

Porter Square Intersection Improvements

Community Meeting

May 8, 2018



CDM
Smith



Agenda

- Project History
- Project Scope
- Existing Conditions
- Design Updates
- Community Feedback



Project History

- Transportation Study - March 2016
- Operational Deficiencies
 - Bicyclist & Pedestrian Safety Concerns
 - Pedestrian Delay
 - Signal Phasing/Coordination
 - Mass Ave/Somerville Ave/White St with Upland St
 - Mass Ave Southbound Lane Configuration
- Public Meeting – January 2018
- Design Revisions – Winter 2018



Existing Conditions



Crash History

- MassDOT crash data (2008-2012)
 - 62 total crashes
- Primarily angle or sideswipe crashes
 - 29 at Mass Ave/Somerville intersection
 - 6 at Somerville Ave/White intersection
 - 27 at Mass Ave/Upland intersection
 - 1 involving a pedestrian
 - 7 involving bicyclists
- 1 pedestrian fatality in February 2016
- 1 bicycle fatality in October 2016



Project Overview

- Goals:
 - Improve Safety for All Users
 - Decrease Delay for All Users
 - Simplify Signal Phasing
- Scope:
 - Traffic signal improvements
 - Minor traffic island modifications
 - Improved signage
 - Revised line striping



Previous Proposed Design



What We Heard

- Concern about removal of pedestrian refuge island
 - Resulting long crosswalk
- Concern about possible increased traffic volume on White Street
- Concern about narrow turn lanes adjacent to bike lane
 - Vehicles overlap bike lane due to curve in the road

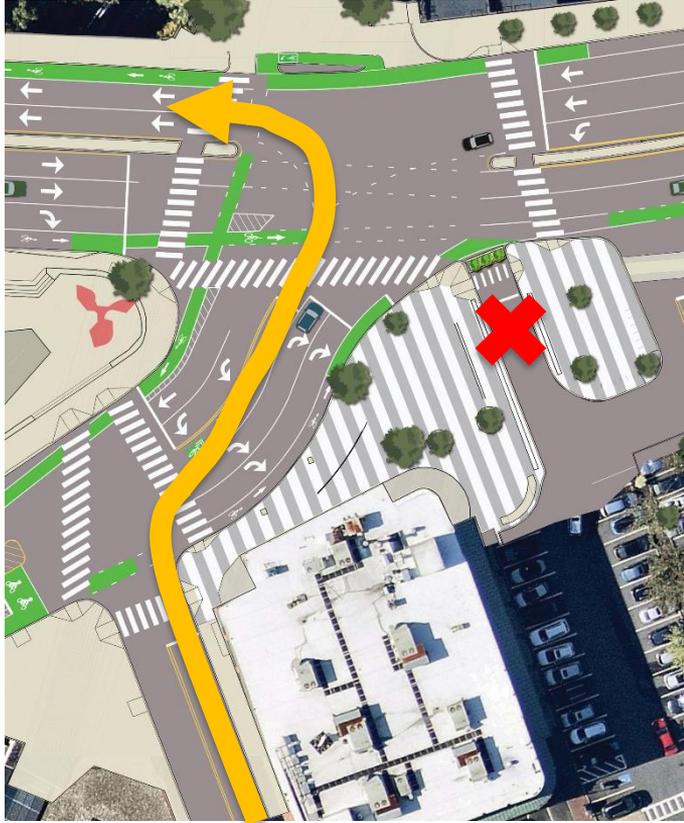


Revised Design



What Changed? – Left Turn Path

Previous Proposed



Revised Design



What Changed? – Pedestrian Island

Previous Proposed



Revised Design



What Changed? – Bike Lane Buffer

Previous Proposed



Revised Design



Design Features

- Reduces number of phases from 5 to 3
 - Reduced delay for all users
 - Improved utilization of bike jug handle
- Improve signal coordination with Upland Road
- Removed optional center turn lane
 - Reduced confusion & frustration
- Shifted northbound bike lane to the curb
 - Added signal protection to reduce right hook conflicts
- Buffered bike lanes on Somerville Ave
 - Reduced overlap from large vehicles through curves
- Lengthened northbound bus stop
 - Reduced transit delay

