Application

04774 - 2016 Roadway Modernization

05396 - CSAH 7 Roadway Reconstruction

Regional Solicitation - Roadways Including Multimodal Elements

Status:	Submitted
Submitted Date:	07/15/2016 2:10 PM

Primary Contact

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	Salutation	First Name	Middle Name	Last Name
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What Grant Programs are you most interested in?	Regional Solicitation - Roadways Including Multimodal Elements			

Organization Information

Name:	ANOKA COUNTY

Jurisdictional Agency (if different):

Organization Type: County Government

Organization Website:

Address: 1440 BUNKER LAKE BLVD

*	ANDOVER	Minnesota	55304
	City	State/Province	Postal Code/Zip

County: Anoka

Phone:* 763-862-4200 Ext.

Fax:

PeopleSoft Vendor Number 0000003633A15

Project Information

Project Name CSAH 7 Reconstruction from Aldrich to 40th Lane

Primary County where the Project is Located Anoka

Jurisdictional Agency (If Different than the Applicant):

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

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

Reconstruction of CSAH 7 (7th Avenue) as a 4-lane divided roadway with a concrete median and dedicated right and left-turn lanes

TIP Description Guidance (will be used in TIP if the project is selected for funding) CSAH 7 Reconstruction from Aldrich to 40th Lane

Project Length (Miles) 0.5

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 $2,448,000.00

Match Amount $612,000.00

Minimum of 20% of project total

Project Total $3,060,000.00

Match Percentage 20.0%

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

Source of Match Funds Anoka County Highway Fund

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

Preferred Program Year

Select one: 2021

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

Additional Program Years:

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

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$204,100.00
Removals (approx. 5% of total cost)	$158,300.00
Roadway (grading, borrow, etc.)	$177,300.00
Roadway (aggregates and paving)	$647,400.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$342,400.00
Ponds	$186,000.00
Concrete Items (curb & gutter, sidewalks, median barriers)	$787,700.00
Traffic Control	$22,400.00
Striping	$26,400.00
Signing	$11,700.00
Lighting	$0.00
Turf - Erosion & Landscaping	$92,600.00
Bridge	$0.00
Retaining Walls	$16,900.00
Noise Wall (do not include in cost effectiveness measure)	$0.00
Traffic Signals	$318,300.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$0.00
Roadway Contingencies	$0.00
Other Roadway Elements	$7,500.00
Totals	**$2,999,000.00**

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	$61,000.00
Sidewalk Construction	$0.00
On-Street Bicycle Facility Construction	$0.00
Right-of-Way	$0.00
Pedestrian Curb Ramps (ADA)	$0.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	$0.00
Pedestrian-scale Lighting	$0.00
Streetscaping	$0.00
Wayfinding	$0.00
Bicycle and Pedestrian Contingencies	$0.00
Other Bicycle and Pedestrian Elements	$0.00
Totals	**$61,000.00**

Specific Transit and TDM Elements

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

Transit Operating Costs

Number of Platform hours	0
Cost Per Platform hour (full loaded Cost)	$0.00

Substotal	$0.00
Other Costs - Administration, Overhead,etc.	$0.00

Totals

Total Cost	$3,060,000.00
Construction Cost Total	$3,060,000.00
Transit Operating Cost Total	$0.00

Requirements - All Projects

All Projects

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

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

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

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

Goal B: Safety and Security ? The regional transportation system is safe and secure for all users (page 60)

- Objectives: Reduce crashes and improve safety and security for all modes of passenger travel and freight transport.

Strategies: Regional transportation partners will incorporate safety and security considerations for all modes and users throughout the process of planning, funding, construction, and operation.

Goal C: Access to Destinations ? People and businesses prosper by using a reliable, affordable, and efficient multimodal transportation system that connects them to destinations throughout the region and beyond (page 62).

- Objectives: Increase the availability of multimodal travel options, especially in congested highway corridors.

- Increase travel time reliability and predictability for travel on highway and transit systems.

- Ensure access to freight terminals such as river ports, airports, and intermodal rail yards.

Strategies: C7. Regional transportation partners will manage and optimize the performance of the principle arterial system as measured by person throughput.

Strategies: C8. Regional transportation partners will prioritize all regional highway capital investments based on a project?s expected contributions to achieving the outcomes, goals, and objectives identified in Thrive MSP 2040 and the Transportation Policy Plan.

Strategies: C9. The Council will support investments in A-minor arterials that build, manage, or improve the system?s ability to supplement the capacity of the principal arterial system and support access to the region?s job, activity, and industrial and manufacturing concentrations.
Goal D: Competitive Economy ? The regional transportation system supports the economic competitiveness, vitality, and prosperity of the region and state (page 64).

- Objectives: Support the region?s economic competitiveness through the efficient movement of freight.

Goal F: Leveraging Transportation Investment to Guide Land Use ? The leverages transportation investments to guide land use and development patterns that advance the regional vision of stewardship, prosperity, livability, equity, and sustainability (page 70).

- Objectives: Encourage local land use design that integrates highways, streets, transit, walking, and bicycling.

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

Anoka 2030 Transportation Plan (2008) Chapter 8, pages 2 - 4

List the applicable documents and pages:

Anoka County 2030 Transportation Plan (2009), pages 76 (4-6), 77 (4-7), 240

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Roadways Including Multimodal Elements

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

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

Roadway Expansion and Reconstruction/Modernization projects only:

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

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

Bridge Rehabilitation/Replacement projects only:

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

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

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

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

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

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

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

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

Requirements - Roadways Including Multimodal Elements

Project Information-Roadways

County, City, or Lead Agency	Anoka County
Functional Class of Road	A Minor Expander Arterial
Road System *TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET*	CSAH
Road/Route No. *i.e., 53 for CSAH 53*	7
Name of Road *Example; 1st ST., MAIN AVE*	7th Avenue
Zip Code where Majority of Work is Being Performed	55303
(Approximate) Begin Construction Date	03/18/2021
(Approximate) End Construction Date	11/11/2021

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

From: **(Intersection or Address)**	CSAH 7 and Aldrich Avenue
To: **(Intersection or Address)** *DO NOT INCLUDE LEGAL DESCRIPTION*	CSAH 7 and 40th Lane

Or At

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

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

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

Expander/Augmentor/Connector/Non-Freeway Principal Arterial

Select one:	Expander
Area	1.033
Project Length	0.5
Average Distance	2.066
Upload Map	1467991199147_CSAH 7_R A D.pdf

Reliever: Relieves a Principal Arterial that is a Freeway Facility

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

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

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

Non-Freeway Facility Volume/Capacity Table

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

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

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

Existing Employment within 1 Mile:	3820
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	640
Existing Students:	0
Upload Map	1467991263870_CSAH 7_R E.pdf

Measure C: Current Heavy Commercial Traffic

Location:	On CSAH 7, south of north of Aldrich Avenue
Current daily heavy commercial traffic volume:	850
Date heavy commercial count taken:	May, 2016

Measure D: Freight Elements

Response (Limit 1,400 characters; approximately 200 words)	The project has taken into consideration heavy commercial vehicles. This includes turning lanes, paved shoulders, and appropriate turning-radius at intersections to accommodate trucks.

