

Western Avenue at Leo M. Birmingham Parkway and Arsenal Street Intersection & Corridor Improvements

Presented by

BPDA & Howard Stein Hudson

January 31, 2018



CITY OF BOSTON
Office of the Mayor
Martin J. Walsh



HOWARD STEIN HUDSON

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MOUNT VERNON
COMPANY

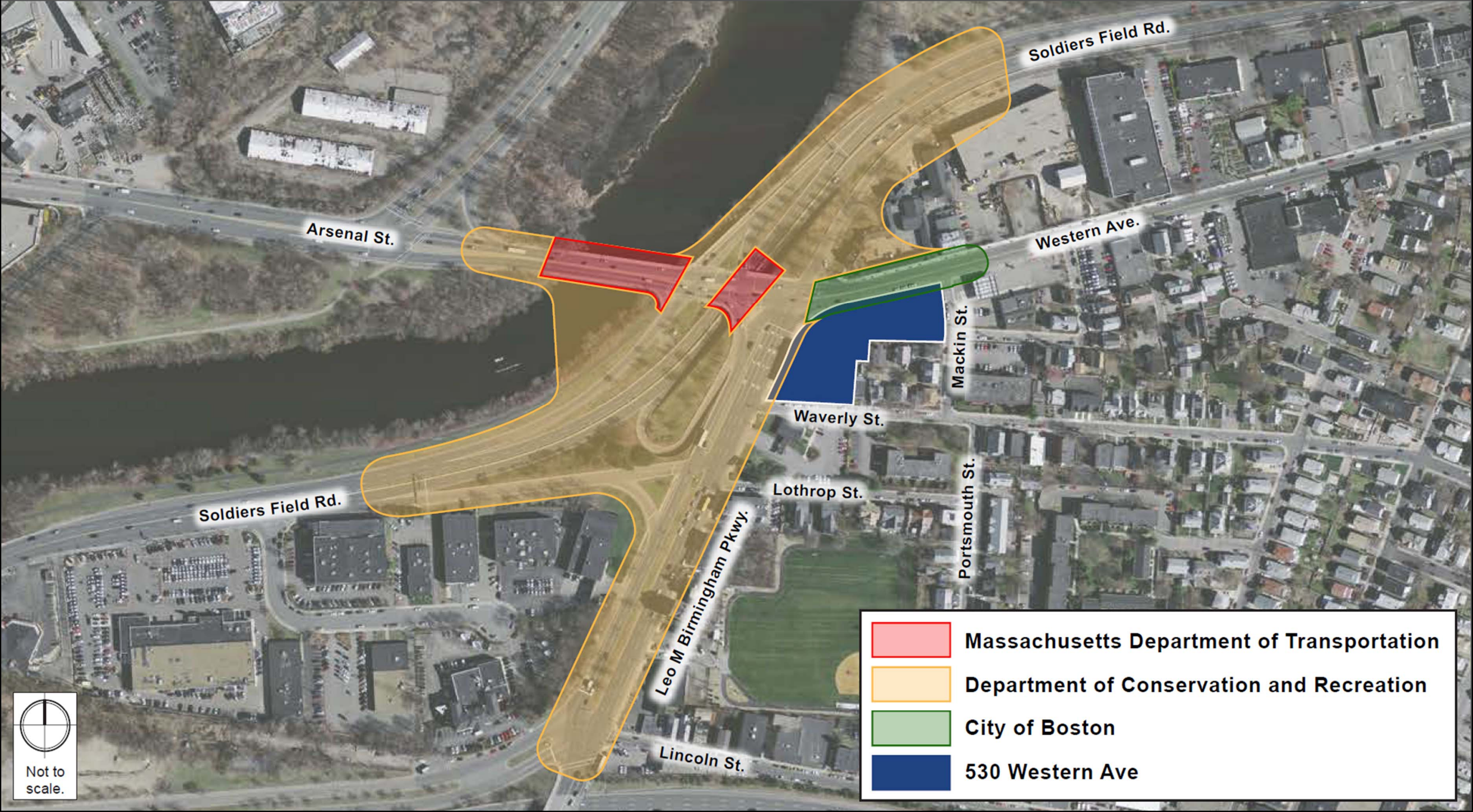
- **Project Study Area**
- **Site History**
- **Existing Site Conditions**
 - Accommodations
 - Operations
- **Guiding Design Principals**
- **Concept Design Alternatives**







- **Planning & Concept Development**
 - Mt Vernon Company funded study & concept development
 - Design coordination with BPDA, DCR, MassDOT, & BTD
 - Presentation to Area Elected Officials
- **Public Input Gathering at Public Meeting**
- **Determine Funding**
- **Initiate Projects and Continued Public Engagement**
- **Short Term Design and Construction**
- **Long Term Project Development Process**



Study Area & Jurisdiction of Facilities



	Massachusetts Department of Transportation
	Department of Conservation and Recreation
	City of Boston
	530 Western Ave

Not to scale.

Regional Planning | Design | Construction Efforts

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ARSENAL STREET
CORRIDOR STUDY



STUDY AREA

GREENOUGH BOULEVARD
GREENWAY



MOUNT AUBURN STREET
CORRIDOR STUDY



ALLSTON BRIGHTON
INTERCHANGE IMPROVEMENT
PROJECT



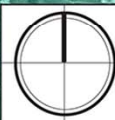
CHARLES RIVER BASIN
PEDESTRIAN AND
BICYCLE STUDY



NONANTUM ROAD/
LEO BIRMINGHAM PKWY/
SOLDIERS FIELD ROAD/
NORTH BEACON STREET
INTERSECTION STUDY



CITY OF BOSTON
VISION ZERO &
GO BOSTON 2030



Not to scale.

■ Arsenal Street Corridor Study

- <https://www.massdot.state.ma.us/planning/Main/CurrentStudies/ArsenalStreetCorridorStudy.aspx>

■ Charles River Basin Ped. & Bike Study for Pathways & Bridges

- https://www.massdot.state.ma.us/Portals/26/docs/bikePedRpt_fall11.pdf

■ Mount Auburn Corridor Study

- <https://www.mass.gov/service-details/mount-auburn-street-corridor-study>

■ Allston Brighton Interchange Improvement Project

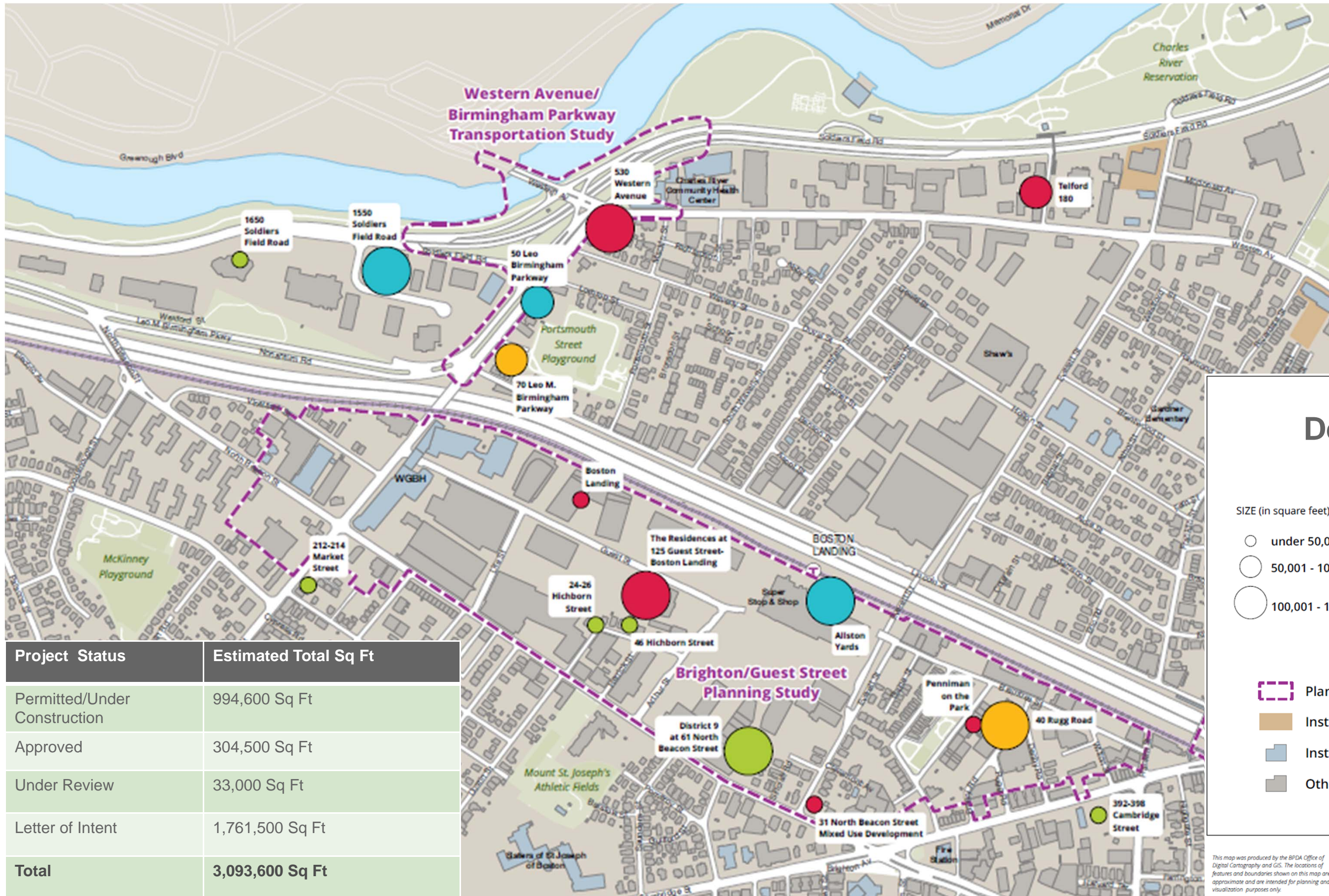
- <http://www.massdot.state.ma.us/highway/HighlightedProjects/AllstonI90InterchangeImprovementProject.aspx>

■ Greenough Boulevard Road Diet

- <http://www.solomonfoundation.org/images/Greenough-concept-design.pdf>



Development Projects



Development Projects

SIZE (in square feet)

- under 50,000 SF
- 50,001 - 100,000 SF
- 100,001 - 1,900,000 SF

STATUS (as of 11/3/17)

- Permitted/Under Construction
- Board Approved
- Under Review
- Letter of Intent

- Planning Study Boundary
- Institutional Master Plan (IMP)
- Institutional/Tax Exempt Buildings
- Other Buildings

Project Status	Estimated Total Sq Ft
Permitted/Under Construction	994,600 Sq Ft
Approved	304,500 Sq Ft
Under Review	33,000 Sq Ft
Letter of Intent	1,761,500 Sq Ft
Total	3,093,600 Sq Ft

- **Multimodal Network Improvements**
- **Available Capacity for Trip Diversion Analysis**
- **Safety Considerations for Diverted Trips**
- **Transit Operation**
- **Consistency of Transportation Facilities**
- **Changes to Multimodal Volumes**
 - Impacts to safety
 - Impacts to access



