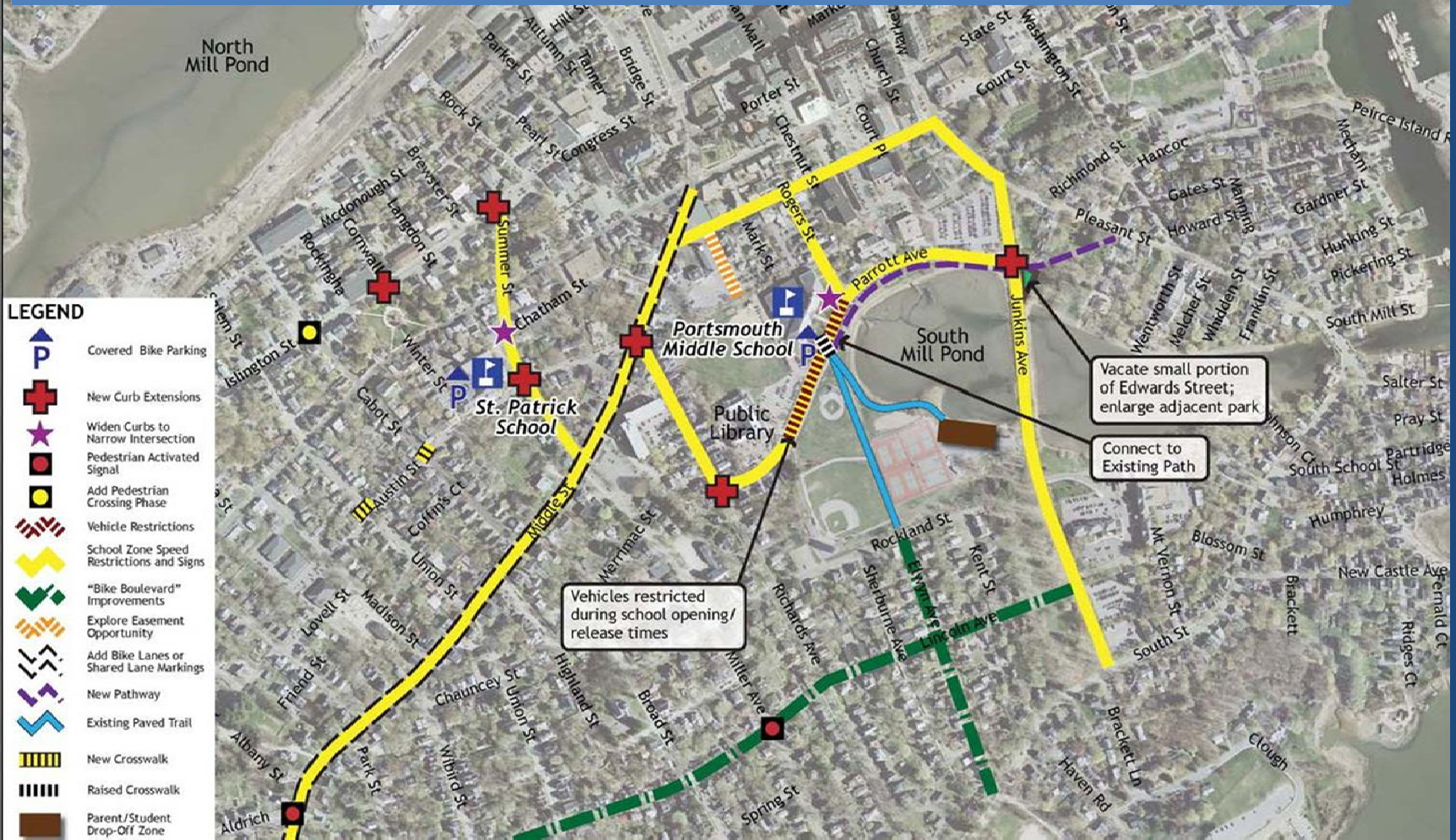


# Middle St / Lafayette Rd Bicycle Route Post-Construction Report Back

Parking Traffic & Safety

December 6, 2018

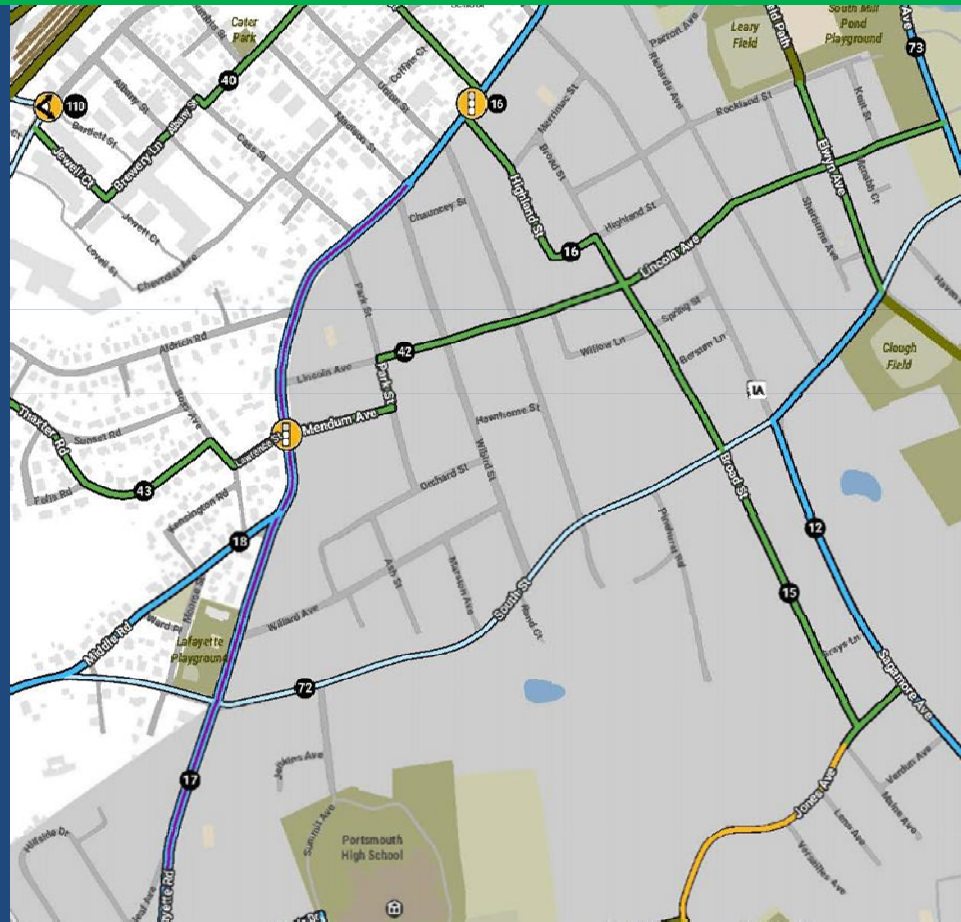
2010 Safe Routes to School Action Plan, illustrated here, identified this corridor for an on-road bike route in order to increase utilization by school age children to get to and from school and other activities.



2014 Bicycle and Pedestrian Plan, illustrated on this slide, reiterated this recommendation indicating that such improvements could improve safety for all travelers and connect gaps in the bicycle and pedestrian network. This plan also suggested that the City consider buffered bicycle lanes rather than simply traditional bicycle lanes along this roadway.

**PROPOSED BIKE IMPROVEMENTS**

-  Shared-Use Path
-  Side Path
-  Cycle Track
-  Buffered Bike Lane
-  Bike Lane
-  Contraflow Bike Lane
-  Shared-Lane Marking
-  Shared Street
-  Pedestrian Street
-  Bike Boulevard
-  Signed Route





# Pre-Construction

- Two lanes of travel, variable roadway width
- No shoulders or striped parking spaces
- Average Traffic Volumes 10,000 to 11,000
- Sidewalks along most of the corridor
- 85<sup>th</sup> percentile speeds 31 - 35
- Low on-street parking usage south of Cass St





