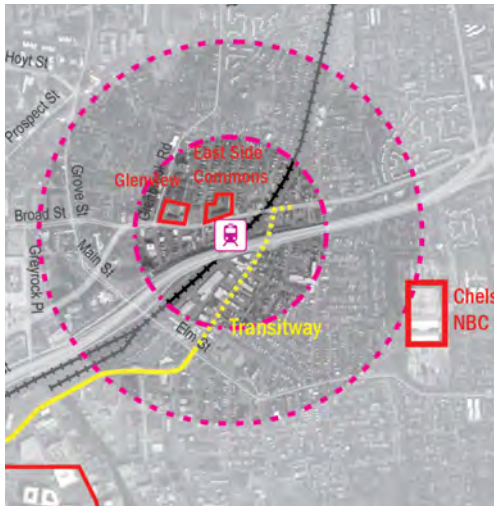

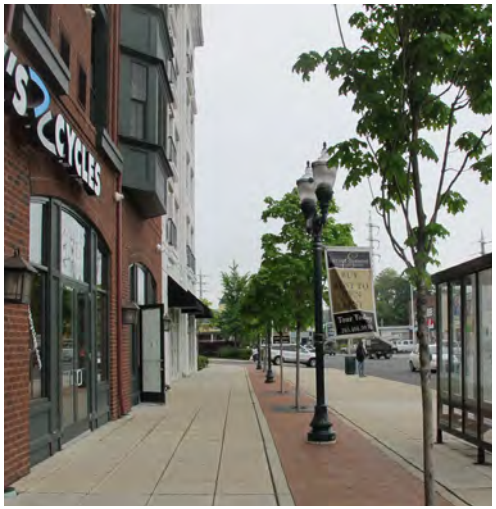

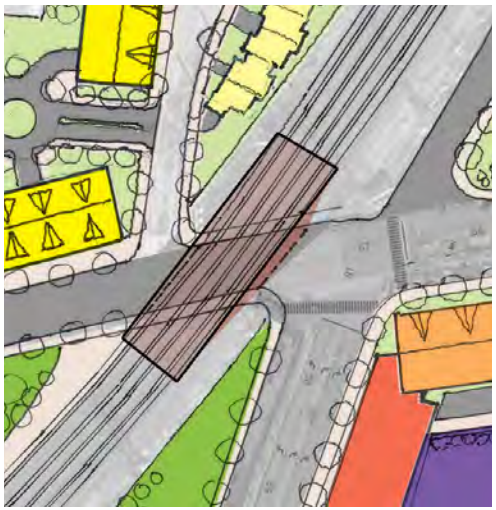

Stamford East Main Street Transit Node

Feasibility Report & Action Plan

SWRPA 50 YEARS
SOUTHWESTERN REGIONAL PLANNING AGENCY

PARSONS BRINCKERHOFF

SWRPA
50
SOUTH WESTERN REGIONAL PLANNING AGENCY
PARSONS
BRINCKERHOFF

STAMFORD EAST MAIN STREET
Transit Node Feasibility Study & Action Plan

Prepared by Parsons Brinckerhoff for the South Western Connecticut Regional Planning Agency and the New York/Connecticut Sustainable Communities Consortium.

November 8, 2013.

Note: All photographs taken by members of the project team unless otherwise noted.

PARSONS BRINCKERHOFF

SWRPA 50 YEARS
SOUTH WESTERN REGIONAL PLANNING AGENCY

Stamford East Side's East Main Street corridor.

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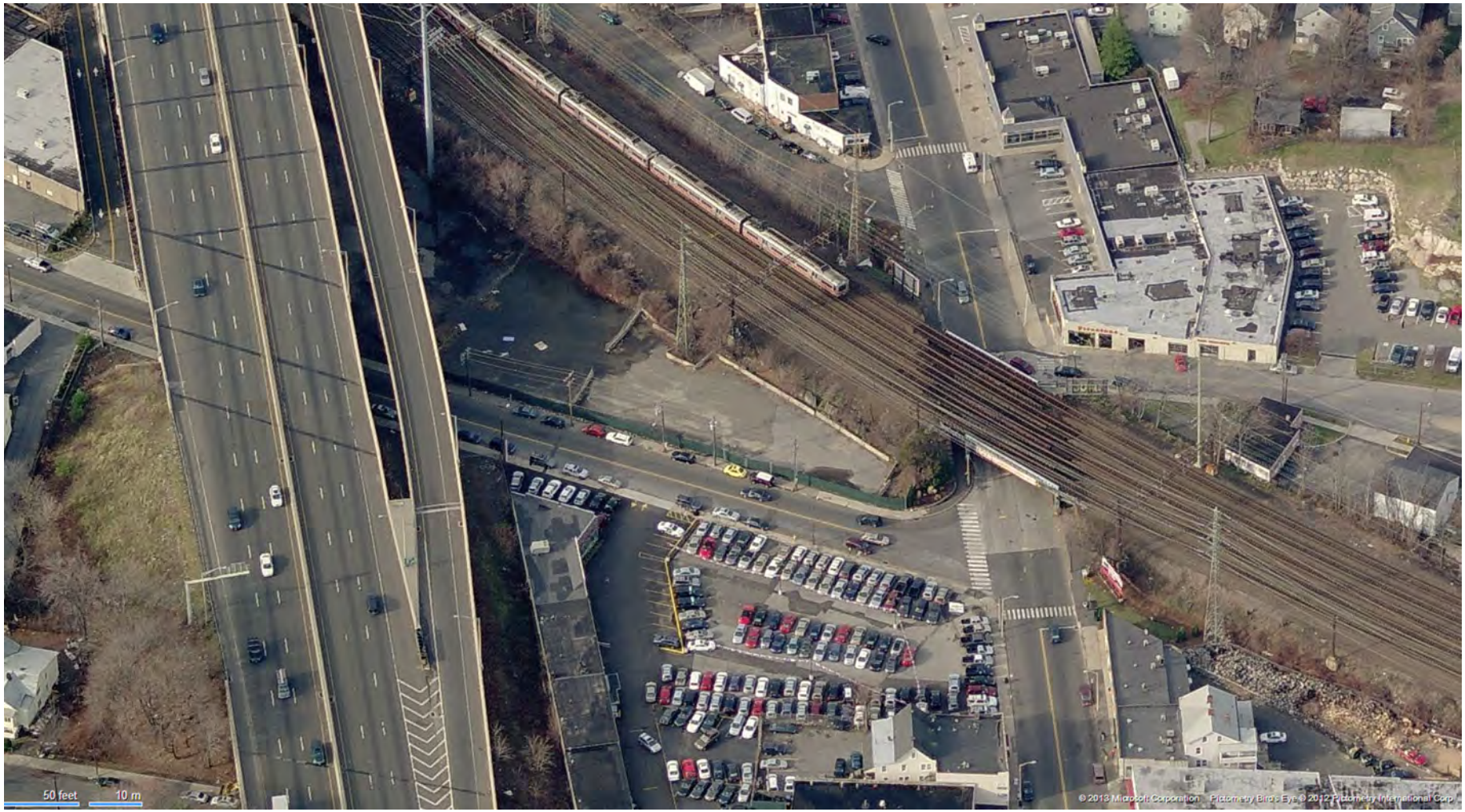
A busy bus station along East Main Street.

1. Introduction



A aerial view of the intersection of East Main Street and North State Street, the adjacent train tracks and East Main Street Rail Bridge, and the I-95 supoerstructure.

Image source: www.bing.com. Copyright Microsoft Corporation, 2013.

The East Side of Stamford is in a period of economic transition, with recent development adding attractive housing and new retail outlets that are expected to serve as a further catalyst for economic expansion. These developments have brought in what the community views as the first step in a long-term process to create a stronger neighborhood featuring an attractive and inviting Main Street – one that draws investment and is perceived as a safe, livable community for its residents.

The East Side is also presented with some inherent challenges that have to a degree stymied the growth potential of the neighborhood. While the East Side is in relative close geographic proximity to Downtown Stamford and the Stamford Transportation Center, the physical and transit connectivity between the East Side and Downtown is not as strong as the community would prefer. Community leaders believe that its economy is limited by poor transit connectivity to the neighboring communities along coastal Connecticut and the broader New York City metropolitan region. The community has attempted to address these barriers by promoting the concept of a rail station to provide that missing link between the East Side and Downtown Stamford, and to serve as a reliever station for an overburdened Stamford Transportation Center.

The Stamford East Main Street Transit Node Feasibility Study and Action Plan (hereby referred to as the "study") examines the possibility of a transit node at East Main Street as a catalyst for growth and an important new community amenity to foster livability within this evolving community. The purpose of this study is to provide a plan to develop a viable transit option and development scenario in Stamford's East Side that generates the community and political support needed to implement and construct these changes, while bringing together the many constituencies that would be involved in the development of an East Side transit project.

This study is undertaken by a project team led by Parsons Brinkerhoff, under the direction of the South Western Regional Planning Agency (SWRPA). This project examines both the basic feasibility and the quality of life benefits of several transit station alternatives that could serve the East Side community and bolster the economy of a City that has become one of Connecticut's primary economic hubs and the economic engine for the southwestern portion of the state.

Based on this extensive examination, the project team recommends that the community's stakeholders and public leaders pursue the construction of a branch line rail station at the intersection of North State Street and East Main Street, in the heart of the East Side's economic core. By taking the necessary steps needed to build ridership demand, establish critical funding structures, and create the climate needed to justify such an investment, the East Side community can achieve their goal of becoming an accessible, livable, and economically prosperous transit-oriented community.

EXECUTIVE STATEMENT

Floyd Lapp, Director of SWRPA

"The Stamford East Main Street Transit Node Feasibility Study sets the table for future development on Stamford's East Side that is in accordance with the best practices of transit oriented development. The recommendations build upon successful and attractive mixed-use development that has added new housing and retail, while the "grow as you go" approach is sound planning that creates a clear path forward for to the community to realize its long-awaited vision of a train station at the center of this flourishing neighborhood. The Study recognizes the continued growth of the Metro North's New Haven Line, the busiest commuter rail line in the nation, and the importance of addressing commuter needs at the Stamford Transportation Center, the station with the most ridership after Grand Central Terminal and most reverse commuters. Upgrading the New Canaan Branch in conjunction with a future East Main Street rail station will provide further benefits for a community deserving of improved transit connectivity and livability."

Floyd Lapp

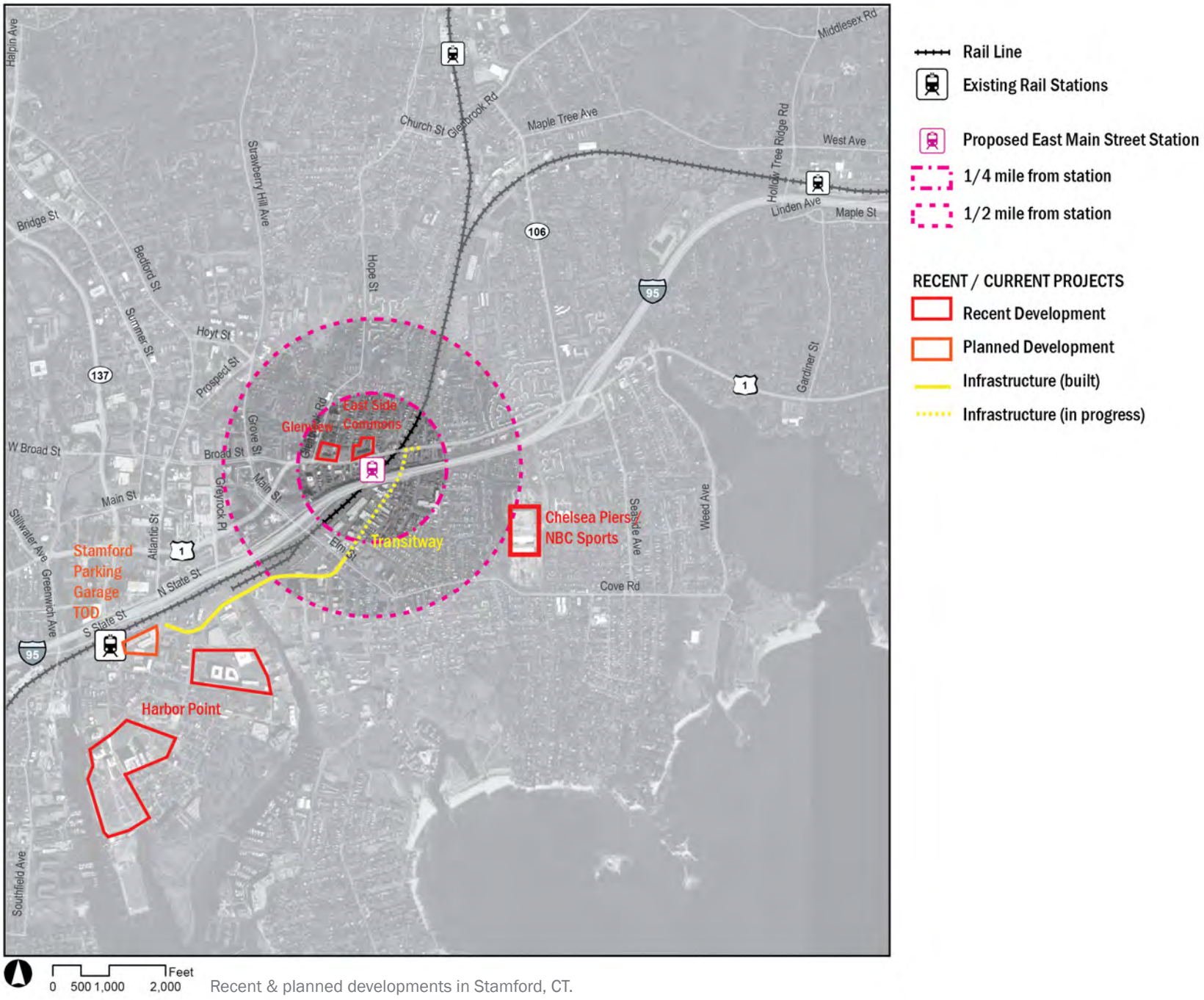
PROJECT PARTNERS

The East Main Street Transit Node Feasibility study was developed with the active participation of the City of Stamford, the Connecticut Department of Transportation (CT DOT), and Connecticut Transit (CT Transit).

This project has been funded by the United States Department of Housing and Urban Development (HUD) through its Sustainable Communities Regional Planning Grant (SCRPG) program. The Stamford East Main Street Transit Node Feasibility Study is one of ten similar projects in New York and Connecticut undertaken by the New York-Connecticut Sustainable Communities Initiative (Sustainable NYCT), organized and financially managed by the Regional Plan Association (RPA) to explore opportunities to create Transit-Oriented Development (TOD) and increase livability, as defined by HUD, throughout the region.

HUD has developed the following six overarching principles to define livability:

- Provide more transit choices
- Promote equitable, affordable housing
- Enhance economic competitiveness
- Support existing communities
- Coordinate policies and leverage investment
- Value Communities and Neighborhoods



Recent & planned developments in Stamford, CT.

2. Community Context

For detailed information on the existing conditions of the neighborhood, please see the East Main Street Transit Node Feasibility Study Existing Conditions Report, available at www.swrpa.org and attached as an appendix to this report. The following section provides a brief synopsis of the demographic and physical traits of the East Side, which for the purposes of this report is generally the area within a ½ mile radius of the East Main Street rail overpass as the intersection with Myrtle Avenue.

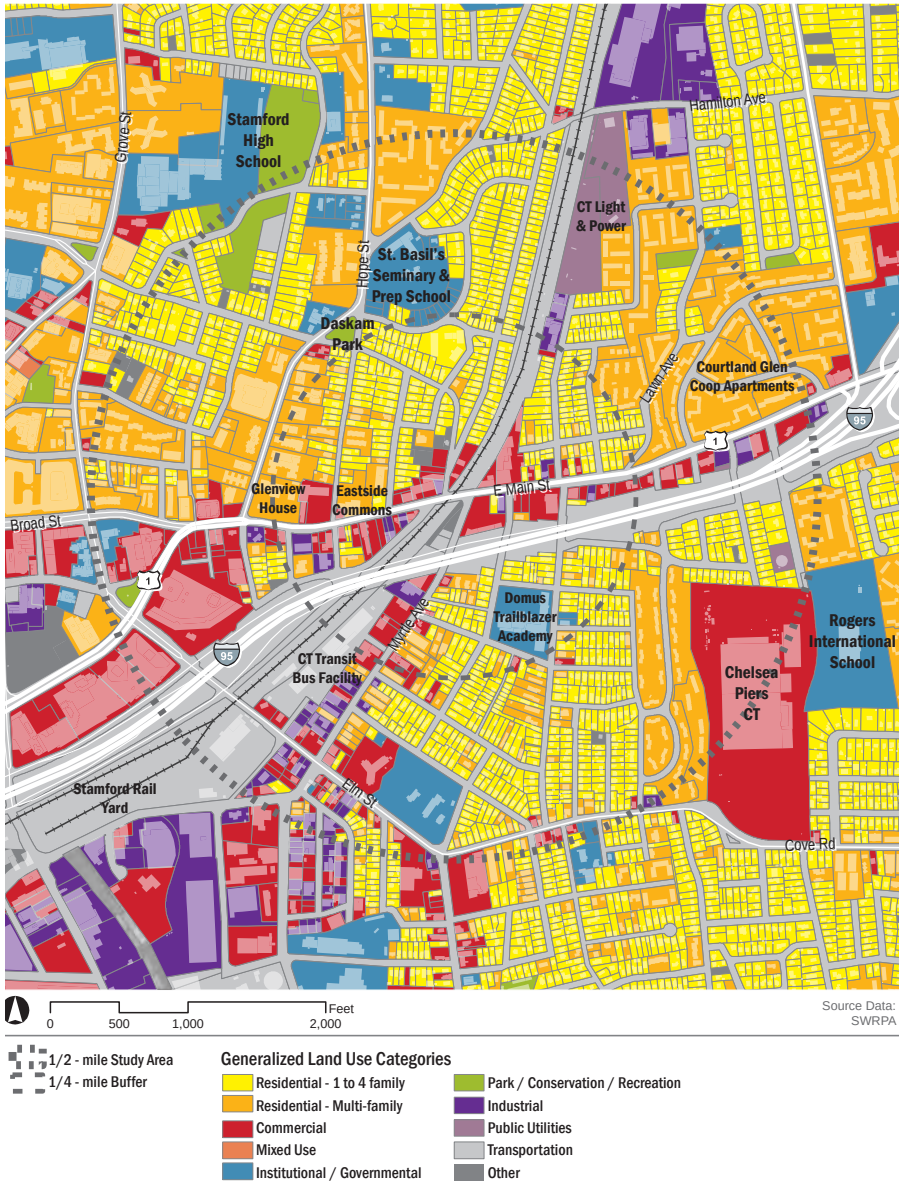
EXISTING CONDITIONS

The East Side is a neighborhood in the southern part of the City of Stamford, bordering Downtown Stamford on its west, the Cove neighborhood to its south, Glenbrook to its north, and the town of Darien to its east. The East Side benefits from its close proximity to Stamford's core, as the East Main Street Rail Overpass is located within one mile from downtown Stamford and the Stamford Transportation Center.

East Main Street is the neighborhood's central spine, carrying significant traffic into and out of the downtown Stamford area that borders the East Side. Small "mom & pop" single lot restaurant and other retail establishments are dispersed with larger retail centers, auto-related uses, furniture sales, liquor stores and fast food restaurants. Residential buildings of various age and density dot East Main Street, with the newest construction of large multi-story residential with retail ground floor located west of the railroad. Zoning classifications within the majority of the ¼-mile study area consist mostly of mid-density, single and multi-family residential with the commercial zoning designations lining the main commercial corridors of East Main Street and Myrtle Avenue.

Beyond East Main Street, the East Side is mostly comprised of a mix of single-family and small apartment building residences with a few commercial corridors that aim to serve the retail and commercial needs of the area residents; with the exception of East Main Street and Broad Street, the neighborhoods both north and south of the primary commercial avenues are dominated by residential uses.

The demographics of the East Side neighborhood indicate a population that displays median household income levels slightly lower than what is typical in other Stamford neighborhoods and throughout much of South Western Connecticut. There is an especially high incidence of housing renters in the neighborhood, uncharacteristic of the general region. The East Side is quite diverse, with a racial composition of the study area indicating that minority populations represent a majority of residents. Due to this fact, there is a significant subset of this population with limited English proficiency.

