



# Community Meeting

## December 6, 2012

*Presented by:*

**CITY OF BOSTON**

Boston Transportation Department

Tetra Tech

The Cecil Group

Brown Richardson & Rowe

Jacobs Engineering Group



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[www.cityofboston.gov/transportation/rutherford/](http://www.cityofboston.gov/transportation/rutherford/)





## Austin Street Area Meeting Agenda

- Existing Conditions
- Major Issues
- Proposed Options
  - Underpass Option
  - Surface Option



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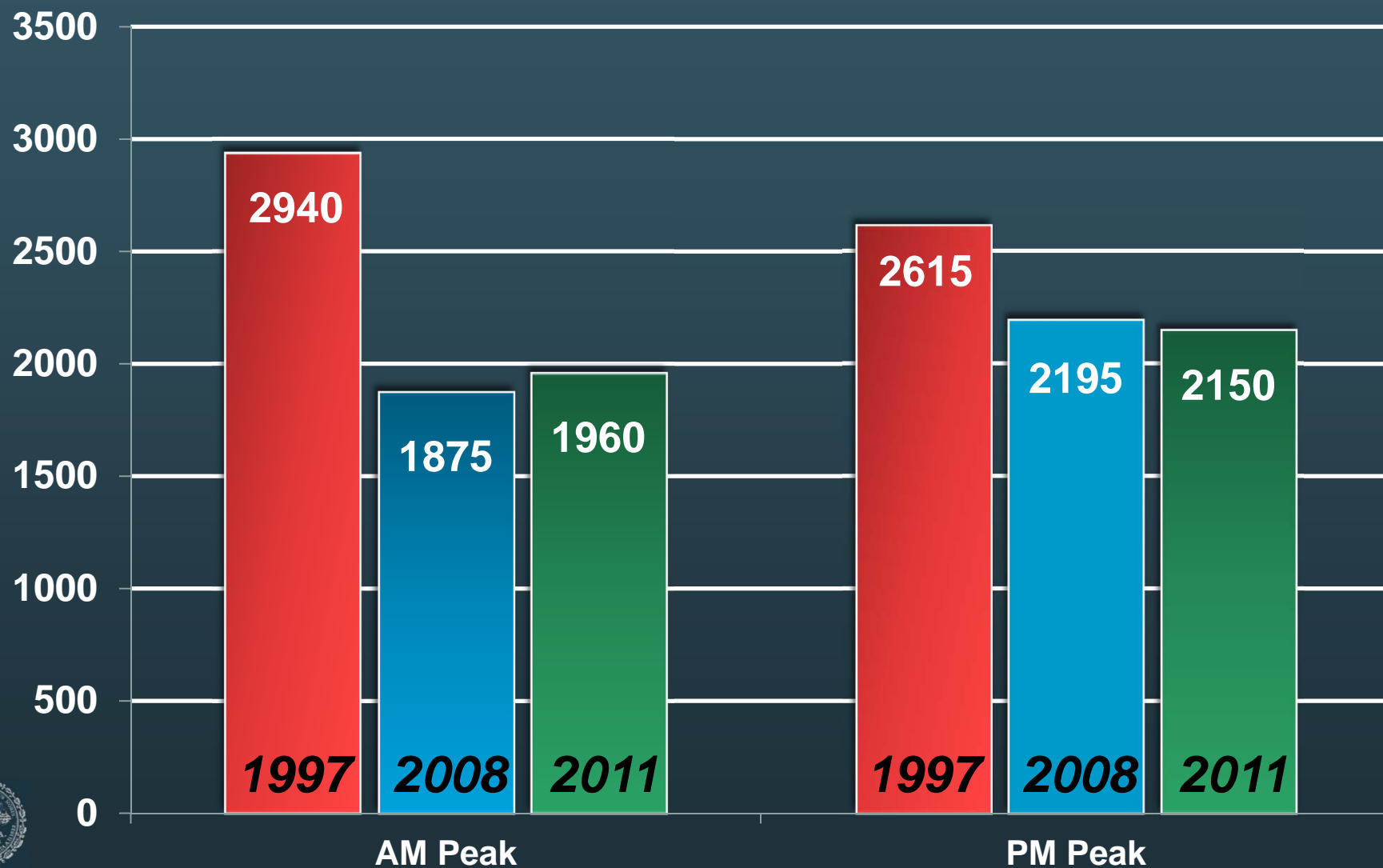
## Rutherford Avenue – Neighborhood Goals

- Improve pedestrian connections/ safety
- Decrease traffic congestion
- Protect Main Street from cut-through traffic
- Create public/open space
- Provide opportunities for appropriate development
- Provide bicycle connections
- Increase on-street parking





