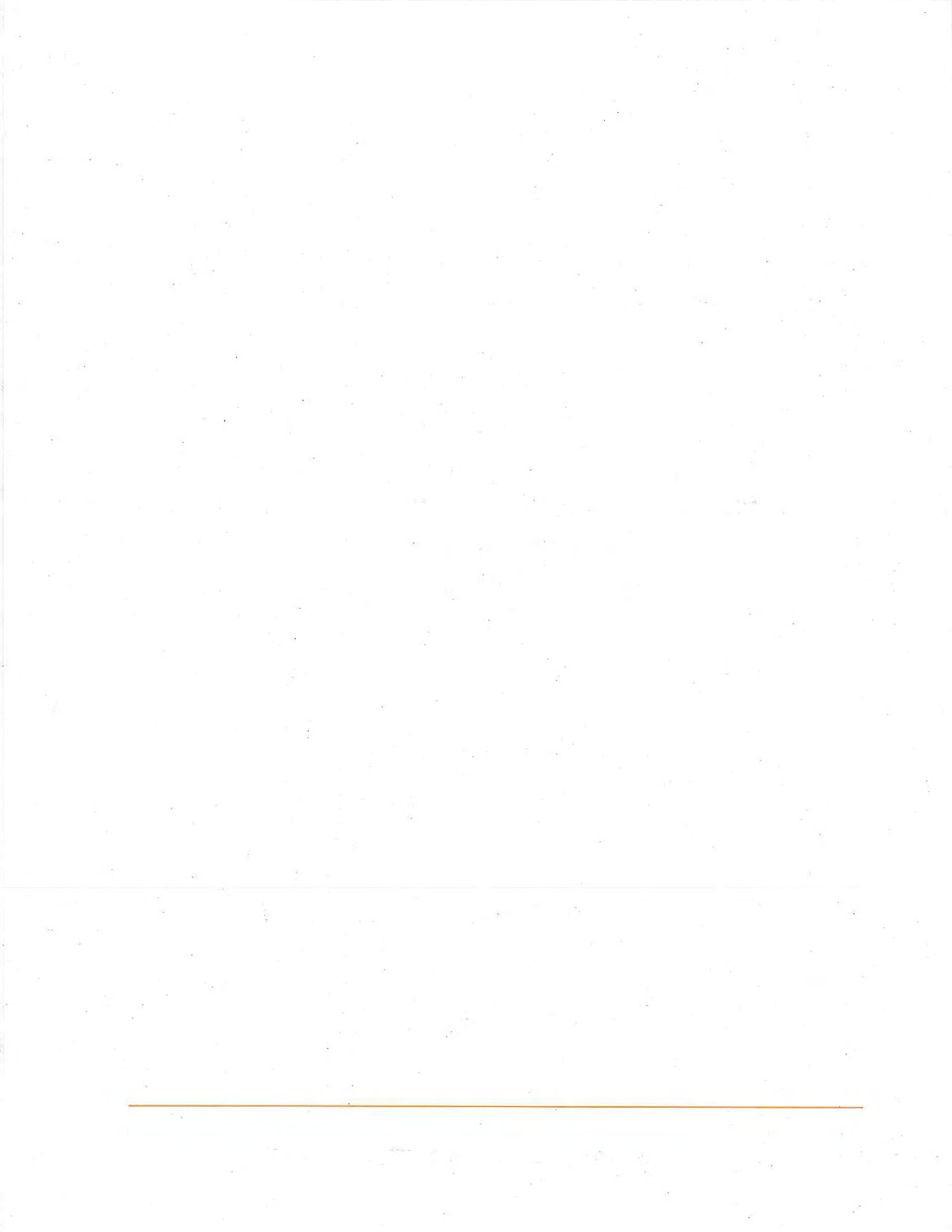




CAPE COD
COMMISSION

Cape Cod Metropolitan Planning Organization (MPO)
**Unified Planning Work Program for
Transportation Planning Activities**
(October 1, 2011–September 30, 2012)







CAPE COD
COMMISSION

CAPE COD METROPOLITAN PLANNING ORGANIZATION Unified Planning Work Program for Transportation Planning Activities

October 1, 2011 – September 30, 2012

Endorsed: 22 August 2011

Cape Cod Metropolitan Planning Organization Members

Jeffrey B. Mullan, Secretary and Chief Executive Officer, Massachusetts Department of Transportation (MassDOT)

Francis A. DePaola, Administrator, MassDOT Highway Division

Ronald Bergstrom, Chair, Cape Cod Regional Transit Authority

Peter Graham, Cape Cod Commission

Frederick Chirigotis, President, Barnstable Town Council

William Doherty, Barnstable County Commissioners

Wayne Taylor, Mashpee Selectman, for Bourne, Falmouth, Mashpee, Sandwich

Lawrence Cole, Harwich Selectman, for Brewster, Chatham, Dennis, Harwich, Yarmouth

Aimee Eckman, Eastham Selectman, for Eastham, Orleans, Provincetown, Truro, Wellfleet

Jason Steiding, Mashpee Wampanoag Tribal Council

Transportation Advisory Group

George Allaire, Chairman, Cape Cod Joint Transportation Committee

Cape Cod Commission Staff Contact

Glenn Cannon, Technical Services Director

Cape Cod Metropolitan Planning Organization

Endorsement DATE: August 22, 2011

The UPWP development process is being used to satisfy the public hearing requirements of the FTA's Section 5307 program and this public notice of public involvement activities and time established for public review and comments on the UPWP will satisfy the FTA Program of Projects requirements.

This report was funded in part through grants from the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), United States Department of Transportation (USDOT). The views and opinions of the Cape Cod Metropolitan Planning Organization expressed herein do not necessarily state or reflect those of the United States Department of Transportation.



CAPE COD
COMMISSION

CAPE COD METROPOLITAN PLANNING ORGANIZATION (MPO)
Unified Planning Work Program (UPWP)
October 1, 2011 through September 30, 2012

The signatures to follow certify that the Cape Cod Metropolitan Planning Organization (MPO), at their meeting on August 22, 2011, hereby approves the following action in accordance with the Comprehensive, Cooperative and Continuing transportation planning process. In accordance with the requirements of 23 CFR Part 450 Section 308(c) of Federal Regulations, the MPO for Cape Cod has completed its review and hereby endorses the Cape Cod Unified Planning Work Program for Transportation Planning Activities for October 1, 2011 through September 30, 2012.

SIGNATORY CERTIFICATION:

Jeffrey B. Mullan, Secretary/Chief Executive Officer – Massachusetts Department of Transportation (MassDOT)

Francis A. DePaola, Administrator
Massachusetts Department of Transportation (MassDOT) Highway Division

Peter Graham
Cape Cod Commission

Ronald Bergstrom, Chair
Cape Cod Regional Transit Authority

William Doherty
Barnstable County Commissioners

Frederick Chirigotis, President
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Lawrence Cole, Ph.D.
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Aimee Eckman
Eastham, Orleans, Provincetown,
Truro, Wellfleet

Jason Stjeding
Mashpee Wampanoag Tribal Council



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CAPE COD JOINT TRANSPORTATION COMMITTEE MEMBERS

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Introduction

This Unified Planning Work Program (UPWP) is developed annually by the Cape Cod Commission transportation staff on behalf of the Cape Cod Metropolitan Planning Organization, in accordance with the requirements in SAFETEA-LU and federal planning regulations. The UPWP describes all significant transportation planning activities planned on Cape Cod over the twelve (12) month period, regardless of lead organization and funding source. The following are the major transportation planning areas:

1. Management and Support of the Planning Process and Certification Activities – the efforts required for coordinating transportation planning activities between CCC and Metropolitan Planning Organization (MPO) member communities, local, regional, state and federal agencies; efforts required to maintain the public participation process; Environmental Justice strategies; efforts required for the administration of the CCC contract with the Massachusetts Department of Transportation (MassDOT); development and approval of the UPWP and the Transportation Improvement Program (TIP); and enhancement of the technical capacity of the planning process.
2. Data Collection and Analysis Activities – to continually gather and update traffic, crash, and road data necessary for transportation planning and analysis; to maintain databases; to develop and update Cape Cod's travel demand forecasting model; to review safety data, goals, objectives, and strategies to promote safety.
3. Short- and Long-Range Transportation Planning – efforts to update and maintain the Regional Transportation Plan for Cape Cod, a certification activity that requires a new plan every four years and development of the Congestion Management Program for the region. Also includes efforts to perform special planning studies of corridor safety/traffic flow and transit and integration of special studies into the regional transportation plan. Emphasis areas include identification of strategies to support the economic vitality of the metropolitan area, transportation security,



emergency planning, strategies to promote smart growth and economic development patterns, environmental protection and energy conservation and preservation of the existing transportation system.

4. Other Technical Activities – to provide other technical assistance to the region, including assistance in the design and implementation of projects, participating in special studies, coordination with transit agencies and assistance in the planning, design, and development of the Intelligent Transportation System for Cape Cod. Special emphasis areas include enhancing the integration and connectivity of the transportation system, across and between modes, for people and freight and promotion of Operation and Management Strategies.

5. Regulatory Review and Planning Assistance to the Towns – review of Developments of Regional Impact and assistance in the development and implementation of Local Comprehensive Plans and Districts of Critical Planning Concern.

Appendix – efforts that are awaiting grant funding that may be initiated during the UPWP period, including a more comprehensive study of the Canal area and several efforts proposed by the National Park Service.

COORDINATION WITH FEDERAL TRANSPORTATION PLANNING FACTORS

All tasks of the UPWP will be implemented with consideration of federal transportation planning factors. This discussion relates to the general topic of Cape Cod MPO transportation planning and is intended to provide an overview to the public. Each planning factor may apply to a varying degree to each specific UPWP task. Cape Cod MPO transportation planning goals are manifested in the Cape Cod Regional Transportation Plan (RTP) referenced in the discussion below. The UPWP is developed in coordination with the eight SAFETEA-LU planning factors as follows:



1. SUPPORT THE ECONOMIC VITALITY OF THE METROPOLITAN AREA, ESPECIALLY BY ENABLING GLOBAL COMPETITIVENESS, PRODUCTIVITY, AND EFFICIENCY

The Cape Cod MPO staff shall apply specific criteria in the review of transportation strategies. These criteria are applied to changes of delay and emissions. Reduction in traffic delay has a direct consequence on economic vitality both through the timely arrival of commuters and goods and reduction in fuel expenses and losses due to air pollution. The RTP directly supports these efforts through the goal: “Create a transportation system that reinforces local development, land use, economic, cultural, and historic preservation goals.” The CCC directly supports regional productivity through its economic development mission (including full-time staff) manifested in the Regional Policy Plan and support of the Cape Cod Economic Development Council’s initiatives, including support of the federally approved Cape Cod Comprehensive Economic Development Strategy priority projects.

2. INCREASE THE SAFETY OF THE TRANSPORTATION SYSTEM FOR MOTORIZED AND NONMOTORIZED USERS

The Cape Cod MPO staff shall apply specific criteria in the review of transportation strategies. These criteria are applied to estimated changes in safety. The primary goal of the RTP is focused on safety and security: “Create a transportation system that provides safe travel options for people and freight, and protects users from natural and external threats.” Safety is of such importance that it is recognized in its own chapter of the RTP.

