

### Application

01967 - 2014 Roadway Expansion		
02238 - CSAH 116 extension to CSAH 81		
Regional Solicitation - Roadways Including Multimodal Elements		
Status:	Submitted	
Submitted Date:	12/01/2014 12:51 PM	

## **Primary Contact**

Name:*	Mr. Salutation	John First Name	A Middle Name	Seifert Last Name
Title:	Public Works Supt.			
Department:				
Email:	jseifert@ci.rogers.mn.us			
Address:	22350 South Diamond Lake Road			
*	Rogers <sup>City</sup>	Minneso State/Provinc		55374 Postal Code/Zip
Phone:*	763-428-8580 Phone		203 Ext.	
Fax:	763-428-9261			
What Grant Programs are you most interested in?	Regional Solici Elements	tation - Roadwa	ays Includin	ig Multimodal

# **Organization Information**

Name:

Jurisdictional Agency (if different):

Organization Type:	City
Organization Website:	
Address:	22350 S DIAMOND LAKE RD

*	ROGERS	Minnesota	55374
C	City	State/Province	Postal Code/Zip
County:	Hennepin		
Phone:*	763-428-8580		
		Ext.	
Fax:			
PeopleSoft Vendor Number	0000006587A3		

# **Project Information**

Project Name	Rogers - CSAH 116 Extension to CSAH 81
Primary County where the Project is Located	Hennepin
Jurisdictional Agency (If Different than the Applicant):	NA

The proposed Fletcher Bypass project extends Hennepin County State Aid Highway (CSAH 116) east of its current alignment to provide a new A Minor Arterial Expander connection to CSAH 81. The proposed project will begin approximately 2,000 feet south of the County Road (CR) 116 (Fletcher Road) /CR 159 (Territorial Road) intersection. The realignment will extend northeast to connect with CSAH 81. The proposed project includes the following elements, as shown in Figure 1:

1. Construct 0.75 miles of a new four-lane divided roadway from 2,000 feet south of CR 116/CR 159 intersection to CSAH 81

2. Traffic signals at the intersections with CR 159 and CSAH 81

3. Turn lanes at signalized intersections

4. Railroad crossing at BNSF railroad

5. 10-ft wide multi-use trail along entire extent of new roadway

The purpose of the project is to address regional traffic issues impacting local roads in Rogers. The reduced capacity of I-94 between Rogers and Maple Grove has led motorists to use local roadway systems to bypass congestion. Motorists currently use Trunk Highway (TH) 101, CSAH 150 (Main Street), CR 159, and CR 116 to bypass congestion and reach suburbs located near TH 55. CR 116 is a straight north-south road between Rogers and Plymouth, providing a direct connection through the northwest suburbs. However, reaching it creates problems on CSAH 150, in Rogers and at intersections along CR 116. Local roadways in

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

Rogers are not sufficient to meet the needs of existing medium to long, suburb-to-suburb trips via CR 116/CSAH 150.

Improvements to CSAH 81 in 2010 improved traffic flow from I-94 to the east, and now the north-south Fletcher Bypass connection needs to be constructed to fully address the issue. The proposed Fletcher Bypass will improve the transportation system for north-south trips between the Twin Cities metropolitan area, Hennepin County, Wright County, Sherburne County and counties in central and northern Minnesota. Once this project is constructed it will result in a jurisdictional exchange where CSAH 150 will become a local street and the Fletcher Bypass will become a county roadway (CR 116).

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

#### **Project Length (Miles)**

0.75

#### **Connection to Local Planning:**

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 MnDOT 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.

#### **Connection to Local Planning**

City of Rogers Comprehensive Plan: Recommends re-routing Fletcher Lane to the east, bypassing the Fletcher historic district to connect with CSAH 81. The bypass will ultimately connect to CSAH 13 north of I-94 via an I-94 overpass. Pages 7-7 and 7-11.

Hennepin County Transportation Systems Plan: Includes Fletcher Bypass as a part of the Base 2030 Roadway Network projects recommended to be completed by 2030. Plan forecasts heavy travel demands across northwestern Hennepin County including CSAH/CR 116 and CSAH 81. Pages 5-11, 9-19, 9-20.

In addition to the approved plans, the proposed project was also documented in the Northwest Hennepin County I-94 Sub-Area Transportation Study (2006). Pages 6-16.

The project is consistent with policies and strategies in the Metropolitan Council Regional 2030 Transportation Policy Plan and the draft 2040 TPP. See attachment Connections to Planning.

#### **Project Funding**

Are you applying for funds from another source(s) to implement this project?	No
If yes, please identify the source(s)	NA
Federal Amount	\$2,929,990.00
Match Amount	\$732,498.00
Minimum of 20% of project total	
Project Total	\$3,662,488.00
Match Percentage	20.0%
Minimum of 20% Compute the match percentage by dividing the match amount by the project total	
Source of Match Funds	Local - City of Rogers
Preferred Program Year	
Select one:	2019

# MnDOT State Aid Project Information: Roadway Projects

County, City, or Lead Agency	City of Rogers
Functional Class of Road	Planned A Minor Arterial
Road System	CSAH
TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET	
Name of Road	CSAH 116
Example; 1st ST., MAIN AVE	
Zip Code where Majority of Work is Being Performed	55374
(Approximate) Begin Construction Date	05/01/2018
(Approximate) End Construction Date	11/30/2018
LOCATION	
From: (Intersection or Address)	2,000 feet south of the existing CSAH 116/Territorial Road/Fletcher Lane intersection
Do not include legal description; Include name of roadway if majority of facility runs adjacent to a single corridor.	
To: (Intersection or Address)	Approximately 1.3 miles east of the TH 101/CSAH 81 intersection
Type of Work	Grading, aggregate base, bituminous surface, signals, RR crossing, bicycle path, ped ramps
Examples: grading, aggregate base, bituminous base, bituminous surface, sidewalk, signals, lighting, guardrail, bicycle path, ped ramps, bridge, Park & Ride, etc.)	
Old Bridge/Culvert?	No
New Bridge/Culvert?	No
Structure is Over/Under (Bridge or culvert name):	

# Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	\$154,340.00
Removals (approx. 5% of total cost)	\$107,306.00
Roadway (grading, borrow, etc.)	\$783,380.00
Roadway (aggregates and paving)	\$706,131.00
Subgrade Correction (muck)	\$0.00
Storm Sewer	\$148,681.00

Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$190,080.00
Traffic Control	\$21,600.00
Striping	\$11,880.00
Signing	\$4,752.00
Lighting	\$0.00
Turf - Erosion & Landscaping	\$93,140.00
Bridge	\$0.00
Retaining Walls	\$0.00
Noise Wall	\$0.00
Traffic Signals	\$453,600.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00
RR Crossing	\$270,000.00
Roadway Contingencies	\$421,348.00
Other Roadway Elements	\$0.00
Totals	\$3,366,238.00

# **Specific Bicycle and Pedestrian Elements**

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	\$296,250.00
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	\$296,250.00

## **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
Transit and TDM Contingencies	\$0.00
Other Transit and TDM Elements	\$0.00
Totals	\$0.00

Transit Operating Costs	
OPERATING COSTS	Cost
Transit Operating Costs	\$0.00
Totals	\$0.00

Totals	
--------	--

Total Cost	\$3,662,488.00
Construction Cost Total	\$3,662,488.00
Transit Operating Cost Total	\$0.00

## **Requirements - All Projects**

#### **All Projects**

1. The project must be consistent with the goals and policies in these adopted regional plans: Thrive MSP 2040 (2014), the 2030 Transportation Policy Plan (amended 2013), the 2030 Regional Parks Policy Plan (amended 2013), and the 2030 Water Resources Management Policy Plan (2005).

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

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

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

3. Applicants must not submit an application for the same project in more than one funding sub-category.

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

4. 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. Expansion, reconstruction/modernization, and bridges must be between \$1,000,000 and \$7,000,000. Roadway system management must be between \$250,000 and \$7,000,000.

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

5. The project must comply with the Americans with Disabilities Act.

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

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

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

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

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

8. 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

9. 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

10. The project applicant must send written notification regarding the proposed projected to all affected communities and other levels and units of government prior to submitting the application.

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

#### **Requirements - Roadways Including Multimodal Elements**

#### **Expansion and Reconstruction/Modernization Projects Only**

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

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

2. Federal funds are available for roadway construction and reconstruction on new alignments or within existing right-of-way, including associated construction and excavation, bridges, or installation of traffic signals, signs, utilities, bikeway or walkway components and transit components.

The project must exclude costs for right-of-way, studies, preliminary engineering, design, or construction engineering. Noise barriers, drainage projects, fences, landscaping, etc., are not eligible for funding unless included as part of a larger project, which is otherwise eligible.

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

#### **Bridge Projects Only**

3. The bridge project 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.

4. Bridges selected in previous Bridge Improvement and Replacement solicitations (1994 2011) are not eligible. A previously selected project is not eligible unless it has been withdrawn or sunset prior to the deadline for proposals in this solicitation.

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

5.Projects requiring a grade-separated crossing of a Principal Arterial of freeway design 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.

6. 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 sub-categories. Rail-only bridges are ineligible for funding.

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

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

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

8. Project limits for bridge projects are limited from abutment to abutment.

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

9. The project must exclude costs for studies, preliminary engineering, design, construction engineering, and right-of-way.

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

#### **Bridge Replacement Projects Only**

10. The bridge must have a sufficiently rating less than 50. Additionally, it must also be classified as structurally deficient or functionally obsolete.

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

#### **Bridge Rehabilitiation Projects Only**

11. The bridge must have a sufficiently rating less than 80. Additionally, it must also be classified as structurally deficient or functionally obsolete.

