

# Intersection Improvements

## Route 6&44

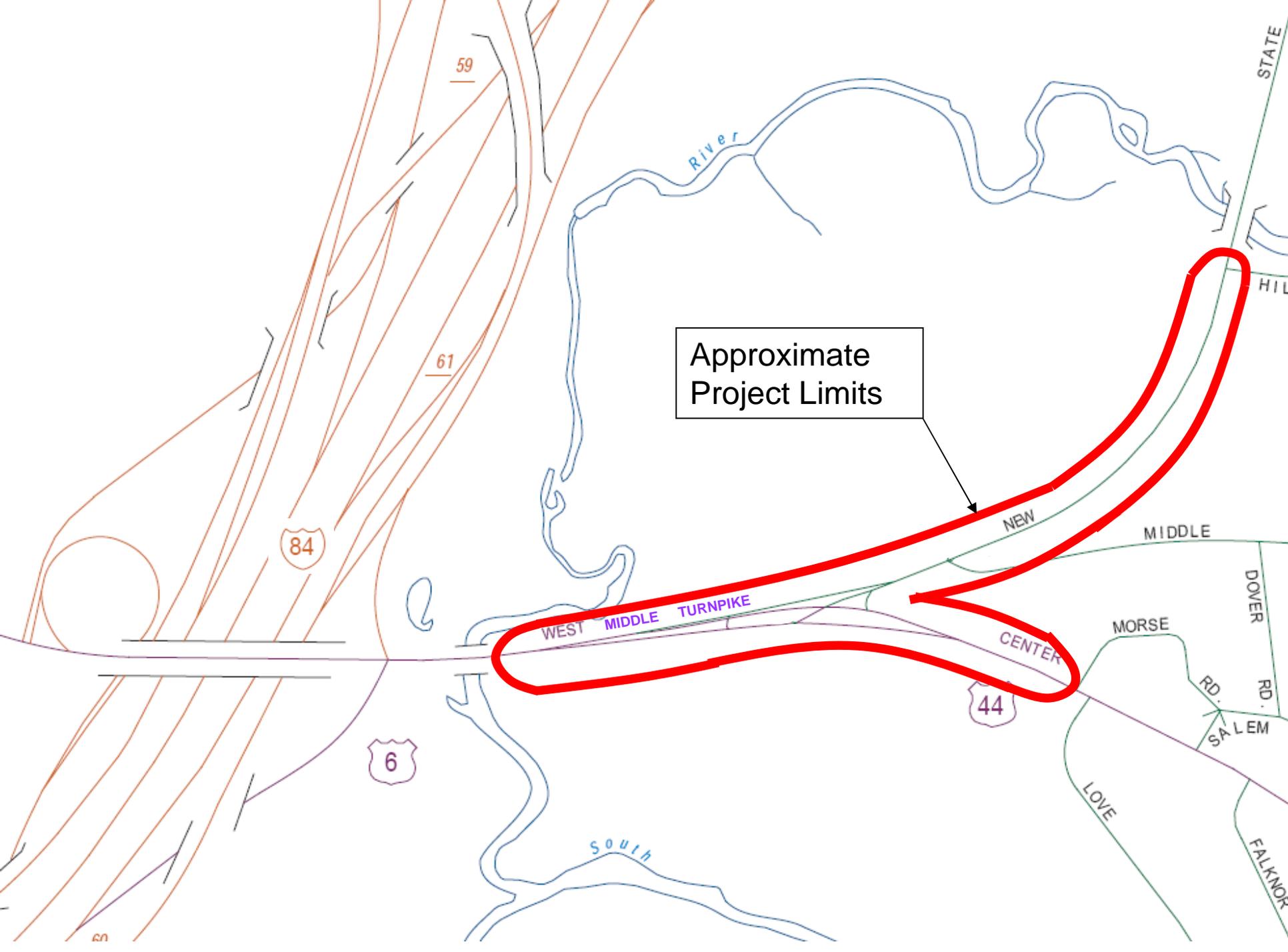
## Manchester

Public Informational Meeting

February 13, 2008

Note: This slide show has been modified slightly for presentation on the internet





Approximate Project Limits

84

6

44

River

South

59

61

STATE

HIL

NEW

MIDDLE

WEST MIDDLE TURNPIKE

CENTER

MORSE

DOVER

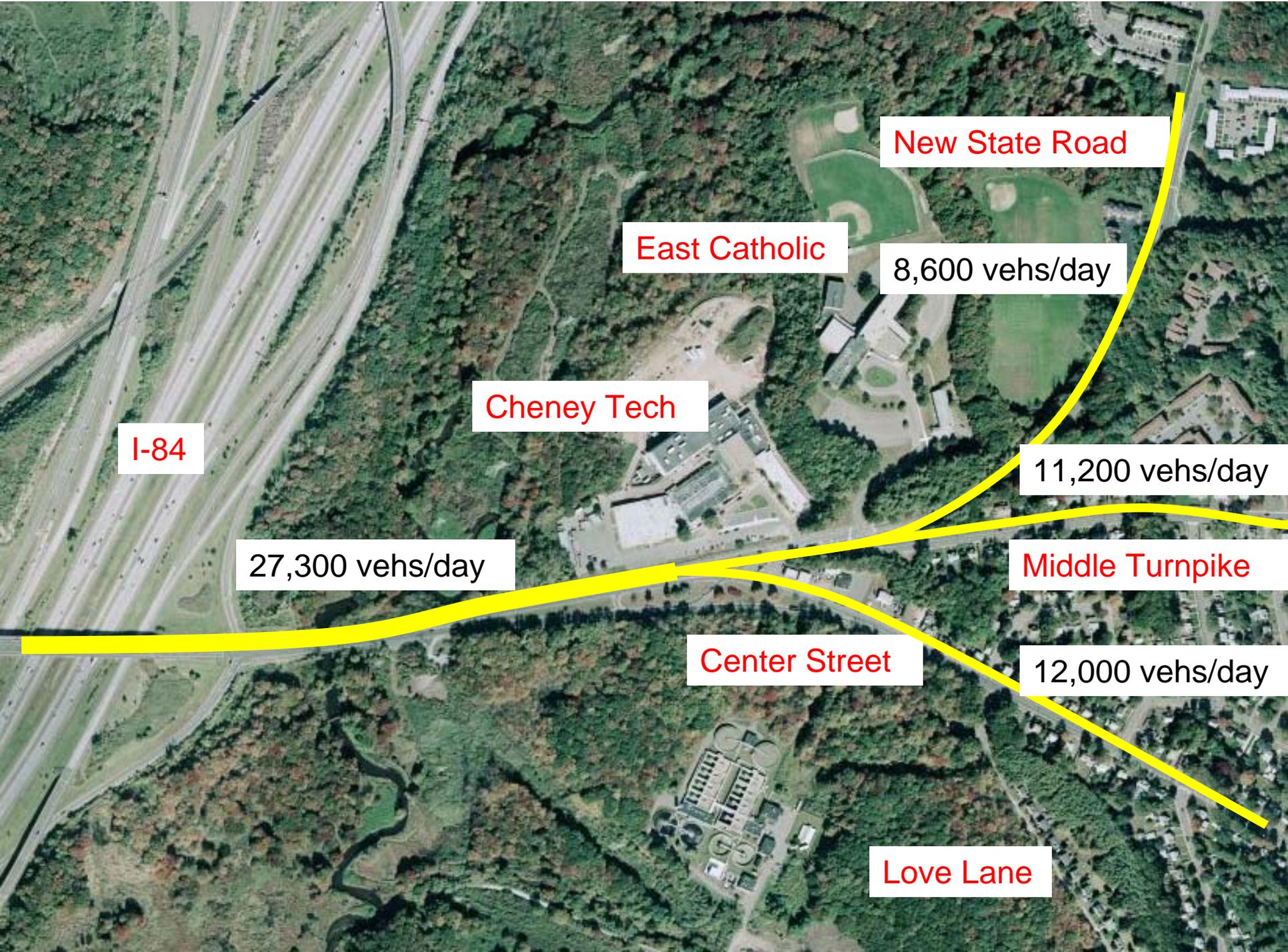
RD.

SALEM

LOVE

FALKNOR

63



I-84

27,300 vehs/day

Cheney Tech

East Catholic

New State Road

8,600 vehs/day

11,200 vehs/day

Middle Turnpike

Center Street

12,000 vehs/day

Love Lane

---

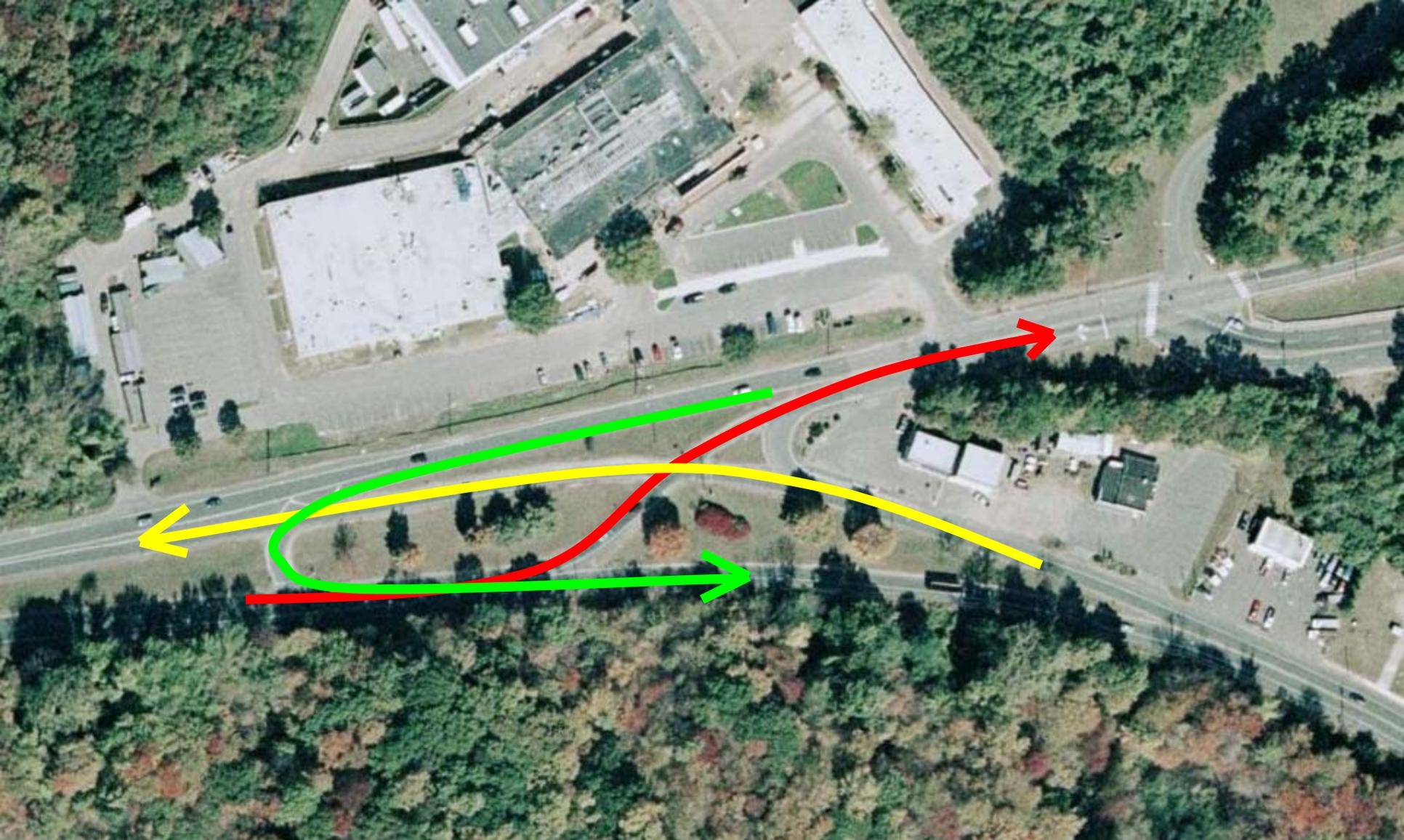
# Background

- Middle Turnpike at Center Street intersection reconstructed in 1957
  - Long history of accidents and complaints about safety, confusion, congestion, and pedestrian operations
  - In response to requests from East Catholic, Cheney Tech and area residents, Town of Manchester submits conceptual plan for improvements to the Regional Planning Agency
  - ConnDOT prepares preliminary design in coordination with town, schools and local leaders
-

