

Town of Holliston

# Highland Street Traffic Operations and Safety

May 16, 2022





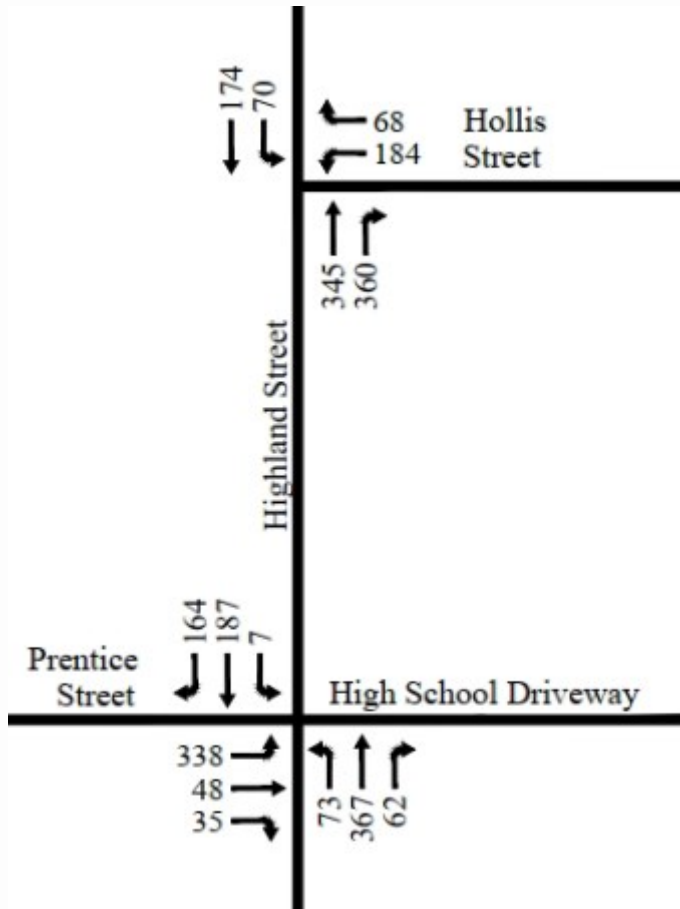
# STUDY AREA

- Traffic volumes, speeds, and operations
- Pedestrian accommodations
- Short-term improvements



