



# Boston Street Complete Streets Study

Salem, MA

Presented by  
VHB

October 2, 2017

# Overview

- Study Area
- Study Objective
- Data Collection
- Existing Conditions
- Previous Corridor Studies
- Potential Improvements
- TIP/PNF Process



# Study Area





# Study Objective

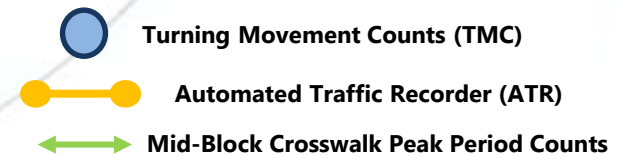
- Review existing conditions including
  - Traffic volumes throughout the corridor
  - Pedestrian and bicycle accommodations
  - Safety of vehicles, pedestrians, and bicyclists
  - Driveway access
  - Location of bus stops
  - Lighting
  - Greenspace
- Provide potential recommended improvement options
  - Alternatives based on “Complete Streets” concept
  - Incorporate public feedback



# Data Collection



- Data collection conducted on Tuesday, September 20<sup>th</sup> and Wednesday, September 21<sup>st</sup>, 2016





# Existing Conditions – Traffic Volumes

- Boston Street
  - Average Daily Traffic: 17,500 – 22,300 vehicles per day
  - Weekday Morning Peak Hour
    - 1,200 – 1,500 vehicles per hour
    - 55% - 60% traffic traveling EB
  - Weekday Evening Peak Hour
    - 1,250 – 1,500 vehicles per hour
    - Near 50/50% split between EB and WB



# Existing Conditions – Bike/Ped Data



## ■ Bicycle Data on Boston Street

- Up to 2 bicycles per direction recorded in AM peak hour
- Up to 4 bicycles per direction recorded in PM peak hour

X (X)

