

Project Advisory Committee (PAC) Meeting #3

December 12th, 2019



Meeting Purpose & Agenda

- Purpose
 - Understand the Tier 2 alternatives, evaluation criteria, and results
 - Provide feedback on the Tier 2 alternatives
- Agenda
 - Welcome
 - Presentation
 - Recap from PAC Meeting #2
 - Recap from Open House
 - Tier 2 alternatives, evaluation criteria, and results
 - Review Tier 2 alternatives (break-out session)
 - Next steps and meeting close



Introductions

- Name
- Who you represent?
- Have you heard anything related to this intersection?

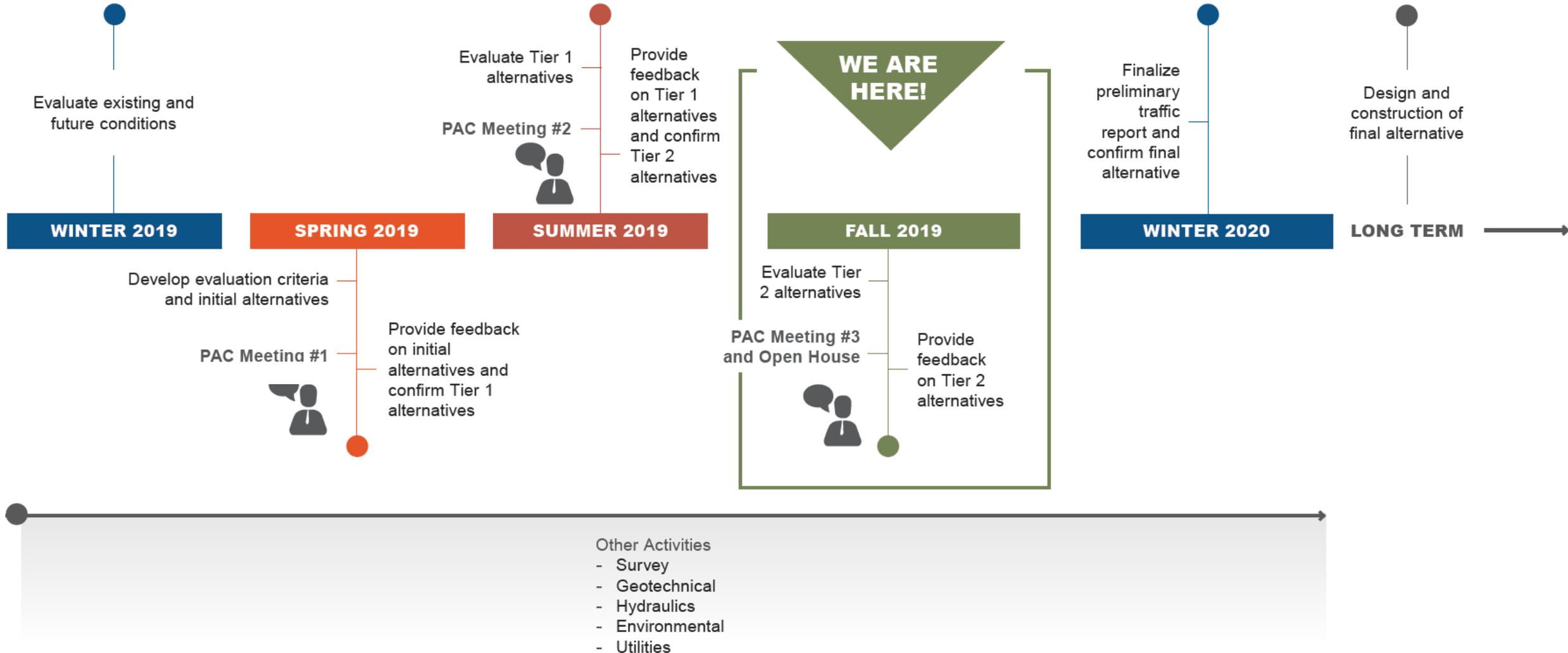


Study Objectives

- Facilitate an open, honest, and transparent decision-making process
- Improve traffic operations and safety for all users
- Improve the pedestrian and bicycle environment
- Improve pavement and area drainage



