



Application

01969 - 2014 Roadway System Management

02303 - Regional Signal Optimization CMAQ

Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted

Submitted Date: 11/26/2014 11:31 AM

Primary Contact

Name:* Michael Joseph Fairbanks
Salutation First Name Middle Name Last Name

Title: Principal Engineer

Department: MnDOT Metro Traffic

Email: mike.fairbanks@state.mn.us

Address: 1500 West County B-2

***** Roseville Minnesota 55113
City State/Province Postal Code/Zip

Phone:* 651-234-7819
Phone Ext.

Fax: 651-234-7850

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

Organization Information

Name: STATE OF MN

Jurisdictional Agency (if different):

Organization Type:

State Government

Organization Website:

Address:

MN DOT

MS725

1500 W COUNTY RD B2 #250

*

ROSEVILLE

Minnesota

55113

City

State/Province

Postal Code/Zip

County:

Ramsey

Phone:*

651-366-3452

Ext.

Fax:

PeopleSoft Vendor Number

0000024577A36

Project Information

Project Name

Regional Signal Optimization CMAQ

Primary County where the Project is Located

Multiple

Jurisdictional Agency (If Different than the Applicant):

This project will optimize the timing of traffic signals on arterials in the seven county metropolitan area. MnDOT will facilitate the project by hiring qualified consultants to collect the necessary data, develop new timing plan, implement the plans with the assistance of the local agency and then develop a before/after study documenting the benefits. The local agency will be required to fund the twenty percent match of each project. This funds will be used to signal optimization and not for the upgrade of equipment.

MnDOT is submitting the application for the region and will be using the TH 47 CMAQ application as a representative arterial for the solicitation.

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

Regional Roadway classifications include:

Major Collector

Minor Collector

A-Minor Augmentor

A-Minor Reliever

A-Minor Expander

A-Minor Connector

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

Project Length (Miles)

7.0

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.

2030 Transportation Policy Plan (amended 2013)

Connection to Local Planning

Statewide Multimodal Transportation Plan

Project Funding

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

If yes, please identify the source(s)

Federal Amount \$2,000,000.00

Match Amount \$500,000.00

Minimum of 20% of project total

Project Total \$2,500,000.00

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 Funds)

Preferred Program Year

Select one: 2018

MnDOT State Aid Project Information: Roadway Projects

County, City, or Lead Agency MnDOT
Major Collector

Minor Collector

Functional Class of Road A-Minor Augmentor

A-Minor Reliever

A-Minor Expander

A-Minor Connector

Road System TH, CSAH, MSAS, Co. Rd, City Street

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

Name of Road Multiple

Example; 1st ST., MAIN AVE

Zip Code where Majority of Work is Being Performed 55113

(Approximate) Begin Construction Date 07/03/2017

(Approximate) End Construction Date 06/29/2018

LOCATION

From:

(Intersection or Address)

Various Locations

Do not include legal description;

Include name of roadway if majority of facility runs adjacent to a single corridor.

To:

(Intersection or Address)

Various Locations

Type of Work

Examples: grading, aggregate base, bituminous base, bituminous surface, sidewalk, signals, lighting, guardrail, bicycle path, ped ramps, bridge, Park & Ride, etc.)

Old Bridge/Culvert?

New Bridge/Culvert?

Structure is Over/Under

(Bridge or culvert name):

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES

Cost

Mobilization (approx. 5% of total cost)	\$125,000.00
Removals (approx. 5% of total cost)	\$0.00
Roadway (grading, borrow, etc.)	\$0.00
Roadway (aggregates and paving)	\$0.00
Subgrade Correction (muck)	\$0.00
Storm Sewer	\$0.00
Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$0.00
Traffic Control	\$125,000.00
Striping	\$0.00
Signing	\$0.00
Lighting	\$0.00
Turf - Erosion & Landscaping	\$0.00
Bridge	\$0.00
Retaining Walls	\$0.00
Noise Wall	\$0.00
Traffic Signals	\$2,250,000.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00

RR Crossing	\$0.00
Roadway Contingencies	\$0.00
Other Roadway Elements	\$0.00
Totals	\$2,500,000.00

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	\$0.00
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	\$0.00

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	\$2,500,000.00
Construction Cost Total	\$2,500,000.00
Transit Operating Cost Total	\$0.00

Requirements - All Projects

All Projects

1. The project must be consistent with the goals and policies in these adopted regional plans: Thrive MSP 2040 (2014), the 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 project 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.

