



**AGENDA
CITY OF CEDAR FALLS, IOWA
COMMITTEE OF THE WHOLE
MONDAY, FEBRUARY 01, 2021
5:50 PM AT CITY HALL VIA VIDEO CONFERENCE**

To protect against the spread of the COVID-19, the meeting will be held via video conference. The public may access/participate in the meeting in the following ways:

- a) By dialing the phone number +13126266799 or +19292056099 or +12532158782 or +13017158592 or +13462487799 or +16699006833 and when prompted, enter the meeting ID (access code) 962 7287 1738.
- b) iPhone one-tap: +13126266799,,96272871738# or +19292056099,,96272871738#
- c) Join via smartphone or computer using this link: <https://zoom.us/j/96272871738>.
- d) View the live stream on Channel 15 YouTube using this link: <https://www.youtube.com/channel/UCCzeig5nIS-dIEYisqah1uQ> (view only).
- e) Watch on Cedar Falls Cable Channel 15 (view only).

To request to speak when allowed on the agenda, participants must click "Raise Hand" if connected by smartphone or computer, or press *9 if connected by telephone. All participants will be muted by the presiding officer when not actually speaking.

Call to Order by the Mayor

1. Main Street Traffic Study.
(60 Minutes, Public Works Director Chase Schrage)

FEBRUARY 1, 2021

MAIN ST CORRIDOR TRAFFIC STUDY UPDATE OF 2017 WORK

CITY COUNCIL

COMMITTEE OF THE WHOLE

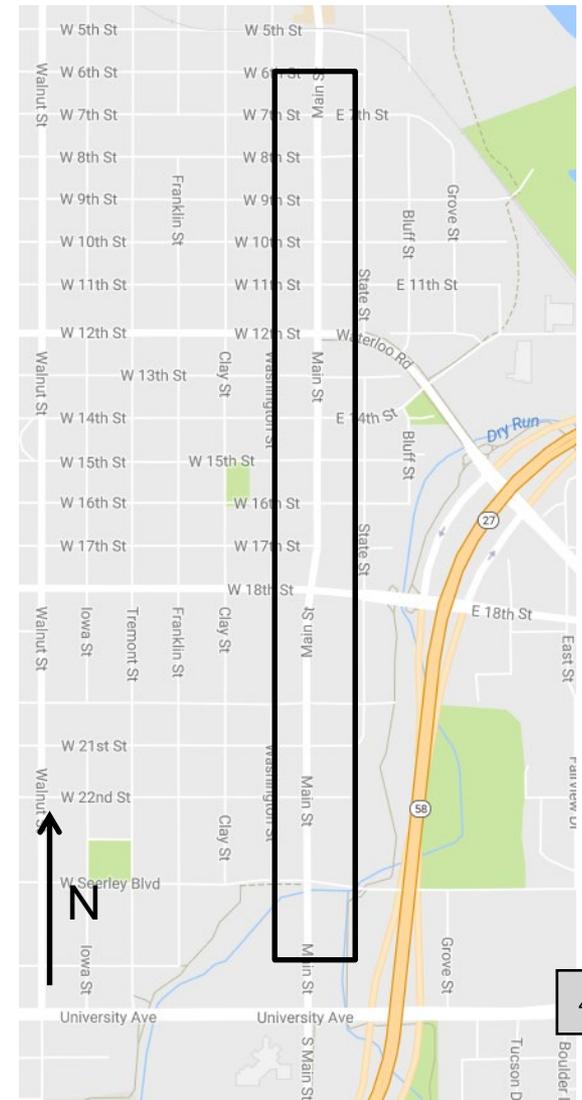


History

- Traffic data collection/analysis *2016*
- Public Input Meeting *9/13/2016*
- Analysis/Alternatives *F 2016 / S 2017*
- Public Input Meeting *5/23/2017*
- Final Report *7/06/2017*
- Council Meeting Summary *7/10/2017*
- Council Meeting Follow Up *8/7/2017*

Introduction

- Main St History
 - Four lane undivided
 - Iowa Hwy 58 until ~1993
 - Asphalt overlay 2003
(3 lane considered at the time)
- Study area
 - North of University Ave to 6th St
 - Mostly residential
 - Some commercial south of 18th St



Introduction

- Needs reconstruction
- Poor pavement
- Beyond patching or overlays
- Other utilities
 - Street lighting replacement
 - Water main repair / replacement
 - Sewer repair / replacement



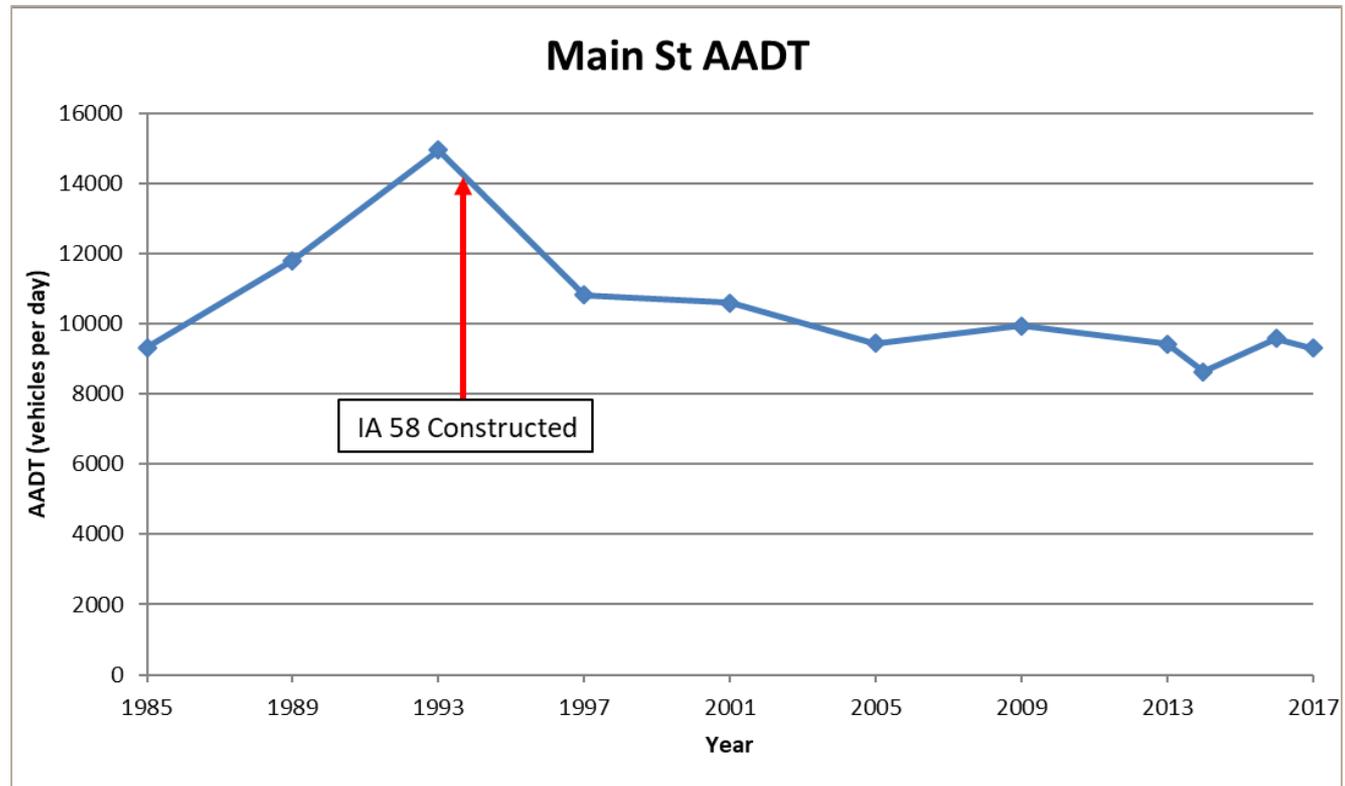
Purpose of 2017 Traffic Study

- Total reconstruction planned
 - *opportunity to improve safety & operations*
 - *consider alternatives*
- Traffic data & analysis to compare alternatives
- Gather & consider public input
- Corridor plan for all travel modes consistent with current & future land use