Measure A: Current Daily Person Throughput

Location	on CSAH 7, north of Aldrich Avenue
Current AADT Volume	14200
Existing Transit Routes on the Project	2
For New Roadways only, list transit routes that will be moved to the new roadway	
Upload Transit Map	1467991816477_CSAH 7_T C.pdf

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	18460.0

Measure B: 2040 Forecast ADT

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

Measure A: Project Location and Impact to Disadvantaged Populations

Select one:

Project located in Area of Concentrated Poverty with 50% or more of residents are people of color (ACP50):	
Project located in Area of Concentrated Poverty:	
Projects census tracts are above the regional average for population in poverty or population of color:	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:	

This improvement project is located near the entrance to Anoka High School with an enrollment of over 2,500 students, of which nearly 30% are of which qualify for the free or reduced lunch program. CSAH 7 provides a crucial link to disadvantage populations between downtown Anoka and greater Anoka County. More importantly, the corridor provides direct access between established neighborhoods and the regional transportation network (US Hwy. 10), which in turn provides access to jobs throughout the Twin Cities.

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

Consistent with the goals and desired outcomes in Thrive 2040, the project will continue to connect local residents in these neighborhoods (inclusive of all races, ethnicity, incomes, and abilities) with a safe and reliable transportation system to improve their overall quality of life.

CSAH 7 also an important connection between the Northstar station in downtown Anoka. This access is vital in the quality of life in linking disadvantaged populations with active modes or transportation.

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

Upload Map 1467991922354_CSAH 7_S E C.pdf

Measure B: Affordable Housing

City/Township	Segment Length in Miles (Population)
Anoka	0.5
	1

Total Project Length

Total Project Length (Total Population) 0.5

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
Item Deleted	0	0.5	0	0	0
		1	**0**	**0**	**0**

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

Total Project Length (Miles)	0.5
Total Housing Score	0

Measure A: Year of Roadway Construction

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation 2
1972	0.5	986.0	1972.0
	1	**986**	**1972**

Average Construction Year

Weighted Year	1972

Total Segment Length (Miles)

Total Segment Length	0.5

Measure B: Geometric, Structural, or Infrastructure Improvements

Improving a non-10-ton roadway to a 10-ton roadway:	Yes
Response (Limit 700 characters; approximately 100 words)	The roadway, currently a 9-ton roadway, will be reconstructed as a 10-ton roadway.
Improved clear zones or sight lines:	Yes
Response (Limit 700 characters; approximately 100 words)	Sight lines at all intersections/access points will be improved.
Improved roadway geometrics:	Yes

Response (Limit 700 characters; approximately 100 words)	The reconstruction will entail turn lanes at all intersections and access points. Install ADA compliant ramps at pedestrian crossings where none currently exist. Refer to project layout for more information.
Access management enhancements:	Yes
Response (Limit 700 characters; approximately 100 words)	The reconstruction involves the conversion of several full-access intersections into right-in/out only. Refer to project layout for more information.
Vertical/horizontal alignments improvements:	
Response (Limit 700 characters; approximately 100 words)	
Improved stormwater mitigation:	Yes
Response (Limit 700 characters; approximately 100 words)	The reconstruction involves the creation of a detention pond to better manage stormwater runoff.
Signals/lighting upgrades:	Yes
Response (Limit 700 characters; approximately 100 words)	The project will entail improvements to traffic control and lighting.
Other Improvements	Yes
Response (Limit 700 characters; approximately 100 words)	The reconstruction will include the construction of a pedestrian/bicycle trail parallel to the roadway.

Measure A: Congestion Reduction/Air Quality

Total Peak Hour Delay Per Vehicle Without The Project	Total Peak Hour Delay Per Vehicle With The Project	Total Peak Hour Delay Per Vehicle Reduced by Project	Volume (Vehicles per hour)	Total Peak Hour Delay Reduced by the Project:	EXPLANATION of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports
14.0	12.0	2.0	2708	5416.0		1468268664260_CSAH 7 Synchro Report.pdf

Total Delay

Total Peak Hour Delay Reduced	5416.0

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

Total (CO, NOX, and VOC) Peak Hour Emissions Per Vehicle without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Per Vehicle with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced Per Vehicle by the Project (Kilograms):	Volume (Vehicles Per Hour):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
2.68	2.5	0.18	2708.0	487.44
3	**3**		**2708**	**487**

Total

Total Emissions Reduced:	487.44
Upload Synchro Report	

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

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

Total Parallel Roadways

Emissions Reduced on Parallel Roadways	0
Upload Synchro Report	1468351609395_CSAH 7 Synchro Report.pdf

New Roadway Portion:

Cruise speed in miles per hour with the project:	0
Vehicle miles traveled with the project:	0

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

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

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

Transit Projects Not Requiring Construction

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

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment

1)Project Scope (5 Percent of Points)

Meetings or contacts with stakeholders have occurred

100%

Stakeholders have been identified Yes

40%

Stakeholders have not been identified or contacted

0%

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

Layout or Preliminary Plan completed

100%

Layout or Preliminary Plan started Yes

50%

Layout or Preliminary Plan has not been started

0%

Anticipated date or date of completion 09/06/2019

3)Environmental Documentation (5 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% date submitted

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

50%

Document not started Yes

0%

Anticipated date or date of completion/approval 08/03/2018

4)Review of Section 106 Historic Resources (10 Percent of Points)

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

100%

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

80%

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

40%

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

0%

Anticipated date or date of completion of historic/archeological review:

Project is located on an identified historic bridge

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

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

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

100%

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

100%

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

Yes

80%

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

50%

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

30%

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

0%

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

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

100%

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

100%

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

75%

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

50%

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

25%

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

Yes

0%

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

0%

Anticipated date or date of acquisition

05/01/2020

7)Railroad Involvement (25 Percent of Points)