3. INCREASE THE SECURITY OF THE TRANSPORTATION SYSTEM FOR MOTORIZED AND NONMOTORIZED USERS

The primary goal of the RTP is focused on safety and security: “Create a transportation system that provides safe travel options for people and freight, and protects users from natural and external threats.” Security is of such importance that it is recognized in its own chapter of the RTP. One area of additional security planning that applies to Cape Cod is that of traffic impacts due to weather events such as impending hurricanes. CCC staff is continuing to participate in the Massachusetts Emergency



Management Agency (MEMA) Massachusetts State Police efforts regarding the “Cape Cod Emergency Traffic Plan.”

4. INCREASE THE ACCESSIBILITY AND MOBILITY OF PEOPLE AND FOR FREIGHT

The Cape Cod MPO staff shall apply specific criteria in the review of transportation strategies. These criteria are applied to improvements in multimodal accessibility. The RTP supports these efforts through its goal: “Connect village centers, economic and employment centers, and points of interest using multiple coordinated modes of transportation in a direct and efficient manner so that people and goods can get from where they are to where they are meant to go.”

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

The RTP supports this planning factor through three goals: “Create a transportation system that maintains, protects, and enhances the natural environment of Cape Cod”; “Create a transportation system that reinforces local development, land use, economic, cultural, and historic preservation goals”; and “Base projects and programs on an objective, transparent and inclusive decision-making process in cooperation with federal, state, regional, and local transportation agencies, government officials, businesses and citizens.”

6. ENHANCE THE INTEGRATION AND CONNECTIVITY OF THE TRANSPORTATION SYSTEM, ACROSS AND BETWEEN MODES, FOR PEOPLE AND FREIGHT

The Cape Cod MPO staff shall apply specific criteria in the review of transportation strategies. These criteria are applied to improvements in multimodal accessibility. The RTP supports these efforts through its goal: “Connect village centers, economic and employment centers, and points of interest using multiple coordinated modes of transportation in a direct



and efficient manner so that people and goods can get from where they are to where they are meant to go.”

7. PROMOTE EFFICIENT SYSTEM MANAGEMENT AND OPERATION

The RTP supports this planning factor through three goals: “Optimize travel time throughout the transportation system for people and freight by pursuing strategies to reduce congestion in areas where it exists and taking proactive measures to prevent congestion in currently free flowing areas”; “Preserve, maintain, and modernize the existing transportation system”; and “Base projects and programs on an objective, transparent and inclusive decision-making process in cooperation with federal, state, regional, and local transportation agencies, government officials, businesses and citizens.”

8. EMPHASIZE THE PRESERVATION OF THE EXISTING TRANSPORTATION SYSTEM

The RTP supports this planning factor through two goals: “Optimize travel time throughout the transportation system for people and freight by pursuing strategies to reduce congestion in areas where it exists and taking proactive measures to prevent congestion in currently free flowing areas” and “Preserve, maintain, and modernize the existing transportation system.” Through the CCC regulatory process, development projects are required to provide traffic mitigation. Additionally, a significant number of acres of developable land have been conserved through the CCC regulatory process — thereby reducing future transportation impacts.



Task #1 – Management and Support of the Planning Process and Certification Activities

TASK 1.1 - UNIFIED PLANNING WORK PROGRAM (CERTIFICATION ACTIVITY)

Objectives: To develop a Unified Planning Work Program (UPWP), in accordance with the requirements in SAFETEA-LU and federal planning regulations, and to obtain MPO endorsement of the UPWP. To prepare progress reports, as needed.

Previous Work: Previous UPWPs (most recent MPO endorsed UPWP: January, 2011)

Procedures: In conformance with applicable Federal and State guidelines, prepare a UPWP which describes all significant transportation and transportation-related planning activities anticipated to be carried out in the region during the period, regardless of funding sources or lead organization. Maintain the UPWP and make amendments as necessary.

Products: Unified Planning Work Program for Transportation Planning Activities for the period October 1, 2011 to September 30, 2012. Amendments to the current UPWP will be submitted as necessary. Monthly progress reports on PL activities performed under the UPWP and an annual report of transportation planning activities.

Schedule:

- Draft UPWP anticipated submission to MPO and CCJTC, July 2012
- Final UPWP anticipated submission to MPO, August 2012
- Monthly progress reports
- Annual Report



Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
FHWA/MassDOT	\$15,000	5 person-weeks
FTA (5303)	\$1,000	0.3 person-weeks
CCC	\$250	0.1 person-weeks

FTA Item Code 44.21.00

**TASK 1.2 - TRANSPORTATION IMPROVEMENT PROGRAM
(CERTIFICATION ACTIVITY)**

Objectives: To prepare a program of transportation improvement projects that is consistent with SAFETEA-LU, the region's transportation plan, the State Implementation Plan, EPA's Air Quality Conformity Regulations, and FHWA/FTA's Planning Regulations. The Transportation Improvement Program (TIP) will include a four-year program of projects. The TIP will be presented for endorsement by the Metropolitan Planning Organization (MPO) in accordance with federal regulations and the region's Public Participation Plan.

Previous Work: "Cape Cod Transportation Improvement Programs (TIPs)," 1988 to present; latest endorsed (July 2011) document covers the period of federal fiscal years 2011–2014.

Procedures: To continue to participate in a committee of Regional Planning Agency (RPA) Directors, Federal and State officials to cooperatively develop financial estimates, evaluate projects, and schedule of TIP development.

I – PREPARATION OF THE DRAFT TIP

A) General

1. The TIP is a staged, multi-year, intermodal program of transportation projects which are consistent with the Regional Transportation Plan (RTP). It is the programming document to



implement FHWA and Federal Transit Administration (FTA) Regional Transportation Plan projects.

2. Insure involvement of local officials and citizens through the Cape Cod Joint Transportation Committee and the Public Participation Plan
3. Provide assistance to municipalities in advancing TIP projects
4. Coordinate with MassDOT District 5, and the MassDOT Boston Office of Transportation Planning in developing project advancement
5. Include project within financial estimates (and other items)

B) Development of the four-year program of projects according to a uniform statewide format.

1. Update the list of transit and highway projects that are expected to require federal transportation funds during the active fiscal years of the TIP.
2. The list of projects may include information such as the following:
 - a. The official MassDOT identifying project title
 - b. Project description
 - c. Estimated total cost
 - d. Proposed sources of federal and non-federal funds.
3. The total costs of projects seeking federal funds in each program year shall be in line with anticipated federal and state funds.

C) Public Participation

- Per the MPO approved Public Participation Plan.



II – TIP APPROVAL

The TIP documents will be reviewed and endorsed by the MPO. The endorsed products will serve as a portion of the required air quality consistency documentation necessary for USDOT (FHWA/FTA) and EPA conformity determinations.

III – MODIFICATION/AMENDMENT

A) Amendments to the TIP require MPO approval.

B) Administrative adjustments to the TIP may be approved by the CCC Executive Director, with appropriate notification to the MPO.

Products:

- TIP consistent with the State Implementation Plan and the Regional Transportation Plan
- Modifications/amendments to the TIP as required

Schedule: As determined by the MPO, FHWA, FTA, and MassDOT.

Funding/Staffing breakdown:

<u>Funding source</u>	<u>Amount</u>	<u>CCC Staffing</u>
FHWA/MassDOT	\$41,250	14 person-weeks
FTA (5303)	\$3,500	1 person-week
CCC	\$875	0.3 person-weeks

FTA Item Code 44.21.00



TASK 1.3 - CCJTC AND MPO ACTIVITIES/PUBLIC PARTICIPATION PROGRAM

Objectives: To maintain an open comprehensive, cooperative and continuing (3C) transportation planning and programming process involving the local, regional, state, and federal levels of government in conformance with applicable federal and state requirements and guidelines.

Previous Work:

- Past maintenance of 3C process, including support to the CCJTC, the MPO, and member agencies
- Update of the Public Participation Plan (June 2007)

Procedures:

1. Provide administrative and technical support to the 3C regional planning process, such as:
 - a. Community liaison and assistance on transportation planning matters
 - b. Review of federal and state transportation programs and related documents as required
2. Provide for and support the public participation process (PPP) in transportation planning for Cape Cod
 - a. Support Cape Cod Joint Transportation Committee (CCJTC)
 - b. Develop, support and participate in local parking, traffic, bikeway, and environmental committee meetings
 - c. Preliminary and follow-up work for meetings as required
3. Present transportation plans and programs (e.g., UPWP, Regional Transportation Plan, TIP) developed through the public participation process to the Cape Cod Joint Transportation Committee and the Metropolitan Planning Organization (MPO) for appropriate action



4. Conduct efforts in conformance with federal, state and local requirements

Products:

- Viable 3C process, including CCJTC and public participation program
- Revision of PPP, as necessary
- Website updates, notices to news media, meeting notices
- Transportation program annual report
- Minutes and reports on CCJTC meetings
- Letters, memoranda, and notes as required
- Other products as required

Schedule: Meetings typically held monthly

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
FHWA/MassDOT	\$56,250	19 person-weeks
FTA (5303)	\$4,000	1.5 person-weeks
CCC	\$1,000	0.3 person-weeks

FTA Item Code 44.21.00

TASK 1.4 – ENVIRONMENTAL JUSTICE/TITLE VI

Objectives: To ensure that all segments of the population are able to fully participate in transportation planning processes and has access to transportation facilities. To integrate the basic principles of Environmental Justice into the 3C Transportation Planning Process, including Limited English Proficiency, as necessary. To develop and maintain a Title VI Civil Rights program for the Cape Cod MPO. To cooperate with stakeholders in the development of the Public Transit Human Services Transportation Plan. To engage the Mashpee Wampanoag Tribe in transportation planning. To account for Environmental Justice efforts within each task as appropriate.



Previous Work: Attendance at preliminary meetings with MassDOT and FHWA to discuss environmental justice requirements and receive guidance on ensuring compliance. Preparation of updates to the Cape Cod Regional Transportation Plan including information and strategies to ensure Environmental Justice.

Procedures: Coordination with the Cape Cod Regional Transit Authority and MassDOT, as required.

Products:

- Viable Title VI Civil Rights program for the Cape Cod MPO
- Incorporation of environmental justice principles into MPO activities

Schedule: Ongoing procedures

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
FHWA/MassDOT	\$35,000	11.5 person-weeks
FTA (5303)	\$4,000	1.5 person-weeks
CCC	\$1,000	0.3 person-weeks

FTA Item Code 44.21.00

TASK 1.5 – ACCESS TO JOBS/JOBS ACCESS REVERSE COMMUTE & NEW FREEDOM PROGRAMS

Objective: To coordinate the Jobs Access Reverse Commute (JARC) and New Freedom (NF) Programs for the Cape Cod urbanized area. The JARC program instituted as part of the Welfare to Work program. The New Freedom program funds innovative measures to serve people with disabilities seeking reliable and safe transportation beyond Americans with Disabilities Act requirements.



Previous Work: Coordination with CCRTA, the Cape Organization for the Rights of the Disabled, and other agencies with Access To Jobs and Welfare to Work programs.

