

(DOT01430193PL)

EAST MAIN STREET CORRIDOR STUDY

TORRINGTON, CT

MAY 2021



PREPARED FOR:
**CITY OF TORRINGTON
NHCOG**



Technical Advisory Committee



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EXECUTIVE SUMMARY

In January 2020, the Northwest Hills Council of Governments (NHCOCG), on behalf of the City of Torrington, and in partnership with the Connecticut Department of Transportation (CTDOT), initiated a planning study of a 3.5-mile segment of East Main Street (Route 202) extending from the intersection of Main Street in Downtown Torrington easterly to the New Hartford town line. As a state route, East Main Street is maintained by CTDOT and the Department has jurisdiction over any activities within the right-of-way. This study was funded by CTDOT through the cooperation of the U.S. Department of Transportation.

East Main Street originated sometime after the 1800s as major routes were established and the City's industrial base took hold. It was not until the 1960s that more intense commercial development changed the function and appearance of the corridor. East Main Street has emerged as a significant economic driver and employment node for the City and the region. While the corridor has been nearly fully developed since 2010, it continues to evolve and adapt to changes in commuting patterns and consumer demands. Yet, the roadway itself has remained unchanged for decades.

Development has put a strain on the East Main Street, result Traffic congestion, safe vehicle movement and the lack of safe pedestrian connections are the main concerns the City and its residents hope to be addressed through the completion of this study and through the cooperation of NHCOCG and CTDOT. Through a series of community engagement activities, these concerns were among a broad range of issues that were raised and used as a foundation for improvements and recommendations.

Despite social distancing guidelines that were first put into place and eventually followed by strict closure of municipal facilities and quarantining in the midst of the Covid-19 pandemic, an effective community outreach program was carried out albeit differently than what had been originally intended. In lieu of plans to assemble and periodically meet with a Citizen Advisory Committee consisting of a cross section of residents and businesses, business owners and residents were invited to two targeted virtual workshops that were informal and conversational. In addition, three virtual public

information meetings were held. The City was also able to expedite the completion of a GIS-based on-line community survey it had been developing for general City outreach. When possible, team members were able to meet with specific property owners to discuss development intentions, traffic impacts and other issues the property owner was facing.

This corridor study not only provides a review of existing traffic conditions, identifies specific areas for improvements, and presents recommendations to address both existing issues and future growth, it addresses pedestrian safety, increased connectivity, transit, and the need to improve the aesthetic form of the corridor. The study also provides a more in-depth analysis of seven Focus Areas. Improvements and recommendations for each of these areas represent an interdisciplinary treatment of issues as a complement to corridor-wide recommendations.



Existing Conditions

The existing conditions evaluation identified four unique segments of East Main Street that have different characteristics related to traffic volumes, adjacent land use types and densities, pedestrian facilities, vehicular speeds, and connectivity to nearby neighborhoods. The four segments were identified to ensure that the recommendations of the study consider the most appropriate context and include the following:

- **Downtown Gateway Segment:** This segment exists between Main Street in Downtown Torrington to East Elm Street and is defined by good pedestrian connectivity, street-front commercial uses (mostly west of Route 8), slower vehicular speeds and volumes, on-street parking availability, and many curb cuts and side streets that serve smaller lots and denser residential neighborhoods. The interchange with Route 8 is also included in this segment and serves as the “gateway” to Downtown Torrington.
- **Western Neighborhood Commercial Segment:** This segment exists between East Elm Street and Yorkshire Street/Pineridge Road and is defined by a significant grade change as the roadway climbs vertically from East Elm Street to the eastern portion of the segment. Land uses in this segment begin to transition to medium sized commercial properties set back from the roadway with more surface parking and pedestrian facilities become intermittent throughout. An additional lane is provided in the eastbound direction, which is carried through the remainder of the corridor to the east.

- **Commercial Transition Segment:** This segment exists between Yorkshire Street/Pineridge Road and Greenridge Road. Land uses consist of medium sized commercial properties that transition into large uses such as big box retailers and automobile dealerships toward the east. The intersection at Tarringford West Street is located in the middle of this segment, which is a critical location with safety deficiencies, access management issues, and experiences high levels of congestion throughout the peak hours. Pedestrian facilities are intermittent throughout this segment and provide little connectivity.
- **Regional Shopping Segment:** This segment exists between Greenridge Road (just west of Dibble Street) and the New Hartford town line and is dominated by large commercial properties occupied by regional and national retail stores and fast-food restaurants. The roadway increases to a four-lane cross section and vehicular speeds tend to be highest throughout this segment. Similar to the segments to the west, pedestrian facilities are intermittent, with poor connectivity throughout.

The existing conditions evaluation identified existing issues that are addressed in the recommendations section. A summary of the existing issues includes the following:

- There is poor pedestrian connectivity east of East Elm Street due to a lack of sidewalks and crosswalks. Observations indicate that there are desire lines along the length of East Main Street as defined by worn paths through the grass adjacent to the roadway. Most of the pedestrian facilities, including curb ramps and pedestrian signal equipment, is not compliant with ADA requirements.
- Safety issues exist at the Route 8 interchange, Tarringford West Street, and Tarringford Street based on a review of the crash history.
- There is a lack of bicycle facilities throughout the entire corridor.

- The grade along East Main Street between Route 4 and Tarringford West Street creates difficulties for trucks and other heavy vehicles to maintain consistent speeds.
- Lack of access management strategies throughout all segments of the corridor may contribute to additional vehicular conflicts and a degradation of safety.
- Most of the traffic signal equipment is outdated and should be upgraded accordingly.
- The area between the Route 8 interchange and East Elm Street (Route 4) is heavily congested with inefficient lane designations and a lack of vehicular capacity.
- The intersection at East Elm Street has poor geometry and sight-distance issues near where it intersects Elsie Street, resulting in poor sight lines of a long crosswalk
- Redevelopment at the Rite Aid parcel (at Willow Street), the existing office building east of East Elm Street, and near the existing Wendy’s (opposite Greenridge Road) should be conducted through a comprehensive planning review process that considers all recommendations included in this report. Provisions for the installation of a traffic signal at Greenridge Road should be explored with any new development that occurs on the northern side of East Main Street on the site adjacent to the Wendy’s property.
- The intersections of the study area at both New Harwinton Road (Route 4) and at Tarringford West Street experience significant congestion and capacity issues.
- Multiple properties that exist at the Tarringford West Street intersection have poor access management, resulting in excessive conflicts with vehicles turning in and out of parking lots
- The segment of East Main Street between Tarringford Street and the Target driveway is five lanes wide with poorly defined turn lanes and no control of access to the adjacent properties, resulting in safety issues.

The existing conditions evaluation provides a foundation on which to forecast future conditions and to develop a list of recommendations for improvements throughout the corridor.

Findings and Recommendations

The corridor study incorporated the information developed in the existing conditions evaluation to develop a list of recommendations to address vehicular congestion, safety, pedestrian connectivity, safety, transit operations, Downtown streetscape, and future land development patterns. The recommendations are also geared toward encouraging new development that will enhance livability and accommodate non-vehicular modes of travel. To develop recommendations related to traffic operations, a future traffic conditions scenario was developed by forecasting the existing traffic volumes to a 20-year planning horizon (2040) by incorporating a general background traffic growth rate. Based on available data, traffic growth has been relatively consistent or has decreased over the past 10+ years along East Main Street. To account for future development that may occur within the corridor or throughout the region, an annual growth rate of 0.5 percent per year was applied to the existing (2020) traffic volumes over a 20-year period to develop the future 2040 traffic volumes. To understand issues surrounding vehicular congestion and operations, a detailed operations analysis was also conducted for the existing (2020) and future conditions (2040).

The findings and recommendations provided in this corridor study consider corridor-wide improvements, segment specific improvements, and a more detailed look at selected key “focus areas” that require an additional level of attention. These recommendations were guided by the existing conditions evaluation, a rigorous community outreach program, and the traffic operations analysis. Based on the findings of the study, the following list provides general recommendations that address various issues along East Main Street. A more detailed version of this list is included within the main body of the report.

VEHICULAR CONGESTION

- Review and update traffic signal timing and phasing at each signalized location
- Geometric modifications/capacity enhancements at the intersections with: Main Street, Route 8 interchange, East Elm Street, Route 4, and Tarringford West Street
- Modify geometry along westbound merging area west of Dibble Street
- Provide internal connections between big box retail sites in Regional Shopping Segment

PEDESTRIAN FACILITIES

- Upgrade pedestrian signal equipment at all signalized locations
- Upgrade curb ramps and ADA-accessibility at all locations throughout corridor
- Install new sidewalks throughout the corridor (City of Torrington is currently in the design phase of a major sidewalk project that will significantly improve pedestrian connectivity throughout the entire length of East Main Street)
- Upgrade and/or install new crosswalks at signalized locations
- Conduct additional study focused on pedestrian circulation patterns and demand routes

SAFETY

- Upgrade traffic signal equipment to provide better visibility of signal heads
- Improve access management throughout entire corridor by reducing curb cuts and restricting left-turns where possible
- Realign Elsie Street with East Elm Street to improve sight distance and pedestrian crossing
- Formalize curb cuts at curb cuts at Tarringford West Street intersection
- Consider installation of medians west of Dibble Street and between Tarringford Street and Target driveway
- Evaluate need for traffic signal at Greenridge Road with new development proposals for property along north side of East Main Street

BICYCLE FACILITIES

- Provide directional signage within the Downtown Gateway segment to direct bicyclists to existing and future facilities
- Conduct further study of bicycle routes and circulation patterns throughout the corridor to identify potential connectivity improvements between East Main Street and the adjacent neighborhoods

TRANSIT

- Upgrade bus stops to provide ADA accessibility and connections to existing and proposed sidewalks
- Review bus schedules and routes with regional transit agency to provide efficient operations
- Conduct a comprehensive transit analysis and routing study in coordination with the local transit agency to develop improved routes, headways, and stop locations

SITE DEVELOPMENT AND STREETScape

- Develop master plan for development between Route 8 and Route 4 with new roadway configurations to provide optimal circulation patterns and pedestrian access
- Install streetscape elements such as decorative lighting and landscape elements throughout the Downtown Gateway segment
- Conduct a long-term transportation development and traffic circulation study for future development around the intersection at East Elm Street



EAST MAIN STREET CORRIDOR STUDY TORRINGTON, CT

INTRODUCTION

- OVERVIEW
- HISTORY AND EVOLUTION

INTRODUCTION

Overview

Torrington, like many downtowns throughout the country, expanded along its thoroughfares as reliance on automobiles increased and suburban-format shopping became the norm. This change most notably resulted in the exodus from downtowns to outlying areas, and in Torrington's case, to East Main Street/State Route 202. To revitalize its historic downtown, the City of Torrington has embarked on a multi-year and multi-pronged effort that includes capitalizing on its nationally-recognized cultural assets, focusing brownfield redevelopment on attracting new residential/commercial mixed-uses, and expanding walking and biking opportunities with new trails and walkable public spaces.



East Main Street (Looking East - Late 1800's)

Alleviating traffic congestion along East Main Street and providing safe and accessible pedestrian connections also have been factored into revitalization efforts, as East Main Street is a short walk from the recently-completed Franklin Street Public Plaza project. The plaza extends the walkable scale of downtown eastward by closing Franklin Street, one of the legs of the confounding "Five-way" convergence with Water, Main, East Main, and South Main streets. It is also where the east and west branches of the Naugatuck River meet and where a 60-unit 4-story apartment building with first floor retail is expected to be constructed in 2022 as the first phase of the City's Riverfront Recapture. The second phase, on the adjacent parcel at 100 Franklin Drive, involves remediation and redevelopment of NIDEC, originally home to the Torrington



East Main Street (Looking West - 1961)

Manufacturing Company and one of the largest employers in the City. NIDEC bought the company in 1984 but moved all operations to Japan in 1990. The proposed Naugatuck River Greenway and the proposed Sue Grossman Greenway will also connect at this point.

The condition and function of East Main Street has deteriorated over a period of several years. The corridor has become not only the City's economic center but a regional retail destination. Residents of Litchfield County to the west, the nearby towns of New Hartford, Canton, Burlington, Harwinton and Avon to the east, and Winsted to the north and beyond regularly patronize commercial and retail establishments along East Main Street. More recently, automobile dealerships have expanded or moved into the corridor, furthering its distinction as a regional economic center. Commuter traffic has also increased. Higher "thru-traffic" traffic volumes coupled with regional retail patronage, especially during peak hours has fueled a growing frustration level among residents. Long rush-hour queue lengths, the lack of safe and accessible pedestrian crossings, and unsafe vehicle maneuvers are common complaints. Other than site-specific improvements made in conjunction with development, no other improvements have been made. Through the completion of this corridor study, priorities for improving both vehicle movement and pedestrian circulation will be established along with recommendations for enhancing the aesthetic appearance of the road.

TACKLING TRAFFIC AND PROTECTING PEDESTRIANS

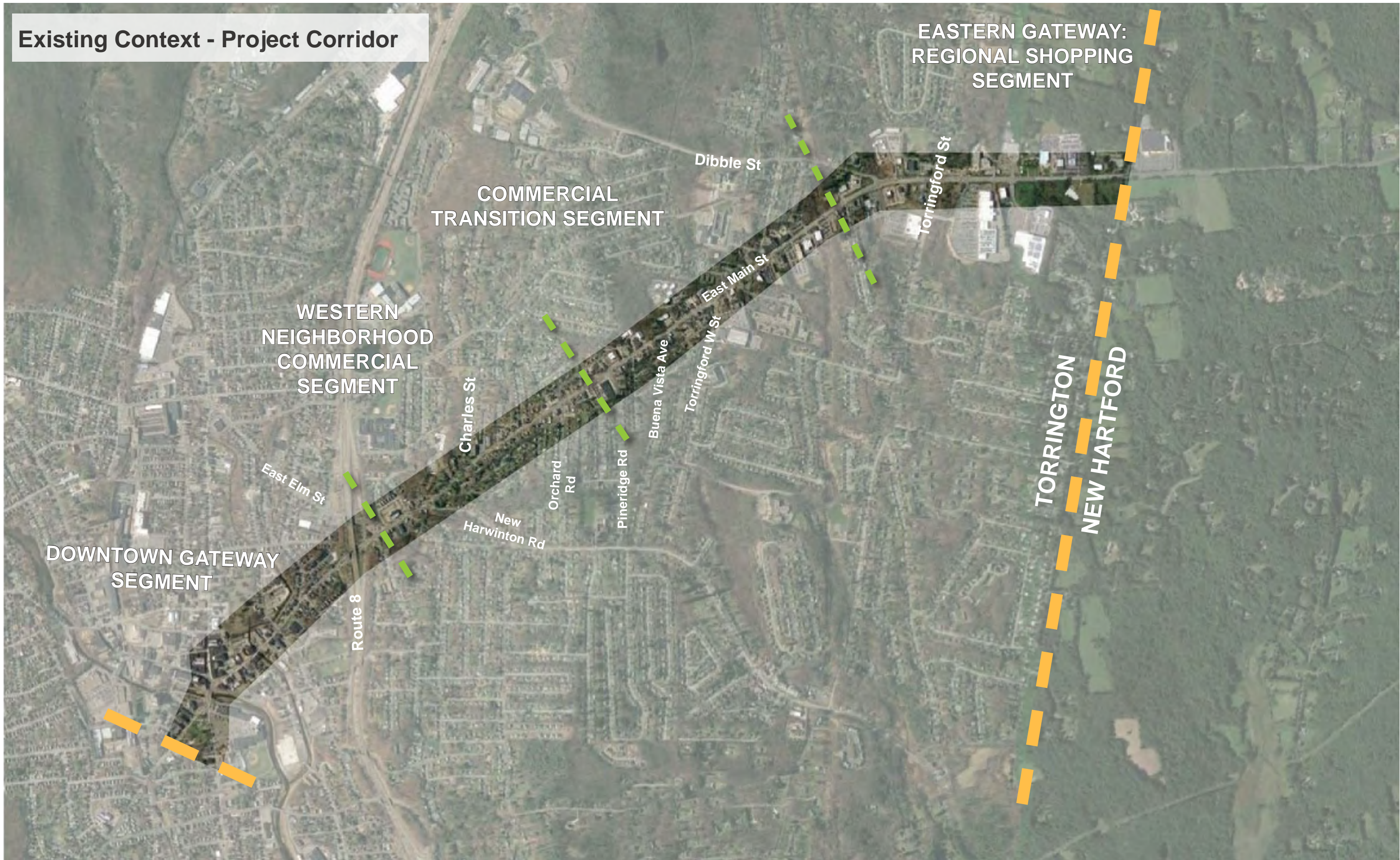
Although East Main Street is a state route and the City of Torrington has no jurisdiction, maintenance responsibility or control over the roadway, the City has been playing an increasingly active role in advocating for improvements as part of its downtown revitalization strategy and also as part of continuing to expand economic opportunities and increase the City's tax base. Working in partnership with the Northwest Hills Regional Council of Governments (NHCOG) and the Connecticut Department of Transportation (CTDOT), the City received funding through the Federal Highway Administration's National Highway Performance Program to perform this study of traffic, pedestrian safety, and development conditions along the 3.5 mile segment of East Main Street from downtown to the New Hartford Line. The overall goals of this study are:

- Improve traffic flow and safety
- Improve safety and connectivity for pedestrians
- Encourage development that will accommodate both vehicles and pedestrians
- Enhance physical surroundings to improve appearance and livability
- Identify multi-modal transportation opportunities

This study is a continuation of efforts that began first in 2016 with a Road Safety Audit (RSA). Funded through CTDOT's Community Connectivity Program, the audit documented factors that can affect safe bike/pedestrian travel and identified issues and counter-measures to improve safety and reduce vehicle crashes. The RSA documented 32 accidents alone at the intersection of Dibble Street and Torrington Road, resulting in 16 injuries. The audit recommended that a study of the East Main corridor be undertaken.

In 2018, a State of Connecticut Responsible Growth and Transit-oriented Growth Grant of two-million dollars was awarded to the City to implement a sidewalk program to increase pedestrian safety at several targeted locations. The sidewalk project has been designed by the City, and construction is expected to begin in 2021. This corridor study was also intended to augment the sidewalk project by highlighting other area in need of sidewalks.

Existing Context - Project Corridor



INTRODUCTION

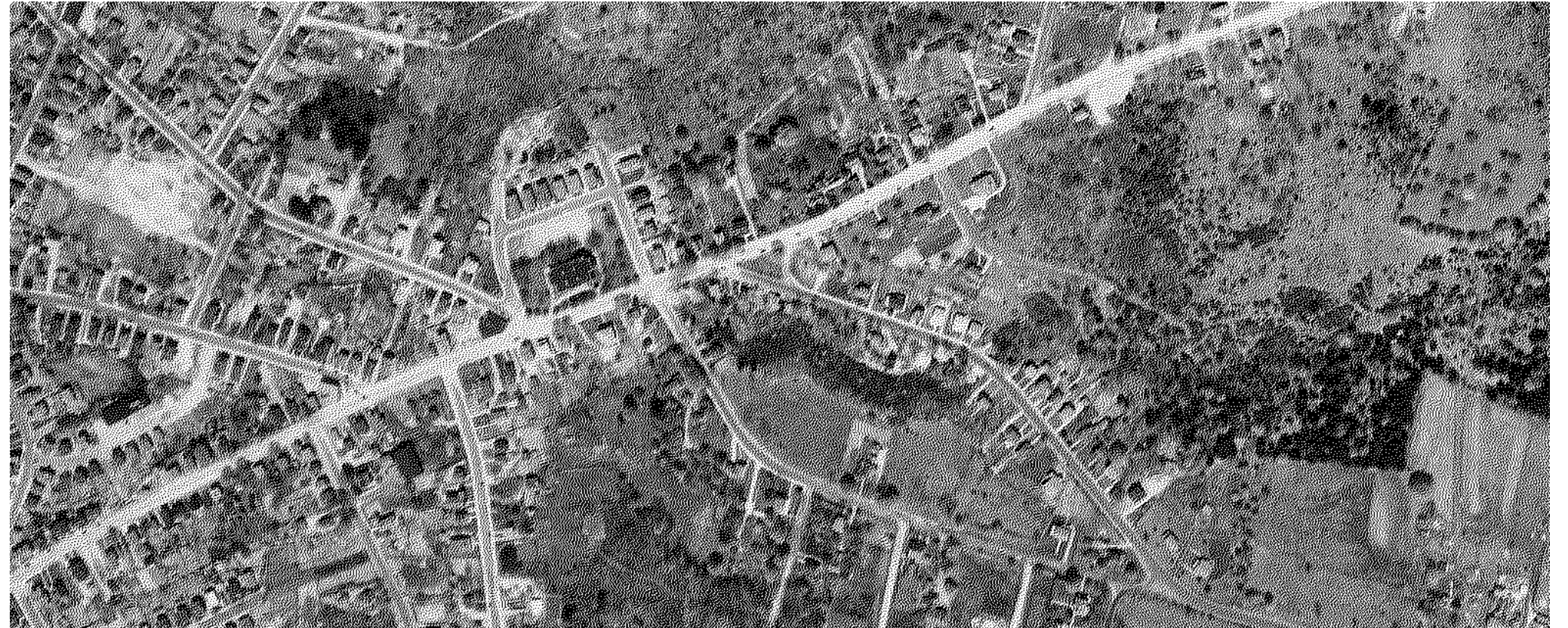
History and Evolution

It may be hard to imagine now, but the segment of East Main Street from the heart of downtown to the New Hartford line was once a mosaic of open fields and dense woodlands. East Main Street originated sometime after the 1800s as major routes were established and the City's industrial base took hold. The demand for distribution to surrounding population centers was growing, and before the Naugatuck Railroad was completed in 1849, overland routes and waterways were the main modes of transportation.

In 1801, the Litchfield Turnpike was chartered as a toll road between West Simsbury and Litchfield. The road followed what is now East Main Street and crossed the Naugatuck River via Center Bridge which is now part of the 5-way intersection. The intersection of Litchfield Turnpike and Waterbury Turnpike at the bridge provide the impetus for what began to function as the center of Wolcottville, and now Torrington's central business district.