No railroad involvement on project

Yes

100%

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

100%

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

60%

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

40%

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

0%

Anticipated date or date of executed Agreement

8)Interchange Approval (15 Percent of Points)*

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

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

Yes

100%

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

100%

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

0%

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

Construction plans completed/approved (include signed title sheet)

100%

Construction plans submitted to State Aid for review

75%

Construction plans in progress; at least 30% completion	Yes
50%	
Construction plans have not been started	
0%	
Anticipated date or date of completion	12/06/2019

10)Letting

Anticipated Letting Date	03/04/2021

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

Crash Modification Factor Used:	41.0
Rationale for Crash Modification Selected:	Text: CR 1 = Installation of a Median CR 2 = Change to FYA ? Protected/Permissive Left-turn These improvements are part of the project. See the attachment for the HSIP Worksheets and additional information.
(Limit 1400 Characters; approximately 200 words)	
Project Benefit ($) from B/C Ratio	$3,630,584.00
Worksheet Attachment	1468528141843_CSAH 7 HSIP Worksheets and Attachments.pdf

Roadway projects that include railroad grade-separation elements:

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

Measure A: Multimodal Elements and Existing Connections

Response (Limit 2,800 characters; approximately 400 words)	The existing multiuse trail adjacent to the roadway and crosswalks throughout the corridor will be improved as part of the project to ensure that the safety, security and traveling comfort of non-motorized travelers are enhanced. All intersections will include marked ADA compliant crosswalks. The project's shoulders will provide a level of resiliency to the non-motorized network, offering an alternate path through the corridor in the event of an incident requiring a temporary closure of the trail. The provision of a median will provide a refuge pedestrian for crossing the roadway at marked crosswalks. Please refer to layout for more details.

Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form):	$3,060,000.00
Enter Amount of the Noise Walls:	$0.00
Total Project Cost subtract the amount of the noise walls:	$3,060,000.00
Points Awarded in Previous Criteria	
Cost Effectiveness	$0.00

Other Attachments

File Name	Description	File Size
Anoka County Board Resolution in Support of CSAH 7 Project.pdf	Anoka County Board Resolution of Support for Project	670 KB
CSAH 7 at 38th_Synchro Summary Reports.pdf	Synchro Summary Reports	33 KB
CSAH 7 Layout.pdf	Project Layout	315 KB
Project Area and Streetview.pdf	Project Area and Streetview	286 KB

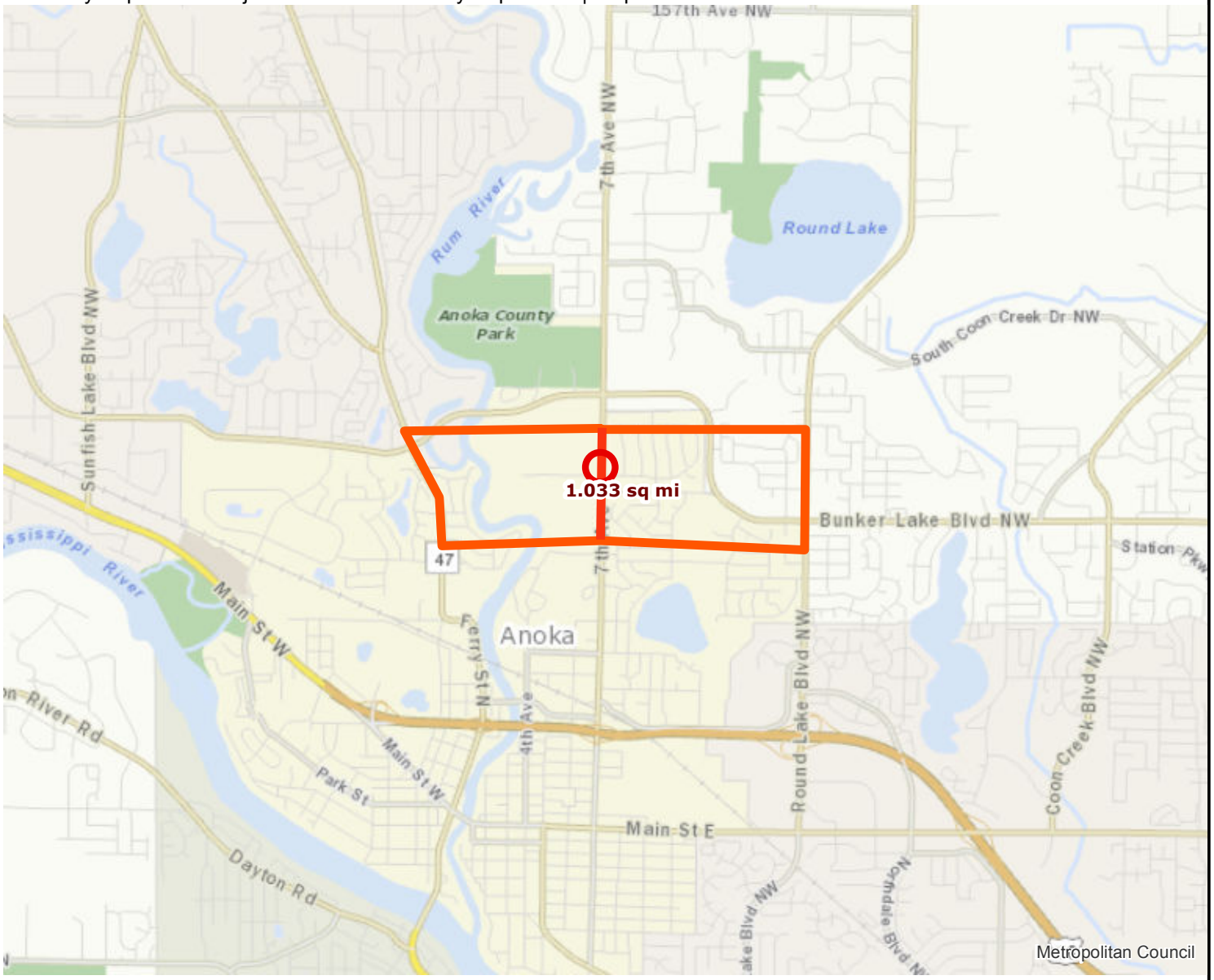
Roadway Area Definition

Roadway Expansion Project: CSAH 7 Roadway Expansion | Map ID: 1467060223657

Results

Project Length: 0.547 miles

Project Area: 1.033 sq mi



Project Points
Project
Project Area
Principal Arterials
A Minor Arterials
Principal Arterials Planned
A Minor Arterials Planned