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

#### **Other Attachments**

File Name	Description	File Size
Attachment 1B & 2A.docx	Attachment 1B & 2A additional traffic count information	39 KB
Connections to Planning.pdf	Connections to Planning - pages from relevant plans as referenced in Project Description	2.8 MB
Figures 1-3 - Layout Land Use Trails.pdf	Figures 1-3: Project Layout, Land Use, Existing/Planned Sidewalks and Trails	1.9 MB
Fletcher Bypass_Reg Solic_Support Letter_Hennepin Co.pdf	Letter of support from Hennepin County	427 KB
Question 2B Future Volumes.pdf	Question 2B - 2030 Traffic Volumes	153 KB
Question 7C Transit Market Area Information.pdf	Question 7C - Transit Market Area	476 KB
RdwayAreaDef.pdf	Roadway Area Definition	1.0 MB
RegionalEcon.pdf	Regional Economy	1.1 MB
SocioEcon.pdf	Socio Economic	1.1 MB
TransitCon.pdf	Transit Connections	1.2 MB

## **Reliever: Freeway Facility or**

Facility being relieved Number of hours per day volume exceeds capacity (based on the Congestion Report)	NA - Not a Reliever Route 0
Reliever: Non-Freeway Facility or Facility being relieved	NA - Not a Reliver Route

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

# Non-Freeway Facility Volume/Capacity Table

Hour	NB/EB Volume	SB/WB Volume	Capacity	Volume exceeds capacity
12:00am - 1:00am			0	
1:00am - 2:00am			0	
2:00am - 3:00am			0	
3:00am - 4:00am			0	
4:00am - 5:00am			0	

5:00am - 6:00am	0
6:00am - 7:00am	0
7:00am - 8:00am	0
8:00am - 9:00am	0
9:00am - 10:00am	0
10:00am - 11:00am	0
11:00am - 12:00pm	0
12:00pm - 1:00pm	0
1:00pm - 2:00pm	0
2:00pm - 3:00pm	0
3:00pm - 4:00pm	0
4:00pm - 5:00pm	0
5:00pm - 6:00pm	0
6:00pm - 7:00pm	0
7:00pm - 8:00pm	0
8:00pm - 9:00pm	0
9:00pm - 10:00pm	0
10:00pm - 11:00pm	0
11:00pm - 12:00am	0

# Expander/Augmentor/Non-Freeway Principal Arterial

Select one:	Expander
Area	3.703
Project Length	0.745
Average Distance	4.9705
Upload Map	Rogers Roadway Area Definition.pdf

## Measure B: Current Heavy Commercial Traffic

Location	New Route - See Attachment 1B & 2A
Current daily heavy commercial traffic volume	0

## Measure C: Project Location Relative to Jobs, Manufacturing, and Education

Select all that apply

Direct connection to or within a mile of a Job Concentration

Direct connection to or within a mile of a Manufacturing/Distribution Location

Direct connection to or within a mile of an Educational Institution

Project provides a direct connection to or within a mile of an existing local activity center identified in an adopted county or city plan

County or City Plan Reference (Limit 700 characters;

Yes

CR 116 serves as an important route between job nodes in the Twin Cities and residential developments in northwest Hennepin County and eastern Wright County. Intensive land uses are proposed east of CR 116 as well as ongoing residential development west of CR 116. The project will improve connections to CSAH 81. There are existing concentrations of industrial and commercial land use along CSAH 81, including downtown Rogers (CSAH 150 between CSAH 81 and 129th Ave) as well as areas along TH 101 to the north. Improving CR 116 will strengthen the connections between employment centers and residential developments. See Figure 2. Rogers Regional Economy.pdf

**Upload Map** 

approximately 100 words)

#### Measure A: Current Daily Person Throughput

Location	CSAH 116 extension - New Route Attachment 1B & 2A
Current AADT Volume	0
Existing Transit Routes on the Project	N/A

## **Response: Current Daily Person Throughput**

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	0

#### Measure B: 2030 Forecast ADT

Use Metropolitan Council model to determine forecast (2030) ADT volume	No
METC Staff - Forecast (2030) ADT volume	0

Approved county or city travel demand model to determine forecast (2030) ADT volume	Yes
Forecast (2030) ADT volume	31000.0

## Measure A: Project Location and Impact to Disadvantaged Populations

Select one:

Project located in Racially Concentrated Area of Poverty

Project located in Concentrated Area of 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

Benefits:

-Bicycle and pedestrian improvements: The construction of multiuse trail along the Fletcher bypass will provide a bicycle and pedestrian connection in an area with few designated bicycle/pedestrian facilities. Low-income populations who rely on bicycling/walking will benefit from improved connections. The trail will be separated from vehicle traffic and comfortable for children, families, people with disabilities, and the elderly. The trail will be designed to ADA standards.

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

-Traffic operations: While the project is not located in an area of above average or concentrated poverty, the Fletcher Bypass will serve a regional transportation purpose. The project will benefit lowincome populations in the northwest suburbs by providing a safer and more convenient alternative to Main Street that is designed to carry regional traffic (as opposed to local streets currently used for this purpose).

Negative impacts and mitigation: The project is not expected to negatively impact low-income populations, people of color, children, people with disabilities, and the elderly. The project is in land that is currently undeveloped.

**Upload Map** 

#### Measure B: Affordable Housing

	City/Township	Segment Length (Miles)	
Rogers		0.75	
		1	

Rogers Socio Economic.pdf

## **Total Project Length**

**Total Project Length** 

## Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

City/Township	Segment Length (Miles)	Total Length (Miles)	Score	Segment Length/Total Length	Housing Score Multiplied by Segment percent	
Rogers	0.75	0.75	41.0	1.0	41.0	
		1	41	1	41	

## Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

Total Project Length (Miles)	0.75
Total Housing Score	41.0

## Measure A: Year of Roadway Construction

Year of Original Roadway Construction or Most Recent Reconstruction	Roadway Segment Length (Miles)	Calculation	Calculation 2	
0	0.75	0	0	
	1	0	0	

## Average Construction Year

Weighted Year	0
Total Segment Length (Miles)	
Total Segment Length	0.75

## Measure A: Cost Effectiveness of Vehicle Delay Reduction

Total Project Cost from Cost Sheet	\$3,662,488.00
Total Peak Hour Vehicle Delay Without The Project	7312.0
Total Peak Hour Vehicle Delay With The Project	2091.0
Total Peak Hour Vehicle Delay Reduced by Project	5221.0
Cost Effectiveness	\$701.49
Synchro or HCM Reports	Rogers Fletcher Bypass Synchro reports.pdf

## Measure B: Cost Effectiveness of Emissions Reduction

Total Project Cost from Cost Sheet	\$3,662,488.00
Total Peak Hour Kilograms Reduced by Project	0.53
Cost Effectiveness	\$6,910,354.72
Synchro or HCM Reports	Rogers Fletcher Bypass Synchro reports.pdf

Measure A: Benefit/Cost of Crash Reduction						
Project Benefit/Cost Ratio	0.07					
Worksheet Attachment	Documentation for safety measure calculation for Fletcher Lane extension project.pdf					
Measure A: Transit Connections						
Existing Routes Directly Connected to the Project	N/A					
Planned Transitways directly connected to the project (alignment and mode determined and identified in the 2030 TPP)	N/A					
Upload Map	Rogers Transit.pdf					
Response						
Met Council Staff Data Entry Only						
Route Ridership	0					
Transitway Ridership	0					

Measure B: Bicycle and Pedestrian Connections

The proposed multiuse trail will directly connect to the following existing bicycle/pedestrian facilities (see Figure 3):

-CSAH 81: Connection to employment center (industrial area), Downtown Rogers, Elm Creek Park Reserve and park trails, and the Rush Creek and Medicine Lake Regional Trails.

-CR 116 (Fletcher Road) bicycle/pedestrian shoulder: continuous connection to Corcoran and Medina, connection to shoulder on CSAH 116 (Territorial Road) which links to Downtown Rogers, Crow-Hassan Park Reserve, and sidewalk connections to residential neighborhoods.

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

The trail will connect to the following future bicycle/pedestrian connections as identified in the Rogers Comprehensive Plan and the Draft 2040 Hennepin County Bicycle Plan:

-Rush Creek Regional Trail extension: Future trail will extend west from Elm Creek Park Reserve to Crow-Hassan Park Reserve. Three Rivers Park District has completed the master plan and is developing a land acquisition plan.

-Multi-use trail along CSAH 81

-Bicycle/pedestrian shoulder on CSAH 101 (Brockton Lane)

## **Measure C: Multimodal Facilities**

Ped/Transit Elements: No transit elements included. Project in Transit Market Area 5 Met Council TPP. No transit in this market other than Dial-a-Ride (see attachment).

Pedestrian/bicycle elements incorporated: Project includes a multi-use trail along the entire length of the CSAH 116 extension. The multiuse trail will provide a safe and comfortable facility for pedestrians/bicyclists and will connect to existing shoulders on CR 116 and CSAH 81. The project will meet ADA standards to provide a facility accessible for people with disabilities. ADAcompliant curb ramps will be constructed at signals. The trail crossing of the BNSF railway will also meet ADA standards.

Existing ped elements: There are no existing pedestrian elements along this route as it is a new road.

Integrates: The project provides a separate facility safe for bicyclists and pedestrians. The trail will be comfortable for a wide range of bicyclist/pedestrian ages and abilities. The city will provide year-round maintenance so the trail can be used safely.

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

### **Transit Projects Not Requiring Construction**

If the applicant is completing a transit or TDM application, only Park-and-Ride and other construction projects require completion of the Risk Assessment below. Check the box below if the project does not require the Risk Assessment fields, and do not complete the remainder of the form. These projects will receive full points for the Risk Assessment.

Check Here if Your Transit Project Does Not Require Construction

#### Measure A: Risk Assessment

1)Project Scope (5 Percent of Points)

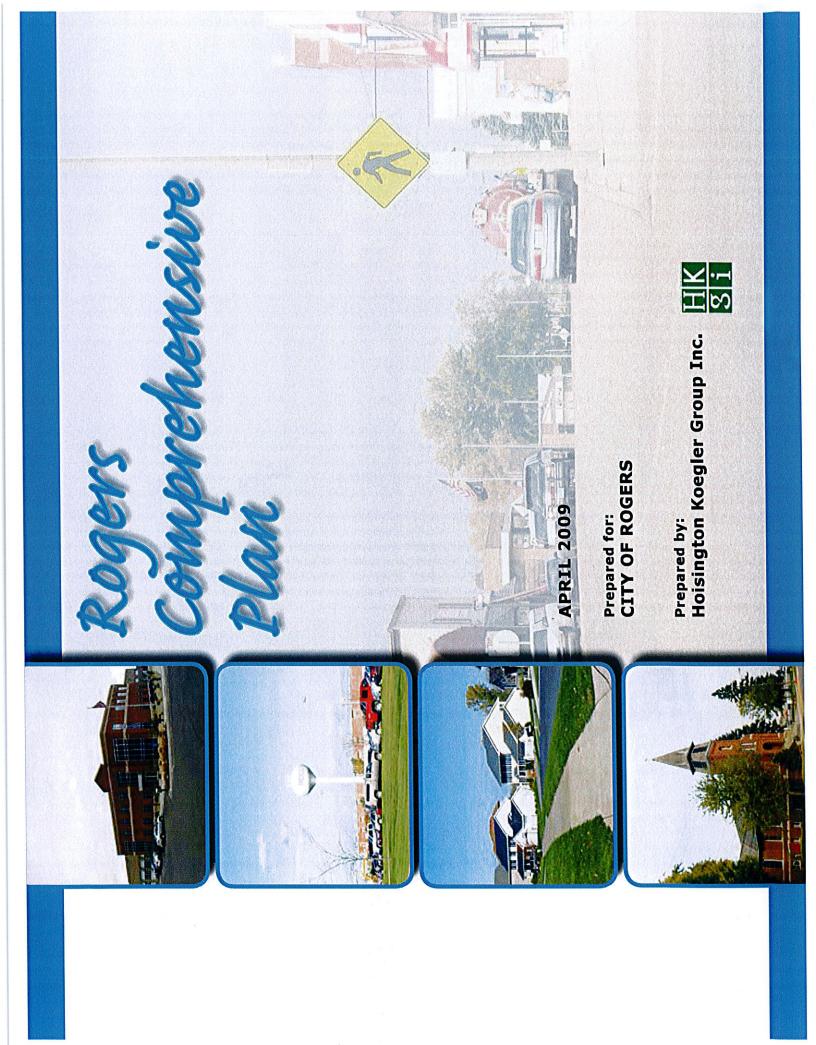
Meetings or contacts with stakeholders have occurred

