

# State Street Corridor Study

## Recommended Alternative Review

November 2, 2017





# AGENDA

- Process Overview
  - Project Goals
  - Alternatives Considered
  - Evaluation
- Recommended Alternative Overview
  - Design Features
  - Traffic Operations
  - Key Feature Improvements
- Next Steps



# STUDY GOALS



**Safety:** Provide safe conditions for all travelers



**Entry:** Create a more attractive entry to the city



**Pedestrians:** Improve conditions for pedestrians along/across State St



**Bicycles:** Provide a safe place for bicyclists separate from travel lanes



**Transit:** Enhance transit conditions through traffic flow, stop accessibility



**Vehicles:** Maintain reasonable traffic operations along the corridor



**Land Use:** Support planned land use described in S. State St. Corridor Plan



**Access:** Ease accessibility of corridor businesses



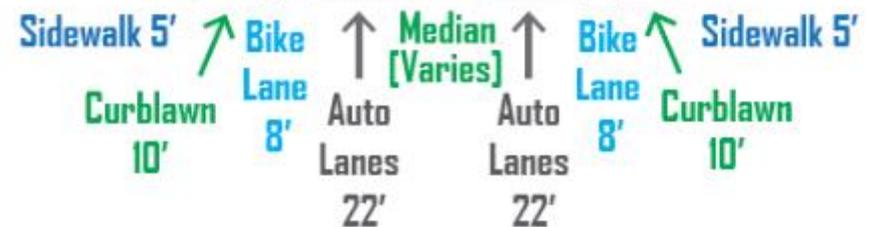
# ALTERNATIVES OVERVIEW

- Alternative 1: Narrow Median with Direct Left Turns
- Alternative 2: Narrow Median with Roundabout Intersections
- Alternative 3: Wide Median with Indirect (“Michigan”) Left Turns



# ALTERNATIVE 1 - NARROW MEDIAN

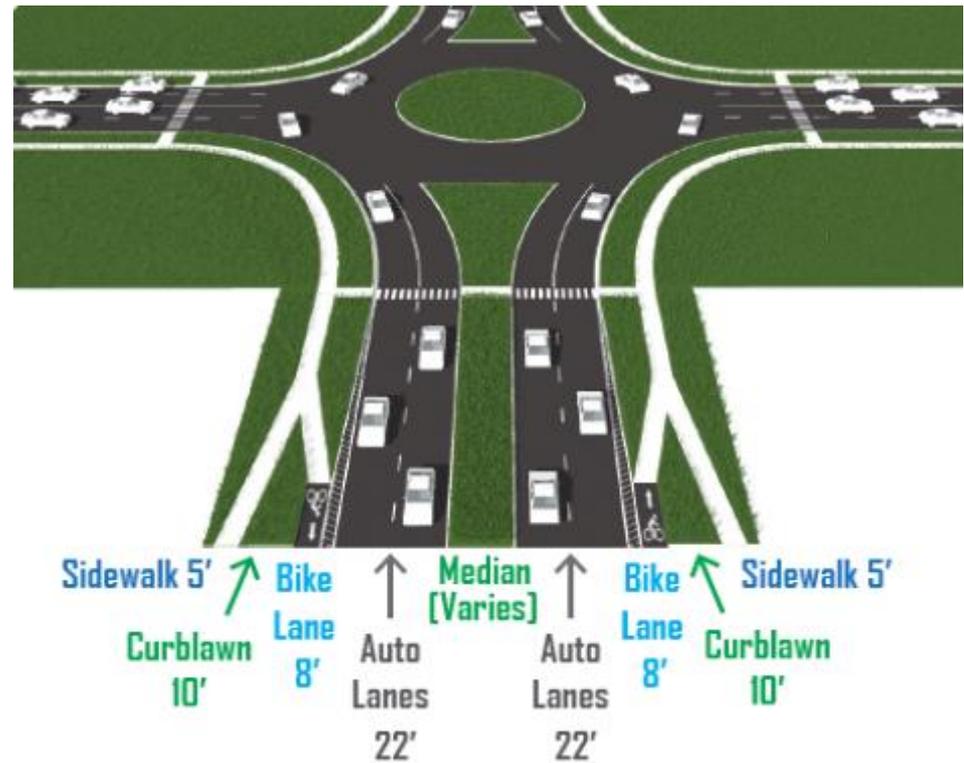
- Direct left-turns
- No u-turns
- Plantable median space





