

# Introduction to the Route 5 Corridor Study

## What is a Corridor Study?

A corridor study is a multi-modal planning process to prepare a master plan for a transportation corridor

## Why Route 5?

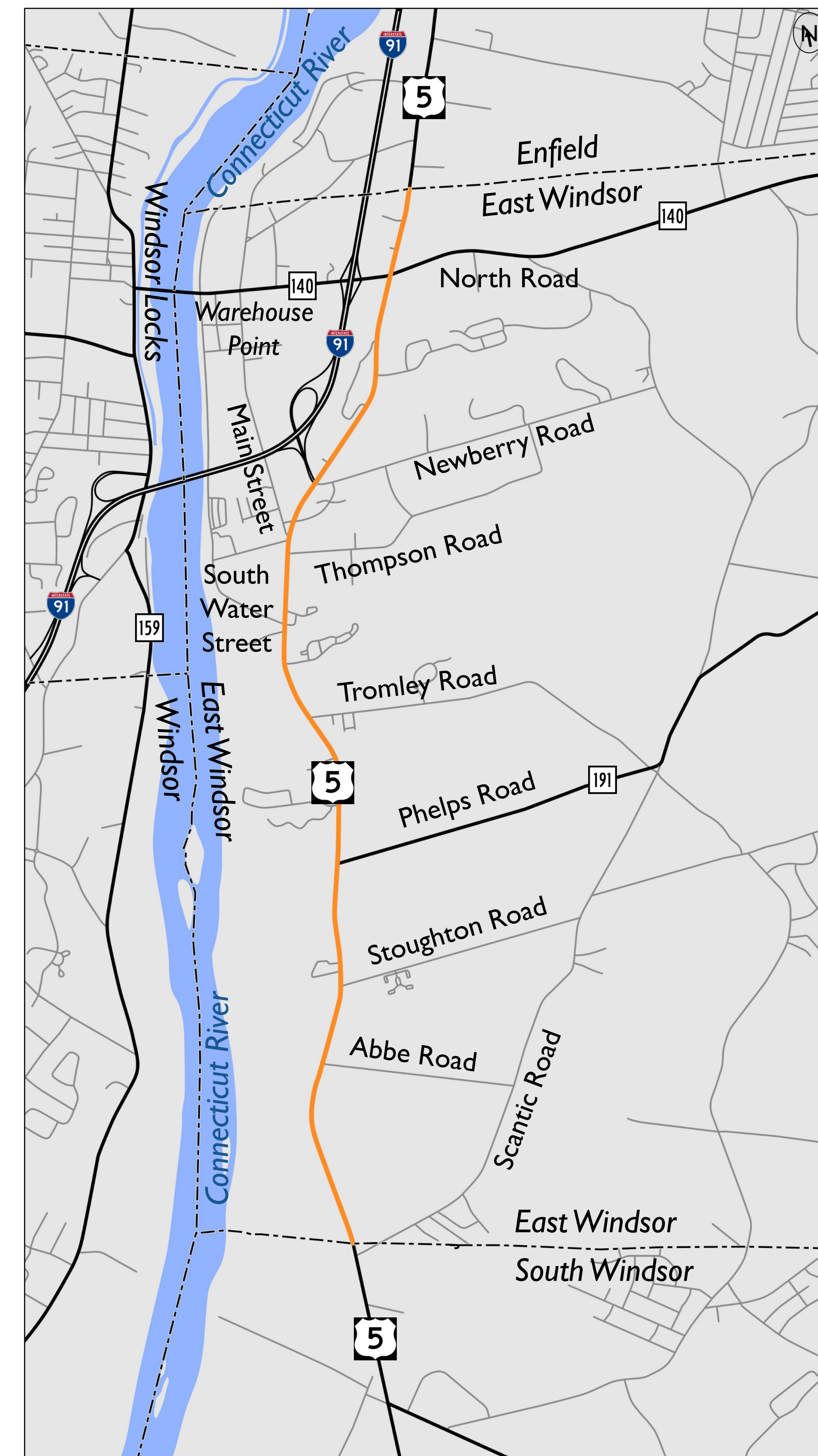
- Recent land use changes have negatively impacted traffic operations
- Lack of bicyclist, pedestrian and transit modes within corridor
- Plan for future growth and economic development



## What is the Study Process?

- Data collection (*Completed*)
- Existing conditions assessment (*Completed*)
- Future conditions assessment (*Being Finalized*)
- Identification and analysis of alternatives (*In Progress*)
- Implementation plan