100%

Stakeholders have been identified	
40%	
Stakeholders have not been identified or contacted	
0%	
2)Layout or Preliminary Plan (5 Percent of Points)	
Layout or Preliminary Plan completed	Yes
100%	
Layout or Preliminary Plan started	
50%	
Layout or Preliminary Plan has not been started	
0%	
Anticipated date or date of completion	08/05/2011
3)Environmental Documentation (10 Percent of Points)	
EIS	
EA	
PM	Yes
Document Status:	
Document approved (include copy of signed cover sheet)	100%
Document submitted to State Aid for review	75%
Document in progress; environmental impacts identified	
50%	
Document not started	Yes
0%	
Anticipated date or date of completion/approval	03/01/2017
4)Review of Section 106 Historic Resources (15 Percent of	Points)
No known potential for archaeological resources, no historic resources known to be eligible for/listed on the National Register of Historic Places located in the project area, and project is not located on an identified historic bridge	Yes
100%	
Historic/archeological review under way; determination of no historic properties affected or no adverse effect anticipated	
80%	
Historic/archaeological review under way; determination of adverse effect anticipated	
40%	

Unknown impacts to historic/archaeological resources	
0%	
Anticipated date or date of completion of historic/archeological review:	08/05/2011
Project is located on an identified historic bridge	
5)Review of Section 4f/6f Resources (15 Percent of Points)	
(4f is publicly owned parks, recreation areas, historic sites, wildlife or wa Conservation Funds were used for planning, acquisition, or developmer	-
No Section 4f/6f resources located in the project area	Yes
100%	
Project is an independent bikeway/walkway project covered by the bikeway/walkway Negative Declaration statement; letter of support received	
100%	
Section 4f resources present within the project area, but no known adverse effects	
80%	
Adverse effects (land conversion) to Section 4f/6f resources likely	
30%	
Unknown impacts to Section 4f/6f resources in the project area	
0%	
6)Right-of-Way (15 Percent of Points)	
Right-of-way or easements not required	
100%	
Right-of-way or easements has/have been acquired	
100%	
Right-of-way or easements required, offers made	
75%	
Right-of-way or easements required, appraisals made	
50%	
Right-of-way or easements required, parcels identified	Yes
25%	
Right-of-way or easements required, parcels not identified	
0%	
Right-of-way or easements identification has not been completed	
0%	
Anticipated date or date of acquisition	03/01/2019
7)Railroad Involvement (25 Percent of Points)	
No railroad involvement on project	

### 100% Railroad Right-of-Way Agreement is executed (include signature page) 100% Railroad Right-of-Way Agreement required; Agreement has been initiated 60% Railroad Right-of-Way Agreement required; negotiations have begun 40% Railroad Right-of-Way Agreement required; negotiations not Yes begun 0% Anticipated date or date of executed Agreement 11/01/2018 8)Construction Documents/Plan (10 Percent of Points) Construction plans completed/approved (include signed title sheet) 100% Construction plans submitted to State Aid for review 75% Construction plans in progress; at least 30% completion 50% Construction plans have not been started Yes 0% Anticipated date or date of completion 03/01/2019 9)Letting **Anticipated Letting Date** 05/01/2019





## INTRODUCTION

ransportation challenges within Rogers and the surrounding northwest Hennepin County area are an increasing concern for residents and businesses. The continued growth of northwest Hennepin County and adjacent Wright County have increased congestion, access and safety problems in the area. In addition, the transition of Rogers from a rural small town to a suburban community within the Twin Cities metropolitan area and the Twin Cities/St. Cloud Interstate 94 (I-94) Corridor creates new and complex transportation demands on the transportation system. Rogers' future transportation system must be designed and maintained to meet the future needs of the community, the metro region and the state's Interregional Corridors (IRC) System, which includes both the I-94 and TH 101 highway corridors.

The Transportation Chapter establishes the community's goals and policies to address the needs for safe, accessible and efficient travel within the community. As required, the Transportation Chapter addresses a variety of transportation modes,

including highways and roadways, non-motorized trails, transit and aviation.

## NORTHWEST HENNEPIN COUNTY I-94 SUB-AREA TRANSPORTATION STUDY

The City of Rogers, in cooperation with Hassan Township and the City of Dayton, began the multiphase Northwest Hennepin County I-94 Sub-Area Transportation Study in late 2006. The study was undertaken to focus on the transportation needs in Northwest Hennepin County, including the potential for requesting an additional interchange on I-94. The entire study involved the following three phases:

 Phase I involved the gathering of background information about the issues, constraints and opportunities and determining the need for a longrange system plan. It included a series of meetings with communities and agency staff. A PowerPoint presentation was assembled to summarize Phase I.





- Upgraded TH 101 TH 101 is currently being proposed to be modified into a Principal Arterial freeway north of I-94.
   Future interchanges are currently proposed to be added at South Diamond Lake Road and CSAH 144. 147th Avenue is proposed as a future overpass. Access to businesses along the highway and adjacent residential areas may be a concern.
- Redesigned TH 101 & CSAH 81

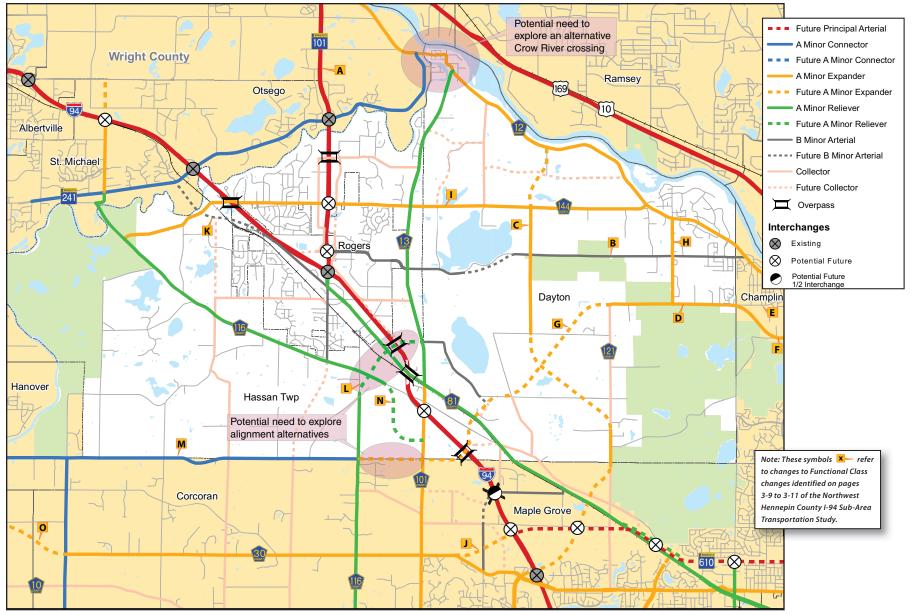
   intersection South of I-94, TH 101 is
   planned to become a direct connection
   into CSAH 81. Industrial Boulevard
   and John Milless Drive will become a
   signalized four-way intersection with
   TH 101/CSAH 81. Main Street will
   become a secondary connection to
   CSAH 81 without a traffic signal.
- Fletcher Lane Bypass The City has been working with Hennepin County and Hassan Township on plans to reroute Fletcher Lane to the east, bypassing the Fletcher historic district to connect with CSAH 81. This rerouting would allow better connection of minor arterials and take heavier traffic off of Main Street and residential streets. Ultimately, the Fletcher Lane Bypass would connect to CSAH 13 north of I-94 via an overpass.

- Extension of Main Street (CR 150)

   Main Street is proposed to be extended from CSAH 116 south to Cain Road in Corcoran to provide an important north-south connection for this area.
- Extension of Industrial Boulevard

   Extending this roadway to the northwest and across the Crow River to St. Michael would provide an alternative regional roadway to I-94 and Territorial Road (CSAH 116).
- Realignment of Territorial Road -Territorial Road east of Fletcher Lane is planned to be realigned to better serve the movement needs of the planned higher density uses between Fletcher Lane and Brockton Lane, south of I-94, and provide a better spacing for its connection to Brockton Lane south of the proposed I-94 interchange.
- Extension of CR 117 Movement along the community's ultimate southern boundary (when Hassan Township merges with Rogers) would be facilitated by the extension of County Road 117 (109<sup>th</sup> Avenue N) from Fletcher Lane to County Road 101 (Brockton Lane). However, the extension of CR 117 is challenged by a wetland complex, areas of significant





*Figure 7.8: Future Functional Classification (Northwest Hennepin County I-94 Sub-Area Transportation Study Figure 3-3).* \* Rogers and Hassan Township's City Boundary reflect conditions as of 2008.

AGER

# HENNEPIN COUNTY TRANSPORTATION SYSTEMS PLAN



October 2011 Adopted by Hennepin County - June 2011 Approved by the Metropolitan Council - September 2011 Final Adoption by Hennepin County - November 2011

## Table 5-3 Base 2030 Roadway Network (Itemized Improvements)

Roadway	Termini	City	
Mn/DOT		'	
I-94	Lane Additions:- TH 610 to TH 101	Maple Grove	
Trunk Highway 101	Conversion to limited access - north segment	Rogers / Hassan Twp	
Trunk Highway 169	CSAH 30 / TH 610 / 101 <sup>st</sup> interchanges	Brooklyn Park	
Trunk Highway 169	CSAH 81/CSAH 109 (85 <sup>th</sup> Ave) – Devil's Triangle	Brooklyn Park	
Trunk Highway 252	Roadway upgrade to limited access	Brooklyn Center / BP	
I-494	Lane Additions: E. Bush Lake to 34 <sup>th</sup> Ave.	Bloomington	
I-494	Lane Additions: I-94 to TH 55	Maple Grove / Plymouth	
I-494 / TH 169	Reconstruct interchange	Bloomington	
Trunk Highway 610	Completion of highway from TH 169 to I-94	Maple Grove / BP	
Hennepin County			
CSAH 1 (Pioneer Trail)	Reconstruct road from CSAH 4 to old TH 212	Eden Prairie	
CSAH 1 (Pioneer Trail)	Reconstruct & add lanes: Co. limits to CSAH 4	Eden Prairie	
CSAH 10 (Bass Lake Road)	Realign & add lanes: Vicksburg to Peony	Maple Grove	
CSAH 10 / CSAH 101	Realign & add lanes: new intersection	Maple Grove	
CSAH 14 (Douglas Drive)	Reconstruct & add lanes: 109 <sup>th</sup> Ave. to CSAH 12	Champlin	
CSAH 24	Reconstruct & add lanes: east of CSAH 101	Plymouth	
CSAH 101	Reconstruct & add lanes with Stone's Throw	Hassan Township	
CSAH 101	Reconstruct & add lanes: CSAH 6 to CSAH 24	Plymouth	
CSAH 101	Reconstruct & add lanes: TH 7 to CSAH 62	Minnetonka	
CSAH 101	Extension of Peony Lane to Lawndale / CR 47	Plymouth	
CSAH 103 (West Broadway)	Reconstruct from CSAH 30 to CSAH 109	Brooklyn Park	
CSAH 109 (85 <sup>th</sup> Avenue)	Add lanes Main Street to Jefferson Hwy	Maple Grove	
County Road 116	Fletcher Bypass – extension to CSAH 81	Rogers / Hassan Twp	
County Road 117	Road extension from CR 116 to CSAH 101	Hassan / Corcoran	
CSAH 122 (Washington Ave.)	Reconfigure for LRT at U of M	Minneapolis	
County Road 159	Realignment east of CR 116 for Stone's Throw	Hassan Township	

#### **Barriers and Gaps Removed**

The Bicycle System GAP Study prepared in 2002 identified about 90 separate missing segments between existing bikeway facilities. Almost one-third (29) of these original gaps have now been closed, however as new facilities are built more gaps are identified. Since the Bike GAP program was begun, Hennepin County has contributed about \$600,000 toward these projects

### Percentage of Urban Roadways<sup>9</sup> with Pedestrian Accommodations

Pedestrians utilize both walkways and multi-use trails within the county roadway right-of-ways. Consistent with the emergence of the Complete Streets and Active Living initiatives, pedestrian facilities are a component of the county's multi-modal planning efforts. As part of the Complete Streets inventory, the county will be monitoring the percentage of county roadway miles that have pedestrian facilities provided where pedestrian occur and/or are expected to occur.

