CAPITOL REGION TRANSPORTATION PLAN

A guide for transportation investments
through the year 2030

Providing Bike and Pedestrian Opportunities
Improving Bradley International Airport
Linking Land Use & Transportation
Improving Freight Transport
More Travel Choices
Better Transit

Capitol Region Council of Governments
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Previous & Related Reports

Preliminary Review of Non-Highway Alternatives May 1992
Preliminary Alternatives Review Apr. 1993
Air Quality & Transportation (Policy Paper) May 1993
Transportation & Land Use (Policy Paper) Aug. 1993
Intelligent Transportation Systems: A Strategic Plan for the Capitol Region Nov. 1998
Capitol Region Bicycle Plan April 2000
Regional Transit Strategy March 2001
Capitol Region Transportation Plan Sep. 1994

\[1998\]

\[2000\]
MAJOR POLICY DIRECTIONS

The Capitol Region Transportation Plan outlines a comprehensive program for improving our transportation system to meet travel needs through the year 2030. It is a systems level plan that provides general policy guidance. It defines the Region's greatest needs, identifies which problems are the Region's highest priority, and outlines how the Region should spend its limited capital funds.

This latest version of the Transportation Plan establishes some new policy directions for the Capitol Region Council of Governments, and reaffirms the Council's commitment to policies set in previous editions. It reaffirms the Council's commitment to developing a transportation system that offers more and better travel choices, and continues its emphasis on developing a good regional transit system as an alternative to the automobile. It also reaffirms and strengthens our commitment to developing a bicycle and pedestrian system.

The Plan establishes some new emphasis areas. These include a strong commitment to linking land use and transportation planning, new policy support for Bradley International Airport, a commitment to start a freight planning program, and a commitment to environmental justice.

More Travel Choices. The 2004 Regional Transportation Plan re-emphasizes the desire to provide our Region's residents with more travel options, and to reduce their need to rely exclusively on the private automobile. While the automobile will continue to dominate most travel in the Region, we need to provide more opportunities for people to use alternate means of transportation. With the earlier adoptions of the Regional Transit Strategy and the Regional Bike Plan, and the start of the New Britain Busway design, we have taken major steps toward achieving that goal. The 2004 Regional Transportation Plan continues to be a true multi-modal plan.

Better Land Use-Transportation Coordination. The Plan places new emphasis on the issue of coordinating transportation policies with the Regional Plan of Conservation and Development, or more generally, linking land use planning with transportation planning. The new Plan recognizes that a common goal of both disciplines needs to be promoting more livable communities in the Capitol Region. The policies adopted with this Plan commit CRCOG's transportation program to supporting livable community goals and the Regional Plan of Conservation and Development.

New Support for Bradley International Airport. Previous editions of this Transportation Plan recognized the importance of Bradley International Airport as a major transportation facility, but provided no policy guidance on the Airport. The new Plan recognizes the importance of Bradley in the economic vitality of the Region, and it includes a strong policy statement that supports developing the Airport both as a transportation asset and as an engine of regional economic growth.

More Emphasis on Environmental Justice. The Region reaffirms its commitment to address the transportation needs of all its residents including members of minority groups, low-income residents, and transit dependent residents. The previous Plan included a commitment to follow the three basic principles of environmental justice. This Plan builds on the three years of progress since our initial commitment. It incorporates the environmental justice policies and procedures adopted in the last three years, and identifies a new list of environmental justice issues to pursue over the next three years.
Add Freight Transport System. For the first time, the Plan includes a chapter on freight transport. In the past, metropolitan planning organizations had little direct role in the planning or funding of freight transportation systems. It has been left largely to the private sector to maintain freight railroads, operate truck terminals, develop overnight package delivery systems, build pipelines, and develop the truck fleets and supporting business and logistics systems to manage the complex truck delivery systems. However, within the past decade there has been an increasing awareness that the public sector needs to play some role in helping develop more efficient delivery systems, and FHWA has asked MPOs to address goods movement planning issues. With this Plan, CRCOG is initiating that effort. The policies presented in the Plan are general in nature, but will be developed in more detail as the freight planning program advances.

Continued Emphasis on Transit. This Plan reaffirms the Council’s commitment to the Regional Transit Strategy, reflects progress made over the last three years, and anticipates completion of three major transit feasibilities studies within the next 12 months. It is expected that the Plan will be amended again within the next year to reflect the findings from these three major studies: Griffin Busway Feasibility Study, Hartford East Busway Feasibility Study, and the New Haven – Springfield Rail Feasibility Study. All of these are scheduled to be completed by June 30, 2004. Once all three studies are completed, we can make a more informed decision on how to adjust and advance the Region’s long-term transit strategy.

More Emphasis on Pedestrian & Bike Travel. The new Plan incorporates a CRCOG pedestrian policy adopted in June 2001 that calls for integrating pedestrian and bike improvements into roadway projects. This continues our efforts to promote non-motorized travel modes, a policy directive that was embraced with the adoption of the 1998 Plan, and reinforced with the adoption of the Regional Bicycle Plan in 2000.

Better Systems Management. This policy continues the emphasis on transportation solutions that are based on improving the efficiency of the existing infrastructure rather than building new infrastructure. As a result of this policy, the proposed plan includes a substantial financial commitment to system management methods such as freeway incident management, coordinated traffic signal systems, Intelligent Transportation Systems, and access management on arterial roads.
1. Linking Land Use & Transportation

The 2004 Regional Transportation Plan places renewed emphasis on the issue of coordinating transportation policies with the Regional Plan of Conservation and Development, or more generally the question of linking land use planning with transportation planning. Previous editions of the Plan have addressed the issue, but recent events have heightened interest in the topic. These include: (1) completion of a regional land use data base, (2) adoption of a new Regional Plan of Conservation and Development, (3) a special land use planning project that identified a strong interest among residents in transportation and livable communities, and (4) a special project to promote transit supportive development around transit stations in the New Britain Busway corridor.

The benefits of a coordinated approach to planning transportation and land use are many, and they can help achieve the goals of both planning processes.

- Reduce congestion - Land use patterns directly affect the amount of daily travel by residents and businesses. Well designed, moderate density, mixed use developments can reduce the amount of travel by reducing the number of trips and the length of trips. This type of development can also improve accessibility without requiring transportation system capacity improvements.

- Support transit - Land use planning that promotes higher density, mixed use, and transit supportive development around rapid transit stations or major bus routes can encourage more travel via transit, boosting both system ridership and fare revenues.

- Reduce sprawl - Focusing transportation resources in areas already well served by other elements of public infrastructure such as water and sewer service will help reduce the spread of low-density development farther and farther from traditional urban centers.

- Support economic development goals - A good transportation system is essential for continued economic growth. The Region’s transportation policies should support system improvements necessary to continue economic growth consistent with the economic development goals in our Regional Plan of Development.

- Preserve farmland, natural resources, and open space - Limiting major transportation improvements in agricultural areas or environmentally sensitive areas will help discourage the development of these areas.

- Preserve & enhance community character - Better coordination at the project planning level can result in roadway improvement projects that achieve transportation system goals, preserve community character, and enhance the livability of places – urban, suburban, and rural.

- Better access management - Poor coordination of land use and transportation planning along arterial roads has often led to unsightly commercial strip development that reduces the ability of the road to move traffic efficiently and safely. Good access management improves the flow of traffic and increases safety along any heavily traveled roadway.

- Better street networks - Traditional urban street networks built in the form of a well-connected grid can advance both transportation and community development goals. A well-connected network improves traffic circulation by offering more route choices and by dispersing traffic flows. The high degree of connectivity also forms a series of blocks that organize development so that land is efficiently utilized. A fine grained network of streets also assures that no single road must become so wide that it is no longer pedestrian friendly.
Components of Land Use-Transportation Coordination Policy

In 1994, the Council adopted a policy to encourage more coordination between transportation planning activities and land use planning activities. Many of the recommendations in that policy have been implemented and are helping to achieve better coordination between these two planning activities. This new Land Use - Transportation policy builds on some of the principles of the 1994 policy and adds elements that reflect more recent efforts undertaken by CRCOG. The key components of the new policy are provided in the list below. Each is discussed in more detail under separate headings that follow.

- Livable communities & smart growth
- Regional Plan of Development
- Regional growth centers
- Transit oriented development
- Regional land use data base
- Context sensitive transportation solutions
- Access management
- Travel forecasting model – improve land use components & interactions

Livable Communities & Smart Growth

The Council of Governments has been an active proponent of public policies that promote livable communities. The concept of livable communities is based on sustainable development principles and seeks to build communities that are good places to live and work, where the quality of life is preserved, where economic growth is sustained, and where natural, cultural, and historic resources are protected. Whether referred to as livable communities, sustainable development, or smart growth, the basic goals are:

- **Sustain prosperity and expand economic growth.** A strong emphasis is placed on encouraging economic growth that builds on past investments and preserves prime farm land and open space.
- **Enhance quality of life.** A key goal is to build or shape communities that provide a high quality of life for residents. Quality of life is affected by numerous factors including safe streets, good schools, choice of travel options, and clean air.
- **Build a stronger sense of community.** A key goal is to build a stronger sense of community through physical design and by bringing residents, businesses, and institutions together to create a common vision for how they want to develop their community.

To emphasize CRCOG’s commitment to public policies that promote livable communities, that commitment is being made a specific goal of the transportation planning program as well.

**Recommendation:**

1. **Support Livable Community Goals.** CRCOG will make every effort to support the goals of livable communities as appropriate. This will be done at all levels of the planning process from systems planning through project development and design. This will include, but not be limited to, adhering to context sensitive planning and design principles as discussed below under ‘Context Sensitive Transportation Solutions.’

Regional Plan of Development

A primary tenet of the land use - transportation policy is that the Region’s transportation plans and policies should be coordinated with, and supportive of, the Regional Plan of Conservation and
Development. This is important given the recent adoption (May 2003) of a new Regional Plan entitled ‘Achieving the Balance.’ The Plan is a significantly revised and strengthened policy document. The Plan recommendations are based on six major goals:

1. **Regional growth centers.** Focus new regional development in areas in which existing and planned infrastructure can support that development.

2. **Revitalize Hartford & other urban centers.** Support efforts to strengthen and revitalize Hartford, the Capitol Region's central city, and also support the revitalization of older, urbanized areas throughout the region.

3. **Preserve community character & natural resources.** Develop in a manner that respects and preserves community character and key natural resources.

4. **More choices for diverse needs.** Support the creation of new employment and housing opportunities, and transportation choices, to meet the diverse needs of our region's citizens.

5. **Multi-town resource planning.** Implement open space and natural resource protection plans that acknowledge and support the multi-town nature of our natural systems.

6. **More regional cooperation.** Encourage regional cooperation in the protection of natural resources, the revitalization of urban areas, and economic development.

Goals 1 – 4 are most directly related to the issue of linking land use and transportation planning. Many of our transportation proposals are supportive of these four goals since there has been a high degree of coordination between the two planning processes. Nonetheless, it is a recommendation of this transportation plan that a commitment be made to strengthen the linkages.

**Recommendations:**

1. **Support Plan of Development Goals.** CRCOG’s transportation plans and policies will be supportive of all the major goals of the Regional Plan of Conservation and Development, but special emphasis will be placed on the first four.
   a. Support regional growth centers
   b. Support revitalization of Hartford & older urban centers
   c. Preserve community character & natural resources
   d. Support more choice for diverse needs

2. **Continue Planning Coordination.** The staff of CRCOG’s Transportation and Community Development departments will continue to work cooperatively on projects in which transportation and livable communities are an issue. Current or previous examples include the New Britain busway and station area planning projects, the development of a regional land use data base, and the Picture It Better Together livable communities planning project.
Connecticut Capitol Region Plan of Conservation and Development
Economic Development Areas of Regional Significance

The areas highlighted on the map represent lands that can best support large, regional-scale commercial and industrial development. In order of priority, these areas are:

1) Areas of Regional Significance
2) Transit Corridors
3) Interstate Highway Areas
4) Sewer and Water Service Areas

CRCOG will use this policy map, along with goals and policies from the Regional Plan, to support plans and development proposals that are consistent with these priority areas.

Source: CRCOG and Municipal GIS Databases
Approved by Capital Region Council of Governments 5/23/03
Regional Growth Centers

Of the six land use planning goals discussed above, the first is of special interest in regard to the new Transportation Plan. Participants in a focus group session conducted for the development of the new Transportation Plan felt that the goal of encouraging economic development within Regional Growth Centers warranted special attention. As a result, the issue of Regional Growth Centers is discussed in more detail here.

The Regional Plan of Conservation & Development recommended that economic growth be focused in areas that have adequate existing and planned infrastructure to support the development. The Plan identified four types of areas and placed them in priority order:

1. regional growth centers - areas of regional significance due to existing employment concentrations and projected employment growth,
2. proposed rapid transit corridors,
3. existing Interstate highway areas, and
4. water and sewer service areas.

There are six Regional Growth Centers and they are listed below, and depicted in Figure 5-1. These are major activity centers that have a high concentration of jobs due to locational advantages and a substantial investment in public and private infrastructure that was required to support the activity. For these same reasons, it is expected that much of the Region’s future employment growth will occur in these areas. It is to the Region’s advantage to continue to support economic growth in these areas rather than making major investments in undeveloped areas where the infrastructure is inadequate, and where there is risk of losing valuable farmland, open space, or important natural and historic resources.

- Downtown Hartford
- Bradley Airport area
- Health Center/WestFarms area
- Rentschler Field area
- Griffin area
- Bucklands area

**Recommendations:**

1. **Support Regional Growth Centers.** Economic development should be encouraged in those areas where the public infrastructure already exists to sustain intensive development. Transportation policies should favor investment of transportation resources in highway and transit projects that serve these Regional Growth Centers.

Transit Oriented Development (TOD)

As part of the 2001 Regional Transportation Plan, the Region made a major commitment to giving travelers more choices by improving our existing bus system and developing a new rapid transit system. If these proposals are to realize their full promise, they must be adequately funded and properly designed. In addition to funding and designing the transit elements of the projects, we need to properly plan for development around the stations. Proper station area planning is needed to assure: (1) that we realize the full economic development potential created by the new transit service, and (2) that the development that does occur is transit supportive.

Transit stations can stimulate economic development in the host community. This is possible because rapid transit service improves access to the station area, thereby making the area more desirable to...
developers. However, there is no guarantee that the economic development will occur unless the proper station area planning is done. Market forces alone will not result in development if local development regulations and policies are not supportive of development in station areas.

Station area planning is also necessary to assure that the type of development that occurs is supportive of the transit system. “Transit supportive” means a mix of development—houses, shops, and offices—arranged in a pedestrian friendly manner with perhaps a higher level of intensity and density than may exist today. Supportive uses are activities that are likely to generate additional riders for the transit system because residents, patrons, or employees find it convenient to ride transit rather than drive to the location. Uses such as automobile sales, warehousing, or ones that are land intensive with low employment densities are not transit supportive.

With the adoption of the Regional Transit Strategy in 2001, the Council of Governments committed to a policy of encouraging and promoting transit supportive development in major transit corridors. Since then, through the Station Area Planning Project, we have worked intensely with the municipalities along the New Britain Busway corridor to assure that transit supportive land use planning is done in areas around the 12 busway stations. At each station, the study area included up to one half-mile around the station; this is the comfortable walking distance to and from a station. Each station area was assessed and development principles prepared for all. Six areas were selected for full station area planning including recommendations for walk/bike/motor vehicle routes to the station; assessment of market conditions and the physical and regulatory environment; proposals for new regulations; development concept plans; phasing and suggested deal structures; and incentives for development and marketing of sites targeted for transit-oriented development. The plans will serve local decision-makers, citizen groups, ConnDOT, private developers, and property owners.

