PLAN 2040
CENTRAL VIRGINIA
LONG RANGE TRANSPORTATION PLAN

5

Chapter 5: Project Evaluation Framework

As explained in Chapter 4, the Central Virginia MPO has decided to create an evaluation tool that could be used to measure the extent to which proposed projects are aligned with the transportation goals of the region and of the state. The transportation goals for the Central Virginia MPO were identified through an extensive stakeholder meeting process in the previous 2035 Update to the LRTP. These ten goals were defined as follows:

1. **Make it Safe:** Promote transportation safety and security for motorized and non-motorized travelers.
2. **Make it Function:** Ensure that the existing transportation system is maintained.
3. **Make it Flow:** Improve mobility and connectivity for people and freight, across all travel modes.
4. **Make it Accessible:** Promote equal access to all modes of transportation for people of all ages and abilities.
5. **Make it Efficient:** Maximize transportation operations and efficiency of key corridors such as Route 29 in the region and between regions. The Route 29 corridor is a vital economic artery for the region and the state and must be managed and developed accordingly.
6. **Promote Vitality:** Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
7. **Sustain Quality:** Support and enhance environmental resilience, energy conservation, and community quality of life.
8. **Coordinate Investments:** Ensure consistency with local and state plans and goals for land use, environmental preservation, and economic development.
9. **Balance Priorities:** Balance cross-jurisdictional transportation needs and concerns.
10. **Expand Resources:** Identify and develop new sources of transportation funding.

Though distinct in their specific focuses, many of these goals are interrelated in terms of the transportation factors and conditions that will determine their success. As such, these goals were divided into five "vision theme" categories that relate to broad concepts in transportation planning that may affect multiple goals as listed above. In order to define these themes in a manner that was consistent with that of the state, the MPO referenced a project evaluation tool that had previously been developed and used by the VDOT Lynchburg District office. These themes were defined, and the region's goals distributed, as shown in Figure 5.1.

The following sections describe each of the five Vision Themes and the specific indicators, or measures that were used to evaluate each theme. Each measure is also described in terms of its relevance to transportation, the data source(s) for the measure and the basis for the high/medium/low scoring definitions used in the project rating framework.

Figure 5.1: Regional Transportation Goals as Grouped by Vision Themes

Goal	CVLRTP 2040 Vision Theme
Make it Flow Make it Accessible	**Mobility and Accessibility** Provide a transportation system that facilitates the efficient movement of people and goods
Make it Safe	**Safety** Provide a safe and secure transportation system
Promote Vitality Make it Efficient	**Economy** Retain and increase business and employment opportunities
Sustain Quality	**Community and Nature** Improve the quality of life and protect the environment
Make it Function Coordinate Investments Balance Priorities	**Operational Efficiency** Preserve the existing transportation system and promote efficient system management

Mobility and Accessibility

Goal		CVLRTP 2040 Vision Theme	Transportation Elements
Make it Flow Make it Accessible	→	**Mobility and Accessibility** Provide a transportation system that facilitates the efficient movement of people and goods	Congestion Traffic Volume Freight Volume Alternative Transportation Facilities

The performance measurements included in the vision theme "Mobility and Accessibility" relate to the region's effort to provide a transportation system that facilitates the efficient movement of people and goods. In the 2035 CVLRTP, this effort was described by the goals "Make it Flow" and "Make it Accessible."

Mobility and accessibility are important factors for economic development. They determine the ease and speed with which businesses can receive and distribute goods, or their ability to gain access employees and customers. Low levels of congestion also improve air quality and can enhance the quality of life for residents.

Four indicators were used to assess a project's importance to the region's Mobility and Accessibility. These included:

- **Congestion**
- **Traffic Volume**
- **Freight Volume**
- **Alternative Transportation Facilities**

Congestion

Transportation Elements		Congestion
Roadway Performance Measurement		Volume to Capacity Ratio
Scoring Criteria	**High**	Volume/Capacity > 1.1 AND increases road capacity
	Medium	Volume/Capacity 0.8 - 1.09 AND increases road capacity
	Low	Volume/Capacity < 0.8 OR does not increase road capacity

Relevance

Traffic congestion is a condition that occurs when the number of vehicles using a road approaches or exceeds its designed capacity. This capacity is determined by the number of travel lanes and the speed of travel. If it is exceeded, traffic on the road will frequently need to slow down or stop in order to avoid collisions with other vehicles. High levels of congestion increase travel times and vehicle emissions, and can have detrimental effects on economic development and quality of life.

