



Consideration of Eight Planning Factors

Bridgeport - Stamford TMA Certification Review

**South Western Region Metropolitan Planning Organization and the
South Western Regional Planning Agency (SWRPA)**

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Prepared by:
South Western Regional Planning Agency
888 Washington Blvd. 3rd Floor
Stamford, CT 06901
203.316.5190



EIGHT METROPOLITAN PLANNING FACTORS

Section 20009 of the *Moving Ahead for Progress in the 21st Century Act* (MAP 21) requires metropolitan transportation planning organizations to consider eight factors in developing transportation plans and programs¹:

1. Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the **safety** of the transportation system for motorized and nonmotorized users;
3. Increase the **security** of the transportation system for motorized and nonmotorized users;
4. Increase the **accessibility and mobility** of people and for freight;
5. Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance the **integration** and connectivity of the transportation system, across and between modes for people and freight;
7. Promote efficient system **management and operation**; and
8. Emphasize the **preservation** of the existing transportation system.

The sections below describe how SWRPA addresses each of the eight planning factors in the conduct of its transportation planning program.

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency

The South Western Region is widely recognized as Connecticut’s economic engine, and its transportation network demands a planning program devoted to supporting and increasing economic vitality. As stakeholders in many projects of regional significance, SWRPA has seamlessly integrated economic development into its planning and programming activities at all levels, including various corridor studies it has sponsored and through regional planning efforts such as the South Western Region Long Range Transportation Plan 2011-2040 (“Plan”), entitled [*Going Forward: The Plan to Maintain and Improve Mobility*](#).

The Plan incorporated the six livability principles developed jointly by the United States Department of Transportation (USDOT), United States Department of Housing and Urban Development (HUD) and the Environmental Protection Agency (EPA):

1. Provide more transportation choices - *Develop safe, reliable and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions and promote public health.*

¹ 23 CFR 450.306

2. Promote equitable, affordable housing - Expand location- and energy-efficient housing choices for people of all ages, incomes, races and ethnicities to increase mobility and lower the combined cost of housing and transportation.

3. Enhance economic competitiveness: Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers as well as expanded business access to markets.

4. Support existing communities: Target federal funding toward existing communities—through such strategies as transit-oriented, mixed-use development and land recycling—to increase community revitalization, improve the efficiency of public works investments, and safeguard rural landscapes.

5. Coordinate policies and leverage investment: Align federal policies and funding to remove barriers to collaboration, leverage funding and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

6. Value communities and neighborhoods: Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.

Each livability principle is critical to harnessing the economic growth potential of the South Western Region by attracting investment, employment, and residents in a manner that does not further overwhelm the transportation system. This dovetails with key Plan strategies including investing in the transportation system in a timely manner to maintain a healthy and competitive regional economy and to promote quality of life and integrating land use planning with transportation, infrastructure and critical facilities, and energy planning to ensure that our communities remain vibrant and sustainable for the future.

The Plan is structured to be responsive to business needs and the State’s urban development strategies, and provides the framework to guide investments in transportation to attain economic goals. This is to be accomplished by balancing housing availability, transportation capacity, and the locations of new jobs and employment centers to avoid creating or exacerbating housing shortages, congestion, and disorganized development patterns.

Furthermore, the Plan describes in detail the transportation infrastructure investments necessary to achieve the economic expansion the region seeks, and also included a new section devoted to economic competitiveness. One key theme is the recognition that congestion on the Region’s roadways continues to adversely impact the region’s quality of life, and it is impossible to build our way out of congestion. This leads to another key theme - addressing rail parking, which must be sufficiently available to promote use of the rail network and encourage economic development.

SWRPA has worked closely with its member municipalities and others to facilitate economic activity. Phase 1 of the Stamford Urban Transitway, a new street connecting the East Side of Stamford to the Stamford Transportation Center, has been completed, and Phase 2 is under construction. The Stamford Urban Transitway will improve traffic operations, safety, efficiency, and encourage public transportation and non-motorized modes of transportation to address current and future traffic needs and support the strong economic growth that has recently taken place in Stamford. Realizing this project has required coordination with SWRPA to ultimately be included in the region’s Transportation Improvement Program (TIP).

Corridor studies sponsored by SWRPA were undertaken with economic development as an underlying consideration. The [Darien Route 1 Study](#) and the [Greenwich-Stamford Route 1 Study](#) incorporate mixed-use development strategies into their recommendations, while the [Route 7 Transportation and Land Use Study](#) devoted significant resources on assessing the various markets and determining which sectors of the economy are leaking to other locales and corridors. The [Route 7 Transportation and Land Use Study](#) also was conceived with Transit Oriented Development as a core task, as rail stations along the Danbury Branch such the station in Wilton have development potential and the Georgetown Land Development Corporation's proposed development is along the rail line.

The FTA's Section 5316 Job Access Reverse Commute Program has driven the broader Bridgeport/Stamford Urbanized Area's efforts undertaken by the People to Jobs Regional Task Force, which been instrumental in the development of a Jobs Access program and created the framework for providing transportation to jobs for persons coming off welfare and other low-income people. This project has been underway for many years and has far surpassed the passenger goals set at the initiation of the project. People to Jobs enables businesses to access available entry-level workers, helping the businesses to remain viable.