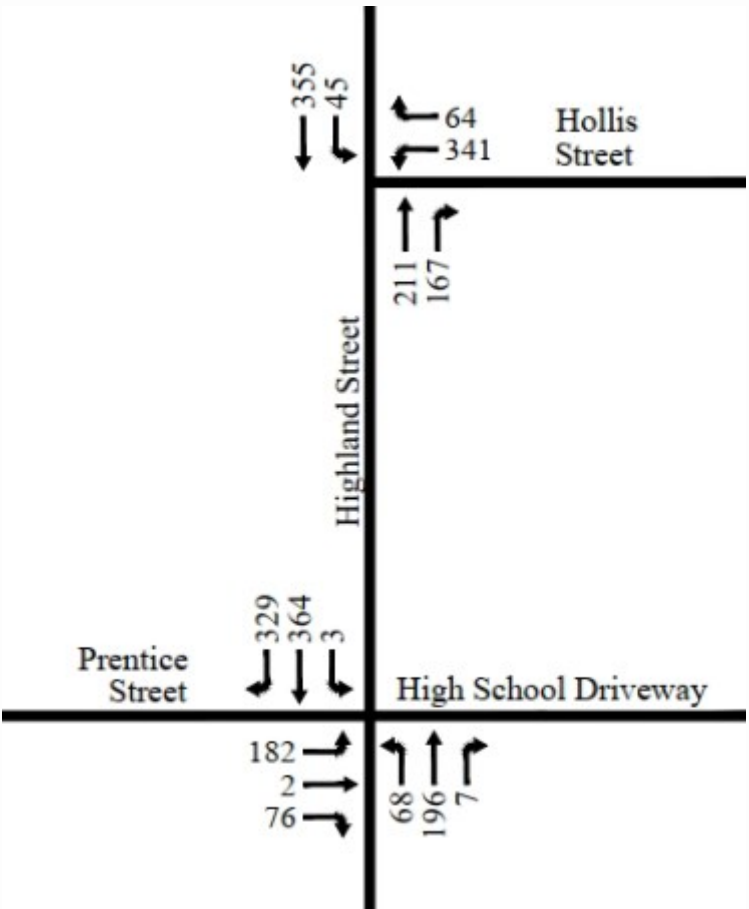
# PEAK HOUR TRAFFIC VOLUMES

WEEKDAY AM



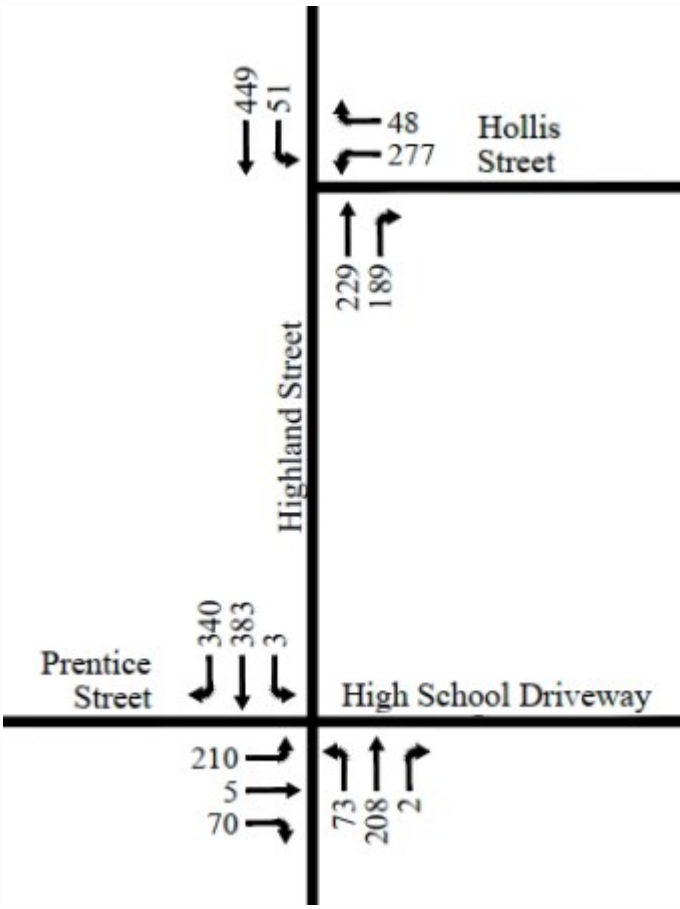
7:15-8:15 AM

WEEKDAY PM  
SCHOOL DISMISSAL



2:45-3:45 PM

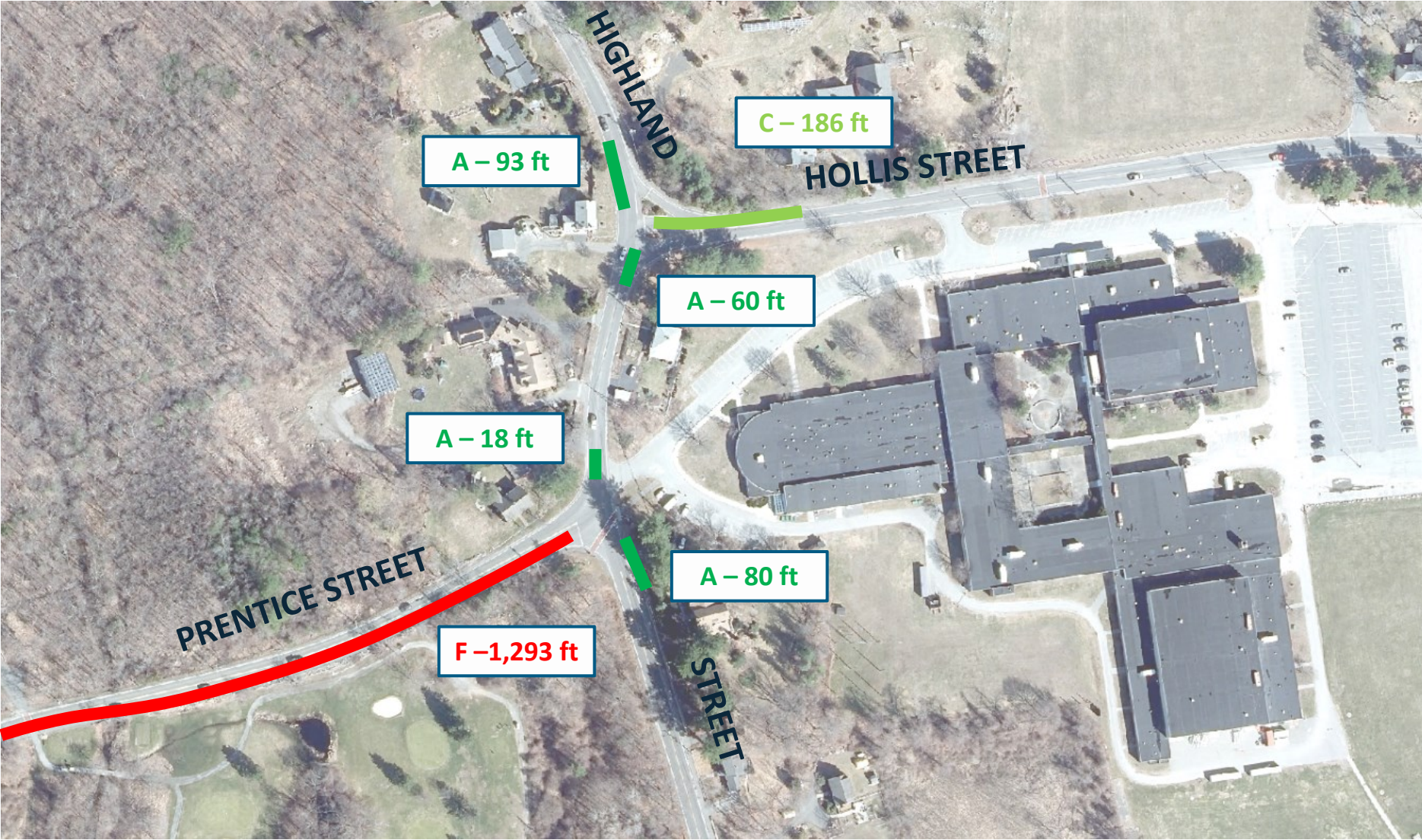
WEEKDAY PM



3:30-4:30 PM



# TRAFFIC OPERATIONS - WEEKDAY AM PEAK HOUR



## LEGEND

LOS A/B

LOS C

LOS D

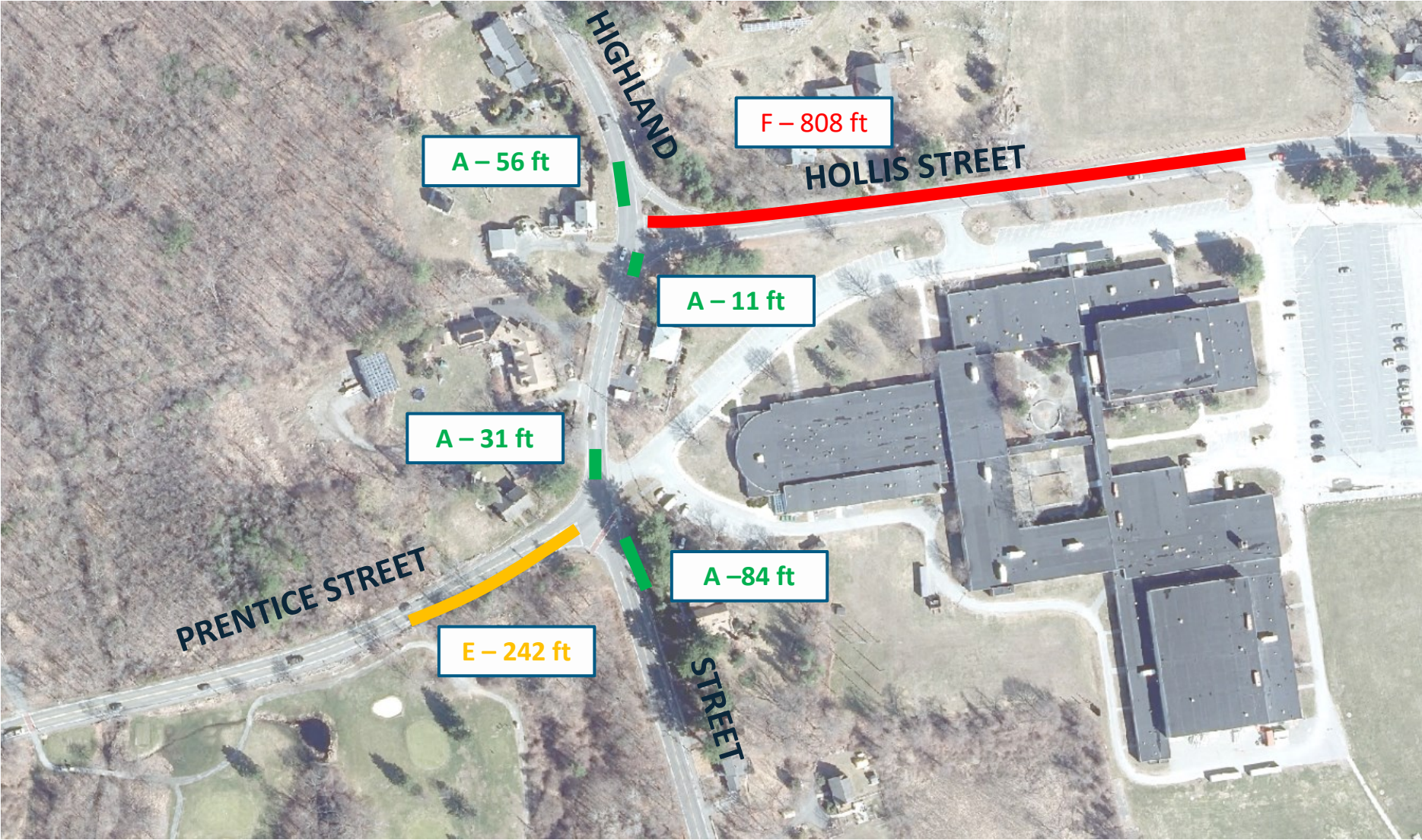
LOS E

LOS F

Approximate 95<sup>th</sup>  
Percentile Queue



# TRAFFIC OPERATIONS - SCHOOL DISMISSAL



LOS A/B

LOS C

LOS D

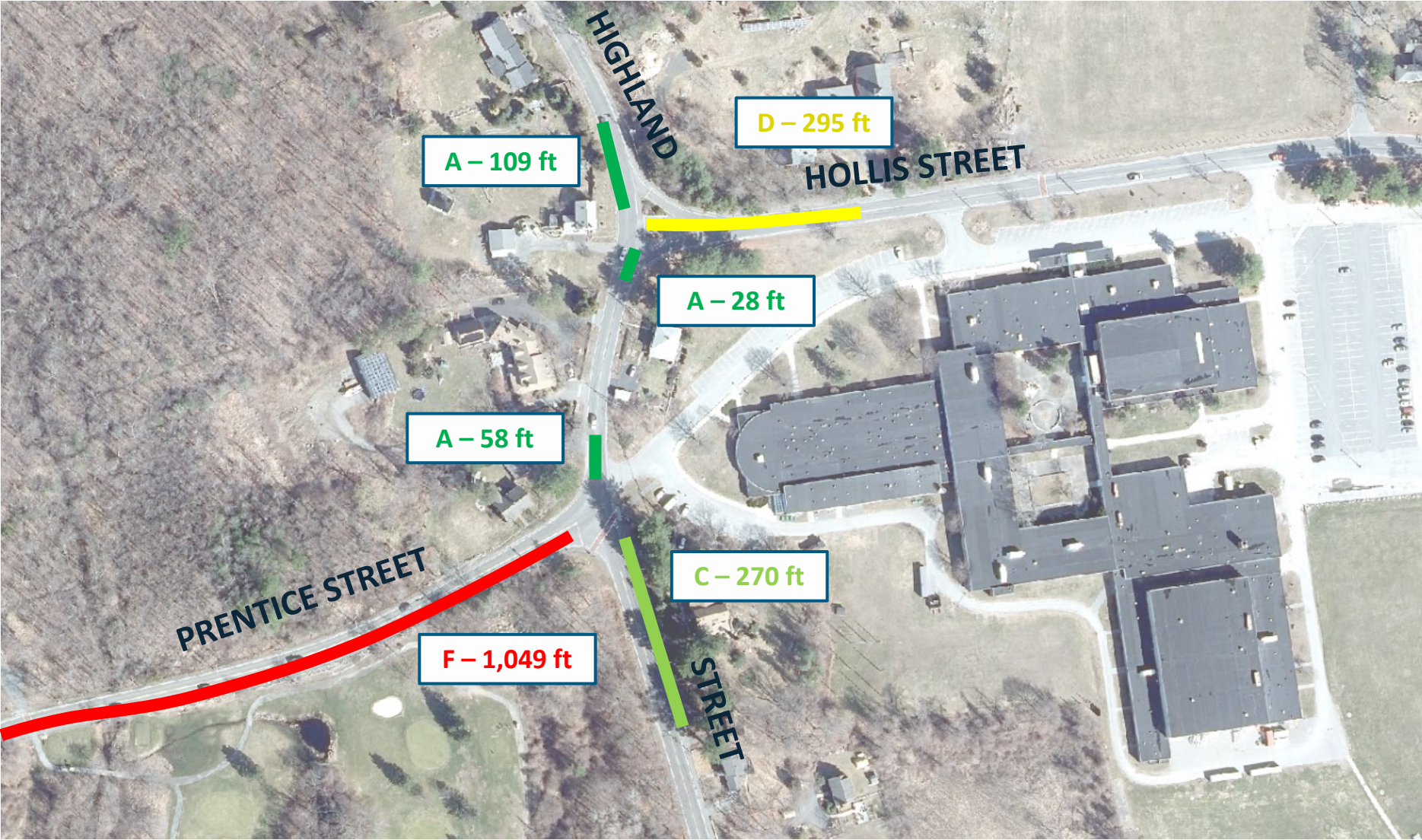
LOS E

LOS F

Approximate 95<sup>th</sup> Percentile Queue



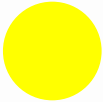
# TRAFFIC OPERATIONS - WEEKDAY PM PEAK HOUR



LOS A/B



LOS C



LOS D



LOS E



LOS F



Approximate 95<sup>th</sup>  
Percentile Queue



# VEHICLE SPEED & SIGHT DISTANCE

- 85<sup>th</sup> Percentile Speed: 33 mph Northbound and Southbound
- Required Intersection Sight Distance (ISD):
  - Looking left for a right turn – 320 ft
  - Looking left and right for a left turn – 365 ft
- Insufficient ISD for left turns from Hollis Street
  - 285 feet looking left
  - 316 feet looking right
- Stopping Sight Distance (SSD) met at both intersections





# EXISTING PEDESTRIAN ACCOMMODATIONS

- No sidewalk on Highland Street between Prentice Street and Hollis Street
- Approx. 600 foot sidewalk gap on Hollis Street adjacent to High School
- Skewed crosswalk at Prentice Street – 60 ft crossing
- Rectangular Rapid Flashing Beacons (RRFBs) – Highland Street at Prentice Street
- Mid-block crosswalk on Hollis Street
- No advance warning signs





