

**FISCAL YEAR 2012**  
**JULY 1, 2011 – JUNE 30, 2012**

**UNIFIED WORK PROGRAM**

**FOR THE**

**RICHMOND AREA METROPOLITAN**

**PLANNING ORGANIZATION**

Approved as a Final Report by the Richmond Area Metropolitan Planning Organization, April 14, 2011.

Prepared by the Richmond Regional Planning District Commission staff through a cooperative process involving the City of Richmond, Counties of Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, Powhatan, and the Town of Ashland, the Virginia Department of Transportation, the Virginia Department of Rail and Public Transportation, the Virginia Department of Aviation, the Richmond Metropolitan Authority, the Capital Region Airport Commission, the Greater Richmond Transit Company, the Federal Highway Administration, the Federal Transit Administration, and RideFinders, Inc., on behalf of the Richmond Area Metropolitan Planning Organization.

**MPO AMENDMENT ACTIONS**

- 11/10/11: UWP amended to program \$53,918 in FY 2011 FTA Section 5303 carryover funds (not expended in FY 2011 and available to be programmed in the FY 2012 UWP) for UWP tasks 2.1, 2.2, 5.2, 5.6 and 8.1.

## **RICHMOND AREA MPO MISSION STATEMENT AND PLANNING PRIORITIES**

### **Mission Statement**

The following mission statement was unanimously approved by the MPO on November 18, 2004:

To serve as the federal and state designated regional transportation planning organization that serves as the forum for cooperative transportation decision-making to assure excellence in mobility and safety within and through the Richmond region.

### **Planning Priorities**

Section 450.308(c) of the Metropolitan Planning regulations states that Transportation Management Area (TMA) designated MPO's shall include a discussion of the planning priorities facing the metropolitan planning area. The following identifies the FY 2012 UWP major planning priorities. Further discussion of these priorities is provided in the various work tasks.

1. Task 1.2, MPO Citizen Participation – The MPO has a strong and active public participation program with two standing citizen advisory committees (Citizens Transportation Advisory Committee/CTAC and Elderly and Disabled Advisory Committee/EDAC) providing for the participation of and representation from individuals and organizations from diverse backgrounds and interests and representing a wide range of citizen views and concerns over regional transportation planning. In FY 2011, the RRPDC and the Greater Richmond Chamber of Commerce, working as regional partners under the Capital Region Collaborative (CRC), initiated the development of the CRC Strategic Plan for the Richmond Region (i.e., “Strawman Draft of Regional Priorities”). Staff anticipates that by the end of FY 2011, the CRC's outreach meetings with groups, organizations and officials from throughout the Richmond Region to gain citizen input on the region's priority issues will have been completed and the next step in the regional strategic plan process would be initiated. Staff anticipates that approximately 80 to 90 outreach/citizen input meetings will have been held for this effort, including meeting with groups and organizations representing low-income, minority, and limited English proficiency persons. In addition to these meetings, a scientific survey conducted by the Southeast Institute of Research has identified and ranked the region's top priority needs, and these results will also help confirm the findings from the outreach/citizen input meetings.
  
2. Task 2.2, Long-Range Transportation Plan Update – The MPO's current 2031 LRTP Update will lapse after August 2012. Staff has spent considerable time and resources in preparing for the next LRTP; primarily the development of demographic data (2008 base year data and 2035 forecasts) and a new Regional Travel Demand Model (RTDM). Work on the 2008/2035 socioeconomic data and forecasts was completed in early FY 2011 with revisions made to a relatively

few transportation analysis zones in mid-FY 2011 (when conducting trip generation work with the new RTDM). VDOT has also made considerable efforts to develop the new RTDM with completion of the enhanced National Household Transportation Survey (providing for a more accurate trip distribution model/trip tables). Expanding the RTDM to cover the entire Richmond Region (Planning District 15), incorporation of GRTC ridership survey results and accurate auto ownership data by TAZ (for a more accurate mode choice model), and various other improvements. The new RTDM should provide staff with the ability to conduct transit service planning (including mode choice using structure/parameters set by FTA for New Starts programs), congestion assessment, truck freight movements, toll analysis, and corridor/subarea studies (with additional data inputs).

3. Task 3.1, Congestion Management Process (CMP) – VDOT will be providing the MPO with 2009 accident data for all of the region’s roads, and through INRIX, Inc., access to archived travel time data on the region’s major roads. This will greatly improve the data inputs for the CMP and allow for more meaningful assessment of recurring and non-recurring traffic congestion. In addition, the new RTDM will have the ability to conduct traffic forecasts at AM peak, PM peak, mid-day and night highway assignments, allowing the MPO to better analyze future traffic conditions.

**DOCUMENTATION OF  
RICHMOND AREA MPO AND TRI-CITIES AREA MPO  
TRANSPORTATION PLANNING COORDINATION**

Article I of the “Memorandum of Understanding for Coordination of Regional Transportation and Air Quality Planning and Programming in the Richmond Area MPO and the Tri-Cities Area MPO Study Areas and the Richmond Nonattainment/Maintenance Area for Ozone Air Quality Standards Superseding the Memorandum of Understanding for January 9, 1992” states that the Richmond Area and Tri-Cities Area MPOs “monitor the coordination of Geographic Information System applications use for transportation planning and programming, cooperate in the sharing of information relating to the development of the long-range transportation plans and transportation improvement programs, coordinate estimation and forecasts of socio-economic data at the traffic analysis zone level, coordinate travel demand model development for the two transportation study areas, and participate on projects of mutual interest.” The MOU provides that documentation of cooperation between the Richmond Area and Tri-Cities Area MPOs shall be included in their respective annual planning work programs.

The following documents cooperative work efforts provided for in the MPO’s FY 12 UWP.

- 1.1 MPO Maintenance/Special Studies – Staff for the Richmond Area and Tri-Cities Area MPOs share information of interest including MPO and TAC meeting agendas, work program and TIP documents, correspondence for various work program and study activities, etc. Staffs for these two MPOs also participate on various VDOT and DRPT technical/study advisory committees.
- 1.3 Unified Work Program (UWP) – The Richmond Area and Tri-Cities Area MPOs have an agreed procedure for the distribution of FHWA/PL funds that VDOT allocates to the Richmond Urbanized Area (which includes both MPOs).
- 2.1 Socioeconomic Data – Base year and forecast year data for the Richmond Area and Tri-Cities Area MPOs is jointly developed with common agreed-to base and forecast years and demographic factors.
- 2.2 Long-Range Transportation Plan (LRTP) – The LRTP regional travel demand model developed and maintained by VDOT covers both the Richmond Area and Tri-Cities Area MPO’s study areas. VDOT, the RRPDC and Crater PDC staffs have established an informal users group to coordinate technical work activities and to address any modeling issues that may arise.
- 3.3 Intelligent Transportation Systems (ITS) – VDOT has developed the *Virginia Central Region ITS Architecture Implementation Plan* and the *Virginia Central Region ITS Architecture Maintenance Plan*. Both plans cover all of the Richmond Area MPO and Tri-Cities Area MPO (plus other rural areas). Staff has established a regional ITS technical work group which will cover the Richmond area.

Coordination with ITS related activities with the Tri-Cities MPO area should be through VDOT as ITS work activities covered for the VDOT designated Central Region (i.e., includes study areas for both Richmond and Tri-Cities).

- 6.1 Intermodal Planning – The MPO continues to involve the Tri-Cities Area MPO in various freight-related planning activities. The Annual Freight Forum will include invitations to Tri-Cities Area MPO freight users, local government and Crater PDC staffs.
  
- 7.1 Air Quality Plan and Program Activities – As part of VDEQ’s work to develop the State Implementation Plan (SIP) for the Richmond Nonattainment Area, VDEQ serves as lead staff for MRAQC, the CAAA Section 174 lead planning organization. Local elected officials representing each nonattainment area jurisdiction plus representatives from both MPOs, VDOT, and VDEQ also serve on the LPO.

## FREQUENTLY USED MPO TERMS AND ABBREVIATIONS

<b>Attainment</b>	A term that means an area is in compliance with the National Ambient Air Quality Standards (NAAQS) and/or the Clean Air Act (CAA). There are six atmospheric pollutants covered under the CAA. The Richmond area (i.e., Cities of Richmond, Colonial Heights, Hopewell, and Petersburg, and the counties of Charles City, Chesterfield, Hanover, Henrico and Prince George) is designated as a nonattainment area for ozone air quality standards.
<b>Highway Trust Fund (HTF)</b>	Provides dedicated funding for federal highway and mass transit programs. Revenues placed in the HTF come from the federal gasoline tax plus other user fees. The HTF consists of separate highway and mass transit accounts.
<b>MPO</b>	Metropolitan Planning Organization. The Richmond Area MPO's membership includes the following local governments and agencies: Ashland, Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, Powhatan, Richmond, CRAC, GRTC, RMA, RRPDC, VDOT, RideFinders, FHWA, FTA, and VDA; serves as the forum for cooperative transportation decision making in the Richmond area.
<b>NAAQS</b>	National Ambient Air Quality Standards; defined by EPA.
<b>Obligations</b>	Commitments made by USDOT agencies to pay out money for federal-aid transportation projects. The TIP serves as the MPO's program of transportation projects for which federal funds have been obligated.
<b>Regionally Significant</b>	Term used for air quality conformity analysis to define highway and rail facilities covered by this analysis. Regionally significant projects are those projects on a facility that serves regional transportation needs and would normally be included in the modeling of a metropolitan area's transportation network. This includes, as a minimum, all principal arterial highways and all fixed guide-way transit facilities that offer a significant alternative to regional highway travel.
<b>SIP</b>	State Implementation Plan; identifies control measures and process for achieving and maintaining NAAQS; eligible for CMAQ funding.
<b>Study Area</b>	The area projected to become urbanized within the next 20 years; defines the area for MPO plans, programs, and studies.
<b>"3-C" Process</b>	("Continuing, Cooperative and Comprehensive") Language from federal legislation establishing MPOs and used in reference to the regional transportation planning and programming process.

- TCM** Transportation Control Measures (for Air Quality Control); eligible for CMAQ funding.
- TDM** Transportation Demand Management; various transportation control strategies and measures used in managing highway demand.
- TIP** Transportation Improvement Program; a staged, multiyear, intermodal program of transportation projects that is consistent with the transportation plan.

**Transportation Plan**

The MPO's adopted Long-Range Transportation Plan; serves as the initial step and framework in developing a regionally based network of transportation facilities and services that meets travel needs in the most efficient and effective manner possible.

**TAZ (Transportation or Traffic Analysis Zone)**

Generally defined as areas of homogeneous activity served by one or two major highways. TAZs serve as the base unit for socioeconomic data characteristics used in various plans and studies.

**Urbanized Area** Term used by the U.S. Census Bureau to designate urban areas. These areas generally contain overall population densities of at least 1,000 persons per square mile in a continuously built-up area of at least 50,000 persons. Factors such as commercial and industrial development, and other types and forms of urban activity centers are also considered.

**UWP** Unified Work Program; MPO's program of work activities noting planning priorities, assigned staffs, work products, budgets, and funding sources.

**VOC** Volatile Organic Compounds; emissions from cars, power plants, etc; when VOCs react with oxides of nitrogen (NOx) in the presence of heat and sunlight to produce ground level ozone or smog.

**MPO STANDING COMMITTEES**

- CTAC** Citizens Transportation Advisory Committee
- EDAC** Elderly and Disabled Advisory Committee
- TAC** Technical Advisory Committee

**FEDERAL STATE AND REGIONAL AGENCIES**

- CRAC** Capital Region Airport Commission

<b>DRPT</b>	Virginia Department of Rail and Public Transportation
<b>EPA</b>	Environmental Protection Agency
<b>FAA</b>	Federal Aviation Administration
<b>FHWA</b>	Federal Highway Administration
<b>FRA</b>	Federal Railroad Administration
<b>FTA</b>	Federal Transit Administration
<b>GRTC</b>	GRTC Transit System (formerly Greater Richmond Transit Company)
<b>MRAQC</b>	Metropolitan Richmond Air Quality Committee
<b>RideFinders</b>	A public nonprofit corporation that provides carpool/vanpool matching and other commuter and transportation services; also, a division of GRTC Transit System
<b>MARAD</b>	Maritime Administration
<b>RMA</b>	Richmond Metropolitan Authority
<b>RRPDC</b>	Richmond Regional Planning District Commission
<b>USDOT</b>	United States Department of Transportation
<b>VDA</b>	Virginia Department of Aviation
<b>VDEQ</b>	Virginia Department of Environmental Quality
<b>VDOT</b>	Virginia Department of Transportation
<b>VTRC</b>	Virginia Transportation Research Council

### **FEDERAL LEGISLATION**

<b>ADA of 1990</b>	Americans with Disabilities Act
<b>CAAA of 1990</b>	Clean Air Act Amendments
<b>ISTEA</b>	Intermodal Surface Transportation Efficiency Act; passed in 1991; reauthorized federal surface transportation programs for highways, highway safety and transit for a six-year period, 1992 to 1997. ISTEA provided for significant expansion of MPO planning and programming authority and responsibilities.

- TEA-21** Transportation Equity Act for the 21<sup>st</sup> Century; signed into law on June 9, 1998 (replaced ISTEA). Authorizes federal funds for highways, highway safety, transit, and other surface transportation programs for the next 6 years. Builds on and continues many of the initiatives established in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.
- SAFETEA-LU** Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users; federal transportation reauthorization signed into law on August 10, 2005 (replaced TEA-21) and expires September 30, 2009. Congress has passed, and the President has signed, several continuing resolutions that have extended SAFETEA-LU.

### **FUNDING PROGRAMS**

- SPR** State Planning and Research; federal funds allocated to VDOT in support of MPO program activities.
- Local Match** Funds required by recipients of PL and Section 5303 funds for matching federal and state grant funds. Section 5303 and PL funds require a 10% match, with VDOT/DRPT providing 10% and the remaining 80% provided by the federal source.
- RRPDC** Funds from the RRPDC (state appropriations and local dues) provided in addition to required local match funds (sometimes noted as RRPDC overmatch).
- PL** Planning funds available from FHWA for MPO program activities.
- CMAQ** Congestion Mitigation/Air Quality; federal funding program created under ISTEA (1991). Directs funding to projects that contribute to meeting National Ambient Air Quality Standards. CMAQ funds generally may not be used for projects that result in the construction of new highway capacity for single occupant vehicles. CMAQ funds may be available for eligible planning activities that lead to and result in project implementation.
- Section 5303** Planning funds available from the FTA for MPO program activities.
- Multimodal Planning**  
Multimodal Planning Grant; VDOT discretionary grant program (state funds matched by local funds) providing assistance and support for innovative multimodal transportation planning initiatives.
- TEIF** Transportation Efficiency Improvement Fund; purpose of program is to reduce traffic congestion by supporting transportation demand management programs designed to reduce use of single occupant vehicles and increase use of high occupancy vehicle modes; operated by the Commonwealth Transportation Board.

## OTHER TERMS AND ABBREVIATIONS

<b>ADT</b>	Average Daily Traffic; used in conjunction with current and projected traffic volumes.
<b>CAO</b>	Chief Administrative Officer
<b>CARE</b>	Community Assisted Ride Enterprise; program operated by GRTC providing demand-response paratransit service for the elderly and disabled in the City of Richmond and Henrico County.
<b>CMP</b>	Congestion Management Process
<b>CHSMP</b>	Coordinated Human Services Mobility Plan
<b>COA</b>	Comprehensive Operational Analysis (for transit studies)
<b>CTB</b>	Commonwealth Transportation Board
<b>EJ</b>	Environmental Justice
<b>FFY</b>	Federal Fiscal Year (October 1 to September 30)
<b>FY</b>	Fiscal Year (July 1 to June 30).
<b>GIS</b>	Geographic Information System
<b>I/M</b>	Inspection and Maintenance
<b>MSA</b>	Metropolitan Statistical Area. The Richmond/Petersburg MSA includes the cities of Colonial Heights, Hopewell, Petersburg, and Richmond; the counties of Charles City, Chesterfield, Dinwiddie, Goochland, Hanover, Henrico, New Kent, Powhatan, and Prince George; and the Town of Ashland.
<b>NHS</b>	National Highway System
<b>NHTS</b>	National Household Transportation Survey
<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>RF<sub>P</sub></b>	Request for Proposals; process used for reviewing and selecting proposals for consultant study activities. (Goods and non-professional services)
<b>RF<sub>Q</sub></b>	Request for Qualifications (Consultant Services).
<b>SIP</b>	State Implementation Plan (for attainment and maintenance of air quality standards)

<b>SOV</b>	Single Occupant Vehicles
<b>STP</b>	Surface Transportation Program
<b>SYIP</b>	Six Year Improvement Program; annual document approved by the CTB. Provides the state's list of federal and state funded transportation projects and programs administered by VDOT and DRPT.
<b>TDP</b>	Transit Development Plan; DRPT requirement for all public transit service operators. GRTC Transit System's TDP expected to be completed by December 1, 2011.
<b>TMA</b>	Transportation Management Area (i.e., MPOs greater than 200,000 in population).
<b>VAMPO</b>	Virginia Association of Metropolitan Planning Organizations
<b>VMT</b>	Vehicle Miles Traveled

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**1.0 MAINTENANCE OF THE MPO**

**1.1 MPO Maintenance/Special Studies**

**A. Background**

This task provides the administrative and technical support needed to maintain the MPO and MPO process, and provides for special studies and reports as directed by the MPO. Major work activities include program administration (e.g. agendas, minutes, mailing, monthly reports, program management and administration, etc.); PL/Section 5303 grant administration; pass-through contracts; participation on advisory committees; special studies and projects; review/comment on pass-through work tasks; federal/state regulations and requirements; federal/state legislation review; training, workshops and conferences; and computer program support. One major or new work element for FY 12 will be staff's active involvement on the Virginia Association of Metropolitan Planning Organizations (VAMPO). VAMPO was formally established in the fall of 2010. The MPO took action at its December 9, 2010 meeting to join VAMPO. RRPDC Executive Director Robert A. Crum, Jr. was appointed to serve as Program Chairman at VAMPO's February 4, 2011 organizational meeting.

The estimate for all staff direct costs is estimated at \$117,900 (not including consultant services). Staff direct costs are reviewed by the Technical Advisory Committee (TAC) as part of the UWP development process and are reported to VDOT and DRPT as part of its submission of quarterly work progress reports.

Under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the MPO's planning and programming responsibilities had been significantly increased and its scope has become broader and more comprehensive. Most of these requirements were continued as part of the Transportation Equity Act for the 21st Century (TEA-21); signed into law on June 9, 1998. On August 10, 2005, President Bush signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU guarantees funding for highways, highway safety, and public transportation totaling \$244.1 billion and represents the largest surface transportation investment in U.S. history. SAFETEA-LU builds on the two landmark bills that brought surface transportation into the 21st century by shaping the highway program to meet the Nation's changing transportation needs—the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21). The planning provisions of SAFETEA-LU retain and revise metropolitan and statewide transportation planning statutory requirements. Most of the provisions mirror previous law, but key statutory changes are included. And, although most of the transportation planning requirements became effective immediately when SAFETEA-LU was signed into law on August 10, 2005, many of these provisions require rulemaking to implement the changes. Draft regulations implementing MPO planning and programming provisions under SAFETEA-LU were published in the Federal Register on June 9, 2006 and the final regulations were

## **FY 12 UWP Task 1.1**

published on February 14, 2007. SAFETEA-LU expired on September 30, 2009. Congress has passed and the President has signed several continuing resolutions that have extended SAFETEA-LU.

The MPO is charged with developing transportation plans and programs, which provide for the development of transportation facilities which function as a “seamless” intermodal system. The process for developing these plans must consider all modes of transportation, and must, to the maximum extent feasible, be continuing, cooperative, and comprehensive (i.e., “3-C” process). As a TMA level MPO, the process must also consider the results of the Congestion Management System in the planning and programming of transportation projects.

### **B. End Products**

A well functioning MPO process which involves the MPO as the policy body for transportation planning in the Richmond Area and provides for a multi-modal, continuing, comprehensive, and cooperative transportation planning and programming process.