■ Short Term and Long Term Improvements

- **Short Term** – Low cost Safety & Complete Streets Improvements

- *Implemented in one construction season*
- *Estimated Cost \$500K*

- **Long Term** – Safety & Complete Streets Improvements

- *Funded via the Transportation Improvement Program*
- *Estimated Cost \$5.0M*



Site History - 1885

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Site History - 1909



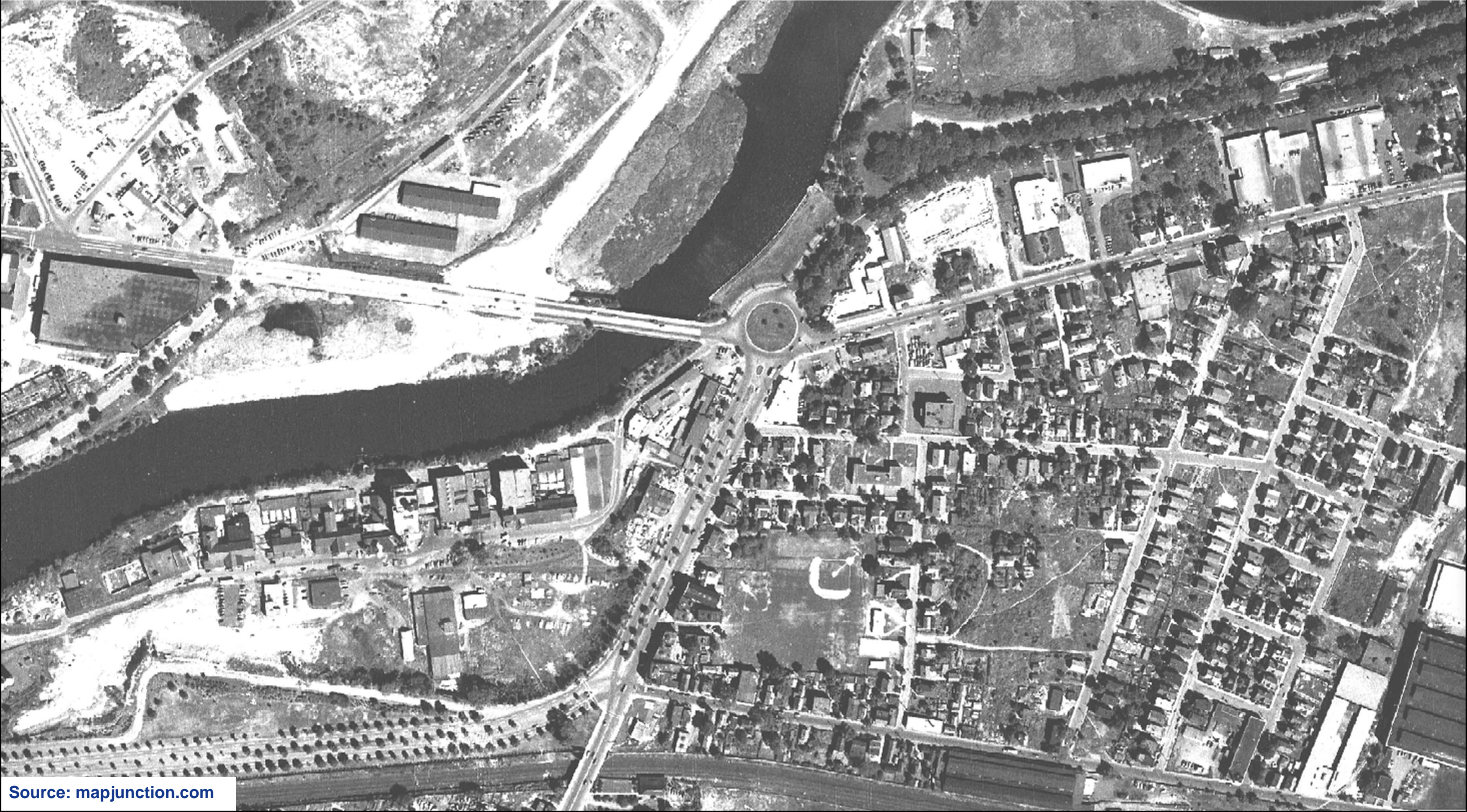
Site History - 1938



Site History - 1946



Site History - 1952



Site History - 1978



Site History - 2016



Western Avenue Westbound View - 2016



Leo M. Birmingham Northbound View - 2017

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Leo M Birmingham Pkwy
Boston, Massachusetts

Google, Inc.

Street View - Aug 2017



Google

Image capture: Aug 2017 © 2018 Google United States Terms Report a problem

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Arsenal Street Eastbound View - 2016

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Leo M. Birmingham Street Northbound View - 2016

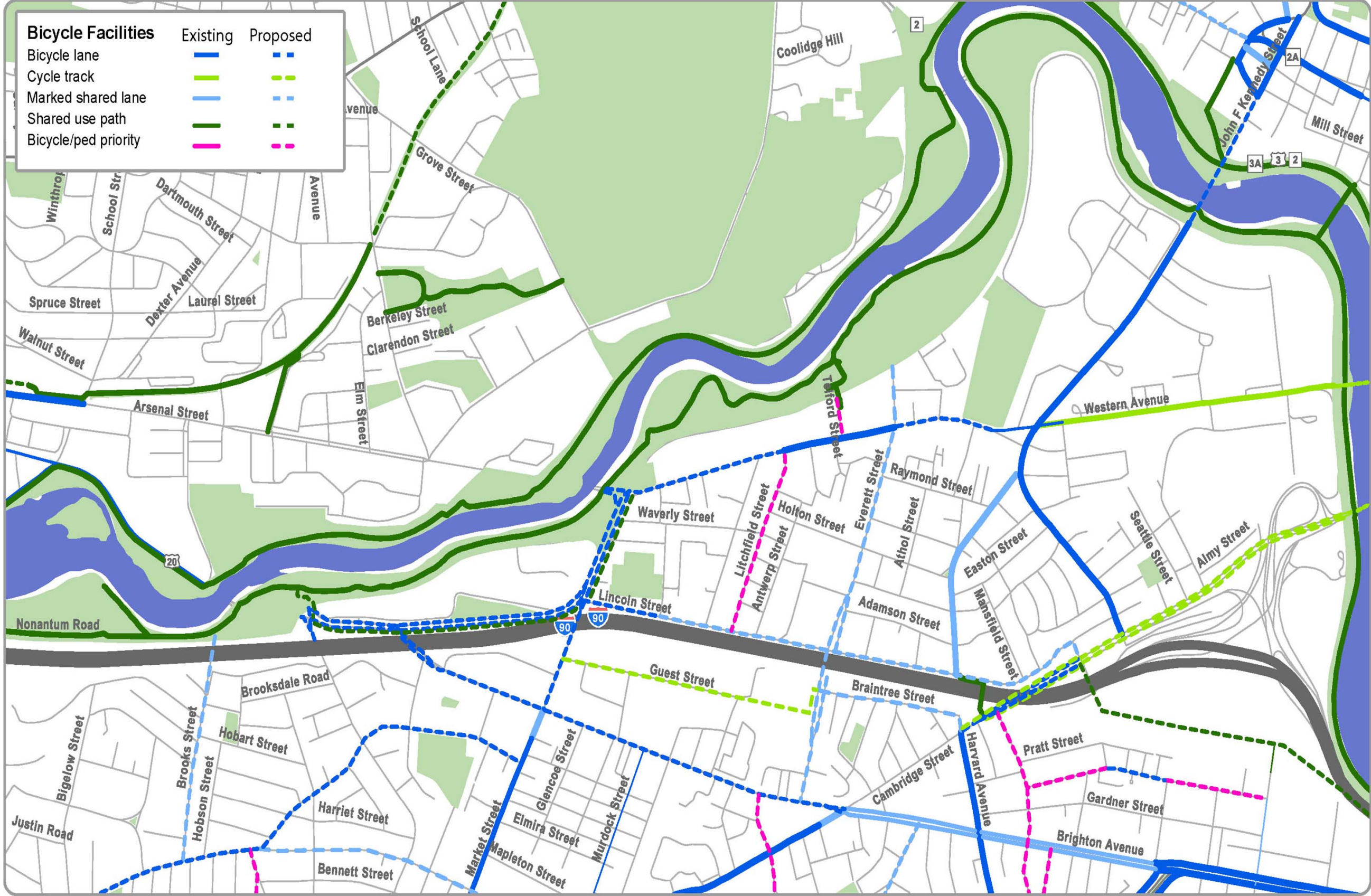
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Image capture: Oct 2016 © 2017 Google United States Terms Report a problem

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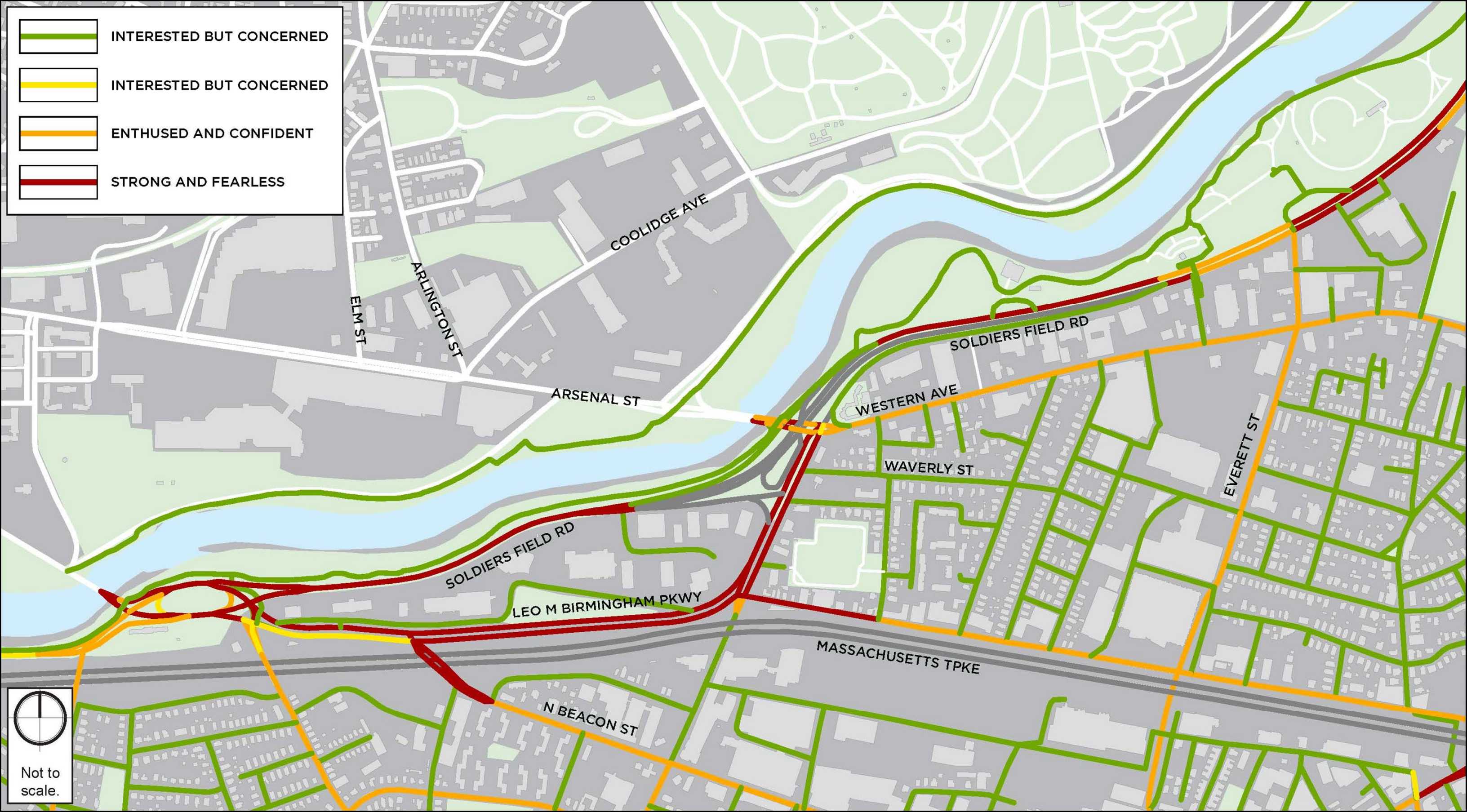
Study Area Existing & Proposed Bicycle Facilities



Data Source: MAPC bicycle and pedestrian inventory, 2015

Existing Condition Bicycle Level of Traffic Stress

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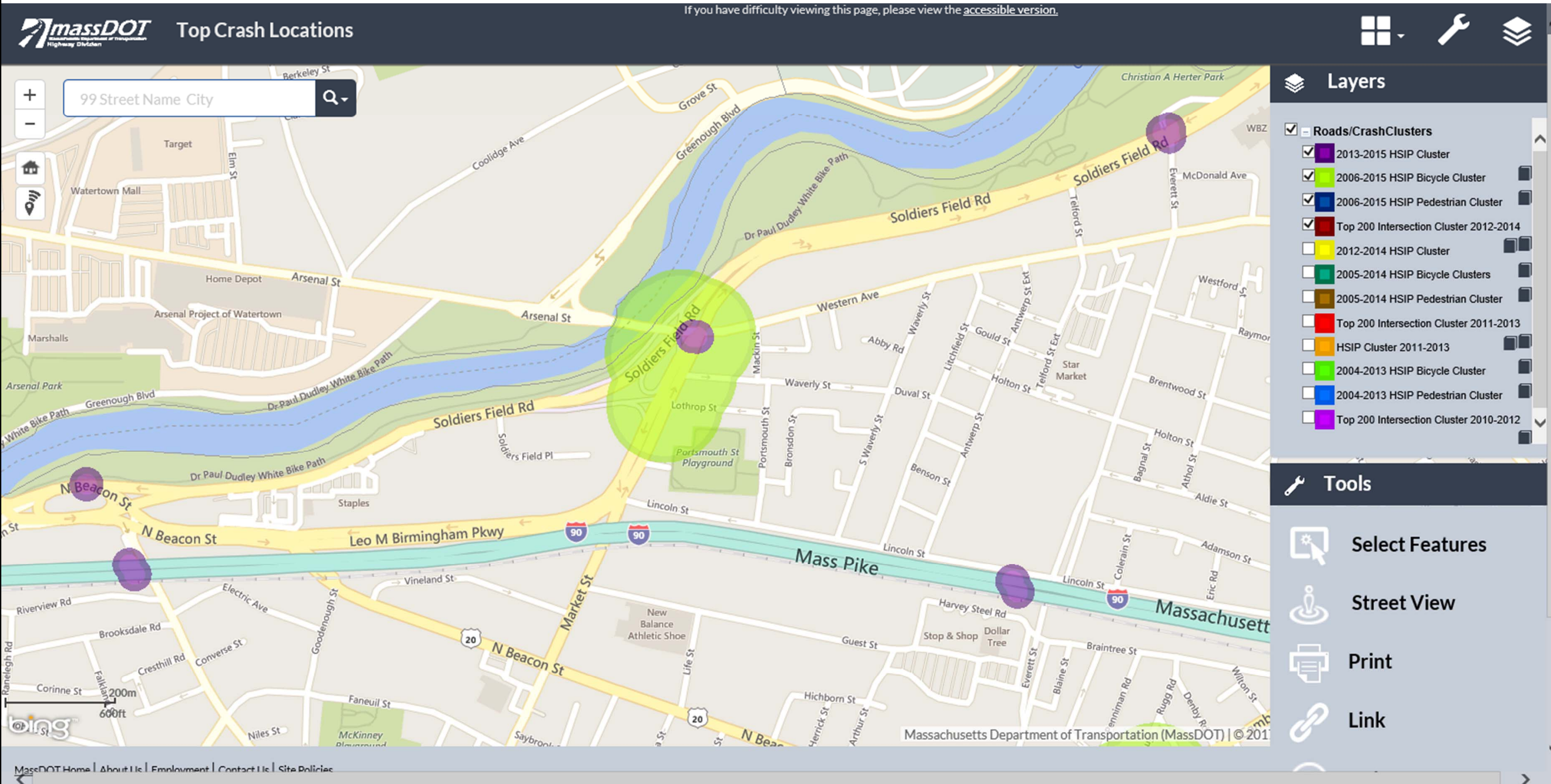
- INTERESTED BUT CONCERNED
- INTERESTED BUT CONCERNED
- ENTHUSED AND CONFIDENT
- STRONG AND FEARLESS

Not to scale.

