



---

# Central Naugatuck Valley Metropolitan Planning Organization

FFY 2018-2021 Transportation Improvement Program

---

**Prepared by:**  
Naugatuck Valley Council of Governments  
in cooperation with the Connecticut Department of Transportation

Endorsed: June 9, 2017  
Revised to include Addendum: Performance-Based Planning and Programming: June 8, 2018

**Central Naugatuck Valley Metropolitan Planning Organization Chief Elected Officials:**

<b>Municipality</b>	<b>Chief Elected Official</b>	<b>Title</b>
Town of Beacon Falls	Christopher Bielik	First Selectman
Town of Bethlehem	Leonard Assard	First Selectman
City of Bristol	Ken Cockayne	Mayor
Town of Cheshire	Rob Oris, Jr.	Town Council Chair
Town of Middlebury	Edward B. St. John	First Selectman
Borough of Naugatuck	N. Warren "Pete" Hess	Mayor
Town of Oxford	George R. Temple	First Selectman
Town of Plymouth	David V. Merchant	Mayor
Town of Prospect	Robert J. Chatfield	Mayor
Town of Southbury	Jeff Manville	First Selectman
Town of Thomaston	Edmond V. Mone	First Selectman
City of Waterbury	Neil M. O'Leary	Mayor
Town of Watertown	Thomas L. Winn	Town Council Chair
Town of Wolcott	Thomas G. Dunn	Mayor
Town of Woodbury	William J. Butterly, Jr.	First Selectman

**Table of Contents**

**Abstract ..... 4**

**Public Comment and Outreach ..... 5**

    Public Comment Period:.....5

    Public Information Meetings: .....5

    Sources of Copies:.....5

**Adopted Resolutions ..... 6**

**Overview..... 19**

**Section 1: MPO Organization ..... 20**

**Memoranda of Understanding .....20**

        Project Movement within the Adopted TIP ..... 20

        Air Quality Planning and Conformity Efforts ..... 20

        Transportation Planning and Funding in the Hartford and Bridgeport/Stamford Urbanized Areas . 21

        Coordination of Transportation Planning Activities in the Multi-State Metropolitan Region ..... 21

**Section 2: TIP Development Process ..... 22**

**Section 3: Air Quality Conformity Process ..... 24**

    Conformity .....24

    Ozone Nonattainment Areas .....24

    PM 2.5 Attainment Maintenance Area.....29

**Section 4: Financial Assessment..... 32**

**Section 5: Public Involvement ..... 34**

**Section 6: FHWA Projects..... 35**

**Section 7: FTA Projects ..... 48**

**Performance-Based Planning and Programming..... 54**

    Highway Safety .....54

    Transit .....55

    Pavement and Bridge Condition .....56

    System Reliability .....56

    Freight Movement .....57

    Air Quality .....57

## **Abstract**

The FFY 2018-2021 TIP contains a listing of all proposed transportation improvement projects programmed to receive federal financial assistance from the US DOT over the next four years. The TIP includes an overview that describes the organization of the MPO. It also describes the TIP development process, the project selection procedures, and the results of the regional air quality impact assessment. The TIP is organized by federal aid transportation programs administered by Federal Highway FHWA and FTA. The public was provided an opportunity to review the TIP and offer comments. Efforts were made to ensure low income and minority groups were notified about the draft TIP and afforded an opportunity to participate in the process.

## **Public Comment and Outreach**

### **Public Comment Period:**

June 1, 2017 – June 30, 2017

### **Public Information Meetings:**

1. Friday, June 9, 2017 at 10:00 AM at Central Naugatuck Valley MPO meeting, Conference Room, NVCOG, Waterbury, CT
2. Tuesday, June 20, 2017 at 5:00 PM at Naugatuck Valley Council of Governments, Waterbury, CT

### **Sources of Copies:**

Mark C. Nielsen, Deputy Director/Director of Planning  
Naugatuck Valley Council of Governments  
49 Leavenworth Street, 3<sup>rd</sup> Floor  
Waterbury, Connecticut 06702

Website: [nvcogct.org](http://nvcogct.org)  
E-mail: [TIPComments@nvcogct.org](mailto:TIPComments@nvcogct.org)  
Phone: (203) 757-0535

## Adopted Resolutions



**CENTRAL NAUGATUCK VALLEY  
METROPOLITAN PLANNING ORGANIZATION**

49 Leavenworth Street, 3rd Floor, Waterbury, CT 06702 - 203-757-0535 - 203-755-8688

### **RESOLUTION 2017-14**

**ENDORSEMENT  
FFY 2018-2021 TRANSPORTATION IMPROVEMENT PROGRAM  
FOR THE  
CENTRAL NAUGATUCK VALLEY MPO**

**WHEREAS**, the Central Naugatuck Valley MPO is authorized by the *Fixing America's Surface Transportation Act (FAST Act)* and related US Department of Transportation regulations to develop and endorse a transportation improvement program for the Central Naugatuck Valley metropolitan planning area.

**WHEREAS**, the Naugatuck Valley Council of Governments is the designated host agency for the Central Naugatuck Valley MPO and has, in consultation with the Connecticut Department of Transportation, prepared the *FFY 2018-2021 Transportation Improvement Program for the Central Naugatuck Valley Metropolitan Planning Organization*.

**WHEREAS**, the *FFY 2018-2021 TIP* lists and describes all transportation improvement projects programmed to receive federal transportation funding assistance from the Federal Highway Administration and the Federal Transit Administration over the next four federal fiscal years beginning October 1, 2017.

**WHEREAS**, the *FFY 2018-2021 TIP* establishes project priorities, indicates project schedules, provides project funding estimates, and identifies federal funding programs.

**WHEREAS**, the financial plan for the *FFY 2018-2021 TIP* is included and demonstrates financial constraint to anticipated federal funding resources expected to be allocated and authorized to the State of Connecticut and the Waterbury Urbanized Area.

**WHEREAS**, the *FFY 2018-2021 TIP* was made available for public review and comment, and notification of the proposed TIP was consistent with and followed the procedures set forth in the MPO's *Public Outreach Policy* dated March 2017, including providing a 30-day review and comment period, holding a public information meeting, posting the draft TIP on the NVCOG website and considering public comments in reviewing the draft TIP.

**WHEREAS**, the proposed *FFY 2018-2021 TIP* has been presented to the CNVMPO, reviewed and discussed.

**WHEREAS**, the proposed program of projects included in the *FFY 2018-2021 TIP* were assessed for their impact on air quality and the State's ability to attain the National Ambient Air Quality Standards for the Ozone and PM<sub>2.5</sub> pollutants and the regional emissions assessments demonstrate that the proposed projects will not have an adverse impact on air quality nor prevent the State from attaining the air quality standards, as required.

**NOW, THEREFORE BE IT RESOLVED** Central Naugatuck Valley Region MPO endorses the *FFY 2018-2021 Transportation Improvement Program for the Central Naugatuck Valley Metropolitan Planning Organization* presented and discussed here today. The endorsement of the FFY 2018-2021 TIP covers a four-year period from October 1, 2017 through September 30, 2021 and is contingent upon no major adverse comments are received during the public review and comment period between June 1, 2017 and June 30, 2017.

This resolution shall become effective as of June 9, 2017.

I do hereby certify that the resolution adopted by the CNVMPO at a public meeting held on June 9, 2017, at which a quorum was present and that the same is a correct and true transcript from the original thereof.

Respectfully submitted,



Thomas Dunn  
CNV MPO Secretary

6-9-17

Date



**RESOLUTION 2017-15**

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

**WHEREAS**, the Central Naugatuck 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 Central Naugatuck Valley MPO that the plans and programs approved today, June 9, 2017 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 Moderate 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 May, 2017; 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** that the Central Naugatuck Valley MPO finds that the Central Naugatuck Valley Long Range Regional Transportation Plan 2015-2040 and the Central Naugatuck Valley Region Transportation Improvement Plan 2018-2021 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 May 2017 Ozone Air Quality Conformity Determination contingent upon no major adverse comments are received during said period.

**CERTIFICATE**

The undersigned duly qualified Secretary of the Central Naugatuck Valley MPO certifies that the foregoing is a true and correct copy of a resolution adopted at a legally convened meeting of the Central Naugatuck Valley MPO on June 9, 2017.

DATE: 6-9-17

BY:   
Thomas Dunn, Secretary



**RESOLUTION 2017-16**

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

**WHEREAS**, the Central Naugatuck 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 Central Naugatuck Valley MPO that the plans and programs approved today, June 9, 2017 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 Greater Connecticut Ozone Moderate Nonattainment area (Litchfield, Hartford, Tolland, New London and Windham 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 May, 2017); and

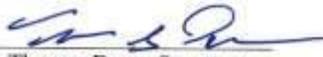
**WHEREAS**, the Connecticut Department of Transportation’s assessment (above) has found that plans and programs jointly meet mobile source emission’s guidelines advanced by EPA pursuant to Section 7506 (3) (A).

**NOW, THEREFORE BE IT RESOLVED** that the Central Naugatuck Valley MPO finds that the Central Naugatuck Valley Long Range Regional Transportation Plan 2015-2040 and the Central Naugatuck Valley Region Transportation Improvement Plan 2018-2021 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 May 2017 Ozone Air Quality Conformity Determination contingent upon no major adverse comments are received during said period.

**CERTIFICATE**

The undersigned duly qualified Secretary of the Central Naugatuck Valley MPO certifies that the foregoing is a true and correct copy of a resolution adopted at a legally convened meeting of the Central Naugatuck Valley MPO on June 9, 2017.

DATE: 6-9-17

BY:   
Thomas Dunn, Secretary



**RESOLUTION 2017-17  
RESOLUTION ON CONFORMITY WITH THE CLEAN AIR ACT  
PM 2.5**

**WHEREAS**, the Central Naugatuck 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 Central Naugatuck Valley MPO that the plans and programs approved on June 9, 2017 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 Central Naugatuck Valley Long Range Regional Transportation Plan 2015-2040 and the Central Naugatuck Valley Region Transportation Improvement Plan 2018-2021 and Amendments show that the implementation of the projects contained therein will result in emissions of PM<sub>2.5</sub> in each analysis year that are less than the emissions of the baseline year; and

**NOW THEREFORE BE IT RESOLVED**, that the Central Naugatuck Valley MPO finds that the Central Naugatuck Valley Long Range Regional Transportation Plan 2015-2040 and the Central Naugatuck Valley Region Transportation Improvement Plan 2018-2021 and 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 May 2017 PM<sub>2.5</sub>

Conformity Determination contingent upon no major adverse comments are received during said period.

**CERTIFICATE**

The undersigned duly qualified Secretary of the Central Naugatuck Valley MPO certifies that the foregoing is a true and correct copy of a resolution adopted at a legally convened meeting of the Central Naugatuck Valley MPO on June 9, 2017.