0 0.475 0.95 1.9 2.85 3.8 Miles

Created: 6/27/2016
LandscapeRSA1

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

METROPOLITAN COUNCIL

Regional Economy

Roadway Expansion Project: CSAH 7 Roadway Expansion | Map ID: 1467060223657

Results

WITHIN ONE MI of project:

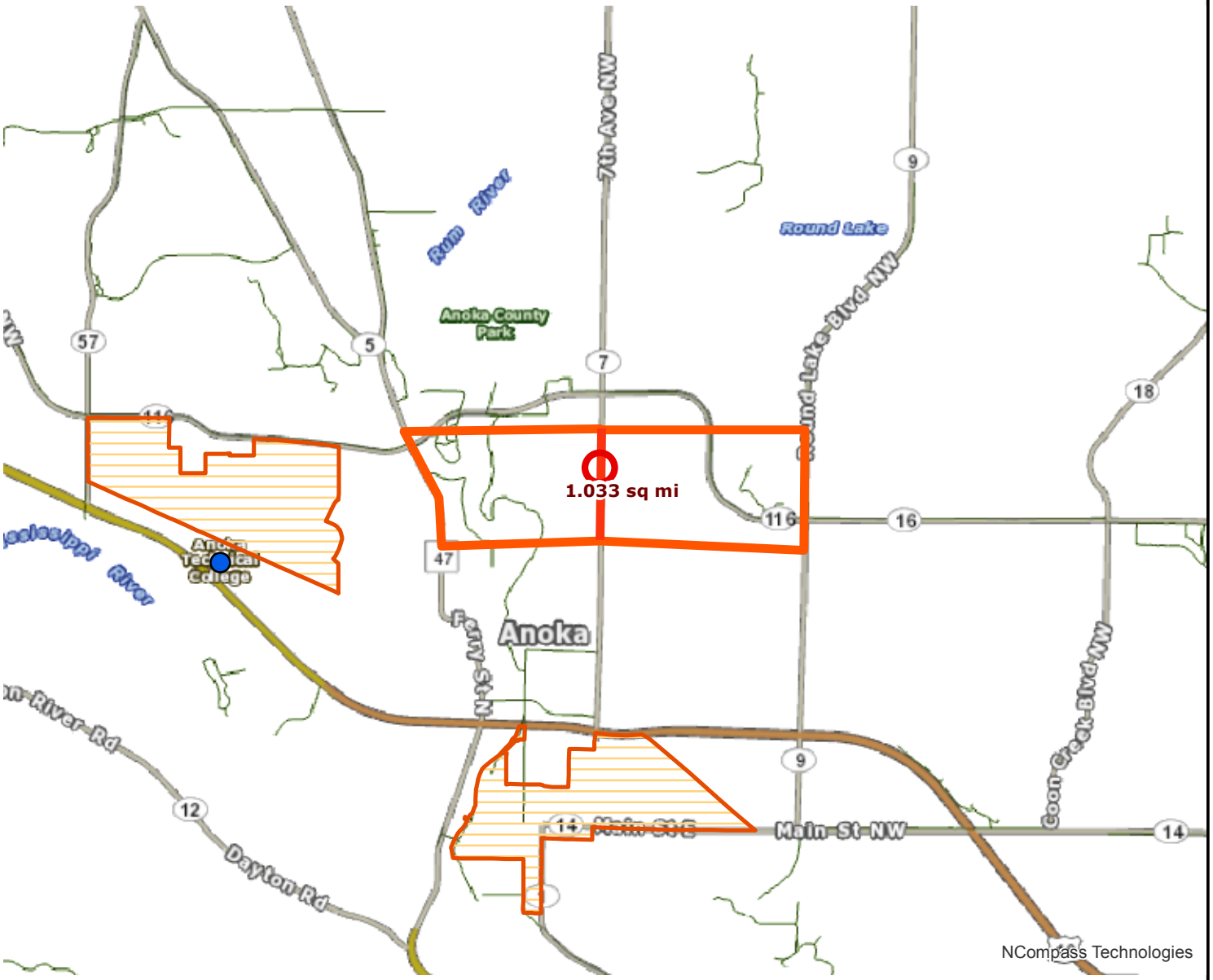
Totals by City:

Andover
- Population: 2569
- Employment: 140
- Mfg and Dist Employment: 8

Anoka
- Population: 7998
- Employment: 3680
- Mfg and Dist Employment: 635

Ramsey
- Population: 5577
- Employment: 601
- Mfg and Dist Employment: 5

Postsecondary Students:
0



Project Points | Project Area | Manfacturing/Distribution Centers

Project | PostSecondary Education Centers | Job Concentration Centers

0 0.475 0.95 1.9 2.85 3.8 Miles

Created: 6/27/2016
LandscapeRSA5

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

METROPOLITAN COUNCIL

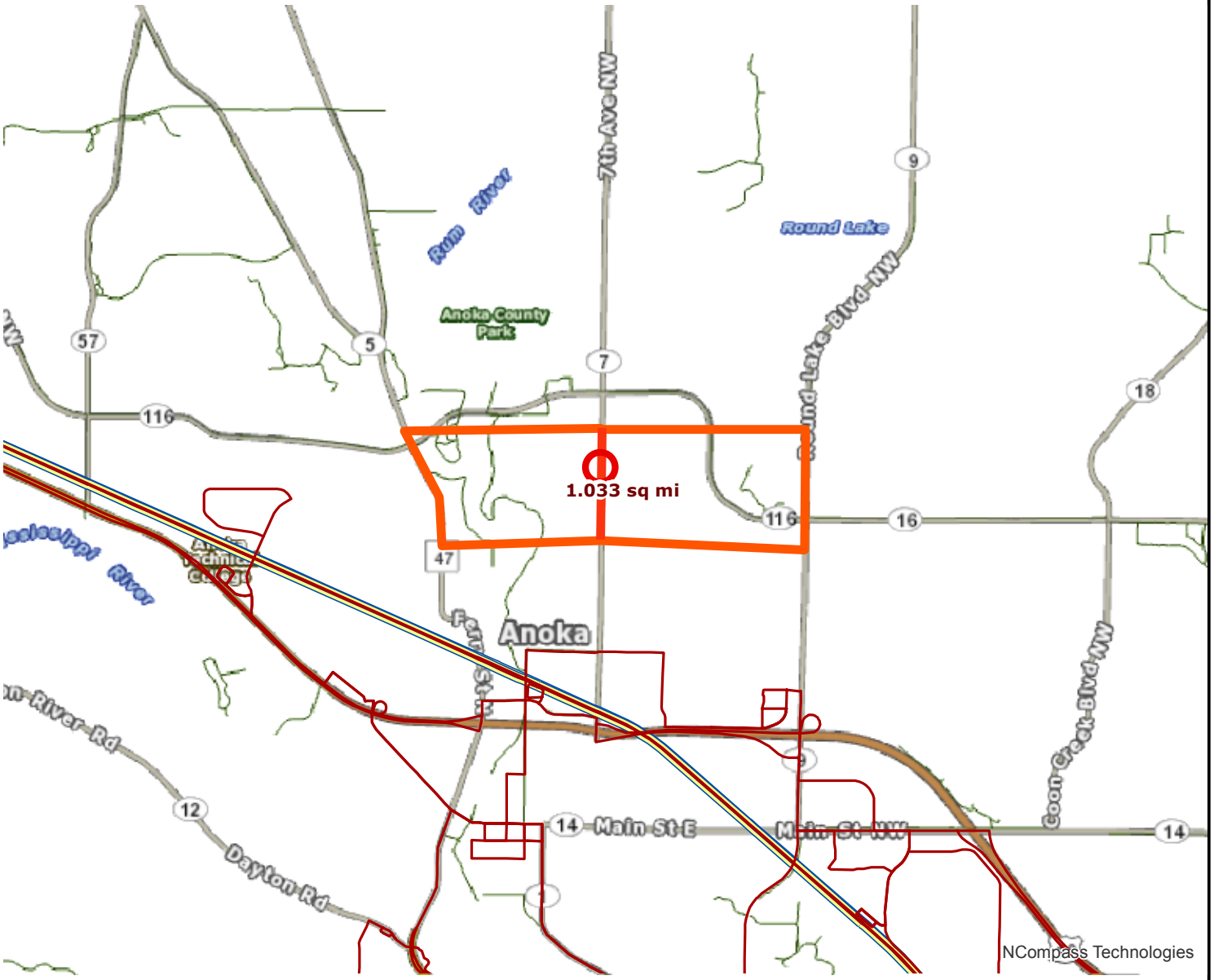
Transit Connections

Roadway Expansion Project: CSAH 7 Roadway Expansion | Map ID: 1467060223657

Results

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

**indicates Planned Alignments*



Project Points | Project Area | **Transitway**

Project | Transit Routes | Northstar Line

0 0.475 0.95 1.9 2.85 3.8 Miles

Created: 6/27/2016
LandscapeRSA3

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

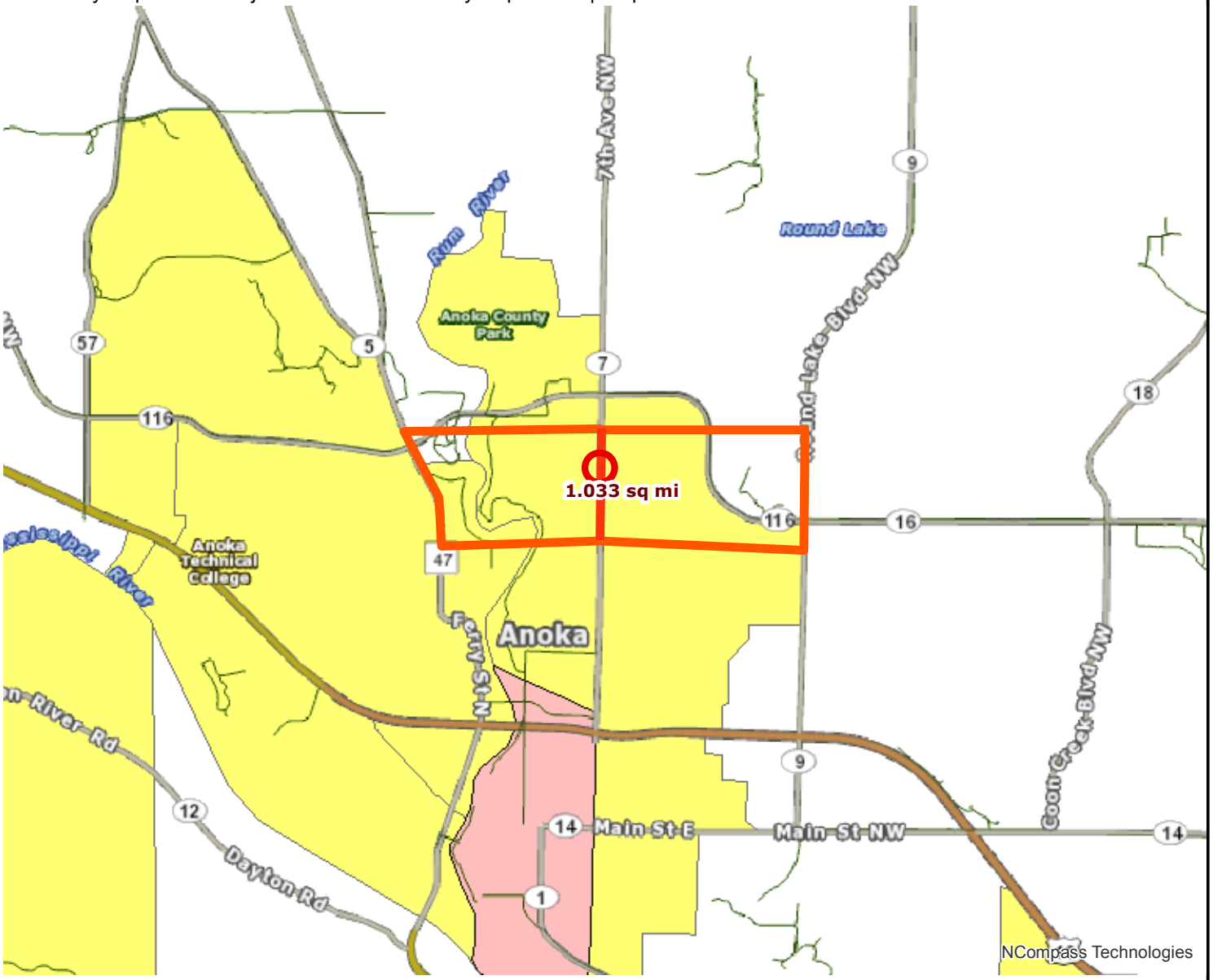
METROPOLITAN COUNCIL

Socio-Economic Conditions

Roadway Expansion Project: CSAH 7 Roadway Expansion | Map ID: 1467060223657

Results

Project census tracts are above the regional average for population in poverty or population of color:
(0 to 18 Points)



