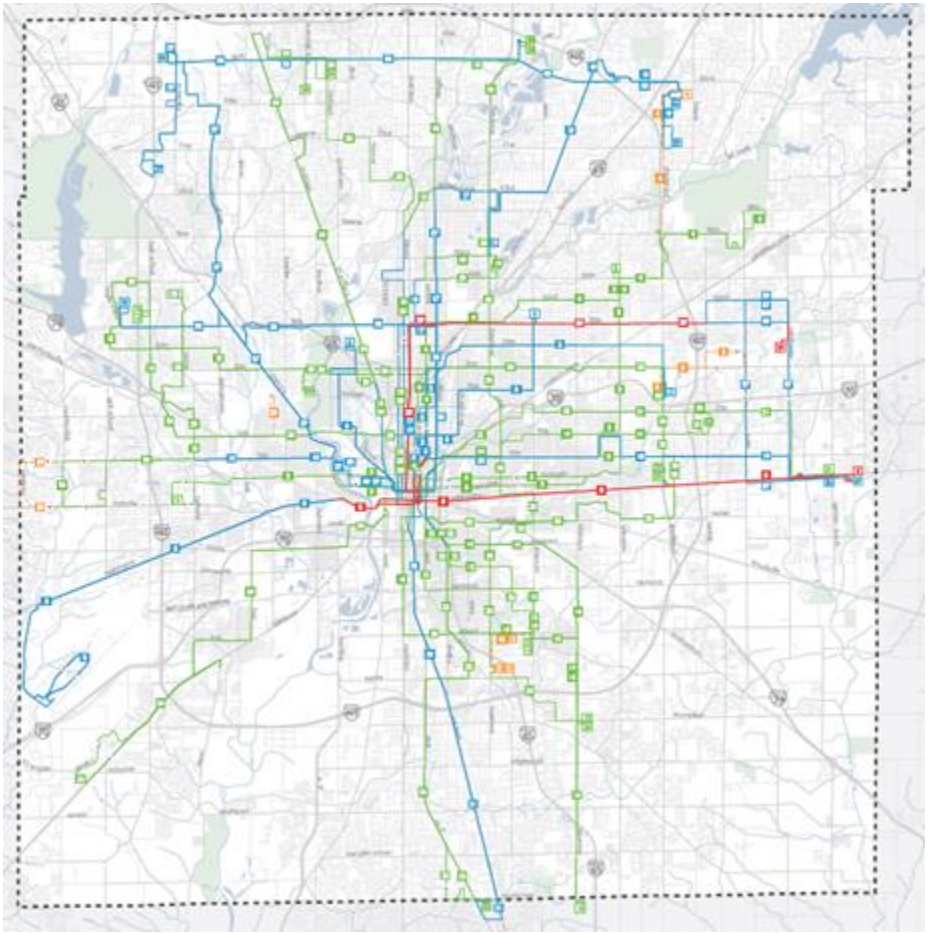
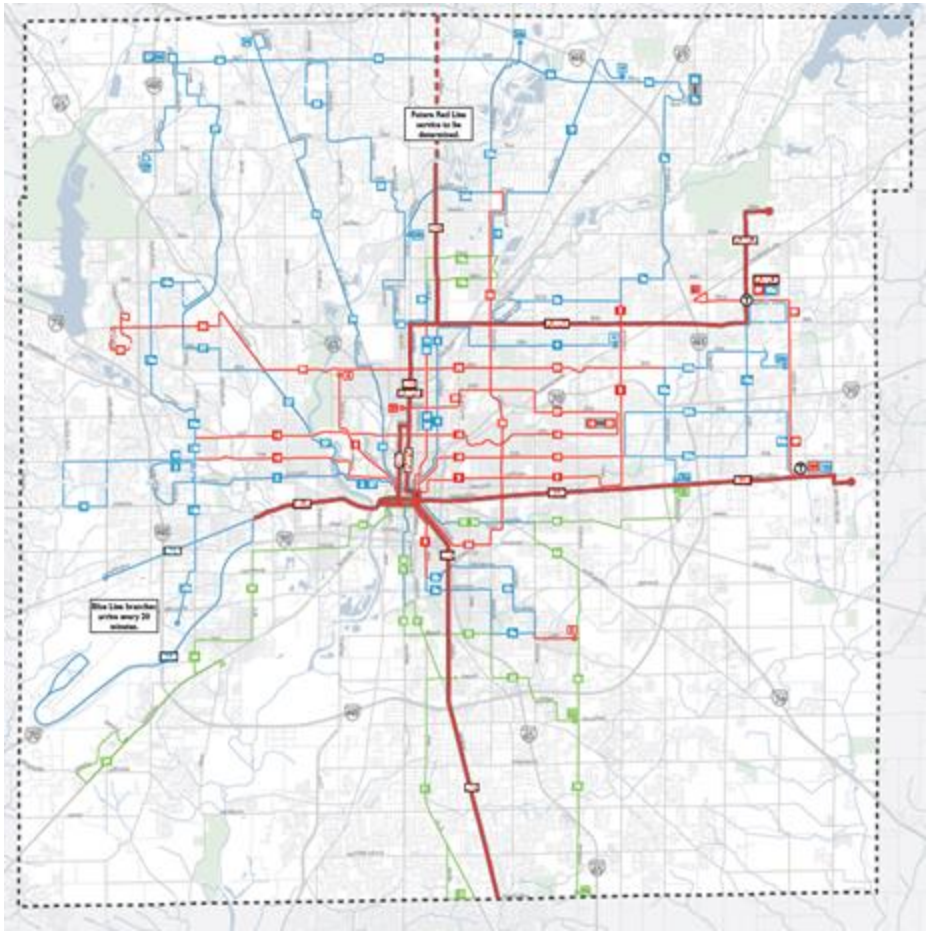
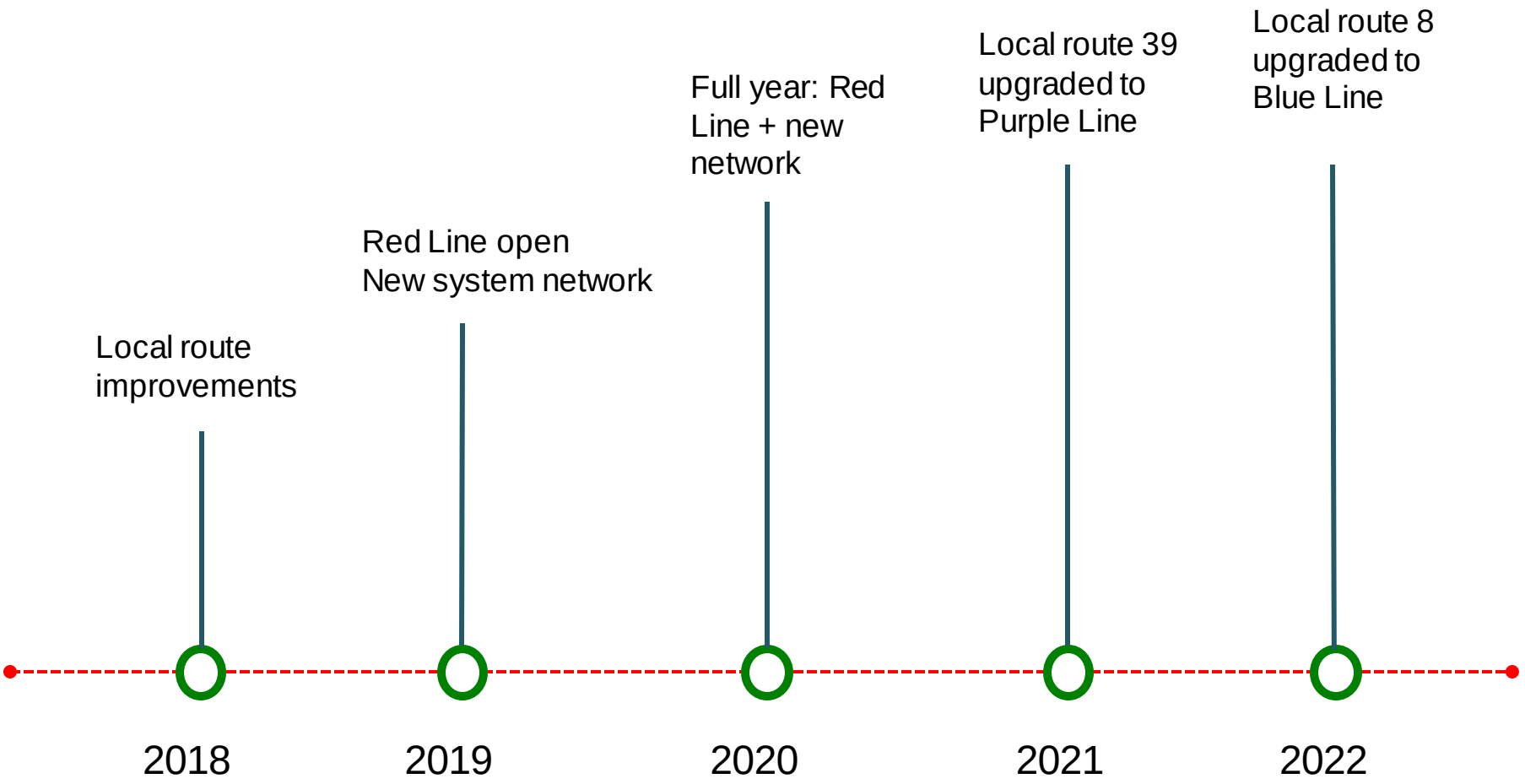
# Blue Line Rapid Transit

May 2018

# MARION COUNTY TRANSIT PLAN








# ANTICIPATED TIMELINE

# RAPID TRANSIT IS FAST

# RAPID TRANSIT IS FREQUENT

# RAPID TRANSIT IS COMFORTABLE

# BLUE LINE – SEGMENT BREAKDOWN

# OVERVIEW: BLUE LINE

- Upgrade Route 8
- Approx. 20 miles
- Bus arriving every 10 mins in peak, service for 20 hours/ day
- 60ft battery electric buses
- Anticipated opening 2022

# Benefits: Infrastructure

- Improvements to:
  - Sidewalks
  - Drainage
  - Pavement
  - Traffic Signals

# Benefits: Travel Time & Ridership

- Airport to Downtown – 45 min → 30 min
- Irvington to Downtown – 22 min → 13 min
- Washington Square Mall to Downtown – 40 min → 25 min