# ALTERNATIVE 2 - ROUNDABOUTS

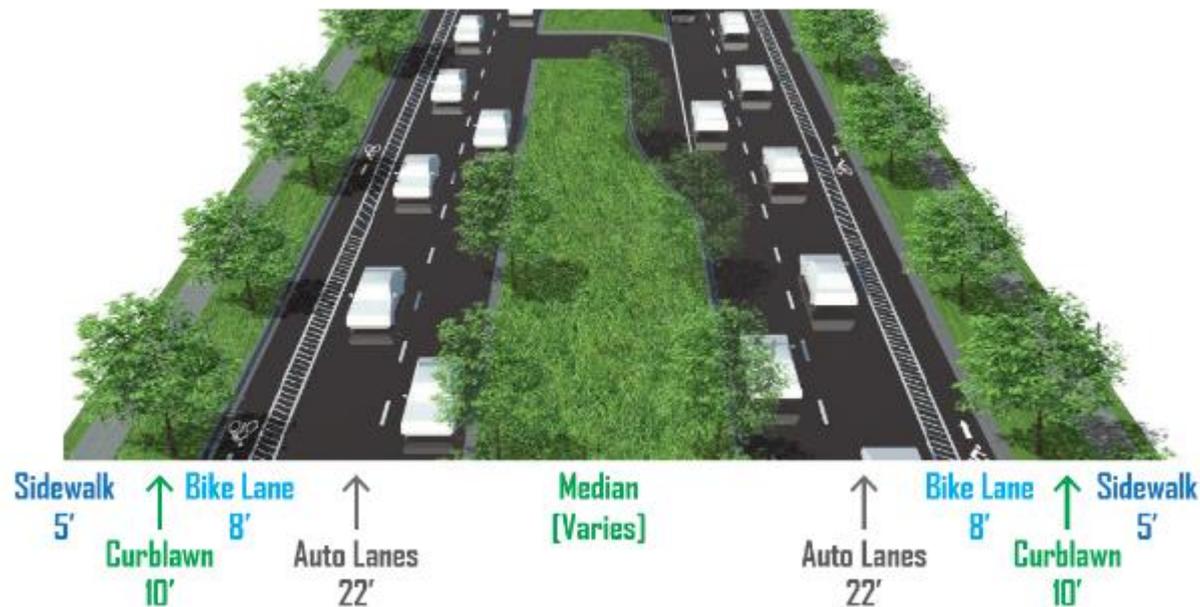
- Roundabout intersections
- Plantable narrow median space





# ALTERNATIVE 3 – WIDE MEDIAN

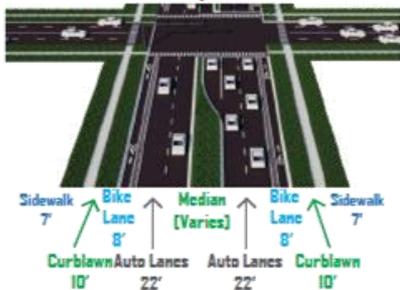
- Indirect (“Michigan”) left turns
- Plantable wide median space



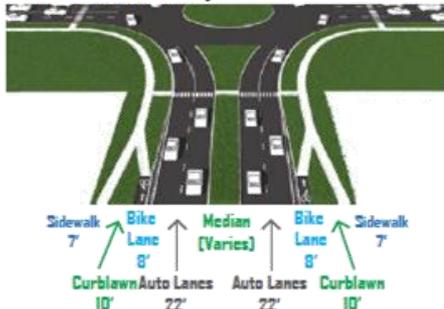


# ALTERNATIVE SCORING

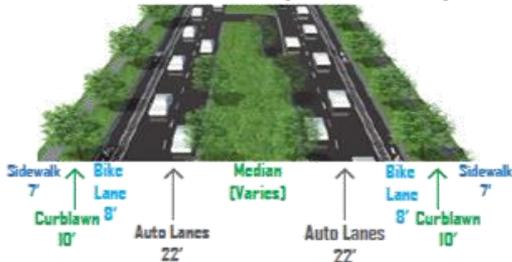
Alternative One (narrow median + direct left turn)



