

MnDOT/Met Council: Freeway System Interchange Study

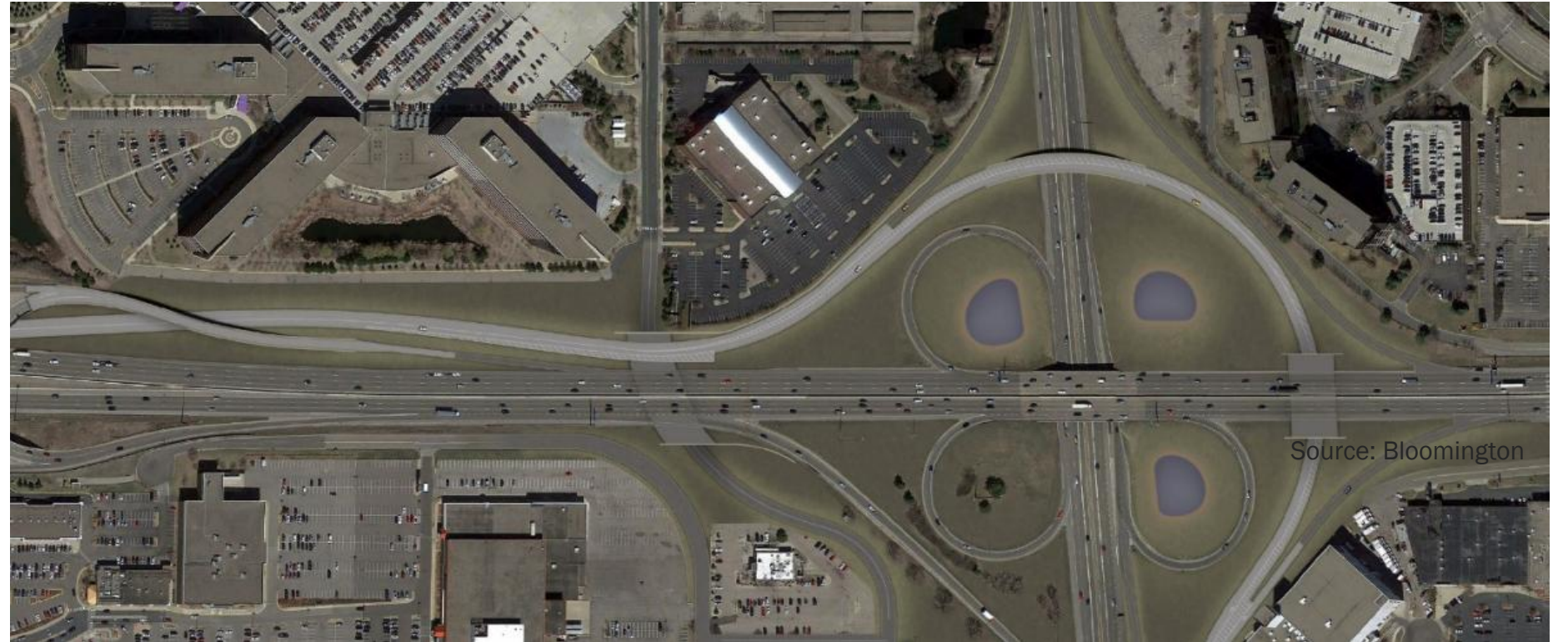
TAB Technical Advisory Committee

February 6, 2019

Freeway System Interchange Study



Example: 494/35W Bloomington/Richfield



- North to west directional ramp
- Corridors of Commerce awarded \$70 million to begin in 2021
- Includes directional ramp and "bridge braids"

Background

I-494/US 169 built in
2012 @ \$125 million
Eden Prairie/Edina/Bloomington

- System studies context
- System interchanges: connect two freeways
- Congestion and crash concentrations
- Recent major investments
- Numerous identified needs
- Locations have been evaluated independently

