

# **US-1/SUNRISE BOULEVARD CORRIDOR STUDY FROM SEARSTOWN TO GATEWAY**



Florida Department of Transportation

District Four

Planning & Environmental Management Office

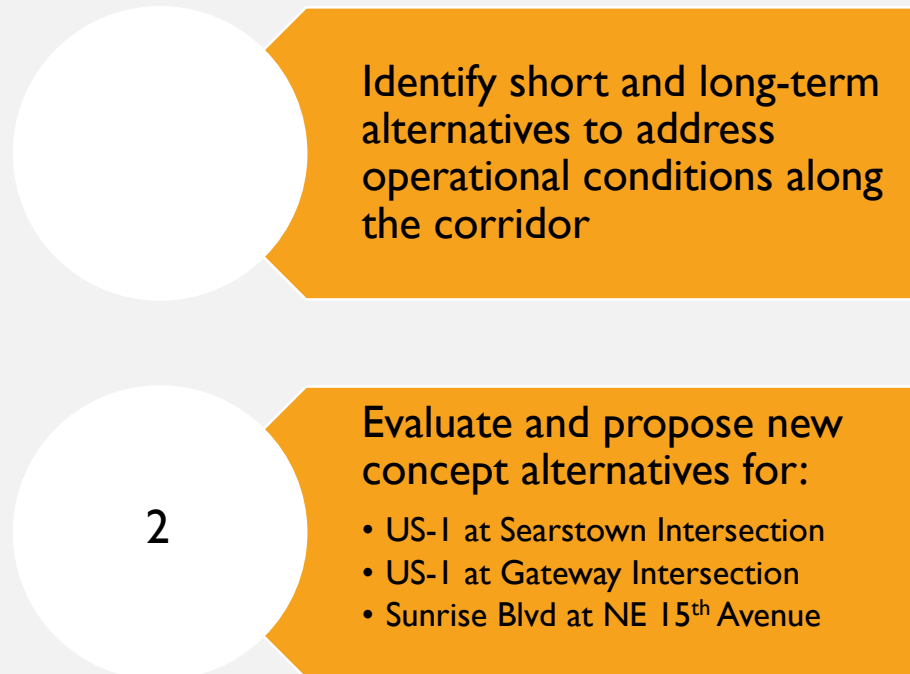
# WHY WE ARE HERE

- Provide an overview of the Corridor Study recommendations
- Gather feedback on next steps

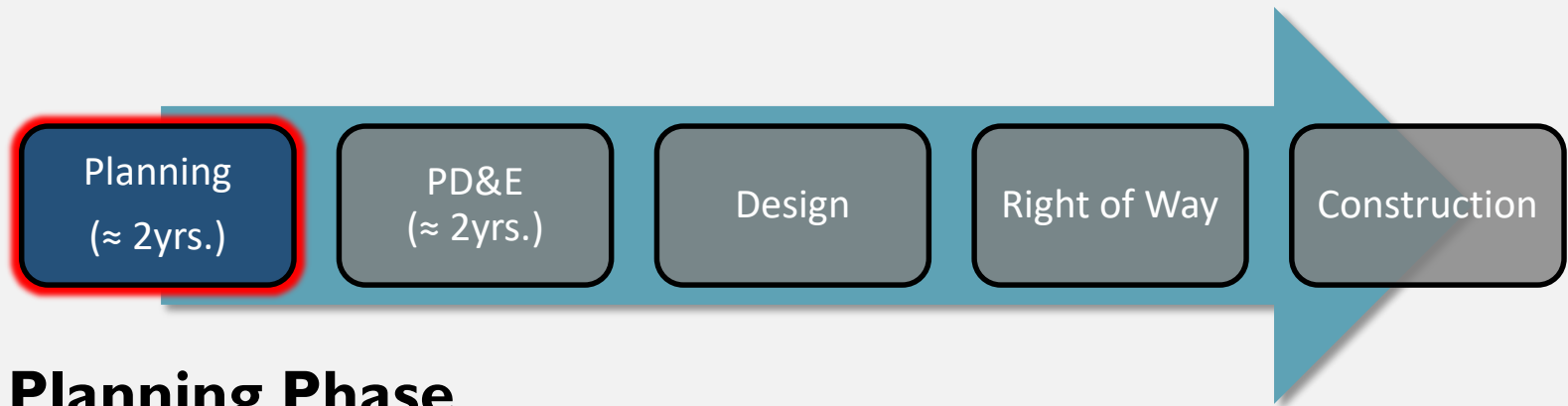
# PROJECT OBJECTIVE

Address congestion and safety concerns along Sunrise Blvd corridor from Searstown to Gateway intersections.

## Project Goals



# PROJECT DEVELOPMENT PROCESS



## □ Planning Phase

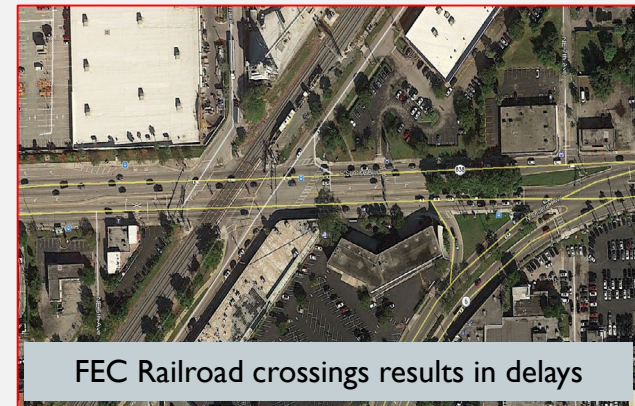
- Identify short term and long term needs for a 20 year horizon
- Develop preliminary design concepts, cost estimates, and identify potential impacts for further study
- Identify course of action and project programming

