

Regional Transportation Plan for the Valley Planning Region: 2015 - 2040



Prepared by:

Valley Council of Governments
April 2015

Acknowledgements

The long range transportation plan for the Valley planning region was prepared by the Valley Council of Governments in cooperation with member municipalities and the Valley Transit District. It was completed under the VCOG's FY 2015 Unified Planning Work Program and funded through the UPWP by the US Department of Transportation (Federal Highway Administration and Federal Transit Administration), Connecticut Department of Transportation and member municipalities. The findings and conclusions expressed in the report are those of the VCOG and do not reflect the official views of CTDOT or the USDOT.

Sources of copies

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For more information

For more information about the VCOG's transportation planning process and the update of the long range transportation plan, please visit the VCOG's website at: www.nvcogct.org

Valley Council of Governments Board

The Honorable David Casseti, Mayor, City of Ansonia

The Honorable Anita Dugatto, Mayor, City of Derby

The Honorable W. Kurt Miller, First Selectman, Town of Seymour

The Honorable Mark Lauretti, Mayor, City of Shelton

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May 1, 2015

Abstract

The Valley Council of Governments (VCOG) is a multi-discipline, regional planning organization with four member communities. The VCOG is the federally designated transportation planning agency for the Valley Planning Region and conducts the transportation planning process in accordance with federal regulations, including planning guidelines provided in MAP-21. It also serves as the transportation planning agency for the Greater Bridgeport and Valley Metropolitan Planning Organization (MPO). The MAP-21 requires the preparation and update of a long range transportation plan (LRTP) for the region at least every four years. The LRTP, among many requirements:

- Must have at least a 20-year planning horizon.
- Must be multi-modal, in that all modes must be considered – highway, public transit, bicycle and pedestrian.
- Provide opportunities for the public to participate in the planning process.
- Follow a continuing, cooperative and comprehensive (3-Cs) planning process for making transportation investment decisions.
- Be financially constrained, that is, there must be a reasonable expectation that funds will be available to implement the proposed projects.

The LRTP was last updated and endorsed by the MPO in 2011 and, in order to fully comply with MAP-21 planning guidelines, a new LRP

for the region needs to be approved and in place by May 1, 2015. The new LRTP covers a timeframe beginning in 2015 and ending in 2040, a 25-year planning horizon.

The long range plan reflects the future transportation needs of the Valley planning region and includes recommended actions, programs and projects to improve, enhance and better manage and operate the public transit and highway systems, promote alternative modes, accommodate bicyclists and pedestrians, consider other non-motorized modes of transportation, provide freight mobility and mitigate environmental impacts. It also adheres to the six livability principles established by the US DOT, HUD and EPA. The proposed actions are intended to accommodate existing travel, make the current transportation system more efficient, meet growing travel requirements and improve mobility within the area.

The recommended plan actions focus on the preservation and maintenance of the essential systems and services in the region and better operations and management of systems. There is also an emphasis on expanding the use of alternative transportation modes, as well as, on various non-traditional programs. A critical focus of the new plan is to realize a link between transportation and land use planning.

GREATER BRIDGEPORT AND VALLEY METROPOLITAN PLANNING ORGANIZATION

Ansonia•Bridgeport•Derby•Easton•Fairfield•Monroe•Seymour•Shelton•Stratford•Trumbull

RESOLUTION 2015-09

**ENDORSEMENT
RESOLUTION ON CONFORMITY WITH THE CLEAN AIR ACT
OZONE**

WHEREAS, the **Greater Bridgeport and Valley MPO** is required to submit an Air Quality Conformity Statement to the US Federal Highway Administration (FHWA) and to the US Environmental Protection Agency (EPA) in accordance with the final conformity rule promulgated by EPA (40 CFR 51 and 93) when adopting an annual Transportation Improvement Program or when effecting a significant revision of the Regions Transportation Plan; and

WHEREAS, Title 42, Section 7506 (3) (A) states that conformity of transportation plans and programs will be demonstrated if:

1. the plans and programs are consistent with recent estimates of mobile source emissions;
2. the plans and programs provide for the expeditious implementation of certain transportation control measures;
3. the plans and programs contribute to annual emissions reductions consistent with the Clean Air Act of 1977, as amended; and

WHEREAS, It is the opinion of the **Greater Bridgeport and Valley MPO** that the plans and programs approved on **April 14, 2015** and submitted to FHWA and EPA conform to the requirements of Title 42, Section 7506 (3) (A) as interpreted by EPA (40 CFR 51 and 93); and

WHEREAS, The State of Connecticut has elected to assess conformity in the Connecticut portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT Ozone Marginal Nonattainment area (Fairfield, New Haven and Middlesex Counties) and the Connecticut Department of Transportation has jointly assessed the impact of all transportation plans and programs in these Nonattainment areas (Ozone Air Quality Conformity Report (**March 2015**); and

WHEREAS, The Connecticut Department of Transportation's assessment (above) has found that plans and programs jointly meet mobile source emission's guidelines advanced by EPA pursuant to Section 7506 (3) (A).

NOW, THEREFORE BE IT RESOLVED by the **Greater Bridgeport and Valley MPO**, That the **Greater Bridgeport and Valley MPO** finds that the 2015 **Long Range Transportation Plans for the Greater Bridgeport and Valley regions** and the **FFY 2015-2018 Transportation Improvement Program** and all Amendments conform to air quality requirements of the U.S. Environmental Protection Administration (40 CFR 51 and 93), related U.S. Department of Transportation guidelines (23 CFR 450) and with Title 42, Section 7506 (3) (A) and hereby approves the existing March 2015 Ozone Air Quality Conformity Determination contingent upon no major adverse comments being received during said period.

CERTIFICATE

The undersigned duly qualified and acting Secretary of **Greater Bridgeport and Valley MPO** certifies that the foregoing is a true and correct copy of a resolution adopted at a legally convened meeting of the **Greater Bridgeport and Valley MPO** on **April 14, 2015**.



Brian Bidolli, Executive Director
GBRC – MPO Co-Secretary



Richard T. Dunne, Executive Director
VCOG – MPO Co-Secretary

Date: 4/14/2015

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GREATER BRIDGEPORT AND VALLEY METROPOLITAN PLANNING ORGANIZATION

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RESOLUTION 2015-10

**ENDORSEMENT
RESOLUTION ON CONFORMITY WITH THE CLEAN AIR ACT
PM 2.5**

WHEREAS, the **Greater Bridgeport and Valley MPO** is required to submit an Air Quality Conformity Statement to the US Federal Highway Administration (FHWA) and to the US Environmental Protection Agency (EPA) in accordance with the final conformity rule promulgated by EPA (40 CFR 51 and 93) when adopting an annual Transportation Improvement Program or when effecting a significant revision of the Region's Transportation Plan; and

WHEREAS, Title 42, Section 7506 (3) (A) states that conformity of transportation plans and programs will be demonstrated if:

1. the plans and programs are consistent with recent estimates of mobile source emissions;
2. the plans and programs provide for the expeditious implementation of certain transportation control measures;
3. the plans and programs contribute to annual emissions reductions consistent with the Clean Air Act of 1977, as amended; and

WHEREAS, It is the opinion of the **Greater Bridgeport and Valley MPO** that the plans and programs approved on **April 14, 2015** and submitted to FHWA and EPA conform to the requirements of Title 42, Section 7506 (3) (A) as interpreted by EPA (40 CFR 51 and 93); and

WHEREAS, The Connecticut portion of the New York – Northern New Jersey – Long Island, NY-NJ-CT area is designated a PM 2.5 attainment/maintenance area; and

WHEREAS, The State of Connecticut has elected to jointly assess conformity in all PM 2.5 attainment/maintenance areas in Connecticut (Fairfield County and New Haven County) and

WHEREAS, The results of the required emissions analysis performed by the Connecticut Department of Transportation on the 2015 **Long Range Transportation Plans for the Greater Bridgeport and Valley regions** and the FFY 2015-2018 **Transportation Improvement Program** and Amendments show that the implementation of the projects contained therein will result in emissions of PM2.5 in each analysis year that are less than the emissions of the baseline year; and

NOW, THEREFORE BE IT RESOLVED, that the **Greater Bridgeport and Valley MPO** finds that the 2015 **Long Range Transportation Plans for the Greater Bridgeport and Valley regions** and the FFY 2015-2018 **Transportation Improvement Program** and all Amendments conform to air quality requirements of the U.S. Environmental Protection Administration (40 CFR 51 and 93), related U.S. Department of Transportation guidelines (23 CFR 450) and with Title 42, Section 7506 (3) (A) and hereby approves the existing March 2015 PM2.5 Conformity Determination contingent upon no major adverse comments being received during said period.

CERTIFICATE

The undersigned duly qualified and acting Secretary of **Greater Bridgeport and Valley MPO** certifies that the foregoing is a true and correct copy of a resolution adopted at a legally convened meeting of the **Greater Bridgeport and Valley MPO** on **April 14, 2015**.



Brian Bidolli, Executive Director
GBRC – MPO Co-Secretary



Richard T. Dunne, Executive Director
VCOG – MPO Co-Secretary

Date: 4/14/2015

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GREATER BRIDGEPORT AND VALLEY METROPOLITAN PLANNING ORGANIZATION

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RESOLUTION 2015-11

ENDORSEMENT LONG RANGE REGIONAL TRANSPORTATION PLANS: 2015 ~ 2040 FOR THE GREATER BRIDGEPORT PLANNING REGION AND THE VALLEY PLANNING REGION

WHEREAS, the Greater Bridgeport Regional Council and the Valley Council of Governments are designated by the US Department of Transportation as the transportation planning agencies for, respectively, the Greater Bridgeport Planning Region and the Valley Planning Region, and conduct the transportation planning process in accordance with Section 34 of Title 23 of the United States Code, as amended by the *Moving Ahead for Progress in the 21st Century (MAP-21)* and related US Department of Transportation planning regulations;

WHEREAS, the Greater Bridgeport Regional Transportation Plan: 2015 - 2040 was prepared by the GBRC in 2015 and endorsed by the Greater Bridgeport and Valley Metropolitan Planning Organization at its April 14, 2015, meeting;

WHEREAS, the Regional Transportation Plan for the Valley Planning Region: 2015 - 2040 was prepared by the VCOG in 2015 and endorsed by the Greater Bridgeport and Valley Metropolitan Planning Organization at its April 14, 2015, meeting;

WHEREAS, the *MAP-21* requires MPOs to prepare and develop long range transportation plans every four years that reflect at least a 20-year planning horizon, are financially constrained, comply with federal planning guidelines, consider eight planning factors, consider six livability principles and conform to the *Clean Air Act Amendments of 1990* and Connecticut's *State Implementation Plan for Air Quality*, as revised;

WHEREAS, the GBRC completed a minor update of its existing long range transportation plan and the new *Plan* was prepared through the transportation planning process and in conformity with *MAP-21* planning guidelines;

WHEREAS, the VCOG completed a minor update of its existing long range transportation plan and the new *Plan* was prepared through the transportation planning process and in conformity with *MAP-21* planning guidelines;

WHEREAS, the GBRC and VCOG conducted a proactive public involvement process that followed the procedures set forth in the GBVMPOs *Public Participation Program* handbook, as revised, including making the draft plans available to the public electronically (on the web), notifying the public of the new plans and soliciting review and comment, providing at least a 30-day review period, holding public information meetings (April 7, 2015 at the office of the GBRC and April 9, 2015 at the office of the VCOG), recording comments from the public and considering and responding to comments;

WHEREAS, the proposed program of projects recommended in the GBRC's and VCOG's long range transportation plans were assessed for their impacts on air quality and the State's ability to attain *8-Hour Ozone and PM_{2.5} National Ambient Air Quality Standards*;

WHEREAS, the regional emissions assessments demonstrate that the proposed projects will not have an adverse impact on air quality.

NOW, THEREFORE BE IT RESOLVED that the Greater Bridgeport and Valley Metropolitan Planning Organization, after reviewing the final draft *Regional Transportation Plan for the Greater Bridgeport Planning Region: 2015 ~ 2040* and the final draft *Valley Council of Government's Long Range Regional Transportation Update 2015 ~ 2040*, find that the *Plans* and all Amendments conform to air quality requirements of the U.S. Environmental Protection Agency (40 CFR 21 and 93), related U.S. Department of Transportation guidelines (23 CFR 450) and with Title 42, Section 7506 (3) (A) and hereby endorses these plans as the MPO's official long range transportation plans for the Greater Bridgeport Planning Region and Valley Planning Region, respectively contingent upon no major adverse comments being received during the 30-day public comment period.

This resolution shall become effective as of April 14, 2015.

We, the undersigned co-secretaries of Greater Bridgeport and Valley Metropolitan Planning Organization (GBVMPO), Connecticut, do hereby certify that the resolution adopted by the GBVMPO at a public meeting held on April 14, 2015, at which a quorum was present and that the same is a correct and true transcript from the original thereof.

Respectfully submitted,



Brian Bidolli, Executive Director
GBRC – MPO Co-Secretary



Richard T. Dunne, Executive Director
VCOG – MPO Co-Secretary

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Date: 4/14/2015

GREATER BRIDGEPORT AND VALLEY METROPOLITAN PLANNING ORGANIZATION
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RESOLUTION 2015-12

**URBAN TRANSPORTATION PLANNING CERTIFICATION
GREATER BRIDGEPORT AND VALLEY MPO**

WHEREAS, the Greater Bridgeport and Valley Metropolitan Planning Organization (MPO) is authorized by the *Moving Ahead for Progress in the 21st Century (MAP-21)* relating to self-certification of metropolitan planning organizations, requires the MPO to certify that the metropolitan transportation planning process is being carried out in accordance with all applicable US Department of Transportation requirements and must submit such certification concurrent with the submittal of the entire proposed TIP to the FHWA and the FTA as part of the STIP approval;

WHEREAS, the Greater Bridgeport Regional Council and the Valley Council of Governments conduct the transportation planning process for their respective planning regions in accordance with the planning regulations promulgated by the US Department of Transportation and specified in the *MAP-21*, by preparing an annual Unified Planning Work Programs for their respective regions, conducting and performing transportation planning activities as contained in their UPWP's, cooperatively preparing, maintaining and amending the endorsed short-range transportation improvement program (TIP), preparing and updating the long range regional transportation plans (LRPs), assessing the air quality impacts of the proposed transportation improvement projects included in the TIP and LRPs, and proactively involving the public in the transportation planning process and;

WHEREAS, the GBVMPPO adheres to the principles of non-discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity, as specified in Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990 and Older Americans Act, and regarding the involvement of disadvantaged business enterprises in USDOT funded projects and the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts.

NOW, THEREFORE BE IT RESOLVED that the Greater Bridgeport and Valley Metropolitan Planning Organization, the Metropolitan Planning Organization for the Bridgeport-Stamford Urbanized Area covered by Greater Bridgeport and the Valley planning regions, hereby certifies that the urban transportation planning process has been and is being conducted in accordance with the terms and provisions of the rules and regulations promulgated by the US Department of Transportation under the *MAP-21* and that all applicable provisions relative to involvement of public and private providers of mass transportation, civil rights, involvement of minority business enterprises, special efforts for elderly and disabled persons, the Clean Air Act and amendments, 23 U.S.C and 49 U.S.C have been satisfied.

This resolution shall become effective as of April 14, 2015.

We, the undersigned co-secretaries of Greater Bridgeport and Valley Metropolitan Planning Organization (MPO), Connecticut, do hereby certify that the resolution adopted by the MPO at a public meeting held on April 14, 2015, at which a quorum was present and that the same is a correct and true transcript from the original thereof.



Brian Bidolli, Executive Director
GBRC – MPO Co-Secretary



Richard T. Durne, Executive Director
VCOG – MPO Co-Secretary

DATE: April 14, 2015

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Table of Contents

Acknowledgements.....	i	Alternate Modes of Transportation	24
Abstract.....	ii	Waterbury Branch Commuter Rail Line	25
GBVMPO Endorsements	iii	Transit Oriented Development.....	31
The Valley Planning Region	1	Complete Streets Policy	35
Greater Bridgeport-Valley MPO.....	3	Federal Transportation Funding Programs	38
Transportation Planning Process	5	Recommended Transportation Improvement Projects	41
Environmental Justice	10	Air Quality Conformity Determination	51
Public Involvement and Outreach	11	Financial Assessment.....	55
Transportation System.....	13		
Transportation Issues.....	15		
Transportation Goals	18		
Air Quality Goals	20		
Sustainable Communities Initiative	21		
Locally Coordinated Human Services Transportation Program.	23		

The Valley Planning Region

The Valley planning region is located in southwestern Connecticut midway between three of the largest cities in Connecticut: the City of Bridgeport to the south, the City of New Haven to the east, and the City of Waterbury to the north. It straddles the boundary between Fairfield and New Haven Counties. The geographic area of the region is relatively small at about 58 square miles. The combined population of the region is 88,545 people (2013 ACS). The combination of population and area results in a population density of 1,516.2 persons per square mile, indicating a fairly densely settled and intensely developed area. The Valley Region is located wholly within the Census-defined Bridgeport-Stamford Urban Area and 100% of its residents live in the urban area.

The Valley planning region is comprised of four lower Naugatuck Valley communities:

- City of Ansonia,
- City of Derby,
- Town of Seymour and
- City of Shelton.

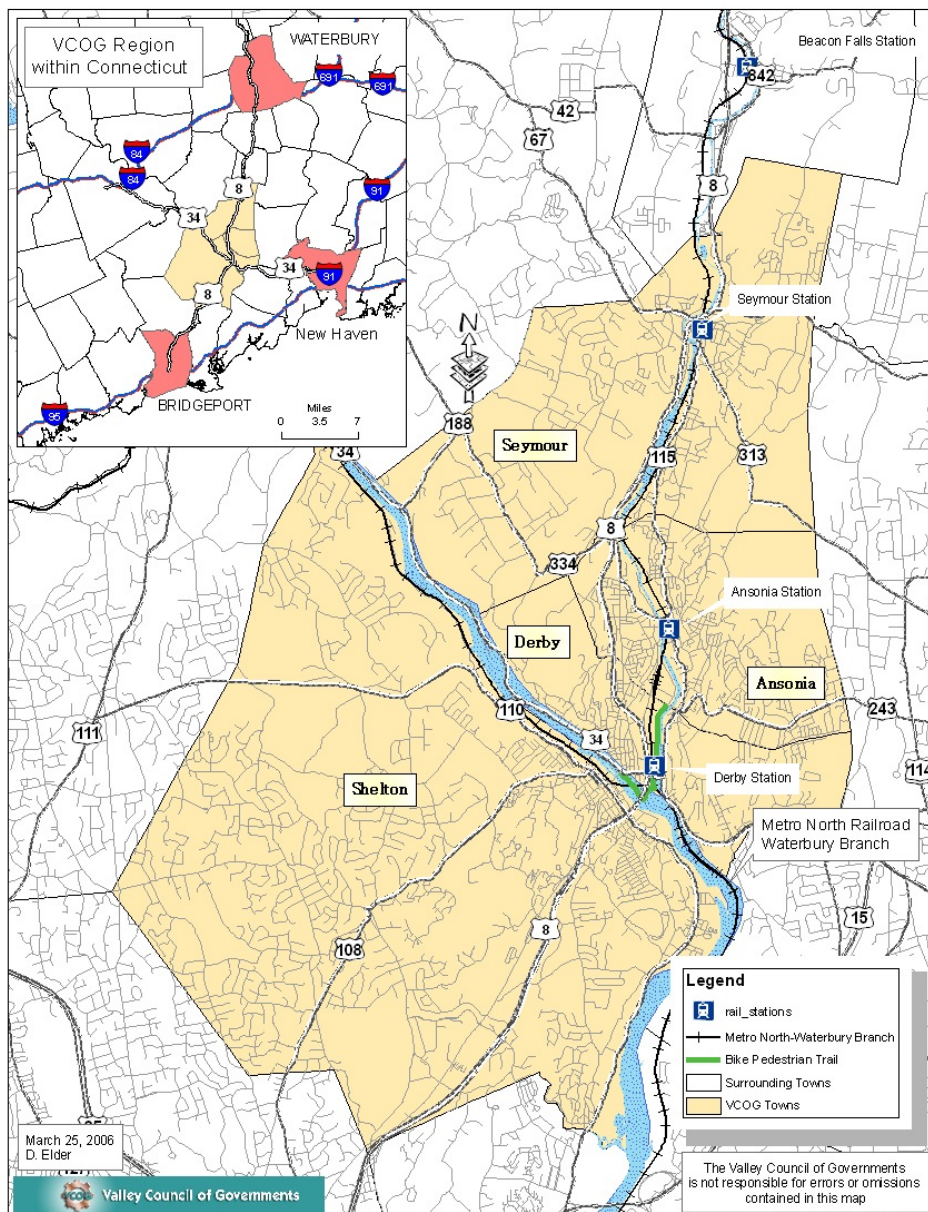
Historically, the region supported a robust manufacturing economy based on its location along the Naugatuck and Housatonic Rivers and access to waterpower and waterborne transportation. During the peak period of manufacturing, the region developed the infrastructure to support the manufacturing sector, including public water supply, sanitary sewers and transportation infrastructure.

