

## 12.0 CAPITAL IMPROVEMENT PROGRAM

The Metropolitan Transportation Plan for the Naugatuck Valley planning region (NVCOG) and the Central Naugatuck Valley MPO (CNVMPO) addresses the issues and deficiencies of the area's transportation systems. The critical transportation problems facing the region, described in detail in chapter 3 of this document, are:

- Aging Infrastructure
- Roadway Congestion
- Highway and Pedestrian Safety
- Under Investment in Public Transit
- Gaps in Active Transportation Facilities

The capital improvement program will meet the goals and objectives discussed throughout this MTP over its 28-year timeframe. These goals, also identified in greater detail in Chapter 3, involve:

- Achieve the goal of zero fatalities or serious injuries on the road network
- Maintain and preserve critical systems in a State-of-Good-Repair
- Promote better and more efficient operation and management of the transportation system
- Enhance transportation systems to meet the traveling needs of all residents and travelers
- Improve resilience of transportation infrastructure to enable it to withstand weather and natural events and provide flood protection
- Address equity and traditionally underserved communities
- Support economic revitalization
- Support sustainable communities initiatives that link land development with investments in transportation infrastructure and support the development of transit-oriented districts

## 12.1 FUNDING PROGRAMS IN THE MTP

Implementation of the capital improvement program presented in the MTP will require a substantial investment in federal, state, and local funds. Federal regulations require the MTP to be “financially constrained” (Title 23 CFR 450.324) and develop a financial plan based on reasonably expected available and projected sources of federal, State, and local revenues and the costs of implementing proposed transportation system improvements. The *Infrastructure Investment and Jobs Act (IIJA)* requires the USDOT to revise federal regulations to designate outer years of the MTP as beyond the first four years and no longer require the projects to be financially constrained.

The principal sources of funds are the various federal-aid transportation programs administered by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The federal aid programs are authorized by federal act and typically provide 80% of the project costs, with state and local funds covering the remaining 20% non-federal share. The *IIJA* reauthorized the core transportation funding programs contained in the FAST Act for both highway and transit improvements. In general, however, funding allocations were increased between 10% and 34%, greatly increasing resources available to address outstanding transportation deficiencies. The *IIJA* added several new formula and discretionary programs, as well as new pilot programs to address specific issues. Key elements of the new act are:

- It provides long-term certainty and more flexibility for states and local governments.
- It advances the goals of safety and sustainability within the system.

About 72% of the Federal Highway Administration funds authorized in the *IIJA* will be distributed to states by statutory based, program-specific factors. The remaining 28% of the funding is provided through discretionary programs, with states, MPOs and cities and towns required to compete on a project-by-project basis.

In Connecticut, the Special Transportation Fund (STF) finances transportation improvement projects and provide the non-federal match of funds under federal transportation acts. The primary purpose of the STF is to pay debt service on Special Tax Obligation Bonds issued for transportation infrastructure purposes. A small portion of the STF is used for “pay-as-you-go” projects, including on-going maintenance. The major sources of STF dollars are the motor fuels tax and motor vehicle receipts, which combined account for about 80% of the total STF revenues.

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## FEDERAL HIGHWAY ADMINISTRATION (FHWA) FORMULA FUNDING PROGRAMS

The core formula programs overseen by the Federal Highway Administration (FHWA) include the following:

**National Highway Performance Program (NHPP):** The NHPP provides funds to states to maintain and support the condition and performance of the National Highway System (NHS), construct new facilities on the NHS, and ensure that investments of Federal-aid funds in highway construction support progress toward achieving performance targets in the state asset management plan. NHPP projects must be on an eligible facility: interstate highways, non-interstate expressways and other non-expressway principal arterials. Projects need to support progress toward achieving national performance goals and improving infrastructure condition, safety, mobility, or freight movement on the NHS. Projects must be consistent with Metropolitan and Statewide planning requirements. Under IJIA, the NHPP may now fund undergrounding public utility infrastructure, in conjunction with an eligible project, resiliency improvements and activities to protect NHS segments from cybersecurity threats. IJIA authorized \$148.0 billion from the Highway Trust Fund, which represents a 27% increase over the funding provided in the FAST Act.

**Surface Transportation Block Grant Program (STBG):** The STBG program is the most flexible federal aid transportation program. It provides funding to states via a set formula to address state and local transportation needs. STBG funds may be used for improving roads classified as a rural major collector or above. Funds can be used for a wide range of projects, such as road reconstruction, rehabilitation, and widening, bicycle and pedestrian facilities, transit projects and ridesharing projects. STBG funds are suballocated to several categories: large urban areas (greater than 200,000 population), other urban areas (less than 200,000 population), transportation alternative projects and off system bridges. Funds not suballocated to one of these categories are available to be spent anywhere in the state.

The IJIA authorized \$72.0 billion under the SPBG program, a 24% increase over the amount provided under the FAST Act.

The urban set-aside is the largest of all the STBG programs and funds are suballocated to specific large (over 200,000 population) urban areas of the State according to the area's relative share of the State's population. The Waterbury Urban Area is classified as a small urban area and not directly allocated funds under the STBG program at this time.