Project Points
Project
Project Area

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

0 0.475 0.95 1.9 2.85 3.8 Miles

Created: 6/27/2016
LandscapeRSA2

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

METROPOLITAN COUNCIL

3: CSAH 7 & 38th Ave

Direction	All
Volume (vph)	2708
Total Delay / Veh (s/v)	14
CO Emissions (kg)	1.88
NOx Emissions (kg)	0.37
VOC Emissions (kg)	0.43

3: CSAH 7 & 38th Ave

Direction	All
Volume (vph)	2708
Total Delay / Veh (s/v)	12
CO Emissions (kg)	1.75
NOx Emissions (kg)	0.34
VOC Emissions (kg)	0.41

3: CSAH 7 & 38th Ave

Direction	All
Volume (vph)	2708
Total Delay / Veh (s/v)	14
CO Emissions (kg)	1.88
NOx Emissions (kg)	0.37
VOC Emissions (kg)	0.43

3: CSAH 7 & 38th Ave

Direction	All
Volume (vph)	2708
Total Delay / Veh (s/v)	12
CO Emissions (kg)	1.75
NOx Emissions (kg)	0.34
VOC Emissions (kg)	0.41

HSIP worksheet

Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
	CSAH 7	From Aldrich To 40th Lane	001+00.420	001+00.980	Anoka Co.	01/01/2013	12/31/2015

Description of Proposed Work: Install Median (39% Reduction Of All Crashes) Chane To FYA-Protected/Permissive Left Turn (40.2% Reduction In Left Turn Crashes At 38th Avenue)

Accident Diagram Codes		1 Rear End	2 Sideswipe Same Direction	3 Left Turn Main Line	5 Right Angle	4,7 Ran off Road	8, 9 Head On/ Sideswipe - Opposite Direction	Pedestrian	6, 90, 99 Other	Total
Study Period: Number of Crashes	Fatal F									
	Personal Injury (PI) A									
	Personal Injury (PI) B			1		1				2
	Personal Injury (PI) C	3		1	1				1	6
	Property Damage PD	2	1	6	3		1			13
% Change in Crashes *Use Desktop Reference for Crash Reduction Factors	Fatal F									
	PI A									
	PI B			-66%		-39%				
	PI C	-39%		-66%	-39%				-39%	
	Property Damage PD	-39%	-39%	-66%	-39%		-39%			
Change in Crashes = No. of crashes X % change in crashes	Fatal F									
	PI A									
	PI B			-0.66		-0.39				-1.05
	PI C	-1.17		-0.66	-0.39				-0.39	-2.61
	Property Damage PD	-0.78	-0.39	-3.96	-1.17		-0.39			-6.69

Year (Safety Improvement Construction): 2018

Project Cost (exclude Right of Way): $ 3,060,000

Right of Way Costs (optional):

Traffic Growth Factor: 0.5%

Capital Recovery

1. **Discount Rate**: 2%
2. **Project Service Life (n)**: 30

Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
F			$ 1,140,000	
A			$ 570,000	
B	-1.05	-0.35	$ 170,000	$ 59,554
C	-2.61	-0.87	$ 83,000	$ 72,276
PD	-6.69	-2.23	$ 7,600	$ 16,963
Total				$ 148,794

B/C= 1.19

Using present worth values,

B= $ 3,630,584

C= $ 3,060,000

See "Calculations" sheet for amortization.

Office of Traffic, Safety and Technology
August 2015

9

Dual CRF for CSAH 7

Improvements include installation of a median and changing to FYA-protected/permissive left turn.

CR1=Installation of median
CR2=Change to FYA-protected/permissive left turn

CR=1 – (1-CR1)*(1-CR2)

Rear end: CR=.39 (CR1 applies only)
Sideswipe: CR=.39 (CR1 applies only)
Left Turn: CR=1 – (1-.39)*(1-.402) = .66
Right Angle: CR=.39 (CR1 applies only)
Ran Off Road: CR=.39 (CR1 applies only)
Head-on Sideswipe Opposite Direction: CR=.39 (CR1 applies only)
Other: CR=.39 (CR1 applies only)

- Countermeasure: Install raised median

CMF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
0.61	39	★★★★☆	All	All		Schultz et al., 2011	
0.56	44	★★★★☆	All	Fatal,Serious injury		Schultz et al., 2011	
0.29	70.77	★★★☆☆	All	All	Urban	Schultz et al., 2008	
0.45	55.43	★★★☆☆	Angle	All	Urban	Schultz et al., 2008	
0.86	14	★★★☆☆	All	All	Urban	Yanmaz-Tuzel and Ozbay, 2010	

- Countermeasure: Change from permissive only to FYA - protected/permissive left turn
-
-

	CMF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
☐	0.935	6.5	★★★☆☆	All	All	Not specified	Simpson and Troy, 2015	

-

☐	0.654	34.6	★★★☆☆	All	Fatal,Serious injury,Minor injury	Not specified	Simpson and Troy, 2015	

-

☐	0.598	40.2	★★☆☆☆	Left turn	All	Not specified	Simpson and Troy, 2015	Target crashes are defined as ... [*read more*]

-

☐	0.592	40.8	★★☆☆☆	Left turn	Fatal,Serious injury,Minor injury	Not specified	Simpson and Troy, 2015	Target crashes are defined as

BOARD OF COUNTY COMMISSIONERS

Anoka County, Minnesota

DATE: July 12, 2016 **RESOLUTION #2016-99**

OFFERED BY COMMISSIONER: Schulte

RESOLUTION AUTHORIZING SUBMITTAL OF FEDERAL FUNDING APPLICATION FOR CSAH 7

WHEREAS, CSAH 7 (7th Avenue) is an "A" minor arterial expander route that provides an important north-south transportation connection in Anoka County; and,

WHEREAS, traffic volumes on CSAH 7 have been increasing over the past decade and are expected to continue to increase in the future as the area continues to grow; and,

WHEREAS, existing and future traffic volumes are such that congestion is and will continue to negatively impact the ability of the corridor to move traffic; and,

WHEREAS, existing and future traffic volumes are such that safety is a concern at intersections and along some segments of the corridor; and,

WHEREAS, Anoka County and the City of Anoka have worked together in the past to make travel capacity and safety improvements along the corridor; and,

WHEREAS, the Anoka County Board of Commissioners is aware of and understands the project being submitted, and commits to operate and maintain the facility for its design life and not change the use of any right-of-way acquired without prior approval from MnDOT and the Federal Highway Administration:

NOW, THEREFORE, BE IT RESOLVED that the Anoka County Highway Department is hereby authorized to submit an application to the Transportation Advisory Board of the Metropolitan Council for 2019-2021 to receive federal transportation funds to make capacity and safety improvements on CSAH 7 between Aldrich Street and 40th Lane in Anoka.