The [Coastal Corridor Bus Study](#) reviewed Route 1 bus services, many of which that were specifically created as a Jobs Access Reverse Commute Program Initiative along the region's primary service corridor. The Study developed recommendations to improve and expand public bus service along Connecticut's Coastal Corridor to address overcrowding and unreliable operations.

SWRPA has been a champion for Transit Oriented Development (TOD) in the South Western Region, and has worked with its member municipalities to pursue State of Connecticut Grants for the planning and implementation of TOD. Both Norwalk and Stamford secured CT Office of Policy and Management (CTOPM) TOD grants. SWRPA was a partner in New York-Connecticut Sustainable Communities, a consortium of cities, counties and regions funded with a U.S. Department of Housing and Urban Development (HUD) Sustainable Communities Regional Planning Grant. The consortium explored opportunities to create TOD and increase livability, as defined by HUD, throughout the region. Among the placed based projects funded by the Grant was the [Stamford East Main Street Transit Node Feasibility Study](#), which was conducted by SWRPA on behalf of the City of Stamford. The Study assessed the feasibility of a new rail station on the East Side of Stamford, and developed a phased implantation plan to build new transit oriented development, create complete streets, and add new transit services. The City of Norwalk separately conducted a consortium project focusing on implementing TOD in South Norwalk.

SWRPA staff has also coordinated closely with the City of Stamford and developers of the Harbor Point mixed-use development to secure funding and provide transportation improvements for what is currently one of the nation's largest redevelopment projects. Although well underway, there remains much construction to be performed, which will ultimately lead to approximately 4,000 new residences, 400,000 square feet of retail and 800,000 square feet of commercial office space in a waterfront district that is within walking distance of the Stamford Transportation Center. In 2013 SWRPA was the conduit for two CT Department of Community and Economic Development brownfield grants for Harbor Point projects. The grants totaling \$1 million were for remediation, removal and disposition of hazardous materials and contaminated soils from Stamford's South End

SWRPA has also strongly supported TOD in Norwalk, having participated in the *South Norwalk Rail Station Intermodal Study* and Norwalk Redevelopment Agency's *Urban Connectivity Master Plan* (2010). The intent of the Connectivity Master Plan was to recommend linkages between various mixed-use developments planned along the Main Avenue Corridor between South Norwalk and the Wall Street vicinity. Subsequently, SWRPA selected a streetscape improvement project in this corridor for funding under the FHWA Transportation Alternative Program (TAP).

SWRPA has also played an integral role in the regional efforts to create the 2009 [Comprehensive Economic Development Strategy \(CEDS\)](#) for the Bridgeport/Stamford region as part of the One Coast One Future Initiative. The CEDS was a collaborative effort of the South Western and Greater Bridgeport planning agencies and chief elected officials as well as the Business Council of Fairfield County and the Bridgeport Regional Business Council. The CEDS is designed to bring together the public and private sectors in the creation of an economic roadmap to diversify and strengthen regional economies. The strategy's completion and approval in 2010 provided the foundation for the region to be eligible for a series of federal grants.

Recognizing the severe effects that congestion has on the economy, SWRPA partnered with the Westchester County Department of Planning to conduct a study that would assess the impacts on a regional basis. [Measuring the Cost of Congestion](#) (2010) addressed the monetary and non-pecuniary costs of congestion and found that the aggregate monetary costs incurred by traffic congestion in the Study Area are estimated to exceed \$1.26 billion annually for an average weekday. If computed on a workweek basis, the annual costs would reach \$6.30 billion for a 5-day workweek.

2. Increase the safety of the transportation system for motorized and nonmotorized users

A cornerstone of virtually all SWRPA activities, safety is a critical issue for the South Western Region's transportation system, and is a driving force behind virtually all projects that SWRPA initiates and participates in, including bicycle and pedestrian, freight, corridor, incident and emergency planning, and transportation technical services studies. Safety planning activities include reviewing safety data, goals, objectives and strategies to promote safety. Staff provides support to the South Western Region CT Department of Emergency Management and Homeland Security (DEMHS) Region 1 Incident Management Team and the Statewide Incident Management Task Force, including technical assistance; meeting, project and activity participation and coordination; inter-agency coordination; after action reviews and other activities.

Safety planning activities include review of safety data, goals, objectives and strategies. *Going Forward*, identifies key safety topics such as education programs, bicycle and pedestrian facilities, Safe Routes to Schools, enhanced truck safety inspections, and increased public safety enforcement and transportation incident management programs. SWRPA continues to coordinate with CTDOT and others in the development of the Strategic Highway Safety Plan, and will develop a corresponding element in the next long range transportation plan update.

Since 1992 the South Western Region has been a leader in transportation incident management activities through its creation of the South Western Region Incident Management Team which has evolved into the DEMHS Region 1 Emergency Support Function 1 – Transportation (R1ESF1). The team includes agencies and organizations involved in responding to incidents on the regional transportation

system. Regular meetings and training exercises of DEMHS Region 1 improve coordination between response agencies, thereby improving the safety of the transportation system for the traveling public.

Corridor Studies recently completed by SWRPA, including the [Greenwich-Stamford Route 1 Study](#), the [Darien Route 1 Study](#) and the [Route 7 Transportation and Land Use Study](#), concentrate on improving the safety along these busy stretches of key arterials within the South Western Region. The [Route 7 Corridor Assessment and Implementation Plan](#) includes operational safety as a fundamental and priority setting considerations.

