



# FEDERAL BOULEVARD

## MULTIMODAL TRANSPORTATION STUDY

# Working Group Meeting #3

Joint Technical and Stakeholder Working Groups

February 24, 2021



# Meeting Facilitation

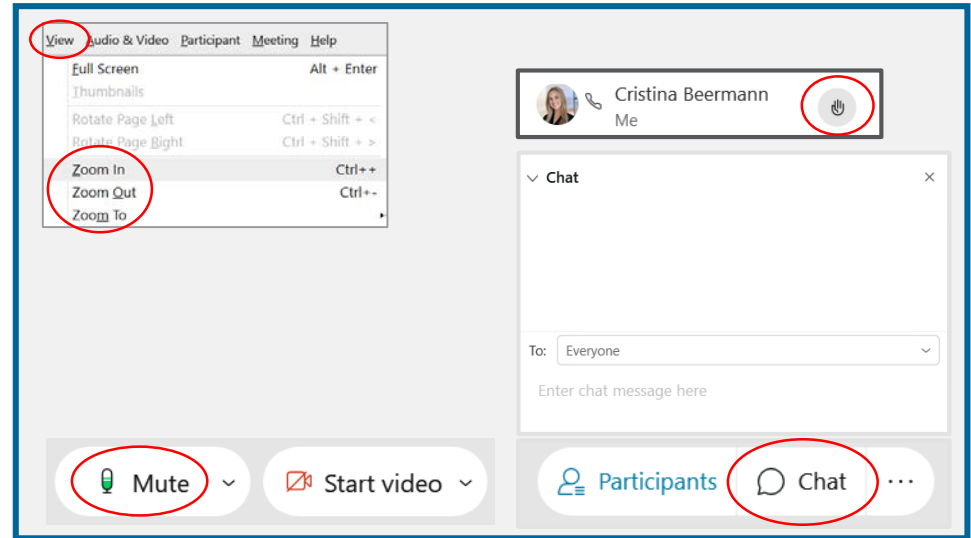
## Ask Questions & Provide Comments

### Webex Instructions

- Maintain mute
- Video
- Chat box
- Hand raise
- Zoom In/Out

Menti.com for feedback exercise

Breakout Group Prompts



Go to [menti.com](https://www.menti.com) and use the code: **30 69 96 5**

# Welcome

# Welcome

## Who We Are

- The 'Partnership' management team:
  - Adams County:  
**Chris Chovan**  
Senior Transportation and Mobility Planner
  - City of Federal Heights:  
**Tim Williams**  
Community Development Director
  - City of Westminster:  
**Debra Baskett**  
Senior Transportation and Mobility Planner



# Additional Project Team Members

## Presenters and Breakout Group Facilitators

- Chris Primus, Consultant Team
- Tara Bettale, Consultant Team
- Keith Borsheim, Consultant Team
- Holly Buck, Consultant Team
- Kiernan Maletsky, Consultant Team
- Cristina Beermann, Consultant Team
- Charlie Dyrsten, Consultant Team
- Rocio Ramirez, Consultant Team
- Kira Olson, Consultant Team

# Working Group Members Roll Call...

Thank you for joining us today! Please 'sign-in' by entering your name, organization (if applicable), and which Corridor Zone you would like to discuss in today's breakout group discussion in the Chat box on the bottom right of your screen.



# Today's Meeting

## Agenda

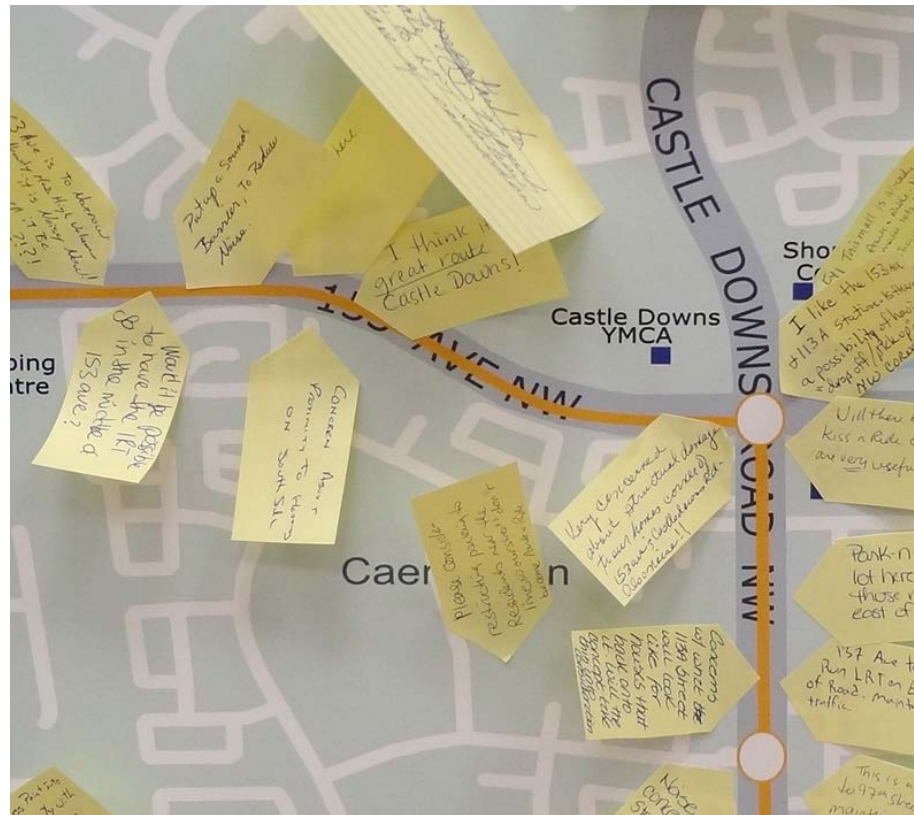
- Introductions and Meeting Purpose
- Other Corridors – Before and After Improvements
- Draft Modal Visions and Potential Elements
- Cross Sections and Right-of-Way
  - Stakeholder feedback: breakout rooms
- Next steps
  - Digital survey
  - Public online meeting



