

# Brighton-Deering-Falmouth Roundabout Public Presentation 2018-01-16



# Presentation Outline

- Project Background: Jeremiah Bartlett (City of Portland)
- Design Approach: John Mahoney (Ransom)
- Landscape-Streetscape Elements: Keith Smith (TJD&A)
- Breakout Tables for Discussion Topics:
  - Traffic: Jeremiah Bartlett (Portland)
  - Pedestrian and Freight: John Mahoney (Ransom)
  - Bicycle and Transit: Tom Nosal (Ransom)
  - Stormwater/Utilities: Steve Bradstreet (Ransom)
  - Landscape-Streetscape: Keith Smith (TJD&A)
  - Questions/Comments for the Record:  
Conrad Welzel with Stenographer to Record



# Design Team



- Ransom – Lead Consultant/Civil Engineering
- MTJ Engineering – Roundabout Design
- TJD&A – Streetscape and Landscape Design
- Dubois & King – Multimodal LOS Analysis
- Titcomb Associates - Survey



# Preferred Alternative from Initial Feasibility Study



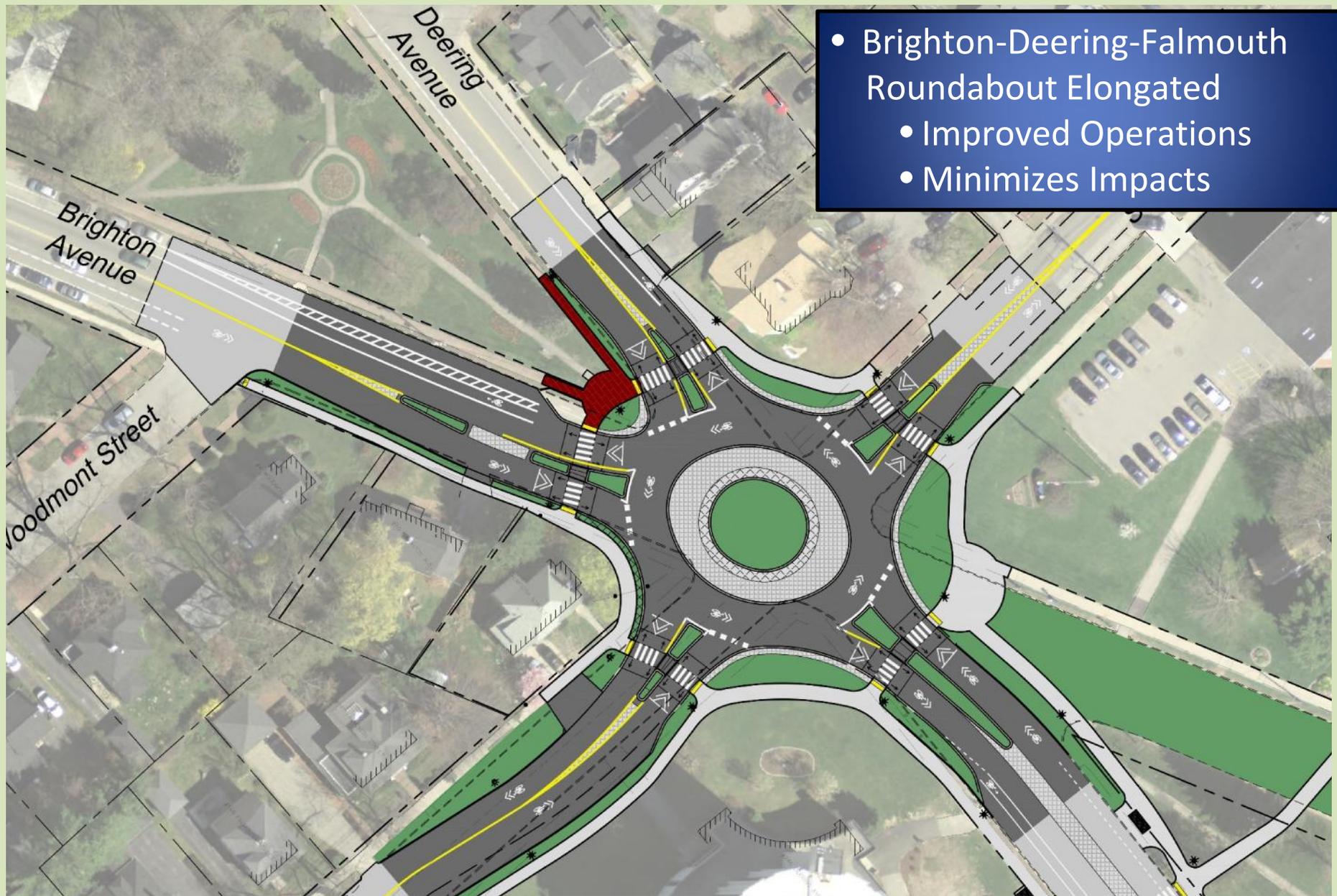
- Two Roundabouts
- Abandon Brighton Avenue from Falmouth to Bedford Streets
- Convert Bedford to two-way from Deering to Brighton

