

# GUIDING PRINCIPLES

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THE ROANOKE VALLEY AREA METROPOLITAN PLANNING ORGANIZATION CONSTRAINED LONG-RANGE TRANSPORTATION PLAN 2035 (CL RTP 2035) consists of three fundamental elements:

- Guiding Principles
- Financially Constrained List of Transportation Projects
- Vision List of Transportation Projects

The Guiding Principles set both the policy tone and spirit in which to assess the Financially Constrained and Vision Lists of Projects against expected future project costs and funding allocations. To help with the assessment, Guiding Principles use a Vision Statement, examination of major societal and demographic trends, SAFETEA-LU Planning Factors, and Goals, Objectives, and Strategies to articulate a leadership vision for the CL RTP 2035.

Vision Statement: By the year 2035, RVAMPO will have made the most of limited federal surface transportation funds by acting upon opportunities to:

- manage the existing system using technology
- extend public transportation in a targeted manner
- provide opportunities for non-interstate ridesharing
- complement and complete existing transportation corridors, and
- provide safer transportation for all users.

The time horizon for the CL RTP extends until the year 2035. Within that time frame there are major societal and demographic trends that are both difficult to forecast with accuracy and profoundly important in their impact on future travel patterns, transportation demand, and transportation safety. These forces represent major variables affecting the decisions and trade-offs and are necessary in the planning process. The summaries below will be supplemented by more detailed information throughout the plan.

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## SOCIETAL AND DEMOGRAPHIC TRENDS

### **RETIREMENT OF BABY BOOM GENERATION**

The Baby Boom generation represents those born after World War II until 1964. If current retirement ages and trends continue, all members of this sizeable population group will retire within the time horizon of this long-range plan. Most past plans relied on extrapolations of trends occurring in the decades preceding the plan. In almost all cases this meant extrapolating travel trends of the Baby Boom generation as they reached employment age, raised families, and achieved their highest earning potential and employment responsibilities. In retirement, these past transportation trends which were based on work and family will change to trends based on leisure, volunteering, medical appointments, and shopping/retail. In addition, as the Baby Boom generation ages, transportation safety and accessibility issues will come to the forefront.

### **AIR QUALITY AND GLOBAL CLIMATE CHANGE**

RVAMPO localities meet not only the 1997 National Ambient Air Quality Standard for 8-hour ozone under the Ozone Early Action Plan protocol but also the new 8-hour Ozone standards adopted by the EPA in March 2008. Similarly, RVAMPO localities are currently in compliance with the Fine Particulate Matter (PM 2.5) standard. It is likely that both of these standards will be further tightened during the time frame of this plan, so projects selected for inclusion in this plan should seek to maximize air quality improvement in balance with safety, financial, and other trade-offs.

Recent indications are that global warming is not only happening, but that it may be happening faster than projected and its consequences may be more widespread and more severe than forecast. The most likely negative effect of global climate change on RVAMPO localities would be increased flooding. Although there is no way to predict the timeline, scale, or severity of these changes in the CL RTP 2035, long-range transportation plans should consider the potential changes (heat, drought, floods, and sea level rise) that may cause major (possibly catastrophic) agricultural, economic, social, and geopolitical changes.

### **ENERGY PRICES**

Despite daily fluctuations, oil and gasoline prices continue to trend upward. Global oil prices no longer reflect simple supply and demand calculations. Even with level demand, oil prices rise due to increasing research and development costs. However, as traditional energy costs increase, technology can provide cheaper alternatives. One example is the rise of hybrid gas/electrical engine cars – which get higher mpg efficiency, require less gasoline, and reduce air pollution. The next level of automobile fuel technology – the hydrogen battery cell – represents a cleaner fuel source, but the technology needed for its use and delivery is still 10 to 15 years away. During this period, if gas prices go to four to six dollars per gallon (or higher), more drivers may turn to mass transit. Carpooling, van sharing and/or bicycling to work might become more attractive alternatives. Alternative transportation amenities may need to be ramped up in order to meet the increased demand.

## FUNDING TRENDS

At present, transportation funds for construction and maintenance are trending downward. The LRTP 2025, originally adopted in February 2004, was amended in April 2008 to account for updated projected financial revenue and project costs. In many cases, locality systems -- urban and secondary -- saw reductions in nominal dollars (not accounting for reductions due to inflation), and some secondary systems saw a nearly 50% reduction in projected transportation revenues through 2025. If this downward trend continues during this plan's time frame, non-traditional and relatively less expensive projects -- such as Intelligent Transportation Systems (ITS), Travel Demand Management (TDM) and Operations Management -- will become more important and must be given serious consideration.

