



# ROUTE 20 TRANSPORTATION & LAND USE STUDY TECHNICAL ADVISORY COMMITTEE MEETING #2

**April 11, 2023**

Christopher Granatini, PE, Project Director  
Craig Yannes, PE, PTOE, RSP1, Project Manager  
Matt Stoutz, PE, PTOE, RSP1, Assistant Project Manager

Dan Amstutz, AICP, Bicycle & Pedestrian Planning  
Larry Cranor, Land Use & Development

# PROJECT TEAM

## PROJECT MANAGEMENT



**Christopher Granatini, PE**  
Project Director  
26 Years of Experience



**Craig Yannes, PE, PTOE, RSP1**  
Project Manager  
14 Years of Experience

## KEY PERSONNEL



**Will Britnell, PE**  
Limited Access Highway & Roundabouts  
40 Years Experience



**Lawrence Cranor**  
Land Use & Development  
32 Years of Experience



**Dan Amstutz, AICP**  
Bicycle & Pedestrian Planning, Public Engagement  
10 Years of Experience



**Matt Stoutz, PE, PTOE, RSP1**  
Traffic Engineering  
8 Years of Experience

# PROJECT TEAM



# STUDY APPROACH

- How can the Transportation System Support Economic Development, Safety & Mobility?
- Bradley International Airport is a Valuable Resource with Ample Development Opportunities
- Land Use and Zoning Changes will drive Growth within and surrounding the Bradley Airport Development Zone (BADZ)
- Balance Needs of Town, State, Large Corporations, & Small Businesses within the Study Area

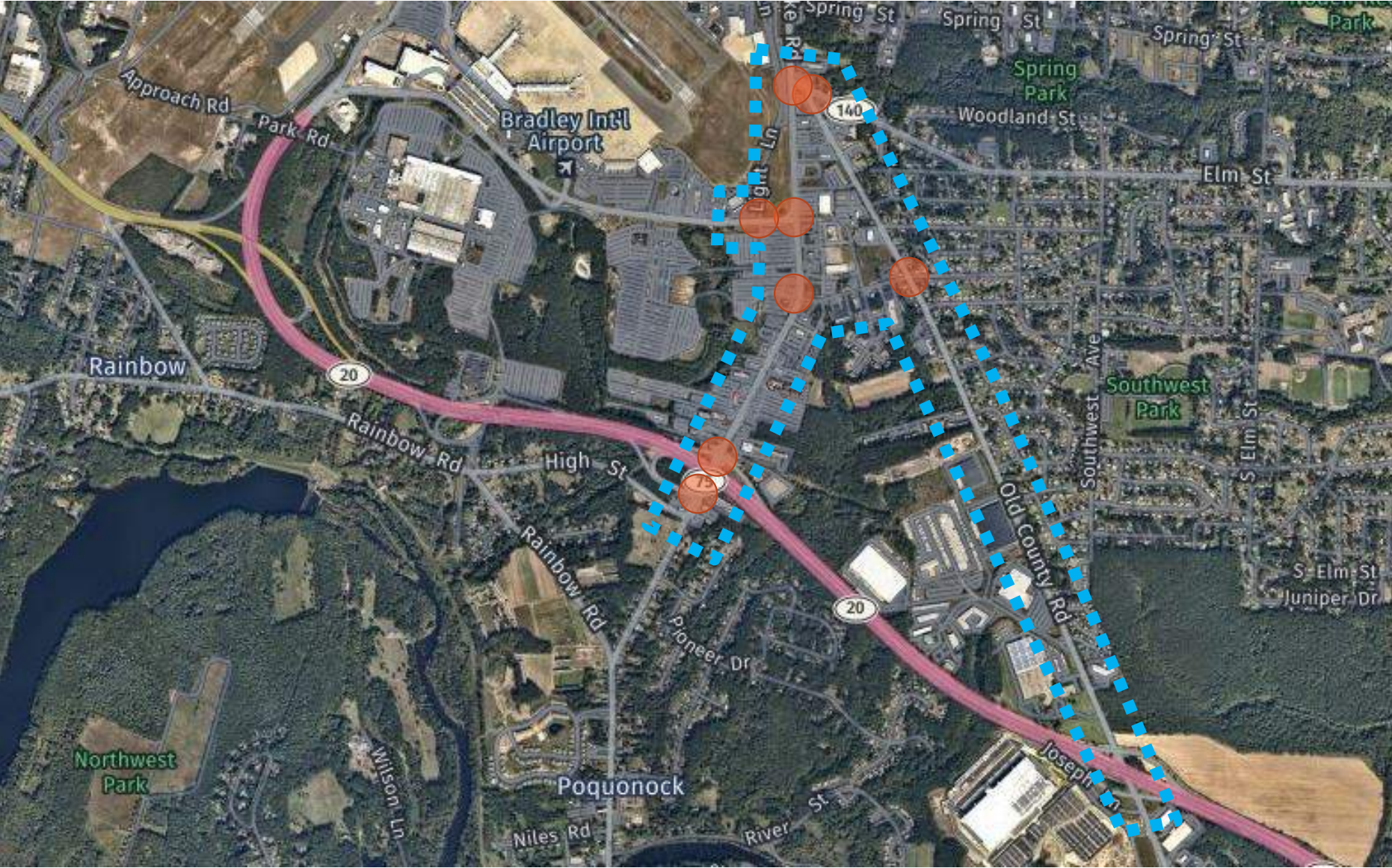


# AGENDA

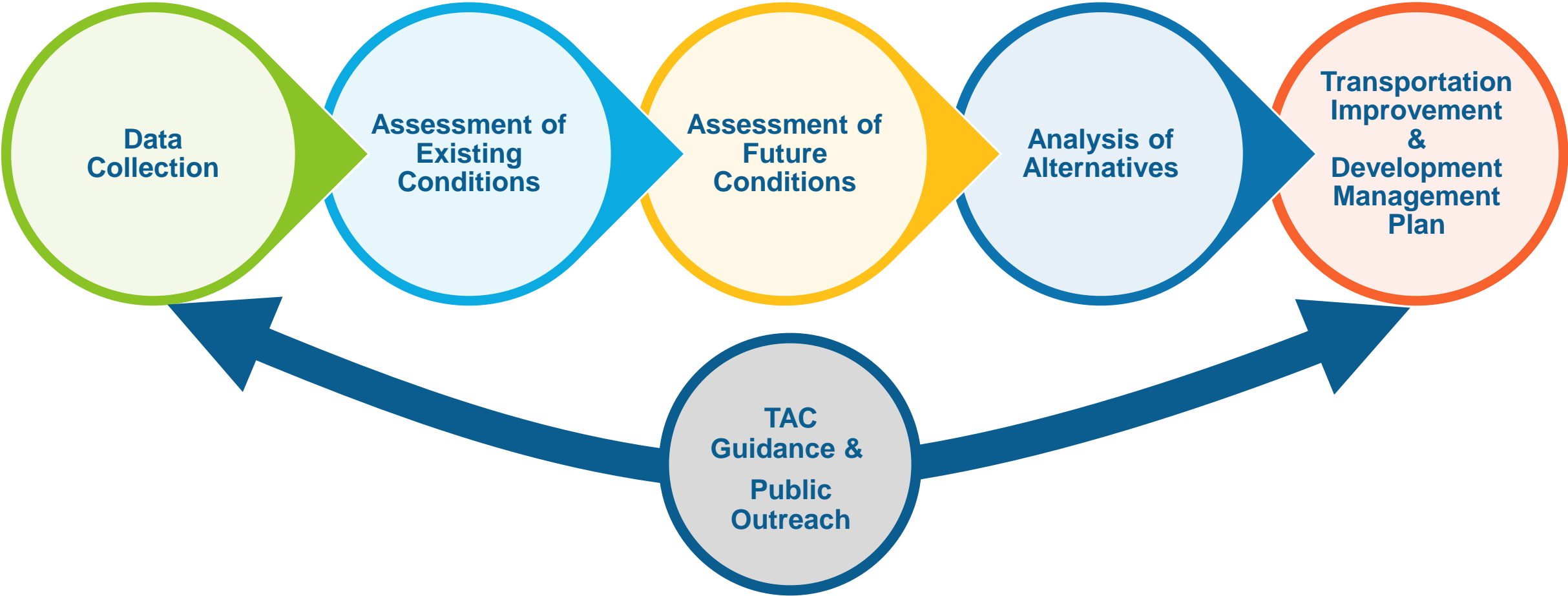
- Project Team
- Study Overview
- Existing Conditions Presentation
- Study Vision Statement
- Schedule & Next Steps
- Open Discussion



# STUDY AREA

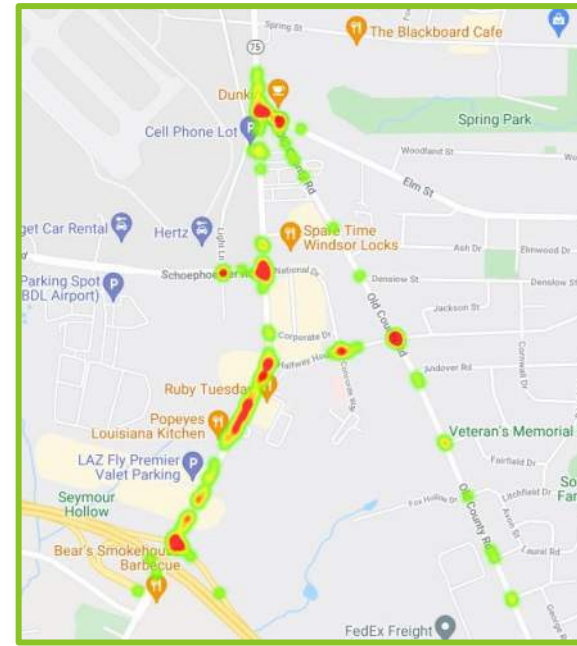


# STUDY PROCESS



# DATA COLLECTION

- Review Of Previous Planning Documents
- Review of Town and DOT GIS Data
- Traffic Volume & Speed Data
- Field Visits
- Collision Data
- Public Survey





# REVIEW OF PREVIOUS PLANS & DOCUMENTS

- **Study Area**

- Bradley Area Transportation Study (2002)
- Bradley Airport Master Plan (2019 Update)
- CTDOT Road Diet Feasibility Study (2021)

- **Town**

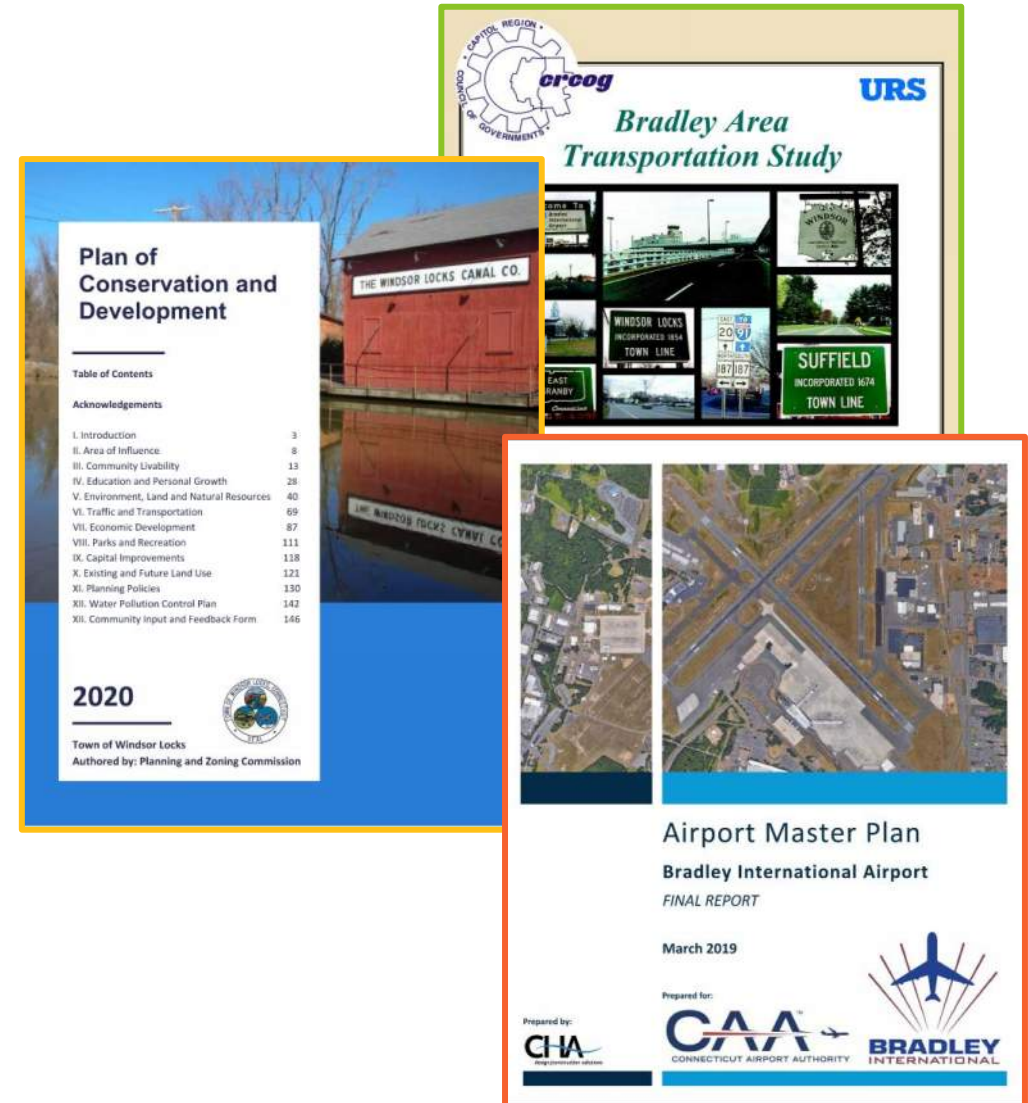
- Windsor Locks POCD (2020)
- Zoning Regulations

- **State**

- CT Active Transportation Plan
- Planned CTDOT Improvements

- **Region**

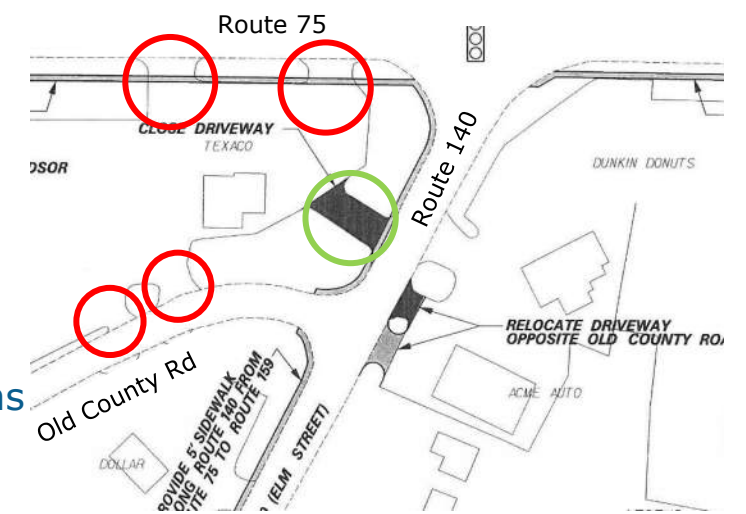
- CRCOG Regional Transportation Safety Plan (2021)
- CRCOG Regional Pedestrian & Bicycle Plans (2008 & 2015)
- CRCOG Connect 2045 (Metropolitan Transportation Plan) (2019)