AM (PM) Pedestrian Volumes



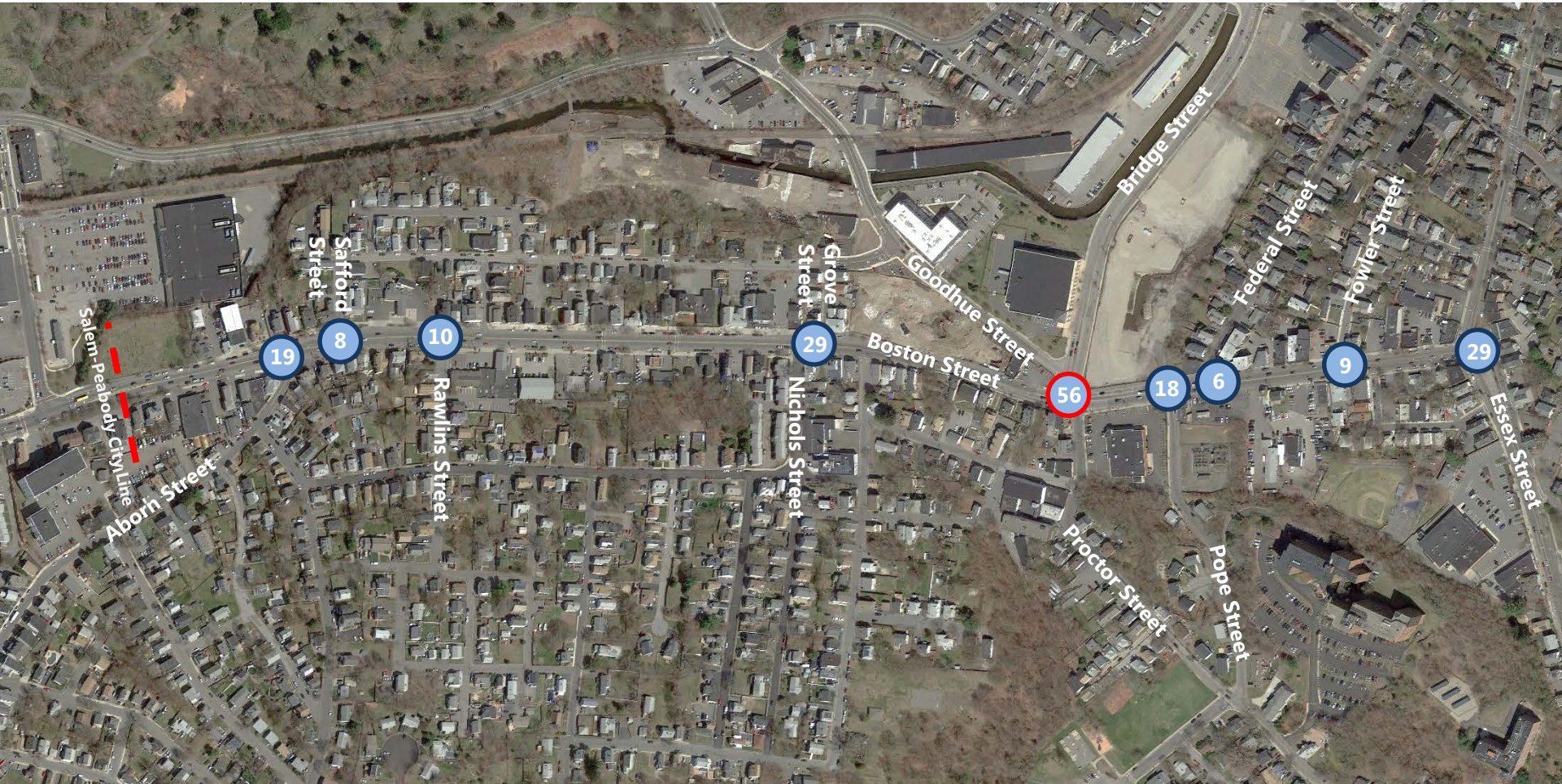
Mid-Block Crossing Pedestrian Volumes



Signalized Crossing Pedestrian Volumes



# Existing Conditions – Crash Data



■ No fatal injuries reported



Number of Crashes during five year period (2011-2015)



Highway Safety Improvement Program (HSIP) Eligible



# Existing Conditions – Signalized Level of Service



X (X)

AM (PM) Overall Level-of-Service (LOS)  
for Signalized Intersections



# Existing Conditions – Deficiencies





# Previous Corridor Studies

- Route 107  
Corridor Study
  - Includes concept for Boston Street at Essex Street