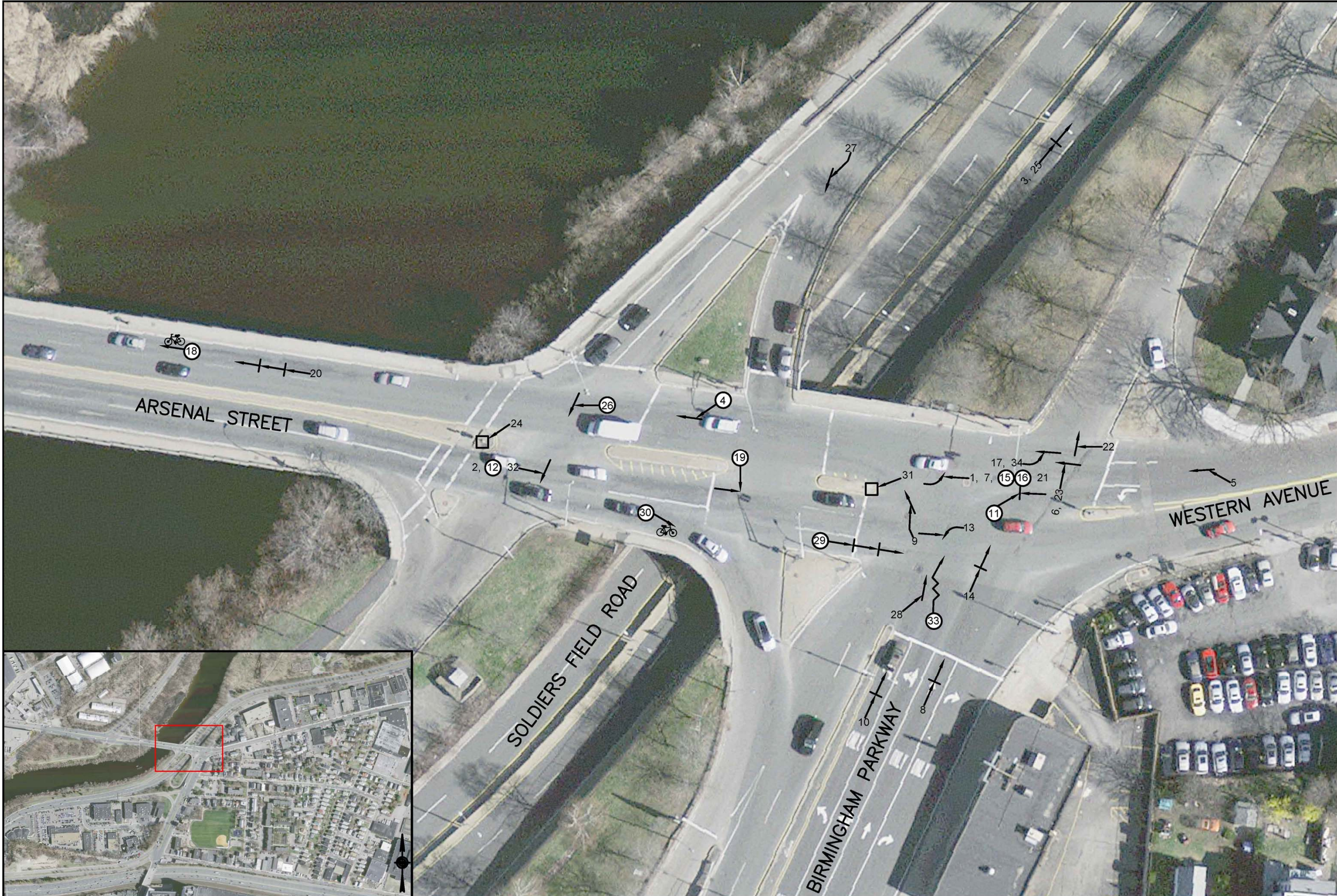
Highway Safety Improvement Program Crash Clusters

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If you have difficulty viewing this page, please view the [accessible version](#).



Crash Diagrams Western Avenue @ Arsenal Street



Key

- Rear-End
- Head-on
- Sideswipe
- Overtuned
- Fixed-Object
- Angle
- Turning Movement
- Parked Vehicle
- Out of Control
- Bicyclist
- Pedestrian
- Deer
- I.D. Number
- Injury
- Fatal



* NOT TO SCALE

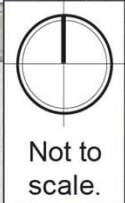
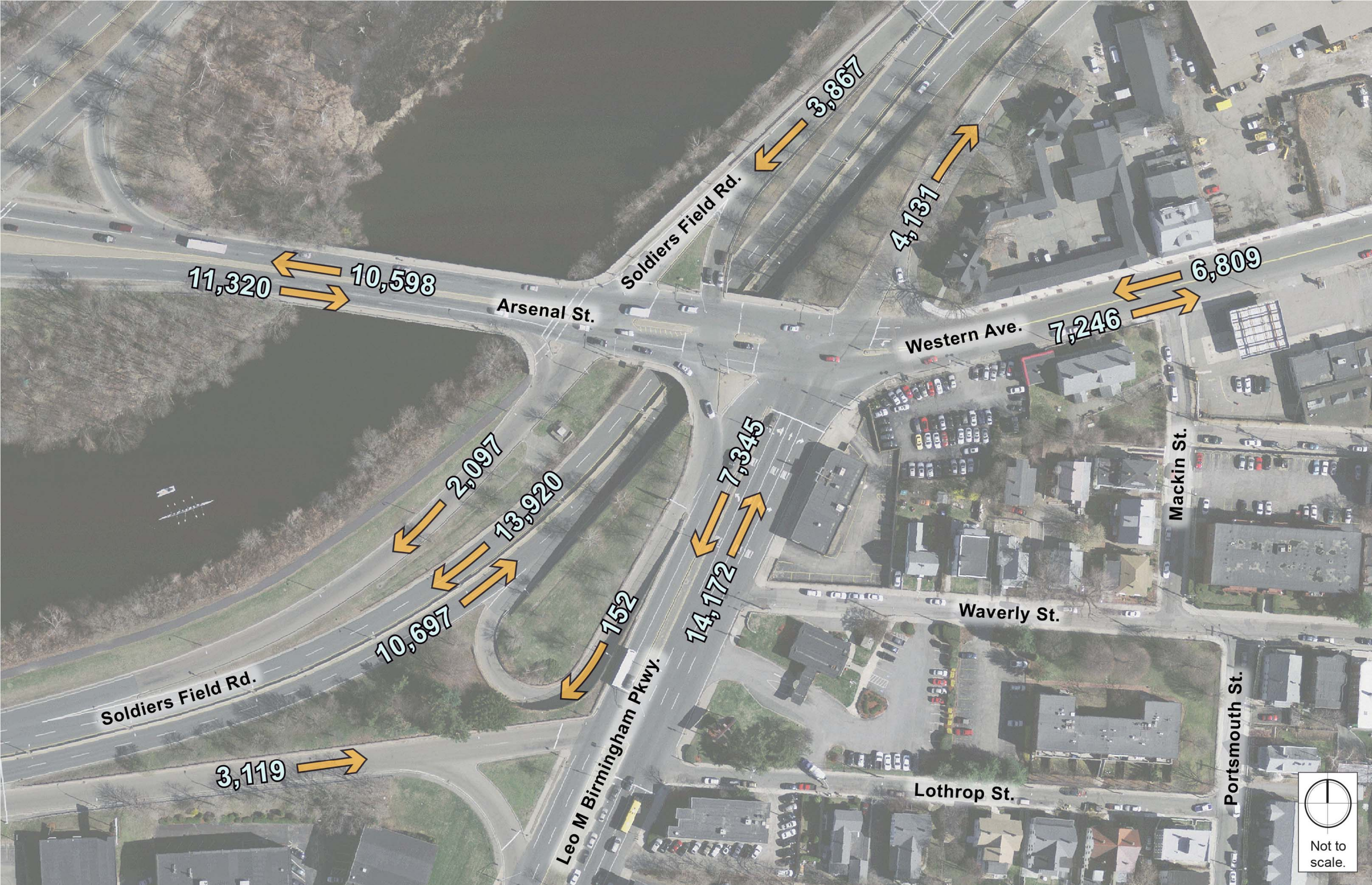
Crash Diagrams – Leo M. Birmingham Parkway



Key	
Rear-End	
Head-on	
Sideswipe	
Overtaken	
Fixed-Object	
Angle	
Turning Movement	
Parked Vehicle	
Out of Control	
Bicyclist	
Pedestrian	
Deer	
I.D. Number	
Injury	
Fatal	

* NOT TO SCALE

Average Daily Traffic (ADT)



- **Simplify and improve access for all modes**
- **Provide access to riverfront & Paul D. White Bike Path**
- **Integrate the Intersection and Leo M. Birmingham Pkwy with Bicycle & Pedestrian Network**
- **Maintain Public Transit operations**
- **Limit cut through movements**
- **Reclaim useable public and green space**

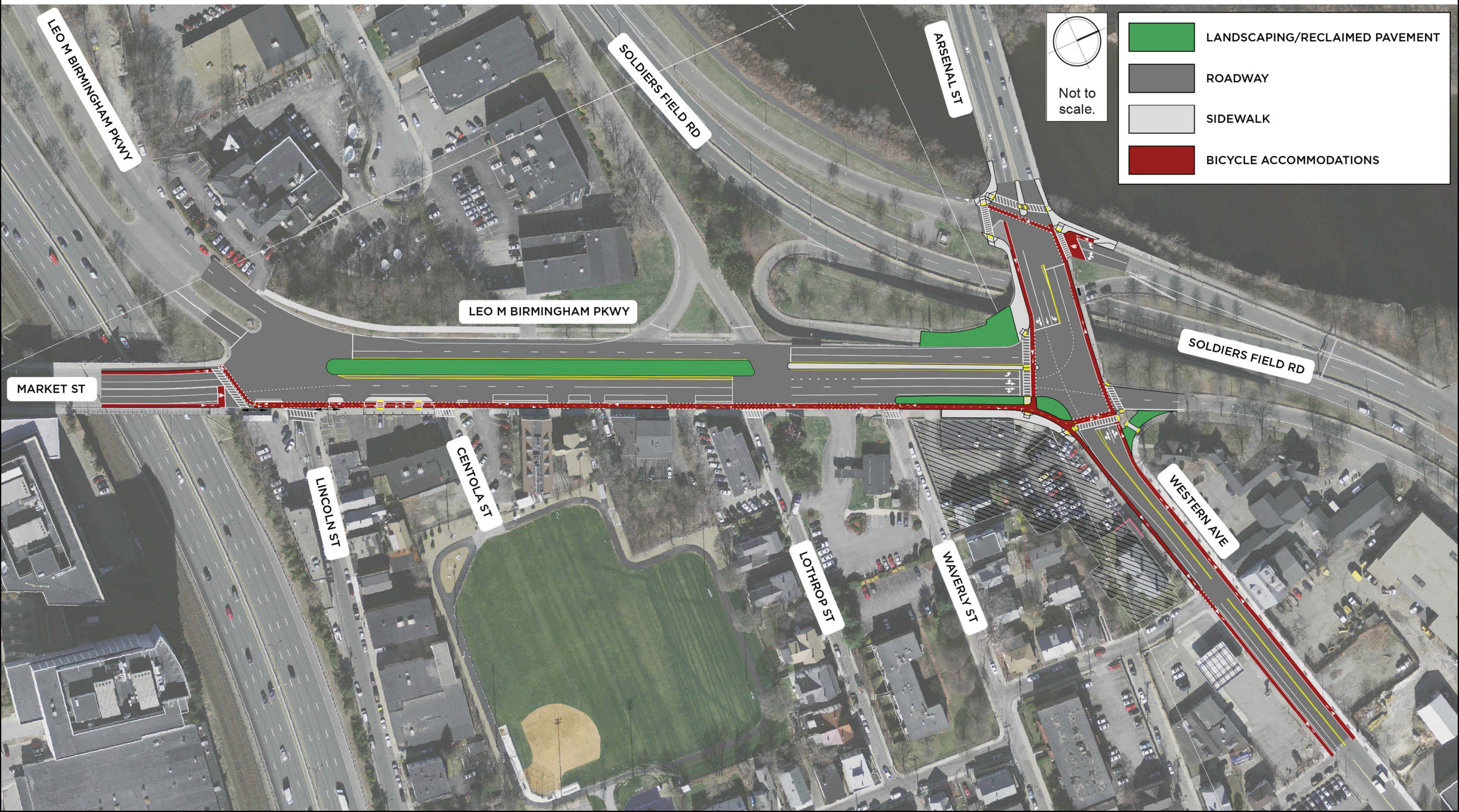


A photograph of a city intersection with traffic lights and cars. The text "Short-term Concept Plans" is overlaid in the center. The scene shows a multi-lane road with a crosswalk, traffic signals, and several vehicles. The sky is overcast with grey clouds. In the background, there are buildings and utility poles. The text is in a bold, blue, sans-serif font.