By the late 1800s, homes were being built along East Main just beyond Willow Street and this trend continued for several more decades. A 1934 aerial shows smaller homes, many of them ranches or cape-cod style, extending up to what is now Harwinton Road/Route 4. Farmhouses and wide expanses of undeveloped land can be found beyond this point. This pattern remained up through the 1960s when a new residential development trend emerged—subdivisions gained popularity and sprang up to the north and south of East Main.

The devastating 1955 flood along with the completion of Route 8, specifically Exit 44 in 1967, dramatically altered the scale and land uses along East Main Street east of Willow. The eastern gateway into the City was now dominated by two concrete overpasses and suburban-style commercial development. Torrington's local economy benefitted from its three Route 8 exits by providing links to the Massachusetts Turnpike (indirectly) to the north, and south to Connecticut's largest city, Bridgeport and Interstate 95. This connectivity along with the desire for suburban living, pushed development along East Main further eastward, where land was plentiful.



Wall Street to New Harwinton Road / Route 4 (1934) - Source: CT State Library



Pineridge Road to New Hartford (1970) - Source: CT State Library

Residential subdivisions, schools, mom-and-pop stores (at first) replaced vacant or agricultural lands. By 1970, development had intensified, reaching the Dibble Street/Kennedy Drive area. Torrington Elementary School and Laurel Acres off Torrington West had been constructed by this time, and the building that now houses Jimmy's food market at the intersection with East Main Street was apparent. There was also a suburban-style retail development in the location of present-day BJ's Wholesale. To the west, undeveloped and/or agricultural land remained the predominant land use.

The footprints of commercial buildings steadily increased in the 1980s and early 1990s and in fact along the northern side of East Main to the New Hartford town line while the southern side was relatively undeveloped. Single-family residential subdivisions, one after the other, stretched out for over a mile to the north and south of properties fronting East Main. In this time, commuter traffic from Torrington and points west increased as service-related jobs were sought in the Hartford region. In 1996, big-box retail arrived with the construction of the Walmart-anchored Torrington Plaza on the southerly side of East Main. Target came next in 2007 followed by Stop & Shop in 2010.

In the last five years, the most noticeable change in development pattern has been an influx in automobile dealerships. All of the new or expanded dealerships have occurred west of Torrington West Road. Other new development includes the \$4.5M transformation of the iconic Sky Top Bowling Lanes at 1000 East Main into a mixed-use commercial development and a new Dunkin' prototype at 305 East Main Street. A substantial renovation/expansion of Torrington Plaza has recently been approved and there are a number of other national retailers with pending approvals to redevelop smaller parcels in the corridor.

With Average Daily Traffic (ADT) in the corridor ranging from 15,400 to 25,000 vehicles/day, it should come as no surprise that there will be continued interest for commercial sites. Given that the frontage along the entire corridor is developed, there will be increasing opportunities to assemble smaller parcels and properties with vacant or obsolete buildings.



Durrand Street to New Hartford (1990) - Source: CT State Library



Torrington West Street to Town Line (2008) - Source: CT State Library



EAST MAIN STREET CORRIDOR STUDY TORRINGTON, CT

COMMUNITY OUTREACH

- INTRODUCTION
- APPROACH
- WHAT WE HEARD
- PRIMARY CONCERNS OF
OUTREACH PARTICIPANTS

COMMUNITY OUTREACH

Introduction

Connecting with a community through formal and informal means of communication are the hallmark of any community planning. Residents, property owners and businesses are “citizen planners” upon who we rely to understand the dynamics and context of a project at the onset, and gain valuable insight and feedback as ideas and recommendations evolve. To be successful, the outreach process should be dynamic and flexible. Rigid and prescriptive attempts at “informing” the public are met with mistrust and disdain—this approach does little to understand what the community is looking for much less provide an open and transparent means of constructive dialogue.

Approach

As originally envisioned, a multi-tiered approach had been planned for connecting with City of Torrington residents and with businesses and property owners along the East Main Street corridor. Engagement methods included public forums, a Citizen’s Advisory Committee (CAC), one-and on-on-one property owner meetings. Soon after the initial kick-off meeting in February 2020, we began monitoring reports of a widespread outbreak of a highly infectious virus in the US, yet to be named then, but now known as COVID-19. By mid-March, as data collection and detailed physical analyses were underway, executive orders issued by Governor Lamont led to a decision to conduct all planned public meetings, targeted stakeholder group meetings and scheduled meetings of the Technical Advisory Committee (TAC) via an online video / audio conferencing platform.



Virtual Outreach

While the intent to reach out to stakeholders in multiple ways remained, there was a need to remain flexible as social distancing guidelines were first put into place and eventually following strict closure of municipal facilities and quarantining. Team members were able to meet with specific property owners to discuss development intentions, traffic impacts and other issues the property owner was facing while still adhering to COVID protocols. In lieu of plans to assemble and periodically meet with a CAC, consisting of a cross section of residents and businesses, business owners and residents were invited to two targeted virtual workshops that were informal and conversational. In addition, property owners within the western portion of the corridor, from Wall Street east to the Route 8 overpass, were sent invitations to join a virtual conversation or to contact the Director of Economic Development for a specific discussion about future plans for their properties. No one accepted the offer.

A screenshot of an online survey form titled "East Main St. Corridor Survey". The form has a dark header with the title in orange. Below the header, there are input fields for "Name", "Date and Time", and "Time". The "Date and Time" field shows "9/25/2020" and "04:08 PM". Below these fields, there is a instruction: "Check boxes below for all the improvements you'd like to see to a location on East Main Street (one location per survey please/ you can submit multiple surveys)". Underneath, there is a section titled "CORRIDOR IMPROVEMENTS" with three rows, each containing a checkbox and a label: "Sidewalk", "Crosswalk", and "Streetlight".

Example of Community Survey

What We Heard



What We Heard

Across the spectrum of engagement, a consistent theme emerged: the road has been ignored for too long and the City needs to do something soon. This signaled to the BSC team the need to more clearly articulate the fact the East Main Street is a state road under the jurisdiction of the Connecticut Department of Transportation and that while the City has always been willing to work collaboratively, CTDOT has a well-established process of identifying issues, securing funding and prioritizing actual construction that must be followed.

Other notable comments included the need for sidewalks and a desire to improve the appearance of the area around Route 8 as well as consistent and reliable transit. Because the GIS-based survey allowed the identification of problems areas, a number of respondents highlighted specific locations that were of concern.

Each of the concerns expressed by participants and the areas identified as needing attention were closely examined by the BSC team. All were found to be relevant in terms of the analyses conducted by the team, and incorporated in varying degrees in the recommendations.

Primary Concerns of Outreach Participants

- Road is in bad condition and needs immediate attention
- The road has changed dramatically in the last 20 years
- Sidewalks desperately needed
- Route 8 area is a gateway to City/downtown and needs to be improved
- Burger King is a benchmark for directions and does not make a good impression
- Left turn existing Hillside is hazardous; entire circulation is difficult in Route 8 area
- Too much congestion makes shopping difficult
- The road is not suitable for bikers—it is too steep
- Entire road should be paved not just sections
- Need parks/greenspace
- Need more buses, more frequent runs and clearly marked bus stops
- Need better bus routes to support employees
- East Main west of downtown should also be studied
- Intersection at Tarringford West/Cumberland Farms is very dangerous
- No crosswalk signal on northwest side Tarringford Street and vehicles having left green arrow put pedestrians at risk
- Stop illegal left turns from Walmart and vehicles crossing over to Goodwill
- Left turns out of Goodwill is extremely dangerous
- Connect Target and Walmart with a sidewalk



EAST MAIN STREET CORRIDOR STUDY TORRINGTON, CT

EXISTING CONDITIONS AND ANALYSIS

- INTRODUCTION
- GENERAL CONTEXT AND SEGMENTS
- EXISTING TRAFFIC CONDITIONS AND ANALYSIS

EXISTING CONDITIONS AND ANALYSIS

Introduction

The corridor study's project limits include the approximate 3.5 mile segment of East Main Street (U.S. Route 202) between Main Street in Downtown Torrington and the New Hartford Town Line in Torrington, Connecticut.

For this report, it was necessary to achieve a basic understanding of the existing conditions of the corridor to provide a baseline for comparison and to identify deficiencies. The base mapping process started with a detailed survey of the main corridor's roadway geometries, traffic signal operations, signage and pavement markings, utilities, and land uses. With the survey complete, other base mapping was extracted from the City of Torrington's GIS system and Google Earth to provide aerial information. BSC Group used this information to identify agencies with jurisdictional oversight to obtain updated records. BSC Group conducted several site visits to observe and record field conditions such as vehicular and pedestrian traffic and amenities, curb cuts, signage, and other existing conditions. The mapping for the report was created and pulled together for the analysis drawings in AutoCAD, and Adobe Illustrator and InDesign.

Another key component of this study was identifying and analyzing the physical characteristics of the corridor. This information provides a foundation for understanding the inter-relationship between land use, development patterns, the transportation network, and the residents and businesses within the corridor. From understanding the history and evolution of East Main Street, we know that the corridor developed linearly from west to east as automobile ownership increased and shopping patterns shifted away from the core downtown. The corridor in its present-day condition reflects this evolution, and in fact, generally reflects four specific segments: Downtown Gateway Segment, Western Neighborhood Commercial Segment, Commercial Transition Segment, and the Eastern Gateway: Regional Shopping Segment.



EXISTING CONDITIONS AND ANALYSIS

General Context and Segments

DOWNTOWN GATEWAY

The Downtown Gateway Segment serves as a critical connection between the Downtown District and the rest of the East Main Street Corridor. It starts at the “Five-Way” intersection (South Main St. / Water St. / Main St. / East Main St. / and Franklin St. [now closed]) and continues to just beyond the iconic “Glass Building” at 507 East Main Street. From downtown to Willow Street, this segment generally reflects the original street wall and scale of the original downtown. Beyond the vacant Rite-Aid (218 East Main St.), multi-family dwellings (many dating back to the turn of the century) sit virtually at the state right-of-way. Many of these structures are in need of repair and some appear to need structural reinforcement. Route 8 / Exit 44 physically and visually truncates this segment. Serving as an arrival gateway from the east as well as a significant transportation nexus (with East Main St. / East Elm St. / Christopher Rd. / Elsie St.), the dramatically different scale, orientation and appearance of this node is largely attributed to a characteristically suburban development pattern sandwiched between residences to either side. The area with Burger King (451 East Main St.), Twin Colony Diner (417 East Elm St.), and the Glass Building (One Torrington Office Plaza / 507 East Main St.) is the gateway to downtown, and provides an opportunity to improve roadway function, increase pedestrian safety and amenities, and to improve the overall aesthetic of the area.



“Five-Way” Intersection



East Main Street Downtown Gateway Segment

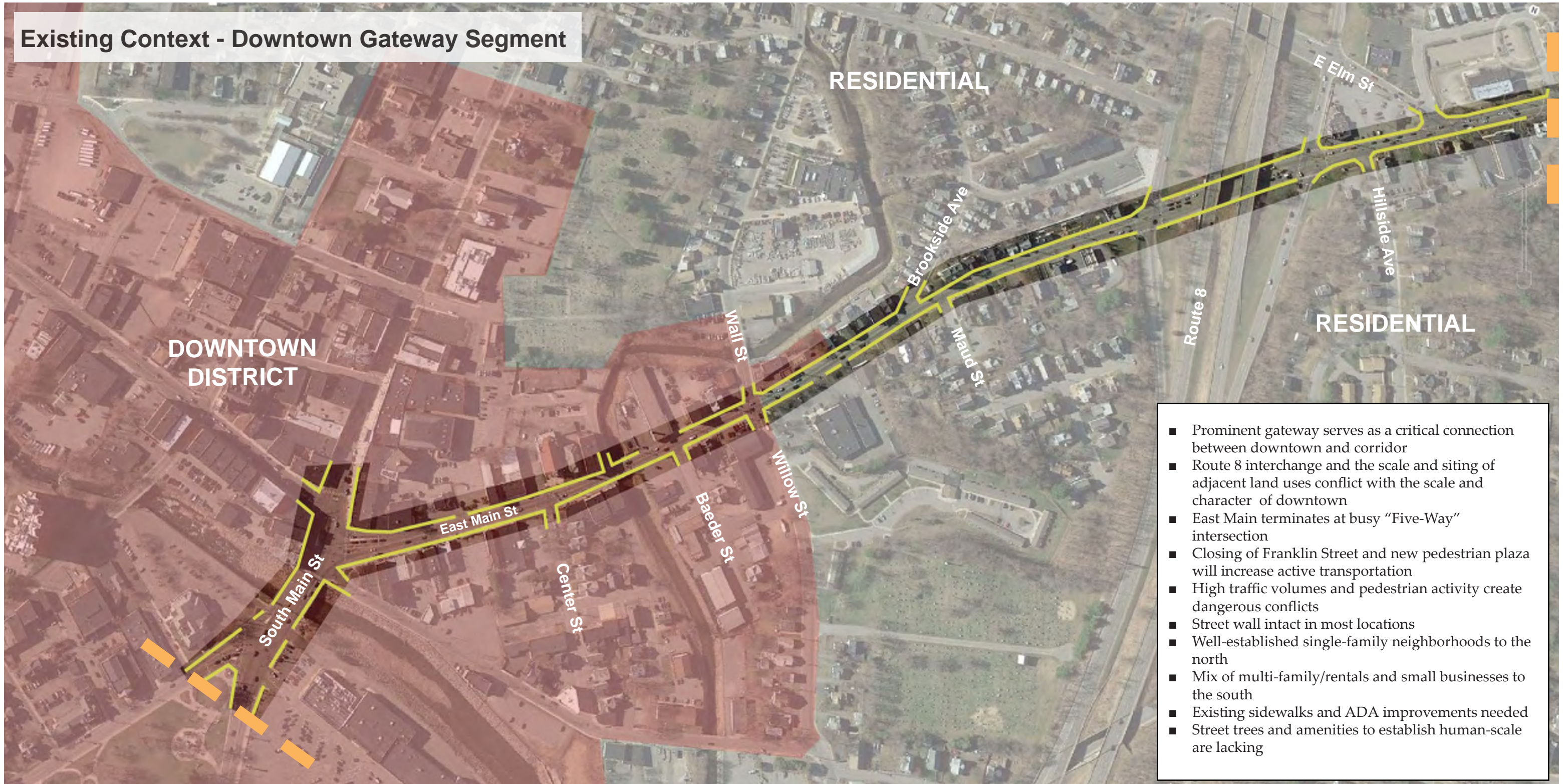


Downtown Torrington



Downtown Torrington

Existing Context - Downtown Gateway Segment



LEGEND

- Proposed Sidewalk
- Existing Sidewalk
- No Sidewalk



EXISTING CONDITIONS AND ANALYSIS

General Context and Segments

WESTERN NEIGHBORHOOD COMMERCIAL

Continuing eastward, this section starts at the Downtown Gateway at the Route 8 Interchange and continues to Hartford Avenue. There is a noticeable climb in elevation near the East Elm St / Route 4 intersection. Land use transitions to large single-family homes with mature landscaping. As the road continues to climb, homes become smaller and businesses appear. This segment is the only area within the corridor where a residential zone (R-6 /6,000 SF lot size) remains along both sides of the road frontage. This pattern becomes more dominant past Orchard Rd. to the terminus of this segment at Pineridge Rd. Here, the former Sky Top Bowling Alley has been re-purposed as a multi-tenanted commercial space called The Shops at Sky Top (1000 East Main St.).



Route 8 Gateway / East Main Street



507 East Main (Glass Building)

Existing Context - Western Neighborhood Commercial Segment



LEGEND

- Proposed Sidewalk
- Existing Sidewalk
- No Sidewalk

EXISTING CONDITIONS AND ANALYSIS

General Context and Segments

COMMERCIAL TRANSITION

This segment represents a full transition to commercial development. Although there are several “mom-and-pop” establishments, the presence of national retail brands is beginning to emerge. East of Buena Vista Ave., a string of properties on both sides of East Main St. create what could be considered a “street wall” with the frontages of each building nearly aligning with one another. None of these properties are interconnected. Cumberland Farms (1237 East Main St.), BJ’s Wholesale Club (1280 East Main St.), Dunkin’ (1276 East Main St.), and Dollar Tree (1270 East Main St.) are situated adjacent to the Toppingford West St. intersection. The intersection is signified by multiple conflicts arising from oversized and excessive curb cuts, uncontrolled or complicated ingress / egress, inadequate pedestrian facilities and traffic congestion. Due to the triangular property configuration of Jimmy’s Deli / Market (1238 East Main St.) on the southwest corner, a portion of patron parking encroaches on CTDOT-owned right-of-way. The curb-cut from the east-bound lane into the site is extremely long and encourages dangerous vehicle cut-throughs to Toppingford West Street. Residential properties completely envelope both sides of the corridor to the north and south, including single-family homes within large subdivisions, larger multi-family developments, and senior housing. Beyond this intersection, a cluster of automobile dealerships and auto-related businesses dominate the southern frontage up to this segment’s terminus at Greenridge Road.

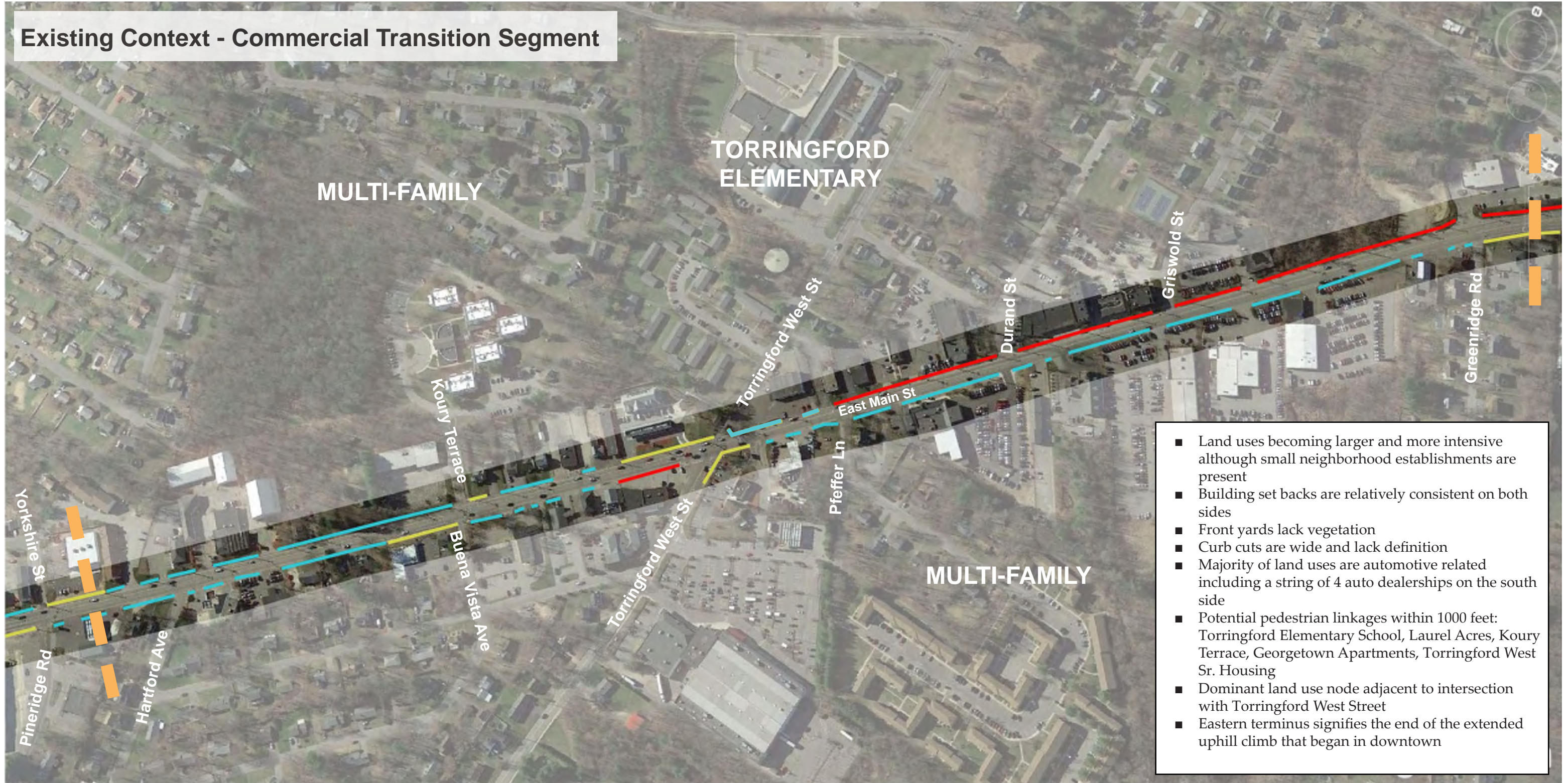


Intersection of East Main Street and Toppingford West Street



Car Dealerships - Commercial Transition

Existing Context - Commercial Transition Segment



- Land uses becoming larger and more intensive although small neighborhood establishments are present
- Building set backs are relatively consistent on both sides
- Front yards lack vegetation
- Curb cuts are wide and lack definition
- Majority of land uses are automotive related including a string of 4 auto dealerships on the south side
- Potential pedestrian linkages within 1000 feet: Torringford Elementary School, Laurel Acres, Koury Terrace, Georgetown Apartments, Torringford West Sr. Housing
- Dominant land use node adjacent to intersection with Torringford West Street
- Eastern terminus signifies the end of the extended uphill climb that began in downtown



LEGEND

- Proposed Sidewalk
- Existing Sidewalk
- No Sidewalk

EXISTING CONDITIONS AND ANALYSIS

General Context and Segments

EASTERN GATEWAY: REGIONAL SHOPPING

The final section is the Eastern Gateway: Regional Shopping Segment, which represents larger national retail chains and big box retailers. This segment begins at a pronounced dip in the vertical alignment of the road—the only one found in the entire corridor. The availability of larger lots has attracted, larger more intensive development. The Dibble St. / Kennedy Drive signalized intersection represents a significant development node; this one anchored by national restaurant chains such as Wendy’s (220 Dibble St.) and Applebee’s (1690 East Main St.) along with regional retailer, Stop & Shop market (931 Torringford St.). In this segment, East Main Street intersects with Dibble Street, providing the only other east-west connection in the corridor, and a means of reaching additional retail development and points north of downtown. The road also provides access to Kennedy Business Park / Commercial Drive and other businesses before terminating at Route 8 and Winsted Road. East of Torringford Street, larger national retailers in suburban- style format are found on both sides of the road. The two largest developments, Torrington Fair / Walmart (970 Torringford St.) and Target (1922 East Main St.), are sited deeper into large rectangular lots so they do not visually dominate the road frontage. This stretch is often congested, pedestrian facilities are lacking, and due to the lack of interconnections, access management is an issue.