### **C. Work Elements**

Work activities include the following:

1. Provide for general maintenance and administration of the MPO “3-C” process, MPO, and MPO committees and work groups, including direct costs to support the process.
2. Provide for the preparation and documentation of MPO meetings and other committee meetings as appropriate.
3. Perform review activities under various local, state, and federal programs including Commonwealth Intergovernmental Review Process, State Route projects and Environmental Impact Statements and Assessments.
4. Coordinate review and presentation activities with RRPDC and other regional, local and state agencies involved with transportation planning and programming.
5. Prepare various reports including VDOT and DRPT Quarterly Progress Reports, and MPO financial and work progress reports.
6. Provide for contract administration of PL, Section 5303, state program funds, and third party agreements. For FY 2012, RRPDC staff is administering pass-through funds agreements for work on UWP task 2.8, Route 5 Urban/Suburban Multimodal Corridor Study (pass-through FHWA/SPR funds allocated by VDOT for consultant work under contract to the RRPDC) and for UWP task 5.4 GRTC

## **FY 12 UWP Task 1.1**

Transit Development Plan (pass-through FTA Section 5303 and DRPT match funds passed through to GRTC for work by their consultant on the TDP).

7. Participate in consultant staffed work tasks including preparation (if designated as lead administrative staff) or review and comment on Request for Proposals, consultant review selection, and documentation.
8. Maintain up-to-date information and literature on transportation planning and programming in the Richmond area.
9. Review and comment as appropriate on legislative and regulatory activities affecting transportation planning and programming, and perform activities necessary to ensure MPO compliance with applicable state and federal rules and regulations.
10. Attend seminars, meetings, workshops, and conferences related to MPO activities. Attend and participate on various VDOT, VTRC, and other advisory committees, task forces, regional and transportation planning associations (e.g., VAPDC, VASITE, ITSVA), etc. Attend Title VI training courses offered by VDOT.
11. Provide for use of legal counsel and audit services, under the direction of the RRPDC Executive Director, for administering federal and state contracts, meeting reporting requirements, and other activities and services necessary and appropriate for staffing the MPO.
12. Provide staff assistance for and participation in special studies, projects and programs in response to requests by area local government, the RRPDC, MPO member organizations, and others as determined by the RRPDC Executive Director. Also, attend CRAC and RMA board meetings to monitor current programs and activities.
13. Collect and update files and reports as necessary, with traffic count information from VDOT, RMA, and local government sources.
14. Staff support for purchase, maintenance, upgrading, and repair of computers. Also, share in attributable costs for support of computer network and support activities.
15. Develop various maps in GIS format for MPO special studies/major projects and presentations.
16. Respond to information requests from area local governments, VDOT, DRPT, GRTC, and other government agencies.

## FY 12 UWP Task 1.1

17. Maintain current highway facilities inventory and monitor regional travel patterns [VDOT].
18. Provide traffic data forecasts for design of highway facilities [VDOT].
19. Provide technical assistance to RRPDC, local jurisdictions, and other agencies concerning transportation [VDOT].
20. Review site plans as requested [VDOT].
21. Perform and/or assist in special projects, studies, evaluations, and other activities upon direction of MPO and MPO Committees.
22. Review federal regulations and guidance related to MPO planning and programming requirements and update/revise the MPO's work program, procedures and activities as appropriate addressing SAFETEA-LU and other federal requirements.
23. Sustainable Transportation Initiative of Richmond (STIR) – STIR is working to develop projects and programs in the City of Richmond and surrounding counties that provide for the integration of alternative/environmentally friendly vehicles and transportation systems. Membership on the STIR board includes City of Richmond, GRTC Transit System, VCU, Greater Richmond Partnership, Venture Richmond, RRPDC, Richmond Times-Dispatch, J. Sargeant Reynolds Community College, Southeastern Institute of Research, Inc., and others. RRPDC staff participation on STIR is focused on developing proposed projects and activities to encourage regional dialogue and discussion. Staff is working with local jurisdictions to discuss infrastructure needs related to electric vehicles. Staff is also proposing to include a section in the 2035 LRTP Update to address sustainable transportation planning initiative and considerations.
24. Virginia Association of Metropolitan Planning Organizations (VAMPO) – VAMPO was formally established in mid-FY 2011 with the MPO taking action at its December 9, 2010 meeting to join. Staff will be an active participant and assist in various upcoming VAMPO activities that are currently being developed. Membership dues for each MPO are set at \$500 per year; VAMPO is currently planning to hold three meetings a year. In addition, the RRPDC Executive Director is serving as VAMPO's Program Chair for the calendar year.
25. Title VI Report – Prepare and submit to FTA's Regional Civil Rights Officer the MPO's report on compliance with Title VI requirements. Work to review and report demographic data available from the census will be conducted under UWP task 2.1.

**FY 12 UWP Task 1.1**

**D. Agency Participation**

RRPDC, VDOT, DRPT, local governments, GRTC, CRAC, RMA, FHWA, FTA, FRA, EPA, VDEQ, VDA, RideFinders, Port of Richmond.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>SPR<sup>①</sup></u>	<u>FY 11 CO 5303</u>	<u>TOTAL</u>
RRPDC	540,329	19,274	-	-	559,603
RRPDC*	90,000	-	-	-	90,000
VDOT	-	-	<u>220,000</u>	-	<u>220,000</u>
<b>TOTAL</b>	<b>\$630,329</b>	<b>\$19,274</b>	<b>\$220,000</b>	<b>-</b>	<b>\$869,603</b>

① Provides for VDOT Richmond District support on all MPO work tasks

\* Contingency funds (anticipated for FY 2013 work program)

**F. Schedule**

Ongoing activity.

## 1.2 MPO Citizen Participation

### A. Background

This task provides staff support to ensure an active and involved citizen participation program, which meets federal and state requirements for public involvement in the transportation planning process. SAFETEA-LU requires a high level of citizen involvement in the MPO process, including public meetings to review the TIP and transportation plan documents.

The MPO's citizen participation process includes the use of two active and involved committees (i.e. CTAC and EDAC); annual public meetings for the TIP and LRTP; posting of MPO/MPO committee meetings and agendas and plan/document summaries on the RRPDC/MPO web site; submitting draft TIP's and other documents as directed by the MPO for public review and making these documents accessible to the public at various locations (e.g., local libraries); providing opportunity for open public comment at all regularly scheduled MPO, TAC, CTAC and EDAC meetings; and other activities documented in the *MPO Public Participation Plan*.

SAFETEA-LU expanded public participation requirements for the TIP and LRTP (i.e., additional consultations, development of public participation plan, employing visualization techniques, etc.). In response to these new requirements, the MPO took action at its April 12, 2007 MPO meeting to adopt the *MPO Public Participation Plan*. This plan builds on the MPO's previously adopted "Guidelines for Public Participation." The plan includes activities for consultation with interested parties and federal, state, and local agencies as part of the LRTP and TIP development process. It also provides for outreach activities that include activities to inform and seek comments from minority and low-income groups and limited English-speaking population groups. It also provides for information, (meeting agendas and notices, reports, studies, etc.) to be made available in an electronically accessible format. Staff currently posts MPO plans, programs, reports, and other materials on the RRPDC web site and submits agendas, correspondence and other information by e-mail.

Under the RRPDC and Greater Richmond Chamber of Commerce Capital Region Collaborative (CRC), RRPDC and Chamber staffs initiated the development of the CRC Strategic Plan for the Richmond Region (i.e., Planning District 15). Staff anticipates that by spring of 2011, approximately 80 to 90 meetings will have been held with groups, organizations and officials from throughout the Richmond Region to gain their input to identifying important regional issues. One of the issue categories that will be addressed in the findings from this extensive public input process will be the region's transportation systems. In addition to these meetings with various groups, organizations and officials, the CRC will conduct a scientific survey of regional attitudes (work conducted by the Southeast Institute of Research). Findings from the CRC Strategic Plan will be used as part of the public input process for the 2035 LRTP and CMP Updates.

**B. End Products**

A functional and viable citizen participation program, which provides for a well informed public and for public input to the “3-C” transportation planning and programming process.

**C. Work Elements**

Work activities include the following:

1. Citizens Transportation Advisory Committee (CTAC) – Provide administrative and technical support of the MPO CTAC.
2. Web Site – Post meeting agendas and minutes, notices, reports, newsletters, plan documents, and other information on the Richmond Regional PDC web site.
3. Information Requests – Respond to requests for information on plans, studies, reports, and data.
4. Public Reviews – Conduct annual MPO review meetings providing initial citizen input for MPO plans and programs. Also, conduct other public review meetings as necessary for the LRTP/CMS and TIP. Review meetings include outreach activities for low-income and minority communities and Limited English Proficiency (LEP) populations. Prepare notice for public reviews advertised in newspapers, posted on web site, and submitted to interested parties and others. Draft documents or summaries distributed to area libraries and posted on web site.
5. Visualization Techniques – Provide for use of appropriate visualization techniques when presenting and describing MPO plans and programs.
6. Consultation with Interested Parties/Agencies – Conduct consultation activities with various interested parties and government agencies as part of the TIP and LRTP development process.
7. Evaluations – Identify measures to evaluate the effectiveness of public involvement and outreach efforts, including efforts to ensure that public outreach efforts are addressing the diverse needs of the community.
8. MPO Orientation Meeting – Conduct periodic orientation meeting for new MPO and MPO committee members.
9. MPO Background Information – Develop, publish, and distribute/post on web site, background information materials on the MPO.

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10. Notices – Provide/distribute notice for all MPO and MPO committee meetings to area news media and interested parties. When appropriate, prepare and distribute press releases.
11. Public Participation Plan (PPP) – Update PPP to identify specific practices used to identify the needs of the Limited English Proficiency (LEP) population and engage this population in the transportation planning process.
12. 2035 LRTP and CMP Updates – High level of public participation activities to be conducted in developing the 2035 LRTP and CMP updates. This will include consideration of findings from the Capital Region Collaborative (CRC) Regional Strategic Plan that address transportation (note that approximately 70 to 80 meetings have been conducted so far by RRPDC and Greater Richmond Chamber of Commerce staffs with groups, organizations, and officials from throughout the Richmond Region; in addition, a scientific survey of regional attitudes has been initiated by Southeast Institute of Research). The results of the CRC's public participation effort will be used as input into the LRTP process. RRPDC staff will also establish a separate website for the 2035 LRTP and CMP updates to provide ongoing status reports and to solicit citizen feedback throughout the LRTP/CMP Update development process.
13. MPO Board Meeting Reports – RRPDC staff now prepares and distributes to the MPO, MPO committees and interested parties, reports summarizing recent MPO board meetings.
14. Annual Public Review Meeting – Conduct series of public review meetings for citizen input on MPO plans, programs and activities. In FY 2011, input on regional transportation needs was provided as part of the CRC Regional Strategic Plan development process. Input from these meetings will be available in late FY 11/early FY 12. In late FY 11, staff will conduct one or more public meetings for the draft FY 2012 – FY 2015 TIP (draft TIP to be submitted for adoption at the June 9, 2011 MPO meeting).
15. MPO Information Fact Sheets – Prepare informational fact sheets on MPO plans, studies, programs, activities and processes (for use at public information/outreach meetings and responding to information requests). Fact sheets will be posted on the RRPDC website. [Minimal staff work on this activity so far in FY 2011; additional emphasis will be needed for late FY 2011/early FY 2012].
16. MPO Meeting Reports – Summaries of MPO meetings prepared and provided to CTAC and EDAC.
17. CTAC and EDAC Meeting Reports – Summaries of CTAC and EDAC meetings prepared and reported at MPO meetings.

**D. Agency Participation**

RRPDC, VDOT, DRPT, local governments, GRTC, CRAC, FHWA, FTA, VDEQ, RMA, RideFinders, CTAC at-large organizations.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 11 CO</u> <u>5303</u>	<u>TOTAL</u>
RRPDC	\$90,000	–	–	\$90,000

**F. Schedule**

Ongoing activity.

**1.3 Unified Work Program (UWP)**

**A. Background**

This task provides for the maintenance of the adopted UWP and for the annual preparation of the MPO's work program for the upcoming fiscal year (i.e., FY 2013, from July 1, 2012 to June 30, 2013). The UWP also identifies the region's planning priorities, documents cooperation between the Richmond Area and Tri-Cities Area MPOs on various work activities and notes various transportation study activities as informational items.

**B. End Products**

1. Maintain/amend the FY 12 UWP.
2. FY 13 UWP document.
3. Prepare/update staff work assignments, budgets, cost estimates and schedules.

**C. Work Elements**

Work activities include the following:

1. Review VDOT, DRPT, FHWA, FTA, EPA, and other state and federal agency information and requirements, plus other materials relating to UWP preparation.
2. Solicit input for proposed work tasks through the MPO's annual public information and outreach meetings and based on comments and suggestions offered as part of regular CTAC and EDAC meetings.
3. Prepare a preliminary staff budget and list of proposed work tasks for the Commission's annual work programs.
4. Provide for consideration of local government, GRTC, VDOT, and DRPT input on proposed transportation planning studies of interest to the MPO (funded with federal transportation funds other than FHWA/PL and FTA Section 5303). Includes studies programmed in the Transportation Improvement Program (TIP).
5. Identify and document planning priorities.
6. Prepare work tasks and budgets.
7. Identify funding sources and amounts.
8. Prepare final work program document.

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9. Secure needed approvals from MPO, VDOT, DRPT, FHWA, FTA, and other agencies/organizations as appropriate.
10. Secure commitments for local match funds as appropriate.
11. Conduct State and Regional Intergovernmental Review process and submit grant applications (for both state and federal grant programs).
12. Distribute final UWP document and post on RRPDC web site.
13. Amend adopted UWP as per MPO action.
14. Prepare and update staff work assignments, direct costs, and schedule.

**D. Agency Participation**

RRPDC, VDOT, DRPT, local governments, CRAC, GRTC, RMA, RideFinders, FHWA, FTA.

**E. Budget, Staff and Funding**

	<u>PL</u>
RRPDC	\$100,000

**F. Schedule**

On-going activity for adopted UWP/RRPDC Work Programs  
October 2011 to May 2012 for FY 13 RRPDC Work Program.  
January 2012 to April 2013 for FY 13 UWP.

**2.0 LONG RANGE PLANNING AND SURVEILLANCE**

**2.1 Socioeconomic Data Development**

**A. Background**

As part of the MPO’s regional transportation planning process, socioeconomic data is developed by area local governments and RRPDC staff for use in various VDOT, MPO, and local plan and study activities. For instance, socioeconomic data provides input for planning models, EIS, corridor studies, air quality conformity analysis, transit studies, etc., and is used to respond to information requests for market and other demographic studies.

The RRPDC staff works with area local governments to coordinate the development of socioeconomic data and forecasts. Data prepared by area local governments (or by RRPDC staff if local government requests such assistance) is as follows:

- Total population
- Group quarters population
- Single and multi-family population
- Total housing units
- Single and multi-family housing units
- Total students
- Students grades K-12 (by location of school)
- College students (by location of school)

Data prepared by RRPDC staff is as follows:

- Total households
- Total employment
- Retail employment
- Automobiles

The RRPDC staff is responsible for developing a final socioeconomic data report which is submitted for TAC review and recommendation, and for MPO review and action. The methodology for base year and forecast year socioeconomic data is developed in consultation with a work group of area local planners and demographers, VDOT, and Crater PDC staff (i.e., Socioeconomic Data work group).

Staff work to develop base year 2008 data and year 2035 forecasts was completed in early FY 2011 with the MPO taking action to approve revised 2008 data and 2035 forecasts at the September 9, 2010 MPO meeting. Staff also prepared the Socioeconomic Data Analysis report and it was approved at the February 10, 2011 TAC meeting (action by TAC on behalf of the MPO). Revisions to 61 Transportation Analysis Zones (TAZs) were needed due to inconsistencies in demographic base year data for these TAZs that became apparent as VDOT consultants were applying this data to the regional travel demand model (RTDM). Note that the RTDM, which

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covers all of the Richmond Region, contains 712 TAZs with 11 separate demographic factors (22 factors to cover both base and forecast years; total of 15, 664 separate data cells for the Richmond Region's base and forecast years). At the March 17, 2011 TAC meeting, action was taken by TAC on behalf of the MPO to approve revised 2008 base year data and 2035 forecasts for the 61 identified TAZs.

In FY 2012, staff work under UWP task 2.1 will focus on utilization and application of 2010 census data. Work to review the zone structure of current TAZs and how they align to 2010 census boundaries (i.e., tracts and block groups) will be initiated in FY 2011 and completed in late FY 2011. These new TAZs will be submitted to the Census Bureau and FHWA for the Census Transportation Planning Package (CTPP), which will provide data from the 2010 census that can be applied and used for various transportation planning activities. Data from the American Community Survey (ACS), which provides ongoing samples for regions averaged over a five-year period, will also utilize these new TAZs. It is important to note that the new TAZs will be used for the MPO's next LRTP Update (i.e., the 2039 LRTP). The MPO's 2035 LRTP Update (due to be completed by August 2012) will use TAZs that provide for the MPO's recently approved 2008 base year data and 2035 forecasts.

Staff will also need to develop Census Transportation Analysis Districts (TADs). This new geographic structure is designated to allow for reporting of various demographic factors that are done through rolling three-year periods reported under the ACS. Due to the large size of TADs, their use and value for regional level analysis will be very limited. TADs should have a minimum of 20,000 residents.

Work activities to maintain and update census tract level data showing minority, ethnic group, limited English proficiency, and low income population groups for Title VI and environmental justice assessments will also be conducted in FY 2012.

As part of the 2008/2009 National Household Travel Survey (NHTS), an enhanced survey sample was conducted in Virginia with 14,584 survey samples (note that 2,225 samples were conducted for the enhanced survey effort in the Richmond/Tri-Cities Region). In addition, VDOT has conducted a supplemental university survey (conducted at four large state universities, one of which is Virginia Commonwealth University) in order to obtain better travel data for university student populations. The household travel survey results are being utilized to develop the new Richmond/Tri-Cities regional travel demand model, and should also be available for analyses of travel characteristics in the Richmond Region. NHTS will provide detailed data for the following:

- Households – Includes number of persons, drivers, workers, vehicles, income, Hispanic status of reference person, tract and block group characteristics.
- Persons – Age, sex, driver status, travel disability, annual miles driven, use of public transit, walk and bike trips.

- Workers – Full or part-time, more than one job, occupation (four categories), workplace location, mode of travel to work, drive alone or carpool, work from home, commercial driver status.
- Each Vehicle – Make, model, age (year), how long owned.
- Daily Travel Data – Origin and destination, time of trip (start/end), distance, means of transportation (including use of transit), number of other trips.
- Longer Distance Travel – Number, dates, recurring or not, purpose, destination, means of transportation.

**B. End Products**

1. 2008/2035 Socioeconomic Data and Forecasts Report – Respond to information requests for TAZ level data and forecasts and update data and forecasts as needed.
2. 2010 Census TAZ Delineation Analysis – Revised TAZ boundaries based on 2010 census blocks; new TAZs to be utilized for the next LRTP Update (2039 LRTP) and for reporting 2010 census data (CTPP data expected to be available in mid- to late-2012).
3. Title VI/Environmental Justice – Complete work on demographic profiles of Richmond Region to identify areas of significant minority, low income, and limited English proficiency population groups.
4. Use of the ACS in support of various plans, studies, and reports (2010 CTPP data scheduled to be available in mid-FY 13).
5. Staff involvement in review activities for the year 2010 census.

**C. Work Elements**

1. 2008/2035 Socioeconomic Data and Forecasts Report – Work on the 2008/2035 Socioeconomic Data and Forecasts Report was completed in September 2010. Periodic follow-up reviews and reports may be needed based on various planning studies and in reviewing results from the 2035 LRTP Update model calibration work (i.e., evaluating the 2008 base year highway network traffic assignments).
2. 2010 TAZ Delineation Analysis – Work in conjunction with VDOT and area local governments in the review of existing TAZ boundaries (this may include realigning TAZ boundaries, establishing smaller TAZs, or aggregating TAZs for certain travel demand model analysis requirements and other study activities) based on the 2010 census. Staff is reviewing current TAZs to define areas where current TAZ boundaries are not consistent with census blocks (these TAZ lines will need to be shifted to be consistent with the census

blocks). Staff will also review these revised TAZs to determine if they can meet ACS reporting requirements. Due to limited sample size for ACS, some or several TAZs may need to be grouped, or “nested” in a larger TAZ that is used for census data (CTPP) purposes, but can also be divided into two or more TAZs for regional travel demand modeling purposes. Work on the 2010 Census TAZ delineation was initiated in mid-March and will be due to be reported to the Census by mid-June (i.e., within 90 days). Some follow-up work may be required in FY 2012.

3. Maintain ACS data and staff expertise and capabilities in applying these data to plan and study activities.
4. Staff involvement in review activities for the year 2010 census.
5. Title VI/Environmental Justice – Complete work on demographic profiles of the Richmond Region to identify areas of significant minority, low-income, and limited English proficiency population groups. Staff may also develop demographic profiles for areas of significant elderly, disabled and low-income population groups (staff time and budget permitting).
6. Work activities to develop ethnic and limited English proficiency, minority and low-income population demographic profiles (details of this work element to be developed following the federal MPO certification review report).