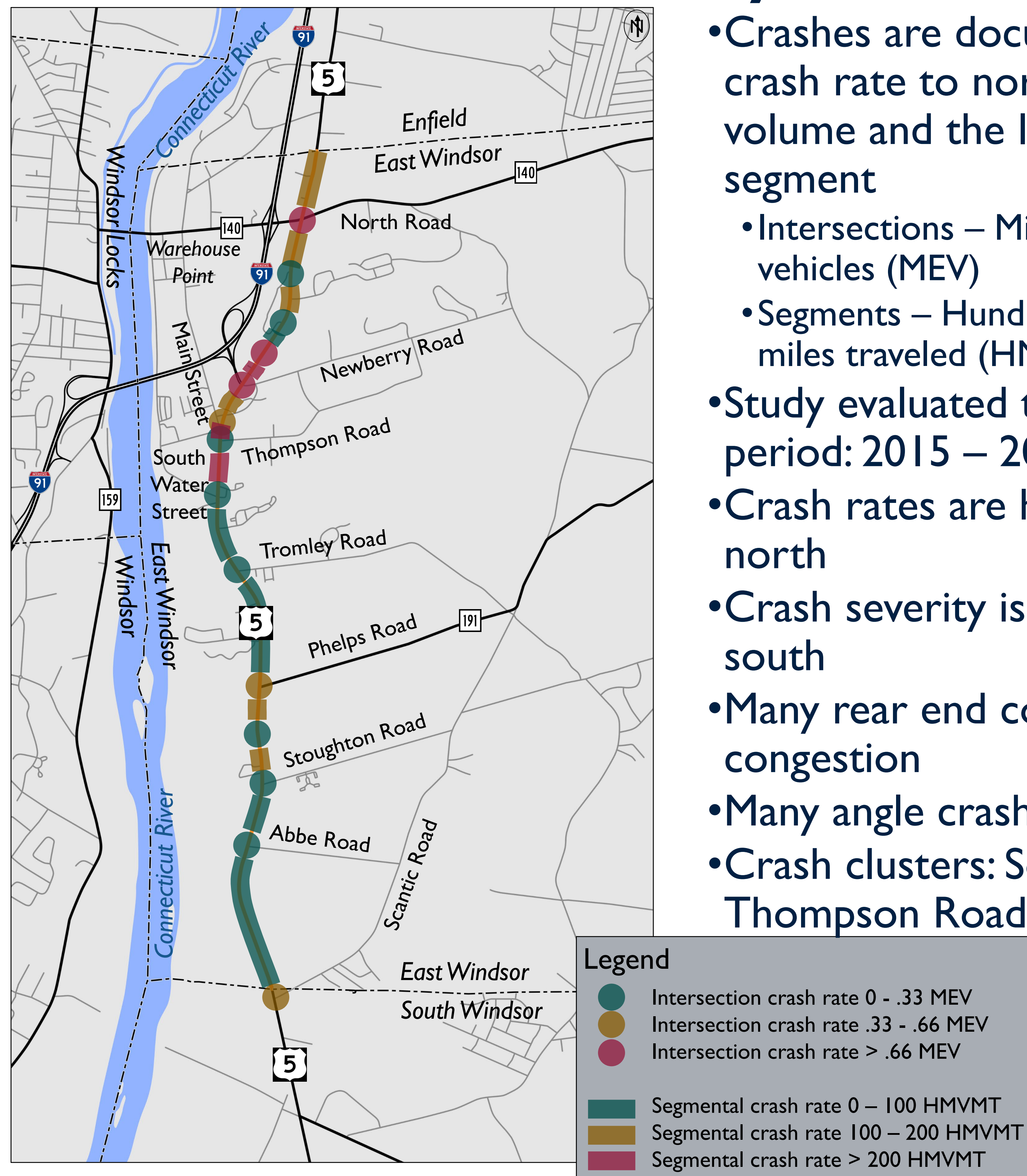
## Route 5 Corridor Study Limits





# Crash History & Multimodal Conditions

## Crash Rates



## Key Takeaways:

- Crashes are documented by crash rate to normalize for traffic volume and the length of a segment
  - Intersections – Million entering vehicles (MEV)
  - Segments – Hundred million vehicle miles traveled (HMVMT)
- Study evaluated the 3-year period: 2015 – 2017
- Crash rates are highest in the north
- Crash severity is highest in the south
- Many rear end collisions due to congestion
- Many angle crashes at driveways
- Crash clusters: South of Thompson Road, at Newberry Road and at Route 140