East Main Street Looking West Towards Dibble Street



Eastern Gateway - Big-Box Retail

Existing Context - Eastern Gateway: Regional Shopping Segment



- Corridor predominantly occupied by national retail chains, many in big-box format
- More of a suburban development pattern apparent with buildings set back farther and parking in front
- Curb cuts are formalized
- Front yards are landscaped
- Adjacent residential development is transitioning to less dense and rural pattern
- Very few pedestrian linkages outside of the retail sites

LEGEND

- Proposed Sidewalk
- Existing Sidewalk
- No Sidewalk



EXISTING CONDITIONS AND ANALYSIS

Existing Traffic Conditions and Analysis

DOWNTOWN GATEWAY SEGMENT (MAIN ST. TO EAST ELM ST.)

This segment of East Main Street is a two-lane roadway with sidewalks along both sides west of the Route 8 interchange. On-street parking is allowed in this segment west of Willow Street and Wall Street. The land uses along this segment consist of street-front retail and commercial uses, with the connecting side streets serving dense residential neighborhoods. This segment of East Main Street experiences the lowest vehicular speeds and traffic volumes of the entire study area corridor.

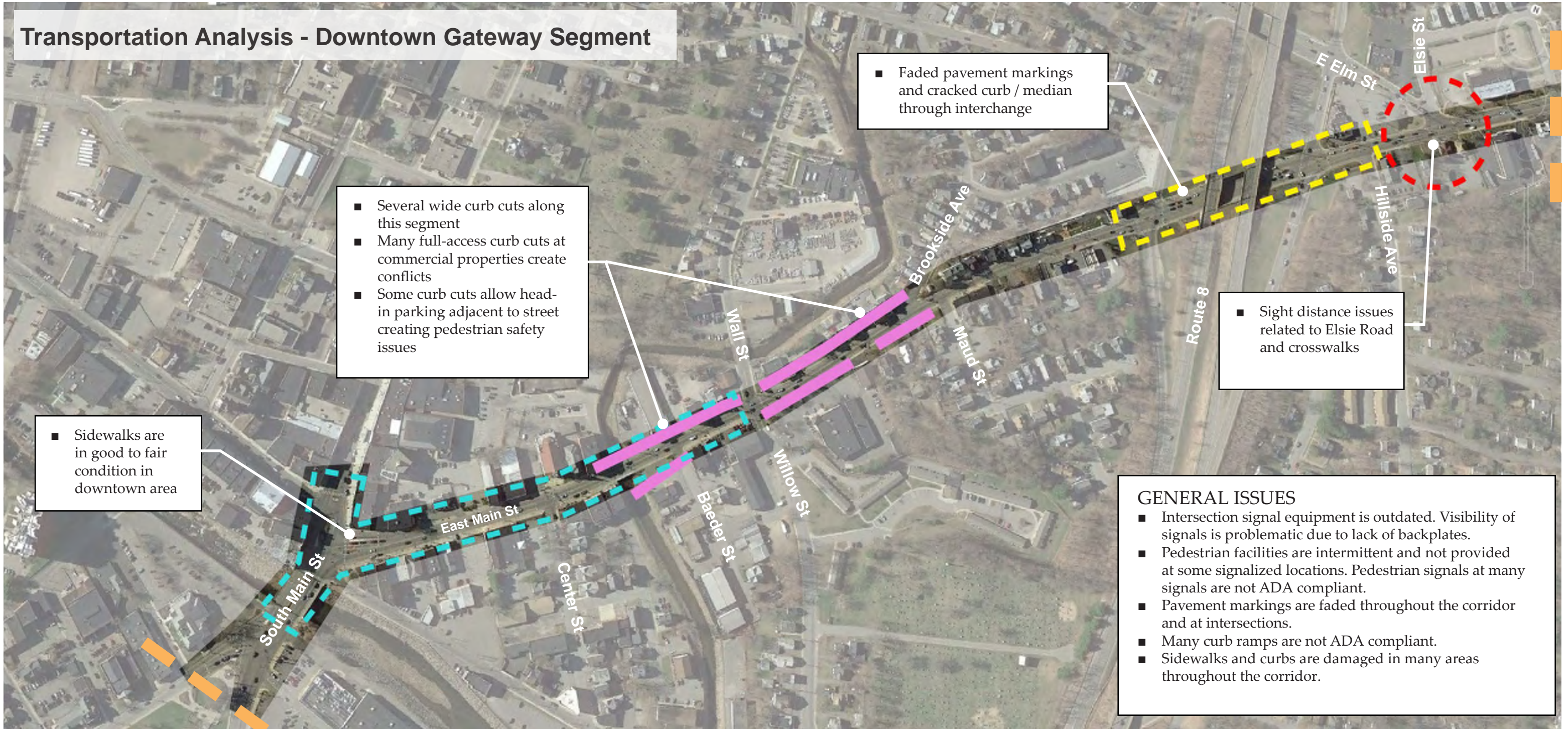
Based on field visits and general traffic observations, the following characterizes the segment of East Main Street between Main Street and East Elm Street:

- Sidewalks are provided along both sides of the roadway throughout the segment. Sidewalks are generally in good condition. However, some areas of sidewalk are damaged, creating unsafe conditions for pedestrians.
- Traffic congestion is moderate to heavy through the Route 8 interchange area and at East Elm Street.
- There are many curb cuts located throughout this segment, some of which are very wide and allow head-in parking that may obstruct the sidewalk at times. The numerous curb cuts also create conflict points throughout the segment, especially for left-turning vehicles.
- Pavement markings are in fair to poor conditions in this segment. Existing medians and islands in and around the Route 8 interchange are in poor condition.
- Lines of sight at the intersection with East Elm Street and Elsie Road are obstructed due to inefficient geometry and obstructions on the edge of the roadway. These sight distance issues also create unsafe conditions for pedestrians at the intersection.
- Traffic signal equipment is outdated and visibility of the signal heads may be reduced during certain times of the day due to lack of backplates and contrast.
- Most curb ramps throughout the segment are not ADA compliant and lack detectable warning panels.
- There are no existing bicycle facilities in this segment.
- Bus stops are provided in this segment for Northwestern CT Transit Route 3 and for CT Transit Route 450X.



On-Street Parking on East Main Street (Downtown Segment)

Transportation Analysis - Downtown Gateway Segment



LEGEND

- - - Area in Good Condition
- - - Area Needing Improvements
- - - Area Needing Significant Improvements
- Access Management Issues
- Substandard Signal



EXISTING CONDITIONS AND ANALYSIS

Existing Traffic Conditions and Analysis

WESTERN NEIGHBORHOOD COMMERCIAL SEGMENT (EAST ELM ST. TO YORKSHIRE ST. / PINERIDGE RD.)

This segment of East Main Street is defined by the significant grade change as the roadway climbs vertically from East Elm Street to the eastern portion of the segment. Land uses in this segment consist primarily of medium-sized commercial and retail uses setback from the roadway, typically with parking provided in front of buildings. The connecting side streets provide access to residential neighborhoods on both sides of East Main Street. Two travel lanes are provided in the eastbound direction and a single lane is provided in the westbound direction. Pedestrian facilities are intermittent and continuous sidewalks are not provided along either side of the roadway, resulting in safety issues. Traffic volumes are highest throughout this segment. On-street parking is prohibited within this segment of East Main Street. Traffic signals are provided at New Harwinton Road, Charles Street, Orchard Road, and Yorkshire Street/Pineridge Terrace.

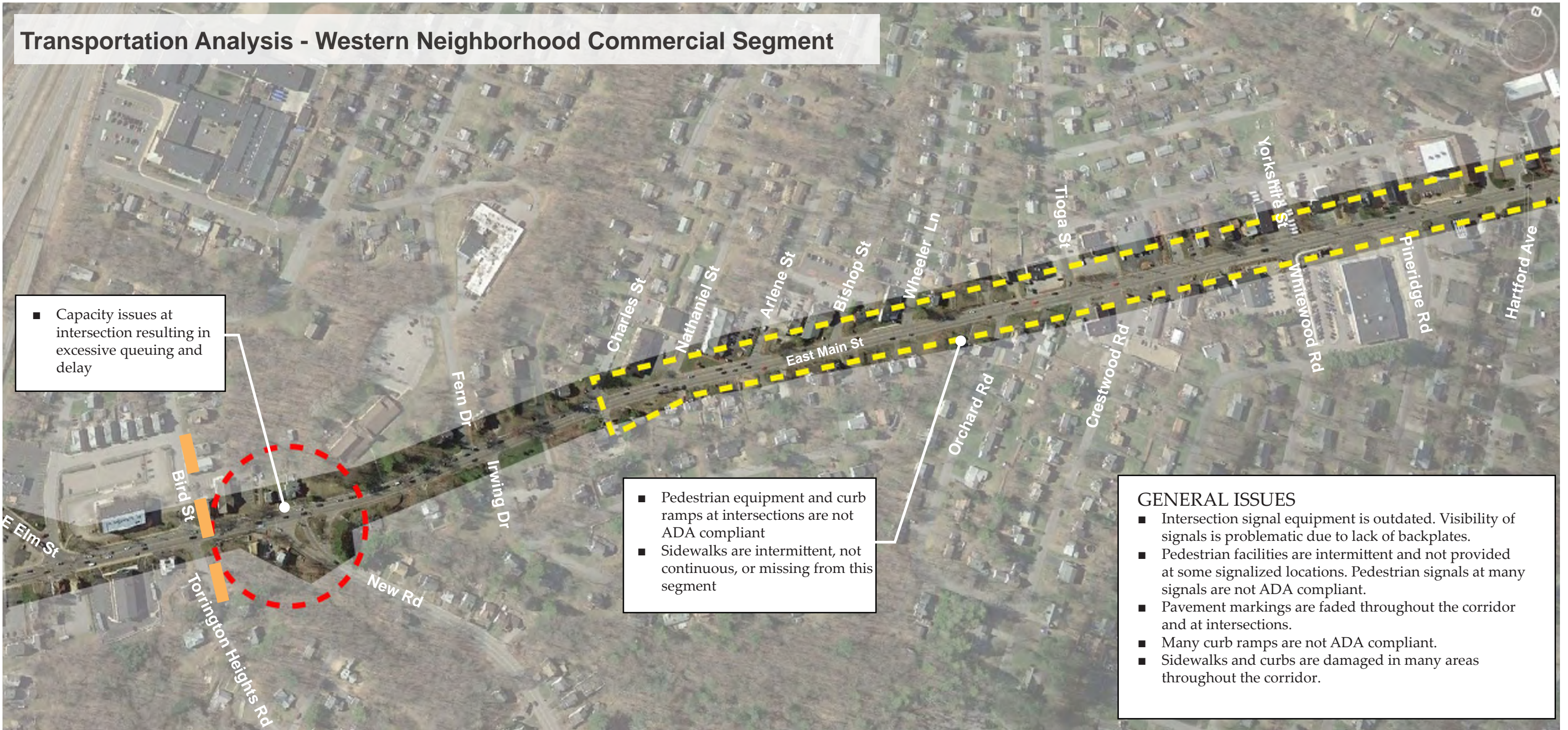
Based on field visits and general traffic observations, the following characterizes the segment of East Main Street between East Elm Street and Yorkshire Street/Pineridge Road:

- Sidewalks are provided intermittently throughout the segment with poor connectivity.
- Traffic congestion is moderate to heavy at the Route 4 intersection.
- This segment is characterized by a steep grade that inclines from west to east.
- Pavement markings are in fair condition in this segment.
- Traffic signal equipment is outdated and visibility of the signal heads may be reduced during certain times of the day due to lack of backplates and contrast.
- Most curb ramps throughout the segment are not ADA compliant and lack detectable warning panels.
- There are no existing bicycle facilities in this segment.
- Bus stops are signed in some locations in the westbound direction for Northwestern CT Transit Route 3, but are lacking accessibility. Most bus stop locations in this area are not ADA compliant.



Safe Pedestrian Facilities Lacking Throughout Corridor

Transportation Analysis - Western Neighborhood Commercial Segment



■ Capacity issues at intersection resulting in excessive queuing and delay

■ Pedestrian equipment and curb ramps at intersections are not ADA compliant
 ■ Sidewalks are intermittent, not continuous, or missing from this segment

GENERAL ISSUES

- Intersection signal equipment is outdated. Visibility of signals is problematic due to lack of backplates.
- Pedestrian facilities are intermittent and not provided at some signalized locations. Pedestrian signals at many signals are not ADA compliant.
- Pavement markings are faded throughout the corridor and at intersections.
- Many curb ramps are not ADA compliant.
- Sidewalks and curbs are damaged in many areas throughout the corridor.

LEGEND

- Area in Good Condition
- Area Needing Improvements
- Area Needing Significant Improvements
- Access Management Issues
- Substandard Signal



EXISTING CONDITIONS AND ANALYSIS

Existing Traffic Conditions and Analysis

COMMERCIAL TRANSITION SEGMENT (YORKSHIRE ST. / PINERIDGE RD. TO GREENRIDGE RD)

This segment of East Main Street provides a transition between the densely developed properties to the west and the larger commercial and big-box retailers to the east. This segment includes the congested intersection at Tarringford West Street where many issues related to safety and access to adjacent properties exist. Land uses in this segment vary and include smaller commercial/retail properties, the large shopping plaza that contains a BJ's store and other outparcels, and access to several multi-family housing developments on both sides of East Main Street. This segment consists of two travel lanes in the eastbound direction and a single lane in the westbound direction. Vehicle speeds increase between the western and eastern portions of this segment. Pedestrian facilities are intermittent throughout this segment and connectivity is poor.

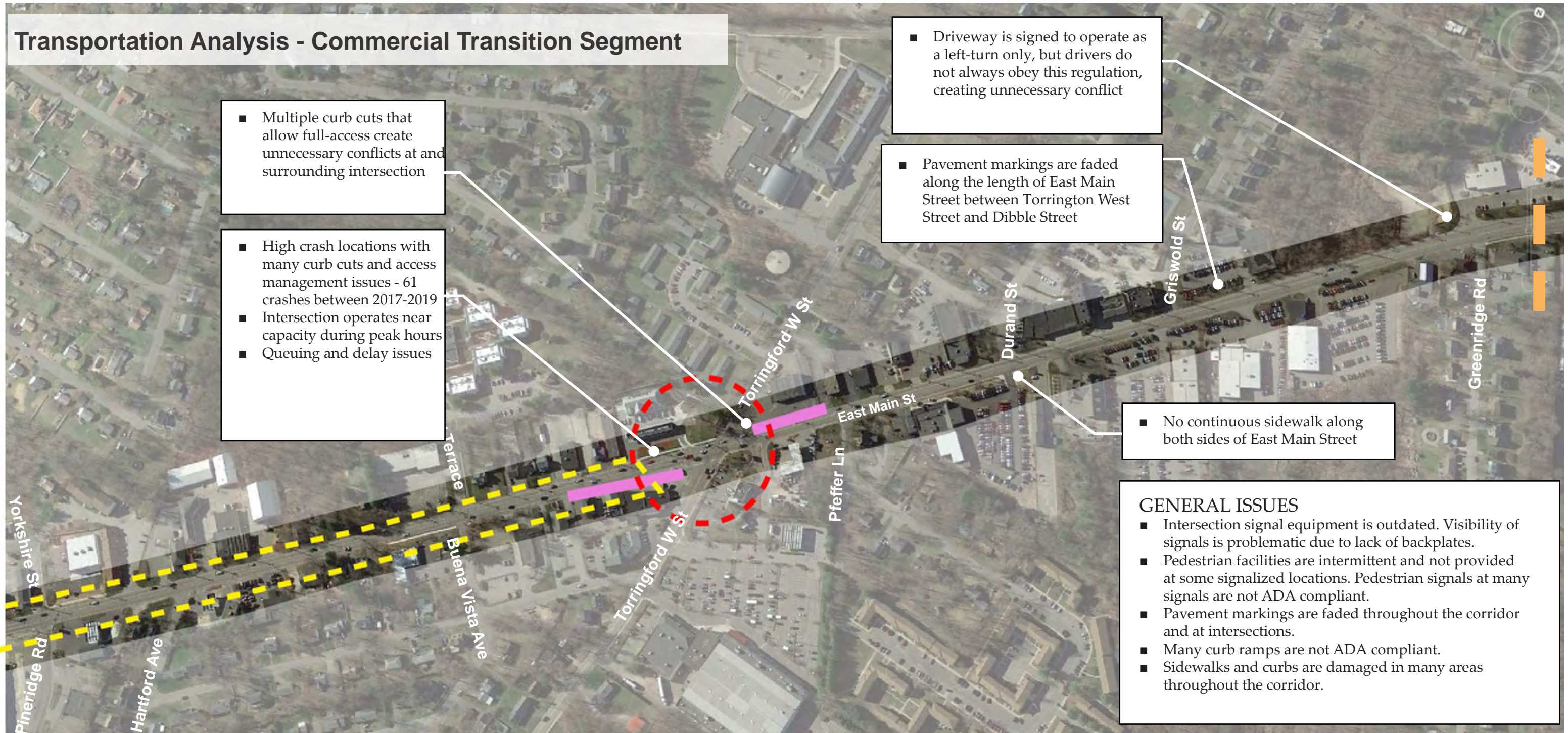
Based on field visits and general traffic observations, the following characterizes the segment of East Main Street between Yorkshire Street/Pineridge Road and Greenridge Road:

- Sidewalks are provided intermittently throughout the segment with poor connectivity. Sidewalks are damaged in some areas throughout the segment, creating unsafe pedestrian conditions.
- Traffic congestion is moderate to heavy at the intersection with Tarringford West Street.
- Numerous curb cuts exist at and near the intersection with Tarringford West Street and some are poorly defined, creating many conflicts around the intersection node.
- Pavement markings are in fair condition in this segment.
- Traffic signal equipment is outdated and visibility of the signal heads may be reduced during certain times of the day due to lack of backplates and contrast.
- Most curb ramps throughout the segment are not ADA compliant and lack detectable warning panels.
- There are no existing bicycle facilities in this segment.
- A flashing yellow traffic signal is provided at Greenridge Road along with left-turn prohibition signs to prevent motorists from turning left into and from the retail plaza opposite Greenridge Road. Field observations indicate that the signs do not prevent motorists from turning left, resulting in safety issues.
- Bus stops are provided in this segment for Northwestern CT Transit Route 3, but are not ADA compliant.



Excessively Wide Curb Cuts Compromise Safe Vehicular and Pedestrian Movement

Transportation Analysis - Commercial Transition Segment



- Multiple curb cuts that allow full-access create unnecessary conflicts at and surrounding intersection

- High crash locations with many curb cuts and access management issues - 61 crashes between 2017-2019
- Intersection operates near capacity during peak hours
- Queuing and delay issues

- Driveway is signed to operate as a left-turn only, but drivers do not always obey this regulation, creating unnecessary conflict

- Pavement markings are faded along the length of East Main Street between Torrington West Street and Dibble Street

- No continuous sidewalk along both sides of East Main Street

GENERAL ISSUES

- Intersection signal equipment is outdated. Visibility of signals is problematic due to lack of backplates.
- Pedestrian facilities are intermittent and not provided at some signalized locations. Pedestrian signals at many signals are not ADA compliant.
- Pavement markings are faded throughout the corridor and at intersections.
- Many curb ramps are not ADA compliant.
- Sidewalks and curbs are damaged in many areas throughout the corridor.

LEGEND

- Area in Good Condition
- Area Needing Improvements
- Area Needing Significant Improvements
- Access Management Issues
- Substandard Signal



EXISTING CONDITIONS AND ANALYSIS

Existing Traffic Conditions and Analysis

REGIONAL SHOPPING SEGMENT (GREENRIDGE RD TO NEW HARTFORD TOWN LINE)

This segment of East Main Street is dominated by big-box retail stores that serve as a regional shopping destination. East Main Street widens to two lanes in each direction, with additional turn lanes at signalized intersections. The intersection of Torrington Street is a key intersection location in this segment, providing a connection for north-south travel through Torrington. Land uses along this segment include large retail plazas containing Walmart, Target, supermarkets, and other suburban-style shopping businesses. Due to the land uses in this segment, side streets and access points are spread out, allowing for higher vehicular speeds. Pedestrian facilities are intermittent with poor connectivity throughout this segment.