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.

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 MnDOT's Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities manual. In the case of a federally funded trunk highway project, the policy guidelines should be read as if the funded trunk highway route is under local jurisdiction.

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

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 sufficiency 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 Rehabilitation Projects Only

11. The bridge must have a sufficiency 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
2303 State of MN HSIP.pdf	Crash B/C	32 KB

Measure A: Functional Classification

Address how the project fulfills its role in the regional economy as identified by its current functional classification. If the project serves a system of routes, respond using the route with the highest functional classification. This system must include a Non-Freeway Principal Arterial or an "A" Minor Arterial.

Reference the Roadway Area Definition map generated at the beginning of the application process. Report the total area and project length, as depicted on the Roadway Project Summary map, to calculate the average distance between the project route (highest functional classification) and the closest parallel A Minor Arterials or Principal Arterials on both sides of the project.

Upload the "Roadway Area Definition" map used for this measure.

Area	8.1
Project Length	7.0
Average Distance	1.1571
Upload Map	TH 47 CMAQ Roadway Area.pdf

Measure B: Current Heavy Commercial Traffic

Location	TH 47 @ 53rd Ave. N
Current daily heavy commercial traffic volume	1200.0

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	Yes
Direct connection to or within a mile of a Manufacturing/Distribution Location	Yes
Direct connection to or within a mile of an Educational Institution	Yes

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

Response (Limit 700 characters; approximately 100 words)

Upload Map

TH 47 CMAQ Regional Economy.pdf

Measure A: Current Daily Person Throughput

Location	TH 47 @ 57th Ave. N
Current AADT Volume	39000.0
Existing Transit Routes on the Project	10, 11, 25, 801, 805, 824, 825, 831, 852, 854, 860

Response - Daily Person Throughput

Average Annual Daily Transit Ridership	2183.0
Current Daily Person Throughput	52883.0

Measure B: 2030 Forecast ADT

Use Metropolitan Council model to determine forecast (2030) ADT volume	Yes
METC Staff - Forecast (2030) ADT volume	45000.0
OR	
Approved county or city travel demand model to determine forecast (2030) ADT volume	
Forecast (2030) ADT volume	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

Yes

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.

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

Upload Map

TH 47 CMAQ Socio-Economic.pdf

Measure B: Affordable Housing

City/Township

Segment Length (Miles)

0

Total Project Length

Total Project Length 7.0

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

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

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

Total Project Length (Miles) 0
Total Housing Score 0

Measure A: Equipment Improvements and Installation Year

Equipment to be Improved Signal Controller
Date of Equipment Installation 04/15/1998

Measure A: Cost Effectiveness of Vehicle Delay Reduction

Total Project Cost from Cost Sheet \$2,500,000.00
Total Peak Hour Vehicle Delay Without The Project 594.0
Total Peak Hour Vehicle Delay With The Project 504.0
Total Peak Hour Vehicle Delay Reduced by Project 90.0
Cost Effectiveness \$27,777.78
Synchro or HCM Reports TH 47 - After.syn

Measure B: Cost Effectiveness of Emissions Reduction

Total Project Cost from Cost Sheet \$2,500,000.00
Total Peak Hour Kilograms Reduced by Project 7.2
Cost Effectiveness \$347,222.22

Measure A: Benefit/Cost of Crash Reduction

Project Benefit/Cost Ratio	2.35
Worksheet Attachment	Regional.xls

Measure A: Transit Connections

Existing Routes Directly Connected to the Project	10, 11, 25, 801, 805, 824, 825, 831, 852, 854, 860
Planned Transitways directly connected to the project (alignment and mode determined and identified in the 2030 TPP)	Central Avenue Arterial BRT
Upload Map	TH 47 CMAQ Transit Connections.pdf

Response

Met Council Staff Data Entry Only

Route Ridership	5532701.0
Transitway Ridership	4192000.0

Measure B: Bicycle and Pedestrian Connections

Response (Limit 1,400 characters; approximately 200 words)	<p>The Rice Creek West Regional Trail has access to the TH 47 corridor near 69th Ave. Pedestrian accommodations are provided at the following intersections (most of which are ADA compliant): 37th, 40th, 44th, 49th, 53rd, 57th, 61st, Mississippi Street, 69th, 73rd, Osborne Road, 81st, 85th, TH 10 South Ramp, and TH 10 North Ramp with TH 47. Throughout the corridor there are numerous commercial and mixed use attractions including Northtown Mall.</p>
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Measure C: Multimodal Facilities