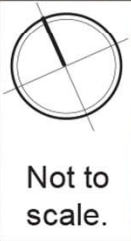
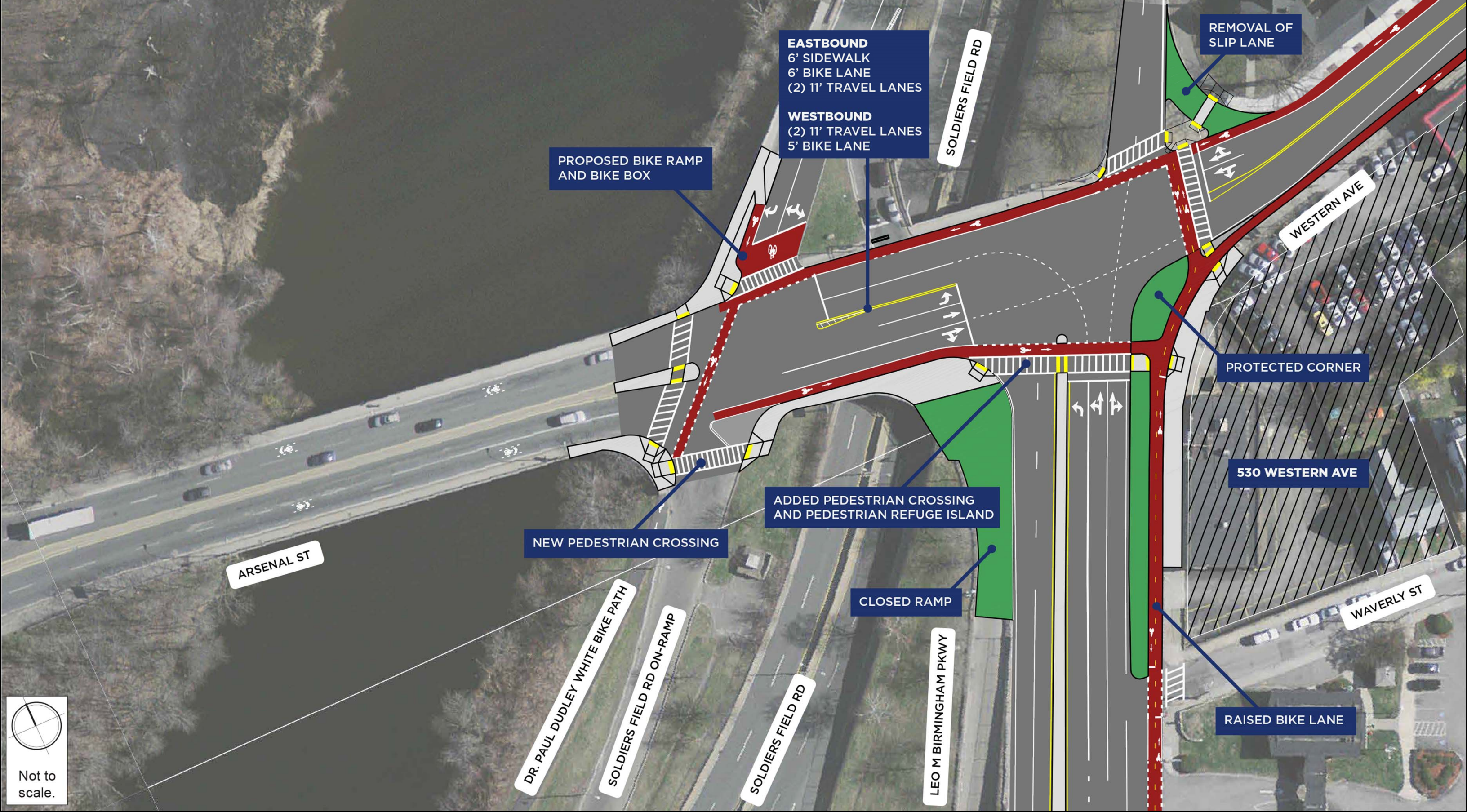
Short-term Concept Plans

Design Concepts: Short-Term Improvements

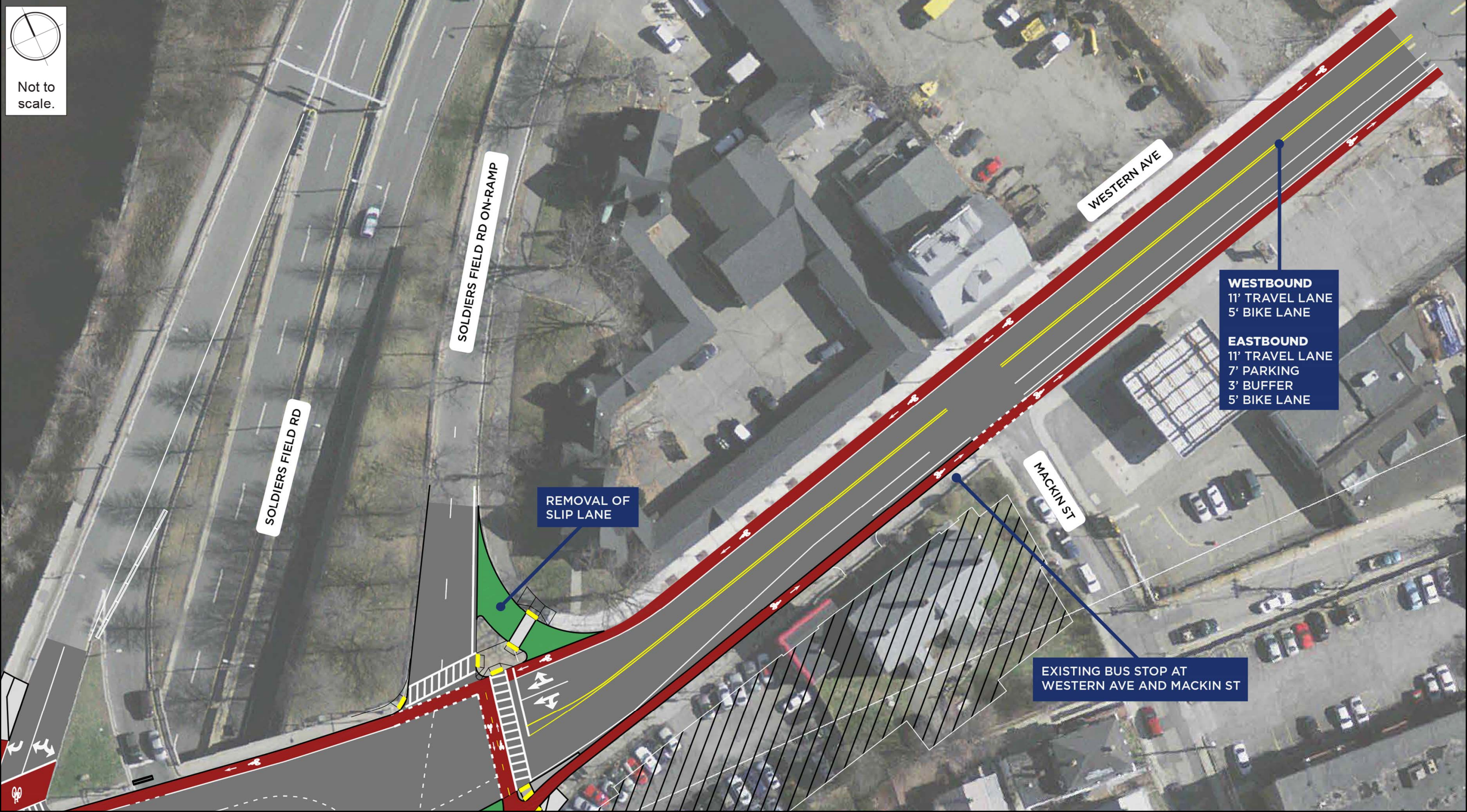
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Short-Term Improvements: Arsenal / Western / Leo M. Birmingham Intersection



Short-Term Improvements: Western Avenue



Not to scale.

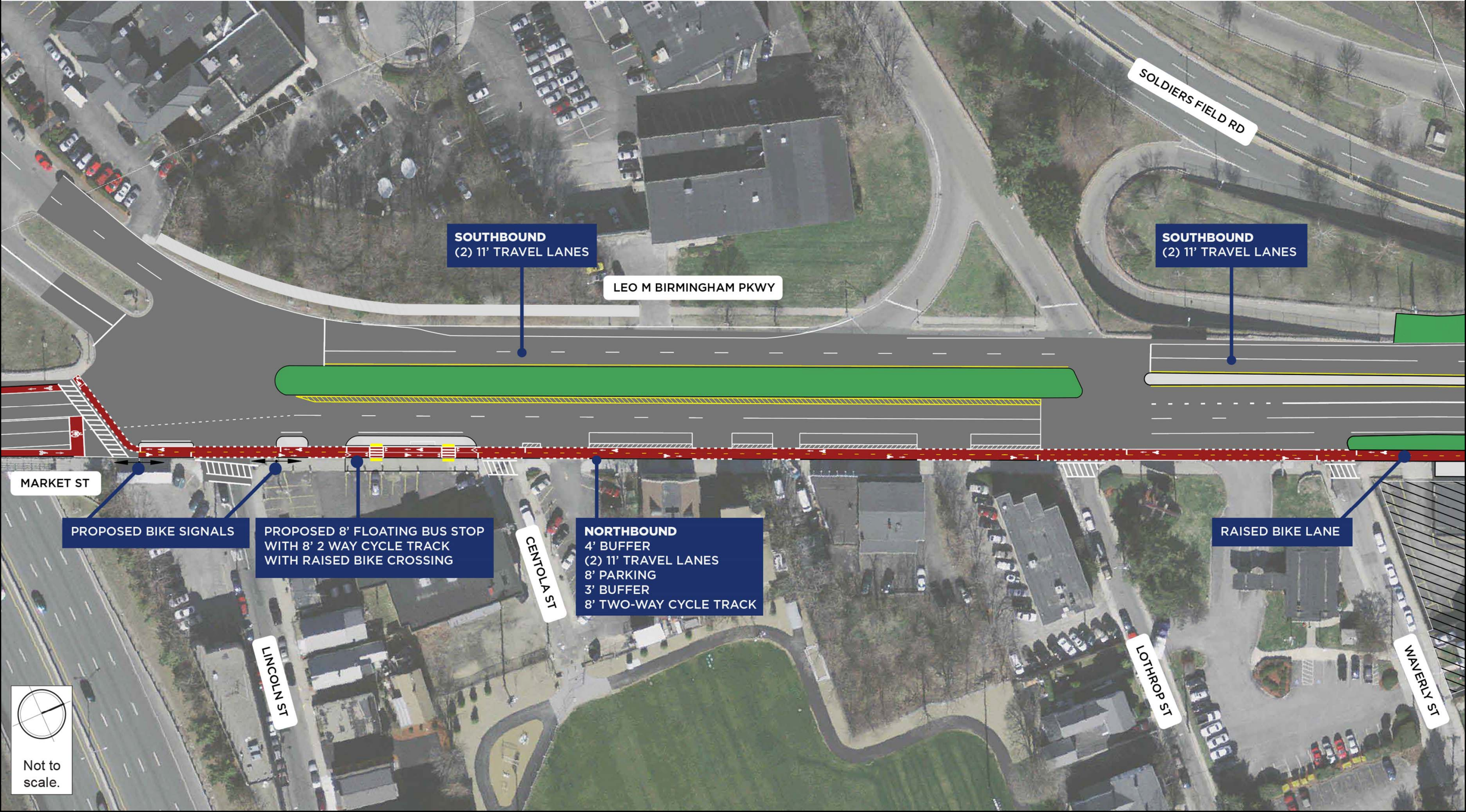
- WESTBOUND**
11' TRAVEL LANE
5' BIKE LANE
- EASTBOUND**
11' TRAVEL LANE
7' PARKING
3' BUFFER
5' BIKE LANE