VDOT and other local government work elements are as follows:

1. Participation by appropriate local staff on the Socioeconomic Data work group [local government work element].
2. Compile data for use in various special studies (e.g., Environmental Impact Statements and Assessments, etc.) [VDOT work element].

**D. Agency Participation**

RRPDC, VDOT, DRPT, Local Governments, Crater PDC.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 11 CO</u> <u>5303<sup>①</sup></u>	<u>TOTAL</u>
RRPDC	\$21,000	\$9,000	\$5,000	\$35,000

<sup>①</sup> 11/10/11 MPO action to add \$5,000 in FY 11 Section 5303 carryover funds.

**F. Schedule**

1. 2010 Census TAZ Delineation Analysis – Due late FY 2011 (possible follow-up activities in FY 2012)
2. Ongoing – Other work activities.

## 2.2 Long-Range Transportation Plan (LRTP) Update

### A. Background

The LRTP serves as the blueprint for developing the region's network of transportation facilities and services. The LRTP features a multimodal approach (i.e. automobiles, buses, car and vanpools, passenger rail, bicycles, water, truck and rail cargo, etc.) to address the region's long term (20 year) travel needs. The LRTP considers the relationship between the transportation infrastructure and its impacts on the natural and human environment. Projects included in the LRTP are constrained by the projected levels of available financial resources and must also meet federal air quality, environmental justice, and planning requirements. Highway and public transportation projects and programs must be consistent with the MPO's adopted LRTP to be eligible for federal-aid funds.

The current Richmond Area Long-Range Transportation Plan was adopted by the MPO early in FY 09 (i.e., August 2008). This LRTP has a horizon year of 2031, and was developed in accord with the 2005 federal transportation act entitled the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The 2031 LRTP includes both long-range and short-range strategies/actions that support the development of an integrated multimodal transportation system, designed to facilitate the safe and efficient movement of people and goods in the Richmond area. The 2031 LRTP is based on the (then) latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity.

MPO planning regulations specify minimum requirements for LRTP content which are summarized as follows (see section 450.322 (f) and (h) of the MPO planning regulations):

- a. Projected transportation demand of persons and goods.
- b. Existing and proposed transportation facilities that should function as an integrated metropolitan transportation system.
- c. Inclusion of locally preferred alternatives selected from an Alternatives Analysis under the FTA Capital Investment Grant program (note this includes consideration of financial capacity, air quality conformity, and environmental justice requirements).
- d. Operational and management strategies.
- e. Consideration of the results of the congestion management process.
- f. Assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provision for multimodal capacity increases based on regional priorities and needs.

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- g. Design concept and design scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of funding source.
- h. Discussion of types of potential environmental mitigation activities and potential areas to carry out these activities (discussion developed in consultation with federal and state land management, wildlife and regulatory agencies).
- i. Pedestrian walkway and bicycle transportation facilities (in accordance with 23 U.S.C. 217 (g)).
- j. Transportation and transit enhancement activities.
- k. A financial plan that demonstrates how the adopted transportation plan can be implemented.
- l. Both a safety and a security element that summarize the priorities, goals, or projects for the MPO study area contained in: 1) the State's Strategic Highway Safety Plan, and 2) emergency relief and disaster preparedness plans, strategies, and policies that support homeland security and safeguard the personal security of all motorized and non-motorized users.

MPO planning regulations specify certain requirements for the LRTP development process, including the following (see Section 450.322 (g), (i), (j), and (l)):

- a. The MPO shall consult with state and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation.
- b. The MPO shall provide citizens and other interested parties with reasonable opportunity to comment on the LRTP (see MPO Public Participation Plan).
- c. FHWA and FTA must make an air quality conformity determination on the LRTP.

In addition, MPOs must assess the impact of proposed projects on the region's low-income and minority communities. Such an environmental justice assessment is conducted as part of the LRTP development process with the analysis and results included in the LRTP.

The development of a long-term multimodal transportation vision plan for the region was proposed by VDOT in FY 2008. Such a plan would assess scenarios for future growth and development and look at various solutions for meeting future mobility and accessibility needs. The MPO has allocated \$300,000 in FY 09 RSTP funds to begin this effort, but to move this plan forward, it is necessary to first develop the resources and expertise required to model future alternatives and analyze their impacts on the area's transportation system. Significant future allocations of RSTP funds or funds from other sources will be required to develop such a regional vision plan. The first step in the process (conducted in FY 10) was the development of a

report on in-house transportation demand modeling and forecasting capabilities to support not only the vision plan for the region, but also to support development of future LRTPs and other planning applications. This report was presented to the MPO's Technical Advisory Committee (TAC) at the November 19, 2009 meeting. In October 2010, the RRPDC staff was able to fill the new position for lead staff in charge of the regional travel demand model. Other support staff are now on board as well. Further information on work related to the model is provided under UWP task 2.3, Regional Travel Demand Model.

In FY 10, staff initiated the review process for establishing the MPO study area boundary. New Kent County's TAC member requested MPO consideration for expanding the boundary in New Kent County. Staff initiated a policy review of New Kent's request and a proposal by staff to expand the study area boundary to cover the entire Richmond Region (i.e., Planning District 15, except for the portion of Chesterfield County covered by the Tri-Cities Area MPO). The proposed expansion to cover all of PD-15 was not recommended by the RRPDC's Large and Small Jurisdictions Committee. In reviewing New Kent's proposed expansion to include all of the Providence Forge and New Kent Courthouse Village areas, it was determined that the proposed expansion area for Providence Forge met federal criteria for the required level of population density. However, for the New Kent Courthouse Village area, additional information on Census Bureau criteria and procedures for connecting densely populated areas outside the urbanized area boundary line to the urbanized area is needed before a determination can be made for this area. It should be noted that socioeconomic data and forecasts now cover the entire PD 15; VDOT requested this coverage based on requirements for the regional travel demand model. However, establishing a new MPO study area boundary that may include these areas will require some additional work (e.g., revised TAZs, base year data and forecast revisions for affected TAZs, changes to the highway network, etc.).

In FY 11, staff's efforts have focused on completing the 2008 base year data and 2035 forecasts, working with VDOT staff to develop a new model with enhanced and expanded capabilities, and initiating development of the LRTP work scope and schedule. Staff is tentatively planning to present the draft 2035 LRTP Update and CMP Update work scope and schedule at the July 14, 2011 MPO meeting.

Staff is planning to initiate public outreach activities for the 2035 LRTP and CMP Updates in the early fall of 2011. Staff work for FY 2011 and early FY 2012 will focus on development of information on the Richmond Region's transportation systems, demographic information, local government land-use plans, and information from previous MPO plans, studies and reports.

**B. End Products**

1. Maintenance of a conforming and financially constrained 2031 LRTP.
2. Amendments to the 2031 LRTP as necessary.

3. Community outreach to increase public awareness and involvement in the long range planning process (conducted in coordination with the MPO's public participation plan; see UWP task 1.2).
4. MPO approved scope of work for the 2035 LRTP Update (in early FY 2012).
5. Develop the draft 2035 LRTP Update by late FY 2012 and initiate final public review (2035 LRTP Update will lapse after August 3, 2012).

**C. Work Elements**

**Development of the 2035 LRTP Update:**

The RRPDC staff has prepared the following outline of initial staff work activities for the 2035 LRTP and CMP Updates. It is important to note that this is not a scope of work or LRTP/CMP plan document outline. Some of these activities may have minimal information and may be dropped from consideration, while other factors may be identified and added. A detailed scope of work and schedule for the 2035 LRTP is tentatively scheduled for review and action at the July 14, 2011 MPO meeting.

1. Overall plan development –
  - Manage/lead LRTP development
  - Lead LRTP Advisory Committee
2. Mapping –
  - Manage and coordinate staff mapping activities and products
3. LRTP Public Participation –

Scope of work activities for public participation to be developed based on the MPO's adopted "Public Participation Plan for the Metropolitan Transportation Planning and Programming Process" which requires certain public participation elements/activities. Initial/additional work activities identified below:

  - a. Web based LRTP public information/public input –
    - Map project data
    - Utilize visualization techniques
  - b. Input from Capital Region Collaborative Regional Strategic Plan –
    - Consideration of findings from CRC Strategic Plan meetings and on-line survey results
    - Southeast Institute of Research (SIR) scientific survey of regional attitudes; include findings related to transportation
  - c. Input from Local Governments/MPO Agencies on Regional Transportation Priority Projects –

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- d. Public Participation and Outreach Meetings –  
(See MPO’s Public Participation Plan for details.)
- e. Meetings with local jurisdictions, MPO Committees and MPO Board –
- f. Other tasks/activities –
4. Institutional Considerations for Transportation Planning, Programming and Implementation –
5. Review of MPO’s current 2031 LRTP and CMS –
6. Review of LRTPs developed in other regions –
  - Review LRTPs and CMPs from Hampton Roads and Fredericksburg
7. Financial Capacity Analysis –
  - Revenue forecasts expected from VDOT in summer of 2011
  - Staff to consult with GRTC and DRPT on transit revenue forecasts
8. Regional Conditions Assessments and Trends –
  - a. Socioeconomic Data and Forecasts –
    - Base year data and forecasts complete for population, housing, employment, students and autos
    - Additional consideration needed for elderly, disabled, minority, low income and limited English proficiency population groups data development
  - b. Natural Environment –
    - Wetlands, parks/natural areas, scenic areas, open space/preservation areas
  - c. Built Environment –
    - Urban and suburban developed areas –  
Buildings and impervious surfaces, hazardous waste and superfund sites
  - d. Historic and Cultural Areas –
  - e. Future Economic and Energy Considerations/Trends –
  - f. Local Government Comprehensive Land-Use and Transportation Plans –
  - g. Federal and State Agency Plans –
    - National Park Service
    - Department of Conservation Recreation (DCR) –
      - Outdoor Recreation Plan
      - Greenways and Blueways

- Department of Environmental Quality –
    - State Implementation Plan for National Ambient Air Quality Standards (NAAQS) Attainment
  - Army Corps of Engineers –
    - James River navigable waterway
9. Regional Travel Demand Model (RTDM) Development –
10. Data Collection and Analysis/Plan Elements –
- a. Highways –
  - b. Public Transportation –
    - Local Express Bus Service
    - Paratransit
    - BRT
  - c. Transportation Demand Management –
  - d. Passenger/Intercity Rail –
  - e. Intermodal/Freight –
  - f. Bicycle/Pedestrian –
  - g. Congestion Management Process (CMP) –
  - h. Safety and Operations –
  - i. Intelligent Transportation Systems (ITS) –
  - j. Security/Emergency Preparedness –
11. Sustainable Transportation Development –
- a. Sustainable Transportation Initiatives for Richmond (STIR) –
    - Assess work activities
  - b. Other
12. CMP Analysis, Strategies and Implementation Measures –
- Includes update of CMS technical document including new/revised data and measures
13. Transportation Plan Alternatives –
- a. Development of initial alternatives –

- Existing Plus Programmed (E + P) projects/programs
  - Current 2031 LRTP projects/programs (include assessment of available funds)
  - MPO's list of regional priority projects (may combine with E + P alternative)
- b. LRTP Advisory Committee alternatives
- c. Development and application of ranking criteria (address SAFETEA-LU planning factors)
- d. Plan alternatives analysis –
- Assessment of appropriate performance measures
  - Financial Capacity
  - Environmental justice
  - Air quality conformity
14. Recommended 2035 LRTP
- Financially constrained LRTP
15. Vision LRTP/Future Scenarios
- To be conducted immediately following the adoption of the 2035 LRTP
16. Regional Transportation and Land-Use Performance Measures –
- Utilize MPO approved Regional Performance Measures to periodically assess and report changes in the Richmond Region's transportation system performance

**Other LRTP Work Elements:**

1. Functional Classification – Review requests for function classification and reclassification and submit for MPO review and action.
2. Review highway construction plans for conformance with the adopted Transportation Plan [VDOT and RRPDC].
3. Maintain/update computer software, staff training, and direct costs [VDOT].

**D. Agency Participation**

RRPDC, VDOT, DRPT, VDEQ, local governments, CRAC, GRTC, RMA, VPA, FHWA, FTA, and RideFinders.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 11 CO 5303<sup>①</sup></u>	<u>TOTAL</u>
RRPDC	\$133,000	\$60,000	\$15,000	\$208,000

① 11/10/11 MPO action to add \$15,000 in FY 11 Section 5303 carryover funds.

**F. Schedule**

1. 2035 LRTP and CMP Updates Work Scope and Schedule – July 14, 2011 MPO meeting (MPO review and action)
2. Complete draft 2035 LRTP and CMP Updates – By end of FY 2012 (MPO action no later than August 2012)
3. Other work activities – ongoing.

**2.3 Regional Travel Demand Model (RTDM)**

**A. Background**

On April 8, 2009, VDOT announced a new policy designating MPOs as now being responsible to develop and maintain their region’s travel demand model. VDOT indicated that it would provide technical assistance and training and assist MPO staff’s in transitioning to this new responsibility. VDOT would also provide technical assistance for model development. In FY 2010, the RRPDC established a new staff position to serve as lead staff in maintaining and conducting the regional travel demand model. The MPO was able to fund this position as part of the FY 2011 UWP, and this position was filled in October 2010. Other support staff positions were budgeted (i.e., current staff with other work responsibilities) and these have been worked into staff’s work program assignments.

VDOT’s responsibilities for support of the MPO’s RTDM include the following:

- Support model development
- Provide technical assistance
- Provide Citilabs software (i.e., Cube Voyager) and training to MPO staff
- Coordinate statewide data collection activities, e.g., NHTS and CTPP
- Perform state model applications, e.g., PPTA and NEPA.

RRPDC staff is responsible for conducting travel demand modeling to meet federal MPO planning requirements, including the regional travel demand model portion of the air quality conformity analysis, and development of model networks (both highway and transit) for the analysis of LRTP alternatives and air quality conformity analysis. It is important to note that the new RTDM will cover both the Richmond and the Tri-Cities MPO study areas, plus PD 15 rural areas in New Kent, Charles City, Goochland and Powhatan, and all of Prince George County in PD 19. VDOT staff expects that work on the new model will be completed in June 2011. VDOT will then provide training for RRPDC and Crater PDC staffs. RRPDC staff will be coordinating with Crater PDC staff in conducting model development activities.

The RTDM used for the MPO’s 2031 LRTP Update was sufficient for conducting air quality conformity analysis, but was not sufficiently accurate for conducting corridor level or transit service analysis. Extensive work conducted by VDOT since January 2010 has enhanced the RTDM’s capabilities as follows:

- New/expanded transportation networks (GIS based network)
- Time of day modeling (accurate for planning level analysis)
- Congestion feedback
- Transit model
- New toll modeling procedures

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- Enhanced truck modeling procedures (based on data from Hampton Roads)
- Full use of “Cube Voyager” scripts

In addition, RRPDC staff’s development of autos by TAZ based on geocoded address data (auto data used in the 2031 LRTP Update was based on assumed rates applied to demographic data), plus other model enhancements conducted by VDOT, should provide for a more effective model. The new RTDM also incorporates results from the enhanced National Household Travel Survey (NHTS) that was recently completed. The new Richmond/Tri-Cities RTDM will support VDOT and MPO planning needs as follows:

- Air quality conformity analysis
- Comprehensive HOV and toll enhancement
- Mode choice and transit inputs
- Congestion assessment
- Subarea analysis (note that additional data, network and other modifications required depending on the scale of the subarea)
- Truck movements

The new RTDM features will include the following:

- Detail coded highway networks
- Updated transit network, with delay-based bus times/speeds (not multiplicative factors)
- Updated trip rates with consistent methodology
- Time of day modeling (peak/off peak distribution through mode choice, four periods for final highway assignment)
- Mode choice using structure/parameters FTA expects in New Starts (i.e., FTA light rail/BRT funding program) forecasts
- AM peak, PM peak, mid-day, and night highway assignments (which sum to 24 hour traffic volumes)
- Full feedback loops (peak and off peak) from highway assignment through distribution

### **B. End Products**

1. Development and maintenance of the Richmond Regional Travel Demand Model (RTDM).
2. Coordinate RTDM work activities with VDOT and Crater PDC

**C. Work Elements**

1. RRPDC staff support for RTDM system development in coordination with VDOT and Tri-Cities MPO staffs
2. Conduct RTDM runs and evaluation for transportation alternatives, scenarios, projects and policy analysis, and in support of CMP corridors analyses
3. Participate in Virginia Transportation Modeling (VTM) Users Group meetings and web conferences
4. Review and analysis of National Household Travel Surveys (NHTS) data and related surveys (e.g., VDOT university travel surveys)

**D. Agency Participation**

RRPDC, VDOT, DRPT, GRTC, FHWA, FTA, local governments.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 11 CO</u> <u>5303</u>	<u>TOTAL</u>
RRPDC	\$58,000	\$30,000	–	\$88,000

**F. Schedule**

Ongoing work activity in support of the 2035 LRTP and CMP updates.

**2.5 Transportation Data Base Development/GIS**

**A. Background**

Conducting the MPO's regional transportation planning and programming process involves extensive work efforts to develop data and information on the region's transportation network. While some of this information is developed by RRPDC staff, a great deal is developed by VDOT, DRPT, consultants, area local governments, and others. Much of this information is of interest to area local governments, transportation agencies, business and marketing firms, educational institutions, citizens groups, and others. Responding to information requests involving certain data items often results in staff work to develop the appropriate information, refer the requesting organization/individual to another agency, or advising them that the information is not available. This UWP task provides for work by RRPDC staff to develop data bases and informational reports on the region's transportation system, and to develop and distribute reports, maps, and other information.

This UWP task also provides for staff development and maintenance of Geographic Information System (GIS) staff services. The use of GIS has become an integral part of the transportation planning process, providing an ability to work with map information and to graphically display various features, data, and other characteristics in various formats. The GIS system also provides staff the ability to link map and data information to conduct transportation systems analysis.

**B. End Products**

1. Informational reports, maps, inventories, and other documents, reporting on transportation activities and development.
2. GIS support for MPO plans, programs, studies, and other work activities.

**C. Work Elements**

1. Development of transportation data for use in various reports, studies, plans and programs.
2. Develop, print and distribute informational reports on transportation plans, programs, activities, and data.
3. Work with VDOT to update information placed in the Richmond Area MPO GIS data base for use in preparing MPO plans, programs, and studies.

4. GIS support as follows:

a. Serve as agency GIS program manager which includes:

- Maintaining agency GIS server
- Guide other staff GIS work by determining work procedures, providing necessary training and promoting GIS program efficiency.
- Oversee development of map products by conducting initial review meetings with assigned staff, providing assistance when necessary, reviewing final draft map products, and filing/storing final map products in GIS server files.

Note that work in developing and maintaining the RRPDC GIS file structure is coordinated through a staff committee that works with GIS users in each agency division to review file structure operating procedures, administrative procedures for reporting file structure issues, and file-building and expansion (for introduction and filing of new data sets).

b. Provide technical assistance to staff and outside jurisdictions/agencies (when requested) for developing maps and data linked to GIS maps.

c. Staff support for development of maps and data linked to GIS map system. Includes staff work in support of the LRTP, CMP, TIP, MPO annual public review meetings, and other staff plan and study work tasks.

5. Maintenance and support for the RRPDC’s street name clearing house program.

**D. Agency Participation**

RRPDC, VDOT, DRPT, FHWA, FTA, local governments, GRTC, CRAC, RMA, RideFinders.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>TOTAL</u>
RRPDC	\$103,000	\$15,000	\$118,000

**F. Schedule**

Ongoing

**2.8 Route 5 Urban/Suburban Multimodal Corridor Study**

**A. Background**

Conduct study of the Route 5 corridor between downtown Richmond and Route 895 to determine various corridor transportation needs and improvements. The study will be conducted by a consultant using VDOT/SPR funds. The RRPDC staff will administer the study with technical review by a study work group (composed of RRPDC, VDOT, DRPT, Henrico, Richmond and GRTC staffs). Specific study purposes are as follows:

1. Determine the safety and integrity of existing transportation infrastructure, including vehicle, bicycle, pedestrian and mass transit infrastructure.
2. Formulate and assess the feasibility of several multimodal transportation scenarios (including vehicles, bicyclists, pedestrians, and mass transit) to meet travel needs.
3. Develop a consensus for a preferred scenario for implementation.
4. Provide future recommended improvements.
5. Prioritize recommended new transportation services and improvements for project phasing purposes.
6. Provide detailed recommendations to incorporate multimodal transportation infrastructure (i.e., roads, mass transit, paratransit, bicycle, and pedestrian facilities) into proposed new developments.