Schedule





Recap from PAC Meeting #2



PAC Feedback on Tier 1 Alternatives

Alternative	Move Forward to Tier 2		Comments & Concerns	
	Yes	No	Pros	Cons
Alt 1 NB	1	2	Used for comparison	
Alt 2 Shared L/R	0	5	No comments	Doesn't solve operation issues for 2040
Alt 3 L/R/R	0	5	No comments	Doesn't solve operation issues for 2040 Potential queuing problems for westbound left-turn
Alt 4 Free RT	5	0	Good bicycle and pedestrian facilities Better safety for bicyclists and pedestrians Simple design for users Relieves queuing Good free-flow movement for vehicles heading west-to-north	No comments
Alt 5 Dual RT	3	2	Good bicycle and pedestrian facilities Potential queuing on WB right-turn if no RTOR	
Alt 6 DLT	3	2	Longer life expectancy Fewer construction periods Relieves queuing	Higher right-of-way and cost Worse bicycle and pedestrian facilities compared to Alts 4 and 5 Potential weaving issues northbound

Action Items from PAC Meeting #2

1. Post meeting materials on website www.mdt.mt.gov/pubinvolve/expofirst
 - Materials posted on website.
2. Schedule next PAC Meeting in December
 - We are here today!



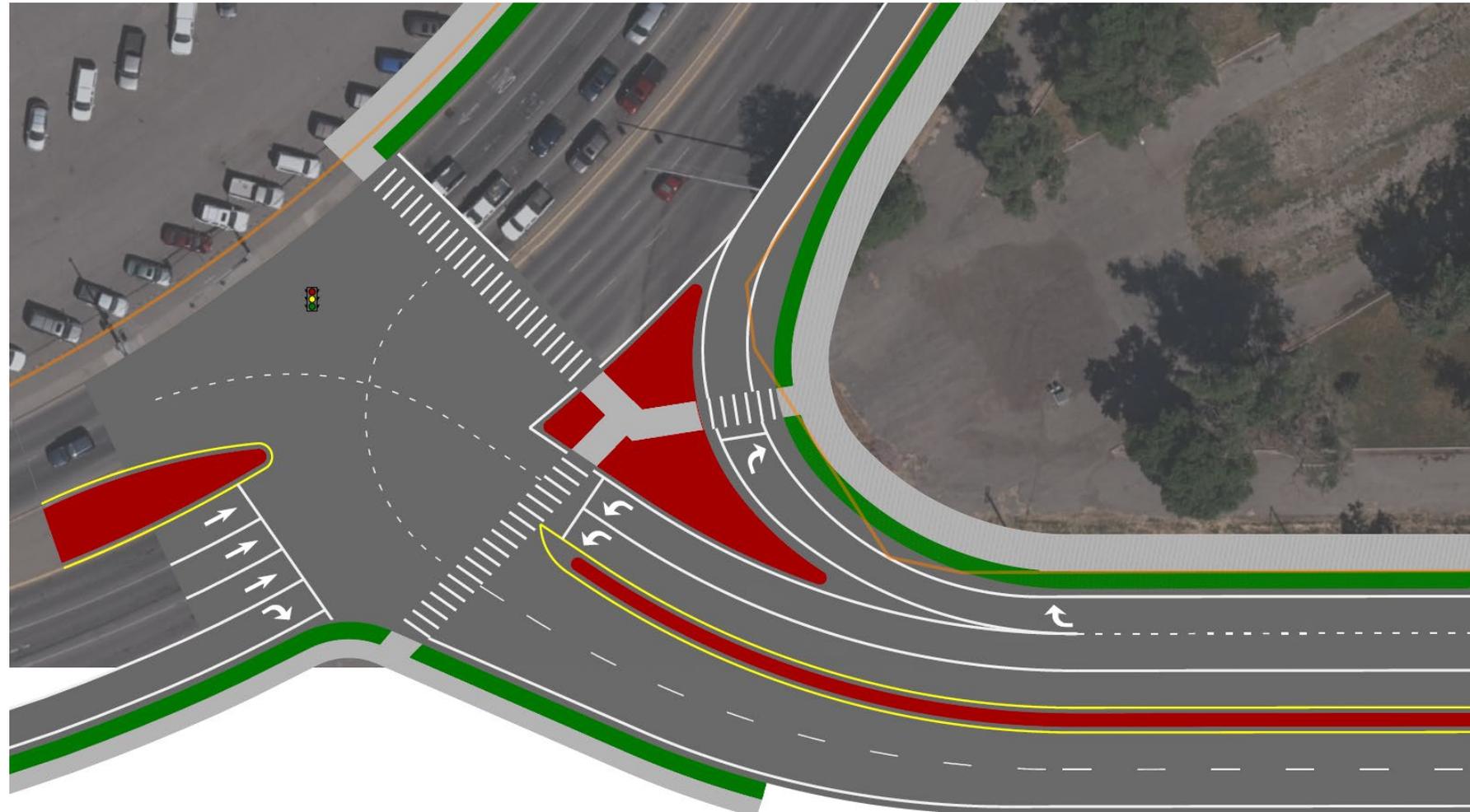
Action Items from PAC Meeting #2 (cont'd)

3. Lockwood is improving sidewalk on the north side of US 87 to the bridge (east of the study area) – providing improvements on the north side of 1st Avenue N would facilitate connections to Lockwood.