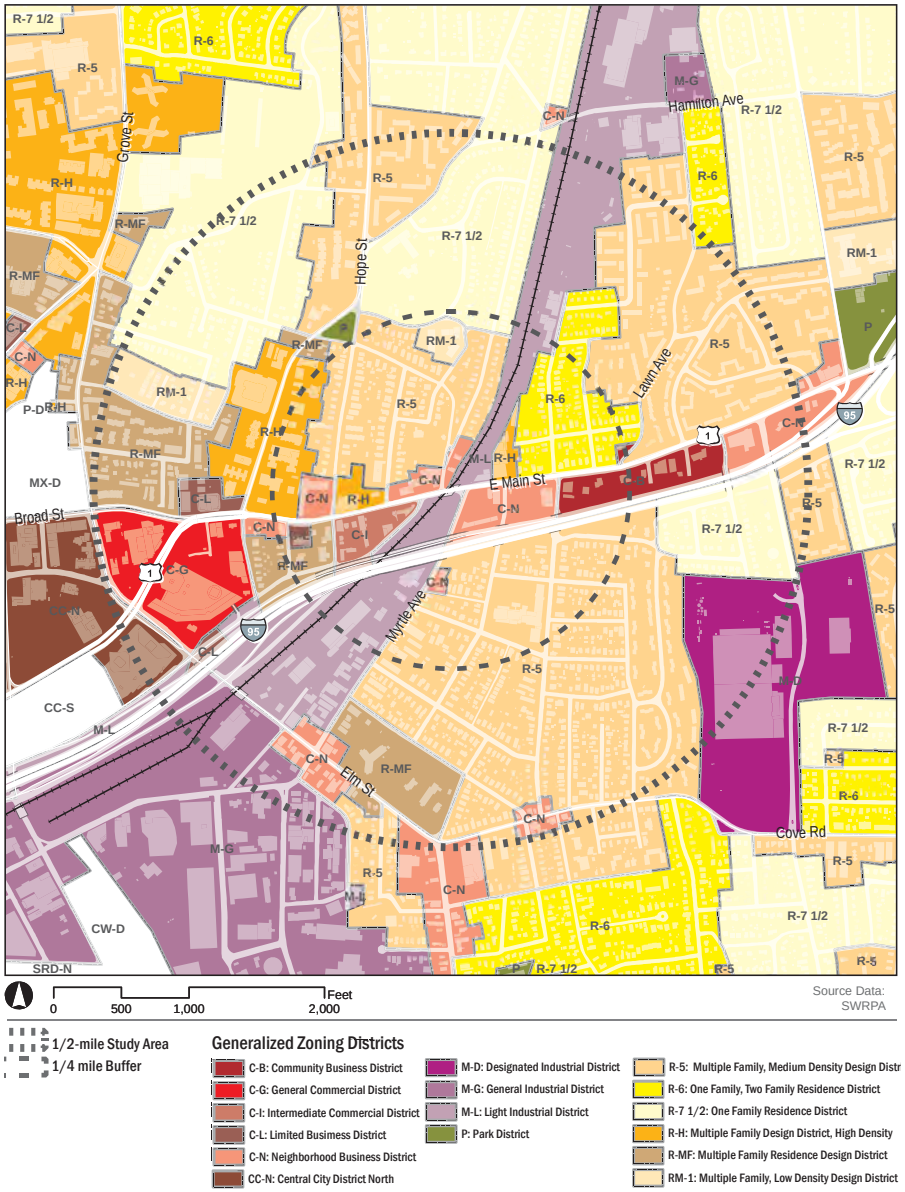


Existing land usage around the study area.

Physically, the East Side neighborhood is divided to a degree by the presence of the rail overpass for the Northeast Corridor, which carries rail traffic served by Amtrak and Metro North. The other major infrastructure presence within this area is Interstate 95 (I-95), which parallels East Main Street just to its south as a viaduct. Also notable from an infrastructure standpoint is the under-construction Stamford Urban Transitway, which upon its completion in 2015 will provide a direct connection south of the rail corridor to the evolving South End neighborhood and the Stamford Transportation Center.

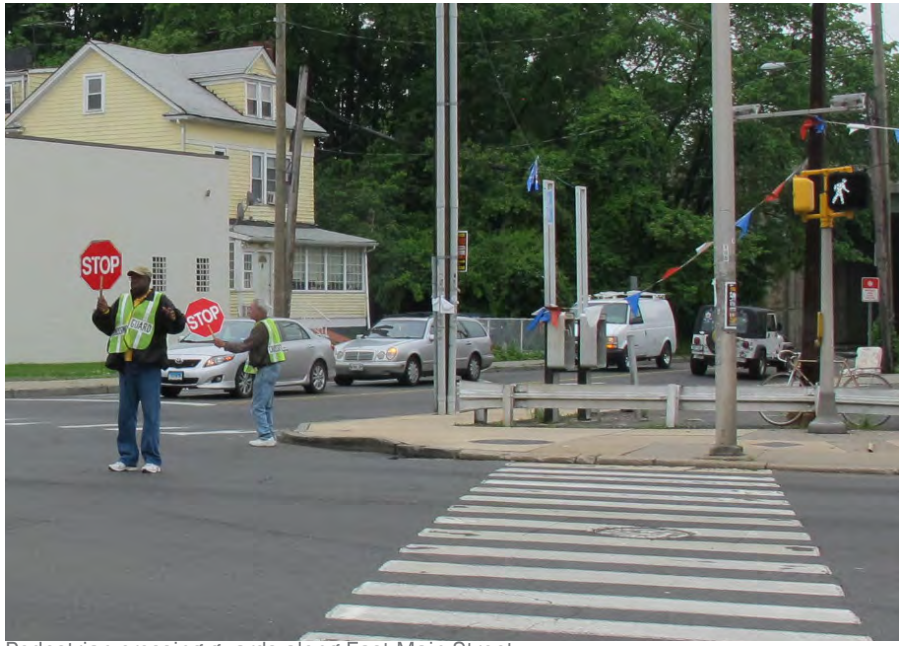
Overall, the East Side's road network does not have any defined patterns. As a major regional east-west corridor, East Main Street typically carries four lanes of traffic, which includes two through lanes in each direction and dedicated turn lanes at certain intersections. However, certain sections of East Main Street in the heart of the East Side neighborhood are only two lanes wide and are dotted with various parking lots and driveways. This lack of lane continuity and prevalence of curb cuts contributes to some of the safety and capacity challenges that the roadway faces. Certain key intersections in this area also are inhibited by poor sightlines and awkward angles. Parking is also inconsistent, with pockets of 2-hour metered parking scattered between no-parking zones on East Main Street, and most side streets prohibiting parking near intersections with East Main Street.

From a transit perspective, the neighborhood is served by two services operated by CT Transit. Route 41 is a regional bus route that serves the U.S. Route 1 Corridor between the Stamford Transportation Center and Norwalk, while Route 42 connects the East Side to Downtown Stamford, the Glenbrook neighborhood and Darien. Most bus routes in the Stamford area begin or end at the Stamford Transportation Center, where users can transfer between routes or to Metro North's New Haven line, serving the entire coastal corridor between New York City and New Haven. Rail users may also board trains at nearby Glenbrook, which provides Branchline service to New Canaan.



Existing zoning regulations around the study area.

GAUGING COMMUNITY DESIRE FOR CHANGE



Pedestrian crossing guards along East Main Street.

A narrow sidewalk near an East Main Street intersection.

The East Side is one of multiple Stamford communities experiencing change as the City continues its evolution into Connecticut's most vital economic engine and major regional center. East Main Street serves as the front door to many small businesses and increasingly represents a place where new development is taking root. The community is supportive of growth, as illustrated by recent large-scale residential developments on East Main Street west of the rail bridge that are representative of the evolving market for development in the neighborhood. Furthermore, recent capital improvements and plans for additional public investment for the street and the surrounding neighborhood have set the stage for meaningful change. While challenges persist, multiple pieces are in place for East Main Street to make significant strides towards becoming a sustainable and livable urban destination within the City of Stamford.

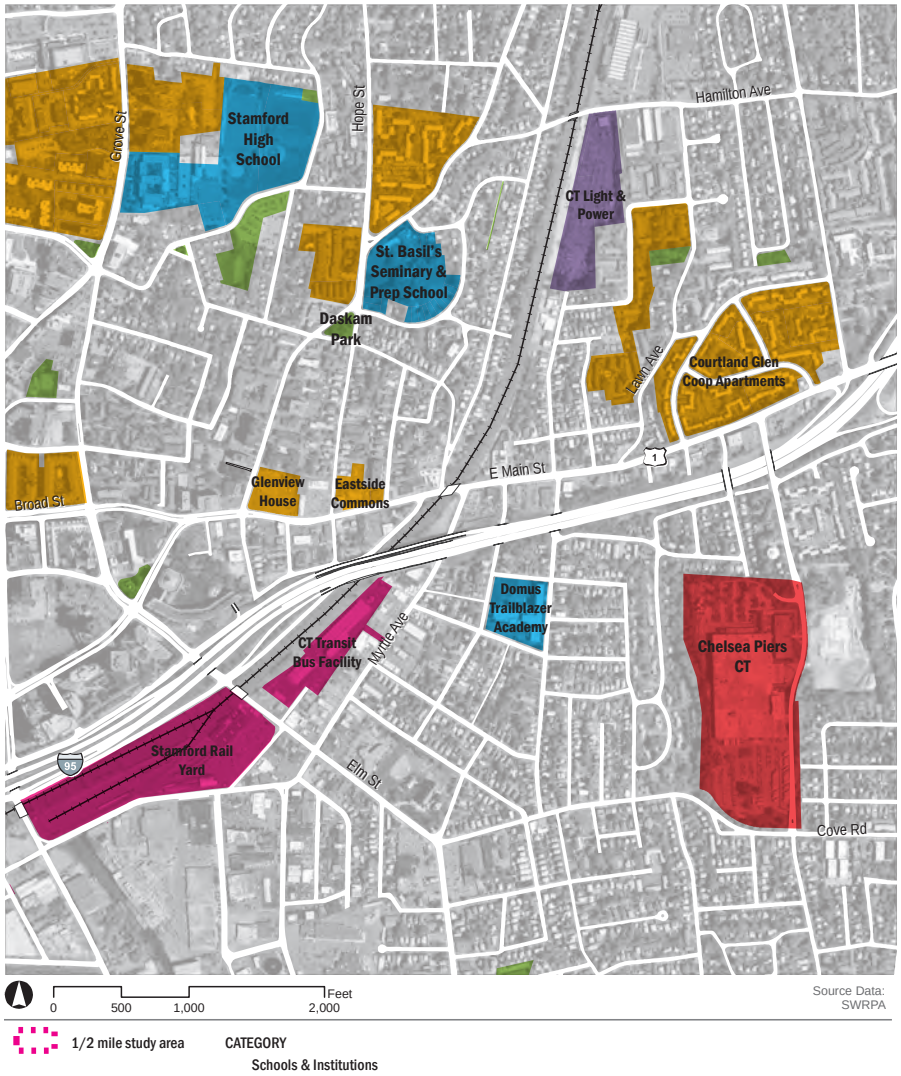
Connectivity to the Stamford Transportation Center, previously isolated from the East Side by a convoluted street system, is being improved with the construction of the Stamford Urban Transitway. This multimodal roadway, which as of July 2013 has completed its first phase of construction and has broken ground on its second phase, will ultimately provide a direct path between the East Side and the Stamford Transportation Center with a lane dedicated for transit and high occupancy vehicles, one general purpose lane, a bike lane, and a safe environment for pedestrians. This connection will also improve the linkage between the East Side and the South End, which is home to the $3.5 billion Harbor Point project that will ultimately add 4,000 housing units, retail and office space, and park land.

The East Side has an existing commercial and residential backbone to support further growth. This is supported by the residents and business interests of the East Side, who throughout the course of this study's public outreach process have demonstrated a preference to shape the neighborhood's development climate in a fashion that supports the creation of a "Main Street Village" environment similar to other neighborhood centers elsewhere in Stamford.

For this vision to be realized, several limiting factors must first be addressed. Inconsistent and incompatible land uses, lack of density, irregular pedestrian experience and safety concerns contribute to perceptions of the East Side neighborhood that must be overcome in order to reach its full economic potential. The most obvious and significant elements are the elevated I-95 corridor and the Northeast Rail corridor. These two large pieces of infrastructure bisect the community, impacting land use and land value, restricting access, and creating barriers to connectivity.

The physical configuration of East Main Street is also ripe for improvement. Minimal landscaping and streetscaping detract from the overall physical appearance, while the street's narrow sidewalks, wide travel lanes and significant curb cuts make the pedestrian experience difficult if not downright dangerous. However, improvements are starting to take shape as Stamford is in the process of implementing complete street strategies for Main Street to enhance multimodal travel opportunities as the Transitway is constructed and as new developments come on line along the frontage of East Main Street.

Zoning in the neighborhood also presents a challenge, as the existing regulations are out of character with the current market and development goals of the community. Stamford is in the preliminary stages of a citywide master plan update that will look closely at the East Side to determine if zoning could be modified to support growth along East Main Street.



Key sites, developments, and destinations around the study area.

One of two new mixed-use developments along East Main Street.

An aerial view of the Stamford Transportation Center, which will undergo TOD improvements. Image source: Stamford Transportation Center Master Plan.

Despite these challenges, new development is taking place. Within the core of the East Main Street neighborhood, two mixed-use developments, each containing over 100 residential units and ground level retail, have been built since 2008. Slightly further afield, the National Broadcast Company (NBC) has restored a former Clairol hair-products factory into the new headquarters of NBC Sports that will house 500 employees. A large-scale recreational facility, Chelsea Piers Connecticut, is also located on that same former Clairol property and is viewed as a major regional attraction. These developments demonstrate the appeal and potential of Stamford's East Side and emphasize the critical importance of establishing the perception that the East Side is indeed one of the city's most accessible, economically viable, and livable areas.

Changes to the East Side are happening in no small part due to the multiple plans and studies that have been conducted by city, regional, and state agencies and transportation authorities. They include:

- East Main Street Corridor Neighborhood Plan
- Stamford Master Plan (2002) and its recent sustainability plan amendments
- Stamford Urban Transitway, Phase II Report (2006)
- New Canaan Branch Line Study (2009)
- Stamford Transportation Center Master Plan (2010)
- MTA Metro-North Railroad Bridge Replacement Study (2011)
- Coastal Corridor Bus Study (2012)

The Stamford Urban Transitway is an ongoing capital project within the East Side.

Smart investment in the East Side could help create a similar environment as Downtown.

Going hand in hand with multiple plans and studies, ongoing capital projects such as the Stamford Urban Transitway, the large scale parking and TOD improvements envisioned for the Stamford Transportation Center and the East Main Street and Atlantic Street Overpass reconstructions are all pieces of the puzzle that will influence the nature of how the East Side will grow.

In the eyes of the community, one additional piece needs to be included: a train station for Stamford's East Side. The community also has expressed concern that the Stamford Transportation Center, which is the busiest train station in the Metro-North system outside of Grand Central Terminal and attracts thousands of inbound commuters, is a poorly functioning and overcrowded facility that is not in a position to accommodate further increases in passenger usage, and that an East Side rail station can relieve some of the capacity issues and boost development opportunity within the East Side.

By analyzing the feasibility of a transit station at East Main Street, this study aims to select a preferred alternative that ties all these plans, studies, developments, and capital projects together in a way that capitalizes on the efforts of the past to connect to the vision for the future. Without transit, the build-out of the East Side of Stamford might not follow suit, resulting in untapped potential and missed opportunities to create a vibrant livable and economically stable community. By using transit as the centerpiece of a sustainable East Main Street community that spurs transit-supportive developments around it, the City will position itself to achieve its three main drivers of an improved quality of life: access and connectivity, sustained and successful economic development, and enhanced livability.

QUALITY OF LIFE GOALS: THREE MAIN DRIVERS

Access & Connectivity

While East Main Street is located in close proximity to downtown Stamford, there remains a clear opportunity to improve access and connectivity to the main commercial area of downtown Stamford and the Stamford Transportation Center, along with new attractions like the site containing NBC Sports and Chelsea Piers. The completion of the Stamford Urban Transitway way will go a long way in connecting East Main Street to the Stamford Transportation Center, but the opportunity for new modes of transportation, connecting to multiple destinations, and for a transit link directly at East Main Street could further improve transit connectivity for the study area. Improved access will lead to a more cohesive and accessible Main Street and a more cohesive and connected city as a whole.

Economic Development

New transit options generate development opportunities and the jobs they create. By thinking of transit and development as a single connected effort, a well-connected and well situated transit facility will help to dictate the location of surrounding development and associated type of use. This can spur local economic development as new businesses are attracted to the area, offering local jobs and retail that can in turn increase local property values and offer new business and employment opportunities in the area. Thinking holistically about land use, transportation, and economic development will foster a transit-supported plan to achieve public investment while recognizing that the investment will promote economic development.

Livability

When thinking about how to pursue change within an existing community, the principles of livability will help to shape and achieve sustainable growth. A livable neighborhood is one that is safe and beautiful while providing options to live, work and play. This can be accomplished through the addition of bike lanes, landscape treatments, wider sidewalks, connected open spaces or effective street intersections. Permanent transit facilities can play a large part in enhancing the livability of a community by changing the balance between automobiles and other forms of transportation, reducing automobile trips and the footprint required for parking, creating denser, mixed-use communities and creating a sense of place with a true neighborhood center, a necessity for any community to feel cohesive and whole.

New development along East Main Street features CT Transit bus stops.

PUBLIC ENGAGEMENT

The public engagement process exhibited a three-legged approach. There were three distinct groups targeted for participation: a committee comprising governmental officials that provided feedback on technical matters, a stakeholder committee consisting of community leaders, property owners, public agencies and elected officials, and the general public that all attended a series of three meetings held at key landmarks throughout the study.

What We Heard

The project team heard numerous desires and expectations expressed by the East Side community for their neighborhood. While the opinions invariably touched on a wide range of issues and ideas, the project team was able to discern an overall shared vision for the community as expressed to them by the general public and the stakeholder committee. The following list summarizes the various elements of the vision expressed by the Study's stakeholders and public audience:

- Desire for a train station at E. Main Street
- Desire for development in the community scaled to promote compact residential development, neighborhood commercial activities and services
- Better Connectivity to and through neighborhood, not only the Stamford Transportation Center
- Desire for an improved quality of life
- Improvements to Main Street, such as a focused town center
- Increased safety and cleanliness

Public engagement allowed the community to express expectations for the neighborhood

Thursday, June 14, 2012 at the DOMUS/ Trailblazers Academy

The initial outreach workshop was held at the DOMUS/Trailblazers Academy, an East Side community center. This meeting and workshop introduced the general public to the purpose and goals for the study, followed by attendee break out groups to consider and respond to the questions posed by the project team regarding insights into critical elements to community livability. Each group was asked a series of questions that focused both on their experiences and attitudes towards transit within the East Side, as well as their overall experience with the neighborhood and their hopes for its future. While most attendees noted the positive attributes of their community, including its diversity, affordability, and access to amenities, there was also an expressed desire to see the East Side become a more economically prosperous area better served by transit.

Wednesday, February 13, 2013 at the Stamford Government Center

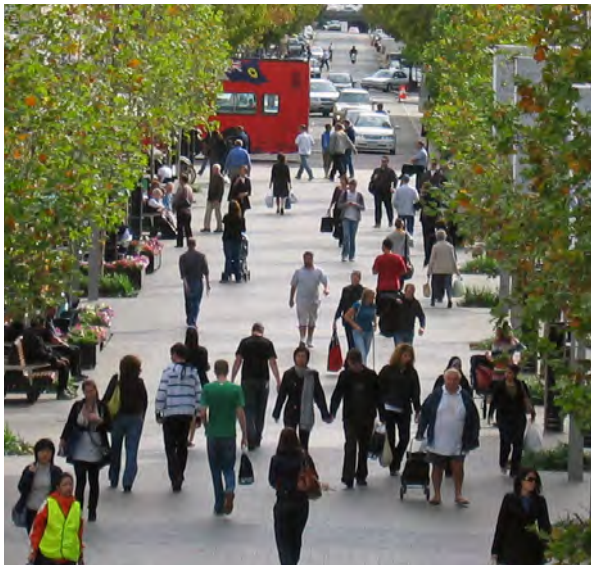
This second public meeting introduced the general public to the various transit alternatives being evaluated by the project team. Attendees were presented alternatives featuring a main line station, a branch line station, and bus only alternatives, along with the opportunities and constraints that each alternative scenario exhibited. This was followed by an opportunity for attendees to voice their opinions regarding each. The project team also used this meeting to first introduce a concept for a preliminary preferred alternative, which involved building a bus shuttle station in order to build initial demand for the implementation of a branch line station at East Main Street.