## Multimodal Conditions:

- The corridor generally has no sidewalks, pedestrians must walk within the roadway or adjacent to it on grassed areas



'Goat path' indicating pedestrian use along Route 5

- Inconsistent and narrow shoulders with high traffic volumes and speeds limit opportunities for bicyclists



Bicyclist riding along the shoulder of Route 5

- Transit service in the corridor is limited, consisting of one, off-peak, Express service to and from Hartford with no stops on weekends



Bus stop on Route 5



# Potential Improvements Under Study

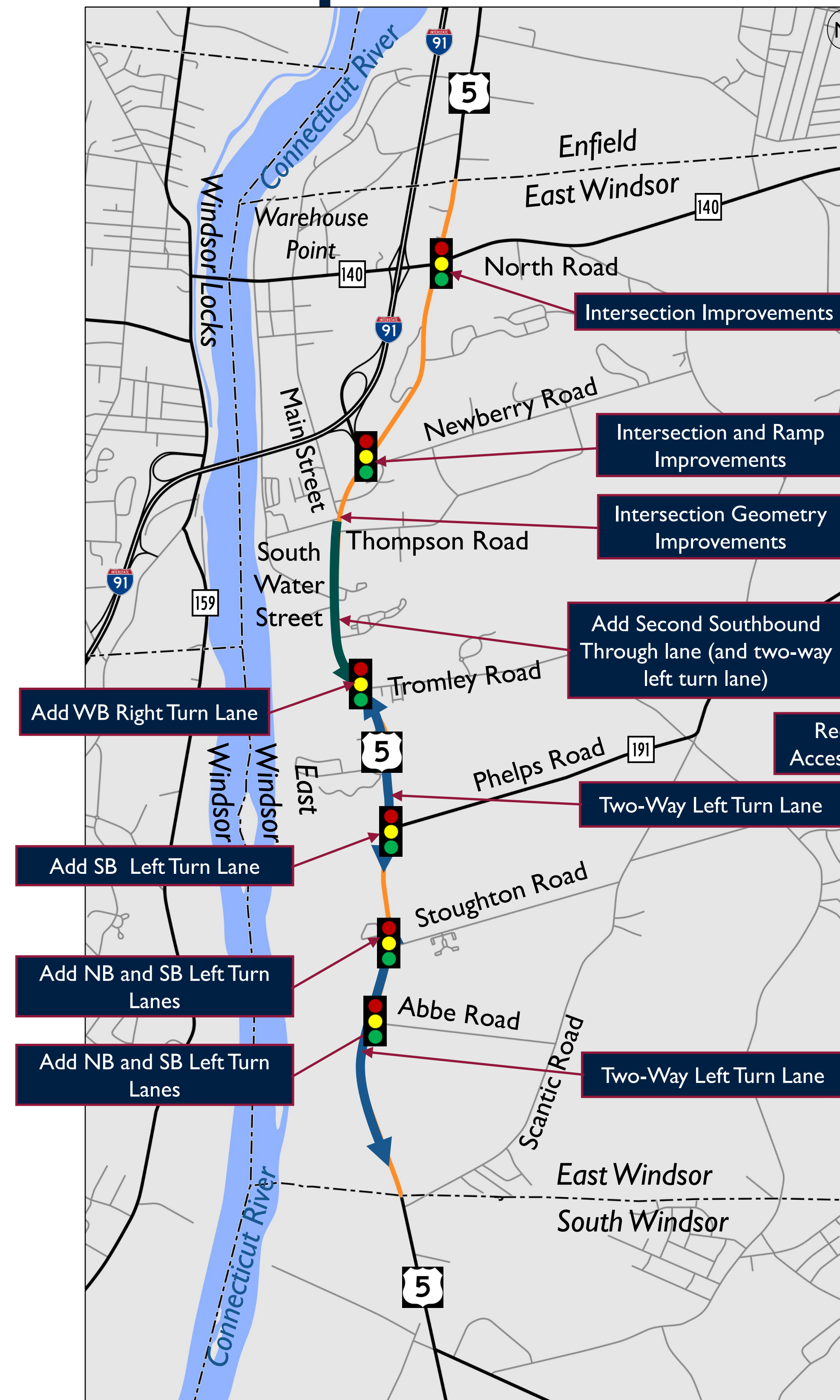
## What problems are we trying to address:

- Traffic operational deficiencies
  - Route 5 at Route 140
  - Route 5 at I-91 Ramps / Newberry Road
  - Route 5 at Main Street, Thompson Road and South Water Street
- Improve roadway safety
  - Merging concerns where southbound Route 5 goes from two lanes to one
  - Crashes related to turning vehicles at local road and driveway intersections
- Enhance mobility:
  - Lack of bicyclist and pedestrian facilities (recreational and transportation)
  - Lack of transit service and amenities

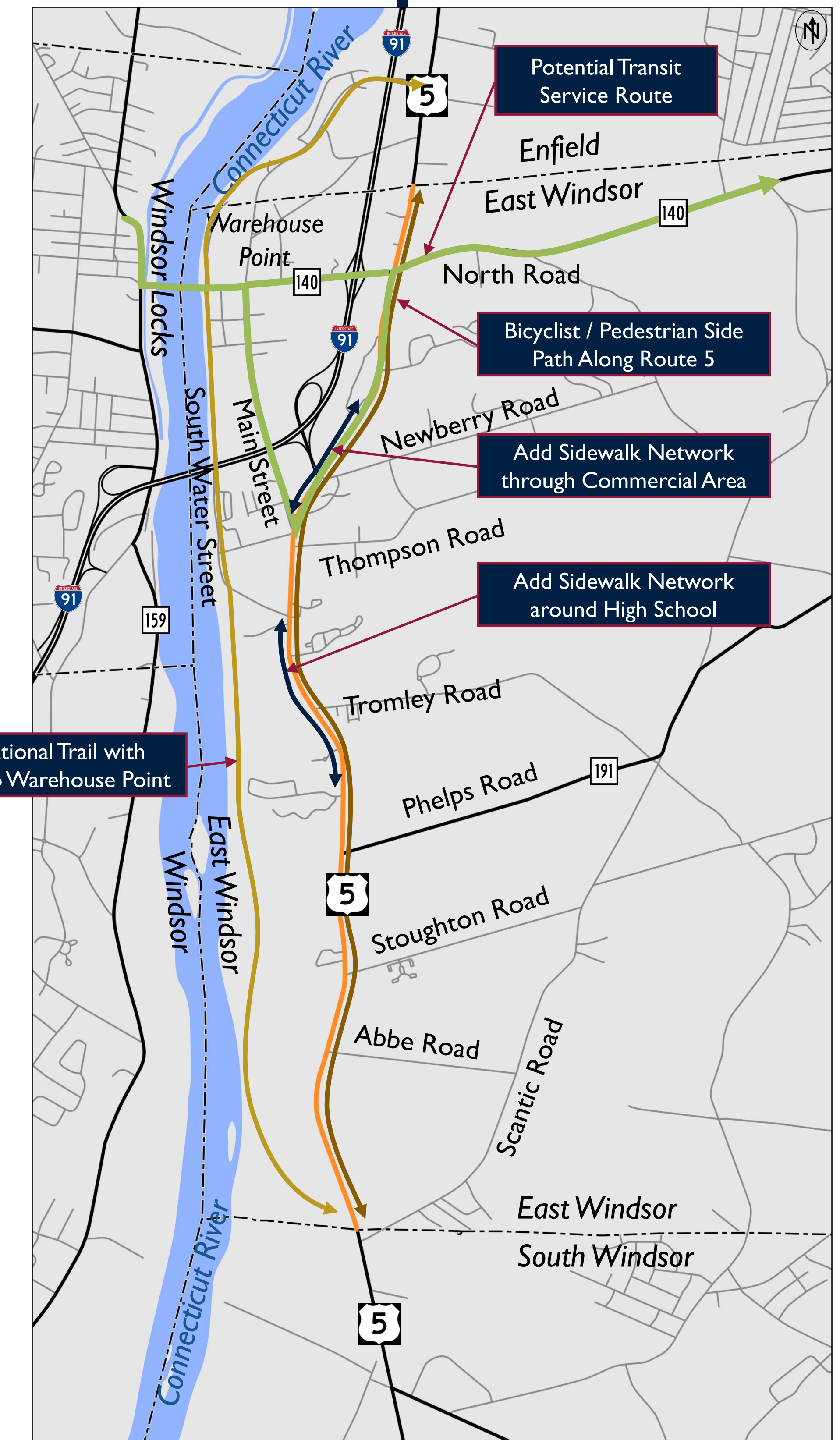
## Near-term opportunities:

- Town and CTDOT coordinating to potentially install new video detectors at several locations in the corridor
- Would help immediately address some of the traffic operational deficiencies

## Potential Vehicular Improvements



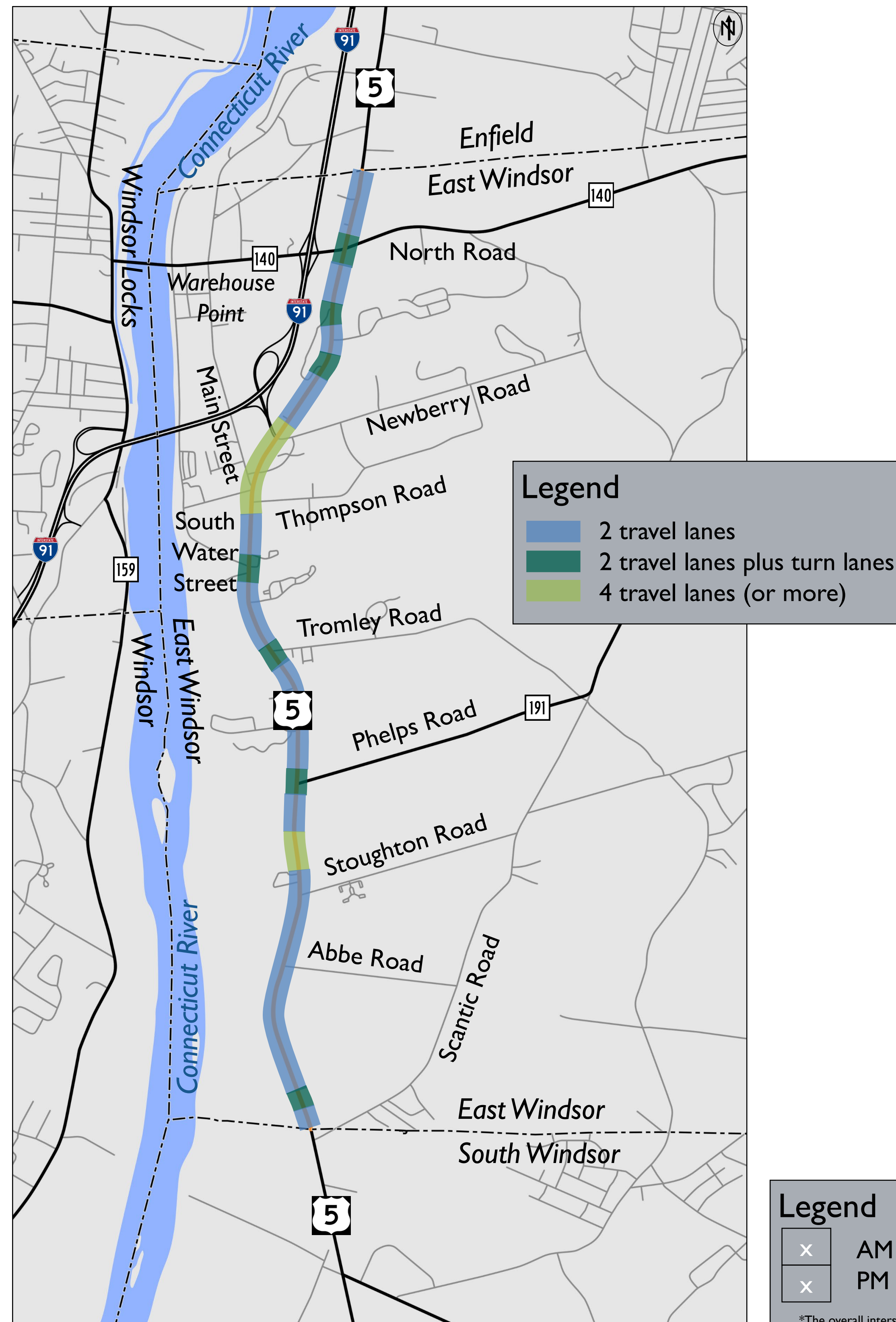
## Potential Multi-modal Improvements



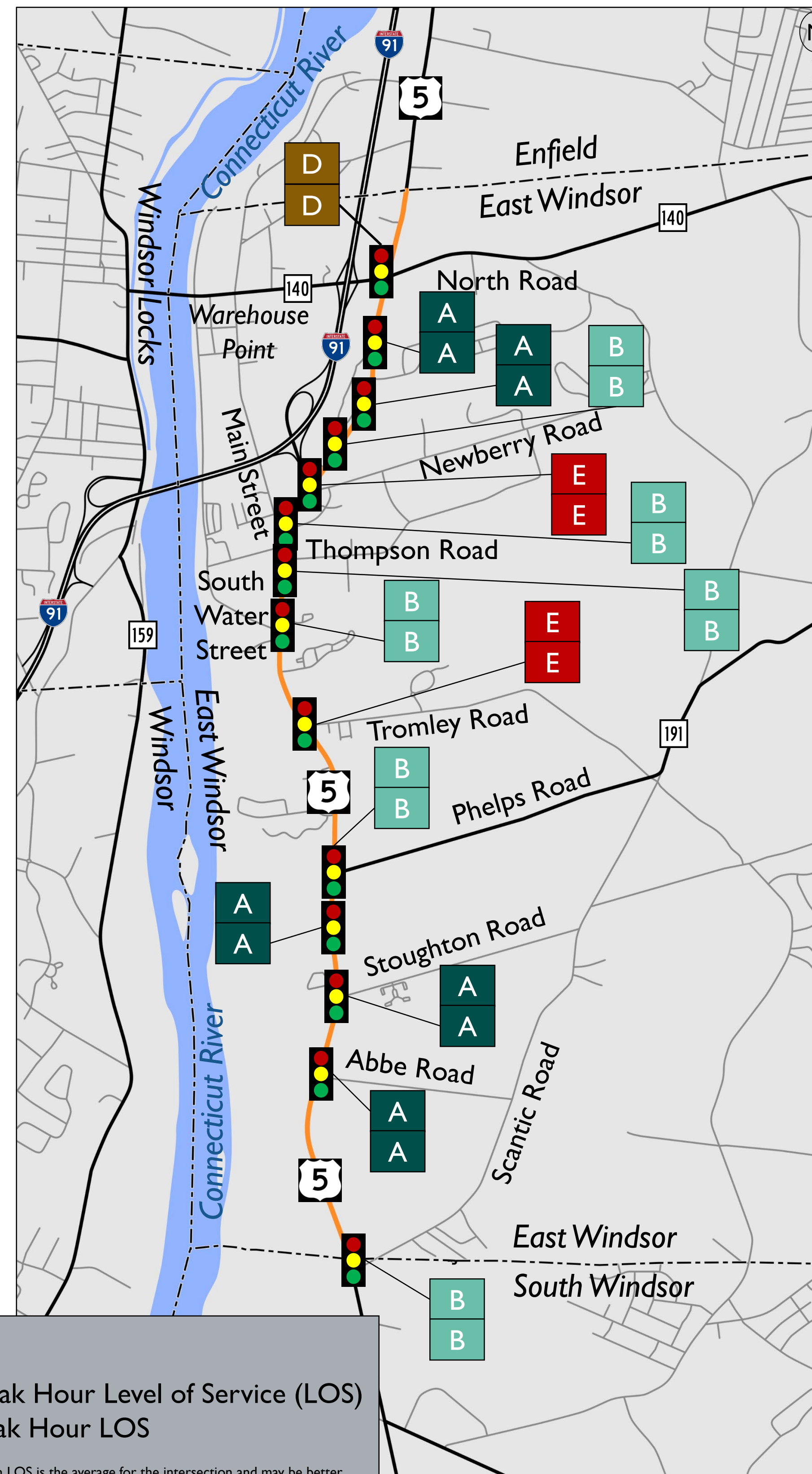


# Existing Roadway & Traffic Conditions

## Lane Configurations



## Traffic Operations



## Key Takeaways:

- Traffic volume is highest south of Newberry Road (14,800 to 20,000 vehicles per day)
- Traffic volume is lowest north of Bridge Street / North Road (Route 140) and towards South Windsor
- Traffic growth relatively flat from 2005 and 2013, but increased since then
- Speed limit is 45 mph throughout, with 85<sup>th</sup> percentiles speeds ranging from 45 – 56 mph off-peak
- Travel speeds are highest in the southern part of the corridor
- LOS D or better generally represents an 'acceptable degree of congestion'
- Sources of Delay:
  - Broken detectors
  - Lack of turn lanes
  - Heavy vehicles / school buses
  - Irregular signal spacing



