

Arboretum Area Transportation Plan

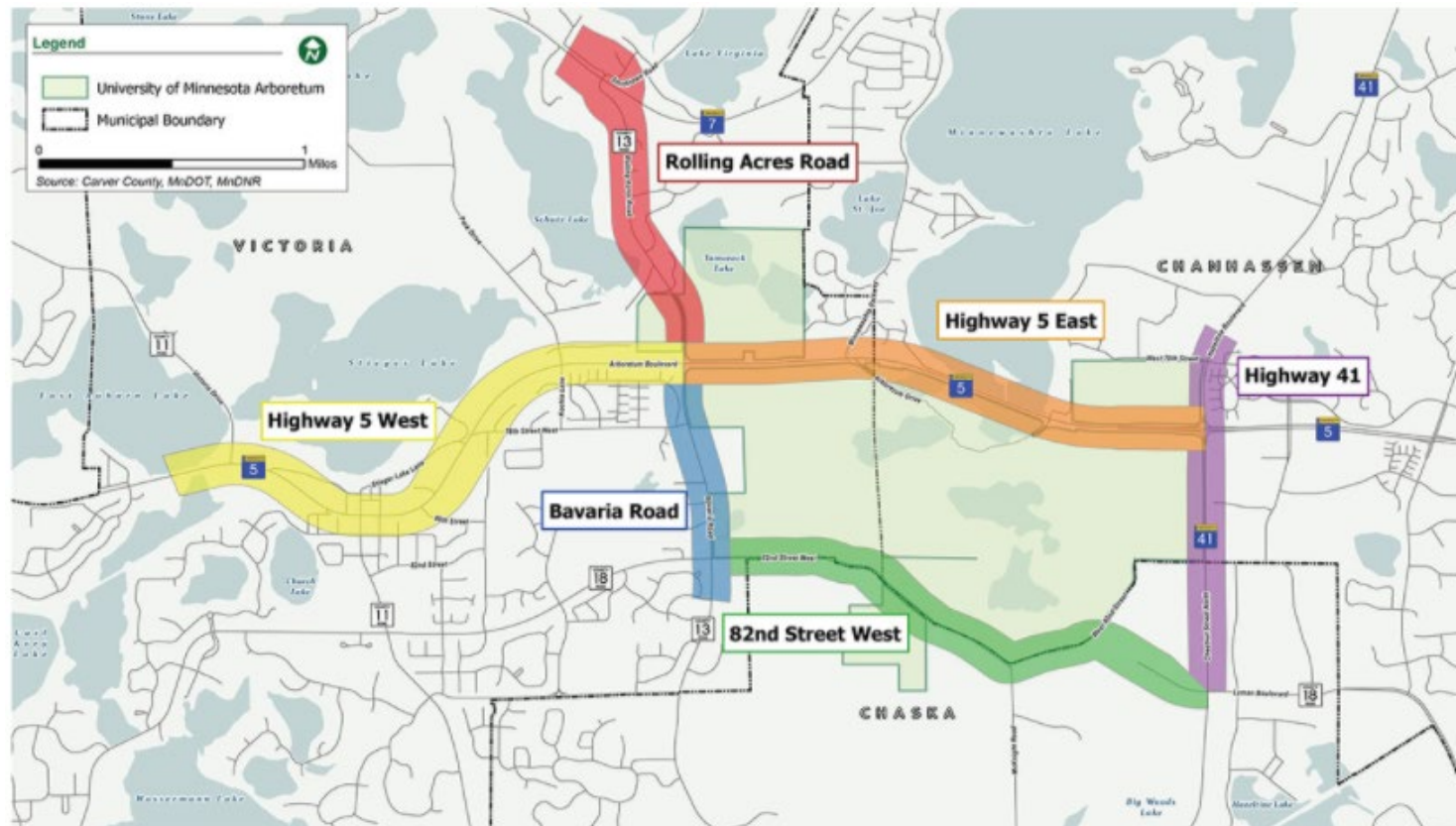
Minnewashta Neighborhood Meeting

January 21, 2021



Agenda

- Study Overview
- Engagement Recap
- Vision
- Overview of the Arboretum's Plans
- Minnewashta Parkway Traffic Review
- Next Steps



Study Recap

Where have we been and what has occurred to date?