# PROJECT LOCATION



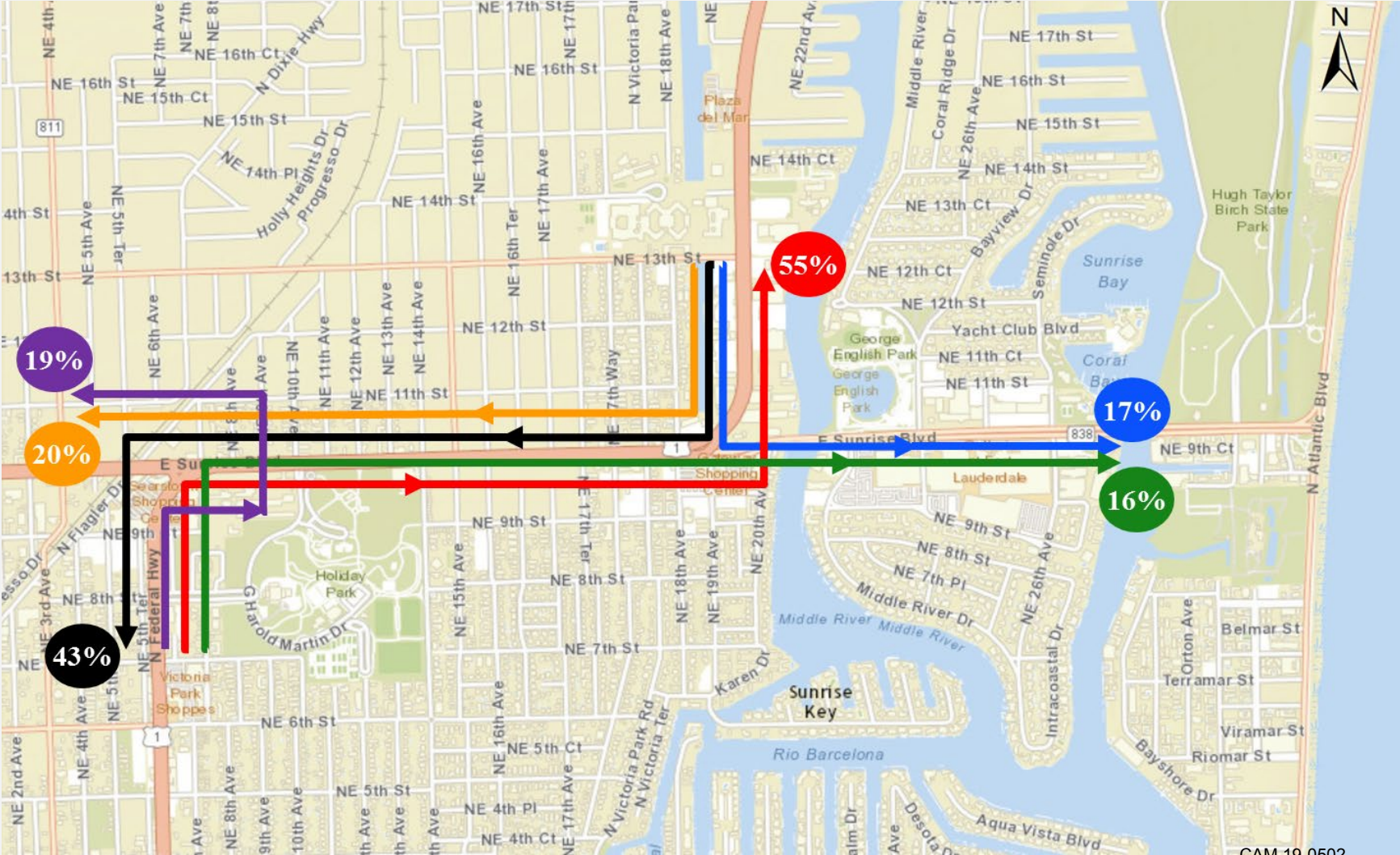
# PROJECT BACKGROUND

- Sunrise Blvd is a major access route for drivers traveling north/south on US-1
- Residual delays from the railroad crossing west of Searstown intersection
- Lack of network connectivity
- Heavy EB to NB left turn movement at Gateway intersection
- Previous Efforts at Sunrise and US-1 at Gateway intersection:
  - Studied a roundabout alternative
  - Proposed short term improvements focusing on enhancing pedestrian crossings





