



VILLAGE OF WESTON, MARATHON COUNTY, WISCONSIN
OFFICIAL MEETING AGENDA OF THE PUBLIC WORKS & UTILITY COMMITTEE

The following items were listed on the agenda in the Village Clerk's Office, in accordance with Chapter 2 of the Village's Municipal Code and will be ready for your consideration at the next regular meeting of the Public Works Committee which has been scheduled for MONDAY, FEBRUARY 10, 2025, @ 4:30 P.M., in the Board Room, at the Weston Municipal Center 4747 Camp Phillips Rd.

A quorum of members from other Village governmental bodies (boards, commissions, and committees) might attend the above-noticed meeting to gather information. Should a quorum of other government bodies be present at this meeting it would constitute a meeting pursuant to State ex rel. Badke v. Greendale Village Bd., 173 Wis.2d 553, 494 N.W.2d 408 (1993). No official actions other than those of the Public Works Committee shall take place.

Wisconsin State Statutes require all agendas for Committee, Commission, or Board meetings be posted in final form, 24 hours prior to the meeting. Any posted agenda is subject to change up until 24 hours prior to the date and time of the meeting.

Join Zoom Meeting by Computer

<https://zoom.us/j/5445915099>

Join Meeting by Phone:

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Meeting ID: 544 591 5099

AGENDA ITEMS

1. Meeting called to order by Public Works & Utility Committee Chair Zeyghami
2. Welcome, introductions and acknowledgement of guests.
3. Roll Call by Recording Secretary
 - Public Works Committee: Hooshang Zeyghami {C}, Joe Jordan {VC}, Tom Hubbard, Luis Lopes-Serrao, Roy Mumper
4. PUBLIC COMMENTS
5. [Approval of 1/13/25 Public Works & Utility Committee Minutes](#)
6. [Acknowledge January 2025 Water and Sewer Permits](#)

STAFF REPORTS

7. [CIP Update](#)
8. [Street Operations Update](#)
9. [Utility Operations Update](#)

POLICY DISCUSSIONS AND RECOMMENDATIONS

10. [Weston Ave \(Alderson St to Birch St\) Multi-Use Path Lighting](#)
11. [Pedestrian and Bicycle Master Plan Update – Consultant Selection](#)



VILLAGE OF WESTON, MARATHON COUNTY, WISCONSIN
OFFICIAL MEETING AGENDA OF THE PUBLIC WORKS & UTILITY COMMITTEE

12. Ross Ave (Metro Dr to Alderson St) Project Update – Draft Roundabout Exhibits
13. Schofield Ave (Normandy St to Birch St) Traffic Control Equipment Procurement
14. Green Tree Acres Phase 2 Construction Services

FUTURE ITEMS

15. Next meeting date(s):
 - a) TBD Schofield Ave PIM
 - b) Monday, March 10, 2025, @ 4:30 p.m. Regular Meeting
16. Topics for future meetings
17. Remarks from Staff
18. Remarks from Committee members.
19. Announcements.

ADJOURNMENT

VILLAGE OF WESTON, MARATHON COUNTY, WISCONSIN
OFFICIAL MEETING AGENDA OF THE PUBLIC WORKS & UTILITY COMMITTEE
HELD ON MONDAY, JANUARY 13, 2025 @ 4:30 PM, IN THE BOARD ROOM AT 4747 CAMP PHILLIPS ROAD

AGENDA ITEMS

1. Meeting called to order by Public Works & Utility Committee Chair Zeyghami at 4:30 p.m.
2. Welcome, introductions and acknowledgement of guests.

Tonia Westphal with Clark Dietz

3. Roll Call by Recording Secretary

Roll call indicated five PW members present.

<u>Member</u>	<u>Present</u>
Zeyghami, Hooshang {Chair}	YES
Jordan, Joe {Vice Chair}	YES
Hubbard, Tom	YES
Lopes-Serrao, Luis	YES
Mumper, Roy	YES

Village Staff in attendance, in-person: Wodalski, Blarek, Swenson, Gebert and Gilmeister.

Audience in attendance, via Zoom: NONE

Audience members present in person: NONE

4. **PUBLIC COMMENTS**

None.

5. **Approval of 11/11/24 Public Works & Utility Committee Minutes**

Motion by Jordan, second by Lopes-Serrao to approve the November 11, 2024, meeting minutes.

Yes Vote: 5 No Votes: 0 Abstain: 0 Not Voting: 0 Result: PASS

<u>Member</u>	<u>Voting</u>
Zeyghami, Hooshang {Chair}	YES
Jordan, Joe {Vice Chair}	YES
Hubbard, Tom	YES
Lopes-Serrao, Luis	YES
Mumper, Roy	YES

6. Acknowledge of November 2024 Water and Sewer Permits

Motion by Mumper, second by Hubbard move to acknowledge the November 2024, Water and Sewer Permits.

Yes Vote: 5 No Votes: 0 Abstain: 0 Not Voting: 0 Result: PASS

<u>Member</u>	<u>Voting</u>
Zeyghami, Hooshang {Chair}	YES
Jordan, Joe {Vice Chair}	YES
Hubbard, Tom	YES
Lopes-Serrao, Luis	YES
Mumper, Roy	YES

STAFF REPORTS

7. CIP Update

Wodalski explained his report to the Committee.

Wodalski stated construction continues with Weston Ave between Progress Way and Roland Machinery as the cross-country completes the water and sewer work. There was indication the sewer would be at the end of this week and will be close to having the water main looped. Zeyghami questioned the materials. Wodalski stated the contractor is bringing in new materials for the project.

Wodalski informed the Committee of the meeting in November with the property owners at the Ross and Metro Dr/Pine St intersection. Residents provided good feedback. Wodalski stated he has a layout that will be more to the residents' liking. There will be a follow-up meeting in January. City of Schofield stated they do not want to utilize eminent domain for any of their property acquisitions. City of Schofield wants to be mutually beneficial for themselves and their residents. Jordan questioned the accommodation of the industrial companies for the delivery of their products. Wodalski stated the design team is in contact with the businesses to identify the sizes of trucks the intersections need to accommodate.

Zeyghami questioned the status of landscaping. Wodalski stated on East Jelinek the landscaping was not completed due to the landscaper not being able to get it shaped for seeding.

Discussed the preliminary cross section diagram of Fuller St reconstruction project.

Jordan, Joe {Vice Chair}	YES
Hubbard, Tom	YES
Lopes-Serrao, Luis	YES
Mumper, Roy	YES

11. Leak Detection Service Contract

Wodalski informed the committee of his meeting with the City of Wausau and Asterra’s services.

Wodalski informed the committee of the benefits of leak detection, cost savings for proactive repairs and discount with utilizing this service with the City of Wausau.

Wodalski explained the satellite imaging to the committee.

Lopes-Serrao requested the details of successes or failures be listed in future reports.

Motion by Mumper, second by Hubbard move to recommend the Village Board approve the 2-year Prevent Package for a cost of \$46,500 split between the 2025 and 2026 budget years.

Yes Vote: 5 No Votes: 0 Abstain: 0 Not Voting: 0 Result: PASS

<u>Member</u>	<u>Voting</u>
Zeyghami, Hooshang {Chair}	YES
Jordan, Joe {Vice Chair}	YES
Hubbard, Tom	YES
Lopes-Serrao, Luis	YES
Mumper, Roy	YES

12. Weston Ave (Alderson St to Birch St) Street Lighting

Wodalski explained his report.

Discussed costs, type/style of streetlights, and layout of streetlights.

Motion by Jordan, second by Hubbard move to defer to the next meeting pending further information from WPS.

Yes Vote: 5 No Votes: 0 Abstain: 0 Not Voting: 0 Result: PASS

<u>Member</u>	<u>Voting</u>
Zeyghami, Hooshang {Chair}	YES
Jordan, Joe {Vice Chair}	YES
Hubbard, Tom	YES
Lopes-Serrao, Luis	YES
Mumper, Roy	YES

13. Pedestrian and Bicycle Master Plan Update

Wodalski explained the update to the committee.

Zeyghami stated proposed routes should start at Mountain Bay, to Mesker, to Corozalla, to Ross Ave, to Camp Phillips, then from Camp Phillips they can go to Northwestern.

Motion by Lopes-Serrao, second by Hubbard move to Recommend the Village Board acknowledge the RFQ for the Bicycle and Pedestrian Masterplan.

14. Real Estate Services Contract Amendment for Ryan St Lift Station

Wodalski explained the Real Estate Contract with Becher Hoppe.

Wodalski explained the complexities of the project, as the State Law changed to include working with all 24 condo owners rather than one property owner.

Motion by Mumper, second by Jordan move to Recommend the Village Board approve a contract amendment with Becher Hoppe for real estate acquisition services for the Ryan St Lift Station Utility Project for an increase of \$13,650.

15. Next meeting date(s):

- | | |
|---|-------------------|
| a) Monday, February 10, 2025, @ 4:30 p.m. | Regular Meeting |
| b) TBD | Schofield Ave PIM |
| c) Monday, March 10, 2025, @ 4:30 p.m. | Regular Meeting |

16. Topics for future meetings

Wodalski will bring the Weston Ave street lighting plan.

17. Remarks from Staff

Gebert informed the committee on January 23, 2025, from 4- 9 p.m., Polito’s Pizza will be the first of a series of 10% proceeds from area restaurants to help benefit the Kenndy Park project.

18. Remarks from Committee members

Jordan requested to review the site plans for the roundabouts. Zeyghami requested the roundabout plans be brought to the next meeting for review. Wodalski stated he will bring the plans to the next meeting.

Mumper stated the water test results should be brought to the committee once a year. Swenson explained the DNR testing and the Consumer Confidence Report (CCR). Wodalski explained all the variables in the water lines that contribute to water issues as well as homes on dead end roads versus home on main circulating lines.

19. Announcements

None.

ADJOURNMENT

Motion by Jordan, second by Mumper to adjourn the PW meeting at 5:48 p.m.

Yes Vote: 5 No Votes: 0 Abstain: 0 Not Voting: 0 Result: PASS

<u>Member</u>	<u>Voting</u>
Zeyghami, Hooshang {Chair}	YES
Jordan, Joe {Vice Chair}	YES
Hubbard, Tom	YES
Lopes-Serrao, Luis	YES
Mumper, Roy	YES

<u>DATE</u>	<u>PERMIT #</u>	<u>APPLICANT</u>	<u>CUSTOMER NAME</u>	<u>SERVICE ADDRESS</u>	<u>PLUMBING CONTRACTOR</u>	<u>PERMIT</u>
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	6304 PERCH DR LOT 42	A1 PLUMBING, HEATING & COOLING	LATERAL
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	6304 PERCH DR LOT 42	A1 PLUMBING, HEATING & COOLING	METER
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	6308 PERCH DR LOT 43	A1 PLUMBING, HEATING & COOLING	LATERAL
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	6308 PERCH DR LOT 43	A1 PLUMBING, HEATING & COOLING	METER
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	6312 PERCH DR LOT 44	A1 PLUMBING, HEATING & COOLING	LATERAL
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	6312 PERCH DR LOT 44	A1 PLUMBING, HEATING & COOLING	METER
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	6316 PERCH DR LOT 45	A1 PLUMBING, HEATING & COOLING	LATERAL
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	6316 PERCH DR LOT 45	A1 PLUMBING, HEATING & COOLING	METER
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3706 MUSKIE DR LOT 41	A1 PLUMBING, HEATING & COOLING	LATERAL
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3706 MUSKIE DR LOT 41	A1 PLUMBING, HEATING & COOLING	METER
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3802 MUSKIE DR LOT 38	A1 PLUMBING, HEATING & COOLING	LATERAL
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3802 MUSKIE DR LOT 38	A1 PLUMBING, HEATING & COOLING	METER
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3710 MUSKIE DR LOT 40	A1 PLUMBING, HEATING & COOLING	LATERAL
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3710 MUSKIE DR LOT 40	A1 PLUMBING, HEATING & COOLING	METER
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3714 MUSKIE DR LOT 39	A1 PLUMBING, HEATING & COOLING	LATERAL
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3714 MUSKIE DR LOT 39	A1 PLUMBING, HEATING & COOLING	METER
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3806 MUSKIE DR LOT 37	A1 PLUMBING, HEATING & COOLING	LATERAL
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3806 MUSKIE DR LOT 37	A1 PLUMBING, HEATING & COOLING	METER
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3810 MUSKIE DR LOT 36	A1 PLUMBING, HEATING & COOLING	LATERAL
1/8/2025		GREEN TREE CONSTRUCTIONS INC	GREEN TREE CONSTRUCTIONS INC	3810 MUSKIE DR LOT 36	A1 PLUMBING, HEATING & COOLING	METER
1/30/2025		DENYON HOMES INC	DENYON HOMES INC	8303 MAPLEFIELD WAY	ADVANTAGE PLBG PLUS	LATERAL
1/31/2025		DENYON HOMES INC	DENYON HOMES INC	8315 MAPLEFIELD WAY	ADVANTAGE PLBG PLUS	LATERAL
1/31/2025		DENYON HOMES INC	DENYON HOMES INC	8405 MAPLEFIELD WAY	ADVANTAGE PLBG PLUS	LATERAL
1/31/2025		DENYON HOMES INC	DENYON HOMES INC	8325 MAPLEFIELD WAY	ADVANTAGE PLBG PLUS	LATERAL
1/31/2025		DENYON HOMES INC	DENYON HOMES INC	8425 MAPLEFIELD WAY	ADVANTAGE PLBG PLUS	LATERAL

REQUEST FOR CONSIDERATION

Public Mtg/Date:	Public Works Committee – 2/10/2025
Description:	Capital Improvement Plan Update
From:	Michael Wodalski, Director of Public Works
Question:	Solely an update on project status

Background

Current Capital Improvement Plan Projects

Below is an update on the status of the various Capital Improvement Plan Projects that are ongoing.

- **Street Projects:**

1. Weston Ave (CR-X to CR-J):

- East Construction Phase: ~100% Complete
- West Construction Phase 1 – Nearing Completion
- West Construction Phase 2 – Spring 2025
- Consultant: AECOM
- Contractor: Integrity Grading and Excavating

The roadway work from Von Kanel to CR-X is complete for the year. Sanitary sewer and watermain installation along the cross-country utility route east of Progress Way is underway. Final ROW Plat Amendment was adopted in early February.

Von Kanel St to Ryan St will be reconstructed in 2025.

2. Weston Ave (Alderson to Birch):

- Construction starting June 2024
- Consultant: MSA
- Contractor: Haas

The project is substantially complete. The multi-use path did not get paved this fall, but will be paved as soon as weather allows in spring. For updates on this project you can check the website at:

www.westonwi.gov/west-ald

A question from Rothschild about lighting the roadway came up in mid-December which I have an item in the packet to discuss further with the Committee.

REQUEST FOR CONSIDERATION

3. E Jelinek and Von Kanel:
 - Construction: Summer 2024
 - Consultant: Clark Dietz
 - Contractor: Francis Melvin

The project is substantially complete. Restoration of vegetative areas will be completed as soon as conditions allow in spring. Pavement markings will also be applied once temperatures allow in spring. A Punch-List walkthrough was conducted and there are several areas where drainage or elevations of the path need to be reworked, and those will be taken care of in Spring as well. This project is updated online at www.westonwi.gov/ejelinek.

4. Schofield Ave (Normandy Ave to Birch St):
 - Construction Year: 2025
 - Consultant: Clark Dietz
 - Contractor: TBD

The project is planned to be advertised for bid this Monday, February 7. There's an item in the packet for procurement of the traffic control equipment to ensure equipment is on-site in time to be installed in 2025. We need to schedule a Public Information Meeting likely in February to go over the project with the businesses along the corridor.

5. Ross Ave (Metro Dr/Pine St to Alderson St):
 - Anticipate Construction in 2027 per DOT agreement

A copy of the Roundabout Exhibits are in the packet for informational purposes. We're still working through some of the design constraints to ensure turning movements are accommodated.

6. Fuller St Reconstruction:
 - Construction scheduled for 2025
 - Consultant: Becher Hoppe

Had a design review with Becher Hoppe the first week of February. Project is slated to go out for bid in early March.

7. Ross Ave and CR-X Intersection:
 - Construction Year: ~2026
 - Consultant: SEH

Preliminary design is ongoing.

REQUEST FOR CONSIDERATION

8. Schofield Ave and Mesker St:

- Construction Year: 2024
- Consultant: MSA
- Contractor: Chippewa Concrete / Van Ert

Signals are up and running. Some sidewalk restoration is the only real outstanding item to be completed this spring.

9. Ross Ave (River Bend to Pauls):

- Construction Year: ~2026
- Consultant: Becher Hoppe

Working with the Town on the agreement and Becher Hoppe is beginning design work.

10. Business 51 (Volkman St to Schofield Ave):

- Construction Year: 2029/30
- Consultant: Becher Hoppe

Becher Hoppe is working on the 30% plans as the DOT needs to have those submitted yet this fall so they can continue with their design on the roadway and better understand potential ROW impacts.

11. Business 51/STH 29 Storm Pond:

- Construction Year: 2026/27
- Consultant: Strand

Soil borings will likely take place in February/early March so soil types, depth to bedrock, etc. can be determined before getting too far into design as those items will dictate if liners or other constraints on the site exist.

12. Alderson St and Jelinek Ave Intersection:

- Construction Year: 2026
- Consultant: Village / MSA

Riverside Land Surveying has collected the survey data for this project. We'll begin preliminary design work this spring.

13. Bike and Pedestrian Masterplan:

RFQ's have been received and we have an item in the packet to begin negotiations with the top scoring firm.

REQUEST FOR CONSIDERATION

- **Utility Projects:**

1. SCADA:

- Construction: 2023-2024
- Consultant: AECOM
- Contractor: PJ Kortens

The ATT issues have been resolved. Lift stations are being linked in and final troubleshooting is ongoing. We are running on the new system at this time.

2. Well 3 and 4 PFAS Treatment:

- Construction spring/summer 2025
- Consultant: AECOM
- Contractor: August Winter

Well 4 and Treatment plant bid was awarded to August Winter. This work is anticipated to start this winter as the Granular Activated Carbon tanks should be delivered this Spring. The Well 3 Safe Drinking Water Loan was submitted in October for Emerging Contaminants funding.

3. Cedar Creek Interceptor Access Road:

- Construction: Anticipate 2024
- Consultant: Mi-Tech/TBD

I am working with MSA for help on this to clear up the Easements/ROW needed for the access road as well as to clean up the original easements that depict a reference line, but not the actual pipe. The agent from MSA is first working through right-of-way for the Weston Ave projects and then we'll have them shift their attention to this project.

Attached Docs:

Committee Action: N/A

Fiscal Impact:

Recommendation:

Recommended Language for Official Action

No Action is needed, solely a discussion item.

Or, Something else

Additional action:

STAFF REPORT

Public Mtg/Date: Public Works Committee – 2/10/2025

Description: Street Operations Update

From: Forrest Blarek, Street Superintendent

Question: Solely an update on project status

Background

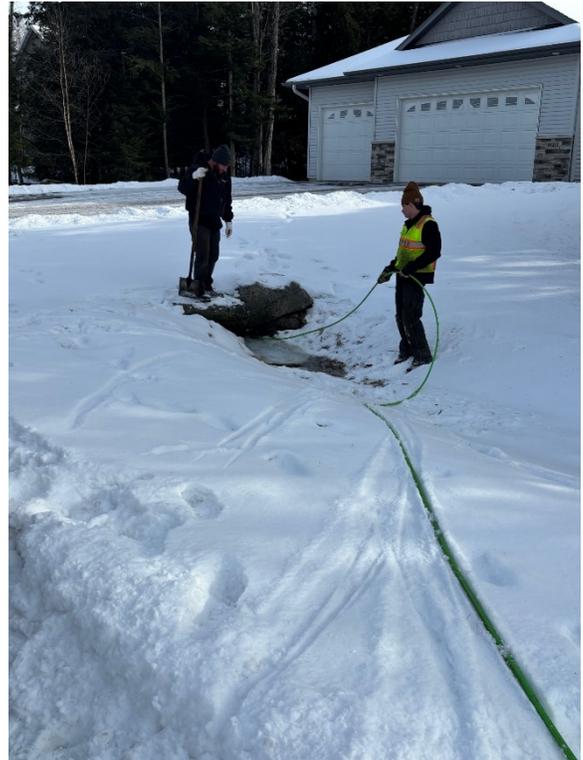
Current Street Operations Projects

Below are the highlights of work staff has been working over the month of January:



- DPW staff thawing out frozen drainage ways on Alta Verde St.
- The village has a towable hot water unit that staff uses to thaw such frozen pipes.

STAFF REPORT



- **DPW** steaming out known problem areas to help prevent flooding come warming weather.
- North facing roadways and driveway culverts are the ones that freeze up the most.

STAFF REPORT



- DPW staff fixing/rehabbing major outfalls throughout the Village.
- This one pictured is drainage to the Eau Claire River on DJ LN. between the addresses of 5204 and 5206.

STAFF REPORT



- DPW staff is continuing brushing ROW areas for better driving visibility throughout the Village.
- Pictured here is the Intersection of Shorey Ave and Camp Phillips.

STAFF REPORT



- DPW staff working on keeping the Ryan St drop area organized.
- Stacking brush allows more room for more brush material.

UTILITY REPORT FOR JANUARY 2025

1. Superintendent Comments

a. Water

- Well 1 (Alta Verde) well maintenance (seal broken windows)
- Well 1 (Alta Verde) chlorine leak repair
- Well 4 (Sternberg) furnace maintenance
- Well 6 (Rippling Creek) chlorine injection repair
- Well 6 (Rippling Creek) chlorine pump repair
- Well 6 (Rippling Creek) caustic soda injection repair
- Kerry Tower sample tap repair
- Schofield Ave. Main break repair
- Water Meter testing
- Water Meter card maintenance and entry
- Organize water parts in Municipal center (pipe rack, hydrant location)
- Assist in multiple ongoing road projects (E. Jelinek, Weston/Alderson, Weston Ave. East, Green Tree)
- EPA PFAS sample collection

b. Sewer

- Trotzer Lift Station investigate frozen check valves
- Progress Way Lift Station placed heater in station due to freezing conditions
- Clean and collect pH Probe data
- Clean bad spots
- New televising van preparation
- Lift Station(s) standby generator general maintenance
- Lift Station(s) pump filters cleaned/replaced

c. SCADA

- SCADA is completed and we are working on final adjustments. Discovered some issues within our network setups and are currently addressing problems.

d. Diggers Hotline Locates

- Village Utility Operators marked approximately 33 locates. Many communication installations as well as upgrades to WPS gas lines.

e. Work Orders

- Village Utility Operators completed 38 Work Orders. The majority of work orders were for various water meter installations, meter communication issues, lateral inspections and water quality responses.

f. Contract Work/Activities Completed/Upcoming

- Well 3 was turned off due to PFAS and remains off.
- Treatment Plant Permanent PFAS treatment for Well 3 and Well 4 should begin March/April.
- Entered Monthly well data to DNR.
- Bloedel Well is back up and working as needed for the distribution system.
- Well 7/8 is approaching final completion.
- AECOM SCADA project is nearing completion.
- Meter Pit(s) Projects completed.
- Weston Ave, E. Jelinek, Hinner Springs, Green Tree Acres projects ongoing.
- Sanitary Sewer jetting completed.
- Lift Station Cleaning complete.

2. Customers Added

Village added a total of 30 new customers during the month.

Type	No. of Customers
Residential Single Family/Condo's	25
Multi Family	4
Commercial/Industrial	1
Total	30

*A new customer includes new connections and change in residencies

3. Water Pumped in 1,000s of gallons (Last 4 Months)

Well 3 (5/27/22) shutdown for PFAS concerns and remains offline. Well 5 was off due to programming issues that took place after recent rehab. Well is back in operation when needed.

	Alta Verde (#1)	Kerry (#2)	Mesker (#3)	Sternberg (#4)	Bloedel (#5)
October					
Total	3,361	21,897	-	22,163	5,202
Peak	203	856	-	814	284
November					
Total	1,729	20,235	-	21,146	413
Peak	714	771	-	806	157
December					
Total	1,613	21,518	-	13,711	-
Peak	114	816	-	796	-
January					
Total	1,502	18,586	-	10,532	-
Peak	76	838	-	395	-
	8,205	82,236	-	67,552	5,615

	Rippling Creek (#6)	Well #7	Well #8	TOTALS
October				
Total	2,832	2,938	1,904	60,297
Peak	142	206	190	337
November				
Total	4,569	2,996	4,370	55,458
Peak	314	323	351	430
December				
Total	7,230	7,232	5,480	56,784
Peak	413	529	470	392
January				
Total	7,913	6,435	8,448	53,416
Peak	408	516	558	349
	22,544	19,601	20,202	
	Total gal X 1000			225,955
	Total gal X 1000 (Less Foremost)			143,719

4. Wastewater Flows (Last 4 Months)

Rib Mountain Metropolitan Sewerage District Flow Charge Totals.

	Bus. 51 Flow (X1000)	Cedar Creek Flow (X1000)	Total Flow Charge (X1000)
October			
Total	15,325	14,040	29,365
November			
Total	15,617	13,966	29,583
December			
Total	16,239	14,736	30,975
January			
Total	15,767	14,693	30,460
	62,948	57,435	120,383

5. Lift Station Hours

Summary of Lift Station Hours for last two months.

Lift Station Hours											
2024	Harlyn		Fox St.		Mesker/Jelinek			Kathleen		E.C. River	
Month	Pump 1	Pump 2	Pump 1	Pump 2	Pump 1	Pump 2	Pump 3	Pump 1	Pump 2	Pump 1	Pump 2
Dec	74.9	76	87.8	98	62.6	72.5	65	4.8	5.8	45	44.8
Jan	64.4	65	82.2	76.5	65.7	289.7	72.9	5.1	6	46.8	46.9

2024	Tanya/Tricia		Progress Way		Pointe		Park Terrace		Ryan St.		
Month	Pump 1	Pump 2	Pump 1	Pump 2	Pump 1	Pump 2	Pump 1	Pump 2	Pump 1	Pump 2	Pump 3
Dec	52.4	50	2.56	4.3	20	25.3	10.6	21.9	23.8	28.8	53
Jan	39.2	34.5	17	23.7	19.1	24	9.6	18.8	28.8	35.4	38.3

2024	Heritage Hills		Ross Ave.		Mesker/Colleen		Trotzer	
Month	Pump 1	Pump 2	Pump 1	Pump 2	Pump 1	Pump 2	Pump 1	Pump 2
Dec	21.8	22.4	34.5	34.7	124.6	129.4	0.5	0.6
Jan	21.7	19.9	28.1	28.1	116.3	121.7	0.5	16.4

REQUEST FOR CONSIDERATION

Public Mtg/Date:	Public Works Committee – 2/10/2025
Description:	Lighting on Weston Ave (Alderson St to Birch St)
From:	Michael Wodalski, Director of Public Works
Question:	Should the Public Works Committee Recommend the Village Board approve the installation of a streetlights on Weston Ave from Alderson St to Birch St?

Background

This item was discussed at the January 2025 Public Works Committee Meeting. The attached document is what I received from WPS since that last meeting showing what they'd be able to provide on their existing poles.

Option 3 is the lowest light intensity which utilizes a 100W equivalent LED at a 25-ft mounting height and a short 2.5-ft arm. Based on the photometrics, there is still a fair amount of light that ends up illuminating the roadway. These lights would be installed on the new poles that were installed by WPS as part of the project and the Villages would then take on the monthly street light cost moving forward.

We could look at other options if the focus is desired to be more on just the path to see what smaller solar path lights might look like and/or cost.

Attached Docs:	- Photometric options from WPS
Committee Action:	- N/A
Fiscal Impact:	- Since these are existing poles, it'd be the monthly rental fee moving forward which is around \$25/month
Recommendation:	Staff is looking for recommendations from the Committee

Recommended Language for Official Action

I Move to Recommend the Village Board _____
Or, Something else

Additional action: _____

Option 1:

LED High Output Roadway (HPS 250W equiv.) | 6' arm | 30' MH | 4000K

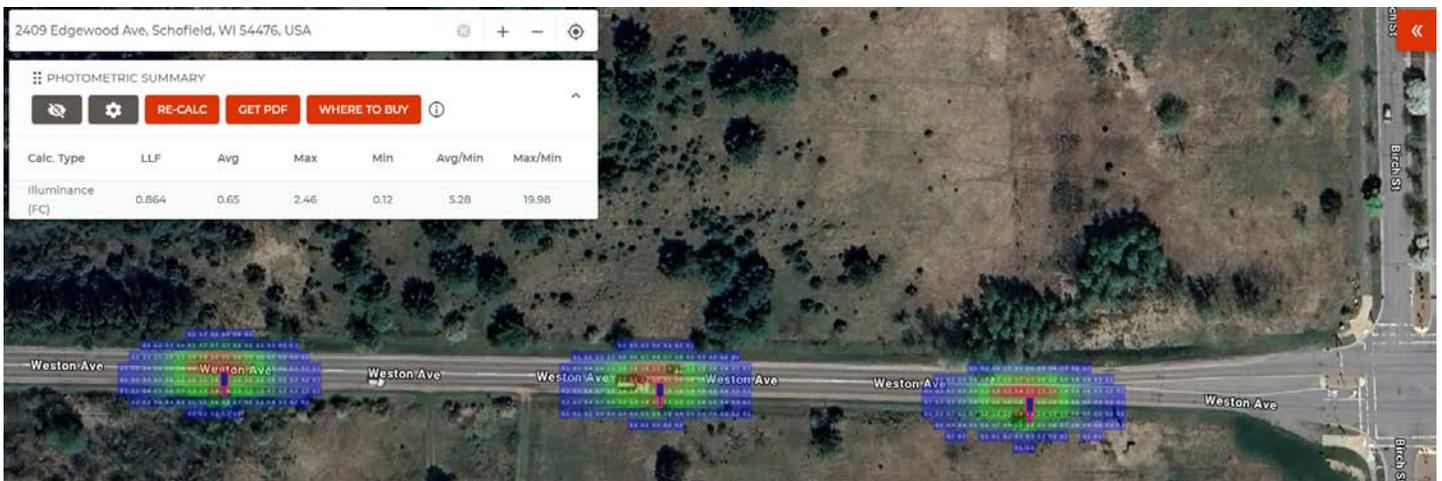
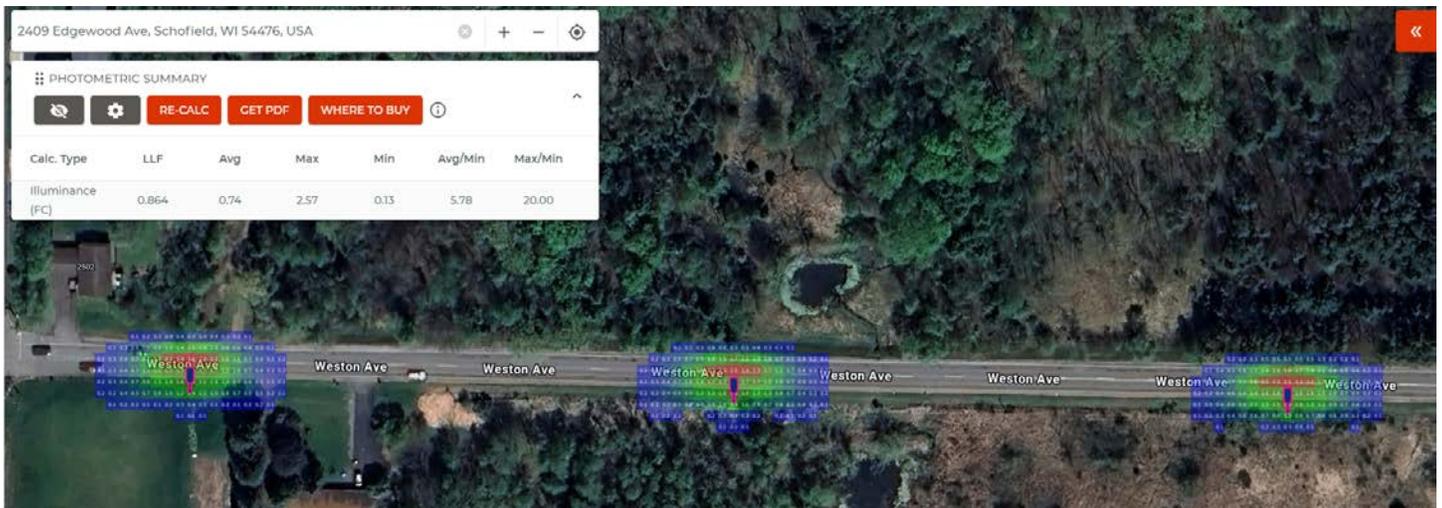
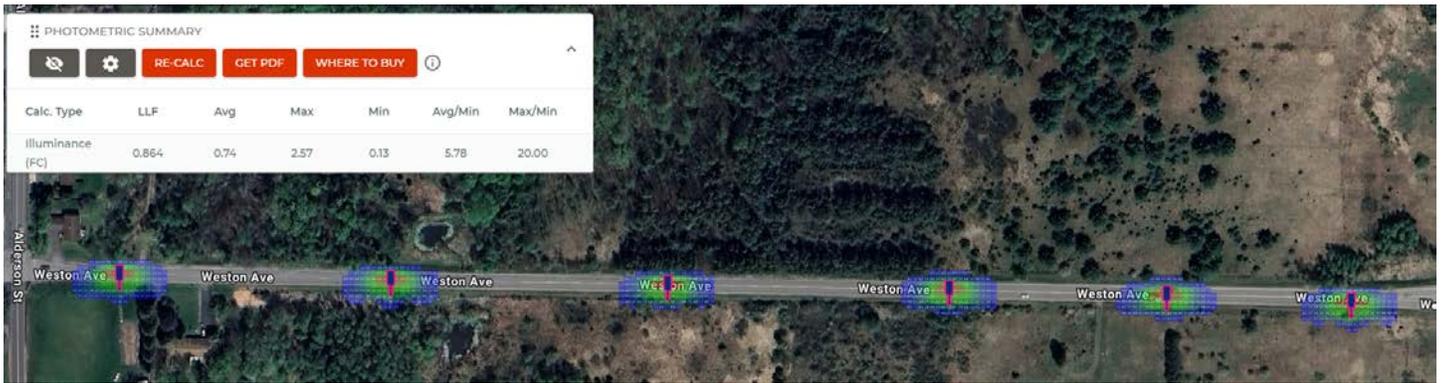
- Photometric summary is approximate



Option 2:

LED Medium Output Roadway (HPS 150W equiv.) | 6' arm | 25' MH | 3000K

- Photometric summary is approximate



REQUEST FOR CONSIDERATION

Public Mtg/Date:	Public Works & Utilities – 02/10/2025
Description:	Village of Weston Bicycle and Pedestrian Master Plan, Consultant Selection
From:	Michael Wodalski, Director of Public Works Isaac Dolan, Staff Engineer Shawn Osterbrink, Director of Parks and Recreation
Question:	Should the Village Enter Negotiations with the Consultant Team of HKGi and raSmith for providing Professional Services to develop the Village of Weston Bicycle and Pedestrian Master Plan?

Background

The Village received proposals from four professional consultants interested in working with the Village to prepare a Bicycle and Pedestrian Master Plan.

Proposals were due on Friday, January 31st and an interdisciplinary review team consisting of five Village staff reviewed and assigned a score to each submittal based on the requirements stated in the Request for Qualifications (RFQ). The table below exhibits the review results for each submittal received.

BICYCLE AND PEDESTRIAN MASTER PLAN QUALITY-BASED SELECTION		
NO.	CONSULTANT / TEAM	SCORE
1	HKGi / raSmith (Team)	86.8
2	Mead & Hunt / WE BIKE (Team)	83.3
3	SRF Consulting Group	74.5
4	Snyder Associates	67.2

Each submittal was scored based on four categories and the respective point allotments.

1. Proposal Quality / 10 points
2. Approach to Project Scope / 25 points
3. Organization, Personnel, and Experience / 40 points
4. Review of Previously Accepted Bicycle and/or Pedestrian Plan / 25 points

The consultant team of HKGi and raSmith was determined to have the highest score of 86.8 points out of the possible 100 points. Based on the reviewer results, Village staff recommends authorization to enter negotiations with the consultant team of HKGi and raSmith to prepare a three-party professional services agreement between the Village, Wisconsin DOT, and HKGi. Once an agreement is negotiated, the request to award will be presented to the Village for approval.

The proposal submitted by HKGi and raSmith is attached for reference.

REQUEST FOR CONSIDERATION

Attached Docs:	HKGi / raSmith – Proposal / Example Master Plan
Committee Action:	Previously acknowledged the project and State Municipal Agreement
Fiscal Impact:	No fiscal impact at this time, local share at maximum funding amount is \$12,000
Recommendation:	Staff recommends authorization to enter negotiations with the consultant team of HKGi and raSmith to prepare a three-party professional services agreement between the Village, Wisconsin DOT, and HKGI for preparation of the Village of Weston Bicycle and Pedestrian Master Plan

Recommended Language for Official Action

I Move to Recommend the Village Board authorize staff to enter negotiations with the consultant team of HKGi and raSmith to prepare a three-party professional services agreement between the Village, Wisconsin DOT, and HKGI for preparation of the Village of Weston Bicycle and Pedestrian Master Plan.

Or, Something else

Additional action:

BICYCLE AND PEDESTRIAN MASTER PLAN

Weston, Wisconsin

Prepared by



Planning | Landscape Architecture | Urban Design



Proposal for Planning Services
January 31, 2025



TABLE OF CONTENTS

4 Firm & Team Background

26 Approach to Scope of Work

Isaac Dolan, P.E., Staff Engineer
Village of Weston
Public Works and Utilities Department
4747 Camp Phillips Road
Weston, Wisconsin 54476



800 Washington Ave. N.
Suite 207
Minneapolis, MN 55401
612-338-0800 | hkgi.com

RE: Proposal for Bicycle and Pedestrian Planning Services

Dear Mr. Dolan and Members of the Selection Committee:

HKGi is excited to submit this proposal to assist the Village of Weston in developing a Bicycle and Pedestrian Master Plan that will increase the safety and efficiency of the Village's non-motorized transportation network. HKGi, a Minneapolis-based planning and landscape architecture firm with an office in Wisconsin, has been a leader in promoting enhanced multi-modal transportation for the last 30+ years. We helped create a vision for one of the Twin Cities' first greenway networks in the late 1990s, and since then we have continued to work with communities throughout Wisconsin, Minnesota, and Iowa to enhance their connectivity and sustainability. As professionals and outdoor enthusiasts, we are passionate about using our skills to improve quality of life within our client communities.

We emphasize providing plans that our clients can put into action to generate positive results for their communities. The team we have assembled for this project combines multi-modal and community planning and design expertise with an approach that emphasizes authentic and interactive community engagement activities and outstanding client service. In our experience, conducting engagement and client services that inspire the community and staff members is critical for the success of planning initiatives. Enthusiasm and excitement for long-range plans helps generate long-term support as the Village and its partners implement plan initiatives.

Our team will be led by Jody Rader, a Project Manager who works out of HKGi's Wisconsin office in Vernon County. Jody brings 18 years of experience in planning and design and has conducted similar projects for the cities of Woodbury and Farmington (MN), Fitchburg (WI), and Washington County (MN). She recently completed the High Cliff State Trail Connection Plan, a long-term vision for a state trail connection in the Fox Cities area, and a master plan for the Great Sauk State Trail in Sauk County (WI). She has experience writing grants and securing funding for multi-modal transportation projects across the region and has also worked on many Safe Routes to School planning efforts. For this project we have teamed with raSmith, a Wisconsin-based engineering firm who will provide traffic and transportation engineering and design expertise. Mark Van Der Wegen will be an integral part of raSmith's team, providing advisory engineering support and cost estimation services.

We are excited about the opportunity to be considered for this project and believe that our team can bring a unique approach to bicycle and pedestrian planning for Weston. If you have questions about our qualifications or would like to discuss this project in more detail, please don't hesitate to contact us. We look forward to speaking with you.

Sincerely,



Jody Rader, PLA (MN, WI)
Project Manager
612-220-8990 | jody@hkgi.com



Gabrielle Grinde, PLA (MN)
Principal in Charge
608-852-3370 | gabrielle@hkgi.com

FIRM & TEAM BACKGROUND



BICYCLE TOUR
WOODBURY, MINNESOTA

FIRM PROFILES



For more than forty years HKGi has helped communities throughout the Upper Midwest create great places for people to live, work and play. HKGi's landscape architects and planners share their design expertise and passion with clients striving to create quality places. Our community-based approach to planning and design builds on the four key principles that have defined HKGi's practice since the firm's beginning: **collaborate, listen, explore, create.**

MULTI-MODAL TRANSPORTATION PLANNING

HKGi has a long history of providing public sector clients with multi-modal transportation planning services, beginning as early as 1999 with our work on the Mississippi River Greenway Plan for Dakota County (MN). We have also provided bicycle-pedestrian and mobility planning services to other clients in the region, including planning, design, and grant writing services.

Besides expanding opportunities for diverse modes of transportation, bicycle-pedestrian infrastructure also promotes active living, improved public health, economic development, and even natural resource conservation. We are passionate about using our creativity and technical skills to help clients improve transportation, safety, and the quality of life in their communities.

hkgi.com | 612-338-0800

MAIN OFFICE

800 Washington Ave. N., #207
Minneapolis, MN 55401

SATELLITE OFFICE

Vernon County, WI

PRINCIPALS

- Bryan Harjes, President
- Brad Scheib, Vice President
- Gabrielle Grinde, Vice President
- Rita Trapp, Vice President

ASSOCIATES

- Jeff Miller, Senior Associate
- Jody Rader, Associate
- Kevin Clarke, Associate
- Sarah Evenson, Associate

STAFF

6 Certified Planners
6 Licensed Landscape Architects
8 Planners/Urban Designers
2 Marketing Communications



raSmith is a multi-disciplinary engineering consulting firm comprising civil engineers, structural engineers, traffic engineers, land surveyors, development managers, landscape architects, ecologists, and construction services professionals. Our services are focused on our public and private sector clients' needs in design and construction including site design, structural engineering, municipal engineering, transportation and traffic, surveying, construction services, and geographic information systems (GIS). We work on projects nationwide from our seven locations. Richard A. Smith, M.S., P.E., F.ASCE, founded raSmith in 1978.