Data Source

In order to predict levels of traffic congestion in the Central Virginia MPO in 2040, a traffic model was developed for the region. The model uses the projected population growth rates of Traffic Analysis Zones (TAZs) in the region to estimate the expected increase or decrease of traffic volume on the region's roads relative to current conditions.

One output of this model is the predicted Volume to Capacity ratio for peak hour travel on every road. Peak hours are the busiest hours on most roads, which are defined as 7-9 A.M. and 4-6 P.M. The Volume-to-Capacity ratio is calculated as: (Traffic Volume ÷ Road Capacity). A Volume-to-Capacity ratio of 1 means that the traffic volume on the road is exactly the same as its capacity. A result less than 1 indicates that the volume is smaller than the road's capacity, while a result greater than 1 indicates that the volume is larger than the road's capacity. The larger the number, the greater the congestion.

Goal

The goal of this performance measurement is to award points to projects that reduce predicted levels of traffic congestion.

Scoring Definition

- High: Volume/Capacity is greater than 1.1 AND the project increases road capacity
- Medium: Volume/Capacity is between 0.8 and 1.1 AND the project increases road capacity
- Low: Volume/Capacity is less than 0.8 OR the project does not increase road capacity

Traffic Volume

Transportation Elements		Traffic Volume
Roadway Performance Measurement		Weighted Traffic Flow
Scoring Criteria	**High**	Weighted Flow Rate > 300 vehicles
	Medium	Weighted Flow Rate: 150-299 vehicles
	Low	Weighted Flow Rate < 150 vehicles

Relevance

Traffic volume is a count of the number of vehicles using a road. In most road networks, a relatively small number of major corridors carry a large majority of the total daily traffic. It is important for a region to identify these corridors and maintain them at a high level of operational efficiency in order for the overall transportation network to function effectively.

Data Source

The data for this measurement was provided by the same traffic model that was used for the Congestion performance measurement. For this evaluation, traffic volume was measured as a Weighted Traffic Flow. Weighted traffic flow is calculated as the number of vehicles per lane, per hour on a given corridor. The average weighted traffic flow of all road segments in the model was calculated, which was determined to be about 150 vehicles per lane, per hour. This figure was used to define the scoring categories for this measurement.

Goal

The goal of this performance measurement is to award points to projects that improve roads that carry a high per-lane volume of traffic.

Scoring Definition

- High: Weighted Traffic Flow is greater than 300 vehicles
- Medium: Weighted Traffic Flow is between 150 and 299 vehicles
- Low: Weighted Traffic Flow is less than 150 vehicles

Freight Volume

Transportation Elements		Freight Volume
Roadway Performance Measurement		Percentage of Truck Traffic
Scoring Criteria	High	Truck Volume > 5% AND improves corridor operation
	Medium	Truck Volume: 2% - 4.99% AND improves corridor operations
	Low	Truck Volume < 2% OR does not improve corridor operations

Relevance

Freight volume reflects the percentage of total traffic on a road that is comprised of heavy trucks (not including buses). Roads with a high percentage of trucks are important to the local economy due to their role in moving freight and facilitating trade. The weight of these vehicles also tends to lead to a more rapid deterioration of road conditions than normal. For both of these reasons, it is important for a region to identify and maintain roads with a large percentage of truck traffic.

Data Source

Freight volume data was provided by the 2013 VDOT daily traffic volume estimates. This report provides total traffic volume percentages for four categories of heavy trucks: 2 axle single-unit, 3+ axle single-unit, 1 trailer, and 2 trailer. The total truck volume was calculated as the sum of these four categories.

Goal

The goal of this performance measurement is to award points to projects that improve the operation of roads with a high percentage of truck traffic.

Scoring Definition

- High: Total truck volume is greater than 5% AND the project improves corridor operations
- Medium: Total truck volume is between 2% and 4.99% AND the project improves corridor operations
- Low: Total truck volume is less than 2% OR the project does not improve corridor operations

Alternative Transportation

Transportation Elements		Alternative Transportation Facilities
Roadway Performance Measurement		Proposed bus, bicycle, or pedestrian facilities
Scoring Criteria	**High**	Includes facilities for two or more alternative modes of transportation
	Medium	Includes facilities for one alternative mode of transportation
	Low	Does not include facilities for alternative modes of transportation

Relevance

In addition to automobiles, roads can be used to facilitate the movement of other modes such as buses, bicyclists, and pedestrians. In order to improve the safety and comfort of all road users, special accommodations can be included for these alternative modes of transportation such as bike lanes, sidewalks, and covered bus stops.