Study Overview

Project Goals



Vehicle
Mobility



Safety for All
Travelers



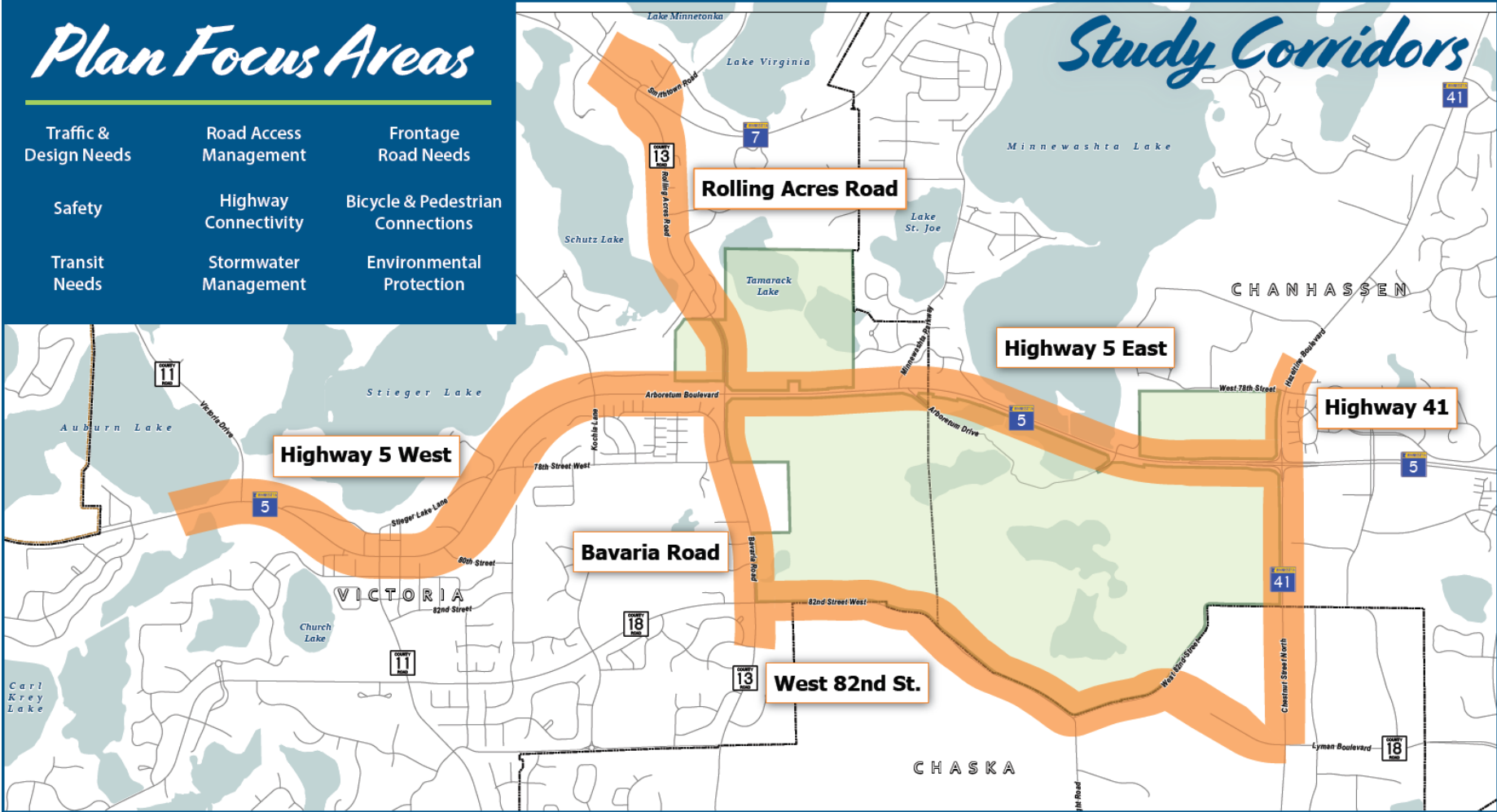
Pedestrian and
Bicycle Access



Environmental
Considerations



Financial
Responsibility



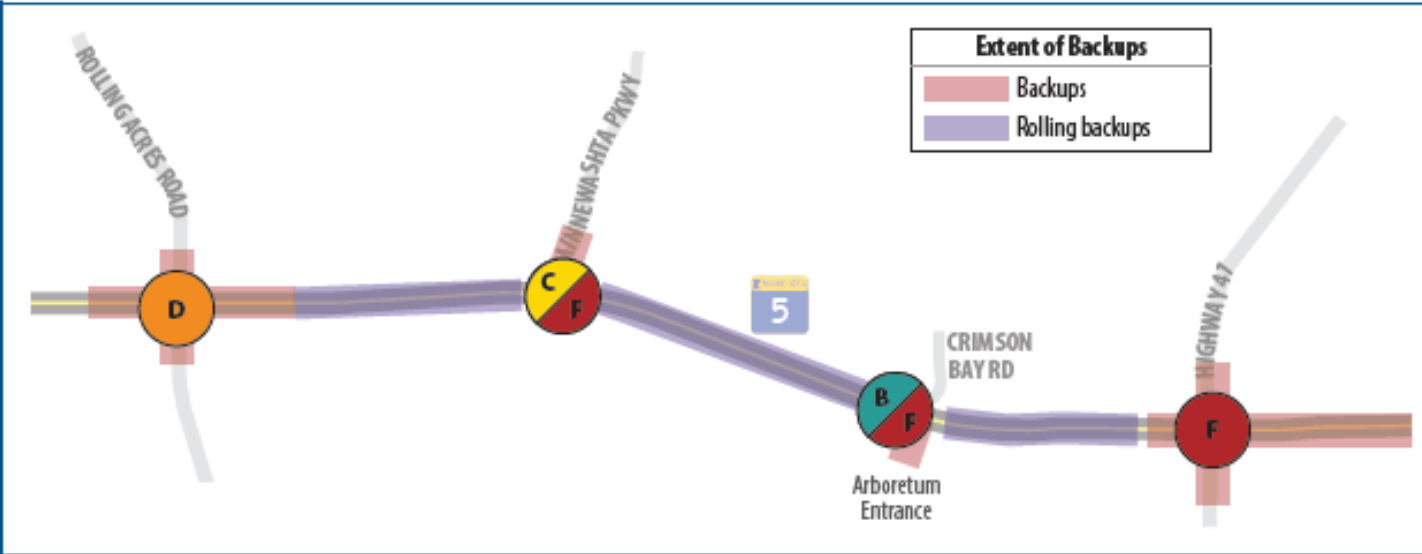
Project Needs Overview

Existing Delay and Backups (PM Peak)

Intersection Level of Service (LOS)

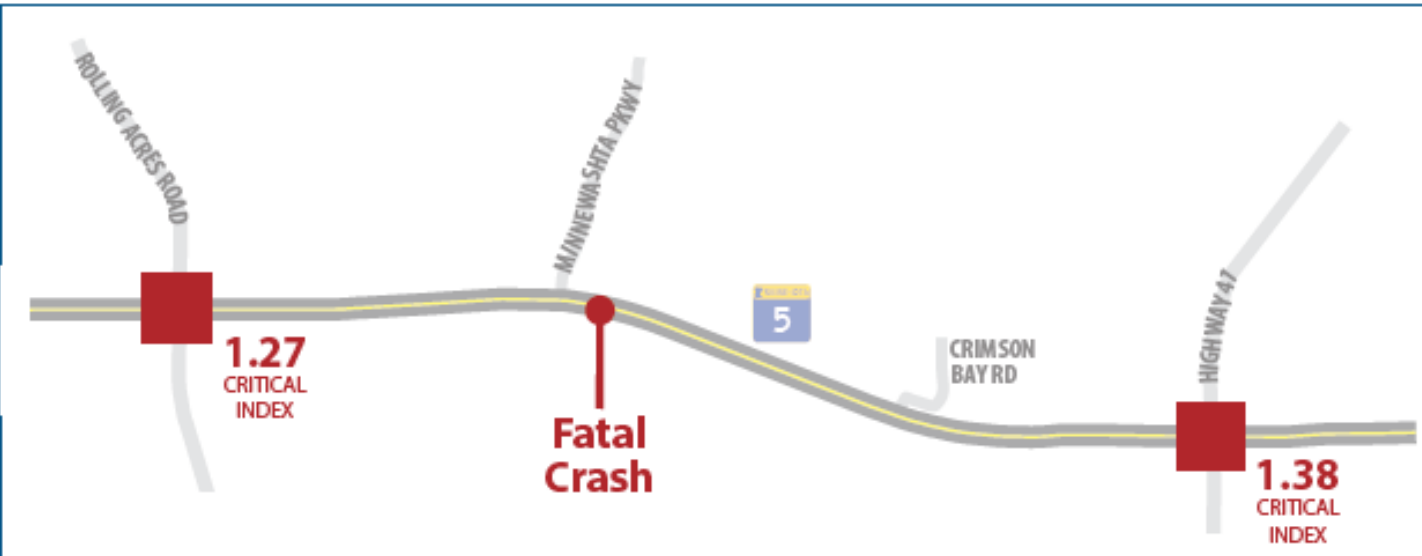
(X) Overall LOS Signalized Intersection
 (X/2) Overall/Worst Leg LOS Unsignalized Intersection

Acceptable	(A) Minimal delays.
	(B) Low level of delay and backups.
	(C) Some delays with occasional backups.
	(D) Some extensive delays. Moderate backups.
Not Acceptable	(E) Traffic at capacity. Long delays and backups.
	(F) Traffic exceeds capacity. Very long delays and backups.



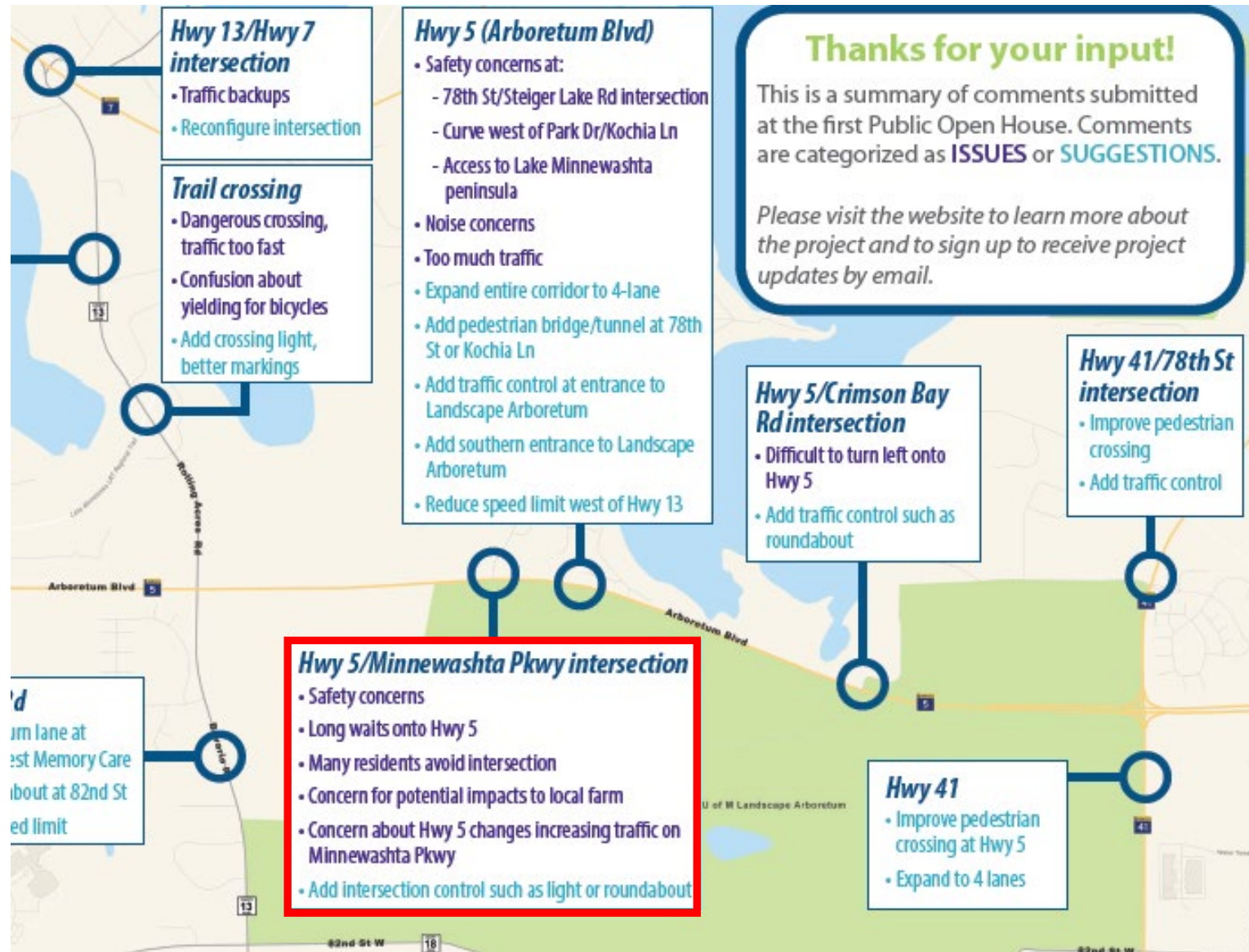
Crash Issues

Intersections with a critical index above 1.0 indicate a strong likelihood of a geometric design, access, or traffic control issue.