# Project Schedule

2012/2013: Alternatives Analysis

2016: Adoption in Marion County Transit Plan Referendum

2018: Design Consultant Selected

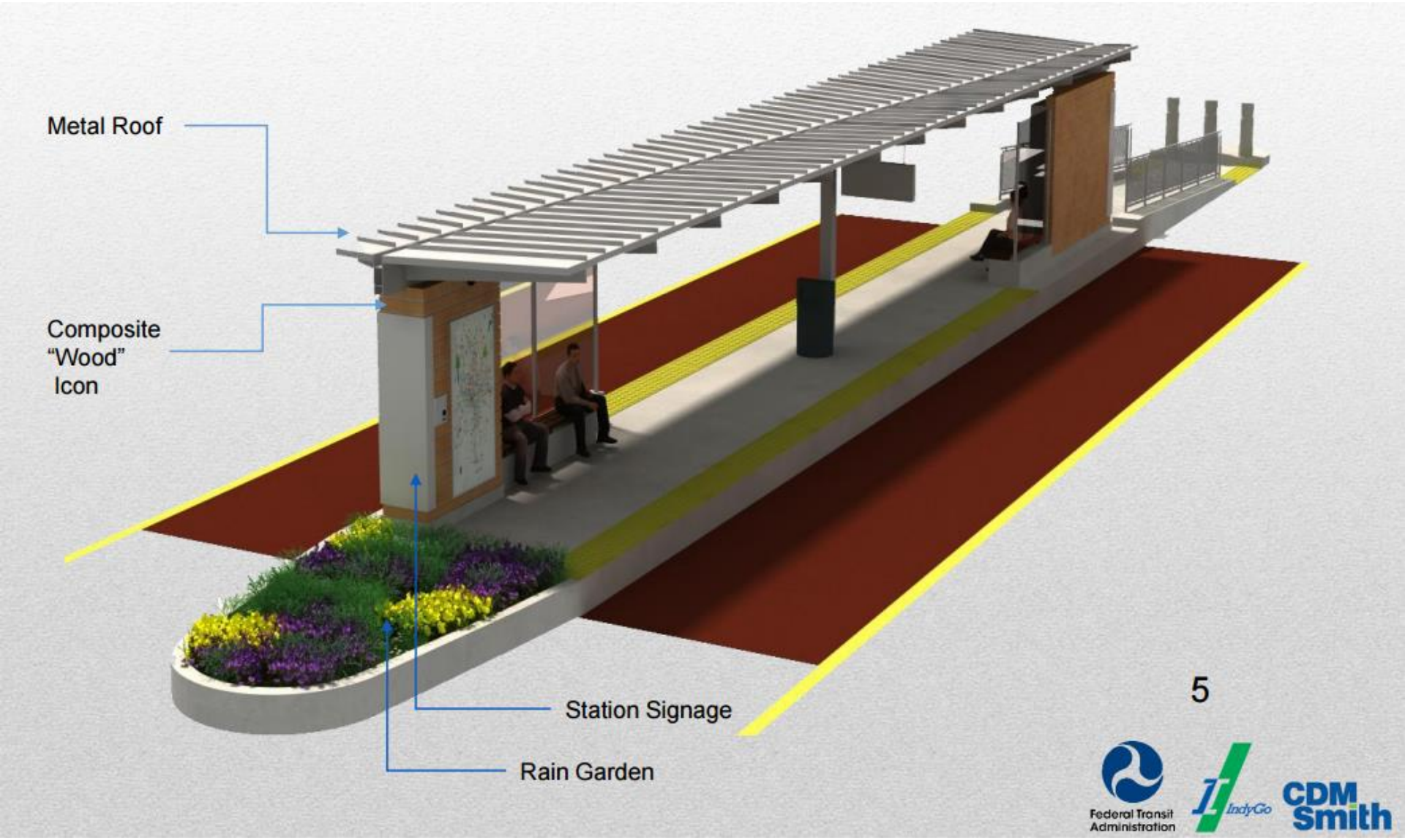
April 2018: Initial Design Corridor Advisory Committees

May/June 2018: Initial Design Public Meetings Grant

August 2018: Small Stars Grant Application

2020/2021: Construction

# CONCEPTUAL STATION DESIGN: CENTER





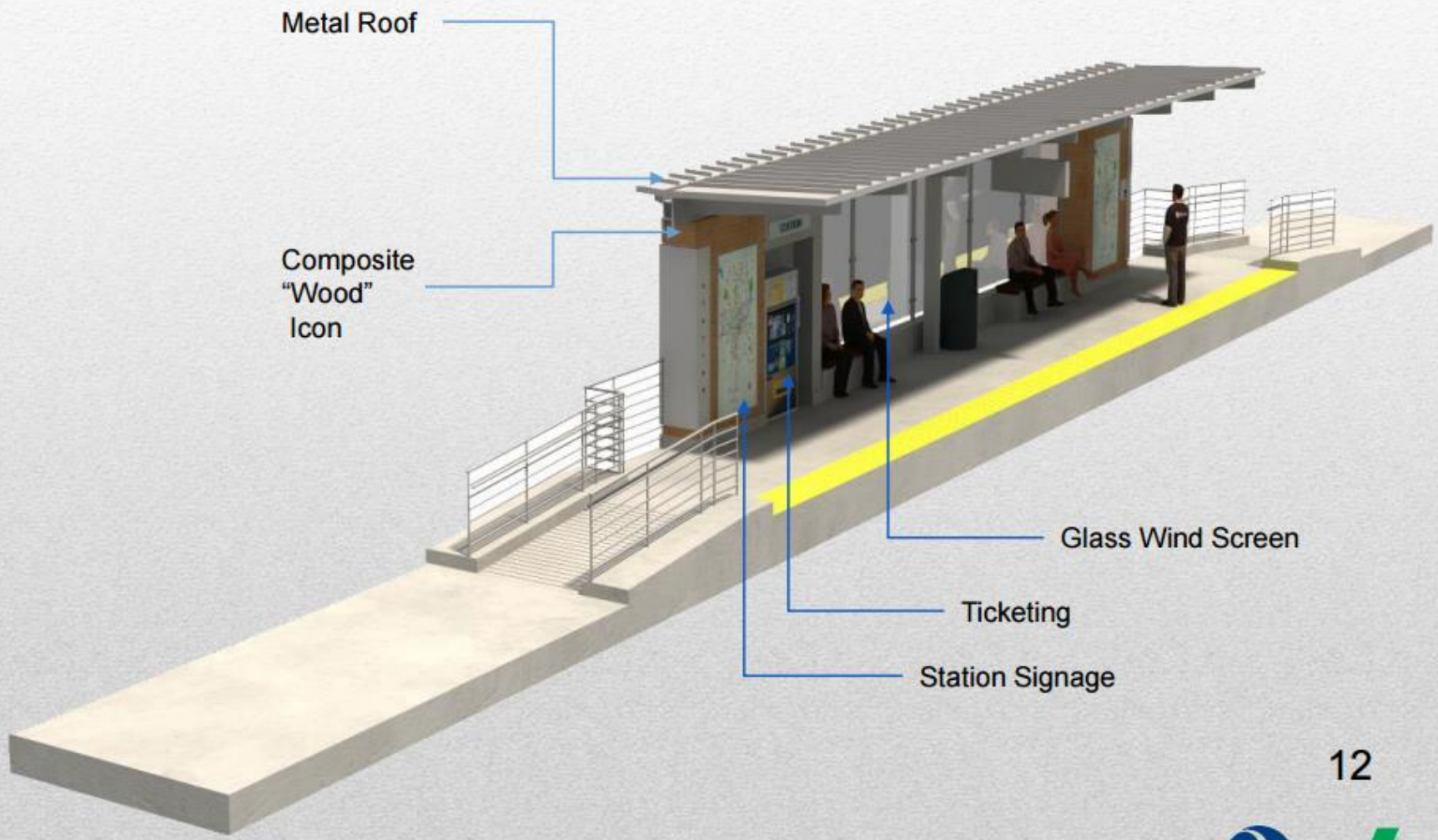

Federal Transit Administration

IndyGo

CDM Smith

# RENDERING: CHILDREN'S MUSEUM

# CONCEPTUAL STATION DESIGN: CURBSIDE






Federal Transit Administration
IndyGo
CDM Smith

# RENDERING: FOUNTAIN SQUARE

# WHAT IS TOD?

## TRANSIT ORIENTED DEVELOPMENT

**TOD is a way of building neighborhoods around quality public transit.** These neighborhoods share key qualities.

**Mixed-Use:** Homes, shops, and jobs are all close to each other and close to a transit stop.

**Walkability:** Streets have plenty of sidewalks and connect frequently, making it easy to get around by foot or bike.

**Density:** Homes and businesses are close together. Entrances are along the sidewalk, while parking is usually in back.

## TOD TYPOLOGIES

There are four types of TOD neighborhoods, each with its own strategies and challenges. These are examples of how development should be guided at different transit stops.

**CBD**
CENTRAL BUSINESS DISTRICT

Dense core of the city with high-rise buildings and active public spaces.


**DC**
DISTRICT CENTER

Cultural and commercial hub for many neighborhoods.


**CC**
COMMERCIAL CENTER

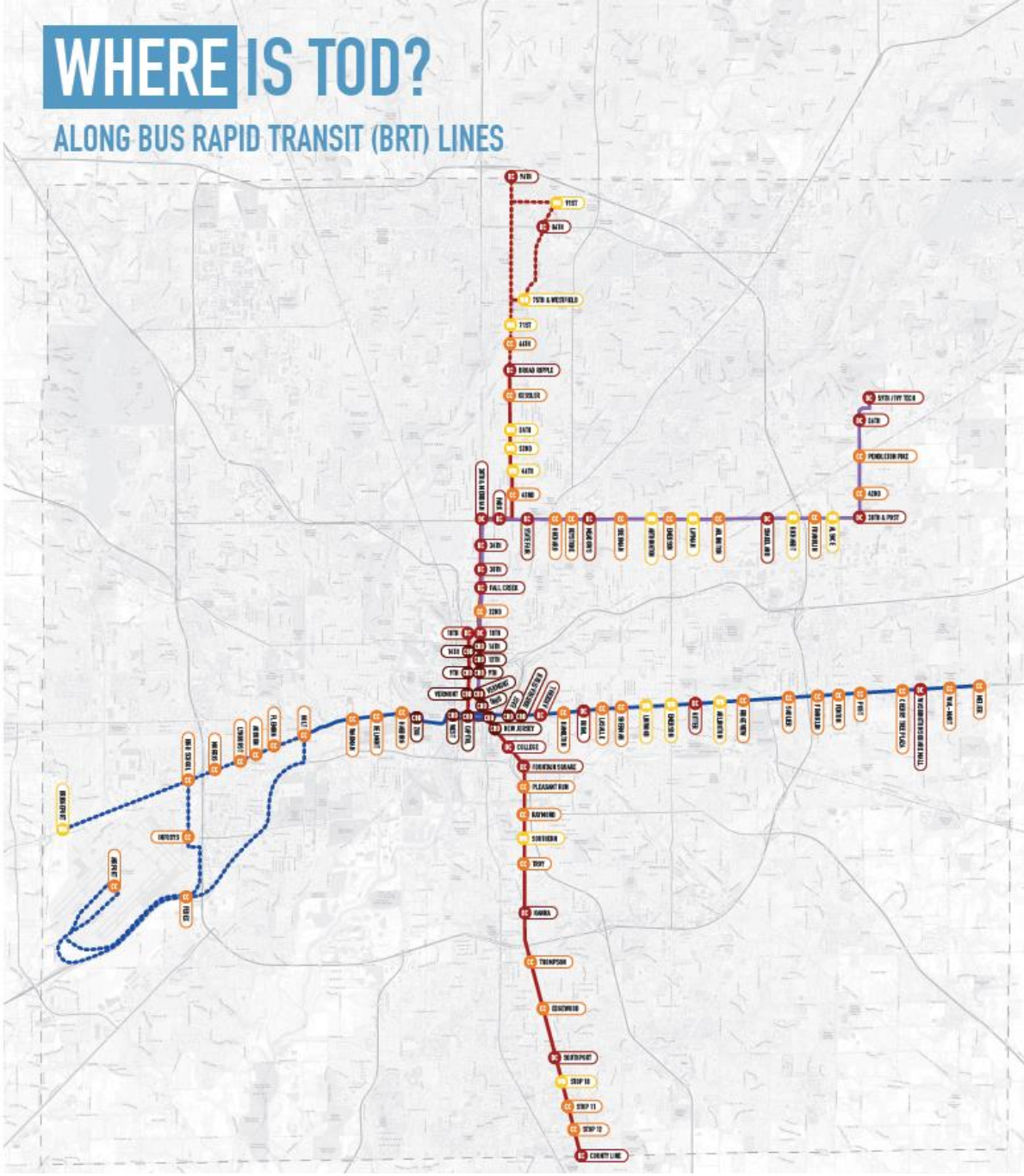
Convert malls and strip commercial to mixed-use neighborhoods.


