CHAPTER 3: THE TRANSPORTATION PLANNING PROCESS

3.1 DEVELOPMENT OF THE 2035 LONG RANGE TRANSPORTATION PLAN

The following section will describe the Federal Regulations that must be addressed in the Metropolitan Long-Range Plan as well as how the highway projects contained within the plan were identified.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) of 2005 requires that each MPO develop an intermodal transportation plan with at least a 20-year horizon. The plan must be updated at least every four years to keep consistent with existing conditions, re-evaluate proposed plans, programs and projects and validate air quality conformity analysis due to the Fredericksburg Urbanized Area's designation as a nonattainment area for air quality. Please refer to **Appendix A** for the complete Federal Regulations *(§ 450.322 Development and content of the metropolitan transportation plan.)* regarding the development of the long range plan.

This 2035 Long Range Transportation Plan (LRTP) is an update of the 2030 Constrained Long Range Plan (CLRP), which was adopted by the FAMPO Policy Committee on January 21, 2004 and amended on May 22, 2007. A finding on Air Quality Conformity was made by FHWA, Federal Transit Administration (FTA) and the Environmental Protection Agency (EPA) on April 15, 2005.

Adoption of the plan and any amendments will follow the MPO's policy for public participation. All plan updates or amendments will be advertised to the public through public notices and published in local and regional newspapers, including publications that target specific groups such as minorities and Spanish-speaking audiences. These will be given a minimum 30-day comment period and public hearing prior to adoption. The Technical Committee, the Transportation Advisory Group, the Bicycle and Pedestrian Committee, as well as the FAMPO Policy Board, will also accept comments at their regular public meetings. The TC will make a recommendation on the update or amendment to the FAMPO Policy Board. The FAMPO Policy Board will then act to approve, reject or defer approval at a public meeting.

If the update or amendment adopted by the FAMPO Policy Board requires an air quality conformity determination, the update/amendment will not be effective until FHWA and FTA, in consultation with EPA, give final approval. These approvals may require up to 45 days from the date of submission to these agencies.

3.1 PROJECT IDENTIFICATION, SELECTION AND COST ESTIMATE DEVELOPMENT

Each project recommended for funding in the 2035 Long Range Plan has been reviewed thoroughly with regard to the eight Federal Planning Factors identified in SAFETEA-LU. SAFETEA-LU requires the incorporation of the planning factors into the metropolitan transportation planning process, and that the long-range plan address the planning factors. The appropriate planning factors have been reviewed for each project. The eight planning factors can be found in Chapter1, Section 2; Goals and Objectives.

Level of Service

Level of Service is defined by the Highway Capacity Manual as a "qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers". A level-of-service definition generally describes these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Six levels of service are defined and they are given letter designations, from A to F, with level-of-service "A" representing the best operational conditions and level-of-service "F" the worst. The following is a list of the various levels of service with abbreviated definitions quoted directly from the Highway Capacity Manual.

Level-of-service "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream

Level-of-service "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable

Level-of-service "C" is in the range of stable flow, but it marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.

Level-of-service "D" represents high-density, but stable flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort or convenience.

Level-of-service "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult.

Level-of-service "F" is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.

The planning and development of projects found in the Long Range Transportation Plan (LRTP) most often begins in each of the localities with the development of their comprehensive plans. Each locality in the GW Region maintains a comprehensive plan, which contains a transportation element. These local transportation plans are developed through a public participation process that has traditionally included public information and/or community meetings and public hearings at both the Planning Commission and Board of Supervisors or City Council levels.

The projects shown in the local plans are considered for inclusion in the LRTP at the localities' request. Projects that are contained in the current Transportation Improvement Plan (TIP) and Six Year Improvement Plan (SYIP) are also included in the Long Range Needs Plan. Each project is given consideration based on transportation needs, which are identified by examining projected growth patterns and modeling results from FAMPO's Travel Demand Model. Consideration is also based on public input, as well as the funding anticipated to be available during the term of the Plan. The planning process develops conceptual improvements that address local and regional needs.

Early in the development of the 2035 Long Range Transportation Plan, the FAMPO Policy Board set a goal of a Regional Level of Service (LOS) of D for the highway portion of the plan. To attain this goal, a series of projects beyond what is found in the Local Comprehensive Plans had to be developed. These projects were developed by coding all of the Comprehensive Plan Projects into FAMPO's Travel Demand Model and running the model to determine where the roadways were still failing. This series of projects that came out of the modeling runs are all assumed to be implemented by 2035 and are mostly focused on the Primary and Interstate Systems in the Region.

Once the initial project list is developed and logical termini are defined, the specific improvements are then defined (i.e. widening or operational improvements, inclusion of bicycle and pedestrian facilities, number of needed lanes, width of the shoulders, number of entrances/intersections to be improved, etc.). The next step is to develop planning level cost estimates for the base year (2008). The cost estimates were derived using VDOT's Transportation and Mobility Planning Division's Statewide Planning Level

Cost Estimates (developed in 2006) and then inflated to 2008 by inflating the cost 5.5% annually. Once the projects were defined and the cost estimates were developed, the list of projects were vetted through the local government staff as well as staff from the VDOT's Fredericksburg District Office and then revised to reflect their input. Next the highway projects are put through a project prioritization calculator that is defined in detail in Part IV of this document. This prioritization methodology will serve as the basis for which projects will be included in the Financially Constrained Long Range Plan.

The FAMPO Financially Constrained Long Range Plan

The FAMPO Financially Constrained Long Range Plan provides a blueprint for how the Region's transportation system should advance to move people and goods in the most efficient, cost-effective and environmentally sensitive manner possible. The purpose of the constrained plan is to identify and describe the multi-modal transportation plans, projects and programs to be carried out within the MPO's study area during the plan's timeframe. Federal regulations require all MPO's to develop this long-range, multi-modal transportation plan with a minimum 20-year horizon. A project included in the Financially Constrained Long Range Plan indicates that it has regional support and may become eligible for Federal funding, if appropriate. For a project to receive Federal funds it must be included in this Plan.