# US | TRAFFIC MOVEMENTS DISTRIBUTION





# US-1 AT SEARSTOWN INTERSECTION

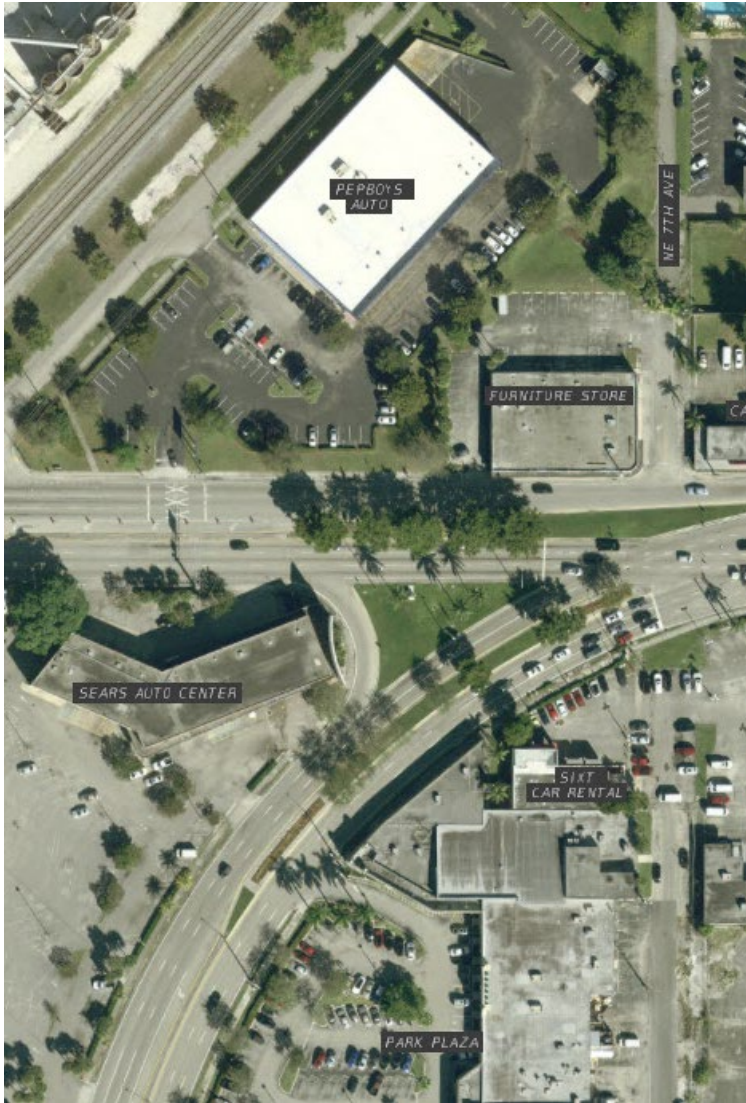
## Existing Conditions

- Overall intersection operates satisfactorily
- WB to SB left-turn movement approaching capacity with long queues

## Future No Build 2040 conditions

- Overall intersection operations fail
- WB to SB left-turn movement fails
  - Longer queues expected
- EB through queues reaching rail road tracks





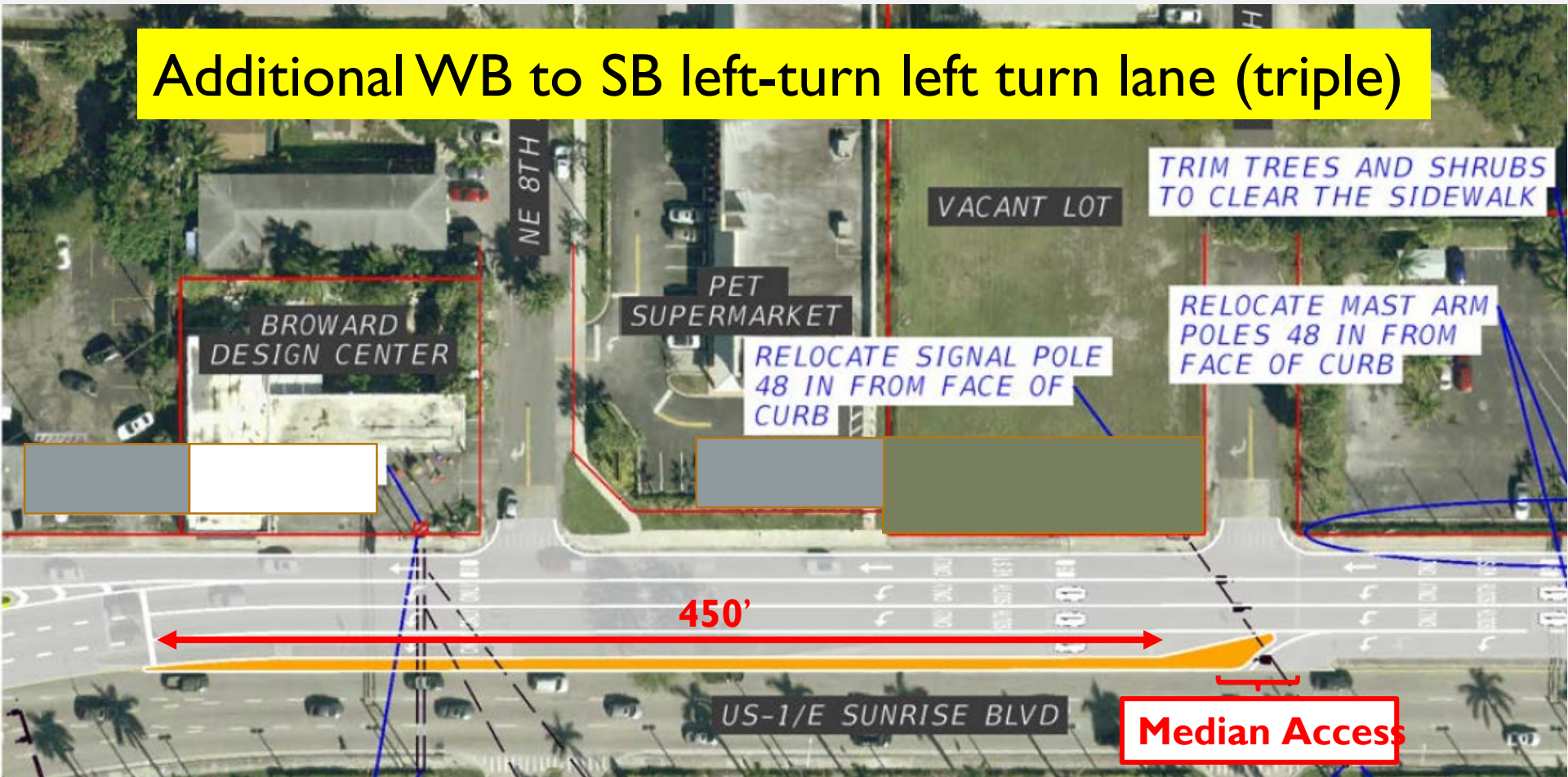
# US-1 AT SEARSTOWN INTERSECTION

## Proposed Improvements:

1. Additional WB to SB left-turn lane (triple)
2. Installation of queue detection system for EB through lanes to 'flush' queues reaching the rail road tracks.