Thursday June 27, 2013 at the Stamford Government Center

This meeting presented a preferred alternative and associated build-out analysis to the general public. The project team discussed the development opportunities of a branch line station, as well as the build-out analysis associated with its implementation. Ranging from traffic impacts to potential development sites and propositions, the project team presented not only the preferred alternative and its design features, but the vibrant community that it would result if the concept were to be implemented.

ELEMENTS OF A TRANSIT-SUPPORTED MAIN STREET

Planning and implementing successful TOD involves many small decisions that directly influence the land use, circulation, urban form, and overall performance of a place. Six basic principles define the essential characteristics of successful TODs. While these principles are critical to the success of any TOD, they should be applied in a context-sensitive way to create a transit-supportive environment allowing, transit improvements and new development to be customized to be compatible with a community's character and aspirations.



Medium- to high-density development

Density is about scale, with the goal of creating a compact walkable district. TOD has a higher net average density than the community average, with highest densities located closest to the transit station.

A mix of land uses

Creating a mix of land uses provides diversity. A transit-supportive environment includes a mix of residential, commercial, service, employment and public uses. Employment uses should be located closer to transit: people are willing to walk further to get to their homes.

Compact, high quality pedestrian-oriented environment

Empowering people to walk requires convenient and comfortable places for pedestrians. "Calming" streets by reducing traffic speeds, activating the street with active ground-floor uses, and adding amenities—such as storefront windows, awnings, architectural features, lighting, and landscaping—help create a comfortable pedestrian environment.

An active defined center

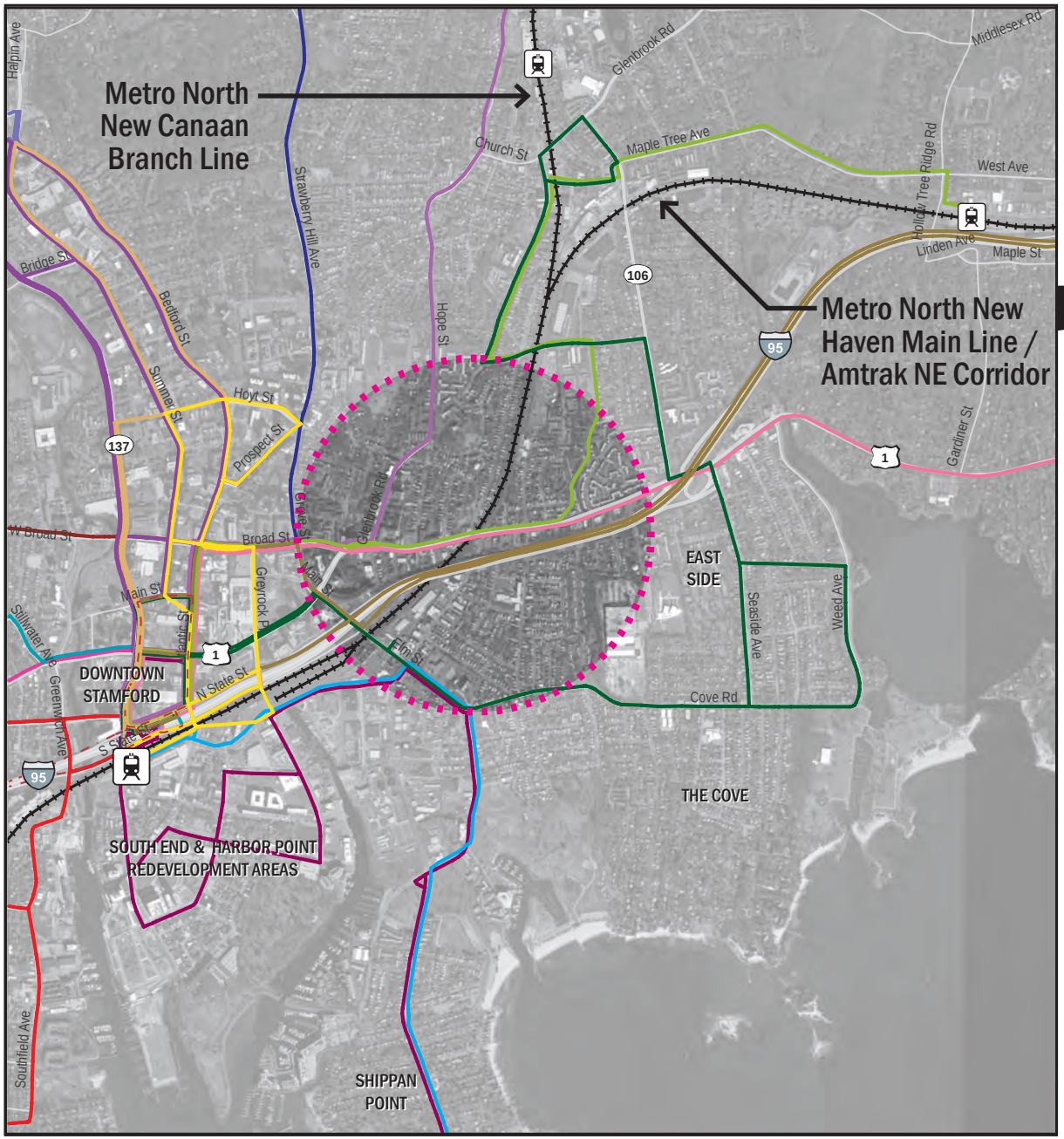
Defined centers create an around the clock active place by offering multiple attractions and reasons for pedestrians to frequent the area both day and night. Centers must have both a dense mix of uses and a sense of place and community so that people choose to gather there. A cohesive, active center can be created by planning TOD as a district rather than individual projects.

Limited, managed parking

Abundant and inexpensive parking motivates people to drive rather than use transit. By creating a more managed parking supply and moving parking from surface parking lots to on-street parking and structures, residents, shoppers, and employees are encouraged to use transit and to walk, or even bike, once they reach their destination.

Public leadership

The public sector must initially lead the TOD effort. Public leadership is needed from when a station area is being developed throughout the life span of the station area. A collaborative and enabling approach – with the use of new innovative tools to complement and enhance planning efforts - leads to implementation, driven by the private sector's funding commitments.



1/2 mile study area

RAIL

Rail Line

Rail Stations

TRANSIT ROUTES (BUS)

- 11 - PORT CHESTER
- 13 - WEST BROAD STREET
- 21 - WEST AVENUE
- 22/24 - GREENWICH & FAIRFIELD AVENUES
- 26 - PACIFIC STREET
- 27 - SHIPPAN AVENUE
- 31 - HIGH RIDGE ROAD
- 32 - LONG RIDGE ROAD
- 33 - STRAWBERRY HILL AVENUE
- 34 - HOPE STREET
- 41 - NORWALK
- 42- DARIEN
- 43 - COVE ROAD
- 45 - NCC FLYER
- COMMUTER CONNECTION - BULLS HEAD
- COMMUTER CONNECTION - CENTRAL
- STAMFORD/WHITE PLAINS EXPRESS

Existing transit routes in and around Stamford, CT.

3. Alternatives Evaluation

The first step in determining whether a new transit facility can be constructed in the heart of the East Side is to analyze the feasibility, costs and benefits associated with implementing a train station. This effort seeks to identify whether a transit node is feasible, and if so, which alternative would be the most desirable and achievable from the shared perspectives of public investment, community livability, and economic development. To this end, the project team evaluated multiple transit node alternatives from the perspective of location, station type, basic feasibility, community benefits, and conformance with community goals for growth. There was continuous close coordination with various departments within the Connecticut Department of Transportation, including its planning and rail operations groups, to ensure that proposals developed by the study team were in accordance with federal and state regulations and best practices.

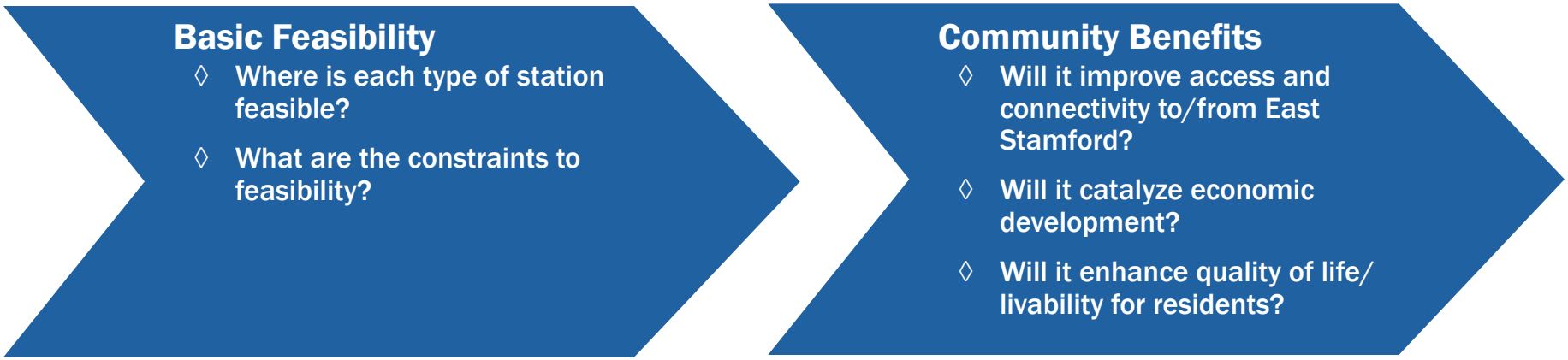
Transit Facilities Considered

Three basic station types were considered for the East Main Street Transit Node:

- Main Line Rail Station
- Branch Line Rail Station
- Bus Station

Each station type has specific design requirements and service potential. These requirements and service levels have significant implications for the relative feasibility, cost, time for implementation, and potential community benefit for each station type.

EVALUATION PROCESS & CRITERIA



As a first step in identifying a preferred and feasible alternative, the project team evaluated each transit alternative in terms of basic feasibility related to engineering and design considerations. In addition, the project team also considered the forecasted benefits for the community, including considerations pertaining to the health and well being.

Basic Feasibility

Basic feasibility considered construction, engineering, and design constraints for each station type at varying locations within the East Main Street neighborhood. These criteria were developed in order to best ascertain whether or not an alternative was feasible purely from the standpoint of implementation.

Community Benefits

The evaluation of the community benefits for each station type and location involved examining criteria such as redevelopment opportunity and accessibility. This portion of the evaluation process was meant to determine whether or not the alternative in question would provide the benefits needed in order to establish a higher quality of life for all users, as well as the surrounding community.

Feasibility Criteria

Construction Feasibility

- Is the construction of the alternative feasible?
- What are the major impediments to construction?

Agency Acceptance

- Which agencies are required to approve/accept the alternative?
- Would the required agencies accept the alternative?

Property Takings

- Does the alternative minimize commercial property takings?
- Does the alternative avoid residential property takings?

Schedule Reliability

- Can a realistic timeframe for construction be projected?
- Number of milestones?
- Impact of impediments to schedule?

Cost

- Is the cost prohibitive?
- Do the costs outweigh the value of the alternative?

Community Benefits Criteria

Redevelopment Opportunity

- Does alternative catalyze development?
- How does development opportunity compare with costs?
- Is there opportunity for public-private partnerships?

Accessibility

- How accessible is station for all potential modes?

Station Environment

- What are positive/negative aspects to station environment?

Train Frequency

- How often will the station be served by NYC bound and outbound service?

Ridership Opportunity

- What is the anticipated level of ridership?
- Does usage match the characteristics of the site?

Main Line Rail Station

Key Characteristics

CT DOT requires a new main line rail station to feature two 900 feet long platforms – one 20 foot wide island platform and one twelve-foot-wide side platform. Each must accommodate at least 10 train cars. These platforms are accessed by four elevators and two pedestrian bridges, each on either side of the platform edges. Since an East Side main line station would not be considered a "key station" by CT DOT, train frequency at an East Side main line station would be similar to that of Noroton Heights Station. CT DOT currently mandates new main stations contain a minimum of 1,400 parking spaces, with 2,000 preferred.

Service Expectations

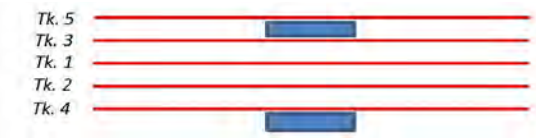
	Inbound	Outbound
AM Peak Trains	10	6
PM Peak Trains	7	11

Base Costs

Item	Estimated Base Cost
Track Work	$4 - 7 million
Station Construction	$25 - 30 million
Infrastructure	$9 - 11 million
Station Access	$2 - 4 million
Mobilization	$20 - 24 million
Total Estimated Base Cost	**$60 - 76 million**

Platform Configuration

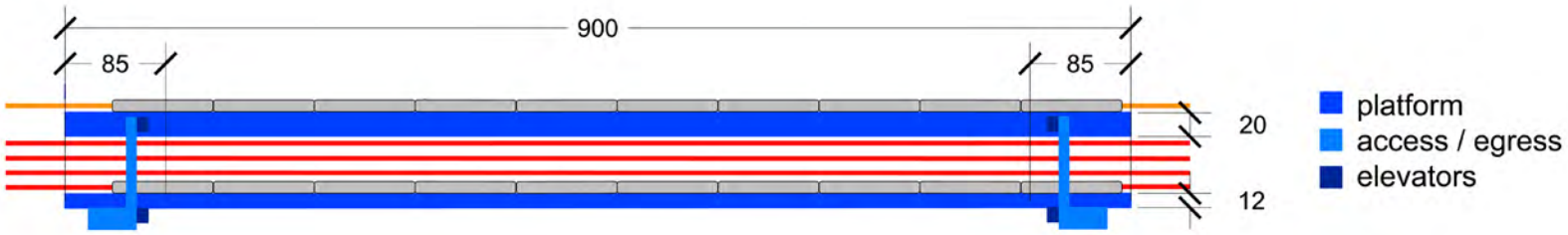
Side platform servicing Track 4, island platform servicing tracks 3 and 5.



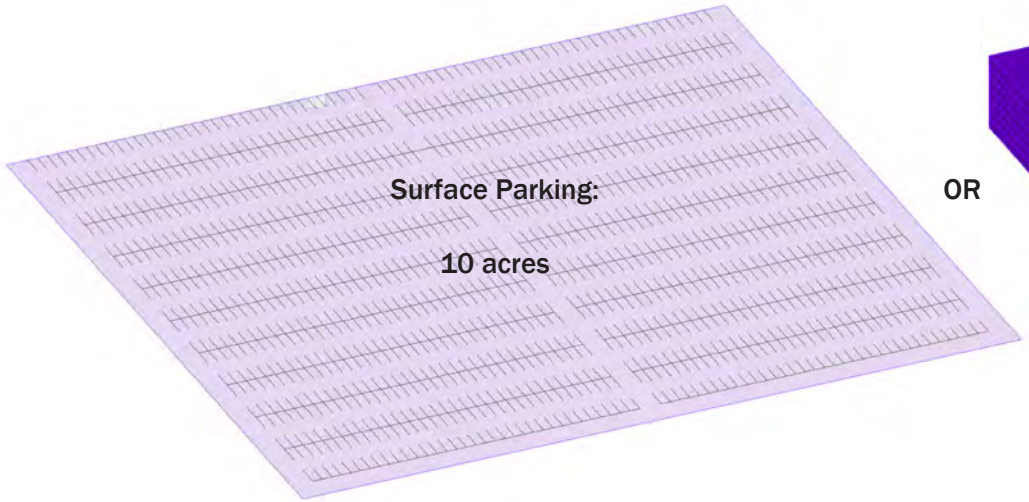
Example

Noroton Heights Station, Darien, CT

Platform & Access Requirements



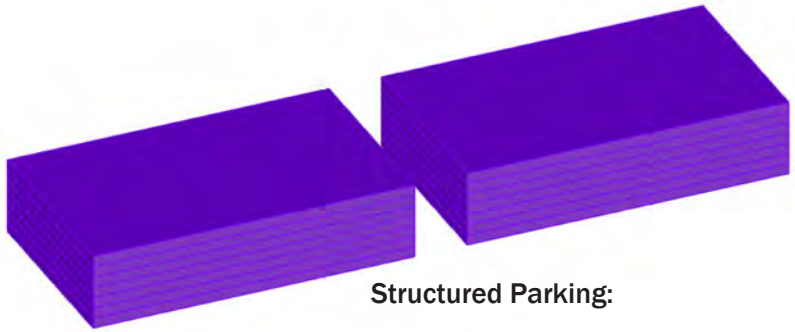
Minimum Parking Requirement: 1,400 Spaces



Surface Parking:

10 acres

OR



Structured Parking:

1.2 Acres x 14 floors

Branch Line Rail Station

Key Characteristics

CT DOT requires a new branch line station to contain a single platform that is 580 feet long and twelve feet wide, accommodating 6 train cars and made accessible by two staircases and elevators set no more than 85 feet away from either side of the platform. Parking standards for a branch line station are more modest than a mainline station, as CT DOT currently calls for at least 400 spaces at new branch line stations. Train frequency would be similar to that of Glenbrook Station.*

Service Expectations

	Inbound	Outbound
AM Peak Trains	6	3
PM Peak Trains	5	7

Base Costs

Item	Estimated Base Cost
Track Work	$2 - 4 million
Station Construction	$10 - 13 million
Infrastructure	$3 - 7 million
Station Access	$1 - 4 million
Mobilization	$4 - 6 million
Total Estimated Base Cost	**$20 - 34 million**

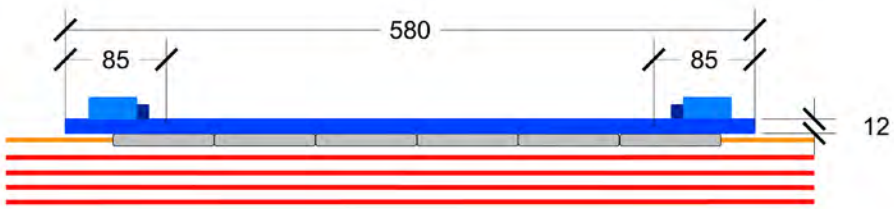
Platform Configuration

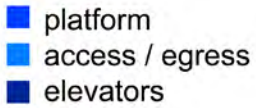
Side platform serving Track 5 only.

Example

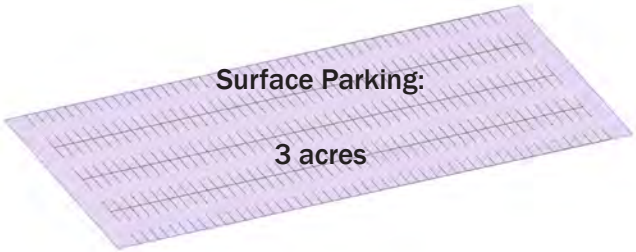
Glenbrook Station, Stamford, CT

Platform & Access Requirements





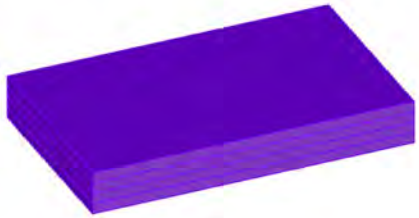
Minimum Parking Requirement: 400 Spaces



Surface Parking:

3 acres

OR



Structured Parking:

1.2 Acres x 4 floors

*Note: the 2009 CT DOT New Canaan Branch Study recommends improvements to the New Canaan Branch that would provide the operational capabilities to operate additional trains to each of the stations located along the branch line

Bus Station

Key Characteristics

A shuttle bus connecting the East Side to the Stamford Transportation Center was also considered as an option independent from any potential rail station scenario. A premium bus system can set itself apart from typical city buses through the use of branded, well designed vehicles with added comfort. Also central to its success are attractive stations that are well lit, safe, routinely maintained and feature real time travel information. The bus option aims to integrate these components with the needs of the community to maximize the benefits of such a scenario.