The Region remains committed to the basic tenets of its transit oriented development policy:

- Develop a strategy for the Region that encourages both transit and transit-supportive land use.
- Make station area planning a part of the general planning process for all rapid transit lines.
- Work with planners and developers to integrate TOD into their plans and development projects.
- Build support for transit among community groups, business leaders, and other stakeholders.

**RECOMMENDATIONS:**

1. **General Support for TOD.** Support Transit Oriented Development along transit lines. The Region, State, and affected municipalities need to undertake a series of actions to encourage transit oriented development.
   - Develop a long range strategy for the Region that encourages both transit and transit-supportive land use.
   - Make station area planning a part of the general planning process for all rapid transit lines.
   - Work with planners and developers to integrate TOD into their plans and development projects.
   - Build support for transit among community groups, business leaders, and other stakeholders.

2. **TOD for New Britain Busway.** Continue special TOD planning efforts along the New Britain Busway, including direct support from CRCOG staff.

3. **TOD for Other Rapid Transit Lines.** Provide similar special TOD planning efforts for other rapid transit lines as they enter EIS and design phases. These should include direct CRCOG support.
Regional Land Use Data

The Council of Governments is in the process of completing a regional land use data base. The data base is an essential tool for understanding the current land use patterns in the Region, developing tools to project future land use trends, and testing alternative development scenarios. It is also an essential input to the regional travel forecast model. Now that the land use data base is nearly complete, it is essential that the Region maintain it and keep it up to date.

RECOMMENDATIONS:
1. **Maintain & Update Land Use Data Base.** Continue to maintain and update the regional land use data base.
2. **Develop Analytical Tools for Improved Land Use Forecasts.** Develop better land use forecasting tools using the regional land use data base and the regional GIS.

Context Sensitive Transportation Solutions

Traditionally, transportation planners and engineers have not been especially sensitive to non-transportation issues as they developed their plans and designs. Environmental issues were an exception to this practice because plans and designs have to comply with environmental regulations. However, little consideration was given to project impacts on historic, cultural, or community resources. Within the past decade, a new approach has evolved in the transportation field that corrects this single-minded approach. The new approach is called ‘context sensitive design’ or ‘context sensitive solutions.’

The goal of this new context sensitive approach is to develop solutions that are responsive to community concerns and that result in transportation projects that are a better fit to the community. In this approach, traffic improvement is no longer the only objective to be met. Designers and planners are expected to give consideration to other community goals such as preserving community character, and creating more pedestrian friendly environments. Projects that are designed through this type of process can contribute to the overall goal of creating more ‘livable communities.’

Substantial progress has already been made in developing context sensitive procedures in the Capitol Region and the State, but these efforts need to be continued. CRCOG needs to continue its context sensitive approach to conducting corridor studies. The Connecticut Department of Transportation has adopted an agency-wide context sensitive design policy, and has used it to great success on many projects.

RECOMMENDATIONS:
1. **Context Sensitive Corridor Studies.** CRCOG should continue to use a context sensitive approach in its corridor planning process.
2. **Context Sensitive Design.** CRCOG should encourage Connecticut DOT to continue its context sensitive approach to design, and to work with DOT staff and consultants on individual projects as needed to assure that community concerns are heard and understood.

Access Management

Land use and transportation often come into conflict on arterial roadways where substantial commercial development is occurring or planned. In the past, the lack of coordination between transportation and land use planners has resulted in problems in these areas. The land is often developed as unattractive commercial strips where the proliferation of driveways erodes the safety and capacity of the roadway. These problems can be prevented, and even corrected, if proper access management policies are in
Transportation 2030

place. CRCOG has actively supported better access management practices within the Region and needs to continue to do so.

**RECOMMENDATION:**

1. **Continue Regional Access Management Program.** CRCOG should continue its access management efforts as recommended in the following chapter on the Arterial Road System.

**Travel Forecast Model**

The regional travel forecast model (also known as a travel demand model) is an important planning tool that CRCOG uses to help make decisions about major transportation proposals. It is used to forecast future traffic volumes on roads, and to forecast future ridership on transit services. It is used to help us understand how traffic will grow over the next 10-20 years, and it is also used to help us evaluate how different roadway and or transit improvements might help us cope with traffic growth. The travel forecast model can also be helpful in understanding how land use can affect travel patterns in general and mode choice in particular. Some travel models (not CRCOG’s) are also capable of showing how development patterns might change in response to changes in the transportation system. For example, will residential growth shift to an area if a new highway is built in that area? In any case, a travel forecast model is an important planning tool that can not only help us do better transportation planning, it can also help us better understand land use - transportation interactions. CRCOG’s model should continue to be refined and improved to increase these analytical capabilities.

**RECOMMENDATIONS:**

1. **Maintain Regional Land Use Database.** CRCOG should continue to maintain and update the regional land use data base.

2. **Develop GIS-based Land Use Forecast Model.** Traffic forecasts are dependent on the land use forecast that we enter into the travel model. Therefore, to get good travel forecasts we need good land use forecasts. Land use forecasts can be improved by developing a GIS-based land use forecast model that utilizes the regional land use data base discussed above, and data sets in the regional GIS such as the local zoning data and the environmental constraints data.

3. **Sensitivity Test with Alternative Land Use Scenarios.** CRCOG should continue its practice of evaluating specific project proposals using alternative land use scenarios. Such sensitivity testing provides insights into how transit projects might perform if we manage our development differently. (Example: more transit oriented development)

4. **Other Travel Model Improvements.** CRCOG should continue to improve its travel model to increase its functionality and performance, and to improve its ability to reflect land use - transportation interactions.
2. TRANSIT SYSTEM

The private automobile is not the only way to travel within the Capitol Region. Alternative travel modes to the private automobile include local and express bus service provided primarily by CT Transit, paratransit services provided for elderly and disabled residents through the Greater Hartford Transit District, and rideshare services provided by the Rideshare Company. These services play an important role in meeting the travel needs of our residents. They serve the basic mobility needs of our transit dependent population. Many elderly persons, many disabled persons, and most families that do not own a car are dependent on our public transit system to meet their basic travel needs such as shopping trips, work trips, and trips to the doctor. They also serve the commuting needs of a small but significant portion of the Region’s workers. About 3.8 percent of all workers in the Region take the bus to work (2000 Census). Of those who work in Hartford, about 7.8 percent commute by bus; and of those who work in the Hartford CBD, about 14.4 percent commute by bus. In total, over 55,000 trips a day are served by our transit system, rather than by private automobile (CT Transit ridership data). Thus, the bus system removes a significant portion of cars from the roads during the most congested periods of the day and in some of the most congested areas.

The Council of Governments recognizes that while transit is a small part of a much larger transportation system, it is a critical part nonetheless. And it is likely to become even more important as our roadways become more congested over time and people seek alternative ways to travel. In fact, the Council has increasingly sought to place more emphasis on transit improvements as a way to improve mobility for those who rely on transit, provide viable travel choices for everyone, and to reduce congestion on our streets. Since the mid 1990s, CRCOG has undertaken several initiatives to improve transit options. These are described below.

**Regional Transit Strategy.** The Council of Governments completed an intensive 2-year effort to define a new vision for a transit system that will serve travel needs within the Region, and provide transit links to cities outside the Region as well. The vision recommends construction of several busways, roadways built for the exclusive use of buses. Upon fulfillment of this vision, buses will whisk travelers between Hartford and numerous outlying communities: New Britain, Bloomfield, Manchester, and Rocky Hill. And this service won’t be limited to the end points of the busways, but each of the following towns along the busway will have improved access: West Hartford, Newington, Wethersfield, East Hartford, Vernon, and Windsor. In addition, most communities in the region can be linked to the busway with bus routes that use the busway for part of their trip. The vision also includes commuter rail service linking New Haven, Hartford, and Springfield and will include a new connection to Bradley International Airport. And bus service improvements throughout the system will increase the mobility of all our region’s citizens. In short, the vision for regional transit in the Hartford region aims to **restore balance** among modes in our transportation system and provide travelers **more choices**.

**Jobs Access Program.** In cooperation with the CT Department of Social Services and a host of other social service and transit agencies, CRCOG started the Jobs Access Program. This is a program to provide rides to work for welfare-to-work clients and other low income residents who want to work, but who cannot reach certain job sites due to lack of a car, lack of regular bus service to the site, or lack of bus service for second or third shift schedules. This innovative program matches clients to the best available transportation service to need their commute needs. In some cases it involves use of a Transit District paratransit vehicle, in other

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**CT Transit Services**
- Local bus service
- Commuter bus service

**Transit District**
- Services for elderly residents
- Service for disabled residents

**Rideshare Company**
- Rideshare service for commuters

**Jobs Access**
3,000 residents find jobs & rides to work
cases it involves placing the client in a Rideshare Company vanpool, and in others it involves modifying a CT Transit bus route or schedule to serve the client or group of clients. In the year 2003, the Jobs Access Program provided about 44,000 trips per month for about 3,000 residents who needed help getting back and forth to work.

**Bus Stop Policy.** In the year 2000, CRCOG adopted a bus stop policy that will help improve bus stops throughout the Region by establishing a program to install and replace passenger shelters at important bus stops, establishing a program to install new bus stop signs at all stops in the Region, and better defining town responsibilities for maintaining bus stops. The policy and resultant improvement programs reflect a desire to improve conditions for bus patrons where they wait to board the bus.

**Recommended Transit Improvement Program.** The Region’s recommended transit improvement program is based primarily on the Regional Transit Strategy. But it also includes recommendations reflecting the Council’s work with the Jobs Access Program, its Bus Stop Policy, and recommendations from previous Regional Transportation Plans regarding maintenance of existing service levels, development of ITS capabilities for transit, and preservation of rail corridors. While the Regional Transit Strategy recommendations are summarized below, the full explanations of the recommendations are provided in the separate report entitled ‘Regional Transit Strategy.’

The recommendations are organized below in a manner reflective of the way the Regional Transit Strategy is organized. However, the following sections are inclusive of recommendations derived from all of CRCOG’s transit programs, not just the Regional Transit Strategy. The sections are:

- Better bus & paratransit service
- New ‘rapid’ transit service
- Better circulation within activity centers
- Better portals to transit system (bus stops & stations)
- Better transit-land use connections

**Better Bus & Paratransit Service**

Even with significant investments in a rapid transit or fixed guideway system, the local bus service and paratransit services will continue to provide the fabric that ties our transit system together. The following recommendations, which are based on both the Regional Transit Strategy and other regional transit policies, are intended to assure the existing services are both properly maintained and improved to meet identified needs.

1. **Maintain & improve existing levels of service**

It is the policy of the Council of Governments that the bus and paratransit systems in the Region are critical to meeting the mobility needs of the Region’s transit dependent population. Furthermore, the bus system is an important “alternate” mode of travel for many of the Region’s other residents. The Council recognizes the importance of both these functions and Council is committed to a policy of maintaining the existing levels of service and to improving those services where appropriate. These include the CT Transit bus services, the Transit District paratransit services, and the Rideshare Company’s vanpool services.

Reaffirmation - The importance of this policy is reaffirmed as part of the 2004 Plan. Transit is the primary, if not the only transportation mode available to households without automobiles. Providing reasonable transit service to those who are dependent on it is a key goal of CRCOG’s transportation policy and its environmental justice policy.
2. **Jobs Access Program.** The Region should continue its Jobs Access program. It is important to develop new systems to provide access to jobs for those who are seeking jobs, but who lack personal transportation.

   *Reaffirmation*  – The importance of the Jobs Access program is reaffirmed as part of the 2004 Plan. Providing transportation to jobs for those who lack their own means of transportation is a key goal of CRCOG’s transportation policy and its environmental justice policy.

3. **ITS for Transit.** Improve the operational efficiency of the existing transit and paratransit services by integrating advanced technologies into current operations, maintenance, and management functions. Specific recommendations such as advanced vehicle location systems are described in “Intelligent Transportation Systems: A Strategic Plan for the Capitol Region.”

   *Reaffirmation*  – Much of the ITS program for highways has been implemented since adoption of the Capitol Region ITS Strategic Plan. In contrast, very little of the ITS program for transit has been implemented. As part of this 2004 Plan, CRCOG reaffirms its commitment to ITS improvements for transit. The following factors provide both an opportunity and need for advancing the transit ITS program:

   - **New Britain Busway** – ITS elements such as automatic vehicle location (AVL), real time bus arrival information signs, and possibly even vehicle guidance systems will be an integral part of this new rapid transit facility.
   - **Radio System Replacement** – CT Transit's current radio system is not a digital system, which has made it impractical to install an AVL system. Given that the radio system is now 15 years old, replacement is needed within the next few years. Any new system would be digital and allow CT Transit to start developing AVL capabilities.

4. **Better Bus Proposals from RTS.** The Regional Transit Strategy recommended several improvements to the existing bus system. Proposed enhancements to existing services include:

   - More hours of service.
   - More timed transfer centers.
   - Increased service frequency to provide timed transfers at the new centers.
   - Increased service frequency on express routes.
   - New routes: to provide for greater suburb to suburb service, to provide circulators within activity centers where appropriate, and to provide a circumferential route in the region’s inner ring suburbs.
   - Modifications to existing routes: to create more direct service, improve operating efficiency or to prevent duplication of route segments. (see RTS report)
   - Integration of alternate fueled vehicles in the transit fleet as soon as practicable.

**New Rapid Transit Service**

The Regional Transit Strategy (RTS) recommends that new rapid transit services be developed in five corridors. The corridors are described below and illustrated in the following figure. Since the RTS was adopted in 2001, planning and/or design activities have been initiated in the four most promising corridors. The status of these activities is also reported below.

Four of the corridors will be developed as busways, which are roadways built for the exclusive use of buses. Buses operating on a busway can operate in express mode, stopping only at either end of the facility, or in local mode, stopping at each busway station. A busway provides rapid service over its length and permits a flexible operation. For example, feeder route service can circulate through a neighborhood and then get on the busway for a quick trip to downtown Hartford. Access points will be located at several points on the busways, enabling many different routes to use the facilities and broadening the reach of the facilities. This permits more patrons to have a “one-seat ride”: no need to
transfer to another vehicle in order to ride on the busway. The busways will be built to allow future conversion to light rail transit if increases in passenger volumes warrant a higher capacity system.

**RECOMMENDATIONS:**

1. **Rapid Transit System**
   Develop a new rapid transit system inclusive of services in the following five corridors.

   **New Britain Hartford Busway:** New busway between Hartford and New Britain. It is located in the Amtrak corridor from Hartford to Newington, and then in the New Britain Secondary corridor for the connection to New Britain. This project is currently in the design phase, and it is expected that operations could begin as early as 2007.

   **Griffin Busway:** Proposed busway from Hartford to Bloomfield with bus service extended to Bradley Airport via Route 187. The exclusive busway portion will be located in the Griffin rail corridor from Union Station to Griffin Office Park in Bloomfield. A feasibility study of this busway is nearly complete. The ‘draft’ recommendation is to defer construct of a busway until there is sufficient experience with the New Britain Busway operations to evaluate its success. The draft recommendation is based on the fact that the cost-effectiveness ratio for the Griffin Busway is not sufficient to meet the minimum federal criteria at this time.