# Proposed Design



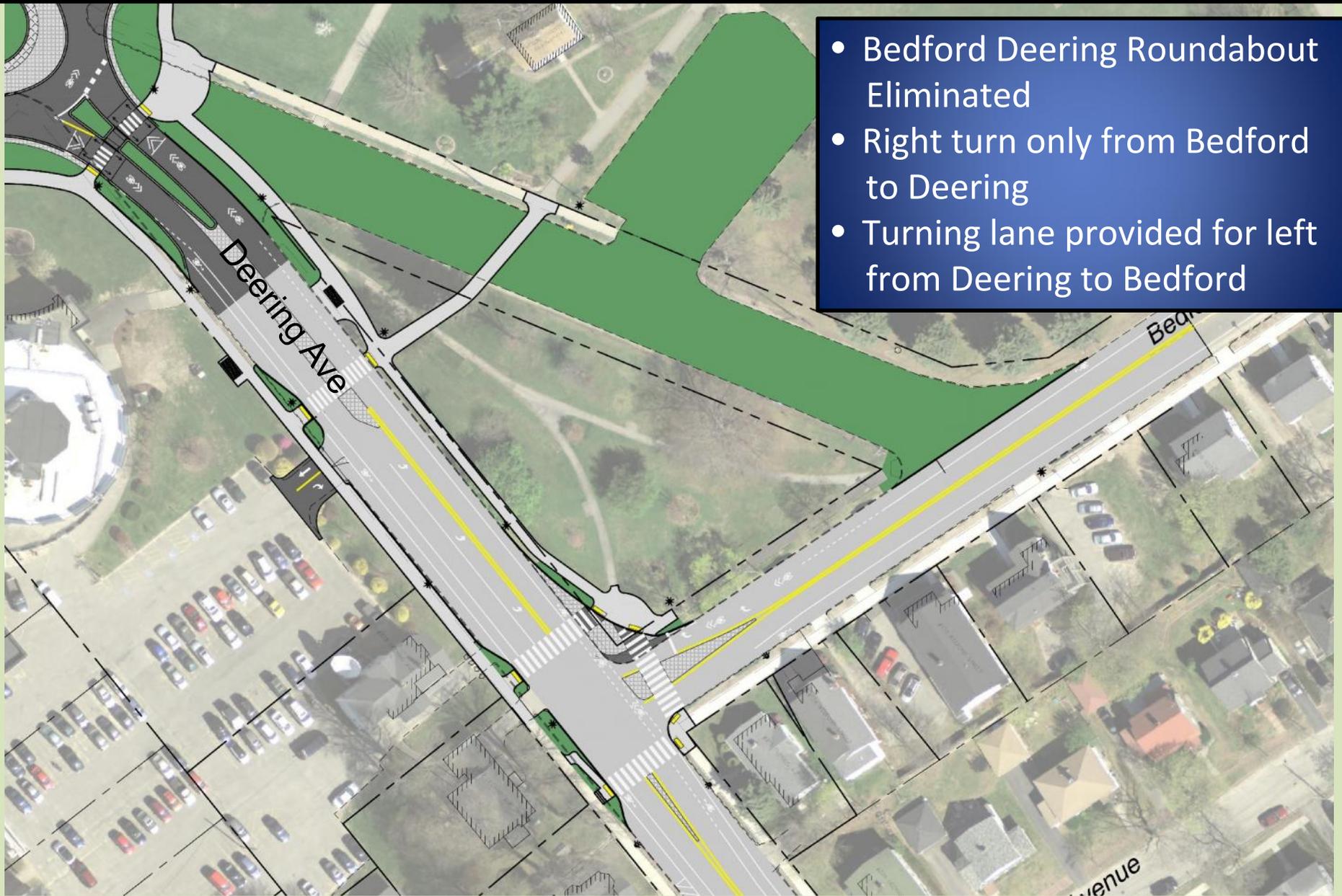
# Adjustments Made to Initial Concept

- Brighton-Deering-Falmouth Roundabout Elongated
  - Improved Operations
  - Minimizes Impacts



# Adjustments Made to Initial Concept

- Bedford Deering Roundabout Eliminated
- Right turn only from Bedford to Deering
- Turning lane provided for left from Deering to Bedford



# Traffic Capacity/Level of Service Criteria

## Existing Conditions Evaluation

2014 Weekday Morning			2014 Weekday Evening		
<u>v/c*</u>	<u>Delay**</u>	<u>LOS***</u>	<u>v/c</u>	<u>Delay</u>	<u>LOS</u>
0.88	63	E	0.93	102	F
2024 Weekday Morning			2024 Weekday Evening		
<u>v/c</u>	<u>Delay</u>	<u>LOS</u>	<u>v/c</u>	<u>Delay</u>	<u>LOS</u>
0.96	76	E	1.12	105	F

