

GREATER HARTFORD MOBILITY STUDY

**A community-driven vision for
creating a vibrant, equitable,
and sustainable multi-modal
mobility network.**



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EXECUTIVE SUMMARY

Executive Summary

Introduction

The Greater Hartford Mobility Study (GHMS) is a Planning and Environmental Linkage (PEL) study by the Connecticut Department of Transportation (CTDOT). It epitomizes a groundbreaking, expansive effort aimed at redefining the entire landscape of greater Hartford’s transportation infrastructure. The study is governed by the principles of the PEL approach and is a concerted, long-term effort to elevate mobility, stimulate economic growth, and fortify environmental sustainability across the Greater Hartford Region. By aligning with the PEL methodology, the study assesses and coordinates an array of transportation recommendations. Each is designed to bolster the interconnectedness, efficiency, and equality of the regional transportation network, thereby driving economic prosperity and enhancing the quality of life for residents and visitors alike.

Study Origins

The region faces multiple challenges: highway disconnections, transit limitations, traffic congestion, and environmental impacts, among others. In the lead-up to GHMS, several projects emerged to address these issues. Projects such as the I-84 Hartford Project, CTfastrak expansion, and rail corridor enhancements, among others, embraced a holistic approach to transportation planning. In 2019, CTDOT decided to initiate the GHMS to provide a comprehensive regional framework for implementing transportation recommendations across the region and among different modes of transportation.

Historical Context and Plan Engagement

The GHMS approach was shaped by the history of how the region’s transportation system has been built. Notably, the GHMS team started by acknowledging the negative impact that mid-20th-century urban renewal and highway projects had on minority, low-

income, and other disadvantaged groups. The team also recognized the role that a highway-centric mobility system had on the region’s economic competitiveness and the quality of its built and natural environments.

In response, the study team adopted an approach centered on the values of accessibility, responsiveness, inclusiveness, and transparency. This led to the inclusion of diverse perspectives from stakeholders and the public. Ideas submitted by the public and stakeholders were evaluated along side projects from previous studies and input from GHMS technical experts (the Universe of Alternatives).

Collectively, the effort resulted in a project that focused on reconnecting communities, encouraging shifts in transportation modes, and enhancing equitable transportation options to improve mobility, access, and connectivity.

Programmatic Vision for Regional Transformation

The GHMS envisions a future where the Greater Hartford region hosts a comprehensive, multimodal mobility system. This system should be carefully crafted to cater to the multifaceted requirements of the residents, workers, and visitors, accommodating diverse backgrounds and needs. Central to this vision is an emphasis on inclusive and equitable transportation options that rectify past disparities. The GHMS program would provide diverse, reliable, and safe multimodal transportation choices that simultaneously mitigate the environmental impact of transportation.

The study is centered around the region’s core, primarily Hartford and East Hartford, acknowledging accessibility as a core principle of the plan. From urban to suburban

environments, GHMS takes a nuanced approach by recommending transportation improvements that serve areas based on their unique needs. This avoids a one-size-fits-all approach and recommended projects that include improvements to road infrastructure, transit accessibility, and regional trails that will facilitate access to and within the core. The result would be reduced congestion, more economic opportunities, and an improved environment.

Recognizing that the core is divided by highways, the plan emphasizes minimizing highway impact on densely populated areas and reconnecting communities. Recommendations avoid highway expansions, instead opting for strategic measures that support multi-modal transportation. This includes lowering and covering highways to enhance community connections, reconstructing the Hartford Line corridor to improve rail services, relocating interchanges, and integrating multi-modal boulevards to encourage walking, biking, and transit options. The program seeks to reclaim space by removing numerous highway ramps that are incompatible with the desired multi-modal street network.

The GHMS aims to create a vibrant, equitable, and accessible regional transportation system by redefining transportation infrastructure to prioritize safety, convenience, and accessibility for all residents and visitors in the greater Hartford region.

Needs Assessment

At the heart of the GHMS is a comprehensive needs analysis categorizing deficiencies into three crucial elements: network, quality, and equity. The detailed categorization highlighted infrastructure shortcomings, user experience

inadequacies, and the urgent need to redress socio-economic imbalances within the Greater Hartford Region. These evaluations and insights guided the formulation of five principal goals:

- Improve the movement of people and goods
- Increase transportation options, accessibility, reliability, and safety
- Accommodate future needs and emerging technologies
- Prioritize social equity
- Minimize environmental impacts

The vision for this program hinges on fostering a seamless, resilient, and multimodal transportation system. The system must be aimed at not only invigorating economic vitality but also enhancing the quality of life for the people it serves. Central to the study's success has been the collaborative effort among technical experts, regional stakeholders, and community members to assimilate a spectrum of needs and perspectives into the planning process.

An Inclusive & Collaborative Process

The GHMS draws strength from a PEL process. This process hinges on early and extensive consultations with local, regional, state, and federal stakeholders.

The study's engagement efforts were multifaceted, meaningful, equitable, and conversational. Engagement strategies included an interactive website, bilingual communications, and targeted outreach to historically overlooked communities. As a result, the study benefited from participation and

feedback from a diverse set of voices across the region that laid the foundation for a community-centered set of recommendations.

This collaborative approach to engagement was pivotal in shaping the multi-modal mobility strategy for the region that addresses social, economic, and environmental considerations. It also helps to position the region to continue to foster a collaborative, community-driven approach as projects move toward implementation.

Regional Benefits

The Greater Hartford Mobility Study recommendations have the potential to address existing infrastructure deficiencies, provide more travel choices, and enhance the quality of life in the Greater Hartford region.

Addressing Infrastructure Deficiencies

This plan organizes its recommendations into the following four components as illustrated on the

City Link West

This component would address safety, reduce the number of ramps in the Study Core, and improve connectivity between neighborhoods and green spaces/parks. Lowering the highway would link neighborhoods currently severed by the highway and create additional developable land while improving rail and bus services that share the corridor.

City Link East

This component proposes to mitigate highway congestion in downtown Hartford by relocating the I-84/I-91 interchange and creating a new bridge connecting I-84 and Route 2 in East Hartford. This redesign would separate local

and highway through traffic and reclaim the historic Bulkeley Bridge for local traffic, including opportunities for dedicated high-capacity transit facilities, separated bike lanes, and improved sidewalks.


Founder Gateway

This component proposes to consolidate the I-84/Route 2 interchange ramps in East Hartford. It would open significant acres of land to potential development and provide opportunities to strengthen the local street grid.

River Gateway

This component would connect Hartford's central business district with the Connecticut River. It allows for equitable access to green space, would mitigate some of the visual and noise impacts of I-91, and create an urban boulevard to strengthen local travel options. In addition, a new bridge would connect the Sheldon/Charter Oak neighborhood with a new, river-oriented, mid-rise neighborhood in East Hartford. The bridge would prioritize bus, bicycle, and pedestrian travel while accommodating automobile traffic.

A Region with More Travel Choices: Transit and Active Transportation

As illustrated on , the GHMS's implementation plan focuses on improving transit services along major corridors and increasing the frequency and hours of operation for over 20 routes. Additionally, proposals for rapid bus services, active transportation trails, and rail service enhancements would provide residents and visitors with safe, accessible, and efficient transit options.

Enhancing Quality of Life: Creating a More Vibrant and Sustainable Region

The plan emphasizes the creation of a more vibrant region by reclaiming land previously occupied by highways, creating attractive public spaces, and contributing to the economic development of the area. By improving roadways and focusing on localized congestion spots, the study aims to balance transportation modes for a more interconnected urban core.

Moreover, the GHMS emphasizes sustainability by recommending the removal of existing barriers that impede access to the Connecticut River, enhancing climate resiliency, and creating connections between neighborhoods and green spaces.

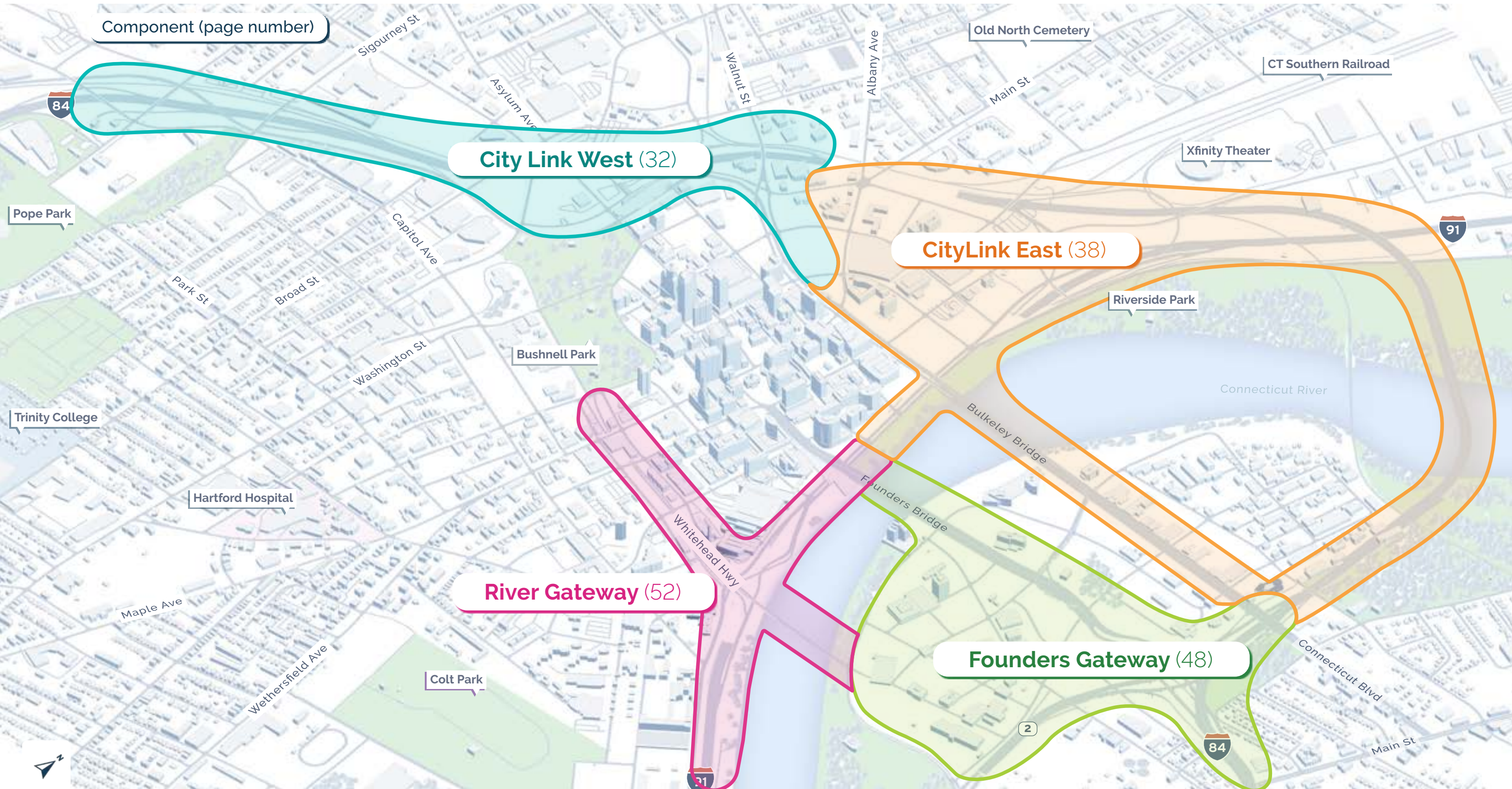
A More Equitable Region: Reconnecting Communities and Expanding Opportunities

The GHMS recognizes past planning errors and aims to rewrite history by reconnecting previously isolated communities, particularly those marginalized by constructing I-84 in the mid-20th century. Through expanded transit service and greenway networks, the plan strives to level the playing field, addressing transportation planning injustices and fostering a more equitable, connected, and accessible transportation system.

As illustrated on ,

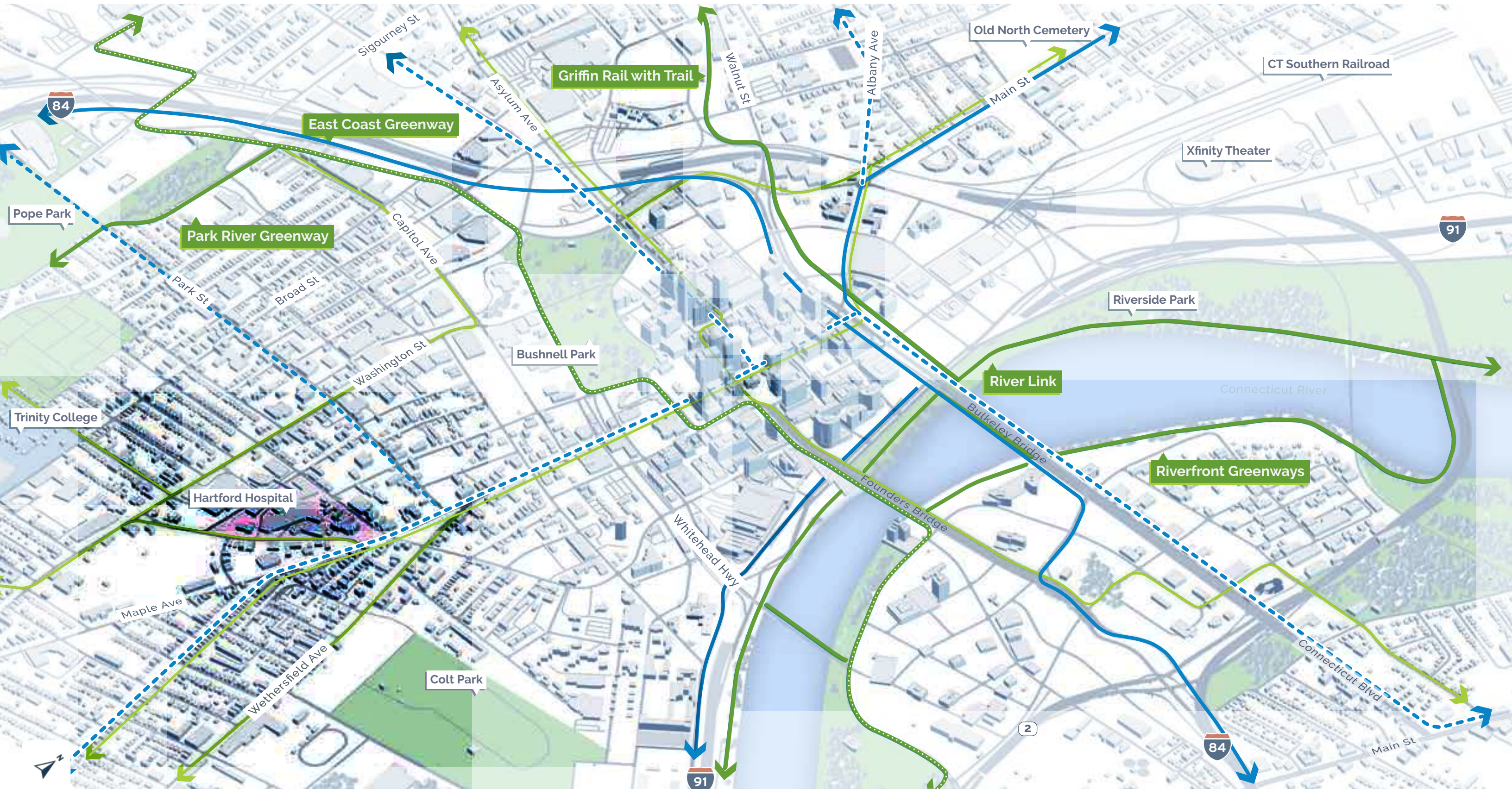
the Greater Hartford Mobility Study (GHMS) is a comprehensive initiative. It is a beacon of innovation and transformative planning to revolutionize the regional transportation landscape. Rooted in a collaborative and inclusive framework, the study delves deep into the historical context, identifies critical

Major Components Map



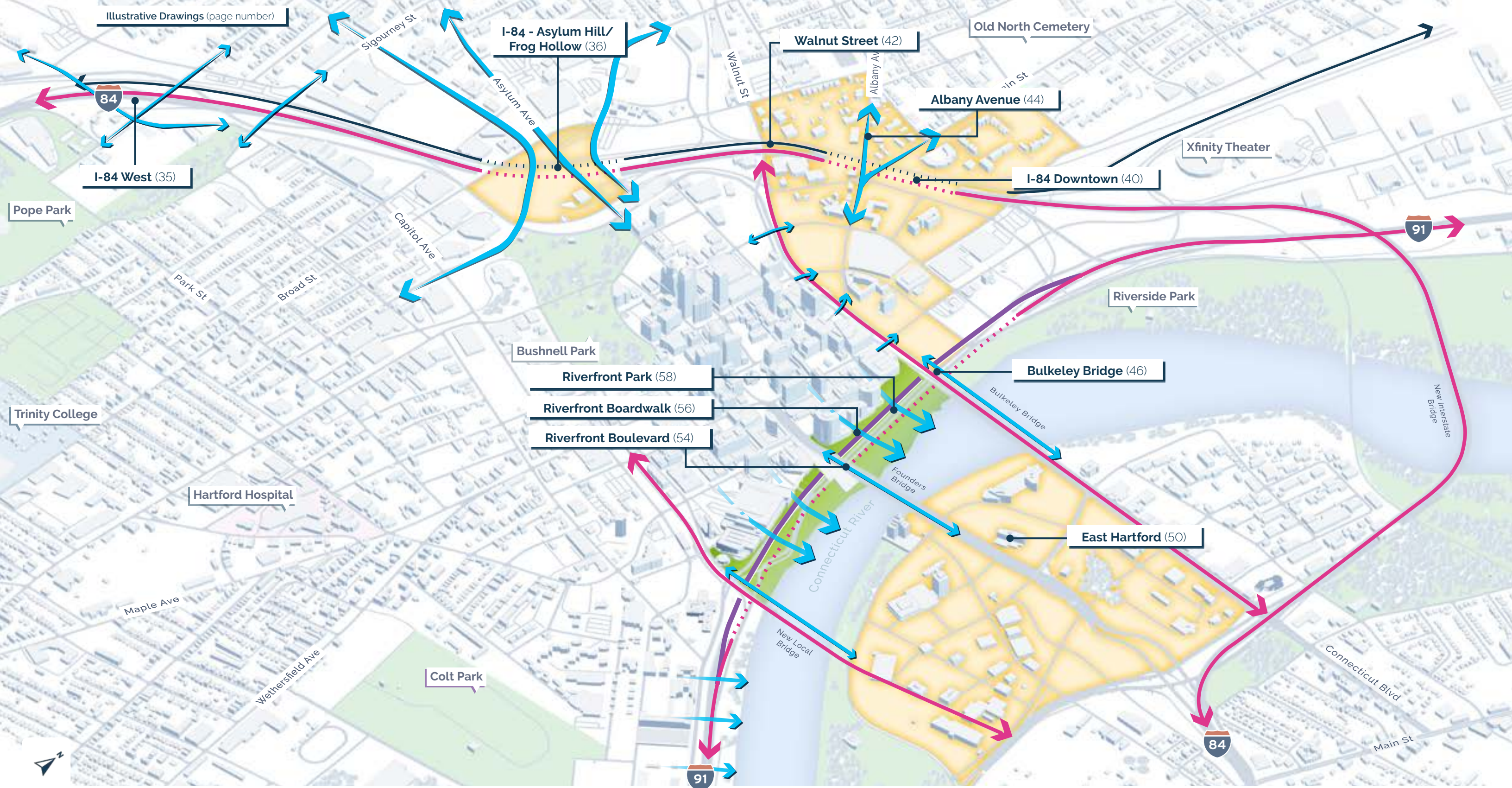
Bicycle, Trail, and Bus Networks

 BUS & BRT  BICYCLE & TRAILS



Removing Barriers and Reconnecting Communities

RAIL INFRASTRUCTURE NEW CONNECTIONS RIVERFRONT BOULEVARD RECONNECTED COMMUNITIES



issues, and envisions a future that prioritizes inclusivity, environmental sustainability, and equitable transportation options. With a strong foundation laid by historical insights and an extensive community-centered approach, the GHMS methodically evaluates and proposes infrastructure adjustments, transit enhancements, and policy frameworks aimed at addressing existing deficiencies and fostering a more connected, vibrant, and equitable Greater Hartford region. This executive summary is the beginning, providing a foundational understanding of the GHMS's objectives, methodologies, and vision. The subsequent report will delve further into the detailed plans, proposed projects, and strategic implementations that form the pillars of this groundbreaking initiative for the Greater Hartford Region's future.