# BRADLEY AREA TRANSPORTATION STUDY PREVIOUSLY IMPLEMENTED IMPROVEMENTS

- Route 75 and Halfway House Road Sidewalks, Pedestrian Signals & Transit Shelters
- Access Management Improvements at Route 75 at Route 140
- Route 75 at Route 20 Westbound Ramp Striping & Signing Improvements

2002  
Recommendations



2023  
Condition



# TRAFFIC VOLUMES

- **Peak Hour Turning Movement Counts (TMC)**

- 8 Study Area intersections
  - Weekday Morning Peak Hours (7 – 9 AM)
  - Weekday Afternoon Peak Hours (4 – 6 PM)

- **96-Hour Automatic Traffic Recorder Counts (ATR)**

- Directional Volumes and Speeds at 4 locations

- **CTDOT Historical Traffic Volume Data**

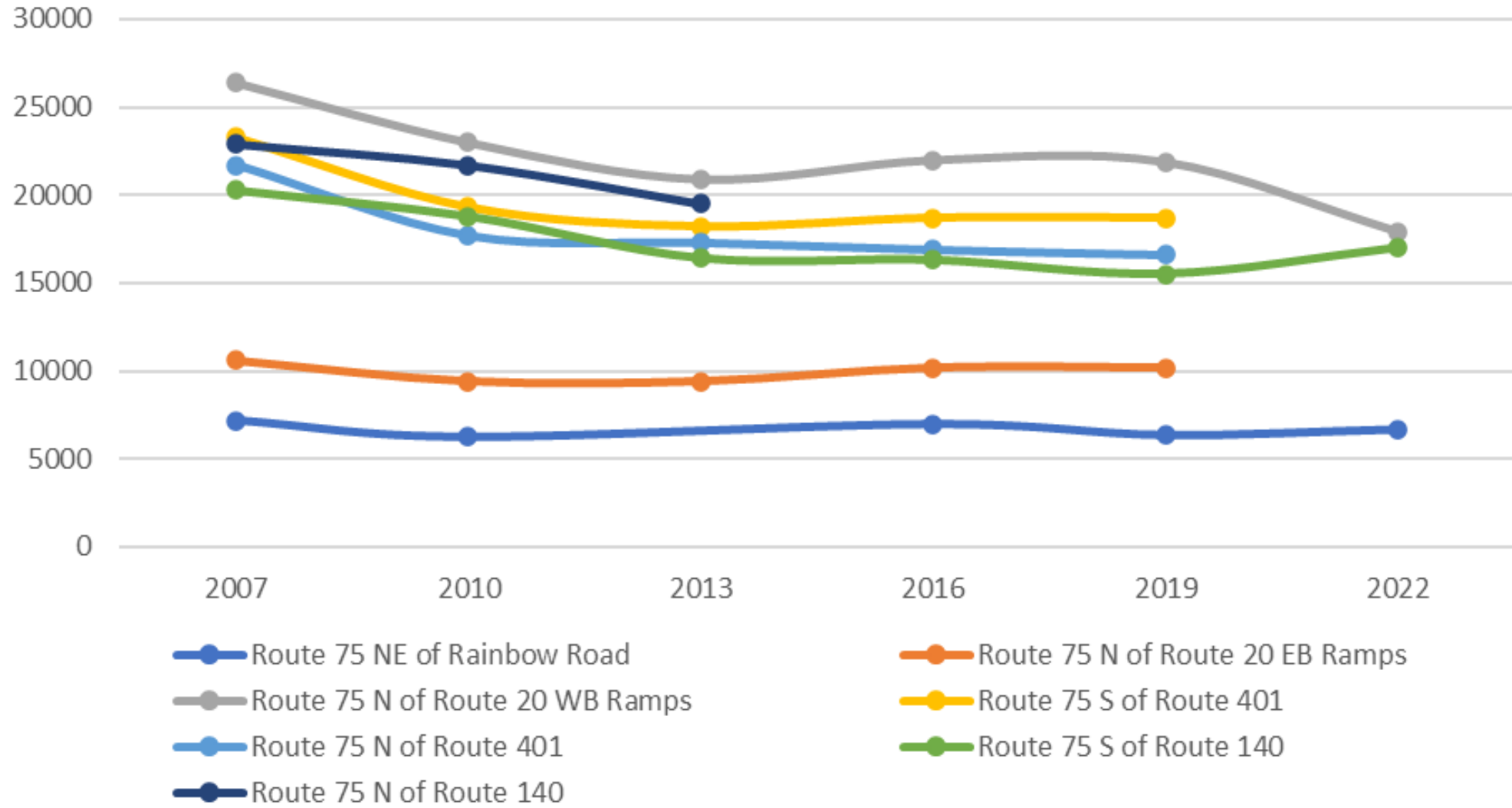
- Triennial 24-hour ATR counts between 2007 and 2019
- CTDOT Road Diet Study



