

January 2025



Steering Committee Meeting #5





## Agenda

- 1 Recap: Vision
- 2 Safety Issues
- 3 Evaluation of Safety Countermeasures
- 4 Alternatives for Williamson Road
- 5 Feedback and Open Discussion
- 6 Next Steps



**1**

## **Recap on Project Progress: Development of a Vision**

# Envision Williamson Project Phases

## Create a Vision

- Gather **feedback from the community** on their current experiences and desired future for Williamson Road
- Develop a **vision for Williamson Road** that can support a safe, caring, and economically vibrant community in which all have equitable opportunities
- 3 steering committee meetings

April–October 2024

## Review Choices

- Share consensus-driven **vision statement**
- Identify **various safety improvements** for Williamson Road to achieve Vision
- Gather **feedback from the community**

November 2024–June 2025

## Select Options

- Develop a pilot for **recommended safety improvements** along the corridor
- Gather **feedback from the community**
- After the pilot, pave and restripe the road

June 2025 Onwards

## **WILLIAMSON ROAD VISION**

### **Williamson Road:**

**A vibrant multinational business and residential community that creates, connects, and supports sustainable, safe, and accessible destinations.**



2

**Recap: Safety Issues  
*Presented at Steering Committee  
Meeting 4***

# Williamson Road:

- Is an urban arterial with between 15,000 and 18,000 daily vehicle trips (2022).
- Has safety concerns around **inadequate visibility**, **excessive speeds**, **no separation of road users**, **difficulty turning in and out of businesses**, and **distracted driving**. (it's part of the Vision Zero high injury network).



Vehicles  
Accessing  
Businesses



Speed/Erratic  
Driving  
Behavior



Community  
Safety

# Moving Towards a Complete Street

- In 2008, Roanoke adopted a Complete Streets policy, committing to improve streets to safely accommodate users of all ages and abilities.
- Williamson Road does not accommodate multiple roadway user types due to **inadequate infrastructure for walkers and people in wheelchairs.**
  - Sidewalks, ADA curb ramps, bike infrastructure, and adequate space for transit riders at bus stops need to be included in a long-term plan for Williamson Road.

CTT  
3/3/08

IN THE COUNCIL OF THE CITY OF ROANOKE, VIRGINIA,

The 17th day of March, 2008.

No. 38042-031708.

A RESOLUTION approving a Complete Streets Policy for the City of Roanoke.

WHEREAS, the City's Comprehensive Plan, Vision 2001-2020, identifies "Improving Streetscapes" as a Strategic Initiative and recommends the creation of a street design manual to guide the design of new streets and improvements to existing streets;

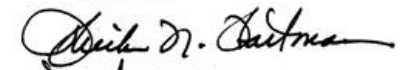
WHEREAS, to implement this recommendation, an interdepartmental project team from the Planning, Building and Development Department, the Engineering Division and Transportation Division of the Public Works Department, and the Department of Parks and Recreation collaborated to create a set of Street Design Guidelines;

WHEREAS, the Street Design Guidelines provide practical approaches to applying the general design principles contained in the comprehensive plan to create "Complete Streets;" and

WHEREAS, the Planning Commission adopted the Street Design Guidelines on July 19, 2007, as an internal tool for developing Complete Streets.

THEREFORE, BE IT RESOLVED that City Council hereby adopts the Complete Streets Policy as set forth in the attachment to the City Manager's letter dated March 17, 2008, to Council.

ATTEST:

  
Debra D. Carmona  
City Clerk.

# Fatalities on Williamson

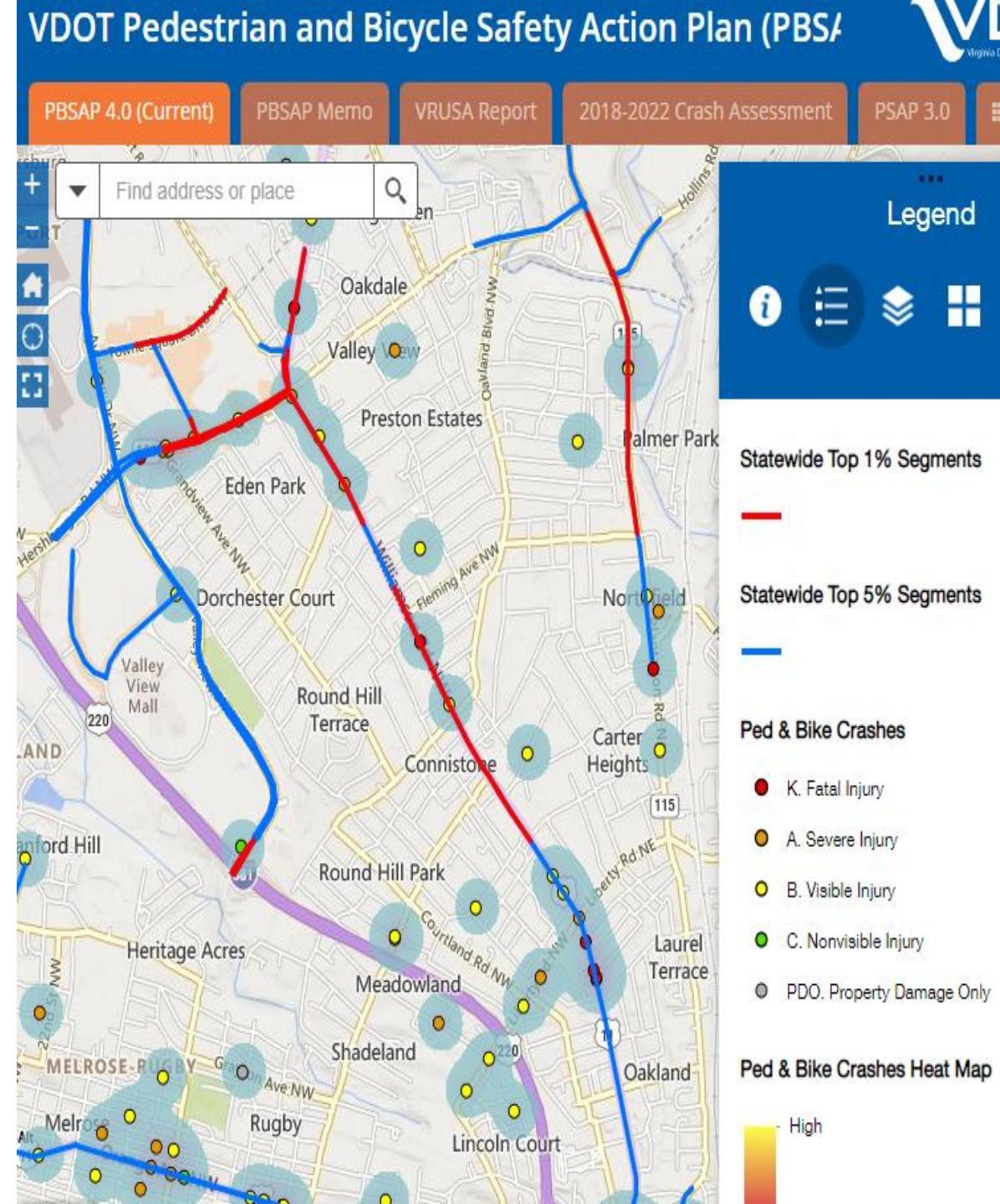
Between 2019 and 2023, Roanoke had:

- **49** people died in traffic including ...
- **18** people killed while walking.

Williamson Road is a deadly hotspot:

- **9 (18%)** Fatalities were on Williamson between Orange & Airport
- **6** of those Fatalities were people walking, **33%** of citywide total

Draft Analysis by Toole Design for Vision Zero Action Plan



# Progress Towards Vision Zero

- In December 2020, Roanoke City Council committed to creating and implementing a Vision Zero Action Plan in City Plan 2040.
- The Roanoke Safety Action Plan is a paradigm shift in how the City thinks about roadway safety. It will lay out a new set of principles for **engineering roads, educating travelers, and creating a sense of collective responsibility.**
- The City of Roanoke is taking action and committing to **zero traffic deaths and serious injuries** by 2035.