The Transportation Alternatives Set-aside Program (TAP) is funded under a 10% drawdown of the STBG allocation. The Transportation Alternative program funds a wide range of non-traditional transportation projects. This includes on- and off-road pedestrian and bicycle facilities,

infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvements like historic preservation, environmental mitigation related to storm water and habitat connectivity; recreational trails, and safe routes to school projects. IIJA substantially increased funding available under the TA program, increasing the authorization by 71% over the FAST Act. In addition, it increased the amount of funds suballocated to urban areas to 59% of the total, an increase of more than 50% suballocated under the FAST Act. Under the FAST Act, states were permitted to flex TA funds not suballocated to urban areas. This provision was revised in IIJA to allow this transfer only if no eligible TA project is available. States are not eligible recipients of TA funds, with projects being led by regional or local governments or non-profit organizations.

The IIJA also increased set-aside funding provided for off-system bridge projects to 20% and added project types to include electric vehicle (EV) charging infrastructure, protective features to enhance resilience and wildlife crossings.

**Congestion Mitigation and Air Quality Improvement Program (CMAQ):** The CMAQ program funds transportation projects and programs that reduce emissions from mobile transportation sources and are intended to help States meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality in areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former nonattainment areas that are now in compliance (maintenance areas). All CMAQ funded projects and programs require an assessment and documentation of air quality benefits by the State. Typical projects include traffic signal systems, transit improvements, ridesharing and commute options programs, and bicycle facilities. Under the IIJA, CMAQ may now fund shared micro mobility projects and buying medium- and heavy-duty zero emission vehicles and charging equipment.

**Highway Safety Improvement Program (HSIP):** This program funds projects that will significantly reduce traffic fatalities and serious injuries on public roads. The program requires a data-driven, strategic, performance-based approach to improving highway safety on public roads. IIJA added eligibility for non-infrastructure safety projects related to education, research, enforcement, emergency services, and safe routes to school. New provisions under IIJA require States to complete vulnerable road user (VRU) safety assessments and consider a “*Safe System*” approach.

**National Highway Freight Program (NFRP):** This program focuses on improving the efficient movement of freight on the National Highway Freight Network. Eligible activities include construction, operational improvements, planning, and performance measurement. Although the program is highway-focused, up to 10% of funds may be used for public or private freight rail,

water facilities, including ports, and intermodal facilities. States must have a State Freight Plan to receive funds. IIJA authorizes \$7.15 billion for the program.

**Bridge Formula Program (BFP):** This program provides funds to replace, rehabilitate, preserve, protect, and construct highway bridges. 15% of the funds are set-aside to replace or rehabilitate “off-system” deficient bridges. Off-system refers to bridges that are not on the Federal-Aid Road system, defined as bridges located on local roads or rural minor collectors. Bridges need to be at least 20 feet long to be eligible. IIJA authorizes \$27.5 billion for the program.

**Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT):** This program was created in IIJA and provides both competitive and formula funds for planning, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure related to highway projects, public transportation facilities, commuter and intercity rail facilities or service, and port facilities. MPOs are eligible recipients for resilience planning grants including scenario development and vulnerability assessments. IIJA authorizes \$7.3 billion for the program by formula and \$1.4 billion for competitive grants.

**Carbon Reduction Program (CRP):** This is a new formula program to provide funds for projects designed to reduce transportation emissions (defined as CO<sub>2</sub>) from on-road highway sources. Eligible projects include public transportation, bicycle and pedestrian facilities, efficient street lighting and traffic control devices, congestion pricing, transportation demand management (TDM) actions that effectuate a mode shift and supporting alternative fuel vehicle deployment. The program requires the state to develop a carbon reduction strategy, in consultation and collaboration with the MPOs, within two years of passage of IIJA.

**National Electric Vehicle Investment Program (NEVI):** This new program will provide formula funding to States to strategically deploy EV charging infrastructure and establish an interconnected network that facilitates data collection, access, and reliability. States must prepare and submit an *Electric Vehicle Infrastructure Deployment Plan* before receiving funds. The initial focus of this program is directed at highways designated as “Alternative Fuel Corridors” for electric vehicles. The intent is to build out this national network, particularly along the Interstate Highway System. Once this national network is fully built out, funding may be used on any public road or in other publicly accessible locations. IIJA authorizes \$5.0 billion for the program.

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## FEDERAL HIGHWAY ADMINISTRATION (FHWA) DISCRETIONARY PROGRAMS

While formula funding programs provide states financial assistance to implement core highway improvements, *IIJA* allocates about two-thirds of its funding authorization on a competitive basis for projects that would have a significant national, regional, and local impact. While *IIJA* specifies that a percentage of discretionary funds are allocated to all states and geographic areas, the ultimate decisions on the award of competitive grants lies with the USDOT. The *IIJA* continues funding for various discretionary programs included in the FAST Act but also created several new programs.