Alternative Two (narrow median + roundabouts)



Alternative Three (wide median)



	SAFETY	ENTRY	PEDESTRIANS	BICYCLES	TRANSIT	LAND USE	VEHICLES	ACCESS
Alternative One	⊖	⊕	⊕	⊕	⊕	⊕	⊖	⊕
Alternative Two	⊕	⊕	⊕	⊕	⊖	⊕	⊖	⊕
Alternative Three	⊕	⊕	⊕	⊕	⊕	⊖	⊖	⊕

Scoring Guide ⊕ BEST ⊕ BETTER THAN EXISTING ⊖ SIMILAR TO EXISTING ⊖ WORSE THAN EXISTING



# RECOMMENDED ALTERNATIVE

- A hybrid solution drawing from narrow and wide median alternatives
- Common non-motorized elements throughout the corridor:
  - Buffered bike lanes
    - Bike lane configuration across I-94 similar to Ann Arbor-Saline Road
  - Continuous sidewalks on both sides of the corridor

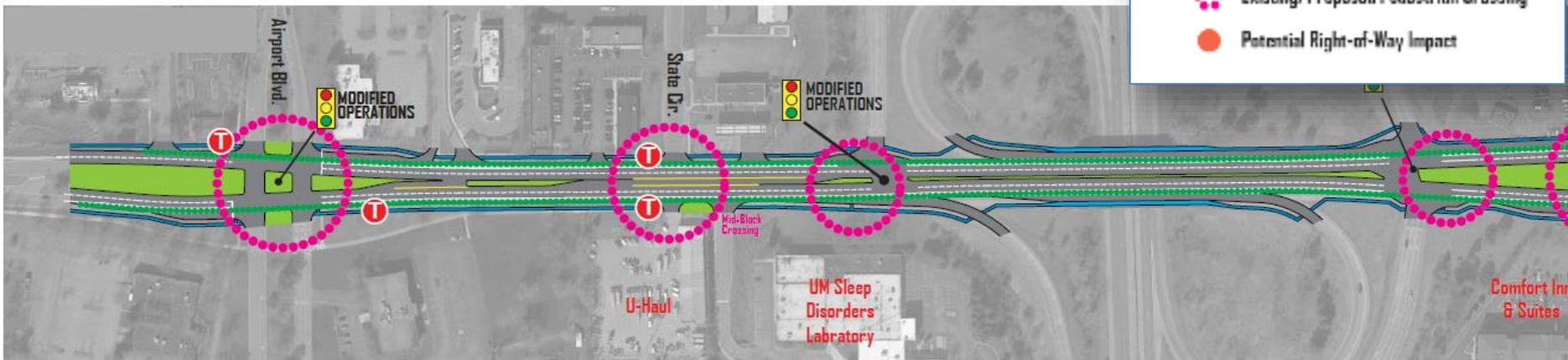


# STATE STREET – RECOMMENDED ALTERNATIVE

- All indirect left turns at Airport/Research diverted to east and west crossovers
- Geometric improvements to discourage direct left turns at Airport/Research
- Desired potential mid-block crossing near State Circle, coinciding with transit stops
- Full signalization of ramp intersections (both directions of State Street stop)

## Legend

- Reconstructed Roadway
- Reconstructed Sidewalk
- Median / Landscape
- On-Street Bike Lanes
- Transit Stop
- Existing/Proposed Pedestrian Crossing
- Potential Right-of-Way Impact