DATE: 6-9-17

BY:   
Thomas Dunn, Secretary



**RESOLUTION 2017-19**

**ENDORSEMENT  
STATE OF GOOD REPAIR (SGR) PERFORMANCE TARGETS  
CENTRAL NAUGATUCK VALLEY MPO**

**WHEREAS**, the Central Naugatuck Valley MPO is the designated metropolitan planning organization for the Central Naugatuck Valley metropolitan planning area and the Naugatuck Valley Council of Governments is the designated host agency for the Central Naugatuck Valley MPO.

**WHEREAS**, the Federal Highway Administration and Federal Transit Administration regulations governing federal transportation assistance, prescribe new requirements for Metropolitan Planning Organizations (MPO's) to coordinate with transit providers, set performance targets, and integrate those performance targets and performance plans into their planning documents. As per 23 CFR 450.324 and 23 CFR 450.326, MPO's are required to reference performance targets and performance based plans into their TIPs and Metropolitan Transportation Plans by October 2018.

**WHEREAS**, the FTA established four *State of Good Repair (SGR) Performance Measures* in asset categories of Rolling Stock, Equipment, Facilities and Infrastructure. The SGR Performance Targets for these measures were set by the Connecticut Department of Transportation (CTDOT) in coordination with the transit providers, including Metro North Railroad, Connecticut Transit, and all the rural and urban Transit Districts to comply with the January 1, 2017 deadline.

**WHEREAS**, the MPO is required to establish SGR performance targets for metropolitan areas for each FTA Performance Measure, as per 23 CFR 450.306 (d)(3), 180 days after the transit providers have set their respective performance targets, or by July 1, 2017. If there are multiple asset classes offered in the metropolitan planning area, the MPO should establish targets for each asset class.

**WHEREAS**, the SGR Performance Measure Targets set by the Connecticut Department of Transportation have been reviewed by the transportation technical and policy boards of Central Naugatuck Valley MPO.

**NOW, THEREFORE BE IT RESOLVED** Central Naugatuck Valley Region MPO endorses the *State of Good Repair (SGR) Performance Measures* established by the Connecticut Department of Transportation on January 1, 2017

This resolution shall become effective as of June 9, 2017.

I do hereby certify that the resolution adopted by the CNVMPO at a public meeting held on June 9, 2017, at which a quorum was present and that the same is a correct and true transcript from the original thereof.

Respectfully submitted,



Thomas Dunn  
CNV MPO Secretary

6-9-17

Date



**RESOLUTION 2017-20**

**URBAN TRANSPORTATION PLANNING CERTIFICATION  
CENTRAL NAUGATUCK VALLEY MPO**

**WHEREAS**, the Central Naugatuck Valley MPO (CVNMPO) is required by the *Fixing America's Surface Transportation Act (FAST Act)* and related US Department of Transportation regulations to certify that the metropolitan transportation planning process is being carried out in accordance with all US Department of Transportation requirements and regulations and must submit such certification concurrent with the submittal of the entire proposed Transportation Improvement Program to the Federal Highway Administration and Federal Transit Administration as part of the STIP approval.

**WHEREAS**, the Naugatuck Valley Council of Governments is the designated host agency for the Central Naugatuck Valley MPO and conducts the transportation planning process in accordance with the regulations promulgated by the US Department of Transportation and specified in the *FAST Act*, by preparing a Unified Planning Work Program, conducting and performing the transportation planning activities contained in the UPWP, preparing, maintaining and amending the endorsed short-range Transportation Improvement Program (TIP), preparing and updating the long range regional transportation plan (LRTP), assessing the air quality impacts of the proposed transportation improvement projects included in the TIP and LRTP, and proactively involving the public in the metropolitan transportation planning process.

**WHEREAS**, the *CNVMP*O 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 VU of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990 and the Older Americans Act, and regarding the involvement of disadvantaged business enterprises in USDOT funded projects and the implementation of an equal opportunity program on Federal and Federal-aid highway construction contracts.

**NOW, THEREFORE BE IT RESOLVED** that the Central Naugatuck Valley MPO, the metropolitan planning organization for the Central Naugatuck metropolitan planning area and the Waterbury urbanized area 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 FAST Act and all applicable provisions relative to 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 USC and 49 USC have been satisfied.

This resolution shall become effective as of June 9, 2017.

I do hereby certify that the resolution adopted by the CNVMPO at a public meeting held on June 9, 2017, at which a quorum was present and that the same is a correct and true transcript from the original thereof.

Respectfully submitted,

  
\_\_\_\_\_  
Thomas Dunn  
CNV MPO Secretary

6-9-17 Date



**CENTRAL NAUGATUCK VALLEY  
METROPOLITAN PLANNING ORGANIZATION**

49 Leavenworth Street, 3rd Floor, Waterbury, CT 06702 - 203-757-0535 - 203-735-8688

**RESOLUTION 2018-10**

**AMENDMENT  
FFY 2018-2021 TRANSPORTATION IMPROVEMENT PROGRAM  
CENTRAL NAUGATUCK VALLEY MPO**

**WHEREAS**, the Central Naugatuck Valley MPO is authorized by the *Fixing America's Surface Transportation Act (FAST Act)* and related US Department of Transportation regulations to develop and endorse a transportation improvement program for the Central Naugatuck Valley metropolitan planning area.

**WHEREAS**, the Naugatuck Valley Council of Governments is the designated host agency for the Central Naugatuck Valley MPO and has, in consultation with the Connecticut Department of Transportation, prepared the *FFY 2018-2021 Transportation Improvement Program for the Central Naugatuck Valley Metropolitan Planning Organization*.

**WHEREAS**, Title 23 CFR 450.326(d) stipulates the TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the TIP toward achieving the performance targets identified in the metropolitan transportation plan.

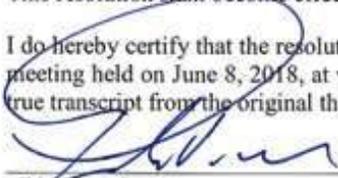
**WHEREAS**, the attached Addendum: Performance-Based Planning and Programming meets the requirements of Title 23 CFR 450.326(d).

**WHEREAS**, the public notification and review of this addendum was consistent with and followed the procedures set forth in the MPO's public involvement guidelines, and the proposed amendments are consistent with the long range transportation plan for the Central Naugatuck Valley planning region.

**NOW, THEREFORE BE IT RESOLVED** that Central Naugatuck Valley MPO approves the amendment of the FFY 2018-2021 TIP to include the Addendum: Performance-Based Planning and Programming.

This resolution shall become effective as of June 8, 2018.

I do hereby certify that the resolution adopted by the Central Naugatuck Valley MPO at a public meeting held on June 8, 2018, at which a quorum was present and that the same is a correct and true transcript from the original thereof.

  
\_\_\_\_\_  
Ed Mone, Secretary

June 8, 2018  
\_\_\_\_\_  
Date

## **Overview**

The Central Naugatuck Valley Metropolitan Planning Organization (CNVMPO) Transportation Improvement Program (TIP) lists all highway and transit improvement projects within the Central Naugatuck Valley planning region programmed to receive federal assistance over the next four federal fiscal years, beginning October 1, 2017 (FFY 2018) and ending September 30, 2021 (FFY 2021). The TIP is incorporated into the State Transportation Improvement Program (STIP), and is collectively referred to as the TIP/STIP.

The CNVMPO is authorized by federal regulations and designated by the Governor to conduct transportation planning and endorse a TIP/STIP for that portion of the Bridgeport-Stamford, Waterbury, New Haven, and Hartford Urbanized Areas covered by the Central Naugatuck Valley planning regions. Federal transportation planning regulations, as amended, stipulate who selects projects under the various funding categories.

Federal regulations require the TIP/STIP to be "financially constrained." This means there must be a reasonable expectation of federal financial assistance to implement endorsed projects and that the funding sources must be identified for each project. The MPO endorsed the FFY 2015-2018 TIP on October 10, 2014. It has been subsequently amended over the intervening years to advance priority projects and maintain a financially constrained TIP/STIP.

The FFY 2018-2021 TIP is organized by federal funding category and federal fiscal year. Project descriptions, cost estimates and schedules are provided for each project. Annual financial plans were developed that provide an estimate of total funding requirements and reflect anticipated federal funds.

The TIP Includes:

- MPO organization and TIP requirements;
- Summary of Transportation Planning Process Memoranda of Understanding (MOUs);
- TIP development, project selection and development process;
- Air quality assessment and regional air quality emission analysis results of TIP;
- Air quality conformity determination (Ozone and PM2.5);
- Public involvement activities and public comments;
- Project descriptions, cost estimates and programming schedule by FHWA and FTA funding category; and
- Financial assessment.

## **Section 1: MPO Organization**

Membership of the CNVMPO includes the Chief Elected Officials of the ten municipalities of the Central Naugatuck Valley planning region. The 15 MPO municipalities are:

- Town of Beacon Falls
- Town of Bethlehem
- City of Bristol
- Town of Cheshire
- Town of Middlebury
- Borough of Naugatuck
- Town of Oxford
- Town of Plymouth
- Town of Prospect
- Town of Southbury
- Town of Thomaston
- City of Waterbury
- Town of Watertown
- Town of Wolcott
- Town of Woodbury

Representatives of the FHWA, FTA, CTDOT, and the CT DEEP are included as "Ex Officio" members. The NVCOG serves as the transportation planning agency of the MPO and conducts the transportation planning process for the planning region in accordance with the federal planning requirements.

### **Memoranda of Understanding**

The transportation planning process in the implicated urbanized areas is carried out through cooperative relationships between area municipalities, regional planning organizations, regional transit operators, state transportation agency, state air agency, and federal transportation. Agreements have been made between participants to define roles and responsibilities and formalize actions. The following are the Memoranda of Understanding that guide transportation planning in the CNVMPO planning region:

#### ***Project Movement within the Adopted TIP***

The CTDOT and MPO established an agreement to expedite the selection and movement of projects within the endorsed State and MPO TIPs (STIP/TIP). The MOU established an administrative process for endorsing these types of changes and provides flexibility in adjusting the STIP/TIP without the need for a formal amendment.

#### ***Air Quality Planning and Conformity Efforts***

The MPO and the Connecticut Department of Energy and Environmental Protection (DEEP) developed a letter of understanding to define roles and responsibilities for air quality planning, particularly as it pertains to the development of transportation control measures (TCMs) and the State Implementation Plan for Air Quality (SIP).

### ***Transportation Planning and Funding in the Hartford and Bridgeport/Stamford Urbanized Areas***

This MOU was developed by the MPOs designated in the Bridgeport-Stamford and Hartford urban areas to guide how funds allocated under the STP urban program would be divided among the MPOs. The CNVMPO includes municipalities included in both urbanized areas. Distribution is based primarily on the total population in each urban planning region relative to its share of the combine population of all urban planning regions. The transportation funds from the FHWA (PL) and FTA (Section 5303) are passed through the CTDOT based on the fairshare population formula to the urban regional planning organizations of the urbanized area. Each year, CTDOT will determine the federal funding available to the Bridgeport-Stamford urbanized area and calculate regional fairshare apportionments based on the method described above.