# PROPOSED CONCEPT

Additional WB to SB left-turn left turn lane (triple)







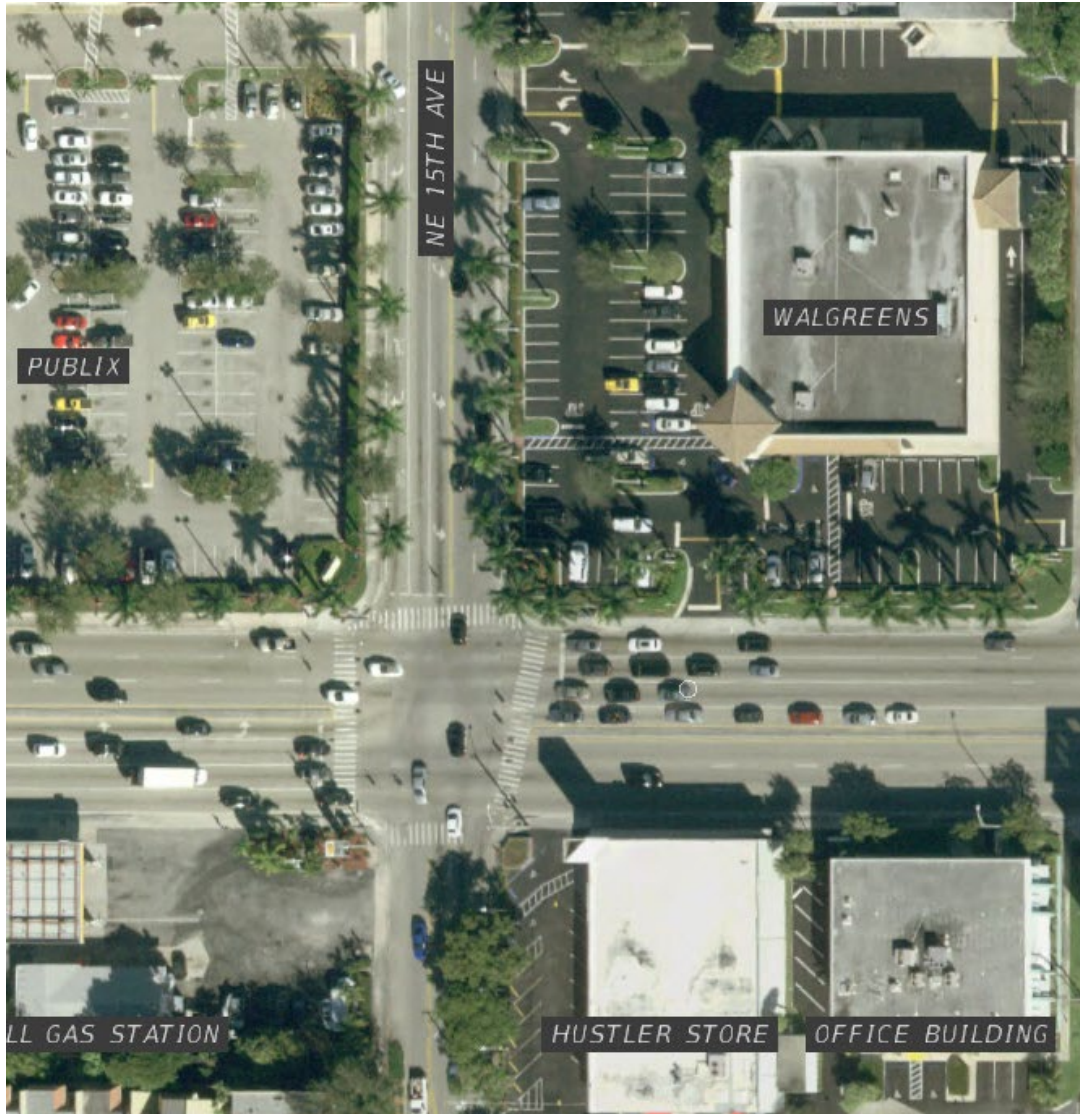
# US-1 AT SEARSTOWN INTERSECTION

## Pros:

- Provides satisfactory traffic operations
- Queue reduced by up to 28%
- No right of way required