# Meeting Purpose & Stakeholder Role

## This Meeting Will

- Provide a project status update
- Share examples of similar corridor success stories
- Understand stakeholder feedback on cross sections and right-of-way
- Provide opportunity for input and questions





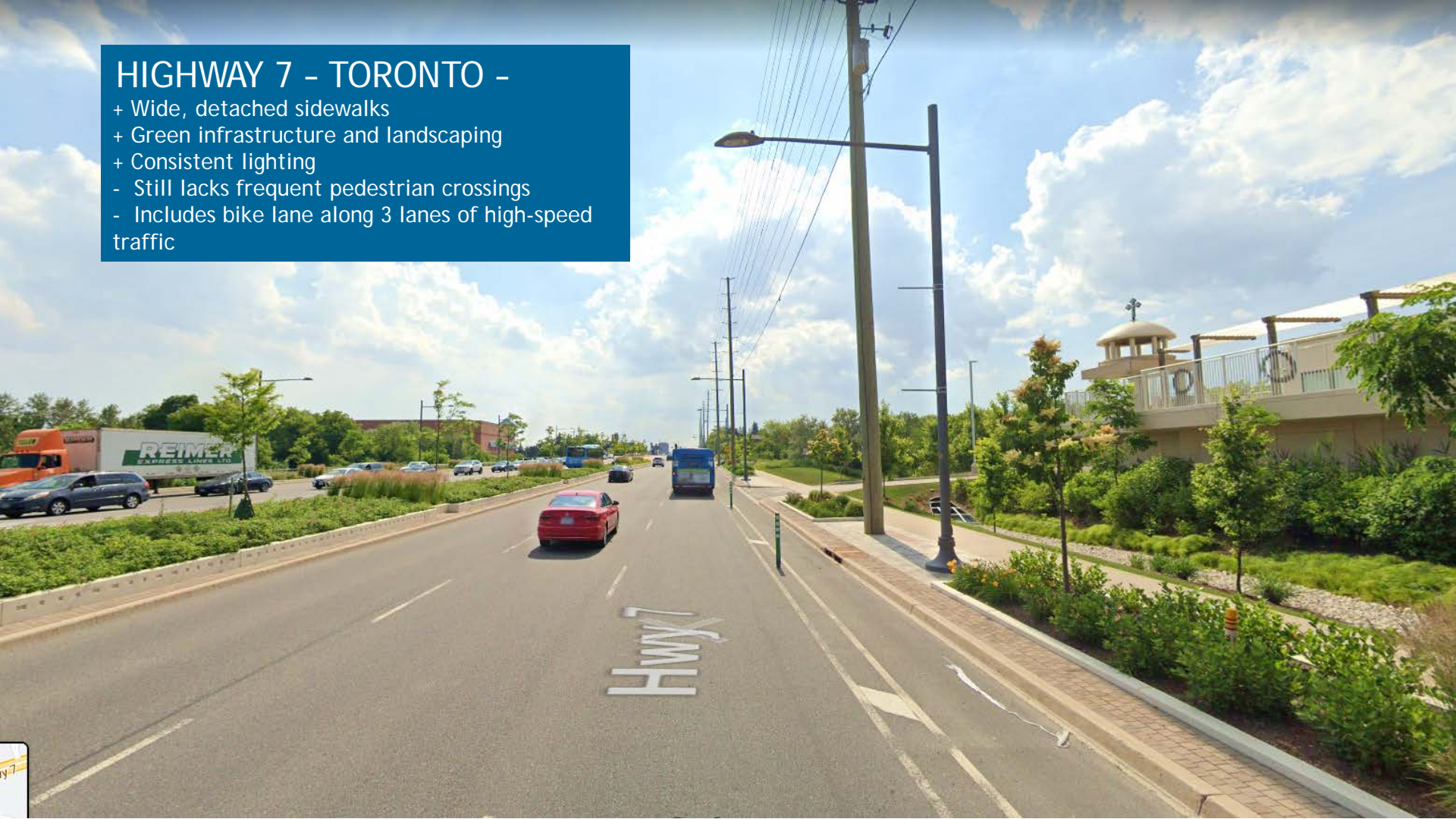
# Similar Corridors

# HIGHWAY 7 - TORONTO - BEFORE



## HIGHWAY 7 - TORONTO -

- + Wide, detached sidewalks
- + Green infrastructure and landscaping
- + Consistent lighting
- Still lacks frequent pedestrian crossings
- Includes bike lane along 3 lanes of high-speed traffic