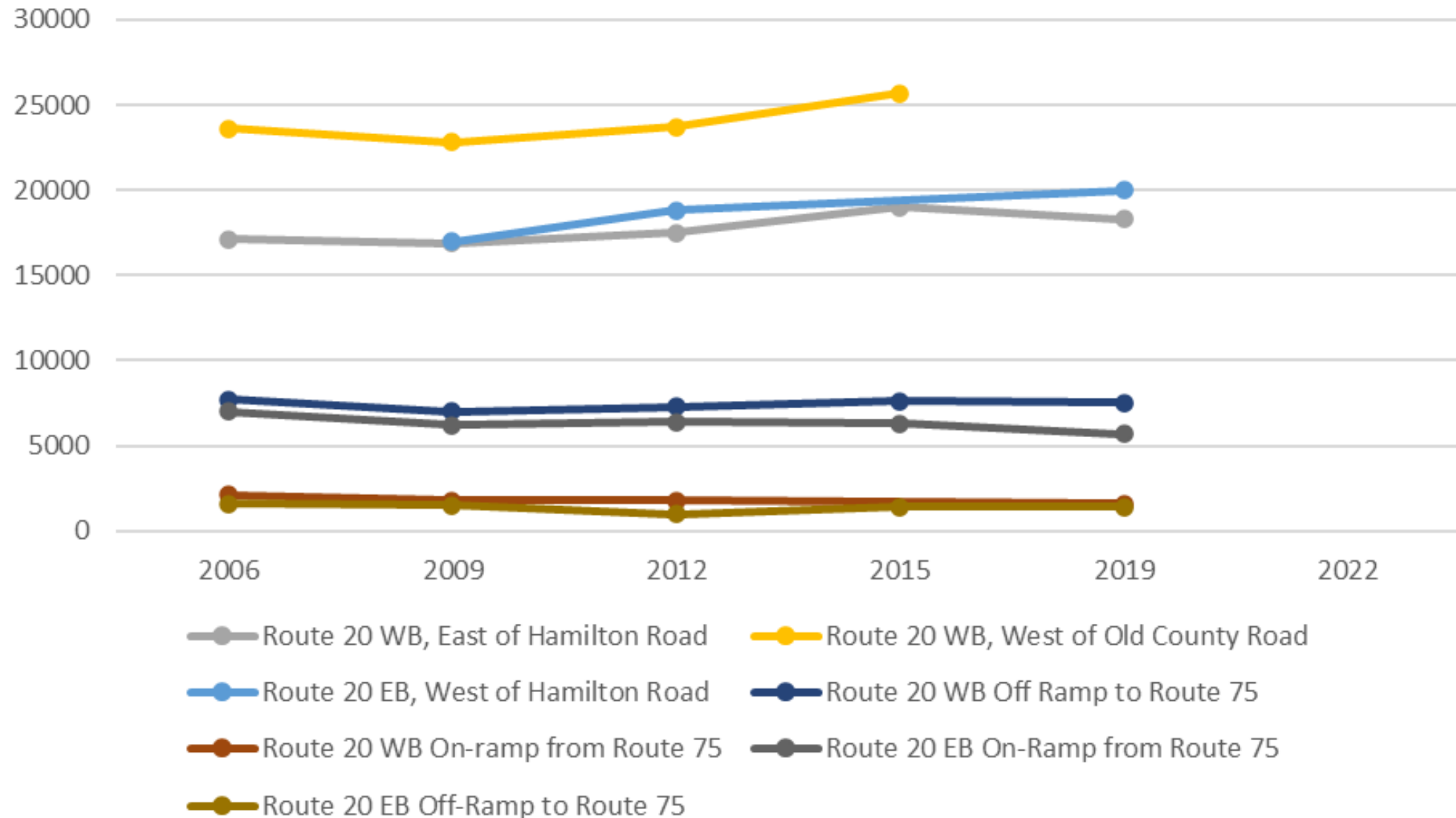
# AVERAGE DAILY TRAFFIC



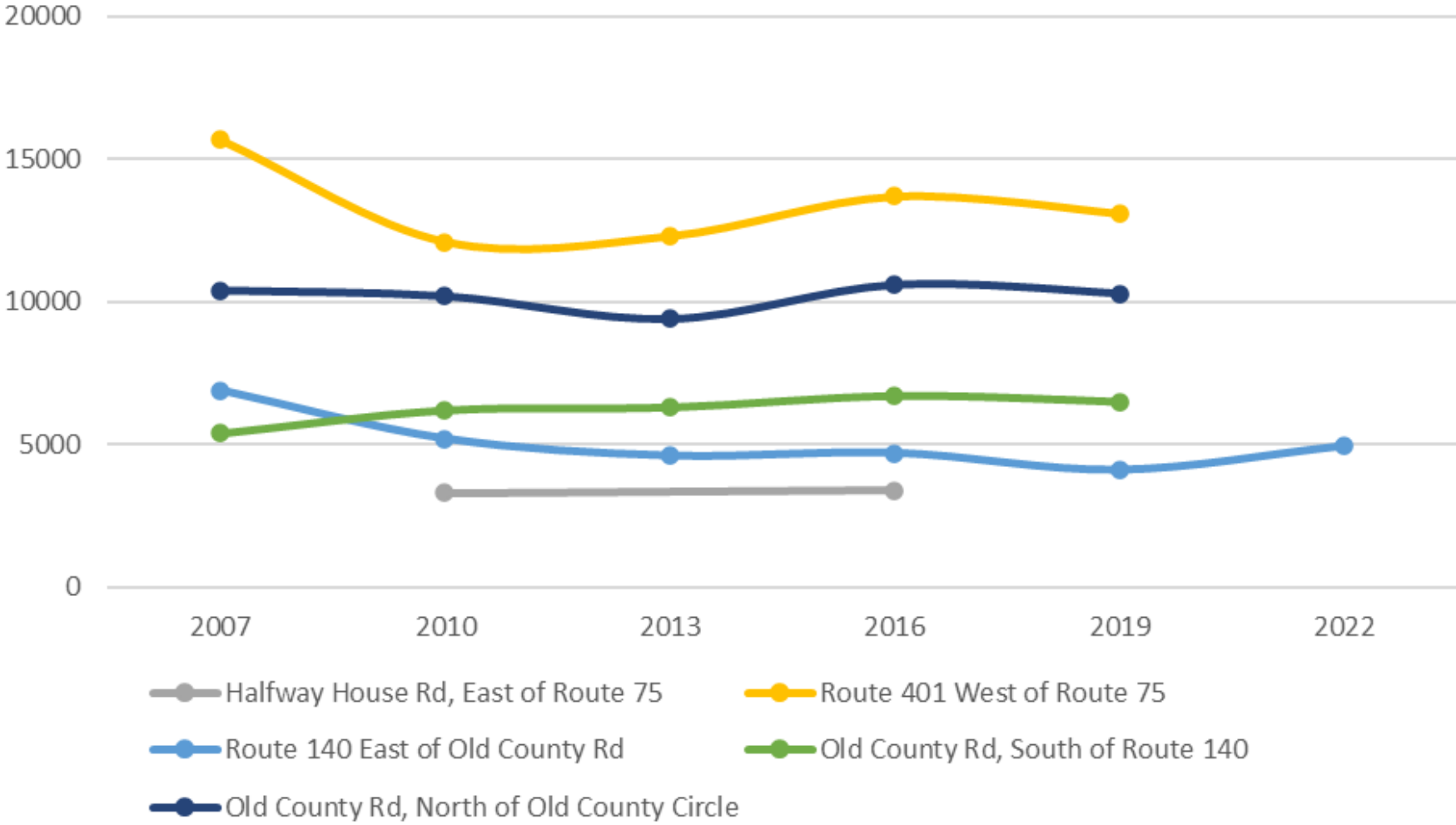
# ROUTE 75 HISTORICAL ADT



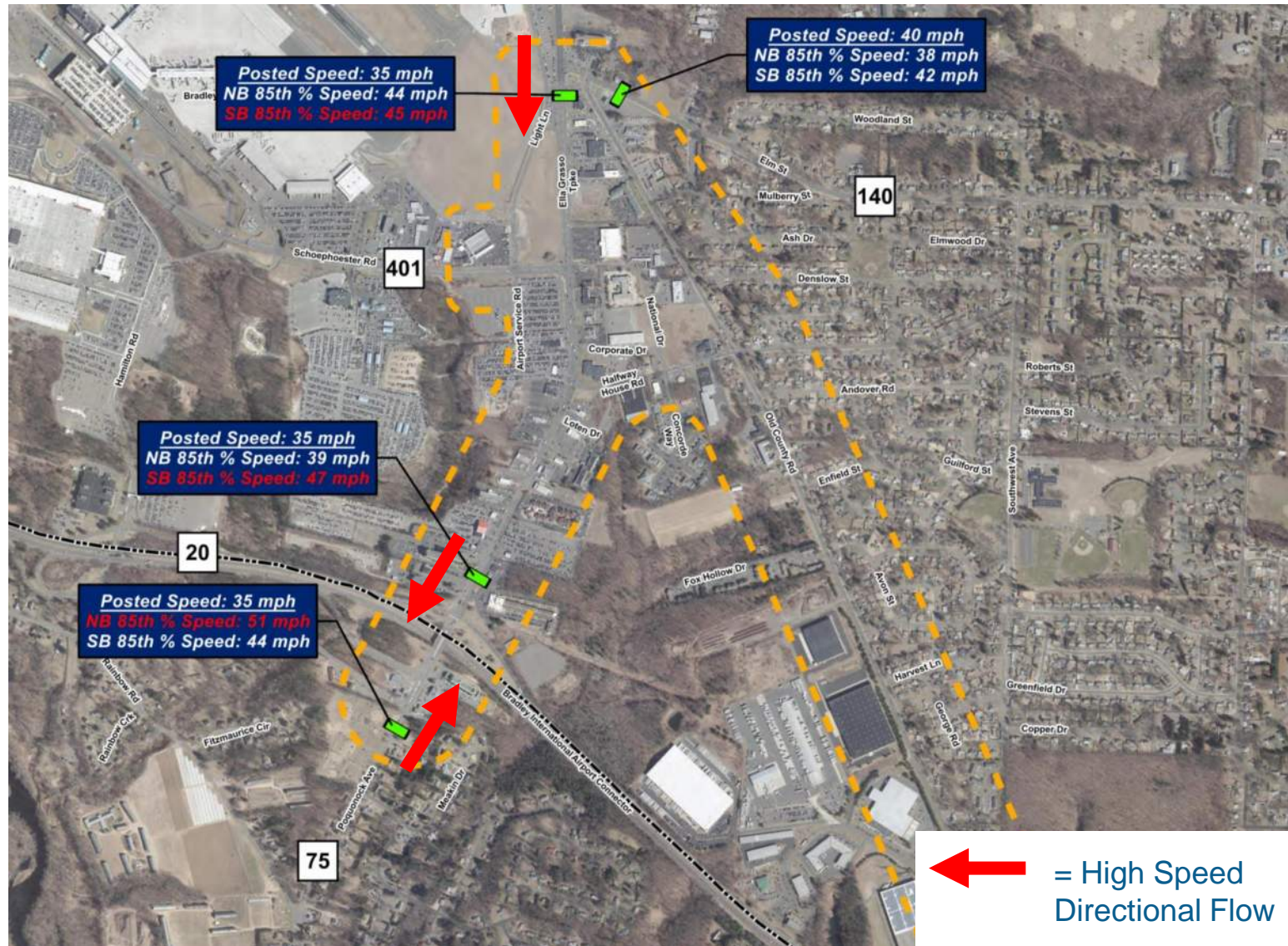
# ROUTE 20 HISTORICAL ADT



# OTHER STUDY ROADWAYS HISTORICAL ADT



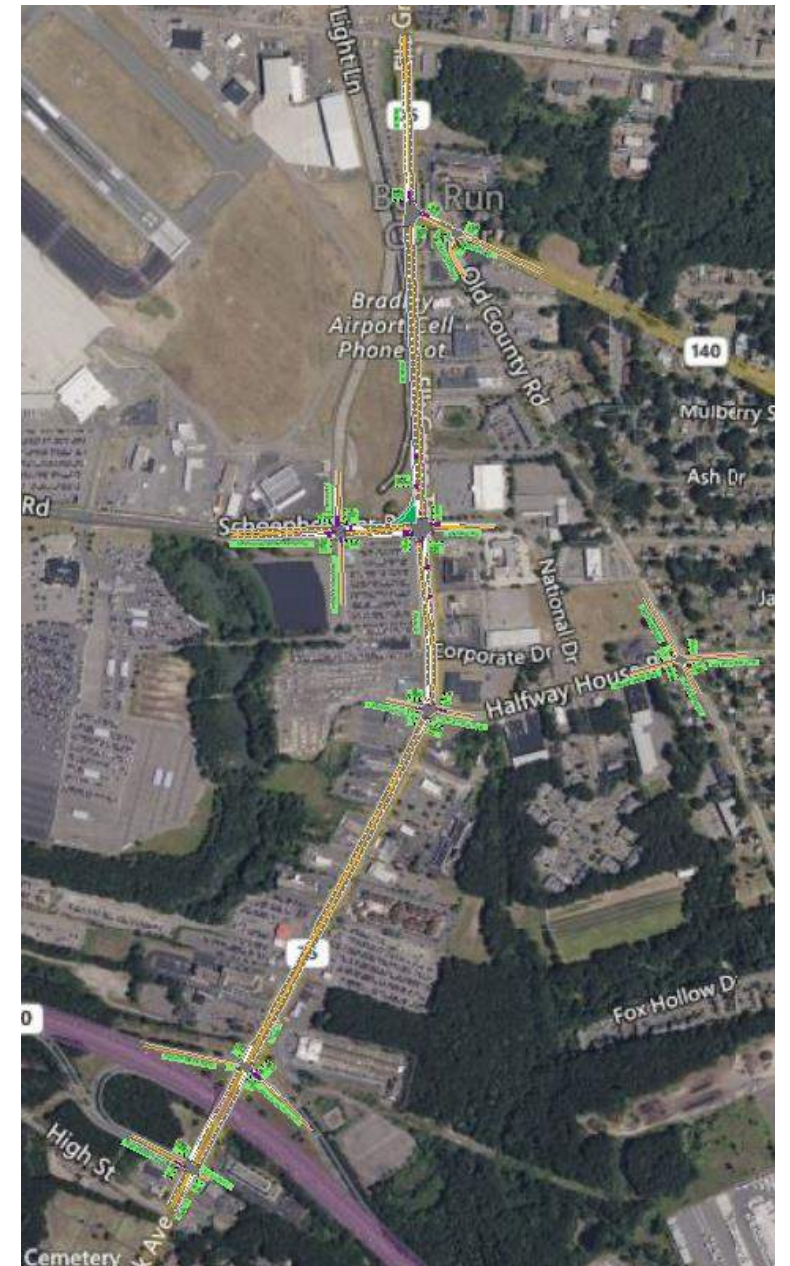
# TRAVEL SPEEDS





# TRAFFIC OPERATIONS ANALYSIS

- **Two Analysis Periods**
  - Weekday Morning Peak Hour
  - Weekday Afternoon Peak Hour
- **Synchro 11 Traffic Analysis Software**
- **Traffic Model Inputs**
  - Balanced Intersection Turning Movement Counts
  - Existing Traffic Signal Timings
  - Intersection Geometry / Lane Use
- **Analysis Results**
  - Level of Service (LOS): Average Delay (sec/vehicle); A – F Grading System
  - v/c ratio: volume carried versus total capacity
  - Queue – Length of Vehicles stopped at Intersections



# LEVEL OF SERVICE

- **LOS A** - Little to no delay
- **LOS B** - Desirable conditions with relatively low delay
- **LOS C** - Conditions with average delays
- **LOS D** - Influence of congestion more noticeable, delays still acceptable
- **LOS E** - High delay values, considered by many agencies to be the limit of acceptable delay
- **LOS F** - Unacceptable to most drivers with high delay; arrival rates exceed the capacity



**LOS A/B**

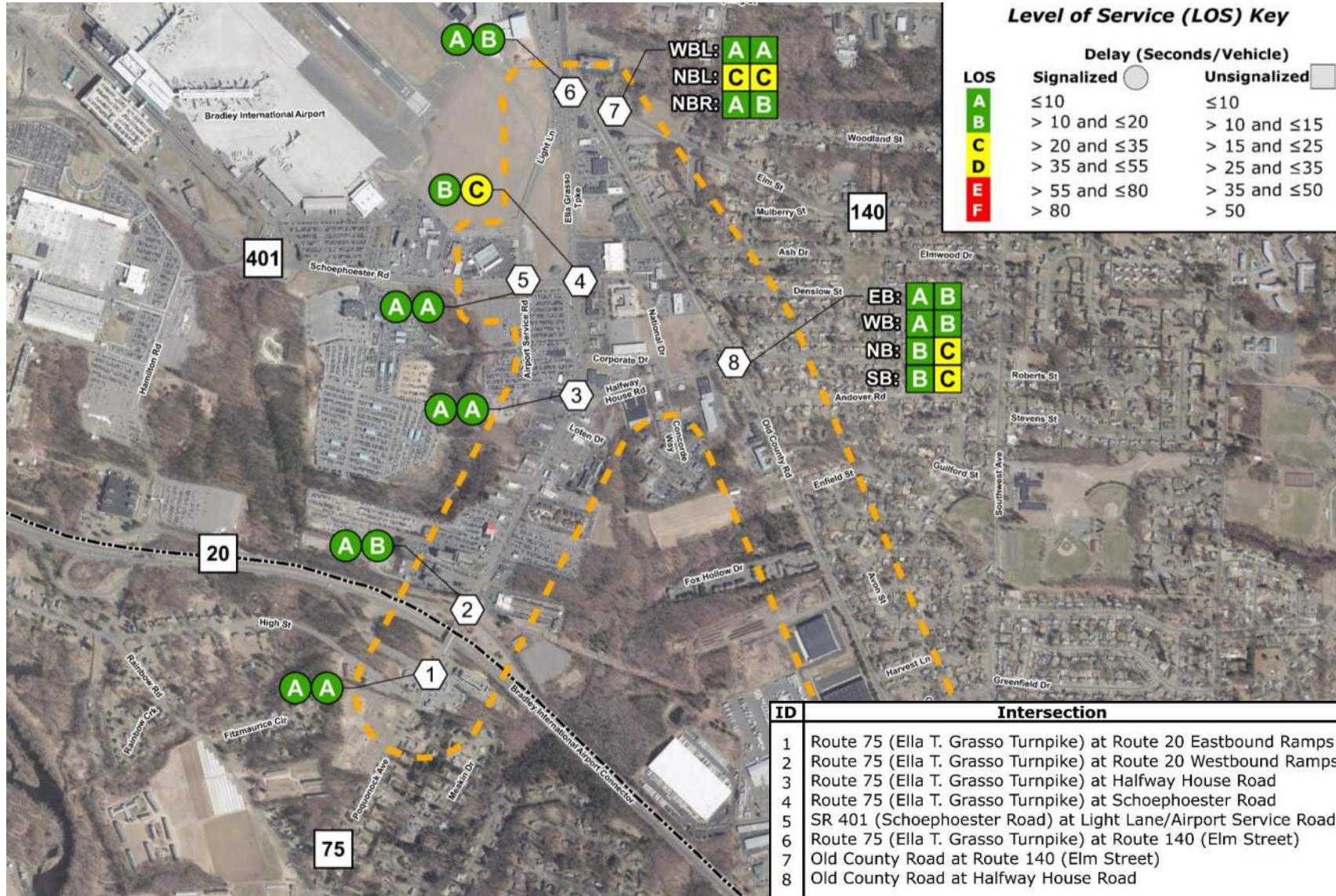


**LOS C/D**



**LOS E/F**

# 2022 TRAFFIC OPERATIONS



# SAFETY ASSESSMENT – HEAT MAP (2018 TO 2022)

## • High Crash Frequency Locations

- Route 75 at Schoephoester Road (1.78 crashes per MEV)
- Old County Road at Halfway House Road (1.28 crashes per MEV)

## • 60% of Crashes Occurred on Route 75 between Route 20 and Halfway House Road

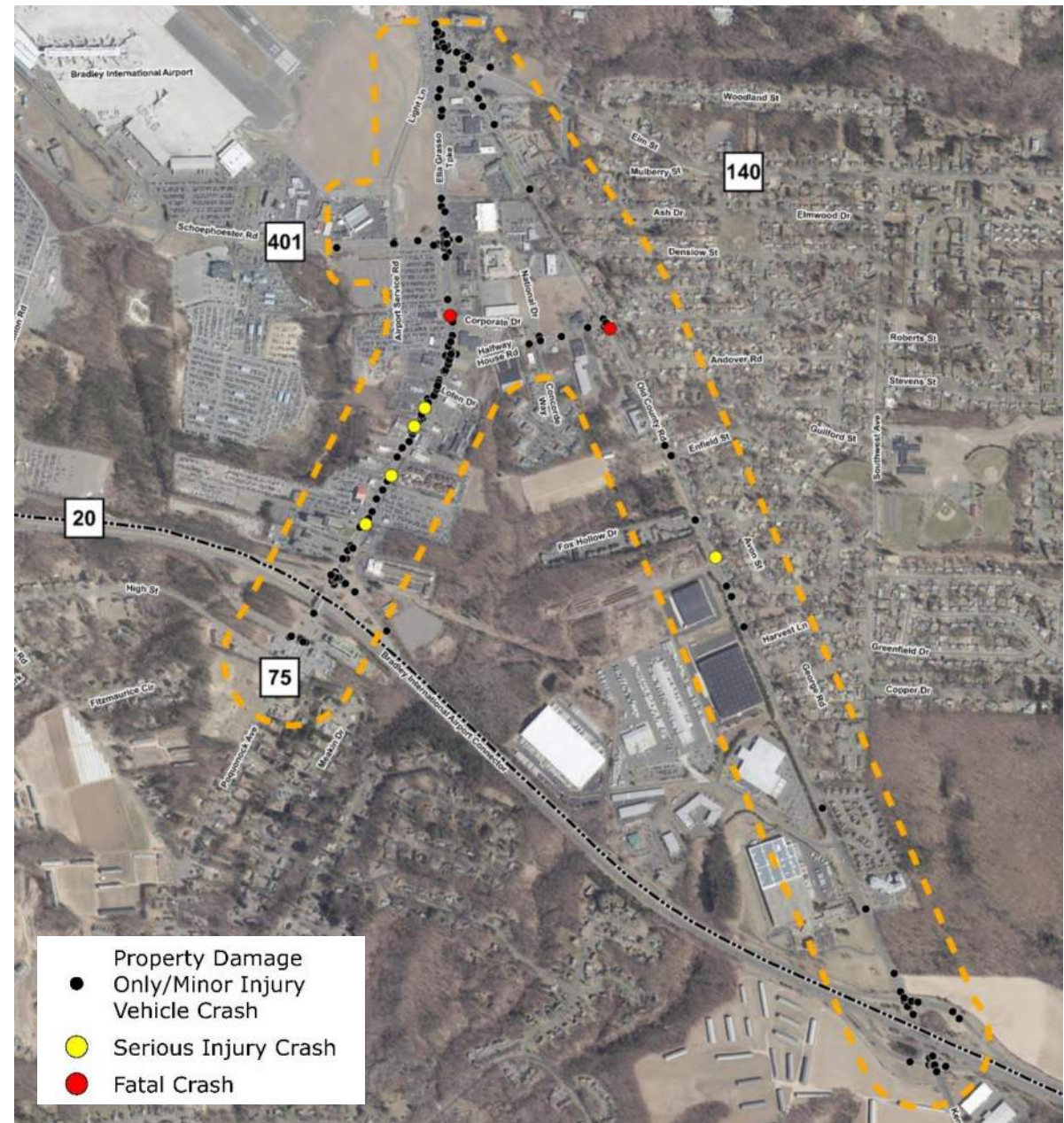
## • Crash Types

- 38% Rear-End
- 33% Angle
- 12% Sideswipe, Same Direction
- 7% Sideswipe, Opposite Direction