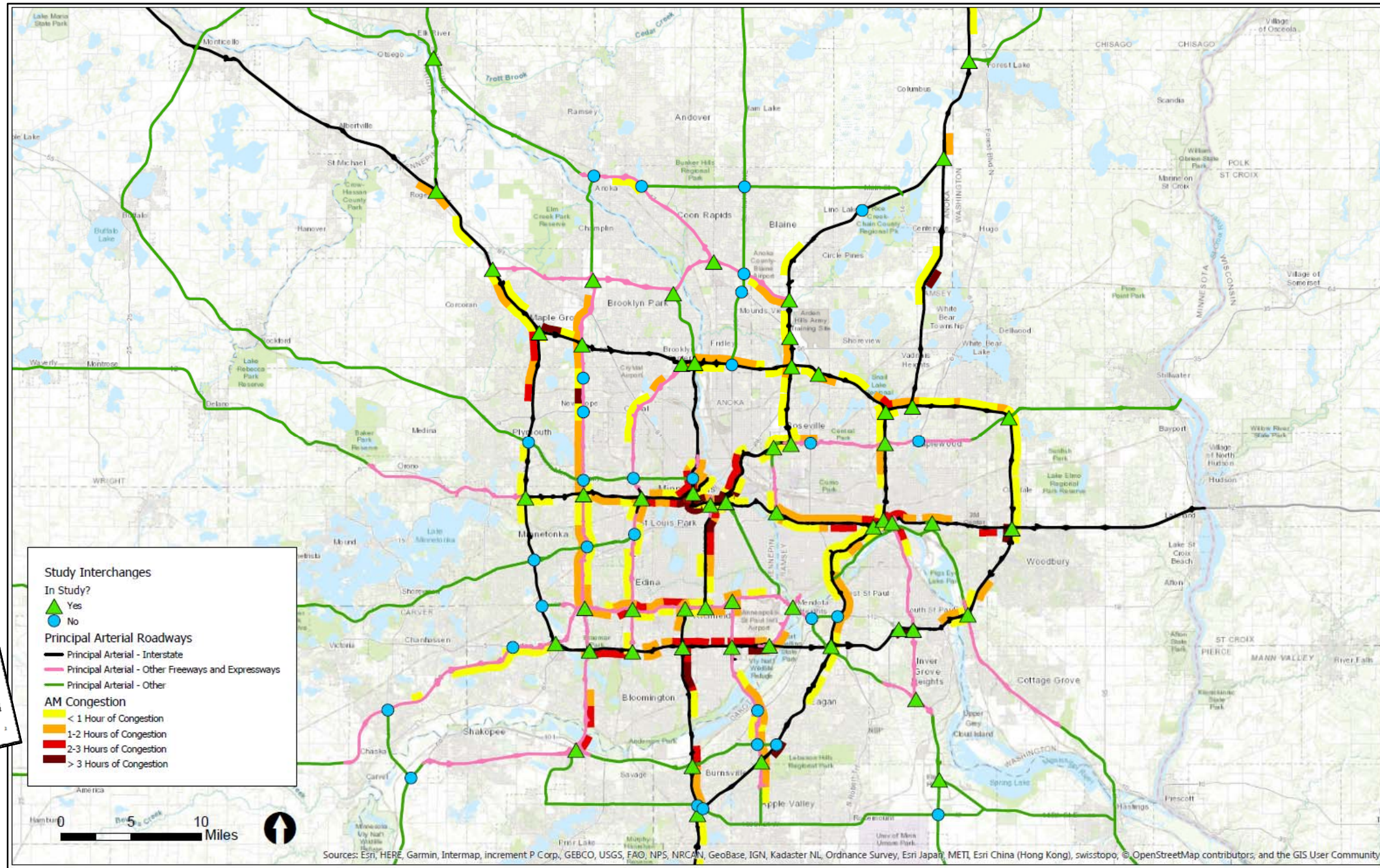


56 Study Interchanges

Freeway System Interchange Study
List of Study Interchanges

DRAFT

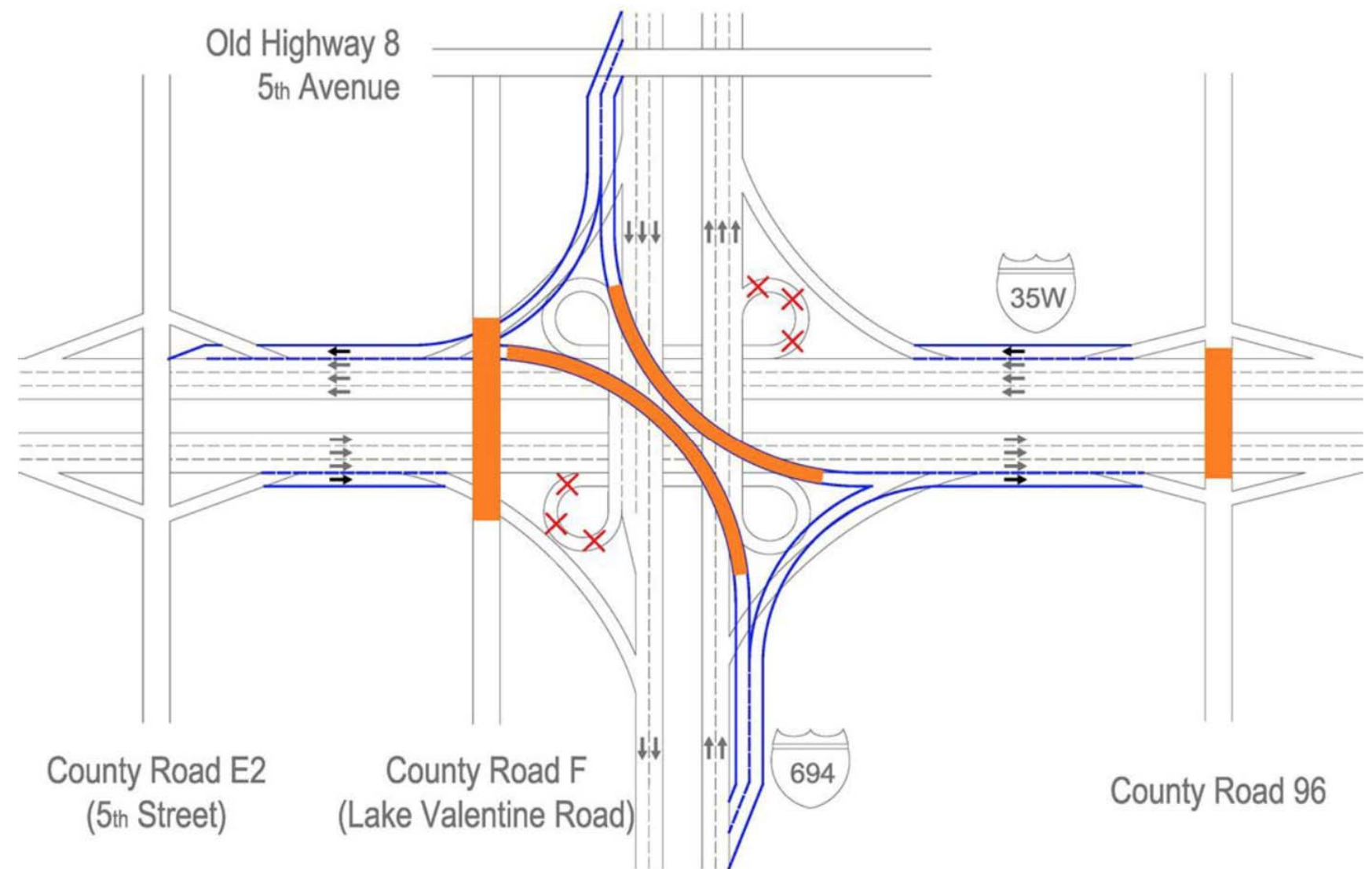
Interchange	Location	State	South Freeway	East-West Freeway	Interchange	County	Area	Number of Interchanges
1	104 & 106	IN	X			Hamilton	West	12
2	104 & 106	IN	X			Hamilton	West	12
3	104 & 106	IN	X			Hamilton	West	12
4	104 & 106	IN	X			Hamilton	West	12
5	104 & 106	IN	X			Hamilton	West	12
6	104 & 106	IN	X			Hamilton	West	12
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55	104 & 106	IN	X			Hamilton	West	12
56	104 & 106	IN	X			Hamilton	West	12