Dense residential developments were also built to provide work force housing in proximity of the manufacturing plants. Businesses and manufacturing plants were located in town centers and the downtown areas became the focal points for residents and met all of their essential needs.

The geography of the area further defined the region as the steep slopes along the rivers confined the town centers and created compact downtowns that limited opportunities for expansion. However, this land patterns resulted in downtowns that had an intimate scale.

The Valley Region has a long and rich history in transportation. As an early river port and a major manufacturing center of Connecticut, the area has capitalized on multi-modal opportunities for more than 100 years. The area benefits from the confluence of the Housatonic and Naugatuck Rivers. The Housatonic River, a navigable waterway from Long Island Sound to Derby, functioned as a means of goods transport. Cargo ships would travel up and down the river and meet the trains at the East Derby Transfer Point.

Before the proliferation of the automobile, the Waterbury rail line was the dominant mode of transportation. The rail service provided intercity and inter-regional passenger, as well as freight, connections. The region was also one of the earliest areas to develop trolley lines for localized travel. The trolley system also connected the region to New Haven.



The expansion of the road network following World War II changed the character of the region. Manufacturing businesses began to relocate to areas with less expensive operating costs and residents began to shift their travel to other communities for shopping and social activities. The construction of Route 8 as an limited access expressway in the early 1960s provided an efficient and convenient means to travel to other areas. As a result, the downtown areas declined and were transformed from vibrant communities. These areas are now under-populated and contain Brownfields; however, they retain well-developed infrastructure and are served by both bus and rail.

The area was further devastated by severe flooding of Naugatuck River in August of 1955 from the unusual occurrence of two named hurricanes, Connie and Diane, passing within proximity of Connecticut within nine days. While neither storm directly struck Connecticut, their combined impact was immense. Over the two day period, up to 20 inches of rain fell in parts of New England. This resulted in arguably the most devastating inland floods to ever hit the state. The damage was estimated to have exceeded 1.5 billion dollars (1955 dollars).

Subsequent to this flood event, a series of dams and levees were constructed along the Naugatuck River to protect flood prone town centers of Ansonia, Derby and Shelton. The areas along the Housatonic River do not have the same level of protection and significant flooding has occurred in recent years.

While Shelton has experienced substantial economic growth, especially in the commercial and office sectors, almost all of the development has occurred outside the downtown area. Some new development has been built in recent years, including residential units. Ansonia, Derby and Seymour have seen a virtual halt to development during the economic downturn that began in 2008. For the most part, these communities are generally considered “built-out” with little land available for new construction. As such, most economic activity focuses on rehabilitation and reuse of older, vacant or under-utilized buildings or infill. Many of the potential sites are considered “brownfields” in need of environmental remediation.

Greater Bridgeport-Valley MPO

In 1982, a memorandum of understanding was executed establishing the consolidated **Greater Bridgeport and Valley Metropolitan Planning Organization (GBVMPO)** and combining the separate Greater Bridgeport and Valley planning regions as the federally designated transportation planning organization for the Bridgeport Urbanized Area. Prior to 1982, the regions were included in the New York Metropolitan Planning Region, with the Tri-State Planning Commission serving as the MPO.

Over the years, the Census-defined urban areas in Connecticut were adjusted and expanded. After the 2000 Census, the Bridgeport UA was consolidated with the separate Stamford and Norwalk urbanized areas to form the Bridgeport-Stamford CT-NY Urbanized Area. The

consolidated urban area comprises the whole or parts of 24 cities and towns in five planning regions in Connecticut plus parts of five towns in New York State.

In 2002, an MOU was established between the pertinent MPOs, RPOs, and FTA-designated transit recipients included in the Bridgeport-Stamford Urbanized Area. The MOU described the planning roles and responsibilities of each of the partner organizations and defined the process for allocating federal transportation funding assistance.

The GBVMPO continues to function as the federally designated transportation planning organization for the Greater Bridgeport and Valley portions of the Bridgeport-Stamford Urban Area. The GBVMPO is currently comprised of the Chief Elected Officials of the ten municipalities of the two planning regions:

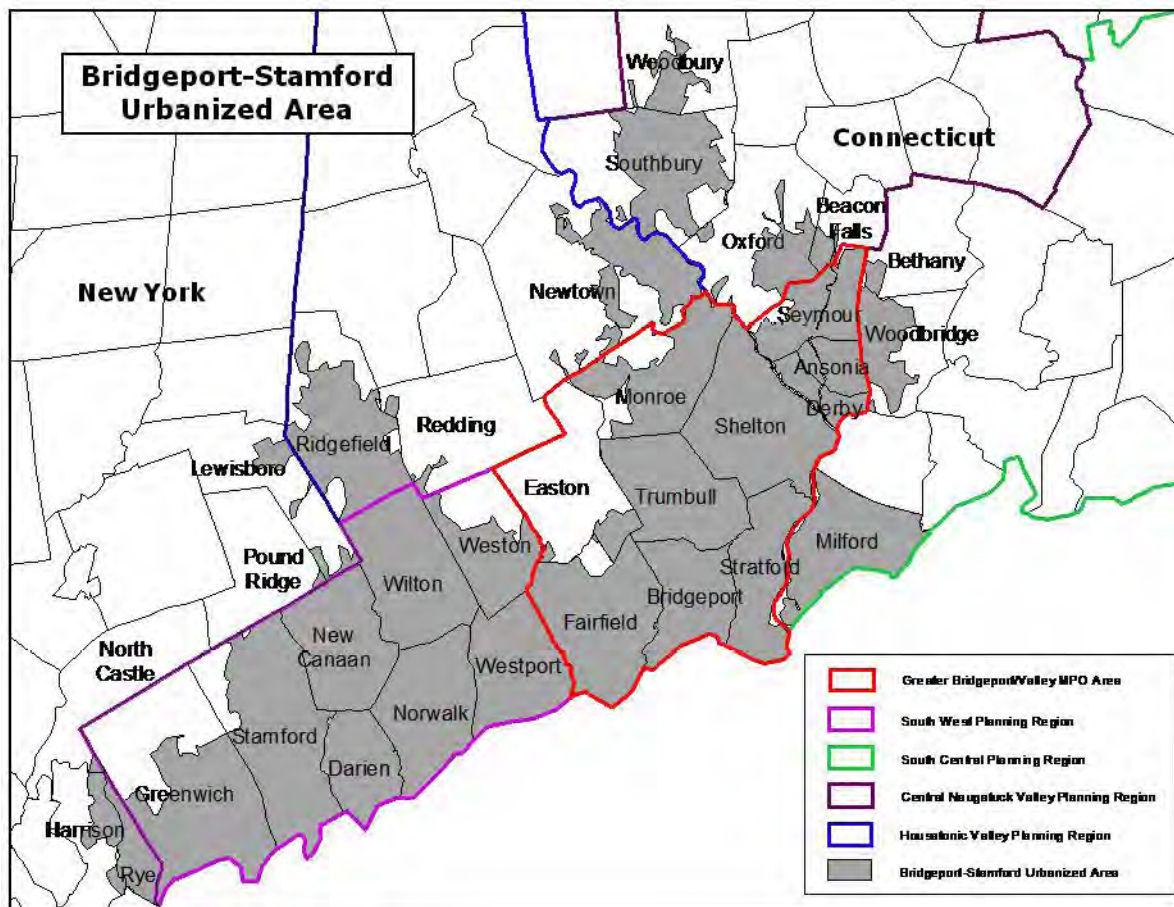
Valley Council of Governments (Valley Planning Region):

- Ansonia-Derby-Seymour-Shelton

Greater Bridgeport Regional Council (Greater Bridgeport Planning Region):

- Bridgeport-Easton-Fairfield-Monroe-Stratford-Trumbull

The chairpersons of the public transportation providers serving the regions (Greater Bridgeport Transit Authority and the Valley Transit District) are also voting members of the GBVMPO.



The staffs of the respective regional planning organizations (RPOs) conduct the transportation planning process for the GBVMPO. The principal tasks include:

1. Approving/endorsing transportation improvement projects that will receive federal transportation financial assistance.

These projects are compiled into a four-year transportation improvement program or TIP. The TIP is the transportation capital plan for the regions for the next four years. The GBVMPO is responsible for amending the TIP as necessary to program priority projects and to ensure a financially constraint capital plan.

2. Preparing a long-range transportation plan that assesses the transportation systems of the regions and identifies the preferred actions and projects to address system deficiencies.

3. Adopting an Air Quality Conformity Statement that certifies that the transportation improvement projects being implemented by the MPO are consistent with the goals of the Clean Air Act and will not adversely impact efforts by the state to attain air quality standards. The CTDOT is responsible for assessing the air emissions impacts of the MPO's TIP and long-range transportation plan.

4. Providing input, advice and recommendations on significant transportation actions and projects, including major investment studies, to the CTDOT. This involves both direct input at quarterly GBVMPO meetings and through the conduct of transportation studies.

Transportation Planning Process

The Valley Council of Governments' (VCOG) is a multi-discipline, regional planning organization for the Valley planning region and is the federally designated transportation planning agency. The VCOG conducts transportation planning process in accordance with federal regulations and serves as the transportation planning agency for the Greater Bridgeport and Valley Metropolitan Planning Organization (MPO). Oversight of the metropolitan transportation planning process is jointly provided by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA).

The development of the Long Range Regional Transportation Plan (LRTP) for the Valley planning region adhered to the guidelines and planning regulations included in Title 23 of the Code of Federal Regulations (CFR), Section 450.322, as amended by federal transportation acts. The current federal legislation governing the region's transportation planning process is the *Moving Ahead for Progress in the 21st Century Act*, commonly referred to as MAP-21. MAP-21 was signed into law on July 6, 2012, and was the first multi-year transportation authorization enacted since 2005. MAP-21 expired on September 30, 2014, but the *Highway and Transportation Funding Act of 2014* extended MAP-21 through May 31, 2015.

MAP-21 authorized federal surface transportation funding for various highway, transit and safety programs. It also made changes

to the planning guidelines and regulations that state how metropolitan planning is conducted. The key planning guidelines are:

- The LRTP must have at a 20-year horizon.
- The LRTP must be consistent with air quality goals and ensure conformity with the applicable clean acts.
- The LRTP must be fiscally constraint and be based on a reasonable anticipation of federal transportation financial assistance.
- The LRTP must contain short-range operational and management strategies and actions, as well as long term actions to improve the performance of the existing transportation system, address regional issues and facilitate the efficient movement of both people and goods.
- The LRTP must be multi-modal and lead to a balanced and integrated multimodal transportation system, including enhanced non-motorized transportation modes.
- The latest available population, land use, travel, employment, congestion and economic activity estimates must be used to assess the performance of the transportation system.
- Other planning officials who may be affected by transportation decisions and investments must consulted during the update of the LRTP, and the LRP must promote consistency with municipal plans of conservation and development and with the state plan of conservation and development.

- The LRTP must consider the eight planning factors as listed in MAP-21.
- Potential mitigation activities to address potential environmental impacts from recommended transportation investments needs to be included in the LRP.
- The public must be provided an opportunity to participate in the development of the LRTP.

The primary goal of the LRTP is meet the future mobility needs of the residents of the Valley planning region. The VCOG followed a continuing, cooperative and comprehensive framework (“3-C” planning process) for making the transportation investment decisions included in the LRTP. This approach enables changes in the transportation system to be monitored and reflected in the both the short- and long-range capital improvement programs. By cooperating and interacting with partners and stakeholders, it is possible to achieve mutual support and consider community concerns. A comprehensive process ensures that all transportation modes are considered and provided the same level of importance.

The current LRTP was endorsed by the GBVMPO in May 2011, and needs to be updated to reflect the changes in the region’s transportation system and address new planning regulations stipulated in MAP-21. A key feature of MAP-21 is the establishment of a performance-based program that will ensure transportation investments will make progress toward achieving national transportation goals. The national performance goals for the federal

aid transportation system were established in seven critical areas [§1203; 23 USC 150(b)]:

1. Safety: To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
2. Infrastructure Condition: To maintain the highway infrastructure asset system in a state of good repair.
3. Congestion Reduction: To achieve a significant reduction in congestion on the National Highway System.
4. System Reliability: To improve the efficiency of the surface transportation system.
5. Freight Movement and Economic Vitality: To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. Environmental Sustainability: To enhance the performance of the transportation system while protecting and enhancing the natural environment.
7. Reduced Project Delivery Delays: To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies’ work practices.

As of this update of the LRTP, the state has not established performance targets; therefore, the LRTP does not include a description of performance measures and targets used to develop

capital investment plans. The MPO commits to working with the state and public transportation providers in developing performance measures and will establish performance measures within 180 days after the date that the Connecticut Department of Transportation (CTDOT) has established performance targets. The performance measures will be subsequently integrated into the transportation planning process.

MAP-21 requires the LRTP to consider projects and strategies that will address eight specific planning factors [§1201; 23 USC 134(h)(1)]. The planning factors and how the LRTP addresses each factors are as follows:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
 - Revitalizing the city centers through the implementation of TOD projects and station area plans.
 - Reconstruction and modernization of interchange areas on Route 8 to provide better access to the city centers and improve efficiency.
 - Expansion of the incident management program and related ITS elements along Route 8.
 - Constructing a connector road between Route 42 in Beacon Falls and Route 67 in Seymour to spur economic development along the new corridor and provide access to potential development sites.
2. Increase the safety of the transportation system for motorized and nonmotorized users.
 - The LRTP is consistent with the CTDOT's highway safety improvement program (HSIP) and integrates the State Highway Safety Plan.
 - Route 8 operational improvements and modernization of interchange areas.
 - The LRTP includes includes projects that address high hazard locations:
 - Route 34 at Route 188 intersection improvement.
 - Route 34 reconstruction project, including advance traffic signal system, bi-directional bicycle lanes and pedestrian elements.
 - Spot improvements and minor widening along Route 67.
 - Route 108 at Isinglass Road intersection realignment.
 - Route 115 at Division Street and Route 243 intersection realignment.
 - Route 334 and Fountain Lake Road realignment.
 - Major widening of SR 714 (Bridgeport Avenue), including implementation of an access management program.
 - Extension of the Naugatuck River Greenway through Seymour and Ansonia, and construction of a pedestrian bridge over the Waterbury Branch Line.
 - Expansion of the incident management program and related ITS elements along Route 8.

3. Increase the security of the transportation system for motorized and nonmotorized users.
 - Transportation emergency management activities as part of the Region II Emergency Planning Team.
 - Identification of critical infrastructure in the Valley planning region.
4. Increase the accessibility and mobility of people and for freight.
 - Traffic signal modernization program – upgrade to include pedestrian signals, countdown signals, and accessible features (audible features).
 - Redevelopment and revitalization of city centers, including TOD and station area projects.
 - Enhancement of sidewalks and crosswalks with curb ramps, curb extensions and use of textured pavement material.
 - Enhance and facilitate intermodal connections between GBT and CT-Transit local bus service and commuter rail service at the Derby-Shelton Multi-Modal Center and Bridgeport rail station.
 - Expansion of the incident management program and related ITS elements along Route 8.
 - Route 8 operational improvements and modernization of interchange areas.
 - Goods movement and freight planning and coordination with the State Freight Plan.
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote

consistency between transportation improvements and State and local planned growth and economic development patterns.

- Consultation with state and local land use managers and environmental protection agencies.
 - Enhanced and expanded commuter rail service along the Waterbury branch line, including constructing a new station at Devon and instituting shuttle rail service along the WBL.
 - Extension of the Naugatuck River Greenway shared-use trails through the region.
 - Congestion management process and travel demand management actions.
 - Complete streets initiatives and access management programs.
 - Transit orient development (TOD) and station area plans to support downtown revitalization.
 - Alternative modes of transportation projects, including implementing Bus Rapid Transit in the Route 8 corridor to connect Derby with Bridgeport.
 - Constructing pedestrian and bicycle connections between downtown Shelton and the Derby-Shelton rail station, including rehabilitation of the Derby-Shelton Bridge to accommodate bi-directional bicycle lanes and pedestrian plaza.
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

- Enhancement of rail-bus transfer connections at the Derby-Shelton rail station, including creating designated bus bays for GBT and CT-Transit buses.
 - Goods movement and freight planning and coordination with the State Freight Plan.
 - Enhanced and expanded commuter rail service along the Waterbury branch line, including constructing a new station at Devon and instituting shuttle rail service along the WBL.
 - Implementing Bus Rapid Transit in the Route 8 corridor to connect Derby with Bridgeport.
7. Promote efficient system management and operation.
- Expansion of the incident management program and related ITS elements along Route 8.
 - Congestion Management System: Identify and assess intersections and corridors with recurring congestion and develop projects to reduce congestion and improve efficiency.
 - Safety Management System: Identify and assess high hazard intersections and corridors and develop a safety improvement program.
 - Public Transit Management System: Develop a ten year capital plan for VTD and CTDOT to ensure rolling stock and vehicles are replaced on a life-cycle schedule.
 - Traffic Data Monitoring Management System: The VCOG has worked with the towns and CTDOT's Project Concepts to provide bi-directional road counts and lane approach

volumes for engineering design including traffic signal design.

- Traffic signal system modernizing and interconnection projects.
8. Emphasize the preservation of the existing transportation system.
- Rebuilding and modifying interchange areas on Route 8 to improve operations and efficiency and provide better access to the region's city centers.
 - Traffic signal system modernizing and interconnection projects.
 - Rehabilitation and maintenance of existing systems in a state-of-good-repair.
 - Implementing low cost, intersection improvements designed to provide turn lanes and by-pass capabilities along arterials.
 - Transportation management and operations projects.

Transportation systems management emphasizes transportation efficiency both in terms of operations and in terms of capital improvements. The MPO has given top priority to low cost intersection improvements and minor reconstruction projects that seek to make the existing system more efficient.

The proposals and recommendations contained in the LRTP are in response to the area's geographic setting, environmental and economic resources, land use patterns, existing problems, and likely growth over the next twenty-eight years (2011-2040). The LRTP is

comprehensive, balanced, and multi-modal, being comprised of highways, maintenance and operation of the system, enhancements of the existing system, safety of the system, public transportation, multi-modal connectivity, and security of the system. The Plan is comprised of expressway, arterial connector, and public transit enhancements. In addition, the VCOG is planning proactively and in strict coordination with the region's land use planning efforts regarding demographic changes, a growing commuter population, and an increase in users of the public transit system to accommodate sustainable growth in an environmentally sound manner. The LRTP addresses freight through the region, emphasizes security in the system, and the interconnectedness of land use planning and its dyadic relationship with the transportation system. The Region's ability to expand transit by bus, train, multi-use trails, and expressway improvements will continue to be limited by financial constraints of projects contained in the local Transportation Improvement Plan (TIP) and Statewide Transportation Improvement Plan (STIP).

Environmental Justice

Executive Orders and US DOT regulations on Environmental Justice require recipients of federal transportation assistance, through their actions, to avoid, minimize and mitigate disproportionately high and adverse impacts to sensitive populations, including low income persons and minorities. This requires the GBVMPO to assess its transportation projects, plans and programs relative to the potential

impact on human health, environment and interrelated social and economic effects, and address disproportionately high and/or adverse impacts.