Action Items from PAC Meeting #2 (cont'd)

4. Interest in seeing free right-turn on different concepts



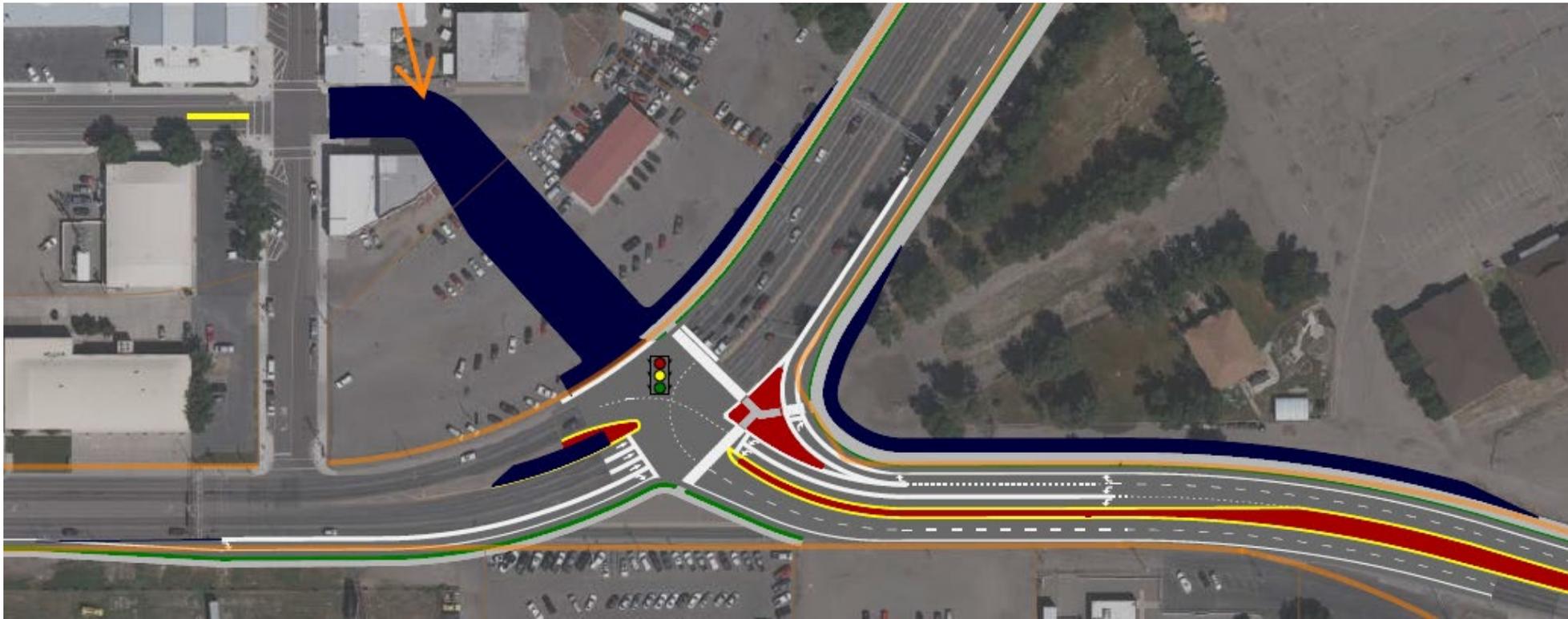
Action Items from PAC Meeting #2 (cont'd)

5. Interest in providing additional southbound left-turn storage on all plans



Action Items from PAC Meeting #2 (cont'd)

6. Interest in seeing how a 4th leg would be integrated to the intersection, providing a connection to 2nd Avenue N.



Action Items from PAC Meeting #2 (cont'd)

7. Assess a second northbound right-turn lane
 - Minimal operational benefit (6 seconds less of delay)
 - Reduces queue length, but limited usage of both lanes due to queue from northbound through
 - Greater ROW impacts



1ST AVENUE N

The image shows an aerial view of a multi-lane road, 1st Avenue N, with various lane markings and traffic flow indicators. A green line runs along the bottom of the road, and a white line runs along the top. A red and yellow area is visible on the right side of the road, and a blue line runs along the top right. The text '1ST AVENUE N' is overlaid on the left side of the image.