Richard A. Smith Jr., P.E., (Ricky) is the second-generation owner and leads the firm as president.

rasmith.com | 920-843-5737

LOCATION

100 West Lawrence Street, Suite 412
Appleton, WI 54911-5754

OTHER OFFICES

Milwaukee, WI
Brookfield, WI
Cedarburg, WI
Madison, WI
Naperville, IL
Irvine, CA



JODY RADER PLA (MN, WI)

Project Manager

jody@hkgi.com

Years of Experience: 18

Education

Master of Landscape Architecture,
University of Minnesota

B.S. Architecture,
University of Minnesota

Certificate in Ecological Restoration

Registration

Landscape Architect, Minnesota Lic. No.
57311, Wisconsin Lic. No. 1000-14

Awards

2021 ASLA-MN Honor Award for
Planning and Urban Design -
Minnehaha Parkway Regional Trail
Master Plan, Minneapolis

Professional Activities

Active member of ASLA, Association
for Community Design (ACD) and the
Association of Pedestrian and Bicycle
Professionals (APBP)

WI APA 2023 Conference and Bike Walk
MN 2018 Conference, Presenter



Introduction

As Project Manager for the planning team, Jody will provide leadership, coordination, and technical expertise for the development of Weston's Bicycle-Pedestrian Plan. She will serve as the primary contact for Village staff and will work with staff to create and execute a community engagement plan. She will also oversee all HKGi work and will coordinate work conducted by raSmith.

Jody leads HKGi's Wisconsin practice from the firm's office in Vernon County, and she has a fast-growing portfolio of multi-modal and trail planning work in Wisconsin and Minnesota. She led the development of trail plans in Sauk County and the Fox Cities area. She has also conducted grant writing for multi-modal transportation improvement projects for several clients.

Jody's work is characterized by an emphasis on client service, outstanding communications and listening skills, and an ability to collaborate with stakeholders on creative problem solving.

Relevant Project Experience

- Bicycle and Pedestrian Plan | Woodbury, MN
- *Pedestrian and Bicycle Plan | Fitchburg, WI
- High Cliff Trail Connection | ECWRPC
- Great Sauk State Trail Master Plan | Sauk County, WI
- MOVE: Bicycle and Pedestrian Plan | Washington County, MN
- Scandia City Center Multi-Modal Study | Washington County, MN
- Bicycle and Pedestrian Plan | Farmington, MN
- Long Range Transportation Plan | Washington County, MN
- Downtown Mobility Study | White Bear Lake, MN
- Active Living Grant Writing | Anoka and Dakota Counties, MN
- Cross-City Trail Master Plan | Duluth, MN
- Minnehaha Parkway Regional Trail Master Plan | Minneapolis, MN
- Battle Creek to St. Croix River Regional Trail Long Range Plan | Washington County, MN

*project completed for previous employer



GABRIELLE GRINDE PLA (MN)

Principal in Charge

gabrielle@hkgi.com

Years of Experience: 17

Education

Master of Landscape Architecture,
University of Minnesota

Bachelor of Arts-Political Science,
University of Wisconsin-Madison

Registration

Landscape Architect, Minnesota
License No. 50416

Awards

2020 MRPA Award of Excellence -
Hutchinson Parks, Recreation and
Community Education System Plan

2015 MN APA Planning in Context Award
- Moorhead River Corridor Plan

2015 MN APA Innovation in Planning
Award - Lanesboro Arts Campus Vision
Plan

2015 MNDOT Stewardship Award
in Transportation and the Natural
Environment - River to River Greenway,
Dakota County, MN

Introduction

Gabrielle will serve as Principal in Charge, providing oversight to the planning team throughout the project and providing QA/QC services to ensure that the planning team produces high-quality deliverable to the Village of Weston.

Comprehensive community park and trail planning has been an important component of Gabrielle's work throughout her career, including the development of bicycle-pedestrian and multi-modal transportation and connectivity plans. She has been a key contributor to planning for an innovative greenway network in Dakota County (MN) since its establishment in 2009, and she has continued to provide leadership and innovative ideas to multi-modal and trail planning initiatives in urban, suburban, small town, and rural contexts. Through this experience she has built a strong knowledge base that will enable her to provide the team with critical guidance.

Relevant Project Experience

- Bicycle and Pedestrian Plan | Mendota Heights, MN
- People Movement Plan | Hastings, MN
- Trails Wayfinding Signage System | Hastings, MN
- Bicycle and Pedestrian Wayfinding Plan | Washington County, MN
- Trail & Bikeway Plan and Western Trails Plan Update | Duluth, MN
- Greenway Guidebook and Greenway Master Plans | Dakota County, MN
- Czech Heritage Trail Plan | Tri-City School District, MN
- Great River Regional Trail Master Plan | Wright County, MN
- Robert Pira Regional Trail | Dakota County and Saint Paul, MN
- Cross City Trail Master Plan | Duluth, MN
- Glacial Edge Regional Trail Master Plan | Fergus Falls, MN
- Munger Trail Spur Connector Plan | Hermantown, MN





NATALIE STRAIT

Planner

natalie@hkgi.com

Years of Experience: 4

Education

Master of Urban and Regional Planning,
University of Minnesota-Twin Cities

Bachelor of Arts, Anthropology,
University of Wisconsin-Madison

Professional Experience

Minnesota Parks and Trails Council:
Collaborative Research

Affiliations

American Planning Association

Introduction

Natalie will provide planning service throughout this project. Her work will include data collection and field research, engagement, GIS and mapping, and report writing and assembly. She has provided similar services on other multi-modal transportation projects as well as on planning initiatives involving land use, redevelopment, downtown revitalization, zoning, and park and trail planning.

Natalie's multi-modal transportation planning experience includes two trail plans in Wisconsin and two trail plans in Minnesota, bicycle-pedestrian planning at both the community-wide and district levels, and regional transportation policy planning. She has also provided similar services on area redevelopment planning projects focused on improving multi-modal connectivity and safety.

Natalie is particularly interested in furthering youth engagement efforts and ensuring that engagement results in equitable planning and design solutions. She is also interested in ensuring that rural communities and stakeholders are able to benefit from planning initiatives that consider and address their needs.

Relevant Project Experience

- Bike-Walk Plan Update | Apple Valley, MN
- High Cliff Trail Connection | ECWRPC
- Scandia City Center Multi-Modal Study | Washington County, MN
- Battle Creek-St. Croix River Trail Long-Range Plan | Washington County, MN
- Downtown Mobility Study | White Bear Lake, MN
- Maple Lakes and Teal Lake Linear Park Plan | Maple Grove, MN
- Transportation Policy Plan | Metropolitan Council
- Transportation Services | Richfield, MN
- Great Sauk State Trail Master Plan | Sauk County, WI





LEILEN FARIAS

Landscape Design
leilen@hkgi.com

Years of Experience: 9

Education

Master of Landscape Architecture,
University of Minnesota

B.S. in Architecture, University of
Minnesota

Registrations

Certified Minnesota Tree Inspector,
#20106176

Awards

Regents Scholarship - University of
Minnesota

Student Academic Excellence Award, U
of Minnesota College of Design

U of Minnesota Design Student and
Alumni Board Member

Introduction

Leilen will provide landscape design and visualization service for this project, particularly related to wayfinding, placemaking, connectivity, and landscape architecture. Leilen is fluent in Spanish and will also provide bi-lingual engagement support throughout the process as needed.

At HKGi Leilen has provided planning and design support for a variety of projects in communities throughout the region, including serving on the planning team for the Great Sauk State Trail. She is providing design services on transit and redevelopment related projects, ensuring that public space improvements integrate multi-modal connectivity principles into the design.

Leilen brings seven years of experience contributing landscape design services to public space improvement projects with the University of Minnesota's Landcare Department. Her experience conducting campus planning emphasized the creation and preservation of a bicycle- and pedestrian-friendly environment.

Relevant Project Experience

- Scandia City Center Study | Washington County, MN
- Great Sauk State Trail Master Plan | Sauk County, WI
- Trail Wayfinding Signage | Hastings, MN
- Downtown Mobility Study | White Bear Lake, MN
- Wayfinding & Signage Plan | Chanhassen, MN
- Streetlight Décor Study | Stillwater, MN
- BRT Station Area Planning | Anoka County, MN
- Purple Line BRT Station Area Planning | Ramsey County, MN
- Mall Redevelopment Area Study and Streetscape Design Themes | Mounds View, MN





AIMEE HACKETT

Graphic Design & Engagement

aimee@hkgi.com

Years of Experience: 7

Education

B.S., Landscape Architecture, Arizona State University

Awards

Williams Family Scholarship, received scholarship twice

Nominated for Herberger Institute for Design and the Arts Design Excellence Student Award

Selected for Student Presentation at 2016 ACEC Annual Roads and Streets Conference

Introduction

Aimee will provide graphic design services in support of the engagement and public communications for this project.

Aimee is a key contributor to many of HKGI's projects. Her work enhances the ability of community members to recognize and participate in engagement activities and also results in reader-friendly report documents and communications materials. Her work includes community engagement materials, infographics, engagement summaries, online materials, and plan reports.

Aimee's graphic design also helps to clearly and concisely convey key themes and messages to project stakeholders and decision-makers. Appealing, professional-quality documents help enrich community support, can be used to present opportunities to potential funding organizations.

Relevant Project Experience

- High Cliff Trail Connection | ECWRPC
- Downtown Bike-Walk Study | Golden Valley, MN
- People Movement Plan | Hastings, MN
- Bicycle and Pedestrian Plan | Mendota Heights, MN
- Great Sauk State Trail Master Plan | Sauk County, WI
- Czech Heritage Trail Plan | Tri-City School District, MN
- MOVE: Bicycle and Pedestrian Plan | Washington County, MN
- Scandia Bike-Walk City Center Study | Washington County, MN
- Bicycle and Pedestrian Plan | Woodbury, MN
- Great River Regional Trail Master Plan | Wright County, MN
- Kinnickinnic River Corridor Master Plan | River Falls, WI
- Arts Culture and Education Corridor Study | White Bear Lake, MN
- Vermillion River Greenway Master Plan | Dakota County, MN





John Bruggeman, P.E., PTOE

Traffic Engineer

John has 20 years of transportation engineering experience. His expertise includes traffic signal design, traffic impact studies, and traffic analysis. John oversees raSmith's traffic signal design efforts, which has included over 100 traffic signal designs in the last five years. He has managed intersection improvement pedestrian and bicycle studies along with traffic signal retiming projects, including WisDOT Highway Safety Improvement Program (HSIP), WisDOT permit projects, and municipal projects.

Additionally, John is actively involved in the transportation engineering profession, providing technical conference presentations, serving on the ITE Wisconsin Section executive board, and teaching transportation engineering courses at Marquette University.

Education

M.S. Engineering & Urban Planning,
University of Wisconsin-Milwaukee, 2009

B.S. Civil Engineering, Marquette
University, 2004

Professional Registrations

Professional Engineer: WI, 2008; IL, 2016
Professional Traffic Engineer: CA, 2015
Professional Traffic Operations Engineer:
2010

Professional Affiliations

Institute of Transportation Engineers (ITE)
Midwestern District

- Annual Conference planning committee, 2005-Present
- Section Board Representative, 2013 Wisconsin Section
- Executive Board Member, 2009-2013
- Administrator, 2014-Present

Martin Bruening Award Committee,
2007-2008

Harvey Shebesta Award Committee,
2012-Present

American Council of Engineering
Companies (ACEC) Future Leaders
Institute, 2011-2012

Transportation Research Board (TRB)
International Roundabout Conference
Presenter, 2011

Awards

2018 - ITE Distinguished Service Award
2012 - ITE Young Consultants Award
2009 - ITE Martin Bruening Technical
Paper Award
2007 - ITE Harvey Shebesta Scholarship

Project Experience

- Milwaukee County Pedestrian and Bicycle Crossing Assessment, WI
- WIS 20 Traffic, Pedestrian, & Bicycle Study, Waterford, WI
- WIS 175 Pedestrian Improvements, Village of Slinger, WI
- 68th Street (Honey Creek Parkway to River Parkway) Pedestrian and Bike Design, Wauwatosa, WI
- Broad Street Pedestrian Improvements, Greendale, WI
- West Allis Pedestrian Evaluation, West Allis, WI
- WIS 35 RRFB Design, La Crosse, WI
- Silver Spring Drive RRFB Design, Glendale, WI
- 92nd and Lapham Intersection Improvement Analysis, City of West Allis, WI
- 116th and Washington Intersection Analysis, City of West Allis, WI
- County CE Corridor Study, Outagamie County, WI
- West Milwaukee Commuter Route Study, Village of West Milwaukee, WI
- Howard Avenue Signal Retiming, City of St. Francis, WI
- US 18 and WIS 57 Connecting Highway Evaluation, Milwaukee, WI
- National Avenue (65th to 70th), West Allis, WI
- County O (Grange to College), Waukesha County, WI
- Waukesha County Speed Studies, WI
- County V Traffic Analysis, Milwaukee County, WI
- County OO Traffic Analysis, Milwaukee County, WI
- County BB Traffic Analysis, Milwaukee County, WI
- S. 92nd Street Corridor Retiming, City of West Allis, WI
- County O (County ES to County I), Waukesha County, WI





Mark Van Der Wegen, P.E.

Project Engineer

With over a decade of specialized experience, Mark stands out as an expert in municipal design. His experience includes varying levels of utility, transportation (local and state), and multi-modal designs. His particular focus is on developing innovative solutions for both local and state agencies.

In addition, he is well experienced in grant acquisition from various sources, which has led to numerous successful infrastructure and community development initiatives. Understanding each community's needs, Mark effectively matches them with fitting financial opportunities, enhancing support. His local government experience has honed his insight into the challenges of funding capital improvements.

Education

B.S. Civil Engineering, Michigan Technological University, 2013

Professional Registration

Professional Engineer: Wisconsin
(No. E-45856-6)

Professional Affiliations

American Public Works Association
(APWA) Leadership and Management
Committee Member (Wisconsin Chapter)

American Society of Civil Engineers
(ASCE) Member

Northeast Wisconsin Stormwater
Consortium (NEWSC) - Leadership
Member At Large

Presentations

Stormwater Quality Management
Workshop (NEWSC) - Dual Presenter
September 2023

Project Experience

- City of Niagara, US 41 Sidewalk Construction, Marinette County, WI
- City of Oshkosh, South Shore West (JELD-WEN Property) Segment Riverwalk, Riverfront walkway design, Winnebago County, WI
- City of Oshkosh, Leach Amphitheater Segment Riverwalk, Riverfront Walkway Rehabilitation, Winnebago County, WI
- Kimberly Clark Corporation, Cold Springs Road Facility, Preliminary Multi-Use Path Design, Winnebago County, WI
- Village of Greenville, Greenwood Road Urban Reconstruction, Outagamie County, WI
- Town of Grand Chute, Mutual Way Urban Reconstruction, Outagamie County, WI
- Town of Grand Chute, Annual Concrete and Sidewalk Repair Program, Outagamie County, WI
- 2022 Wisconsin Department of Transportation, Surface Transportation Program Urban (STP-U), W. Spencer Street from S Nicolet Road to S. Bluemound Drive, Town of Grand Chute, WI
- 2023 and 2024 Wisconsin Department of Transportation, Transportation Alternatives Program Grant, Wisconsin Avenue (WIS 96) Sidewalk, Town of Grand Chute, WI
- 2022 Wisconsin Department of Natural Resources, Knowles-Nelson Stewardship Grant, Arrowhead Park Boardwalk Replacement, Town of Grand Chute, WI
- 2023 Fox Cities Tourism Grant, Greenville Drive (County GV) Multi-Use Trail
- 2022 Outagamie County Greenways Grant, S. Casaloma Drive Multi-Use Trail
- 2023 Fox Cities Greenways Grant, S. Casaloma Drive Multi-Use Trail
- 2023 Outagamie County Greenways Grant, Greenville Drive (County GV) Multi-Use Trail

Multi-Modal Planning & Design *Experience*

**Our approach helps
client communities to:**



Identify Community
Needs & Establish a
Community Vision



Analyze the Community's
Current Transportation
Infrastructure



Identify Key Opportunities
for Infrastructure & Policies



Find direction for Safe
Crossings, Preferred Routes,
Wayfinding, & Design



Deliver Action-Oriented
Implementation Plans



Develop Strategies
to Achieve the Vision

**HKGI has conducted multi-modal
planning & design for many
communities in recent years,
including:**

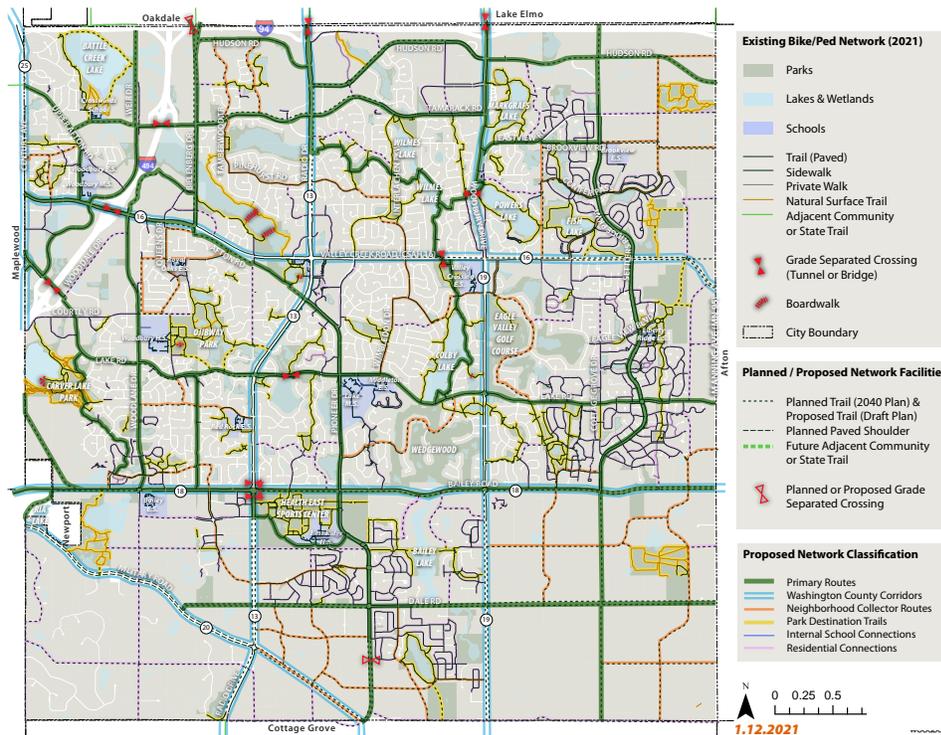
- » Apple Valley (MN) Bicycle & Pedestrian Plan
- » Farmington (MN) Bicycle and Pedestrian Plan
- » Hastings (MN) People Movement Plan & Trail Wayfinding Signage Plan
- » Mendota Heights (MN) Bicycle and Pedestrian Plan
- » Dakota County (MN) Greenway Network Planning
- » Duluth (MN) Citywide Bikeway and Trail Plan
- » Downtown Golden Valley (MN) Bike-Walk Study
- » White Bear Lake (MN) Arts Culture and Education Corridor Study and Downtown Mobility Study
- » Chaska (MN) Wayfinding Signage Plan
- » Chanhassen (MN) Downtown Wayfinding Signage
- » Stillwater (MN) Streetlight Décor Study
- » Duluth (MN) Cross City Trail Master Plan
- » Hermantown (MN) Munger State Trail Spur Master Plan
- » Minneapolis Minnehaha Parkway Regional Trail Master Plan
- » Saint Paul Central Corridor Bicycle & Pedestrian Plan
- » St. Louis Park (MN) Xenia-Park Plan Bicycle & Pedestrian Plan
- » Scandia (MN) City Center Study
- » Woodbury (MN) Bicycle & Pedestrian Plan
- » Grant Writing for Multi-Modal Planning & Active Living Projects

- » **More details about selected projects are included on the pages that follow.**



Bicycle and Pedestrian Plan

WOODBURY, MINNESOTA



HKGi led the process to create a bicycle-pedestrian plan for this fast-growing east metro community. At the beginning of the project, HKGi’s planners worked with the City to identify a set of project objectives that would suit Woodbury’s current development context while also helping the City prepare for expansion of the bicycle-pedestrian network in both developed yet to be developed areas. Engagement emphasized developing a better understanding of the public’s needs and concerns when walking and biking in the community.

Some of the primary concerns for this project were to identify strategies for maintaining the existing system in a “state of good repair;” addressing key crossing safety issues throughout the community; positioning projects to compete for multi-modal transportation grant programs; improve or enhance connectivity to destinations such as parks, schools, athletic facilities, and business centers; improve multi-modal access to the planned Gold Line BRT corridor; and incorporate direction from other planning documents into the plan.

PARK DESTINATION ROUTES

Within the Network Classification, Park Destination Routes are paved trails, natural surface trails, and sidewalks that provide circulation routes and recreation within Woodbury’s parks. Figure 3.11 on the opposite page shows the location of Park Destination Routes, along with Woodbury’s Internal School Connections.



INTENDED USE

- Intended to serve as a destination for individuals, families, groups
- Primary use: recreation / active living / tourism
- Secondary use: connection through parks to connect to City’s trail network

LOCATION

- Trails and sidewalks located within Woodbury Parks

DESIGN + IMPLEMENTATION

- Combination of sidewalks, natural surface trails, and paved multi-use trails
- Potential for specialized trail experiences, such as mountain biking, fat tire biking, wildlife observation, scenic/ natural viewing areas, bike share locations
- Wayfinding, trail amenities, trail identity is specific to each park and park classification
- Focus on trail/sidewalk consistency and handicap accessibility (width, design, surface) within parks
- Potential for trailhead amenities (parking, seating, shade structure, kiosk with maps and interpretive elements)

INTERNAL SCHOOL CONNECTIONS

Internal School Connections provide necessary pedestrian and bicycle connections within school campuses. Figure 3.11 on the opposite page shows the location of these connections.

INTENDED USE

- Primary use: connect students, teachers, caregivers and other visitors to school building from within the school campus
- Secondary use: Connect to school campus features (outdoor classrooms, fields, etc.), connect to adjacent trail or sidewalk networks within neighborhoods

LOCATION

- Located within Woodbury School Properties

DESIGN + IMPLEMENTATION

- Combination of sidewalks and paved trails
- Wayfinding is determined by the school and/or school district
- Focus on safety for children, visibility of pedestrians

CLIENT

City of Woodbury

HIGHLIGHTS

- Identify ways in which land use offers ways to encourage or facilitate multi-modal transportation
- Engage community members to understand their needs and concerns for bike-ped improvements and their usage patterns
- Identify methods for maintaining current system

REFERENCE

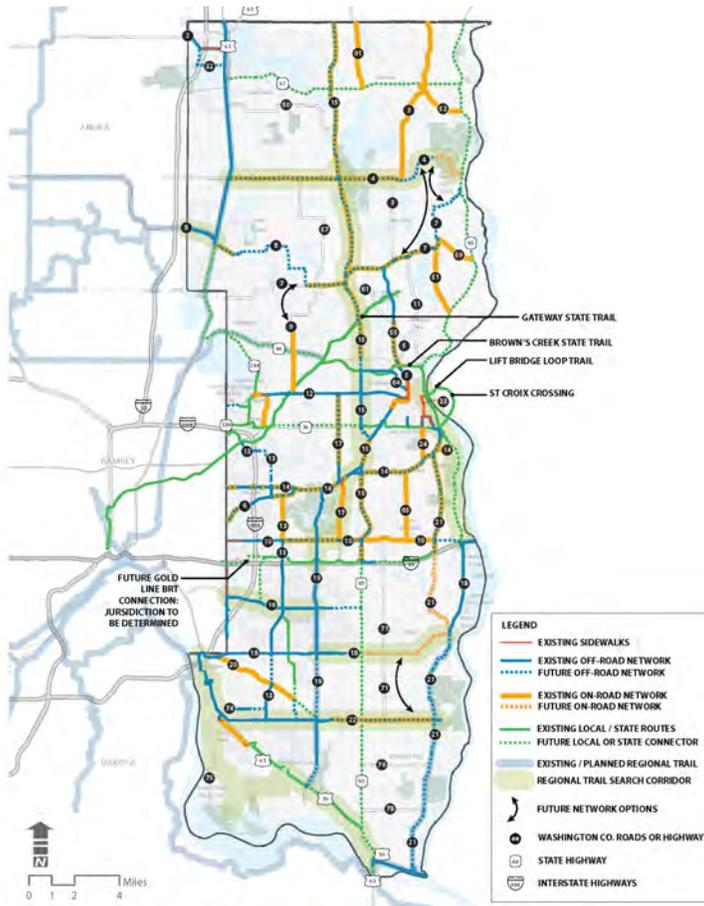
Tony Kutzke, City Engineer
City of Woodbury
tony.kutzke@woodburymn.gov
651-714-3593





MOVE: Bicycle and Pedestrian Plan

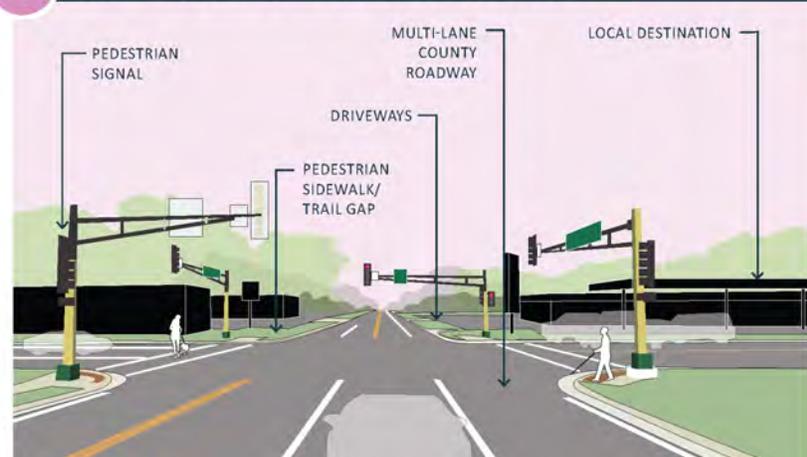
WASHINGTON COUNTY, MINNESOTA



Network Plan for future bicycle-pedestrian priority projects

4

CASE STUDY: SIGNALIZED INTERSECTION



HKGi performed an in-depth case study analysis of intersection types and improvements, along with a wayfinding plan for county trails.



HKGi led the development of a Bicycle and Pedestrian Plan that will guide future investment decisions and prioritize initiatives to improve and enhance the County's bicycle-pedestrian network.

In the initial phase of the project HKGi collected input from stakeholders across the County and conducted an existing conditions analysis. Engagement activities included pop-up meetings at community events such as the Tour de Hugo and a local bluegrass festival. The existing conditions report included analyses of Level of Comfort, trip orientation-destination, demographic trends, and crash and demand data.

In subsequent phases of the project the planning team established a hierarchy of existing routes and trails and identified recommended new or improved routes. HKGi also helped the County prioritize recommended improvement projects by identifying low cost/high benefit improvements as well as crossings and focus areas that will have the greatest impact on safety and usage of the network.

Since adoption of the plan, the County has begun several of its implementation initiatives.

CLIENT

Washington County, Minnesota

HIGHLIGHTS

- Social Pinpoint™ used for online engagement, enabling collection of detailed, location-specific input
- Enhanced branding to increase visibility of the project and solicit greater quantity of input
- Focus on identifying low-cost/high-benefit initiatives

REFERENCE

Emily Jorgensen, Project Manager
Washington County
651-430-4338
emily.jorgensen@co.washington.mn.us

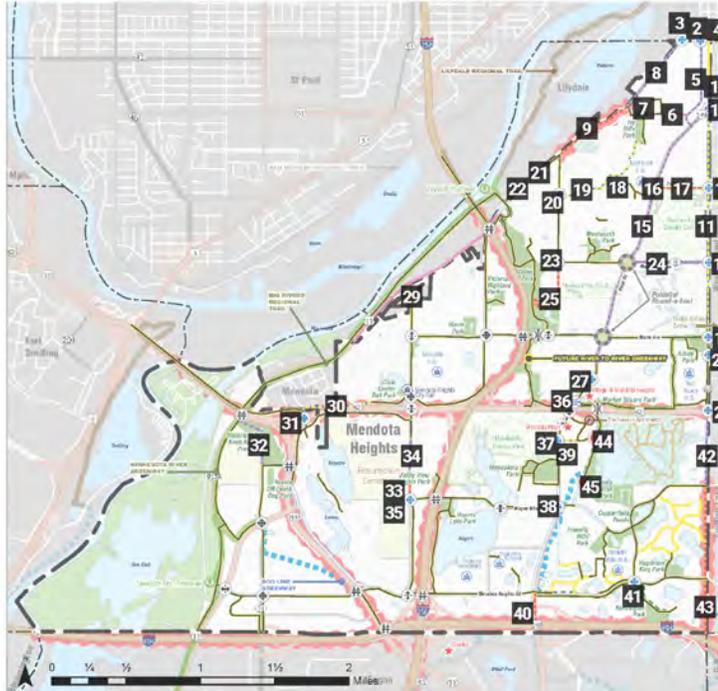


Bicycle and Pedestrian Plan

MENDOTA HEIGHTS, MINNESOTA

PRIORITY PROJECTS MAP

(SEE TABLES ON FOLLOWING PAGES FOR NUMBERED PROJECT DESCRIPTIONS)



Parks and Open Space	Local Bike Ped System	Greenways	Crossings / Improvements
Cemetery	Offstreet Bituminous (3-8')	Potential Future Greenway	Existing Tunnel
Golf Course	On Street Bikeway / Wide Shoulder	Ex City Trail (Future Greenway)	Existing At-Grade Xing (East/West)
Dodge Nature Preserve	Ex Sidewalk	Major Road - Barrier	Existing At-Grade Xing (North/South)
State Property	Planned Trail		Existing Bridge Crossing
Water	Trail Gaps		Existing At-Grade Xing (Both Ways)
City Park	Desired Trail Connections (Feasibility Issues)		Proposed Dak. Co. Tunnel
	Lilycaie Pedestrian Trail (outside Mendota Hts)		Proposed At-Grade X-ing Enhancement
	Dodge Nature Center Trails		New Wayfinding Sign

DAKOTA COUNTY GREENWAYS

Off-street bituminous trails, multi-use trails, and shared-use paths are paved routes, typically 8-10 feet wide that can be used by bicyclists, walkers, runners, rollerbladers, and other non-motorized users.



Because of its location at the confluence of the Minnesota and Mississippi Rivers, Mendota Heights is a destination for cyclists, hikers, and paddlers from around the Twin Cities. The community is also bisected by several expressways that act as barriers to bicycle and pedestrian connectivity.

As a result of the city's unique context, HKGI's plan provides several strategies for creating a safer, more welcoming environment for multi-modal transportation. The plan provides guidance for planning and designing amenities such as protected bike lanes, off-street shared paths, grade-separated and at-grade crossings, and ways to integrate the community's network with existing trails and greenways.

The plan includes more than forty recommended improvement projects, ranging from new trails to crossing improvements. The plan also identifies potential pavement treatments, street furnishings, lighting, and other elements that can be incorporated into improvement projects to create optimal environments for cyclists and pedestrians.

CLIENT

City of Mendota Heights

HIGHLIGHTS

- Provides strategies to mitigate the barrier of four expressways intersecting the city
- Features several high-quality section illustrations that provide guidance for road, bikeway, trail, and crossing geometry and design

REFERENCE

Ryan Ruzek
Public Works Director
City of Mendota Heights
651-452-1850
rruzek@mendotaheightsmn.gov

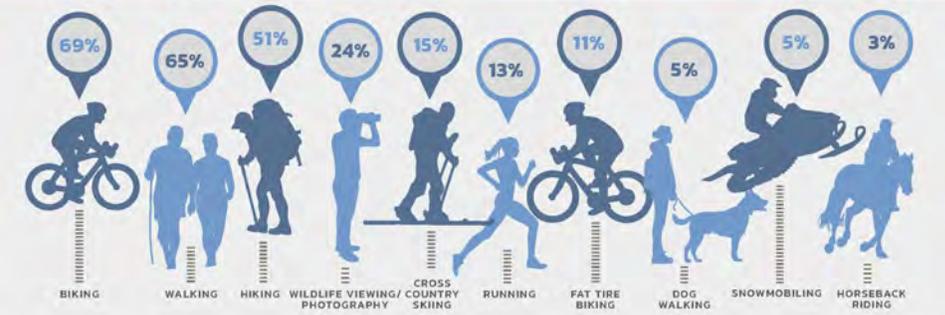


Great Sauk State Trail Master Plan

SAUK COUNTY, WISCONSIN



POPULAR TRAIL USAGE



HKGi recently completed a long range plan for the Great Sauk State Trail in Sauk County, Wisconsin. Currently the trail parallels the Wisconsin River and connects Prairie du Sac and Sauk City with the Sauk Prairie State Recreation Area. The master plan identifies a recommended trail alignment to extend the trail through Devil’s Lake State Park and along the Baraboo River going west until the trail meets the 400 Trail in Reedsburg.

HKGi conducted an extensive engagement process, meeting with community members and stakeholder groups in villages and locations throughout the trail search corridor. Engagement continued throughout the project, augmenting the planning team’s field work and research to determine the best and most feasible potential trail alignments.

The Plan identifies trail alignment options and recommended implementation phases to ensure that trail right-of-way acquisition and design and construction can proceed in an orderly fashion. The Plan also includes recommendations for a host of trail development topics such as surface type, maintenance budgeting, wayfinding, marketing, and funding strategies.

CLIENT

Sauk County, Wisconsin

HIGHLIGHTS

- The Plan feature an Operations & Maintenance Plan to aid in budgeting and planning for improvements
- Building on a strong collaborative relationship with the Friends of the Great Sauk State Trail, the Plan emphasizes expanding stewardship and partnerships with other user groups and community organizations

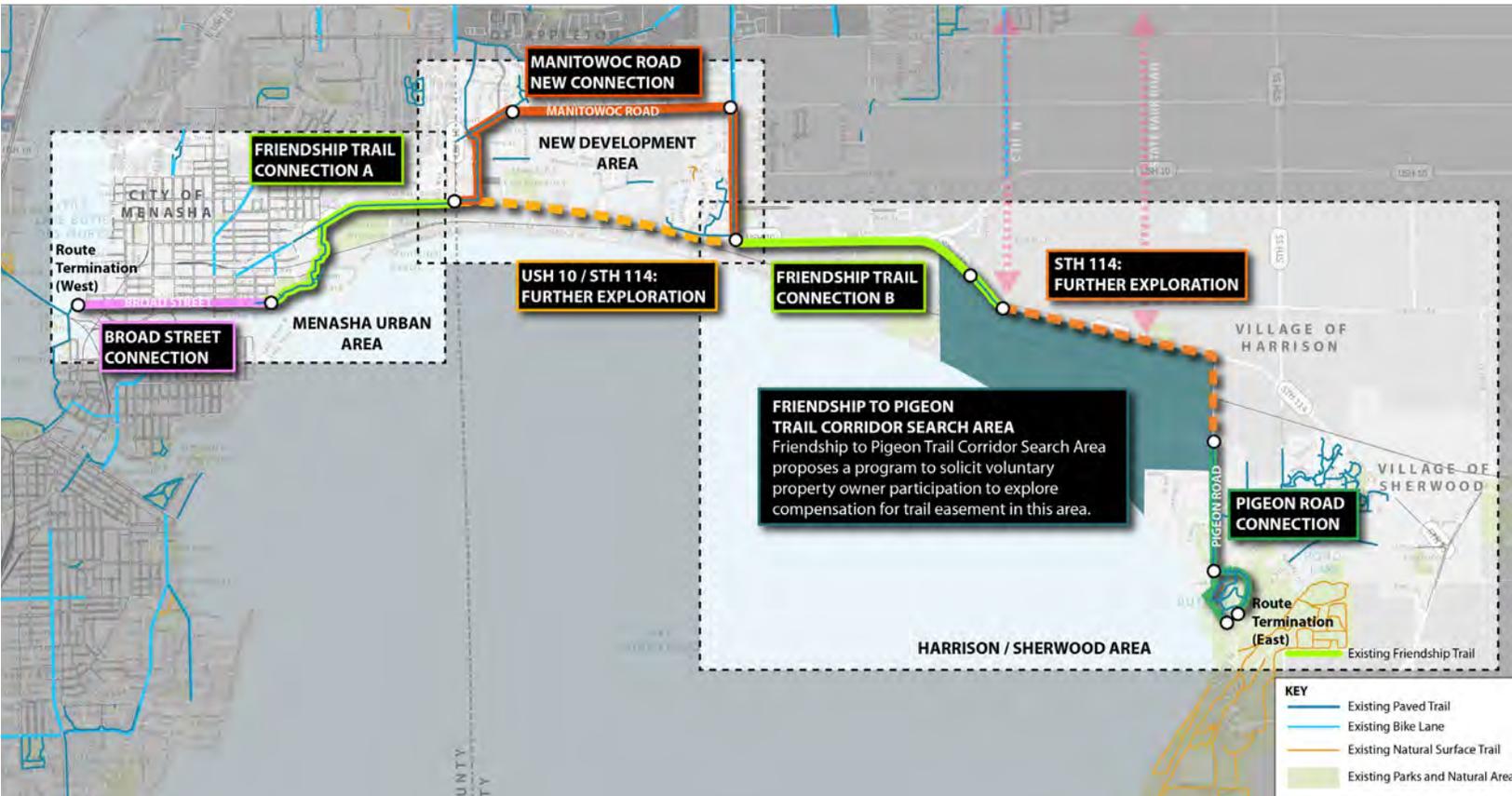
REFERENCE

Brian Simmert, Planning and Zoning Manager
Sauk County
608-355-3245
brian.simmert@saukcountywi.gov



High Cliff Connection Trail Plan

FOX CITIES REGION, WISCONSIN



HKGi conducted a planning process to identify feasible trail alignments to connect downtown Menasha to High Cliff State Park and create a much-needed bicycle/pedestrian corridor serving the Fox Cities metropolitan area. The planning process included multiple phases of engagement to ensure that stakeholders throughout the corridor would have opportunities to provide input into the trail’s alignment and development.

The HKGi planning team also conducted an in-depth, data-driven analysis of factors such as transportation activity, travel destinations, current conditions, and current bicycle and pedestrian routes within and adjacent to the trail search corridor. The analysis was used to identify potential routes through the study area, which spans urban, suburban development, and rural areas. The final study report also included recommendations for safety improvements at street crossings and illustrations to guide design issues such as trail corridor geometry.

Since completion of the plan, HKGi has been contracted to assist the Community Foundation for the Fox Valley Region with implementation efforts. Services include coordination, project prioritization, grant-writing, and community outreach.

CLIENT

East Central Wisconsin Regional Planning Commission

HIGHLIGHTS

- Included data-driven analysis of transportation activity, travel destinations, current conditions, and current bicycle and pedestrian routes
- Identification of potential route options through the study area to enable flexibility in implementation as needed

REFERENCE

Kim Biedermann, Regional Bicycle and Pedestrian Coordinator
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Scandia City Center Study

SCANDIA, MINNESOTA



HKGi recently completed a study to develop a multi-modal transportation planning vision, including strategies for improving safety and access for pedestrians and bicyclists in Scandia’s city center. The study was commissioned in anticipation of a Gateway State Trail extension and a new trailhead planned for the city center. The study was also prompted by a proposed new arts and heritage center and the community’s desire to create better all-ages access to destinations throughout the city center.

HKGi’s work plan called for early engagement to collect ideas from community stakeholders and to work with them to establish a vision for the city center that would guide the rest of the study. In addition to online engagement, HKGi participated in several events during Vinterfest weekend, including hosting a Walk About tour of the city center. HKGi also met with key stakeholder groups such as the Scandia Heritage Alliance and Scandia Elementary School.

Other services provided by HKGi included a transportation mode analysis, concept exploration with stakeholders, the development of a network plan as well as concepts for three key areas, a wayfinding framework plan, and placemaking theme explorations. Implementation recommendations include individual improvement projects for trails, on-road bikeways, sidewalks, crosswalks, wayfinding and furnishings as well as broader citywide initiatives.