---

# Existing Conditions

---

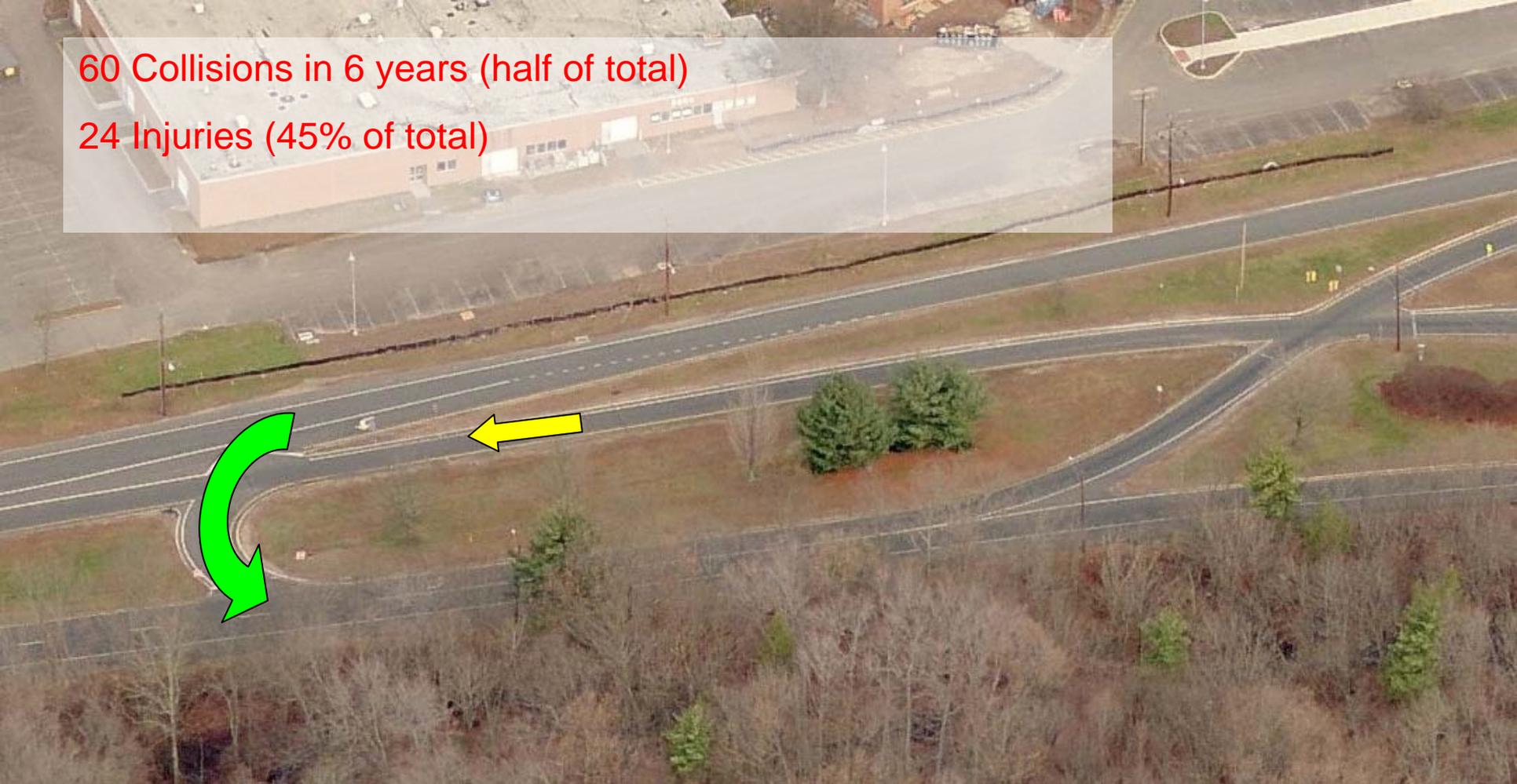


Unusual Geometry

120 Collisions in 6 years (1999 – 2004) – State Roads only  
53 Injuries



# Accident History



60 Collisions in 6 years (half of total)

24 Injuries (45% of total)

# Accident History



# Cheney Tech Driveway



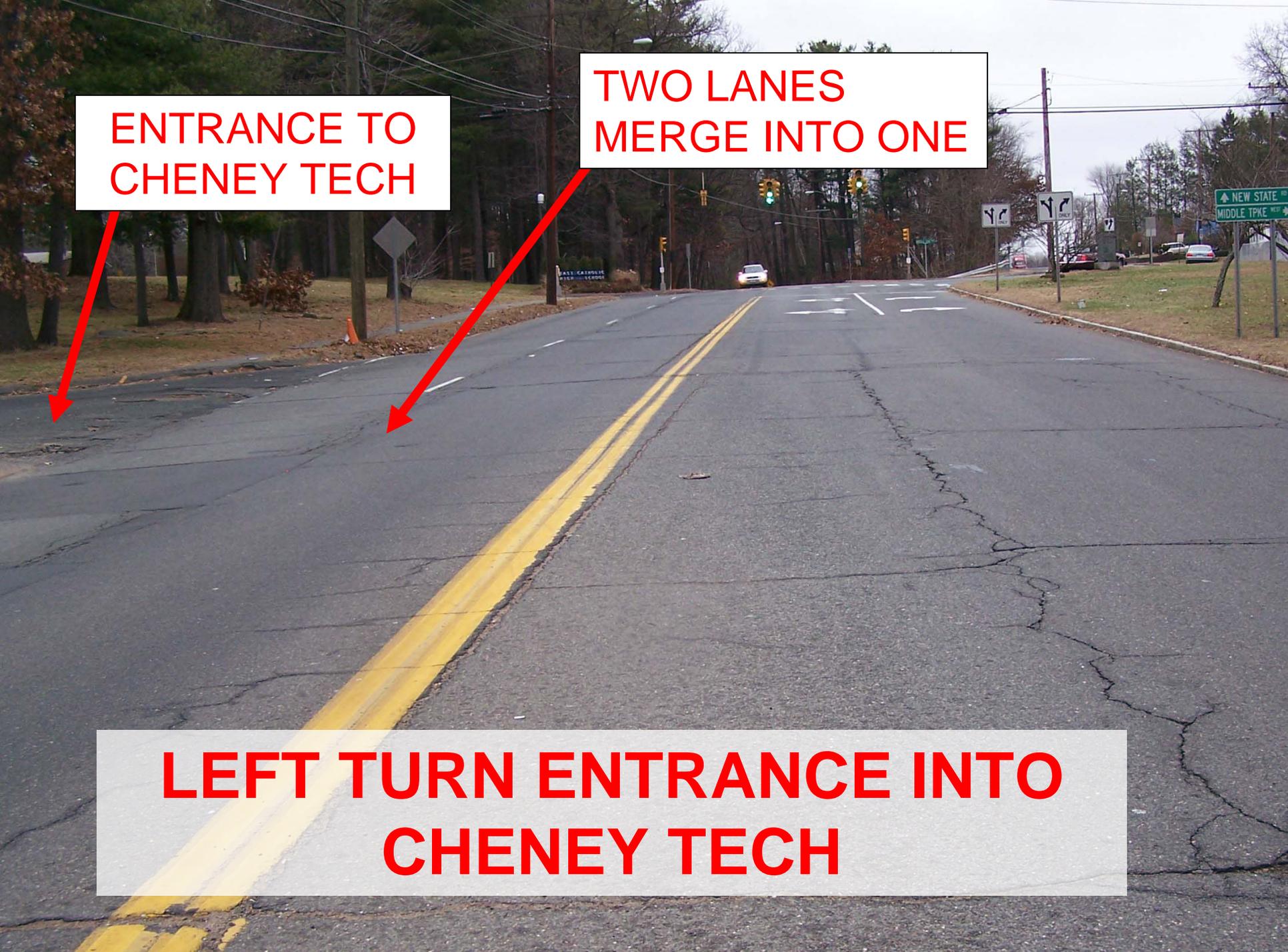
Making a left turn  
from Cheney Tech  
Driveway



**ENTRANCE TO  
CHENEY TECH**

**TWO LANES  
MERGE INTO ONE**

**LEFT TURN ENTRANCE INTO  
CHENEY TECH**





# Pedestrian Crossing Difficulties

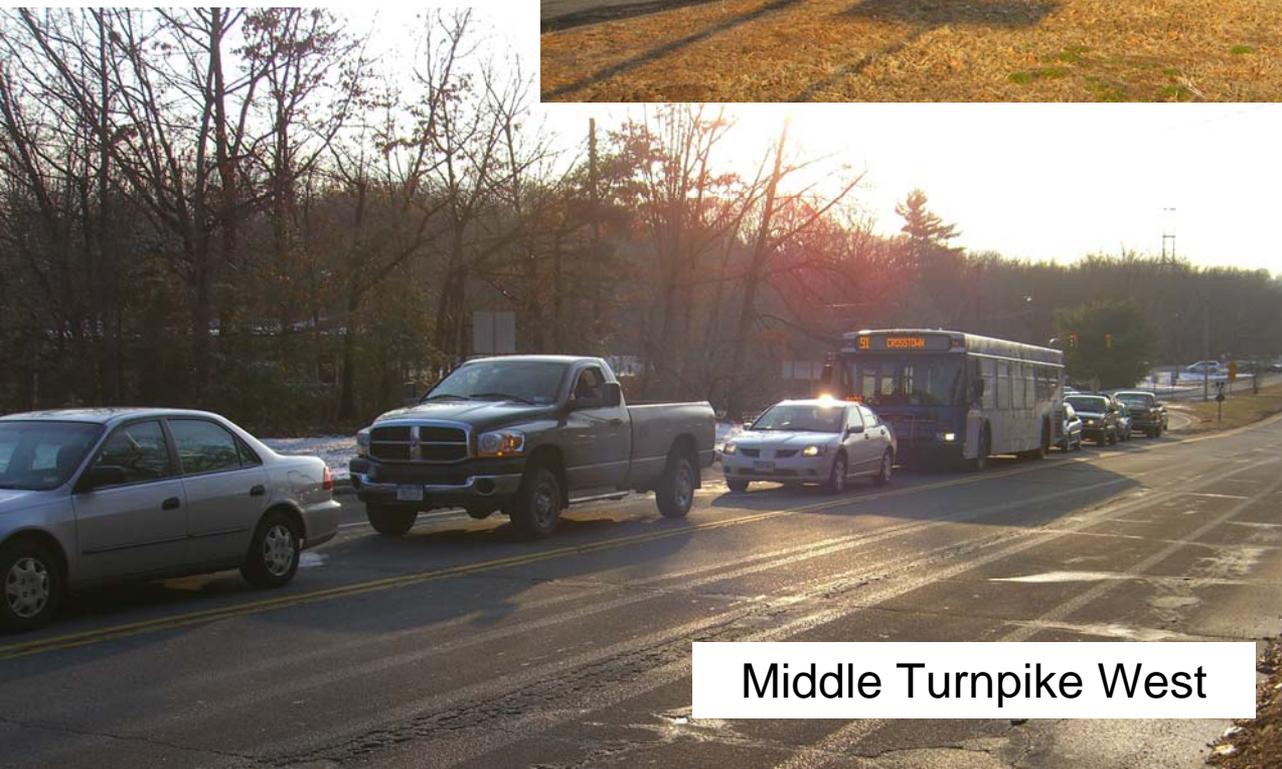


# Undesirable Intersection Geometry

# Congestion at East Catholic

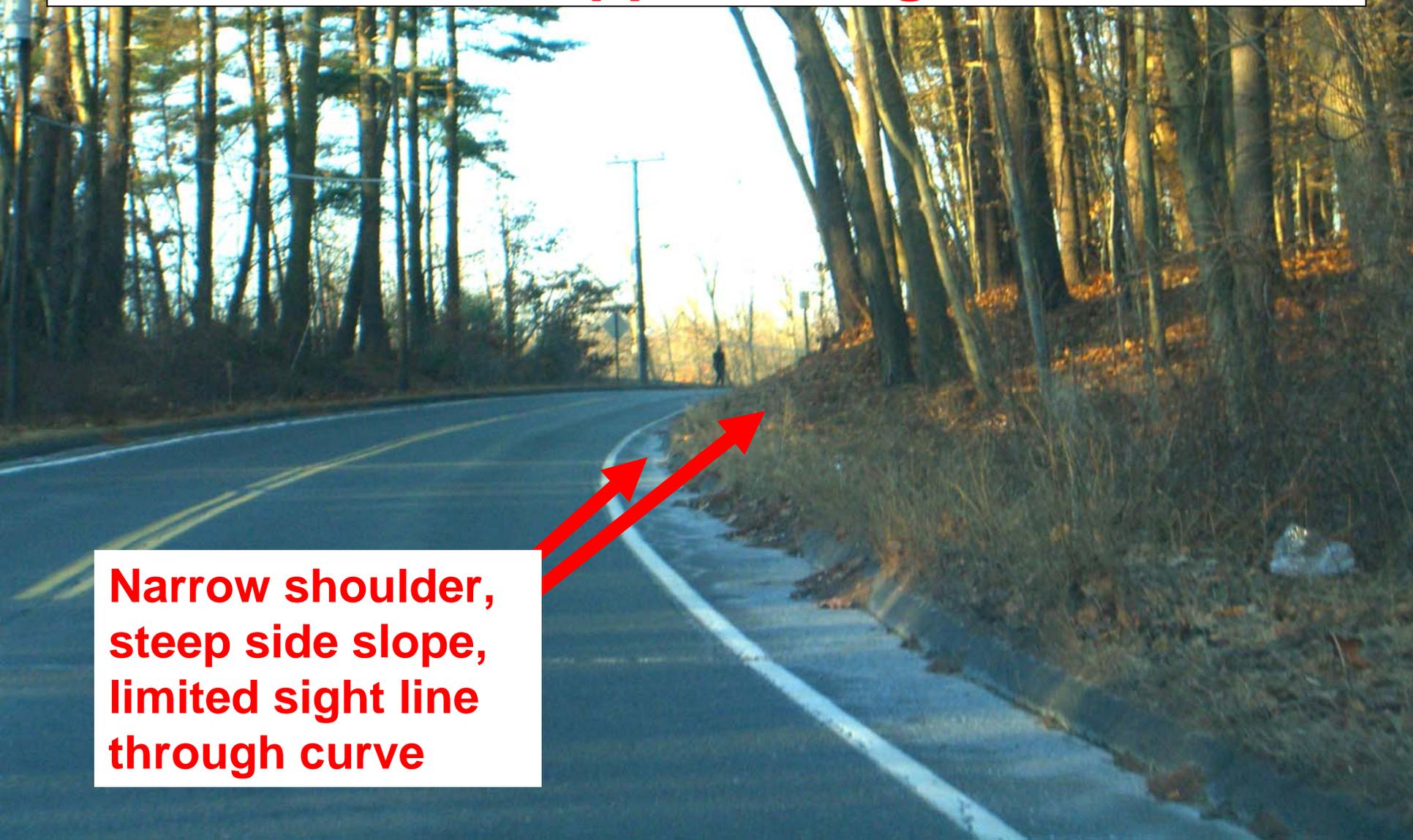


New State Road



Middle Turnpike West

# **Pedestrian/ Bicyclist Issues: New State Road approaching East Catholic**



**Narrow shoulder,  
steep side slope,  
limited sight line  
through curve**

---

# Project Goals

- Improve safety at Center Street intersection(s)
  - Eliminate confusing configurations
  - Reduce congestion at New State Rd/East Catholic
  - Provide signalized access to/from Cheney Tech
  - Improve pedestrian accommodations
  - Improve bicycle accommodations
-