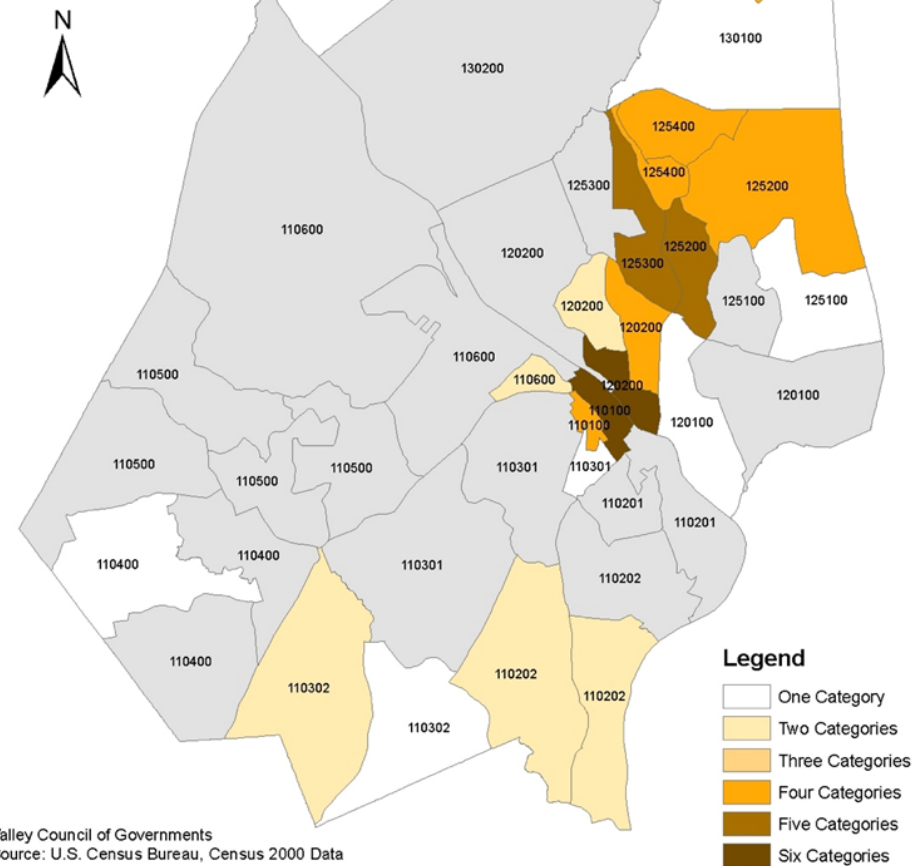
The intent of Environmental Justice is three fold:

1. To ensure full and fair participation of minority and low-income persons.
2. To ensure no action prevents, prohibits or makes it difficult for minority or low-income persons from participating in the transportation planning process.
3. To ensure transportation investments are made in minority and low-income areas and the improvements planned for these areas meet the needs of the residents, improve access to jobs and services, and increase overall mobility.

A demographic profile of the Valley planning region was developed to determine areas with concentrations of minority and low-income populations. The assessment also included identifying areas with a high proportion of the population having a transit dependency. The determination of areas of special concern was based on whether the area had a demographic value significantly different than the average for the region as whole. The spatial assessment of the demographic profile revealed that the "at risk" areas were scattered throughout the region and every municipality has at least one area that exceeds critical values.

Communities Exceeding One or More Critical Values

Categories of Environmental Justice include:
 1) Minority population
 2) Per capita income
 3) Persons below poverty level
 4) Households with public assistance
 5) Bus as means of transportation to work
 6) Number of households with zero vehicles available



Minority populations are concentrated in the downtown areas of Ansonia, Derby and Shelton. Low income populations are also concentrated in these areas, as well as in the town center of Seymour. Areas exceeding critical values on one or more variables are shown in the following map.

To ensure none of these areas is experiencing disproportionate and adverse impacts from transportation investments, the proposed projects included in the LRTP were geocoded and overlaid on the EJ thematic map. It is also important to ensure that transportation investments are being made in these areas. These investments need to be appropriate for the area and the residents living there and not causing an adverse and disproportionate impact.

The principle goals of the LRTP are to preserve and maintain the essential transportation services in the region, and enhance mobility. The recommended projects included in the LRTP will not adversely impact “at risk” populations and will enhance mobility of residents and increase access to jobs and services. The projects are intended to improve quality of life and create livable and sustainable communities.

Public Involvement and Outreach

Federal guidelines require an effective and proactive public participation program to ensure transportation stakeholders and public are apprised of transportation plans, projects and program

and are provided an opportunity to review plans and projects and provide comments. The *Greater Bridgeport/Valley MPO Public Participation Program* outlines the MPO's public involvement process. It requires providing the following:

- Complete information;
- Timely public notice;
- Full public access to key decisions;
- Early and continuing involvement of the public in developing the long range Plan and TIP;
- Making plans and reports available in an electronic format;
- Maintaining a list of interested stakeholders representing private transportation providers, environmental groups, public transit unions, business concerns, and other interested parties;
- Holding public meetings to inform the public about an MPO action of regional significance and solicit comments and opinions. Public meetings will be held in a timely fashion and in an accessible location;
- Proper and effective advertising of public meetings and proposed MPO actions using a range of media; and
- Responding to public comments.

In compliance with the adopted public involvement process, the VCOG conducts project-level public information meetings and hearings and posts information on active projects on its website. The Transportation Improvement Program (TIP) and LRTP are also

posted on the website, and public information meetings are held in advance of adoption of the TIP and LRTP by the GBVMPO. The public is also notified of the intent to modify and update these documents and is encouraged to review and comment on the proposed amendments.

The public outreach process for the update of the LRTP included the following activities:

- The proposed draft of the LRTP was released for public review and comment on March 31, 2015 and posted on the VCOG website;
- A summary report of proposed improvement projects was prepared and posted on the VCOG's website;
- Notification of the draft LRTP was published in the Connecticut Post on March 31, 2015;
- A 30-day public review and comment period was provided beginning on March 31, 2015 and ending on April 30, 2015. A news release was prepared and mailed to various transportation stakeholders and interested persons and organizations. Comments on the plan were received, reviewed and considered; responses were provided;
- A public information meeting was held on Thursday, April 9, 2015 at the offices of the VCOG located in the Derby Rail Station, in Derby, Connecticut. The meeting began at 5:00 pm and VCOG staff were available before the start of the meeting to informally discuss the LRTP;

- A presentation of the LRTP was made at the GBVMPO meeting held on April 14, 2015. Public comments were discussed and questions from the board members were answered. The public was provided an opportunity to comments of the LRTP.
- The GBVMPO endorsed the long range transportation plan at its April 14th meeting.

Transportation System

The Valley planning region is straddles Fairfield and New Haven counties and lies mid-way between Bridgeport, New Haven and Waterbury. Route 8 is the main travel corridor, extending as a limited access expressway in a north-south direction from Bridgeport to Winchester. It connects I-95, Route 15 (Wilbur Cross Parkway) and I-84. The region is also served by commuter rail operated by the Metro-North Railroad. Three stations are located along the Waterbury branch rail line: Derby-Shelton, Ansonia and Seymour.

The transportation system of the Valley region is diverse and offers its residents an integrated range of options. Key transportation facilities include:

- Route 8 Expressway – General Samuel Jaskilka Highway: Route 8 is a major north-south limited access highway through the Naugatuck River valley. It begins in Bridgeport at

the junction with I-95 and extends to the Town of Winchester in the northwest corner of the state, a distance of 58.3 miles. The highway continues as a two-lane arterial to the Massachusetts border. It was constructed in the early 1960s but was not completed until 1982. Through the Valley region, the expressway features an alignment that closely follows the curves of the Naugatuck River, has elevated viaducts through the town centers and has poorly design on- and off-ramps that lack adequate acceleration and deceleration lanes, provide partial access at some locations, are short in length and often connect with residential streets.

- Several principal arterials – State Route 34, State Route 115, State Route 113 and Pershing Drive (SR 727).
- An interconnected network of minor arterials – State Route 67, State Route 108, State Route 110, State Route 115, State Route 188, State Route 243, State Route 313, State Route 334, Bridgeport Avenue (SR 714), Huntington Street, and Constitution Boulevard.
- Local fixed-route bus services provided by the Greater Bridgeport Transit (GBT) and Connecticut Transit-New Haven Division (CT-Transit). The GBT operates three routes from downtown Bridgeport to the Valley planning region. Route 15 operates over Bridgeport Avenue in Shelton to the Derby-Shelton train station and provides service to the businesses located on Bridgeport Avenue. Route 22X is operated as an expressway to the Shelton Office Park via the Route 8 Expressway. It is operated only in the peak hours. Route 23 is an extension of regular bus service through Stratford and

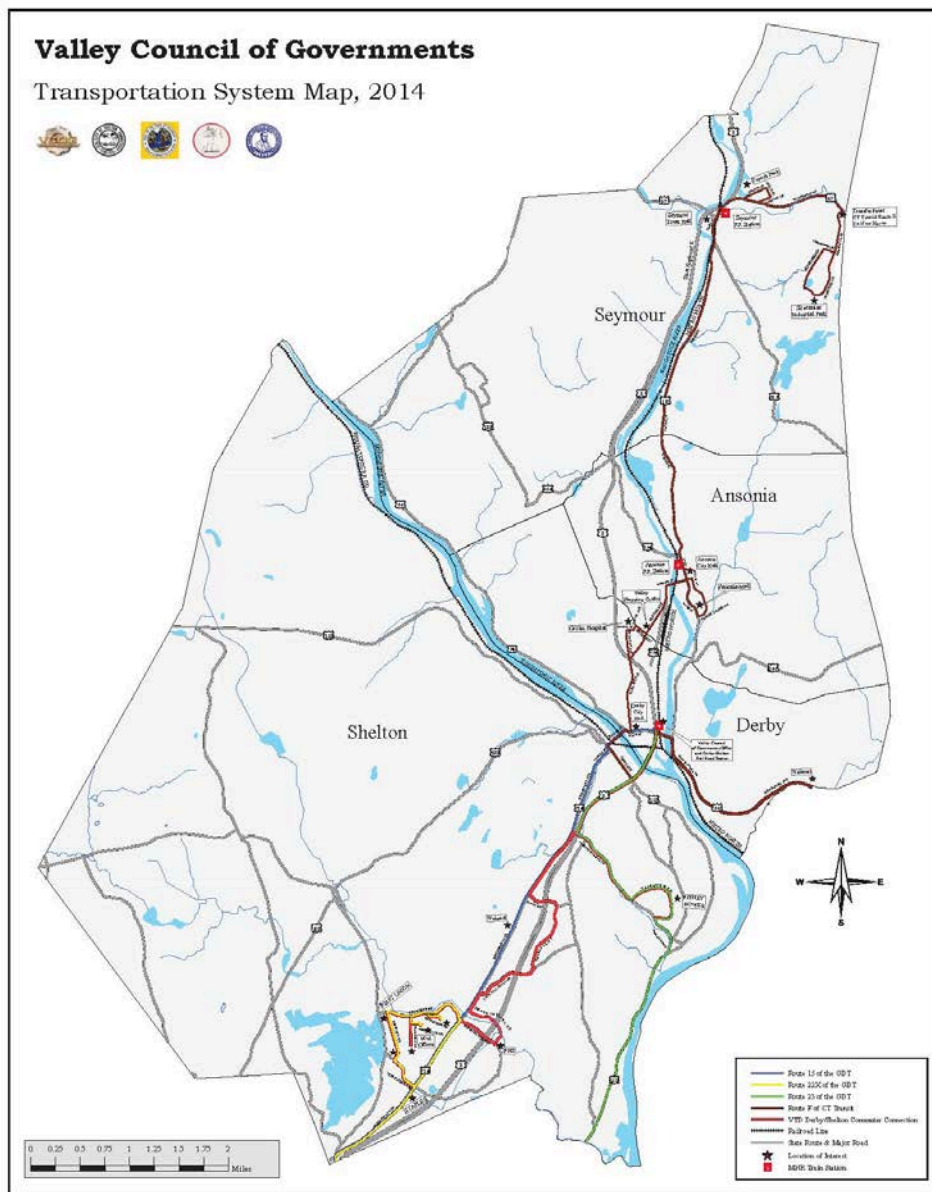
operates along Route 110 to the office parks on Constitution Boulevard in Shelton. It ends at the Derby-Shelton rail station. Fixed route service operated by CT Transit extends from downtown New Haven to the town center of Seymour via Route 34, with intermediate stops at the Derby-Shelton rail station and downtown Ansonia.

- Specialized paratransit services for the elderly and disabled – Valley Transit District.
- Commuter rail service along the Waterbury branch line – Metro North Railroad: The Waterbury Branch Line (WBL) extends 27.1 miles inland from the New Haven Main Line (NHML) at Devon in Milford to Waterbury. The WBL is owned by CTDOT and the Metro North Railroad operates commuter service using diesel-haul equipment. The WBL is maintained at FRA Class 3 track standards. The line consists of a single-track with no passing sidings and is not electrified. In addition, it is considered “dark territory” as there are no communication signals along the line. This prevents the operation of more than one train set at any one time; one train needs to clear the line before another one is sent. Six stations are located on the line – Waterbury, Naugatuck, Beacon Falls, Seymour, Ansonia, and Derby-Shelton. Connecting service to Stamford and New York City is available at Bridgeport Station. While daily service is offered on the WBL, frequency and quality of service is constrained by the existing infrastructure.
- Freight and goods movement – motor carriers, freight rail, and multi-modal shipments: The Maybrook freight rail line

extends 33.5 miles between New York’s Beacon Line in Danbury, the Danbury Branch in Danbury, the Berkshire Line in Danbury, and the Waterbury Branch Line in Derby. The Housatonic Railroad Company (HRR) owns this line and it maintains it at FRA Class 1 track standards. HRR provides local freight service and, under a trackage rights agreement, the Providence & Worcester Railroad Company also has rights to operate on this line. Through the Valley region, the Maybrook line passes through Shelton along the Housatonic River and crosses the river in downtown Shelton to the WBL south of Route 34. There is no passenger service on this line. It has not been used for several years and its operational status is unknown.

- Regional shared-use trail – Naugatuck River Greenway, Derby Greenway, Ansonia River Walk and Shelton Riverwalk.

The principal transportation systems in the Valley planning region are depicted in the following map.



Transportation Issues

While the LRTP focuses specifically on transportation systems in the Valley planning region, it also addresses changes to the composition of the region that have occurred since adoption of the previous plan and accommodates those changes in the vision for the future of the region. Planning efforts focus on the region, but transportation and development patterns of adjacent municipalities, regions, and urban centers and how these patterns impact the region are also considered. The LRTP identifies mechanisms, programs, and projects to take a proactive approach in planning for the future of the region that will be in harmony with the local, regional, and statewide planning initiatives. Transportation is recognized in each plan as a significant component in achieving that vision.

The assessment of transportation systems for the Valley planning region followed federal guidelines for a comprehensive, continuing, and cooperative (3-C) transportation planning process. The comprehensive transportation planning process followed a series of steps that applied analytical methods to the estimation of future travel demand and transportation requirements. Based on the analyses, conducted by regular state monitoring systems, local monitoring systems, and traffic modeling through the GBVMPO, the critical issues facing the Valley planning region over the next twenty eight years include the following:

Project Coordination:

The Valley planning region has seen a dramatic increase in commuter traffic in several of its corridors, including Route 8, Route 34, Route 67, and the major financial center along Bridgeport Avenue in Shelton. While the role of transportation improvements have been clearly defined in the area's overall economic planning and land use development initiatives, implementation of critical improvements has been slow due to lack of funding and the limited ability to program transportation funding within the area.

Because of past difficulties in implementing transportation projects in a timely manner, emphasis is being placed on effective regional integration of all existing transportation modes, especially among local units of government and operating agencies to accomplish better connectivity and efficiency of the existing system while proactively planning for future improvements that can build on the existing corridors and infrastructure. The coordination between land use management and transportation improvements at the local and state level has been explored in detail and coordination among the Connecticut Department of Energy and Environmental Protection (DEEP) and the Connecticut State Office of Policy and Management (OPM) has been extensive. The planning factors contained in MAP-21 promote consistency between transportation improvements among state and locally planned development, including the consideration of open space, conservation, and preservation in the Valley planning region.

Proactive Public Outreach:

Throughout the region, public support and/or opposition to a project is received over the course of its inception, design, and construction phases. Lengthy delays, increased costs, or even abandonment of a project can result from of an ineffective public involvement and outreach effort. To ensure the efficient use of resources and avoid unnecessary cost increases, the transportation planning process includes a proactive public involvement process that involves local stakeholders at early stages of project concept development, advisory committees to aid in decision-making and use of electronic media to notify the public of proposed and planned transportation projects, programs and policies.

Incident Management:

The geometry of Route 8 causes substantial delay and congestion, thereby, exacerbating air quality problems and increasing the number of accidents and other incidents. There is a need to improve the response time to an incident and reduce the time required to clear an incident in the region. The Valley planning region's Incident Management System (IMS) has improved response times and relieved peak hour travel time congestion. Over the next 28 years, the Valley Planning Region will emphasize demand response, Intelligent Transportation Systems (ITS), and highway design to continue to relieve congestion and reduce the number of accidents along major corridors.

Route 8 Operational Problems:

Route 8 through the Valley planning region operates at a poor level of service, experiencing Level of Service E operations during the peak commuting periods, with LOS F conditions occurring in the vicinity of the Commodore Hull Bridge. The original design of the older sections of the highway was constrained by residential and industrial development patterns within the city centers and by topography and the Naugatuck River Valley. Several of the interchange areas do not provide for full traffic movements, resulting in limited access to key areas, and many of the interchange ramps are short, do not provide proper acceleration and land on local streets, resulting in vehicle conflicts and excess traffic in residential neighborhoods. These operational deficiencies require remediation to enhance safety, reduce conflicts, and improve access and mobility. Improved access to the region's city centers from Route 8 is also necessary for economic development.

Expand and Maintain Multi-use Trail Facilities:

Past efforts have resulted in the construction of several multi-use trails in the region: Derby Greenway, Ansonia RiverWalk and Shelton RiverWalk. The region has promoted the construction of these projects and bicycling as a viable transportation alternative. These projects are essential to improve bicycle and pedestrian safety. However, efforts need to continue to promote, plan, rehabilitate, and develop multi-use trails, including the extension of the Naugatuck River Greenway through Seymour and Ansonia. Enhanced

pedestrian connections to the region's transit centers and commuter rail stations are also necessary. A critical issue facing the region is need to maintain the existing multi-use trails in a state-of-good-repair, as well as, the need for maintaining sidewalks throughout the region and providing adequately pedestrian enhancements.

Freight and Goods Movement:

The movement of freight and goods requires special attention in the region as well as southern Connecticut. Nearly all freight into, out of and through the region is via truck. Rail freight is constrained through the region, with only limited service on the Waterbury branch line and Maybrook freight rail line. There are no direct links available to the major intermodal transfer hubs in New Jersey and no clearly advertised and dedicated intermodal rail service between New England and the lower northeast corridor or the southern Atlantic coast, even via Selkirk rail yards in New York. This, along with the changing industrial location patterns, has substantially increased truck traffic on I-95, Route 8, Route 34, and Route 25. In addition, there have been substantial increases in truck traffic on the arterial network, such as, on Route 34 between Danbury and New Haven.

Air Quality:

The transportation sector has been a major contributor to air pollution and the major consumer of petroleum products. Over 90% of all trips in the Valley planning region are made by automobiles.

The region is a part of the non-attainment areas for the Ozone and Fine Particulate Matter (PM_{2.5}) standards. The transportation projects and improvement program must demonstrate that they will reduce mobile source emissions, contribute to efforts to achieve national ambient air quality standards and not cause a violation of the air quality standards. The Valley planning region is committed to achieving both efficiency and air quality goals through concerted efforts to expand and improve commuter rail services, promote TOD development projects and enhance mobility choice.

Paratransit Services:

The consolidated regional transportation service in the Valley Region is actively pursuing new ways of increasing and better utilizing the region's existing dial-a-ride services, especially for the elderly and disabled population. The Local Coordinated Human Service Transportation Plans (LOCHSTP) and the Regional Mobility Manager program are seeking to identify gaps and respond to those gaps. The challenge facing the region is ensuring stabilized state funding sources to maintain current levels of service.