Single Northbound Right-Turn Lane

Required Storage Length: **425 feet**
Northbound-Through 95th Queue: **598 feet**
Intersection Vehicle Delay: **38.3 seconds**
NB Right-Turn Vehicle Delay: **20.7 seconds**

Northbound-Through
95th Queue



Dual Northbound Right-Turn Lane

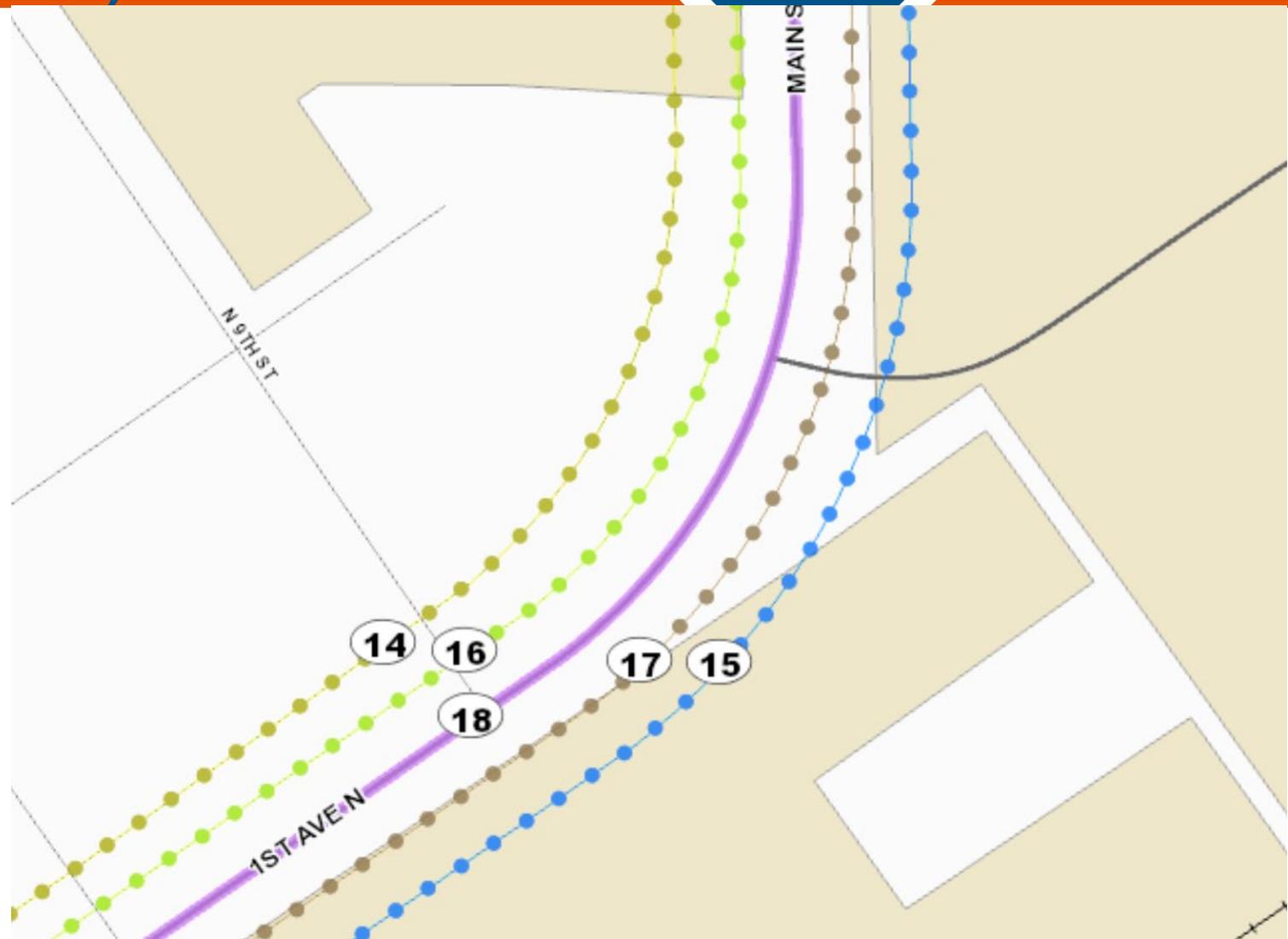
Required Storage Length: **175 feet**
Northbound-Through 95th Queue: **598 feet**
Intersection Vehicle Delay: **37.6 seconds**
NB Right-Turn Vehicle Delay: **14.2 seconds**

Northbound-Through
95th Queue



Action Items from PAC Meeting #2 (cont'd)

8. Has transit been involved
 - MET Transit is on the PAC.
 - Five routes travel through intersection.





Recap from Open House



Open House Attendance

- We held two sessions on Dec 12, 2019.
 - 18 attendees @ noon session
 - 25 attendees @ evening session



