

COLORADO

REGIONAL TRANSPORTATION PLANNING GUIDEBOOK



COLORADO DEPARTMENT OF TRANSPORTATION

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REGIONAL TRANSPORTATION PLANNING GUIDEBOOK

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Introduction

This *Guidebook* is designed to assist Regional Planning Commissions and the consultants assisting the Regional Planning Commissions with the updating of their Regional Transportation Plans for their Transportation Planning Regions. While the *Guidebook* is intended for use by the ten rural Regional Planning Commissions (Eastern, Southeast, San Luis Valley, Gunnison Valley, Southwest, Intermountain, Northwest, Upper Front Range, Central Front Range, and South Central) and the two small Metropolitan Planning Organizations (Pueblo Area and Mesa/Grand Junction Area) information will be included about the three large Metropolitan Planning Organizations (Greater Denver Area, North Front Range, and Pikes Peak Area) for consistency between the plans as they are consolidated into Colorado's long range transportation plan.

Each Regional Planning Commission is requested to start the regional transportation planning process by identifying a vision for transportation in their Transportation Planning Region. The Regional Planning Commissions are then asked to identify, analyze, and prioritize transportation needs for the movement of people and goods for all modes of transportation (Roadway, Transit, Aviation, Bicycle/Pedestrian, and Rail) to meet this vision.

The planning period for this update will be 2005 to 2030. The Regional Transportation Plans will need to be updated beginning February 1, 2003 with the First Draft submitted to the Colorado Department of Transportation (CDOT) by April 1, 2004 and the Final Plan adopted and submitted by September 1, 2004

The Transportation Commission will adopt a *2030 Statewide Transportation Plan* in June of 2005.

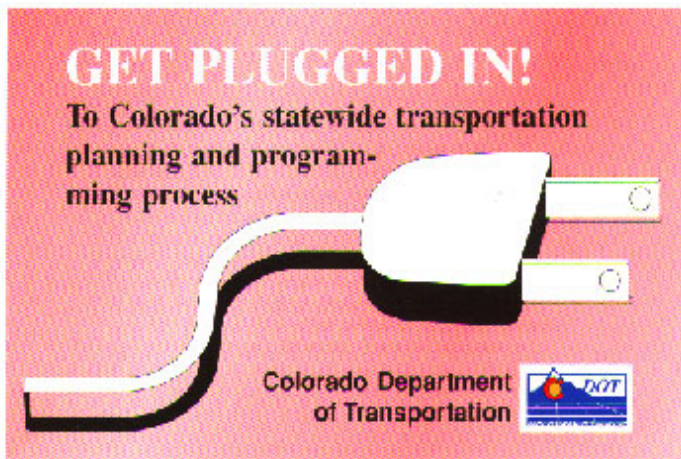
Setting the Stage

In 1991, two pieces of legislation were adopted that dramatically changed transportation planning in Colorado. The first was the passage of state legislation by the Colorado General Assembly that transformed the Colorado Department of Highways into the Colorado Department of Transportation with a mission to address all modes of transportation for the state. This legislation also established a (grass roots) process for defining transportation needs and required the development of a comprehensive long-range Statewide Transportation Plan based on 15 Regional Transportation Plans developed by locally elected officials representing the counties and municipalities in the 15 Transportation Planning Regions of Colorado. The second piece of federal legislation was the enactment by Congress of the Intermodal Surface Transportation Efficiency Act of 1991 that similarly required the states to produce Statewide Transportation Plans and a Statewide Transportation Improvement Program that identifies short-term project needs and priorities. Colorado chose to use a 6-year Statewide Transportation Improvement Program.

In December 1994 each of the 10 rural Regional Planning Commissions and the two small Metropolitan Planning Organizations completed their 1995 to 2015 Regional Transportation Plans. In January 1996 the Transportation Commission approved Colorado's 2015 Statewide Transportation Plan, entitled *Colorado's 20 Year Transportation Plan*.

In 1998, Congress enacted the Transportation Efficiency Act for the 21st Century, a follow up federal legislation to Intermodal Surface Transportation Efficiency Act of 1991. This legislation continued the requirement for statewide planning.

In December 1999 each of the 10 rural Regional Planning Commissions and the two small Metropolitan Planning Organizations completed the updates for their 2001 to 2020 Regional Transportation Plans. In November 2000 the Transportation Commission approved *Colorado's 2020 Statewide Transportation Plan: Investing in Colorado's Future*



Reason for a Regional Transportation Plan

The 15 regional transportation plans are the cornerstone documents used in the development of Colorado's statewide transportation plan. The vision for transportation and the resulting transportation projects from each of the Transportation Planning Regions form the basis for Colorado's statewide transportation plan. Only projects contained in or consistent with the regional transportation plans are eligible for inclusion in the statewide plan. Consequently, only these projects are eligible for state and federal funding through the Statewide Transportation Improvement Program process. While regional transportation plans and the statewide transportation plan are required by state statute, only regional transportation plans in metropolitan areas, the statewide transportation plan and the Statewide Transportation Improvement Program are required under federal law. Colorado has designed its transportation planning process to comply with all applicable state and federal regulations. By following the steps outlined in the Guidebook, the Regional Planning Commissions will assure planners that the end result of the regional transportation plan will be a useful tool accepted by the public, local governments, the state and federal agencies that can guide transportation development into the future.

In addition to fulfilling legal requirements, the Colorado Department of Transportation believes that this (ground roots) approach to comprehensive transportation planning is the only possible way to address transportation needs in such a complex world of competing needs, rapidly growing demand and shrinking resources. Development of well thought out plans gives Colorado the opportunity to wisely use the people's resources in an era of demanding accountability for expenditures of public funds and impacts on other social systems and the natural world. Planning, by definition, brings together all stakeholders in a system, pooling initiative and resolve to address problems that may be too complex for individual resolution.

THE PROCESS

1. REGIONAL TRANSPORTATION PLAN

The Regional Transportation Plan establishes a vision for transportation in each of the planning regions. The Regional Planning Commission using goals, objectives, and strategies developed to meet this vision performs demand and alternative analysis of current and future transportation needs. The result is the "Preferred Plan" identifying all transportation needs believed necessary to meet the vision for the region over a 20 plus year time frame. The second phase is development of the "Financially Constrained Plan" identifying only those projects that can reasonably be expected to receive funding from anticipated revenues over the next 20 years. The Regional Transportation Plan will be updated at least every six years and may be amended bi-annually using the amendment process outlined in the *Colorado Department of Transportation's Guidelines for Transportation Plan Amendments in the Regional and Statewide Transportation Planning Process*.

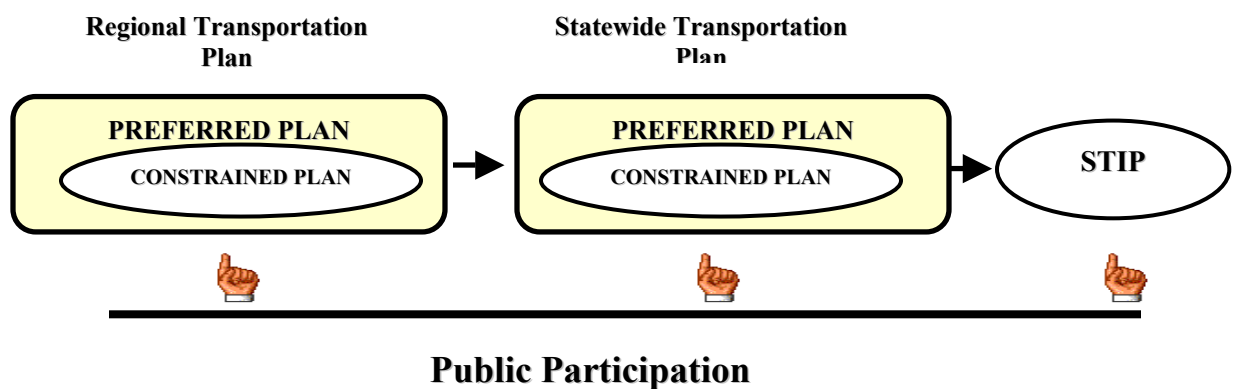
2. STATEWIDE TRANSPORTATION PLAN

The statewide transportation plan is a composite document reflecting the Transportation Commission adopted policies, direction and needs contained in the 15 Regional Transportation Plans that are eligible for funding over the next 20 years. The Transportation Commission adopted the *2020 Statewide Transportation Plan* in November of 2000. The statewide transportation plan is updated every six years and may be amended as needed following the Guidelines for Transportation Plan Amendments in the Regional and Statewide Transportation Planning Process. The statewide transportation plan is more than a composition of the 15 Transportation Planning Regions plans. It examines Colorado's transportation system from an overall perspective, setting goals and envisioning an innovative future that supports Colorado's unique quality of life.

3. STATWIDE TRANSPORTATION IMPROVEMENT PROGRAM

The Statewide Transportation Improvement Program is the project-programming document for the Colorado Department of Transportation, which contains projects from the statewide transportation plan that are scheduled for implementation in the next six years. The Statewide Transportation Improvement Program is updated every two years and can be amended as needed following the Transportation Improvement Plan/ Statewide Transportation Improvement Program Amendment Guidelines.