# EXISTING PEDESTRIAN ACCOMMODATIONS



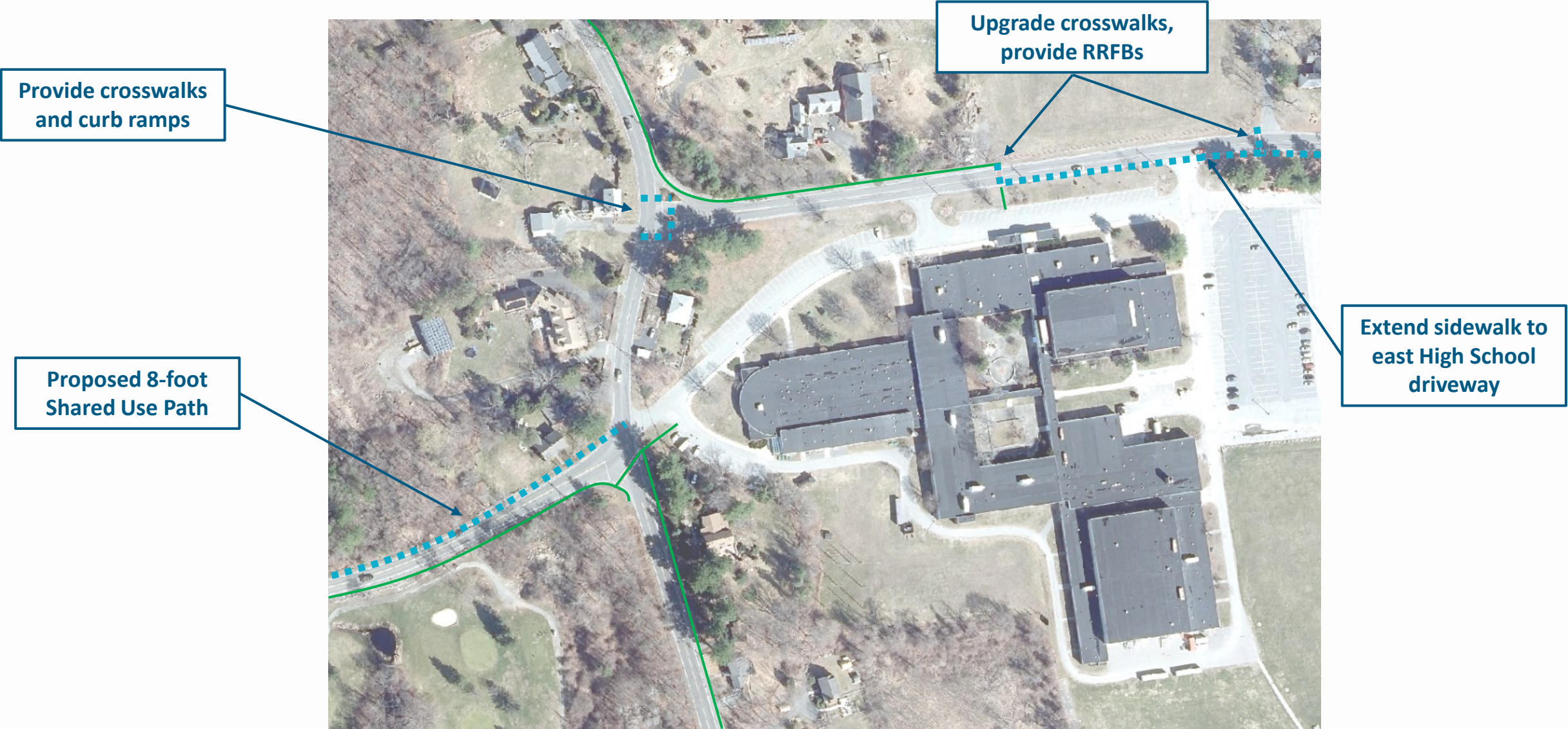
Highland Street at Prentice Street



Hollis Street Mid-Block Crossing



# COMPLETE STREETS PRIORITIZATION PLAN



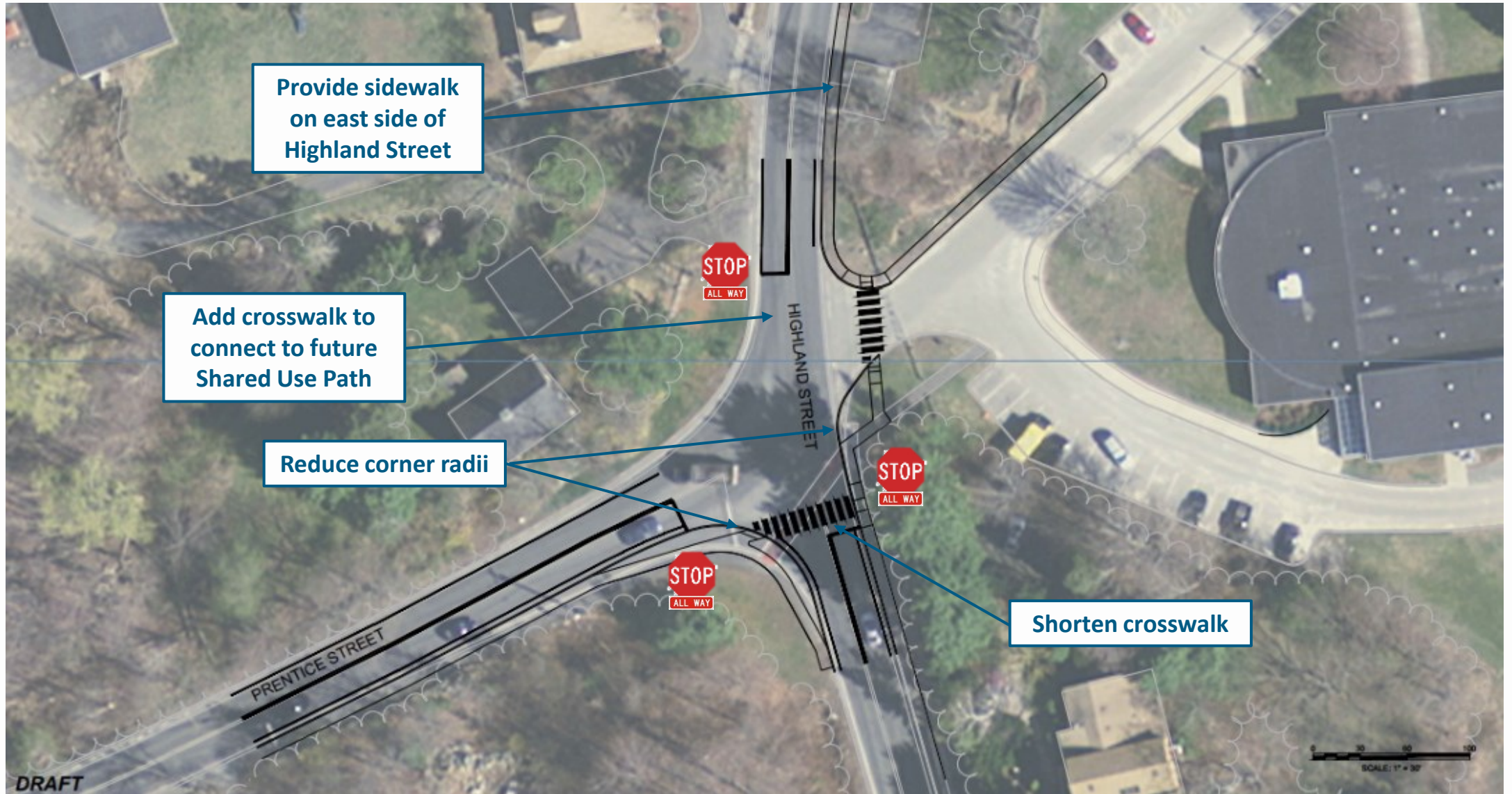


# SHORT-TERM IMPROVEMENTS

- Provide All-Way Stop sign control
  - Meets MUTCD traffic volume warrants
  - Corrects Intersection Sight Distance deficiency at Hollis Street
- Reduce corner radii
- Provide sidewalks on the east side of Highland Street, south side of Hollis Street
- Upgrade existing crosswalks and signage