   **Manchester Busway:** Recommended busway from Hartford to Manchester and Vernon. It will be located in the freight rail corridor from Union Station to Manchester, or in the Interstate 84 high occupancy vehicle lanes. A feasibility study of the Manchester or Hartford East Busway is currently underway and is scheduled for completion by June 2004.

   **Rocky Hill Busway:** Proposed busway from Hartford to Rocky Hill with bus service extended to Middletown. The exclusive busway will be located in the Hartford/Middletown rail corridor from Union Station to Rocky Hill. No feasibility study is planned for this corridor since this corridor had the smallest potential ridership of all the corridors.

   **New Haven-Hartford-Springfield Commuter Rail Service:** Improve Amtrak intercity rail service to serve commuter trips, provide better connections with Acela service in New Haven, and provide a connection to Bradley Airport. It will use the existing Amtrak corridor. A feasibility study of the NHHS commuter rail service is currently underway and is scheduled for completion by June 2004.

2. **Rail Corridor Preservation**
   Continue to preserve existing rail rights-of-way for future transportation use. The policy includes all existing rail rights-of-way and it allows for the interim use of the rights-of-way for other transportation functions such as multi-use trails.
Better Circulation within Activity Centers

A downtown circulation system was evaluated as part of the RTS and proved to be integral to the success of the rapid transit facilities. The RTS emphasized the importance of a downtown circulator to make it easier for people to move between activity centers downtown and for transit services to integrate with the busway service. The RTS also identified neighborhood circulators as services that can improve access in an activity center while allowing more efficient operation of regional routes.

RECOMMENDATIONS:

1. Downtown Circulator. Implement a Downtown Circulator to accomplish the following objectives:
   - convenient transit service in downtown Hartford
   - connecting service for rapid transit lines terminating in downtown
   - connecting service for the existing bus system
   - connecting service between downtown and the fringe of downtown
   - easier circulation for all transit vehicles downtown

   A special task force was formed by the Metro Hartford Alliance to explore ways of financing a downtown circulator service. Work on the a transit priority pathway in downtown is deferred until the routing of the New Britain Busway is finalized.

2. Buckland Hills Circulator. Examine the potential benefits of reorienting service in this area to include a transit center with a circulator.

Better Portals to the Transit System

Both the Regional Transit Strategy and the regional bus stop policy place new emphasis on those locations where people gain access to the transit system or have an opportunity to transfer between routes in the system. We can encourage more people to use the transit system if we improve these ‘portals’ to the system.

RECOMMENDATIONS:

1. Major Transfer Centers. The RTS recommends the creation of timed transfer centers, or mini-transit hubs, outside downtown Hartford. A transfer center creates the opportunity for a person to get to other bus routes more directly and more quickly. Furthermore, the transfer center encourages several routes to come together outside of downtown Hartford, resulting in improved mobility at the new hub.
   - Copaco Plaza (Bloomfield)
   - West Farms Mall (Farmington)
   - Buckland Hills Mall (Manchester)
   - Wethersfield Shopping Center (Wethersfield)

2. Transit Stations on Busways. Fixed transit stations are a key element of each of the proposed rapid transit lines. The RTS recommends that each major station on a rapid transit line include appropriate amenities to make the stations both attractive and convenient to use. Stations will include covered platforms with enclosed station areas (i.e., buildings) at high ridership locations. Transit oriented development is also encouraged at all stations.

3. Transit Supportive Uses at Stations. The RTS recommends inclusion of transit support activities at major stations or transfer hubs. When individuals travel to and from work today, their trip often
has several purposes: dropping children at day care, taking care of errands, picking up dinner. For some commuters, these other needs make transit infeasible for the work trip. But if retail facilities, day care, dry cleaning establishments (and other uses) are made available at transit centers and stations, the transit trip becomes feasible. It is the intent of the RTS to encourage the development of other services at key transit centers and stations. Buckland Hills and Park St. (on the New Britain Busway) are proposed as prototypes, with others to follow.

4. **Bus Shelters.** CRCOG’s Bus Stop policy recommends the development of a bus shelter program to install new, or replace old passenger shelters at important bus stops throughout the Region. This program has been underway for several years and needs to be continued.

5. **Bus Stop Signs.** CRCOG’s Bus Stop policy recommends the creation of a bus stop sign program to install standardized signs at all stops. The sign replacement program was recently started and will take several years to complete.

**Better Transit-Land Use Connections**

In order for the proposed transit improvements to realize their full promise, they need to be fully integrated into the surrounding land use. Before the advent of the automobile, cities were largely shaped by their transit lines and routes. Today, highways and roadways tend to be a stronger determinant of land use and urban form. But one of the clear goals of the RTS has been to use transit as a tool to shape urban form. In examining transit and land use connections in other cities, the RTS found that transit can indeed shape development in our auto-oriented culture, but these factors have to be in place:

- Strong development climate
- Supportive public policies
- Clear, long-term regional plan with a strong transit component and transit supportive land use policies
- A strong transit agency, reliable transit service, supportive institutions, and a “transit culture”

**Recommendations:**

1. **Support Transit Oriented Development along Transit Lines.** The Region, State, and affected municipalities need to undertake a series of actions to encourage transit oriented development.
   - Develop a long range strategy for the Region that encourages both transit and transit-supportive land use.
   - Make station area planning a part of the general planning process for all rapid transit lines. Station area planning expands the station siting activity typically done as part of the development process for each new rapid transit facility, to include consideration of potential development within a half-mile radius of each station.
   - Work with planners and the developers to integrate transit oriented development into their plans and development projects.
   - Build support for transit among community groups, business leaders, and other stakeholders.
3. FREEWAY SYSTEM

Freeways are the most important part of the Region’s roadway system. There are 98 miles of freeways in the Capitol Region. These constitute only 2.7 percent of the total road miles (3,686 miles) in the Region, but they carry 41 percent of the total traffic or vehicle miles of travel. The freeways are I-91, I-84, I-291, Route 2, part of Route 20 (the Bradley connector), and part of Route 15 (from I-84 to the Berlin Turnpike). The freeway improvement program has three major components:

1. incident management,
2. operational improvements, and
3. capacity expansion.

System Management Emphasis

The primary emphasis in the freeway program is on better management of the existing system to improve safety and maintain or improve operational efficiency. Therefore, most of the recommendations focus on items one and two in the list above: incident management and operational improvements.

Incident Management System & ITS

Incident management is the primary tool for reducing highway congestion that occurs when accidents, breakdowns, or other incidents result in a full or partial blockage of the highway. The goals of incident management are to respond sooner to incidents, clear the incidents more quickly, and manage traffic better during the accident.

Previous studies have estimated the potential benefits of a full incident management program for the Capitol Region to be a reduction in delay of about 1.7 million vehicle hours per year and a savings of about 1.0 million gallons of fuel per year.\(^1\)

Recommendations:

1. **Incident Management Team.** Continue the planning and coordination activities of the Incident Management Steering Committee. This includes efforts to update and complete the Region’s incident response program including:
   - Develop traffic diversion plans for every section of freeway
   - Develop an incident command policy to specify responsibilities of each responding agency and lines of authority
   - Implement a quick clearance policy to establish higher priority for removing disabled vehicles
   - Continue emergency service patrols (CHAMPS)
   - Maintain the TIMS communications system and radio frequency for emergency responders

2. **Support State Incident Management Initiatives.** Support the incident management initiatives undertaken through the State Transportation Strategy Board. With the recent establishment of a Statewide Incident Management Task Force, many of the incident management issues identified by

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\(^1\) JHK Associates, "Connecticut Freeway Traffic Mgmt System", 1990
the Capitol Region Incident Management Steering Committee will now be addressed at the State level. Key goals and initiatives of the TSB and the Statewide Task Force include:

- Improve interagency cooperation and incident management procedures. Examples include:
  - Reaffirm the Statewide Incident Management Policy
  - Adopt Unified Command System as the statewide standard for managing incidents
  - Develop other policies that promote coordination among responding agencies
  - Identify incident management needs, estimate costs, find funding, and implement worthwhile projects

- Implement ITS projects to enhance incident management capabilities. Examples include:
  - Support development and implementation of a 511 phone plan for Connecticut
  - Provide live video feed from traffic cameras to appropriate emergency responders
  - Support cellular phone and 911 GPS systems as a way to locate incidents
  - Make improvements to the State Traveler Information website to include real-time traffic conditions, incidents, detours, weather and incident management services
  - Support development and implementation of a 511 phone plan for Connecticut
  - Support interagency interoperability communications plan for incident management

CRCOG should continue to support and participate in the work of the Statewide Incident Management Task Force.

3. Traffic Management System & ITS. Complete implementation of the regional incident detection, verification, and communication systems as specified in “Intelligent Transportation Systems: A Strategic Plan for the Capitol Region.” Construction of the system is complete, with minor system configuration remaining that will be finalized by the spring of 2004. The system monitors traffic conditions on about 60 miles of freeway in the Hartford metro area, and can detect and confirm traffic problems in the monitored area. The system also includes a variety of communications systems so that information collected on general traffic conditions as well as specific problems can be disseminated to the public as well as appropriate emergency response agencies. The entire system is managed by a 24-hour traffic operations center located at DOT headquarters. Key elements include:

- Traffic surveillance cameras - to monitor conditions and confirm location and nature of incidents. Eventually, this video will be fed live to local TV stations as a way of informing the public. Camera snapshots will be made available on the ConnDOT website www.ct.gov/dot.
- Traffic flow monitors - to monitor traffic speed, gauge the level of congestion, and detect problems. Travel volume and speed information will be made available for planning needs such as the Congestion Management System.
- Highway advisory radio - to provide information on traffic problems directly to motorists
- Variable message signs - to provide information on traffic problems directly to motorists
- Direct video connections to State Police - State Police are able to verify and monitor incidents remotely from their barracks to coordinate the response with ConnDOT, and help determine what type of emergency services to dispatch. This greatly reduces response time. Video feeds are also exchanged between ConnDOT headquarters and the City of Hartford for the coordination of incident management and special event management activities.

Freeway Safety & Operational Improvements

Operational problems on a freeway such as sharp curves, narrow shoulders, short ramps, and left-hand entrances can both restrict the capacity of the road and create safety problems. The objective of the proposed operational improvement program is to remove these substandard conditions so that the roadway can operate more efficiently and safely.
RECOMMENDATIONS:

1. **I-84: Hartford to Farmington.** As a result of the Hartford West Major Investment Study, the following highway improvements are recommended:

   - **I-84 at Rt4/Rt6/Rt9.** Reconstruct the interchanges of I-84 at Route 4, Route 6, and Route 9 as described in the MIS report. Key elements include elimination of eastbound bottleneck near Route 9, elimination of left hand ramps, better access to Route 6, direct access from Route 4 to Route 9 southbound.

   - **Operational lanes at South Main.** Construct operational or auxiliary lanes from the South Main Street interchange (West Hartford) to the Ridgewood Road interchange (exits 40–42). The new lanes should be constructed using the median as much as possible and noise barriers should be constructed as appropriate.

   - **Westside Access Improvements.** Subsequent to the Hartford West MIS, the Westside Access Study was conducted to identify ways to reconfigure & improve the interchanges of I-84 at Prospect, Flatbush, Sisson, & Sigourney. The study focused on safety improvements, improving access to key destinations, and reducing the size of interchanges to reduce their impacts on adjoining neighborhoods. The improvements proposed in the study were grouped into two major projects:

     - **Flatbush Ave. Access Improvements** - This proposal improves freeway access in the Prospect St., Flatbush Ave., and Parkville areas. It provides full access to Flatbush Ave, and it connects Flatbush Ave. directly to the Parkville neighborhood via a new road under I-84 that connects to Bartholomew Ave. in Parkville. In addition to improving access to these areas, and improving circulation within the southeast corner of the City, it opens new economic development opportunities. It greatly enhances highway access to the Charter Oak redevelopment area off Flatbush Ave. It opens land along the new connector between Flatbush Ave. and Bartholomew Ave. to development, and it enhances the development potential in Parkville along and near Bartholomew Ave. Estimated cost of the project is $61,000,000.

     - **Sisson Ave. Access Improvements.** This proposal improves access to the Sisson Ave. area and the Sigourney St. area. It replaces the massive high speed ramp system to Sisson Ave. with a more standard ramp and collector road system that improves local circulation and is less intrusive in the neighborhood. It improves the freeway by eliminating some horizontal curvature problems on I-84 and providing standard-width shoulders along both sides of I-84. It also includes reconstruction of the part of the aging I-84 viaduct. The cost of this proposal is $286,000,000.

At the conclusion of the Westside Access Study, it was determined that the proposed improvements were too expensive to pursue in the near future. In response to strong interest by the City, the Connecticut Department of Transportation re-evaluated the Flatbush Avenue proposal to see if could be scaled back to reduce the cost. It was determined that the proposal could be scaled back with and costs reduced from $114,000,000 to $61,000,000. The revised concept provides less direct access to Prospect Ave., but still achieves most of the other objectives of the original concept.

**RECOMMENDATION: Westside Access** Include the scaled back Flatbush Avenue proposal as part of financially constrained 20-year Plan. Remove the Sisson Avenue proposal from the financially constrained 20-year Plan, but continue to recognize this as a regional need by including it on the Unfunded Needs List.

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2 $61,000,000 is based on a scaled back concept developed after the Westside Access Report was published.
2. **Route 2 Study.** Conduct a study of the need for operational improvements. This recommendation is based on the previous decision not to consider Route 2 as a candidate for major widening (due to limited funding for major investments).

3. **Access Improvements.** Study or implement freeway access improvements at identified sites.

   - **I-84 at Rentschler:**
     Improve access to the Rentschler Field redevelopment area in East Hartford. An interchange improvement at I-84 & Silver Lane was recommended in the Rentschler Field Access Study.
     \[RECOMMENDATION\] - The proposed flyover connection should be implemented to help facilitate redevelopment of this regional growth center.

   - **I-84 at Flatbush:**
     Improve access to the Flatbush-Parkville-Elmwood redevelopment area in Hartford & West Hartford. An interchange improvement at I-84 & Flatbush Ave. was recommended in the Westside Access Study.
     \[RECOMMENDATION\] - The proposed interchange improvement should be implemented to help facilitate redevelopment of the Flatbush & Parkville areas in Hartford and the Elmwood area in West Hartford.

   - **I-91 at Day Hill:**
     Improve access to the Day Hill-Griffin development area in Windsor & Bloomfield. Access problems to this regional growth center were identified in the Bradley Area Transportation Study. A subsequent technical study of improvement options is currently underway.
     \[RECOMMENDATION\] - Complete the study & forward the recommendations to the Transportation Committee as soon as they are endorsed by the Windsor Town Council.

4. **Special Problem Locations.** Evaluate operational improvement needs at identified sites. It is recommended that each problem be analyzed in greater detail than is possible in this plan. The locations are:

   - **I-84 at Buckland:**
     It is increasingly apparent that the existing interchanges in the Buckland area will not be able to serve projected development in this regional growth center. South Windsor and Manchester have expressed interest in a comprehensive study to explore options for improving access to the area.