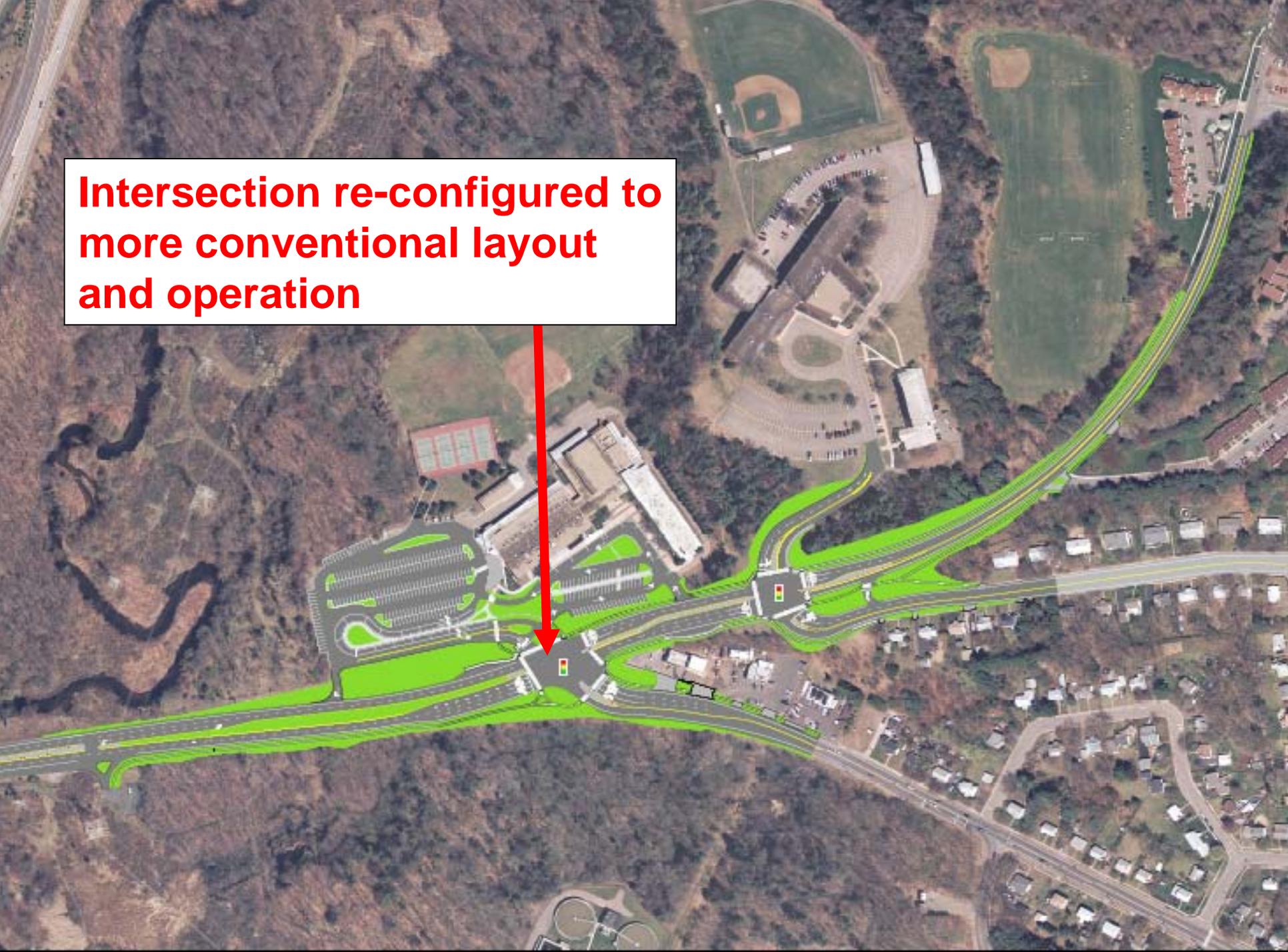
---

# Proposed Improvements

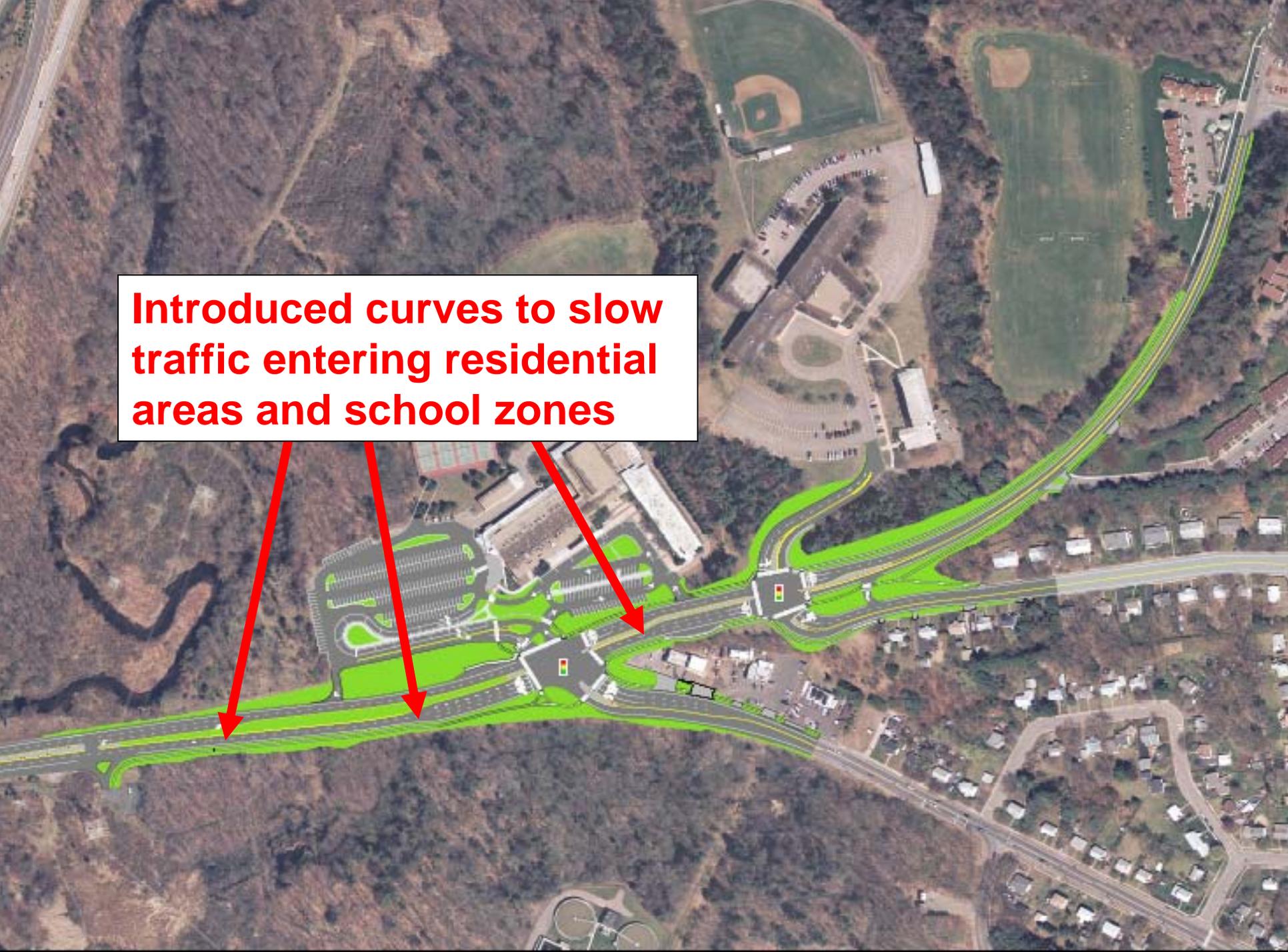
---



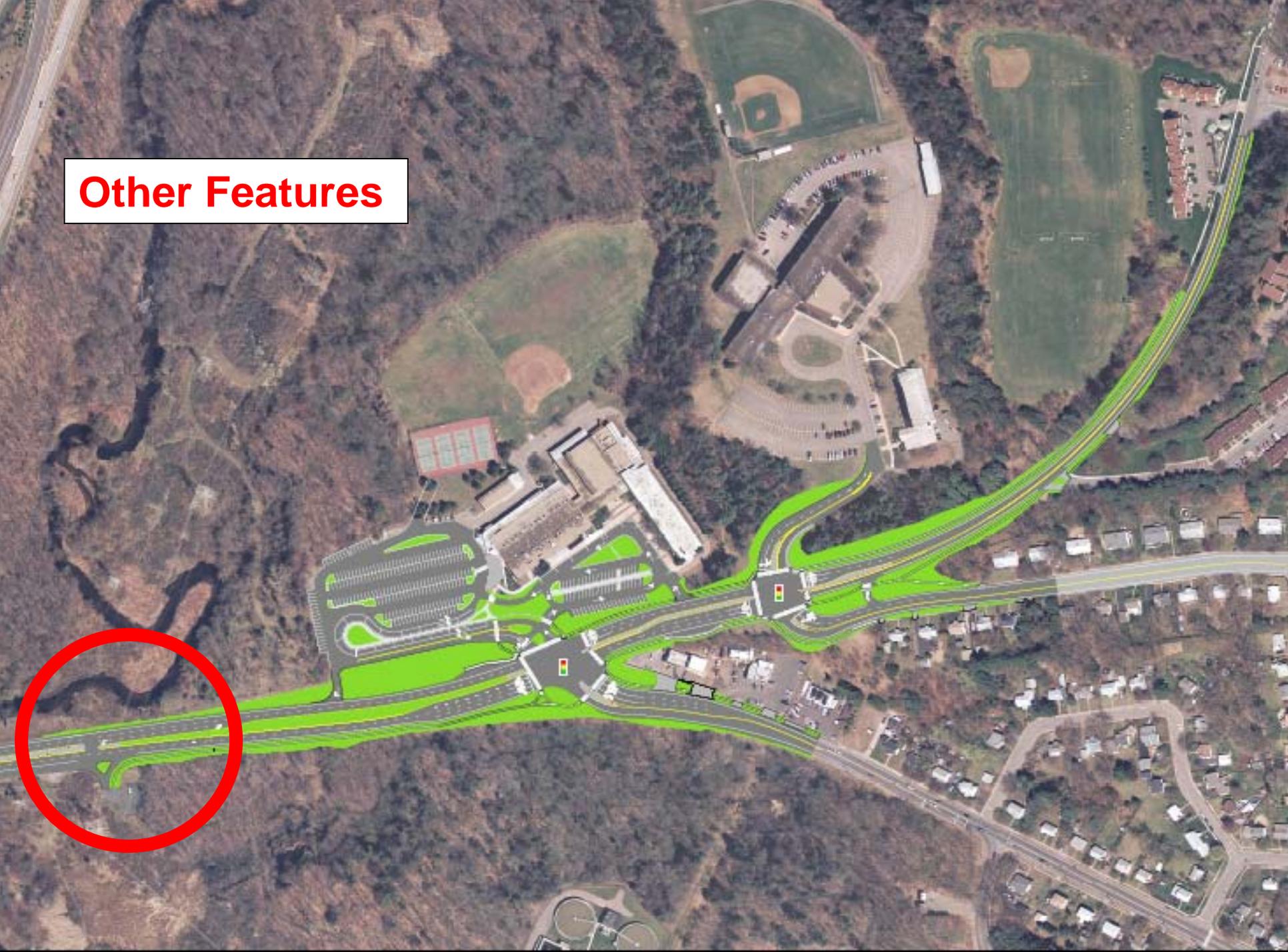
**Intersection re-configured to more conventional layout and operation**



**Introduced curves to slow traffic entering residential areas and school zones**



## Other Features



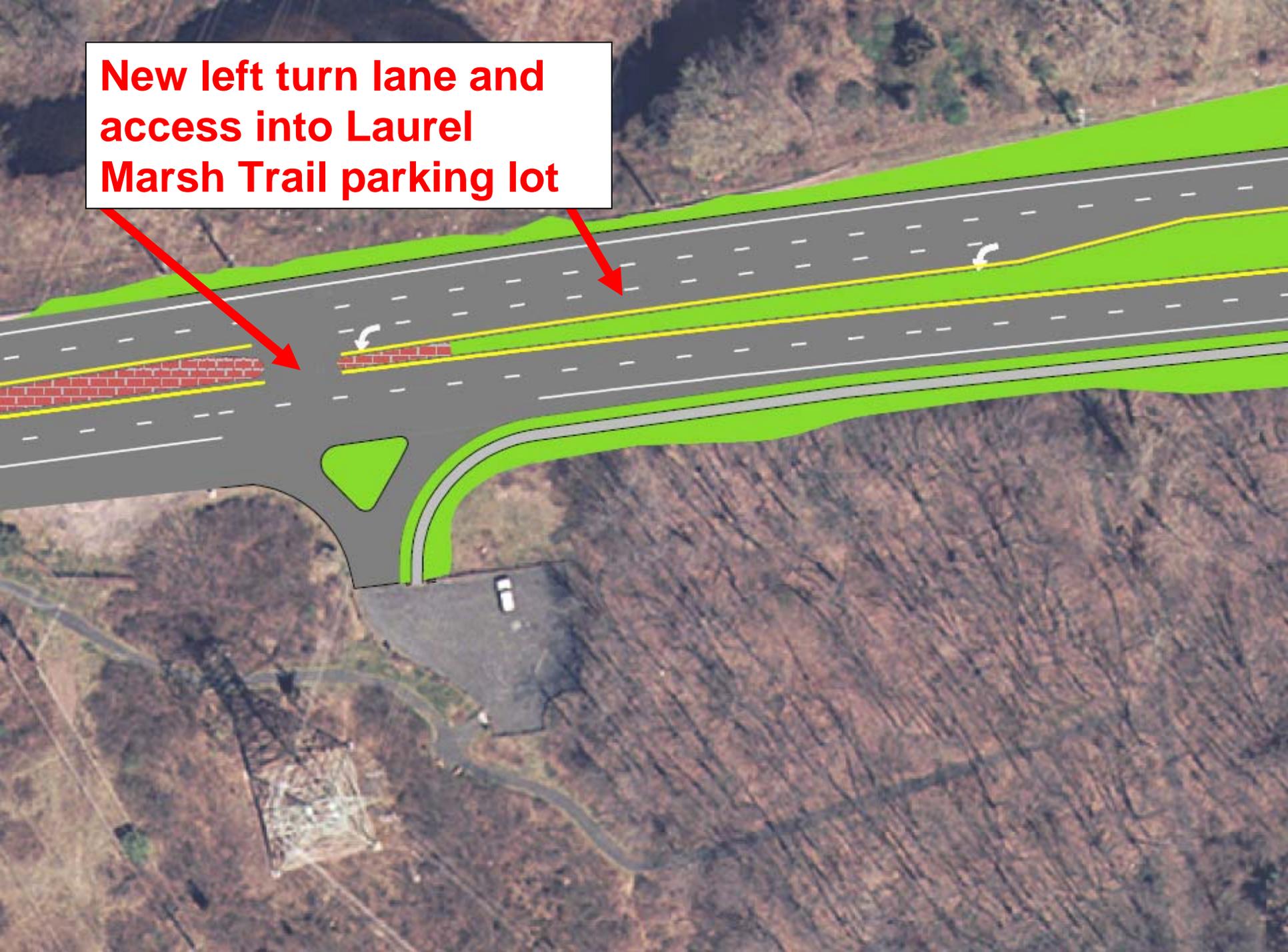
**New left turn lane and  
access into Laurel  
Marsh Trail parking lot**