The study will utilize innovative modeling techniques with an appropriate level of sensitivity to project and assess capacity, demand, and constraints within the study area over a long term planning horizon of approximately 20 years. A detailed and comprehensive strategy for addressing travel and mobility needs within the area is expected including analysis by various modes of travel (i.e., by automobiles and trucks, local and express bus, bus rapid transit, paratransit, pedestrian, and bicycles). The study is expected to include analysis of several scenarios to accommodate future developments. These scenarios are anticipated as follows:

1. Existing conditions with only existing and committed projects implemented.
2. Evaluation of the proposed programs and projects contained in the adopted regional *2031 Long-Range Transportation Plan* (2031 LRTP) to include those projects and programs in the 2031 LRTP “Vision List.”

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3. Three discrete preliminary scenarios focusing on innovative planning and design solutions developed in collaboration with local jurisdictions.
4. A consensus preferred scenario resulting from local government and public input.

The study consultant will also conduct the public review and participation process, and will present the final draft study for CTAC and TAC review and recommendation, and for MPO review and action. Work was initiated in May 2010 and it is anticipated to be completed by mid-2012.

### **B. End Products**

The end product shall be a study that provides findings on transportation needs, and recommends practical and innovative solutions for transportation facilities and services to meet those needs. Certain deliverables are required, especially including a sub-area transportation demand model that can be utilized by the study work group, jurisdictions, and agencies to conduct follow-up research and analysis in the study area. In addition, the study shall, at a minimum, address the following parameters:

1. At least three (3) preliminary scenarios shall be prepared showing alternative transportation solutions, meeting the criteria in items a. through d. below.
  - a. Findings and recommendations based on an overall planning horizon of approximately 20 years, and within that time frame, short- and long-term strategies and policy changes addressed.
  - b. Estimated costs for proposed transportation facilities and services within the given time frames and with reasonable considerations for inflation.
  - c. Graphical depiction (GIS based) of all recommended projects and services.
  - d. Supporting technical documentation of all work and delivery of work documents to study work group members.
2. A preferred scenario resulting from the technical analysis and citizen input process, and which is accepted by the study work group, and ultimately, by the MPO. In addition to meeting the criteria applicable to the preliminary scenarios, the preferred scenario shall also include the criteria specified in items e. through g. below.
  - e. Responsible public entity (e.g., state or local government, transportation service provider, etc.) for the recommended transportation facilities and services.

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- f. Innovative funding mechanisms for project development and service operation.
- g. Documentation of results of public participation activities and how the preferred scenario was selected.

**C. Work Elements**

Work tasks specified in consultant services agreement.

**D. Agency Participation**

RRPDC, VDOT, DRPT, City of Richmond, Henrico County, GRTC, FHWA, FTA.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	FY 11 CO <u>5303</u>	<u>SPR</u>	<u>TOTAL</u>
RRPDC	20,000	8,000	-	-	28,000
RRPDC Consultant	<u>-</u>	<u>-</u>	<u>-</u>	<u>135,000<sup>①</sup></u>	<u>135,000</u>
<b>TOTAL</b>	<b>\$20,000</b>	<b>\$8,000</b>	<b>-</b>	<b>\$135,000</b>	<b>\$163,000</b>

<sup>①</sup> \$135,000 in FHWA/SPR funds transferred from FY 11 UWP (anticipated amount expected to be available as of July 1, 2011). Consultant services study budget is \$400,000 (total amount of FHWA/SPR funds available for consultant work in FYs 2010, 2011 and 2012).

**F. Schedule**

Work was initiated in May 2010 with an anticipated completion schedule of 16 months. Staff currently expects the study to be completed and presented for review and action by the December 2011 MPO meeting.

## 2.9 City of Richmond Strategic Multimodal Transportation Plan

### A. Background

In 1997, the City of Richmond contracted with Michael Baker Jr. Inc. for the development of the City of Richmond Transportation Plan. The document analyzed the existing conditions of the various modes of travel within the City, developed multimodal goals/objectives/policies and developed recommendations for implementation. This document was incorporated into the City's Master Plan document in 2001.

The goals of the City of Richmond Transportation Plan were:

- To promote a multimodal transportation system which is designed to support the efficient movement of people and goods while respecting the quality of life in neighborhoods and the environmental, cultural, and historic resources of the City.
- To promote alternative modes of transportation to more efficiently address demand on the transportation network.

The transportation vision created in the report promoted the urban qualities of the City providing a transportation system that is seamless, functional and inviting. The goals and vision of the 1997 Plan provide a basis from which to expand upon. Given the high level of growth and development in the City in recent years, particularly in the downtown, a new multimodal transportation plan is needed.

In addition, since the 1997 plan was adopted the transportation planning field has broadened to include essential connections between transportation and land use, a stronger focus on the street network and linkages of multimodal transportation choices, management of urban mobility, best transportation planning practices, transit oriented development, complete streets and other related focus areas while maintaining the core components of a safe and efficient system.

### B. End Products

A consultant conducted study that will provide a balanced Richmond Strategic Multimodal Transportation Plan (RSMTP) which encompasses specified work elements to best address the City's current and future transportation needs and enhance the safety, mobility and quality of life of the City and the region. The plan will provide a dynamic transportation vision and set the foundation to comprehensively identify the transportation/land use strategies, resources and priorities which will shape the transportation framework of the City.

1. Update the 1997 City of Richmond Transportation Plan.

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2. Coordinate with other transportation studies, programs or projects. The consultants should focus on existing data where practical and maximize use of their transportation planning expertise. It is recognized that there are many current and valid plans for different transportation modes; however, the roadway system assessment will need to be fully updated including future travel demand projections, corridor capacities, level of service assessments and improvements sufficient to provide future safe and efficient travel for all modes of transportation.
3. Identify current multi-modal strengths and deficiencies in the existing transportation/land use system and project anticipated future deficiencies and challenges.
4. Analyze site or topic specific transportation/land use emphasis areas.
5. Coordinate public information/input process.
6. Develop short-term (0-6-year), mid-term (6-15 year) and long-term (15-20 year) multimodal transportation/land use recommendations.
7. Identify Costs/Funding/Priorities.
8. Identify/recommend needed plans, ordinances and policies for implementation.

### **C. Work Elements**

1. Data Collection and Review:
  - Collect and review past and current studies of all modes
  - Coordinate with other programs/projects
  - Confirm traffic volumes, accident/safety data, roadway inventory/physical features, travel demand management programs, land use patterns and projections, socioeconomic demographics, and levels of pedestrian/bicycle activity to the extent practical.
  - Review and understand the philosophies of the 2008 Downtown Plan, 2000-2020 City Master Plan and 1997 City of Richmond Transportation Plan and identify transportation/land use network recommendations

#### Deliverables:

- Summary of past and current studies and other programs as they relate to the RSMTTP
- Summary of traffic volumes, accident/safety data, roadway inventory/physical features, travel demand management programs, land use patterns

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and projections, socioeconomic demographics, and levels of pedestrian/bicycle activity to the extent practical.

- Summary of transportation/land use network recommendations of the 2008 Downtown Plan, 2000-2020 City Master Plan and 1997 City of Richmond Transportation Plan as they relate to the RMSTP
- Summary of other pertinent information needed for RMSTP

### 2. Mapping and Future Growth Model Analysis:

- Update base mapping in ArcGIS if necessary (City provides base)
- Database approach combining data in map/database platform
- Analyze intersection density (# of intersections per sq. mile) for defined districts within the City as a means to evaluate connectivity within the street network
- Identify opportunities for greater transportation mode share
- Characterize development patterns
- The VDOT supplied Richmond and Tri-Cities Regional Travel Demand Model may be used as the basis of area wide traffic projections. An important part of the travel demand effort will be ascertaining those corridors and key intersections/gateways that will and will not function safely and efficiently in the future and to develop specific multimodal operational approaches to these deficiencies

#### Deliverables:

- Updated base mapping
- Mapping of databases and pertinent information
- Mapping and analysis of intersection density (# of intersections per sq. mile) for defined districts to evaluate connectivity within the street network, identify opportunities for greater transportation mode share and characterize development patterns
- Area wide traffic projections using VDOT supplied Richmond and Tri-Cities Regional Travel Demand Model
- Identification of corridors and key intersections/gateways that will and will not function safely and efficiently in the future and develop specific multimodal operational approaches to these deficiencies

### 3. Public Outreach and Stakeholder Involvement:

- Meet with RSMTP Advisory Committee and stakeholders as determined
- Develop a public involvement plan which includes hand-on workshops/charettes with presentations to set the stage for the discussion, educates the participants and provides an opportunity for meaningful

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public input that creates the vision and guides the work of the consultant team

- Sharing information – interim and final deliverables posted on City website/newsletter
- Conduct scheduled meetings to present deficiencies and initial thoughts on recommendations to key staff and the Advisory Committee

Deliverables:

- Briefings to RSMTP Advisory Committee, key staff and other interested parties
- Public involvement plan and its implementation
- Deliverables posted on City website/newsletters

### 4. Existing Conditions Analysis for All Modes:

- Document known multi-modal/land use strengths, deficiencies, constraints and operational issues
- Perform capacity analysis on selected systems/corridors and intersections using available studies to the extent possible

Deliverables:

- Existing Conditions Analysis document containing all modes/land use
- Capacity analysis on selected systems/corridors and intersections

### 5. Analyze Various Site and Area Wide Issues:

- Analyze potential conversion of limited number of one-way streets to two-way streets in downtown area (using existing Synchro network) – impact on adjacent land use, accidents for vehicles, pedestrians, and bicyclists, level of service, costs, vehicle conflict points, operational evaluation, public education, staged implementation, modeling and mapping
- Evaluate Downtown Plan proposals for street cross sections.
- Provide multimodal recommendations to accommodate infill development proposed in Downtown Plan
- Develop typical concept cross sections for corridors and other defined districts based upon the relationship between land use and the transportation network (e.g. “walkable districts” for Downtown, traditional neighborhood areas and current City Right of Way Design Manual)
- Review concepts of transit oriented development, complete streets recommendations/guidelines, traditional walkable city recommendations,

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best transportation planning practices, transportation harmonization and other transportation and land use strategies as they apply to the City of Richmond and its current standards.

- Analyze the impact of interstate and freeway corridors on the City
- Review City functional classification system and assess VDOT funding allocations to ensure the City is capturing available funding.
- Review the impact of current and proposed passenger and freight rail corridors within the City (including transport of hazardous materials and grade crossings).
- Analyze at a functional schematic level key intersection operations for pedestrian, bicyclists, and vehicles at Broad and Belvidere Streets; Downtown Expressway ramp intersections at 7th, 10th, and 12th Streets; Byrd and 9th Streets; Broad and 14th Streets, Maury and 4th Streets and others.
- Analyze scenic, historic and critical corridors (Riverside Drive, Monument Avenue, Cary Street/ Three Chopt Road, “Boulevard of Museums”, Belt Boulevard and others) from the point of view of protecting and enhancing their unique character while maintaining their safe and efficient travel function
- Analyze Citywide bridges
- Analyze Citywide Intelligent Transportation Systems (ITS)
- Analyze Citywide signal system
- Analyze Citywide truck routes
- Analyze Citywide bike routes
- Analyze Citywide walking routes and pedestrian guidelines
- Analyze ADA accessibility and policies
- Analyze pedestrian/vehicle issues in university areas
- Analyze parking resources: on and off street parking, permit parking
- Analyze transportation needs of tourists/visitors
- Analyze major events circulation
- Analyze Emergency, Police, Fire, transportation concerns
- Analyze City of Richmond Emergency Evacuation Plan – ESF1
- Analyze downtown transit circulation and GRTC transfer center/s
- Coordinate with DRPT on GRTC’s Bus Rapid Transit and associated land use proposals

### Deliverable:

- Depending upon the scope and findings of each Task item – a technical memorandum will be provided with appropriate text, tabulation and mapping outlining results and providing recommendations

6. Develop Strategic Multimodal Transportation Vision Statement for the City of Richmond:

- Develop core values that support the Vision Statement
- Develop goals and objectives that support the Vision Statement

Deliverables:

- Multimodal Transportation Vision Statement for the City of Richmond
- Core Values that support the Vision Statement
- Goals and objectives that support the Vision Statement

7. Development of Short-Term, Mid-Term and Long-Term Recommendations:

- Develop specific short-term, mid-term and long-term multimodal/landuse recommendations
- Identify/recommend needed plans, ordinances, strategies and policies for implementation

Deliverables:

- Detailed short-term, mid-term and long-term multimodal/land use recommendations
- Identification of recommend plans, ordinances, strategies and policies needed for implementation

8. Implementation Plan and Funding:

- Prioritize multimodal projects/recommendations and identify implementation years
- Project funding and costs

Deliverables:

- Prioritization of multimodal projects and identification of implementation years
- Detailed project funding and costs

9. Presentation of Documents, Draft and Final Plan:

- Prepare draft and final documents including Executive Summary and Citizen Guide in hard copy, CD, and PowerPoint Presentation
- Prepare appropriate maps and public information documents
- Assist with Planning Commission & City Council adoption

Deliverables:

- Maps of concepts and deliverables
- Public information documents of deliverables
- Draft RSMTP including an Executive Summary and Citizen Guide
- Final RSMTP including an Executive Summary and Citizen Guide in hard copy, CD and PowerPoint Presentation
- Scheduled meetings to present draft and final Richmond Strategic Multimodal Transportation Plan to RSMTP Advisory Committee, key staff and interested parties.
- Presentations to the City Planning Commission and City Council

**D. Agency Participation**

City of Richmond, “Richmond Connects” RSMTP Advisory Committee, stakeholders (including RRPDC)

**E. Budget, Staff and Funding**

RSTP

City of Richmond      \$448,000<sup>①</sup>

<sup>①</sup> Total of \$500,000 in RSTP funds allocated for this study. Authorized amount identified in VDOT’s Project Cost Estimating System (PCES) is \$448,000. Note that no RSTP funds have been obligated for this study in the MPO’s TIP (as of April 5, 2011).

**F. Schedule**

Specific schedule to be determined; approximately 18 months estimated for completion

**3.0 MANAGEMENT SYSTEMS/SHORT RANGE PLANNING**

**3.1 Congestion Management Process (CMP) Update**

**A. Background**

The Congestion Management Process (CMP) serves as a systematic process for addressing congestion by providing information on transportation system performance and proposing use of alternative strategies and programs to help alleviate congestion. Update work on the CMP is conducted as an element of the LRTP update. In addition, MPO planning regulations require the MPO to address congestion management through a process that provides for safe and effective integrated management and operation of the multimodal transportation system, based on a cooperatively developed and implemented metropolitan-wide strategy of new existing transportation facilities eligible for funding under title 23 U.S.C. and title 49 U.S.C. Chapter 53, through the use of travel demand reduction and operational management strategies (see Section 450.320 (a) of the MPO planning regulations). MPO planning requirements for development of a CMP is summarized as follows (see Section 450.320 (b)):

- a. Development of a CMP should result in multimodal system performance measures and strategies that can be reflected in the LRTP and the TIP.
- b. The level of system performance deemed acceptable by state and local transportation officials may vary by facility type, location, and/or time of day.
- c. Consideration should be given to strategies that manage demand, reduce single occupant vehicle (SOV) travel, and improve transportation system management and operations.
- d. Where the addition of general purpose lanes is determined to be an appropriate congestion management strategy, explicit consideration is to be given to the incorporation of appropriate features with the SOV project to facilitate future demand management strategies and operational improvements that will maintain the functional integrity and safety of those lanes.
- e. The CMP shall be developed, established, and implemented as part of the MPO planning process including coordination with transportation system management and operations activities.

The following summarizes other/additional CMP requirements as stated in the MPO planning regulations (see section 450.320 (c)):

- f. Methods to monitor and evaluate the performance of the multimodal transportation system, identify the causes of recurring and non-recurring

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congestion, identify and evaluate alternative strategies, provide information supporting the implementation of actions, and evaluate the effectiveness of implemented actions.

- g. Definition of congestion management objectives and appropriate performance measures to assess the extent of congestion and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies. Such measures shall be developed in consultation with operators of major modes of transportation.
- h. Establishment of a coordinated program for data collection and system performance monitoring. To the extent possible, this data collection program should be coordinated with existing data sources (including archived operational/ITS data) and coordinated with area operations managers.
- i. Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies.
- j. Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy/combination of strategies proposed for implementation.
- k. Implementation of a process for periodic assessment of the effectiveness of implemented strategies.

Work in conducting the CMP corridor reviews was placed on hold with the Richmond nonattainment area (which includes most of the MPO study area) being reclassified to maintenance status. Such a reclassification means that such corridor reviews are not necessary. However, based on the revised (lowered) 8-hour ozone air quality standard of 0.075 parts per million (ppm; previously set at 0.084) and air quality data readings for the past three years, the Richmond Area is in the process of being redesignated to nonattainment air quality status. EPA publication of area designations and classifications were previously due by March 12, 2010. However, in September 2009, EPA announced its reconsideration of the ozone air quality standard and proposed a new standard in the range of 0.070 to 0.060 ppm with the new standard to be set by January 2010. EPA has requested an extension of the time frame (which is under review by federal court) to finalize the standard by January 31, 2011. As of early February 2011, there has been no response from the court to EPA.

While the schedule for EPA action to establish the new standard has been delayed, it appears to be very possible that the new standard will be set either before or in early FY 2012. When these delays have been resolved, the redesignation of the Richmond maintenance area back to nonattainment status will occur and as a result, a number of additional CMP requirements will apply to the Richmond Area MPO (see Section 450.320 (d) and (e) of the MPO planning regulations).

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Also, note that SAFETEA-LU has expanded the scope of the CMP to include additional considerations for management and operations (i.e., there must be a “process that provides for effective management and operation” to address congestion management). Further review of federal requirements will be needed to identify, program, and staff these new work activities. Staff will consult with VDOT, RMA, City of Richmond, Henrico County, and Town of Ashland traffic engineering staffs (i.e., those jurisdictions and agencies responsible for highway systems operations) to document current procedures and activities and determine what will be required to meet these new federal requirements.

Section 450.320 (f) of the MPO planning regulations states that state laws, rules, or regulations pertaining to congestion management systems may constitute the CMP if the FHWA and FTA find that the state law, rules, or regulations are consistent with and fulfill the intent of the MPO planning requirements. Staff is not aware of this being the case; however, staff will work with VDOT to incorporate VDOT CMP planning, operational, and management activities into the MPO’s process.

VDOT is expected to start reporting accident data for all roadways in Virginia, beginning with 2009 data. Previously, this data was reported by VDOT for only VDOT system roads (i.e., Interstate, Primary, and county secondary systems, except for Henrico) and did not report accident data for urban system (i.e., City of Richmond and Town of Ashland) roads and the RMA’s downtown expressway and Powhite Parkway. RRPDC staff has been working with VDOT’s 2008 accident data to develop a system for receiving and storing this data, and plans to utilize it for the upcoming CMP Update and other study work efforts. VDOT has advised that the 2009 accident data should be provided to RRPDC staff in late March/early April 2011.

The RRPDC also expects to transition development of its regional congestion analysis for major highway corridors from GPS travel time runs (when designated roads are driven by staff with a GPS recording device measuring time and location as the road is driven) to use of proprietary travel time data (archived data from INRIX, Inc., provided under contract to VDOT, and VDOT provides to MPO staff at no charge). One significant staff expense to allow RRPDC staff to geocode the INRIX travel time data will be the purchase of a shape file that can locate travel time data onto the Richmond Region’s major roads. Note that the INRIX data should provide data for most major roads; however, some GPS travel time runs may still be necessary. The direct cost for the INRIX data compatible shape file is estimated at \$3,500 to \$4,200. Staff anticipates this expense to be made in FY 2011. Note that future changes to the network may require further purchases of updated network shape files and the need to budget for this additional direct cost will be necessary.

**B. End Products**

1. CMP Scope of Work (to be conducted in conjunction with the 2035 LRTP work scope); scheduled for early FY 2012 (i.e., present for review and action at the July 14, 2011 MPO meeting).
2. Travel time data (from INRIX or from GPS travel time runs) for the Richmond Region's major roads/corridors, 2009 accident data (from VDOT) identifying high accident locations, and development of other data required for the CMP Update.
3. Develop the draft CMP Update by late FY 2012 and initiate final public review (conducted in conjunction with the 2035 LRTP Update).

**C. Work Elements**

1. CMP Work Scope – Staff will review CMP requirements and develop an approach to address these requirements. The primary components for the CMP include the following:
  - System definition and data collection
  - Congestion definition and identification
  - Strategy evaluation
  - System monitoring and evaluation

The draft scope of work is tentatively scheduled to be presented at the July 14, 2011 MPO meeting.