The financially constrained plan includes projects proposed for the Interstate, Primary, Urban, and Secondary Highway Systems, as well as the Public Transportation System and Bicycle and Pedestrian Systems. As a new provision of SAFETEA-LU, the revenues and cost estimates found in the Financially Constrained Plan must be inflated to reflect the "year of expenditure dollars". This was done by compounding a 3.0% interest rate annually to the expected year of expenditure.

Beyond the Long Range Plan

Once identified in the planning process, the project development phase develops a single project from concept through detailed study, and finally to construction, provided all interim approvals are obtained. To move forward with the project development phase, a project must be included in a funding program. All transportation projects proposed for funding through one of the methods identified in the LRTP must also be included in the Transportation Improvement Program (TIP) for the Region. Actual project funding is generally obtained through the State's Six Year Improvement Program (SYIP) which may include funding from Federal, State, and local sources. Some projects may also receive private funding through proffered contributions from developers or funded solely by local or a combination of local and private sources.

For a project to be identified in the TIP, it must have been considered by the Commonwealth Transportation Board (CTB) and included in the State's Six Year Improvement Program. Once funding is allocated to a project in the State's Six Year Program, work may begin in the form of a study, actual engineering or construction depending on the nature of the project.

While the individual jurisdictions, public transportation providers, VDOT and the Virginia Department of Rail and Public Transportation (VDRPT) work together to identify projects that meet transportation needs, and should be included in the State's funding, the implementation of highway projects in this area has traditionally been the responsibility of VDOT. The Code of Virginia specifies how funding is to be distributed among the various programs. Each program differs in the way its funding is allocated to individual

projects. For improvements to the Interstate system, all projects compete on a statewide basis for program funding. For Primary System Improvements, the projects within each individual VDOT construction district compete for program funding. In the Interstate and Primary Systems, the CTB)action approves each project. The Secondary Six Year Program is handled locally by the jurisdictions and VDOT's Resident Engineers. The Board of Supervisors in conjunction with VDOT is responsible for the approval of the secondary program in each of the respective jurisdictions. Both programs are subject to public hearings, and the CTB has final approval authority for all State transportation improvement programs.

Inclusion of a project in the Six Year Program allows VDOT to begin allocating funds on project development. VDOT has three funding categories that are used for the project development process:

1. **Preliminary Engineering (PE):** This category funds initial project development. Available for funding under PE are: alternatives evaluation, environmental assessment, location determination, survey and engineering design. During this phase of project development, public information meetings are held by VDOT on major projects to solicit community input on the project proposal. Formal Location and Design Public Hearings are also held during this phase.

2. **Right of Way (RW):** Following the required approvals of project design plans by Federal, State, and local agencies under the PE phase, funding can be made available for right-of-way acquisition. This category includes not only the cost of securing the right-of-way necessary to construct the project, but also the cost of relocating utilities that will be affected by the improvement.

3. **Construction (CN):** This is the final stage of the project development process. Under this stage, the clearing and grading of the land necessary for the project takes place, and the construction of the road and accompanying structures is completed.

Activities may overlap between these categories as the project is refined during the development process, and each category is significantly more complex than the brief description provided above. Prior to the project development process, limited project planning activities take place to sufficiently develop the concept for the purposes of discussion and preliminary analysis.

Even though VDOT has review and is the approval authority over all public highway projects or projects that impact public highways, project implementation is not restricted exclusively to the State agency. Other members of FAMPO may also develop projects. For example, the City of Fredericksburg, unlike the counties, is responsible for the roads within its boundaries with the exception of the interstate. However, VDOT has traditionally played a significant role in the development of regional projects within the City. Other agencies involved with non-highway transportation modes also have a corresponding project responsibility.

The FAMPO Transportation Improvement Program (TIP)

The Transportation Improvement Program (TIP) is a financially constrained list of transportation projects planned for the FAMPO region for a 4 year period. The TIP is updated at a minimum every two years and includes projects intended for the Interstate, Primary, Urban and Secondary Highway Systems. Also included are safety, transportation enhancements, and public transportation projects. The TIP may also include funding for feasibility studies, preliminary engineering (PE) activities and Environmental studies, as well as Right-of-Way and Construction activities.

Federal law requires that all federally-funded transportation projects within an MPO's study area be endorsed by the MPO and included in the TIP and LRTP. The total cost of all TIP projects cannot exceed the amount of funding that is reasonably expected to be available during the period covered by the TIP.

VDOT Six Year Improvement Program (SYIP)

The Six Year Improvement Program (SYIP) is the Commonwealth Transportation Board's (CTB) funding plan for Virginia's transportation system. The Program document shows the distribution of both actual and anticipated allocations for a six year period to items such as ports, airports, public transportation, and highways.

The Six Year Improvement Program includes funding for the Interstate, Primary, Urban, and Secondary Systems, public transportation and other Federal and State transportation programs. While the SYIP document illustrates the funding applied to the Interstate, Primary, and Urban Systems on a project level basis, it also shows the Secondary System funding per locality. The process for distributing funds across the Secondary System is distinctly different than the process for the Interstate, Primary, and Urban Systems, as previously noted.

The CTB holds annual public hearings for the Six Year Improvement Program in each of the nine VDOT construction districts generally in the spring of each year. These hearings, called Planning and Programming Meetings, are an opportunity for citizens, local governing bodies, MPOs, Planning District Commissions (PDCs), and members of the General Assembly to request that certain projects or studies be funded through this program. The funds that are distributed throughout this program consist of Federal, State and local resources. This document closely resembles the Transportation Improvement Program (TIP), which is developed by the MPO. For a project in a metropolitan area to be shown and funded through the Six Year Improvement Program, it must also be shown in the TIP.