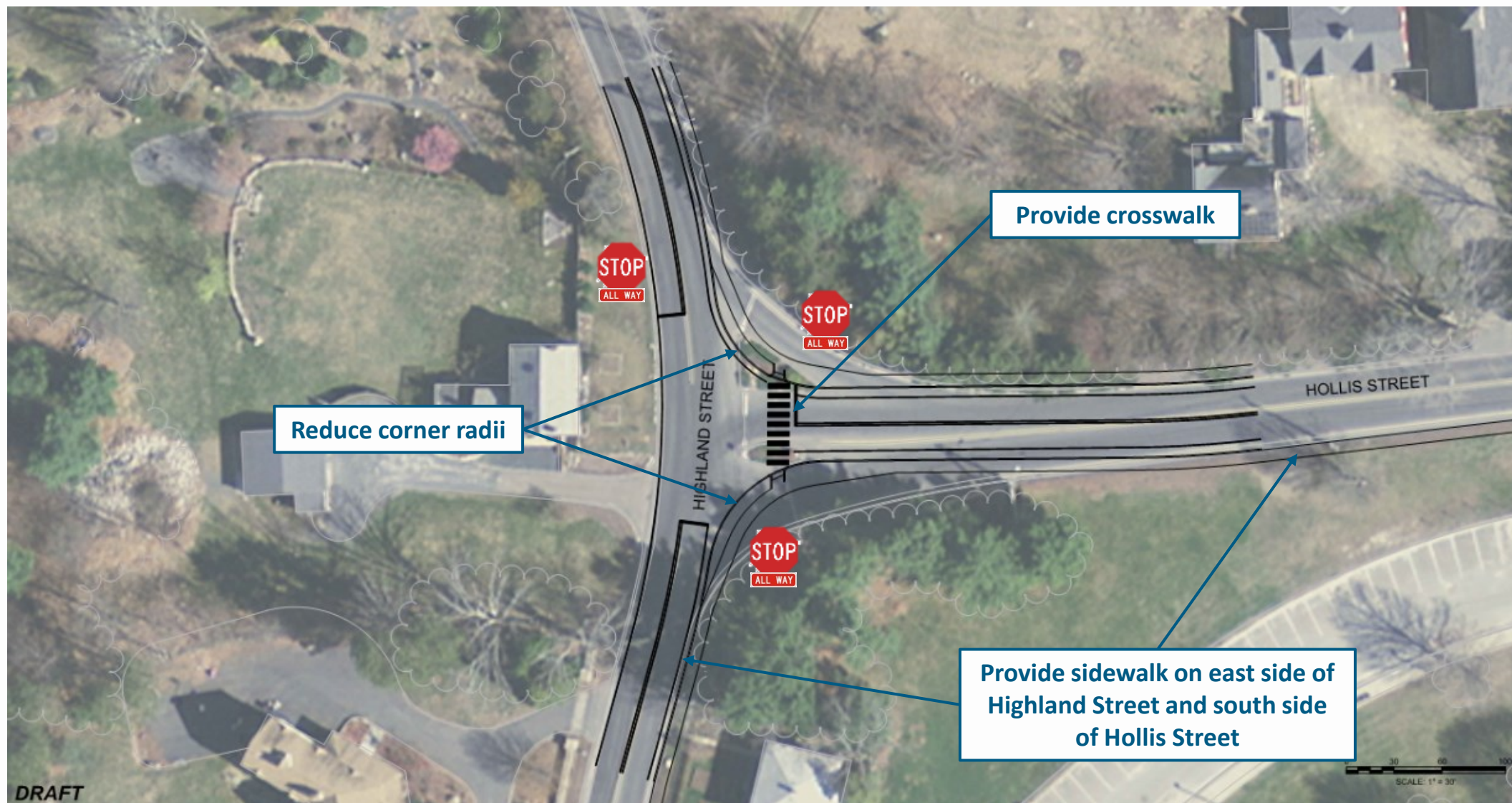


# SHORT-TERM IMPROVEMENTS – PRENTICE STREET





# SHORT-TERM IMPROVEMENTS – HOLLIS STREET



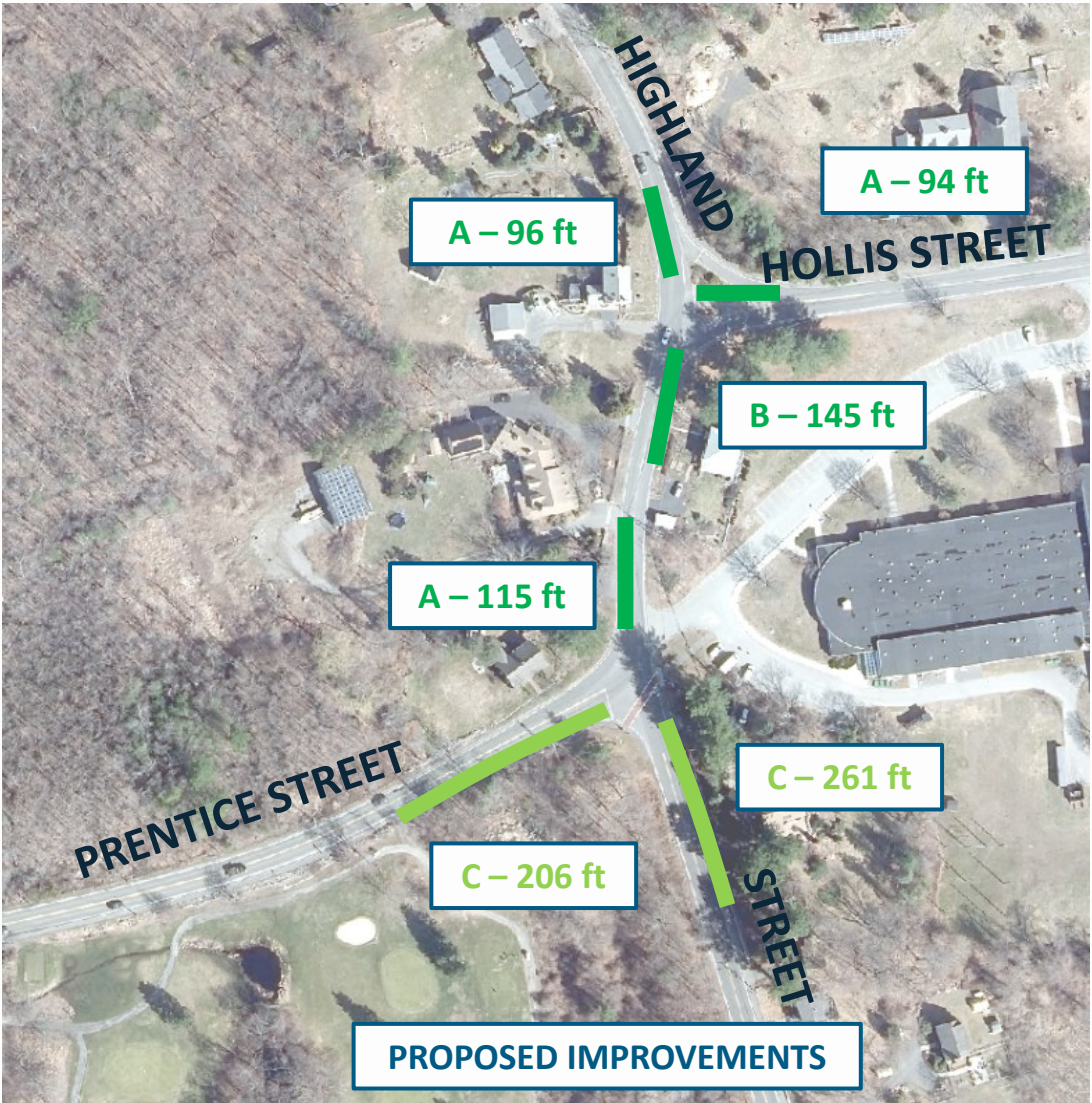
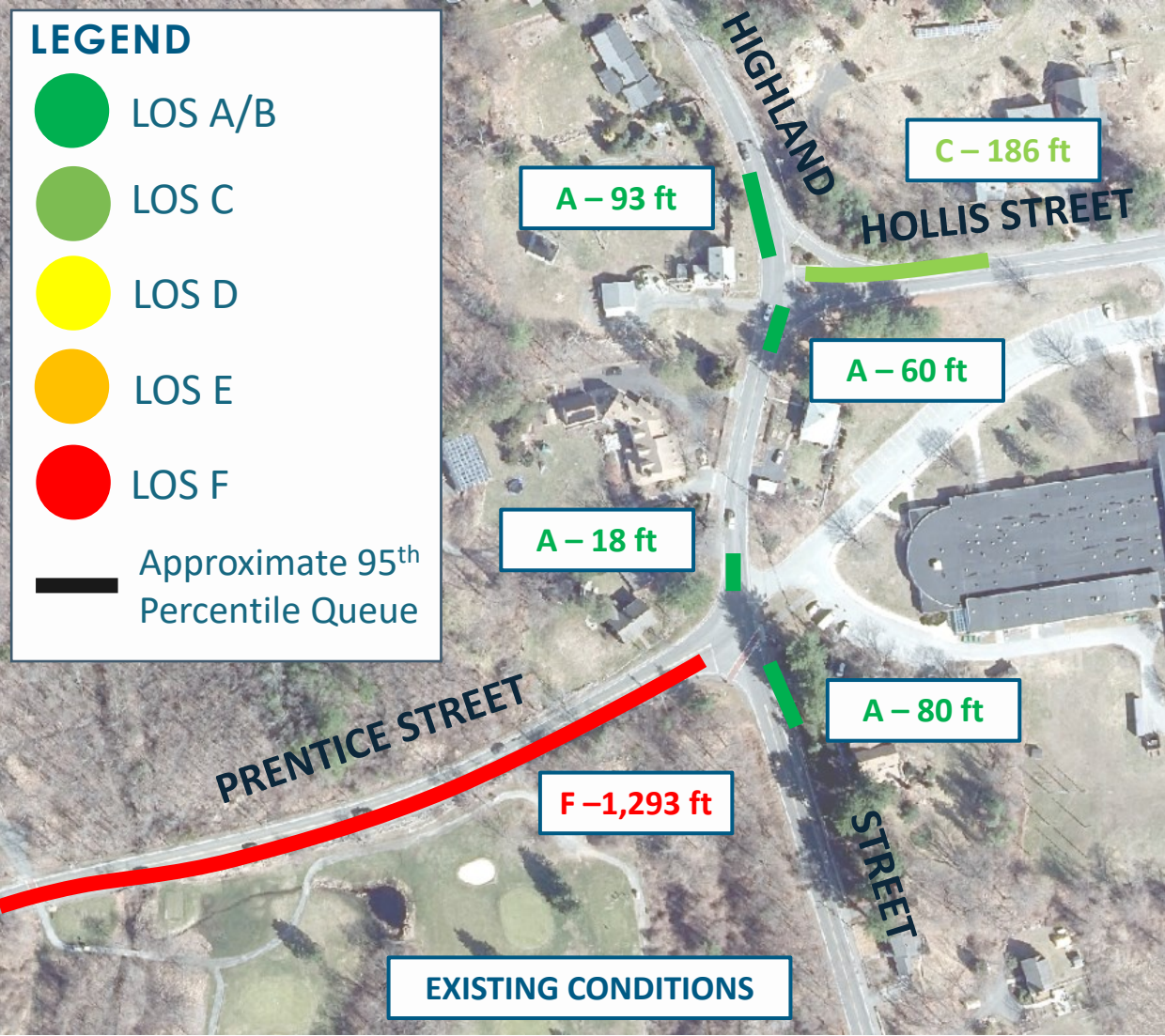


# SHORT-TERM IMPROVEMENTS

- Provide RRFBs at Hollis Street mid-block crosswalk
  - Can remove and relocate existing RRFBs at Prentice Street
- Provide pedestrian crossing warning signs (W11-2/ W16-9P) along Hollis Street in advance of mid-block crosswalk
- Provide Stop Ahead warning signs (W3-1) along all intersection approaches