Activities: As the designated recipient for JARC and NF funds, the Cape Cod Commission shall see that the following are developed:

- Identification of service gaps such as geographic restrictions and limited hours (JARC)
- Identification of needs for enhanced assistance, extended hours, and improved scheduling (NF)
- Development of criteria for evaluating proposals to use JARC and NF funding

Products: Coordinated Plan

Schedule: Per MassDOT guidance and federal requirements

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
FTA (5303)	\$2,500	1 person-week
MassDOT/FTA (5316 & 5317)	\$ 16,900	5.5 person-weeks
CCC	\$625	0.2 person-weeks

FTA Item Code 44.21.00

TASK 1.6 – REGIONAL TRANSPORTATION PLAN

(Certification Activity)

Objectives: To maintain and update the Regional Transportation Plan for Cape Cod, in conformance with the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and successor acts, consistent with the goals and requirements of the Cape Cod Commission, towns, the MassDOT, FTA, and the FHWA,



considering all modes of transportation and both short- and long-range elements.

Previous Work:

- Ten (10) year needs assessment prepared in October 1989
- Regional Policy Plan for Cape Cod, August 1991
- Long Range Transportation Plan, September 1993
- Long Range Transportation Plan Amendments, September 1994
- Regional Policy Plan for Cape Cod, November 1996
- Regional Transportation Plan, approved by MPO, March 1997
- Regional Transportation Plan, approved by MPO, January 2001
- Regional Policy Plan for Cape Cod, April 2002
- Regional Transportation Plan, approved by MPO, August 2003
- Regional Transportation Plan, approved by MPO, March 2007
- Regional Policy Plan for Cape Cod, 2009
- Regional Transportation Plan, approved by MPO, August 2011

Procedures: Updates to Regional Transportation Plan (RTP). Potential amendment to RTP in 2011-2012 to include recommendations from Hyannis Access Study and the Willow Street/Yarmouth Road Corridor Study and Cape Cod Canal area efforts. Includes RTP conformity analysis and reassessment of fiscal constraint. Ongoing public outreach will include workshops and participation at meetings of local officials and issue-oriented groups focused on the environment and accessibility. These efforts will further involve Cape Cod environmental organizations and strengthen the link between transportation impacts and environmental analysis. Work with communities to identify Growth Incentive Zones and Economic Centers, promote mixed-use development, transit-oriented development, and identify appropriate transportation infrastructure to support these areas.

Products:

- Updates and amendments as necessary (e.g., amendment to include Hyannis Access Study recommendations)
- Presentation materials, maps, website downloads for meetings and workshops

Schedule: To be determined



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Funding/Staffing Breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
FHWA/MassDOT	\$ 12,567	5 person-weeks
FTA (5303)	\$ 5,000	1.5 person-weeks
CCC	\$ 1,250	0.4 person-weeks

FTA Item Code 44.23.02



Task #2 – Data Collection and Analysis Activities

TASK 2.1 – CAPE COD TRAFFIC DATA COLLECTION PROGRAM

Objectives: To create and maintain databases of traffic counting data for Cape Cod to be used for transportation planning. To monitor growth in traffic volumes and to determine existing traffic volumes on Cape Cod roads. To perform the coverage counts for MassDOT. To perform bicycle and pedestrian activity counts in selected locations. To obtain data on road geometry, when necessary, as part of the traffic counting efforts.

Note: It is a goal of the region to install permanent traffic counters to provide continuous reliable data on traffic volumes, vehicle types, and speed on all major roads. Permanent stations with remote access capabilities are the appropriate safe and cost-effective manner to collect data.

Previous Work: Annual traffic counting programs, 1984–2011. Traffic counting reports and appendices (2010 versions most recently):

- Cape Cod Traffic Counting Report
- Intersection Turning Movement Counts
- Bicycle - Pedestrian Counts
- Park and Ride Lot Counts
- Travel Times

Procedures: For the summer of 2011, over 300 counts are scheduled across Cape Cod's 15 towns. Additional counts, in coordination with or at the request of the towns and MassDOT, will be taken as schedule and weather permits. Where possible, FHWA traffic monitoring guide procedures will be followed. Police details, if required for the additional count locations, shall be the responsibility of the towns for local roads and MassDOT for state roads and locations requested by MassDOT. Turning



movement counts will also be taken at selected intersections. Bicycle and pedestrian counts will also be performed on selected paths throughout Cape Cod.

Where possible, FHWA traffic monitoring guide procedures will be followed. Work activities under this task include:

- Placement of counters
- Retrieval of counters
- Routine checks of counters
- Equipment inventory and maintenance
- Data tabulation
- Data factoring
- Data analysis/recording
- Coordination of counters
- Coordination of safety measures with towns
- Coordination of external program counts
- Periodic calibration/verification of equipment per MassDOT guidelines
- Obtain necessary permits from towns and MassDOT
- Development of traffic count file and data base
- Data mapping
- Program evaluation
- Computer data entry and maintenance
- Updated geometric information, as needed. Gather information to include sidewalks, shoulders and bicycle lanes.

Products:

- Cape Cod Traffic Counting Report for 2011. Report will contain information on study design, count location, date/time of peak-hour volume, average daily traffic, and factored average daily traffic. The most recent 10 years of counts conducted by CCC will be included in this report.
- Online database that includes date of counts, general weather and traffic conditions average daily traffic, factored average daily traffic, peak hour traffic volume. Breakdown of traffic by hour over period studied kept on file. Information provided via a map-based search tool for ease of use by the public and other stakeholders.
- Factored counts for MassDOT



- Expanded seasonal traffic counting data
- Turning movement counts at intersections, including bicycle and pedestrian counts
- An analysis of traffic growth trends over the past 10-year period for Cape Cod, subregions and major routes
- Counts accessible at website (www.gocapecod.org/counts)

Schedule: Report on counts taken in 2011 submitted January 2012

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
FHWA/MassDOT	\$62,500	21 person-weeks

TASK 2.2 – TRANSPORTATION DATABASE MANAGEMENT/MODELING/TRAVEL DEMAND FORECASTING

Objectives: To maintain and improve databases of Cape Cod transportation information including roadway geometry, traffic volumes (motor vehicles, bicycles, pedestrian), and other. To provide the transportation information for Cape Cod to local and state officials, transportation professionals, and the public. To continue to develop and calibrate computerized travel demand forecasting databases and models for Cape Cod, including year 2035 forecasts. To continue integration with Geographic Information System (GIS) data to provide a platform for GIS-based traffic counts, congested link summaries, and accident summaries.

Previous Work:

- Draft VISSIM models for Harwich Center and Yarmouth Road/Willow Street (Barnstable)
- Geo-located Cape Cod crash database for 2004–2008
- Online mapping of traffic counting data:
http://www.gocapecod.org/counts/googler/allcape_gm.htm
- Transportation model, developed in 1999/2000 for base year of 1997
- Transportation model, updated in 2010



Procedures: Integrate new records when available; maintain database, develop subroutines for analysis. When details are needed for specific locations, town crash records may be obtained and reviewed. CCC staff will contact MassDOT to request latest crash records. Conduct public outreach to member communities. Respond to data and information requests from the public, transportation professionals, and local, regional, and state officials. Participate in analyses of and obtain latest Pictometry data and software.

Review and utilize available socio-economic, employment, population, and housing data for base year and forecast year data. Utilize existing traffic volume and transit data to determine existing travel demands. Utilize existing transportation models for sub-regions of Cape Cod. Improve transfer methods of data between CCC Geographic Information System (GIS) services and transportation modeling effort. Expand transportation demand model to include Saturday morning element and to explicitly include alternate modes. Additional modeling efforts include the use of Synchro/Sim-Traffic software. Construction of Synchro models includes development of a computerized roadway/intersection network. Inputs include turning movements and roadway link traffic volumes, roadway and intersection geometry, and signal timing and phasing.

Products:

- Crash, roadway geometry, roadway traffic volumes, intersection turning movements data, and Pictometry information database
- Reports, letters, and memoranda as required
- Updated regional transportation model based on latest available demographic information, reports of results, and summaries
- Models will be used to support Task 3 and other regional planning and TIP activities

Schedule: Ongoing

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC staffing</u>
FHWA/MassDOT	\$39,375	13 person-weeks



TASK 2.3 – PAVEMENT MANAGEMENT

Objectives: To collect data and implement a regional pavement management system for Cape Cod to provide an objective rating of pavement conditions and needs.

Previous Work:

- Eastham, Pilot Pavement Management Study, December 1990
- Bourne, Preliminary Pavement Management Report, April 1992
- Participation on technical coordination committees for Pavement Management
- Special Statewide pavement management systems effort, 1994

Procedures: Existing conditions determination will be conducted through “windshield” surveys of roadways. Additional information may be provided by individual towns; some towns maintain pavement management databases. Existing data will be requested from individual towns. The proposed pavement rating system will be determined in coordination with the towns. The rating system will be consistent with MassDOT standards and standards that other Massachusetts’ RPAs are using.

Products: Assessment of pavement management needs

Schedule:

January-March 2012	Evaluation of existing data, coordination with communities, review of methodologies.
March-April 2012	Schedule & coordination of data collection
May-August 2012	Data Collection
September 2012	Status Report

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
FHWA/MassDOT	\$ 32,000	10.5 person-weeks



TASK 2.4 – GEOGRAPHIC INFORMATION SYSTEM

Objectives: To maintain and improve the Geographic Information System for Cape Cod to provide an analysis tool for transportation decision-making.

Ongoing Work:

- Integration of Massachusetts DOT Roadway Inventory Files
- Development of geographic land use information for transportation planning

Procedures: Importing of transportation-related geographic information from state, federal, local and other sources into Cape Cod's Geographic Information System; editing as needed; provide database, digital, and graphic outputs of geographic information as required.

Products: digital files for input into specialized transportation analyses; graphic output of maps (paper, .jpg, .pdf as required).

Schedule: Ongoing

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
FHWA/MassDOT	\$ 36,250	12 person-weeks

TASK 2.5 – SAFETY MONITORING

Objectives: To develop a comprehensive planning analysis of traffic and transit safety conditions on Cape Cod's transportation network.

Previous Work:

- Integration of annual Massachusetts DOT crash records.



- “Barnstable County Intersections of Critical Safety Concern” (2010)
- Safety Chapters of Cape Cod Regional Transportation Plans (2007, 2001)
- Accident databases prepared with data supplied by MassDOT. Original database included detailed data for the years 1989–1991 and 1993 and less detailed information for the years 1991–2001. 2002–2008 database includes new location reporting methods. Analyses included in the 1997, 2000 and 2003, 2007 and 2011 Cape Cod Regional Transportation Plans and other studies.

Procedures: Assign crash records provided by MassDOT to their proper locations. Review local police department records for detailed crash analyses. Develop rankings of high-crash locations. Review Transit safety records. Work with MassDOT to implement recommendations contained in the Massachusetts Strategic Highway Safety Plan. Participate in the State’s Safety Users Group. Participate in the development of Roadway Safety Audits.

Products: crash records database; listings of high-crash locations by rate, severity, and frequency; charts, data and other input into Roadway Safety Audits.

Schedule: Ongoing

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
FHWA/MassDOT	\$ 17,375	6 person-weeks



Task #3 – Short- and Long-range Transportation Planning

TASK 3.1 – CONGESTION MANAGEMENT PROGRAM/ CONGESTED LOCATIONS

Objectives: To improve the online system database for providing Congestion Management information, including intersection and roadway Level-of-Service, travel times, and Park & Ride Usage. Also to perform location studies, as time and need allows. To develop criteria for identifying congestion and methods to address congestion, consistent with applicable regional, state, and federal transportation policies. To identify top congested locations for further study. Develop low-cost solution for an identified ‘top regional bottleneck location’ for inclusion on a future TIP.

