

Item 7b.**Sunfish Lake Engineer's Report for September 6, 2022**

By: Jeff Sandberg, PE
City Engineer

Date: August 31, 2022

1. Engineering Activities Undertaken in the Month of August

The following Engineer's Report reflects the Engineering activities undertaken this past month.

- A. Adoption of Dakota County Regional Roadway System Visioning Study – The study is complete, and staff will present the final study at the September City Council meeting for resolution of approval. Representatives from Dakota County will also be available to answer questions. (SEE ATTACHMENTS 1A1, 1A2)
- B. 2022 Street Maintenance Projects – The work is complete, and the contractor has submitted their Final Pay Request to close out the project in the amount of \$124,934.93. (SEE ATTACHMENTS 1B1, 1B2)
- C. No Solicitation Signage – The signage has not been finalized as staff works with the City Attorney on statute language to add to the sign.

2. Building and Site Reviews in the Month of August

- A. Staff conducted reviews for the following properties this past month:
 - 343 Salem Church Road – Resident requested opinion on fire marker sign.
 - 15 Sunnyside Lane – Staff performed an erosion control inspection before construction activities could begin. Staff also reviewed and commented on a preliminary plan for the stairway to the lake.
 - 11 Salem Lane – Staff reviewed and commented on a demo permit for the property. Staff also worked with the builder on a material re-use plan for inside the home.
 - 100 Windy Hill Road – Staff performed an erosion control inspection before construction activities could begin related to an artificial turf area being constructed.

3. Public Works Activities Undertaken in the Month of August

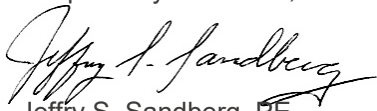
- A. Staff coordinated the final work for the crack seal and chip seal work on the 2022 Street Maintenance Projects.

4. Anticipated Engineering/Public Works Activities for the Month of September

- A. Each year in September staff has requested bids for snowplowing work for the upcoming winter months. In 2021, SFL entered in to a three-year agreement with our current contractor to plow the city streets. This upcoming season is year three of that three-year contract.
- B. Staff is replacing the missing street sign at Salem Church Lane.

The above constitutes the Engineering Report for the City of Sunfish Lake for September 6, 2022.

Respectfully submitted,



Jeffrey S. Sandberg, PE
City Engineer



Regional Roadway System VISIONING STUDY UPDATE

TRAFFIC MODELING, ALTERNATIVE
EVALUATION & PUBLIC INVOLVEMENT



Kimley»Horn

Sunfish Lake City Council
September 2022

Agenda

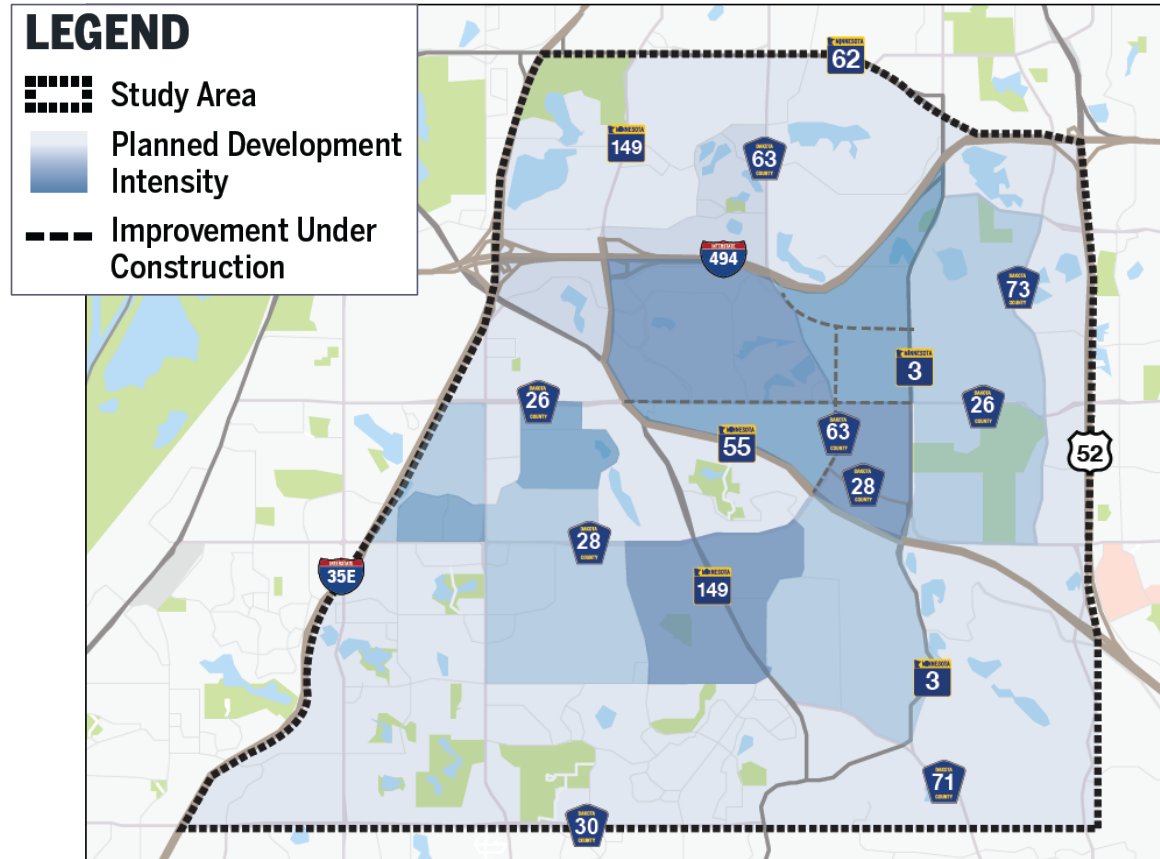
- Study Background
- Updates to Final Recommendations
- Next Steps



Study Background

Study Area

- Northeast Eagan
- Northwest Inver Grove Heights
- Mendota Heights
- Sunfish Lake



Regional Roadway System

■ **VISIONING STUDY UPDATE**

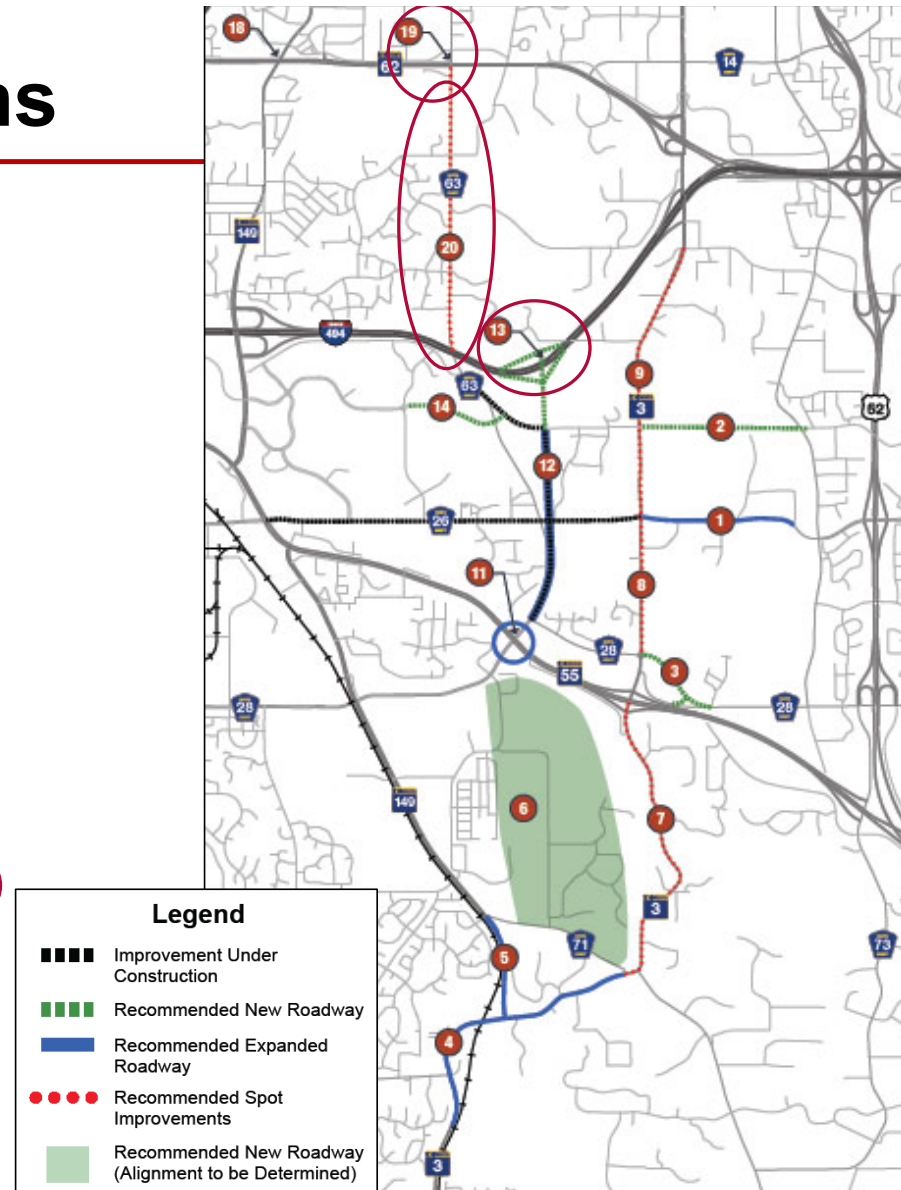
Study Background

- Regional Roadway System Visioning Study (RRSVS) completed in 2010
- Recommended transportation improvements to meet long-term needs based on forecast growth in the area
- Since 2010:
 - Development has occurred with less intensity than forecast
 - Transportation improvements have been completed
 - City comprehensive plans updated

Updates to Final Recommendations

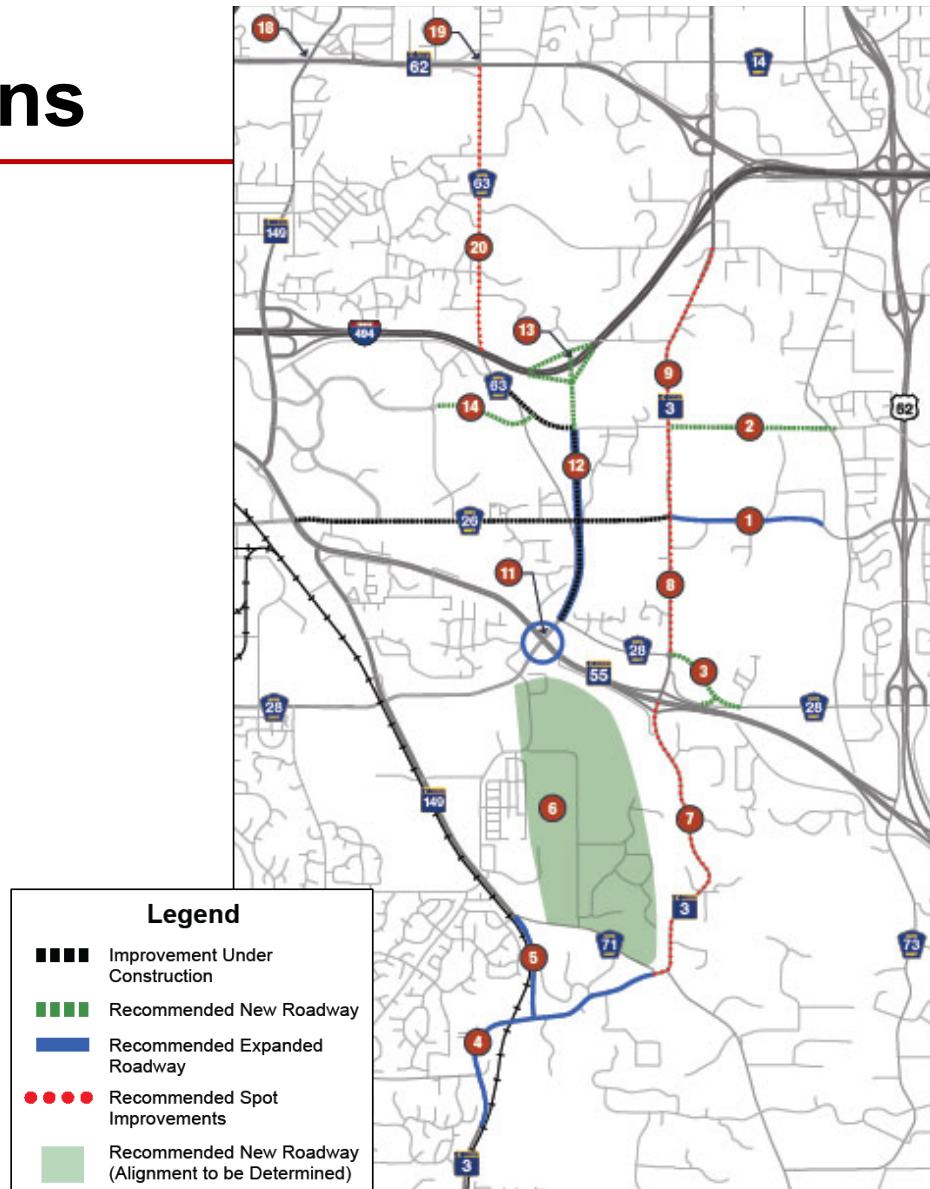
Final Recommendations

- 16 recommended roadway improvements
 - Recommendations in and near Sunfish Lake:
 - CR 63 (Argenta Trail)/I-494 Interchange (#13)
 - TH 62/CR 63 (Delaware Ave) Intersection Improvements (#19)
 - Recommendation added on CR 63 (Delaware Ave) (#20)