SWRPA has devoted attention to various aspects of bicycle and pedestrian safety. The [South Western Region Bicycle and Pedestrian Plan](#) identified policies and activities to increase the use, safety, and convenience of bicycling and walking in Connecticut's South Western Region and promotes bicycling and walking as integral components of the Region's multi-modal transportation system. Building off the [Regional Bicycle and Pedestrian Plan](#), the [Bicycle-Pedestrian Safety Corridor Study](#) examines bicycle and pedestrian safety deficiencies in seven high priority corridors and recommends well established engineering countermeasures to address the issues identified. The corridors highlighted in this study have the poorest pedestrian and bicycle safety records of any State highways in the South Western Region. Safe Routes to Schools continues to be an important element of the region's non-motorized transportation system. Safe Routes plans have been developed for a number of primary schools in Greenwich, Norwalk, and Stamford. Norwalk and Stamford implemented Safe Routes to Schools Infrastructure improvements with funding from CTDOT. A 2014 infrastructure improvement project is approved for the Norwalk Roton Middle School using the 2009 master plan developed by SWRPA and consultants.

SWRPA has provided leadership in strengthening safety of its transit network. The [Stamford Transportation Center Master Plan](#) included SWRPA Staff participating on the technical committee and meeting separately with the consulting team to concentrate on critical safety matters faced by users of the facility on a daily basis. The [Westport Rail Stations Parking Study](#), which is now underway, will culminate with a mobility plan that includes improving multimodal circulation and safety as an objective.

SWRPA also offers technical assistance to its member municipalities on the CTDOT Local Bridge Program. SWRPA's report, the [Bridges of the South Western Region 2013](#), summarizes the State of Connecticut's Local Bridge Program including funding sources and bridge rating system, and provides a basic understanding of the overall structural condition of the bridges in the South Western Region.

With an aging population that struggles with the determination of the appropriate time to discontinue driving due to higher incidence of crashes, SWRPA's human services transportation planning has devoted much energy to providing planning assistance and coordination with entities that provide transit options for seniors and persons with disabilities. The [Locally Coordinated Human Services Transportation Plan](#) (LOCHSTP) process, in determining viable projects eligible for funding through the FTA's Section 5317 New Freedom Initiative, resulted in the development of a mobility manager position for the Bridgeport/Stamford Urbanized Area. The Mobility Manager program was competitively bid and awarded to the Kennedy Center. The program has centralized a variety of functions such as fielding questions and disseminating information that empower seniors and persons with disabilities to use transit safely and confidently.

With the continued evolution of SWRPA's geographic information system (GIS), the Agency's ability to perform complex analyses has increased dramatically. With georeferenced crash data soon available from the Connecticut Crash Data Repository, SWRPA is well equipped to enhance its analytical capabilities of the South Western Region's transportation network's safety.

3. Increase the security of the transportation system for motorized and nonmotorized users

SWRPA recognizes that the transportation system must be secure in order for it to be effectively used by all modes of transportation, people and goods. In addition, the transportation system is a resource for emergency responders to use and as asset to be managed for all hazards, manmade, terrorism or natural. Strong efforts have been made to address the expanded security emphasis required by SAFETEA-LU and MAP-21, and have been incorporated into our planning activities through involvement with DEMHS Region 1 and the emergency support functions. Security, including initiatives to create safer and more secure environments for all users, is a core component of the *Going Forward (the Plan)*.

Various projects with security components have been undertaken by SWRPA in recent years. In 2011, SWRPA updated the [South Western Region Pre-Disaster Mitigation Plan](#), which evaluates the Region's vulnerability to a number of natural hazards and qualifies the region's municipalities for certain FEMA funds in the event of a natural disaster. Currently SWRPA is developing a DEMHS Region 1 evacuation plan in cooperation with the Greater Bridgeport Regional Council (GBRC). FTA Section 5307 and related Enhancement funds have been used to provide various amenities at transit stations throughout the region that have created safer and more secure environments for passengers through improved lighting, sheltering, bike storage and other upgrades.

As described in the safety section, the SWRPA and the SWRMPO have worked with DEMHS Region 1 on broad-based emergency management and homeland security initiatives, and have continued work in transportation with responders and transit operators (Metro-North, Norwalk Transit District, CT Transit, and Greater Bridgeport Transit). Since 2007, SWRPA and the South Western Region MPO have been active voting members of the Region 1 Emergency Planning Team; SWRPA is the chair of DEMHS Region 1 ESF1 (Transportation), and has routinely developed or participated in various exercises, drills and training. The SWRMPO has included DEMHS matters in the non-MPO agenda, and has worked to develop strong applications resulting in a series of federal grants.

Rail security is an emphasis area of the DEMHS Region 1 and ESF1, with a working group established for improve communications, mapping of resources, access points to the rail and staging areas. SWRPA will continue to evaluate the security of highway and transit systems, current and developing plans, programs and processes to promote security.

4. Increase the accessibility and mobility options available to people and for freight.

The South Western Region's extensive transportation network includes rail, bus transit (including paratransit service), and highway and water transportation systems. With a long history of promoting transit services and conducting studies have to determine the level and type of services required,

SWRPA has been relentless in its efforts to increase the accessibility and mobility of people and for freight.