The inclusion of these facilities within the street corridor not only increases the mobility of non-driving groups such as children, the elderly, the disabled, and low income populations, but may also encourage more people of all abilities to use these modes for some trips rather than their cars. This choice can help people save money by limiting their automotive expenses, as well as improving their health by increasing their amount of physical activity. It also can benefit the transportation network as a whole by reducing congestion, reducing wear on the asphalt, and decreasing air emissions. For these and other reasons, an increasing number of professionals and businesses indicate a preference for cities that support alternative modes of transportation, which therefore makes it an economic development consideration as well.

Data Source

The alternative transportation score was based on the number of different types of non-automobile facilities that would be improved or added by the project.

Goal

The goal of this performance measurement is to award points to project that add or improve facilities that are intended for alternative modes of transportation.

Scoring Definition

- High: Includes facilities for two or more alternative modes of transportation
- Medium: Includes facilities for one alternative mode of transportation
- Low: Does not include facilities for any alternative modes of transportation

Safety

Goal		CVLRTP 2040 Vision Theme	Transportation Elements
Make it Safe	→	Safety Provide a safe and secure transportation system	Traffic Accidents Safety Features

The performance measurements included in the vision theme "Safety" relate to the region's effort to provide a safe and secure transportation system. In the 2035 CVLRTP, this effort was described by the goal, "Make it Safe."

Safety factors are intended to protect the most important elements of the region's transportation system: the people themselves. While the high speed of travel enabled by modern transportation produces some notable benefits, this speed, combined with the size of the vehicles, exposes users to significant risks. In the Central Virginia MPO alone, over 10,000 accidents occurred between 2011-2013, resulting in 91 deaths and over 1,000 serious injuries. In addition to bodily harm, these accidents also incur significant costs in terms of time and property damage.

Two indicators were used to assess a project's importance to the region's Safety. These included:

- **Traffic Accidents**
- **Safety Features**

Accidents

Transportation Elements		Traffic Accidents
Roadway Performance Measurement		2011-2013 VDOT traffic accident data
Scoring Criteria	**High**	30 or more accidents from 2011-2013 OR a top accident rate location
	Medium	10-29 accidents from 2011-2013
	Low	9 or fewer accidents from 2011-2013

Relevance

The accidents performance measurement assesses the number and rate of accidents that occurred at the proposed project location. While many accidents may occur due to driver error or a variety of different factors, the repeated occurrence of accidents at a single place along a road may indicate a deficiency in the road design itself.

Data Source

Accident data was provided by the Virginia Department of Transportation. One data set provided the location of every accident that occurred between 2011-2013. The other data set identified the location of road segments and intersections with the highest accident rates within the Lynchburg District. An accident rate is calculated as the number of accidents that occur per 100,000,000 vehicle miles traveled.

Goal

The goal of this performance measurement is to award points to projects that improve roads at locations that have historically experienced a high number or rate of accidents.

Scoring Definition

- High: 30 or more accidents from 2011-2013 OR includes a high accident rate location
- Medium: 10-329 accidents from 2011-2013
- Low: 9 or fewer accidents from 2011-2013

Safety Features

Transportation Elements		Safety Features
Roadway Performance Measurement		Safety-related project features
Scoring Criteria	**High**	Project includes features that are primarily intended to address a safety concern
	Medium	Project features will generally improve road safety
	Low	Project features will have no discernable impact on safety

Relevance

The design of a roadway can significantly affect the safety of travelers who use it. Factors such as the configuration of an intersection or ramp, the width of travel lanes, the distance of sight at a turn, the location of driveways, shoulder width, pavement markings, and lighting can all play a role in travel safety.

While all new construction is required to abide by the latest safety regulations, some projects include features that are specifically intended to improve roadway safety. Examples of these might include driveway access management improvements, the creation of a round-about intersection, pedestrian islands, or the addition of bike lanes to physically separate travel modes.

Data Source

Project evaluation was based on proposed project features as defined by the contributing locality or study recommendation.