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

There are no bicycle, pedestrian, or transit elements included as part of this project. The Rice Creek West Regional Trail has access to the TH 47 corridor near 69th Ave. Pedestrian accommodations are provided at the following intersections (most of which are ADA compliant): 37th, 40th, 44th, 49th, 53rd, 57th, 61st, Mississippi Street, 69th, 73rd, Osborne Road, 81st, 85th, TH 10 South Ramp, and TH 10 North Ramp with TH 47. Routes 10, 11, 25, 801, 805, 824, 825, 831, 852, 854, 860 and the Church of St. William plus the Northtown Transit Center are included in this corridor.

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 Yes
100%

Stakeholders have been identified
40%

Stakeholders have not been identified or contacted
0%

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

Layout or Preliminary Plan completed Yes
100%

Layout or Preliminary Plan started
50%

Layout or Preliminary Plan has not been started
0%

Anticipated date or date of completion

3) Environmental Documentation (10 Percent of Points)

EIS

EA

PM

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

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:

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 waterfowl refuges; 6f is outdoor recreation lands where Land and Water Conservation Funds were used for planning, acquisition, or development of the property)

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 Yes

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

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

7)Railroad Involvement (25 Percent of Points)

No railroad involvement on project Yes

100%

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

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

60%

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

40%

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

0%

Anticipated date or date of executed Agreement

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

9)Letting