Corridor Background - Traffic

Average annual daily traffic (AADT)

- Decreased after new IA 58 built
- Steady or slightly declined since
- Latest DOT counts at a similar level to previous years

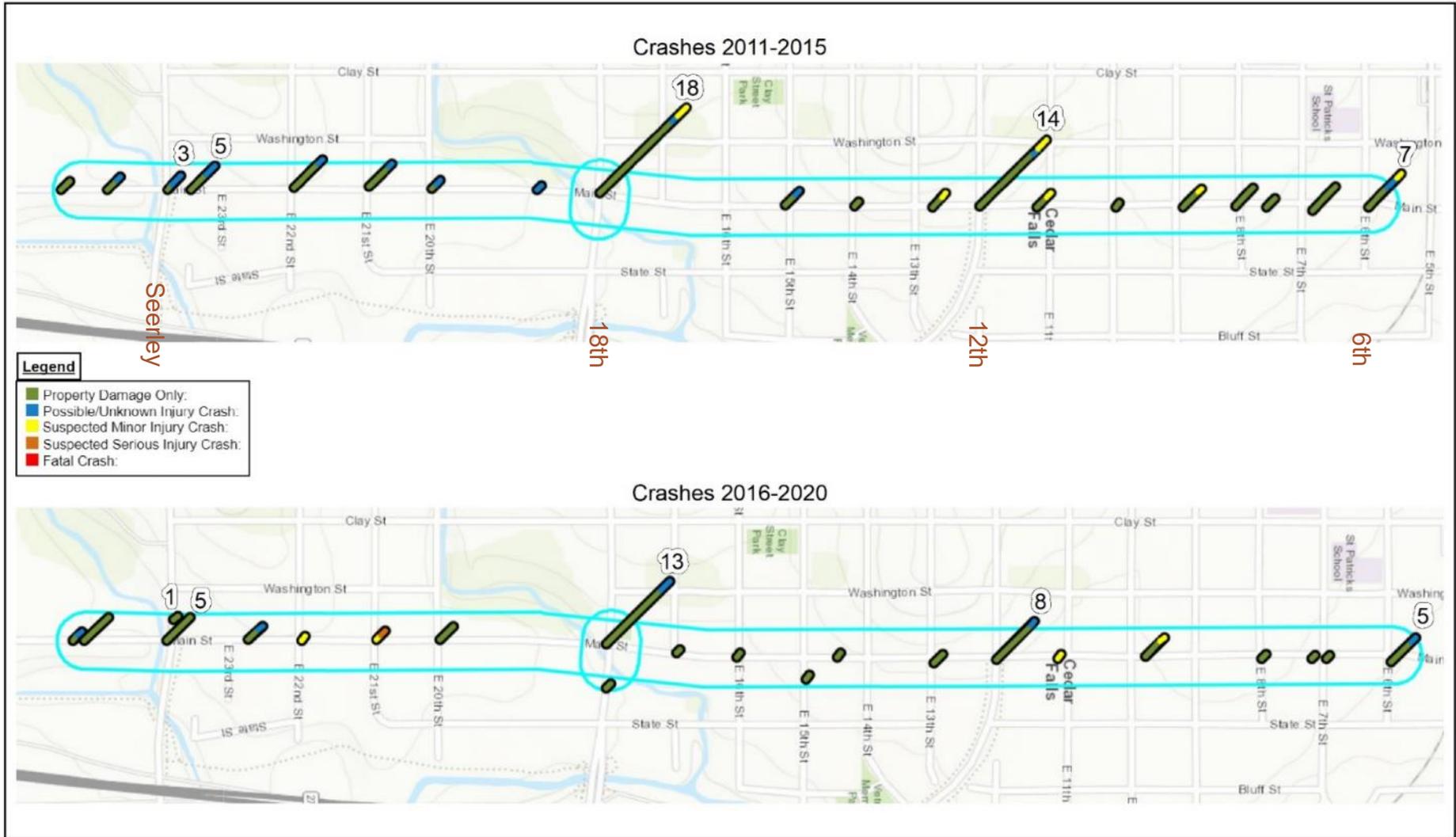


Corridor Background - Safety

	2011-2015	2016-2020
Total Crashes	92	63
Injury Crashes	29	11
Injuries	Minor 8 Possible 21	Serious 1 Minor 5 Possible 9
Crash Rate - signals	< Iowa Avg	< Iowa Avg
Crash Rate - corridor	= Iowa Avg	< Iowa Avg
Correctable Crashes	Rear Ends 19 Broad­sides 11 Sideswipes 6	Rear Ends 10 Broad­sides 8 Sideswipes 4

Corridor Background – Crash locations

FILE PATH: F:\Proposal\2021\Cedar Falls\Main St_01_SeerleyTrafficCrash_StackComparisonMap_Main.mxd
 SOURCES:

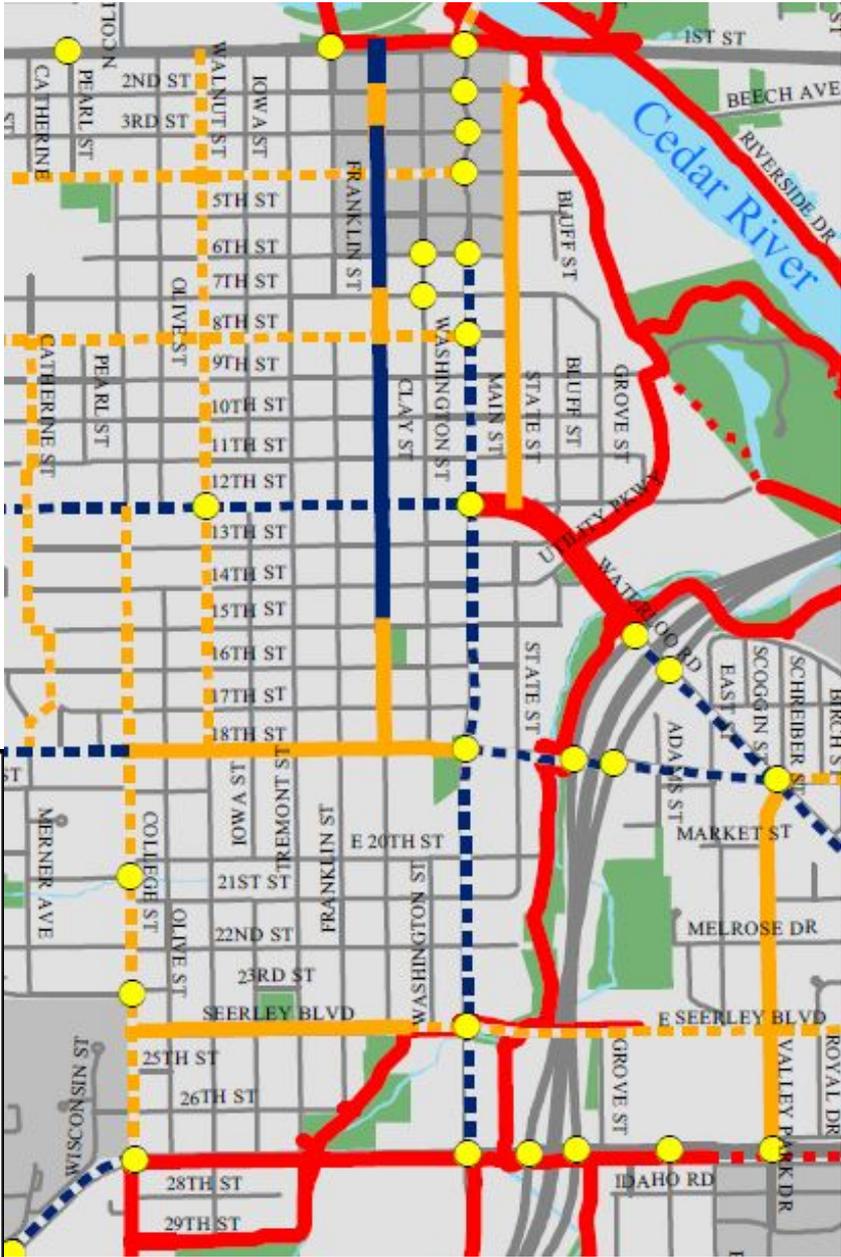


Corridor Background

- Main St identified for planned dedicated bike lanes by Bikeway Network Improvements map

LEGEND

- Destination Areas
- Roadway Improvements**
 - Existing Dedicated Bike Lanes
 - Planned Dedicated Bike Lanes
 - Existing Shared Lanes
 - Planned Shared Lanes
- Traffic Signals
- Trails**
 - Existing Trail
 - Planned Trail

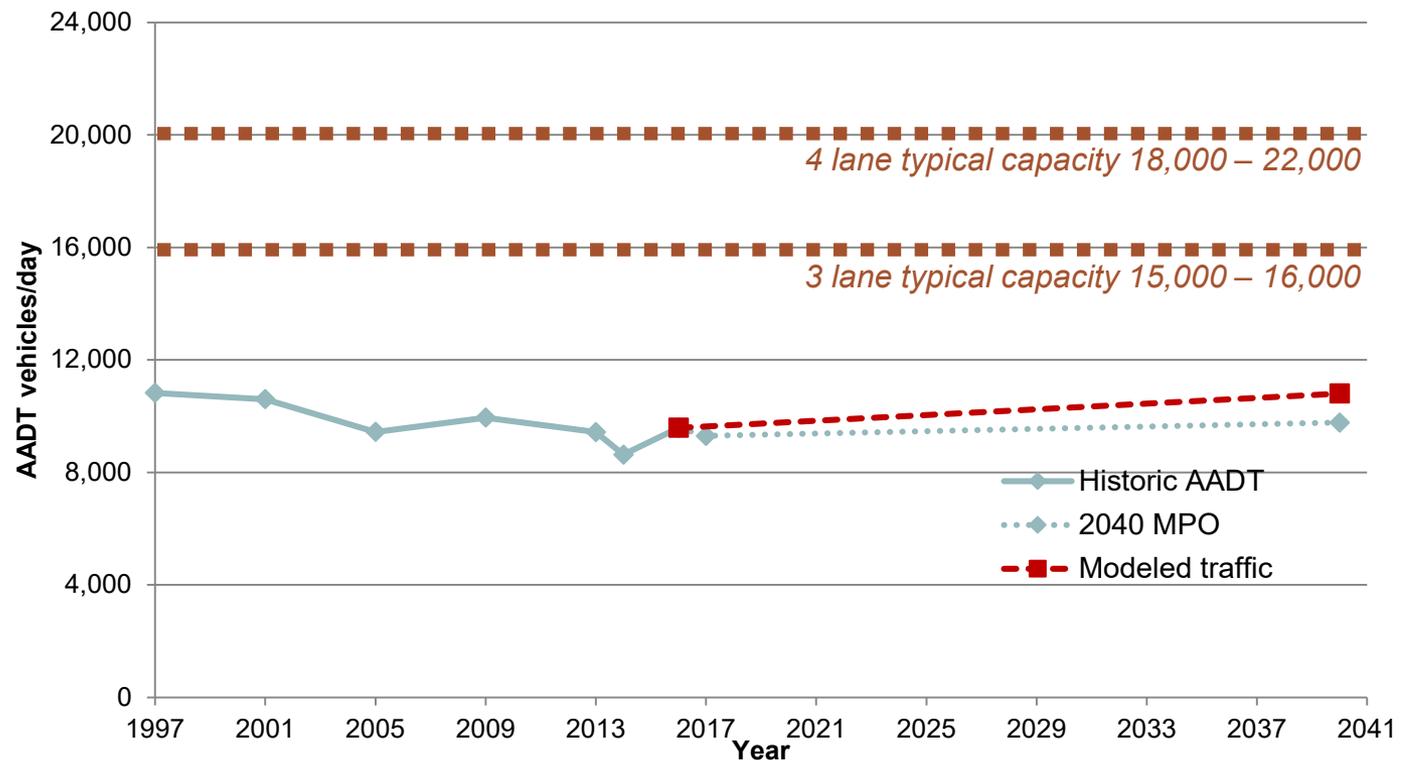


Source: City of Cedar Falls

Projected Traffic Growth

- Traffic demand to remain same or slightly increase
- INRCOG travel demand model forecasts for the year 2040/2045 little/no growth

Main St Daily Traffic (AADT)