**WN**
WALKABLE NEIGHBORHOOD

Walkable neighborhood with mixed-use center at transit stop.

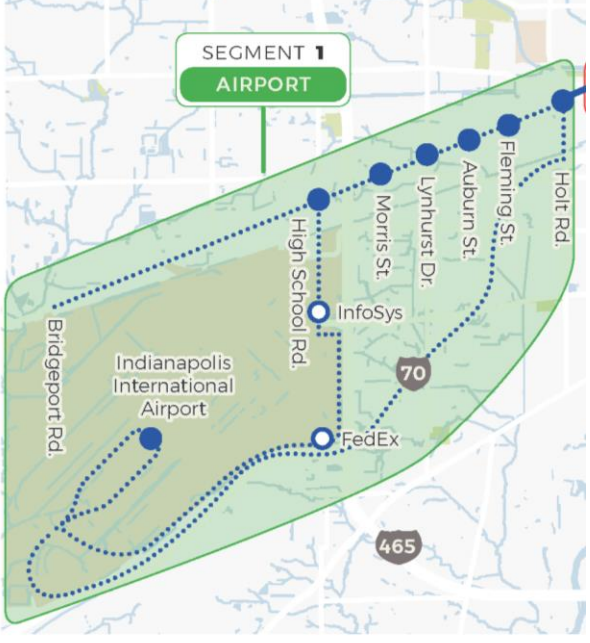

# WHERE IS TOD?

## ALONG BUS RAPID TRANSIT (BRT) LINES

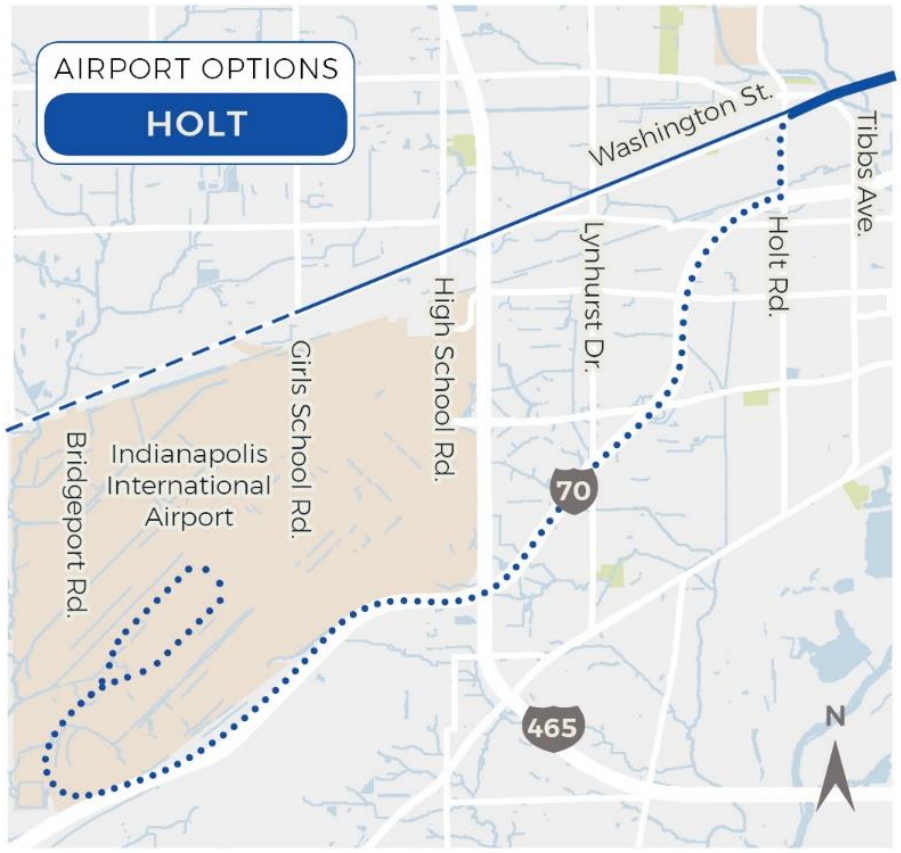


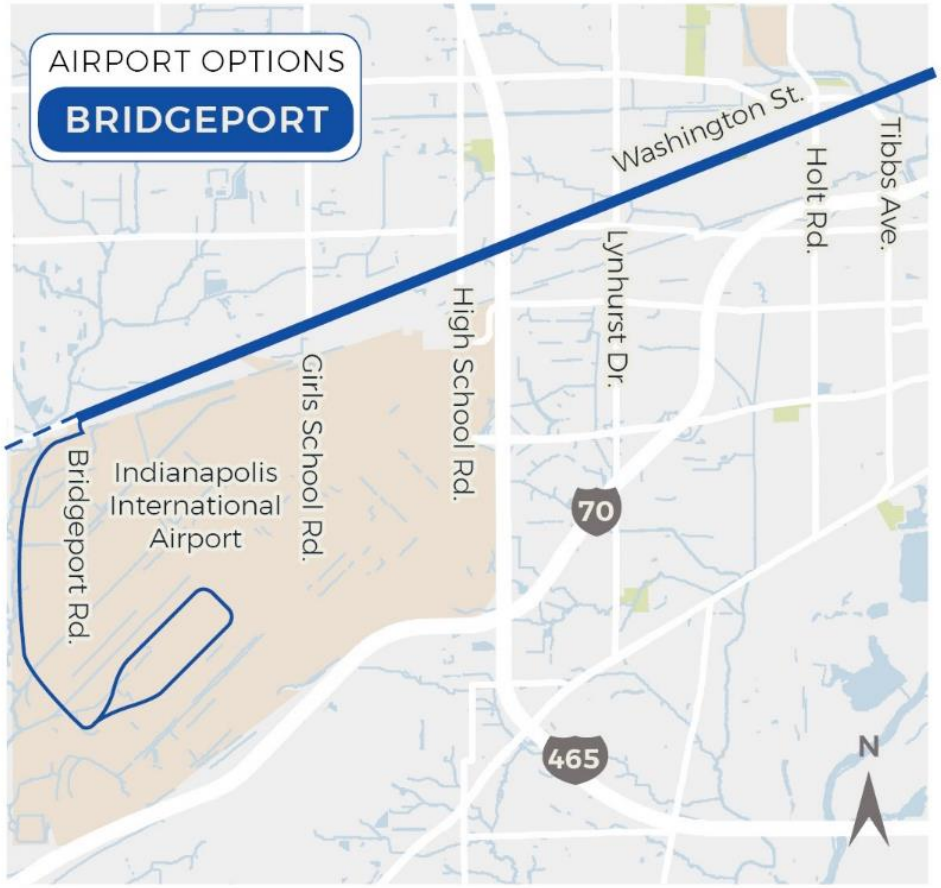

# SEGMENT 1– CHALLENGES

- Route
- Infrastructure Condition
- Low-Density Land Use
- Access Control
- Future Extensions



# SEGMENT 1: ROUTING ALTERNATIVES




**BRT SERVICE - 10 MINUTE FREQUENCY**

**BRT SERVICE - 20 MINUTE FREQUENCY**

**EXPRESS SERVICE - 20 MINUTE FREQUENCY**

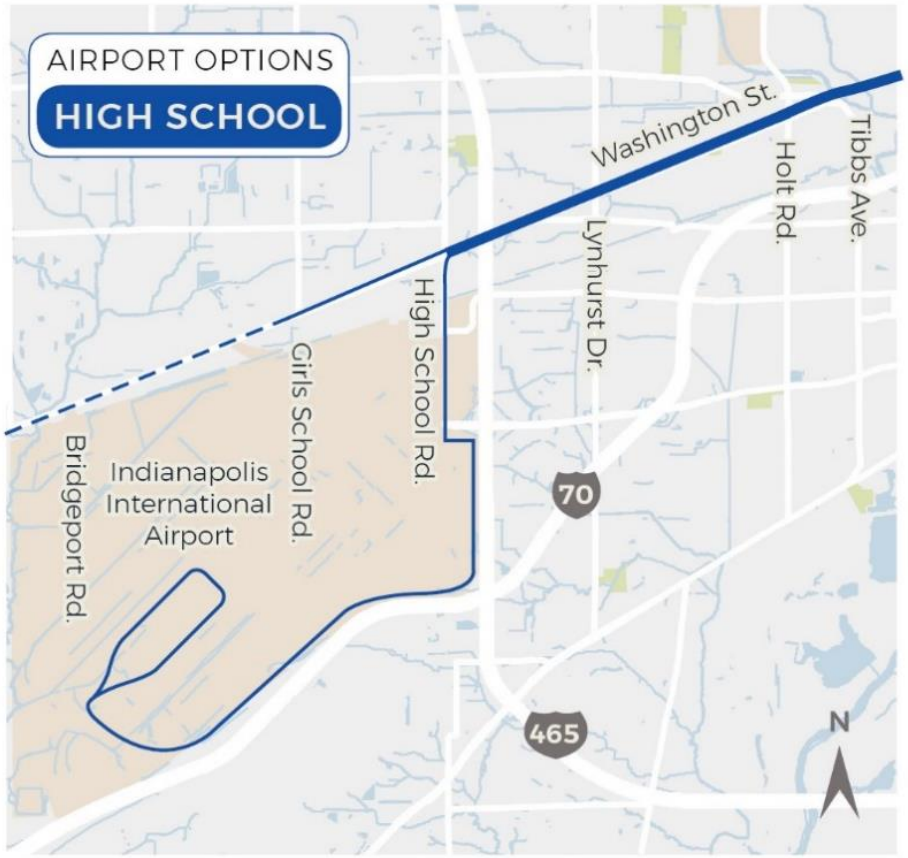
**FUTURE EXTENSION - 20 MINUTE FREQUENCY**