### ***Coordination of Transportation Planning Activities in the Multi-State Metropolitan Region***

The NVCOG is a party to a multi-state MOU with the New York Metropolitan Transportation Council (NYMTC) and the Orange County Transportation Council (OCTC) in the State of New York, the North Jersey Transportation Planning Authority (NJTPA) in the State of New Jersey, the Western Connecticut Council of Governments (WestCOG), Connecticut Metro Council of Governments (METROCOG), Naugatuck Valley Council of Governments (NVCOG), South Central Regional Council of Governments (SCRCOG), and Lower Connecticut River Valley Council of Governments (RiverCOG) in the State of Connecticut, and the Lehigh Valley Planning Commission (LVPC) in the State of Pennsylvania to perform in good faith the activities of voluntary coordination, cooperation and consultation amongst themselves. The intent of the MOU is to cooperate in efforts toward achieving, wherever possible, general consistency of planning products, analyses and tools through informal communication and document exchange.

## **Section 2: TIP Development Process**

The TIP is prepared by the NVCOG in collaboration with CTDOT. The MPO selects highway projects for the attributable portion of FHWA's Surface Transportation Block Grant Program (STPH, STPBS, STPNH and STP Anywhere), as well as, local transit projects under the FTA's Section 5307 capital formula grant program. The CTDOT submits a list of proposed projects allocated to the other federal-aid programs. The MPO evaluates the draft State TIP (STIP) and incorporates its program into the MPO TIP.

Projects proposed for federal-aid funding under the STP are required to follow a prescribed scoping, evaluation and development process. Project proposals must complete all aspects of the process before they can be initiated and included in the TIP.

To set priorities for locally initiated projects, the CNVMPO established regional goals and objectives in its long-range transportation plan that reflect the goals of MAP-21:

### **Goal**

To develop and maintain an efficient transportation system that will provide the public with a high level of mobility, safety, and choice, while also addressing social, economic, and environmental needs and concerns.

### **Objectives**

1. To provide a transportation system that reinforces and compliments the regional plan of conservation and development and the land use planning objectives of the region's 15 municipalities. <sup>[1]</sup><sub>[SEP]</sub>
2. To maintain and improve the region's highway system with an emphasis on making better use of existing transportation facilities while seeking to improve safety and security and reducing traffic congestion, energy consumption, and motor vehicle emissions. <sup>[1]</sup><sub>[SEP]</sub>
3. To maintain and improve public transportation service to provide a choice of travel modes, reduce highway congestion, improve efficiency, and provide mobility for people who are transit dependent. <sup>[1]</sup><sub>[SEP]</sub>
4. To provide transportation services to expand employment opportunities.
5. To provide transportation services responsive to the elderly and persons with disabilities.
6. To plan and program transportation improvements according to existing and realistic future funding.
7. To support strong, sustainable, and livable communities.
8. To provide "walkable communities," especially in downtown centers and in congested areas, connecting these areas with commuter parking lots, residential areas, schools, commercial and industrial corridors, and recreation areas.

9. To increase the safety and security of the transportation system for motorized and non-motorized users.

In 2013, the Connecticut state legislature created the Local Transportation Capital Improvement Program or LOTCIP. The new program provides state funds to urbanized planning areas in lieu of the federal transportation funds allocated under the Surface Transportation Block Grant (STBG) Program for urbanized areas. The CTDOT implemented the program and developed guidelines and procedures for selecting projects. While the LOTCIP provides an alternate funding source for local transportation projects, federal guidelines still require the CNVMPO and CTDOT to collaborate on project selection and evaluation under the STBG.

Projects included in the TIP must address the issues and be consistent with the objectives contained in the CNVMPO long range transportation plans (LRTP), as well as, the CTDOT's capital plan. Project selection is based on a thorough evaluation of project purpose and needs. The availability of federal financial assistance, the cost of the proposed improvement, and the ability of the project sponsor to finance and complete its share of the project are also considered in setting regional priorities. A financial plan and activity schedule is established for each federal fiscal year. This financial plan establishes the priorities for each funding category.

Projects are intended to meet the following criteria:

- Address a transportation deficiency;
- Improve the movement of people and goods;
- Adequately mitigate the transportation deficiency;
- Minimize adverse environmental and social impacts; and
- Is it cost effective.

All projects contained in the TIP are consistent with the LRTP for the Central Naugatuck Valley planning region and the state-wide long range transportation plan.

## **Section 3: Air Quality Conformity Process**

### **Conformity**

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 are required to demonstrate that their transportation plans, programs and projects contribute to the attainment of *National Ambient Air Quality Standards (NAAQS)* and will not cause a new violation or delay attainment of the *NAAQS*. This process is referred to as *Air Quality Conformity*. The CNVMPO is required to assess the air quality impacts of its transportation plans, program and projects and certify that its transportation process is in conformity with the *CAAA*.

The Connecticut Department of Transportation is responsible for conducting the air quality emissions analyses for the metropolitan planning organizations in Connecticut. The CTDOT uses the statewide travel demand model to estimate vehicle miles of travel for various classes of highways and during various time periods. The future transportation network includes all planned improvement projects and is based on the complete implementation of the transportation improvement program (TIP) and the long range transportation plans.

### **Ozone Nonattainment Areas**

Connecticut is divided into two non-attainment area for the 8-hour ozone *NAAQS*, both are classified as “Moderate” non-attainment areas. Fairfield, New Haven and Middlesex counties are included as part of the New York-Northern New Jersey-Long Island non-attainment area. The remainder of the state is designated as the Greater Connecticut non-attainment area. Because parts of the CNVMPO planning area are located in both non-attainment areas, a conformity determination is required for both non-attainment areas.

In June, 2004, the EPA finalized the 8-hour standards for ozone non-attainment areas and the designated the Connecticut portion of the New York-Northern New Jersey-Long Island non-attainment area as a “moderate” non-attainment area for the 8-hour Ozone *NAAQS*. Subsequent decisions by the EPA, and based on revisions to the approach for classifying non-attainment areas, re-designated both of Connecticut’s non-attainment areas as a “marginal” non-attainment area with an attainment date of December 31, 2015. Based on 2012-to-2014 air quality data, the EPA determined that Connecticut’s non-attainment areas did not attain ozone standards by the July 20, 2015 deadline. Both the Greater Connecticut and the New York-New Jersey-Long Island areas were reclassified as “Moderate,” effective June 3, 2016, with the new attainment date set for these two areas as July 20, 2018.

The MOVES2014a emissions model is used to calculate emissions from transportation travel and establish ozone 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 conformity test requires the emissions from the future transportation system to be less than the EPA-approved budgets for all analysis years. The emissions analyses were conducted for the following years:

2018 – New attainment year and near term analysis year

2025 – Interim modeling year

2035 – Interim modeling year

2040 – Long range transportation plan horizon year

The results of the quantitative emissions analyses conducted by CTDOT are shown in the following tables and the analysis year trends are depicted in the charts following the tables.

**CENTRAL NAUGATUCK 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**

Analysis Year	VOC Emission Analysis			NO <sub>x</sub> Emission Analysis		
	Action	SIP Budget	Difference	Action	SIP Budget	Difference
<b>2018 Emissions</b>	16.56	27.40	-10.84	22.39	54.60	-32.21
<b>2025 Emissions</b>	12.33	27.40	-15.07	13.26	54.60	-41.34
<b>2035 Emissions</b>	7.26	27.40	-20.14	7.86	54.60	-46.74
<b>2040 Emissions</b>	6.68	27.40	-20.72	7.35	54.60	-47.25

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. VOC & NO<sub>x</sub> emissions are in tons per summer day and are calculated using Connecticut’s vehicle mix.

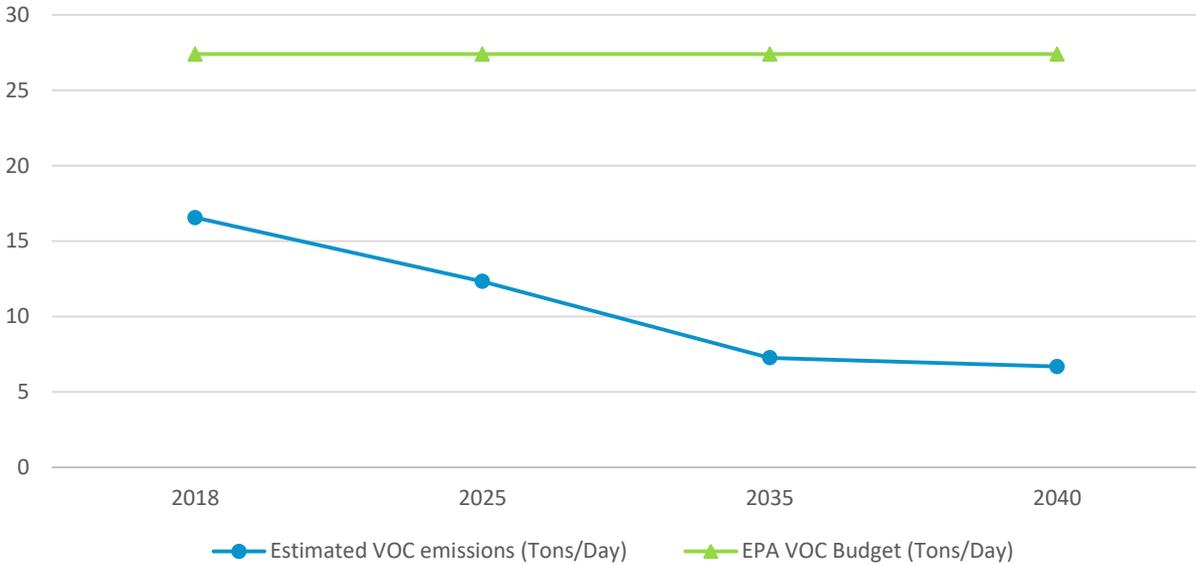
3. HMPS 14 Functional Class system used.

4. National Low Emission Vehicle (NLEV) program included in 2008 and future years.

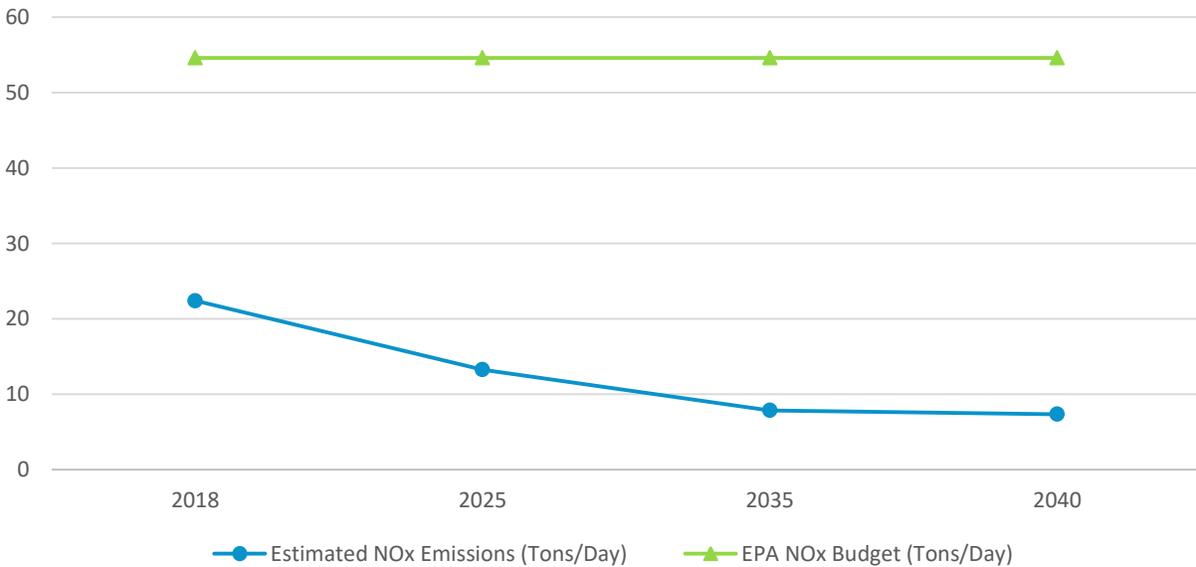
5. Eight Hour Ozone emission budgets effective June 27, 2008.