Community Feedback - Proposed Design



Porter Square Intersection Improvements

Community Meeting

January 18, 2018



**CDM
Smith**

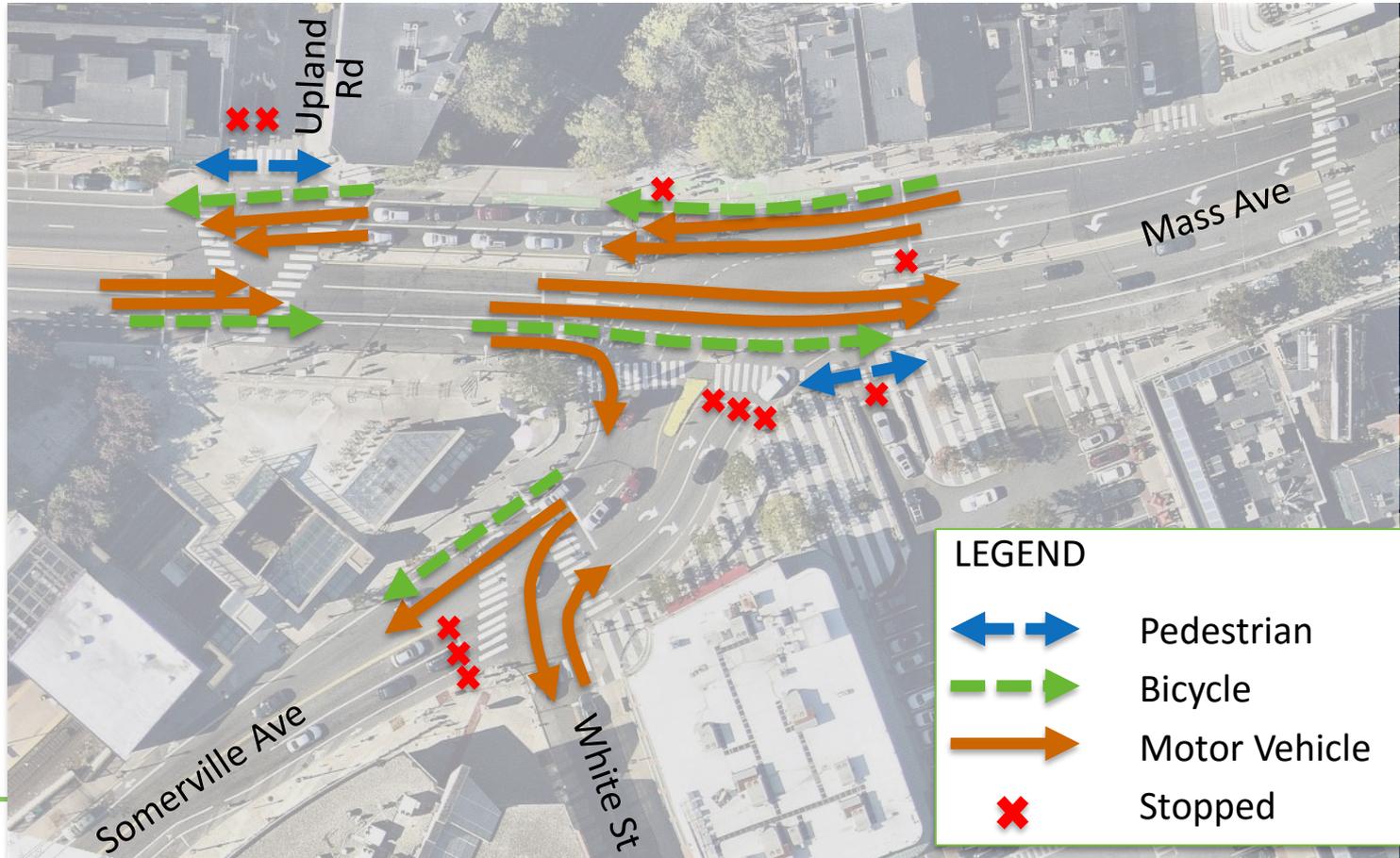