Rideshare Programs:

In recent years, the level of ridesharing has decreased and more trips are being made with only one person in the vehicle. Ridesharing alternatives need to be promoted and incentives need to be expanded. The effectiveness of various alternative commute options is limited given the travel patterns existing in the area. Efforts need

to be expanded to include express buses to commuter lots, shuttle buses to rail stations and reverse transit service to suburban areas.

Increasing Road Congestion:

Increasing traffic volumes are expected to cause congestion on many minor arterial and collector streets that currently operate at good levels of service. The congestion and delay problems along the principal road network are projected to spread beyond high volume road corridors.

Transportation Goals

The primary goal of the long range transportation plan is to enhance mobility and preserving and maintaining the existing transportation facilities and operations. The goals of the LRTP remain consistent with past plans and provide a framework for making transportation investment decisions:

1. Guide growth in concert with regional and municipal goals;
2. Create sustainable communities and promote livability principles;
3. Promote rail, and transit as the preferred modal choice of the region;
4. Reflect energy and air quality objectives;
5. Respond to the amplified Title VI concerns with Environmental Justice;

6. Integrate Intelligent Transportation Systems and ensure ITS projects conform to the National and State ITS Architecture, standards and protocols.

The specific goals, objectives, planning policies, and capital improvements were developed within the context of the Valley Planning Region and Greater Bridgeport-Valley MPO:

1. Provide and maintain an efficient multi-modal transportation system that facilitates the movement of people and goods, while minimizing adverse social, economic and environmental impacts.
2. Improve the efficiency of the existing highway network by better management and upgrading of existing operations and facilities, by encouraging low-cost capital, transportation system management strategies to improve capacity and level of service, by constructing missing segments of the street network, and by establishing management systems that seek to ensure the timely maintenance and rehabilitation of existing facilities.
3. Upgrade the expressway system and selectively increase roadway capacity in major travel corridors.
4. Maximize the use of public transportation by making the bus and rail systems more efficient and convenient, by expanding the public transit system within the area and beyond, by improving transportation access for the elderly and disabled population, marketing those services, and by developing

transit services to suburban employment areas to persons without a vehicle available for use.

5. Promote ridesharing and paratransit options including demand response transit systems that increase vehicle occupancy and manage travel demand at activity centers.
6. Selectively develop bicycle paths and routes to provide a viable transportation alternative and an extension of the road network, provide adequate and safe walkways for pedestrians, and enhance the aesthetic quality of existing transportation facilities.
7. Coordinate the type, intensity, amount, location and timing of new development to transportation system capacity, and integrate transportation planning and land use planning as part of a major regional growth management policy.
8. Encourage energy efficient transportation and minimize the adverse environmental effects of existing and future transportation programs and systems.
9. Improve the area's air quality to comply with the 1990 Clean Air Act Amendments; support the Connecticut State Implementation Plan for Air Quality's broad intentions of achieving and maintaining the National Ambient Air Quality Standards (NAAQS); and promote the expeditious implementation of Transportation Control Measures. No goals, objectives, directives, recommendations, or transportation improvement projects contained in the LRTP contradict special requirements of the Connecticut State Transportation Plan and no transportation improvement

project will increase the frequency or severity of existing violations of the NAAQS.

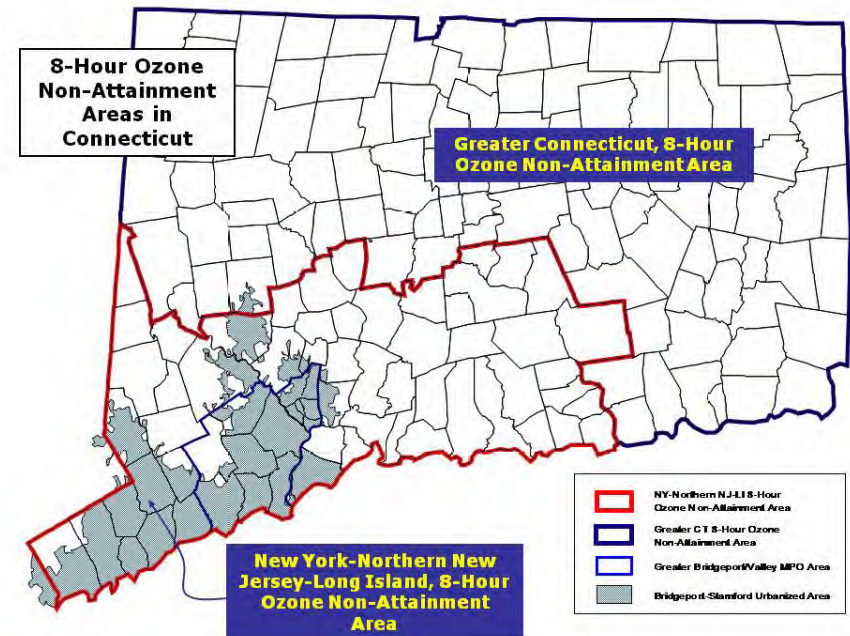
10. Improve awareness and coordination of public transportation options available in the region.
11. Initiate and emphasize the importance of accessibility in measuring transportation system performance.

Air Quality Goals

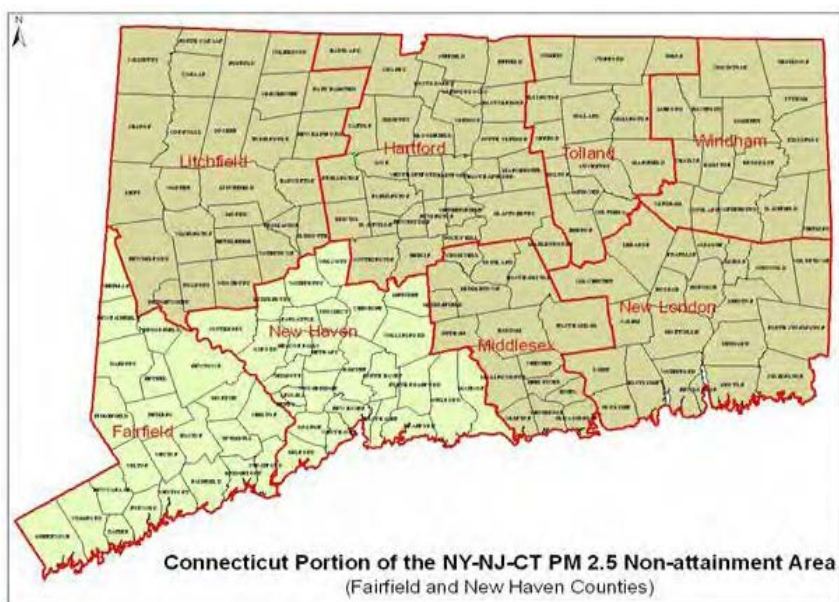
The Clean Air Act Amendments (CAAA) stipulate that the US Environmental Protection Agency (EPA) establish National Ambient Air Quality Standards (NAAQS) and designate areas of the country based on pollution levels. Three transportation-related pollutants are regulated: Ozone, Carbon Monoxide and Particulate Matter. Ozone is an areawide pollutant that forms from a chemical reaction of hydrocarbons, oxygen, and nitrogen oxides with sunlight. Carbon Monoxide is emitted from vehicles and can become concentrated at spot locations but dissipates fairly quickly. Particulate Matter is small particles present in the air that is formed by the incomplete combustion of gasoline and other petroleum fuels. Connecticut is divided into non-attainment areas for the 8-Hour Ozone and fine particulate matter (PM_{2.5}) NAAQS. The state is classified as a maintenance area Carbon Monoxide and as an attainment and maintenance area for the one-hour Ozone NAAQS.

The Valley planning region is a part of the the New York-Northern New Jersey-Long Island 8-Hour Ozone Non-attainment Area and the

Connecticut Portion of the New York-New Jersey-Connecticut PM_{2.5} Non-attainment Area. The Connecticut portion of the Ozone non-attainment are includes Fairfield, New Haven and Middlesex counties.



For PM_{2.5}, the non-attainment area in Connecticut is comprised of just Fairfield and New Haven counties. The non-attainment areas are depicted in the following map.



Sustainable Communities Initiative

The Valley Council of Governments, along with its MPO partner the GBRC, strongly supports a shift to an increased emphasis on mode choice, public transit opportunities, sustainable development, housing, and interconnectedness of transportation planning and transit supportive land uses. The VCOG is a partner in the New York-Connecticut Metropolitan Region Sustainable Communities Planning Consortium. The Consortium is a unique, bi-state collaboration in the largest and most complex metropolitan area in the United States. It is comprised of eight large cities in the New York Metropolitan Area, including New York City, four MPOs, suburban Long Island and two regional planning organizations and represent more than 14 million people and nearly \$800 billion in economic output.

The LRTP supports efforts to reduce emissions and attain the NAAQS. The specific air quality goals are:

1. Contribute to annual reductions in transportation-related emissions.
2. Actively advance Transportation Control Measures (TCMs) contained and identified in the State Implementation Plan for Air Quality (SIP).
3. Be responsive to the goals of the SIP.
4. Comply with the 1990 Clean Air Act Amendments by demonstrating conformity with air quality goals.

The NY-CT Consortium applied for and was awarded an Sustainable Communities Initiative (SCI) grant from HUD to develop a regional plan of sustainability, investigate the feasibility of implementing several catalytic projects and energize the opportunities for livable communities and growth centers around existing and planned transit centers. The goals were to enhance affordable housing efforts, reduce congestion, improve the environment and continue to develop economic competitiveness.

The SCI grant program was an outgrowth of a joint effort of the US Department of Transportation, the US Department of Housing and Urban Development (HUD) and US Environmental Protection Agency (EPA) to improve access to affordable housing, provide more

transportation options, and lower transportation costs. The SCI established six livability principles:

- **Provide more transportation choices:** Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.
- **Promote equitable, affordable housing:** Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.
- **Enhance economic competitiveness:** Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services, and other basic needs by workers, as well as expanded business access to markets.
- **Support existing communities:** Target Federal funding toward existing communities through strategies like transit oriented, mixed-use development, and land recycling, to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.
- **Coordinate and leverage Federal policies and investment:** Align Federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government

to plan for future growth, including making smart energy choices such as locally generated renewable energy.

- **Value communities and neighborhoods:** Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods.

During the past three years, the Consortium formalized and expanded existing collaborations and developed a broader context for regional cooperative efforts. These efforts have included regular consultations among cities within the region and between the region's metropolitan planning organizations.

Coordinated and comprehensive regional planning for economic competitiveness and sustainability in the NY-CT SCI area presented an enormous challenge that demanded a far-reaching partnership of interests, responsibilities and expertise. A regional sustainability plan was developed from a shared vision of its members that identified and addressed existing gaps in the existing planning process to achieve more livable and sustainable communities and more transportation mode choice. The primary goal was to create a network of mixed-use, mixed-income city and town centers linked by the region's extensive commuter rail network.

The Valley planning region has and continues to experience obstacles to sustainable development through the past reliance on highways and roadways and the limited commuter rail service provided on the Waterbury branch rail line. Residents, municipal leaders and officials, and other stakeholders of the Valley region

recognize the finite limit on land and natural resources and the implications when reliable and efficient transportation for commuters to travel to job centers is not provided.

The Valley region benefits from the Waterbury branch line of the New Haven main rail line. The Metro-North Railroad operates service between New Haven and Grand Central Terminal, and the branch line provides a connection for Valley residents to access New York City and other cities along the New Haven Line.

The regional plan for sustainability will tie together the redevelopment areas and city centers of the four Valley municipalities and foster redevelopment near the existing transit centers. The key focus of the plan is to effectuate a fundamental change in how these city centers are perceived and construct transformative improvements that will be the catalysts for economic revitalization, livable communities and sustainable transportation choices.

As a small region with compact urban cores, these communities are well situated to realize the benefits from strategic transportation investments that take full advantage of existing infrastructure and opportunities to create vibrant communities for residents to live and work. The key element is federal and state investments to maintain the rail system in a state of good repair and embark on a program of modernization and expansion. Continued investment in state-of-good repair projects is critical to the region's ability to maintain and

build on its current levels of productivity and continue to support dense energy-efficient development patterns.

Locally Coordinated Human Services Transportation Program

In response to new funding programs included in SAFETEA-LU, the VCOG participated in a multi-regional planning effort to coordinate human service transportation programs in the Bridgeport-Stamford urbanized area. This planning effort was conducted among the following organizations and resulted in the developed of a Locally Coordinated Human Services Transportation Plan (LOCHSTP):

- South Western Regional Planning Agency (SWRPA)
- Greater Bridgeport Regional Council (GBRC)
- Greater Bridgeport Transit Authority (GBT)
- Valley Transit District (VTD)
- Milford Transit District (MTD)
- Norwalk Transit District (NTD)
- Stamford Division of CT-Transit.

The LOCHSTP provides the key initiatives and recommendations for coordinated human services transportation in the Bridgeport-Stamford urban area. It focuses on expanding transit services to persons with mobility difficulties and implementing reverse commute transit services for low income persons.

In the Valley planning region, several reverse commute initiatives were launched, including the extension of the GBT Route 15 from the Bridgeport East Side to the Derby-Shelton commuter rail station. This route provides access to employment along Bridgeport Avenue in Shelton. In conjunction with this extension, VTD operates work shuttle buses from the Derby-Shelton rail station to employment centers in Shelton.

A key result of the LOCSTP was the need to identify gaps in the transportation services to the elderly and disabled. The VTD provides paratransit and dial-a-ride services to the elderly and disabled. Funding constraints have prevented the VTD from expanding services. The LOCHSTP work group has initiated a mobility manager program that is responsible for marketing specialized transportation services and identifying gaps in services.

Alternate Modes of Transportation

The VCOG has also identified the need for a more efficient means of moving large amounts of people from the northern end of the region in Seymour to the increasingly commercial centers along Bridgeport Avenue in Shelton and beyond to Trumbull and Bridgeport. Physical constraints defined by steep slopes and river valleys prevent the ability of creating new corridors in a region. Instead, it is critical that alternate mode of transportation are evaluated and designed that could more efficiently provide commuters with a way to travel

within and from the Valley region to employment centers without using the Route 8 expressway and other regional highway facilities.

The Route 8/Route 25 expressway is a vital component of the western Connecticut transportation system and the only north-south limited access highway in western Connecticut. It connects Naugatuck Valley municipalities, including Waterbury, to the Bridgeport and southwestern Fairfield County, and is a major link between I-84 in the north and I-95 and Route 15 in the south.

A substantial portion of the Fairfield County workforce lives throughout the Naugatuck Valley and uses Route 8 to travel and commute between Waterbury, Bridgeport and Stamford. Every day, over 45,000 commuters travel over the Commodore Hull Bridge on Route 8 to reach major employment areas in southwestern Fairfield County. Of that total, more than 30,000 have destinations in Shelton and Trumbull. Currently, there is no convenient transit option; therefore, most commuters must rely on driving their private automobiles.

The Waterbury branch line provides rail connection from the Valley region to Bridgeport and Stamford, with connections to New York City, but the WBL is located on east bank of the Housatonic River and intermediate connections to Shelton and Trumbull are not possible. While ridership on the WBL has increased in recent years, its current minimal level of service proves to be a disincentive for commuters to choose this option. As described above, service on the WBL is limited

and does not provide the headways required to attract substantial numbers of commuters

Demographic and economic trends indicate that the Fairfield County workforce will continue to relocate to the Lower Naugatuck Valley due to the relatively lower cost of housing. The existing expressway is not designed to accommodate the number of existing and future commuters, especially during peak morning commuter period.

The Route 8 expressway was built in the 1960s and its obsolete design cannot meet the challenges of current and future demand, and simply expanding lane miles is neither feasible nor cost effective.

These travel patterns and lack of a balanced transportation system places a tremendous burden on the current road system. In addition, the economic stability and growth of the Naugatuck Valley area depends on a sensible and reasoned approach to commuter options. The severe congestion along the Route 8 corridor can only be solved by the development of new alternate transit options. Without new and enhanced mass transit options in the corridor, Connecticut will not be able to supply the necessary workforce to sustain the economic growth of Fairfield County's Coastal Corridor region.

The development of alternate transit modes and sensible transportation systems is essential to the healthy economic and social development of southwestern Connecticut. Without new transportation modes and enhanced mode choice, the potential exists for economic stagnation of the entire region.

Waterbury Branch Commuter Rail Line

The Waterbury Branch Line (WBL) extends 27.1 miles inland from the New Haven Main Line (NHML) at Devon in Milford to Waterbury. The WBL is owned by CTDOT and the Metro North Railroad operates commuter service using diesel-haul equipment. Freight and passenger service has been provided along the WBL for over 100 years.

The WBL is maintained at FRA Class 3 track standards. The line consists of a single-track with no passing sidings and is not electrified. In addition, it is considered "dark territory" as there are no communication signals along the line. This prevents the operation of more than one train set at any one time; one train needs to clear the line before another one is sent.

Six stations are located on the line – Waterbury, Naugatuck, Beacon Falls, Seymour, Ansonia, and Derby-Shelton. Connecting service to Stamford and New York City is available at Bridgeport Station. While daily service is offered on the WBL, frequency and quality of service is constrained by the existing infrastructure.

Waterbury Branch Line Track and Way Improvements

The CTDOT conducted a needs and feasibility study on the Waterbury branch line to identify potential improvements along the line that would be needed to enhance service. As described above, the WBL is a single track with no signalization or passing sidings,

making impossible for more than one train to operate on the line at the same time.

The report included a long list of improvements to the WBL:

- **Full Signalization**: The proposed action would implement a Central Traffic Control (CTC) system along the entire WBL. Full signalization would allow for communication to occur whereby opposing trains can safely divert and communicate with each other on line. The signal system, which would be controlled by rail traffic controllers at the existing GCT Dispatch Center, would allow two trains heading in the same direction to operate on the branch at the same time. Currently, the full 27-mile length of the branch is a single block, meaning that a second train cannot enter the branch from the mainline until the train ahead of it reaches Waterbury Station. This severely limits the number of morning and evening peak period trains that can operate on the branch. Signalization would allow the WBL to be divided into a series of blocks, where a second train could enter a new block once the train ahead of it pulled onto the next block.
- **Passing Sidings**: The WBL is currently single track. Installing passing sidings would allow multiple trains to operate on the branch line at the same, thereby, increasing flexibility and capacity. Implementation of sidings in conjunction with full signalization would produce the greatest increase in service and operations. The preliminary alternative recommended

the construction of two passing sidings: one north of the Derby rail station from approximately mile post (MP) 9.0 to MP 9.7; and one north of the Beacon Falls station from about MP 18.5 to MP 19.25. The passing sidings would be sufficiently long (at least 3,500 feet) to trains to enter and exit the siding at a minimum speed of 30 mph. In addition, the passing sidings would include a fully signalized interlock and integration with the CTC system. Signalized interlockings would allow trains to move between branch line tracks and the sidings without the time-consuming need for train crews to manually operate the switches.

Derby-Shelton Multi-Modal Center (DSMMC)

The Derby-Shelton Multi-Modal Center (DSMMC) is located on the eastern edge of downtown Derby and is within walking distance of downtown Shelton, which is about a quarter-mile from the station. The station it is easily accessible from Route 8 and Route 34. The administrative offices and maintenance facility of the Valley Transit District (VTD) are located on the same site as the station. Multi-modal connections are made to fixed-route bus service operated by the Greater Bridgeport Transit Authority and Connecticut Transit New Haven Division.

A relatively large parking lot, with space for about 75 vehicles, is available at the station. No fee is required to park at the station. In addition, a canopy covers the low-level platform. The only passenger shelter is a small, unheated Plexiglas shelter.

The station building was constructed in 1903 by the New York, New Haven & Hartford Railroad (New Haven Railroad), necessitated by the relocation of tracks of the former New Haven & Derby Line through Derby, and subsequent effort to double-track the line. It is a rectangular-plan brick building capped by an asphalt shingle-clad hipped roof. The interior floor plan featured a large central waiting room with a ticket office, restrooms, and a fireplace. Although the building no longer functions as a train station, the building retains many of its unique historical features and qualities and appears to be historically and architecturally significant as an example of an early-19th century New Haven Railroad station.