   - **I-91 at I-84**
     - Ramp from I-91 southbound to I-84 westbound (capacity problem)
     - I-84 through lanes (capacity restriction in both directions)

   - **I-91 at Charter Oak Bridge**
     - Ramp from I-91 northbound to Rt 15 eastbound (capacity problem)

**Freeway Capacity Improvements**

Route 6 is the only new freeway or freeway widening proposed as part of this plan. In 1994, ConnDOT released a Draft Environmental Impact Statement for Route 6. Subsequently, CRCOG endorsed alternative #54 or similar highway alignment. The key reason that CRCOG supported alignment #54 was that it kept the freeway north of existing Route 6, north of the Hop River and avoided significant impacts to the more densely settled areas on Route 6 or south of Route 6. CRCOG has continued to support a freeway option as well as a northern alignment.

In January 2001, the Corps of Engineers announced its intention to issue a decision that will permit a new freeway, but a freeway that follows a southern alignment. In December 2003, ConnDOT appealed to the US Secretary of Transportation to use his authority under special environmental streamlining
Transportation 2030

regulations to intervene in the dispute between Connecticut and federal environmental agencies regarding the permits for Route 6. CRCOG will wait for the Secretary’s response before reviewing its position on Route 6.

RECOMMENDATIONS:

1. **Route 6.** Construct a new highway on an alignment north of existing Route 6.

2. **Route 6.** CRCOG will conduct a full reassessment of the Route 6 issue after the US Secretary of Transportation responds to the request for resolution of the environmental permitting dispute.
4. ARTERIAL SYSTEM

The Region recognizes the need to continue to maintain and improve its arterial roadways. Our approach to improving our roadway system is based on a strong planning requirement that includes consideration of community concerns, and an emphasis on better management of our existing roads through signal coordination and improved access management. The key elements of our program are:

1. context sensitive corridor plans to identify road improvements
2. roadway improvements
3. traffic signal improvements
4. access management improvements
5. municipal road policy
6. Rocky Hill – Glastonbury Ferry

System Management Emphasis

The primary emphasis in the arterial program is on better management of the existing system to improve safety and maintain or improve operational efficiency. Therefore, most of the recommendations focus on intersection and other operational improvements, modernization and expansion of computerized traffic signal systems, and access management.

Context Sensitive Corridor Plans

In the 1994 Plan, CRCOG recommended that we conduct comprehensive planning studies on important arterial corridors before initiating any major improvements in those corridors. The recommendation included consideration of land use issues as part of the study. Since 1994, CRCOG has conducted several of these corridor studies and they have evolved to be more than a comprehensive planning review of roadway needs and land use issues. They now include a major effort to fully involve the affected communities in the planning process, and an effort to fully consider community plans and goals when trying to develop solutions to traffic problems. Plans are now developed with a better understanding of the context of the cultural, historic, economic, and environmental context in which the roadway is located. The goal is to develop plans that both improve the traffic conditions and make the community a better place to live.

The corridor study approach to transportation planning is also desirable because it is a comprehensive approach. Many operational improvements are now done as “spot” improvements in response to specific development proposals or traffic problems. When designing spot improvements, there is often little attention given to how the improvement relates to other sections of road, where the next spot improvement might be needed, or what the long-term needs are in the entire travel corridor. Likewise, many communities do not fully recognize how their local zoning can substantially alter traffic on the roadway and therefore the need for roadway improvements. These comprehensive plans will provide an opportunity for transportation and land use planners to reach agreement on the ultimate scale, design features, and general character of the roadway.

Recommendations:

1. **Context Sensitive Corridor Studies.** It is recommended that CRCOG continue to conduct corridor studies on major arterial roadways. To the extent possible, roadway improvement projects should evolve from comprehensive corridor studies of the nature described above.
Roadway Improvement Program

While we promote better system management techniques such as signal coordination and access management to improve the traffic flow and safety on our arterial roadways, we recognize that physical changes to the roadways are still necessary in many cases to correct problems that arise as traffic development occurs and traffic increases. Thus, roadway improvements are still a major part of our arterial improvement program. In a regional plan of this nature, it is not possible to identify every necessary improvement. Although our traffic forecasts have identified where traffic increases might result in the need for improvements, in many locations we have not yet identified the type of improvement that might be needed. For those corridors in which we have completed a corridor plan, we have provided a brief summary of the types of improvements recommended.

Corridor Study Recommendations:

Each corridor study includes detailed recommendations on how to improve the roadway, transit services, and pedestrian facilities in the respective corridor. The corridor summaries provided below are extremely brief and intended to illustrate the general nature of the recommended improvements. Recommendations regarding transit services and pedestrian improvements are presented in even more abbreviated form.

BRADLEY AREA TRANSPORTATION STUDY

The Bradley Area Transportation Study evaluated current and future traffic conditions in the vicinity of Bradley International Airport. Recommendations focused on: (1) improving ground access to the Airport, and (2) correcting other traffic problems in the four towns adjacent to the Airport.

Airport Access (see Airport chapter for details)
- Northside Access Improvements.
- Westside Access Improvements.
- International Drive – Bradley Park Road.
- Route 75 Improvements.

Suffield
- Route 159: various safety & operational improvements between state line & Rt. 190 bridge.
- Suffield center: various streetscape and traffic operational improvements to Rt. 168 & Rt. 75.

Windsor Locks
- Route 75: various safety & operational improvements between Rt. 140 (Elm St.) & Rt. 20.
- Elm St. & North St.: various pedestrian, traffic calming, & access improvements.

East Granby
- Route 20: intersection improvements at International Drive, East St., & School St.
- Town Center: define & enhance town center with streetscaping, pedestrian, & traffic improvements.
- Bike Trail: build bike trail along Rt. 20 from center to Farmington Canal trail.

Windsor
- Route 75: various access & operational improvements between Rainbow Rd. & Rt. 20.
- I-91 signage: better guidance for southbound motorists seeking Kennedy Rd. commercial area.
- I-91 at Day Hill Road: various operational improvements in near-term.
- I-91 at Day Hill Road: implement recommendations of ongoing study of long-term options for improving access to Day Hill development area.
**ROUTE 4: FARMINGTON**

The primary problem on Route 4 in Farmington is congestion in Farmington center and to a lesser degree in Unionville. Safety problems exist in both villages. Final recommendations reflect a balance between the desire to address traffic problems, and a desire to preserve the character of the two villages.

**Farmington Center Improvements**
- Reconstruct Route 4 through Farmington center to a uniform 3-lane cross section (2 eastbound, 1 westbound) to improve traffic flow and safety. This will be achieved with no net increase in road pavement.
- Improvements to Route 4/Route 10 intersection.
- Access management & streetscape improvements.

**Unionville Improvements**
- Route 177/New Britain Ave. improvements.
- Minor improvement at Route 4/Route 167.
- Access management.
- Further study of Route 4/Route 177 intersection, traffic calming, and shopping center circulation.

**Transit & Pedestrian**
- Improvements to Unionville Express, E-Route extension to Tunxis College, bus shelters, complete sidewalk network in villages.

**ROUTE 10: GRANBY TO FARMINGTON**

Route 10 is generally adequate to safely and efficiently serve existing and future traffic demand. Safety and congestion problems are limited to a few key locations such as a few busy intersections where east-west routes cross Route 10.

**Roadway Improvements**
- Retain basic 2-lane configuration of roadway.
- Access management throughout the corridor.
- Improve traffic and safety at critical locations including:
  - Route 10 at Quarry Road in Granby
  - Route 10 at Meadow Brook Road in Granby
  - Route 10/Route 20/Route 189 in Granby
  - Route 10 through Hoskins commercial area in Simsbury
  - Route 10/Route 167 in Simsbury
  - Route 10/Route 185 in Simsbury
  - Nod Road/Route 185 in Simsbury
  - S-curve at Avon-Farmington town line
  - Route 10 at driveway to Post Office Square in Farmington
  - Route 10 at Cooke St in Farmington

**Transit & Pedestrian**
- Improve commuter lot in Weatogue, add commuter lot in Granby, bus shelters for Simsbury Express, sidewalks in villages, complete Farmington Canal Greenway.

**ROUTE 44: HARTFORD TO CANTON**

Route 44 is the primary east-west route linking the Farmington Valley with Hartford and West Hartford. In the commercial areas of Canton and Avon, safety problems related to left turns at driveways are the primary concern. Similar problems exist at Bishops Corner in West Hartford. Safety is a critical problem on Avon Mountain where steep grades, sharp curves, and high speeds result in frequent and severe
accidents. In Hartford problems include a high accident rate, speeding on residential side streets, insufficient parking, and inadequate drainage.

Roadway Improvements

- **Avon Mountain**: Correct safety problems over Avon Mountain by reconstructing roadway to include: 8-foot shoulders; 4-foot painted median (buffer space between opposing lanes of traffic); left-turn lanes at intersections; and reduction of sharp curve near Deercliff Road.

- **Avon-Canton Commercial Area**: Correct left-turn accident problem in commercial area of Avon and eastern part of Canton by reconstructing Route 44 with a median. Median to be sufficiently wide (24 feet) to allow landscaping to create an attractive, “boulevard” type appearance.

- **Bishops Corner, West Hartford**: Correct safety problems by redesigning, relocating, or closing commercial driveways. Install 4-foot wide raised median to reduce left-turn related accidents.

- **Hartford**: Add streetscaping, drainage improvements, and signal timing improvements along Albany Avenue from Homestead Avenue to Main Street. Add traffic calming on residential streets.

Transit & Pedestrian

- New commuter lots near Rt 179 & Rt. 10, sidewalks through commercial areas, streetscaping in Hartford, bus shelters and sidewalks in Bishops Corner, bus stop & shelter improvements in Hartford, wide shoulders over Avon Mt., bike trail west of Rt. 179, and midday bus service in Canton & Avon.

**ROUTE 175: WETHERSFIELD & NEWINGTON**

Congestion is the key problem in the west end of the corridor near Route 9. Speeding and safety are concerns on the remainder of the 4-lane section through Newington. There are major congestion and safety problems where Route 175 crosses under the Berlin Turnpike at the Route 15 interchange. In the largely residential sections through Wethersfield, there are some minor geometric and safety problems.

Newington

- Maintain current 4-lane cross section but provide improvements at key locations such as Rt 175/Maple Hill/Alumni.

- Route 9 Access: Realign southbound on ramp to be directly opposite Manafort Drive.

- Access management & signal coordination.

- Newington Center: No improvements.

- Route 175/Route 15 Interchange: Reconstruct using an urban single-point design to improve traffic flow and safety.

Wethersfield

- Maintain as a two-lane roadway, but provide improvements at key intersections including: Willow Road, Ridge Road, Wolcott Hill Road, and Silas Deane Highway.

Transit & Pedestrian

- Provide good vehicular & pedestrian access to the proposed New Britain Busway station near Rt. 175.

**ROUTE 190: ENFIELD & SOMERS**

Route 190 is the primary east-west roadway in Enfield and Somers. Although traffic is expected to increase about 20 percent in this corridor over the next twenty years, no major widening of the roadway will be required. Instead improvements can be limited to intersections and short sections of road. The following projects will address safety and congestion problems, while preserving or enhancing the character of the four villages in the corridor.

Enfield

- Commercial area: I-91 to Palomba Dr.: Continue access management, minor improvements to Phoenix Ave. intersection, coordinate traffic signals, add or widen sidewalks, construct multi-use trail.
• Transition area: Palomba to Hazardville: Access management, minor widening to allow a 3-lane cross section between Palomba Dr. & Enfield Professional Park, sidewalks and 5-foot shoulders for bicycles.

• Hazardville: Streetscape improvements, and minor improvements to Maple St. intersection.

• Scitico: Streetscape improvements, add left-turn lanes & partially or completely close Scitico Rd. at Scitico Rd./Taylor Rd. intersection, add an eastbound left-turn lane at Broadbrook Rd. intersection, and complete sidewalk network.

Somers

• Somersville: Streetscape improvements, sidewalks; traffic calming on School St.; geometric and other improvements at 4 intersections, traffic signal at School St./Hall Hill Rd. intersection. In the long term, consider adjusting the vertical profile of Rt 190 east of School St.

• Somers center: Streetscape improvements, sidewalks, multi-use trail from the Recreation Complex to Field Road, and realign and add turn lanes to the Rt 190/Rt 83 intersection, relocate the Woodward House within historic district.

**BERLIN TURNPIKE: WETHERSFIELD & NEWINGTON**

The Berlin Turnpike serves a long established, but still growing commercial area. There are major safety and congestion problems at both the Route 175 interchange and the Prospect St. intersection. It is important to address these major problems as well as some minor problems related to commercial driveways, while still maintaining good access to businesses.

Wethersfield

• Access management & minor traffic operational improvements.

• Landscaped median.

Route 175/Route 15 Interchange

• Reconstruct using an urban single-point design to improve traffic flow and safety, while reducing the amount of land occupied by the interchange. Include landscaping to create a “gateway” into the communities of Wethersfield and Newington.

Newington

• Realign the Rt. 15/Prospect/Robbins intersection to eliminate dogleg.

• Close or realign selected median breaks.

• Improve landscaping in the corridor, particularly within the median.

• Promote better access management practices such as inter-parcel connections, shared driveways, and better driveway designs.

Transit & Pedestrian

• Pedestrian safety improvements, relocate bus stops to safe locations.

**RENTSCHLER FIELD ACCESS STUDY: EAST HARTFORD**

The former Rentschler Airport is a 650-acre, prime development site located within two miles of downtown Hartford. It offers an excellent opportunity for in-fill development that supports regional ‘smart growth’ goals. The UConn football stadium recently opened on the site. Plans call for most of the rest of the site to be developed as a research and technology park to stimulate additional growth in the high tech sector of the Region’s economy. To fully realize the economic benefits of the potential development, access to the site needs to be improved from I-84 and from Route 2.

Access from I-84

• Improve access to the Rentschler site from I-84 by grade separating the Silver Lane/Roberts Street intersection. An overpass (bridge or flyover) will be constructed over Silver Lane to connect Roberts Street directly to the site.
Access from Route 2

• Improve access from Route 2 by reconstructing the Route 2/Main Street interchange to allow direct access from Route 2 to the southern end of the site.
• Study also identified potential need to improve Route 2 itself.

Roadway through the Site

• Construct a new town-owned roadway through the site connecting the two new access points described above.

Transit & Pedestrian

• Better transit service to the site and sidewalks through the site.

Computer Controlled Traffic Signal System

The Region's investment in its existing computer controlled traffic signal system has yielded significant benefits through reduced travel times, reduced fuel consumption, reduced vehicle emissions, and improved traffic flow. Given the effectiveness of the existing computer signal system, the Region should continue to invest in them. They are a good complement to other roadway improvements and in some cases can eliminate the need for certain operational improvements.

The primary recommendation is to upgrade the oldest parts of the existing signal system. The oldest of our signals systems rely on an outdated technology referred to as UTCS. These need to be replaced as soon as possible.

The proposed program also includes recommendations to expand the existing system with new systems, as warranted. Signal coordination is also recommended in some of the corridor studies described above.

RECOMMENDATIONS:

It is recommended that we continue to improve and expand the regional network of computer controlled traffic signal systems. This includes:

1. Replace Older UTCS Systems. Replace UTCS signal systems that rely on older communications and computer technology.

2. Install New Signal Systems. Install new signal systems at locations that meet warrants for computer coordinated signal systems.

Access Management Program

Access management is a critical element of the arterial program. Its objective is to preserve the capacity of existing roads so that we minimize the need for widening or operational improvements. It is also critical to maintaining the effectiveness of the coordinated traffic signal system. Both roadway capacity and signal system effectiveness can be reduced by construction of too many driveways, poorly located driveways, and poorly designed driveways. Access management requires active planning by the towns and the State (on State highways, the State has a role to play in approving driveway permits) to help determine how many driveways will be allowed in the future, where they will be allowed, and how they will be designed.