# Future Traffic Assessment

## Future Forecasting:

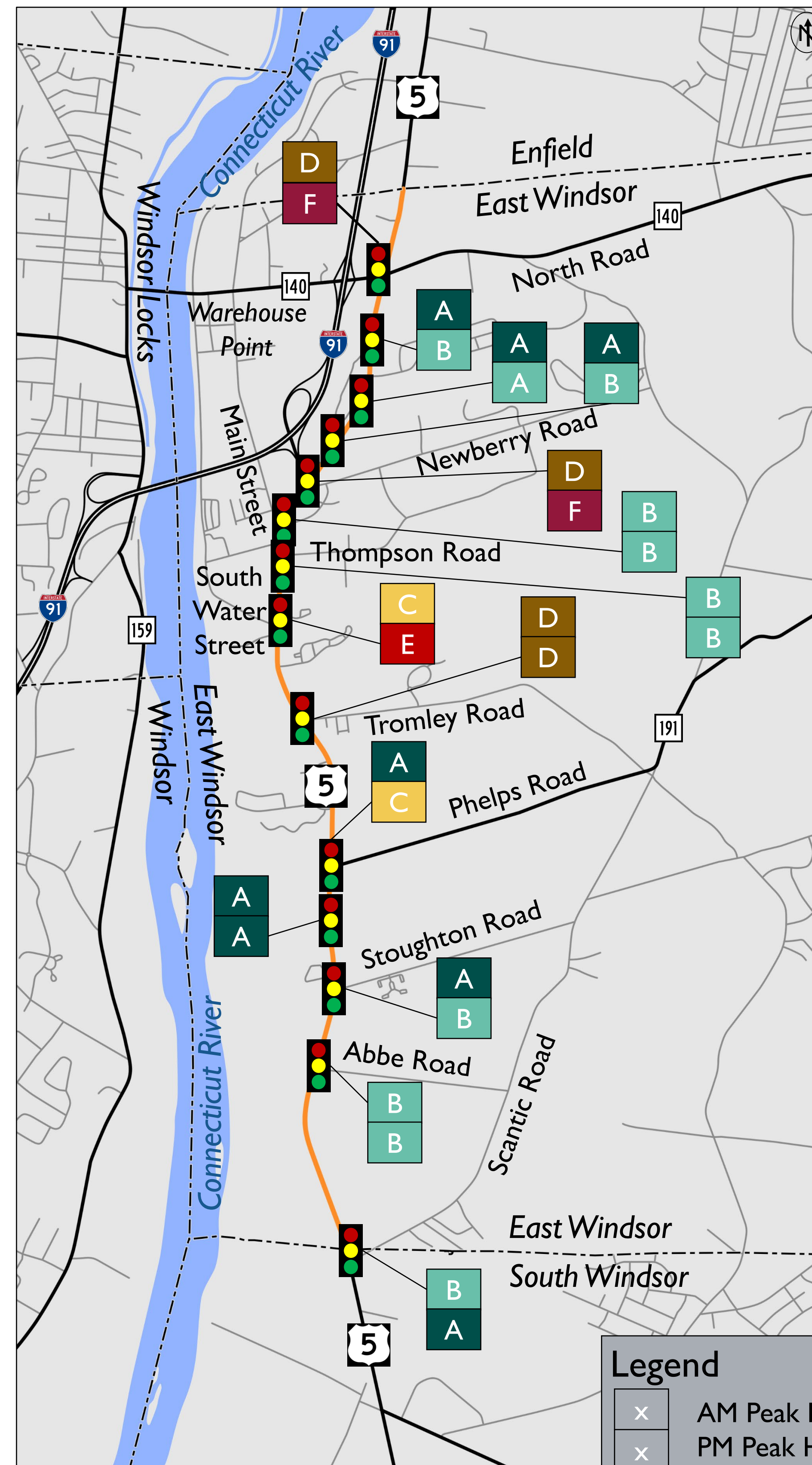
**Base Scenario:** Considers ambient growth in traffic from development in and around the study corridor that will occur independently of actions taken as a result of this study to the *planning year of 2040*

- Would result in traffic growth of approximately 15 – 20% on Route 5 south of I-91
- Operations depicted in the graphic immediately to the right