6. Series 31C with 20 iterations equilibrium assignment.

Estimated VOC Emissions by Analysis Year  
Compared to Approved EPA Budget  
CT Portion of NY-NJ-LI-CT Non-Attainment Area



Estimated NOx Emissions by Analysis Year  
Compared to Approved EPA Budget  
CT Portion of NY-NJ-LI-CT Non-Attainment Area



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

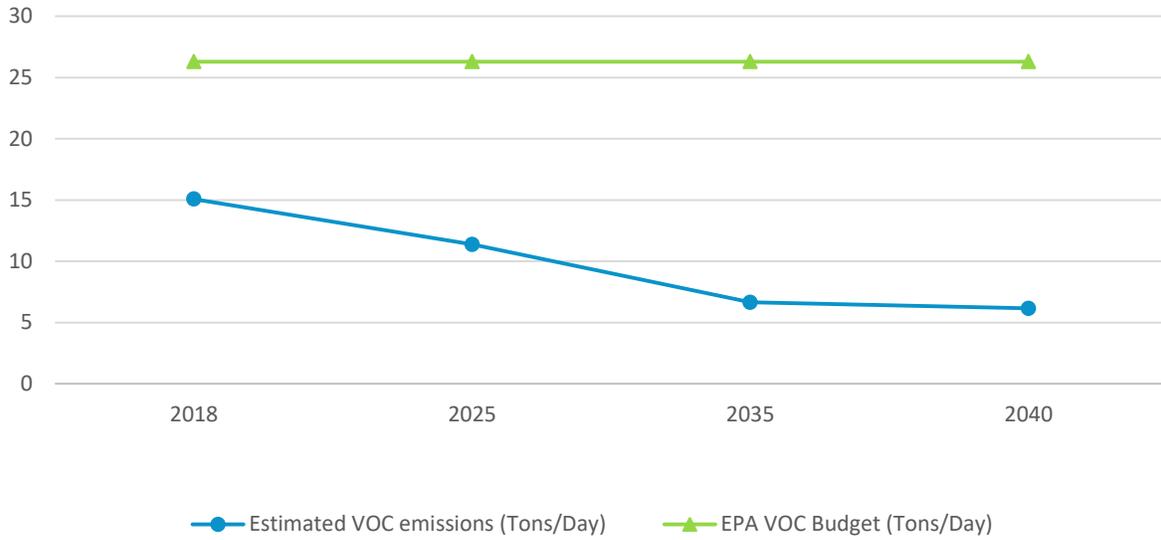
8-Hour Ozone NAAQS

Greater Connecticut Non-Attainment Area

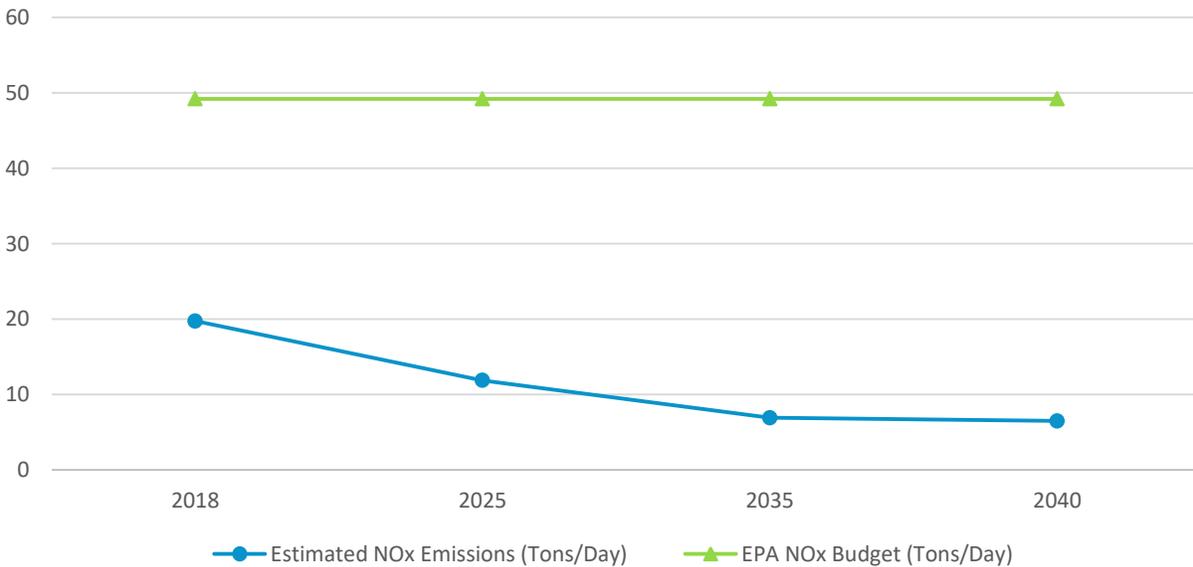
VOC Emission Analysis				NO <sub>x</sub> Emission Analysis		
Analysis Year	Action	SIP Budget	Difference	Action	SIP Budget	Difference
<b>2018 Emissions</b>	15.07	26.30	-11.23	19.74	49.20	-29.46
<b>2025 Emissions</b>	11.38	26.30	-14.92	11.86	49.20	-37.34
<b>2035 Emissions</b>	6.65	26.30	-19.65	6.91	49.20	-42.29
<b>2040 Emissions</b>	6.15	26.30	-20.15	6.48	49.20	-42.72

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. VOC & NO<sub>x</sub> emissions are in tons per summer day and are calculated using Connecticut's vehicle mix.
3. HMPS 14 Functional Class system used.
4. National Low Emission Vehicle (NLEV) program included in 2008 and future years.
5. Eight Hour Ozone emission budgets effective June 27, 2008.
6. Series 31C with 20 iterations equilibrium assignment.

Estimated VOC Emissions by Analysis Year  
Compared to Approved EPA Budget  
Greater CT Non-Attainment Area



Estimated NOx Emissions by Analysis Year  
Compared to Approved EPA Budget  
Greater CT Non-Attainment Area



## **PM 2.5 Attainment Maintenance Area**

The US Environmental Protection Agency (EPA) promulgated national ambient air quality standards (NAAQS) for fine particulate matter in 1997. Fine particulate matter is referred to as PM2.5 and is a mixture of microscopic solids and suspended liquid solids in the air. It is formed directly as a by-product of combustion, such as smoke or automobile exhaust, or indirectly from chemical reactions in the atmosphere. Fairfield and New Haven Counties are included in the New York-New Jersey-Connecticut (NY-NJ-CT) PM2.5 non-attainment area.

On April 17, 2007 the Connecticut Department of Energy and Environmental Protection (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 PM2.5 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 PM2.5 non-attainment area was re-designated 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.

The MOVES2010b emissions model is used to establish emissions budgets for the 2017 and 2025 analysis years. Emission estimates were developed for each scenario year using MOVES2014a for direct PM2.5 and indirect PM2.5 emissions based on the estimate of NOx emissions, the most critical precursor of PM2.5.

The conformity test requires the emissions from the future transportation system expected to be in place in 2017 to be less than the EPA-approved budget for 2017 and the emissions from the 2025 build scenario and subsequent years to be less than the 2025 budget. The emissions analyses were conducted for the following years:

2013 – Attainment year

2017 – Motor Vehicle Emissions Budget year

2025 – Motor Vehicle Emissions Budget year; End maintenance period

2035 – Interim modeling year

2040 – Long range transportation plan horizon year

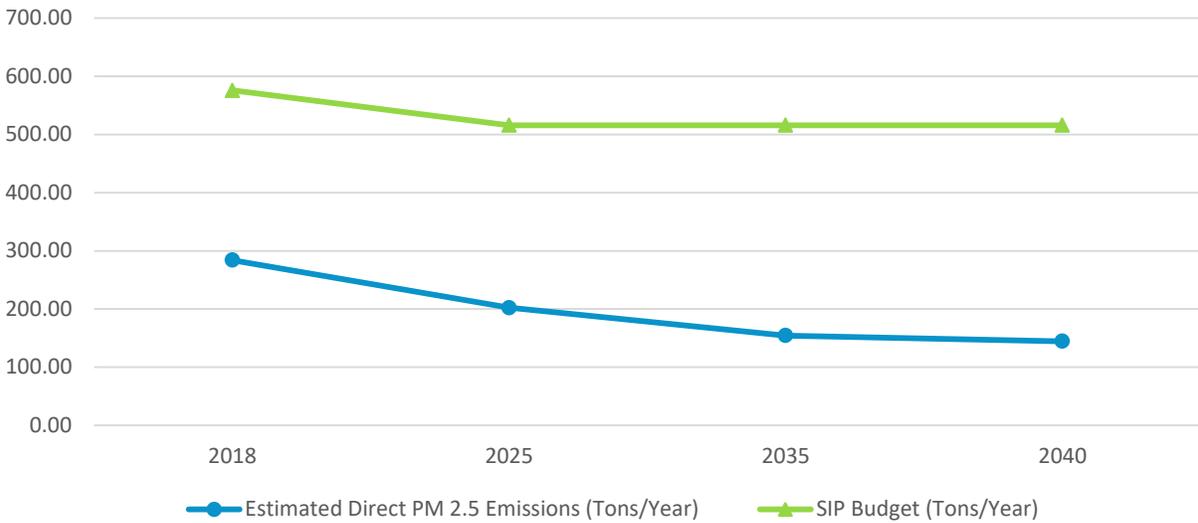
The results of the quantitative emissions analysis conducted by CTDOT are shown in the following table and the analysis year trends are depicted in the charts following the table.