Two possible routes between East Main Street and the Stamford Transportation Center were evaluated. In an optimal situation, a shuttle bus can offer commuters using the Stamford Transportation Center a very competitive experience. Schedules would feature frequent shuttles during the AM and PM peak periods, with buses running every five to ten minutes. Using signal priority at certain intersections to allow the shuttle to avoid stopping at select signal-controlled intersections, a bus could provide a trip time of seven minutes in length. Base fares for shuttles currently operated by CT Transit are $1.30 per ride; a shuttle bus would likely be priced no higher than comparable local services, and could even be lower or even free if, for example, a business improvement district were to subsidize such a service.

It is important to note that a bus shuttle with an associated station would not necessarily provide the same quality of life benefits and development opportunities as a rail station. This has been reinforced by members of East Side community throughout the Study's public participation process. However, since it would provide the most feasible transit alternative from the standpoint of ease of construction and operations and allow for a package of improvements robust enough to create a meaningful improvement in travel experience, the option was carried forward for further consideration.

Base Costs

Item	Estimated Base Cost
Station Construction & Access	$6 - 8 million
Surface Parking	$2 - 3 million
Total Estimated Base Cost	**$8 - 11 million**

Service Expectations

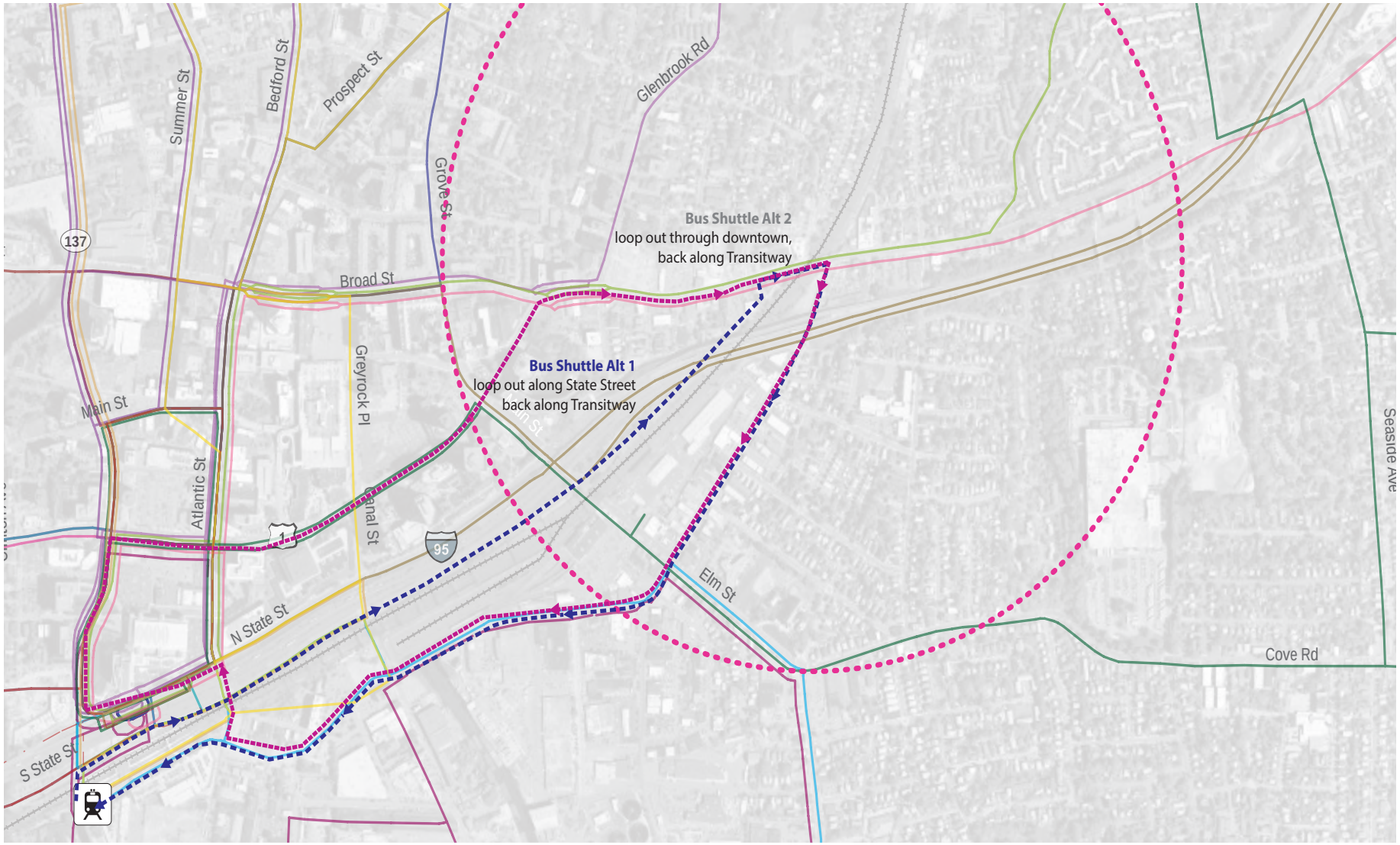
- Service estimated every 20 minutes during the AM and PM peaks; with 7 minute frequencies to the Stamford Transit Center

Example

Boston's Silver Line bus system.

Silver Line, Boston, MA

- Signal priority
- Enhanced stations
- Branding
- Enhanced service plan
- Improved vehicles
- Real-time information

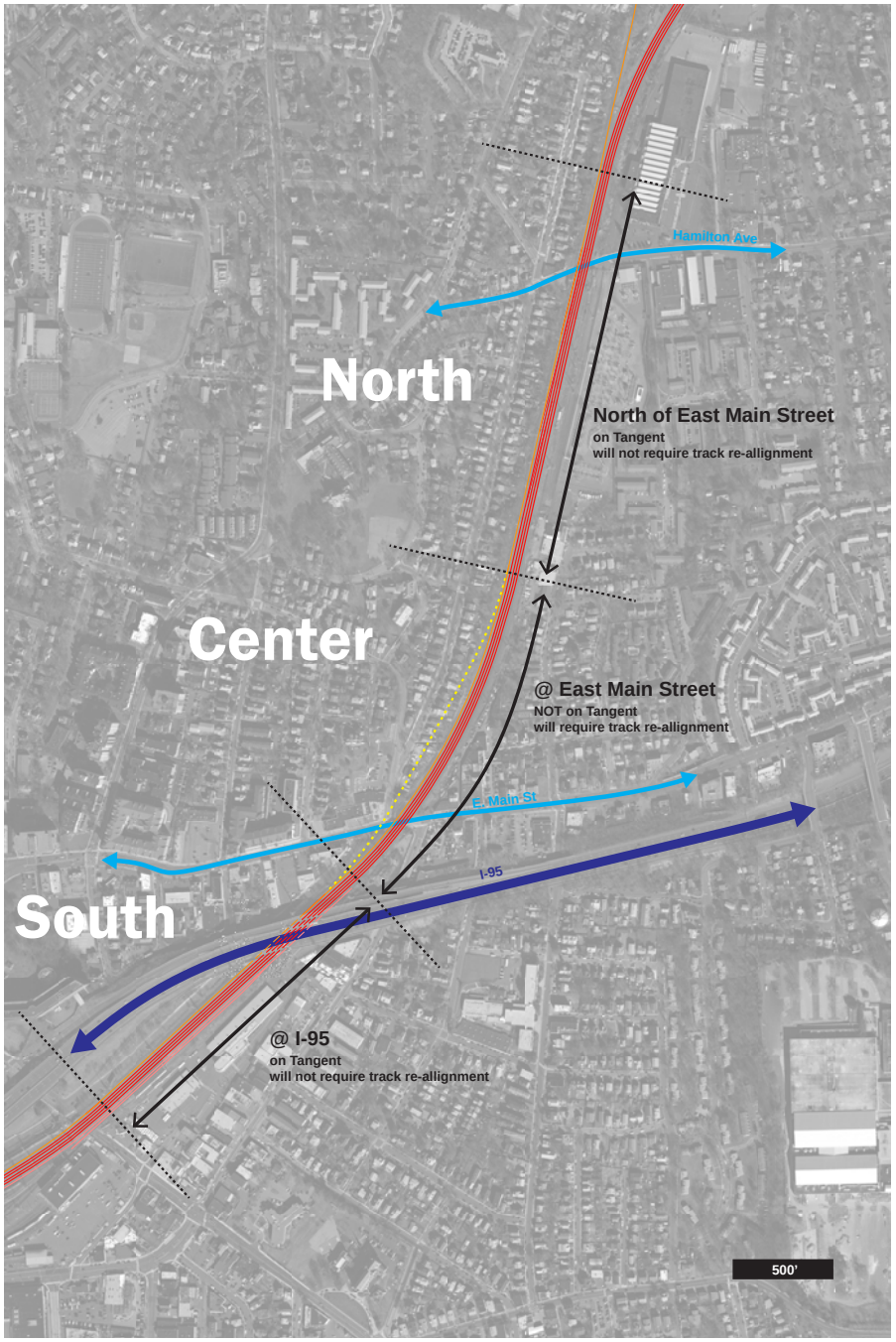


Two proposed alternative bus routes between East Main Street and the Stamford Transportation Center.

The North location is adjacent to a residential neighborhood and light and power facility.

The Center location requires the reconfiguration of East Main Street.

The South location is situated underneath the I-95 superstructure.



FEASIBILITY ANALYSIS BY LOCATION

Three locations were taken into consideration in determining station feasibility. The project team evaluated a location along the straight portion of track north of East Main Street (the "North" location); the point where East Main Street crosses the northeast corridor rail line (the "Center" location); and along the straight section of track to the south of East Main street (the "South" location). In evaluating the opportunity for siting a station in close proximity to East Main Street, the project team took a number of factors into consideration.

A station at East Main Street would be the first station east of the Stamford Transportation Center, the busiest station between New York's Penn Station and Boston's Back Bay Station along Amtrak's Northeast corridor. The location is roughly one mile from the Stamford Transportation Center and roughly one and a half miles from Noroton Heights, the next station along the New Haven Line (which operates along the Northeast Corridor). This station will also be located at the junction point of the New Haven Line and the New Canaan Branch line, which extends due north from a point roughly 3,500 feet north of Main Street, servicing Glenbrook, Springdale, Talmadge Hill, and New Canaan. Glenbrook, the closest of these stations, is less than a mile (4,900 feet) from the intersection of East Main Street. Given its location, this could be a new station along the New Canaan branch or along the New Haven Line. Connecticut Department of Transportation has been clear in its input that this station should exclusively serve either as a main Line station OR a branch line station rather than attempt to service both as a hybrid station that attempts to serve both concurrently.

State regulations require that all station platforms be situated tangential (parallel) to the tracks. Two of the three locations identified (North and South) met this requirement, while the center location, would require track realignment in order to be feasible. Track relocation to achieve a tangential condition would be prohibitively expensive and could significantly impact Metro North and Amtrak service during the reconstruction period, and CT DOT advised that the Fedreral Railroad Administration would almost certainly prohibit such work that would interfere with operations.

North: At Hamilton Ave.

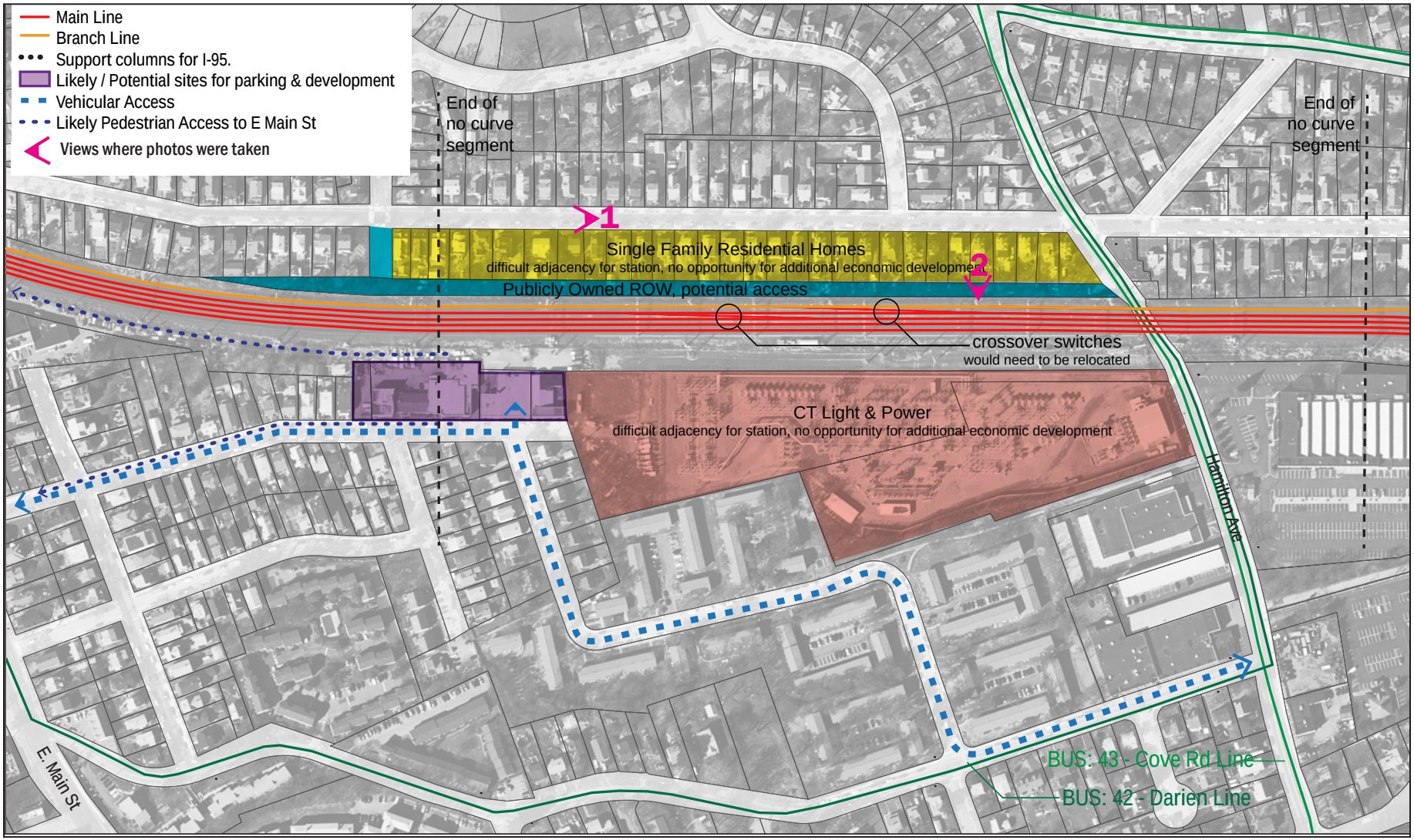
A rail station located along a portion of tangential track to the North of East Main Street would place the station in a primarily residential neighborhood. While there is ample room to physically site either a branch or main line station in this location, station access to and parking would impact the local residentially-oriented street system. Additionally, room for amenities and parking is very limited. While feasible, a branch or main line station at this location would require an extended pathway to make a connection to the East Main Street neighborhood possible, thereby significantly lessening its value as a catalyst for East Main Street development. Adjacencies to this station are also highly problematic, as a neighborhood of single family homes is located directly to the west and a substantial CT Light and Power facility lies directly adjacent to the tracks to the east. Shoehorning a station, its access, parking, and connections to East Main Street into this location would result in the poor integration of transit and community for both potential users of the station and existing residents of the area.

Site issues & Constraints

- Catenary would need to be replaced
- Crossover switches will need to be relocated (1 for branch, both for main)
- Might require reconstruction of rail Bridge at Hamilton Ave
- No direct access to Main Street from station
- Would require vehicular access through residential neighborhoods
- Limited potential sites for parking

Feasible Rail Options

- Branch
- Main


Main Line
Branch Line
Support columns for I-95.
Likely / Potential sites for parking & development
Vehicular Access
Likely Pedestrian Access to E Main St
Views where photos were taken
End of no curve segment
End of no curve segment
1
2
Single Family Residential Homes
difficult adjacency for station, no opportunity for additional economic development
Publicly Owned ROW, potential access
crossover switches
would need to be relocated
CT Light & Power
difficult adjacency for station, no opportunity for additional economic development
Hamilton Ave
E. Main St
BUS: 43 - Cove Rd Line
BUS: 42 - Darien Line

Center: at East Main Street

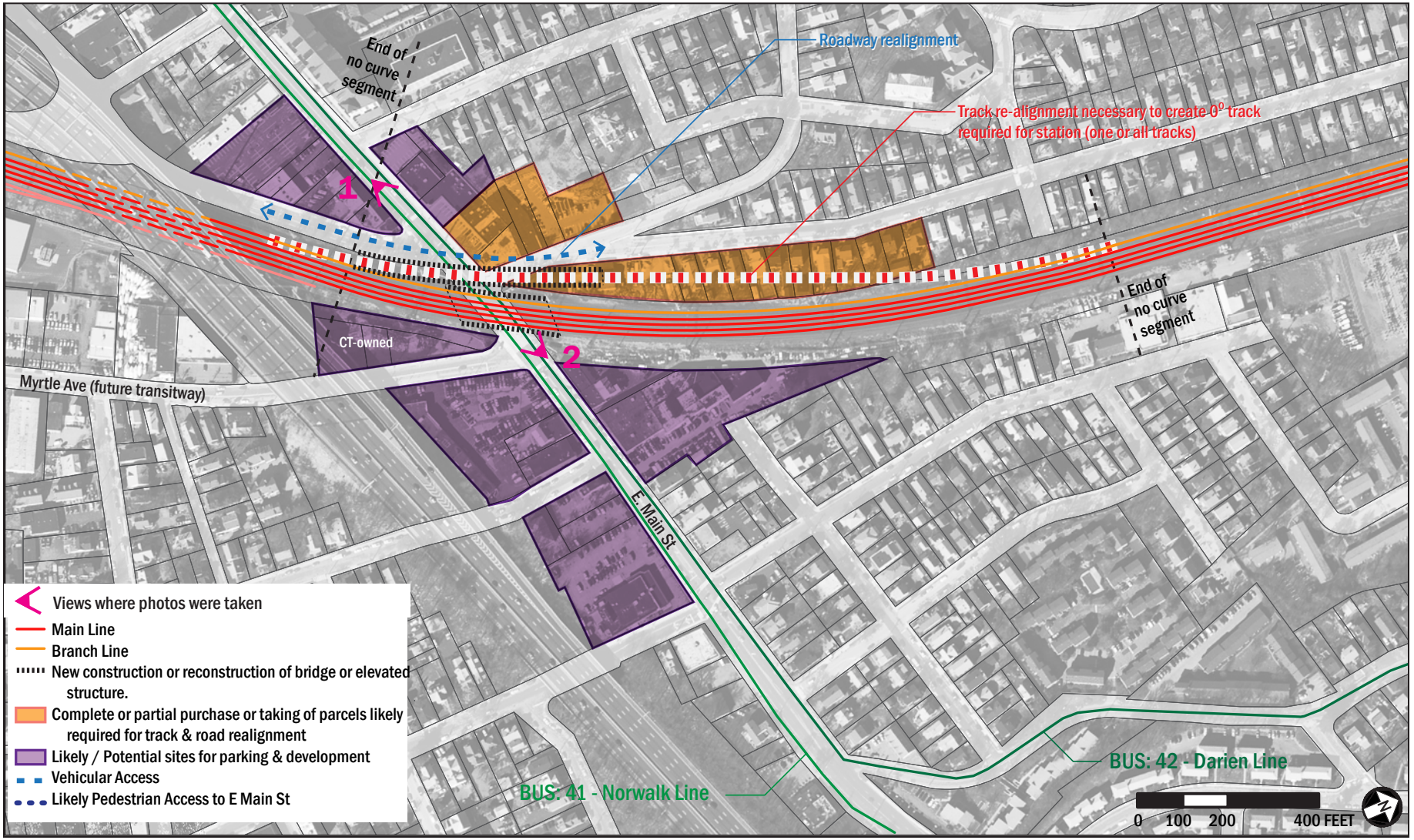
A rail station centrally located at East Main Street would significantly alter the community as it is currently constituted. Implementing a station at a point of significant (2%) curvature of the track would necessitate re-alignment. Construction impacts (cost of construction, major property takings, bridge reconstruction, road re-alignment, operational impacts), along with the severity of the resulting community impacts, create a scenario that is not only highly infeasible, but also one where the impacts significantly outweigh any perceived benefits to a station.