**BRT SERVICE - 10 MINUTE FREQUENCY**

**BRT SERVICE - 20 MINUTE FREQUENCY**

**FUTURE EXTENSION - 20 MINUTE FREQUENCY**

# SEGMENT 1: ROUTING ALTERNATIVES





**BRT SERVICE - 10 MINUTE FREQUENCY**

**BRT SERVICE - 20 MINUTE FREQUENCY**

**FUTURE EXTENSION - 20 MINUTE FREQUENCY**

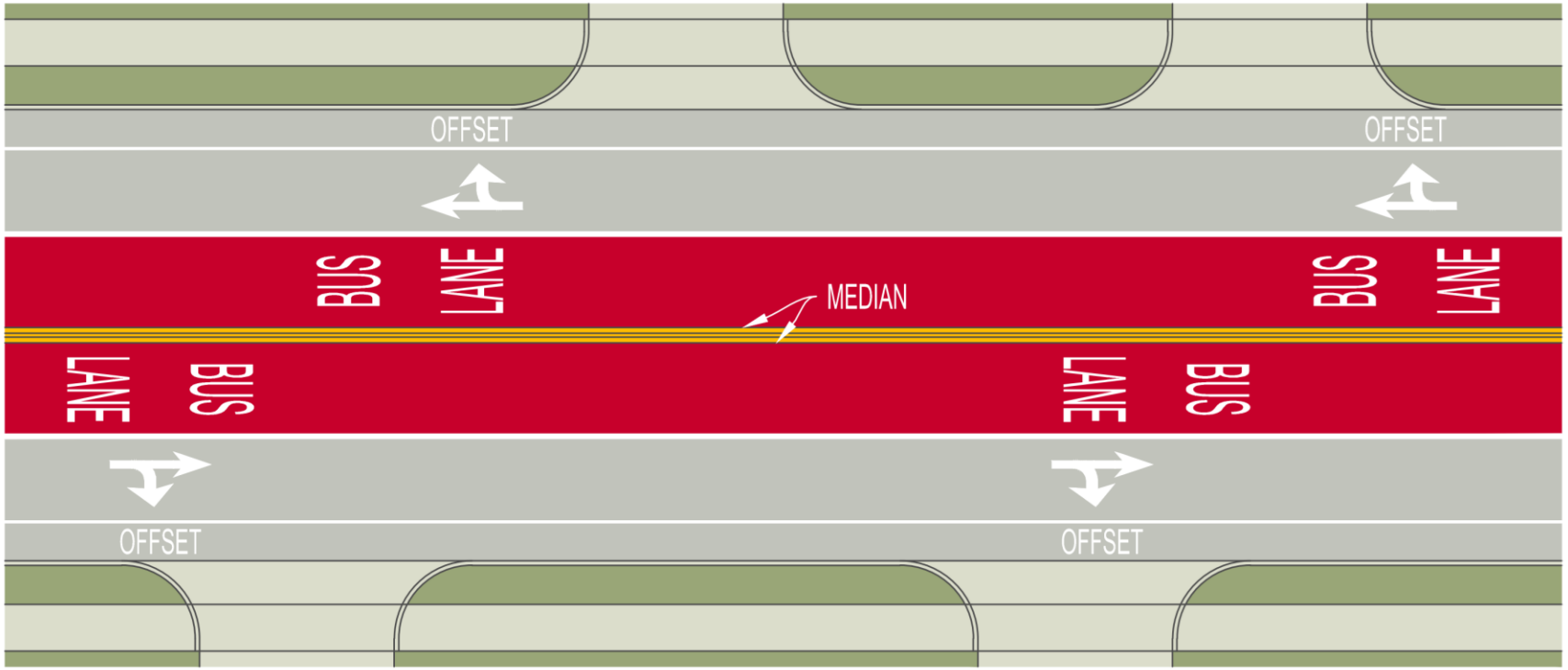
**BRT SERVICE - 10 MINUTE FREQUENCY**

**FUTURE EXTENSION - 10 MINUTE FREQUENCY**


# Traffic Analysis

- Detailed Traffic Analysis in progress
- Some increased delay expected in some segments, but limited to certain thresholds (LOS D)