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

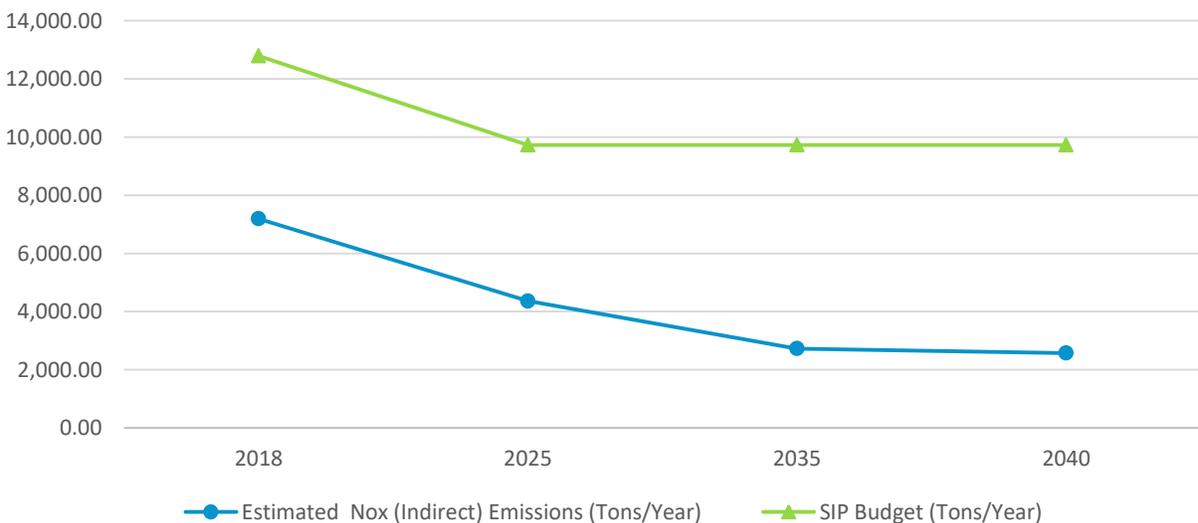
Fine Particulate Matter (PM<sub>2.5</sub>) Annual NAAQS  
 Connecticut Portion of the NY-NJ-LI-CT Area

Direct PM <sub>2.5</sub> Emission Analysis				NO <sub>x</sub> Emission Analysis		
Analysis Year	Action	SIP Budget	Difference	Action	SIP Budget	Difference
2018 Emissions	284.10	575.80	-291.70	7,192.70	12,791.80	-5,599.10
2025 Emissions	202.30	516.00	-313.70	4,361.80	9,728.10	-5,366.30
2035 Emissions	154.40	516.00	-361.60	2,726.30	9,728.10	-7,001.80
2040 Emissions	144.60	516.00	-371.40	2,572.00	9,728.10	-7,156.10

Estimated Direct PM 2.5 Emissions by Analysis Year  
 Compared to Approved EPA Budget  
 CT Portion of the NY-NJ-LI-CT  
 Attainment/Maintenance Area



Estimated NOx (Indirect) Emissions by Analysis Year  
 Compared to Approved EPA Budget  
 CT Portion of the NY-NJ-LI-CT  
 Attainment/Maintenance Area



#### **Section 4: Financial Assessment**

The FFY 2018-2021 TIP is financially constrained to the congressional authorized amounts for the programs governed by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Non-federal matching funds will be provided by the State of Connecticut through the Connecticut Department of Transportation and by the sponsoring municipalities of the Central Naugatuck Valley planning region.

The TIP is expected to require about \$1,098.9 million to implement over the next four years. This funding requirement includes regional (specific projects located in one of the fifteen municipalities in the Central Naugatuck Valley MPO area) and statewide and multi-region projects. These latter projects involve actions that will be implemented in either CTDOT Maintenance and Construction District 1 or 4, both of which overlap the MPO area. The funding requirements for the statewide and district projects are included for information purposes only. These funds are not included in the MPO TIP financial plan because they are shown in other regional TIPs and are only included in the financial plan for the State TIP (STIP). For projects specific to the Central Naugatuck Valley region, the funding requirement for the next four years totals about \$383.0 million.

The US Department of Transportation will provide about 75.7% of the funds required to implement the MPO TIP projects, with the state contributing 23.9%. Local sources of funds are expected to provide less than 0.4% of the total cost to implement region-based projects. Federal sources are estimated to accumulate to about \$289.8 million and the state will provide \$91.5 million. Approximately \$1.7 million will come from local sources. The vast majority of federal funds are allocated to state roads and facilities where the State is responsible for the non-federal matching funds. Since its inception, local projects are primarily being completed with 100% State funds under the LOTCIP. Because local projects are sorted into the LOTCIP, there are very few locally sponsored projects in the TIP, and therefore local funds account for only a small portion of spending in the TIP.

About 91.9% of the total cost of the MPO's transportation improvement program is targeted at highway and road projects with about 8.1% of the funds used to support various transit projects. Highway improvement projects are estimated to cost about \$352.1 million, with \$289.8 million allocated from various FHWA programs. This represents roughly 82.3% of the financial requirement for highway projects. The only transit-related line items allocated directly to the planning region are for CTtransit bus operations and will require about \$30.9 million to implement. These projects will be 100% state funded.

The funding requirements to implement the projects listed in the TIP are provided from reasonably expected public resources. The federal funds identified in the TIP are a portion of the total expected authorization to the State of Connecticut. When these funds are summed with all other expected federal funds shown in the TIPs of the other Connecticut MPOs and the rural regions of Connecticut, as shown in the STIP, the total equals the expected federal authorization to the State of Connecticut. CTDOT and the MPO have concurred in the use of these federal funds for the projects listed in the FFY 2018-2021 TIP/STIP.

The majority of the federal funds in the TIP will be matched by State resources. The CTDOT has committed to use Connecticut Special Transportation Fund (STF) resources for this purpose. The STF was established in 1983 by the Connecticut State Legislature to finance the State's share of the Transportation Infrastructure Renewal Program. This fund is required to pay the operating expenses of the CTDOT, the 100% State funded infrastructure improvement projects, and the interest and principal from the sale of bonds. Connecticut uses proceeds from the sale of bonds to match expected federal funds. The sale of bonds has consistently been at a level sufficient to match all available federal funds. The principal sources of STF revenues are the motor fuel tax and motor vehicle receipts, which combined account for about 80% of the total fund revenues. State resources are sufficiently available to match the federal funds allocated to TIP/STIP projects. Past experience of Connecticut's performance in financing the Transportation Infrastructure Renewal Program supports this conclusion, as all available federal funds have been matched during that period.

Local resources provided by the municipalities composing the CNVMPO will also be used to match federal funds to the extent necessary. These local revenues will contribute less than ½ a percent of the non-federal match. Where local funds are indicated in the TIP, the municipality or sponsoring entity has made a financial commitment to provide the necessary project funds for the match of federal dollars. The commitment of local match of federal funds is a condition for project endorsement by the MPO and must be authorized by a municipal resolution before a project is added to the TIP.

The TIP, and the STIP, of which the TIP is a component, is financially constrained and the spending plan is based on reasonable projections of available statewide and local resources. As project, program and schedule changes are made to the TIP, the total expected federal authorizations and matching funds will be re-allocated to reflect total statewide and regional program needs.

## **Section 5: Public Involvement**

The draft FFY 2018-2021 TIP was made available to the public for review and comment. A 30-day review and comment period was provided, beginning on June 1, 2017 with a posting on both the NVCOG website and ending on June 30, 2017. A legal notice was published in the Republican American (Waterbury area newspaper) in the June 1, 2017 edition. In an effort to expand public outreach to Spanish speaking residents, a legal notice was also published in the weekly Spanish newspaper, La Voz Hispana De Connecticut, June 1, 2017.

The draft list of projects was posted on the website of the NVCOG and the public was requested to offer comments.

Public information meetings were held concerning the draft STIP/TIP:

- Friday, June 9<sup>th</sup> at 10:00 AM during the CNVMPO meeting in the conference room of the NVCOG, Third Floor, 49 Leavenworth Street, Waterbury.
- Tuesday, June 20<sup>th</sup>, at 5:00 PM in the conference room of the NVCOG, Third Floor, 49 Leavenworth Street, Waterbury.

For the public information meeting on June 20<sup>th</sup>, NVCOG and CTDOT staffs were available at 4:30 PM to informally discuss any aspects relating to the draft TIP/STIP and any other transportation issues and concerns. Comments received at the meetings were recorded and staff responded to comments, as needed.

The public review and comment period information meetings also served as the notice for related air quality assessments. The CTDOT conducted the regional emissions analyses for Ozone and Fine Particulate Matter (PM2.5) and the results were incorporated into the TIP/STIP.

The public was also provided an opportunity to comment on the draft TIP and air quality conformity determinations at the meeting of the Central Naugatuck Valley MPO held on June 9, 2017. The Chair asked if there was anyone from the public present at the meeting that wanted to comment. Hearing none, the CNVMPO moved to endorse the air quality conformity statements and draft TIP, contingent on completing the public comment period and during which no major adverse comments were received.

## Section 6: FHWA Projects

### Federal Highway Administration



### Central Naugatuck Valley MPO 2018-2021 Transportation Improvement Program

**Bristol**                      **Project #: 0017-0187**                      Route/System:                      CT 72

Region:                      05

Route 72, Route 69 and Divinity Street: Construct intersection improvements at Route 72 and Route 69. Includes realignment of the intersection.

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPH	X7	FD	2018	\$750	\$600	\$150	\$0
STPH	X7	ROW	2018	\$4,150	\$3,320	\$830	\$0
NHPP	X7	CON	2019	\$4,050	\$3,240	\$810	\$0
STPH	X7	CON	2019	\$4,050	\$3,240	\$810	\$0

**Middlebury**                      **Project #: 0080-0128**                      Route/System:                      I-84/CT 63 & 64

Region:                      05

Improvements on Routes 63, 64 and I-84 WB Interchange 17

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPO	CC	ROW	2018	\$1,900	\$1,520	\$380	\$0
STPO	CC	FD	2018	\$1,625	\$1,300	\$325	\$0

**Middlebury**                      **Project #: 0080-0128**                      Route/System:                      I-84/CT 63 & 64

Region:                      05

Improvements on Routes 63, 64 and I-84 WB Interchange 17 - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP	CC	CON	2020	\$12,500	\$10,000	\$2,500	\$0
NHPP	CC	CON	2021	\$8,250	\$6,600	\$1,650	\$0
NHPP	CC	CON	FYI	\$8,250	\$6,600	\$1,650	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Middlebury**

**Project #: 0080-0128**

Route/System: I-84/CT 63 & 64

Region: 05

Improvements on Routes 63, 64 and I-84 WB Interchange 17 - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP	CC	CON	2020	\$0	\$0	\$0	\$0

**Naugatuck**

**Project #: 0087-0145**

Route/System: Cross Street

Region: 05

Reconstruction of Cross Street

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPO	X7	CON	2018	\$4,430	\$3,544	\$443	\$443

**Plymouth**

**Project #: 0110-0136**

Route/System: US 6

Region: 05

Realign North Main Street to intersect US 6 opposite Agney Avenue. Widen US 6 to provide left-turn lanes at North Main Street/Agney Avenue and South Main Street.