## • Cons:

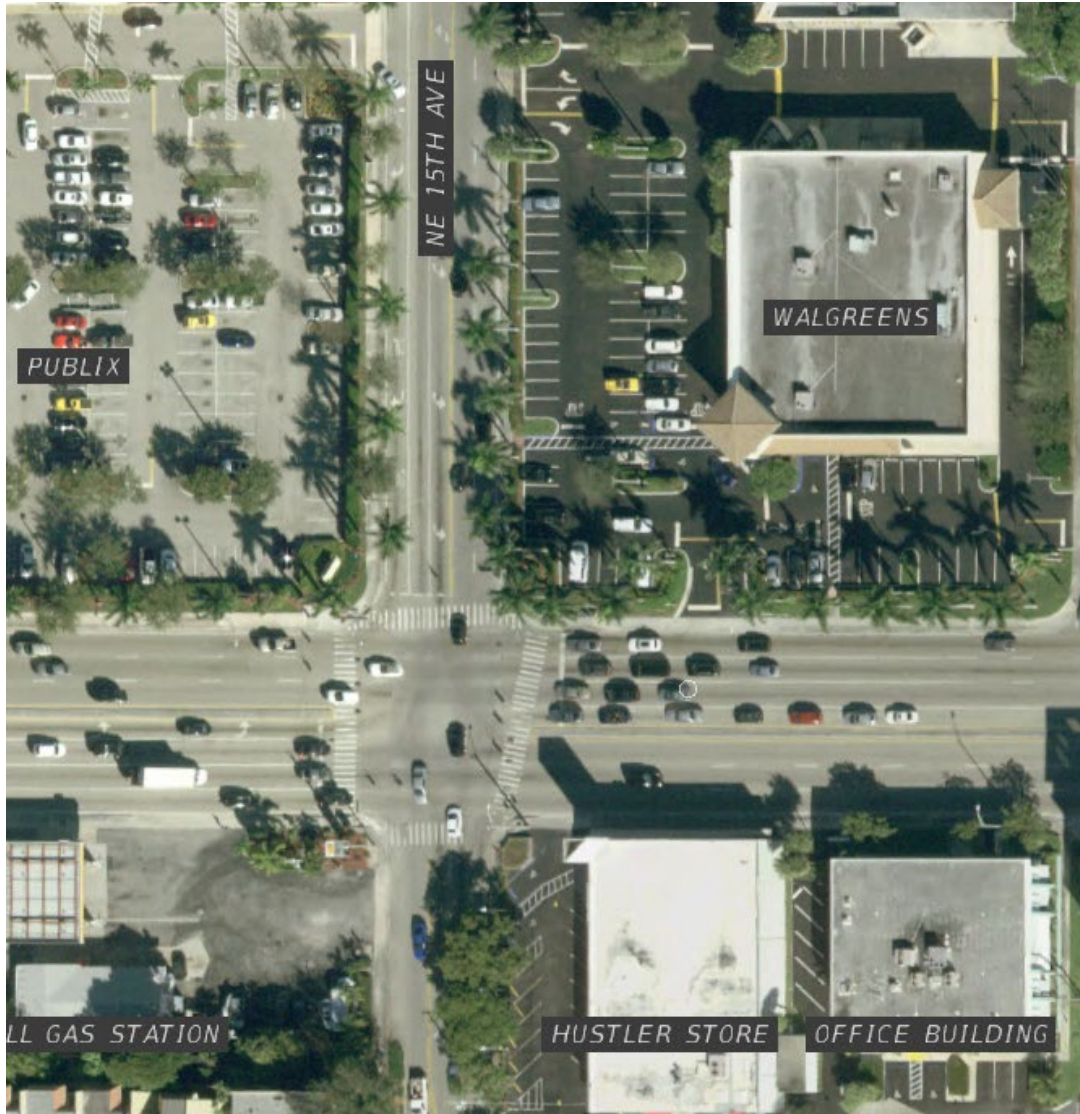
- Requires closing of EB median opening to NE 9th Ave



# SUNRISE BLVD. AT NE 15<sup>TH</sup> AVE.

- **Existing PM Conditions**
  - EB to NB left-turn movement
    - Moderate congestion
    - Occasional queue spills over adjacent through lane.
- **Future No Build 2040 conditions**
  - Overall intersection operation fails
  - EB to NB left-turn movement
    - Constant congestion
    - Adjacent through lane blockage expected





# SUNRISE BLVD. AT NE 15<sup>TH</sup> AVE.

## Proposed Improvements:

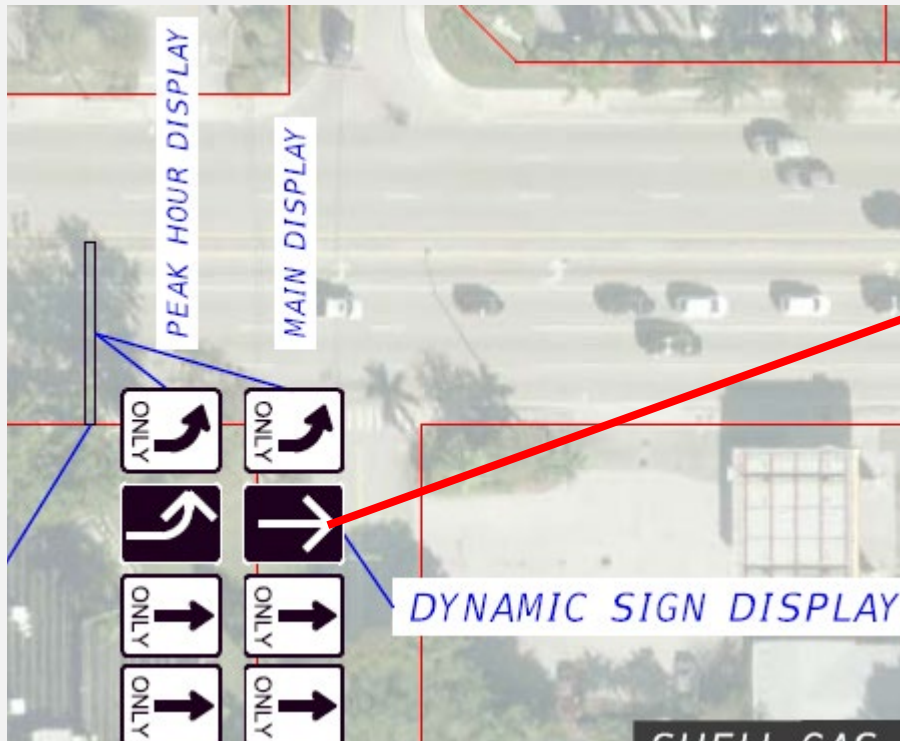
1. Installation of Dynamic Lane Assignment System to provide a dual EB to NB left-turn lane during peak hours only.



