

Separated Bike Lanes on Extension Road Baseline Road to Main Street

Proposed Pilot Project

Transportation Advisory Board
March 15, 2022

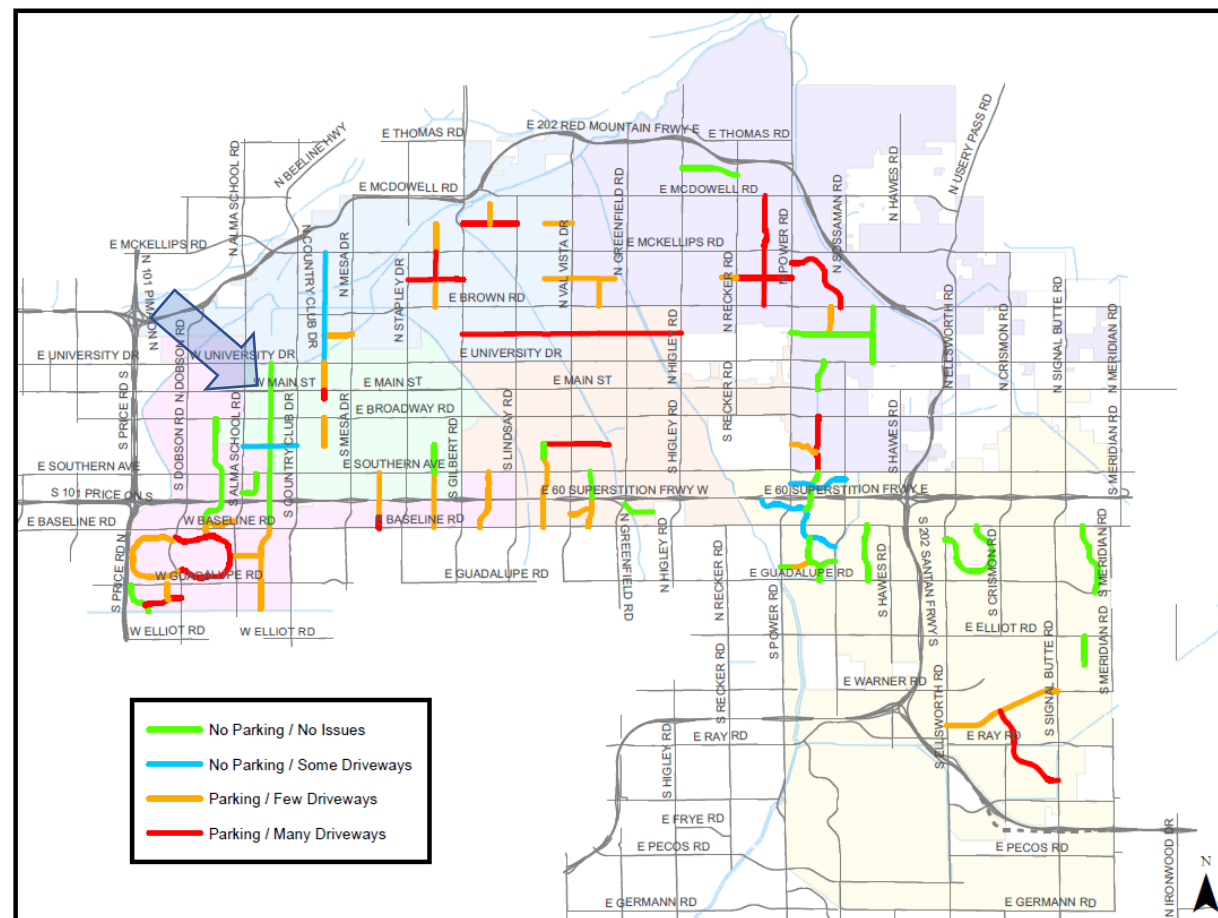


1. Background
2. Existing Conditions
3. Design Concepts
4. Evaluation Criteria
5. Community Outreach
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Citywide Evaluation