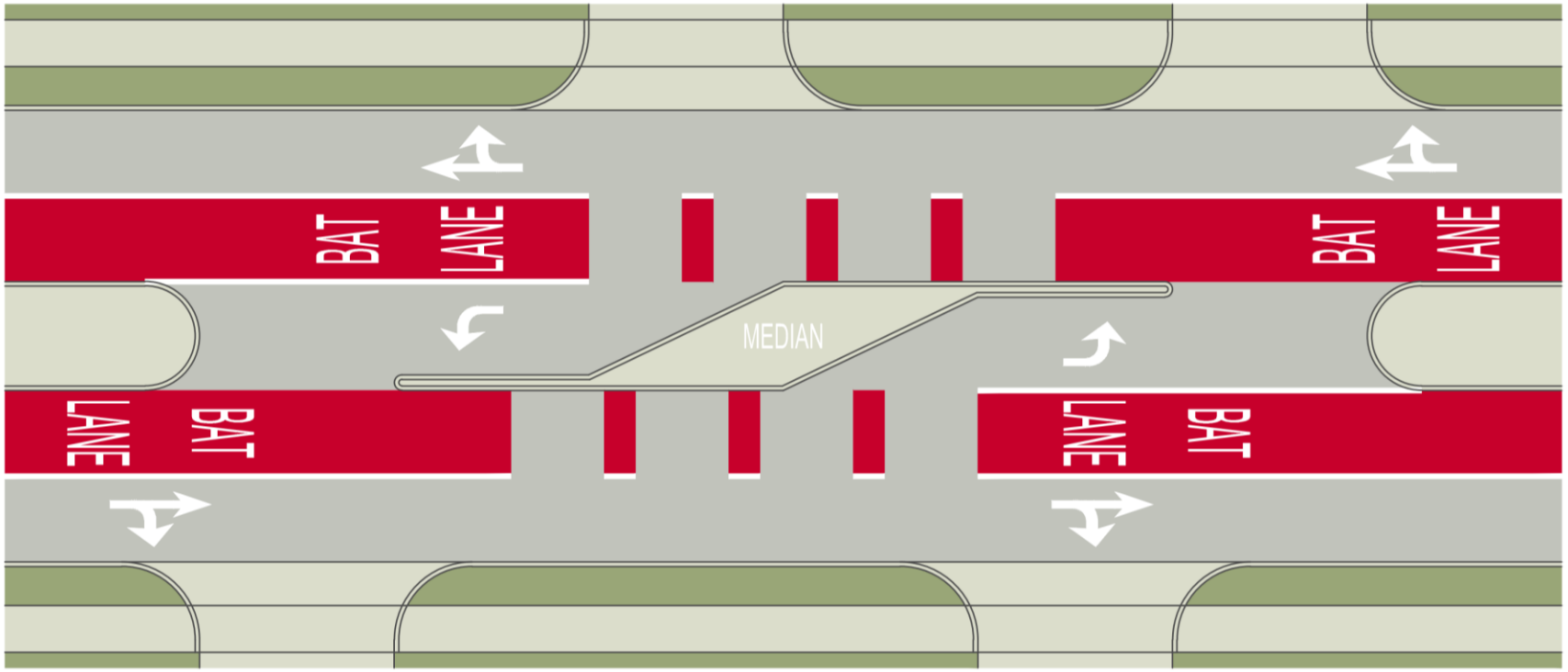
# SEGMENT 1: LANE OPTIONS




Center Exclusive


# Median Exclusive: Animation

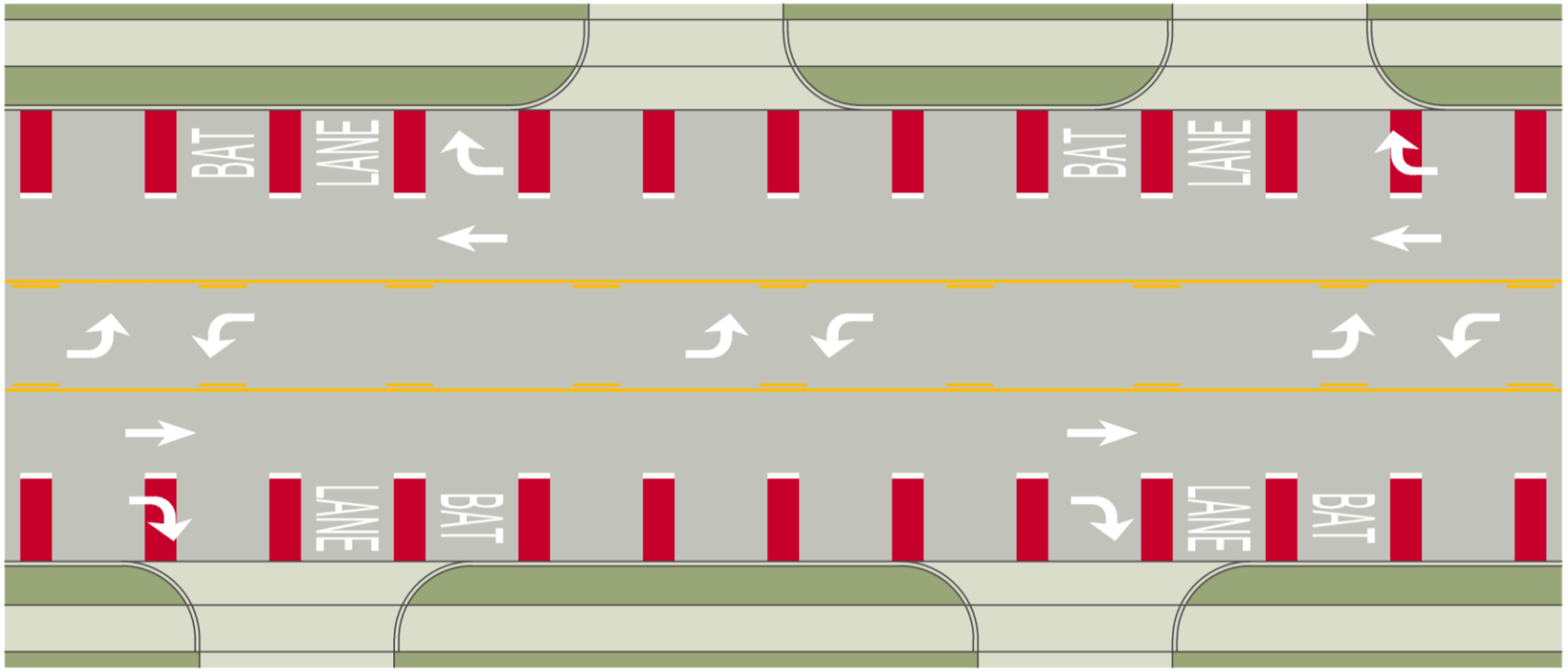
# SEGMENT 1: LANE OPTIONS



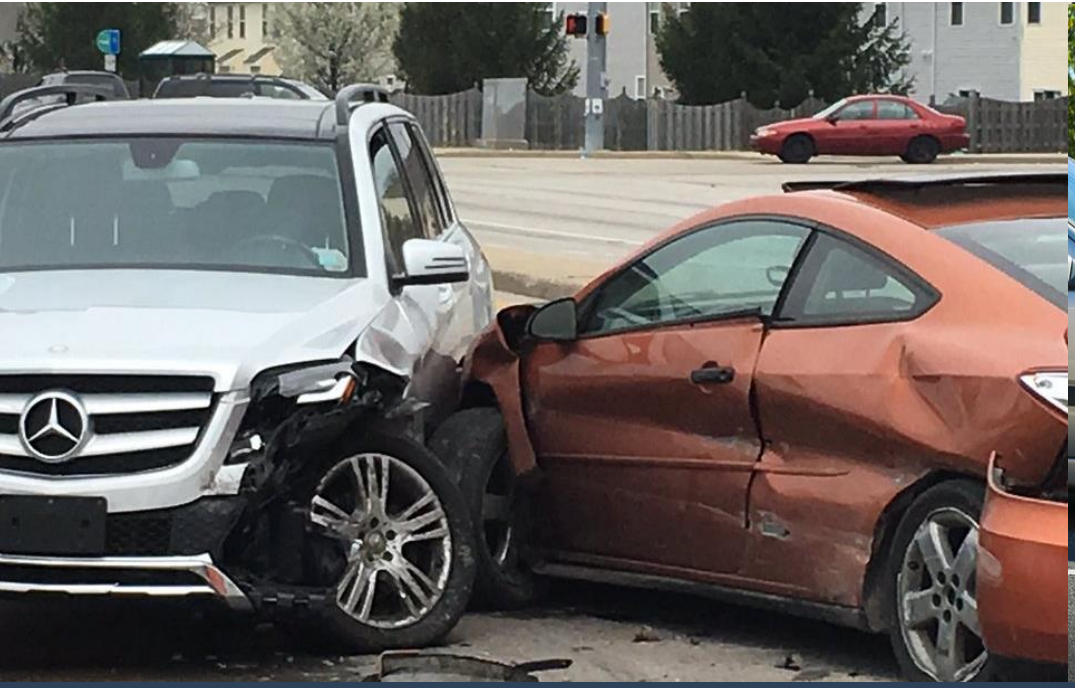

Left BAT

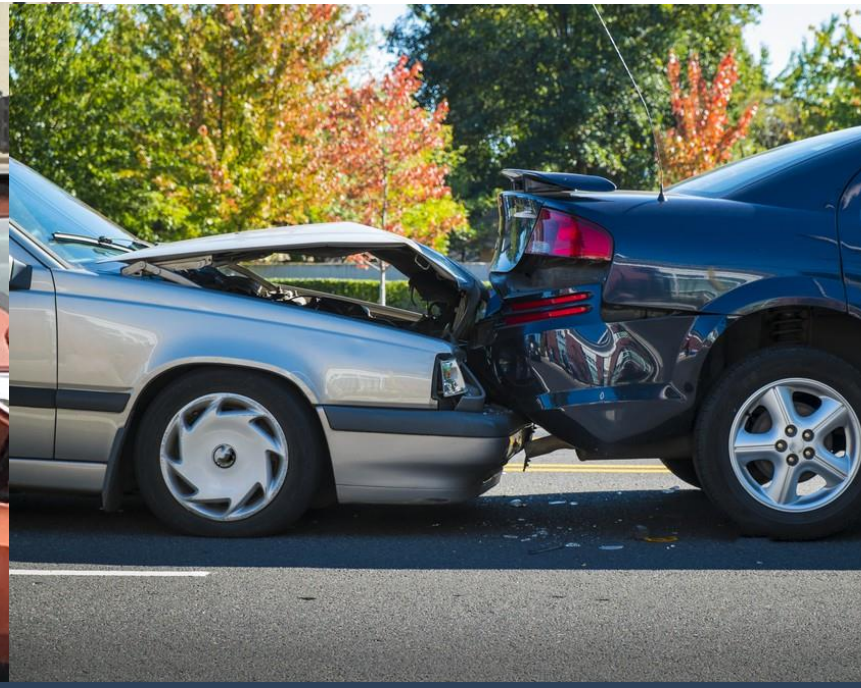
# Left lane bat Animation

# SEGMENT 1: LANE OPTIONS




Right BAT





# LEFT TURNS AND U-TURNS: SAFETY BENEFITS

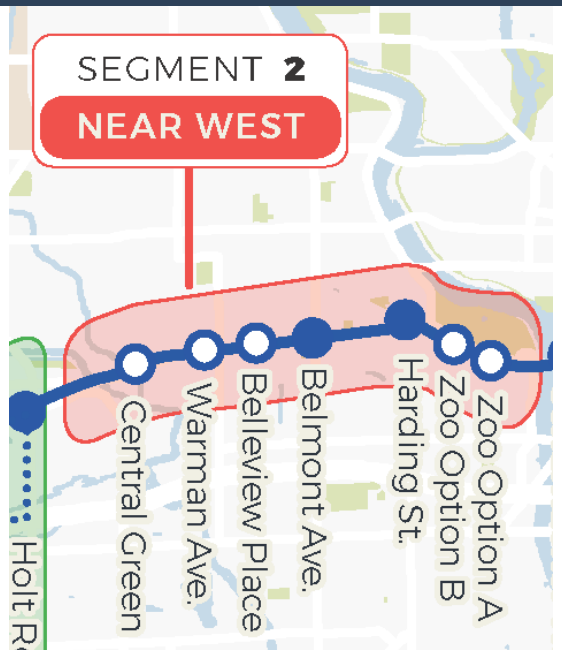
- Washington Street inside I-465 is a high-crash corridor
- 1,914 crashes, 10 fatalities, and 613 injuries from 2015-2017
- 27% of crashes are the types that could be significantly reduced or eliminated by limiting left turns

# SEGMENT 1

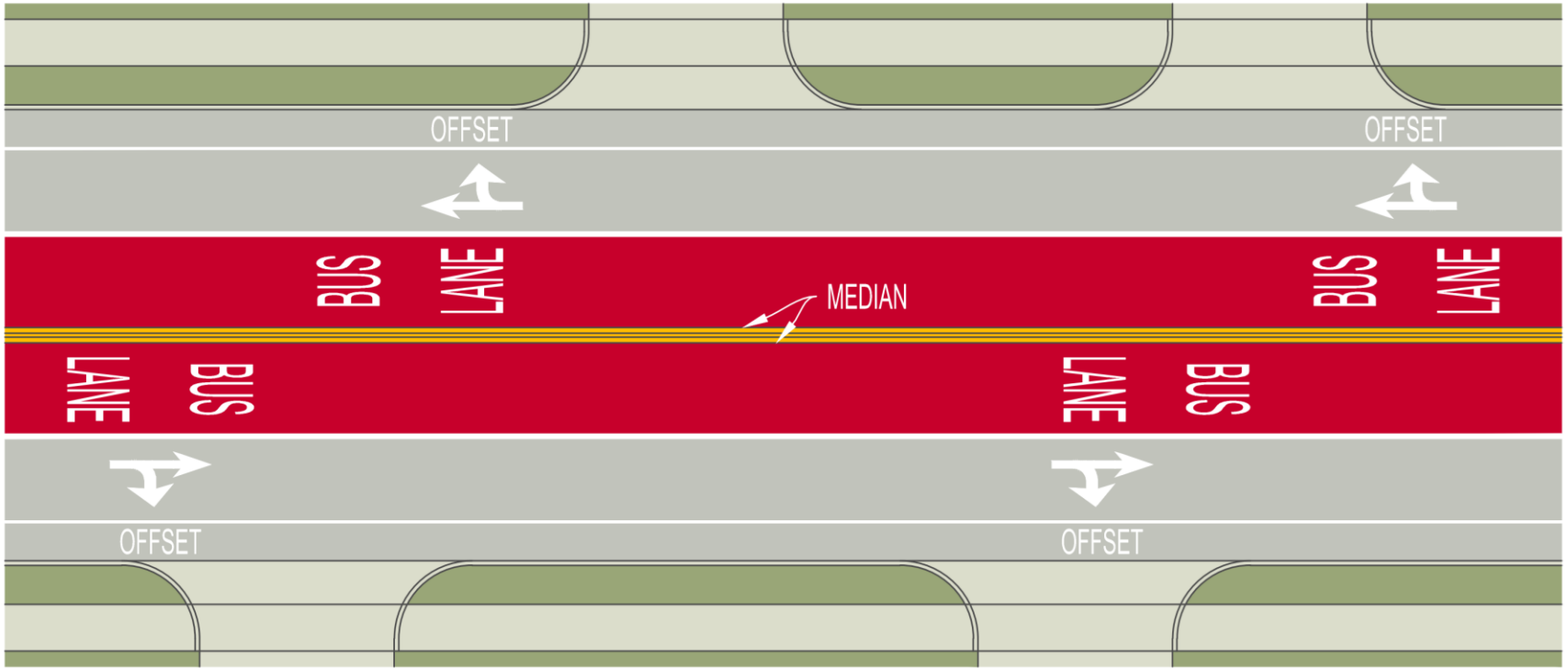
| Center Exc. | Left BAT* | Right BAT | Evaluation |
|---|---|---|---|
| + | – | × | Safety |
| + | – | × | Bus Speed |
| – | – | – | Traffic Congestion |
| × | – | + | Auto Access |
| + | + | × | Economic Development |
| $47.1 M | $48.3M | $56.5M | Cost |


# SEGMENT 2– CHALLENGES

- Infrastructure Condition
- Railroad Underpasses
- Interface w/ Ambrose Development
- Station Siting