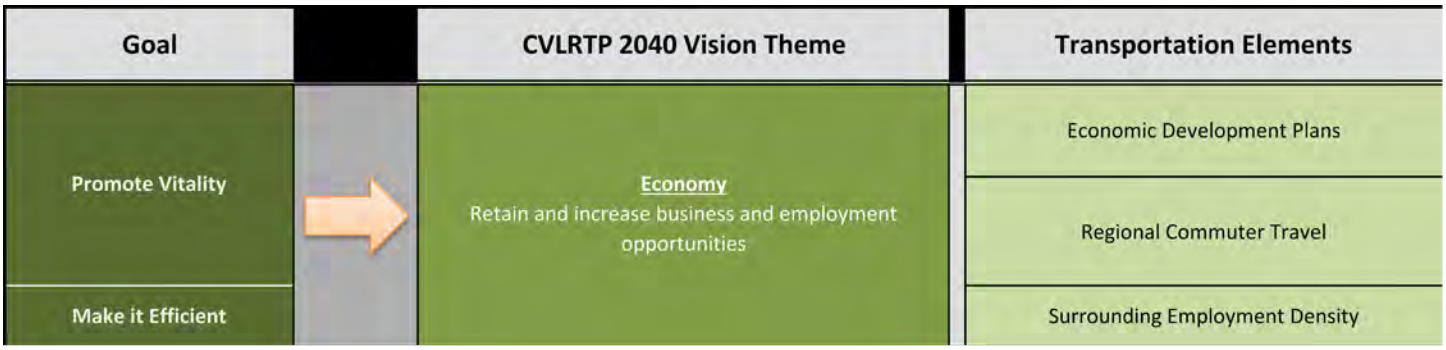
Goal

The goal of this performance measurement is to award points to projects that are primarily intended to address a safety concern.

Scoring Definition

- High: Project includes features that are primarily intended to address a safety concern
- Medium: Project features will generally improve road safety
- Low: Project will have no discernible impact on safety

Economy



The performance measurements included in the vision theme "Economy" relate to the region's efforts to retain and increase employment opportunities. In the 2035 CVLRTP, this effort was described by the goals "Promote Vitality" and "Make it Efficient."

The transportation network plays a significant role in the economic activity of any region. It determines the speed and efficiency with which goods can travel in and out of the region, as well as the accessibility of shopping and employment opportunities for residents and visitors. It also has a major influence on the type and intensity of real estate development that can be supported on any given property.

Three indicators were used to assess a project's importance to the region's economy. These included:

- **Economic Development Plans**
- **Regional Commuter Travel**
- **Surrounding Employment Density**

Economic Development Plans

Transportation Elements		Economic Development Plans
Roadway Performance Measurement		Identification in state or regional economic development plans
Scoring Criteria	**High**	Project is specifically recommended in the Region 2000 CEDS document or the Virginia Statewide Multimodal Freight Study
	Medium	Project improves a corridor of statewide significance or has a specific role in local economic development
	Low	Project does not have a specific significane to economic development

Relevance

Economic development strategies crafted at both the state and regional levels typically include recommendations for desired transportation improvements that will support the initiatives suggested by the plan. These project recommendations were identified and included for consideration in this update of the CVLRTP.

Data Source

On the regional level, the Central Virginia MPO referred to the recommendations made in the Region 2000 Comprehensive Economic Development Strategy, which was completed in 2013. On the state level, these recommendations came from the Virginia Statewide Multimodal Freight Study.

In addition to the specific recommendations made by these studies, the analysis also acknowledges projects that would support local economic development initiatives, as well as those that improve the operation of "Corridors of Statewide Significance," as identified in the 2035 VTrans Plan. In the Central Virginia region, Corridors of Statewide Significance include US 29 and US 460.

Goal

The goal of this performance measurement is to award points to projects that have been recommended by economic development plans produced by Region 2000 or the Commonwealth of Virginia.

Scoring Definition

- High: Project is specifically recommended in the Region 2000 CEDS document or the Virginia Statewide Multimodal Freight Study
- Medium: Project improves a Corridor of Statewide Significance or has a specific role in local economic development
- Low: Project does not have a specific significance to economic development

Regional Commuter Travel

Transportation Elements		Regional Commuter Travel
Roadway Performance Measurement		Designation as a primary regional commuter corridor
Scoring Criteria	**High**	Project improves a primary commuter corridor with a projected congestion concern (V/C > 0.8)
	Medium	Project improves a primary commuter corridor without a projected congestion concern (V/C < 0.8) OR provides primary access to a major employment center
	Low	Project does not affect a major commuter corridor

Relevance

Some of the most common types of trips made on a region's transportation network are those made by residents to and from their places of work. For many people, this trip includes travel on one of the region's primary arterial highways between their home and their place of employment. The roads that receive the largest amount of this commuter traffic during the morning and evening "rush hours" are often designated as primary commuter corridors.