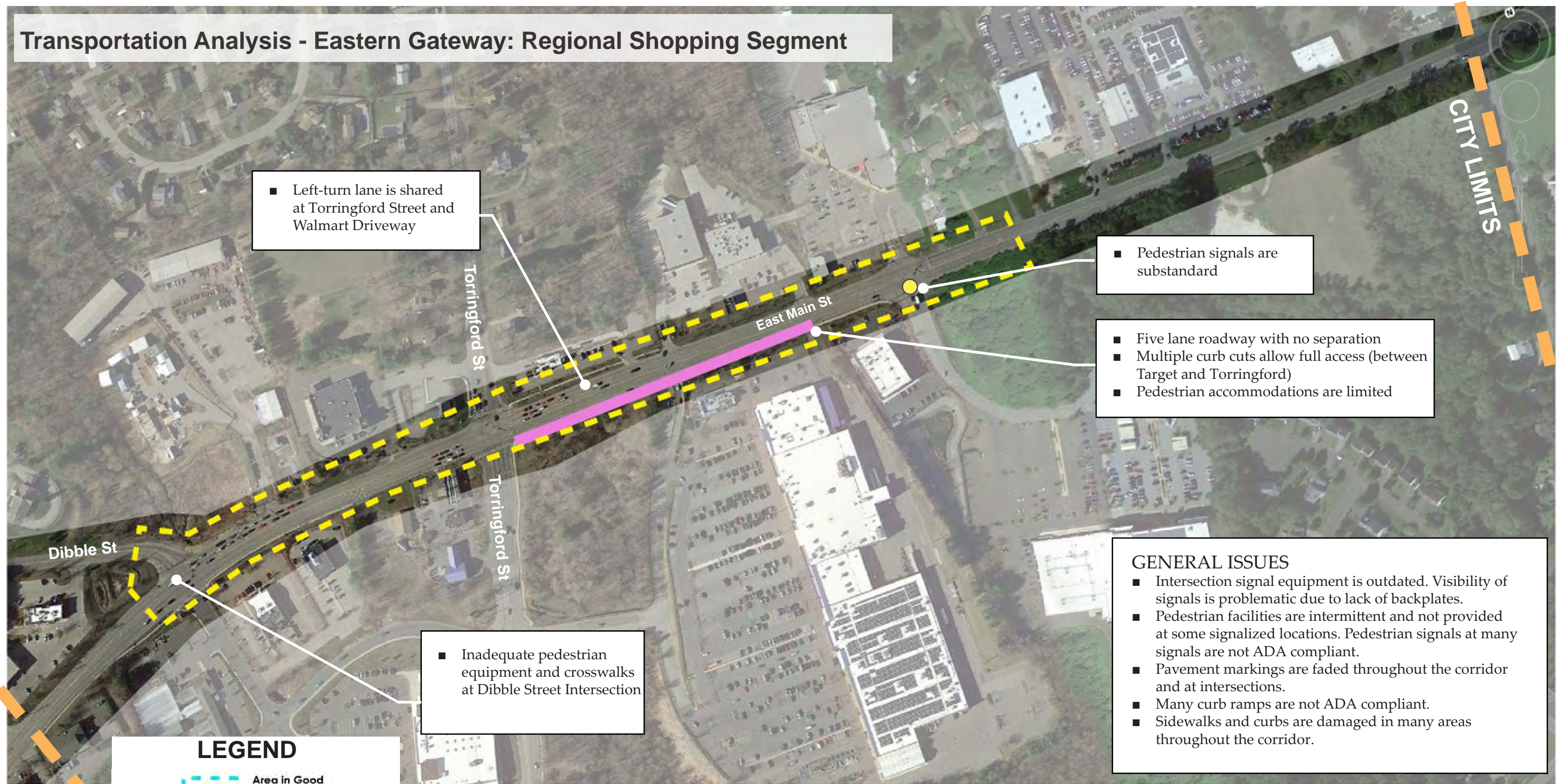
Based on field visits and general traffic observations, the following characterizes the segment of East Main Street between Greenridge Road and the New Hartford Town Line:

- Sidewalks are provided intermittently throughout the segment with poor connectivity.
- Curb cuts serve larger retail plazas and experience moderate levels of traffic volumes.
- Pavement markings are in fair condition in this segment.
- Traffic signal equipment is outdated and visibility of the signal heads may be reduced during certain times of the day due to lack of backplates and contrast.
- Most curb ramps throughout the segment are not ADA compliant and lack detectable warning panels.
- There are no existing bicycle facilities in this segment.
- A left-turn lane is provided in the westbound direction at the intersection of Torrington Street that extends beyond the Walmart Driveway, with no definition between the two different left-turning movement locations.
- Bus stops are provided in this segment for Northwestern CT Transit Route 3, but are not ADA compliant.



Traffic and Pedestrian Improvements Would Improve Safety

Transportation Analysis - Eastern Gateway: Regional Shopping Segment



■ Left-turn lane is shared at Torringford Street and Walmart Driveway

■ Pedestrian signals are substandard

■ Five lane roadway with no separation
 ■ Multiple curb cuts allow full access (between Target and Torringford)
 ■ Pedestrian accommodations are limited

■ Inadequate pedestrian equipment and crosswalks at Dibble Street Intersection

GENERAL ISSUES

- Intersection signal equipment is outdated. Visibility of signals is problematic due to lack of backplates.
- Pedestrian facilities are intermittent and not provided at some signalized locations. Pedestrian signals at many signals are not ADA compliant.
- Pavement markings are faded throughout the corridor and at intersections.
- Many curb ramps are not ADA compliant.
- Sidewalks and curbs are damaged in many areas throughout the corridor.

LEGEND

- Area in Good Condition
- Area Needing Improvements
- Area Needing Significant Improvements
- Access Management Issues
- Substandard Signal



EXISTING CONDITIONS AND ANALYSIS

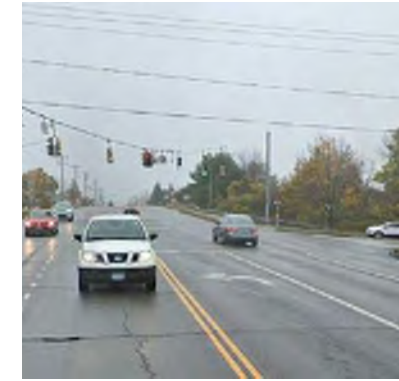
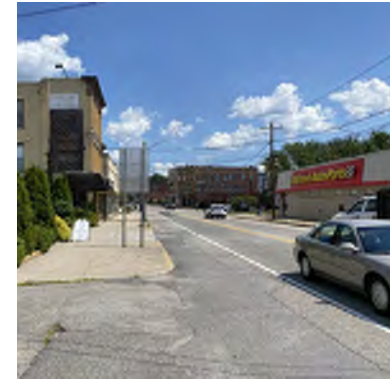
Existing Traffic Conditions and Analysis

Existing traffic data was collected in November 2019 and March 2020 to establish a baseline for traffic conditions throughout the Project’s study area. Manual turning movement counts (TMCs) were conducted in November 2019 and early March 2020 during the weekday morning (7:00 – 9:00 AM), weekday evening (4:00 – 6:00 PM), and Saturday midday (11:00 AM – 1:00 PM) peak periods at the study intersections. The Existing weekday morning and weekday evening peak hour traffic volumes are provided in the Appendix.

Automatic traffic recorders (ATR) were placed in three locations on East Main Street to collect traffic volumes and vehicular speeds. The ATRs collected data from Friday March 13 to Saturday March 14, 2020. The ATR data collected traffic volumes and speeds at the locations east of Center Street and west of Griswold Street and collected traffic volumes and vehicular classification west of Harrison Road. Heavy vehicles, west of Harrison Road, comprised approximately 1.4 percent of the total traffic that was counted during the data collection period. The summary of the ATR data is presented in the adjacent table. The detailed traffic data is provided in the Appendix.

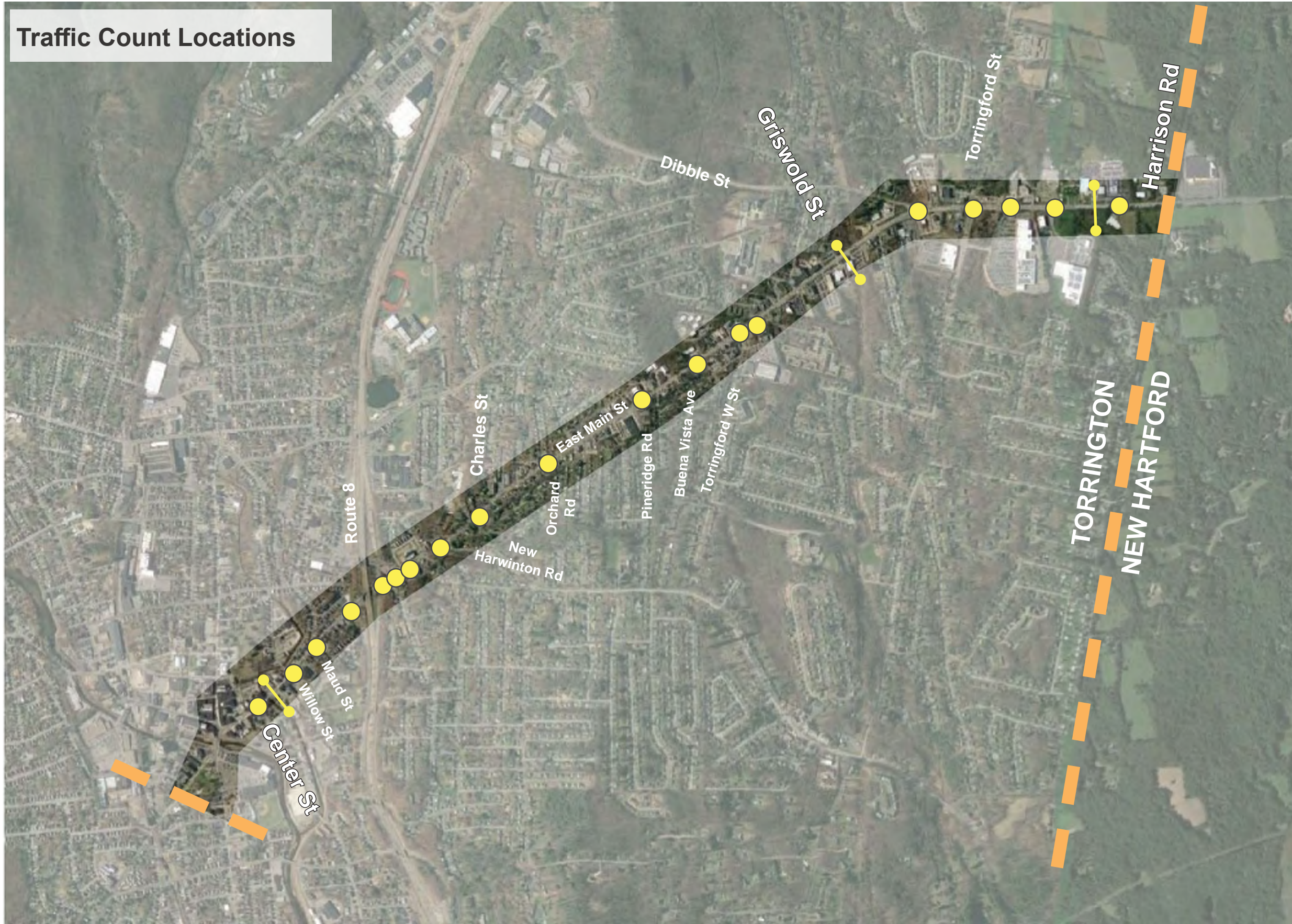
Peak hour traffic volumes along East Main Street are dominated by commuter traffic and regional shopping traffic. Major intersections with the highest traffic volumes include the Route 8 interchange, New Harwinton Road (Route 4), Tarringford West Street, and Tarringford Street.

The eastern portion of East Main St. serves as the regional commercial district and contains many “big box” style retail stores and restaurants. Due to the nature of this land use, the corridor serves trailer trucks between the Target / Walmart area and the Route 8 Interchange. As presented above, heavy vehicles do not comprise a significant percentage of the traffic volumes. However, the grade between East Elm Street and Tarringford West Street creates a difficult situation for heavy vehicles to maneuver, especially in the eastbound direction. The eastbound direction through this segment consists of two lanes which allow slower moving heavy vehicles to travel in the right lane, and passenger vehicles to pass in the left lane.





| TRAFFIC VOLUME SUMMARY | | | |
|-----------------------------------|---|-------------------------|-----------------------|
| | East of Center Street | West of Griswold Street | West of Harrison Road |
| Weekday Daily Volume (1) | 10,690 | 17,200 | 14,575 |
| Weekday Morning Peak Hour | | | |
| Volume (2) | 610 | 1,045 | 870 |
| K Factor (3) | 5.7% | 6.1% | 6.0% |
| Directional Flow (4) | 56% WB | 52% EB | 53% WB |
| Weekday Evening Peak Hour | | | |
| Volume | 615 | 1,225 | 1,235 |
| K Factor | 5.8% | 7.1% | 8.5% |
| Directional Flow | 51% WB | 52% WB | 54% WB |
| Saturday Daily Volume | 8,960 | 15,210 | 12,760 |
| Saturday Midday Peak Hour | | | |
| Volume | 715 | 1,410 | 1,210 |
| K Factor | 6.7% | 9.3% | 8.3% |
| Directional Flow | 53% WB | 54% WB | 51% WB |
| 85 th Percentile Speed | 33 mph | 45 mph | Speeds not measured |
| 1 | Vehicles per day | | |
| 2 | Vehicles per hour | | |
| 3 | Percentage of daily trips that occur during peak hour | | |
| 4 | Percentage of peak hour traffic by direction | | |

Traffic Count Locations



LEGEND

-  48-Hour ATR Count Location March 2020
-  TMC Location

EXISTING CONDITIONS AND ANALYSIS

TRAFFIC VOLUME SUMMARY

Existing Traffic Conditions and Analysis

CRASH DATA SAFETY EVALUATION

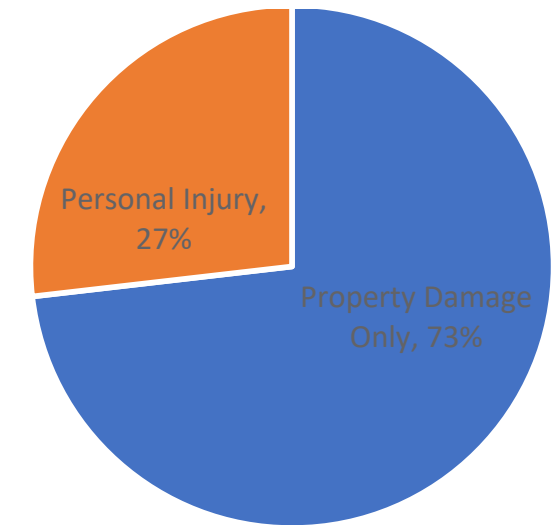
Motor vehicle crash data were reviewed to identify existing safety issues throughout the East Main Street corridor. Data were obtained from the UCONN Crash Data Repository for the years 2017 – 2019. The summary of the crash data for each of the study intersections is presented by intersection in the adjacent table. A corresponding crash data “heat map” is shown on the adjacent figure to indicate where the higher crash locations are throughout the corridor. The figures on the opposite page show crashes by type, severity, and month of year throughout the corridor. A more detailed presentation of the crash data is provided in the Appendix that shows specific crash characteristics for each study intersection throughout the corridor.

The figures indicate that approximately 73 percent of the crashes were property damage only and the remaining 27 percent resulted in personal injuries. No fatal crashes were reported during the review period. Approximately half of the crashes were “rear-end” type collisions, with about a quarter classified as “angle” type collisions and the remainder being “sideswipe”, “head-on”, or “other” types of collisions. The prevalence of rear-end collisions may be a result of congestion throughout the corridor, improper traffic signal timing, unexpected stops, and the numerous curb cuts that exist throughout the entire corridor. Crashes were distributed throughout the year mostly evenly, with each month experiencing between 7 to 11 percent of the total.

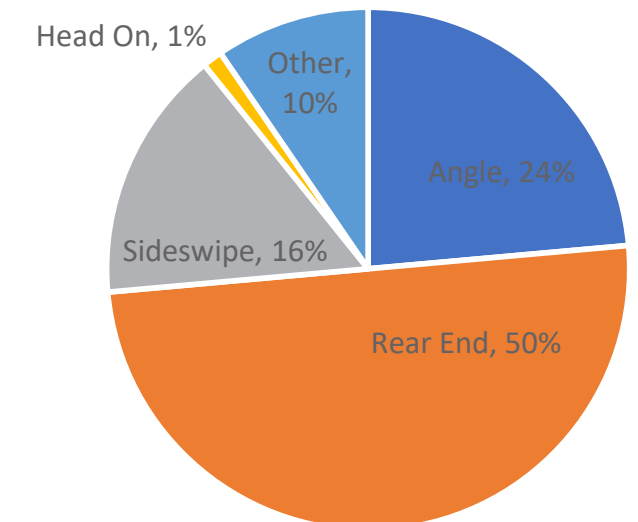
Locations experiencing high occurrences of crashes include Tarringford West Street, Tarringford Street, and the Route 8 Interchange area. Locations closer to Downtown Torrington that experience higher occurrences of crashes include East Main Street intersections with Willow Street/Wall Street and Main Street. Specific recommendations for improvements are presented later in this report to address safety conditions throughout the entire East Main Street corridor.

| Intersection East Main Street at: | Number of Crashes | Percentage of All Crashes |
|---------------------------------------|----------------------|------------------------------|
| Main Street | 26 | 5.2 |
| Center Street | 10 | 2.0 |
| Willow Street/Wall Street | 24 | 4.8 |
| Columbus Road/Route 8 SB Ramp | 30 | 6.0 |
| Christoper Road/Route 8 NB Ramp | 12 | 2.4 |
| East Elm Street | 16 | 8.2 |
| Route 4 | 19 | 3.8 |
| Charles Street | 17 | 3.4 |
| Orchard Street | 4 | 0.8 |
| Pineridge Road/Yorkshire Street | 7 | 1.4 |
| Buena Vista Avenue/Koury Terrace | 19 | 3.8 |
| Tarringford West Street | 61 | 12.3 |
| Dibble Street | 21 | 4.2 |
| Tarringford Street | 66 | 13.3 |
| Target Driveway | 4 | 0.8 |
| Tarringford East Street/Harrison Road | 12 | 2.4 |
| Other Locations | 148 | 29.8 |
| TOTAL | 496 | |

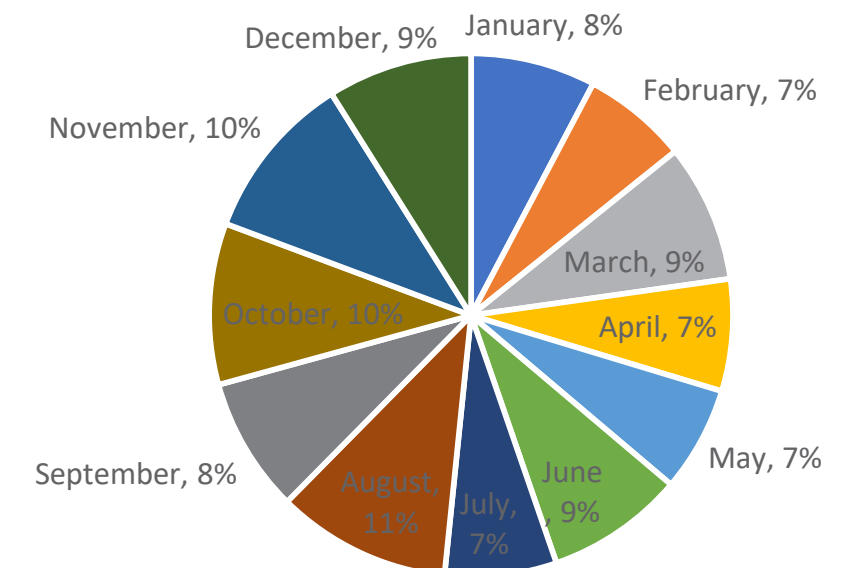
CRASH SEVERITY



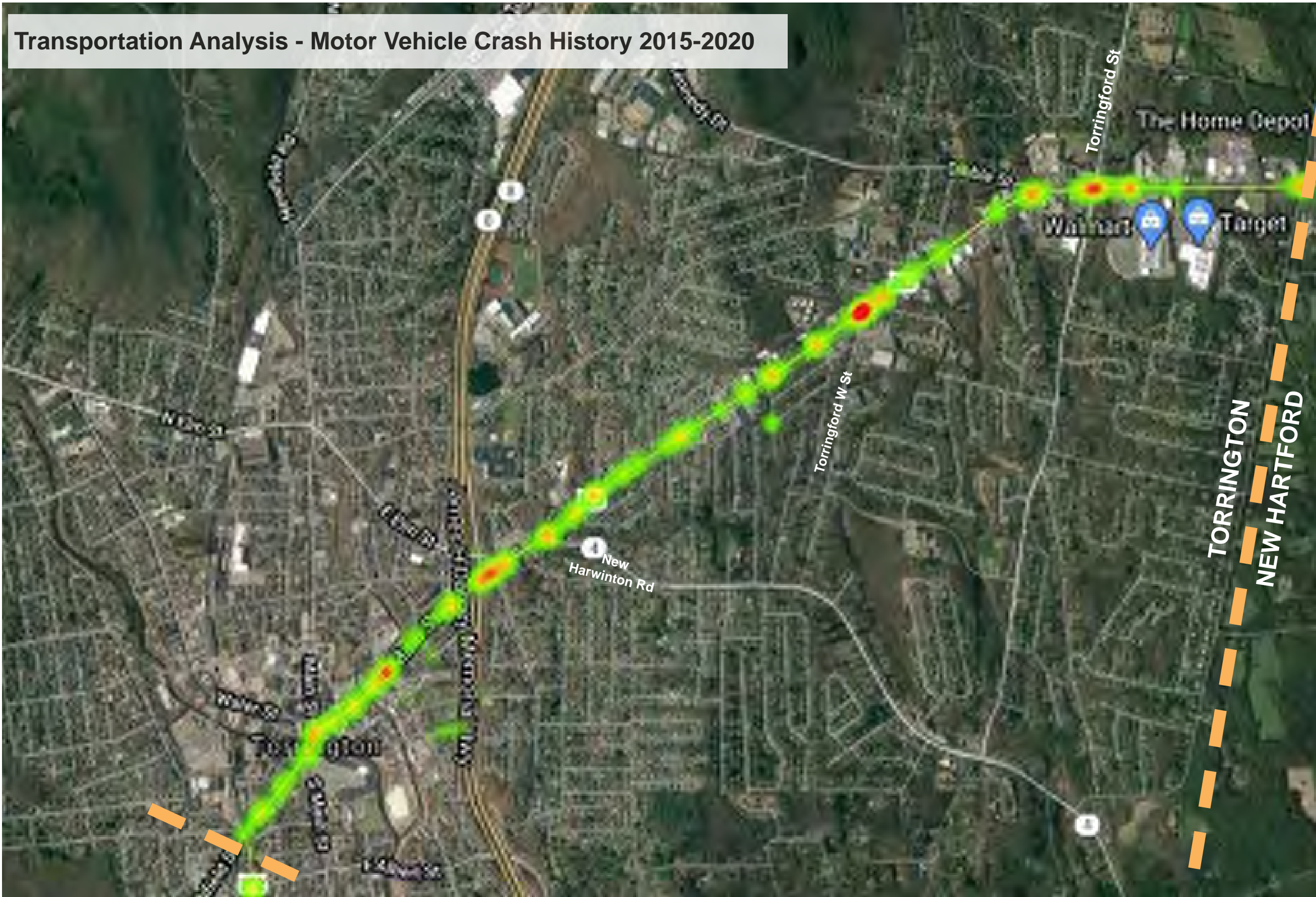
CRASHES BY TYPE






CRASHES BY MONTH



Transportation Analysis - Motor Vehicle Crash History 2015-2020



LEGEND

-  High Frequency Crash Area
-  Medium Crash Frequency Area
-  Low Crash Frequency Area

EXISTING CONDITIONS AND ANALYSIS

Existing Traffic Conditions and Analysis

TRANSIT SERVICES

The Northwestern CT Transit District is based on Torrington and currently operates Route 3 along the East Main Street corridor. This bus route provides local service throughout Torrington, connecting mostly commercial properties and larger residential developments along East Main Street, Kennedy Drive, and Winsted Road. The Transit District is currently in the process of implementing a new schedule with new stops, some of which were not yet signed or identified. Major stops are located at Walmart, Target, and at residential developments around the Torrington West intersection node.