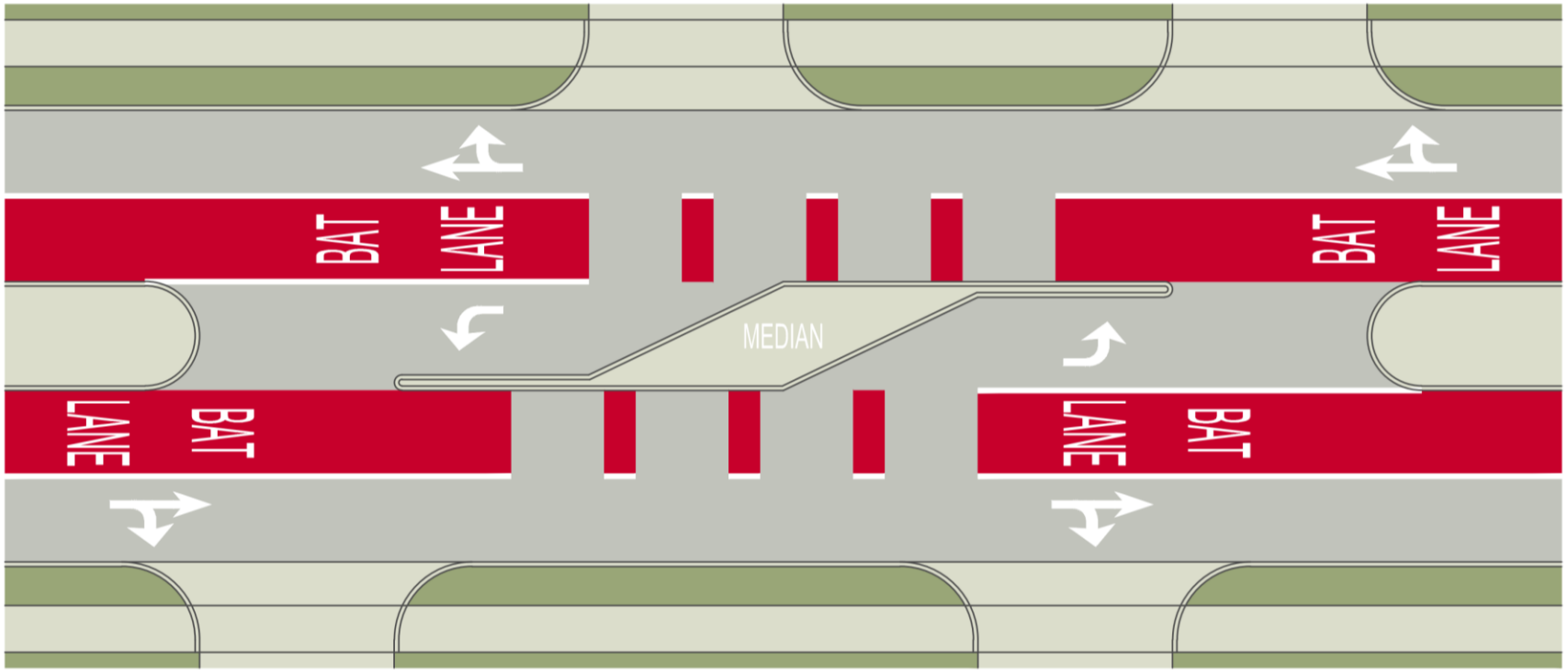


# SEGMENT 2: LANE OPTIONS



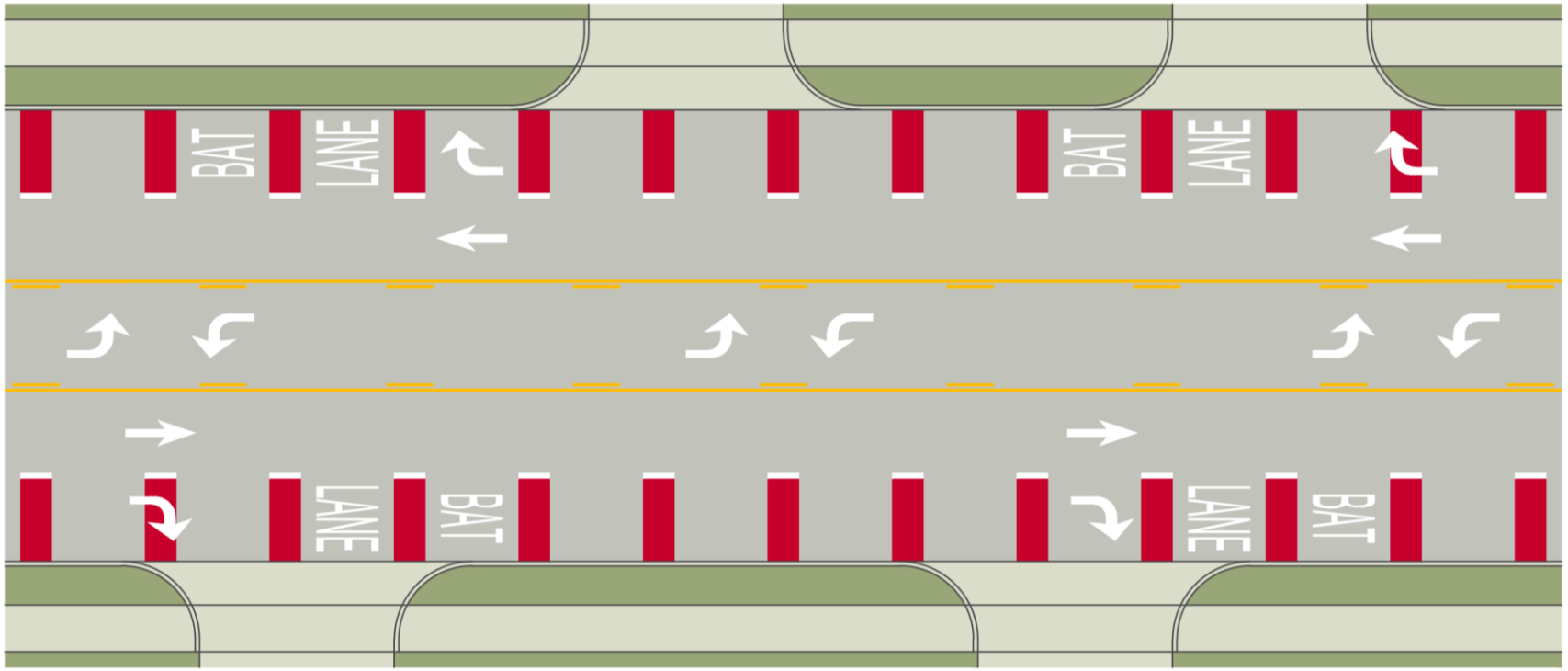

Center Exclusive

# SEGMENT 2: LANE OPTIONS




Left BAT

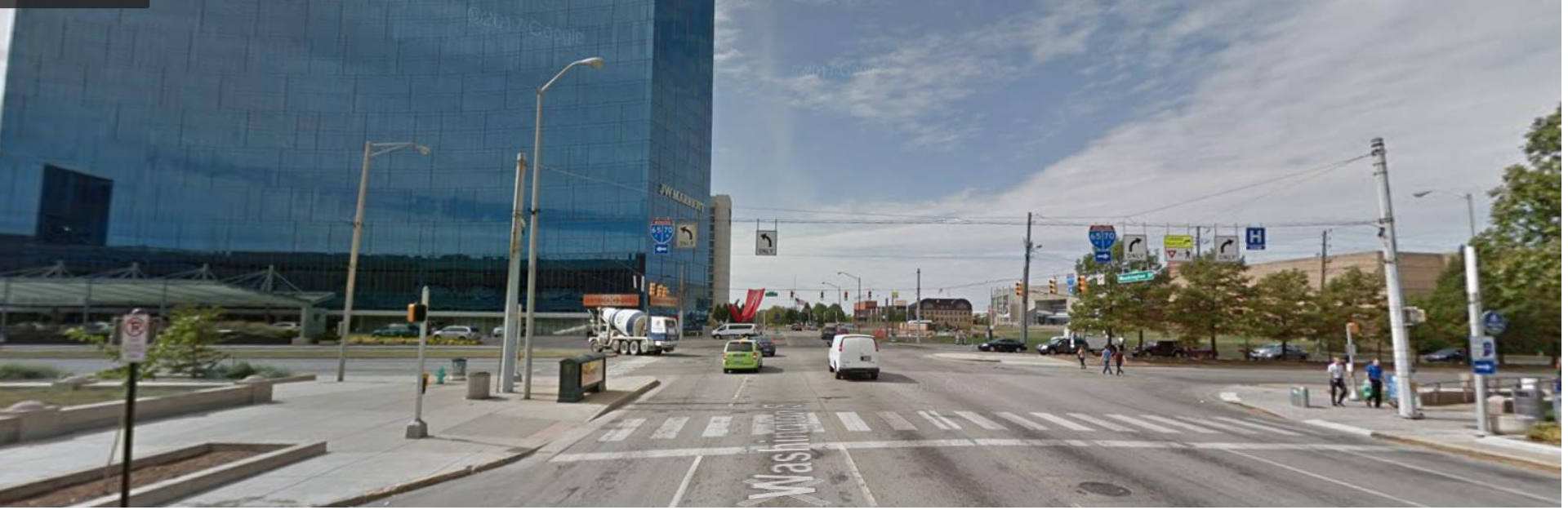
# SEGMENT 2: LANE OPTIONS




Right BAT

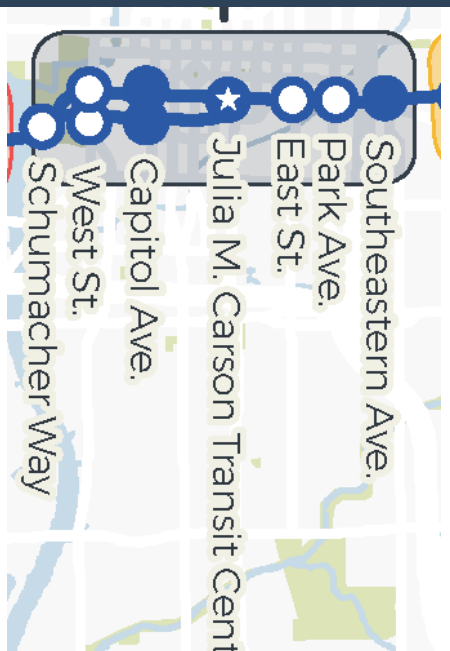
# SEGMENT 2

| Center Exc. | Left BAT* | Right BAT | Evaluation |
|---|---|---|---|
| + | – | × | Safety |
| + | – | × | Bus Speed |
| – | – | – | Traffic Congestion |
| × | – | + | Auto Access |
| + | + | × | Economic Development |
| $32.5 M | $32.6M | $36.9M | Cost |