Supporting Documentation

The GHMS recommendations are supported by a collection of detailed technical documents encompassed in the appendices to this Final Report. These documents offer a deeper understanding of the study's framework, stakeholder engagement, needs assessment, explored alternatives, financial considerations, critical findings, and implementation strategy. This technical information is crucial in supporting the plan's proposed strategies and decisions, providing an evidence-based approach for implementing the outlined transportation improvements.

A blue-tinted photograph of a family riding bicycles on a paved path. In the foreground, a woman on the left and a man on the right are riding, both seen from behind. Between them, a young child wearing a helmet is also riding a bicycle. The background shows other people walking and some trees, all in a soft, out-of-focus state. A semi-transparent dark blue horizontal band is overlaid across the middle of the image, containing the word 'INTRODUCTION' in white, bold, italicized capital letters. A thin pink diagonal line is positioned to the right of the text.

INTRODUCTION

Background

The Greater Hartford Mobility Study (GHMS) outlines the Connecticut Department of Transportation's (CTDOT) long-term strategy to improve the experience of moving throughout the region, support efforts to create more livable places, and address inequitable outcomes produced by previous transportation investments. The goal is a region that is more economically vibrant and environmentally sustainable, a more resilient transportation network, and a place that is more attractive to live, work, and visit.

Several studies in the recent past focused on individual infrastructure improvement projects across different modes of transportation and at various Greater Hartford locations. However, a comprehensive system of improvements was not evaluated. GHMS was initiated to solve the mobility puzzle for the region by identifying and piecing together complementary improvements. It also establishes timelines and sequencing of these improvements so that a long-term implementation program can be put in place.

CTDOT assembled a team of technical experts who worked closely with the agency's staff, federal and state agency partners, regional stakeholders, and community members to establish this study. A Planning & Environmental Linkage (PEL) Study provides a collaborative approach to transportation decision-making that is aligned with the federal process. The GHMS PEL study looks at transportation, environmental, community, and economic goals early in the planning process so that it

can effectively inform the subsequent National Environmental Policy Act (NEPA) review process to advance improvement projects into design and construction.

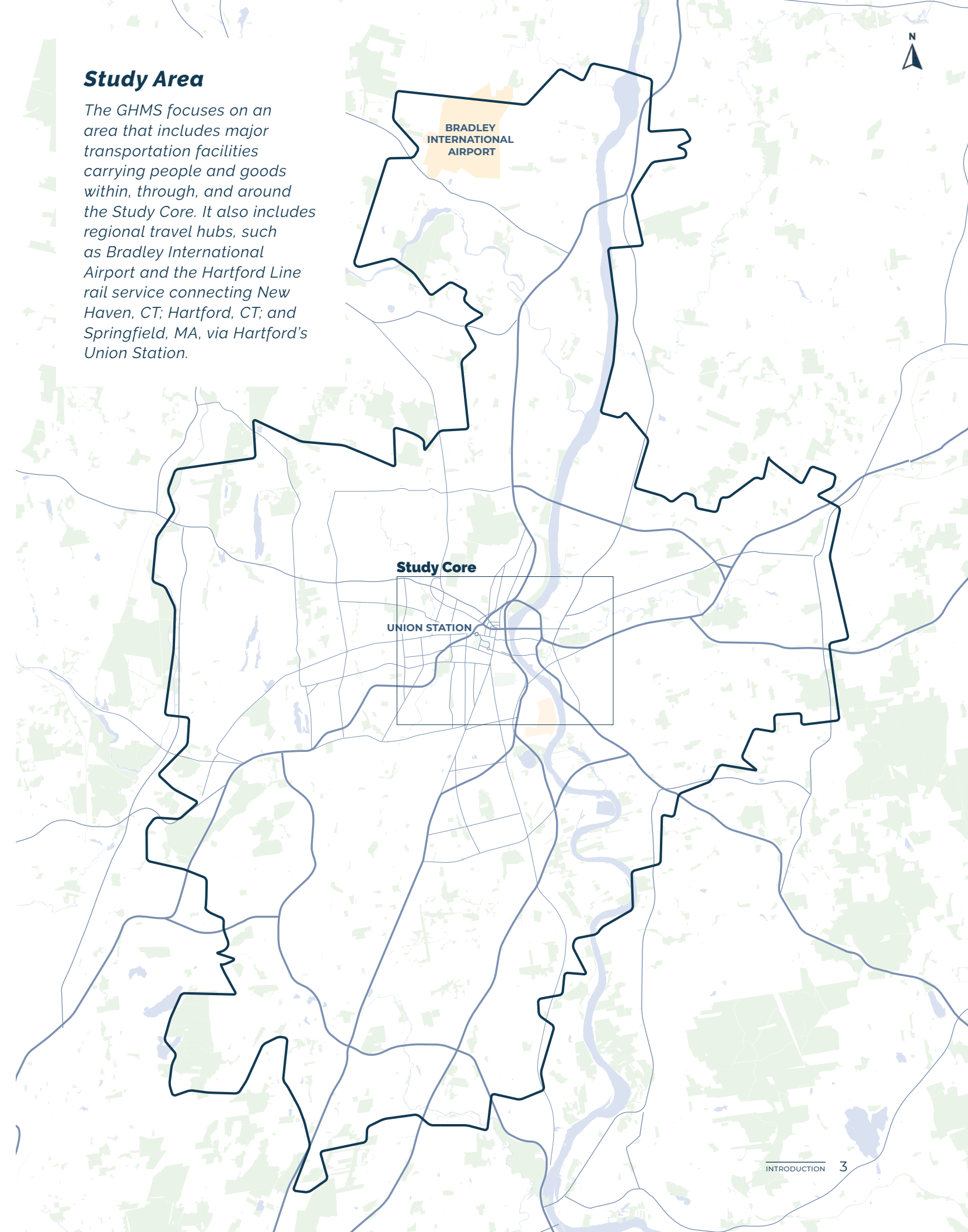
The study team performed thorough technical planning work to identify multi-modal needs, assess potential solutions, and address barriers to implementation.

Substantial resources were dedicated to making the planning process accessible, inclusive, responsive, and transparent. As a result, this study presents a collaborative multi-modal vision that comprehensively addresses mobility and accessibility across the region.

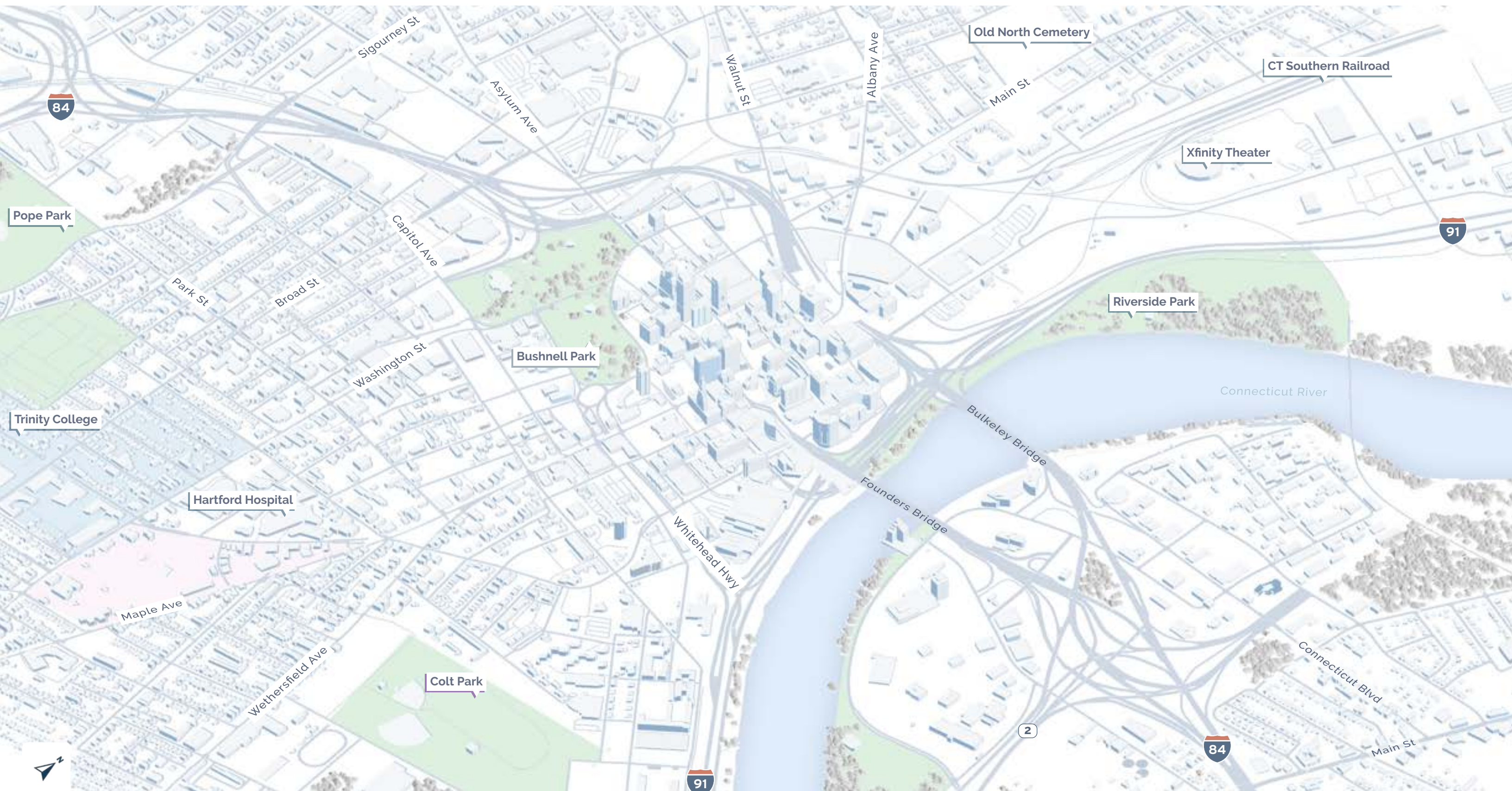
Each strategy within the programmatic vision includes specific projects that have undergone significant technical analysis to evaluate how they fit into the overall framework of infrastructure improvements to maximize social, economic, and environmental benefits for the region. The analysis also identified early improvement actions that have the potential to bring immediate benefits to the region and can support further development of identified mid- and long-term improvements.

Study Area

The GHMS focuses on an area that includes major transportation facilities carrying people and goods within, through, and around the Study Core. It also includes regional travel hubs, such as Bradley International Airport and the Hartford Line rail service connecting New Haven, CT; Hartford, CT; and Springfield, MA, via Hartford's Union Station.



Study Core: Existing Conditions



Origins

A History of Progress and Injustice

Across the country in the mid-20th century, urban renewal, suburbanization, and the construction of the interstate highway system worked together to pull investment out of central business districts and divide communities. Hartford was no exception.

Interstate projects such as the construction of I-84 and I-91, and their associated network of auto-oriented highways and arterials, made driving through the Greater Hartford region easier and improved access for suburban residents. They also opened interstate commerce and allowed for the quick and efficient movement of goods and services. However, these benefits came at a major cost. Infrastructure projects disconnected neighborhoods, displaced residents, destroyed cultural heritage, cut Hartford off from its riverfront, and took investment away from infrastructure to support biking, walking, and taking transit.

The negative impacts of these projects were disproportionately felt by the region's black, brown, and low-income residents. Property values around the highway projects declined, and the areas became the only refuge for the region's most vulnerable residents who could not afford to live anywhere else. Those determined not to give up their community fought for incremental improvements while reconciling with the reality that staying meant enduring long-term health impacts, reduced access to employment, higher transportation costs, and higher rates of traffic fatalities. In comparison, the benefits of the auto-oriented mobility system were largely realized by white, higher-income suburban residents and businesses that had access to the capital necessary to take advantage of the economic opportunities.



Moving Forward

The Seed of Opportunity

Today, the Greater Hartford region has an opportunity to utilize its infrastructure to shape a different future. One that is inclusive of its diverse communities, supports the mobility needs of all users, and the varied economic, social, and environmental needs of its residents.

The opportunity to envision a different mobility system on a large scale started when it was determined that Hartford’s I-84 Viaduct was nearing the end of its useful life. In many ways, the viaduct embodies all of the failures of a highway-centric transportation planning approach. The highway forms a major barrier that divides Hartford’s core, a “no man’s land” separating neighborhoods from each other and downtown. Much of the land around and under the highway remains underutilized and unattractive, overshadowed by the presence of the highway and associated ramps. These factors limit the economic vitality of the core and detract from the city’s cohesiveness and identity.

When examining what to do with the I-84 Viaduct, a robust community of transportation professionals, civic groups, political leaders, and citizens came together to articulate a new vision for the area:

“The Hub of Hartford will be a lively and walkable, mixed-use, mixed-income urban place, a regional crossroads centered on Union Station, where business, government, community, and recreational uses integrate seamlessly in a historic context supplemented by compatible new development. The buildings, trees, and landscaped areas will define public streets and spaces that reconnect previously separated city precincts: the state government complex, the Frog Hollow and Asylum Hill neighborhoods and offices, the downtown, and Bushnell Park. Cyclists, walkers, and transit riders share the road comfortably with automobiles.”

- **Committee in advance of the I-84 Viaduct Study**



Lowered Highway Concept from I-84 Hartford Study

More Issues and More Projects

The I-84 Viaduct may have been one of the most visible issues in the region, but it was by no means the only one. Throughout the region, residents and stakeholders identified numerous other areas where the transportation system is holding the region back:

- Interstate 91 cuts Hartford off from the Connecticut River, disconnecting communities from the region’s preeminent ecological treasure.
- The region’s highways are infamous for their traffic congestion and bottlenecks, especially the I-84/I-91 interchange. The interchange is routinely featured on top nationwide bottleneck lists. In 2023, the American Transportation Research Institute (ATRI) identified the interchange as the worst freight truck bottleneck in New England and the 21st nationally.
- The I-84/I-91 interchange is the number one choke point in Connecticut, number two in

New England, and ranking ninth nationally. This forces residents and visitors to spend more time in their cars and gives them less time to live their lives.

- The region’s transit system is underdeveloped compared to its system of roadways and highways. This leaves many residents with limited access to jobs and amenities or forces them to spend a disproportionate share of their income on transportation.
- Traffic congestion on highways limits the flow of goods and services in the region, limiting economic opportunity for businesses and the people whom they employ.
- The reliance on personal automobiles as the predominant mode of travel is deteriorating the natural environment and contributing to climate change. This is and will continue to have impacts on the quality of life of residents in the region.

In response to these issues, several initiatives have emerged that incorporated a holistic approach to transportation planning that included economic, social, and environmental goals. They included:

- I-84 Hartford Project
- CTfastrak expansion
- Amtrak/Hartford Line Rail Corridor enhancements
- I-84 / I-91 Study
- East Coast Greenway planning

A Comprehensive Approach

The scale, complexity, and inter-related nature of these projects necessitated a comprehensive planning initiative that would assess the primary transportation deficiencies in the region and provide a mechanism to prioritize projects for further study and implementation. A comprehensive approach would allow CTDOT to:

- Study the mobility system as a whole and ensure that individual projects were mutually reinforcing and did not advance different goals.
- Incorporate other projects to ensure they advance a holistic and comprehensive mobility vision for the region.
- Avoid disproportionate impacts on minority populations, low-income residents, and the environment.
- Explore opportunities where a coordinated approach could unlock opportunities for improved mobility, revitalize the transportation system, and advance the region's economic, social, and environmental goals.

The PEL process provided a strong framework for advancing those needs, and in 2021 the CTDOT created the Greater Hartford Mobility Study.

The Vision for the Study

The GHMS began with an aspirational yet achievable vision that guided the study:

The GHMS vision is to improve mobility by planning an integrated, resilient, multi-modal transportation system in the Greater Hartford Region, thereby enhancing the quality of life, economic vitality, and opportunity in the region.

Five goals were identified to help guide the process towards this vision.

Goal 1: Improve the movement of people and goods

Goal 2: Increase transportation options, accessibility, reliability, and safety

Goal 3: Accommodate future needs and emerging technologies

Goal 4: Prioritize social equity

Goal 5: Minimize environmental impacts

More details about the mobility needs can be found in [The Planning Process](#).

Why PEL

The PEL process allows CTDOT, relevant federal agencies such as the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Rail Administration (FRA) and their partners to develop a collaborative and integrated approach to transportation decision-making that 1) considers environmental, community, and economic goals early in the transportation planning process, and 2) uses the information, analysis, and products developed during planning to inform the environmental review process. The PEL process engages local, regional, state and federal transportation and resource agencies along with study area stakeholders and the general public. It improves information sharing and early consultation among state and federal transportation and resource agencies. This reduces or eliminates duplication of work in planning and NEPA processes and assists with streamlined project delivery. CTDOT is the lead agency for the PEL and has worked with appropriate local and federal stakeholders and agencies to inform them about the study's purpose and need, preliminary universe of alternatives, process used to eliminate unreasonable alternatives, and establish a preliminary infrastructure improvement program for implementation..

Supporting Documentation

The GHMS is a public-facing document that is intended to provide readers with the critical information necessary to understand the study's vision and strategy. The Plan is supported by a robust set of technical documents that are included in the appendices, including:

- PEL Questionnaire
- Study Framework
- Community Engagement Plan
- Agency Coordination Plan
- Existing Conditions Report
- Future Condition Travel Demand Methodology
- Scenario Planning Baseline
- Needs Statement
- Universe of Alternatives
- Alternatives Screening
- Scenario Planning Results
- Implementation Plan



CRISPER	3	
NORTH END BLEND	3	3.20
LA PALOMA SABAVERA	3	3.25
AQUA FRESCA	3.05	3.25
OVALTINE	2.80	3
AT MILK VARS	SYRUPS .50	CBD 2

Do you have ideas about how to IMPROVE TRANSPORTATION in Greater Hartford?