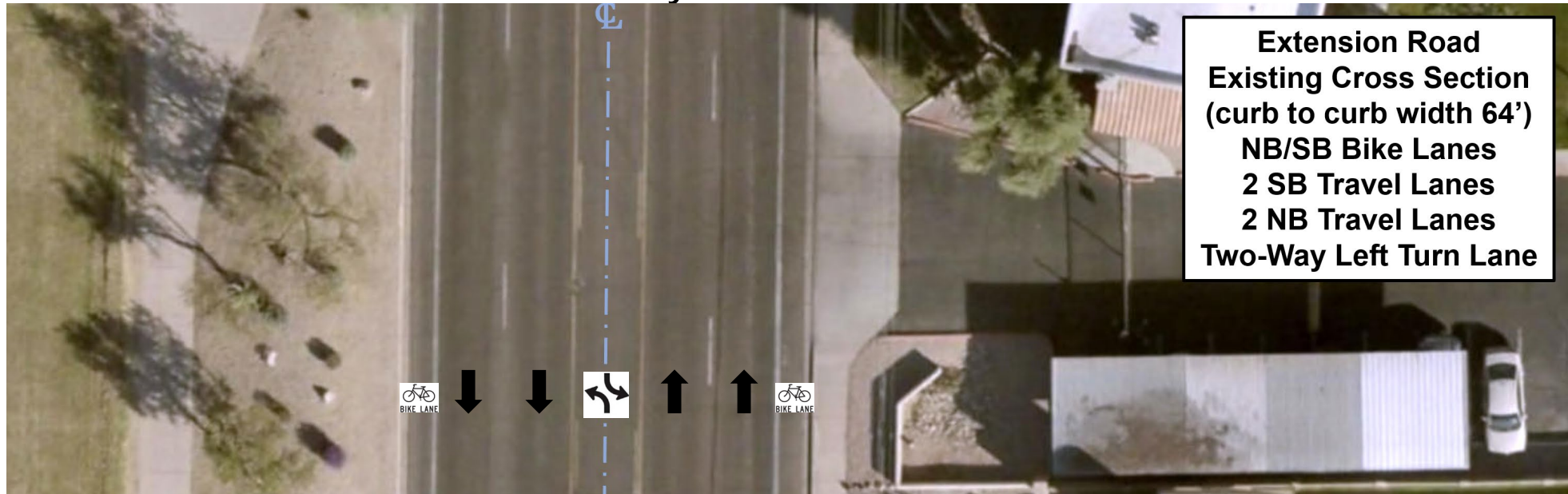
- Collector Streets
- On-street parking
- Number of driveways
- Speed limit



Collector Streets for Separated Bike Lanes
Printed by G Topham on 9/30/2021

Extension Road – Baseline Road to Main Street

- Five-lane collector with striped median and bike lanes
- Posted speed limit 40 mph south and 35 mph north of Southern Avenue
- Predominantly residential along east side
- Public park & two schools along west side
- Railroad tracks north of Broadway Road



Traffic Analysis and Observations

- Collected traffic counts along the corridor; slightly more southbound traffic than northbound

Extension Rd Corridor - Baseline to Broadway Summary

Average Volumes (vehicles per day)			Dir. Split
24-HR Average Daily Traffic	NB	5573 vpd	49%
	SB	5800 vpd	51%
	TOTAL	11373 vpd	
Average Peak Hour Volumes (vehicles per hour)			Dir. Split
AM	NB PH	459 vph	51%
	SB PH	447 vph	49%
PM	NB PH	548 vph	47%
	SB PH	623 vph	53%

- Observed traffic flow at Ida Redbird Elementary; southbound queues are significantly larger than northbound during the PM peak