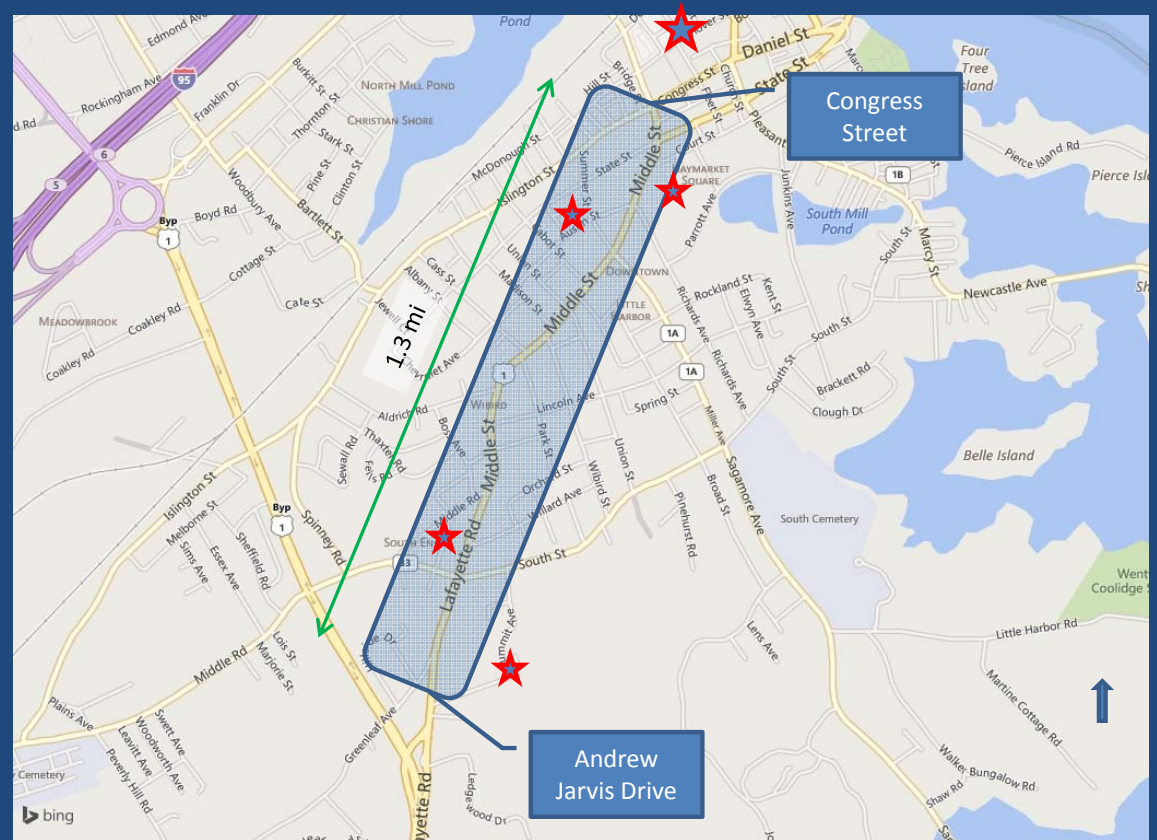
# Project Purpose and Objectives

## Purpose

- Improve Safety for Cyclists & Pedestrians
- Expand Connectivity
- Provide Bicycle Route Utilized by All Ages

## Objectives

- Slow traffic speeds
- Improve pedestrian crossings
- Maintain on-street parking
- Emergency response route
- Separate bike lanes from traffic