Previous Work:

- Cape Cod Congestion Management System 1997 Report, January 21, 1998
- Development of Congestion Management Program at www.gocapecod.org/congestion

Procedures:

- Data collection including specialized traffic counts, usage surveys, identification of locations for installation of monitoring stations, develop and refine procedures for defining congestion levels and locations (as outlined in Task 2.1).
- Identify one to three locations that are experiencing congestion and develop recommendations for potential improvement



Products:

- Congestion Management Plan website for Cape Cod and associated products: Maps, Tables, Presentation Materials
- Recommendations for improvements to specific congestion locations
- To work toward including Level of Service (LOS) analysis on all federal-aid eligible roads

Schedule: Continuous. Oct. 2011-September 2012

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
FHWA/MassDOT	\$30,066	10 person-weeks

**TASK 3.2 – TRANSPORTATION SAFETY
(REPORTING/COORDINATION AND EVALUATION AT
THREE LOCATIONS)**

Objectives: To evaluate safety improvements at three high-crash locations identified in the 2010 Barnstable County Intersections of Critical Safety Concern and the 2011 Cape Cod Regional Transportation Plan. Coordination with MassDOT’s safety division and participation in MassDOT Road Safety Audits.

Previous Work:

2006 safety evaluation studies at the Otis Rotary in Bourne, Route 137/39 intersection in Harwich, and Route 6A/28 in Orleans, three high-crash locations identified in 2003 Cape Cod Regional Transportation Plan

2008 safety evaluation studies at Route 6/Brackett Road in Eastham and the two intersections on Route 130 in Sandwich formed by the Route 6 ramps at interchange 2



FY 2009 Safety Study includes the following locations: Route 6 Intersections at the Truro Central School, Orleans/Eastham Rotary, and Route 6 at Shank Painter Road in Provincetown

The 2010 Barnstable County Intersections of Critical Safety Concern (top fifty crash location report) provided analysis based on frequency, crash rate, EPDO, and EPDO rate using geo-located crash data to the extent available. Creation of the report also included outreach to local and state police to improve crash data reporting.

2011 Reports pending.

Procedures:

- Coordination with CCJTC and local agencies on specific locations
- Review of causal factors of crashes at each location
- Review of roadway/intersection geometry
- Identification of deficiencies and alternatives to improve safety
- Review of local and state police reporting practices
- Identification of ways to improve accuracy, consistency and timeliness of information
- Assistance in the implementation of improved practices
- Consultation and coordination with appropriate agencies regarding environmental mitigation
- Use of visualization techniques including GIS data layers showing land use and sensitive environmental areas (as outlined in Task 2.4)

Products: Report including recommendations to improve safety at studied locations for consideration of future TIP programming.

Schedule:

October–November 2011	Data Collection (as outlined in Task 2.5)
December 2011–February 2012	Problem identification, development of improvements and analysis
March 2012	Recommendations and draft report
April 2012	Mapping (as outlined in Task 2.4)
May 2012	Final report



Funding/Staffing breakdown:

<u>Funding source</u>	<u>Amount</u>	<u>CCC staffing</u>
FHWA/MassDOT	\$36,079	12 person-weeks

TASK 3.3 – HYANNIS ACCESS STUDY IMPLEMENTATION

Objectives: To follow-up the recommendations of the Mass EOT Hyannis Access Study. To facilitate final design of roadway, transit, and multi-use pathway improvements; support Town of Barnstable efforts to advance design/construction of Hyannis Rotary, Yarmouth Road, and Route 28 improvements from the Hyannis Rotary to the Yarmouth town line and to engage in an inclusive public process regarding improvement alternatives.

Previous Work:

- Participation in the Mass EOT Hyannis Access Study (2007-2008)
- Commenced Willow Street/Yarmouth Road Corridor Study, 2009 UPWP – on-going

Procedures:

- Surveys and public outreach regarding design alternatives for various roadway segments
- Identify acceptable recommendations
- Present final recommendations for public comment

Products:

Report with recommendations for roadway, transit and multi-use pathway improvements to enhanced connectivity leading to TIP candidate project(s).



Schedule:

Oct. 2011 – April 2012	Development of Alternatives
May-June 2012	Refinement of Alternatives
July 2012	Select Preferred Alternative
August 2012	Develop Draft Report
September 2012	Final Report

Funding/Staffing breakdown:

<u>Funding source</u>	<u>Amount</u>	<u>CCC staffing</u>
FHWA/MassDOT	\$39,688	13 person-weeks

TASK 3.4 – GREEN STREET RETROFIT PROJECT

Objectives: To identify pilot project areas along Route 6A that may be subject to flooding, or located in denser village centers. For these areas, identify “Green Street” strategies that mitigate flooding by implementing less engineered methods. Additionally, strategies include traffic calming measures which promote walkability, pedestrian safety and vegetative enhancement. Green Complete Streets are lined with trees, which clean air, reduce asthma rates during hotter months, and mitigate the urban heat island effect. In addition, Green infrastructure like curbside rain gardens can clean water runoff, improving water quality.

Previous Work:

- Adoption of the 2009 Cape Cod Regional Policy Plan setting forth standards for low-impact development. See: <http://www.capecodcommission.org/RPP>
- Route 6A Corridor Management Plan Update (2010)
- Identify opportunities to meet Green Communities Act goals through local and regional initiatives

Procedures:

- Scope of Work to be developed in consultation with MassDOT



Products: To be refined in scope of work. The types of products that will be produced by this study include public meetings, suitability maps, potential planting and materials listings, standard engineering details, and PowerPoint presentations. These products will be incorporated into a final report.

Schedule: October 2011 to September 2012, milestones to be refined in Scope of Work

Funding/Staffing breakdown:

<u>Funding source</u>	<u>Amount</u>	<u>CCC staffing</u>
FHWA/MassDOT	\$ 28,063	9.5 person-weeks

TASK 3.5 – PEDESTRIAN AND BICYCLE LEVEL OF SERVICE FOR TOWN CENTERS

Objectives: To examine issues related to Level of Service (LOS) for Pedestrians & Bicyclists in each of 15 town centers. To implement the latest version of the Highway Capacity Manual’s state-of-the-art procedures in identifying Level of Service for bicyclists and pedestrians. To evaluate a limited number of target locations for LOS. To identify “walkability” scores for each town center.

Previous Work:

- Bicycle network planning efforts
- Online Bike Route Planning:
www.gocapecod.org/bikerouteplanning

Procedures:

Bicycle and Pedestrian facilities throughout Cape Cod vary greatly in quality, availability, and suitability for users. As an effort in the FY 2012



UPWP, this study will examine issues related to Level of Service (LOS) for Pedestrians & Bicyclists in each of 15 town centers. To identify

The latest version of the Highway Capacity Manual includes state-of-the-art procedures in identifying Level of Service for bicyclists and pedestrians. These procedures require information regarding vehicular traffic flows and roadway & intersection geometry. As the budget permits, a limited number of target locations will be evaluated for LOS.

To develop the list of target locations, existing bicycle & a pedestrian facilities (and missing links thereof) will be considered in concert with “walkability” scores for each town center.

Products:

Results will be published in a written report to be made available online at www.gocapecod.org in addition to printed copies for interested parties. Additionally, many of the component maps and other graphics will be made available online as well.

Schedule: The schedule for this effort allows for a final completion by August 2012. Milestones include coordination meetings with the Cape Cod Joint Transportation Committee (or designated subcommittee thereof).

- Review of methodology/project initiation: Winter 2011
- Draft Walk Score mapping/listing of target locations: May 2012
- Draft LOS results: June 2012
- Draft report: July 2012

Funding/Staffing breakdown:

<u>Funding source</u>	<u>Amount</u>	<u>CCC staffing</u>
FHWA/MassDOT	\$ 24,053	8 person-weeks



TASK 3.6 – FOLLOW-UP ON PREVIOUS TRANSPORTATION PLANNING STUDIES

Objectives: To allow for completion of and/or follow-up work on special transportation studies of prior UPWPs

Previous Work:

- Hyannis Access Study Implementation and 2011 Regional Transportation Plan

Products:

- Hyannis Access Study Implementation Final Report
- 2011 Regional Transportation Plan outreach documents (summaries, mapping of projects)

Schedule: As needed

Funding/Staffing breakdown:

<u>Funding source</u>	<u>Amount</u>	<u>CCC staffing</u>
FHWA/MassDOT	\$ 24,053	8 person-weeks



Task #4 – Other Technical Activities

TASK 4.1 – INTERMODAL COORDINATION, INTELLIGENT TRANSPORTATION SYSTEMS (ITS), AND TRAVEL SMART INITIATIVES

Objectives: To promote the most efficient, cost-effective and environmentally sound use of our transportation system, covering all modes of transportation. To advance the development of a Transportation Management Center on Cape Cod. To work with state agencies in the advancement of Intelligent Transportation System initiatives for Cape Cod, including further development of ITS for the region. To assist in the advancement of improved rail, bus, and water transportation, including passengers and freight to/from and within the Cape Cod region. To enhance the integration and connectivity of the transportation system, across and between modes, for people and freight. To promote efficient system operation and management.

Previous Work:

- Assistance to the Cape Cod Transit Task Force and the Cape Cod Regional Transit Authority
- Development and continued participation in the promotion of the Flex Route bus service for the Outer Cape
- Marine Transportation Feasibility Study, 1998
- Intermodal and congestion management systems efforts
- Assistance in ITS efforts on Cape Cod. Participation in Farradyne Systems study, 1995
- Transportation website: www.gocapecod.org
- Assistance to the Cape Cod Chamber of Commerce with the development of the “Smart Guide”
- Development of the Five-year and Long-range Public Transportation Plans for Cape Cod
- Development of the Public/Private Partners Program
- ITS Existing Conditions Report, 2010



Procedures:

- Assistance to the Cape Cod Transit Task Force and the Cape Cod Regional Transit Authority
- Assistance to the Massachusetts Department of Transportation with the development of ITS for Cape Cod – efforts to include outreach to stakeholders, attendance at meetings, review of documents and other assistance
- Development of specific ITS criteria, goals and priorities consistent with the Cape Cod Regional Transportation Plan
- Evaluation and integration of under-utilized sources of transportation information, including the Cape Cod Regional Transit Authority automated vehicle locator and the Route 132 closed loop signal system
- Advancement of 511 Traveler Information System and other real-time transportation information systems
- Support for MassRides' initiatives

Products: Evaluation of CCRTA transit routes; letters and memoranda as required; continued identification and development of congestion and intermodal management strategies; updated and expanded website of transportation information, reports and memoranda as required. Several possible products include:

- Traveler information via Internet
- Promotion of transportation alternatives
- ITS plans for Cape Cod Canal Area, including real-time traveler information
- ITS plans for Hyannis area
- Summary reports of updates to CMS database
- Technical memoranda reporting analyses of travel patterns and traffic condition prediction methodology
- ITS coordination with other regions

Schedule: Continuous throughout the year



Funding/Staffing breakdown:

<u>Funding source</u>	<u>Amount</u>	<u>CCC staffing</u>
FHWA/MassDOT	\$ 23,750	8 person-weeks
FTA (5303)	\$ 48,238	16 person-weeks
CCC	\$ 12,118	4 person-weeks

FTA Item Code 44.27.00

TASK 4.2 – OTHER TECHNICAL ASSISTANCE REQUESTS

Objectives: To provide the state, the towns, and the region with technical transportation assistance, as needed

Previous Work:

- Preparation of signal warrant analyses, review of local transportation improvement alternatives, preparation of local safety studies
- Wellfleet Fire Station access/egress recommendations, 2007
- West Chatham Route 28 Improvements, 2008
- Traffic Calming Techniques identified for local roads in Truro (2011)

Procedures: Assist towns with infrastructure improvements including pedestrian, bicycle, transit rider shelter locations, roadway reconfigurations, corridor studies, etc. Potential locations include Route 28/Bearses Way in Barnstable (capacity and safety improvements), Shank Painter Road in Provincetown (corridor improvements), and Route 28 in Harwich (pedestrian, bicycle and transit improvements).