Check out the Connecticut Department of Transportation's Greater Hartford Mobility Study Collaborative Portal!

GREATER HARTFORD

www.hartfordmobility.com

AN INCLUSIVE & COLLABORATIVE PROCESS

STUDY Q&A

Proposals & Feedback

Information



GREATER

The Community Engagement Approach

Striving for Accessibility, Inclusiveness, Responsiveness, and Transparency in the engagement strategy led the project team to some big rewards and learning moments about what an equity-centered approach entails. The GHMS Team took the following approach to engagement.

Multi-Faceted

To reach virtual and in-person constituents

At the start of the GHMS, the team was faced with the challenge of engaging the community at the start and height of the global COVID-19 pandemic. Much of the study's initial outreach was conducted digitally and through virtual meetings. This was convenient for many who preferred to stay home to protect their health, fulfill their care duties, or did not have access to reliable transportation.

However, the pandemic also highlighted the digital divide – unequal access to high-quality and reliable internet. Also, many learned during this time that nothing beats the feeling of an in-person connection. From a gift card social media giveaway contest to boots-on-the-ground community engagement efforts at local farmers markets, community meetings, and church visits, the GHMS Team reached far and wide to make sure all voices were heard.

Meaningful

To make people part of the process

The public is more engaged when they can have a conversation and ask questions about the planning process. Through virtual listening sessions, pop-ups at community events, neighborhood meetings, and one-on-one meetings, the GHMS strove to make people part of the process every step of the way. The team uncovered nuances and insights through a meaningful and multi-faceted approach to community engagement. Neighbors welcomed the GHMS Team into their living rooms, community gathering spaces, and local coffee shops to think big about the future of transportation in Greater Hartford.



GHMS team meeting with residents at National Night Out event



Principles That Guided Engagement

Accessibility

Anyone who wants to participate in the planning process should be able to in an easy and accessible way, regardless of background, socio-economic status, and language preference. GHMS outreach was conducted to reach the greatest number of people in the greatest number of ways. That meant scheduling in-person and virtual meetings at multiple times throughout the day, incorporating bilingual communication materials, and connecting with local social equity organizations.

Inclusiveness

The GHMS Team was intent on remedying past mistakes by including previously omitted communities throughout the planning process, ensuring diverse voices were heard, and, perhaps most importantly, demonstrating responsiveness to feedback received.

Responsiveness

The GHMS Team engaged in campaigns to solicit as much feedback from the community as possible while also collecting feedback from the public. The GHMS Team reviewed feedback and comments and responded to questions and ideas about the different concepts for the future of Hartford.

Transparency

The GHMS is guided by the desires of the region. To make that possible, the GHMS Team established an open, honest, and transparent dialogue with stakeholders and the public, educating them on technical information, and the planning process. Major milestones, changes to the plan, and new ideas were shared with the public via newsletters, social media, and discussions. When people understand the project and its potential, it provides a rich discussion that informs project decisions and direction.

Equitable

To prioritize inclusion and accessibility

The Greater Hartford region is diverse in all senses of the word. According to the US Census Bureau, Greater Hartford is made up of 19.5% Latinos and 16.4% of African Americans. In Hartford County, those numbers double. The region is home to several organizations advocating for ADA accessibility, socio-economic justice, religious diversity, and more.

During the community engagement process, study materials were available in English and Spanish to encourage the same understanding and participation across the region. The team strove to have representation of the community and sought support from local influencers to succeed in that mission.

Inclusion means meeting people where they are – inviting people to the table. The team reached out to individuals and groups who represented a piece of the community, whether it be low to moderate-income residents who rely on public transportation, ADA agencies and advocates, faith leaders, and more.

Conversational

To build a shared understanding

During the initial outreach, the team met with stakeholders and community groups in person and virtually to hear their ideas about the type of multi-modal transportation improvements they would like to see in Greater Hartford. Following this initial data-gathering phase, the GHMS Team went to the drawing board.

When the ideas solidified into tangible concepts, the GHMS Team went back online and in person to get responses from the public. People were able to voice their support for their favorite transportation ideas via the GHMS website, Online Collaboration Portal, and social media accounts. They could also contact the team through the study's email. People were also able to support potential transportation alternatives through paper materials at in-person community meetings.

Community Engagement Strategies

Interactive And Engaging Website

The GHMS Team considered initial input from regional stakeholders, the public, and the existing conditions analysis to develop over 100 alternatives for the public to review. A virtual tour of Hartford's Bushnell Park (below) guided users to interactive booths to learn more about the Study's purpose, the challenges and opportunities with transportation in the region, and the complete list of alternatives. On the website, visitors marked their favorite multi-modal transportation ideas. There were over 1,000 comments and selections from the public!

Bilingual Communications

Greater Hartford is rich in diversity, with a population made up of people from a variety of racial,

ethnic, and cultural backgrounds. The city is home to a large and vibrant Latino community, as well as African American, Caribbean, and African communities, among others. This diversity brings a wealth of cultural traditions, languages, and perspectives, making it a unique and dynamic place. A Spanish-language communication strategy is part of the Study's commitment to inclusiveness and cultural diversity for the future of transportation in Hartford.

Spanish-language speakers engaged with the Study during in-person events in their neighborhoods. Spanish-speaking staff

educated the public, making them a part of the planning process. All social media campaigns, emails, flyers, and communications material were distributed in English and Spanish languages. Even an online gift card raffle encouraged far-reaching engagement and supported different types of local businesses in Greater Hartford!

Engaged Stakeholders

Working with community groups and local organizations is vital to more informed





Community Pop-Up Events

Community pop-up events were opportunities to gather input and feedback from a diverse range of residents, including those who may not typically participate in the decision-making process. Meeting people where they are, physically, allows for a more representative and inclusive planning process that considers the perspectives of all members of the community.

GHMS Attended Events

- | | | |
|------------------------------------|---|---|
| National Night Out | Know Good Market | Bici Co. Transport Hartford |
| West End Farmers' Market | East Hartford Farmer's Market | Multi-Modal Meetup at Carmine's in East Hartford |
| Know Good Market | Bici Co. Transport Hartford | Congressman Larson Event |
| State House Square Farmer's Market | Multi-Modal Meetup at Semilla Café | Leadership Greater Hartford Event at Semilla Café |
| Hartford Yard Goats Game | Bici Co. Transport Hartford | Hartford Taste Festival |
| Riverfront Asian Festival | Multi-Modal Meetup at WeHa Brewing and Roasting Co. | Latino Fest |
| Hartford Athletic Soccer Game | Bici Co. Transport Hartford | DominGo! |
| West End Farmers' Market | Multi-Modal Meetup at The Place 2 Be | National Night Out (Blue Hills NRZ) |

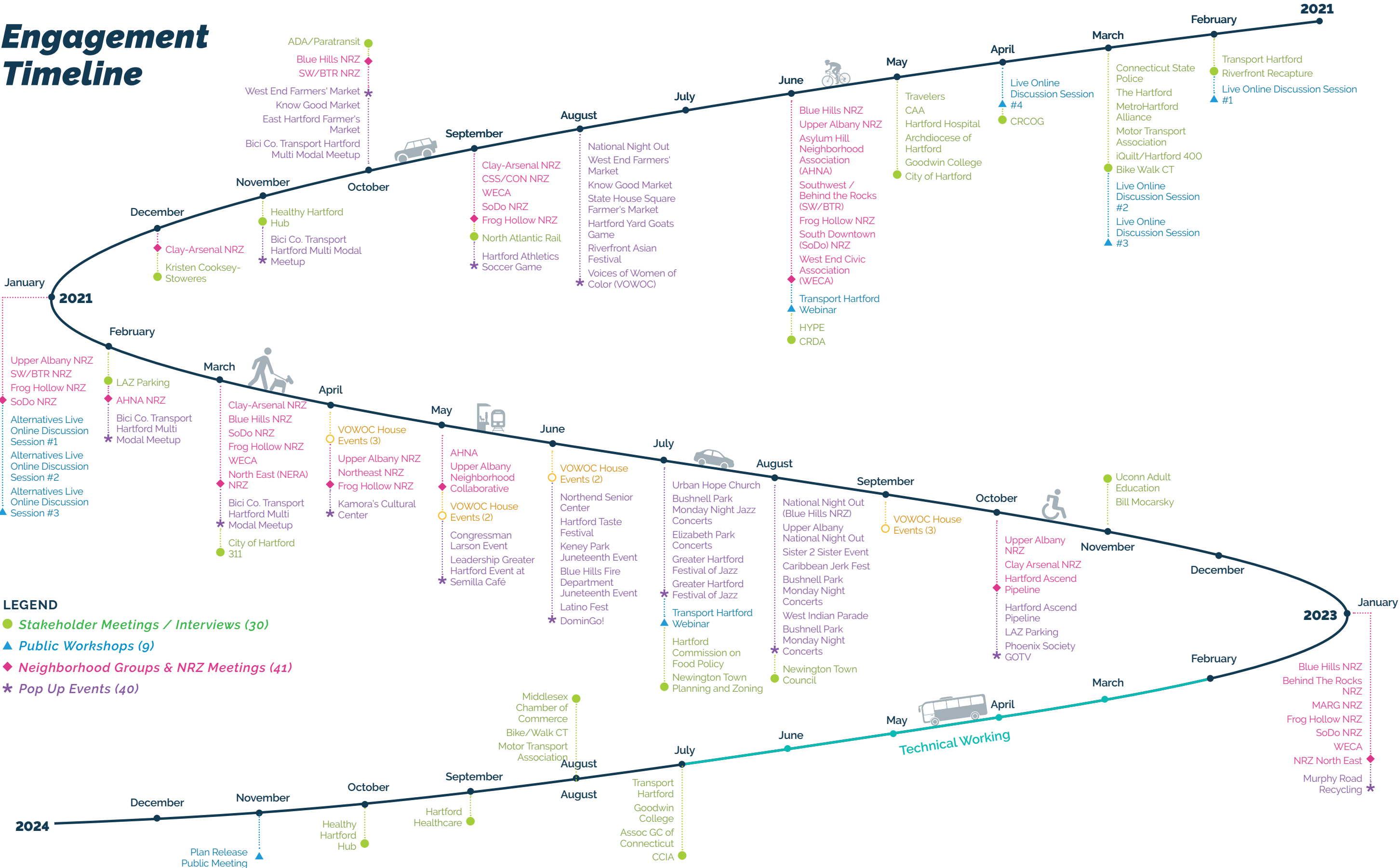
and equitable decision-making, improved community satisfaction, and a stronger sense of ownership and investment in the city's future. The GHMS Team met with neighborhood associations, community interest groups, and advocacy organizations throughout Greater Hartford and heard neighborhood needs and priorities. The GHMS Team had over 15 one-on-one conversations with different community interest groups and over 30 Neighborhood Revitalization Zone (NRZ) meetings.

House Parties

The GHMS conducted outreach across diverse communities in Greater Hartford, but the team felt that more could be done to engage

those whose voices needed to be heard. The team wanted to hear from key demographics, especially marginalized groups that have been impacted by planning projects in the past. As a result, the GHMS collaborated with social justice firm, Voices of Women of Color (VOWOC) to conduct neighborhood-level outreach in Hartford's historically disenfranchised north end. VOWOC took a personalized approach to community engagement, which entailed coming together over food and good company. VOWOC delivered a house-party model to not just share information with residents but to engage them authentically. The VOWOC house parties brought together important community influencers from North Hartford and everyday residents for an opportunity to have a candid discussion about the GHMS's potential transportation improvement ideas. VOWOC outreach was critical for this study, as it invited people to the table that may not have been reached before. They conducted 10 house parties and spoke to over 240 people in their engagement efforts.

Engagement Timeline



An aerial photograph of a city, likely New York City, showing a dense urban landscape with various buildings and green spaces. The image is overlaid with a semi-transparent blue filter. A prominent pink diagonal line runs from the top right towards the bottom right. The text 'REGIONAL PROGRAMMATIC VISION' is written in a bold, white, sans-serif font, positioned in the upper right quadrant of the image.

REGIONAL PROGRAMMATIC VISION

The Vision

The following vision reflects the aspirations of the Greater Hartford community. It is not a guarantee of outcomes. As an expression of desired future conditions, it helps everyone understand what a successful multi-modal mobility system in the region will look like.

Greater Hartford will have a multi-modal mobility system that is integrated and resilient. People will find it easier to catch a bus, get to work, visit friends, catch a game, or visit the riverfront. The program would increase access to greenways and trails, expand the bus rapid transit system, provide more night and weekend bus service, and create a more reliable and robust transportation system. These transformative mobility improvements would provide people with more opportunities to get out of single occupancy cars and onto transit, ride their bikes, or walk to where they need to go.

In the future:

- The system will facilitate the efficient movement of goods and people. It will support the requirements of the Region's varied businesses, institutions, and communities.
- The system will be inclusive. Residents, workers, and visitors of all ages, incomes, races, and abilities will have a transportation system that works for them. The Region's mobility infrastructure will reconnect communities and be built to redress historic negative impacts of transportation on low-income people, people of color, and people with disabilities.

- The system will provide multi-modal choices for safe and reliable transportation with redundant options for how and when to travel.
- Mobility improvements will strive to avoid or minimize the environmental impacts of transportation investments. More residents, visitors, and workers will have sustainable options for mobility.
- The system will incorporate emerging technologies that support the Region's mobility, economic, social, and environmental goals.

The regional transportation system will satisfy the mobility challenges of today while supporting aspirations for a more sustainable and equitable future. The system will support competitive towns and cities and provide mobility options that are safe, efficient, and convenient for all users. The region's urban core - consisting of the state's capital city, Hartford, and its sister town, East Hartford - will be a place where accessibility helps drive economic and community growth in a resilient and sustainable manner.

Regionally, the multi-modal network will be built on an understanding that maintaining accessibility throughout the region is a superior approach to focusing only on improving vehicular travel time. This accessibility approach is explained in further detail on the [Mobility and Access in a Regional Context](#).

To achieve this, the region will have a nuanced



approach to building a multi-modal network. Multiple modes of safe and accessible transportation will offer fast and efficient mobility. Passenger rail (CTrail) and bus rapid transit (CTfastrak) services will provide quick and affordable mobility options from beyond the core. This will bring people to and from the suburbs to jobs, services, and entertainment in the cities while making the urban core safer and more convenient to navigate.

The region’s highway system will also be critical in serving local and express buses, trucks, and cars, all destined for the economic center of the region. The future transportation system will be flexible for people who wish to live and work wherever they please and founded on values that will strengthen the economic health of the core. Having a strong and vibrant core will benefit neighborhoods and communities radiating out in every direction and stimulate the state’s economic vitality and growth.

Mobility and accessibility will be carefully managed. The region’s core will no longer be divided in every direction by the Interstate system that has siphoned jobs to the suburbs and contributed to the gradual degradation of the communities adjacent to the highways.

Reflecting the input of project stakeholders and the public, additional freeway capacity will be limited except where required to address

bottlenecks and safety deficiencies and where it is needed to maintain route continuity and lane balance. This will make for a stronger and healthier core and avoid induced-traffic demand to meet the new supply of capacity.

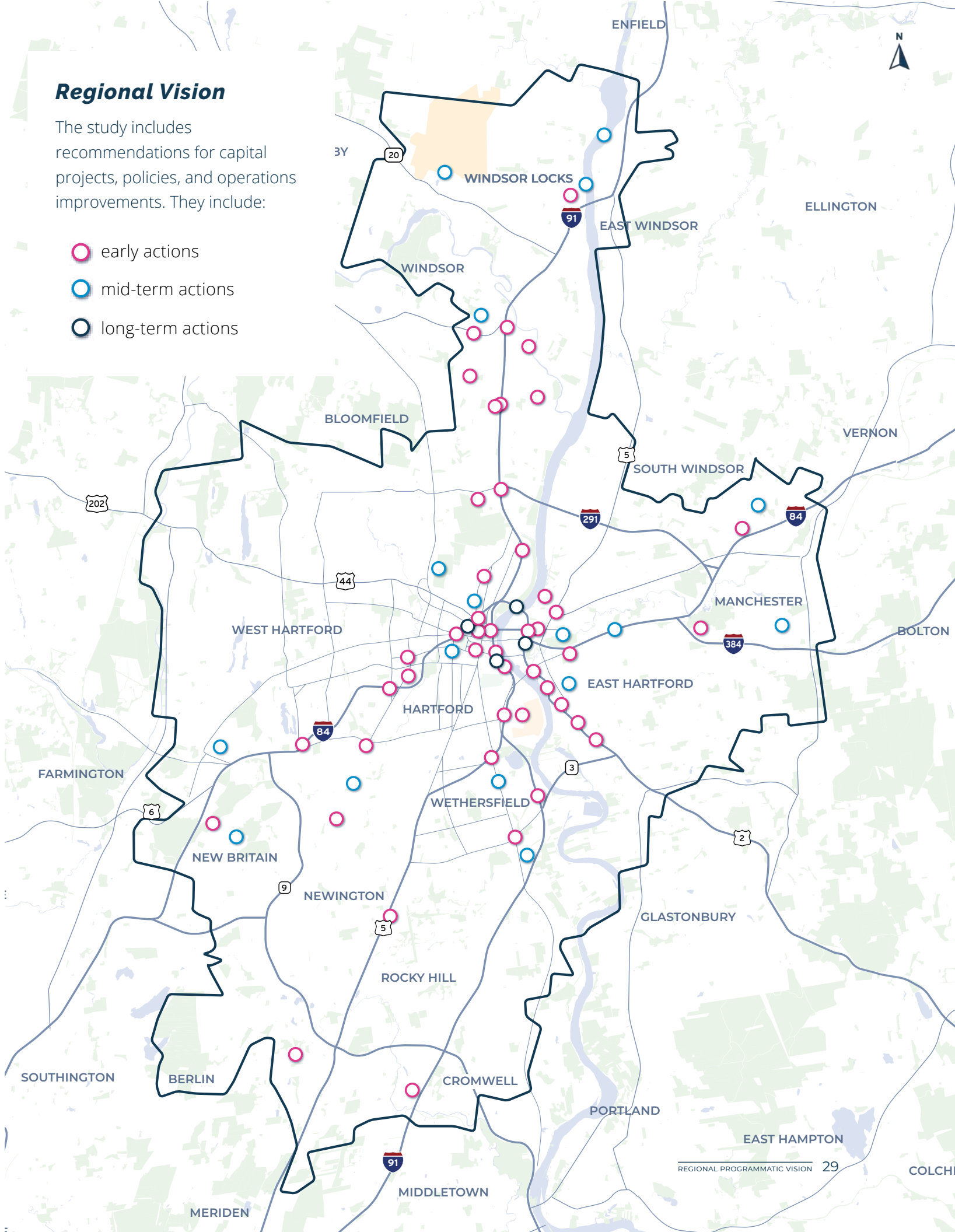
As a result, the impact of the regional highway system in the densest part of the core will be minimized. Fewer high-speed highway ramps will make walking and biking safer and more convenient in the core. Lowering the elevated freeways, and in some instances diverting them, will reconnect communities along complete streets that go over and on top of capped highways. Constructing a better-connected city grid will support economic growth and provide the much-needed accessible infrastructure people need to get around.