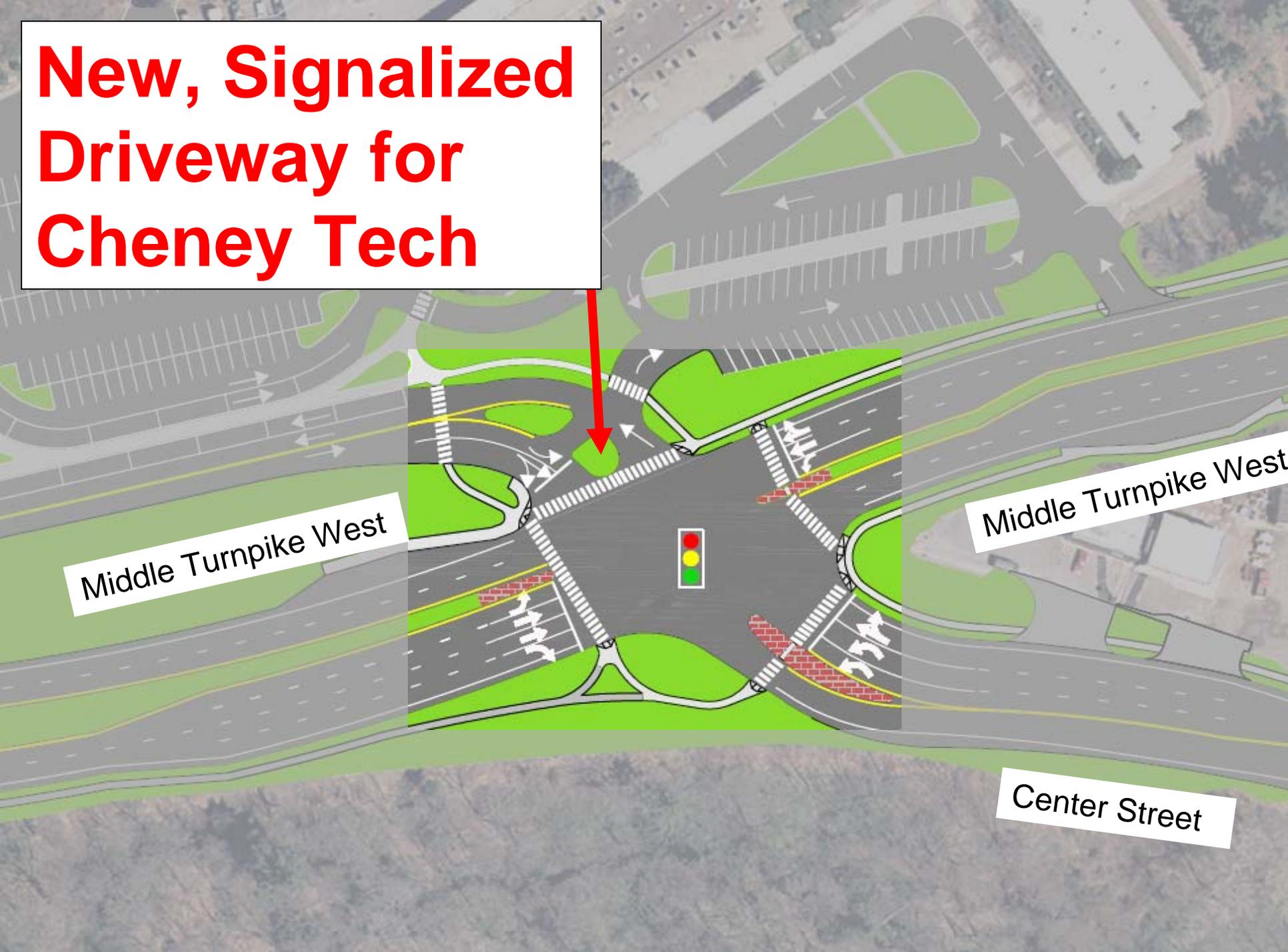


**Laurel Marsh Trail  
parking lot**

**New left turn lane and  
access into Laurel  
Marsh Trail parking lot**



# New, Signalized Driveway for Cheney Tech

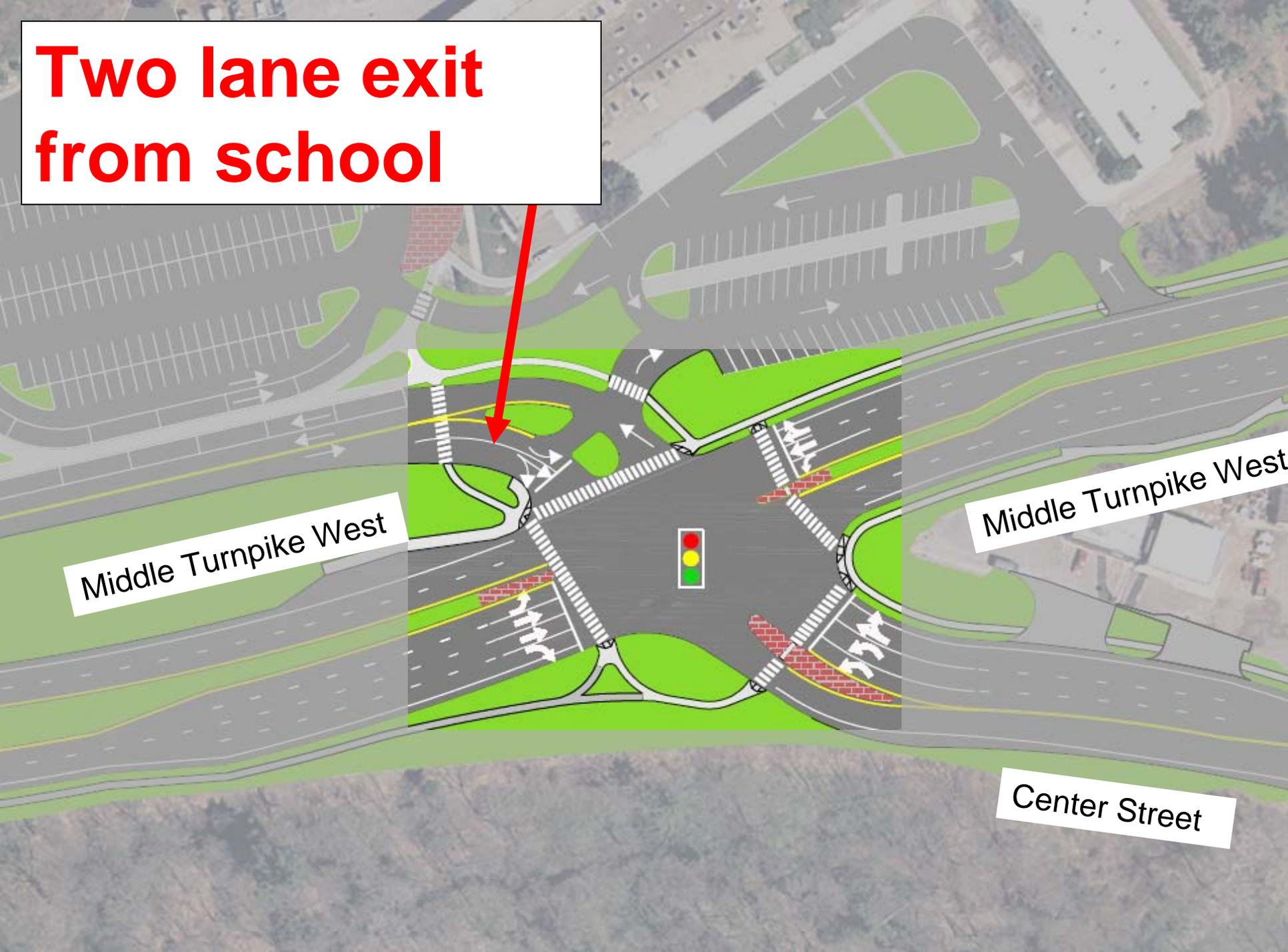


Middle Turnpike West

Middle Turnpike West

Center Street

**Two lane exit  
from school**

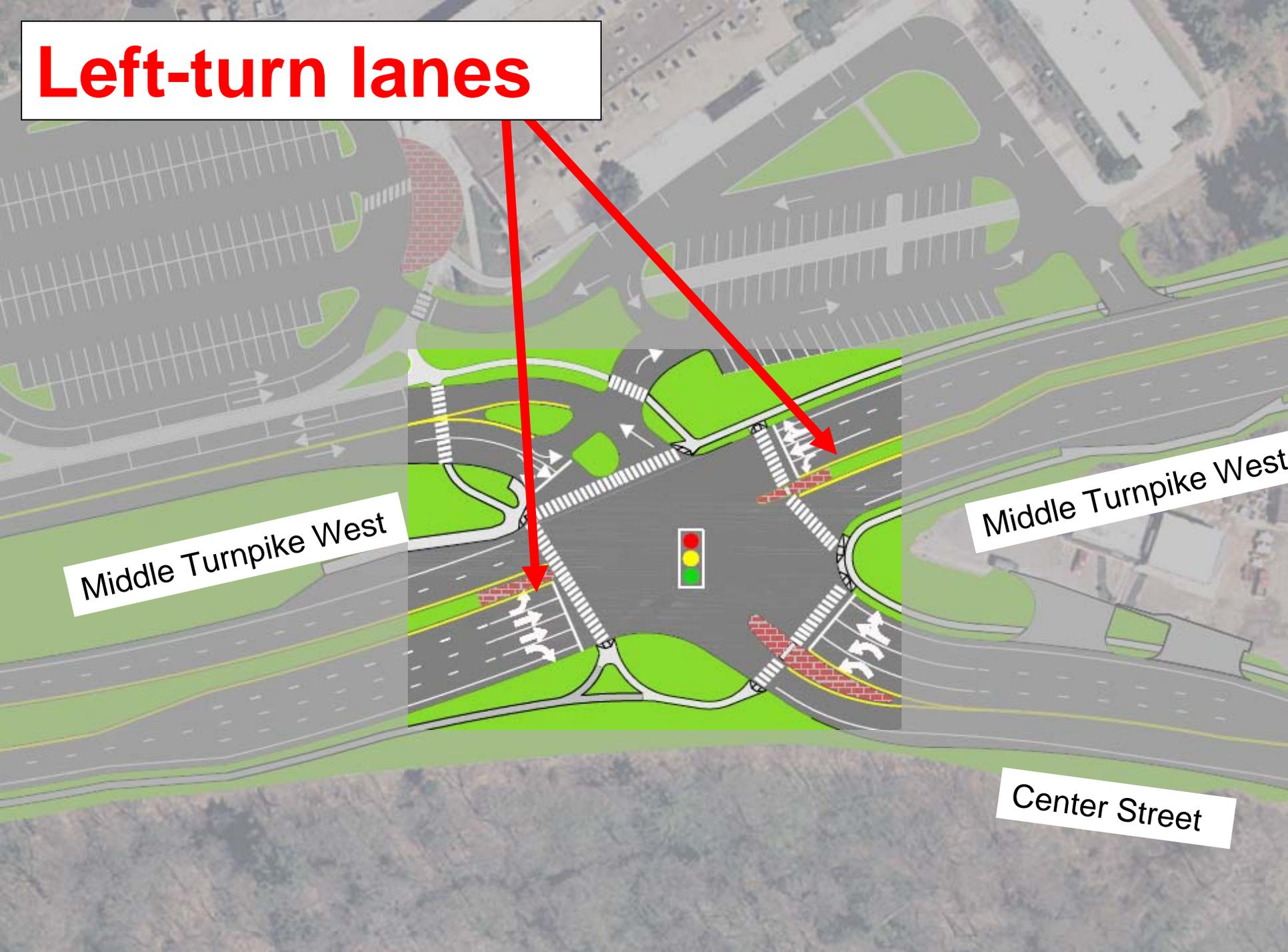


Middle Turnpike West

Middle Turnpike West

Center Street

# Left-turn lanes

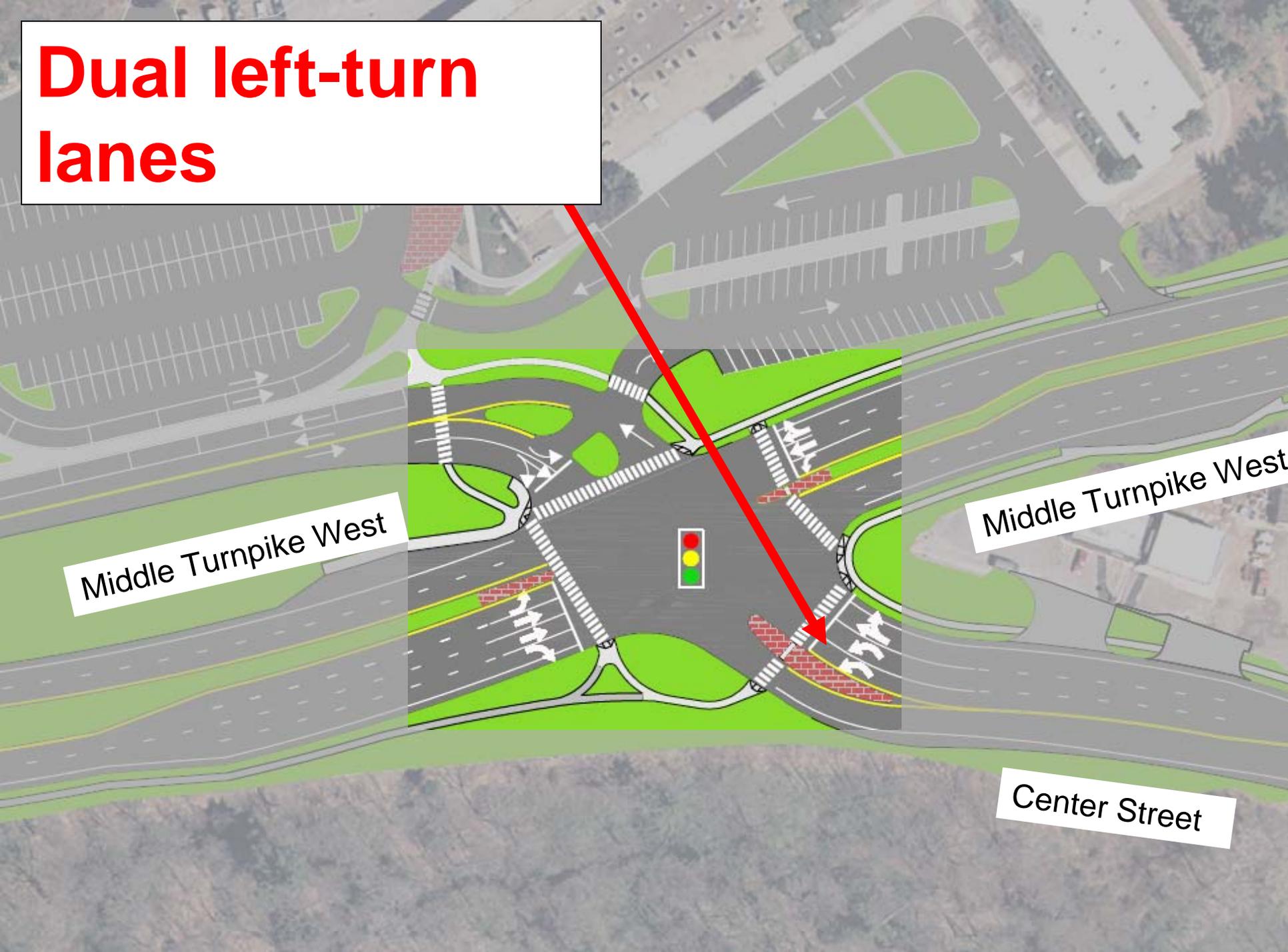


Middle Turnpike West

Middle Turnpike West

Center Street

# Dual left-turn lanes

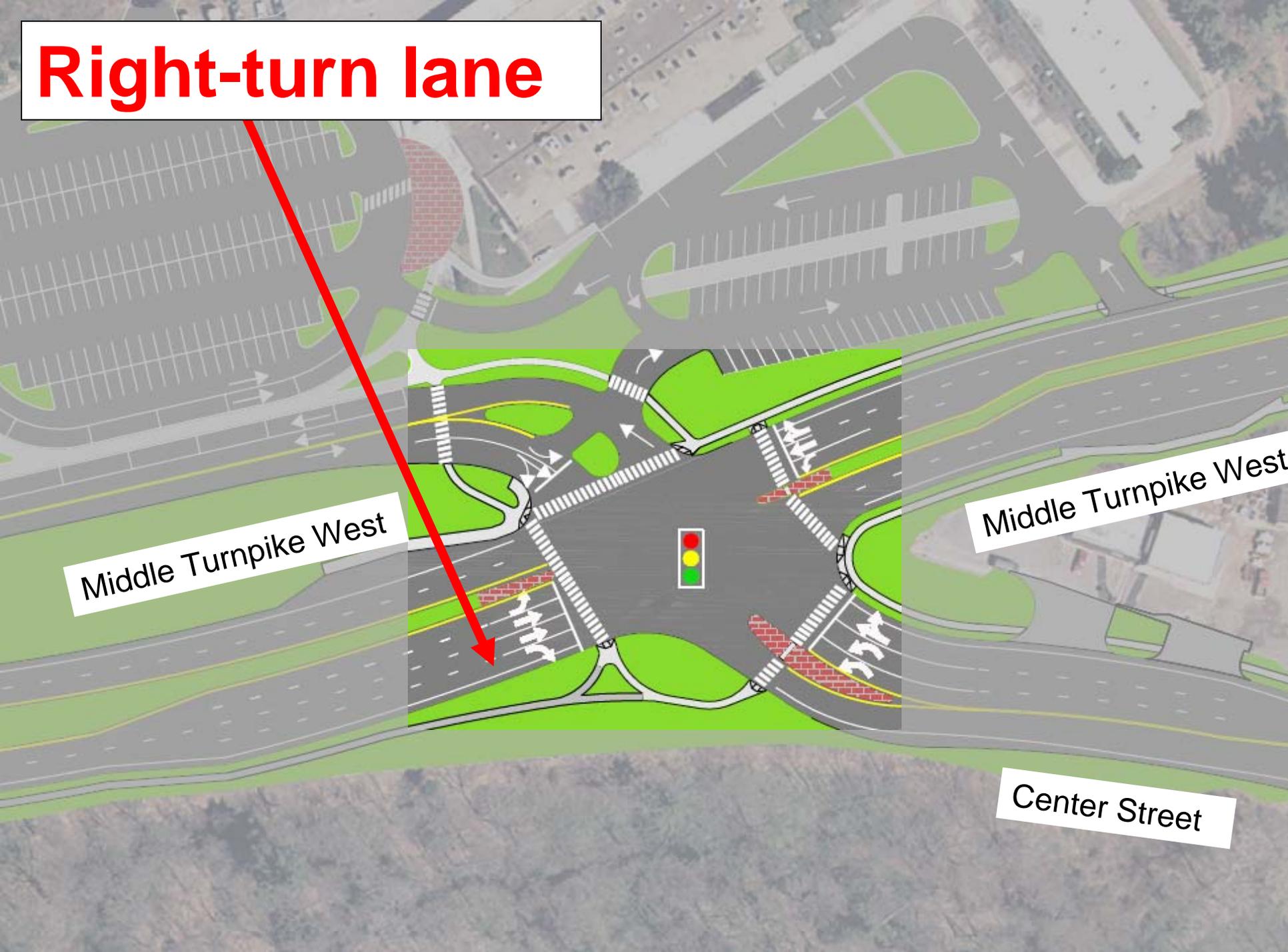


Middle Turnpike West

Middle Turnpike West

Center Street

# Right-turn lane



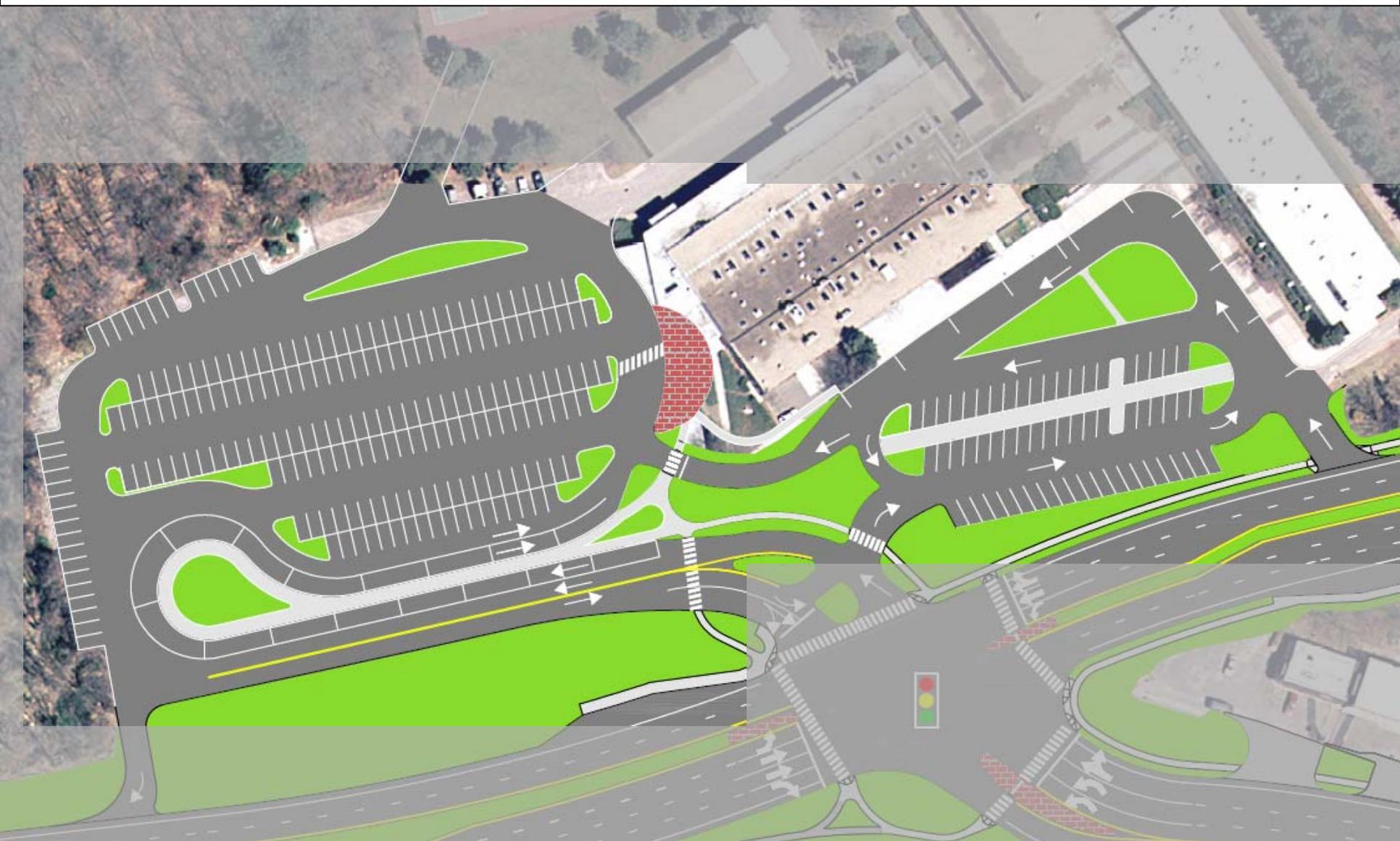
Middle Turnpike West