#### Volume to Capacity Ratio

Another category of system effectiveness relates to roadway congestion and operating levels of service. The quality of roadway operations are measured using indicators such as the volume to capacity ratio (V/C), Level of Service (LOS), and vehicle delay (minutes). For system-wide evaluations, the V/C ratio is an appropriate means of analyzing roadway performance since it highlights segments that have roadway volumes that exceed the capacity of the roadway lanes.<sup>10</sup> Significant congestion is anticipated for many of the state trunk highways and interstate highways in the metropolitan area. This congestion for many principal arterials is a concern since this trend is an indicator of potential diversion to the minor arterial system.

Typically, roadway facilities are designed to provide adequate service over a 20year design life. The V/C ratio and additional considerations such as the roadway geometrics (today and future) were used to evaluate roadway operations for the forecast Year 2030. Map F in the report pocket entitled "Roadway System Adequacy - 2030 Operations" highlights roadway segments based on the level of anticipated future congestion.

As in the 2000 HC-TSP, the future traffic forecasts also found heavy travel demands across the northwestern portion of the county. Anticipated future residential development growth just outside Hennepin County in the St. Michael / Albertville

<sup>&</sup>lt;sup>9</sup> An urban roadway is one with raised curbs, closed drainage system, sidewalks or the ability to incorporate sidewalks, and is in an area with higher land densities and pedestrian activities.

<sup>&</sup>lt;sup>10</sup> Roadway capacities were estimated for Year 2030 based on values originally developed by the Metropolitan Council for the regional forecasting model as documented in *Model Calibration Technical Memo #5 - 1990 Highway Network and TAZ Documentation*. The Metropolitan Council capacities were hourly lane volumes categorized by area type and facility type. For average daily analysis, these values were converted to daily capacities and categorized by Functional Classification and Facility Type.

areas and the Otsego / Elk River areas appear to generate trips which are attracted to activity nodes in the metropolitan area such as the future commercial / office areas in the Rogers and Maple Grove areas. These travel patterns tend to put stress on existing 2-lane rural county roadways in Corcoran, Dayton, and Hassan Township.

County roadways in the northwest area of the county that are expected to experience significant congestion over the next 20 years include:

- CSAH-13 (Dayton / Rogers)
- CSAH-30 (Corcoran / Hassan Township)
- CSAH-81 (Maple Grove, Rogers)
- CSAH-101 (Corcoran / Dayton / Hassan Township)
- CSAH-116 (Rogers)
- County Road 116 (Corcoran)

Western portions of the county roadway system also have segments that are anticipated to experience congestion. Growth in the Rockford / Delano areas and Orono / Long Lake areas are forecasted to contribute new vehicle trips. The lack of principal arterials between Trunk Highway 55 / Interstate 94 corridors and the constraints of Lake Minnetonka channel traffic to just a few roadways in these areas. County roadways with potential congestion that appear in this western area include:

- CSAH-6 (Orono)
- CSAH-15 (Minnetonka Beach / Orono)
- CSAH-19 (Tonka Bay)
- CSAH-92 (Minnetrista / St. Bonifacius)
- County Road 139 (Delano / Independence)

Potential future congested county roadways also are sprinkled within Minneapolis and the first / second tier suburbs. Some key roads are:

- CSAH-30 / 93<sup>rd</sup> Avenue (Brooklyn Park)
- CSAH-81 / Bottineau Blvd. (Brooklyn Park / Brooklyn Center)
- CSAH-121 / Fernbrook Lane (Dayton / Maple Grove)
- CSAH-152 / Cedar Avenue (Minneapolis)
- CSAH-21 / 50<sup>th</sup> Street (Minneapolis)



# NORTHWEST HENNEPIN COUNTY



# SUB-AREA TRANSPORTATION STUDY

**APRIL 2008** 

PREPARED BY:

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**

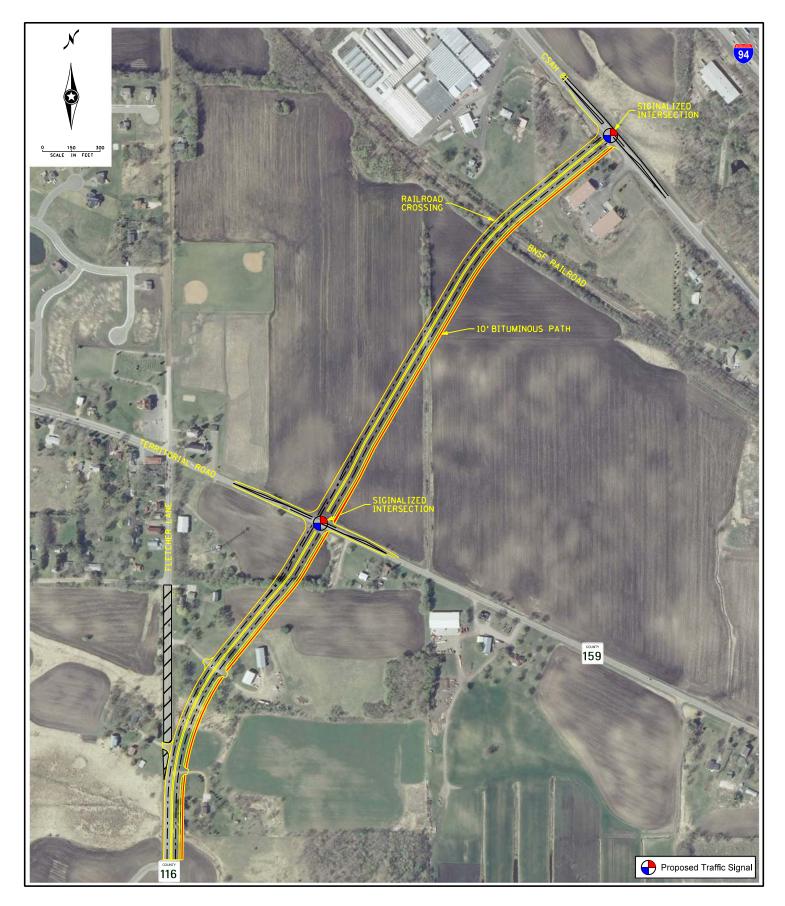
Ken Ashfeld, City Engineer

## PREPARED BY: SRF CONSULTING GROUP, INC.

Dave Montebello, PE, Principal Marie Cote, PE, Principal Angela Bersaw, Senior Planner

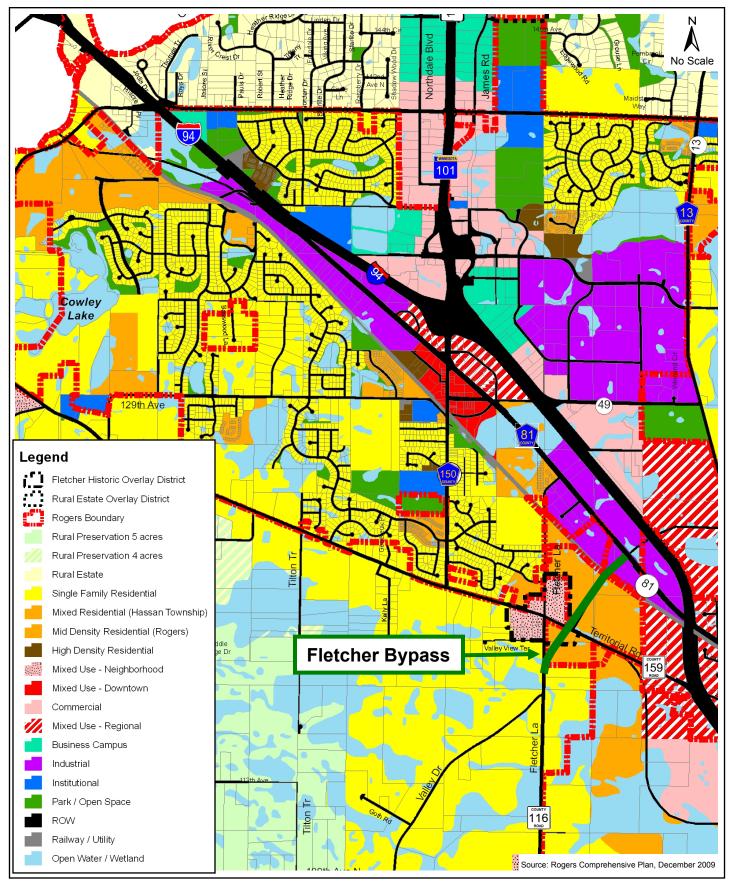
## Table 6-2 Short-term Improvements

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





**Figure 1: Project Layout** Fletcher Bypass City of Rogers 2014 Surface Transportation Program Application



# 2030 Land Use Map

FLETCHER BYPASS CONSTRUCTION PROJECT (REALIGNMENT OF CR 116) STP Application (A MINOR ARTERIAL – EXPANDER) City of Rogers Figure 2