CLIENT

Washington County and City of Scandia

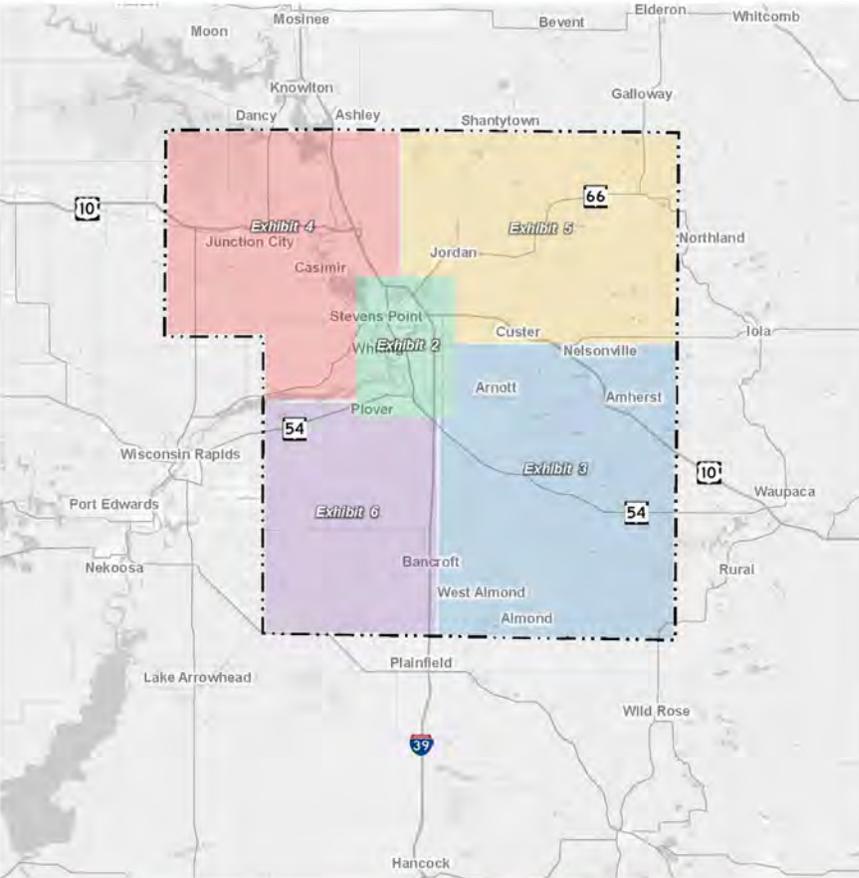
HIGHLIGHTS

- Transportation analysis included travel distance and mode to city center
- Emphasis on safe connections to city center destinations, including schools
- Exploration of placemaking and wayfinding elements and character
- Detailed concepts for three focus areas in city center

REFERENCE

Sara Allen, Senior Planner
Washington County
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Project Experience



Portage County SS4A Action Plan & Pedestrian/Bicycle Master Plan Update

Portage County, WI

This Safe Streets for All (SS4A) project is currently underway and will provide Portage County with a roadmap for future high-impact, low-cost projects and strategies to improve safety throughout the County. To date, the project has included a comprehensive public involvement component including public meetings, community surveys, and an evaluation of safety “hotspots” throughout the county. raSmith is responsible for safety data analysis, ADA compliance review, and public involvement as part of a comprehensive team of planners, engineers, and public involvement experts.

Client

Portage County

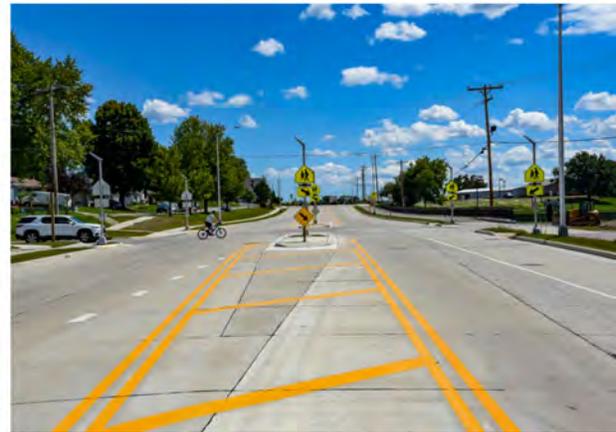
Project Team

Pat Hawley, P.E., PTOE, RSP
Laura Schroeder, P.E., PTOE, RSP

John Bruggeman, P.E., PTOE



Project Experience



WIS 20 Traffic, Pedestrian, and Bicycle Study

Waterford, WI

raSmith was retained by WisDOT to design a two-mile segment of WIS 20 in Waterford. WIS 20 is a two-lane, undivided urban arterial with on-street parking in the downtown area. As part of the design project, raSmith completed a traffic study and conducted a comprehensive pedestrian and bicycle evaluation. Specific to the pedestrian and bicycle evaluation, counts were collected on a spring day to document mid-block and intersection crossings along the corridor. The project team also met with Village officials and representatives from the four schools located along WIS 20.

raSmith recommended Rectangular Rapid Flashing Beacons (RRFBs) near two schools and the public library to increase the safety of their pedestrian crossings. Other pedestrian enhancements such as curb bump-outs, updated sidewalk and multi-use path, ADA-compliant curb ramps, and updated pedestrian signal equipment were installed throughout the corridor.

Client

Wisconsin Department of
Transportation SE Region

Project Team

John Elkin, P.E.
Rachel DeSombre, P.E.
John Bruggeman, P.E., PTOE
Andrew Axt, P.E.
Andy Utic, P.E.

raSmith
CREATIVITY BEYOND ENGINEERING

Project Experience



Milwaukee County Pedestrian and Bicycle Crossing Assessment

Milwaukee County, WI

raSmith completed a pedestrian and bicycle crossing assessment at 20 locations throughout Milwaukee County. This planning-level project was funded through the Wisconsin Department of Transportation's Transportation Alternatives Program (TAP). The intent of the study was to develop and recommend conceptual improvement alternatives to improve bicycle and pedestrian safety and operations. The project included a traffic and crash analysis, site distance evaluation, and ADA curb ramp compliance check. raSmith developed low-cost and high-cost alternatives for each location and estimated the construction costs for each scenario. The project also included several high-profile/high-use locations in the region, including four locations along Lincoln Memorial Drive along Milwaukee's lakefront. The evaluation was summarized in a final report for the County to use for planning future projects and utilizing available funding opportunities.

Client

Milwaukee County

Project Team

John Bruggeman, P.E., PTOE
Josh Fleming



The image shows two women in winter attire, including beanies and jackets, standing outdoors at what appears to be a community event or trail engagement. They are looking at a large informational map or poster that features various images and text. The background shows a wooded area with trees and other people, suggesting a park or trail setting. The overall scene is overlaid with a semi-transparent teal color.

APPROACH TO SCOPE OF WORK

UNDERSTANDING



The Village of Weston, through funding provided by the Village and WisDOT, is seeking professional planning and engineering services to develop a Bicycle and Pedestrian Master Plan (the Plan). The planning process will develop a vision for the future of biking and walking in Weston, responding to a growing need to incorporate pedestrian and bicycle facilities and network planning into future investments, as well as address safety, accessibility, tourism, recreation, equity, and quality of life for people of all ages and abilities. The Plan will also look to connect residents and visitors to neighboring communities through multi-modal networks.

The Village has identified a list of potential stakeholders, which include the Village of Weston Board of Trustees, residents of Weston, DC Everest Area School District, Village of Weston staff, Wausau MPO and WisDOT. The plan process will need to incorporate input, ideas, and review by these stakeholders along the way, building consensus for future improvements, investments, maintenance, and initiatives.

Multi-modal connectivity encompasses elements of environmental sustainability, recreation, tourism, public health, safety, and economic development. The awarded consultant team will be tasked with providing up-to-date recommendations for building a network that connects people to schools, parks, civic destinations, natural spaces, employment centers, shopping districts, and to other trail networks in the region. Local preferences for facilities will be balanced with guidance provided by WisDOT, FHA, AASHTO, NACTO, and other trusted statewide and national resources. Existing infrastructure and consideration for recently created goals outlined in the Village's Comprehensive Plan and CORP will be incorporated into the plan.

With a holistic approach in-mind, the Village will be able to create a plan that details an implementable vision of a walkable and bicycle-friendly city. This vision will be crafted and refined through the input and influence of residents and stakeholders, with an understanding that recommendations will address both physical improvements and programming or educational opportunities to make biking and walking a viable, safe, and comfortable means for getting around.

APPROACH

HKGi approaches bicycle and pedestrian planning through the lens of active living. This means that we will work to tailor future network plans and recommendations to meet the specific needs of Weston, avoiding a one-size-fits-all approach. Integrating Active Living principles involves understanding how the community uses and enjoys the current network, and then working closely with key stakeholders to develop an attainable vision to make it easy, convenient, and safe for people of all ages and abilities to walk or bike throughout the area. An emphasis is placed on finding ways for people to reach community destinations such as schools, parks, civic, and employment areas by biking and or walking, with the added benefit of enjoying the outdoors and getting exercise on a daily basis. We also look to identify ways that the pedestrian and bicycle network can contribute to regional tourism, economic development, and strengthen connections to natural resources and regional park destinations.

TO PROVIDE A USEFUL & IMPLEMENTABLE PLAN UPDATE, WE WILL FOCUS ON THE FOLLOWING STRATEGIES:

- » Thorough review and evaluation of previous and relevant planning efforts to identify elements that were successful and elements that have been challenging to implement.
- » Development an authentic engagement plan, that is tailored to gather feedback from the people who will likely benefit most from a well-connected and safe environment for biking and walking (for example, seniors, people with disabilities, youth, new residents, and people who cannot afford to own or operate a personal vehicle).
- » Thorough research and analysis of existing conditions to understand challenges and opportunities for the current and future network. This includes reviewing local crash and transportation data, gathering and reviewing

crowd-sourced location-based data where available (e.g. Strava), and identifying gaps and barriers in the current network through GIS mapping. Level of Traffic Stress analysis, Origin/Destination and Demand analysis, and understanding demographics are all examples of how HKGi has performed analysis on previous bicycle and pedestrian planning efforts.

- » Thorough on-site documentation and observation of the existing Village facilities and conditions.
- » Development of an implementation plan that clearly identifies projects that can be matched to known local, state, and federal funding sources, along with a strategic timeline for applications. Structured integration of the engagement approach and robust documentation of the planning process will streamline the implementation process for Village staff. Our team includes experienced multi-modal transportation engineers who will provide high-level cost estimation for identified projects.
- » Build the project and goals around addressing multi-modal networks within the Village as a means to address a broad spectrum of visitors and residents. This entails adopting 8-80 and Active Living approaches to bicycle and pedestrian planning. If a city is designed to accommodate the needs of both 8-year-olds and 80-year-olds, there is evidence that more people will benefit from the network. An Active Living approach to bicycle and pedestrian planning acknowledges that if people can easily and safely access trails and sidewalks on a daily basis for transportation purposes, then the network for biking and walking for recreation and tourism will be far stronger and robust.



WORK PLAN

Task 1: Data Collection

MONTHS 1-4

The project will start with a kick-off meeting and tour of the Village with staff. This meeting and tour will build the foundation for communication throughout the duration of the project. This task will include the collection and assembly of base information through GIS files, maps, studies, and surveys. A set of basemaps will be developed to understand the existing roadway, sidewalk, and trail network, previously planned facilities, regional connections to surrounding areas, and key community destinations for biking and walking. Then, a series of analysis maps will be created to better understand the issues and opportunities of the current system: origin/destination analysis, demand analysis, level of traffic stress, network gaps, crash data and safety barriers, and a sidewalk/trail condition analysis are examples. HKGi will work with Village staff and raSmith to identify the most useful information to explore.

Strava and Streetlight are two platforms that utilize cell phone locations to track the movements of pedestrians, bicyclists, and motorists. Streetlight data provides an additional layer of demographic information that can help the project team identify areas of the Village where people of different ages, income levels, and ethnicities travel. If the Village would like to explore Streetlight as a tool for understanding equity and mobility issues for this project, our team can facilitate subscription access as an additional service or contract amendment.

HKGi will facilitate a meeting with staff and WisDOT to review findings, and then present the analysis work as part of the meetings, events, and info shared in the Public Involvement task.

SUBTASKS

- 1.1 Kick-off Meeting and Site Tour
- 1.2 Data Gathering
- 1.3 Inventory and Analysis Mapping
- 1.4 Review Existing Plans and Guidelines
- 1.5 Prepare Existing Conditions Presentation
- 1.6 Meeting with Staff + WisDOT

Task 2: Public Involvement

MONTHS 2-12

HKGi will draft and finalize the Communication and Engagement Plan, which will outline the full scope of public involvement, branding styles, communications, contacts, and other resources that will be useful throughout the process. Our team will develop a set of online survey and outreach materials, per the Communications and Engagement Plan. Materials such as an interactive mapping tool (Social Pinpoint), a community-wide survey, project branding and social media copy will be shared with Village staff for posting on the project website and sharing through digital media (see next page for more details about HKGi's engagement approach and methods).

A series of stakeholder meetings will be facilitated to gather ideas, concerns, and understand priorities with the primary stakeholders (DC Everest School District, Wausau MPO, bicycle and pedestrian advocates, for example). This task also includes presentations to the Board of Trustees and Committees at the culmination of the project. A series of three open houses have been outlined in the scope of work; these events will be facilitated by HKGi and will align with project milestones to maximize community input. A complete summary of community feedback collected will be created and presented as part of the final plan document.

SUBTASKS

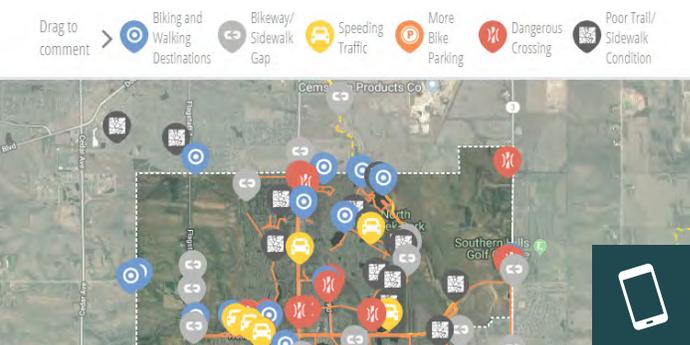
- 2.1 Develop Communication and Engagement Plan
- 2.2 Develop Outreach Materials
- 2.3 Develop Survey and Social Pinpoint
- 2.4 Trustee + Committee Presentations (2 in-person)
- 2.5 Stakeholder Meetings (3 virtual)
- 2.6 Open Houses (3 in-person)
- 2.7 Coordination with staff
- 2.8 Summary of Community Feedback

Engagement with the Community



HKGI has experience conducting engagement to collect feedback from many perspectives within a community. At the onset of a project we work with the client to create a customized engagement plan that best suits their community and the project's objectives. To ensure that we engage a broad spectrum of stakeholder groups such as youth, seniors, people with disabilities and parents, we use a variety of methods to collect input.

Below are examples of online tools, in-person events and outreach methods that have been successful on past projects.



ONLINE TOOLS

- » **Social Pinpoint** - Interactive mapping tool for collecting place-based feedback ([click for example](#))
- » **Story Maps & Project Websites** - An information hub for project updates, events and survey tools ([click for example](#))
- » **Surveys** - Online survey tools that can gather demographic information and community sentiments



IN-PERSON EVENTS

- » **Pop-Up Meeting** - We bring information and speak with residents at community events
- » **Listening Sessions & Focus Groups** - Meetings with user groups, neighborhood organizations or targeted stakeholders
- » **Workshops** - Facilitated workshops with interactive activities with staff, stakeholder groups and community members



OUTREACH + COMMUNICATION

- » **Social Media Posts and Press Releases** - Share project highlights & calls to action
- » **Flyers & Handouts** - For project communication, often using QR codes to direct people to web tools
- » **Yard Signs & Posters** - Custom designed informative signs that can be distributed to community spaces/bulletin boards

Task 3: Master Plan Preparation MONTHS 5-12

With the site analysis and preliminary community input in-hand, our team will draft a vision and goals that will serve as a guide as we develop network, facility, policy, and program recommendations to address the issues and opportunities identified in Task 1. A set of maps depicting areas for future improvements, as well as section diagrams, perspective renderings, and other visualization tools will be created to communicate recommendations and ideas.

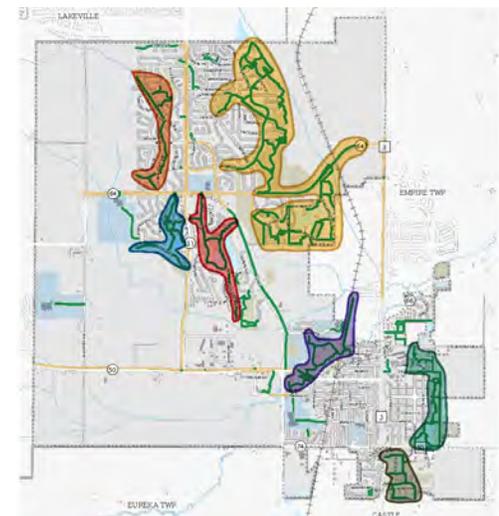
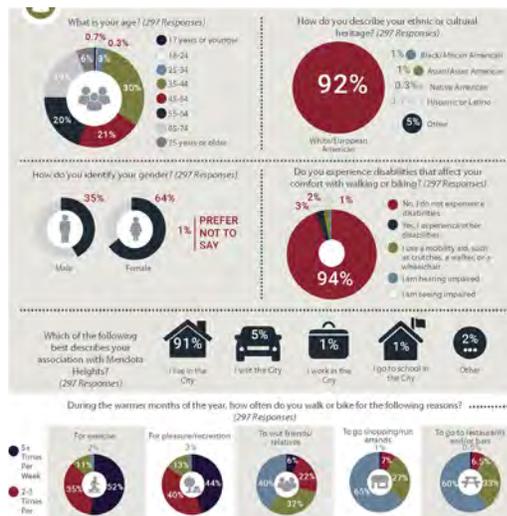
Our team will draw from many years of experience working with similar communities to prepare recommendations that are feasible from a cost and construction perspective. Our team will also draw on experience working with similar communities to understand how current trends, such as E-Bikes, will have an influence on the future of biking and walking in Weston.

RaSmith will provide advisory engineering support, which may include ADA compliance review, conceptual design peer review, and construction feasibility review. An implementation plan will also be drafted, which will include a list of projects with priorities (near-, mid-, and long-term), project partners, and potential funding sources included. A preliminary cost estimate will be prepared as well.

HKGI will meet with Village staff and WisDOT to review draft recommendations, and a full draft of the complete plan document will be created. The draft document will be easy-to-read, concise, and meet the state’s requirements for bicycle and pedestrian planning. HKGI will facilitate a review period for staff and stakeholders (as guided by Village staff) utilizing a web-based tool called Konveio. Comments on the draft plan will be collected and revisions applied to the draft plan accordingly. Per the Communications and Engagement Plan, the draft plan will be presented to the public through an open house, as well as presented to the Village Board of Trustees for approval. All final exhibits, documents, and project materials will be packaged and transmitted to Village staff upon completion of the project.

SUBTASKS:

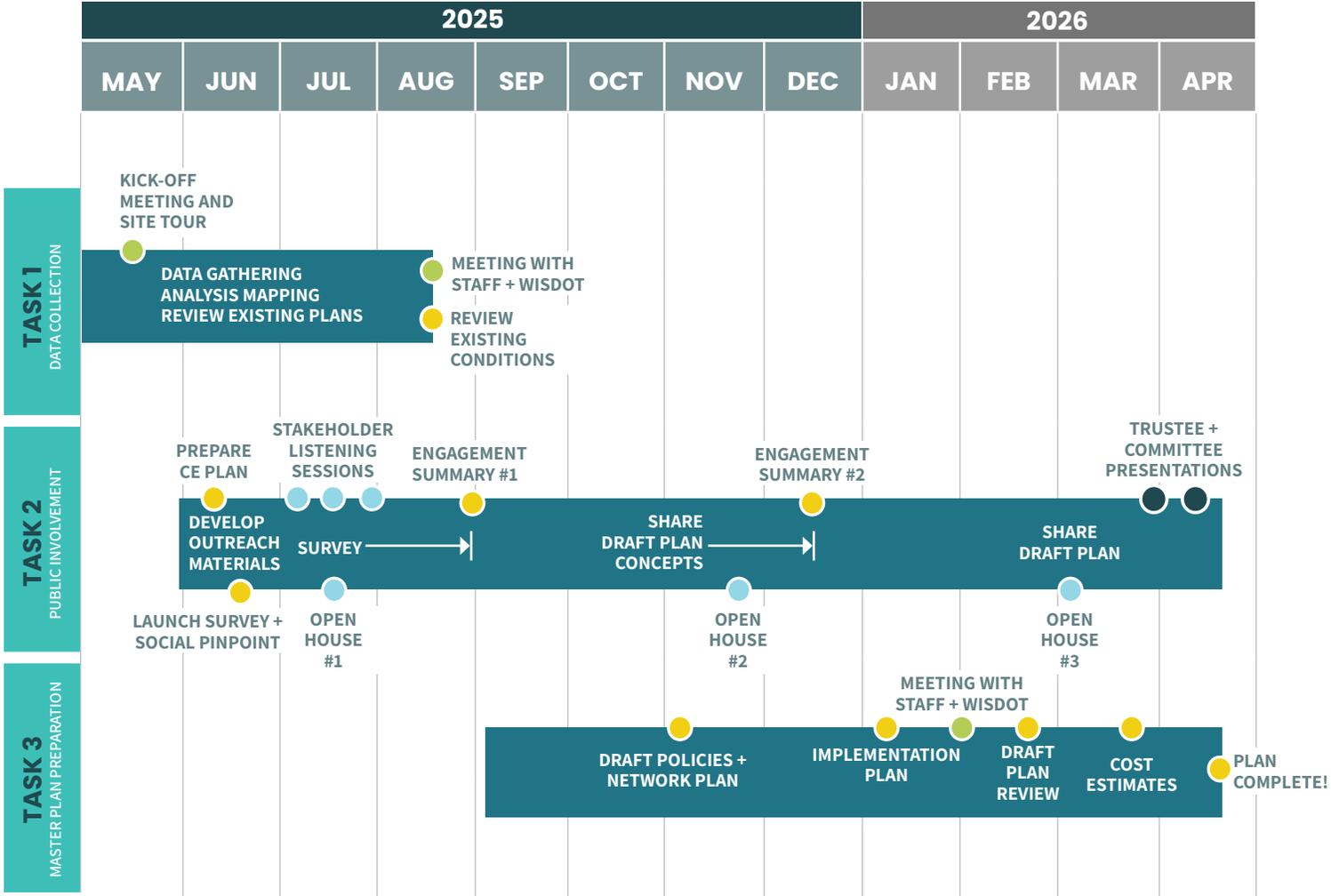
- 3.1 Prepare Draft Goals, Policies and Network Plan
- 3.2 Prepare Implementation Plan
- 3.3 Meeting with Staff + WisDOT
- 3.4 Prepare Draft Plan Document
- 3.5 Facilitate Review of Draft Plan
- 3.6 Revisions to Draft Plan
- 3.7 Cost Estimation
- 3.8 Draft Plan Finalization



The planning process will include fun engagement activities, engagement data illustrating community demographics and input about bicycling and walking in Weston, and mapping illustrating the data that underlies the improvement recommendations contained in the final Plan.

PROJECT TIMELINE

The table below outlines our anticipated timeline for conducting the work plan presented. If the HKGi team is selected to conduct this project, one of our first tasks will be to confirm this schedule or modify it to best fit the Village’s expectations and the needs of the project. We will also work with staff to add or confirm detailed dates, as appropriate, for the milestones illustrated below.



TIMELINE KEY

- Meetings with Staff / WISDOOT
- Community Engagement Events
- Project Milestones
- Trustee and Committee Presentations



Planning | Landscape Architecture | Urban Design

move

Bike & Pedestrian Plan



Washington County

*A great place to live, work,
and play... today and
tomorrow!*



Washington
County

move
Bike & Pedestrian Plan

*Funded in part by the Statewide Health
Improvement Partnership, Minnesota
Department of Health*



*Prepared by HKGi
in partnership with
CivicBrand and Bolton & Menk*



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01. PLAN & PROCESS

HISTORICAL CONTEXT

Washington County’s bicycle culture is rich in history dating back to the 1860’s. This history is celebrated and promoted throughout the county. The biking community hosts numerous events on an annual basis that attracts hundreds of riders throughout the region and nation. Notable events include the Tour De Hugo (City of Hugo) and the Hero Gravel Classic (City of Stillwater). Many events are also hosted in the county parks that range from fat-tire bike demos to educational/safety programs.

INTRODUCTION

Washington County is fulfilling one of its strategies from the [2040 Comprehensive Plan](#) by “adopting a bicycle and pedestrian plan to address county recreation and transportation needs.”

The purpose of this plan is to:

- » Create a future county-wide bicycle and pedestrian network that builds upon the existing network;
- » Identify barriers that limit safe and comfortable bicycle and pedestrian routes for all users;
- » Incorporate community feedback and desires toward bicycle and pedestrian needs, while being balanced with other county goals and resources;
- » Identify best practices and guide the county in future facility and network investments; and,
- » Guide policy and programming improvements, such as wayfinding and educational/encouragement activities.

PLAN GOALS

The purpose of this Plan is to also advance Washington County's 2040 Comprehensive Plan's goals, policies, and strategies that pertain to pedestrians and bicyclists. Excerpts from Washington County's 2040 Comprehensive Plan are listed below.

TRANSPORTATION GOAL 1: PLAN, BUILD, AND MAINTAIN AN INTERCONNECTED AND ACCESSIBLE TRANSPORTATION SYSTEM THAT CONSIDERS ALL USERS AND MODES OF TRAVEL.

- » Policy: Coordinate transportation mobility and choice to meet a diversity of needs, while considering appropriate system levels of service.
 - *Strategy: Integrate non-motorized accommodations into the design of roadway and transit facilities to increase access to destinations*
 - *Strategy: Adopt a bicycle and pedestrian plan to address county recreation and transportation needs.*
- » Policy: Work with partners to identify and coordinate transportation system improvements to accommodate growth and development
 - *Strategy: Identify gaps in the trail network and prioritize investments to improve non-motorized access to destinations.*
- » Policy: Support regional planning activities to enhance interagency collaboration and coordination.
 - *Strategy: Coordinate with partners, including the Metropolitan Council and Minnesota Department of Natural Resources, to preserve, maintain, and expand the regional and state trail networks.*

TRANSPORTATION GOAL 3: IMPROVE SAFETY AND EFFICIENCIES FOR ALL USERS.

- » Policy: Support ongoing safety review processes that promotes both proactive and reactive treatments to reduce crashes.
 - *Strategy: Coordinate with partners to improve safety and usability of county roadways when developing safe, effective, and implementable strategies in key locations (e.g., schools and at non-motorized crossings).*
 - *Strategy: Develop roadway crossings at trail facilities within county roadway corridors to promote safety for all users.*

TRANSPORTATION GOAL 4: PROMOTE POSITIVE ENVIRONMENTAL AND HEALTH OUTCOMES.

- » Policy: Explore opportunities to improve the environment and encourage physical activity.
 - *Strategy: Work with local partners to promote land use patterns that enable alternative modes of travel and reduce reliance on the private automobile*
 - *Strategy: Identify trail connections to provide links to key destinations.*

PLANNING FOR BIKING AND WALKING

Over time, the purposes for biking and walking have changed dramatically. Walking is the original form of transportation. It has always been the cheapest and most environmentally friendly way of getting around. The introduction of the bicycle in the early 1800's carried many of the same benefits and allowed people to travel more efficiently, faster, and longer distances. After the advent of the personal automobile and its increased popularity in the 1920s and 30s, biking and walking for transportation purposes began to decline and was seen mostly for sport, exercise, or recreational purposes.

Today, biking and walking have again become more popular for multiple purposes as many people are recognizing the importance of living an active and healthy lifestyle. The following are some key reasons for planning for the future bicyclists and pedestrians in Washington County.



SAFETY

Evidence suggests that high-bicycling-mode-share communities are not only safer for bicyclists but for all road users. Further, bike facilities themselves act as “calming” mechanisms on traffic, slowing cars and reducing fatalities ¹.



LIVABILITY + MOBILITY

Fifty percent of U.S. residents say that walkability is a top priority or high priority when considering where to live ². Bicycling has become the country's fastest-growing form of transportation for commuters.



QUALITY OF LIFE

Washington County residents have indicated their “quality of life” as being excellent or good³, which is attributed in part to the County's park and trail system. Parks and trails provide public health benefits by connecting people to nature, while providing opportunities to recreate and live actively. See pages 1-4 and 1-5 for more information on recent surveys conducted by Washington County regarding public health, parks, trails, and active living.



HOUSEHOLD AND COMMUNITY PROSPERITY

According to AAA, it costs an average of \$8,849 to operate the average car for 2018, or about \$737 per month ⁴. Not all households can afford to own a car and some lower income households who own a car may be sacrificing other basic needs in order to get by.

WHY PLAN FOR BIKING AND WALKING TODAY?

The following are some key reasons for planning for the future bicyclists and pedestrians in Washington County.

- » Safety
- » Livability + Mobility
- » Health
- » Household and Community Prosperity
- » Air Quality and Greenhouse Gas Reduction
- » Recreation
- » Parking and Transportation Networks



The *Washington County Residential Survey* is administered on an annual basis. The most recent survey was mailed to 2,500 randomly selected households in January 2019 and was distributed equally among the five county Commissioner Districts. Of the approximately 2,413 households that received a survey in the mail, 749 surveys were completed, providing a response rate of 31%.



Finding: Washington County residents feel exceptionally safe in the community, but are concerned about road safety.

- ↑ Residents’ rating for overall feeling of safety in the county was much higher than that given in other counties across the nation.
- ↓ Respondents felt the least safe from distracted drivers and being injured while biking or walking along roads in the county; both of these reported feelings of safety declined from 2016 to 2019.

Finding: Residents are pleased with the ease of travel in the county, but public transportation continues to be an area of opportunity.

As in 2016, ease of travel by car in Washington County received a rating of 71 on the 100-point scale, which was between “excellent” and “good” and was much higher than ratings given in other counties across the nation.

Residents were less pleased with the availability of public transportation options in the county: this item received a rating of 35 on the 100-point scale (just above “fair”) and was lower than the national county average.



“Residents visit parks regularly and would like to see additional amenities offered.”



When asked how often they had frequented a regional park or trail in the past year, a majority of respondents (**6 in 10**) had visited at least three times during that time period; **87%** of the respondents visited a regional park in the past 12 months.



Residents were asked to select from a list of options why they had not visited a regional park or trail, or had not visited more often, and instructed to choose as many as applied. Residents were most likely to indicate lack of time as a factor for not visiting (**52%** of respondents selected this option).



Residents would like to see the following facilities added or expanded to the county’s park system: hiking trails (**48%**), biking trails (**36%**), dog parks (**28%**), a swimming splash pad (**27%**) and picnic/group shelters (**25%**).

The **Adult Health and Wellbeing Survey** is conducted every 4-6 years and was administered by Washington County's Department of Public Health and Environment with SHIP support in the fall of 2019. In 2019, a total of 1,281 residents participated in either a random mail based survey, or a targeted in person survey of low income and minority populations in the county.

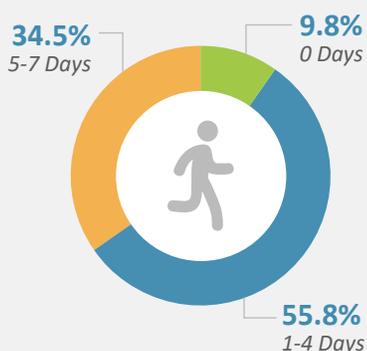


TRANSPORTATION

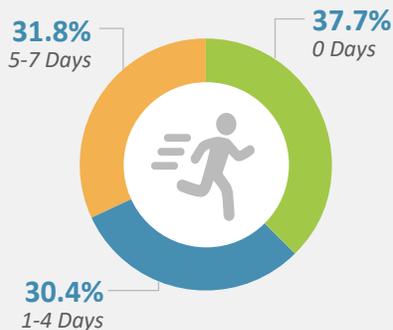
In the year prior to the survey, the lack of personal transportation kept 20% of the respondents in the targeted sample from getting to places where they needed to go, such as jobs, medical appointments, or shopping.

Finding: Most Washington County residents from the targeted sample are getting some form of exercise at least once a week, but is not meeting CDC's recommended physical activity guidelines.

Moderate exercise 5+ days per week



Vigorous exercise 3+ days per week



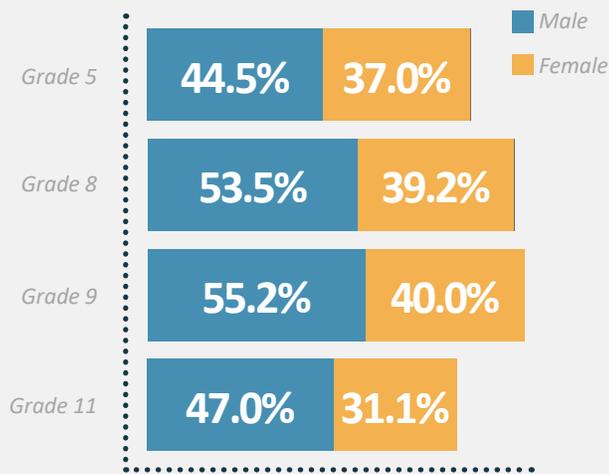
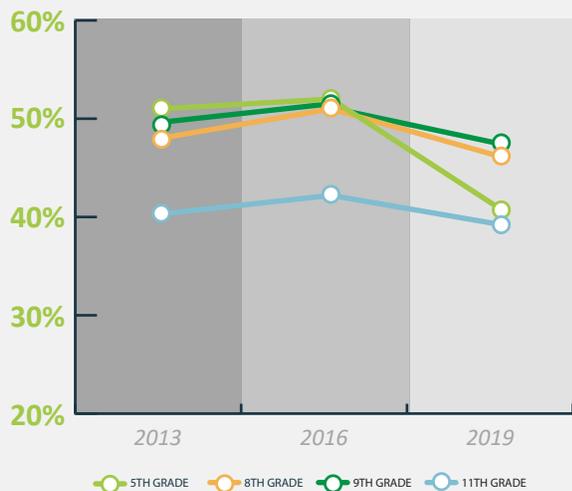
CDC Recommended physical activity guidelines: Moderate activity for 30 minutes / 5+ days or vigorous activity for 20 minutes/3+ days or both



The **Minnesota Student Survey** is conducted every three years and is a collaborative effort of local schools and state agencies (Education, Health, Human Services, and Public Safety). This survey was completed in the spring of 2019. In 2019, there were 9,541 survey responses by 5th, 8th, 9th, and 11th graders in the county.

Finding: There has been a steady decline in the amount of time students partake in physical activity during the week.

PHYSICALLY ACTIVE AT LEAST 60 MINUTES FOR 5 OR MORE DAYS IN THE PAST WEEK?



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AIR QUALITY AND GREENHOUSE GAS REDUCTIONS

The transportation sector generates the largest share (28.9%) of greenhouse gas emissions ⁵. Walking or cycling could substitute for 41% of short car trips (less than 3 miles), saving nearly 5% of CO₂ emissions from car travel ⁶.



RECREATION & COMMUTING

Trails provide recreational opportunities and commuters options. Trails also serve diverse communities, including those that may otherwise have limited opportunities to access natural areas and jobs due to financial or transportation constraints. Furthermore, bicycling is the fastest growing form of transportation for commuters.



MULTIMODAL NETWORKS

As more people bike and walk to destinations such as retail, restaurants, entertainment, and work, the demand for vehicle parking decreases, allowing buildings to be closer to each other and become even more walkable. Encouraging transit use, biking and walking brings travel origins and destinations closer together and can help alleviate traffic congestion ⁷, while supporting public health initiatives.



REGIONAL ECONOMIC COMPETITIVENESS / TOURISM

As bicycling and walking networks have grown, so have active transportation-oriented developments and bike-friendly businesses. Numerous studies have shown that real estate values increase with proximity to bicycle paths and walking trails.



SUSTAINABILITY / RESILIENCE

Because biking and walking do not rely on burning fossil fuels, they are more resilient to swings in fuel prices. From a sustainability perspective, bicycles can be produced for a fraction of the materials, energy, and shipping costs of a car. Biking and walking also saves taxpayers money by reducing road wear. A 20-pound bicycle causes less wear on the pavement than a two-ton vehicle.

THE PLANNING PROCESS

The planning process started in June of 2019 and ended in July of 2020. The draft Plan was available for public review during the fall of 2020 (August 2020 - October 2020). A longer review period was provided to better accommodate people during the pandemic. The Washington County Board of Commissioners adopted the Plan in February 2021.

PROJECT BRAND

A project brand was developed in an effort to create an “identity” for the plan. The project brand and style (as seen below) is based on five brand principles: Balance, Family, Connection, Nature, and Evolution. These principles represent an identity and path for building Washington County’s bicycle and pedestrian network. Materials and documents prepared for this plan were required to use the project logo and follow the county’s style guide.

PROJECT MANAGEMENT TEAM

The overall planning process was led by Washington County Public Works. The Project Management Team (PMT) was comprised of Public Works, Information Technology, and Public Health staff.

TECHNICAL ADVISORY COMMITTEE

The planning process was guided by a Technical Advisory Committee (TAC) (see Table 1.1). The TAC was comprised of local and regional agencies. Each committee member served as a “champion” of the process by promoting the public engagement activities, reviewing technical information, and providing guidance throughout the planning process.

PROJECT MANAGEMENT TEAM

- » Emily Jorgensen, Planner II, Public Works (Project Lead)
- » Connor Schaefer, Planner II, Public Works
- » Kevin Peterson, Engineer II, Public Works
- » Joe Gustafson, Traffic Engineer, Public Works
- » Charlie Parent, Engineering Technician II, Public Works
- » Stephanie Souter, Public Health Program Supervisor, Public Health & Environment
- » Kim Ball, Public Health Program Coordinator, Public Health & Environment
- » Alena DeGrado, Planner I, Public Health & Environment
- » David Brandt, IT Spatial Analyst Developer, IT
- » HKGi, Bolton & Menk, and CivicBrand project team representatives

Table 1.1 Technical Advisory Committee Members

NAME	CITY/TOWNSHIP	ROLE/POSITION	COUNTY DISTRICT
Ben Prchal	City of Lake Elmo	Planner	3
Ryan Goodman	Forest Lake, Marine on the St. Croix, Scandia	Consultant Engineer, Bolton & Menk	1
Eric Johnson	City of Oak Park Heights	City Administrator	3
Bill Turnblad/Abbi Wittman	City of Stillwater	Economic Development Director/Planner	3
Bob Streetar	City of Oakdale	Community Development Director	2
John Burbank	City of Cottage Grove	Planner	4
Kathy Laur	Lake St. Croix Beach	City Administrator	3
Merritt Clapp Smith	Stillwater Township, Scandia, Baytown	Consultant Planner, TKDA	1, 3
Kate Eiyneck	City of Newport	Consultant Planner, MSA Services	4
Tony Kutzke	City of Woodbury	Engineer	2,5
Shayla Denaway	City of Hugo	Parks Planner	1
Steve Elmer	Met Council	Bike/Ped Planning	NA
Brandon Helm	DNR	Acquisition and Development Specialist	NA



COMMUNITY ENGAGEMENT

Every effort was made to make the planning and public engagement processes accessible to all Washington County residents. This was achieved by targeting public engagement activities in specific parts of the county, while leveraging online tools. A summary of these activities are listed below.

POP-UP EVENTS

Community events were one of the most effective forums for engaging residents in the planning process. Washington county staff attended the following events to share project information and ask questions about walking and biking in the county:

- » Spokes & Folks: The Evolution of Bicycles and Trails in Washington County Exhibit (Historic Court House in Stillwater) – June 1, 2019
- » Washington County Ice Cream Social (Historic Court House in Stillwater) – July 18, 2019
- » Washington County Fair (Lake Elmo) - July 29 - August 4, 2019
- » Washington County Blue Grass Festival (Lake Elmo Park Reserve) – September 7, 2019
- » Sustainable Stillwater (Stillwater) - September 6, 2019
- » Tour de Hugo (Hugo City Hall) – September 21, 2019
- » Park and Trail User Interviews: Field Visit (county-wide) - September 28 – 29, 2019
- » Lake Links Association (White Bear Lake and the Town of White Bear) - December, 2019
- » Woodbury Bicycle Advisory Committee (Woodbury) - January 14, 2020

Additional events were planned, but canceled as a result of the COVID-19 pandemic. Online engagement efforts were used to help supplement the public engagement process.

VIDEO

A short video was created to highlight the purpose of the study, while showcasing interviews from residents on what walking and biking means to them in the county.

ONLINE TOOLS

Interactive maps and surveys were used to engage people specifically for this planning effort. At any given time during the planning process (June 2019 – July 2020), people were able interact with these tools to provide comments or react to ideas. The county’s website was used as a clearinghouse to promote the project and interactive tools. These tools reached over 2,000 unique users.

The public was able to review and comment on the draft Plan in late 2020 (August 2020 - October 2020). The draft document was posted on the project website and paired with a series of videos summarizing each chapter - narrated by county staff.

NOTE TO THE READER

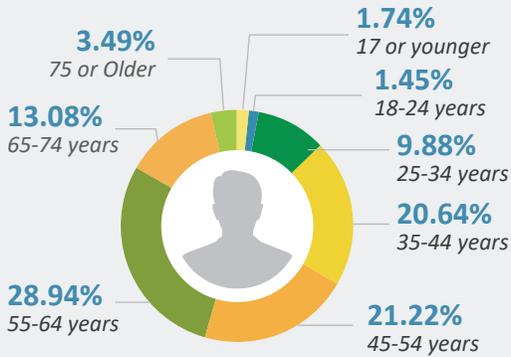
COVID-19 was at the forefront of all of our lives during the last several months of developing this Plan. During this time, Washington County’s park and trail system experienced a large increase in the number of users.

The response to COVID is continually evolving and we will continue to experience impacts in our communities and parks/trail systems as this plan is implemented.



Key themes and findings that emerged from the online questionnaire include:

Survey respondents (350 people) fell within the following age groups:



Many respondents indicated they use the existing network on a regular basis for exercise, leisure, or recreational purposes.

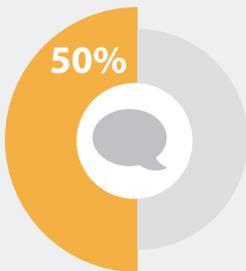
Only a small percent of the respondents use the existing bicycle and pedestrian network to travel to work:



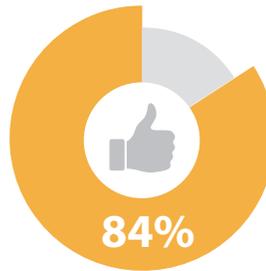
Only a small percent of respondents (1.5%) walk or bike to transit options on a regular basis.



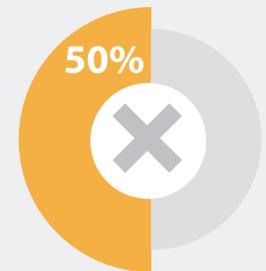
94% of the respondents never walk or bike to school or work.