Middle Turnpike West

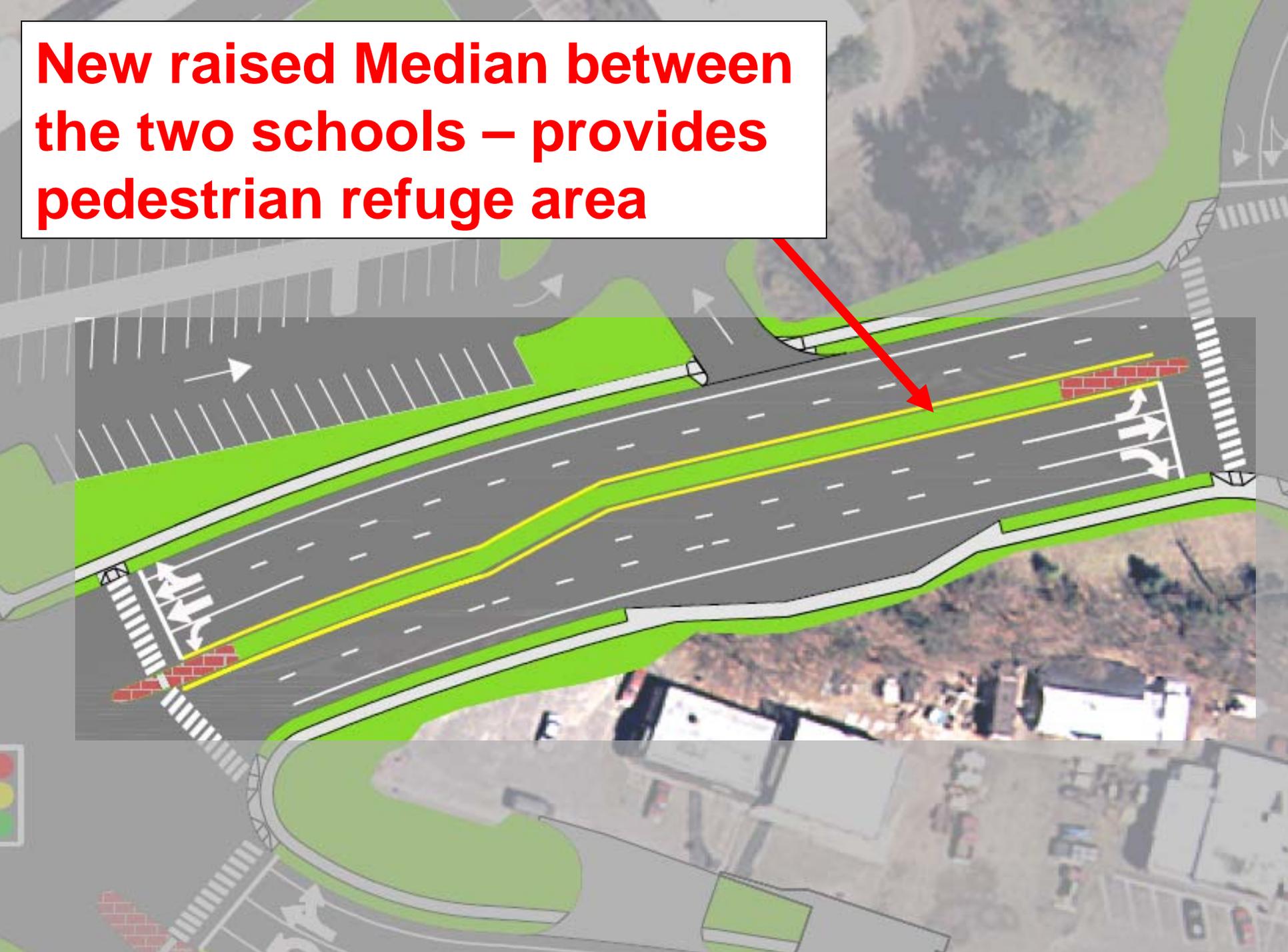
Center Street

# Revised Parking Lot Design for Cheney Tech

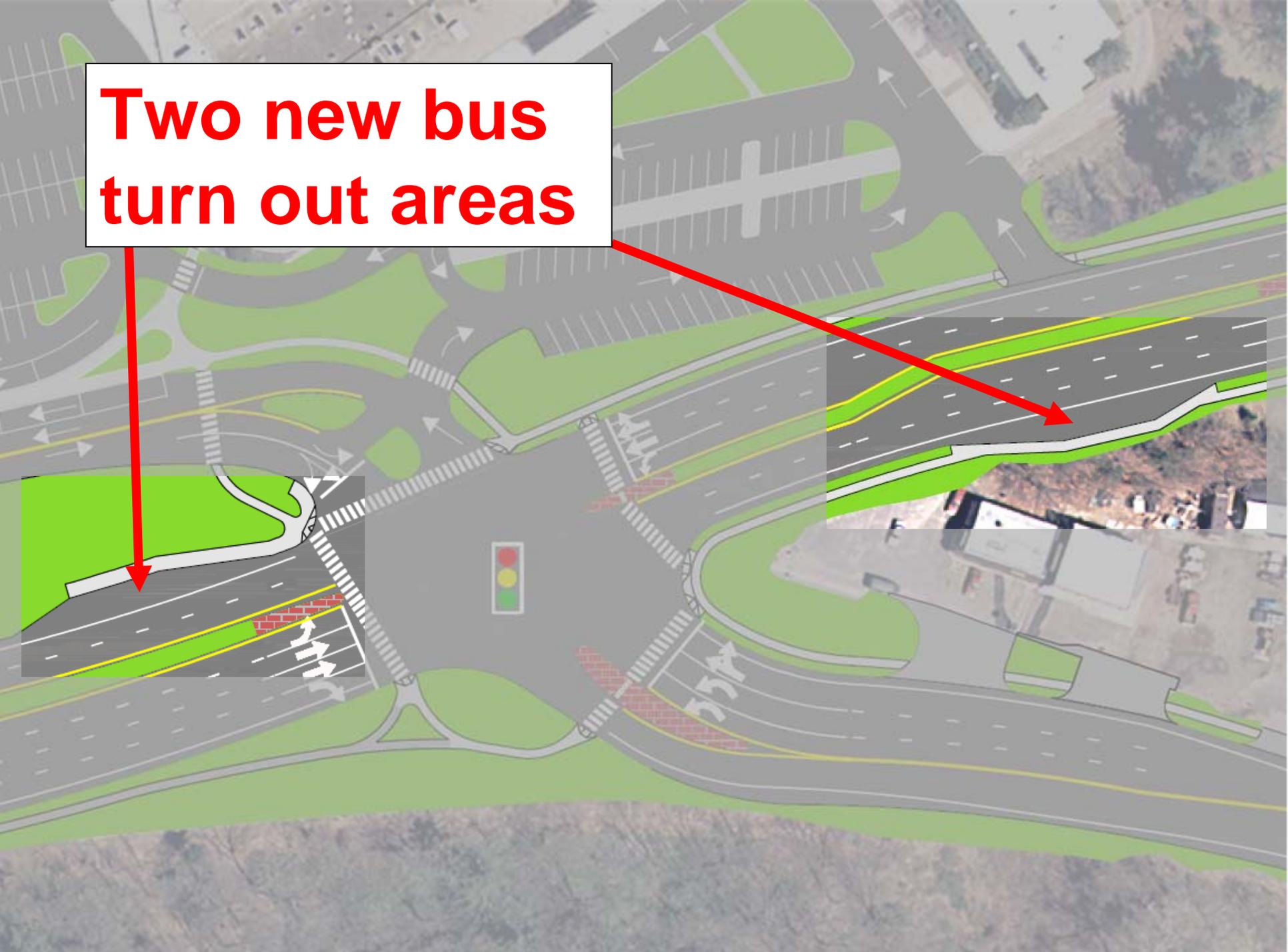
## Design by ConnDOT, to be built by ConnDPW



**New raised Median between the two schools – provides pedestrian refuge area**



**Two new bus  
turn out areas**





Stopped Bus



Resulting Back-up

# Intersection Improvements at Middle Turnpike West West/New State Road/East Catholic



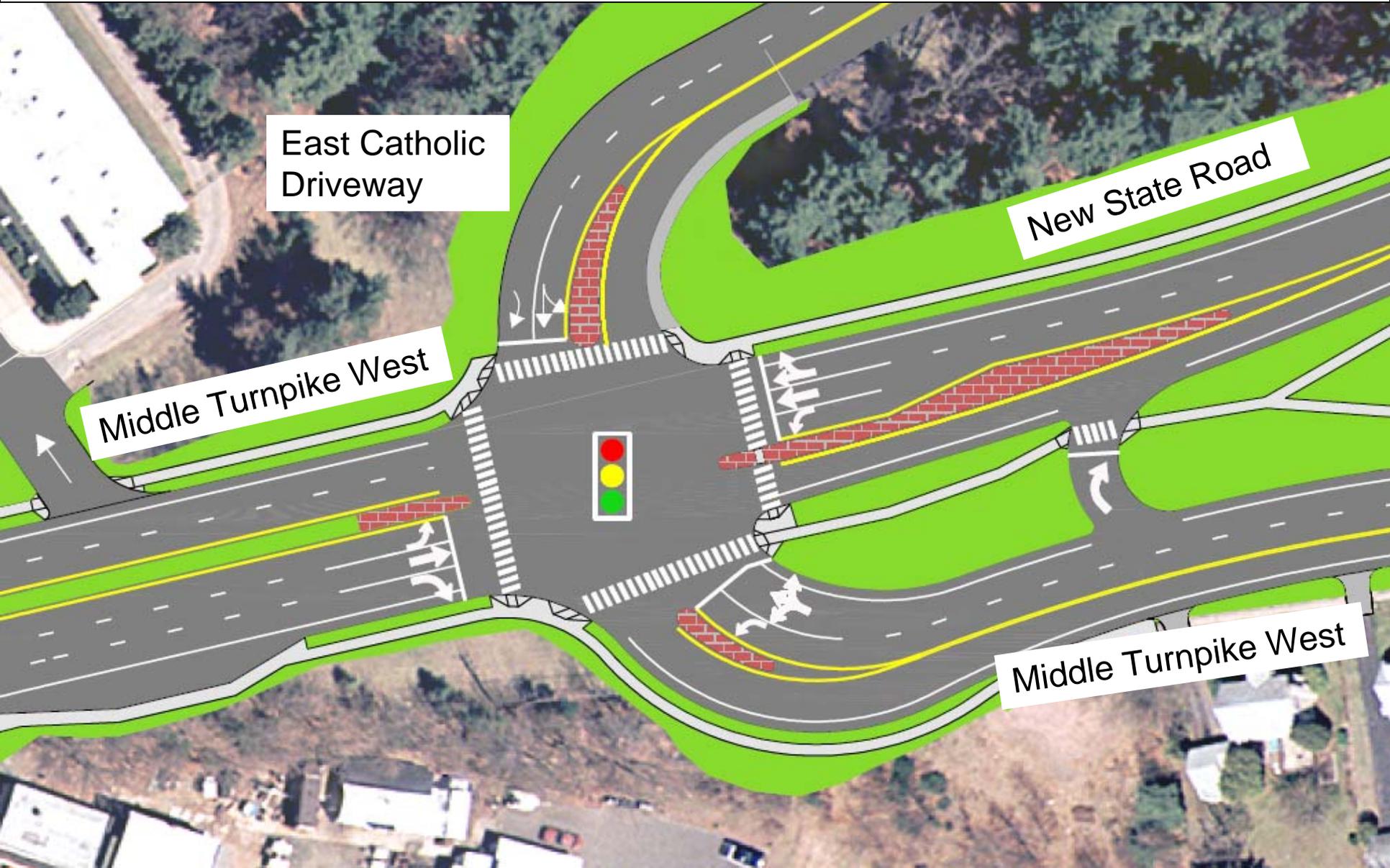
East Catholic Driveway

New State Road

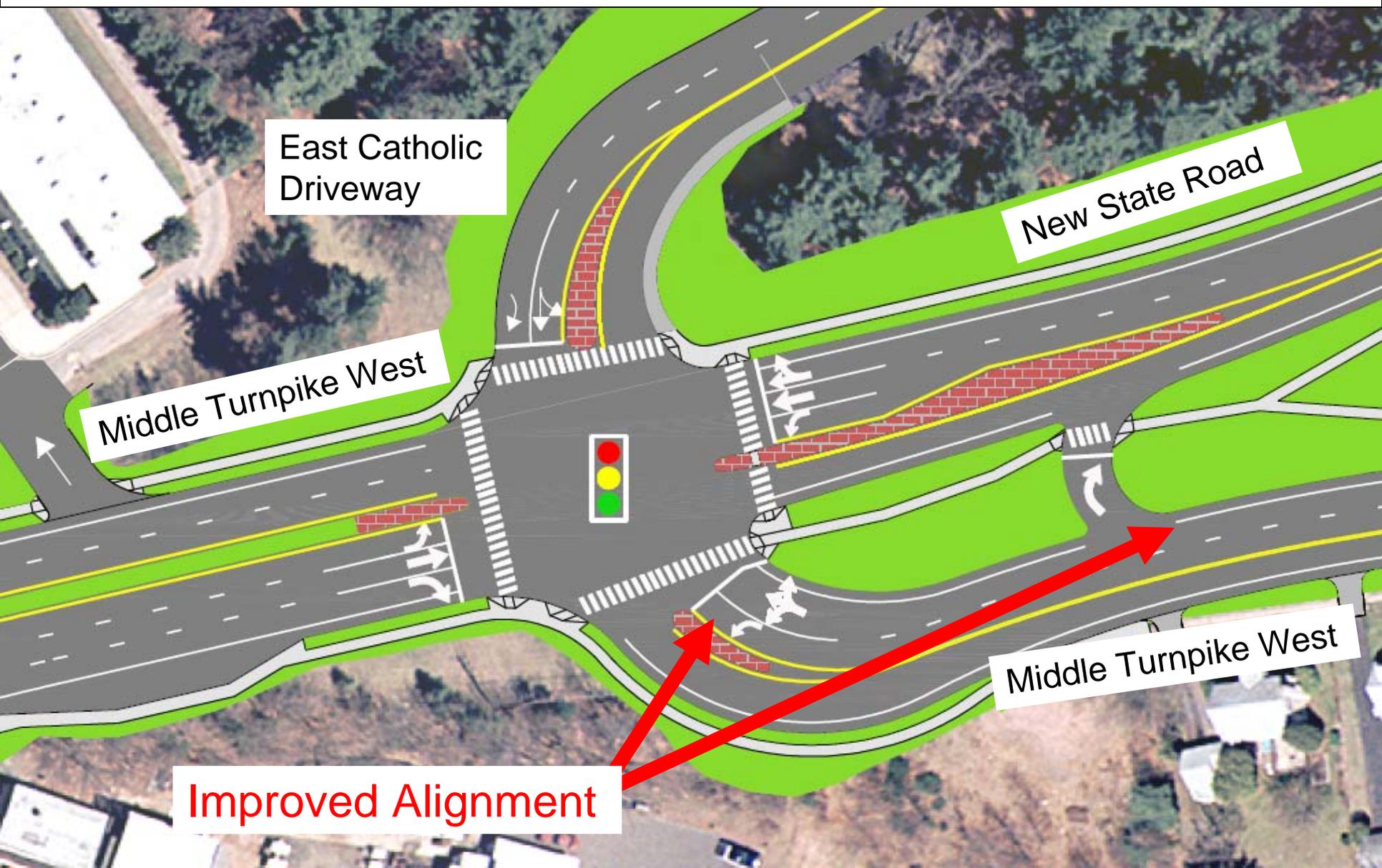
Middle Turnpike West

Middle Turnpike West

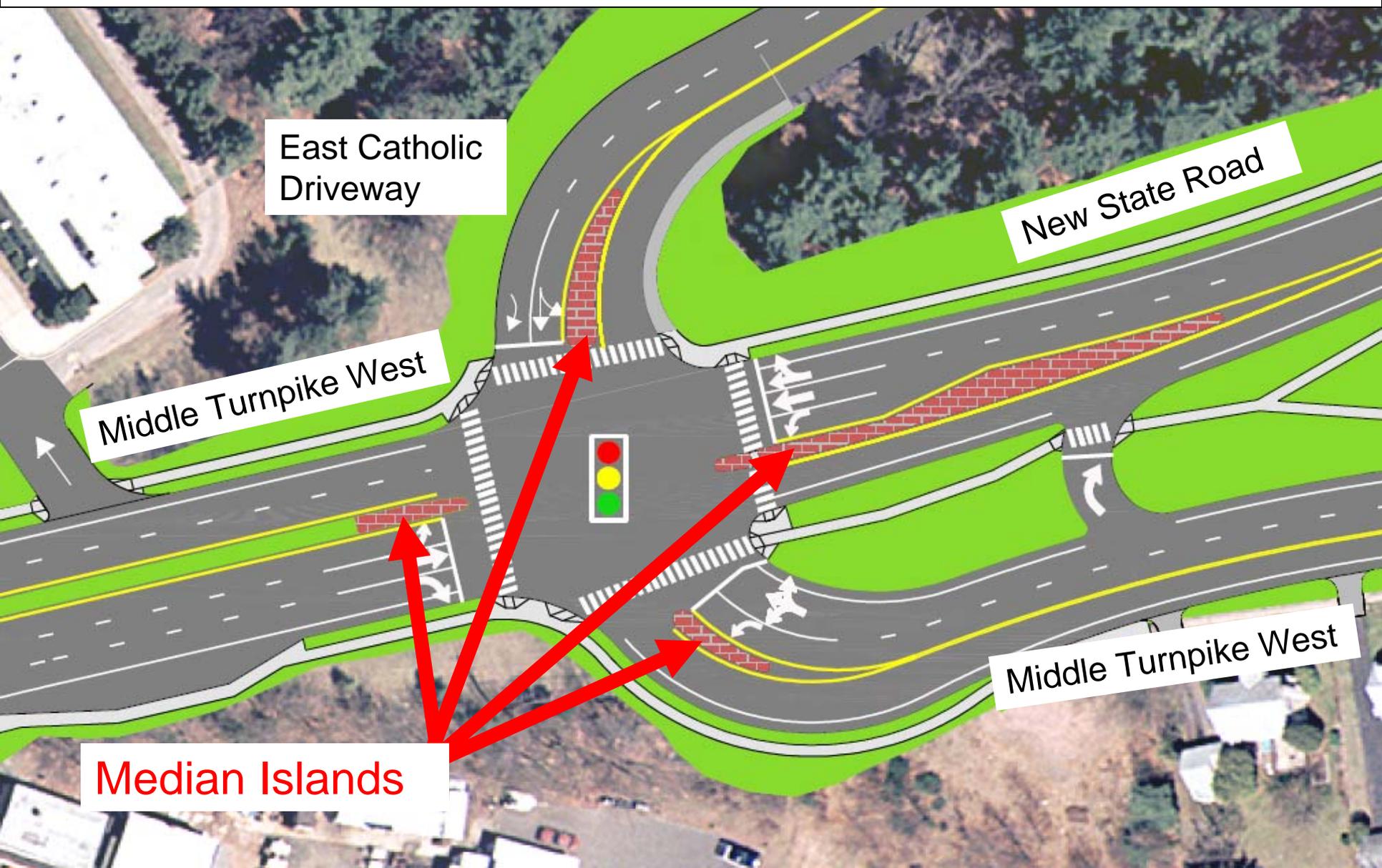
# Intersection Improvements at Middle Turnpike West/ New State Road/East Catholic