2. Traffic Congestion Data – VDOT has entered into an agreement with INRIX, Inc. which provides proprietary comprehensive travel time data for the state. VDOT has received authorization from INRIX to share their travel time data (i.e., archived data) with RRPDC staff. The RRPDC will need to purchase a shape file that can locate travel time data onto the Richmond Region's major roads. There will be a direct cost (in FY 2011) estimated at \$3,500 to \$4,200 to purchase this shape file. Future changes to the network may require further purchases of updated network shape files. Note that travel time data presented in the CMP will need to acknowledge and cite INRIX as the data source. Also note that GPS travel time runs or other data sources may be needed depending on the scope of INRIX coverage of the Richmond Region's major roads.
2. Accident Data – VDOT will provide 2009 accident data for all roads in the Richmond Region to RRPDC staff (including non-VDOT administered roads). Staff expects to receive this data in late March/early April 2011. Staff will review and analyze this data for use in the CMP (e.g., identify non-recurring congestion areas).

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3. Texas Transportation Institute (TTI) Congestion Reports – Continue to receive, review, and analyze TTI congestion data for the Richmond Urbanized Area.
4. Consideration for Change in Area’s Air Quality Status – Based on the revised (lowered) 8-hour ozone air quality standard of 0.075 parts per million (ppm; previously set at 0.084) and air quality data readings for 2006, 2007 and 2008, the Richmond Area is in the process of being redesignated to nonattainment air quality status. EPA is also giving consideration to an even lower standard of 0.065 ppm to 0.070 ppm. As a result, a number of additional CMP requirements will apply to the Richmond Area MPO (see Section 450.320 (d) and (e) of the MPO planning regulations). Richmond Area MPO jurisdictions covered by EPA nonattainment area designation include the counties of Charles City, Chesterfield, Hanover (including Ashland), and Henrico. This area extends into and includes several jurisdictions in the Tri-Cities Area MPO.
5. Access Management Studies – Provide staff technical assistance and participation in local access management studies conducted by VDOT or local government as requested.

**D. Agency Participation**

RRPDC, VDOT, Local Governments, GRTC, RideFinders, CRAC, RMA, FHWA, FTA, DRPT.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 11 CO</u> <u>5303</u>	<u>TOTAL</u>
RRPDC	\$60,000	\$9,000	–	\$69,000

**F. Schedule**

1. GPS travel time runs – Conduct as needed to supplement INRIX data.
2. CMP Work Scope – Present at July 14, 2011 MPO meeting for review and action.
3. Safety Data – Establish process and procedures for receiving and maintaining data (schedule established upon VDOT providing initial data; expected in April 2011).
4. Texas Transportation Institute (TTI) Congestion Reports – Ongoing

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5. Draft CMP Update (conducted in conjunction with the 2034 LRTP Update) developed by late FY 2012 and final public review process initiated in late FY 2012.

### 3.3 Intelligent Transportation Systems (ITS) Update

#### A. Background

The MPO took action at its July 21, 2004 meeting to accept the *Richmond Regional ITS Architecture Report* and the *Richmond Regional ITS Architecture Deployment Plan Report*. Note that the Tri-Cities Area MPO also took action to accept both reports since both cover the Richmond and Tri-Cities areas. The ITS Architecture Report identifies the region's framework for institutional agreements and technical integration of ITS. It defines the pieces of the region's systems (e.g., traffic signal operations, freeway management, emergency management, public transit operations, etc.) and the information exchanged between them. The *ITS Architecture Deployment Plan* outlines the vision for ITS deployment and identifies and prioritizes projects and "market packages" that are needed to implement the ITS architecture on a high, medium, and low priority basis. It helps to prioritize funding decisions by having a comprehensive shared approach to regional ITS programs so that the infrastructure can be incrementally built out over a 20-year time horizon and allow integration among key foundations of the system as it grows and expands.

As part of the MPO's July 21, 2004 action on ITS, the MPO's Technical Advisory Committee (TAC) was designated with conducting annual reviews of these documents with VDOT providing technical assistance of these services and with TAC and RRPDC staff reporting on the implementation status of ITS projects and providing recommendations for updates and/or changes to the region's ITS architecture report and deployment plan. It was recommended that such reviews be conducted at the January TAC meeting (based on work by VDOT staff to prepare proposed projects for consideration in the upcoming VDOT Six-Year Improvement Plan). The MPO took further action to direct that it be provided with an annual report on ITS applications and implementation including the status of ITS projects, funding, and new technologies.

The RRPDC was advised by VDOT in late March 2009 that the Richmond Regional ITS Architecture Deployment Plan Report has been updated. Staff has received the *Virginia Central Region ITS Architecture Implementation Plan, Version 1.0* (dated June 23, 2009) and the *Virginia Central Region ITS Architecture Maintenance Plan Version 1.0* (dated June 30, 2009) and held meetings with VDOT staff in September 2009 to discuss the MPO's role in ITS architecture and formation of a regional ITS technical workgroup. Presentations were given by VDOT and RRPDC staffs at the July 16 and the September 17 TAC meetings, with staff's initial recommendation to establish an ITS TAC resource and work group. Staff also conducted several visits to an ITS/Highway Safety work group in Hampton Roads. At the February 18, 2010 TAC meeting, staff presented a proposal for the establishment of a Richmond Region ITS/TAC work group composed of local government planners and traffic operations engineers, and staff from VDOT, FHWA, GRTC, RMA CRAC, DRPT and RideFinders to address the following:

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- Recommendations for enhancement and improvement of existing services.
- Recommendations for new services.
- Report on project and services coordination.
- Recommendations for project priorities.

Staff also proposed the primary functions for the ITS/TAC work group as follows:

- Provide a regional forum for discussion of ITS related issues, projects, plans and programs.
- Facilitate and promote use and maintenance of the VDOT Central Region ITS Architecture.
- Promote and assist in integrating the ITS architecture into the regional planning process.

The ITS/TAC work group would be available to address projects and programs as requested by VDOT, DRPT, local governments, and regional transportation agencies (i.e., GRTC, RMA, CRAC) to facilitate the integration of ITS projects into state and regional plans and programs. Note that ITS is addressed as part of the MPO's LRTP and staff is working to integrate it into overall regional planning processes.

#### **B. End Product**

1. Establishment of the ITS/TAC work group composed of planners and traffic operations engineers from VDOT, DRPT, GRTC, RMA, CRAC, RRPDC and area local governments, and charged with providing the following:
  - Recommendations for enhancement and improvement of existing services
  - Recommendations for new services
  - Report on project and serve coordination
  - Recommendation for project priorities

The primary functions of the ITS/TAC work group are as follows:

- Provide a regional forum for discussion of ITS related issues, projects, plans and programs
  - Facilitate and promote use and maintenance of the VDOT Central Region ITS Architecture
  - Promote and assist in integrating the ITS architecture into the regional planning process
2. Ongoing and active ITS/TAC work group.

**C. Work Elements**

Work activities conducted by RRPDC staff with assistance from VDOT and in coordination with Tri-Cities Area MPO to include the following:

1. Establish ITS/TAC Work Group – Present staff proposal for TAC review and recommendation and for MPO review and action. Following MPO action, follow up with appropriate agencies for designating work group members and other contacts.
2. Conduct initial ITS/TAC Work Group meeting.
3. Conduct Ongoing Meetings as Needed – Staff anticipates that this group should generally meet on a quarterly basis.
4. Provide reports and recommendations on projects, programs, and services based on the VDOT Central Region ITS Architecture.

**D. Agency Participation**

RRPDC, VDOT, DRPT, local governments, GRTC, RMA, CRAC, FHWA, FTA.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	FY 11 CO <u>5303</u>	<u>TOTAL</u>
RRPDC	\$20,000	\$4,000	–	\$24,000

**F. Schedule**

Ongoing process.

**4.0 TRANSPORTATION PROJECT PROGRAMMING**

**4.1 Transportation Improvement Program (TIP)**

**A. Background**

As federally funded highway and transit projects and programs move from the planning to the implementation phase, such projects and programs must be reviewed and approved by the MPO. The MPO's approval allows the project or program to be included in the TIP. Once in the TIP (i.e., when funds are obligated), it shows that sufficient funds are available, or are reasonably expected to become available in the near future (i.e., one to four years) for a project, project phase, or program to move forward for implementation. It allows the implementing agency (i.e., state, local government or regional agency) to have access to the designated federal fund source and request reimbursement for project expenses.

The RRPDC serves as lead staff for developing and maintaining the TIP. However, all federal-aid highway funds and most federal-aid transit funds are managed and administered by VDOT and DRPT. As a result, projects and programs that are ready to move forward for implementation must first be reviewed with their proposed funding request authorized and submitted by VDOT or DRPT with these agencies requesting that the funds be shown as obligated in the TIP.

In addition to state and federally funded highway and transit projects and programs, locally and privately funded highway projects that are considered "regionally significant" must be included in the TIP (and the LRTP) for public review and air quality conformity analysis purposes.

Under SAFETEA-LU, there are a number of federal-aid highway programs (i.e., administered by FHWA) which, in order to be eligible for use by the implementing agency, must be programmed in the TIP. This includes the following:

1. Equity Bonus
2. Interstate Maintenance (IM)
3. National Highway System (NHS)
4. Bridge
5. Surface Transportation Program (STP)
6. Regional Surface Transportation Program (STP subprogram for urbanized areas with greater than 200,000 population)
7. Highway Safety Improvement Program (HSIP)
8. Congestion Mitigation and Air Quality Improvement (CMAQ)
9. Recreational Trails
10. Safe Routes to Schools
11. Rail-Highway Grade Crossing
12. Highway Priority Projects (Congressional Earmarks)

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13. Transportation Enhancements
14. Transportation, Community, and System Presentation Program (TCSP)
15. Scenic Byways
16. Federal Lands Highway Program (FLHP)

SAFETEA-LU also has funds available under federal-aid transit programs (i.e., administered by FTA) which, in order to be eligible for use by the implementing agency, must be programmed in the TIP. This includes the following:

1. Sections 5307 and 5340 – Urbanized Areas
2. Section 5308 – Clean Fuels Grant Program
3. Section 5309 – Capital Investment Grants “New Starts”
4. Section 5309 and 5318 – Bus and Bus Facility Grants
5. Section 5310 – Elderly and Persons with Disabilities
6. Section 5316 – Job Access and Reverse Commute (JARC)
7. Section 5317 – New Freedom Program
8. Section 5320 – Transit in the Parks

Projects included in the TIP include information on the implementing agency, location/service area, cost estimates, funding sources, amount of funds actually or scheduled for allocation, type of improvement, and other appropriate information. The TIP also includes a financial plan summary, GRTC’s Financial Capacity documentation and certification, project implementation status, public participation and the MPO/State Statement of Certification.

Note that SAFETEA-LU provides several significant changes to the TIP development process and document content which includes the following:

- The TIP must be updated at least every four years and contain at least four years of projects and strategies. Staff recommends that the TIP be updated annually based on state’s current process to annually adopt the SYIP.
- The TIP must be developed through the MPO’s adopted *Public Participation Plan* (adopted by MPO on April 12, 2007 and SAFETEA-LU compliant).
- Visualization techniques shall be employed to describe the TIP.
- The TIP shall be made available in electronically accessible formats (such as the RRPDC web site).
- SAFETEA-LU specifies that the development of the annual listing of obligated projects “shall be a cooperative effort of the state, transit operator, and MPO” and also shall include two new project types: “investments in

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pedestrian walkways and bicycle transportation facilities” for which federal funds have been obligated in the preceding year.

- The TIP will contain: priority list of projects and strategies for four years; financial plan; and description of work (type of work, termini, length, etc.) of each project in the TIP.

It should be noted that SAFETEA-LU expired in September 2009 with several extensions already approved by Congress. Staff will monitor the reauthorization and integrate any new/revised metropolitan planning requirements as they come into effect.

The MPO has lead authority for the allocation of Regional Surface Transportation Program (RSTP) and Congestion Mitigation Air Quality (CMAQ) program funds. RSTP funds are allocated under federal formula to the Richmond Urbanized Area while CMAQ funds are allocated by federal formula to the state and these funds are sub-allocated by state formula to EPA designated non-attainment and maintenance areas in the state. The Commonwealth Transportation Board (CTB) established a new policy on February 16, 2011, which directs the district CTB member to work with the appropriate MPO and with VDOT and DRPT staff to recommend to the Board a list of CMAQ projects for inclusion in the SYIP with all six years of CMAQ funds anticipated to be available to the MPO to be programmed; that CMAQ projects will be programmed to facilitate maximization of the use of federal funds including fully funding project phases according to current schedules and cost estimates; and that CMAQ allocations be programmed centrally by VDOT and DRPT staff based on the recommended CMAQ projects according to CTB priorities and federal eligibility requirements.

The MPO established its current RSTP and CMAQ funds project review, selection and funds allocation process on December 9, 2004. This process emphasizes allocating funds to projects by phase as each project moves forward in both the SYIP and TIP. After all current projects have been reviewed and allocations have been made to allow these projects to move forward, consideration to allocation of remaining funds is given to new candidate projects. Applications submitted by area local government and regional agency TAC members are reviewed and scored based on established criteria for project applications. These applications are reviewed and ranked by RRPDC and VDOT staffs. These findings are presented to TAC, which provides its recommendation to select projects and allocate funds by year. The TAC recommendation for CMAQ funds is then reviewed by the CTB member, and the TAC and staff recommendation is presented for MPO review and action.

Essential elements of the TIP are as follows:

1. Approval and Updates – The TIP must be approved by the MPO and the Governor, and must be updated at least every four years. The Richmond Area

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MPO's TIP is currently scheduled to be updated on an annual basis based on VDOT's annual preparation of the state's Six-Year Improvement Program.

2. **Scope of TIP** – The TIP must include all projects within the MPO's Study Area (including pedestrian walkways and bicycle transportation facilities) to be funded under Title 23 and the FTA.
3. **Financial Plan** – The TIP must include a financial plan component or element. The financial plan must demonstrate how the TIP can be implemented, and indicate resources from public and private sources that are reasonably expected to be made available to carry out the plan.
4. **Project Priorities** – The TIP must include a priority list of projects to be carried out over a four-year period, and a financial plan that demonstrates how it can be implemented. Projects within a funding category for a particular year can serve as an indicator of priority, such that first year projects are the highest priority, second year projects are the next highest priority, etc. Procedures or agreements that distribute sub-allocated STP or funds under 49 U.S.C. 5307 to individual jurisdictions or modes within the metropolitan planning area by predetermined percentages or formulas are inconsistent with legislative provisions that require the MPO, in cooperation with the state and public transportation operator, to develop a prioritized and financially constrained TIP, and shall not be used unless they can be clearly shown to be based on considerations required to be addressed as part of the MPO's planning process.
5. **Included Projects** – The TIP shall include capital and non-capital surface transportation projects (or phases of projects) within the boundaries of the metropolitan planning area proposed for funding under 23 U.S.C. and 49 U.S.C. Chapter 53 (including transportation enhancements, Federal Lands Highway program projects, safety projects included in the state's Strategic Highway Safety Plan, trails projects, pedestrian walkways, and bicycle facilities), except the following do not necessarily have to be included:
  - a. Safety projects funded under 23 U.S.C. 402 and 49 U.S.C. 31102;
  - b. Metropolitan planning projects funded under 23 U.S.C. 104 (f), 49 U.S.C. 5305 (d), and 49 U.S.C. 5339;
  - c. State planning and research projects funded under 23 U.S.C. 505 and 49 U.S.C. 5305 (e);
  - d. At the discretion of the state and MPO, state planning and research projects funded with National Highway System, STP, and/or Equity Bonus funds;

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- e. Emergency relief projects (except those involving substantial functional, locational, or capacity changes);
  - f. National planning and research projects funded under 49 U.S.C. 5314; and
  - g. Project management oversight projects funded under 49 U.S.C. 5327.
6. Project Selection – All federally funded projects, except NHS, Bridge, Interstate Maintenance and Federal Lands Highway Program projects are to be selected by the MPO in consultation with the state and public transportation operator (GRTC) from the approved TIP and in accordance with the TIP priorities. Projects that are on the NHS and projects funded under the Bridge and Interstate Maintenance programs are to be selected by the state in cooperation with the MPO from the approved TIP. Federal Lands Highway program projects shall be selected in accordance with procedures developed pursuant to 23 U.S.C. 204. The TIP serves as the project selection document.
7. Transportation Plan Consistency – All federally funded TIP projects must be consistent with the MPO's adopted Transportation Plan. As a management tool for monitoring progress in implementing the transportation plan, the TIP should:
- a. Identify criteria and process for prioritizing implementation of transportation plan elements (including multimodal trade-offs) for inclusion in the TIP and any changes in priorities from the previous TIP; and
  - b. List major projects from the previous TIP that were implemented and identify any significant delays in the planned implementation of major projects.
8. Air Quality Conformity – The MPO, along with FHWA and FTA, must make a conformity determination for projects listed in the proposed TIP, or for amendments that add or delete regionally significant projects. Conformity is generally defined in the CAAA as conforming to the adopted State Implementation Plan's purpose for eliminating and reducing the severity and number of NAAQS violations and achieving attainment status. In other words, the implementation of TIP projects must be shown to serve as part of the region's effort to improve air quality.
9. Agencies/Public Review and Comment – The public, affected agencies, representatives of transportation agency employees, other affected employee representatives, private providers of transportation, and other interested parties must receive a reasonable opportunity to comment on the proposed program.

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10. Environmental Justice – Assessment and documentation of the distributional effects of the metropolitan transportation investments are provided through the MPO’s LRTP and VDOT’s use of the NEPA process. The NEPA process that is completed by VDOT (or project administrator) address project specific Environmental Justice (EJ) analysis and documentation. With a regional level assessment of EJ covered by the LRTP and with project level EJ analysis covered by the NEPA process, an EJ component is not required at the TIP level.
11. MPO Certification – In TMA's, the USDOT Secretary shall certify the planning process at least once every four years. Note that the most recent federal certification review was conducted on March 25-26, 2009. A draft certification review report was issued by FHWA on June 18, 2010.
12. The state, public transportation operator and MPO shall, on an annual basis and within 90 days following the end of a program year, cooperatively develop a listing of projects (including investments in pedestrian walkways and bicycle transportation facilities) for which funds under 23 U.S.C. or 49 U.S.C. Chapter 53 were obligated in the preceding program year. This listing shall be prepared in accordance with Section 450.314 (a) of the MPO planning regulations and shall include all federally funded projects authorized or revised to increase obligations in the preceding program year, and shall at a minimum include the TIP information under Section 450.324 (e) (1) and (4) and identify for each project the amount of federal funds requested in the TIP, the federal funding that was obligated during the preceding year, and the federal funding remaining and available for subsequent years. This listing shall be made available for public review in accordance with the MPO’s public participation criteria for the TIP.

Note that the “Memorandum of Understanding on Metropolitan Transportation Planning Responsibilities for the Richmond Area” (MOU signed by the Richmond Area MPO, the Commonwealth of Virginia Secretary of Transportation, GRTC Transit System, and the RRPDC) states under the Annual Obligation Report section the following:

Within 60 days after the close of the federal fiscal year the Virginia Department of Transportation and the Virginia Department of Rail and Public Transportation shall provide the MPO with Annual Obligation Report information. To the extent possible, this report(s) will contain the projects (including investments in pedestrian walkways and bicycle transportation facilities) for which federal highway or transit funds were obligated in the preceding program year. It shall include all federally funded projects authorized including those revised to increase obligations in the preceding program year, at a minimum include TIP project description and implementing agency information and identify, for each project, the amount of federal funds requested in the TIP, the federal

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funding that was obligated during the preceding year, and the federal funding remaining and available for subsequent years. The MPO shall publish the Annual Obligation Report on the web and in accordance with any procedures outlined in the Public Participation Plan to ensure adequate access by the public and other interested stakeholders.

13. Freight shippers, providers of freight transportation services, and representatives of users of public transit are added to the list of parties that must be given the opportunity for review and comment on plans and TIP's.

Note that the TIP is posted on the RRPDC's web site and updates are made when the TIP is amended or adjusted (i.e., changes which the RRPDC staff is authorized to make to the TIP).

In addition to developing and maintaining the TIP, RRPDC staff identifies regional priority projects and advocates for the allocation of funds to these projects, and it has lead authority in allocating federal funds under the Regional Surface Transportation Program (RSTP) and Congestion Mitigation Air Quality (CMAQ) program

### **B. End Products**

1. Annual listing of obligated projects from preceding program year. (Projects to be submitted by VDOT and DRPT by December 1, 2011 and posted on RRPDC web site by December 30, 2011).
2. Maintenance activities in support of the current TIP including processing of TIP amendment and adjustment requests; and maintenance of records tracking the programming of RSTP and CMAQ funds.
3. Development and submission of the MPO's list of regional transportation priority projects.