## SAFETEA-LU PLANNING FACTORS

Through SAFETEA-LU, the federal government provides long-range planning factors to guide MPOs through the planning process. The federal planning factors are listed below along with possible regional project selection criteria.

**One:** "Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency." Select projects which provide congestion relief. Select cost-effective projects (e.g. lowest cost per new user).

**Two:** "Increase the safety of the transportation system for motorized and non-motorized users." Select projects with potential to improve safety.

**Three:** "Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and non-motorized users."

**Four:** "Increase the accessibility and mobility options available to people and for freight." Set aside funding for mass transit projects. Select cost-effective projects (e.g. lowest cost per new user).

**Five:** "Protect and enhance the environment, promote energy conservation, and improve quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns." Select projects which promote efficient growth patterns identified in local Comprehensive Plans.

**Six:** "Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight."

**Seven:** "Promote efficient system management and operation." Set aside funding for cost-effective ITS projects.

**Eight:** "Emphasize the preservation of the existing transportation system." Consider long-term operations and maintenance costs in the selection process.

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## GOALS AND OBJECTIVES

The RVAMPO CLRTP 2035 establishes a set of goals, objectives, and strategies to help guide the planning process. For the purposes of this plan the following definitions are used for goal, objective, and strategy:

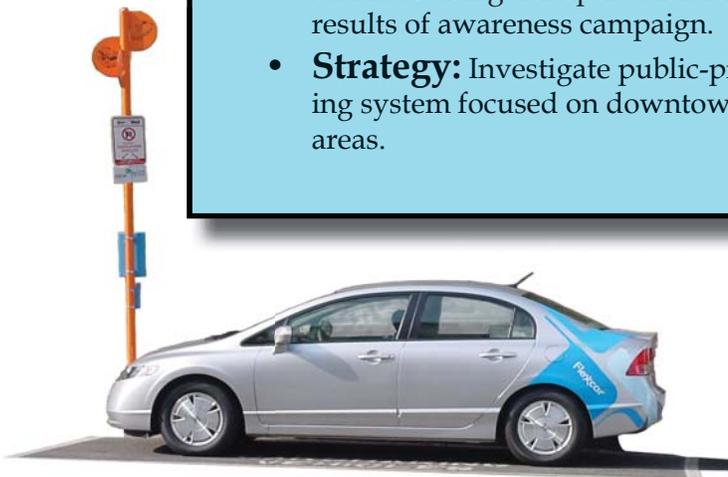
**Goal** - A long-term end toward which efforts are directed.

**Objective** - A specific, intermediate program or activity that marks progress toward a goal.

**Strategy** - A measurable plan of action or way in which programs and activities are coordinated to achieve an identified goal and objective.

### **GOAL ONE: Improve transportation system performance and air quality *and* reduce growth in transportation-related energy use by reducing the growth rate of Vehicle Miles Traveled (VMT)**

- **Objective:** Plan for non-interstate park and ride lots by including construction costs or private sector partnership costs in the Financially Constrained List of Transportation Projects (FCLTP).
  - **Strategy:** Develop a program, focused on key regional arterial corridors, to encourage businesses, churches, and other organizations with pre-existing excess parking capacity, to officially section off portions of their existing parking lots as park and ride sections. Progress on this objective can be measured by the number of such partnerships by a certain date.
  - **Strategy:** Add the estimated construction cost of one non-interstate 20-space park and ride lot to the project costs of major arterial construction projects over one mile in length in the FCLTP.
- **Objective:** Increase performance and awareness of Travel Demand Management (TDM) Program.
  - **Strategy:** Conduct professional target market analysis and create campaign for commuters near major regional corridors using transportation funds from construction revenues.
  - **Strategy:** Develop VMT reduction awareness campaign using a wide variety of communication products, possibly including: public service announcements, advertising, social networking, and other appropriate channels using transportation funds from construction revenues. Measure results of awareness campaign.
  - **Strategy:** Investigate public-private partnerships to implement a car sharing system focused on downtown, village centers, and mixed use residential areas.



**GOAL TWO: Increase percentage of “complete streets” by adding elements that adapt existing right-of-way (ROW) and travel corridors for safe use by multiple transportation modes.**

- **Objective:** Provide bicycle accommodations on key commute corridors.
  - **Strategy:** Apply at least 2% of total FCLTP funds to bicycle enhancements.
  - **Strategy:** Install or provide installation incentives for an additional 50 bicycle racks by the time horizon of this plan.
- **Objective:** Increase pedestrian access and safety on collector and arterial roads.
  - **Strategy:** Include sidewalk costs in FCLTP project cost estimates for roadways that function at the collector or arterial level and currently lack sidewalks.
  - **Strategy:** Include costs for crosswalks and pedestrian crossing signals to connect sidewalks already present or to be constructed in FCLTP project cost estimates.
- **Objective:** Reconfigure, restripe, and/or resurface urban collectors and arterials to include bicycle lanes, sidewalks, or pedestrian paths in accordance with local comprehensive plans and local design guidelines.
  - **Strategy:** Include “stand alone” bicycle or pedestrian accommodations that are attached to existing collectors or arterials in FCLTP where appropriate.