Freeway System Interchange Study

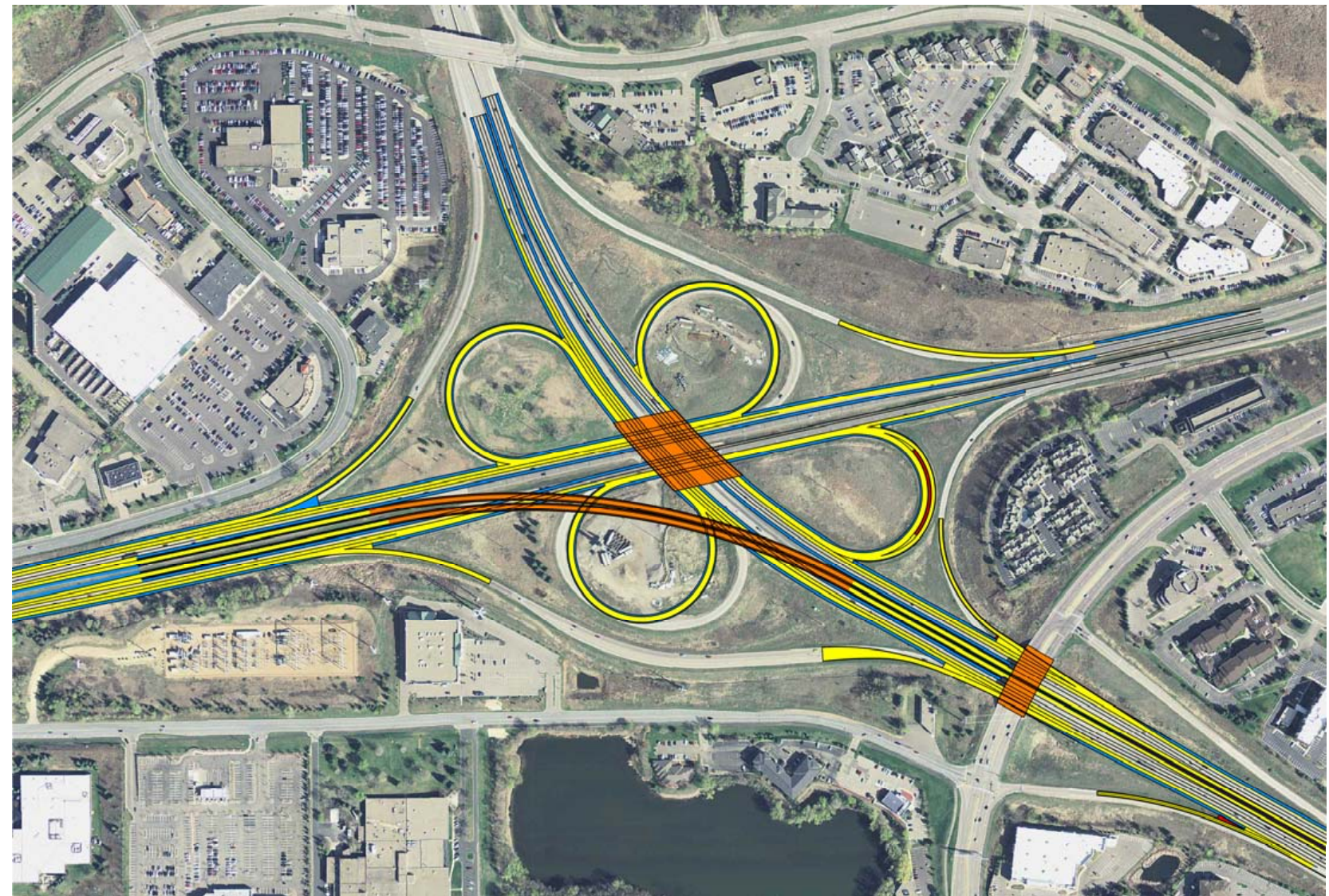
Purpose

- Reduce delay and crashes
- Consider needs of freight and transit
- Systematically discover and prioritize opportunities across region
- Right size investments



Outcomes

Prioritized list of projects that can improve the region's freeways at these targeted locations to continue supporting and improving economic vitality and quality of life in our region.