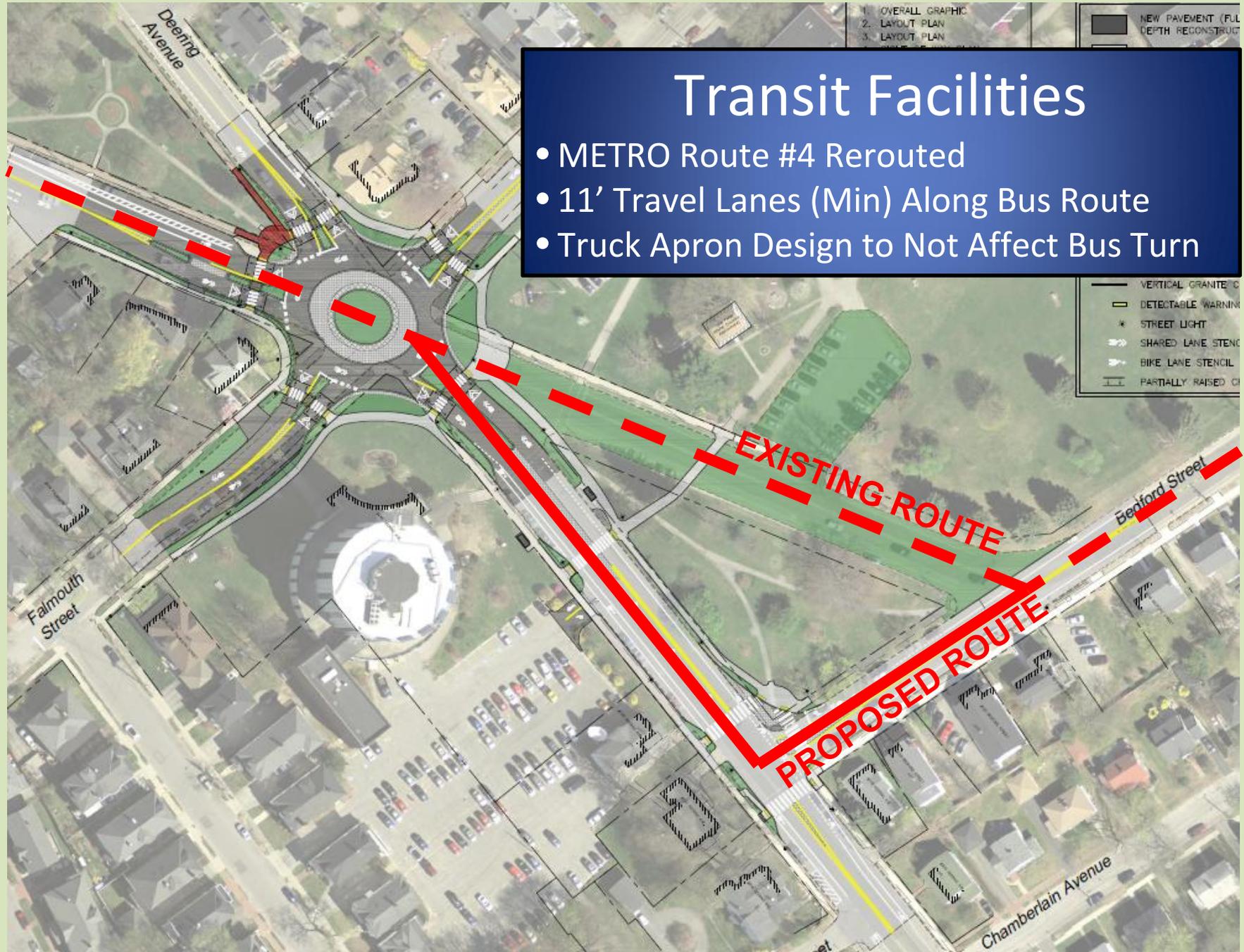
## Evaluation for Preferred Alternative

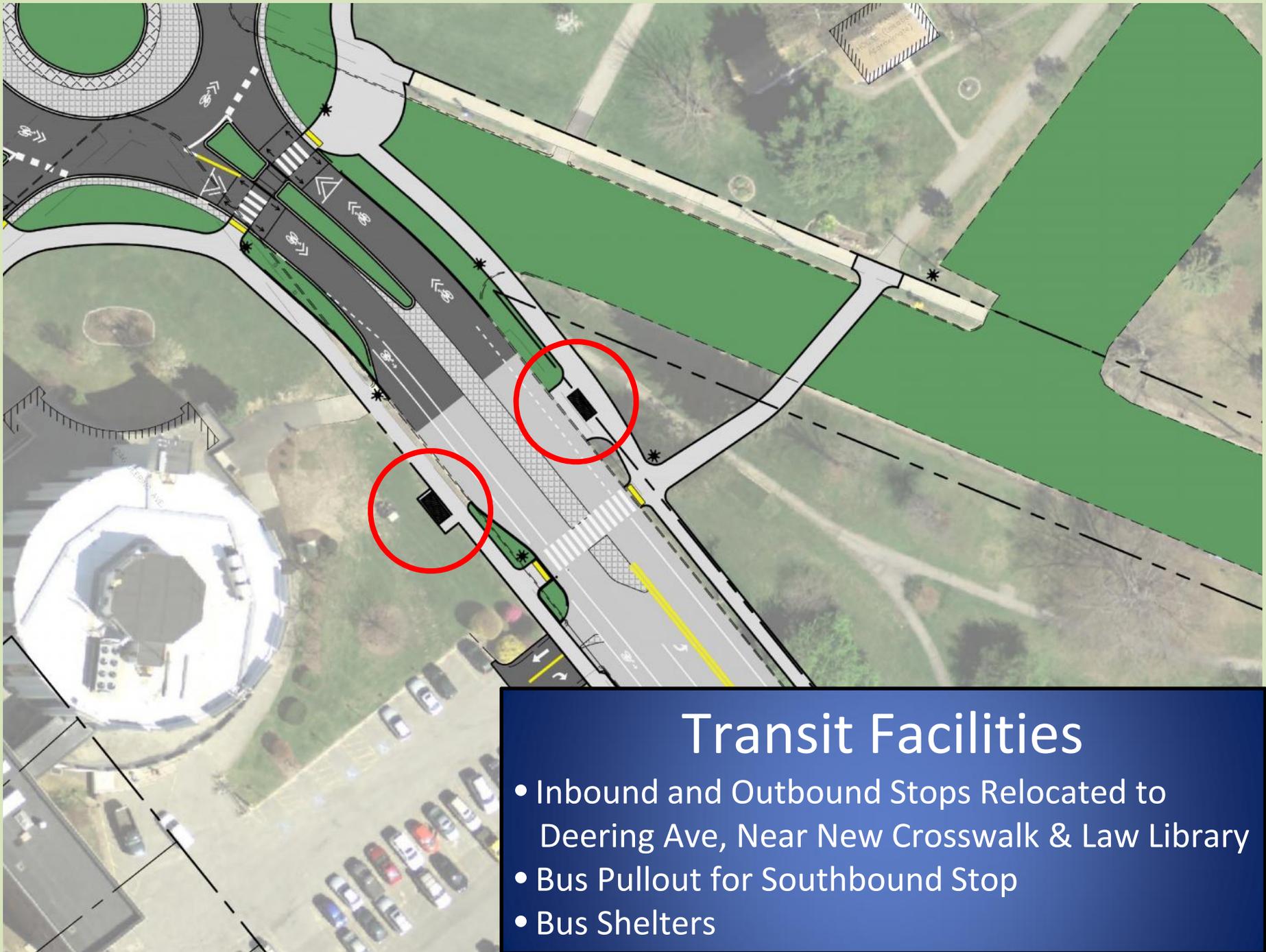
	2014 Weekday Morning		2014 Weekday Evening		2024 Weekday Morning		2024 Weekday Evening	
	<u>Delay**</u>	<u>LOS***</u>	<u>Delay</u>	<u>LOS</u>	<u>Delay</u>	<u>LOS</u>	<u>Delay</u>	<u>LOS</u>
<b>Brighton Ave @Deering Ave &amp; Falmouth St</b>								
Overall	21	C	19	C	34	D	27	D

- Additional traffic counts have confirmed the initial findings of the feasibility study

# Transit Facilities

- METRO Route #4 Rerouted
- 11' Travel Lanes (Min) Along Bus Route
- Truck Apron Design to Not Affect Bus Turn