VISION  
ZERO  
ROANOKE

# Accommodating Bicycles

- 2024 Roanoke Draft Bike Network includes Williamson Road as a bike route, categorized as a “Separated Bikeway”
- Given speeds, traffic volume, and road type of Williamson Road, two options for accommodating bicyclists:
  - Protected bike lanes
  - Multi-use path or side path (one side of road)

## Proposed Bikeway Network

- Greenways
- Separated Bikeways
- Neighborhood Bikeways

## Existing Facilities

- Two-way Protected Mobility Track
- Greenways
- Unpaved Trails
- Parks
- Schools





3

## Evaluation of Countermeasures

## **WILLIAMSON ROAD VISION**

### **Williamson Road:**

**A vibrant multinational business and residential community that creates, connects, and supports sustainable, safe, and accessible destinations.**

# Potential Williamson Road Countermeasures

## SAFER PEOPLE



[Crosswalk Visibility Enhancements](#)



[Leading Pedestrian Interval](#)



[Pedestrian Hybrid Beacons](#)



[Rectangular Rapid Flashing Beacons \(RRFB\)](#)

## SAFER ROADS



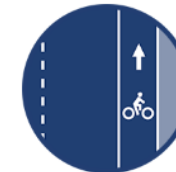
[Medians and Pedestrian Refuge Islands in Urban and Suburban Areas](#)



[Center Turn Lane](#)



[Walkways](#)



[Bicycle Lanes](#)



[Dedicated Left- and Right-Turn Lanes at Intersections](#)



[Roundabouts](#)



[Corridor Access Management](#)

## SAFER SPEEDS



[Appropriate Speed Limits for All Road Users](#)



[Speed Safety Cameras](#)



[Variable Speed Limits](#)

All of these countermeasures will help advance Roanoke's adherence to transportation policies and procedures, such as:

- Complete Streets
- Vision Zero
- Bike Plan
- Engineering Standards

# Evaluating Safety Countermeasures

## The countermeasures are evaluated according to:

1. **Road User Safety** through slower speeds and reducing conflict points for all users (vehicles, motorcycles, pedestrians, and bicyclists)
2. **Vehicular Access:** access to businesses and ease of travel along and across conflicting lanes
3. **Multimodal Access:** access to businesses and ease of travel along the road (for pedestrians and bicyclists)
4. **Level of Effort:** Cost & Feasibility to implement on Williamson Road

**Evaluation of countermeasures largely determines on a number of factors.  
Countermeasures received a color based on the lowest scoring factor**



- Can be implemented
- Is low cost
- Has significant safety improvements




- Some challenges with implementation
- Moderate cost implications
- Moderate safety improvements







- Hurdles related to implementation or time to implement
- Higher costs
- Moderate or lower safety improvements

# Review Safety Countermeasures & Illustrate Tradeoffs



Safety Countermeasure	Road User Safety	Vehicular Access	Multimodal Access	Cost and Feasibility on Williamson Road
<p><b>Marked Crosswalks</b></p> 	<p><i>Up to 40% reduction in pedestrian injury crashes</i></p>	<p><i>No change</i></p>	<p><i>Aids with access &amp; safe crossing; improvement, but only effective if a vehicle stops</i></p>	<p><i>Medium cost: requires ADA-compliant curb ramps to implement. Crosswalks should not be used mid-block across four-lane roads</i></p>



# Review Safety Countermeasures & Illustrate Tradeoffs



Safety Countermeasure	Road User Safety	Vehicular Access	Multimodal Access	Cost and Feasibility on Williamson Road
<p><b>Rectangular Rapid Flashing Beacons</b></p> 	<p><i>Up to 47% reduction in pedestrian crashes</i></p> <p><i>Increase motorist yield rates up to 98%</i></p>	<p><i>No change</i></p>	<p><i>Helps drivers see pedestrians at crosswalk locations</i></p>	<p><i>Should not be implemented on a four-lane roadway or at unmarked crosswalks</i></p> 
<p><b>Pedestrian Hybrid Beacons</b></p> 	<p><i>55% reduction in pedestrian crashes</i></p> <p><i>29% reduction in total crashes</i></p> <p><i>15% reduction in serious injury and fatal crashes</i></p>	<p><i>Organizes pedestrians crossing, so it can actually reduce vehicle delay and manage traffic flow</i></p>	<p><i>Formalizes mid-block crossing or crossings without traffic lights</i></p>	<p><i>High cost and infrastructure needs. Applicable to roads with four lanes as well as three.</i></p> 

# Review Safety Countermeasures & Illustrate Tradeoffs

Safety Countermeasure	Road User Safety	Vehicular Access	Multimodal Access	Cost and Feasibility on Williamson Road
<p><b>Medians</b></p> 	<p>46%-56% reduction in crashes</p>	<p>May reduce vehicular access depending on where medians are placed</p>	<p>Increases pedestrian and bicycle safety because it provides a place for safety within crossing.</p>	<p>High cost, would require significant curb work, and only applicable with lane reconfiguration options (where center turn lane added).</p>
<p><b>Center Turn Lane</b></p> 	<p>19%-47% reduction in total crashes</p>	<p>Makes turning movements easier</p>	<p>No change</p>	<p>Low-cost, would require new road lane marking, but would only be applicable with lane reconfiguration.</p>





# Review Safety Countermeasures & Illustrate Tradeoffs

Safety Countermeasure	Road User Safety	Vehicular Access	Multimodal Access	Cost and Feasibility for Williamson Road
<p><b>Walkways/ Sidewalks</b></p> 	<p>65%-89% reduction in crashes involving pedestrians</p>	<p>No change</p>	<p>Improvement wherever sidewalks are located</p>	<p>Could result in high costs due to concrete and curb work. Feasible only where ROW is wide enough or if lane is acquired.</p>
<p><b>Bicycle Lanes</b></p> 	<p>Up to 53% reduction in crashes for bicyclists</p>	<p>No change, potential improvement, as bicyclists currently use both roadway and sidewalk due to lack of formal lane.</p>	<p>Improves access, helps expand bike network and access. Bike lanes on each side provide access to both sides of street.</p>	<p>Medium, could be implemented in lane reconfiguration approach.</p>





# Review Safety Countermeasures & Illustrate Tradeoffs

Safety Countermeasure	Road User Safety	Vehicular Access	Multimodal Access	Cost and Feasibility for Williamson Road
<p><b>Corridor Access Management</b></p> 	<p><i>25%-31% reduction in fatal and injury crashes along urban/suburban arterials</i></p>	<p><i>Minimizes conflict points, creates smoother traffic flow</i></p> <p><i>Less ambiguity to traffic movements</i></p>	<p><i>Big improvement on access and sidewalk and bike lane continuity, as it reduces number of potential conflict points between vehicles and pedestrians</i></p>	<p><i>High cost, could be difficult to implement as it would involve closing driveways and coordination with property owners and tenants.</i></p>
<p><b>Appropriate Speed Limits for All Road Users</b></p> 	<p><i>Reduced high-injury and fatal crashes at slower speeds</i></p>	<p><i>Can smooth flow of traffic by reducing erratic driver behavior.</i></p>	<p><i>Improved access, as walkers and bikers can better anticipate speed of vehicles.</i></p>	<p><i>Low cost, mixed outcomes since road design and vehicle volume currently encourage speeds above speed limit.</i></p>





# Review Safety Countermeasures & Illustrate Tradeoffs

Safety Countermeasure	Road User Safety	Vehicular Access	Multimodal Access	Cost and Feasibility for Williamson Road
<p><b>Dedicated Left- and Right-Turn Lanes at Intersections</b></p> 	<p><i>Left turn lanes: 28%-48% reduction in total crashes</i></p> <p><i>Right turn lanes: 14%-26% reduction in total crashes</i></p>	<p><i>Increases ease of turning movements</i></p>	<p><i>May lengthen crossing distances for pedestrians</i></p>	<p><i>Low cost, but would require lane reconfiguration to accommodate a center lane.</i></p>
<p><b>Roundabouts</b></p> 	<p><i>78%-82% reduction in fatal and injury crashes</i></p>	<p><i>Can improve traffic flow compared to regular intersections</i></p>	<p><i>Would depend on how the roundabout is constructed and its accommodations for users. Crossing can be more difficult.</i></p>	<p><i>High cost, difficult implement due to ROW available. Traffic model would need to determine applicability.</i></p>



# Review Safety Countermeasures & Illustrate Tradeoffs

Safety Countermeasure	Road User Safety	Vehicular Access	Multimodal Access	Cost and Feasibility
<p><b>Variable Speed Limits</b></p> 	<p><i>Between 34% and 51% reduction in crashes</i></p>	<p><i>Smooths traffic flow based on current conditions</i></p>	<p><i>Indirect effects – can lower overall traffic speeds</i></p>	<p><i>Already being implemented in school zones, with varying success (road design doesn't promote slower speeds).</i></p>
<p><b>Speed Safety Cameras</b></p> 	<p><i>Between 20% and 54% reduction in crashes</i></p>	<p><i>Intended to reduce speeding, which can smooth traffic flow</i></p>	<p><i>Indirect effects - Improve pedestrian safety</i></p>	<p><i>Low cost but in Virginia, illegal outside of school zones and work zones</i></p>



# Additional Elements to Support Vision

Outside of project purview, with varying impacts on safety.