Site issues & Constraints

- Requires track realignment ($8M for Branch, $45M for Main)
- Requires reconstruction of rail bridge at East Main Street
- Requires road realignment
- Catenary would need to be replaced for re-aligned segment
- At least part of track realignment would need to be built on structure spanning East Main Street
- Track and road realignments would require purchase or taking of residential homes as well as commercial parcels
- A site / multiple sites would need to be acquired for parking

Feasible Rail Options

No Feasible Rail station options at this location.


End of no curve segment
Roadway realignment
Track re-alignment necessary to create 0° track required for station (one or all tracks)
1
2
CT-owned
End of no curve segment
Myrtle Ave (future transitway)
E. Main St
Views where photos were taken
Main Line
Branch Line
New construction or reconstruction of bridge or elevated structure.
Complete or partial purchase or taking of parcels likely required for track & road realignment
Likely / Potential sites for parking & development
Vehicular Access
Likely Pedestrian Access to E Main St
BUS: 41 - Norwalk Line
BUS: 42 - Darien Line
0 100 200 400 FEET
N

South: at I-95

Implementing a station at the closest tangent point to the south of East Main Street would situate a rail station in close proximity to the center of the East Main Street neighborhood. The challenge of the South location lies in its relationship to the I-95 superstructure that crosses above the rail tracks to the south of East Main Street. Any station at this location would be situated directly underneath the I-95 superstructure, creating significant challenges to feasibility should the station configuration require reconstruction of the I-95 structural support system. While a main line station would force a complete reconstruction, there is sufficient space to locate a branch line station under I-95 without requiring major reconstruction. While not ideal, a branch line station should be considered as it provides a station with direct access to East Main Street without the need for significant property takings.

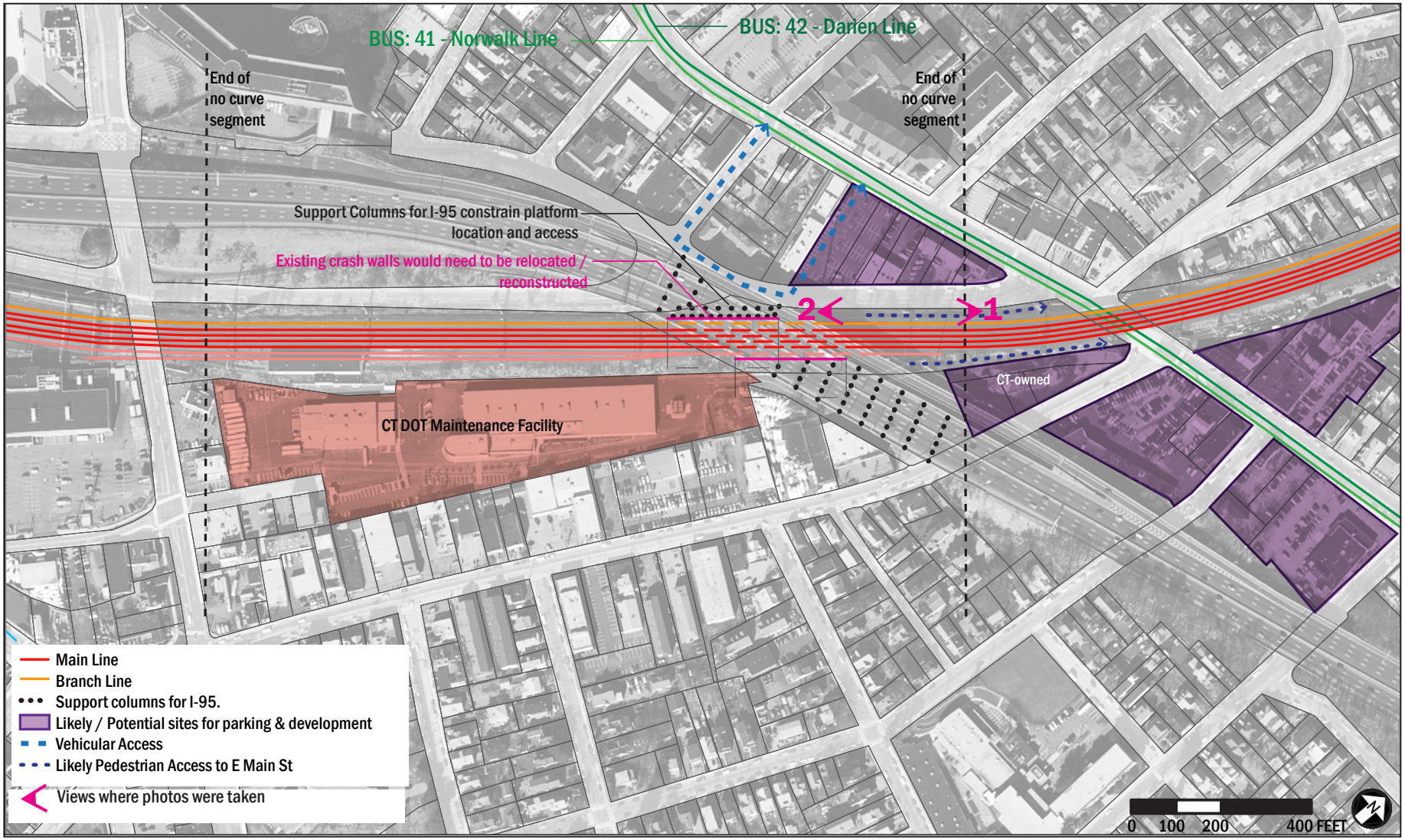
While it is important to note that it would be infeasible to reconstruct I-95 solely to accommodate a main line station, there could be a future opportunity to revisit a potential main line station. This would occur at a point in time when I-95 requires reconstruction for expansion, long-term state of good repair, or other reasons. A potential realignment of the support structure could accommodate a platform length required for main line operations.

Site issues & Constraints

- Highly constrained platform location; platform would need to be built around support columns of I-95
- Main line station would require reconstruction of section of I-95 and replacement of East Main Street Bridge (Estimated at $50M by CTDOT)
- Would require reconstruction of crash walls and support columns under I-95 ($3M)
- A site / multiple sites would need to be acquired for parking

Feasible Rail Options

- Branch


BUS: 41 - Norwalk Line
BUS: 42 - Darien Line
End of no curve segment
End of no curve segment
Support Columns for I-95 constrain platform location and access
Existing crash walls would need to be relocated / reconstructed
2
1
CT-owned
CT DOT Maintenance Facility
Main Line
Branch Line
Support columns for I-95.
Likely / Potential sites for parking & development
Vehicular Access
Likely Pedestrian Access to E Main St
Views where photos were taken
0 100 200 400 FEET

ANALYSIS OF FEASIBLE ALTERNATIVES

The initial feasibility assessment illustrated that there are five possible station configurations to be further analyzed:

- a main line station north of East Main Street
- a branch line station north of East Main Street
- a branch line station south of East Main Street
- a bus station south of East Main Street (Bus Station Option 1)
- a bus station north of East Main Street (Bus Station Option 2)

The following pages graphically depict the concepts for each of these options, along with a rating for each feasibility and quality of life criteria. The rating scale included evaluations of "good," "fair," and "poor."

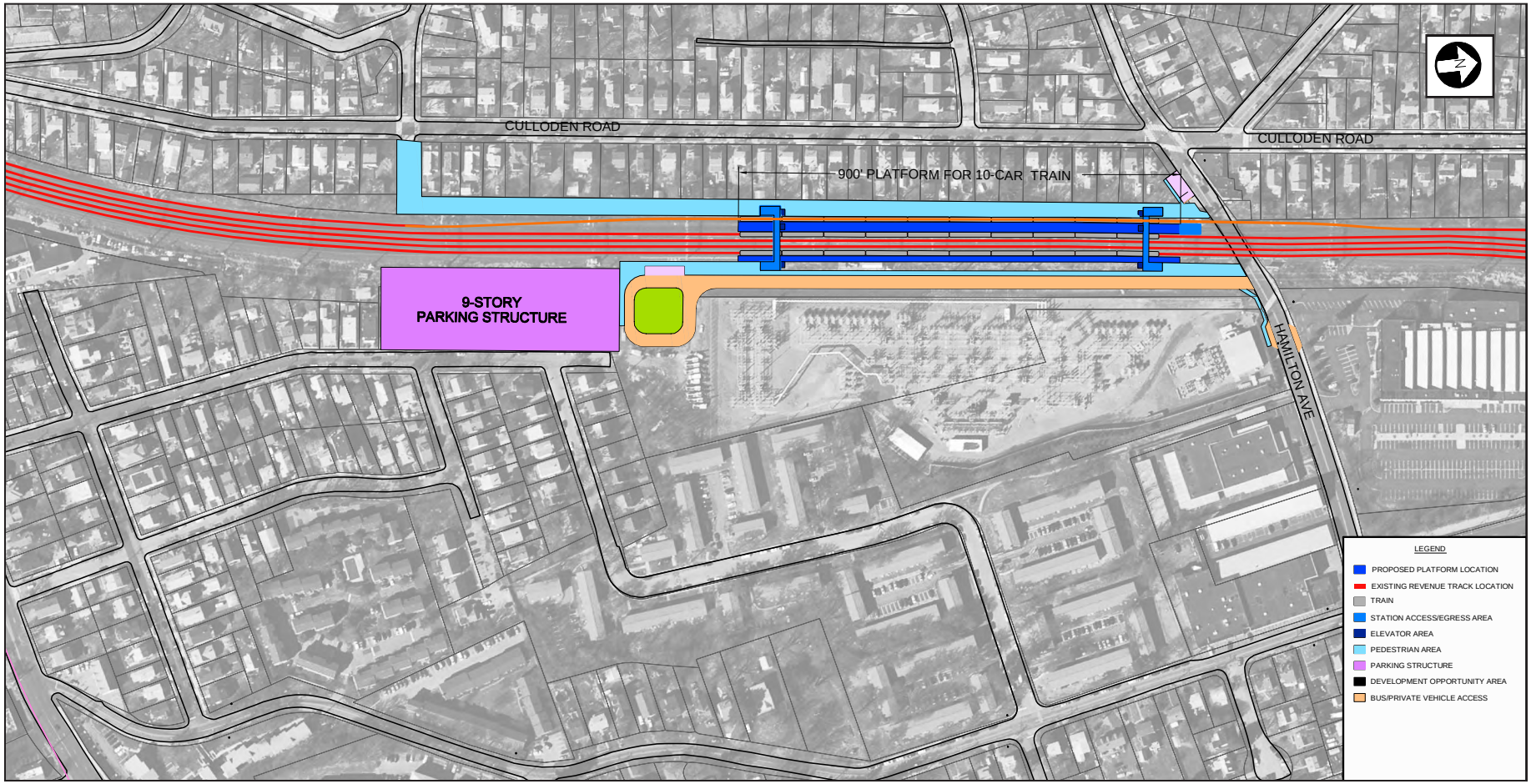
Feasibility refers to the ease of developing and constructing the station and was determined based on the following criteria:

- Construction Feasibility
- Agency Acceptance
- Property Takings
- Schedule Reliability
- Cost

Quality of Life benefits examined each station option in light of community and rider benefits including:

- Redevelopment Opportunity
- Accessibility
- Station Environment
- Train/Bus Frequency
- Ridership Opportunity

North Main Line Option



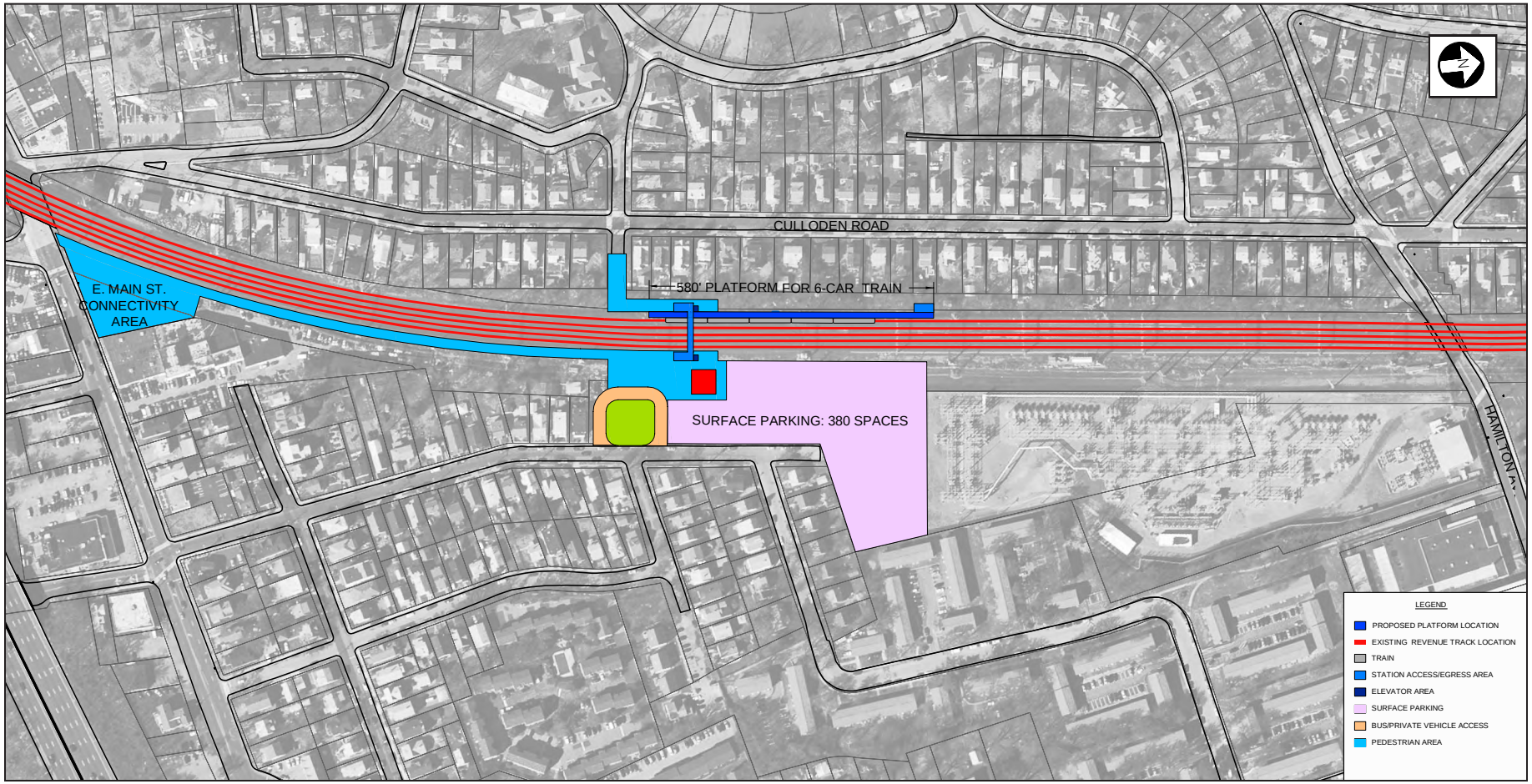
Feasibility

Construction Feasibility	POOR
Agency Acceptance	POOR
Property Takings	POOR
Schedule Reliability	POOR
Cost	POOR
Overall Feasibility	POOR

Quality of Life Benefits

Redevelopment Opportunity	POOR
Accessibility	POOR
Station Environment	POOR
Train Frequency	FAIR
Ridership Opportunity	FAIR
Overall Quality of Life Benefits	POOR

North Branch Line Option



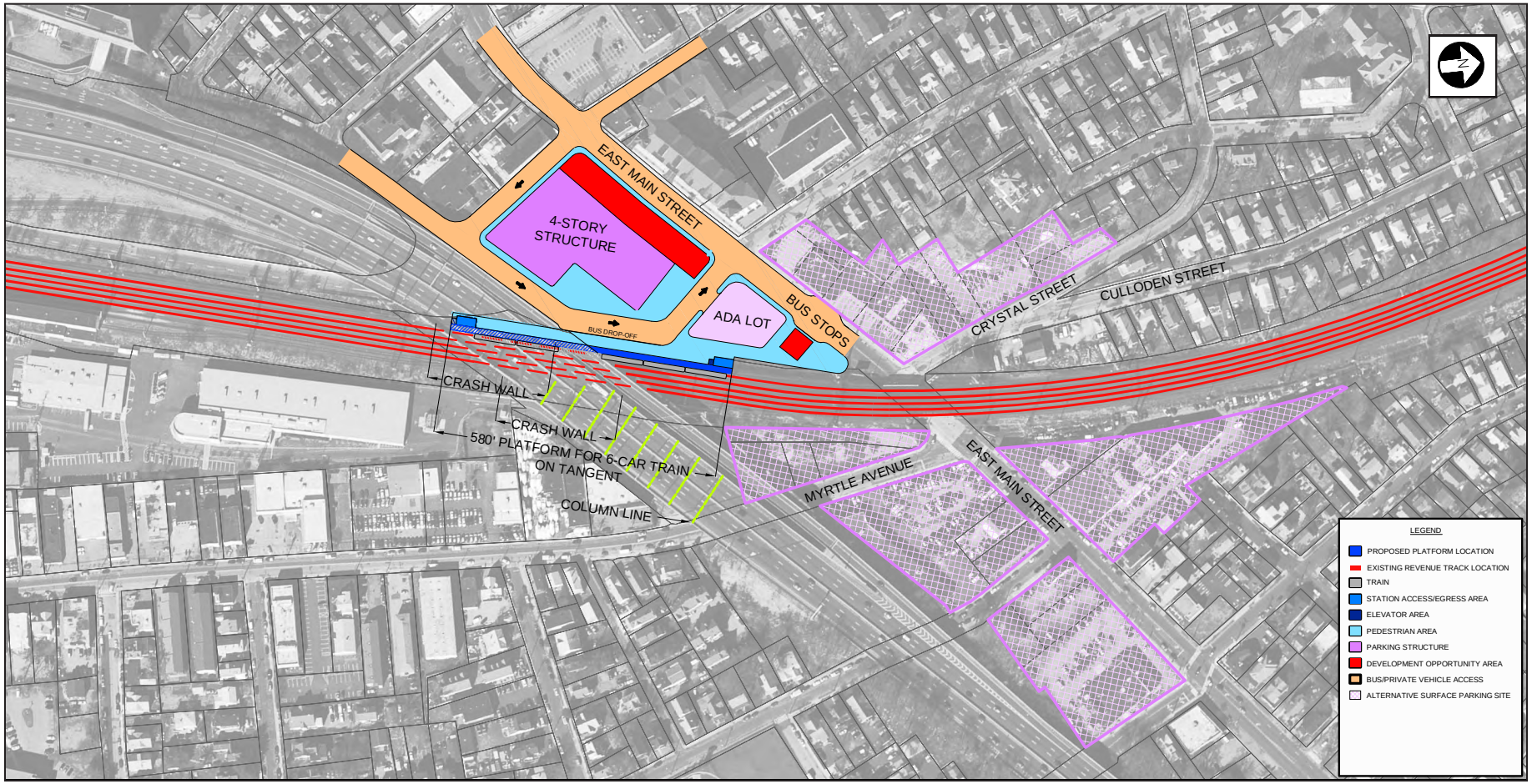
Feasibility

Construction Feasibility	GOOD
Agency Acceptance	GOOD
Property Takings	POOR
Schedule Reliability	FAIR
Cost	GOOD
Overall Feasibility	GOOD

Quality of Life Benefits

Redevelopment Opportunity	POOR
Accessibility	POOR
Station Environment	FAIR
Train Frequency	POOR
Ridership Opportunity	POOR
Overall Quality of Life Benefits	POOR