Open House Feedback

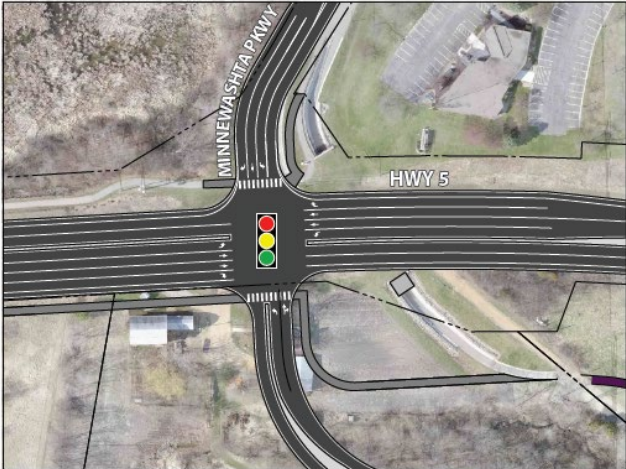
- Open House to kickoff study, understand concerns, share safety and mobility findings, and gather feedback
- July 16, 2019
- 38 participants from Minnewashta Parkway Neighborhood at open house



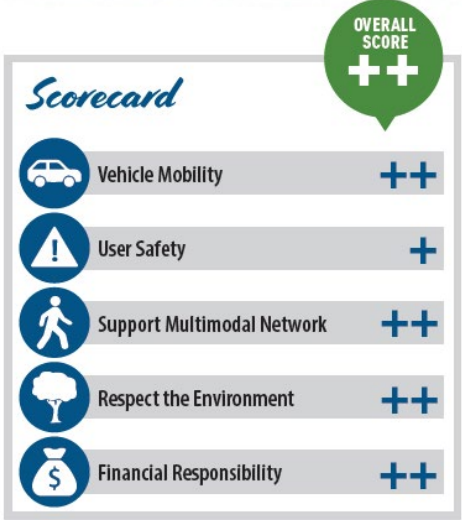
Open House Feedback

- Open House to share Concepts and gather feedback
- December 17, 2019
- 32 Participants from Minnewashta Parkway Neighborhood at open house
- 19 Participants in Online Survey from Minnewashta Parkway Neighborhood

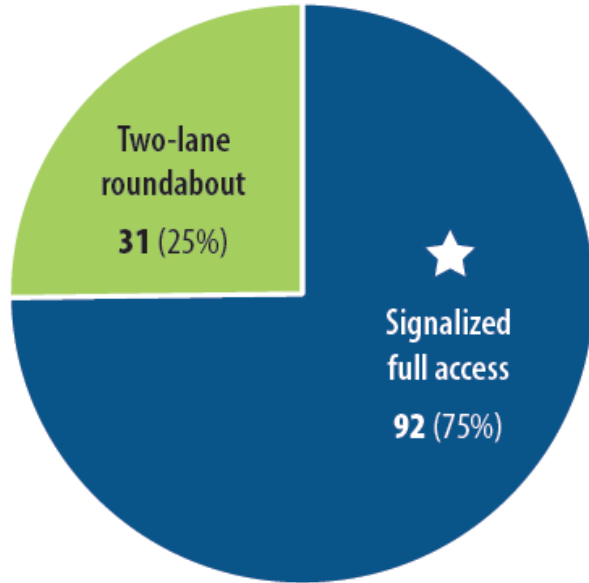
Concept 1: Signalized Full Access



Concept 2: Two-Lane Roundabout



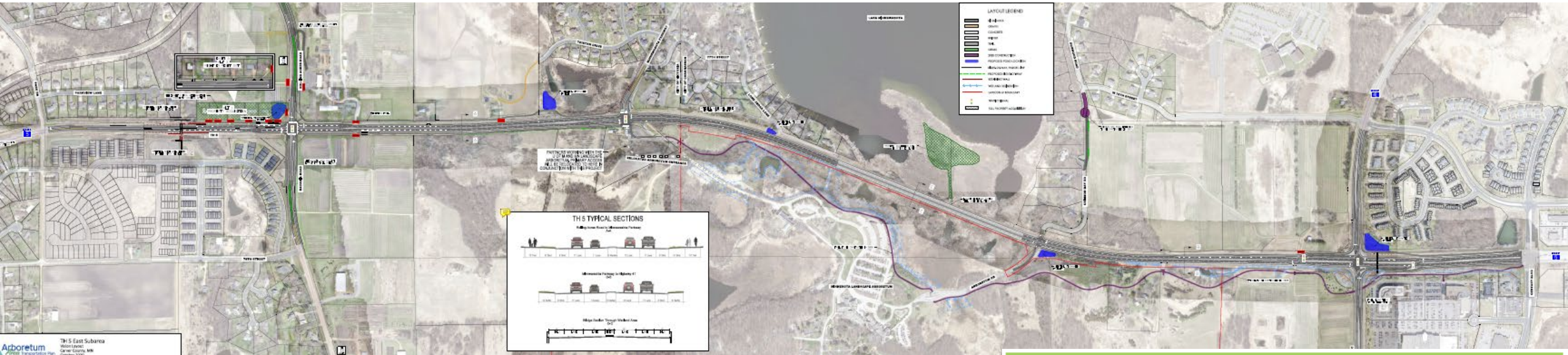
Highway 5/Minnewashta Parkway Intersection Concepts



Of 30 residents who provided input, 27 favored the signal



TH 5 East - Vision



Arboretum
TH 5 East Subarea
Map Date:
Carter County, Ark
October 2020

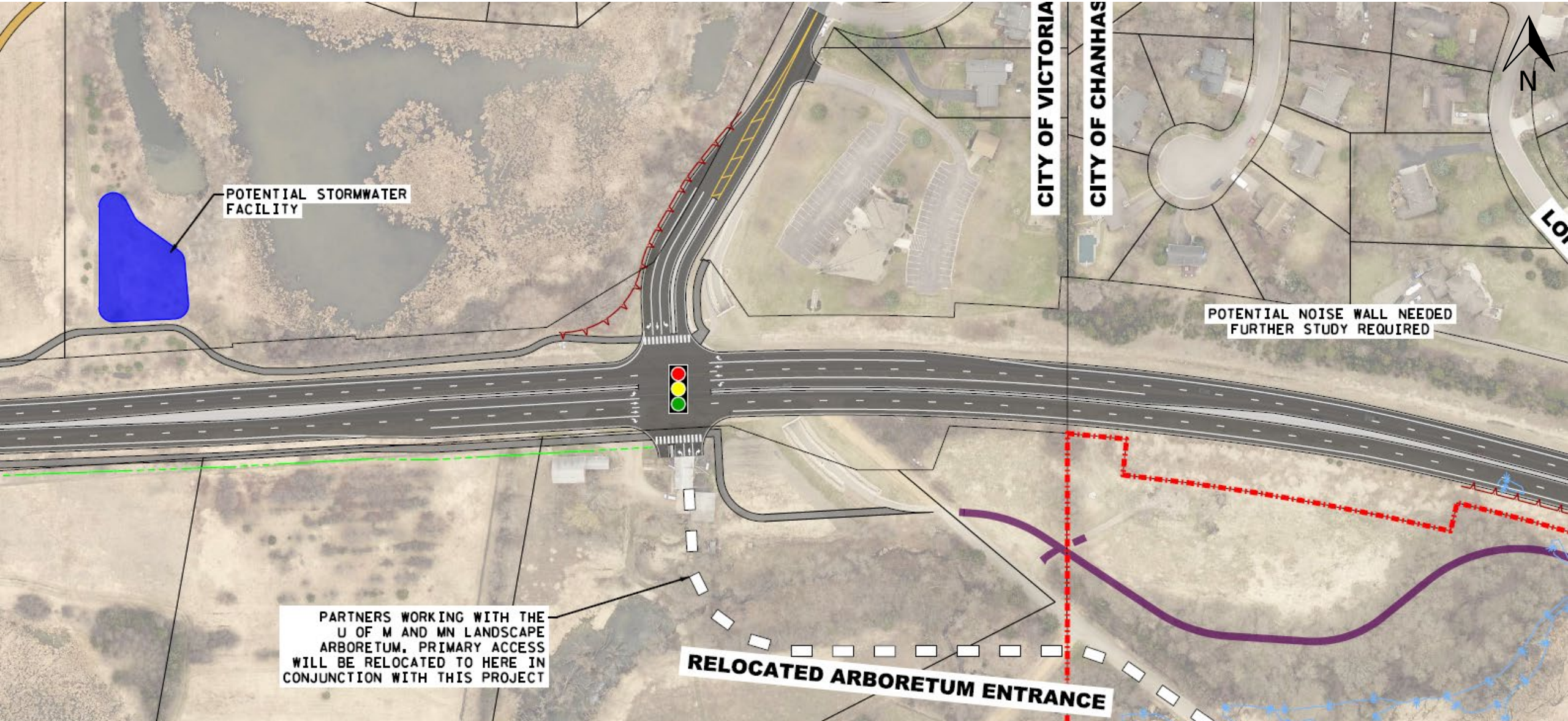
PROPOSED 4-LANE EXPANSION



Expanding to 4-lanes would
reduce delay by 70-80%
for 2040 predicted traffic volumes.