The Derby Greenway section of the Naugatuck Valley River Greenway is located on the east side the WBL from the DSMMC. However, there is not a well-defined connection between the station and the greenway. Currently, travelers need to exit the station site and walk along the existing sidewalk on the north side of Route 34, cross the on-ramp to Route 8 northbound and follow an short access driveway before reaching the greenway.

The condition of the DSMMC was assessed by CTDOT, but the work was completed in 2006. At that time, a number of problems were noted and maintaining the station facilities in a state-of-good-repair was recommended. While the station functions adequately, passenger amenities are minimal. The existing shelter provides only minimal protection from the elements, as it is open on one side. Signage directing users to the station and parking is minimal,

although a station gateway sign has been installed since the visual conditions assessment. No ticket-vending kiosk is available and train and bus information is limited. Although trash receptacles have been installed, there is track-level trash and litter. A standard bicycle rack has also been installed.

The following are needed and recommended actions to maintain the DSMMC in a state-of-good-repair:

- Install new and relocate existing wayfinding signage directing to the DSMMC and from Route 8 and Route 34.
- Install an information kiosk to provide static and interactive commuter information, for both rail and bus operations.
- Complete a major renovation of the station building and re-establish it as passenger terminal for WBL passengers.
- Resurface the existing parking area and access roadways to better define a bus circulation, bus loading and unloading area, including bus bays, and commuter parking.
- Replace the existing shelter with a larger, heated structure.
- Install a bicycle path and pedestrian walkway into and through the station property with a terminus at the boarding area. The sidewalk and bike path would be delineated and separated to avoid conflicts. Decorative elements would be installed to visually highlight the distinct paths for walkers and bicyclists and alert drivers of their presence in the area.
- Install decorative lighting throughout the site.

- Improve and enhance existing pedestrian areas to better define separation from the parking area, bus loading area and station platform.
- Construct a direct connection to the Derby Greenway from the DSMMC with a new staircase and path from the sidewalk along Route 34 and a landing in the southern end of the parking lot at the DSMMC. The new path will comply with ADA guidelines.

The long-term objective of the DSMMC is to implement the TOD station area plan for the Derby-Shelton rail station and create an expanded multi-modal transportation center consisting of high level platforms, large commuter parking garage, fixed-route bus bays, full-service passenger terminal, and extensive rail service.

Ansonia Train Station

The Ansonia rail station is located on West Main Street in downtown Ansonia, one block from Main Street (Route 115) and along the east bank of the Naugatuck River. The station is not readily accessible from Route 8.

Storefronts line the street east of the station and flood control walls line the opposite side of the tracks. Between the flood control wall and the tracks is an abandoned roadway. Weeds have overtaken the old pavement.

The boarding area consists of bituminous pavement and a low-level wooden platform. An old wooden canopy covers the boarding area. Three Plexiglas glass shelters line the boarding and provide some protection for passengers. Several shrubs are planted along the backside of the shelters and partially obscure them from the street. Sidewalks connect the downtown Ansonia area and the station. The suggested short-term improvements are as follows:

The following are needed and recommended actions to maintain the Ansonia station in a state-of-good-repair:

- Seal and repaint the wooden platform and canopy, and repair uneven joints between the platform sections, as necessary.
- Install new and relocate existing wayfinding signage directing patrons to the Ansonia train station and from Route 8.
- Install station entrance signs at both ends of West Main Street.
- Install parking information signs that identify commuter parking locations.
- Install an information kiosk to provide static and interactive commuter information for rail operations.
- Install a bike rack and enhance pedestrian connections between the downtown area and the station, including installing a raised sidewalk along the tracks.
- Reconfigure the parking area just south of the canopy, repave and restripe the parking area.

- Upgrade and enhance the platform area and connections from the parking areas by replacing the bituminous pavement with concrete pavers, re-landscape and trim existing trees and shrubs..
- Install decorative post-mounted lights along the path from Main Street to the station area and enhance the lighting within the platform and waiting areas.
- Place the aerial wires to the canopy underground.

Seymour Train Station

The Seymour rail station is located on Main Street in the heart of downtown Seymour. The station consists of a low-level platform and a shelter. No waiting room is provided and tickets must be purchased on the train. The shelter is unique among the WBL stations. While most of the shelters along the branch line are simply glass enclosures similar to a typical bus shelter, the one at the Seymour station consists of a brick structure with windows and sufficient roof overhang to protect patrons from the elements. Parking for commuters is available in front of the station, but patrons to local businesses can also park in the area. Additional commuter parking can be found in nearby mixed-use parking lots. However, commuter rail parking is not readily identified and difficult to find. A two-hour time limit is posted at the lot and the mixed use of spaces restricts parking supply. Access to the station is directly from Main Street. However, wayfinding signage is limited and could easily be missed amid the normal sign clutter found in an urban

environment. A day pass or an annual permit can be obtained for nominal fee, but the availability of these passes is not widely known.

The condition of the Seymour train station was assessed by CTDOT, but the work was completed in 2007. At that time, a number of problems were noted and maintaining the station facilities in a state-of-good-repair was recommended. As with the DSMMC, the Seymour station functions adequately, but passenger amenities are minimal. The existing shelter, while unique among shelters along the WBL, needs to be cleaned more regularly and deodorized. Signage also needs to be improved and supplemental plates need to be added to better direct users to the station and parking from Route 8 and Route 67. No ticket-vending kiosk is available and train and bus information is limited. The station area is overgrown with grass and weeds and unkempt. Minor maintenance items, such as painting, crack sealing, and removing litter and debris is required.

The following are needed and recommended actions to maintain the Seymour train station in a state-of-good-repair:

- Install new and relocate existing wayfinding signage directing to the Seymour train station and from Route 8 and Route 67.
- Install a station entrance sign.
- Install parking regulation signs that identify commuter parking locations and fees associated with daily and monthly rail parking.

- Install an information kiosk to provide static and interactive commuter information for rail operations.
- Resurface the existing parking area and re-strip parking spaces.
- Install decorative lighting throughout the site.
- Improve and enhance passenger amenities, including vending machines, benches along the platform and inside the shelter, and bicycle racks.
- Provide better separation between the parking area and the platform by installing decorative pavers to distinguish between walking and waiting areas.

The long-term objective is to implement the TOD station area plan for the Seymour rail station. This includes the relocation of the rail station north of its current location as part of new development project. The new station would provide dedicated parking and enhance waiting area with high-level platforms.

New Train Station at Devon Junction

A critical goal of the long range transportation is to improve operations along the Waterbury branch line and provide services and schedules that would be attractive to commuters and provide a reliable alternative to driving. Enhanced service along the WBL is also critical to realizing revitalization of the downtowns located along the branch line and incentivizing transit supportive developments within the station areas.

An issue with increasing the number of trains on the WBL and providing additional direct service to Bridgeport or Stamford is the limited capacity and schedule slots on the New Haven main line (NH-ML). In addition, the existing interlocking at Devon between the NH-ML and the WBL does not allow service to New Haven.

The proposed action would be to construct a new station at the Devon junction to serve as transfer point between WBL trains and NH-ML trains. The new station would provide the ability to increase service to mainline destinations without taking up additional schedule slots on the New Haven Line. Waterbury branch line service would be altered to operate more like a shuttle service. Operations would terminate trains at Devon and the schedule would be retooled to facilitate the transfers. Southbound WBL trains would arrive at Devon several minutes before a NH-ML train is due to arrive. Similarly, northbound trains would depart Devon after the arrival of a NH-ML train. The new Devon station would also allow WBL riders to access eastbound trains and travel to New Haven. In addition to the shuttle service, some WBL trains would continue on the main line to provide direct service to Bridgeport and Stamford.

The preliminary alternative would locate a new Devon station within the Devon junction, between the “Y” formed by the split of the WBL track and the interlocking with Track 3 of the NH-ML. One option would be to eliminate the existing curved connecting tracks between the WBL and NH-ML with a new section of straight, double-tracked rail with a terminus at the main line. This would eliminate the

interlockings with the main line. High level platforms would be installed along the new section of WBL track and two side platforms would be constructed along the inbound and outbound local tracks for NH-ML trains. The southern ends of the two WBL platforms would connect directly with the inbound NH-ML platform. The connection to the outbound platform would be via an underground passage.

Vehicle parking would be provided under the adjacent I-95 southbound viaduct with access from Naugatuck Avenue.

This location and configuration of a new Devon station would require the relocation of the electrical substation that is currently located within the “Y”.

If a connection with the main line is maintained, the new Devon station would be located just to the east of the WBL “Y”. New high level platforms would be constructed along the NH-ML inbound and outbound local tracks. WBL trains would access the new station along the inbound platform. This connection would require a new cross-over and interlocking between the inbound NH-ML track and the eastern leg of the WBL “Y”.

Passengers transferring between the WBL and outbound service would be accommodated via an overpass. A drop-off and pick-up area would be constructed along the outbound platform and accessed from Naugatuck Avenue.

The construction of a new Devon station east of the existing “Y” would require the reconstruction and relocation of the existing main line crossovers located at Control Point (CP) 261. The new crossovers would be relocated about 1,000 feet east of their present location. However, this location would avoid the complicated relocation of electric utilities within the “Y” and provide a better cross-platform connection.

Transit Oriented Development

The Valley planning region has a key role in promoting TOD-supportive land use development plans and identifying alternative transit modes that facilitate travel to and from TOD areas. Transit Oriented Development (TOD) is typically defined as compact development within convenient walking distance of a transit station, typically a half mile or less. The TOD area contains a mix of land uses, including moderate density housing, retail, restaurants and entertainment. A TOD offers the opportunity for infill development and redevelopment in underutilized areas. Mixing land uses, concentrating employment, residential, retail, and leisure activities near transit stations and providing a walkable environment can make transit service more attractive and viable, and the area more sustainable and robust. However, a key determinant of a project’s success is the associated transit service. If the transit service is constrained, then it is unlikely a sufficient number of people will be attracted to the area and be able to support the higher concentration of TOD-type uses.

While reducing the number of automobile trips and improving mobility are key goals of a TOD strategy, there are also economic and social benefits associated with TODs that have the potential to generate value for community in terms creating and retaining jobs. Successful transit-oriented developments create synergy within a community by combining innovative urban development and current market opportunities to enhance residential and commercial activity. The best TODs provide pedestrians with convenient, safe, and pleasant access to transit stations, surrounding businesses, and other services.

The LRTP is intended to advance HUD's livability principles and extend sustainable communities. The recommended actions will implement alternate transit services and improvements needed along both the WBL and the Route 8 Corridor that will advance the development of residential, commercial and employment opportunities and new town centers in Derby, Shelton, Ansonia and Seymour that are within walking distance of new and enhanced public transit facilities, including local bus service, bus rapid transit routes and commuter rail. The new town centers will provide built environment densities that meet transit supportive standards for land uses and walkability, in order to facilitate and encourage the use of enhanced transit services.

The basic actions and strategies to promote and incentivize TOD projects include:

- Transit supportive zoning regulations within a quarter-to-half mile of the existing commuter rail stations.
- Incentives for developers to invest in projects that complement both the community development goals within the transit corridor and the transit system operations.
- Incentives for individuals to live within walking distance of the region's commuter rail stations.
- State tax incentives for businesses that locate in areas accessible to the rail stations.
- Concentrate mixed-use, mixed-income developments in compact, pedestrian-friendly areas near commuter rail stations to reduce the number of automobile trips.
- Encourage an appropriate mix of services near transit stations that accommodate the needs of working families and the transit dependent residents.
- Provide a network of pedestrian and bicycle paths and greenways that are safe and provide convenient access to the transit system.

The municipalities of the Valley Planning Region are uniquely positioned to be transformed into vibrant, high-density communities that have access to efficient and high quality transit services. Because of historical development patterns, each community has a compact, urban core located in proximity to a commuter rail station with access to the Waterbury Branch Line. While originally developed as manufacturing centers, these downtowns have the infrastructure needed support higher density residential patterns

and mixed land uses and services. Specific actions center on Waterbury branch line infrastructure improvements, major enhancements of the stations, and construction of various complete streets and pedestrian-friendly elements to connect the stations to downtown areas.

Derby-Shelton Multi-Modal Center (DSMMC)

The Derby-Shelton commuter rail station is located at the edge of the downtown on Ausonio Drive near its intersection with Main Street. A full interchange with the Route 8 Expressway is located opposite the intersection of Route 34 and Ausonio Drive. The station is also serves as a connection point between commuter rail service and local bus services operated by the GBT and CT Transit. There are several sites adjacent to the station that could be developed for mixed use activities, including a large parcel on the east side of the WBL, directly opposite the station.

The proposed action includes:

- Install high level platforms, about 680 feet in length, along the southbound track.
- Reconfigure the existing parking area and access driveways to better define bus boarding and alighting zone. Four bus bays would be installed adjacent to the existing station building. An interactive information kiosk and heated shelters would also be installed.

- The existing parking lot under Route 8 would be reconfigured and restriped.

Ansonia TOD Station Area Plan

The Ansonia commuter rail station is located along West Main Street about a block from the main part of the downtown area. The street environment is somewhat run-down and uninviting to commuters, and there are no clear directional signage guiding persons to the station area from downtown. The downtown area features a variety of attractive buildings with a historic architecture, but the area is viewed as economically depressed. The City has adopted zoning regulations that are intended to achieve a suitable and compatible mix of non-residential and residential land uses in its city center. However, there are several larger parcels mixed within and directly adjacent to the downtown that are zoned heavy industrial.

The goals and objectives of the Ansonia TOD station area plan are to enhance and improve the streetscape along West Main Street and make aesthetically pleasing pedestrian connections with the remainder of the downtown. Included in the upgrades are:

- Ornamental street lights
- Remove guide poles
- Replace sidewalks with concrete pavers, granite curbs and new concrete

- Landscaping with urban street trees, rain gardens and storm-water planters
- High-level platforms and platform area enhancements
- Repaving West Main Street and commuter parking areas
- Installation of directional and wayfinding signage

Seymour TOD Station Area Plan

The commuter rail station is located on Main Street at the eastern edge of the downtown, but directional signage from the downtown area is limited and parking is not well defined. The downtown area is the main focal point of the community and it incorporates a variety of functions such as governmental, financial, entertainment, and retail services. It is a true mixed-use "node," but it is facing several economic challenges. The town views supporting and creating TOD projects as critical to continuing the revitalization and redevelopment of its downtown and making the center a vibrant, livable and sustainable place to live and work. Land for the development of a TOD project is limited.

The current zoning within the town center area is divided into two districts. The northern half is designated as Central Commercial (CBD-1) and the southern half is zone as General Industrial (GI-2). The CBD-1 zone permits various commercial and retail uses, including cultural, entertainment, and recreational activities. Residential dwellings are not permitted in the CBD-1 zone as a stand-alone use. However, mixed-use developments, consisting of commercial uses and apartments are permitted as a special

exception. The GI-2 zone permits a variety of more intense warehousing and manufacturing activities. Residential dwellings are not allowed in this district.

Given the land constraints within the Seymour downtown, the preferred TOD action plan recommends the relocation of the Seymour rail station to the north of its current location. The proposed site is located just north of an existing retail development and would be relatively close to the downtown. The new train station would provide ample parking for commuters and eliminate the competition for parking in the downtown area. The new station would be a component of a larger development project proposed for the area. The new development would feature a mix of housing, retail and commercial uses. The site has some constraints; primarily there may not be a sufficient length of straight track to accommodate the station. However, the opportunity for developing a TOD project with a new train station is worth exploring.

If the relocation of the Seymour station is not implemented, improvements and enhancements need to be implemented in the downtown area to improve pedestrian access to the station. The streetscape along Main Street needs to be enhanced to make an aesthetically pleasing pedestrian connection to the downtown. Included in the upgrades are:

- Ornamental street lights
- Replace sidewalks with concrete pavers, granite curbs and new concrete

- Landscaping with urban street trees, rain gardens and storm-water planters
- High-level platforms and platform area enhancements
- Repaving Main Street and commuter parking areas
- Installation of directional and wayfinding signage

Complete Streets Policy

The Valley planning region is a dense urban area with a transportation system that needs to accommodate many users and many modes. Streets are an integral part of our cities and towns, providing and facilitating the movement of people and goods. The road network in the region is extensive, serving to connect neighborhoods and providing access to businesses, jobs, schools and a wide range of public and private services. Connections to neighboring cities and towns, regions as well as interstate travel are facilitated by the highway system.

The goal of transportation improvement programs has usually been to make the highway system as efficient as possible, with efficiency defined as making the flow of traffic better. This has resulted in overbuilt roadways, exclusive turn lanes that increase the walk distance across an intersection, additional travel lanes that reduce shoulder area available to bicyclists and traffic signal timing and phasing that favors vehicle movements. The needs of pedestrians and bicyclists have often been either ignored or only considered minimally. Streets are an important part of a community's livability

and help define it as a special place. They allow children to get to school and parents to get to work; they bring together neighbors and draw visitors to neighborhood stores. However, the emphasis on vehicle movement has resulted in street environments unfriendly to bicyclists and pedestrians and land uses dependent on the automobile. Streets need to be designed for everyone, whether young or old, on foot or on bicycle, in a car or in a bus.

"Complete Streets" is an approach to design and construction that accommodates all travels and all modes. The intent of a *Complete Streets Policy* is to effectuate a change in how the street environment is planned, designed and built and, as a consequence, change how it is used. In essence, the street environment is altered from one where vehicles dominate to one where all users are accommodated. It also encompasses not just the area between the curbs but extends beyond the pavement to include space along the roadway as well. Complete Streets make it easier to cross the street, walk to stores, and bicycle to work. They allow buses to run on time and make it safer for people to walk to and from bus stops and train stations. By adopting a *Complete Streets Policy*, communities will routinely design and operate the entire right-of-way to enable safe access for all users, regardless of age, ability, or mode of transportation. The goal is to ensure that every transportation project will make the street network better and safer for drivers, transit users, pedestrians, and bicyclists, and making communities more livable and a better place to live.

While a complete street embraces many common elements, each application is unique and the features selected reflect the land use, needs and characteristics of the area.

Key elements of the “*Complete Streets Program*” include:

- Bicycle facilities – bicycle routes and lanes, signage, bicycle racks, appropriate pavement markings and symbols;
- Bus features and amenities – bus pull-outs, shelters, clear and accessible paths;
- Pedestrian enhancements – crosswalks, pedestrian signal enhancements, curb ramps, and sidewalks;
- Traffic calming actions – using textured material, intersection bump-outs, curb extensions, center refuge islands, and raised intersection tables;
- Streetscape environment – appropriate urban trees, landscaping, bio-swales and rain gardens, permeable paving material, and buffers between the street and sidewalk to dramatically alter the “atmosphere” of the street environment;
- ADA compliant features – curb ramps, detectable tactile cues and warnings, accessible pedestrian signals, and longer walk intervals;
- On-street parking treatments – delineated parking spaces and curb/sidewalk bump-outs; and
- Access management actions – driveway consolidations, modifications and closures

Chapter 238, Section 13a-153f of the Connecticut General Statutes requires the consideration of integrating elements and features that would accommodate all modes and users of the transportation system, including facilities for bicyclists, pedestrians, and transit users. The law specifies that at least one percent of all transportation funds received by the state be expended on these types of transportation enhancements.

The following actions are recommended:

Short-term Pedestrian Enhancement Program:

To improve the pedestrian environment and safety, the basic immediate actions include:

- Rehabilitating and improving sidewalks, paths and crosswalks and closing gaps in the network;
- Upgrading and modifying traffic and pedestrians signals, including installing countdown signals, vibrotactile warnings and audible indicators, and making sure they are in working order; and
- Installing and modifying regulatory and warning signs (no right turn on red and pedestrian crosswalk signs).