Open House Attendance



Key Feedback

- Positive comments
 - Improvements address right-turn deficiency
 - Help with MetraPark ingress/egress
 - Support the pedestrian and bicycle facilities
 - Enhance beautification at the intersection and along MetraPark
- Topics to further assess
 - Driveway access for properties to the south
 - Drainage
 - Utility conflicts
 - Coordination with MetraPark (Big Sky Economic Development Association)

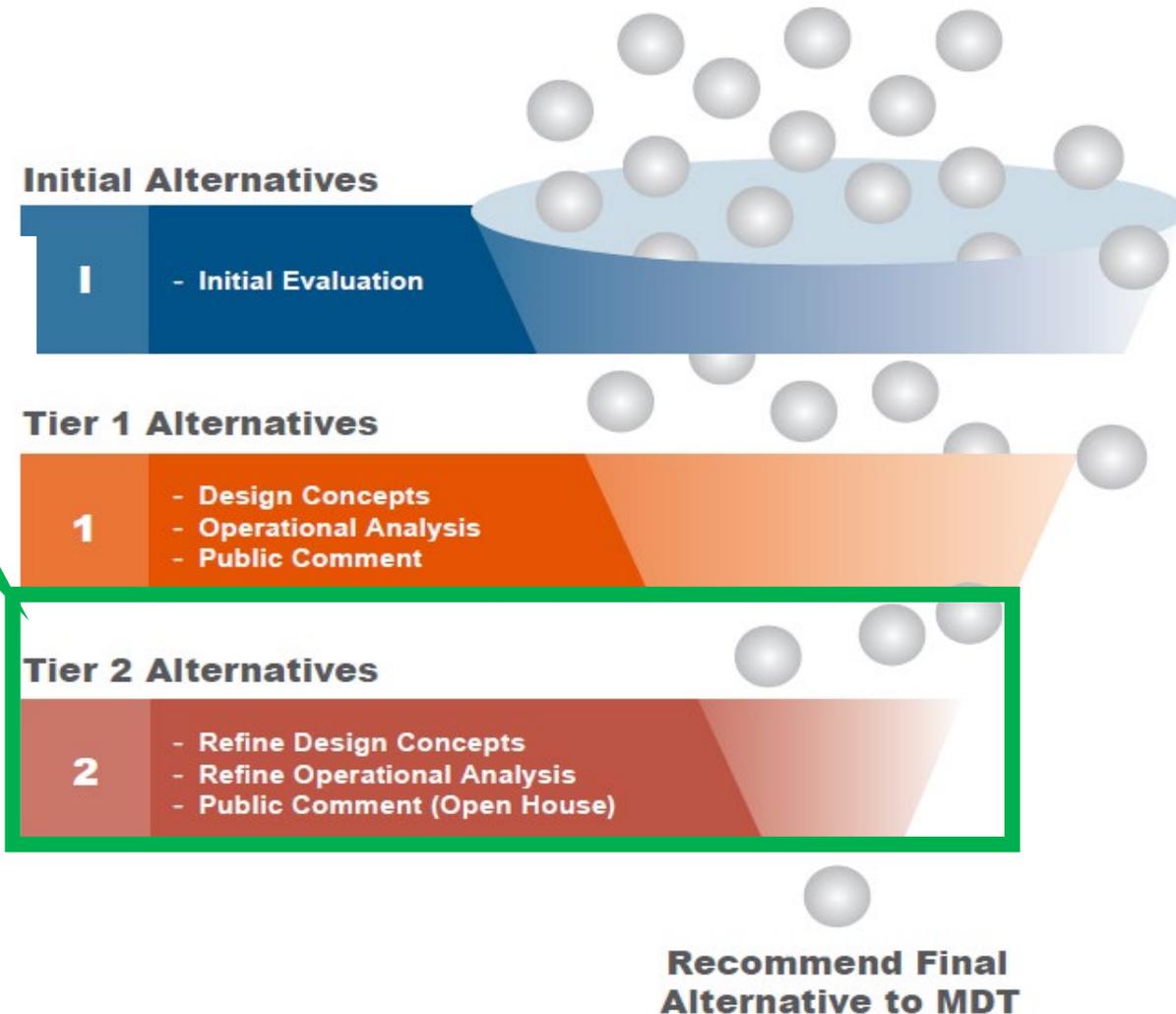




Tier 2 Alternatives



Tiered Approach



We are here!