TH 5 East - Vision



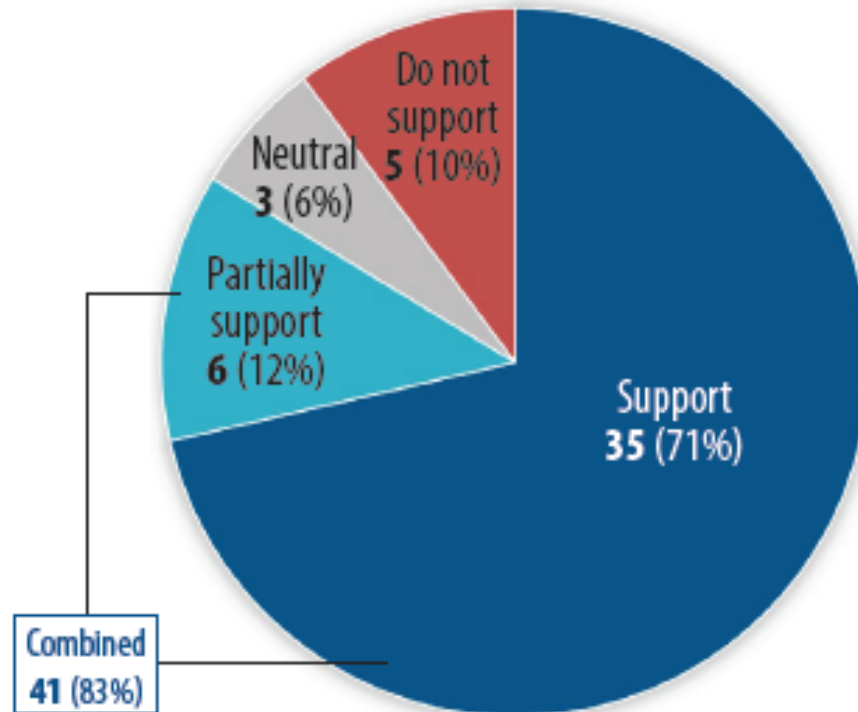
Dec 2020 Open House Feedback

- Purpose: Share Visions and Draft Implementation Plan
- November 19 – December 4, 2020

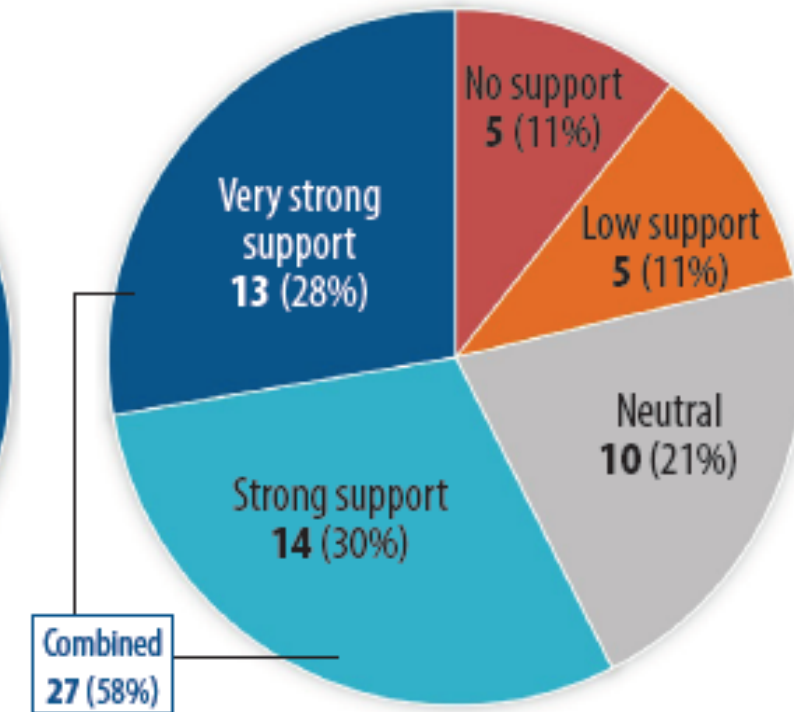
Highway 5 - East

All respondents (61)

Vision
49 respondents



Implementation
47 respondents

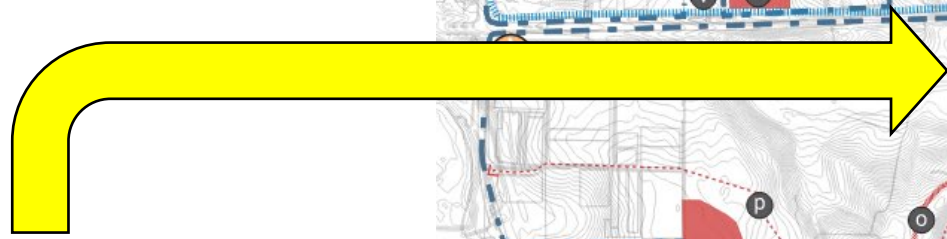


Arboretum Master Plan and Access Study

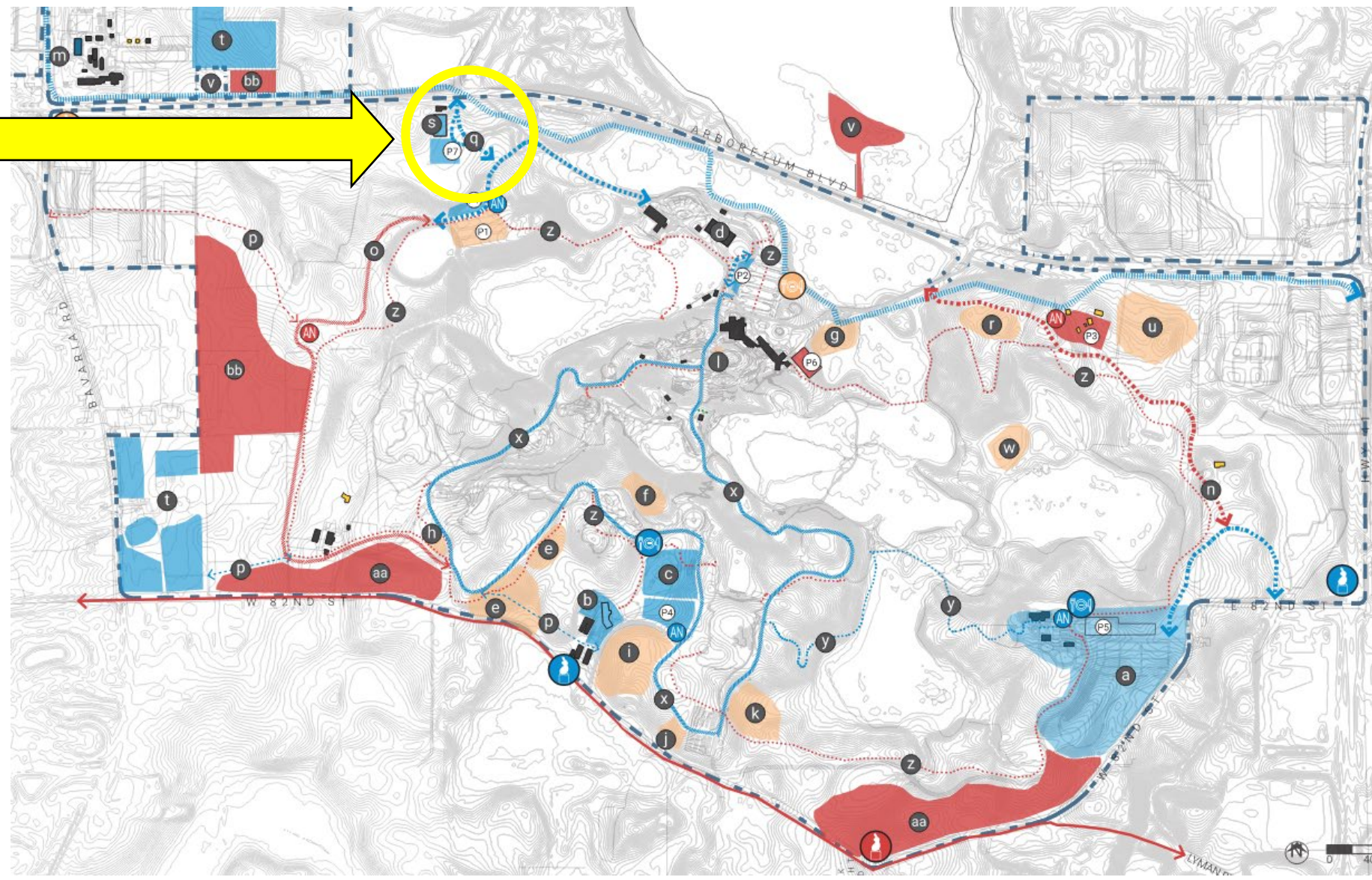
What external sources helped guide study recommendations for this area?