# SAFETY ASSESSMENT – CRASH SEVERITY (2018 TO 2022)

- **365 Total Crashes**
  - 358 Minor Injury/ Property Damage Only
  - 5 Serious Injuries
  - 2 Fatalities
- **2 Fatalities were Pedestrians**
- **4 of the 5 Serious Injury Crashes Occurred along Route 75 between Route 20 WB Ramps and Halfway House Road**



# SAFETY ASSESSMENT – PEDESTRIANS (2018-2022)

## • 6 Pedestrian Crashes

- 2 Fatalities
- 4 Serious Injuries

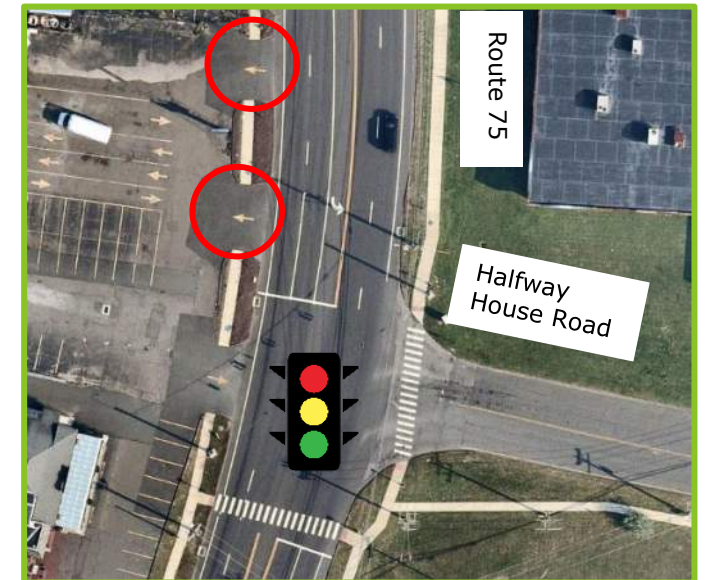
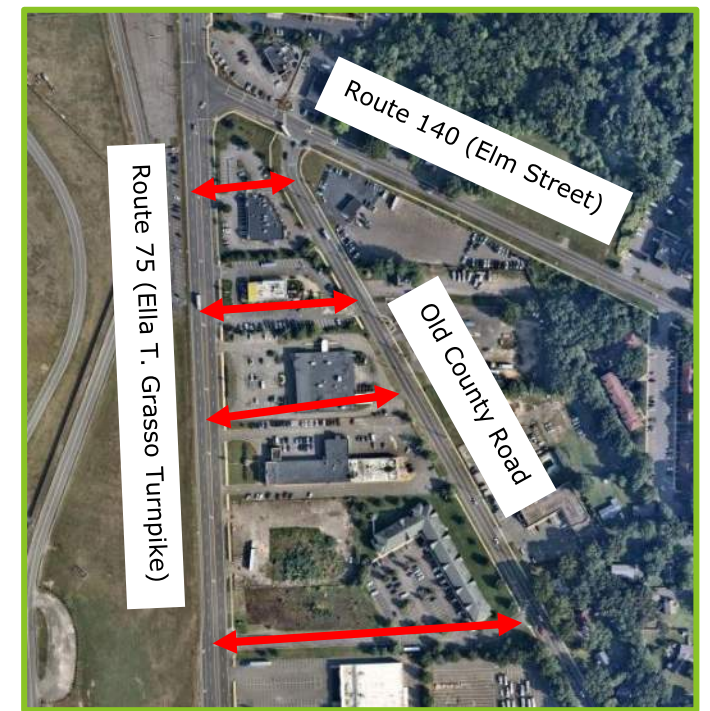
## • No Bicycle Crashes

Date	Type	Location	Contributing Factor	Injury
4/7/2018	Pedestrian	Route 75 Across from Pride Gas Station	Unknown	Suspected Minor Injury
4/25/2018	Pedestrian	Route 75 Across from the Old Friendly's	Unknown	Fatal Injury (Killed)
5/3/2018	Pedestrian	Old County Road at Halfway House Road	Unknown	Fatal Injury (Killed)
8/7/2018	Pedestrian	Route 75 at Double Tree Hotel	Under the Influence	Suspected Minor Injury
12/11/2018	Pedestrian	Route 75 at Laz Parking Driveway	Unknown	Possible Injury
10/1/2020	Pedestrian	Halfway House Road at Concorde Way	Unknown	Possible Injury



# ACCESS MANAGEMENT – KEY ISSUES

- Redundant Driveways
- Closely Spaced Driveways
- Poorly Delineated Driveways
- Driveways near Signalized Intersections
- Multiple Access Points for a Single Parcel
- National Drive and Corporate Drive Ownership & Access



# KEY ROADWAY & TRAFFIC ISSUES & DEFICIENCIES

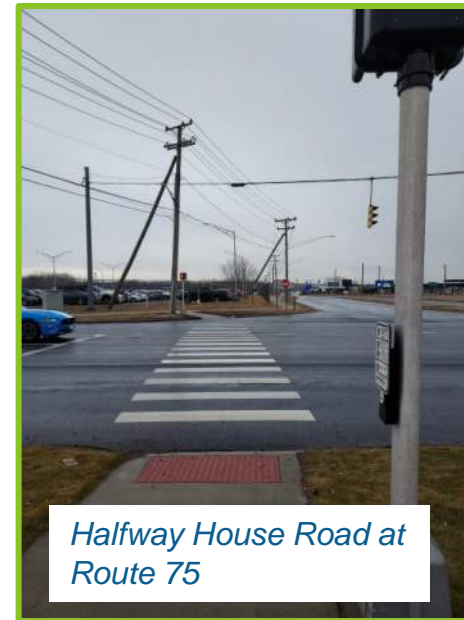
- High Travel Speeds, Lack of Protected Turn Lanes, Closely Spaced Driveways, High Driveway Density along Route 75
- High Travel Speeds along Old County Road
- Safety Concerns at Old County Road at Halfway House Road
- High Crash Rates at Route 75 at Schoephoester Road and Route 75 at Halfway House Road
- Access & Safety Concerns at Dunkin' Driveway on Route 140





# PEDESTRIANS, BICYCLISTS, & TRANSIT OVERVIEW

- Area includes pedestrian facilities and local CT transit bus service
- Limited facilities for bicycling & limited trail infrastructure
- LOTCIP Project No. L165-001 and recent signal upgrades made significant pedestrian improvements



*Halfway House Road at Route 75*



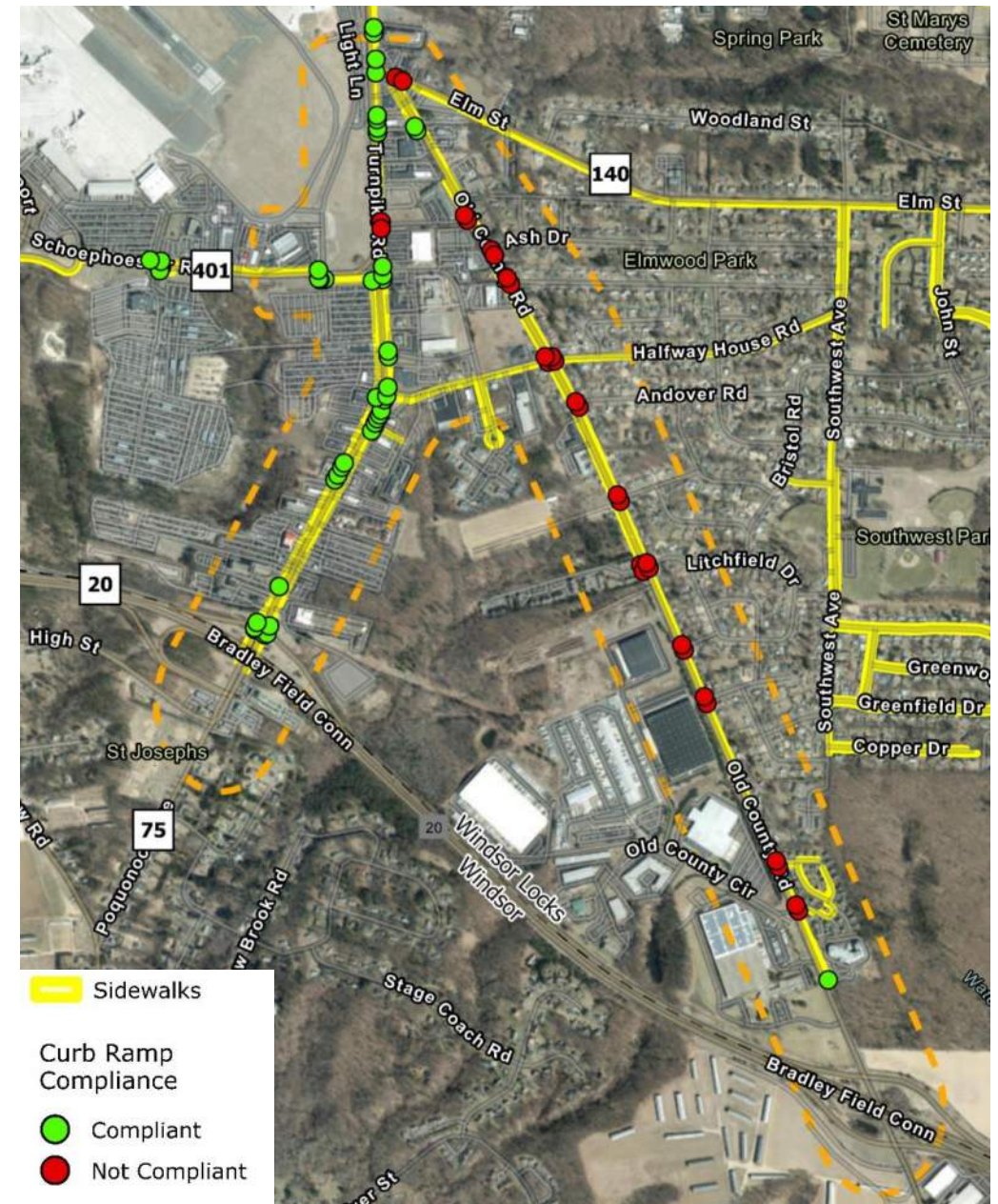
*Old County Rd 5' shoulders*



*Schoephoester Rd sidewalks*

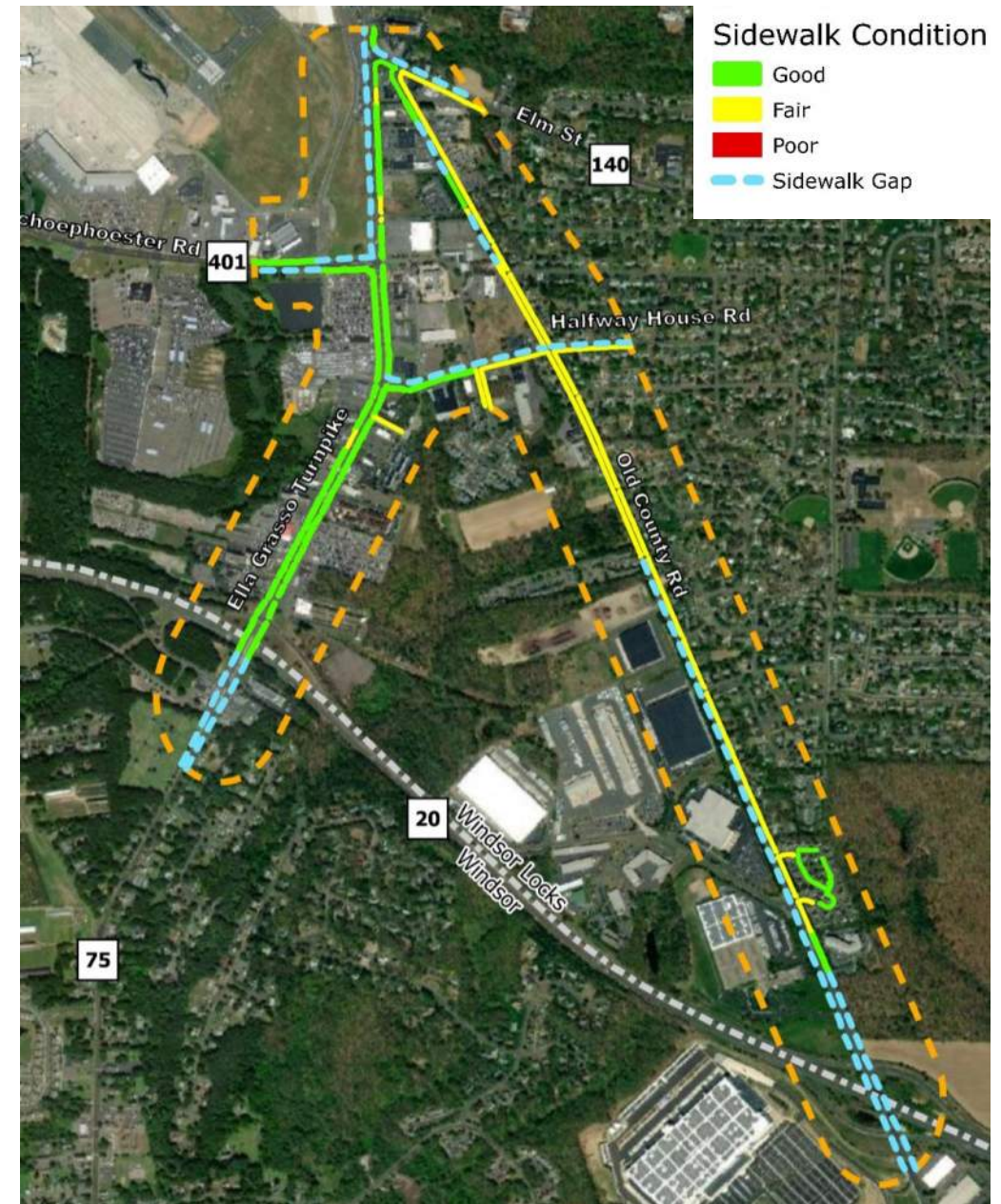
# PEDESTRIAN INFRASTRUCTURE: SIDEWALKS & RAMPS

- Generally good sidewalk network
- LOTCIP Project No. L165-001 filled many sidewalk gaps on Route 75 and Schoephoester Road
- Along with LOTCIP Project: pedestrian accommodations at signals and upgraded curb ramps along Route 75
- Non-compliant curb ramps on Old County Road