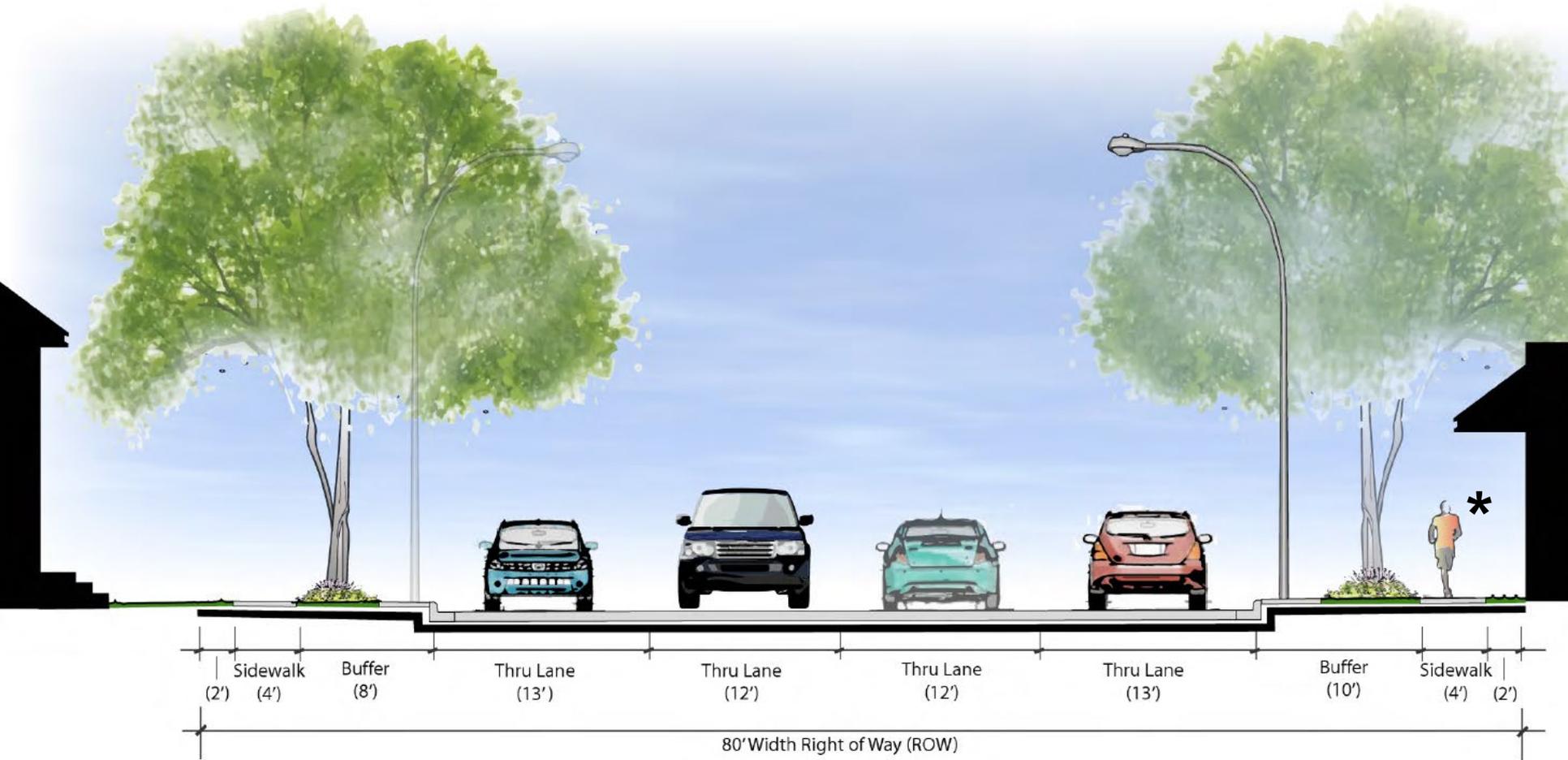


Corridor Alternatives

- Alternative 1: Four-lane throughout
 - *Same as existing*
- Alternative 2: Three-lane throughout
 - *Center turn lane*
- Alternative 3:
 - *Three-lane south of 18th St*
 - *Boulevard north of 18th St*

Alternative 1

Item 1.



*

Notes:

-Lane, sidewalk, ROW widths vary by location within the corridor

-East sidewalk not present south of 18th St

Four-Lane (Existing)

6th St – Seerley Blvd

Alternative 1: Four-Lane Throughout (Existing)

Pros

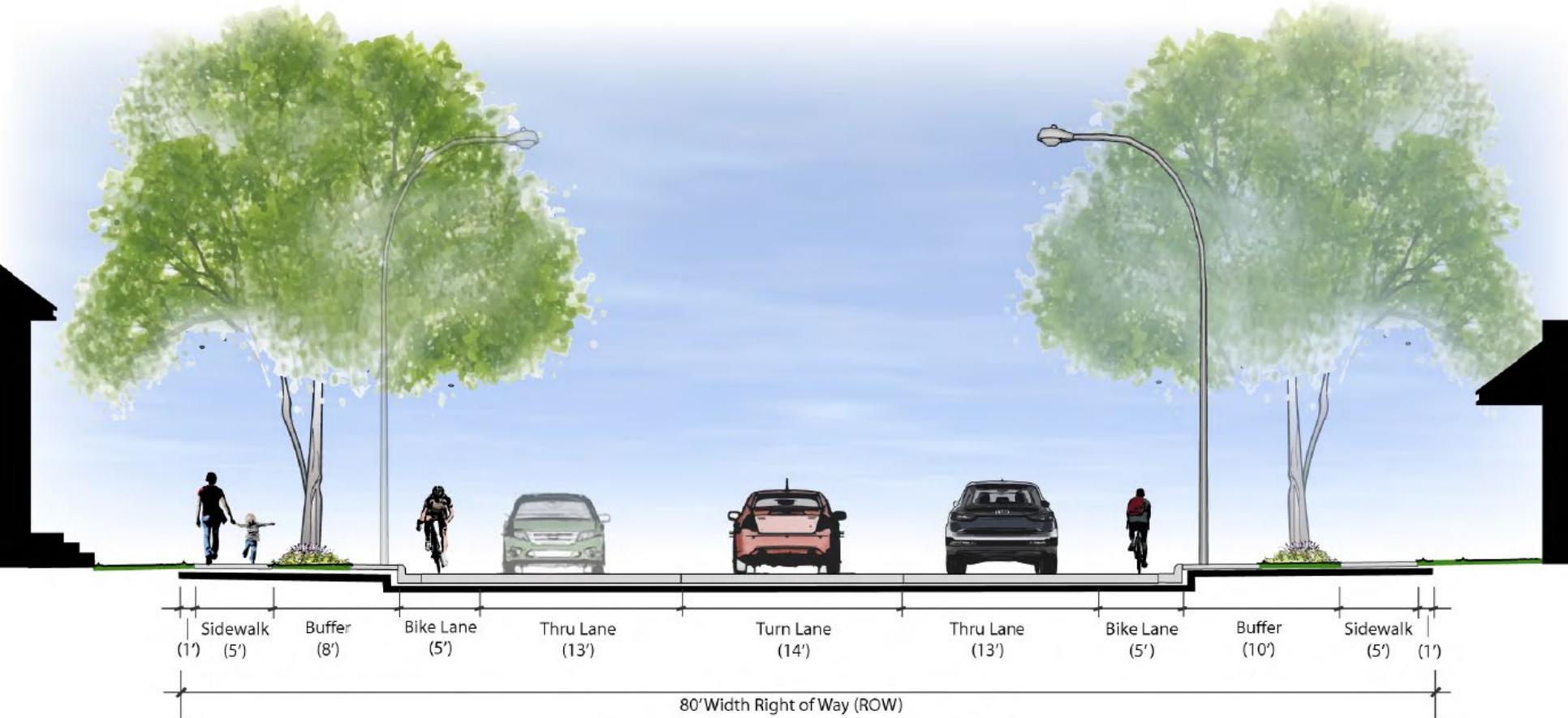
- There is plenty of capacity for traffic flow
- Sunday on-street parking for churches remains the same

Cons

- Does not improve safety
- Inefficient signal operations at the 12th St intersection remain
 - NB and SB don't receive green at same time – “split phase”
- No room for on-street dedicated bike lanes, per Bike Plan

Alternative 2

Item 1.