Transportation Planning Process



Insights From Past Regional Planning Processes

Following the adoption of the Statewide Transportation Plans, the Colorado Department of Transportation conducts a debriefing workshop and invites all participants in the transportation planning process to comment on how the planning process was conducted and to make suggestions on how to improve the process into the future. During the last workshop participants were asked to comment on the following areas of the planning process:

- Project Prioritization/Financial Constrain Process
- Vision, Values, Goals and Strategies Setting Process
- Local Needs Integration Process
- CDOT Policy Integration Process
- Modal Integration Process
- Public Involvement/Environmental Justice Process

From the workshop Colorado Department of Transportation staff developed the following list of recommendations, that have been incorporated into the *Guidebook* and need to be implemented into the next planning update process:

1. Prioritization Process
 - Regional Planning Commissions and the Colorado Department of Transportation Regions should use a consistent prioritization process
 - Criteria should be supported with accurate and current data to assist in prioritization process
 - Funding allocation from the Transportation Commission should be presented early in the process
2. Vision, Values, Goals and Strategies Setting Process
 - The Vision, Values, Goals and Strategies need to be used in the prioritization process
 - The Colorado Department of Transportation needs to present the Department Vision in the *Guidebook* for use by the Regional Planning Commissions in the development of their Vision, Values, Goals and Strategies
3. Local Needs Integration Process
 - The Colorado Department of Transportation needs to develop a better methodology for identifying local needs in the planning process
4. Colorado Department of Transportation Policy Integration Process
 - The Colorado Department of Transportation needs to revisit Transportation Commission policies prior to regional plan updates
 - The Colorado Department of Transportation needs to incorporate Transportation Commission policies and guidance into the *Guidebook*
5. Modal Integration Process
 - The *Guidebook* should outline how modal elements will be addressed in the regional plans
 - The *Guidebook* should outline how each Regional Planning Commission should develop Technical Advisory Committees for each mode
 - More modal data needs to be included in the dataset
6. Public Involvement/Environmental Justice Process
 - Implement and incorporate findings from public involvement evaluation study
 - *The Public Involvement Guidelines* need to incorporate Environmental Justice process
 - Data needs to be updated in the Colorado Department of Transportation dataset to reflect 2000 Census

7. General Recommendations

- The Colorado Department of Transportation needs to develop training on the planning process for new local elected officials and new participants in the process

Getting Started

Regional transportation planning consists of identifying local and regional issues, compiling pertinent information, examining modal alternatives, and selecting a desired course of action based on regional values.

The fifteen Transportation Planning Regions in Colorado are very diverse in their planning requirements and capabilities. Due to federal guidelines, the five Transportation Planning Regions containing Metropolitan Planning Organizations will use more complex planning tools and techniques than the ten Transportation Planning Regions with predominantly rural characteristics. However, within this varying level of sophistication there must be some consistency in order to facilitate the development of a quality statewide plan.

Therefore, the Colorado Department of Transportation is proposing that the Regional Planning Commissions develop their plans with the following ten factors in mind:

- Consider and incorporate the Transportation Commissions policies and guidance from the 2020 statewide plan
- Address all modes of transportation and other transportation systems and programs
- Link to the Transportation Planning Regions latest transportation plan
- Address the planning period of 2005 to 2030
- Delineate a preferred system plan, which identifies the overall transportation needs of the region for at least the next 20 years to meet mobility and accessibility requirements, supports economic growth and development, and sustains a desired quality of life
- Address environmental sensitivity for both the natural and human environment
- Encourage adequate public involvement
- Address requirements from appropriate federal and state legislation
- Develop a process for cooperating with neighboring Transportation Planning Regions and neighboring states, as well as other appropriate local and state planning partners
- After prioritizing the preferred system plan, develop a financially constrained plan that is based on the results of the Colorado Department of Transportation Region's prioritization process and other local and private revenues likely to be available

The *Guidebook* identifies and describes the following eleven step process for updating the Regional Transportation Plans:

Step I	Transportation Planning Region/Regional Planning Commission
Step II	Public Participation Process
Step III	Regional Vision, Values, Goals and Strategies
Step IV	Inventory of Existing Transportation System
Step V	Socioeconomic and Environmental Regional Profile
Step VI	Mobility Demand Analysis
Step VII	Alternatives Analysis
Step VIII	Preferred Transportation Plan
Step IX	Prioritization Process
Step X	Financially Constrained Plan
Step XI	Consistency with State and Federal Requirements

The Guidebook describes what is expected in each of these steps as well as provides supporting information to assist the Regional Planning Commissions in completing these steps. Specific Products to be included in the Regional Transportation Plans will be identified at the end of each chapter of the *Guidebook*.

General Note:

The following statement must be contained in the Regional Transportation Plan:

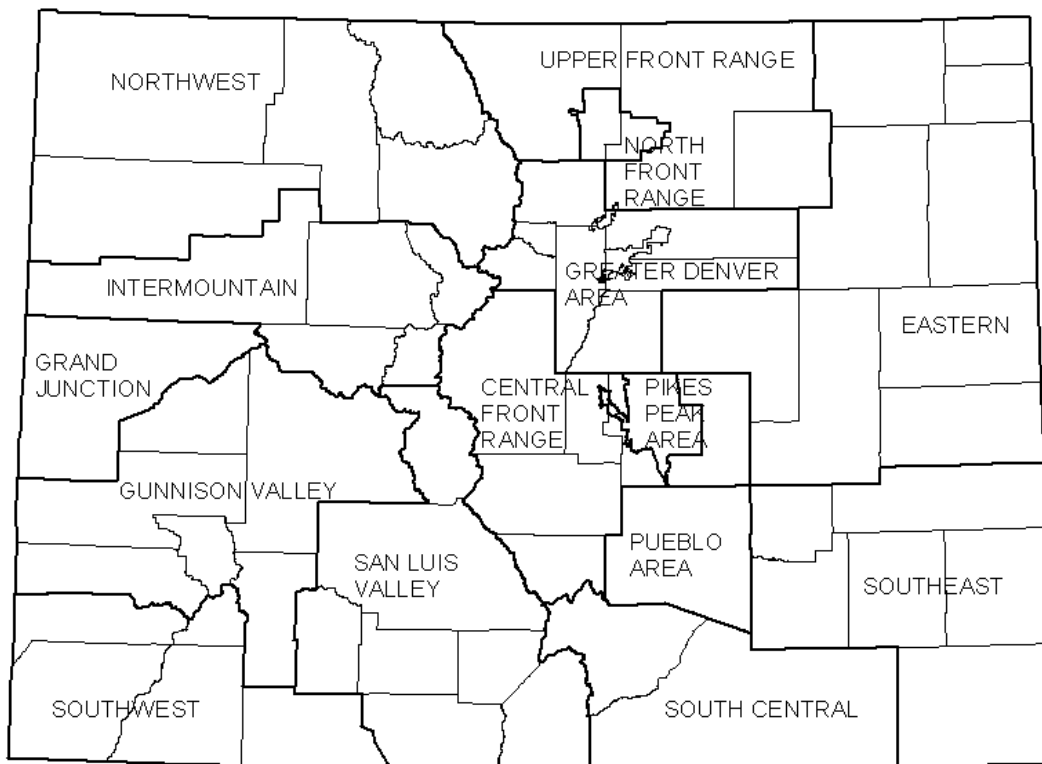
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STEPS FOR UPDATING YOUR REGIONAL TRANSPORTATION PLAN

STEP I – TRANSPORTATION PLANNING REGION/REGIONAL PLANNING COMMISSION

The State of Colorado has been divided into 15 Transportation Planning Regions as set forth in Colorado Revised Statute 43-1-1102 (8)(a), 43-1-1103 (5) (C.R.S.) and the Rules and Regulations for The Statewide Transportation Planning Process and Transportation Planning Regions (The Rules). Five of these are the Metropolitan Planning Areas. The remaining 10 rural Transportation Planning Regions are grouped in geographic contiguous areas with transportation commonalities comprised of Counties and all Municipalities within the counties of these given boundaries.

Transportation Planning Regions



A Regional Planning Commission as set forth in 30-28-105 C.R.S typically guides the planning process in each Transportation Planning Region. Intergovernmental Agreements between all cities and counties in the Transportation Planning Region form these Regional Planning Commissions.

The Regional Planning Commission should select an elected official to act as chairperson and to represent the Transportation Planning Region on the Statewide Transportation Advisory Committee as set forth in 43-1-1104, C.R.S. The chairperson of the Regional Planning Commission may designate another person to serve on the Statewide Transportation Advisory Committee in their stead. The Regional Planning Commission should also select an alternate to the Statewide Transportation Advisory Committee to represent the Regional Planning Commission in the absence of the chairperson or their designee.