**Rebuilding American Infrastructure with Sustainability and Equity (RAISE):** Previously known as the BUILD and TIGER grant programs, the RAISE program awards funds on a competitive basis for major capital investments in surface transportation projects that will stimulate the nation's economy and invests in road, rail, transit and port projects that promise to achieve economic recovery and growth. Selection criteria includes safety, economic competitiveness, quality of life, environmental protection, state of good repair, innovation, partnership, and additional non-Federal revenue for infrastructure investments. Some planning grants are provided. This program provides at most 80% federal funding, although in recent years this has been modified to cover 100% of eligible project costs in historically disadvantaged areas. Under *IIJA*, the RAISE program was authorized for five years at a minimum total allocation of \$15.0 billion.

**Nationally Significant Multimodal Freight & Highway Projects (INFRA):** This program provides funds for multimodal freight and highway projects of national or regional significance. The purpose is to improve the safety, efficiency, and reliability of the movement of freight and people. Eligible projects need to be located on the National Multimodal Freight Network. Under *IIJA*, flexibility to use INFRA funds for non-highway freight projects was increased and the set-aside for small projects was increased. A total of \$8 billion will be provided under *IIJA*.

**Safe Streets and Roads for All (SS4A):** The SS4A program was created to support efforts to advance "vision zero" plans and implement other capital improvements that reduce the number of fatal and serious injury crashes, especially for bicyclists and pedestrians. Recipients of SS4A funds are MPOs and local governments; state DOTs are not eligible recipients. *IIJA* authorizes \$5.0 billion for the program.

**National Infrastructure Project Assistance (MEGA):** This program was established under *IIJA* and supports large, complex, multi-modal, multi-jurisdictional freight-related projects that are difficult to fund by other means and are likely to generate national or regional economic, mobility, or safety benefits. The program allocates 50% of the funds for projects costing between \$100 million and \$500 million and 50% of the funds for projects costing more than \$500 million. The federal share directly from the program is 60%. Federal funds from other programs can

supplement the project, but the total federal support cannot exceed 80%. Total funding available over the life of the *IIJA* is \$10 billion.

**Bridge Investment Program (BIP):** This is a new program that supports rehabilitating or replacing bridges, including culverts. The focus of the program is to encourage bridge repairs, including culverts, that will improve safety, efficiency, and reliability of people and freight movement, as well as to improve flood control and habitat connectivity for aquatic species. Eligible bridges need to be listed on the National Bridge Inventory. A total of \$12.5 billion is authorized for the program under *IIJA*.

**Congestion Relief Program (CRP):** The Congestion Relief program was created to advance innovative solutions to congestion in the most congested metropolitan areas. The goals are to reduce highway congestion, optimize highway capacity and reduce economic and environmental costs incurred by travelers due to excessive congestion. Eligible activities include integrated congestion management systems, congestion pricing, including interstate tolling and actions that encourage ridesharing and mobility services. *IIJA* authorizes \$250 million for the program.

**National Culvert Removal, Replacement, and Restoration Grant program (also known as the Culvert Aquatic Organism Passage Program (AOP)):** *IIJA* established this program to address barriers to anadromous fish passage by replacing, restoring, or removing culverts and other structures that prevent or inhibit movement of these fish species. These species, such as salmon, are born in freshwater, spend most of their lives in the marine environment, and migrate back to freshwater to spawn.

**Strengthening Mobility and Revolutionizing Transportation (SMART):** This program was established under *IIJA* to fund advanced smart city or community technology demonstration projects that improve transportation safety and efficiency. Total funding available over the life of the *IIJA* is \$10 billion.

**Charging and Fueling Infrastructure Grants:** This program was established under *IIJA* to strategically deploy publicly accessible electric vehicle charging infrastructure and other alternative fueling infrastructure along designated alternative fuel corridors. Operating assistance may be funded for up to five years. At least 50% of funds must be used for community grants that prioritize projects in rural areas and low- and moderate-income neighborhoods. Total funding available over the life of the *IIJA* is \$2.5 billion.

**Active Transportation Infrastructure Investment Program:** This program was established under *IIJA* to build connected active transportation systems. The intent is to expand opportunities for people to walk, bicycle and roll safely to where they want to go. The focus is on larger, regional

active transportation networks that will connect communities and destinations. Total funding available over the life of the *IIJA* is \$1 billion.

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#### FEDERAL TRANSIT ADMINISTRATION (FTA) PROGRAMS

As is the case for highway improvement projects overseen by the FHWA, the core formula and discretionary programs administered by the Federal Transit Administration are retained and continued under *IIJA*. The FTA will receive \$91.2 billion over the five years of the act. Most of these funds will be allocated to capital programs and projects.

**Urbanized Area Program (§5307):** This program provides formula funds to designated recipients in urban areas for transit capital and operating assistance. These funds are intended primarily for capital projects, including buying new buses, building maintenance and passenger facilities, acquiring support vehicles, and purchasing administrative capital items. Funds are allocated to individual urban areas based on its share of the population. In Connecticut, split agreements are executed among FTA recipients within an urban area that allocate funds to priority projects. Unallocated funds from the urban area are pooled and assigned for use anywhere in the state. The CTDOT provides the non-federal share of FTA capital grants.