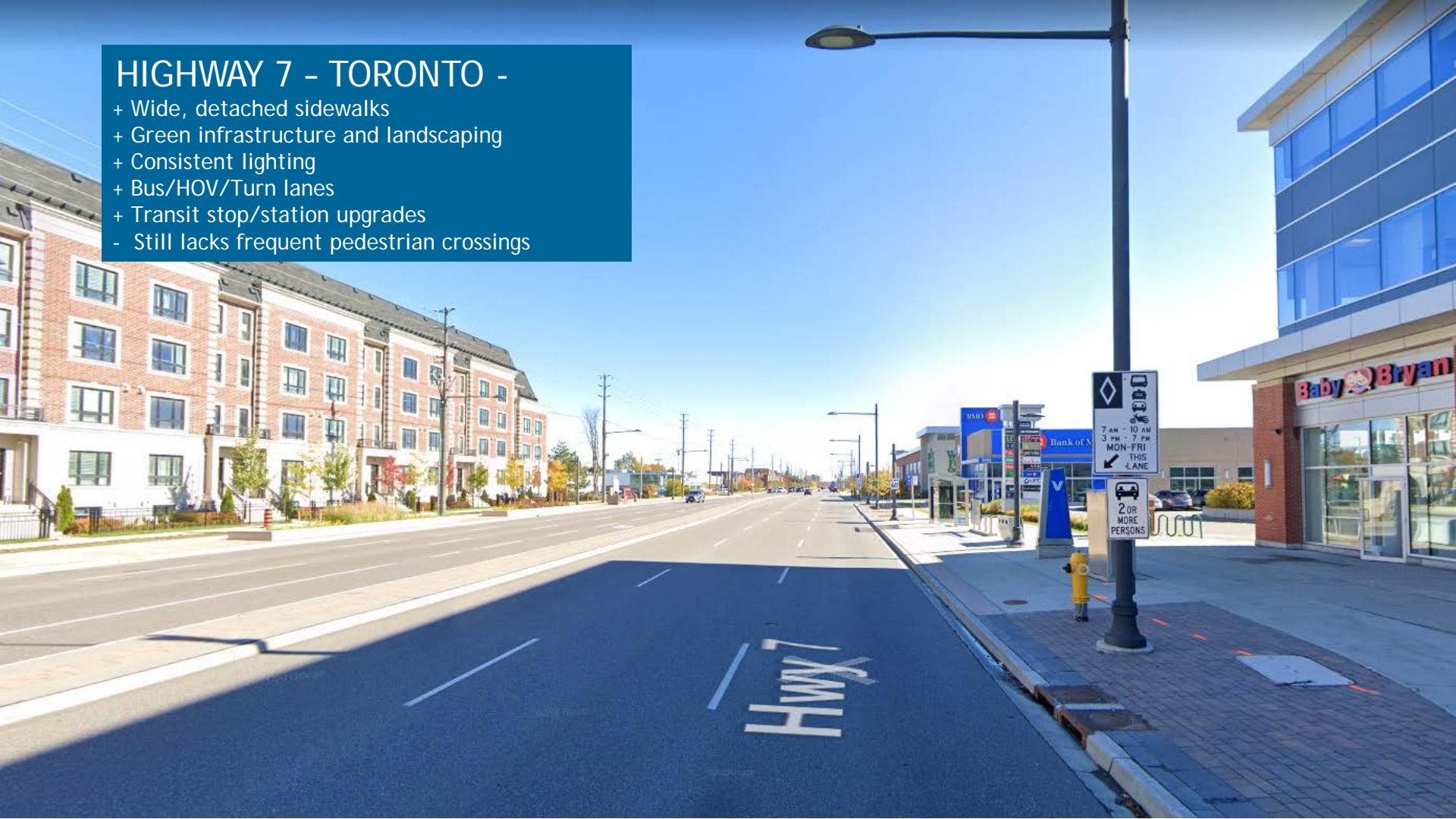


# HIGHWAY 7 - TORONTO - BEFORE



## HIGHWAY 7 - TORONTO -

- + Wide, detached sidewalks
- + Green infrastructure and landscaping
- + Consistent lighting
- + Bus/HOV/Turn lanes
- + Transit stop/station upgrades
- Still lacks frequent pedestrian crossings



# 11<sup>th</sup> AVE - EUGENE, OREGON - BEFORE



# 11<sup>th</sup> AVE - EUGENE, OREGON - AFTER

- + Wide, detached sidewalks
- + Green infrastructure and landscaping
- + Consistent lighting
- + Bus/Turn lanes
- + Transit stop/station upgrades
- + Pedestrian signal at transit stop/trail connection



# CENTRAL AVE - ALBUQUERQUE, NM - BEFORE





## CENTRAL AVE – ALBUQUERQUE, NM - AFTER

- + Green infrastructure and landscaping in median
- + Upgraded lighting
- + Center-running bus rapid transit facilities
- + Transit stop/station upgrades
- + Incorporate public art



## COLFAX & PARK AVE - BEFORE



## COLFAX & PARK AVE - AFTER

- + Low-cost crossing enhancements
- + Major reductions in pedestrian-involved crashes



# OTHER BUILT EXAMPLES



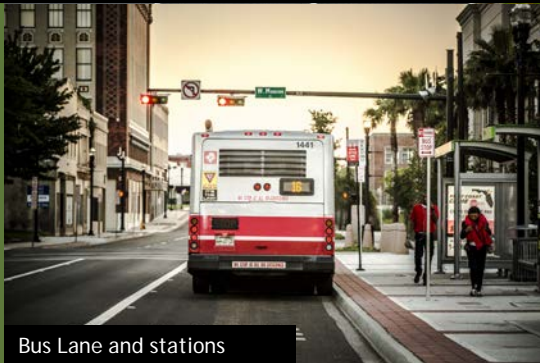
Business Access Transit Lane and tree lawn



Bus Lane and stations



Landscaping and Stormwater Treatments



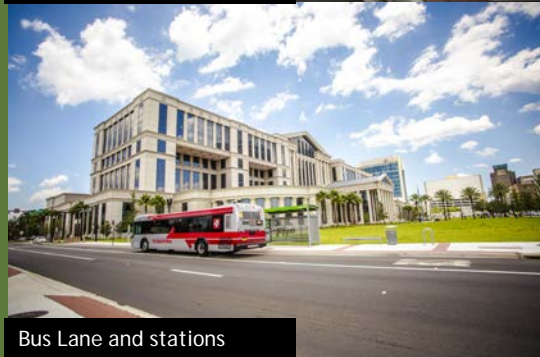
Bus Lane and stations



Bus Lane and landscaped median



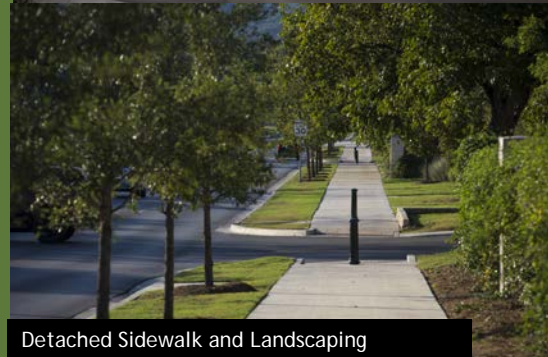
Landscaping and Stormwater Treatments



Bus Lane and stations



Multi-use Sidewalk and Stormwater Treatments



Detached Sidewalk and Landscaping

# Draft Mobility Needs & Goals

The Federal Boulevard Multimodal Transportation Study will...