The Regional Planning Commission acts as the formal policy body, directing the transportation planning activities within the Transportation Planning Region. The Regional Planning Commission will be responsible for creating and adopting the 20-year Regional Transportation Plan for the Transportation Planning Region and for forwarding the Regional Transportation Plan, along with a copy of the formal Resolution of Adoption, to the Colorado Department of Transportation for integration into the 20-year Statewide Transportation Plan.

The Regional Planning Commission will need to decide if the Regional Transportation Plan will be produced with the assistance of a transportation-planning consultant or if the Regional Planning Commission will develop the Regional Transportation Plan using their own planning staff. Once the Regional Planning Commission has made this decision they may contract with the Colorado Department of Transportation to fund the Regional Transportation Plan. (Providing funding from the Colorado Department of Transportation is available for these purposes)

As part of the development of the Regional Transportation Plans, the Regional Planning Commissions may want to consider the formation of technical advisory committees to assist in the planning process. These technical advisory committees may include representatives from interested parties representing the different modes of transportation included in the Regional Transportation Plans, citizen advisory groups to assist in the public outreach and participation in the Regional Transportation Plan, etc. A representative of the Colorado Department of Transportation's Division of Transportation Development and the respective Colorado Department of Transportation Region(s) shall be on all committees.

PRODUCTS:

- Description of the Transportation Planning Region with Map
- History of the planning process for the Region
- Description of entities included on the Regional Planning Commission
- List of Technical Advisory Committees and their roles

STEP II – PUBLIC PARTICIPATION PROCESS

Public participation is a critical element in both the rural and urban regional transportation planning processes. It provides a structure in which citizens can develop an understanding of the state and regional transportation systems and how they operate. Regional transportation planning shall have a public involvement process that is proactive and provides complete information, timely public notice and opportunities for early and continuous participation for all Colorado citizens. Early issues identification and cooperative solution building can reduce the potential for conflict later in the transportation planning process



The public involvement process provides for communication among all interested parties through public meetings, forums, workshops and other techniques. Citizens have access to information, plans, and programs for review and comment via direct mailings, displays, mass media, inserts and electronic communications. The Rules and Regulations for The Statewide Transportation Planning Process and Transportation Planning Regions “The Rules” provide a general description of the public participation requirements to be used in the development of the regional and statewide transportation plans coordinated with the federal transportation planning requirements.

The “Guidelines for Public Involvement in Statewide Transportation Planning and Programming” provide a more in-depth discussion of how the Colorado Department of Transportation intends to implement public involvement in the planning and programming processes and provides guidance on how to include the traditionally underserved populations including low-income, minority, and people who are not proficient in English. Local governments and interested parties may use this as a basis for tailoring regional public involvement activities in the Transportation Planning Regions; however, additional public participation activities are also encouraged.

The Colorado Department of Transportation maintains a database for each Transportation Planning Region of individuals and organizations who have expressed an interest in the transportation planning process. This list is available upon request and can be converted into mailing labels to assist in public outreach efforts. Some public involvement techniques the Colorado Department of Transportation currently uses include direct mailings, public meetings, open houses, public hearings, issue forums, customer surveys, newsletters, and advertising.

The broad goals for public participation include keeping people informed and involved on a continual basis and facilitating cooperation and consensus building. Some public participation related responsibilities of your Regional Planning Commission include:

1. Establish and maintain a contact list of all known parties interested in transportation for your Region, utilizing the contact list provided by the Colorado Department of Transportation as a starting point
2. Providing reasonable notice and opportunity to comment on issues and draft documents
3. Issuing press releases and public service announcements or provide timely notices of regional and statewide transportation planning activities to the public. Regional Planning Commissions can also submit announcements and calendars of scheduled meetings to the Colorado Department of Transportation for inclusion on the Division of Transportation Development's web page
4. Seeking out and considering the needs of those persons or groups that may be considered traditionally under-served by existing transportation systems that could potentially become impacted by future transportation decisions. This outreach could include contacting individuals or representatives of low-income and minority households, (including those who are not proficient in English) the elderly, persons with disabilities, and student population's which may face difficulties accessing employment and other amenities

Consideration should also be given to the three fundamental principles of environmental justice:

- 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
 - To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process
 - To prevent the denial of, reduction in, or significantly delay in the receipt of benefits by minority and low-income populations
5. Seeking out representatives from all transportation modes including but not limited to bicyclists, airports operators, pedestrians, transit system operators, passenger and freight train system operators, and commercial vehicle operators
 6. Periodically reviewing the effectiveness of the regional transportation planning public involvement process to ensure that the process provides full and open access to all interested parties and revising the process as necessary

7. Holding at least one public meeting, open forum, or open house in each of the Transportation Planning Regions for each of the following phases of the planning process
 - Initiating the regional transportation planning process to review the Transportation Planning Regions Vision
 - Review of the preferred plan for the Transportation Planning Region
 - Review and comment on the final draft of the Regional Transportation Plan
 - Updates to the Regional Transportation Plans

The public involvement activities should held in a location that is accessible to the disabled populations and those with limited transportation options.

Public involvement activities should also be conducted during amendments to the regional plans.

Public involvement for the Metropolitan Planning Organizations is similar to the rural regional planning process. The Denver Regional Council of Governments and the Pikes Peak Area Council of Governments have developed and adopted public involvement plans for their Transportation Planning Regions. Further information on the metropolitan transportation planning process can be found in 450.312 U.S.C. and 450.322 U.S.C. or by contacting the appropriate Metropolitan Planning Organization.

PRODUCTS:

- Chapter describing the public participation process used by the Regional Planning Commission in preparation of the Transportation Plan.
- Appendix to regional transportation plan documenting public meetings held in the Transportation Planning Region including meeting minutes, sign-in sheets and responses to significant issues raised at the meetings and during all document review and comment periods and the response to those issues.

STEP III – REGIONAL VALUES, VISION, GOALS, AND STRATEGIES

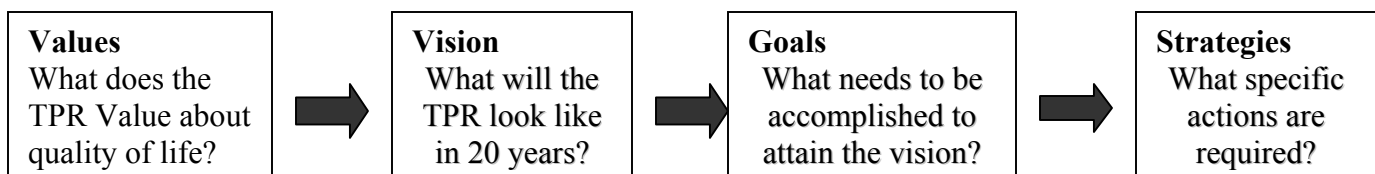
This step will assist the Regional Planning Commission in determining how transportation plays into the desired quality of life for the Transportation Planning Region. Identification of common interests will help achieve a unified focus for the Transportation Planning Region. Each Regional Planning Commission sets Values, Vision, Goals, and Strategies during the update of their current regional plans. As new participants enter the planning process and the transportation environment changes in the Transportation Planning Region, the Regional Planning Commissions will need to revisit their Values, Vision, Goals, and Strategies to determine if they need to be updated.

What is the advantage of having a common vision of the quality of life for the Transportation Planning Region? The vision will assist in defining what kind of transportation systems, facilities, and services will be necessary to support and maintain the desired quality of life set for the Region.

The Colorado Department of Transportation would like the Regional Planning Commissions to use the Department's of Transportations Mission Statement as a base in setting the values, vision, goals and objectives for the Transportation Planning Region.

“The mission of the Colorado Department of Transportation is to provide the best multi modal transportation system for Colorado that most effectively moves people, goods, and information.”

THE VISIONING AND GOAL SETTING PROCESS



Values

To begin the process the Regional Planning Commission should check the values established in the current Regional Transportation Plan and other planning documents to see if they reflect the current thinking of the participants in the planning process by asking the following questions:

What is it about the Transportation Planning Region that commits you to its future?

What is the quality of life that you want to pass to the next generation in the Transportation Planning Region?

Next, the Regional Planning Commission will need to review the interrelationships and interdependencies in the Transportation Planning Region to the surrounding regions, the state, the nation and the world by asking:

What connections have been important to the social, economic and environmental vitality and visibility of the Transportation Planning Region?

Which connections are becoming or will likely become important in the future?

Finally, the Regional Planning Commission may wish to review the Colorado Department of Transportation's modal plans to see if the direction addressed in the plans could be used to identify additional values for the Transportation Planning Region.

Vision

After a set of values has been developed for the Transportation Planning Region, the Regional Planning Commission needs to utilize those values to develop a vision for the Region. It will be necessary to remember what the Regional Planning Commission wants the Transportation Planning Region to look like in the next 20 years, as well as how transportation will work as an element and solution within that picture. Once that is established, the Regional Planning Commission needs to ask the following questions to see if there needs to be a revision to their existing vision statement:

Are there any new values not addressed in the vision statement?

How can the new values be incorporated into the vision statement?

Are the ten central planning themes (referred to in the getting started section of the introduction of the Regional Transportation Guidebook Page 8) reflected in the vision statement?