The access management program has two elements. The first is a policy to provide funding for the preparation of access management plans. This includes a review of local planning and zoning regulations as well as preparation of curb cut or driveway plans to guide the location of future driveways and to

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3 For a more complete discussion see "System Management: Making More Effective Use of Existing Roads", a policy paper prepared for this plan in December 1992.
identify problems with existing driveways. The second element includes changes to the roadway planning and design process to assure that access management issues are fully addressed at all stages in the development of widening and operational improvement projects.

**RECOMMENDATIONS**

It is recommended the Region continue to implement access management programs and policies suggested in the policy papers on (a) system management, and (b) land use. Key features are:

1. **Access Management Plans.** Provide funding for the preparation of access management plans. In many cases, it is most appropriate to do this as part of one of the proposed arterial corridor studies.

2. **Consider in Design Phase.** Require access management issues to be addressed as part of the design phase of any roadway improvement project.

### Municipal Road Policy

The Regional Transportation Plan is a systems level plan that addresses problems on the major transportation systems: the regional transit system, the freeway system, and the arterial system. The focus on the higher level systems is necessary but it means that problems on lower level systems, such as collector roads, have not been identified as part of this plan. While the Region has not identified specific problems on collector roads, we recognize that problems do exist and that municipalities sometimes need financial assistance to correct the more serious problems.

Most of the roads in the collector system are the responsibility of municipalities. They are maintained and improved through local operating budgets and capital improvement budgets. In some cases, the cost of major reconstruction, or of correcting serious geometric and safety problems, can exceed a town's capacity to finance the improvement. In the past, the Region has recognized these problems and allowed towns to use federal funds to correct serious problems on town-owned collector roads. This policy of allotting small amounts of federal funds to solve selected problems on town-owned collector (or arterial) roads will continue within the limits of available funding and the competing need to address problems on higher level systems.

**RECOMMENDATIONS:**

1. **Funding for Town Roads.** Continue a policy of allowing the use of federal funds to address serious problems on town-owned roads classified as collector or higher. Funding decisions will consider the limits of available federal funds and the competing need to address problems on higher level systems.

### Rocky Hill - Glastonbury Ferry

The Rocky Hill - Glastonbury Ferry is a unique element in the Region's transportation system. It is the oldest continuously operating ferry in the United States, and it is the only ferry in service within the

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4 The Region has made significant progress on access management since these recommendations were first adopted in 1994. Access management is now addressed in all corridor studies, and DOT now considers access management in the design phase of most road improvement projects. Many towns also give serious consideration to access management during the review of development proposals.

5 The problems on the collector and local roads systems are typically structural, geometric, or safety related. Because these roads carry less traffic, congestion is not usually a problem.

6 Geometric problems are those related to poor design features such as bad curves, steep grades, poor sight lines, and narrow lanes.

7 These roads must be classified as "collectors" or higher.
Region. The ferry serves cars, motorcycles, cyclists, and pedestrians who want to cross the Connecticut River between Glastonbury and Rocky Hill. Functionally, the ferry is part of State Route 160, and it is owned and operated by the State of Connecticut.

The ferry, like the seven bridges across the Connecticut River, plays an important role in linking the towns east of the river to the towns west of the river. The Connecticut River is the most prominent natural feature in the Region, and the one that has the greatest impact on travel patterns within the Region. The river forms a nearly 28-mile long barrier through the middle of Region. In that 28-mile barrier, there are only eight opportunities for motorists to cross the river. Due to the difficulty and cost of providing crossings over the Connecticut River, each crossing acquires a special significance. The significance of the ferry crossing has less to due with the volume of traffic it carries than with the nature of the traffic it carries, and the ferry’s historic significance.

The ferry plays a special role in serving local vehicular traffic between Rocky Hill and Glastonbury, and it plays an important role for bicyclists. Motorists traveling between parts of southern Glastonbury and Rocky Hill can cut nearly 8 miles (one-way) off their trip if they use the ferry. For cyclists, the ferry is even more important since bicycle access to the Putnam Bridge (Route 2) between Wethersfield and northern Glastonbury is not allowed. The ferry is the only crossing for cyclists between Hartford and Middletown. Without the ferry, cyclists face a barrier of over 13 miles with no way to get across.

The ferry's greatest value might derive from its role as a tourist attraction, and its historic significance. The ferry is promoted as a tourist attraction for visitors to the area, and for residents who are looking for a special way to view the river, or a unique mode of travel. As the oldest continually operating ferry in the United States, the ferry also has special importance as a historic resource. As one of the very first river crossings in the Region, it serves to remind both residents and tourists alike that we have very old and strong ties to the Connecticut River.

The Council of Governments supports the continued operation of the Rocky Hill – Glastonbury Ferry for the benefits it provides local motorists, cyclists, and tourists; and for its value as a historic resource.

**RECOMMENDATIONS:**

1. **Continue Operation of Historic Ferry.** Continue the operation of this historic ferry with adequate hours of operation and a reasonable fare structure.
5. BIKES & PEDESTRIANS

In April 2000, the Council of Governments adopted the Capitol Region Bicycle Plan that defined a strategy for making the Region a bike friendly environment that supports bicycling as a viable form of travel. In June of 2001, a Policy for Integrating Bicycling and Walking into the Transportation Infrastructure was adopted; in 2003, a series of Walkability Workshops were held throughout the Region; and in 2004, a Capitol Region Pedestrian Plan will be adopted. Each of these items is intended to help the Region realize its goal as defined in the following vision statement.

‘That by the Year 2010, residents and visitors of the Region will be able to safely and conveniently walk, bicycle, or take another type of non-motorized vehicle via roads and multi-use trails, to employment centers, shopping areas, bus and train centers, recreation and cultural attractions, and schools. Residential and commercial land use planning and development will incorporate walking and bicycling as legitimate transportation modes, providing people of all ages with efficient and enjoyable transportation options within development clusters and to nearby destinations. It is our intent that such steps will promote a sense of community and friendliness in our communities, while enhancing our appreciation of the natural environment.’

The strategy for achieving this goal is based on five elements:

- **Facilities** - Provide proper facilities for cyclists and pedestrians.
- **Education & Enforcement** - Educate the public about cyclists’ rights to use the road and do more to enforce those rights. Educate the public about the rights of pedestrians, particularly at crosswalks, and provide an enforcement campaign to clarify the rights and duties of pedestrians and motorists.
- **Culture Supportive of Cycling & Walking** - Do more to promote a regional culture supportive of cycling and walking.
- **Planning & Administrative Support** - Ensure that CRCOG continues to support bike and pedestrian planning activities.
- **Funding** - Secure funding to implement the recommendations.

**Facilities for Cyclists & Pedestrians**

Encouraging more people to cycle and walk is dependent to a large extent on the availability of safe convenient facilities. For cyclists, these include making existing roadways safe for cyclists, providing off-road facilities such as paved bikeways or multi-use trails, and making it possible for cyclists to use the regional bus system as part of a combined bike-bus trip. It also includes making sure there are appropriate facilities available at important destinations for cyclists to store and secure their bikes. For pedestrians, safe and convenient facilities include well maintained sidewalks of adequate width, conveniently located crosswalks, traffic signal systems which are safe and convenient for pedestrians, and multi use trails. In addition, for pedestrians, land use factors play a large role in determining if a location is comfortable for walking. Sprawling development, characterized by large lots, and with commercial destinations located behind a sea of parking, is particularly unattractive to pedestrians. Compact development, with a mix of uses, with parking located behind structures, encourages individuals to walk.

**Recommendations:**

1. **Integrate Biking & Walking into Transportation Infrastructure** - In June 2001, CRCOG adopted a policy on ‘Integrating Bicycling and Walking into Transportation Infrastructure.’ The intent of the policy is to encourage roadway designers to develop designs that are more accommodating of pedestrians and cyclists. The policy recognizes that the public right-of-way must serve all users - not just motorists; and that if we truly want to achieve more ‘livable communities,’ roadway designs must
accommodate the needs of the community – especially those of pedestrians and cyclists. If these needs are considered early in the design phase of roadway projects, they can be addressed more easily and at a lower cost. While not all conflicts can be resolved in all roadway designs, by making the effort to address pedestrian and cyclists needs, we will succeed in the majority of cases and help create a much more bike and pedestrian friendly environment throughout the Region. The policy closely resembles a national policy adopted by the US Department of Transportation.

Key Elements of the CRCOG Policy on Integrating Biking & Walking into Transportation Infrastructure

1. Bike and pedestrian needs shall be accommodated in new construction and reconstruction projects in all urbanized areas whenever possible and not cost prohibitive. Engineers and planners are encouraged to consider a full range of treatments to achieve the performance goal of providing safe, convenient, and comfortable travel for bicyclists and pedestrians.

2. In rural areas, paved shoulders should be included in all new construction or reconstruction on roadways used by greater than 1000 vehicles per day.

3. Sidewalks, shared use paths, street crossings, pedestrian signals, signs, street furniture, transit stops and facilities and connecting pathways shall be designed, constructed, operated and maintained so that all pedestrians (including those with disabilities) can travel safely and independently.

2. Regional Greenway System The bike plan calls for construction of a regional greenway or multi-use trail system. The primary parts of the regional system include:

Charter Oak Greenway - The Charter Oak Coast Greenway is a proposed trail that will stretch from Hartford to Providence, Rhode Island. In our region it runs east-west through East Hartford, Manchester, Bolton, and Andover. Segments in Manchester, Bolton, and Andover are already in use. Critical gaps remain in East Hartford, Manchester, and through Bolton Notch. This trail remains a regional priority.

Farmington Canal Trail - The Farmington Canal Trail is a proposed multi-use trail from New Haven, CT to Northampton, MA. In our region it runs directly north through the Farmington valley through the towns of Farmington, Avon, Simsbury, East Granby, and Suffield. This trail remains a high priority and is expected to be completed by 2006.

Linking the Two Interregional Greenways A goal of the Regional Bike Plan is to link the Charter Oak Greenway to the Farmington Canal Trail. Currently there is no defined route between Hartford and the Farmington Valley. As shown in the greenway map below, there are at least two potential general alignments that need to be studied. Once linked, the two greenways will become part of the even larger network of trails that is known as the East Coast Greenway that will eventually stretch from Maine to Florida. Planning for this connection must be a priority over the next three years.

Other Greenways The bike plan also supports construction of other trails that either link to the two primary trails or serve significant sub-areas of the Region.

3. Bike Friendly Roadways A majority of cycling in the region will continue to take place on the Region’s roads and therefore it is very important to work to improve our roadway systems’ accommodation of cyclists. Our research has found that the two strategies that have the greatest impact in improving actual bicycle safety and cyclists perception of safety are wide curb lanes and wide shoulders (4 feet or more). This plan has not identified specific strategies for roadway improvements but sets as a priority the identification and improvement of good radial routes for

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8 Bolton Notch is critical because bicycle passage through the Notch is currently prohibited. The only road through the Notch (Route 6) is an expressway and bikes are not allowed.
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commuter cyclists into and out of Hartford. Particular attention will be focused on the elimination of obstacles identified by cyclists.

4. **Bike and Pedestrian Friendly Land Use.** The main areas of concern with regard to bike friendliness of land use are: can a cyclist access a development by bike, and once at a development, is there a place to securely park a bike? The bike plan recommends a number of actions to encourage developers, towns, and the state to provide more bike racks and other amenities to support bike use. For pedestrians, land use plays a key role in determining if a pedestrian feels comfortable walking. More compact development, a mix of uses, and careful attention to pedestrian needs in land development will play a large role in encouraging more individuals to walk.

5. **Bike Friendly Transit.** Cycling can be feasible for a greater number of individuals if a cycling trip can be combined with a transit trip. To encourage this, the bike plan recommends secure storage for bicycles at transit stops, and special racks on the exterior of buses so cyclists can take their bike with them while they ride the bus.

![Diagram of Major Interregional Greenways](image)
Safety Education & Enforcement Programs

Both cyclists and pedestrians experience difficulties due to motorist behavior. There is a general lack of knowledge on the part of the average motorist relative to the bicyclist's right to be on the roadway. In addition to lack of knowledge on the part of motorists, many cyclists are unaware of their rights and responsibilities on the road and some law enforcement officials are unsure of what they should expect of cyclists. For pedestrians, the most glaring problem is the failure of motorists to uniformly recognize the need to yield to pedestrians in crosswalks that are not signalized. The proper behavior is generally only seen at crosswalks marked with a sign noting that motorists should yield to pedestrians. In fact, Connecticut State Law requires that motorists yield to pedestrians in marked and unmarked crosswalks, unless traffic control is present. A motorist is to yield when a pedestrian has stepped to the curb of a crosswalk. Overall, bicyclists and pedestrians are frequently not expected, or noticed by motorists.

Enforcement of the rules of the road as they apply to cyclists and pedestrians can have the effect of reinforcing proper behavior. If neither cyclists nor motorists are cited for infractions of these rules, many people remain unaware of when they have operated their bicycle or motor vehicle illegally. Regular enforcement reinforces the rules for the uninformed.

Recommendations:

1. **Education Programs.** Education programs for both cyclists and motorists are needed. These include school programs for young cyclists, efforts to reach and inform adult cyclists, and efforts to reach and inform automobile drivers.

2. **Enforcement Programs.** There are a variety of actions that will result in more effective enforcement of motor vehicle laws that affect bicycle and pedestrian safety. These include training for police, and encouragement of police to enforce the laws.

3. **Pedestrian Safety.** A pedestrian safety study currently being conducted by CRCOG has revealed a high incidence of pedestrian accidents in urban areas, and especially in Hartford. CRCOG is committed to addressing the problem of pedestrian and cyclist safety in urban areas, and will develop more specific recommendations as part of the pedestrian safety study.

Promote a Pro-Cycling & Pro-Walking Culture

A critical part of our strategy to increase the use of bicycles and walking for transportation is to promote a culture that will encourage more people to bicycle and to walk. The goal is to build upon the base of current cyclists and walkers, expand the visibility of cycling and walking, and engage new partners (particularly, the business community) to help promote cycling and walking.

Recommendations:

1. **Promotional Activities.** In cooperation with towns and the CT Bike Coalition, help plan and sponsor a variety of promotional activities that raise the profile of cycling.

2. **Private Sector.** The bike plan identifies a number of activities to involve the private sector in promoting cycling (example – encouraging employees to bike to work) and in developing bike-related tourist opportunities.

3. **Regional Cycling Map.** Produce a regional cycling map.

Planning & Administrative Support

CRCOG needs to continue to provide planning and administrative support to the regional bike and pedestrian program.
RECOMMENDATIONS:

1. **Staff Support.** CRCOG should continue to provide one staff person on at least a half-time basis to support the bike and pedestrian program.

2. **Bicycle & Pedestrian Committee.** CRCOG should continue to support a standing committee to provide a regional forum to discuss bike issues and to help guide CRCOG’s bike and pedestrian planning efforts. Membership has been expanded to assure representation of a broader range of members of the cycling community and those interested in issues of pedestrian safety and access.

**Funding**

In order for this Bicycle Plan to be accomplished, funding needs to be secured for continued planning and implementation.

RECOMMENDATIONS:

1. **Funding for Staff Support.** CRCOG needs to continue to devote a portion of its budget to support a staff person to work on bike and pedestrian planning activities.