**GOAL THREE: Assure that transportation improvements are compatible with local comprehensive plans and regional economic development activities.**

- **Objective:** Consult local government design guidelines and neighborhood plans to more accurately develop project cost estimates for candidate LRTP 2035 projects.
- **Objective:** Construct “Roanoke River Greenway” as defined in “2007 Update to the Roanoke Valley Conceptual Greenway Plan” by the end of LRTP 2035 time horizon.
  - **Strategy:** Periodically monitor “Roanoke River Greenway” implementation and schedule.
  - **Strategy:** Apply surface transportation funds, as appropriate, to “Roanoke River Greenway” construction.



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### GOAL THREE - CONTINUED:

- **Objective:** Assure adequate transportation connectivity between Downtown Roanoke and Biomedical Center Complex on Reserve Avenue.
- **Objective:** Plan for freight needs on applicable corridors.
  - **Strategy:** Review candidate CL RTP 2035 projects for inclusion in the 2002-03 "Roanoke Valley - Alleghany Regional Freight Study" and give special consideration to included projects.
  - **Strategy:** Consider extra costs needed to accommodate vehicles with long wheel bases in appropriate candidate CL RTP 2035 projects.
- **Objective:** Develop telework as a complement to existing commuting patterns and as an inter-regional transportation option for those living in the RVAMPO area and teleworking to larger metropolitan areas.
  - **Strategy:** Continue to work with City of Roanoke Economic Development and Telework VA program to expand telework options both inter- and intra-regionally. Report number of registered telework participants on an annual basis.
- **Objective:** Continue to investigate an increased role for rail, both intermodal freight and a possible re-establishment of passenger rail service.
  - **Strategy:** Investigate under-analyzed niche markets for passenger rail service and cross reference with existing economic development and tourism planning initiatives.
  - **Strategy:** Assess intermodal freight aspect of candidate CL RTP 2035 projects.

### GOAL FOUR: Maximize benefits from limited transportation funds by focusing on bottleneck improvements, spot improvements, and/or technology improvements to be applied to the transportation system at a lower cost than traditional construction costs.

- **Objective:** Provide funds for signal timing coordination and synchronization plans and studies on key regional corridors.
- **Objective:** Consider corridor improvements as a combination of a series of intersection or bottleneck improvements coupled with appropriate safety and accessibility.
  - **Strategy:** Program costs for roundabouts where feasible and track number of roundabouts implemented.
  - **Strategy:** Program costs for signal timing, reversible lane or other operations systems designed to get extra capacity out of existing infrastructure.

**GOAL FIVE: Enhance transportation safety for all users and bystanders.**

- **Objective:** Develop at least 10 active or completed Safe Routes to Schools (SRTS) plans or projects by the end of the CLRTP 2035 time horizon.
  - **Strategy:** Develop at least one SRTS plan in each RVAMPO locality within the next 10 years.
- **Objective:** Use data analysis to identify top regional accident locations on a vehicle miles traveled, entering volume or other standard measure.
- **Objective:** Identify regionally significant right of way or human factors that have the potential to lead to accidents in anticipated projects listed in this plan.
  - **Strategy:** Investigate whether public policies such as limiting mobile phone use in operating vehicles can be implemented at the local or regional level.

**GOAL SIX: Anticipate transportation needs of retiring Baby Boom population in projects selected for CLRTP 2035.**

- **Objective:** Target future areas that are projected to have a concentration of “carless households” in retirement age ranges.
  - **Strategy:** Develop regional “non-commute trip” ridesharing system for non-emergency medical, shopping, and social trips. Have such a program in operation by 2012.



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### GOAL SIX - CONTINUED:

- **Strategy:** Investigate a regional car sharing system designed to appeal to households who want to own one vehicle or less on a permanent basis. Report feasibility by 2012.
- **Strategy:** Investigate feeder system (e.g. taxi, jitney-style, or other para-transit feeder system) that targets concentrations of “future carless households” to the current fixed route transit system. Integrate concept into regional transit development plan by 2012.
- **Strategy:** Investigate bicycle sharing/renting systems that could serve as a transit feeder system. Integrate concept into regional bicycle plan by 2010.
- **Objective:** Investigate daily bus service between Roanoke Valley and Smith Mountain Lake to connect retired lake residents with regional airport and other transportation connections.