3.3 PUBLIC INVOLVEMENT

An extensive public involvement effort throughout the course of this plan is vital. The George Washington Region Public Participation Plan (PPP) represents an ambitious program that is intended to gain as much input as possible and will provide a mechanism whereby all residents of our Region can have input into the development of the 2035 Long Range Transportation Plan (LRTP).

Since communication is a vital key to an effective public outreach program, the principal objective is to involve as many people as possible, so they know that a plan is being prepared and that they can influence the outcome. It is important to hold the interest of the citizens throughout the outreach process so that their opinions can guide the study team throughout the various stages of the planning process.

As part of the process of developing the 2035 LRTP public outreach, the following list represents the goals to be obtained during the public outreach effort:

- Interest, inform and involve a diverse public in a proactive manner in order to receive relevant input to the planning effort so FAMPO will have better decision-making tools and greater acceptance of a final LRTP;
- Involve the public early in the process and communicate with them continuously from start to finish;
- Create an understanding of the transportation planning process;
- Educate citizens on how transportation decisions are made;
- Maintain information that is visually interesting and easy to comprehend;
- Build consensus of support and foster a climate of rational discussion;
- Involve the traditionally underserved populations/special audiences;
- Meet Federal, State and other requirements for public involvement (e.g., SAFETEA-LU); and
- Nurture media understanding and fair reporting.

The following is a detailed description of how the public outreach will be implemented and how the desires of the public will be incorporated into the planning process:

2035 LRTP Webpages

The Internet is a major avenue for the dissemination of information so that citizens can have access to information 24/7. The LRTP information will be divided into three separate webpages on the FAMPO website, and will be continuously updated throughout the public outreach process. The following lists the webpage titles, content and web addresses:

LRTP Overview:
The LRTP Overview webpage will give an overview of the LRTP, how it is developed and why it is updated.
http://www.fampo.gwregion.org/2035LongRangeTransportationPlan.html

Public Participation:
The LRTP Public Participation webpage will share information about the public meetings as well as give the public the opportunity to comment on the LRTP via an online survey or a downloadable questionnaire, and will be able to request to be added to the LRTP mailing list.
http://www.fampo.gwregion.org/2035LongRangeTransportationPlanPublicParticipation.html

Materials & Publications*:*
The LRTP Materials and Publications webpage will house the draft LRTP for public review. Other information that will be posted on this webpage will include meeting materials used during the public meetings, newspaper articles, and presentations used throughout the public outreach effort.
http://www.fampo.gwregion.org/2035LongRangeTransportationPlanMaterialsPublications.html

A translation tool will be place on the FAMPO website for which the public will be able to easily translate each webpage into twelve different languages.

Public Meetings & Hearings

There will be five public meetings held throughout the development of the plan. One meeting will be held in each of the five jurisdictions in our Region. The intent of these meetings is to give the citizens an opportunity to review key transportation improvement initiatives from 2008 through 2035. The public will be given an opportunity to ask questions, review visual displays, fill out a LRTP questionnaire, and most importantly, express their opinions. The meeting dates and locations are as follows:

Table 3.1

Public Meeting Locations		
Date	**Jurisdiction**	**Location**
October 14, 2008	Stafford County	Courthouse Community Center
October 15, 2008	Spotsylvania County	Riverbend High School
October 21, 2008	Caroline County	Community Service Center
October 22, 2008	King George County	King George Citizen Center
October 23, 2008	City of Fredericksburg	George Washington Regional Commission Office

The meetings will be in an open-house format for a period of three hours during which time people can come and go as they please. Open-house meetings will allow for one-on-one interaction with members of the public and will give opportunities for the public to ask as many questions as they desire. Those questions that cannot be answered adequately at the meeting will be noted, and a response will be sent via USPS mail or e-mail. Each participant will receive a handout titled "2035 Long Range Transportation Plan: Summary of the Public Draft" as well as a questionnaire for submitting their comments. A presentation will be given during of the each of the public meetings and will end with a question and answer session along with valuable information on how comments can be submitted.

A large media outreach effort will be implemented to increase both attendance and participant diversity at all the public meetings. Meetings will be advertised twice in the area newspapers two weeks and one week prior to each public meeting. The are

newspapers will include the *Free Lance Star*, *Stafford Sun, Journal Press, and* the *Caroline Progress*. Postcards will be sent to key stakeholders and special groups, regional libraries, recreation centers, faith organizations and social services. Information sharing among the Region's homeowners associations, regional businesses and Hispanic organizations will be coordinated through emails and flyers.

Speakers Bureau

Presentations are an excellent way to disseminate information to citizens who are active in the community. There will be presentations scheduled to governing bodies, special interest and traditionally underserved groups throughout the Region. An interpreter will be available, if necessary.

Media Relations & Outreach

Newspaper, radio and television are excellent means of communication for the entire study area. The team will be available for interviews with local reporters and will send materials to radio and television stations. FAMPO staff will contact the editorial boards of the local newspapers serving the area to discuss the LRTP process. Press releases periodically will be issued to the various media outlets announcing key milestones in the study process, and will be shared among other county government Public Informational Officers (PIOs), neighborhood groups for newsletters and human services for constituents. In addition to press releases and interviews, information will be distributed for inclusion in the regional community calendars and on local jurisdiction websites. A PowerPoint presentation will be video taped and placed on the area's public and government access channels so the public who cannot attend a public meeting can view the presentation from their homes.