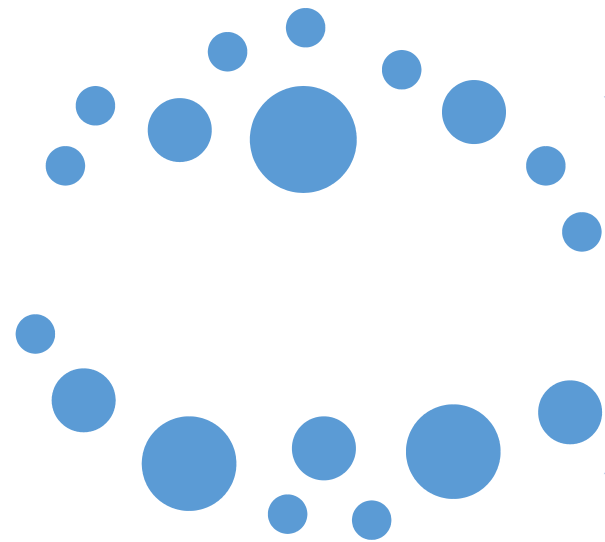


Stakeholder Engagement

Study Leadership	Agency Outreach
<p>Technical Advisory Committee</p> <ul style="list-style-type: none"> • Seven-county Metro Area counties • Wright and Sherburne counties • Local governments • Federal Highway Administration • MnDOT • Metropolitan Council 	<ul style="list-style-type: none"> • Minnesota Freight Advisory Committee • Transportation Advisory Board <ul style="list-style-type: none"> -Technical Advisory Committees • Congestion Management Process • State’s Capital Improvements Committee • Met Council Transportation Committee