An intelligently reconfigured highway system will help effectively reduce critical bottlenecks for freight carriers while eliminating ramp connections with city streets. This will be possible because local traffic will be distributed to city streets, allowing the highway to move longer-distance cars and trucks. Interchanges will be simplified and smaller, so that land can be freed up for other uses. Because streets will be designed for all modes, people will have more mobility choices and more vibrant neighborhoods.

Regional Vision

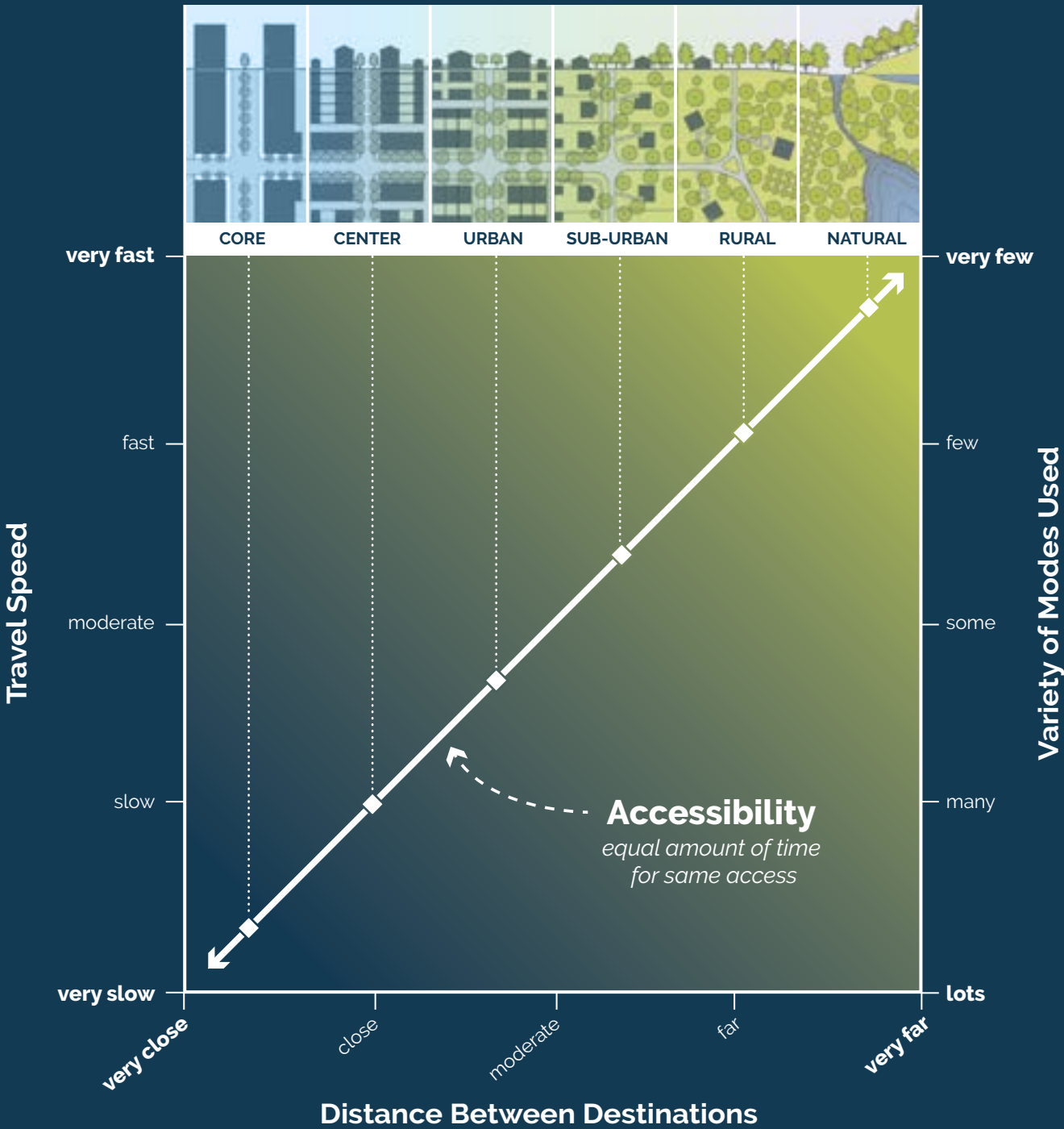
The study includes recommendations for capital projects, policies, and operations improvements. They include:

- early actions
- mid-term actions
- long-term actions



Mobility and Access in a Regional Context

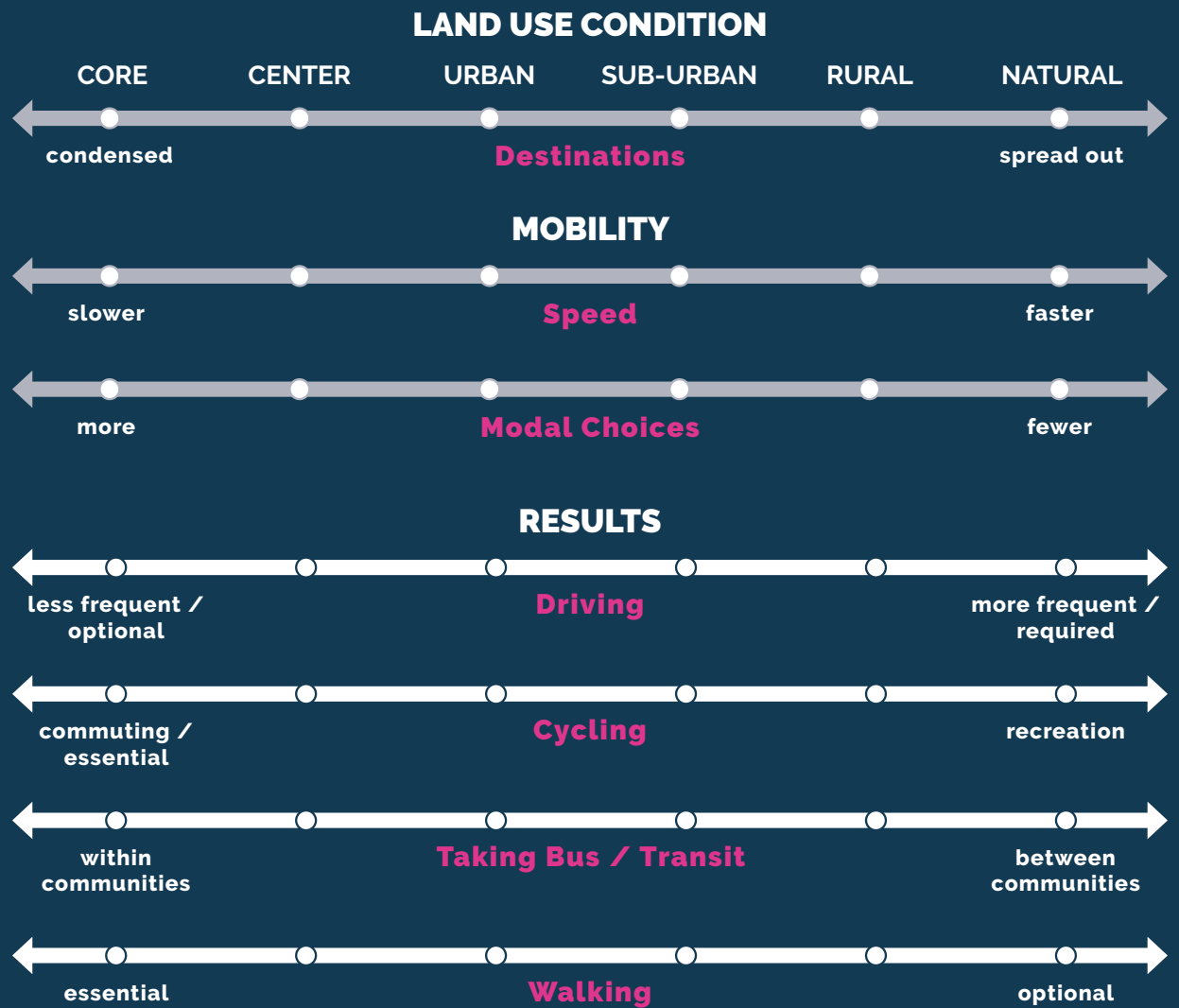
The diagram below and on the following pages can help one think about how a mobility system can and should be designed to provide equal accessibility to everyone in the region. In urban areas, destinations are close together. This makes slower modes of travel, like walking and biking, more practical options. In fact, walking or biking in an urban area may be a more reasonable choice than “faster” modes like driving. So in those areas, the transportation system needs to be focused on supporting high-quality multi-modal options and avoid investments that solely focus on congestion and car access.



Transect Diagram source: SmartCode Version 9.2; Mobility v Accessibility Illustration: FHI Studio

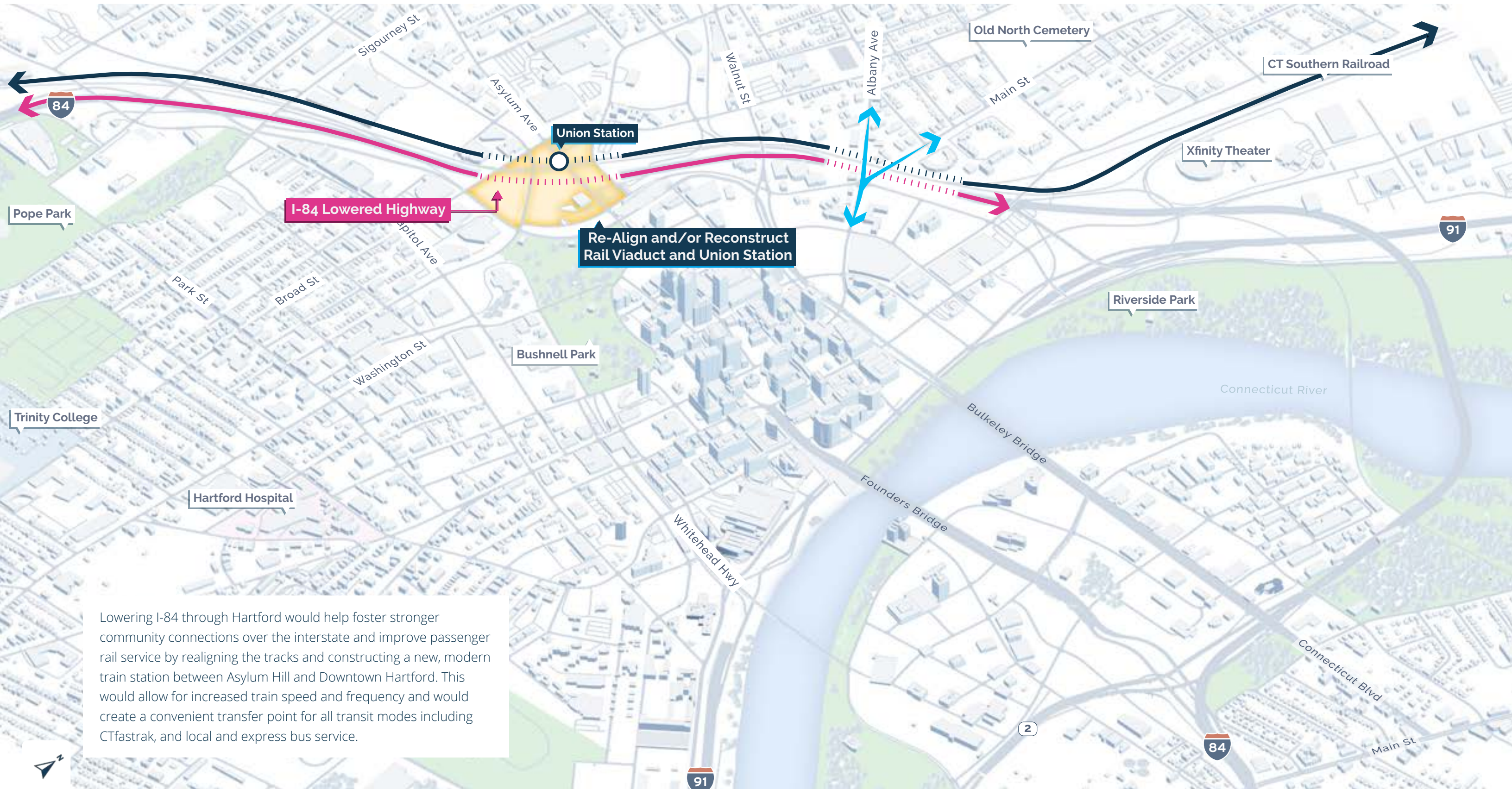
In more suburban and rural areas, destinations are more spread out. This makes speed a more important component of providing equal accessibility. In these environments, buses and rail service cannot compete with the convenience of driving because they result in significantly longer travel times and less flexibility.

The GHMS utilized a context-sensitive framework to create an improvement program that would provide quality accessibility to everyone in the region while avoiding taking a one-size-fits-all approach. In more suburban and rural areas, destinations are more spread out with longer trip lengths making travel speed a more important component of providing efficient accessibility. In contrast, in the urban core having multiple modal options and facilities are more important components as trips are shorter in length. As such, the program includes projects in the core and urban areas that are emphasizing improving roads for all users and supporting revitalization through active mobility and transit accessibility. Likewise, the program's proposed highway, regional transit, and regional trail improvements would improve access from sub-urban locations to the core, reduce congestion on major roadways, create economic opportunity, and reduce the environmental impact of the system.

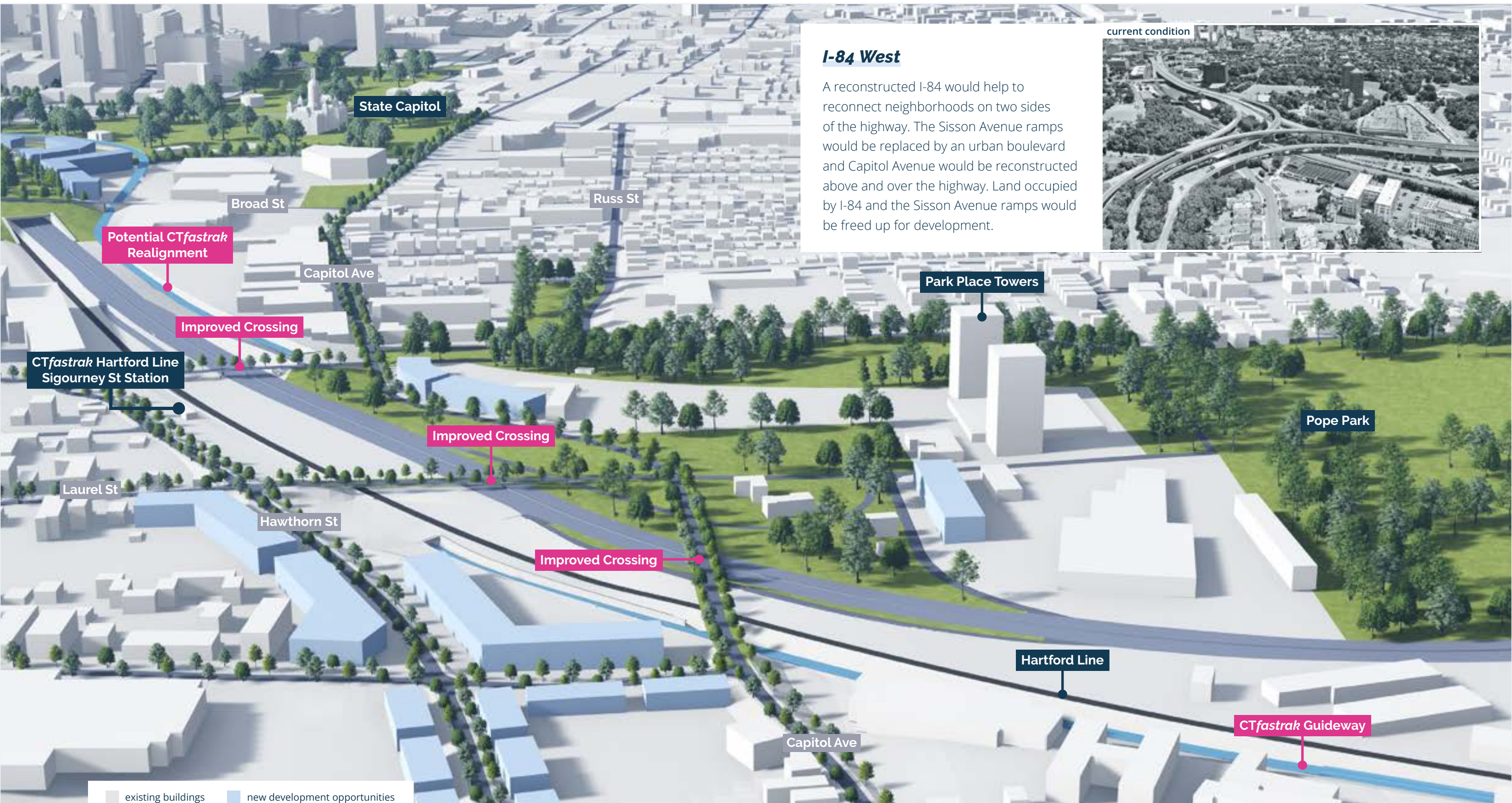


City Link West

RAIL INFRASTRUCTURE NEW CONNECTIONS RECONNECTED COMMUNITIES



Lowering I-84 through Hartford would help foster stronger community connections over the interstate and improve passenger rail service by realigning the tracks and constructing a new, modern train station between Asylum Hill and Downtown Hartford. This would allow for increased train speed and frequency and would create a convenient transfer point for all transit modes including CTfastrak, and local and express bus service.



I-84 West

A reconstructed I-84 would help to reconnect neighborhoods on two sides of the highway. The Sisson Avenue ramps would be replaced by an urban boulevard and Capitol Avenue would be reconstructed above and over the highway. Land occupied by I-84 and the Sisson Avenue ramps would be freed up for development.