- Focus on **safe, equitable, consistent, and high-quality** options
- Build on **existing multimodal facilities** (trails, rail, etc.)
- Identify **attainable alternatives** to driving alone
- Generate recommendations for **walking, rolling, biking, transit, driving, and freight**

# Draft Modal Visions & Potential Elements

# Reference Document

## Review the reference document for details

- Background data and findings
- Potential element pros and cons
- Recommendations

**FEDERAL BOULEVARD**  
MULTIMODAL TRANSPORTATION STUDY

2021-02-17  
Draft Multimodal Vision  
**Pedestrians**

<p><b>1. What are the existing conditions on Federal Boulevard?</b></p> <ul style="list-style-type: none"> <li>Average of one crash per month involving a pedestrian, most of which result in serious injury or fatality</li> <li>13 pedestrian deaths recorded from 2013 to 2017</li> <li>Significant portions of the corridor do not have sidewalks</li> <li>Long distances between signalized crossings that require out-of-direction travel and can lead to unsafe crossing activity</li> </ul>	<p><b>2. What was communicated by stakeholders?</b></p> <ul style="list-style-type: none"> <li>Concern over the lack of safe and recreated pedestrian facilities</li> <li>Concern over crash safety and sidewalk issues             <ul style="list-style-type: none"> <li>Close to 70% of stakeholders mentioned these three issues as primary concerns</li> </ul> </li> <li>Desire for continuous sidewalks that provide physical barriers from vehicle traffic</li> <li>Need for safe pedestrian crossing infrastructure at multiple intersections</li> <li>Need for increased maintenance along corridor to ensure ADA accessibility year-round             <ul style="list-style-type: none"> <li>Maintaining signs were reduced when snow removed along sidewalks did not occur consistently</li> </ul> </li> </ul>
<p><b>3. What are the objectives for pedestrian facilities along Federal?</b></p> <ul style="list-style-type: none"> <li>Advocate for greater connectivity to provide access to destinations for people walking or rolling</li> <li>Encourage additional signage, barriers, obstructed sidewalk signage along corridor</li> <li>Encourage efforts to provide reliable, comfortable, and accessible sidewalk network</li> <li>Identify potential and block crossing locations where distances exceed half a mile between signalized crossings or in areas that have high numbers of unsafe crossings</li> <li>Identify potential median refuge island locations in between signalized crossings where there are more than 6 lanes of traffic</li> </ul>	<p><b>4. Why should pedestrian facilities be improved?</b></p> <ul style="list-style-type: none"> <li>Provides more inclusive and accessible design for people with disabilities</li> <li>Improves safety for pedestrians and prioritizes the most vulnerable users in the corridor</li> <li>Supports ADA compliant infrastructure essential for people rolling or using mobility devices (e.g., sidewalk)             <ul style="list-style-type: none"> <li>Improves accessibility to other modal options</li> <li>Promotes health benefits</li> <li>Reduces emissions/pollution</li> <li>Encourages walking instead of driving</li> <li>Provides greater connectivity to transportation environment</li> <li>Ensures a comfortable and safe pedestrian experience, everyone is a pedestrian at some point in their journey</li> </ul> </li> </ul>

Full of Walkable Working Corridor Regarding Prioritization and Benefits of Pedestrian Priority Measures

**FEDERAL BOULEVARD**  
MULTIMODAL TRANSPORTATION STUDY

2021-02-17  
Draft Multimodal Vision  
**Pedestrians**

Potential Elements	Pros	Cons	\$	Recommendations
<p><b>Attached Sidewalk – 8' wide</b></p>	<ul style="list-style-type: none"> <li>Can fill existing gaps in sidewalk network most cost effectively</li> <li>Meets Americans with Disabilities Act (ADA) requirements</li> <li>Would provide space for transit boarding</li> </ul>	<ul style="list-style-type: none"> <li>Could have potential Right-of-Way impacts</li> <li>Less safe than detached sidewalks</li> <li>Less comfortable than detached sidewalks</li> <li>Does not provide adequate space for landscaping elements</li> </ul>	\$1	Not recommended, unless ROW acquisition or drainage issues are prohibitive
<p><b>Detached Sidewalk – 8' wide</b></p>	<ul style="list-style-type: none"> <li>Similar advantages as attached sidewalks</li> <li>Provides higher degree of comfort for pedestrians, providing a buffer from motorist traffic</li> <li>Provides space for landscaping and lighting elements outside the pedestrian pathway</li> </ul>	<ul style="list-style-type: none"> <li>Could have ROW impacts</li> <li>Cost potentially less higher costs</li> </ul>	\$2	Not recommended, unless ROW impacts limit implementation and 30' detached multi-use path cannot be constructed
<p><b>Detached Multi-use Path – 10' wide</b></p>	<ul style="list-style-type: none"> <li>Similar advantages as detached 8' sidewalks</li> <li>Provides higher degree of comfort for pedestrians</li> <li>Provides space for bicycles to share for when bike lanes, and access to destinations</li> </ul>	<ul style="list-style-type: none"> <li>Could have ROW impacts</li> <li>Cost potentially less higher costs</li> </ul>	\$3	Recommended corridor-wide
<p><b>Enhanced Safety for all Users at Intersections – various treatments</b></p>	<ul style="list-style-type: none"> <li>Create safety improvements where most crashes occur</li> <li>Provides greater access to transit</li> </ul>	<ul style="list-style-type: none"> <li>Prioritizes people walking, rolling, biking over vehicle mobility</li> </ul>	\$	Recommended corridor-wide (where needed)
<p><b>Safe Pedestrian Crossings: Signals, Rectangular Rapid Flashing Beacons (RRFBs) &amp; High Intensity Activated Crosswalks (HAWKs)</b></p>	<ul style="list-style-type: none"> <li>Provides safety improvements in areas where unsafe crossing activity occurs</li> <li>Provides greater access to transit boarding locations, which may be located mid-block rather than at intersections</li> <li>Can minimize encroached vehicle delay by only stopping traffic when activated by pedestrians</li> </ul>	<ul style="list-style-type: none"> <li>Prioritizes pedestrian safety, escorted vehicles may have increased travel time</li> </ul>	\$	Recommended corridor-wide (where needed)