**Education**

**Enforcement**

**Façade Grant  
Program**

**Landscaping**

**Public Parking**

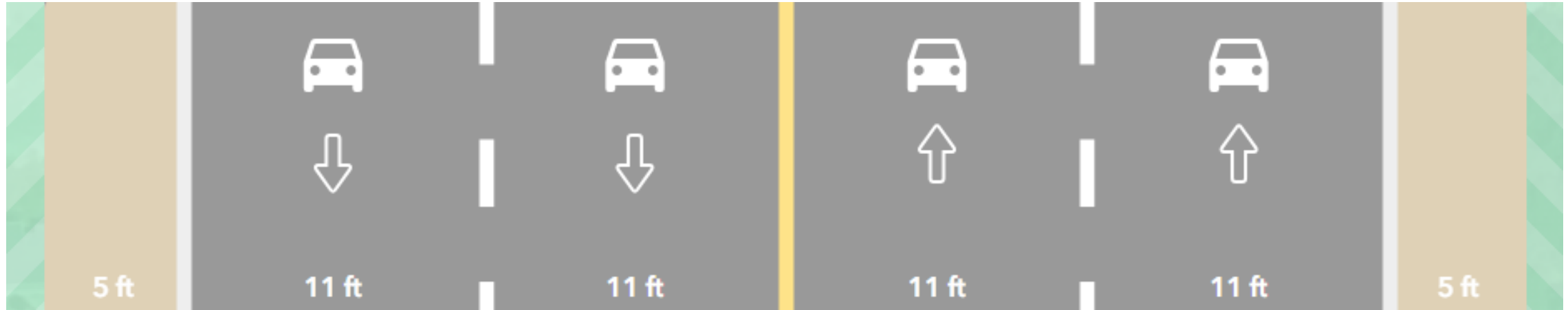
**Undergrounding  
Utilities**



**4**







## **Applying the Countermeasures**

# Existing Conditions



- **Two 11' travel lanes each direction**
- **5' sidewalk on each side of the street where sidewalk exists**

# Existing Conditions

Road User Safety	Vehicular Access	Multimodal Access	Level of Effort: Cost	Level of Effort: Feasibility	Policy Adherence
<p><i>No improvements to road user safety beyond signal upgrades</i></p> 	<p><i>No improvements to vehicular access beyond signal upgrades</i></p> 	<p><i>No improvements to multimodal access beyond signal upgrades</i></p> 	<p><i>Low cost</i></p> 	<p><i>Easy to implement, low cost</i></p> 	<p><i>Does not meet Roanoke policies like complete streets or the bike plan</i></p> 

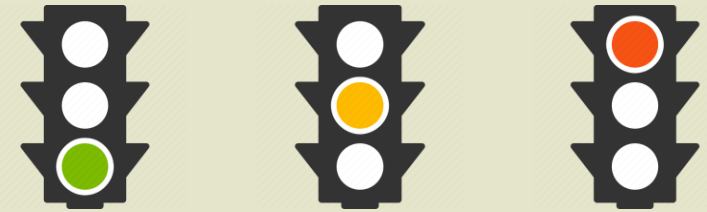
# Two Alternatives with Two Options for Each Alternative

## (A) Current Road Layout

- **Option A1:** Existing Conditions and Formalized Crosswalks
- **Option A2:** Limited Crosswalks and Curb Ramps, Sidepath, and Simplified Access Points

## (B) Lane Reconfiguration

- **Option B1:** Interim Lane Reconfiguration, Crosswalks, Curb Ramps
- **Option B2:** Lane Reconfiguration, Crosswalks, Curb Ramps, Continuous Sidewalks, Simplified Access Points



### Alternatives evaluated according to:

- Road User Safety
- Vehicular Access
- Multimodal Access
- Level of Effort: Cost
- Level of Effort: Feasibility
- Policy Adherence

# Option A: Potential Countermeasures

## SAFER PEOPLE



[Crosswalk Visibility Enhancements](#)

Not as significant of a safety improvement given 4-lane condition.



[Leading Pedestrian Interval](#)



[Pedestrian Hybrid Beacons](#)

Not as significant of a safety improvement given 4-lane condition.



[Rectangular Rapid Flashing Beacons \(RRFB\)](#)

Not as significant of a safety improvement given 4-lane condition.

## SAFER ROADS



[Medians and Pedestrian Refuge Islands in Urban and Suburban Areas](#)

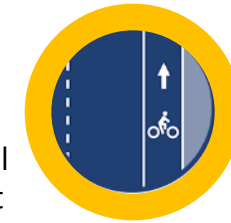


[Center Turn Lane](#)



[Walkways](#)

Would require minimal acquisition of adjacent properties.



[Bicycle Lanes](#)

A side path alternative would require substantial acquisition of property on one side (Option A2 only)



[Dedicated Left- and Right-Turn Lanes at Intersections](#)



[Roundabouts](#)

Will not be pursued for intersections between Compton - Truman.



[Corridor Access Management](#)

Given the number of individual properties and driveways, this process will take time.

## SAFER SPEEDS



[Appropriate Speed Limits for All Road Users](#)

Speed limit may not be followed given wide road and low volumes.



[Speed Safety Cameras](#)

Limitations given Virginia state law – only permitted in school zones

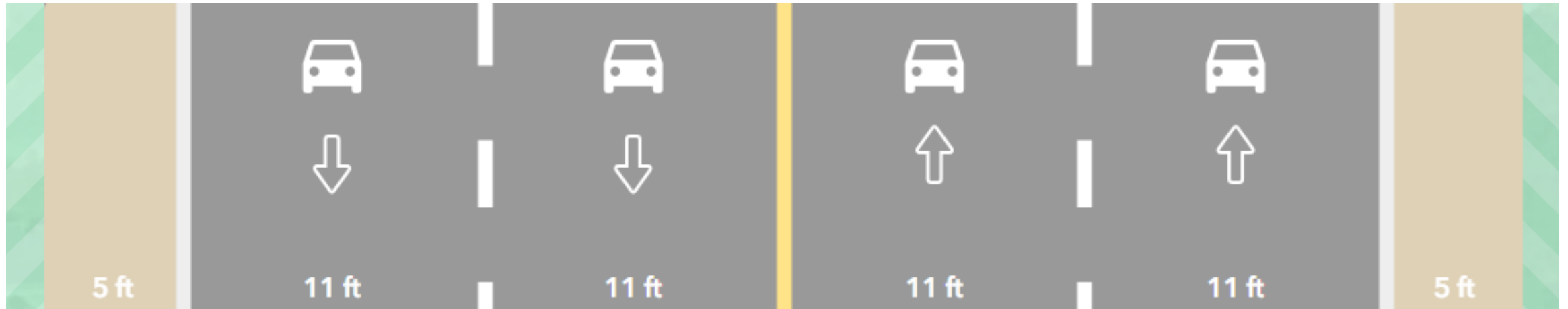


[Variable Speed Limits](#)

Already using in school zones.

**Only a handful of these safety countermeasures are applicable—or appropriate—in 4-lane condition. Some critical aspects to a successful design will also take higher level of effort, time, and cost.**