- Started with a range of options (~16)
 - Selected six alternatives for Tier 1
 - Selected three alternatives for Tier 2
- Tier 2
 - Evaluate three alternatives
 - Recommend final alternative to MDT for design



Alternative 1 No-Build



- Does not fix the problem
- Used to compare alternatives



Alternative 4

Free Westbound Right-Turn Lane

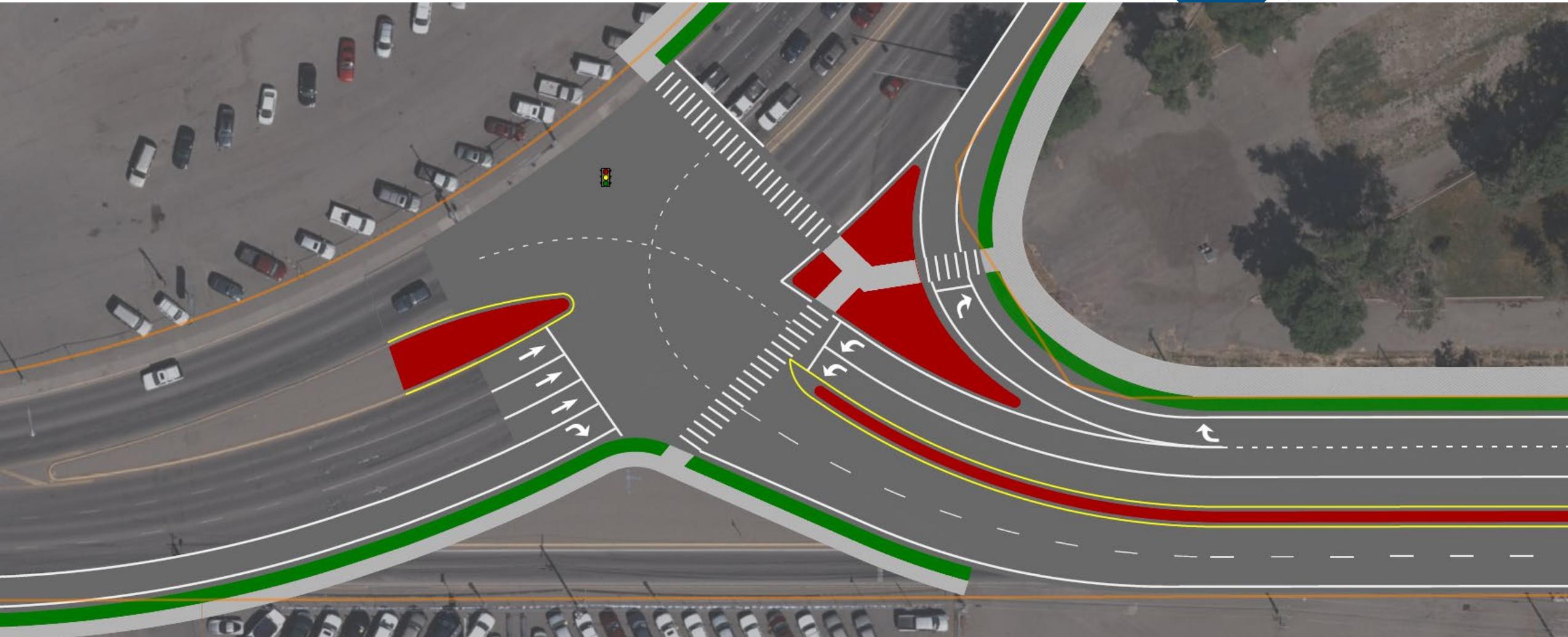


- Modify westbound approach
 - Dual left-turn lanes
 - Single right-turn lane (signalized)
 - Lane alignment
- Add 4th northbound through lane to Bench Blvd
- Modify northbound right-turn lane
- Add crossings, pathway, and detached sidewalks



Alternative 4

Free Westbound Right-Turn Lane



Alternative 4

Free Westbound Right-Turn Lane



Alternative 4

Free Westbound Right-Turn Lane



Alternative 4 Free Westbound Right-Turn Lane



Alternative 4

Free Westbound Right-Turn Lane

- Reduces spillback for westbound right-turn lane
- Operates at Level of Service C (30 seconds of delay) during AM peak hour or D (42 seconds of delay) during PM peak hour
- Improves accessibility to MetraPark with new travel lane on Exposition Drive
- Enhances safety by reducing traffic congestion and adding pedestrian and bicyclist facilities