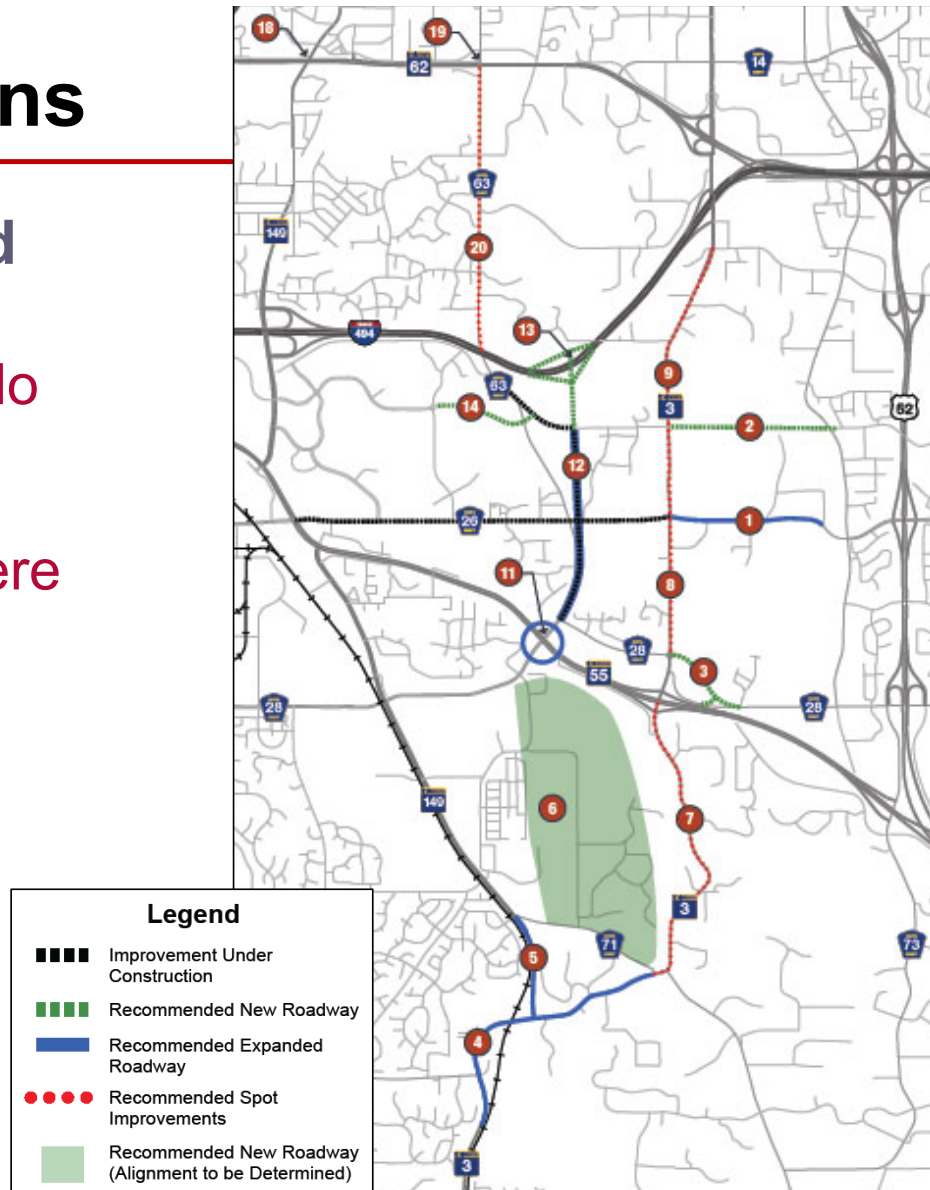
Final Recommendations

- **Multimodal transportation recommendations**
 - Bicycle and pedestrian facilities planned in parallel with roadway improvements
 - Consistent with multimodal networks in city and county transportation plans



Final Recommendations

- Recommendations focused at system level
 - RRSVS recommendations do not preclude agencies from evaluating or implementing localized improvements where there is a need identified





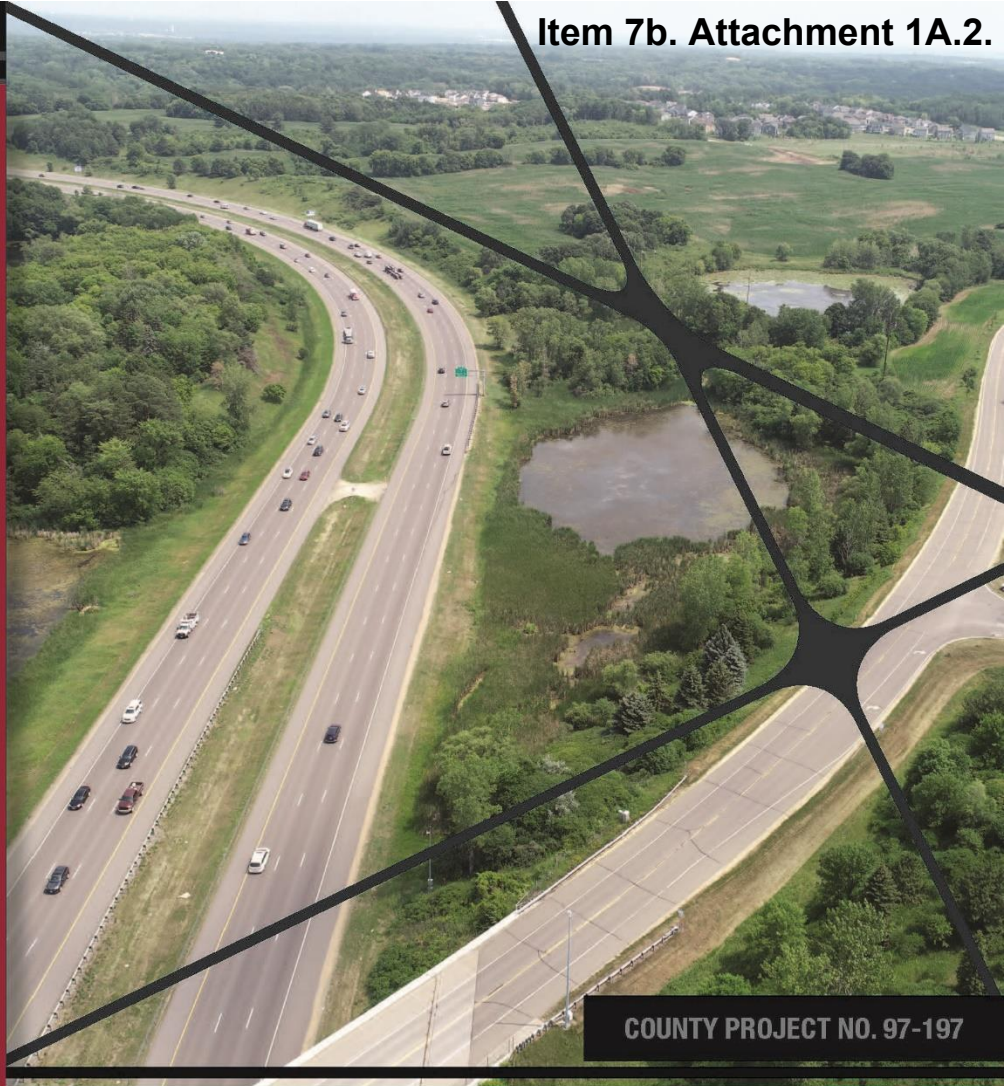
Next Steps

Next Steps

- August/September - Cities adopt study
- September – Dakota County board adopts study



Questions?



COUNTY PROJECT NO. 97-197

Regional

Roadway System

VISIONING STUDY UPDATE

PREPARED FOR

Dakota
COUNTY

AUGUST 2022

PREPARED BY

Kimley»Horn



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Introduction

The Regional Roadway System Visioning Study (RRSVS) Update was a joint planning effort by Dakota County, the Minnesota Department of Transportation (MnDOT), and the cities of Eagan, Inver Grove Heights, Mendota Heights, and Sunfish Lake. The recommendations from the RRSVS Update are intended to guide the planning and implementation of transportation improvements within the study area over the next 20 years.

Northeast Eagan and northwest Inver Grove Heights represent one of the largest remaining undeveloped areas along the I-494/I-694 corridor in the Twin Cities. Significant growth is anticipated in the next 20 years, and a unified transportation vision is needed to support development and guide future efforts of the cities, county, and MnDOT to plan, fund, and implement transportation improvements. The study area includes the undeveloped areas in Eagan and Inver Grove Heights as well as the fully developed communities in Mendota Heights and Sunfish Lake, shown in **Figure 1**. The figure also shows that the most intense development is anticipated in the area bounded by I-494 to the north, Trunk Highway (TH) 3 (Robert Trail) to the east, TH 55 (Courthouse Boulevard) to the south, and TH 149 (Dodd Road) to the west.

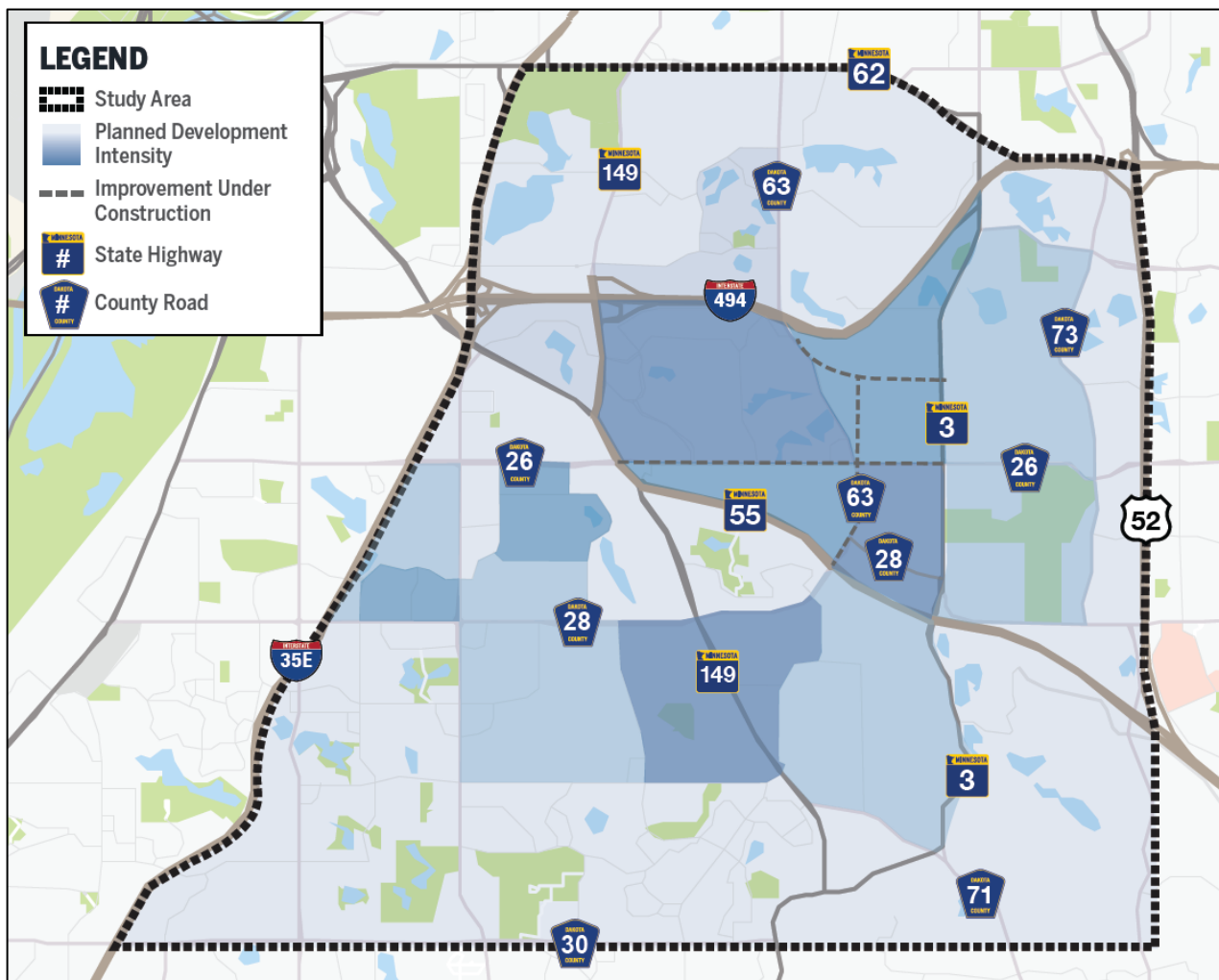


Figure 1. RRSVS Update Study Area

STUDY PURPOSE

The original RRSVS was completed in 2010 and contained 16 recommendations that were based on technical analysis, agency input, and public feedback. An update to the roadway vision was undertaken to assess current transportation conditions and current land use plans in the study area, including:

- Significant development that has occurred in Eagan and Inver Grove Heights since the 2010 RRSVS was completed. In many cases, the development that has occurred is less dense and generates less traffic than was anticipated in the 2010 study.
- Completion of the 2040 Comprehensive Plans in the cities of Eagan, Inver Grove Heights, Mendota Heights, and Sunfish Lake. The land use plans in the Eagan and Inver Grove Heights 2040 Comprehensive Plans included fewer households and jobs in the study area compared to the cities' 2030 Comprehensive Plans.
- Traffic capacity and safety conditions that have changed since 2010.
- Transportation improvements identified in the 2010 RRSVS that have been completed or are under construction, including: reconstruction of the TH 55/County Road (CR) 28 (Yankee Doodle Road/Argenta Trail) intersection; expansion of CR 26 (Lone Oak Road/70th Street W) to four lanes between TH 55 (Courthouse Boulevard) and TH 3 (Robert Trail); reconstruction and realignment of CR 63 (Argenta Trail) between CR 28 (Amana Trail) and I-494; and the construction of 65th Street from TH 3 (Robert Trail) to CR 63 (Argenta Trail).
- Development of the Dakota County 2040 travel demand forecast model, which indicated that the year 2040 daily traffic projections are generally similar to or lower than the previously published 2030 daily traffic volumes. The Dakota County travel demand model reflects county and city 2040 comprehensive plans.

STUDY PROCESS

The RRSVS Update was completed through a process of collecting and analyzing current data, with input provided by the study agencies and the public. The process involved four major steps, as described in the following bullets.

- **Data Collection:**
 - Roadway and intersection traffic volumes
 - Planned roadway improvements
 - Land use plans in city comprehensive plans
 - New developments
 - Forecast traffic growth
 - Public and agency input on current conditions
- **Scenario Modeling and Analysis:**
 - Evaluation of each technical area to identify transportation needs and constraints

- **Develop and Evaluate Planning-Level Transportation Alternatives:**

- Develop and evaluate potential transportation improvements, including 2010 RRSVS recommendations and potential new improvements
- Public and agency input on draft recommendations

- **Adoption of Final Recommendations:**

- To demonstrate concurrence with the study recommendations, the study findings are intended to be adopted by the city councils in Eagan, Inver Grove Heights, Mendota Heights, and Sunfish Lake and by the Dakota County Board.

The following sections of this report provide more information on the data, analysis, and recommendations of the RRSVS Update.

Land Use

The development assumptions used in the RRSVS Update are based on the total population and employment forecasts for each city, which are established by the Metropolitan Council, and the location-specific land uses and intensities shown in the cities' 2040 Comprehensive Plans. The 2018 (existing) and 2040 total development in the cities of Eagan, Inver Grove Heights, Mendota Heights, and Sunfish Lake are summarized in **Table 1**. Development in other communities such as Rosemount and Farmington are included in the traffic forecasts discussed later in this report and the land uses assumptions in these communities match the Dakota County 2040 Transportation Plan.

Table 1. Eagan, Inver Grove Heights, Mendota Heights and Sunfish Lake Forecast Growth

	Year 2018			Year 2040		
	Population (number of residents)	Households (number of households)	Employment (number of jobs)	Population (number of residents)	Households (number of households)	Employment (number of jobs)
Eagan	68,363	27,147	59,600	74,300	30,850	70,000
Inver Grove Heights	35,238	14,196	10,303	46,700	19,800	14,000
Mendota Heights	11,420	4,594	11,279	12,000	5,000	13,700
Sunfish Lake	526	185	3	490	210	10

Source: Metropolitan Council, Dakota County 2040 Transportation Plan, and City of Eagan, City of Inver Grove Heights, City of Mendota Heights, and City of Sunfish Lake 2040 Comprehensive Plans

The Inver Grove Heights 2040 Comprehensive Plan also identified specific land use changes in northwest part of the city (the RRSVS Update study area) compared to the 2030 Comprehensive Plan. The changes were largely a result of market demand for certain land uses types, but also were based on the city's more detailed understanding of site conditions and constraints. The 2040 land use plan in northwest Inver Grove Heights generally reflects a shift towards lower density development and land use types that would be expected to generate traffic at lower rates, such as changes from commercial or industrial land use to residential land use.

Beyond 2040

Beyond Year 2040 development assumptions were established to analyze the full build-out anticipated in northeast Eagan and northwest Inver Grove Heights. Development for Beyond 2040 conditions was based on the remaining developable area, allocation of additional development to those areas based on zoning definitions in each city's comprehensive plan, and input from Eagan and Inver Grove Heights city staff. The summary chart in **Figure 2** and the bullets that follow summarize the key aspects of the Beyond 2040 land use.