Long-term Pedestrian Enhancement Program:

To address longer term needs, the entire streetscape environment requires enhancement. Proposed actions include:

- Modifying road design to better accommodate pedestrians – narrowing the road, reducing the number of lanes and reallocation of the right-of-way;
- Constructing intersection treatments – bulb-outs, curb extensions and median barriers;
- Implementing pedestrian-related traffic calming projects – raised cross walks, raised intersections and textured pavement;
- Constructing new and extended sidewalks and walkways
- Enhancing traffic signals – leading pedestrian interval, ITS applications that automatically detect the presence of pedestrians;
- Embedding warning lighting in mid-block crosswalks to enhance visibility and alert motorists of the presence of pedestrians; and
- Modifying commercial driveways – consolidating, closing, narrowing and reducing curb radii.

Complete Streets Program:

To enhance the street system to accommodate all modes of travel and all users, the following actions are recommended:

- Bicycle facilities – bicycle routes and lanes, signage, bicycle racks, appropriate pavement markings and symbols;

- Bus features and amenities – bus pull-outs, shelters, clear and accessible paths;
- Pedestrian enhancements – crosswalks, pedestrian signal enhancements, curb ramps, and sidewalks;
- Traffic calming actions – using textured material, intersection bump-outs, curb extensions, center refuge islands, and raised intersection tables;
- Streetscape environment – appropriate urban trees, landscaping, bio-swales and rain gardens, permeable paving material, and buffers between the street and sidewalk to dramatically alter the atmosphere” of the street environment;
- ADA compliant features – curb ramps, detectable tactile cues and warnings, accessible pedestrian signals, and longer walk intervals;
- On-street parking treatments – delineated parking spaces and curb/sidewalk bump-outs; and
- Access management actions – driveway consolidations, modifications and closures.

Traffic Calming Program:

Vehicle speeds correlate to the severity of accidents and contribute to the safety concerns of pedestrians and bicyclists. Traffic Calming actions offer an engineering approach to slow traffic speeds and/or divert traffic. The physical devices are installed in the roadway to cause a change in driver behavior and improve the conditions for

non-motorized street users. Every traffic calming project is different and addresses specific concerns of the area. Key elements of a traffic calming program include:

- Volume control measures that divert some or all of the traffic in a different direction – street closures, diverters, median barriers and forced turn islands;
- Vertical speed control measures that force traffic to slow down – speed humps, speed tables, raised crosswalks, raised intersections and textured pavement;
- Horizontal speed control measures that deflect the movement of traffic – mini traffic circles, chicanes, lateral shifts and realigned intersections;
- Road narrowing speed control measures that affect the driver's perception of road width – neck downs, center islands and chokers;
- Modern roundabouts; and
- Reallocation of roadway width – converting one-way streets to two-way, creating “gateways” and installing bicycle lanes.

Federal Transportation Funding Programs

The principal sources of funds to implement recommended LRTP programs and projects 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%. The current federal transportation act is MAP-21. It was enacted in July, 2012, expired in September, 2014, and extended through May 31, 2015. It is expected that a new transportation authorization and appropriations bill will be enacted in the near term and the core funding programs will be continued.

The core federal aid transportation programs are as follows:

National Highway Performance Program (FHWA):

The NHHP program provides funds for improvements to highways included on the National Highway System. Under MAP-21 the NHS was enhanced to include: interstate highways, other expressways and all principal arterials – Route 8, Route 34 and sections of Route 67, Route 115 and SR 727. The NHPP consolidated funding from previously separate programs: National Highway System (NHS); Interstate Maintenance (IM); and Highway Bridge Replacement and Rehabilitation Program (HBRR).

Surface Transportation Program (FHWA):

The STP program provides flexible funding for projects to preserve and improve the conditions and performance on any highway on the federal aid system, including NHS and interstate highways, bridges on any public road, pedestrian and bicycle infrastructure, and transit capital projects. The STP appropriation to the State is allocated

based on proportion to their relative shares of the State's population:

- **Anywhere in the state (STPA):** 50% of the State's STP allocation can be used anywhere in the state.
- **Urbanized Areas (STP-Urban):** 50% of the State's STP allocation is distributed to urban areas based on the relative shares of the areas' population

Transportation Alternatives Program (FHWA):

MAP-21 established a new program to provide funding for a variety of alternative transportation projects, including many that were previously eligible activities under the Transportation Enhancement Program, Recreational Trails, and Safe Routes to School. The TAP consolidates funding from previously separate programs: Recreational Trails (RT) and Safe Routes to School (SR2S). It requires a 2% set-aside of the total amount authorized from the highway account and within each it a proportional set aside of the State's allocation of NHHP, STP, CMAQ, HSIP and Metropolitan Planning apportionments. Eligible projects include: bicycle and pedestrian facilities; recreational trail projects that include pedestrian, equestrian, bicycling and non-motorized snow activities as well as off-road motorized vehicle activities; and infrastructure-related and behavioral projects to enable and encourage primary and secondary school children to walk and bicycle to school.

Highway Safety Improvement Program (FHWA):

The HSIP was established as a core program under SAFETEA-LU and continued under MAP-21. It provides flexible funds to the states to address their most critical safety needs and achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

Congestion Mitigation and Air Quality Program (FHWA):

The CMAQ program provides flexible funding for transportation projects and programs to help meet the requirements of the Clean Air Act, reduce congestion and improve air quality. Funding is allocated to areas that are designated as non-attainment for ozone, carbon monoxide or particulate matter. Eligible projects include: traffic signal system improvements; travel demand management programs; and transit projects.

Section 5307 Urbanized Area Formula Grant Program (FTA):

The Section 5307 program provides grants to Urbanized Areas for public transportation capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances. These funds constitute a core investment in the enhancement and revitalization of public transportation systems in the nation's urbanized areas, which depend on public transportation to improve mobility and reduce congestion. Under MAP-21, the Section 5307 program incorporates the Access to Jobs and Reverse

Commute (Section 5317), which was a separate program under SAFETEA-LU.

Section 5309 Discretionary Capital Program (FTA):

The Section 5309 program provides grants for new and expanded rail, bus rapid transit, and ferry systems that reflect local priorities to improve transportation options in key corridors. This program defines a new category of eligible projects, known as core capacity projects, which expand capacity by at least 10% in existing fixed-guideway transit corridors that are already at or above capacity today, or are expected to be at or above capacity within five years. The program also includes provisions for streamlining aspects of the New Starts process to increase efficiency and reduce the time required to meet critical milestones.

Program funds can be used for major fixed guideway capital projects, including new starts and extensions, bus rapid transit (BRT) projects, and projects that improve capacity on an existing fixed-guideway system.

Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities (FTA):

This program is intended to enhance mobility for seniors and persons with disabilities by providing funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and ADA complementary

paratransit services. Under MAP-21, the Section 5310 program consolidates the New Freedom Program (Section 5317) and Elderly and Disabled Program (Section 5310).

Section 5324 Public Transportation Emergency Relief Program (FTA):

The Section 5324 program helps states and public transportation systems pay for protecting, repairing, and/or replacing equipment and facilities that may suffer or have suffered serious damage as a result of an emergency, including natural disasters such as floods, hurricanes, and tornadoes. The program also improves coordination between U.S. DOT and the Department of Homeland Security (DHS) to expedite assistance to public transit providers in times of disasters and emergencies.

Section 5337 State of Good Repair Grant Program (FTA):

The Section 5337 is a new formula-based program created under MAP-21. State of Good Repair program is dedicated to repairing and upgrading the nation's rail transit systems along with high-intensity motor bus systems that use high-occupancy vehicle lanes, including bus rapid transit (BRT). These funds reflect a commitment to ensuring that public transit operates safely, efficiently, reliably, and sustainably so that communities can offer balanced transportation choices that help to improve mobility, reduce congestion, and

encourage economic development. The program replaces the Fixed Guideway Rail Modernization Program (Section 5309).

Section 5339 Bus and Bus Facilities Program (FTA):

The Section 5339 capital program provides funds to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities. Under MAP-21, this program replaces the Section 5309 Bus and Bus Facilities Program.

State Operating Subsidies (State):

Because the Bridgeport-Stamford urbanized area has a population greater than 200,000 people, Section 5307 funds cannot be used to subsidize local bus operations. However, the state is committed to providing subsidies to cover 100% of operating deficits for local fixed-route bus service. In addition, state grant funds are made available to municipalities to expand and enhance specialized paratransit services already provided in the community.

Recommended Transportation Improvement Projects

Through the transportation planning process, the VCOG has identified various transportation improvements to preserve and maintain existing systems, as well as, to undertake various system

enhancements. Implementation of the proposed improvements will be primarily through financial assistance provided by US Department of Transportation under **MAP-21**.

The Connecticut Department of Transportation (CDOT) has estimated the funding level likely to be available over the next twenty years. Projects will be selected from the LRTP and programmed for funding in the Greater Bridgeport and Valley Transportation Improvement Program (TIP). The TIP lists all proposed highway and transit improvement projects within the Greater Bridgeport and Valley Planning Regions programmed to receive federal assistance over a four-year period. The current TIP was endorsed by the GBVMPO on October 14, 2014, and is effective through September 30, 2018.

High Priority Project

Under SAFETEA-LU, high priority program funding was specifically authorized to implement various spot safety improvements along Route 67 in Seymour. The project involves minor widening from the intersection with River Street (Route 313) westward to the vicinity of Martha Street to provide turn lanes and a safer transition. Intersection improvements will also be constructed at Old Drive, Beecher Street and Church Street.

In addition, the VCOG received HPP funds to conduct a study to assess the feasibility of constructing a connector road between Route 42 in Beacon Falls and Route 67 in Seymour. The proposed

project would provide an alternate local route to Route 8 and alleviate traffic congestion on the expressway. It would also provide access to prime industrially and commercially zoned parcels. The Route 42 to Route 67 connector road project has been identified as future transportation improvement project.

Expressway System Improvements

The Route 8 Expressway through the Valley planning region is geometrically deficient and many interchange areas do not meet current design standards. The VCOG identified a comprehensive, corridor improvement program that would rehabilitate the highway to function as a high quality facility and improve the infrastructure condition, safety, mobility and freight movement. The improvement program will modernize Route 8 interchanges, reduce circuitous routing, reduce traffic impacts on local streets, improve safety, and enhance economic development. Specific projects include:

- Interchange 18: Reconstruct interchange ramps to provide standard acceleration and deceleration zones, and construct a new northbound on-ramp. Local roads would be improved to accommodate new ramp geometry. Project has been designed and advertised for construction; construction expected to begin Spring 2015.
- Interchange 16 and 17: The ramps at Interchange 17 would be realigned and extended to provide more direct access to Pershing Drive and the main business areas of Ansonia. A new northbound on-ramp would be constructed from

Pershing Drive to Seymour Avenue and a new southbound off ramp would be extended to Pershing Drive from Seymour Avenue. Pershing Drive would be extended to Route 34 in Derby to provide a local connection between Derby and Ansonia and reduce demand on Route 8. Other adjacent local roads would be reconstructed, including a new road between Pershing Drive and Seymour Avenue.

- Interchange 22: Construct new SB on-ramp.
- Interchange 19 and 21: Realign the southbound lanes between the interchanges to improve traffic flow and reduce weaving conflicts and modify ramps to provide standard acceleration and deceleration lanes.
- Interchange 14: Construct new southbound on-ramp from downtown Shelton and modify local streets.
- Interchange 11: Construct new southbound on-ramp from Bridgeport Avenue.
- Commodore Hull Bridge: Rehabilitate and repair the superstructure. Project is in design.

Arterial and Collector System Improvements

Many of the arterials and collector streets in the Valley planning region are essential for inter-town and inter-regional travel. However, many of these roads also function as the main streets through the city centers. The LRTP assessed operations and safety on the region's arterials and collectors and identified a series of improvements to the existing street network. The projects will

alleviate current and future operating problems and reduce traffic accidents. A balance approach to road improvements is required to ensure that opportunities to revitalize the city centers is not constrained or inhibited by over-built roads.

Selected widening and capacity improvements as well as better ways of managing traffic are included. Most improvements would be constructed within the existing rights-of-way, although some additional property will be needed for more extensive projects. Specific projects include:

- Route 34: Reconstruction of Route 34 through downtown Derby from the vicinity of the Route 8 overpass to Bridge Street. The project will widen the road from two lanes to four lanes, with turn lanes at key intersections. Various complete street elements will be included in the project, including a center island median, curb extensions, use of tactile material on crosswalks, traffic signal upgrades, enhanced pedestrian facilities, and bi-directional bicycle lanes. Preliminary design has been completed and the project will advance to final design in the Spring 2015. Construction is anticipated to begin in 2016.
- Route 115: Rehabilitate and minor widening from Route 34 in Derby to Route 67 in Seymour. The pavement structure is in poor condition and needs resurfacing. A uniform and consistent shoulder area needs to be provided over its entire length. The intersection at Division Street and Route 243 needs to be realigned.

- Route 110: Traffic signal modernization and interconnection project through downtown Shelton.
- Route 334: Several intersections need to be realigned and improved and several river crossings need to be rehabilitated.
- Route 313: The section of Route 313 from Route 67 to Broad Street will be widened as part of the Route 67 improvement project. This project includes widening and replacement of the bridge over the Little River.
- SR 714 – Bridgeport Avenue: Major widening to four lanes from the vicinity of Huntington Street to Commerce Drive. The project will include a comprehensive access management program to reduce the number of conflict points and rationalize access to adjacent commercial and retail parcels.
- Route 108: Reconstruct and realign the intersection at Isinglass Road.
- SR 728: Reconstruction and realignment of the intersection of SR 728 (Derby Avenue) and Cedar Street at the southbound entrance ramp to Route 8 at Interchange 21.

Congestion Management Program

MAP-21 requires states and regions designated as a Transportation Management Area to develop, establish and implement a Congestion Management Process. The CMP is defined as “...a continuous activity of considering and implementing actions that enhance mobility and reduce congestion on designated systems or in

targeted areas, appropriate to the magnitude and scope of desired system performance.” The Valley planning region is include in the Bridgeport-Stamford TMA and has developed a CMP in conjunction with Greater Bridgeport and Valley MPO.

The CMP provides a regional evaluation and implementation of congestion reduction strategies. The proposed system has been in effect since October 1, 1995. The basic objectives of the CMP are:

- Strive to alleviate both existing and future congestion.
- Enhance mobility of both people and goods.
- Evaluate performance of the system to identify areas and causes of congestions – data collection and performance measures.
- Identify and assess alternative actions – needs analyses and strategy identification.
- Evaluate the effectiveness of those actions – post-project evaluation.

The VCOG assesses highway performance and identifies alternate solutions. These performance data and analyses assist decision makers in selecting cost effective strategies for alleviating recurring congestion.

While constructing new infrastructure and expanding existing roads has been a traditional approach to addressing and reducing congestion, financial constraints and environmental considerations

have dictated a reevaluation of how to manage congestion. In recent years, the CMP has identified a number of strategies by which the transportation system can be managed better. Proposed actions from the CMP studies fall into one of seven general categories:

- Transportation Demand Management (TDM) – ridesharing programs, commute alternative programs, and telecommuting.
- Transit Service Improvements – enhance local bus services, bus rapid transit projects and commuter rail operational improvements.
- Intelligent Transportation Systems (ITS) – advanced technologies to operate transportation systems more efficiently.
- Traffic Signal Optimization & Installation Program – upgrade traffic signal systems, system interconnection, adaptive signal control and central signal system operation.
- Intersection Improvements – add turn lanes.
- Corridor Capacity Improvement Program – minor widening and selective widening.
- Access Management Program – reduce number of driveways and limited movements into and out of commercial driveways.

The goal of the CMP is a systematic process to assist decision-makers in selecting cost-effective strategies to reduce congestion and improve mobility. The following projects are included in the CMP for the Valley planning region:

- TDM Programs: Continue to provide funding support for the statewide TDM programs and regional rideshare incentive programs.
- Region-wide Traffic Signal Modernization and Management System: Upgrade, modernize and replace traffic signal equipment to maintain a state-of-good-repair. Actions involve replacing all signal heads with LED lenses, installing detection equipment, providing coordination equipment, revising and optimizing the signal timing and phasing plans, and minor modifications to the lane arrangement.

Intelligent Transportation Systems (ITS)

ITS refers to using advanced technologies to better manage and operate transportation systems. These advanced systems include computer hardware or software, traffic control devices, communications links, and remote detectors. The intent is to realize a more seamless transportation system with reduced delays and conflicts and increased systems integration, interoperability and communication. ITS projects needs to be consistent with the National ITS Architecture and must satisfy a defined set of user services defined by FHWA.

In the Valley planning region, officials from state and local police departments, the CTDOT and VCOG have participated in planning and identifying possible ITS projects. Proposed ITS projects for the Valley planning region include:

- Freeway Incident Management: The CTDOT operates 24-hour incident management centers in Bridgeport and Newington. The program includes monitoring of traffic and detection of incidents along I-95, I-91 and I-84. The program needs to be expanded to include coverage along Route 8 through the region. The project would include the installation of video cameras along the highway and speed detectors to monitoring operations and identify incidents. Including Route 8 in the state's incident management system will reduce response time when an incident occur and reduce congestion and delay caused by an incident.
- Enhance Highway Corridor Operations: The proposed program would integrate existing and planned traffic control devices to enhance and coordinate arterial traffic control systems. The intent will be to monitor traffic operations and institute timing changes in response to traffic conditions in real time. The system may also provide transit signal priority.
- Real Time Traveler Information System: The proposed system would provide information to transit travelers on vehicle location, schedule adherence, and delays. The project would install and interactive information kiosks dynamic message signs at the region's commuter rail stations.

Fixed-Route and Dial-a-Ride Local Bus Service

The Valley planning region is served by three local bus operators:

- Valley Transit District: The VTD provides dial-a-ride service throughout the region and operates commuter shuttles along Bridgeport Avenue in Shelton.
- Greater Bridgeport Transit: The GBT provides extensive service in the city of Bridgeport and Greater Bridgeport region. Three routes extend into the Valley planning region, two of the routes connect downtown Bridgeport with the Derby-Shelton rail station.
- CT Transit-New Haven Division: The New Haven Division of CT Transit operates one route from downtown New Haven to the town center of Seymour via Route 34, with intermediate stops at the Derby-Shelton rail station and downtown Ansonia.

The LRTP recognizes and supports the importance of local bus transit and its role in serving mobility needs. Proposed actions include:

- Preserve and maintain the essential local bus services provided by the VTD including funding operating deficits.
- Replace rolling stock and capital equipment as it reaches the end of its useful life.
- Continue to operate the GBT's Route 15 extension between downtown Bridgeport and Derby via Bridgeport Avenue in Shelton.
- Continue to provide service on Route F6 operated by CT Transit.

- Replace bus shelters throughout the region and install new shelters at key locations, especially along Bridgeport Avenue and in the city centers.
- Install a heated shelter at the Derby-Shelton rail station.
- Rehabilitate the VTD administrative and maintenance facility – project is underway.
- Implement various transit enhancement projects to improve pedestrian and bicycle access to the region's transit stops.

Commuter Rail Service Improvements and Waterbury Branch Line Modernization Program

The Waterbury branch line traverses the Valley planning region. It is one of the three branch lines of the New Haven main line and extends from the city of Waterbury to its connection with the main line in Devon, a distance of about 27 miles. Service is operated primarily between Waterbury and Bridgeport, with stops at Naugatuck, Beacon Falls, Seymour, Ansonia, and Derby-Shelton. Connections and transfers are required to continue west of Bridgeport to Stamford and New York City.

The WBL consists of an unsignalized, non-electrified single track with no passing sidings. Because of the lack of signals, the WBL is considered "dark" territory. These physical characteristics limit and constrain the level of service provided on the line as northbound and southbound trains are unable to pass one another, and, since the WBL is "dark" territory, multiple trains cannot operate simultaneously on the line. The most frequent service that can be

operated on the WBL is about every two hours in each direction. Currently, service is limited to eight southbound runs to Bridgeport and seven return trips to Waterbury each day. Only two trips in each direction occur during peak service periods.