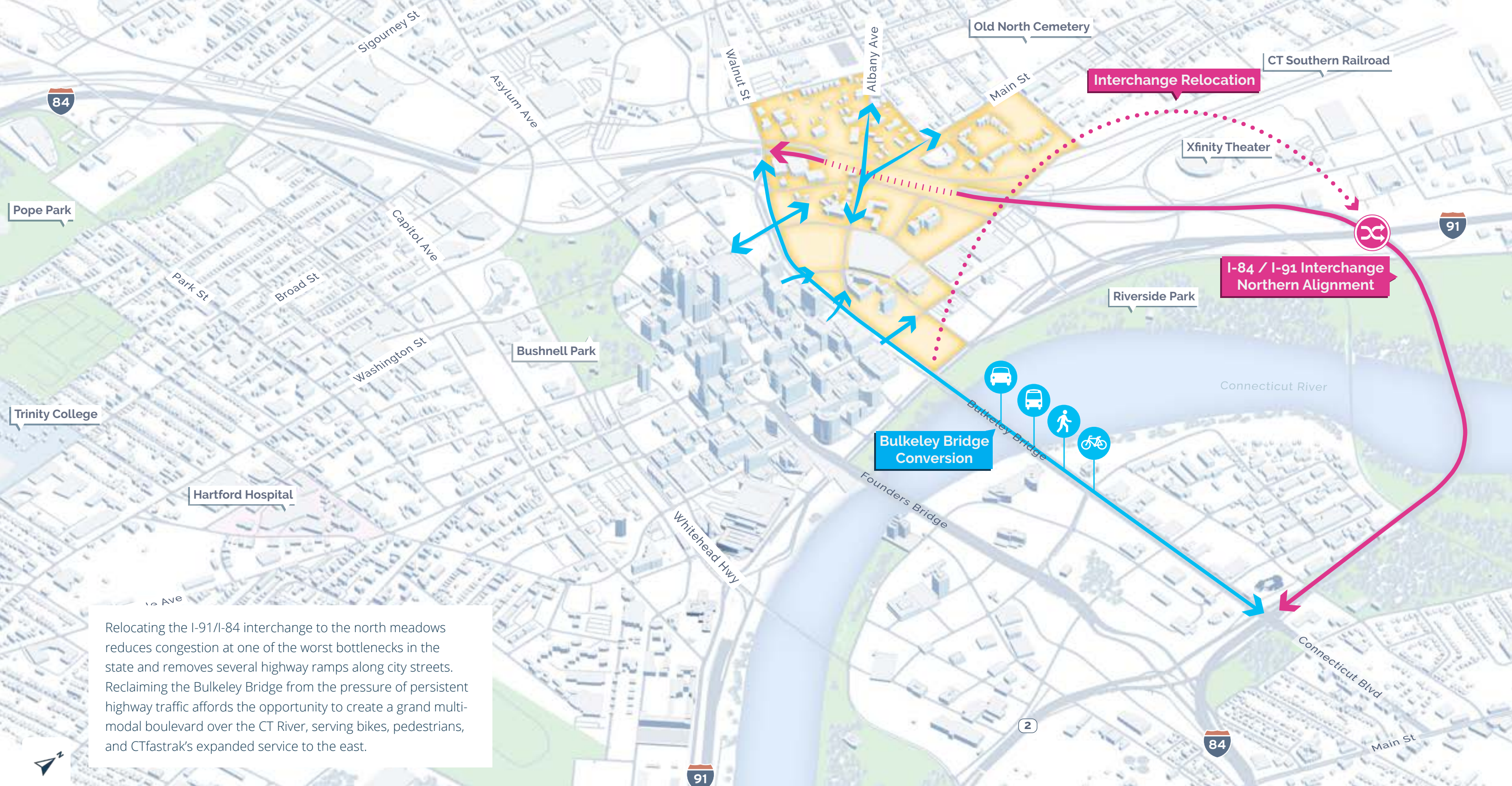
I-84 - Asylum Hill/Frog Hollow

A reconstructed I-84 and railroad would reconnect Asylum Hill and neighborhoods west of the highway with the Downtown. Multi-modal streets would allow for safe and comfortable crossings. The capped and relocated highway would facilitate opportunities for open space and development between Bushnell Park and Broad Street. A relocated train station would help activate the Asylum corridor.



CityLink East

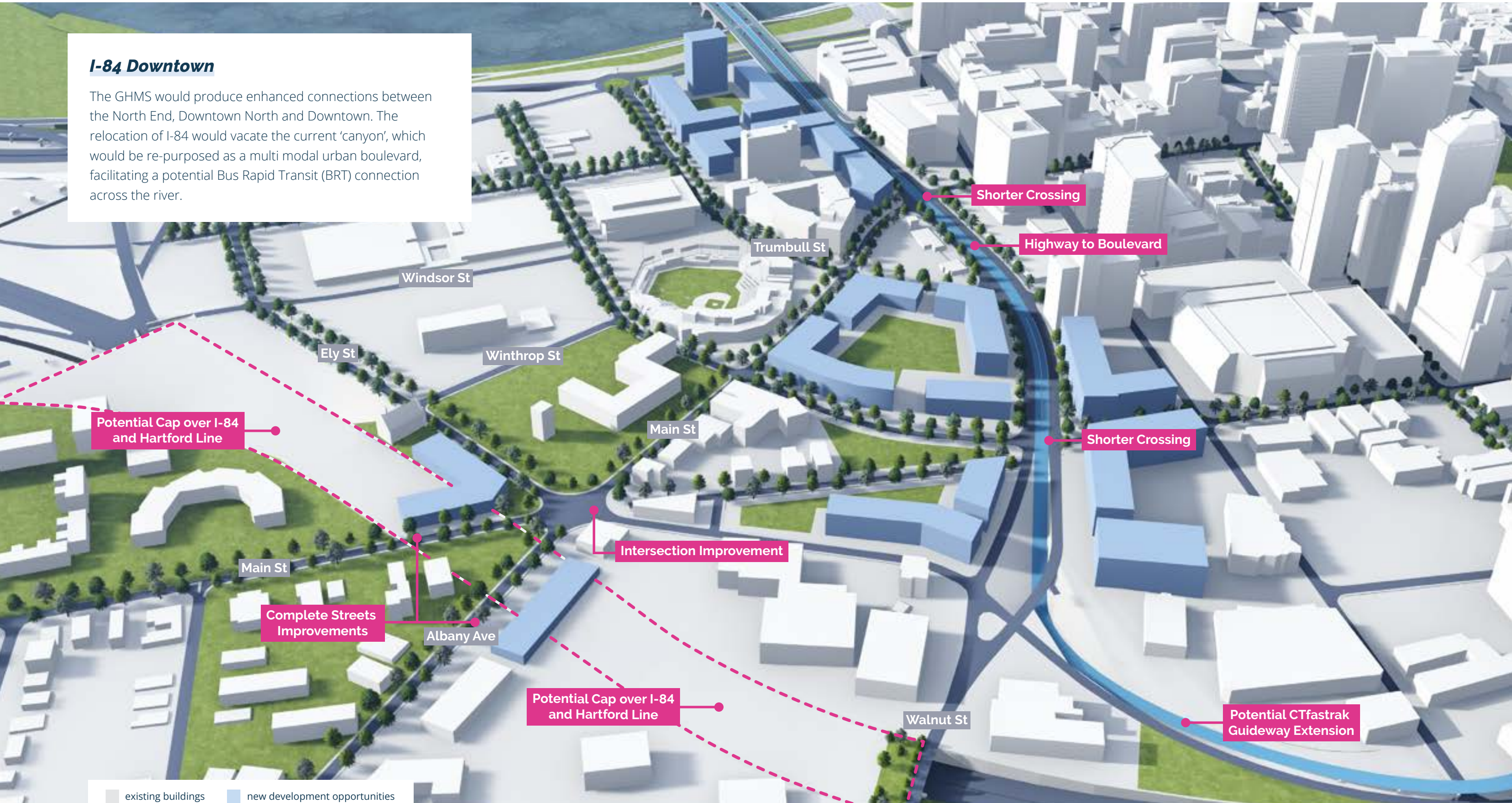
INFRASTRUCTURE NEW CONNECTIONS RECONNECTED COMMUNITIES



Relocating the I-91/I-84 interchange to the north meadows reduces congestion at one of the worst bottlenecks in the state and removes several highway ramps along city streets. Reclaiming the Bulkeley Bridge from the pressure of persistent highway traffic affords the opportunity to create a grand multi-modal boulevard over the CT River, serving bikes, pedestrians, and CTfastrak's expanded service to the east.

I-84 Downtown

The GHMS would produce enhanced connections between the North End, Downtown North and Downtown. The relocation of I-84 would vacate the current ‘canyon’, which would be re-purposed as a multi modal urban boulevard, facilitating a potential Bus Rapid Transit (BRT) connection across the river.



Walnut Street

Capping over the rail line and the proposed northern alignment creates opportunities for better pedestrian amenities such as a linear park over the bridge, wider sidewalks, and streetscape improvements.



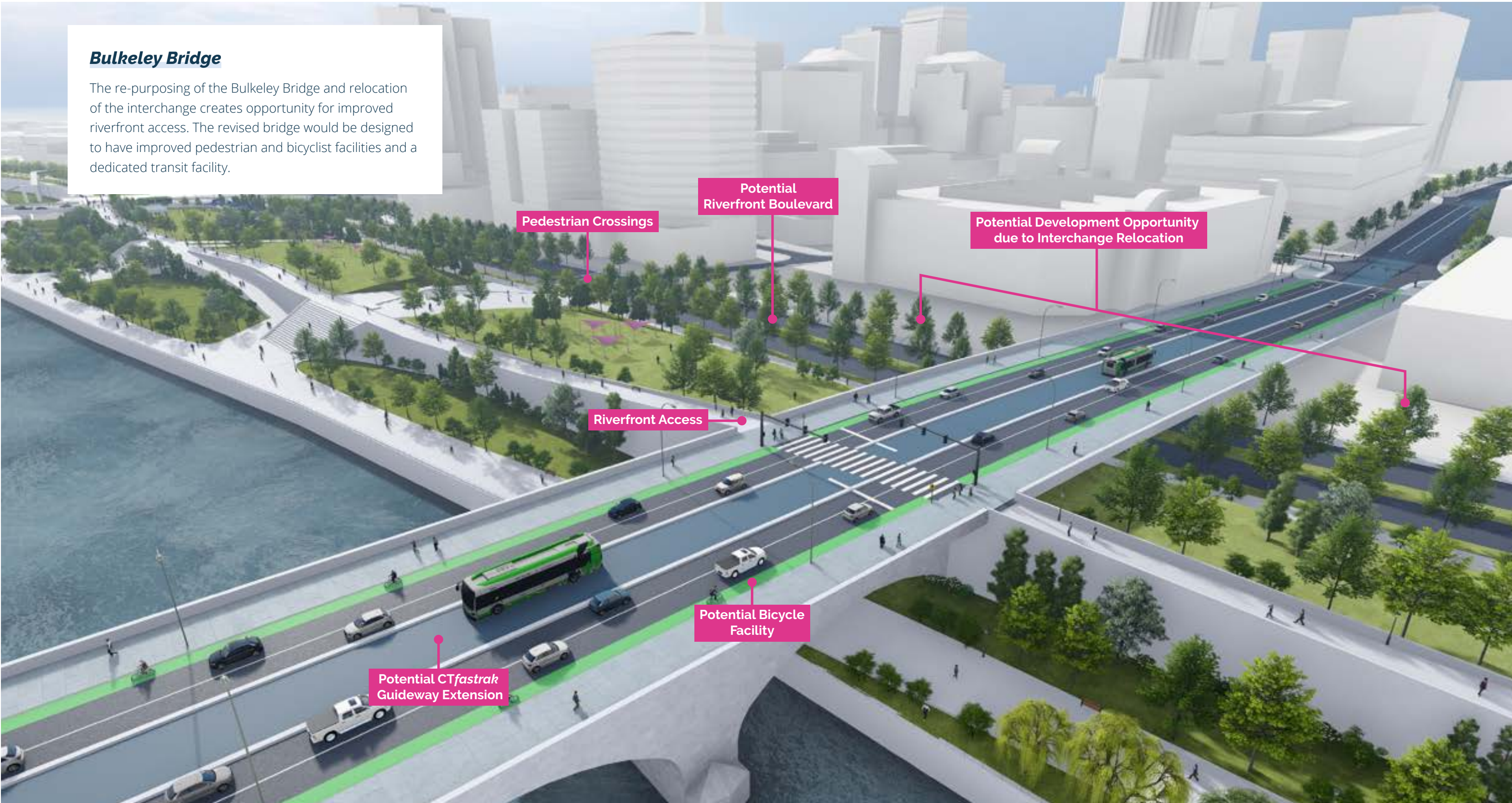
Albany Avenue

Capping over the rail line and the proposed northern alignment creates opportunities to reconnect neighborhoods to the Downtown with enhanced streetscapes and better public infrastructure improvements.



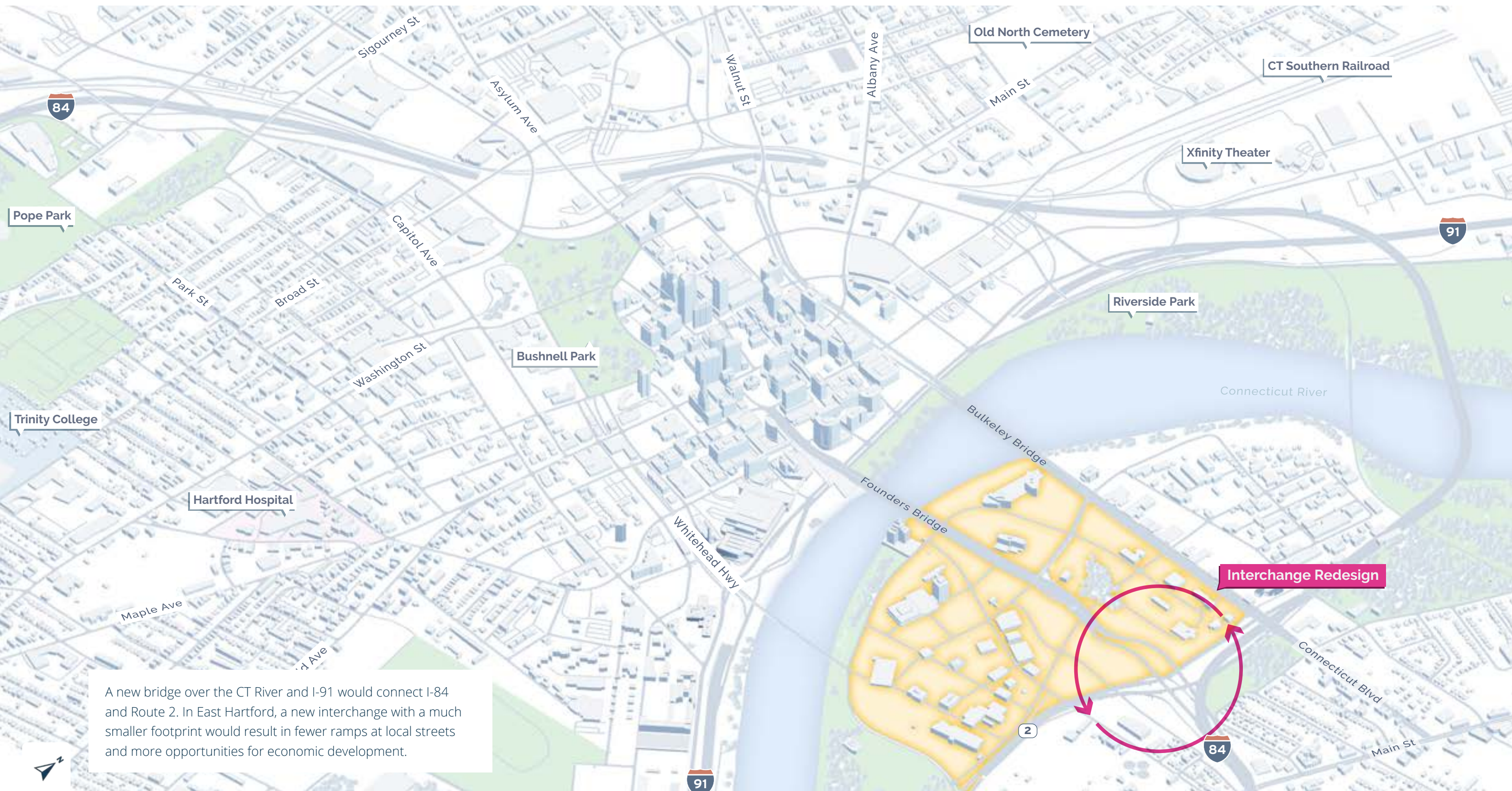
Bulkeley Bridge

The re-purposing of the Bulkeley Bridge and relocation of the interchange creates opportunity for improved riverfront access. The revised bridge would be designed to have improved pedestrian and bicyclist facilities and a dedicated transit facility.