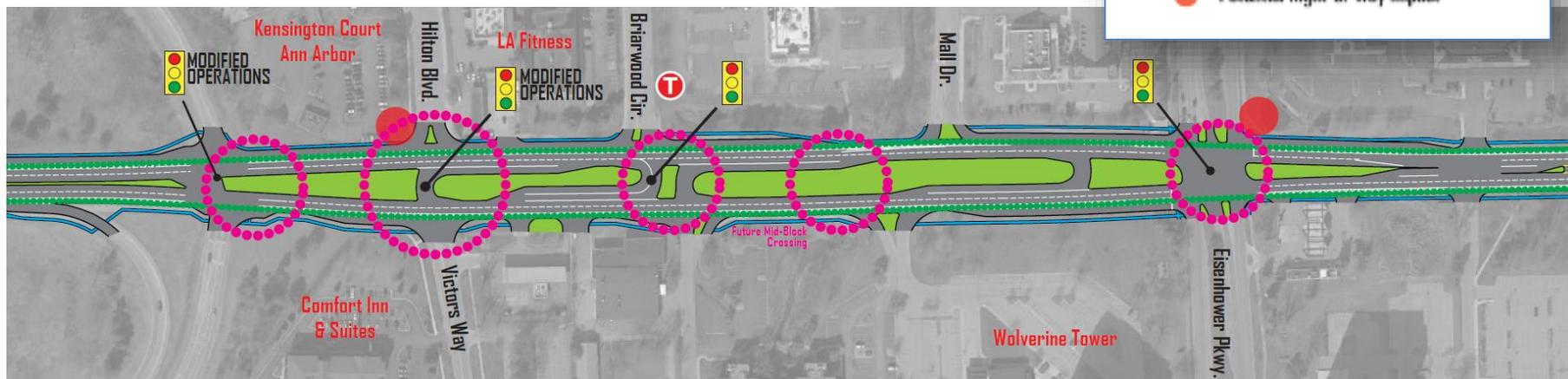


# STATE STREET – RECOMMENDED ALTERNATIVE

- Indirect left-turns; accommodates all driveway movements
- Addition of two traffic signals; split direction signals minimize impact on State St.
- New pedestrian crossings:
  - Briarwood Circle
  - Hilton/Victors
  - I-94 WB Ramps
  - Potential for additional mid-block crossing south of Mall Drive