# PROPOSED DYNAMIC LANE TURN LANE CONCEPT



Typical Dynamic Lane Display  
Source: FHWA



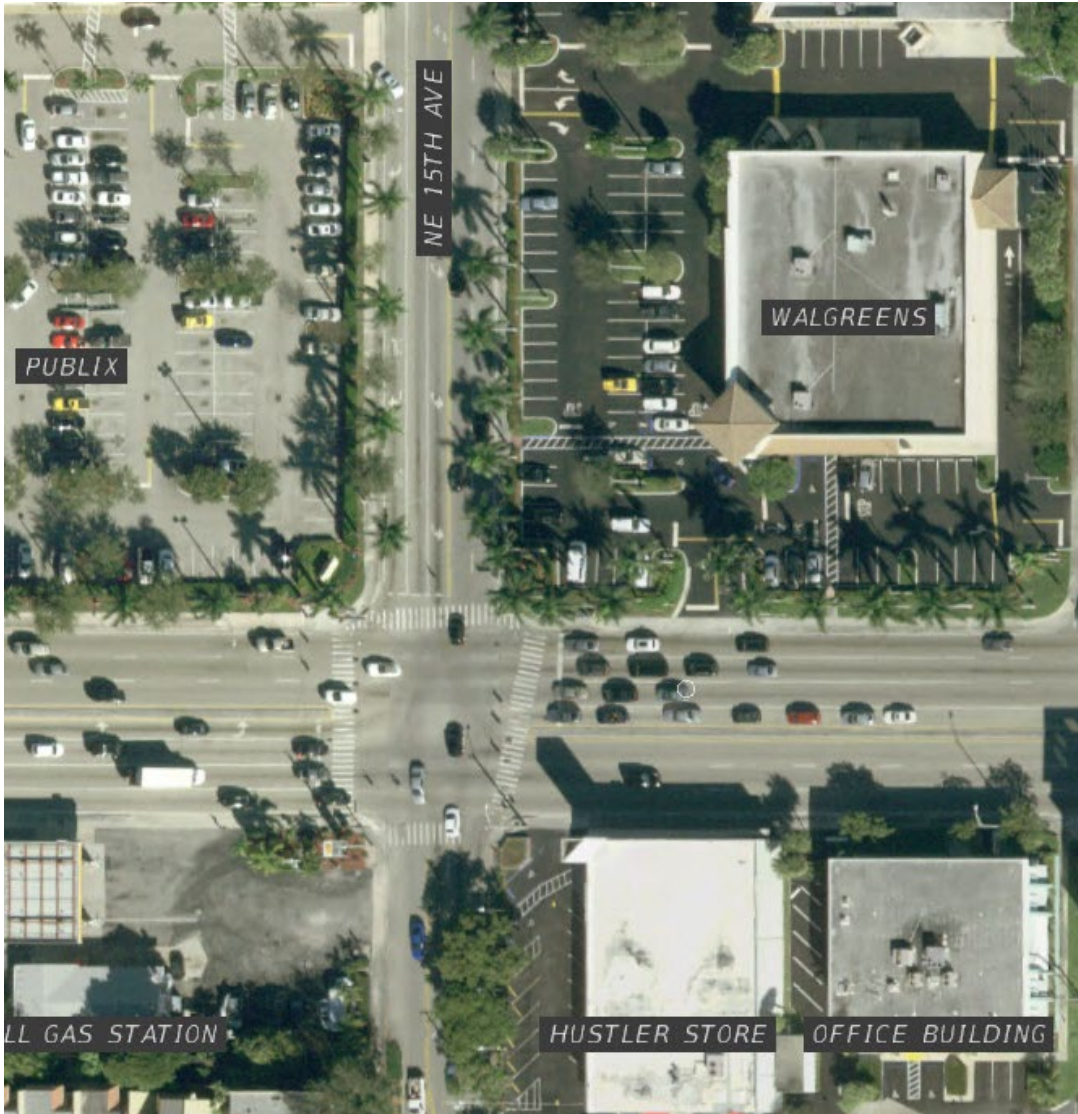
# SUNRISE BLVD. AT NE 15<sup>TH</sup> AVE.

## Pros:

- Provides desirable peak hour traffic operations
- Reduces EB queues

## Cons:

- Requires right-of-way to receive dual lanes on the north approach
- May conflict with City's Master Plan