SWRPA's objective is to provide transportation for the traditionally transit-dependent (young, elderly, disabled, low income) as well as options that provide commuters with viable mode choices such as transit, walking, bicycling, ferry, and ridesharing. *Going Forward*, , promotes choice, alternative modes and demand management, and identifies transportation needs, strategies, and supports the use of new technology. *Going Forward* also supports Intelligent Transportation Systems (ITS) to promote system efficiency, reliability, operations and management, and to increase information available to users to enhance their ability to make smart travel choices and make the transit system more user-friendly and appealing to occasional users and those looking to reduce their auto dependency.

Since 1985 SWRPA has conducted parking counts and evaluations of CTDOT's park and ride locations in the region. Since 2010, the count has been undertaken each year. The findings and recommendations are documented in a report and posted on the [SWRPA commuter parking website](#). The findings and recommendations are shared with CTDOT, and occasionally corrective actions occur. In 2011, SWRPA also developed a web-based interactive map for commuter parking in the South Western region which provides information on the commuter parking lot location, spaces, past use, available transit and photos.

Corridor studies were initiated to improve mobility along critical corridors that suffer from congestion and circulation matters that directly affect accessibility and mobility. These studies recommend various accessibility improvements and multimodal enhancements to promote improved mobility. Each of these studies features a bicycle and pedestrian component to promote non-motorized forms of transportation:

- The [Route 7 Transportation and Land Use Study](#) offers viable, creative, and community friendly solutions that will improve mobility, safety, and quality of life within the Route 7 corridor. The Plan offers suggestions that connect and improve all modes of transportation in the context of a land use vision focused on vibrant mixed-use villages along the corridor with preserved areas between these villages. The Study includes proposed investments that include roadway improvements, additional rail parking, transit oriented development, and bike/pedestrian accommodations.
- The [Darlen Route 1 Corridor Study](#) developed a comprehensive transportation plan for US Route 1 that will provide improved mobility, multimodal accessibility and safety for all users. The plan incorporates land use and development strategies that support the transportation system, with transportation improvement recommendations of this study promote the concept of Complete Streets.
- The [Greenwich/Stamford Route 1 Study](#) focused on developing a community supported, coordinated plan to improve traffic operations on Route 1, improve pedestrian safety, manage access, accommodate transit and enhance the corridor's economic potential. The final plan recommends many "complete streets" elements, that improve operations for vehicles as well as mobility for pedestrians and bicyclists.

Additional studies have also been conducted by SWRPA to address all aspects of the transportation network:

- Following up on the *Greenwich/Norwalk Bus Rapid Transit Study*, which directly addressed accessibility and mobility with a recommendation to create an enhanced bus service in the Stamford to Norwalk portion of the corridor, SWRPA managed the [Coastal Corridor Bus Study \(2012\)](#), (administered by Norwalk Transit District) assessed governance and service delivery of all bus routes along Route 1 between the New York State Line and Madison, CT, with an emphasis on transfers to and from the existing Coastal Link Service jointly operated by Norwalk Transit District, Greater Bridgeport Transit and Milford Transit District.
- The [Stamford East Main Street Transit Node Feasibility Study](#) developed plans for a new rail station that would serve Stamford's East Side, and also included a recommendation for a bus shuttle to provide added connectivity to the Stamford Transportation Center. The Study also provided a framework for transit oriented development, with complete streets an integral component of the strategy for improving mobility for the neighborhood.
- The [Route 7 Corridor Assessment & Implementation Plan](#) developed a phased implementation improvement plan for the Route 7 corridor from the vicinity of Route 7 Expressway and Route 123 (Norwalk) to Route 7 and Wolfpit Road (Wilton) to address multi-modal operational and safety needs in the corridor that are not currently being pursued in any active planning, design or funded programs.
- The [Westport Bus Services and Needs Study](#) is conducting a comprehensive operational analysis of Westport's transit system, including its commuter & after-school routes and Services for Seniors and persons with disabilities. The Study will determine potential system expansion and modification to best serve needs of Westport residents and businesses.
- The 2010 [South Western Region Freight Overview](#) presents a summary of the existing freight transportation infrastructure and freight-related travel, safety and economic data for Connecticut's South Western Region. The study notes that the most important element of the region's freight system is I-95, which accounts for over 85% of the Region's commercial vehicle miles traveled. In addition to highway freight, the report reviews the region's commercial ports and freight rail service. The report also presents commodity flow data, showing the type of freight flowing into and out of region, as well as the local employment directly supported by freight transportation. In 2013, SWRPA produced a supplemental update document that summarized recent developments with freight transportation in Connecticut.
- SWRPA updated its 2009 [South Western Region Rail Parking Study](#) in 2011 and again in 2013. Each edition of the study examined various aspects of rail station parking, including inventory and usage, capacity, and information availability. The study provides a series of recommendations offering options to maximize and increase capacity and approaches to streamline permitting processes and reduce confusion for occasional users. As part of SWRPA's rail station parking initiative, SWRPA organizes biannual rail parking manager peer-to-peer sessions that include CTDOT and rail parking managers from other regions. The meetings provide the opportunity to validate SWRPA information, findings and recommendations, to share best practices, and to bring in featured speakers or vendors that address rail parking managers' requests and needs.
- To build on the momentum created with this study, the [Westport Rail Stations Study](#) is evaluating existing commuter parking facilities at and near the Westport and Greens Farms rail stations in Westport and developing strategies to implement potential improvements identified by the Study team. SWRPA's role in project development facilitates mobility through its process to develop its Transportation Improvement Program and selection of projects funded through programs such as STP Urban, CMAQ, and FTA Enhancement. SWRPA also provides leadership when state programs provide opportunities, as it did when the Governor's Bus Service Initiative required timely

prioritization of initiatives proposed by the broader urbanized area's transit operators to expand bus service.