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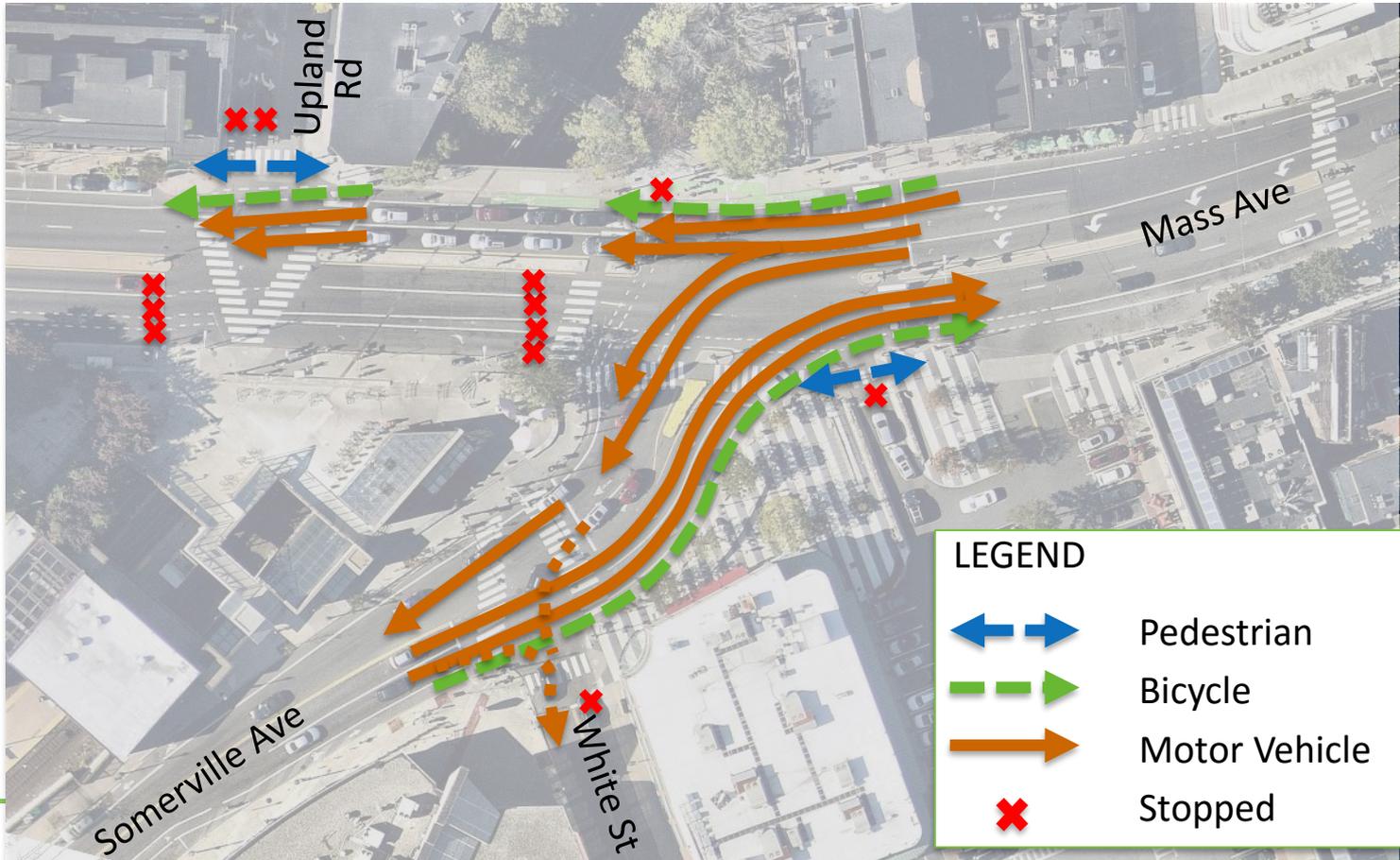
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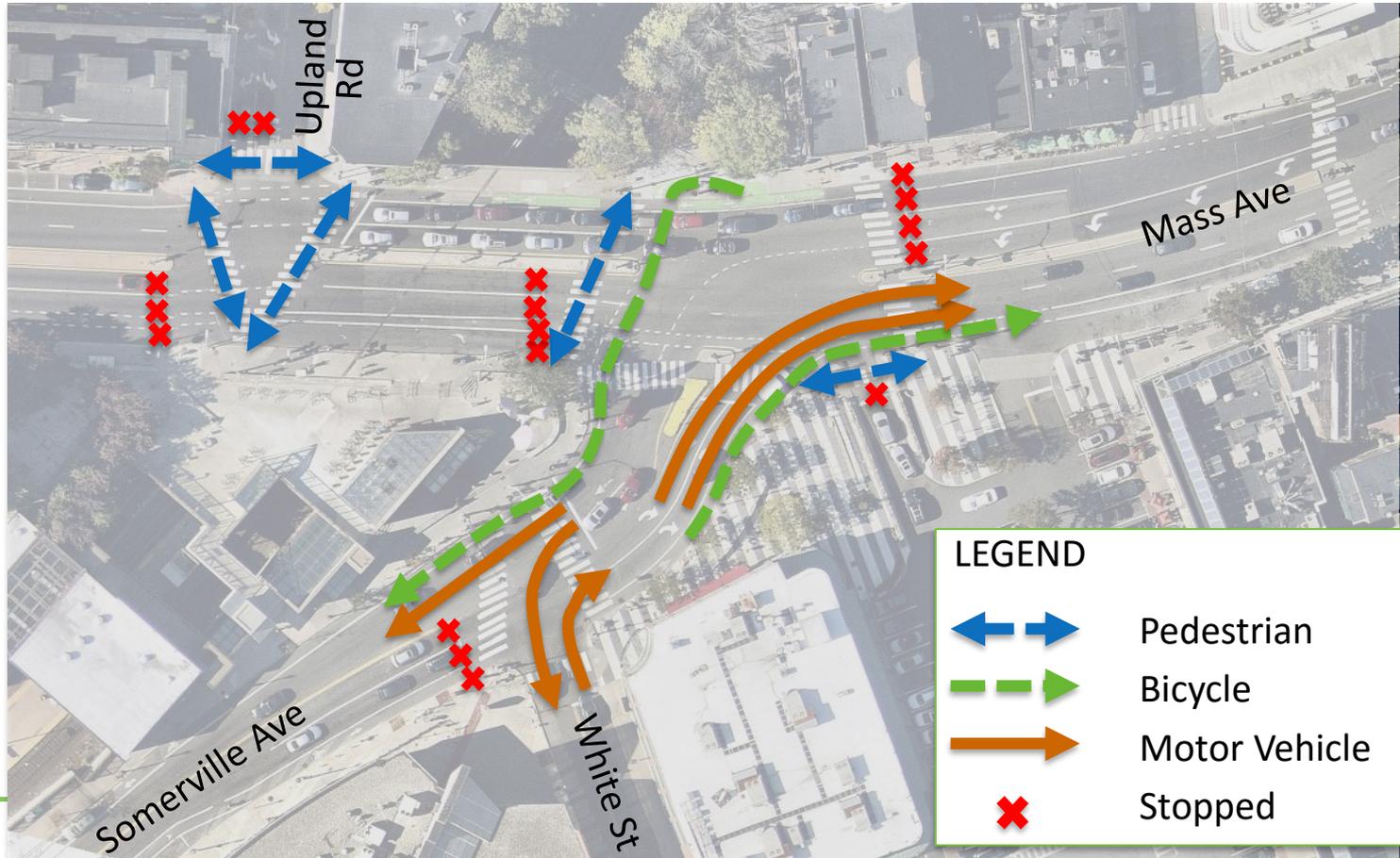
Existing Conditions – Phase 1