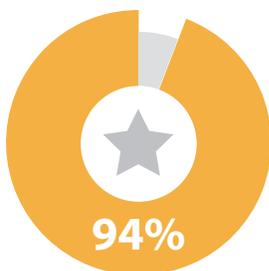
50% of the respondents indicated they are "comfortable" and "confident" in using the existing network, while 28% are "interested" or "concerned" in using the existing network.



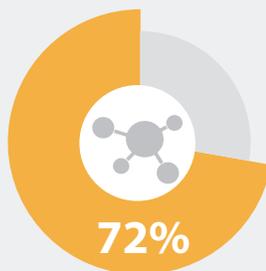
84% of the respondents felt non-motorized access to parks are "important" or "very important."



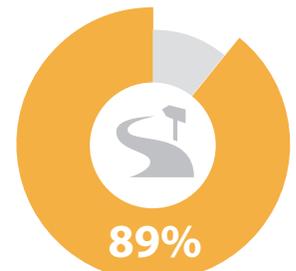
50% of the respondents do not have access to trails or sidewalks for where they want to go.



94% of the respondents felt safety was "important" or "very important" for all users of the roadway.



72% of the respondents felt it was "important" or "somewhat important" to reach their destination by foot or bike as fast as possible.



Creating off-road trails with scenic views and connections to parks and natural features are "very important" or "important" to 89% the respondents.

Specific destinations for better pedestrian and bicycle routes identified by the public include:

- » Woodbury Village/494 and CR16
- » Stillwater Marketplace (Stillwater Blvd and 36)
- » Transit stations/park and ride locations
- » Gateway Trail
- » Indian Head Trail
- » Hardwood Creek Trail
- » Lake Links Trail
- » Browns Creek Trail
- » Carpenter Nature Center
- » Wargo Nature Center
- » Oakdale Nature Center



Key themes and findings that emerged from the Social Pinpoint (an interactive online map) and discussions with people at pop-events include the following:

- ➔ Safety concerns are primarily linked to pedestrian and bicycle crossings at trails and intersections.
- ➔ Transportation barriers, such as Highway 36, Highway 95, Interstate 94, and Interstate 494 are major obstacles for people traveling by foot or bike.
- ➔ There is a strong desire to provide safer connections between neighborhoods, schools, and commercial/retail centers.
- ➔ On-road shoulders could be wider to provide more opportunities for bicyclists.
- ➔ Desired routes are focused on larger connections between popular destination points (state/regional parks to state/regional trails) or future commuter and school routes/connections
- ➔ In general, bike commuters are traveling between Woodbury and Saint Paul.
- ➔ There is a growing need for more pedestrian and bicycle amenities (e.g., bike racks, restrooms, bike repair stations, kiosks, and drinking fountains) along regional trail corridors (e.g., Gateway and Browns Creek).
- ➔ Some of the most popular pedestrian and bicycle loops are located in and around natural features (lakes and rivers).

KEY THEMES

People use the existing network for recreational purposes, but desire other routes to commercial centers and jobs.

Access to nature is highly valued.

Findings suggest transportation barriers (Highways and Interstates) may limit people's mobility options to bike to work or access transit.

Pedestrian and bicycle safety is a priority.

People strongly value Washington county's existing pedestrian and bicycle network.

Input on existing routes are generally recreational-focused.



02. EXISTING ENVIRONMENT

INTRODUCTION

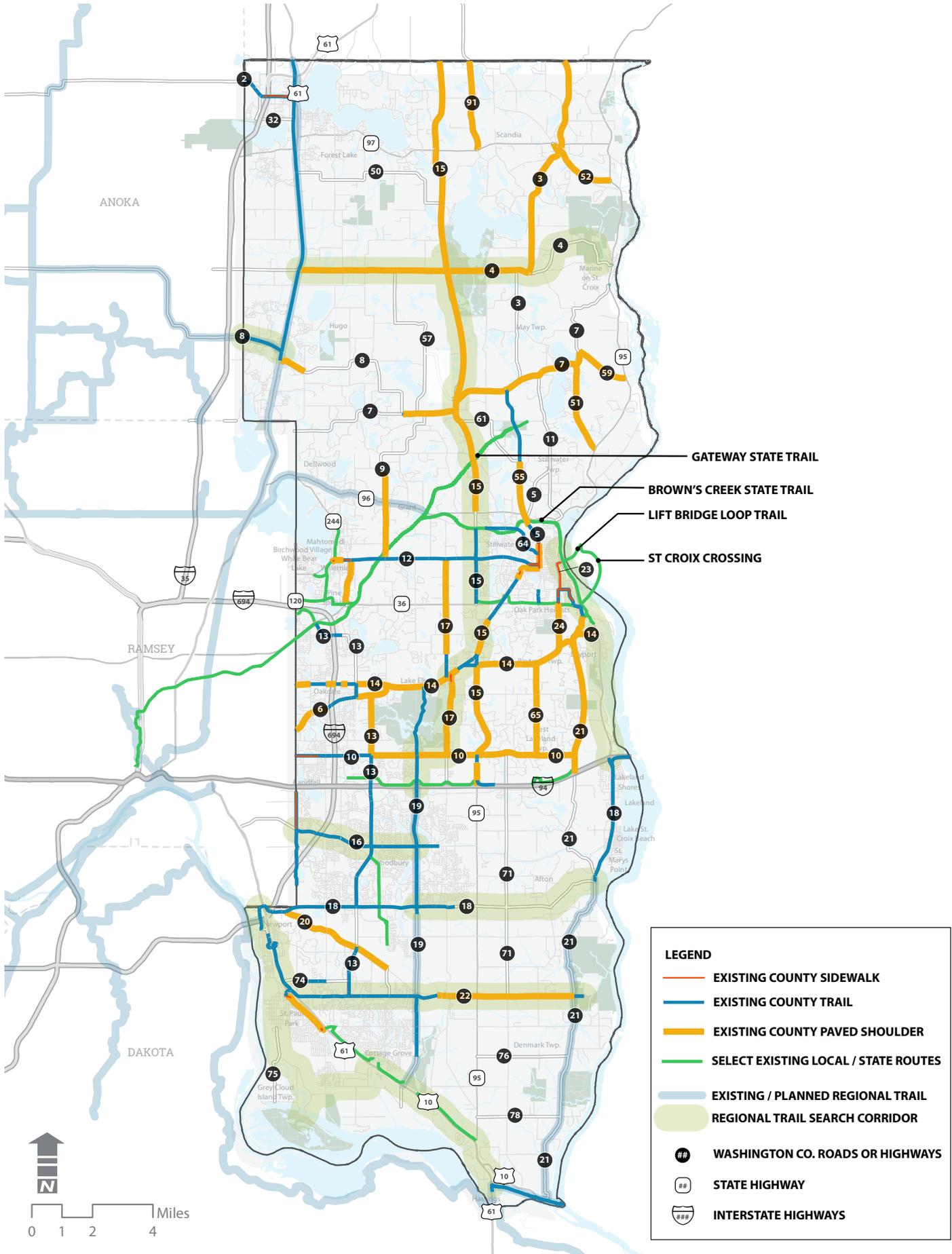
This chapter evaluates the characteristics of the existing transportation and built environment, county demographics and the demand for biking and walking, biking and walking travel behaviors and attitudes, and the safety of those who bike and walk. This analysis was used to help build the Future Network Plan and plan recommendations.

PUBLIC INPUT

During the existing conditions analysis, public input (see Chapter 1) was used to help to 'ground truth' data, as well as inform the factors used in the analysis. Where applicable community feedback is noted in this chapter with grey callout boxes.

WHAT WE'VE HEARD

Figure 2.1 Existing Bike and Pedestrian Facilities in Washington County



POPULATION FORECASTS

Washington County was reported by the State Demographer to be the third fastest growing county between 2010 and 2018. Washington County is expected to continue this type of growth as it looks out to the year 2040 (see Table 2.1). As part of this growth, Washington County and its local partners have been committed to building a multi-modal transportation network. It is also important to recognize Washington County's changing demographics (e.g., an aging population and increased racial/ethnic diversity). Planning for a multi-modal transportation networks will need to take into consideration these changing demographics, which are discussed in the Washington County 2040 Comprehensive Plan.

Table 2.1 Metropolitan Council Forecasts for Washington County

YEAR	POPULATION	HOUSEHOLDS	EMPLOYMENT
2010	238,136	87,859	71,897
2020	269,970	102,590	88,860
2030	305,600	118,620	96,540
2040	336,810	132,500	103,490

SYSTEM CHARACTERISTICS

Washington County's multi-modal network is comprised of over 240 miles of bicycle and pedestrian facilities, which complements the county's 35 miles of state and regional trails (see Figure 2.1 and Table 2.2). The county's network consists of paved shoulders, paved trails, and sidewalks along county roads in some urban areas. Paved shoulders less than 5.5' in width are not considered as part of the existing bicycle and pedestrian network. Table 2.2 does not include local (city) bicycle and pedestrian networks. Combined, the local, county, and regional systems play an important role in moving people throughout the county.

Table 2.2 Washington County Bicycle and Pedestrian Network

TRAIL OR SIDEWALK	LENGTH
County Sidewalks	9.3 Miles
County Trails*	65.0 Miles
Shoulders ≥ 5.5' on county Roads	167.2 Miles **
Regional Trails	19.1 Miles
State Trails	16.5 Miles
Total***	277.1 Miles

* Washington county trail total equals miles of road with county trails alongside them.

** Center lane miles

*** Total does not include county Roads without shoulders and with shoulders less than 5.5' on both sides.

STATE DEMOGRAPHER

According to the State Demographer, the fastest growing counties by population between 2010 and 2018 were Carver (16.4% increase), Scott (12.5%), Washington (9.8%), Wright (9.5%) and Hennepin (9.4%). The counties that added the most residents between 2010 and 2018 on net were Hennepin (+108,679), Ramsey (+43,592), Dakota (+30,006), Anoka (+27,007), Washington (+23,376), and Scott (+16,183). Forty-five counties have lost population since 2010.



WHAT WE'VE HEARD

One of the most prevalent comments received through community engagement regarding the existing bike and pedestrian system is a concern for narrow and inconsistent shoulder widths along county roads.



TRANSPORTATION TRIPS

Transportation trips can be classified as all trips whose primary purpose isn't for exercise and recreation and are destination focused. Examples of transportation trips include trips to:

- » visit friends/family
- » shopping/run errands
- » restaurants, bars, and other entertainment
- » cultural, religious, or community events
- » work
- » school
- » make connections with transit



DATA NOTES

The US Census does not account for partial trips; if a resident decides to bike to the nearest transit stop and take the bus to work, that trip will likely be counted as a transit trip if the transit portion of the trip is longer in length.

Every person, regardless of their main travel mode, is a pedestrian at one point in time whether it's walking (or rolling) from their car to their work entrance, walking to the transit stop, or walking to a neighbors house to carpool to work.



EXISTING TRAVEL BEHAVIOR AND HOUSEHOLD CHARACTERISTICS

Data available through the US Census Bureau and the Minnesota Department of Transportation (MnDOT) help paint a picture of how Washington County residents are currently getting around the county and to other destinations. This section provides a summary of this data.

BIKE AND WALK MODE SHARE

A large majority of daily transportation trips occur between the home and work. Analyzing how residents get to work provides a snapshot of typical mode share. Mode share is the percentage of travelers using a particular type of transportation. Figure 2.2 highlights how Washington County residents get to work most days of the year. Findings from this assessment include:

- » An estimated 83% of Washington County residents drive to work compared to 76% of all US citizens.
- » Approximately 286 people bike to work in Washington County and an estimated 1,340 people walk to work.
- » Non-motorized transportation accounts for 1.2% total in Washington County.
- » Walking and biking as a means of getting to work has stayed relatively the same since 2000 (see Table 2.33) in Washington County.

Figure 2.2 Means of Transportation to Work in Washington County

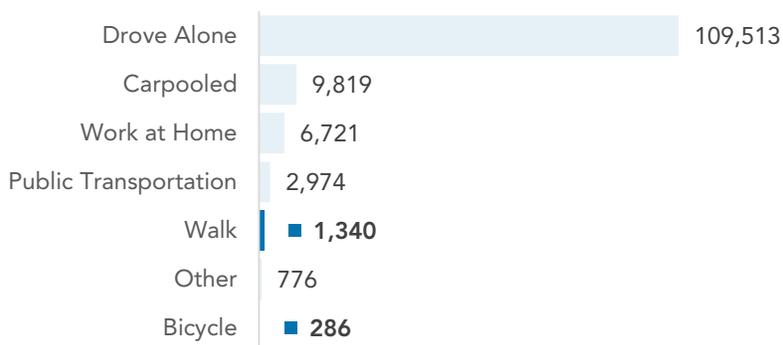
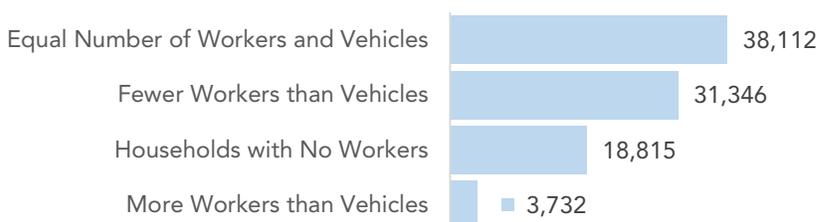


Figure 2.3 Vehicle Competitive Households in Washington County



SELECTED HOUSEHOLD CHARACTERISTICS

When a household has more workers than it has vehicles, it is classified as a vehicle-competitive household. People within a vehicle-competitive household are oftentimes faced with the decision of how they are going to get around, because they do not have the option to drive for every trip. Options for these people include alternative work schedules, or choosing other means of transportation, such as carpooling, transit, walking, or biking.

Other vehicle household characteristics include those who do not own a vehicle (zero vehicle households) by choice or for financial or ability reasons. For example, it costs an average of \$8,849 to operate the average car for 2018, or about \$737 per month¹. This amount factors in all costs of auto ownership over the life of the vehicle. For those living at or below the poverty level, vehicle ownership can be a significant cost burden. This cost burden may be eliminated or significantly lowered if a safe and convenient non-motorized transportation network exists.

Washington County's vehicle household characteristics are highlighted below:

- » **Vehicle-Competitive Households:** Figure 2.3 highlights the number of vehicle-competitive households in Washington County. This data suggests that not every eligible driver in the county needs to own a car, and that some households may be able to supplement some trips by walking or biking to nearby destinations.
- » **Zero Vehicle Households:** There are 2,752 zero vehicle households in Washington County (Table 2.44). These homes are primarily located inside the I-494 beltway. The number of zero vehicle households may be relatively small (3%), but still calls attention to the number of Washington County residents who rely on other modes of transportation.
- » **Poverty Status:** As seen below (Table 2.55), 12,251 (5.0%) Washington county residents live at or below the poverty level. A disproportionate level of minority populations live below the poverty level in Washington County.

Table 2.5 Poverty Status in Washington County

RACE/ETHNICITY	TOTAL POPULATION	BELOW POVERTY LEVEL	% BELOW POVERTY LEVEL
Population Below Poverty Level	247,183	12,251	5.0%
White	214,363	9,241	4.3%
Black or African American	9,462	1,380	14.6%
American Indian	697	67	9.6%
Asian	13,388	526	3.9%
Hispanic or Latino	9,680	1,415	14.6%
Other	9,273	1,037	11.2%

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

¹ Your Driving Costs: How Much Are You Really Paying to Drive? [Brochure]. (2018 Edition) Heathrow, FL: AAA Association Communication

Table 2.3 Bike/Walk Mode Share Over Time in Washington County

MODE	% SHARE		
	2000	2010	2016
Bicycle	0.1%	0.2%	0.2%
Walk	1.1%	1.4%	1.0%

Source: U.S. Census Bureau, Multiple Years

Table 2.4 Zero Car Households in Washington County

HOUSEHOLD TYPE	HOUSEHOLDS	PERCENT
Number of Zero Vehicle Households	2,752	3.0%
Total Households	92,005	100.0%

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

TRAVEL DISTANCE AND DESTINATION

For all modes of transportation, the majority of Washington County residents have a commute to work that is longer than 10 minutes (see Figure 2.66). However, there are almost 13,000 residents that have less than a 10-minute commute. Because such a large gap exists between the amount of people who are currently walking and biking to work (1,626 people) and the amount of people who have less than a 10-minute commute (~13,000 people), there is greater potential to increase the non-motorized transportation mode share through education and improved facilities.

Figure 2.6 Travel Time to Work



Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

ORIGIN-DESTINATIONS

Quantifying the number of people biking and walking is a difficult task to achieve at a county level. New data sources are becoming available to quantify the number of users and pinpointing their routes. These data sets are typically being collected through people who have opted into mobile applications that track their movement (e.g., fitness applications). One data source in particular includes StreetLight® data, which is an aggregate of GPS records collected from cellphone providers. This data set was available to Washington County through the Minnesota Department of Transportation (MnDOT) during the development of this study.

The data set was used to provide a snapshot of bicycle trips starting (origin) and ending (destination) in Washington County. The chords (links) in Figure 2.4 and Figure 2.5 demonstrate the bicycle trips occurring between communities. Most trips are starting or ending in Oak Park Heights, Oakdale, Stillwater, and Woodbury. Figure 2.77 - Figure 2.99 also provide a snapshot of common characteristics associated with these bicycle trips. For example, the average bicycle trip is under 20 minutes (85%), under two miles in length (88%), and under ten miles per hour (90%). These figures suggest most trips are occurring at shorter distances.

Figure 2.7 Average Bicycle Speed in MPH

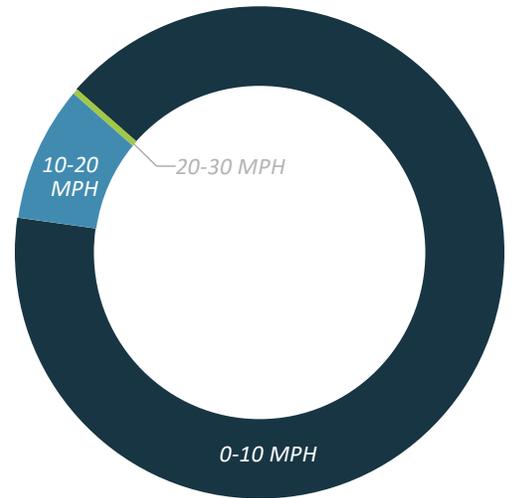


Figure 2.8 Average Bicycle Trip in Miles

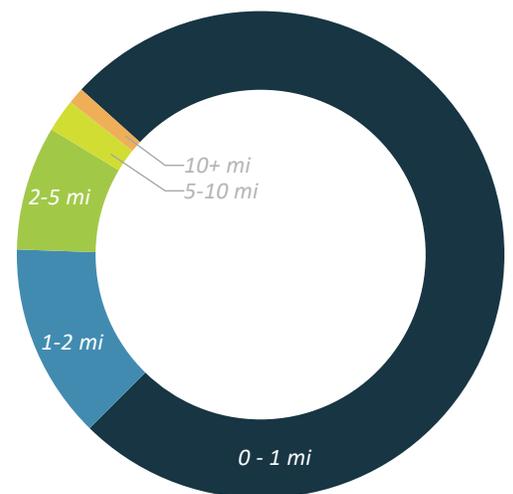
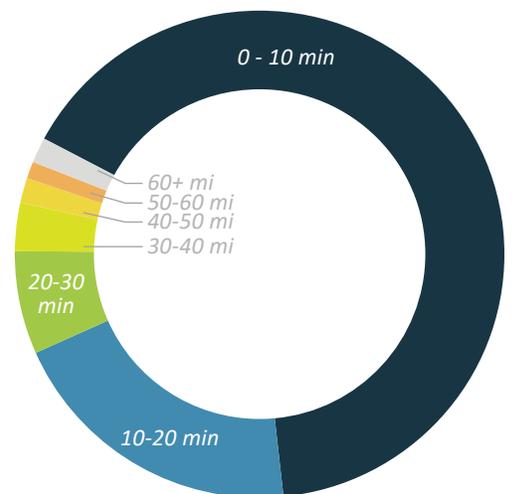


Figure 2.9 Average Bicycle Trip in Minutes



WHAT WE'VE HEARD

The following are top destinations for walking or biking, as identified through community engagement:

- » METRO Gold Line / 494 Transit Station Areas
- » 3M Campus
- » FedEx/Century College
- » All elementary, middle, and high schools
- » Shopping and commercial areas
- » Duluth Junction
- » Regional / County / State Parks
- » Regional and State Trails
- » Lakes and rivers
- » Nature Centers
- » City centers / downtowns
- » Fitness centers
- » District / Community Ed locations

DEMAND FOR WALKING AND BIKING

A demand analysis was performed to identify areas in Washington County that are likely to generate high levels of bicycle and walking activity. This analysis reveals areas where there is potentially a need for pedestrian and bicycle facilities, if they do not already exist today. The demand analysis is based on existing conditions and takes into account the following socioeconomic, connectivity, and destination factors:



SOCIOECONOMIC FACTORS

- » Population density
- » Population density of people younger than 18 years old and older than 65 years old
- » Population density of people who bike, walk, and take transit to work
- » Population density of people who have a commute that is 10 minutes or less
- » Household density of households in poverty
- » Household density of households with zero vehicles



CONNECTIVITY FACTORS

- » Intersection density
- » Bus Stop Locations
- » Future METRO Gold Line BRT Stop Locations



DESTINATION FACTORS

- » Retail property density
- » Schools (grades K-12)
- » Regional Parks, State Parks, and Natural Features
- » Trailheads
- » Job density

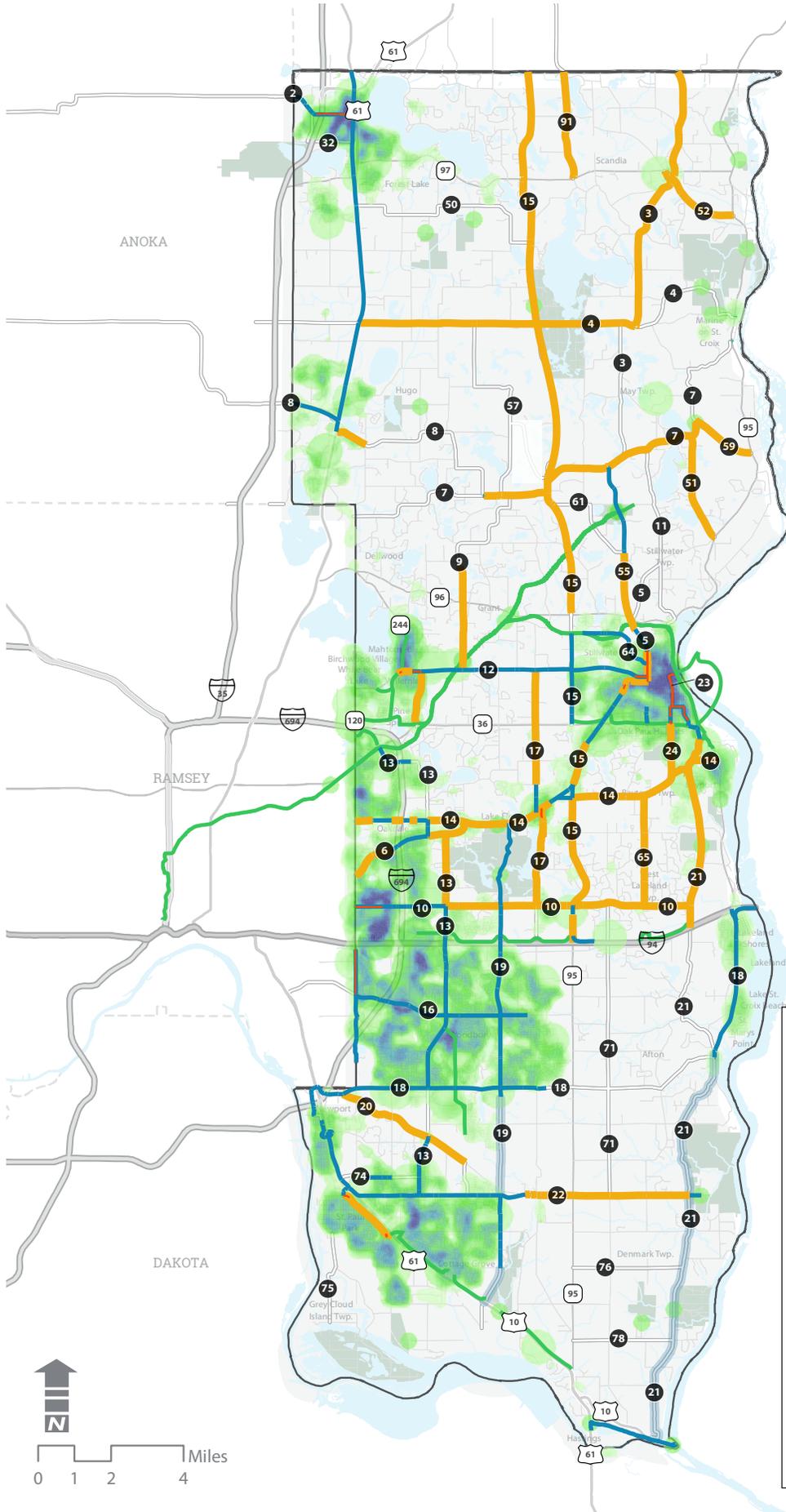
The factors above were layered together to produce a heat map (see Figure 2Figure 2.1010). Areas in darker blue indicate higher demand for biking and walking destinations. In general, these areas contain many of the factors described above when layered together. Areas in green contain only a few of the factors, while no color represents areas that do not contain any of the factors. Areas without color still serve as opportunities for future connections between neighborhoods and higher demand destinations. However, these destinations may change over time as the county's population grows and develops.



Figure 2.10 Washington County Walking and Biking Demand

WALKING AND BIKING DEMAND

This map identifies areas in Washington County that are likely to generate high levels of bicycle and walking activity. This map reveals areas (greens and blue) where there is potentially a need for pedestrian and bicycle facilities.



LEGEND

-  EXISTING COUNTY SIDEWALK
-  EXISTING COUNTY TRAIL
-  EXISTING COUNTY PAVED SHOULDER
-  SELECT EXISTING LOCAL / STATE ROUTES

WALKING AND BIKING DEMAND

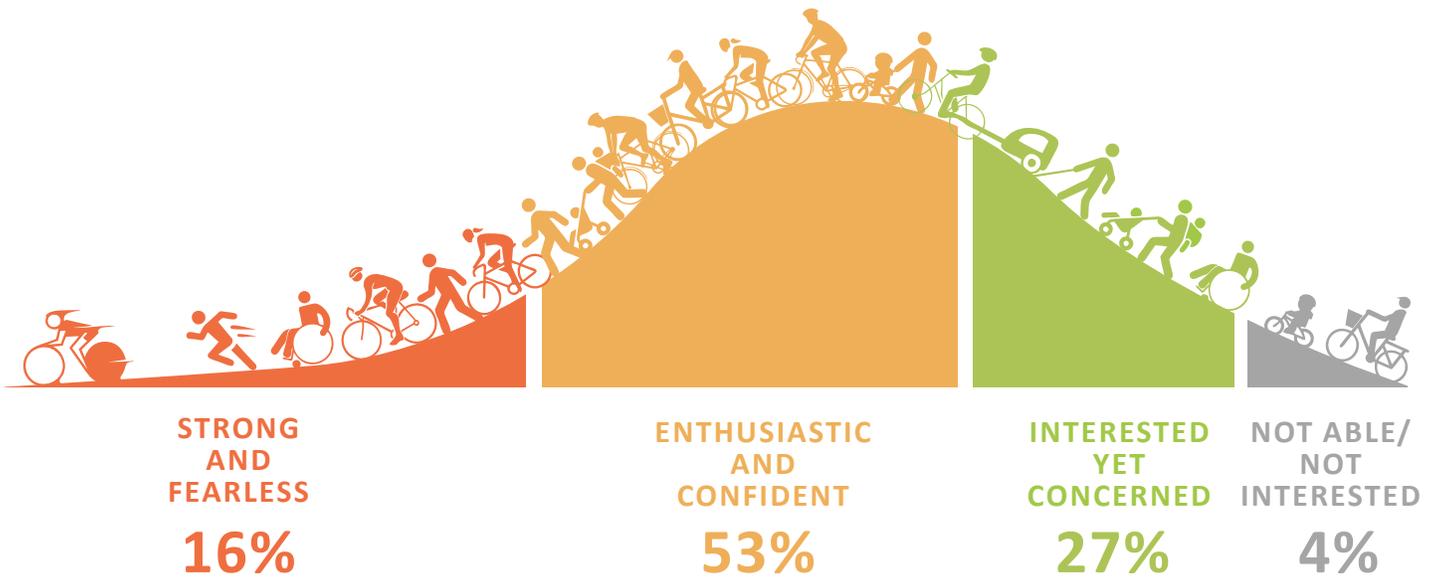
HIGHEST DEMAND



LOWEST DEMAND

-  WASHINGTON CO. ROADS OR HIGHWAYS
-  STATE HIGHWAY
-  INTERSTATE HIGHWAYS

Figure 2.11 Identified Levels of Comfort (as reported in the Washington County Biking & Walking Survey)



WHAT WE'VE HEARD

Nearly 400 Washington county residents participated in a web survey during the spring/summer of 2020, which gathered information about community preferences for biking and walking. The results show that over half of participants identify as “Enthusiastic and Confident” in their abilities to get around using non-motorized transportation. Approximately 27% of participants identify as “Interested Yet Concerned”. Generally, the filling of gaps in the separated off-road trail network significantly improves the chances that folks in this category will one day consider upgrading their status to “Enthusiastic and Confident” or even to “Strong and Fearless.”

DEFINING COMFORT

Not all people have the same level of comfort when it comes to bicycling. Originally developed by Roger Geller at the City of Portland (OR) the “Four Types of Bicyclists” (see Figure 2.711) are meant to guide efforts in assessing what certain segments of a population require or want in a bikeway facility. Geller suggested that most people can be categorized into the following four groups:

1. Strong and Fearless: People willing to bicycle with limited or no bicycle-specific infrastructure
2. Enthusiastic and Confident: People willing to bicycle if some bicycle-specific infrastructure is in place
3. Interested Yet Concerned: People willing to bicycle if high-quality bicycle infrastructure is in place
4. Not Able or Interested: People unwilling to bicycle even if high-quality bicycle infrastructure is in place

These typologies help us identify which segments of the population need lower stress facilities to try bicycling or to bicycle more often. Most communities find that as they build safer and more comfortable bicycle facilities, the number of people bicycling increases. This is due to the fact that one of the largest groups of bicyclists identify as “Interested Yet Concerned” with biking. When bicycle facilities are built to the needs of the “Interested Ye Concerned”, the results of investment yield the highest number of users. Additionally, when more people start bicycling because of a more comfortable network, biking becomes safer due, to the fact that motorists are more aware of the bicyclists presence.

WHAT IS COMFORT?

Comfort and perceived safety are strongly tied to bicycling and walking behavior. If people do not feel comfortable or safe bicycling and walking, they are unlikely to walk or bike for transportation or recreation.



LEVEL OF COMFORT FINDINGS

Overall, most of the county system accommodates the “experienced bicyclist” and the “strong and fearless bicyclists.” This is depicted in Map 1.3 and summarized in the table below.

These findings should not be perceived as a negative, but merely as a benchmark for moving forward. These findings also serve as an opportunity for helping identify improvements on the existing system and opportunities to expand the multi-modal network that accommodates all age groups and abilities.

LEVEL OF COMFORT ANALYSIS

A Level of Comfort analysis was performed to understand the level of comfort or stress bicyclists face on the existing system. While this analysis traditionally focuses on bicyclists, the outcomes are easily translatable for pedestrian experiences. Level of comfort is influenced by the following:

- » **Traffic Volume:** High volume of adjacent traffic is stressful and less desirable for bicyclists, especially when sharing the road with vehicles.
- » **Traffic Speed:** High speed of adjacent traffic is stressful and less comfortable for bicyclists, especially when sharing the road with vehicles.
- » **Separation:** Adjacent vehicle traffic in close proximity is stressful and less comfortable for most bicyclists. Separating bicyclists from the road (e.g., off-street trails) are the most comfortable routes to experience. Off-street trails also provide safer routes for pedestrians.
- » **Crossings:** Unmarked or un-signalized intersections can be stressful and uncomfortable for both pedestrians and bicyclists. Crossing driveways and access roads can also be stressful for pedestrians and bicyclists. Visible and comfortable pedestrian and bicycle crossings require site-specific design elements. Not every crossing is stressful or uncomfortable.

The existing Washington County system, along with state and regional trails, were scored based on these factors to determine a Level of Traffic Stress (LTS). The LTS analysis shows the least and most stressful routes for bicyclists.

The LTS scores for Washington County have been translated to correspond to Level of Comfort (see Figure 2.11 and Table 2.6). For example, the most comfortable facilities (or the least stressful) are referred to as facilities for “all ages and abilities.” These facilities are generally comfortable for people of a wide range of abilities, ages and perceptions of safety. The least comfortable facilities (most stressful) are referred to as facilities for “strong and fearless bicyclists.” These facilities are adjacent to or intersect with high vehicle speeds and multiple traffic lanes. These facilities are generally uncomfortable for most bicyclists and pedestrians, with the exception of highly experienced road cyclists.

Table 2.6 Overall Level of Comfort (LTS) in Washington County

FACILITY IS COMFORTABLE FOR:	MILES	PERCENT
All Ages and Abilities (LTS 1)	82.2	25.8%
Most Adult Bicyclists (LTS 2)	4.3	1.4%
Experienced Bicyclists (LTS 3)	104.4	32.7%
Strong and Fearless Bicyclists (LTS 4)	128.1	40.1%
Total	319.0	100.0%

SAFETY OF BICYCLISTS AND PEDESTRIANS

Crash data was reviewed for crashes involving people walking and bicycling from 2013 - March 2018. The locations of these crashes are illustrated in Figure 2.13. However, existing crashes do not provide a full picture of safety issues for people walking and biking. The lack of documented crashes at certain locations may indicate that people are unwilling to bike or walk in these locations because they do not feel safe. The purpose of this assessment is to provide a general overview of reported crashes (see Table 2.7). It is important to recognize the data presented throughout this section is based on reported crashes and an interpretation of crash reports. Not all crashes are reported by people, so it is unclear on the exact number of pedestrian and bicycle crashes occurring on the system. Findings from this analysis provide a general understanding of pedestrian and bicycle crashes.

LOCATION OF CRASHES

Most bicycle crashes occurred at a stop-controlled intersection (52%) with the second most common location being a signalized intersection (30%)(see Table 2.8). The most common locations for pedestrian crashes were listed as occurring in an other/unknown location or not at an intersection (57%)(see Table 2.9).

Table 2.7 Total Pedestrian and Bicycle Crashes

NUMBER OF CRASHES				
2013	2014	2015	2016	2017
37	44	38	49	50

Table 2.8 Location of Crashes Involving Bicyclists

LOCATION OF BIKE CRASHES	FREQUENCY	PERCENT OF TOTAL CRASHES
Signalized Intersection	31	30%
Stop Controlled Intersection	55	52%
Roundabout	3	3%
Interchange (on Ramp)	1	1%
Driveway Access	3	3%
Other/Unknown/Not at Intersection	12	11%

Table 2.9 Location of Crashes Involving Pedestrians

LOCATION OF PEDESTRIAN CRASHES	FREQUENCY	PERCENT OF TOTAL CRASHES
Signalized Intersection	17	14%
Stop Controlled Intersection	28	24%
Roundabout	1	1%
Driveway Access	5	4%
Other/Unknown/Not at Intersection	68	57%

WHAT WE'VE HEARD

The following are some of the most commonly voiced safety concerns raised by residents through community engagement. Note that most are referring to intersection crossings:

- » Inconsistent, narrow, or missing segments of paved shoulders along roadways
- » Need for pedestrian signals or better signal timing for existing signals at crosswalks
- » Low visibility of pedestrians crossing at intersections
- » Need for more visible crosswalks near schools
- » Vehicle speeds and enforcement of pedestrian crosswalks at roundabouts



TYPE/CAUSE OF CRASHES

Most bicycle crashes were caused by a vehicle turning left or right (45%)(see Table 2.10), where most pedestrian crashes were caused by vehicles or pedestrians failing to follow traffic control or inattention/distracted (50%)(see Table 11).

CRASH SEVERITY

The number to fatal and serious injury (incapacitating) crashes has remained about the same from 2013-2017 for bicycle crashes; however, these types of pedestrian crashes shows an increase every year from 2014-2017 (see Tables 2.12 - 2.13).

Table 2.10 Cause of Bicycle Crash

CAUSE OF BICYCLE CRASH	FREQUENCY	PERCENT OF TOTAL CRASHES
Vehicle Turning Left	22	21%
Vehicle Turning Right	25	24%
Vehicle Failure to follow Traffic Control or Inattention/ Distraction	16	15%
Bicycle Failure to follow Traffic Control or Inattention/ Distraction	25	24%
Other/Unknown	17	16%

WHAT WE'VE HEARD

“We need to be able to get to practical places without fearing the traffic.”

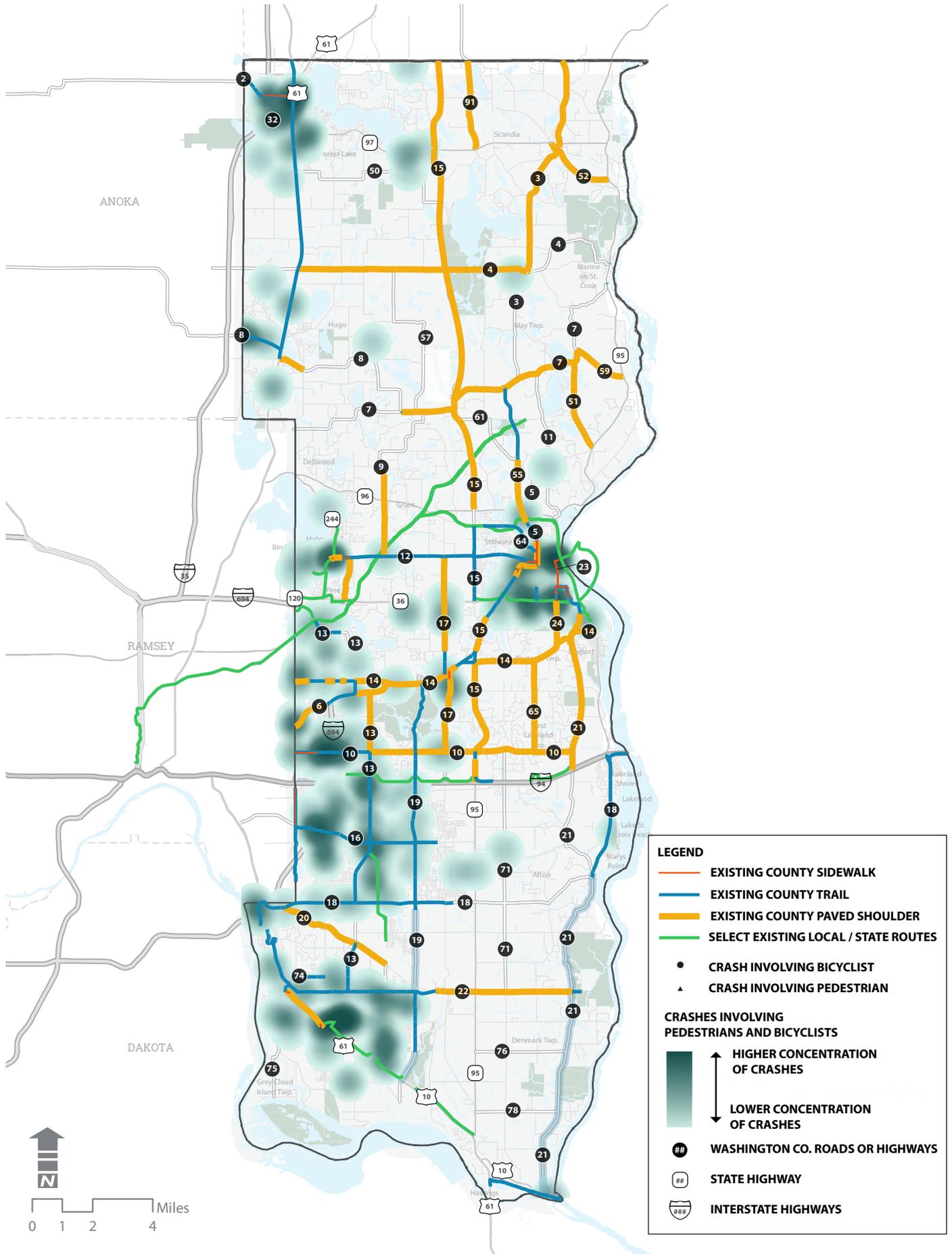
Social Pinpoint Comment



Table 2.11 Cause of Pedestrian Crash

CAUSE OF PEDESTRIAN CRASH	FREQUENCY	PERCENT OF TOTAL CRASHES
Vehicle Turning Left	16	13%
Vehicle Turning Right	6	5%
Vehicle Failure to follow Traffic Control or Inattention/ Distraction	32	27%
Pedestrian Failure to follow Traffic Control or Inattention/ Distraction	27	23%
Other/Unknown	38	32%

Figure 2.13 Washington County Crashes Involving Bicyclists and Pedestrians (2013 - March 2018)



SYSTEMATIC SAFETY ANALYSIS

Opportunity for further safety analysis may include identifying patterns and crash risk associated with different infrastructure conditions and environments. This analysis would help support a proactive approach to improving bicycle and pedestrian safety.

Tools such as pedbikesafe.org also provide practitioners with the latest information available for improving the safety and mobility of those who walk and bike. These tools and others should be considered when exploring safety improvements for various infrastructure conditions.