### **C. Work Elements**

Work activities include the following:

1. Amendments/Adjustments – Based on requests from VDOT, local governments, GRTC, and other transportation agencies, RRPDC staff prepares and submits proposed amendments for TAC review and recommendation and for MPO action. Based on action taken at the July 14, 2005 MPO meeting, RRPDC staff is authorized to make certain changes to the TIP consultation with and written agreement from local government/agency TAC members and VDOT. Note that VDOT is responsible for advising the MPO as to the availability and amount of federal transportation funds to be obligated and this

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information is needed before proposed amendments/adjustments can be submitted for appropriate review and action.

2. Regional Surface Transportation Program (RSTP)/Congestion Mitigation/Air Quality (CMAQ) Tracking Sheets – Maintain record of RSTP and CMAQ funds allocated for area projects including record of past and current allocations and project close-out (showing funds remaining after project completion).
3. RSTP/CMAQ Project Selection – Conduct process for preparing and selecting RSTP and CMAQ projects and program selected projects in the TIP. Note that VDOT has recently (i.e., mid-FY 2011) established an ongoing process for financial close-out of completed RSTP and CMAQ projects. This will allow the MPO to reallocate RSTP and CMAQ funds remaining from completed projects.
4. TIP Participation Plan – Conduct participation plan that specifies procedures and process for providing reasonable opportunity for comment on the content of the TIP. This includes consultation with interested parties and consultation with federal, state, and local agencies when developing the draft TIP document.
5. Annual Listing of Obligated Projects – The annual listing of obligated projects report is to be submitted by VDOT and DRPT to RRPDC staff no later than December 1, 2011. Note that RRPDC staff supplements the VDOT and DRPT provided Annual Listing of Obligated Projects (covering projects with funds obligated in the preceding federal fiscal year) with those projects with planned obligations (VDOT's and DRPT's reports only cover actual obligations).
6. Public Review – Conduct public review process for final draft TIP document and air quality conformity analysis findings. Adopted TIP document, RSTP and CMAQ allocations, and regional priority projects should be posted in the RRPDC web site.
7. Visualization Techniques – Visualization techniques shall be employed to describe the TIP.
8. Conformity Analysis – Utilizing the regional travel demand model, RRPDC staff will model projects included in the draft TIP to determine vehicle miles of travel (VMT), which is used as input to the MOBILE 6.2 model (i.e., used to determine the amount of nitrogen oxides and volatile organic compounds emissions that are attributable to the region's highway and transit networks). Starting on March 2, 2010, EPA officially released the next generation of Motor Vehicle Emission Simulator (MOVES2010) model for use in SIP development and regional conformity applications. EPA also allows a two-year grace period (i.e., until March 2, 2012) until use of MOVES2010 is required in conducting the air quality conformity analysis. VDOT staff is charged with

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running the MOBILE 6.2/MOVES2010 model for analyzing projects included in the draft TIP, and prepares and submits the air quality conformity analysis report for RRPDC staff review, and for TAC review and recommendation. The RRPDC staff conducts the public review process for the draft air quality conformity analysis report, for RRPDC staff review, and for TAC review and recommendation. The RRPDC staff conducts the public review process for the draft air quality conformity analysis report.

9. Regionally Significant Projects – Under VDOT guidance, coordinate identification of regionally significant public and private transportation projects and submit to VDOT for air quality analysis purposes.
10. Federal Transportation Administration (FTA) Section 5310 Projects – Provide information on Section 5310 funds program to EDAC, area local governments and human service agencies. Action taken by the MPO to endorse requests for Section 5310 funding. Projects selected by the CTB and programmed in VDOT's Six Year Improvement Program. Selected projects are then reviewed by VDOT and recommended by VDOT for programming in the TIP given sufficient funds for obligation purposes.
11. Enhancement Projects – Action taken by the MPO to endorse requests for transportation enhancement program funds. Projects are selected by the CTB and programmed in VDOT's Six-Year Improvement Program. Selected projects are then reviewed by VDOT and recommended by VDOT for programming in the TIP given sufficient funds for obligation purposes.
12. Regional Priority Projects – Annual activity to identify the region's list of priority projects. These projects are described in a report document (i.e., Regional Transportation Priority Projects Report), submitted to the Commonwealth Transportation Board (CTB) for its review and consideration in allocating state and federal funds in the Six-Year Improvement Program (SYIP), and can be submitted by MPO member local governments and agencies in seeking federal, state and other potential sources of funds.
13. Next TIP – Work on the FY 12 – FY 15 TIP was initiated in January 2011 (based on notice provided by VDOT on January 21, 2011 that the new TIP is due to the CTB by mid-June 2011). Due to the short notice and time allowed by VDOT to develop and submit the new TIP, and due to action during the 2011 General Assembly session to approve most of the Governor's transportation funding initiative (approving approximately \$4 billion in new transportation funding), there may be significant amendments required to the new TIP (scheduled to be adopted at the June 9, 2011 MPO meeting) in early FY 2012. The MPO's Statement of Certification will be included with the new TIP.

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- 14. Coordinate listing and description of progress in the implementation of TCM's (if appropriate).
- 15. TIP Availability in Electronically Accessible Format – Post MPO adopted TIP and other appropriate documents on the RRPDC web site.

**D. Agency Participation**

RRPDC, VDOT, VDEQ, DRPT, Local Governments, GRTC, FHWA, EPA, FTA, RideFinders, CRAC, paratransit and other transportation operators, freight shippers, providers of freight transportation services, and representatives of users of public transit.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>TOTAL</u>
RRPDC	\$189,000	–	\$189,000

**F. Schedule**

- 1. TIP Amendments/Adjustments – Ongoing activity
- 2. Regional Priority Projects – July 2011 to November 2011
- 3. FY 13 to FY 18 RSTP/CMAQ Project Review and Selection – December 2011 to April 2012
- 4. Annual Listing of Obligated Projects Report – VDOT and DRPT to provide annual listing of actual project obligations during the preceding program year (i.e., federal fiscal year) to RRPDC by December 1, 2011 and final list to be posted on RRPDC web site by December 31, 2011.

**5.0 TRANSIT PLANNING**

**5.2 Elderly and Disabled Transportation Needs and Services**

**A. Background**

The Elderly and Disabled Advisory Committee (EDAC) is composed of individuals and organizations representing the region's elderly, disabled, and low income groups and advises the MPO on plans, studies, issues, and other matters related to the planning of public transportation services. It also assists GRTC by advising them of public transportation needs and issues of concern to the elderly and disabled community. EDAC will also serve as a review committee for work on UWP task 5.6, Coordinated Human Services Mobility Plan (see UWP task 5.6).

This task provides RRPDC staff support to ensure an active and involved EDAC and to assist the committee in developing up-to-date information on transportation needs of elderly and disabled in the Richmond area, their transportation needs, and available transportation services and resources. This task also provides for staff participation in various study activities addressing the region's specialized transportation services and serving on advisory committees involved with specialized transportation needs and services.

Staff prepares and submits EDAC meeting agendas and agenda attachments to several EDAC members by e-mail in an accessible format that allows visually impaired committee members to receive and read these materials. Information posted on the RRPDC/MPO web site is also accessible to these members.

One major work task for staff in FY 2011 has been the Transportation Operators Inventory report. This report provides an inventory of both public and private transportation service providers in the Richmond Region (including human service agencies and organizations, and public transportation operators). The report should cover for each operator (except for private contract operators under the Department of Medical Assistance Services program), information on number and types of vehicles, services offered, area covered, contact information, and certain other service related information. Staff anticipates having this draft report ready for review and action at either the June 9, 2011 or July 14, 2011 MPO meeting.

**B. End Products**

1. A functional and viable process that advises the MPO and GRTC on the special transportation needs of the elderly and disabled, and provides reports on elderly and disabled transportation needs and services.
2. Updated Transportation Operators Inventory report (completed late FY 2011 or early FY 2012).

**C. Work Elements**

1. Provide administrative and technical staff support for the EDAC.
2. Provide for EDAC review and participation in developing the Human Services Public Transportation Coordination Plan (see UWP task 5.6).
3. Update the Transportation Operators Inventory report of human service agencies, public transportation, and private transportation service providers. This is primarily an inventory of service operators, vehicles, contact information, and includes limited service information. Work on this report should be completed in late FY 2011 or early FY 2012. The last Transportation Operators Inventory report was completed in March 2005.
4. Staff participation on various human/social service agency/organization advisory committees and work groups.
5. Provide periodic status reports on various UWP work tasks and activities for EDAC review, information, and action as appropriate.

**D. Agency Participation**

RRPDC, GRTC, DRPT, local governments, FTA, EDAC appointing organizations, private and human service agency transportation operators.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 11 CO</u> <u>5303<sup>①</sup></u>	<u>TOTAL</u>
RRPDC	-	\$30,000	\$20,918	\$50,918

<sup>①</sup> 11/10/11 MPO action to add \$20,918 in FY 11 Section 5303 carryover funds.

**F. Schedule**

1. Transportation Operators Inventory – completed by late FY 2011 or early FY 2012
2. Other activities are ongoing.

**5.4 GRTC Transit Development Plan (TDP)**

**A. Project Description**

Transit Development Plans (TDPs) are designed to help transit operators improve their efficiency and effectiveness by identifying the need and required resources for modifying and enhancing services provided to the general public. TDPs also provide a solid foundation for funding requests and feed directly into the programming process (i.e., budgeting, funding and implementation of a transit operators capital needs program and transportation services). To capture the benefit of this planning tool, DRPT now requires that any public transit (bus, rail, ferry) operator receiving state funding prepare, adopt, and submit a TDP. DRPT requires that a TDP be completed every six years. DRPT also requires the annual submission of a letter by the transit operator describing progress made towards implementing the TDP and any significant changes. The planning horizon for the TDP is a minimum of six years (a longer planning horizon may be required to reflect significant capital replacement/rehabilitation needs, or the capital and operating budget implications of significant service expansion). Items identified by DRPT as the purpose of the TDP are as follows:

- To improve the efficiency and effectiveness of public transportation services in the Commonwealth of Virginia.
- To serve as a management and policy document for the transit operators.
- To maximize the investment of public funds and achieve the greatest possible public benefit.
- To provide the basis for inclusion of an operator’s capital and operating programs in planning and programming documents such as: the Six Year Improvement Program (SYIP), Statewide Transportation Improvement Program (STIP), Transportation Improvement Program (TIP) and Constrained Long-Range Plan (CLRP).

GRTC completed the Comprehensive Operations Analysis (COA) Final Report in March 2008. Some DRPT requirements may be addressed by the COA and some may be addressed in other GRTC reports and/or studies. Outlined under the UWP work elements are the chapters prescribed by DRPT to be included in the TDP.

**B. End Product**

An adopted Transit Development Program (TDP) that meets all DRPT specified requirements.

**C. Work Elements**

The adopted TDP will be required to address all plan requirements and its format must follow the chapter structure as specified by DRPT. Outlined below are the chapters to be included in the TDP with a brief summary of each chapter.

1. Overview of Transit System – Brief overview of the transit system including the following elements:
  - History
  - Governance
  - Organizational Structure
  - Transit Services Provided and Areas Served
  - Fare Structure
  - Fleet
  - Existing Facilities
  - Transit Security Program
  - Public Outreach
2. Goals, Objectives and Standards – Describe current goals, objectives and standards; process for their review and update; and changes from prior TDPs.
3. Service and System Evaluation – Describe the evaluation process and evaluate route-level and system-wide performance against current performance standards for each mode and/or type of service.
4. Service Expansion Project Descriptions – Provide a separate project description summarizing each service expansion project.
5. Operations Plan – Describe fixed route and demand response services the operator intends to provide over the TDP period. From the current base of operations, the plan will incorporate changes that reflect the ongoing evaluation of services/systems with respect to adopted goals, objectives, standards and legal and regulatory requirements. The plan should be constrained based on “reasonably” expected revenues.
6. Capital Improvement Program (CIP) – The CIP describes the capital programs required to carry out the operations and services identified in the operating plan. The CIP provides the basis for requests for federal, state and regional funding for capital replacement, rehabilitation, and expansion projects. The CIP should reflect the operator’s “reasonable” expectation of funding.
7. Financial Plan – A principal objective of the TDP is to demonstrate that the operator is planning a sustainable level of transit service over the planning period, including rehabilitation and replacement of capital assets. The capital and operating budgets need to consider expense forecasts; federal, state,

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regional and local revenue projections; future policies; labor or service agreements; competitive demands on funding; and regional priorities and policies.

8. TDP Monitoring and Evaluation – Describe the process that will be undertaken to periodically monitor and evaluate the progress that has been made towards successfully implementing the TDP and integrating it with other internal and external planning documents.
9. Appendix – The following documents must be included in the TDP appendix:
  - Most recent FTA Triennial Review report
  - Most recent Title VI report
  - Table containing the transit operator’s fleet inventory
  - Three-year retrospective of operating and capital expenses and revenues

Note that DRPT expects for MPOs to consider information in the TDP when developing MPO plans and creating the TIP. In view of this, the draft TDP shall be submitted and presented to the MPO’s Technical Advisory Committee (TAC) for review, comment, and recommendation to the MPO. The final draft TDP shall be submitted and presented to the MPO for review and action.

### **D. Agency Participation**

GRTC, GRTC consultant, RRPDC, DRPT, FTA, local governments, RideFinders

### **E. Budget, Staff and Funding**

	FY 11 CO		
	<u>5303</u>	<u>DRPT<sup>①</sup></u>	<u>TOTAL</u>
GRTC Consultant	\$65,000	\$74,614	\$139,614

<sup>①</sup> Action taken at February 17, 2011 Technical Advisory Committee meeting on behalf of MPO to amend UWP task 5.4 to program \$74,614 in DRPT Technical Assistance Grant funds (100% state funds).

### **F. Schedule**

Completion date is 11/1/11. Final TDP due to DRPT by 12/1/11.

## 5.5 Regional Public Transportation Services

### A. Background

The MPO *Regional Mass Transit Study* was completed and approved by the MPO in May 2008. The results from this study were incorporated into the MPO's adopted 2031 Long-Range Transportation Plan (LRTP) update. In addition, the MPO took action at its November 13, 2008 meeting to establish its list of regional priority projects, which included two new transit projects; Broad Street Bus Rapid Transit (from Willow Lawn to Rockett's Landing) and GRTC Downtown Transfer Center.

The MPO is involved with various agencies, jurisdictions, and organizations providing technical assistance and participation in various public transportation services studies, advisory groups and committees, and other activities supporting the development of public transportation services in the region. This work task provides for RRPDC staff participation in such activities. Work activities anticipated for RRPDC staff in FY 2012 include the following:

- Review and recommendation on the GRTC Bus Rapid Transit (BRT) Alternatives Analysis for the Broad Street corridor locally preferred alternative, and submit for MPO review and action.
- Provide for MPO review/participation in various rail studies and projects (e.g., Richmond/Hampton Roads Passenger Rail Project Tier I Final EIS, Main Street Station, Southeast High Speed Rail Corridor studies and projects, both north and south of the Richmond Region).
- Staff work to identify potential rail and transit improvement projects in the Richmond MPO study area eligible for RSTP and/or CMAQ funds, and conduct needed reviews and reports to move these potential projects forward for funding.
- Review of various local and regional proposals for expanded public transportation services.
- Attend/participate on various advisory committees and work groups. Includes staff participation as a member of the RideFinders Advisory Board, the DRPT Multimodal and Public Space Design Guidelines Steering Committee, and staff attendance at GRTC Board meetings and other meetings, conferences, webinars, and events.
- Staff review comments and recommendations to TAC and the MPO on the GRTC Transit Development Plan (TDP).

**B. End Products**

Ongoing RRPDC staff review and participation in local and regional public transportation service proposals and studies and state passenger rail studies.

**C. Work Elements**

1. Advisory Committees/Work Groups/Meetings – RRPDC staff participation on the GRTC/DRPT Broad Street Rapid Transit Study Technical Advisory Committee, RideFinders Advisory Board, DRPT Multimodal and Public Space Design Guidelines Steering Committee, and other public transportation related groups and organizations. Attendance at public transportation workshops, conferences and meetings.
2. Plans, EIS and Studies – Monitor, review, comment, and provide reports to the MPO and MPO committees on plans, studies, and Environmental Impact Statement (EIS) projects (includes EIS work currently underway for the Washington, D.C. to Richmond, Richmond to Raleigh/Charlotte, and Richmond to Hampton Roads High Speed rail corridors; and studies for Richmond area rail improvement projects). Also monitor, review, comment and report on GRTC, RideFinders, DRPT and local government public transportation plans, programs, projects and studies.
3. Other Studies and Projects – Monitor, review and comment, and advise the MPO as appropriate on public transportation and passenger rail projects and studies (includes Main Street Station, GRTC Downtown Transfer Center, and high speed rail studies and projects).
4. GRTC TDP – Work on the GRTC Transit Development Plan (TDP) is currently underway and it is scheduled to be completed and submitted to DRPT by December 2011. The draft TDP will be submitted and presented to the MPO Technical Advisory Committee (TAC) for review, comment and recommendation, and it will also be presented to the MPO for review and approval. Note that the MPO has allocated \$65,000 in FTA Section 5303 funds to GRTC for this study; DRPT has allocated \$139,614 in Technical Assistance Grant Funds. Upon completion of the TDP, it is DRPT's expectation that the TDP will be considered by the MPO when developing plans and when creating the TIP.
5. Richmond Area Rail and Transit Improvement Projects – Staff work to identify potential rail and transit projects in the Richmond MPO study area eligible for RSTP and/or CMAQ funds, and conduct needed reviews and reports to move these potential projects forward for allocation of funds (including RSTP, CMAQ and other potential funding sources).

**D. Agency Participation**

RRPDC, GRTC, RideFinders, local governments, DRPT, FTA.

**E. Budget, Staff, and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 11 CO</u> <u>5303<sup>①</sup></u>	<u>TOTAL</u>
RRPDC	–	\$46,000	\$8,000	\$54,000

<sup>①</sup> 11/10/11 MPO action to add \$8,000 in FY 11 Section 5303 carryover funds.

**F. Schedule**

Ongoing

**5.6 Coordinated Human Services Mobility Plan**

**A. Background**

SAFETEA-LU requires that as a condition of federal assistance covering FTA Section 5310 (Elderly Individuals and Individuals with Disabilities Program) Section 5316 (Job Access and Reverse Commute Program) and Section 5317 (New Freedom Program, funding new ADA type paratransit services), that the region prepare a coordinated public transit human services transportation plan for the coordination of transportation resources provided through multiple federal programs. This plan should enhance transportation access for elderly, disabled, and low-income individuals, minimize duplication of services, and encourage the most cost-effective transportation program possible. Note that SAFETEA-LU requires this coordination plan to be developed by a process that includes representatives of public, private, and nonprofit transportation and human service providers and participation by the public. In the Richmond area, the MPO working in coordination with GRTC, the Tri-Cities Area MPO, DRPT, and its study consultant, came up with a plan of action covering both MPOs (plan approved at the October 9, 2008 MPO meeting). Such coordination is required due to FTA Section 5316 and Section 5317 funds being allocated on a formula basis, which is based on the census designated Richmond Urbanized Area (which covers most of both MPOs' study areas). GRTC is the urbanized area designated recipient for administering these funds.

The Coordinated Human Services Mobility Plan (CHSMP) establishes the construct for a unified comprehensive strategy for transportation service delivery in both the Richmond Area and Tri-Cities Area MPOs. It is focused on unmet transportation needs of seniors, disabled, and low-income. The CHSMP includes the following federally required elements:

1. Assessment of available services identifying current providers (public and private).
2. Assessment of transportation needs of the elderly, disabled and low-income.
3. Strategies, activities, and/or projects to address the identified gaps between current services and needs, as well as opportunities to improve efficiencies in service delivery.
4. Priorities for implementation based on resources, time, and feasibility for implementing specific strategies and/or activities.

The CHSMP serves as a comprehensive, unified plan that promotes community mobility for the elderly, disabled and low-income; establishes priorities to incrementally improve mobility for these groups; and provides an ongoing process to identify partners interested, willing and able to promote community mobility for these groups. One remaining effort for the CHSMP planning process is the development of an ongoing structure and process for future coordinated

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transportation planning efforts. This effort should be initiated FY 2012 and the RRPDC staff is looking for guidance and direction from DRPT and GRTC in deciding when this work effort should get underway. Note that the MPO took action at its October 9, 2008 meeting to approve the CHSMP and to endorse the establishment of and authorize the participation of those designated by GRTC on a project review and selection committee for the purpose of reviewing and scoring applications for FTA Section 5316 and 5317 funds as administered by GRTC (MPO also specified the member organizations for this project review and selection committee).