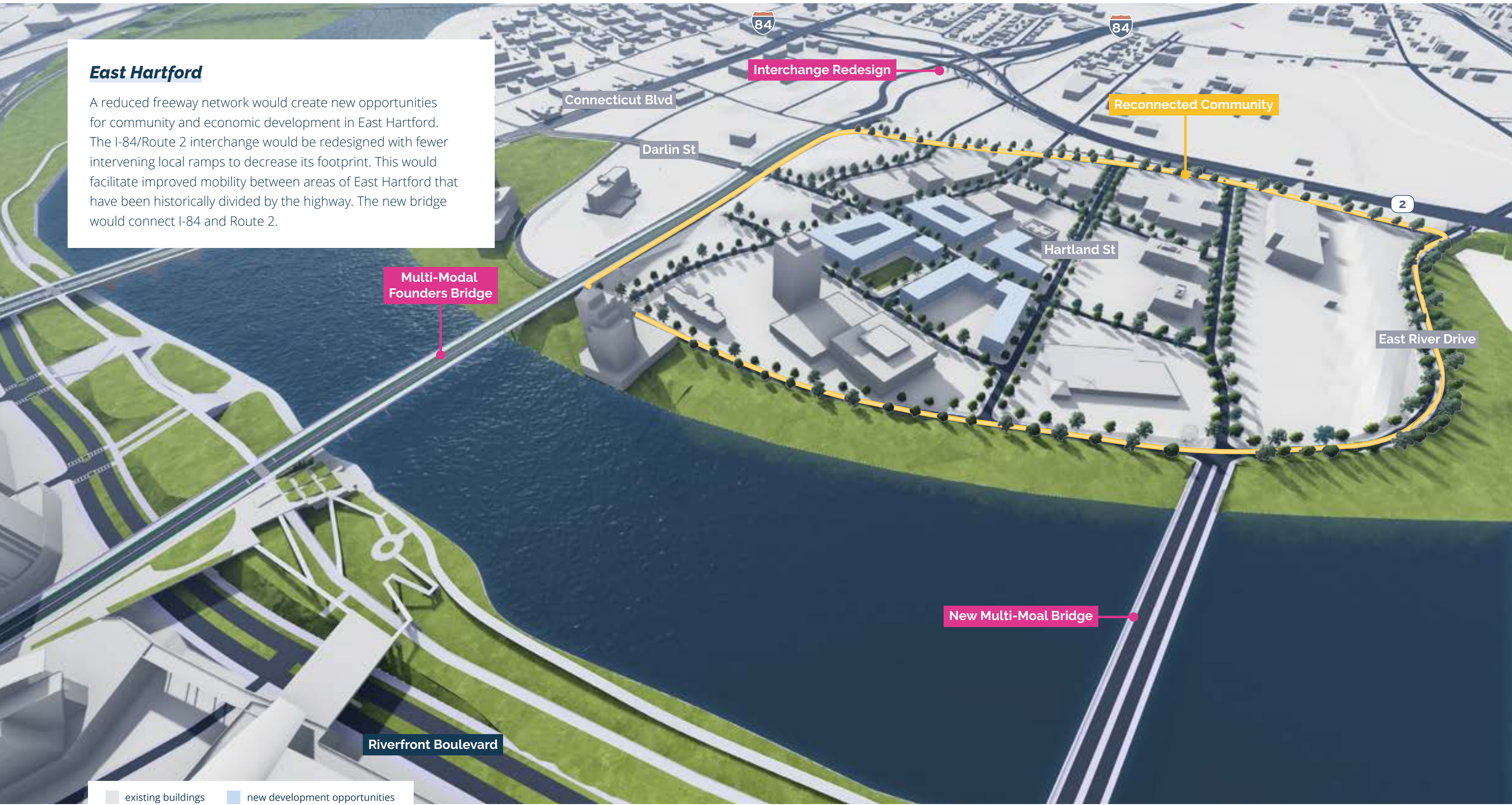
Founders Gateway

 NEW CONNECTIONS  RECONNECTED COMMUNITIES



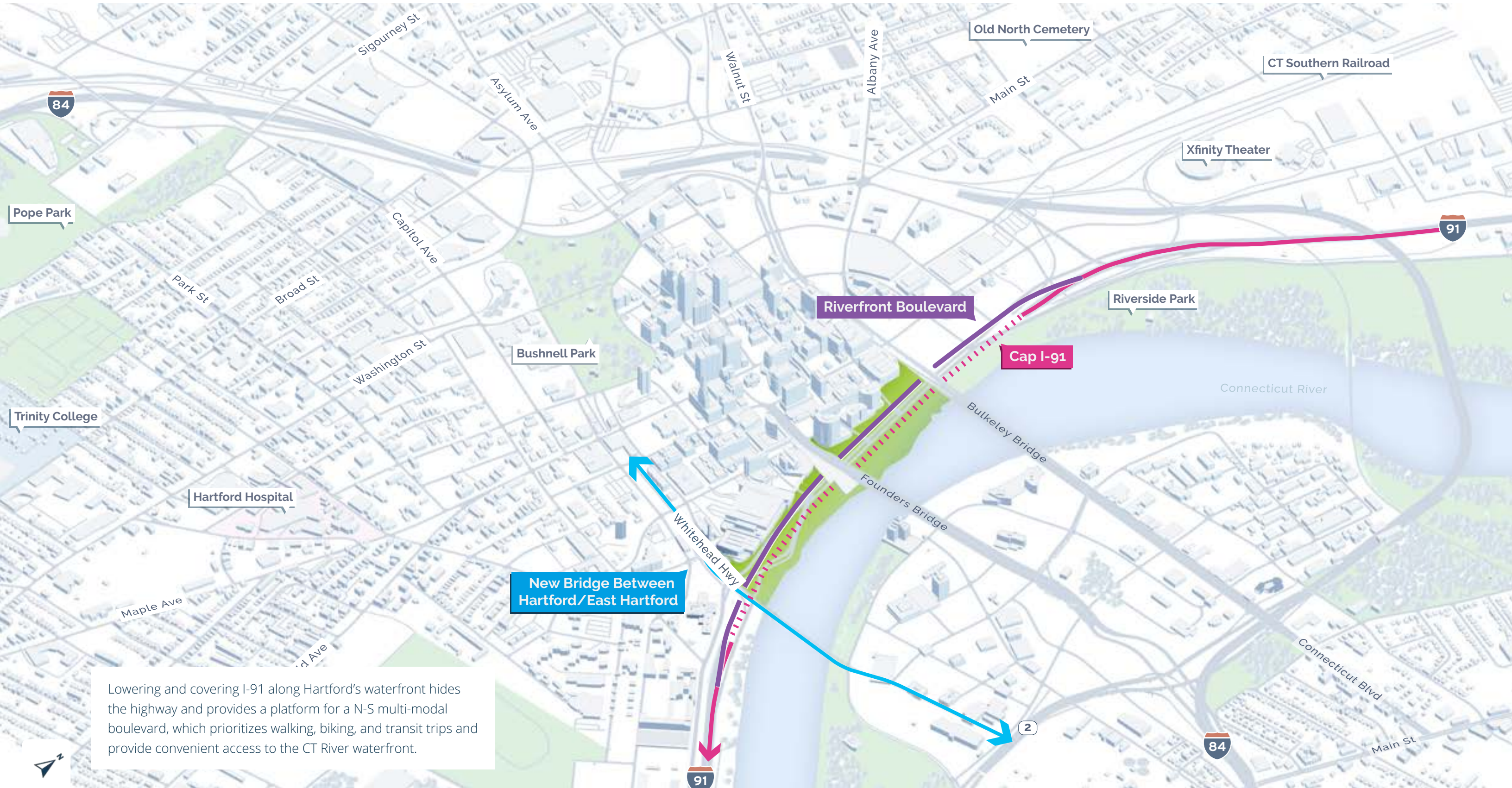
East Hartford

A reduced freeway network would create new opportunities for community and economic development in East Hartford. The I-84/Route 2 interchange would be redesigned with fewer intervening local ramps to decrease its footprint. This would facilitate improved mobility between areas of East Hartford that have been historically divided by the highway. The new bridge would connect I-84 and Route 2.



River Gateway

INFRASTRUCTURE NEW CONNECTIONS



Riverfront Boulevard

Lowering and covering I-91 would facilitate enhanced connectivity between downtown and the riverfront and create opportunities for new open spaces.



Riverfront Boardwalk

Removing highway infrastructure would create an opportunity for a boardwalk and park that follows the floodwall. A gradual incline allows for fully accessible connections between Downtown and the park.



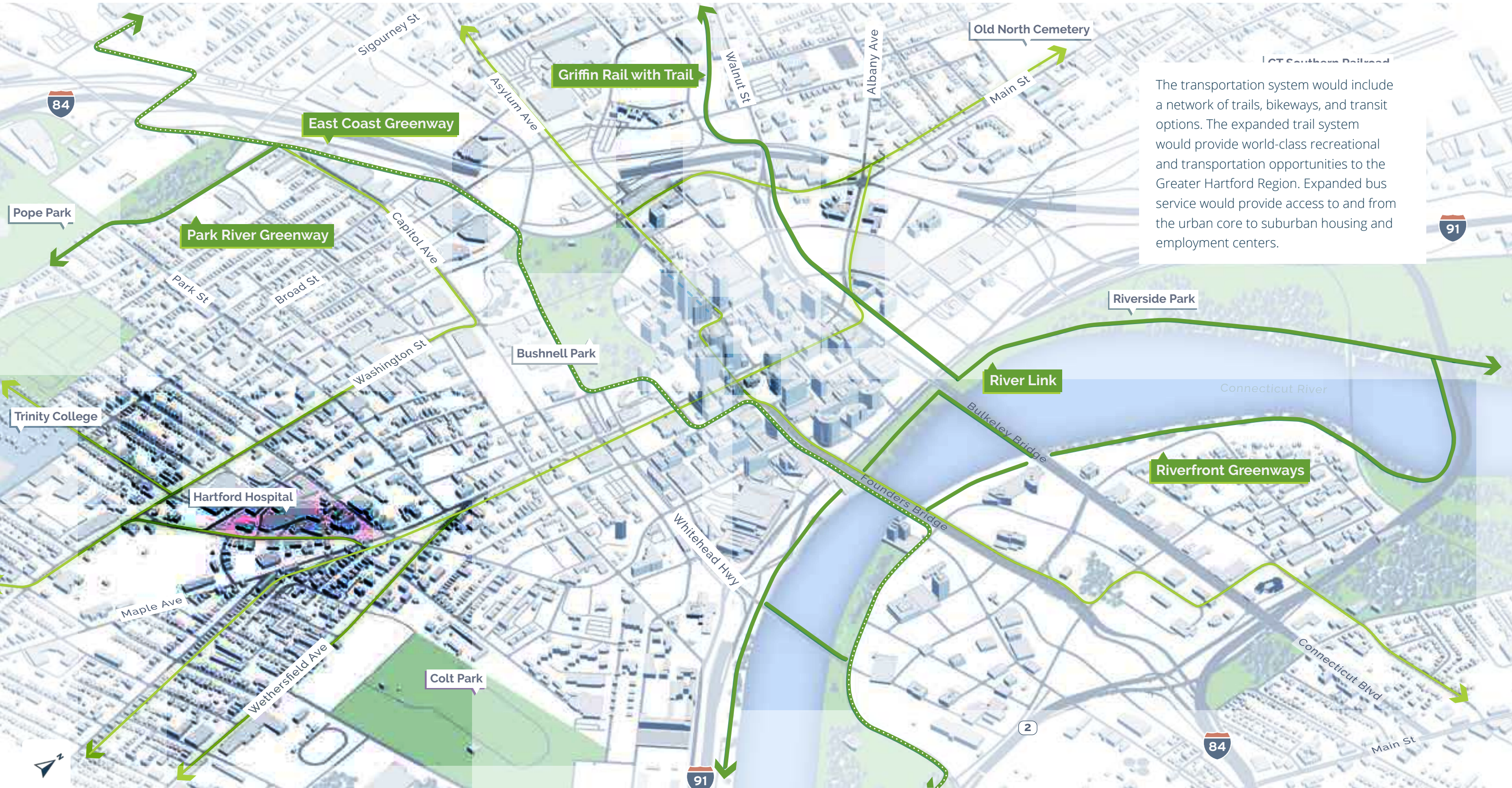
Riverfront Park

A new park could improve the transition between the Downtown and the river. Accessible ramps could provide easy access between the boardwalk and the riverfront. Incorporating the floodwall into the design creates opportunities for panoramic views of the river and East Hartford.



Bicycle & Trail Network

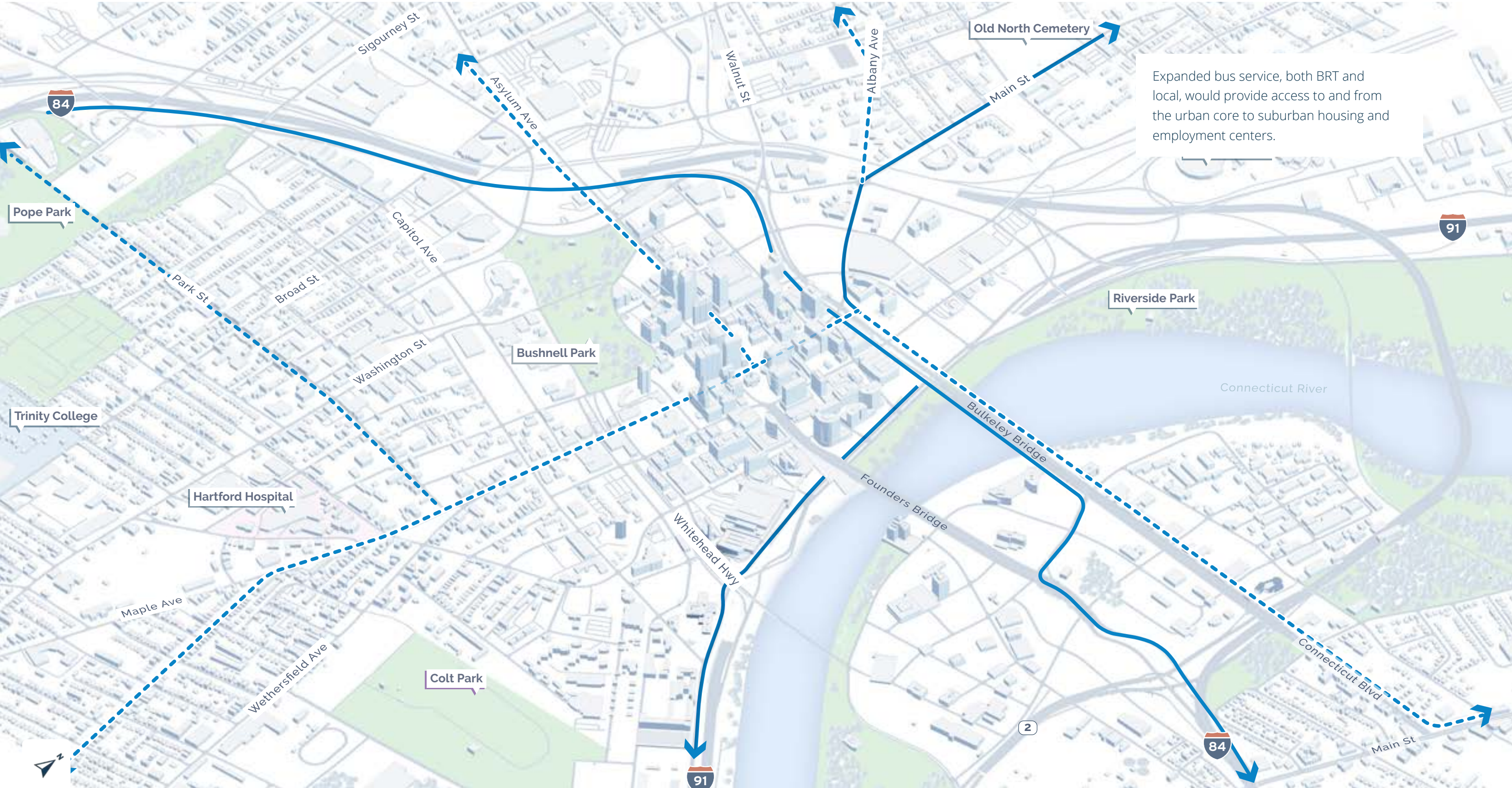
EAST COAST GREENWAY ON-STREET BIKE LANES TRAILS



The transportation system would include a network of trails, bikeways, and transit options. The expanded trail system would provide world-class recreational and transportation opportunities to the Greater Hartford Region. Expanded bus service would provide access to and from the urban core to suburban housing and employment centers.

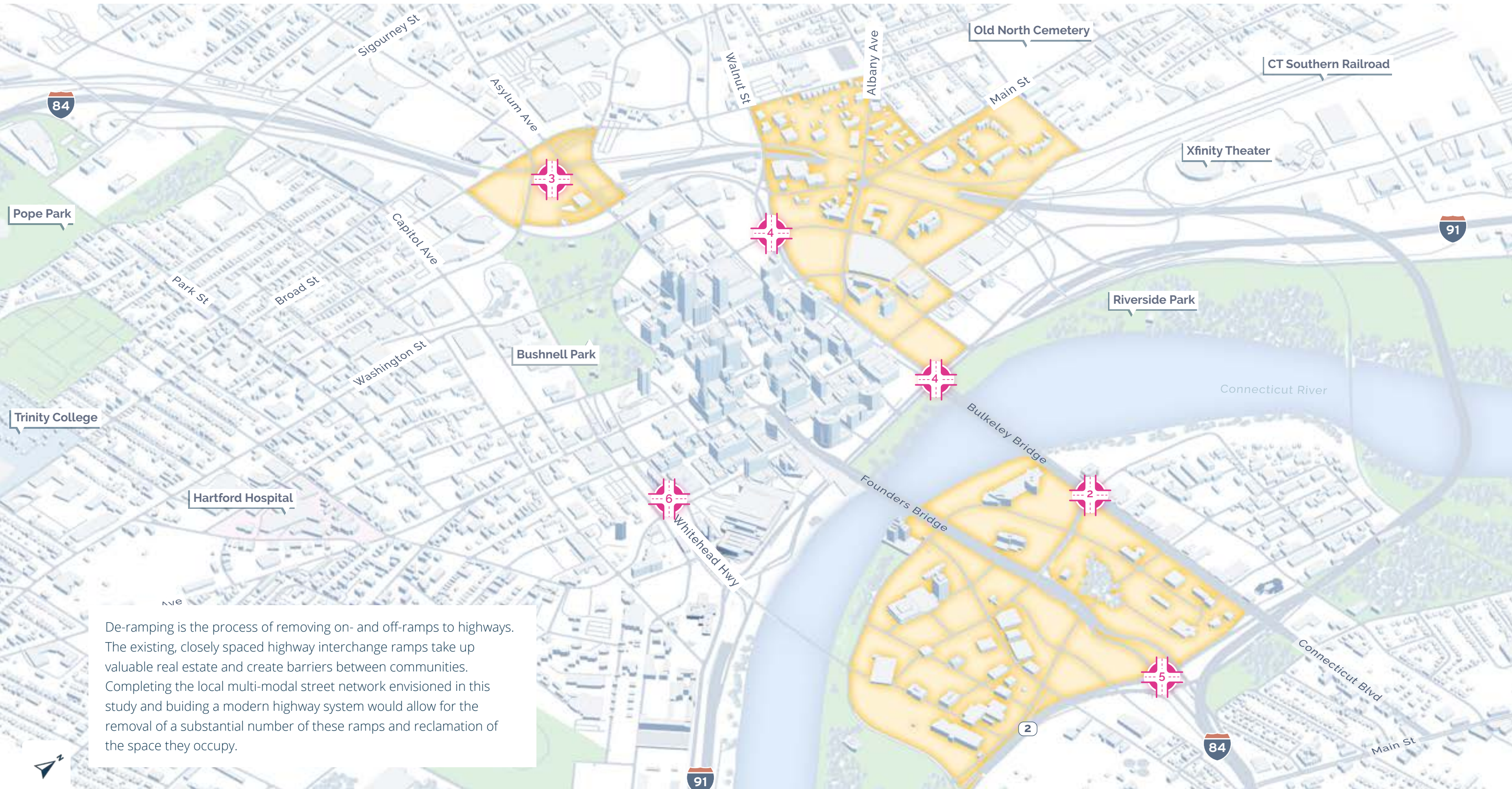
Bus Network

--- TRANSIT PRIORITY — HIGH CAPACITY TRANSIT



De-Ramping & Local Connections

 NUMBER OF RAMPS REMOVED  RECONNECTED COMMUNITIES



De-ramping is the process of removing on- and off-ramps to highways. The existing, closely spaced highway interchange ramps take up valuable real estate and create barriers between communities. Completing the local multi-modal street network envisioned in this study and building a modern highway system would allow for the removal of a substantial number of these ramps and reclamation of the space they occupy.



REGIONAL BENEFITS

Addressing Infrastructure Deficiencies

A Less Congested Region

The region has known congestion hot spots that act as traffic bottlenecks. The most well-known is the I-84 and I-91 interchange. These two major interstate highways serve over three hundred thousand daily trips through the study area. They also meet at the heart of the urban core where limited space is available to handle that level of traffic. As such, the existing interchange serves as the “throat of an hourglass” for the region’s roadway system. Short-distance local travel also intermingles with long-distance trips on these interstate highways to exacerbate the situation.

Several interstate highway ramps directly introduce higher-speed cars from the interstate roadways onto lower-speed local roads throughout the urban core. This creates the potential for more conflicts. It also makes those places unattractive environments for bicyclists, pedestrians, and transit users in the urban core.