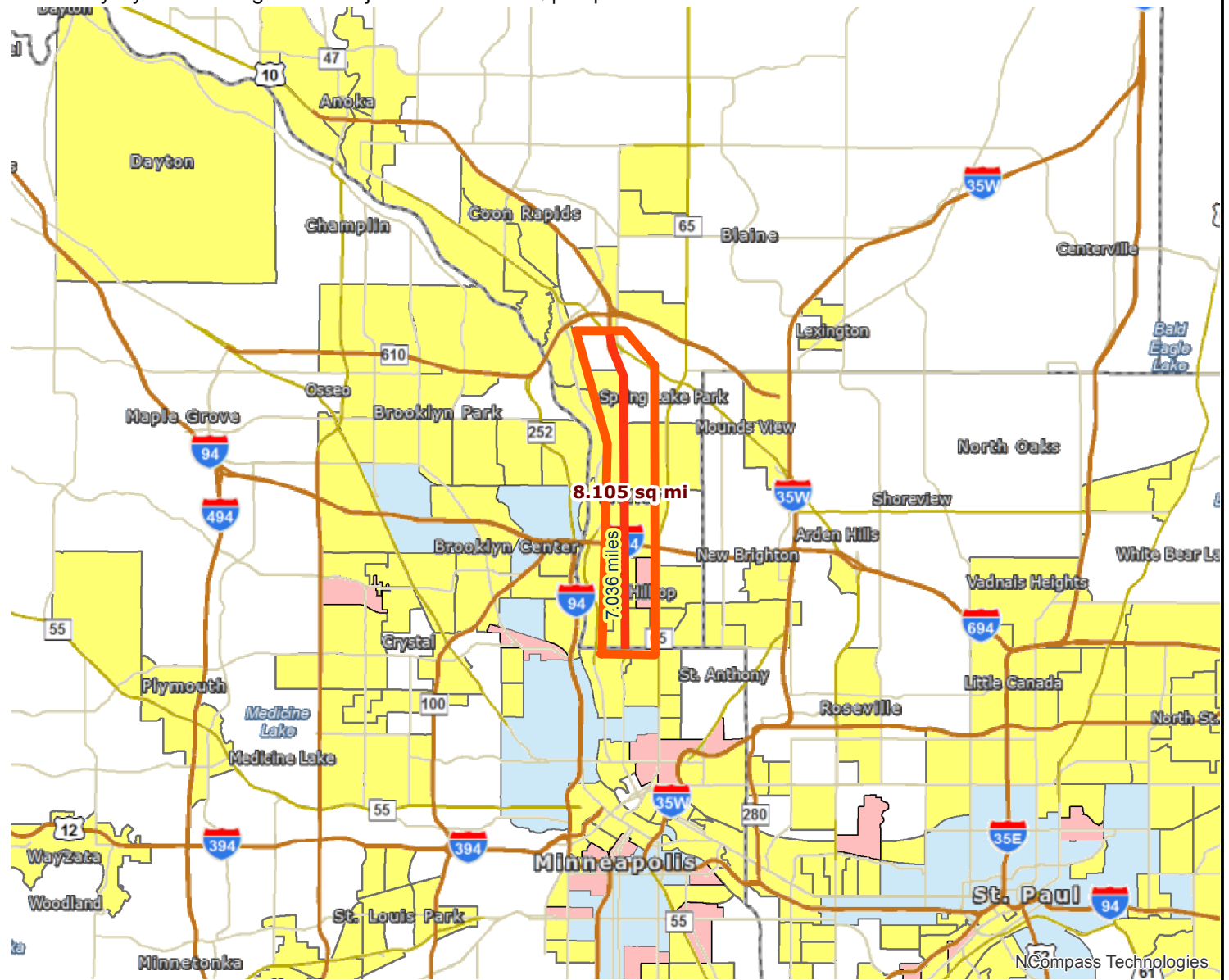
Anticipated Letting Date

B/C worksheet		Control Section	T.H. / Roadway	Location			Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
		0205	47	from 37th St N to TH 10			005+00.371	020+00.665	Fridley	1/1/2011	12/31/2013
		Description of Proposed Work									
		ATMS - 16 Signals, fiber interconnect & cameras									
Accident Diagram Codes		1	2	3	5	4, 7	8, 9		6, 90, 98, 99		
								Pedestrian	Other	Total	
Study Period: Number of Crashes	Fatal	F					1			1	2
	Personal Injury (PI)	A	2			1	4	1		2	10
		B	23	2	4	9	4	1		9	
		C	40	3	12	6	6	3		10	80
Property Damage	PD	57	12	16	16	17	5		11	134	
% Change in Crashes	Fatal	F					-8%			-8%	
	PI	A	-8%			-8%	-8%	-8%		-8%	
		B	-8%	-8%	-8%	-8%	-8%	-8%		-8%	
		C	-8%	-8%	-8%	-8%	-8%	-8%		-8%	
Property Damage	PD	-8%	-8%	-8%	-8%	-8%	-8%		-8%		
Change in Crashes <small>= No. of crashes X % change in crashes</small>	Fatal	F					-0.08			-0.08	-0.16
	PI	A	-0.16			-0.08	-0.32	-0.08		-0.16	-0.80
		B	-1.84	-0.16	-0.32	-0.72	-0.32	-0.08		-0.72	-4.16
		C	-3.20	-0.24	-0.96	-0.48	-0.48	-0.24		-0.80	-6.40
Property Damage	PD	-4.56	-0.96	-1.28	-1.28	-1.36	-0.40		-0.88	-10.72	
Year (Safety Improvement Construction)		2018									
Project Cost (exclude Right of Way)		\$ 2,500,000		Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit		<div style="border: 1px solid black; padding: 5px; display: inline-block;">B/C= 2.35</div> <i>Using present worth values,</i> B= \$ 5,874,893 C= \$ 2,500,000 <i>See "Calculations" sheet for amortization.</i>	
Right of Way Costs (optional)				F	-0.16	-0.05	\$ 1,100,000	\$ 58,667			
Traffic Growth Factor		3%		A	-0.80	-0.27	\$ 550,000	\$ 146,667			
Capital Recovery				B	-4.16	-1.39	\$ 160,000	\$ 221,867			
1. Discount Rate		4.5%		C	-6.40	-2.13	\$ 81,000	\$ 172,800			
2. Project Service Life (n)		10		PD	-10.72	-3.57	\$ 7,400	\$ 26,443			
				Total				\$ 626,443			

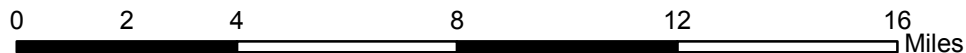
Updated 9-5-2014

Results

Project IN area of above average concentration of race or poverty.