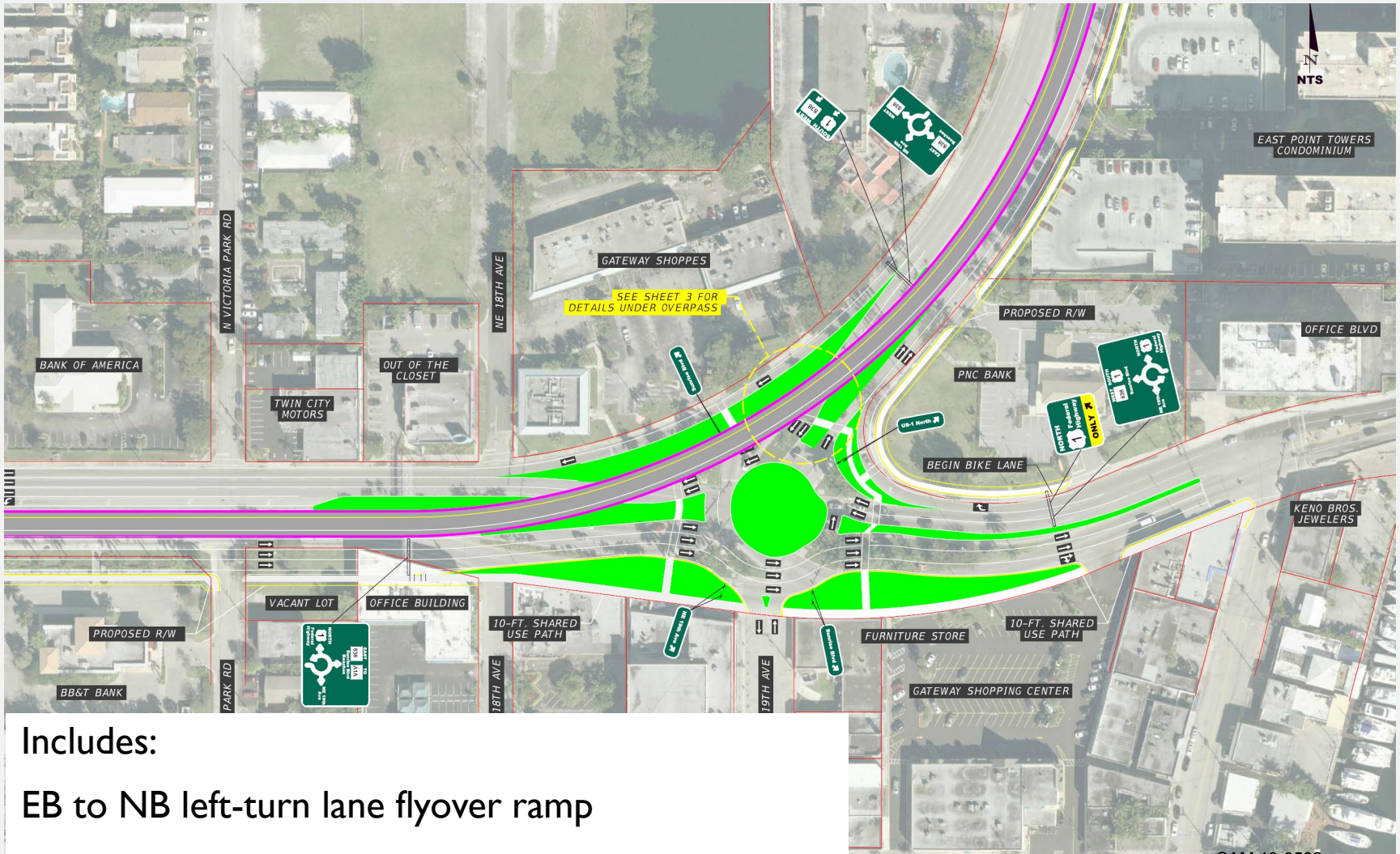
# US-1 AT GATEWAY INTERSECTION

- **Existing 2016 conditions**
  - Overall intersection operation fails in the PM Peak
  - Critical movements:
    - EB movements
    - SB left turn
- **Future No Build 2040 conditions**
  - Overall delay increases up to 97%
  - EB to NB left-turn
    - Delay increases by 66.0% (AM) & 214.7% (PM)
  - Existing 3 lanes does not provide capacity





# PROPOSED MULTILANE ROUNDABOUT



Includes:

EB to NB left-turn lane flyover ramp

SB to VWB free flow right-turn



# PROPOSED MULTILANE ROUNDBABOUT



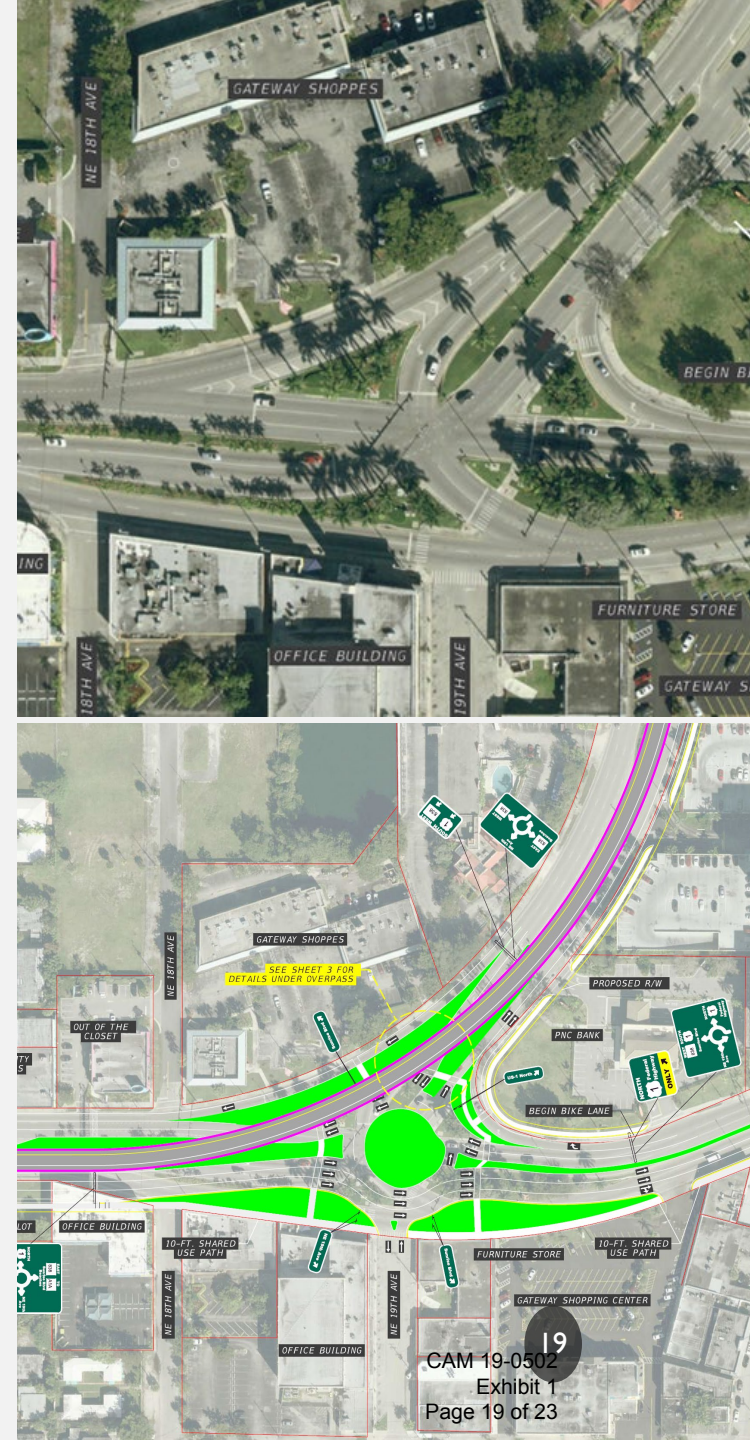
Looking West



# US-1 AT GATEWAY INTERSECTION

## Pros:

- **Operations**
  - All movements operate in satisfactorily
  - Separates US 1 traffic (45% of the total approach volume, or 20% of the intersection volume)
- **Safety**
  - 48% overall crash reduction by converting a signalized intersection to a roundabout and 78% crash reduction of severe crashes (Highway Safety Manual)
  - All vehicular crossing conflicts are eliminated
  - Pedestrian conflict points reduced from 11 to 9 and less crossing distance



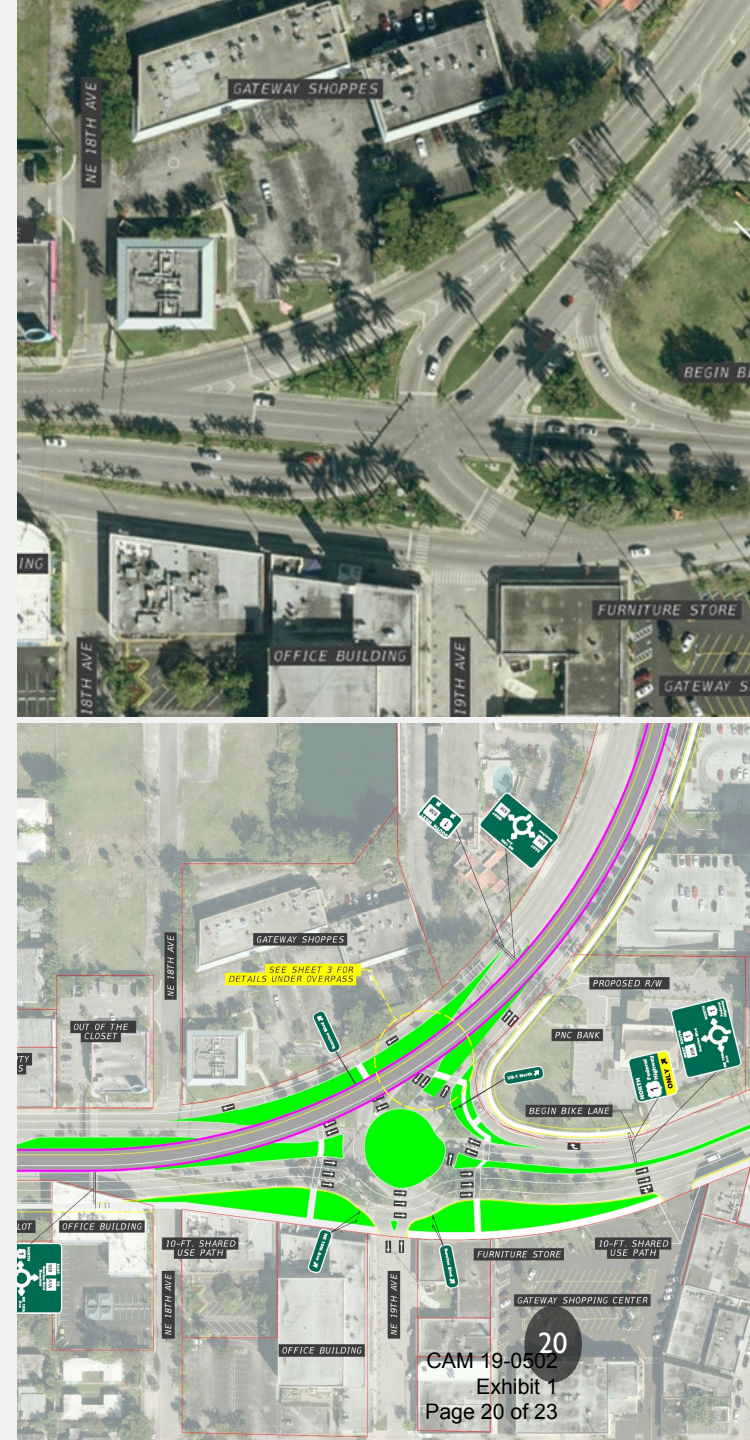
# US-1 AT GATEWAY INTERSECTION

## Pros:

- **Access**
  - Local SB to NB access maintained
  - South approach to NB US 1 access created
  - Safer SB access to businesses
- **Aesthetics**
  - Provides area beautification and landmark opportunities

## Cons:

- **Right of Way Requirements**
  - Can be mitigated through final selection of roadway and flyover alignment



## NEXT STEPS

- **Corridor Study completed in 2017**
- **US I at Searstown**
  - WB to SB triple left-turn lane
  - Design funded in FY 2020 (FM 441721-1)
  - Construction funded in FY 2022
- **US I at 15<sup>th</sup> Ave**
  - Dynamic EB to NB left-turn lane
  - Unfunded
- **US I at Gateway**
  - Multilane Roundabout with EB to NB flyover
  - PD&E funded in FY 2023 (FM 441955-1)
  - Design and construction phases unfunded

## CONTACT INFORMATION

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THANK YOU