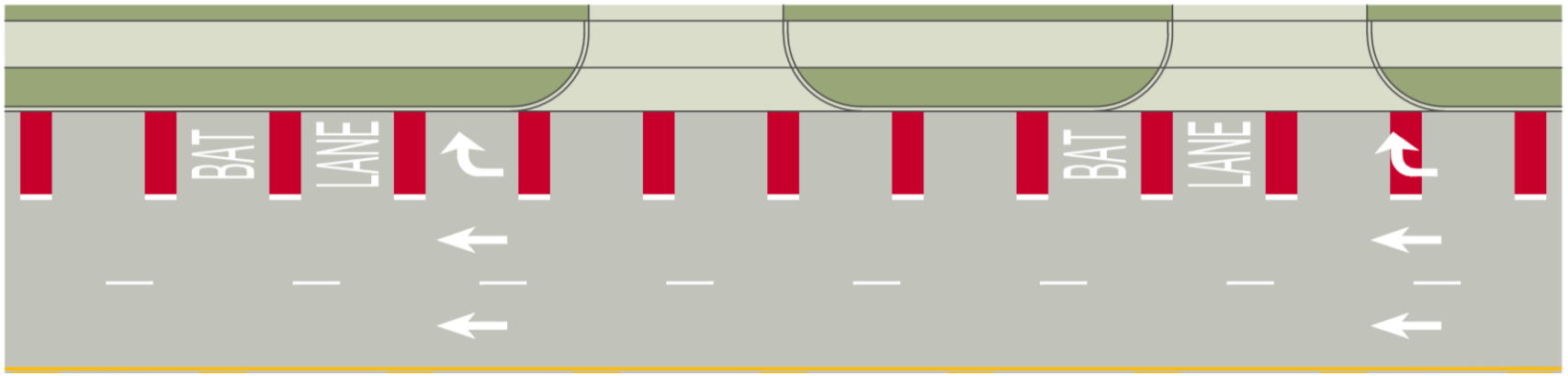


# SEGMENT 3– CHALLENGES

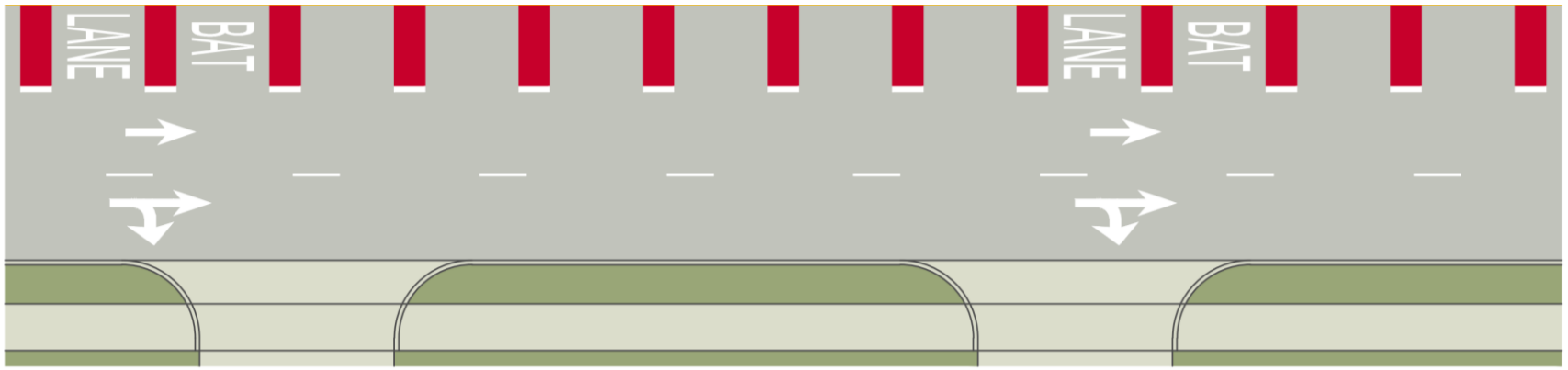
- Traffic Congestion
- Turning Conflicts
- Station siting
- $23.2M