- Project
- Racially concentrated area of poverty
- Above reg'l avg conc of race/poverty
- Project Area
- Concentrated area of poverty



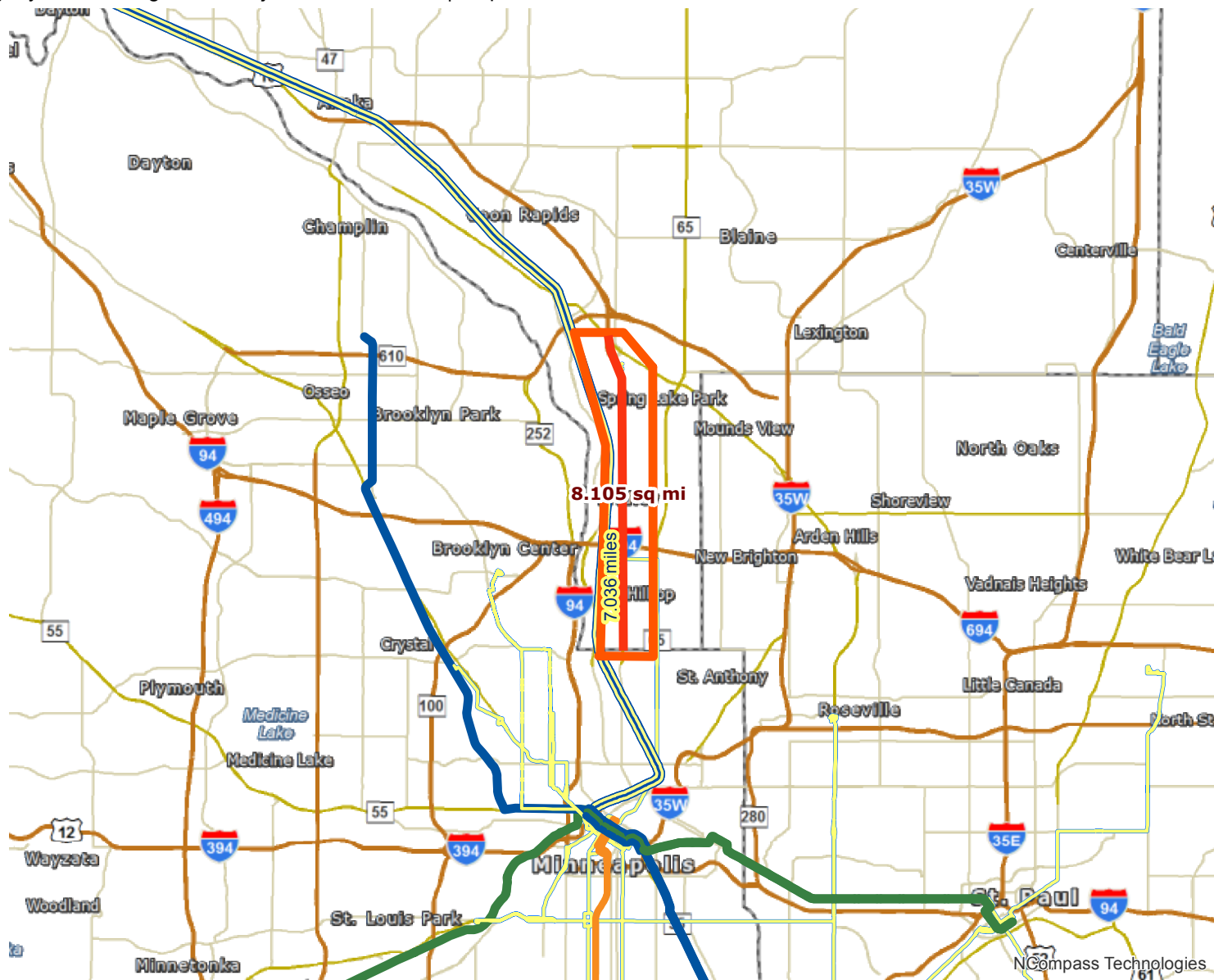
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For complete disclaimer of accuracy, please visit <http://giswebsite.metc.state.mn.us/gisitenew/notice.aspx>



North Arrow Technologies



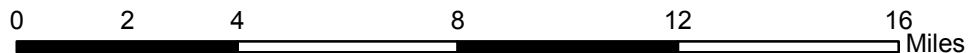
Results

Transit with a Direct Connection to project:
10 11 25 801 805 824 825 831 852 854 860

*Central

*indicates Planned Alignments

- ▬ Project
- Project Area
- ▬ Transitway
- ▬ Blue / Green Line
- ▬ Blue Line
- ▬ Green Line
- ▬ Light Rail, Green Line Extension
- ▬ Light Rail, Blue Line Extension
- ▬ Northstar Line
- ▬ Arterial BRT
- ▬ BRT, Orange Line
- ▬ Planned Alignments



Created: 10/28/2014
LandscapeRSA3



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<http://giswebsite.metc.state.mn.us/gisitenew/notice.aspx>



NCcompass Technologies