Analysis Process

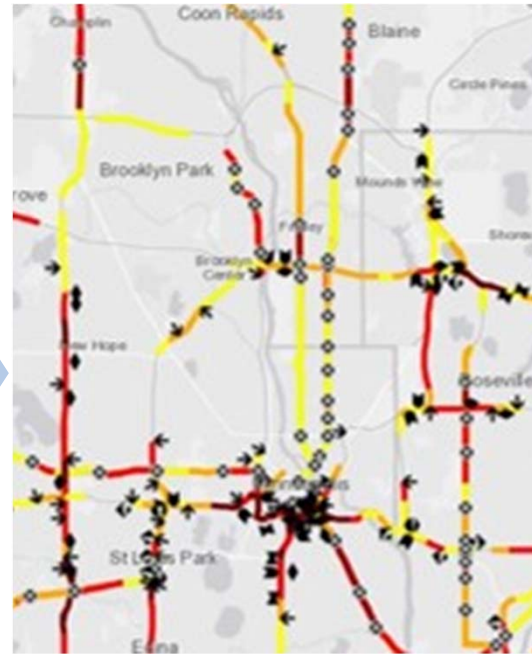
System Interchanges



Determine locations to be studied

56
locations

Evaluate current issues



Identify highest problem magnitudes

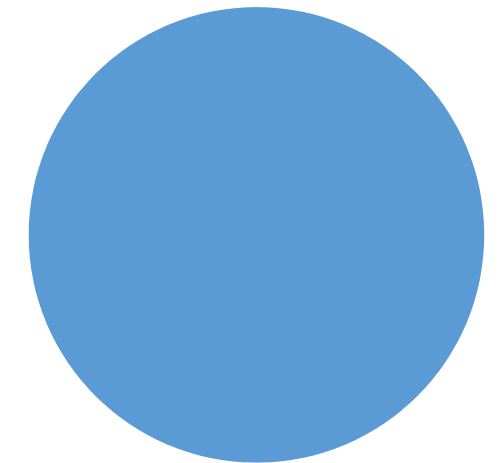
~20
locations

Develop a range of solutions



Estimate return on investment

Identify priority locations



Document recommendations for future investments

10-12
locations

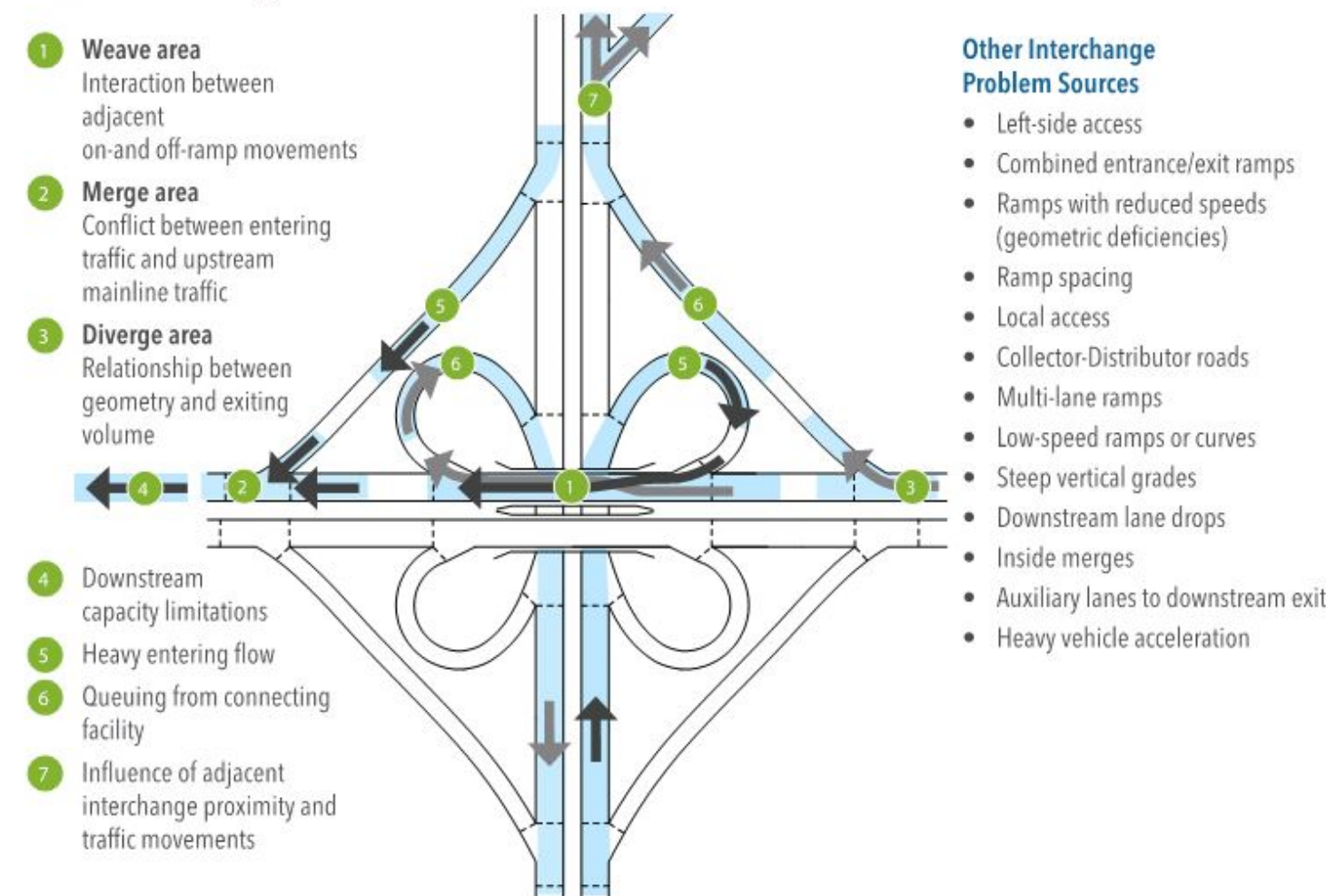
Problem Assessment and Screening

1) Data collection and evaluation

- Collect appropriate data to quantify problems considering: delay, safety, reliability, heavy commercial vehicles
- Consider weighting of criteria