The bus stops are identified by a single sign, where posted. Bus shelters with transit information are generally not provided at any location. Many locations are not provided ADA compliant routes or facilities and are located on the grass area adjacent to East Main Street, creating major pedestrian safety issues.

The CTtransit service is based in the City of Hartford and operates Bus Route 450X on weekdays toward the eastern end of the corridor, with two stops located in the downtown area. This bus route provides regional transit service between Torrington and Waterbury. Route 927 – Torrington Express operates along East Main Street and provides service between downtown Torrington and Hartford. Route 927 operates as a commuter express bus route and only provides service during the weekday peak periods.

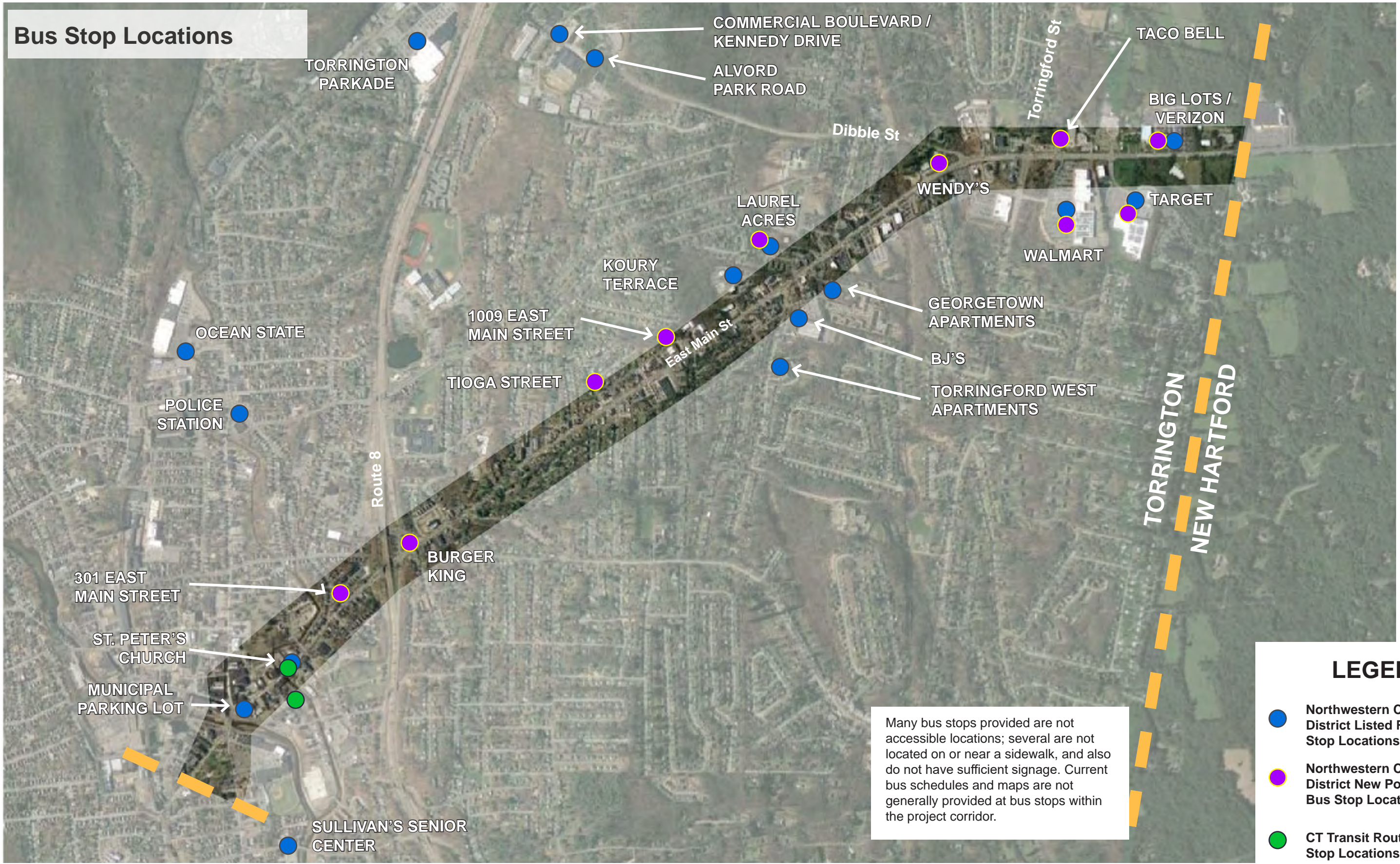


Limited Transit Service Includes Northwestern CT Regional Transit District



Bus Stop Locations Should be Evaluated to Optimize Ridership and Safety

Bus Stop Locations



Many bus stops provided are not accessible locations; several are not located on or near a sidewalk, and also do not have sufficient signage. Current bus schedules and maps are not generally provided at bus stops within the project corridor.

LEGEND

- Northwestern CT Transit District Listed Route 3 Bus Stop Locations
- Northwestern CT Transit District New Posted Route 3 Bus Stop Locations
- CT Transit Route 450X Bus Stop Locations

EXISTING CONDITIONS AND ANALYSIS

Existing Traffic Conditions and Analysis

FUTURE TRAFFIC CONDITIONS

To assess the potential future traffic conditions throughout the corridor, the existing traffic volumes were grown to develop a 20-year traffic horizon (year 2040). A 0.5 percent annual growth rate was applied to the overall traffic volumes, which represents a growth rate higher than the trends from 2006 – 2018, based on available data obtained from the CTDOT Traffic Monitoring Information. Traffic counts conducted along East Main Street west of Dibble Street (Station 144) and east of Tarringford Street (Station 25) indicate that traffic volumes have been trending downward since 2006. The 0.5 percent growth rate was selected to account for additional development in Torrington and throughout the region that is not currently planned or proposed. The 2040 traffic volumes are provided in the Appendix.

TRAFFIC OPERATIONS ANALYSIS

An analysis of traffic operating conditions at the study area intersections was conducted for the weekday morning, weekday evening, and Saturday midday peak hours for the existing and future conditions scenarios. These time periods represent peak typical commuter and recreational travel periods throughout the course of a week. Intersection and roadway design are typically based on these peak operating periods to evaluate the worst-case scenarios and identify if there are any capacity issues that should be addressed. Traffic operations analyses were also conducted to assess specific recommendations at intersections, which are discussed later in this report.

The traffic operations analysis determines vehicular delays and queuing patterns that occur at the intersections throughout the corridor. Analyses were conducted using the Synchro 10 traffic analysis software, which is based on methods defined in the Highway Capacity Manual. Delays are categorized by “level-of-service” (LOS), which assigns a letter grade to each intersection between A and F (A being the lowest delays and F being the highest delays) to identify areas that may experience significant congestion and lack of capacity to meet the traffic demands. The following table shows each LOS designation for signalized intersections based on average delay per vehicle.

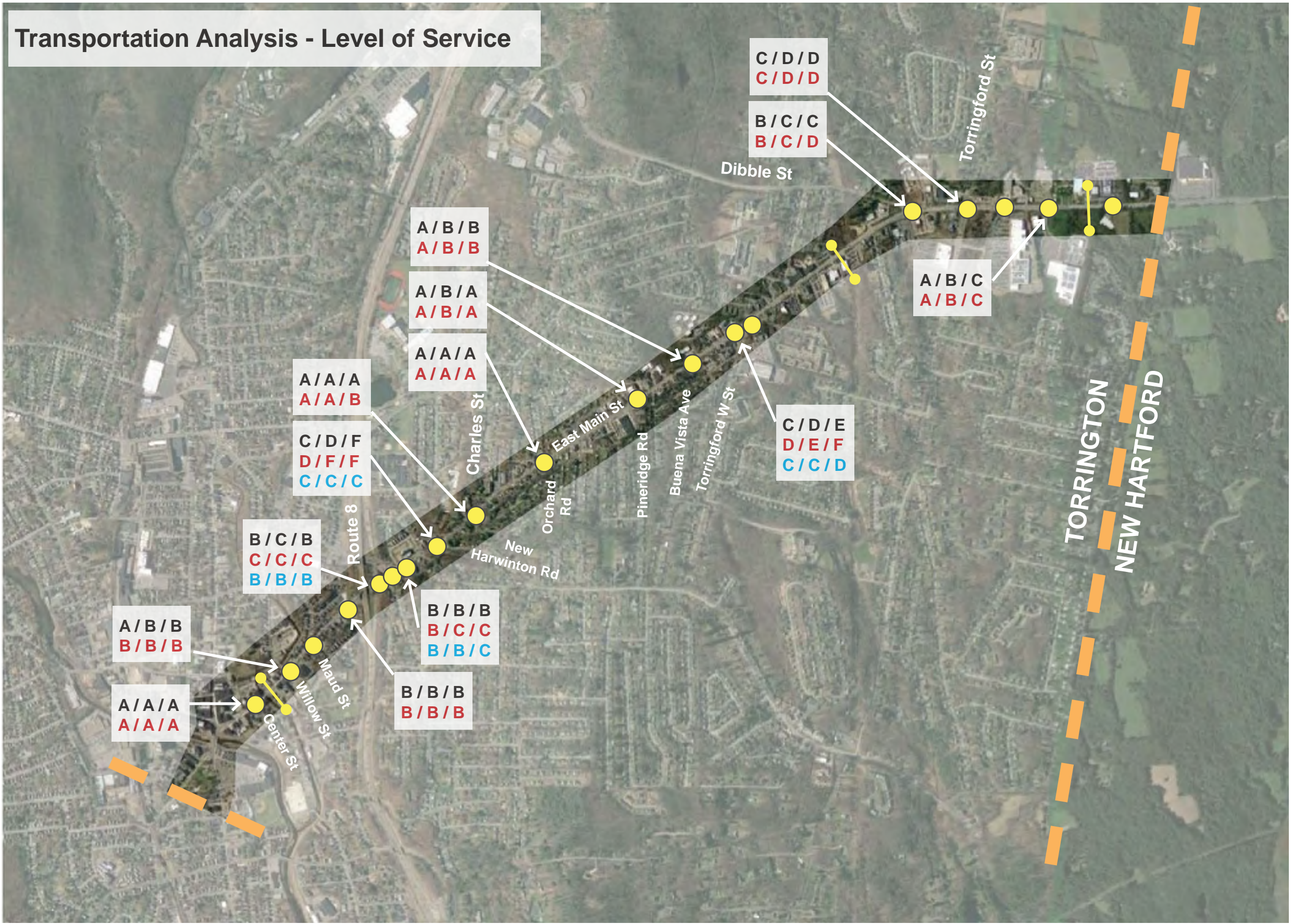
Average delays are typically the highest during the commuter peak periods due to heavy directional flow to/from the regional highway system and between large employment centers. Poor LOS does not necessarily indicate that there are capacity issues and may be a result of how traffic signals are timed and the geometry at the intersection. However, low LOS are sometimes related to lack of capacity, which indicates that queues may not clear through intersections, creating congestion issues upstream throughout the corridor.

The adjacent figure shows the LOS summary at each study area intersection. Detailed analysis sheets and tables are provided in the Appendix.

| Level of Service | Average Delay (seconds/vehicle) |
|------------------|---------------------------------|
| A | 0 – 10 |
| B | 10 – 20 |
| C | 20 – 35 |
| D | 35 – 55 |
| E | 55 – 80 |
| F | >80 |

Locations experiencing the highest levels of congestion include East Main Street at Tarringford West Street, Route 4, and at the Route 8 interchange. These intersections carry considerable traffic volumes along East Main Street and each of the cross streets during the peak periods and as a result, vehicular queues and delays can be moderate to significant.

Transportation Analysis - Level of Service



LEGEND

- AM / PM / Saturday times for Intersection Level of Service
- BLACK - 2020 Existing
- RED - 2040 Future
- BLUE - 2040 Future with Mitigation



EAST MAIN STREET CORRIDOR STUDY TORRINGTON, CT

RECOMMENDATIONS

- **TRANSPORTATION RECOMMENDATIONS**
- **FOCUS AREA RECOMMENDATIONS**
- **PUBLIC IMPROVEMENT CONCEPTS**

RECOMMENDATIONS

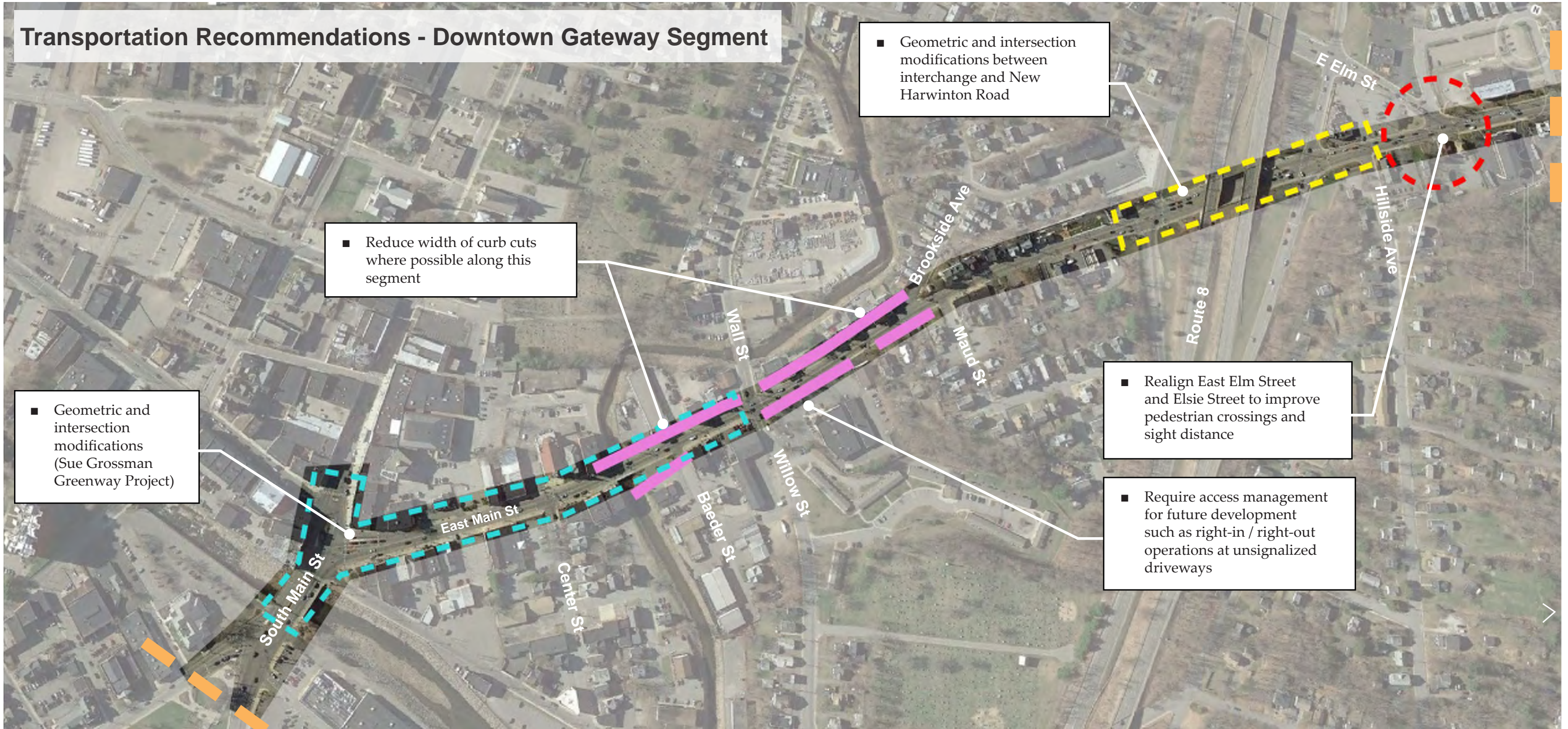
Transportation Recommendations

The objectives of this corridor study are to determine recommendations for improvements that will improve safety, reduce congestion, improve mode choice for non-motorists, and to plan for growth associated with economic development within the study area. This study has identified existing issues that need to be addressed and has considered the future needs from growth and potential development throughout the East Main Street corridor. The recommendations for improvements identified in this section are intended to provide the City of Torrington, the NHCOG, and CTDOT with a plan to ensure that existing deficiencies are addressed and to prepare for additional demands on the corridor.

Specific recommendations are presented in the following pages that address the Project's goals. Further exploration into specific focus areas are presented after this section.



Transportation Recommendations - Downtown Gateway Segment



LEGEND

- - - Area in Good Condition
- - - Area Needing Improvements
- - - Area Needing Significant Improvements
- Access Management Issues
- Substandard Signal



Transportation Recommendations - Western Neighborhood Commercial Segment



■ Geometric modifications to provide additional capacity

■ Pedestrian and sidewalk upgrades between New Harwinton Road and Torrington West Street

LEGEND

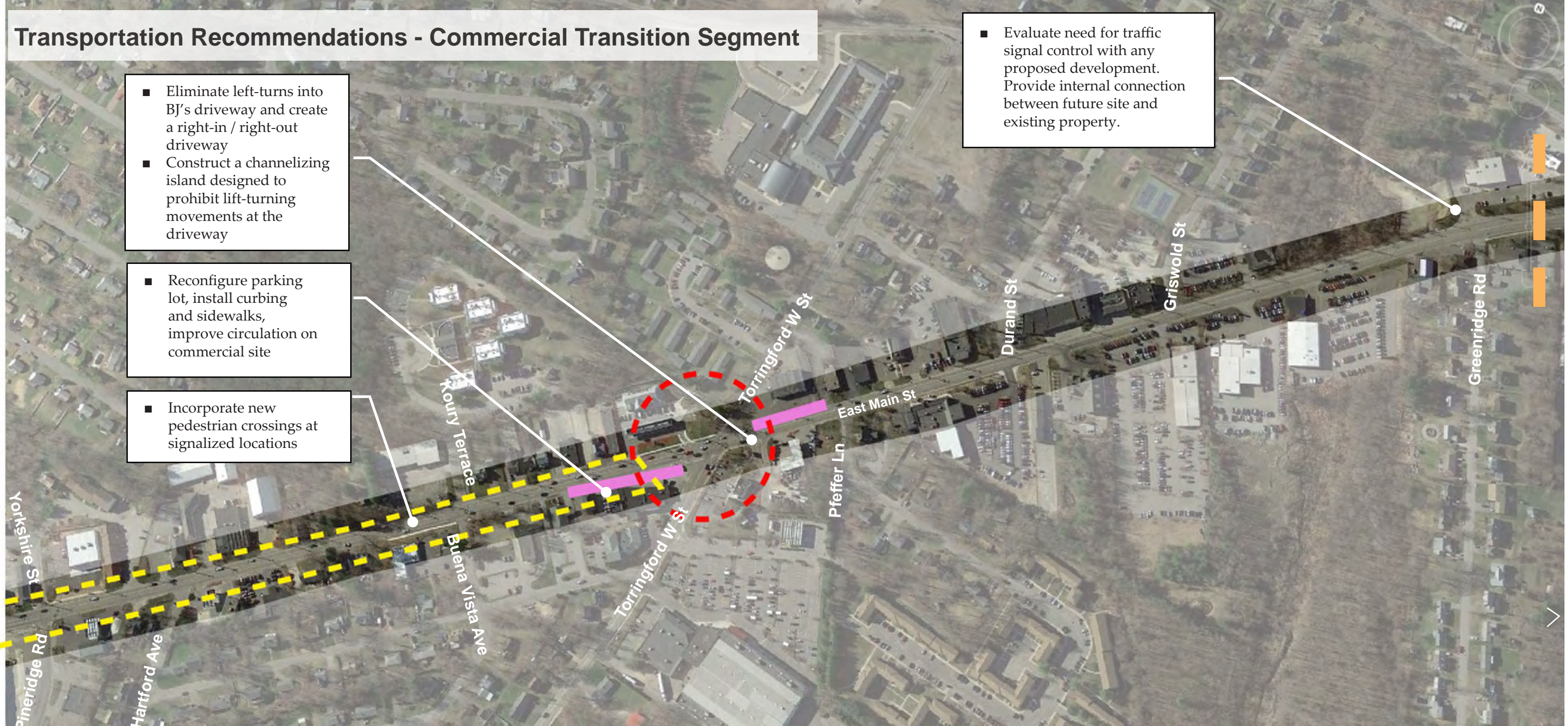
-  Area in Good Condition
-  Area Needing Improvements
-  Area Needing Significant Improvements
-  Access Management Issues
-  Substandard Signal



Transportation Recommendations - Commercial Transition Segment

- Eliminate left-turns into BJ's driveway and create a right-in / right-out driveway
- Construct a channelizing island designed to prohibit left-turning movements at the driveway
- Reconfigure parking lot, install curbing and sidewalks, improve circulation on commercial site
- Incorporate new pedestrian crossings at signalized locations

- Evaluate need for traffic signal control with any proposed development. Provide internal connection between future site and existing property.