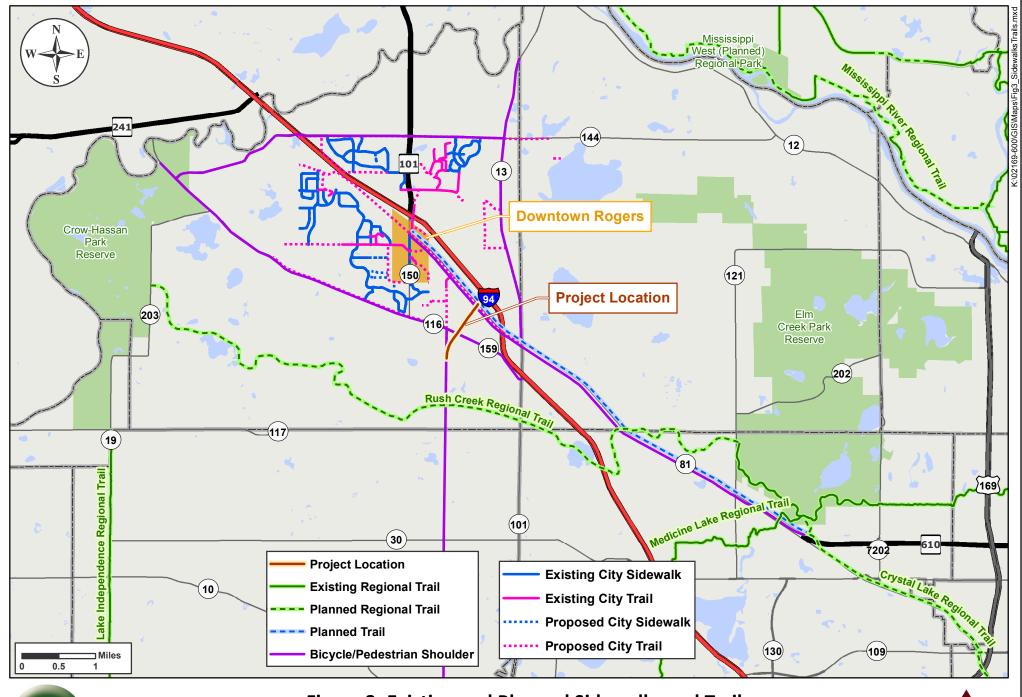


Figure 3: Existing and Planned Sidewalks and Trails Fletcher Bypass - City of Rogers, MN 2014 Surface Transportation Program Grant Application





### **Hennepin County**

Public Works

**Transportation Department** James N. Grube P.E., Director 1600 Prairie Drive Medina, Minnesota 55340

612-596-0300, Phone 612-321-3410, Fax www.hennepin.us/transportation

November 26, 2014

John Seifert Public Works Superintendent City of Rogers 22350 South Diamond Lake Road Rogers MN 55374

RE: CR 116 Extension to CSAH 81 (Fletcher Bypass) 2014 Surface Transportation Program Application

Dear Mr. Seifert:

Hennepin County has been notified that the City of Rogers is submitting an application for regional solicitation funding for the Fletcher Bypass, connecting County Road 116 (Fletcher Lane) to CSAH 81. The county has been involved in the planning of this project for a number of years and is supportive of the project. The Fletcher Bypass is identified in the Hennepin County Capital Improvement Program (CIP) as a provisional project. The project is also a component of the 2030 Hennepin County Transportation Systems Plan (2030 HC-TSP) and was included in 2008 as part of the Northwest Hennepin County I-94 Subarea Transportation Study.

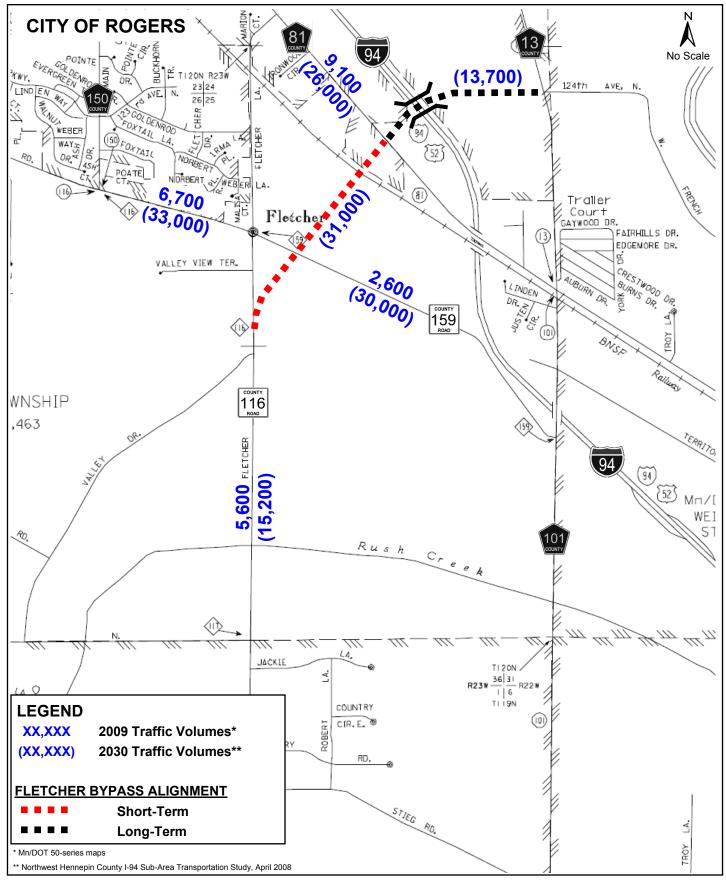
The project will increase safety and improve roadway operations by relocating a difficult intersection (Fletcher Lane and Territorial Road) and provide a more direct connection to the arterial roadway network. CR 116 is an important north-south arterial that currently provides an almost 9-mile continuous connection between CSAH 116/CR 159 in southern Rogers to Trunk Highway 55 in Medina. The project is part of the second phase of area network improvements that have included 2010 improvements on CSAH 81 in Rogers and eventually will result in a jurisdictional exchange where CSAH 150 (Main Street) will become a local street and the Fletcher Bypass will become a county roadway. Over time, the Fletcher Bypass is anticipated to become an important element serving the transportation needs of northwest Hennepin County.

Hennepin County acknowledges, to the extent it has jurisdiction and controls right of way of the associated facilities, that the county 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,

James n. Sreebec

James N. Grube, P.E. Director of Transportation and County Engineer



## **Daily Traffic Volumes**

FLETCHER BYPASS CONSTRUCTION PROJECT (REALIGNMENT OF CR 116) STP Application (A MINOR ARTERIAL – EXPANDER) City of Rogers 2030 Traffic Volumes - from NW Hennepin County I-94 Sub-Area and Rogers Comp Plan

# **2040 REGIONAL TRANSPORTATION POLICY PLAN**

DRAFT PLAN

Public Comment Period: August 14 – October 1, 2014



390 Robert Street North | St. Paul, MN 55101-1805 Phone 651.602.1000 | Fax 651.602.1550 | TTY 651.291.0904 | metrocouncil.org *An Equal Opportunity Employer* 

#### **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 highdensity 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.

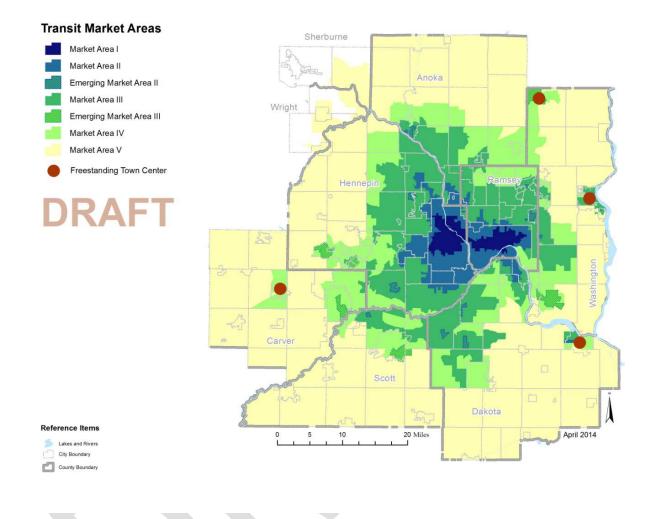
## **Transit Market Areas**

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 as well as some unique Market Area features. The Transit Market Areas are generally associated with community designations in *Thrive MSP 2040* as follows:

- Transit Market Areas I and II are mostly Urban Center communities where urban form and density are most supportive of transit and 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 and 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 providing basic coverage.
- 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.

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

#### Figure F-1: Transit Market Areas



## **Regular-Route System Design**

For the regular-route bus system, the guidelines on transit service design in Appendix G: Regional Transit Design Guidelines and Performance Standards cover a number of topics including:

- Transit Market Areas and Service Options the service types that are appropriate for the different Transit Market Areas
- Network Design and Access
- Route Spacing the distance between bus routes
- Stop Spacing the distance between bus stops on a route
- Route Structure
- Route Deviations diversion of some or all service on a route to serve nearby land uses
- Service Levels
- Service Span the number of hours/day and days/week a transit service operates



# **Appendix G: Regional Transit Design Guidelines and Performance Standards**

## **Transit Market Areas**

Demand for transit service varies across the region. This applies to the time of day that transit is used, the number of trips taken, and the purpose of trips taken on transit. While this variation in transit demand is driven by a number of factors, it is primarily due to differences in development density, urban form, and demographics. To account for these differences in the planning and evaluation of transit service, the region is divided into five distinct Transit Market Areas representing different levels of potential transit demand.

Transit Market Areas are a tool used to guide transit planning decisions. They help ensure that the types and levels of transit service provided, in particular fixed-route bus service, match the expected demand in a given area. For example, transit service in a suburban community where the automobile is the most convenient mode for the majority of trips might focus on the work commute, providing express bus service to downtown. Transit service in a dense urban core neighborhood might need to accommodate a broader variety of transit service needs that can be met by providing frequent, all-day service to a variety of destinations.

## **Transit Market Index**

Transit Market Areas are determined using a Transit Market Index which in turn is based on a combination of measures of density, urban form, and automobile availability.

#### **Population and Employment Density**

Population and employment density are strong indicators of transit demand. Higher density areas generate more transit demand for the simple reason that they have more people living and working within the fixed area within walking distance of any transit stop. Additionally, people living and working in high density areas are more likely to take transit than those living in low density areas. This is because automobile use is often inconvenient because of congestion and parking costs and because residents typically have less need for a car since there are more destinations within walking distance.

In the Transit Market Index, population and employment densities are calculated separately by dividing the total population and total jobs in a census block group by the developed land area of the block group.

#### **Intersection Density**

Block size and urban form are important factors in transit demand. Areas with smaller blocks tend to have more traditional street-grids and provide a more walkable environment for pedestrians. The Transit Market Index measures urban form using intersection density; it is the total number of three-, four-, and five-way intersections in a block group divided by the total

service. Focusing growth in and around these areas to connect to other areas of higher potential transit use will present good opportunities for future transit improvement.

#### **Freestanding Town Centers**

Freestanding Town Centers are areas that historically grew independently of Minneapolis and St. Paul and are still separated from the urban and suburban areas of the metro by rural land. Because of their concentrated downtowns laid out in a traditional urban form, these areas have a Transit Market Index value that would indicate Market Area III or higher. However, their relatively small population and land area, as well as their distance from other transit-supportive land uses, limits the potential for local fixed-route transit.

## **Typical Transit Service Types**

Table G-2 shows the typical transit service types and levels that are most appropriate for the different transit market areas. The service types listed here are general descriptions for each market area; specific implementation of transit service will depend on available resources, specific analysis of local transit demand and existing ridership, complementary and competing services, and other factors. Detailed analysis of specific communities and locations may determine that other types and levels of service are more appropriate.