Arboretum 2018 Master Plan Update



q New Minnewashta Entrance Drive
replace existing entry drive with new
entry & roundabout



Arboretum 2020 Access/Egress Study

New entrance

Enter and exit




Typical Day

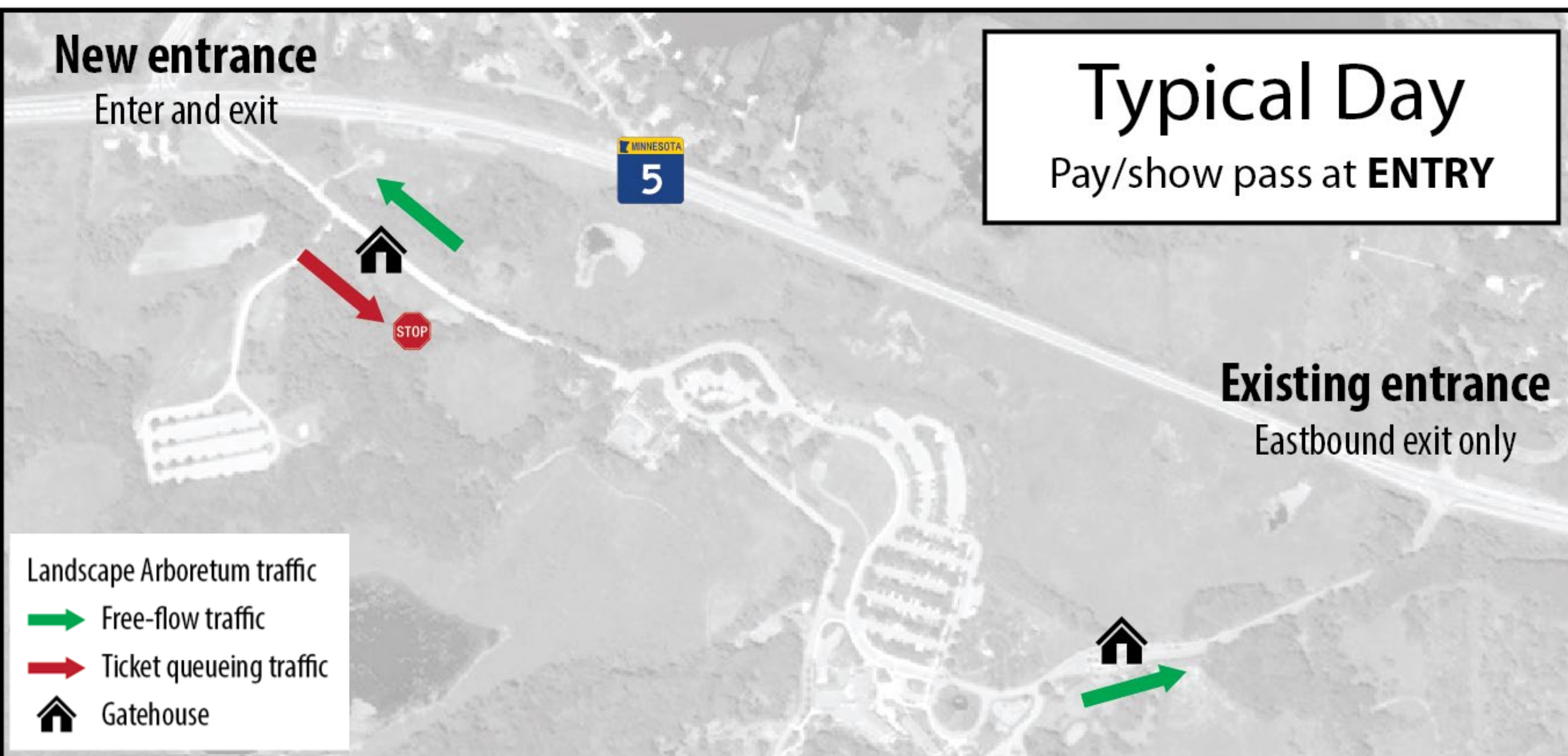
Pay/show pass at **ENTRY**

Existing entrance

Eastbound exit only

Landscape Arboretum traffic

-  Free-flow traffic
-  Ticket queueing traffic
-  Gatehouse



Arboretum 2020 Access/Egress Study

New entrance

Enter and exit






Busy Day

Pay/show pass at **EXIT**

Existing entrance

Eastbound exit only

Landscape Arboretum traffic

-  Free-flow traffic
-  Ticket queueing traffic
-  Gatehouse



Arboretum Access Conclusions

- The primary Arboretum access point will remain on TH 5
 - The decision is solely contained within the Arboretum and University of Minnesota
 - Arboretum improvements are funded privately
 - MnDOT has jurisdiction and supports this relocation
- This Arboretum Area Transportation Plan recognizes and incorporates these findings into the study
- MnDOT Established Signal Warrants
 - Minnewashta Parkway at TH 5 - without Arboretum Access relocation this intersection will not become signalized



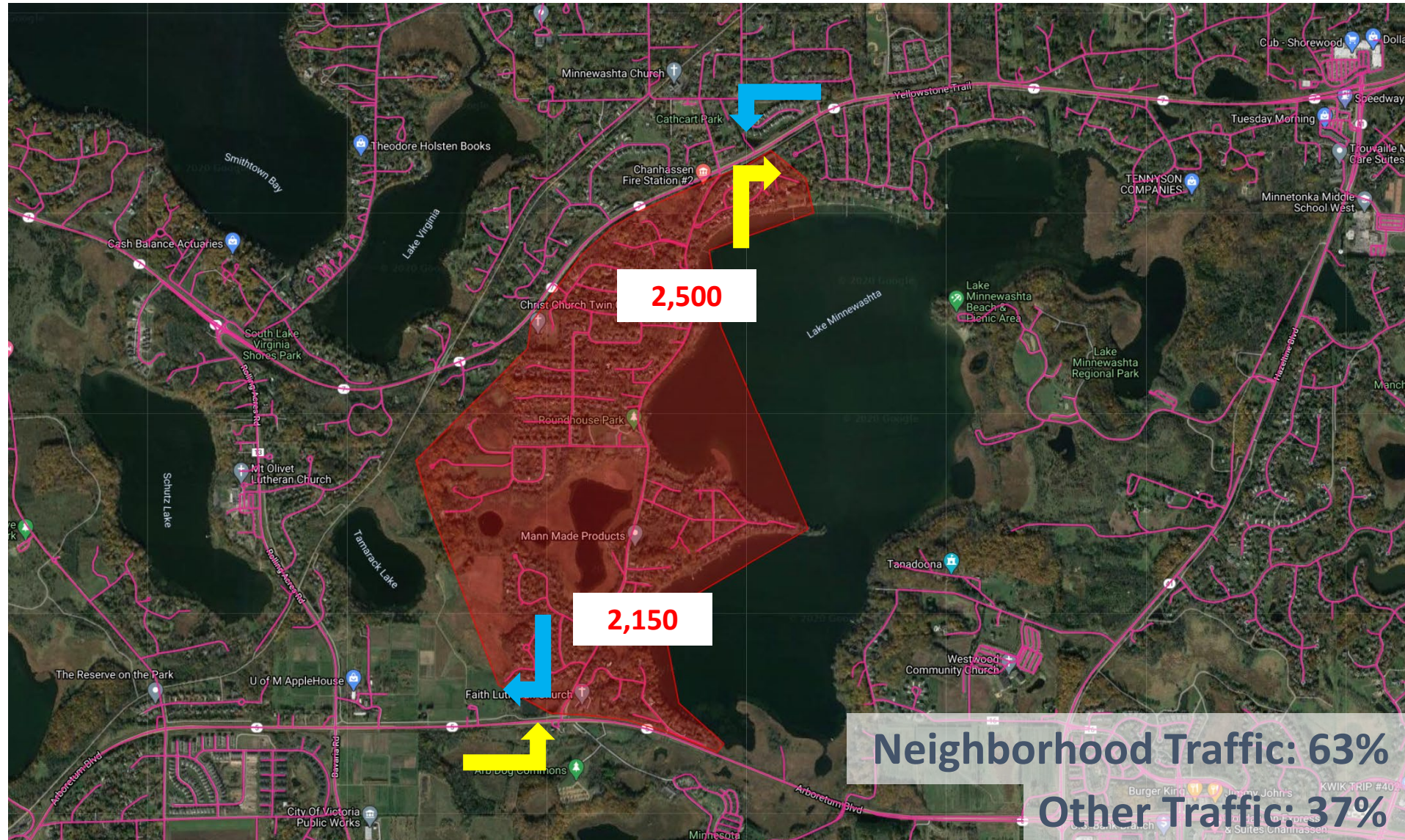
Minnewashta Parkway and Arboretum Traffic Analysis