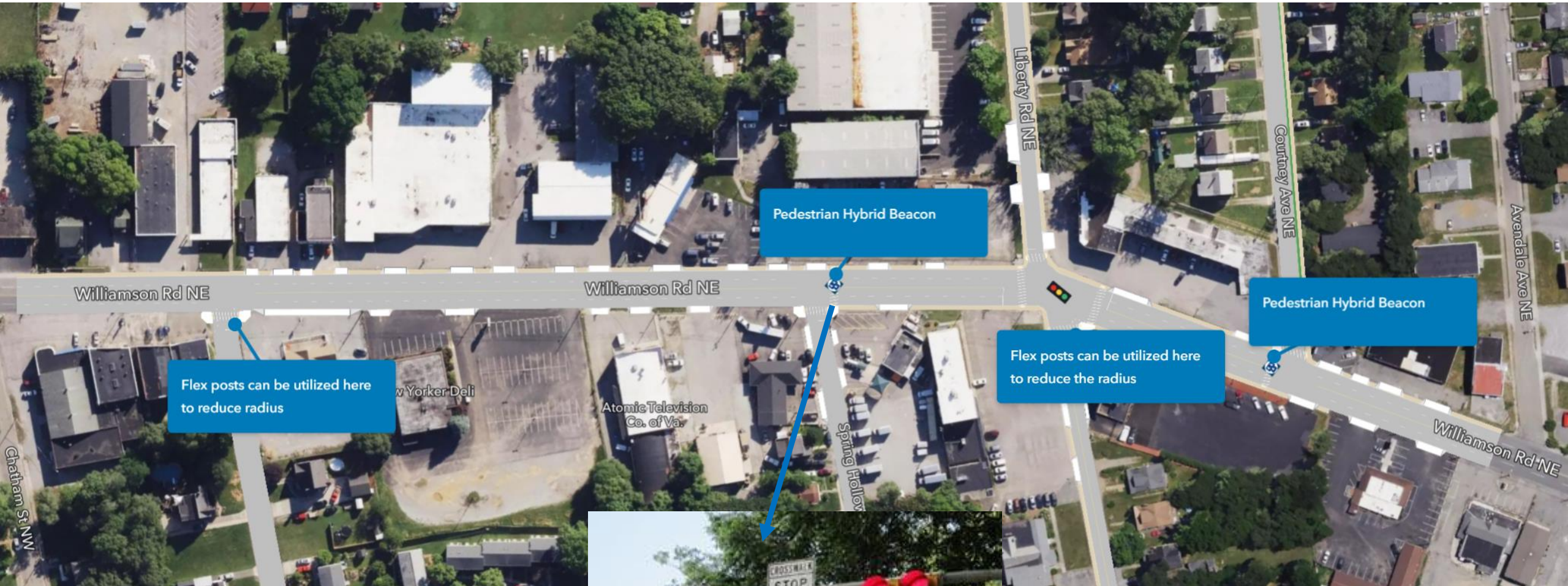
# Option A1: Existing Conditions and Formalized Crosswalks









## Option A1 includes:

- Two 11' travel lanes each direction
- 5' sidewalk on each side of the street where sidewalk exists
- 1.5' landscape buffer where available
- Marked crosswalks at signalized intersections and side streets
- Pedestrian hybrid beacons at new marked crosswalks

# Option A1: Existing Conditions and Formalized Crosswalks



# Option A1: Existing Conditions and Formalized Crosswalks

Road User Safety	Vehicular Access	Multimodal Access	Level of Effort: Cost	Level of Effort: Feasibility	Policy Adherence
<i>Minimal improvements to road user safety</i>	<i>Minimal improvements to vehicular access</i>	<i>Minimal improvements to multimodal access</i>	<i>Low cost, but funds needed for pedestrian hybrid beacons</i>	<i>Easy to implement, low cost</i>	<i>Does not meet Roanoke policies like complete streets or the bike plan</i>
					

# Option A2: Limited Crosswalks and Curb Ramps, Sidepath, and Simplified Access Points



Proposed Firehouse

Property Lines

2' landscape buffer

8' pedestrian path

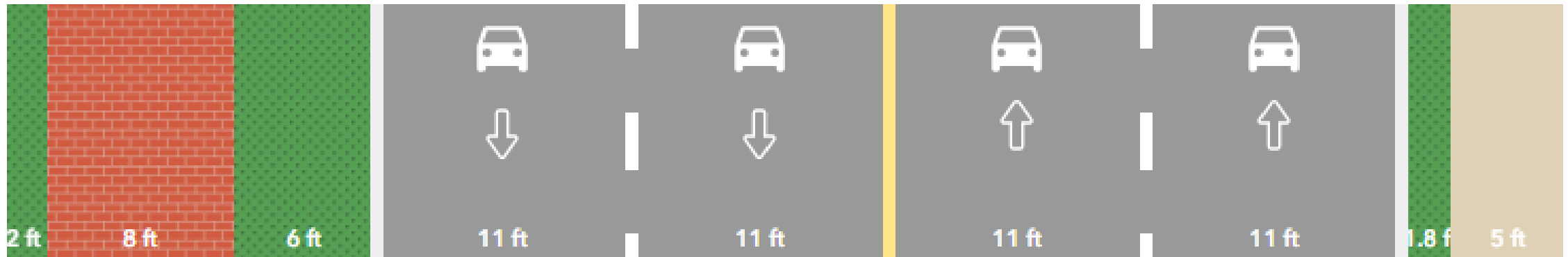
6' landscape buffer

Light poles

Williamson Rd.

Property Lines

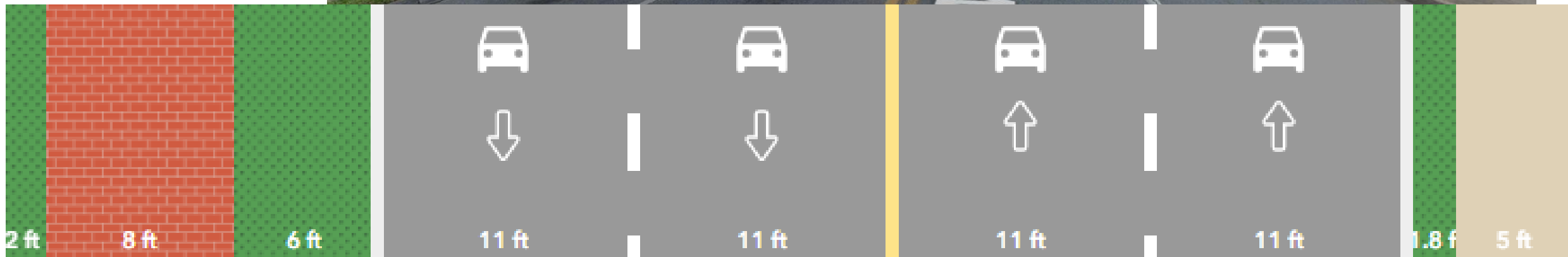
# Option A2: Limited Crosswalks and Curb Ramps, Sidepath, and Simplified Access Points



## Option A2 includes:







- Two 11' travel lanes each direction
- 16' sidepath on the left side of Williamson Road (8' of pavement, 2' and 6' of pavement on each side of the path)
- 5' sidewalk and approx. 2' landscape buffer on right side of Williamson Road
- Marked crosswalks at signalized intersections and side streets
- Pedestrian hybrid beacons at new marked crosswalks
- Simplified access points – fewer driveways for drivers to navigate
- NOTE: This requires 10' of additional right-of-way that does not exist.

# Option A2: Limited Crosswalks and Curb Ramps, Sidepath, and Simplified Access Points





# Option A2: Limited Crosswalks and Curb Ramps, Sidepath, and Simplified Access Points

Road User Safety	Vehicular Access	Multimodal Access	Level of Effort: Cost	Level of Effort: Feasibility	Policy Adherence
<i>Minimal improvements to road user safety</i>	<i>Minimal improvements to vehicular access</i>	<i>Improved pedestrian experience, but bicycle access limited to one side of the street</i>	<i>High cost due to land acquisition</i>	<i>Significant land acquisition would take multiple years and not guaranteed.</i>	<i>Does not meet Roanoke policies like complete streets</i>
					

*Another alternative:*

**Lane Reconfiguration can  
expand options for the road  
and improve affects of other  
safety countermeasures**



# Moving From 4 to 3 Lanes

## When Does Lane Reconfiguration Work Best?

- Average daily traffic count of 20,000 ADT or less
  - Williamson sees between 15,000 to 18,000 daily trips between Orange Avenue and Hershberger Road

## What Does it Do?

- Takes 4 vehicle lanes and converts into 3 vehicle lanes—designating one lane for turning movements

## What's the Benefit?

- This can make through movement flow more efficiently without turning vehicles.
- Frees up space previously dedicated to cars (~10-12 feet) for a new use:
  - Bus pull-off zone
  - On-street parking
  - Sidewalk space
  - Bike lane
  - Landscaping (or Tree) zone

# Case Studies of Lane Reconfiguration Projects



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## Brandon Avenue, Roanoke

Local example



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## Edgewater Drive, Orlando

Vision process



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## Ocean Park Blvd, Santa Monica

Temporary pilot  
before permanent  
implementation

# Case Study: Brandon Avenue, Roanoke

- City of Roanoke and stakeholders identified safety concerns on Brandon Avenue. Brandon Avenue was on the repaving schedule and local advocates suggested using the repaving opportunity to improve safety
- **Similar corridor to Williamson Road – 21,000 ADT**
  - Commuter corridor, connections to important destinations like grocery stores
- Community survey to receive feedback on proposed reconfiguration
  - 63% of respondents were in favor of changing the lane configuration
  - An additional 14% of the respondents supported safety improvements along Brandon Avenue