Transit Market Area	Transit Market Index Range	Propensity to Use Transit	Typical Transit Service
Market Area I	TMI greater than 256.0	Highest potential for transit ridership	Dense network of local routes with highest levels of service accommodating a wide variety of trip purposes. Limited stop service supplements local routes where appropriate.
Market Area II	TMI between 128.0 and 256.0	Approximately 1/2 ridership potential of Market Area I	Similar network structure to Market Area I with reduced level of service as demand warrants. Limited stop services are appropriate to connect major destinations.
Market Area III	TMI between 64.0 and 128	Approximately 1/2 ridership potential of Market Area II	Primary emphasis is on commuter express bus service. Suburban local routes providing basic coverage. General public dial-a-ride complements fixed route in some cases.

#### Table G-2: Transit Market Area Transit Demand and Typical Services

Market Area IV	TMI between 32.0 and 64.0	Approximately 1/2 ridership potential of Market Area III	Peak period express service is appropriate as local demand warrants. General public dial-a-ride services are appropriate.
Market Area V	TMI less than 32.0	Lowest potential for transit ridership	Not well-suited for fixed-route service. Primary emphasis is on general public dial-a-ride services.
Emerging Market Overlay	Varies.	Varies. Typically matches surrounding Market Area.	Varies. Typically matches surrounding Market Area.
Freestanding Town Center	TMI at least 64.0	Varies. Typically matches surrounding Market Area.	Varies. Potential for local community circulator as demand warrants. Some peak period commuter express service may be appropriate

#### **Transitways**

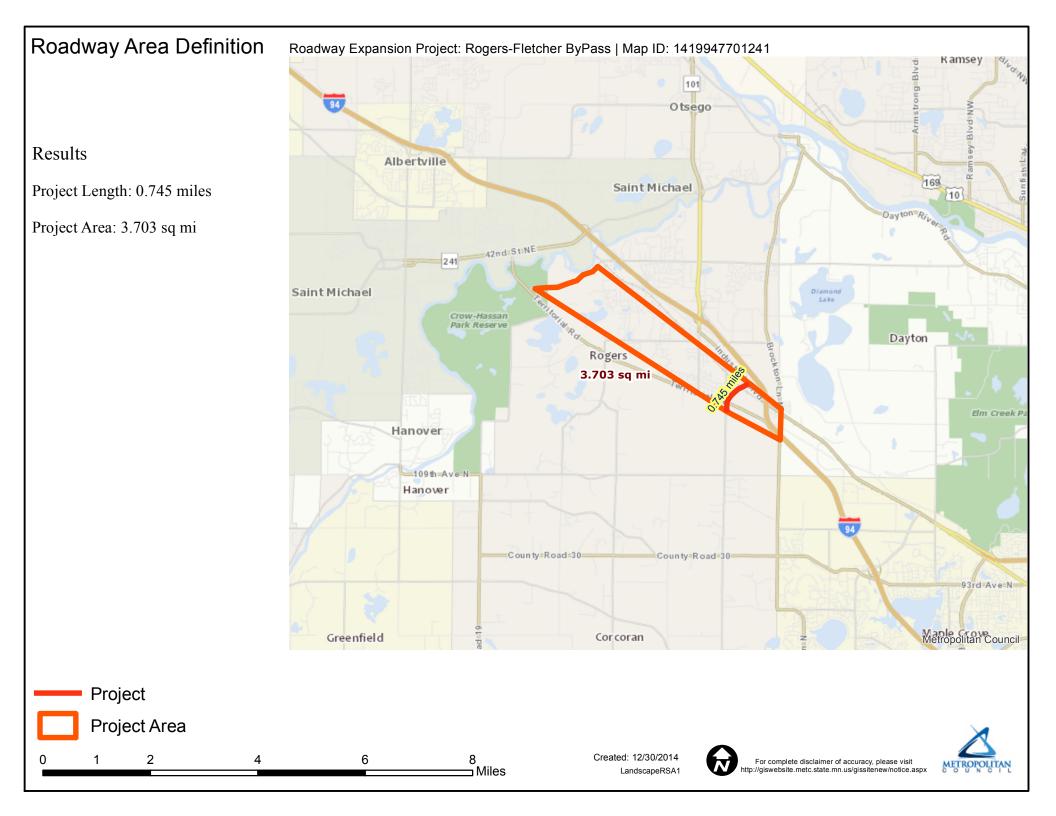
Transitways are unique transportation corridors with specific, detailed planning processes that result in appropriate levels of service for specific corridors. The detailed planning work on transitway corridors leads to unique applications of transit service design standards and specific types of service unique to each corridor. See the Regional Transitway Guidelines for more information about planning Arterial Bus Rapid Transit (BRT), Highway BRT, Light Rail Transit (LRT) and Commuter Rail

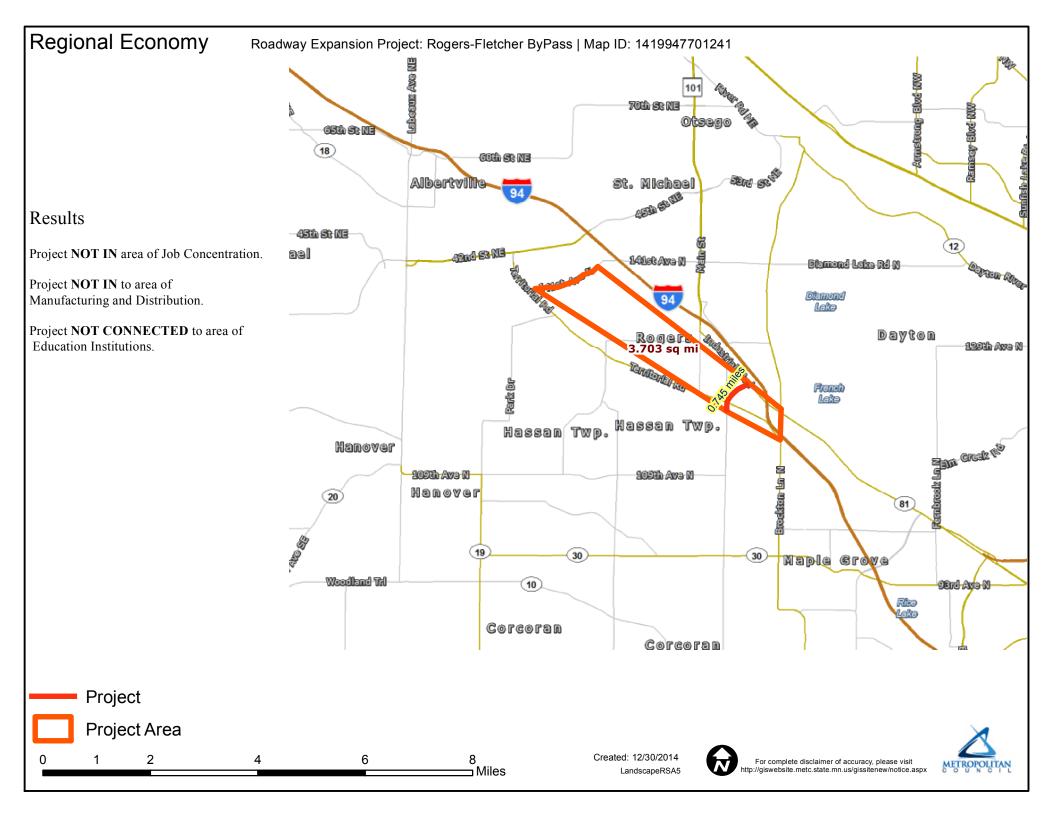
#### **General Public Dial-a-Ride**

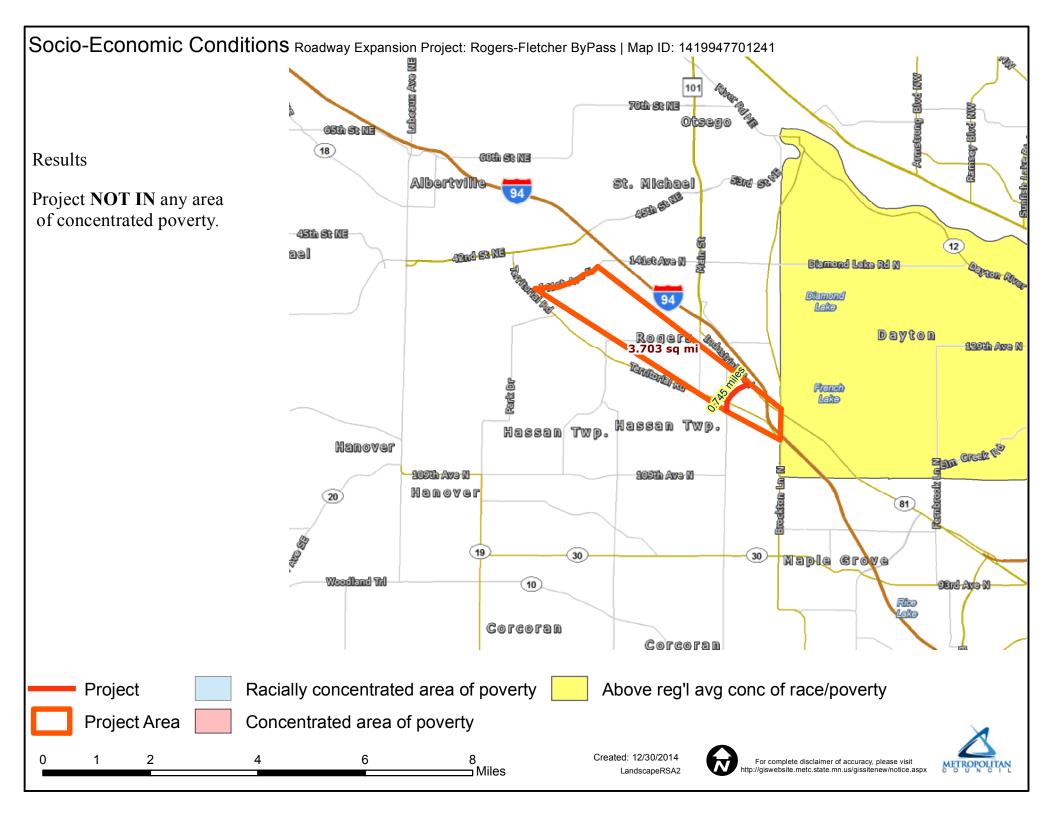
General public dial-a-ride service is provided by the Metropolitan Council through Transit Link. Transit Link service is open to the general public and operates where regular-route transit service is not available. It is intended to augment the regular-route network and is only available for trips that cannot be accomplished on regular routes alone. Transit Link trips may drop-off passengers at major transfer points to complete their trip on the regular-route network.