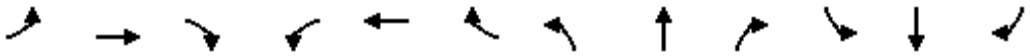
STATE OF MINNESOTA)
COUNTY OF ANOKA) ss

I, Jerry Soma, County Administrator, Anoka County, Minnesota, hereby certify that I have compared the foregoing copy of the resolution of the county board of said county with the original record thereof on file in the Administration Office, Anoka County, Minnesota, as stated in the minutes of the proceedings of said board at a meeting duly held on July 12, 2016, and that the same is a true and correct copy of said original record and of the whole thereof, and that said resolution was duly passed by said board at said meeting.

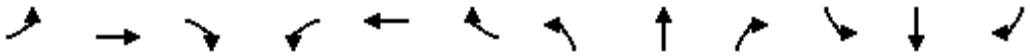
Witness my hand and seal this 12th day of July 2016.

JERRY SOMA
COUNTY ADMINISTRATOR

	YES	NO
DISTRICT #1 – LOOK	X	
DISTRICT #2 – BRAASTAD	X	
DISTRICT #3 – WEST	X	
DISTRICT #4 – KORDIAK	X	
DISTRICT #5 – GAMACHE	X	
DISTRICT #6 – SIVARAJAH	X	
DISTRICT #7 – SCHULTE	X	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	105	170	173	207	30	246	223	52	3	1340	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	300		300	300		300
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.981			0.985			0.985	
Flt Protected		0.997		0.950				0.977				
Satd. Flow (prot)	0	1857	1583	1770	1827	0	0	3406	0	0	3486	0
Flt Permitted		0.974		0.679				0.569			0.954	
Satd. Flow (perm)	0	1814	1583	1265	1827	0	0	1984	0	0	3326	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			42		12			35			36	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		514			530			521			393	
Travel Time (s)		11.7			12.0			11.8			8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	114	185	188	225	33	267	242	57	3	1457	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	185	188	258	0	0	566	0	0	1625	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		2	2		6	6	

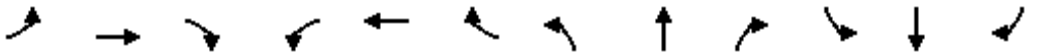


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	20.0	20.0	20.0		40.0	40.0		40.0	40.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%		66.7%	66.7%		66.7%	66.7%	
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		12.6	12.6	12.6	12.6			33.2			33.2	
Actuated g/C Ratio		0.23	0.23	0.23	0.23			0.61			0.61	
v/c Ratio		0.29	0.46	0.64	0.59			1.77dl			0.79	
Control Delay		19.7	18.6	30.3	24.3			7.1			11.7	
Queue Delay		0.0	0.0	0.0	0.0			0.0			0.0	
Total Delay		19.7	18.6	30.3	24.3			7.1			11.7	
LOS		B	B	C	C			A			B	
Approach Delay		19.0			26.8			7.1			11.7	
Approach LOS		B			C			A			B	
90th %ile Green (s)	16.0	16.0	16.0	16.0	16.0		36.0	36.0		36.0	36.0	
90th %ile Term Code	Max	Max	Max	Max	Max		Hold	Hold		Max	Max	
70th %ile Green (s)	16.0	16.0	16.0	16.0	16.0		36.0	36.0		36.0	36.0	
70th %ile Term Code	Hold	Hold	Hold	Max	Max		Hold	Hold		Max	Max	
50th %ile Green (s)	13.6	13.6	13.6	13.6	13.6		36.0	36.0		36.0	36.0	
50th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Hold	Hold		Max	Max	
30th %ile Green (s)	10.9	10.9	10.9	10.9	10.9		32.9	32.9		32.9	32.9	
30th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Hold	Hold		Gap	Gap	
10th %ile Green (s)	7.5	7.5	7.5	7.5	7.5		25.1	25.1		25.1	25.1	
10th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Dwell	Dwell		Dwell	Dwell	
Stops (vph)		84	106	145	186			236			992	
Fuel Used(gal)		1	2	3	3			4			14	
CO Emissions (g/hr)		95	134	181	222			291			952	
NOx Emissions (g/hr)		19	26	35	43			57			185	
VOC Emissions (g/hr)		22	31	42	52			68			221	
Dilemma Vehicles (#)		0	0	0	0			0			0	
Queue Length 50th (ft)		35	42	58	75			41			176	
Queue Length 95th (ft)		72	91	116	138			80			293	
Internal Link Dist (ft)		434			450			441			313	
Turn Bay Length (ft)				150								
Base Capacity (vph)		549	508	383	561			1363			2277	
Starvation Cap Reductn		0	0	0	0			0			0	
Spillback Cap Reductn		0	0	0	0			0			0	

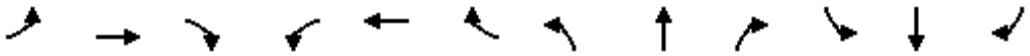
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn		0	0	0	0			0			0	
Reduced v/c Ratio		0.22	0.36	0.49	0.46			0.42			0.71	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 54			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 83.2%		ICU Level of Service E	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 60			
70th %ile Actuated Cycle: 60			
50th %ile Actuated Cycle: 57.6			
30th %ile Actuated Cycle: 51.8			
10th %ile Actuated Cycle: 40.6			
dl Defacto Left Lane. Recode with 1 though lane as a left lane.			