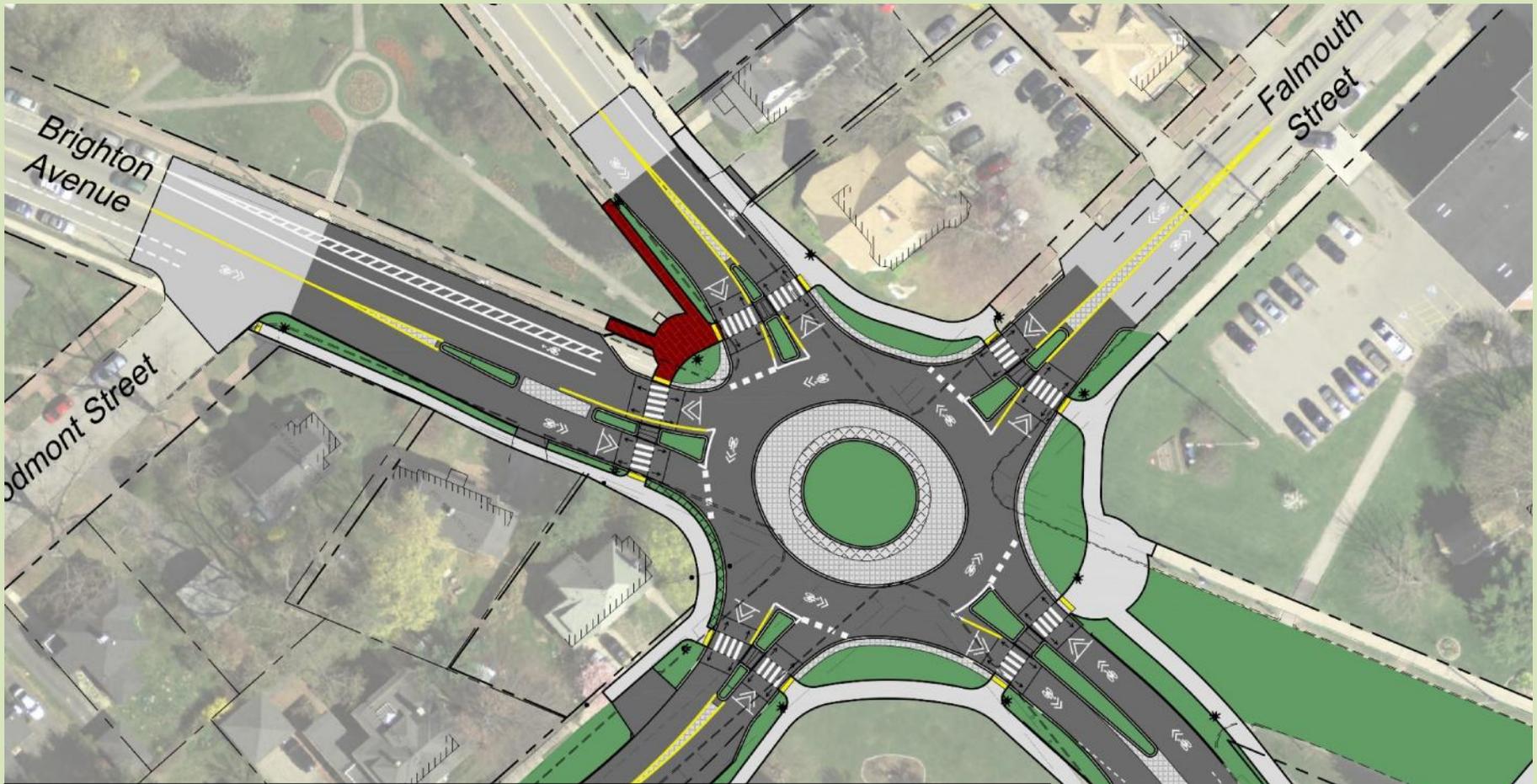






## Existing Bicycle Hub

- Bike Lanes on Bedford Street
- Bike Lanes on Deering Avenue
- Bike Lanes on Brighton Avenue
- Neighborhood Byway on Falmouth



## Bicycle Facilities

- Transition Bike Lanes to Shared Lanes on Approaches, Bike Lanes Resume on Exits from Roundabout
- Shared Use Lanes within Roundabouts
- Sidewalk also available to cyclists (8' wide around roundabout)

