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St. Croix Valley Roadway Jurisdiction Study

Washington County

Final Report: 05.31.19

Washington County

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APPENDICES

St. Croix Crossing, opened to traffic on August 2nd, 2017

A. STUDY OVERVIEW

1. Background/Purpose

On August 2nd, 2017, the St. Croix Crossing opened to traffic in its new alignment with Trunk Highway 36 between Oak Park Heights, Minnesota and St. Joseph, Wisconsin. Traffic patterns on surrounding local roads, county highways, and state highways in the Oak Park Heights and Stillwater area quickly adjusted to the new crossing. This major system connection prompted Washington County to explore whether changes in roadway jurisdiction are appropriate for several local and county roadways to improve the efficiency and management of the transportation system.

Washington County initiated the St. Croix Valley Roadway Jurisdictional Study in 2018 to provide technical analysis and recommendations for potential changes in roadway jurisdiction for routes in the eastern portion of the county. This study's intent is to identify the most appropriate roadway ownership based on the actual function of the roadway following the opening of the St. Croix Crossing. The outcomes of this study provide a framework for future discussions related to the long-term operation and maintenance of identified roadways between the county and other road authorities. It is anticipated that recommended jurisdictional changes will occur over several years.

A series of technical memos were completed during the study process related to changes in traffic patterns, roadway functional classification, future roadway improvement considerations, state aid route designation, and jurisdiction. This report summarizes the technical findings and recommendations to support the long-term transportation goals of Washington County and its partner agencies. The study outcomes provide a technical framework for the issues and considerations as future discussions occur between the county and other road authorities.

2. Process and Report Summary

A technical approach was established to identify the most appropriate roadway ownership for the subject roadways based on the actual function of the roadway. The functional classification of each study roadway was evaluated for its role in the regional system, and

recommendations were made to properly align classifications based on system guidelines. From there, recommendations for jurisdictional changes became more apparent so higher functioning roads would be owned and maintained by Washington County, while lower functioning roads would be under city and township jurisdiction. Roadways recommended for jurisdictional changes were further evaluated to help agencies better understand potential cost considerations that may be associated a transfer, including necessary improvements and annual maintenance costs. State aid allocations and system considerations were also made for the City of Stillwater. A summary of the analysis for each study segment is provided in **Appendix A**.

This study report provides a summary of the findings and recommendations completed as part of the technical analysis. This study report is divided into the following sections:

- **Section A** is the Study Overview.
- **Section B** describes the corridors (roadway segments) that were evaluated as part of this study and the information that was inventoried for each corridor.
- **Section C** provides a summary of the five technical analyses that were performed over the course of the study.
- **Section D** outlines the study recommendations.
- **Appendices** consist of agency correspondence, inventory maps, and the detailed technical analysis memos.

3. Agency Involvement

Washington County sought to ensure an open and transparent process by inviting representatives from potentially affected roadway agencies to participate in the study. Invited agencies included the Minnesota Department of Transportation (MnDOT), City of Bayport, City of Oak Park Heights, City of Stillwater, Baytown Township, Stillwater Township, and West Lakeland Township. The City of Oak Park Heights and Baytown Township declined to participate (see **Appendix B** for letters), however they were provided monthly meeting materials and summaries. Agency representatives participated in monthly project management team meetings as the study methodology and recommendations were developed. Participants were asked to share the information from each meeting with their respective agencies. The following agency representatives participated throughout the study process:

Table 1: Project Management Team - Agency Representatives

Agency	Name
City of Bayport	Matt Kline
City of Stillwater	Shawn Sanders
Stillwater Township	Rod Hunter, Sheila-Marie Untiedt
West Lakeland Township	Dave Schultz
Washington County	Andrew Giesen, Frank Ticknor, Joe Gustafson, Allison Berndt, Mitch Bartelt
MnDOT	Adam Josephson, Dan Erickson

B. STUDY CORRIDORS

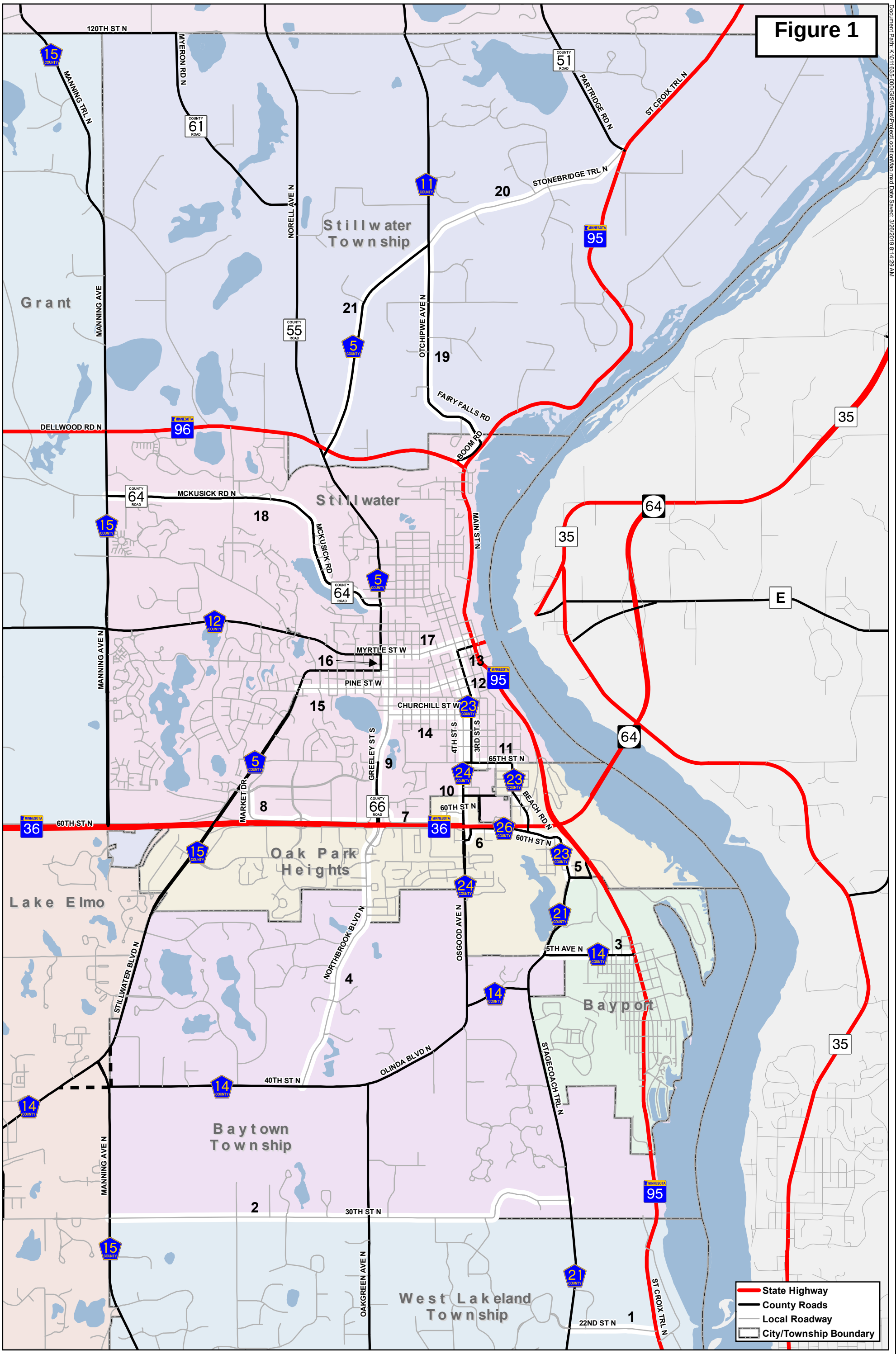
1. Corridor Segments

Washington County identified 21 roadway segments for evaluation in the study. Studied roadway segments are located within the cities of Bayport, Oak Park Heights, and Stillwater, and the townships of Baytown, Stillwater, and West Lakeland Township. The segments are listed in **Table 2** and shown in **Figure 1**.

Table 2: Study Roadway Segments

Map Ref.	Roadway Segment	Map Ref.	Roadway Segment
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St
2	**30th St N** from CSAH 15 (Manning Ave) to CSAH 21 (Stagecoach Trl)	13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)
3	**CSAH 14 (5th Ave)** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	14	**Churchill St W** from Greeley St to CSAH 23 (3rd St)
4	**Northbrook Blvd N/Oakgreen Ave N** from CSAH 14 (40th St) to TH 36	15	**Pine St W** from CSAH 5 (Stillwater Blvd) to CSAH 23 (3rd St)
5	**CSAH 23 (Stagecoach Trl/S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd)	16	**Olive St W** from CSAH 5 (Owens St) to Greeley St
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)
7	**60th St N/W Frontage Rd/Oren Ave N** from Greeley St to Osgood Ave	18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St)
8	**Market Dr/W Frontage Rd/60th St N** from Curve Crest Blvd to Greeley St	19	**CSAH 11 (Otchipwe Ave N)** from TH 96 (Dellwood Rd) to CSAH 5 (Stonebridge Trl)
9	**Greeley St S** from TH 36 to Myrtle St	20	**Stonebridge Trl N** from CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95
10	**CSAH 24 (N Osgood Ave)/4th St S** from TH 36 to Pine St	21	**CSAH 5 (Stonebridge Trl N)** from CR 55 (Norell Ave) to CSAH 11 (Otchipwe Ave)
11	**CSAH 23 (Orleans St E/Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)		

Figure 1



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Study Area Map

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

N

0 3,500 Feet

1 inch = 3,500 feet

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2. Roadway Characteristics Inventory

Prior to the evaluation and analysis process, information on each of the study segments was inventoried through a series of site visits, traffic counts, and review of existing data provided by the County and partner agencies. Each of the 21 study roadways were inventoried using a Google certified Insta360 Pro Camera to capture imagery that was post-processed and uploaded to the Google Map's Street View system. This provided up to date imagery of each roadway to document roadway condition, sidewalks and trails, dimensions, and design constraints. Available GIS data was also collected to establish an extensive database of roadway attributes for use in the analysis. Traffic counts were collected in May and June 2018.

The following information was inventoried for each roadway segment:

- Number of roadway lanes
- Roadway width
- Current traffic volumes
- Posted speed limit
- Pavement condition
- Roadway jurisdiction
- Roadway functional classification
- Sidewalks and trails
- Intersection control types (signals, stop signs, yield signs, etc.)
- Access point locations (intersections, driveways, field entrances)
- Existing and planned land uses

The results of the roadway inventory and data collection were documented in a series of maps. These maps are provided in **Appendix C**. The 21 study segments have varying characteristics based on the roadway type (urban/rural section), surrounding land uses (residential, commercial, agricultural), intersection control types, access, and functional classification.

C. EVALUATION AND ANALYSIS

This section summarizes the five technical evaluations performed as part of the study process. Each evaluation was a standalone process; however, the results of the preceding evaluations were inputs for subsequent evaluations. The findings of each evaluation by study segment are provided in the technical memos (**Appendix D-H**) and the overall recommendations are provided in **Section D**. This section summarizes the evaluation criteria used for each of the following topics:

- Traffic forecasts
- Roadway functional classification analysis
- Roadway jurisdiction analysis
- Future roadway improvements and costs considerations
- State aid system considerations

1. Traffic Forecasts

Traffic volume forecasts were utilized in the study to determine future vehicle traffic patterns and help identify potential needs for the study segments based on the evaluation criteria developed for roadway functional classification and jurisdictional changes. The Washington County 2040 Regional Travel Demand Model (TDM) was utilized to develop 2040 forecast

volumes for the study roadways. Forecast volumes for the study roadways were compiled alongside actual traffic counts taken prior to the opening of the St. Croix River Crossing (pre-bridge, year varies) and following the opening of the bridge (2018). **Figure 2** shows the 2040 forecasted volumes for the study segments as well as volumes for major roadways within the study area.

A comparison of the pre-bridge and 2018 counts shows that many study segments have experienced a decrease in daily traffic volumes since the St. Croix River Crossing opened to traffic in August 2017, with a decrease of 10 percent on average. **Figure 3** shows the percent change before and after the bridge opening. The change in volumes is particularly noticeable in downtown Stillwater as regional traffic no longer needs to travel into downtown Stillwater to cross the river. By 2040 much of the traffic volumes are forecasted to approach pre-bridge conditions, likely due to population growth and continued development in the area.

Table 3 below summarizes the change in volumes for each roadway segment before and after the bridge opening, as well as forecasted 2040 volumes. For the study segments, an average of 25 percent increase in traffic volumes is forecasted by 2040 based on the patterns observed in the travel demand model.

Table 3: Traffic Volume Comparison by Study Segment Pre-Bridge, Post-Bridge (2018), and 2040

Map Ref.	Roadway Segment	Pre-Bridge Traffic Volume	Post-Bridge 2018 Volume	Percent Change Pre/Post Bridge	2040 Forecast Volume	Percent change from 2018
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	3,800	3,470	-9%	3,630	5%
2	**30th St N** from CSAH 15 (Manning Ave) to CSAH 21 (Stagecoach Trl)	1,475	1,340	-9%	1,390	4%
3	**CSAH 14 (5th Ave)** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	2,050	2,740	34%	3,650	33%
4	**Northbrook Blvd N/Oakgreen Ave N** from CSAH 14 (40th St) to TH 36	1,800	2,220	23%	3,120	41%
5	**CSAH 23 (Stagecoach Trl/S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd)	2,850	2,840	0%	3,980	40%
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	n/a	2,550	n/a	3,160	24%
7	**60th St N/W Frontage Rd/Oren Ave N** from Greeley St to Osgood Ave	n/a	2,830	n/a	3,740	32%
8	**Market Dr/W Frontage Rd/60th St N** from Curve Crest Blvd to Greeley St	n/a	3,790	n/a	4,700	24%

Map Ref.	Roadway Segment	Pre-Bridge Traffic Volume	Post-Bridge 2018 Volume	Percent Change Pre/Post Bridge	2040 Forecast Volume	Percent change from 2018
9	**Greeley St S** from TH 36 to Myrtle St	13,400	12,450	-7%	13,650	10%
10	**CSAH 24 (N Osgood Ave)/4th St S** from TH 36 to Pine St	11,700	10,710	-8%	13,600	27%
11	**CSAH 23 (Orleans St E/Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	2,200	3,100	41%	3,860	26%
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	6,100	3,030	-50%	4,140	37%
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	6,800	1,690	-75%	1,840	9%
14	**Churchill St W** from Greeley St to CSAH 23 (3rd St)	8,200	4,450	-46%	5,570	25%
15	**Pine St W** from CSAH 5 (Stillwater Blvd) to CSAH 23 (3rd St)	3,900	2,430	-38%	2,200	-9%
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	n/a	n/a	n/a	n/a	n/a
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	10,200	8,310	-19%	9,490	14%
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St)	1,600	1,940	21%	2,650	37%
19	**CSAH 11 (Otchipwe Ave N)** from TH 96 (Dellwood Rd) to CSAH 5 (Stonebridge Trl)	1,150	1,040	-10%	1,360	31%
20	**Stonebridge Trl N** from CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95	n/a	2,110	n/a	2,680	27%
21	**CSAH 5 (Stonebridge Trl N)** from CR 55 (Norell Ave) to CSAH 11 (Otchipwe Ave)	3,200	3,370	5%	4,220	25%

Source: Pre-bridge counts reflect most recent available data provided by local agency and/or MnDOT prior to August 2017. 2018 counts collected by WSB in May and June 2018.

Figure 2

Box 1

See Box 1

Stillwater Township

Grant

Oak Park Heights

Lake Elmo

Baytown Township

Bayport

West Lakeland Township

2040 Traffic Volume

- 0 - 1,999
- 2,000 - 4,999
- 5,000 - 9,999
- 10,000 - 14,999
- >= 15,000
- City/Township Boundary

Source: Washington County Travel Demand Model, SRF Washington County Traffic Model Update (FEB 2018), & WSB 2040 Traffic Volume Forecasts for the St. Croix Valley Roadway Jurisdictional Study (SEPT 2018)

2040 Traffic Volume Forecasts

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

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Washington County

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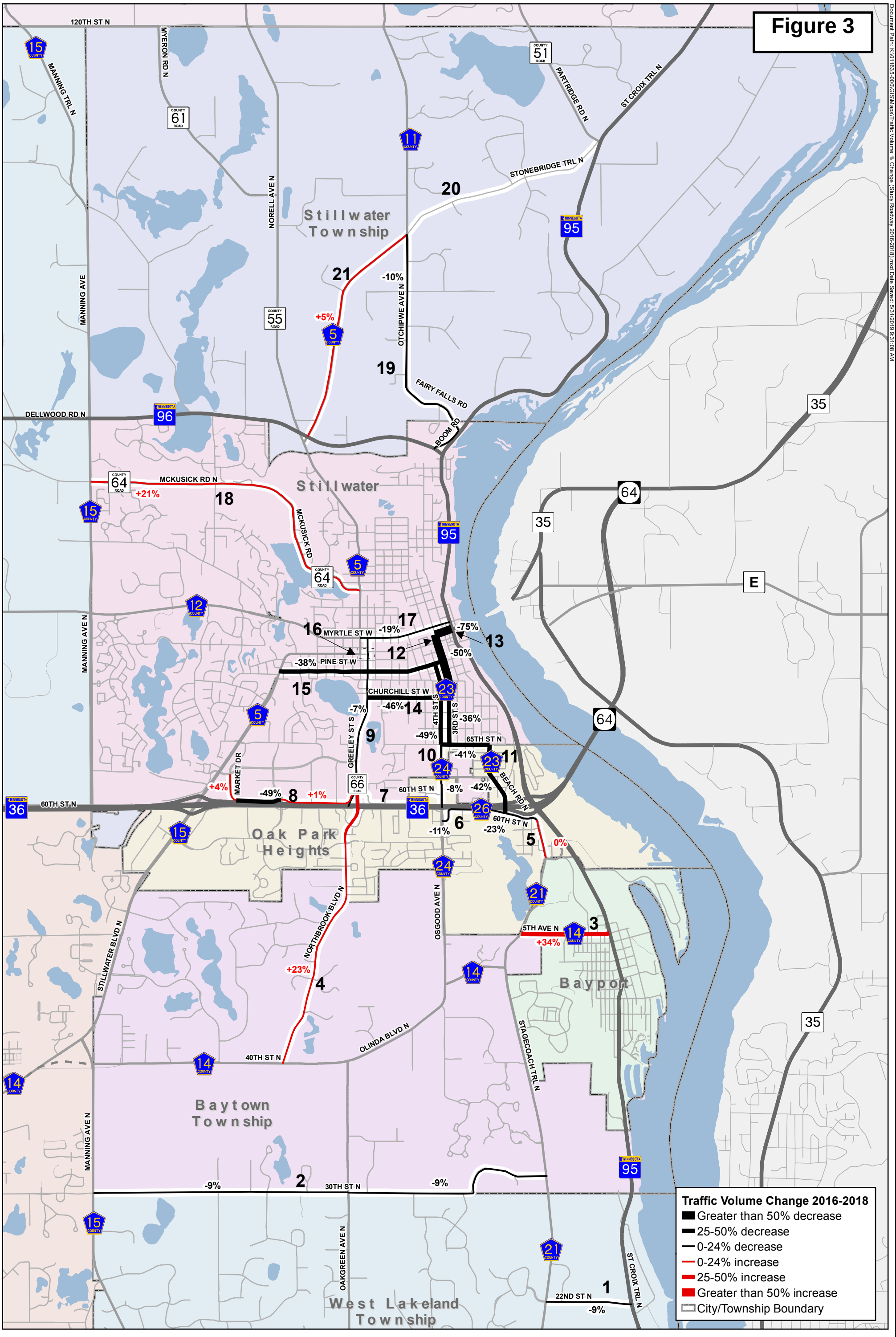
Figure 3



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Traffic Volume Percent Change Pre-Bridge and Post-Bridge

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

0 3,500 Feet

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Washington County

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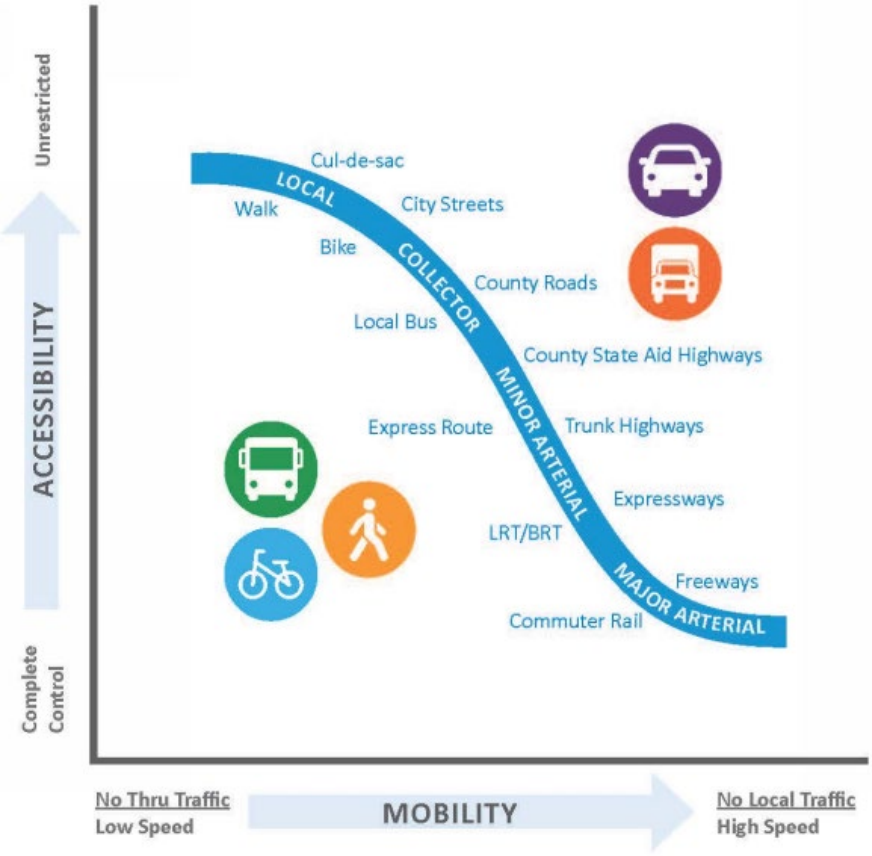
2. Functional Classification

Roadway functional classification is a transportation planning tool used to establish a hierarchy in the transportation system and preserve mobility on key corridors. Roads are generally placed into categories based on the degree to which they prioritize access (to adjacent land or other roadways) versus maintaining mobility on the roadway (see **Figure 4**). How a roadway functions as part of the overall system is a key factor in properly aligning roadway jurisdiction. In the Twin Cities metropolitan area, roadways are generally divided into principal arterials, minor arterials, collector, and local.

Figure 4: Functional Classification Relationship



Source: 2040 Washington County Comprehensive Plan

Functional classification evaluation criteria were developed based on Metropolitan Council functional classification guidance. Additional resources included FHWA guidance, the Washington County 2040 Transportation Plan, and MnDOT access management guidelines. Definitions and general category values for the criteria were established to determine whether the study segments best met the criteria as a local, collector, or arterial roadway (there were no principal arterial roadway segments evaluated in this study). Other considerations such as physical constraints, environmental issues, political concerns, etc., were also documented. The evaluation criteria and general category values used are provided in **Table 4**. See **Appendix E** for a detailed analysis of how the criteria were applied to each roadway segment.

Table 4: Functional Classification Evaluation Criteria - General Categories for Local, Collector, and Arterial Roadways

Evaluation Criteria	Local	Collector	Arterial
State Aid Designation *Does the roadway segment have a state-aid designation (MSAS or CSAH)?*	MSAS or none	MSAS, CSAH or none	CSAH
Traffic Volumes *What are the roadway daily traffic volumes and how have they changed over time? (Pre-bridge, post-bridge/existing, 2040 forecast)*	<5,000	5,000-10,000	>10,000
Posted Speed *Is the segment low speed (30-40 mph) or high speed (45-55 mph)?*	Low speed	Low speed or high speed	High speed
Roadway/Route Spacing *Does the roadway meet spacing guidance for similarly classified roadways?* *Do other nearby roadways serve a similar role/function?*	As needed to provide access to property	1/8-1/2 mile in job concentrations, 1/2 mile-1 mile suburban	1-2 miles suburban 1/2 mile-1 mile urban
Total Corridor Length *What is the length of the corridor route that the roadway segment serves?*	<2 miles	2-5 miles	>5 miles
System Connections *Does the roadway segment connect to similar or higher functioning roadways?* *What types of connections to the overall transportation system are provided?*	Serves more localized area Connects to other local roads or collectors	Provides connections within community Connects to arterials or other collectors	Provides connections beyond community Connects to other arterials
Place Connections *Does the roadway provide connections to regional destinations/places or local destinations/places?*	Serves neighborhoods or local destinations	Serves neighborhoods and commercial or employment centers	Serves commercial or employment center, city or multiple communities
Intersection Spacing Density *What is the frequency/number of intersections (per mile)?*	>10 intersections per mile	5-10 intersections per mile	<5 intersections per mile
Land Use/Access *What are the surrounding land uses?* *What is the frequency/number of driveways accessed from the roadway?*	High amount of direct property access	Low to medium amount of direct property access	Low amount of direct property access
Right of Way *What is the typical corridor width?*	60-70 feet	71-100 feet	>100 feet
On-Street Parking *Is on-street parking allowed?* *Is on-street parking typical?* *Does on-street parking affect mobility?*	On-street parking allowed, may or may not be common	On-street parking not allowed or allowed, but not common	On-street parking not allowed
Other Considerations *Physical constraints/environmental issues* *Potential social/political concerns* *Planned improvements*			

Several key findings were noted as part of the functional classification evaluation:

- The removal of the Lift Bridge river crossing from the roadway network changes the importance of the CSAH 23 (Chestnut St) connection (Segment 13) between 3rd St and Trunk Highway (TH) 95. Myrtle St (Segment 17) could better serve this connection as it would also complete an east-west arterial connection between CSAH 12 and TH 95.
- The spacing of north-south A-Minor arterials is inconsistent with guidance within Stillwater between downtown and TH 36. There are three north-south arterials (CSAH 23, CSAH 24, and TH 95) within one mile.
- There is a need for a continuous north-south arterial more evenly spaced between CSAH 15 (Manning Ave) and TH 95 north of TH 36 in urbanized Stillwater. A portion of CSAH 5 serves this role. Greeley St (Segment 9) could extend this north-south arterial to TH 36.
- 22nd St N (Segment 1) could serve a higher importance as there are few opportunities to connect down the bluff to TH 95 between I-94 and TH 36/Stillwater.
- There are limited routes south of TH 36 that provide long distance connections. This limits the ability to extend routes and designate the study segments as arterials.
- There is a need for collector routes (frontage roads) along both sides of TH 36 to provide local access and reduce dependence on the principal arterial (TH 36) for local/shorter trips in the Stillwater/Oak Park Heights area.
- There is no clear route that serves connections for the one block gap between CSAH 5 and Greeley St. Depending on the direction of travel and time of day, Olive St (Segment 16) or Myrtle St (Segment 17) may be more utilized when heading north or south.