# Intersection Improvements at Middle Turnpike West/ New State Road/East Catholic



# Intersection Improvements at Middle Turnpike West/ New State Road/East Catholic



East Catholic Driveway

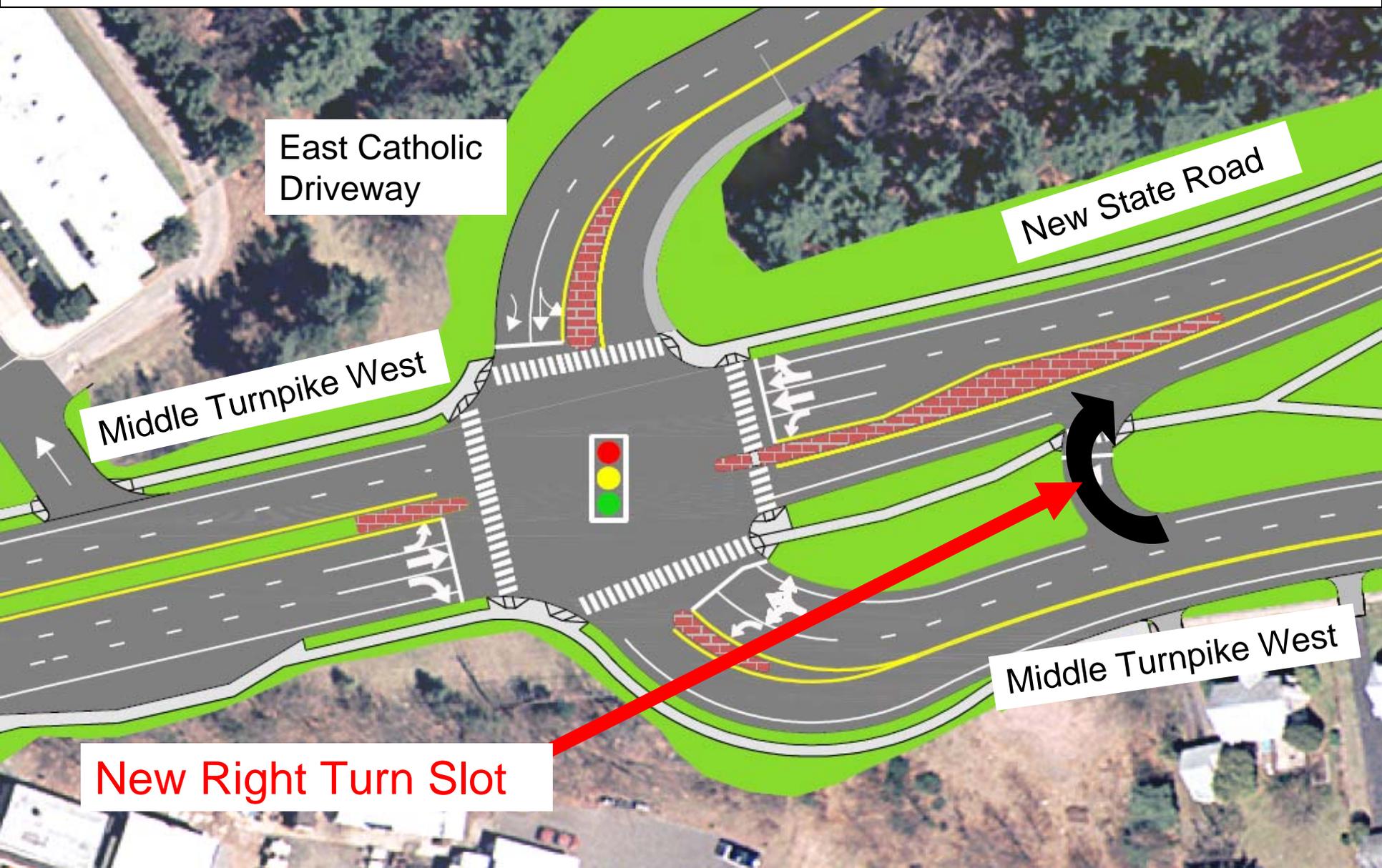
New State Road

Middle Turnpike West

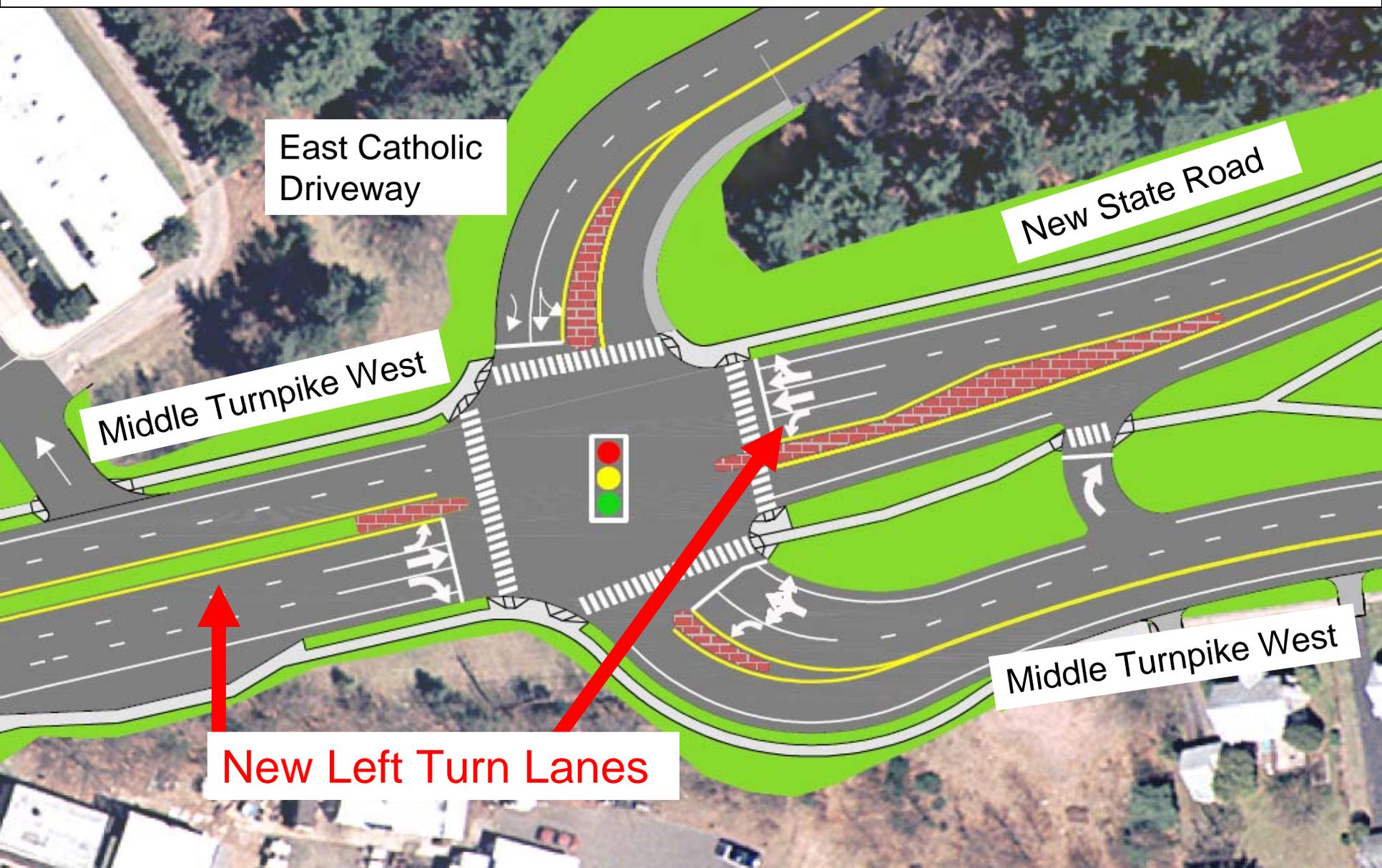
Middle Turnpike West

Median Islands

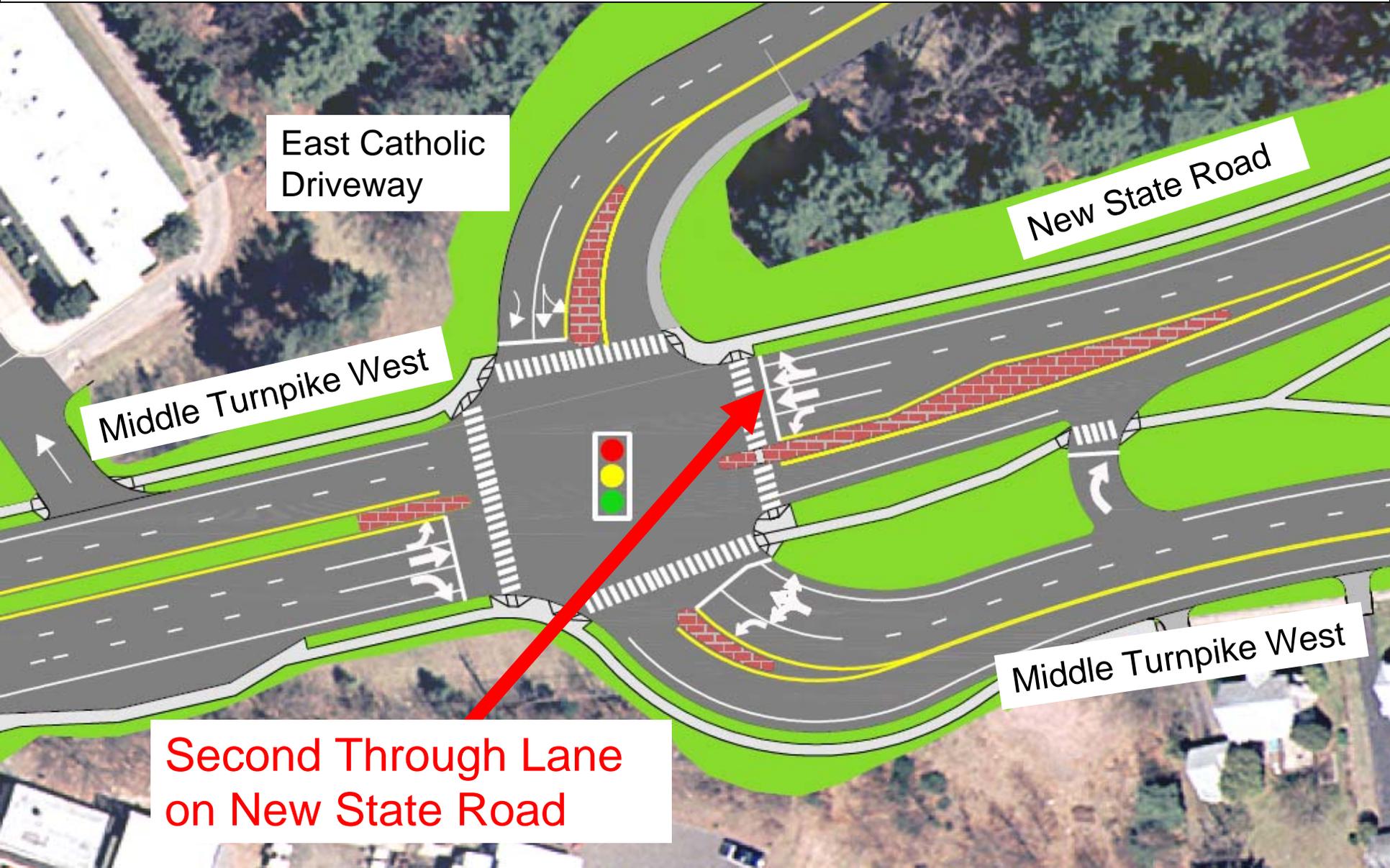
# Intersection Improvements at Middle Turnpike West/ New State Road/ East Catholic