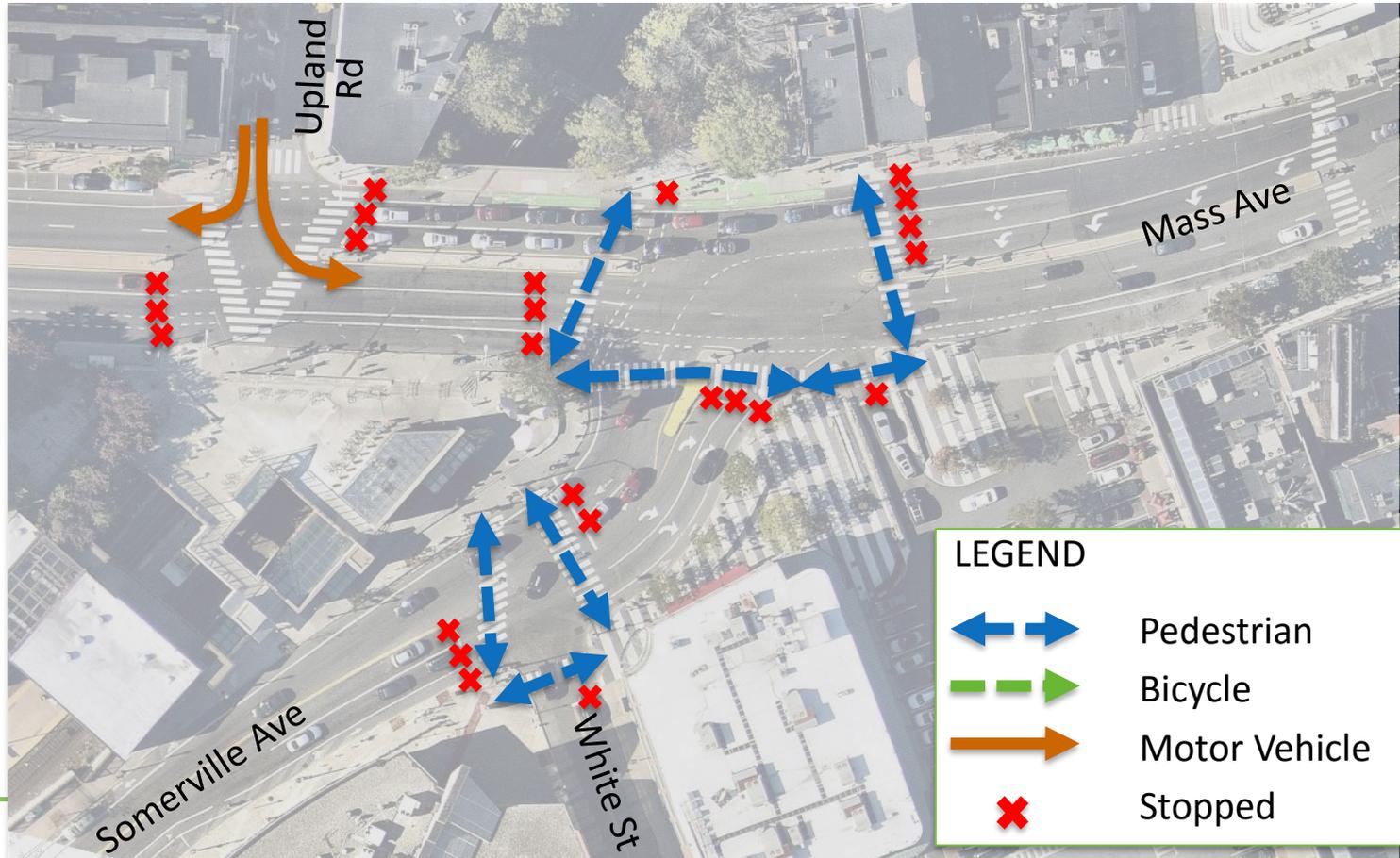
Existing Conditions – Phase 2



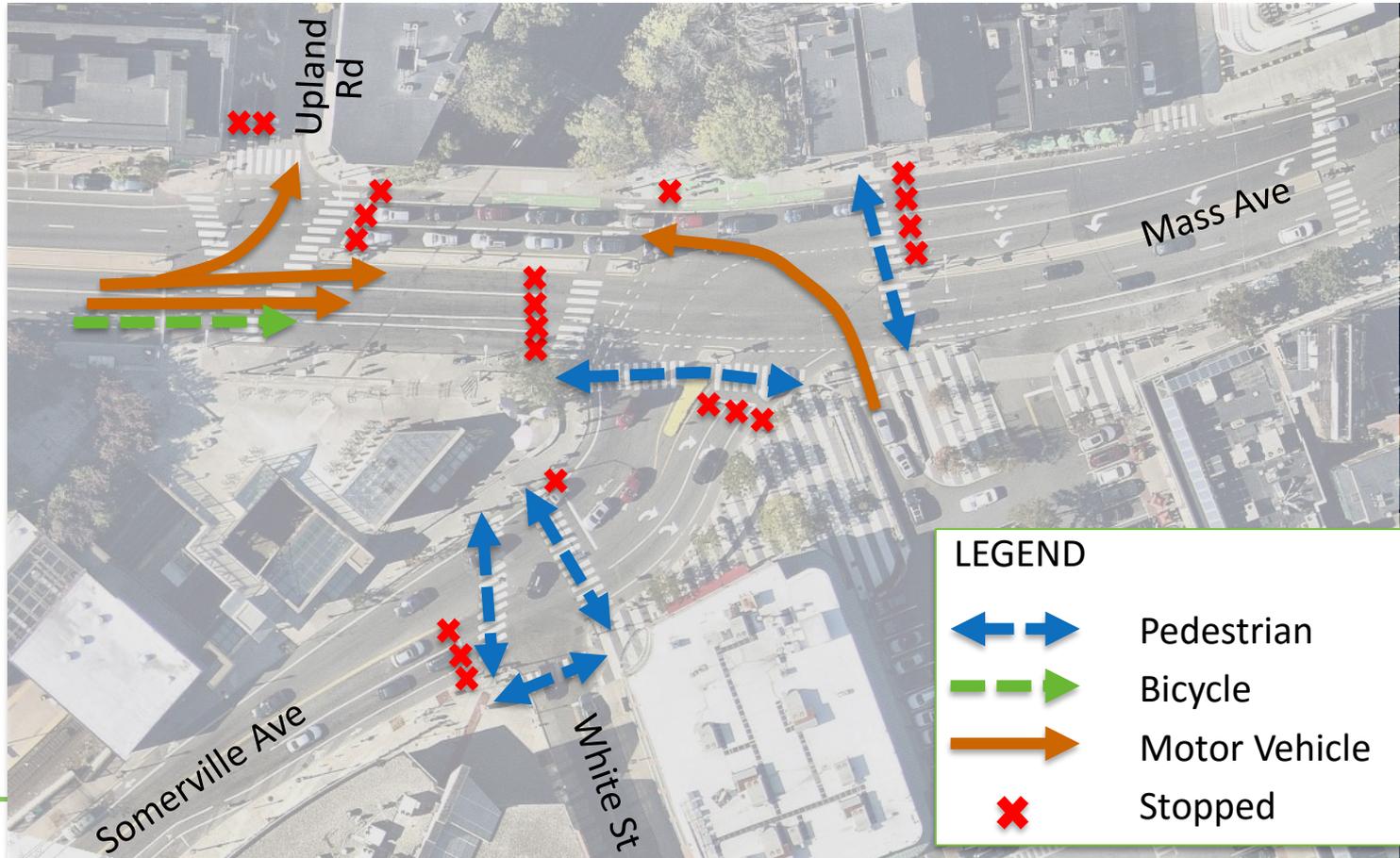
Existing Conditions – Phase 3