2. **Funding for Improvement Programs.** CRCOG needs to work with the Bike and Pedestrian Committee and other agencies to seek and secure funding to implement the bike and pedestrian recommendations.
6. Bradley Airport

Previous editions of this Transportation Plan recognized the importance of Bradley International Airport as both a transportation facility and as an engine of economic growth. But the prior plans did not include a detailed policy supportive of improving the airport, improving access to the airport, or supporting other actions needed to fully realize the economic growth benefits that the Airport can generate. This Plan strongly supports these goals and includes specific recommendations on how some of these can be achieved. While the policies proposed below are still general in nature, they are supportive of further development of the Airport and they are based on work done for the Bradley Area Transportation Study, the Gallis Report, the Transportation Strategy Board, and the ongoing Airport Master Plan and Airport noise study.

Bradley International Airport is both a major transportation facility and an economic resource for the Capitol Region and the State of Connecticut. The Airport is served by nine major and five regional carriers operating 230 flights (in and out) a day, which carry over 3,262,000 passengers (boardings) and 143,000 tons of cargo per year. Compared to other airports nationwide, Bradley ranks 48th in volume of passengers served and 37th in volume of air cargo handled. The Airport is a major engine of economic growth that generates an estimated $2.5 billion in economic activity each year and affects as many as 26,000 jobs.

From a regional perspective, the Airport provides a critical link to the nation’s air transport system and the nation’s economy. The Airport’s importance as a potential engine of economic development was previously noted in the Gallis Report where its role was defined as providing fast and convenient access to the national and international transportation systems. The presence of good quality air service within the Region that is so easily accessible gives the Region a competitive advantage in those economic sectors and industries that rely on fast and convenient delivery of people and goods. These advantages can help stimulate a substantial amount of economic growth.

If we are to achieve the full benefit that the Airport can offer, we must plan properly -- appropriate land use regulations, good road systems, adequate infrastructure, and full consideration of the potential impacts on adjacent communities. Proper planning is necessary to assure: (1) that we realize the maximum growth potential from the Airport, and (2) that the growth occurs in a manner that provides maximum benefit with minimum disruption to the environment, neighborhoods, towns, and the Region.

The recommended improvements include:

- Better ground access – roadway & transit

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Better Ground Access

The Airport currently enjoys good roadway access, but has limited transit access. Route 20 and I-91 offer good access to most parts of the Airport for most users. However, to support anticipated development on and near the Airport, it will be necessary to improve roadway access and develop better transit access to the Airport.

**ROADWAY ACCESS.**

To maintain good road access to the Airport and to help facilitate economic development in the area in and around the Airport, which is designated as a ‘regional growth center’, four roadway improvements are recommended. They were all proposed in the Bradley Area Transportation Study and are described below.

**Westside Access Improvement.** The west side of the Airport houses numerous cargo facilities that must be served by truck. Access to these areas are either via East Street and Russell Road, or via Bradley Park Road and the Airport Perimeter Road. The Bradley Park - Perimeter Road route is the shortest route for trucks coming from I-91. However, there are two problems with this route: (1) it requires some awkward turning maneuvers at the entrance to Perimeter Road, and (2) it abuts the Air National Guard base and poses a security problem. For several months after the 9/11 tragedy, this section of Perimeter Road was closed due to security concerns.

**RECOMMENDATION.** To address these problems, it is recommended that a new section of roadway be built as proposed in the BATS report. Essentially, it requires about a 2200-foot extension of Bradley Park Road north to Russell Road.

**International Drive – Bradley Park Road.** The areas immediately west and southwest of the Airport are commercial-industrial areas, and both Windsor and East Granby are planning for additional development in these areas. Access to these areas is primarily from Route 20 through the intersection of Bradley Park Road, International Drive, and Route 20. Minor improvements are needed to the intersection and to the two roadways. Improvements are needed to address operational problems and to make the roads more attractive gateways to important airport-related development areas. Streetscaping improvements are proposed for Bradley Park Road to complement the street layout and streetscaping already existing on International Drive.

**RECOMMENDATION.** To address these issues it is recommended that Bradley Park Road and International Drive be improved as proposed in the BATS report.

**Northside Access Improvement.** Due to planned development at the north end of the Airport, there is a need to consider better connections to I-91 from the north side. Airport officials working on a new Airport Master Plan are anticipating that much of the future development at the Airport will occur at the north end of the Airport, and much of this development will be related to air cargo service. The Town of Suffield is also planning for commercial-industrial development in the area immediately north of the Airport. Much of the future traffic from these developing areas will likely seek access to the Interstate system by traveling north through Suffield center to access I-91 via the Route 190 bridge over the Connecticut River. To avoid additional traffic impacts on the historic center of Suffield, the BATS report proposed the construction of a new 2-lane (1 lane in each direction) roadway from Route 75 to the Route 190 bridge. This 4.3 mile road provides a more direct route from the north end of the Airport and it will
divert about 3000 - 4000 vehicles a day from Suffield center. To minimize environmental and community impacts, this road would be designed as a 2-lane, at grade roadway with a moderate design speed of 35 mph.

**Recommendation.** To accommodate future development on the north end of the Airport, it is recommended that a new 2-lane connector road be built as proposed in the BATS report. Before a final commitment is made to this project, an environmental review must be completed.

**Route 75 Improvements.** There are existing operational and safety problems on Route 75 from just south of Route 20 to Route 140. This busy commercial area with hotels, valet parking, and fast food services is in need of access management improvements to reduce the number of driveway-related accidents. It also needs pedestrian improvements to serve employees of Route 75 businesses and airport travelers staying in Route 75 hotels. Additionally, the BATS report proposed streetscape improvements to provide a more pleasing entrance to our Region’s primary airport.

**Recommendation.** To address these problems, it is recommended that Route 75 be improved as proposed in the BATS report. Key elements include a new service road for businesses, a center turn lane for left-turning vehicles, driveway modifications, streetscaping, and sidewalks.

**Transit Access: Link to New Haven-Springfield Rail**

The BATS report and the Regional Transit Strategy both called for better transit access to the Airport. Current transit access is limited to taxis and the Bradley Flyer bus route. While improved bus service is needed (see below), the two studies mentioned above also proposed providing a transit connection between the Airport and the proposed New Haven-Hartford-Springfield (NHHS) commuter rail service. A passenger rail connection of this sort would provide a good reliable link to the Airport from the three major cities in the Knowledge Corridor, and it would provide a link to the New Haven Line rail service.

The form, or mode, of this connection is yet to be determined. A direct rail connection is possible since a rail spur from the Amtrak line to the Airport does exist. However, the rail option poses several problems including disruption to through-service schedules from Springfield to New Haven, and the difficulty of extending the rail track direct to the terminal. An option that would be less costly to implement and allow a faster and more direct connection to the terminal is to provide a shuttle service from the Windsor Locks Amtrak station direct to the terminals via Route 20. Both options are being studied as part of the ongoing NHHS study, which is scheduled to be completed in early summer 2004.

**Recommendation.** To assure the Airport has a good transit connection to the three major cities in the Knowledge Corridor and to the New Haven Line rail service, a connection to the proposed NHHS commuter rail service should be included as part of any service plan.

**Transit Access: Bus Service**

Given the very limited transit service to the Airport today, some bus service improvements are needed. The Bradley Flyer is the only regular bus service between the Airport and downtown Hartford. It is a semi-express service via the I-91 HOV lane that operates hourly from 6:00 am to 11:00 pm Monday through Friday. Service is less frequent on weekends, but is available for most of the day. It was designed to serve employees at the Airport and was not designed to serve air travelers. Several different Airport bus service needs have been identified in various studies conducted recently. These include:

- **Service to Hartford for air travelers.**
- **Service via Blue Hills corridor.**
- **Service to New Haven for air travelers.**
- **Service to Springfield for air travelers.**

**Service to Hartford for Air Travelers.** The Bradley Flyer is the only regular bus service between the Airport and downtown Hartford. Since it was designed to serve employees at the Airport, it is not
marketed to air travelers and does not serve Hartford destinations that might be of interest to air travelers. To be more effective in serving the air traveler market, service should be adjusted as follows.

- **More Destinations.** Serve more destinations downtown such as hotels, major employers, and the new convention center when it is built.
- **More Frequent Service.** Provide more frequent service.
- **Better Equipped Buses.** Provide buses better suited to serve air travelers. Existing buses do not have luggage racks to accommodate bags and suitcases that most travelers carry.
- **More Marketing.** Market bus service directly to air travelers with better signs in the terminal, better information on Airport kiosks and websites, through major downtown employers, and through the Visitors and Convention Bureau.

It is uncertain if the existing Bradley Flyer can adequately serve this market even if modified. Service frequency could be increased and racks could be added, but there might still be conflicts between the destinations that need to be served. The current Flyer serves some employment sites on Route 75 and on Kennedy Road in Windsor, and it serves the Old Statehouse downtown. Air travelers need to reach hotels in downtown; they do not need the stops at employment sites on Route 75 and Kennedy Road. The extra travel time required to serve these stops might discourage travelers from using the bus service.

**RECOMMENDATION.** Provide better bus service from the Airport to downtown Hartford for air travelers. As an interim step, the existing Bradley Flyer service can be better marketed, but service improvements or new service is needed to meet the needs of the new convention center when it opens.

**Service via Blue Hills Corridor.** The Bradley Flyer route serves downtown Hartford well because the I-91 HOV lanes provide fast reliable service to the Airport. However, the feasibility study for the Griffin Busway showed potential for supplemental service to the Airport via the Griffin Busway and/or Blue Hills Avenue (Route 187). This route has somewhat longer travel times, but it provides better service to residents in the northwest area of Hartford and Bloomfield. It also serves two large employment centers: the Griffin – Day Hill office/industrial area, and the International Drive industrial area.

**RECOMMENDATION.** For the short term, develop supplemental bus service to the Airport that builds on the recommendations from the Griffin Busway study to enhance service within the Blue Hills corridor. In the long term, develop full service to the Airport via the Griffin Busway.

**Service to Springfield other Cities within Bradley's Market area.** It is also desirable to establish good transit connections from Bradley to other key cities within the Airport’s market area. For example, Springfield is nearly the same distance from Bradley as Hartford, yet there is no regularly scheduled bus service between Springfield and the Airport. Efforts should be made to establish transit service to Springfield and other key cities such as New Haven.

**RECOMMENDATION.** Support the efforts to develop bus service between the Airport and other key cities such as Springfield and New Haven.

**Better Opportunities for Appropriate Economic Development**

Bradley International Airport presents a tremendous opportunity for economic growth for the Region as a whole, and for airport related development within the immediate vicinity of the Airport itself. This fact was recognized in the Gallis Report, the DECD land use study, the Airport Economic Impact Study, and the Bradley Area Transportation Study. However, in order to realize the Airport’s full economic potential, sufficient and appropriate planning must be done, and supportive programs must be put in place. The Council of Governments supports planning (state,
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Regional, and local) that helps achieve the Airport’s economic development potential in a manner that has minimum impact on the environment and on neighborhoods in the general vicinity of the Airport.

Regional Growth Center. With the adoption of the Regional Plan of Conservation and Development in 2003, the Region designated the Airport area as one of six ‘regional growth centers’ in the Capitol Region. This designation is intended to encourage economic development within areas that have both the potential for a lot of economic growth and adequate infrastructure to support such growth.

RECOMMENDATION. The Council should continue its designation of the Airport area as a Regional Growth Center, and continue to develop policies that support economic growth in these areas.

Roadway Improvements. The roadway improvements recommended under Better Ground Access will help facilitate economic development on and around the Airport.

RECOMMENDATION. Implement the roadway improvements recommended above.

Pre-Approved Sites. The lack of pre-approved or ‘shovel ready’ construction sites at the Airport has hindered efforts to promote development at the Airport. Some prospective businesses chose not to locate at Bradley when confronted with timeframes of 6 - 18 months to get necessary state and federal environmental permits. The Transportation Strategy Board and others have suggested that State officials ‘pre-approve’ selected development areas for construction. The appropriate planning and analysis needs to be done in advance of specific development proposals to make the sites ‘shovel ready’ when developers express interest in the sites.

RECOMMENDATION. Support proposals by the Transportation Strategy Board and others to establish pre-approved development sites at the Airport.

Noise-Tolerant Land Uses. The State, Region, and towns should encourage only noise-tolerant land uses near the Airport. Noise levels under airport flight paths can be very high and can interfere with residential and many commercial activities. While buildings can be sound insulated to reduce noise levels, certain land uses such as residences, schools, and nursing homes are still inappropriate near flight paths. Town development regulations need to both restrict the types of uses allowed in areas affected by Airport noise, and require the appropriate level of noise insulation for buildings within these areas. Town plans and development regulations should be consistent with the Airport Master Plan, and with recommendations in the Part 150 Noise Exposure and Compatible Land Use Study. Both reports are currently being developed by Airport officials.

RECOMMENDATION. Support policies that discourage noise-sensitive land uses near flight paths, and that encourage construction techniques with adequate noise insulation.

Better Air Passenger Service

The Region’s residents and businesses are fortunate to have an easily accessible airport that offers good connections to the national air transportation system. However, the air travel market is volatile and competitive. Bradley’s market area is constantly in flux as competing airports in Providence, RI; Worcester, MA; and Manchester, NH seek to increase their market areas. It is important that Bradley maintain the quantity and quality of service it currently has, and that efforts be undertaken to improve service as well. To that end the Council of Governments supports efforts to improve existing service and expand service into new markets.
**Promote & Improve Domestic Service.** We need to do more to improve and expand domestic service from Bradley. In the face of competition from other regional airports, Bradley needs to do more marketing to promote existing services and attract more passengers and airlines.

**RECOMMENDATION.** Support efforts to improve and promote domestic passenger service.

**Develop International Service.** While Bradley has facilities to process international travelers, it currently has no regularly scheduled international air service. Direct connections from Bradley Airport to international destinations would offer a tremendous advantage to regional businesses that compete in international markets. Developing scheduled international service should be a high priority for Bradley.

**RECOMMENDATION.** Support efforts to develop scheduled international service at Bradley.

**Better Air Cargo Service**

Bradley has great potential as an air cargo facility because of its easy ground access, uncongested airport facilities, and proximity to New York and Boston. The ease of getting in and out of Bradley, combined with the good regional highway system make it attractive to air cargo handlers seeking to serve not only the Hartford-Springfield area, but other parts of New England as well. While Bradley's air cargo services cannot compete with New York and Boston on price, they can offer faster delivery times in most parts of New England, and often can offer faster delivery times into New York City and Boston as well. The following two recommendations reflect the Council's support for continued improvement of air cargo capabilities at the Airport.

**Capitalize on Air Cargo Potential.** Bradley has great potential as an air cargo facility because of its easy ground access, and uncongested airport facilities, and proximity to New York and Boston. We should continue to improve Bradley's air cargo capabilities and services, and capitalize on problems that New York and Boston airports are experiencing due to increasing ground and air congestion.

**RECOMMENDATION.** Support efforts to improve Bradley's air cargo capabilities and services.

**Multimodal Cargo Center.** Evaluate making Bradley a true multi-modal freight facility by improving rail freight access to the Airport, and developing support facilities for trucking. The multimodal cargo center at the airport in Charlotte, North Carolina should be evaluated as a possible model for Bradley.