## Rutherford Ave. traffic volume comparison - Austin Street Underpass

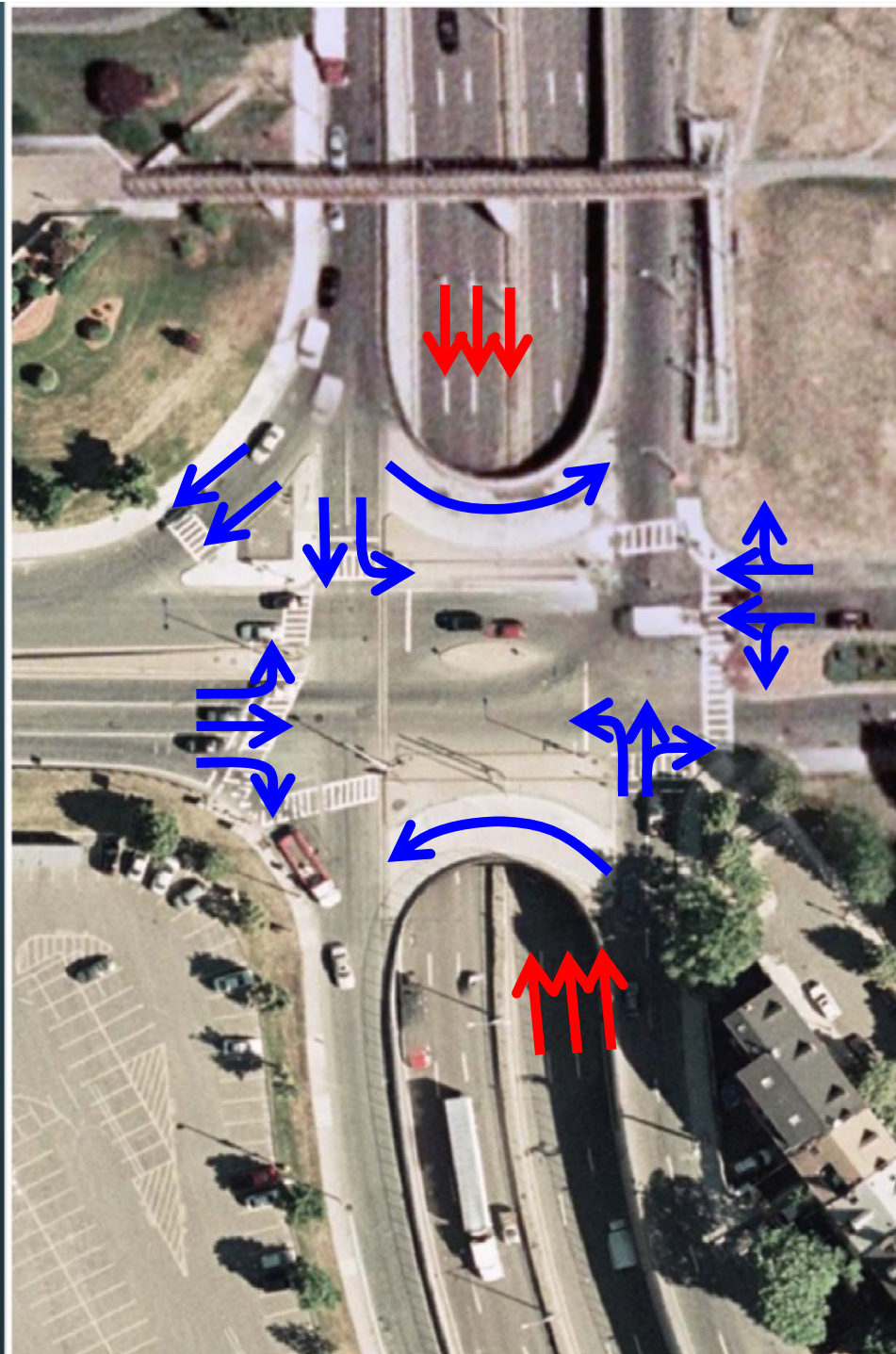




# Austin Street - Existing Geometry



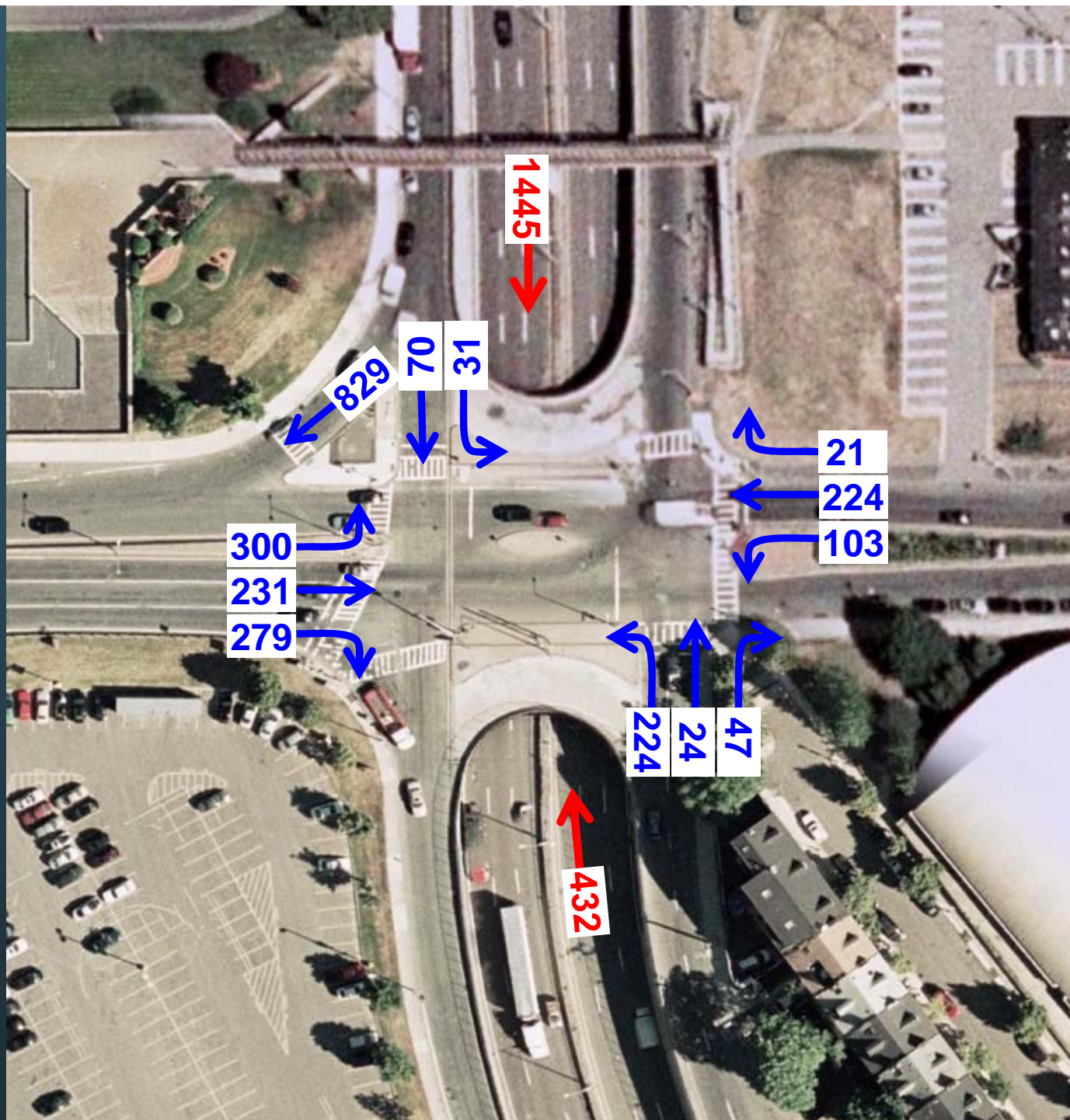
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# Austin Street – Existing AM Peak Hour Volumes

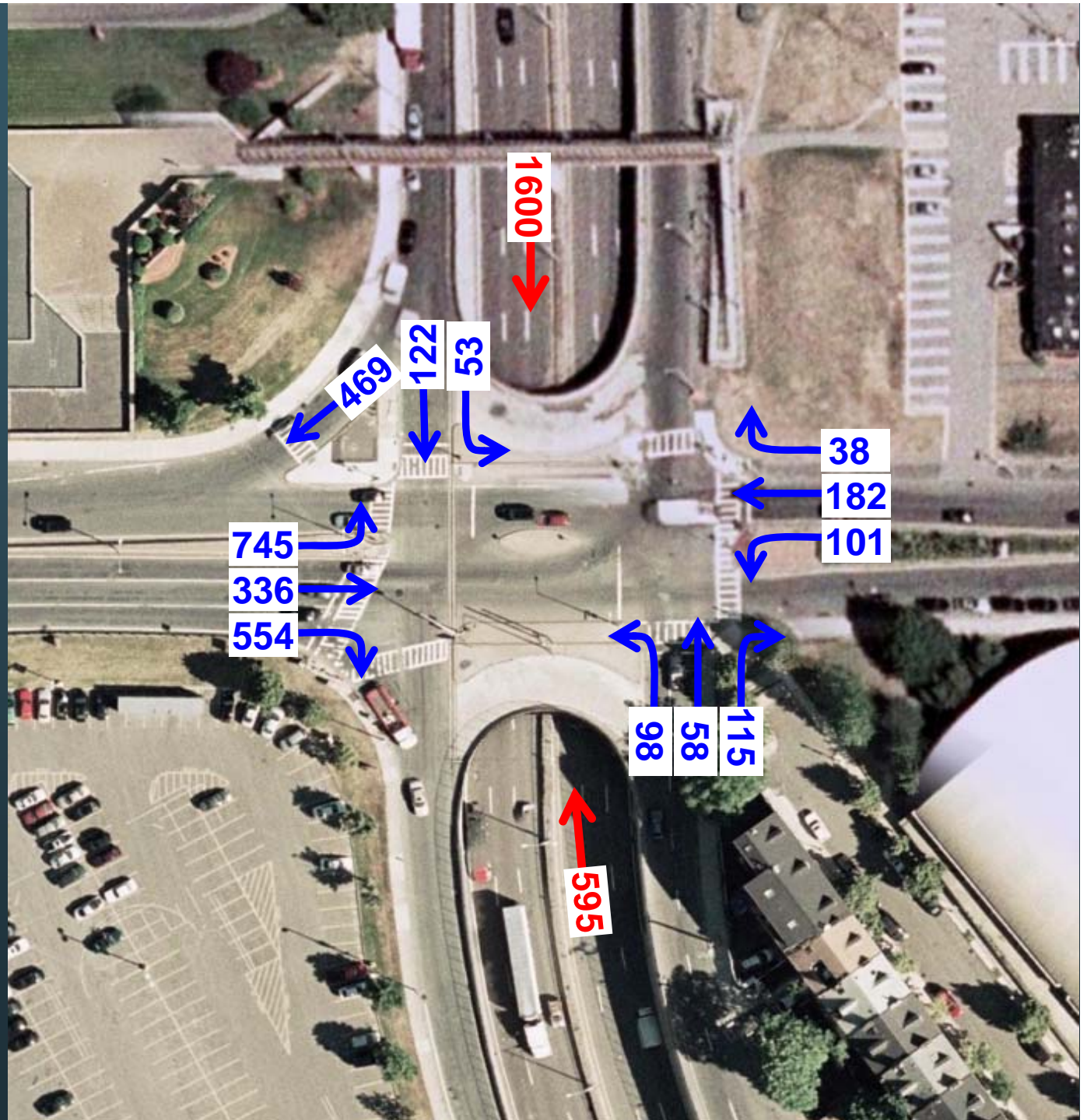


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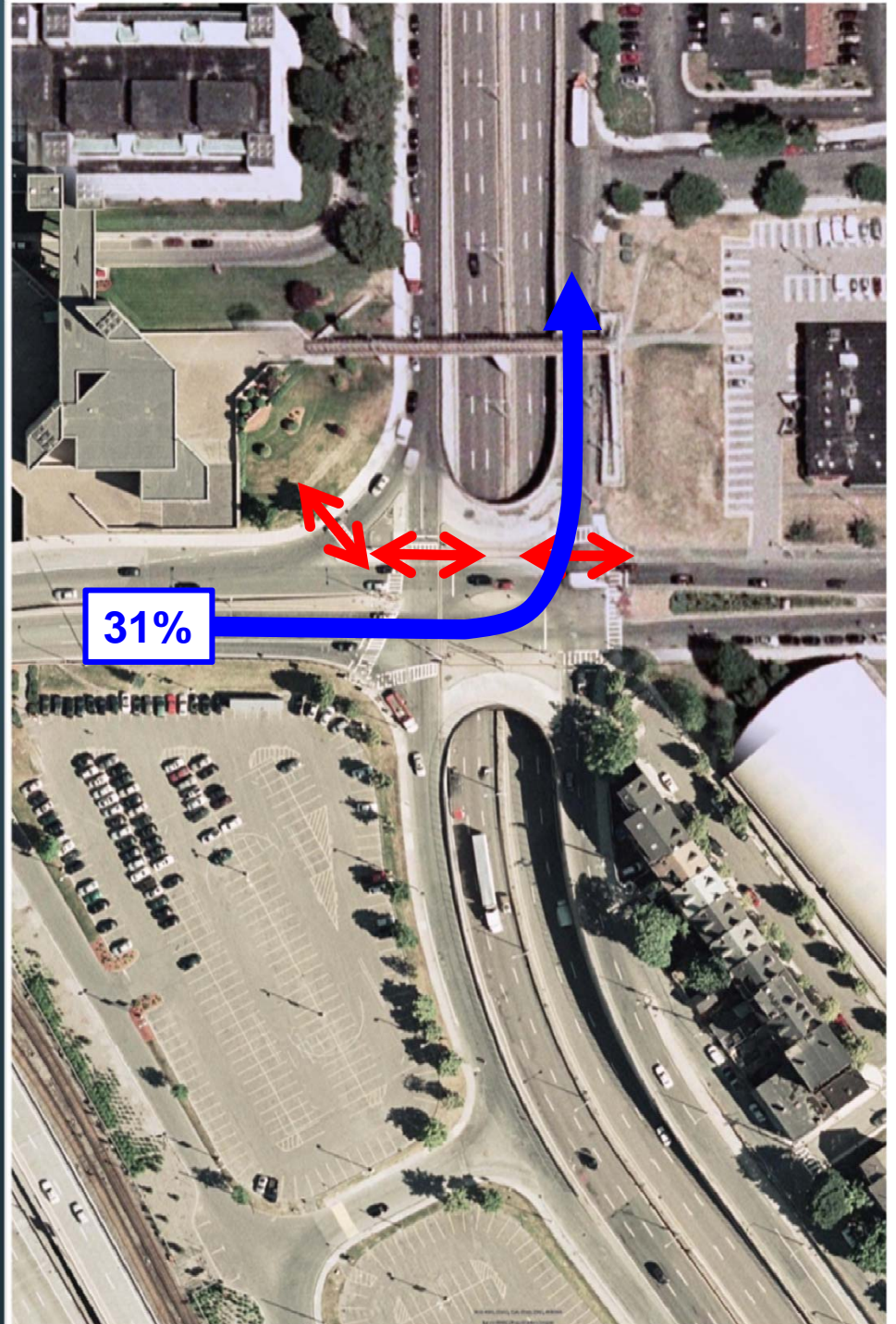
# Austin Street – Existing PM Peak Hour Volumes





## Austin Street – Existing Issues

1. High volume of traffic turning left from Gilmore Bridge to Rutherford Ave. NB
2. Pedestrian “unfriendly” environment – 3 separate Ped crossings from neighborhood to MBTA Station.