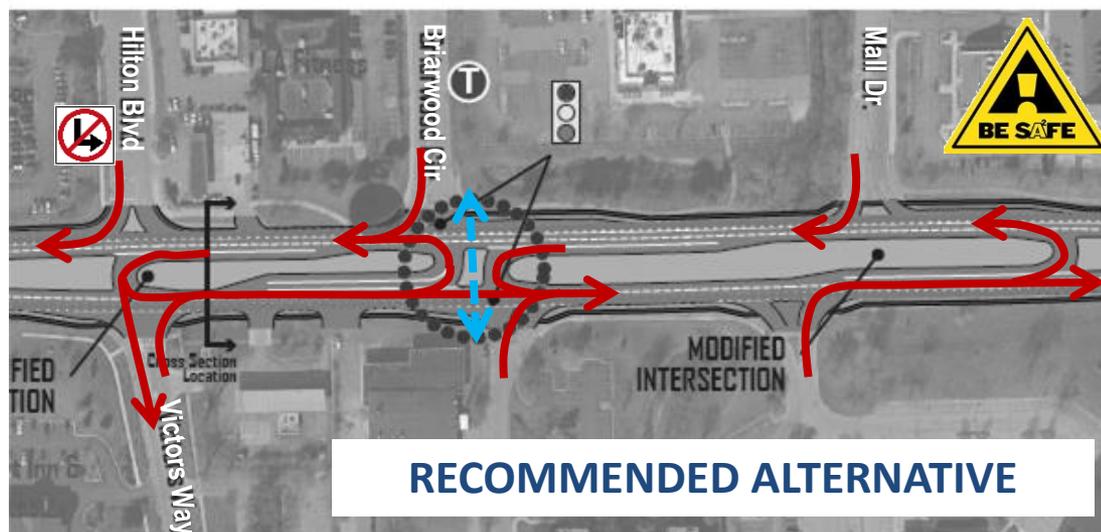
**Legend**

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# RECOMMENDED ALTERNATIVE TRAFFIC MANEUVERS



Vehicle turning movement



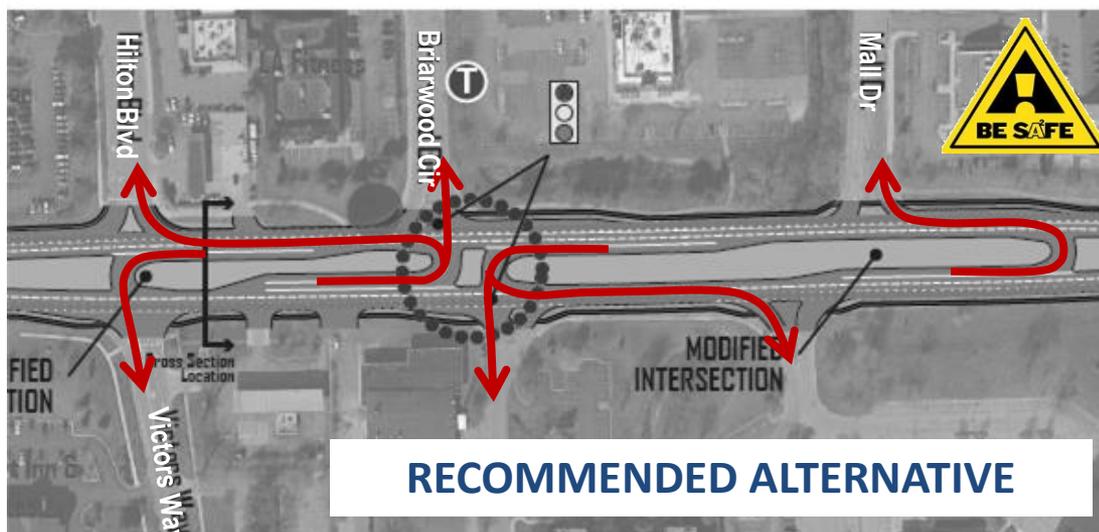
Pedestrian movement across State St



No Turn Allowed



# RECOMMENDED ALTERNATIVE TRAFFIC MANEUVERS



-  Vehicle turning movement
-  Pedestrian movement across State St
-  No Turn Allowed



# ANIMATION OF RECOMMENDED ALT.



# RECOMMENDED ALTERNATIVE IMPROVEMENTS

Goal	Feature	No-Build Condition	Recommended Alternative
  	Bike lanes and sidewalks along full corridor	NO	YES
  	Number of pedestrian crossing points	2	8
 	Number of left-turns requiring merging or yielding in the median	6	0
 	Left-turn access to/from side streets and major driveways between I-94 and Eisenhower (% of possible movements)	50% (6 of 12)	92% (11 of 12)
 	Median treatment north of I-94	Paved	Landscaped, with potential to incorporate water absorption/rain garden features
 	<b><i>Total end-to-end peak travel time along State Street (non-peak will be minimally affected)</i></b>		
	<i>AM Northbound</i>	4-5 minutes	5-7 minutes
	<i>PM Southbound</i>	4-5 minutes	4-6 minutes



# VEHICLE SAFETY IMPROVEMENTS

Location	5-Year Crashes	Crash Reduction From	Estimated Crash Reduction Potential
State St between I-94 EB and WB Ramps	24	Elimination of left-hand merging movements	90%
State St at Hilton/Victors Way	128	Removing direct left turn, adding signalization	40%
State St at Mall Dr	27	Removing direct left turn, adding signalization	60%



# COST ESTIMATE

ITEM	COST
Roadway Removal and Construction	\$16,600,000
Bridge Deck Replacement	\$4,100,000
Design and Construction Administration	\$6,700,000
<b>TOTAL (City Costs)</b>	<b>\$27,400,000</b>

*Note: preliminary design-level cost estimate, includes 20% contingency.*



## NEXT STEPS

- Consider public feedback
- Secure funding
- Incorporate in the Transportation Improvement Program (TIP)
- Conduct final design and construction

*Share with us your thoughts!*