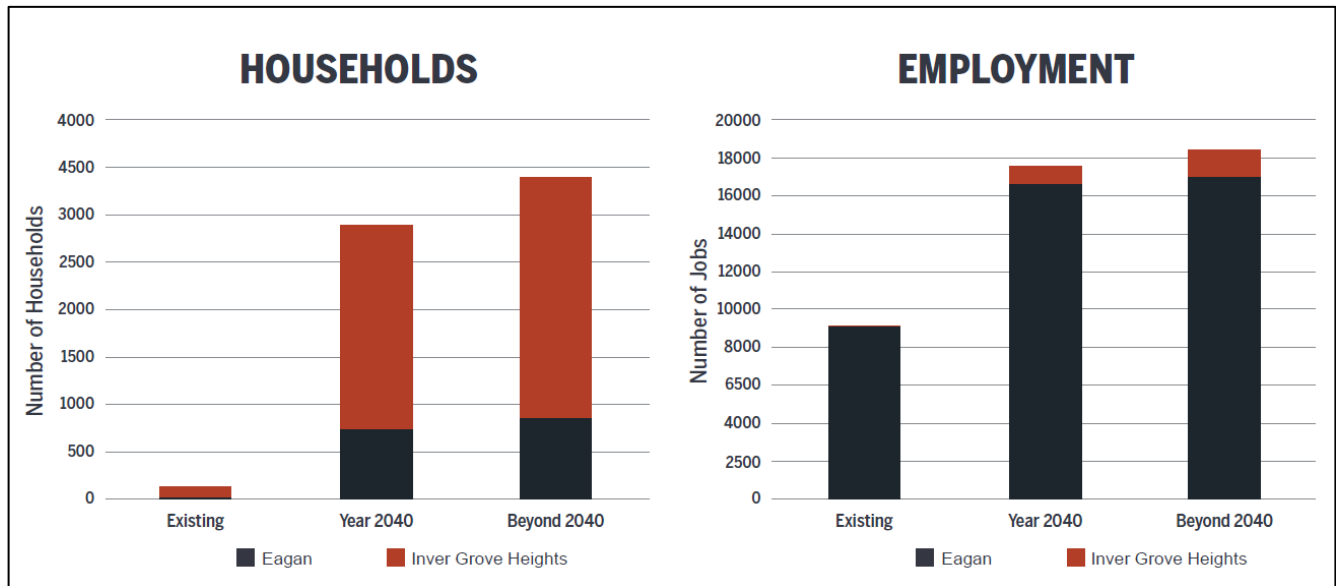


Figure 2. RRSVS Study Area Household and Employment Forecasts

Eagan

- Residential development in the Viking Lakes area will be predominantly in the southern portion of the 200-acre site. An Alternative Urban Areawide Review (AUAR) was prepared for the Vikings Lake area in 2016 and updated in 2021¹.
- Demand for office space remains low. Employment growth in the areas zoned for commercial/industrial would likely be lower traffic generating uses like warehouse and light industrial rather than higher-density office buildings.
- Growth of traditional shopping land uses is not anticipated to be significant in northeast Eagan, however there is likely to be growth in “service offices” which includes uses like insurance/financial, medical/dental offices, and similar activities that generate customer traffic.

Inver Grove Heights

- Residential development is likely to continue at current densities observed in northwest Inver Grove Heights, which are approximately:
 - Low density (single family) residential approximately 2 units per acre.
 - Medium density (townhomes) approximately 9 units per acre.
- Little retail development is anticipated beyond 2040 forecasts.
- Non-retail commercial land uses would be anticipated to be in the mid-range of the allowable densities from the comprehensive plan.

The Beyond 2040 analysis showed that the majority of the RRSVS study area will be developed by 2040, with a relatively small amount of development remaining beyond 2040.

¹ Minnesota Vikings Headquarters and Mixed Use Development AUAR Update, April 2021.
https://www.cityofeagan.com/images/CommunityDevelopment/Planning/MV VenturesAUARUpdate_05112021.pdf

Transportation Conditions

Transportation improvements were identified based on needs and constraints in five key areas:

- Traffic capacity
- Safety
- Roadway connectivity
- Roadway expansion impacts
- Environmental resources

The following sections present the technical analysis of each of these areas. The analysis was used to identify the existing and future transportation needs in the study area and the impacts of potential transportation improvements. The focus of the technical analysis was on county and state highways and city collectors:

- TH 3 (Robert Trail)
- TH 149 (Dodd Road/Jefferson Trail)
- TH 55 (Courthouse Boulevard)
- CR 26 (Lone Oak Road/70th Street W)
- CR 28 (Yankee Doodle Road/80th Street W/Amana Trail)
- CR 63 (Argenta Trail/Delaware Ave)
- CR 71 (Rich Valley Boulevard)
- 65th Street
- Vikings Parkway

These roadways provide the primary transportation infrastructure that support developing areas and connect to the regional transportation network. The capacity and operations of freeways and local neighborhood streets were not part of the RRSVS analysis because they serve inter-regional and local transportation purposes, respectively.

TRANSPORTATION NEEDS

Traffic Capacity

Existing average annual daily traffic volumes (AADT), existing intersection counts, and forecast daily traffic volumes were used to evaluate future traffic operations at the roadway and intersection level. The planning-level traffic capacity thresholds in **Table 2** were used to determine whether additional through lanes (roadway expansion) would be needed to accommodate the expected future traffic volumes. The capacity thresholds are consistent with the 2040 Dakota County Transportation Plan.

Table 2. Roadway Segment Capacity Thresholds

Number of Through Lanes	Approaching Traffic Capacity (vehicles/day)	Maximum Traffic Capacity (vehicles/day)
4 Lanes	31,000	35,000
3 Lanes	15,000	18,000
2 Lanes	8,500	10,000

Intersection capacity was evaluated for 34 intersections in the study area. The capacity analysis was based on the methods outlined in the Highway Capacity Manual (HCM) 6th Edition using Synchro/SimTraffic version 11. The primary inputs of the HCM methodology are the number of lanes and the hourly traffic volumes. The intersection analysis was completed for future year a.m. and p.m. peak hours. The following volume/capacity (v/c) thresholds were used for the intersection evaluations:

- Over Capacity: $v/c > 1.0$
An intersection that is over capacity would have significant congestion and backups. At a traffic signal, vehicles may have to wait through multiple signal cycles.
- Approaching Capacity: $0.85 \leq v/c \leq 1.0$
An intersection approaching capacity would be congested and drivers would experience back-ups and slower traffic.

Pandemic Impacts on Traffic

At the time of the RRSVS Update, traffic volumes and patterns were still being impacted by the COVID-19 pandemic. Total daily traffic volumes in 2021/2022 have been observed to be similar to pre-pandemic levels, however the time-of-day travel patterns continue to be different in 2021/2022 compared to pre-pandemic conditions. Traffic volumes in the morning peak hour have generally been observed to be lower than pre-pandemic conditions, mid-day volumes are generally higher than pre-pandemic conditions, and afternoon peak hour volumes are similar to pre-pandemic conditions. It is not known if peak hour traffic patterns will fully return to pre-pandemic conditions due to permanent changes in the amount of remote work and commuter behaviors, however traffic operations and congestion in the afternoon peak hour have largely returned to pre-pandemic conditions. In some locations the hours of congestion may be shorter, but the congested areas still indicate roadways or intersections with capacity or operations needs. Therefore, traffic volumes and forecasts in the RRSVS Update were not adjusted to specifically account for the effects of the COVID-19 pandemic.

Traffic Forecasts

The 2040 Dakota County Travel Demand Model was used to produce the traffic forecasts used in the traffic capacity analysis. The land use assumptions used in the travel demand model are documented in the Land Use section of this report. The 2040 Visioning Baseline model was used to understand the traffic conditions that would result if all the future development occurred, but no improvements were made to the existing transportation system. The following transportation network assumptions were used in the RRSVS 2040 Visioning Baseline model:

- Existing roadway network was assumed in the study area, including improvements that are currently under construction on CR 26 (Lone Oak Road/70th Street W) and CR 63 (Argenta Trail).
- Recommendations from the 2010 RRSVS that have not yet been implemented, such as an interchange at I-494/CR 63 (Argenta Trail), were not included in the 2040 Visioning Baseline model.

- Programmed roadway improvements outside the study area were included in the 2040 Visioning Baseline model. This includes improvements such as the expansion of 117th Street and paving of CR 73 (Akron Avenue) in Inver Grove Heights.

The 2040 Visioning Baseline forecasts were then used to identify roadway and intersection capacity needs in the study area, as shown in **Figure 3**. The key findings of the 2040 Visioning Baseline capacity analysis were:

- The largest traffic volumes are being generated by the higher intensity development, which is primarily in the area bounded by I-494 to the north, TH 3 (Robert Trail) to the east, TH 55 (Courthouse Boulevard) to the south, and TH 149 (Dodd Road) to the west. Without an interchange on I-494 between TH 149 (Dodd Road) and TH 3 (Robert Trail), traffic will rely on TH 3 (Robert Trail), CR 63 (Argenta Trail/Delaware Avenue) to TH 62 or TH 55, and TH 149 (Dodd Road) to access the regional highway network.
- The signalized intersection at TH 55 (Courthouse Boulevard) and CR 28 (Yankee Doodle Road/Argenta Trail) will have increased congestion as traffic volumes increase. This is a concern because it is the first signalized intersection on TH 55 (Courthouse Boulevard) when approaching from the east.
- The signalized intersections on TH 62 at TH 149 (Dodd Road) and at CR 63 (Delaware Avenue) currently are congested and will have greater traffic pressure in the future if other improvements are not made to the transportation system as the development occurs.

The Beyond 2040 traffic capacity analysis did not identify any additional needs beyond those identified in the 2040 Visioning Baseline.

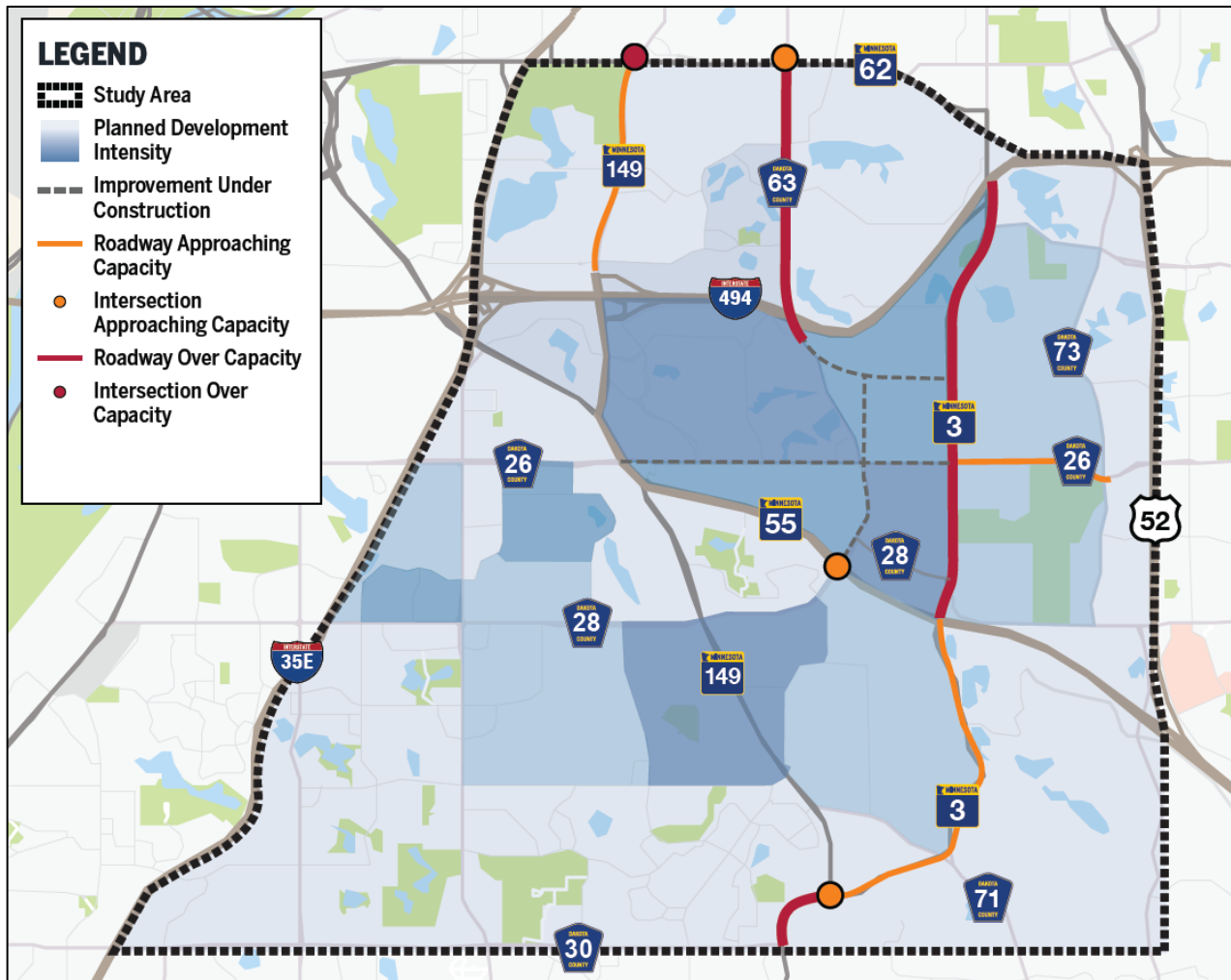


Figure 3. 2040 Visioning Baseline Traffic Capacity Needs.

Safety

Crash data was obtained using MnDOT's Minnesota Crash Mapping Analysis Tool (MnCMAT) for the five-year period from 2015 through 2019. Crash rates were calculated for roadway segments and for intersections, with intersection crashes based on a 250-foot radius. The crash rates were compared to expected crash rates for similar roadways and intersections, and the critical crash rate was used to determine where the existing crash rate on a roadway or intersection significantly exceeded the expected crash rate. The evaluation of critical crash rates in the study area are summarized in **Figure 4** and in the following key findings:

- None of the roadway segments in the study area had a crash rate approaching or exceeding the critical crash rate.
- Six intersections had a crash rate approaching the critical rate. An intersection with a crash rate that is approaching the critical crash rate would be monitored to determine if there is a safety concern.
- Two intersections had a crash rate exceeding the critical rate.
 - The CR 26 (Lone Oak Road/70th Street W)/CR 63 (Argenta Trail) intersection is currently under construction as a roundabout, and this improvement is expected to address the safety need at the intersection.

- The TH 55 (Courthouse Boulevard)/CR 26 (Lone Oak Road) intersection has a high number of crashes because it is a congested, signalized intersection.