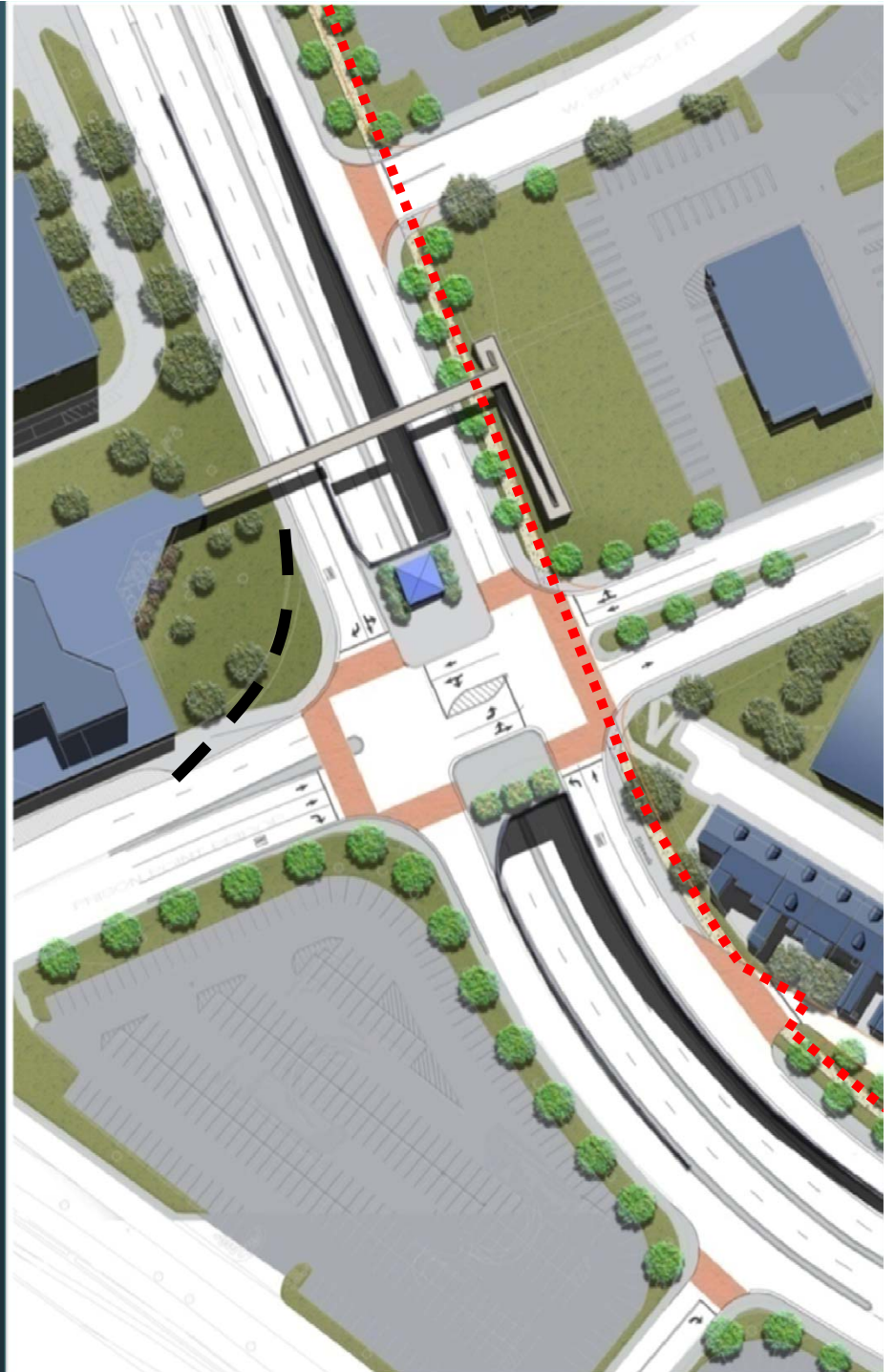
# Austin Street Improvement Options

1. Underpass Option
2. Surface Option



# Austin Street Underpass Concept Design

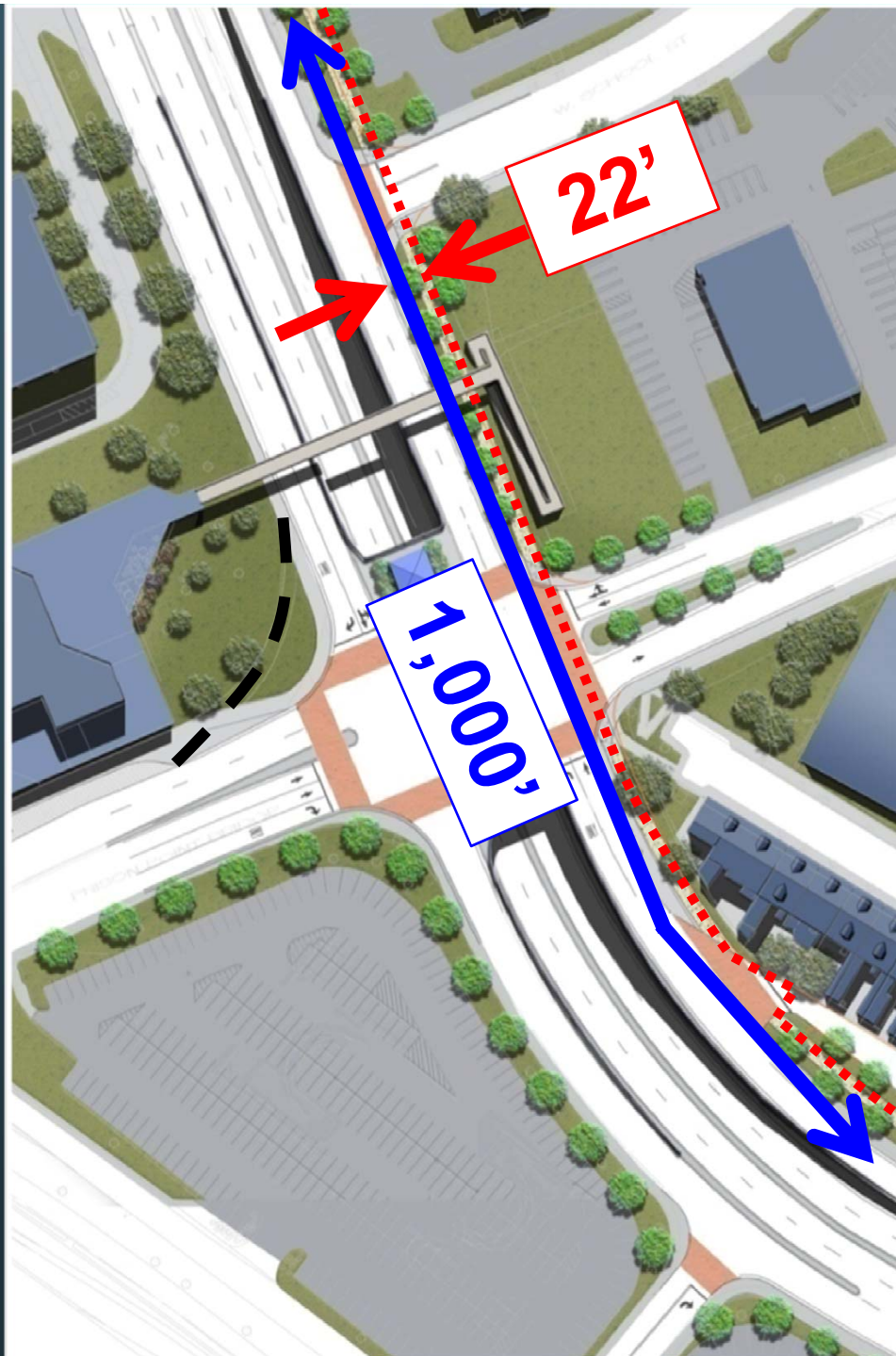
- Provides 22 foot wide buffer including open space & multiuse path
- Improves pedestrian safety
- Adequate capacity for future traffic
- Creates generous pedestrian island