South Branch Line Option



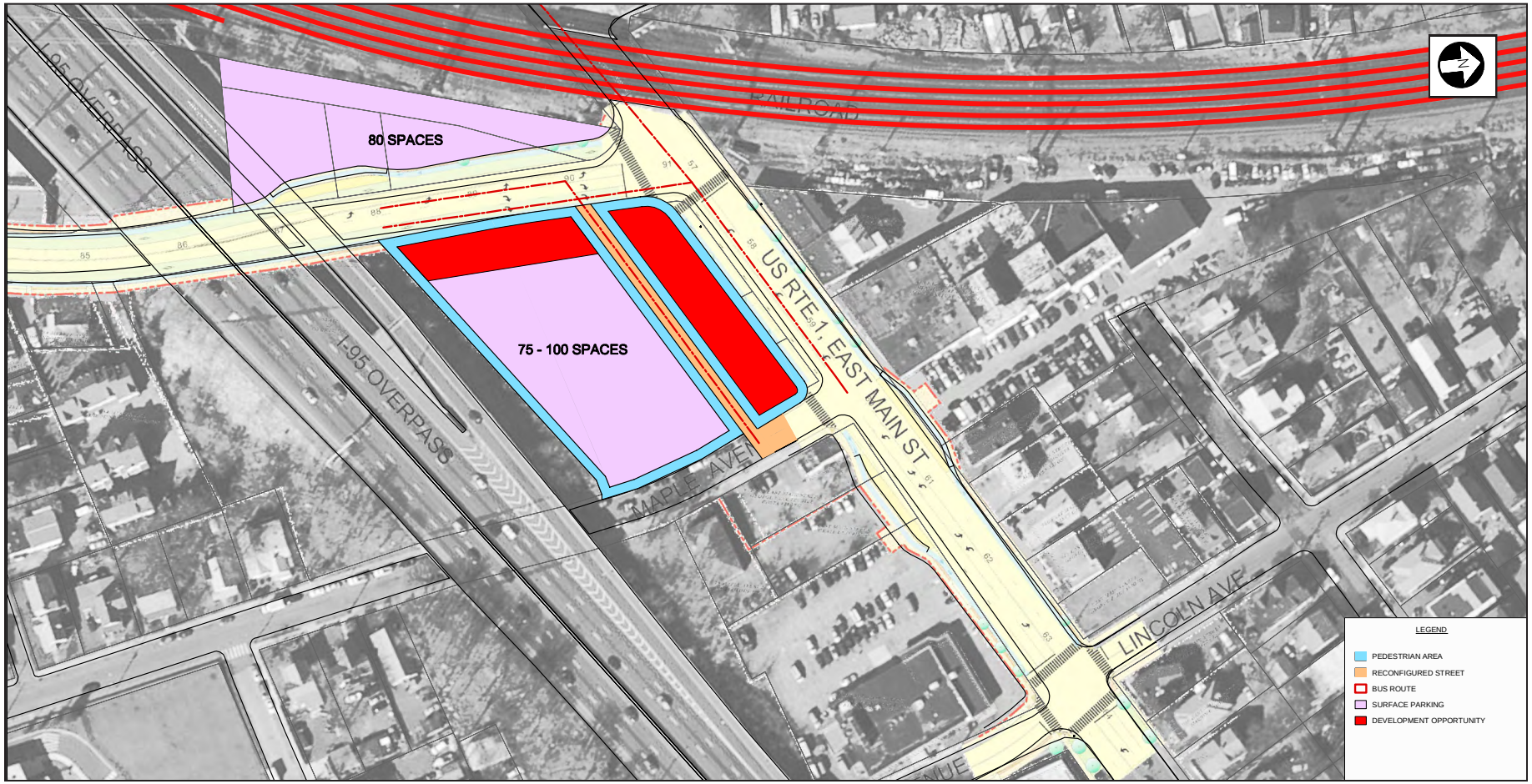
Feasibility

Construction Feasibility	FAIR
Agency Acceptance	POOR
Property Takings	FAIR
Schedule Reliability	POOR
Cost	FAIR
Overall Feasibility	**FAIR**

Quality of Life Benefits

Redevelopment Opportunity	GOOD
Accessibility	FAIR
Station Environment	FAIR
Train Frequency	FAIR
Ridership Opportunity	FAIR
Overall Quality of Life Benefits	**FAIR**

Bus Station Option 1



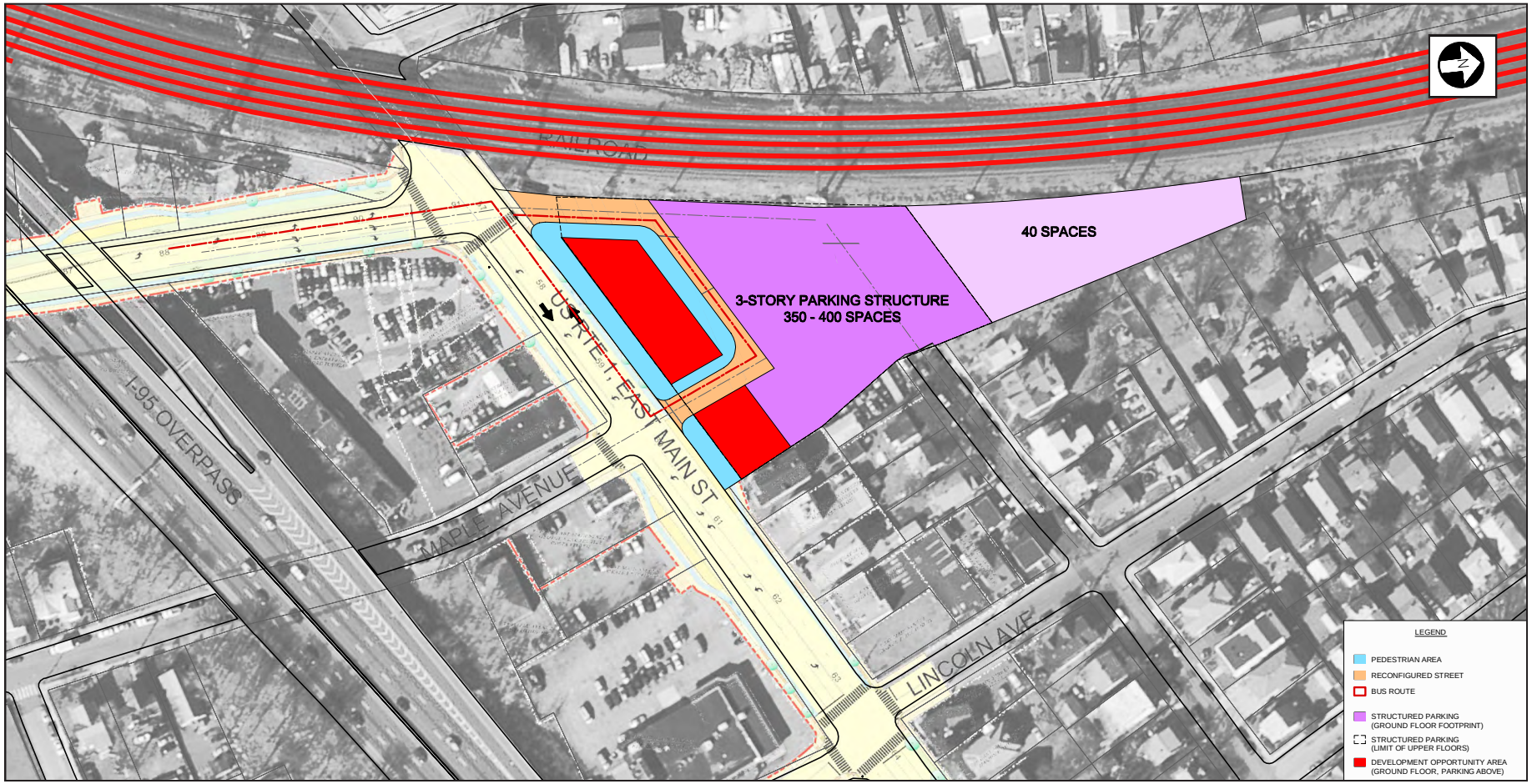
Feasibility

Construction Feasibility	GOOD
Agency Acceptance	GOOD
Property Takings	FAIR
Schedule Reliability	GOOD
Cost	GOOD
Overall Feasibility	GOOD

Quality of Life Benefits

Redevelopment Opportunity	FAIR
Accessibility	FAIR
Station Environment	FAIR
Bus Frequency	POOR
Ridership Opportunity	POOR
Overall Quality of Life Benefits	FAIR

Bus Station Option 2



Feasibility

Construction Feasibility	GOOD
Agency Acceptance	GOOD
Property Takings	FAIR
Schedule Reliability	GOOD
Cost	GOOD
Overall Feasibility	GOOD

Quality of Life Benefits

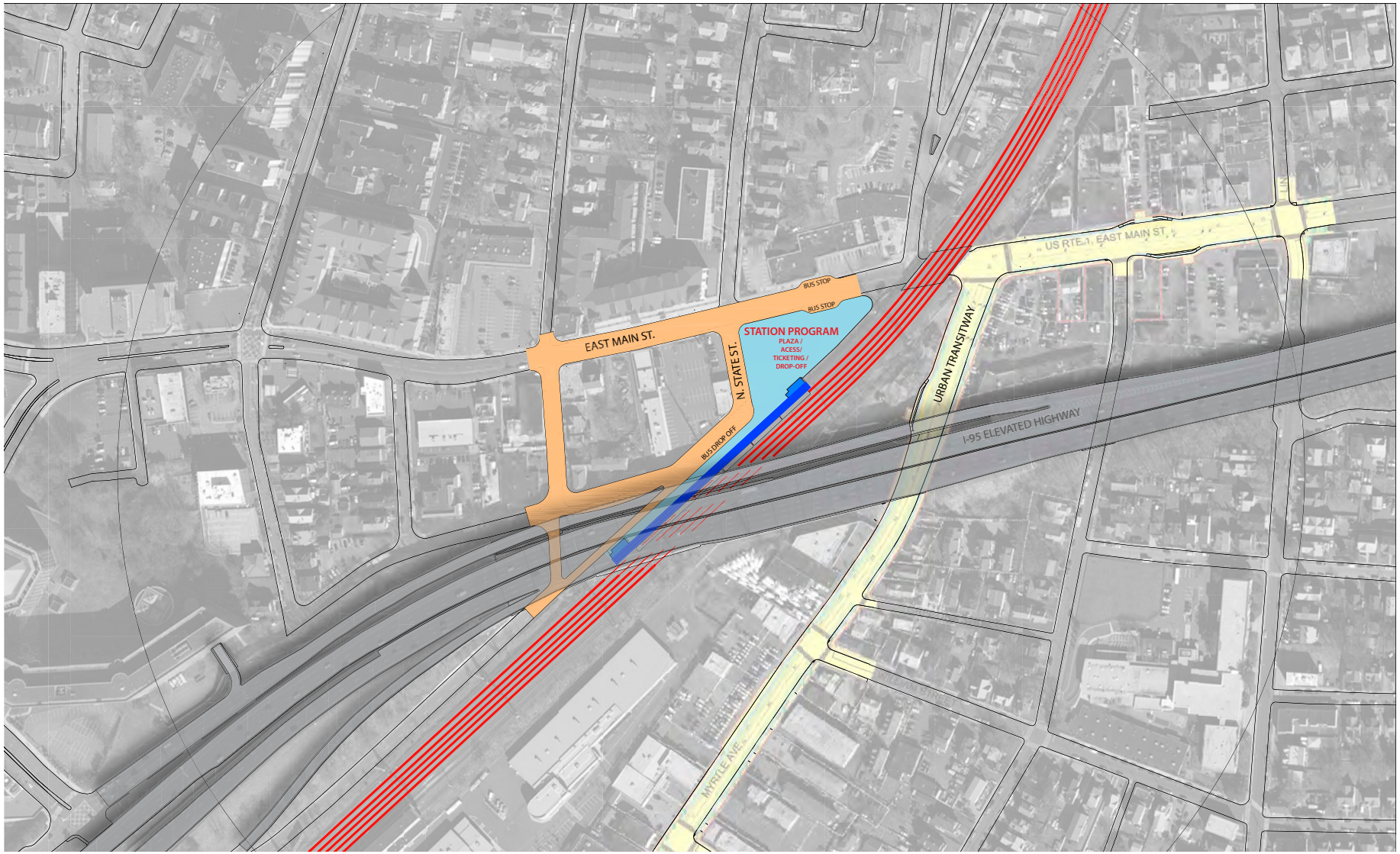
Redevelopment Opportunity	FAIR
Accessibility	FAIR
Station Environment	FAIR
Bus Frequency	POOR
Ridership Opportunity	POOR
Overall Quality of Life Benefits	FAIR

PREFERRED ALTERNATIVE

Summary of Results

Given the dual interests of recommending a feasible transit alternative that could spur economic development while enhancing the East Main Street corridor as a true destination and be embraced by public officials, agencies, and the community collectively, the project team determined that a branch line train station south of East Main Street beneath the I-95 superstructure is the most feasible option. It was therefore selected as the preferred alternative and is considered the most achievable approach to attaining substantial, positive change for the East Side community and the East Main Street neighborhood.

Numerous considerations and criteria were evaluated in order to reach this conclusion. While some alternatives provided the sought-after quality of life benefits, they did not meet the basic feasibility criteria required to justify their construction. In other instances, the alternatives were feasible from a construction standpoint, but failed to produce any quantifiable improvements to the community as a place. Specifically, both north options would not produce sufficient quality of life improvements to generate the support needed for a station to be constructed in a residential area that would be impacted by the presence of a rail station. The preferred branch line train station south of East Main Street beneath the I-95 achieves the desired quality of life improvements, including developing and enhancing the East Main Street corridor, with the ability to garner local community and public support.



The preferred branch line station south of East Main Street under I-95.

A rendering of East Main Street with the envisioned full-build branch line station scenario.

4. Transit Oriented Development Scenario

Transit-oriented development is typically defined as more compact residential development within ¼ to ½ mile of transit that may also include mixed use development. While the preferred alternative for a rail station would achieve some progress towards creating a transit oriented development scenario, it is clear that the development that occurs within the immediate vicinity will be just as critical in shaping the future of the East Side.

In order to measure and forecast the benefits and impacts that a station would bring to the East Side community, the project team analyzed several critical factors in order to propose a full build-out transit oriented development scenario. This entails a vision for the East Side bolstered by successful development at an appropriate scale while at the same time being fully accessible by rail, bus, car, and foot.

The full build-out scenario put forth in the following sections includes a market analysis that forecasts sustained developments of various types and uses, a development program that ensures that all the needs of the community are met, and a circulation and access plan that mitigates traffic impacts and addresses parking constraints. Through this comprehensive analysis of all the benefits and impacts that a branch line station brings, the future vision of East Main Street as the center of a transit-oriented neighborhood becomes clearer.

MARKET ANALYSIS

Land Use	Units	Market w/o Station	Market with Station	% Increase
Residential	units	278	380	37%
Residential	square feet	420,000	561,300	38%
Retail & Community	square feet	126,313	140,000	11%
Parking Total	spaces	-	1,423	-

Forecasted East Side retail and residential market with and without construction of branch line station.

A review of the market horizon through 2025 illustrates that there is a market for growth in the East Side, regardless of whether or not a new rail station is constructed. While the office market in Stamford as a whole remains weak with a surplus of office space as compared to demand, future demand for residential exists. Of even greater reassurance is the retail market, which is currently underserved for the densities of residential that are found in the East Side.

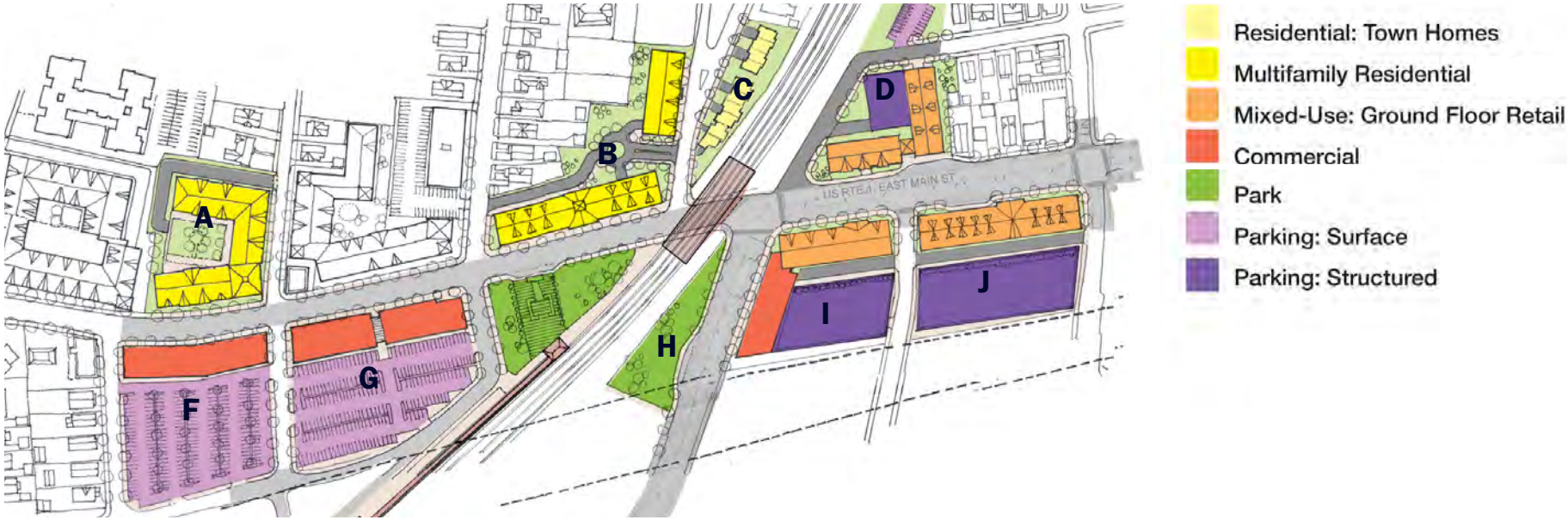
In a baseline scenario that doesn't account for a potential rail station, the area within 1/2 mile of the East Main Street rail overpass can support approximately 400 - 450 new residential units. If it is assumed that 65% of the total new housing market is concentrated along East Main Street in the vicinity of the proposed rail station, we can project a market for roughly 275 additional residential units through 2025. Potential new retail space supporting such residential growth could be in the neighborhood of 125,000 square feet.

The advent of a station should support additional growth. The amount of growth attributable to a new station is reflective of a combination of factors, including general market conditions, zoning requirements, roadway capacity, and densities in and around the proposed station area that help to shape the nature of growth. While a new station can engender additional growth, that growth is controlled by the amount of available real estate, the development market, and the rules and codes that promulgate development.

Important to Stamford's East Side is a plan of action that not only enables growth, but establishes a growth trajectory that reflects the character of its surroundings. This would accommodate existing infrastructure and support any additional development. Fortunately for the East Side area, the capacity for growth is slightly higher than what the market is forecasting, meaning that the advent of a new station should increase market opportunity.

Given these conditions, the project team projected a reasonable full build-out in line with the character of recent developments, available development sites, the ability of East Main Street to accommodate existing and added traffic volumes generated by new activities, and the need for parking associated both with development and with a new branch line station. Keeping these factors in mind, the projected build-out exceeds market projections in residential by almost 40% and exceeds retail by an additional 10%.

DEVELOPMENT PROGRAM

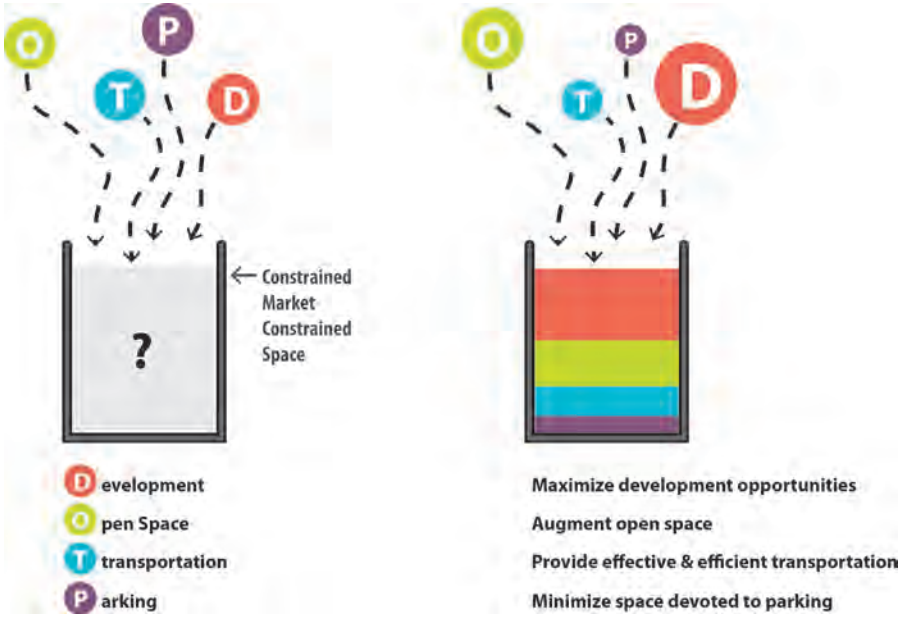


As the market analysis suggests, East Main Street would be suited for a diverse development program if construction of a rail station in close proximity to the neighborhood's commercial core were to commence. Already featuring two mixed-use apartment complexes of five and six-stories, respectively, the East Main Street neighborhood is primed for further economic growth and development similar in scale to that which currently exists.