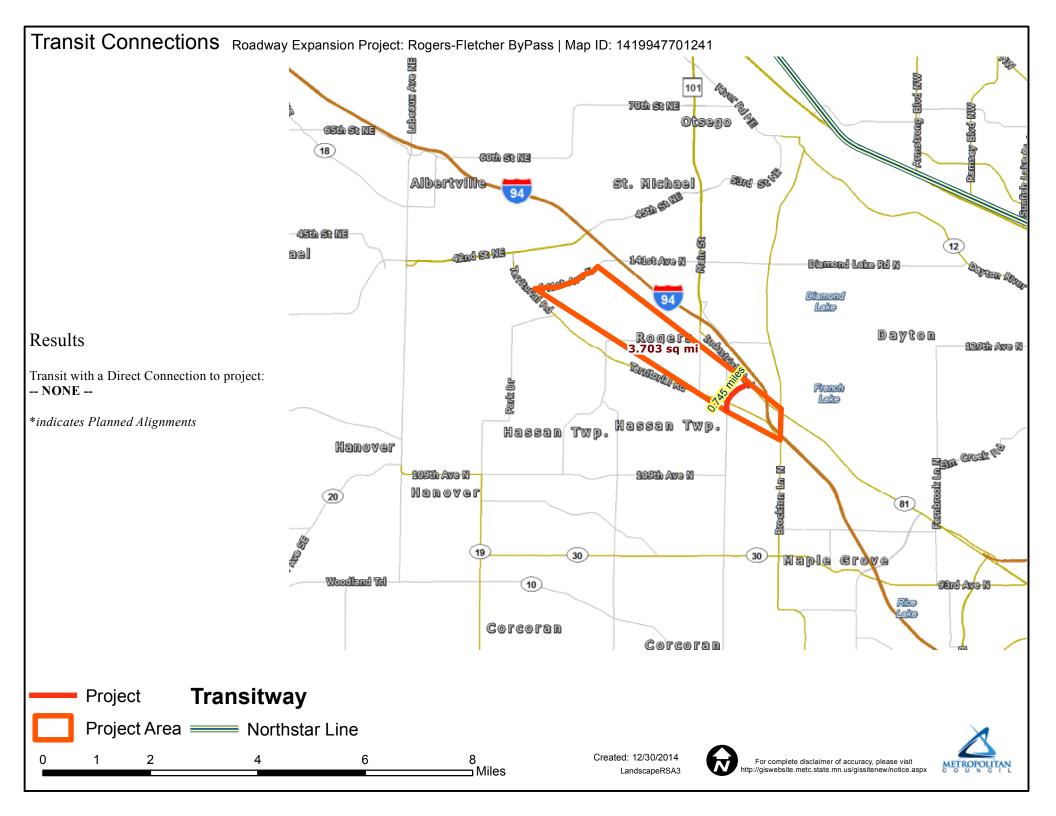
#### ADA Paratransit Services

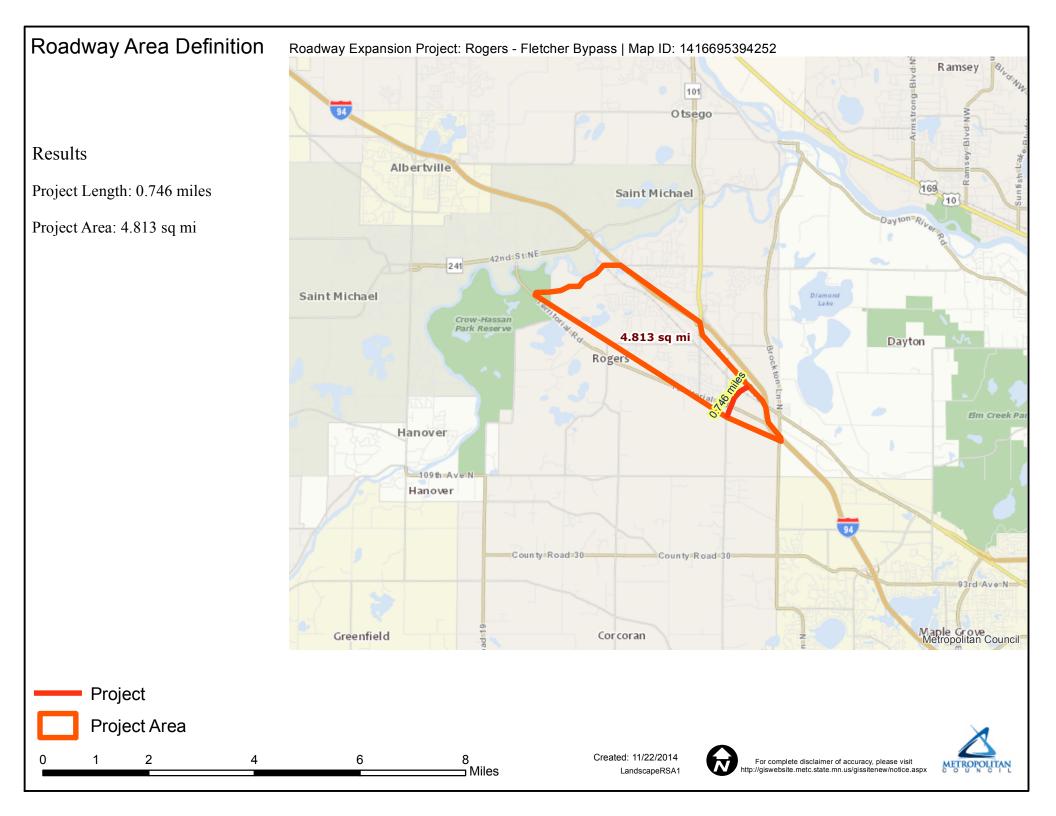
ADA paratransit service is public transportation for certified riders who are unable to use the regular fixed-route bus due to a disability or health condition. In the Twin Cities region, the Metropolitan Council oversees all ADA paratransit services. Metro Mobility contracts with ADA paratransit service providers, who provide customers with "first-door-through-first-door" transportation.

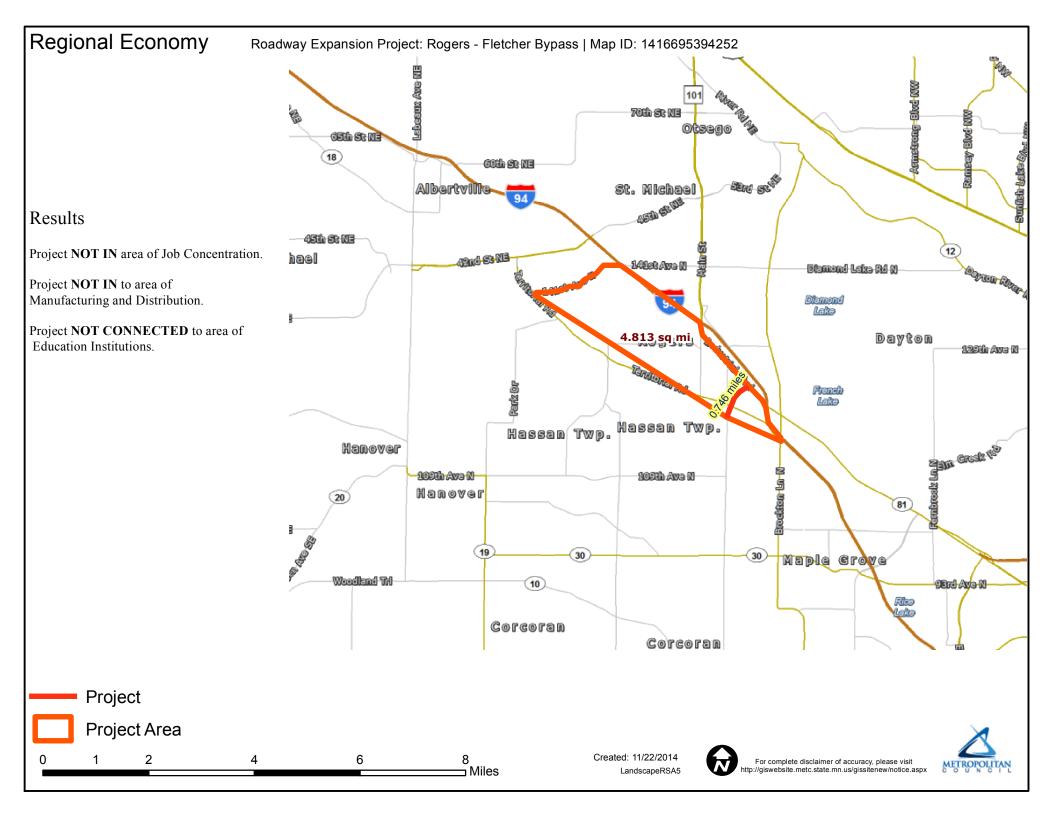


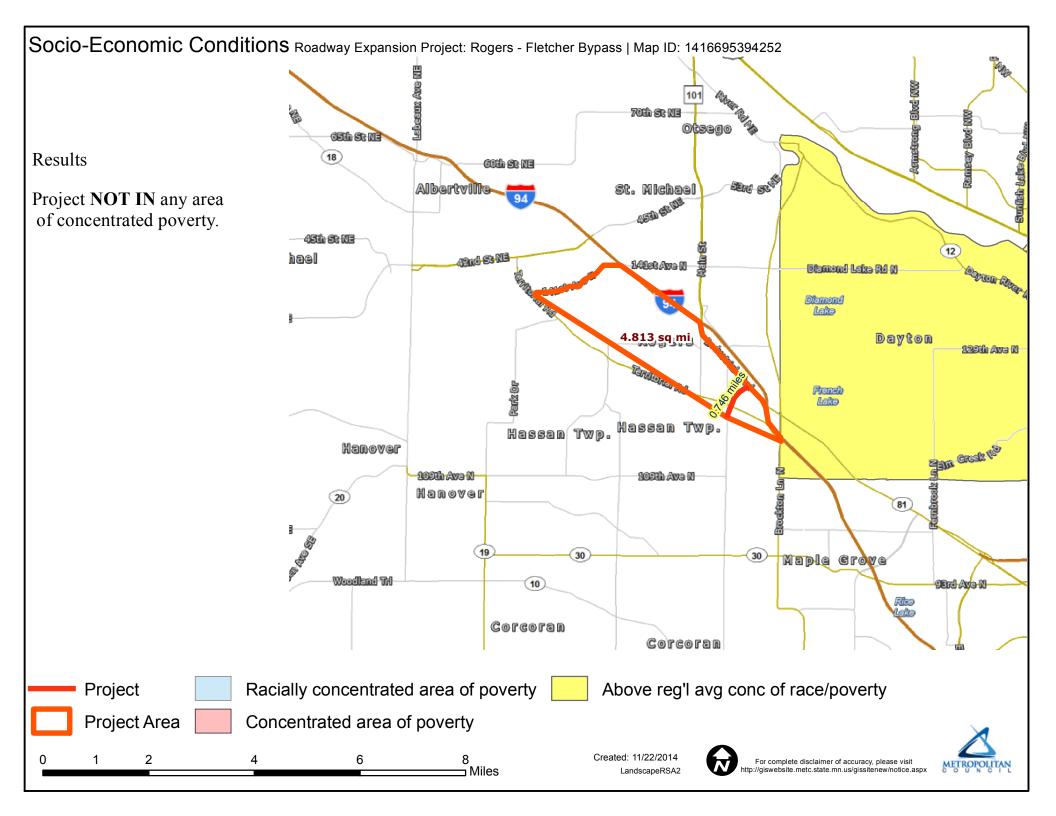












Direction	All	
Volume (vph)	914	
Total Delay / Veh (s/v)	8	
CO Emissions (kg)	0.98	
NOx Emissions (kg)	0.19	
VOC Emissions (kg)	0.23	