# Project Funding

PRELIMINARY DESIGN PHASE = \$45,256

Federal Safe Routes to School Grant (managed by NHDOT) = \$43,357

City's share = \$1,899

FINAL ENGINEERING & CONSTRUCTION PHASE = \$265,410

Federal Safe Routes to School Grant = \$180,407

City funds = \$85,003

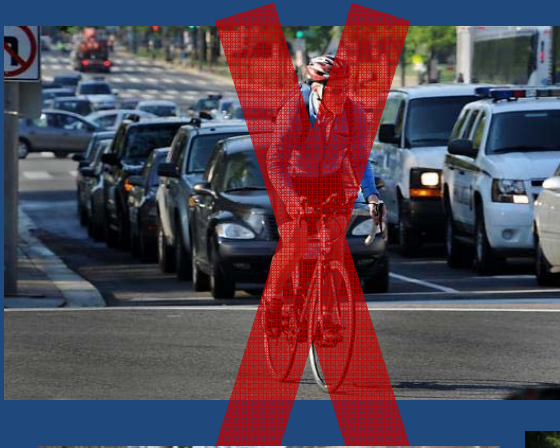
TOTAL PROJECT COSTS = \$310,666

Federal Safe Routes to School Grant = \$223,764

City funds = \$86,902

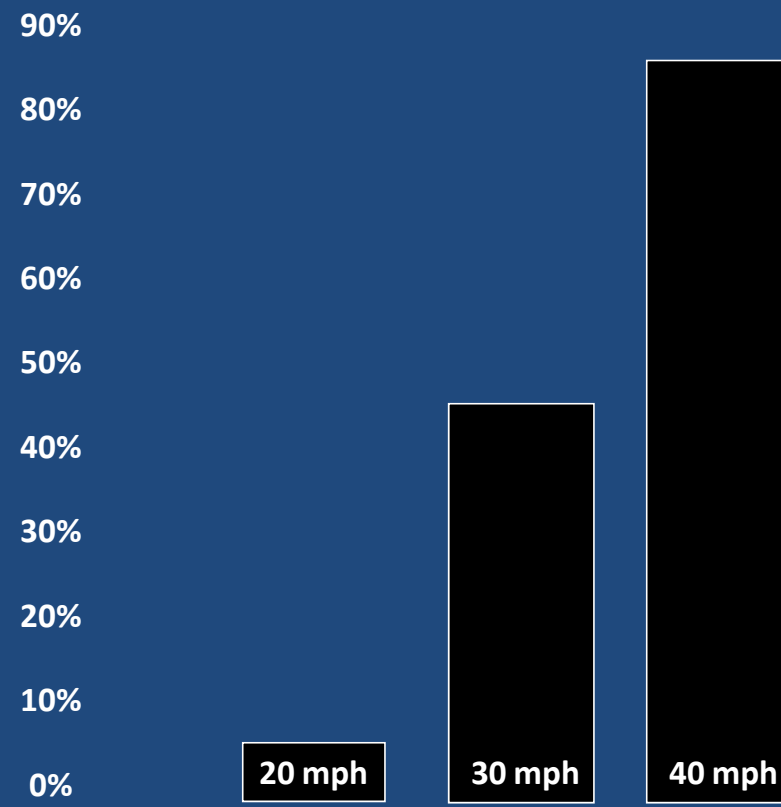


# Who are we designing for?



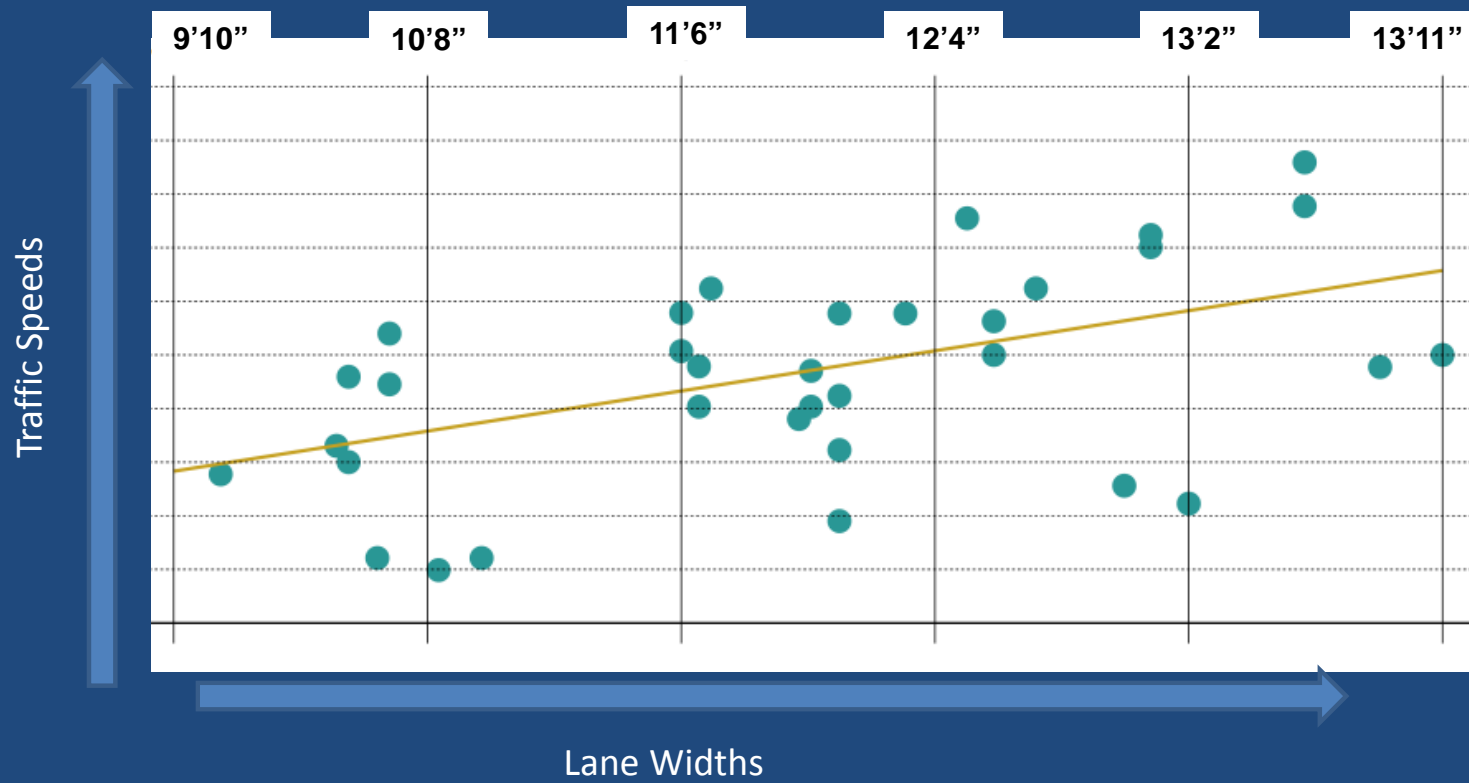
# Safe Speeds

## Pedestrian's risk of fatality if hit by a motorist





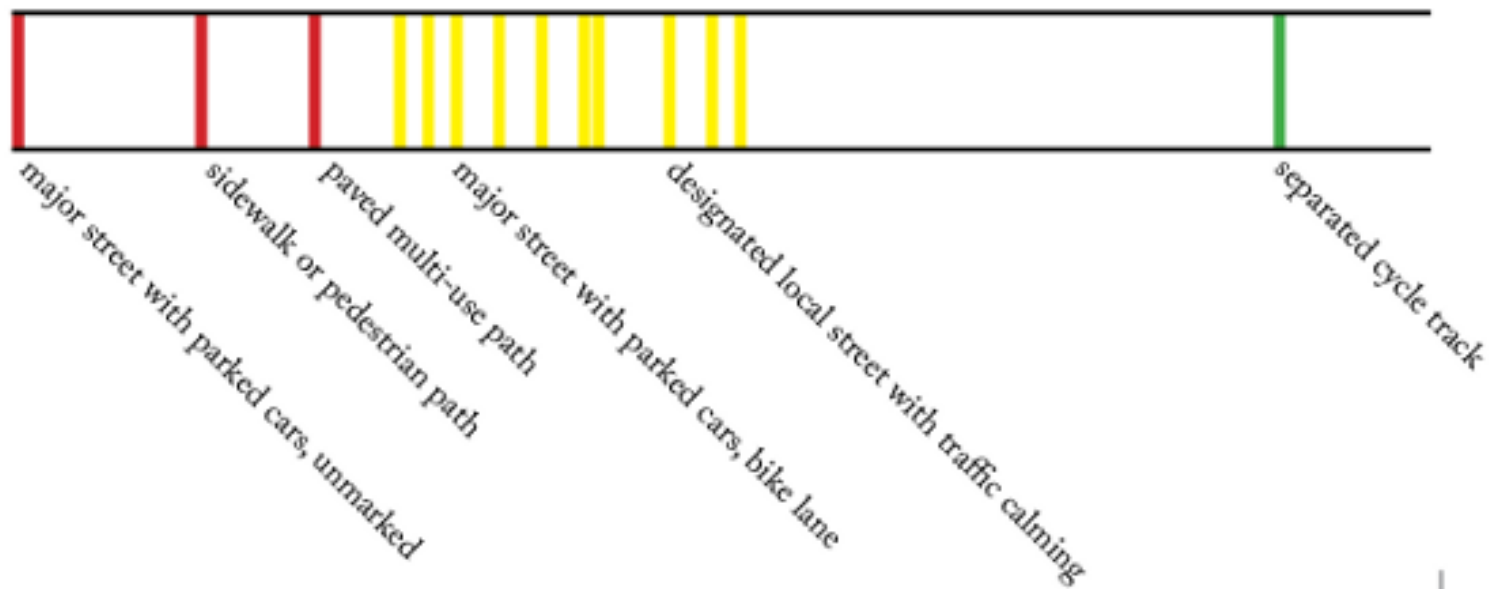