SWRPA staff members have been and continue to be active participants on the many studies and projects in the region that have the ability to improve or add mobility, including:

- *CTDOT New Canaan/Waterbury Branch Line Study*
- *CTDOT Danbury Branch Environmental Assessment*
- *Stamford Transportation Center Master Plan*
- *South Norwalk Rail Station Intermodal Study (Norwalk Transit District)*
- *Stamford Urban Transitway – Phases 1 and 2*
- [I-95 Value Pricing Pilot Project/Connecticut Congestion Relief Study: Express Lanes & Electronic Tolling](#)
- *CT Metro North Commuter Rail Council*
- [Stamford Glenbrook and Springdale TOD \(CTOPM-funded\)](#)
- [Norwalk Traffic Management Plan \(STPB-funded\)](#)
- [Stamford High Ridge and Long Ridge Corridor Study \(STPB-funded\)](#)
- [Norwalk River Valley Trail Routing Study \(Recreational Trails Program-funded\)](#)

Within the Bridgeport/Stamford Urbanized Area, SWRPA took the lead in the development of a *Locally Coordinated Human Services Transportation Plan (LOCHSTP)*. The LOCHSTP comprised of the following programs:

- FTA Section 5310, which provides grant funding for the purchase of vehicles to private nonprofit corporations and associations or public bodies for the purpose of transporting elderly persons and persons with disabilities. Under CT DOT's management plan for the program, the federal grant provides 80% of the cost of the vehicle (up to \$40,000) with the remainder supplied by the entity receiving the vehicle grant. Since 2009, organizations participating in the program have been awarded 9 vehicles that enhance mobility for seniors and persons with disabilities.
- FTA Section 5316 – Job Access, Reverse Commute, which provides funding for services benefitting lower income individuals' ability to access their places of employment. The Workplace, Inc. took the lead in the Bridgeport/Stamford Urbanized Area's People to Jobs collaborative, and has developed a program of services specific to the urbanized area's needs and resources, resulting in the expansion of service hours along many bus routes into nights and weekends and more frequent service during other busier periods.
- FTA Section 5317 – New Freedom Initiative, which provide new public transportation services and public transportation alternatives for people with disabilities that go beyond the requirements of the Americans with Disabilities Act (ADA). The primary achievement of the region's New Freedom initiative is the creation of a Regional Mobility Manager, which is staffed by the Kennedy Center. This Mobility Manager has overseen the development of taxi voucher programs, a mobility handbook for seniors and persons with disabilities, developed volunteer driver programs, and promoted the use of accessible taxi vehicles. The New Freedom Initiative has also provided funding for new services, including a joint service sponsored by multiple municipalities to provide rides to the VA Hospital in New Haven

While not officially part of the LOCHSTP process, the State of Connecticut has provided funding since 2006 through a Municipal Dial-a-Ride Grant Program. SWRPA administers the program on a local level

and provides technical assistance, and the program has doled out in the range of \$300,000 - \$350,000 annually, with the towns providing a plethora of new services and expanded hours of dial-a-ride services.

Safe and connected pedestrian and bicycle facilities are essential elements of the comprehensive multi-modal transportation system envisioned for the South Western Region. These modes provide personal transportation choices that are alternatives to the single occupant vehicle and provide mobility to those who do not have access to an automobile. They can be relatively low cost, and contribute to a better quality of life, especially in City and Town centers. SWRPA promotes bicycling and walking in the region through a number of initiatives. The [South Western Region Bike/Pedestrian Plan](#) identified policies and activities that increase the use, safety, and convenience of bicycling and walking in Connecticut's South Western Region and to promote bicycling and walking as integral components of the Region's multi-modal transportation system. The [Bicycle-Pedestrian Safety Corridor Study](#) identified the region's state highway corridors with the highest number of bicycle- and pedestrian-involved crashes and recommended engineering countermeasures.

SWRPA also assists its member municipalities with technical assistance and obtain funding for Safe Routes to School and Federal Transit Administration Enhancement projects. The Safe Routes to Schools activities are described in the safety session.

5. Protect and enhance the environment, promote energy conservation, and improve quality of life.

As stated in its mission, SWRPA is dedicated to preserving and improving quality of life in South Western Connecticut. *Going Forward*, has incorporated the six livability principles developed jointly by the United States Department of Transportation (USDOT), Housing and Urban Development (HUD) and the Environmental Protection Agency (EPA), all of which are critical to harnessing the economic growth potential of the South Western Region by attracting investment, employment, and residents in a manner that does not further overwhelm the transportation system. This dovetails with key Plan strategies including investing in the transportation system in a timely manner to maintain a healthy and competitive regional economy and to promote quality of life and integrating land use planning with transportation, infrastructure and critical facilities, and energy planning to ensure that our communities remain vibrant and sustainable for the future.