An Executive Summary will be published in early 2009 providing a synopsis of the study process and final recommendations. The Executive Summary will be inserted in the local newspaper reaching approximately 45,000 citizens within our Region, and will describe the following:

- The Long Range Transportation Planning process and projects
- Map of key projects
- Transit and Bike/Pedestrian changes
- Timeline
- Funding needs and potential revenue sources to fund the projects

Space will be allotted to Transportation Demand Management (TDM) information sources such as Park & Ride Lot maps and transit information. Additional copies will be printed and made available at the regional libraries and government centers, and mailed directly to key stakeholders as well.

Outreach to Local Government and Community Groups

The LRTP public outreach will include a direct communication with government Public Information Officers in our Region. This will include the sharing of resources, partner, education, and elevate communication process and increase the reach of our education materials, including enhancing FAMPO's current mailing list/contact database with groups such as neighborhoods, associations, services clubs and more.

Visualization Techniques

The team will strive to maximize its use of various visualization techniques to help inform the public and convey pertinent information concerning future transportation plans. Appropriate methods include, but are not limited to, PowerPoint presentations, webpage graphics, static maps, photographs, and meeting handouts. The team will use the best techniques available to inform the public.

Follow-up Survey

A telephone follow-up survey will be implemented to gauge the impact of a planned public education and implementation communication program. The survey will be a 12-minute survey of adult residents 18 years of age and older in the FAMPO Region for each of the five jurisdictions. The target number of completed surveys for each jurisdiction is 200. The total number of completed surveys will be 1,000.

Comment Strategies

Stakeholder and public feedback are fully considered in the identification of issues, needs and improvement strategies for the FAMPO Region. All citizens are encouraged to submit their comments using various methods:

- Printed Comment Form
- Online survey posted on the study webpages
- E-mail
- USPS Mail

All public comments will be gathered, circulated for review, and any questions will be responded to in a timely matter. All the comments will be logged and summarized for inclusion in the final 2035 LRTP document. A thank you letter will be sent to all who participated in order to build relationships, goodwill and trust.

Involvement of Minorities and Traditionally Underserved Groups

The transportation underserved are those that have greater difficulty getting to places in their community, such as jobs, schools, recreation and shopping that the population at large. Examples of the traditionally underserved include persons with disabilities and low incomes, minority groups, and the elderly. Transportation barriers make it difficult for them to identify and implement specific strategies that enable these citizens to participate in the public involvement process. Concerted attempts will be made to actively engage residents of traditionally underserved area.

Consultation with the traditionally underserved populations will be implemented in a variety of ways, including:

- Preparing and distributing meeting notifications in Spanish
- Having a sign interpreter and Spanish interpreter at key events upon request
- Distributing Poster and Flyers to key groups/locations: social services, faith groups, senior centers, libraries, and more for distribution and posting.

As with other FAMPO projects, the team will ask the public meeting attendees to complete a demographic survey in order to determine the percentage of these special

groups participating in public meetings, and which media outlet lead them to the meetings. This information will be used to continually review and improve our outreach to all citizens to ensure we are casting a net wide enough to reach out to this diverse audience. To help accommodate the diversity in our Region, a translation tool will be placed on the FAMPO website for easy translation. This tool offers the use of twelve different languages.

Public Comment Period for the Draft 2035 Long Range Transportation Plan

A legal notice will be published in the all the Regional newspapers informing the public and local officials that the draft LRTP is available for comment. There will be a 30 day public comment period for the review of the LRTP. Copies of the draft 2035 LRTP documents will be available for public review and comment in the following formats:

- The GWRC/FAMPO office
- The FAMPO website at the following address: http://www.fampo.gwregion.org/2035LongRangeTransportationPlanMaterialsPublications.html
- Regional government offices
- Regional public libraries

Public comment forms will accompany each draft 2035 LRTP document thereby affording the general public an opportunity to formally comment during the development process. Comment forms will also be available during each public meeting, speakers bureau, as well as and the FAMPO website. Comments received are addressed and responses will be made to the originator of the comment as appropriated.

3.4 ENVIRONMENTAL JUSTICE

Executive Order 12898 is a presidential directive to all federal agencies to make environmental justice a part of all programs, policies, and activities. The order was signed in 1994 and augments Title VI of the Civil Rights Act of 1964 by making the prohibition of discrimination based on race, color, and national origin more specific. The Executive Order addresses persons belonging to Black, Hispanic, Asian American, American Indian and Alaskan Native, and Low-income groups.

The intent of environmental justice is to improve transportation opportunities, planning and decision-making by including all public groups in the planning process and in the implementation of transportation services and facilities. Specifically, Metropolitan Planning Organizations are expected to enhance public participation in their area by eliminating participation barriers and engaging minority and low-income populations in making transportation decisions. To begin this process, the needs of these groups must be identified. This can be accomplished in part by identifying residential, employment, and transportation patterns of low-income and minority populations. By identifying these factors, impacts and benefits of transportation investments can be more equally distributed. To complete the process of identifying these needs, planning organizations must engage these groups in planning discussions and meetings to the extent practicable. The Executive Order and the U.S. Department of Transportation outlined the following three fundamental principles involved when identifying environmental justice:

1. To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.

2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.

3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

FAMPO is meeting these principals by examining the location of each of its transportation improvements to ensure that its transportation system adequately and appropriately benefits all groups of the Region's population. FAMPO is also providing direct notice to as many entities representing the various groups in our Region as is practicable. FAMPO will also attempt to hold public meetings on the LRTP in facilities that are centrally located, accessible by as many transportation modes as possible, and accommodating to the members of the communities with diabilities.

FAMPO continues with its work to comply with the Environmental Justice regulations utilizing data provided by the 2000 & 2006 Census, the Virginia Employment Commission (VEC) as well as estimates and projections from the GWRC.