Does the new Vision Statement describe a 20-year vision for the Transportation Planning Region to meet the desired quality of life?

Colorado Department of Transportation Vision

“To create an integrated transportation system that focuses on moving people and goods, develops linkages among transportation choices, and provides modal choices to enhance the quality of life and environment of the citizens of Colorado.”

Goals

Once the vision statement has been revisited and revised, the Regional Planning Commission should identify transportation issues needing attention in development of goals to meet the vision for the Transportation Planning Region. The Regional Planning Commission should revisit the goals set out in the existing Regional Transportation Plan to see if they have been met or if they need to be updated to reflect the new vision for the Transportation Planning Region.

This process should have developed a list of issues that are likely to affect transportation systems in the Transportation Planning Region for a minimum of the next 20 years. The following questions will assist the Regional Planning Commission in categorizing these issues keeping the vision for the Transportation Planning Region in mind;

Which issues are likely to have the largest impact on the Transportation Planning Region?

Which issues need the Regional Planning Commission's immediate attention?

Once the Regional Planning Commission has categorized the issues, they should have a grasp of where they want transportation for the Transportation Planning region to be for the next twenty years. This should give the Regional Planning Commission(s) a focal point to develop goals to assist in working toward the vision for the Transportation Planning Region.

Strategies

After the Regional Planning Commission has developed the goals for the Transportation Planning Region they should identify strategies to assist in achieving the goals. Some strategies to consider include:

Transportation/Land use/Development relationships

Modal plan strategies

Innovative financing

Private sector initiatives

Public/Private partnerships

Potential for Intermodal connections

Potential for alternative modal development

Environmental mitigation actions

Transportation system management and operations

On an annual basis the Regional Planning Commission should evaluate the goals and strategies to assure the planning process addresses the most current vision for the Transportation Planning Region.

PRODUCTS:

- Vision Statement for the Transportation Planning Region
- List of Goals to address Vision for the Transportation Planning Region
- List of strategies to achieve the goals for the Transportation Planning Region

STEP IV – INVENTORY OF EXISTING TRANSPORTATION SYSTEM

When updating the regional transportation plan it is important to start with a comprehensive overview of the existing transportation system for the Transportation Planning Region. This information will be the base from which the planning process will identify any shortfalls in the existing transportation system and potential solutions to be addressed over the minimum twenty-year time frame of the regional plan. The solutions might encompass areas, corridors, or problems needing specific, relatively obvious types of improvements. In other cases further detailed studies or analysis might be needed before reaching conclusions about the best courses of action.

Historically the transportation planning process of the Colorado Department of Transportation has fostered improvements in data availability of the data for use by the Regional Planning Commissions. This effort has focused on supplementing the information used to develop the original Regional Transportation Plan and subsequent updates. Having packaged the data into a consistent computerized format the information is made available to Regional Planning Commissions in a comprehensive “Transportation Planning Data Set.”

The Transportation Planning Data Set contains information describing the existing transportation inventory. Data has been combined into a standard database format and integrated with Geographic Information System (GIS) software. This structure is flexible and allows databases to be added, as necessary, to expand the data set.

Along with the data set, several programs have been developed which are available to assist in completing the eleven primary planning steps defined in this guidebook. Some of the capabilities these programs provide are the ability to determine current highway capacities, project future traffic volumes, identify current deficiencies of transportation modes, identification of trends and creation of prioritized and financially constrained project lists.

Distributing data in this standardized format is expected to reduce some of the work associated with development of the Regional Transportation Plans. In turn, having a standard project list provided for all Regional Planning Commissions will assist in the development of the Statewide 20 Year plan and future STIPs.

The Transportation Planning Data Set contains the locations and descriptions of transportation facilities, existing or planned projects, defined corridors, and other geographic and socioeconomic data. The location and operating characteristics are provided as a beginning point, but it is expected that this data will be reviewed, verified, corrected and enhanced with information available within the Transportation Planning Region. The data set contents are listed in the Appendix; a summary is provided in the sections below.

TRANSPORTATION FACILITIES

The Colorado Department of Transportation will provide each Regional Planning Commission with information for each of the following transportation facility types. The information is a starting point to be used to inventory the existing transportation system. The data set information needs to be confirmed, refined and updated to reflect the current transportation system. Once the existing transportation system is identified, the Regional Planning Commissions will use this information to start to identify shortfalls in the existing system.

Aviation

The state's aviation system is an important component of Colorado's overall transportation system. Examination of this system can identify improvements for aviation facilities, shortfalls in service area, as well as areas for improved intermodal connections. Regional Planning Commissions should review runway pavement condition, airport safety issues, existing/historical airport operations, enplanements and freight movement for airports in their Transportation Planning Region. Sources of information for Aviation include, airport master plans and the Colorado Department of Transportation's aviation system plans.



Bicycle/Pedestrian

The demand for a non-motorized transportation system continues to grow in Colorado. Therefore, assessing current and future needs regarding bicycling and walking is necessary. Regional Planning Commissions should review information for state highways with unpaved shoulders or paved shoulders of less than four feet to identify where improvements need to be made, and identify missing connections within the existing Bicycle/Pedestrian system. Other sources of information that may be helpful for planning Bicycle/Pedestrian systems are, Bicycle master plans, and other municipal and county planning documents.

Highways

Highways are the backbone of Colorado's transportation system for the movement of people and freight. In conjunction with local roads and streets, the state's highway system is the principle means of gaining access to individual properties and Intermodal facilities throughout the state. Portions of the system are experiencing congestion and capacity problems because of substantial traffic increases and growth. Other portions of the system have significant geometric deficiencies or are in need of reconstruction. The Regional Planning Commissions should review highway information regarding capacity, traffic volumes, surface conditions, bridge conditions, safety concerns, high occupancy vehicle lanes, commercial truck traffic, number of highway miles, existing highway geometries, traffic growth patterns, hazardous materials routes, and accident locations to identify potential highway deficiencies.



Intelligent Transportation Systems (ITS)

ITS is the application of various technologies deployed in an integrated fashion to improve the efficiency and safety of the transportation system. By providing reliable accurate and timely information, and real-time traffic management and operation of the transportation system through fully interacted, coordinated and maintained Intelligent Transportation Systems, users are able to make decisions that enhance and improve their choice of travel, mode, route and time, thereby resulting in a more productive, efficient and safe transportation system.

Intermodal Connections

Intermodal facilities, both passenger and freight, are an integral part of the state's transportation system. They not only provide mobility options, but also are key components for economic viability and enhancement. The Regional Planning Commission should review essential modal terminal facilities that, when overlaid on the transportation system, illustrate the connections between the different modes of transportation. A starting point is the National Highway System Intermodal Connections Inventory. Other facilities the Regional Planning Commission need to review are, local park-n-ride facilities, satellite parking facilities, transit stations, rail/truck transfer centers, and air/freight terminals.

Rail

Although the rail industry is somewhat unique because of its private operation and ownership, it is still important to identify connections for passenger and freight as well as related economic impacts on the Transportation Planning Region. The Regional Planning Commission should review information on all class 2 and class 3 rail lines to identify areas for potential acquisition assistance, rehabilitation, substitute service assistance, construction assistance, rail crossing upgrades, rail abandonment, and passenger rail service. Other sources of information for Rail are the Colorado Passenger Rail Study, Colorado's Freight Rail Study, and Major Investment Studies.

Transit



Transit focuses on the movement of people through the use of fixed-route/fixed-schedule bus service, van service for the elderly and disabled, intercity bus, shuttles and light rail service. The Regional Planning Commissions should review service areas, ridership information, fleet sizes, park-n-ride facilities, buildings, and transfer stations to identify deficiencies in the existing transit systems. Other sources of information for Transit are, Colorado's Transit Needs and Benefits Study, Transit Development Plans, and Regional Plan's Transit Elements for transit providers in the Transportation Planning Region.

Transportation Demand Management

Transportation Demand Management is a wide range of programs and services that make the most efficient use of existing transportation facilities by managing the actual "demand" placed on these facilities. Using strategies, which promote alternative modes, increase vehicle occupancy, reduce travel distances and ease peak-hour congestion. Transportation Demand Management efforts can extend the useful life of transportation facilities, enhance community mobility, and improve air quality. Transportation Demand Management can include carpooling, vanpooling, transit, biking, walking, maximizing existing parking facilities, flexible work hours, flexible work place, and teleconferencing. The Regional Planning Commissions should identify existing Transportation Demand Management programs in their area.

Local Roadways

The municipal and county streets and roads are a vital component of the state's roadway network. Wherever individual properties are not served directly by the state highway system, local roads provide for critical vehicular access to the wider transportation system. In addition to providing mobility for all citizens on a daily basis, local streets and roads provide important access to and from markets and play a key role in the state's tourism industry. The Regional Planning Commissions may want to review local roadway information regarding capacity, traffic volumes, surface conditions, bridge conditions, safety concerns, high occupancy vehicle lanes, commercial truck traffic, number of roadway miles, existing roadway geometries, traffic growth patterns, hazardous materials routes, and accident locations to identify potential roadway deficiencies.