**Capital Investment Grants (CIG/§5309):** This discretionary program funds major transit capital investments, including heavy rail, commuter rail, light rail, streetcars, and bus rapid transit. Program funds are used for constructing new, fixed-guideway transit systems or extending existing systems (New Starts), enhancing or improving the capacity of existing systems (Core Capacity), and constructing bus rapid transit projects operating in mixed traffic that represent a substantial investment in the corridor and emulate the features of rail.

**Enhanced Mobility of Seniors and Individuals with Disabilities Program (§5310):** This program provides funds to private nonprofit organizations help meet the transportation needs of older adults and persons with disabilities when transportation services are unavailable. Funds are apportioned to states based on a formula and can be used for capital, operating and planning assistance to nonprofit organizations and public agencies that provide specialized transportation services to elderly persons and persons with disabilities. Eligible projects include both traditional capital and nontraditional investments that go beyond ADA services.

**State of Good Repair (§5337):** This formula program allocates funding to states and local governments that own, maintain, and operate fixed-guideway and high-intensity bus systems. The goal of the program is to support capital projects that maintain public transportation systems in a state of good repair and ensure that public transit operates safely, efficiently, reliably, and sustainably.



**Bus and Bus Facilities Formula Grants (§5339):** This discretionary program provides grants to help modernize bus fleets and facilities. A priority purpose is to help transit agencies acquire or lease low- or no-emission vehicles to improve air quality and reduce the effects of climate change. Funding is also available to acquire and construct supporting facilities required for operating low- and zero-emission vehicles.

**All Station Accessibility Program (ASAP):** The ASAP was established under *IIJA* to provide funding to repair, rehabilitate, modify, and improve the infrastructure at existing stations or facilities to ensure accessibility for all users. The intent is to upgrade “legacy” transit and commuter rail stations to fully comply with the requirements of the Americans with Disabilities Act.

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#### NEW PILOT PROGRAMS ESTABLISHED UNDER *IIJA*

The *IIJA* created several pilot programs to address critical concerns, but Congress wanted states and MPOs to demonstrate efficacy of the federal participation before making the program permanent. The following pilot programs may be pertinent to the NVCOG MTP.

**Reconnecting Communities Pilot Program (RCP):** The construction of the interstate system, as well as other limited access highways, often divided neighborhoods and created barriers to community activity. *IIJA* created this pilot program to study the feasibility and impacts of removing an existing facility to reconnect communities. Eligible activities include planning, design, demolition, and reconstruction of street grids, parks, or other infrastructure. The goals of the program include improving mobility, access, and economic development. The program will provide \$50 million for planning activities and \$70 million for construction over five years.

**Wildlife Crossings Pilot Program:** The purpose of this new program is to reduce the number of wildlife-vehicle collisions and improve habitat connectivity. A total of \$350 million will be provided under *IIJA* for projects implemented under the program.

**National Motor Vehicle Per-Mile User Fee Pilot Program:** The purpose of this pilot program is to test design and implement a per-mile user fee as alternate method for generating revenue to finance transportation investments. The program will develop recommendations related to adoption and implementation of a per-mile user fee. A total of \$50 million will be provided under *IIJA*.

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#### FEDERAL RAILROAD ADMINISTRATION PROGRAMS

In Connecticut, CTDOT is responsible for funding rail operations and equipment. Metro North Railroad, a division of the Metropolitan Transportation Authority (MTA) in New York City, operates rail service along the Connecticut-owned the New Haven Main Line (NHML) and branch lines, including the Waterbury Branch Line (WBL). CT Rail is responsible for operating rail service

along the Shoreline East (from New Haven to New London) and the Hartford Rail Line (from New Haven to Springfield, Massachusetts). The New Haven Main Line (NHML) is part of the Northeast Corridor (NEC), extending from Washington, DC to Boston. Service on the NEC is operated by Amtrak. The NEC does not include the New Haven line branches. Additionally, a series of freight operators utilize the state's rail network, some on privately owned trackage and others over Connecticut-owned track. The Federal Rail Administration (FRA) oversees several grant programs to improve and modernize the existing rail system and maintain the equipment, track and way in a state-of-good-repair. Improvements to rail infrastructure are also eligible under several programs administered by the FTA. Recipients and project eligibility vary by program, as well as the cost share.

**Consolidated Rail Infrastructure and Safety Improvements (CRISI):** The CRISI program provides funding opportunities for capital projects that improve the safety, efficiency and reliability of passenger and freight rail transportation systems.

**Federal-State Partnership for Intercity Passenger Rail Grants:** This program provides funding for intercity passenger rail systems to reduce the backlog of projects needed to maintain systems in a state of good repair and improve performance. Under *IIJA*, the program was broadened to include projects that would expand or establish new intercity passenger rail services. Two subcategories are designated: system on the Northeast Corridor and other intercity rail systems not located on the NEC.

**Railroad Crossing Elimination:** This is a new, competitive grant program established under *IIJA* to fund highway-rail or pathway-rail grade crossing improvements. The purpose of the program is to eliminate highway-rail crossings that are frequently blocked by trains and generally improve the safety and mobility of people and goods.