Notes:

-Lane, sidewalk, ROW widths vary by location within the corridor

Three-Lane Thoroughfare 6th St – Seerley Blvd

Alternative 2: Three-Lane Throughout

Pros

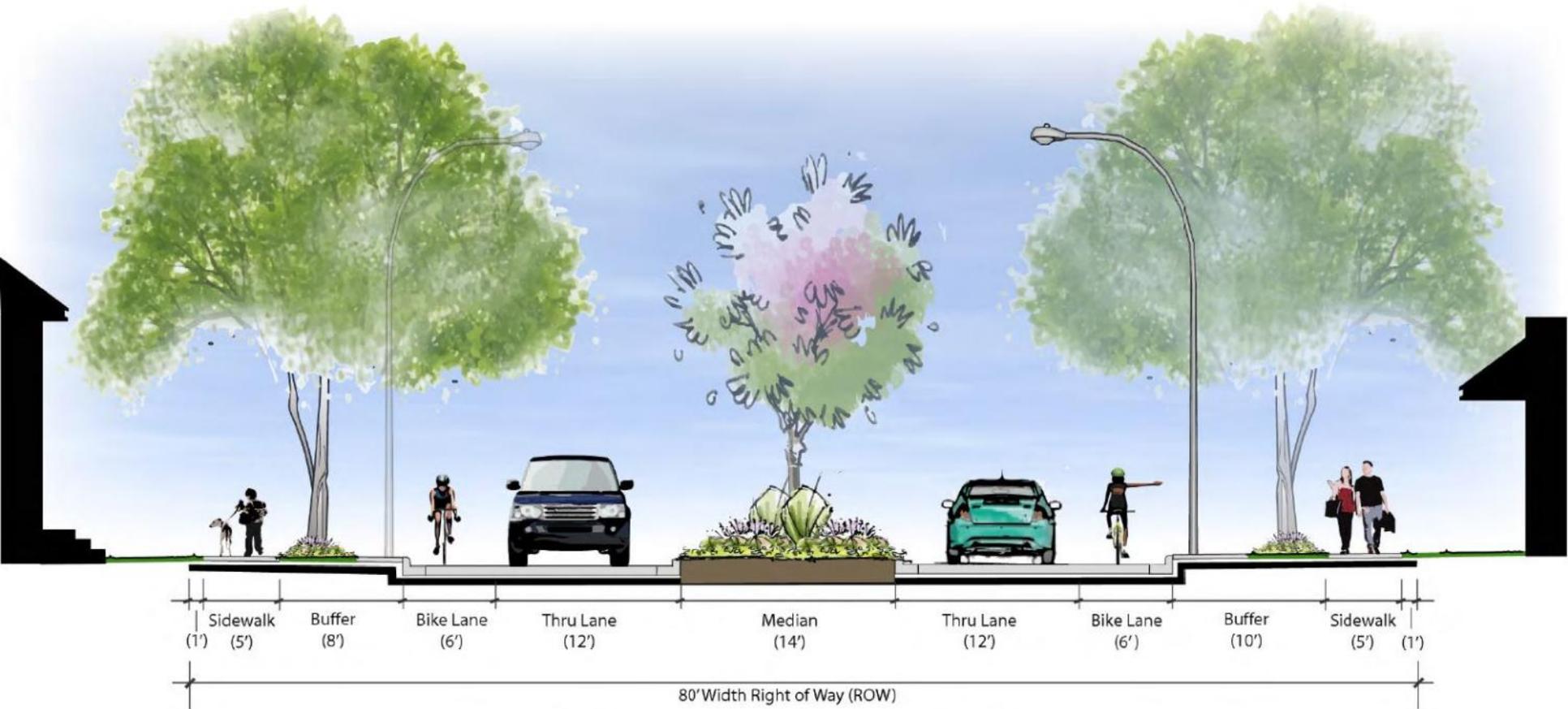
- Improves safety & speed consistency
- Still enough capacity for traffic
- Separation of left turn & thru traffic
- Improves 12th St signal operation
- Reduce pedestrian crossing time and number of conflicts (improves pedestrian safety)
- On-street bike lanes opportunity

Cons

- Slightly increases delay at 18th St, Seerley Blvd, & the corridor overall in peak hours
- Churches would use bike lanes for parking Sunday mornings

Alternative 3

Item 1.



Notes:
-Lane, sidewalk, ROW widths vary by location within the corridor

Three-Lane South of 18th St/ Boulevard North of 18th St

Alternative 3: Three-Lane South of 18th St/ Boulevard North of 18th St

Pros

- Improves safety and speed consistency
- Still enough capacity for traffic
- Separation of left turn & thru traffic
- Improves 12th St signal operation
- Reduce pedestrian crossing time and number of conflicts (improves pedestrian safety)
- On-street bike lanes opportunity
- Center turn lane not necessary for left turn volumes north of 18th St
- Median provides aesthetic improvement

Cons

- Slightly increases delay at 18th St, Seerley Blvd, and the corridor overall in peak hours
- Churches would use bike lanes for parking Sunday mornings
- **If bike lanes not included, additional pavement still needed through boulevard section**
- Potential increased delay if left turners don't pull all the way into median opening
- New maintenance effort: landscaping
- Convert 10 accesses to right-in-right-out

Alternatives Summary

- **Alternatives 2 and 3**
 - Accommodate more modes of traffic
 - Increase safety / speed control
 - Improve traffic flow at signalized intersections
 - Similar delays / travel time rest of corridor
 - Aesthetic improvement opportunities
- **Major intersections**
 - Roundabouts feasible at Seerley Blvd, 18th St, 12th intersections (replace signals)
 - Refined layout needed to understand ROW & utility impacts