At the January 19, 2011 CHSMP Stakeholders meeting and application review, DRPT announced that DRPT and their study consultant (KFH consultants) will conduct an update of the Richmond Region/Crater PDC CHSMP in FY 2012. DRPT advised that updates for CHSMP's are required every five years; however DRPT plans to conduct these updates every three years. This update will review the various strategies in the current plan to see if they are still valid. Note that MPO staff should have the Richmond Region Transportation Operators Inventory report completed in late FY 2011 and this can serve as a resource for this plan update/review. In addition, Senior Connections has received Section 5317 New Freedom grant funds from GRTC to begin the Richmond Regional Coordinated Mobility Management program called "Ride Connection." Ride Connection will be a centralized mobility manager system that provides information about transportation options, and coordinates responses to requests for transportation services, particularly for low-income, elderly and people with disabilities. By serving as a clearinghouse for transportation options, Ride Connections can facilitate the most cost-effective service for the traveler, and in most cases, make the reservation, schedule the ride, and possibly dispatch the most appropriate service operator. Since Ride Connection is being funded under the GRTC administered FTA Section 5317 New Freedom funds, the service area will be the Richmond Urbanized Area (use of these funds is limited to eligible public transportation services within the Richmond Urbanized Area).

DRPT also maintains and conducts a mobility management training program and has encouraged area human service agencies and organizations to participate in these training programs and work with other human service agencies and organizations to share and coordinate their limited transportation resources to have more effective and efficient services. DRPT is also encouraging human service agencies and organizations to utilize private transportation operators. Note that Chesterfield County contracts with the private company Van Go, Inc., which operates the Access Chesterfield program for qualified elderly, disabled and low-income Chesterfield County residents.

It should also be noted that Hanover County is working with Quin Rivers (Community Action Agency for Charles City and New Kent counties) and Bay Area Transit (which provides public transportation and human service agencies bus and van services to Charles City and New Kent counties, and to other jurisdictions in the Northern Neck and Middle Peninsula regions) to develop a plan for certain types of public transportation.

**B. End Product**

1. Amendment to the Coordinated Human Services Mobility (CHSMP) to define the ongoing structure and process for future coordinated transportation planning efforts.
2. Ongoing participation in the GRTC administered FTA Section 5316 and 5317 application review and scoring process.

**C. Work Elements**

Work activities include the following:

1. Develop the CHSMP ongoing structure and process for future coordinated transportation planning efforts (direction and guidance to be provided by DRPT and GRTC as to when this effort should be initiated; note that staff for the Tri-Cities Area MPO should also be aware and included in this effort). Development of this element should be conducted similar to the process used to develop the CHSMP. The structure is to be determined through input from a diverse group of stakeholders that represent transportation, aging, disability, social service and other appropriate organizations in the Richmond and Tri-Cities regions. A proposed starting point for this effort will include participants from previous CHSMP development workshops and EDAC members, alternates and interested parties. While formal responsibilities and organization roles will be determined locally, it is anticipated this structure will:
  - Lead updates of the Richmond/Petersburg Metropolitan Planning Area's *Coordinated Human Service Mobility Plan* based on local needs (but at the minimum FTA required cycle).
  - Provide input and assist public transit and human service transportation providers in establishing priorities with regard to community transportation services.
  - Review and discuss coordination strategies in the region and provide recommendations for possible improvements to help expand mobility options in the region.
  - Provide input on applications for funding through the Section 5310, JARC, and New Freedom competitive selection process.

[Note work activities and responsibilities for this work element will need to be reviewed and assigned to appropriate staff agencies; i.e., GRTC, RRPDC, and/or Crater PDC.]

2. Work with DRPT and their consultants to conduct the update of the Richmond Region/Crater PDC CHSMP.

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3. Ongoing participation in the GRTC administered FTA Sections 5316 and 5317 project application review and scoring process.
4. Provide technical and administrative assistance to DRPT in conducting reviews of requests for FTA Section 5310 funds (including reviews of application procedures and addressing applicants' transportation needs including coordination with other area transportation providers and human service agencies and organizations).
5. Monitor and report to the MPO, EDAC and TAC on various public transportation services and programs for the elderly, disabled, and low-income persons in the Richmond Region.
6. Assist in notification and coordination of DRPT's regional CHSMP stakeholders/team meetings and provide assistance with grant applications.

**D. Agency Participation**

RRPDC, DRPT, VDOT, GRTC, local governments, human service agencies/ organizations, public and private non-profit paratransit service operators, FTA.

**E. Budget, Staff and Funding**

	<u>5303</u>	FY 11 CO <u>5303<sup>①</sup></u>	<u>TOTAL</u>
RRPDC	\$14,000	\$2,000	\$14,000

<sup>①</sup> 11/10/11 MPO action to add \$2,000 in FY 11 Section 5303 carryover funds.

**F. Schedule**

1. Developing CHSMP ongoing structure and process for future coordinated transportation planning efforts – To be determined (following consultation with GRTC, DRPT, and Crater PDC).
2. Project application process – to be determined (to be initiated by GRTC).
3. Update of Richmond Region/Crater PDC CHSMP – to be determined (study to be initiated by DRPT).

**5.7 Richmond Bus Rapid Transit (BRT) Alternatives Analysis**

**A. Project Description**

The Richmond Bus Rapid Transit (BRT) Alternatives Analysis (AA) and Environmental Assessment will develop a detailed problem statement representing the purpose and need of the project from which project goals and objectives will be derived. The Alternatives Analysis will be conducted in accordance with the Environmental Assessment (EA) guidelines, as required by the National Environmental Protection Act (NEPA) of 1969.

A definition of alternatives will be developed to: 1) meet the study’s problem statement goals and objectives for the improvements, 2) isolate the differences between potential solutions to an identified transportation problem, and 3) highlight the tradeoffs inherent in the selection of a locally-preferred alternative (LPA). The “build” and Transportation System Management (TSM) alternatives will be included in the definition of alternatives report and will be directly related to and address the “purpose and need” of the project. An “Evaluation of Alternatives” report will be developed in a manner that will provide the information necessary for local officials and the general public to understand the relative costs and benefits among the alternatives and to ultimately select the LPA. The evaluation framework will focus on the transportation problems identified in the project’s purpose and need and will reflect the corresponding project goals and objectives that will fundamentally drive the alternatives analysis. A detailed station area analysis will be conducted to identify appropriate station locations and assess the adjacent land-use compatibility. Ridership forecasts will be developed to contribute to the evaluation of the alternatives. Detailed capital and operating costs will be developed to reflect each alternative, along with a preliminary financial plan. The financial plan will reflect the recent financial history of GRTC, document projected costs and revenues into the future, and demonstrate the reasonableness of key assumptions underlying these projections. The financial plan will aid decision makers in understanding the costs associated with constructing, operating and maintaining each of the alternatives on an annual basis.

The BRT alternatives analysis study area is along the Broad Street Corridor starting at Willow Lawn (in Henrico County) extending east on Broad Street in the City of Richmond to downtown, then proceeding along the Route 5 corridor to the Rocketts Landing development in the City of Richmond and Henrico County.

The Project Team will collaborate with a Policy Advisory Committee (PAC) and a Technical Advisory Committee (TAC) that is comprised of representatives from the City of Richmond and Henrico County, as well as representatives from the Virginia Commonwealth University (VCU), the Convention Center, the MPO, etc. In addition to the TAC and PAC oversight, public outreach and communications to the public will facilitate DRPT’s and GRTC’s ability to gain public involvement and input throughout the AA and EA planning and project development process.

**B. Project Budget**

In FY 2009, DRPT and GRTC programmed \$720,000 flexible STP (allocated by the state) and local match of \$180,000 (\$90,000 state and \$90,000 GRTC). In FY 2010 DRPT and GRTC programmed \$873,142 of Section 5304 funding (allocated by the state) and local match of \$180,000 (allocated by GRTC) to provide an additional \$1,053,142 of funding to the project. The total project budget between FY 2009 and FY 2010 is \$1,953,142.

**C. Schedule**

- June 2011 – Public meetings on Locally Preferred Alternative
- Summer 2011 (late FY 2011/early FY 2012) – Finalize funding plan and environmental document.
- Fall 2011 (early/mid-FY 2012) – Submit FTA Small Starts application (contingent upon favorable response from City of Richmond and Henrico County on proceeding with application).

**5.8 Richmond Area Rail Studies and Projects**

The following presents a brief informational report on statewide and Richmond Region passenger rail studies and projects.

**Virginia State Rail Plan**

The *Virginia Statewide Rail Plan* analyzes the current state of Virginia’s rail system and recommends segments for improvement. The *Virginia Statewide Rail Plan* has been developed in accordance with guidelines (49 CFR 266.15) set out by the Federal Railroad Administration (FRA) for state plans in order to ensure that Virginia’s rail plans are consistent with federal funding requirements. The *Virginia Statewide Rail Plan* has been incorporated into the Commonwealth’s long-range multi-modal transportation plan, *VTrans 2035*.

The draft Rail Plan was made available for public comment in June 2008 and public hearings were held across the state and comments were received through August 2008. The *Virginia Statewide Rail Resource Allocation Plan* was released in December 2008 to assist in programming funds. The *Virginia Statewide Rail Plan* was completed in December 2008.

**Southeast High Speed Rail – Raleigh to Richmond**

In cooperation with the North Carolina Department of Transportation (NCDOT), the Virginia Department of Rail and Public Transportation (DRPT) continues to advance high speed rail in Virginia, and the Commonwealth’s contributions toward the Southeast High Speed Rail Project will:

- Evaluate high speed passenger rail service on the designated high speed rail corridor from Raleigh, N.C. through Richmond to Washington, D.C.;
- Evaluate the high speed rail connection between Hampton Roads and Richmond’s Main Street Station;
- Provide passengers with a more cost-effective, competitive alternative to air travel; and
- Connect Virginia to the Northeast Corridor, the only active high speed rail corridor operating in North America.

The Commonwealth, Amtrak, and CSX will coordinate all project-related rail improvements and operations. The project will be managed through a public-private partnership between the Commonwealth, North Carolina, CSX, Norfolk Southern and federal partners. DRPT is coordinating with the NCDOT to complete the Tier II Environmental Impact Statement (EIS) and seek a federal Record of Decision for railway and associated highway design in the corridor from Richmond Main Street Station to Raleigh, N.C. The draft Tier II EIS has been completed and public hearings were held during the summer of 2010. The final Tier II EIS is expected to be completed by mid-2011. A Record of Decision from the U.S. Federal Rail

Administration (FRA) for this segment of the SEHSR corridor is expected in late 2011. This action would be followed by right-of-way and permit acquisitions. Right-of-way and construction dates will depend on funding with earliest right-of-way acquisition beginning in mid-2012. Project sponsors are projecting high speed rail passenger service, pending sufficient funding, could potentially commence during the 2018 – 2022 time period.

**Southeast High Speed Rail – Richmond to Washington, D.C.**

On May 27, 2009, DRPT announced that the high speed rail route between Main Street Station and Doswell (Hanover County) was established following the completion of an environmental study to select the most feasible route between these two points. The study looked at an eastern route, which followed the Buckingham Branch line, and a western route, which followed the CSX rail line (which currently serves Amtrak routes). FRA notified DRPT on May 13, 2009 that findings from the environmental study were confirmed and that the eastern route may be dismissed from further consideration. With this announcement, the SEHSR corridor from Main Street Station north to Washington, D.C. was now defined. On August 10, 2010, DRPT announced that it had submitted an application for funding from FRA to advance development of the portion of the Southeast High Speed Rail Corridor (SEHSRC) from the Main Street Station to Washington, D.C. The application was for \$55.385 million (\$44,308,000 in federal funding and \$11,077,000 in non-federal match) to conduct preliminary engineering and National Environmental Protection Act (NEPA) EIS activities along this corridor. DRPT also submitted an application of approximately \$1.5 million for preliminary engineering/final design of a new rail bridge across the Appomattox River in Chesterfield County and the City of Petersburg. On October 29, 2010, Virginia Senator Jim Webb announced that \$45.4 million in federal transportation grant funds to develop high speed passenger rail service between Richmond/Petersburg and Washington, D.C. were approved.

DRPT has provided the MPO the following timeline for developing high speed rail in the Richmond area to Washington, D.C. corridor:

- Conduct preliminary engineering and Tier II EIS (from EIS to Record of Decision) – 2012 to 2020
- Negotiate with railroad and apply for federal funds for construction – 2020 to 2021
- Receive federal funding and obligate funds – 2021 to 2022
- Construction – 2022 to 2029
- Service begins – 2034

The Arkendale to Powell's Creek (in Northern Virginia Section of rail corridor), third main line track covering 11 miles, has been fully funded by ARRA (\$75 million). Environmental assessment and preliminary engineering work is being finalized. Negotiations with FRA and CSX are underway.

**Richmond to Hampton Roads Passenger Rail Project**

The DRPT is pursuing improved passenger rail service in the major east-west travel corridor between Richmond and the Hampton Roads regions of Virginia, to ultimately connect to the Southeast, Northeast and Mid-Atlantic regions as an extension of the Southeast High Speed Rail Corridor. This potential project could include improvements to existing service or the development of new rail service to accommodate frequent passenger trains. New service could include a link to Hampton Roads via Route 460, rail improvements to existing lines in or around Petersburg. VDPRT completed a series of public meetings on the Tier I Draft Environmental Impact Statement document on alternatives for Richmond to Hampton Roads passenger rail service. The Richmond Area MPO took action at its February 11, 2010 meeting to endorse Alternative One of the Tier I Draft EIS and noted its further support of high speed rail, which is summarized as follows:

- Reaffirms the MPO's strong support for the extension of high speed rail in the Washington, D.C. to Richmond Region corridor followed by high speed rail from the Richmond Region east to the Hampton Roads Region and south along the Southeast High Speed Rail corridor.
- Supports high speed rail capable of more than 110 mph along the U.S. Route 460 corridor connecting Richmond to Norfolk.
- Supports enhancing passenger rail along the Peninsula I-64 corridor from Richmond to Hampton Roads.
- Urges DRPT to move forward as quickly as possible to complete all plans and programs for high speed rail in the Washington, D.C. to Richmond Region corridor.
- Pledges MPO support to assist DRPT in its efforts to secure high speed rail funding for service throughout the state.

The Commonwealth Transportation Board (CTB) took action at its February 18, 2010 meeting to select Alternative One as the preferred alternative. Following FRA review and action, DRPT plans to proceed with developing the final draft EIS based on Alternative One as the Preferred Alternative.

The CTB has also allocated approximately \$87 million in state only funds for the restoration of conventional passenger rail service between Richmond/Staples Mill Road Station and Norfolk via the Ettrick Station in Chesterfield County. The corridor being developed for this service is ultimately being planned by the state for high speed passenger rail service that would connect with Southeast, Northeast and Mid-Atlantic regions as an extension of the SEHSRC. This project could include potential improvements to existing rail stations or development of new passenger rail stations to accommodate conventional passenger trains. On December 20, 2010, it was announced that the state and Norfolk Southern Corporation (NS) have signed an agreement to upgrade the company's railroad track between Petersburg and Norfolk in order to accommodate passenger trains. The track work includes improved signaling, track extensions and connections, passenger train turning and servicing facilities,

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and a track and platform near Norfolk's Harbor Park. It also includes a new connection between NS and CSX tracks near Petersburg. Construction is expected to begin in 2011 and service could begin in 2013. The trains will be part of Amtrak's Virginia regional service and will operate at up to 70 mph between Norfolk and Petersburg. Initial service is expected to have three departures.

**6.0 INTERMODAL PLANNING**

**6.1 Intermodal Planning**

**A. Background**

In FY 02, the MPO completed work on the Richmond Regional Intermodal Transportation Study. This study examined the potential for an intermodal freight center in the Richmond/Tri-Cities area. It also examined the region's freight transportation network (i.e., highways, rail, airport, and port) and provided recommendations to improve freight movement. While the study concluded that the region did not need an intermodal facility at this time, it recommended the establishment of an Intermodal Advisory Task Force charged with monitoring future demand for such a facility. The study was accepted by the MPO at its February 14, 2002 meeting and a 46-member task force was jointly established with the Tri-Cities Area MPO and approved at the MPO's June 13, 2002 meeting. Due to other work priorities and limited staff resources, the RRPDC did not conduct follow-up work activities for intermodal planning as identified in the study or conduct any task force meetings.

With the passage of SAFETEA-LU and growing concern over the movement of freight through the Richmond region, there is a renewed interest and need to address freight transportation issues and needs. Part of this need is being addressed under work being conducted by VDOT to develop a statewide Multimodal Freight Study. This effort was initiated in October 2006 with a Phase One report being completed in early 2008. The Phase Two report was completed in early FY 10 with recommendations incorporated into the VTrans 2035 Statewide Transportation Plan. The Statewide Multimodal Freight Study provides a comprehensive look at Virginia's freight issues covering all transportation modes at statewide and corridor levels, and all types of freight movement (local/regional and through).

VDOT has provided the MPO with 2004 commodity flow data for the Richmond region (provided to VDOT under contract with Global Insight, Inc.). Staff was able to use this data for an analysis of region-wide freight data (examining commodity flow data by load, tonnage and value) in the 2031 LRTP Update. Note this is proprietary data and staff reviewed proposed tables and data included in the LRTP with VDOT before its release and publication.

In May 2010, the MPO's Intermodal Strategies and Action Study was completed. Work on this study was initiated in October 2008 and was funded under a VDOT Multimodal Planning Grant. It identifies roadway designations and policy measures to improve accommodation of current and future truck traffic and presents a summary of infrastructure improvement

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projects. These strategies and actions will help the MPO in addressing various regional freight movement needs and will be included for consideration as part of the upcoming 2035 LRTP and CMP Updates. In addition, project recommendations may also be considered for funding (following the state and the MPO's process for reviewing and selecting projects and allocating and obligating funds).

A major innovation in freight movement, initiated by the Richmond Area MPO, has been the highly successful "64 Express" James River Barge service operating between the Port of Richmond and Hampton Roads marine terminals. The service concept was proposed in November 2007 and the service was launched in December 2008 as a cooperative venture by the MPO, the Port of Richmond, the Virginia Port Authority, and Norfolk Tug. It has provided once or twice weekly service transporting about 100 to 160 truck containers. An estimated 12,000-plus truck trips (estimated at 90 miles per trip) were eliminated in its first year of operation. It removes oversize and overweight containers from the Region's roads and provides 30-plus gallons of diesel fuel saved per trip. The MPO initiated the service by allocating approximately \$3.9 million in federal and state CMAQ funds for a three-year demonstration period. Currently the City of Richmond and VPA are negotiating a lease arrangement for VPA's operation of the Port of Richmond and the continuation of the 64 Express. Note that the Port of Richmond currently has no regularly scheduled deepwater ships calling on the Port and the 64 Express is the only regularly scheduled shipping operation.

In FY 2011, RRPDC staff will work with the City of Richmond, VPA, DRPT, and VDOT in addressing highway and rail access issues at the Port of Richmond. Staff will also coordinate the MPO's transportation planning and programming work with the upcoming Regional Comprehensive Economic Development Strategies (CEDS). A CEDS for the City of Richmond was recently approved by the Economic Development Administration (EDA) and staff anticipates that the Regional CEDS will be underway in early FY 2012 pending the availability of federal funding to support this effort. The MPO has also proposed the allocation of RSTP and CMAQ funds for the new Port Opportunity Zone Improvement projects. This will allow for use of CMAQ and RSTP funds in making various highway and rail access, operational and efficiency land-side improvements to and from the Port of Richmond.

### **B. End Products**

On-going technical support for regional and state multi-modal transportation planning activities, projects and programs.

**C. Work Elements**

1. Port of Richmond Strategic Economic Development – RRPDC staff to review with the City of Richmond and Virginia Port Authority staffs and officials, and with other interested parties, revisions/updates to capital facility plans and programs. Staff will also assist in strategic development activities and rail and roadway access improvements to and from the Port of Richmond terminal. Staff will also coordinate with the City of Richmond and VPA in continuing and expanding the “64 Express” James River Barge Service.
2. Intermodal Economic Development Strategies – The City of Richmond recently completed a CEDS. The RRPDC should also lead in the development of a CEDS for the Richmond Region (anticipated to begin in FY 2012). A review and analysis of the Port of Richmond and its role in the City Regional CEDS is anticipated (especially in industrial and warehouse areas located near the Port of Richmond).
3. Intermodal Strategies and Actions Study – Provide staff technical and administrative assistance in carrying out various programs and follow-up activities as identified in the Intermodal Strategies and Actions Study (completed in May 2010). Staff anticipates that an annual freight forum for freight users and local regional and state government organizations will be established to provide for continuing input from the freight users community carrying out various strategies and actions, and continuing the regional freight planning process. Prior to initiating the freight forum, staff will hold informal meetings and discussions with various freight users/modes, shippers, and other interested parties. Results from the freight forum should be useful as input for the MPO’s 2035 LRTP Update, the Port of Richmond strategic development programs and activities, and in addressing road and rail access issues throughout the Richmond Region including the Port of Richmond and other intermodal terminals.
4. General Freight Planning Activities – RRPDC staff support for state and local governments, economic development organizations, and freight interest groups and organizations for freight related planning activities. Also, participate on VDOT and other advisory committees and groups involved in multimodal freight planning.