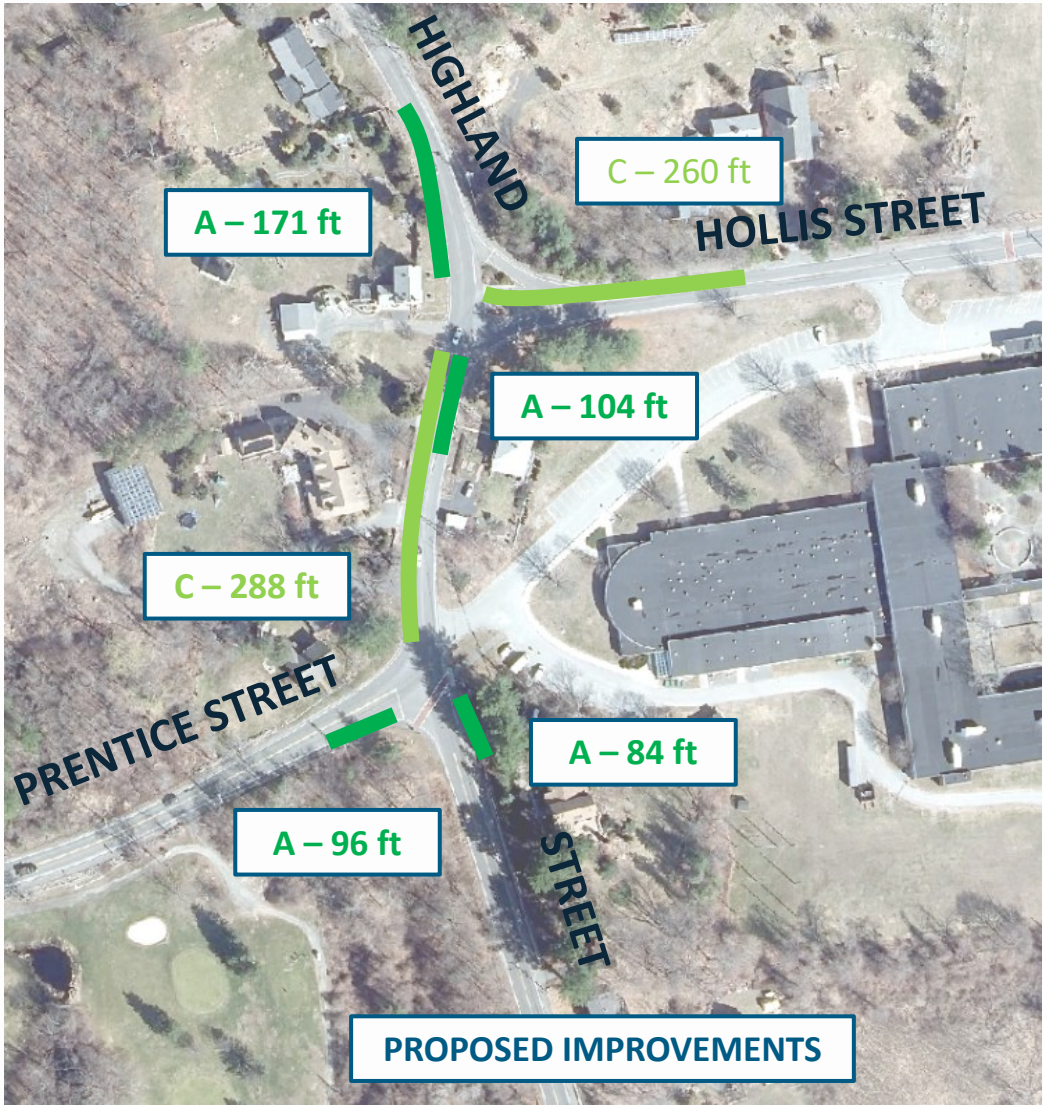
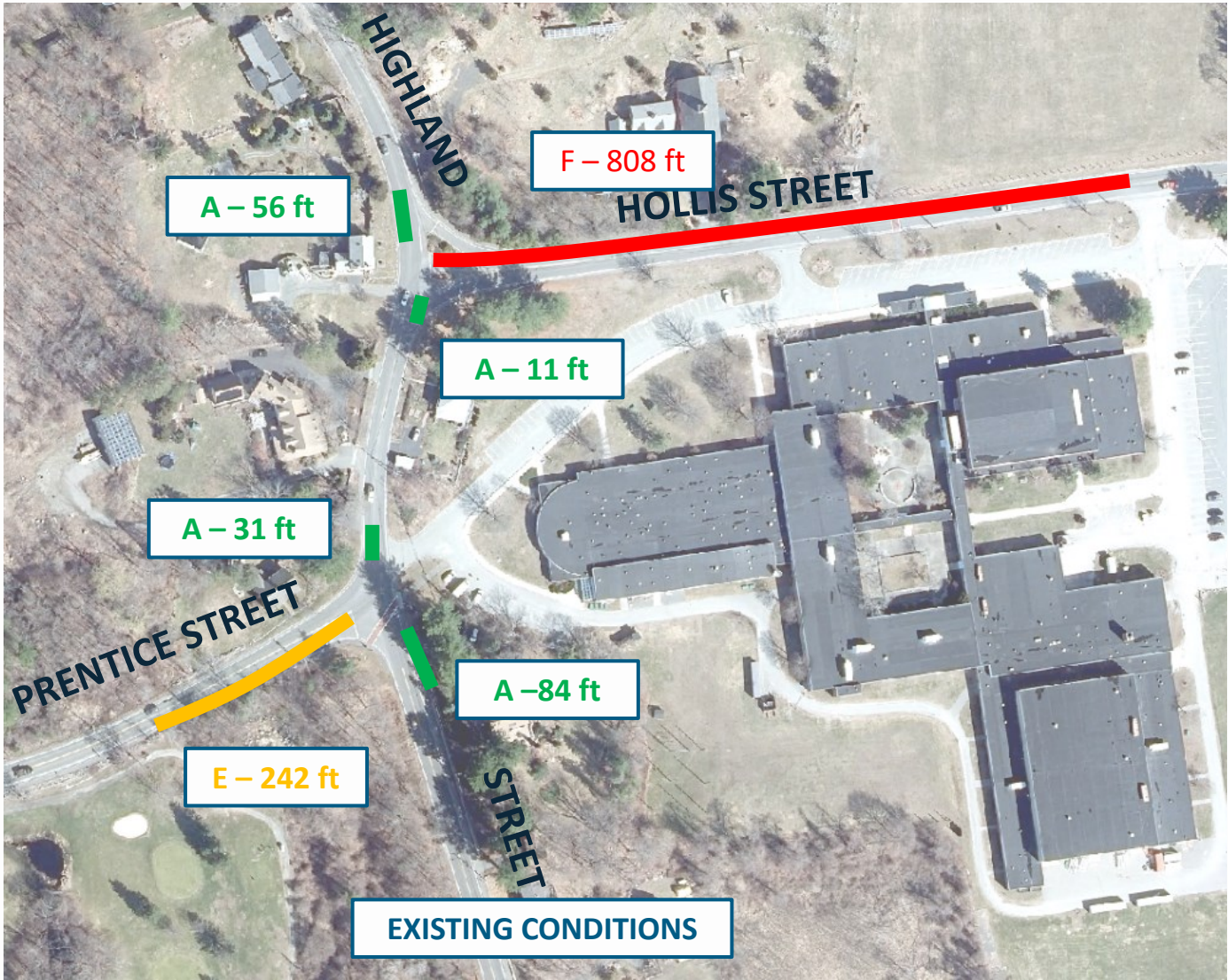