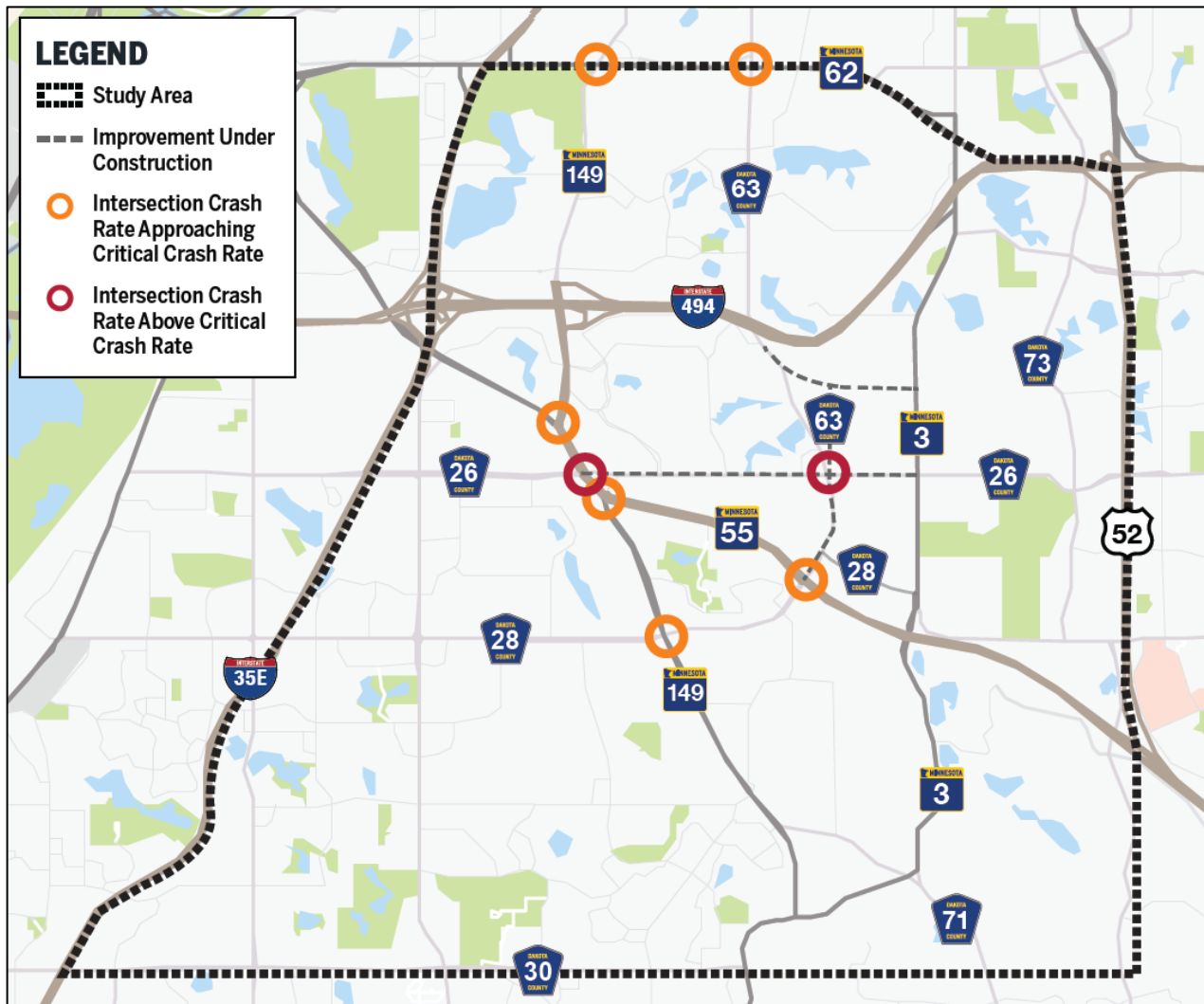


Figure 4. Study Area Crash History (2015-2019)

Source: MnCMAT

Roadway Connectivity

Collector Streets Needs

Collector streets connect between neighborhood streets and the state or county highway network, such as TH 3 (Robert Trail) and CR 26 (Lone Oak Road/70th Street W). In suburban areas, collector streets are typically needed every ½ to 1 mile for the following purposes:

- **Access management** – City collector streets provide the link between neighborhood streets and the highway system. Full access intersections to the highway would be a minimum distance of 1/4 mile apart and partial access intersections would be a minimum distance of 1/8 mile apart. Connecting multiple neighborhood streets directly to the county and state highway network at full access locations would not be feasible based on the safety and mobility of the highway and the density of residential developments planned in the RRSVS area. Without collector streets, the traffic within developed areas would be served only by local streets with driveways for each parcel; these types of street are not compatible with the traffic volumes and speeds that would be connecting to the highway network.
- **Neighborhood circulation** – Collector streets provide an organized system of circulation from neighborhood streets to collector streets, which then connect to the highway network. Neighborhood streets would only be allowed to access the highway network every 1/8 to 1/4 mile, as noted above, and some of the accesses would have partial access, meaning that left turns would not be allowed from the neighborhood street onto the highway. This would result in challenging traffic circulation through the neighborhoods.

Collector streets are city streets and are intended to carry primarily local trips; collector streets are not highways and are not intended to carry regional traffic. In the RRSVS study area, three areas were identified that would need a collector street to support development and connect the neighborhood/commercial area to the highway network, as shown in **Figure 5**.

- **65th Street Extension** – East of TH 3 (Robert Trail), there are currently no east-west collector streets between Upper 55th Street and CR 26 (70th Street W), a distance of 1.5 miles. Without an extension of 65th Street between TH 3 (Robert Trail) and CR 73 (Babcock Trail), the area would have only residential streets to serve about 750 total acres. This area is designated for Low Density Residential in the Inver Grove Heights 2040 Land Use Plan (one to four units per acre).
- **Area near Alverno Avenue and Argenta Trail** – In the area south of TH 55 (Courthouse Boulevard), there are currently no north-south collector streets between TH 149 (Dodd Road) and TH 3 (Robert Trail), a distance of 1.25 miles. Within the 2040 Metropolitan Urban Service Area (MUSA), which is the area intended to be serviced by city sewer and water, Eagan and Inver Grove Heights 2040 Land Use Plans identify Low Density Residential (one to four units per acre), Low-Medium Density Residential (four to eight units per acre), and Medium Density Residential (eight to 12 units per acre). The area covers a total of about 1,070 acres, with the MUSA area being more than half the total area.
- **Vikings Parkway Extension** – West of CR 63 (Argenta Trail), the need for an east-west collector street was identified between I-494 and CR 26 (Lone Oak Road). The extension of Vikings Parkway to the east would serve the remainder of the Vikings Lakes Development east of Ames Crossing Road, which is identified for Major Office in the Eagan 2040 Land Use Plan.

In addition to the future development areas identified with collector street needs, the realignment of CR 28 (80th Street W) east of TH 3 (Robert Trail) was also identified as a roadway connectivity need. CR 28 (80th Street W) currently has a partial-access intersection on TH 3 (Robert Trail) that is 1/8 mile north of the TH 55 ramp

intersection. Connecting CR 28 (80th Street W) to Amana Trail, another 1/8 mile north, would allow for a full access intersection and provide improved connectivity of the county road.

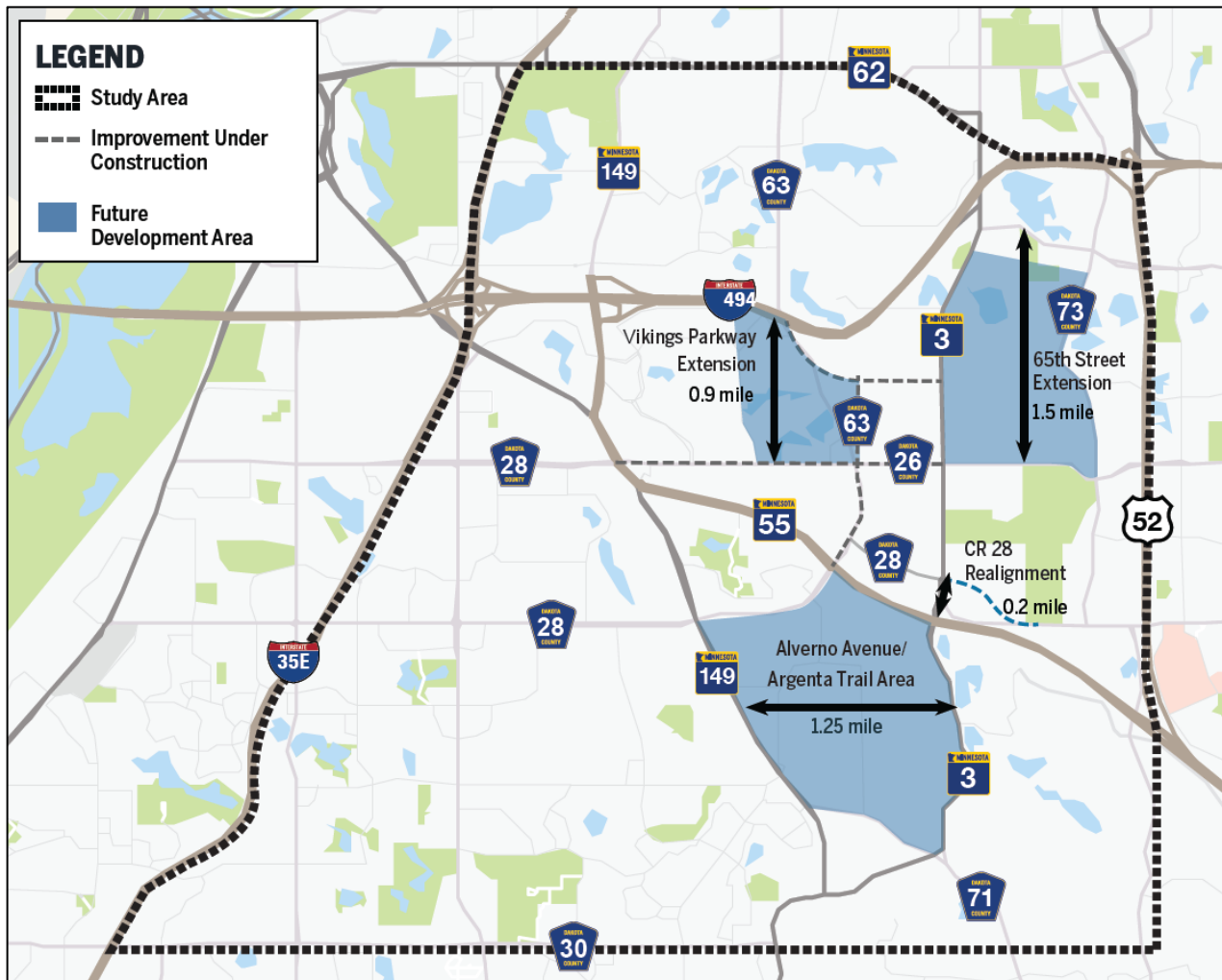


Figure 5. Roadway Connectivity and Collector Street Needs

Principal Arterials

Principal arterials are highways that provide time-efficient and safe travel over long distances for large volumes of traffic, with an emphasis on mobility over access. Principal Arterial highways help connect the region with the other areas in the state, carry the major portion of trips to/from activity centers, and serve the majority of through movements.

The Dakota County Principal Arterial Study, completed in 2018, focused on planning for principal arterials in Dakota County which are not freeways and are not intended to become freeways in the future. The recommendations of the Principal Arterial Study identified the following as future principal arterial highways in the RRSVS study area:

- TH 3 (Robert Trail) south of TH 149 (Jefferson Trail)
- TH 149 (Jefferson Trail/Dodd Road) south of TH 55 (Courthouse Boulevard)

- CR 28 (Yankee Doodle Road) between TH 149 (Dodd Road) and Amana Trail
- CR 63 (Argenta Trail) between CR 28 (Amana Trail) and I-494

Due to the close spacing between TH 149 (Jefferson Trail/Dodd Road), CR 63 (Argenta Trail), and TH 3 (Robert Trail) and their roles in serving future traffic, TH 149 (Dodd Road) north of TH 55 (Courthouse Boulevard) and TH 3 (Robert Trail) north of TH 149 (Jefferson Trail) were not recommended as future Principal Arterial highways. The existing Principal Arterial highways and the recommended future Principal Arterial highways from the Dakota County study are shown in **Figure 6**.

The intersection of TH 55 (Courthouse Boulevard) and CR 28 (Yankee Doodle Road/Argenta Trail) currently has a traffic signal and the intersection was identified in the Traffic Capacity analysis as approaching its capacity by 2040. To support the function of both roadways as Principal Arterial highways, the need for a future grade separation or high-capacity intersection was identified.

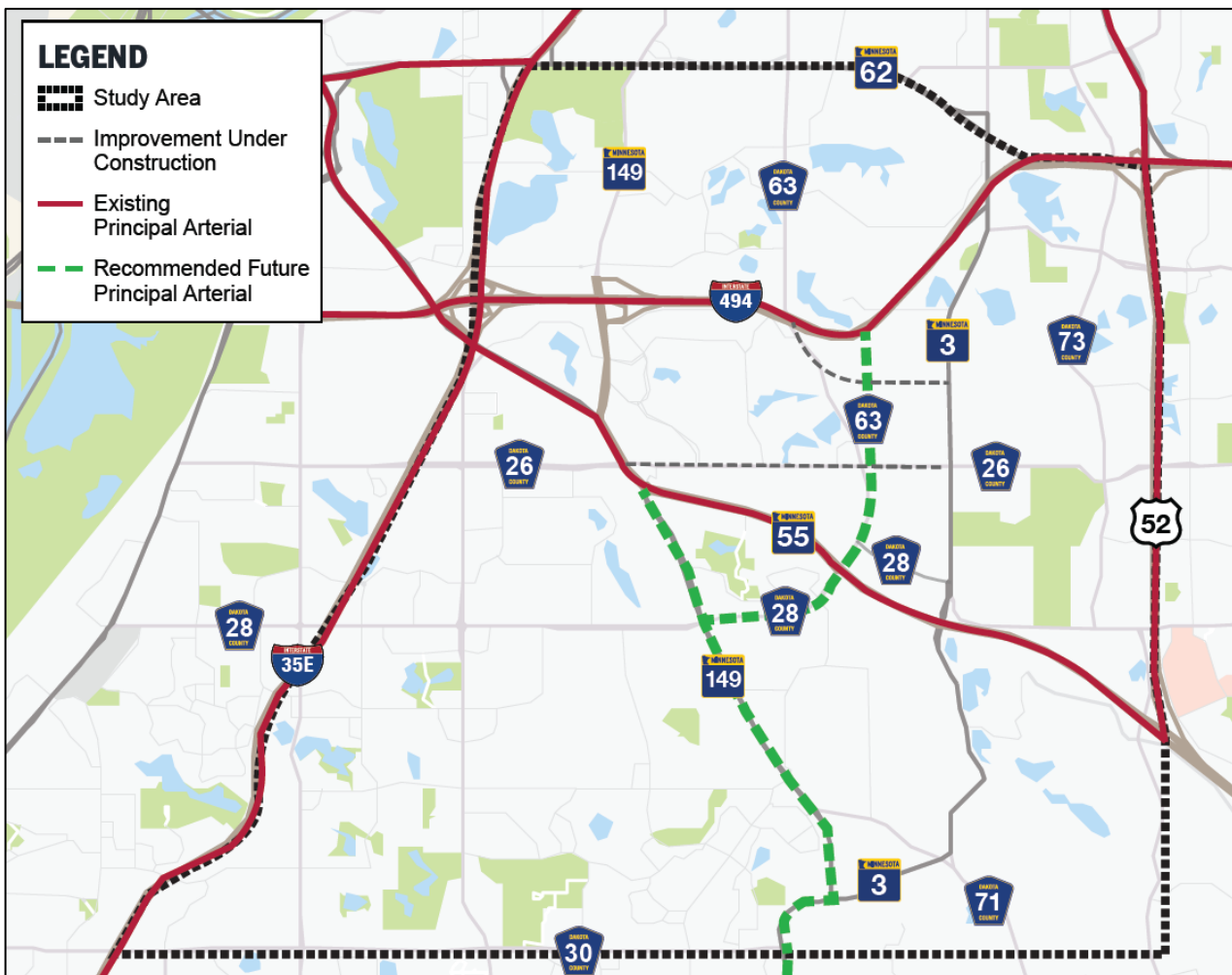


Figure 6. Principal Arterial Needs

TRANSPORTATION IMPACTS

In addition to the transportation needs, the potential impacts of changes to the transportation system were also identified and documented. The impacts were used to inform the development and evaluation of potential improvements.