# Traffic Calming



# Physical Separation of Traffic

## Selected bikeway types by safety level

Source: *American Journal of Public Health, Teschke et al, 2012*





# Public Input

- Meeting with School Officials – October 2014
- Public Information Gathering Meeting – November 19 2014
- Public Comment Period
- Public Meeting to Review Design Alternatives – February 2015
- City Council Presentation – April 6, 2015
- Pop-Up Demonstration – September 23, 2015
- Parking & Traffic Safety Committee – October 6, 2016
- Public Meeting – June 8, 2017

# Alternatives Considered

- Traditional Bike Lanes
- Buffered and Protected Bike Lanes
- Two-Way Cycle Track

# Final Design Option

- Buffered -- a bicycle lane with additional lateral separation from motor vehicle travel ways
- Protected – a bicycle lane with vertical separation (parked cars, flexible bollards, plantings, or curbing) from motor vehicle travel ways

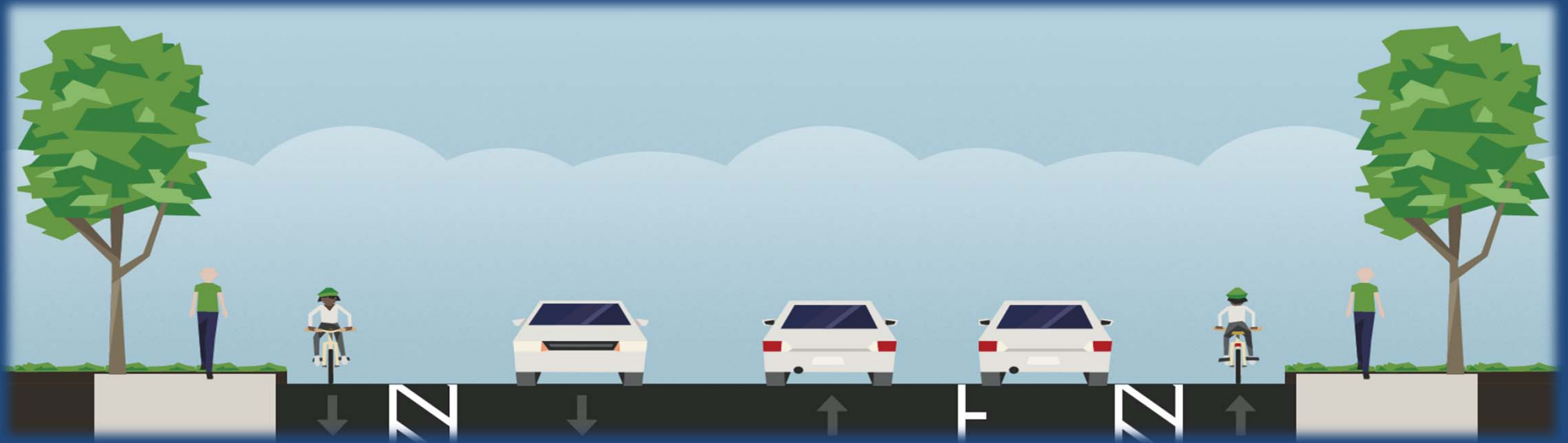


## Bid / Construction Process

- Bid process started in January 2018
- Re-Bid three times due to bidding climate
- Final Construction Bid
  - Reduced number of pedestrian activated signals at crosswalks
  - Eliminated Cabot St crosswalk and ped signal
- Project Start – Early September
- Project Completion – End of October