3. Jurisdictional Analysis

In an optimized roadway system, jurisdiction corresponds with functional classification. The State generally has jurisdiction over principal arterials and some minor arterials. Counties have jurisdiction over most minor arterials and some collector streets. Cities and townships have jurisdiction over most collector streets and local streets.

A set of evaluation criteria was developed to evaluate the 21 study segments based on state, county, and local government agencies' jurisdictional classification definitions. The Washington County 2040 Transportation Plan was used to develop the criteria for the eight general categories and values that best fall under each level of jurisdiction as shown in **Table 5**. The recommended functional classification for each study segment from the previous analysis was used. See **Appendix F** for a detailed analysis of how the criteria were applied to each roadway segment.

The following key findings were noted as part of the jurisdictional evaluation analysis:

- Ownership of 22nd St (Segment 1) is misaligned. Currently, 22nd St is a B-Minor arterial and under West Lakeland Township's jurisdiction. It is also recommended as an A-Minor arterial. Townships do not typically own and operate A-Minor arterials.
- Density and spacing of county roadways in southeast Stillwater (CSAH 23 and CSAH 24) exceeds county connectivity needs.
- S Frontage Rd/60th St, Beach Rd, and Orleans St (Segments 5, 6, 11) are currently county roadways. With the opening of the new St. Croix Crossing, these roadways no longer function like county roadways and provide fewer long-distance trips.
- As an east/west collector route, McKusick Rd (Segment 18) serves a similar route to TH 96 (future turnback to county) and CSAH 12 within the same service area.

- Initially, CSAH 11 (Segment 19) and Stonebridge Trl (Segment 20) were evaluated for jurisdictional changes to support a county route connection between TH 95 and TH 96. However, based on additional information, these routes are recommended for no change. Historically, Stonebridge Trl has already undergone a jurisdictional transfer from county to township. In addition, a site visit found the surrounding terrain challenging for further improvements or road widening. Roadway modifications needed to meet state aid standards would be cost prohibitive and difficult due to the surrounding environment. CSAH 11 was also noted as having higher truck traffic and challenging grade issues.

Table 5: Evaluation Criteria - Roadway Jurisdiction General Categories for Local, County, and State

	Local	County	State
Roadway Functional Classification	Local, Collector	Collector, Minor Arterial	Minor Arterial, Principal Arterial
Trips Served	Serve short length trips (< 2 miles) within a community	Serve medium length trips (2-10 miles) within a community or across city/township boundaries within the county	Serve longer length trips (> 6 miles) that travel across boundaries within the region or state
System Continuity	Connects to other local roads and county roads	Connects to other county roadways and local and state roadways	Connects to other state roadways and county roadways
Route Length	< 6 miles	5-20 miles	15+ miles
Traffic Volumes	< 10,000	5,000-30,000	10,000-50,000+
Speed	30-40mph	40-55mph	45-70mph
Place Connections	Serves neighborhoods or local destinations	Serves community commercial or employment centers	Serves regional commercial or employment centers, city or multiple communities
Land Use/Access	High amount of direct property access High amount of roadway intersections	Low to medium amount of direct property access Low to medium amount of roadway intersections; access spacing of 1/4 mile for full-movement intersections	Low to no amount of direct property access Low amount of roadway intersections; access spacing of 1/2 mile or greater for full-movement intersections

4. Future Roadway Improvements and Costs

The purpose of future roadway improvement needs and costs analysis was to estimate potential roadway improvement and maintenance costs that could be considered as part of or prior to a future jurisdictional transfer agreement between agencies. A planning level assessment of existing roadway conditions and estimated costs of potential roadway improvements was performed for roadways recommended for a jurisdictional transfer within this study.

An assessment of existing roadway conditions was performed for twelve segments. Items considered as part of the existing conditions assessment included pavement condition, roadway dimensions, sidewalk/trail facility condition, and drainage. Next, an evaluation of roadway improvements was performed based on design standards and the future roadway type expected for the recommended jurisdiction. This assessment evaluated whether state aid rural or urban standards would be applied based on the recommended functional classification and daily traffic volumes. An assessment was completed for each segment to determine what improvements would be needed to meet such standards and provide an improved roadway condition. Items considered as part of this analysis included:

- Pavement reconditioning or reconstruction need
- Lane and shoulder widths, overall roadway widening
- Turn lane and intersection improvements
- Traffic control and signage
- Retaining wall replacements
- Sidewalk/trail replacement and planned facilities
- Curb and gutter/drainage needs

Using the assumed roadway improvements defined above, high-level cost estimates were developed. For consistency, these unit prices were applied regardless of facility type or jurisdiction. Since each agency may use different roadway design standards, it is not expected that these values will be exact. Rather, they were used to provide a consistent analysis for all roadways. As part of the evaluation, three different types of costs were considered:

Long-Term Capital Costs

Long-term capital cost refers to major improvements or reconstruction for the roadway segment or a portion thereof that would likely be needed in ten years or more. Some segments may only require a pavement reconditioning in the next ten years, however, a full reconstruction may be needed following the next mill and overlay cycle.

Short-Term Capital Costs

Short-term capital cost refer to more immediate updates and roadway modifications to bring a roadway and its pavement up to a good condition. This could include improvements such as pavement resurfacing or reconstruction, ADA upgrades, pedestrian improvements, etc. Five categories were further detailed under short-term capital costs to help understand potential needs in the next ten years: major utilities, roadway costs, drainage, right-of-way, and trails/sidewalks.

Annual Long-Term Maintenance Costs

Annual long-term maintenance cost refers to the upkeep of the roadway segment. This includes snow removal, street sweeping, patching, sealing, etc. For this analysis, an average cost of $23,000 per mile was used based on recent Washington County Public Works estimates. Again, annual maintenance costs per mile may not be the same for all agencies, but this was used for consistency in assumptions.

Appendix G provides a table summarizing the existing conditions assessment and preliminary cost estimates developed for the twelve potential jurisdictional transfer segments. Of the twelve segments, four segments (5, 6, 11, and 18) have been recently reconstructed or upgraded, thus, the improvements needed for these four segments are currently minimal. During this evaluation, Segments 19 and 20 were removed as recommended jurisdictional changes, in part based on the findings from this effort.

5. State Aid System Considerations

Through the state aid system administered by the Minnesota Department of Transportation (MnDOT), the City of Stillwater receives funding that is used to maintain, construct, and/or reconstruct roadways the City has designated as Municipal State Aid Street (MSAS) routes. Washington County receives funding that is used to maintain, construct, and/or reconstruct roadways designated as County State Aid Highway (CSAH) routes. Roadways on the state aid system typically carry heavier traffic volumes, connect major points of interest, and provide an integrated and coordinated road system. These factors vary from city to city and county to county. However, similar rules apply to all state aid routes, and they must be considered as changes to the state aid system are being evaluated. Key requirements include:

- County State Aid Highway (CSAH) routes must connect to other CSAH, Trunk Highway (TH), or MSAS routes.
- MSAS routes must connect to other MSAS, CSAH, TH, or County Road (CR) routes.
- A city's total mileage may increase or decrease because of new subdivisions, annexations, etc.
- The MSAS system cannot exceed 20 percent of a city's improved local mileage notwithstanding TH, CSAH, and county road turnback mileages.
- Former THs (turned back after July 1, 1965) and CSAHs and county roads (turned back after May 11, 1994) that have been designated as state aid routes may not be revoked and the mileage designated elsewhere.

State aid requirements were confirmed with the MnDOT Metro State Aid Office as part of this analysis and a discussion was held regarding how the recommended jurisdictional transfers would be evaluated for potential state aid changes. This information was shared with Washington County and City of Stillwater staff and discussed at a meeting in February 2019. Based on the analysis and discussions with the Metro State Aid Office, the recommended jurisdictional transfers appear to meet state aid criteria and would not affect any adjoining MSAS routes. There are multiple options for most segments that could be considered to meet state aid rules. **Figure 5** shows CSAH and MSAS routes designated within Stillwater.

Figure 5

Recommended Roadway Jurisdiction Changes in Stillwater

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

Rec. Jurisdictional Transfers
- City to County
- County to City

State Aid Routes
- CSAH Route
- MSAS Route

Existing Roadway Jurisdiction
- State
- County
- Local Roadway

18
2.6 miles
county to city

17
0.7 miles
city to county

16
0.1 miles
city to county

12
306 feet
city to county

13
0.1 miles
county to city

9
1 mile
city to county

11
from county to city:
1,250 feet shared city bndy
400 feet Stillwater only

Summary

Change	Length	Segments
City to County:	1.9 miles	(#9, 12, 16, 17)
County Road to City:	2.6 miles	(#18)
CSAH to City:	0.3 miles	(#11, 13)

N

0 1,500 Feet

wsb

D. STUDY RECOMMENDATIONS

After a thorough evaluation and analysis process, ten study segments are being recommended for a jurisdictional transfer in the future. The recommended transfer of these study segments is based on their existing conditions and their role in the region's transportation network. The recommended jurisdictional transfers are meant to help improve the current transportation system and accommodate existing and future travel patterns. This section provides an overview of the recommendations produced by each stage of the analysis, summarizes the jurisdictional transfer process, and recommends some next steps.

1. Functional Classification Recommendations

Table 6 provides a summary of the recommended functional classification changes identified as part of this analysis. See **Figure 6** for the recommended functional classification map.

Two additional recommendations beyond the study roadways were identified during this analysis:

- Change the CSAH 5/CR 55/CSAH 3 route north of Myrtle St to an A-Minor arterial.
- Establish a Major Collector route south of TH 36 via 58th St (from CSAH 15/Stillwater Blvd to Oakgreen Ave) and 60th St (from Oakgreen Ave to TH 95) to serve as a supporting roadway and extension of the south frontage road network for TH 36.

Changing Roadway Functional Classification

In the metropolitan area, roadway functional classification is administered at the regional level through the Metropolitan Council's Transportation Advisory Board (in coordination with state and federal guidance). Local road authorities reflect the regional functional classification system (and potentially their own local classifications) within their respective comprehensive plans. The process for changing a roadway's functional classification depends on the classification in question. Cities and counties can make changes to collector and local networks at their discretion through updates to their respective comprehensive plans, provided they maintain regional system continuity and follow the functional classification criteria outlined in Appendix D of the Metropolitan Council's Transportation Policy Plan. The Metropolitan Council requires notification of any changes or discrepancies with local plans for incorporation on the regional map.

Requests for changes to minor arterials are required to be submitted to the Transportation Advisory Board for approval. Requests can only be submitted by the government agency that has jurisdiction over the roadway in question. The agency is required to submit the Regional Functional Classification Change Request Form to initiate the review and approval process. The full process can take a few months to complete. Once the Transportation Advisory Board has approved the change, the new classification should then be reflected in relevant city/county comprehensive transportation plans. Comprehensive plan updates require approval by local agencies as well as review and approval by the Metropolitan Council.

Table 6: Study Roadway Segments Recommended for Functional Classification

Map Ref.	Roadway Segment	Current Functional Classification	Recommended Functional Classification
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	B-Minor	Change to A-Minor Connector as part of CSAH 10 route to TH 95
4	**Northbrook Blvd N/ Oakgreen Ave N** from CSAH 14 (40th St) to TH 36	Minor Collector/ Major Collector	Change entire segment to Major Collector as arterial route south of TH 36 is not needed
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	Major Collector	Maintain as Major Collector. Extend Major Collector status west along 60th St to Oakgreen Ave and along 58th St between Oakgreen Ave and Stillwater Blvd
7	**60th St N/W Frontage Rd/ Oren Ave N** from Greeley St to Osgood Ave	Local Roadway	Change to Major Collector
8	**Market Dr/W Frontage Rd/ 60th St N** from Curve Crest Blvd to Greeley St	Local Roadway	Change to Major Collector
9	**Greeley St S** from TH 36 to Myrtle St	A Minor Expander/ Major Collector	Change to A-Minor Expander Arterial designation as part of continuous north-south route via CSAH 5/CR 55 (future CSAH 3) to the north
10	**CSAH 24 (N Osgood Ave)/ 4th St S** from TH 36 to Pine St	A Minor Connector/ Local Roadway	Change to Major Collector
11	**CSAH 23 (Orleans St E/Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	A Minor Expander	Change to Major Collector
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	A Minor Reliever	Change to Major Collector
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	A Minor Reliever	Change to Local
15	**Pine St W** from CSAH 5 (Stillwater Blvd) to CSAH 23 (3rd St)	Major Collector/ Local Roadway	Change to Major Collector for entire segment
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	Local Roadway	Change to A-Minor Expander Arterial designation as part of connection to north-south route via Greeley St/CSAH 5/CR 55 (future CSAH 3) to the north
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	B Minor	Upgrade to A-Minor Reliever Arterial as continuation of east-west CSAH 12 route to TH 95
20	**Stonebridge Trl N** from CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95	Major Collector	Change to Minor Collector to maintain supporting north-south route between TH 95 and TH 96

Figure 6

Map Ref.	Roadway Segment	Recommended Roadway Jurisdiction
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	**CHANGE TO A-MINOR CONNECTOR AS PART OF CSAH 10 ROUTE TO TH 95**
4	**Northbrook Blvd N/Oakgreen Ave N** from CSAH 14 (40th St) to TH 36	**CHANGE ENTIRE SEGMENT TO MAJOR COLLECTOR AS ARTERIAL ROUTE SOUTH OF TH 36 IS NOT NEEDED**
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	**MAINTAIN AS MAJOR COLLECTOR. EXTEND MAJOR COLLECTOR STATUS WEST ALONG 60TH ST TO OAKGREEN AVE AND ALONG 58TH ST BETWEEN OAKGREEN AVE AND STILLWATER BLVD**
7	**60th St N/W Frontage Rd/Oren Ave N** from Greeley St to Osgood Ave	**CHANGE TO MAJOR COLLECTOR**
8	**Market Dr/W Frontage Rd/60th St N** from Curve Crest Blvd to Greeley St	**CHANGE TO MAJOR COLLECTOR**
9	**Greeley St S** from TH 36 to Myrtle St	**CHANGE TO A-MINOR EXPANDER ARTERIAL DESIGNATION AS PART OF CONTINUOUS NORTH-SOUTH ROUTE VIA CSAH 5/CR 55 (FUTURE CSAH 3) TO THE NORTH**
10	**CSAH 24 (N Osgood Ave)/4th St S** from TH 36 to Pine St	**CHANGE TO MAJOR COLLECTOR**
11	**CSAH 23 (Orleans St E/Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	**CHANGE TO MAJOR COLLECTOR**
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	**CHANGE TO MAJOR COLLECTOR**
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	**CHANGE TO LOCAL**
15	**Pine St W** from CSAH 5 (Stillwater Blvd) to CSAH 23 (3rd St)	**CHANGE TO MAJOR COLLECTOR FOR ENTIRE SEGMENT**
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	**CHANGE TO A-MINOR EXPANDER ARTERIAL DESIGNATION AS PART OF CONNECTION TO NORTH-SOUTH ROUTE VIA GREELEY ST/CSAH 5/CR 55 (FUTURE CSAH 3) TO THE NORTH**
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	**UPGRADE TO A-MINOR RELIEVER ARTERIAL AS CONTINUATION OF EAST-WEST CSAH 12 ROUTE TO TH 95**
20	**Stonebridge Trl N** from CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95	**CHANGE TO MINOR COLLECTOR TO MAINTAIN SUPPORTING NORTH-SOUTH ROUTE BETWEEN TH 95 AND TH 96**

Principal Arterial
A Minor Augmentor
A Minor Reliever
A Minor Expander
A Minor Connector
B Minor Arterial
Major Collector
Minor Collector
Local Roadway
City/Township Boundary

Recommended Roadway Functional Classification

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

N

0 3,500 Feet
1 inch = 3,500 feet

Washington County

wsb

2. Jurisdictional Roadway Recommendations

Table 7 provides a summary of the recommended roadway jurisdiction changes identified as part of this analysis. See **Figure 7** for the recommended roadway jurisdiction map.

Table 7: Study Roadway Segments Recommended for Change in Jurisdiction

Map Ref.	Roadway Segment	Current Roadway Jurisdiction	Current State Aid Designation	Recommended Roadway Jurisdiction
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	Township	none	**Change to County**
5	**CSAH 23 (Stagecoach Trl/ S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd)	County	CSAH	**Change to City**
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	County	CSAH	**Change to City**
9	**Greeley St S*** from TH 36 to Myrtle St	County/City	MSAS north of Curve Crest Blvd	Keep as County from TH 36 to Curve Crest Blvd **Change to County from Crest Curve Blvd to Myrtle St**
11	**CSAH 23 (Orleans St E/Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	County	CSAH	Keep as County (Orleans St from 4th St to 3rd St) **Change to City (Orleans St from 3rd St to Paris Ave and Beach Road to S Frontage Rd)**
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	County/City	CSAH except for segment between Chestnut St and Myrtle St	Keep as County from Orleans St to Chestnut St **Change to County from Chestnut St to Myrtle St**
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	County	CSAH	**Change to City**
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	City	none	**Change to County**
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	City	MSAS	**Change to County**
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St)	County	none	**Change to City**

**Note: There is a discrepancy regarding existing jurisdiction on Greeley St from Curve Crest Blvd to Orleans St (approx. 1/8 mile). The County has maintained Greeley St from TH 36 to Orleans St for several decades. However, the MnDOT Municipal State Aid Street System map (2015) designates the segment from Curve Crest Blvd to Orleans St as a Municipal State Aid Street (MSAS).*

Figure 7

TH 96 has been identified as jurisdictional transfer to County in MnDOT Jurisdictional Study

Map Ref.	Roadway Segment	Recommended Roadway Jurisdiction
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	**CHANGE TO COUNTY**
5	**CSAH 23 (Stagecoach Trl/S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd)	**CHANGE TO CITY**
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	**CHANGE TO CITY**
9	**Greeley St S** from TH 36 to Myrtle St	**KEEP AS COUNTY FROM TH 36 TO ORLEANS ST** **CHANGE TO COUNTY FROM ORLEANS ST TO MYRTLE ST**
11	**CSAH 23 (Orleans St E/Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	**KEEP AS COUNTY (ORLEANS ST FROM 4TH ST TO 3RD ST)** **CHANGE TO CITY (ORLEANS ST FROM 3RD ST TO PARIS AVE AND BEACH ROAD TO S FRONTAGE RD)**
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	**KEEP AS COUNTY FROM ORLEANS ST TO CHESTNUT ST** **CHANGE TO COUNTY FROM CHESTNUT ST TO MYRTLE ST**
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	**CHANGE TO CITY**
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	**CHANGE TO COUNTY**
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	**CHANGE TO COUNTY**
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St)	**CHANGE TO CITY**

Recommended Roadway Jurisdiction
- City/Twp to County
- County to City/Twp

Existing Roadway Jurisdiction
- State
- County
- Local Roadway
- City/Township Boundary

Roadway Segments Recommended for Change in Jurisdiction

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

N

0 3,500 Feet

wsb

Table 8 summarizes the change in system mileage for county and city/township roadways based on the recommendations in this study. Should these changes occur, the county roadway system would be reduced approximately 2.2 miles. The 2040 Washington County Comprehensive Plan identifies a net increase of 19.6 miles of county roadways based on previously identified jurisdictional change recommendations between the State, County, cities, and townships. Incorporating the recommendations from this study would change the net increase for county roadways to 17.4 miles. Jurisdictional changes are primarily identified within the cities of Oak Park Heights and Stillwater, mostly related to the CSAH 23 and CSAH 26 which no longer provide regional connections to the regional river crossing.

Table 8: Net Change in Roadway Jurisdiction Mileage*

Agency	Net Change based on Recommended Transfers (in miles)	
	County	City/Township
City of Bayport	0	0
City of Oak Park Heights	-1.6	1.6
City of Stillwater	-1.3	1.3
Baytown Township	0	0
Stillwater Township	0	0
West Lakeland Township	0.7	-0.7
Net Change**	-2.2	2.2

**Note: Mileage is approximate*
***Note: A jurisdictional transfer of Trunk Highway 96 has been identified by MnDOT. This jurisdictional change would result in nine additional miles to Washington County.*

3. Agency Specific Recommendations

The following table summarizes recommendations for each agency based on the technical analysis from this study.

Table 9: Recommendations by Agency

Agency	Recommendation
City of Bayport	1. None
City of Oak Park Heights	1. Establish a Major Collector route south of TH 36 via 58th St (from CSAH 15/Stillwater Blvd to Oakgreen Ave) and 60th St (from Oakgreen Ave to TH 95) to serve as a supporting roadway and extension of the south frontage road network for TH 36. 2. Change the functional classification of 60th St (Segment 7) to a Major Collector. 3. Reflect these recommended functional classification changes in future update to its comprehensive plan. 4. Consider implications for the recommended jurisdictional transfers of CSAH 23 and CSAH 26 (Segments 5, 6, 11) to city roadways. 5. Discuss with the City of Stillwater considerations related to the transfer of Orleans St/65th St (Segment 11) as a city road with portions of the roadway within both cities.

Agency	Recommendation
City of Stillwater	1. Change the functional classification of Market Dr/60th St/W Frontage Rd/Oren Ave N (Segments 7 and 8) and Pine St (Segment 15) to a Major Collector. 2. Work with Washington County to explore the opportunity and timing of transferring Greeley St (Segment 9), 3rd St (Segment 12), Olive St (Segment 16), and Myrtle St (Segment 17) to county jurisdiction. 3. Reflect these recommended functional classification changes in future update to its comprehensive plan. 4. Consider implications for the recommended jurisdictional transfers of CSAH 23 (Segments 11, 13) and County Road 64 (Segment 18) to city roadways. 5. Discuss with the City of Oak Park Heights considerations related to the transfer of Orleans St/65th St (Segment 11) as a city road with portions of the roadway within both cities.
Baytown Township	1. None
Stillwater Township	1. Change Stonebridge Trl N (Segment 20) from a Major Collector to a Minor Collector. Update their comprehensive plan to reflect this functional classification change.
West Lakeland Township	1. Begin discussions with Washington County on the potential transfer of 22nd St (Segment 1) to county. 2. Continue working with MnDOT and the county to explore roadway improvements at the intersection of TH 95. 3. The recommended roadway functional classification change for 22nd St (Segment 1) may not be needed until the road is under county jurisdiction.
Washington County	1. Work with the respective agencies on the recommended jurisdictional transfers identified in this study. 2. Meet annually with each agency to discuss opportunities and timing for potential jurisdictional transfers. 3. Discuss with the City of Stillwater the opportunity to make all (or as much) of the recommended jurisdictional changes at once. 4. Explore the timing of roadway functional classification changes to the county system. Upgrading Greeley St (Segment 9), Olive St (Segment 16), and Myrtle St (Segment 17) to A-Minor arterials may not appropriate until they become under county jurisdiction. Reclassifying CSAH 23 (Segments 11, 12, 13), CSAH 24 (Segment 10), and CSAH 26 (Segment 6) could occur prior to jurisdictional transfers. Update the comprehensive plan and work through functional classification change request at the regional level as necessary. 5. Reevaluate and update the identified potential roadway improvements and costs considered in this study every five years.
MnDOT	1. Coordinate (as needed) with Washington County and City of Stillwater on state aid considerations as jurisdictional transfers are being pursued.

4. Jurisdictional Transfer Process Overview

When an agency has jurisdiction of a given roadway, that agency is responsible for the upkeep of that facility, including reconstruction, maintenance, and preservation. These responsibilities remain with the agency unless the jurisdiction is transferred to another roadway authority per agreement. Counties have authority under Minnesota Statute § 162.02 and § 163.11 for jurisdictional transfers (often referred to as turnbacks) and revocation of county highway corridors.

Jurisdictional transfers are executed through a joint powers agreement between the affected agencies. Agreements are often based on establishing an acceptable roadway condition, maintenance needs for an agreed upon period, available funding, and agency approvals. Improvements can be identified to bring the roadway condition up to an acceptable and agreed upon level for the receiving agency.

5. Implementation/Next Steps

It is anticipated that considerable on-going discussion between Washington County and the local agencies will occur regarding these recommended transfers over time. The information provided in this study should be used to help provide a starting point for discussions and potential improvements that could be incorporated into a jurisdictional transfer agreement.

To pursue implementation of the recommendations in this study, the following efforts should be pursued:

- Present the findings of this study to the respective agency elected officials to establish the baseline for future jurisdictional transfer opportunities.
- Continue conversations with partner agencies to explore potential jurisdictional transfer opportunities. Hold annual meetings between agencies to maintain the dialogue.
- Update roadway functional classification based on the recommendations in this study.
- Update comprehensive plans to reflect roadway functional classification revisions and potential jurisdictional transfers.