SWRPA was a partner in New York-Connecticut Sustainable Communities, a consortium of cities, counties and regions funded with a U.S. Department of Housing and Urban Development (HUD) Sustainable Communities Regional Planning Grant. The consortium explored opportunities to create Transit-Oriented Development (TOD) and increase livability, as defined by HUD, throughout the region. Among the placed based projects funded by the Grant was the [Stamford East Main Street Transit Node Feasibility Study](#), which was conducted by SWRPA on behalf of the City of Stamford. The Study assessed the feasibility of a new rail station on the East Side of Stamford, and developed a phased implantation plan to build new transit oriented development, create complete streets, and add new transit services. The City of Norwalk separately conducted a consortium project focusing on implementing TOD in South Norwalk.

Environmental and Clean Air Responsibility – avoiding, minimizing, and mitigating negative environmental impacts of transportation projects and systems whenever possible, continues to be a core concept. The region is intimately involved in developing initiatives to improve air quality to bring the region into compliance with the clean air standards and develop a more healthy and high quality of life for all residents. *Going Forward* identifies measures to improve air quality, including promotion of alternative fuels and energy efficient transportation modes, increased public transit service, transportation demand management and transportation systems management, and new bicycle and pedestrian facilities. In its promotion of transit oriented development, *Going Forward* furthers policies that contribute to regional congestion mitigation, encourage sustainable travel options and minimize environmental impacts.

SWRPA has been working with the State of Connecticut to achieve goals established in its Climate Change Action Plan. In the wake of Superstorm Sandy, coastal resiliency and adaptation have become front page issues. To address this, SWRPA is participating in a FHWA [Hurricane Sandy Follow-up and Transportation Vulnerability Assessment and Adaptation Analysis](#) in collaboration with peer MPO regions in Connecticut, New York and New Jersey. This assessment will look at how future extreme weather events could affect transportation infrastructure and demonstrate how the transportation system could respond through design, operations, and maintenance strategies and the benefits of various adaptation actions. SWRPA is also performing a regional coastal vulnerability assessment, which will also inform and supplement the transportation vulnerability assessment.

Currently, SWRPA is working diligently on an [Emergency Evacuation Planning and Needs Assessment](#) which incorporates state/regional, municipal, and transportation assets relative to natural hazards. This is a joint venture with the Greater Bridgeport Regional Council, funded by the federal Homeland Security Grant Program (HSGP), which is administered by DEMHS. Principal natural hazards analyzed include proximity to FEMA Flood Zones, SLOSH Hurricane Inundation areas, and Superstorm Sandy Inundation areas. Sandy Inundation data provides a reasonable benchmark for emergency and transportation officials to consider in the placement of, protection, and mitigation of area resources, including key infrastructure.

The project is also exploring the feasibility of an interactive, web-based component which would provide certain data collected in an interactive, real-time format to emergency stakeholders so long as an internet connection is present. Such efforts also include the possibility of a public component which could inform the public of area natural hazards relative to their residences/place of work, while also providing important contact information and directions to assistance in the event of an emergency. Extensive outreach to municipal, regional/state, and federal stakeholders was conducted as part of this project, including soliciting input for future work efforts most beneficial/critical to the region.

SWRPA is also gearing up for the 2016 Update of the region's Pre-Disaster Mitigation Plan (PDM), which is primarily funded under FEMA's Hazard Mitigation Grant Program (HMGP), with a 25% local match. The goal of such efforts are to work with municipalities to identify strategies aimed at reducing vulnerability to damages caused by area natural disasters, including transportation resources. Natural disasters analyzed in the PDM include: Floods, Hurricanes and Tropical Storms, Severe Storms (i.e. Wind storms, Winter Storms), Severe Thunderstorms, Tornados, Dam Failure, Drought, Earthquakes, and Sea Level Rise. Specific strategies include those that reduce:

- The loss of life and property

- Human suffering
- Economic Disruption
- Disaster assistance costs resulting from natural disasters

The risk from natural disasters are evaluated, for purposes of the PDM, in terms of:

- Frequency
- Magnitude
- Vulnerable locations
- Economic loss

The formation of a PDM Advisory Committee comprised of municipal appointees includes: Emergency Management Directors (EMDs), Police and Fire Chiefs, Public Works, Planning, Engineering and Conservation Staff. SWRPA works with committee members to assess the success of mitigation strategies identified in the 2011 PDM update, as well as identifying new strategies and areas of concern, based off of more recent storm events.

In order to more fully consider the environment as it relates to transportation planning, SWRPA continuously consults with representatives of appropriate Federal and State agencies to review their inventories of historic, natural, and cultural resources as well as related efforts. These consultations help elevate environmental conservation and mitigation, land use, and historic preservation as important considerations in SWRPA's transportation planning program. Implementation of transit options and commuter choices will have positive impacts on the environment by reducing energy consumption and auto emissions.

To conform to requirements of its designation as a Transportation Management Area (TMA), SWRPA annually conducts travel time data collection as part of its Congestion Mitigation Process (CMP), and issues [Travel Time Monitoring Reports](#) annually. Its objective is to obtain quantitative data identifying and measuring congestion along major roadways and in the South Western Region. In the past, staff used GPS equipped probe vehicles to gather data on travel speeds and times during rush hour on I-95, CT 15 and Route 7. In 2013, SWRPA obtained access to I-95 Corridor Coalition Vehicle Probe Project Data, which all hours of the day, all days of the week, and both directions of travel. In 2014, SWRPA obtained access to the National Performance Management Research Dataset made available to MPOs by USDOT. These two data sources represent a major improvement over the floating car method previously used.