# Case Study: Brandon Avenue, Roanoke

- **Solution: Permanent lane reconfiguration after a short-term traffic flow pilot**
  - Traffic flow through the corridor was reduced by two minutes compared to existing conditions benchmark
  - Included signal timing, which will be included in any Williamson Road pilot
  - One travel lane each direction, center turn lane, buffered bike lanes, and pedestrian crossing improvements



# Case Study: Edgewater Drive, City of Orlando

- **Edgewater Drive is the main street through College Park, in Orlando, Florida**
- **Beginning in 1999, stakeholders recognized safety issues on Edgewater Drive.**
  - Four lane roadway with more than 20,000 drivers per day
  - Speeding
  - Experienced crashes every three days and injuries every nine days
  - Limited space for sidewalks, streetscape, and bike lanes
- **Solution: Stakeholders formulated a vision,** set of goals, and plan for lane reconfiguration to regain space for pedestrians
  - *Vision:* A vibrant, pedestrian-oriented commercial district with reduced incidents of speeding, improved bike and pedestrian infrastructure, and an enhanced streetscape.
  - City of Orlando started with a temporary lane reconfiguration, using tape to restripe the road. This included a before-and-after analysis to look at crash volumes, injury rates, vehicle speeds, traffic volumes, on-street parking, travel times, and bicyclist volumes.

# Case Study: Edgewater Drive, City of Orlando

- **Permanent Solution:**

One travel lane each direction with a two-way center turn lane, bike lanes in each direction, and widened on-street parking

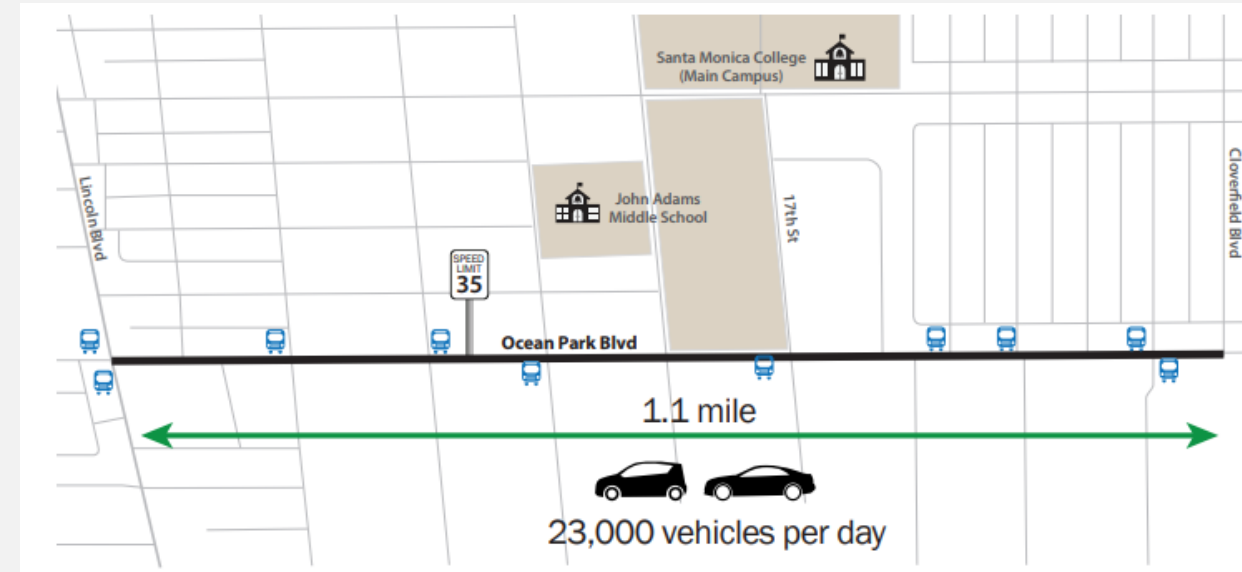
- **Results:**

- Total collisions dropped by 40%
- Injury rates declined by 71%
- Traffic counts dropped 12% before returning to pre-intervention levels
- Pedestrian counts increased 23%
- Bicycling activity increased 30%
- The corridor has gained 77 new businesses and an additional 560 jobs
- Property values adjacent to the road and within a ½ mile of the corridor rose 80%



# Case Study: Ocean Park Blvd, Santa Monica, CA

- **The City of Santa Monica installed a lane reconfiguration project along Ocean Park Boulevard in 2008.**
  - Ocean Park Boulevard is a transit route with 23,000 ADT. Land uses along the corridor include two schools and a neighborhood commercial district. Speed limits range from 25mph in school zones to 35mph elsewhere on the corridor.
- **Issue:** Parents, school faculty, and residents were concerned about high speeds, traffic volumes, and an increase in crashes.
- **Solution:**  
**The City first implemented a temporary pilot lane reconfiguration in 2008, which they then made permanent in 2010**



# Case Study: Ocean Park Blvd, Santa Monica, CA

## ▪ Results:

- 65% reduction in collisions in first 9 months
- Injury collisions reduced 60%
- Travel speeds have remained consistent throughout the day on the corridor
- Through a survey sent out, many community members were satisfied with the project
- Traffic volumes decreased by approximately 3,000-4,500 vehicles per day



# Potential Countermeasures

## SAFER PEOPLE



[Crosswalk Visibility Enhancements](#)



[Leading Pedestrian Interval](#)



[Pedestrian Hybrid Beacons](#)



[Rectangular Rapid Flashing Beacons \(RRFB\)](#)

## SAFER ROADS



[Medians and Pedestrian Refuge Islands in Urban and Suburban Areas](#)



[Center Turn Lane](#)



[Walkways](#)



[Bicycle Lanes](#)



[Dedicated Left- and Right-Turn Lanes at Intersections](#)



[Roundabouts](#)



[Corridor Access Management](#)

## SAFER SPEEDS



[Appropriate Speed Limits for All Road Users](#)



[Speed Safety Cameras](#)



[Variable Speed Limits](#)

# Option B: Potential Countermeasures

## SAFER PEOPLE



[Crosswalk Visibility Enhancements](#)



[Leading Pedestrian Interval](#)



[Pedestrian Hybrid Beacons](#)

Specific treatment for higher used mid-block crossings



[Rectangular Rapid Flashing Beacons \(RRFB\)](#)

Specific treatment when implementing mid-block crossings

## SAFER ROADS



[Medians and Pedestrian Refuge Islands in Urban and Suburban Areas](#)

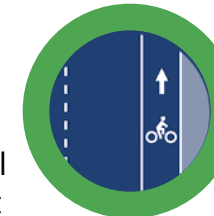


[Center Turn Lane](#)



[Walkways](#)

Would require minimal acquisition of adjacent properties.



[Bicycle Lanes](#)

Could be accommodated within curb-to-curb area at a lower cost than a side path



[Dedicated Left- and Right-Turn Lanes at Intersections](#)



[Roundabouts](#)

Will not be pursued for intersections between Compton - Truman.



[Corridor Access Management](#)

Given the number of individual properties and driveways, this process will take time.

## SAFER SPEEDS



[Appropriate Speed Limits for All Road Users](#)

Speed limit may not be followed given wide road and low volumes



[Speed Safety Cameras](#)

Limitations given Virginia state law – only permitted in school zones

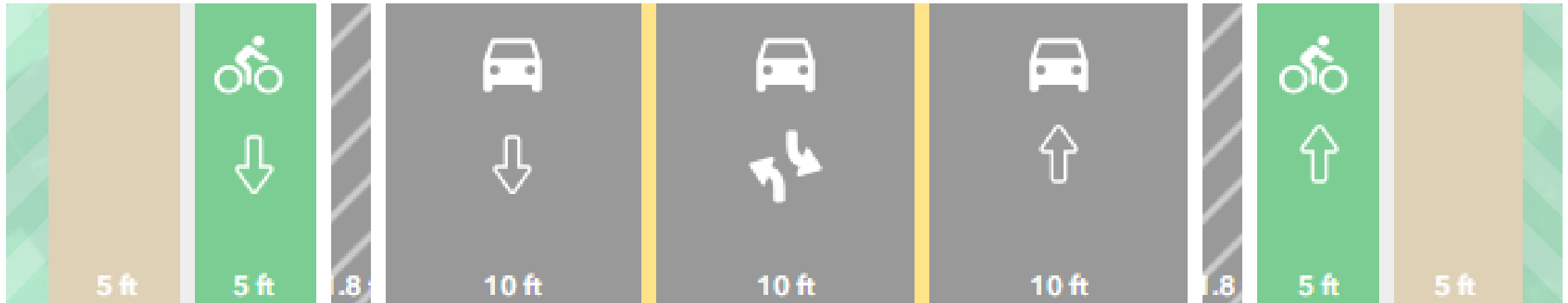


[Variable Speed Limits](#)