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP	X7	ROW	2020	\$700	\$560	\$140	\$0
NHPP	X7	FD	2020	\$500	\$400	\$100	\$0
NHPP	X7	CON	FYI	\$3,770	\$3,016	\$754	\$0

**Waterbury**

**Project #: 0151-0273**

Route/System: I-84

Region: 05

Upgrade Expressway - Phase 3: Reconstruction of I-84 to provide a third lane in each direction from Washington Street to the vicinity of Pierpont Road in the City of Waterbury. - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NFRP	CC	CON	2018	\$17,875	\$14,300	\$3,575	\$0
NHPP	CC	CON	2018	\$29,900	\$23,920	\$5,980	\$0
NFRP	CC	CON	2019	\$16,600	\$13,280	\$3,320	\$0
NHPP	CC	CON	2019	\$10,000	\$8,000	\$2,000	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Waterbury**      **Project #: 0151-0273**      Route/System:      **I-84**

Region:      05

Upgrade Expressway - Phase 3: Reconstruction of I-84 to provide a third lane in each direction from Washington Street to the vicinity of Pierpont Road in the City of Waterbury. - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NFRP	CC	CON	2018	\$0	\$0	\$0	\$0
NHPP	CC	CON	2018	\$0	\$0	\$0	\$0

**Waterbury**      **Project #: 0151-0312**      Route/System:      **I-84 EB**

Region:      05

NHS - Rehab Bridge 03191A over I-84 westbound, Route 8 and the Naugatuck River - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	CON	2018	\$13,333	\$12,000	\$1,333	\$0
NHPP-BRX	X6	CON	2019	\$16,667	\$15,000	\$1,667	\$0
NHPP-BRX	X6	CON	2020	\$5,556	\$5,000	\$556	\$0
NHPP-BRX	X6	CON	2021	\$3,644	\$3,280	\$364	\$0

**Waterbury**      **Project #: 0151-0312**      Route/System:      **I-84 EB**

Region:      05

NHS - Rehab Bridge 03191A over I-84 westbound, Route 8 and the Naugatuck River - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	CON	2018	\$0	\$0	\$0	\$0

**Waterbury**      **Project #: 0151-0313**      Route/System:      **I-84 WB**

Region:      05

NHS - Rehab Bridge 03191A over I-84 westbound, Route 8 and the Naugatuck River - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	CON	2018	\$4,444	\$4,000	\$444	\$0
NHPP-BRX	X6	CON	2019	\$7,778	\$7,000	\$778	\$0
NHPP-BRX	X6	CON	2020	\$12,222	\$11,000	\$1,222	\$0
NHPP-BRX	X6	CON	2021	\$2,556	\$2,300	\$256	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Waterbury**      **Project #: 0151-0313**      Route/System: I-84 WB

Region: 05

NHS - Rehab Bridge 03191A over I-84 westbound, Route 8 and the Naugatuck River - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	CON	2018	\$0	\$0	\$0	\$0

**Waterbury**      **Project #: 0151-0321**      Route/System: NRG

Region: 05

Design and construct a section of the Naugatuck River Greenway in Waterbury along South Main Street from the Naugatuck town line at Platts Mill Road -- Phase 1

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
HPPS	X6	CON	2019	\$4,147	\$3,512	\$0	\$635
REP	X6	CON	2019	\$3,082	\$2,564	\$0	\$519
TAPO	X6	CON	2019	\$631	\$505	\$0	\$126

**Waterbury**      **Project #: 0151-0324**      Route/System: Various

Region: 05

Implement and construct various pedestrian safety improvements in the vicinity of Gilmartin School in the City of Waterbury

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
SRSI	X6	CON	2018	\$500	\$500	\$0	\$0

**Waterbury**      **Project #: 0151-0325**      Route/System: Various

Region: 05

Traffic signal upgrade at 15 location in downtown Waterbury

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
CMAQ	X8	FD	2018	\$88	\$88	\$0	\$0
CMAQ	X8	CON	2018	\$2,780	\$2,780	\$0	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Waterbury**      **Project #: 0151-0326**      Route/System:      I-84/CT 8

Region:      05

I-84 & Rte. 8: Rehabilitate eight bridges on Route 8 at the interchange with I-84 - Bridge No. 03190 A, B, C, D, E & F; and Bridge No. 03191 D & E - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	CON	2018	\$25,000	\$20,000	\$5,000	\$0
NHPP-BRX	X6	CON	2019	\$31,250	\$25,000	\$6,250	\$0
NHPP-BRX	X6	CON	2020	\$31,250	\$25,000	\$6,250	\$0
NHPP-BRX	X6	CON	2021	\$34,450	\$27,560	\$6,890	\$0

**Waterbury**      **Project #: 0151-0326**      Route/System:      I-84/CT 8

Region:      05

I-84 & Rte. 8: Rehabilitate eight bridges on Route 8 at the interchange with I-84 - Bridge No. 03190 A, B, C, D, E & F; and Bridge No. 03191 D & E - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	CON	2018	\$0	\$0	\$0	\$0

**Waterbury**      **Project #: 0151-0332**      Route/System:      I-84

Region:      05

NHS - Rehab Bridge # 03191F Ramp 197 over Ramp 202 Meadow Street

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	CON	2019	\$5,000	\$4,500	\$500	\$0

**Waterbury**      **Project #: 0151-0333**      Route/System:      CT 8

Region:      05

Rehab of bridge 03176 over the Naugatuck River and adjacent local roads. Located 1/4 mile north of town line.

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	FD	2018	\$500	\$400	\$100	\$0
NHPP-BRX	X6	ROW	2018	\$50	\$40	\$10	\$0
NHPP-BRX	X6	CON	FYI	\$7,100	\$5,680	\$1,420	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Waterbury**      **Project #: 0151-0334**      Route/System:      **CT 8**

Region:      05

National Highway System - Rehabilitate Bridge numbers 03178 (Route 8 Southbound) and 03179 (Route 8 northbound) over Waterbury Branch Line

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	ROW	2018	\$50	\$40	\$10	\$0
NHPP-BRX	X6	FD	2018	\$510	\$408	\$102	\$0
NHPP-BRX	X6	CON	FYI	\$10,200	\$8,160	\$2,040	\$0

**Statewide**      **Project #: 0170-0BRX**      Route/System:      **Various**

Region:      70

On/Off-Systems bridge improvements, BRX and BRZ (Bridge Report)

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	ALL	2018	\$50,000	\$40,000	\$10,000	\$0
NHPP-BRX	X6	ALL	2019	\$50,000	\$40,000	\$10,000	\$0
NHPP-BRX	X6	ALL	2020	\$50,000	\$40,000	\$10,000	\$0
NHPP-BRX	X6	ALL	2021	\$50,000	\$40,000	\$10,000	\$0
NHPP-BRX	X6	ALL	FYI	\$50,000	\$40,000	\$10,000	\$0

**Statewide**      **Project #: 0170-3382**      Route/System:      **Various**

Region:      70

Provide funds to conduct load ratings for bridges on National Highway System roads (1/1/16-12/31/20) - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	OTH	2018	\$2,000	\$1,600	\$400	\$0
NHPP-BRX	X6	OTH	2019	\$2,000	\$1,600	\$400	\$0
NHPP-BRX	X6	OTH	2020	\$2,000	\$1,600	\$400	\$0

**Statewide**      **Project #: 0170-3382**      Route/System:      **Various**

Region:      70

Provide funds to conduct load ratings for bridges on National Highway System roads (1/1/16-12/31/20) - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	OTH	2018	\$0	\$0	\$0	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Statewide**      **Project #: 0170-3383**      Route/System:      Various

Region: 70

Provide funds to conduct load ratings for bridges on non-National Highway System roads (1/1/16-12/31/20) - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA-BRX	X6	OTH	2018	\$1,000	\$800	\$200	\$0
STPA-BRX	X6	OTH	2019	\$1,000	\$800	\$200	\$0
STPA-BRX	X6	OTH	2020	\$1,000	\$800	\$200	\$0

**Statewide**      **Project #: 0170-3383**      Route/System:      Various

Region: 70

Provide funds to conduct load ratings for bridges on non-National Highway System roads (1/1/16-12/31/20) - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA-BRX	X6	OTH	2018	\$0	\$0	\$0	\$0

**Statewide**      **Project #: 0170-3411**      Route/System:      Various

Region: 70

Provide funds for state forces to conduct inspections on bridges that are located on the National Highway System (9/1/2016 to 8/31/2021) - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	OTH	2018	\$3,703	\$2,962	\$741	\$0
NHPP-BRX	X6	OTH	2019	\$3,926	\$3,141	\$785	\$0
NHPP-BRX	X6	OTH	2020	\$4,162	\$3,330	\$832	\$0

**Statewide**      **Project #: 0170-3411**      Route/System:      Various

Region: 70

Provide funds for state forces to conduct inspections on bridges that are located on the National Highway System (9/1/2016 to 8/31/2021) - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	OTH	2018	\$0	\$0	\$0	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Statewide**      **Project #: 0170-3412**      Route/System:      Various

Region: 70

Provide funds for state forces to conduct bridge inspections on non-National Highway System roads (9/1/16 - 8/31/21) - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA-BRX	X6	OTH	2018	\$2,860	\$2,288	\$572	\$0
STPA-BRX	X6	OTH	2019	\$3,032	\$2,426	\$606	\$0
STPA-BRX	X6	OTH	2020	\$3,214	\$2,571	\$643	\$0

**Statewide**      **Project #: 0170-3412**      Route/System:      Various

Region: 70

Provide funds for state forces to conduct bridge inspections on non-National Highway System roads (9/1/16 - 8/31/21) - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA-BRX	X6	OTH	2018	\$0	\$0	\$0	\$0

**Statewide**      **Project #: 0170-3413**      Route/System:      Various

Region: 70

Provide funds for consulting engineering services to conduct inspections on bridges that are located on the National Highway System (9/1/2016 to 8/31/2021) - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	OTH	2018	\$19,010	\$15,208	\$3,802	\$0
NHPP-BRX	X6	OTH	2019	\$20,150	\$16,120	\$4,030	\$0
NHPP-BRX	X6	OTH	2020	\$21,360	\$17,088	\$4,272	\$0

**Statewide**      **Project #: 0170-3413**      Route/System:      Various

Region: 70

Provide funds for consulting engineering services to conduct inspections on bridges that are located on the National Highway System (9/1/2016 to 8/31/2021) - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP-BRX	X6	OTH	2018	\$0	\$0	\$0	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Statewide**      **Project #: 0170-3414**      Route/System:      Various

Region: 70

Provide funds for bridge inspections using consulting engineering services on non-National Highway System roads (9/1/16 - 8/31/21) - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA-BRX	X6	OTH	2018	\$8,340	\$6,672	\$1,668	\$0
STPA-BRX	X6	OTH	2019	\$8,840	\$7,072	\$1,768	\$0
STPA-BRX	X6	OTH	2020	\$9,370	\$7,496	\$1,874	\$0

**Statewide**      **Project #: 0170-3414**      Route/System:      Various

Region: 70

Provide funds for bridge inspections using consulting engineering services on non-National Highway System roads (9/1/16 - 8/31/21) - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA-BRX	X6	OTH	2018	\$0	\$0	\$0	\$0