The South Western Region has taken on a variety of transit initiatives intended to curb growth of vehicle miles traveled and carbon emissions through efforts to reduce dependency on automobiles. A prime example is the updated [South Western Region Bike-Pedestrian Plan](#), which identified policies and activities that increase the use, safety, and convenience of bicycling and walking in Connecticut's South Western Region and promotes bicycling and walking as integral components of the Region's multi-modal transportation system.

Other studies conducted by SWRPA also promote increased use of transit and improved air quality. [The Route 7 Transportation and Land Use Study](#) recommended higher density nodes and transect zoning to encourage improved train station environments and TOD along the Danbury Branch. The [Coastal Corridor Bus Study](#) developed recommendations to improve and expand public bus service along

Connecticut's Coastal Corridor between Greenwich and New Haven, including new express services. The [Westport Bus Services and Needs Study](#) is assessing current operations and develop an updated recommended service and governance plan for bus services in Westport, including services to the town's two rail stations. The [Westport Rail Stations Parking Study](#) is evaluating existing commuter parking facilities at and near the Westport and Greens Farms rail stations in Westport and identifying and assessing potential improvements.

SWRPA initiated an [Electric Vehicle Infrastructure Plan](#), as it recognized the opportunity provided by new technology and Connecticut's role in preparing the region for more widespread acceptance of alternative energy vehicles. The initial report provided an overview of the technology and charging requirements, and performed a market assessment to help educate elected officials and provide a framework for installing charging stations in a regional manner.

Activities in which SWRPA sponsored or actively participated provide further indication of the importance of planning that provides environmental advantages. SWRPA participates on the technical committees of the [Danbury Branch Phase II Alternatives Analysis](#), the [I-95 Value Pricing Pilot Project/Connecticut Congestion Relief Study: Express Lanes & Electronic Tolling](#), the [Glenbrook/Springdale TOD study](#) and the [Stamford High Ridge/Long Ridge Study](#). SWRPA has also supported the Stamford Urban Transitway project, which incorporates automobile trip reduction and travel demand management strategies that promote alternative transportation modes.

6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

SWRPA has made a strong effort to enhance the integration and connectivity of transportation systems and modes for people and freight. The region is supportive of transportation investments that encourage development of a balanced transportation system which uses a variety of modes operating in a complementary way to save energy, reduce congestion, strengthen urban centers and meet the needs of all residents. *Going Forward* highlights connectivity as a key objective, as it proposes improvements to rail and commuter connections and services, more direct and seamless transit trips, and future studies of freight alternatives that link Connecticut to the Port of New York/New Jersey and the international rail grid.

SWRPA has devoted substantial amounts of time and energy in promoting connectivity through its activities. The [Stamford East Main Street Transit Node Feasibility Study](#) developed plans for a new rail station that would serve Stamford's East Side, and also included a recommendation for a bus shuttle to provide added connectivity to the Stamford Transportation Center. Connectivity was a key consideration of the [Coastal Corridor Bus Study](#), which introduced opportunities to introduce express services connecting Stamford, Norwalk and other key employment centers and looked to provide improved mobility for those unable to use the rail network. SWRPA is a participating agency for the [Danbury Branch Phase II Alternatives Analysis](#), which is considering opportunities to improve and expand the Danbury Branch.

Member municipalities of SWRPA have closely coordinated with SWRPA on many projects enhancing transportation integration and connectivity, resulting in their inclusion on the Transportation Improvement Program. The City of Stamford is conducting a Transit Oriented Development Study at the Glenbrook and Springdale Stations; Stamford has also made substantial progress on the construction of its urban transitway, which will provide a single point of access to local and regional bus service, commuter rail, and Amtrak, and includes sidewalks and a dedicated bicycle lane, along with bus and road improvements. Phase 1 was completed in 2010, and Phase 2 is currently underway.

SWRPA also joined forces with the Westchester County Department of Planning to study [Access to Employment Centers and Disconnected Residential Areas](#) along the I-95, I-287 and Merritt Parkway Corridors. This joint project provides remediation recommendations that could improve interstate connectivity and provide opportunities for additional attainable housing within a reasonable distance from workplaces.

As the lead agency in the coordination of the Bridgeport/Stamford Urbanized Area's FTA recipients of Section 5307 Enhancement funds, SWRPA has worked closely with municipalities and transit providers to enhance connectivity through upgrades to transit facilities, such as installation of bike racks and bus shelters. Additionally, FTA enhancement funding along with STP Enhancement funding was used to assist the City of Norwalk with the development of a multi-use trail along the Norwalk River, which upon completion will promote commuting by bicycle and on foot due to its close proximity to the office, commercial and retail developments.

7. Promote efficient system management and operation.

The South Western Region's transportation planning program promotes and supports *transportation systems management* (TSM) to maximize the efficiency and productivity of the Region's existing transportation system. *Going Forward (the "Plan")* also identifies projects and studies aimed at prolonging the effective life of facilities, using new technology to achieve transportation system productivity and service enhancement, and refining operations, management, financing and governance to improve system efficiency.

The Region makes use of the various management systems developed by the Connecticut Department of Transportation as part of the planning process. A regional pavement management system and a geographic information system has been developed and implemented to assist in system management decisions. The 2010 *South Western Region ITS Strategic Plan* is an assessment of new and enhanced opportunities for the implementation of intelligent transportation systems (ITS) applications in the South Western Region. Eight proposed ITS strategies, identified by SWRPA and its stakeholders, were analyzed using IDAS, a sophisticated cost-benefit application that functions as a post-processor to travel demand models. Six of the eight benefits were shown to have positive cost-to-benefit ratios. In 2013, SWRPA produced a supplemental update document that summarized recent developments with regard to ITS in the South Western Region and Connecticut.