Already using in school zones

**More safety countermeasures can be applied and are more effective in 3 lane condition. Some will also require higher level of effort, cost, and time given existing conditions.**

# Option B1: Interim Lane Reconfiguration, Crosswalks, Curb Ramps









- One 10' travel lane each direction with a 10' two-way center turn lane
- Buffered 5' bike lanes on each side
- 5' sidewalk on each side
- Periodic rectangular rapid flashing beacons and marked crosswalks
- Flex posts to buffer bike

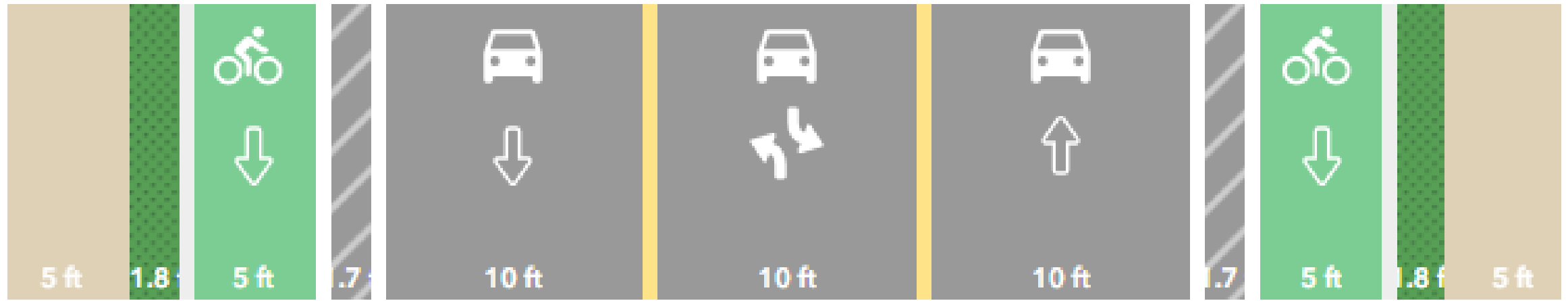
# Option B1: Interim Lane Reconfiguration, Crosswalks, Curb Ramps



# Option B1: Interim Lane Reconfiguration, Crosswalks, Curb Ramps

Road User Safety	Vehicular Access	Multimodal Access	Level of Effort: Cost	Level of Effort: Feasibility	Policy Adherence
<i>Improvements to road user safety</i>	<i>Improved, easier access to businesses and parking</i>	<i>Improved, formalized sidewalks and bike lanes</i>	<i>Medium cost – no land acquisition</i>	<i>Easy to implement, can be done during next lane repaving/ restriping. No right-of-way or land acquisition needed</i>	<i>Adheres to Complete Streets and Vision Zero policies</i>
					







# Option B2: Lane Reconfiguration, Crosswalks, Curb Ramps, Continuous Sidewalks, Simplified Access Points



- One 10' travel lane each direction with a 10' two-way center turn lane
- Buffered 5' bike lanes on each side
- 5' sidewalk on each side with a 2' landscape buffer between the sidewalk and the road
- Periodic rectangular rapid flashing beacons and marked crosswalks
- Simplified driveway access



# Option B2: Lane Reconfiguration, Crosswalks, Curb Ramps, Continuous Sidewalks, Simplified Access Points

Road User Safety	Vehicular Access	Multimodal Access	Level of Effort: Cost	Level of Effort: Feasibility	Policy Adherence
<i>Major improvements to road user safety</i>	<i>Improved, easier access to businesses and parking, fewer conflict points</i>	<i>Improved, easier access to businesses for pedestrians and cyclists, easier to travel</i>	<i>High cost, needs additional right of way</i>	<i>Feasibility will be challenging due to cost</i>	<i>Adheres to city policies</i>
					































# Feasibility for A2 and B2



**5**

## **Feedback and Open Discussion**

# Recap: Alternatives

	Alternative	Road User Safety	Vehicular Access	Multimodal Access	Level of Effort: Cost	Level of Effort: Feasibility	Policy Adherence
Existing Lane Configuration	<b>Existing Conditions:</b> Do Nothing						
	<b>A1:</b> Existing Conditions and Formalized Crosswalks						
	<b>A2:</b> Limited Crosswalks and Curb Ramps, Sidepath, and Simplified Access Points						
Lane Reconfiguration	<b>B1:</b> Interim Lane Reconfiguration, Crosswalks, Curb Ramps						
	<b>B2:</b> Lane Reconfiguration, Crosswalks, Curb Ramps, Continuous Sidewalks, Simplified Access Points						

# Recap: Alternatives

Not feasible due to land acquisition & cost (for short-term improvement)



















	Alternative	Road User Safety	Vehicular Access				
Existing Lane Configuration	<b>Existing Conditions:</b> Do Nothing						
	<b>A1:</b> Existing Conditions and Formalized Crosswalks						
	<b>A2:</b> Limited Crosswalks and Curb Ramps, Sidepath, and Simplified Access Points						
Lane Reconfiguration	<b>B1:</b> Interim Lane Reconfiguration, Crosswalks, Curb Ramps						
	<b>B2:</b> Lane Reconfiguration, Crosswalks, Curb Ramps, Continuous Sidewalks, Simplified Access Points						

# Recap: Alternatives

Not feasible (for short-term improvement) due to cost

	Alternative	Road User Safety	Vehicular Access	Multimodal Access				
Existing Lane Configuration	Proposed Future Conditions							
	A1: Existing Conditions and Formalized Crosswalks							
	A2: Limited Crosswalks and Curb Ramps, Sidepath, and Simplified Access Points							
Lane Reconfiguration	B1: Interim Lane Reconfiguration, Crosswalks, Curb Ramps							
	B2: Lane Reconfiguration, Crosswalks, Curb Ramps, Continuous Sidewalks, Simplified Access Points							

# Recap: Alternatives



















Alternative	Road User Safety	Vehicular Access	Multimodal Access	Level of Effort: Cost	Level of Effort: Feasibility	Policy Adherence
Existing Lane Configuration	<b>Existing Conditions:</b> Do Nothing 					
	<b>A1:</b> Existing Conditions and Formalized Crosswalks 					
Lane Reconfiguration	<b>B1:</b> Interim Lane Reconfiguration, Crosswalks, Curb Ramps 					

# Recap: Alternatives

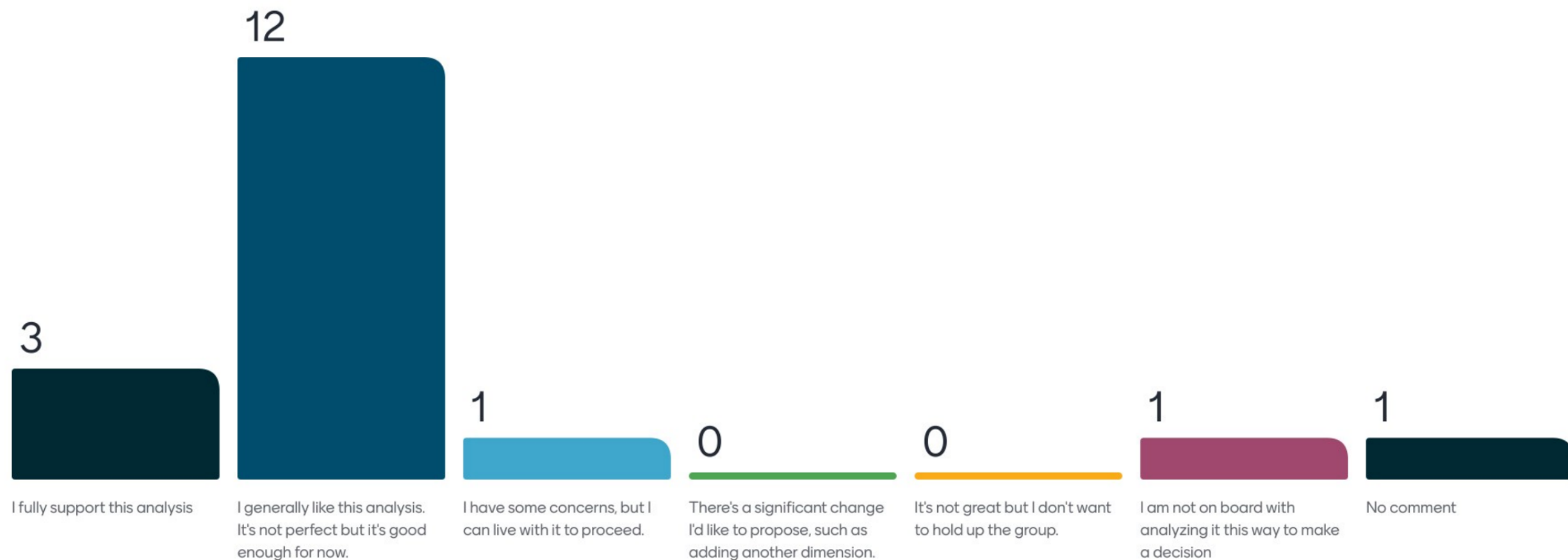
**Recommended option to test for a pilot**