**Statewide**      **Project #: 0170-3415**      Route/System:      Various

Region: 70

Provide funds for sign support inspections using consulting engineering services on National Highway System roads (9/1/16 - 8/31/21) - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP	X6	OTH	2018	\$1,168	\$934	\$234	\$0
NHPP	X6	OTH	2019	\$1,168	\$934	\$234	\$0
NHPP	X6	OTH	2020	\$2,920	\$2,336	\$584	\$0

**Statewide**      **Project #: 0170-3415**      Route/System:      Various

Region: 70

Provide funds for sign support inspections using consulting engineering services on National Highway System roads (9/1/16 - 8/31/21) - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
NHPP	X6	OTH	2018	\$0	\$0	\$0	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Statewide**      **Project #: 0170-3416**      Route/System:      Various

Region: 70

Provide funds for sign support inspections using consulting engineering services on non-National Highway System roads (9/1/16 - 8/31/21) - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X6	OTH	2018	\$250	\$200	\$50	\$0
STPA	X6	OTH	2019	\$250	\$200	\$50	\$0
STPA	X6	OTH	2020	\$750	\$600	\$150	\$0

**Statewide**      **Project #: 0170-3416**      Route/System:      Various

Region: 70

Provide funds for sign support inspections using consulting engineering services on non-National Highway System roads (9/1/16 - 8/31/21) - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X6	OTH	2018	\$0	\$0	\$0	\$0

**Statewide**      **Project #: 0170-3417**      Route/System:      Various

Region: 70

Provide funds to conduct mast arm and span pole inspections statewide (9/1/17- 8/31/21) - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X6	OTH	2018	\$1,000	\$800	\$200	\$0
STPA	X6	OTH	2019	\$500	\$400	\$100	\$0
STPA	X6	OTH	2020	\$500	\$400	\$100	\$0

**Statewide**      **Project #: 0170-3417**      Route/System:      Various

Region: 70

Provide funds to conduct mast arm and span pole inspections statewide (9/1/17- 8/31/21) - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X6	OTH	2018	\$0	\$0	\$0	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Statewide**

**Project #: 0170-3439**

Route/System:

Region: 70

Federal eligible preliminary engineering for the Transportation Alternatives set-aside program - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X6	PE	2018	\$660	\$528	\$132	\$0
STPA	X6	PE	2019	\$660	\$528	\$132	\$0
STPA	X6	PE	2020	\$660	\$528	\$132	\$0
STPA	X6	PE	2021	\$660	\$528	\$132	\$0

**Statewide**

**Project #: 0170-3439**

Route/System:

Region: 70

Federal eligible preliminary engineering for the Transportation Alternatives set-aside program - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X6	PE	2018	\$0	\$0	\$0	\$0

**Statewide**

**Project #: 0170-3444**

Route/System:

Region: 70

Pavement management analysis and data collection (4/1/17 - 3/31/20) - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X6	PL	2018	\$668	\$534	\$134	\$0
STPA	X6	PL	2019	\$443	\$354	\$89	\$0

**Statewide**

**Project #: 0170-3444**

Route/System:

Region: 70

Pavement management analysis and data collection (4/1/17 - 3/31/20) - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X6	PL	2018	\$0	\$0	\$0	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Statewide**      **Project #: 0170-3455**      Route/System:      Various

Region:      70

Connecticut Highway Assistance Motorist Patrol (CHAMP) safety service patrol (7/1/17-6/30/20) - AC Conversion

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
SIPH	X6	OTH	2018	\$4,537	\$4,083	\$0	\$454
SIPH	X6	OTH	2019	\$4,537	\$4,083	\$0	\$454

**Statewide**      **Project #: 0170-3455**      Route/System:      Various

Region:      70

Connecticut Highway Assistance Motorist Patrol (CHAMP) safety service patrol (7/1/17-6/30/20) - AC Entry

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
SIPH	X6	OTH	2018	\$0	\$0	\$0	\$0

**Statewide**      **Project #: 0170-SFTY**      Route/System:      Various

Region:      70

Safety Program, HSIP - Rural and Other(Safety Report)

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
HSIP(SIPH)	X6	ALL	2018	\$26,608	\$23,948	\$2,661	\$0
HSIP(SIPH)	X6	ALL	2019	\$26,608	\$23,948	\$2,661	\$0
HSIP(SIPH)	X6	ALL	2020	\$26,608	\$23,948	\$2,661	\$0
HSIP(SIPH)	X6	ALL	2021	\$26,608	\$23,948	\$2,661	\$0
HSIP(SIPH)	X6	ALL	FYI	\$26,608	\$23,948	\$2,661	\$0

**District 1**      **Project #: 0171-0402**      Route/System:      Various

Region:      71

Traffic Control Signals in District 1

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X7	CON	2018	\$3,570	\$3,570	\$0	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**District 1**                      **Project #: 0171-0417**                      Route/System:                      Various

Region:                      71

Add funding to install/replace Office of State Traffic Administration (OSTA) approved signals in District 1

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X7	ROW	2018	\$110	\$110	\$0	\$0
STPA	X7	FD	2018	\$187	\$187	\$0	\$0
STPA	X7	CON	2019	\$3,350	\$3,350	\$0	\$0

**District 4**                      **Project #: 0174-0400**                      Route/System:                      Various

Region:                      74

Traffic Control Signals in District 4

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X7	CON	2018	\$3,000	\$3,000	\$0	\$0

**District 4**                      **Project #: 0174-0418**                      Route/System:                      Various

Region:                      74

Replace traffic control signals at 12 locations

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
STPA	X7	ROW	2019	\$120	\$120	\$0	\$0
STPA	X7	FD	2019	\$282	\$282	\$0	\$0
STPA	X7	CON	2020	\$3,859	\$3,859	\$0	\$0

**Section 7: FTA Projects**

*Federal Transit Administration*



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Statewide**                      **Project #: 0170-XXXX**                      Route/System:                      Various

Region:                      70

Municipal Grant Program

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
9-N/A	X6	OTH	2018	\$5,000	\$0	\$5,000	\$0
9-N/A	X6	OTH	2019	\$5,000	\$0	\$5,000	\$0
9-N/A	X6	OTH	2020	\$5,000	\$0	\$5,000	\$0
9-N/A	X6	OTH	2021	\$5,000	\$0	\$5,000	\$0

**Other Urban Area**                      **Project #: 0170-XXXX**                      Route/System:                      Various Bus

Region:                      70

Section 5310 Program-Enhanced Mobility of Seniors/Individuals with Disabilities-Other Urban

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
5310E	X6	OTH	2018	\$540	\$432	\$0	\$108
5310E	X6	OTH	2019	\$556	\$445	\$0	\$111
5310E	X6	OTH	2020	\$573	\$458	\$0	\$115
5310E	X6	OTH	2021	\$590	\$472	\$0	\$118

**Rural**                                      **Project #: 0170-XXXX**                      Route/System:                      Various Bus

Region:                      70

Section 5310 Program-Enhanced Mobility of Seniors/Individuals with Disabilities-Rural

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
5310E	X6	OTH	2018	\$250	\$200	\$0	\$50
5310E	X6	OTH	2019	\$257	\$206	\$0	\$51
5310E	X6	OTH	2020	\$265	\$212	\$0	\$53
5310E	X6	OTH	2021	\$273	\$218	\$0	\$55



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Statewide**                      **Project #: 0170-XXXX**                      Route/System:                      **Various**

Region:                      70

Transit Capital Planning

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
5307C	X6	OTH	2018	\$450	\$360	\$90	\$0
5307C	X6	OTH	2019	\$500	\$400	\$100	\$0
5307C	X6	OTH	2020	\$550	\$440	\$110	\$0
5307C	X6	OTH	2021	\$600	\$480	\$120	\$0

**Various**                      **Project #: 0171-XXXX**                      Route/System:                      **CTfastrak**

Region:                      71

CTfastrak Infrastructure/Station/Facility Improvements

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
5337H	X6	CON	2018	\$1,642	\$1,313	\$328	\$0
5337H	X6	CON	2019	\$1,683	\$1,346	\$337	\$0
5337H	X6	CON	2020	\$1,725	\$1,380	\$345	\$0
5337H	X6	CON	2021	\$1,768	\$1,414	\$354	\$0

**Various**                      **Project #: 0400-XXXX**                      Route/System:                      **CTtransit**

Region:                      79

CTtransit Facility Improvements

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
5339	X6	CON	2018	\$4,440	\$3,552	\$888	\$0
5339	X6	CON	2019	\$4,551	\$3,641	\$910	\$0
5339	X6	CON	2020	\$4,665	\$3,732	\$933	\$0
5339	X6	CON	2021	\$4,781	\$3,825	\$956	\$0



**Central Naugatuck Valley MPO**  
**2018-2021 Transportation Improvement Program**

**Various**                      **Project #: 0400-XXXX**                      Route/System:                      CTtransit

Region: 79

CTtransit Facility improvements/Misc Admin Capital

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
5307C	X6	OTH	2018	\$12,000	\$9,600	\$2,400	\$0
5307C	X6	OTH	2019	\$8,250	\$6,600	\$1,650	\$0
5307C	X6	OTH	2020	\$6,625	\$5,300	\$1,325	\$0
5307C	X6	OTH	2021	\$25,000	\$20,000	\$5,000	\$0

**Various**                      **Project #: 0400-XXXX**                      Route/System:                      CTtransit

Region: 79

CTtransit Systemwide Bus Replacements

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
5339	X6	ACQ	2018	\$4,440	\$3,552	\$888	\$0
5307C	X6	ACQ	2019	\$18,750	\$15,000	\$3,750	\$0
5339	X6	ACQ	2019	\$4,551	\$3,641	\$910	\$0
5339	X6	ACQ	2020	\$4,665	\$3,732	\$933	\$0
5307C	X6	ACQ	2020	\$25,375	\$20,300	\$5,075	\$0
5307C	X6	ACQ	2021	\$15,000	\$12,000	\$3,000	\$0
5339	X6	ACQ	2021	\$4,781	\$3,825	\$956	\$0

**Waterbury**                      **Project #: 0431-XXXX**                      Route/System:                      Waterbury

Region: 05

Waterbury - ADA Operating

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
9-N/A	X6	OTH	2018	\$1,943	\$0	\$1,943	\$0
9-N/A	X6	OTH	2019	\$1,943	\$0	\$1,943	\$0
9-N/A	X6	OTH	2020	\$1,943	\$0	\$1,943	\$0
9-N/A	X6	OTH	2021	\$1,943	\$0	\$1,943	\$0



Central Naugatuck Valley MPO  
2018-2021 Transportation Improvement Program

**Waterbury**      **Project #: 0431-XXXX**      Route/System:      Waterbury

Region:      05

Waterbury - Fixed Route

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
9-N/A	X6	OTH	2018	\$4,504	\$0	\$4,504	\$0
9-N/A	X6	OTH	2019	\$4,504	\$0	\$4,504	\$0
9-N/A	X6	OTH	2020	\$4,504	\$0	\$4,504	\$0
9-N/A	X6	OTH	2021	\$4,504	\$0	\$4,504	\$0