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#### FEDERAL AVIATION ADMINISTRATION

**Airport Improvement Grant and Passenger Facility:** The *IIJA* provides \$15 billion in grants to airports throughout the country. Under this program, grants are used to implement various improvements to airport infrastructure. Funds can be used on runways, taxiways, terminals, airport-transit connections, and roadway projects. Projects related to safety and sustainability are also eligible.

**Airport Terminals Program:** The *IIJA* provides \$5 billion in competitive grants under this program to fund airport terminal development projects that address the aging infrastructure of the nation's airports. These grants will fund safe, sustainable, and accessible airport terminals, on-airport rail access projects and airport-owned airport traffic control towers. Projects may also include multimodal development.

**Air Traffic Facilities:** The *IIJA* provides \$5 billion to FAA for grants to upgrade and maintain the nation’s air traffic control systems. Funds will be used to upgrade, replace, and maintain critical buildings and equipment to operate the nation’s air space. This also includes upgrading the power systems, navigation and weather equipment, and radar and surveillance systems that the air traffic systems rely and depend on.

**FAA Contract Tower Competitive Grant Program:** The FAA provides \$20 million annually through FY 2026 to modernize air traffic control towers at small town and municipal airports.

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## STATE FUNDING PROGRAMS

**Local Transportation Capital Improvement Program (LOTICIP):** The LOTICIP program was created to provide state funds to municipalities through the Councils of Governments for road, bridge, multi-use trail, and pedestrian improvements. The intent of the program is to address regional transportation needs through a dedicated capital improvement program overseen by the COGs. The responsibility of the program is vested at the regional level, and it is expected that projects will advance more expeditiously and at a lower cost. Project eligibility is the same as under the USDOT STBG Program. Municipalities are responsible for preparing design plans and paying 100% of the design-related costs; the designs must meet minimum state roadway design standards and ensure a 15-to-20-year useful life. LOTICIP funds are allocated at the low bid amount at the time of construction plus 20% for contingencies and incidentals.

**Community Connectivity Grant Program (CCGP):** The CCGP was developed to provide funding for targeted, low-cost infrastructure improvements commonly identified through a Road Safety Audit (RSA) or other planning initiatives. The purpose of the CCGP is to provide funding directly to municipalities to implement small-scale infrastructure improvements that enhance pedestrian and bicyclist safety and provide better connections for pedestrians and bicyclists. Municipalities are responsible for preparing design plans and paying 100% of the design-related costs. State funds are allocated for the construction of improvements but are constrained to the cost estimate at the time of grant award.

**Recreational Trails Program Grant:** Connecticut provides funds through the Department of Energy and Environmental Protection (DEEP) for a variety of recreational trails actions and projects. The program provides 80% of the project’s cost with a 20% sponsor-provided match required. Eligible sponsors include private organizations, municipalities, federal, state, and regional agencies, and other government entities such as tribal nations. Funds can be used for planning, such as trail routing studies, project design, acquisition of property for trail projects, construction, maintenance equipment, trail amenities, and publications and outreach material related to bikeways, multi-use trails (including motorized) and water trails (blueways).

**State Local Bridge Program:** Municipally owned bridges can be funded by state and federal Local Bridge Programs. To qualify for the state Local Bridge Program, a bridge must carry a certified local road, be at least 20 feet long, and be functionally obsolete according to FHWA criteria. The program was revised to extend eligibility to include bridges that are not currently structurally deficient but have other issues and could benefit from minor repairs to extend their useful life. State grants provide 50% of the cost of improvements with the municipality responsible for the other 50% cost share.

**State Matching Grant Program for Demand Responsive Transportation for Elderly and People with Disabilities:** This program provides funds to municipalities for new or expanded transportation services to seniors and people with disabilities, such as weekend, evening or out of town services, additional days of service or special trips. These funds are available to all municipalities, but they must submit an application that describes the service enhancements to be funded by the grant. Municipalities may also choose to assign their grant to a transit district.

**Transportation Rural Improvement Grant Program (TRIP):** This program provides funds to municipal governments for infrastructure improvements in small towns designated as rural by the US Census. Activities may include transportation capital projects such as construction, modernization, or major repair of infrastructure. Funds may only be used for construction activities.

**Transit-Oriented Development Grant Program:** This program provides grants through the Office of Policy and Management (OPM) to fund shovel-ready capital projects and related activities located within one-half mile of existing public transportation facilities. Currently, a minimum 20% match is preferred.

# Quarry Walk, Oxford



## 12.2 IMPLEMENTING THE MTP

To accomplish the goals of the MTP, the region has developed a list of priority projects that maintain fiscal constraint over the span of this plan, meaning that total programmed projects remain below the reasonably expected funding levels. There are projects, however, that the region considers priority that could not be accomplished with the funding expected within the region, and these are identified in the Goals section of Chapter 3 as Vision Projects, those that would be transformational but do not fit into current funding levels.

The full list of projects programmed in the region can be found in Appendix A of this document.

CTDOT calculated the total estimated FHWA funds for Connecticut (\$53,570,365,877) for the period 2023-2050 by compounding the estimated federal funds for federal fiscal year 2023 (\$1,600,000,000) at 1.5% for 28 years. \$17,632,713,000 was deducted from this total for “major projects of statewide significance”.