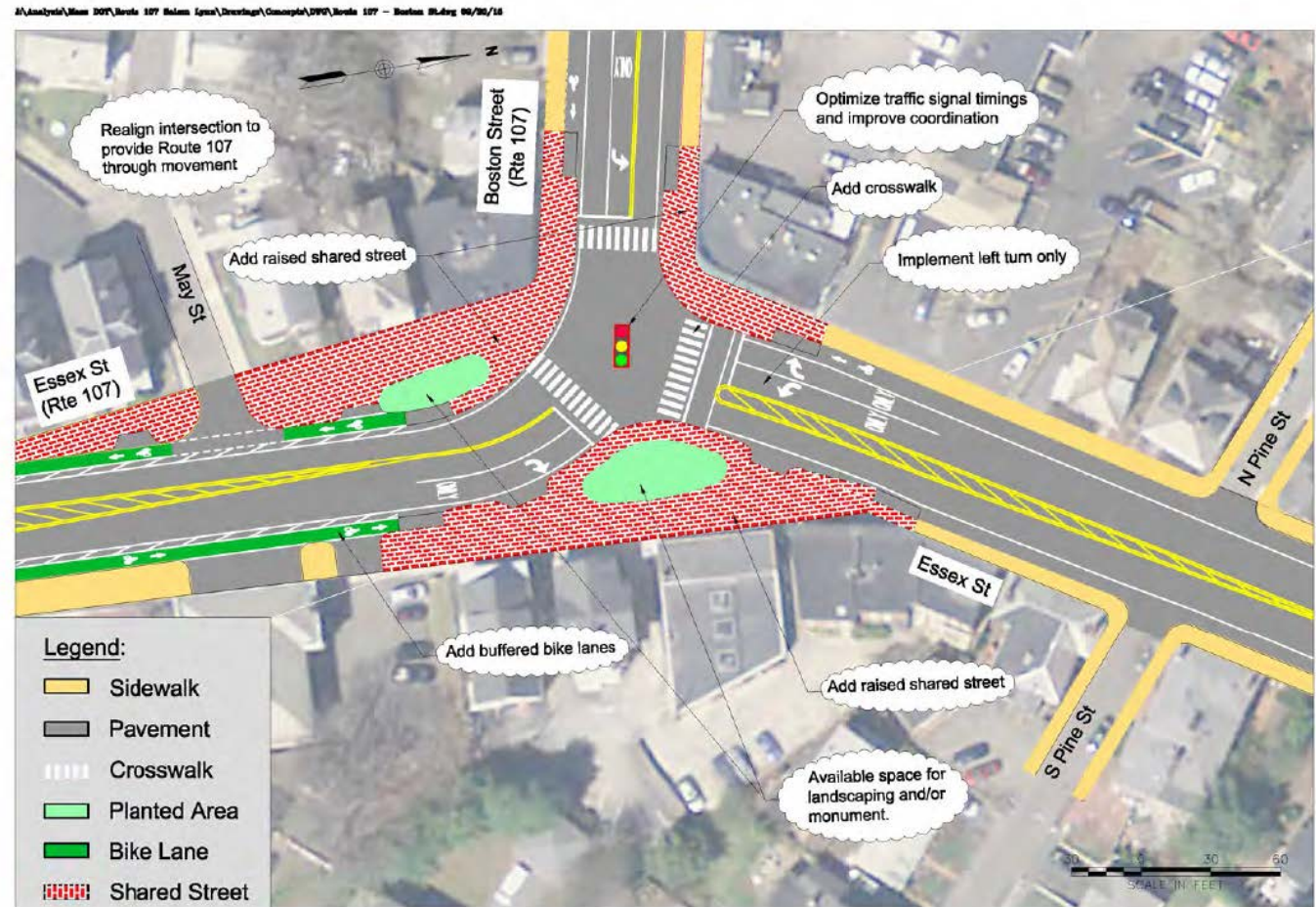


Figure VI-25  
Essex Street (Route 107) at Boston Street  
Route 107 Corridor Study  
Lynn/Salem, MA

Source: Route 107 Corridor Study, MassDOT and McMahon Associates, November 2016



# Potential Improvements

- Improved Pedestrian Accommodations
  - Level sidewalks throughout
  - ADA Ramps at all crosswalk landings
  - Efficient spacing of mid-block crossings
- Connect to Main Street accommodations in Peabody
- Improved Bicycle Accommodations
  - Several potential treatments
    - On-road buffered bike lanes
    - Separated bike lanes
    - Parking separated bike lanes
- Maintain Vehicular Operations



Sidewalk on Main Street in Peabody,  
west of Salem/Peabody city line



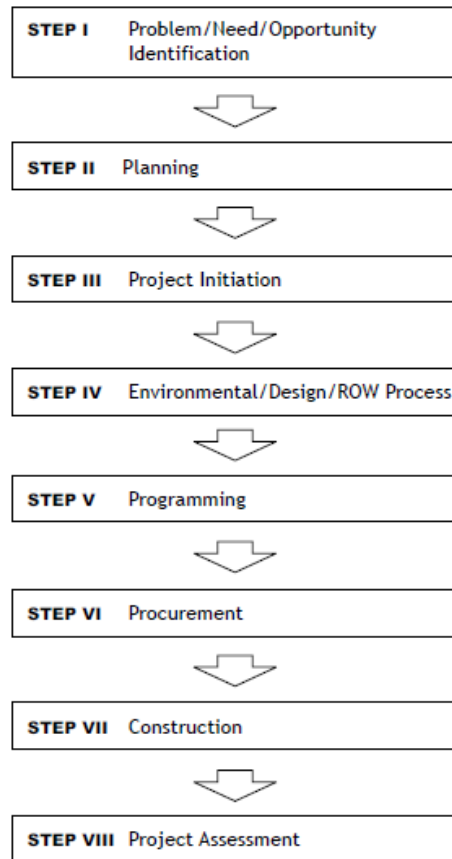
Source: MassDOT Separated Bike Lane Planning & Design Guide