A look at new detailed analysis



General Origin-Destination Analysis

- Data derived from GPS data
- Weekdays only
- 2017-2019: All Months



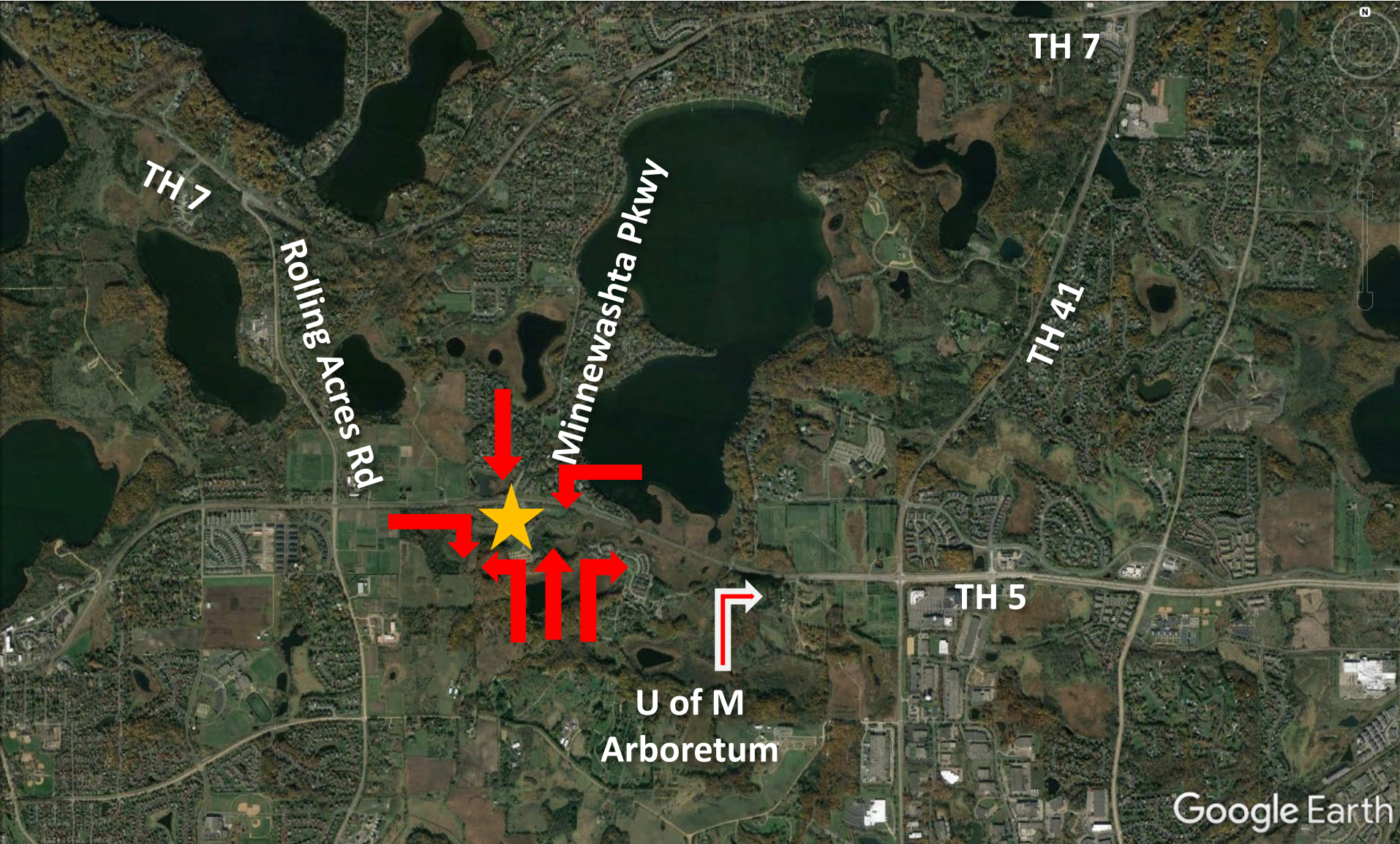
Existing Conditions

- Main Arboretum entrance opposes Crimson Bay Road
- Traffic on Minnewashta parkway split between north and south ends



Planned Conditions

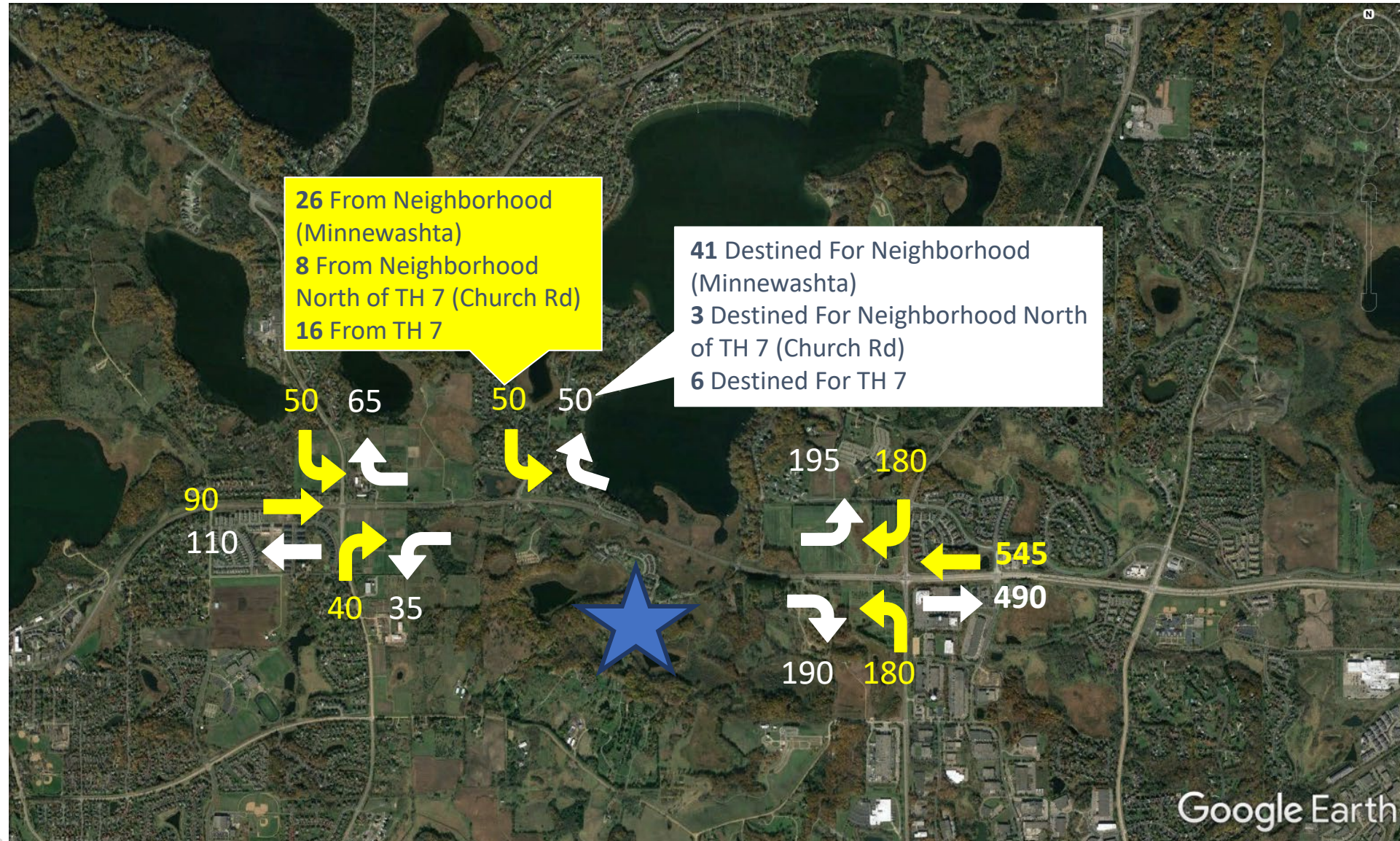
- Main Arboretum entrance opposes Minnewashta Parkway
- Adjustments to ticketing system



Existing Arboretum Traffic (Peak Season Weekday)

- Data derived from GPS data, traffic counts, and Arboretum visitor count information
- **Weekdays only**
- 2017-2018: May and October