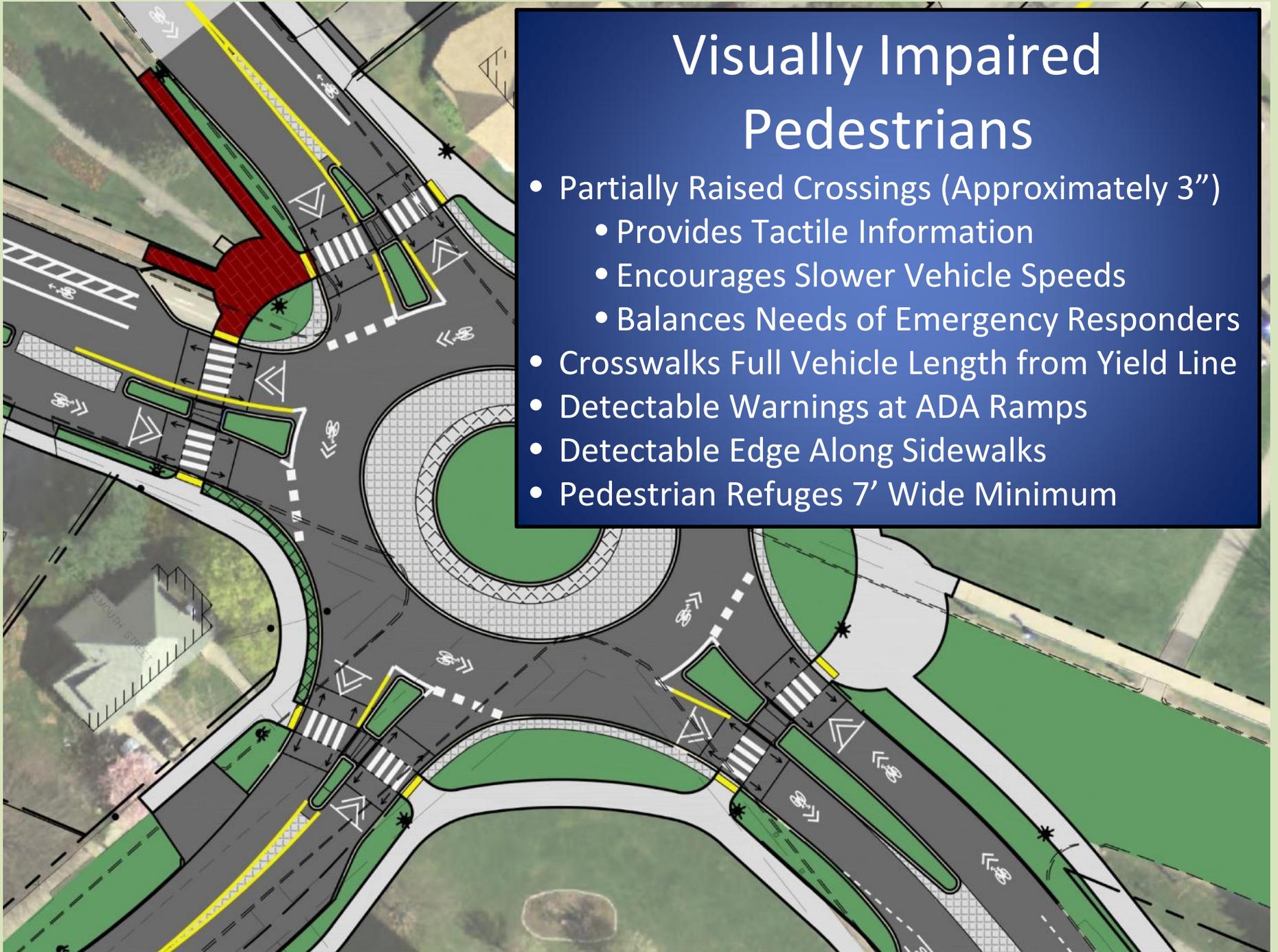


## Pedestrian Crossings

- Crosswalks on All Approaches
- Refuge Created by Splitter Island Allows Pedestrians to cross one lane of traffic at a time
- Mid-block Crossing Connects USM Law Library to Main Campus

# Visually Impaired Pedestrians

- Partially Raised Crossings (Approximately 3")
  - Provides Tactile Information
  - Encourages Slower Vehicle Speeds
  - Balances Needs of Emergency Responders
- Crosswalks Full Vehicle Length from Yield Line
- Detectable Warnings at ADA Ramps
- Detectable Edge Along Sidewalks
- Pedestrian Refuges 7' Wide Minimum