# Pedestrians

## Existing Conditions and Stakeholder Input

- Many pedestrian crashes
- Difficult to cross
- Important issue for most stakeholders

## Objectives for Improvements

- Greater connectivity
- Encourage addressing sidewalk concerns
- Improve safety for pedestrians

# Pedestrians



Not recommended unless ROW acquisition or drainage issues are prohibitive

Attached Sidewalk - 8' wide



Detached Multi-use Path - 10' wide



Where needed



Not recommended unless ROW acquisition or drainage issues are prohibitive

Detached Sidewalk - 8' wide



Where needed

(where needed)

Enhanced Safety for all Users at Intersections - various treatments



Key

Recommended corridor-wide

Not Recommended

Safer Pedestrian Crossings: Signals, Rectangular Rapid Flashing Beacons (RRFBs) & High Intensity Activated Crosswalks (HAWKs)



# Transit

## Existing Conditions and Stakeholder Input

- Slower bus speeds due to congestion
- Record ridership
- Advocate for quality transit amenities
- Improve service

## Objectives for Improvements

- Lack of multimodal connections to bus stops
- Safer access to bus stops and shelters
- More frequent service
- Prepare for ridership growth
- Opportunity for development, redevelopment, and land preservation

# Transit



Semi-exclusive dedicated bus lanes (lanes that are reserved for buses and right turning vehicles)

	Federal - 50th	Clear Creek - Federal Station - Gate B	Westminster Station	Federal - 72nd	Federal - 104th	Front Range Community College	106th & Melrose Gate C
+	510A	515A	522A	--	--	--	--
+	540A	545A	--	551A	601A	--	606A
+	610A	615A	622A	--	--	--	--
+	621A	626A	633A	--	--	--	--
+	631A	636A	643A	--	--	--	--
+	641A	646A	--	652A	703A	708A	--
+	651A	656A	703A	--	--	--	--
+	701A	706A	713A	--	--	--	--
+	711A	716A	723A	--	--	--	--
+	721A	726A	733A	--	--	--	--

Service Enhancements - more frequent service (every 10 minutes), Timed Transfers to other routes and increased hours of service



Transit bypass lanes (dedicated lanes for bus approaches to intersections) at key locations, coupled with transit signal priority 'queue jumps'



Stop/Station Enhancements - ADA accessible bus shelters, relocated bus stops, sidewalk connections, multilingual information

Key



Recommended corridor-wide



Not Recommended

# Bicycles

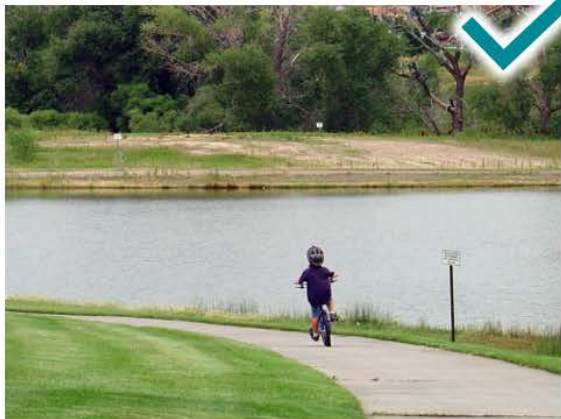
## Existing Conditions and Stakeholder Input

- Minimal on-street bike infrastructure
- Not a designated bike corridor
- Encourage development of complete bike network
- Advocate for underpasses for all ages and abilities

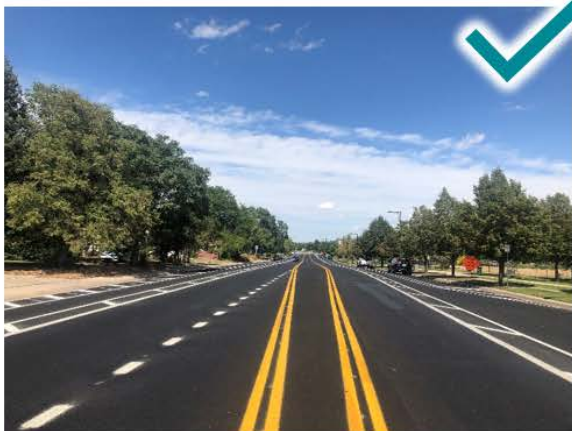
## Objectives for Improvements

- Concern over air quality
- More bike connections to neighborhoods
- Reduce emissions/pollution
- Addresses congestion management