**~80%
To/From East**



Existing Arboretum Traffic (Peak Season Weekend)

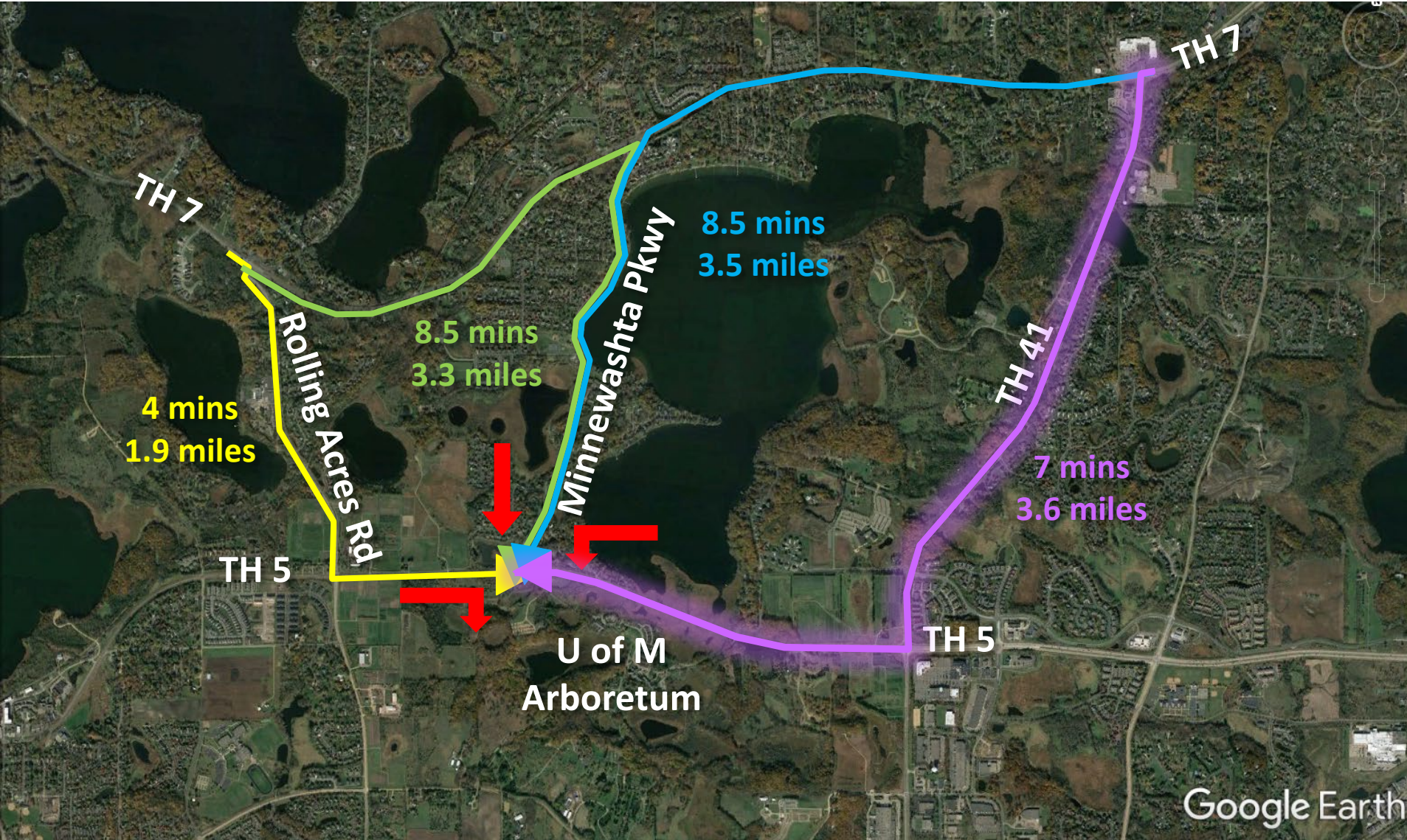
- Data derived from GPS data, traffic counts, and Arboretum visitor count information
- **Weekends only**
- 2017-2018: May and October