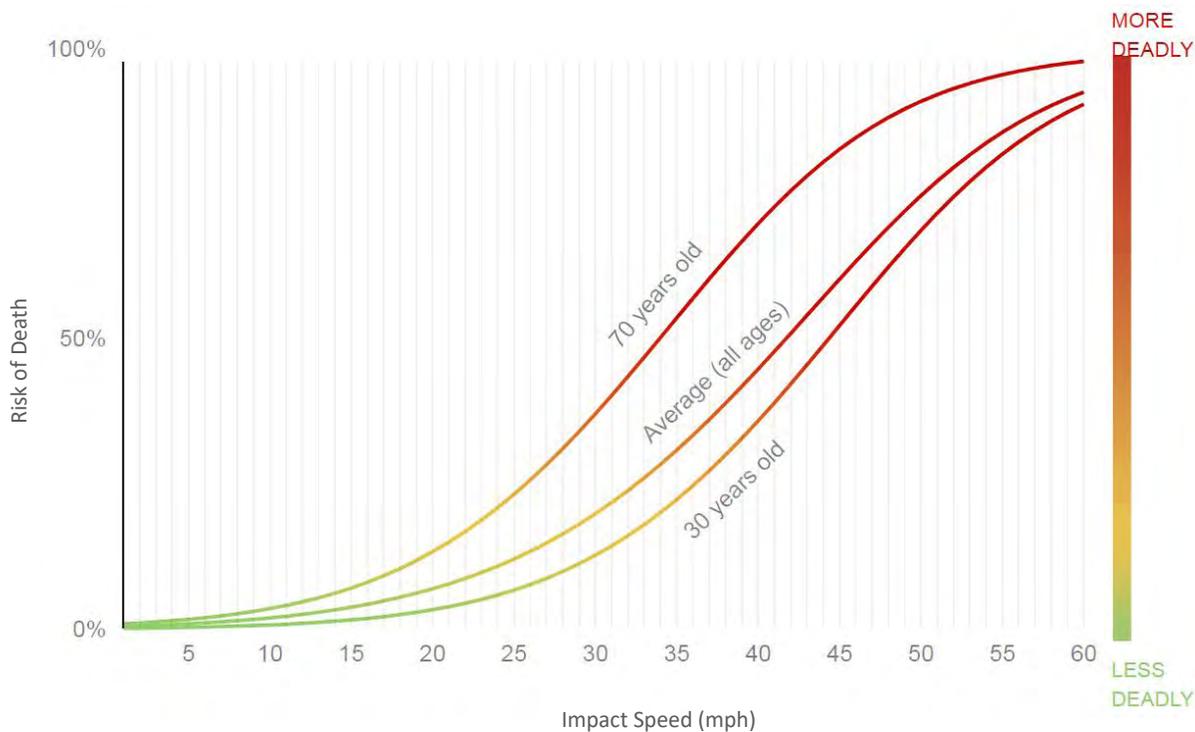
Table 2.12 Severity of Bicycle Crashes

CRASH SEVERITY	2013	2014	2015	2016	2017	2018 (ONLY THRU MARCH)
Fatal	1	1	1	0	1	0
Incapacitating Injury	2	2	0	2	1	0
Non-Incapacitating Injury	7	11	7	11	9	1
Possible Injury	6	11	15	4	8	1
Property Damage Only	0	1	0	0	2	0
Total	16	26	23	17	21	2

Table 2.13 Severity of Pedestrian Crashes

CRASH SEVERITY	2013	2014	2015	2016	2017	2018 (ONLY THRU MARCH)
Fatal	3	0	0	1	2	0
Incapacitating	2	4	5	6	7	1
Non-Incapacitating	11	5	2	17	12	1
Possible Injury	5	9	8	5	3	2
Property Damage Only	0	0	0	3	5	0
Total	21	18	15	32	29	4

Figure 2.14 Impact Speed and Risk of Pedestrian Death



Source: "Unsafe at Many Speeds". Lena Groeger. <https://www.propublica.org/article/unsafe-at-many-speeds>

ISSUES AND CHALLENGES

Pedestrian and bicycle facilities should be designed for use by people of all ages and abilities. There are a variety of issues and challenges in the county that can make bicycling and walking difficult for even the most confident bicyclists and pedestrians.

Man-made and environmental physical barriers within the county that may hinder biking and walking include:

» Rivers, Streams, and Lakes

Washington County is home to many water features for its residents to enjoy. Unfortunately, crossing over these features can be challenging without structures (e.g., bridges and boardwalks), which can be costly.

» Highways and Freeways

Roadways with limited access and high speeds of traffic are difficult to cross and in some cases, illegal to cross as a pedestrian and bicyclist.

» Railroad Corridors

Rail corridors throughout the county can be hazardous to cross at improper locations. Rail crossings require careful coordination with railway companies.



The top locations for crashes involving pedestrians and bicyclists are highlighted in Figure 2.13. Most of these locations occur where there is high demand for walking and biking and major transportation barriers are both present. Most of these locations are destination-rich and come with the challenge of balancing automobile mobility and access with the safety of pedestrians and bicyclists.

While the county may be connected through trails (state, county, regional, and local), county roads, and local roads, only 25% of the county's existing bicycle and walking network is identified as comfortable for all ages and abilities. Vulnerable populations that do not or cannot drive are more affected by missing gaps in the network of comfortable biking and walking facilities. Even places along existing trails, such as the Gateway and Brown's Creek trails, can be uncomfortable for bicyclists and pedestrians because the trails cross high speed highways at grade. Grade separated infrastructure (tunnels or bridges) is often an expensive solution, and may not always be the best solution to address safety. Traffic slowing or calming, increasing visibility and/or providing adequate signals may be just as effective to improving user comfort at crossings and throughout the overall ped/bike network.

Policy and education based issues and challenges such as trail winter maintenance, awareness of trail locations, trail etiquette and driving laws, as well as vehicle speeds also affect the comfort and accessibility for biking and walking in Washington county.



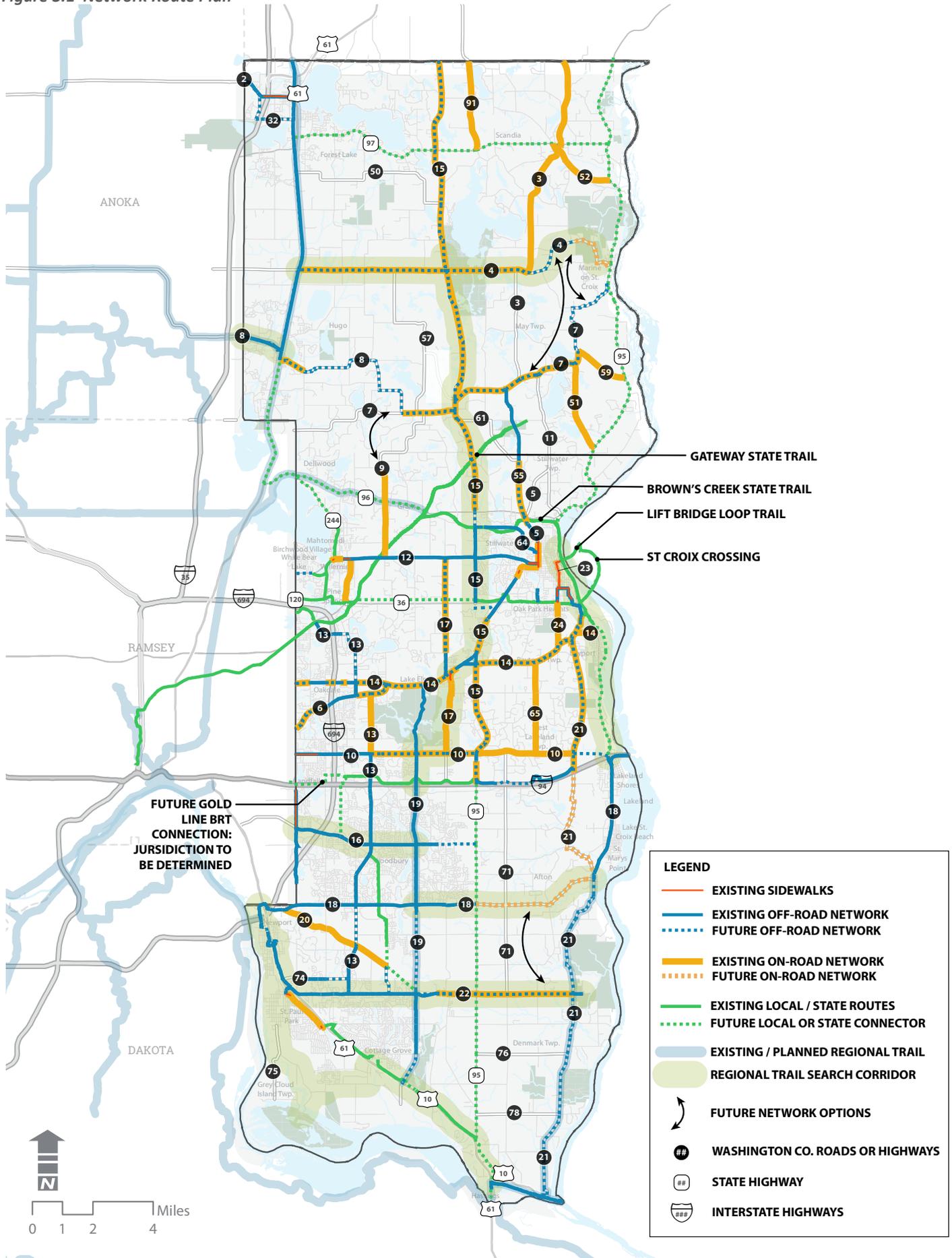
03. NETWORK PLAN

GOALS FOR THE NETWORK

A successful network for pedestrians and bicyclists consists of clearly defined routes that connect users to relevant destinations with a consistent experience throughout the start and end of their trip. Today, the network of pedestrian and bicycle facilities throughout Washington County's system is primarily built as trails or sidepaths (trails aligned with existing roadways) and paved shoulders that are actively used by pedestrians and bicyclists as their comfort level allows.

In the development of a plan for the future county-wide network, the following goals were established through collaboration with county staff and influenced by feedback gathered through community engagement. These goals will continue to serve as guidance for future alignment, identification, and implementation of the network and supporting pedestrian and bicycle facilities.

Figure 3.1 Network Route Plan



NETWORK GOALS



Goal 1: The Washington County network for pedestrian and bicyclists will primarily focus on creating and maintaining longer segment connections between cities, regional and state parks, and other destinations throughout the county, providing pedestrian and bicycle connections at a range of intervals of every 2 miles (in urban or suburban areas) up to every 4 miles (rural areas).



Goal 2: The planned Washington County system will connect to existing local and state trail networks, and future segments within the county's system will avoid duplication of similar routes owned by other agencies.

The Washington County network will continue to serve an existing and enthusiastic community of recreational bicyclists, as well as support a growing population of people interested in integrating biking and walking into daily commutes to work or school.



Goal 3: The Washington County network will continue to consist primarily of two types of facilities: off-road trails and paved shoulders. New network segments and improvements to existing segments will be constructed and planned with consistency and with accepted state and national standards and guidance applicable to the appropriate rural, suburban, or urban transects of Washington County.



Goal 4: The Washington County Network Plan will build off of previous comprehensive planning efforts. The Network Plan will support the ongoing planning and construction of the Regional Bicycle Transportation Network (RBTN). Search corridors and alignments previously identified will remain part of the future county-wide network, with additionally planned segments that will augment and support these routes.



Goal 5: The county road and public right-of-way network will connect various public realm amenities for a range of modes and activities (walking, biking, driving, roller-blading, etc.), and will support how residents travel to and from destinations such as schools, parks/open space, restaurants and other businesses.

NETWORK PLAN

The Network Plan was developed to guide the next 10 years of bicycle and pedestrian routes within Washington County, and is intended to clearly build off of recent and concurrent multi-modal planning efforts throughout the county. The Network Plan is compatible with the County's 2040 Comprehensive Plan, as well as future corridor search areas for regional trails. These routes have been determined through analysis and synthesis of the existing conditions (as outlined in Chapter 2), as well as combined input from county staff and residents of Washington County through community engagement.

The primary focus of the Network Plan in Figure 3.1 identifies:

- » Existing and future off-road network segments as trails or sidepaths as shown in blue.
- » Existing and future on-road network segments as paved shoulders as shown in orange.
- » Existing local or state connector routes that support the county-wide system today, or will potentially support in the future as shown in green.

ROUTE TYPES

OFF-ROAD NETWORK

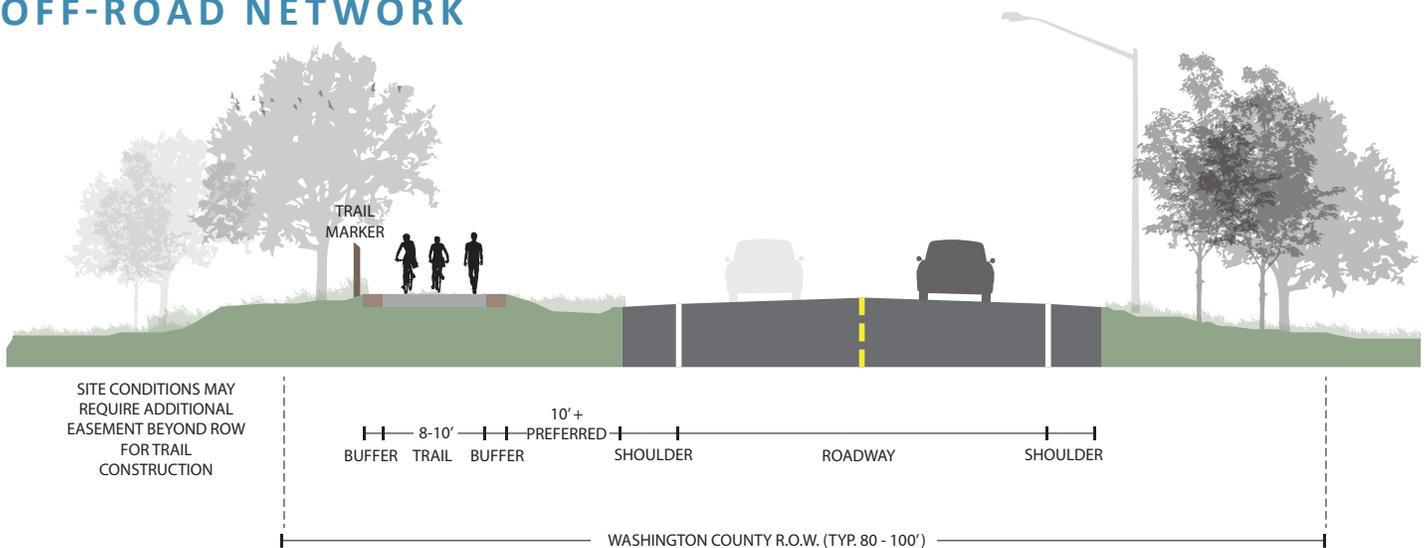


Figure 3.2 Typical Off-Road Network Route Section

The existing off-road network consists of paved shared-use trails that are aligned with county roadways and are built almost exclusively within the county right-of-way. The proposed off-road network builds off of the existing built segments to fill gaps, creating connections for longer distance travelling throughout the county for recreational and transportation purposes. This route type is intended to provide a continuous trail experience, separated from the roadway, that is comfortable for use by all ages and skill levels. This route type is intended to be used by pedestrians and bicyclists, as well as in-line skaters and other non-motorized transportation users. Whether a trail is located on one or both sides of the roadway will be determined at the time of implementation, and will be driven by projected use and connection to nearby destinations. Roadways with trails along one side of the roadway should have extra attention paid at roadway crossings, to ensure that trail users can connect safely and comfortably to other trail connections and to community destinations.

An effort should be made to provide continuous connection to nearby existing local, state, and county trails and sidewalks where possible, and may require spurs or additional connections that are not in alignment with the adjacent roadway.

OFF-ROAD NETWORK RECOMMENDED DESIGN FEATURES

Existing trails throughout the county vary in width and design. As new trail segments are built, or as trails are improved or upgraded, the following recommendations should be considered for design:

- » 8-10' in width with a preferred minimum 10' vegetated buffer between the trail and adjacent roadway
- » 2' gravel or vegetated buffer on either side of the trail
- » Continuous bituminous (asphalt) surface
- » ADA curb ramps installed at all roadway crossings, along with high visibility crosswalk markings as necessary
- » Maximum of 5% running slope wherever possible, with a 1-2% cross slope
- » Intermittent trail markers or directional signage to nearby landmarks or intersections
- » Communication of on-road network to be done through a county-wide map, available through the county website and posted at county parks

See page 3-18 for further specific guidance on trail / sidepath design.



OFF-ROAD NETWORK: REGIONAL TRAIL

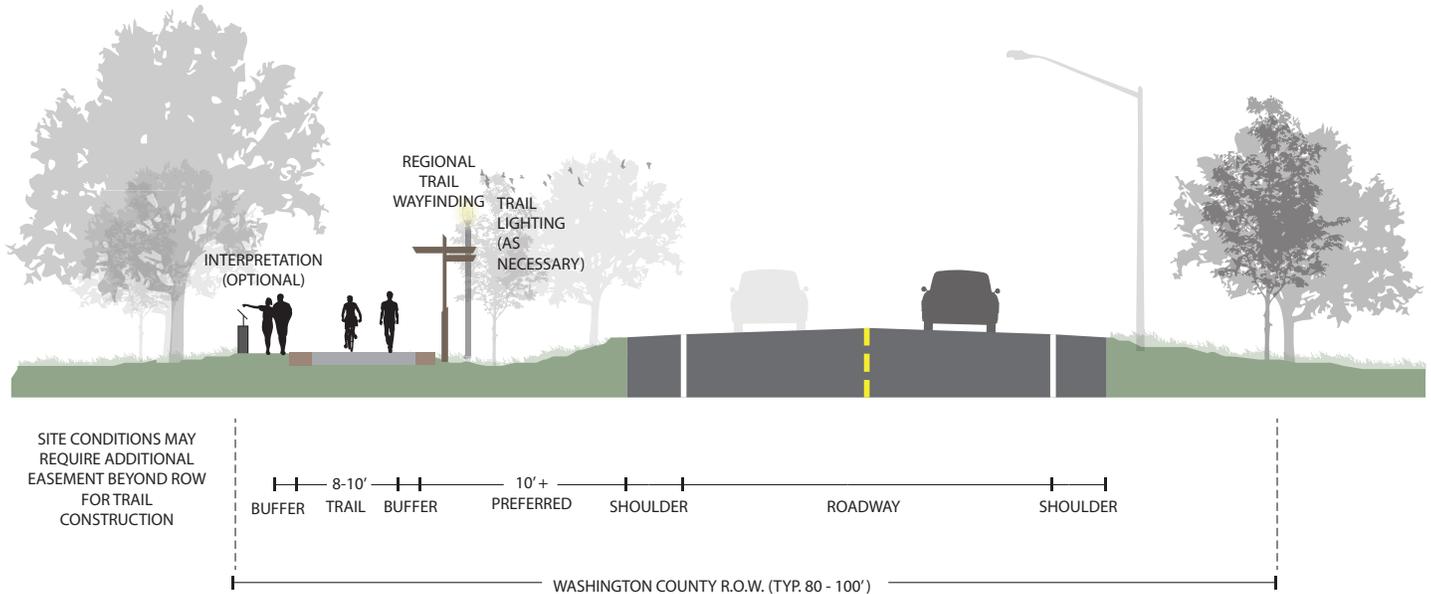


Figure 3.3 Typical On-Road Network Route Section for a Regional Trail

The off-road network includes segments that have been previously planned as a future regional trail, or fall within a regional trail search corridor. Regional trails are intended to serve as high-quality recreational routes for non-motorized use. Most often, the regional trail networks connect to natural and scenic areas, as well as connect to and through regional and local park systems. Wayfinding and interpretive elements are often integrated into the trail experience to provide interest and information about regional destinations, history, and/or ecology.



Trailhead along Hardwood Creek Regional Trail with seating, information kiosk, and trash/recycling receptacles (Photo: Star Tribune)

OFF-ROAD NETWORK: REGIONAL TRAIL RECOMMENDED DESIGN FEATURES

In addition to the recommended design features outlined for the off-road network routes (as shown on page 3-4), off-road network segments within the Washington County bicycle and pedestrian network should be considered for the following design elements:

- » Regional trail name and placemaking elements such as wayfinding signage, trailheads, and interpretive elements
- » Trail lighting (either pedestrian-scale lighting with dark sky features or trail bollards with lighting) where appropriate
- » Observation platforms or scenic viewing locations at places of interest
- » Other possible trail amenities such as drinking fountains, bike fix-it stations, trash/recycling receptacles
- » Trail markers or directional signage directing users to nearby landmarks or intersections
- » Communication of on-road network to be done through a county-wide map, available through the county website and posted at county parks

ON-ROAD NETWORK

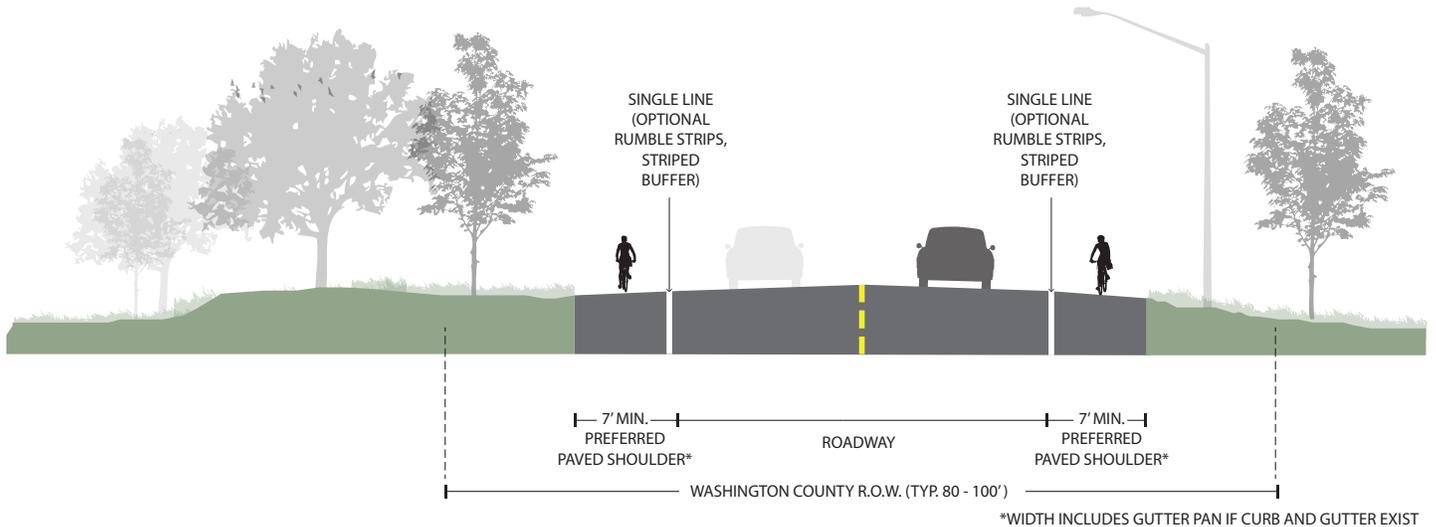


Figure 3.4 Typical On-Road Network Route Section

The on-road network consists of paved shoulders that are wide enough for bicyclists or pedestrians to use. These paved shoulders exist today, throughout county, and vary in width and comfort for use. The Network Plan identifies existing paved shoulder segments that are at least 5.5' in clear width as part of the existing network. A handful of new segments for the on-road network are proposed in the Network Plan.

The planned on-road network:

- » Supports connections to the off-road network
- » Acknowledges the existing on-road bicycle routes used today by cyclists who are comfortable travelling alongside vehicle traffic, and
- » Fills gaps in the overall county-wide network where a separated trail is likely not feasible due to land constraints (topography, tree cover, private land ownership, etc.), high costs, and low projected use.

Today, the county does not have any bike lanes and shared-use lanes have been constructed sparingly. This plan does not include specific recommendations to include these types of on-road facilities in the near future within the county system, as there has been

a general preference voiced for focus on separated trails that are comfortable for a wider range of abilities and comfort levels. The on-road network comprised of paved shoulders will take advantage primarily of existing roadways and routes that are in-use today by cyclists.

ON-ROAD NETWORK RECOMMENDED DESIGN FEATURES

On-road network segments within the Washington County bicycle and pedestrian network should be considered with the following design elements:

- » 7' clear width for paved shoulders is preferable for these routes and future roadway upgrades
- » Optional rumble strips or striped buffer
- » Optional wayfinding or directional signage
- » Communication of on-road network to be done through a county-wide map, available through the county website and posted at county parks

See page 3-19 for further specific guidance on paved shoulder design

STATE AND LOCAL CONNECTORS

It is not possible to provide an evenly distributed route network across the entire county by relying solely on Washington County roadways and landholdings. Each municipality within the county has an existing trail and sidewalk network, and there are state trails (Gateway and Browns Creek Trails) that provide significant connection to destinations today. The Washington County Network Route Plan identifies some of the existing state and local trails and facilities that are already in-place today to support the county-wide network. Often these are longer route segments that connect trail users across longer distances.

Future state and local connector routes are also identified on the Network Route Plan. These are segments that could serve to support the county-wide network in the future. However, these areas are not within Washington County jurisdiction. They have been identified in this plan as potential projects that, if initiated by the local or state jurisdictions, could also serve to supplement the county bike and pedestrian network.

INTERSECTION CASE STUDIES

County-wide crash data from 2013 to 2018, along with information gathered through the public engagement process, guided the identification of areas throughout the county that warranted further study to address safety at intersections. Efforts were made to understand how future facility improvements (e.g., crossing aids, crosswalk markings, signage, trail or pavement design) could potentially address safety issues for pedestrians and bicyclists as they use or connect to the Washington County pedestrian and bicycle network.

A number of common intersection types were identified as safety and comfort concerns for pedestrian and bicyclists:

- » Roundabout intersections
- » Trail crossings at side streets
- » Crossings at wide roadways due to trail gaps
- » Signalized intersections near commercial / community destinations

The following case studies examine these example intersection conditions found throughout the county to better understand the public's safety concerns. The case studies also provide potential improvement considerations and resources for further exploration.

There are many intersections throughout the county roadway system where pedestrians and bicyclists will potentially cross at some point, either with or without adjacent trails or paved shoulders. Enhanced crossing treatments, signals, and signage do not necessarily make intersections safer for pedestrians, reduce speeds of drivers, or improve behaviors. All options should be explored, including dissuading pedestrians from crossing at unsafe locations.



Browns Creek State Trail in Stillwater

1 CASE STUDY: ROUNDABOUT INTERSECTION

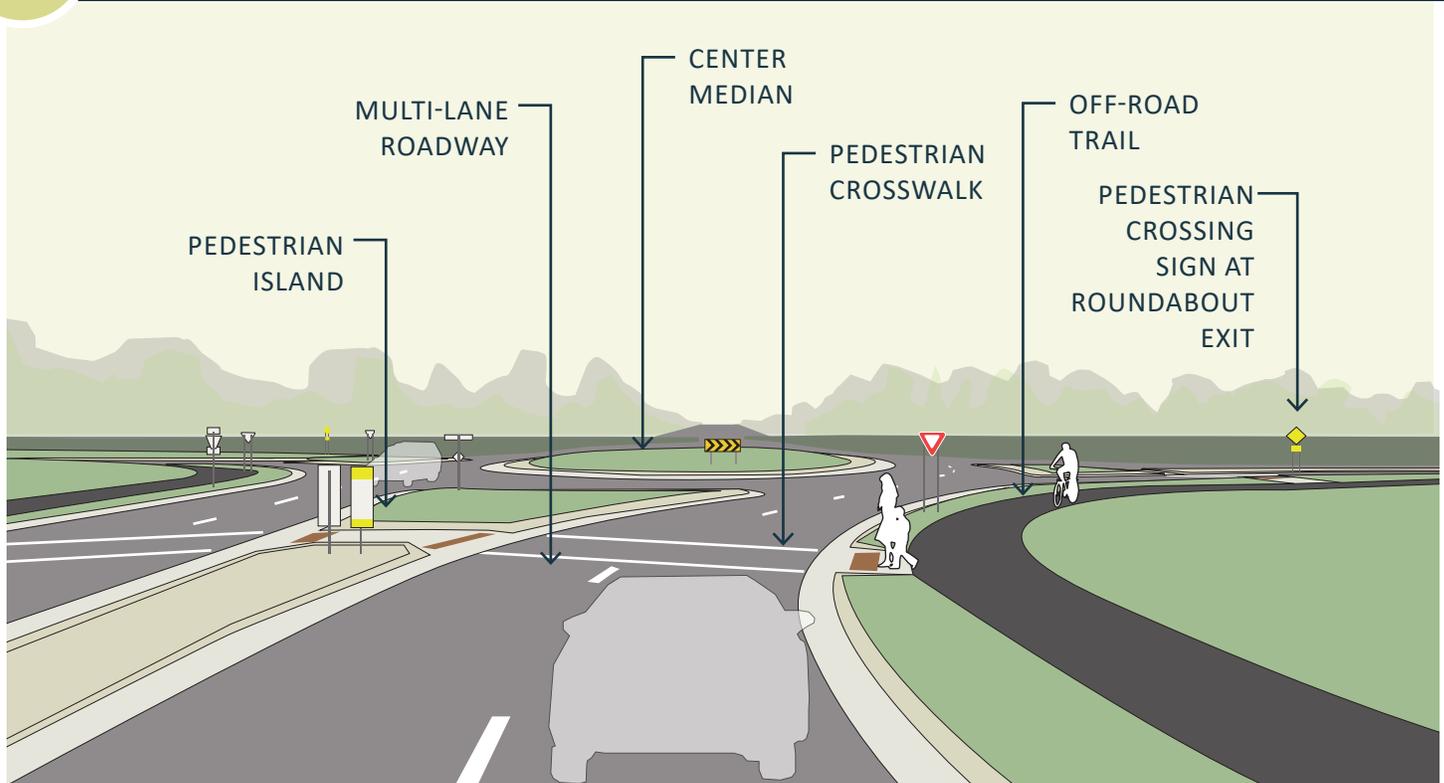


Figure 3.5 Illustration of an example roundabout

ROUNDABOUT:

- » Intersections designed as an alternative to signal-controlled or stop-controlled intersections.
- » Generally, vehicles enter the intersection at lower speeds (compared to typical intersections).
- » Vehicles are required to yield to vehicles from the left, as well as yield to pedestrians and bicyclists.
- » Crossing distances for pedestrians and bicyclists at roundabouts are generally shorter, with pedestrian islands.
- » Single-lane roundabouts typically offer shorter crossing distances and lower speeds than multi-lane roundabouts.

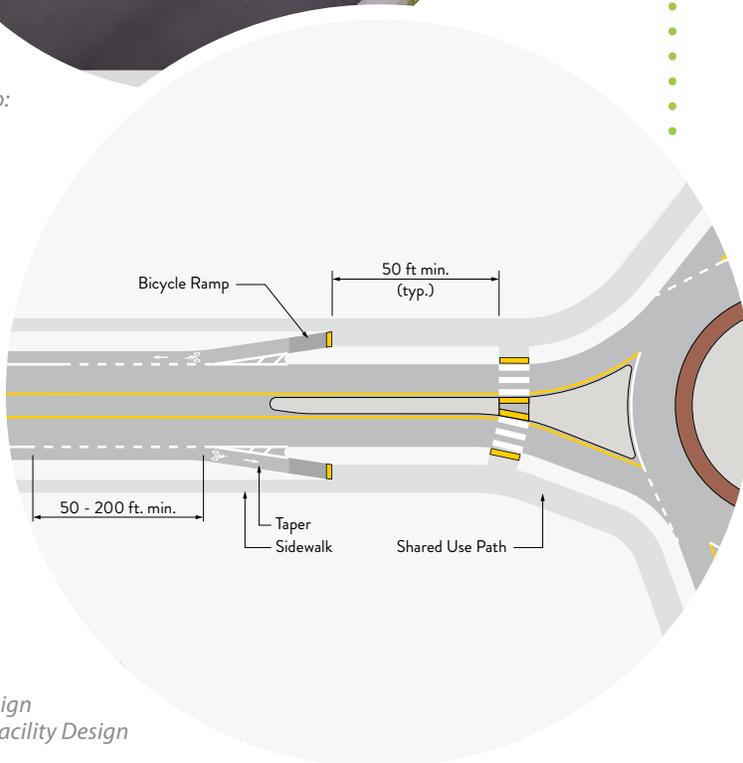
SAFETY CONCERNS:

- » Drivers entering the roundabout intersection are generally looking ahead and to the left for conflicting vehicles, and can fail to see pedestrians and bicyclists crossing the intersection from the right side of the roadway. This situation is not exclusive to roundabouts and occurs at standard intersections as well.
- » Drivers exiting the roundabout may fail to see a pedestrian in a crosswalk.
- » Roundabouts can be complex for drivers that aren't familiar with them.
- » Crosswalks with multiple lanes of approach, at roundabouts or elsewhere, can cause crosswalk users to become hidden from view behind stopped traffic creating a potential hazard.
- » Bicyclists using the roadway may be uncomfortable mixing with traffic as they move through the roundabout.

Roundabout design with separated pedestrian and bicycle crossing, entry pedestrian crossing signs, high visibility crosswalks and low vegetation in medians. Note that this example includes on-road bike lanes. Also note that diamond signs are not included in Minnesota State guidelines. (Image: MassDOT Separated Bike Lane Planning and Design Guide)



Example of crosswalk design (Photo: Carmanah Traffic)



Slip ramp design (MN Bicycle Facility Design Manual)

BICYCLE AND PEDESTRIAN CONSIDERATIONS AT ROUNDABOUTS:

- » Consider signs at roundabout, including pedestrian crossing signs at vehicle approach of the roundabout intersection.
- » Continue to provide protected pedestrian islands at crosswalks.
- » Continue to provide continental-style crosswalk markings and other high-visibility crosswalk treatments.
- » Consider Rectangular Rapid Flashing Beacons (RRFB) or other user-activated pedestrian signal at roundabout crossing where applicable, such as high-volume locations.
- » Continue to integrate protected shoulders or shared-use paths at roundabouts. Consider installing a slip ramps, with considerations for maintenance and ADA standards.
- » Continue to opt for a single-lane roundabout design if traffic volumes permit.
- » Continue to design roundabouts to allow for proper deflection angles to promote slower speeds throughout.

RESOURCES:

- » MN Bicycle Facility Manual (2020), page 7-13
- » MnDOT Road Design Manual, Chapter 12
- » NCHRP Report 672 - Roundabouts: An Informal Guide

2 CASE STUDY: TRAIL CROSSING AT SIDE STREET

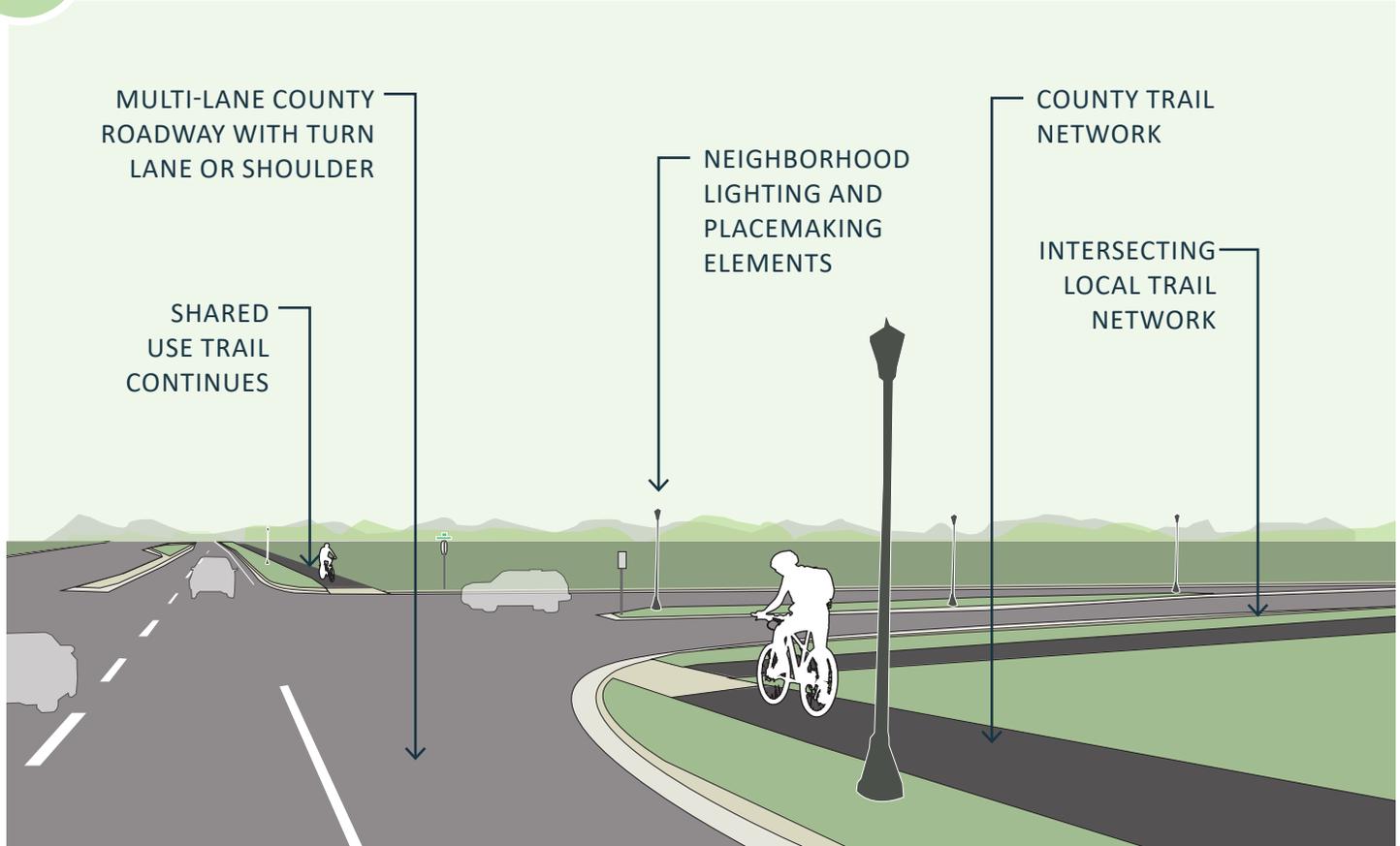


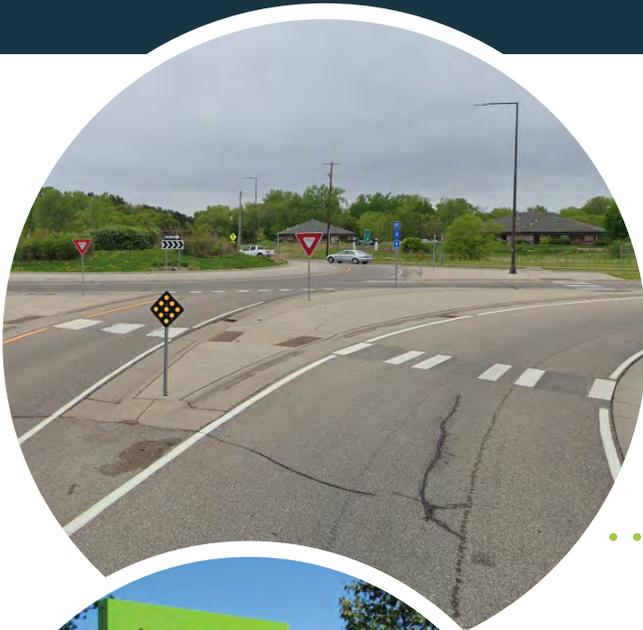
Figure 3.6 Illustration of an example trail crossing at a side street

SIDE STREET TRAIL CROSSING:

- » The Washington County bicycle and pedestrian network primarily exists in alignment with the county roadway network.
- » Separated trails (also known as sidepaths) are generally located parallel to major roadways.
- » Local (municipal) streets intersect the trail network with variations in crossing treatments.
- » Roadway width, lighting, topography, continuity and connection with other trail networks, and signage contribute to the visibility of trail users to vehicles, as well as contribute to the overall comfort of trail users.

SAFETY CONCERNS:

- » Drivers approaching from sidestreets may not anticipate a trail crossing at the intersection.
- » Inconsistencies in design of signage, crosswalk markings, or pedestrian curb ramps between local and county jurisdictions could pose confusion for trail or roadway users.
- » Wide distances between the roadway and the trail provide a more comfortable trail experience between intersections. However, the crossing might be set back from drivers' desired stopping location.
- » Drivers approaching the intersection from a side street may be looking in one direction for a gap in traffic and do not see a cyclist on the trail coming from the other direction.
- » Cyclists from the side street might be in the driver's blind spot as they approach the intersection.