APPENDICES

A. Study Segment Summary Sheets
B. Agency Correspondence
C. Inventory Maps
D. Memo - 2040 Traffic Volume Forecasts Methodology
E. Memo - Roadway Functional Classification Evaluation and Recommendations
F. Memo - Roadway Jurisdiction Recommendations
G. Memo - Roadway Improvement Needs Analysis and Costs
H. Memo - Stillwater State Aid System Analysis

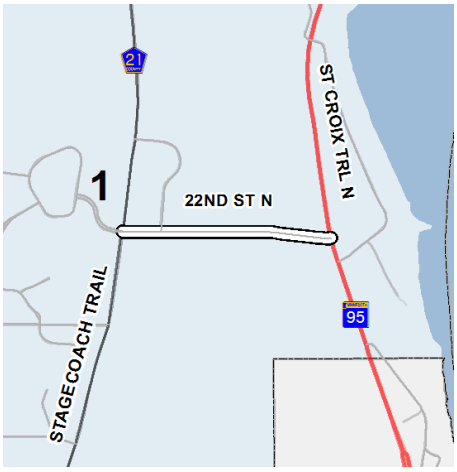
APPENDIX A

Study Segment Summary Sheets

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 1: 22nd St N
from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)

West Lakeland Township

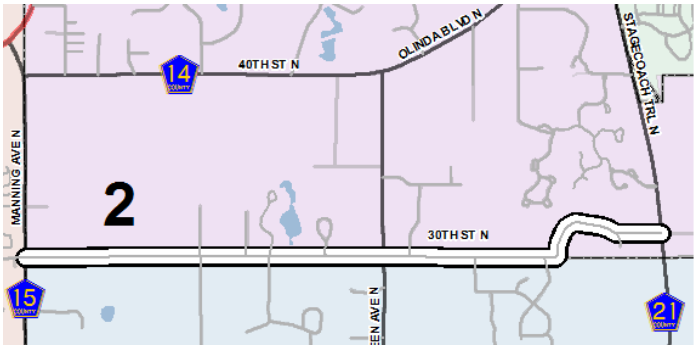


Segment Summary	
Segment Length	0.7 miles
Roadway Type	Rural Two-Lane Undivided
State Aid Designation	None
Posted Speed	55 mph (No Posted Speed) 30 mph Advisory Speed on Hill
Traffic Volumes Pre-Bridge / 2018 / 2040	3,800 / 3,470 / 3,630
Current Jurisdiction	Township
Current Functional Classification	B-Minor Arterial
Recommended Jurisdiction	County
Recommended Functional Classification	A-Minor Arterial (Connector)
Notes	• A-Minor and B-Minor Arterials typically are not under township jurisdiction • Could serve as part of CSAH 10 route down the bluff to TH 95 • Current pavement condition is considered poor • On bluffs, rain/ice and grade issues • Current design does not meet state aid standards • Improvements at TH 95 intersection have been identified by Township to improve safety • Additional right-of-way likely needed for any future improvements

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 2: 30th St N
from CSAH 15 (Manning Ave) to CSAH 21 (Stagecoach Trl)

Baytown Township and West Lakeland Township

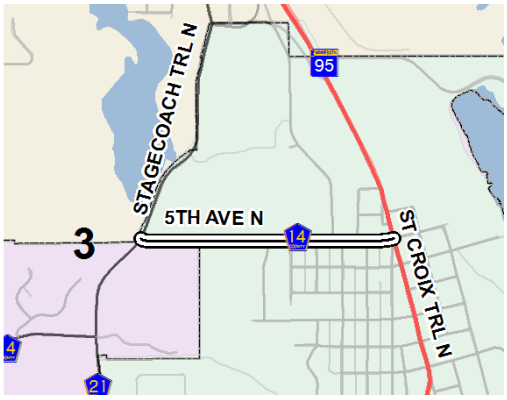


Segment Summary	
Segment Length	3.6 miles
Roadway Type	Rural Two-Lane Undivided
State Aid Designation	None
Posted Speed	Varies 30-55 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	1,475 / 1,340 / 1,390
Current Jurisdiction	Township
Current Functional Classification	Major Collector
Recommended Jurisdiction	Township
Recommended Functional Classification	Major Collector
Notes	• East-west route between CSAH 10 and CSAH 14, but does not extend further • Realignment of western portion of road being considered due to airport expansion • Connects to Lake Elmo Regional Airport and rural residential neighborhoods • Current pavement condition considered fair to poor

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 3: CSAH 14 (5th Ave)
from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)

City of Bayport

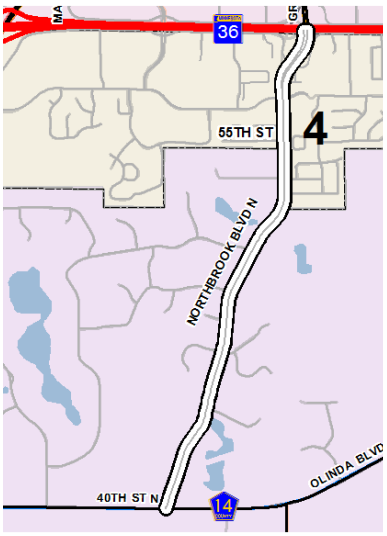


Segment Summary	
Segment Length	0.7 miles
Roadway Type	Urban/Rural Two-Lane Undivided
State Aid Designation	CSAH 14
Posted Speed	30 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	2,050 / 2,740 / 3,650
Current Jurisdiction	County
Current Functional Classification	A-Minor Arterial (Connector)
Recommended Jurisdiction	County
Recommended Functional Classification	A-Minor Arterial (Connector)
Notes	• Currently serves as a primary connection to Bayport from CSAH 21 to the west • Connects to downtown Bayport with residential and commercial properties at the intersection with TH 95 • Could potentially re-designate CSAH 14 as an A-Minor Arterial Reliever to TH 36

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 4: Northbrook Blvd N/Oakgreen Ave N
from CSAH 14 (40th St) to TH 36

Baytown Township and City of Oak Park Heights

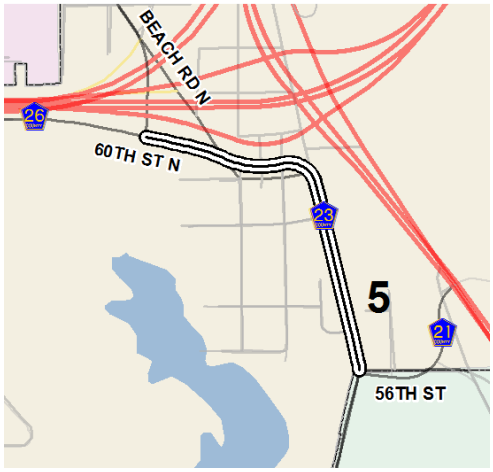


Segment Summary	
Segment Length	2.1 miles
Roadway Type	Rural Two-Lane Undivided
State Aid Designation	None
Posted Speed	30 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	1,800 / 2,220 / 3,120
Current Jurisdiction	Township and City
Current Functional Classification	Minor Collector (55th St to 40th St); Major Collector (55th St to TH 36)
Recommended Jurisdiction	Township and City
Recommended Functional Classification	Major Collector
Notes	• Roadway recently upgraded • Includes an at-grade railroad crossing • Intersection with TH 36 may be a future interchange location • Does not continue south of CSAH 14 • Extends into Stillwater via Greeley St • Mainly serves rural residential areas • Arterial route south of TH 36 not needed

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 5: CSAH 23 (Stagecoach Trl/S Frontage Rd)
from CSAH 21 (56th St) to CSAH 23 (Beach Rd)

City of Oak Park Heights

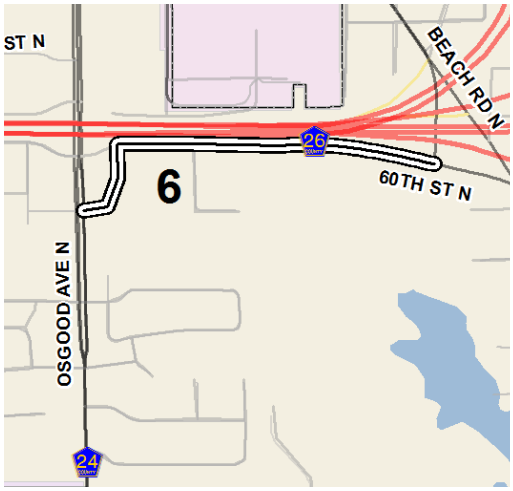


Segment Summary	
Segment Length	0.6 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	CSAH 23
Posted Speed	40 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	2,850 / 2,840 / 3,980
Current Jurisdiction	County
Current Functional Classification	Major Collector
Recommended Jurisdiction	City
Recommended Functional Classification	Major Collector
Notes	• Currently part of Beach Rd route across TH 36 and frontage road network along TH 36 • Roadway is new and meets current standards • Mainly serves residential neighborhood and local connections across TH 36 and as alternate route for TH 95

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 6: CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)
from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)

City of Oak Park Heights

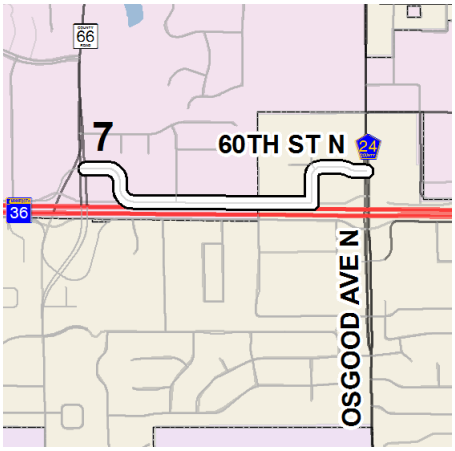


Segment Summary	
Segment Length	0.5 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	CSAH 26
Posted Speed	40 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	650 / 2,550 / 3,160
Current Jurisdiction	County
Current Functional Classification	Major Collector
Recommended Jurisdiction	City
Recommended Functional Classification	Major Collector
Notes	• Roadway is new and meets current standards • Part of south frontage road network for TH 36 • 60th St/Osgood Ave intersection to be removed and realigned with 59th St intersection. This will allow more continuous south frontage road network west to Oakgreen Ave • Also recommended to extend Major Collector route to the west via 58th St (from CSAH 15/Stillwater Blvd to Oakgreen Ave) and 60th St (from Oakgreen Ave to CSAH 24/Osgood Ave) to provide continuous south frontage road collector network for TH 36

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 7: 60th St N/W Frontage Rd/Oren Ave N
from Greeley St to Osgood Ave

City of Stillwater and City of Oak Park Heights

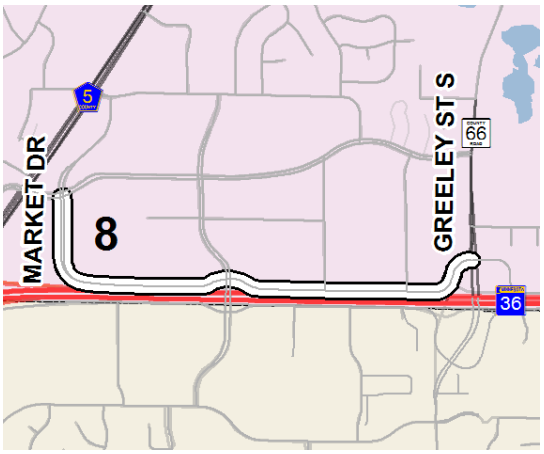


Segment Summary	
Segment Length	0.8 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	None
Posted Speed	40 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	No data / 2,830 / 3,740
Current Jurisdiction	City
Current Functional Classification	Local
Recommended Jurisdiction	City
Recommended Functional Classification	Major Collector
Notes	• Part of north frontage road network for TH 36 • Mostly serves local businesses and destinations • Extends between CSAH 5 and CSAH 24

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 8: Market Dr/W Frontage Rd/60th St N
from Curve Crest Blvd to Greeley St

City of Stillwater

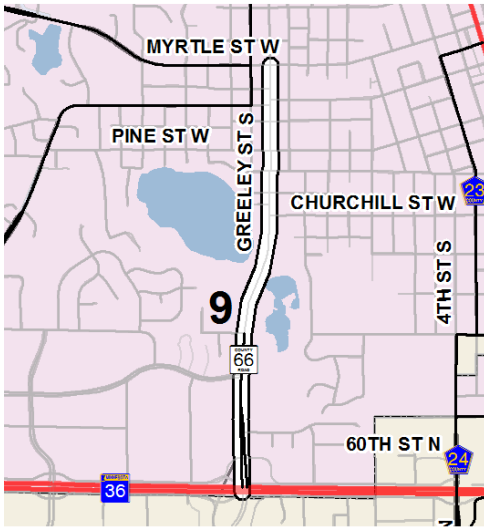


Segment Summary	
Segment Length	1.2 miles
Roadway Type	Urban Two-Lane Undivided/Divided
State Aid Designation	MSAS 124; MSAS 125
Posted Speed	30 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	3,650 / 3,790 / 4,700
Current Jurisdiction	City
Current Functional Classification	Local
Recommended Jurisdiction	City
Recommended Functional Classification	Major Collector
Notes	• Part of north frontage road network for TH 36 • Mostly serves local businesses and destinations • Extends between CSAH 5 and CSAH 24

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 9: Greeley St S
from TH 36 to Myrtle St

City of Stillwater

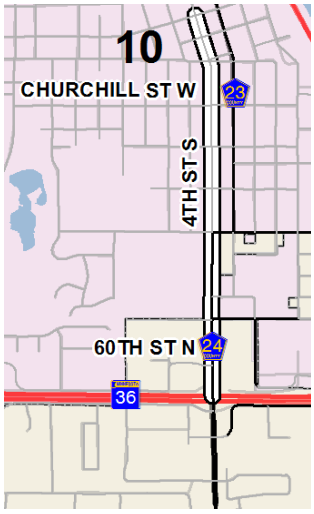


Segment Summary	
Segment Length	1.3 miles
Roadway Type	Urban Two-Lane Undivided/Divided
State Aid Designation	MSAS 108 north of Curve Crest Blvd
Posted Speed	30 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	13,400 / 12,450 / 13,650
Current Jurisdiction	County (CR 66: TH 36 to Curve Crest Blvd); City (Curve Crest Blvd to Myrtle St W)
Current Functional Classification	A-Minor Arterial (TH 36 to Curve Crest Blvd); Major Collector (Curve Crest Blvd to Myrtle St W)
Recommended Jurisdiction	County
Recommended Functional Classification	A-Minor Arterial (Expander)
Notes	• One mile from CSAH 5 (A-Minor Arterial) to the west and TH 95 (A-Minor Arterial) to the east • May be future TH 36 interchange location • The south end has been reconstructed but the north segment pavement is older and distressed • Recommended as part of continuous north-south A-Minor Arterial (Expander) via CSAH 5/CR 55 (future CSAH 3) • There is a discrepancy regarding existing jurisdiction from Curve Crest Boulevard to Orleans Street (approx. 1/8 mile). The 2015 MnDOT MSAS system map designates the segment as part of MSAS 108. However, the County has maintained Greeley Street from TH 36 to Orleans Street for several decades

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 10: CSAH 24 (N Osgood Ave)/4th St S
from TH 36 to Pine St

City of Stillwater and City of Oak Park Heights

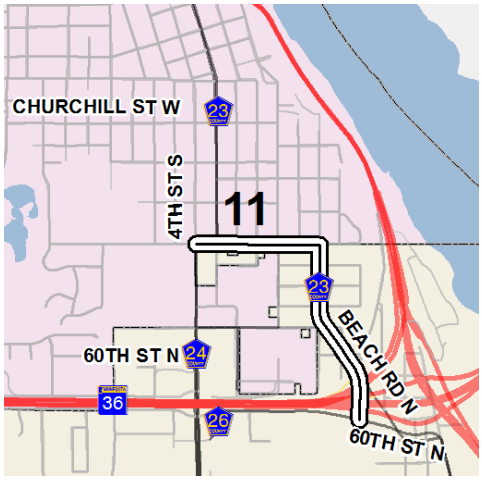


Segment Summary	
Segment Length	1.1 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	CSAH 24 (TH 36 to 65th St/Orleans St); MSAS 103 (65th St/Orleans St to Pine St)
Posted Speed	30-35 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	11,700 / 10,710 / 13,600
Current Jurisdiction	County (TH 36 to 65th St/Orleans St N); City (65th St/Orleans St N to Pine St)
Current Functional Classification	A-Minor Arterial (TH 36 to 65th St/Orleans St N); Local (65th St/Orleans St N to Pine St)
Recommended Jurisdiction	County (TH 36 to 65th St/Orleans St N); City (65th St/Orleans St N to Pine St)
Recommended Functional Classification	Major Collector
Notes	• CSAH 24 north of TH 36 has duplicate role to CSAH 23 and Greeley St • Not a continuous route north of Orleans St • 4th St does not connect north of Pine St and the segment ends in the downtown area

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 11: CSAH 23 (65th St/Orleans St E/Paris Ave N/Beach Rd)
from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)

City of Stillwater and City of Oak Park Heights

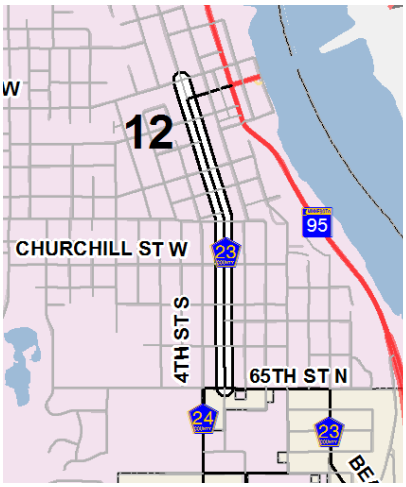


Segment Summary	
Segment Length	0.9 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	CSAH 23 (3rd St to 60th St); CSAH 24 (4th St to 3rd St)
Posted Speed	Varies 30-40 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	2,200 / 3,100 / 3,860
Current Jurisdiction	County
Current Functional Classification	A-Minor Arterial (Expander)
Recommended Jurisdiction	County (65th St/Orleans St from 4th St to 3rd St); City (65th St/Orleans St from 3rd St to Paris Ave and Beach Rd to S Frontage Rd/60th St N)
Recommended Functional Classification	Major Collector
Notes	• Roadway is in good condition and meets standards • Serves duplicative role as an arterial • Does not provide access to TH 36 (Principal Arterial) • Provides local access and alternate route to TH 95 and CSAH 24 (Osgood Ave) across TH 36

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 12: CSAH 23 (3rd St S)
from 65th St/Orleans St to Myrtle St

City of Stillwater

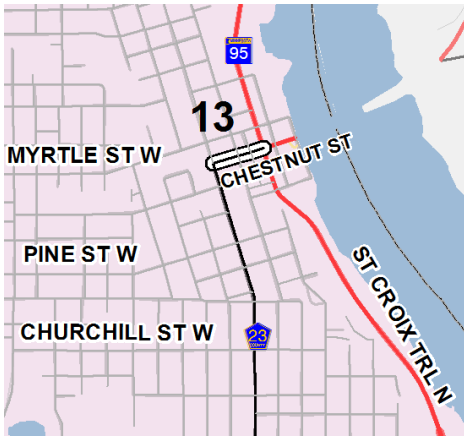


Segment Summary	
Segment Length	0.9 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	CSAH 23 (except Chestnut St to Myrtle St)
Posted Speed	30 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	6,100 / 3,030 / 4,140
Current Jurisdiction	County (65th St/Orleans St to Chestnut St); City (Chestnut St to Myrtle St)
Current Functional Classification	A-Minor Arterial (65th St/Orleans St to Chestnut St); Local (Chestnut St to Myrtle St)
Recommended Jurisdiction	County
Recommended Functional Classification	Major Collector
Notes	• Chestnut St no longer arterial connection across river • Extending county route to Myrtle Street supports connection to east-west county route (CSAH 12) • 3rd St connects through Chestnut St and Myrtle St • 4th St does not connect to Myrtle St • Serves residential and commercial land uses in downtown Stillwater • Current pavement appears to be structurally sound but needs future surface treatment

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 13: CSAH 23 (Chestnut St E)
from 3rd St to TH 95 (St. Croix Trl)

City of Stillwater

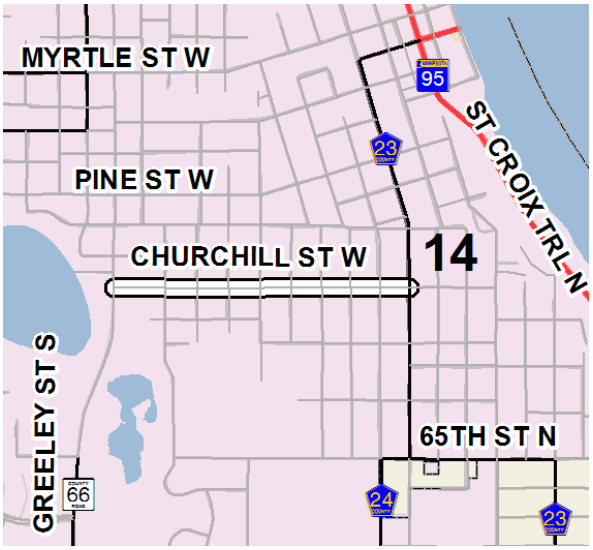


Segment Summary	
Segment Length	0.1 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	CSAH 23
Posted Speed	30 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	6,800 / 1,690 / 1,840
Current Jurisdiction	County
Current Functional Classification	A-Minor Arterial (Reliever)
Recommended Jurisdiction	City
Recommended Functional Classification	Local
Notes	• Small segment, traffic has dropped significantly • No longer serves as arterial route across river • Myrtle St provides longer east-west route connection between TH 95 and CSAH 15 • Connects to TH 95 (A-Minor Arterial) • Serves commercial and downtown land uses • Pavement appears to be structurally sound, but long-term reconstruction likely needed

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 14: Churchill St W
from Greeley St to CSAH 23 (3rd St)

City of Stillwater

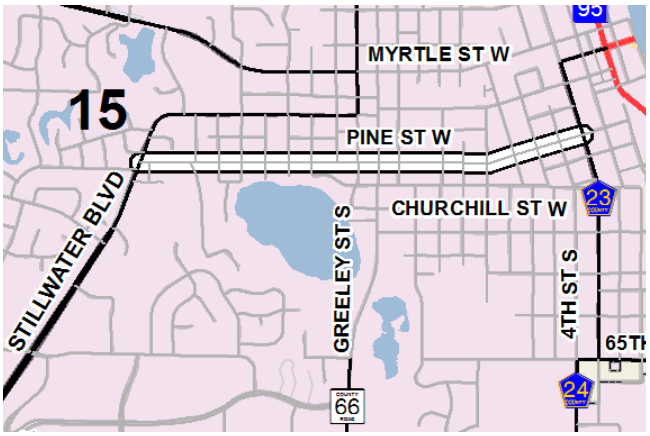


Segment Summary	
Segment Length	0.6 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	MSAS 111
Posted Speed	30 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	8,200 / 4,450 / 5,570
Current Jurisdiction	City
Current Functional Classification	Major Collector
Recommended Jurisdiction	City
Recommended Functional Classification	Major Collector
Notes	• Connects CSAH 23 (3rd St) and Greeley St • Total route less than one mile in length • Shorter east-west route than Pine St and Myrtle St • Serves mostly residential land uses

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 15: Pine St W
From CSAH 5 (Stillwater Blvd) to CSAH 23 (3rd St)

City of Stillwater

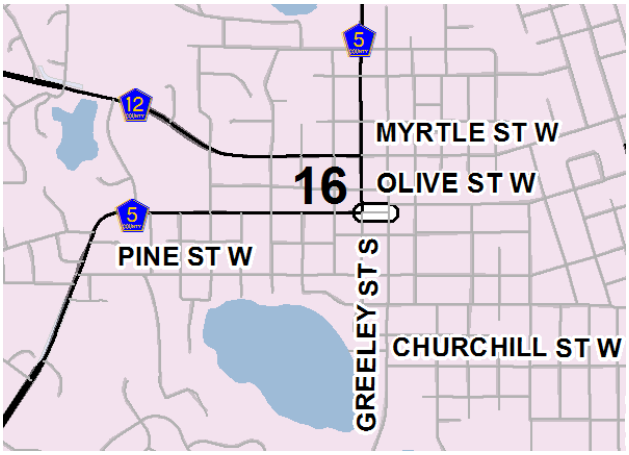


Segment Summary	
Segment Length	1.3 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	MSAS 102
Posted Speed	30 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	3,900 / 2,430 / 2,200
Current Jurisdiction	City
Current Functional Classification	Major Collector (Greeley St S to 3rd St S); Local (Stillwater Blvd to Greeley St S)
Recommended Jurisdiction	City
Recommended Functional Classification	Major Collector
Notes	• Serves mostly residential land uses • Several intersection bump outs east of Greeley St • Connects CSAH 5 and CSAH 23 • Does not extend to TH 95 • Complementary east-west route to Myrtle St

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 16: Olive St W
From CSAH 5 (Owens St) to Greeley St

City of Stillwater

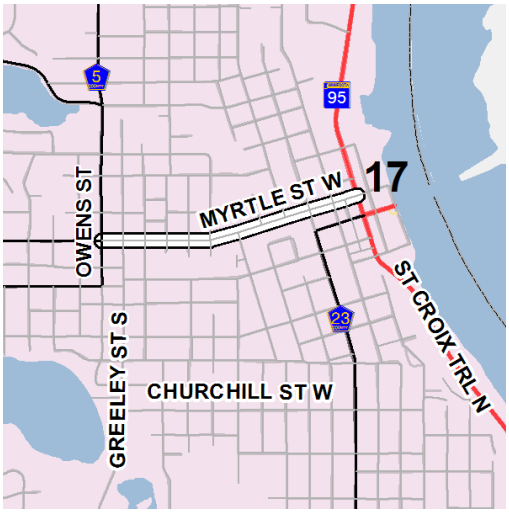


Segment Summary	
Segment Length	0.1 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	None
Posted Speed	30 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	No data
Current Jurisdiction	City
Current Functional Classification	Local
Recommended Jurisdiction	County
Recommended Functional Classification	A-Minor Arterial (Expander)
Notes	• Works in conjunction with Myrtle St to maintain north-south route between Greeley St and CSAH 5 • Depending on direction/destination, drivers tend to use either Myrtle St or Olive St • Designating this segment as arterial supports movements between CSAH 5 to the north and Greeley St to the south • Roadway meets standards. Pavement reconditioning and long-term reconstruction likely needed

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 17: Myrtle St W
From CSAH 5 (Owens St) to TH 95 (St. Croix Trl)

City of Stillwater

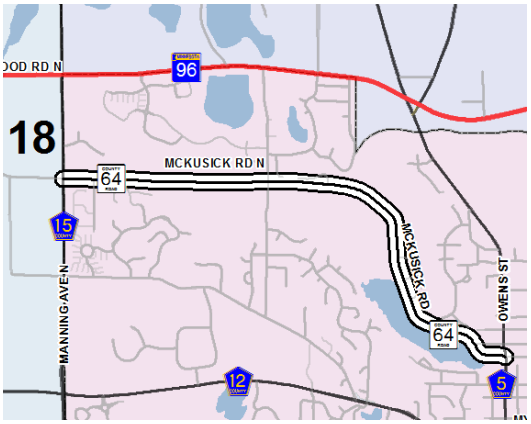


Segment Summary	
Segment Length	0.7 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	MSAS 104
Posted Speed	30 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	10,200 / 8,310 / 9,490
Current Jurisdiction	City
Current Functional Classification	B-Minor Arterial
Recommended Jurisdiction	County
Recommended Functional Classification	A-Minor Arterial (Reliever)
Notes	• Serves as an extension of CSAH 12 (A-Minor Arterial) route to TH 95 (A-Minor Arterial) • Provides longer east-west arterial route connection than Chestnut St • Completes continuous east-west CSAH 12 route between Mahtomedi and Stillwater (over seven miles) • Serves the residential and downtown commercial area of Stillwater • Reconstruction likely needed

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 18: CR 64 (McKusick Rd N)
From CSAH 15 (Manning Ave) to CSAH 5 (Owens St)