3.5 CONSULTATION AND MITIGATION DISCUSSION

SAFETEA-LU requires Metropolitan Long Range Transportation Plans (LRTPs) to be developed, *as appropriate,* in consultation with State and local agencies regarding land use management, natural resources, environmental protection, conservation, and historic preservation. The consultation shall involve, *as appropriate*, comparing available plans, maps or inventories. {References include: 23 USC 134(i) 4, 135(f) 2(D), 134(g) 1, 135(b) 2, and 134(g) 3.}

SAFETEA-LU also requires LRTPs to include a generalized discussion of potential environmental mitigation activities and potential mitigation areas, including activities that may have greatest potential. The mitigation discussion shall be developed in consultation with Federal, State and Tribal wildlife, land management, and regulatory agencies. (References include: 23 CFR 134(i) 2(B), 135(f) 4, and 134(g) 3(B).)

FAMPO has developed a consultation contact list comprised of various State agencies which include but are not limited to the following:

- Virginia Department of Agriculture and Forestry
- Virginia Department of Conservation and Recreation
- Virginia Department of Emergency Management
- Virginia Department of Environmental Quality
- Virginia Department of Forestry
- Virginia Department of Game and Inland Fisheries
- Virginia Marine Resources Commission
- Virginia Department of Agriculture and Consumer Services

The Virginia Department of Transportation has developed a Draft Environmental Mitigation Discussion for the use of all MPO's in the Commonwealth. This Mitigation Discussion can be used as is or can be tailored to fit each MPO's specific needs. FAMPO will use the Potential Environmental Discussion as is. The Environmental Mitigation Discussion was also sent to the above agency contact list.

The Virginia Department of Transportation has provided all of the MPO's in the Commonwealth with a "consultation checklist" for Environmental Mitigation/Consultation as well as Public Participation. Elements of this checklist are:

- Develop draft environmental mitigation discussion using discussion and table provided below and on the following pages.
- Send mitigation discussion and the LRTP electronically to resource agencies.
- Request in writing a:
  1. Comparison of the LRTP with appropriate conservation plans/inventories.
  2. Identification of sensitive areas.
  3. Review of draft mitigation discussion and recommendations for enhancement by mitigation agencies
- Modify mitigation discussion as appropriate.
- Document contacts and comments or responses received.

Potential Mitigation Discussion

Metropolitan transportation planning is a regional process that is used to identify the transportation issues and needs in metropolitan areas. In metropolitan areas over 50,000 in population, the responsibility for transportation planning lies with designated Metropolitan Planning Organizations (MPO). This planning process is a collaborative effort between the member jurisdictions, the Virginia Department of Transportation, transit operators, and other modal representatives. During the plans development, the MPO examines land development patterns, demographics, travel patterns and trends to identify existing and future transportation problems. The MPO then identifies alternatives to meet current and projected future demands that will provide a safe and efficient transportation system that meets the needs of the traveling public while limiting adverse impacts to the environment. This Region is designated as an MPO area and all the jurisdictions in this Region work together to develop a constrained long-range transportation plan.

The Long Range Transportation Plan (LTRP) for this Region identifies and recommends a capital investment strategy to meet the existing and future transportation needs of the public over the next 20 years. The inclusion of a recommended improvement in the long range transportation plan represents preliminary regional support for that improvement. The LRTP is a decision-making tool to determine which projects should be implemented. Transportation improvements go through several steps from conception to implementation and take many years to successfully complete.

The consideration and recommendations made during the planning process are preliminary in nature. Detailed environmental analysis conducted through the National

Environmental Policy Act (NEPA) does not apply to long range transportation plans. With exceptions for regional ambient air quality, offsetting environmental impacts during the long-range planning process is not required. While detailed environmental analysis is not required, it is important to consult with environmental resource agencies during the development of a long-range transportation plan. This interagency consultation provides

an opportunity to compare transportation plans with environmental resource plans, develop a discussion on potential environmental mitigation activities, areas to provide the mitigation, and activities that may have the greatest potential to restore and maintain the environment.

Detailed environmental analysis of individual transportation projects occurs later in the project development process as the improvement approaches the preliminary engineering stage. At this stage, project features may be narrowed and refined, and the environmental impacts and environmental mitigation strategies can be appropriately ascertained. ***Virginia's State Environmental Review Process*** directs the project-by-project interagency review, study and identification of environmental permit-processing, and National Environmental Protection Act (NEPA) studies. Usually, a variety of environmental documentation, permit and mitigation needs are identified and environmental findings are closely considered and evaluated. Common project environmental mitigation measures (required silt-fence barriers, precautions to control dust, etc) are managed using ***Virginia's Road and Bridge Standards*** that apply to all construction activities. Special environmental concerns, however, may differ widely by project and location. As environmental studies are conducted and undergo public and interagency review, needed mitigation plans are specified and committed to within the environmental documents on the particular transportation project or activity. Environmental management systems then are used to monitor, and ensure compliance with, the environmental mitigation commitments.

Potential environmental mitigation activities may include: avoiding impacts altogether, minimizing a proposed activity/project size or its involvement, rectifying impacts (restoring temporary impacts), precautionary and/or abatement measures to reduce construction impacts, employing special features or operational management measures to reduce impacts, and/or compensating for environmental impacts by providing suitable, replacement or substitute environmental resources of equivalent or greater value, on or off-site. Where on-site mitigation areas are not reasonable or sufficient, relatively large off-site compensatory natural resource mitigation areas generally may be preferable, if available. These may offer greater mitigation potential with respect to planning, buffer protection and providing multiple environmental habitat value (example: wetland, plant and wildlife banks).