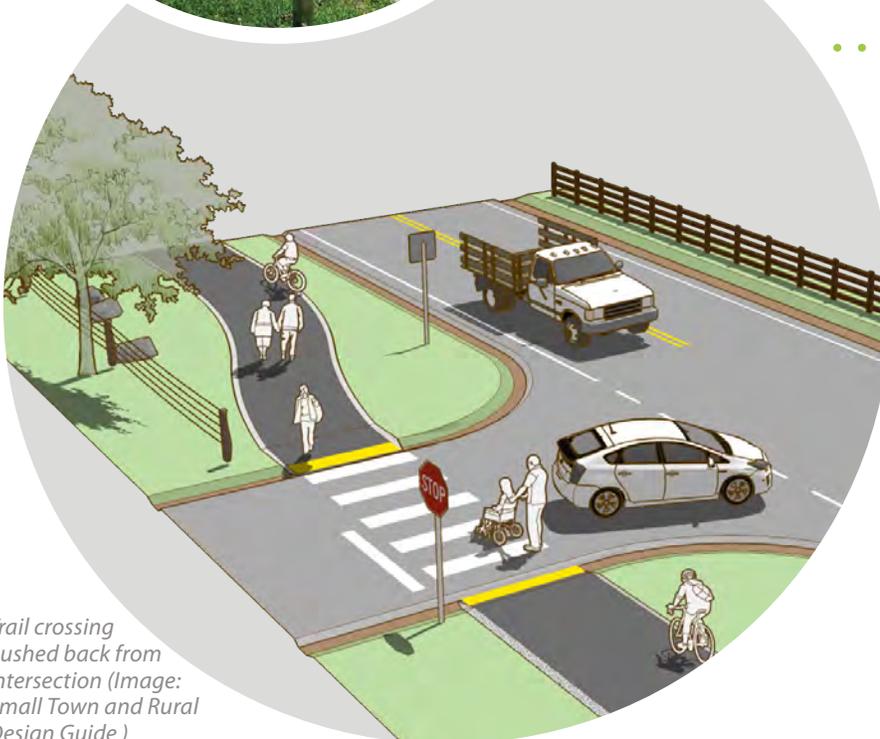
Continental style crosswalk markings (left) and Seattle-style markings (right) at CR 14 and Stillwater Boulevard in Lake Elmo. Washington County has had success with the Seattle-style markings, as they reduce degradation from repeated tire crossing. (Photo: Google Streetview)

BICYCLE AND PEDESTRIAN CONSIDERATIONS AT SIDE STREET TRAIL CROSSINGS:

- » Continue to install continental-style or Seattle-style crosswalk markings at trail crossings. This may require collaboration with local municipalities. Consider forward stop bars (see lower image), where necessary, to reinforce safety at crosswalk for pedestrians and bicyclists.
- » Provide consistent and highly visible wayfinding signage at key trail intersections.
- » Consider trail lighting along the trail, as well as along the side street leading to the intersection.
- » Consider providing clear cone of vision for vehicles approaching the intersection from the side streets, minimizing obstructions, unnecessary objects and tall vegetation.
- » Consider alternative trail designs at intersections. One strategy that has been used with varying degrees of success has involved pushing the trail crossing back from the intersection to allow approaching vehicles the ability to stop prior to the crosswalk, and then move forward to check for oncoming traffic. This, and other types of alternative designs will require further site-specific study to determine applicability.



Highly visible and consistent trail wayfinding can assist with navigating trail network and provide a visual cue to drivers (photo: SEGD)



Trail crossing pushed back from intersection (Image: Small Town and Rural Design Guide)

RESOURCES:

- » Small Town and Rural Design Guide
- » MN Bicycle Facility Manual (2020), page 5-27
- » MnDOT Best Practices and Guidance in At-Grade Trail Crossing Treatments

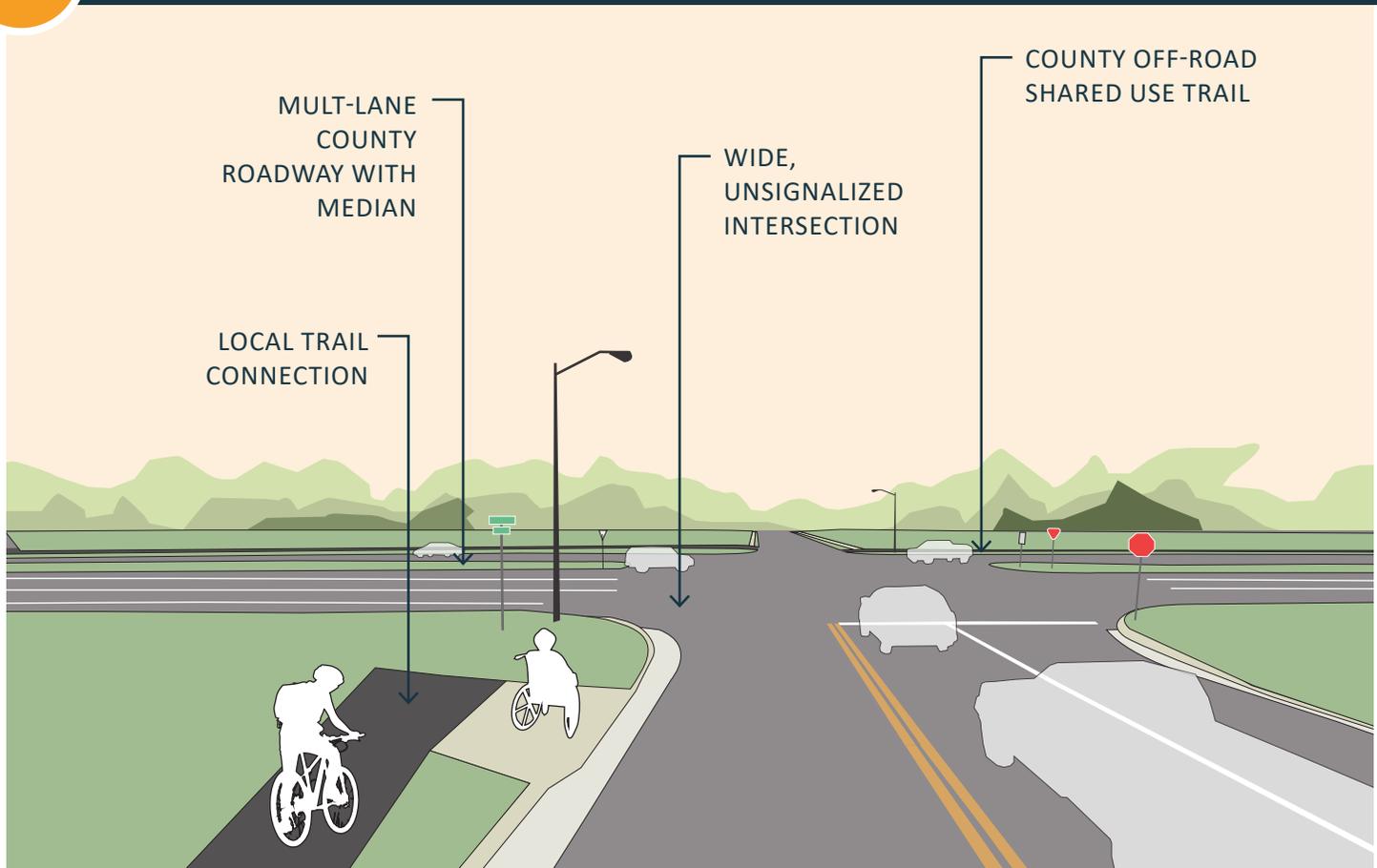


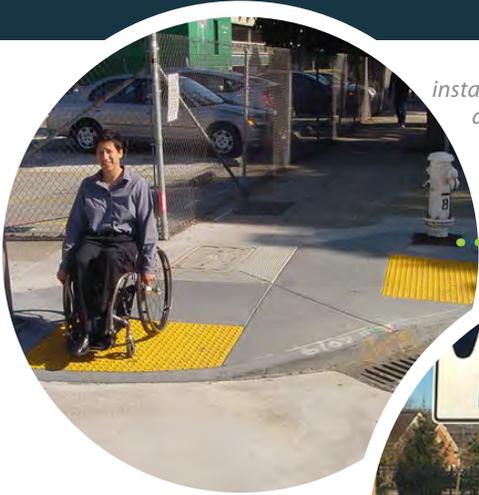
Figure 3.7 Illustration of an example wide roadway with a gap in trail connection

WIDE ROADWAY / TRAIL GAP:

- » The Washington County bicycle and pedestrian network primarily exists in alignment with the county roadway network.
- » Separated trails (also known as sidepaths) are generally located parallel to major roadways.
- » Local (municipal) streets intersect the trail network with variations in crossing treatments, pedestrian curb ramps, lighting, crosswalk markings, and signage.
- » Local and county trail segments may exist only on one side of the roadway.
- » Gaps in the local and county trail network, even on just one of four legs of an intersection, can create a significant barrier for continuous pedestrian or bicycle travel.

SAFETY CONCERNS:

- » Crossing at an unsignalized intersection is difficult for people of all abilities with higher speed vehicular traffic, but especially for people with disabilities, seniors, children, and people using mobility aids.
- » Pedestrian ramps sometimes do not allow people to enter into an intersection in the direction of their travel (as in the example above), which makes it more difficult to cross.
- » Wide, multi-lane roadways provide longer distances for travel in order to cross, increasing the vulnerability of pedestrians.
- » Travel speeds of vehicles and lack of gaps in traffic pose as barriers for pedestrians looking to cross roadways such as this.



Example of improved pedestrian curb ramp installed in both directions of pedestrian travel at an intersection (image: City of San Francisco)

Protected pedestrian refuge island shortens the distance that pedestrians are exposed to vehicles while crossing an intersection (Photo: AARP)



HAWK Signal (High Intensity Activated Crosswalk) shown in combination with continental-style crosswalk markings (image: Mary Carpenter Transportation)



Example of a grade-separated crossing in Woodbury MN (image: HKGI)

BICYCLE AND PEDESTRIAN CONSIDERATIONS AT WIDE ROADWAY CROSSINGS OR ADDRESSING TRAIL GAPS:

- » Consider working with local municipality to install wider pedestrian ramps at key trail connections.
- » Continue to install pedestrian refuge islands at key trail connections.
- » Consider installing curb extensions where space permits. Note that curb extensions aren't recommended if they impede roadway travel lanes or shoulder widths.
- » Consider installation of a HAWK signal (High-Intensity Activated Crosswalk) at a mid-block location in combination with other enhanced pedestrian facilities. Pedestrians are not likely to travel farther than 1/4 mile out of their way to reach a safer crossing location, which should be taken into consideration.
- » Consider installation of trail along both sides of roadway, with connection to a safer crossing point.
- » Consider a partnership with the adjacent municipality to install a grade separated crossing, such as a bike/ped tunnel or a pedestrian bridge. Note that both tunnels and bridges have significant funding and space requirements.

RESOURCES:

- » AASHTO Guide for the Development of Bicycle Facilities
- » MnDOT Best Practices and Guidance in At-Grade Trail Crossing Treatments
- » MnDOT Bicycle Facility Design Manual

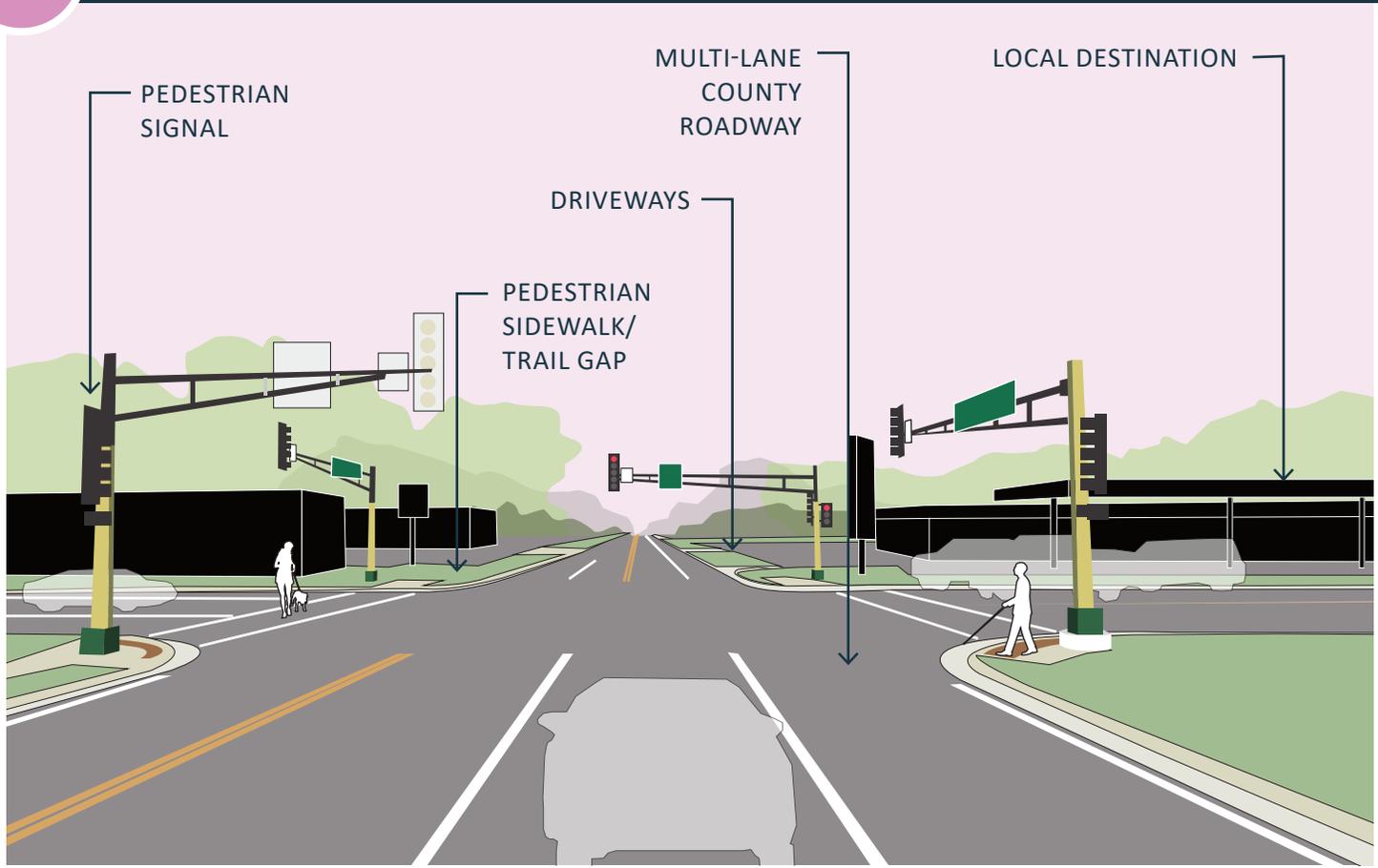


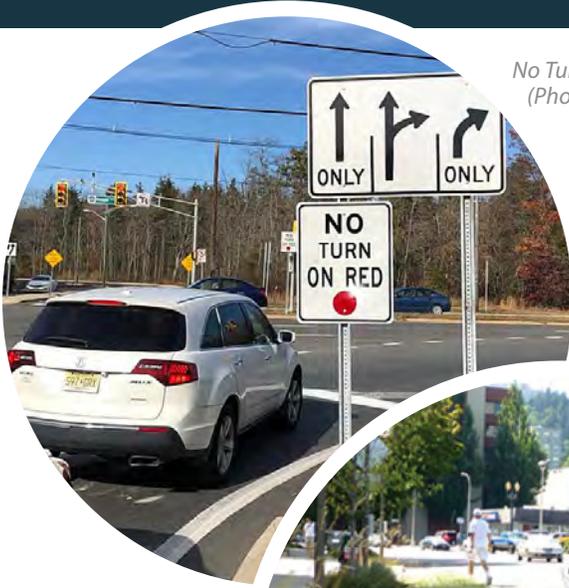
Figure 3.8 Illustration of an example signalized intersection

SIGNALIZED INTERSECTION:

- » The Washington County bicycle and pedestrian network primarily exists in alignment with the county roadway network.
- » Sidewalk connections exist in a few locations throughout the county, primarily in commercial areas.
- » Pedestrian curb ramps, lighting, crosswalk markings, signage, and pedestrian crossing signals are all types of facilities found at signalized intersections that influence the perception of safety and comfort.
- » Gaps in the local and county trail network, even on just one of four legs of an intersection, can create a significant barrier for continuous pedestrian or bicycle travel.

SAFETY CONCERNS:

- » Crosswalk markings are sometimes degraded beyond visibility for both drivers and pedestrians.
- » Gaps in the trail and sidewalk network create barriers to people with disabilities, seniors, children, and people who use mobility aids.
- » Pedestrian ramps and landing areas are sometimes installed around roadway signals and other vertical elements, leaving narrow widths for pedestrians to navigate around.
- » Vehicles making both right and left turns are potential threats to pedestrians and bicyclists using crosswalks.
- » Pedestrians will likely use boulevard areas to access commercial and community destinations, crossing driveways and parking lots where their presence may not be visible or anticipated by drivers.



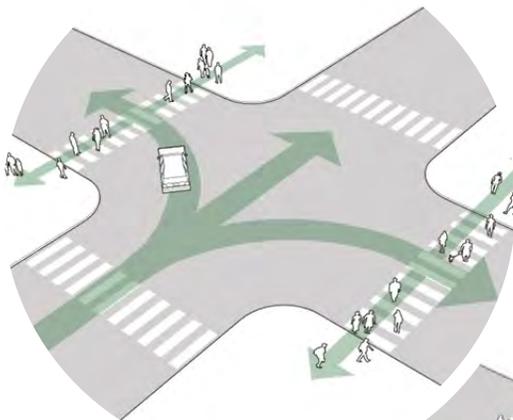
No Turn on Red sign
(Photo: The Hawk)



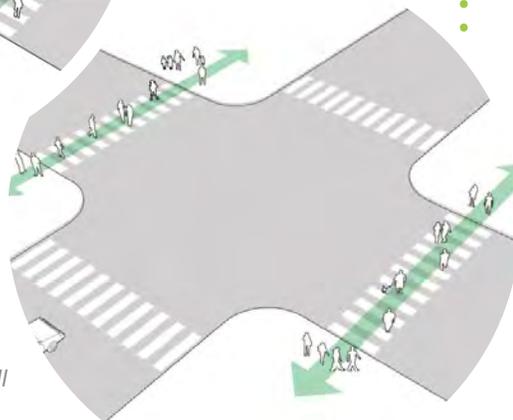
Curb extension with integrated stormwater feature
(Photo: NACTO)

BICYCLE AND PEDESTRIAN CONSIDERATIONS AT SIGNALIZED INTERSECTIONS:

- » Continue to work with local municipalities to perform ADA retrofits and/or signal replacement with improved pedestrian ramps.
- » Continue to install continental or Seattle-style crosswalk markings at all trail and sidewalk crossings, as well as forward stop bar markings.
- » Consider implementing NO TURN ON RED at intersections where warranted.
- » Continue to consider installation of pedestrian refuge islands where warranted.
- » Curb extensions have been considered, if space permits (without obstructing a bikeable shoulder).
- » Consider filling gaps in sidewalk and trail connections throughout corridor.
- » Consider leading pedestrian intervals or all-way stop timing at signalized intersections to allow pedestrians more time to cross the roadways, where applicable. Note that pedestrian wait times can be longer with variations in signal timing.



Typical signal timing exposes pedestrians in crosswalks to vehicles making right and left-hand turns (Image: NACTO)



Leading pedestrian interval is signal timing that gives pedestrians a head start on crossing without vehicles entering the intersection. All-way stop timing allows pedestrians to cross in all directions for a longer period of time, with vehicles stopped in all directions (Image: NACTO)

RESOURCES:

- » NACTO Urban Bikeway Design Guide
- » Washington County ADA Transition Plan
- » MnDOT Best Practices and Guidance in At-Grade Trail Crossing Treatments
- » MnDOT Bicycle Facility Design Manual

PEDESTRIAN AND BICYCLE FACILITY DESIGN

GENERAL DESIGN GUIDANCE

The following statements are intended to provide guidance on general design of bicycle and pedestrian improvements throughout the county:

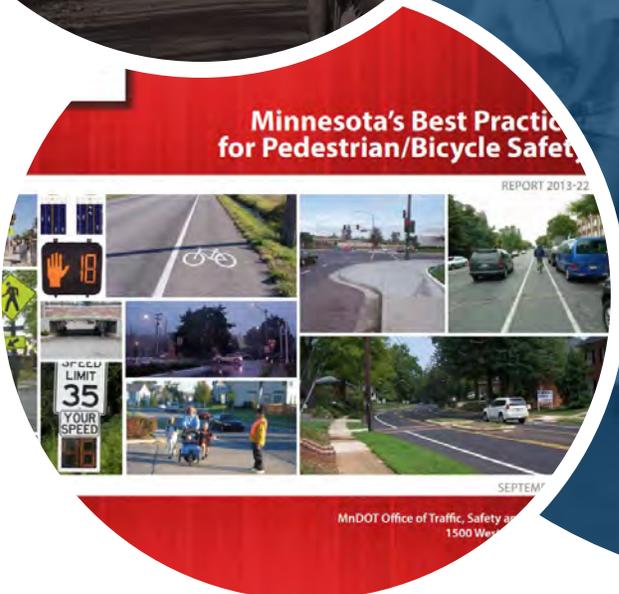
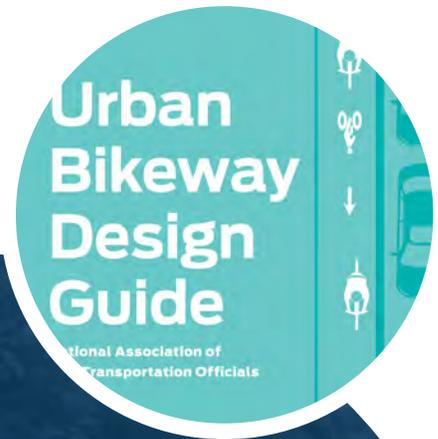
- » The design and implementation of county pedestrian and bicycle facilities should continue to recognize the community character (e.g. rural, suburban or urban) and design features will respond to local features such as natural resources, aesthetics, and gateways.
- » Elements will be incorporated into planning and design efforts to encourage:
 - *Comfortable corridors and places to walk and bike to,*
 - *Safe and well-landscaped routes that inter-connect the community, and*
 - *Healthy and active lifestyles.*
- » Continental-style crosswalk markings should continue to be installed and maintained at county roadway intersections. The county has explored other style crosswalk markings, such as the “Seattle-style” marking, which reduces marking degradation and allows for better visibility with the same amount of material. This style and others will continue to be installed on a case-by-case basis to best suit the context.
- » The county road and public right-of-way network should connect various public realm amenities for a range of modes (walking, biking, driving, etc.) to support travel to and from destinations such as schools, parks/open space, restaurants and other businesses.
- » Per the 2015 ADA Transition Plan approved by the county, new facilities for pedestrians will meet accessibility standards. The county will also continue to actively upgrade existing pedestrian facilities to meet these standards as well.
- » When determining which bicycle and pedestrian facilities to potentially install along roadways and at intersections, the comfort and safety of all roadway users should be taken into account. Pedestrian and bicycle facilities often provide a necessary physical separation between motorized and non-motorized roadway users, which benefits both.

DESIGN GUIDANCE ON SPECIFIC FACILITIES

The following resources provide specific guidance on paved trails and paved shoulders. This guidance has combined standards as listed in the following:

- » *2020 MnDOT Bicycle Facility Manual*
- » National Association for City Transportation Officials (NACTO) guides, such as the *Urban Street Design Guide* and the *Urban Bikeway Design Guide*
- » *Small Town and Rural Multimodal Networks (2016, US DOT)*
- » *Minnesota's Best Practices for Pedestrian/Bicycle Safety (2013)*
- » *State Aid Manual (2015, MnDOT)*
- » *MnDOT Facility Design Manual*

Guidance for County State Aid Highways (CSAH) is generally provided through the most current *MnDOT Bicycle Facility Manual*.



TRAIL (OR SIDEPATH) DESIGN

In Washington County, nearly all constructed trails could also be referred to as sidepaths, as they typically align with existing roadways. For simplicity, the term trail is used throughout this plan to mean a paved, separated shared-use facility to be used by non-motorized vehicles and pedestrians. This facility type is intended to serve a wide variety of comfort levels for both biking and walking.

Typical design features of trails in Washington County include:

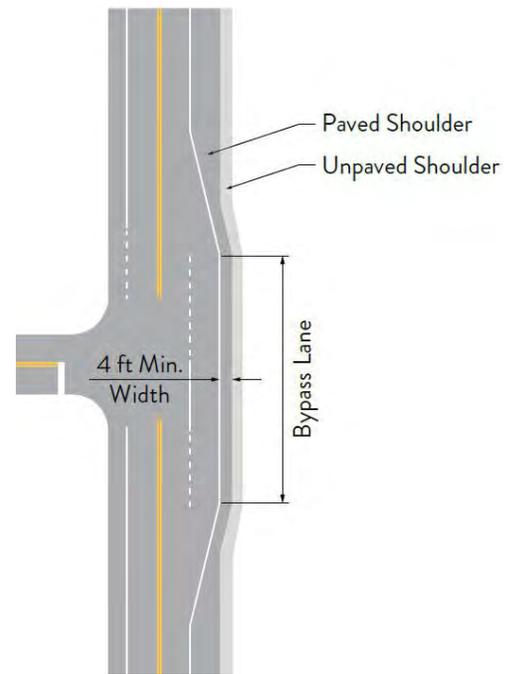
- » Bituminous (asphalt) surfacing
- » Aggregate base
- » 10' width preferred, with 8' width at areas of site constraint and 12'+ in areas of heavy use
- » 2-5' fall zone (turf or gravel) on both sides of the paved trail with no vertical obstructions within 2' of either side of the trail.
- » 2-5% running slope wherever possible, with a 1-2% cross slope
- » Pavement markings to separate bicyclists from pedestrians or designate direction of travel to be implemented only where trail use is heavy and warranted
- » Generally, more separation width between the edge of the roadway and the trail is preferred, with 10' minimum buffer as a guide where feasible. In practice, the county generally matches the boulevard width to the trail width (e.g. construction of a 10' boulevard adjacent to a 10' trail). Trail and boulevard widths are determined to fit within site constraints.
- » Future trail layout and determination of roadway side placement should consider County ROW width, drainage ditches, utilities, existing trees, topography, driveway conflicts, bridge crossings, and other site-specific environmental constraints that impact pedestrian and bicyclist safety and comfort and project costs.



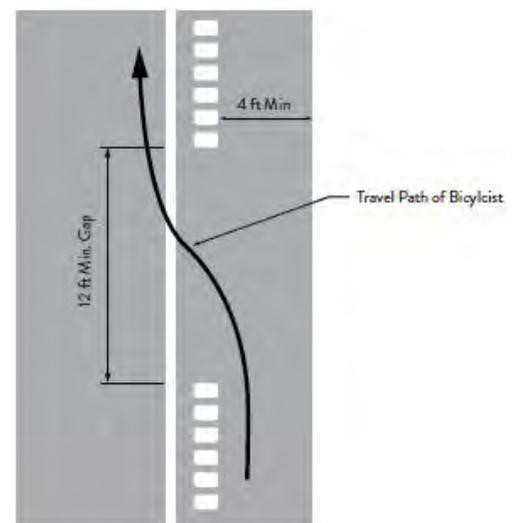
PAVED SHOULDER DESIGN

Paved shoulders alongside Washington County roadways have been considered as part of the bicycle and pedestrian network if they are at least 6 feet in width and are continuously paved with either bituminous (asphalt) or concrete surface to the edge of the roadway. Bicyclists who are comfortable riding alongside and in the same direction as adjacent vehicle traffic are generally the users of these facilities, although pedestrians do use paved shoulders for walking (typically moving in the opposite direction of adjacent vehicle traffic). All Washington County roadways will continue to remain available for pedestrian and bicycle use, with the following design guidelines for future facility construction and improvement:

- » Bituminous (asphalt) paved surface, continuous in width
- » A single, continuous stripe separates vehicle traffic from shoulder use. Rumble strips or striped buffers are also potential treatments to further separate drivers and bicyclists or pedestrians.
- » Although 6' is considered a minimum today for this type of facility, future roadways to be used as part of the County's paved shoulder network should strive for a 8' width (minimum) in urban areas and a 10' width in rural areas to accommodate for future changes in roadway volumes or speeds. These widths are guided by State Aid Standards. In most cases, paved shoulders will be widened to meet county and state standards as part of roadway reconstruction projects.
- » It is expected that shoulders along the County's paved shoulder network will meet minimum width and design guidelines for both sides of the roadway.
- » Potential warning and regulatory signs that may be applicable to Washington County paved shoulder network include:
 - *W11-1 Bicycle Warning Sign with SHARE THE ROAD plaque (W16-1P)*
 - *W8-25 SHOULDER ENDS*
 - *R4-4 RIGHT TURN LANE YIELD TO BIKES*
- » Where a right turn lane terminates the paved shoulder, consider installation of shared lane markings where bicyclists and vehicles share the roadway.
- » At bypass lanes, consider a 4' minimum (6'+ preferred) paved shoulder for bicyclists to continue.



Paved shoulder with bypass lane guidance, as shown in the MnDOT Bicycle Facilities Design Manual (2020)



Rumble strip design guidance, as shown in the MnDOT Bicycle Facilities Design Manual (2020)

CHOOSING FUTURE FACILITIES

This plan is intended to serve as a tool for future decision-making regarding improvements to the bicycle and pedestrian network in Washington County. The following table provides guidance to understand specific facility types that are recommended to be used in combination with common intersection types found in Washington County.

Table 3.1 lists facilities for safety strategies that are potential considerations for intersection types commonly found in Washington County. The table also cites state and national references for locating guidance on specific design for facility and intersection combinations. The table is intended to be used as reference for exploring multiple options for future comparison of language and design. The guides listed are current as of 2020; it should be noted that this list is not exhaustive, but intended to serve as a starting point.

The references are keyed below (click on text to link directly to reference documents):

- 1 - FHWA Safe Transportation for Every Pedestrian (STEP)
- 2 - FHWA Proven Safety Countermeasures
- 3 - AASHTO Guide for the Development of Bicycle Facilities
- 4 - NACTO Urban Street Design Guide
- 5 - NACTO Urban Bikeway Design Guide
- 6 - MnDOT Best Practices and Guidance in At-Grade Trail Crossing Treatments
- 7 - MnDOT Best Practices for Pedestrian/Bicycle Safety
- 8 - MnDOT Bicycle Facility Design Manual

It should be noted that guidance for County State Aid Highways (CSAH) is generally provided through the most current *MnDOT Bicycle Facility Manual (2020)* for pedestrian and bicycle facilities, through the State Aid Manual (2015), and through the MnDOT Facility Design Guide.

Guides are updated periodically; the list above and included in the table reflect guidance current as of 2020.

Table 3.1 Reference Guide to Pedestrian and Bicycle Crossing Facilities at Intersection Types

SAFETY STRATEGIES		INTERSECTION TYPE					
		Roundabouts	Signalized Intersections	Four-way Stop Control	Two-way Stop Control	Trail Crossing at Mid-block	Highway Crossing
SIGNING / STRIPING	High Visibility Crosswalk Markings	1	1,4,6,7,8	1,4,6,7,8	1,4,6,7,8	1,3,4,6,8	1,4,6,7,8
	Crosswalk Warning Signs	1	1,6,8	1,4,6,8	1,6,8	1,3,6,8	1,6,8
	Advance Stop Bar Marking					1,3,4,5,6,7,8	1,6,7,8
	Stop or Yield Signs for Bicycles					3,5,6,8	
CROSSING AID	Rectangular Rapid Flashing Beacon (RRFB)	1,5			1,5,6,7,8	1,4,5,6,7,8	
	Overhead Pedestrian Hybrid Beacon (PHB/HAWK)				2,5,6,7,8	1,2,3,5,6,8	1,2,4,6,7,8
GEOMETRY	Slip Ramp	3,8					
	Curb Extensions (Bump Outs)		1,4,6,7	1,4,6,7	1,4,6,7	1,4,6,7	
	Pedestrian Refuge Island		5,6,8	5,6,8	5,6,8	1,2,3,5,6,8	1,2,6,8
	Trail Crossing Pushed Back from Intersection	6			6,8		
	Road Diet					1,2,3,7	
SIGNALIZED INTERSECTION	Protected Only Left and Right Turn Phases		4,8				
	Signal Timing Adjustments		3,8				
	Bicycle Actuated Signals		3,5,8				
	Leading Pedestrian Interval		2,3,4,5,8				
	No Right Turn on Red		4,8				
GRADE SEPARATION	Trail Overpass or Underpass					3,7,8	3,7,8

ACTIVE LIVING RECOMMENDATIONS

Today, the benefits of increasing physical activity and promoting healthy lifestyle choices for people of all ages in our communities is an identified priority. Access to a safe, convenient, and enjoyable network for walking and biking plays a significant role in providing opportunities for people to engage in healthy lifestyles.

Active living is a method to prioritize the integration of physical activity and healthy eating into daily routines. Age, physical ability and proximity to parks and trails influence opportunities for making active living a reality for residents.

In addition to creating a plan for investing in the future bicycle and pedestrian network, primarily in the form of trails and paved shoulders, this plan identifies other non-infrastructure recommendations for promoting and achieving an environment conducive to active living for all Washington County residents.

RECOMMENDATIONS

1. DEVELOP A COHESIVE AND CONSISTENT WAYFINDING AND SIGNAGE PLAN

This wayfinding plan should coordinate or be integrated with Washington County Parks. Providing clear and consistent communication throughout the county-wide network will promote use of trails and can also build identity and pride for the network. The wayfinding and signage plan process can also integrate a community engagement initiative to develop trail names, and to identify potential landmarks, loop routes, connections with other regional/state/local trail networks, or other points of interest to be noted in directional signage.

2. DEVELOP AND MAINTAIN AN UPDATED NETWORK ROUTE MAP

A county-wide route map, with popular county destinations, landmarks, and existing segments of the bicycle and pedestrian network is an essential way to promote active living. This map should be kept up-to-date and posted visibly through county communications such as the county website, as well as posted at county parks and at regional trailheads. The map should consider accessibility by readers who have visual impairments, and may need to be provided in other languages.



Example of trail wayfinding (Photo: E3)

3. DEVELOP SAFETY AND EDUCATION PROGRAMS FOR PEDESTRIANS AND BICYCLISTS

Providing pedestrian and bicyclist safety and education programs can help potential bicyclists and pedestrians understand how to engage in active living safely and comfortably. This is especially true for residents in more rural areas, who may think that biking and walking are activities reserved for urbanites. These programs can be initiated through Washington County SHIP (Statewide Health Improvement Partnership) or through Washington County Public Safety, Sheriff's Office or Parks. Education or information can also be extended to include programs for drivers, to better understand how to share the roadway with bicyclists and pedestrians. Group bicycle rides or hikes, lead by professionals trained through Bicycle Alliance of Minnesota are one way of providing education in a group setting.

The Minnesota Bicycling Handbook is an excellent resource for understanding the rules of the road and becoming familiar with safe riding techniques. Link to resource:

<https://www.bikemn.org/education/minnesota-bicycling-handbook>

MnDOT's Walk! Bike! Fun! curriculum is a toolkit for creating walking and biking education for children, adults, and seniors. Link to resource: <https://www.bikemn.org/education/walk-bike-fun>

4. BECOME DESIGNATED AS A BICYCLE FRIENDLY COMMUNITY

The Bicycle Friendly Community Program is administered through The League of American Bicyclists. This is an incentive program where communities apply to and become designated at different levels of achievement for accomplishing community goals related to providing high quality bicycle facilities and access to educational and encouragement activities. Becoming designated and working actively with the League of American Bicyclists opens the door to sharing best practices and connecting to technical resources for building and improving the county-wide system. Link to resource:

<https://www.bikeleague.org/>

5. EVALUATE PLAN PROGRESS

This plan, once approved by the county, should be revisited periodically to take inventory of progress made towards filling network gaps, addressing safety improvements, and increasing biking and walking activity in the county. Evaluation could include the following:

- » Taking inventory of completed projects and updating map files
- » Completing trail counts or intercept surveys along routes
- » Convening across county departments to evaluate progress



MNDOT PORTABLE COUNTER BORROWING PROGRAM

MnDOT provides freely available and easy to install portable counters that can be used to collect bicycle and pedestrian count data without concern for weather, climate or daylight. Equipment and instructive toolkits are available to cities, counties, and active transportation advocacy organizations for short-term lending. Counts can be used as a tool for understanding use of current trail networks, and lay the groundwork for future planning and prioritization efforts.

» To learn about this program, visit www.dot.state.mn.us/bike-ped-counting/borrow.html

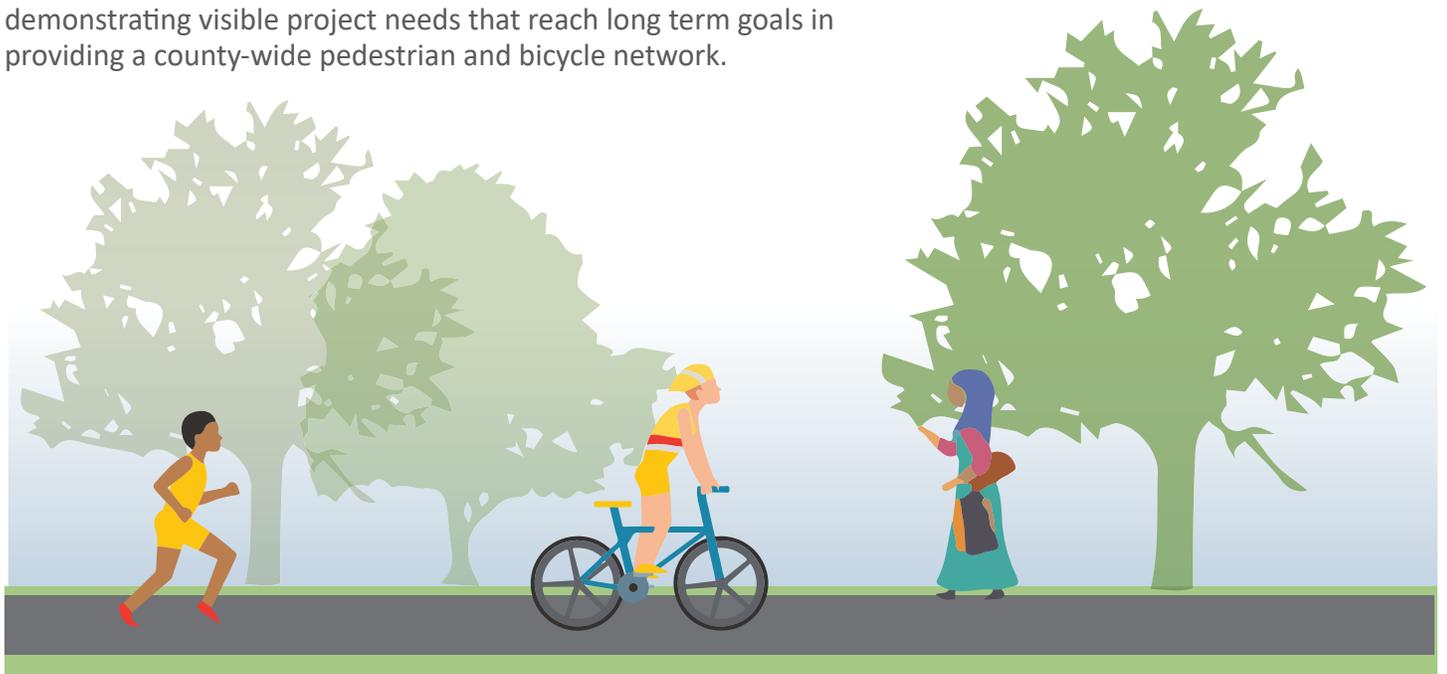




04. IMPLEMENTATION

INTRODUCTION

The Implementation Chapter helps articulate the Future Network Plan and the implementation steps that should follow. This chapter provides the county a framework for identifying priorities and demonstrating visible project needs that reach long term goals in providing a county-wide pedestrian and bicycle network.



PROJECT PRIORITIZATION

A well-defined project prioritization process can help rank project needs (on-road facilities and off-road trails) in a manner that is consistent with county pedestrian and bicycle goals. Ranking projects helps determine where investments should occur first. In this case, the future network has been broken into logical projects for prioritization (see Figure 4.1).

The prioritization process is based on a scoring system that assigns point values to a trail segment based on their contribution to specific measures (see page 4-3). The end result is a cumulative score for each trail segment; the higher the score, the higher the project.



» **High** - These projects are projected to have the biggest impact for improving the safety and comfort level for pedestrian and bicycle movement, while linking to key destinations. High projects are intended to be completed or have substantial progress towards completion in the near-term.



» **Medium** – These projects are projected to have substantial impact in meeting specific measures. Medium projects should be viewed as opportunities for completion in the mid-term.



» **Low** – These projects are projected to meet a few of the measures. Regardless of their score, they are still viewed as a need in completing the county’s pedestrian and bicycle network. These project should be monitored for opportunities for completion and how they may coincide with future roadway projects.

PROJECT PRIORITIZATION RESULTS

The project prioritization tool developed for this study allows the county to run alternative scenarios to determine a project’s benefit to the overall network. This tool also provides the county flexibility to adjust measures accordingly as priorities may shift over time. For example, opportunities may present themselves to advance a project sooner than originally planned. This may include opportunities to secure new funding, responding to a safety need, or aligning a trail project that coincides with a roadway improvement.

The project prioritization tool ranks 48 projects that total over 100 miles of new off-road bike/pedestrian routes and on-road bike facilities (see Tables 4.1 & 4.2 and Figure 4.1). This list helps communicate project needs to elected leaders, residents, and stakeholders.

PROJECT PRIORITIZATION MEASURES

The following measures were used to evaluate the Future Network Plan and to inform the project priorities list (see Tables 4.1 and 4.2). The measures were selected based on community input and direction from the Technical Advisory Committee (TAC).