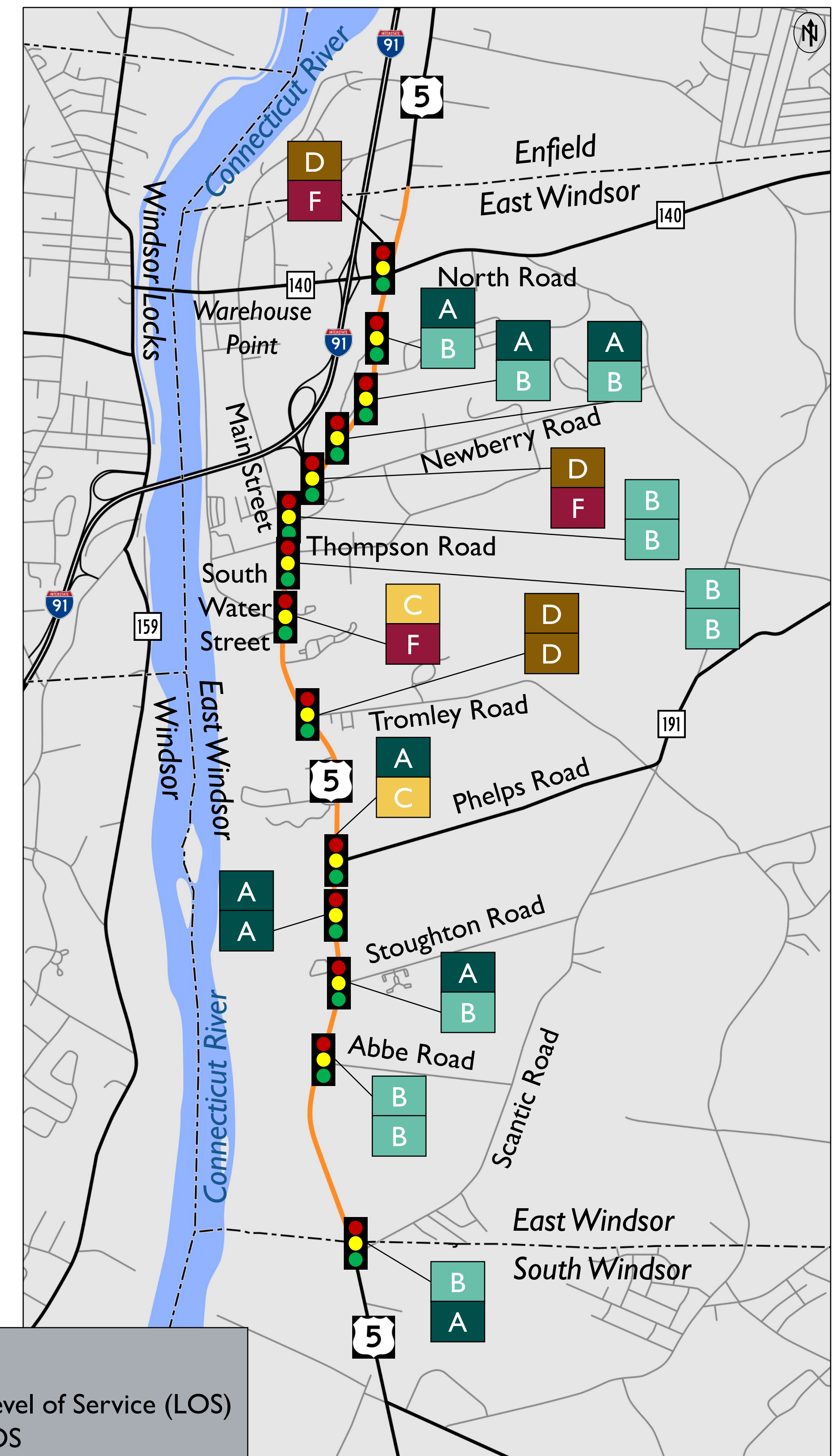
**Build Scenario:** Considers additional development concepts identified by the study team as part of the vision for the corridor

- See Potential Development Opportunities board for information on the vision for the corridor
- Would result in traffic growth of approximately 20 – 25% on Route 5 south of I-91
- Operations depicted in the graphic at the far right

## Base Operations



## Build Operations



**Legend**

x AM Peak Hour Level of Service (LOS)  
x PM Peak Hour LOS

\*The overall intersection LOS is the average for the intersection and may be better than individual approaches.



# Potential Development Opportunities