Public Input

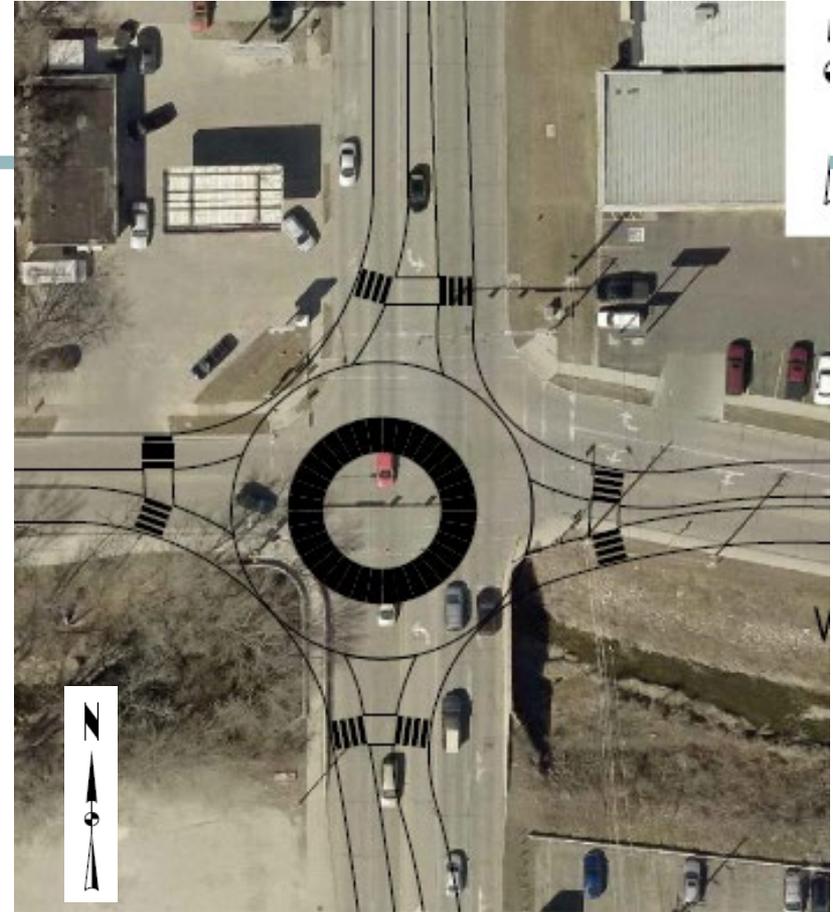
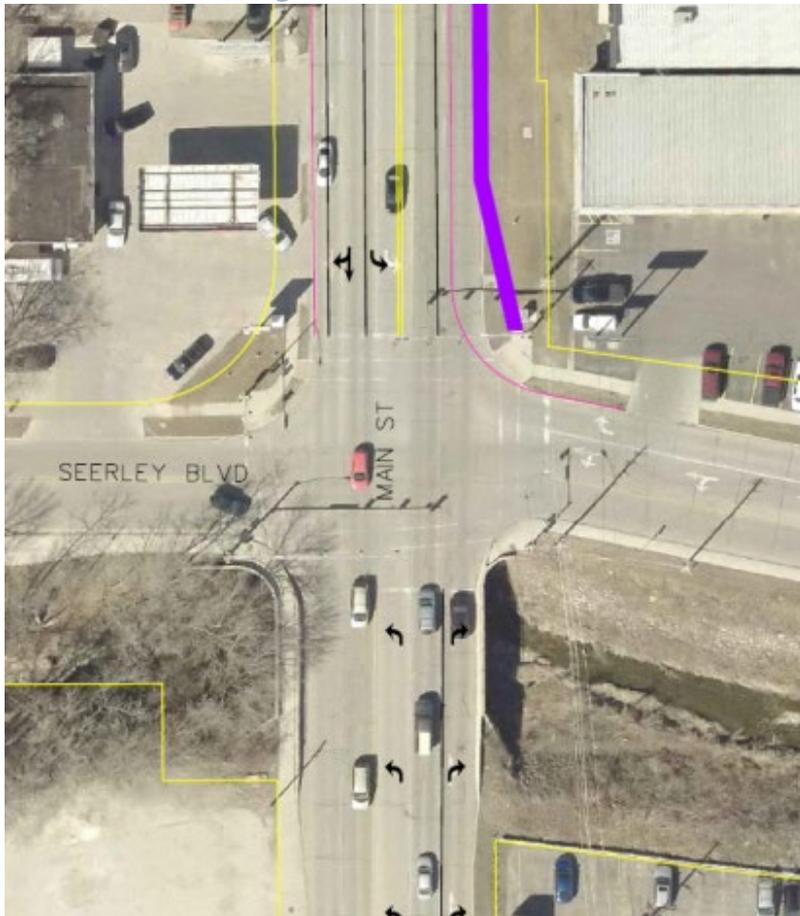
- 9/13/2016 Public Meeting
 - Existing conditions – traffic/crashes/ROW
 - Possible options – functional lanes, all modes
 - Citizen concerns, issues, ideas
- 5/23/2017 Public Meeting
 - Summary Presentation of Analyses
 - Alternatives / Costs
 - Recommendations
 - Q&A – open discussion

4 to 3 Lane Conversion Benefits

- Proven crash reduction of 19-47%
- Decrease speeding & calm traffic
- Reduce rear-end & left turn crashes
- Reduce right angle crashes for side streets
- Improve pedestrian crossings
- Opportunity to improve bicycle facilities
- Improve livability / encourage safer environment

Seerley Blvd Intersection - Roundabout

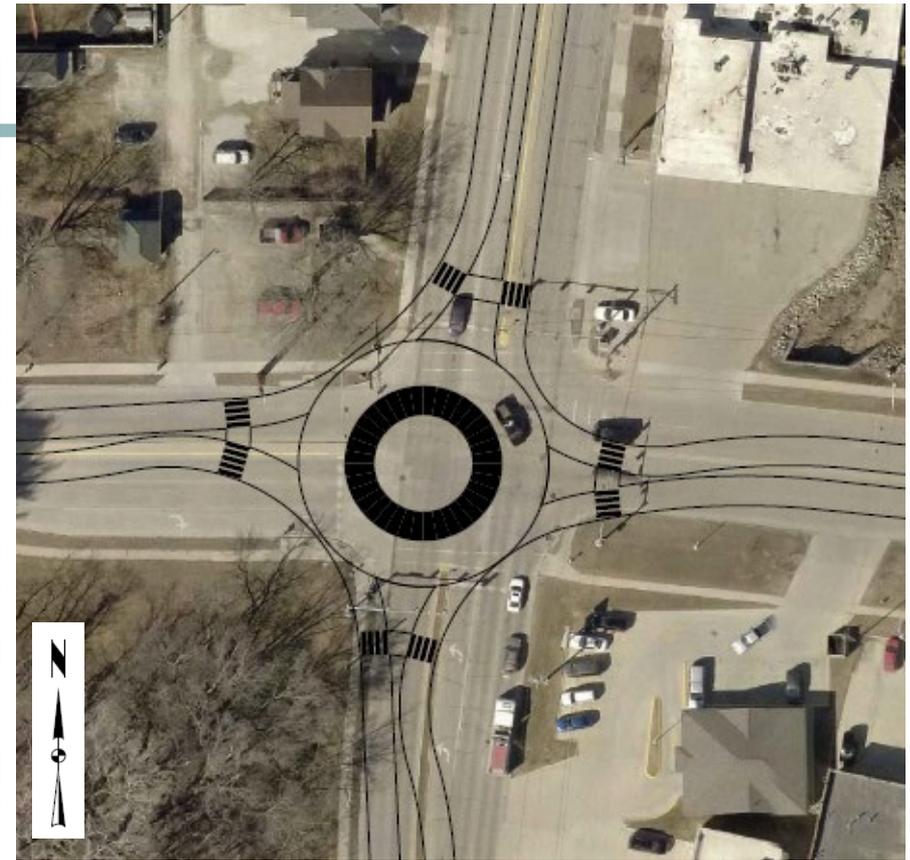
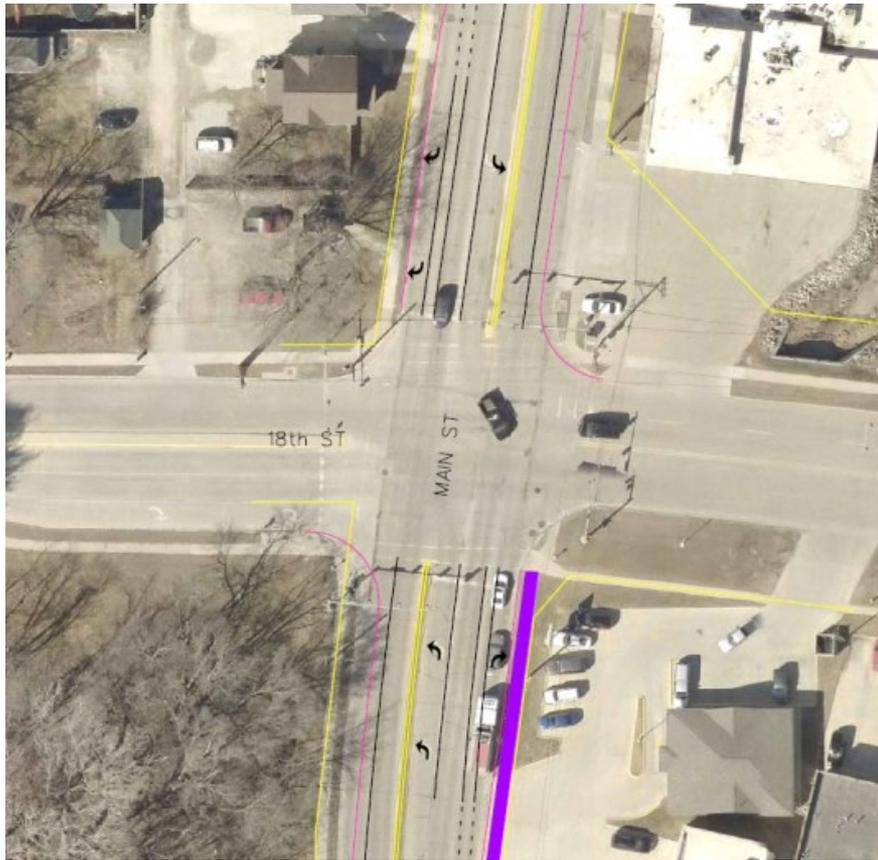
Item 1.