FILLS A GAP

The project fills a gap in the existing network, which are typically missing links less than one mile in length



CONNECTOR TO PARKS

The project provides a logical connection to a county or State park



RBTN CONTRIBUTION

The project is part of the Regional Bicycle Transportation Network (RBTN)



CONNECTOR TO SCHOOLS

The project provides a logical connection to a school (K-12)



CONNECTOR TO REGIONAL & STATE TRAILS

The project will help complement the existing regional and state trail network by connecting county trails to this network



CONNECTOR TO A RBTN

The project will complement the Regional Bicycle Transportation Network (RBTN) by connecting county trails to this network



CONNECTOR TO HOMES

The project will help link households in poverty to the county or regional trail network



COMFORT LEVEL

The project will help enhance the user's experience, which is measured by Levels of Traffic Stress (LTS). A LTS score represents the level of stress or comfort one experiences on the route (see Chapter 2). For example, the most comfortable facilities (or the least stressful) are referred to as facilities for "all ages and abilities." These facilities are generally comfortable for people of a wide range of abilities, ages and perceptions of safety. The least comfortable facilities (most stressful) are referred to as facilities for "strong and fearless bicyclists." These facilities are adjacent to or intersect with high vehicle speeds and multiple traffic lanes. These facilities are generally uncomfortable for most bicyclists and pedestrians, with the exception of highly experienced road cyclists



CONNECTOR TO DEMAND CENTERS

The project provides a logical connection to a demand center (see Chapter 2). Demand centers are areas where there is a high need for pedestrian and bicycle facilities. These areas are based on existing conditions that take into account socioeconomic factors (e.g., population density), connectivity factors (e.g., bus stops), and destination factors (e.g., job centers)

Table 4.1 New Off-Road Facilities

PROJECT (SEE FIGURE 4.1)	MILES	PRIORITY	CR ROAD #
OFF-04a	4.91	Medium	CR 4
OFF-04b	2.73	Medium	CR 4
OFF-04c	2.14	Medium	CR 4
OFF-06a	1.29	High	CR 6
OFF-06b	1.20	High	CR 6
OFF-07a	1.74	Low	CR 7
OFF-07b	1.83	Low	CR 7
OFF-07c	3.04	Low	CR 7
OFF-07d	3.09	Low	CR 7
OFF-08	0.90	Medium	CR 8
OFF-10a	3.53	High	CR 10
OFF-10b	1.16	Low	CR 10
OFF-12a	0.55	High	CR 12
OFF-13a	1.86	Medium	CR 13
OFF-13b	1.34	High	CR 13
OFF-14a	2.03	High	CR 14
OFF-14b	2.54	High	CR 14
OFF-14c	3.50	Low	CR 14
OFF-15a	3.09	Low	CR 15
OFF-15b	4.12	Low	CR 15
OFF-15c	4.75	Low	CR 15
OFF-15d	1.82	Low	CR 15
OFF-15e	2.25	High	CR 15
OFF-15f	0.70	Medium	CR 15
OFF-15g	1.21	High	CR 15
OFF-15h	3.17	Medium	CR 15
OFF-15i	0.76	High	CR 15
OFF-16	1.25	High	CR 16
OFF-17	3.16	Low	CR 17
OFF-18	0.73	High	CR 18
OFF-19a	2.72	High	CR 19
OFF-19b	1.12	High	CR 19
OFF-20	0.93	Medium	CR 20
OFF-21a	5.35	Low	CR 21
OFF-21b	4.26	Low	CR 21
OFF-21c	4.04	Low	CR 21
OFF-21d	3.06	Medium	CR 21

PROJECT (SEE FIGURE 4.1)	MILES	PRIORITY	CR ROAD #
OFF-22	4.53	Low	CR 22
OFF-32	1.39	High	CR 32
OFF-33	0.81	Medium	CR 33
OFF-38	0.30	High	CR 38
OFF-55	2.15	Medium	CR 55
OFF-64	0.29	Medium	CR 64
OFF-74	0.72	Medium	CR 74
OFF-94	1.21	High	I-94*
Total	99.32		

*Not a county roadway

Table 4.2 New On-Road Facilities

PROJECT (SEE FIGURE 4.1 MAP ID)	MILES	PRIORITY	COUNTY ROAD #
ON-04d	1.78	Low	CR 4
ON-18	4.24	Medium	CR 18
ON-21	4.02	Low	CR 21
ON-23	1.00	High	CR 23
Total	11.05		



USING THE 6E'S: Implementation of the Future Network Plan should embrace the 6 E's¹ from Safe Routes to School (SRTS) initiatives. The 6 E's have been translated to a broader definition that applies at a county-wide level.

✓ **EVALUATION**

Evaluation strategies help monitor trends over time and identify specific safety issues. Evaluating and monitoring crash data can help identify areas of concern that may warrant safety improvements (see Page 2-14 for this Plan's safety analysis).

💬 **EDUCATION**

Education programs aim to teach residents safe walking and biking behaviors. Education programs may also include driver safety campaigns. There are often opportunities to partner with police, community groups or others on education programs.

👥 **ENGAGEMENT**

Every project should begin by listening to the community, youth, families, community organizations, and build intentional, ongoing engagement opportunities into the planning and design process.

♥ **EQUITY**

Equity recognizes that different people have different barriers to living healthy, fulfilled lives (see Factor #6). In order to allow people to get to the same outcome, we need to understand the different barriers and opportunities that affect different groups, and craft our policies, programs, and overall approaches with those various challenges and needs in mind.

Equality assumes that all needs are the same. The result is that every community gets the exact same resources without regard to individual differences. Equality works only in circumstances where everyone starts from the same place and needs the same things.

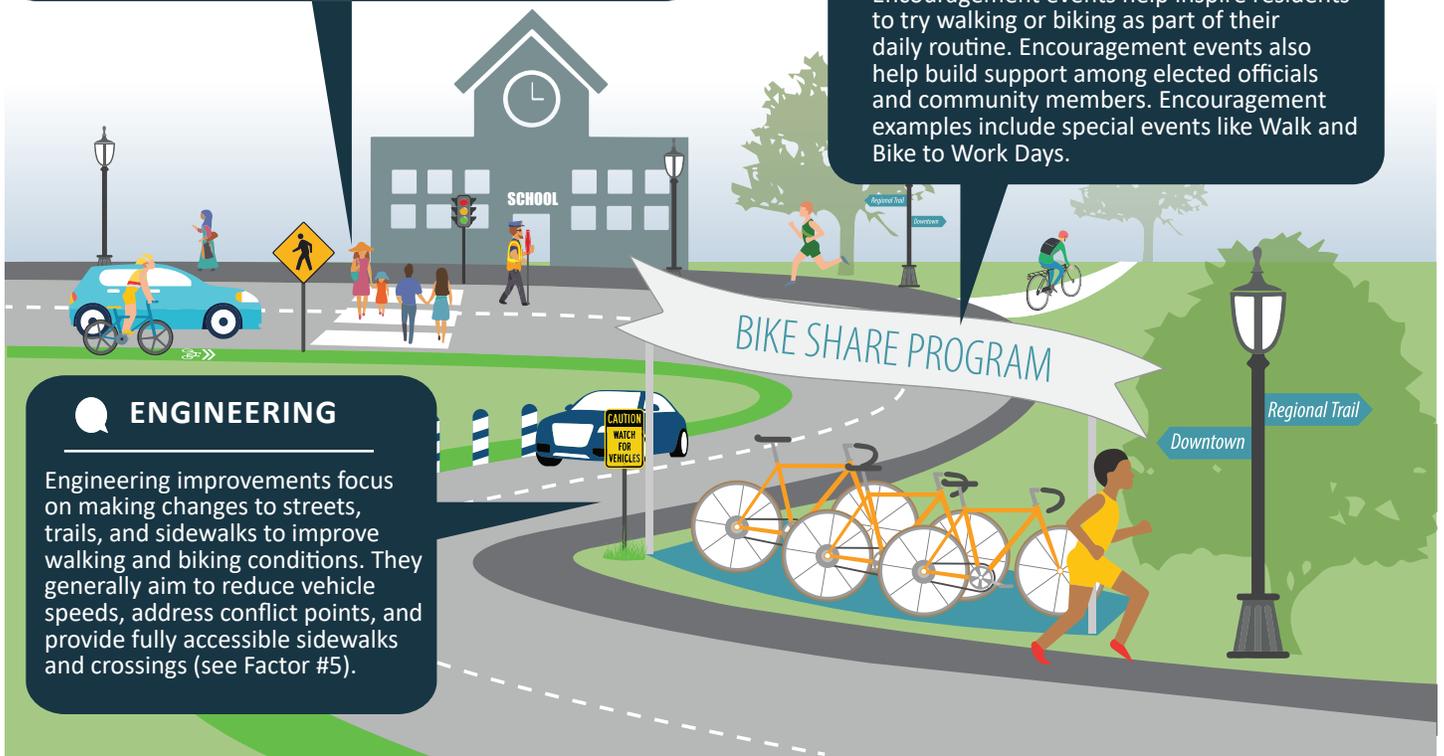
Equity allows resources to be provided on the basis of need. Communities disproportionately impacted by safety, health or transportation access inequities are provided appropriate resources to address their individual needs. Therefore, resource allocation may differ between communities. While often used interchangeably with equality, equity involves a variety of strategies aimed at the fair – but not necessarily equal – provision of resources.

👍 **ENCOURAGEMENT**

Encouragement events help inspire residents to try walking or biking as part of their daily routine. Encouragement events also help build support among elected officials and community members. Encouragement examples include special events like Walk and Bike to Work Days.

💡 **ENGINEERING**

Engineering improvements focus on making changes to streets, trails, and sidewalks to improve walking and biking conditions. They generally aim to reduce vehicle speeds, address conflict points, and provide fully accessible sidewalks and crossings (see Factor #5).



¹Minnesota Department of Transportation "Minnesota Safe Routes to Schools" <https://www.dot.state.mn.us/mnsaferoutes/> and Safe Routes Partnership: <https://www.saferoutespartnership.org/safe-routes-school>

CONSIDERATION FACTORS

There are many factors to consider when prioritizing a project for implementation. In order to shift a project, the county should consider a series of “Consideration Factors.” The factors maintain a degree of flexibility when prioritizing projects over time. The factors help address larger policy decisions that need to be considered when programming projects for implementation.

The factors are provided to help further refine the implementation of the projects listed in Tables 4.1 and 4.2. The factors may further influence the timeline or importance of a project, in addition to their priority measure ranking.

CONSIDERATION FACTOR #1: DOES THE PROJECT ADDRESS PEDESTRIAN AND BICYCLE SAFETY NEEDS?

Pedestrian and bicycle safety is an important contributor in making Washington County a great place to live, work, and play. There are many examples of great places to walk and bike in Washington County. However, there is still much work to be done. High vehicle speeds lead to risky crossing conditions and connectivity gaps at high traffic locations, resulting in uncomfortable pedestrian and bicycle experiences.

Bicycle and pedestrian safety goals are included in Washington County’s 2040 Comprehensive Plan. Working towards this goal requires a comprehensive approach that mirrors the 6 E’s for Safe Routes to School (SRTS). The 6 E’s (see page 4-6) have been translated to a broader definition that applies at a county-wide level. The 6E’s should be used as a source of inspiration in creating safer environments for pedestrians and bicyclists.

The county should focus on “Evaluation” and “Engineering” for the purpose of this factor. Shifting project priorities (see Tables 4.1 and 4.2) should be “Evaluated” to address safety needs first. Safety improvements should also be “Engineered” to address problem areas, while using design strategies that are proactive in helping mitigate conflicts between vehicles and pedestrians and bicyclists.

CONSIDERATION FACTOR #2: DOES THE PROJECT OVERCOME A TRANSPORTATION BARRIER?

There are physical barriers that limit pedestrian and bicycle movement throughout the county. The Future Network Plan will need to overcome these barriers. Therefore, stronger consideration should be given to projects that help move people safely over these barriers. Some of the more major barriers (e.g., Highway 36 and Interstate 94) in the county are discussed in the sidebar.

REGIONAL BARRIERS

Some of the major barriers in that limit pedestrian and bicycle movement in Washington county have been recognized by the Metropolitan Council’s Regional Bicycle Barriers Study (2019). These barriers primarily consist of connections over major transportation corridors. Major barriers identified during this Plan’s public engagement process include Highway 36, Highway 95, Interstate 494, and Interstate 94.

Overcoming freeway barriers is slowly becoming part of the design process for larger roadway projects. Future interchanges and overpasses (planned or programmed) recognized in Washington county’s 2040 Comprehensive Plan include:

- » Highway 36/county Road 15 (Manning Avenue) Interchange
- » Highway 36/county Road 17 (Lake Elmo Avenue) Interchange
- » Interstate 35E/County Road 4 (170th Street) Interchange
- » Highway 36/Highway 120 Interchange
- » Interstate 94 (west of County Road 13) Overpass

These projects are primarily being driven by growth and traffic projections. While the timing of these project may vary, they should continue to consider their ability to integrate pedestrian and bicycle facilities. If planned accordingly, these projects can help address significant barriers that limit pedestrians and bicycle movement throughout the county.

Under some circumstances, the Future Network Plan may require a grade separated crossing (e.g., overpasses or tunnels) to reduce pedestrian and bicycle crashes. Grade separated crossings can help reduce serious and fatal injuries, while improving traffic flow. However, they also have some disadvantages. They can be costly and may never be fully utilized by pedestrians and bicyclists if they do not provide a safe and convenient connection.

The actual use of a grade separated crossing will depend on the time it takes to use the crossing compared to crossing a roadway at-grade. For example, Table 4.3 demonstrates that if travel times are the same to cross a roadway at-grade and grade separated, most people will choose to use a tunnel and many people will choose use a pedestrian bridge. In general, people will avoid using a grade-separated crossing when it is inconvenient and takes too long. Pedestrians are more apt to use a pedestrian tunnel if it does not pose any personal security risks. These considerations need to be weighed when evaluating cost/benefit of a grade separated crossing.

Project priorities (see Tables 4.1 and 4.2) may shift over time as further evaluation and consideration is given to a project's ability to overcome a barrier, while providing safer crossings. Higher priority should be given to projects that overcome regional barriers (see sidebar on page 4-7).

Table 4.3 Percent of Pedestrians Using the Grade Separated Route vs. the At-Grade Crossing

TRAVEL TIMES	BRIDGE	TUNNEL
EQUALS	15% TO 60%	95%
30% Longer on Grade Separated Route	0%	25% to 70%
50% Longer on Grade Separated Route	0%	0%

Note: If grade separated crossings are an alternative at a crossing location, the use of the grade separated crossing depends on the time to use each alternative route.

CONSIDERATION FACTOR #3: DOES THE PROJECT HAVE COMMUNITY SUPPORT?

The usefulness and longevity of this Plan needs to have community buy-in from the outset. To achieve this objective, the implementation of the Future Network Plan will require a meaningful and transparent planning process. The planning process should focus on building consensus around local priorities and realistic implementation measures. The Plan should be referenced, celebrated, and promoted both within the county and at the local level.

The projects and ideas represented in this Plan will require coordinated efforts by many different county, local and state agencies. The various county roles and responsibilities include Public Works, the county Board of Commissioners, Washington County State Health Improvement Partnership (SHIP), and the Parks Commission to name



just a few. Shifting a project (see Tables 4.1 and 4.2) should be vetted through a public process.

COST PARTICIPATION POLICY

Community support for a project is also built through cooperative agreements between the county and city. Trails are sometimes constructed as part of larger roadway projects, which at times may be funded as part of Washington County's Cost Participation Policy (#8001). This policy determines the appropriate division of cost in funding cooperative highway projects, traffic signals, and bridge construction projects with MnDOT, municipalities, and other agencies. For highway and bridge projects, the cost splits differ for cities with populations greater than 5,000 and for those with populations less than 5,000. The primary purpose for this difference is the absence of direct State Aid funding to municipalities with less than 5,000 residents. The policy also guides the county's cost participation when communities use Tax Increment Financing (TIF) and for jurisdictional changes or turnbacks.

CONSIDERATION FACTOR #4: DOES THE PROJECT CONTRIBUTE TO THE RBTN?

Implementation of the Future Network Plan should correspond closely to the corridors identified in the Regional Bicycle Transportation Network (RBTN) in order to provide seamless connections to neighboring communities and the broader regional transportation network. According to the Metropolitan Council, the RBTN corridors and alignments make up the "trunk arterials" of the overall system of bikeways that connect to regional employment and activity centers. Washington County's RBTN alignments and corridors are shown in Figure 4.2.

The goal of the RBTN is to establish an integrated seamless network of on-street bikeways and off-road trails that complement each other to most effectively improve conditions for bicycle transportation at the regional level. These routes are further classified into two tiers of corridors and alignments:

» **Tier 1 & 2 Corridors** have been identified as the highest for regional transportation planning and investment. The corridors are planned in locations where they can attract the most riders and where they can most effectively enhance mode choice in favor of biking, walking, and transit over driving alone. Tier 2 Corridors are the remaining corridors in the overall RBTN. A total of 10 RBTN corridors are identified within the county.

» **Tier 1 & Tier 2 Alignments** are based on local bicycle plans and in many cases (particularly in the core cities) already exist in some form and may need little or no improvement for the regional network. The RBTN alignment network identified in Washington County provides connections between the cities of White Bear Lake and Forest Lake (via the Hardwood Creek Regional Trail), Pine Springs to the Pine Point Regional Park (via the Gateway State Trail), with a spur connecting to Stillwater (Brown's Creek Trail).

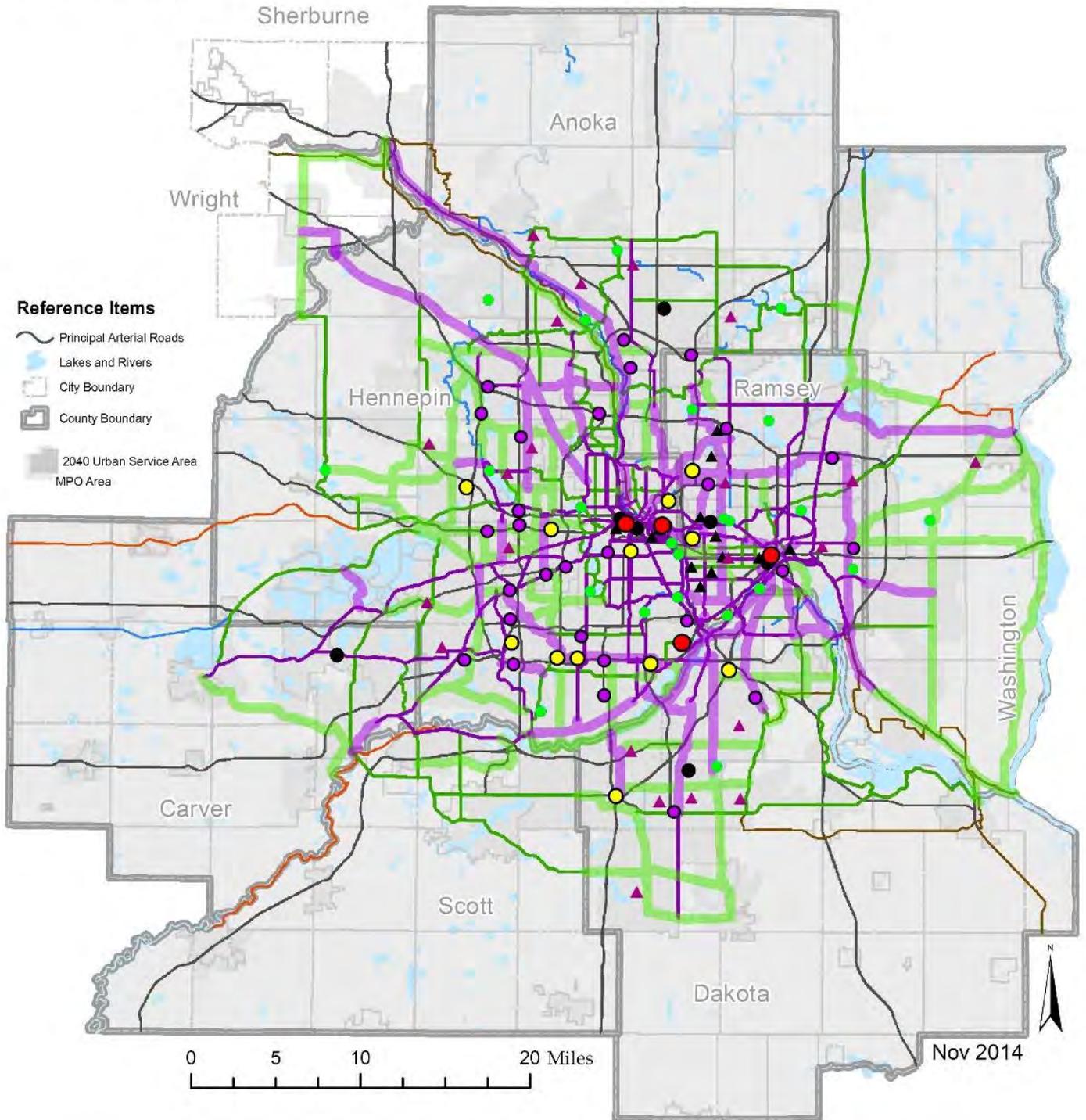
Shifting a project (see Tables 4.1 and 4.2) should consider its contribution to the RBTN. Projects that contribute to the RBTN may score more favorably as part of the Metropolitan Council's Regional Solicitation program.

CONSIDERATION FACTOR #5: DOES THE PROJECT EMBRACE INNOVATIVE DESIGN SOLUTIONS?

Designing and planning for pedestrian and bicycle projects requires a balance of interpreting and translating experiential or qualitative data and community feedback, alongside current county and statewide standards for roadways, intersections, and trail facilities. While one design standard may be a perfect solution to an issue in one community, the same solution may be completely inappropriate in another context (e.g., rural, suburban, or urban). Design solutions should also embrace some degree of flexibility when finding solutions that address barriers (e.g., topography, environmental features, and right-of-way constraints) and align with community priorities.

Planners and engineers have a wide range of design solutions at their disposal that provide a safer, more comfortable experience, and accessible street for people walking and biking. These design solutions (see Chapter 3) should be explored to their fullest potential when implementing the Future Network Plan. The county should be willing to explore new options and design solutions as they become available, while understanding that investments need to accommodate the movement of people comfortably and safely.

Figure 4.2 Metropolitan Council Regional Bicycle Transportation Network (RBTN)



RBTN Alignments

- Tier 1 Alignments
- Tier 2 Alignments

RBTN Corridors (Alignments Undefined)

- Tier 1 Priority Regional Bicycle Transportation Corridor
- Tier 2 Regional Bicycle Transportation Corridors

Regional Destinations

- Metropolitan Job Centers
- Regional Job Centers
- Subregional Job Centers
- Large High Schools
- Colleges & Universities
- Highly Visited Regional Parks
- Major Sport & Entertainment Centers

Other Trail Systems

- Regional Trails (Regional Parks Policy Plan)
- Mississippi River Trail (US Route 45)
- State Trails (DNR)

GRANT FUNDING: The county should continue to pursue grant funds from various programs to help offset capital costs when implementing the Future Network Plan.

MN DNR NATURAL AND SCENIC AREA GRANTS

The MN DNR Natural and Scenic Area Grants are intended to protect and provide public access to high quality natural and scenic areas. Example projects include trails, overlooks interpretive displays, benches, wayfinding and trailhead parking. All projects must align with the State Outdoor Recreation Plan (SCORP). This grant is typically available annually, with an application deadline in early spring.

MN DNR OUTDOOR RECREATION GRANTS

The MN DNR Outdoor Recreation Grant is intended to fund projects that increase and enhance outdoor recreation facilities in local and community parks throughout the state. All projects must align with the State Outdoor Recreation Plan (SCORP). Example projects include internal park trails and trail amenities. This grant is typically available annually, with an application deadline in early spring.

MN DNR LOCAL TRAIL CONNECTIONS (LTC)

Local Trail Connections grants are administered through MN DNR. These grants fund relatively short trail connections between where people live and desired community destinations, and are not intended for funding significant new trails. Funding prioritizes projects with significant connectivity, high expected use, and attractive integration of cultural and natural resources.

MN DNR FEDERAL RECREATIONAL TRAIL PROGRAM

The Recreational Trails program provides financial assistance for the development and maintenance of recreational trails and trail-related projects and provides funding from the Federal Highway Trust Fund in acknowledgment of off-road recreational fuel use. This current federal highway bill is set to expire on September 30, 2020, however a replacement bill (America's Transportation Infrastructure Act (ATIA) has been proposed.

MNDOT SAFE ROUTES TO SCHOOL

MnDOT administers grant funding to support Safe Routes to School (SRTS) Planning Assistance and plan development to support schools' effort to promote safe biking and walking for students on a daily basis. Small micro-grants are occasionally available to fund educational or encouragement programs such as bike fleets and bike rodeos. SRTS Plans are generally used as a foundation for cities and school districts to apply for SRTS Infrastructure grants. Infrastructure grants support capital funding for projects that promote and encourage biking and walking to school, such as trails, sidewalks, and other bike/ped facilities near schools. Other example projects include traffic calming, crosswalk signals, bicycle parking and ADA improvements. SRTS Planning Assistance and Infrastructure Grants are generally available on an annual basis.

METROPOLITAN COUNCIL REGIONAL SOLICITATION

The Metropolitan Council allocates federal funds through Regional Solicitation Grants. Funding priorities include multi-use trails, bicycle facilities, grade-separated crossings, filling network gaps, intersection/crossing treatments, sidewalks, streetscaping, ADA improvements, and Safe Routes to School infrastructure projects. These grants are available on 2-year funding cycle, with the next solicitation for grant applications anticipated in early 2020.

PEOPLE FOR BIKES (NON-PROFIT 501C3)

The PeopleForBikes Community Grant Program provides funding for important projects that build momentum for bicycling in communities across the U.S. These projects include bike paths and rail trails, as well as mountain bike trails, bike parks, BMX facilities, and large-scale bicycle advocacy initiatives.

CONSIDERATION FACTOR #6: DOES THE PROJECT PROVIDE BENEFITS FROM AN EQUITY PERSPECTIVE?

In many communities, including Washington County, there are barriers that prevent all residents from having the same opportunities to thrive. For instance, race, ethnicity, and age continue to be predictors of health, education, income, housing, and recreation. The Washington County Bicycle and Pedestrian Plan is committed to advancing equitable opportunities for all to move throughout the county.

In order to allow people to achieve their greatest outcome, we need to understand the different barriers and opportunities that affect different groups, and prioritize projects with those various challenges and needs in mind. A fundamental approach to multimodal planning is a process that embraces Context Sensitive Solutions (CSS). CSS is a collaborative, interdisciplinary approach that involves all stakeholders in developing a transportation facility that fits its context and environment (e.g., physical, built, social, and environmental), while maintaining safety and mobility. Implementation of the Future Network Plan should be viewed through a CSS lens that helps advance social equity goals. Shifting a project (see Tables 4.1 and 4.2) should carefully weigh the outcomes from this perspective. However, it is important to note that a focus on equity does not mean providing equal access to the same amount of resources. Equity is focused on making sure everyone has the resources they need to lead a healthy, productive life.

CONSIDERATION FACTOR #7: DOES THE PROJECT ALIGN WITH FUNDING OPPORTUNITIES?

Implementation of the Future Network Plan will occur as opportunities present themselves and as resources allow. Therefore, funding to acquire and build a pedestrian or bicycle improvement will come from a variety of sources.

Those sources may include Washington County general funds, bonding, city partnerships, and other grant funding. Since Washington County does not have all the funding needed today to build out the Future Network Plan, it will need to actively monitor and plan for various funding sources. The type of funding (e.g., grants) may influence when a project is built - shifting it's priority (see Tables 4.1 and 4.2).

- » **General Funds:** General funds are used as a primary source for on-going maintenance, operations, and amenities for the bike and pedestrian system. Capital improvements can also be funded through general funds. Many projects coincide with roadway reconstruction or expansion projects, which make it more cost effective to integrate trail construction when working in the existing rights-of-way.
- » **Grants:** Grant funding throughout Washington County has had a positive impact on the implementation of local and regional bicycle and pedestrian network. Grant funding generally requires a match by the county or City, likely through general funds. Grant funding also typically favors larger, capital projects over maintenance and operations funding. Grant funding might also require evidence of partnerships and community engagement and support for specific requests. Examples of grant funds are listed on page 4-11.
- » **Bonding:** General Obligation Bonds and Revenue Bonds provide another source of implementation funding for new facilities, and in some cases, can provide funding for repairs and upgrades of existing facilities. Residents can decide to raise revenue through a permanent or temporary tax increase dedicated for specific purposes such as park, trail, and bikeway improvements and maintenance. These funds are usually provided through bonds approved as part of a voter referendum.
- » **County State Aid Funds:** State aid funds are available for pedestrian and bicycle improvements on state aid roadways. This funding source is particularly useful at the time of street construction or re-construction.



- » **Partnerships:** Public and private partnerships have the potential to provide a wide array of funding opportunities beyond the traditional municipal models. Partnerships with local and state agencies have proven to be successful in building the existing trail network. Further partnerships with the School Districts and local businesses will be important for implementation of events and programming, and can support future grant writing efforts as well. Organizations with partner funding can also provide assistance with design, outreach, or maintenance/stewardship of facilities.
- » **Donations:** Private donations are a potential funding source; these may be from individuals or area corporations, or donations of labor from recreation clubs or use agreements. “Adopt-a-Trail” programs, memorial bench donations, and incentives for local businesses to provide bike racks are all examples of how organizations, businesses, and individuals could help with maintenance and funding, while raising awareness and enthusiasm of the bicycle and pedestrian system.

CONSIDERATION FACTOR #8: DOES THE PROJECT CONSIDER FUTURE OPERATIONS AND MAINTENANCE NEEDS?

Implementation of the Future Network Plan should consider ongoing operations and maintenance needs. General maintenance activities may include trail edge mowing, surface maintenance, snow removal, refuse removal, annual inspections, and general administration. General estimates for these types of activities associated with a regional trail corridor (15 to 30 miles in length) are provided in Table 4.4. Table 4.5 provides general cost estimates for other activities associated with capital costs.

Replacement schedules are also an important factor to consider in developing annual work plans and Capital Improvement Programs (CIP). Regular maintenance schedules should be followed for on- and off-road trails to extend their lifespan, while maximizing investments. (see Tables 4.6 and 4.7). Implementation of the Future Network should consider long-term funding needs to ensure investments (projects) can be maintained over time.



Table 4.4 Annual Operations & Maintenance Activities - 2020 Cost Estimates

ITEM	ANNUAL COST *
General Administration	\$6,000
Annual Sign Inventory and Replacements	\$2,500
Security – Patrol	\$1,500
Natural Resource Management Along Corridor	\$2,000
Mowing, Trail Sweeping	\$4,500
Trail Amenity Maintenance – Benches, Trash Cans, Refuse Removal	\$5,000
Landscape Maintenance at Trailheads	\$5,500
Shoulder and Striping Maintenance	\$6,000
Equipment Maintenance	\$6,500
Trailhead facility repair and maintenance	\$5,000
Snow Removal	\$2,000
Tree trimming	\$2,000
Vegetation maintenance (sediment removal from rain gardens and stormwater management systems, prairie management including burns)	\$2,500

* General estimates are based on a regional trail corridor that is 15 to 30 miles in length.

Table 4.5 Capital Activities - 2020 Cost Estimates

FACILITY TYPE	ANNUAL O+M COST	CAPITAL COST	ESTIMATED LIFE
Asphalt Trail (8' wide or less)	\$1,200 to \$2,000 / Mile	\$200,000 to \$250,000 / Mile	25+ years
Asphalt Trail (10' wide)	\$1,500 to \$2,500 / Mile	\$250,000 to \$350,000 / Mile	25+ years
On-Street Bikeways (8' wide)	\$1,500 to \$2,500 / Mile	\$500,000 to 700,000 / Mile	20 years
Sidewalks (6' wide concrete)	Minimal	\$45 / LF	25 to 40 years
New Boardwalk (wood)	\$15 - \$20 / LF	\$600 - \$800 / LF	15 to 20 years
SIGNAGE TYPE	ANNUAL O+M COST	CAPITAL COST	ESTIMATED LIFE
Kiosk-Style Signs	Minimal	\$5,000 - \$25,000	20 years
Wayfinding Sign	Minimal	\$1,000 - \$1,500	20 years
CROSSING TYPE	ANNUAL O+M COST	CAPITAL COST	ESTIMATED LIFE
Pedestrian/Bicycle Tunnel	\$2,000 - \$5,000 / yr	\$600,000 - \$1,200,000	50 years
Pedestrian/Bicycle Overpass	\$10,000 - \$20,000 / yr	\$1,200,000 - \$2,500,000	50 years
HAWK (Pedestrian Hybrid Beacon Signal)	\$4,000 - \$6,000 / yr	\$100,000 - \$160,000	20 years
RRFB (Rectangular Rapid Flashing Beacons)	Minimal	\$15,000 - \$20,000	20 years
Signalized Intersection	\$6,000 - \$10,000 / yr	\$200,000 - \$350,000	20 years
Flashing Warning Sign	Minimal	\$4,000 - \$8,000	10 to 15 years
ADA Curb Ramp Retrofit	Minimal	\$1,000 - \$2,000 / Ramp	25 to 40 years
High Visibility Crosswalks	Minimal	\$800 - \$2,000	2 to 5 years
Median/Refuge Island (4' to 8' wide)	Minimal	\$20,000 - \$30,000 / 100 LF	25 to 40 years
Crossing Signs	Minimal	\$300 - \$1,200	10 to 15 years
AMENITY TYPE	ANNUAL O+M COST	CAPITAL COST	ESTIMATED LIFE
Bike Repair Station	\$50 - \$100	\$500 - \$1,500	5 years
Bench	Minimal	\$750 - \$2,000	10 years
Trash/Recycling Cans	Minimal	\$500 - \$1,500	10 years
Bike Parking Rack	Minimal	\$500 - \$1,000	20 years

Table 4.6 Off-Road Trail - Maintenance Schedule

ASPHALT TRAIL YEAR	MAINTENANCE ACTIVITY
0	Original construction of the paved trail
every 5 years	Routine maintenance: crack filling, minor patching, minor curb repairs
15 - 20	Overlay or Mill & Overlay
35	Reclaim and Pave

Table 4.7 On-Road Bike Facility - Maintenance Schedule

ASPHALT TRAIL YEAR	MAINTENANCE ACTIVITY
0	Original construction of the paved trail
every 5 years	Crack Seal
20	Overlay
35	Mill & Overlay
50	Total Reconstruction

** It is assumed maintenance activities will coincide with maintenance schedules used to maintain a typical roadway.*

CONSIDERATION FACTOR #9: DOES THE PROJECT HAVE ANY CHALLENGES TO OVERCOME?

Reaching a consensus on a pedestrian or bicycle project typically requires a quantitative and qualitative approach to evaluate various alternatives, alignments, or routes. This approach needs to consider technical data, public input, engineering design standards, and direction from county staff. To achieve this objective, the county can conduct sensitivity tests to determine a project's feasibility.

A sensitivity test will help determine a project's benefits or fatal flaws from a social, economic, and environmental perspective (SEE Scan). Typical screening criteria that is consistent with federal environmental documents include, but is not limited to the following:

- » Impacts to adjacent property (e.g., full or partial acquisition)
- » Benefits to surrounding businesses
- » Benefits to the physical and natural environment (e.g., noise and air quality)
- » Impacts to threatened and endangered species, wetlands, waterbodies, soils, and hazardous materials
- » Community and Political Support
- » Return on Investment (e.g., low-cost/high benefit vs. high cost/marginal benefit)
- » Project Readiness (right-of-acquisition, design, and permitting)
- » Social Equity Measures (ability to connect to underserved populations)

Shifting a project's priority (see Tables 4.1 and 4.2) may be influenced by further analysis. Projects should be fully screened for their benefits and fatal flaws, if any, prior to implementation.

CONSIDERATION FACTOR CHECKLIST

The “Consideration Factors” help introduce larger policy decisions to consider when shifting a project (see Tables 4.1 and 4.2). The factors should be weighed and considered heavily when implementing the Future Network Plan. Using the factors will also help create greater transparency in the decision making process. In that respect, Table 4.8 can be used as a checklist to help determine if and when project should be adjusted.

Table 4.8 Consideration Factor Checklist

YES OR NO	CONSIDERATION FACTORS
	Factor #1: Does the project address pedestrian and bicycle safety needs?
	Factor #2: Does the project overcome a transportation barrier?
	Factor #3: Does the project have community support?
	Factor #4: Does the project contribute to the RBTN?
	Factor #5: Does the project embrace innovative design solutions?
	Factor #6: Does the project provide benefits from an equity perspective?
	Factor #7: Does the project align with funding opportunities?
	Factor #8: Does the project consider future operations and maintenance needs?
	Factor #9: Does the project have any challenges to overcome?







REQUEST FOR CONSIDERATION

Public Mtg/Date:	Public Works – 2/10/2025
Description:	Ross Ave (Metro to Alderson) Draft Roundabout Exhibits
From:	Michael Wodalski, Director of Public Works
Question:	Should the Public Works Committee Acknowledge the Preliminary Roundabout Exhibits?

Background

At the January 13, 2025 Meeting it was requested that I bring the draft roundabout exhibits to the February Meeting. Attached are the current layouts. More work has been done with the Metro Drive intersection at this point as you can tell based on the shape of the roundabout there. We're also in discussions with several of the manufacturers to make sure the loads they currently are able to get to/from their plants are still able to navigate the route once the roundabouts are built.

The Alderson St roundabout is the next one that will receive some fine tuning over the next several weeks as this one more or less is still the original standard layout that we started with and hasn't been modified yet to account for turning movements or other conflicts.

These are still very preliminary layouts and are subject to change prior to final design.

Attached Docs: - Preliminary Roundabout Exhibits

Committee Action: - Previously requested to see the layouts in their current state.