Data Source

Four major road corridors in the Central Virginia MPO have been designated by previous Region 2000 transportation plans (the Region 2000 Commuter Services Plan and the Region 2000 Park and Ride Study) as primary commuter corridors. These include US 460, US 29, Rt 221, and Rt 501.

A project's Commuter Travel score was determined by its relation to these primary commuter corridors. If the project was an improvement to one of those corridors, the evaluation also considered the projected levels of congestion at the project location.

Goal

The goal of this performance measurement is to award points to projects that improve primary commuter corridors with projected congestion problems.

Scoring Definition

- High: Project improves a primary commuter corridor with a projected congestion concern (V/C > 0.8)
- Medium: Project improves a primary commuter corridor without a projected congestion concern (V/C < 0.8) OR provides primary access to a major employment center
- Low: Project does not improve a primary commuter corridor

Employment Density

Transportation Elements		Surrounding Employment Density
Roadway Performance Measurement		U.S. Census Longitudinal Employment-Household Dynamics: Employment Density
Scoring Criteria	**High**	Surrounding employment density is greater than 4 jobs per acre
	Medium	Surrounding employment density is between 1 and 4 jobs per acre
	Low	Surrounding employment density is less than 1 job per acre

Relevance

Businesses and other places of employment are not distributed evenly across a region. Instead, a majority are typically clustered in selected places around the region, including city downtowns, shopping centers, industrial parks, and office parks. The efficiency of the transportation network in and around these places can have a significant impact on many business functions, including the sending and receiving of goods, access to customers, and access to employees.

Data Source

The US Census produces a comprehensive data set entitled Longitudinal Employment-Household Dynamics (LEHD) that provides the approximate location and number of employment positions. This data can be used to create an "employment density" map that estimates the density of employment positions per acre at any given point in the region.

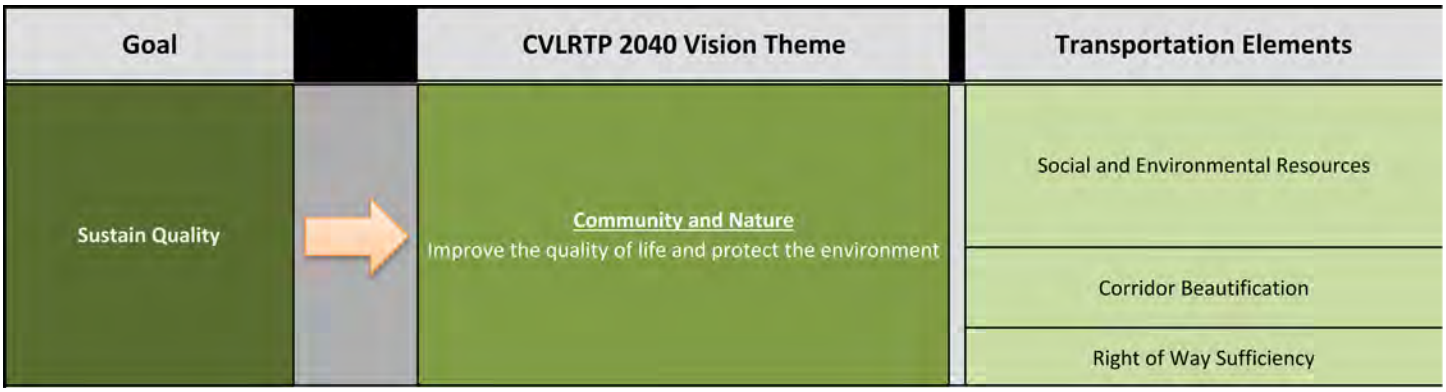
Goal

The purpose of this performance measure is to award points to projects that improve the transportation network in areas with a high density of employment positions.

Scoring Definition

- High: Surrounding employment density is greater than 4 jobs per acre
- Medium: Surrounding employment density is between 1 and 4 jobs per acre
- Low: Surrounding employment density is less than 1 job per acre

Community and Nature



The performance measurements included in the Vision Theme "Community and Nature" relate to the region's efforts to improve its quality of life and protect the natural environment. In the 2035 CVLRTP, this effort was described by the goal "Sustain Quality."