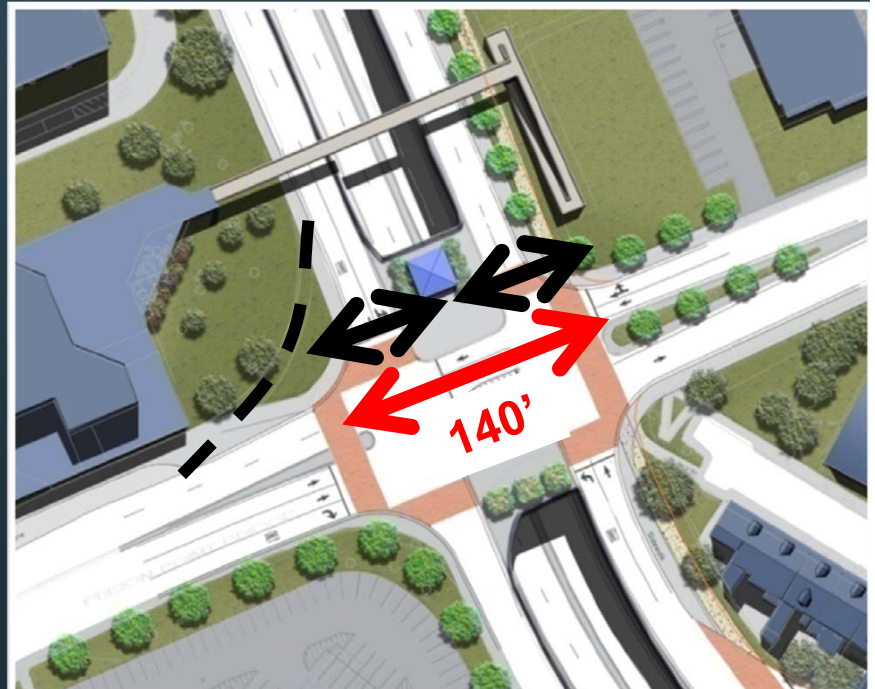
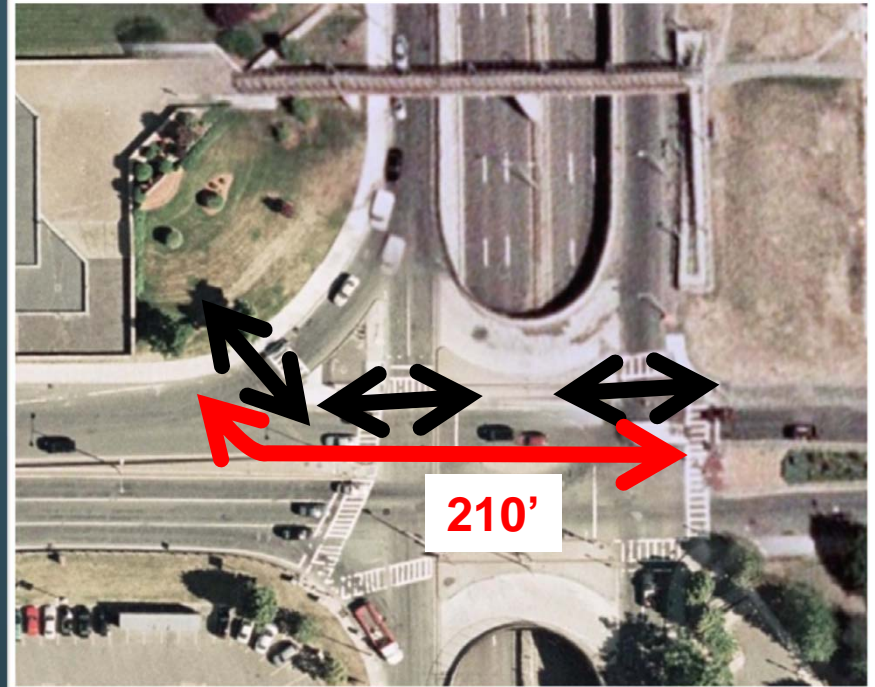
# Austin Street Underpass Concept Design

- 22 foot wide open space with multi-use path
- No on-street parking within 1,000' area



## 12 Austin Street Underpass Concept Design

- Reduce pedestrian crossings from 3 to 2
- Reduce pedestrian crossing distance from 210 feet to 140 feet (185 feet if right turn lane is required)





# 13 Austin Street Underpass Concept Design

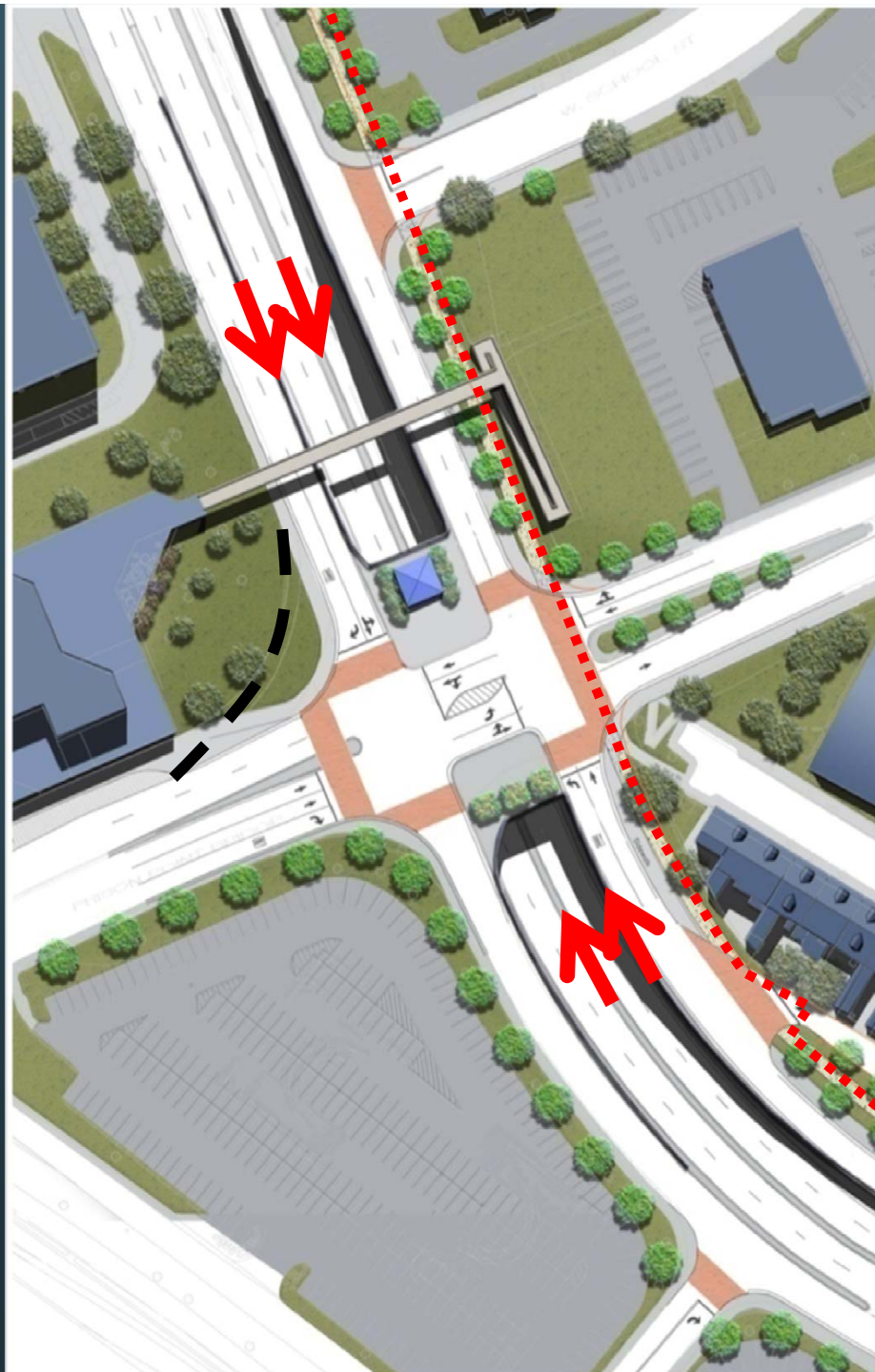
Reduces width of  
Rutherford Avenue  
underpass:

- 6 lanes to 4 lanes
- 3 lanes per direction to 2 lanes per direction

*Note: Underpass traffic demands = 1 lane,  
2<sup>nd</sup> lane is required for safety purposes*

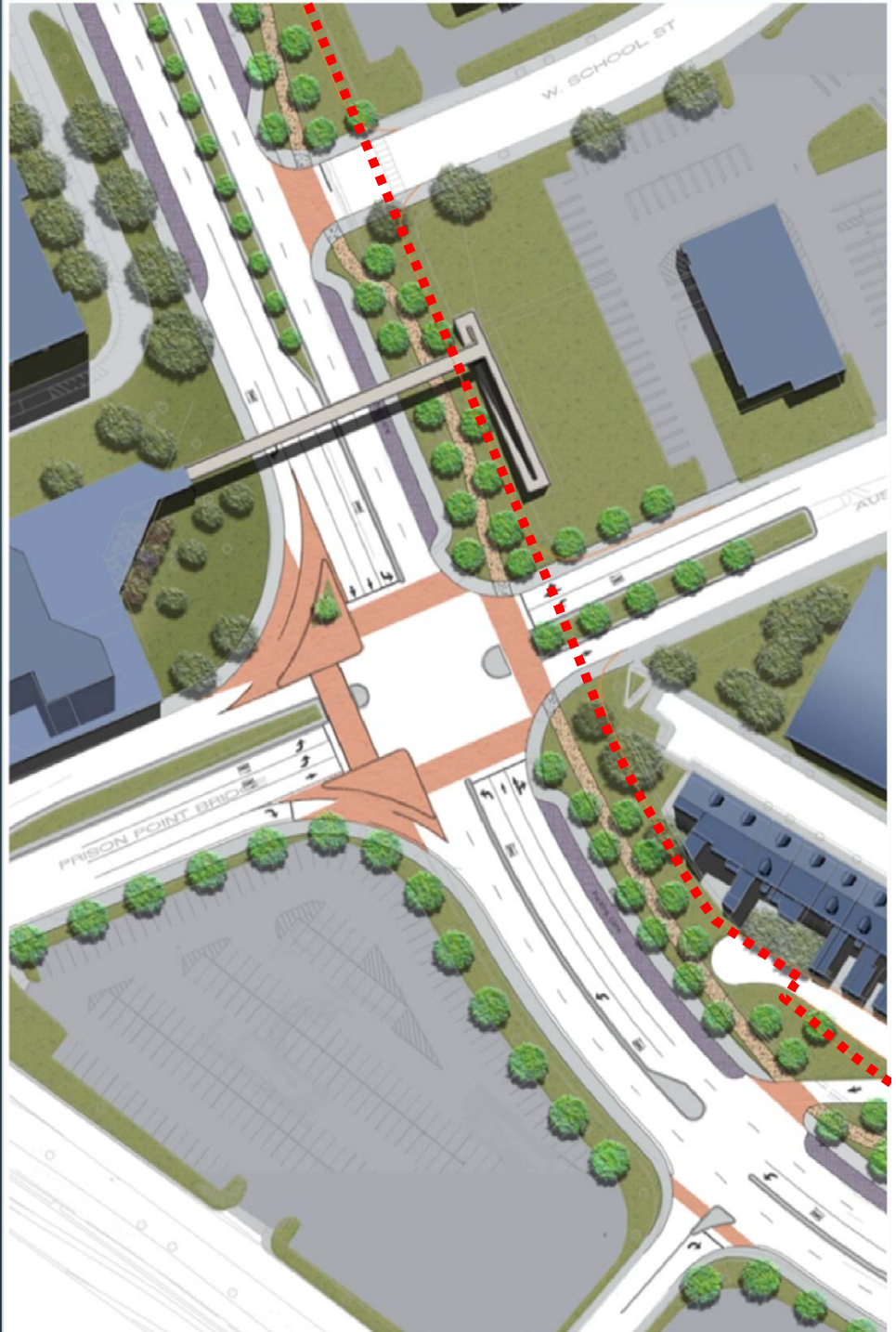


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## Austin Street Surface Option Concept Design