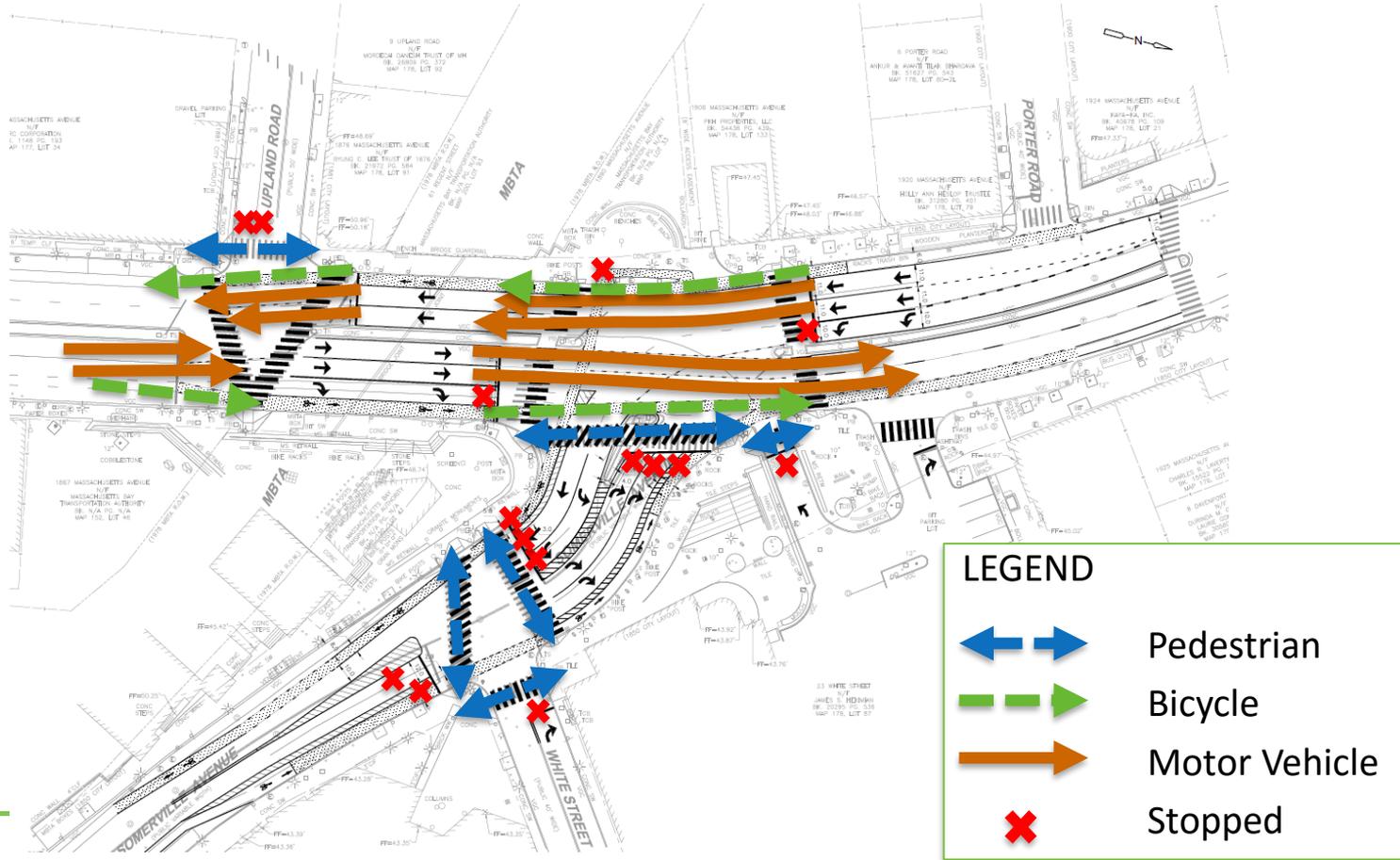
Existing Conditions – Phase 4



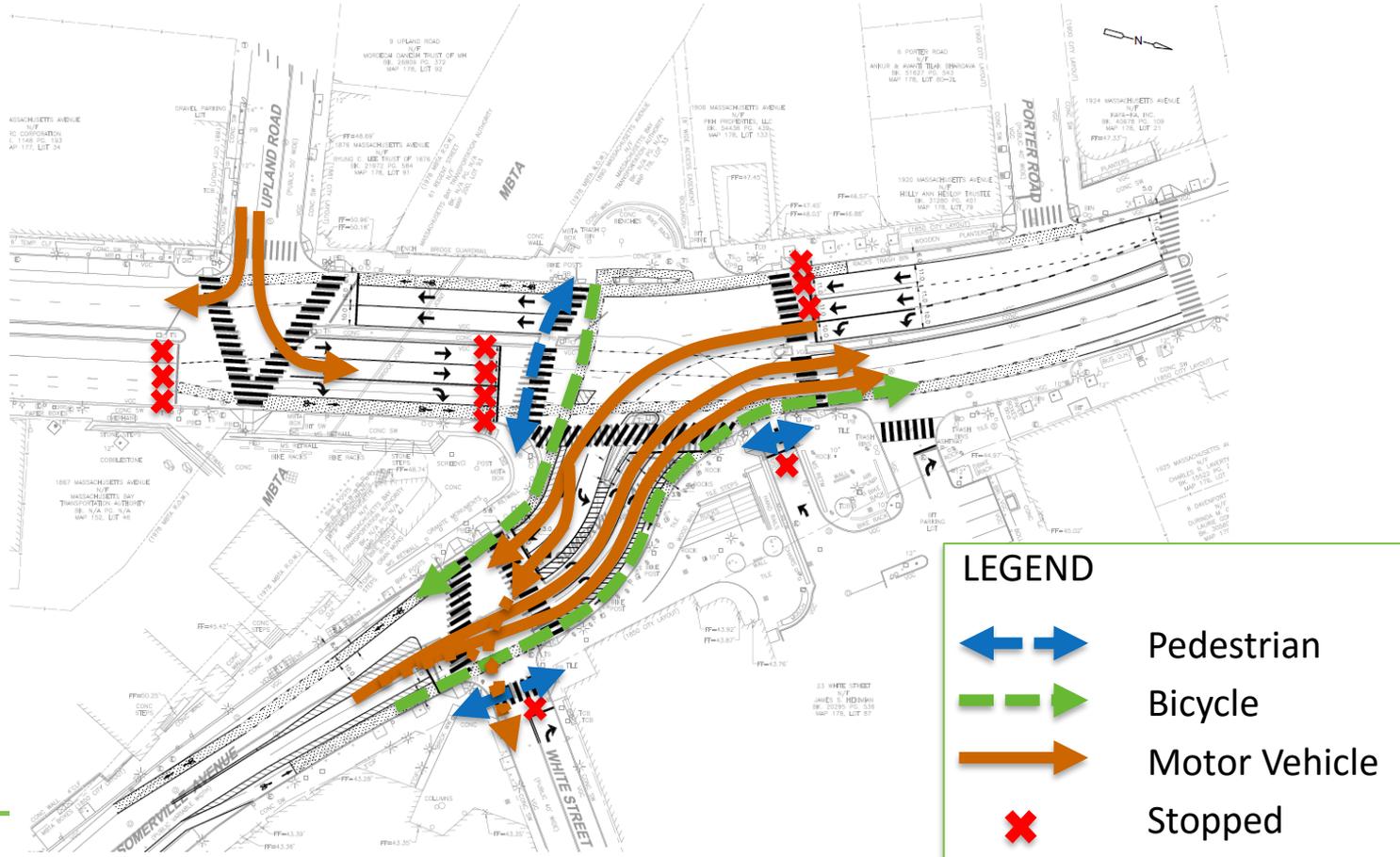
Existing Conditions – Phase 5