Roadway Expansion

When considering traffic capacity needs in the RRSVS study area, some of the existing roadways in the study area were identified as having greater impacts or constraints for roadway expansion (adding through vehicle lanes). Corridors that had at least two of the following characteristics were identified as constrained corridor roadways:

- Roadway without existing highway right-of-way needed for additional through lanes
- Steep grades or bluffs along the roadway
- Fully developed areas with existing homes and driveway accesses on the roadway
- Large areas of lakes, wetlands, or other natural resources adjacent to the roadway

The constrained roadway corridors are shown in **Figure 7**. Constrained roadway corridors would have more significant impacts if the roadway was expanded (through vehicle lanes added) compared to other roadways in the RRSVS study area.

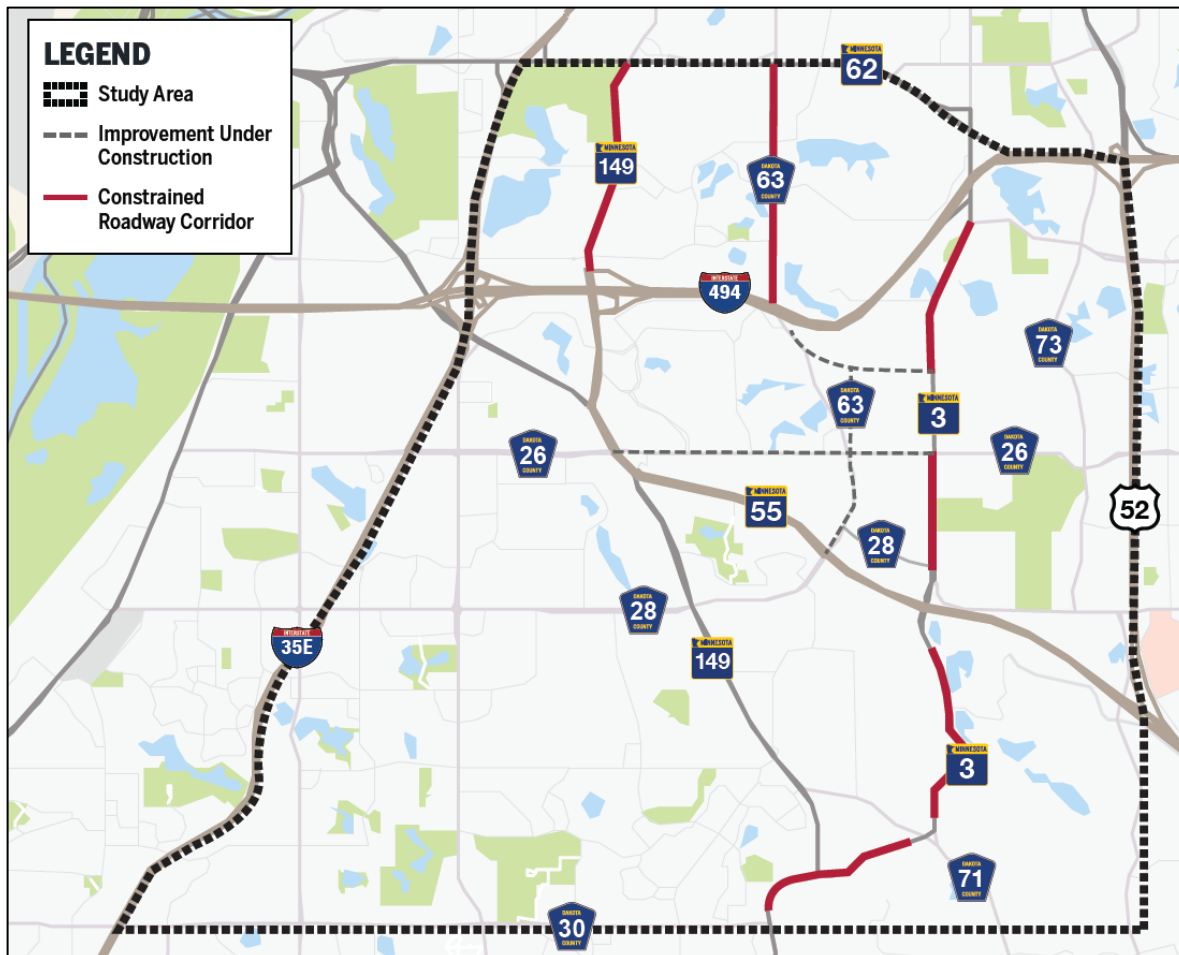


Figure 7. Corridors with Roadway Expansion Impacts

Environmental Resources

Potential environmental resources within the RRSVS study area were identified through a review of available data sources.

- Natural Resources
 - National Wetlands Inventory (NWI) depicts potential wetland areas and waterbodies based on stereoscopic analysis of high altitude and aerial photographs.
 - National Hydrography Dataset (NHD) depicts drainage networks and related features, including rivers, streams, canals, lakes, and ponds.
 - Minnesota Department of Natural Resources (DNR) Public Waters Inventory (PWI) includes all waterbasins and watercourses that meet the criteria set forth in Minnesota Statutes, Section 103G.005.
 - DNR Regionally Significant Ecological Areas (RSEA) dataset includes regionally significant terrestrial and wetland ecological areas in the seven-county metropolitan area.
 - DNR Sites of Biodiversity Significance depicts areas with varying levels of native biodiversity that may contain high quality native plant communities, rare plants, rare animals, and/or animal aggregations. There are no Sites of Biodiversity in the study area.
 - Federal Emergency Management Agency's Flood Insurance Rate Map which identifies floodplains in the study area.
- Parks and Trails – Parks and trails were identified through the Dakota County Interactive GIS mapping which includes county and city facilities.
- Federally-Listed and State-Listed Species and Habitats – The DNR Natural Heritage Inventory System (NHIS) database and United States Fish and Wildlife Service (USFWS) database were reviewed for known occurrences of endangered, threatened, and special concern species. Species and habitats are not mapped to specific locations but their presence within Dakota County was documented.
- Cultural Resources - Coordination with the State Historic Preservation Office (SHPO) identified three properties listed in the National or State Registers of Historic Places, and no known or suspected archaeological properties. The locations of cultural resources were identified at the Township Range Section (TRS) level. The identified cultural resources did not have a significant effect on the evaluation of alternatives; to simplify the mapping, historic properties are not shown on the maps in Figures 8 and 9.
- Contaminated Sites – The Minnesota Pollution Control Agency (MPCA) "What's In My Neighborhood" database was reviewed to identify properties in the MPCA inventory. The inventory includes contaminated sites that have been previously remediated, potentially contaminated sites that are currently being investigated or remediated, and sites with environmental permits and registrations from the MPCA.
- Environmental Justice – Potential environmental justice areas, including areas of minority and low-income population groups, were reviewed based on the 2016-2020 American Community Survey (ACS). Environmental justice areas were mapped at the census block group level.
- Social and Community - Social and community resources reviewed include the locations of schools, churches, hospitals, libraries, government buildings, and post offices.

The data gathered through the environmental review is documented in **Figure 8** (north RRSVS study area) and **Figure 9** (south RRSVS study area).

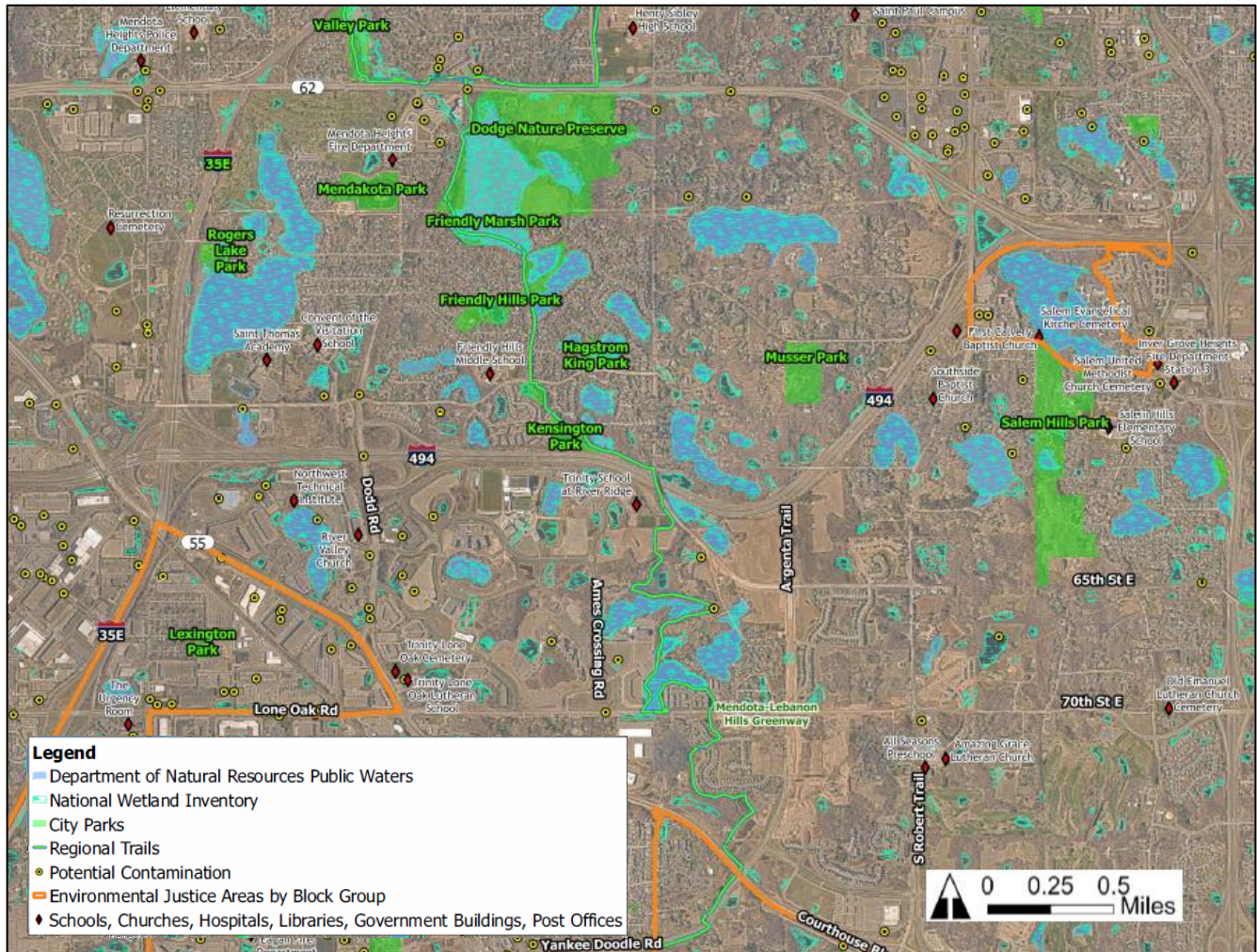


Figure 8. Environmental Resources – North RRSVS Study Area

Listed species are not mapped to specific locations, but species in Dakota County include: Northern Long-Eared Bat, Higgins Eye Mussel, Sheepsnose Mussel, Snuffbox Mussel, Monarch Butterfly, Rusty Patched Bumble Bee, Minnesota Dwarf Trout Lily, and Prairie Bush-Clover.

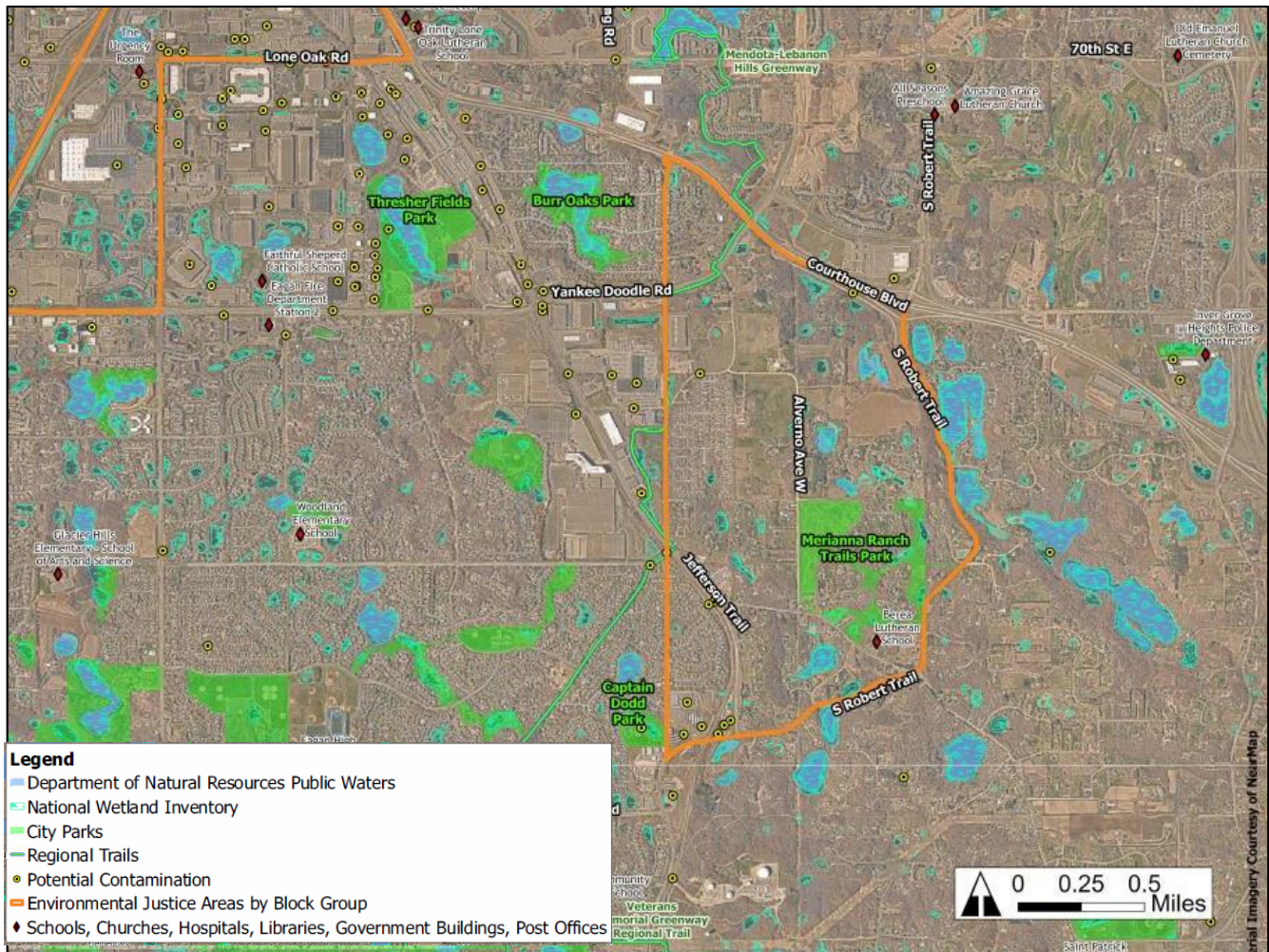


Figure 9. Environmental Resources – South RRSVS Study Area

Listed species are not mapped to specific locations, but species in Dakota County include: Northern Long-Eared Bat, Higgins Eye Mussel, Sheepnose Mussel, Snuffbox Mussel, Monarch Butterfly, Rusty Patched Bumble Bee, Minnesota Dwarf Trout Lily, and Prairie Bush-Clover.