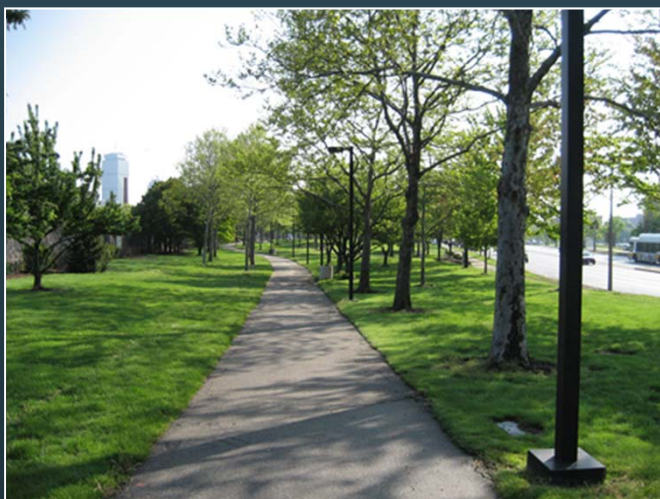
- Provides 50 foot wide buffer that includes open space, multiuse path and on-street parking lane
- Improves pedestrian safety
- Reduces highway-like feel and underpass noise
- Adequate capacity for future traffic



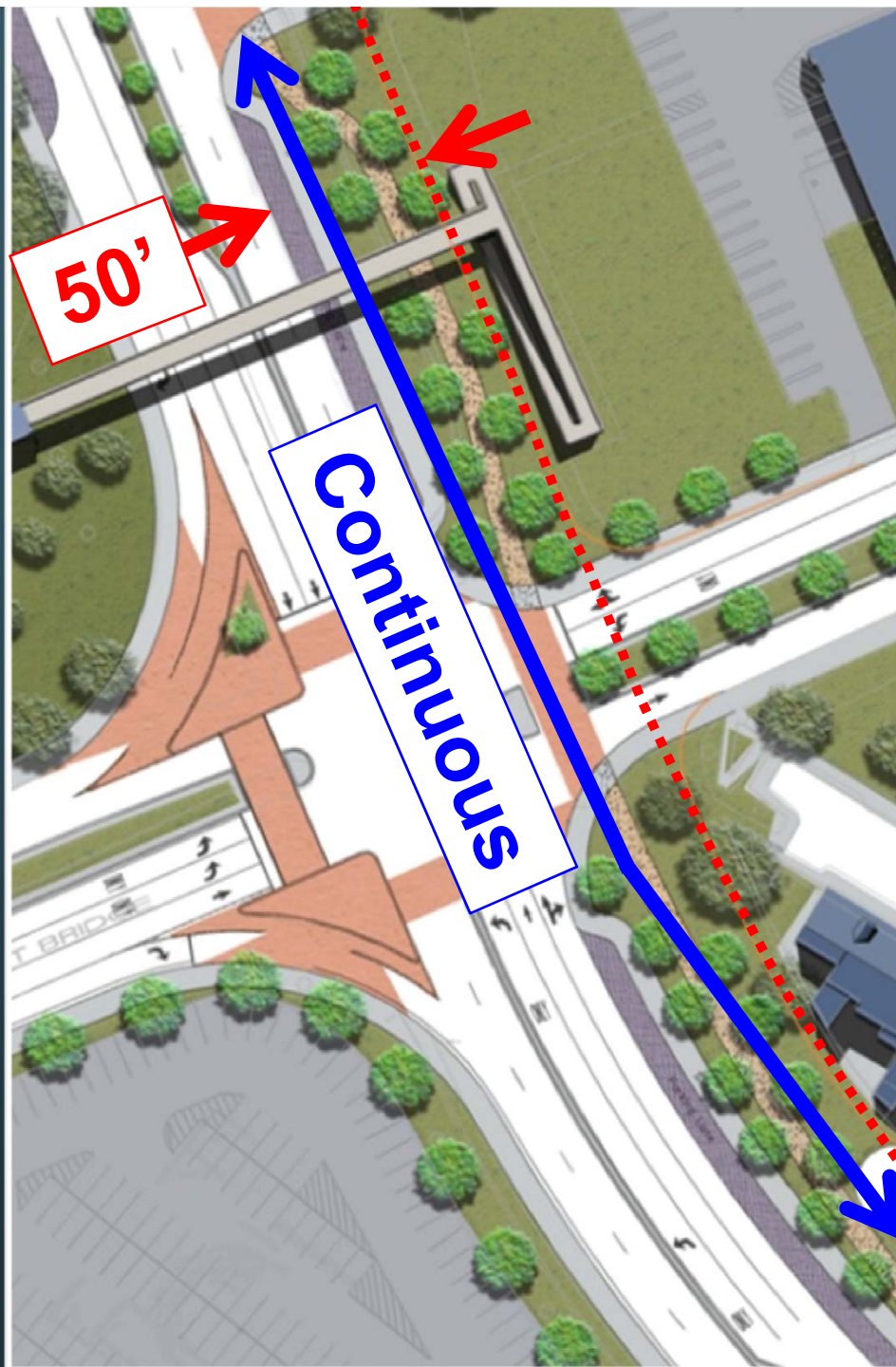


## Austin Street – Surface Option

- Provides an approximate 50 foot buffer with open space, multiuse path and an on-street parking lane

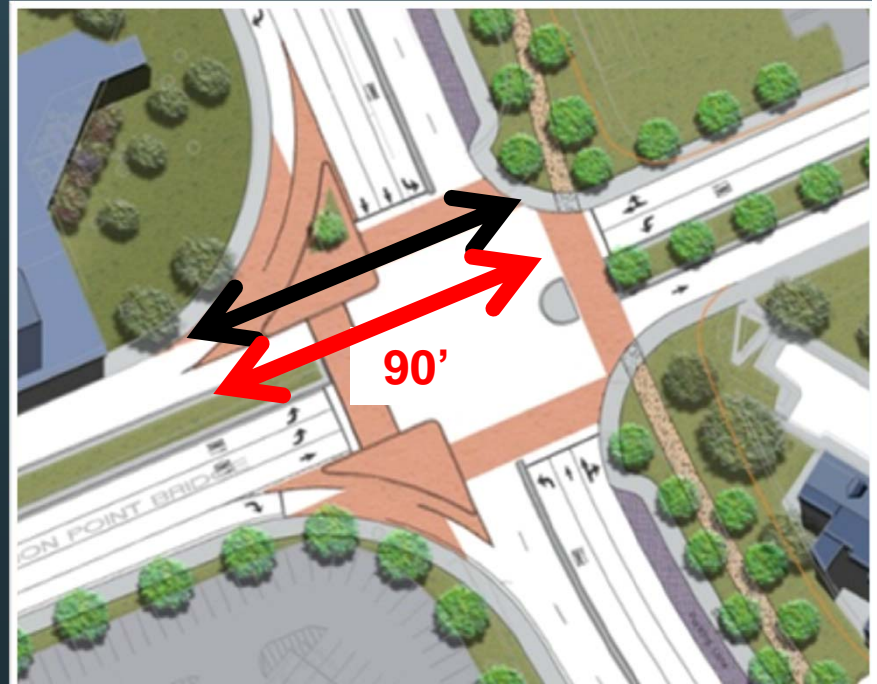
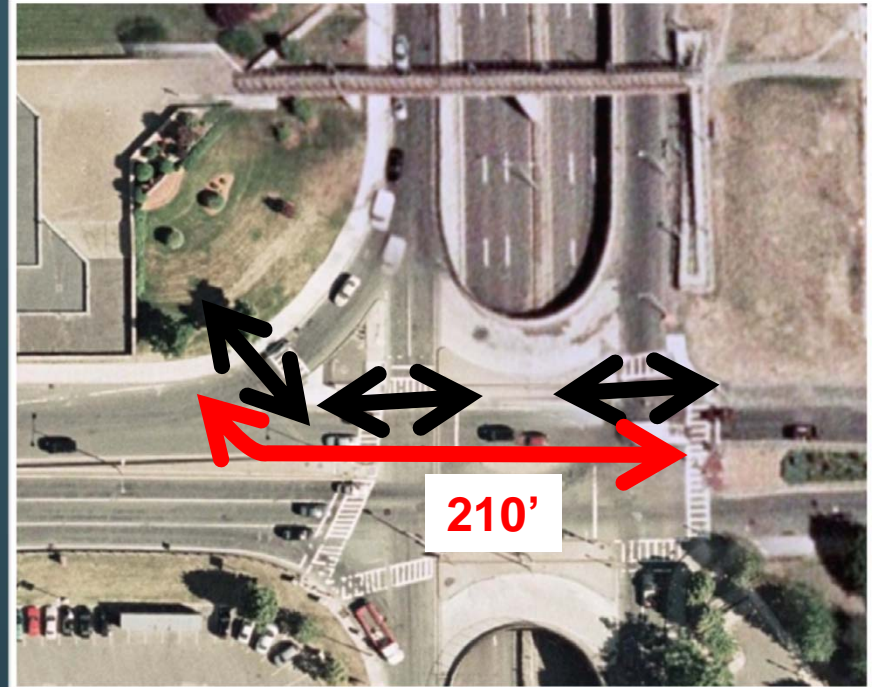