TRANSPORTATION PROJECTS

Existing and planned projects are being categorized as part of a statewide data set to allow Regional Planning Commissions to understand how current activities may affect long-term project selection. The projects are grouped by investment category as follows:

System Quality

System quality projects maintain the existing transportation system infrastructure.

Roadway

- Surface treatment projects
- Reconstruction projects
- Bridge projects
- Rest Area projects
- Noise Barrier projects
- Environmental mitigation projects
- Enhancement projects

Aviation

- Runways/Taxiways
- Terminals and maintenance facilities

Rail

- Right of Way acquisition

Transit

- Maintenance facilities
- Operating funds for existing service
- Capital for existing service

Safety

Safety projects reduce fatalities, injuries and property damage.

Roadway

- Geometries
- Interchange reconstruction
- Truck ramps
- Intersection improvements
- Guardrail
- Rail crossing improvements
- Signing/Striping/Lighting

Aviation

- Navigational equipment
- Fire/Rescue equipment
- Lighting

Intelligent Transportation System

- Advanced traffic management strategies and applications
- Incident management strategies and applications

Mobility

Mobility projects expand the existing transportation system infrastructure to provide for movement of people and goods.

Roadway

- Reconstruction adding capacity
- New interchanges
- New construction
- New pedestrian facilities
- Transportation Demand Management Strategies

Aviation

- Hangers
- Snow removal equipment
- New Terminals
- New air service
- Expansions of runways/taxiways

Rail

- New rail line construction
- New rail stations
- New rail capital

Transit

- Transfer stations
- Park-n-ride
- Transit stations
- Operating funds for new service
- Capital for new service
- Amenities

ITS

- Collection and dissemination of roadway and vehicle information through advanced traveler information systems
- Advanced traffic management strategies and application

Program Delivery

Program delivery projects are support functions to enable the delivery of program categories listed above.

Data collection
Modal studies

SYSTEMS/CORRIDORS

The Colorado Department of Transportation will provide each Regional Planning Commission with information for each of the following systems/corridors. The information should be used to assist in the inventory the existing transportation system. The data set information needs to be confirmed, refined and updated to reflect the current transportation system.

Functional Classification

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. Basic to this process is the recognition that individual roads and streets do not serve travel independently. Rather, most travel involves movement through networks of roads. It becomes necessary then, to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification assignments describe this process by defining the part that any particular road or street should play in serving the flow of trips through a roadway network. Most roads are classified as local, with a small number of roads serving as collectors or arterials. These classifications can be reviewed during the process with any desired changes forwarded as part of the completed inventory.

National Highway System and High Priority Corridors of the National Highway System

The Intermodal Surface Transportation Efficiency Act of 1991 and the follow-up legislation of Transportation Efficiency Act for the 21st Century created the National Highway System. The National Highway System consists of the interstate highway system, a substantial percentage of the urban and rural principal arterial system, and certain other routes deemed important for national defense purposes. The National Highway System has been further refined to identify high priority corridors. Colorado has part of three of these high priority corridors. These corridors are; Ports-to-Plains corridor, Heartland Express corridor, and the Camino Real corridor. The Colorado Department of Transportation will use the planning process to review and consider any proposed changes to this system.

Scenic Byways

Colorado's scenic byways are part of a national program to categorize and promote scenic, natural, historic, and cultural resources. The Regional Planning Commissions should recognize this system of corridors as having extraordinary aesthetic and cultural values that should be maintained and enhanced by transportation improvements. The Colorado Department of Transportation will use the planning process to review and consider any proposed changes to this system.

Corridor Optimization

The corridor optimization process is intended to provide an assessment of how to best meet future travel demand in a given corridor. The end product of the process is a document that defines the Colorado Department of Transportation's vision of alternatives in terms of opportunities for potential modal expansion (highways or transit), future right of way needs, and permitted access for a given corridor. It also suggests the roles transit, the parallel arterial roadway system and other alternatives could undertake to help meet future overall corridor demands.

Western Transportation Trade Network Freight Corridors

This system of corridors was developed as part of a project with the Western Transportation Trade Network, composed of 17 states in the western United States. The Western Transportation Trade Network identifies and prioritizes critical corridors for moving freight between the western United States, Mexico and Canada, as well as the impediments along the corridors that prevent the efficient movement of freight. The corridors identified in Colorado can be used as a factor in prioritizing transportation improvements.

PRODUCTS:

- Description of the existing Aviation system
 - List of Airports with general description including whether the airport is considered Commercial Service, Reliever, or General Aviation facility
- Description of the existing Bicycle/Pedestrian system
 - Identification of highways with deficient or no shoulders
 - Identification of existing bike paths
- Description of the existing Highway system
 - Identification of National Highway system roads in the region
 - Identification of functional classification of roadways in the region
 - Identification of access code categories for roadways in the region
 - Traffic volume information for roadways in the region
 - Surface condition information for roadways in the region
 - Accident history for roadways in the region
 - Bridge information for bridges in the region
 - Identification of Scenic Byways in the region
 - Freight movement for the region
 - Hazardous Freight Routes
- Description of the existing Intelligent Transportation System (ITS) network
 - Identification of ITS infrastructure, devices and ITS Architectures
 - Identification of ITS Strategic plans and Incident management plans
- Description of the existing Intermodal facilities
 - Identification of intermodal connections in the region
- Description of the existing Rail system
 - Identification of freight rail operators in the region
 - Identification of passenger rail operators in the region
 - Identification of potential rail abandonment locations
 - Identification of rail crossing information
- Description of the existing Transit system
 - Identification of transit operators in the region

STEP V – SOCIOECONOMIC AND ENVIRONMENTAL REGIONAL PROFILE

This step is a review and update of the Transportation Planning Region's characterization of population, economic conditions, tourism, and environmentally sensitive areas for human and natural resources. The Regional Planning Commissions need to identify areas of growth for the region, identify areas that are underserved by transportation options, identify areas that are experiencing economic growth or decline, identify impacts of tourism, and identify areas where transportation improvements may have an impact on the human and natural environments.

SOCIOECONOMICS

Land use and socioeconomic data help the Regional Planning Commission analyze the interrelated impacts of population, land use, and transportation systems within the Transportation Planning Region. Supporting data is usually collected from city, county, or regional master plans, the State Demographer's Office, and the United States Census Bureau. The Colorado Department of Transportation will provide the latest United States Census and State Demographer's information as part of the Transportation Planning Data Set. The Regional Planning Commission will need to provide additional historical, current and projected information on population distribution, income, age, race, employment, housing units, general land use patterns, modal splits, commute to work, auto ownership and other data as appropriate. The Regional Planning Commission should identify major activity centers that generate significant numbers of trips throughout the Transportation Planning Region. These generators include but are not limited to employment centers, schools, colleges, manufacturing facilities, service centers, intermodal transfer centers, correction centers, recreation centers, tourist attractions, airports, shopping malls or other specific generators.

ENVIRONMENT

Both human and natural environmental considerations play an important role in the development of the Regional Transportation Plan. Proposed improvements to transportation facilities can lack support that would be needed for them to move from the regional and statewide plans into the construction phase in the Statewide Transportation Improvement Plan if they are expected to have an adverse affect on the human or natural environment, and these impacts cannot be mitigated. Therefore, a general understanding of the Transportation Planning Region's human and natural environment is essential.

Early identification and inventory of these sensitive areas of the Transportation Planning Region is important to establish the base on which proposed transportation improvements can be superimposed to determine the likelihood of any potential adverse impacts associated with construction. Areas of concern for the human environment can include potential impacts on minority populations and low-income populations. Areas for concern on the natural environment can include potential impacts on air quality, land use,

noise levels, water quality, wetlands, flood plains, threatened and endangered wildlife and plants, historical and archeological sites, valuable visual resources as open space and scenic views, and hazardous material sites. Where possible, identification of sites where proposed transportation improvements may potentially impact the human or natural environment, or are presumed to be environmentally sensitive should be highlighted for more detailed analysis.

The Regional Planning Commission should also identify population segments that may be “transportation disadvantaged” such as the elderly, persons with disabilities, low-income, or student groups. A key concern in the planning process is to ensure that environmental justice is addressed. Presidential Executive Order 12898, issued in 1994, establishes the need to identify and address, disproportionately high and adverse human health or environmental effects of transportation programs, policies, and activities on minority populations and low-income populations. The Colorado Department of Transportation has mapped the locations of low income and minority population groups by census tract for each Transportation Planning Region. Each Regional Planning Commission is asked to review maps and supporting graphical information and to consider the locations of these population groups in relation to transportation planning activities, particularly regarding the prioritization and selection of projects. Based on the unique characteristics of the Transportation Planning Region, each Regional Planning Commission may choose to overlay additional information such as mobility impaired residents, auto availability of residents and commuters, hazardous material sites, transit availability, and other similar concerns to identify broad issues for future project level consideration.