Direction	All	
Volume (vph)	697	
Total Delay / Veh (s/v)	3	
CO Emissions (kg)	0.61	
NOx Emissions (kg)	0.12	
VOC Emissions (kg)	0.14	

Direction	All	
Volume (vph)	1106	
Total Delay / Veh (s/v)	3	
CO Emissions (kg)	0.86	
NOx Emissions (kg)	0.17	
VOC Emissions (kg)	0.20	

Direction	All	
Volume (vph)	841	
Total Delay / Veh (s/v)	1	
CO Emissions (kg)	0.58	
NOx Emissions (kg)	0.11	
VOC Emissions (kg)	0.14	

Direction	All	
Volume (vph)	914	
Total Delay / Veh (s/v)	8	
CO Emissions (kg)	0.98	
NOx Emissions (kg)	0.19	
VOC Emissions (kg)	0.23	

Direction	All	
Volume (vph)	697	
Total Delay / Veh (s/v)	3	
CO Emissions (kg)	0.61	
NOx Emissions (kg)	0.12	
VOC Emissions (kg)	0.14	

Direction	All	
Volume (vph)	1106	
Total Delay / Veh (s/v)	3	
CO Emissions (kg)	0.86	
NOx Emissions (kg)	0.17	
VOC Emissions (kg)	0.20	

Direction	All	
Volume (vph)	841	
Total Delay / Veh (s/v)	1	
CO Emissions (kg)	0.58	
NOx Emissions (kg)	0.11	
VOC Emissions (kg)	0.14	

Documentation for safety measure calculation for Fletcher Lane extension project.

1) Identify the parallel roadway(s) that will be affected by the project.

The project will draw traffic from CSAH 150 (Main Street), which is approximately ½ mile west of the existing Fletcher Lane alignment.

2) Using crash data for the most recent three years, calculate the existing crash rate for the parallel roadway(s) identified in Step 1.

Crash information for the CSAH 150 (Main Street) corridor was requested and received from MnDOT. The crash rate information is as follows:

Rural segment (Territorial Road to Douglas Drive):

Location	Number of	Daily Entering	Crash Rate*			Severity Rate	
Location	Crashes	Vehicles	Calculated	Average**	Critical***	Calculated	Average**
CSAH 150 (Main Street) between CSAH 116 (Territorial Road) and Douglas Drive (2011-2013)	10	5,200	2.96			3.56	
Metro District				0.7	1.60		1.2
Statewide				0.6	1.49		1.0

Urban segment (Douglas Drive to CSAH 81):

Location	Number of	Daily Entering		Crash Rate*		Severity Rate	
Location	Crashes	Vehicles	Calculated	Average**	Critical***	Calculated	Average**
CSAH 150 (Main Street) between CSAH 116 (Territorial Road) and Douglas Drive (2011-2013)	13	8,700	2.43			2.99	
Metro District				2.1	3.22		3
Statewide				2.0	3.14		2.9

Crash rates included intersection-related crashes.

3) Identify the daily traffic volume that will be relocated from the parallel roadway(s) to the new roadway.

The daily traffic volume that is projected to be diverted from the CSAH 150 (Main Street) corridor due to the construction of the Fletcher Lane extension is 3,000 vehicles per day.

4) Calculate the number of crashes on the parallel roadway(s) using the existing crash rate from Step 2 and the relocated traffic volume to determine the change in number of crashes due to the relocated traffic volume.

The projected number of crashes on CSAH 150 (Main Street) with the rerouted traffic volumes was calculated using the following formula:

Projected number of crashes (3-Year Period) = Existing number of crashes (3-Year Period) \* Projected ADT / Existing ADT

Rural segment:

10 crashes \* (5,200-3,000) / 5,200 = 4.2 crashes (3-Year Period) = 1.4 crashes per year

(5.8 crashes attributed to the 3,000 diverted vehicles)

Urban segment:

13 crashes \* (8,700-3,000) / 8,700 = 8.5 crashes (3-Year Period) = 2.8 crashes per year

(4.5 crashes attributed to the 3,000 diverted vehicles)

5) Identify the average crash rate for the new roadway using MnDOT's average crash rates by roadway type. Using the average crash rate for the new roadway, calculate the number of crashes related to the relocated traffic.

The proposed Fletcher Lane extension will be constructed as a 2-lane undivided urban roadway, which has an average crash rate of 3.4 (for ADTs between 1,500 and 5,000 vehicles per day including intersection crashes).

The number of crashes on this segment is projected to be:

(3 years) \* (0.75 mile segment length) \* (365 days/year) \* (3,000 vehicles/day) \* (3.4 crashes per million entering vehicles per mile of roadway) / 1,000,000 = 8.4 crashes (3-Year Period)

6) Calculate the crash reduction factor using the existing number of crashes on the existing parallel roadway (Step 4) compared to the estimated crashes calculated for the new roadway (Step 5) due to the relocated traffic volume.

Projected number of crashes on new roadway: 8.4

Existing number of crashes on parallel roadway: 23

Crash reduction factor = Projected crashes / existing crashes = (23 + 8.4 - 10.3) / 23 = 0.92

7) The calculated crash reduction factor should be used in the HSIP B/C worksheet.

See attached B/C worksheet

HES worksheet			Control Section Descripti	T.H. / Roadway Fletcher Lane	South of CR 159	Location		SAH 81	]	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township Hennepin Co.	Study Period Begins	Study Period Ends 12/31/2013		
Accide	ent Diaș	gram lodes	Proposed 1 Rear End	l Work	Construct Fletch 2 Sideswipe Same Direction		xtension as 4-3 n Main Line		4,7 Ran off Road		8, 9 Head On/ Sideswipe - Opposite Direction	Pedestrian	6, 90, 99 <b>Other</b>	Total		
Study Period: B Number of		F A B C					1	3				1		1 3		
% Change in Crashes (FHWA CRF Clearinghouse)	PI	PD F A B C PD		-8%	-8%			-8%			-89	6	-8%	19		
Change in Crashes = No. of crashes <b>X</b> % change in	PI	F A B C					-0.08 -0.16				-0.0	8		-0.08		
crashes PD -0.32 -					-0.48 2016	Type of	-0.16 Study Period: Change in	-0.24 Annual Change in		Cost per	-0.1	6	-0.16 B/C=	-1.52 0.07		
Project Cost (exclude Right of Way)\$ 3,336,000Right of Way Costs (optional)						Crash F A	Crashes	Crashes	\$ \$	Crash 6,800,000 390,000	Benefit	Using present B= C=	\$	<sup>s,</sup> 245,602 336,000		
Capital Recovery         1. Discount Rate       4.5%         2. Project Service Life (n)       20						B C PD Total	-0.08 -0.24 -1.52	-0.03 -0.08 -0.51	\$	121,000 75,000 12,000	\$ 6,000 \$ 6,080	See "Calculations" sheet for amortization.				

CSAH 150 (Main Street) crashes provided by MnDOT (Territorial Road to Douglas Drive)

Sys	Ref_Point	Crash_Num	Month	Day	Year	DyWk	Time	Sev	Diag	Junc	Туре	LIT	Wthr1	Surf	V1Type	V1Dir	V1Act	V1Fac1	V2Type	V2Dir	V2Act	V2Fac1
04	000+00.000	111460127	5	26	2011	5-Thu	1454	N	9	2	1	1	1	1	2	2	6	10	1	5	11	1
04	000+00.000	113190203	11	14	2011	2-Mon	1731	С	3	2	1	6	1	1	3	3	6	2	1	7	1	1
04	000+00.000	120710108	3	9	2012	6-Fri	1444	N	9	2	1	1	1	1	35	8	6	1	1	90	17	11
04	000+00.000	122900033	10	16	2012	3-Tue	0852	N	1	1	1	1	1	1	1	1	5	4	1	1	10	14
04	000+00.000	132840060	10	11	2013	6-Fri	0845	N	5	2	1	1	2	1	2	5	6	2	1	3	6	1
04	000+00.003	110820129	3	23	2011	4-Wed	0833	N	1	2	1	1	7	5	1	5	1	3	1	5	10	1
04	009+00.260	112660074	9	23	2011	6-Fri	0830	N	5	2	1	1	1	1	1	7	1	1	1	2	6	2
04	009+00.261	112230157	8	11	2011	5-Thu	1643	С	8	2	1	1	1	1	1	7	1	1	2	2	6	2
04	000+00.240	110170140	1	17	2011	2-Mon	1317	N	5	4	1	1	4	2	1	5	6	2	4	1	1	1
04	000+00.240	140030021	12	31	2013	3-Tue	1701	Ν	2	4	1	4	2	5	1	5	6	8	1	5	15	1

CSAH 150 (Main Street) crashes provided by MnDOT (Douglas Drive to CSAH 81)

Sys	Ref_Point	Crash_Num	Month	Day	Year	DyWk	Time	Sev	Diag	Junc	Туре	LIT	Wthr1	Surf	V1Type	V1Dir	V1Act	V1Fac1	V2Type	V2Dir	V2Act	V2Fac1
10	000+00.000	110190355	1	19	2011	4-Wed	1830	N	1	5	1	4	1	4	4	1	1	1	3	1	5	2
05	001+00.831	133500144	12	16	2013	2-Mon	1241	N	9	1	1	1	4	5	2	3	1	1	3	7	1	46
05	001+00.834	112220028	8	9	2011	3-Tue	1856	В	3	4	1	1	1	1	1	5	1	1	1	8	6	2
04	000+00.910	120840015	3	23	2012	6-Fri	1708	N	2	1	1	1	1	1	1	1	14	15				
04	000+00.919	113500228	12	16	2011	6-Fri	1630	Ν	2	1	1	1	2	1	1	5	1	1	3	5	8	15
04	019+00.623	123630195	12	28	2012	6-Fri	1613	N	2	7	1	1	2	4	35	4	5	8	2	4	5	1
04	019+00.631	131290137	5	9	2013	5-Thu	1921	N	1	4	1	1	2	1	2	1	1	4	3	1	1	1
04	019+00.648	111240052	5	4	2011	4-Wed	0720	N	2	2	1	1	1	1	1	2	5	15	3	2	11	1
04	019+00.648	112800100	10	6	2011	5-Thu	1708	N	2	7	11	3	1	1	35	1	6	10	3	1	6	1
04	019+00.648	121580114	6	6	2012	4-Wed	1405	N	5	4	1	1	1	1	1	8	4	2	1	5	1	1
04	019+00.650	122390066	8	26	2012	1-Sun	1239	N	1	4	1	1	1	1	2	5	1	4	4	5	11	1
04	019+00.685	111510057	5	30	2011	2-Mon	1233	Ν	98	90	1	1	1	1	2	1	7	8	1	3	1	1
04	019+00.694	123560195	12	21	2012	6-Fri	1451	С	2	3	1	1	1	1	1	5	1	8	3	5	1	1