2) Select interchanges for solution development

Potential Areas of Interchange Conflict

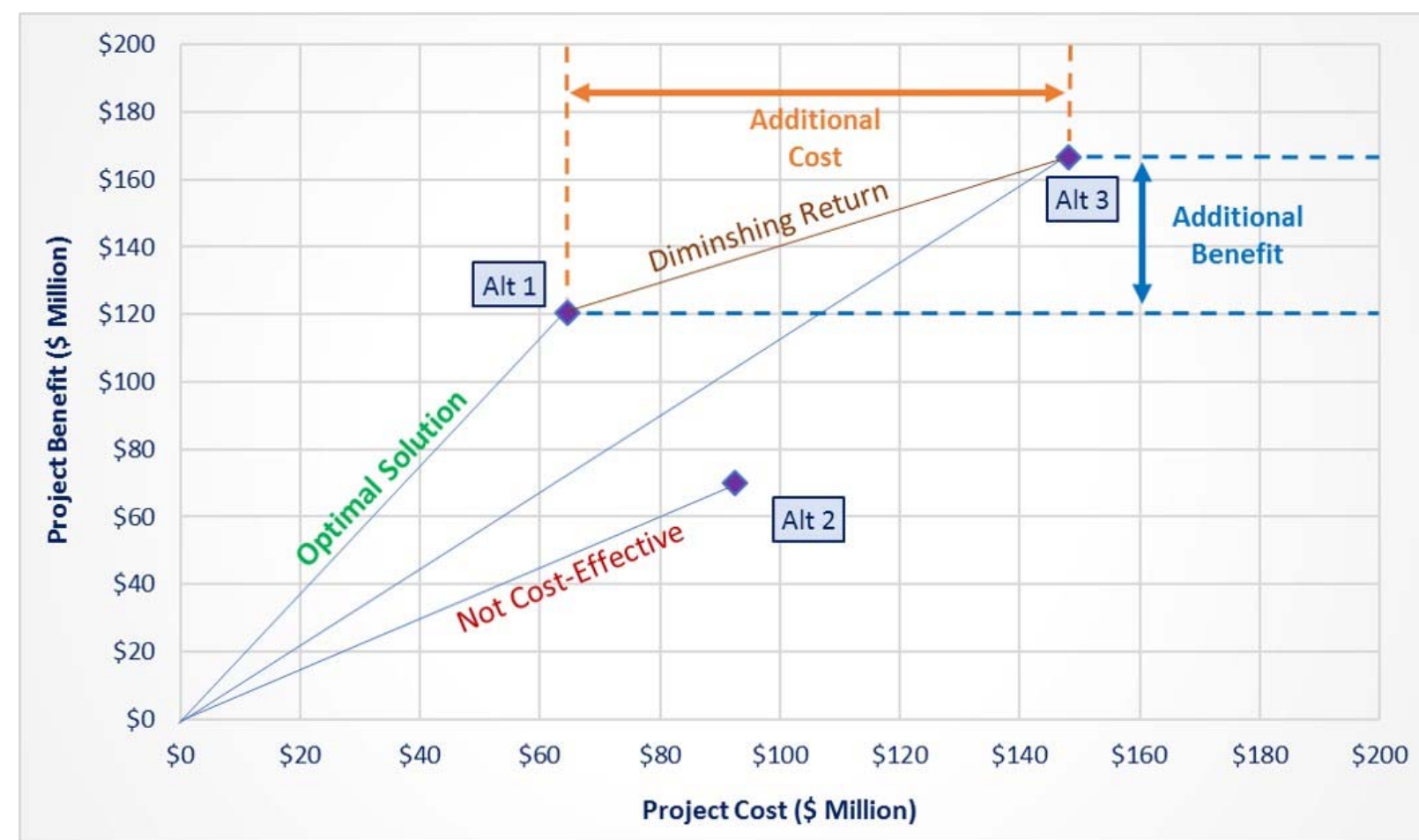


Performance Measures – Recommended Approach

Metric Category	Performance Measure(s)	Units	Source
Mobility	Travel time delay	Vehicle-hours of delay (VHD)	Loop detectors, NPMRDS/INRIX data
Reliability	Variability of congestion	Standard deviation (minutes)	Loop detectors, NPMRDS/INRIX data
Safety	Cost of crashes	Dollars	MN DPS crash data
Freight	Freight Volume	HCAADT	ATR/VC counts
Transit	Transit ridership	Persons	Met Council

Next Steps: Issue Identification, solution development, and prioritization

- 1) Collect data to analyze interchange problems
- 2) Methods for developing design solutions
- 3) Develop design solutions and suggest implementation priority
- 4) Documentation of results by end of 2019 --> Next TPP Update



Questions for you:

- What are your concerns about freeways and connections?
- Keys to making this study successful?
- Other questions or concerns?

Thank you!

Contacts:

Tony Fischer

tony.fischer@metc.state.mn.us

Michael Corbett

michael.j.corbett@state.mn.us