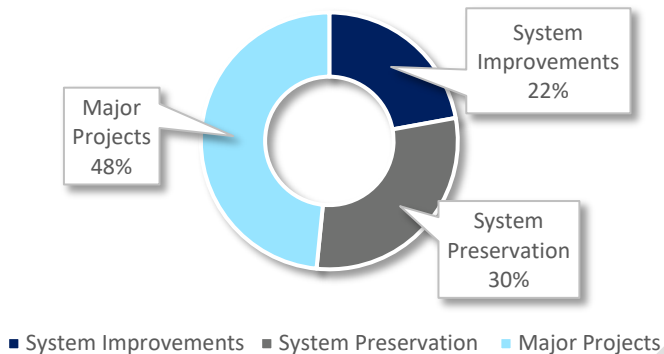
Of the balance of the total estimated funds (\$35,937,652,877), CTDOT’s Office of Statewide Coordination and Modeling, STIP Unit allocated 60% for System Preservation (\$21,562,591,726), and 40% for System Improvement (\$14,375,061,151). System Preservation projects include repaving roadways, bridge repair or replacement, and any other form of reconstruction in place. System improvement projects are projects that enhance safety, improve mobility, increase system productivity or promote economic growth.

Five percent of the System Preservation funds and 3.8% of the System Improvement funds were distributed equally to each of the MPOs and the RPOs. This provided each of the 10 planning organizations with a minimum allocation of funds. Weighted variables were used to distribute the remainder of the funds. The variables used were Vehicle Miles of Travel (VMT), Average Travel Time Index (AVR TTI), and Lane Miles (LM).

**For System Improvement funds:** .25 weight for VMT and .75 weight for AVT TTI.

**For System Preservation funds:** .25 weight for VMT and .75 for LM.

## Allocation of Funds to the CNVMPO



The amounts allocated to these variables for each category were then distributed to each MPO/RPO in proportion to its respective percentage to the total of the variables.

The CTDOT has estimated that, over the period of the MTP, approximately \$3.362 million will be available for improvements and preservation of the system within

the CNVMPO region. An additional \$3.154 million will be provided to fund Major Projects of Statewide Significance, projects that will occur on roads within the region but will be controlled by the CTDOT because of their significance to the statewide transportation system. Most notably in this category is the NewMix project, which is the long-term replacement of the Interstate 84/Route 8 interchange in Waterbury. This project, estimated to occur in the mid-2040s, is programmed for \$3 Billion.

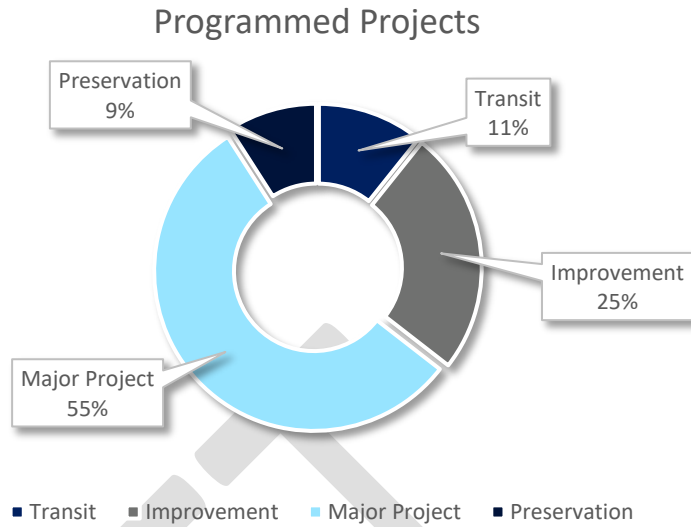
In addition to the above outlined FHWA funding, direct maintenance and operation funding from the FTA is included in the long-range outlook for the region. Within the CNVMPO, FTA funding is expected to be utilized 100% for operations and state of good repair projects, so none of this funding is programmed into the project listing in Appendix A or included in the income or expenditure tables. Funding to the region includes:

- \$87,376,250 for the CTtransit Waterbury Division
- \$1,805,000 for the CTtransit Bristol-New Britain Division
- \$387,380,000 for the CTtransit New Haven Division, which operates one route into Cheshire and Bristol

Because of the region's commitment to Vizion Zero, the list of improvement projects is larger than the list of preservation. While maintaining the system in a state of good repair is essential, the region is committed to improving roadway safety as quickly as possible on as much of the network as possible. The result is that most projects, even those designed to improve the condition of existing roads, will likely include improvements to pedestrian and cyclist infrastructure, as well as lighting, safety devices such as bollards, and design speed reductions.

WITHIN THE REASONABLE FUNDING ESTIMATES FOR THE REGION, FOUR MAJOR CATEGORIES RECEIVED FUNDING:

- Improvements: \$1,410,205,000
- Major Projects: \$3,154,250,000
- System Preservation: \$516,389,000
- Transit: \$610,831,000



This plan yields a small surplus of expected funds which can either be programmed into future projects, particularly those focused on vulnerable user safety, or made available for CTDOT projects within the region. This program does not, however, cover all the regional priority projects, and in combination with unanticipated funding amounts or discretionary awards may be utilized to implement these projects.