- Roundabout safer/more efficient than traffic signal
- Box culvert south approach – can be extended/modified
- Access points in northwest/northeast corners adapted for roundabout
- Right of way acquisition likely required – minimize in northwest & northeast
 - Southeast & southwest City right of way

18th St Intersection - Roundabout

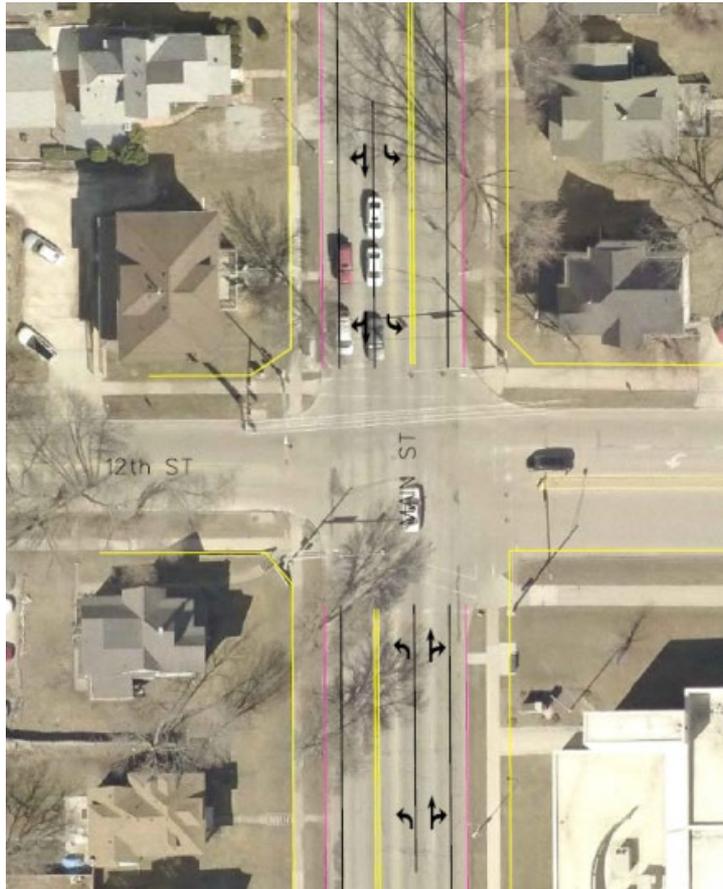
Item 1.



- Roundabout safer/more efficient than traffic signal
- Will work w/ Fire Station
- Right of way acquisition likely required – minimize in southeast
 - (other three City right of way)

12th St Intersection - Roundabout

Item 1.



- Roundabout safer/more efficient than traffic signal
 - Eliminate “split phase north/south” signal operation
- Pedestrian friendly for nearby City Rec & Fitness Center
- Right of way acquisition required 3 of 4 corners
 - Southeast corner City right of way