# SEGMENT 3: RECOMMENDATION

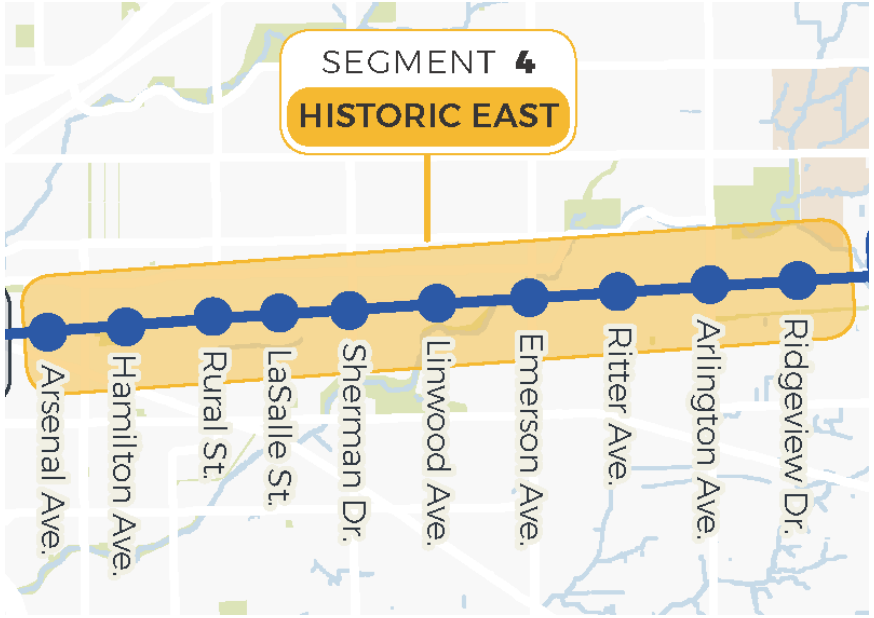



BAT Lanes

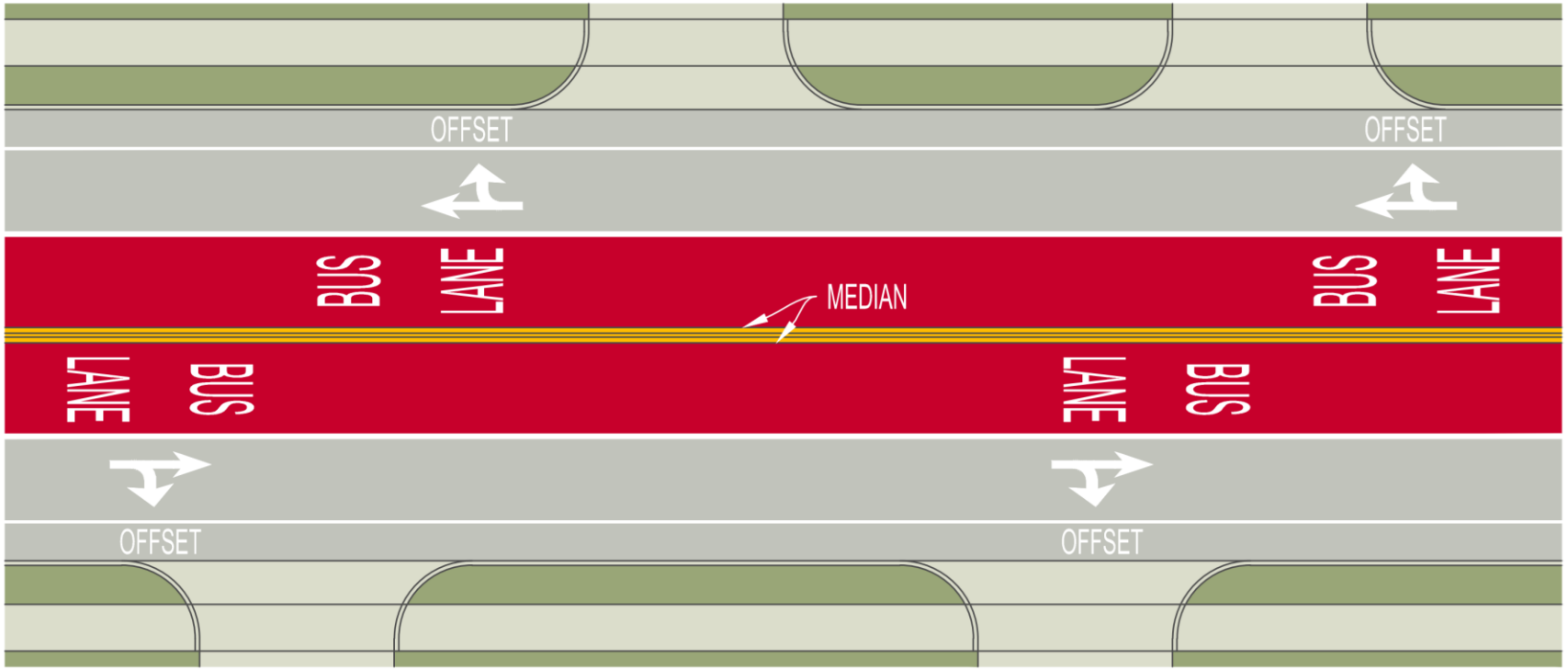



# SEGMENT 4– CHALLENGES

- Street Width
- Historic Structures
- Power Lines

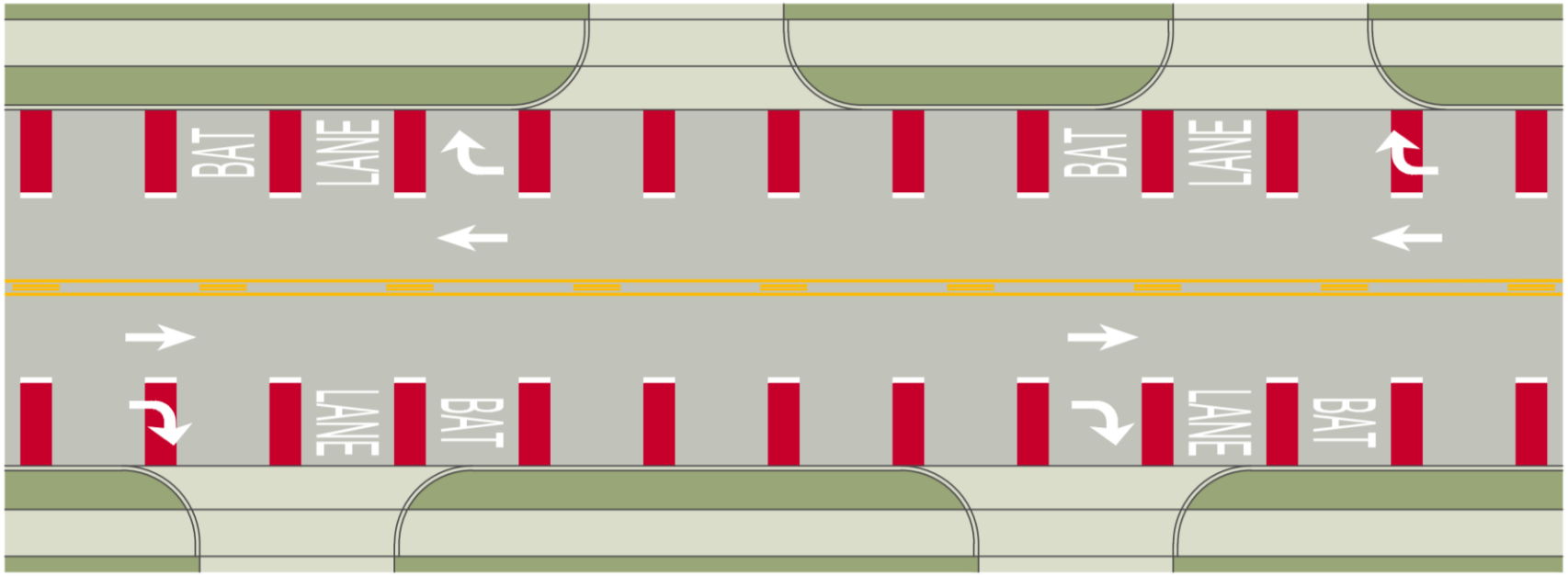


# SEGMENT 4: LANE OPTIONS




Center Exclusive

# SEGMENT 4: LANE OPTIONS



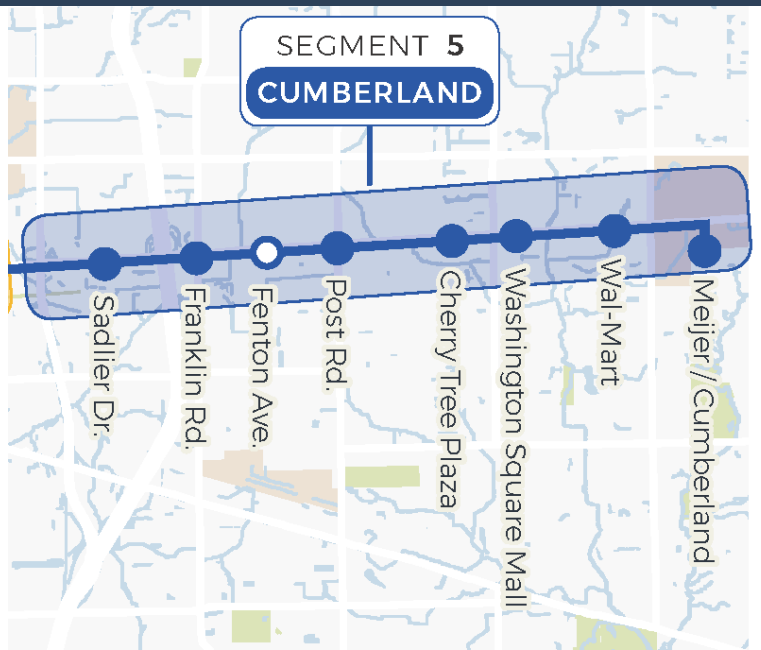

Right BAT

# SEGMENT 4

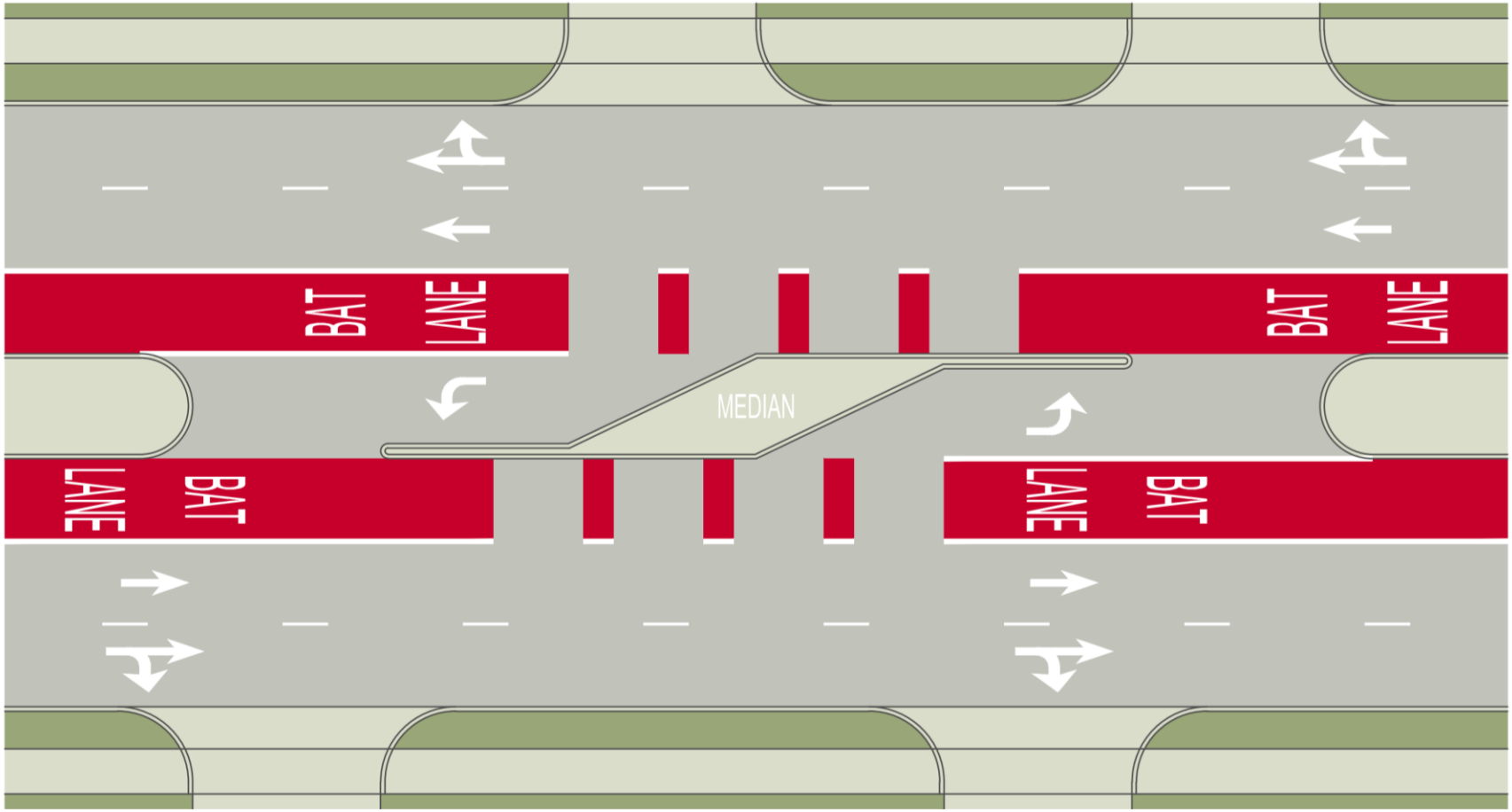
| Center Exc. | | Right BAT | Evaluation |
|---|---|---|---|
| + | | ✕ | Safety |
| + | | ✕ | Bus Speed |
| – | | – | Traffic Congestion |
| ✕ | | ✕ | Auto Access |
| + | | ✕ | Economic Development |
| $51.3 M | | $59.0M | Cost |


# SEGMENT 5– CHALLENGES

- Excessive Street Width
- Access Control
- Walkability
- Fenton Station?

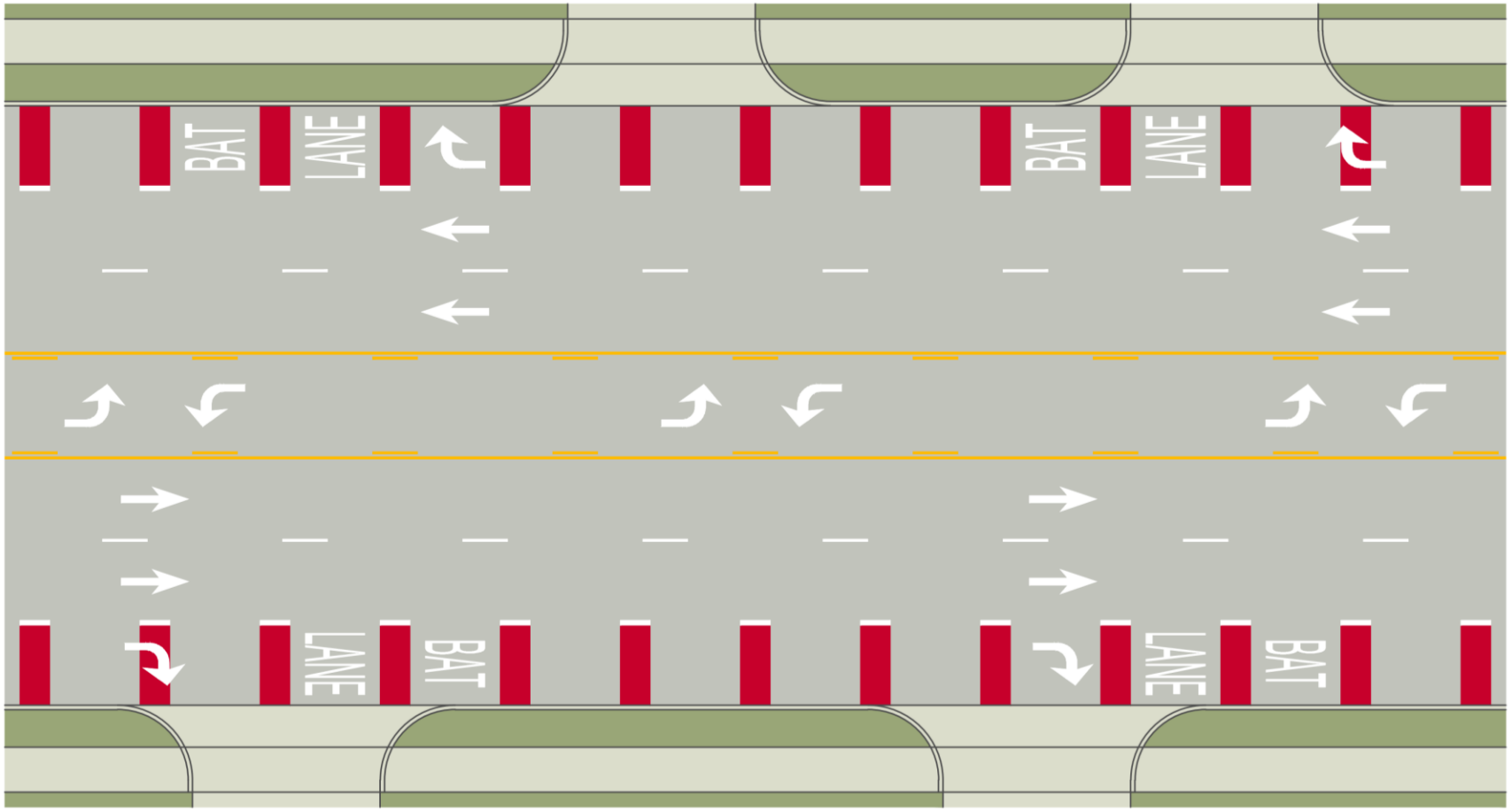


# SEGMENT 5: LANE OPTIONS




Left BAT (Channelized)

# SEGMENT 5: LANE OPTIONS




Right BAT

# SEGMENT 4

| | Left BAT* | Right BAT | Evaluation |
|---|---|---|---|
| | – | ✗ | Safety |
| | – | ✗ | Bus Speed |
| | – | – | Traffic Congestion |
| | – | + | Auto Access |
| | + | ✗ | Economic Development |
| | $40.7M | $47.4M | Cost |


# Decision Recap

- Routing on West End/Funding
- Station Locations
- Lane Configurations