**City Bus/Ladder Truck**



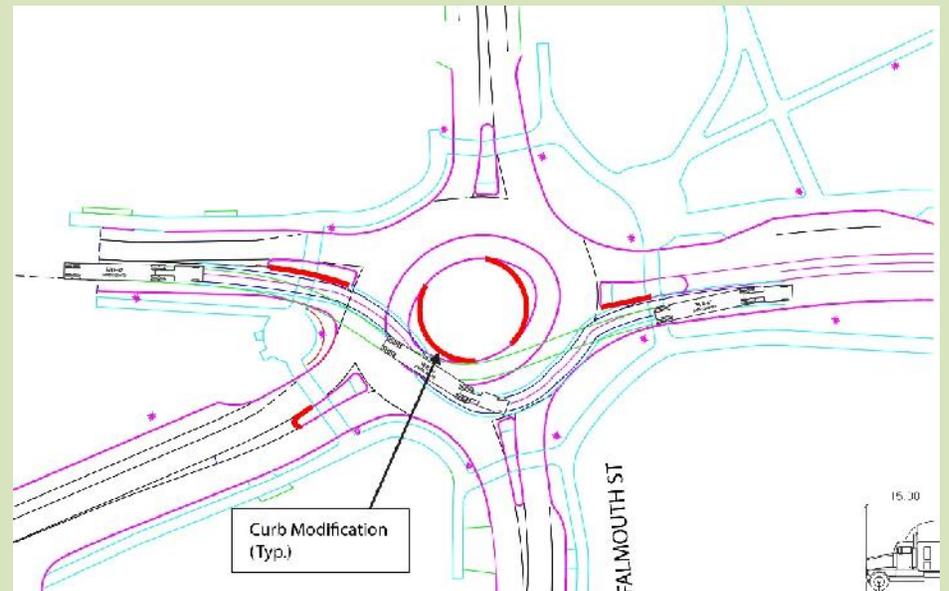
**WB-50 Tractor Trailer**



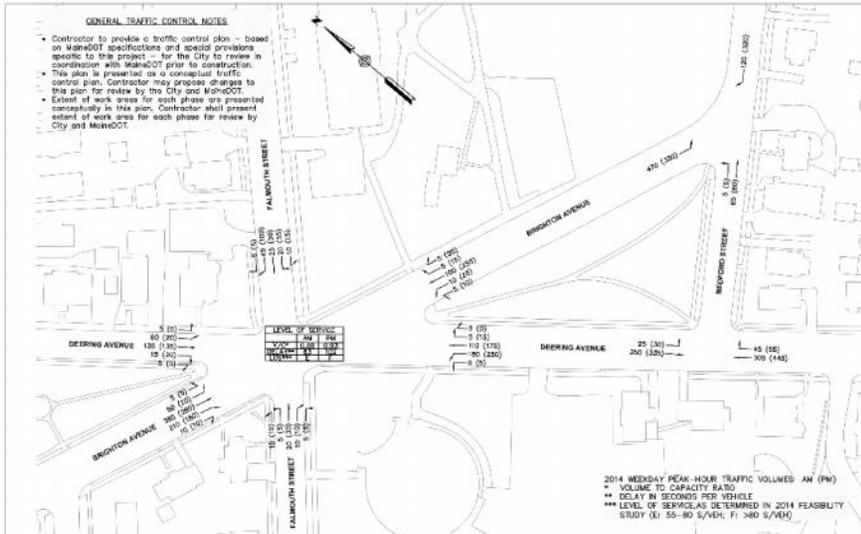
**WB-62 Tractor Trailer**



**WB-67 Tractor Trailer**

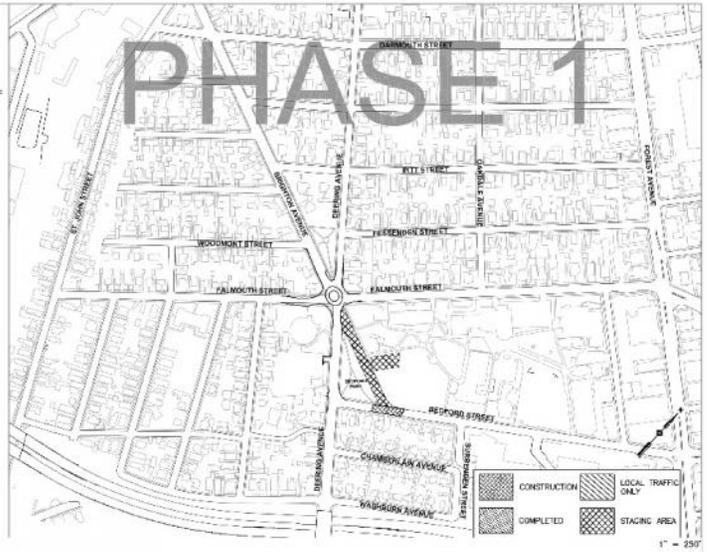


# Traffic Control and Construction Phasing



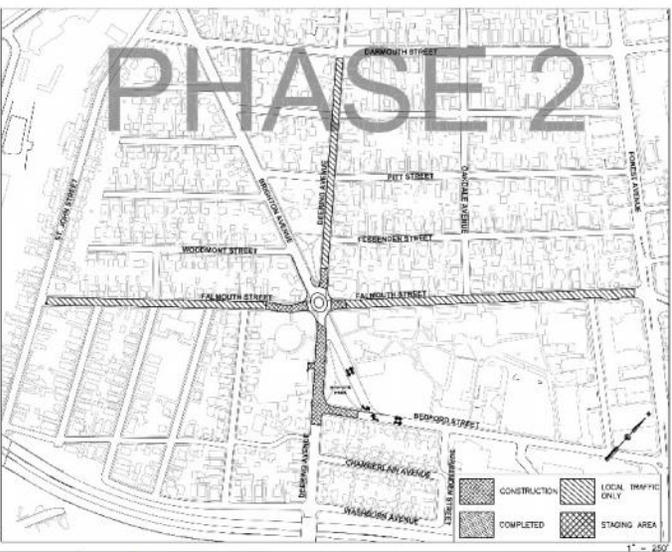
## PHASE 1

- TRAFFIC CONTROL**
- Restrict Bedford Street and Brighton Avenue (between Bedford and Falmouth Streets) to one lane with alternating traffic as necessary. Or, if and when necessary, restrict Bedford Street and/or Brighton Avenue (between Bedford and Falmouth Streets) to local traffic only.
- BICYCLE AND PEDESTRIAN ACCESS**
- Southern sidewalk on Bedford Street to remain open.
- METRO BUS ACCESS**
- During Bedford Street construction, METRO bus service (Route Number 4) can remain on Bedford Street, following temporary traffic control corresponding to lane closures. Alternatively, bus service can be temporarily rerouted onto Falmouth Street or follow the Sunday-service route.
- CONSTRUCTION SEQUENCING**
- Install new drainage infrastructure on Bedford Street.



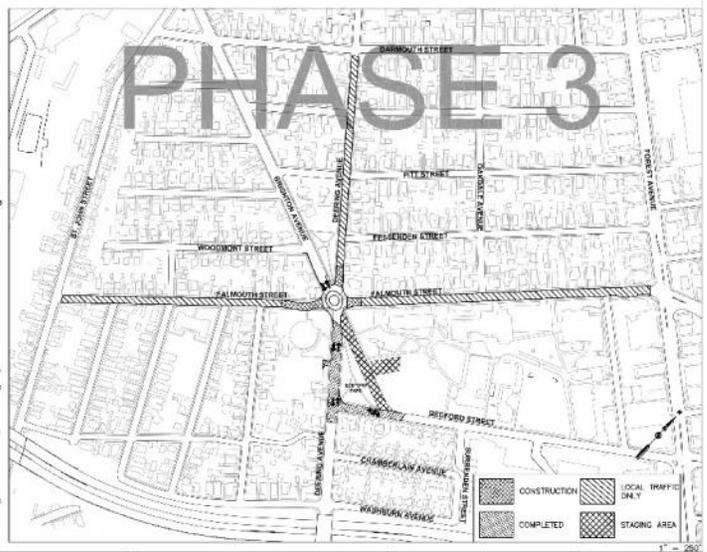
## PHASE 2

- TRAFFIC CONTROL**
- Restrict Deering Avenue between Brighton Avenue and Bedford Street to one lane with alternating traffic as necessary. Limit closure of both lanes as possible.
  - Restrict Bedford Street between Brighton and Deering Avenues to one lane with alternating traffic as necessary. Limit closure of both lanes as possible.
  - Restrict Deering Avenue between Woodburn Avenue and Bedford Street, as well as Bedford Street between Brighton and Deering Avenues, to local traffic only as necessary, depending on lane closures.
  - Make Falmouth Street east and west of five-leg intersection, as well as Deering Avenue north of five-leg intersection, open to local traffic only. Access to/from these sections will not be available from the five-leg intersection. This allows for the removal of the existing traffic signal at only Brighton-Deering through-movements will be allowed. Emergency access to be preserved to the greatest extent feasible.
  - At this point, signal at five-leg intersection can be closed, removed.
- BICYCLE AND PEDESTRIAN ACCESS**
- Contractor to schedule sidewalk work such that sidewalk on at least one side of Deering can be open at all times. Pedestrians may also use Bedford Park walkway and existing sidewalks where not impacted by construction of Phase 2.
  - Bicycle traffic shall share use of the roadway with vehicles and follow same detour routes as motor vehicle traffic.
- CONSTRUCTION SEQUENCING**
- Install new drainage infrastructure on Deering Avenue and Bedford Street. Connect to new infrastructure installed on Bedford Street in Phase 1 and make temporary connection to sanitary sewer.
  - Set curb for curb realignments and curb extensions; construct associated sidewalk modifications within limits of Phase 1 construction area.
  - Construct back space at intersection of Bedford Street and Deering Avenue.
  - Construct as much of collection main on Deering Avenue as possible without interfering with through-movements on Brighton Avenue or Brighton-Deering (during later phases).
  - Construct sidewalks on Deering Avenue along southeast corner of new five-leg intersection to connect pedestrian access to Falmouth Street.
  - Reroute Deering Avenue on Bedford Street according to final striping plan.
  - Construction on Falmouth and Deering north will begin in this phase. See Phase 3 for construction sequencing.