Impacts

- » Right-of-way impact - 59,500 square feet
- » # of properties impacted - 7

Estimated Construction Cost

- » \$7.5 million



Alternative 5

Dual Westbound Right-Turn Lanes

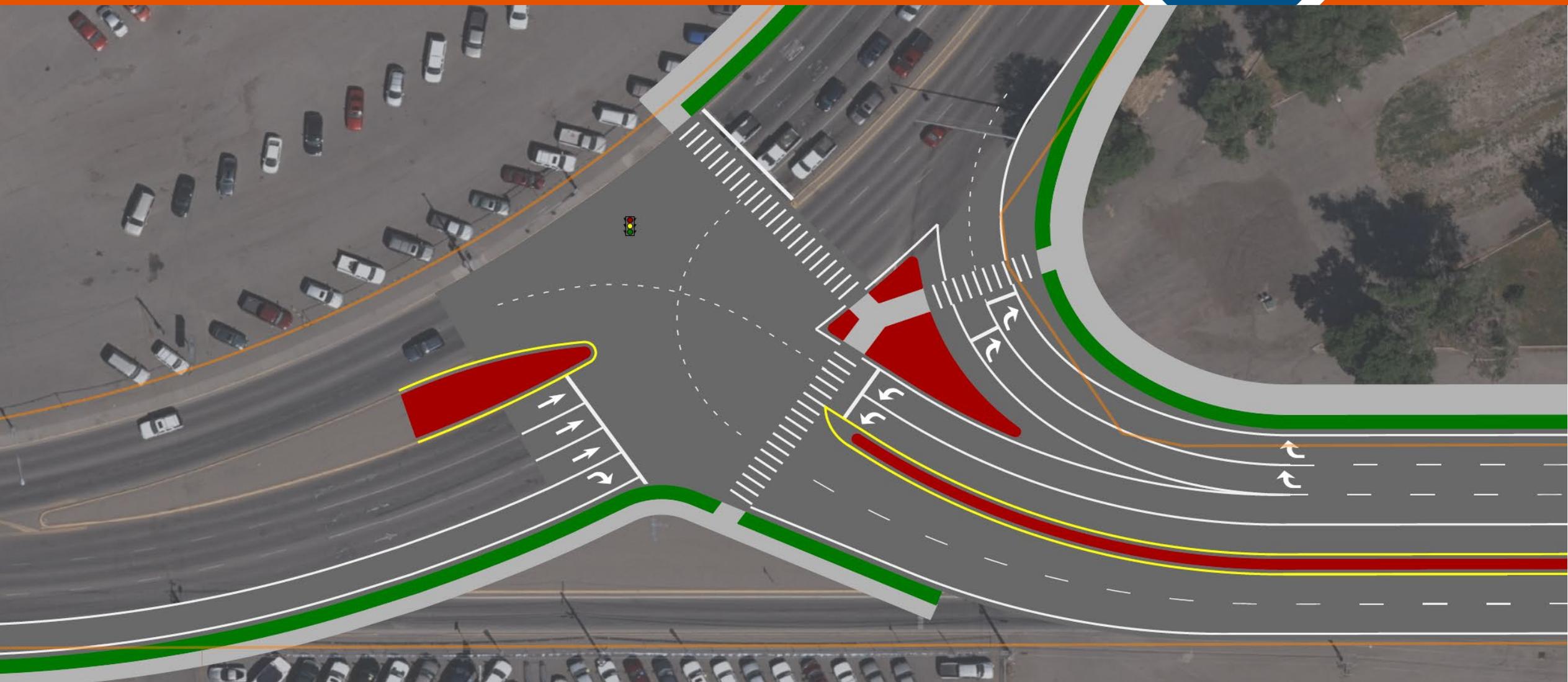


- Modify westbound approach
 - Dual left-turn lanes
 - Dual right-turn lane (signalized)
 - RTOR for outside lane
 - Lane alignment
- Modify northbound right-turn lane
- Add crossings, pathway, and detached sidewalks



Alternative 5

Dual Westbound Right-Turn Lanes



Alternative 5

Dual Westbound Right-Turn Lanes



Alternative 5

Dual Westbound Right-Turn Lanes



Alternative 5

Dual Westbound Right-Turn Lanes



Alternative 5

Dual Westbound Right-Turn Lanes

- Reduces spillback for westbound right-turn lane
- Operates at Level of Service C (28 seconds of delay) during AM peak hour or D (39 seconds of delay) during PM peak hour
- Provides connections for pedestrians and bicyclists