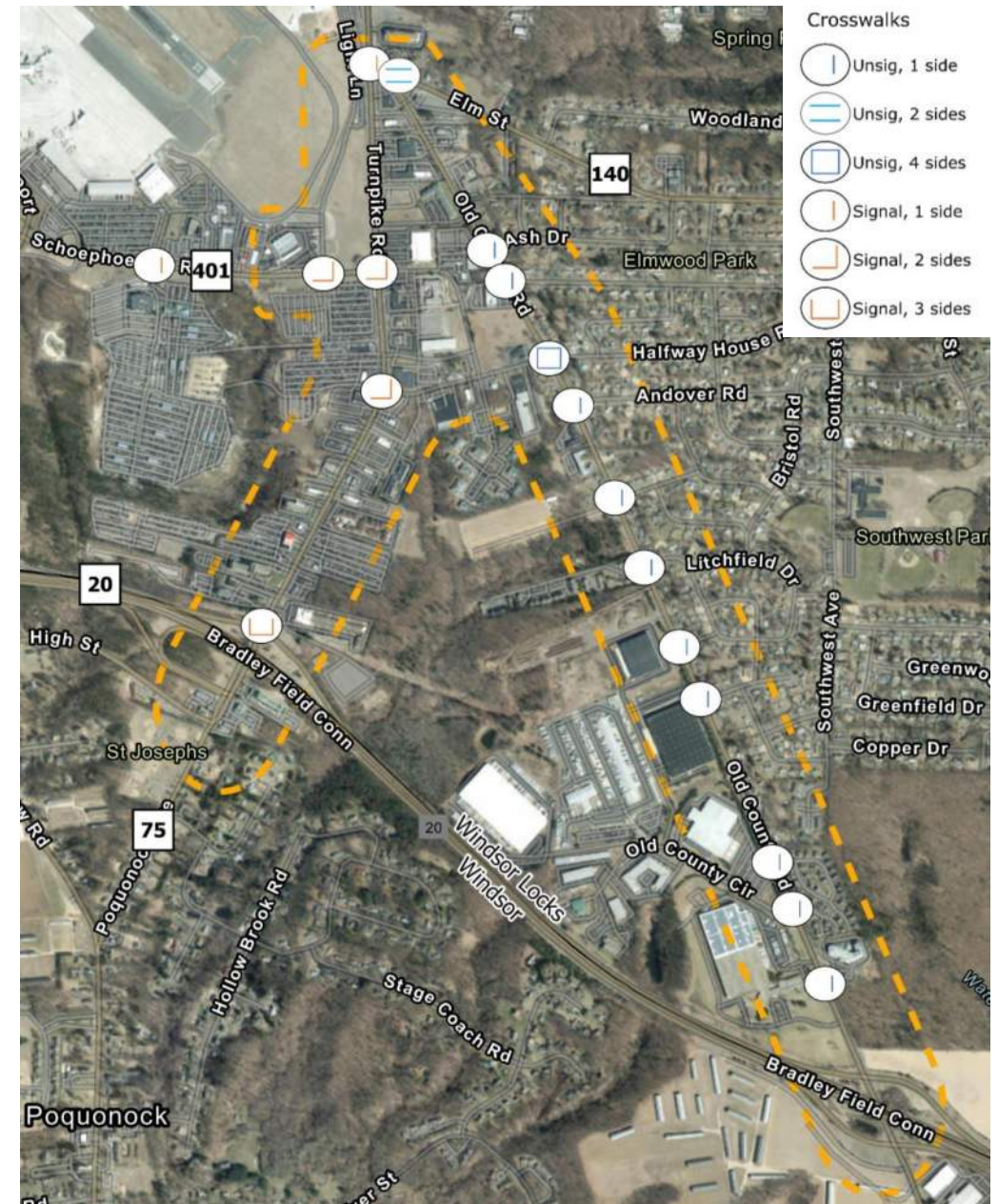
# PEDESTRIAN INFRASTRUCTURE: SIDEWALK CONDITIONS

- Sidewalks in good to fair condition
- Sidewalk gaps still exist on Route 75, Old County Road, Halfway House Road, Schoephoester Road
- Lack of accessible paths to adjacent land uses



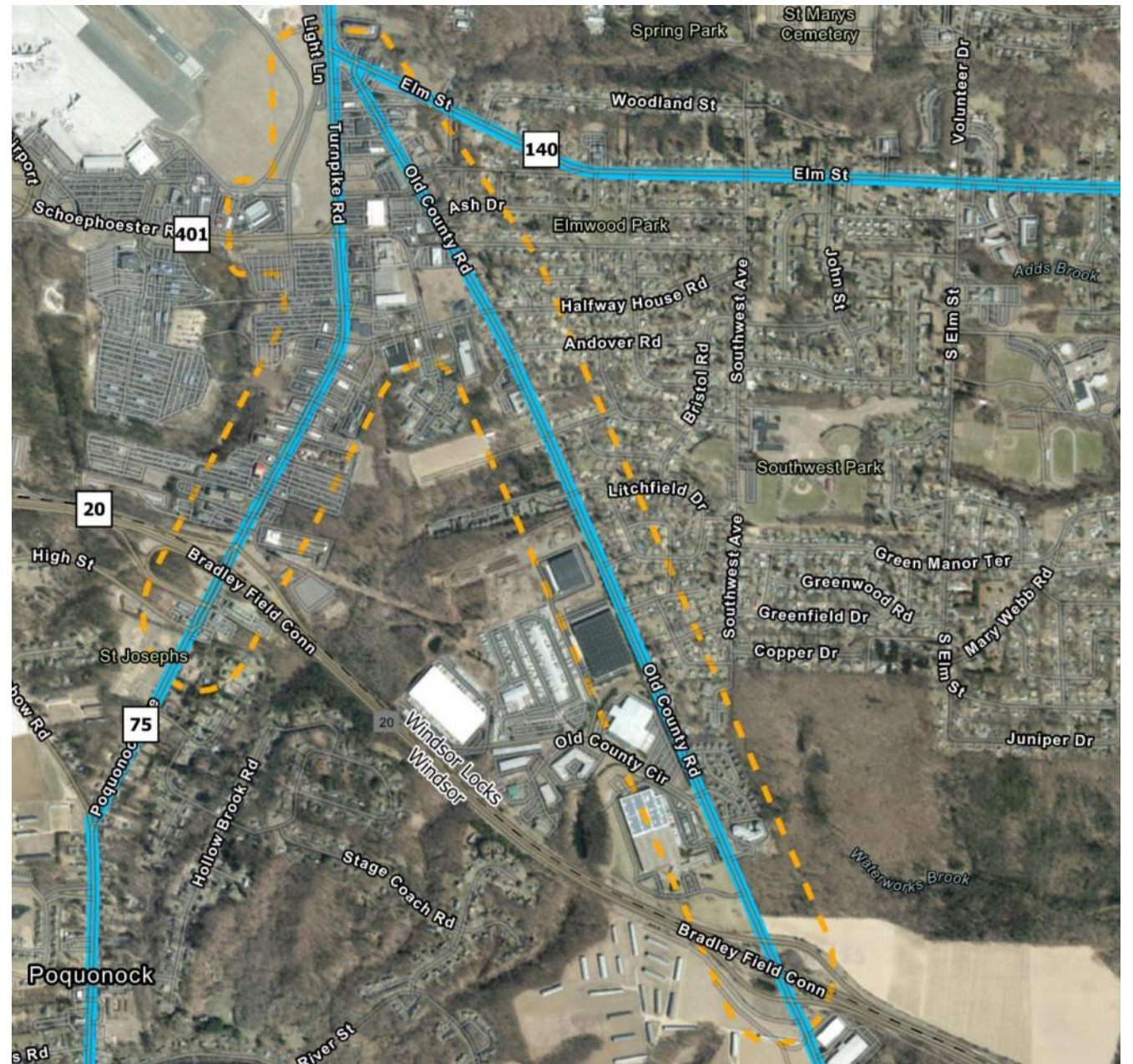
# PEDESTRIAN INFRASTRUCTURE: CROSSWALKS

- Crosswalks provided at major signalized and unsignalized intersections, across side streets on Old County Rd
- Long distances between mainline road crossings
- Some crosswalks not restriped after recent repaving



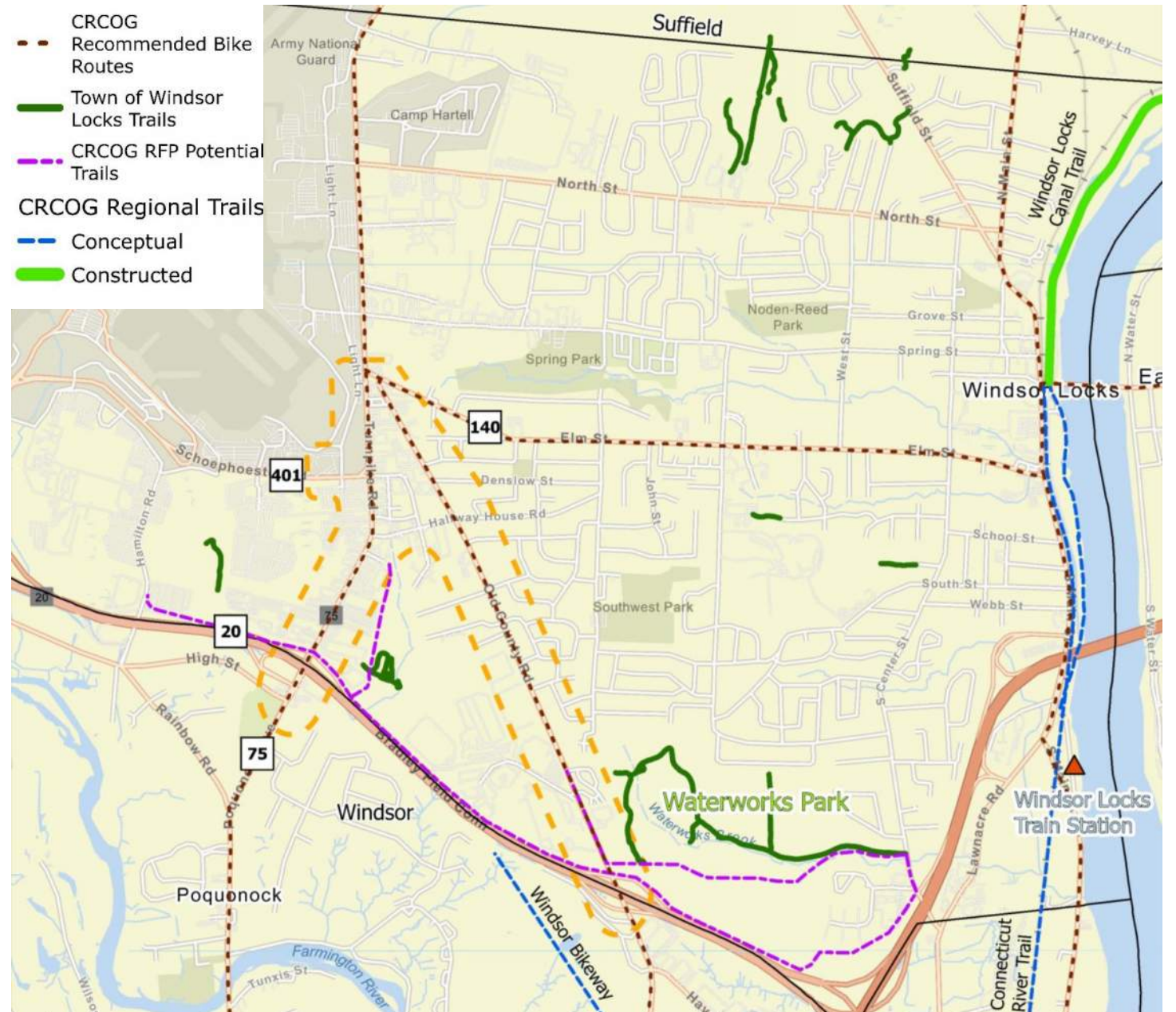
# BICYCLE INFRASTRUCTURE

- **CRCOG Pedestrian & Bicycle Plan (2015 Update)**  
– recommended routes
- **Narrow shoulder width on Route 75 and Schoephoester Rd not suitable currently**
- **Generally adequate shoulder width on most of Old County Road (5')**



# EXISTING AND PLANNED TRAILS

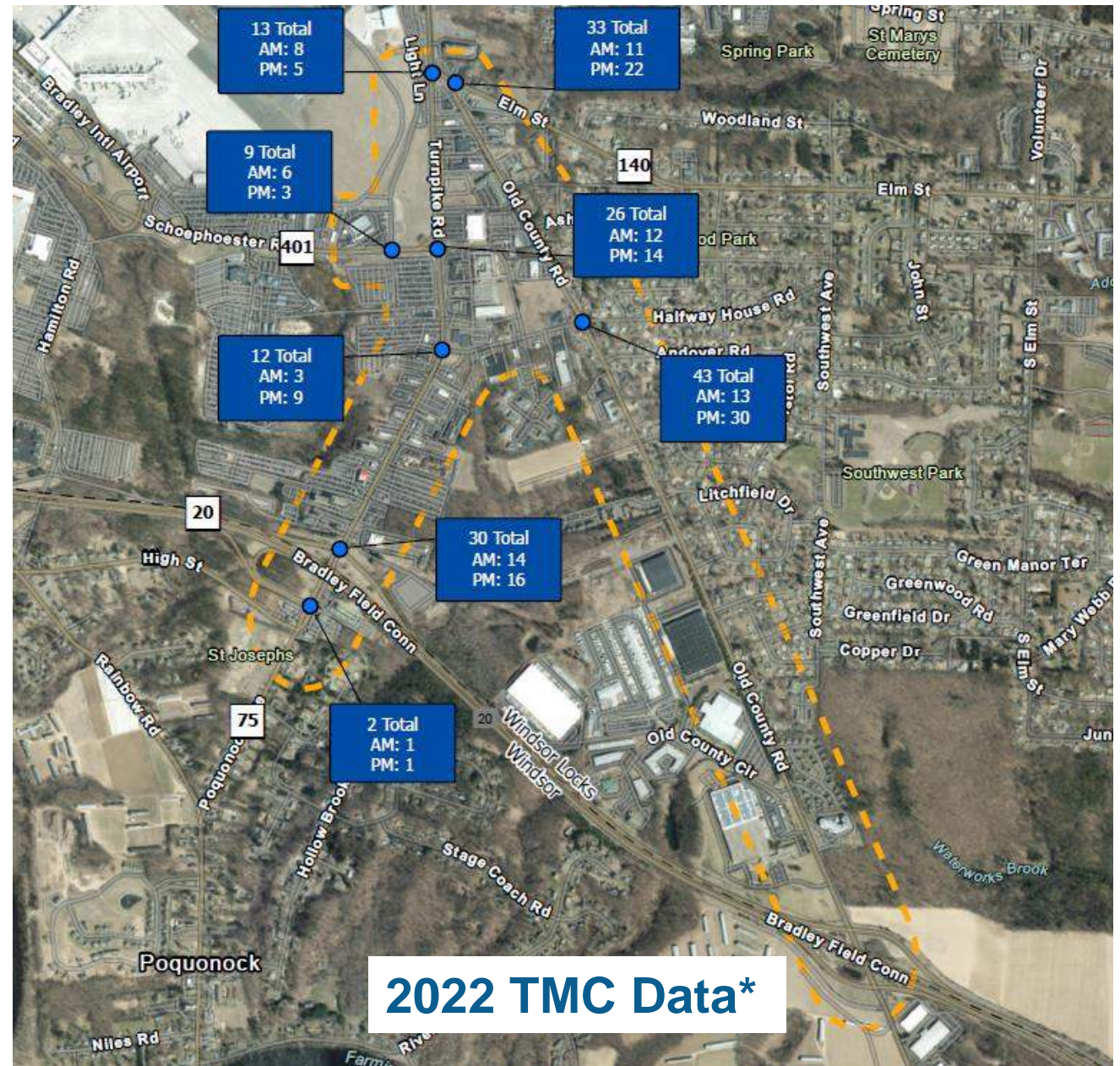
- Walking trails within Waterworks Park and around different parts of Windsor Locks
- Windsor Locks Canal Trail northeast of study area
- Some proposed trail alignments in town/study area but lack connectivity
- Routes to be explored along Route 20 right of way and behind properties along Route 75