Products: Letters, reports, memoranda, and analyses

Schedule: Continuous throughout the year

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC staffing</u>
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TASK 4.3 – CCRTA TRANSIT-ORIENTED MASTER PLAN

Objectives: The purpose of the Transit Oriented Development (TOD) Master Plan Study (the Study) for the Hyannis Transportation Center (HTC) Area is to define a conceptual plan that will guide future development and redevelopment at the HTC and surrounding area toward uses that will support transit ridership while supporting smart growth development. The HTC, which opened in 2003, is located in the Town of Barnstable, MA on the northeastern edge of the Village Center and serves as the terminal for year-round and seasonal transit services throughout Cape Cod operated by the Cape Cod Regional Transit Authority (CCRTA). The HTC is also served by taxis, steamship ferry shuttle buses, private intercity bus carriers, and seasonal scenic and dinner trains. Barnstable Municipal Airport is located across from the Route 28 entrance to the HTC.

A detailed scope of work including procedures, products, and schedule is available in the appendix of this UPWP.

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCRTA staffing</u>
FTA (5307)	\$ 300,000	Outside Consultant
MassDOT (match)	\$60,000 (toll credits)	



Task #5 – Cape Cod Commission Transportation Planning and Regulatory Activities

TASK 5.1 – REVIEW AND COMMENT ON ENVIRONMENTAL NOTIFICATION FORMS, ENVIRONMENTAL IMPACT REPORTS, AND DEVELOPMENTS OF REGIONAL IMPACT

Objectives: The primary purpose of the CCC regulatory program is mitigation of transportation impacts in a manner that is consistent with Barnstable County's Regional Policy Plan. To ensure proper review and analysis of traffic impacts of major residential and commercial developments throughout the region. To provide such information to the CCC, MassDOT, EOEA-MEPA Unit, town officials, and other interested parties, as required. To recommend mitigation measures and work with interested parties in applying conditions to projects. To assist the Cape Cod Commission regulatory staff in the review of developments of regional impact. To assist the Massachusetts Highway Department/Public Private Development Unit (MassDOT - PPDU) in the implementation of mitigation strategies.

Previous Work: Previous work includes analysis, review, and comment on Environmental Notification Forms (ENFs), Environmental Impact Reports (EIRs), and Cape Cod Commission regulatory review.

Procedures:

- Review ENF, EIR, EIS, MIS and/or traffic analyses
- Compute trip generation estimates
- Review traffic counts on adjacent street network; conduct special traffic counts
- Perform preliminary site visit
- Compute LOS at site drive and area intersections, as necessary
- Attend MEPA site visit, if applicable
- Discuss project with interested parties
- Identification of appropriate mitigation measures



- Review mitigation measures for compliance and consistency with the Regional Policy Plan
- Written and oral comments and testimony to the Cape Cod Commission, MassDOT District 5, MEPA, the towns, and other interested organizations as required
- Coordinate mitigation with MassDOT-PPDU

Products:

- Discussions with MEPA, MassDOT, project proponents, and town officials – provide written comments
- Testimony at DRI and other meetings as required
- Advancement of measures to mitigate traffic impacts
- Analysis and recommendation on transportation improvements necessary to mitigate impacts

Schedule: As required to meet CCC, MEPA, MassDOT, and local deadlines

Funding/Staffing breakdown: Support of this effort will be provided by the CCC. Below is the funding/staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
CCC	\$ 69,703	23 person-weeks

TASK 5.2 – ASSIST COMMUNITIES AND THE REGION IN THE DEVELOPMENT AND IMPLEMENTATION OF LOCAL COMPREHENSIVE PLANS (LCPS), DISTRICTS OF CRITICAL PLANNING CONCERN (DCPCS), AND ECONOMIC DEVELOPMENT IN DESIGNATED GROWTH CENTERS

Objectives: To provide technical assistance in the development and implementation of LCPs and DCPCs, Growth Incentive Zones, Economic Centers, village center planning, and other CCC funded transportation efforts



Previous work:

- Regional Policy Plan updates
- Past assistance in the development of LCPs in various Cape Cod towns

Procedures: Advisory and analytical assistance

Products: Testimony, letters, LCPs, DCPCs, and Technical Memoranda as required

Schedule: As established by the Cape Cod Commission and the Towns and legislated requirements

Funding/staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC Staffing</u>
CCC	\$ 25,685	8.5 person-weeks

TASK 5.3 – OTHER TRANSPORTATION ACTIVITIES

Objectives: To perform other transportation activities and transportation program management

Previous Work: Past transportation program management

Procedures: Flexible

Products: Viable transportation planning program

Schedule: Continuous throughout the year

Funding/Staffing breakdown:

<u>Funding Source</u>	<u>Amount</u>	<u>CCC staffing</u>
CCC	\$ 48,701	16 person-weeks



Appendix A – Additional Planning Efforts

The following projects are awaiting funding (primarily from grants) and are shown for information purposes. If these projects are awarded funding, these projects will be included in the UPWP as Tasks.

APPENDIX A.1 – RACE POINT/MACMILLAN PIER BICYCLE CONNECTION

Objectives: Design and install striping, signage, and minor drainage structural improvements along a bicycle route connecting the Cape Cod National Seashore bicycle trails with Provincetown MacMillan Pier.

Previous Work:

- Integrated Bicycle Plan for Cape Cod, 2010

Procedures: Per CCNS Grant Application

Budget: \$100,000

Schedule: Work would be completed by September 30, 2012.

APPENDIX A.2 – PROVINCETOWN/TRURO BICYCLE MASTER PLAN

Objective: Develop a master plan for a network of bicycle routes in Provincetown and Truro and connect the network with Cape Cod National Seashore and the Cape Cod Rail Trail (CCRT). The two towns are ideally situated for constructing this network because they are adjacent to existing trails in the National Seashore and the CCRT.



Previous Work:

- Integrated Bicycle Plan for Cape Cod, 2010
- Adoption of project scope by the Towns of Provincetown and Truro
- Rail Trail Extension Study, 1988

Procedures: Per CCNS Grant Application

Budget: \$381,680

Schedule: Work would be completed by September 30, 2012.

APPENDIX A.3 – TRANSIT NEEDS ASSESSMENT FOR THE MASHPEE WAMPANOAG TRIBE

Objective: Determine unmet transportation needs and develop solutions and opportunities to improve mobility options. Meeting these needs is expected to include a number of strategies from public transportation, coordination of services, bicycle and pedestrian facilities and the creation of specialized transportation functions.

Previous Work:

- 2002 Five-Year Public Transportation Plan

Procedures: Per TRIP Grant Application

- **Issue Formulation:** Hold a series of public input meetings to gather opinions on transit issues. Build upon these issues in conversations with the Tribe. Summarize issues and develop preliminary goals.
- **Data Collection:** In conjunction with staff, review existing plans, community growth and development from 2000 to present and collect data relevant to formulating a comprehensive transit plan.
- **Data Analysis:** Using collected data, formulate growth trends and projected need areas for transit development and expansion. Meet with Tribe to communicate these trends and projections.
- **Development of Goals, Objectives, and Strategies:** Review preliminary goals for consistency with data trends and projections. Adjust preliminary goals as needed and develop more detailed objectives to support the revised goals.



- **Develop Alternatives:** Using the goals and objectives, formulate creative strategies to satisfy the data trends and projections. Each alternative should also include financial considerations. Present alternatives to the Tribe.
- **Develop Plan with Recommended Alternatives:** Utilizing input from the public meetings and the Mashpee Wampanoag Planning Department, develop a final draft plan. Present the plan to the Tribal Council for review. Present the plan to the General Membership for public hearing and action.

Budget: \$200,000

Schedule: Work would be completed by September 30, 2012.

APPENDIX A.4 – SIGNAGE STANDARDS FOR BICYCLE NETWORK ON CAPE COD

Objectives:

Develop bicycle signage standards for Cape Cod and develop a pilot program for the Cape Cod Rail Trail.

Previous Work:

- Draft Integrated Bicycle Plan for Cape Cod, 2010

Procedures: Per CCNS Grant Application

Budget: \$49,500

Schedule: Work will be completed by September 30, 2012.

APPENDIX A.5 – ITS PARKING MANAGEMENT SYSTEM DESIGN AND PILOT PROGRAM

Objectives: This proposal will establish a parking management system that was developed in the current ITS implementation study.



Previous Work:

- ITS Implementation Study, 2010
- Southeastern MA ITS Architecture Update, 2010

Procedures: Per CCNS Grant Application

Budget: \$75,000

Schedule: Work will be completed by September 30, 2012.

APPENDIX A.6 – UPDATE 5-YEAR AND LONG-RANGE CAPE COD TRANSPORTATION PLANS

Objective: To develop and implement a comprehensive transit plan for Cape Cod, considering year-round and seasonal needs, including a 5-year plan and early implementation items for the Cape Cod Regional Transit Authority and the Woods Hole, Martha's Vineyard and Nantucket Steamship Authority. To perform Intermodal Management Systems planning activities. Promotion of transportation alternatives through support, education and outreach, including coordination with the Cape Cod Chamber of Commerce and the Cape Cod Regional Transit Authority. This work plan proposes the expenditure of one-half of anticipated \$200,000 grant to be expended over two years.

Previous work:

- License plate surveys conducted Spring and Summer 1999
- 2002 Five-Year Public Transportation Plan
- 2003 Long Range Public Transportation Plan

Procedures: Hold public informational and stakeholders meeting (as necessary) to update the existing Public Transportation Plan. Develop future transportation needs.

Products: Updated Public Transportation Plan for Cape Cod



CAPE COD
COMMISSION

Schedule: To be determined

Budget: \$200,000

APPENDIX A.7 – MASHPEE WAMPANOAG PAVEMENT MANAGEMENT PROGRAM

Objectives:

The Bureau of Indian Affairs (BIA) has recently defined a system of tribal roads and the objective is to develop a Pavement Management System (PMS) to assess the condition of the roadway system and develop cost effective short and long range maintenance strategies.

Previous Work:

Procedures: The elements of this project include procurement of a consultant with Pavement Management expertise. The consultant will work with the Tribe perform the following:

- Inventory Definition
- Pavement Inspection
- Condition Assessment
- Condition Prediction
- Condition Analysis
- Development of a short and long range work plan including strategies and financial needs.

This PMS is expected to:

Prioritize and justify the expenditure of limited roadway maintenance budgets and limit “arbitrary” expenditures. The expenditures will be prioritized in terms of safety, improved transportation operations, and maintaining a state of good repair that will reduce the impacts of deferred maintenance.