# Post-Construction

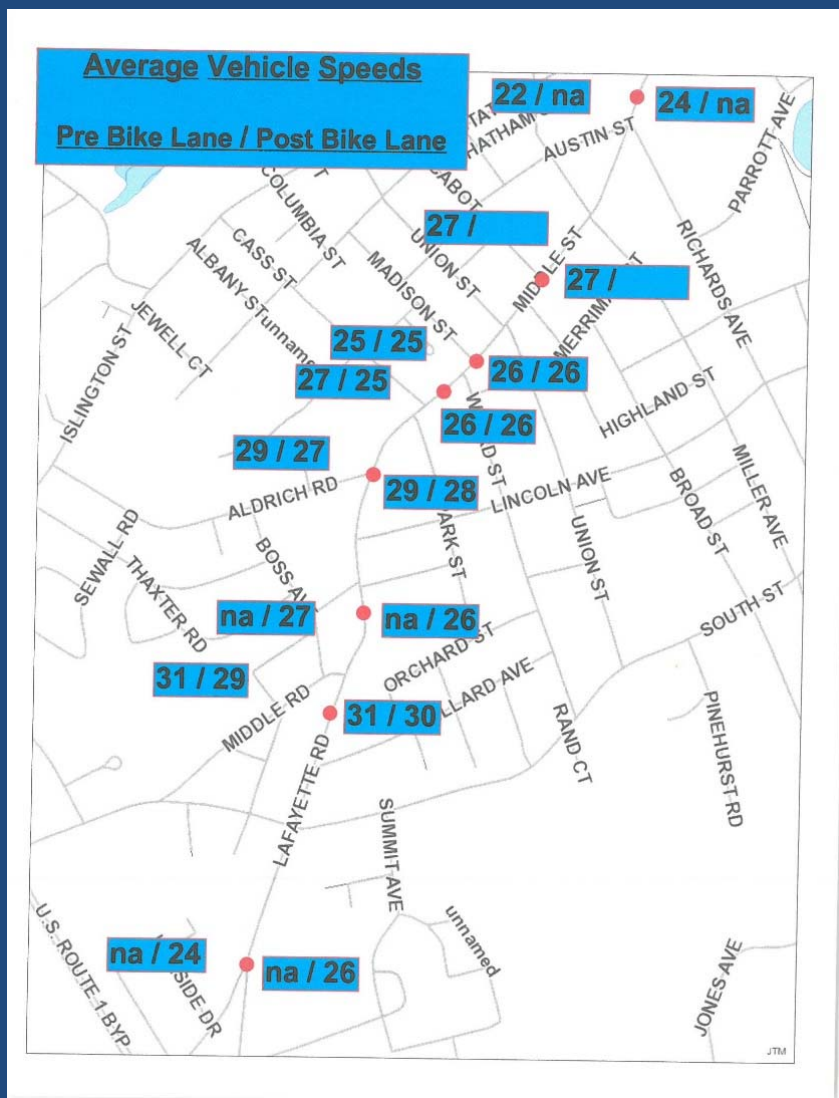


# Post-Construction

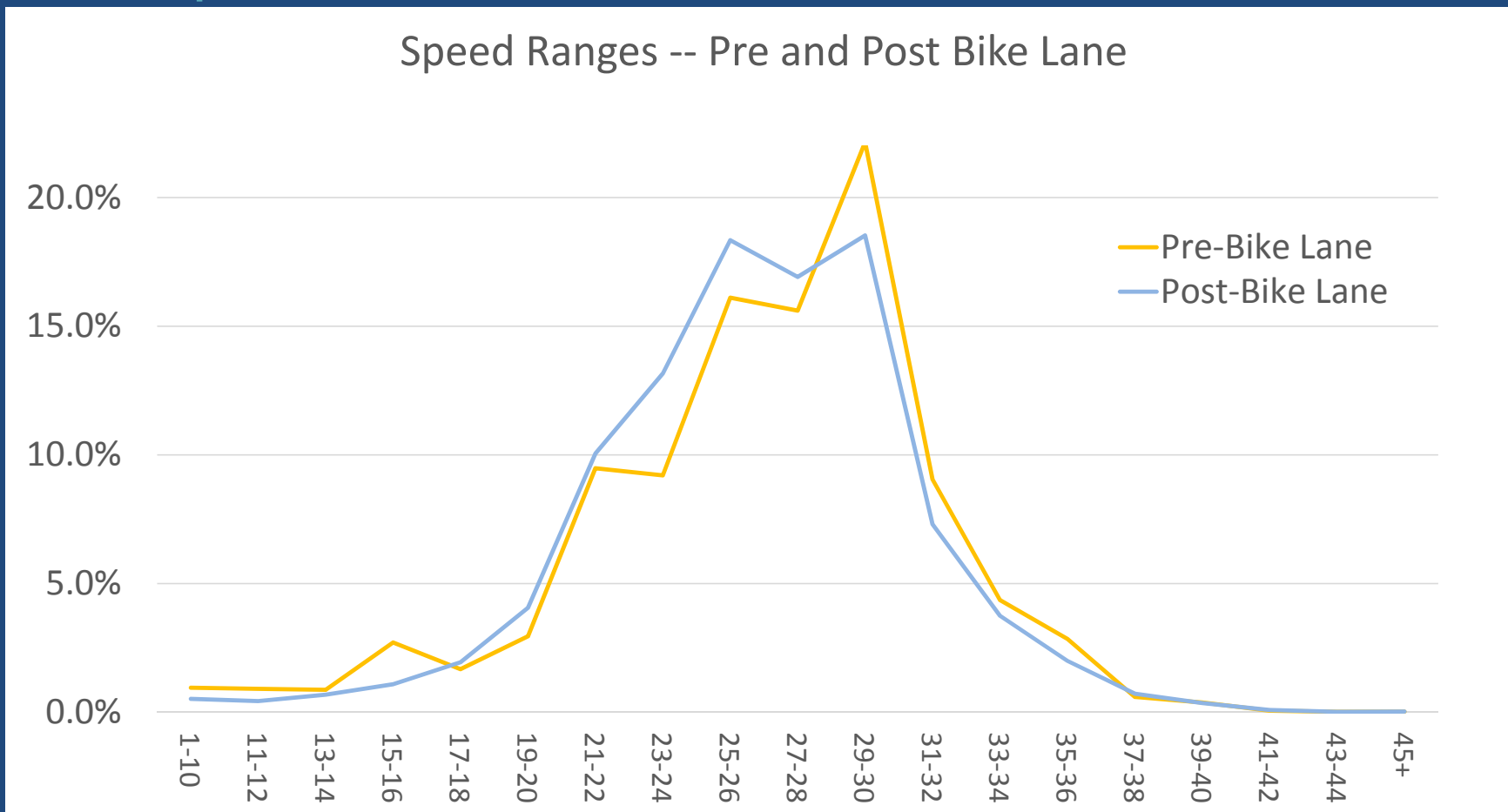
- Pedestrian-activated signals at Richards / Austin crosswalk
- Ped. Signal at Lawrence / Mendum (in process)
- Green paint to delineate bike lanes through intersections
- Bike Boxes at South St intersection



# Traffic Speeds



# Traffic Speeds





# Feedback from Public

- Sight lines at intersections – some have improved, some are still a concern
- Flexible delineators (bollards) – aesthetic, location, distance between
- Access for COAST bus stops
- Questions about trash collection, delivery trucks, pulling over for emergency vehicles



# Feedback from Public



- Concern about maintenance, snow removal
- Concerns about too much paint, overall aesthetic
- Width of travel lanes and travel way – some like, some don't
- Requests to add parking in some locations, remove it in others
- Concern that bike lanes don't continue past Cabot
- Like the separation from traffic, feel more comfortable
- Like that traffic is slower

## Next Steps -- Evaluation and Research

- Further monitoring and data collection – traffic speeds, bicycle counts, parking counts (through multiple seasons)
- Research alternatives to delineators and options for revising the design and location of the delineators
- Propose locations where additional signage might be needed
- Review COAST bus stop locations and access
- Guidance for delivery trucks, trash collection, snow clearing
- Evaluate sight line concerns and traffic behavior at intersections

## Process for Modifications to Design

- Development of options, internal review with City staff
- Public meeting(s) to present and discuss options
- Parking & Traffic Safety Committee input