# PEDESTRIAN AND BICYCLE COUNT DATA

Location	Date	Pedestrians	Bicycles	Total
Route 75 & National Drive / Schoephoester Road	9/13/2017	0	3	3
Route 75 & National Drive / Schoephoester Road	9/15/2017	24	1	25
Route 75 & National Drive / Schoephoester Road	9/15/2020	4	2	6
Route 75 & Halfway House Road	9/17/2020	6	2	8

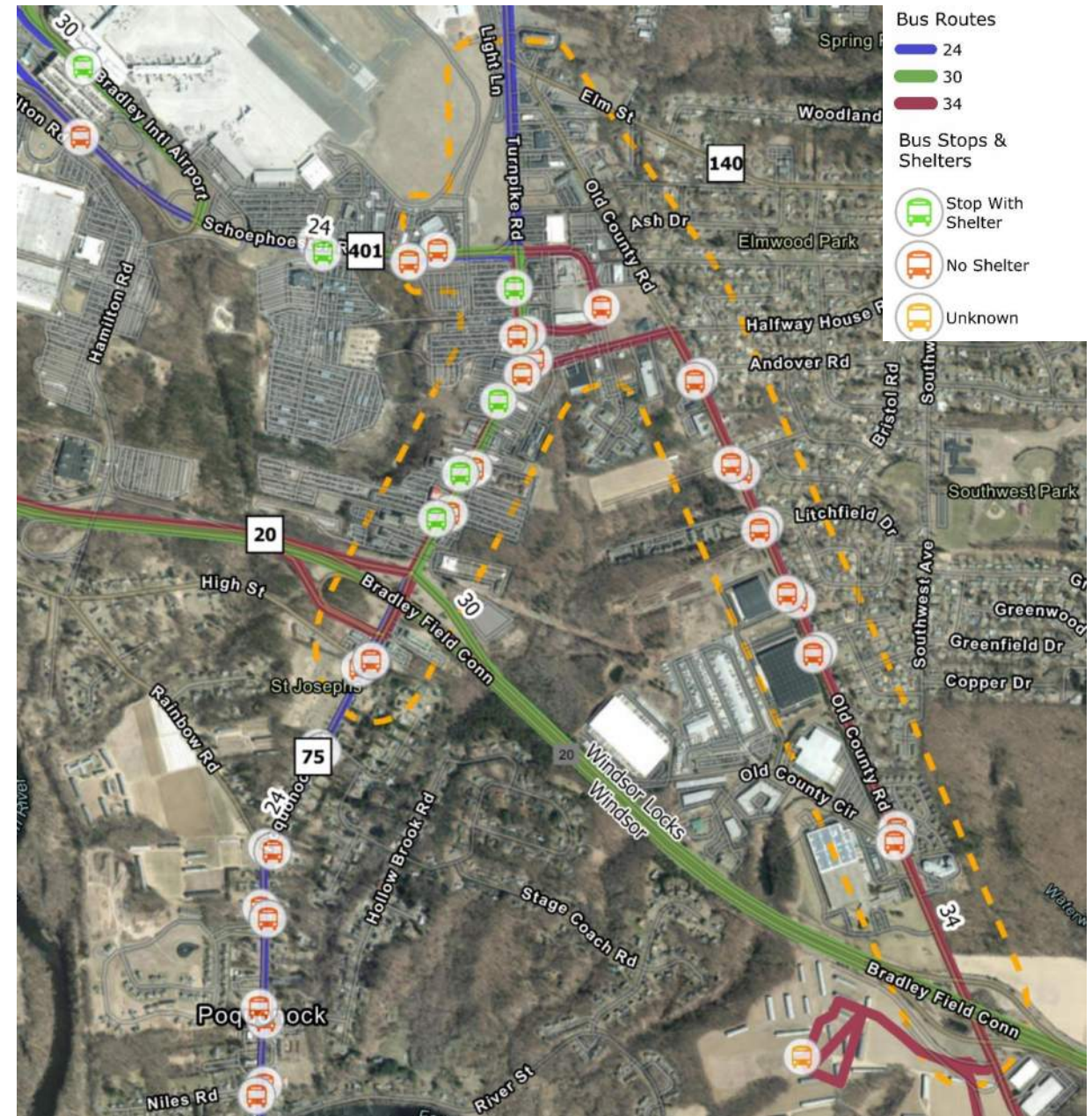
## 2017 & 2020 CROCOG Manual Counts



\*No cyclists counted in data

# TRANSIT INFRASTRUCTURE

- CT transit Routes 24, 30, 34
- Route alignments recently adjusted to better serve areas; Route 24 started August 2021
- Shelters at several locations





# TRANSIT RIDERSHIP DATA

- CT transit daily average ridership
- New Route 34 has seen significant ridership increase
- Route 30 ridership still below pre-pandemic levels

CTtransit Ridership Data

Route	CTtransit Average Daily Ridership by Fiscal Year (July-June)				
	FY 2019	FY2020	FY2021	FY2022	FY2023***
24*	N/A	N/A	N/A	48	79
30	477	334	213	209	307
34	N/A**	222	162	324	493

\*Bus Route 24 did not begin operation until FY2022.

\*\*Until FY2020, data for Bus Route 34 was combined with Routes 32 and 36.

\*\*\*FY2023 Data is incomplete.

# KEY PEDESTRIAN, BICYCLE & TRAIL DEFICIENCIES

## • Pedestrian

- Sidewalk gaps on Route 75, Old County Road, Halfway House Road, Schoephoester Road
- Long crossing distances & distances between crossings, some crosswalks not restriped
- Non-compliant curb ramps on Old County Road
- Lack of accessible paths to adjacent land uses

## • Bicycles

- No bike lanes or paths & most roads less suitable for biking
- Lack of shoulders coupled with high speeds, high traffic volumes, and truck traffic
- No bike parking observed

## • Trails

- Limited trail infrastructure, lack of connectivity between proposed trails



*Old County Rd sidewalk gap*



*Schoephoester Rd shoulders*

# KEY TRANSIT DEFICIENCIES

- Some bus stops lack sidewalks
- Most bus stops do not have shelters or other amenities
- Low frequency headways
- Must walk long distances to find safe crossing



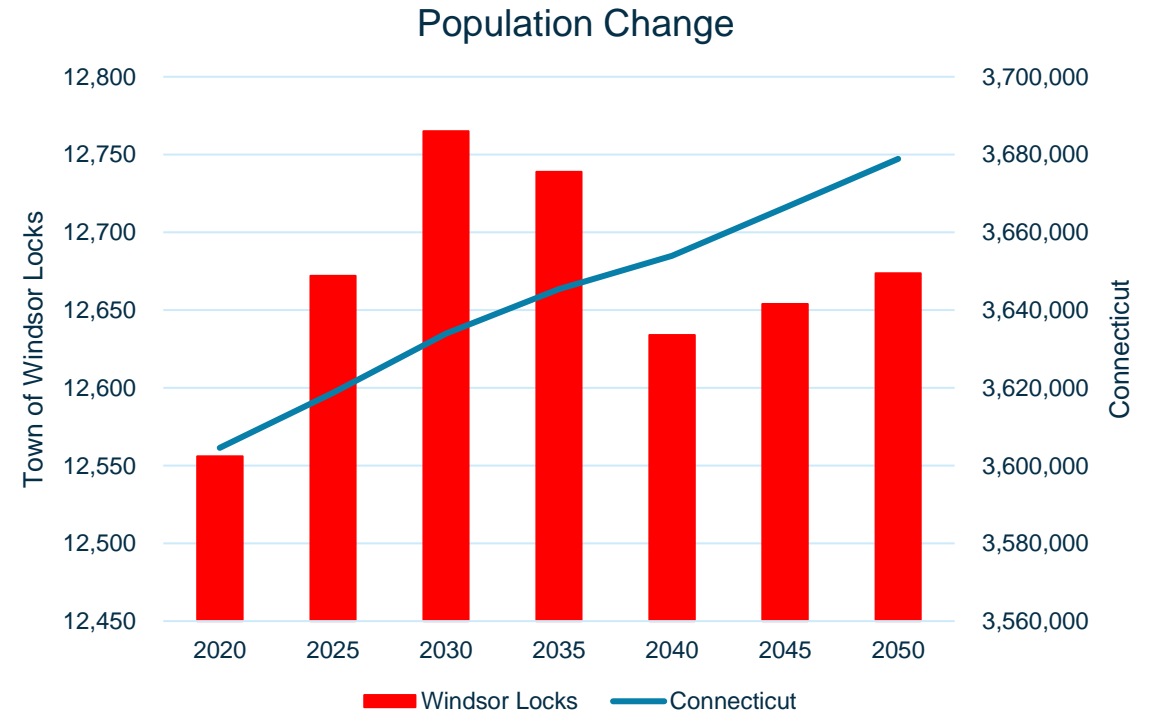
# MARKET ANALYSIS: POPULATION & HOUSEHOLDS

## • Population (2022 – 2027)

- Relatively stable population in near term
  - With some growth among those aged 35 to 54 (26% of 2027 Town population)
  - And those 65 and older (26% of 2027 Town population)

## • Households (2022 – 2027)

- Limited projected overall growth
  - High concentration of owner-occupied housing (75%) = opportunities for diversification to increase renter-occupied housing = mixed-use development opportunities
- Owner median value (2027) of \$220,022
  - Approximately 54% of housing valued \$200K to \$400K



Windsor Locks = 0.94%    Statewide = 2.06%

# MARKET ANALYSIS: INCOME & EDUCATION

## • Income (2027)

- Average household income of \$110,142 compares well to Hartford County at \$128,247
  - Projected (2022 – 2027) growth of 19% in households earning more than \$100K
  - By 2027 these households will represent 42% of Town of Windsor Locks households which compares well against Hartford County representation of 45%

## • Educational Attainment (2020)

- Adult population (25 and older) = 56% with some level of college or college degrees
  - Somewhat less than Hartford County at 64%
  - Indicates a strong Town base of educated residents = important as many businesses and developers view this as a “proxy” for a skilled and talented workforce

# MARKET ANALYSIS: UNEMPLOYMENT & WAGES

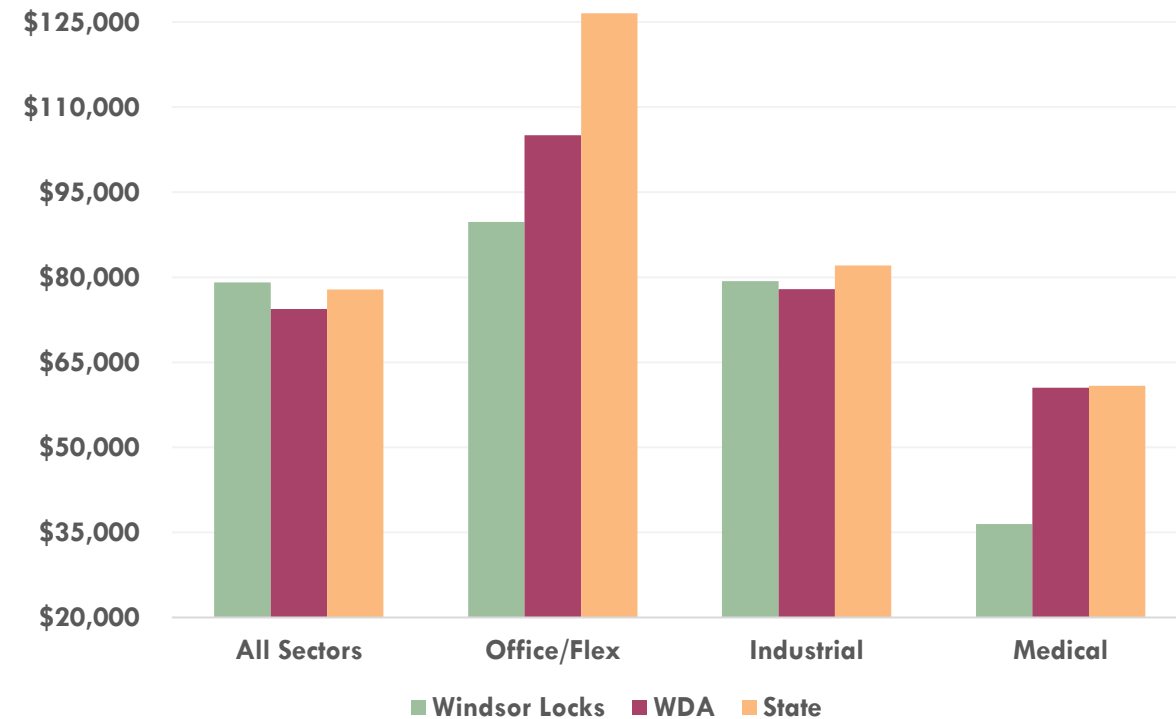
## • Unemployment (2017 – 2022)

- Post COVID-19, unemployment rates have returned to standards of “full employment”
  - Town of Windsor Locks = 4.9% North Central WDA = 5.1% Connecticut = 5%

## • Average Annual Wage (2021)

- Comparable average annual wage across all industry sectors = \$74.5K to \$79.1K
- Town of Windsor Locks a “mixed-bag” when considering sectors by type of space utilized
  - Most notable for average annual wage in health care (medical space) related sector