# Bicycles



Expanded connections to adjacent side paths



Dedicated Bike Lane along Lowell Boulevard



Dedicated Bike Lane along Federal Boulevard

Key



Recommended  
corridor-wide



Not  
Recommended

# Trails

## Existing Conditions and Stakeholder Input

- Five regional trails
- Address missing greenway trail and infrastructure
- Encourage accessible connections
- Greater connectivity to existing trails

## Objectives for Improvements

- Option for commuters
- Provide a connection to Camenisch Park
- Enhance connection to natural resources

# Trails



Wayfinding



Expanded connections to existing regional trails



Connections to other modal options

Key



Recommended  
corridor-wide



Not  
Recommended

# Streetscapes

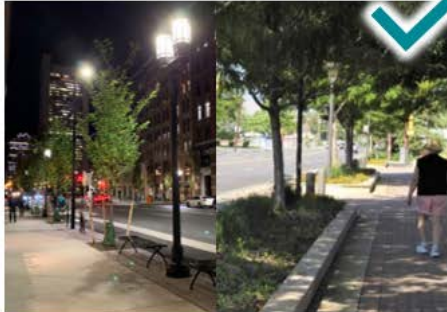
## Existing Conditions and Stakeholder Input

- Lack of unifying streetscape elements
- No sidewalk uniformity
- Prioritize wayfinding to key destinations
- Reduce urban heat island effect

## Objectives for Improvements

- Aesthetic consistency
- Tree canopy
- Enhances traffic calming
- Greater user comfort

# Screeescapes



Street Lighting and Pedestrian Amenities



Green drainage elements



Brick or hardscape median



Public Art/Gateway Elements



Improved Signage - Inventory and reassessment

Key



Recommended  
corridor-wide



Not  
Recommended



# Auto Safety and Operations

## Existing Conditions and Stakeholder Input

- Inadequate sight distance
- Non-compliant signals equipment
- Insufficient ADA facilities
- Improve traffic operations along the corridor
- Meet Vision Zero goals

## Objectives for Improvements

- Manage congestion
- Vehicle speed
- Improve travel time
- Improve safety
- Reduce congestion

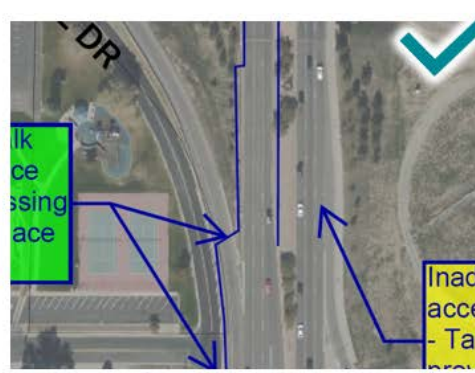
# Auto Safety and Operations



Update signal equipment - Signal Rebuilds



Raised medians



Interchange improvements

Key



Recommended  
corridor-wide



Not  
Recommended



Improved left turn treatments



ADA compliant design

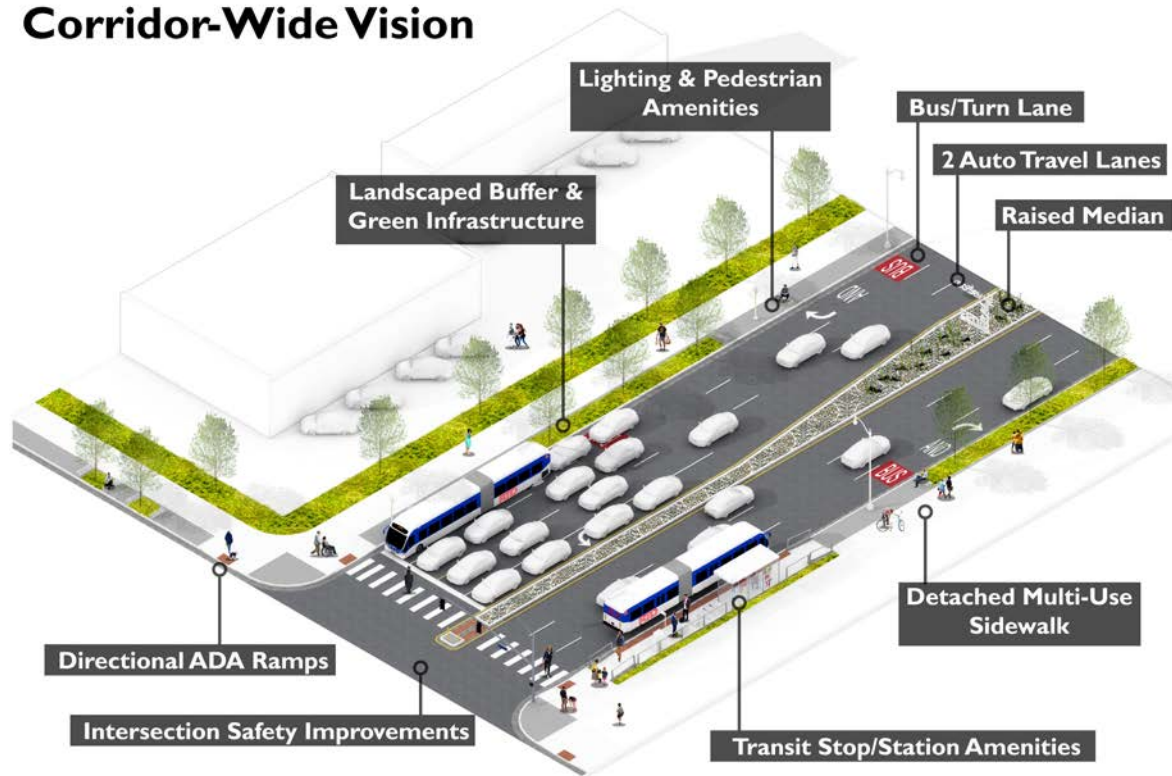


Consistent corridor speed limits and signal progression based on lower target speeds