Air quality non-attainment or maintenance areas within each Transportation Planning Region should be identified as well as listing the measures, as identified in the State Implementation Plan, being taken by these areas to ensure attainment of federal standards. Also in an effort to maintain air quality standards, the Colorado Department of Transportation will assist each of the rural Regional Planning Commissions in identifying those small urban and other areas that are at risk of becoming federally designated non-attainment areas for certain pollutants. For each area that may be at risk, the Regional Planning Commission should:

- Identify pollutant(s) for any at risk area in the region
- Identify why the area may be at risk
- Address weather traffic and related emissions in the area are expected to increase in the future
- Identify what measures will be taken (if necessary) to ensure that violations of the appropriate air quality standards will not occur in the future

It is important to note that the environmental component of the Regional Transportation Plan should not, in and of itself, be the reason to remove a project from consideration. The “environmental scan” during the Regional Planning Process is meant to identify human and natural environmentally sensitive areas that need to be more carefully considered prior to implementation of various projects. However, in some instances, the

Regional Planning Process can provide the basis for eliminating from further consideration projects that would clearly result in unacceptable or significantly detrimental environmental impacts. If a project from the Regional Transportation Plan is eventually to be proposed for construction using federal funds, it is essential for the National Environmental Policy Act be followed. At some point, National Environmental Policy Act related documentation on each project would need to fully address various alternatives and mitigation measures relating to human and natural environmental concerns. The findings from an Environmental Assessment or Environmental Impact Study resulting from the National Environmental Policy Act are the legal basis that determines if a transportation project can be built and what measures need to be taken to minimize harm.

RELATED PLANNING DOCUMENTS

In the update of the socioeconomic and environmental section of the Regional Transportation Plan, the Regional Planning Commissions should consider planning information from other federal, state and local agencies. Following is a partial list of agencies and types of documents the Regional Planning Commission may wish to contact or access:

Agencies

- Colorado Department of Local Affairs
- Colorado Department of Public Health and Environment
- Colorado Governor's Office of Energy Conservation
- Colorado State Park Service/Recreation Division
- United States Bureau of Indian Affairs/Tribal Lands
- United States Bureau of Land Management
- United States Census Bureau
- United States Department of Natural Resources
- United States Forest Service
- United States Geological Service
- United States National Park Service

Documents

- City and County Comprehensive Plans
- City and County Transportation Plans
- Indian Nation Transportation Plans
- Local Comprehensive Land Use Plans
- Managing Colorado's Future – A Guidebook for Integrating Land Use, Transportation, and Air Quality
- Executive Order 12898 Environmental Justice

PROJECTIONS

Once the Regional Planning Commission has established the current socioeconomic and environmental profiles, they are encouraged to use the data supplied in the transportation dataset to forecast future conditions and levels of growth for the Transportation Planning Region. The projections must cover a minimum period of 20 years, and show an appropriate correlation to those conditions established in the profiles. Regional trends should be applied to local land-use projections, emphasizing impacts to and by activity centers, during the forecast period. If the Regional Planning Commission produces their own projections, rather than using those produced by the State Demographer, they will need to identify any significant differences and the reasoning behind the differences. Depending on the magnitude of these differences, the Regional Planning Commission may need to discuss them with the Statewide Transportation Advisory Committee and reach a statewide concurrence on such projections.

PRODUCTS:

- Population Data
 - By County - History, Current, Projections, Growth Rates
 - Per Capita Income
 - Household Size
 - Age Breakdown
- Employment Data
 - By County – Number Employed, Industry Breakdown, Growth Rate
- Tourism Data
 - Major Tourism Generators
 - Visitor day information
 - Growth in visitor day information
- Agricultural Data
 - Crop Production, Destination
 - Livestock Production, Destination
- Human Environment Data
 - Identification of high density low income areas within counties
 - Identification of high density minority areas within counties
- Natural Environment Data
 - Identification of air quality non-attainment areas
 - Identification of air quality at-risk for non-attainment areas
 - Identification of wetland areas
 - Identification of endangered species in the area
 - Identification of historic and archeological areas
 - Identification of hazardous waste areas

STEP VI – MOBILITY DEMAND ANALYSIS

The estimation of travel demand for transportation facilities and services is perhaps the most significant element in the transportation planning process. Transportation demand analyses show how movements of people and freight currently using a given transportation facility might change over time. The demand analysis provides a first glimpse of what types of improvements or combinations of improvements need to be made to transportation facilities to meet the expected mobility demand for the twenty-year time frame of the plan. A rough estimate of capital and operating costs associated with construction and any potential impacts to the environment can also be provided by such analysis. For movement of people, projections of vehicle traffic on the highway system needs to take into consideration potential changes in the average rate of occupancy per vehicle.

There are a number of ways to estimate travel demand within the rural transportation planning regions of the state. These range from simple techniques such as historical trend analysis to variants of more complex computer models used in metropolitan regions that require large databases of demographic and socioeconomic information to forecast travel demand.

Simplified demand estimation techniques and analysis are appropriate in situations in which more detailed techniques and/or data cannot be used, because of budget or time constraints. Specifically, a historical trend analysis that estimates transportation demand by plotting historical demand levels over time and then extrapolating the trend into the future can usually be an excellent starting point for demand estimation in the rural transportation planning regions. This method has been used extensively by the Colorado Department of Transportation in estimating future traffic volumes on the state highway system. However, there are drawbacks that need to be kept in mind. First and foremost, trend line analyses are based on the assumption that all factors and relationships affecting demand remain constant over time. If one or more of these factors change, there could be a shift in demand. Examples of changes that could affect demand include the addition of transportation capacity improvements, demographic shifts, inflation, fluctuations in price of fuel, a growing or shrinking economy, a change in the rate or extent of urbanization in a particular area, and the rise and fall of real income.

In addition to the historical trend analysis technique discussed above, simplified versions of more complex techniques, which tend to focus on the impacts of a limited number of key factors influencing transportation demand, are now available for use in the rural transportation planning regions.

The demand analysis should produce need statements identifying all perceived major mobility issues, impediments and opportunities in the region. For example, if a section of roadway is thought to be unsafe and safety improvements are proposed, accident statistics should be cited to support the needs statement. Or, if the transportation of the elderly and/or disabled is felt to be an important transportation need, the Transit Element, Transit

Development Plan, and the Transit Needs and Benefit Study should provide supporting documentation for the needs statement.

PRODUCTS:

- Description of the Mobility Demand Analyses process used by the Regional Planning Commission
- List of needs statements for corridors

STEP VII – ALTERNATIVES ANALYSIS

Once the mobility demand analysis has been completed, an alternatives analysis will need to be conducted on each of the identified corridors to develop a list of options to address the mobility, safety, and geometric needs for the Transportation Planning Region. Social and environmental factors that could affect any of the transportation options under consideration should also be identified at this time. The alternatives analysis should explore all reasonable options to address the identified solutions. Examples of these solutions are:

- Aviation solutions
- Bicycle/Pedestrian solutions
- Roadway solutions
- Rail solutions
- Transit solutions
- Transportation Demand Management solutions
- Intelligent Transportation System Solutions
- Transportation System Management solution
- Combinations of solutions listed above
- No Build



Both the Transportation Systems Management and the No Build solutions provide the baselines from which significant transportation investments can be evaluated.

In the corridors where capacity problems are identified in the mobility demand analysis the plan should consider modal alternatives as well as roadway improvements to address the need. For corridors categorized where highway widening is likely to be the only reasonable solution to address the capacity need, the person trips estimated in the demand analysis would be converted to vehicle trips. A capacity calculation would then be made of the existing facility. Capacity is defined as the total number of vehicles or persons that could be accommodated on a facility under prevailing conditions. The vehicle trip estimate would be divided by the capacity to arrive at the volume to capacity ratio that will determine what improvements will need to be made to the roadway to address the need.

In those corridors where the capacity analysis does not indicate a deficiency, a geometric and safety analysis should be performed to determine if the facility meets current standards. If the facility does not meet current geometric standards, it is potentially unsafe; therefore, geometric or safety improvements to the corridor should be considered.

If transportation improvements in a corridor might adversely affect an environmentally sensitive area, the cost of remediation for those impacts should be calculated and included in the overall project cost. If the impacts are considered severe or cannot be mitigated, an alternative proposal should be investigated.

For State Significant Corridors, the alternatives analysis will need to be expanded to include a vision for the corridor. This vision should include:

- A mobility statement for the entire corridor describing the mobility needs in the corridor over the plan period. This should include identification of mobility solutions and possible alternatives to highway solutions to address the needs throughout the corridor.
- A safety statement for the entire corridor describing the safety needs in the corridor over the plan period. This should include identification of solutions to address safety needs throughout the corridor.
- A system quality statement for the entire corridor describing system quality needs in the corridor over the plan period. This should include identification of solutions to address system quality needs throughout the corridor.
- An environmental statement for the entire corridor describing environmental sensitivities. This should include identification of potential human and natural impacts and potential mitigations throughout the corridor.
- A statement on how the Transportation Planning Region will coordinate the vision with adjoining Transportation Planning Regions in the same corridor.