Development and Evaluation of Transportation Improvements

The process to develop and evaluate transportation improvements in the RRSVS study area started with the identification of improvements that could potentially address one of the documented existing or future transportation needs. To address the capacity, safety, and connectivity needs identified in the study, multiple types of improvements were considered:

- Roadway expansions (adding through vehicle lanes)
- New roadways
- Interchange expansions
- New interchanges
- Intersection improvements
- Spot improvements such as turn lanes and intersection control
- Corridor improvements such as access management

Improvements to existing roadways focused on key corridors in the study area:

- TH 3 (Robert Trail)
- TH 149 (Dodd Road/Jefferson Trail)
- TH 62
- CR 26 (Lone Oak Road/70th Street W)
- CR 28 (Yankee Doodle Road/80th Street W/Amana Trail)
- CR 63 (Argenta Trail/Delaware Ave)

Potential improvements or changes were not considered on freeways such as I-35E or on neighborhood streets.

A list of 21 potential transportation improvements were identified for evaluation, which included the recommended improvements from the 2010 RRSVS as well as some new potential improvements that were not identified in the 2010 RRSVS. The evaluation of each of the potential improvements considered how well it met one of the identified transportation needs and its potential environmental and property impacts. The traffic forecasting model was used to test how various combinations of improvements addressed the RRSVS Visioning Baseline capacity need, the amount of roadway expansion needed, and the traffic volume shifts resulting from different combinations of improvements. The 21 potential improvements and the evaluation of each improvement are summarized in **Table 3**.



Table 3. Evaluation of Potential RRSVS Transportation Improvements

Potential Transportation Improvement Alternative		2010 RRSVS Study Recommendation?	Transportation Needs			Environmental and Property Impacts
			Capacity	Safety	Connectivity	
1	CR 26 (70 th Street W), TH 3 (Robert Trail) to CR 73 (Babcock Trail): Expansion to 4 lanes	Yes	▶			▶
2	65 th Street Extension, TH 3 (Robert Trail) to CR 73 (Babcock Trail): City collector street (2 lanes)	Yes			+	▶
3	CR 28 (80 th Street W) at TH 3: Roadway realignment (2 lanes)	Yes			+	▶
4	TH 3 (Robert Trail), CR 30 (Diffley Road) to CR 71 (Rich Valley Boulevard): Expansion to 4 lanes	Yes	+			▶
5	TH 149 (Jefferson Trail), CR 71 (Rich Valley Boulevard) to TH 3 (Robert Trail): Expansion to 4 lanes	Yes	+			▶
6	CR 28 (Yankee Doodle Road) to TH 149 (Jefferson Trail) or CR 71 (Rich Valley Boulevard): City collector street (2 lanes)	Yes			+	▶
7	TH 3 (Robert Trail), CR 71 (Rich Valley Boulevard) to TH 55 (Courthouse Boulevard): Expansion to 4 lanes	Yes	+(without Argenta/I-494 interchange)			×
8	TH 3 (Robert Trail), TH 55 (Courthouse Boulevard) to CR 26 (70 th Street W): Expansion to 4 lanes	Yes (long term)	+(without Argenta/I-494 interchange)			▶
9	TH 3 (Robert Trail), CR 26 (70 th Street W) to I-494: Expansion to 4 lanes	Yes (long term)	+(without Argenta/I-494 interchange)			▶
10	TH 3 (Robert Trail)/I-494/TH 62 Interchange Improvements	No				
11	TH 55 (Courthouse Boulevard) and CR 28 (Yankee Doodle Road/Argenta Trail) High-Capacity Intersection or Interchange	Yes	▶	+	▶	▶
12	CR 63 (Argenta Trail), TH 55 (Courthouse Boulevard) to I-494: Expansion to 4 lanes	Yes (6 lanes)	+(with Argenta/I-494 interchange)			▶

Note: The improvement numbering system was used for referencing of individual items and does not indicate evaluation ranking or priority.

LEGEND:	Transportation Needs	Environmental and Property Impacts
	⊕ Fully Meets Need	⊕ Positive Effects
	▶ Partially Meets Need	▶ Neutral Effects or Moderate Negative Effects
	Does Not Meet Need	× Significant Negative Effects



Table 3. Evaluation of Potential RRSVS Transportation Improvements (continued)

Potential Transportation Improvement Alternative		2010 RRSVS Study Recommendation?	Transportation Needs			Environmental and Property Impacts
			Capacity	Safety	Connectivity	
13	CR 63 (Argenta Trail)/I-494 Interchange	Yes	+			+
14	Vikings Parkway extension: City collector street (2 lanes)	Yes			+	►
15	TH 149 (Dodd Road), TH 55 (Courthouse Boulevard) to I-494: Expansion to 6 lanes	Yes		+(at TH 55)		►
16	TH 149 (Dodd Road)/I-494 Interchange Improvements	No				
17	CR 26 (Lone Oak Road), I-35E to CR 43 (Lexington Avenue): Expansion to 6 lanes	Yes				►
18	TH 62/TH 149 (Dodd Road) Intersection Improvements: Additional evaluation needed to identify specific improvements	No		+		
19	TH 62/CR 63 (Delaware Avenue) Intersection Improvements: Additional evaluation needed to identify specific improvements	No		+		
20	CR 63 (Delaware Avenue), I-494 to TH 62: Spot improvements	No	+			►
21	CR 28 (Amana Trail), CR 63 (Argenta Trail) to TH 3 (Robert Trail): Expansion to 4 lanes	Yes				

Note: The improvement numbering system was used for referencing of individual items and does not indicate evaluation ranking or priority.

LEGEND:	Transportation Needs	Environmental and Property Impacts
	+ Fully Meets Need	+ Positive Effects
	► Partially Meets Need	► Neutral Effects or Moderate Negative Effects
	Does Not Meet Need	✗ Significant Negative Effects

Based on the evaluation shown in Table 3, there were five potential transportation improvements that did not meet a transportation need. These alternative improvements were therefore not considered further and are not included in the recommendations for this study.

10. TH 3 (Robert Trail)/I-494/TH 62 Interchange Improvements – The 2040 and Beyond 2040 traffic forecasts did not show traffic capacity needs at the interchange, and additional interchange capacity at TH 3 (Robert Trail) would not be needed with a new interchange at CR 63 (Argenta Trail)/I-494. This finding is consistent with the 2010 RRSVS, which included more intense development in the study area.

15. TH 149 (Dodd Road), TH 55 (Courthouse Boulevard) to I-494: Expansion to 6 lanes – The 2010 RRSVS included a recommendation to expand the roadway to six vehicle lanes. The RRSVS Update forecasts for 2040 and Beyond 2040 showed traffic volumes on TH 149 (Dodd Road) less than 35,000 vehicles per day, which indicates a 6-lane section would not be needed. In addition, a new interchange at CR 63 (Argenta Trail)/I-494 would reduce the future traffic demands on TH 149 (Dodd Road) in this segment.

16. TH 149 (Dodd Road)/I-494 Interchange Improvements – The 2040 and Beyond 2040 traffic forecasts did not show traffic capacity needs at the interchange, and additional interchange capacity at TH 149 (Dodd Road) would not be needed with a new interchange at CR 63 (Argenta Trail)/I-494. This finding is consistent with the 2010 RRSVS, which included more intense development in the study area.

17. CR 26 (Lone Oak Road), I-35E to CR 43 (Lexington Avenue): Expansion to 6 lanes – The 2010 RRSVS included a recommendation to expand the roadway to six vehicle lanes. The RRSVS Update forecasts for 2040 and Beyond 2040 showed traffic volumes on CR 26 (Lone Oak Road) were less than 35,000 vehicles per day, which indicates a 6-lane section would not be needed. In addition, the forecasts on this segment of CR 26 (Lone Oak Road) had little variation in traffic volume when testing combinations of potential improvements in the RRSVS study area, which indicates that this roadway segment is not significantly affected by the transportation improvements in the RRSVS study area.

21. CR 28 (Amana Trail), CR 63 (Argenta Trail) to TH 3 (Robert Trail): Expansion to 4 lanes – The 2010 RRSVS included a recommendation to expand the roadway to four vehicle lanes. The RRSVS Update forecasts for 2040 and Beyond 2040 showed traffic volumes on CR 28 (Amana Trail) less than 8,000 vehicles per day, which indicates a 4-lane section would not be needed. In addition, the forecasts on this segment of CR 28 (Amana Trail) had little variation in traffic volume when testing combinations of potential improvements in the RRSVS study area, which indicates that this roadway segment is not significantly affected by the transportation improvements in the RRSVS study area.

The technical analysis and evaluation also showed that several potential improvements should be modified or reduced in scope, for example corridor spot improvements instead of corridor expansion (adding through vehicle lanes). The details of these scope modifications and the technical analysis supporting the modifications to improvements scope are discussed in the Recommendations section of this report.

Public Input

Opportunities for the public to provide input and updates to elected officials in each city occurred at two key points in the RRSVS Update: during the project initiation/data collection phase and during the recommendations phase. The feedback was used to inform and validate the transportation needs and to inform the final recommendations of the study.

OPEN HOUSE #1

The intent of Open House #1 was to inform the public about the study and gather input about transportation challenges and opportunities in the study area. The first open house was held in November 2021 with both in-person and virtual options for participation. The open house materials were available on the project website and comments were requested during a three-week period in November 2021. The in-person meeting was held on November 9, 2021 at Friendly Hills Middle School in Mendota Heights. About 70 people attended the in-person open house and there were 512 visits to the project website during the virtual open house.

The major themes of public feedback during Open House #1 included:

- Concern about Alverno Avenue becoming a major north-south street south of TH 55 (Courthouse Boulevard), the desire to retain rural character of the area, and concern with impacts to private property.
- Concern about traffic and pedestrian safety at specific intersections on TH 149 (Dodd Road) and on TH 62.
- Questions about whether additional lanes are needed on TH 3 (Robert Trail) and concerns with impacts to private property.
- Questions about timeline for roadway improvements.
- Desire for transparency of the decision-making processes for future land use, long-term transportation plan, and roadway projects.

OPEN HOUSE #2

The purpose of Open House #2 was to share the transportation needs analysis and draft recommendations for the study area. The open house was held in June 2022 with both in-person and virtual options for participation. The open house materials were available on the project website and comments were requested during June 2022. The in-person meeting was held on June 1, 2022 at Veterans Memorial Community Center in Inver Grove Heights. About 60 people attended the in-person open house and there were 157 visits to the project website during the virtual open house.

The major themes of public feedback during Open House #2 included:

- General support for not expanding TH 3 (Robert Trail) to a four-lane roadway north of CR 71 (Rich Valley Boulevard).
- Concern for expansion (adding through vehicle lanes) on TH 3 (Robert Trail) south of CR 71 (Rich Valley Boulevard).
- Concern for developing city collector streets, especially 65th Street east of TH 3 (Robert Trail) and a collector street south of TH 55 (Courthouse Boulevard) near Alverno Avenue.
- Support for a new interchange at CR 63 (Argenta Trail)/I-494.

As part of the updates to city councils in summer 2022, Sunfish Lake and Mendota Heights provided the following feedback on the study:

- Sunfish Lake expressed concern about safety and delays on Salem Church Road at CR 63 (Delaware Avenue) and TH 3 (Robert Trail), especially as traffic volumes increase.
- Mendota Heights requested that the RRSVS Update address pedestrian and bicycle needs in the study area.

Recommendations

The recommendations of the RRSVS Update are intended to guide the planning and implementation of transportation improvements within the study area over the next 20 years. Significant growth is anticipated in the next 20 years, and a unified transportation vision is needed to support development and guide future efforts of the cities, county, and MnDOT to plan, fund, and implement transportation improvements.

ROADWAY IMPROVEMENTS

The 16 roadway recommendations of the RRSVS Update reflect the changes that have occurred in traffic conditions, land use plans, and the transportation network since the 2010 RRSVS was completed. The recommended improvements will provide for safe and efficient travel in and through the study area and support development in the RRSVS study area and surrounding communities.

Each of the recommended roadway improvements is shown in **Figure 10**; the need for the improvement, dependencies among improvements, and modifications to the improvement scope compared to the 2010 RRSVS recommendations are discussed below. The improvement numbering system was used for referencing on the map and does not indicate importance or priority.

1. CR 26 (70th Street W), TH 3 (Robert Trail) to CR 73 (Babcock Trail): Expansion to 3 lanes – The 2040 and Beyond 2040 traffic forecasts showed future traffic volumes of about 10,000 vehicles per day, which indicates that improvements would be needed to the existing two-lane roadway. Based on the technical analysis, the scope of this improvement was modified from a four-lane expansion (recommended in the 2010 RRSVS) to a three-lane expansion (recommended in the RRSVS Update). A three-lane roadway would have one through lane in each direction with left-turn lanes. Access management will also be needed on CR 26 (70th Street W), consistent with the 2040 Dakota County Transportation Plan.

2. 65th Street Extension, TH 3 (Robert Trail) to CR 73 (Babcock Trail): City collector street (2 lanes) – The RRSVS Update confirmed the need for the 65th Street extension to support residential development in the area bounded by TH 3 (Robert Trail), Upper 55th Street, CR 73 (Babcock Trail), and CR 26 (70th Street W). The 2040 and Beyond 2040 forecasts show that the 65th Street extension would carry 800 to 2,000 vehicles per day, with the higher volume expected if the CR 63 (Argenta Trail)/I-494 interchange was constructed.

If 65th Street were not extended between TH 3 (Robert Trail) and Babcock Trail (CR 73), the analysis indicated that the recommended number of lanes on TH 3 (Robert Trail) and CR 26 (70th Street W) would not change. However, neighborhood street connections to the county and state highways would only be permitted at most every 1/4 mile (full access) or 1/8 mile (partial access). This means that all the traffic from the future neighborhoods (800 to 2,000 vehicles per day) would be accessing the highway system via neighborhood streets. Residential streets, with very frequent driveway accesses, are not designed to accommodate these traffic volumes and would be expected to negatively impact safety and livability on the neighborhood streets.

3. CR 28 (80th Street W) at TH 3: Roadway realignment (2 lanes) – This recommendation meets a connectivity need because CR 28 (80th Street W) currently intersects TH 3 (Robert Trail) only 1/8 mile north of the TH 55 ramp intersection. Based on access management guidelines, the existing CR 28 (80th Street W)/TH 3 (Robert Trail) intersection is a partial access. Realignment of CR 28 (80th Street W) to intersect TH 3 (Robert Trail) at Amana Trail would allow for a full access intersection and provide improved connectivity of the county road.

4. TH 3 (Robert Trail), CR 30 (Diffley Road) to CR 71 (Rich Valley Boulevard): Expansion to 4

lanes – The 2040 and Beyond 2040 forecasts showed future traffic volumes of 16,500 to 19,000 vehicles per day south of TH 149 (Jefferson Trail), which indicates that a four-lane roadway would be needed to provide adequate capacity. This recommendation is also supported by the identification of TH 3 (Robert Trail) and TH 149 (Jefferson Trail) as future principal arterial highways. More detailed traffic analysis will be needed to determine the intersection design and control at the TH 3 (Robert Trail)/TH 149 (Jefferson Trail) intersection and the number of lanes on TH 3 (Robert Trail) between TH 149 (Jefferson Trail) and CR 71 (Rich Valley Boulevard). The expansion of TH 3 (Robert Trail) would require modifications or reconstruction of the existing railroad bridge.