The City Link East project, which proposed relocation of the I-84/I-91 Interchange, would address roadway congestion in the region while improving the environment for pedestrians, bicyclists, and transit riders. The project is aligned with the Governor’s initiative to reduce single occupancy car miles traveled in the region. The project is estimated to reduce over 375,000 car miles traveled in the GHMS study area every day. However, the biggest benefit is that it would act as the first step to reduce I-84 and I-91 interchange-related congestion as it is estimated to reduce over 6,700 hours of delay per day in the study core alone when compared to the existing conditions. These planning-level estimates of benefits indicate that City Link East is not likely to encourage more cars on the region’s roadways. Instead, it improves operations by alleviating congestion.

The proposed relocation of the I-84 and I-91 interchange would allow for the closure of multiple ramps in the urban core. This would create a more favorable environment that can support multiple modes. The repurposed Bulkeley Bridge would include dedicated transit, bicycle, and pedestrian facilities and carry local automotive traffic across the river.

A Region with More Travel Choices

More and Better Transit

The implementation plan focuses on improving travel choices and operation for multiple modes of travel. Buses would have priority along the major corridors to improve transit travel times. This includes transit along Albany Avenue, Burnside Avenue, Farmington Avenue, Franklin Avenue, Main Street, and Park Streets. Along with non-capital improvements, these investments would improve service frequency and/or expand service hours for more than 20 transit routes in and around Hartford, particularly in areas serving major employment hubs. The additionally proposed bus rapid transit service routes would improve options and travel time competitiveness, extending the benefits that are currently being realized with the existing CTfastrack service.

Better Interconnections

The active transportation projects would give residents and visitors more options where they can walk, bike, and roll safely to and from major transit stops and rail stations. Adding an active transportation trail along the Griffin Line Corridor and completing the East Coast Greenway within the study area would further enhance active transportation choices within the region.

The proposed double tracking of the Hartford Line would support improved service frequency for the CT Rail service. Improved amenities at rail stations would enhance user experience to make rail service more attractive.

Active Streets

The program identifies recommendations that would improve bicycle and pedestrian facilities throughout the study core, including facilities that support people with disabilities that affect mobility. Study area roadways would have more balanced opportunities for all modes of travel rather than focusing on moving more cars at faster speeds. Public and stakeholder feedback was clear against car-centric new roadway capacity. As such, roadway improvements would mainly eliminate localized congestion hot spots. Roadway reconfigurations would create local benefits with improvements at Pulaski Circle, the Albany-Main Street Intersection, and the Farmington-Asylum-Broad Trident Key. Roadway corridors are identified for signal improvements in the north end of Hartford and East Hartford Main Street.

Overall, the GHMS recommendations would improve mobility for the wider study area through the elimination of key congestion hotspots and providing operational and service improvements. In the urban core, the recommendations would enhance access and create more travel choices.

Enhancing Quality of Life in the Region

A More Vibrant Region

The Greater Hartford region offers a vibrant rich mix of cultural, economic, community, arts, entertainment, and recreation assets. The GHMS recommendations would support those assets while spurring economic development. The recommendations would create a more interconnected region and reclaim important land that highway infrastructure currently occupies. The result would be a more attractive public realm and a more efficient and robust transportation system. This would lead to the creation of more amenities that people enjoy: community gathering spaces, restaurants, coffee shops, entertainment venues, and nightlife options.

The enhanced transportation network would contribute to making the Greater Hartford region a hub for attracting and retaining talent. The transformative transportation and mobility opportunities presented by the GHMS would truly move the needle on spurring economic growth for a more vibrant Greater Hartford region.

A More Sustainable Region

The GHMS recommendations prioritize sustainability. The region would have cleaner air, better access to parks and open spaces, and more climate resiliency. It would also be more sustainable and more prepared for future climate events.

The GHMS recommends eliminating the current roadway barriers that cut off access to one of the most important natural assets for this region: the Connecticut River. The proposed capping of I-91 and a riverfront boulevard on the west side of the river would significantly improve access to the riverfront and help with place-making efforts. The lowered highway option to replace the current I-84 Viaduct would also improve connections between neighborhoods, parks, and green spaces.

A More Resilient Region

In line with Connecticut's climate resiliency policies, the Greater Hartford Mobility Study recommendations should reduce greenhouse gas emissions. Modeling results indicate that the long-term recommendations could provide a 20,000 kg/day decrease in total mobile emissions compared to the future no-build. Emphasizing infrastructure resilience, the recommendations would fortify the Connecticut River flood control infrastructure to better withstand the impacts of climate change, particularly against rising water levels and flooding. Additionally, the design phase would include the development of additional resiliency adaptation strategies. These include implementing green infrastructure for managing stormwater and decreasing impervious areas to address urban heat island effects. These initiatives are crucial in strengthening the state's ability to face climate-related challenges.

A shift to more sustainable transportation modes would reduce energy consumption and emissions. Long-term components, including urban planning and land use strategies, would support compact, walkable communities, aiming to reduce reliance on personal vehicles and promote resilient urban development. Additionally, the recommendations prioritize public health and safety by encouraging active transportation modes that would improve air quality and overall physical health for the people of Connecticut, aligning with broader initiatives supporting community well-being and sustainability.

A More Equitable Region

The construction of I-84 in the mid-20th century divided the city of Hartford and

isolated the largely African-American minority neighborhoods in the North End of the city from the economic activity in Downtown Hartford, reinforcing the redlining policies of the time. These planning and policy decisions still plague the city that continues to suffer from disinvestment today. The GHMS presents historic and transformative opportunities that would redress the planning mistakes of the past and reconnect communities that were previously cut off from economic activity and opportunities.

The GHMS also lays out recommendations that would expand transit service and greenway networks. These added multi-modal transportation options would help level the playing field for the region's most vulnerable residents. A more connected region would result in a system that works better for many of the region's minority and low-income demographic groups. It would also support people who have mobility-related disabilities by improving infrastructure and providing services to support their safe and convenient movement through the region.



IMPLEMENTATION PLAN

The Process

The GHMS Implementation Plan is the culmination of the PEL process. It reflects the years-long effort to develop the [Regional Programmatic Vision](#) based on [The Planning Process](#) discussed in the next section.

The creation of the Implementation Plan began by assessing all the transportation improvement ideas. Technical experts screened out projects that had a critical flaw. Those included any project that:

- Did not meet the study's vision and goals.
- Was unable to meet at least one identified need.
- Had disproportionate impacts on disadvantaged populations.
- Had the potential for deterioration in safety.
- Had the potential for generating an excessive increase in vehicular traffic, resulting in more vehicle miles traveled when considered at the regional level.

- Had severe and non-mitigable impacts on built and/or natural environment.
- Had costs excessively exceeding anticipated benefits.

The team then utilized the factors identified on the following page to categorize projects into implementation horizons that identify when projects may be under construction:

- Early Action: Within (4) years
- Mid-Term: 5–12 years
- Long-Term: 12-plus years.

The result was a series of projects that, together, should create well-balanced mobility opportunities in the region that can enhance mobility and access, create travel options, and promote equity.

A list of projects, organized by implementation horizon, can be found on the following pages. More details regarding the specifics of each project can be found in the Appendix.

Implementation Program



The Implementation Plan

Early Action Projects (within 4 years)

Project Name	Planning-Level Cost Estimate*	Modes
Better Connect Goodwin College to East Hartford	\$100k	Bike / Pedestrian
Complete and Improve Bicycle Networks in Moderate and High Demand Areas	\$11M	Bike / Pedestrian
Complete Pedestrian Facilities along Charter Road, Wethersfield	\$250k	Bike / Pedestrian
Complete Pedestrian Facilities along Day Hill Road, Windsor	\$900k	Bike / Pedestrian
Complete Pedestrian Facilities along International Drive, Windsor	\$600k-\$700k	Bike / Pedestrian
Complete Pedestrian Facilities along Murphy Road, Hartford	\$450k	Bike / Pedestrian
Develop and Implement Local Complete Streets Plans	\$11M	Bike / Pedestrian
Enhance Airport Service (Bradley Flyer)	\$4M investment + \$600k per year	Bus
Enhance Pedestrian Crossings at Intersections near Freeway Ramps	\$800k-\$1M	Bike / Pedestrian
Enhance Service Frequency in Transit Priority Areas	\$7M per year	Bus
Hartford Line Upgrades (NHHS EA)	\$256M	Rail
I-91 Northbound Auxiliary Lane - Interchange 21 to 22	\$5M-\$10M	Traffic & Highway
Improve Evening Service in Transit Priority Areas	\$2.5M-\$3M	Bus
Improve Rail Station Amenities	In progress	Rail
Infrastructure Hardening to Address Drainage and Flooding Vulnerabilities	In progress	Rail
Main Street Complete Streets, East Hartford	\$350k	Bike / Pedestrian
Mobility as a Service (MaaS)	In progress	Rail
New Crosstown Routes to Provide Circulation around Hartford	\$6M	Bus

* Preliminary estimate due to limited availability of project details. Estimate is subject to adjustment as project design progresses in subsequent project development phases.

Project Name	Planning-Level Cost Estimate*	Modes
North Main Street - Transit Priority	\$3M-\$10M	Multi-Modal
Provide Bicycle Network Servicing Elmwood CTfastrak Station	\$2M-\$2.5M	Bike / Pedestrian
Provide Bicycle Network Servicing Flatbush Avenue CTfastrak Station	\$500k-\$600k	Bike / Pedestrian
Provide Bicycle Network Servicing Hartford Union Station	\$4.2M	Bike / Pedestrian
Provide Bicycle Network Servicing Kane Street CTfastrak Station	\$200k-\$250k	Bike / Pedestrian
Provide Bicycle Network Servicing Sigourney Street CTfastrak Station	\$65k	Bike / Pedestrian
Provide Bicycle Network Servicing Windsor Station	\$700k	Bike / Pedestrian
Pulaski Circle - Modern Roundabout	In progress	Traffic & Highway
Ramp Closure(s) at High/Trumbull Streets, Hartford	\$1M- \$5M	Traffic & Highway
Reconfigure Intersection of Albany Avenue and Main Street	\$500k - \$2M	Traffic & Highway
Regional Freeway System Interchange Completion: Route 2/Route 17/Route 94 Interchange		Traffic & Highway
Regional Traffic Calming Framework	\$500k - \$1.5M	Traffic & Highway
Rev Moody Overpass Traffic Corridor		Traffic & Highway
Riverside Park to Downtown North (DoNo) via Riverlink Connection, Hartford	In progress	Bike / Pedestrian
Route 2 Safety and Operational Improvements between Route 15 to Route 3	In progress	Traffic & Highway
Route 2 Widening over Griswold Street	In progress	Traffic & Highway
Serve Major Employment Centers	\$10M	Bus
Silas Deane Highway Corridor Study	\$500k - \$1.5M	Traffic & Highway
Station Parking Redevelopment to Further Support TOD	In progress	Rail
Strengthen Regional Identity with Branding and Wayfinding	\$1M-\$10M	Rail
Support Micro-Transit Initiatives Policy	\$200k-\$1M per year	Bus
Trident Mobility Improvements		Traffic & Highway
Truck Parking at Park and Rides	\$300k-\$700k	Traffic & Highway

* Preliminary estimate due to limited availability of project details. Estimate is subject to adjustment as project design progresses in subsequent project development phases.

Mid-Term Projects (5 - 12 years)

	Planning-Level Cost Estimate*	Modes
286K Freight Rail Capacity Upgrades	\$50M	Rail
Bloomfield to Windsor Greenway	\$3M	Bike / Pedestrian
City Link East - Phase 1	\$800M - \$1.2B	Traffic & Highway
Commuter Parking Policies Assessment	In progress	Traffic & Highway
Connecticut Rail Bridge	In progress	Rail
Dual-Mode Locomotives and Fleet Upgrades	\$70M	Rail
East Coast Greenway	\$15M	Bike / Pedestrian
Enhance Bus Stop Amenities	\$22k-\$80k per unit	Bus
Enhance Cross-River Connections	\$1.5M-\$2M	Bike / Pedestrian
Hartford Line Electrification	\$2B-\$3B	Rail
Hartford Line Yard Storage and Maintenance Facilities	\$100M-\$150M per yard	Rail
Hartford Parks Greenway	\$3M	Bike / Pedestrian
I-84/Route 6/Route 4/Route 9 Improvements	\$170M-\$200M	Traffic & Highway
I-91 Southbound Capacity Improvements between Interchange 29 to 25	\$100M-\$150M	Traffic & Highway
Implement Solar Canopies at Rail Stations	In progress	Rail
Main Street Complete Streets, East Hartford	\$10 - \$25M	Bike / Pedestrian
Mobility Hubs	\$250k-\$10M per hub	Bus
New Rail Station, Enfield	\$30M	Rail
New Rail Station, Newington	\$52M	Rail
New Rail Station, North Haven	\$52M	Rail
New Rail Station, West Hartford	\$70M	Rail
New Rail Station, Windsor Locks	\$10M-\$15M	Rail
Newington to Wethersfield Greenway	\$4M-\$4.5M	Bike / Pedestrian
Provide Transit Priority Infrastructure	\$37M	Bus
Reconfigure Intersection of Albany Avenue and Main Street	\$25M-\$75M	Traffic & Highway

* Preliminary estimate due to limited availability of project details. Estimate is subject to adjustment as project design progresses in subsequent project development phases.

	Planning-Level Cost Estimate*	Modes
Reconfigure Off-Street Parking	In progress	Traffic & Highway
Riverfront Greenway	\$7M-\$8M	Bike / Pedestrian
Route 175 Corridor Study	\$500k - \$1.5M	Traffic & Highway
South Branch Park River Greenway	\$3M	Bike / Pedestrian
Trident Mobility Improvements	\$15M - \$25M	Traffic & Highway
Trout Brook Greenway	\$3.5M-\$4M	Bike / Pedestrian
West Hartford - Albany Avenue Study	\$.5 - \$2M	Traffic & Highway

* Preliminary estimate due to limited availability of project details. Estimate is subject to adjustment as project design progresses in subsequent project development phases.

Long-Term Projects (12+ years)

Project Name	Planning-Level Cost Estimate*	Modes
Bus Rapid Transit (BRT) Expansion: Griffin Corridor	\$635M	Bus
Bus Rapid Transit (BRT) Expansion: North Corridor	\$120M	Bus
Bus Rapid Transit (BRT) Expansion: Northeast Corridor	\$240M	Bus
Bus Rapid Transit (BRT) Expansion: South Corridor	\$190M	Bus
City Link	\$8B-\$10B	Traffic & Highway
Griffin Line Multi-Use Path Study	In progress	Bike / Pedestrian
Griffin Line: Multi-Use Path	\$10M	Rail
Griffin Line: Passenger and Freight Rail		Rail
Hartford Line I-91 HOV to Bradley	\$50M-\$75M	Rail
New Connecticut River Bridge at Airport Road/Brewer Street	In progress	Traffic & Highway
Providence to Hartford Rail Access	\$4B-\$5B	Rail
Putnam Bridge Replacement	\$2M-\$5M	Traffic & Highway
River Gateway	\$2B-\$2.5B	Traffic & Highway
Support For TOD	In progress	Bus

* Preliminary estimate due to limited availability of project details. Estimate is subject to adjustment as project design progresses in subsequent project development phases.

Intentionally Blank

An aerial photograph of a city skyline, likely New York City, featuring a dense cluster of skyscrapers and a large highway interchange in the foreground. The image is overlaid with a semi-transparent dark blue rectangle. A bright pink diagonal line runs from the top right corner towards the center. The text 'THE PLANNING PROCESS' is written in a bold, white, italicized sans-serif font, positioned on the right side of the image, partially overlapping the dark blue rectangle and the pink line.

THE PLANNING PROCESS

The GHMS Process

The GHMS utilized the previous work done by the other relevant studies and projects in the GHMS study areas as a foundation for the technical analysis and engagement with the community. The GHMS continued building relationships, having dynamic conversations, and keeping stakeholders, local businesses, neighborhood revitalization zones (NRZs) and the public actively engaged and informed throughout the study.

During the COVID-19 pandemic, much of the study's initial outreach was conducted using a virtual interactive study portal and through virtual meetings with stakeholders and the public. As it became safe to do so, the GHMS Team started attending community events in person and developed a multi-faceted approach to informing people about the study and gathering input from the community.

Project Identification

At the beginning of the study, the GHMS Team reached out to stakeholders and community members to inform them of the study and hear their initial ideas about the study area transportation needs and multi-modal transportation improvements that they would like to see in Greater Hartford. Residents, stakeholders, and community leaders from across the region were able to suggest improvements, projects, and policies they thought would make the region and local communities better. From improved local connections and sidewalks to enhanced bus routes, the community provided imperative feedback to help the GHMS Team determine priorities in the region. CTDOT staff, the GHMS Team, stakeholders, and community members together contributed to the process of identifying projects. Based on the findings of existing conditions and study area needs, the GHMS Team identified several improvement projects and opportunities. Stakeholders and community members provided nearly 140 potential improvement ideas that were also grouped into potential projects for alternatives screening consideration. Also, relevant previous planning work was considered and incorporated into the study.

The GHMS Team reviewed nearly fifty (50) relevant previous

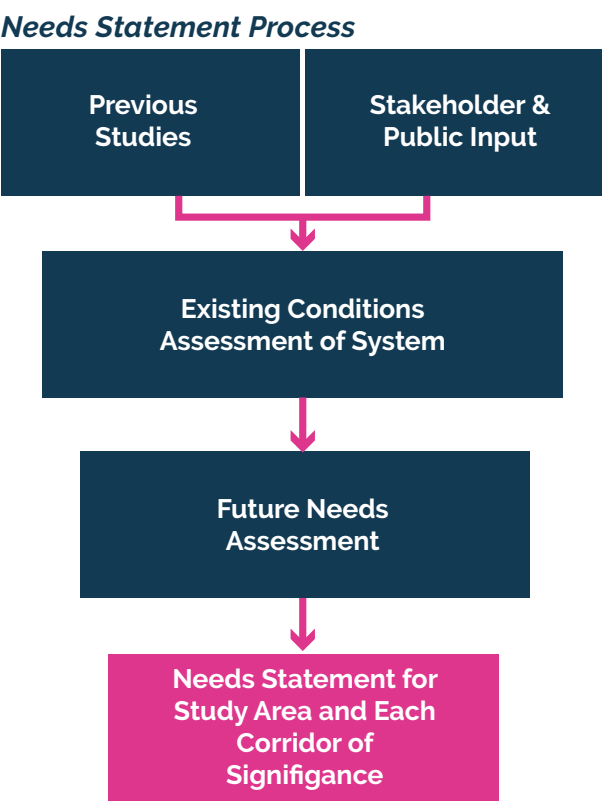
studies, reports, and plans from the past decade that had been prepared by CTDOT, other agencies, and groups. This led to a list of projects that could support multi-modal mobility enhancements in the Greater Hartford region. The goal was to be as inclusive as possible and use relevant previous planning work to maximize efficiency. Recommendations ranged from those with substantially completed previous planning and engineering work to those that were still in the infancy stage.