Mitigation activities and the mitigation areas will be consistent with legal and regulatory requirements relating to the human and natural environment. These may pertain to neighborhoods and communities, homes and businesses, cultural resources, parks and recreation areas, wetlands and other water sources, forested and other natural areas, agricultural areas, endangered and threatened species, and the ambient air. The following table illustrates some potential mitigation activities and potential mitigation areas for these resources:

Table 3.2

POTENTIAL ENVIRONMENTAL MITIGATION STRATEGIES			
Resource	**Key Applicable Requirements**	**Potential Mitigation Activities for Project Implementation**	**Potential Mitigation Areas for Project Implementation**
Neighborhoods, Communities, Homes and Businesses	Uniform relocation Assistance and Real Property Acquisition Policy Act at 42 USC 4601 Et seq.	Impact avoidance or minimization; context sensitive solutions for communities (appropriate functional and/or esthetic design features	Mitigation on-site or in the general community. (Mitigation for homes and businesses is in accordance with 49 CFR 24
Cultural Resources	National Historic Preservation Act at 16 USC 470	Avoidance, minimization; landscaping for historic properties; preservation in place or excavation for archaeological sites; Memoranda of Agreement with the Department of Historic Resources; design exceptions and variances; environmental compliance monitoring	On-site landscaping of historic properties, on-site mitigation or archeological sites; preservation in-place
Parks and Recreation Areas	Section 4(f) of the U.S. Department of Transportation Act at 49 USC 303	Avoidance, minimization, mitigation; design exceptions and variances; environmental compliance monitoring	On site screening or on-site replacement of facilities; in some cases, replacement of affected property adjacent to existing
Wetlands and Water Resources	Clean Water Act at 33 USC 1251-1376; Rivers and Harbors Act at 33 USC 403	Mitigation sequencing requirements involving avoidance, minimization, compensation (could include preservation, creation, restoration, in lieu fees, riparian buffers); design exceptions and variances; environmental compliance monitoring	Based on on-site/off-site and in-kind/out-of-kind sequencing requirements; private or publicly operated mitigation banks used in accordance with permit conditions
Forested and Other Natural Areas	Agricultural and Forest District Act (Code of VA Sections 15.2-4305; 15.2-4307-4309; 15.2-4313); Open Space Land Act (Section 10.1-1700-1705,1800-1804)	Avoidance, minimization; Replacement property for open space easements to be of equal fair market value and of equivalent usefulness; design exceptions and variances; environmental compliance monitoring	Avoidance, minimization; Replacement property for open space easements to be of equal fair market value and of equivalent usefulness; design exceptions and variances; environmental compliance monitoring

Table 3.2 Continued

Potential Mitigation Strategies			
Resource	**Key Applicable Requirements**	**Potential Mitigation Activities for Project Implementation**	**Potential Mitigation Areas for Project Implementation**
Agricultural Areas	Farmland Protection Policy Act of 1981 at 7 USC 4201-4209, Agricultural and Forest District Act (Code of VA Sections 15.2-4305; 15.2-4307-4309; 15.2-4307-4309; 15.2-4313)	Avoidance, minimization; design exceptions and variances; environmental compliance monitoring	Replacement of agricultural operation within existing agriculture-forestall district
Endangered and Threatened Species	Endangered Species Act at 16 USA 1531-1544	Avoidance, minimization; time of year restrictions; construction sequencing; design exceptions and variances; species research; species fact sheets; Memoranda of Agreements for species management; environmental compliance monitoring	Relocation of species to suitable habitat adjacent to project limits
Ambient Air Quality	Clean Air Act at 42 USC 7401-7671, and Conformity regulations at 40 CFR 93	Transportation control measures, transportation emission reduction measures	Within air quality non-attainment and maintenance areas

3.6 AIR QUALITY AND TRANSPORTATION CONFORMITY

Effective June 15, 2004, the EPA classified the city of Fredericksburg and the counties of Spotsylvania and Stafford as a moderate ozone nonattainment area under the 8-hour ozone National Ambient Air Quality Standard (NAAQS). Subsequently and based on an improvement in ozone monitoring data, the Fredericksburg ozone nonattainment area was redesignated into attainment with the 8-hour ozone standard effective January 23, 2006. At that time, a State Implementation Plan (SIP) revision including a maintenance plan was approved that outlined how the region would continue to attain the 8-hour ozone standard over the next ten year period. Included in the maintenance plan are motor vehicle emissions budgets (MVEBs) that need to be used in transportation conformity determinations. Transportation conformity using the new MVEBs was last demonstrated on the Region's FY 2007-2010 TIP and 2030 LRP, and approved by FHWA, on September 16, 2008.

Prior to 2004, FAMPO's air quality planning activities had been limited to Stafford County's inclusion in the Northern VA-DC-MD severe 1-hour ozone nonattainment area. In order to comply with the transportation conformity regulations, FAMPO and the National Capital Region Transportation Planning Board (TPB) entered into an agreement to submit descriptions of Stafford's transportation projects to the TPB, so that they could be evaluated for conformity review. The 1-hour ozone standard, however, was superseded by the 8-hour ozone standard, and 2005 was the last year in which the Stafford project descriptions were required to be submitted to the TPB. However, coordination with TPB on air quality issues continues today.

In order to meet the EPA requirement that non-attainment areas be brought back into attainment with air quality standards, a State Implementation Plan (SIP) revision must be prepared for each affected region and submitted to the EPA by the Governor. In order to advise the Governor of the most appropriate air quality control measures to implement in this region, the George Washington Air Quality Committee (GWAQC) was formed. At the request of the governing bodies of the FAMPO local jurisdictions, the elected officials serving on FAMPO were also appointed to the GWAQC. Air quality personnel from the Virginia Department of Environmental Quality (VDEQ) serve as staff to the GWAQC. In August 2004, FAMPO approved Interagency Consultation Procedures to address the consultation requirements in the Federal transportation conformity rule. These procedures also outline the membership of the Interagency Consultation Group (ICG), an entity that convenes to approve the models, methods, and assumptions that are used in regional transportation conformity determinations.