5. TH 149 (Jefferson Trail), CR 71 (Rich Valley Boulevard) to TH 3 (Robert Trail): Expansion to 4

lanes – The 2040 and Beyond 2040 forecasts showed future traffic volumes of 13,000 to 14,500 vehicle per day south of Wescott Road, which indicates that additional lanes would be needed to provide adequate capacity. This recommendation is also supported by the need for continuity with the segment of TH 149 (Dodd Road) to the north and identification of TH 149 (Jefferson Trail/Dodd Road) as a future principal arterial highway. More detailed traffic analysis will be needed to determine the intersection design and control at TH 3 (Robert Trail) and TH 149 (Jefferson Trail).

6. CR 28 (Yankee Doodle Road) to TH 149 (Jefferson Trail) or CR 71 (Rich Valley Boulevard): City collector street (2 lanes) – The RRSVS Update confirmed the need for a city collector street to support the low- to medium-density residential development in the 2040 MUSA area south of TH 55 (Courthouse Boulevard) between TH 149 (Jefferson Trail/Dodd Road) and TH 3 (Robert Trail). The city collector street would connect neighborhoods to the highway network and is not intended to serve through traffic. The collector street is recommended to connect to CR 71 (Rich Valley Boulevard) because the RRSVS Update traffic forecasting showed that a connection to TH 149 (Dodd Road) would be more likely to result in cut-through traffic.

If a city collector street were not built as the low- to medium-density residential land uses are developed, all the traffic from the neighborhood would be accessing the highway system via neighborhood streets. Residential streets, with very frequent driveway accesses, are not designed to accommodate these traffic volumes and would be expected to negatively impact safety and livability on the neighborhood streets.

7. TH 3 (Robert Trail), CR 71 (Rich Valley Boulevard) to TH 55 (Courthouse Boulevard): Spot

Improvements – The 2040 and Beyond 2040 forecasts showed that future traffic volumes would remain less than 10,000 vehicles per day if TH 3 (Robert Trail) is not expanded and if an interchange is constructed at CR 63 (Argenta Trail)/I-494. Based on the traffic forecasts, corridor constraints in this segment of the TH 3 (Robert Trail) corridor, and both public and agency input, the scope of this improvement was modified from a roadway expansion (recommended in the 2010 RRSVS) to spot improvements which could include shoulders, turn lanes, access management, and intersection improvements. More detailed traffic analysis will be needed to determine the location and type of spot improvements.

8. TH 3 (Robert Trail), TH 55 (Courthouse Boulevard) to CR 26 (70th Street W): Spot

Improvements – The 2040 and Beyond 2040 forecasts showed that future traffic volumes would remain less than 10,000 vehicles per day if TH 3 (Robert Trail) is not expanded and if an interchange is constructed at CR 63 (Argenta Trail)/I-494. Based on the traffic forecasts, corridor constraints in this segment of the TH 3 (Robert Trail) corridor, and both public and agency input, the scope of this improvement was modified from a roadway expansion (recommended in the 2010 RRSVS) to spot improvements which could include shoulders, turn lanes, access management, and intersection

improvements. More detailed traffic analysis will be needed to determine the location and type of spot improvements.

9. TH 3 (Robert Trail), CR 26 (70th Street W) to I-494: Spot Improvements – The 2040 and Beyond 2040 forecasts showed that future traffic volumes would remain less than 10,000 vehicles per day if TH 3 (Robert Trail) is not expanded and if an interchange is constructed at CR 63 (Argenta Trail)/I-494. Based on the traffic forecasts, corridor constraints in this segment of the TH 3 (Robert Trail) corridor, and both public and agency input, the scope of this improvement was modified from a roadway expansion (recommended in the 2010 RRSVS) to spot improvements which could include shoulders, turn lanes, access management, and intersection improvements. More detailed traffic analysis will be needed to determine the location and type of spot improvements.

11. TH 55 (Courthouse Boulevard) and CR 28/63 (Yankee Doodle Road/Argenta Trail) High-Capacity Intersection or Interchange – This improvement meets a connectivity need because TH 55 (Courthouse Boulevard) is an existing principal arterial highway and CR 28 (Yankee Doodle Road/Argenta Trail) is identified as a future principal arterial highway. The existing traffic signal would be expected to have significant congestion by 2040. To support the function of both roadways as principal arterial highways, a future grade separation or high-capacity intersection is recommended.

12. CR 63 (Argenta Trail), TH 55 (Courthouse Boulevard) to I-494: Expansion to 4 lanes – The 2040 and Beyond 2040 traffic forecasts showed future traffic volumes of 18,000 to 33,000 vehicles per day with a new interchange at CR 63 (Argenta Trail)/I-494. Based on the technical analysis, the scope of this improvement was modified from a six-lane expansion (recommended in the 2010 RRSVS) to a four-lane expansion (recommended in the RRSVS Update). The roadway expansion would not be needed until the new interchange is constructed at I-494.

13. CR 63 (Argenta Trail)/I-494 Interchange – The 2040 and Beyond 2040 traffic forecasts showed that a new interchange at CR 63 (Argenta Trail)/I-494 would best provide regional highway access to and from the densest development in the RRSVS study area. This confirms the recommendation from the 2010 RRSVS. The 2010 RRSVS included significant analysis to site the interchange and roadway network around the interchange, therefore the recommendation in the RRSVS Update perpetuates the previously recommended location and design: the new interchange would provide access to and from Eagan, Inver Grove Heights, and both directions of I-494. There would not be direct access to the interchange from north of I-494. The design and footprint (interchange configuration) at CR 63 (Argenta Trail)/I-494 have not been determined. Further evaluation of the CR 63 (Argenta Trail)/I-494 interchange configuration would be needed to determine the interchange layout and whether the I-494/TH 3 West Ramps would need to be removed. The removal of the I-494/TH 3 West Ramps was not evaluated in this study.

Changes in interchange access require significant time for evaluation, funding, and approvals. Future evaluations could determine that a new interchange is not warranted or may determine that other modifications may be needed along with the interchange.

14. Vikings Parkway Extension: City collector street (2 lanes) – This improvement meets a roadway connectivity need west of CR 63 (Argenta Trail). An east-west collector street between I-494 and CR 26 (Lone Oak Road) would serve the future development area east of Ames Crossing Road.

18. TH 62/TH 149 (Dodd Road) Intersection Improvements: Additional evaluation needed to identify specific improvements – This improvement meets both capacity and safety needs. While a new interchange at CR 63 (Argenta Trail)/I-494 would reduce the future traffic demand on this segment of TH 149 (Dodd Road), improvements would still be needed to address capacity issues and potential

existing safety needs. More detailed traffic analysis will be needed to determine the location and type of improvements.

19. TH 62/CR 63 (Delaware Avenue) Intersection Improvements: Additional evaluation needed to identify specific improvements – This improvement meets both capacity and safety needs. While a new interchange at CR 63 (Argenta Trail)/I-494 would reduce the future traffic demand on this segment of CR 63 (Delaware Avenue), improvements would still be needed to address capacity issues and potential existing safety needs. More detailed traffic analysis will be needed to determine the location and type of improvements.

20. CR 63 (Delaware Avenue), I-494 to TH 62: Spot Improvements – The 2040 and Beyond 2040 forecasts showed that future traffic volumes would be approaching the capacity of a two-lane roadway. While a new interchange at CR 63 (Argenta Trail)/I-494 would reduce the future traffic demand on this segment of CR 63 (Delaware Avenue), improvements would still be needed to address capacity issues. Spot improvements, which could include shoulders, turn lanes, access management, and intersection improvements, are recommended to address the capacity need. More detailed traffic analysis will be needed to determine the location and type of spot improvements.

The RRSVS Update recommendations discussed in this section are focused on the system level and reflect the needs on the highway corridors and at major intersections and interchanges. These recommendations do not preclude or limit agencies from evaluating and implementing localized improvements, such as at minor intersections or on smaller roadway segments, where the agencies identify a specific need.

The roadway and intersection capacity for the study area, with the 16 recommended improvements, is shown in **Figure 11**. The analysis shows that the 2040 capacity needs would be addressed by the recommended improvements and no roadway segments or intersections would be over capacity. The segment of CR 63 (Argenta Trail) between 65th Street and I-494 would be approaching the capacity of a four-lane roadway section. This segment of roadway would be part of the CR 63 (Argenta Trail)/I-494 interchange, would primarily serve turning traffic to and from I-494, and would not have any through traffic; therefore, additional through lanes are not recommended. The interchange configuration, including the number of turn lanes, should be further evaluated in future phases of the interchange analysis and design.

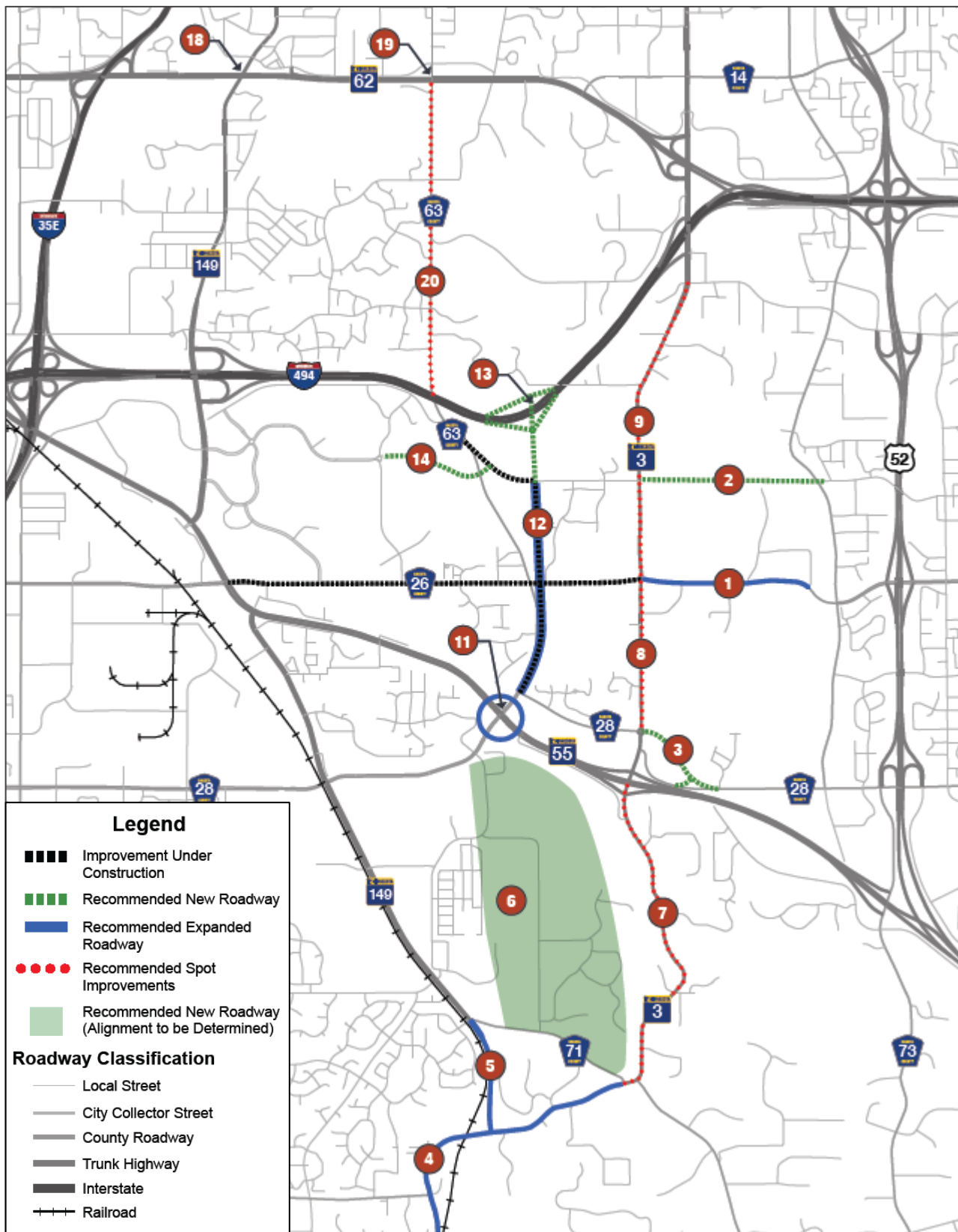


Figure 10. RRSVS Update Recommendations

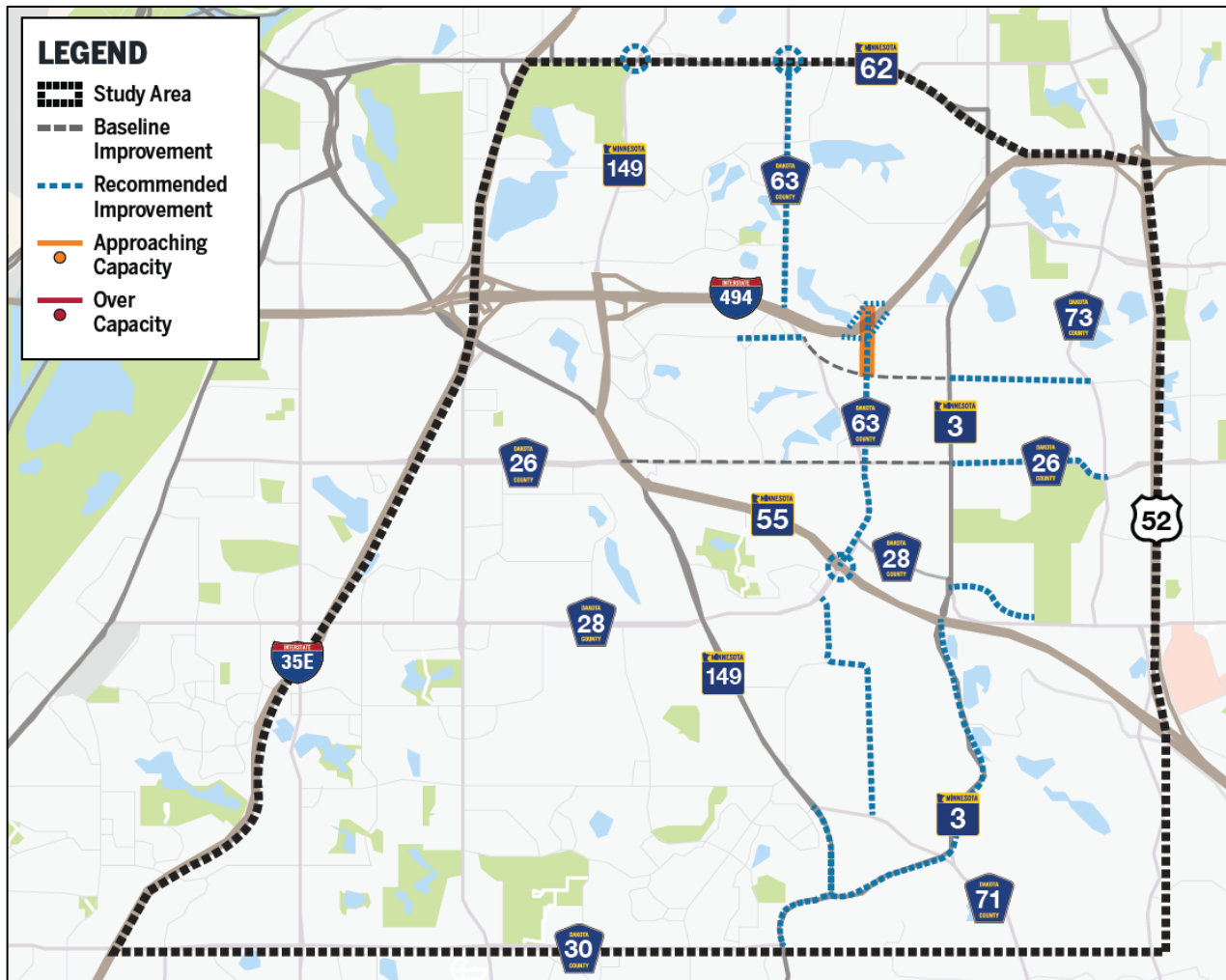


Figure 11. 2040 RRSVS Update Traffic Capacity Needs with Recommendations.