Transportation projects can affect natural environmental resources as well as and the surrounding homes, businesses, and community facilities such as schools, parks, churches, and libraries. In order to minimize the negative effects that projects may have on these things, it is important to consider the location of each proposed project in relation to its surrounding environment.

Three indicators were used to assess a project's importance to the region's Community and Nature. These included:

- Social and Environmental Resources
- Corridor Beautification
- Right of Way Sufficiency

Environmental Resources

Transportation Elements		Social and Environmental Resources
Roadway Performance Measurement		Proximity to wetlands, rivers and streams, agriculture/forest districts, historic landmarks, parks and conservation lands, Virginia Outdoor Foundation easements, and endangered species habitat
Scoring Criteria	**High**	Project has little or no impact on sensitive environmental resources
	Medium	Project has a moderate potential impact on sensitive environmental resources
	Low	Project has a major potential impact on sensitive environmental resources

Relevance

A project's impact on the environment is largely determined by its location relative to sensitive environmental resources. This proximity can have both a practical effect in terms of the physical damage that it may cause to these resources, as well as an administrative effect in terms of additional time and money that would spent on the mitigation efforts that would be required of the project to minimize this damage.

Data Source

For this analysis, a basic screening for seven types of sensitive environmental resources was conducted. These resources included: Wetlands, Rivers and Streams, Agricultural and Forest Districts, Historic Landmarks, Parks and Conservation Easements, Virginia Outdoor Foundation Easements, and Endangered Species Habitat.

A 1,500' buffer was created around every project location. For each category of resource, if there were no recorded instances of the resource in the buffer zone, the project was awarded 2 points. If a recorded instance of the resource was located within this buffer zone but was not directly adjacent to the project location, the project was only awarded 1 point for that category. If the project passed directly over or adjacent to the resource, however, 0 points were awarded. Thus, each project received and environmental resource score between 0 and 14, with a score of 14 indicating no major environmental impact and a score of 0 indicating a severe environmental impact.

Goal

The goal of this performance measurement is to award points to projects that avoid serious impacts on sensitive environmental resources.

Scoring Definition

High: Project has little or no impact on sensitive environmental resources (12-14 points)

Medium: Project has a moderate impact on sensitive environmental resources (8-11 points)

Low: Project has a major impact on sensitive environmental resources (0-7 points)

Corridor Beautification

Transportation Elements		Corridor Beautification
Roadway Performance Measurement		Proposed streetscaping or corridor beautification features
Scoring Criteria	**High**	Project includes specific streetscape improvement plans
	Medium	Project includes features along the edge (sidewalks) or middle (median, roundabout) of the road that may accommodate streetscaping
	Low	Project does not include streetscape improvements

Relevance

The influence of a road on the community it serves extends beyond the simple question of the number and speed of vehicles that can travel on it. The visual appearance of a road and its surroundings can influence the perception that both residents and visitors may have of the community itself. Beautiful buildings and landscaping along a road can produce a very positive perception of the community, while buildings and landscaping that show signs of deterioration, dirtiness, or a general lack of care can produce a negative perception of the community. This not only affects the quality of life of those who live there, but it can have a strong influence on property values and on the locations chosen by businesses and real estate developers.

As such, projects that improve a road's "streetscape" are increasingly being used by communities and businesses alike as an important component in efforts to revitalize or sustain surrounding economic activity. Some projects accomplish this directly by specifically enhancing the road's streetscape to increase its beauty, while others may accomplish it indirectly by creating features such as medians and roundabouts that provide a space for future streetscape improvements.

Data Source

Project evaluation was based on proposed project features as defined by the contributing locality or study recommendation.

Goal

The goal of this performance measurement is to award points to projects that have a positive impact on the visual beauty of the region's roads.

Scoring Definition

- High: Project includes specific streetscape improvement plans
- Medium: Project includes features along the edge (sidewalks) or middle (median, roundabouts) of the road that may accommodate streetscape elements
- Low: Project does not include streetscape improvements

Right of Way Sufficiency

Transportation Elements		Right of Way Sufficiency
Roadway Performance Measurement		Sufficiency of existing right of way
Scoring Criteria	High	Project will not require any additional right of way
	Medium	Project will require a minor acquisition of additional right of way
	Low	Project will require a major acquisition of additional right of way

Relevance

Right of Way refers to an easement of property that is reserved or obtained by a public government for the purposes of creating public "ways"—usually a road or utility infrastructure. Any publicly funded transportation project must obtain all of the right of way that is necessary for its completion before the project begins.