**D. Agency Participation**

RRPDC, VDOT, DRPT, Crater PDC, CRAC, VPA, local governments, FHWA, MARAD, public and private shippers/freight operators.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>TOTAL</u>
RRPDC	24,000	–	\$24,000

**F. Schedule**

Ongoing

**7.0 AIR QUALITY PLANNING**

**7.1 Air Quality Plan and Program Activities**

**A. Background**

The Clean Air Act Amendments (CAAA) of 1990 present serious air quality improvement challenges to almost all of the nations mid-size to major metropolitan areas. To meet this challenge, the state has pursued a program of reduction measures, which includes various stationary source control measures, stage 2-vapor recovery, clean fuels, and other measures.

In FY 1995, the Metropolitan Richmond Air Quality Committee (MRAQC) was established as the Section 174 Lead Planning Organization (LPO) based on appointments by the Governor's office. Representation on MRAQC includes local elected officials from non-attainment area jurisdictions (i.e. Richmond, Henrico, Chesterfield, Hanover, Charles City, Colonial Heights, Hopewell and Prince George), from the Richmond and Tri-Cities Area MPOs, the Crater and Richmond regional planning district commissions and agency representatives from VDOT and VDEQ. The role of the LPO is established and defined in general terms in Section 174 of the CAAA. It is also described in the Richmond Area and Tri-Cities Area Memorandum of Understanding (MOU) for Air Quality and Transportation Planning Coordination. Section 174 of the CAAA provides that the LPO shall prepare the state implementation plan (SIP) revisions, and determine those elements of the SIP to be implemented by the state, local governments, regional agencies, and others. In FY 1997, VDEQ staff submitted a request to EPA for designating the area to attainment status. In November 1997 EPA issued notice in the Federal Register noting the Richmond Area to be in attainment status for ozone air quality standards and was designated as a Maintenance Area. Since that time however, EPA has designated the Richmond area (i.e., City of Richmond, Petersburg, Colonial Heights and Hopewell, and counties of Charles City, Chesterfield, Hanover, Henrico, and Prince George) to be a marginal nonattainment area for ozone air quality standards. The Richmond area nonattainment designation went into effect on June 15, 2004 with its status being set at a marginal level shortly after that time (Richmond was a moderate nonattainment area at one time under EPA's one-hour ozone air quality standards).

In FY 05, VDEQ reconstituted the Metropolitan Richmond Air Quality Committee (MRAQC) which is the Lead Planning Organization (LPO) under Section 174 of the CAAA. Appointments of local elected officials and agency members were made in FY 05 and MRAQC held its first meeting in November 2005 (FY 06) initiating work to develop the region's State Implementation Plan (SIP). At its May 10, 2006 meeting, action was taken to approve proposed control strategies (as part of the extension of the Richmond nonattainment area into the newly added areas, which are the City of

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Petersburg, Prince George County, and the remaining area of Charles City County; previously only a small part of Charles City County was in the nonattainment/maintenance area). MRAQC also took action to approve contingency measures (required as part of the contingency plan included in VDEQ's request for redesignation of the Richmond nonattainment area to attainment/maintenance status).

In March 2008, RRPDC staff received notice of action by EPA to lower the 8-hour ozone standard to 0.075 parts per million (it was previously set at 0.08 ppm). As a result of this change and based on the past three years of data exceeding these new standards, the Richmond and Tri-Cities Maintenance Area jurisdictions (i.e., Richmond, Henrico, Hanover, Charles City, Petersburg, Colonial Heights, Hopewell, and Prince George) will be redesignated to nonattainment status. These designations were expected to occur in March 2010. However, on January 6, 2010, EPA proposed to strengthen the national ambient air quality standards (NAAQS) for ground-level ozone, the main compound of smog. EPA proposed that the 8-hour primary ozone standard be changed to a level within the range of 0.060 to 0.070 ppm (the current primary 8-hour average ozone standard is 0.075 ppm). After one delay in setting the final standard, EPA has again requested an extension of the timeline for finalizing the standard to no later than July 31, 2011. As of February 2010, this request was before the court with jurisdiction over a lawsuit related to the standard and had not yet responded to EPA's request.

An important activity that the MRAQC should consider when development of the next SIP is underway is consideration of emissions budgets (e.g., mobile, point, and area-wide sources). It is staff's understanding that the new "MOVES2010" emissions analysis model generally show higher levels of NO<sub>x</sub> and VOC emissions than the current MOBILE 6.2 model. This may result in emissions budget levels for mobile sources that the LRTP and TIP cannot meet.

It is important to note that in a separate rule, EPA proposed in July 2009 to modify the ozone air quality monitoring network design requirements. The proposed monitoring revisions would change minimum monitoring requirements in urban areas, add new minimum monitoring requirements in non-urban areas, and extend the length of the required ozone monitoring season.

This work task also provides for RRPDC and VDOT staff work activities for conducting air quality conformity analysis in support of the TIP and LRTP. VDOT is responsible for conducting the air quality conformity analysis using the MOBILE 6.2 model (used to determine the amount of Nitrogen Oxides and Volatile Organic Compounds emissions that are attributable to the region's highway and transit networks). Note that starting in March 2012, VDOT will be required to use EPA's new emissions analysis model

“MOVES 2010” (Motor Vehicle Emission Simulator, first released for use in 2010). The RRPDC staff is responsible for developing the vehicle miles of travel (VMT) input for MOBILE 6.2 and MOVES2010 (staff will be using the regional travel demand model). RRPDC staff is also responsible for conducting the public review process when an air quality conformity analysis is conducted, and also provides staff support for TIP, LRTP, and TIP/LRTP amendments (when appropriate) review and coordination.

Staff work activities includes identification of projects, project descriptions, submission of socioeconomic data and forecasts, coordinate/conduct project reviews with local staff and other administrative and coordination activities.

**B. End Products**

Administrative support for MPO activities involving development of the non-attainment area state implementation plan and air quality conformity analysis.

**C. Work Elements**

1. Monitor air quality data for the Richmond area, and review EPA and Virginia Department of Air Pollution Control reports, guidelines, regulations, etc.
2. Limited administrative support for MPO participation in developing the nonattainment area implementation plan. (VDEQ serves as lead staff to the MRAQC).
3. Review, comment, and conduct other activities necessary for the nonattainment area planning process.
4. Review and comment on the area’s emissions inventory, especially information relating to mobile sources and transportation control measures.
5. Computer modeling using the regional travel demand model for development of VMT data required for maintenance plan/nonattainment area plan implementation.
6. Computer modeling using MOBILE 6.2 and/or MOVES2010 for conducting emissions reductions estimates as part of the conformity analysis process. Note that VDOT plans to use MOVES2010 for the 2035 LRTP Update since this plan is scheduled for review and action after March 2012 (the point where the two-year grace period on continued use of MOBILE 6.2 will end). [VDOT]
7. Conduct air quality conformity analysis activities in support of the TIP and LRTP [RRPDC and VDOT].

**D. Agency Participation**

RRPDC, VDOT, DRPT, VDEQ, MRAQC, GRTC, RideFinders, local governments, FHWA, EPA, FTA, and Tri-Cities MPO.

**E. Budget, Staff, and Funding**

	<u>PL</u>	<u>5303</u>	<u>TOTAL</u>
RRPDC	25,000	5,000	\$30,000

**F. Schedule**

Ongoing activity

**8.0 BICYCLE AND PEDESTRIAN PLANNING**

**8.1 Bicycle and Pedestrian Planning**

**A. Background**

This task provides RRPDC staff time in support of work by area groups, organizations and local governments to advance bicycle and pedestrian studies, programs and projects in the Richmond Region.

In mid-2008 the Capital Region Greenway Group, an ad hoc collaboration between the City of Richmond Department of Parks and Recreation; the City of Richmond Department of Community Development; various departments and citizens of Henrico, Chesterfield, Goochland, New Kent and Hanover Counties; the Virginia Department of Conservation and Recreation; the Capital Trail Foundation; the Richmond Area Bicycling Association; Bike-Walk Virginia and a Richmond City Council representative approached the MPO for assistance. The requested assistance would be in coordinating and advancing bicycle and pedestrian efforts supporting the 2004 Regional Bicycle and Pedestrian Plan. The plan was a collaboration between the MPO and VDOT to provide a regional network of bicycle and pedestrian amenities, and was adopted by the MPO as a study.

Efforts to improve bicycle and pedestrian access, whether on or off-road are in keeping with the Virginia Department of Conservation and Recreation 2007 Outdoors Plan, the 1993 Regional Greenways Plan, and various efforts already underway in the Region. The Virginia Capital Trail is nearing completion except for a portion in Henrico County (west of I-295) which is currently under review. The East Coast Greenway (ECG), a continuous path from Florida to Maine, requires a regional thoroughfare through this region and needs a local effort to support it. The James River Heritage Trail (JRHT) is shown running along the south shore of the James River in Chesterfield and Powhatan counties and the City of Richmond. Both the ECG and the JRHT are shown in the Virginia Outdoors Plan as proposed trails.

In mid-FY 2011, RRPDC staff presented a report at the November 18, 2010 TAC meeting on staff work completed to date for bicycle and pedestrian planning in the Richmond Region. The report noted the status of several major routes and projects, reported on staff technical assistance to the City of Richmond for various multi-purpose trail projects, and provided an inventory of bicycle facilities and routes in the Richmond Region. Due to staffing changes, work to complete the inventory of bicycle facilities and routes was put on hold. Staff anticipates that some additional work on the regional inventory will be completed in FY 2011 and FY 2012, and this information will be included as input for the development of the Bicycle and Pedestrian element of the 2035 LRTP Update. Staff will also review and include information from local governments' comprehensive land-use and

transportation plans as part of the 2035 LRTP Update Bicycle and Pedestrian element.

At its October 14, 2010 meeting, the RRPDC Board's Executive Committee members expressed an interest in playing a role to develop a comprehensive inventory of existing facilities and promoting coordination among those jurisdictions that are interested in working to connect these facilities with the RRPDC staff providing technical assistance in developing maps and documents that address current, programmed and planned bicycle and multi-purpose (i.e., bicycle and pedestrian) trail facilities. Consideration for including these planned connections and recommendations for their development and implementation will be included in the 2035 LRTP Update. Special attention should be given to assessing the bicycle and pedestrian facilities within the GRTC local bus service area in order to improve accessibility to and from bus stops.

**D. End Products**

1. Development of the Richmond Regional Inventory of Bicycle and Pedestrian Facilities.
2. Identified connections to current and committed bicycle and pedestrian facilities and routes that are supported by the appropriate local government and provide a viable regional network of bicycle and pedestrian routes and facilities.
3. Specific pedestrian and bicycle facility projects utilizing RSTP and CMAQ funds allocated under the Region-wide Bicycle/Pedestrian Improvements project.

**C. Work Elements**

Federal legislation requires that MPO activities provide for all means of transportation, "including accessible pedestrian walkways and bicycle transportation facilities". This task further satisfies federal regulations by ensuring that there are a sufficient number of projects which minimize transportation-related fuel consumption and air pollution, and which protect and enhance the environment and improve quality of life (23 CFR sec 450.000 (a) and 450.306 (a)(5)).

Work activities include the following:

1. Complete work on a regional inventory of existing, planned, signed and designated bicycle routes and facilities.
2. Conduct review of census (American Community Survey) Journey to Work data to identify the number and percent of residents who walk to work (note this is one of the MPO's Regional Performance Measures

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which responds to the General Assembly’s performance measure for Job and Housing Access to Pedestrian Facilities).

3. Provide for development of the Richmond Regional Inventory of Bicycle and Pedestrian Facilities, work with interested local government staffs and officials in planning for routes to connect and facilitate development of a regional bicycle and pedestrian network, provide recommendations for their development and implementation, and provide for their consideration and incorporation into the 2035 LRTP Update.
4. Participation in National Park Service and Virginia Department of Conservation and Recreation meetings/work activities for regional/multi-state trail facilities (e.g., East Coast Greenway, James River Heritage Trail, etc.).

**D. Agency Participation**

RRPDC, VDOT, DRPT, GRTC, FHWA, National Park Service, local governments and interested parties (e.g., Richmond Area Bicycling Association, Partnership for Smarter Growth, etc.)

**E. Budget, Staffing and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 11 CO</u> <u>5303<sup>①</sup></u>	<u>TOTAL</u>
RRPDC	\$25,000	\$5,000	\$3,000	\$33,000

<sup>①</sup> 11/10/11 MPO action to add \$3,000 in FY 11 Section 5303 carryover funds.

**F. Schedule**

Ongoing activity.

**AGENCY BUDGET SUMMARY SHEET  
FHWA PL/SPR; FHWA/RSTP; FTA SEC 5303  
FY 2012 UWP - RICHMOND AREA MPO**

Task No/ Abbrev	RRPDC				VDOT SPR	OTHER	TOTAL						GRAND TOTAL
	PL	5303	CO 5303	OMF (1)			PL	SPR	5303	CO 5303	OMF (1)	OTHER	
1.1 MPO Maint	540,329	19,274	-	-	220,000	-	540,329	220,000	19,274	-	-	-	779,603
1.1 Conting.	90,000	-	-	-	-	-	90,000	-	-	-	-	-	90,000
1.2 Citi Partic	90,000	-	-	-	-	-	90,000	-	-	-	-	-	90,000
1.3 UWP	100,000	-	-	-	-	-	100,000	-	-	-	-	-	100,000
2.1 Data	21,000	9,000	5,000	-	-	-	21,000	-	9,000	5,000	-	-	35,000
2.2 LRTP	133,000	60,000	15,000	-	-	-	133,000	-	60,000	15,000	-	-	208,000
2.3 RTDM	58,000	30,000	-	-	-	-	58,000	-	30,000	-	-	-	88,000
2.5 TD/GIS	103,000	15,000	-	-	-	-	103,000	-	15,000	-	-	-	118,000
2.8 Rt. 5 Study (3)	20,000	8,000	-	-	135,000	-	20,000	135,000	8,000	-	-	-	163,000
2.9 City SMTP (2)	-	-	-	-	-	448,000 (6)	-	-	-	-	-	448,000	448,000
3.1 CMP	60,000	9,000	-	-	-	-	60,000	-	9,000	-	-	-	69,000
3.3 ITS	20,000	4,000	-	-	-	-	20,000	-	4,000	-	-	-	24,000
4.1 TIP	189,000	-	-	-	-	-	189,000	-	-	-	-	-	189,000
5.2 E&D TNS	-	30,000	20,918	-	-	-	-	-	30,000	20,918	-	-	50,918
5.4 GRTC/TDP (4)	-	-	65,000	-	-	74,614 (5)	-	-	-	65,000	-	74,614	139,614
5.5 RPTS	-	46,000	8,000	-	-	-	-	-	46,000	8,000	-	-	54,000
5.6 CHSMP	-	14,000	2,000	-	-	-	-	-	14,000	2,000	-	-	16,000
5.7 RBRT (2)	-	-	-	-	-	-	-	-	-	-	-	-	-
5.8 Rail (2)	-	-	-	-	-	-	-	-	-	-	-	-	-
6.1 IM Plg.	24,000	-	-	-	-	-	24,000	-	-	-	-	-	24,000
7.1 Air Q. Plg.	25,000	5,000	-	-	-	-	25,000	-	5,000	-	-	-	30,000
8.1 Bike/Ped Plg.	25,000	5,000	3,000	-	-	-	25,000	-	5,000	3,000	-	-	33,000
<b>TOTAL (\$)</b>	<b>1,498,329</b>	<b>254,274</b>	<b>118,918</b>	<b>-</b>	<b>355,000</b>	<b>522,614</b>	<b>1,498,329</b>	<b>355,000</b>	<b>254,274</b>	<b>118,918</b>	<b>-</b>	<b>522,614</b>	<b>2,749,135</b>

- NOTES:
- (1) RRPDC Over Match Funds (OMF) or in-kind staff match (100 percent RRPDC local funds).
  - (2) UWP information item
  - (3) Work conducted by RRPDC staff and consultant.
  - (4) Work conducted by GRTC consultant.
  - (5) DRPT Technical Assistance Grant Funds (100 percent state funds).
  - (6) RSTP funds (allocated by MPO)

**FUNDING SOURCES SUMMARY SHEET  
FHWA PL/SPR; FHWA/RSTP; FTA SEC 5303  
FY 2012 UWP - RICHMOND AREA MPO**

Task No./ Abbrev.	PL		SPR		5303		CO 5303		RRPDC	OTHER		TOTAL		GRAND
	Federal	State/Local	Federal	State	Federal	State/Local	Federal	State/Local	OMF (1)	Federal	State/Local	Federal	State/Local	TOTAL
1.1 MPO Maint	432,263	108,066	176,000	44,000	15,419	3,855	-	-	-	-	-	623,682	155,921	779,603
1.1 Conting.	72,000	18,000	-	-	-	-	-	-	-	-	-	72,000	18,000	90,000
1.2 Citi Partic	72,000	18,000	-	-	-	-	-	-	-	-	-	72,000	18,000	90,000
1.3 UWP	80,000	20,000	-	-	-	-	-	-	-	-	-	80,000	20,000	100,000
2.1 Data	16,800	4,200	-	-	7,200	1,800	4,000	1,000	-	-	-	28,000	7,000	35,000
2.2 LRTP	106,400	26,600	-	-	48,000	12,000	12,000	3,000	-	-	-	166,400	41,600	208,000
2.3 RTDM	46,400	11,600	-	-	24,000	6,000	-	-	-	-	-	70,400	17,600	88,000
2.5 TD/GIS	82,400	20,600	-	-	12,000	3,000	-	-	-	-	-	94,400	23,600	118,000
2.8 Rt. 5 Study	16,000	4,000	108,000	27,000	6,400	1,600	-	-	-	-	-	130,400	32,600	163,000
2.9 City SMTP	-	-	-	-	-	-	-	-	-	358,400	89,600 (6)	358,400	89,600	448,000
3.1 CMP	48,000	12,000	-	-	7,200	1,800	-	-	-	-	-	55,200	13,800	69,000
3.3 ITS	16,000	4,000	-	-	3,200	800	-	-	-	-	-	19,200	4,800	24,000
4.1 TIP	151,200	37,800	-	-	-	-	-	-	-	-	-	151,200	37,800	189,000
5.2 E&D TNS	-	-	-	-	24,000	6,000	16,734	4,184	-	-	-	40,734	10,184	50,918
5.4 GRTC/TDP (4)	-	-	-	-	-	-	52,000	13,000	-	-	74,614 (5)	52,000	87,614	139,614
5.5 RPTS	-	-	-	-	36,800	9,200	6,400	1,600	-	-	-	43,200	10,800	54,000
5.6 CHSMP	-	-	-	-	11,200	2,800	1,600	400	-	-	-	12,800	3,200	16,000
5.7 RBRT (2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.8 Rail (3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.1 IM Plg.	19,200	4,800	-	-	-	-	-	-	-	-	-	19,200	4,800	24,000
7.1 Air Q. Plg.	20,000	5,000	-	-	4,000	1,000	-	-	-	-	-	24,000	6,000	30,000
8.1 Bike/Ped Plg.	20,000	5,000	-	-	4,000	1,000	2,400	600	-	-	-	26,400	6,600	33,000
<b>TOTAL (\$)</b>	<b>1,198,663</b>	<b>299,666</b>	<b>284,000</b>	<b>71,000</b>	<b>203,419</b>	<b>50,855</b>	<b>95,134</b>	<b>23,784</b>	<b>-</b>	<b>358,400</b>	<b>164,214</b>	<b>2,139,617</b>	<b>609,519</b>	<b>2,749,135</b>

- NOTES:
- (1) RRPDC Over Match Funds (OMF) (100 percent RRPDC local funds).
  - (2) UWP information item
  - (3) Work conducted by RRPDC staff and consultant.
  - (4) Work conducted by GRTC consultant.
  - (5) DRPT Technical Assistance Grant Funds (100 percent state funds).
  - (6) RSTP funds (allocated by MPO; 80% federal and 20% state).