LEGEND

- Area in Good Condition
- Area Needing Improvements
- Area Needing Significant Improvements
- Access Management Issues
- Substandard Signal



Transportation Recommendations - Eastern Gateway: Regional Shopping Segment



■ Properties have internal connections that allow access to traffic signals at the Target driveway and Torrington St. to accommodate existing left-turning maneuvers.

■ Install raised median between Torrington Street and Target driveway. Retain westbound left-turn lane to Walmart and provide separation between left-turn lanes.

■ Upgrade pedestrian facilities

■ Upgrade pedestrian facilities

■ Potential pedestrian and vehicular linkage would further reduce vehicle trips

LEGEND

- Area in Good Condition
- Area Needing Improvements
- Area Needing Significant Improvements
- Access Management Issues
- Substandard Signal



RECOMMENDATIONS

Focus Areas

As part of the corridor study, development considerations were to be explored at selected economic development nodes within the corridor. In consultation with City staff, five nodes were initially identified, and further discussion led to the addition of two more areas. A matrix was developed to summarize key physical attributes and assessor’s data. This information would be used as a quick reference guide for City staff, particularly in anticipation of dialogue with property owners and potential developers.

By the time the physical and traffic analyses of the corridor were completed and this matrix finalized, a different approach was envisioned—one that would examine specific Focus Areas in terms of several different elements and then integrated with potential traffic improvements. This approach not only would provide for flexibility in examining areas based on relevant context rather than solely on development, it would be an effective means of communicating the nature and extent of recommendations to complement corridor-wide improvements.

Improvement options include:

- Development / Reuse
- Traffic Improvements
- Access Management
- Connectivity
- Accessibility
- Placemaking / Urban Design

A series of existing context maps were created using aerial and Geographic information System data to highlight attributes and issues of each Focus Area. Recommendations were depicted on a separate series of graphics.

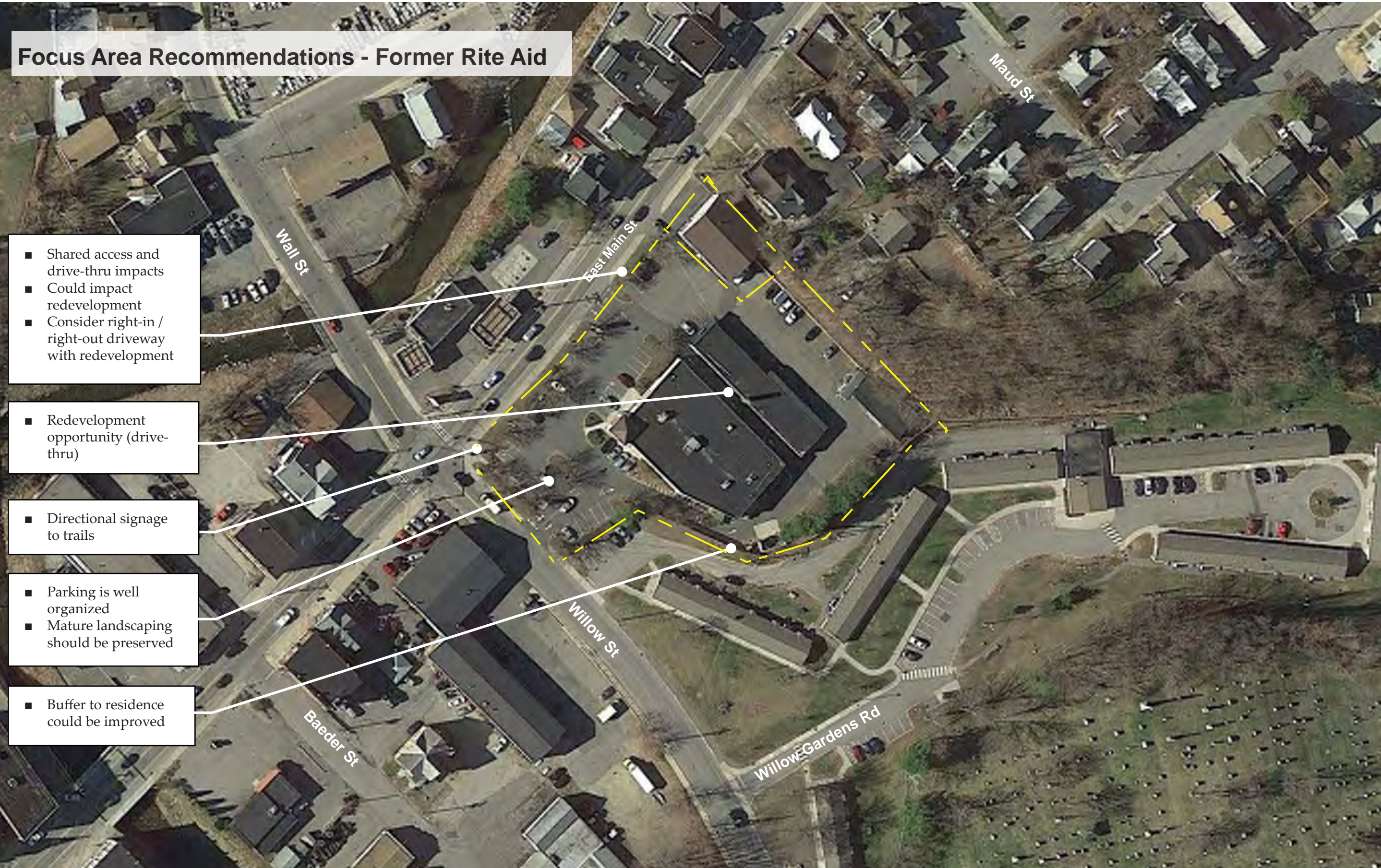
| TORRINGTON EAST MAIN STREET CORRIDOR STUDY AREA: FOCUS AREAS | | |
|--|--------------------------|---|
| Target Plaza Access management Traffic Improvements Connectivity | 1902- 1922 East Main St. | Signalized intersection with westbound dedicated left turn lane provides access. Famous Footwear, Bed Bath Beyond (vacant) are in line with Target and are on a separate parcel than the frontage retail (Panera, GameStop, Mattress Firm). Pedestrian access from East Main is possible via sidewalk along the frontage and continuing into the site via an asphalt walk way running along the western side of the parking lot. Connection with Torrington Plaza would reduce localized vehicular congestion and provide additional pedestrian access. |
| Torrington Plaza Access management Traffic Connectivity | 970 Torrington St. | Eastbound entrance/ exit directly from East Main Street. Full access from Torrington Street (signalized at East Main) which connects with adjacent retail (Stop & Shop). Development includes Walmart, Market 32(Price Chopper), Petco and Michaels with and MacDonald's pad site. Pedestrian connection with Target Plaza would help to reduce localized vehicular congestion. Property owner/developer has secured local approvals of a major expansion which will include a pedestrian connection up to the property line with Target. |
| Big Lots (rear parcel) Development Internal circulation | 1927 East Main St. | Access from East Main is through a signalized intersection aligned with Target. Rear parcel is undeveloped except for a cell tower; circulation and parking in front could be improved and attention should be given to safe pedestrian access to storefronts. Access to the rear provided via an existing narrow driveway to the west of the existing building. This may be insufficient depending on bulk zoning requirements and future use. Lower intensity use may be ideal. |
| Wendy's/Retail Strip Internal Circulation | 220 Dibble Street | Main access is off Dibble. Includes Cork Liquors and Valvoline Instant Oil Change in separate building with interconnected access/parking. Cork/Valvoline has separate westbound entrance and exit. Westbound left turn lanes prohibited but often ignored. |
| Vacant Lots Development Access Management Traffic Improvements | 1571 East Main St. | Only one parcel has frontage. Same ownership as Wendy's allows more opportunity for integrated development of adjacent parcels. Existing curb-cut is in close proximity to Valvoline's westbound-only exit and within the area where westbound lanes merge from 2 to 1. Potential for shared access with Valvoline/Wendy's. If existing curb cut is not currently approved through DOT encroachment permit, one will be necessary for development. Owner has had several interested end-users examine the site. |
| | 2565 East Main St. | Direct ingress/egress hampers interest. Depending on the size/intensity of development, a state traffic permit may be necessary and potential remedies should be explored. |

CONTINUED

CONTINUED

| TORRINGTON EAST MAIN STREET CORRIDOR STUDY AREA: FOCUS AREAS | | |
|--|--|---|
| 1397-1439 Block Access management | 1397 East Main St. | Auto Parts business occupies corner with parking arranged at Durand Street side. Rear parking appears constrained by adjacent building and rear property. |
| | 1399/1415 East Main St. | Partially vacant; front yard parking is extremely close to the state right-of-way and creates hazardous conditions for vehicle ingress/egress. |
| | 1431-39 East Main St./ 7 Griswold Street | Three buildings, two are multi-tenanted; includes Enterprise Car Rental and Pizza Palace. Parking in rear available to all tenants via access from Griswold. Access drive from East Main situated between two buildings is narrow and conflicts with front parking. Pizza Palace elevation is higher than adjacent properties and its main entrance faces the rear parking area. Directional signage may helpful in facilitating safe vehicle access. Property management strategies should be employed to lessen the frequency of the driveway being blocked. |
| Torrington West/East Main Block Access Management Traffic Improvements Connectivity | 1238 East Main St. | Jimmy's Market & Deli/Tedeschi Tile Oversized curb cut encourages cut-throughs to avoid signalized right-turn onto Torrington West; parking is not striped nor are wheel stops evident--both of these may help to provide patrons safe parking and possible increase spaces. Parking appears to be encroaching upon State right-of-way and could be lost if CTDOT required signal improvements. |
| | 1276 East Main St. 1270 East Main St. | Unsignalized access in close proximity to Torrington West signalized intersection and provides direct access into Dunkin Donuts; auto repair business east of access drive has two wide curb cuts and appears to be parking auto within state right-of-way. |
| | 1280 East Main St. | Unsignalized westbound access creates hazardous vehicle movement into the site. Long driveway to access the business creates potential conflicts with the Dunkin entrance, the circulation around the BJ Gas facility and access into the parking lot that requires yielding to cross traffic from an entrance off Torrington West. |
| | 380 Torrington West St. Vacant | Potentially planned as Phase 2 of Torrington West Sr. Housing |
| Former Rite Aid Reuse/redevelopment Internal circulation Access management | 218 East Main St. | Includes Torrington Sash & Door and plumbing contractor; challenging access/circulation related to smaller businesses. Not currently being offered for sale/lease despite vacancy of Rite Aid. This property is under private ownership not a corporate holding, therefore future discussions with the owners may be beneficial to understand expectations and future plans. |
| Route 8 Node Traffic Improvements Connectivity Development/Redevelopment Gateway Enhancements | 451 E. Main St. Burger King | Parking lot in need of repair and reconfiguration; wide curb cuts; appearance is out of sync and scale with downtown. Site improvements would benefit operational function and gateway appearance. State Park 'n Ride lot located to the west should be connected in a defined and visible way. |
| | 475 East Main St. Vacant Lot/Burger King frontage | Corner is used for Burger King parking but parcel is under separate ownership. Existing landscape materials may not be suitable for this high activity corner; more sustainable vegetation would eliminate need for frequent replacement and provide aesthetic improvement to this very visible corner. |
| | 417 East Elm St. Twin Colony Diner | Ample parking provides opportunity to improve circulation, organize parking nearer the entrance, and add landscaping and more outdoor seating given the prominent location. The site's location and use as a restaurant would be a beneficial addition to a cohesive and integrated reconfiguration of surrounding properties. |
| | 507 East Main St. Glass Building | Under its present use as an office building or under potential reuse/redevelopment scenarios, the site would benefit from improved parking, site circulation and pedestrian safety provisions that address the topographic challenges of the site and also create accessibility issues. Reuse options expand if the site could be incorporated into a longer-term vision for the Route 8 gateway which would include addressing convoluted traffic patterns and providing safe pedestrian connections. The site owners are examining options and would welcome changes in traffic patterns to enhance the property. |

Focus Area Recommendations - Former Rite Aid



- Shared access and drive-thru impacts
- Could impact redevelopment
- Consider right-in / right-out driveway with redevelopment

- Redevelopment opportunity (drive-thru)

- Directional signage to trails

- Parking is well organized
- Mature landscaping should be preserved

- Buffer to residence could be improved

Focus Area Recommendations - Route 8 Gateway

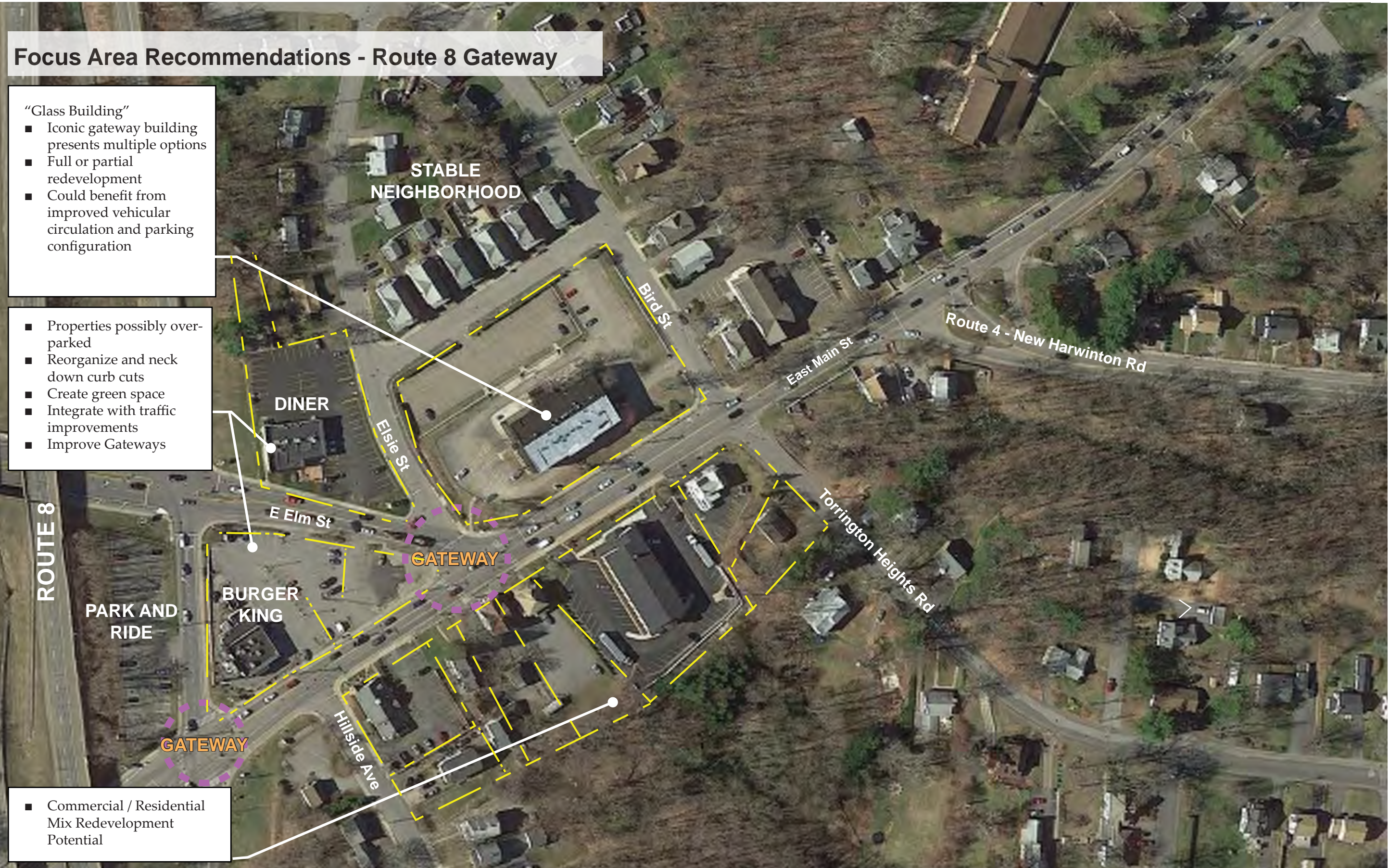


"Glass Building"

- Iconic gateway building presents multiple options
- Full or partial redevelopment
- Could benefit from improved vehicular circulation and parking configuration

- Properties possibly over-parked
- Reorganize and neck down curb cuts
- Create green space
- Integrate with traffic improvements
- Improve Gateways

- Commercial / Residential Mix Redevelopment Potential



Focus Area Recommendations - Route 8 Gateway Long-Term Development Vision



Preserve Existing Neighborhood

- Future Development**
- Opportunity for multi-use development with or without existing building
 - Existing parking lot may support a residential use in a compatible format

- Coordinated Development**
- Property stakeholders may benefit from a cohesive plan
 - Regardless of uses and development format, coordinated access and parking would improve function and safety

- Long Term Integrated Development**
- Examine form and function of existing uses with change in road configuration
 - Existing uses may choose to remain in current locations or become integrated in new format
 - Streetscape and gateway improvements provide walkable, human-scale to overcome dominance of overpasses and restore downtown connection

Focus Area Recommendations - Route 8 Gateway Long-Term Transportation Vision

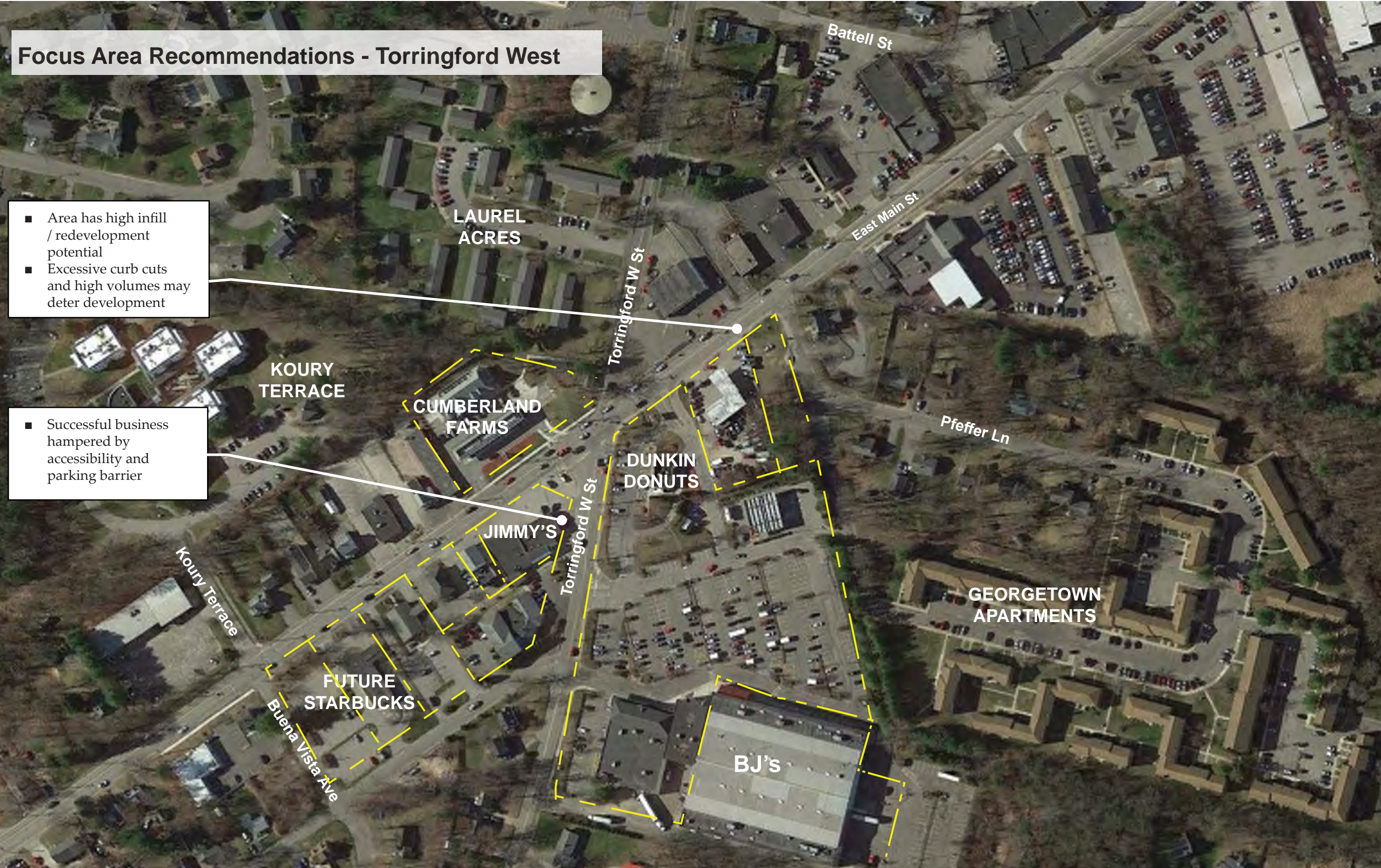


Focus Area Recommendations - Torringford West

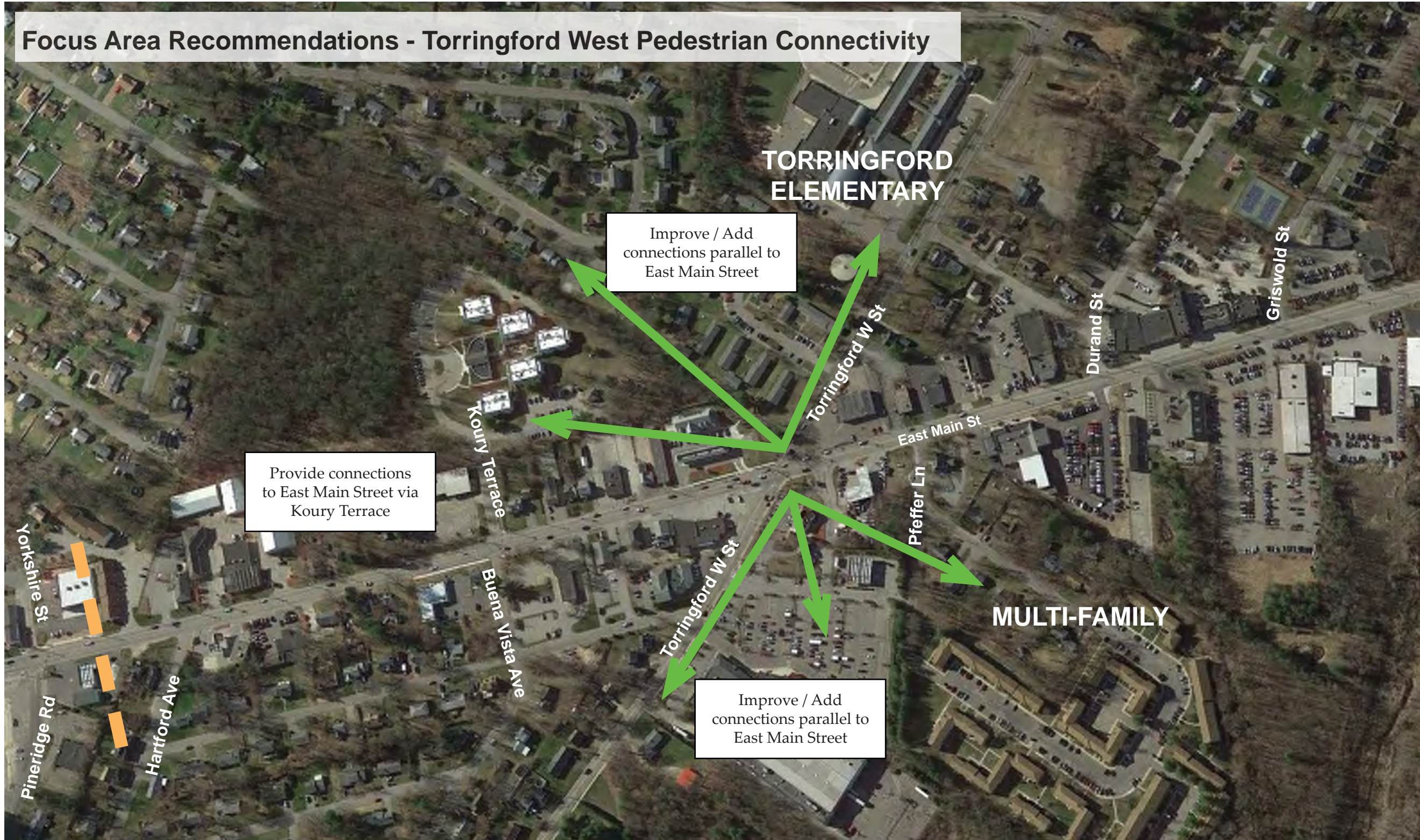


- Area has high infill / redevelopment potential
- Excessive curb cuts and high volumes may deter development