# Intersection Improvements at Middle Turnpike West/ New State Road/East Catholic



# Intersection Improvements at Middle Turnpike West/ New State Road/East Catholic



East Catholic Driveway

New State Road

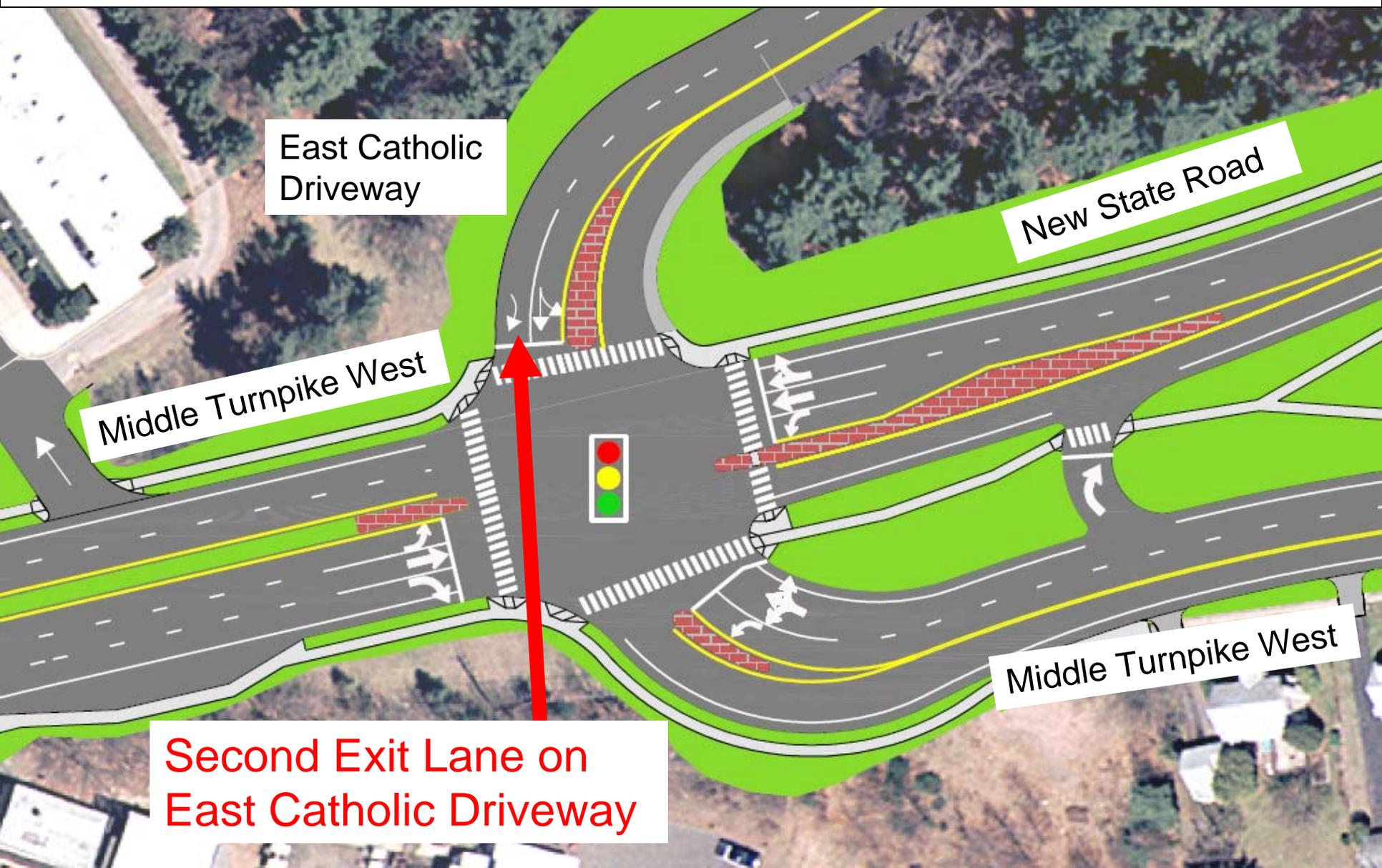
Middle Turnpike West

Middle Turnpike West

Second Through Lane on New State Road



# Intersection Improvements at Middle Turnpike West/ New State Road/East Catholic



East Catholic Driveway

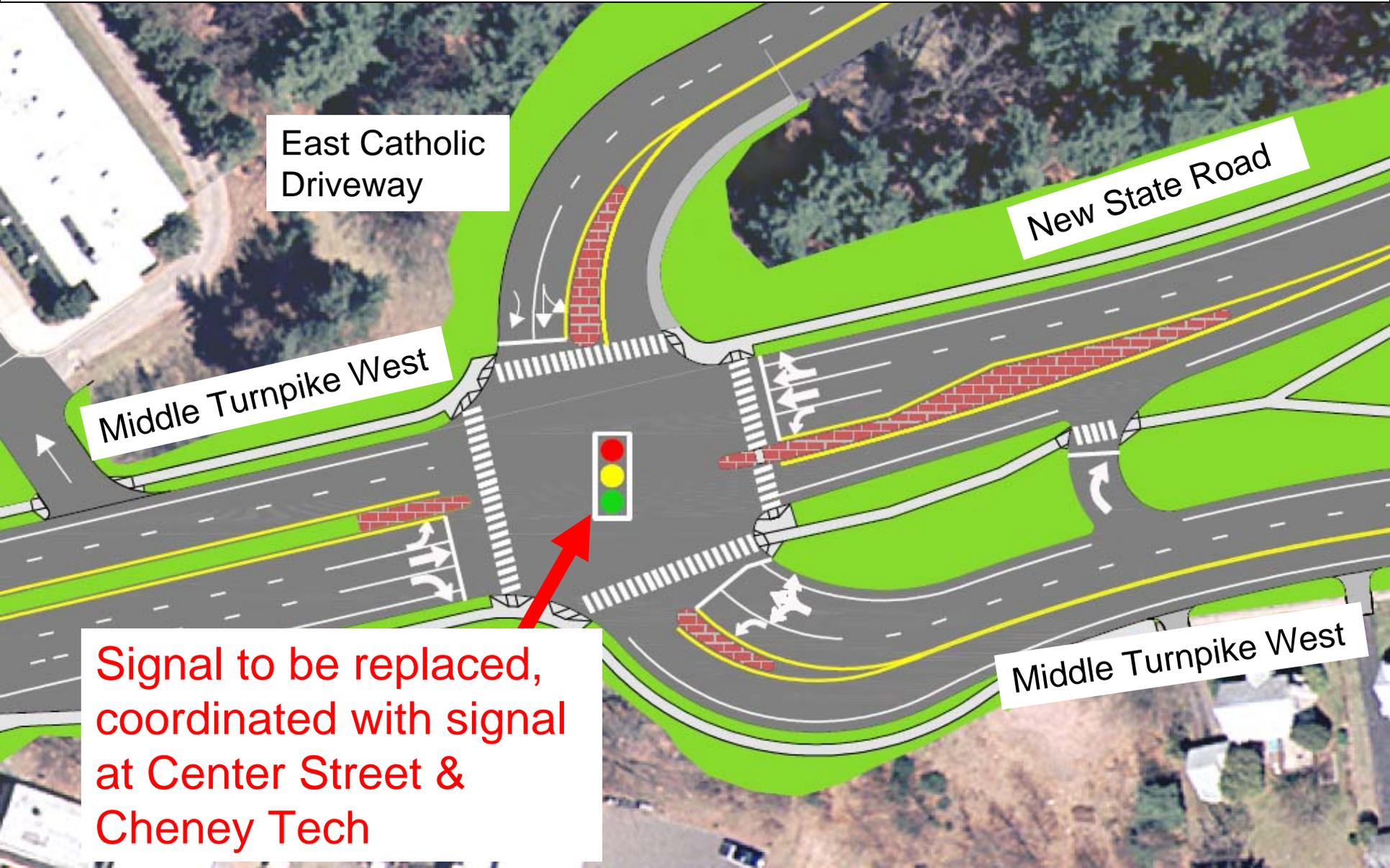
New State Road

Middle Turnpike West

Middle Turnpike West

Second Exit Lane on East Catholic Driveway

# Intersection Improvements at Middle Turnpike West/ New State Road/East Catholic



East Catholic Driveway

New State Road

Middle Turnpike West

Middle Turnpike West

Signal to be replaced, coordinated with signal at Center Street & Cheney Tech

# Intersection Improvements at Middle Turnpike West/New State Road/East Catholic

East Catholic  
Driveway

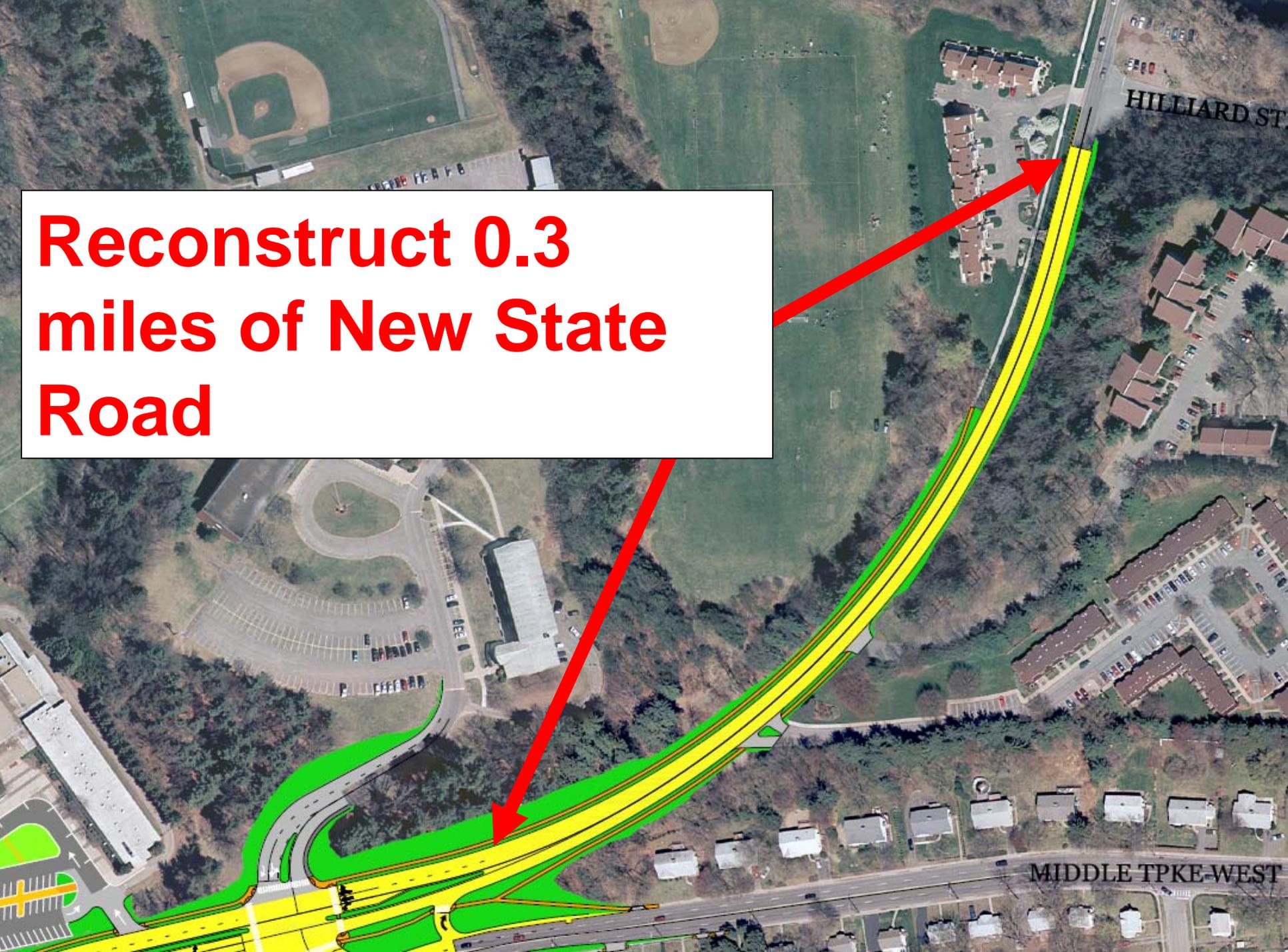
New State Road

**Average overall delay reduced by 50%  
in AM peak hour, 69% in PM peak  
hour. Based on 2025 projected  
volumes.**

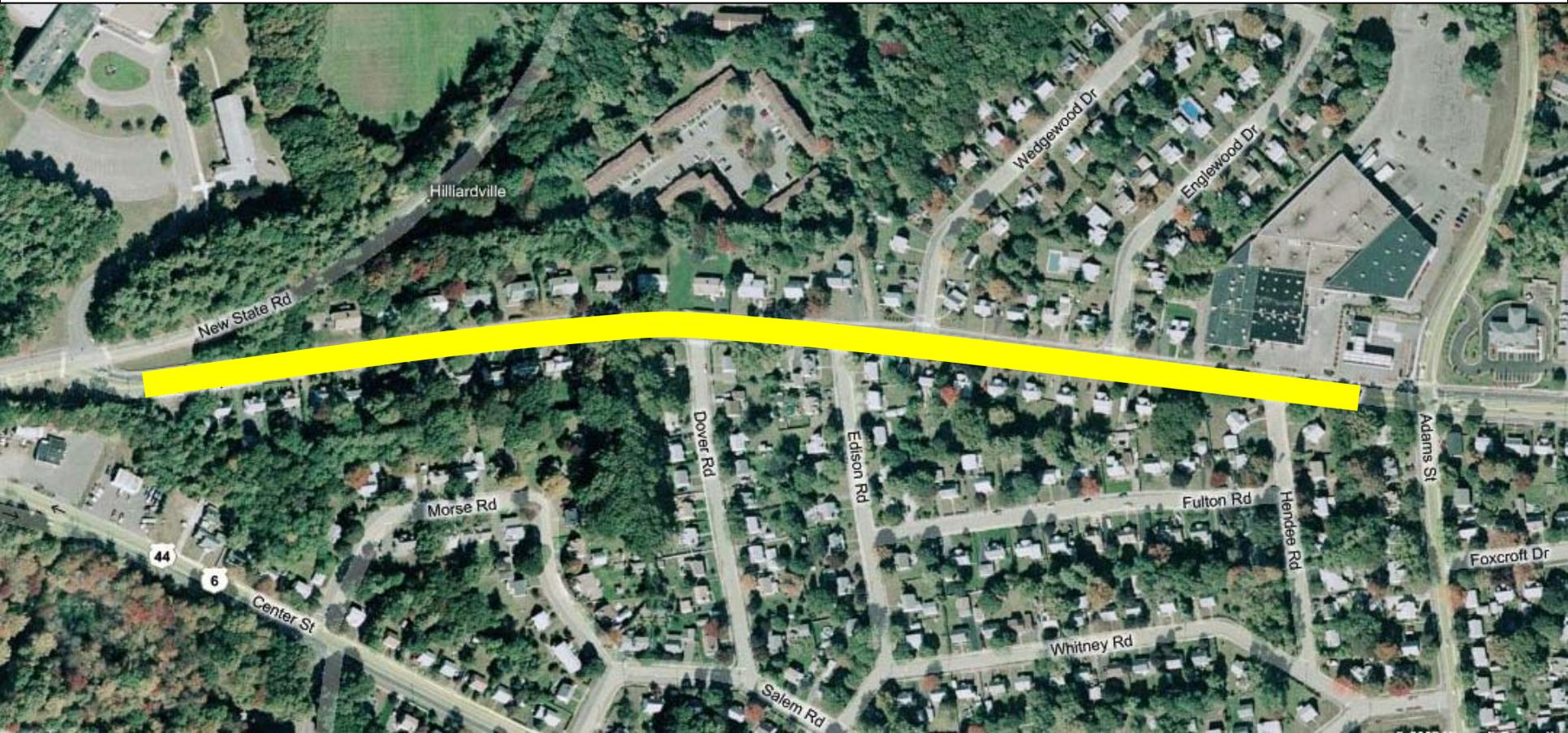
Middle Tu

Middle Turnpike West

**Reconstruct 0.3  
miles of New State  
Road**



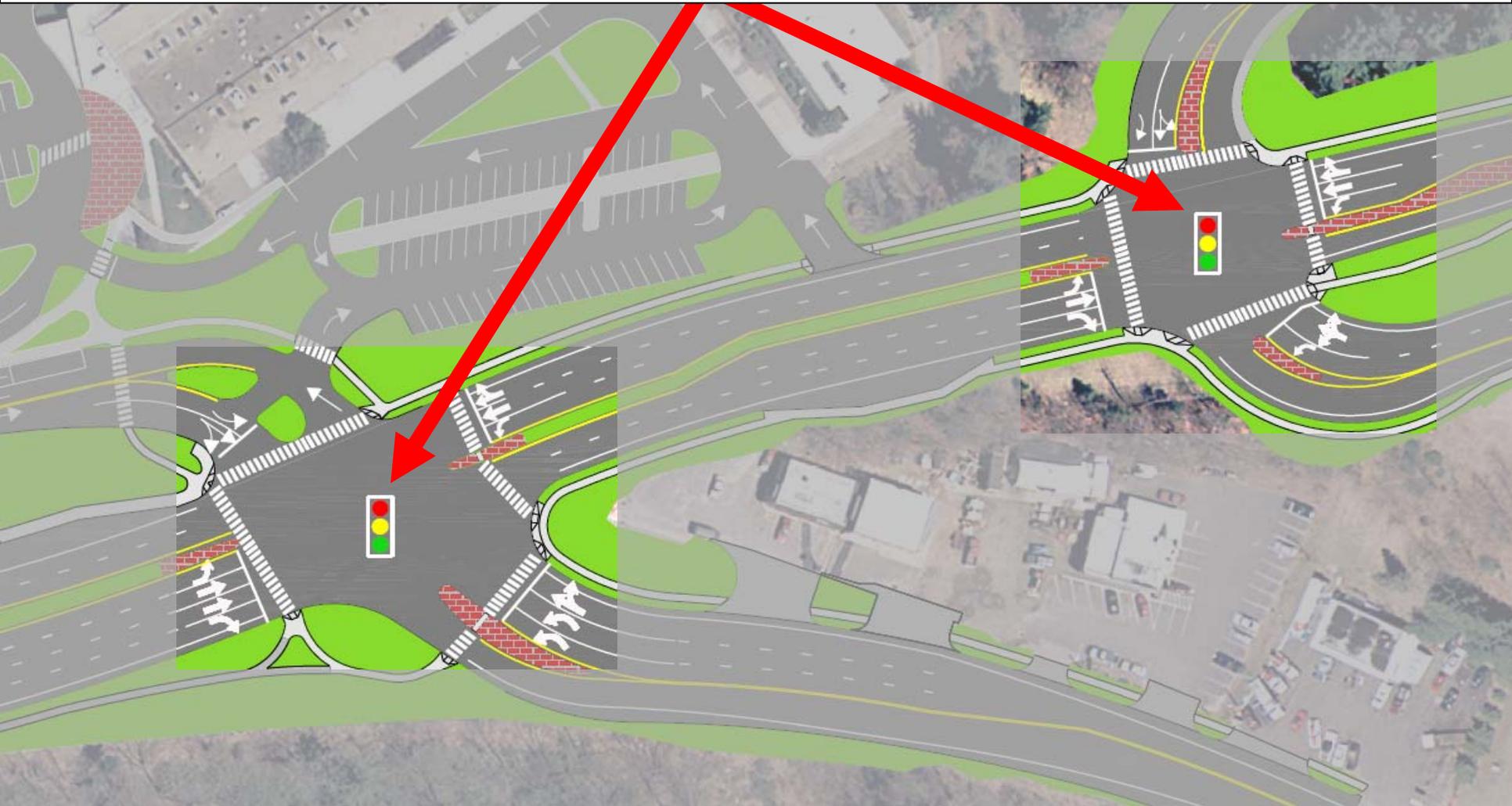
# Town to re-stripe Middle Turnpike West from 4 lanes to 2 lanes from New State Road to Adams Street (Summer 2008)