# Cross Sections & Right-of-Way

# Cross Section

## Corridor-Wide Vision

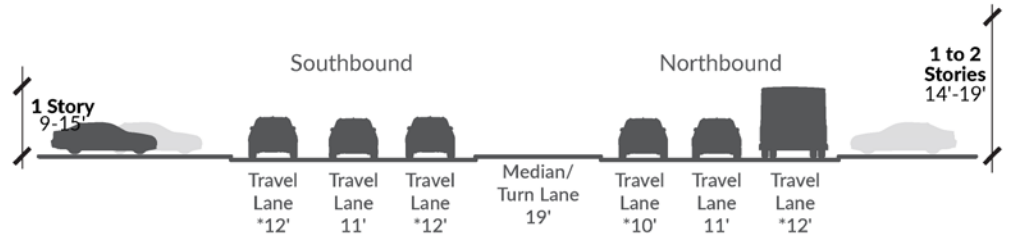


# Zone A

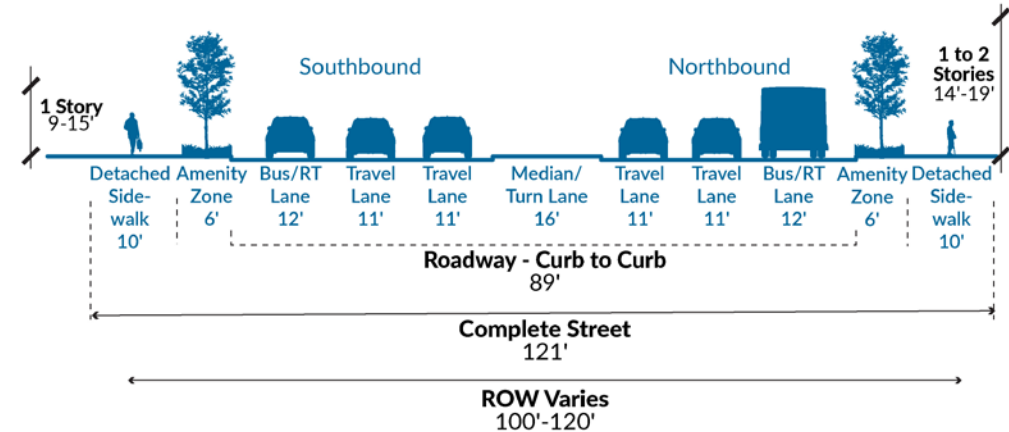
## Zone A Representative Location: Between 65th Avenue and Longfellow Place



### Existing Condition



### Proposed Condition

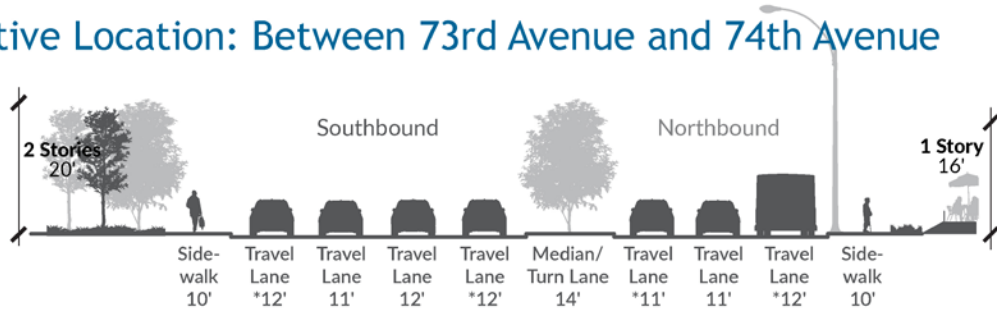


# Zone B

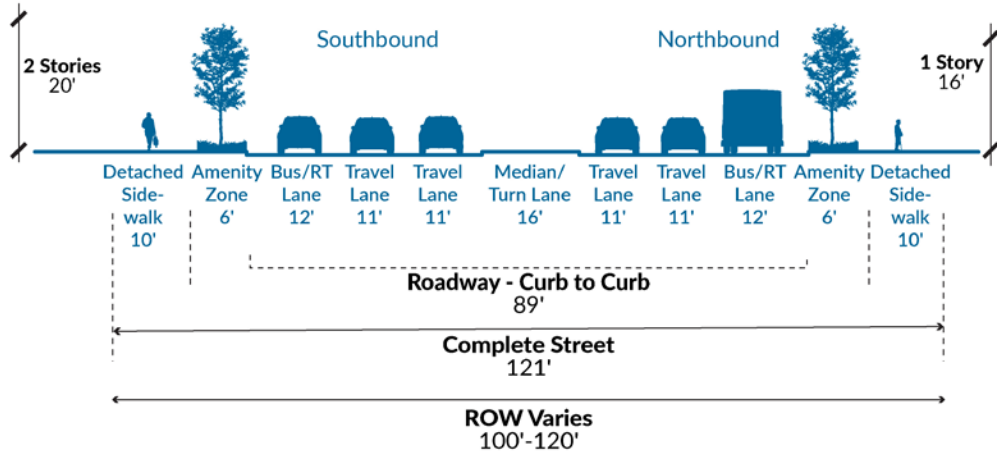
## Zone B Representative Location: Between 73rd Avenue and 74th Avenue