City of Stillwater

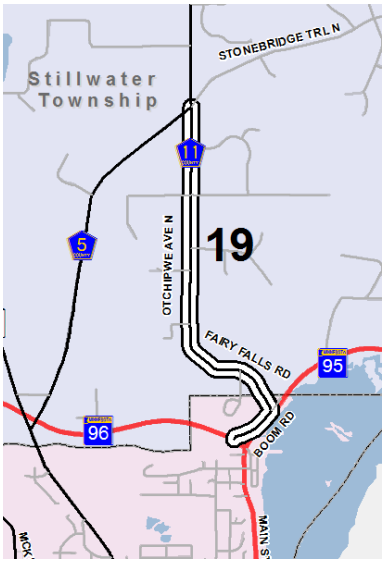


Segment Summary	
Segment Length	2.6 miles
Roadway Type	Urban Two-Lane Undivided
State Aid Designation	MSAS 116 (Neal Ave to CSAH 5/Owens St)
Posted Speed	Varies 30-50 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	1,600 / 1,940 / 2,650
Current Jurisdiction	County
Current Functional Classification	Major Collector
Recommended Jurisdiction	City
Recommended Functional Classification	Major Collector
Notes	• Only east-west collector route between CSAH 12 and TH 96; additional arterial not needed between these two roadways • Serves primarily residential land uses • Roadway is new and meets current standards • Future traffic signal at CSAH 15 and McKusick Rd N may be needed

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 19: CSAH 11 (Otchipwe Ave N)
From TH 96 (Dellwood Rd) to CSAH 5 (Stonebridge Trl)

City of Stillwater and Stillwater Township



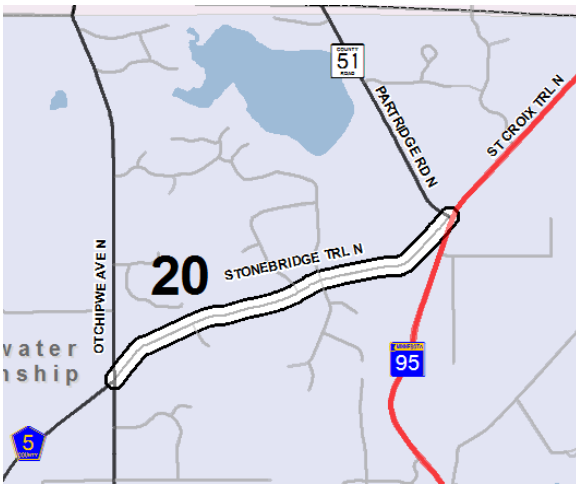
Segment Summary	
Segment Length	2 miles
Roadway Type	Rural Two-Lane Undivided
State Aid Designation	CSAH 11
Posted Speed	Varies 35-50 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	1,150 / 1,040 / 1,360
Current Jurisdiction	County
Current Functional Classification	Minor Collector
Recommended Jurisdiction	County
Recommended Functional Classification	Minor Collector
Notes	• Primarily serving rural residential area • Part of Raleigh Trucking haul route, but not used much due to curves and grade • Duplicate north-south route to CSAH 5 (Stonebridge Trl) • Pavement is in good condition • Long-term full depth reclamation may be needed

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 20: Stonebridge Trl N

From CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95

Stillwater Township

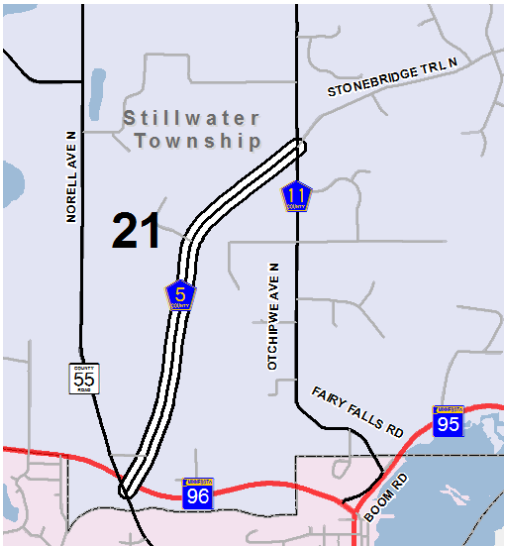


Segment Summary	
Segment Length	1.7 miles
Roadway Type	Rural Two-Lane Undivided
State Aid Designation	None
Posted Speed	45 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	No data / 2,110 / 2,680
Current Jurisdiction	Township
Current Functional Classification	Major Collector
Recommended Jurisdiction	Township
Recommended Functional Classification	Minor Collector
Notes	• Segment previously changed jurisdiction from County to Township • Along with CSAH 5, provides connection between TH 95 and TH 96 • Part of Raleigh Trucking haul route, although lower usage than CSAH 5 (Segment 21) • Terrain is challenging for any changes and modifications needed to meet state aid standards

St. Croix Valley Roadway Jurisdiction Study
Summary Sheet

Segment 21: CSAH 5 (Stonebridge Trl N)
From CR 55 (Norell Ave) to CSAH 11 (Otchipwe Ave)

Stillwater Township



Segment Summary	
Segment Length	1.9 miles
Roadway Type	Rural Two-Lane Undivided
State Aid Designation	CSAH 5
Posted Speed	45 mph
Traffic Volumes Pre-Bridge / 2018 / 2040	3,200 / 3,370 / 4,220
Current Jurisdiction	County
Current Functional Classification	Major Collector
Recommended Jurisdiction	County
Recommended Functional Classification	Major Collector
Notes	• CR 55 (Norell Ave) provides more direct north-south route and could relieve CSAH 15 (Manning Ave) • Part of Raleigh Trucking haul route • Primarily serving the rural residential area

APPENDIX B

Agency Correspondence

MAGNUSON LAW FIRM

LICENSED IN MINNESOTA AND WISCONSIN

THE GRAND GARAGE
324 MAIN STREET SOUTH • SUITE #260 • STILLWATER, MN 55082-5165
TELEPHONE: (651) 439-9464 • FAX: (651) 439-5641
WWW.MAGNUSONLAWFIRM.COM

DAVID T. MAGNUSON
DTMAGNUSON@MAGNUSONLAWFIRM.COM

January 9, 2018

Andrew Giesen – Project Manager
Wayne Sandburg – Deputy Engineer
Don Thiesen – Washington County Engineer
11660 Meyron Road North,
Stillwater, MN 550582

Re: St. Croix Valley Roadway Jurisdictional Study – Northbrook Avenue

Dear Gentlemen:

The Town Board of the Town of Baytown directed that I write to express their strong preference that Northbrook Avenue remain in the Town and not become part of the County Road system. To begin with, this road was created by the Town Board during the 1950s. Town Board members met with owners along the proposed road and obtained the voluntary conveyances of the needed right of way. The road was then constructed and paid for by the Town. It was designed initially as a local road, both in its base, width, slopes and surfacing. It has a rural section and a great number of driveways that enter the road based upon the historical location of existing houses. To bring this road to current county standards would be extremely expensive and only serve to make the road more dangerous for those who live along the road. The Town Board has expended more than $500,000 several years ago to upgrade the road, and they yearly budget sums to patch and resurface. However, the present design of the road is "traffic calming" and an upgrade to county standards would only mean an increase is speeds and more danger to the users of this reach of Northbrook. The Town Board respectfully asks that the consideration of this road as a county road be deleted from the jurisdictional study. That would allow county funds to be devoted to the study of other roads that are better candidates for becoming a county road.

Respectfully,

David T. Magnuson
Attorney for the Town of Baytown

cc: Gary Kriesel
County Commissioner
Washington County Government Center

City of Oak Park Heights

14168 Oak Park Blvd. N • Box 2007 • Oak Park Heights, MN 55082 • Phone (651) 439-4439 • Fax (651) 439-0574

January 12th, 2018

Mr. Andrew Giesen, EIT sent via email only: Andrew.Giesen@co.washington.mn.us
Transportation Division
Washington County Public Works Department
11660 Myeron Rd North
Stillwater, MN 55082

RE: Roadway Jurisdictional Study

Thank you for considering the inclusion of the City in your upcoming Roadway Jurisdictional Study.

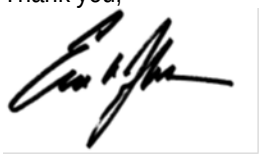
Unfortunately, the Study's objectives are not primarily focused on an assessment of existing traffic concerns. And, despite its stated purpose, the Study minimally relates to the St. Croix River Crossing and its direct traffic impacts. Moreover, the Study lacks any meritorious outline of how to address such issues collectively if at all possible. Rather, the Study is directed almost fundamentally designed to be an elaborate cost-shifting exercise.

Accordingly, the City is declining to participate in this Roadway Jurisdictional Study.

The City had informed the County in November 2017 that the City already maintains a roadway transfer policy (again enclosed) and the City is not seeking to supplant that process which is the primary goal of this Study. Please recall that in that same communication, the City also informed the County that the City would consider reasonable proposals for potential roadway transitions so long as they are pursued under the City's defined process.

Please let me know if you have any questions.

Thank you,



Eric Johnson,
City Administrator

Cc: Molly O'Rourke, County Administrator

CITY OF OAK PARK HEIGHTS
POLICY ON CITY ACCEPTANCE OR TAKEOVER OF ROADWAYS FROM OTHER JURISDICTIONS

The City currently has a deficit in its ability to fully fund the long-term care and maintenance of its current roadway systems. The consideration of the acceptance of additional roadways from other jurisdictions places even greater and unsustainable burden on the City's ability to fund and maintain such infrastructure. Accordingly, the City will not accept the "turn back" or consider the acceptance of any roadways from the other government entities until such time as the following conditions are met:

1. Any public entity that desires the City to assume a roadway shall make that request in writing not less than 12 months prior to any potential action.

2. Any public entity that desires the City to consider a roadway takeover shall provide the City detailed study (justification and analysis) regarding the proposed transfer. This study shall be performed by an independent engineering firm capable of performing such task and shall include traffic studies, history of repairs and maintenance, cost-benefit analyses to the City and other impacted parties as well the anticipated results of the proposed project. This study shall be undertaken by the City at the expense of the proposing agency and which shall be paid for upfront by the proposing agency.

3. Public meetings shall be held and convened by the agency proposing to impact or transfer such roadways to the City; affected parties that are reasonably anticipated to be impacted by the proposal (both public and private) shall be invited to the meeting(s).

4. At a minimum, prior to the City assuming any roadways, all such roadways that are proposed to be conveyed to the City shall fully reconstructed (or recently reconstructed) by the proposing agency at their sole expense to the standards as may be minimally required by the City Engineer; including all curb and gutters and drainage systems inclusive of downstream control structures. All proposed street reconstruction subject to a proposed conveyance to the City shall comply with the in-effect watershed and MS4 rules.

5. The City shall not be required to fund any portion of such proposed reconstruction or secure needed right of ways of any roadways to be conveyed to the City. If City lands are proposed to be used, these shall first be purchased by the proposing agency; or the City shall be compensated for such value as determined by the City Council.

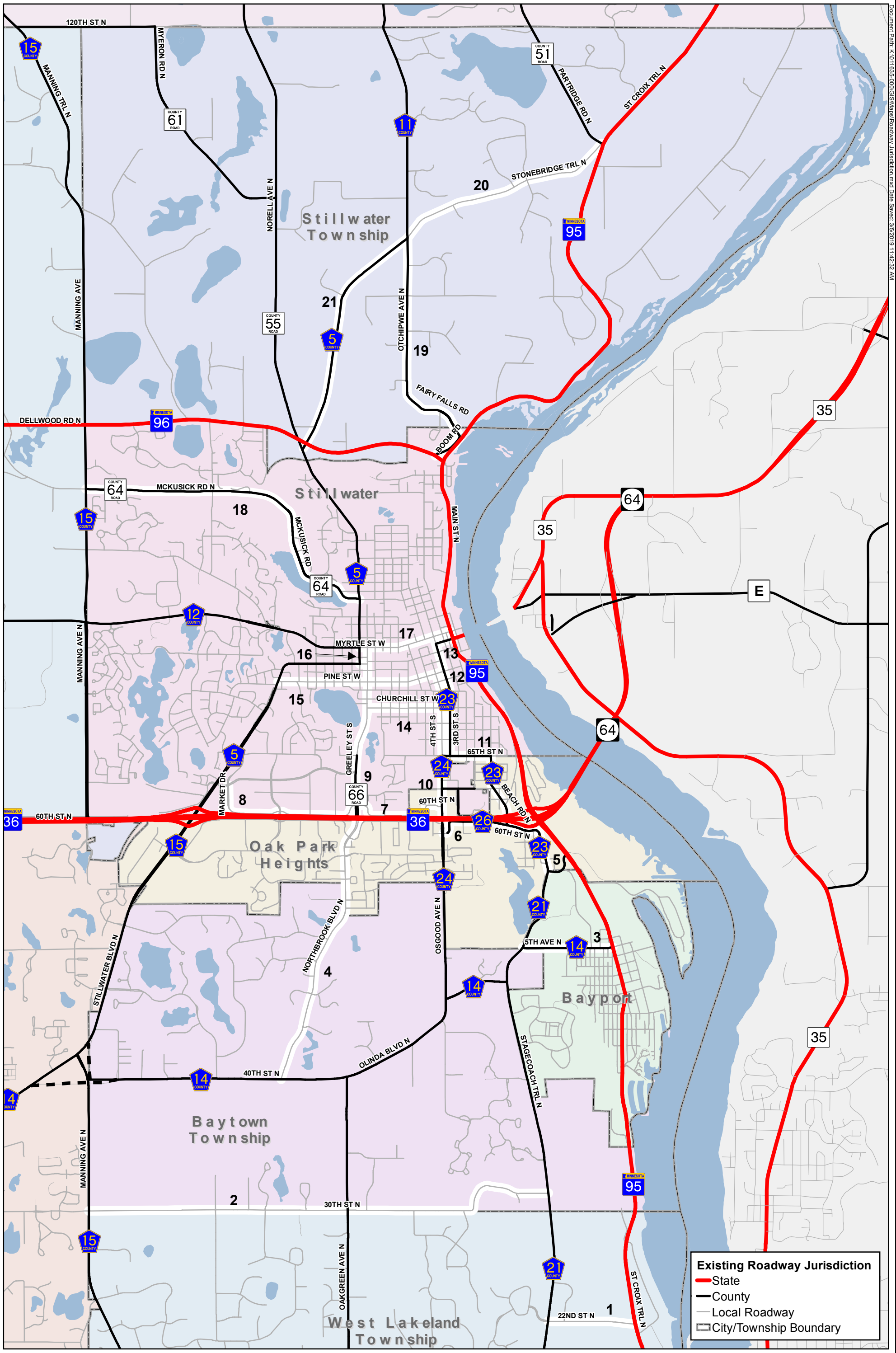
6. Prior to any acceptance of a roadway, the City shall first be supplied with an upfront payment of not less than one-half of the second "life-cycle" cost of the street surface and its appurtenances including but not limited to: curb and gutter and pond maintenance. This shall generally include, two "seal-coatings", one "mill and overlay" and one full reconstruction of the street surfaces and curb & gutters and minor and major pond maintenance. This calculation shall be performed by the City Engineer subject to applicable Construction Cost Indexes.

7. The City shall not assume any roadways from another jurisdiction until such time as the City becomes fully eligible for State Road Aids as defined in MN STAT 162.09

8. The City Council may deviate from these policies for good cause and should make that finding in any related City Council resolution.

APPENDIX C

Inventory Maps



Roadway Jurisdiction

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

N

0 3,500 Feet

1 inch = 3,500 feet

wsb

Roadway Functional Classification

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

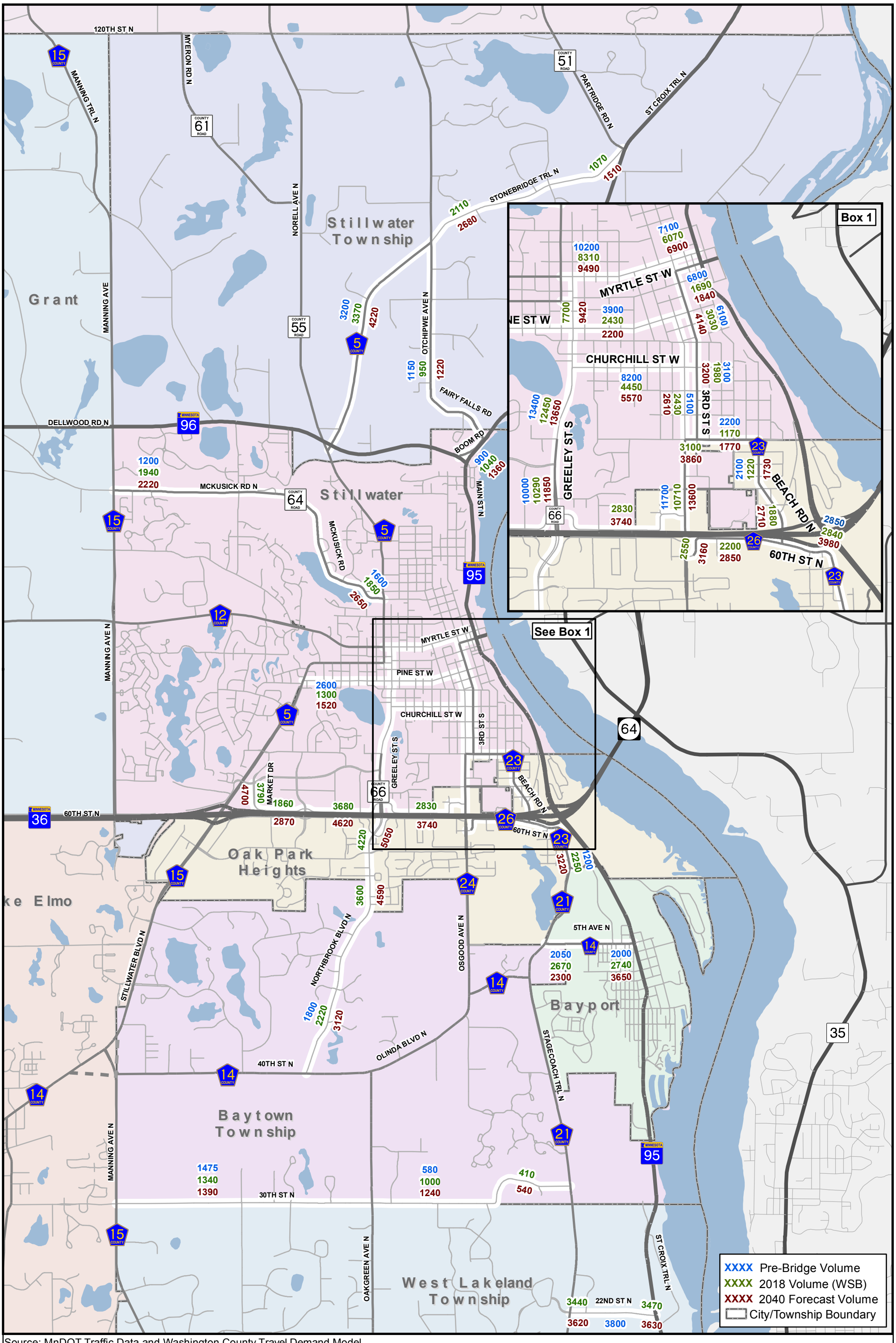
N

0 3,500 Feet

1 inch = 3,500 feet

wsb

Principal Arterial
A Minor Augmentor
A Minor Reliever
A Minor Expander
A Minor Connector
Other Arterial
Major Collector
Minor Collector
Local Roadway
City/Township Boundary



Source: MnDOT Traffic Data and Washington County Travel Demand Model

Traffic Volume Pre-Bridge, 2018, & 2040 Forecast

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

N

0 3,500 Feet

Washington County

wsb

Existing Number of Roadway Lanes

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

N

0 3,500 Feet
1 inch = 3,500 feet

wsb

4 Divided
4 Undivided
2 Divided
2 Undivided
City/Township Boundary

Pavement Condition

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

N

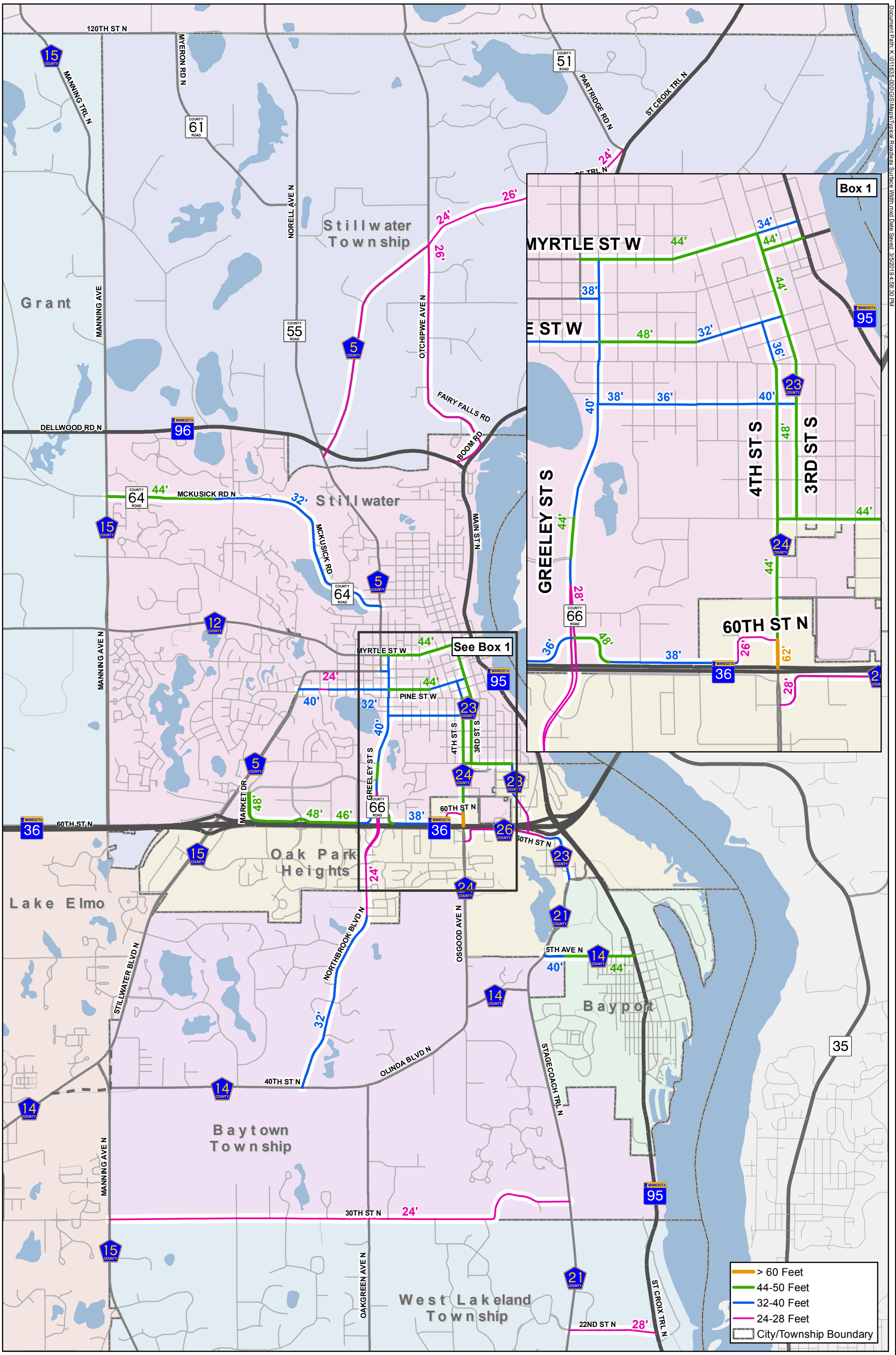
0 3,500 Feet

1 inch = 3,500 feet

wsb

Pavement Condition

- Very Good (80-100)
- Good (60-79)
- Fair (40-59)
- Poor (20-39)
- No Data Available
- City/Township Boundary



Typical Roadway Surface Width

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

N

0 3,500 Feet

1 inch = 3,500 feet

wsb

Roadway Posted Speed and Intersection Control Type

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

wsb

N

0 3,500 Feet

1 inch = 3,500 feet

30 - 35 MPH
40 - 45 MPH
50 - 55 MPH
Traffic Signal
4-Way Stop
Side Street Stop
City/Township Boundary

Box 1

See Box 1

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Access Density

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

wsb

N

0 3,500 Feet

Acces Points
- Commercial
- Residential
- Rural Residential

Existing Sidewalks and Trails

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

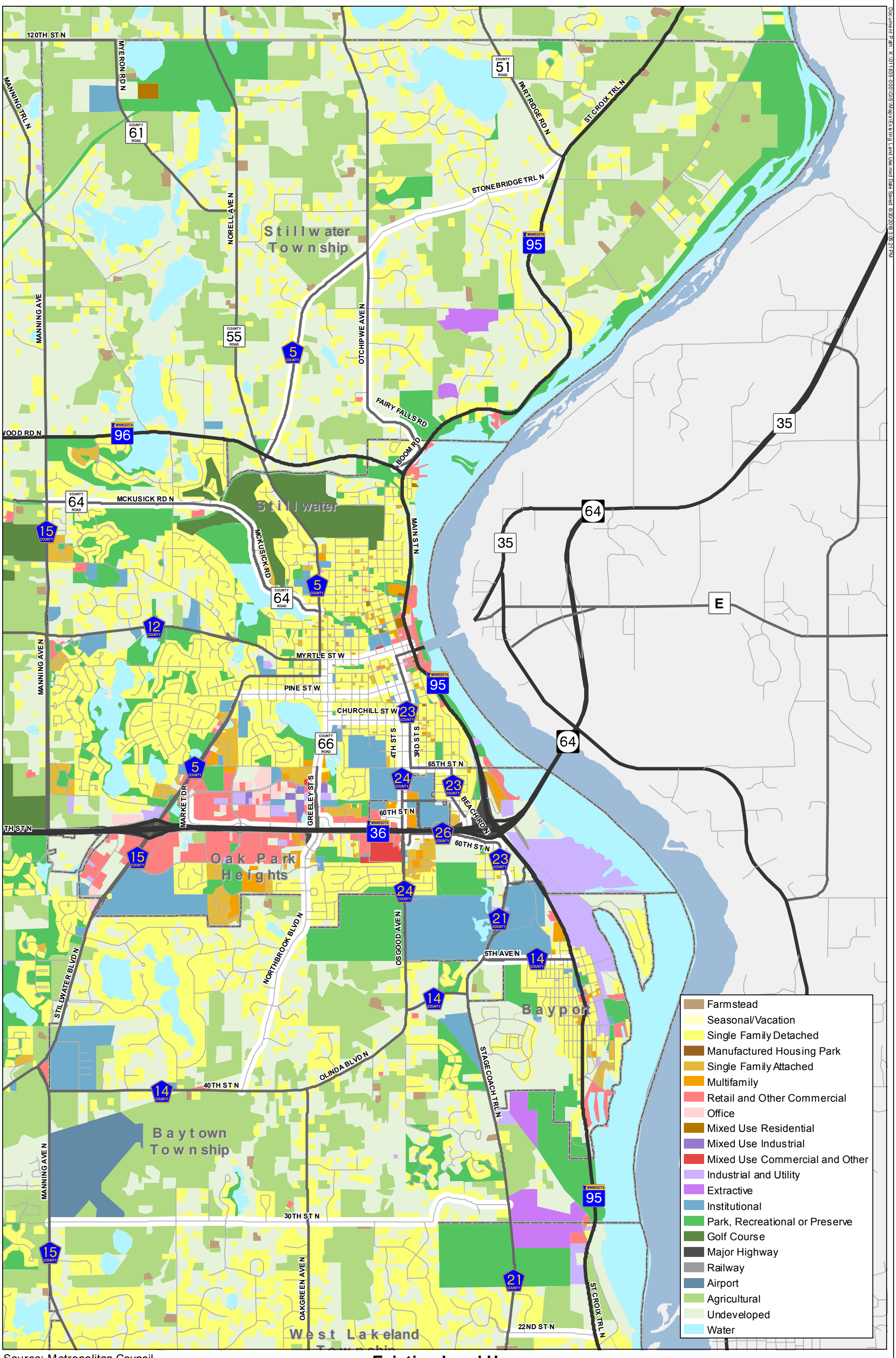
Washington County

N

0 3,500 Feet
1 inch = 3,500 feet

wsb

Trails
Sidewalks
City/Township Boundary



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Source: Metropolitan Council

Washington County

Existing Land Use

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

N

0 3,500 Feet

1 inch = 3,500 feet

wsb

APPENDIX D

Memo - 2040 Traffic Volume Forecasts Methodology

Memorandum

To: Andrew Giesen
Washington County Public Works

From: Tony Heppelmann, PE
Andy Hingeveld, AICP

Date: April 16, 2019

Re: 2040 Traffic Volume Forecasts Methodology for the
St. Croix Valley Roadway Jurisdictional Study
WSB Project No. 011635-000

The purpose of this memo is to summarize the methods used to generate (2040) forecast traffic volumes for the roadways included in the St. Croix Valley Roadway Jurisdictional Study (see Attachment A for study segments). Forecast traffic volumes were utilized in the study to determine future vehicle traffic patterns and help identify potential roadway needs for the study segments as part of the evaluation criteria developed for roadway functional classification and potential jurisdictional changes. The Washington County 2040 Regional Travel Demand Model (TDM) included network links for the subject roadways, however the results of the original model run (SRF Report "Washington County Traffic Model Update: Year 2040 Forecasts" dated Feb. 14, 2018) did not report forecast values for most of the subject roadways.