## PHASE 3

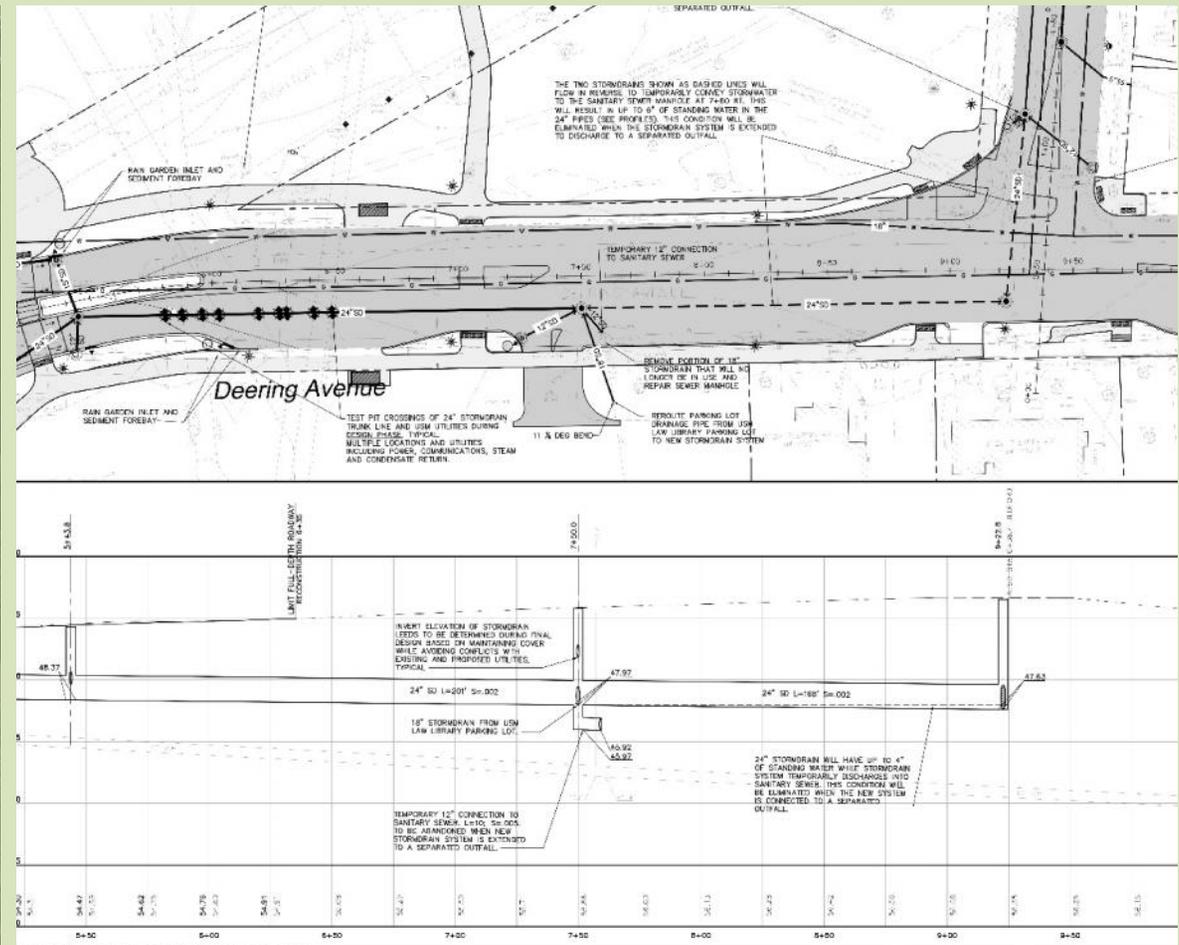
- TRAFFIC CONTROL**
- Reopen Bedford Street.
  - Falmouth Street east and west of five-leg intersection, as well as Deering Avenue north of five-leg intersection, continue to be open to local traffic only. Access to/from these sections will not be available from the five-leg intersection. This allows for the removal of the existing traffic signal at only Brighton-Deering through-movements will be allowed. Emergency access should be preserved to the greatest extent feasible.
  - Brighton Avenue between Bedford and Falmouth Streets shall be closed to traffic and may be used for staging as necessary, as well as the adjacent parking lot, in coordination with USM.
- BICYCLE AND PEDESTRIAN ACCESS**
- Pedestrian traffic may use newly constructed or existing sidewalks and crosswalks.
  - Bicycle traffic to share use of roadway with motor vehicles and follow same detour as motor vehicle traffic.
- CONSTRUCTION SEQUENCING**
- Demolish existing roadway as directed in construction drawings and retain materials as necessary (collectively).
  - Install new drainage infrastructure through Brighton-Deering intersection, and tie to new infrastructure installed on Deering Avenue (south of Falmouth Street).
  - Install new drainage infrastructure on Falmouth Street and Deering Avenue (north of Falmouth Street), and tie into newly constructed infrastructure.
  - Remove existing material, install new base material and pave base course on Falmouth Street and Deering Avenue within limits of Phase 3 construction area.
  - Construct within limits of Phase 3 construction area, as determined by contractor. Do not set roundabout brand curbs or construct lone splitter islands or flush medians.
  - Construct sidewalks.
  - Place temporary striping and lane markings as necessary.