REMOVAL OF SLIP LANE

EXISTING BUS STOP AT WESTERN AVE AND MACKIN ST

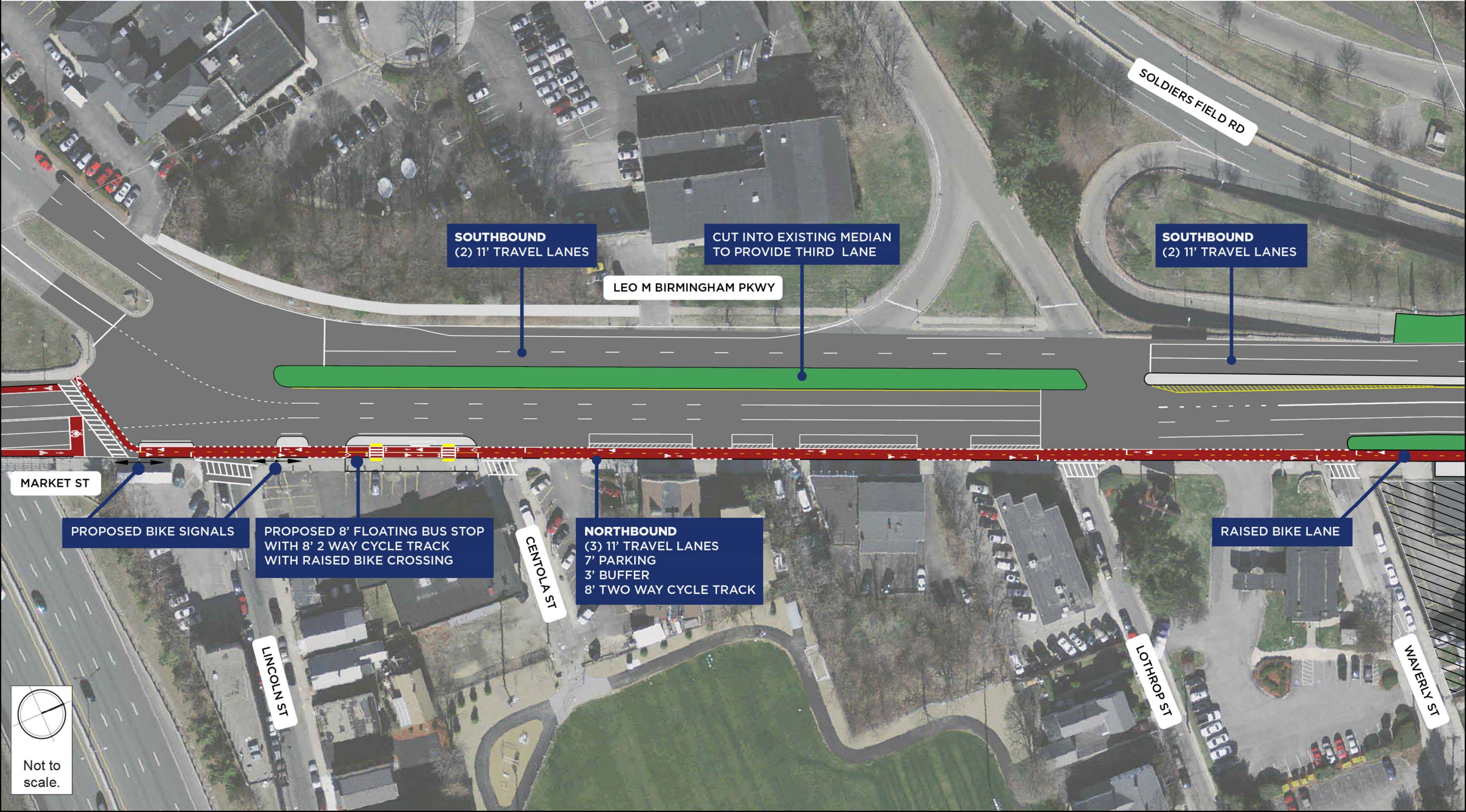
Short-Term Improvements: Leo M Birmingham Parkway Option 1

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Short-Term Improvements: Leo M Birmingham Parkway Option 2

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SOUTHBOUND
(2) 11' TRAVEL LANES

CUT INTO EXISTING MEDIAN
TO PROVIDE THIRD LANE

SOUTHBOUND
(2) 11' TRAVEL LANES

LEO M BIRMINGHAM PKWY

SOLDIERS FIELD RD

MARKET ST

PROPOSED BIKE SIGNALS

PROPOSED 8' FLOATING BUS STOP
WITH 8' 2 WAY CYCLE TRACK
WITH RAISED BIKE CROSSING

CENTOLA ST

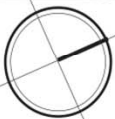
NORTHBOUND
(3) 11' TRAVEL LANES
7' PARKING
3' BUFFER
8' TWO WAY CYCLE TRACK

RAISED BIKE LANE

LINCOLN ST

LOTHROP ST

WAVERLY ST



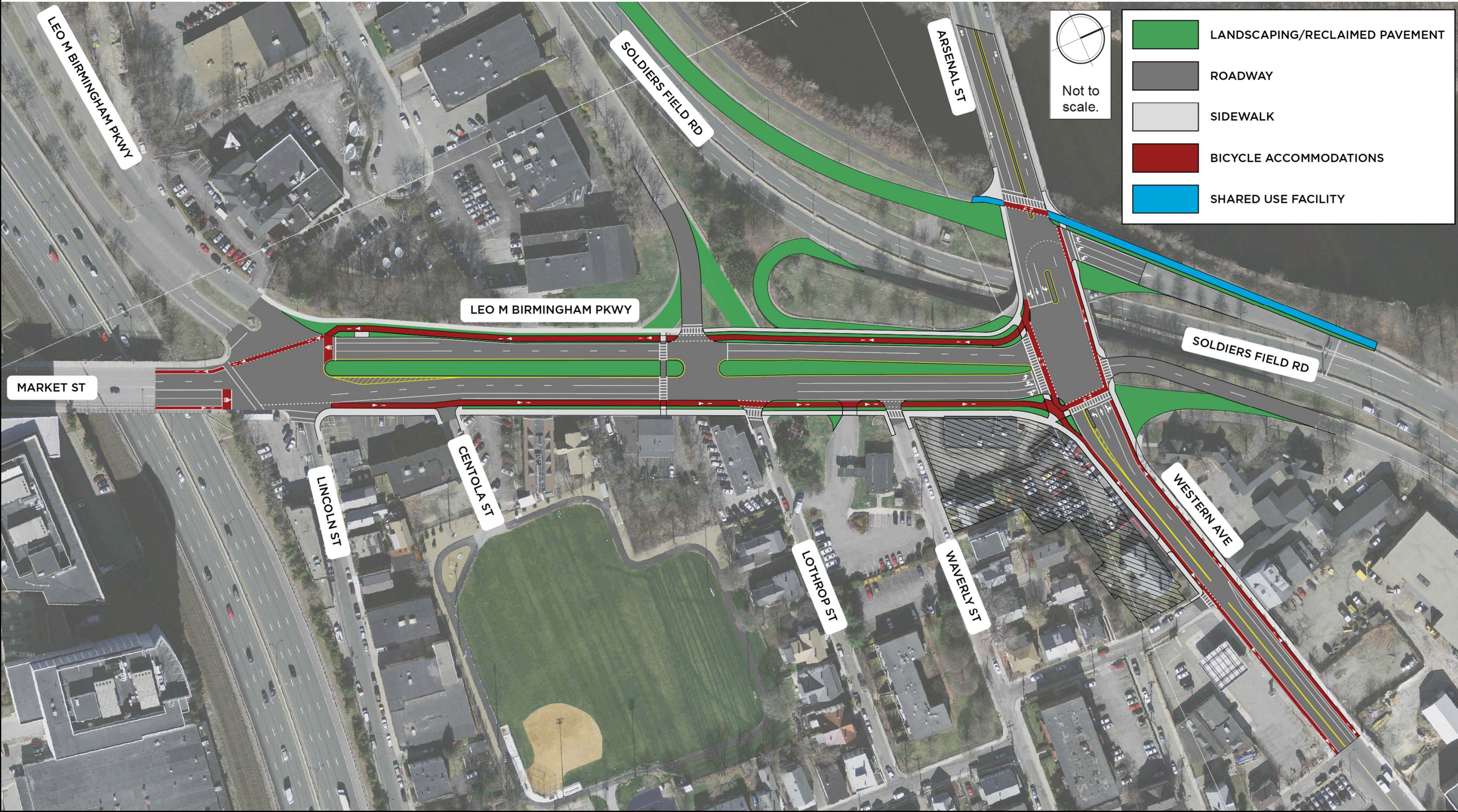
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Long-Term Concept Plans

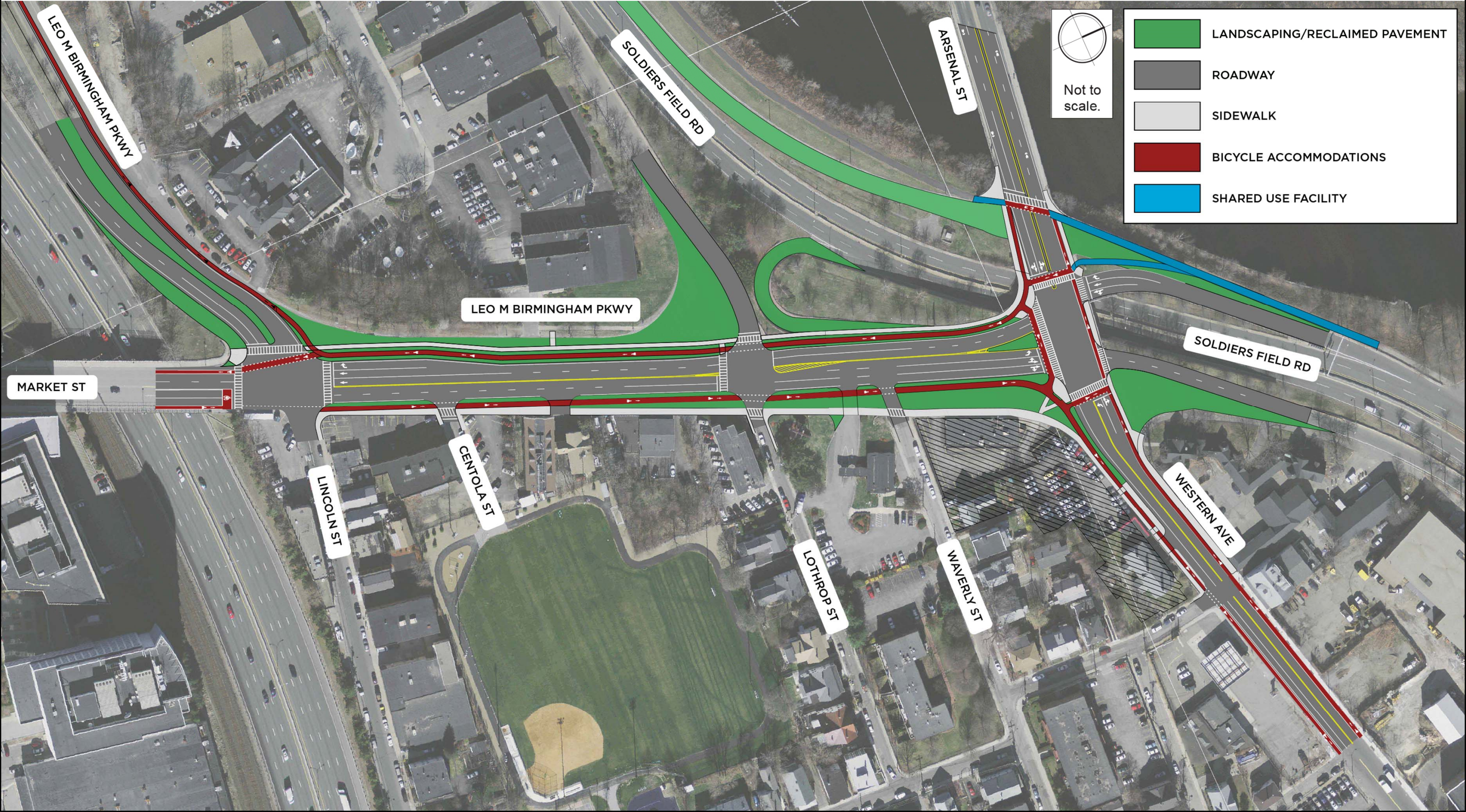
Long-Term Improvements Option 1

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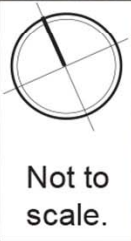
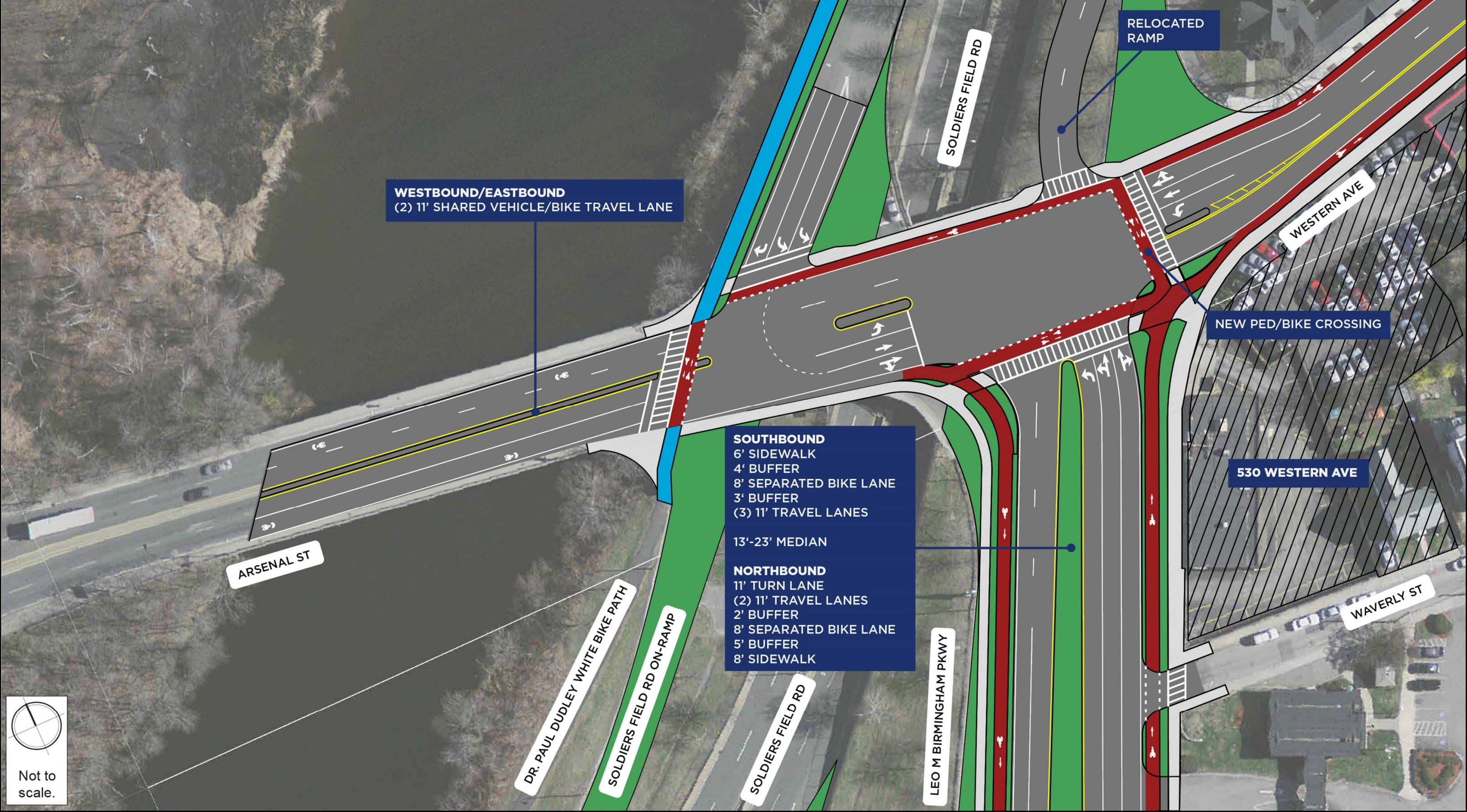
Long-Term Improvements Option 2