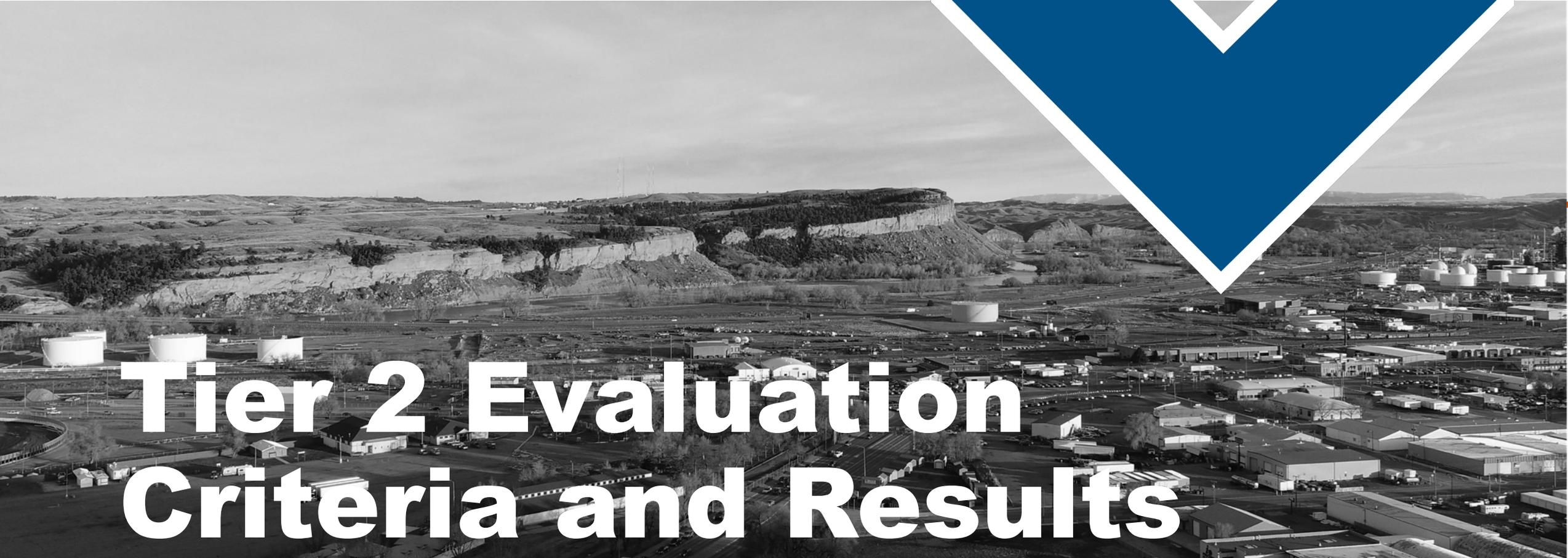
Impacts

- » Right-of-way impact - 55,000 square feet
- » # of properties impacted - 7

Estimated Construction Cost

- » \$7.4 million





Tier 2 Evaluation Criteria and Results



Evaluation Results

Criteria	Alt 1 NB	Alt 4 Free RT	Alt 5 Dual RT
Safety Performance	Lower	Medium	Medium
Number of Free Right-Turns	1	1	0
Pedestrian Facility Quality	Lower	Higher	Higher
Bicycle Facility Quality	Lower	Higher	Higher
Traffic Operations (2040 AM/PM Peak Hour Level of Service)	C/F	C/D	C/D
Traffic Operations Lifespan (After 2040)	0 years	8-12 years	8-12 years
Right-Of-Way Impact (square-feet)	None	59,500	55,000
Number of Properties Impacted	0	7	7
Design and Construction Cost Estimates	None	\$7.5 mil	\$7.4 mil

Project Advisory Committee

Successful Outcome of this Project

- Long-term solution versus a stop gap solution.
- Multimodal access to MetraPark. Accessibility for all users.
- The project includes bike and pedestrian improvements – a beautiful multimodal project.
- Right solution for all users.
- Just address the problems at hand for now at Exposition Drive and 1st Avenue N and see how other projects (e.g. Inner Belt Loop, Bypass) change traffic at this intersection
- Address simple things (e.g. address snow storage with boulevards and keep sidewalks clear). Make sure it is safer and efficient. Put thoughts together to achieve a viable solution that works for the next 30 or 40 years.
- Improve traffic flow.
- Idea of MDT not purely focused on moving cars. That's a good thing.
- Improved traffic flow and better access into and out of MetraPark.
- Move traffic, bicyclists, and pedestrians safely through the intersection.
- All road users comfortably accommodated. It would be disappointing to forget bikes and pedestrians and go with an easy solution for vehicles only.
- Like the alternative through the MetraPark – its looking good (cost aside). Like the jog to the interstate for a direct connection. Also, like displaced left-turn option.





Breakout Session – Let's Hear From You!





Next Steps



Next Steps

- PAC action—Return comment sheet by January 10th
- Technical team will...
 - post materials to project website: <https://www.mdt.mt.gov/pubinvolve/expofirst/>
 - review and assess comments from open house and PAC
 - continue to meet with property owners and businesses
 - recommend preferred alternative to MDT



Driveway Options