South Bay Harbor Trail, Melnea Cass Blvd. Source: Masspaths.org



## Austin Street – Surface Option

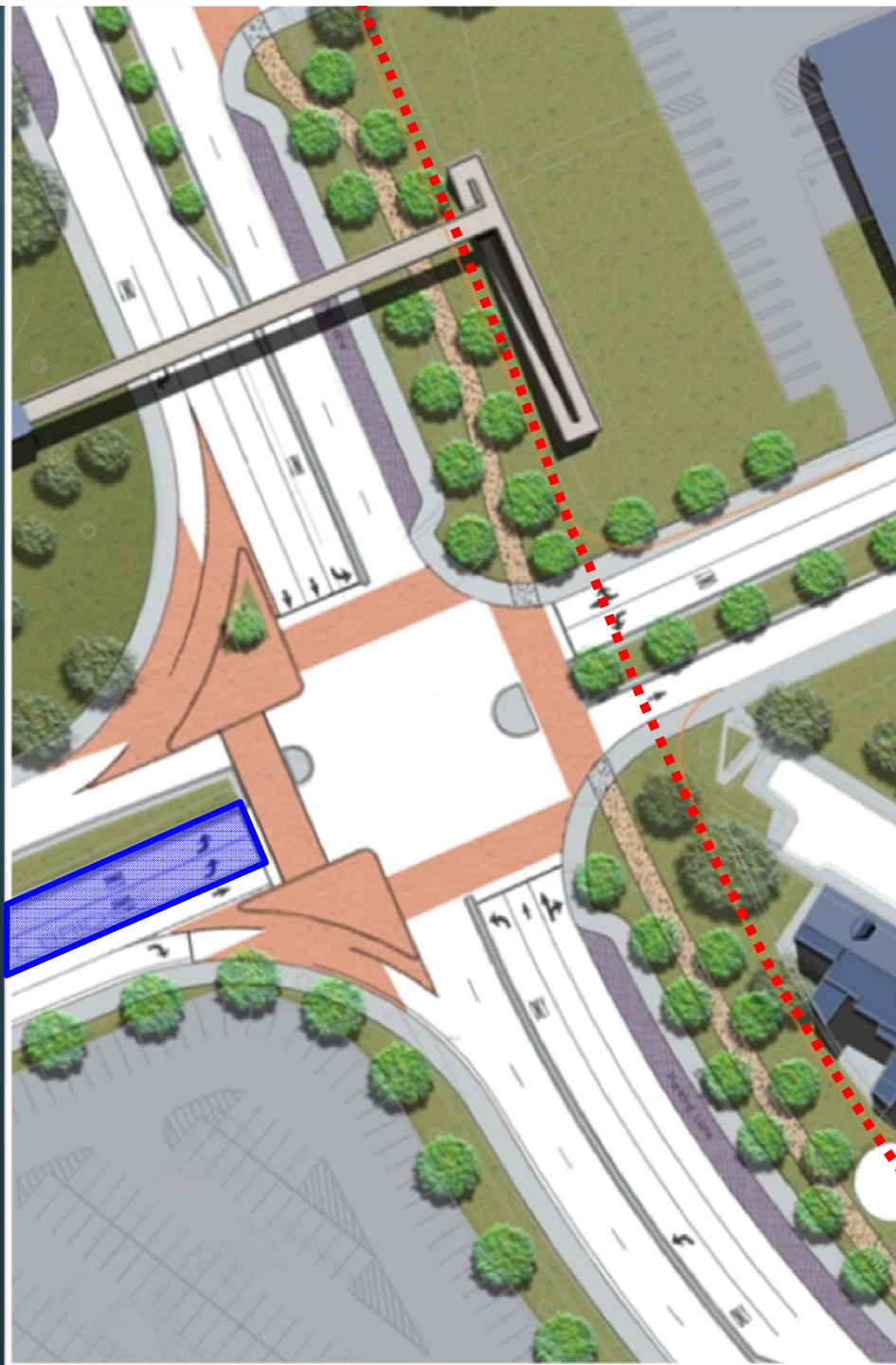
- Reduce pedestrian crossings from 3 to 2
- Reduce crossing distance from 210 feet to 90 feet





## Austin Street – Surface Option

- 2 left turn lanes from Gilmore Bridge
- Total of 13 traffic lanes will be provided



## 2030 Traffic Projections

- 2008 Traffic Counts (similar to 2011)
- Increase by 5% to account for regional growth and redevelopment in the Rutherford Avenue corridor
- Add in traffic from Assembly Square Project in Somerville





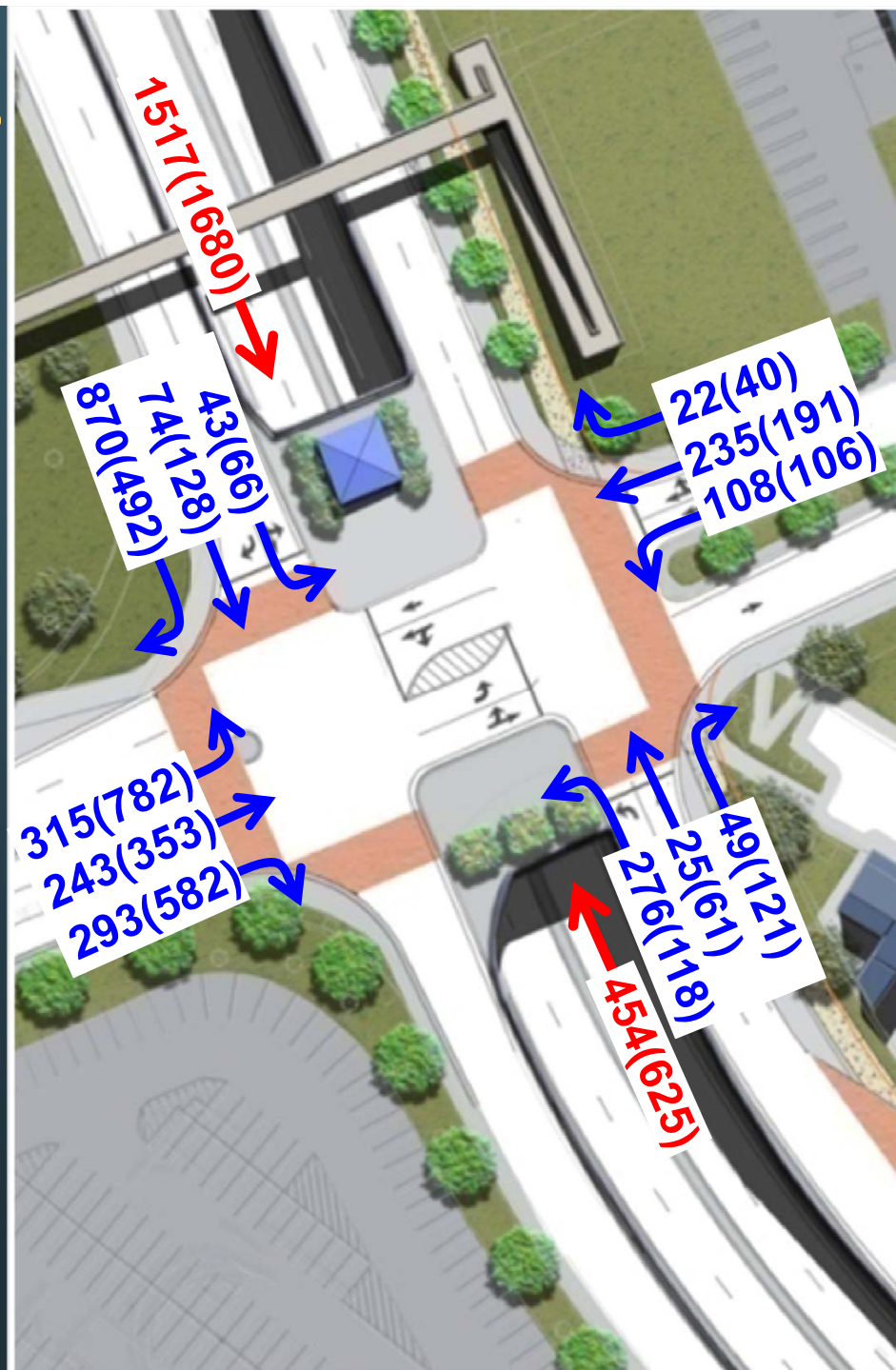
# 19 Austin Street Underpass Concept Design