CAPE COD
COMMISSION

Products:

- Roadway inventory/Assessment
- Recommended Strategies and Budget

Schedule: To be determined, pending FLHD grant.

Budget: \$ 100,000



APPENDIX – CAPE COD REGIONAL TRANSIT AUTHORITY
– TRANSIT-ORIENTED DEVELOPMENT MASTER PLAN

TOD MASTER PLAN STUDY

**FOR THE HYANNIS TRANSPORTATION CENTER
AREA**

Scope of Work

The purpose of the Transit Oriented Development (TOD) Master Plan Study (the Study) for the Hyannis Transportation Center (HTC) Area is to define a conceptual plan that will guide future development and redevelopment at the HTC and surrounding area toward uses that will support transit ridership while supporting smart growth development. The HTC, which opened in 2003, is located in the Town of Barnstable, MA on the northeastern edge of the Village Center and serves as the terminal for year-round and seasonal transit services throughout Cape Cod operated by the Cape Cod Regional Transit Authority (CCRTA). The HTC is also served by taxis, steamship ferry shuttle buses, private intercity bus carriers, and seasonal scenic and dinner trains. Barnstable Municipal Airport is located across from the Route 28 entrance to the HTC.

The HTC facility consists of a bus bays and passenger platforms, an indoor station ticketing and waiting area, and short and long term surface parking areas. The existing HTC bus and rail station areas are generally located at the south end of the overall site near Main Street within easy walking distance of the Hyannis Village Center. The larger HTC site extends northward generally along the west side of the railroad tracks and currently includes short and long term surface parking for the HTC, and further north consists of vacant and underutilized parcels extending to the Iyannough Road/Route 28, which is the primary access point for the HTC on north.

The selected consultant team will be directed by the CCRTA, and the consultant's progress will be monitored by the Project Manager. The



selected consultant will perform specific tasks as outlined below, with summary report and presentation materials as products for each major task. Each task will be accomplished in coordination with a public involvement plan. However, no items in this scope shall preclude the consultant from proposing modified or additional approaches or activities to accomplish the objectives of this effort. This study is expected to require 12 months to complete from the issuance of a Notice to Proceed.

Task 1 – Project Initiation

The purpose of this task is to develop the framework necessary to conduct the study. The consultant, in consultation with CCRTA and the Study Working Group (which will be organized by CCRTA in partnership with the Town of Barnstable, the Cape Cod Commission, and others) will finalize the study area, develop goals and objectives, evaluation criteria, and a public participation plan. Evaluation criteria will be determined based on the defined goals and objectives.

1.1 Study Area

The initial Study Area boundary is generally between Main Street in Hyannis on the south, Iyannough Road/Route 28 on the north, Yarmouth Road on the east, and Ridgewood Avenue on the west. The specific boundary will vary according to the task and discipline of the Study.

The Study Area boundary will be finalized in the first stages of the study with input from the Study Working Group.

1.2 Goals and Objectives

Goals and objectives, which identify the purpose of the Study, will be developed. The goals and objectives provide a “mission statement” for addressing a particular issue or set of issues. The goals and objectives should shape the framework for the entire study.



1.3 Evaluation Criteria

The evaluation criteria are specific considerations, or measures of effectiveness, used to assess benefits and impacts of alternatives developed during the Study. The evaluation criteria will be based on the defined goals and objectives. The criteria are expected include, but are not limited to the categories of: Land use and economic development, community character, mobility, safety, environmental effects, revenues, and cost.

Task 1 Deliverables

Draft report/chapter containing the following:

- Study Area
- Goals and Objectives
- Evaluation criteria and measurement methods

Task 2 – Public Involvement Plan

The study's Public Involvement Plan will have three components: 1) meetings with the Study Working Group, 2) visioning charrettes, and 3) general public informational meetings at key project milestones. Working Group meetings will also be scheduled at key project milestones with input from the members, and will be conducted by CCRTA and the consultant.

Following consultant selection, a Working Group meeting will be scheduled to discuss the study area limits, establish the goals, objectives, and evaluation criteria for the project, and to allow the task force the opportunity to comment on these elements.

Following establishment of the Working Group the consultant will schedule a series of up to three charrettes with project stakeholders from the area (i.e., bicyclists, pedestrians, property owners, motorists, business owners, residents, etc.) and the involved agencies.

MassDOT and the consultant will conduct public informational meetings at key project milestones. Public meetings will be scheduled and



publicized by MassDOT and the consultant, including the preparation of display materials for meetings.

Task 2 Deliverables

Draft report/chapter containing the following:

- Public Involvement Plan
- Working Group meeting minutes
- Charrette materials and documentation
- Public meeting materials and minutes

Task 3 – Existing Conditions and Issues Evaluation

Existing baseline land use, transportation, environmental, and site conditions will be inventoried and evaluated, as well as anticipated future year baseline conditions. Other issues raised by the Working Group may be evaluated if feasible.

3.1 Existing Conditions and Data Collection

Current year conditions will be analyzed for the study area. Existing data from CCRTA, Town of Barnstable, Cape Cod Commission, and MassDOT will be used to the degree feasible. This includes all available traffic volume, turning movement, and crash data for the study area. All available data on transit services, availability, and ridership shall be collected as well. The study area will be analyzed for traffic volumes and levels of service, safety, transit services, bicycling and pedestrian demand and environment, and other conditions as necessary. Other issues related to transit oriented development as suggested in the public involvement process may be evaluated as appropriate.

Existing land use/economic development and environmental data will be reviewed in the defined study area. Land use/economic development data collected may include, but are not limited to: land-use patterns (existing and planned parcels), zoning, right-of-way, property values, tax revenue data, car and truck access, transit access, bicycle/pedestrian facilities, parking, regional employment, elevation and visibility information, emergency response, and public facilities and utilities. Environmental data collected may include, but are not limited to: wetlands, surface geology, protected and recreational open space, hazardous materials sites,



noise levels, air quality, and cultural, historical, and archaeological resources. The consultant team will identify all potential land use and environmental constraints that could affect the feasibility of any alternatives developed during the study.

The consultant will assemble land use and environmental data from existing sources to the degree feasible. These sources may include, but are not limited to: local comprehensive planning documents, previous studies, tax revenue information, zoning regulations, and GIS data layers that are available from municipal or regional GIS sources, and MassGIS sources. CCRTA will provide available aerial photography files and any previously existing maps for the development or updating of base maps by the consultant as necessary. The general accuracy of these data will be confirmed through site visits. Recent and proposed commercial/industrial developments, major residential and mixed-use projects, and other proposed projects with significant trip generation in the study area will be identified and mapped.

Using the above collected data, a base map will then be assembled in a GIS format for use in the future tasks.

Products:

- Existing traffic volumes, turning movements, levels of service, and crash data (with collision diagrams and crash rates)
- Existing transit services for study area
- Existing environmental and land-use/economic development data

3.2 Future Year Conditions

Conditions in the study area will be forecasted for the horizon year of 2035. One of the primary tools to be used for estimating future conditions is a travel demand transportation model. Model data will be utilized from the Town of Barnstable, Cape Cod Commission and MassDOT's Statewide Model, as appropriate. Traffic will be forecasted for a "no-build" condition, which assumes no change in land use beyond that already identified in the MPO adopted regional transportation plan and Town of Barnstable long range plan. Throughout the region, only existing or planned projects that can reasonably be expected to be in place by 2035 will be included in the analysis.



The consultant will coordinate closely to utilize regional model results as inputs to traffic simulations and transit services depicting a future no-build condition. This future no-build condition should also include the most current socio-economic projections (population, households, and employment), and estimates of future land use.

Products:

- Forecasted traffic levels and conditions
- Forecasted transit ridership and services
- Socio-economic projections
- Land use projections

3.3 Issue Definition and Evaluation

Existing deficiencies and issues in the study area will be identified, quantified, and evaluated.

As part of defining development and transportation issues in the study area, the following elements should be considered: economic development, current and future land use, traffic congestion, safety, environmental issues, community effects, transit, bicycling, pedestrians, and other factors as appropriate. Wherever feasible, issues will be presented in graphical or map form suitable for presentation at a public informational meeting.

Product:

- Inventory and definition of issues

3.4 Constraints Identification

CCRTA and the consultant team will identify a set of project constraints related to environmental impacts, transportation impacts, business and residential effects, revenues, cost, transit services and ridership, and other factors as appropriate.

Product:

- Inventory of project constraints



Task 3 Deliverables

Completed draft chapter/section containing the following:

- Existing traffic volumes, turning movements, levels of service, and crash data
- Existing transit services for study area
- Existing bicycling/pedestrian activity for study area
- Existing environmental and land-use data
- Forecasted traffic levels and conditions
- Forecasted transit ridership and services
- Socio-economic projections
- Land use projections
- Inventory and definition of issues
- Inventory of project constraints

Task 4 – Alternatives Development

Short and long-range land use alternatives for Transit Oriented Development in the study area will be developed in this task. Alternatives that promote smart growth principles, efficient transit operations, and increased use of transit, pedestrian, and bicycle modes will be identified. In consultation with the Working Group, CCRT and the consultant team will develop alternatives and refine a selection of alternatives for detailed analysis (Task 5).

Task 4 Deliverables:

Draft section/chapter containing the following:

- Descriptions of short and long-range TOD alternatives
- Maps and graphics showing alternatives

Task 5 – Alternatives Analysis

The alternatives will be analyzed based on the evaluation criteria from Task 1.



5.1 Land Use and Economic Development Analysis

The consultant will analyze land use, economic development and business impacts for each alternative to the degree feasible, including examining: right-of-way, property values, tax base, planned and potential zoning changes, planned developments (including 40B and TODs), parking, car and truck access to existing or planned parcels, visibility, labor force impacts, regional and local employment, and other elements as necessary to fully analyze each alternative.

Product:

- Alternatives analysis for land use and economic/business impacts

5.2 Mobility Analysis

The consultant will analyze the impacts of alternatives on mobility in the study area. Mobility as it relates to the transit, bicycle and pedestrian, and roadway systems should be considered. The roadway system to be analyzed includes both state routes and local roads/intersections (including bicycle and pedestrian accommodations) in the study area. Transit services to analyze may include local bus, commuter bus, intercity bus, private shuttles, seasonal bus and rail passenger service, or any other type of existing or planned service as appropriate. The consultant will coordinate closely to utilize regional model results as part of the analysis methods for evaluating appropriate highway and transit alternatives.

Product:

- Alternatives Analysis for traffic operations, transit ridership, bicycle and pedestrian conditions

5.3 Environmental Effects Analysis

The consultant will analyze the environmental impacts for each alternative to the degree feasible, including examining as relevant: wetlands, surface geology, protected and recreational open space, hazardous materials sites, air quality, noise, cultural, historical and archaeological resources, and other constraints as necessary to fully analyze each alternative.



Product:

- Alternatives analysis for environmental effects

5.4 Community Effects/Environmental Justice Analysis

The consultant will analyze the community impacts for each alternative to the degree feasible, including examinations of: land-use patterns, property values, vehicular access, transit access, public facilities and utilities, cultural, historic, and archeological resources, visual impact, and other constraints as necessary. The consultant should also analyze the possible social equity impacts of the alternatives analyzed and how they may impact or benefit the minority and disadvantaged populations that now reside in and adjacent to the study area.