WSB utilized the Washington County TDM provided by Washington County to develop 2040 forecast volumes for the subject roadways. WSB ran a base year scenario with the new St. Croix River Crossing open to traffic to generate 2014 (base model year) volumes; and a forecast year (2040) scenario with the new St. Croix River Crossing open to traffic to model 2040 volumes. WSB compared the model assignments between the base year scenario and the 2040 scenario to determine the expected growth in traffic on each of the routes. This growth in the model assignments was used to factor the existing traffic counts (collected in May and June 2018) to generate 2040 forecasts. The adjustment process is explained below.

A. Adjustment Process

The model adjustment process uses actual traffic counts as the starting point for the 2040 forecasts. It then adjusts the actual traffic counts based on the modeled growth in traffic. The National Cooperative Highway Research Program Special Report (NCHRP) 255 provides guidance in **Table 1** for the appropriate adjustment process based on the amount of growth and how well the model calibrates to the existing counts. The process computes three values:

- The difference between the base year model assignment and the actual base year traffic count;
- The ratio of the base year model assignment to the base year traffic count; and
- The magnitude of growth between the base year model assignment and the forecast year model assignment.

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Table 1: Model Adjustment Process

Condition	Implications of Condition	Method Recommended
$\frac{FutureVolume}{BaseVolume} > 3$	High model growth may cause the ratio method to result in unreasonably high adjusted volumes.	Difference Method
$\frac{BaseCount}{BaseVolume} > 1.5$	A large underestimation by the model in the base year may cause the ratio method to result in unreasonably high adjusted volumes.	Difference Method
$\frac{BaseVolume}{BaseCount} > 1.5$	A large overestimation by the model in the base year may cause the ratio method to result in unreasonably low adjusted volumes.	Difference Method
All Other Cases		Average Method

The average method refers to averaging the results using the difference method and ratio method. A brief description of the three methods is provided below.

Ratio Method: The ratio of future and base year is calculated, and this ratio is applied to the existing traffic volume to calculate the future volume after prorating the growth to the current year volume.

$$Ratio\ Method\ Forecasted\ Volume\ = \frac{Future\ Model\ Volume}{Prorated\ Existing\ Year\ Model\ Volume} \times Existing\ Volume$$

Difference Method: The difference between the future year and base year is added to the existing volume after prorating the difference to the current year volume.

Difference Method Forecasted Volume = (Future Model Volume – Prorated Existing Year Model Volume) + Existing Volume.

The **Average Method** averages these two methods:

$$Forecasted\ Volume = \frac{Ratio\ Method\ Forecasted\ Volume + Difference\ Method\ Forecasted\ Volume}{2}$$

These guidelines were used to generate traffic forecasts for 2040 for the study roadway segments. The year 2040 forecasts were calculated using the appropriate increment to the 2018 actual counts by interpolating the model growth between 2018 and 2040. However, the travel demand model did not generate traffic volume forecasts for all study roadways. Some roadways—for example, short segmented local roadways—may have been too small to be incorporated into the regional model to generate traffic forecast volumes. In these cases, 2040 ADT was interpolated based on the average percent change of traffic volume between 2018 and the 2040 forecast.

B. Final Forecast Volumes

Table 2 and **Attachment B** show the forecast volumes generated for the subject roadways along with actual traffic counts taken prior to the opening of the St. Croix River Crossing (pre-bridge, year varies) and following the opening of the bridge (2018). **Attachment C** shows the 2040 forecasted volumes for the study segments as well as major roadways within the study area. A comparison of the pre-bridge and 2018 counts shows that many study segments have experienced a decrease in daily traffic volumes (by ten percent on average) since the St. Croix River Crossing opened to traffic in August 2017. The change in volumes is particularly noticeable in the downtown Stillwater area as regional traffic no longer must travel into downtown Stillwater to cross the river. By 2040, much of the traffic volumes are forecasted to approach pre-bridge conditions, likely due to overall population growth and continued development of the area.

Attachment D displays the network links analyzed in the model run by percent change in volume from 2014 to 2040 for the study area. For the study segments, an average of 25 percent increase in traffic volumes is forecasted by 2040 based on the patterns observed in the travel demand model.

Table 2: Traffic Volume Comparison by Study Segment Pre-Bridge, Post-Bridge (2018), and 2040

Map Ref.	Roadway Segment	Traffic Volumes: Pre-Bridge 2018 (Percent change)	Traffic Volumes: 2040 (Percent change from 2018)
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	3,800 3,470 (-9%)	3,630 (5%)
2	**30th St N** from CSAH 15 (Manning Ave) to CSAH 21 (Stagecoach Trl)	1,475 1,340 (-9%)	1,390 (4%)
3	**CSAH 14 (5th Ave)** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	2,050 2,740 (34%)	3,650 (33%)
4	**Northbrook Blvd N/Oakgreen Ave N** from CSAH 14 (40th St) to TH 36	1,800 2,220 (23%)	3,120 (41%)
5	**CSAH 23 (Stagecoach Trl/S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd)	2,850 2,840 (0%)	3,980 (40%)
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	n/a 2,550	3,160 (24%)
7	**60th St N/W Frontage Rd/Oren Ave N** from Greeley St to Osgood Ave	n/a 2,830	3,740 (32%)
8	**Market Dr/W Frontage Rd/60th St N** from Curve Crest Blvd to Greeley St	n/a 3,790	4,700 (24%)
9	**Greeley St S** from TH 36 to Myrtle St	13,400 12,450 (-7%)	13,650 (10%)

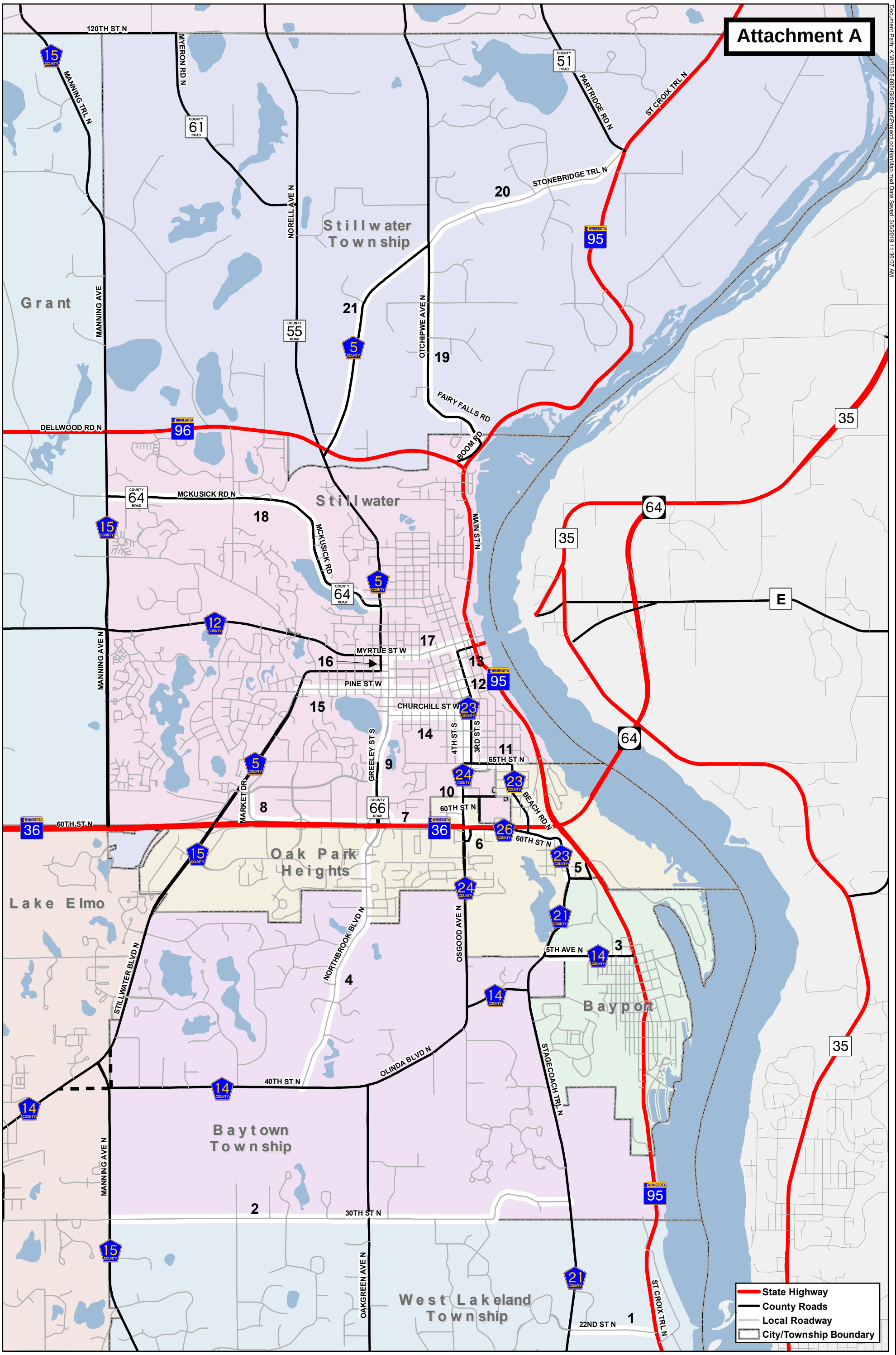
Map Ref.	Roadway Segment	Traffic Volumes: Pre-Bridge 2018 (Percent change)	Traffic Volumes: 2040 (Percent change from 2018)
10	**CSAH 24 (N Osgood Ave)/4th St S** from TH 36 to Pine St	11,700 10,710 (-8%)	13,600 (27%)
11	**CSAH 23 (65th St/Orleans St E/Paris Ave N/ Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	2,200 3,100 (41%)	3,860 (26%)
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	6,100 3,030 (-50%)	4,140 (37%)
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	6,800 1,690 (-75%)	1,840 (9%)
14	**Churchill St W** from Greeley St to CSAH 23 (3rd St)	8,200 4,450 (-46%)	5,570 (25%)
15	**Pine St W** from CSAH 5 (Stillwater Blvd) to CSAH 23 (3rd St)	3,900 2,430 (-38%)	2,200 (-9%)
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	n/a	n/a
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	10,200 8,310 (-19%)	9,490 (14%)
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St)	1,600 1,940 (21%)	2,650 (37%)
19	**CSAH 11 (Otchipwe Ave N)** from TH 96 (Dellwood Rd) to CSAH 5 (Stonebridge Trl)	1,150 1,040 (-10%)	1,360 (31%)
20	**Stonebridge Trl N** from CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95	n/a 2,110	2,680 (27%)
21	**CSAH 5 (Stonebridge Trl N)** from CR 55 (Norell Ave) to CSAH 11 (Otchipwe Ave)	3,200 3,370 (5%)	4,220 (25%)

Source: Pre-bridge counts used from most recent available data provided by local agency and/or MnDOT prior to August 2017. 2018 counts collected by WSB in May and June 2018.

Attachments:

A. Study Area Map
B. Traffic Volume Pre-Bridge, 2018, & 2040 Forecasts Map
C. Traffic Volume Forecasts Map
D. Traffic Volume Percentage Change 2014-2040 Map

Attachment A



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Study Area Map

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

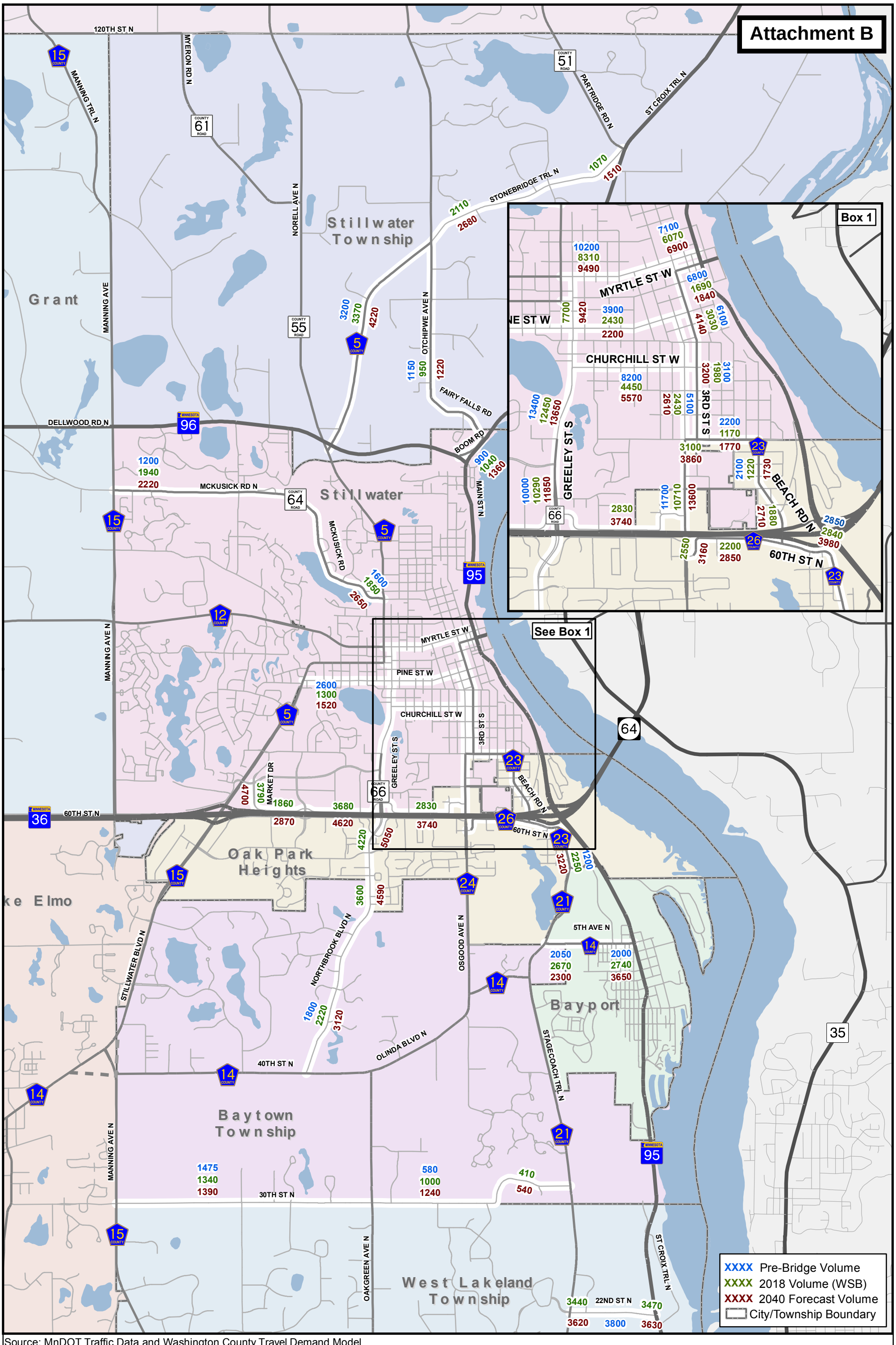
N

0 3,500 Feet

1 inch = 3,500 feet

wsb

Attachment B



Source: MnDOT Traffic Data and Washington County Travel Demand Model

Traffic Volume Pre-Bridge, 2018, & 2040 Forecast

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

N

0 3,500 Feet

Washington County

wsb

Attachment C

Box 1

See Box 1

Stillwater Township

Grant

Oak Park Heights

Lake Elmo

Baytown Township

Bayport

West Lakeland Township

120TH ST N
MANNING TRL N
MYERON RD N
NORELL AVE N
PARTRIDGE RD N
ST CROIX TRL N
STONEBRIDGE TRL N
OTCHIPWE AVE N
MANNING AVE
DELLWOOD RD N
FAIRY FALLS RD
BOOM RD
MCKUSICK RD N
MCKUSICK RD
MAIN ST N
MYRTLE ST W
PINE ST W
CHURCHILL ST W
3RD ST S
GREELEY ST S
BEACH RD N
60TH ST N
MARKET DR
NORTHBROOK BLVD N
OSGOOD AVE N
5TH AVE N
OLINDA BLVD N
40TH ST N
STAGECOACH TRL N
30TH ST N
OAKGREEN AVE N
22ND ST N
STILLWATER BLVD N

COUNTY 15 ROAD
COUNTY 61 ROAD
COUNTY 51 ROAD
COUNTY 55 ROAD
COUNTY 64 ROAD
COUNTY 66 ROAD
MINNESOTA 96
MINNESOTA 95
MINNESOTA 36
COUNTY 5
COUNTY 12
COUNTY 23
COUNTY 26
COUNTY 24
COUNTY 14
COUNTY 21
64
35

2040 Traffic Volume
0 - 1,999
2,000 - 4,999
5,000 - 9,999
10,000 - 14,999
>= 15,000
City/Township Boundary

Source: Washington County Travel Demand Model, SRF Washington County Traffic Model Update (FEB 2018), & WSB 2040 Traffic Volume Forecasts for the St. Croix Valley Roadway Jurisdictional Study (SEPT 2018)

2040 Traffic Volume Forecasts

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

N
0
3,500
Feet

Washington County

wsb

Document Path: K:\011635-000\GIS\Maps\2040 Traffic Volume Forecast.mxd

Attachment D

Stillwater Township

Oak Park Heights

Baytown Township

West Lakeland Township

Stillwater

Houlton

Bayport

Percent Change
- More than 50% decrease
- 25% - 49% decrease
- 0 - 24% decrease
- 0 - 19% increase
- 20% to 39% increase
- 40% to 59% increase
- 60% to 79% increase
- More than 80% increase

Traffic Volume Percentage Change 2014-2040

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

0 2,000 4,000 Feet

N

wsb

APPENDIX E

Memo - Roadway Functional Classification Evaluation and Recommendations

Memorandum

To: Andrew Giesen
Washington County Public Works

From: Jack Corkle, PTP, AICP
Andy Hingeveld, AICP

Date: April 16, 2019

Re: Roadway Functional Classification Evaluation and Recommendations for the St. Croix Valley Roadway Jurisdictional Study
WSB Project No. 011635-000

The purpose of this memo is to summarize the evaluation process and recommendations for the roadway functional classification analysis completed as part of the St. Croix Valley Roadway Jurisdictional Study. Roadway functional classification is a standard tool used in transportation planning to establish a hierarchy in the roadway network and preserve mobility on key corridors. How a roadway functions as part of the overall system is a key factor in properly aligning roadway jurisdiction. The analysis was completed consistent with regional guidance. See **Attachment A** for a map of the study roadways and the surrounding area.

A. Roadway Functional Classification Overview

Functional classification defines the role a roadway plays in the transportation network. Functional classification incorporates several transportation and land use characteristics, including roadway speeds, access to adjacent land, intersection spacing, connection to population centers and land uses, and the length of trips taken on the roadway. Roads are generally placed into categories based on the degree to which they prioritize access (to adjacent land or other roadways) versus maintaining mobility on the roadway. **Figure 1** summarizes the roadway functional classification hierarchy based upon the access versus mobility relationship.

In the Twin Cities metropolitan area, the Metropolitan Council has established a roadway functional classification system in its 2040 Transportation Policy Plan that generally distributes traffic from local neighborhood streets to collector roadways, then to minor arterials and ultimately the principal arterial system. **Table 1** shows that higher functioning roadways carry the most traffic but have the least amount of system mileage in the metropolitan area.

Table 1: Twin Cities Metropolitan Area System Distribution

Functional Classification Type	Percent of System Mileage	Percent of Vehicle Miles Traveled (VMT)
Principal Arterials	4	53
Minor Arterials	13	27
Collectors	10	7
Local Streets	72	12

Source: Metropolitan Council, FHWA 2015

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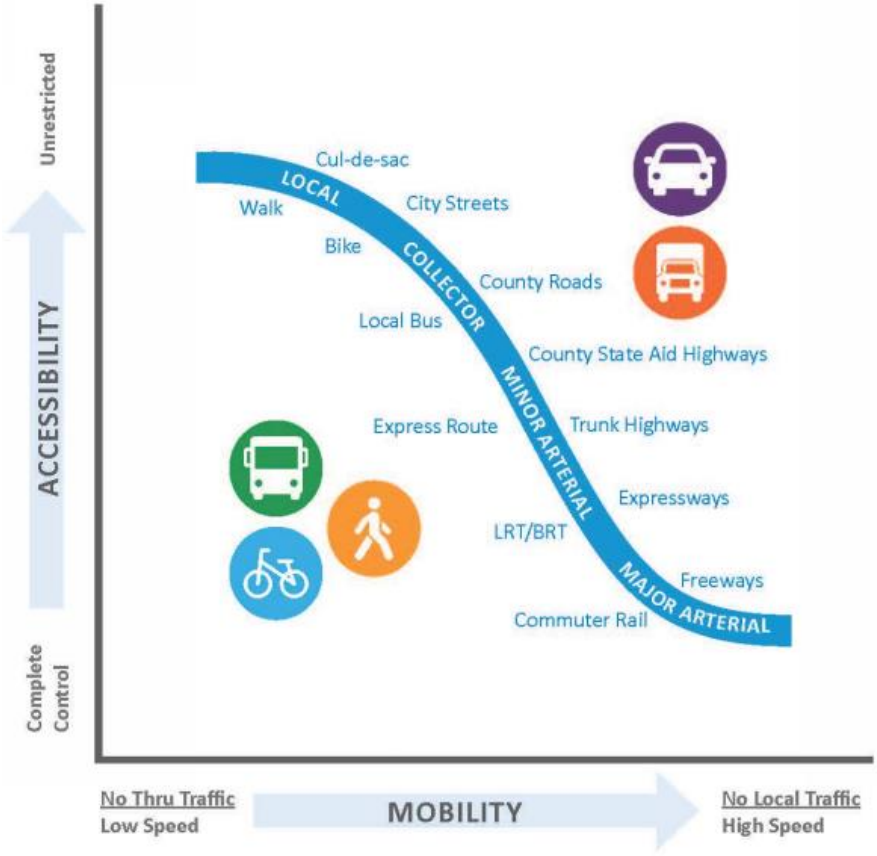
Figure 1: Functional Classification Relationship



Source: 2040 Washington County Comprehensive Plan

Each roadway functional classification is summarized below from the highest mobility roadway to the lowest.

Principal Arterials

Principal arterials generally serve as the primary highway facilities that carry the highest traffic volumes on the transportation network and typically are intended to serve trips greater than eight miles (regional trips). Principal arterials are spaced between two and six miles apart in developed and developing areas and between six and twelve miles apart in rural areas. Intersections are generally limited to interstate freeways, other principal arterials, and A-Minor arterials. Within the metropolitan area, most principal arterials are under MnDOT jurisdiction.

Minor Arterials

Minor arterials maintain a focus on mobility but provide more land access than principal arterials. Minor arterials are intended to serve trips of four to eight miles in length. Within developing areas, these facilities are spaced between one and two miles apart. Minor arterials connect cities and towns within the region and link to regional business and commercial concentrations. Minor arterials are typically under county jurisdiction, and in some cases are under state or city jurisdiction.

The Metropolitan Council has established a system of A-Minor and B-Minor arterials. A-Minor arterials are eligible for federal funding administered by the Metropolitan Council. B-Minor arterials have a similar focus on mobility above land access. These roadways connect major traffic generators in the region.

The Metropolitan Council has split A-Minor arterials into four types, described below:

- Relievers: Arterials located parallel to congested principal arterials that are intended to provide additional capacity to the principal arterial.
- Augmenters: Arterials that supplement the principal arterials system within urban centers and urban communities.
- Expanders: Arterials that supplement principal arterials in developing areas of the metropolitan area.
- Connectors: Arterials that provide connections between rural towns and connect rural areas with the principal arterial system.

Collectors

Major and minor collector roadways provide linkages to larger developments and community amenities. Collector roadways generally favor access to the transportation system over mobility but, try to balance the two competing needs. Collector roadways are generally lower speed than the principal or minor arterial routes. Collector roadways are often owned and operated by cities and townships, although counties operate some of these facilities. Collectors are intended to serve trips of one to four miles in length. Collectors link minor arterials, other collectors, and local streets.

Major collectors typically serve higher density residential areas and concentrations of commercial and industrial land uses. These facilities tend to serve longer trips than minor collectors. Minor collectors serve lower density residential areas and concentrations of commercial and industrial land uses. Compared to major collectors, minor collectors tend to serve shorter trips.

Local

Most streets are classified as local but only serve about 12 percent of the total vehicle miles traveled systemwide. Local streets are primarily intended to serve adjacent properties and are designed as low-speed, low-capacity facilities. Medium distance travel is purposefully directed away from these streets to the collector and arterial system. Local streets are owned and operated by cities and townships.