# MassDOT Project Need Form (PNF) Process

## Overview of Project Development

### PROCESS

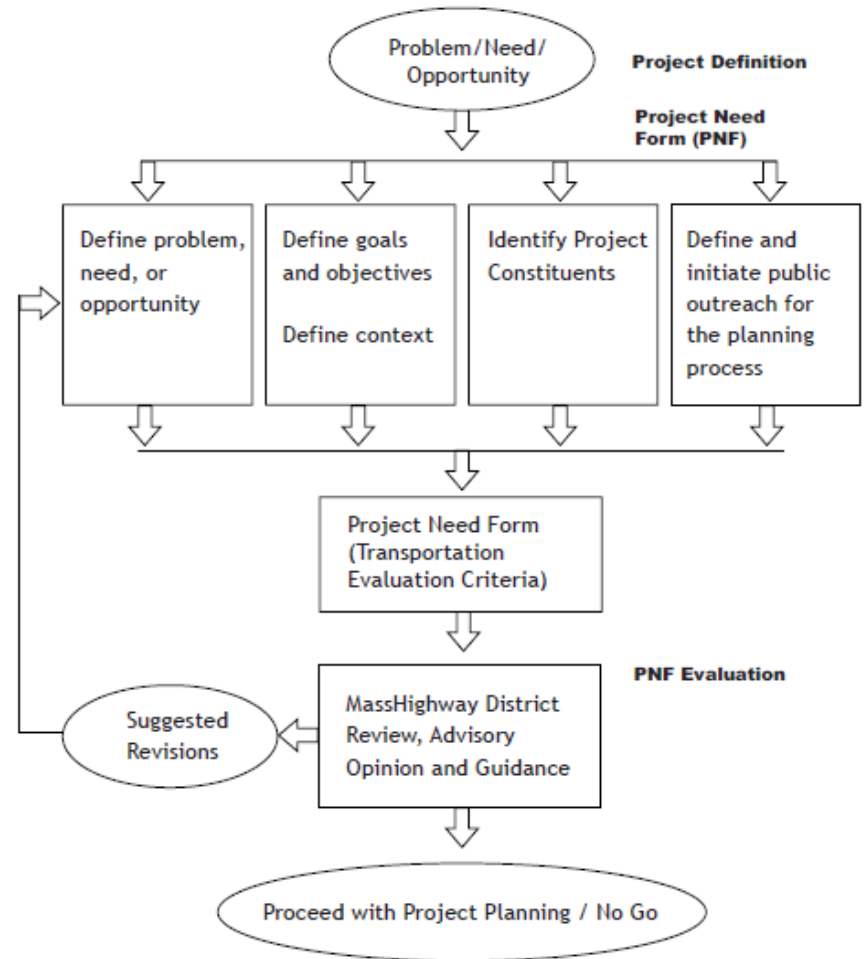


### OUTCOMES

1. Project Need Form (PNF)
2. Project Planning Report (If necessary)
3. Project Initiation Form (PIF)  
3. Identification of Appropriate Funding  
3. Definition of Appropriate Next Steps  
3. Project Review Committee Action
4. Plans, Specs and Estimates (PS&E)  
4. Environmental Studies and Permits  
4. Right-of-Way Plans  
4. Permits
5. Regional and State TIP  
5. Programming of Funds
6. Construction Bids and Contractor Selection
7. Built Project

Source: MassDOT

## Step I: Problem/Need/Opportunity Identification



Source: MassDOT



# MAPC Transportation Improvement Program (TIP)

- The TIP is the rolling, five-year capital funding document that outlines all the chosen and potential transportation infrastructure projects eligible for funding in the region
- Cities and towns in Eastern MA submit potential transportation infrastructure projects to the Boston Region Metropolitan Planning Organization (MPO) for potential funding
- The MPO must evaluate each project and prioritize which projects are added to the TIP to receive federal and state roadway funding



Laura Castelli | [Lcastelli@vhb.com](mailto:Lcastelli@vhb.com) | 617.607.2764

[www.vhb.com](http://www.vhb.com)



Offices located throughout the east coast