Appropriate and desired developments for the neighborhood include multifamily residential apartment buildings with ground floor retail, commercial facilities, community park space, and modestly scaled town houses. A well balanced mix of these different types of uses would help guide the neighborhood into a more active and walkable corridor. With medium to high densities set within a compact, high quality pedestrian-oriented environment with limited and managed parking, East Main Street will have the necessary pieces in place to become a true transit-supported main street at the center of Stamford's East Side.

Land Use	Units	Total
Residential	Units	370
Retail	Square Feet	140,000
Parking	Spaces	1,400 - 1,500 (450 - 500 Commuter)

Proposed residential units, retail square footages, and parking spaces.



How TOD balances a variety of land uses.

As shown in the table and image above, the main goals of the proposed development program are to maximize development opportunities, create active open space in the center, provide effective and efficient transportation options, and minimize space devoted to parking, especially fronting East Main Street. Today's East Main Street urban environment, while not without its constraints, is well-spoken for and already features many elements of a transit-supported main street. By instituting a development program that works within the boundaries of the existing urban environment while at the same time striving to reach the neighborhood's full development potential, the project team provides one of several potential development scenarios that may come about given the construction of a rail station.

The key to any development program within a transit-supported community is balance: balance of uses, balance of activities, balance of urban and park space, and balance of users. The development program proposed in the full-build scenario is by no means the definitive blue print as to how East Main Street should be developed. Rather, it is a suggestion as to how all these factors may be balanced effectively to create a transit-supported community with a high quality of life for all those who reside there.

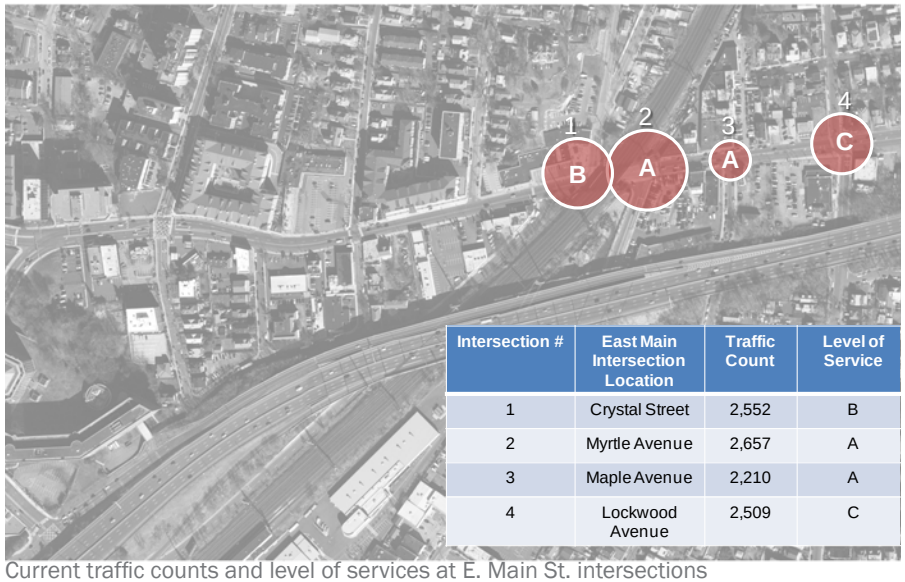
CIRCULATION & ACCESS

The realignment of South State Street will improve circulation and access.

With the introduction of a new branch line station at East Main Street, circulation and access within the neighborhood becomes of greater importance. The proposed full-build scenario ensures that the station is easily and safely accessible by all modes of transportation. This would be accomplished with a station site plan that features a passenger drop-off area along East Main Street in close proximity to the station, simple bus access that allows seamless passage for easy bus routes in and out of the station area, and improved street conditions and intersections along East Main Street, North State Street, and Myrtle Avenue.

A key factor in improving circulation and access for all users is the implementation of complete streets strategies along the streets surrounding the preferred station alternative. Such implementation would include the widening of sidewalks, the addition of bike lanes, and introduction of strategies and incentives that result in vehicles travelling at safer speeds. The end result would be an area that is safer and more accessible for pedestrians, cyclists, and transit users, along with vehicles.

TRAFFIC



Intersection #	East Main Intersection Location	Traffic Count	Level of Service
1	Crystal Street	2,552	B
2	Myrtle Avenue	2,657	A
3	Maple Avenue	2,210	A
4	Lockwood Avenue	2,509	C

Current traffic counts and level of services at E. Main St. intersections

Intersection #	East Main Intersection Location	Traffic Count	Level of Service
0	N. State Street (proposed)	2,585	A
1	Crystal Street	2,709	A
2	Myrtle Avenue	2,851	A
3	Maple Avenue	2,438	B
4	Lockwood Avenue	2,696	C

Traffic counts and level of services with propsed full-build scenario

The proposed full-build scenario mitigates traffic impacts that would occur given the construction of a branch line station at East Main Street. A key design factor which achieves this is the rerouting of North State Street. This proposed realignment would create a perpendicular crossing with East Main Street, eliminating a dangerous intersection.

While vehicular activity would certainly increase, the proposed full-build scenario would improve on current traffic conditions, providing safe streets for both vehicles and pedestrians. As the images above show, while the addition of the rail station would increase the traffic counts along East Main Street's various intersections, the level of service at these intersections would not be drastically altered. Level of service refers to the travel speeds, traffic density, and time delay of the surrounding intersections measured on a scale from "A" to "F", with "A" signifying uninterrupted travel and "F" signifying typical congestion conditions and delay. A new rail station would maintain the current level of service at intersections along East Main Street as new street alignments and improvements to the corridor would counteract the increase in traffic flows that the introduction of a branch line station would generate.

PARKING

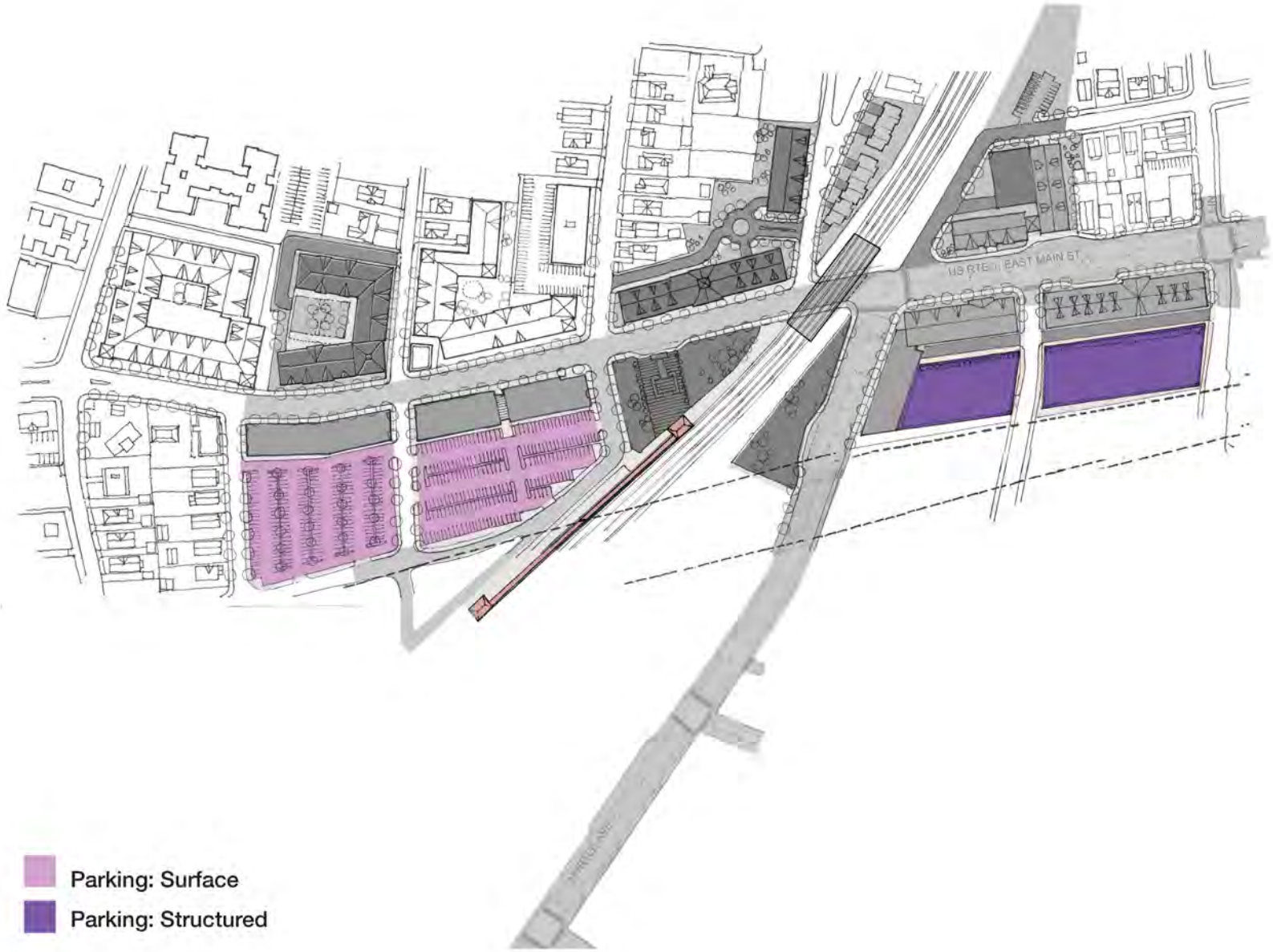
	Proposed	Springdale	Glenbrook	Required by CTDOT
Commuter Surface Spaces Adjacent to Station	241	214	155	-
Additional Structured Spaces for Commuters	252	-	-	-
TOTAL	493	214	155	400

Table showing the parking spaces provided in the full-build scenario as compared to Springdale, Gnebrook, and CTDOT requirements.

The project team is proposing a phased parking strategy that ultimately will meet CT DOT's minimum rail parking requirements while conforming to TOD best practices. CT DOT currently requires 400 parking spaces within a 1/4 mile radius of any new branch line station. As development is completed along East Main, it is anticipated that station demand will be induced, allowing approximately 60 - 70 spaces to be initially built directly adjacent to the station. These spaces are comparable with nearby branch stations such as Springdale and Glenbrook. Additional parking will continue to be constructed as development along East Main Street progresses until full-build out occurs, at which point the rail station will contain roughly 480 - 500 parking spaces.

A shared development parking strategy should also be implemented. Local land owners along East Main Street have stated that they are eager to participate in a planned growth strategy that maximizes development potential. They are interested in seeing how parking can be managed and placed so as to not detract from development potential by taking up key assemblages along East Main Street. It is therefore critical that parking along East Main Street be spread out and situated to preserve development opportunities and community character as the neighborhood's TOD matures.

The above strategies for parking are based on current CT DOT best practices. Throughout the Study's public participation process, community members have clearly stated their view that commuter rail parking should be minimized to the greatest degree possible. If CT DOT were to revisit their parking standards at a future date and determine that less than 400 spaces are needed for a new branchline station, the community should consider replacing the land dedicated for parking with other uses. Such a strategy is recommended for the proposed East Side Station by the project team and stakeholders from the NYCT Sustainable Group.



Proposed full-build parking strategy.

A MetroNorth train passes by the preferred location for a branch line station.

5. Implementation Strategies

Successful TOD requires consensus among neighborhood and community groups, local government, transportation agencies, development vision, and funding sources. Requiring a series of implementable steps that build the proper conditions and create this consensus, achieving TOD is challenging. When integrating TOD into an already mature and established community, the challenge can be even more complex. New development patterns must be woven in to an existing urban fabric and a market for TOD must be established with discreet development sites leading the way. Costly new infrastructure must be integrated into the existing built environment and the community must actively desire change. While it is a complex undertaking, communities across the country are embracing TOD and illustrating that all of these hurdles can be overcome, transforming communities from 20th century automobile dominated, one-dimensional zones into vibrant transit-served and bike/pedestrian friendly neighborhoods. Each location is different and every context unique, but in every community there are building blocks that can become the steps in a connected implementation strategy.

The Stamford Urban Transitway, an ongoing capital project, could help spur the implementation of a rail station in the East Side.

MITIGATION STRATEGIES

Link Capital Projects to Transit-Oriented Development

Stamford's East Side is the beneficiary of three capital projects that, if realized as elements of a TOD plan, will feed into the larger goal of creating a transit-serviced community.

1. The Stamford Urban Transitway will establish a complete street design for East Main Street and encourage greater transit activity along this corridor. Completion of Phase 2 of this project is expected to be completed in the 2015.

2. The triangular lot on the southeast side of the rail overpass is slated to become a park. This project is required as mitigation for an ongoing CT DOT project concerning safety and operational improvements at the intersection of Courtland Avenue and East Main Street, about 2/3 of a mile east of the rail overpass. By connecting the park to the train station plaza, an open central "green" space can be established along East Main Street.

3. The proposed reconstruction of the East Main Street Rail Bridge has the potential to radically transform East Main Street. If coupled with a larger complete streets design approach, the added capacity will help to establish the East Side as an accessible destination. Although this bridge replacement is considered by all parties to be a critical need and essential to maintaining a state of good repair for rail operations, the project remained unfunded as of July 2013.

These projects, if viewed individually, only provide isolated benefits. If part of a larger strategy, however, if part of a larger strategy, these projects can become elements of TOD implementation plan, serving as "steps" in the process designed to promote livability principles.

Start Small

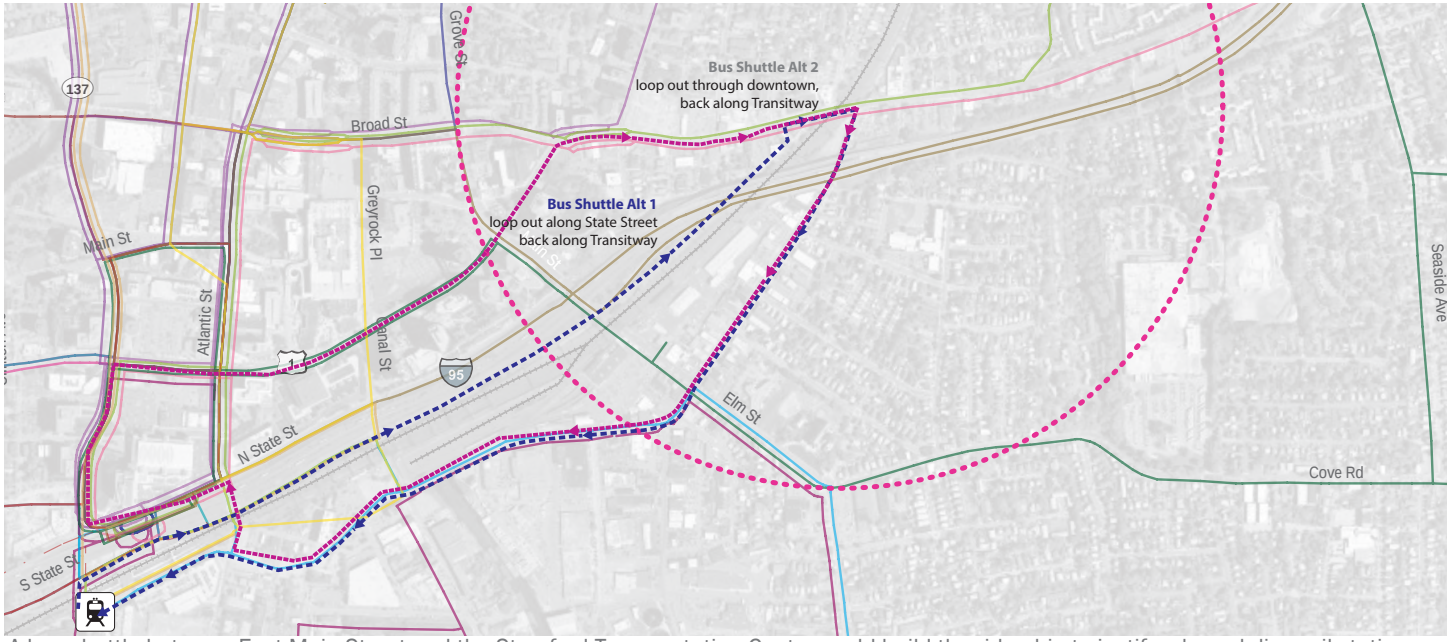
Creating a small capital project that can be constructed in a short timeframe can set in motion the process of implementing a larger-scale capital program. If such improvements physically set the stage for a larger capital project, then the impetus to complete the work is more significant, as incremental progress is often viewed as a commitment to the goals of a project. This is especially important when trying to establish momentum in the planning, financing, and political realms, when the display of a shared commitment can be instrumental towards building the rationale for a project.

Create the Environment for Transit-Oriented Development

The concept of TOD clearly focuses on creating opportunities to invest in transit and determining the appropriate development to take advantage of such investment. However, the elements of TOD in a built context do not always have to follow the order of "transit first, development second." It is critical that communities desirous of change recognize that the first new project will set the tone for development for the entire surrounding community. The development community itself can play a role in establishing an appropriate environment for new transit investment and chart a path that can lead to long-term success.

A TOD zoning overlay is one tool that is often used to ensure that development responds to transit investment. This overlay does not have to wait for the transit investment, but can set TOD guidelines, densities, mixed-use requirements, form-based code structures, public right-of-way treatments, parking incentives and myriad other development friendly principles in place. TOD overlay zones make a statement to prospective developers that the community is looking to establish certain types of development that align with the stated desire and need for the transit infrastructure to support growth and should be seriously considered for portions of the East Main Street neighborhood near the proposed station.

INTERIM BUS

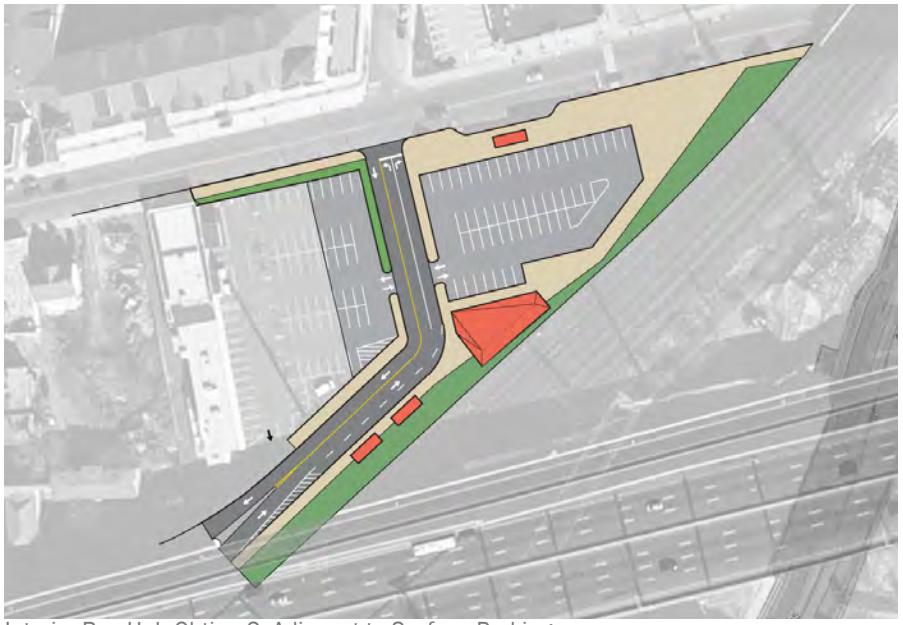


A bus shuttle between East Main Street and the Stamford Transportation Center could build the ridership to justify a branch line rail station.