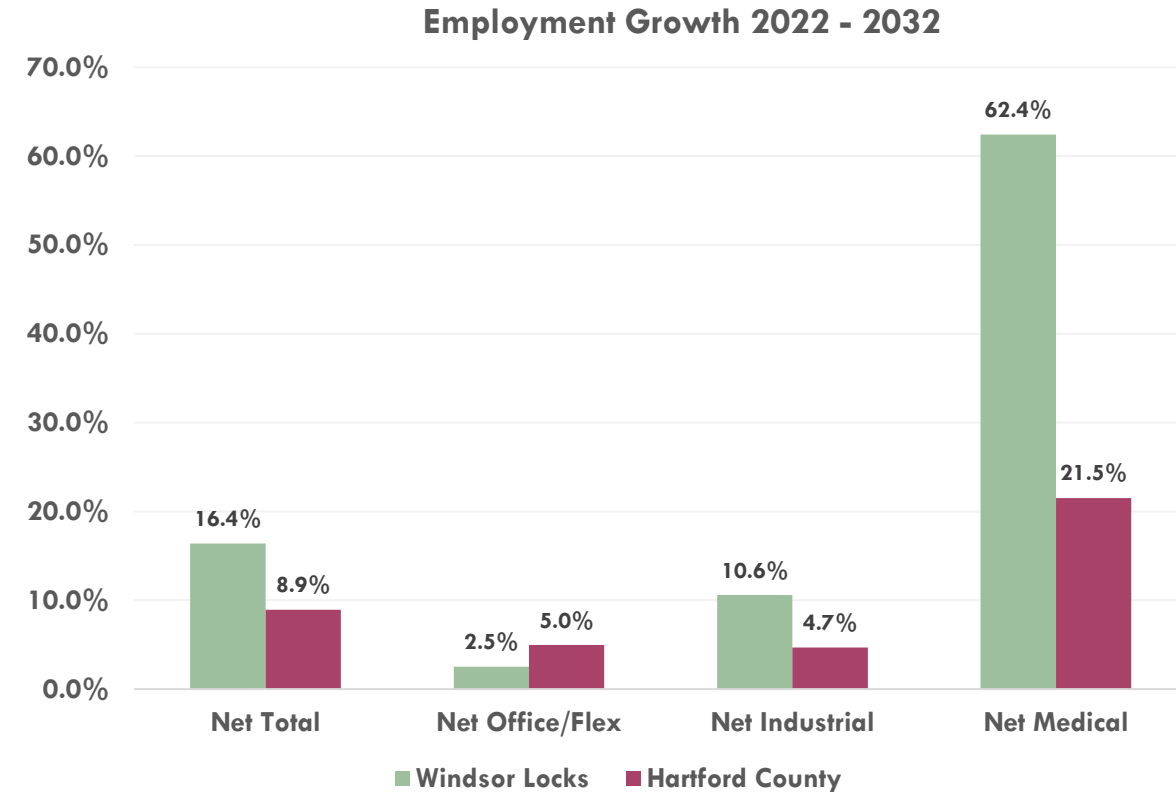
Comparative Average Annual Wage 2021



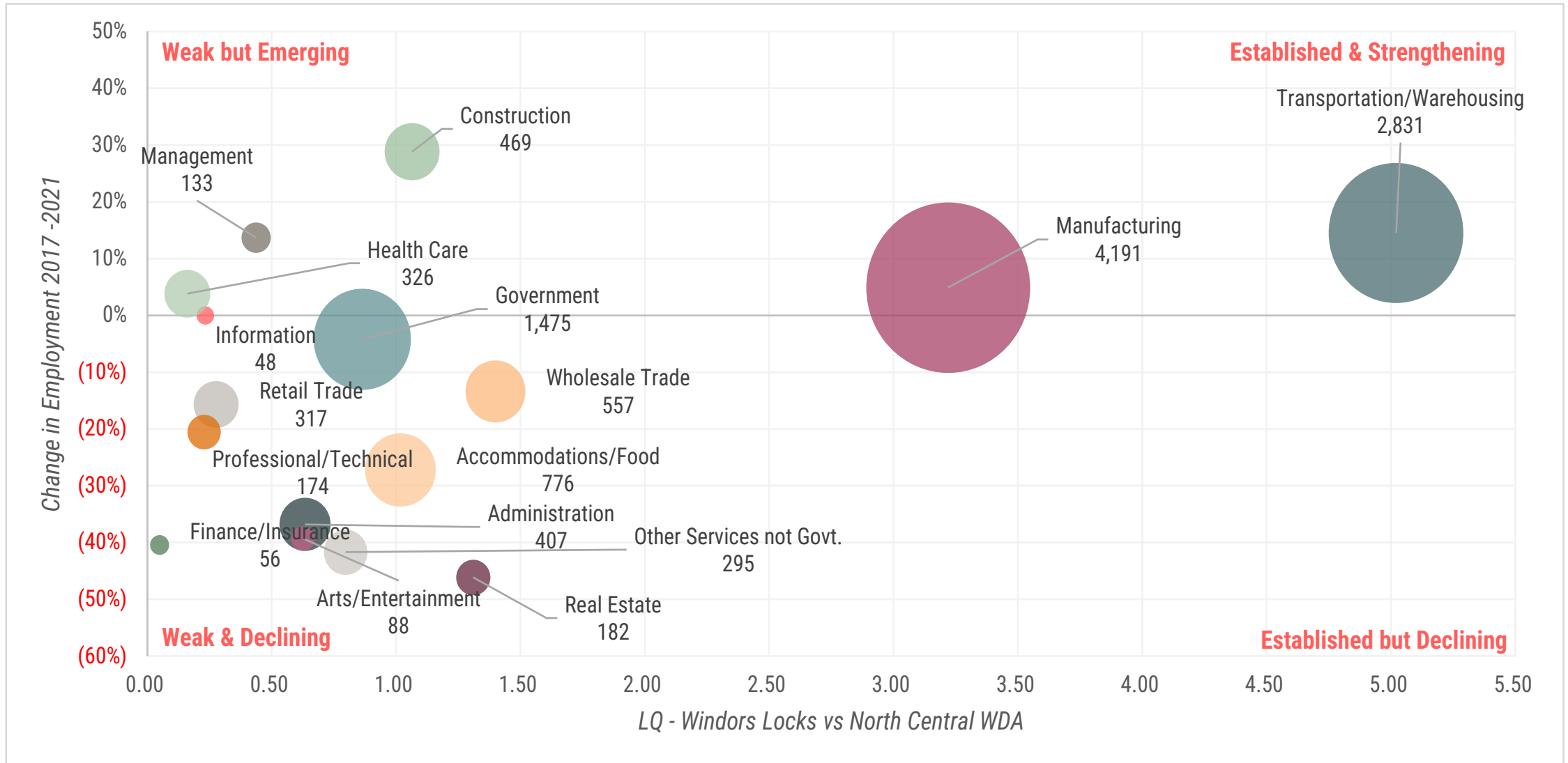
# MARKET ANALYSIS: EMPLOYMENT

## • Employment (2022 - 2032)

- Projected net employment growth of 1,977 jobs for the Town of Windsor Locks = 16.4%
  - Hartford County = 48,310 jobs (8.9%)
- Projected net employment growth rates by type of space utilized are greater in the Town
  - The absolute numbers are less = newly built space (SF) in the Town improved by capturing growth from Hartford County
  - Combined 3 use sectors for Town = net increase of 1,838 jobs
  - Combined 3 use sectors for County = net increase of 31,427 jobs



# MARKET ANALYSIS: EMPLOYMENT

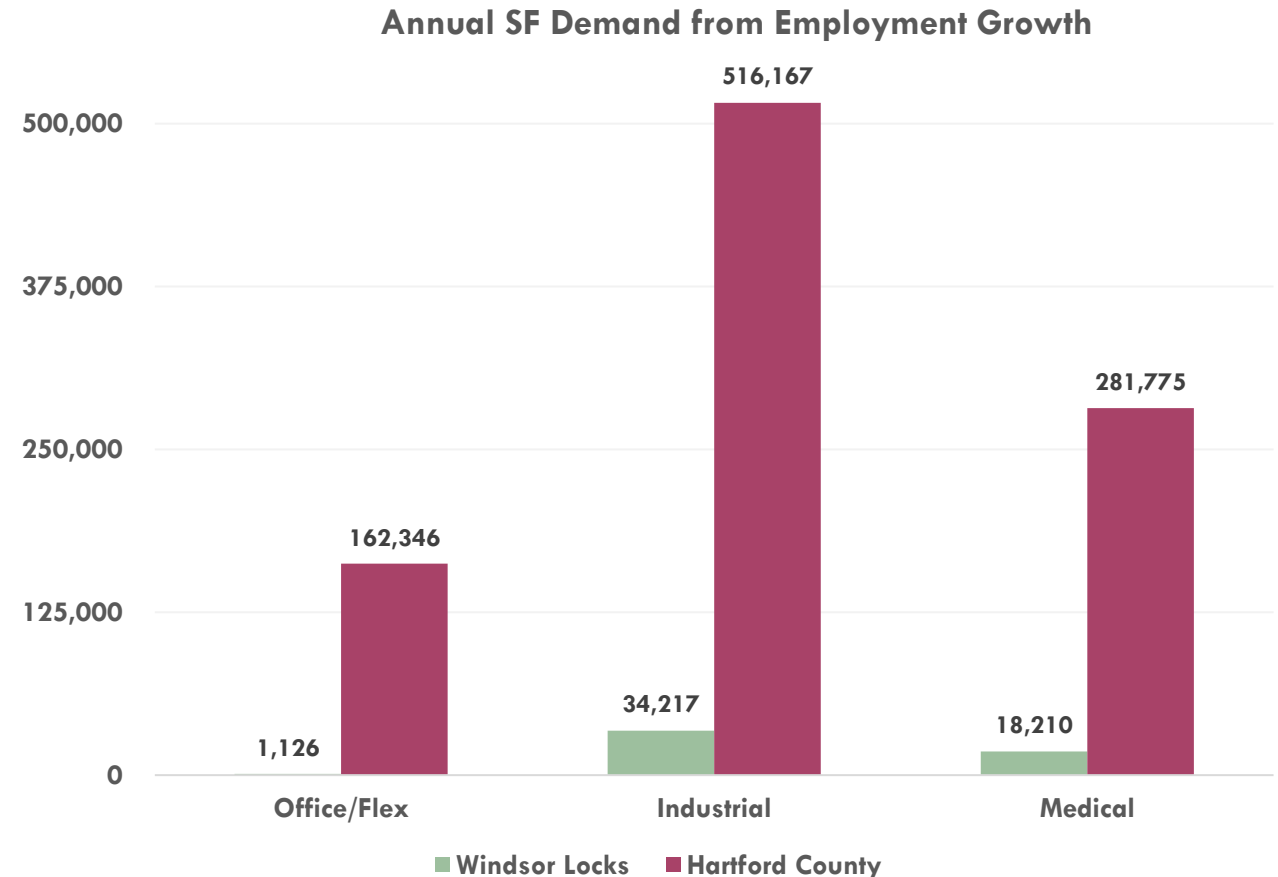




# MARKET ANALYSIS: DEVELOPMENT SPACE

## • Projected Space Demands

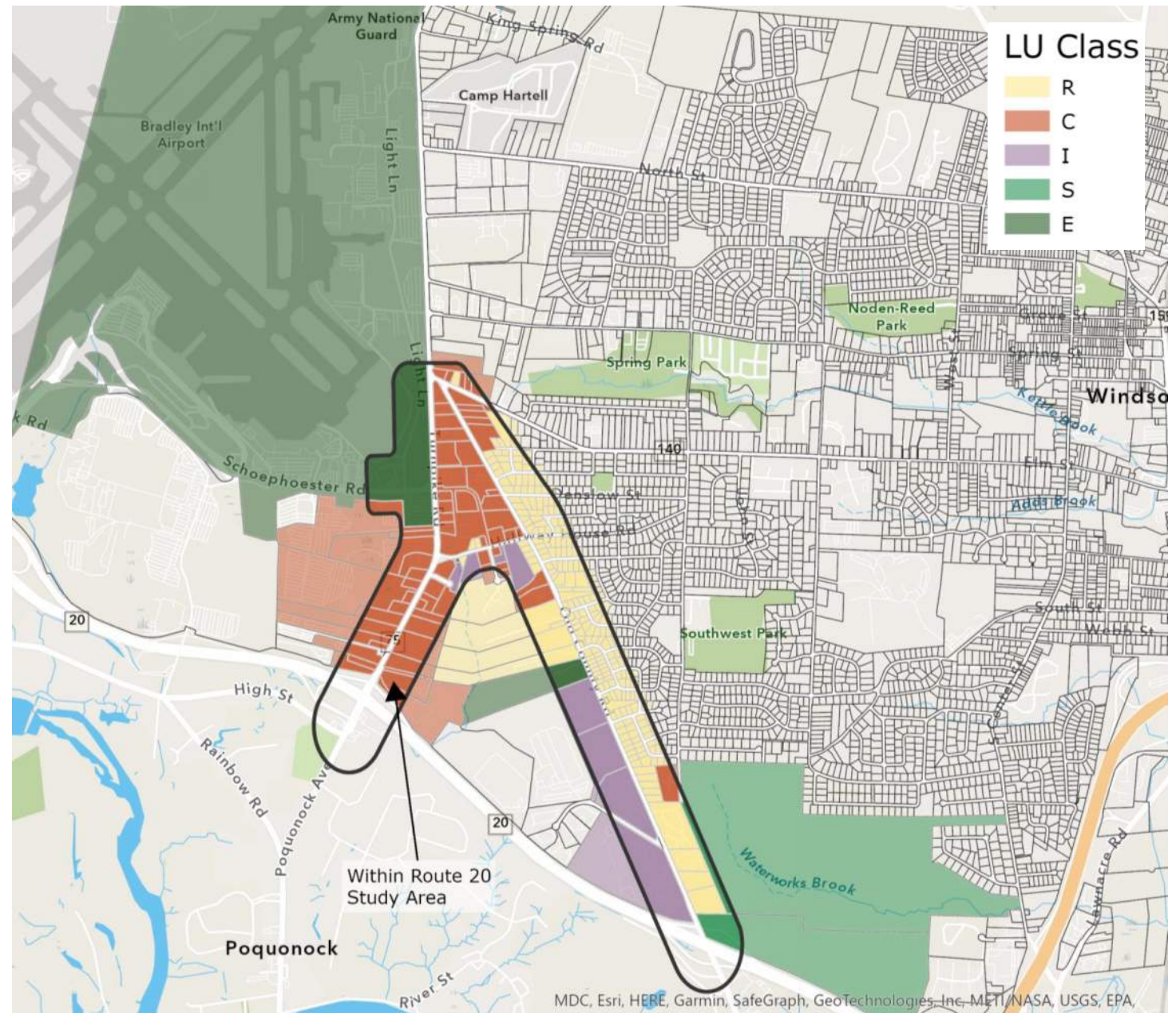
- Net employment growth = annual demand for 53,702 SF in Town
  - Hartford County = 1.23M SF
- Increased development in Town = garnering a larger share of County
  - Not all demand = newly built space
  - Dependent on available sites, access, appropriate zoning and other regulations
  - Developer's capacity to make the project "pencil out"
- Townwide retail demand per 100 households = 6,950 SF