Product:

- Alternatives analysis for community effects/ environmental justice

5.5 Revenue and Cost Analysis

Approximate revenue and cost impacts of the alternatives will be estimated. Revenues will consider changes in tax revenues and fare revenues. Costs will consider changes in capital and operating costs for public infrastructure and services.

Products:

- Revenue and cost analysis associated with each alternative

Task 5 Deliverables

Draft report section evaluating all alternatives based on Task 1 criteria, including:

- Mobility
- Safety
- Environmental effects
- Regional impacts
- Land use and economic development
- Community effects
- Cost



Task 6 – Recommendations

Recommendations may include both short range (within five years) and long range recommendations as a result of the analysis completed in the previous tasks.

Task 6 Deliverables

Draft report section/chapter on recommendations containing:

- Tables of short and long-range recommendations
- Recommendation narrative
- Recommendation maps, graphics, and displays

Task 7 – Final Report

A Final Report will be prepared consisting of revised versions of the report chapters developed under Tasks 2 through 6, with an introductory chapter discussing the overall project and the goals-related material developed in Task 1. The report will also include an executive summary and appendices. The consultant team will be expected to deliver five (5) copies of the report to CCRTA, as well as copies for each member of the Working Group. The final report should also be made available in PDF format.

Task 7 Deliverables

- Draft final report
- PowerPoint document of recommendations
- Revised final report

COST

The cost of the study, including up to two TOD alternatives for the study area in two time frames, is estimated to be \$300,000.



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FEDERAL FISCAL 2012 SPR AND PL FORMULA ALLOCATION

Federal Fiscal 2012 PL and SPR Formula Allocation

based on revised MARPA PL formula

<u>MPO (PL-Funded)</u>		<u>%</u>	<u>at 90% OA</u>	<u>FHWA Funds</u>	<u>NFA Funds</u>	<u>TOTAL FFY2012</u>
			\$8,507,425			
Berkshire	YR 4	0.04928403	\$377,352	\$377,352	\$94,338	\$471,690
Boston (CTPS) (MAPC)	YR 1	0.34335965	\$2,129,487	\$2,129,487	\$532,372	\$2,661,858
	YR 1		\$499,509	\$499,509	\$124,877	\$624,387
Cape Cod	YR 4	0.06128872	\$469,268	\$469,268	\$117,317	\$586,585
Central Mass.	YR 1	0.08719251	\$667,605	\$667,605	\$166,901	\$834,507
Merrimack Valley	YR 4	0.07114080	\$544,703	\$544,703	\$136,176	\$680,878
Montachusett	YR 1	0.05890295	\$451,001	\$451,001	\$112,750	\$563,751
Northern Middlesex	YR 4	0.06758006	\$517,439	\$517,439	\$129,360	\$646,799
Old Colony	YR 1	0.07044230	\$539,354	\$539,354	\$134,839	\$674,193
Pioneer Valley	YR 4	0.09461633	\$724,447	\$724,447	\$181,112	\$905,559
Southeastern Mass.	YR 1	0.09619265	\$736,517	\$736,517	\$184,129	\$920,646
TOTAL		1.00000000	\$7,656,683	\$7,656,683	\$1,914,171	\$9,570,853
RPAs (SPR-Funded)						
Franklin	YR 4	\$381,656	\$381,656	\$381,656	\$95,414	\$477,070
Martha's Vineyard	YR 4	\$218,845	\$218,845	\$218,845	\$54,711	\$273,556
Nantucket	YR 3	\$186,155	\$186,155	\$186,155	\$46,539	\$232,694
TOTAL			\$786,656	\$786,656	\$196,664	\$983,320
TOTAL (PL and SPR funded)			\$8,443,339	\$8,443,339	\$2,110,835	\$10,554,173

The recommended PL Allocation Formula as developed by the Massachusetts Association of Regional Planning Agencies and recommended by MassDOT (formerly the Executive Office of Transportation) is based upon the following three factors. These factors result in the percentages shown.

- 40% of available funds are equally divided among the 10 MPOs.
- 30% is allocated based upon each MPO's relative share of Urbanized Population.
- 30% is allocated based upon each MPO's relative share of Total Population.

MassDOT Office of Transportation Planning
S:\HQ\Planning\MPOActivities\PLANNING FUND allocation INFO\FY2012 PL info for regions.xls



LIST OF SIGNIFICANT PLANNING STUDIES AND OTHER GRANTS

Significant Regional Transportation Planning Efforts by Cape Cod Commission	
Cape Cod TIP Amendment FY11-14	May 2011
Cape Cod Unified Planning Work Program amendment for 2010	January 2011
A Plan for Improved Pedestrian and Bicycle Facilities in Harwich	January 2011
Cape Cod Traffic Counting Program 2010 Annual Report	January 2011
Cape Cod Unified Planning Work Program for 2010	August 2010
Cape Cod TIP FY11-14	August 2010
Cape Cod TIP Amendment FY10-13	August 2010
Cape Cod TIP Amendment FY10-13	July 2010
Cape Cod Traffic Counting Program 2009 Annual Report	January 2010
Cape Cod TIP Amendment FY10-13	December 2009
Cape Cod TIP FY10-13	September 2009
Yarmouth Road/Willow Street (Barnstable) Corridor Study	2009
Route 6A Corridor Management Plan Update	2009
2009 Transportation Safety Report	2009
Congestion Management Program	Continuous
Environmental Justice (e.g., "Workrides," online translations, videos, etc.)	Continuous
Cape Cod implementation of MBTA "Charlie Card" in coordination with Boston MPO for commuter bus passes	Continuous
2008 Transportation Safety Report	May 2009
Cape Cod Unified Planning Work Program amendment for 2009	March 2009
Cape Cod Traffic Counting Program 2008 Annual Report	February 2009
Cape Cod TIP Amendment Year 2009 January 2009	February 2009
2009 Regional Policy Plan	January 2009
Cape Cod Transportation Data Collection Guide	November 2008
"Transportation and the Environment" Cape Cod Regional Transportation Plan Workshop	October 2008
Cape Cod TIP Amendment FY2007-2010	June 2008
Cape Cod Traffic Counting Program 2007 Annual Report	January 2008
Cape Cod TIP Adjustment FY2007-2010	August 2007



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Cape Cod Unified Planning Work Program for FY2008	July 2007
Cape Cod TIP Amendment FY2007-2010	June 2007
Cape Cod Traffic Counting Program 2006 Annual Report	April 2007
2006 Transportation Safety Report	December 2006
Cape Cod Unified Planning Work Program for FY2007	August 2006
Cape Cod Transportation Improvement Program FY2007-2010	August 2006
Cape Cod TIP Amendment (FY2006-2010)	March 2006
Route 28 Safety & Traffic Flow Study	January 2006
Provincetown - Howland and Bradford Street Intersection Study	November 2005
Cape Cod Traffic Counting Program 2005 Annual Report	November 2008
Cape Cod Unified Planning Work Program for FY2006	August 2005
Cape Cod Transportation Improvement Program FY2006-2010	July 2005
Cape Cod Transportation Improvement Program Amendment FY2005-2009	May 2005
Cape Cod Transportation Improvement Program Amendment FY2005-2009	April 2005
Cape Cod Unified Planning Work Program for FY05 Amendment	February 2005
Cape Cod Traffic Counting Program 2004 Annual Report	November 2004
Cape Cod Unified Planning Work Program for FY05	August 2004
Cape Cod Transportation Improvement Program FY2005-2009	July 2004
Cape Cod Transportation Improvement Program Amendment FY2004-2008	June 2004
Cape Cod Transportation Improvement Program Amendment FY2004-2008	March 2004
Route 6 Safety & Traffic Study (Eastham, Wellfleet, Truro, Provincetown)	March 2004
Cape Cod Transit Support Facilities Design Prototypes (Cape Cod Commission and National Park Service)	February 2004
Cape Cod Traffic Counting Program 2003 Annual Report	December 2003
2003 Cape Cod MPO Regional Transportation Plan	August 2003
Cape Cod Unified Planning Work Program for FY04	August 2003
Cape Cod Transportation Improvement Program FY2004-2008	August 2003
Cape Cod Transportation Improvement Program Amendment	June 2003
Falmouth Steamship Authority Traffic Study (final draft)	February 2003
Cape Cod Traffic Counting Program 2002 Annual Report	December 2002
Cape Cod Unified Planning Work Program for FY03	August 2002



Cape Cod Transportation Improvement Program FY2003-2007	August 2002
Cape Cod Park & Ride Study	June 2002
Five-Year Public Transportation Plan (by CCC and the CC Transit Task Force)	June 2002
2002 Regional Policy Plan	April 2002
Marston Mills Recreational Fields Traffic Study	November 2001
Provincetown Bike Route Study	December 2000
Bicycle Safety Study - Provincetown	April 2000
A Strategic Plan for Expanded Cape Cod Ferry Service	January 2000
Harwich Route 39/137 Planning Study	May 1999
Conwell Street Corridor Safety Study	May 1999
BL-2 Internal Road Transportation Benefits & Detriments (Sandwich)	November 1998
Massachusetts Military Reservation Master Plan	September 1998
Cape Cod Marine Transportation Feasibility Study	June 1998
Veterans Memorial Elementary School (Provincetown) Pedestrian Safety Study	May 1998
Route 28 & 132 Traffic Circulation Study - Barnstable	August 1992
Route 28 Traffic Circulation Study - Yarmouth to Orleans	March 1992
Route 28 Traffic Circulation Study - Mashpee	December 1989
Route 28/MacArthur Blvd Traffic Study - Bourne	April 1989
10-year Needs Assessment - Summary List	October 1989
Route 6 - Alternatives - Dennis to Orleans	October 1986

Environmental Impact Reports and Traffic Impact Studies (by others):

Community Heath Center, Traffic Impact and Access Study	May 2011
Sturgis Charter Public School, Traffic Impact and Access Study	February 2011
Windrift Acres, Traffic Impact and Access Study	April 2010
BJ's Wholesale Club, Traffic Impact and Access Study	November 2009
The Villages at Barnstable, Barnstable, Traffic Impact and Access Study	May 2009
FW Webb, Barnstable, Traffic Impact and Access Study	February 2009
Wise Living at Woods Hole, Falmouth, Traffic Impact Technical Memorandum	June 2008
Provincetown Municipal Airport Commission, Traffic Operation Report and Parking Analysis	March 2008