PRODUCTS:

- Description of the alternatives analysis process used by the Regional Planning Commission
- A vision statement for each of the state significant corridors in the Transportation Planning Region identifying mobility, safety, system quality and environmental concerns and solutions.

STEP VIII – PREFERRED PLAN

The Preferred Plan provides the long-range transportation vision for the Transportation Planning Region. It highlights the interrelated nature of transportation to land use, development, and to the Transportation Planning Region's quality of life including a vital economy and protecting the human and natural environment. The Preferred Plan is an Intermodal transportation plan that considers all modes of transportation as having a vital role in providing mobility for people and freight. Key features of the plan include an emphasis on maintaining the existing transportation system and providing for future needs.

Through the alternatives analysis conducted for each corridor, the Regional Planning Commission should identify a set of preferred projects for each mode to be included in the preferred plan. The Preferred Plan list of projects identified in your prior Regional Transportation Plan would be a good place to start in the development of this list. The projects in the existing list should be reviewed to identify projects that have been completed and need to be retired, identify projects that need to be moved forward in the updated plan to address current needs, and identify new projects not on the list to address new or developing needs anticipated in the next 20 to 25 year period.

Any new projects identified through the planning process should be run through the same preliminary screening used in your last plan update process. This screening is a subjective review by the Regional Planning Commission to determine if the needs are viable and realistic. Several factors the Regional Planning Commission may want to consider in this screening include:

- Does the project aid in the attainment of the vision and goals developed by the Regional Planning Commission?
- Is the project a justifiable need?
- Does the project provide a viable contribution to a system that meets the Regional Planning Commissions transportation needs?
- Is the project realistic based on the human and natural environment and the physical constraints of the area?

If the projects survive this preliminary screening process they are added to the existing projects needs list.

The resulting multi-modal preferred project list should comprehensively address mobility, safety and system quality needs for the Transportation Planning Region, while supporting economic growth and development, protecting the human and natural environment, and sustaining the quality of life as defined in the values, vision and goals for the Transportation Planning Region.

LOCAL TRANSPORTATION NEEDS

Colorado's Public Roadway system is over 85,000 miles of interlocking state, municipality, and county roadways and bridges. Together these components of the state's public roadway system produce over 35.0 billion miles of travel annually. The state highway component of this roadway system makes up about 10% of the roadway system and carries about 60% of the state's total miles of travel. This means that about 90% of the roadway system is municipal and county streets, roads and bridges that carry the remaining 40% of miles traveled.

In an attempt to better assess the existing condition and identify the long range needs of the local roadway system, the statewide transportation plan will integrate a section addressing local roadway conditions, long range needs and the financial resources available to address the identified local roadway needs.

PRODUCTS:

- Multi-modal list of all mobility, safety, and system quality projects identified for the Transportation Planning Region providing all data items needed for the Statewide Plan database. (CDOT will provide format)
- The starting point for this list will be the project list produced from the last regional plan. (CDOT will provide current list of projects) The Regional Planning Commission should indicate what projects are to be removed from the list because the projects have been completed or because the need no longer exists. The list should indicate what projects are new to the process. The list should indicate where a scope has changed to an existing project to reflect a new scope.

STEP IX – PRIORITIZATION PROCESS

Since costs of identified needs in preferred plans typically outweigh expected revenues, it is important to prioritize the needs within the Transportation Planning Region. Each Regional Planning Commission is asked to assess the impacts and importance of proposed projects by using some form of evaluation criteria in this prioritization. There are many methods and processes for evaluating and prioritizing projects. To assure consistency in the prioritization process it will be important for the Regional Planning Commissions to use the criteria based method described below or a similar method. This consistency will assist staff in each of the Colorado Department of Transportation's Regions as they work with the Regional Planning Commissions within their region on the next step of the planning process, constraining the Regional Plans.

The Colorado Department of Transportation has provided the following criteria as a base for beginning the prioritization process:

<u>Public Support</u>	Projects should have the support of the transportation stakeholders and the general public.
<u>Congestion</u>	Projects should be designed to reduce congestion by reducing demand for trips, shifting the demand to alternative modes, implementing operational improvements, or increasing capacity.
<u>Safety</u>	Projects should enhance transportation safety by emphasizing the security and safety of the traveler or by addressing existing or potential hazardous or unsafe situations.
<u>Environment</u>	Projects should avoid and minimize, if necessary, impacts to the human and natural environment.
<u>System Continuity</u>	Projects should ensure that gaps in the transportation system are completed and that regional connections are assured.
<u>Preservation of the System</u>	Projects should maintain and preserve the existing transportation infrastructure in order to repair or replace inadequacies or to extend the useful life of the facility.
<u>Economic Impact</u>	Projects should minimize operating and maintenance costs over time, demonstrating relatively high benefits as compared to overall costs, and support regional economic development goals.
<u>Inter/Multi Modal</u>	Projects should improve connections between different modes of transportation or support modes other than single occupant vehicle.
<u>Ability to Implement</u>	Projects should be technologically sound and have achievable acquisition and approval requirements.

The Regional Planning Commissions may want to consider the use of technical data to supplement the criteria in their prioritization process. The following are samples of technical data used in past planning efforts:

- Passenger Miles Traveled (PMT)
- Vehicle Miles Traveled (VMT)
- Accident Data
- Current/Projected Level of Service
- Cost Per Mile
- Average Daily Traffic (ADT)
- Air Quality
- Cost Per Rider

Once the Regional Planning Commission has decided on the criteria to use, a decision should be made as to how each criterion will be weighted. The weight assignments should be determined by assessing the importance of each criterion in meeting the Transportation Planning Region's values, visions and goals. An example might be to weight "system preservation" with a weight of 15; while assigning a weight of 10 for "inter/multi modal." To make the process easier for calculations the sum of all weights should total 100.

In addition to the weighting, a score should be applied to each criterion. The scoring could range from one to three (one representing a low impact and three representing a high impact.) The score is then multiplied by the weight to determine the "Total Weighted Points" for each project. The projects can then be ranked to represent the priority for project funding consideration.

A sample methodology is shown on the following page. The criteria and weighting values identified above may be used in this or some similar methodology to prioritize all of the proposed projects within the Transportation Planning Region. This methodology has been developed to allow for prioritizing and comparing all transportation projects regardless of mode.

PRODUCTS:

- Description of the prioritization process used including:
 - Criteria Used
 - Weighting of Criteria
 - Scoring System
 - Multi-Modal Prioritized List of Projects

Project Prioritization

Sample Scoring Sheet

Projects	Public Support Wt. = 25		Congestion Relief Wt. = 16		Safety Wt. = 12		Environmental Wt. = 11		System Quality Wt. = 8		Preservation of System Wt. = 8		Economic Impact Wt. = 9		Inter/Modal Multi/Modal Wt. = 7		Ability to Implement Wt. = 4		Total Weighted Points
	Score	Weighted Points	Score	Weighted Points	Score	Weighted Points	Score	Weighted Points	Score	Weighted Points	Score	Weighted Points	Score	Weighted Points	Score	Weighted Points	Score	Weighted Points	
A.	3	75	2	32	2	24	3	33	3	24	1	8	3	27	3	21	1	4	248
B.	2	50	3	48	1	12	2	22	2	16	3	24	3	27	1	7	1	4	210
C.	3	75	1	16	3	36	1	11	3	24	2	16	1	9	2	14	2	8	209
D.	1	25	3	48	1	12	1	11	1	8	3	24	3	27	3	21	3	12	188
E.	2	50	2	32	2	24	2	22	2	16	3	24	3	27	2	14	1	4	213
F.	3	75	1	16	3	36	3	33	3	24	2	16	2	18	2	14	2	8	240
G.	3	75	2	32	3	36	2	22	2	16	1	8	1	9	1	7	2	8	213
H.	2	50	3	48	2	24	3	33	1	8	1	8	2	18	3	21	1	4	214
I.	1	25	3	48	1	12	1	11	3	24	2	16	3	27	2	14	3	12	189
J.	3	75	2	32	2	24	2	22	3	24	3	24	1	9	1	7	2	8	225

Projects Scoring: 3 for High Impact, 2 for Medium Impact, 1 for Low Impact

The weighted Points for each criterion is the Score multiplied by the Criteria Weight

STEP X – FINANCIALLY CONSTRAINED PLAN

Once the Regional Planning Commission has prioritized their Preferred Plan, they will need to develop the Transportation Planning Region's Financially Constrained Plan. This process starts with the Colorado Department of Transportation providing each of their 6 Engineering Regions with a control total reflecting the revenues expected to be available for transportation improvements over a minimum of the next 20 years. The control total will be those state and federal dollars expected to be available after "statewide programs" are accounted for.

- "Statewide programs" have been determined by the Transportation Commission to include maintenance, resurfacing, bridge program, safety program, the strategic project program, the Intelligent Transportation System (ITS) and the Colorado Department of Transportation's Operation program.

Projects in these categories should not compete for estimated funding available to the Colorado Department of Transportation Regions for mobility, safety and system quality needs.