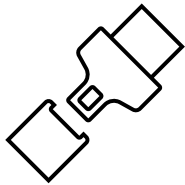
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## EXPECTED OUTCOMES

Implementation of the MTP will address the region's most critical problems while allowing for growth and revitalization throughout the 19 NVCOG towns. Based on the critical planning factors identified in Chapter 2 of this document, with an intensive focus on equity, the following outcomes are expected from the projects and programs identified in this plan.

### Safety

Improvements identified in this plan focus heavily on safety, providing for the region's NVision Zero program, addressing the locations that prove most dangerous for users, especially vulnerable users, and utilizing a full safe-system approach to address traffic fatalities and injuries. Of the 25% of funds programmed into improvements, the majority focus on intersection and corridor safety upgrades, utilizing proven countermeasures to reduce speeds and reduce the severity of crashes when they happen. Importantly, these improvements include additional pedestrian facilities, improved and expanded bicycle facilities, and intersection improvements.



NVCOG will continue regular updates to the region's NVision Zero action plan, prioritizing enhancement projects based on periodic review of crash data, speed data, and volumes. These updates will ensure that, as much as possible, traffic fatalities can be eliminated within the time frame of the Vision Zero goal.

A critical step to reduce roadway fatalities and serious injuries is providing alternatives for those who need to travel but should not be driving, including those who have consumed alcohol, individuals who are too tired to drive, or those who are unable to drive. The expansion of transit and active transportation options will provide an alternative, further benefiting those traveling on the region's roads.

### Active Transportation

Projects within NVision50 provide not only for the completion of the 44-mile Naugatuck River Greenway but connector trails that reach all parts of the region. This network of multi-use trails will serve as the core of a broader active transportation network, allowing users of bicycles, micromobility devices, mobility assistive devices, and pedestrians to travel between town centers and transit stops.



To supplement the network of trails, multi-use side paths and on-road mobility lanes will provide access to local destinations. These facilities, implemented as part of a broader complete streets plan, will add an additional option to users.

## Mobility Equity

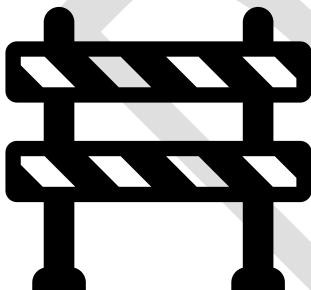
For too many residents and visitors to the NVCOG region, mobility is limited based on the lack of options in the current transportation system. This plan aims to address this equity issue by addressing the four parts of the NVCOG’s definition of mobility equity; mobility for all ages, mobility for all abilities, mobility for all incomes, and mobility from anywhere to everywhere. This plan addresses mobility equity in two ways; adding additional mobility options for all users and reducing the impact of the roadway network.

Projects identified in NVision50 complete the region’s trail network, put a renewed focus on complete streets throughout the region’s cities and towns, and expand the transit network. Outcomes related to this primary planning goal are further discussed under the Mode Choice target.



Several of the region’s major projects, including the largest and most significant, all work to mitigate the impacts of the region’s transportation network on the surrounding residents. By reconnecting local streets that were bisected by highway construction, residents can benefit from the services and jobs located throughout their city. Additionally, based on air quality conformity modeling, pollution emitted from the transportation system decreases drastically by 2050, having the greatest impact on those with health issues who live and work near major highways.

## Efficiency

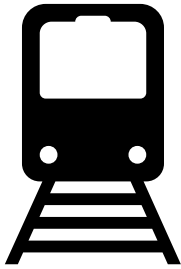


Minor roadway expansions, improved transit options, and greater active transportation access will all work to address congestion on the region’s roads. While there is no one simple answer, the many actions included in this plan, including the major projects of statewide importance being lead by the CTDOT, will all contribute to addressing the least predictable and most congested locations within the CNVMPO. The 9% of funding committed to preservation of the system will improve the quality of our infrastructure, across the transportation system, to better serve existing users more efficiently.

## Mode Choice

A key contributing factor to mobility equity is providing mode choice for all users; ensuring that no matter how an individual wants to travel they can do so safely and conveniently. Improvement projects within the MTP add significant extension to the region's bicycle network, as well as upgrade and complete facilities for those walking/rolling. Not only does this open traditional active transportation options to more residents but it provides for additional micromobility options including e-bikes and scooters.

The \$610 million programmed into transit improvements and service, along with the several significant but unfunded priorities, will provide intercity connections for passengers across the region, ensuring that the two largest NVCOG cities, Bristol and Waterbury, are connected via transit, and providing access to Hartford and points north, New Haven and points east, and expanding the number of people with access to New York and points west and south.

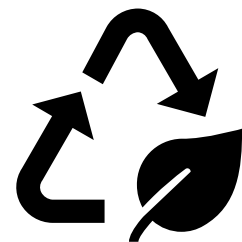


The inclusion of Bus Rapid Transit along the Route 8 corridor, and decreased headways along rail and bus systems, provides new and better options for residents throughout the region, ensuring that everyone has the ability to choose how they would like to travel.