- Successful business hampered by accessibility and parking barrier



Focus Area Recommendations - Tarringford West Pedestrian Connectivity

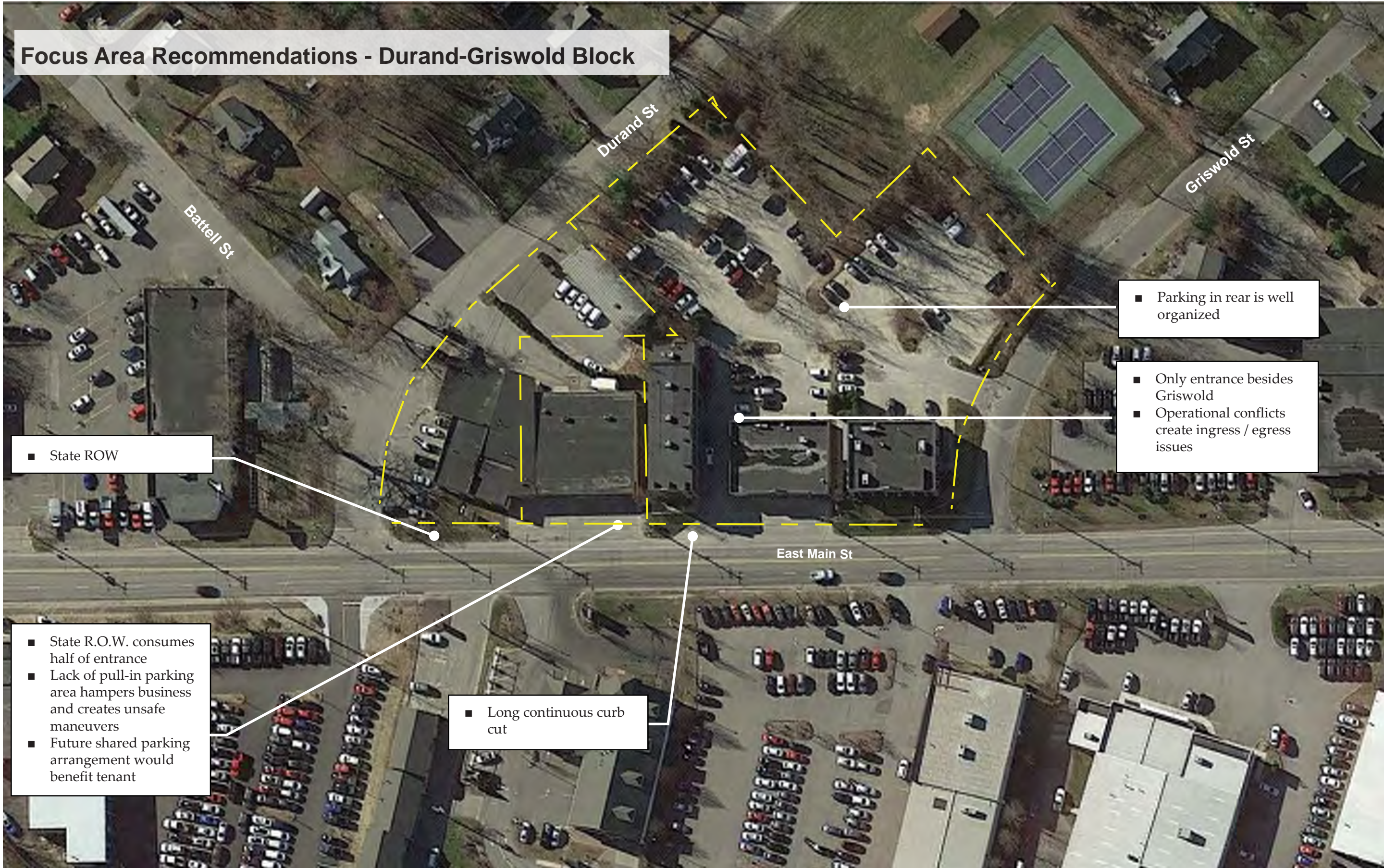


LEGEND

- Proposed Sidewalk
- Existing Sidewalk
- No Sidewalk



Focus Area Recommendations - Durand-Griswold Block



■ State ROW

■ Parking in rear is well organized

■ Only entrance besides Griswold
■ Operational conflicts create ingress / egress issues

■ State R.O.W. consumes half of entrance
■ Lack of pull-in parking area hampers business and creates unsafe maneuvers
■ Future shared parking arrangement would benefit tenant

■ Long continuous curb cut

Focus Area Recommendations - Wendy's

To Route 8 and
Winsted Road

Potential bicycle
connection

Bicycle directional
signage

- Entrance off Dibble Street allows safe egress / ingress with ample queue length

- Shared access and parking

- Right turn only but cross lane left turns occur

- Development Potential
- Suitable for smaller retail / drive-thru
- Existing curb cut may be impacted by road usage

- Existing flashing yellow light
- Evaluate need for additional traffic control and geometric upgrades with redevelopment of parcels
- Intersection improvements may be linked to development





Focus Area Recommendations - Big Lots

- Steep topography may increase development costs
- Narrow access point to rear may hinder certain development

- Interconnected access improves accessibility

- Signalized access is good / Internal circulation is confusing
- Safe pedestrian circulation to and from stores could be improved



Focus Area Recommendations - Torrington Fair / Target



- Signalized access

- Un-signalized access

- Separate access points create additional traffic on East Main Street
- Integrated access would facilitate patronage of both properties
- Provides more efficient transit access

- Potential pedestrian and vehicular linkage would further reduce vehicle trips



Public Improvement Concepts - Downtown Gateway Segment



- Opportunity to relocate overhead utility wires underground

- Reduce width of curb cuts where possible along this segment

- Replace sidewalks and curb ramps

- Install street trees and light poles to match work on South Main Street

RECOMMENDATIONS



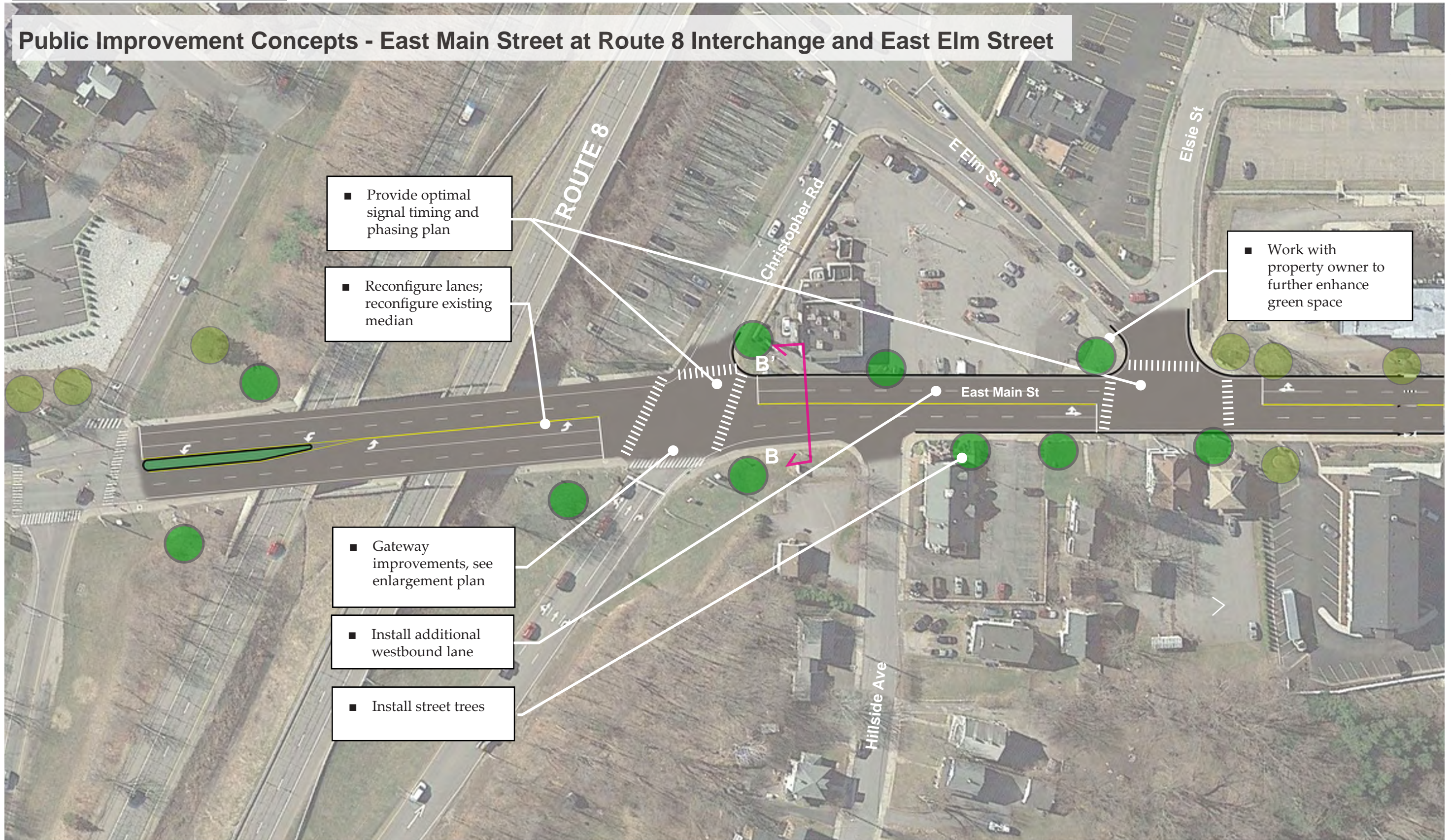
Existing Downtown Cross Section A-A'



Proposed Downtown Cross Section A-A'

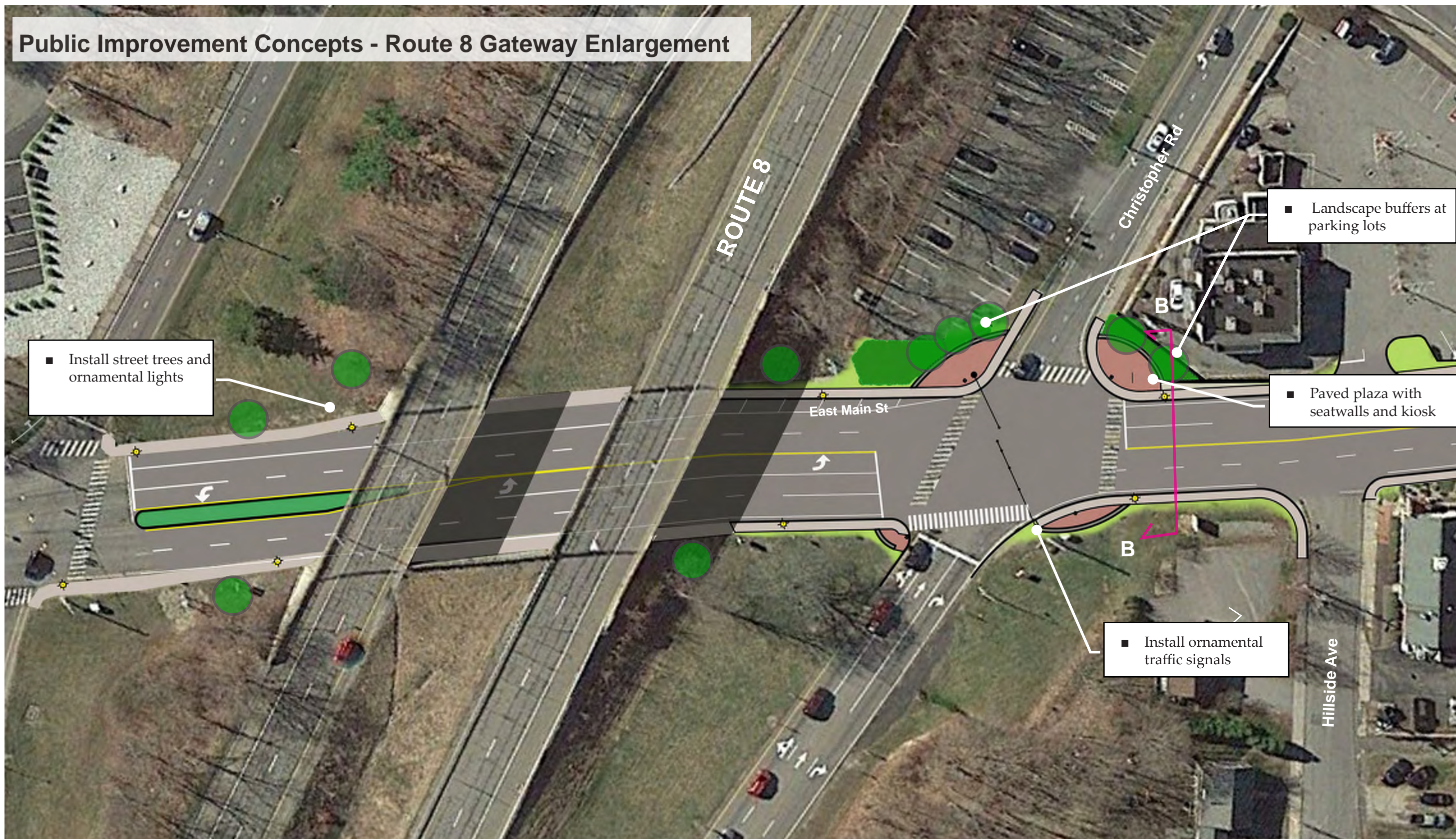
RECOMMENDATIONS

Public Improvement Concepts - East Main Street at Route 8 Interchange and East Elm Street



RECOMMENDATIONS

Public Improvement Concepts - Route 8 Gateway Enlargement



RECOMMENDATIONS



Existing Gateway Cross Section B-B'



Proposed Gateway Cross Section B-B'

RECOMMENDATIONS

Existing View at Route 8 Gateway



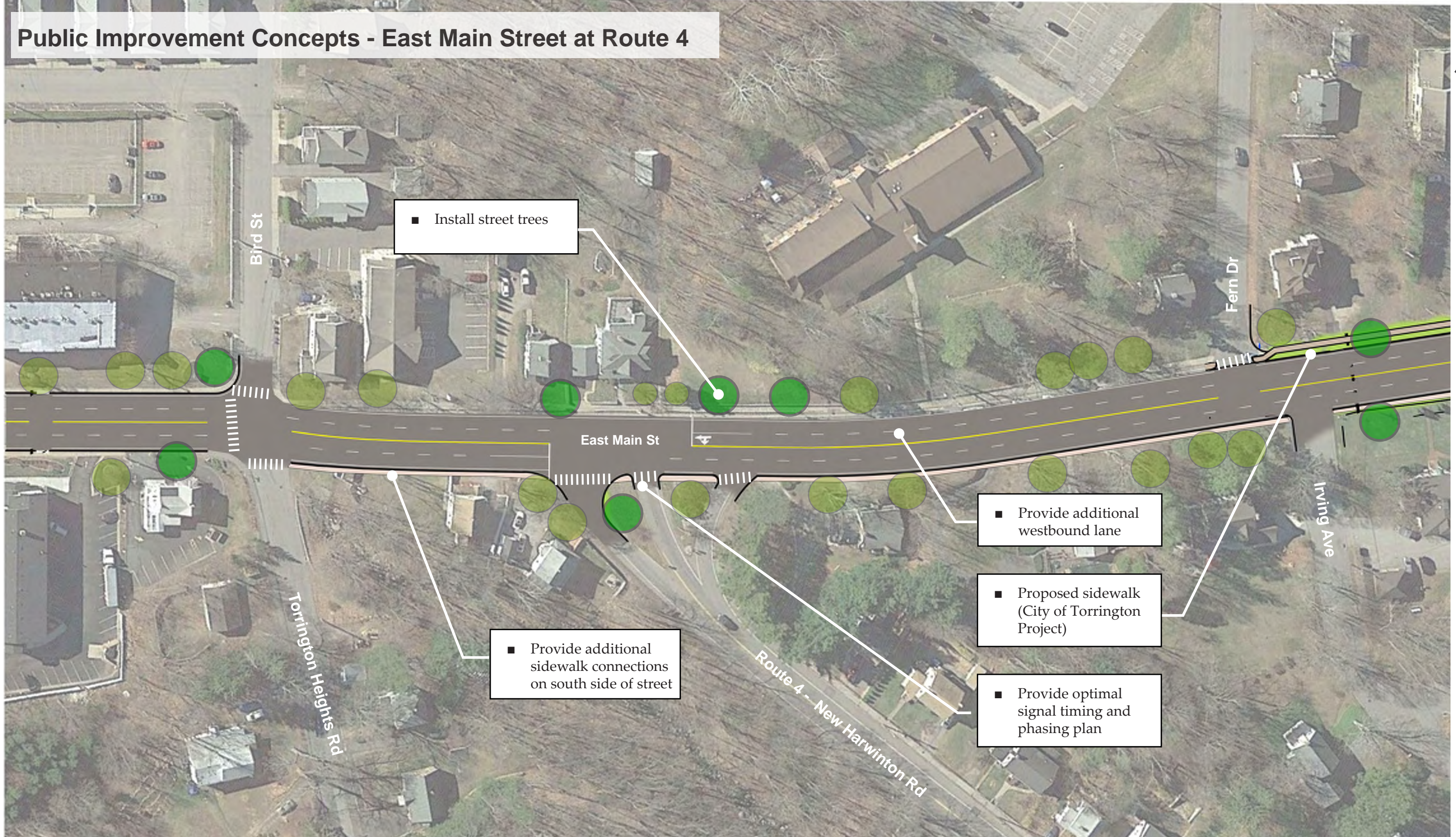
RECOMMENDATIONS

Proposed Route 8 Gateway



RECOMMENDATIONS

Public Improvement Concepts - East Main Street at Route 4



■ Install street trees

■ Provide additional sidewalk connections on south side of street

■ Provide additional westbound lane

■ Proposed sidewalk (City of Torrington Project)

■ Provide optimal signal timing and phasing plan

RECOMMENDATIONS

Public Improvement Concepts - East Main Street Sidewalk Project



■ Install street trees

■ Proposed sidewalk (City of Torrington Project)