Needs Statement

The GHMS study was guided by the Needs Statement. This document served as the rationale for conducting the study, identified the problems or challenges that needed to be addressed, and clarified why solving those problems would be beneficial for the community and the environment.

This Needs Statement was developed after an in-depth exploration of the issues with the current system. The team utilized the process illustrated to the right to identify needs based on the following inputs:

- **Previous Studies:** GHMS built upon the extensive previous planning and engineering work performed on multiple initiatives in the region.
- **Stakeholder & Public Input:** The team collaborated closely with the public to get their input on issues. An interactive website and a collaboration portal collected input and the team undertook substantive outreach efforts. (See An Inclusive & Collaborative Process for more details)
- **Existing Conditions:** The technical team undertook an existing conditions analysis to identify current multi-modal transportation



system weaknesses. This assessment also helped to verify the relevance of needs identified from previous planning and engineering work.

- **Future Conditions:** The team also looked toward the future to anticipate future needs. This included examining the impact of COVID-19, the emergence of new technologies and their impact on transportation, and the potential impact of future economic development strategies on mobility.

The details of the Needs Statement can be found in the [Regional Transportation Needs](#) section.

Vision and Goals

The Needs Statement also included the Vision and Goals for GHMS. Whereas the Needs Statement identifies the issues that are to be addressed, the Vision and Goals articulates how the GHMS should solve those problems.

Alternatives Evaluation

Public Evaluation

The variety of ideas was then compiled into a series of potential transportation improvement alternatives. This was presented to the public via the Greater Hartford Mobility Study Online Collaboration Portal. The Online Collaboration Portal was a separate web page housed on the GHMS website that was dedicated to engaging the public and sharing important information about the potential alternatives. The portal provided the opportunity for the public to rank their transportation priorities, express their thoughts about the vision and goals of the study, and “like” and leave comments about the specific transportation alternatives and policies that mattered to them. More detail on the robust effort to ensure participation was broad and inclusive can be found in [An Inclusive & Collaborative Process](#). Participants were able to express their support for projects and share what they liked about projects, why projects might not work, and how the project could be improved. The GHMS Team read, considered, and documented every public comment and created a summary of the public feedback.

Technical Review

A diverse team with expertise across all modes of transportation established a 2-step

alternatives screening process. The first step was to eliminate projects that were unable to fulfill an identified need(s), did not meet at least one study goal, and/or were recommended to be eliminated previously in a recognized planning process/study. The projects that passed through this high-level fatal flaw screening were then evaluated based on 12 criteria that reflected community-expressed needs. Projects scored highly if they met the following core mobility-related criteria:

- **Travel Time and Reliability:** If they would improve both travel time and reliability, and if they helped to eliminate one or more congestion hot spots.
- **Access and Connectivity:** If they would improve both access to transportation facilities and connectivity between compatible land use pairs and/or travel modes.
- **Travel Convenience and Travel Options:** If they would provide redundant travel options and improve end-user travel experience.

Technical experts also reviewed projects for their ability to promote the following regional goals. Projects scored highly only if they met the following criteria.

- **Promotes Equity:** They had minimal or only temporary negative impacts on an environmental justice community and created opportunities for a disadvantaged population.
- **Enhances Safety:** They had the potential to reduce crashes that cause injuries, fatalities, and property damage or make walk, biking, or taking transit safer.

- **Improves Infrastructure Resiliency and Sustainability:** They produced a reduction in Vehicle Miles Traveled (VMT) or aided directly to enhance sustainability.
- **Limits Adverse Impacts on Environment:** They had minimal impact on the built and/or natural environment.
- **Supports Future Technology:** They included consideration for supporting future technologies.

As part of this process, technical experts identified critical flaws that disqualified projects based if they:

- Had disproportionate impacts on disadvantaged populations.
- Resulted in deterioration in safety.
- Produced excessive Vehicle Miles Traveled
- Had severe and unmitigable impacts on built and/or natural environment.
- Had significant public and stakeholder opposition.

Scenario Planning and Regional Benefits

Over the past decade, there have been major changes in technology and society that have affected travel behavior, land use, and transportation systems. Societal changes include the COVID-19 pandemic, climate change, and economic recessions. Technological changes include advancements in automotive technologies, ride-sharing, smartphone travel guidance, and dynamic travel updates, among others.

In response to these complex changes, scenario planning has become a useful tool.

Project teams use it to create potential future conditions. They then use those models to study how different combinations of projects would impact the region. This allows the team to have a better understanding of project benefits and impacts in an uncertain world.

The team took a data-driven approach to building the model. The team created scenarios that varied based on the levels of land use density, land use diversity, context-sensitive design, destination accessibility, and effectiveness of alternate modes of travel. These are factors known to have impacts on the transportation system.

To understand the impact of projects, the team examined industry-standardized “key performance indicators” (KPIs). The KPIs used included: mobility, capacity and congestion, travel options and convenience, accessibility, safety, equity, environmental sustainability, and economic opportunities.

The GHMS scenario planning compared the Programmatic Vision to two different baseline conditions. The first baseline condition assumed that the transportation system stayed as it is today. The team also compared the Programmatic Vision to a scenario where only currently planned projects were implemented.

By looking at the different KPIs, the team could understand how projects working together could benefit the region. The scenario model also allowed the team to study the impact of phasing, which shaped the implementation plan.

Next Steps

The GHMS is only the first step in the implementation effort to reshape mobility in the region. This study can be used to identify transportation priorities in the Greater Hartford region and advance projects with independent utility into the National Environmental Policy Act (NEPA) and Connecticut Environmental Policy Act (CEPA) process, as applicable. The PEL process also identifies projects and improvements that can be implemented simultaneously as the study progresses.

Each project would need to move forward from conceptualization through preliminary engineering, environmental review, and final design. This study includes a project prioritization matrix to advance appropriate projects through the subsequent NEPA and

CEPA requirements, as applicable. In addition, the study includes a series of early implementation actions that can be found in [Implementation Plan](#) section.

Regional Transportation Needs

What is the Needs Statement?

The Needs Statement is an essential component of the GHMS. At its core, the Statement documented the rationale for conducting the study, identified what problems or challenges needed to be addressed, and why solving those problems would be beneficial for the community and the environment. In addition, the study:

- Identified the concerns of stakeholders, including government agencies, local communities, environmental groups, and other interested parties
- Defined the goals and objectives of the PEL Study. This clarifies what the study aims to achieve and outlines the desired outcomes.
- Guided what information needs to be collected to support the study's objectives, including data related to transportation, land use, environmental impacts, and other relevant factors.
- Defined the study's scope and boundaries, including the geographic area, the transportation corridors, or projects under consideration

In accomplishing these goals, the needs statement served as a reference point

throughout the study, guiding the decision-making process. It helped stakeholders and decision-makers stay focused on the study's original intent and ensured that the study's outcomes aligned with the identified needs.

The Needs Statement

Utilizing the above process in combination with the GHMS vision and goals, the team identified three major categories of needs where GHMS should focus its improvements.

Network: Deficiencies in the multi-modal network: Needs identified under this theme are mostly focused on identifying physical infrastructure deficiencies and are aligned with the following GHMS study goal:

Quality: Deficiencies in the quality of user experience: Needs identified under this theme are mostly focused on identifying issues with the quality of service provided to users of the multi-modal transportation system.

Specific Needs

The specific needs for the region are detailed below, along with a notation regarding how they align with one or more of the Areas of Need.

Issues	Theme		
	Network	Quality	Equity
Roadway geometry and aging infrastructure that do not meet current standards, contribute to congestion issues and cause operational constraints	●	●	
Traffic congestion in the Study Core	●		
Traffic flow throughout the Study Area is constrained by a lack of network redundancy and several bottlenecks where demand exceeds capacity	●		
Economic development opportunities in the Study Area are limited by lack of mobility and access to employment centers	●		
Bus travel is not competitive with other modes	●		●
Rail travel is not competitive with other modes	●		●
Active transportation mode networks are incomplete and lack access to key transit nodes	●	●	●
Lack of east-west connections across the Connecticut River and the Study Core	●	●	●
Safe and convenient options for truck parking is found wanting by freight providers	●	●	
Lack of focus on maximizing use of non-highway freight modes (rail, barge, air/inter-modal)	●		
There are numerous gaps in the multi-modal transportation network	●		
Concerns with infrastructure resiliency	●	●	
Quality of user experience needs – contributing factors		●	
Lack of system redundancy (lack of alternate routes) limits choices for users	●	●	
Limited implementation of Transportation Demand Management strategies results in demand exceeding capacity	●	●	
Speeding issues along certain corridors due to lack of traffic calming measures		●	
Frequency and/or span of service for bus and rail transit is insufficient for mode competitiveness and quality of service		●	

Issues	Theme		
	Network	Quality	Equity
Station/stop amenities are not attractive to customers and have maintenance issues	●	●	
Deficiencies in multi-modal connectivity and accessibility		●	
Lack of a comprehensive plan to accommodate emerging technologies such as connected and automated vehicles, real-time traffic/transit updates, app-based transportation interfaces, automated freight delivery options and others		●	
Transportation facilities are lacking resiliency to potential impacts of climate change		●	
Active transportation facilities do not consistently meet current safety standards		●	
Rail, transit and active transportation modes lack competitiveness	●	●	●
Non-auto modes are underutilized as sustainable transportation options to address climate change and resiliency challenges			●
Lack of access for some populations creating inequitable barriers to jobs, amenities and transportation options		●	●

Equity: Needs identified under this theme are mostly focused on achieving social equity by making active transportation and public transportation options more competitive for local trips to reduce reliance on auto travel.

Needs in the Corridors of Significance

In addition to regional needs, the GHMS identified specific needs in each of the five Corridors of Significance (see map on the following page).

Study Core

Highway modal needs highlight key congestion hotspots for freight and passenger vehicles along major corridors, local connections and

access across the Connecticut River, and geometric deficiencies.

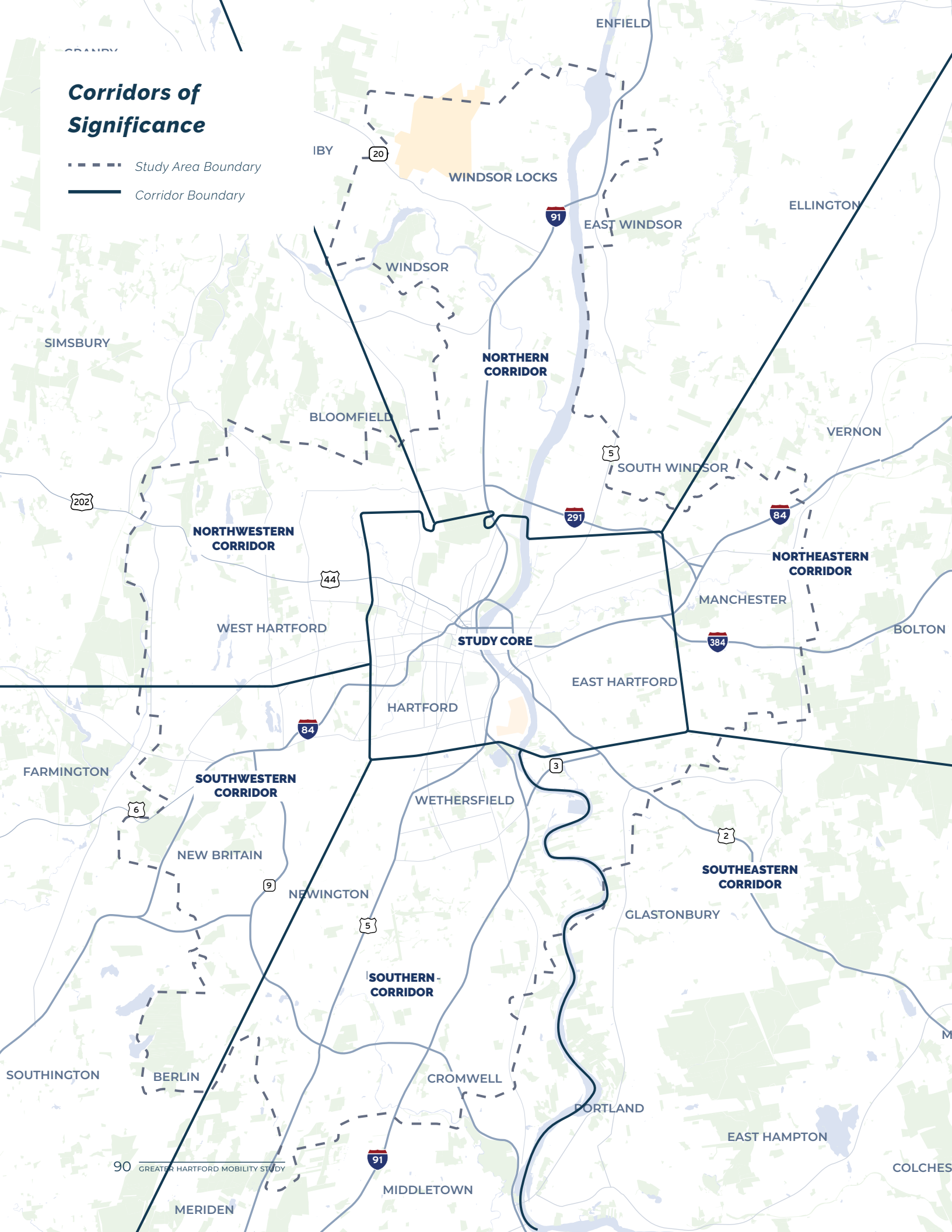
Multi-modal needs focus on rail and transit infrastructure and service, station and stop facilities, better accommodation and provision of bicycle/trail facilities, and micro-mobility considerations to access key transit hubs and nodes.

Other needs focus on promoting economic development and quality of life through improved access to the Connecticut River and green spaces, continued promotion of active transportation options within the Study Core, and consideration of transportation policies focused on reducing auto dependency.

Northern Corridor

Corridors of Significance

--- Study Area Boundary
— Corridor Boundary



The transportation challenges encompass a shortage of safe truck parking and congestion on I-91. There's a need for better connectivity at the I-91 interchange with Day Hill Road. Inadequate station amenities, limited bicycle access to transit hubs, and constrained multimodal access to Bradley International Airport are issues. Rail infrastructure problems hinder Hartford Line service, and the evolving transportation landscape isn't being holistically addressed. Furthermore, a scarcity of pedestrian and bicycle infrastructure affects safety and comfort, and transit services are limited in the evening, frequency, duration, and service areas. Mobility-as-a-Service (MaaS) lacks cohesion.

Northeastern Corridor

There is congestion on I-84 eastbound between Interchanges with Bluckland Street and Route 30 in Manchester due to a short weave length. Truck parking options are insufficient and need to be made safer and more convenient. The area lacks a well-connected bicycle/pedestrian network. The study should consider the impact of emerging transportation technologies. Improving bus travel time competitiveness compared to personal vehicles is essential. The limited evening service, frequency, duration, and service areas of transit hinder its effectiveness in serving employment and residential centers. Additional bus stop amenities are needed to enhance the transit experience.

Southeastern Corridor

Short distances between Route 2 interchanges lead to congestion and high crash rates during peak hours. Geometric deficiencies are present on Route 2 near the Route 17 interchange. A cohesive bicycle/pedestrian network is lacking. The Putnam Bridge requires a long-

term replacement or rehabilitation strategy as it nears the end of its service life. The study should address the potential impact of emerging transportation technologies holistically. Limited evening service, infrequent transit frequency, and service area restrictions hinder transit's effectiveness in serving employment and residential centers. Bus stop amenities are lacking. There is a lack of cohesion in Mobility-as-a-Service (MaaS) implementation.

Southern Corridor

Current demand outpaces capacity leading to congestion on I-91 southbound. Truck parking options are inadequate in terms of safety and convenience. The network lacks redundancy due to incomplete system interchanges or interchanges between freeways and principal arterials. A cohesive bicycle/pedestrian network is missing. Transit stations lack consistent amenities, and there are issues with bicycle/pedestrian access to key transit nodes. Emerging transportation technologies need to be addressed more holistically. Transit services are limited in the evenings, with infrequent frequency and service areas, affecting their ability to serve employment and residential centers. Bus stop amenities are insufficient.

Southwestern Corridor

Several I-84 interchanges, including Park Road / Trout Brook and Routes 4, 6, and 9, lack lane balance and continuity, negatively impacting safety and operations. The east-west local street network has limited redundancy. Safe and convenient truck parking options are insufficient. Key transit nodes lack bicycle/pedestrian access. The area lacks a cohesive bicycle/pedestrian network. The study should address the potential impact of emerging transportation technologies holistically.

Transit services are limited in the evenings, with infrequent frequency and restricted service areas, affecting their ability to serve employment and residential centers. Bus stop amenities are lacking, and there is a lack of cohesion in implementing Mobility-as-a-Service (MaaS).

Northwestern Corridor

A lack of network redundancy and a bypass that results in increased traffic congestion on key corridors and limited east-west redundancy. Gaps in the multimodal transportation network, particularly in active transportation modes, and an absence of network redundancy across the Metacomet Ridge contribute to transportation issues. Additionally, the corridor fails to address emerging technologies holistically. There is a lack of multimodal connections beyond personal vehicles and transit suffers from limited evening service and frequency, long durations, and the absence of bus stop amenities.

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An aerial architectural rendering of a waterfront park and city street. The scene shows a multi-lane road with cars and a bus, a crosswalk, and a sidewalk. Adjacent to the road is a park area with trees, a paved path, and a small building with a curved roof. The park is situated next to a body of water, with a bridge visible in the background. The word "CONCLUSION" is overlaid in large, bold, white letters on a dark blue background that spans the top half of the image. A pink diagonal line is on the right side of the dark blue background.

CONCLUSION

Conclusion

The Greater Hartford Mobility Study encapsulates an ambitious and transformative vision for transportation in the Greater Hartford region. By focusing on improving mobility, access, and sustainability, the GHMS sets forth a comprehensive roadmap for the region’s transportation future.

The study’s emphasis on addressing infrastructure deficiencies, such as congested highway interchanges and roadway bottlenecks, enhances the transportation network’s overall efficiency. The implementation plan, categorized into early action-, mid-term, and long-term projects, is structured to ensure a balanced and phased approach. Each recommendation has been planned considering environmental impact, interdependencies, utility, and funding.

A critical aspect of the GHMS is the inclusive and collaborative community engagement strategy. The comprehensive approach ensured that diverse voices were heard, irrespective of socio-economic status or cultural background. This involved various engagement techniques, from digital platforms and bilingual communications to community pop-up events and stakeholder engagement. The efforts to engage marginalized communities through personalized events further reinforced the study’s commitment to inclusivity.

The GHMS’s dedication to fostering equity and sustainability is apparent in its pursuit of creating a more connected, accessible, and resilient transportation network. The study’s approach reflects a commitment to learning from the community, engaging with diverse stakeholders, and integrating feedback to design a transportation system that serves the region’s needs effectively.

The Greater Hartford Mobility Study lays a framework that addresses the region’s mobility challenges, promotes inclusivity, and prioritizes sustainable and equitable transportation.

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