# LAND USE

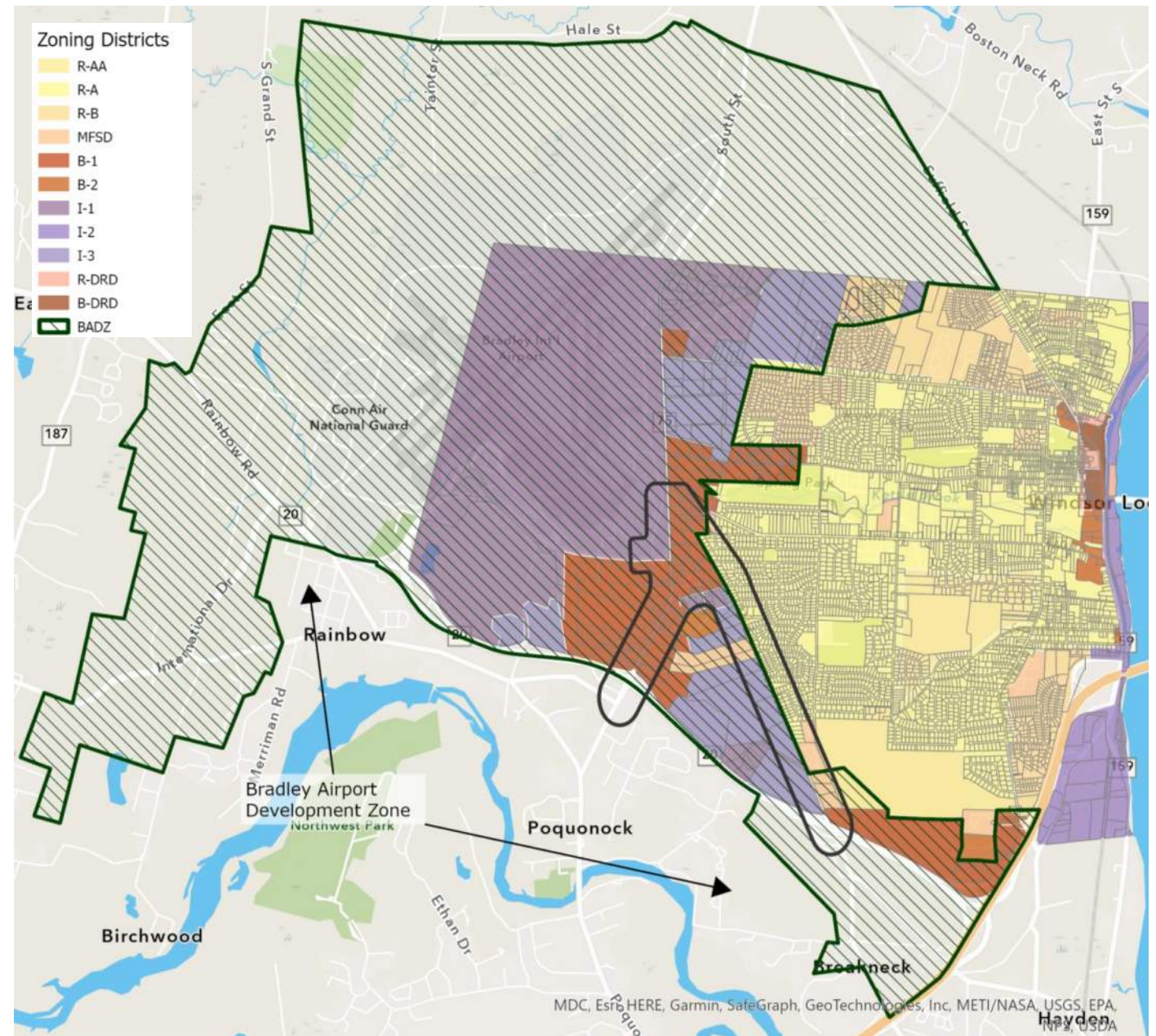
- Total 1,805-acres, within “clipped” study 355-acres (20%)
  - “Clipped” high concentration of commercial and industrial use = 57% combined

Land Use Category	Total Acres	% of Total	Clipped Acres	% of Clipped
Residential	151.6	8%	96.4	27%
Commercial	247.9	14%	142.9	40%
Industrial	84.5	5%	60.4	17%
Exempt	1,030.9	57%	44.5	13%
Special	290.5	16%	11.2	3%
<b>Totals</b>	<b>1,805.4</b>		<b>355.4</b>	



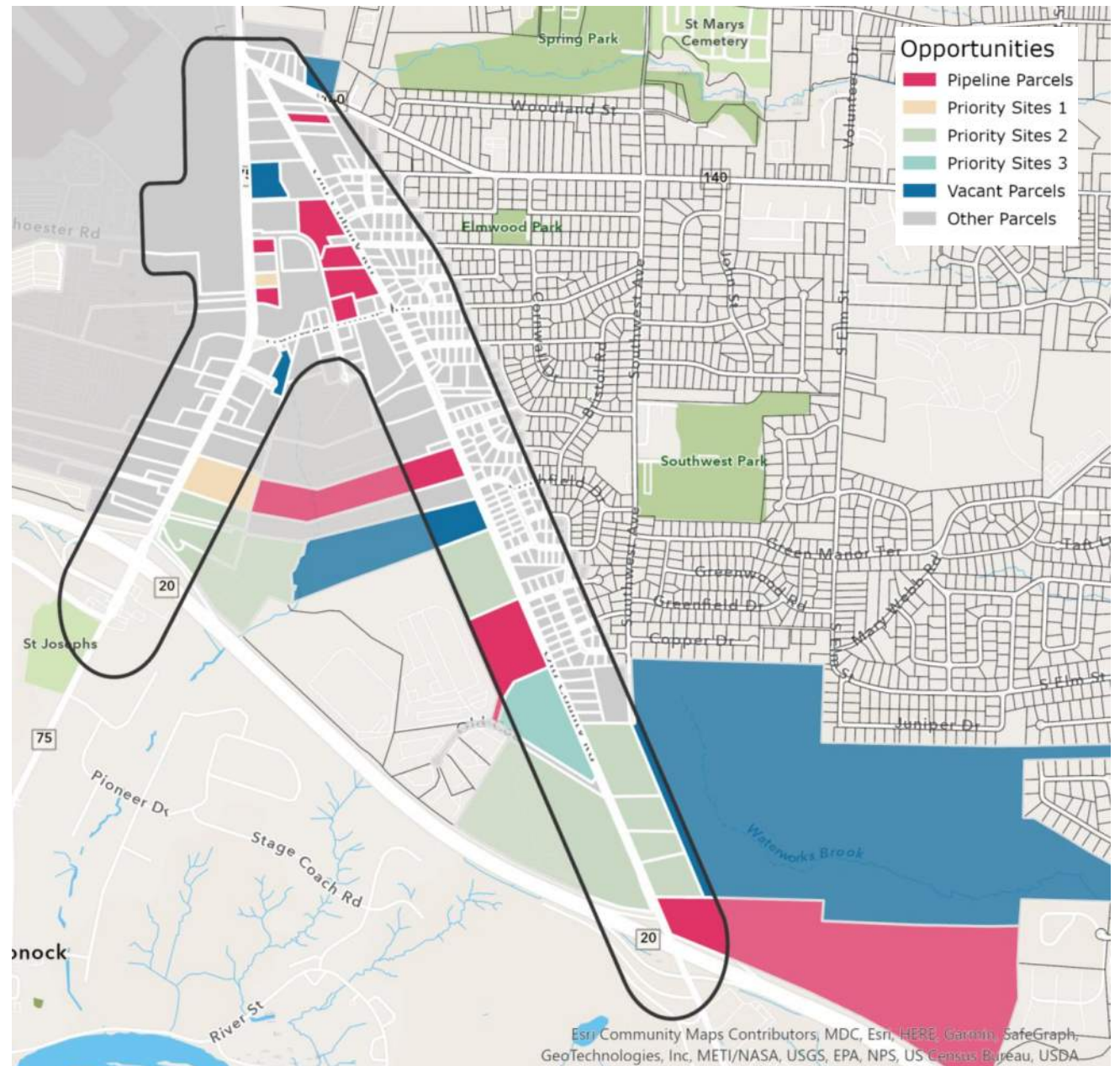
# ZONING

- Multiple zoning districts allowing for a wide variety of uses
- Bradley Airport Development Zone (BADZ)
  - Allows for a mix of residential and commercial uses as controlled by an overall Master Plan
- General Observations on Regulations
  - Comments from developers that Route 20 access, frontage, curb cuts and other regulations stymie projects
  - Consider increased allowances for development density
  - Height restrictions of 2/3 stories could hinder mixed-use development



# DEVELOPMENT SITES

- Numerous sites currently identified as project sites, in various stages
  - Include 7.5-acre parcel for mixed use with 274 residential units and 4 pad sites for commercial
  - Re-positioning of 3.3-acre site for 10 (1BR) rental units, 20 (2BR) townhomes and assorted commercial/lifestyle amenities
  - Field observations suggests 235-acres of vacant and/or under-utilized parcels with possible redevelopment potential





# ONLINE PUBLIC SURVEY – KEY COMMENTS

## • Roadways & Traffic

- High Travel Speeds
- Improve Pedestrian Safety
- Truck Traffic Utilizing Local Roadways
- Implement Rear Access Roadways

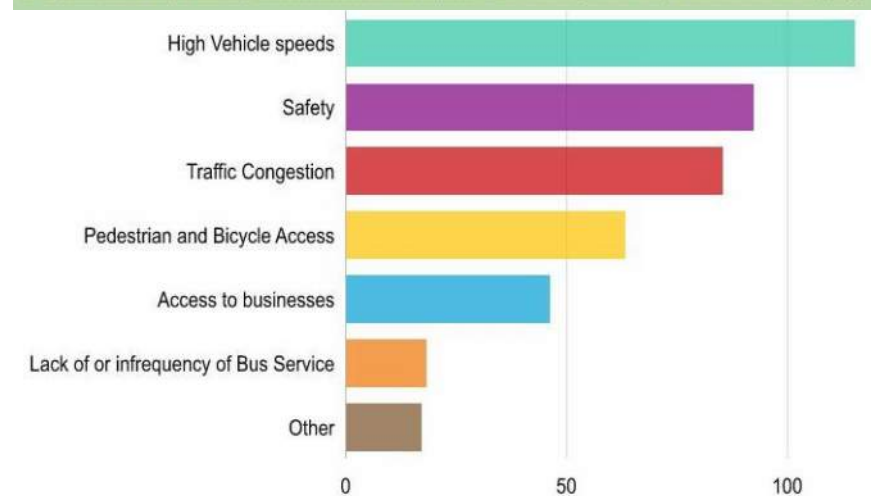
## • Pedestrians, Bicyclists & Transit

- Improve Pedestrian & Bicycle Safety & Mobility
- Increase Transit Service & Amenities
- Install Bike Paths

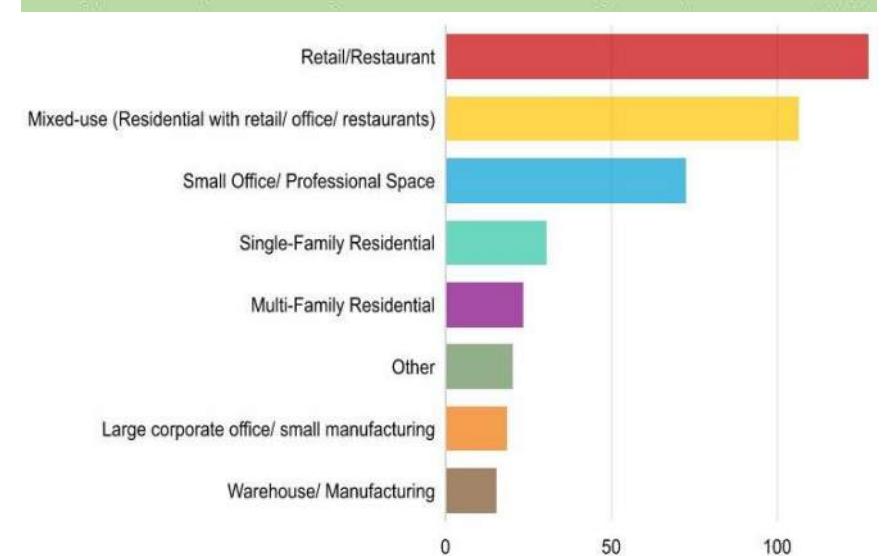
## • Land Use & Development

- Desire For Retail, Restaurant, Office, Professional Space, And Mixed-use Development
- Increase Utilization of Parcels Along Route 75
- Protect Existing Open Space
- Limit Commercial Development in Residential Areas

Do you have any transportation concerns about the Study Area? (Select all that apply)



What type of development would you like to see within the Study Area? (Select all that apply)



## **STUDY VISION STATEMENT – COLLABORATIVE WORKSHOP**

- **Develop feasible and community supported transportation solutions that maintain traffic flow, address identified safety concerns, and provide guidance on access management issues while accommodating future land use development opportunities.**
- **Improve transportation system access and mobility for alternative travel modes including sidewalk, bicycle, and transit infrastructure and amenities to provide a complete transportation system.**
- **Develop a comprehensive transportation and development management plan that prioritizes and defines implementation timelines to enable the programming, funding, and construction of improvements.**

# SCHEDULE



## Legend

- Deliverables
- ▲ Meetings
- ★ Public Information Meeting
- Monthly Coordination Calls
- ◆ Progress Reports

Task	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
1		■	▲															
B: Study Kickoff Meeting			▲															
C: Monthly Coordination Calls			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
D: Monthly Progress Reports & Invoices		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
2			■															
A: Public Involvement Plan			■															
B: Study Website							■		■					■		■		■
C: Technical Advisory Committee		▲					▲	▲				▲				▲		
D: Public Outreach				Survey					★				▲	★				
E: Municipal Coordination													▲					
F: Stakeholder Meetings				▲	▲	▲	▲	▲	▲	▲								
3		■																
Data Collection		■																
4			■				■											
Assessment of Existing Conditions			■				■											
5					■			■										
Assessment of Future Conditions					■			■										
6								■				■						
A: Develop Preliminary Alternatives								■				■						
B: Assess & Refine Alternatives												■		■				
7														■		■		
Transportation Improvement & Development Management Plans														■		■		



# QUESTIONS & OPEN DISCUSSION

- **Next Steps:**

- Future Conditions – Ongoing
- TAC Meeting #3 – Late May
- Public Info Meeting #1 – Early June

- **Study Website:**

- <https://crcog.org/rt20/>

- **Contact Information:**

- Pramod Pandey, CRCOG  
[PPandey@crcog.org](mailto:PPandey@crcog.org)
- Craig Yannes, Project Manager  
[CDYannes@tighebond.com](mailto:CDYannes@tighebond.com)
- Matt Stoutz, Assistant Project Manager  
[MStoutz@tighebond.com](mailto:MStoutz@tighebond.com)