The existing roadway functional classification for the study roadways and the surrounding area are shown in **Attachment B**.

Benefits of Functional Classification

Planning for and operating a roadway system consistent with the defined functional classification system provides several benefits including:

- Supporting a safe and efficient transportation system that meets to needs of its users
- Providing mobility benefits to the regional transportation systems – maintaining network balance
- Restricting new driveways and access points on high-speed and/or congested corridors
- Reducing through trips within neighborhoods
- Preserving mobility from changes in land use and development
- Supporting economic growth and development in appropriate locations

B. Functional Classification Evaluation Criteria and Analysis

There are several criteria and road characteristics that are used in determining roadway functional classification. These factors include roadway design, traffic volumes and speeds, types of trips served, and place connections, among others. While many of these criteria and characteristics are related, they are independent of each other and many corridors may fall within multiple classification categories. As a result, a qualitative review was applied to this analysis.

A set of evaluation criteria was developed based upon Metropolitan Council functional classification guidance (Appendix D: Functional Classification Criteria and Characteristics, from the 2040 Transportation Policy Plan). Additional resources including FHWA guidance, the Washington County 2040 Transportation Plan, and MnDOT Access Guidance were also utilized. Definitions and general category values for the criteria were established to determine whether the subject segment best met the criteria as a local, collector, or arterial roadway. Other considerations were also documented. The evaluation criteria and general category values used are provided in **Table 2**. See **Attachment C** for the detailed analysis on how the criteria was applied to each roadway segment.

Table 2: Functional Classification Evaluation Criteria - General Categories for Local, Collector, and Arterial Roadways

Evaluation Criteria	Local	Collector	Arterial
State Aid Designation *Does the roadway segment have a state-aid designation (MSAS or CSAH)?*	MSAS or none	MSAS, CSAH or none	CSAH
Traffic Volumes *What are the roadway daily traffic volumes and how have they changed over time? (Pre-bridge, post-bridge/existing, 2040 forecast)*	<5,000	5,000-10,000	>10,000
Posted Speed *Is the segment low speed (30-40 mph) or high speed (45-55 mph)?*	Low speed	Low speed or high speed	High speed
Roadway/ Route Spacing *Does the roadway meet spacing guidance for similarly classified roadways?* *Do other nearby roadways serve a similar role/function?*	As needed to provide access to property	1/8-1/2 mile in job concentrations, 1/2 mile-1 mile suburban	1-2 miles suburban 1/2 mile-1 mile urban
Total Corridor Length *What is the length of the corridor route that the roadway segment serves?*	<2 miles	2-5 miles	>5 miles
System Connections *Does the roadway segment connect to similar or higher functioning roadways?* *What types of connections to the overall transportation system are provided?*	Serves more localized area Connects to other local roads or collectors	Provides connections within community Connects to arterials or other collectors	Provides connections beyond community Connects to other arterials
Place Connections *Does the roadway provide connections to regional destinations/places or local destinations/places?*	Serves neighborhoods or local destinations	Serves neighborhoods and commercial or employment centers	Serves commercial or employment center, city or multiple communities

Evaluation Criteria	Local	Collector	Arterial
Intersection Spacing Density *What is the frequency/number of intersections (per mile)?*	>10 intersections per mile	5-10 intersections per mile	<5 intersections per mile
Land Use/Access *What are the surrounding land uses?* *What is the frequency/number of driveways accessed from the roadway?*	High amount of direct property access	Low to medium amount of direct property access	Low amount of direct property access
Right of Way *What is the typical corridor width?*	60-70 feet	71-100 feet	>100 feet
On-Street Parking *Is on-street parking allowed?* *Is on-street parking typical?* *Does on-street parking affect mobility?*	On-street parking allowed, may or may not be common	On-street parking not allowed or allowed, but not common	On-street parking not allowed
Other Considerations *Physical constraints/environmental issues* *Potential social/political concerns* *Planned improvements*			

The following is a summary of key findings that were provided as part of the functional classification evaluation analysis.

- The removal of the Lift Bridge river crossing from the roadway network changes the importance of the CSAH 23 (Chestnut St E) connection (Segment 13) between 3rd St and TH 95. Myrtle St W (Segment 17) could better serve this connection as it would also complete an east-west arterial connection between CSAH 12 and TH 95.
- The spacing of north-south A-minor arterials is inconsistent with guidance within Stillwater between downtown and TH 36. There are three north-south arterials (CSAH 23, CSAH 24, TH 95) within one mile.
- There is a need for a continuous north-south arterial more evenly spaced between CSAH 15 (Manning Ave) and TH 95 north of TH 36 in urbanized Stillwater. A portion of CSAH 5 serves this role. Greeley St S (Segment 9) could extend this north-south arterial to TH 36.
- 22nd St N (Segment 1) could serve a higher importance as there are few opportunities to connect down the bluff to TH 95 between I-94 and Stillwater.
- There are limited routes south of TH 36 that provide long distance connections. This limits the ability to extend routes and designate the study segments as arterials.
- There is a need for collector routes (frontage roads) along both sides of TH 36 to provide local access and reduce dependence on the principal arterial (TH 36) for local/shorter trips in the Stillwater/Oak Park Heights area.
- There is no clear route that serves connections for the one block gap between CSAH 5 and Greeley St. Depending on the direction of travel and time of day, Olive St W (Segment 16) or Myrtle St W (Segment 17) may be more utilized when heading north or south.

C. Recommendations

Table 3 provides a summary of the recommended functional classification changes identified as part of this analysis. See **Attachment D** for the recommended functional classification map.

Table 3: Recommended Functional Classification for Study Roadways

Map Ref.	Roadway Segment	Current Functional Classification	Recommended Functional Classification
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	B-Minor	Change to A-Minor Connector as part of CSAH 10 route to TH 95
2	**30th St N** from CSAH 15 (Manning Ave) to CSAH 21 (Stagecoach Trl)	Major Collector	Maintain as Major Collector
3	**CSAH 14 (5th Ave)** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	A Minor Connector	Maintain as A-Minor Connector Arterial to maintain connection to TH 95
4	**Northbrook Blvd N/ Oakgreen Ave N** from CSAH 14 (40th St) to TH 36	Minor Collector/ Major Collector	Change entire segment to Major Collector as arterial route south of TH 36 is not needed
5	**CSAH 23 (Stagecoach Trl/S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd)	Major Collector	Maintain as Major Collector
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	Major Collector	Maintain as Major Collector. Extend Major Collector status west along 60th St to Oakgreen Ave and along 58th St between Oakgreen Ave and Stillwater Blvd
7	**60th St N/W Frontage Rd/ Oren Ave N** from Greeley St to Osgood Ave	Local Roadway	Change to Major Collector
8	**Market Dr/W Frontage Rd/ 60th St N** from Curve Crest Blvd to Greeley St	Local Roadway	Change to Major Collector
9	**Greeley St S** from TH 36 to Myrtle St	A Minor Expander/ Major Collector	Change to A-Minor Expander Arterial designation as part of continuous north-south route via CSAH 5/CR 55 (future CSAH 3) to the north

Map Ref.	Roadway Segment	Current Functional Classification	Recommended Functional Classification
10	**CSAH 24 (N Osgood Ave)/4th St S** from TH 36 to Pine St	A Minor Connector/ Local Roadway	Change to Major Collector
11	**CSAH 23 (65th St/Orleans St E/ Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	A Minor Expander	Change to Major Collector
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	A Minor Reliever	Change to Major Collector
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	A Minor Reliever	Change to Local
14	**Churchill St W** from Greeley St to CSAH 23 (3rd St)	Major Collector	Maintain as Major Collector
15	**Pine St W** from CSAH 5 (Stillwater Blvd) to CSAH 23 (3rd St)	Major Collector/ Local Roadway	Change to Major Collector for entire segment
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	Local Roadway	Change to A-Minor Expander Arterial designation as part of connection to north-south route via Greeley St/CSAH 5/CR 55 (future CSAH 3) to the north
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	B Minor	Upgrade to A-Minor Reliever Arterial as continuation of east-west CSAH 12 route to TH 95
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St)	Major Collector	Maintain as Major Collector
19	**CSAH 11 (Otchipwe Ave N)** from TH 96 (Dellwood Rd) to CSAH 5 (Stonebridge Trl)	Minor Collector	Maintain as Minor Collector
20	**Stonebridge Trl N** from CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95	Major Collector	Change to Minor Collector to maintain supporting north-south route between TH 95 and TH 96
21	**CSAH 5 (Stonebridge Trl N)** from CR 55 (Norell Ave) to CSAH 11 (Otchipwe Ave)	Major Collector	Maintain as Major Collector to support truck route to TH 96

The following items were additional recommendations beyond study roadways that were identified during this analysis:

- Change the CSAH 5/CR 55/CSAH 3 route north of Myrtle St to an A-Minor Arterial.
- Establish a Major Collector route south of TH 36 via 58th St (from CSAH 15/Stillwater Blvd to Oakgreen Ave) and 60th St (from Oakgreen Ave to TH 95) to serve as a supporting roadway and extension of the south frontage road network for TH 36.

Attachments:

A. Study Area Map
B. Existing Roadway Functional Classification Map
C. Functional Classification Evaluation Criteria and Analysis Table
D. Recommended Roadway Functional Classification Map

Attachment A

Study Area Map

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

wsb

N

0 3,500 Feet

1 inch = 3,500 feet

State Highway
County Roads
Local Roadway
City/Township Boundary

Attachment B

Roadway Functional Classification

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

N

0 3,500 Feet

1 inch = 3,500 feet

wsb

- Principal Arterial
- A Minor Augmentor
- A Minor Reliever
- A Minor Expander
- A Minor Connector
- Other Arterial
- Major Collector
- Minor Collector
- Local Roadway
- City/Township Boundary

Attachment C

Washington County

St. Croix Valley Jurisdictional Study

Functional Classification Evaluation Criteria and Analysis

Color Coding: Item generally consistent with Evaluation Criteria for:
- Local Road - Green
- Collector Road - Yellow
- Arterial Road - Red

wsb

Map Ref.	Roadway Segment	Current Functional Classification	Traffic Volumes: Pre-Bridge, 2018 (% Δ)	Traffic Volumes: 2040 (% Δ 2018)	Posted Speed	Segment Length (Miles)	Roadway/Route Spacing	Total Corridor Length	System Connections	Place Connections	Intersection Spacing/Density	Mobility vs. Land Access Driveway Access Density	Right of Way (estimated)	On-Street Parking	Other Considerations	Draft Recommendation - Functional Classification
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl) 2-lane undivided	B-Minor	3,800, 3,470 (-9%)	3,630 (5%)	High speed 55 mph	0.7	Only east-west route between CSAH 21 and TH 95 from I-94 to the south and CSAH 14 to the north (over 4 miles)	Connects to CSAH 21 and MN 95 Total Route = 0.7 miles	Connects to A-Minor Arterials at each end. Does not provide continuous east-west route, primarily serves as a connection down the bluff	Mainly serves rural residential	4 intersections/mile	11 driveways/mile	66 feet	On-street parking not allowed	Pavement condition considered poor On bluffs, rain/ice and grade issues	Upgrade to A-Minor Connector as part of CSAH 10 route to TH 95
2	**30th St N** from CSAH 15 (Manning Ave) to CSAH 21 (Stagecoach Trl) 2-lane undivided	Major Collector	1,475, 1,340 (-9%)	1,390 (4%)	Speed varies 55/45/ 40/30 mph	3.6	Only east-west route between CSAH 10 and CSAH 14 (3 miles)	Connects CSAH 21 and CSAH 15, extends west to CSAH 17 (Lake Elmo Ave) Total Route = over 4 miles	Connects to A-Minor Arterials at each end.	Connects to Lake Elmo Regional Airport and rural residential neighborhoods	3 intersections/mile	14 driveways/mile	66 feet	On-street parking not allowed	Realignment of western portion of road being considered due to airport expansion Pavement condition considered fair to poor	Maintain as Major Collector
3	**CSAH 14 (5th Ave)** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl) 2-lane undivided	A Minor Connector	2,050, 2,740 (34%)	3,650 (33%)	Low speed 30 mph	0.7	One of two east-west routes between I-94 and TH 36 that connect CSAH 21 and TH 95 down the bluff. 1 mile south of TH 36 and <3 miles north of 22nd St	Serves as part of (non-contiguous) CSAH 14 route from CSAH 15 to TH 95 Total Route = over 4 miles	Primary connection to Bayport from CSAH 21 to the west.	Connects to downtown Bayport with residential and commercial properties at the intersection with TH 95	8 intersections/mile	25 driveways/mile Several local road accesses on east end	60 feet	On-street parking not allowed or allowed, but not common		Maintain as A-Minor Connector Arterial to maintain connection to TH 95 - Potential Reliever designation for CSAH 14?
4	**Northbrook Blvd N/Oakgreen Ave N** from CSAH 14 (40th St) to TH 36 2-lane undivided/divided	Minor Collector/ Major Collector	1,800, 2,220 (23%)	3,120 (41%)	Low speed 30 mph	2.1	Only continuous north-south route between CSAH 15 and CSAH 24 (2.4 miles) that connects to TH 36 and into Stillwater	Connects CSAH 14 and MN 36, extends into Stillwater via Greeley St Total Route = over 3 miles	Connects to CSAH 14 (Minor Arterial) and TH 36 (Principal Arterial).	Connects Baytown Township, Oak Park Heights, and Stillwater. Mainly serving residential areas.	6 intersections/mile	20 driveways/mile	66-80 feet	On-street parking not allowed	Road recently upgraded Includes at-grade railroad crossing Intersection with TH 36 may be future interchange location	Change entire segment to Major Collector as arterial route south of TH 36 is not needed
5	**CSAH 23 (Stagecoach Trl/S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd) 2-lane undivided	Major Collector	2,850, 2,840 (0%)	3,980 (40%)	Low speed 40 mph	0.6	Part of only continuous north-south route across TH 36 between CSAH 24 and TH 95	CSAH 21 to Orleans St Total Route = 1.7 miles	Part of Beach Road route across TH 36	Serves mainly residential land uses	10 intersections/mile	5 driveways/mile	66 feet	On-street parking not allowed	New Beach Road overpass alignment to Stillwater	Maintain as Major Collector
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd) 2-lane undivided	Major Collector	n/a 2,550	3,160 (24%)	Low speed 40 mph	0.5	Serves as east-west route (frontage road) immediately south of TH 36 (Principal Arterial) between CSAH 24 and TH 95	CSAH 24 to CSAH 21 Total Route = 1.3 miles	Part of south frontage road system for TH 36. Via CSAH 21, connects to TH 95	Serves mainly residential land uses with higher intensities near CSAH 24	6 intersections/mile	16 driveways/mile	66 feet	On-street parking not allowed	New Beach Rd overpass alignment to Stillwater 60th St/Osgood Ave intersection to be removed and realigned with 59th St intersection. This will allow more continuous south frontage road network west to Oakgreen Ave	Maintain as Major Collector. Extend Major Collector status west along 60th St to Oakgreen Ave and along 58th St between Oakgreen Ave and Stillwater Blvd
7	**60th St N/W Frontage Rd/Oren Ave N** from Greeley St to Osgood Ave 2-lane undivided	Local Roadway	n/a, 2,830	3,740 (32%)	Low speed 40 mph	0.8	Serves as east-west route (frontage road) immediately north of TH 36 (Principal Arterial) between CSAH 5 and CSAH 24	Extends between CSAH 5 and CSAH 24 Total Route = 2 miles	Part of north frontage road system for TH 36	Mostly serves local businesses and destinations	3 intersections/mile	23 driveways/mile	60-80 feet	On-street parking not allowed		Change to Major Collector
8	**Market Dr/W Frontage Rd/60th St N** from Curve Crest Blvd to Greeley St 2-lane undivided/divided	Local Roadway	n/a, 3,790	4,700 (24%)	Low speed 30 mph	1.2	Serves as east-west route (frontage road) immediately north of TH 36 (Principal Arterial) between CSAH 5 and CSAH 24	Extends between CSAH 5 and CSAH 24 Total Route = 2 miles	Part of north frontage road system for TH 36	Mostly serves local businesses and destinations	4 intersections/mile	12 driveways/mile	60-80 feet	On-street parking not allowed		Change to Major Collector

Map Ref.	Roadway Segment	Current Functional Classification	Traffic Volumes: Pre-Bridge, 2018 (% Δ)	Traffic Volumes: 2040 (% Δ 2018)	Posted Speed	Segment Length (Miles)	Roadway/Route Spacing	Total Corridor Length	System Connections	Place Connections	Intersection Spacing/Density	Mobility vs. Land Access Driveway Access Density	Right of Way (estimated)	On-Street Parking	Other Considerations	Draft Recommendation - Functional Classification
9	**Greeley St S** from TH 36 to Myrtle St 2-lane undivided/divided	A Minor Expander/ Major Collector	13,400, 12,450 (-7%)	13,650 (10%)	Low speed 30 mph	1.3	Approximately 1 mile from CSAH 5 (A-Minor Arterial) to the west and TH 95 (A-Minor Arterial) to the east	CSAH 14 and Myrtle St/CSAH 12 Total Route = 5+ miles	Connects to CSAH 5 (off by one block) to the north, which extends beyond Stillwater. To the south, extends to CSAH 14 as part of Northbrook Blvd - One of few intersections with TH 36 (PA)	Key connection between Stillwater and TH 36 that serves residential and commercial land uses	10 intersections/mile	46 driveways/mile	60 feet	On-street parking available south of Churchill St (but not used). On-street parking occurs north of Churchill St	Duplicate role to CSAH 24/CSAH 23 Somewhat continuous route but not the most reliable travel time due to adjacent land uses, signals, and all-way stops (urban context) but better than CSAH 5 Intersection with TH 36 may be future interchange location	Change to A-Minor Expander Arterial designation as part of continuous north-south route via CSAH 5/CR 55 (future CSAH 3) to the north
10	**CSAH 24 (N Osgood Ave)/4th St S** from TH 36 to Pine St 2-lane undivided, 4-lane undivided at TH 36	A Minor Connector/ Local Roadway	11,700, 10,710 (-8%)	13,600 (27%)	Low speed 35/30 mph	1.1	Greeley St and Beach Rd are both A-Minors within 0.5 miles of Osgood Ave	CSAH 14 to Chestnut St Total Route = 2.7 miles (including 3rd St)	A-Minor Route continues on 3rd St north of Orleans St connecting into downtown and ending at Chestnut St. South of TH 36, A-Minor route extends to CSAH 14	Key connection between downtown Stillwater and TH 36 that serves residential and commercial land uses	10 intersections/mile	62 driveways/mile	60 feet	No on-street parking south of Orleans St. Parking north of Orleans St	Duplicate role to CSAH 24/CSAH 23 and Greeley St Not a continuous route north of Orleans St. 4th St does not connect north of Pine St. Ends at downtown area	Change to Major Collector
11	**CSAH 23 (Orleans St E/Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd) 2-lane undivided	A Minor Expander	2,200 3,100 (41%)	3,860 (26%)	Low speed 40/35/30 mph	0.9	There are other arterials within 1 mile (duplicative)	Orleans St and CSAH 26 Total Route = 1 mile	Connects to CSAH 23/24 (A-Minor Arterial and Major Collector Beach Rd overpass to south of TH 36	Serves mostly residential and connects to one arterial: CSAH 23	15 intersections/mile	21 driveways/mile	60 feet	On-street parking not allowed	Does not provide access to TH 36 (Principal Arterial) Serves duplicate role to CSAH 24 (Osgood Ave)	Change to Major Collector
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St 2-lane undivided	A Minor Reliever	6,100, 3,030 (-50%)	4,140 (37%)	Low speed 30 mph	0.9	North-south arterial route from CSAH 24/23 to Downtown area Alternate route to TH 95 (A-Minor Arterial)	Myrtle St and Orleans St Total Route = 1 mile	Completes Osgood Ave/TH 36 connection into Downtown area via 3rd St (alternate route to 4th St)	Residential and commercial downtown land uses	13 intersections/mile	63 driveways/mile	60 feet	On-street parking allowed	3rd St connects through Chestnut St and Myrtle St. 4th St does not connect past Pine St (not completing downtown route or access to other key east-west routes)	Change to Major Collector
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl) 2-lane undivided	A Minor Reliever	6,800, 1,690 (-75%)	1,840 (9%)	Low speed 30 mph	0.1	East-west arterial route from CSAH 24/23 to Downtown area that connects to TH 95 (A-Minor Arterial)	3rd St and TH 95 Total Route = 1 mile	Makes the connection between CSAH 23 and TH 95	Commercial and downtown land uses	30 intersections/mile	40 driveways/mile	60 feet	On-street parking allowed	Completes route connection to TH 95 (A-Minor Arterial) No longer serves as route across lift bridge	Change to Local
14	**Churchill St W** from Greeley St to CSAH 23 (3rd St) 2-lane undivided	Major Collector	8,200, 4,450 (-46%)	5,570 (25%)	Low speed 30 mph	0.6	Three blocks south of Pine St and seven blocks south of Myrtle St	CR 66 and CSAH 23 Total Route = <1 mile	Connects to CSAH 23/3rd St (A-Minor Arterial and Greeley St (Collector) Alternate route to Pine St or Myrtle St	Serves mostly residential and connects to one arterial: CSAH 23	16 intersections/mile	43 driveways/mile	60 feet	On-street parking not allowed or allowed, but not common		Maintain as Major Collector
15	**Pine St W** from CSAH 5 (Stillwater Blvd) to CSAH 23 (3rd St) 2-lane undivided	Major Collector/ Local Roadway	3,900 2,430 (-38%)	2,200 (-9%)	Low speed 30 mph	1.3	Two blocks from Olive St and four blocks from Myrtle St	CSAH 5 and CSAH 23 Total Route = 1.4 miles	Connects to CSAH 5 (A-Minor Arterial), Greeley St, and 3rd Street (A-Minor Arterial). Continuous east-west route between CSAH 5 and CSAH 23	Connects to an arterial at the west end; mostly residential	14 intersections/mile	52 driveways/mile Low amount of driveway access west of Greeley St. East of Greeley St, higher amount of driveway access.	60 feet	On-street parking not allowed or allowed, but not common	Does not extend to TH 95. Several intersection bump outs east of Greeley St	Change to Major Collector for entire segment
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St 2-lane undivided	Local Roadway	n/a	n/a	Low speed 30 mph	0.1	Two blocks from Myrtle St and two blocks from Pine St	Connection between CSAH 5 and Greeley St (CR 66). Olive St is offset to the east making an less direct connection to CSAH 23	Connects CSAH 5 to Greeley St as an alternate route to Myrtle St	Residential	20 intersections/mile	20 driveways/mile	66 feet	On-street parking allowed; May or may not be common	Works with Myrtle St segment to maintain north-south route between Greeley St and CSAH 5 Road width is more narrow than one block west (CSAH 5 segment) Also offset alignment at Greeley St does not support continuous east-west route to TH 95	Change to A-Minor Expander Arterial designation as part of connection to north-south route via Greeley St/CSAH 5/CR 55 (future CSAH 3) to the north
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl) 2-lane undivided	B Minor	10,200, 8,310 (-19%)	9,490 (14%)	Low speed 30 mph	0.7	Only arterial route east of CSAH 5 between TH 36 and TH 96 (except small segment of CSAH 23/65th St)	Completes CSAH 12 route between Mahtomedi and Stillwater to TH 95 Total Route = over 7 miles	Links CSAH 12/CSAH 5 and TH 95. One block gap to connect to CSAH 23/CSAH 24	Serves the residential and Downtown commercial area and also connects west and east	17 intersections/mile	51 driveways/mile	60 feet	On-street parking not allowed or allowed, but not common		Upgrade to A-Minor Reliever Arterial as continuation of east-west CSAH 12 route to TH 95

Map Ref.	Roadway Segment	Current Functional Classification	Traffic Volumes: Pre-Bridge, 2018 (% Δ)	Traffic Volumes: 2040 (% Δ 2018)	Posted Speed	Segment Length (Miles)	Roadway/Route Spacing	Total Corridor Length	System Connections	Place Connections	Intersection Spacing/Density	Mobility vs. Land Access Driveway Access Density	Right of Way (estimated)	On-Street Parking	Other Considerations	Draft Recommendation - Functional Classification
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St) 2-lane undivided	Major Collector	1,600, 1,940 (21%)	2,650 (37%)	Speed varies 50/40/30 mph	2.6	Only east-west collector between CSAH 12 and TH 96, a total distance of 1.5 miles	CR 64, CSAH 5, and CSAH 15 Total Route = 3.7 miles	Connects to CSAH 15 (A-Minor Arterial) on west end and CSAH 5 (A-Minor Arterial) on east end. Extends west of CSAH 15 to TH 96 Alternate route into Stillwater from TH 96	Users can take CR 64 to get on TH 96; mostly residential homes along this roadway and users can connect to Grant	4 intersections/mile	13 driveways/mile	100 feet	On-street parking not allowed		Maintain as Major Collector
19	**CSAH 11 (Otchipwe Ave N)** from TH 96 (Dellwood Rd) to CSAH 5 (Stonebridge Trl) 2-lane undivided	Minor Collector	1,150, 1,040 (-10%)	1,360 (31%)	Speed varies 50/35 mph	2.0	North-south collector route within one mile of a Major Collector (Stonebridge Trl) and A-Minor Arterial (TH 95)	Extends from TH 95/96 north to CSAH 7 Total Route = 4.5 miles	Connects to A-Minor Arterials on each end (TH 95/96 and CSAH 7) From Stillwater, allows a more north-south route than TH 95 (which follows the river)	Primarily rural residential area	4 intersections/mile	15 driveways/mile	90 feet	On-street parking not allowed	Part of Raleigh Trucking haul route, but not used much due to curves Part of CR 11 redesignation	Maintain as Minor Collector
20	**Stonebridge Trl N** from CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95 2-lane undivided	Major Collector	n/a, 2,110	2,680 (27%)	High speed 45 mph	1.7	Only Major Collector between CR 55 (B-Minor Arterial) and TH 95 (A-Minor Arterial). CSAH 11 also collector in area serving more north-south route	Route connection between TH 96 and TH 95 Total Route = 3.5 miles	Connects to A-Minor Arterials on each end (TH 95 and TH 96) Route heads toward the river and TH 95 via Stonebridge Trl	Primarily rural residential area	2 intersections/mile	11 driveways/mile	66 feet	On-street parking not allowed	CR 55 (Norell Ave) provides more direct north-south route and could relieve CSAH 15 (Manning Ave). CSAH 5/Stonebridge Trl runs northeast-southwest and connects to TH 95 Part of Raleigh Trucking haul route, although low usage	Change to Minor Collector to maintain supporting north-south route between TH 95 and TH 96
21	**CSAH 5 (Stonebridge Trl N)** from CR 55 (Norell Ave) to CSAH 11 (Otchipwe Ave) 2-lane undivided	Major Collector	3,200, 3,370 (5%)	4,220 (25%)	High speed 45 mph	1.9	Only Major Collector between CR 55 (B-Minor Arterial) and TH 95 (A-Minor Arterial). CSAH 11 also collector in area serving more north-south route	Route connection between TH 96 and TH 95 Total Route = 3.5 miles	Connects to A-Minor Arterials on each end (TH 95 and TH 96) Route heads toward the river and TH 95	Primarily rural residential area	2 intersections/mile	20 driveways/mile	120 feet	On-street parking not allowed	CR 55 (Norell Ave) provides more direct north-south route and could relieve CSAH 15 (Manning Ave). CSAH 5/Stonebridge Trl runs northeast-southwest and connects to TH 95 Part of Raleigh Trucking haul route	Maintain as Major Collector to support truck route to TH 96