**Waterbury**      **Project #: 0431-XXXX**      Route/System:      Waterbury

Region:      05

Waterbury Dial-A-Ride

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
9-N/A	X6	OTH	2018	\$732	\$0	\$732	\$0
9-N/A	X6	OTH	2019	\$732	\$0	\$732	\$0
9-N/A	X6	OTH	2020	\$732	\$0	\$732	\$0
9-N/A	X6	OTH	2021	\$732	\$0	\$732	\$0

**Bristol**      **Project #: 0442-XXXX**      Route/System:      Bristol

Region:      05

Bristol Local

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
9-N/A	X6	OTH	2018	\$319	\$0	\$319	\$0
9-N/A	X6	OTH	2019	\$319	\$0	\$319	\$0
9-N/A	X6	OTH	2020	\$319	\$0	\$319	\$0
9-N/A	X6	OTH	2021	\$319	\$0	\$319	\$0



Central Naugatuck Valley MPO  
2018-2021 Transportation Improvement Program

**Bristol**

**Project #: 0450-XXXX**

Route/System:

Bristol

Region: 05

Bristol Commuter

FACode:	Air Quality Code:	Phase:	Year:	Tot\$(000):	Fed\$(000):	Sta\$(000):	Loc\$(000):
9-N/A	X6	OTH	2018	\$233	\$0	\$233	\$0
9-N/A	X6	OTH	2019	\$233	\$0	\$233	\$0
9-N/A	X6	OTH	2020	\$233	\$0	\$233	\$0
9-N/A	X6	OTH	2021	\$233	\$0	\$233	\$0

# Central Naugatuck Valley Metropolitan Planning Organization

FFY 2018-2021 Transportation Improvement Program

## Addendum:

Performance-Based Planning and Programming

**Prepared by:**

Naugatuck Valley Council of Governments  
in cooperation with the Connecticut Department of Transportation

Endorsed June 8, 2018

## **Performance-Based Planning and Programming**

The Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning, published on May 27, 2016, (FHWA 23 CFR Parts 450 and 771 and FTA 49 CFR Part 613) implements changes to the planning process, including requiring a performance-based approach to planning and requires that the Connecticut Department of Transportation (CTDOT), Central Naugatuck Valley Metropolitan Planning Organization (CNVMPO), and the operators of public transportation use performance measures to document expectations for future performance. Performance management and performance-based planning and programming increases the accountability and transparency of the Federal-aid Program and offers a framework to support improved investment decision-making by focusing on performance outcomes for national transportation goals. FHWA and FTA established national performance measures in areas such as safety, infrastructure condition, congestion, system reliability, emissions, freight movement, transit safety and transit state of good repair.

As part of this new performance-based approach, recipients of Federal-aid highway program funds and Federal transit funds are required to link the investment priorities contained in the Statewide Transportation Improvement Program (STIP) and Transportation Improvement Program (TIP) to achievement of performance targets.

The MAP-21 performance-related provisions also require States, MPOs, and operators of public transportation to develop other performance-based plans and processes or add new requirements on existing performance-based plans and processes. These performance-based plans and processes include the Congestion Mitigation and Air Quality Improvement (CMAQ) Program performance plan, the Strategic Highway Safety Plan, the public transportation agency safety plan, the highway and transit asset management plans, and the State Freight Plan.

A STIP and TIP shall include, to the maximum extent practicable, a discussion of the anticipated effect of the STIP and TIP toward achieving the performance targets identified by the State in the statewide transportation plan or other State performance-based plan(s), linking investment priorities to those performance targets.

All current targets set for the performance measures listed below can be accessed at the CTDOT website at [www.ct.gov/dot/performanceasures](http://www.ct.gov/dot/performanceasures).

### **Highway Safety**

Highway Safety is determined by the interaction between drivers, their behavior and the highway infrastructure. The five (5) performance measures for Highway Safety include: (1) the number of fatalities; (2) the rate of fatalities; (3) the number of serious injuries; (4) the rate of serious injuries; and, (5) the number of non-motorized fatalities and serious injuries. The STIP and the TIP will program projects to meet the targets set by the CTDOT and agreed upon by the CNVMPO by including appropriate Highway Safety Improvement Program (HSIP) safety projects:

1. **Programmatic highway safety improvements:** Projects or programs that are conducted regularly throughout the state such as signing and pavement marking programs.
2. **Programmatic driver safety activities:** Projects or programs that are conducted regularly on an ongoing basis. These include Highway Safety behavioral programs such as Impaired Driving, Occupant Protection, Distracted Driving, Speeding, Motorcycle Safety, and Teen Driving grants for State and Municipal Police Departments using National Highway Traffic Safety Administration (NHTSA) funds.
3. **Location-specific highway safety projects:** This includes roadway safety improvements selected to correct known safety problems at locations with a high frequency or severity of crashes.

## Transit

The Transit Asset Management (TAM) rule requires that recipients and sub recipients of Federal Transit Administration (FTA) funds set annual performance targets for federally established State of Good Repair (SGR) measures. Performance targets will be set for one or more asset classes for the following asset categories: Rolling Stock, Equipment, Facilities and Guideway Infrastructure. CTDOT identified asset classes for its transit service providers specific to each of the four assets categories in the three public transportation modes of rail, bus and ferry.

The percentage of assets beyond the useful life benchmark is the performance measure set for both the categories of Rolling Stock and Equipment. For the facilities category, the performance measure is based on a 5-point condition rating scale derived from FTA's Transit Economic Requirement Model (TERM). The performance measure is the percentage of facilities rated below 3 on the 5-point scale, with a 3 rated as SGR. The category of facilities has two classes which are passenger and parking stations and administrative and maintenance buildings. Under FTA reporting requirements, the guideway Infrastructure category is specific only to rail. The performance measure set by FTA is the percentage of guideway with a performance restriction, which is interpreted as slow zones.

Under the FAST Act and MAP-21, "transit providers are required to submit an annual narrative report to the National Transit Database that provides a description of any change in the condition of its transit system from the previous year and describes the progress made during the year to meet the targets previously set for that year." Beginning in October 2018, performance targets will be reported annually to the National Transit Database by CTDOT for the transit system. A narrative report describing strategies for setting targets and progress on the targets will accompany targets starting 2019.

The STIP and TIP will program projects to meet the targets set by the CTDOT and agreed upon by the CNVMPO by utilizing the list of capital prioritized projects, based on projected asset conditions, included in the CTDOT TAM and Transit Group Plans to be completed by October 1, 2018 to be shared with the MPOs. This list of projects will be updated every four years along with the Plans. These prioritized projects will be developed with the aid of CTDOT's analytical decision support tool, Transit Asset Prioritization Tool, better known as TAPT.

## Pavement and Bridge Condition

The four performance measures for Pavement condition include (1) the percent of the Interstate system in Good, (2) the percent of the Interstate system in Poor condition, (3) the percent of the non-Interstate National Highway System (NHS) in Good, and (4) the percent of the non-Interstate NHS in poor condition. The two performance measures for Bridge condition include (1) the percent of NHS Bridges in Good, and (2) the percent of NHS Bridges in Poor condition.

The STIP and the TIP will program projects to meet the targets set by the CTDOT and agreed upon by the CNVMPO using the Department's Pavement Management System and the Bridge Management System, which uses a systematic look at conditions to develop optimal strategies. These strategies are included in the CTDOT Transportation Asset Management Plan (TAMP).

**Transportation Asset Management Plan:** TAMP acts as a focal point for information about the assets, their management strategies, long-term expenditure forecasts, and business management processes. CTDOT is required to develop a risk-based TAMP for the NHS to improve or preserve the condition of the assets and the performance of the system (23 U.S.C. 119(e) (1), MAP-21 § 1106). MAP-21 defines asset management as a strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on engineering and economic analysis based upon quality information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a desired state of good repair over the lifecycle of the assets at minimum practicable cost. (23 U.S.C. 101(a) (2), MAP-21 § 1103).

Pavement and Bridge State of Good Repair needs are identified, quantified, and prioritized through the TAMP process. Projects to address SOGR repair needs are selected from the TAMP for inclusion in the STIP and TIPs.

## System Reliability

Highway travel time reliability is closely related to congestion and is greatly influenced by the complex interactions of traffic demand, physical capacity, and roadway "events."<sup>1</sup> Travel time reliability is a significant aspect of transportation system performance.

The national system reliability performance measures assess the impact of the CTDOT's various programs on the mobility of the transportation highway system users. Operational-improvement, capacity-expansion, and to a certain degree highway road and bridge condition improvement projects, impact both congestion and system reliability. Demand-management initiatives also impact system reliability. According to the SHRP-2 study, Analytical Procedures for Determining the Impacts of Reliability Mitigation Strategies, "travel-time reliability is a new concept to which much of the transportation profession has had only limited exposure."<sup>2</sup>

---

<sup>1</sup> SHRP 2 Project L03, "Analytical Procedures for Determining the Impacts of Reliability Mitigation Strategies," September 2011, p. ES-7, on the World Wide Web at

<http://onlinepubs.trb.org/onlinepubs/shrp2/L35RFP/L03Report.pdf> (accessed May 14, 2018)

<sup>2</sup> Ibid, p. 1-1.

Although there is not a specific system reliability program, reducing congestion and improving system reliability are key factors considered when CTDOT makes decisions about investments in the transportation system.

The CTDOT and the CNVMPO will program projects in the STIP and TIP to meet the targets set by the CTDOT and agreed upon by the CNVMPO by considering system reliability in the projects that are selected. Over time, and as quantifiable impacts begin to be observed and measured, they can be expected to become part of the project selection process in a formal way.

### **Freight Movement**

This measure considers factors that are unique to the trucking industry. The unusual characteristics of truck freight include:

- use of the system during all hours of the day
- high percentage of travel in off-peak periods
- need for shippers and receivers to factor in more 'buffer' time into their logistics planning for on-time arrivals. [23 CFR 490.607].

Freight movement will be assessed by the Truck Travel Time Reliability (TTTR) index. For the first reporting period, Connecticut will be using the analysis conducted as part of the truck freight bottleneck analysis that was done as part of the freight plan, and which was approved by FHWA. Going forward, Connecticut, along with other State DOTs and MPOs have the data they need in FHWA's National Performance Management Research Data Set (NPMRDS), which includes truck travel times for the full Interstate System. Therefore, for this first year of reporting, the CTDOT and CNVMPO must use the trend and truck bottleneck analysis done for the recently completed Statewide Freight Plan.

### **Air Quality**

USDOT requires that states and MPO's assess the impact of their transportation systems on air quality and specifically the impacts vehicle exhaust emissions. Their performance measure for air quality is based on an assessment of projects selected for funding under the Congestion Mitigation and Air Quality Improvement (CMAQ) program.

The CMAQ program's purpose is to fund transportation projects or programs that contribute to the attainment or maintenance of National Ambient Air Quality Standards (NAAQS) in those specific areas. The STIP and the TIP will program projects to meet the targets set by the CTDOT and agreed upon by the CNVMPO by selecting appropriate CMAQ eligible projects including: congestion reduction and traffic flow improvements; ridesharing; transit improvements; travel demand management; and, bicycle and pedestrian facilities.