Fiscal Impact: - N/A

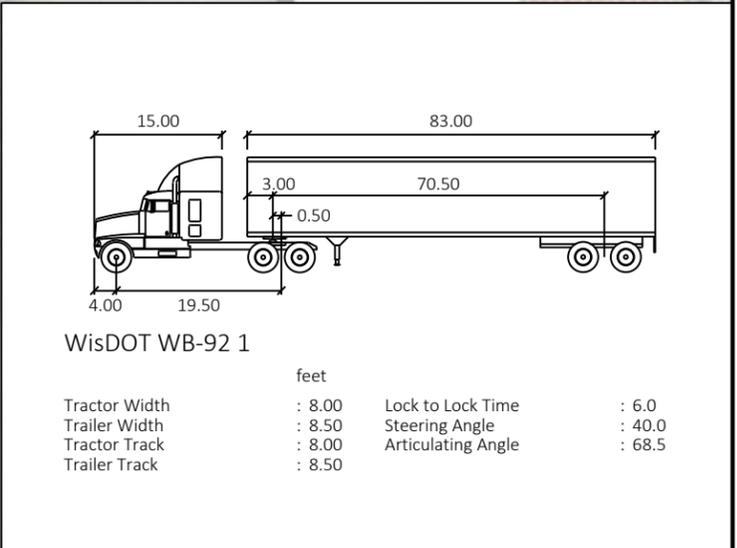
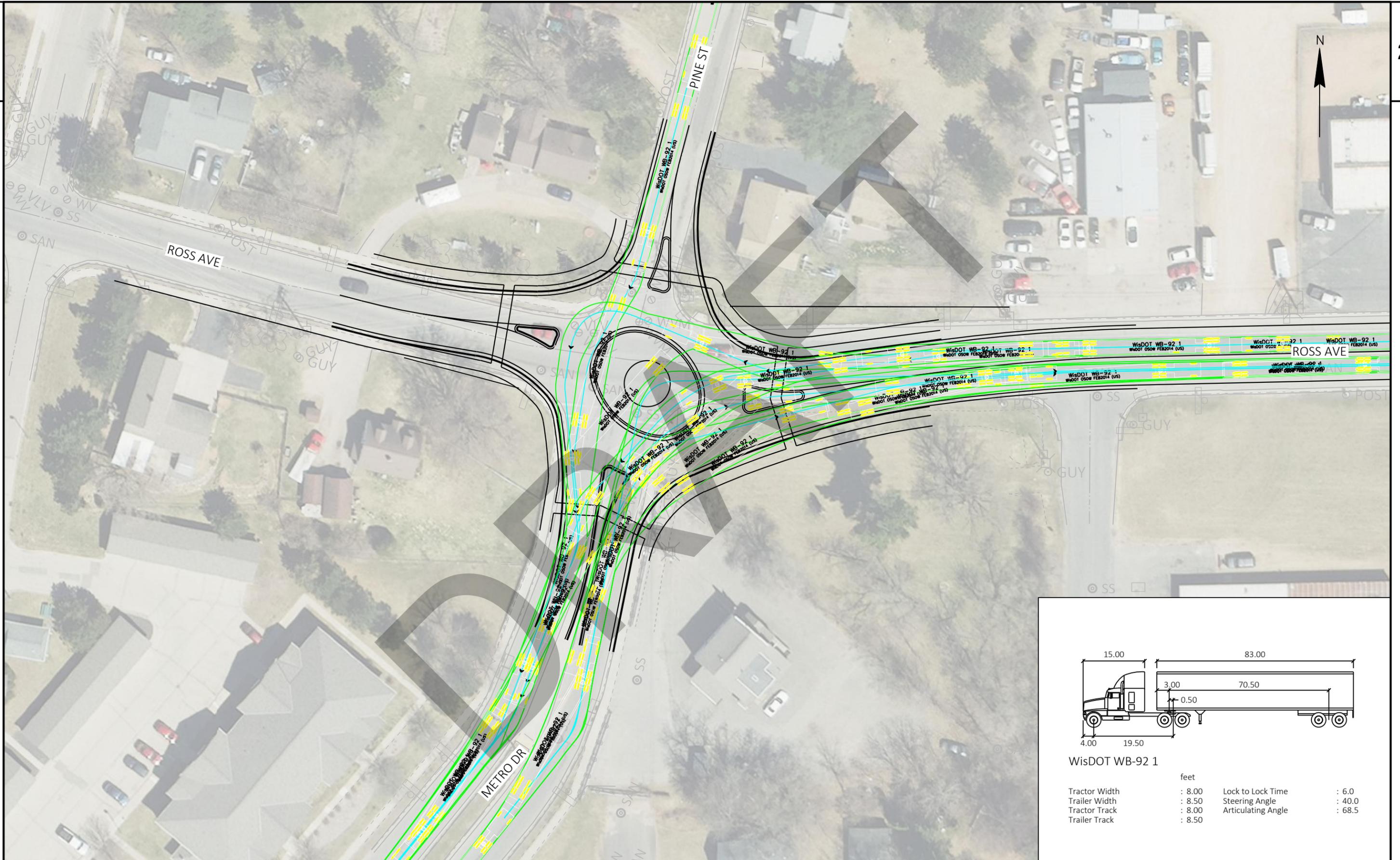
Recommendation: These are still a work in progress and not a final design layout

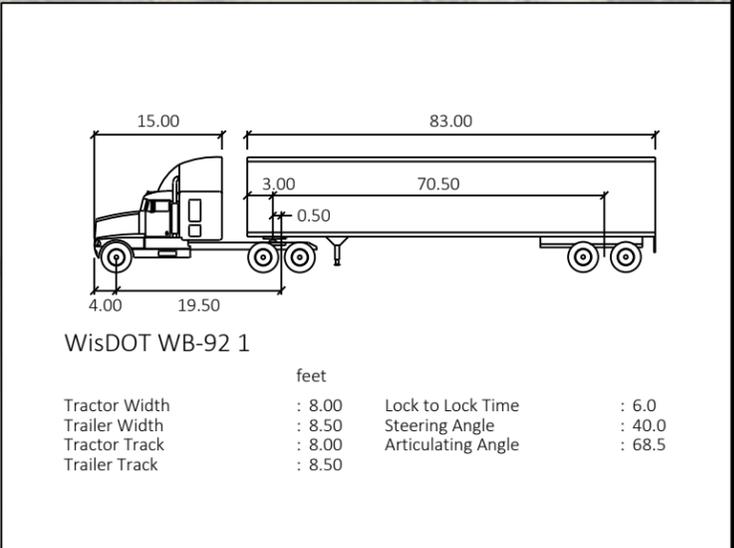
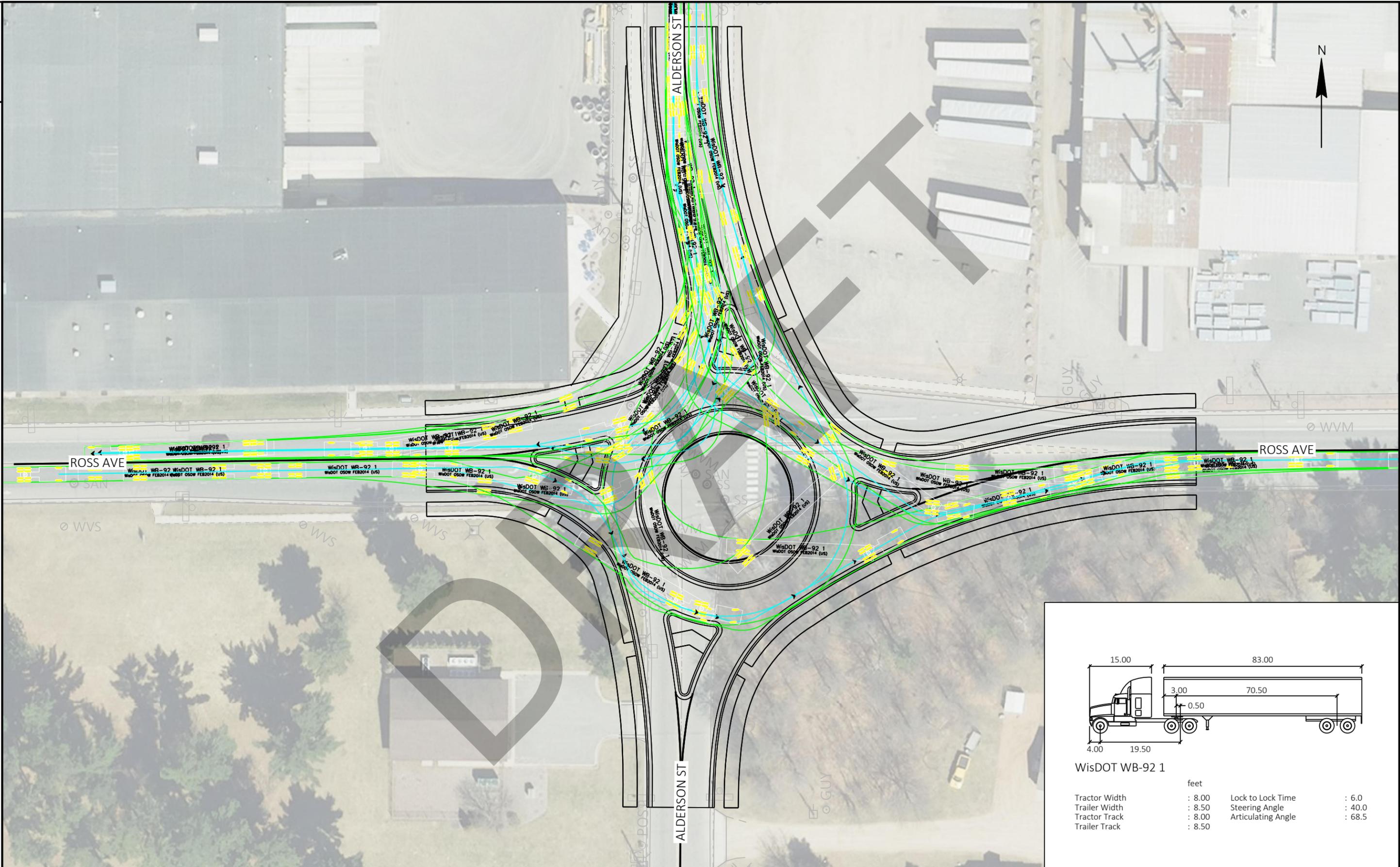
Recommended Language for Official Action

I Move to acknowledge the preliminary layouts as presented.

Or, Something else

Additional action:





REQUEST FOR CONSIDERATION

Public Mtg/Date:	Public Works – 2/10/2025
Description:	Schofield Ave (Normandy St to Birch St) Traffic Signal Procurement
From:	Michael Wodalski, Director of Public Works
Question:	Should the Public Works Committee Recommend the Village Board approve procuring the traffic control equipment for the Schofield Ave (Normandy St to Birch St) construction project from Tapco Inc. for an amount of \$411,267.80?

Background

For the Schofield Ave (Normandy Ave to Birch St) Reconstruction Project, staff sought quotes to direct purchase the traffic signals for the 3 signalized intersections (Alderson St, Ace/Target and Birch St) as well as the Rapid Rectangular Flashing Beacons at the 3 Mid-Block crossings (Pine, Cherry and Fox).

The purpose of seeking the quotes was to ensure materials are ordered in time to arrive by late summer/fall so they can be installed with the project due to long lead times. The Mesker/Schofield Ave project was one where materials for that intersection were ordered in May and didn't arrive until December, and we want to avoid that issue with this project this coming year.

This project is slated to be advertised for bids starting February 10th with bid opening then on March 10th. Thus, once contracts are approved and signed we're likely looking at a contractor being able to order materials by late March/early April. Purchasing the equipment ahead of time gains 1.5 to 2 months for the equipment to arrive in time. The quotes break out as shown below:

Supplier	RRFB's	Traffic Signals	Total Material Cost
Tapco	\$50,930.80	\$360,337.00	\$411,267.80

Tapco is the supplier of all the traffic signals in the Village and is also the company that provides maintenance services to the existing system. The overall estimate for signal and crossing equipment is \$696,290 so there is adequate room yet for the installation cost of the equipment which will be bid as part of the project.

Attached Docs: - Tapco Quotes

Committee Action: - N/A

Fiscal Impact: - Equipment costs are within the estimated range for these project items.

REQUEST FOR CONSIDERATION

Recommendation: Staff recommendation is to procure the traffic control equipment from Tapco for a cost of \$411,267.80.

Recommended Language for Official Action

I Move to recommend the Village procure the traffic control equipment from Tapco for a price of \$411,267.80.

Or, Something else

Additional action:



Safe travels:

Traffic and Parking Control Co., Inc.
5100 West Brown Deer Rd
Brown Deer, WI 53223
United States of America
Phone No.:800-236-0112
E-Mail: customerservice@tapconet.com

SALES QUOTE

SALES QUOTE DATE

1/29/2025

SALES QUOTE NUMBER

Q25001687

CUSTOMER NO.

C9705

Page: 1

BILL TO

Village of Weston
Isaac Dolan
5500 Scoffield Ave
finance@westonwi.gov
Weston, WI 54476
United States of America

SHIP TO

Weston Municipal Center
Isaac Dolan
4747 Camp Phillips Rd
Weston, WI 54476
United States of America

Ext. Document No.	SHIP VIA	TERMS	SALESPERSON	VALID UNTIL
SCHOFIELD-ALDERSON-ACE/TARGET-BIRCH	BEST RATE Prepaid & Add	Net 30 DAYS	Cheryl Cieslewicz	2/28/2025

Item/Description	U/M	Quantity	Unit Price	Total Price
203-00014 Base,Aluminum Square Pedestal, No Paint Door, SP-5444-PNC	Each	21	190.00	3,990.00
201-00017 Base,Transformer TB2-17 10-12"BC Door bolt must be SS hex head 1/4" x3/4"-20(TPI)	Each	10	525.00	5,250.00
159-00014 Washer, T-Base, 2 3/4" OD, 1/2" Thick, 1" ID P/N AS-95257	Each	40		
159-00015 Washer, T-Base, 2 1/2" OD, 3/8" Thick, 1" ID, P/N A-76027	Each	40		
030-00004 Bolt,Connecting Hardware,1"x4" Galvanized Bolt each w/ 1 Nut, 1 Lockwasher & 2 Flatwashers,4/Set	Set	10	65.00	650.00
159-00021 Pole,Aluminum 20Ft WISDOT Type 2 Flagpole ** .375 WALL **	Each	6	1,795.00	10,770.00
137669 Hardware Kit for Type 2 20ft Alum Pole (Flagpoles) includes: 1- 6 5/8" Pole Cap, 4-Nut Covers	Bag	6		
137756 Shaft,Steel,WISDOT,(Stepdown)30' Type 3 Galvanized 3RA8738300-WI-GV / 1056882 240B50	Each	2	2,995.00	5,990.00

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SCHOFIELD-ALDERSON-ACE/TARGET-BIRCH	BEST RATE Prepaid & Add	Net 30 DAYS	Cheryl Cieslewicz	2/28/2025

Item/Description	U/M	Quantity	Unit Price	Total Price
137757 Shaft,Steel,WISDOT,30' Round Type 4 11GA Galvanized 11RA8038300NC-WI-GV 730B709	Each	2	1,625.00	3,250.00
153764 Monotube Pole WISDOT Type 10 SPECIAL Millerbernd	Each	7	9,065.00	63,455.00
153737 Bolts, Anchor Type 9/10 SPECIAL for Millerbernd Monotube Pole	Each	42		
153742 Templates, Top & Bottom for Type 9/10 SPECIAL Millerbernd Monotube Pole	Each	7		
373-35 Standard Aluminum Pole,3.5', Schedule 80, 4.5"OD, TOE Stamped	Each	3	165.00	495.00
373-1380 Standard Aluminum Pole,13' Schedule 80 6061-T6 4.5" O.D., T.O.E. Stamped	Each	10	445.00	4,450.00
373-1580 Pole,Standard Aluminum Pole,15' Schedule 80 6061-T6 4.5" O.D., T.O.E. Stamped	Each	4	495.00	1,980.00
373-1080 Standard Aluminum Pole,10' Schedule 80,4.5"OD 6061-T6, T.O.E. Stamped	Each	4	400.00	1,600.00
203-00010	Each	21		

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Table with 5 columns: Ext. Document No., SHIP VIA, TERMS, SALESPERSON, VALID UNTIL. Row 1: SCHOFIELD-ALDERSON-ACE/TARGET-BIRCH, BEST RATE Prepaid & Add, Net 30 DAYS, Cheryl Cieslewicz, 2/28/2025

Main item table with 6 columns: Item/Description, U/M, Quantity, Unit Price, Total Price. Includes items like Cap, 4.5" OD Pole, Raw, 4C Signal with(3) 1/4x3/4-20 stainless steel hex head Bolts, Arm, 35Ft SPECIAL WISDOT Millerbernd Monotube Arm, etc.

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Item/Description	U/M	Quantity	Unit Price	Total Price
106190 Arm Luminaire 6Ft Steel for Millerbernd Monotube Pole '	Each	5	560.00	2,800.00
109738 Arm Luminaire 12Ft Steel for Millerbernd Monotube Pole	Each	2	610.00	1,220.00
150232 Arm, Luminaire 15ft GV Clamp-On Lum Arm For Type 10 Millerbernd Monotube Pole	Each	1	795.00	795.00
153796 Hardware Mounting Kit for Millerbernd Luminaire Arm	Each	11		
137014 Signal SIG 3 Sec 12 w/RYG Ball LEDs Vertical Yellow Poly Cutaway Visors	Each	36	585.00	21,060.00
115820 Backplate 3 SEC 12" SIG w/ 2" FY Reflective Border BPB503FY	Each	36		
137037 Screws, 3 Sec Backplate 1/2" w/Washers (12 per bag)	Bag	36		
137044 Signal SIG 4 Sec 12 w/RYYG All Arrow LEDs Vertical Yellow Poly Cutaway Visors (Variant) Red,Yel,Yel, Grn All Left Arrows	Each	14	785.00	10,990.00

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SCHOFIELD-ALDERSON-ACE/TARGET-BIRCH	BEST RATE Prepaid & Add	Net 30 DAYS	Cheryl Cieslewicz	2/28/2025

Item/Description	U/M	Quantity	Unit Price	Total Price
118406 Backplate 4 SEC 12" SIG w/ 2" FY Reflective Border BPB504FY	Each	14		
137038 Screws, 4 Sec Backplate 1/2" w/Washers (16 per bag)	Bag	14		
136852 Signal SIG Pedestrian 1 Sec 16" w/Combo/Cntdwn LED Yellow Poly Egg Crate	Each	22	340.00	7,480.00
154802 Accessible Pedestrian Signal-APS Pushbutton Sell Line Only Schofield & Alderson	Each	1	7,200.00	7,200.00
154802 Accessible Pedestrian Signal-APS Pushbutton Sell Line Only Schofield & Ace/Target Driveways	Each	1	7,815.00	7,815.00
154802 Accessible Pedestrian Signal-APS Pushbutton Sell Line Only Schofield & Birch St	Each	1	8,350.00	8,350.00
145008 Navigator iNS2 9x15 Yel/Blk APS PushButton Station 2-Wire w/R10-3e Sign	Each	20		
145009 Navigator iNS2 9x15 Yel/ Bi-Dir w/R10-3e Sign	Each	7		
145099	Each	3		

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Main item table with 6 columns: Item/Description, U/M, Quantity, Unit Price, Total Price. Includes items like INS Navigator 2 Wire Control Unit, Luminaire LED Type C, and Video/Radar Detection Equipment.

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SCHOFIELD-ALDERSON-ACE/TARGET-BIRCH	BEST RATE Prepaid & Add	Net 30 DAYS	Cheryl Cieslewicz	2/28/2025

Item/Description	U/M	Quantity	Unit Price	Total Price
152046 NoTraffic Single Intersection, Standard 4 Approaches, 5 Years Service, Detection, Basic Analytics	Each	3		
152047 No Traffic Power DIN Assembly	Each	3		
155143 Remote Front Panel Access, 5 Year Plan	Each	3		
153351 No Traffic Mast Mount	Each	12		
1237-00003 Camera Power Cable 3-C-16-B-26SJOOW 01342 Jacketed SJOOW Carolprene 1000' Rolls Only	Foot	3,000		
152048S Intersection Safety Insights, 5 Year Plan	Each	3		
373-12574HW Signal Mounting Hardware-Schofield & Alderson	Kit	1	5,075.00	5,075.00
373-12574HW Signal Mounting Hardware-Schofield & Ace/Target Driveways	Kit	1	4,150.00	4,150.00

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SCHOFIELD-ALDERSON-ACE/TARGET-BIRCH	BEST RATE Prepaid & Add	Net 30 DAYS	Cheryl Cieslewicz	2/28/2025

Item/Description	U/M	Quantity	Unit Price	Total Price
373-12574HW Signal Mounting Hardware-Schofield & Birch St	Kit	1	4,225.00	4,225.00
122-FR1JPYWI Bracket, Tapco, Poly, Yellow, 2 FR1JPYWI	Each	50		
124273 Astro Brac Alum 46" Gusseted Tube 1-1/2" TOE w/Vinyl Insert AB-2003-46 (3 Sec)	Each	13		
124347 Astro Brac Alum 58" Gusseted Tube 1-1/2" TOE w/Vinyl Insert AB-2003-58 (4 Sec)	Each	7		
136148 Astro Signal Brac arm kit 1-way 8-1/2" CTC Alum SS slotted washer	Each	20		
142663 Astro-Brac Galaxy Hinged Clamp Kit 96" SS Cable AG-3055-96-SS	Each	20		
217-00004 Nipple Pipe 1.5"X2" Steel, Zinc Plated 15/16" Long NPT Pipe Thread On Both Ends	Each	4		
1168-00005 Locknut #659 Iron Hex Galv 1.5" For FR1JPY	Each	4		
290-SE0360	Each	4		

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SCHOFIELD-ALDERSON-ACE/TARGET-BIRCH	BEST RATE Prepaid & Add	Net 30 DAYS	Cheryl Cieslewicz	2/28/2025

Item/Description	U/M	Quantity	Unit Price	Total Price
Serrated Lock Ring SE-0360 Alum (Notched One Side)				

Subtotal:	360337.00
Invoice Discount:	0.00
Total Sales Tax:	0.00
Total:	360,337.00

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Ext. Document No.	SHIP VIA	TERMS	SALESPERSON	VALID UNTIL
	BEST RATE Prepaid & Add	Net 30 DAYS	Aaron Guilbault	2/19/2025

Item/Description	U/M	Quantity	Unit Price	Total Price
SPV.0060.09 - Pine street				
500029 Controller, 12V, 108045, Hollow, Radio, Out1/Out2	Each	3	1,885.00	5,655.00
142048 Universal Cabinet Mounting Bracket, SOP Cabinets 108766, 108045, 120652, Includes U-Bolt Hardware	Each	3	175.00	525.00
SLR-55-A 65W/12V Solar Panel Package, Side of Pole Mount, Banded	Each	2	696.00	1,392.00
SLR-55-B 65W/12V Solar Panel Package, Top Of Pole Mount 4.5 Dia.	Each	1	645.00	645.00
101494 Battery, Universal battery, Solar 12V 50Ah AGM UB12500 - Internal Thread	Each	3	325.00	975.00
138089 RRFB, Dimmable, Assembly with Universal Mounting Kit	Each	6	365.00	2,190.00
2180-C00753 Hardware Kit, RRFB, MNT to 1.5" pipe, 2" & 2.25" Telespar, Articulating and Back-To-Back	Each	2	31.00	62.00
2180-C00543 RRFB Mount, Trombone Mast Arm Light Bar and Sign Mount Kit	Each	2	450.00	900.00

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	BEST RATE Prepaid & Add	Net 30 DAYS	Aaron Guilbault	2/19/2025

Item/Description	U/M	Quantity	Unit Price	Total Price
140259 Wire Harness, Dimmable RRFB, 50' of Cable w/ Male Connector	Each	2	122.95	245.90
144162 Push Button, iNX, No Braille, Yellow Single Arrow, 9"x12" R10-25 Faceplate	Each	3	740.00	2,220.00
146153-50 Cable, Bulk, 6C 18AWG, Outdoor/Burial Rated, ICEA E2 Color, 50 foot pre-cut length	Each	1	120.00	120.00
373-05075 W11-2,30"x30"x.080 DG3 FYG,Pedestrian Crossing (Symbol) Fed Spec - Fluorescent Yellow-Green Sign	Each	6	125.00	750.00
373-01757 W16-7PR,24"x12"x.080 DG3 FYG,Down Diagonal Right Arrow (Fed Spec) Sign	Each	2	50.00	100.00
373-01759 W16-7PL,24"x12"x.080 DG3 FYG,Down Diagonal Left Arrow (Fed Spec) Sign	Each	2	50.00	100.00
107265 Sign Mounting Kit, Banded, Flared Leg, Standard For Mounting B2B Static Signs to a Large Pole	Each	2	46.00	92.00
111531N Sign Mounting Kit, Banded, Flared Leg, Standard For Mounting One Static Sign to a Large Pole	Each	4	29.95	119.80

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Item/Description	U/M	Quantity	Unit Price	Total Price
373-13 Standard Aluminum Pole, 13' Schedule 40 6061-T6 4.5" O.D. T.O.E.	Each	1	390.00	390.00
203-00014 Base,Aluminum Square Pedestal, No Paint Door, SP-5444-PNC	Each	1	340.00	340.00
3177-00042 J-Bolt,1"x 42"+4" ATSM F1554 GR-105 92k 12" Thread Full Galvanized with Nut & Lock Washer	Each	4	54.00	216.00
030-00006 Washer Flat 1-1/16"ID x2.5OD"x.125" Galvanized For 1" A/B, for use w/ J-bolts (not incl) SPV.0060.10 - Cherry St	Each	4	5.30	21.20
500029 Controller, 12V, 108045, Hollow, Radio, Out1/Out2	Each	3	1,885.00	5,655.00
142048 Universal Cabinet Mounting Bracket, SOP Cabinets 108766, 108045, 120652, Includes U-Bolt Hardware	Each	3	175.00	525.00
SLR-55-A 65W/12V Solar Panel Package, Side of Pole Mount, Banded	Each	2	696.00	1,392.00
SLR-55-B 65W/12V Solar Panel Package, Top Of Pole Mount 4.5 Dia.	Each	1	645.00	645.00

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	BEST RATE Prepaid & Add	Net 30 DAYS	Aaron Guilbault	2/19/2025

Item/Description	U/M	Quantity	Unit Price	Total Price
101494 Battery, Universal battery, Solar 12V 50Ah AGM UB12500 - Internal Thread	Each	3	325.00	975.00
138089 RRFB, Dimmable, Assembly with Universal Mounting Kit	Each	6	365.00	2,190.00
2180-C00753 Hardware Kit, RRFB, MNT to 1.5" pipe, 2" & 2.25" Telespar, Articulating and Back-To-Back	Each	2	31.00	62.00
2180-C00543 RRFB Mount, Trombone Mast Arm Light Bar and Sign Mount Kit	Each	2	450.00	900.00
140259 Wire Harness, Dimmable RRFB, 50' of Cable w/ Male Connector	Each	2	122.95	245.90
144162 Push Button, iNX, No Braille, Yellow Single Arrow, 9"x12" R10-25 Faceplate	Each	3	740.00	2,220.00
146153-50 Cable, Bulk, 6C 18AWG, Outdoor/Burial Rated, ICEA E2 Color, 50 foot pre-cut length	Each	1	120.00	120.00
373-05075 W11-2,30"x30"x.080 DG3 FYG,Pedestrian Crossing (Symbol) Fed Spec - Fluorescent Yellow-Green Sign	Each	6	125.00	750.00

All prices are listed in US Dollar (USD)
For terms and conditions, please visit <https://tapconet.com/terms-conditions>



Safe travels:

Traffic and Parking Control Co., Inc.
5100 West Brown Deer Rd
Brown Deer, WI 53223
United States of America
Phone No.:800-236-0112
E-Mail: customerservice@tapconet.com

SALES QUOTE

SALES QUOTE DATE

1/20/2025

SALES QUOTE NUMBER

Q25001015

CUSTOMER NO.

C9705

Page: 5

BILL TO

Village of Weston
Dan Raczkowski
5500 Scoffield Ave
finance@westonwi.gov
Weston, WI 54476
United States of America

SHIP TO

Weston Municipal Center
Dan Raczkowski
4747 Camp Phillips Rd
Weston, WI 54476
United States of America

Ext. Document No.	SHIP VIA	TERMS	SALESPERSON	VALID UNTIL
	BEST RATE Prepaid & Add	Net 30 DAYS	Aaron Guilbault	2/19/2025

Item/Description	U/M	Quantity	Unit Price	Total Price
373-01757 W16-7PR,24"x12"x.080 DG3 FYG,Down Diagonal Right Arrow (Fed Spec) Sign	Each	2	50.00	100.00
373-01759 W16-7PL,24"x12"x.080 DG3 FYG,Down Diagonal Left Arrow (Fed Spec) Sign	Each	2	50.00	100.00
107265 Sign Mounting Kit, Banded, Flared Leg, Standard For Mounting B2B Static Signs to a Large Pole	Each	2	46.00	92.00
111531N Sign Mounting Kit, Banded, Flared Leg, Standard For Mounting One Static Sign to a Large Pole	Each	4	29.95	119.80
373-13 Standard Aluminum Pole, 13' Schedule 40 6061-T6 4.5" O.D. T.O.E.	Each	1	390.00	390.00
203-00014 Base,Aluminum Square Pedestal, No Paint Door, SP-5444-PNC	Each	1	340.00	340.00
3177-00042 J-Bolt,1"x 42"+4" ATSM F1554 GR-105 92k 12" Thread Full Galvanized with Nut & Lock Washer	Each	4	54.00	216.00
030-00006 Washer Flat 1-1/16"ID x2.5OD"x.125" Galvanized For 1" A/B, for use w/ J-bolts (not incl)	Each	4	5.30	21.20
SPV.0060.11 - Fox St				

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	BEST RATE Prepaid & Add	Net 30 DAYS	Aaron Guilbault	2/19/2025

Item/Description	U/M	Quantity	Unit Price	Total Price
500029 Controller, 12V, 108045, Hollow, Radio, Out1/Out2	Each	3	1,885.00	5,655.00
142048 Universal Cabinet Mounting Bracket, SOP Cabinets 108766, 108045, 120652, Includes U-Bolt Hardware	Each	3	175.00	525.00
SLR-55-A 65W/12V Solar Panel Package, Side of Pole Mount, Banded	Each	2	696.00	1,392.00
SLR-55-B 65W/12V Solar Panel Package, Top Of Pole Mount 4.5 Dia.	Each	1	645.00	645.00
101494 Battery, Universal battery, Solar 12V 50Ah AGM UB12500 - Internal Thread	Each	3	325.00	975.00
138089 RRFB, Dimmable, Assembly with Universal Mounting Kit	Each	6	365.00	2,190.00
2180-C00753 Hardware Kit, RRFB, MNT to 1.5" pipe, 2" & 2.25" Telespar, Articulating and Back-To-Back	Each	2	31.00	62.00
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203-00014 Base,Aluminum Square Pedestal, No Paint Door, SP-5444-PNC	Each	1	340.00	340.00
3177-00042 J-Bolt,1"x 42"+4" ATSM F1554 GR-105 92k 12" Thread Full Galvanized with Nut & Lock Washer	Each	4	54.00	216.00
030-00006 Washer Flat 1-1/16"ID x2.5OD"x.125" Galvanized For 1" A/B, for use w/ J-bolts (not incl)	Each	4	5.30	21.20
373-05075 W11-2,30"x30"x.080 DG3 FYG,Pedestrian Crossing (Symbol) Fed Spec - Fluorescent Yellow-Green Sign	Each	6	125.00	750.00
373-01757 W16-7PR,24"x12"x.080 DG3 FYG,Down Diagonal Right Arrow (Fed Spec) Sign	Each	2	50.00	100.00
373-01759	Each	2	50.00	100.00

All prices are listed in US Dollar (USD)
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107265 Sign Mounting Kit, Banded, Flared Leg, Standard For Mounting B2B Static Signs to a Large Pole	Each	2	46.00	92.00
111531N Sign Mounting Kit, Banded, Flared Leg, Standard For Mounting One Static Sign to a Large Pole	Each	4	29.95	119.80

Furnish only quote. Installation is not included.
Solar powered equipment requires no shading or obstructions

Subtotal:	50930.80
Invoice Discount:	0.00
Total Sales Tax:	0.00
Total:	50,930.80

All prices are listed in US Dollar (USD)
For terms and conditions, please visit <https://tapconet.com/terms-conditions>

REQUEST FOR CONSIDERATION

Public Mtg/Date:	Public Works – 2/10/20245
Description:	Green Tree Acres Second Phase - Construction Representative Contract
From:	Michael Wodalski, Director of Public Works
Question:	Should the Public Works Committee Recommend the Village Board Approve the Construction Representative Contract with Vreeland Associates for the Green Tree Acres Second Phase for an estimated amount of \$42,000 - \$44,000?

Background

Green Tree Construction is getting ready to construct the second phase of the Green Tree Acres Subdivision in spring 2025. The developer (Green Tree Construction) is responsible for installing the new public infrastructure (water, sewer, storm water, streets and sidewalk). As part of the Development Agreement with Green Tree Construction, they are to reimburse the Village for any costs incurred for all consultant fees, including engineering. The Construction Representative is responsible for making sure the infrastructure is installed according to the approved plans and specifications of the project.

The design engineer, Vreeland Associates has submitted the attached proposal for the construction phase services. Vreeland has performed similar duties for the Hinner Springs Subdivision as well as Phase 1 of this subdivision and there is no issue from staff's perspective of having them oversee the construction activity. Historically, we have used the same engineering firm from design through construction as they are the ones most familiar with the design and any questions that come up during construction can more easily be answered.

All costs associated with the contract with Vreeland will be reimbursed by the developer, thus there is not a fiscal impact to the Village.

Attached Docs: - Proposal from Vreeland

Committee Action:

Fiscal Impact: - The estimated range of \$42,000 to \$44,000 will be reimbursed by the Developer.

Recommendation: Staff recommends approving the construction representative contract with Vreeland Associates

Recommended Language for Official Action

I Move to Recommend the Village Board Approve the Construction Representative Contract with Vreeland Associates for Green Tree Acres Second Phase for the estimated contract range of \$42,000 - \$44,000.

Or, Something else



6103 Dawn St.
Weston, WI 54476
Phone #: 715-241-0947

February 5th, 2025

Mr. Micheal Wodalski
Director of Public Works
Village of Weston
4747 Camp Phillips Road
Weston, WI 54476

RE: Phase 2 Green Tree Acres

Dear Mr. Wodalski

We are pleased to respond to your request for construction monitoring services on the Green Tree Subdivision new development project. As a professional land surveying and engineering firm, located in the Village of Weston, for the last 25 years we have been dedicated to continue to provide services to the village we live and work in and see the continued growth of our community.

This proposal will address construction monitoring services for the completion of Green Tree Acres Subdivision Phase 2 including completion of utilities and street infrastructure improvements based on our plans. Based on the schedule provided the following services will be provided during the completions of Phase 1 of Green Tree Acres Subdivision.

1. Conduct a Pre-Construction Meeting
2. Monitor, on a daily, fulltime basis, the contractors pipe laying, pipe trench backfilling, pipe trench compaction and performance testing activities. Monitor, as needed, the contractor's road building activities.
3. Coordinating with subcontractors as needed for soil proctor, compaction tests, and/or concrete testing. The testing would be coordinated through AET (American Engineering & Testing).
4. Record daily notes on construction activities.
5. Make construction record notes on CR's plan print.
6. Provide measurements of buried facilities and prepare as-built construction drawings.
7. Provide written report to the Village, with photographs, summarizing the construction activities.
8. Make regular contact with the Village staff regarding project status.

Tasks completed by us as needed;

- a. Plat staking.



6103 Dawn St.
Weston, WI 54476
Phone #: 715-241-0947

b. Construction Staking

We will provide the construction monitoring services at a rate of \$100/hr. this construction monitoring services hourly rate, during the time of contractor is on-site, is for full-time monitoring during pipe laying and backfill activities and part-time during road building and concrete work. This includes compensation for vehicles, report forms, photographs and miscellaneous items.

The village will dictate the level of services desired for the infrastructure as they will accept it as a public improvement. The level of services will be established at the pre-construction meeting. The level of service will drive the total cost of construction monitoring.

Based on the schedule provided by our we estimate 300 hours of CR time during sanitary sewer, watermain, lateral utility pipe laying, and storm sewer. The street construction, concrete and restoration work have an estimated of 60 hours for periodic site checks. With that we estimate construction monitoring services to be in the range of \$35,000 to \$37,000 for full-time construction monitoring during pipe laying and as needed during street construction, depending on the efficiencies of the contractor and the weather conditions.

AET for the typical material testing demands on soils, concrete and pavement for Phase 2. We estimate the subcontractor cost to be \$5,000.

Following the completion of the project we estimate the construction record drawings preparation to be \$2,000.

The total for construction monitoring services is estimated to be \$42,000 to \$44,000.

All work under this agreement will be performed in accordance with Wisconsin codes and Statutes and Local Codes and Ordinances. Client, by the undersigned, hereby agrees to be responsible for payment of the charges for the above-described work. **Work will begin after we receive a signed contract**, payment of each invoice is due in full within 30 days of receipt. In the event collection proceeding becomes necessary, all costs of collection, necessary disbursements, and attorney fees, will be paid by Client, in addition to all other relief Vreeland is entitled. The parties hereto have executed this Agreement as of date set forth below, and by so signing, certify that they have been duly and properly authorized by their respective entities to make the commitments contained herein, intending them to be binding upon their respective entities and to execute this Agreement on their behalf.

It would be a pleasure to perform this work for you. If this proposal is acceptable, please sign one copy and return it for our files. Please contact us if you have any questions. We are able to meet with you and review the proposal if you so desire.

Sincerely,

Dustin Vreeland, PE
Engineer

Accept Proposal _____

GENERAL NOTES:

- CONTACT DIGGER'S HOTLINE 5 WORKING DAYS PRIOR TO THE START OF DEMOLITION/CONSTRUCTION.
- GRADE, LINE, AND LEVEL TO BE REVIEWED IN THE FIELD BY THE CONSTRUCTION MANAGER.
- INSTALL ALL REQUIRED EROSION CONTROL MEASURES IN ACCORDANCE WITH LOCAL AUTHORITIES AND THE DEPARTMENT OF NATURAL RESOURCES REGULATIONS.
- ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN ACCORDANCE WITH THE DEPARTMENT OF NATURAL RESOURCES, LOCAL AUTHORITIES REGULATIONS.
- 6" OF TOPSOIL SHALL BE PROVIDED IN ALL GENERAL LAWN AREAS AND 12" SHALL BE PROVIDED IN ALL PLANTING BED AREAS.
- SEE SHEET C17 FOR ALL REQUIRED EROSION CONTROL ELEMENTS.
- ANY EXISTING UTILITIES NOT SHOWN ON THIS DOCUMENT WHICH NEED TO BE REMOVED, RELOCATED AND OR ADJUSTED SHALL BE THE RESPONSIBILITY OF THE SITE GRADING CONTRACTOR AND INCLUDED IN THE BASE BID CONTRACT.
- COORDINATE ALL EARTHWORK ACTIVITIES WITH GAS, ELECTRIC, (INCLUDING MAIN SERVICE, SITE LIGHTING, CONDUITS AND SIGNAGE) CABLE AND TELEPHONE CONSTRUCTION AND RESPECTIVE TRADES FOR THE INSTALLATION OF SAID UTILITIES.
- PROVIDE RIP RAP AT ALL ENDWALL STRUCTURES OF THE PROPOSED CULVERTS TO PREVENT WASHOUT AND EROSION.
- RIP RAP SHALL HAVE FILTER FABRIC PLACED BENEATH.
- EXCESS TOPSOIL SHALL BE STOCKPILED AND STORED ONSITE FOR FUTURE USE, UNLESS OTHERWISE DIRECTED BY THE OWNER. SILT FENCE SHALL BE PLACED AROUND STOCKPILE ON DOWNHILL SLOPES.
- ALL TESTING AND INSPECTION SHALL BE DONE IN ACCORDANCE WITH SPS 382.21.
- THE LOCAL MUNICIPALITY SHALL BE CONTACTED PRIOR TO ANY EXCAVATION IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL HAVE HIS TRAFFIC CONTROL PLAN APPROVED PRIOR TO WORK COMMENCING. THE LOCAL MUNICIPALITY SHALL OPERATE ALL EXISTING WATER VALVES IF NEEDED.
- ALL INSTALLATION OF SEWER AND WATER SHALL BE TO PLOVER SEWER AND WATER STANDARDS AND SPECIFICATIONS.
- 4"x4" POST SHALL BE PLACED AT THE END OF SANITARY SEWER AND WATERMAIN PLUGS ON MUSKIE DRIVE FOR FUTURE EXTENSION. 4"x4" POST SHALL BE PAINTED BLUE FOR WATERMAIN AND GREEN FOR SANITARY SEWER ABOVE GROUND SURFACE.
- CLUSTER BOX UNIT (CBU) 1-5 SEE DETAIL ON SHEET C24 FOR INSTALLATION GUIDELINES AND SIZES

WETLAND NOTE

DELINEATED WETLAND SHOWN HEREON WERE PROVIDED BY STAR ENVIRONMENTAL.

SCALE NOTE:
IF YOU ARE VIEWING THESE PLANS IN AN 11"x17" SIZE THEY MAY BE HALF SCALE FROM THE ORIGINAL 22"x34" SIZE DRAWING AND THE DRAWING SCALE IS HALF OF THAT STATED. CHECK SCALE.

STAMP/SIGNATURE:		REVISIONS		TITLE PAGE:
BY	DATE	DESCRIPTION		
DV	6/4/24	ADJUST 12" INV IN CB 35 AND 24" INV IN 37.		PROPOSED OVERALL PLAN
				PROJECT: GREEN TREE ACRES
				LOCATION: VILLAGE OF WESTON MARATHON COUNTY, WISCONSIN

TITLE PAGE:
PROPOSED OVERALL PLAN

PROJECT: GREEN TREE ACRES

LOCATION: VILLAGE OF WESTON
MARATHON COUNTY, WISCONSIN

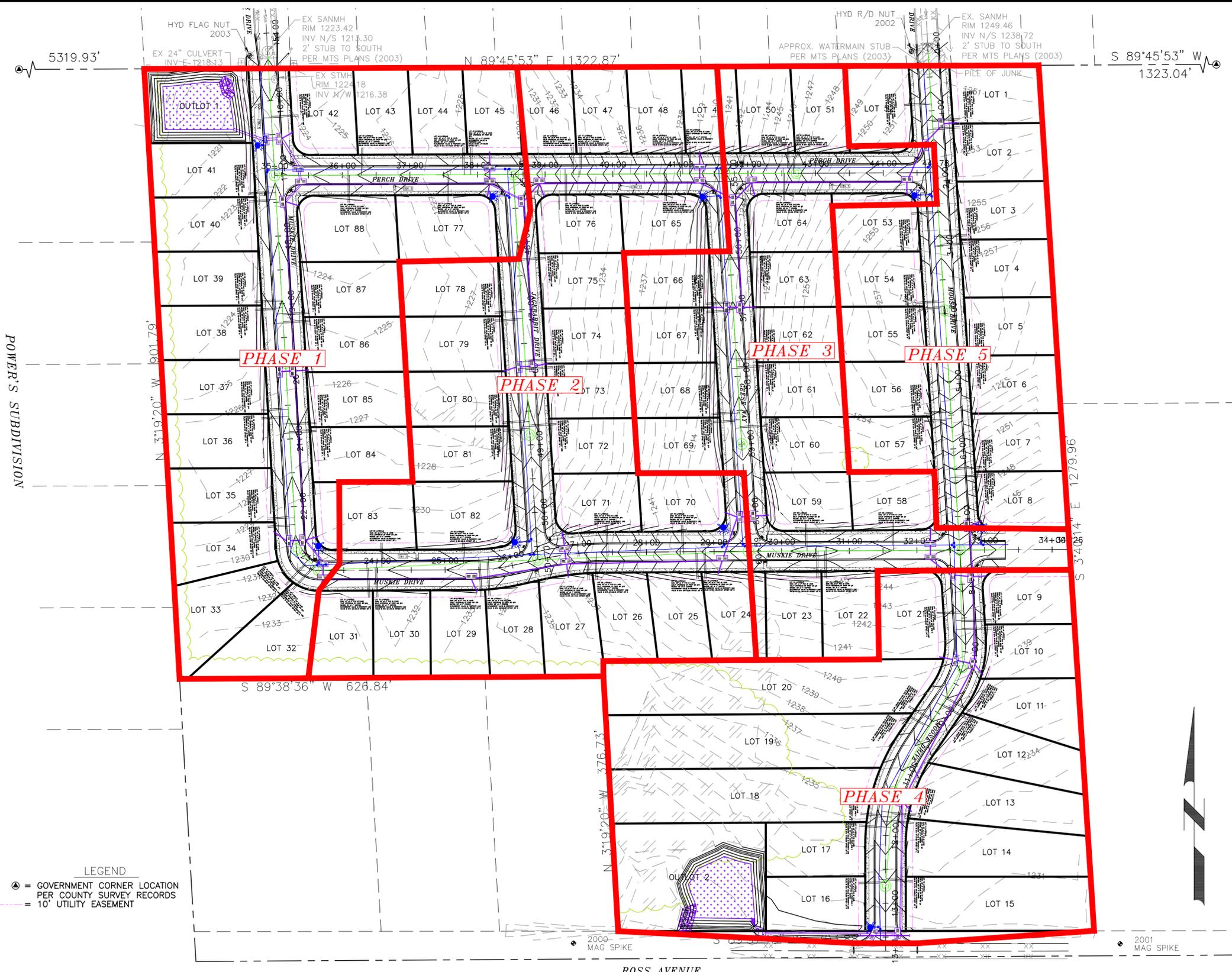


VREELAND ASSOCIATES LAND SURVEYORS & ENGINEERS
6103 DAWN STREET WESTON, WI. 54476
PHONE NO.: (715) 241-0947
EMAIL: dustin@vreelandassociates.us
WEBSITE: www.vreelandlandsurveying.com
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PREPARED FOR:
GREEN TREE CONSTRUCTION

PLAN DATE:
JUNE 4TH, 2024

DRAWN BY: DUSTIN VREELAND
DRAFTED BY: TIMOTHY VREELAND
FILE NO.: 23-0361 ENGINEERING
DATE: SEPTEMBER 5TH, 2023
SCALE:
1" = 80'
SHEET
C4



LEGEND
 ● = GOVERNMENT CORNER LOCATION PER COUNTY SURVEY RECORDS
 - - - = 10' UTILITY EASEMENT