Strategic corridors of right of way are typically reserved between private property parcels in order to serve these properties with public road infrastructure, but some transportation projects require the expansion of the road corridor beyond the existing extent of the right of way. Other projects may involve the construction of a new road over existing private property, which requires the creation of a new right of way. In either case, the acquisition of property for the new right of way typically requires significant time and money.

In addition to monetary costs, new right of way acquisition generally indicates some kind of environmental disruption. In areas that are currently undeveloped, it may involve the destruction of habitats or other environmental resources. In areas that are developed, it may involve the destruction of private buildings or other space that currently serves a private purpose.

Data Source

Project evaluation was based on proposed project features as defined by the contributing locality or study recommendation.

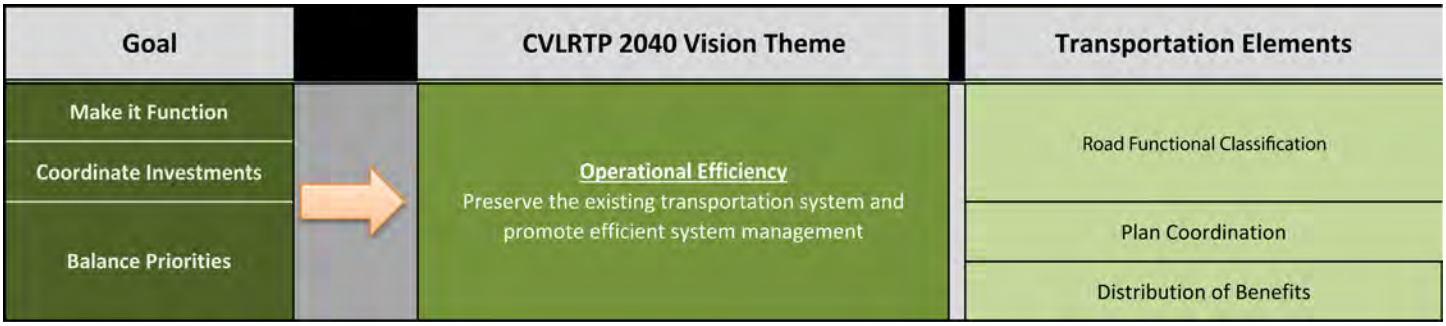
Goal

The goal of this performance measurement is to award points to projects that are expected to remain within the bounds of the existing right of way, thereby minimizing the project's disruption of existing habitats or property.

Scoring Definition

- High: Project will not require any additional right of way
- Medium: Project will require a minor acquisition of additional right of way
- Low: Project will require a major acquisition of additional right of way

Efficiency



The performance measurements included in the vision theme "Efficiency" relate to the region's efforts to preserve the existing transportation system and promote efficient system management. In the 2035 CVLRTP, these efforts were described by the goals "Make it Function," "Coordinate Investments," and "Balance Priorities."

This vision theme addresses the reality of modern transportation planning, which is that public funding available to build and maintain infrastructure is only sufficient to fund a very small portion of the transportation improvements that are proposed by the region. In order to maximize total impact of the projects that are selected, therefore, it is in the region's interest to ensure that they offer benefits to as many of the region's residents as possible, as well as operating in coordination with any expected future population and development changes.

Three indicators were used to determine a project's efficiency score:

- **Road Functional Classification**
- **Plan Coordination**
- **Distribution of Benefits**

Functional Roadway Classification

Transportation Elements		Road Functional Classification
Roadway Performance Measurement		VDOT Road Functional Classification
Scoring Criteria	**High**	Classified as Urban Freeway & Expressway or Urban/Rural Other Principle Arterial
	Medium	Classified as Urban/Rural Minor Arterial
	Low	Classified as Urban Collector, Rural Major/Minor Collector, Local, or is not classified

Relevance

The Virginia Department of Transportation classifies all of the state's federally aided roads into categories called Functional Classes, in accordance with a mandate issued by the Federal Highway Act of 1973. The purpose of the mandate was to allow the Federal Highway Administration to better understand national transportation needs by creating standardized terminology that could be applied across all states. VDOT describes this classification system as follows:

"Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Most travel occurs through a network of interdependent roadways, with each roadway segment moving traffic through the system towards destinations. The concept of functional classification defines the role that a particular roadway segment plays in serving this flow of traffic through the network. Roadways are assigned to one of several possible functional classifications within a hierarchy according to the character of travel service each roadway provides. Planners and engineers use this hierarchy of roadways to properly channel transportation movements through a highway network efficiently and cost effectively.