**RECOMMENDATION.** Support efforts to make Bradley a true multi-modal freight facility.

**Community Sensitive Planning**

The continued development of Bradley International Airport can offer tremendous transportation and economic development benefits to the Region and the State. Development must, however, be done in a manner that is sensitive to the concerns of adjacent communities. Noise and traffic issues need to be addressed, and plans need to be prepared through a cooperative approach with the affected municipalities. The Council of Governments fully supports the development of Bradley International Airport while recognizing that Airport planning must be done in a manner that gives full consideration to the potential impacts the Airport can have on neighboring communities. Airport planners need to work with local officials and residents to minimize impacts, including noise and traffic, from Airport activities.

**RECOMMENDATION.** Planning for Airport improvements must be done in a manner that is sensitive to community concerns, and must involve local officials in the planning process.
7. FREIGHT TRANSPORT SYSTEM

The movement of goods plays an important role in economic growth that is often not fully appreciated. This lack of understanding is especially true in Connecticut where primary industries such as agriculture and mining play a small role, and secondary economic activities such as manufacturing play a decreasing role. The importance of freight transport is more obvious in economies dominated by primary and secondary industries that ship massive quantities of heavy and/or bulky materials. But even in economies dominated by the financial, insurance, and service industries, efficient movement of goods is still important. Freight transport is required for the import of the finished products and basic commodities used by both businesses and consumers, and for the export of some of the specialized products produced within the region. The mode of transport might be different to suit the higher value - lower bulk goods being shipped, but the need to move these goods in and out of the Region still exists.

Most of the Region's freight is delivered by truck. Some bulky items such as lumber, paper, and fuel oil, however, are often shipped via train, barge, or even pipeline. High value goods, or items needed on short notice, are often shipped via air. Both truck and air delivery is becoming increasingly important as many businesses now keep inventories low to reduce cost and depend on 'just in time' delivery. For the trucking industry, congestion can pose a problem for satisfying the 'just in time' delivery demands of their shippers and receivers.

CRCOG's Role in Freight Transport Planning

This chapter on freight transport is the first such chapter in a Capitol Region Transportation Plan. In the last 50 years, the public sector, and metropolitan planning organizations in particular, have had little direct role in the development or operation of freight transportation systems. It has been left largely to the private sector to maintain freight railroads, operate truck terminals, develop overnight package delivery systems, build pipelines, and develop the truck fleets and supporting business and logistics systems to manage the complex truck delivery systems that account for most of the goods movement in the nation. However, within the past decade there has been an increasing awareness that the public sector needs to play some role in helping develop more efficient delivery systems if the United States is to stay economically strong in the face of an increasingly competitive world economy. To this end, the US DOT, which funds the transportation planning function at metropolitan planning organizations like CRCOG, has asked MPOs to begin addressing goods movement issues in their regions. Therefore, CRCOG is beginning its effort to develop a goods movement planning program.

This chapter constitutes the formal start of CRCOG's goods movement planning program. The policies presented below are general in nature. They tend to identify issues we intend to pursue, rather than specific projects to address deficiencies. At this time, we do not know, or understand, all the deficiencies in our freight transport system. However, more detailed recommendations will be developed over time as our efforts at goods movement planning progress.

It should also be understood that CRCOG's ability to directly influence freight transport systems is much more limited than our ability to shape traditional highway and transit systems. We have no direct authority (regulatory or financial) over most elements of the freight transport system. Rail and air transport systems are regulated by federal agencies (Federal Rail Administration and Federal Aviation Administration) that have no formal or official relationships with MPOs like CRCOG. Therefore, the plans and policies that we develop in this program are likely to be purely advisory in nature. The exception will be in those areas where freight planning and traditional highway and transit planning overlap. Examples include the planning for improved ground access to cargo facilities at Bradley Airport, and use of ITS (Intelligent Transportation Systems) to improve monitoring of truck safety on highways.

The rest of this chapter is divided into four sections: Truck Transport, Rail Freight, Air Cargo and Water Transport.
Truck Transport

Trucks are the primary delivery mode for freight. In Connecticut, trucks deliver more than 80 percent of all goods shipped. As a mode, trucking offers flexibility and an ability to serve many different origins and destinations. It is well suited to serving the ‘just in time’ delivery requirements of modern industries since shipments can be arranged on short notice and delivery times are relatively short. Trucking tends to be fairly cost effective over short to moderate distances.

Trucking is not well suited to the delivery of bulky goods, or for delivery over very long distances. Other modes such as rail and barge have a competitive advantage for these conditions. But trucking can complement these modes by completing the delivery to receivers located short to moderate distances away from ports or rail sidings. The water and rail transport industries both have special container shipping systems that are designed to facilitate transfers to trucks for the final leg of the trip. The containers are designed to be easily loaded onto tractor trailers and trucked to final destinations. However, this does require that the appropriate intermodal transfer facilities be available in order to accomplish this rail-to-truck or ship-to-truck transfer.

The speed, reliability, and cost of trucking are all adversely affected by congestion. As highway congestion increases, truck delivery times increase, and it becomes more difficult to meet delivery schedule deadlines. Congestion also drives up the cost of trucking. For regional economies highly dependent on trucking, high levels of congestion can increase the cost of doing business as well as the cost of living. The price of both consumer goods and business products are affected by trucking costs.

A preliminary list of trucking issues affecting the Capitol Region was developed during the update of this Plan. The issues are explained below, but no recommendations are provided other than that the issues need to be studied in greater detail.

- **Congestion.** Highway congestion in Connecticut and the Hartford area reduces delivery reliability and increases the cost of trucking. As the Region examines ways to address congestion, the needs of trucking should be considered.

- **Intermodal Facilities.** The easy transfer of freight between various modes of transport is essential to allow businesses the opportunity to choose the most cost effective method for shipping or receiving their goods. Intermodal freight facilities can serve rail-truck, ship-truck, and plane-truck transfers of freight. Existing or potential intermodal sites that can help freight movement to the Hartford area include: the Hartford rail yard north of downtown Hartford, Bradley International Airport, feeder barge facilities in New Haven and Bridgeport, and the West Springfield rail yard. See the Rail, Air, and Water sections below.

- **Truck Stops.** There is a serious shortage of truck stops in Connecticut. The need is not so much for overnight sleeping facilities, but rather for parking facilities to accommodate truckers who arrive in the early morning and wait for receivers or shippers to open for business. Truck delivery times are set by shippers and receivers - not by trucking firms. Oftentimes, the deliveries are scheduled for early morning to match the first work shift at the receiver. Since drivers are often penalized by the receiver if they arrive late, many drivers will travel overnight and arrive in Connecticut at 3:00 or 4:00 am. They park at a truck stop as close to the receiver as possible, and wait until the receiver opens for business. While the Connecticut Department of Transportation has documented the need for more truck stops statewide, it is not yet determined if any stops are needed within the Capitol Region.

- **Loading Restrictions.** Loading restrictions were raised as an issue by members of a special focus group on transportation and economic development. Truck traffic contributes to congestion, so it might be advantageous to manage loading and unloading operations so as to not conflict with
peak period traffic. Since trucking firms do not set delivery schedules, this will require the cooperation of shippers and receivers. They might need to alter their work shifts to accommodate deliveries at night.

**Rail Freight**

Rail is an important mode of transport for bulky goods that are being shipped over long distances. Since rail freight tends to be a slow method of shipment, the goods being shipped usually are not needed for any time-sensitive business process. Trains are also restricted to a fairly limited rail network, which means that rail shipments are often limited to receivers and shippers located along rail facilities. This limitation can be overcome if appropriate intermodal facilities are available to allow the transfer of freight to trucks for the final leg of the trip.

Rail freight offers the advantage of helping to relieve congestion on our highways. Since trains operate on their own rights of ways, rail freight does not add to the congestion on Connecticut’s highways. If ways can be found to encourage more shipments via rail, we can reduce the number of trucks on congested roadways.

**National Rail Connections.** Freight rail service to the Capitol Region is limited. Access to important national rail freight lines is primarily to the north via Amtrak’s New Haven – Springfield track. In Springfield, the Amtrak line intersects the Albany – Boston track owned by CSX, which is a major rail freight operator along the east coast. This connection via the Albany – Boston line provides access to the Port of New York & New Jersey, the CSX lines running south along the east coast, and to the nation’s interior via rail lines running west out of Albany.

**Local Rail Network.** Internally, the Region’s shippers and receivers are served by the Connecticut Southern Railroad operating along the Amtrak line, and by other short line railroads operating along branch lines. Some of these branch lines were reactivated within the past decade after being abandoned for many years. One example of this is the Griffin rail line which was reactivated by Central New England Railroad and serves a few receivers along the line. The largest receiver is the Home Depot warehouse in northern Bloomfield. Home Depot’s decision to locate in Bloomfield was predicated on the condition that rail service be restored.

No project specific recommendations have been developed for the Region’s rail service, but several issues have been identified. These issues will serve as a focal point for CRCOG’s emerging freight planning program as it develops over the next three years.

- **Problems with Freight Use of Amtrak Line.** Freight train use of the Amtrak line is limited by the high fees charged by Amtrak, the priority given to passenger service, and by a weight restriction on the Connecticut River bridge between Windsor Locks and Enfield. The weight restriction on the bridge prevents freight operators from shipping certain heavy items such as lumber on fully loaded rail cars.

- **Double Tracking Amtrak.** Double tracking the Amtrak corridor has been suggested for the proposed New Haven – Hartford – Springfield (NHHS) commuter rail passenger service, but is extremely expensive. The cost of double tracking might not be justified by the proposed passenger service alone, but double tracking would also benefit rail freight service. The benefits to both passenger and freight service should be considered when trying to justify the cost of double tracking.

- **Intermodal Terminals.** To get more freight onto rail, we need intermodal terminals in the Hartford, Springfield, and New Haven areas. These terminals could be equipped to allow transfer of freight from rail cars to trucks, to load and unload containers, and to load and unload truck trailers shipped ‘piggy back’ on flat cars.

- **West Springfield Yard.** The West Springfield rail yard operated by CSX could become an important facility for serving the Hartford area. It could serve as an intermodal facility and break-
in-bulk point where goods are off-loaded from train cars to trucks for delivery to Connecticut. Likewise, it could serve as a switching facility where train cars bound for Connecticut are detached from longer trains and switched to trains bound for Connecticut. The Pioneer Valley Planning Region and CSX are currently reviewing options for improving this facility and the Capitol Region needs to remain a participant in that planning process.

Air Cargo

Bradley International Airport has a significant air cargo business and tremendous potential for increasing that business. Nationally, it has a higher ranking for the volume of freight moved than for number of passengers served. Bradley's air cargo business benefits from excellent ground access plus uncongested airport facilities. This easy-in/easy-out feature gives it a competitive advantage over New York and Boston for certain types of goods. Having fast and convenient air cargo service available within the Region gives the Hartford-Springfield area a competitive advantage in attracting and retaining businesses that use or produce low bulk – high volume goods, or ones that are dependent on fast delivery over long distances.

This Plan's emphasis on air cargo development stems from work CRCOG did as part of the Bradley Area Transportation Study (BATS) when the importance of the Airport's air cargo business was made clear in focus group meetings with Airport officials and businesses. The first recommendation presented below is a direct result of the BATS work. The recommendations are the same as those listed in the chapter on Bradley International Airport.

- **Capitalize on Air Cargo Potential.** Bradley has great potential as an air cargo facility because of its easy ground access, uncongested airport facilities, and proximity to New York and Boston. We should continue to develop Bradley's air cargo capabilities and services, and capitalize on problems that New York and Boston airports as experiencing with increasing ground and air congestion.

- **Intermodal Cargo Center.** Evaluate making Bradley a true multi-modal freight facility by improving rail freight access to the Airport, and developing support facilities for trucking. The multimodal cargo center at the airport in Charlotte, North Carolina should be evaluated as a possible model for Bradley.

Water Transport

While no major ports are located within the Capitol Region, CRCOG recognizes that economic benefits can be realized here when improvements are made at the State’s coastline ports. The cost of shipping goods to and from the Capitol Region can be significantly reduced, if at least a portion of the trip is made by water. The Transportation Strategy Board has recommended that up to $1.5 million in State funds be used to initiate feeder barge service at the Port of Bridgeport. This feeder barge service will include accommodations for ship-to-truck transfers. In addition, the Port of New Haven has a plan to improve its container shipping capabilities.

- **Feeder Barge/Intermodal Facilities.** CRCOG supports the recommendations by the Transportation Strategy Board to improve container shipping capabilities at Connecticut ports, initially in Bridgeport and eventually in New Haven.
8. SPECIAL POLICIES

There are several policies and programs the Council has adopted that warrant special discussion. These special programs and policies are described in this section. They are:

- MPO Coordination
- Congestion Management System
- Air Quality - Transportation Policy
- Demand Management Policy
- Intelligent Transportation System (ITS) Policy
- Security

MPO Coordination

CRCOG is committed to working cooperatively with all its neighboring regional planning agencies in the Hartford metropolitan area, as well as the planning agencies in the Springfield and New Haven areas. Since major transportation projects often extend across multiple regions, or even multiple metropolitan areas, it is important that the affected planning agencies, or metropolitan planning organizations (MPO), work cooperatively. Coordination assures they are addressing inter-regional needs, as well as the needs of individual regions. It also assures that proposed improvements are not duplicative or conflicting.

Hartford MPO Coordination. The Hartford metropolitan area extends beyond the boundaries of the Capitol Region as illustrated in Figure 8-1. Since the political boundaries of the regional planning agencies do not coincide with the functional limits of the Hartford metropolitan area, it is important that the regional agencies within the metropolitan area coordinate their planning efforts. In February 2003, an agreement to do so was among the four MPOs that share some portion of the Hartford metropolitan area – CRCOG, the Central CT Regional Planning Agency, the Midstate Regional Planning Agency, and the Council of Governments of the Central Naugatuck Valley. The agreement established a common goal to conduct the four transportation programs in a manner that assures their plans are mutually supportive of major projects and programs to improve the transportation system in the Hartford urbanized area. The agreement also required agency activities be coordinated in a number of specific planning and programming areas. The specific clause governing planning activities is provided below.

Coordination of Planning Activities. The four primary MPOs in the Hartford urbanized area (CRCOG, CCRPA, COGCNV, and MRPA) agree to coordinate their regional transportation plans, transportation improvement programs (TIPs), and annual work programs. The coordination efforts will include the exchange and review of annual work programs, regional transportation plans, and TIPs. Staff of the four MPOs will meet at least annually to review each others planning programs and to identify projects or programs of mutual interest or potential conflict.

This coordination is achieved primarily through periodic meeting of the four agencies to discuss ongoing or scheduled planning activities. In preparation for this Plan update, a list of common issues, problems, activities, and projects was prepared.