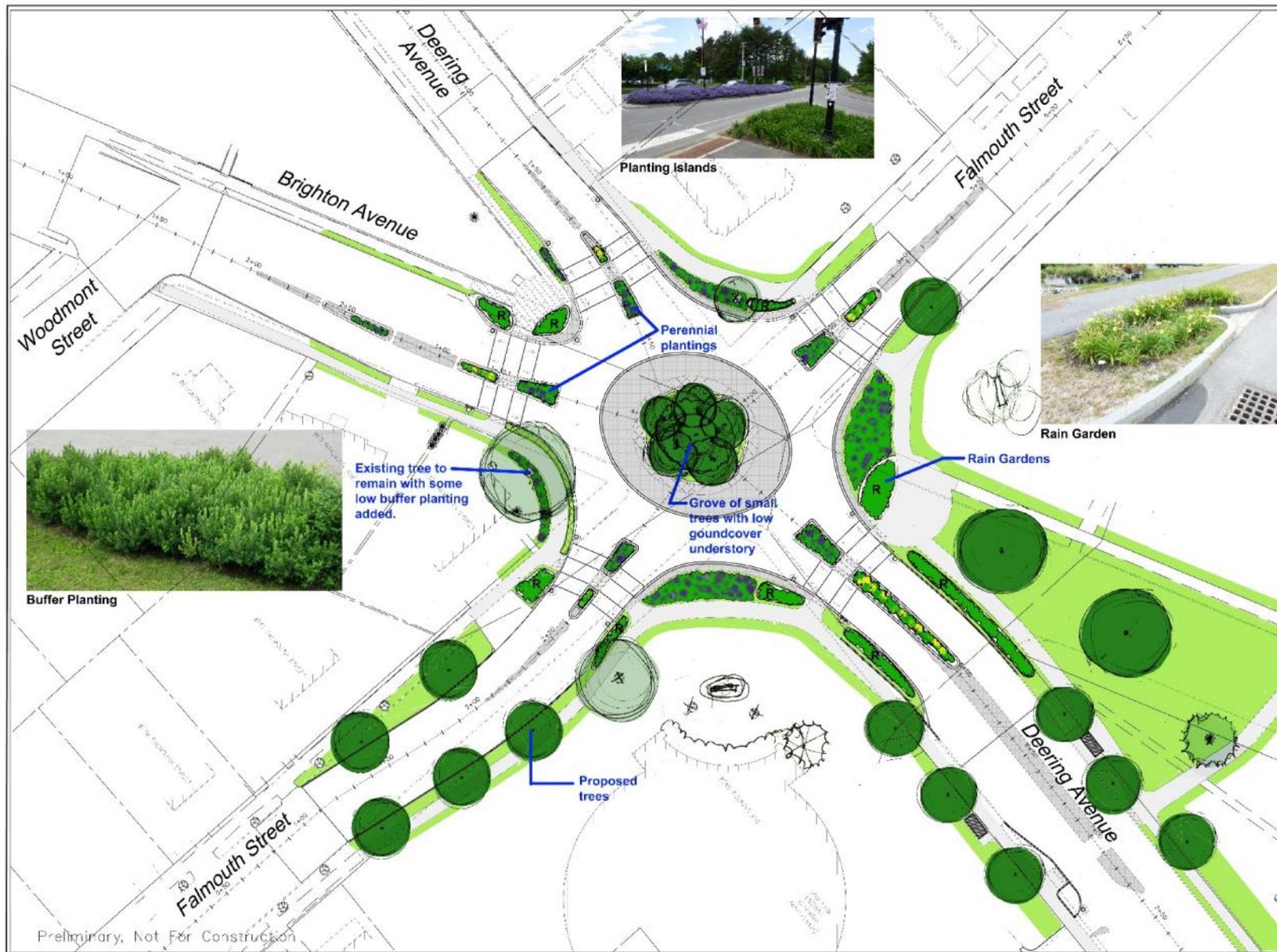


# New Separated Stormdrain System

- Reduce the frequency and duration of combined sewer overflows
- Stormwater filtration systems (rain gardens will be installed to remove pollutants before discharge to Back Cove/Casco Bay



# Landscape and Streetscape



Brighton-Deering-Falmouth & Bedford-Deering Roundabouts

City of Portland  
309 Congress Street  
Portland, Maine



**RANSOM**  
Consulting, Inc.  
400 Commercial Street, Suite 404  
Portland, Maine 04103  
Tel (207) 772-2861  
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www.ransominc.com



tjd&a  
DuBois & King



Landscape Concept Plan

For staff review 8.3.17

No.	Revision/Issue	Date

# Landscape and Streetscape



Brighton-Deering-Falmouth  
& Bedford-Deering  
Roundabouts

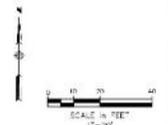
City of Portland  
389 Congress Street  
Portland, Maine



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Landscape Concept  
Plan

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# Landscape and Streetscape



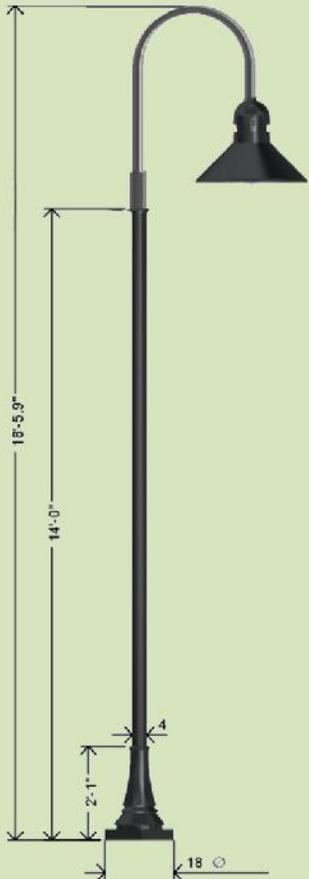
**Materials**

# Landscape and Streetscape



**Trees and Plants**

# Landscape and Streetscape



Princeton Aluminum Pole, Smooth Base  
BC (Bishops Crook Crossarm)  
Hallbrook® W Bowl Glass



## Streetscape Amenities

**Thank You!**