Engineers + Planners

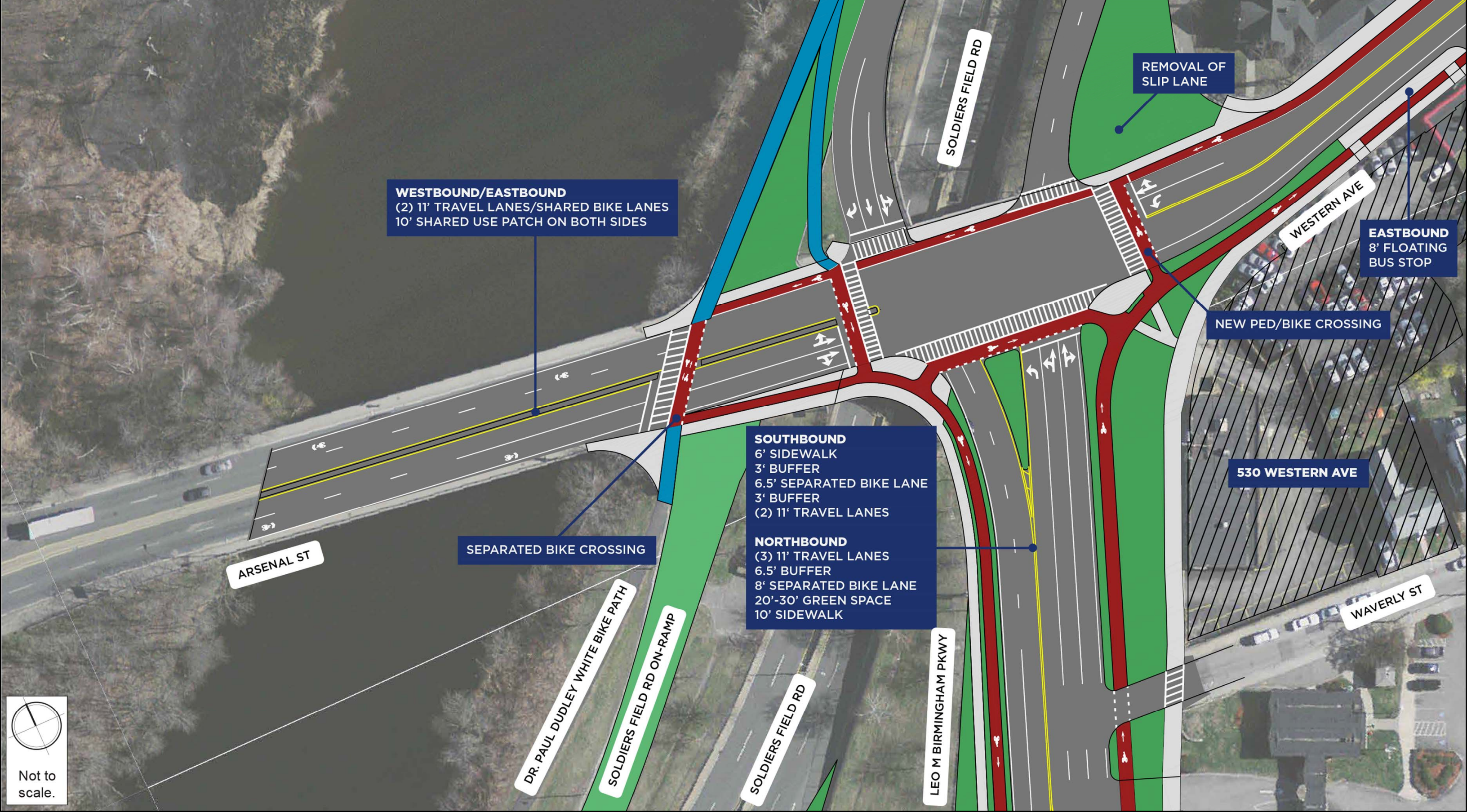


Long-Term Improvements Option 1: Arsenal / Western / Leo M. Birmingham Intersection

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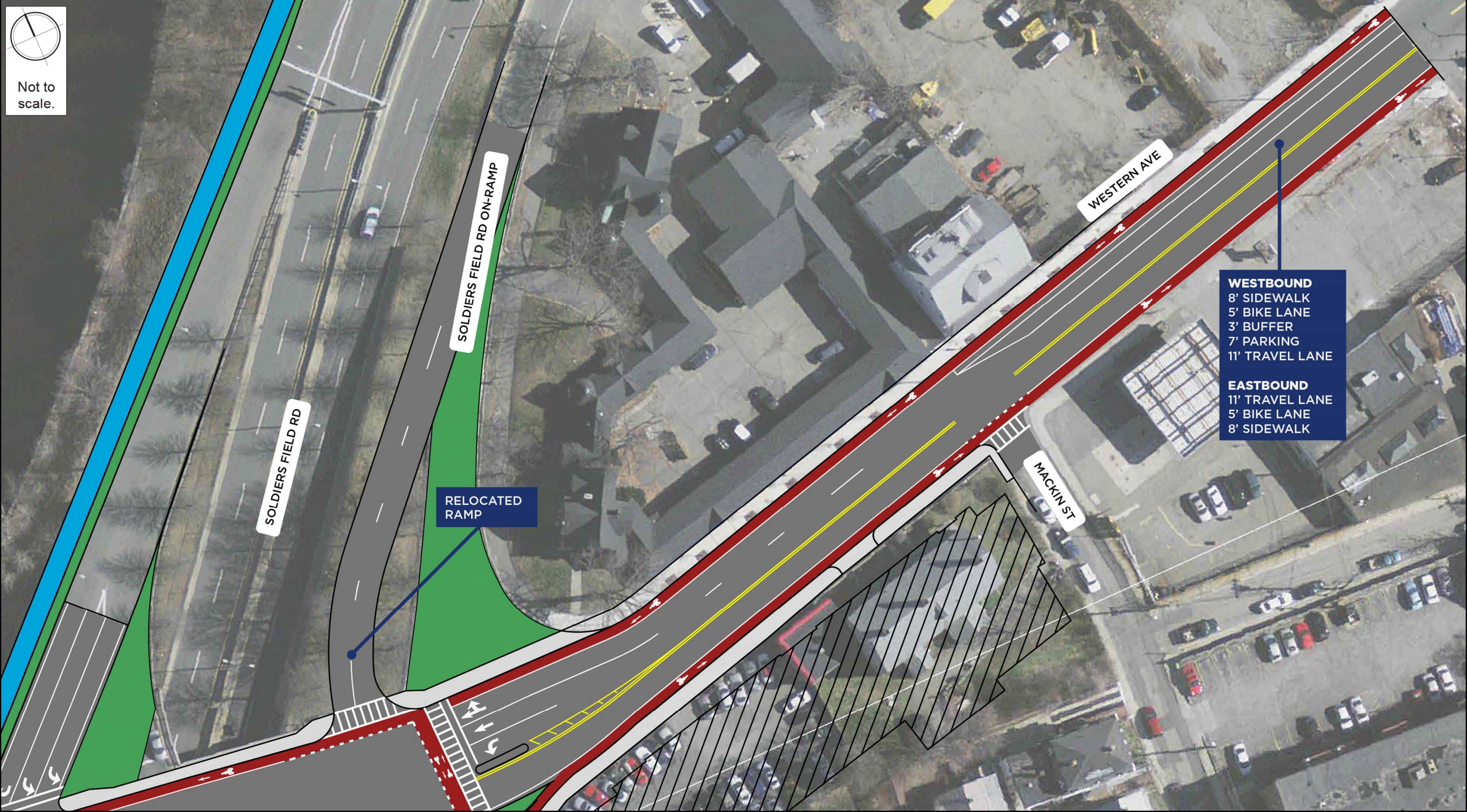


Long-Term Improvements Option 2: Arsenal / Western / Leo M. Birmingham Intersection



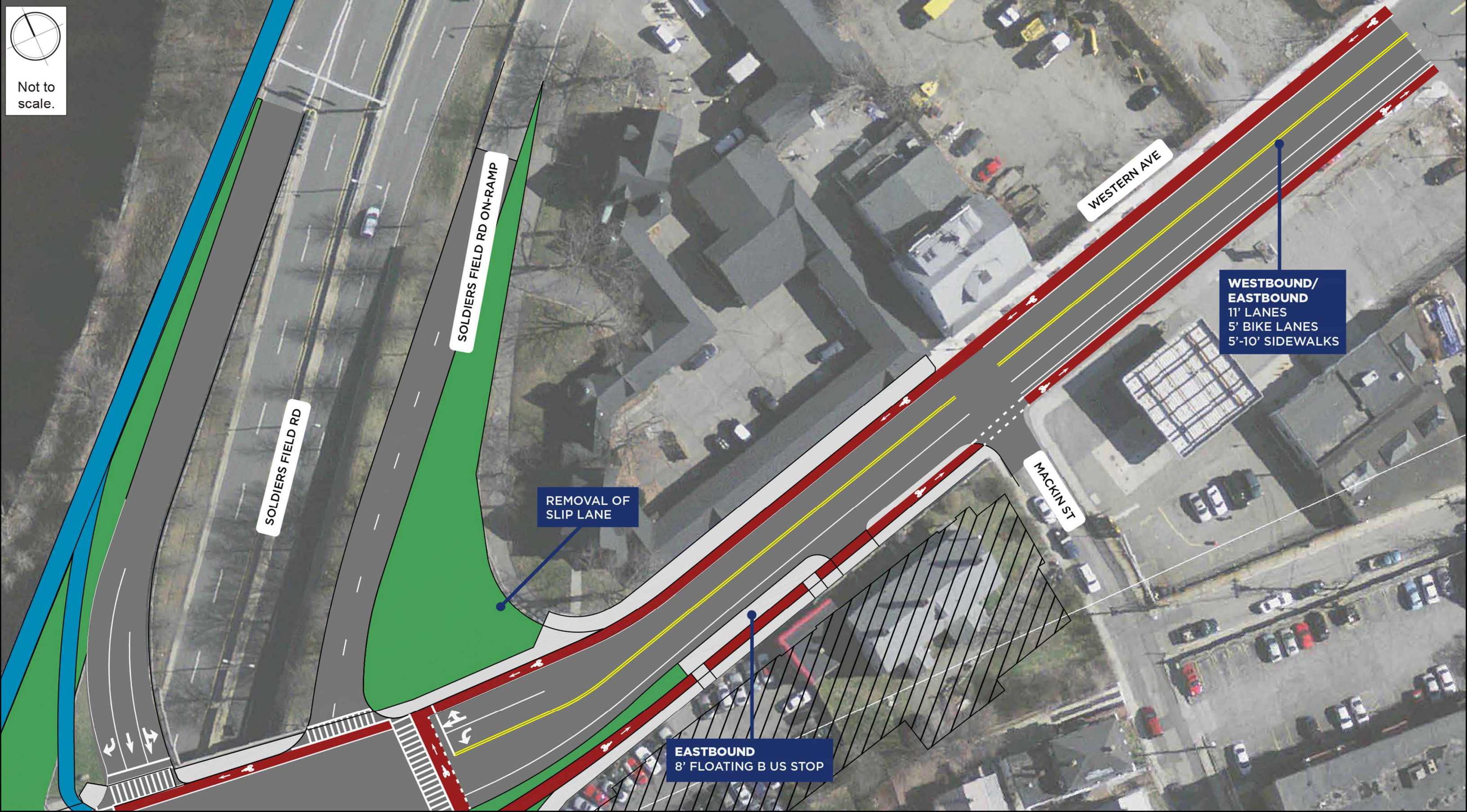
Long Term Improvements Option 1: Western Avenue

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Not to scale.

Long-Term Improvements Option 2: Western Avenue



Not to scale.