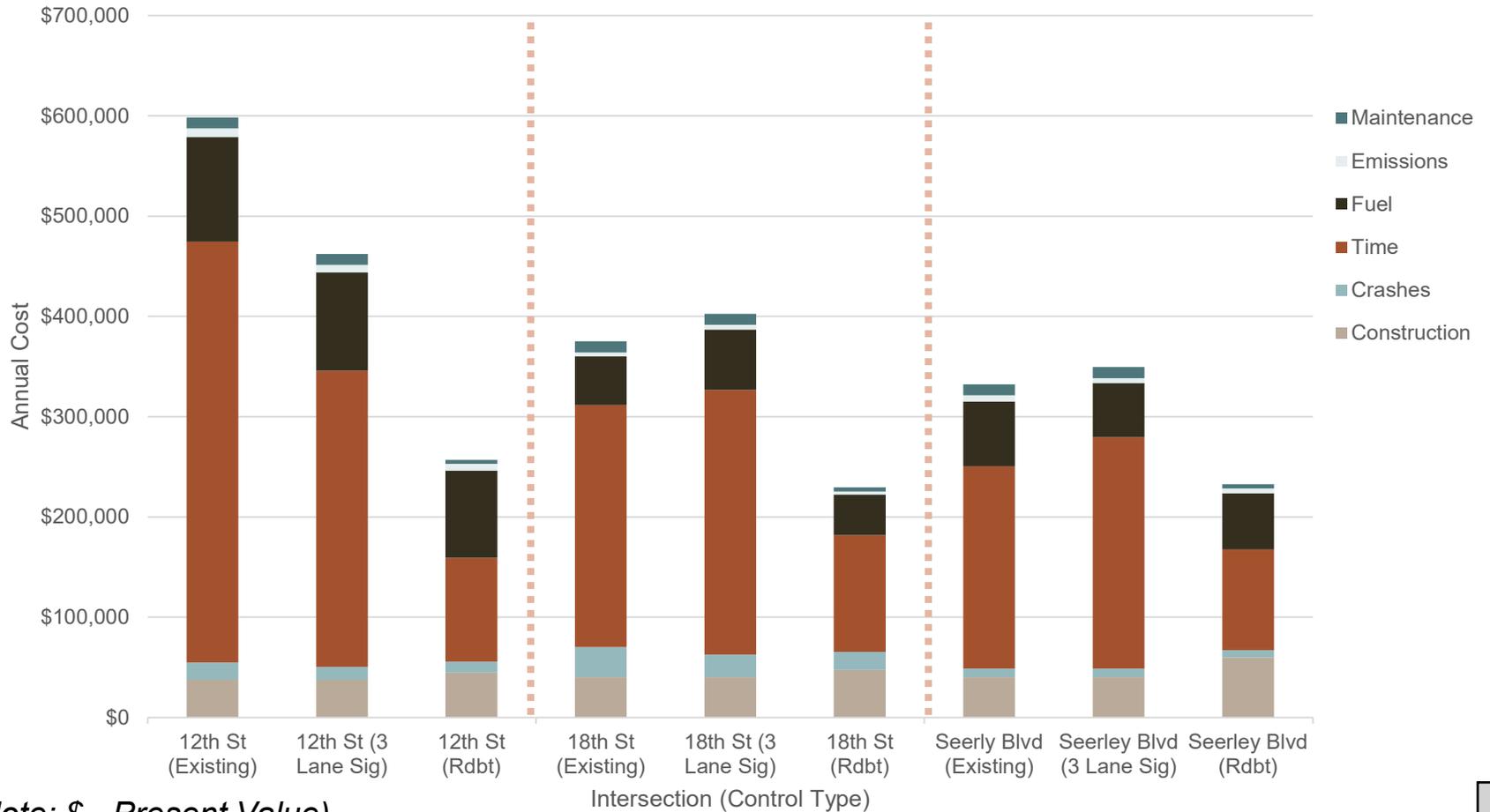
Corridor Operations

- 3 lane w/ signals
 - Future acceptable
 - Similar travel time vs. 4 lane
- 3 lane w/ roundabouts
 - Future acceptable
 - Improvement in corridor travel time vs signals

Peak	Travel Direction	Corridor Travel Time by Scenario (Min:Sec)			
		2016 Existing 4 Lane Signals	2040 Existing 4 Lane Signals	2040 3 Lane Signals	2040 3 Lane Roundabouts
AM	NB	4:19	4:25	4:30	4:10
	SB	4:12	4:26	4:10	3:54
	Average	4:16	4:26	4:20	4:02
Off	NB	4:15	4:18	4:21	4:03
	SB	4:13	4:18	4:15	3:55
	Average	4:14	4:18	4:18	3:59
PM	NB	4:44	4:49	4:53	4:49
	SB	4:36	4:33	4:35	4:12
	Average	4:40	4:41	4:44	4:31

Life Cycle Cost - Intersections

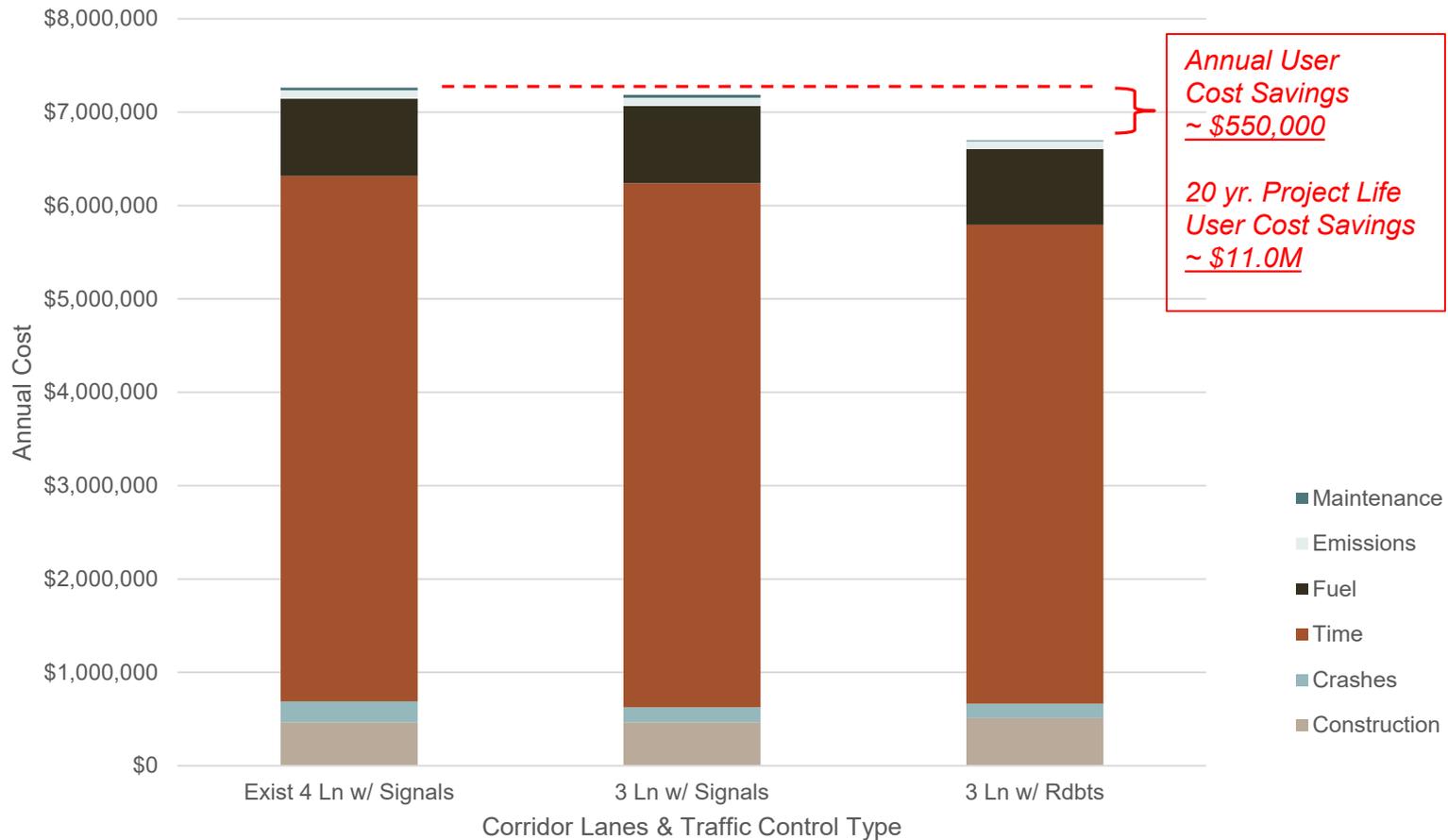
Main St Intersections - Life Cycle Cost Comparison (2040 traffic)



(Note: \$ - Present Value)

Life Cycle Cost - Corridor

Main St Corridor - Life Cycle Cost Comparison (2040 traffic)



(Note: \$ - Present Value)

Funding Opportunity

- Iowa DOT Review
 - Identified Candidate Corridor for Lane Reduction Project
- Traffic Safety Improvement Program
 - Eligible for funding
 - Application due August each year
 - \$400k to \$500k per projected benefit/cost
 - 4 to 3 lane conversion & roundabouts favorable improvements

Schedule

- Design & Right-of-Way
 - *FY 2022 (Begin July 2021)*
- Construction
 - *FY 2023 thru FY 2025 (begin July 2022)*
 - *Includes \$2,900,000 of federal funds programmed for FY2023-FY2024*

Recommendation

- Three lane corridor
 - Enhanced safety over four lane
 - Reduced conflict points
 - Speed consistency
 - Traffic calming for neighborhood
- On-street bike lanes 6th to Seerley
- Roundabouts -12th / 18th / Seerley
 - Need preliminary design
 - Better define impacts & costs
- Pursue Iowa DOT TSIP Funding

Q&A



Thank you