	Alternative	Road User Safety	Vehicular Access	Multimodal Access				ence
Existing Lane Configuration	<b>Existing Conditions:</b> Do Nothing							
	<b>A1:</b> Existing Conditions and Formalized Crosswalks							
Lane Reconfiguration	<b>B1:</b> Interim Lane Reconfiguration, Crosswalks, Curb Ramps							

# Recap: Alternatives

	Alternative	Road User Safety	Vehicular Access	Multimodal Access	Level of Effort: Cost	Level of Effort: Feasibility	Policy Adherence
Existing Lane Configuration	<b>Existing Conditions:</b> Do Nothing						
	<b>A1:</b> Existing Conditions and Formalized Crosswalks						
Lane Reconfiguration	<b>B1:</b> Interim Lane Reconfiguration, Crosswalks, Curb Ramps						

# To what extent do you agree or disagree with this analysis?



Are there any additional evaluation criteria we should consider to make a decision about the pilot?

I think due diligence has been followed

What is the impact on parking? Is there a shortage of parking to begin with?

What is the projected outcome of traffic flow at peak travel times if the project includes three lanes

Good thoughtful look. I appreciate the time and consideration of all users

None at this time.

All factors within City's control have been addressed

Maybe not evaluation criteria, but more info on outreach plan to businesses and property owners

Would like a stronger recommendation or support of plans by the professionals

Are there any additional evaluation criteria we should consider to make a decision about the pilot?

Maybe this was covered another time but has considerations been made if Williamson floods when it heavily rains?

No

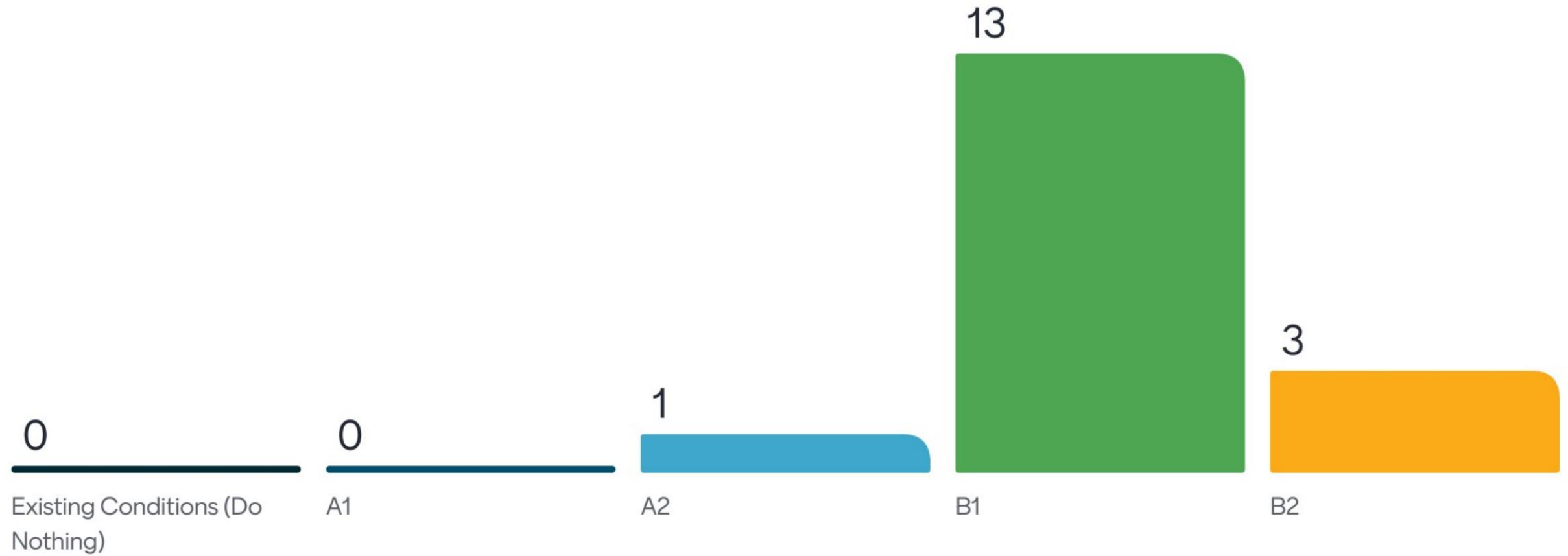
Impact on parking numbers and traffic congestion to ease minds.

Options that consider moving curbs closer together to create a path with lower property impacts

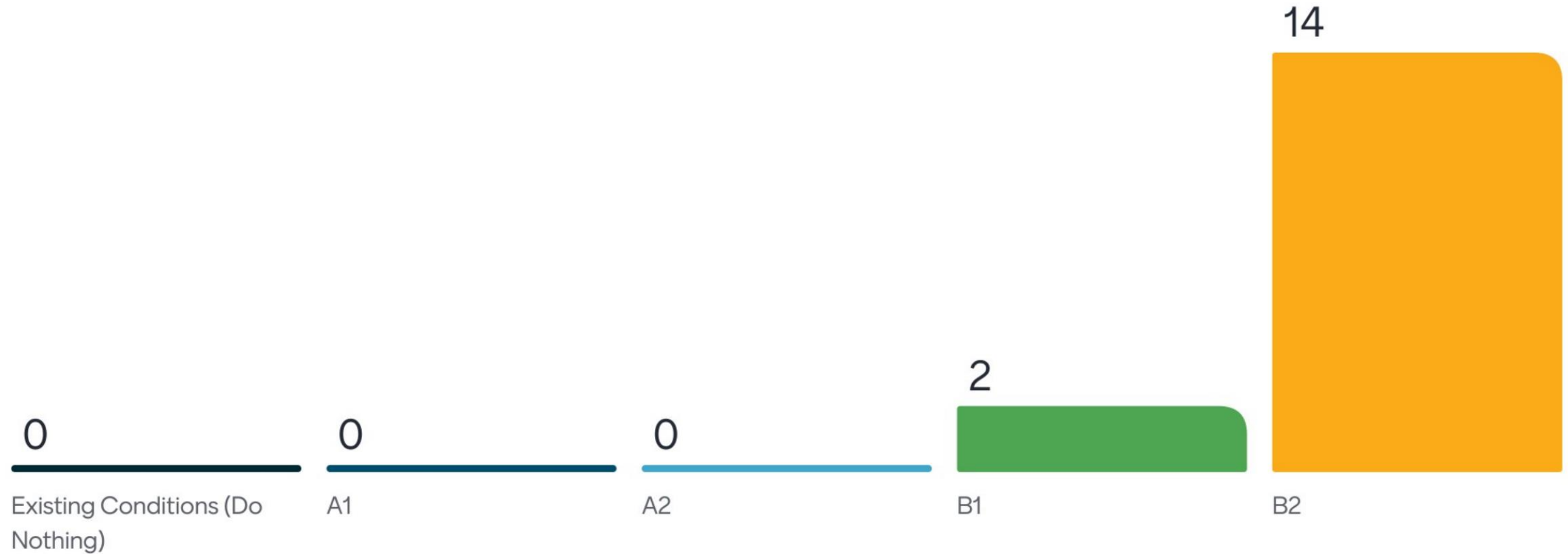
More and better studies on property owners, options etc. Need demonstration projects first.

Cost of drainage changes, if any, required for moving curbs inward

# What is your favorite option for a pilot?



# What is your favorite option for a long term project?



# What would make a pilot a success to you?

Increase in pedestrian use.

Low cost improvements to safety

Data on reduction in speeds, crashes, and serious injuries

Less crashes and injuries in the corridor

Increased motorist comfort and safety when turning left.

Traffic flows. Peds and bike use space. Businesses see more interest.