SOLDIERS FIELD RD

SOLDIERS FIELD RD ON-RAMP

REMOVAL OF SLIP LANE

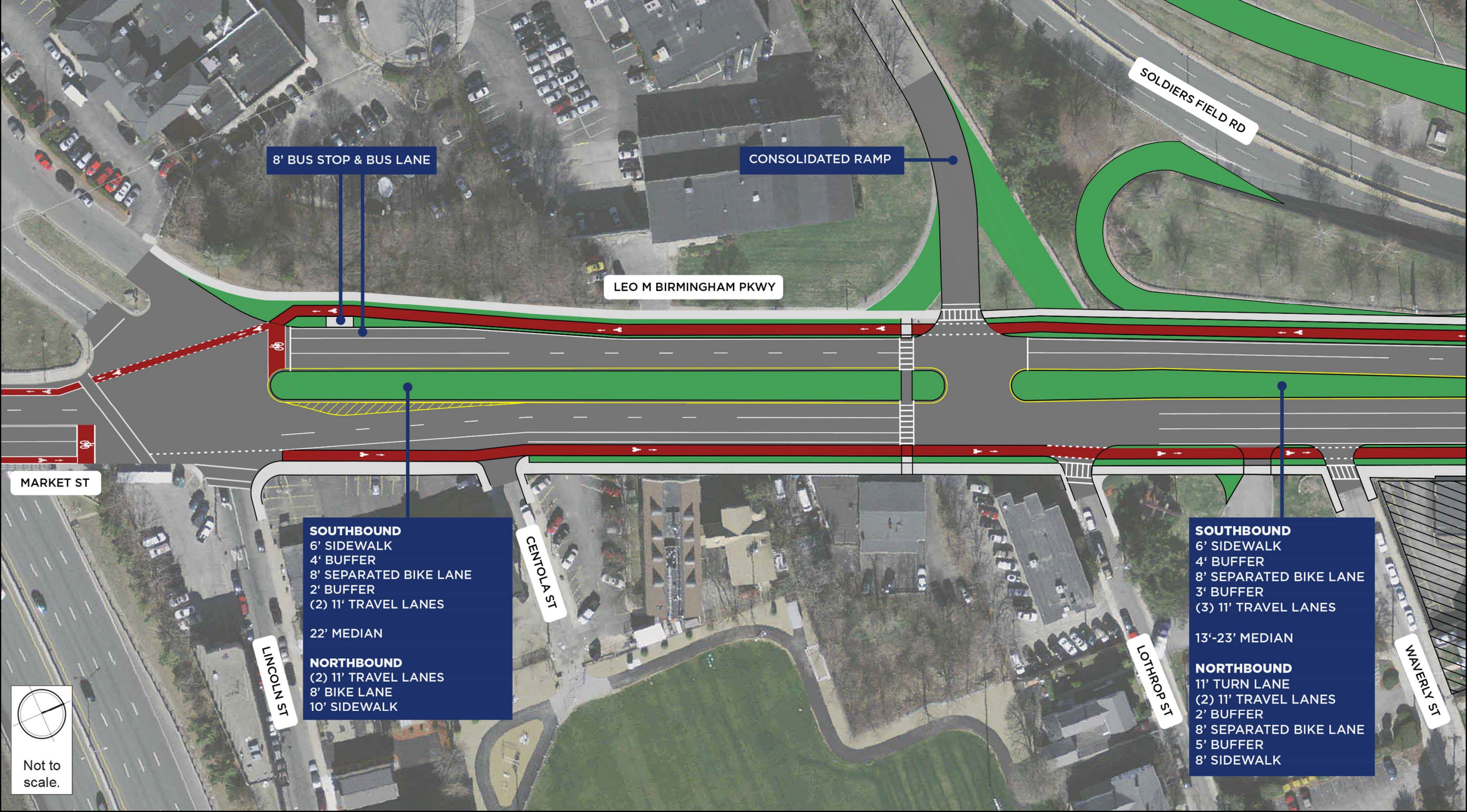
EASTBOUND 8' FLOATING B US STOP

WESTERN AVE

MACKIN ST

WESTBOUND/
EASTBOUND
11' LANES
5' BIKE LANES
5'-10' SIDEWALKS

Long-Term Improvements Option 1 : Leo M. Birmingham Parkway



8' BUS STOP & BUS LANE

CONSOLIDATED RAMP

LEO M BIRMINGHAM PKWY

SOLDIERS FIELD RD

MARKET ST

CENTOLA ST

LINCOLN ST

LOTHROP ST

WAVELY ST

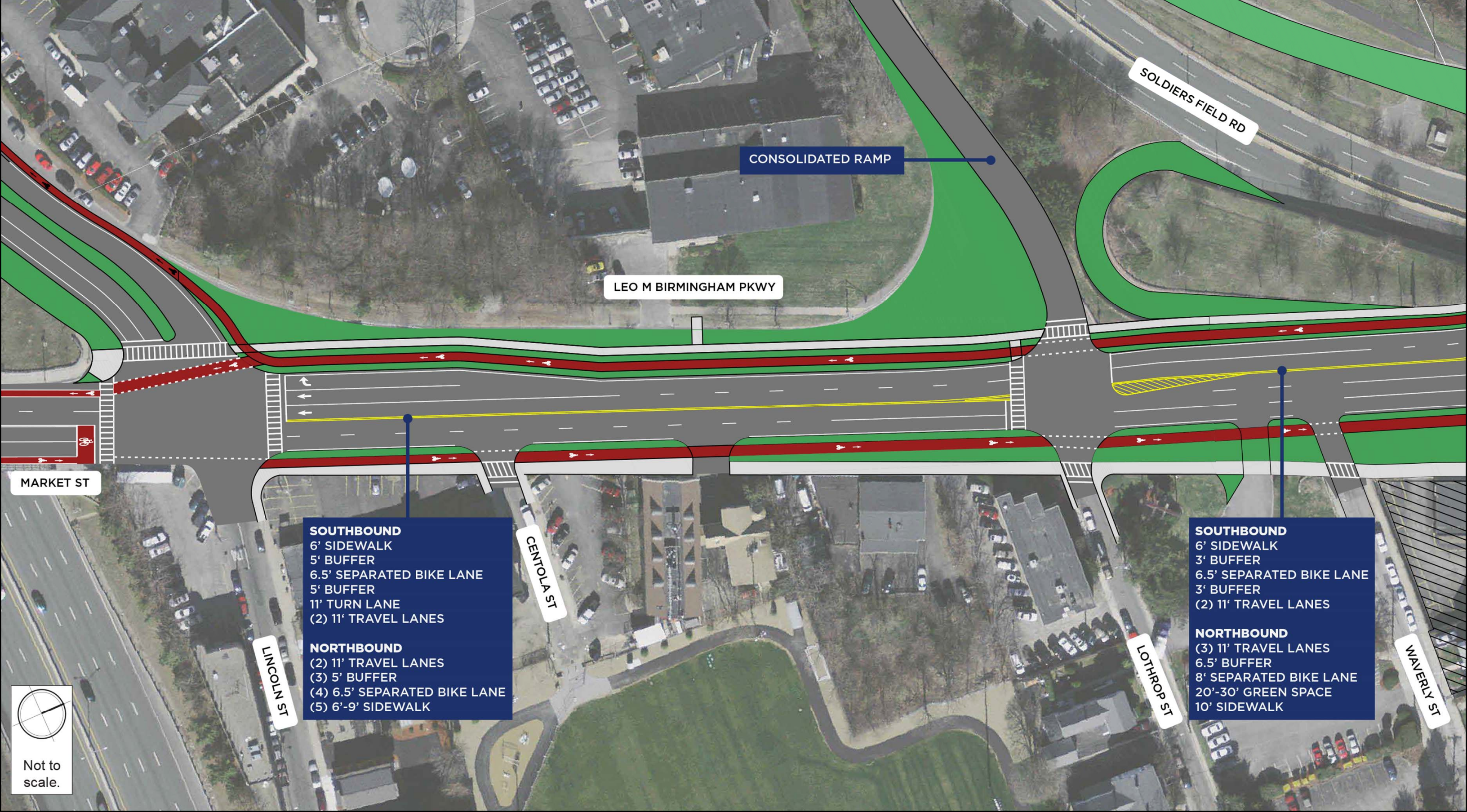
SOUTHBOUND
 6' SIDEWALK
 4' BUFFER
 8' SEPARATED BIKE LANE
 2' BUFFER
 (2) 11' TRAVEL LANES
 22' MEDIAN
NORTHBOUND
 (2) 11' TRAVEL LANES
 8' BIKE LANE
 10' SIDEWALK

SOUTHBOUND
 6' SIDEWALK
 4' BUFFER
 8' SEPARATED BIKE LANE
 3' BUFFER
 (3) 11' TRAVEL LANES
 13'-23' MEDIAN
NORTHBOUND
 11' TURN LANE
 (2) 11' TRAVEL LANES
 2' BUFFER
 8' SEPARATED BIKE LANE
 5' BUFFER
 8' SIDEWALK



Not to scale.

Long-Term Improvements Option 2: Leo M. Birmingham Parkway



SOUTHBOUND
 6' SIDEWALK
 5' BUFFER
 6.5' SEPARATED BIKE LANE
 5' BUFFER
 11' TURN LANE
 (2) 11' TRAVEL LANES

NORTHBOUND
 (2) 11' TRAVEL LANES
 (3) 5' BUFFER
 (4) 6.5' SEPARATED BIKE LANE
 (5) 6'-9' SIDEWALK

SOUTHBOUND
 6' SIDEWALK
 3' BUFFER
 6.5' SEPARATED BIKE LANE
 3' BUFFER
 (2) 11' TRAVEL LANES

NORTHBOUND
 (3) 11' TRAVEL LANES
 6.5' BUFFER
 8' SEPARATED BIKE LANE
 20'-30' GREEN SPACE
 10' SIDEWALK



Not to scale.

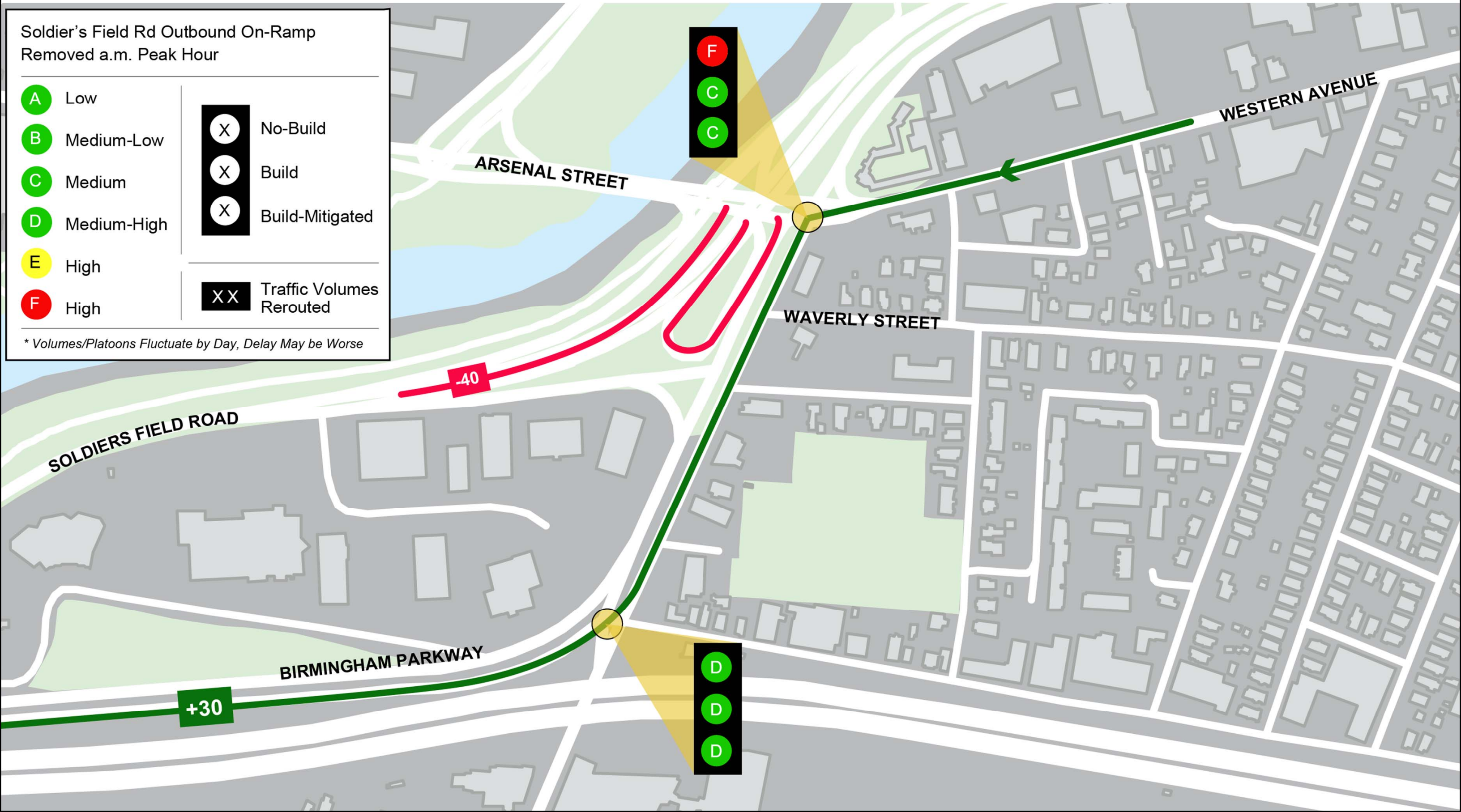
Long-Term Diversion Analysis / Vehicle Routing AM Peak Hour