Splits and Phases: 3: CSAH 7 & 38th Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	105	170	173	207	30	246	223	52	3	1340	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	0		300	0		300
Storage Lanes	0		1	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frt			0.850		0.981				0.850			0.850
Flt Protected		0.997		0.950				0.974				
Satd. Flow (prot)	0	1857	1583	1770	1827	0	0	3447	1583	0	3539	1583
Flt Permitted		0.974		0.679				0.572			0.954	
Satd. Flow (perm)	0	1814	1583	1265	1827	0	0	2024	1583	0	3376	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			42		12				57			165
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		514			530			521			393	
Travel Time (s)		11.7			12.0			11.8			8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	114	185	188	225	33	267	242	57	3	1457	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	185	188	258	0	0	509	57	0	1460	165
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6

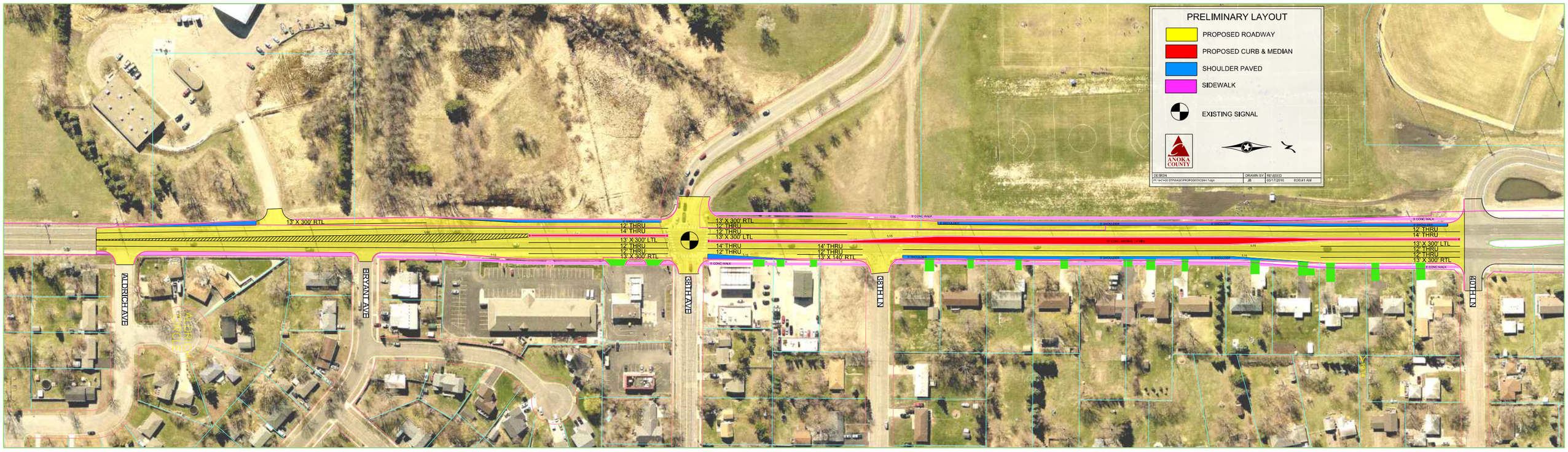


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%		66.7%	66.7%	66.7%	66.7%	66.7%	66.7%
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0		36.0	36.0	36.0	36.0	36.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)		4.0	4.0	4.0	4.0			4.0	4.0		4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Walk Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effct Green (s)		12.4	12.4	12.4	12.4			31.8	31.8		31.8	31.8
Actuated g/C Ratio		0.24	0.24	0.24	0.24			0.61	0.61		0.61	0.61
v/c Ratio		0.28	0.46	0.63	0.59			1.88dl	0.06		0.71	0.16
Control Delay		19.4	18.3	29.4	23.7			7.1	1.9		10.0	1.5
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Delay		19.4	18.3	29.4	23.7			7.1	1.9		10.0	1.5
LOS		B	B	C	C			A	A		B	A
Approach Delay		18.7			26.1			6.6			9.1	
Approach LOS		B			C			A			A	
90th %ile Green (s)	16.0	16.0	16.0	16.0	16.0		36.0	36.0	36.0	36.0	36.0	36.0
90th %ile Term Code	Max	Max	Max	Max	Max		Hold	Hold	Hold	Max	Max	Max
70th %ile Green (s)	16.0	16.0	16.0	16.0	16.0		36.0	36.0	36.0	36.0	36.0	36.0
70th %ile Term Code	Hold	Hold	Hold	Max	Max		Hold	Hold	Hold	Max	Max	Max
50th %ile Green (s)	13.6	13.6	13.6	13.6	13.6		36.0	36.0	36.0	36.0	36.0	36.0
50th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Hold	Hold	Hold	Max	Max	Max
30th %ile Green (s)	10.4	10.4	10.4	10.4	10.4		28.9	28.9	28.9	28.9	28.9	28.9
30th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Hold	Hold	Hold	Gap	Gap	Gap
10th %ile Green (s)	7.3	7.3	7.3	7.3	7.3		22.3	22.3	22.3	22.3	22.3	22.3
10th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Dwell	Dwell	Dwell	Dwell	Dwell	Dwell
Stops (vph)		84	105	144	185			217	7		829	13
Fuel Used(gal)		1	2	3	3			4	0		11	1
CO Emissions (g/hr)		95	132	178	220			264	19		799	41
NOx Emissions (g/hr)		18	26	35	43			51	4		155	8
VOC Emissions (g/hr)		22	31	41	51			61	4		185	9
Dilemma Vehicles (#)		0	0	0	0			0	0		0	0
Queue Length 50th (ft)		35	42	58	75			38	0		146	0
Queue Length 95th (ft)		72	91	116	138			72	11		240	18
Internal Link Dist (ft)		434			450			441			313	
Turn Bay Length (ft)				150					300			300
Base Capacity (vph)		571	527	398	583			1434	1138		2392	1169
Starvation Cap Reductn		0	0	0	0			0	0		0	0
Spillback Cap Reductn		0	0	0	0			0	0		0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn		0	0	0	0			0	0		0	0
Reduced v/c Ratio		0.21	0.35	0.47	0.44			0.35	0.05		0.61	0.14

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 52.5			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 12.2		Intersection LOS: B	
Intersection Capacity Utilization 77.0%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 60			
70th %ile Actuated Cycle: 60			
50th %ile Actuated Cycle: 57.6			
30th %ile Actuated Cycle: 47.3			
10th %ile Actuated Cycle: 37.6			
dl Defacto Left Lane. Recode with 1 though lane as a left lane.			

Splits and Phases: 3: CSAH 7 & 38th Ave


PRELIMINARY LAYOUT
PROPOSED ROADWAY
PROPOSED CURB & MEDIAN
SHOULDER PAVED
SIDEWALK
EXISTING SIGNAL
ANOKA COUNTY
DESIGN
DRAWN BY
REVISED
JB
05/17/2016
8:05:41 AM
13' X 300' RTL
12' THRU
14' THRU
13' X 300' LTL
12' THRU
12' THRU
13' X 300' RTL
14' THRU
12' THRU
14' THRU
12' THRU
13' X 140' RTL
13' X 300' LTL
12' THRU
12' THRU
13' X 300' RTL
9' CONC WALK
8' SHOULDER
ALDRICH AVE
BRYANT AVE
93RD AVE
93RD LN
94TH LN
PARK

Project Area

CSAH 7 looking North