The LRTP proposes a significant upgrade and modernization of the WBL infrastructure. Improvements to the line will allow an increase in service and operations:

- **Signalization:** Install full signalization along the entire length of the WBL and place under Central Traffic Control (CTC). Full signalization will create a series of blocks and allow more than one train to operate in the same direction at the same time. The project would produce the greatest benefits if combined with the construction of fully signalized passing siding. The project is in design and expected to be implemented as part of the CTDOT's Positive Train Control project.
- **By-pass Sidings:** Construct by-pass siding at three locations along the WBL, including from just north of the Derby-Shelton station. The by-pass sidings will provide locations for northbound and southbound trains to pass, allowing more frequent service.
- **Devon Station:** Because of capacity constraints on the New Haven main line, the opportunities to increase through service from the WBL are limited. As an alternative, it is proposed that a new station be constructed at the Devon "Y" where the WBL joins the main line. The new station would

function as a transfer point between WBL trains and main line trains. Service on the WBL would be converted to function more as a shuttle service between Devon and Waterbury.

- **Annual Track Program:** Implement and continue the annual program to maintain the track and right-of-way along the WBL.
- **Station Improvements:** Rehabilitate the Derby-Shelton, Ansonia and Seymour rail stations, including installing high level platforms, passenger shelters, information kiosks and enhancing wayfinding and pedestrian connections to the stations from the adjacent downtown areas.
- **Seymour Rail Station:** Relocate the Seymour station from its current downtown location to north of the commercial/retail development north of Route 67. The new station would be built as part of a development project and would support efforts to create a TOD project in the area.

Regional Non-Motorized Transportation

Streets are an integral part of our cities and towns, providing and facilitating the movement of people and goods. However, there are concerns that motorized traffic is being improved at the expense of accommodating travelers who use non-motorized modes. MAP-21 continues the federal emphasis begun with ISTEA with regard to accommodating all travelers. As part of regional transportation planning process, the VCOG has taken an active role in advancing non-motorized transportation improvements and promoting

complete streets elements in all highway improvement projects. The proposed and recommended actions recognize the need to encourage walking and bicycle travel for transportation, recreation, exercise and quality of life and envision a network of interconnected on-street bicycle routes and multi-use trails located on a separate right-of-way.

To achieve these objectives, the LRTP focuses on efforts to:

- Accommodate current bicycle use on the existing highway system in a safe manner;
- Connect activity centers and provide connections between where people live and where they want to go with well defined pathways;
- Make sure facilities are connected and provide sidewalks that are well maintained and provide pedestrian amenities;
- Promote the idea that all trips involve some time walking, especially at the destination;
- Not all bicyclists and pedestrians are the same; the different needs of all travelers need to be accommodated;
- Understand the unique qualities of every neighborhood and location; do not treat all places the same;
- Slow traffic down; consider traffic calming actions, including using textured material at crosswalks, bumping-out intersection curbs to shorten the walk distance, and installing center refuge islands;

- Enhance the streetscape environment, including planting urban appropriate trees, landscaping, installing bio-swales and rain gardens, using permeable paving material, and providing a buffer between the street and sidewalk;
- Install pedestrian enhancements, including highly visible crosswalks, upgrading pedestrian signal equipment, and extending walk intervals; and
- Add on-street parking treatments, including designated spaces delineated by a unique pavement treatment and curb/sidewalk bump-outs.

In recent years, federal aid funding has been allocated to the construction of sections of the Naugatuck River Greenway (NRG). The NRG is a planned multi-use trail along the Naugatuck River, extending from the City of Torrington to Derby. While most of the greenway is undeveloped, two sections have been completed in the Valley region. The Derby Greenway Trail extends between Bridge Street and Division Street at the Derby-Ansonia town line. It was built on the top of the flood control levee along the Naugatuck River and through land south of Route 34 and formed by the confluence of the Housatonic River and Naugatuck River. The Derby Greenway Trail provides a non-motorized connection between downtown Shelton and the Derby-Shelton rail station. However, the alignment does not provide a direct connection with the rail station and is longer than a straight-line connection. The Ansonia River Walk is essentially an extension of the Derby Greenway Trail from Division Street to just south of the downtown area. It was built along the flood control levees. An overpass of the WBL is in design and a plan to connect

with the downtown is underway. A recently completed assessment of transportation alternatives to enhance pedestrian and bicycle connections between Shelton and Derby recommended renovation of the Derby-Shelton Bridge over the Housatonic River to create a physical link between the Derby Greenway Trail and the Shelton River Walk trails in downtown Shelton.

Proposed non-motorized transportation improvements include:

- **Seymour Greenway Trail:** This project is a section of the NRG through downtown area of Seymour. It will connect existing open spaces and parks in the downtown with commercial and retail activities along Route 67. Included in the project are enhancements and improvements to the downtown streetscape and sidewalk network. Crosswalks and curb ramps would be upgraded. The first phase of the project is construction of a trail from Route 67 to the Tigue Dam Fishway Park. The trail would create a safe connection between downtown and the commercial areas along Route 67. To connect the downtown with the west side of the Naugatuck River, a pedestrian bridge is proposed, located just south of the Tigue Dam. A master plan for the Seymour Greenway project has been completed and the design of the first phase is underway.
- **Ansonia RiverWalk:** The existing trail runs from the Derby town line at Division Street to just south of the downtown. A project is in design to construct an overpass of the Waterbury branch line tracks. However, the overall plan for the RiverWalk is to connect the trail with the downtown and implement various streetscape improvements. The project will enhance and rehabilitate the existing sidewalks and install pedestrian amenities, such as, curb ramps, curb extensions, tree plantings, benches and crosswalks. The intent of the project is to improve pedestrian circulation in the downtown area.
- **Shelton RiverWalk:** The existing trail extends from Veterans Memorial Park along Canal Street to the Avalon condominium complex. The trail continues behind the condominiums along the Housatonic River. Phase III of the project would complete the gaps in the RiverWalk and extend it farther north along the river.
- **Route 34 Bicycle and Pedestrian Connections:** Route 34 is the main arterial through downtown Derby. It connects downtown Shelton with downtown Derby. However, it is primarily an auto-centric facility and pedestrian connections are deficient and bicycle travel is unsafe. As part of the state's TOD Pilot Program, the VCOG investigated existing pedestrian and bicycle connections in the corridor and identified a need to improve connections, especially between downtown Shelton and the Derby-Shelton trail station. The proposed project would be implemented as part of the Route 34 widening project and consists of the following actions:
 - Widen the sidewalk on the south side of Route 34 from Bridge Street to Factory Street;
 - Install a bi-direction cycle track along the south side of the road between the roadway and sidewalk;

- Provide a four-foot buffer between the road and the cycle track;
 - Install street trees and other planters;
 - Install curb extensions at key intersections;
 - Construct a separate path through the buffer behind the Home Depot and connect to the Derby-Shelton train station;
 - Extend a pedestrian and bicycle path through the parking lot of the rail station to provide a direct connection to the station platforms; and
 - Create a connection from the Derby Greenway to the Derby-Shelton station.
- Derby-Shelton Bridge: The Derby-Shelton Bridge is a historic bridge that carries Bridge Street over the Housatonic River. It connects with Route 34 on the east end and Route 110 on the west side. The Derby Greenway also starts near the intersection with Route 34. The bridge was built in 1918 and is 466 feet long and has 43-foot curb-to-curb width. As part of the TOD Pilot Program study, it was recommended that the bridge be rehabilitated and the bridge deck reconfigured to better accommodate pedestrians and bicyclists. Proposed actions include complete renovation and repair of the structure, including replacement of the lighting, reconstruction of the parapets, and installation of decorative railing, and the reconfiguration of the bridge deck to create a wide pedestrian plaza and a separate, bi-directional bike way. New period style lighting would be installed on the parapet walls.

- Naugatuck River Greenway: The Council of Governments of the Central Naugatuck Valley (COGCNV) completed an assessment of a preferred alignment of the NRG through that region. The study did not extend into Seymour and Ansonia. The VCOG conducted a preliminary investigation on possible alignments through those towns and how to connect with the completed sections. The LRTP proposes the completion of the NRG and extensions to connect to the Ansonia RiverWalk.

Recreational Trails Program

MAP-21 consolidated the Recreational Trails Program under the Transportation Alternatives Programs. Separate funding is no longer available for projects that develop and maintain recreational trails for motorized and non-motorized recreational trail users. However, Connecticut has continued to provide funds from the TAP program for recreational trails. Eligible activities include new trail construction, maintenance and restoration of existing recreational trails, development and rehabilitation of trailside and trailhead facilities and trail linkages, purchase of maintenance equipment, acquisition of easements or property, and trail promotion, education, environmental/historical trail interpretation.

Identified recreational trail projects in the Valley planning region are:

- Chatfield Park Trail in Seymour
- Fountain Lake Trail in Ansonia and Seymour
- Keith Mitchell Forest Trail in Seymour

- Little Laurel Lime Ridge Oak Trail in Seymour
- Redwing Pond Boardwalk Extension in Ansonia
- Witek Park to Ansonia High School Trail in Derby and Ansonia
- Various town trails in Shelton, including the Shelton Lakes recreation path and trail network.

Air Quality Conformity Determination

The Clean Air Act Amendments (CAAA) of 1990 and the federal transportation regulations and legislation recognized the major contributions of transportation sources to the overall air quality problem evidenced throughout the country. To effectuate a reduction in transportation-related emissions and a corresponding improvement in air quality, areas designated as non-attainment or maintenance for a criterion pollutant were required to demonstrate that their transportation plans, programs and projects contributed to the attainment of National Ambient Air Quality Standards (NAAQS) and would not cause a new violation or delay attainment of the NAAQS. This process is referred to as Air Quality Conformity. The GBVMPO is required to make the conformity determination based on a quantitative assessment of regional emissions.

The three transportation-related pollutants are regulated: Ozone, Carbon Monoxide and Particulate Matter. Ozone is an areawide pollutant that forms from a chemical reaction of hydrocarbons, oxygen, and nitrogen oxides with sunlight. Carbon Monoxide is emitted from vehicles and can become concentrated at spot

locations. It dissipates fairly quickly, and the concern is more associated with intersections where severe congestion occurs. Particulate Matter is small particles present in the air and is a mixture of microscopic solids and suspended liquid solids in the air. It is formed directly as a by-product of incomplete combustion of engines (smoke or automobile exhaust), or indirectly from chemical reactions in the atmosphere. It also includes dust and small particles from the wear of vehicle parts (tires, brake linings, etc) re-entrained into the air by the movement of vehicles. The finer the particulate matter, the greater the health risk is.

The quantitative air quality assessment is conducted by the CTDOT. The analyses are performed by the CTDOT because the non-attainment areas in Connecticut encompass more than one MPO area. To demonstrate conformity, the estimated total emissions likely to be generated from the implementation of the region's transportation improvement program, as detailed in the LRTP, would be less than allowable budgets in each of several analysis years.

For the 8-hour Ozone conformity test, the analysis years required for the 2015-2040 LRTP are:

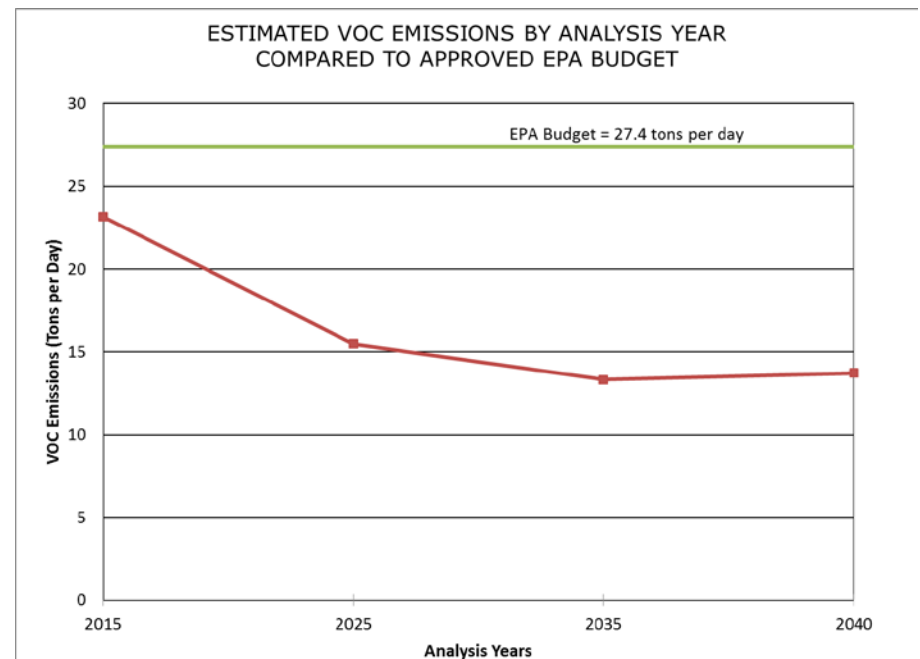
- 2009 (Base analysis year)
- 2015 (near term analysis year)
- 2025 (interim modeling year)
- 2035 (interim modeling year)
- 2040 (Horizon year for the LRTP)

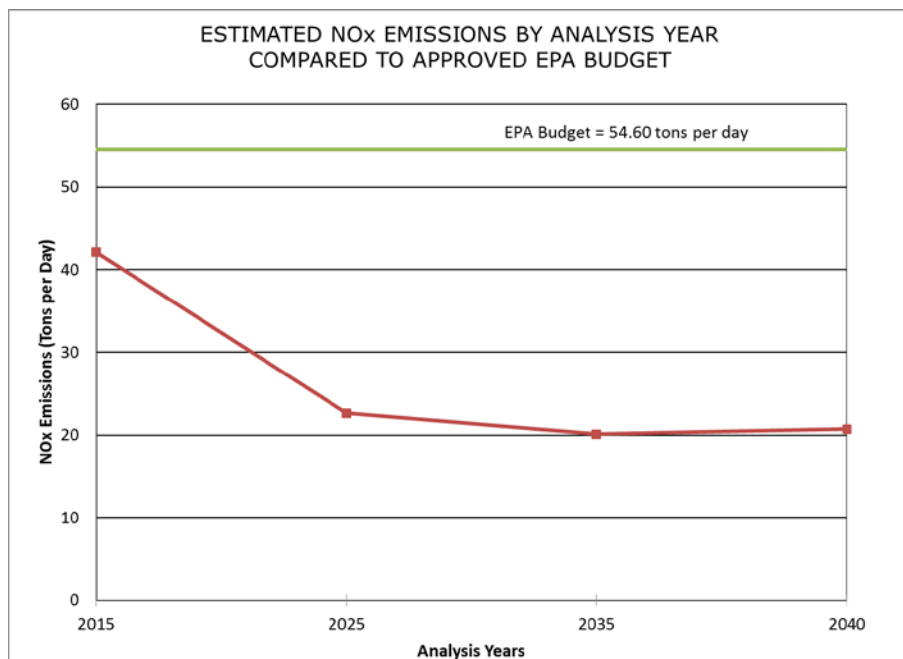
The MOVES2010b emissions model is used to calculate emissions from transportation travel and establish emissions budgets. The 8-hour budgets were developed jointly by CTDOT and CTDEEP. The budgets were found to be adequate by EPA and can be used in comparing future transportation-related emission to determine conformity. The approved budgets for the 8-hour Ozone NAAQS are

VALLEY PLANNING REGION 2015-2040 LONG RANGE TRANSPORTATION PLAN REGION EMISSIONS ANALYSIS RESULTS						
8-Hour Ozone NAAQS Connecticut Portion of the NY-NJ-LI-CT Area						
VOC Emission Analysis				NO _x Emission Analysis		
Analysis Year	Action	SIP Budget	Difference	Action	SIP Budget	Difference
2015 Emissions	23.15	27.40	-4.25	42.08	54.60	-12.52
2025 Emissions	15.48	27.40	-11.92	22.66	54.60	-31.94
2035 Emissions	13.32	27.40	-14.089	20.12	54.60	-34.48
2040 Emissions	13.72	27.40	-13.68	20.72	54.60	-33.88
1. A small reduction in VMT and emissions in the Greater Connecticut area will occur from the ECO program in the Connecticut portion of the NY-NJ-LI area due to travel between the areas.						
2. Emission analysis based on SUMMER conditions.						
3. VOC & NO _x emissions are in tons per day and are calculated using Connecticut's vehicle mix.						
4. HMPS 12 Functional Class system used.						
5. National Low Emission Vehicle (NLEV) program included in 2008 and future years.						
6. Eight Hour Ozone emission budgets effective June 27, 2008.						

27.4 tons of VOC emissions per day and 54.6 tons of Nitrogen Oxide emissions per day.

The results of the quantitative emissions analysis for the 8-Hour Ozone conformity test are shown in the following table and the analysis year trends are depicted in the charts following the table.





The CTDEEP submitted a revision to the State Implementation Plan to establish interim progress for achieving the NAAQS for fine particulate matter and motor vehicle emission budgets. The annual emission budgets for the Connecticut portion of the NY-NJ-CT non-attainment area were determined to be adequate and are used in future analysis years. The EPA has also determined Connecticut's PM_{2.5} attainment demonstration SIP to be administratively and technically complete as of January 8, 2009. Effective October 24, 2013, the Connecticut portion of the multi-state PM_{2.5} non-attainment area was redesignated as "attainment maintenance." EPA's guidance for maintenance plans calls for a demonstration of

continued compliance by showing that future emissions during the maintenance period will not exceed the level of emission in the attainment inventory. The end of the maintenance period is 2025.

For the PM_{2.5} conformity test, the analysis years required for the 2015-2040 LRTP are:

- 2017 (near term analysis year)
- 2025 (interim modeling year)
- 2035 (interim modeling year)
- 2040 (Horizon year for the LRTP)

The MOVES2010b emissions model is used to establish emissions budgets for the 2017 and 2025 analysis years. Emission estimates were developed for direct fine particulate matter and indirect emissions based on an estimate of NO_x emissions, the most critical precursor of PM_{2.5}.

The results of the quantitative emissions analysis for the annual PM_{2.5} conformity test are shown in the following table and the analysis year trends are depicted in the charts following the table.

VALLEY PLANNING REGION
2015-2040 LONG RANGE TRANSPORTATION PLAN
REGION EMISSIONS ANALYSIS RESULTS

Fine Particulate Matter (PM_{2.5}) Annual NAAQS
Connecticut Portion of the NY-NJ-CT Area

Direct PM _{2.5} Emission Analysis				NOx Emission Analysis		
Analysis Year	Action	SIP Budget	Difference	Action	SIP Budget	Difference
2017 Emissions	450.2	575.8	-125.6	10,365.7	12,791.8	-2,426.1
2025 Emissions	369.3	516.0	-146.7	6,900.0	9,728.1	-2,828.1
2035 Emissions	369.5	516.0	-146.5	6,129.6	9,728.1	-3,598.5
2040 Emissions	382.5	516.0	-133.5	6,266.0	9,728.1	-3,462.1

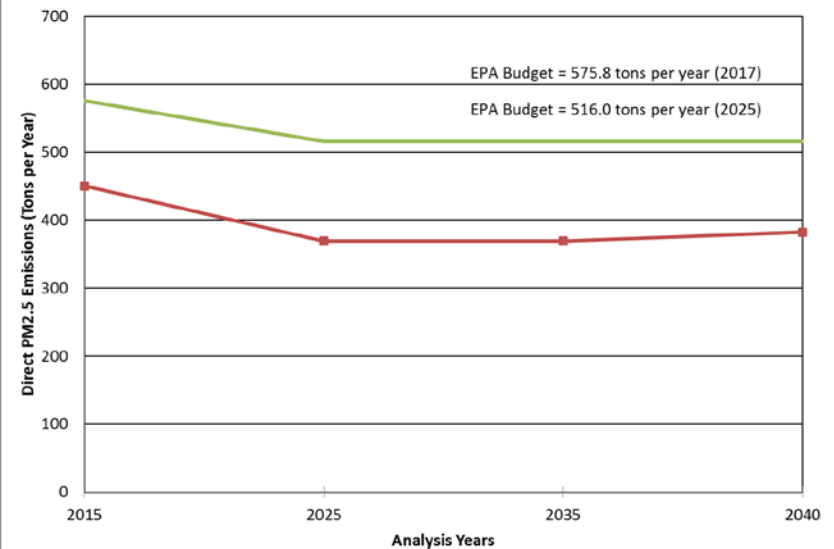
1. A small reduction in VMT and emissions in the Greater Connecticut area will occur from the ECO program.