Attachment D

Map Ref.	Roadway Segment	Recommended Roadway Jurisdiction
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	**CHANGE TO A-MINOR CONNECTOR AS PART OF CSAH 10 ROUTE TO TH 95**
4	**Northbrook Blvd N/Oakgreen Ave N** from CSAH 14 (40th St) to TH 36	**CHANGE ENTIRE SEGMENT TO MAJOR COLLECTOR AS ARTERIAL ROUTE SOUTH OF TH 36 IS NOT NEEDED**
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	**MAINTAIN AS MAJOR COLLECTOR. EXTEND MAJOR COLLECTOR STATUS WEST ALONG 60TH ST TO OAKGREEN AVE AND ALONG 58TH ST BETWEEN OAKGREEN AVE AND STILLWATER BLVD**
7	**60th St N/W Frontage Rd/Oren Ave N** from Greeley St to Osgood Ave	**CHANGE TO MAJOR COLLECTOR**
8	**Market Dr/W Frontage Rd/60th St N** from Curve Crest Blvd to Greeley St	**CHANGE TO MAJOR COLLECTOR**
9	**Greeley St S** from TH 36 to Myrtle St	**CHANGE TO A-MINOR EXPANDER ARTERIAL DESIGNATION AS PART OF CONTINUOUS NORTH-SOUTH ROUTE VIA CSAH 5/CR 55 (FUTURE CSAH 3) TO THE NORTH**
10	**CSAH 24 (N Osgood Ave)/4th St S** from TH 36 to Pine St	**CHANGE TO MAJOR COLLECTOR**
11	**CSAH 23 (Orleans St E/Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	**CHANGE TO MAJOR COLLECTOR**
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	**CHANGE TO MAJOR COLLECTOR**
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	**CHANGE TO LOCAL**
15	**Pine St W** from CSAH 5 (Stillwater Blvd) to CSAH 23 (3rd St)	**CHANGE TO MAJOR COLLECTOR FOR ENTIRE SEGMENT**
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	**CHANGE TO A-MINOR EXPANDER ARTERIAL DESIGNATION AS PART OF CONNECTION TO NORTH-SOUTH ROUTE VIA GREELEY ST/CSAH 5/CR 55 (FUTURE CSAH 3) TO THE NORTH**
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	**UPGRADE TO A-MINOR RELIEVER ARTERIAL AS CONTINUATION OF EAST-WEST CSAH 12 ROUTE TO TH 95**
20	**Stonebridge Trl N** from CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95	**CHANGE TO MINOR COLLECTOR TO MAINTAIN SUPPORTING NORTH-SOUTH ROUTE BETWEEN TH 95 AND TH 96**

Principal Arterial
A Minor Augmentor
A Minor Reliever
A Minor Expander
A Minor Connector
B Minor Arterial
Major Collector
Minor Collector
Local Roadway
City/Township Boundary

Recommended Roadway Functional Classification

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

N

0 3,500 Feet
1 inch = 3,500 feet

Washington County

wsb

APPENDIX F

Memo - Roadway Jurisdiction Recommendations

Memorandum

To: Andrew Giesen
Washington County Public Works

From: Jack Corkle, PTP, AICP
Andy Hingeveld, AICP

Date: April 16, 2019

Re: Roadway Jurisdiction Recommendations for the
St. Croix Valley Roadway Jurisdictional Study
WSB Project No. 011635-000

This memo summarizes the evaluation process and recommendations used to identify potential jurisdictional changes as part of the St. Croix Valley Roadway Jurisdictional Study.

Roadway jurisdiction categorizes the ownership of roadways by level of government. Ownership affects how a given roadway is operated, maintained, administered, funded, and what types of system connections are provided. Over time, roadway jurisdictions can change to address modifications in the roadway system, the built environment, or travel patterns. In August 2017, the opening of the St. Croix River Crossing Bridge in its new alignment with TH 36 was a major change to the state highway system that led to altered traffic patterns on several non-state roadways, prompting the need to re-evaluate roadway jurisdiction in the Stillwater area. This analysis was completed for several local and county road segments that were identified by Washington County. See **Attachment A** for a map of the study roadways.

A. Roadway Jurisdiction Overview

As described in this section, the roadway jurisdictional classification system categorizes the responsible road authority across three levels of government: state, county, and local. **Table 1** identifies roadway designations operated by each jurisdiction.

State

The State is responsible for the maintenance and operation of the trunk highway system (i.e., TH 36, TH 95), which serves regional and statewide transportation needs. State owned roads support longer routes, more traffic, higher speeds, and less access (freeways, expressways, multi-lane roadways). The State is also responsible for interstates and U.S. highways as the federal government has delegated its authority for operating and maintaining these roadways to individual states.

County

County owned roadways are intended to provide regional connectivity. County roadways have shorter connections, lesser traffic, slower speeds and more access than state owned roadways but more than local roadways. Roadways under county jurisdiction provide connections to major destinations and access to the state highway system.

County owned roadways are further divided into two designations. County State Aid Highways are routes that are eligible for state aid funding assistance. County Roads are not eligible for state aid funding.

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Local (City or Township)
Local roadways are intended to provide the most amount of access and the least amount of mobility. Local roadways provide direct access to adjacent properties and support localized trips within a city or township. City streets and township roads fall within local jurisdiction, as well as most collector roads.

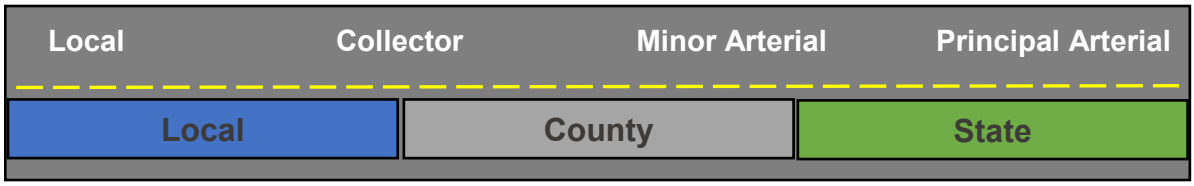
Cities with populations greater than 5,000 receive state aid funding assistance and designate higher-volume roadways as part of the Municipal State Aid System (MSAS). Cities with populations under 5,000 and township do not receive dedicated state aid assistance.

Table 1: Roadway Designations by Jurisdiction

State	County	Local
Interstates (I)	County State Aid Highways (CSAH)	Municipal State Aid Street System (MSAS)
Trunk Highways (TH)	County Roads (CR)	City Streets
US Highways (US)		Township Roads

In an optimized roadway system, jurisdiction corresponds with functional classification. The State generally has jurisdiction over principal arterials and some minor arterials. Counties have jurisdiction over most minor arterials and some collector streets. Cities and townships have jurisdiction over most collector streets and all local streets. **Figure 1** summarizes the typical relationship between roadway jurisdiction and functional classification.

Figure 1: Functional Classification and Roadway Jurisdiction Relationship



Best planning practices emphasize properly aligning roadway jurisdiction to balance ownership and operations with how the roadway functions. Agencies with similar roadways provide more efficient maintenance and operations practices. For example, a four-lane principal arterial highway requires different snow plowing equipment than a two-lane collector roadway. Properly aligned roadway jurisdictions also support better use of transportation funding for maintenance and future improvements. Roads that are a low priority for one agency may be a higher priority for another agency. Jurisdictional changes allow for a better alignment of roadway ownership with agency priorities.

B. Roadway Jurisdiction Evaluation Criteria and Analysis

There are several criteria and road characteristics that relate to roadway jurisdiction. The following factors are considered when performing a jurisdictional analysis:

- History/past agreements between road authorities
- Administration/agency expertise
- Roadway functional classification
- Type and length of trips served
- System continuity
- Route length
- Traffic volumes
- Speed

- Place connections
- Adjacent land uses and amount of access
- State Aid designation and funding distribution
- Design of facility

For this analysis, a set of evaluation criteria was developed based upon state, county, and local government agencies' jurisdictional classification definitions. The Washington County 2040 Transportation was used primarily to help develop the criteria for the eight general category values that best fall under each level of jurisdiction. The eight general categories are: roadway functional classification, trips served, system continuity, route length, traffic volumes, speed, place connections, and land use/access. The evaluation criteria and general category values used are provided in **Table 2**.

Table 2: Evaluation Criteria - Roadway Jurisdiction General Categories for Local, County, and State

	Local	County	State
Roadway Functional Classification	Local, Collector	Collector, Minor Arterial	Minor Arterial, Principal Arterial
Trips Served	Serve short length trips (< 2 miles) within a community	Serve medium length trips (2-10 miles) within a community or across city/township boundaries within the county	Serve longer length trips (> 6 miles) that travel across boundaries within the region or state
System Continuity	Connects to other local roads and county roads	Connects to other county roadways and local and state roadways	Connects to other state roadways and county roadways
Route Length	< 6 miles	5-20 miles	15+ miles
Traffic Volumes	< 10,000	5,000-30,000	10,000-50,000+
Speed	30-40mph	40-55mph	45-70mph
Place Connections	Serves neighborhoods or local destinations	Serves community commercial or employment centers	Serves regional commercial or employment centers, city or multiple communities
Land Use/Access	High amount of direct property access High amount of roadway intersections	Low to medium amount of direct property access Low to medium amount of roadway intersections; access spacing of ¼ mile for full-movement intersections	Low to no amount of direct property access Low amount of roadway intersections; access spacing of ½ mile or greater for full-movement intersections

The following is a summary of key findings that were provided as part of the jurisdictional classification evaluation analysis.

- Ownership of 22nd St N (West Lakeland Township) is misaligned. Currently, 22nd St N is a B-Minor Arterial and under the local township's jurisdiction. It is also recommended as an A-Minor Arterial. Townships do not typically own and operate A-Minor Arterials.
- Density and spacing of county roadways in southeast Stillwater (CSAH 23 and CSAH 24) exceeds county connectivity needs.
- S Frontage Rd/60th St, Beach Rd, and Orleans St are currently county roadways. With the opening of the new St. Croix River Crossing, these roadways no longer function like county roadways and provide fewer long-distance trips.
- As an east/west collector route, McKusick Rd serves a similar route to TH 96 (future turnback to county) and CSAH 12 within the same service area.
- Initially, CSAH 11 and Stonebridge Trl were evaluated for jurisdictional changes to support a county route connection between TH 95 and TH 96. However, based on additional information, these routes are recommended for no change. Historically, Stonebridge Trl has already undergone a jurisdictional transfer from County to township. In addition, a site visit found the existing surrounding terrain challenging for further improvements or road widening. Roadway modifications needed to meet state aid standards would be cost prohibitive and challenging due to the surrounding environment. CSAH 11 was also noted as having higher truck traffic and challenging grade issues.

C. Recommendations

Table 3 provides a summary of the recommended roadway jurisdiction changes identified as part of this analysis. See **Attachment B** for the detailed analysis for each roadway segment. See **Attachment C** for the recommended roadway jurisdiction map. **Attachment D** provides a map highlighting only roadway segments recommended for jurisdictional changes.

Table 3: Recommended Roadway Jurisdiction

Map Ref.	Roadway Segment	Current Roadway Jurisdiction	Current State Aid Designation	Recommended Roadway Jurisdiction
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	Township	none	**Change to County**
2	**30th St N** from CSAH 15 (Manning Ave) to CSAH 21 (Stagecoach Trl)	Township	none	Keep as Township
3	**CSAH 14 (5th Ave)** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	County	CSAH	Keep as County
4	**Northbrook Blvd N/ Oakgreen Ave N** from CSAH 14 (40th St) to TH 36	City/Township	none	Keep as City/Township

Map Ref.	Roadway Segment	Current Roadway Jurisdiction	Current State Aid Designation	Recommended Roadway Jurisdiction
5	**CSAH 23 (Stagecoach Trl/ S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd)	County	CSAH	**Change to City**
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	County	CSAH	**Change to City**
7	**60th St N/W Frontage Rd/ Oren Ave N** from Greeley St to Osgood Ave	City	none	Keep as City
8	**Market Dr/W Frontage Rd/ 60th St N** from Curve Crest Blvd to Greeley St	City	MSAS from Curve Crest Blvd to Washington Ave	Keep as City
9	**Greeley St S*** from TH 36 to Myrtle St	County/City	MSAS north of Curve Crest Blvd	Keep as County from TH 36 to Curve Crest Blvd **Change to County from Crest Curve Blvd to Myrtle St**
10	**CSAH 24 (N Osgood Ave)/4th St S** from TH 36 to Pine St	County/City	CSAH from TH 36 to Orleans St, MSAS from Orleans St to Pine St	Keep as County (TH 36 to Orleans St) Keep as City (Orleans St to Pine St)
11	**CSAH 23 (65th St/Orleans St E/ Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	County	CSAH	Keep as County (Orleans St from 4th St to 3rd St) **Change to City (Orleans St from 3rd St to Paris Ave and Beach Rd to S Frontage Rd)**
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	County/City	CSAH except for segment between Chestnut St and Myrtle St	Keep as County from Orleans St to Chestnut St **Change to County from Chestnut St to Myrtle St**
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	County	CSAH	**Change to City**

Map Ref.	Roadway Segment	Current Roadway Jurisdiction	Current State Aid Designation	Recommended Roadway Jurisdiction
14	**Churchill St W** from Greeley St to CSAH 23 (3rd St)	City	MSAS	Keep as City
15	**Pine St W** from CSAH 5 (Stillwater Blvd) to CSAH 23 (3rd St)	City	MSAS	Keep as City
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	City	none	**Change to County**
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	City	MSAS	**Change to County**
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St)	County	none	**Change to City**
19	**CSAH 11 (Otchipwe Ave N)** from TH 96 (Dellwood Rd) to CSAH 5 (Stonebridge Trl)	County	CSAH	Keep as County
20	**Stonebridge Trl N** from CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95	Township	none	Keep as Township
21	**CSAH 5 (Stonebridge Trl N)** from CR 55 (Norell Ave) to CSAH 11 (Otchipwe Ave)	County	CSAH	Keep as County

*Note: There is a discrepancy regarding existing jurisdiction on Greeley St from Curve Crest Blvd to Orleans St (approx. 1/8 mile). The County has maintained Greeley St from TH 36 to Orleans St for several decades. However, the MnDOT Municipal State Aid Street System map (2015) designates the segment from Curve Crest Blvd to Orleans St as a Municipal State Aid Street (MSAS).

Attachments:

A. Existing Roadway Jurisdiction Map
B. Roadway Jurisdiction Evaluation Criteria and Analysis Table
C. Recommended Roadway Jurisdiction Map
D. Roadway Segments Recommended for Change in Jurisdiction

Attachment A

Roadway Jurisdiction

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

wsb

N

0 3,500 Feet
1 inch = 3,500 feet

Existing Roadway Jurisdiction
- State
- County
- Local Roadway
- City/Township Boundary

Attachment B

Washington County

St. Croix Valley Jurisdictional Study

Roadway Jurisdiction Evaluation Criteria and Analysis

wsb

Map Ref.	Roadway Segment	Jurisdiction	State Aid Designation	Recommended - Functional Classification	Traffic Volumes: Pre-Bridge, 2018 (% Δ)	Traffic Volumes: 2040 (% Δ 2018)	Posted Speed	Segment Length (Miles)	Route System Connections	Total Corridor Length	Notes	Recommended - Roadway Jurisdiction
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl) 2-lane undivided	Township	none	Upgrade to A-Minor Connector as part of CSAH 10 route to TH 95	3,800, 3,470 (-9%)	3,630 (5%)	High speed 55 mph	0.7	Connects to CSAH 21 and MN 95 Extends CSAH 10 route down the bluffs to connect to TH 95	Part of CSAH 10 Route connection to TH 95 Total Route = over 10 miles	Pavement condition considered poor On bluffs, rain/ice and grade issues	**CHANGE TO COUNTY**
2	**30th St N** from CSAH 15 (Manning Ave) to CSAH 21 (Stagecoach Trl) 2-lane undivided	Township	none	Maintain as Major Collector	1,475, 1,340 (-9%)	1,390 (4%)	Speed varies 55/45/ 40/30 mph	3.6	Connects CSAH 21 and CSAH 15, extends west to CSAH 17 (Lake Elmo Ave)	Total Route = over 4 miles	Realignment of western portion of road being considered due to airport expansion Pavement condition considered fair to poor	**KEEP AS TOWNSHIP**
3	**CSAH 14 (5th Ave)** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl) 2-lane undivided	County	CSAH	Maintain as A-Minor Connector Arterial to maintain connection to TH 95 - Potential Reliever designation for CSAH 14?	2,050, 2,740 (34%)	3,650 (33%)	Low speed 30 mph	0.7	Primary connection to Bayport from CSAH 21 to the west. Serves as part of (non-contiguous) CSAH 14 route from CSAH 15 to TH 95	Total Route = over 4 miles		**KEEP AS COUNTY**
4	**Northbrook Blvd N/Oakgreen Ave N** from CSAH 14 (40th St) to TH 36 2-lane undivided/divided	City/Township	none	Change entire segment to Major Collector as arterial route south of TH 36 is not needed	1,800, 2,220 (23%)	3,120 (41%)	Low speed 30 mph	2.1	Connects CSAH 14 and MN 36, extends north into Stillwater via Greeley St	Total Route = over 3 miles	Road recently upgraded Includes at-grade railroad crossing Intersection with TH 36 may be future interchange location	**KEEP AS CITY/TOWNSHIP**
5	**CSAH 23 (Stagecoach Trl/S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd) 2-lane undivided	County	CSAH	Maintain as Major Collector	2,850, 2,840 (0%)	3,980 (40%)	Low speed 40 mph	0.6	Part of Beach Rd route across TH 36	Total Route = 1.7 miles	New Beach Rd overpass alignment to Stillwater	**CHANGE TO CITY**

Map Ref.	Roadway Segment	Jurisdiction	State Aid Designation	Recommended - Functional Classification	Traffic Volumes: Pre-Bridge, 2018 (% Δ)	Traffic Volumes: 2040 (% Δ 2018)	Posted Speed	Segment Length (Miles)	Route System Connections	Total Corridor Length	Notes	Recommended - Roadway Jurisdiction
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd) 2-lane undivided	County	CSAH	Maintain as Major Collector. Extend Major Collector status west along 60th St to Oakgreen Ave and along 58th St between Oakgreen Ave and Stillwater Blvd	n/a 2,550	3,160 (24%)	Low speed 40 mph	0.5	Part of south frontage road system for TH 36. Via CSAH 21, connects to TH 95	Total Route = 1.3 miles	New Beach Rd overpass alignment to Stillwater 60th St/Osgood Ave intersection to be removed and realigned with 59th St intersection. This will allow more continuous south frontage road network west to Oakgreen Ave	**CHANGE TO CITY**
7	**60th St N/W Frontage Rd/Oren Ave N** from Greeley St to Osgood Ave 2-lane undivided	City	none	Change to Major Collector	n/a, 2,830	3,740 (32%)	Low speed 40 mph	0.8	Part of north frontage road system for TH 36 Extends between CSAH 5 and CSAH 24	Total Route = 2 miles		**KEEP AS CITY**
8	**Market Dr/W Frontage Rd/60th St N** from Curve Crest Blvd to Greeley St 2-lane undivided/divided	City	MSAS from Curve Crest Blvd to Washington Ave	Change to Major Collector	n/a, 3,790	4,700 (24%)	Low speed 30 mph	1.2	Part of north frontage road system for TH 36 Extends between CSAH 5 and CSAH 24	Total Route = 2 miles		**KEEP AS CITY**
9	**Greeley St S** from TH 36 to Myrtle St 2-lane undivided/divided	County/City	MSAS north of Curve Crest Blvd	Change to A-Minor Expander Arterial designation as part of continuous north-south route via CSAH 5/CR 55 (future CSAH 3) to the north	13,400, 12,450 (-7%)	13,650 (10%)	Low speed 30 mph	1.3	Connects to CSAH 5 (off by one block) to the north, which extends beyond Stillwater. To the south, extends to CSAH 14 as part of Northbrook Blvd - One of few intersections with TH 36	Total Route = 5+ miles	Duplicate role to CSAH 24/CSAH 23 Somewhat continuous route but not the most reliable travel time due to adjacent land uses, signals, and all-way stops (urban context) but better than CSAH 5 Intersection with TH 36 may be future interchange location	**KEEP AS COUNTY FROM TH 36 TO CURVE CREST BLVD** **CHANGE TO COUNTY FROM CREST CURVE BLVD TO MYRTLE ST**
10	**CSAH 24 (N Osgood Ave)/4th St S** from TH 36 to Pine St 2-lane undivided, 4-lane undivided at TH 36	County/City	CSAH from TH 36 to Orleans St, MSAS from Orleans St to Pine St	Change to Major Collector	11,700, 10,710 (-8%)	13,600 (27%)	Low speed 35/30 mph	1.1	Route continues on 3rd St north of Orleans St connecting into downtown and ending at Chestnut St. South of TH 36, route extends to CSAH 14 CSAH 14 to Chestnut St	Total Route = 2.7 miles (including 3rd St)	Duplicate role to CSAH 24/CSAH 23 and Greeley St Not a continuous route north of Orleans St. 4th St does not connect north of Pine St. Ends at downtown area	**KEEP AS** **COUNTY (TH 36 TO ORLEANS ST)** **CITY (ORLEANS ST TO PINE ST)**
11	**CSAH 23 (Orleans St E/Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd) 2-lane undivided	County	CSAH	Change to Major Collector	2,200 3,100 (41%)	3,860 (26%)	Low speed 40/35/30 mph	0.9	Connects to CSAH 23/24/Beach Rd overpass to south of TH 36 Orleans St and CSAH 26	Total Route = 1 mile	Does not provide access to TH 36 Serves duplicate role to CSAH 24 (Osgood Ave)	**KEEP AS COUNTY (ORLEANS ST FROM 4TH ST TO 3RD ST)** **CHANGE TO CITY (ORLEANS ST FROM 3RD ST TO PARIS AVE AND BEACH RD TO S FRONTAGE RD)**

Map Ref.	Roadway Segment	Jurisdiction	State Aid Designation	Recommended - Functional Classification	Traffic Volumes: Pre-Bridge, 2018 (% Δ)	Traffic Volumes: 2040 (% Δ 2018)	Posted Speed	Segment Length (Miles)	Route System Connections	Total Corridor Length	Notes	Recommended - Roadway Jurisdiction
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St 2-lane undivided	County/City	CSAH except for segment between Chestnut St and Myrtle St	Change to Major Collector	6,100, 3,030 (-50%)	4,140 (37%)	Low speed 30 mph	0.9	Completes Osgood Ave/TH 36 connection into Downtown area via 3rd St (alternate route to 4th St)	Total Route = 1 mile	3rd St connects through Chestnut St and Myrtle St. 4th St does not connect past Pine St (not completing downtown route or access to other key east-west routes)	**KEEP AS COUNTY FROM TH 36 TO CHESTNUT ST** **CHANGE TO COUNTY FROM CHESTNUT ST TO MYRTLE ST**
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl) 2-lane undivided	County	CSAH	Change to Local	6,800, 1,690 (-75%)	1,840 (9%)	Low speed 30 mph	0.1	Makes the connection between CSAH 23 and TH 95	Total Route = 1 mile	Completes route connection to TH 95 No longer serves as route across lift bridge	**CHANGE TO CITY**
14	**Churchill St W** from Greeley St to CSAH 23 (3rd St) 2-lane undivided	City	MSAS	Maintain as Major Collector	8,200, 4,450 (-46%)	5,570 (25%)	Low speed 30 mph	0.6	Connects to CSAH 23/3rd St and Greeley St Alternate route to Pine St or Myrtle St	Total Route = <1 mile		**KEEP AS CITY**
15	**Pine St W** from CSAH 5 (Stillwater Blvd) to CSAH 23 (3rd St) 2-lane undivided	City	MSAS	Change to Major Collector for entire segment	3,900 2,430 (-38%)	2,200 (-9%)	Low speed 30 mph	1.3	Connects to CSAH 5, Greeley Street, and 3rd Street. Continuous east-west route between CSAH 5 and CSAH 23	Total Route = 1.4 miles	Does not extend to TH 95. Several intersection bump outs east of Greeley Street	**KEEP AS CITY**
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St 2-lane undivided	City	none	Change to A-Minor Expander Arterial designation as part of connection to north-south route via Greeley St/CSAH 5/CR 55 (future CSAH 3) to the north	n/a	n/a	Low speed 30 mph	0.1	Connection between CSAH 5 and Greeley St (CR 66). Olive St is offset to the east making an less direct connection to CSAH 23	Extension of CSAH 5/CSAH 15 route (over 8 miles)	Works with Myrtle St segment to maintain north-south route between Greeley St and CSAH 5 Road width is more narrow than one block west (CSAH 5 segment) Also offset alignment at Greeley St does not support continuous east-west route to TH 95	**CHANGE TO COUNTY**
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl) 2-lane undivided	City	MSAS	Upgrade to A-Minor Reliever Arterial as continuation of east-west CSAH 12 route to TH 95	10,200, 8,310 (-19%)	9,490 (14%)	Low speed 30 mph	0.7	Completes CSAH 12 route between Mahtomedi and Stillwater to TH 95 Links CSAH 12/CSAH 5 and TH 95. One block gap to connect to CSAH 23/CSAH 24	Total Route = over 7 miles		**CHANGE TO COUNTY**