■ Provide additional westbound lane

■ Provide additional sidewalk connections on south side of street

RECOMMENDATIONS

Public Improvement Concepts - East Main Street Sidewalk Project



RECOMMENDATIONS

Public Improvement Concepts - East Main Street Sidewalk Project



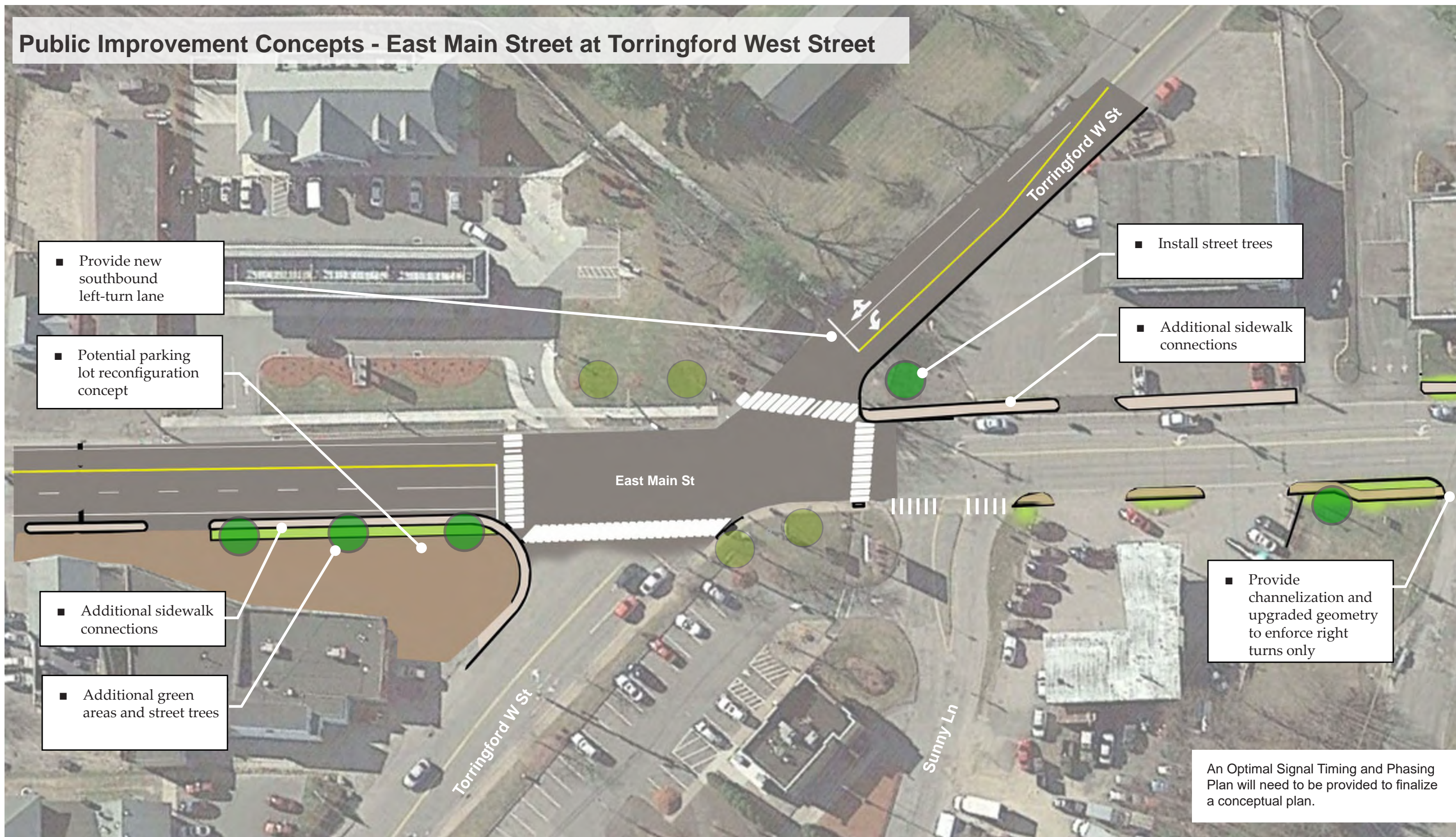
RECOMMENDATIONS

Public Improvement Concepts - East Main Street Sidewalk Project



RECOMMENDATIONS

Public Improvement Concepts - East Main Street at Tarringford West Street



RECOMMENDATIONS

Public Improvement Concepts - East Main Street



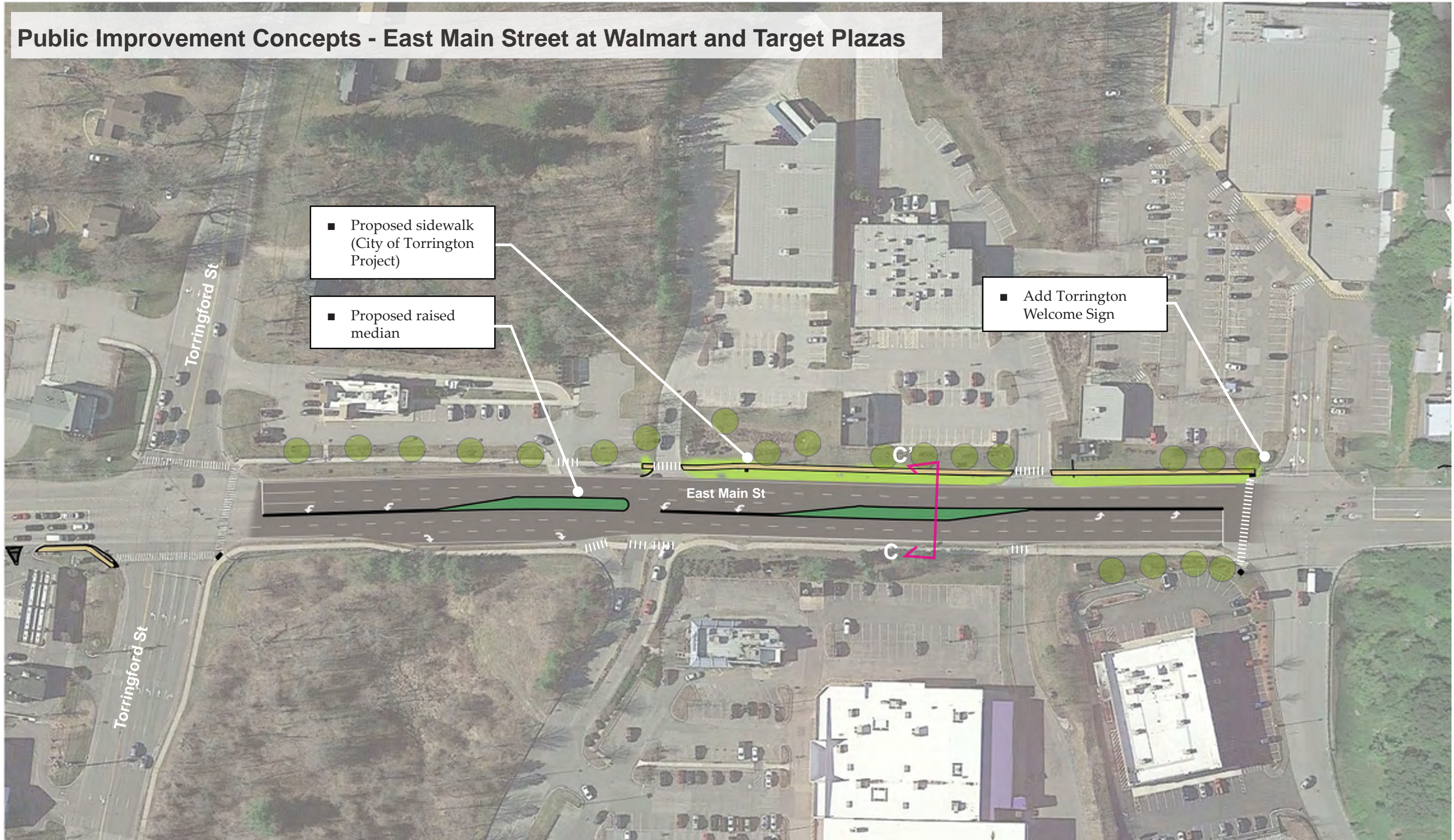
RECOMMENDATIONS

Public Improvement Concepts - East Main Street at Tarringford West Street



RECOMMENDATIONS

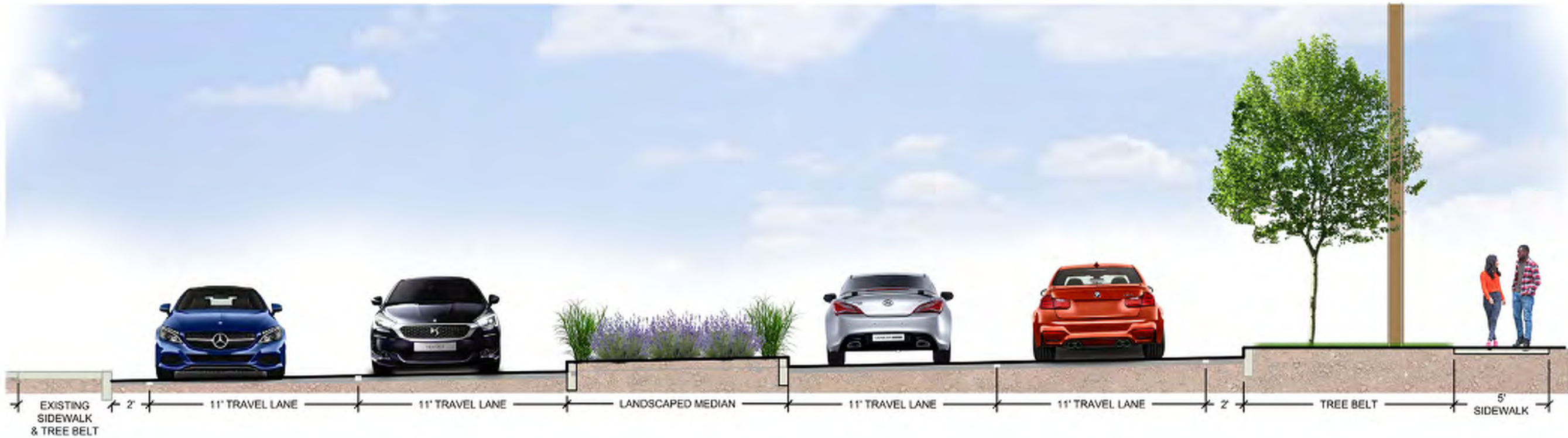
Public Improvement Concepts - East Main Street at Walmart and Target Plazas



RECOMMENDATIONS



Existing Walmart Cross Section C-C'



Proposed Walmart Cross Section C-C'



EAST MAIN STREET CORRIDOR STUDY TORRINGTON, CT

MOVING FORWARD

- JUMP-STARTING IMPLEMENTATION
- PHASING RECOMMENDATIONS
- FUNDING OPPORTUNITIES

Jump-starting Implementation

Recommendations have been developed to address roadway deficiencies and improve pedestrian safety and the overall appearance and function of the corridor. More detailed physical improvements have been identified in eight Focus Areas. Presented below are a series of actions that can be used to begin the process of identifying priorities and move forward.

TRAFFIC AND TRANSPORTATION

- Reach out to local and state elected officials with a summary of the recommendations to initiate assistance in support and funding
- Organize an inter-agency meeting that includes City staff, NHCOC and CTDOT to establish clear mechanisms and the assignment of responsibility for:
 - Consistent monitoring and reporting of conditions
 - Establishing priorities and obtaining approval
 - Additional studies required to support implementation
 - Identify partnerships that will assist in obtaining funding
 - Maintain on-going dialogue with NHCOC to ensure East Main Street remains a *regional* priority
- Conduct an access management study that focuses specifically on the inventorying of approved curb cuts, proximity to the state right-of-way, and impacts to ingress/egress in relation to the business or property
- Review the city's zoning regulations and identify areas to further strengthen cur-but standards and design

TRANSIT

- Conduct an employer survey to identify if the lack of full transit options is hampering recruitment, and also to identify suitable bus stop locations
- Work with CTDOT and local transit providers to evaluate current service and identify options to expand reliable transit in support of employment and businesses
- Work with NHCOC and local transit providers to identify accessible bus stop locations and improve existing locations (shelters, secure bicycle racks, etc)

CONNECTIVITY

- Identify and program subsequent phases of sidewalk installation
- Pursue funding for and carry out a comprehensive connectivity study between destinations, neighborhoods, and the corridor
- Identify neighborhoods near schools to identify opportunities for safe routes
- Examine bicycle circulation within the Downtown Gateway in relation to trails and destinations

PLACEMAKING

- Assemble summary of improvements and present to joint meeting of City Council and city departments
- Pursue grant funding for gateway improvements, streetscapes and pocket parks
- Involve the city's Arts & culture commission in engaging local arts/culture organizations to introduce art and sculpture throughout the corridor where feasible
- Examine property boundaries and the state right-of-way in the Downtown Gateway/Route 8 node to ascertain the need for gaining cooperation from owners to implement a phased improvement plan
- Discuss the process of obtaining approval from CTDOT for visual improvement of the Route 8/East Main overpass

COST BREAKDOWN

The following table summarizes the recommendations of this study. The recommendations are organized by specific issue, location within the corridor, and expected project costs. The project costs are based on CTDOT's unit pricing. Due to many unknown details of some recommended construction projects, such as utility impacts, these costs should be considered preliminary and used for budgetary and planning purposes only. Updated and more detailed costs estimates should be conducted for grant applications and design documents.

Recommendations

| Vehicular Congestion | Approximate Cost | Downtown Gateway | Western Neighborhood | Commercial Transition | Regional Shopping |
|--|------------------|------------------|----------------------|-----------------------|-------------------|
| Optimize traffic signal timing and phasing throughout corridor | \$10,000 ea | ● | ● | ● | ● |
| Geometric modifications at South Main Street/East Main Street/Main Street intersection (current City of Torrington Project) | N/A | ● | | | |
| Geometric modifications between Route 8 interchange and New Harwinton Road to provide additional westbound lane. Reconstruct traffic signals at Route 8 ramps. | \$2,000,000 | ● | | | |
| Geometric modifications at New Harwinton Road and new westbound lane between New Harwinton Road and Charles Street | \$850,000 | | ● | | |
| Modify geometry at intersection with Torrington West Street to provide a southbound left-turn lane. Optimize signal phasing and timing plans. | \$150,000 | | | ● | |
| Eliminate left-turns into/from BJ's Driveway through geometric modifications | \$75,000 | | | ● | |
| Provide internal connections between Walmart and Target sites for vehicles and pedestrians | \$50,000 | | | | ● |
| Pedestrian Facilities | Approximate Cost | Downtown Gateway | Western Neighborhood | Commercial Transition | Regional Shopping |
| Install Accessible Pedestrian Signals (APS) at signalized locations throughout corridor | \$100,000 | ● | ● | ● | ● |
| Upgrade crosswalks and curb ramps throughout corridor | \$100,000 | ● | ● | ● | ● |
| Install new sidewalks throughout corridor (current City of Torrington Project) | N/A | ● | ● | ● | ● |
| Provide additional crosswalks and curb ramps across East Main Street at signalized locations (Charles Street, Orchard Street, Yorkshire/Pineridge Street, and Koury Terrace) | \$75,000 | | ● | | |
| Evaluate potential for new/enhanced pedestrian connections between residential development nodes on north and south side of East Main Street and commercial properties along East Main Street | \$50,000 | | | ● | |
| Install sidewalk along north side of East Main Street between Torrington West Street and Torrington Street. | \$750,000 | | | ● | ● |
| Install crosswalk across East Main Street at Dibble Street and APS signals at intersection. Optimize traffic signal timing and phasing. This recommendation should be implemented along with installation of sidewalk on north side of East Main Street. | \$10,000 ea | | | | ● |
| Install APS pedestrian signals at intersection with Target Driveway and optimize traffic signal timing and phasing. Consider eliminating the concurrent pedestrian phase for crossing East Main Street. | \$7,500 | | | | ● |

CONTINUED

| Safety | Approximate Cost | Downtown Gateway | Western Neighborhood | Commercial Transition | Regional Shopping |
|--|-----------------------|------------------|----------------------|-----------------------|-------------------|
| Upgrade traffic signal equipment throughout corridor; provide backplates for better visibility | \$40,000 | ● | ● | ● | ● |
| Conduct a detailed traffic safety evaluation and Road Safety Audit based on police crash data at the intersections with Tarringford West Street, Tarringford Street, and at the Route 8 Interchange. | \$20,000 per location | ● | | ● | ● |
| Improve access management throughout segment by reducing curb cuts and restricting left-turns where possible | \$25,000 | ● | | | |
| Realign Elsie Street approach to East Elm Street to improve sight distance and pedestrian crossing | \$150,000 | ● | | | |
| Formalize curb cuts in the southeast corner at the intersection with Tarringford West Street to provide sidewalks and safer site access | \$50,000 | | | ● | |
| Reconfigure parking and site access at the Durand-Griswold Block | \$75,000 | | | ● | |
| Evaluate need for traffic signal at Greenridge Road with proposed development on the north side of East Main Street (to be conducted with future traffic study for development) | \$20,000 | | | ● | |
| Install raised median between Tarringford Street and Target Driveway to provide physical separation between directions of travel and eliminate left-turning conflicts. Retain westbound left-turn lane into Walmart Driveway | \$1,500,000 | | | | ● |
| Bicycle Facilities | Approximate Cost | Downtown Gateway | Western Neighborhood | Commercial Transition | Regional Shopping |
| Conduct a comprehensive bicycle planning study to identify better connections between East Main Street, adjacent properties, and adjacent neighborhoods | \$50,000 | ● | ● | ● | ● |
| Provide directional signage to direct bicyclists to existing and future bicycle facilities | \$25,000 | ● | | | |
| Transit | Approximate Cost | Downtown Gateway | Western Neighborhood | Commercial Transition | Regional Shopping |
| Conduct a comprehensive transit study in coordination with the local transit authority to create more efficient bus routes, identify upgrades to schedule and bus stops, and to provide bus shelters and bus scheduling information at select locations. | \$50,000 | | | | |
| Upgrade bus stops to provide ADA accessibility and connections to sidewalks. Provide benches and shelters at select stops. | \$75,000 | ● | ● | ● | ● |
| Review bus schedule and routes with regional transit agency to provide efficient operations | \$10,000 | ● | ● | ● | ● |
| Site Development | Approximate Cost | Downtown Gateway | Western Neighborhood | Commercial Transition | Regional Shopping |
| Develop master plan for development along north and south side of East Main Street between Route 8 and New Harwinton Road. Development plans should include reconfigured roadway layouts to provide optimal circulation patterns and pedestrian access. | \$50,000 | ● | | | |
| Streetscape Development | Approximate Cost | Downtown Gateway | Western Neighborhood | Commercial Transition | Regional Shopping |
| Install decorative street lighting, landscape elements, and decorative traffic signal equipment, similar to Main Street | \$750,000 | ● | | | |

Funding Opportunities

Based on the scope of work, as identified through this study, improvements to the transportation infrastructure on State Route 202 within the project area would be eligible for funding through two primary avenues.

First, the improvements could be directly funded by the Connecticut Department of Transportation through its Project Development process. Under this scenario, improvements would be investigated, initiated, designed, funded, and constructed by the Department as a State Project. Should a project be initiated, it would be prioritized against other statewide needs, reviewed for eligibility under various State or Federal funding sources, and included in the Department's Capital Plan.

Alternatively, other competitive funding sources are available to deliver projects outside the Department's traditional Project Development process. These funding sources are summarized as follows.

LOCAL TRANSPORTATION CAPITAL IMPROVEMENT PROGRAM (LOTICIP)

The Local Transportation Capital Improvement Program (LOTICIP) is administered by the Connecticut Department of Transportation and provides State funds to urbanized area municipal governments in lieu of Federal funds otherwise available through Federal transportation legislation (see below). Legislation was drafted in July 2012 to establish the LOTICIP and Public Act 13-239, section 74 was subsequently passed in the spring 2013 legislative session to formally establish the LOTICIP. The program is intended to reduce the administrative requirements imposed by Federal funding programs and simplify municipalities' ability to implement capital infrastructure improvements while concurrently minimizing the use of CTDOT resources. Funding under the program is variable and would be based on NHCOG's annual LOTICIP funds.

Based on historic funding levels, a reasonable maximum project funding under the program through NHCOG should be considered approximately \$1,000,000. To apply for funding, an application would be prepared and submitted to the CTDOT through NHCOG. The application includes specific project information and associated supporting information specific to the project. Basic eligibility criteria for two of the most common improvement types include:

- In general, LOTICIP projects must be located on a roadway classified as an urban collector or higher on the Department's Functional Classification database. SR 202 is classified as a "State Highway, Principal Arterial" and meets this criteria.
- Exclusive (stand-alone) sidewalk projects may be considered eligible along other roadway classifications.
- Bridge improvements may be eligible on other roadway classifications as long as the Federal definition (20 feet or greater span length as defined in 23 CFR 650.305) of a bridge is met.

TRANSPORTATION ALTERNATIVES (TA) SET ASIDE PROGRAM

The Transportation Alternatives (TA) Set-Aside program was created through the Fixing America's Surface Transportation (FAST) Act. With the passage of the FAST Act, the TA Set-Aside program replaced the similar Transportation Alternatives Program (TAP). The TA Set-Aside program is designed to help expand transportation choices and enhance the transportation experience. Federal regulations define categories of eligible activities encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to storm water and habitat connectivity. Although the FAST ACT expired at the end of Federal Fiscal Year 2020, it is anticipated that a similar program will provide funding in Federal Fiscal Year 2021 through 2025.

RAISE DISCRETIONARY GRANTS

The U.S. Department of Transportation (DOT) recently published a Notice of Funding Opportunity to apply for \$1 billion in Federal Fiscal Year 2021 discretionary grant funding through the Rebuilding

American Infrastructure with Sustainability and Equity (RAISE) grants. RAISE has been in-place since 2020 and was formerly known as Better Utilizing Investments to Leverage Development (BUILD) and prior to that, Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grants Program. Funding secured by CTDOT in 2020 was used to improve a variety of state transportation facilities. Projects for RAISE funding are evaluated based on merit criteria that include safety, environmental sustainability, quality of life, economic competitiveness, state of good repair, innovation, and partnership. Within these criteria, projects will be prioritized that can demonstrate improvements to racial equity, reduce impacts of climate change and create good-paying jobs. For the Federal Fiscal Year 2021 round of RAISE grants, the maximum grant award is \$25 million, and no more than \$100 million can be awarded to a single State. Up to \$30 million will be awarded to planning grants, including at least \$10 million to Areas of Persistent Poverty.

COMMUNITY CONNECTIVITY PROGRAM (CCGP)

The Community Connectivity Grant Program (CCGP) provides funding to municipalities for targeted infrastructure improvements to improve accommodations for bicyclists and pedestrians in urban, suburban and rural community centers. The goal of the program is to make conditions in the public realm, including state and local roads, safer and more accommodating for pedestrians and bicyclists, thereby encouraging more people to use these modes of travel.

The program was developed by, and is administered by, CTDOT, to provide funding directly to municipalities to perform smaller scale infrastructure improvements that are aligned with the overall program's goals. Grants are awarded by CTDOT on a competitive basis. The program is currently in "Round 3" and grants range between \$125,000 and \$600,000. Grant funds can only be used for construction activities. Costs associated with other activities such as engineering; rights-of-way negotiations and acquisitions; utility relocation; and public involvement, are the responsibility of the municipality. Detailed information is available on the CTDOT website at https://portal.ct.gov/DOT/PP_Intermodal/CTConnectivity/CT-Connectivity-CCGP.