A branch line station represents a significant investment. With many critical transportation infrastructure projects vying for money in today's ultra competitive funding environment, the effort to construct a branch line station will clearly be an uphill effort. A smaller initial investment designed to support the broader and longer-term goal of a train station will help to establish a public commitment to the overall project, create activity supportive of transit development, and stimulate investment that creates a critical mass of demand for an eventual train station.

In the case of East Main Street, an effective first step would be to implement an interim bus shuttle. Doing so would help to generate some of the transit ridership demand needed to further justify the subsequent investment in the construction of a rail station. More importantly, the interim bus shuttle will establish a formalized transit presence on East Main Street, establishing it as a true complete street and a transit destination.

Interim Bus Hub Option 1: Adjacent to Public Park



Interim Bus Hub Obtion 2: Adjacent to Surface Parking

The interim shuttle will also set forth key initial infrastructure modifications needed to implement the eventual development of a train station. First, South State Street is to be relocated to perpendicularly intersect with East Main Street. This will create the key access road into the station area and organize traffic more effectively along East Main Street. The bus shuttle will also establish a public open space on Main Street in the center of the district on a site that can later become East Main Street's "front door" connection to the train station.

This interim shuttle can take multiple forms. To attract Stamford Transportation Center users who might be interested in a lower cost parking option, the bus station could be built with parking for commuters. However, the community expressed more support for a park than parking, as they prefer the shuttle location serving as a community amenity. Both these potential options are shown in the images above; the community and the City of Stamford will ultimately have to reach consensus to determine the best path forward.

LONG TERM MAIN LINE OPTION

While difficult to imagine and plan for in the near- and medium-term timeframes, a main line rail station can be a long-term possibility for the East Side community. Such a station would provide a strong alternative to the Stamford Transportation Center not only for residents of the East Side but of surrounding communities as well. Although the constraints to construction are significant and would come with a major expense, a main line station could be justifiable and achievable once the following conditions are met:

1. Construction of a branch line station is completed.

2. Strong ridership is experienced at a branch line station, with demand reaching levels that justify the significant additional investment necessary for station expansion.

3. The elevated I-95 superstructure requires significant reconstruction. The main barrier to feasibility for a main line station currently is the presence of I-95's structural support system. At a future unknown date, when CT DOT must undertake extensive highway reconstruction, or if a policy decision were made to add lanes to I-95 that would necessitate major construction, plans could be made to relocate the supporting columns that preclude the necessary widening of the rail tracks and extension of platforms to accommodate 12 car trains without interfering with rail operations.

If plans for a main line station were to move forward, minimum parking requirements for a main line station would also have to be met in order to garner the support of CT DOT. As stated earlier in this report, a main line station requires at minimum 1,400 spaces, a number out of scale with the East Side neighborhood that would only be satisfied through the construction of structured parking facilities in close proximity to the station. The project team envisions these facilities would eventually take the place of the surface parking lots shown in the full-build branch line scenario.

Although a branch line station is the preferred alternative, a main line station would clearly bolster transit and development in the neighborhood even further. It is possible to envision additional development opportunities south of East Main Street along Myrtle Avenue in a main line station scenario.

Development program for the proposed main line build out alternative.

The proposed main line build out alternative.

1. Completion of Transitway

2. Interim Bus Shuttle

3. Development North of East Main Street

4. East Main Street Bridge Replacement

5. Branch Station with Surface Parking & Retail

6. Full Build-Out with Development East of Tracks

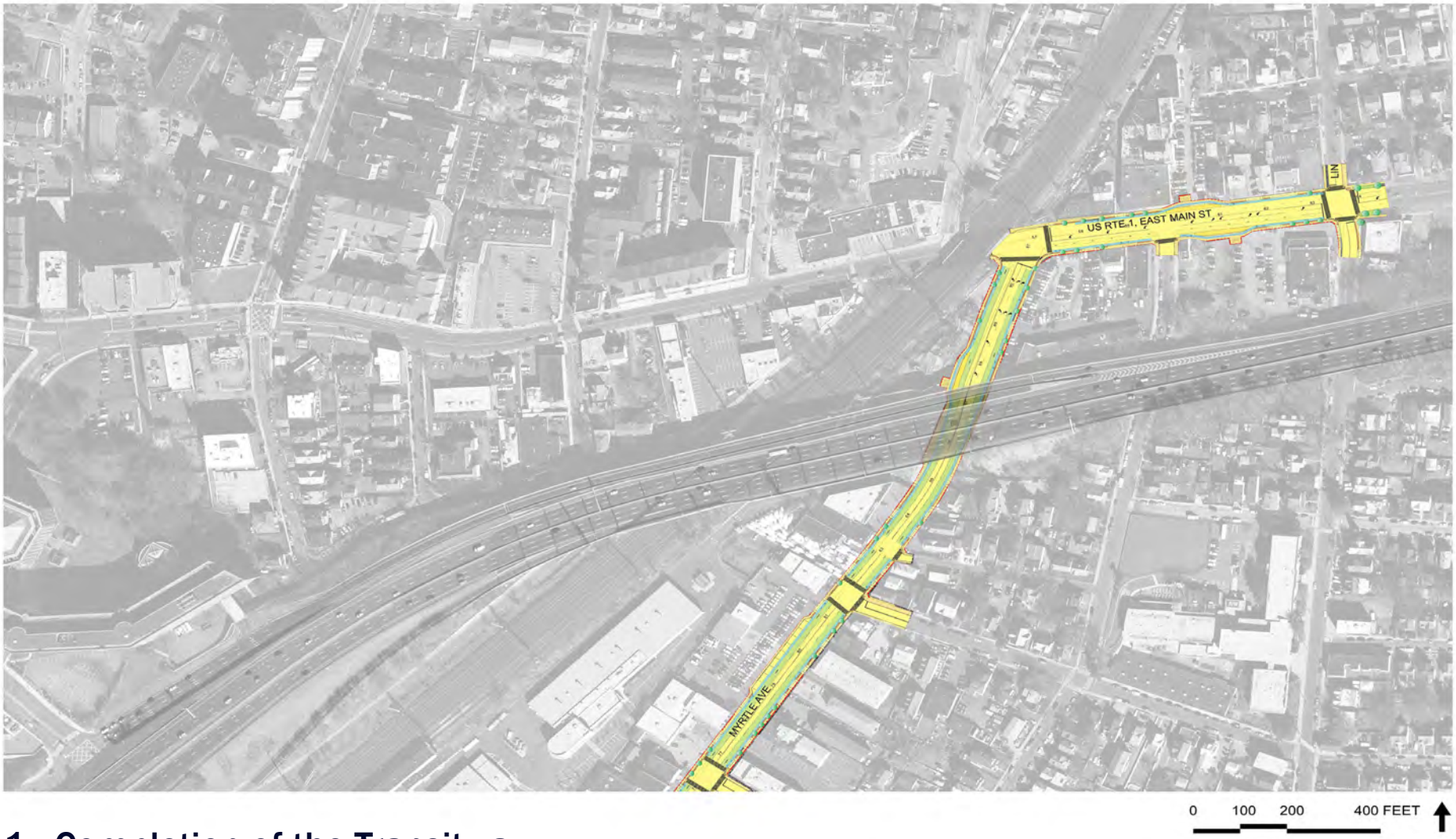
6. Phasing

Grow as We Go

The study has concluded that an incremental approach would best serve an East Side that seeks to attain their community vision for an East Main Street rail station and a successful transit oriented district. This is not an achievement that happens overnight. By growing as we go, Stamford's East Side will be able to build the pieces that will achieve their goal of becoming a livable, sustainable urban destination within the fast-growing City of Stamford.

The notion of growing as you go recognizes that TOD is a complex process. It involves multiple parties in multiple roles, working together over time to achieve a shared vision. TOD is by its very nature a shared public –private undertaking. Public interventions catalyze private development interests, thus shouldering the costs of investments needed to realize an optimal vision for the future. There are often many steps and shared investments put in place along the way to achieve that vision, and, in the case of Stamford's East Side, many of those pieces are actually happening or will happen in the near future. A roadmap that ensures future actions and investments will be essential to creating a successful TOD.

The following steps, when structured as a series of connected actions, represent this "Grow as You Go" approach, and outlines key milestones that need to be implemented before the East Side may attain a rail station and reach its full compact, mixed-use development potential.



1 - Completion of the Transitway

The phasing strategy begins with the completion of the Stamford Urban Transitway, a project undertaken by the City of Stamford with federal funding support. Already half completed, with its second and final phase scheduled to be completed by 2015, the Transitway will provide new, safe and accessible travel for automobiles, buses, and bicycles leading directly to the Stamford Transit Center from East Main Street, while avoiding the congestion of downtown Stamford.

2 - Interim Bus Shuttle

Requiring minimal parking and implementable at a fraction of the cost of a station, an interim bus shuttle and East Main Street bus station will provide the groundwork for the rail station and development to follow. The phased bus approach would serve as the initial impetus for establishing vehicular access, bus drop-offs and parking facilities that will be necessary for a rail station. Additionally, an interim bus station could build the necessary ridership to justify the capital expenditure needed to fund the completion of a branch line station. A bus shuttle facility will be in the same location that a train station is ultimately proposed, and may feature either surface parking or a public park depending on the sentiments of members of the community and Stamford government officials.

3 - Development North of East Main Street

A well designed public park and bus station could lead to development north of East Main Street on sites that lie adjacent to recent residential development, creating the beginnings of a transit-supported main street. With a successful bus facility in place at the future site of a branch line station and with ties between the newly introduced transit and the surrounding residential development, the neighborhood begins to form its center.

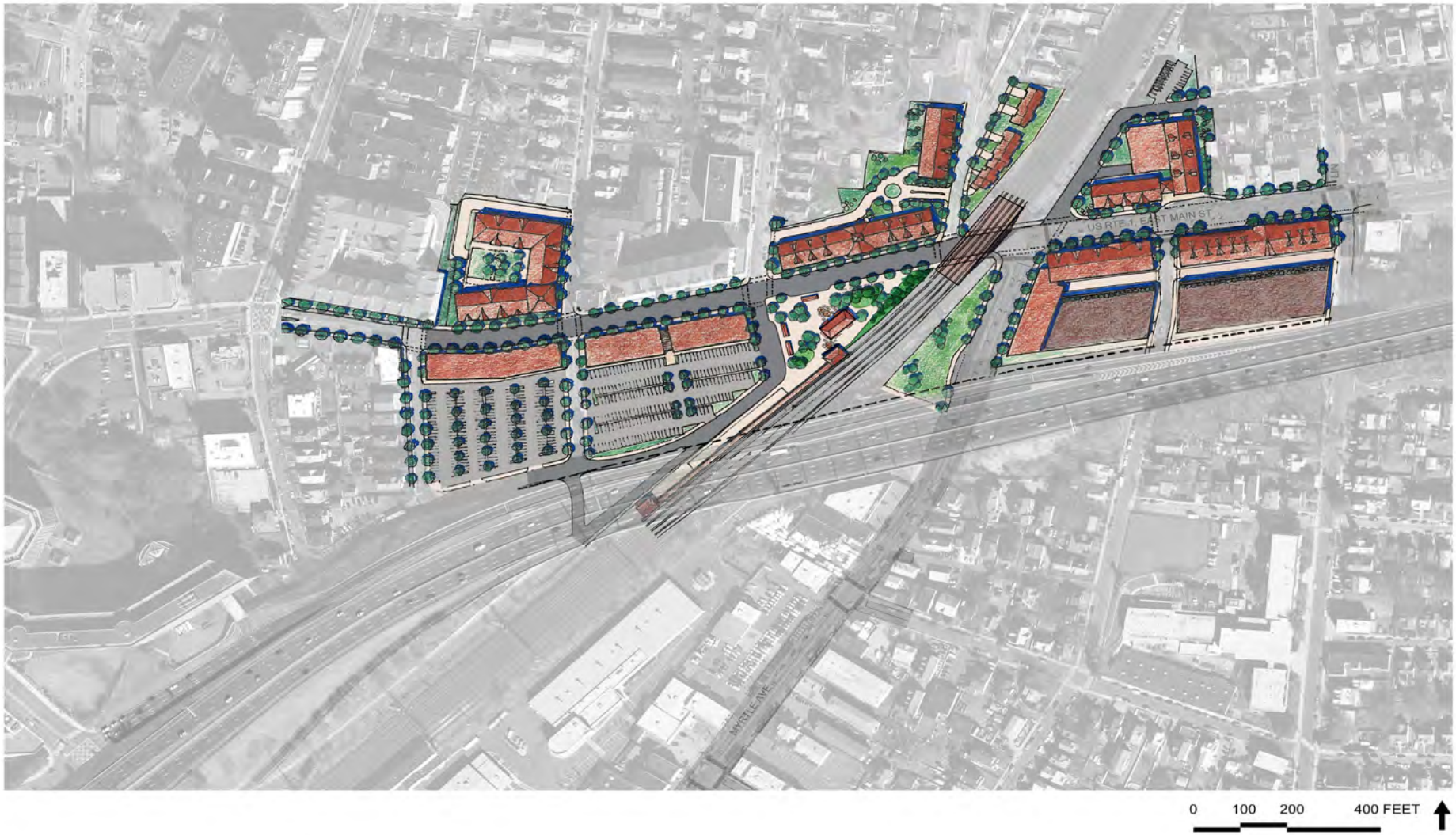
Widening the East Main Street Rail Bridge allows for the implementation of complete streets strategies.

4 - East Main Street Rail Bridge Replacement

The replacement of the East Main Street Rail Bridge is necessary to the construction of a branch line station. Given its narrow width and the ensuing traffic constraints that this creates at street level, the East Main Street Rail Bridge is one of many bridge replacement projects awaiting funding as part of CT DOT's capital improvement plan. A new or rehabilitated bridge wide enough to ease traffic at street level and accommodate the higher frequency of trains that will come with the construction of a rail station is an integral step in this study's phasing process. Additionally, the widening of the bridge will allow recommended complete street strategies to be implemented, creating enough space for pedestrians and cyclists to travel along the entirety of the East Main Street corridor safely.

5 - Branch Station with Surface Parking & Retail

With a strong and stable foundation in place, a branch line rail station can now be completed, with well-designed surface parking strategies ready to be put into place in order to accommodate new commuters. With a new way to access the Stamford Transportation Center, the interim bus shuttle is no longer needed and will give way to a station circulation plan, along with a drop off location for the station's ridership. The presence of a rail station will add to developments that have already occurred.



6 - Full Build-Out with Development East of Tracks

With the branch line station in place, the East Side will flourish as an economic center just minutes from Stamford's downtown. The added development will spread to the portion of East Main Street east of the rail bridge, connecting the two sides of the community into one vibrant commercial and residential corridor. With the Stamford Urban Transitway and the widened East Main Street Bridge already completed, all the necessary pieces will be in place for the East Side to reach its highest potential and serve its residents as a successful transit-oriented community.

A future vision for a transit-supported East Side community, anchored by a vibrant East Main Street.

7. Conclusion

This project represents federal policy towards sustainability enacted at the local level through regional coordination. The East Side community has long desired a train station as the centerpiece of its revitalization plans, but has had little success in moving forward in realizing this goal. HUD has established its livability principles with the intent of realizing context sensitive TOD success stories around the country. Using these principles as guidance, SWRPA, as a member of the NY-CT Sustainable Communities Consortium, has set out to determine whether a train station can be constructed to service the East Side and to determine how the implementation of new transit opportunities can lead to the realization of a livable community in and along East Main Street.

Through a publicly vetted process, SWRPA has been able to identify a feasible rail station strategy that the community can embrace as a catalyst for growth in their neighborhood. While the full build out will not be realized overnight, SWRPA has set forth a series of steps – its "Grow as We Go" vision, to structure the necessary political, regulatory and infrastructural investments needed. If followed, the result will be an improved East Side that becomes the transit-oriented, livable, and vibrant community it aims to be.

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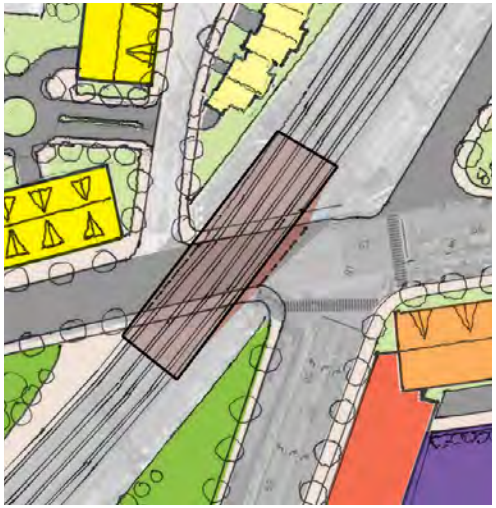
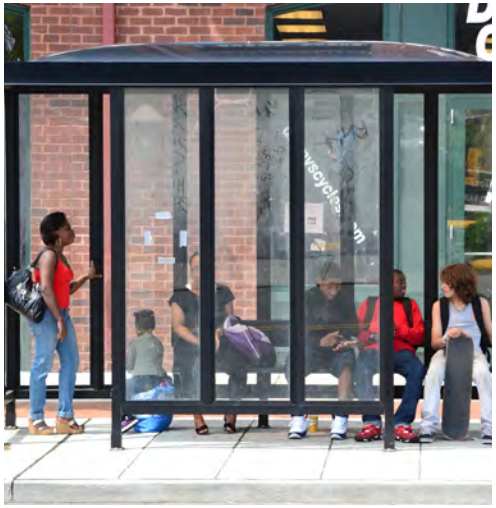
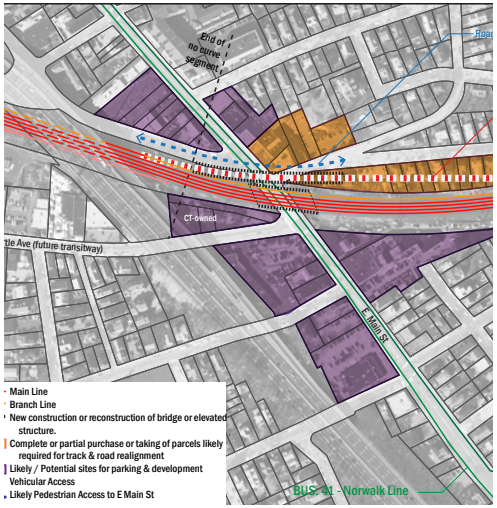
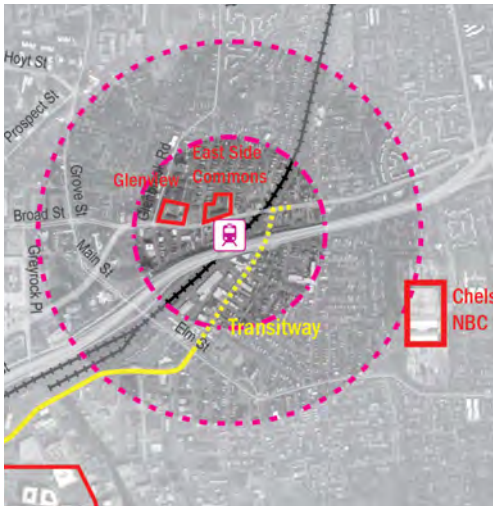
CT TRANSIT






End of no curve segment
CT-owned
E Main St
Main Line
Branch Line
New construction or reconstruction of bridge or elevated structure.
Complete or partial purchase or taking of parcels likely required for track & road realignment
Likely / Potential sites for parking & development
Vehicular Access
Likely Pedestrian Access to E Main St
BUS 41 - Norwalk Line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Greylock Pl
Transitway
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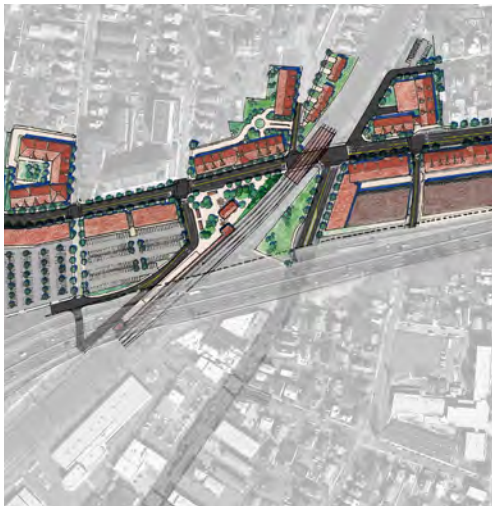

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