Map Ref.	Roadway Segment	Jurisdiction	State Aid Designation	Recommended - Functional Classification	Traffic Volumes: Pre-Bridge, 2018 (% Δ)	Traffic Volumes: 2040 (% Δ 2018)	Posted Speed	Segment Length (Miles)	Route System Connections	Total Corridor Length	Notes	Recommended - Roadway Jurisdiction
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St) 2-lane undivided	County	none	Maintain as Major Collector	1,600, 1,940 (21%)	2,650 (37%)	Speed varies 50/40/30 mph	2.6	Connects to CSAH 15 on west end and CSAH 5 on east end. Extends west of CSAH 15 to TH 96	Total Route = 3.7 miles		**CHANGE TO CITY**
19	**CSAH 11 (Otchipwe Ave N)** from TH 96 (Dellwood Rd) to CSAH 5 (Stonebridge Trl) 2-lane undivided	County	CSAH	Maintain as Minor Collector	1,150, 1,040 (-10%)	1,360 (31%)	Speed varies 50/35 mph	2.0	Connects to TH 95/96 and CSAH 7 From Stillwater, allows a more north-south route than TH 95 (which follows the river)	Total Route = 4.5 miles	Part of Raleigh Trucking haul route, but not used much due to curves Part of CR 11 redesignation Within city and township, challenging grade issues and curves	**KEEP AS COUNTY**
20	**Stonebridge Trl N** from CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95 2-lane undivided	Township	none	Change to Minor Collector	n/a, 2,110	2,680 (27%)	High speed 45 mph	1.7	Connects to TH 95 and TH 96 Route heads toward the river and TH 95 via Stonebridge Trl	Total Route = 3.5 miles	CR 55 (Norell Ave) provides more direct north-south route and could relieve CSAH 15 (Manning Ave). CSAH 5/Stonebridge Trl runs northeast-southwest and connects to TH 95 Part of Raleigh Trucking haul route, although low usage The current roadway enviroment makes it challenging to meet state aid roadway standards/ requirements if the segment was to be under county jurisdiction Was at one time a county road and turned back to township	**KEEP AS TOWNSHIP**
21	**CSAH 5 (Stonebridge Trl N)** from CR 55 (Norell Ave) to CSAH 11 (Otchipwe Ave) 2-lane undivided	County	CSAH	Maintain as Major Collector to support truck route to TH 96	3,200, 3,370 (5%)	4,220 (25%)	High speed 45 mph	1.9	Connects to TH 95 and TH 96 Route heads toward the river and TH 95	Total Route = 3.5 miles	CR 55 (Norell Ave) provides more direct north-south route and could relieve CSAH 15 (Manning Ave). CSAH 5/Stonebridge Trl runs northeast-southwest and connects to TH 95 Part of Raleigh Trucking haul route	**KEEP AS COUNTY**

Attachment C

TH 96 has been identified as jurisdictional transfer to County in MnDOT Jurisdictional Study (9 miles)

Mileage Net Change Based on Rec. Roadway Jurisdiction*

	Roadway Total Mileage Change (in miles)	
	County	Local
Bayport	0.0	0.0
Baytown Township	0.0	0.0
Oak Park Heights	-1.6	1.6
Stillwater	-1.3	1.3
Stillwater Township	0.0	0.0
West Lakeland Township	0.7	-0.7
Net Change	-2.2	2.2

Note: MN Highway 96 jurisdictional change would result in 9 additional miles to County

*Numbers are Approximate

Recommended Roadway Jurisdiction
- County
- Local (City/Township)

Existing Roadway Jurisdiction
- State
- County
- Local (City/Township)
- City/Township Boundary

Recommended Roadway Jurisdiction

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

N

0 3,500 Feet
1 inch = 3,500 feet

Washington County

wsb

Attachment D

TH 96 has been identified as jurisdictional transfer to County in MnDOT Jurisdictional Study

Map Ref.	Roadway Segment	Recommended Roadway Jurisdiction
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	**CHANGE TO COUNTY**
5	**CSAH 23 (Stagecoach Trl/S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd)	**CHANGE TO CITY**
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	**CHANGE TO CITY**
9	**Greeley St S** from TH 36 to Myrtle St	**KEEP AS COUNTY FROM TH 36 TO ORLEANS ST** **CHANGE TO COUNTY FROM ORLEANS ST TO MYRTLE ST**
11	**CSAH 23 (Orleans St E/Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	**KEEP AS COUNTY (ORLEANS ST FROM 4TH ST TO 3RD ST)** **CHANGE TO CITY (ORLEANS ST FROM 3RD ST TO PARIS AVE AND BEACH ROAD TO S FRONTAGE RD)**
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	**KEEP AS COUNTY FROM ORLEANS ST TO CHESTNUT ST** **CHANGE TO COUNTY FROM CHESTNUT ST TO MYRTLE ST**
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	**CHANGE TO CITY**
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	**CHANGE TO COUNTY**
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	**CHANGE TO COUNTY**
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St)	**CHANGE TO CITY**

Recommended Roadway Jurisdiction
- City/Twp to County
- County to City/Twp

Existing Roadway Jurisdiction
- State
- County
- Local Roadway
- City/Township Boundary

Roadway Segments Recommended for Change in Jurisdiction

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

N

0 3,500 Feet

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APPENDIX G

Memo - Roadway Improvement Needs Analysis and Costs

Memorandum

To: Andrew Giesen
Washington County Public Works

From: Derek Schmidt, PE
Andy Hingeveld, AICP

Date: April 16, 2019

Re: Roadway Improvement Needs Analysis and Costs
St. Croix Valley Roadway Jurisdictional Study
WSB Project No. 011635-000

The purpose of this memo is to provide a summary of the roadway improvement needs analysis and preliminary costs associated with the recommended jurisdictional transfers identified as part of the St. Croix Valley Roadway Jurisdictional Study. WSB performed a planning level assessment of existing roadway conditions and estimated costs of potential roadway improvements for roadways recommended for a jurisdictional transfer within this study. The purpose of the evaluation was to estimate potential roadway improvements and maintenance costs that could be considered as part of or prior to a future jurisdictional transfer agreement between agencies.

As jurisdictional transfers occur, it is common that the agency taking over ownership of the road will generally accept a recently upgraded road or a roadway in good condition. Costs associated with maintaining a given roadway for a certain number of years may also be considered as negotiations for a jurisdictional transfer occur. The information in this memo is intended to provide some initial considerations and preliminary cost estimates to help facilitate such discussions as agencies explore jurisdictional transfers in the future.

It is important to note that the preliminary cost estimates developed and summarized in this memo were based on a high-level evaluation of existing facilities as of 2018. These estimates should be used for planning purposes only and will need to be reassessed over time as individual jurisdictional transfer discussions may occur during different time periods.

A. Roadway Evaluation and Needs Assessment

The twelve segments initially identified for potential jurisdictional transfers during the jurisdictional analysis phase of the study were evaluated in this analysis. **Attachment A** shows the roadways that are recommended for jurisdictional changes.

First, an assessment of existing roadway conditions was performed. To complete this assessment, WSB used street imagery collected in May 2018, data provided by Washington County and partner agencies, the results of the roadway inventory completed as part of this study, and site visits completed in December 2018. A summary of the existing roadway condition assessment is provided for each segment in **Attachment B**. Items considered as part of the existing conditions assessment included:

- Pavement condition (recent data and visual assessment)
- Existing roadway dimensions
- Existing sidewalk/trail facilities condition and ADA accessibility
- Existing drainage issues

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Second, an evaluation of roadway improvements needed for each segment was performed. This step considered what roadway design standards would need to be met based on the future roadway type expected for the recommended jurisdiction. This assessment evaluated whether state aid rural or urban standards would be applied based on the recommended functional classification (identified earlier in this study process) and daily traffic volumes. Once the roadway standards were identified, an assessment was completed for each segment to determine what improvements would be needed to meet such standards and provide an improved roadway condition. A summary of the assumed roadway improvements needed is provided for each segment in **Attachment B**. Items considered as part of this analysis included:

- Pavement reconditioning or reconstruction need
- Lane and shoulder widths, overall roadway widening
- Turn lane and intersection improvements
- Traffic control and signage
- Retaining wall replacements
- Sidewalk/trail replacement and planned facilities
- Curb and gutter/drainage needs

B. Preliminary Cost Estimates

Using the assumed roadway improvements as defined above, high-level cost estimates were developed for each segment. Costs were developed using the following unit price assumptions. For consistency, these unit prices were applied across all segments, regardless of facility type (county, city, or township). Since each agency may use different roadway design standards, it is not expected that these values will be exact. Rather, they were used to provide a consistent analysis for all roadways.

Table 1: High-Level Material Costs Assumed in Preliminary Capital Improvement Estimates

Item	Unit Price ($)	Unit
Roadway Reconstruction		
Bituminous Surfacing	$70.00	Ton
Gravel	$35.00	Cubic Yard
Sand	$15.00	Cubic Yard
Grading	$8.00	Cubic Yard
Misc.*	Varies	Varies
Roadway Reconditioning		
Bituminous Overlay	$70.00	Ton
Milling	$2.00	Square Yard
Misc.*	Varies	Varies

* Miscellaneous costs included segment level evaluations based on drainage issues, retaining walls, traffic control, additional right-of-way and sidewalk/trail improvements.

As part of the evaluation, three different types of costs were considered:

Long-Term Capital Costs
Long-term capital costs refer to major improvements or reconstruction for the roadway segment or a portion thereof that would likely be needed in ten years or more. Some segments may only require a pavement reconditioning in the next ten years, however, a full reconstruction may be needed following the next mill and overlay cycle.

Short-Term Capital Costs
Short term capital cost refers to more immediate updates and roadway modifications to bring a roadway and its pavement up to a good condition. This could include improvements such as pavement resurfacing or reconstruction, ADA upgrades, pedestrian improvements, etc. Five categories were further detailed under short-term capital costs to help understand potential needs in the next ten years: major utilities, roadway costs, drainage, right of way, and trails/sidewalks.

Annual Long-Term Maintenance Costs
Annual long-term maintenance cost refers to the upkeep of the roadway segment. This includes snow removal, street sweeping, patching, sealing, etc. For this analysis, an average cost of $23,000 per mile was used based on recent Washington County Public Works estimates. Again, annual maintenance costs per mile may not be the same for all agencies, but this was used for consistency in assumptions.

C. Results

Attachment B provides a table summarizing the existing conditions assessment and preliminary cost estimates developed for the twelve evaluated segments. This information was reviewed with Washington County Public Works staff as part of a site visit for each roadway segment in December 2018. The information was further refined following the site visits, and again reviewed with County staff in January 2019. Feedback from the Study Project Management Team was also incorporated into the final analysis.

Of the twelve segments, four segments (5, 6, 11, and 18) have been recently reconstructed or upgraded, thus, the improvements for these four segments are currently minimal. The remaining segments improvements identified as short-term and long-term are outlined in **Attachment B**. During this evaluation, Segments 19 and 20 were removed as recommended jurisdictional changes, in part based on the findings from this effort.

Attachment:

A. Recommended Roadway Jurisdictions Map
B. Preliminary Roadway Improvement Needs Analysis and Costs Table

Attachment A

TH 96 has been identified as jurisdictional transfer to County in MnDOT Jurisdictional Study

Map Ref.	Roadway Segment	Recommended Roadway Jurisdiction
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	**CHANGE TO COUNTY**
5	**CSAH 23 (Stagecoach Trl/S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd)	**CHANGE TO CITY**
6	**CSAH 26 (59th St/Osman Ave/60th St/S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	**CHANGE TO CITY**
9	**Greeley St S** from TH 36 to Myrtle St	**KEEP AS COUNTY FROM TH 36 TO ORLEANS ST** **CHANGE TO COUNTY FROM ORLEANS ST TO MYRTLE ST**
11	**CSAH 23 (Orleans St E/Paris Ave N/Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	**KEEP AS COUNTY (ORLEANS ST FROM 4TH ST TO 3RD ST)** **CHANGE TO CITY (ORLEANS ST FROM 3RD ST TO PARIS AVE AND BEACH ROAD TO S FRONTAGE RD)**
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	**KEEP AS COUNTY FROM ORLEANS ST TO CHESTNUT ST** **CHANGE TO COUNTY FROM CHESTNUT ST TO MYRTLE ST**
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	**CHANGE TO CITY**
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	**CHANGE TO COUNTY**
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	**CHANGE TO COUNTY**
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St)	**CHANGE TO CITY**

Recommended Roadway Jurisdiction
- City/Twp to County
- County to City/Twp

Existing Roadway Jurisdiction
- State
- County
- Local Roadway
- City/Township Boundary

Recommended Roadway Jurisdiction

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Washington County

N

0 3,500 Feet

wsb

Attachment B

Washington County

St. Croix Valley Jurisdictional Study

Preliminary Roadway Improvement Needs Analysis and Costs

wsb

Map Ref.	Roadway Segment	Recommended Roadway Jurisdiction Changes	Recommended Functional Classification	Length (Miles)	Road Design Urban/ Rural	Existing Assessment	Roadway Standards	Basis of Preliminary Costs (2018 Roadway Conditions)	Annual Long-Term Maintenance Costs*	Long-Term Capital Costs (10+ Years)	Short-Term Capital Costs					
											Total	Utilities	Roadway Costs	Drainage	Right of Way	Trails/ Walks
1	**22nd St N** from CSAH 21 (Stagecoach Trl) to TH 95 (St. Croix Trl)	Change to County	A Minor Connector	0.7	Rural	Pavement in poor condition, existing roadway width approx. 26', mostly residential entrances.	County State Aid Rural 12' lanes, 8' shoulder (2' paved min.)	12' lanes, 8' shoulders, 10-ton roadway, rural design, curb on hill to TH 95, turn lanes only at CR 21 and TH 95. No soil corrections. Profile correction at TH 95. Increase R/W width to 100' from 66'.	$15,200		$2,000,000		$1,500,000	$250,000	$250,000	
5	**CSAH 23 (Stagecoach Trl/ S Frontage Rd)** from CSAH 21 (56th St) to CSAH 23 (Beach Rd)	Change to City	Major Collector	0.6	Urban	Pavement in very good condition, roadway is new and meets current standards.	State Aid Urban <10,000 ADT - 30 MPH	No standards upgrades needed. Pavement rehab is not needed at this time.	$12,900							
6	**CSAH 26 (59th St/Osman Ave/60th St/ S Frontage Rd)** from CSAH 24 (Osgood Ave) to CSAH 23 (Beach Rd)	Change to City	Major Collector	0.6	Urban	Pavement in very good condition, roadway is new and meets current standards.	State Aid Urban <10,000 ADT - 30 MPH	No standards upgrades needed. Pavement rehab is not needed at this time.	$12,700							
9	**Greeley St S** from TH 36 to Myrtle St	Keep as County from TH 36 to Curve Crest Blvd Change to County from Curve Crest Blvd to Myrtle St	A Minor Expander	1.0	Urban	Existing corridor is urban with curb and gutter. The south end has been reconstructed. The north segment pavement is older and showing distress. The pavement capacity is unknown.	State Aid Urban >10,000 ADT - 30 MPH	Estimate only includes portion of roadway changing jurisdiction. Reconstruct roadway as an urban section with parking. Perpetuate trail/walk on both sides. ADA improvements.	$22,100		$3,075,000		$2,400,000	$350,000	$150,000	$175,000
11	**CSAH 23 (Orleans St E/Paris Ave N/ Beach Rd)** from CSAH 24 (Osgood Ave) to CSAH 26 (S Frontage Rd)	Keep as County from 4th St to 3rd St Change to City from 3rd St to Paris Ave and Beach Rd to S Frontage Rd	Major Collector	0.9	Urban	Existing corridor is urban with curb and gutter. The road varies in width from 28' to 42'. The roadway has recently been reconstructed.	State Aid Urban <10,000 ADT - 30 MPH	No standards upgrades needed. Pavement rehab is not needed at this time.	$20,000							
12	**CSAH 23 (3rd St S)** from 65th St/Orleans St to Myrtle St	Keep as County from 65th St to Chestnut St Change to County from Chestnut St to Myrtle St	Major Collector	0.1	Urban	The existing segment is urban curb and gutter with a roadway width of 44'. The pavement appears to be structurally sound, but is in need of a surface treatment.	State Aid Urban <10,000 ADT - 30 MPH	No standards upgrades needed. Assumes a 3" mill and overlay and upgrades to ADA facilities and signage. Grade is challenging for a traffic signal or roundabout at Myrtle St. Assumes project is combined with others due to small size.	$1,300		$330,000	$25,000	$275,000	$20,000		$10,000
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl)	Change to City	Local	0.1	Urban	The existing segment is urban curb and gutter with a roadway width of 44'. The pavement appears to be structurally sound, but is in need of a surface treatment.	State Aid Urban <10,000 ADT - 30 MPH	No standards upgrades needed. Assumes a 2" mill and overlay and signage changes for short-term. Long term costs are for reconstruction.	$3,100	$500,000	$150,000		$150,000			
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	Change to County	A Minor Expander	0.1	Urban	The existing segment is urban curb and gutter with a roadway width of 40'. The pavement appears to be structurally sound, but is in need of a surface treatment.	State Aid Urban <10,000 ADT - 30 MPH	No standards upgrades needed. Assumes a 3" mill and overlay and upgrades to ADA facilities and signage. No addition of turn lanes provided. Re-stripe for turn lanes is possible. Long-term costs assumes reconstruction.	$1,300	$350,000	$155,000		$130,000			$25,000
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	Change to County	A Minor Reliever	0.7	Urban	The existing segment is urban curb and gutter with a concrete roadway width of 44' from CSAH 5 to 5th St. The roadway is 34' wide from 5th St to TH 95. The pavement appears to be structurally sound in general, but may need some concrete joint repair.	State Aid Urban >10,000 ADT - 30 MPH	No standards upgrades needed. Cost assumes full reconstruction for length of segment. Further evaluation of this segment is needed to determine the need for a full reconstruction. Some of the two-way stop intersections have limited sight distance due to buildings. Correcting skew in road at Harriet St may require variance. Profiles were not checked for compliance with a 30-mph design speed.	$16,300		$4,400,000	$150,000	$3,250,000	$375,000	$250,000	$375,000
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to CSAH 5 (Owens St)	Change to City	Major Collector	2.6	Urban	The existing roadway is urban with a 44' section west of Neal Ave and a 34' section east of Neal Ave. The pavement is in excellent condition throughout the corridor.	State Aid Urban <10,000 ADT - 50 MPH (W of Neal) 40 MPH (East of Neal)	No standards upgrades needed. Pavement rehab is not needed at this time. Long-term capital costs include future traffic signal at CSAH 15 and McKusick Road.	$58,900	$250,000						
19	**CSAH 11 (Otchipwe Ave N)** from TH 96 (Dellwood Rd) to CSAH 5 (Stonebridge Trl)	Keep as County**	Minor Collector	2.0	Rural	The existing roadway is rural with a pavement width of 26'. The pavement is in good condition.	Would not need to meet State Aid Standards	The costs shown reflect a full depth reclamation along the corridor and guardrail replacement. FDR not immediately needed and applied to long-term capital costs. Short-term costs would be minimal.	$46,200	$1,100,000						
20	**Stonebridge Trl N** from CSAH 11 (Otchipwe Ave) to CR 51 (Partridge Rd) and TH 95	Keep as City/Township**	Minor Collector	1.7	Rural	The existing roadway is rural with varying widths from 24-26'.	State Aid Rural >1500 ADT requires 11-12 lanes and 6' shoulders	The costs reflect a full reconstruction to current rural standards with 12' lanes and 6' shoulders. The terrain in this area is challenging. Further investigation is needed to determine costs associated with widening impacts and any adjustments to alignment and profile to meet standards. There are areas where maintaining the existing shoulder width may be necessary to contain costs. The long-term costs assume no reconstruction was completed and a full depth reclamation project was completed instead.	$39,100	$950,000	$3,525,000		$3,100,000	$250,000	$175,000	

Key: Green shaded cells - No short- or long-term capital c

Notes: *An average cost of $23,000 per mile was used to develop the annual long-term maintenance cost estimates per Washington County Public Works.

**Segments 19 and 20 were revised to no change in jurisdiction recommended during this roadway needs and costs analysis.

APPENDIX H

Memo - Stillwater State Aid System Analysis

Memorandum

To: Andrew Giesen
Washington County Public Works

From: Lee Gustafson, PE
Andy Hingeveld, AICP

Date: April 16, 2019

Re: Stillwater State Aid System Analysis
St. Croix Valley Roadway Jurisdictional Study
WSB Project No. 011635-000

The purpose of this memorandum is to summarize the analysis performed for the City of Stillwater regarding how recommended jurisdictional transfers may affect the city's state aid system and funding allocation.

A. State Aid Overview

Through the state aid system administered by the Minnesota Department of Transportation, the City of Stillwater receives funding that is used to maintain, construct, and/or reconstruct roadways the City has designated as Municipal State Aid Street (MSAS) routes. Funding for the state aid system comes from the Highway User Tax Distribution Fund and is allocated to counties and state aid cities (populations greater than 5,000) based on a distribution formula established by state statutes and the respective county and city screening boards. The MSAS formula is based on 50 percent population and 50 percent construction needs. The City of Stillwater currently designates 18.25 miles of its local roadway system as MSAS routes (shown in **Attachment A**).

There are several requirements that cities must meet to designate streets as part of the MSAS system. Roadways on the state aid system typically carry heavier traffic volumes, connect major points of interest, and provide an integrated and coordinated road system. These factors vary from city to city and county to county. However, similar rules apply to all state aid routes, and they must be considered as changes to the state aid system are being evaluated. Key requirements include:

- County State Aid Highway (CSAH) routes must connect to other CSAH, Trunk Highway (TH), or MSAS routes.
- MSAS routes must connect to other MSAS, CSAH, TH, or County Road (CR) routes.
- A city's total mileage may increase or decrease because of new subdivisions, annexations, etc.
- The MSAS system cannot exceed 20 percent of a city's improved local mileage notwithstanding TH, CSAH, and county road turnback mileages.
- Former THs (turned back after July 1, 1965) and CSAHs and county roads (turned back after May 11, 1994) that have been designated as state aid routes may not be revoked and the mileage designated elsewhere.

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B. Analysis

As part of this analysis, WSB met with the MnDOT Metro State Aid Office to confirm state aid requirements and discuss how the recommended jurisdictional transfers would be evaluated for potential state aid changes. This information was shared with Washington County and City of Stillwater staff, and discussed at a meeting in February 2019. Based on the analysis and discussions with the Metro State Aid Office, the recommended jurisdictional transfers appear to meet State Aid criteria and would not affect any adjoining MSAS routes.
There are multiple options for most segments that could be considered to meet state aid rules. A more detailed summary for each segment recommended for a jurisdictional transfer is provided in **Attachment B**.

As was discussed at the February 2019 meeting, the likely scenario for potential jurisdictional transfers between Washington County and the City of Stillwater would include further detailed discussions amongst staff, and possibly the Washington County Board and the City of Stillwater City Council. It was also thought that some jurisdictional transfers may happen much sooner than others, some may take several years before they are achievable, and some may not happen at all.

Attachments:

A. Recommended Roadway Jurisdiction Changes in Stillwater - Map
B. Stillwater State Aid Designation Analysis Table

Attachment A

Washington County

Recommended Roadway Jurisdiction Changes in Stillwater

St. Croix Valley
Roadway Jurisdiction Study
Washington County, MN

Rec. Jurisdictional Transfers
- City to County
- County to City

State Aid Routes
- CSAH Route
- MSAS Route

Existing Roadway Jurisdiction
- State
- County
- Local Roadway

18
2.6 miles
county to city

17
0.7 miles
city to county

16
0.1 miles
city to county

12
306 feet
city to county

13
0.1 miles
county to city

9
1 mile
city to county

11
from county to city:
1,250 feet shared city bndy
400 feet Stillwater only

Summary

Change	Length	Segments
City to County:	1.9 miles	(#9, 12, 16, 17)
County Road to City:	2.6 miles	(#18)
CSAH to City:	0.3 miles	(#11, 13)

N

0 1,500 Feet

wsb

Attachment B

St. Croix Valley Jurisdictional Study - SEGMENTS IN STILLWATER

State Aid Designation Analysis

Map Ref.	Roadway Segment	Current Jurisdiction	Current Designation	Segment Length	Posted Speed	Recommended Roadway Jurisdiction	MSAS Mileage Change (+ or -)	Comments
9	**Greeley St S** from TH 36 to Curve Crest Blvd	County	County Road 66	0.3	Low speed 30 mph	NO CHANGE		
9	**Greeley St S** from Curve Crest Blvd to Myrtle St	City	MSAS 108	1.0	Low speed 30 mph	CHANGE TO COUNTY	+ 1.0	**Additional MSAS mileage can be designated elsewhere.**
11	**CSAH 24 (Orleans St E)** from CSAH 24 (Osgood Ave)/4th St to CSAH 23 (3rd St)	County	CSAH 24	0.1	Low speed 30 mph	NO CHANGE		**Other options for CSAH 23 alignment**
11	**CSAH 23 (Orleans St E)** from CSAH 23 (3rd St) to CSAH 23 (Paris Ave)	County	CSAH 23	0.3	Low speed 30 mph	CHANGE TO CITY	-0.3	**Must be designated as MSAS to maintain legal connections on other MSAS routes. Only required to designate 6th Ave to 4th Ave. Recommend 3rd St to 4th Ave (0.3 miles). Stillwater could request State Aid Needs on entire street, even for portion within Oak Park Heights.**
12	**CSAH 23 (3rd St S)** from Orleans St to Chestnut St	County	CSAH 23	0.9	Low speed 30 mph	NO CHANGE		
12	**3rd St S** from Chestnut St to Myrtle St	City	Local	0.1	Low speed 30 mph	CHANGE TO COUNTY		**Multiple options for making connections to conform to State Aid rules. Designating as a CSAH may make the most sense. SEE NOTES BELOW.**
13	**CSAH 23 (Chestnut St E)** from 3rd St to TH 95 (St. Croix Trl) 2-lane undivided	County	CSAH 23	0.1	Low speed 30 mph	CHANGE TO CITY	-0.1	**Multiple options for making connections to conform to State Aid rules. Designating as a MSAS may make the most sense. SEE NOTES BELOW.**
16	**Olive St W** from CSAH 5 (Owens St) to Greeley St	City	Local	0.1	Low speed 30 mph	CHANGE TO COUNTY		**Greeley St would have to be CSAH for Olive St to be CSAH. Olive St could be CR if Greeley St was CSAH or CR.**
17	**Myrtle St W** from CSAH 5 (Owens St) to TH 95 (St. Croix Trl)	City	MSAS 104	0.7	Low speed 30 mph	CHANGE TO COUNTY	+0.7	**Additional MSAS mileage can be designated elsewhere. If segment is not designated CSAH, it could impact other designations.**
18	**CR 64 (McKusick Rd N)** from CSAH 15 (Manning Ave) to Neal Ave	County	CR 64	1.0	High speed 50 mph	CHANGE TO CITY	-1.0	**Does not need to be designated as MSAS to maintain legal connections on other MSAS routes. However, recommending segment be designated as MSAS.**
18	**CR 64 (McKusick Rd N)** from Neal Ave to CSAH 5 (Owens St)	County	MSAS 116/CR 64	1.6	Speed varies 40/30 mph	CHANGE TO CITY		**No mileage change. Road already designated as MSAS.**
	Net MSAS Change						**+0.3**	

Note: CSAH routes must connect to other CSAH, TH, or MSAS routes

Note: MSAS routes must connect to other MSAS, CSAH, TH or CR routes