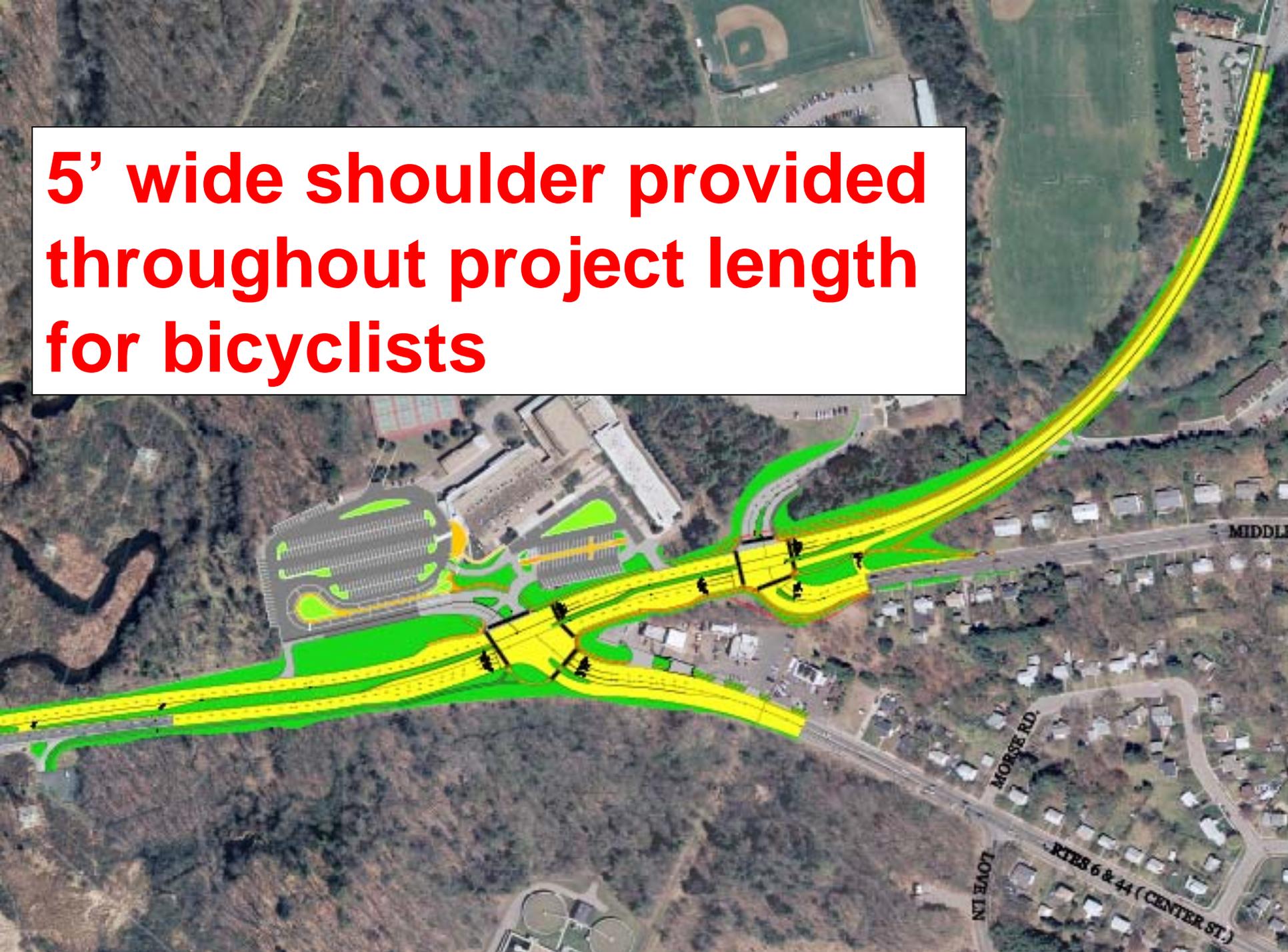
**4,200 Feet of  
new sidewalks**



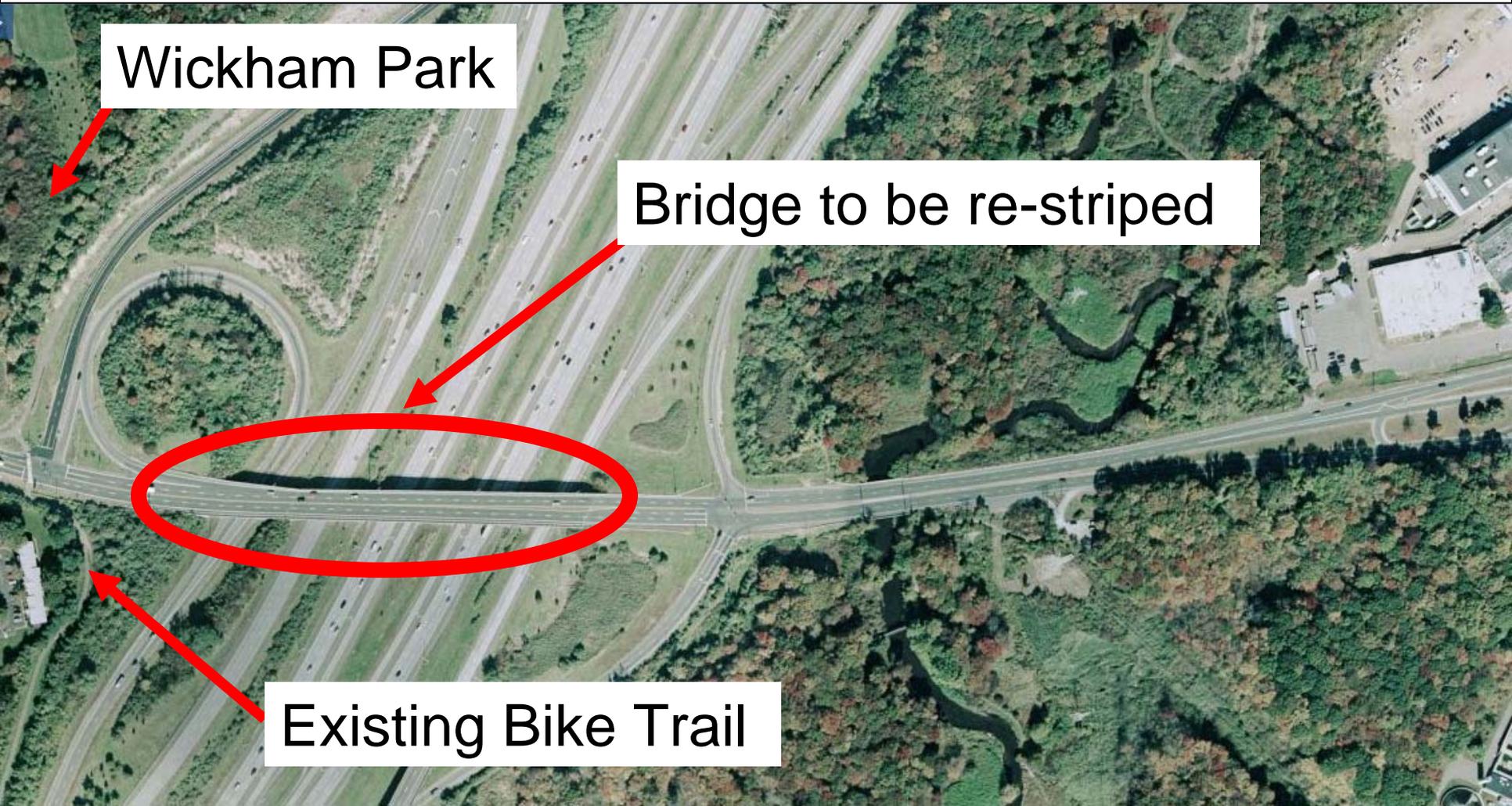
# Crosswalks, Exclusive Pedestrian phases (walk/don't walk) provided at both signals



**5' wide shoulder provided  
throughout project length  
for bicyclists**



# Middle Turnpike West bridge over I-84 to be re-striped to provide 5' wide shoulders for bicyclists

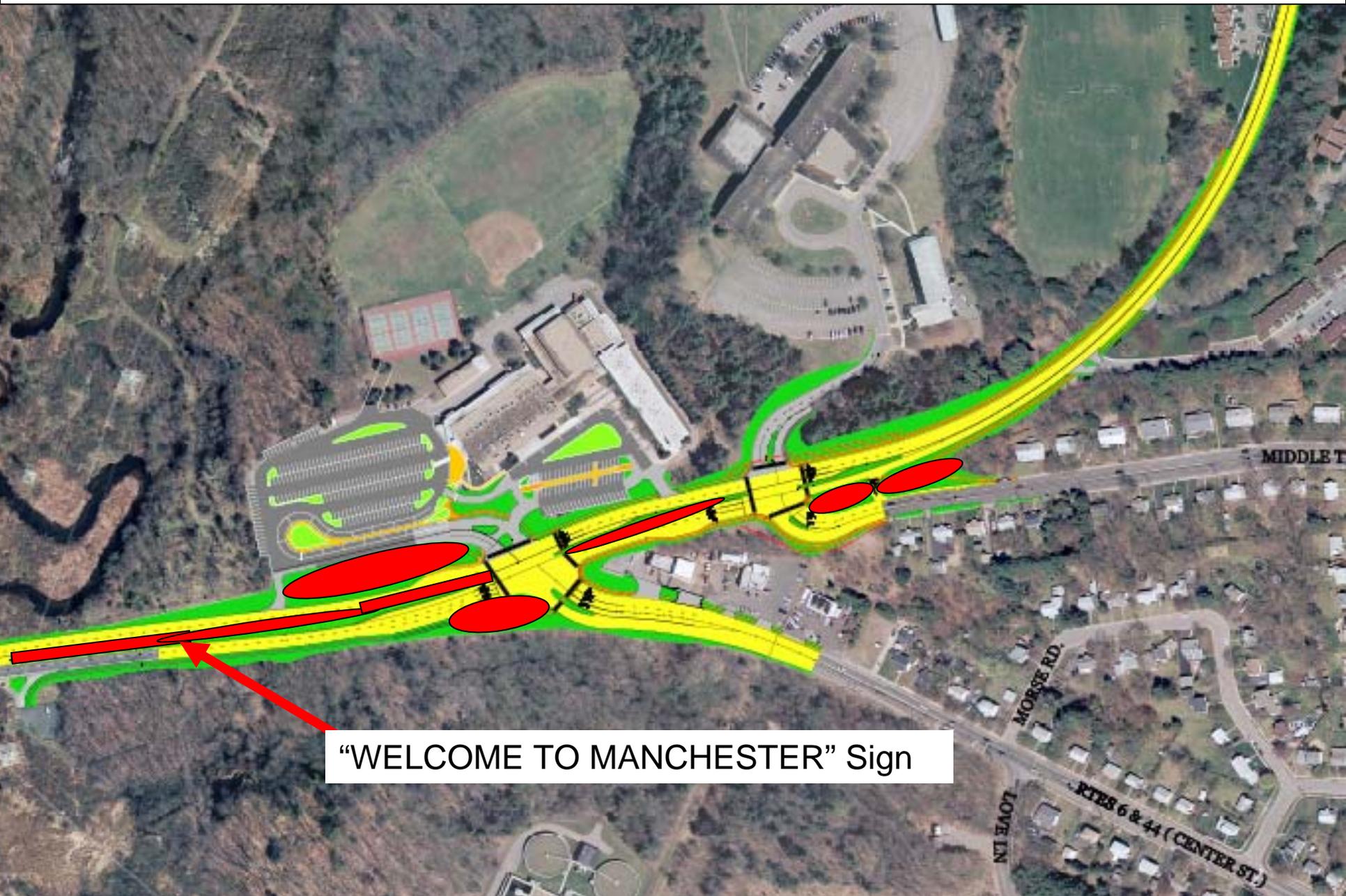


Wickham Park

Bridge to be re-striped

Existing Bike Trail

# Landscaping Opportunities



"WELCOME TO MANCHESTER" Sign

MIDDLE T

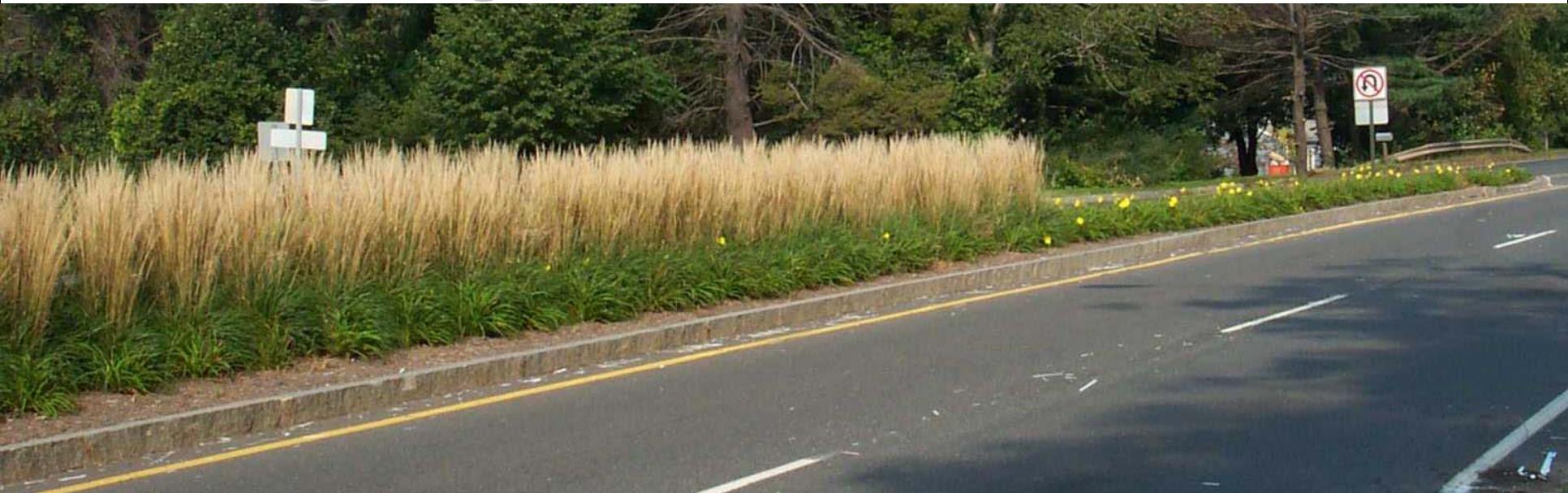
MORSE RD.

LOVE LN

RTES 6 & 44 (CENTER ST.)



**Example of landscaping and gateway signing to be used in median**



---

# Costs

- Construction Cost: approximately \$10 million
    - Includes additional Cheney Tech parking lot work by DPW (\$50,000)
    - Does not include re-striping of Middle Tpke. W. between New State Road and Adams Street (town funded)
    - Includes installation of landscaping, to be maintained by the town
    - Town will pay 20% of cost of new sidewalks
  - Rest of work to be funded 80% Federal, 20% State
-

---

# Next Steps

- Currently 30% complete
  - After obtaining design approval from the FHWA, acquisition of R.O.W. will commence
  - Drainage design needs to be completed
  - Construction “staging” plans will be prepared
  - Environmental permits must be obtained
  - Coordination with utility companies
  - Complete design, advertise for bids, award
  - Construction tentatively scheduled for 2010
-

---

# Traffic Simulation

Proposed Improvements  
on Routes 6 & 44 in  
Manchester CT, at  
East Catholic and  
Cheney Technical  
High Schools

---

---

# Summary

- Safety at Center Street intersection improved
  - Signalized access for Cheney Tech
  - East Catholic: left turn lane in, 2 lane exit
  - Alignment on Middle Turnpike improved
  - Middle Turnpike to be re-striped from 4 to 2 lanes (by Town of Manchester)
  - Congestion reduced at New State Rd/East Catholic intersection by 50% - 69%
-

---

## Summary (cont.)

- All left turn movements will have arrows, both signals to be coordinated
  - Pedestrians: 4,200' new sidewalks, crosswalks, pedestrian signal phases
  - Bikes: 5' shoulders throughout, including bridge over I-84
  - Public Transit: 2 bus turnouts
  - Aesthetics: medians, landscaping
  - Laurel Marsh Trail: left turn access from east
-

# Thank You