The Colorado Department of Transportation Regions will then meet with representatives from all of the Transportation Planning Regions in their area as a group to prioritize projects on a regional basis. The prioritization of the Transportation Planning Region's projects will continue at a minimum until the control total for the Colorado Department of Transportation Region has been reached. The Colorado Department of Transportation Regions are asked to prioritize past the control total to allow for the addition of projects to the constrained list if more funding is made available. The resulting list of prioritized projects equaling the control total for the Colorado Department of Transportation Region will be the starting point for each of the Transportation Planning Regions Constrained Plans. The remainder of the Transportation Planning Region's Constrained Plan should be the identification of any projects expected to be funded using local or private funding.

Using the list developed by the Colorado Department of Transportation Region(s) all projects above the control total amount should be added to the Transportation Planning Region constrained plan.

A flow chart indicating how a Colorado Department of Transportation Region prioritization process works is presented below.

**Transportation
Planning Region
Preferred Plans**

TPR X	
Project #1	\$200m
Project #2	\$ 50m
Project #3	\$300m
Project #4	\$200m
Project #5	\$200m
Project #6	\$250m
Total	\$1.2b

TPR Y	
Project #1	\$250m
Project #2	\$400m
Project #3	\$100m
Project #4	\$ 50m
Total	\$0.8b

TPR Z	
Project #1	\$300m
Project #2	\$200m
Project #3	\$400m
Project #4	\$100m
Project #5	\$150m
Total	\$1.15b

**Colorado Department
of Transportation
Region Prioritized List**

Control Total of \$2.2Billion	
Priority Number	
#1 TPR Y	\$250m
#2 TPR Z	\$300m
#3 TPR X	\$200m
#4 TPR X	\$ 50m
#5 TPR Z	\$200m
#6 TPR Y	\$400m
#7 TPR Z	\$400m
#8 TPR X	\$300m
#9 TPR Y	\$100m
Constrained Total \$2.2b	
#10 TPR Z	\$100m
#11 TPR Y	\$ 50m
#12 TPR X	\$200m
#13 TPR X	\$250m
#14 TPR Z	\$150m
Unconstrained Total \$.75b	

**Transportation
Planning Region
Constrained Plan**

TPR X	
Project #1	\$200m
Project #2	\$ 50m
Project #3	\$300m
Total	\$550m

TPR Y	
Project #1	\$250m
Project #2	\$400m
Project #3	\$100m
Total	\$750m

TPR Z	
Project #1	\$300m
Project #2	\$200m
Project #3	\$400m
Total	\$900m

Finally, this step must include an assessment of the social, environmental, energy and economic impacts of the Financially Constrained Plan and how it will affect the Transportation Planning Region. While the Preferred Plan developed in STEP VIII might expect to meet all the transportation needs of the Transportation Planning Region throughout the planning period, the Financially Constrained Plan may fall short of meeting these identified needs. This is the Transportation Planning Regions chance to look at the interrelationship between the transportation system and the rest of the community and ask the following questions:

- Is transportation serving the needs of the Transportation Planning Region?
- What are the effects of not being able to implement the entire Preferred Plan?
- Will the region's air quality goals be met?
- Will congestion overwhelm some facilities?
- Will some modes be developed at the expense of others?
- What are the effects on the region's economy?
- Can the vision and values expressed in STEP III be maintained?

PRODUCTS:

- Estimate of revenues expected to be available to fund the Financially Constrained Plan including federal, state, local and private funds.
- Constrained list of projects for the Transportation Planning Region in database format.
- Discussion on what cannot be accomplished from the Preferred Plan with the financial constraints.
- Discussion of environmental effects (good or bad) that may occur due to financial constraints.

STEP XI – REGIONAL PLAN CONSISTENCY WITH STATE AND FEDERAL REQUIREMENTS

The authority and need for Colorado’s regional planning process, is based on three sources:

- Transportation Efficiency Act for the 21st Century
- Title 43 Colorado Revised Statutes
- Statewide Transportation Planning Process Rules and Regulations

Other laws and guidelines, both federal and state, also have a bearing on the process. These include federal environmental laws, the Americans with Disabilities Act, United States Department of Transportation guidelines regarding Metropolitan Planning Organizations and Statewide planning, the laws regarding regional planning commissions, and others. The Statewide Transportation Planning Process Rules and Regulations (*The Rules*) consider all of these and outline a process ensuring that the resulting long-range regional transportation plans will meet all necessary requirements. This Guidebook expands on this outline, offering assistance to planners engaged in the process. Plans consistent with *The Rules* will be considered by the Colorado Department of Transportation to be in compliance with all other requirements, for purposes of integration with the Statewide Plan.

Transportation Efficiency Act for the 21st Century

Section 1204 Statewide Planning – requires states to produce a multi-modal long-range transportation plan. The state plans are to be based on a series of “planning factors” strongly directed at economic vitality, safety and security of the transportation system, accessibility and mobility of both people and freight, protection and enhancement of environmental sensitivities to the human and natural environment, multimodalism, promotion of system management and operation and preservation of the existing transportation system.

Section 1203 Metropolitan Planning – requires that Metropolitan Planning Organizations produce long range plans through a separate but parallel planning process. These plans must have a financial plan, limited to funds reasonably expected to be available, and must be incorporated into the Statewide Plan.

Title 43 Colorado Revised Statues

Commonly known as “the Colorado Department of Transportation Bill” the legislation gives the Colorado Department of Transportation responsibility for developing a statewide transportation plan based on regional transportation plans, including the five Metropolitan Planning Organizations within the state. The “non-Metropolitan Planning Organization” Transportation Planning Regions may be governed by locally established Regional Planning Commissions. The formation of Regional Planning Commissions and production of regional plans is optional for each “non-Metropolitan Planning Organization” Transportation Planning Region, but the state must consider the needs of each area when developing the Statewide Plan. All areas of the state are to be represented on the Statewide Transportation Advisory Committee, which assists the Colorado Department of Transportation in reviewing the regional plans for consolidation into the Statewide Plan. The regional plans must be financially constrained and based on many of the same factors required in the Transportation Efficiency Act for the 21st Century, including multimodal aspects and a cooperative planning process. The legislation also calls for the process to be prescribed by rules and regulations promulgated by the Transportation Commission. Title 43, Part 11 “Transportation Planning” is included in the Appendix to the Guidebook.

The Rules

The Rules for the Statewide Transportation Planning Process consolidate all the requirements for the transportation planning process into one place, with the expectation of the Metropolitan Planning Organizations planning process described in federal regulations. With respect to Metropolitan Planning Organization plans, *the Rules* are complimentary and do not add additional requirements to the Metropolitan Planning Organization planning process.

The Transportation Planning Regions (the geographic areas) are established under *the Rules* based on common transportation corridors, geographic similarities, socioeconomic cohesiveness and governmental relationships. *The Rules* also outline public participation requirements, the duties of the Statewide Transportation Advisory Commission, the formation of the Transportation Planning Regions and the amendment and update process for transportation planning. The planning factors included in the Transportation Efficiency Act for the 21st Century and the Colorado Department of Transportation Bill are referenced and must be explicitly considered in each individual Regional Transportation Plan as appropriate. The Rules are included in the Appendix of the Guidebook.

Closing

The Statewide Transportation Advisory Committee and Colorado Department of Transportation staff will review drafts and final Regional Transportation Plans as described in *the Rules*. Colorado Department of Transportation staff will assist in the development of each regional plan, helping to assure that all requirements are met and that appropriate elements are included in the plan. The Colorado Department of Transportation reserves the right to delay acceptance of any plan that does not fully meet the requirements until any deficiencies are corrected. This ensures that each Regional Transportation Plan will contain similar types of information, allowing each to receive unbiased consideration. The Colorado Department of Transportation can then effectively and efficiently integrate the regional plans into a comprehensive Statewide Plan.

This process to produce a regional transportation plan fulfills a two-fold purpose. It is a critical link in the chain from planning to implementation. First, the planning process has served to bring together transportation stakeholders including private citizens, local officials, business interests, transportation providers, environmental interests and others to create a long-term vision for the region and to identify the relative importance of transportation improvements given estimated resources. Second, the Transportation Planning Regions will have created a vital piece of the Statewide Plan, since all 15 regional plans will be integrated into the Statewide Plan. The Statewide Plan will become the source of projects to be included in the Statewide Transportation Improvement Program that will finally be implemented through the annual budget.

The regional transportation planning process is a critical component in determining Colorado's future. The Colorado Department of Transportation is wholeheartedly committed to this "bottoms up" approach to transportation planning in which the people of Colorado have the opportunity and the responsibility to envision the future and in its implementation. This planning process will set in motion the plans that will guide transportation development, through the Statewide Plan, for at a minimum the next 20 years. Active and thoughtful involvement will help ensure a productive and quality transportation future for Colorado.

PRODUCTS:

- Discussion on how the plan meets the Federal and State Guidelines.
- Resolution from the Regional Planning Commission adopting the Regional Plan
- Statement in plan stating the following:
 - This document has been prepared using Federal funding from the United States Department of Transportation. The United States Department of Transportation assumes no responsibility for its contents or use thereof.