The transportation conformity rule requires that all transportation projects identified in FAMPO's TIP and the financially constrained portion of the LRTP be shown to conform prior to final approval and adoption. Only those projects determined to be regionally significant need to be explicitly included in the regional emissions analysis and modeled for conformity. The VDOT Environmental Division, utilizing project information and data approved by FAMPO and the ICG, prepare each conformity analysis on FAMPO's TIP and the financially constrained portion of the LRTP and presents the results for FAMPO approval. Since the Region was designated nonattainment with the 8-hour ozone standard in 2004, FAMPO's TIP and the financially constrained portion of the LRTP have been found to conform on each occasion that conformity was run, and Federal conformity findings were subsequently issued by FHWA. Any new or amended TIP or the financially constrained portion of the LRTP that adds or deletes regionally significant projects will be required to undergo a new conformity review as well.

3.7 THE LAND USE AND TRANSPORTATION CONNECTION

Existing Situation

As shown in the Chapter 2, the George Washington Region is a rapidly growing ex-urban area of the Washington Urbanized Area. In Southern Caroline County, the Region also hosts suburban development related to the Richmond urbanized area.

The George Washington Region is also home to one of the world's largest military parks; The Fredericksburg and Spotsylvania National Military Park. The park contains approximately 8,000 acres and is spread across four counties and one independent city. It is important that the integrity of the park lands and the battlefields not contained within the park not be compromised or encroached upon. A number of the roadway improvement projects found in this plan border or pass through these lands and context sensitive designs and solutions will have to be applied to these projects to ensure the park lands and battlefields are not compromised.

Over the past decade, the Region's development and population growth has led that of all other Virginia regions by a wide margin, as the population has increased by roughly 50%. These new residents have settled on lands developed under State law and consistent with the comprehensive plans of local governments, as well as their zoning ordinances.

While containing pockets of urban development, parks, national monuments, resource areas, military bases and agricultural lands, the Region's key recent development has been in strip commercial and suburban properties.

This major influx of new people and business in widely distributed areas has led directly to heightened traffic congestion throughout the Region, particularly in its (expanding) urbanized area.

This rise in congestion is directly tied to a simple truth. Although government and the private sector have built new roadways and widened others, and although the Regional bus system, the Fredericksburg Regional Transit (FRED), and inter-Regional transit, including ride sharing/vanpooling, Virginia Railway Express (VRE) and Express Bus have improved services and facilities, the transportation system has not kept pace with the demand for transportation.

This fact is demonstrated in the highway parts of the 2035 LRTP in the following chapters, where congested roadways are mapped, projects to relieve that congestion are defined and prioritized, and where these roadway improvements are shown to exceed available revenues by an order of magnitude.

Moreover, the transit portions of the 2035 LRTP show that transit is not currently a good tool in the transportation tool box to help solve this Regional congestion problem because Regional development is so spread out that, based on national effectiveness measures such as cost per trip and riders per hour, significant increases in Regional transit are uneconomical. They are just too expensive for their return, given the spread out nature of Regional development. This does not mean that transit can never become a good tool to help solve Regional congestion problems or that transit does not also serve other purposes. What this means is that, given current Regional land use policy, public investments in Regional transit are difficult to make economically.

One brighter spot in the transit picture is in the area of inter-Regional travel, essentially commuters who work in Northern Virginia. Here the concentration of commuter demand in the greater I-95 corridor makes transit a better tool for easing congestion, and studies show that fully 40% of all inter-regional trips in the greater I-95 corridor use some form of transit, be it commuter rail, express bus or ridesharing/vanpooling.

This is the existing situation, and the future brings no really better news, given current land use policy.

Please refer to **Map 4** on the following page for a visual representation of the Region's existing land use.

Future Situation

Chapter 2 (Demographic Trends and Projections) of this 2035 LRTP shows a mid-range projection for regional population about doubling by 2035, to about 600,000 persons. **Chapter 2** also contains population density maps modeled by FAMPO showing where development will occur through 2035. These population density maps were based on the Comprehensive Plans of all the local governments in the Region and were vetted through local government staff.

GEORGE WASHINGTON REGION EXISTING LAND USE

PRINCE WILLIAM COUNTY
MCB QUANTICO
FAUQUIER COUNTY
CULPEPER COUNTY
STAFFORD COUNTY
MARYLAND
POTOMAC RIVER
DHALGREN
NSWC
ORANGE COUNTY
CITY OF FREDERICKSBURG
KING GEORGE COUNTY
SPOTSYLVANIA COUNTY
FORT A.P. HILL
WESTMORELAND COUNTY
ESSEX COUNTY
CAROLINE COUNTY
LOUISA COUNTY
KING & QUEEN COUNTY
HANOVER COUNTY
KING WILLIAM COUNTY

CITY OF FREDERICKSBURG

GEORGE WASHINGTON REGION
2035 Long Range Transportation Plan
MAP 4

GEORGE WASHINGTON REGIONAL COMMISSION
FAMPO Fredericksburg Area Metropolitan Planning Organization

Legend
- Single Family Residential
- Multi-Family Residential
- Commercial
- Public/Semi-Public
- Industrial
- Military Installations
- State Parks
- NPS Properties
- Agriculture
- Forest/Vacant

0 4 8 16 24 32 Miles

The future population distribution maps in Chapter 2 continue to show a widely dispersed Regional development pattern through 2035. The parts of the Plan dealing with highways and transit show that the Regional highway system will continue to experience severe congestion during this period, and the transit system will continue to lack concentrated areas of Regional employment and housing to afford an economical transit solution to continued highway widening.

By 2035 the cost of highway expansion to achieve an acceptable level of congestion will be nearly $9 billion, while available revenues from all current sources will be a scant one-fifth of that amount, under $2 billion. Moreover, widening these highways will cause disruptions to neighborhoods and environmentally sensitive areas to which people are likely to object. Finally, given no change in Regional land use policy, even if the Region could accommodate all of its highway demand through building wider thoroughfares, future population growth beyond 2035 would reinvent the problem again, requiring yet another round of highway widening in the distant future.