The corridor studies that SWRPA has recently completed each contain system management and operation as underlying objectives. The [Route 7 Transportation and Land Use Study](#) included access management as a task, while the broader goals of the Route 7 Study, the [Darlen Route 1 Study](#), and the [Greenwich-Stamford Route 1 Study](#) each revolved around improving traffic flow, improving safety,

addressing access management and accommodating multimodal operations. The [Westport Rail Stations Parking Study](#) and the [South Western Region Rail Parking Study](#) addresses operational deficiencies. SWRPA also is a participating agency in CT DOT's [I-95 Value Pricing Pilot Project/Connecticut Congestion Relief Study: Express Lanes & Electronic Tolling](#).

An example of the Region's support of TSM is the South Western Region Incident Management Team, which brings together local, regional and state agencies and organizations involved in responding to incidents on the regional highway, transit and water transportation systems. Meetings and training exercises of the South Western Region Incident Management Team improve coordination between response agencies, thereby improving system safety and operational efficiency. Since 1991 – when the Region began supporting the South Western Region Incident Management Team – it has helped to develop plans and programs to address system deficiencies, leading to quicker emergency response, decreased delay and less non-recurrent congestion. Incident management activities also operate through DEMHS Region 1 ESF-1, chaired by SWRPA staff, the Statewide Incident Management Task Force, and the New York State DOT Bridge Strike Task Force.

Since 1985 SWRPA has conducted parking counts and evaluations of CTDOT's park and ride locations in the region. Since 2010, the count has been undertaken each year. The findings and recommendations are documented in a report and posted on the [SWRPA commuter parking website](#). The findings and recommendations are shared with CTDOT, and occasionally corrective actions occur. In 2011, SWRPA also developed a web-based interactive map for commuter parking in the South Western region which provides information on the commuter parking lot location, spaces, past use, available transit and photos.

The region's park and ride lots are a facet of TDM, promoting alternatives to single-occupancy vehicle travel, such as ridesharing, carpooling, vanpooling, and public transportation programs, providing a convenient place for people to meet and travel together in one vehicle or bus.

SWRPA updated its 2009 [South Western Region Rail Parking Study](#) in 2011 and again in 2013. Each examined various aspects of rail station parking, including inventory and usage, capacity and information availability. The study provides a series of recommendations offering options to maximize and increase capacity and approaches to streamline permitting processes and reduce confusion for occasional users. As part of SWRPA's rail station parking initiative, SWRPA organizes biannual rail parking manager peer-to-peer sessions that include CTDOT and rail parking managers from other regions. The meetings provide the opportunity to validate SWRPA information, findings and recommendations, to share best practices, and to bring in featured speakers or vendors that address rail parking managers' requests and needs.

8. Emphasize the preservation of the existing transportation system

The top transportation objective of the South Western Region is to achieve and maintain a system-wide state of good repair for transportation equipment and facilities, including highways, bridges, and transit systems. *Going Forward* (the Plan) identifies the maintenance needs and resources to maintain the Region's transportation systems. Over the twenty-nine year span of the Plan, over \$773 million will be spent on system preservation and maintenance for projects such as paving, bridge repair or replacement and other forms of reconstruction in place. This equates to \$26 million per year for system preservation and maintenance. CTDOT also estimates that enhancement of the highway system will cost about \$51 million per year. Over thirty years, this expenditure would amount to approximately \$1.53 billion for projects that promote safety, improve mobility, increase system productivity, and support economic growth.

The [Transportation Improvement Program](#) is largely comprised of projects focusing on system preservation. SWRPA works closely with its Transportation Technical Advisory Group (TTAG) and the Members of the South Western Region Metropolitan Planning Organization (SWRMPO) to continuously amend the TIP to address pressing needs. Implementation of projects to attain and maintain a state of good repair for rail infrastructure bus systems, including infrastructure, ITS and rolling stock, are among the region's highest priorities for funding. The region continues to use and improve existing monitoring, management and evaluation systems of the towns, state and region to develop maintenance and paving programs and priorities to maximize pavement condition and longevity.

Transportation Systems Management and Operations (TSMO) is considered in all activities and incorporated into the long range transportation plan in accordance with all federal regulations and guidance. Objectives include development of processes and strategies for capital and operational improvements to preserve the existing highway and transit systems. The South Western Region Incident Management Task Force and The Locally Coordinated Human Service Transportation (LOCHSTP) planning efforts, and rail parking initiatives are examples of TSMO. The Congestion Management Process is a centerpiece of SWRPA's TSMO activities. SWRPA has also been a stakeholder in the State of Connecticut's Value Pricing Study.

SWRPA also offers technical assistance to its member municipalities on the CTDOT Local Bridge Program. SWRPA its report, [The Bridges of the South Western Region 2013](#), which summarizes the State of Connecticut's Local Bridge Program including funding sources and bridge rating system, and provides a basic understanding of the overall structural condition of the bridges in the South Western Region.

The SWRPA Purchasing Cooperative is comprised of municipal purchasing staff and the SWRPA staff, and has resulted in the purchase of items that assist in system preservation, including gasoline, diesel oil, salt, and sand.