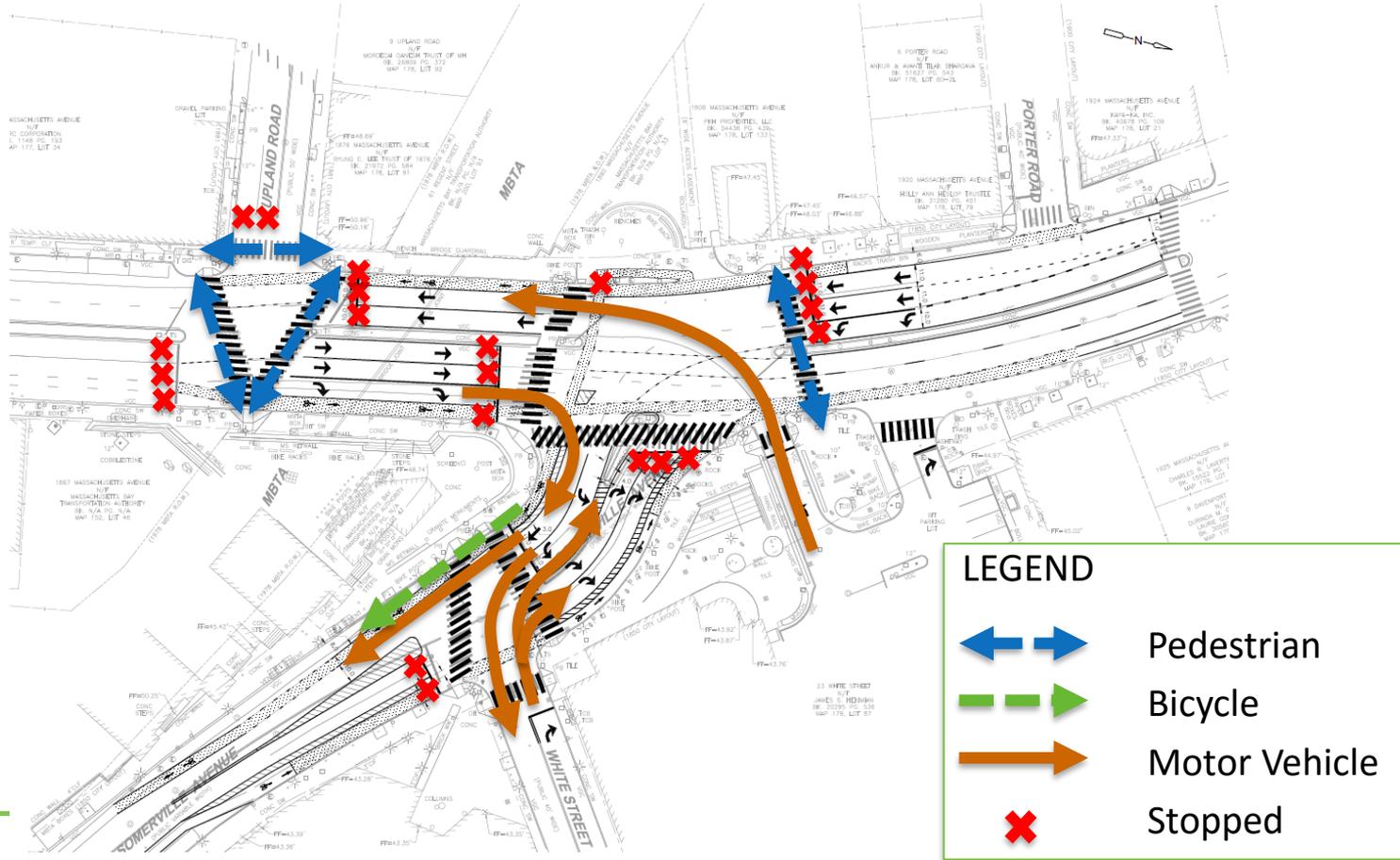
Proposed Design – Phase 1



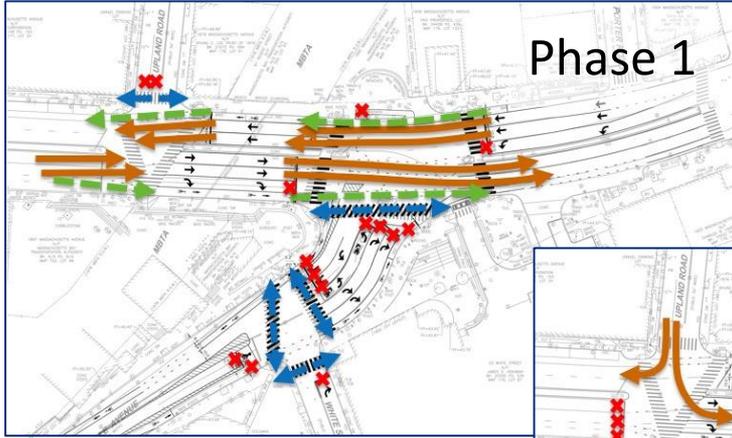