Smooth traffic flow and overall positive community feedback

No major restrictions to traffic flow at peak hours , less traffic accidents, less pedestrian incidents

# What would make a pilot a success to you?

Increased pedestrian use

People, vehicles, businesses get excited and want to continue to follow what the pilot began

Proof that safety is increased and traffic and businesses were not impacted

Confirm no significant impact to existing throughput; positive business owner and neighborhood feedback; more bicycle and pedestrian use.

More complete sidewalks, and dedicated bike paths. More crosswalks and signal

Less crashes, slower travel speeds, more pedestrian use.

comments and feedback from the community about the impacts/ challenges of the pilot.

Reduced speeds in school zones

# What would make a pilot a success to you?

Engagement and events that activate the space and encourage experiencing the changes

Lower accident rates, safer pedestrian use. So form of traffic users feedback

Support by business community. Support by neighborhood residential groups. Support by current opponents.

Was it safer? Was traffic not backed up.?

# What data should the city collect and evaluate to determine success?

Speed panel studies ..

ADT, travel times, queue lengths, vehicle speeds (averages and highest speeds seen)

Safer roads, less crashes, happier people

Opinions from users on their experiences as a motorist, cyclists, bus riders, and pedestrians

Pre- and post-attitude survey of business owners to show changes in outlook; pedestrian and bike counts; crash rates.

Talk to bus riders and pedestrian who live on Williamson road

Traffic count

Impact on businesses. Pedestrian and driver experience. Accessibility change for bus riders.

# What data should the city collect and evaluate to determine success?

Pre and post-project speeds, travel time, business impacts

Intercept surveys of transit users and people biking and walking on corridor

Retailers comments, pedestrian input

Transit increase in patronage

Accidents, fatalities, travel times, vehicle speeds, pre and post feedback, school, student, families feedback

Sales tax data to quantify business impacts in addition to qualitative data on impacts

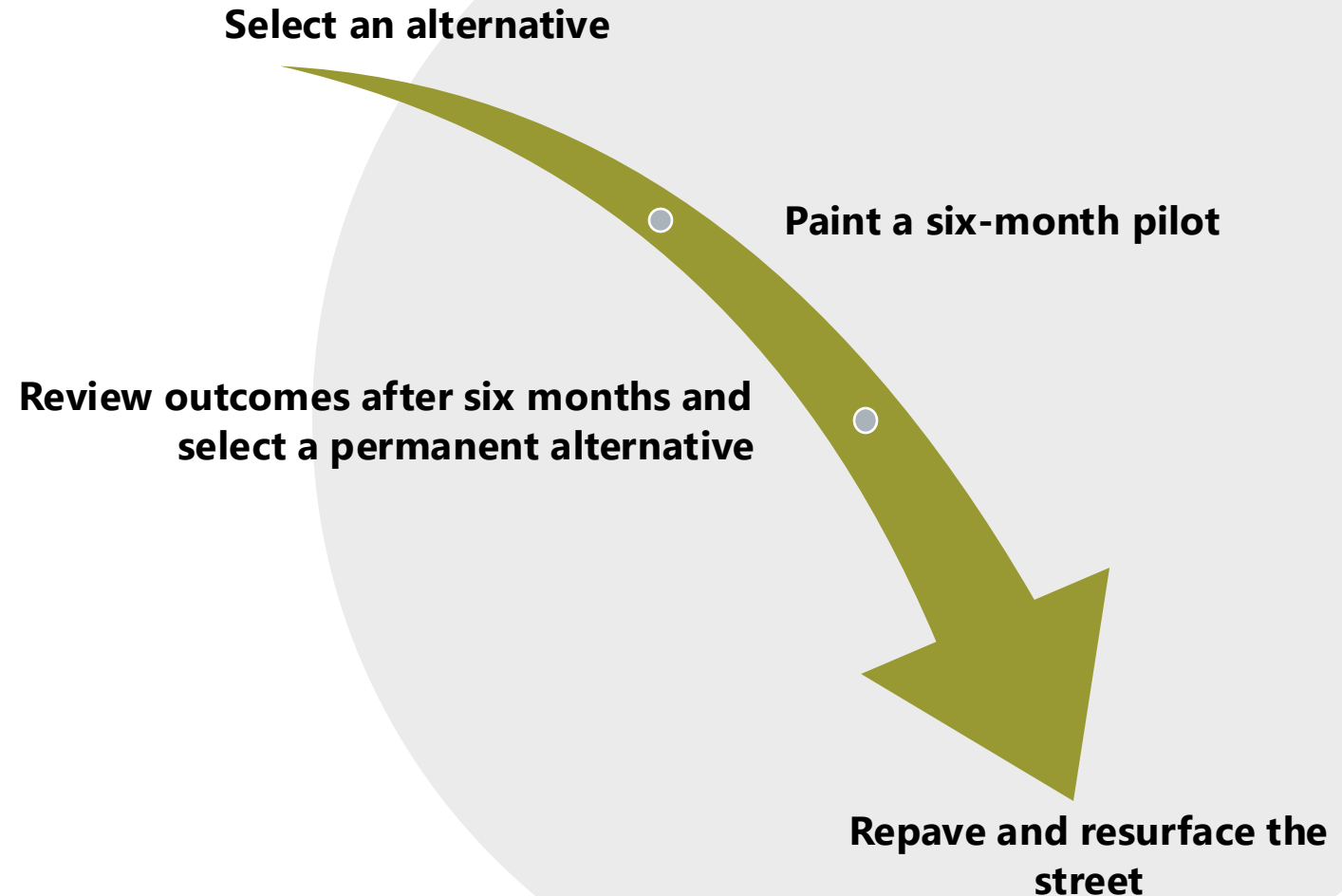
Number of crashes, delays related to crashes, and severity of crashes

Targeted neighborhood survey

Crash, pedestrians, input from area residence, business owners, and the general traveling public.

# Opportunity for a Low-Cost Pilot

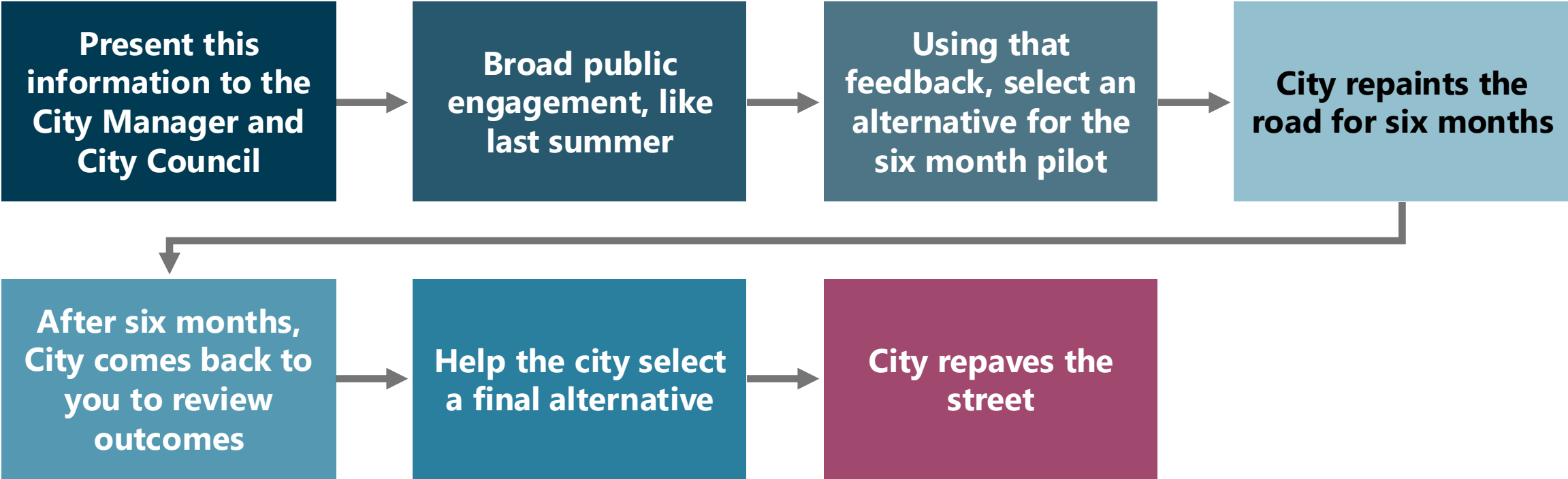
Like Brandon Avenue, the city has the opportunity for a low-cost pilot before permanent striping and repaving.





## Next Steps

# Next Steps



**Thank you!**