# TRAFFIC OPERATIONS - WEEKDAY AM PEAK HOUR



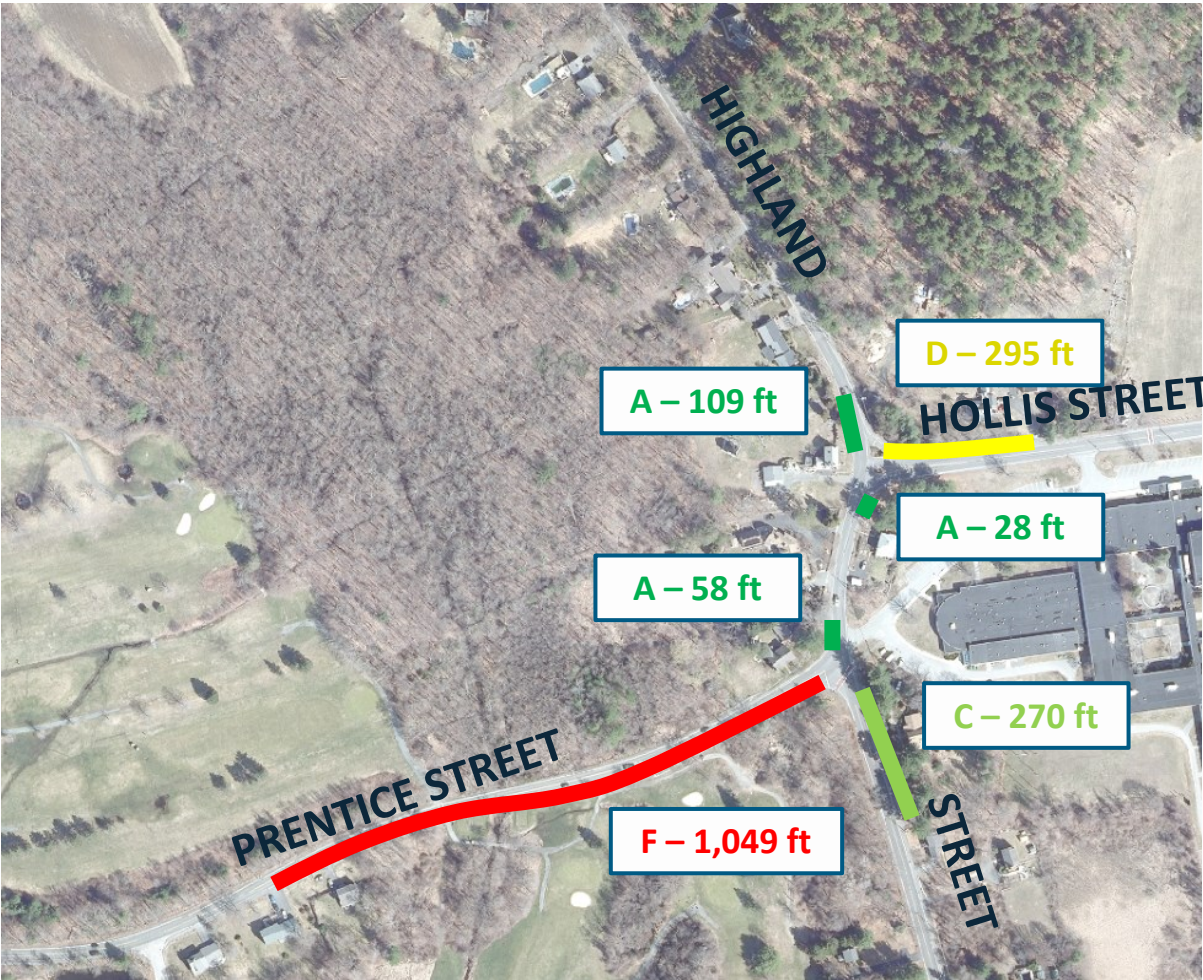


# TRAFFIC OPERATIONS - SCHOOL DISMISSAL

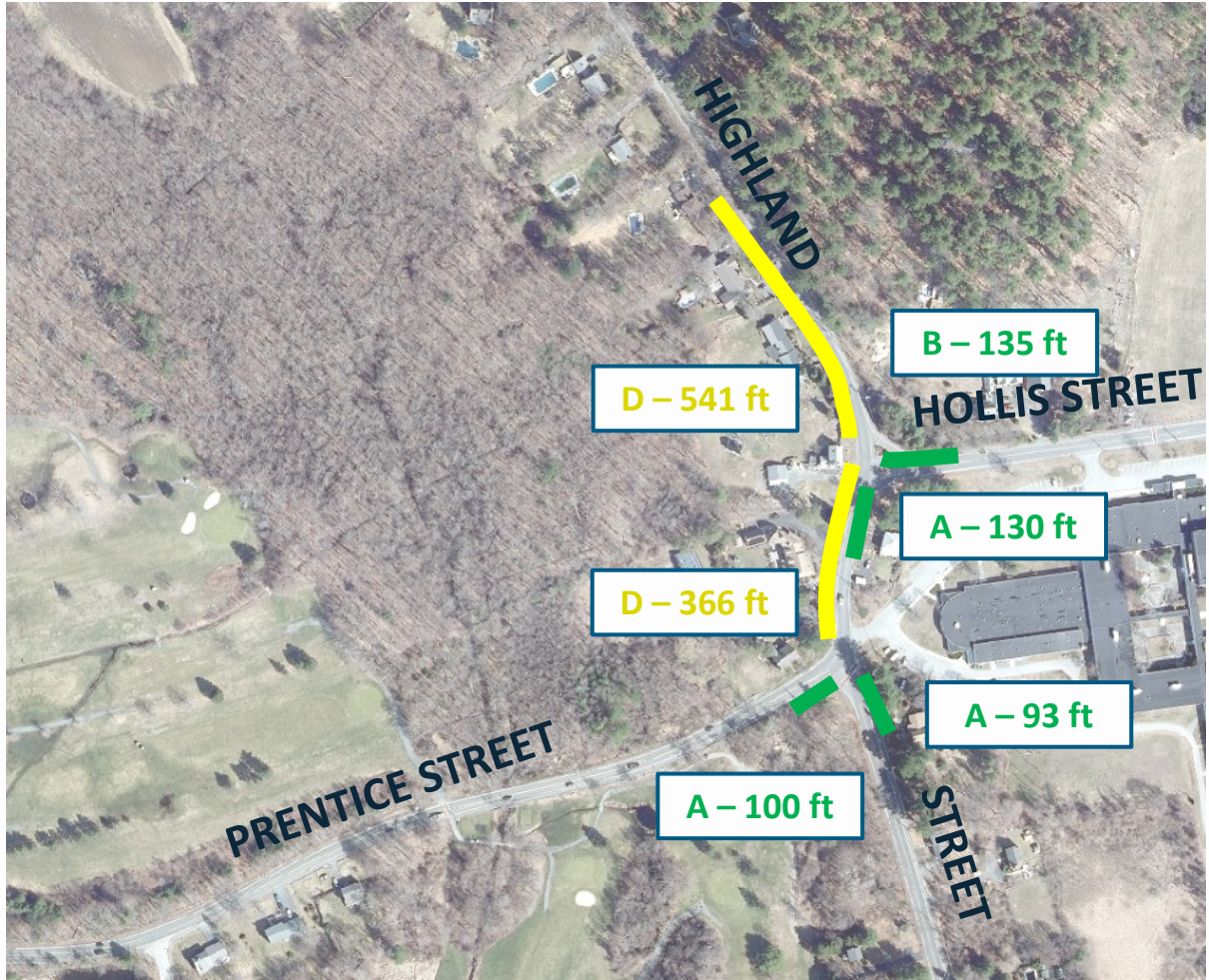




# TRAFFIC OPERATIONS - WEEKDAY PM PEAK HOUR



EXISTING CONDITIONS



PROPOSED IMPROVEMENTS



# POTENTIAL LONG-TERM IMPROVEMENTS

- Study of future traffic operations in conjunction with school redevelopment
- Traffic signals or roundabout
- Roadway widening to provide turn lanes and/or bicycle facilities
- Realign Hollis Street to create a four-way intersection at Prentice Street