These costs and impacts and this vicious cycle are almost certainly unacceptable to most people.

Land Use Findings

The above shows that the status quo land use policy in the Region directly affects transportation and is quite negative. The current Regional land use policy is actually a "quilt" of five local government policies, and it fails from the point of view of traffic congestion, costs and impacts.

A Regional approach to land use policy formulation, for adoption and implementation by local governments, may not solve this problem in its entirety, but it offers the potential of a sound beginning.

The Boards and staff of neither GWRC nor FAMPO desire to obtain land use regulatory powers. But these organizations can serve as conveners of policy makers and interested persons on the subject of growth and development and land use policy in the Region.

One technique used successfully by many Regions, including many fast growing Regions in the Sunbelt, is to begin to undertake Regional land use scenario planning. In these cases Regional policy makers and staff have come together to map out and analyze the alternative land development options confronting them.

From this work the costs and benefits of alternative land use policies were defined for the Regions and the local governments therein. These costs and benefits extended to transportation, utilities, educations, emergency services, tax revenues and other areas.

Utilizing this approach, the autonomy of local governments to set land use policy within their boundaries is maintained, while the most positive and cost effective development patterns and policies for the greater Region are defined.

Benefits from this approach include a greater public understanding of Regional trends and choices, greater inter-governmental cooperation and a propensity of the State and Federal governments to provide more funding to cooperating Regions for infrastructure and others improvements needed to promote more cost-effective land development.

3.8 CONGESTION MANAGEMENT PROCESS

In December of 2004, the FAMPO Policy Committee adopted the Congestion Management System (CMS) program for the FAMPO Region. This program initially examined the North Stafford County area. The Congestion Management System, referred to as a Congestion Management Process in SAFETEA-LU, is an ongoing process that is formally part of a two year cycle. Eventually all of the congested corridors within the FAMPO Region will be analyzed in detail. In addition, as key components of the CMP are implemented, the effectiveness of those components will be monitored, and recommended modifications may be provided as appropriate. The CMP is an integral part of the planning and project prioritization process of FAMPO.

Intelligent Transportation Systems (ITS) are a key component of the CMP described above. ITS components may include the coordination of high technology, variable message signs, improvements in information systems, communications and sensors with the conventional surface transportation infrastructure on an area wide basis. Vehicle sensors in pavement for traffic signal activation, intelligent vehicle initiatives (IVI), which include hands-free vehicle navigation, collision avoidance and intelligent cruise control are just a few examples of ITS. Recently VDOT has also extended a 511 information program for Interstate conditions throughout the state, including the I-95 corridor through the Fredericksburg Region. Under what is know as Rule 940, Federal regulations require planning for ITS projects to be incorporated into the traditional transportation planning process. VDOT has established an ITS protocol consistent with Rule 940 in order to implement ITS solutions Statewide. ITS will play a growing role in FAMPO congestion management activities going forward.

3.9 FREIGHT PLANNNING

One of the emphasis areas of the Federal planning requirements is an improved understanding of freight patterns and future demands on state and regional multi-modal networks. VDOT has initiated a statewide study effort of freight in Virginia, last year having conducted a statewide freight survey. FAMPO has complemented this statewide effort by developing information about freight shippers in the Fredericksburg Region. Going forward, FAMPO will identify transportation system deficiencies that impact the movement of freight, develop short and long term improvements that will improve the movement of freight and develop a coordination structure to obtain input from and disseminate information to, the Region's major freight stakeholders.

3.10 SECURITY AND EMERGENCY PREPAREDNESS PLANNING

In March of 2006, the Rappahannock Area Development Commission (the predecessor to the George Washington Regional Commission) adopted an ***All-Hazards Mitigation Plan***. This plan was constructed in accordance with the requirements of the Disaster Mitigation Act of 2000 (DMA 2000) and will provide the communities and its citizens with a better understanding of the natural hazards the communities face, the assets vulnerable to those hazards, and the strategies available to mitigate those hazards. The plan will also help the communities build support for mitigation activities, develop more effective public education policies regarding mitigation and disasters; integrate mitigation

processes into other community programs and processes and post disaster recovery activities, and obtain disaster related grants in the aftermath of a disaster.

The Hazard Mitigation Planning Committee (HMPC) analyzed and prioritized the natural hazards that threaten the RADCO region. The Plan focuses on the hazards that have the highest probability of occurring. The HMPC considered and analyzed the potential impacts of these hazards, which were listed in the Plan's Vulnerability Assessment section. The HMPC also evaluated current capabilities in mitigating certain types of hazards; this evaluation went into the Capability Assessment section of the plan. The Hazard Identification, Vulnerability Assessment, and the Capability Assessment sections all compose the Risk Assessment section of the document. After reviewing the Risk Assessment, the HMPC assembled and developed goals, objectives, and possible mitigation strategies. With the developed list of mitigation strategies, the Committee prioritized those strategies and made recommendations as to the actions that would be appropriate given the potential strategies. This process formed the basis for this All-Hazards Mitigation Plan.

3.11 HUMAN SERVICE TRANSPORTATION COORDINATION

The George Washington Regional Commission is developing a Human Service Transportation Coordination Plan in concert with the Regional Transit Policy Plan. This plan includes:

- An inventory of clients, destinations and current services;
- An assessment of service gaps and unmet needs;
- Recommendations of service changes and additions including implementing agencies and budgets; and
- Creation and continued existence of a Human Service Transportation Advisory Committee, as a subgroup to the Rappahannock Area Disability Network (RADN).

This plan is complete in draft form and presently being reviewed by FAMPO Staff.