2. Emission analysis based on SUMMER and WINTER conditions.

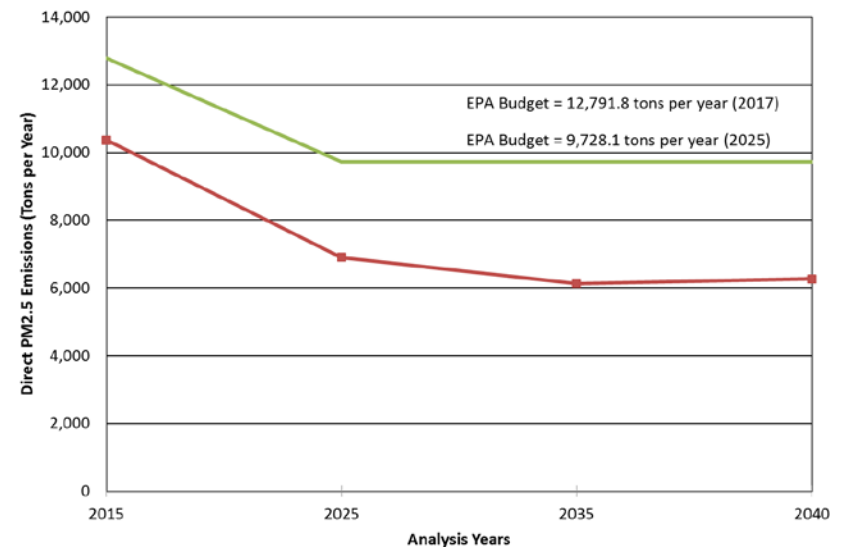
3. NOx emissions are in tons per day and are calculated using Connecticut's vehicle mix.

4. HMPS 12 Functional Class system used.

ESTIMATED DIRECT PM_{2.5} EMISSIONS BY ANALYSIS YEAR
COMPARED TO APPROVED EPA BUDGET



ESTIMATED NOx (INDIRECT) EMISSIONS BY ANALYSIS YEAR
COMPARED TO APPROVED EPA BUDGET



Financial Assessment

Federal planning regulations require the LRTP to have at least a 20-year time frame. The LRTP for the Valley planning region extends from 2015 through 2040. Over this period, funds will be available from federal, state and local sources to implement recommended projects. The CTDOT, as part of its financial planning responsibilities, provided an estimate of the total resources likely to be available to implement the highway portion of the regional LRTPs. Funds needed to construct major projects of statewide significance were extracted from the total with the remaining funds allocated to the regions based on proportionate weight of vehicle miles of travel, congested vehicle miles of travel and lane miles.

For the public transportation share, current FTA apportionments to the Bridgeport-Stamford urbanized area were extrapolated over the life of the LRTP inflated by 5.0% every five years. Funds available to the Valley planning region were sub-allocated by the fairshare proportion of urban area population. The state has committed to providing funds to cover 100% of the operating subsidies for local bus services. The VTD also receives federal funds through the FTA for operating ADA transit services. These funds were expected to be continued over the life of the LRTP and will be equal to funding needs.

Rail capital projects proposed and planned for the Valley region represent major statewide investments. The funding for these

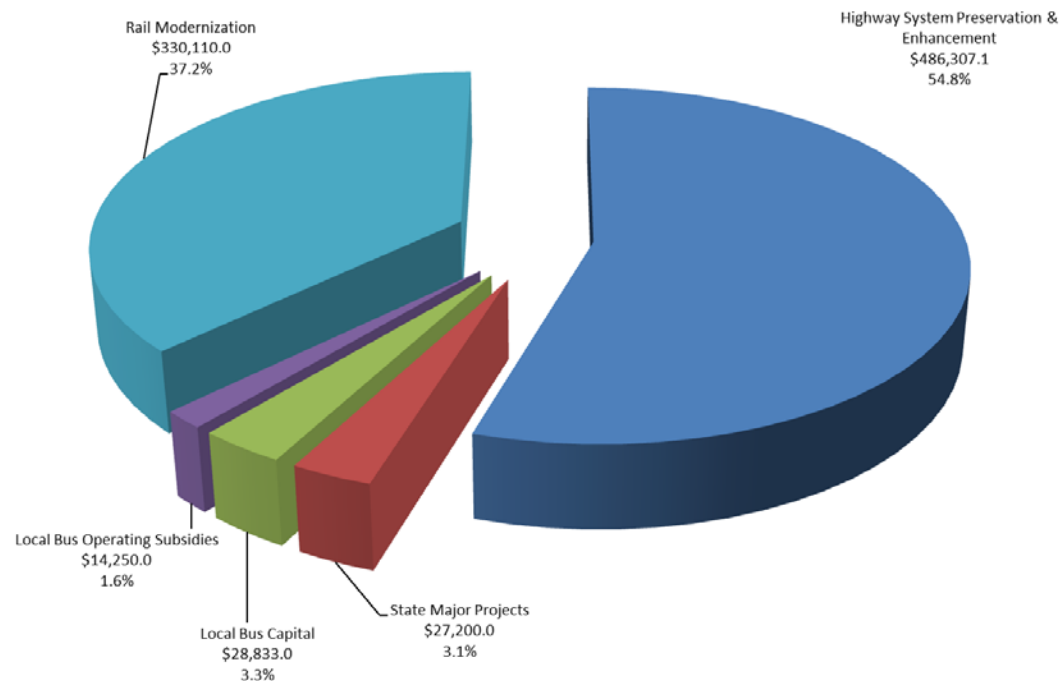
projects were assumed to be included in the CTDOT's rail plan and not drawn from the region's allocation of anticipated program funds.

Federal regulations also require the LRTP to be financially constrained and be based on a reasonable expectation of funds. The CDOT estimates that, over the next 25 years, about \$486.3 million will be available to implement the projects included in the LRTP. An additional \$27.2 million will be available to construct major projects of statewide significance. Resources for the highway system are further broken-down by funds to preserve and maintain the system in a state of good repair and those available for system enhancements. About \$178.7 million are earmarked for system improvements (enhance safety, improve mobility, increase system productivity or promote economic growth) and about \$307.6 million for system preservation (resurfacing, bridge rehabilitation and replacement, and reconstruction).

Based on current appropriations, it is expected that about \$373.2 million will be available through FTA grants for regional bus and rail capital projects. About \$43.1 million will be allocated to the region to support bus operations and about \$330.1 million will be invested in rail infrastructure and station modernization projects. While the total for bus capital and operating programs is expected to meet existing needs and demand, it does not allow for any new services or route enhancements and expansions.

The breakdown by funding source is shown in the following chart.

ANTICIPATED FINANCIAL RESOURCES (\$000)
2015 - 2040

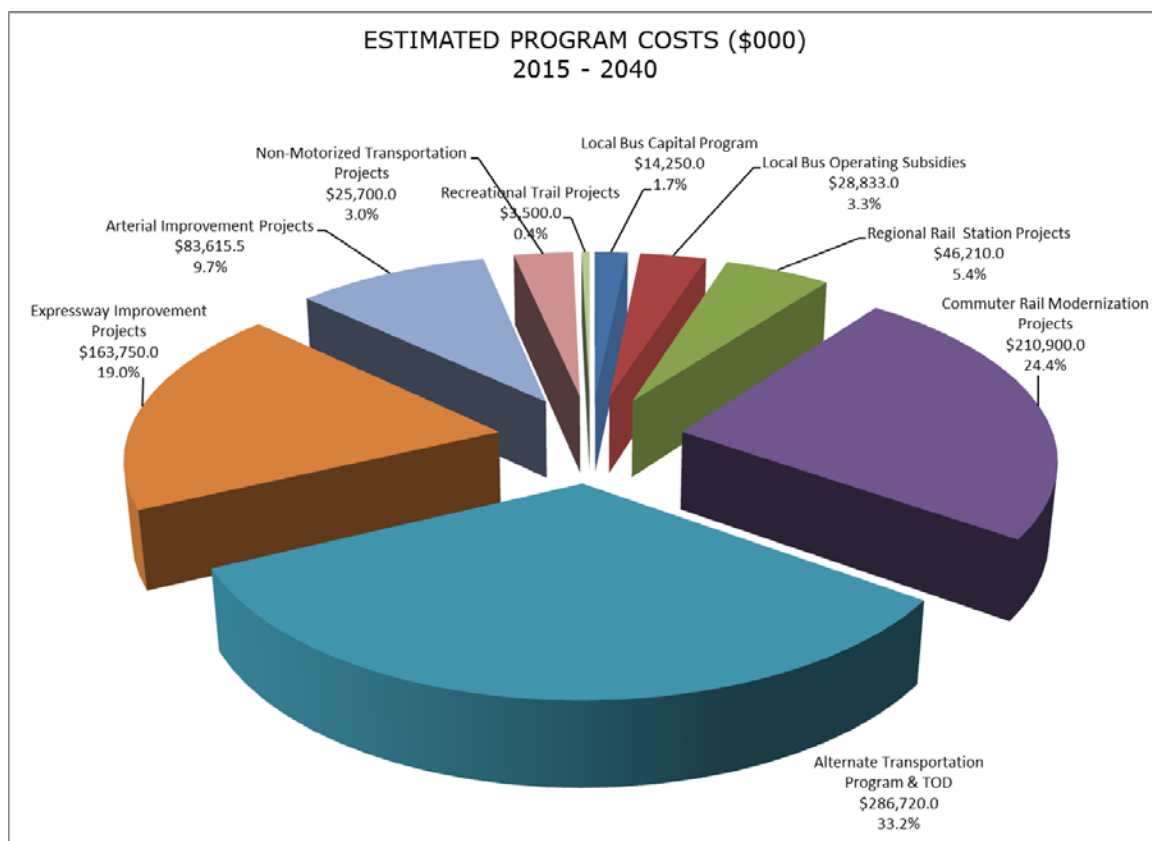


The funding needed to implement the transportation improvements recommended in the LRTP are substantial. The estimated financial need is about \$886.7 million. This cost includes a substantial investment in modernizing the infrastructure of the Waterbury branch rail line.

Project and program estimates represent order of magnitude costs based on unit prices supplied by ConnDOT and illustrative project concepts. Projects with known schedules were inflated to the expected year of implementation.

Anticipated Financial Resources, 2015-2040

Funding Category	Estimated Funds (\$000)
Highway System Improvements	\$178,687.5
Highway System Preservation	\$307,619.6
Major State Highway Projects	\$27,200.0
Subtotal:	\$513,507.1
Bus Capital Program	\$28,833.0
Bus Operating Subsidies	\$14,250.0
Rail Modernization Program	\$210,900.0
Rail Station Improvement Program	\$119,210.0
Subtotal:	\$373,193.0
Total Anticipated Funds	\$886,700.1



Estimated Project Costs Transportation program of Projects: 2015 - 2040	
System Category	Estimated Cost (\$000)
Local Bus Capital Program	\$14,250.0
Local Bus Operating Subsidies	\$28,833.0
Regional Rail Station Projects	\$46,210.0
Commuter Rail Modernization Projects	\$210,900.0
Alternate Transportation Program & TOD	\$286,720.0
Subtotal: Public Transit Projects	\$586,913.0
Expressway Improvement Projects	\$163,750.0
Arterial Improvement Projects	\$83,615.5
Non-Motorized Transportation Projects	\$25,700.0
Recreational Trail Projects	\$3,500.0
Subtotal: Highway Projects	\$276,565.5
Total:	\$863,478.5

The breakdown of project costs by system indicates that about 28.6% of the funds will be used to implement various highway system projects, including actions needed to maintain the facilities in a state of good repair, enhance highways, mitigate congestion, and support freight mobility and goods movement. An additional 3.4% of the total cost will be allocated to provide non-motorized

facilities, including multi-use trails and greenways, pedestrian enhancements and recreational trails.

Over one-third of the anticipated available funds have been targeted at supporting and enhancing public transit operations, capital equipment and infrastructure. The Waterbury branch rail line is an essential transportation system in the region, but it is need of major

rehabilitation. Investment in its facilities will cost over \$257.1 million over the next 20 years, and represents about 29.8% of the funding allocation in the LRTP. The LRTP has also identified opportunities to provide new alternate modes of transportation, and funding totaling about \$286.7 million has been allocated to these projects.

The recommended program of projects are listed in the following table:

**VALLEY PLANNING REGION
LONG RANGE TRANSPORTATION PLAN
PROGRAM OF PROJECTS AND ESTIMATED COSTS: 2015 - 2040**

Sector	Project Description		Comment	Timeframe
Regional Rail Station Projects	Ansonia: Station rehabilitation	\$2,500.0		2015-2020
	Derby-Shelton Multi-Modal Transit Center: Construct station area renovations, including rehabilitation of building, new commuter parking lot, bus bays & intermodal transfer point, information kiosk, high level platforms, accessible walkways and heated shelter	\$20,000.0		2015-2020
	Seymour: Relocate the Seymour Rail Station	\$23,000.0	Part of TOD & Redevelopment Project	TBD
	Derby-Shelton Station: Pedestrian & transit enhancements	\$710.0		2015-2020
	Subtotal:	\$46,210.0		
Commuter Rail Modernization Projects	WBL: Full Signalization of the Waterbury Branch Line	\$128,000.0	State Major Project	2015-2020
	WBL: By-Pass Siding north of Derby-Shelton Station	\$16,000.0		2015-2020
	WBL: Annual Track Modernization Program	\$50,000.0	Annual State Project funds extrapolated for 25 years	2015-2020
	WBL: Implement Positive Train Control	\$16,900.0	State Major Project	2015-2020
	Subtotal:	\$210,900.0		
Bus Operating Subsidies	VTD: Provide Annual Operating funds for Dial-a-Ride service provided by VTD.	\$20,960.0	Annual Project funds extrapolated for 25 years	2015-2040
	VTD: Provide Annual Operating funds for Paratransit/ADA service provided by VTD.	\$7,873.0	Annual Project funds extrapolated for 25 years	2015-2040

	Subtotal:	\$28,833.0		
Local Bus Capital Program	VTD: Replace rolling stock and maintenance & administrative vehicles	\$6,000.0	Based on life-cycle replacement	2015-2040
	VTD: Administrative Capital Projects	\$1,500.0	Based on life-cycle replacement	2015-2040
	VTD: Expand and rehabilitate VTD administration, maintenance & operations facility	\$4,150.0		2015-2020
	VTD: Bus shelter replacement program	\$1,400.0	Based on life-cycle replacement	2015-2040
	VTD: Transit enhancement projects	\$1,200.0		2015-2020
	Subtotal:	\$14,250.0		
Alternate Transportation Program & TOD	WBL: Construct Devon Station and institute high frequency shuttle service to connect NH-ML trains	\$73,000.0	State Major Project	2015-2025
	Route 8 & WBL: Implement Bus Rapid Transit in the Route 8 and Waterbury Branch Line corridor between Derby and Bridgeport; about 13.0 miles	\$213,720.0	State Major Project	2025-2040
	Subtotal:	\$286,720.0		
Expressway Improvement Projects	Route 8: Expand state Incident Management Systems to include Route 8; includes 24-hour monitoring, video surveillance, variable message signs & incident detection	\$7,200.0		2015-2020
	Route 8: Construct new SB on-ramp at Interchange 11; widen Bridgeport Avenue	\$3,500.0	Preliminary design completed	2020-2025
	Route 8: Construct new SB on-ramp at interchange 14; modify local streets	\$9,875.0	Preliminary design completed	2020-2025
	Route 8: Reconstruct interchanges 16 & 17; extend	\$80,000.0	Preliminary design completed	2020-2025

	Pershing Drive & construct local roads			
	Route 8: Reconstruct Interchange 18; new NB on ramp & modify local streets	\$11,100.0	Project obligated; construction underway	2015-2020
	Route 8: Realign SB lanes between Interchange 19 & 21; modify interchange	\$17,500.0	Preliminary design completed	2020-2025
	Route 8: Construct new SB on-ramp at Interchange 22	\$7,375.0	Preliminary design completed	2020-2025
	Route 8: Rehabilitate Commodore Hull Bridge (Bridge No. 00571) Carrying Route 8 over the Housatonic River & Route 110	\$27,200.0	State Major Project	2015-2020
	Subtotal:	\$163,750.0		
Arterial Improvement Projects	Route 34: Reconstruct and major widening from Route 8 to Bridge Street; includes advanced traffic signal system, complete streets elements & bi-directional bike lanes	\$16,500.0	Preliminary design completed	2015-2020
	Route 34: Reconstruct and widen intersection at Route 34 and Route 188 in Seymour	\$3,200.0		2015-2020
	Route 42 & Route 67: Construct connector arterial between Route 42 in Beacon Falls and Route 67 in Seymour; includes construction of section of Naugatuck River Greenway	\$8,500.0		2015-2020
	Route 67: Construct various spot improvements along Route 67 between Route 313 (River Street) and Johnson Street; includes widening of bridge over Little River	\$5,060.5	Preliminary engineering study completed	2015-2020
	Route 108: Widen bridge carrying Shelton Road	\$2,105.0		2020-2025
	Route 108: Reconstruct & realign the intersection at	\$2,800.0		2015-2020

	Isinglass Road			
	Route 115: Realign intersection at Division Street & Route 243; widen approach lanes	\$6,000.0		2015-2020
	Route 334: Upgrade Maple Street Bridge over Naugatuck River in Ansonia	\$2,000.0		2015-2020
	Route 334: Restore bridge over Naugatuck River & railroad tracks in Ansonia	\$2,000.0		2015-2020
	Route 334: Realign road between Southwest Road & Fountain Lake Road	\$2,000.0		2015-2020
	SR 714 (Bridgeport Avenue): Major widening to 4 lanes from Trumbull town line to Constitution Boulevard; includes intersection improvements at Trapp Falls Road and Commerce Drive, advance traffic signal system & access management	\$11,500.0		2020-2025
	SR 728: Realign intersection of SR 728 (Derby Avenue) at Cedar Street; includes improvements to the ramps at Interchange 21 on Route 8	\$6,950.0		2020-2025
	Various: Bridge rehabilitation, widening and repair program in the Valley planning region	\$15,000.0		2015-2025
	Subtotal:	\$83,615.5		
Non-Motorized Transportation Projects	Ansonia Riverwalk: Construct Phase II of the Ansonia Riverwalk Greenway; north to downtown	\$3,000.0	Master plan prepared	2015-2020
	Ansonia Riverwalk: Construct pedestrian & streetscape	\$2,000.0	Master plan prepared	2015-2020

	enhancements in downtown Ansonia			
	Naugatuck River Greenway: Construct extension from Beacon Falls to downtown Seymour	\$3,500.0	Part of Route 42/67 Connector Road Project	2015-2020
	Naugatuck River Greenway: Construct extension from downtown Seymour to downtown Ansonia	\$3,200.0		2020-2025
	Seymour Greenway: Construct pedestrian & streetscape enhancements in downtown Seymour; construct pedestrian bridge over the Naugatuck River at Tingue Dam	\$4,500.0	Master plan prepared	2015-2020
	Derby-Shelton Connection: Rehabilitate the Derby-Shelton Bridge over the Housatonic River; includes bi-directional bicycle lanes, pedestrian plaza, streetscape elements & decorative lighting	\$2,700.0		2015-2020
	Shelton River Walk: Widen Canal Street & install various pedestrian & bicycle facilities & amenities	\$2,100.0		2015-2020
	Shelton River Walk: Extend river walk along Canal Street West; construct pedestrian improvements on Wooster Street & provide connections into Riverview Park	\$3,500.0		2015-2020
	Downtown Shelton: Construct pedestrian & streetscape enhancements along Route 110 & Bridge Street	\$1,200.0		2015-2020
	Subtotal:	\$25,700.0		
Recreational Trail Projects	Chatfield Park Trail: Seymour	\$500.0		2015-2025
	Fountain Lake Trail: Ansonia--Seymour	\$500.0		2015-2025
	Keith Mitchell Forest Trail: Seymour	\$500.0		2015-2025

	Little Laurel Lime Ridge Oak Trail: Seymour	\$500.0		2015-2025
	Redwing Pond Boardwalk Extension: Ansonia	\$500.0		2015-2025
	Ryan Field Trail: Derby	\$500.0		2015-2025
	Witek Park to Ansonia High School Trail: Derby & Ansonia	\$500.0		2015-2025
	Subtotal:	\$3,500.0		