## Environmental Protection

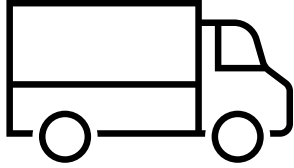
Projects identified in NVision50 will work to reduce the impact of the transportation network on the environment. As identified in the air quality conformity determination included as Appendix B to this document, all the region's non-attainment categories are improved by implementation of projects within and surrounding this region. By 2050, all three non-attainment categories within Connecticut are well below their emission budgets. Electrification of the passenger rail system and buses, along with the switch from internal combustion to alternative power sources in personal vehicles will all benefit the region's air and water quality.

Additionally, the increase in options for travelers to those with less environmental impact, particularly active transportation, will further yield benefits in this category. Bridge and culvert improvements, along with non-transportation related habitat restoration projects, will bring native species back to the region's waterways.

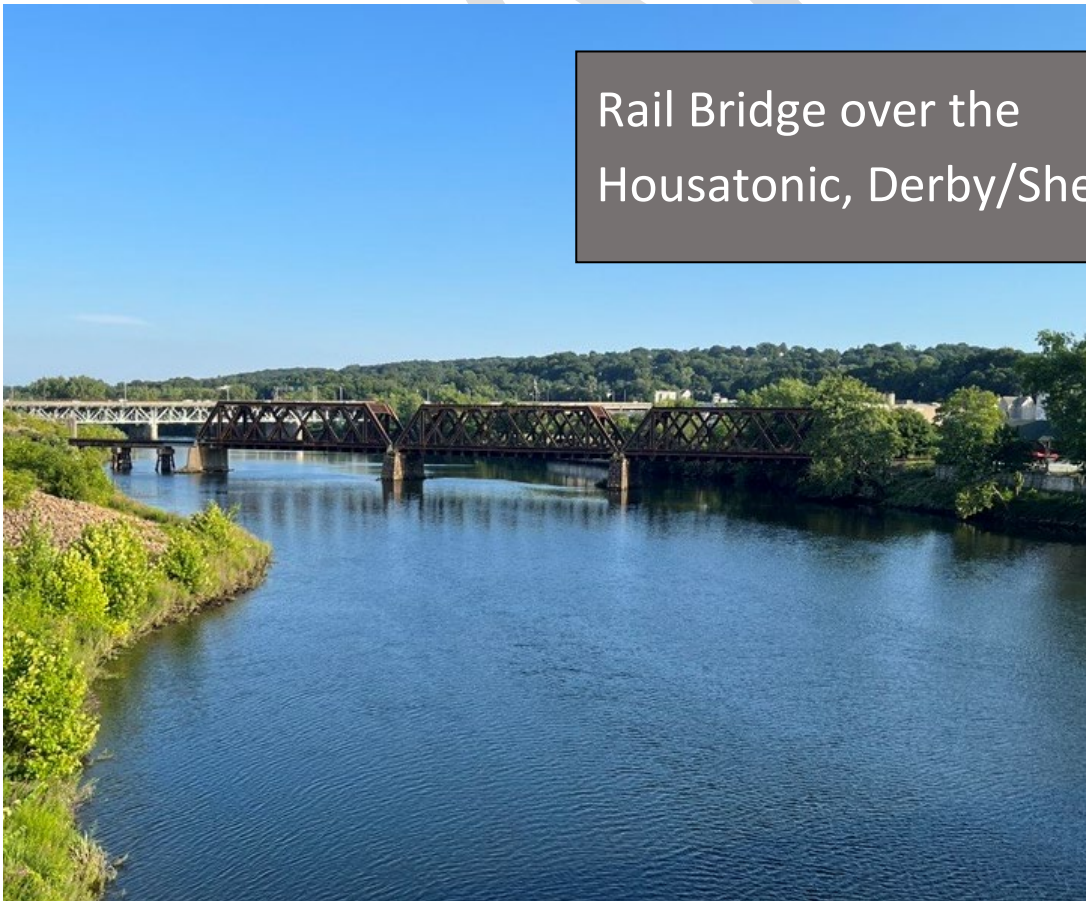


## Freight

Movement of materials and goods throughout the region are essential to the economy and well-being of residents. Reliability of the roadway network is one of the most important aspects of planning for the freight industry, and NVision50 utilizes a series of preservation and improvement projects to reduce unpredictability within the highway system. Ensuring consistency in cross-section across Interstate 84, addressing the challenge of grades and curves at the interchange between Interstates 84 and 691, and addressing the short weaves and dangerous ramp spacing along Route 8 will improve safety and reduce congestion, improving consistency for freight companies.



Improvements to the freight rail network will also provide an alternative for shippers and receivers, help to reduce truck miles on the region's highways, and support economic growth in former industrial zones. Improvements to capacity throughout the region, the construction of an inland port in Naugatuck to transfer freight from rail to truck, and improved transfer sites between railroads will all work to ensure the freight network is a driver of economic growth and wellbeing.



Rail Bridge over the Housatonic, Derby/Shelton