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Soldier's Field Rd Outbound On-Ramp
Removed a.m. Peak Hour

A Low	X No-Build
B Medium-Low	X Build
C Medium	X Build-Mitigated
D Medium-High	XX Traffic Volumes Rerouted
E High	
F High	

* Volumes/Platoons Fluctuate by Day, Delay May be Worse



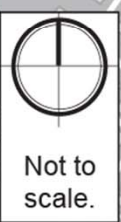
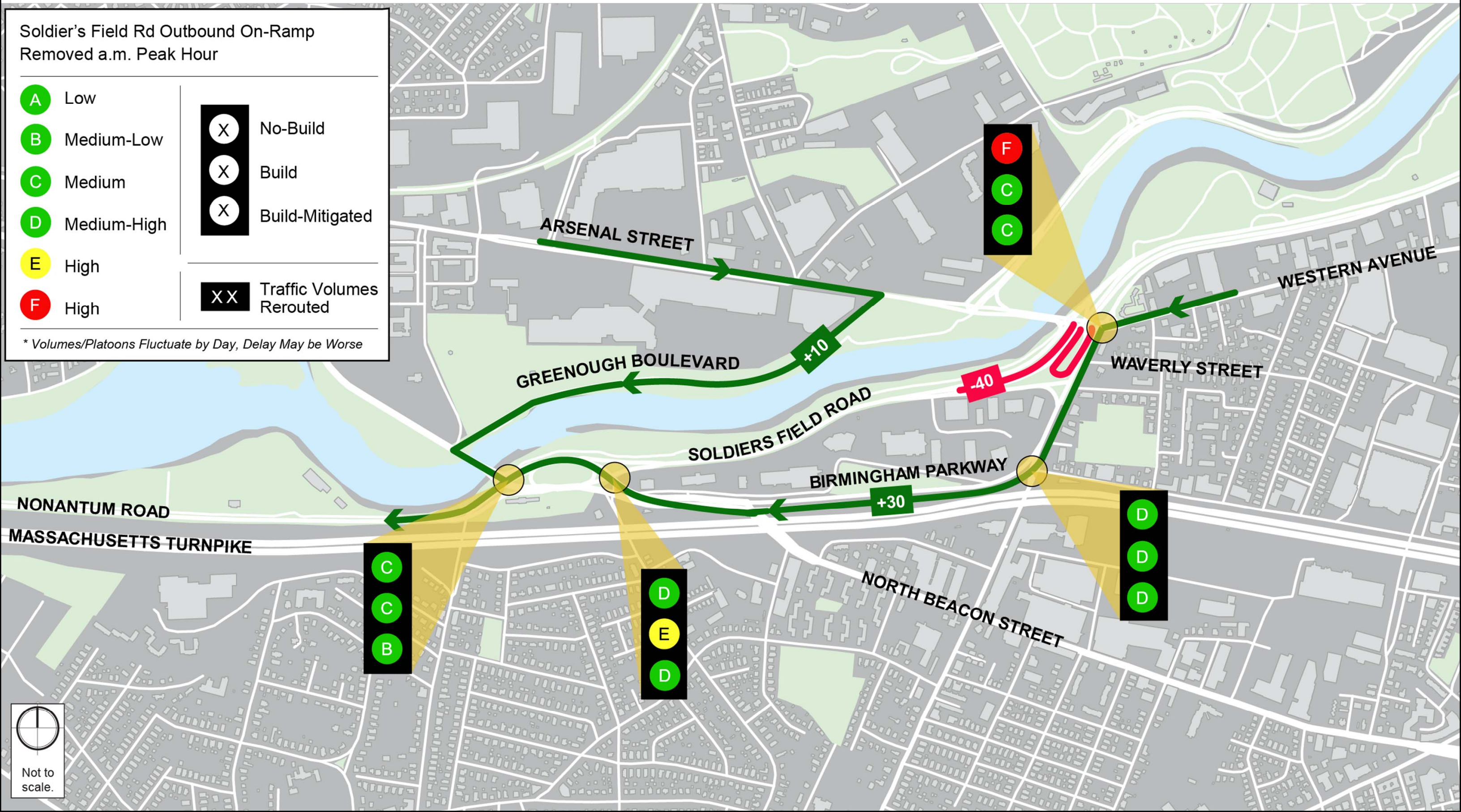
Long-Term Diversion Analysis / Vehicle Routing AM Peak Hour

Engineers + Planners

Soldier's Field Rd Outbound On-Ramp
Removed a.m. Peak Hour

A Low	X No-Build
B Medium-Low	X Build
C Medium	X Build-Mitigated
D Medium-High	XX Traffic Volumes Rerouted
E High	
F High	

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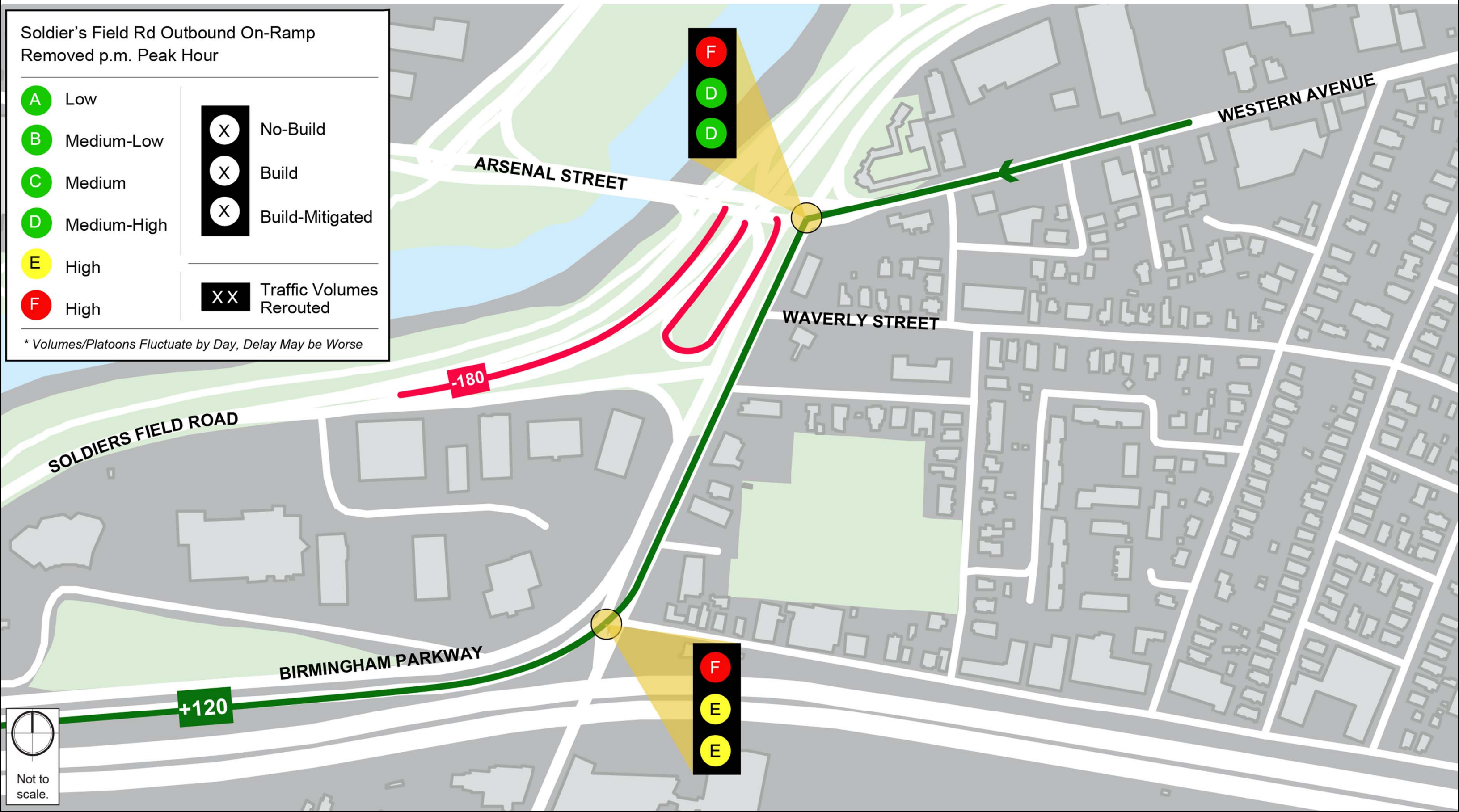


Project Area Vehicle Routing

Soldier's Field Rd Outbound On-Ramp
Removed p.m. Peak Hour

- | | |
|----------------------|------------------------------------|
| A Low | X No-Build |
| B Medium-Low | X Build |
| C Medium | X Build-Mitigated |
| D Medium-High | XX Traffic Volumes Rerouted |
| E High | |
| F High | |

* Volumes/Platoons Fluctuate by Day, Delay May be Worse



Not to scale.

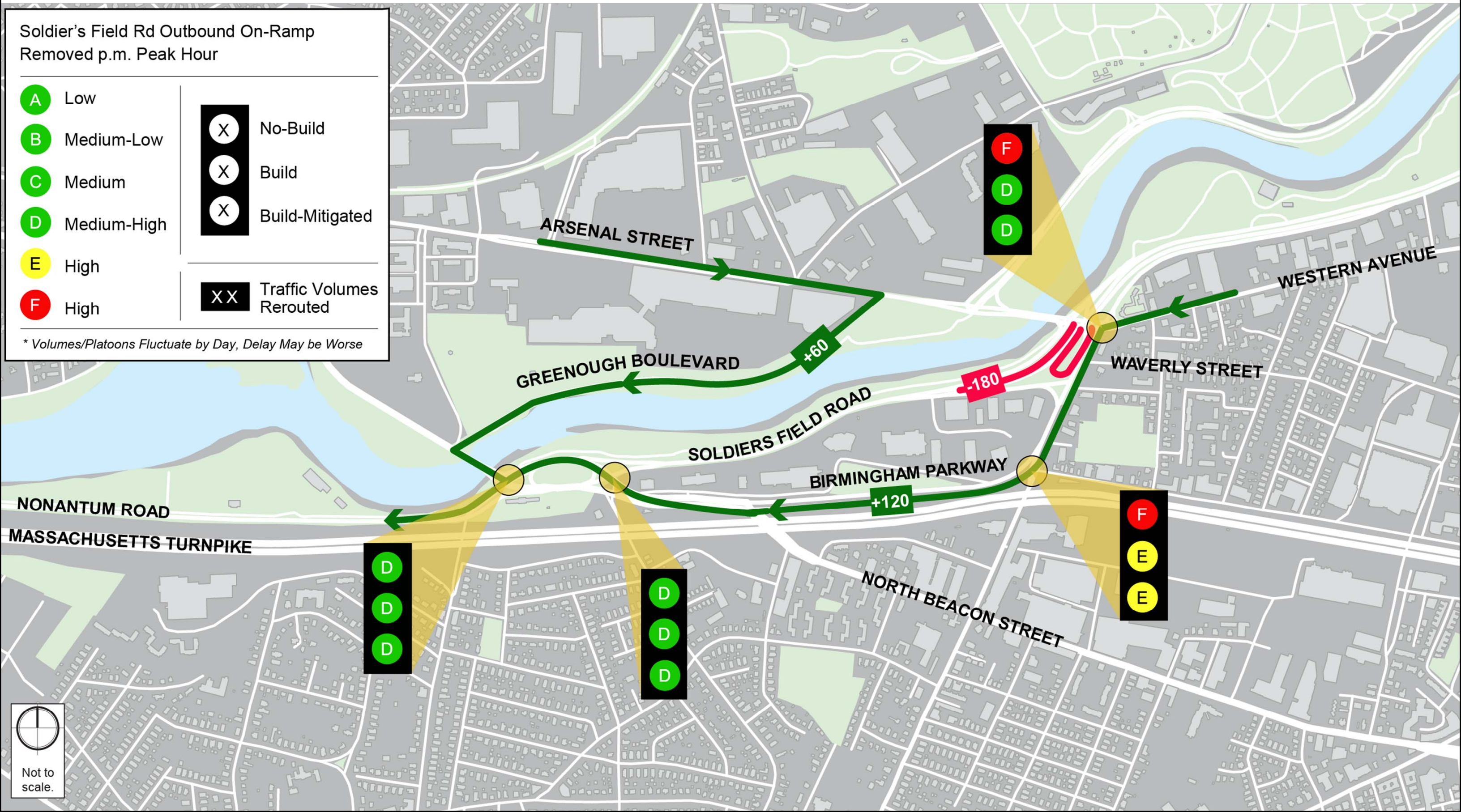
Long Term Diversion Analysis / Vehicle Routing PM Peak Hour

Engineers + Planners

Soldier's Field Rd Outbound On-Ramp
Removed p.m. Peak Hour

- | | |
|----------------------|------------------------------------|
| A Low | X No-Build |
| B Medium-Low | X Build |
| C Medium | X Build-Mitigated |
| D Medium-High | XX Traffic Volumes Rerouted |
| E High | |
| F High | |

* Volumes/Platoons Fluctuate by Day, Delay May be Worse



Questions? / Comments?

[http://www.bostonplans.org/planning/
planning-initiatives/westernave](http://www.bostonplans.org/planning/planning-initiatives/westernave)



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