All functional classification categories now exist in both urban and rural areas and include:

A. Principal Arterial
   i. Interstate
   ii. Other Freeways & Expressways
   iii. Other
B. Minor Arterial
C. Collector
   i. Major Collector
   ii. Minor Collector
D. Local

Data Source

The functional roadway classification for each road was provided by VDOT.

Goal

The goal of this performance measurement is to award points to those roads in the region that serve the greatest amount and highest speeds of traffic.

Scoring Definition

- High: Classified as Urban Freeway & Expressway or Urban/Rural Other Principle Arterial
- Medium: Classified as Urban/Rural Minor Arterial
- Low: Classified as an Urban Collector, Rural Major/Minor Collector, Local, or is not classified

Plan Coordination

Transportation Elements		Plan Coordination
Roadway Performance Measurement		Recommendation in local, regional, and statewide planning documents
Scoring Criteria	**High**	Project is recommended by two or more other plans
	Medium	Project is recommended by one other plan
	Low	Project is not recommended by any other plans

Relevance

One of the initial tasks of the 2040 LRTP Update was to review other planning documents produced by local governments, Region 2000, and the Commonwealth of Virginia in order to identify any transportation project recommendations pertaining to the Central Virginia MPO.

The purpose of this review was to ensure that their recommendations were properly considered as part of the long range planning effort. These proposed projects are likely to directly support future growth and development anticipated in region. Additionally, multiple sources of recommendation for a project indicate a broad foundation of support that will increase its chances of receiving official approval for construction.

Data Source

The following plans were reviewed during this process:

- Amherst County Comprehensive Plan
- Town of Amherst 2009 Comprehensive Plan
- Bedford County 2025 Comprehensive Plan
- Campbell County Comprehensive Plan
- City of Lynchburg Comprehensive Plan
- Central Virginia's Region 2000 Park and Ride Lot Location Study
- Commuter Services Study
- Greater Lynchburg Transit Company Planning Documents
- Region 2000 Bicycle Plan
- Region 2000 Comprehensive Economic Development Strategy (CEDS)
- Region 2000 Coordinated Human Services Mobility Plan
- Region 2000 Greenways, Blueways, and Trails Plan: 2012 Connection Vision
- Region 2000 2035 Rural Long Range Transportation Plan
- Virginia 2012-2016 Strategic Highway Safety Plan
- Virginia Statewide Multimodal Freight Study, Phase II
- Virginia Surface Transportation Plan 2035
- VTrans 2035 Update

Goal

The goal of this performance measurement is to award points to projects that have been recommended by multiple planning efforts, thus indicating a broad range of support and effectiveness.

Scoring Definition

- High: Project is recommended by two or more other plans
- Medium: Project is recommended by one other plan
- Low: Project is not recommended by any other plans

Distribution of Benefits

Transportation Elements		Distribution of Benefits
Roadway Performance Measurement		Expected geographic distribution of users
Scoring Criteria	**High**	Project will provide regional benefits
	Medium	Project will provide signficant benefits to two localities
	Low	Project will provide significant benefits to one locality

Relevance

A transportation improvement project may provide considerable economic and quality of life benefits to its surrounding community. The question of how far those benefits will extend depends largely on the role and location of the improved corridor within the surrounding transportation network.

As a regional planning initiative, the intent of the CVLRTP is to direct funding towards projects that will provide benefits to as many of the member localities of the Central Virginia MPO as possible. A project that improves one of the region's primary arterial corridors, for example, can reasonably be expected to be used by and provide benefits to residents of all the communities in the region. Likewise, improvements to a non-regional corridor that provides a direct connection between two neighboring localities offers a wider distribution of benefits than one that only facilitates traffic within a single locality.

Data Source

Project evaluation was based on the proposed project location. US 460 and US 29 were regarded as "regional corridors." The distribution of benefits for projects on non-regional corridors was determined by the proximity and connectivity it would provide to surrounding localities.

Goal

The goal of this performance measurement is to award points to projects that distribute benefits to multiple communities in the region.

Scoring Definition

- High: Project will provide regional benefits
- Medium: Project will provide significant benefits to two localities
- Low: Project will provide significant benefits to one locality