**~80%+
To/From East**



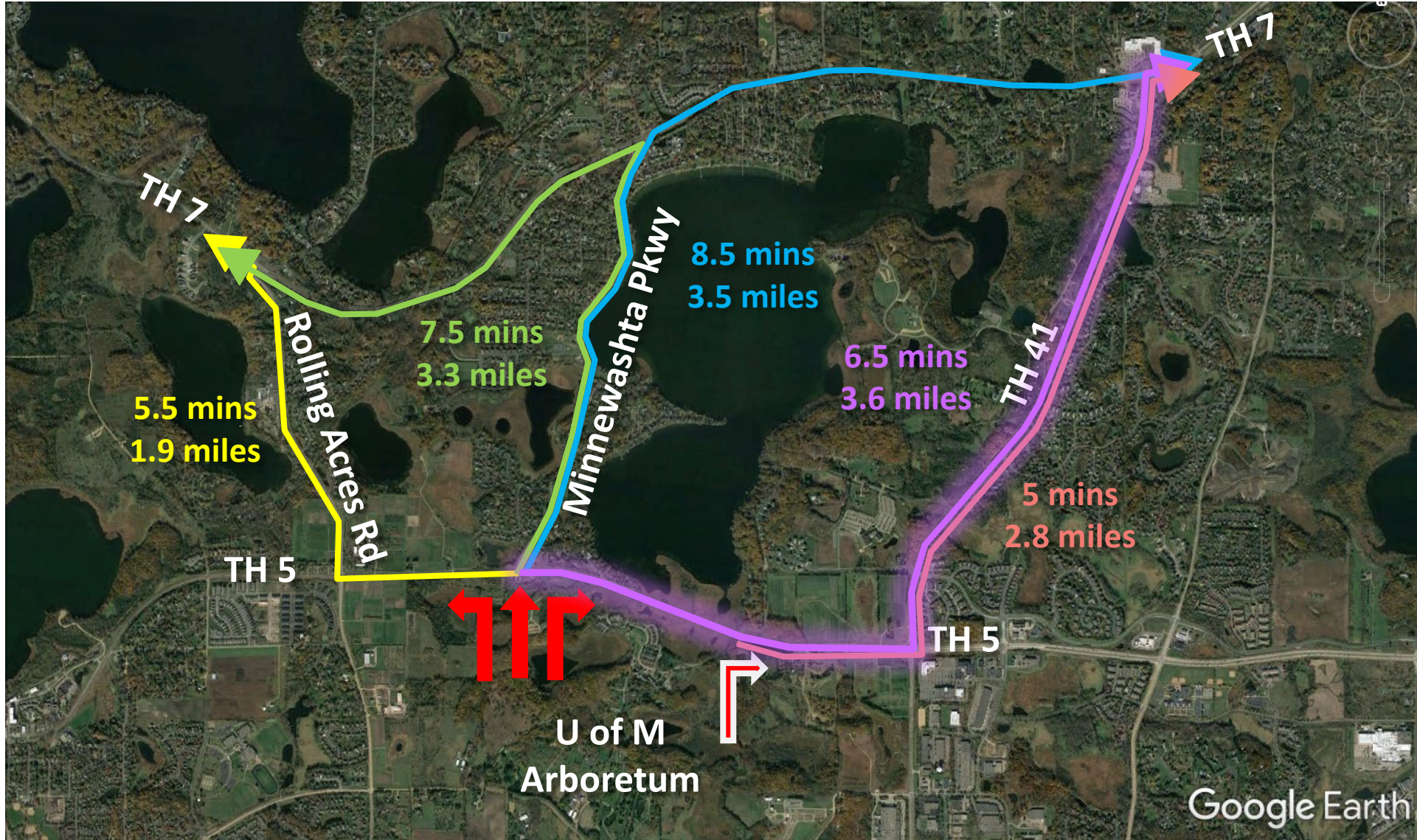
Entering Arboretum with Access Shift

- Data from Google Maps
- Adjusted to account for new signal

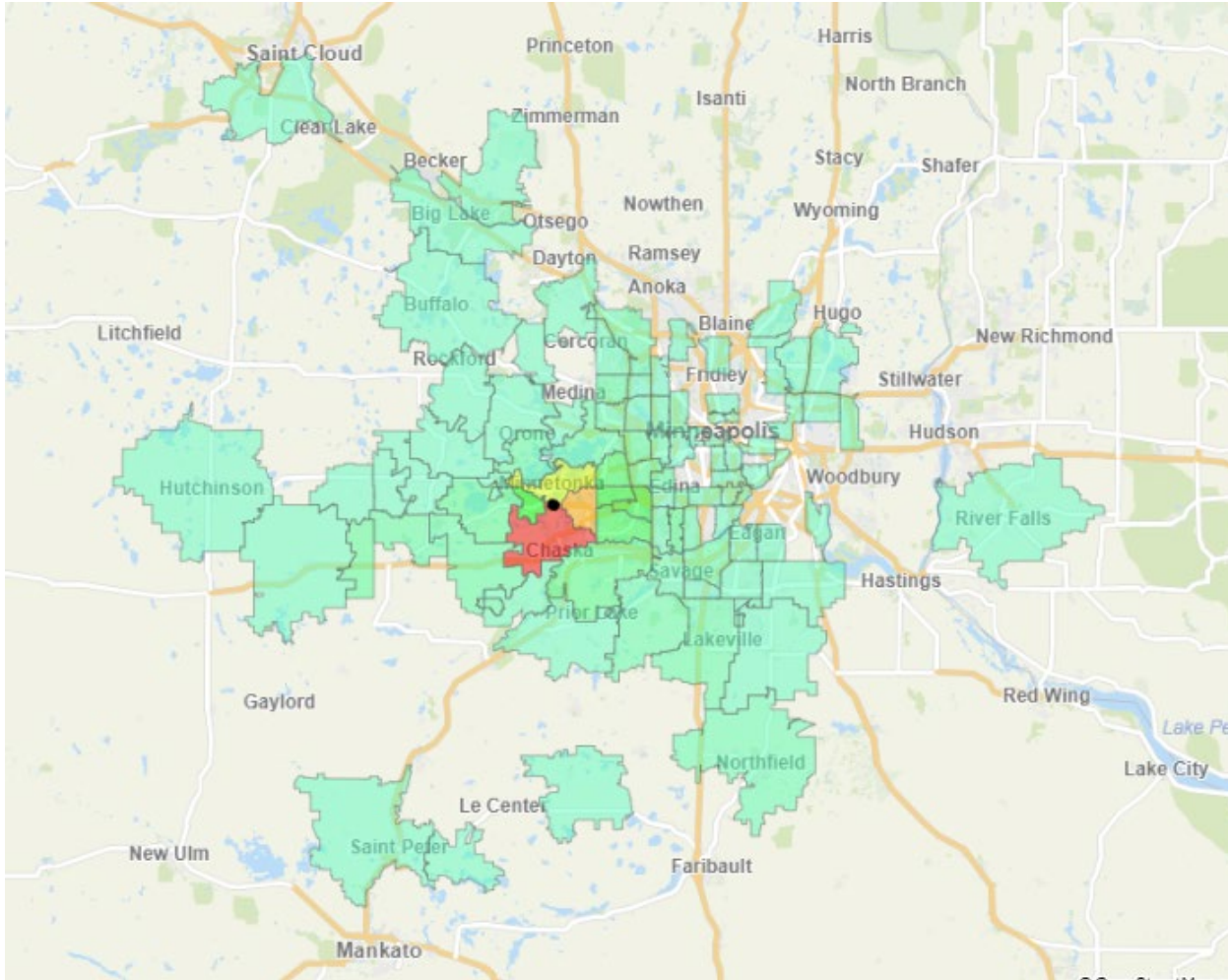


Exiting Arboretum with Access Shift





- Data from Google Maps
- Adjusted to account for new signal



Arboretum Visitor Origins by Zip Code



Percent of Traffic

-  20+%
-  10-20%
-  5-10%
-  0-5%

With Arboretum entrance shifted...

1. Approximately **40 trips (Less than 2%)** may be added to Minnewashta Parkway on a peak season weekday
2. Approximately **60 trips** may be added to Minnewashta Parkway on a peak season weekend day



Daily Traffic

- Current total traffic volumes are appropriate for a collector roadway
- A traffic signal cannot be installed at this location without the Arboretum entrance shift
- Neighborhood traffic patterns will change once a signal is installed



Minnewashta Pkwy Traffic Conclusions



- “Other traffic” may decrease over time as improvements are made to surrounding roadway network
- 2025 expansion project could include signal timing during peak periods to make this less convenient



Arboretum Related Traffic

- About 80% of visitor traffic travels to/from the east
- The quickest trips for entering and exiting the Arboretum use the highway network
- (Entering) Changes in ticketing procedures to significantly reduce queuing on highway
- (Exiting) Many visitors will use the existing entrance location to exit
- About 40-60 trips per day in the peak season may route to Minnewashta Parkway



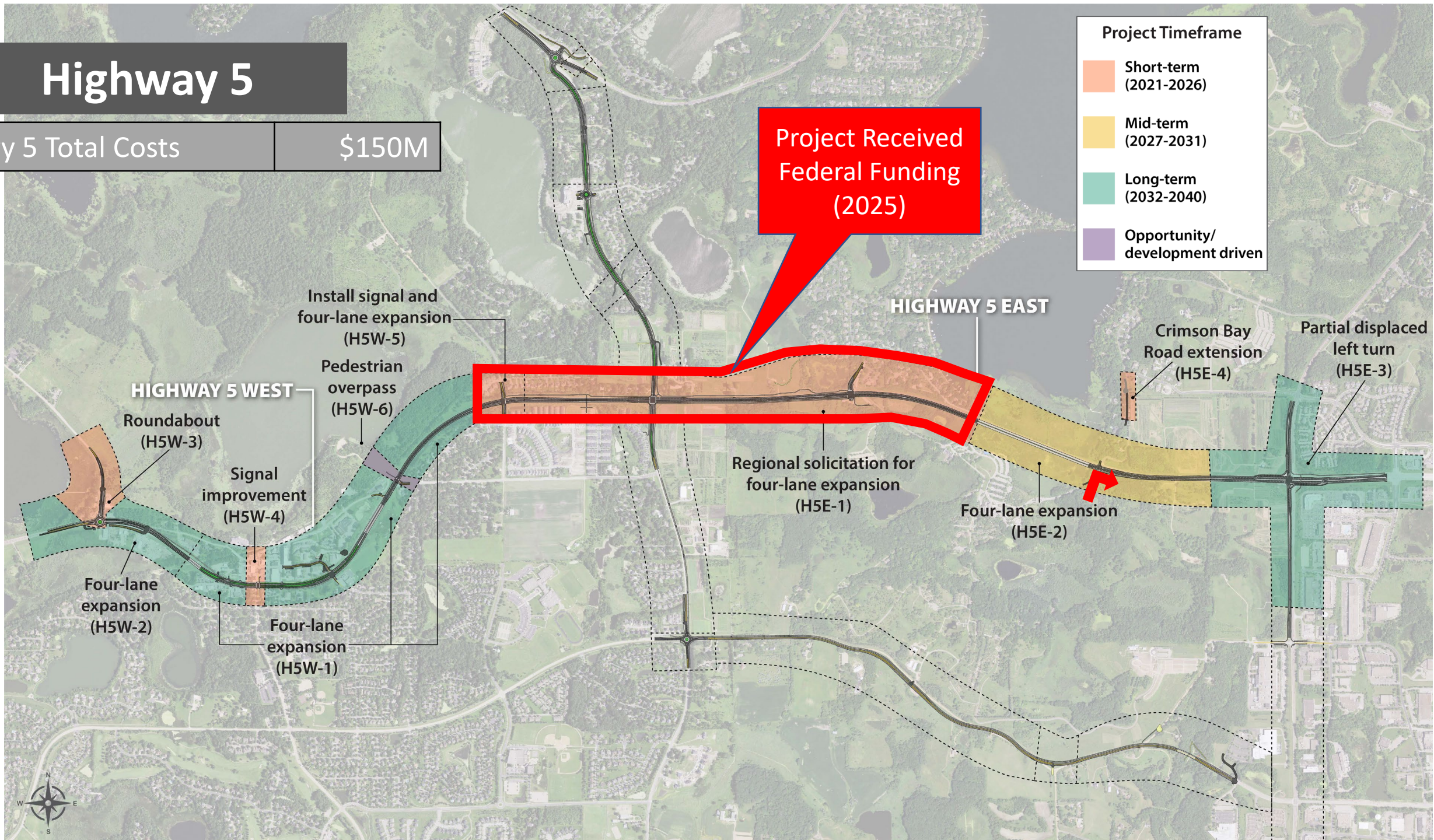
Highway 5

Hwy 5 Total Costs \$150M

Project Timeframe

- Short-term (2021-2026)
- Mid-term (2027-2031)
- Long-term (2032-2040)
- Opportunity/development driven

Project Received Federal Funding (2025)



Next Steps

- February – Council Adoption of Study Recommendations
- Development of 2025 TH 5 Project
 - Arboretum to prepare plans to relocate access
 - Carver County to prepare plans to expand TH 5
 - Continued engagement thru the development of the project
 - 2021 to 2024 – Further design of expansion project along Hwy 5
 - 2025 Construction
- Ongoing – Chanhassen monitor the safety and operations of Minnewashta Parkway

Project Website

<https://www.co.carver.mn.us/ArboretumAreaTransportationPlan>