Proposed Design – Phase 2



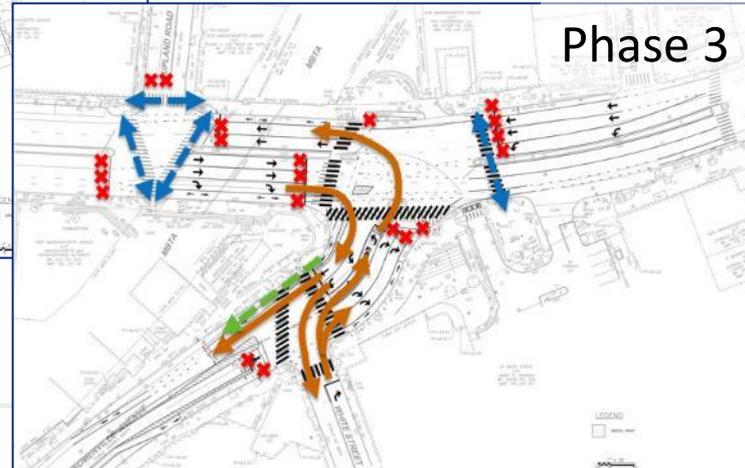
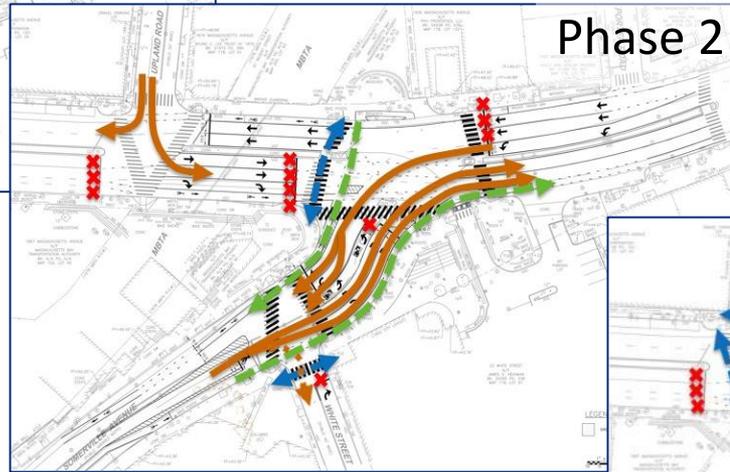
Proposed Design – Phase 3



Proposed Signal Cycle – All Phases



- Pedestrian Crossing Time
Approximately 28 – 35 sec



LEGEND

- ↔ Pedestrian
- Bicycle
- Motor Vehicle
- × Stopped