Future 2030 AM (PM)  
Peak Hour Traffic Volumes



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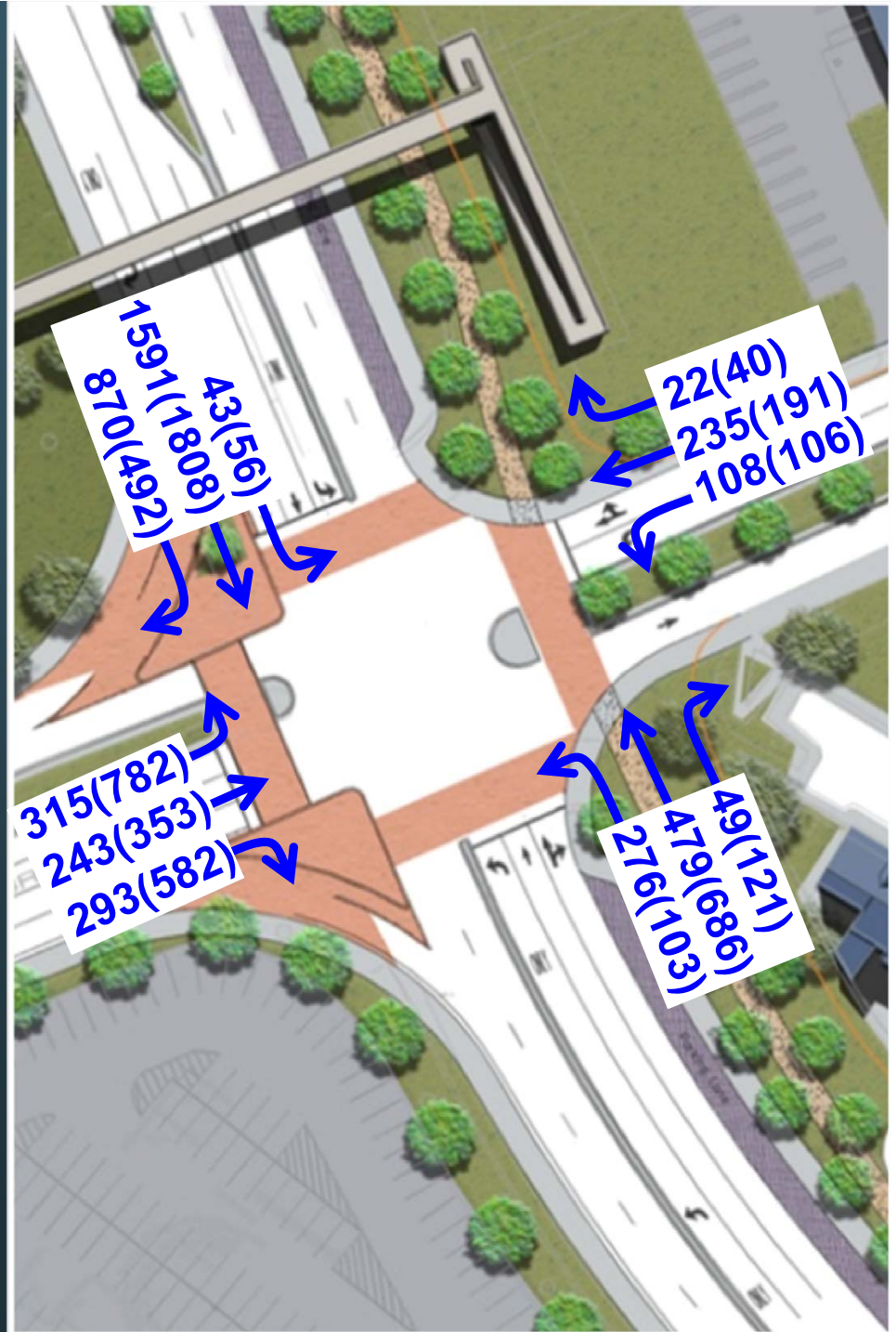
*Note: Capacity of 1 thru lane =  
approx. 1,000 vehicles/hour*



# Austin Street Surface Option Concept Design

Future 2030 AM (PM)  
Peak Hour Traffic Volumes

*Note: Capacity of 1 thru lane =  
approx. 1,000 vehicles/hour*





## Comparison of Signal Times – Austin Street Approach

| Condition        | AM Peak Hour   | PM Peak Hour   |
|------------------|--|--|
| Existing         | <ul style="list-style-type: none"> <li>• 29 of 105 seconds (27%)</li> <li>• 22% of traffic volume</li> </ul> | <ul style="list-style-type: none"> <li>• 29 of 105 seconds (27%)</li> <li>• 13% of traffic volume</li> </ul> |
| Underpass Option | <ul style="list-style-type: none"> <li>• 32 of 120 seconds (26%)</li> <li>• 14% of traffic volume</li> </ul> | <ul style="list-style-type: none"> <li>• 30 of 120 seconds (25%)</li> <li>• 11% of traffic volume</li> </ul> |
| Surface Option   | <ul style="list-style-type: none"> <li>• 26 of 120 seconds (22%)</li> <li>• 8% of traffic volume</li> </ul>  | <ul style="list-style-type: none"> <li>• 24 of 120 seconds (20%)</li> <li>• 6% of traffic volume</li> </ul>  |

*Note: To accommodate all traffic movements, existing signal is programmed to complete cycle in 105 seconds. Future cycle for both design options = 120 seconds.*



# Proposed Cross-Corridor connections

- Baldwin Street
- Essex Street
- BHCC





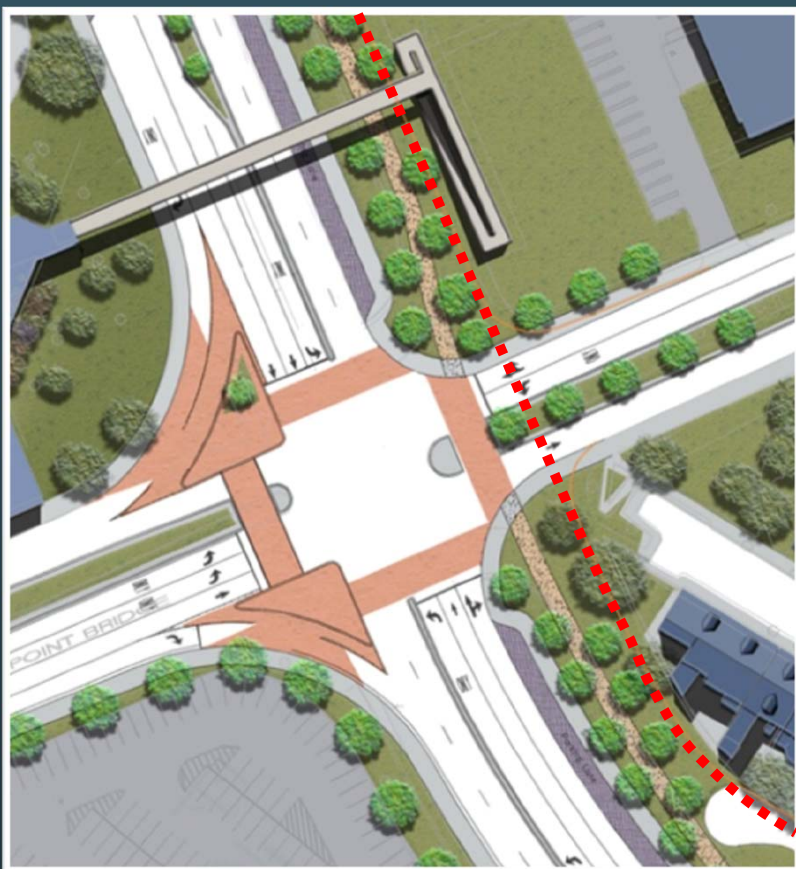
## Traffic Signal Systems

- Queue detection and video monitoring at signals
- All signals in corridor coordinated in a system linked to BTM Management Center
- Traffic Progression along boulevard – maximizes “through-put”; discourages diversions
- Real-time signal timing adjustments to respond to changes in demand (e.g., traffic related to events at TD Bank Garden)