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Teledyne/Benthos, Falmouth, Traffic Impact Study	September 2007
Daniels Recycling Company, Orleans, Traffic Impact and Access Study	July 2007
CanalSide Commons 40B, Bourne, Traffic Impact Memorandum	July 2007
Forest Cove 40B, Falmouth, Traffic Impact Study	April 2007
Blanchard Liquors, Barnstable, Traffic Impact Technical Memorandum	March 2007
Parkers River Marine Park, Yarmouth, Traffic Study	October 2006
CVS, Yarmouth, Traffic Impact letter	June 2006
Independent Living Facility, Falmouth, Traffic Impact Technical Memorandum	April 2006
Orleans Toyota - O'Connor Road Traffic Impact Letter	April 2006
CCRTA Fare Study - Final Report (Draft)	March 2006
Strategic Plan for the Development of Flex Service	March 2006
Dunkin Donuts, Dennis, Traffic Impact Letter	March 2006
International Fund for Animal Welfare Transportation Report, Yarmouth	March 2006
Electronics Superstore, Hyannis, Traffic Impact Technical Memorandum	March 2006
Walgreen Pharmacy, Traffic Impact & Assessment Study, Yarmouth	February 2006
Cape Cod Cooperative Bank, Barnstable, Traffic Impact Technical Memo	December 2005
Mashpee Industrial Park, Traffic Impact Letter	November 2005
Mashpee Commons, Traffic Impact & Access Study	November 2005
Macmillan Pier Transportation Center Feasibility Study - Final Draft Report	January 2006
CVS, Bourne - Traffic Impact Technical Memorandum	October 2005
Cape End Manor, Traffic Impact Letter, Provincetown	September 2005
Canal Bluffs 40B, Bourne, Traffic Impact Letter	September 2005
Spring Bars Road 40B, Falmouth, Traffic Impact and Access Study	September 2005
Falmouth Housing Corporation, Traffic Impact and Access Study	September 2005
Bayside Seafood and Market, Brewster, Traffic Impact Assessment	August 2005
Dowcett Subdivision, Yarmouth, Traffic Impact Assessment	August 2005
Spring Bars Road 40B, Falmouth, Traffic Impact Assessment	July 2005
Bourne Elementary School, ENF	June 2005
Office Building, Hyannis, Traffic Impact Assessment	May 2005
Summerwoods 40B, Traffic Impact Letter, Harwich	April 2005



Integrated Solid Waste Mgt Facility, Bourne, Traffic Impact Assessment	January 2005
Riverview School, Sandwich, Traffic Impact Assessment	January 2005
Canal Place 40B, Bourne, Traffic Impact Report	January 2005
Orleans Shaw's (Traffic Impact & Access Study)	November 2004
Annie's Pasture 40B, Traffic Impact Assessment, Sandwich	November 2004
Eastham Town Beach Traffic Impact Assessment	September 2004
Lookout Ridge Subdivision, Traffic Impact Assessment, Sandwich	September 2004
Sandwich Shaw's (Traffic Impact & Access Study)	August 2004
Barnstable Airport Improvement Project, Hyannis, MA (Final EIR/Final EA)	May 2004
Proposed Cape Cod Hospital Expansion	March 2004
CanalSide Commons Development Traffic Impact and Access Study	March 2004
North Bay Partners Traffic Study - Barnstable	March 2004
Schooner Village 40B, Traffic Impact Assessment, Barnstable	January 2004
Sagamore Rotary Grade Separation (Revised EA/Final EIR)	October 2003
South Cape Village Supplemental EIR	October 2003
Alternative Transportation Facility Design Prototypes Workbook	September 2003
Sagamore Rotary Transportation Improvements Project (Environmental Assessment and Draft EIR)	June 2003
Mashpee Place (Final EIR)	May 2003
Wendy's Restaurant, Yarmouth, Traffic Impact & Access Study	June 2003
Cape Cod National Seashore Alternative Transportation Systems Long Range Planning Study	May 2003
Augat Self Storage Transportation Impact Assessment, Mashpee	March 2003
Harwich Commons Expansion, Traffic Impact & Access Study	March 2003
Dunkin Donuts, Traffic Study, Brewster	February 2003
Wellfleet Harbor Actors Theater (Traffic Impact & Access Study)	December 2002
Pleasant Bay Assisted Living, Traffic Study - Brewster	November 2002
Wise Living 40B, Traffic Impact & Access Study, Orleans	November 2002
Cape Cod Hospital Proposed Hadaway Road Ambulatory Campus	October 2002
Falmouth Hospital Expansion Traffic Impact Study	October 2002
Independence Medical Arts Traffic Impact Letter - Barnstable	October 2002
Sandwich Shaw's (Traffic Impact & Access Study)	August 2002
Mashpee Shaw's (Traffic Impact & Access Study)	August 2002



Rt 28 Mobil Gas Traffic Impact Letter - Yarmouth	July 2002
Truro Stop & Shop (draft EIR)	May 2002
Orleans Shaw's (Traffic Impact & Access Study)	January 2002
Long Pond Medical Traffic Impact Letter - Harwich	September 2001
Atlantis Supermarket (ENF)	September 2001
Harwich Shaw's (Traffic Impact and Access Study)	April and July 2001
Anchor Self Storage, Sight Distance & Trip Generation Analysis, Mashpee	May-June 2001
Flagship Self Storage, Traffic Assessment, Mashpee	May 2001
BJ's Wholesale Club	April 2001
Cotuit Landing - Barnstable (final)	November 2000
CanalSide Commons - Bourne (final)	October 2000
Brewster Farms Country Market, Traffic Report, Brewster	August 200
CanalSide Commons - Bourne (supplemental draft)	May 2000
Mashpee Commons - Mashpee (draft)	March 2000
South Cape Factory Outlet - Mashpee (final)	February 2000
Route 3 - South Weymouth to Bourne - Corridor Needs Analysis	May 1999
Silver Square Traffic Impact Assessment - Bourne	April 1999
South Cape Factory Outlet - Mashpee (draft)	April 1999
CanalSide Commons - Bourne (draft)	February 1999
Route 6 - Transportation Improvements Project Dennis to Orleans (draft)	October 1994

Feasibility/Conceptual Planning Studies (by others):	
Cape Cod National Seashore Bicycle Feasibility Study	August 2010
Cape Cod National Seashore ITS Implementation Plan	2010
Cape Cod National Seashore ITS Implementation Plan, Existing Conditions Report	2010
Cape Cod National Seashore Satellite Maintenance Study	2010
Cape Cod National Seashore Integrated Parking and Transit Study	2010
Hyannis Access Study	August 2008
Buzzards Bay Village Comprehensive Transportation Plan	June 2007
Buzzards Bay Commuter Rail Extension Feasibility Study	January 2007
Sagamore Rotary Grade Separation Study	March 1998
Conceptual Design & Feasibility Study for a New Route 6 Interchange in the Town of Barnstable	January 1998



Other CCC Planning Grants:
US Dept of Housing & Urban Development - HOME program
Coastal Zone Management - Mass Bays Program
EPA - Wastewater Planning
EOEA - District Local Technical Assistance
DEP - U. Mass. School for Marine Science & Technology
NPS - Outer Cape Maintenance Study
NPS - Outer Cape Parking & Transit Study
NPS - Integrated Bicycle Study
NPS - Intelligent Transportation Implementation Plan
Monomoy Refuge - Monomoy Access Study



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LIST OF STAFF AND ESTIMATED PERCENTAGE OF TIME ALLOCATED TO MASSDOT FUNDED (PL) TASKS IN THE 2011–2012 UPWP

Staff Name and Position	Percentage of Time
Patty Daley, Deputy Director	5%
Glenn Cannon, PE, Technical Services Director	30%
Lev A. Malakhoff, Senior Transportation Engineer	85%
Priscilla N. Leclerc, Senior Transportation Planner	85%
Clay Schofield, PE, Transportation Engineer	40%
, Transportation Analyst	80%
Cape Cod Commission Planning Staff	5%
Cape Cod Commission GIS Staff	5%
Seasonal Traffic Technicians	100%

Seasonal Traffic Counting Technician(s) – approximately 10 person-weeks (100%)

FY2012 Funding Summary

		FHWA PL funds	MDOT PL (match)	FTA Sec 5303	MDOT/FTA Sec 5316 Sec 5317	FTA Sec 5307	CCC	Other	Task Total
Task 1 Mgt & Support of the Planning Process & Certification Activities									
1.1	Unified Planning Work Program	\$12,000	\$3,000	\$1,000			\$250		\$16,250
1.2	Transportation Improvement Program	\$33,000	\$8,250	\$3,500			\$875		\$45,625
1.3	CCJTC and MPO activities/Public Participation Program	\$45,000	\$11,250	\$4,000			\$1,000		\$61,250
1.4	Environmental Justice/Title 6	\$28,000	\$7,000	\$4,000			\$1,000		\$40,000
1.5	Access to Jobs/Job Access Reverse Commute/New Freedom			\$2,500	\$16,900		\$625		\$20,025
1.6	Regional Transportation Plan	\$10,268	\$2,567	\$5,000			\$1,250		\$19,085
	Total for Task 1	\$128,268	\$32,067	\$20,000	\$16,900		\$5,000		\$202,235
Task 2 Data Collection & analysis activities									
2.1	Traffic Counting Program	\$50,000	\$12,500						\$62,500
2.2	Transportation database management	\$31,500	\$7,875						\$39,375
2.3	Pavement Management	\$25,600	\$6,400						\$32,000
2.4	Geographic Information Systems	\$29,000	\$7,250						\$36,250
2.5	Safety Monitoring	\$13,900	\$3,475						\$17,375
	Total for Task 2	\$150,000	\$37,500						\$187,500
Task 3 Short and long range planning									
3.1	Congestion Management (3 Locations Study)	\$24,053	\$6,013						\$30,066
3.2	Transportation Safety (3 Locations Study)	\$28,863	\$7,216						\$36,079
3.3	Hyannis Access Study Implementation	\$31,750	\$7,938						\$39,688
3.4	Green Street Retrofit Project (stormwater retrofit of Route 6A)	\$22,450	\$5,613						\$28,063
3.5	Pedestrian and Bicycle Level of Service for Town Centers	\$19,242	\$4,811						\$24,053
3.6	Follow up on Previous Studies	\$19,242	\$4,811						\$24,053
	Total for Task 3	\$145,600	\$36,400						\$182,000
Task 4 Other technical activities									
4.1	Intermodal Coordination & ITS	\$19,000	\$4,750	\$48,238			\$12,118		\$84,106
4.2	Other Technical Assistance Requests	\$26,400	\$6,600						\$33,000
4.3	CCRTA Transit-Oriented Development Master Plan*					\$300,000*		\$60,000 (toll credits)*	
	Total for Task 4	\$45,400	\$11,350	\$48,238			\$12,118		\$117,106
Task 5 CCC Planning and regulatory activities									
5.1	Regulatory						\$69,703		
5.2	Planning						\$25,685		
5.3	Other transportation activities						\$48,701		
	Total for Task 5						\$144,089		
Appendix Other Tentative Planning Efforts									
A.1	Race Point/MacMillan Pier Bicycle Connection							\$100,000	
A.2	Provincetown, Truro, and Route 6 Multiuse Path Master Planning							\$381,680	
A.3	Transit Needs Assessment for the Mashpee Wampanoag Tribe							\$200,000	
A.4	Signage Standards for Bicycle network on Cape Cod							\$49,500	
A.5	Development of Seashore Parking Management System							\$75,000	
A.6	Update 5-Year and Long Range Cape Cod Transportation plans							\$200,000	
A.7	Mashpee Wampanoag Pavement Management Program							\$100,000	
	Total for Task 6							\$1,106,180	
	Totals	\$469,268	\$117,317	\$68,238	\$16,900		\$161,207	\$1,106,180	
Key:									
MDOT = Massachusetts Department of Transportation									
FHWA = Federal Highway Administration									
FTA = Federal Transit Administration									
CCC = Cape Cod Commission									
CCRTA = Cape Cod Regional Transit Authority									
PL = Planning funds									
Sec 5303 = Federal Transit Planning Funds									
*Task 4.3 - expenditures not included in totals									
TRIP - Paul S. Sarbanes Transit In Parks Program									
PLHD=Public Lands Highway Discretionary									

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