OTHER RECOMMENDATIONS

2010 RRSVS

In addition to the 16 roadway improvements recommended, there were also two areas where the RRSVS Update recommendation is not to implement an improvement that was identified in the 2010 RRSVS. The technical analysis in the RRSVS Update did not show a transportation need for either of these roadways in 2040 or Beyond 2040 traffic forecasts.

17. CR 26 (Lone Oak Road), I-35E to CR 43 (Lexington Avenue): The 2010 RRSVS included a recommendation to expand the roadway to six vehicle lanes. The RRSVS Update showed 2040 traffic forecasts less than 35,000 vehicles per day, which indicates a six-lane section would not be needed. Therefore, expansion to a six-lane roadway is not recommended.

21. CR 28 (Amana Trail), CR 63 (Argenta Trail) to TH 3 (Robert Trail): The RRSVS Update showed 2040 traffic forecasts less than 8,000 vehicles per day, which indicates the existing roadway section with one lane in each direction, turn lanes, and access management would meet the future capacity needs. Therefore, expansion to a four-lane roadway is not recommended.

Multimodal Transportation

Trails, sidewalks, and bikeways are important elements of a safe and efficient transportation system and provide transportation and recreation options for people of all ages and abilities. As noted in the 2010 RRSVS, many of the regional routes in the study area are not conducive for bicycle and pedestrian use due to narrow shoulders and limited sight distance due to curves and hills. Dakota County, the cities, and MnDOT should plan for appropriate pedestrian and bicycle facilities in parallel with the recommended roadway improvements from this study and consistent with the pedestrian and bicycle networks identified in the 2040 Comprehensive Plans.

Implementation

The implementation of specific recommendations in the RRSVS Update will be driven by the rate of development and growth in traffic volumes on the roadway network. The recommendations also include additional studies and more detailed preliminary design for intersections and roadway segments.

The improvements included in the RRSVS Update recommendations should be incorporated into appropriate capital improvement programs as the following occurs:

- Capacity and/or safety needs are identified on the existing transportation system
- Opportunities arise to coordinate with development or other outside funding sources
- Specific to the CR 63 (Argenta Trail)/I-494 interchange, the necessary supporting roadway system connections need to be in place prior to or built with the new interchange.
- An Interchange Warrant Analysis was completed and submitted to the Federal Highway Administration (FHWA) as part of the 2010 RRSVS. A more detailed and comprehensive operations and safety analysis will be required if the interchange access process moves forward.
 - If FHWA determines that the warrant analysis has merit to proceed to the next step, an Interstate Access Request (IAR) would be prepared. This process would address operations and safety on I-494 in greater detail. Based on input from FHWA and Mn/DOT during the 2010 RRSVS, this analysis would require a formal layout for the interchange and other access changes, as well as an environmental study that meets state and federal requirements.

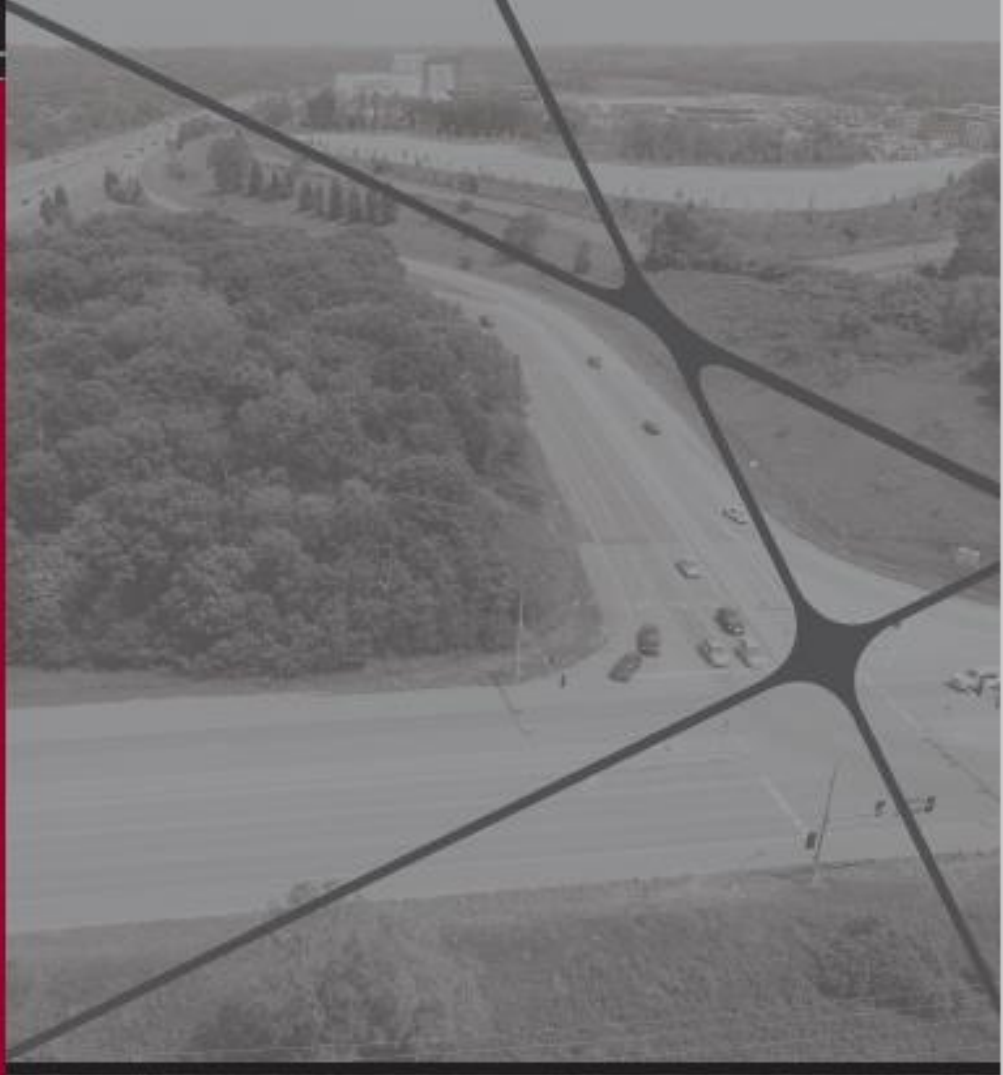
The RRSVS agency partners should pursue a variety of funding sources, both public and private, to implement the transportation vision for the RRSVS study area. As individual projects move into the engineering phase, the alignments and specific property impacts would be determined by the partner agencies and additional environmental review and public engagement would be conducted.

STUDY ADOPTION

To conclude the RRSVS Update study, in August and September 2022 the recommendations were presented to the City of Eagan, City of Inver Grove Heights, City of Mendota Heights, City of Sunfish Lake, and Dakota County Board for adoption. The signed resolutions from each city and the county board are provided in the Appendix.

Appendix: City Council and County Board Resolutions

Resolutions will be added following action by city councils and County Board.





August 31, 2022

Honorable Mayor and City Council
City of Sunfish Lake

Re: Construction Pay Voucher No. 1 (Final) and
Final Project Close-Out Documents
City of Sunfish Lake Capital Improvement Projects
City Project No. 2022-01; WSB Project No. 019872-000

Dear Mayor and Council Members:

Please find enclosed Construction Pay Voucher No. 1 & Final in the amount of \$124,934.93 for the above-referenced project. This final payment request represents the final quantities for the project and the release of the retainage on the contract.

We recommend that the City of Sunfish Lake approve Construction Pay Voucher No. 1 & Final for Allied Blacktop at the September 6, 2022, City Council meeting, subject to receipt of the following items:

1. Satisfactory showing that the contractor has complied with the provisions of Minnesota Statutes 290.92 requiring withholding state income tax (IC134 forms).
2. Evidence in the form of an affidavit that all claims against the contractor by reasons of the contract have been fully paid or satisfactorily secured (lien waivers).
3. Consent of Surety to Final Payment certification from the contractor's surety.
4. Two-year maintenance bond.

This project will be considered for acceptance by the City Council on September 6, 2022. The maintenance period will be in effect from September 6, 2022, until September 6, 2024.

Upon approval by the City Council and receipt of the above items, final payment in the amount of \$124,934.93 can be released to Allied Blacktop, and the contract for this project will be finalized and closed out. Once processed, please keep one copy of the pay voucher for your records and return two copies to our office, one for the contractor and one for our files.

If you have any questions or comments regarding the enclosed, please contact me at 651.286.8474. Thank you.

Sincerely,

WSB


Jeffrey Sandberg, PE
City Engineer

Enclosures

cc: Cathy Iago, City of Sunfish Lake

2022 Street Maintenance Projects

Final Pay Voucher 1



Client: City of Sunfish Lake 15 Sunnyside Lane Sunfish Lake, MN 55118	Contractor: Allied Blacktop 10503 89th Avenue North Maple Grove, MN 55369
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WSB Project No.: 019872-000
Client Project No.: City Project No. 2022-01
State Project No.:
Federal Project No.:

Contract Amount		Funds Encumbered	
Original Contract	\$132,029.39	Original	\$132,029.39
Contract Changes	\$0.00	Additional	N/A
Revised Contract	\$132,029.39	Total	\$132,029.39

Work Certified To Date	
Base Bid Items	\$124,934.93
Contract Changes	\$0.00
Material On Hand	\$0.00
Total	\$124,934.93

Work Certified This Voucher	Work Certified To Date	Less Amount Retained	Less Previous Payments	Amount Paid This Voucher	Total Amount Paid To Date
\$124,934.93	\$124,934.93	\$0.00	\$0.00	\$124,934.93	\$124,934.93
Percent Retained: 0%			Percent Complete: 94.63%		

FINAL PAY VOUCHER

I hereby certify that a Final Examination has been made of the noted Contract, that the Contract has been completed, that the entire amount of Work Shown in this Final Voucher has been performed and the Total Value of the Work Performed in accordance with, and pursuant to, the terms of the Contract is as shown in this Final Voucher.

Approved By WSB


Signature

August 23, 2022

Date

Approved By Allied Blacktop


Signature

8/24/22
Date

Approved By City of Sunfish Lake

Signature

Date

Payment Summary				
No.	Up Through Date	Work Certified Per Voucher	Amount Retained Per Voucher	Amount Paid Per Voucher
1	08/23/2022	\$124,934.93	\$0.00	\$124,934.93

Funding Category Name	Work Certified To Date	Less Amount Retained	Less Previous Payments	Amount Paid This Voucher	Total Amount Paid To Date
Local Funding	\$124,934.93	\$0.00	\$0.00	\$124,934.93	\$124,934.93

Accounting Number	Funding Source	Amount Paid This Voucher	Revised Contract Amount	Funds Encumbered To Date	Paid Contractor To Date
Local Funding	Local	\$124,934.93	\$132,029.39	\$132,029.39	\$124,934.93

Contract Item Status									
Line No.	Item	Description	Unit	Unit Price	Contract Quantity	Quantity This Voucher	Amount This Voucher	Quantity To Date	Amount To Date
1	2021.501	MOBILIZATION	LS	\$5,000.00	1	1	\$5,000.00	1	\$5,000.00
2	2331.603	CRACK SEALING	L F	\$0.40	18980	13286	\$5,314.40	13286	\$5,314.40
3	2355.506	BITUMINOUS MATERIAL FOR FOG SEAL	GAL	\$5.00	1261	1169	\$5,845.00	1169	\$5,845.00
4	2356.604	BITUMINOUS SEAL COAT FA-2	S Y	\$1.60	12602	12602	\$20,163.20	12602	\$20,163.20
5	2356.506	BITUMINOUS MATERIAL FOR SEAL COAT	GAL	\$1.99	3781	3403	\$6,771.97	3403	\$6,771.97
6	2563.601	TRAFFIC CONTROL	LS	\$5,000.00	1	1	\$5,000.00	1	\$5,000.00
7	2582.503	4" SOLID LINE PAINT	L F	\$0.40	2820	2820	\$1,128.00	2820	\$1,128.00
8	2582.503	4" DBLE SOLID LINE PAINT	L F	\$0.70	1410	1410	\$987.00	1410	\$987.00
9	2331.603	CRACK SEALING	L F	\$0.40	5500	3850	\$1,540.00	3850	\$1,540.00
10	2355.506	BITUMINOUS MATERIAL FOR FOG SEAL	GAL	\$5.00	625	625	\$3,125.00	625	\$3,125.00
11	2356.604	BITUMINOUS SEAL COAT FA-2	S Y	\$1.50	6241	6241	\$9,361.50	6241	\$9,361.50
12	2356.506	BITUMINOUS MATERIAL FOR SEAL COAT	GAL	\$1.99	1873	1685	\$3,353.15	1685	\$3,353.15
13	2331.603	CRACK SEALING	L F	\$0.40	21831	15282	\$6,112.80	15282	\$6,112.80
14	2355.506	BITUMINOUS MATERIAL FOR FOG SEAL	GAL	\$5.00	1656	1656	\$8,280.00	1656	\$8,280.00
15	2356.604	BITUMINOUS SEAL COAT FA-2	S Y	\$1.50	16555	16555	\$24,832.50	16555	\$24,832.50
16	2356.506	BITUMINOUS MATERIAL FOR SEAL COAT	GAL	\$1.99	4967	4469	\$8,893.31	4469	\$8,893.31
17	2582.503	4" SOLID LINE PAINT	L F	\$0.40	10916	12783	\$5,113.20	12783	\$5,113.20
18	2582.503	4" DBLE SOLID LINE PAINT	L F	\$0.70	5458	5877	\$4,113.90	5877	\$4,113.90

Contract Item Status									
Line No.	Item	Description	Unit	Unit Price	Contract Quantity	Quantity This Voucher	Amount This Voucher	Quantity To Date	Amount To Date
Bid Totals:							\$124,934.93		\$124,934.93

Project Category Totals			Amount This Voucher	Amount To Date
Category				
Schedule A. Base Bid Roadways			\$50,209.57	\$50,209.57
Schedule B. Alternate 1			\$17,379.65	\$17,379.65
Schedule C. Alternate 2			\$57,345.71	\$57,345.71

Contract Change Item Status											
CC	CC No.	Line No.	Item	Description	Units	Unit Price	Contract Quantity	Quantity This Voucher	Amount This Voucher	Quantity To Date	Amount To Date
Contract Change Totals:											

Contract Change Totals					Amount This Voucher	Amount To Date
No.	Contract Change	Description				

Material On Hand Additions					
Line No.	Item	Description	Date	Added	Comments

Material On Hand Balance						
Line No.	Item	Description	Date	Added	Used	Remaining