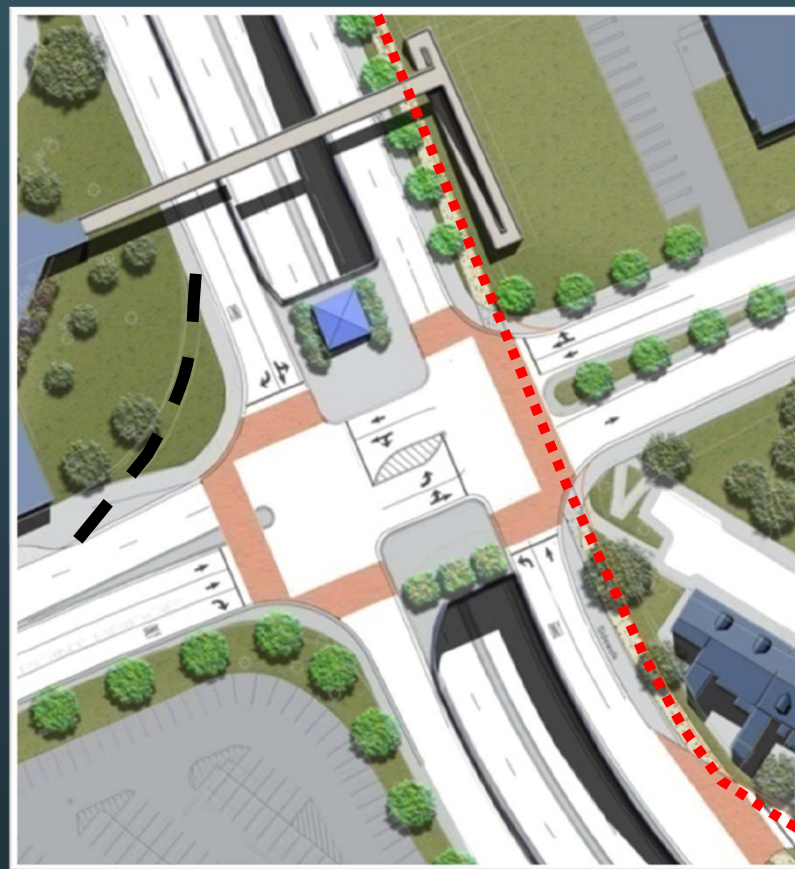


# Austin Street – Comparison of Options

## Surface Option



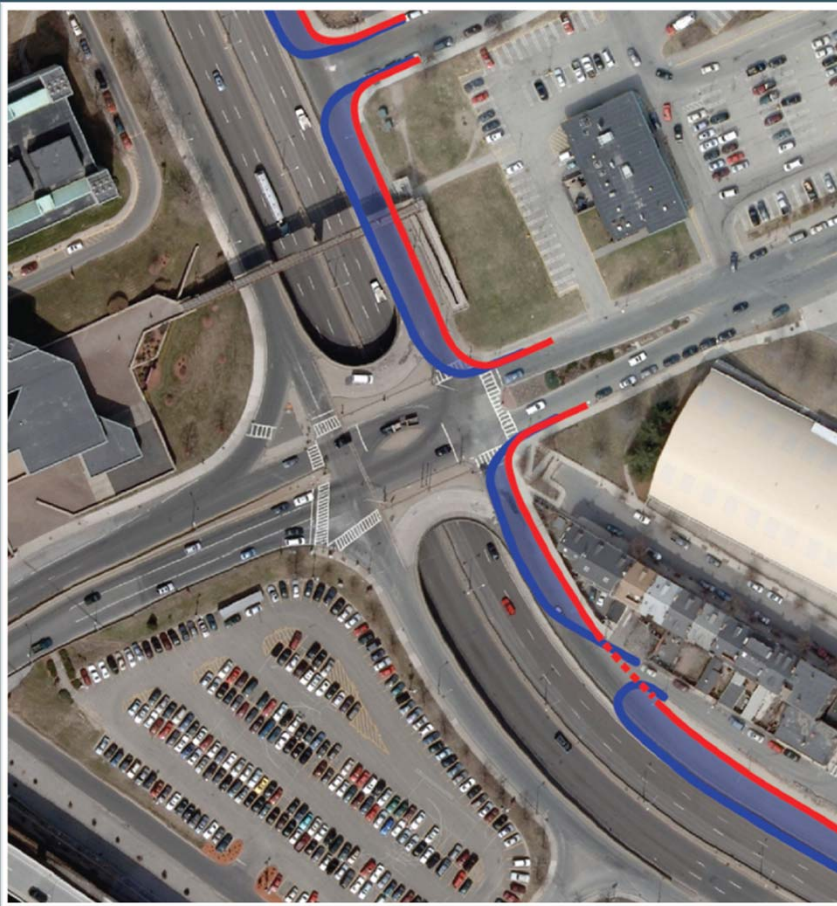
## Underpass Option



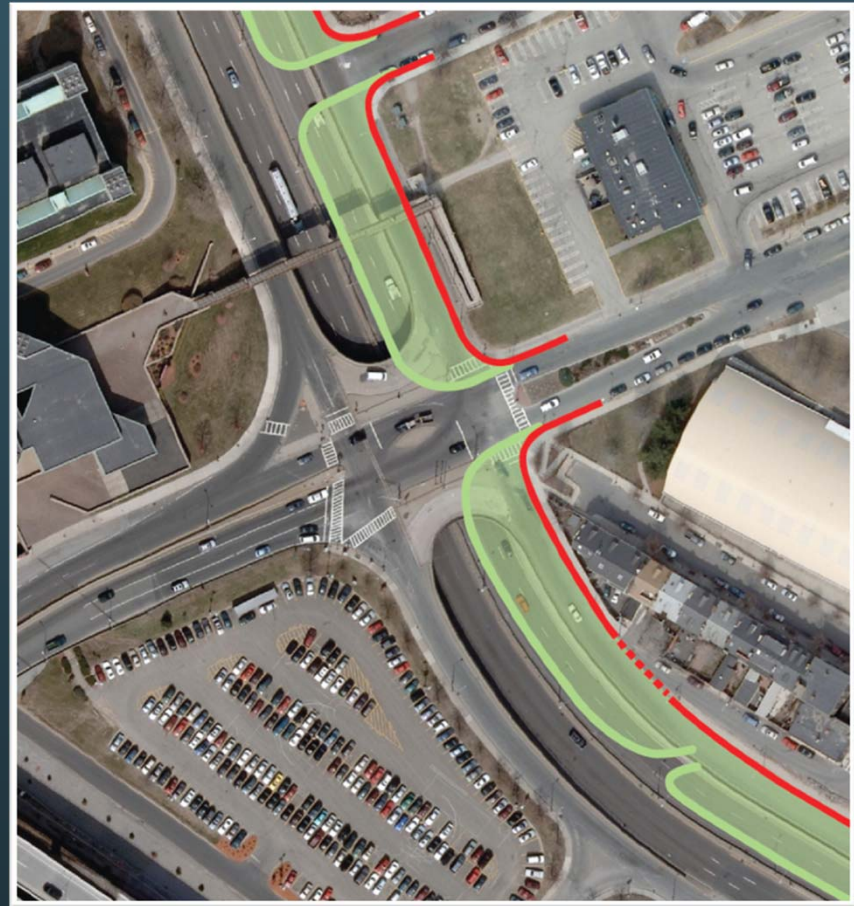


# 25 Austin Street – Comparison of Options

## Underpass Option



## Surface Option



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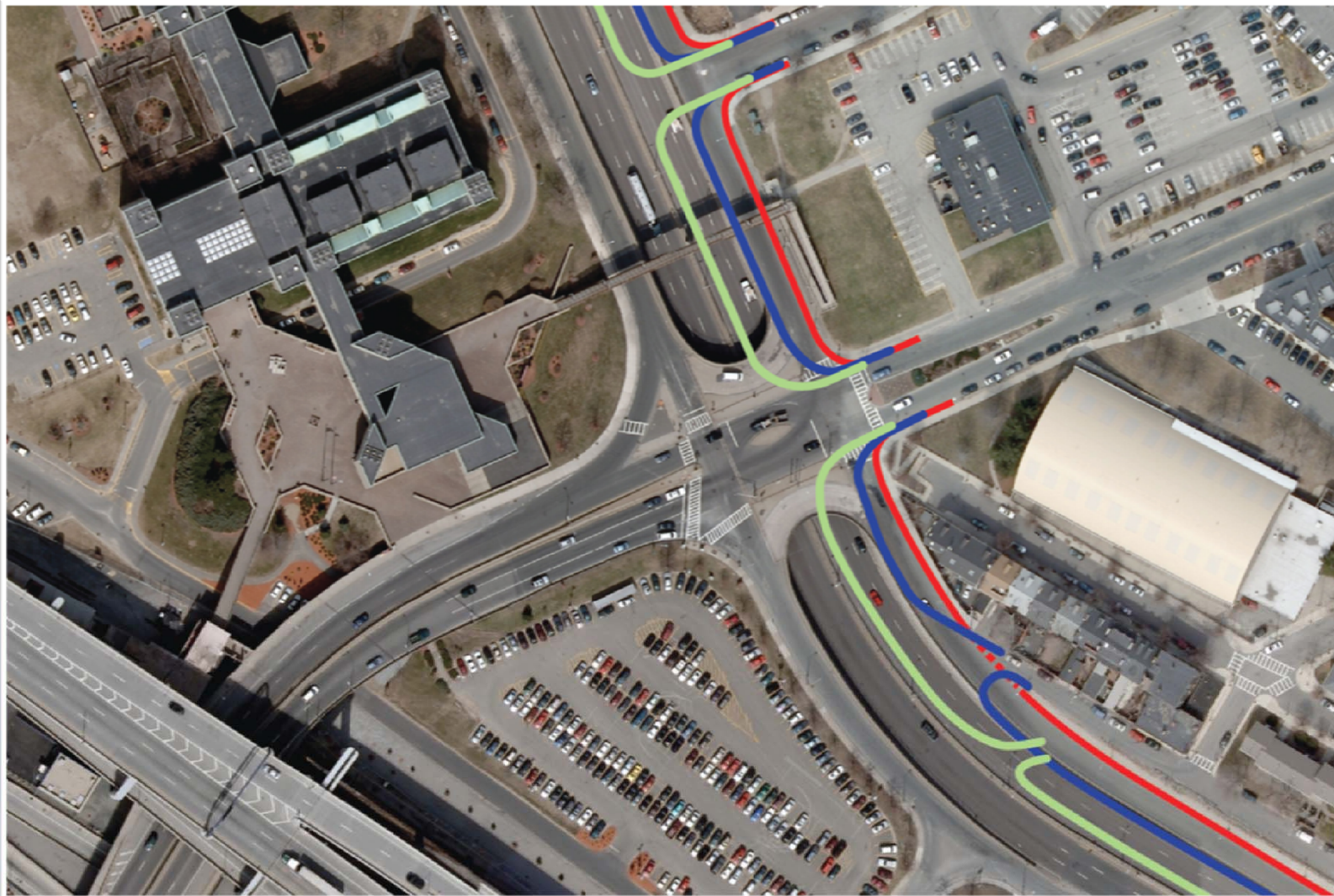
Underpass Option

Surface Option

Existing



# Austin Street – Comparison of Options



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Underpass Option

Surface Option

Existing



# Option Comparison Based on Response to Goals

| GOALS                  | SURFACE OPTION   | UNDERPASS OPTION   |
|------------------------|--|--|
| Pedestrian Connections | <ul style="list-style-type: none"> <li>Improved pedestrian connections</li> <li>Crossing distance reduced to 90 ft.</li> </ul>               | <ul style="list-style-type: none"> <li>Improved pedestrian connections</li> <li>Crossing distance reduced to 140 ft.</li> </ul>                    |
| Traffic Congestion     | <ul style="list-style-type: none"> <li>Adequate capacity at intersection</li> <li>Design provides flexibility for future volumes</li> </ul>  | <ul style="list-style-type: none"> <li>Adequate capacity at intersection</li> <li>Underpass separates out north – south through traffic</li> </ul> |
| Open Space             | <ul style="list-style-type: none"> <li>Provides 50 ft. wide buffer with open space and on-street parking adjacent to neighborhood</li> </ul> | <ul style="list-style-type: none"> <li>Provides 22 ft. buffer with adjacent to neighborhood</li> </ul>   |
| Main Street            | <ul style="list-style-type: none"> <li>Signals will be timed to prevent cut-through traffic on Main and Austin</li> </ul>                    | <ul style="list-style-type: none"> <li>Signals will be timed to prevent cut-through traffic on Main and Austin</li> </ul>                          |
| Bicycle connections    | <ul style="list-style-type: none"> <li>10 ft. multiuse path on east side</li> <li>5 ft. bike lane on Rutherford Ave. SB</li> </ul>           | <ul style="list-style-type: none"> <li>10 ft. multiuse path on east side</li> <li>Bicycle accommodations SB TBD</li> </ul>                         |
| On-Street Parking      | <ul style="list-style-type: none"> <li>Rutherford Ave (Austin St. area): 130</li> </ul>  | <ul style="list-style-type: none"> <li>Rutherford Ave (Austin St. area): 15</li> </ul>   |



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### Discussion

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