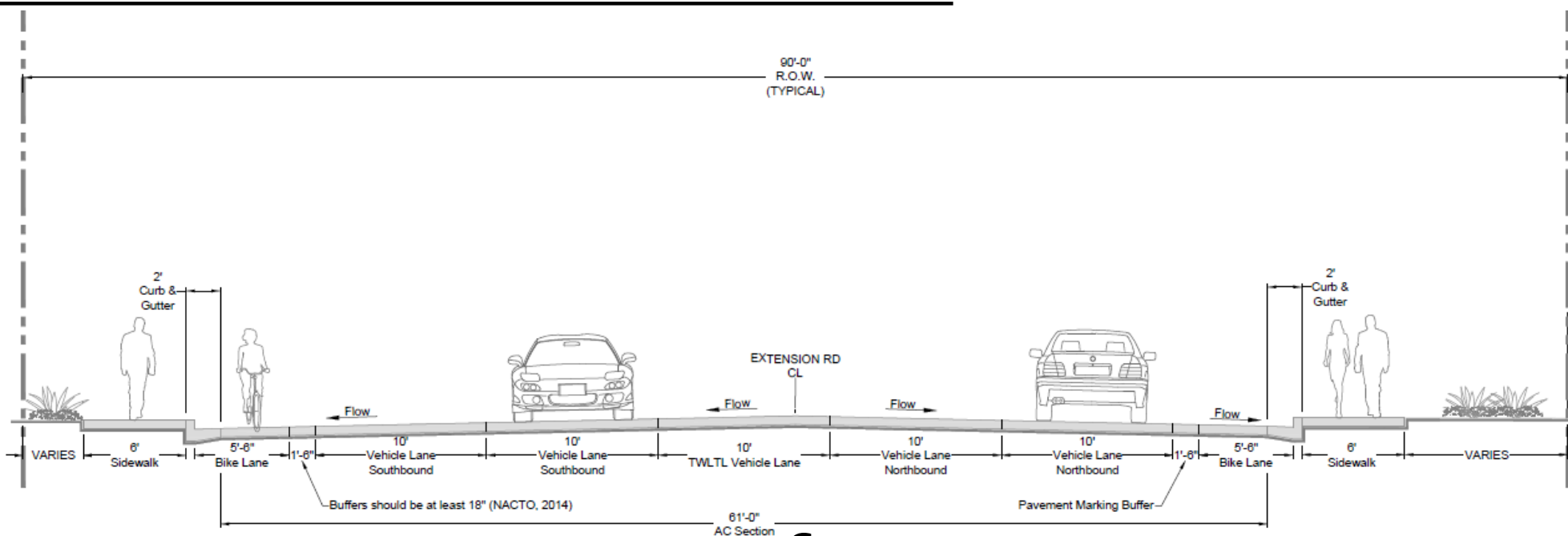


Traffic Analysis and Observations - continued

- Collected turning movement counts at all major signalized intersections along corridor
- Modeled existing traffic signal operations
 - Signalized intersections operate at Level of Service (LOS) D or better
 - Existing delays for the northbound through/right turn movements < 47 seconds
 - Largest delays at Extension Road and Southern Avenue



Buffered Bike Lanes – whole corridor:



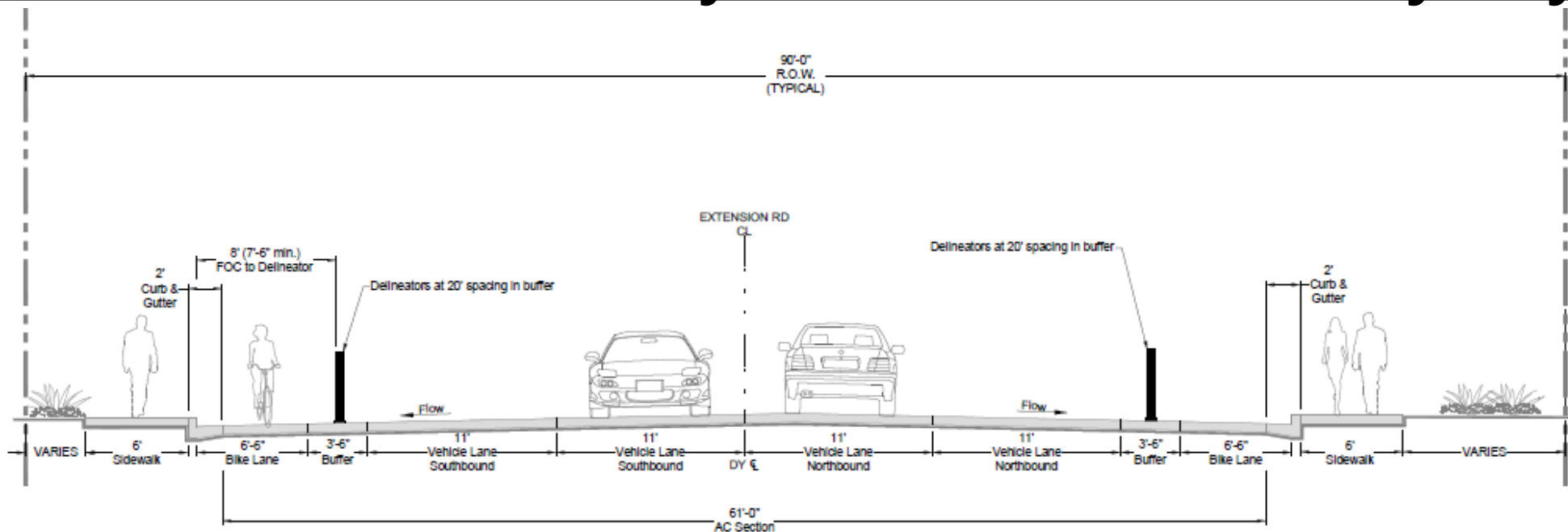
Pros:

- Maintains number of travel lanes
- 18" buffer between bikes and vehicles
- No impact on traffic flow

Cons:

- Not enough room for delineators
- Minimal safety improvement for bicyclists

Separated & remove two-way LTL – south of Broadway only:



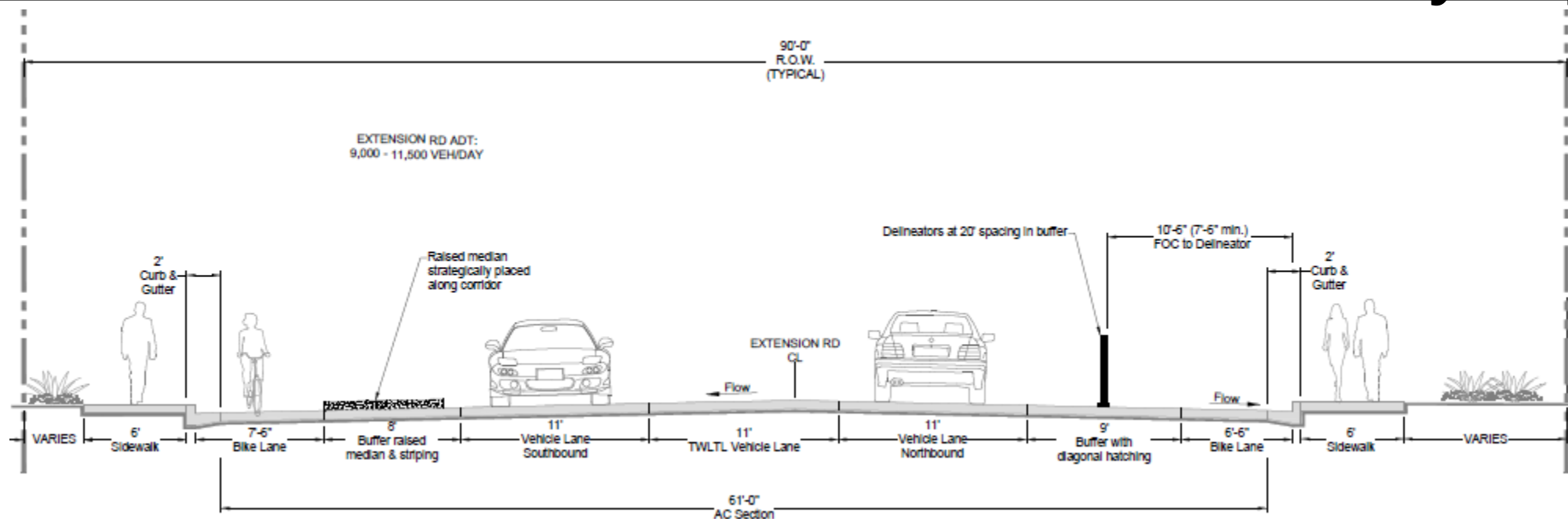
Pros:

- Maintains number of travel lanes
- Bike lanes separated with delineators

Cons:

- No two-way left turn lane
- Minor impact on traffic flow
- Requires creative transitions at intersections
- Not common in the valley, potential for confusion and rear-end crashes

Separated & remove NB & SB Lane – south of Broadway only:



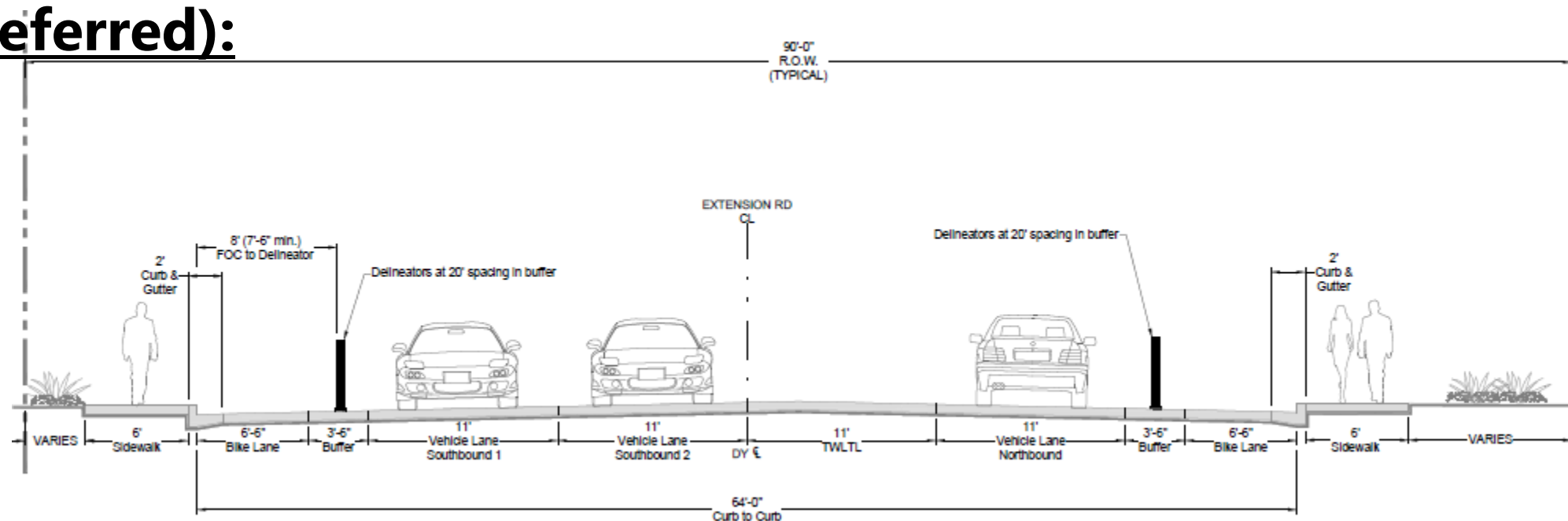
Pros:

- Maintains two-way left turn lane
- Bike lanes separated with delineators and/or medians

Cons:

- Removal of one NB and one SB travel lane
- Noticeable impacts on traffic flow, especially during school start and release

Separated & remove NB lane – south of Broadway only (preferred):



Pros:

- Maintains two-way left turn lane
- Bike lanes separated with delineators

Cons:

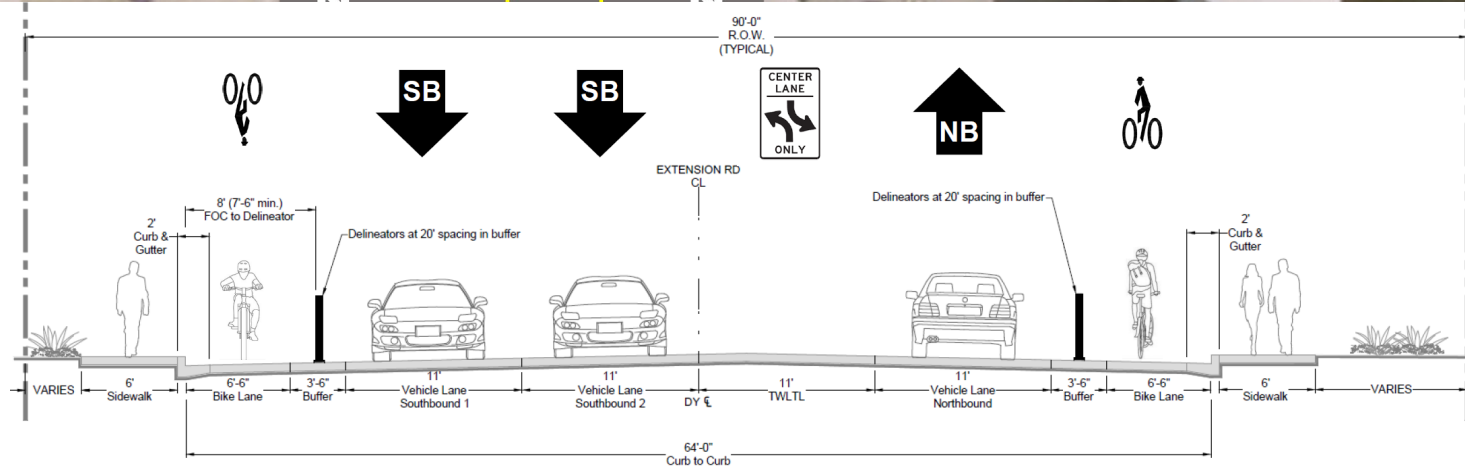
- Removal of one NB travel lane
- Some impacts on traffic during school start and release

Design Concepts



**Extension Road Separated Bike Lanes
Plan View Typical Section**

**Preferred Alternative:
NB/SB Bike Lanes (6.5')
Buffers w/ Delineators (3.5')
2 SB Travel Lanes (11')
1 NB Travel Lane (11')
Two-Way Left Turn Lane (11')**



Traffic Analysis with Preferred Concept:

- All signalized intersections operate at LOS D or better (same as existing)
- Minimal impact to school traffic at Emerald Avenue
- Largest expected delays at Extension Road and Southern Avenue but maintaining LOS D:

Existing NB Thru & Shared Thru/RT	AM		PM		Intersection LOS	
	Delay	LOS	Delay	LOS	C	AM
	46.4	D	39.6	D	D	PM
Proposed NB Shared Thru/RT	AM		PM		Intersection LOS	
	Delay	LOS	Delay	LOS	D	AM
	63.3	E	61.4	E	D	PM
Change	16.9	+36%	21.8	+55%		



Evaluation Criteria

This will be a pilot project and subject to an extensive before and after evaluation with the following criteria:

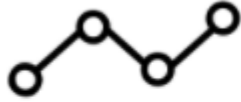
- Vehicle volumes and speeds
- Traffic flow
- Bike volumes
- Bike crashes
- User input



- Post cards, flyers and door hangers (properties within ½ mile of the project)
- Public meeting on April 25th at 6 pm
- Opportunity to share feedback online



Timeline & Next Steps



DATA



REVIEW



RESEARCH



RECOMMEND

Community Feedback

- We will be collecting input two weeks past the public meeting

Implementation

- Depending on feedback, we will implement the project in late summer/fall of 2022

Questions/Discussion