### Existing Condition



### Proposed Condition

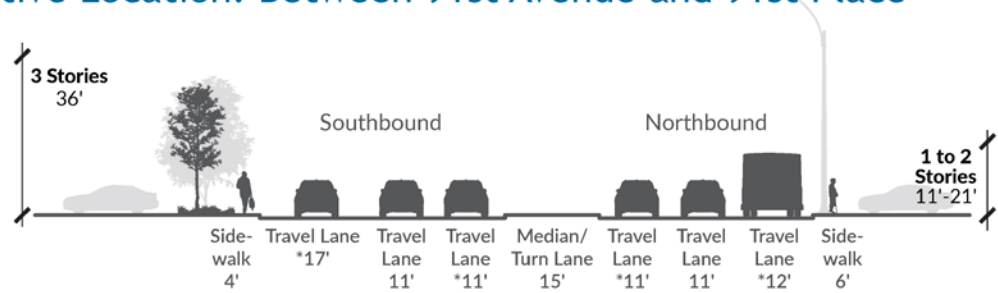


# Zone C

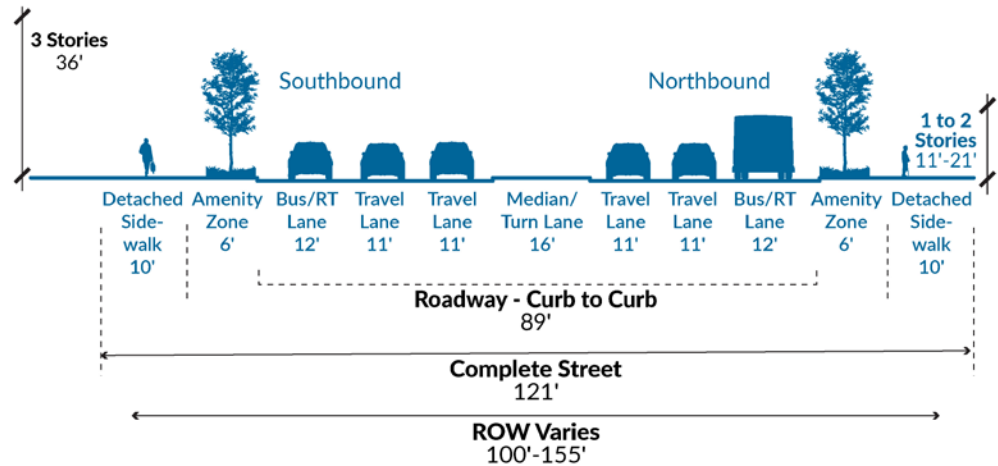
## Zone C Representative Location: Between 91st Avenue and 91st Place



### Existing Condition



### Proposed Condition

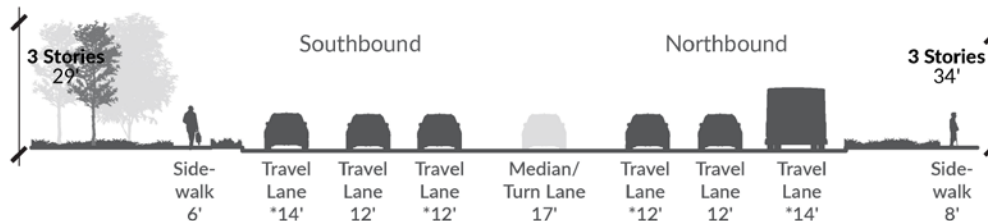


# Zone D

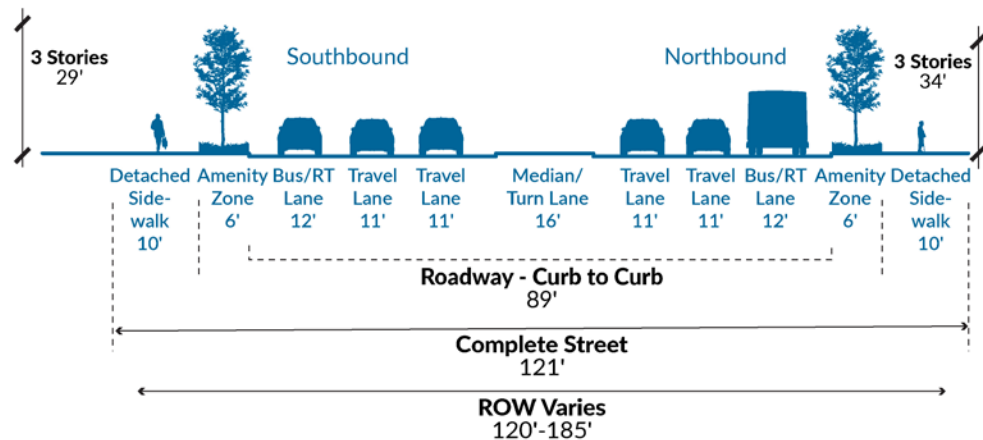
## Zone D Representative Location: Between 107th Avenue and 108th Avenue



### Existing Condition



### Proposed Condition





# Key Takeaways

## Right-of-Way (ROW) and Other Impacts

- Most parcels are affected for typically minor ROW acquisitions
  - Varies along corridor
  - Most ROW needs impact parking to some extent
  - Few structures are impacted
- Modifications to interchanges and bridges will be needed

# Stakeholder Feedback - Menti

Go to [menti.com](https://www.menti.com) and use the code: **30 69 96 5**

# Breakout Groups

# Breakout Group Instructions

## Instructions

- Discussion (25 min.)
  - React to Menti results
  - Discuss your thoughts on cross-section and right-of-way impacts
- Report back



# Stakeholder Breakout Groups

## We'd like your input

- Introductions
  1. Were the Menti results surprising to you? Why or why not?
- Review corridor impacts by zone
- Discussion
  1. Are the type and nature of impacts acceptable to achieve a *multimodal complete street* cross-section?
  2. Do you feel that the transit improvements shown in the cross section would help meet the transit goals for the corridor?
  3. What technical data do you need to support this cross section?
  4. Do you have any additional questions/comments?

# Report Back

# Next Steps

## Upcoming

- Digital Survey
- Online public meeting



# Thank You!



**FEDERAL BOULEVARD**

MULTIMODAL TRANSPORTATION STUDY