10 Metropolitan Planning Organization (MPO) is a federal term used to designated the regional planning agency responsible for approving the use of federal transportation funds within a given metropolitan area.
11 COGCNV, which is the Waterbury MPO, is included in the agreement, but very little of their region falls within the Hartford metropolitan area boundary, and none of region abuts CRCOG.
<table>
<thead>
<tr>
<th>Issue or Project in Common</th>
<th>Affected MPOs</th>
<th>Comment</th>
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| ITS & Incident Management | CRCOG, CCRPA, MRPA | - The 3 agencies support a common program for ITS & incident management  
- The Capitol Region Incident Management Steering Committee is a joint program of all 3 agencies.  
- All 3 agencies participate in the Capitol Region ITS architecture study.  
- The Capitol Region ITS Plan extends into MRPA and CCRPA to cover major freeway routes in those regions. |
| Congestion Management System | CRCOG, CCRPA | - The 3 agencies are cooperating to develop a common CMS for the Hartford metropolitan area. |
| Jobs Access | CRCOG, CCRPA | - CRCOG and CCRPA support a common jobs access program. They serve on the same taskforce that manages the jobs access program that covers most of the Hartford metro area.  
- MRPA participates in the New Haven area jobs access program since program boundaries are based on the CT Dept of Social Service regions, which are not based on metro areas. |
| New Britain Busway | CRCOG, CCRPA | - The New Britain Busway is endorsed in the transportation plans of both agencies, and both agencies actively participate in joint planning activities with one another and the state DOT. |
| NHHS Commuter Rail | CRCOG, CCRPA | - CRCOG and CCRPA both support this proposal & both participate in the advisory committee for the NHHS commuter rail feasibility study. |
| Farmington Canal Multi-Use Trail | CRCOG, CCRPA | - CRCOG and CCRPA both endorse this trail, and both work with their affected towns to advance funding for this trail that will extend from New Haven to Northampton, MA. |
| Hartford - Middletown Rail | CRCOG, MRPA | - There is a potential conflict between the proposed uses for the Hartford - Middletown rail ROW. However, the long term nature of CRCOG’s proposal, & the possibility of joint-use, greatly reduce any concern about conflict at this time.  
- CRCOG proposes a busway in the rail ROW.  
- MRPA has an interest in restoring rail freight service.  
- CRCOG’s proposed busway in this corridor is not until year 15-20 of the Plan. Joint use is possible, but it is too early to determine. Joint use feasibility should be assessed at such time as either the freight or busway proposal is activated. |

**Coordination with other MPOs.** CRCOG also interacts regularly with both the Springfield MPO and the New Haven MPO. Since the Springfield region abuts the Capitol Region we have many common concerns such as Bradley International Airport, ITS and incident management on I-91, transit services for Enfield, the New Haven - Springfield Commuter Rail proposal, the study of the West Springfield freight rail yard, and the Farmington Canal Trail. We meet at least annually to review the status of our planning programs, and as required for studies such as the West Springfield rail yard study.

Even though the Midstate region lies between CRCOG and the New Haven MPO, we still coordinate with the New Haven MPO as needed for projects such as the New Haven - Springfield Commuter Rail. We also meet regularly with them as part of the I-91 TIA Board. The TIA meetings provide a forum for discussing issues of common concern.
Congestion Management System

Federal regulations require each metropolitan planning organization (MPO) like CRCOG to develop a Congestion Management System (CMS) to help manage congestion reduction efforts. The Capitol Region already performs some of these functions through its program of corridor studies, but we are initiating a more comprehensive approach to CMS that will be done in coordination with two other MPOs in the Hartford area - CCRPA and MRPA. The new program will include: (1) a broad based program of annual monitoring of transportation system performance, (2) new methods to monitor and evaluate system performance, (3) an annual review to identify congestion problems, to determine which are being addressed, and to determine which still need to be addressed, and (4) special efforts to measure the congestion relief provided by projects after they have been constructed.

CRCOG has a longstanding System Management Policy that places greater emphasis on reducing congestion through better management of the existing highway system, rather than on projects to expand or increase the capacity of the system. CRCOG will continue to follow this policy that favors congestion-reduction strategies such as traffic signal coordination, intersection operational improvements, and freeway incident management.

Recommendations:

1. **Monitor Regional Traffic & Congestion.** Develop a process to monitor and evaluate transportation system performance on an annual basis. The system will include two primary components: the freeway system, and the arterial system.
   - *Freeway System.* Freeway system performance will be based on data collected from the new 60-mile network of traffic flow monitoring stations.
   - *Arterial System.* Arterial system performance will be based on speed and delay data collected by driving the selected corridors during peak periods. Due to the labor-intensive nature of these speed and delay studies, arterial system performance will be limited to only a few regionally important arterial roads.

2. **Identify Congested Areas & Monitor Progress.** Conduct an annual review to identify congestion problems, and monitor progress in addressing the problems. The review will identify which problems are being addressed through projects programmed in the TIP, the Regional Transportation Plan, or elsewhere; and which problems still need to be addressed.

3. **Special Efforts to Evaluate Projects.** Conduct special efforts to measure the congestion relief provided by selected projects after they have been constructed.

Air Quality - Transportation Policy

Many metropolitan areas of the nation, including the Capitol Region, have serious air pollution or smog problems. These smog problems are caused in large part by emissions from automobiles. Because of the automobile's key role in the smog problem, the federal Clean Air Act of 1990 requires metropolitan areas to develop transportation plans that help reduce vehicle emissions that contribute to smog. The Capitol Region has responded to this requirement by conducting a full review of air quality-transportation issues and developing a regional air quality policy that enhances the State air quality program.12

The primary recommendations in the 1993 regional air quality policy are:

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12 The State plan includes several programs to reduce emissions such as enhanced vehicle inspection and maintenance, reformulated gasoline, oxygenated gasoline, and vapor recovery systems for gasoline stations.
1. Encourage the State Legislature to adopt the California (LEV) new car standards for the State of Connecticut. (The LEV standards have been adopted by the State of CT.)

2. Adopt an emissions reduction goal of 1-4 percent for the Capitol Region Transportation Plan.

3. Evaluate a full range of transportation control measures including trip reduction measures, VMT (vehicle miles of travel) reduction measures, and congestion reduction measures. (CRCOG adopted the Regional Transit Strategy. The corridor studies also include recommendations such as new commuter lots and transit improvements that will help reduce vehicle exhaust emissions.)

**Diesel Emissions.** CRCOG’s Environmental Justice Advisory Board identified diesel emissions as an air quality issue that disproportionately affects low-income urban neighborhoods. The issue was raised because there is a high incidence of asthma in these neighborhoods, and evidence suggests that diesel emissions, especially particulates, are part of the cause of this urban health problem. To address the problem, the Environmental Justice Advisory Board suggested that CRCOG incorporate the goal of reducing diesel emissions into its various transportation plans and policies.

The most direct policy initiative that CRCOG can adopt is to encourage CT Transit to reduce diesel emissions from its large public transit fleet. The current CT Transit bus fleet is composed of about 200 diesel-powered vehicles, and many primary bus routes traverse low-income, minority, and transit dependent neighborhoods. To reduce emissions from the current fleet, CT Transit could switch to a low-sulfur diesel fuel that produces fewer particulates. This would increase fuel costs by about $0.10 per gallon and might not be economically feasible in the current fiscally difficult environment. However, CT Transit is evaluating low-sulfur fuel in its Stamford operations, and results from those tests should demonstrate whether a change to low-sulfur fuel in Hartford would be warranted.

A second option is to encourage CT Transit to purchase low-emission buses as part of its normal bus replacement program. Since the useful economic life of a bus is about 12 years, and the age of the existing fleet is mixed, there is an opportunity to realize significant emissions reductions even within the next 3-4 years. CT Transit is currently testing two hybrid diesel-electric buses that are propelled by electric motors powered by batteries that are recharged in the garage overnight and by a small diesel motor during route operations. This technology holds great promise for reducing emissions.

**RECOMMENDATIONS:**

1. **Implement Policy.** Continue to implement the regional air quality policy.

2. **Support Alternate Travel Modes.** Support alternate travel modes such as the projects recommended in the transit and bicycle sections of this Plan.

3. **Reduce Diesel Emissions.** CRCOG supports the reduction of diesel emissions from all sources, but especially encourages programs to reduce emissions from public transit vehicles. The bus replacement program for CT Transit must remain responsive to changing technology and market forces, but it should also be structured to achieve reasonable reductions in diesel emissions. Likewise, low-sulfur diesel fuel should remain an option, and should be reconsidered after sufficient knowledge is gained from the Stamford test.

**Demand Management Policy**

Many options for reducing congestion focus on increasing the *capacity* of the transportation system (or transportation *supply*). An important alternative approach is to reduce, or otherwise modify, the *demand* for transportation. This does not necessarily mean getting people to make fewer trips. More often demand management is focused on getting people to use an alternate form of transportation (bus or carpool), or to shift their travel to off-peak periods when there is excess capacity. Examples include:

- staggered work hours to spread peak demand
The Council has studied demand management options as part of several previous studies. These include a special analysis of demand management done for the 1994 update of the Transportation Plan, the Major Investment Study for the Griffin corridor in 1995, and the Regional Transit Strategy in 2000. The analyses consistently demonstrate that some techniques such as increasing parking fees, eliminating employee parking subsidies, or providing transportation allowances to employees, can be effective at reducing vehicle miles of travel, increasing transit ridership, and reducing vehicle exhaust emissions. The difficulty with these techniques is that they often rely on voluntary participation of private employers to implement them. Voluntary programs are often not effective, and making them mandatory through legislative action is often politically unpopular.

**Recommendations:**

1. **Encourage TDM.** The Council should try to integrate demand management into our transportation programs whenever possible. A special effort should be made to introduce some demand management techniques to support the Regional Transit Strategy. We should also promote new federal and state “deduct a ride” programs that use income tax deductions to encourage use of transit and ridesharing instead of driving alone to work.

2. **Support Rideshare Programs.** The Council should continue to support rideshare programs that encourage alternatives to driving alone to work. While the primary function of the rideshare programs is encouraging commuters to use carpools or vanpools, the various programs in the State also promote public transit as well as transportation demand management initiatives such as deduct-a-ride and telecommuting.

**ITS Policy (Intelligent Transportation Systems)**

ITS is the creative application of information and communications technologies to enhance the efficiency of our transportation system. In the most visionary of ITS scenarios, drivers will enter smart highways and relinquish control of their smart cars to onboard auto piloting systems and regional traffic management systems that control speed, steering, and vehicle spacing to achieve fast, safe, and more efficient traffic flow.

While the most advanced aspects of ITS, such as auto-pilot controls for cars, are still years away from being practical, some ITS systems are already being installed. In 1997, CRCOG adopted a strategic plan for the deployment of ITS systems in the Capitol Region. The ITS Plan identifies applications for ITS that will benefit freeway operations, arterial road operations, and public transit operations. Many of the basic recommendations in the ITS Plan are already being implemented. The Region’s extensive computer controlled traffic signal system for arterial roadways is being updated with modern equipment that provides more reliable service and offers better traffic flow management capabilities. The Connecticut Department of Transportation is installing an ITS system that will monitor traffic conditions on all the major freeways with video cameras and special traffic flow monitors. When fully installed by the end of 2004, operators in DOT’s operations center will be able to check traffic flow on almost every freeway, and instantly report problems to the general public, motorists, transit operators, and other interested parties such as emergency service agencies and trucking businesses. Information will be distributed via variable message signs on the freeway, highway advisory radio, commercial radio and TV stations, and the Internet.

**Recommendations:**

2. **Implement ITS Plan.** Continue to implement recommendations as specified in “Intelligent
Transportation Systems: A Strategic Plan for the Capitol Region. Recommendations are included for the following: transit and ridesharing systems, freeway and arterial systems, and a travel information system.

3. **ITS for Transit** CRCOG will work to implement the transit recommendations from the ITS Plan that have lagged behind those for the highway system. The transit program needs to be accelerated and the following factors provide both an opportunity and need for doing so.

   - **New Britain Busway** - ITS elements such as automatic vehicle location (AVL), real time bus arrival information signs, and possibly even vehicle guidance systems will be an integral part of this new rapid transit facility.
   - **Radio System Replacement** - CT Transit’s current radio system is not a digital system, which has made it impractical to install an AVL system. Given that the radio system is now 15 years old, replacement is needed within the next few years. Any new system would be digital and allow CT Transit to start developing AVL capabilities.

4. **Complete Regional ITS Architecture.** CRCOG will work with the Connecticut Department of Transportation to complete the development of a regional ITS architecture. The ongoing project is scheduled for completion by summer 2004. Key features, developed with input from regional stakeholders, will be:
   - Identification of existing and planned ITS systems, and additional needed improvements
   - Identification of information interconnects between and among the existing, planned, and needed ITS systems
   - Identification of a sequential list of ITS projects needed in the Region
   - Identification of any agreements required for ITS project interoperability, and the ITS-related standards for any listed project
   - Development of an ITS architecture document that meets the federal architecture requirements for the Region

5. **Support State Incident Management Initiatives.** Support the incident management initiatives undertaken through the State Transportation Strategy Board. With the recent establishment of a Statewide Incident Management Task Force, many of the incident management issues identified by the Capitol Region Incident Management Steering Committee will now be addressed at the State level. Key goals and initiatives of the TSB and the Statewide Task Force include:
   - Improve interagency cooperation and incident management procedures. Examples include:
     - Reaffirm the Statewide Incident Management Policy
     - Adopt Unified Command System as the statewide standard for managing incidents
     - Develop other policies that promote coordination among responding agencies
     - Identify incident management needs, estimate costs, find funding, and implement worthwhile projects
   - Implement ITS projects to enhance incident management capabilities. Examples include:
     - Support development and implementation of a 511 phone plan for Connecticut
     - Provide live video feed from traffic cameras to appropriate emergency responders
     - Support cellular phone and 911 GPS systems as a way to locate incidents
     - Make state-of-the-art improvements to the State Traveler Information website to include real-time traffic conditions, incidents, detours, weather and incident management services
     - Support development and implementation of a 511 phone plan for Connecticut
     - Support interagency interoperability communications plan for incident management

CRCOG should continue to support and participate in the work of the Statewide Incident Management Task Force.
Transportation Security

The tragedy of September 11, 2001 brought a new emphasis on transportation security at the federal, State, regional and local level. Our surface transportation systems are important considerations in planning for emergency preparedness because:

- The transportation system conveys people away from the site of an attack and provides access for emergency response teams. Ancillary transportation systems such as variable message signs and highway advisory radio can be used to detour the public around a major event. Transit vehicles can be used as a respite center for responders.
- The transportation system itself is vulnerable to attack, such as the bombing of a bridge or the hijacking of a transit vehicle. Protection of transportation facilities must be a high priority and the response in the event of an attack must be carefully planned and practiced.

The Capitol Region has been proactive in bringing people together to discuss and plan for the security of our regional surface transportation systems, with both security issues, valuable to the response and vulnerable to attack, being considered. These issues are being discussed within the transportation community in the Hartford area, but they are also discussed by the emergency services community in the area. Since CRCOG supports both a transportation planning function and a public safety planning function, we have also been able to coordinate the activities of each. Examples of recent transportation security planning efforts are provided below. CRCOG is committed to continuing to conduct and/or support such efforts in the future.

Capitol Region Emergency Planning Committee. Capitol Region Emergency Planning Committee (CREPC) is part of CRCOG’s Public Safety Council. CREPC developed and continues to update the Regional Emergency Disaster (RED) Plan. One element of that plan, the Regional Emergency Support Function (R-ESF #1), addresses transportation issues and how to incorporate them into the greater emergency response effort. The R-ESF #1 chapter of the RED Plan documents the coordination efforts of federal, State, regional, local and private entities involved in the transportation security effort. The chair of R-ESF #1 committee attends CRCOG Transportation Committee meetings as a liaison from CREPC, and is a member of the Greater Hartford Incident Management Steering Committee.

Transit Security Forum. CTTransit sponsored FTA’s “Connecting Communities: Emergency Preparedness and Security Forum” in Hartford on Jan. 8 and 9, 2003. This forum brought together emergency responders and transit providers in a unique opportunity to learn from each other. The goal of the forum was “to demonstrate the important role that transit plays in crisis situations and the importance of delivering a coordinated regional response to any emergency.”

Transit Emergency Drills. CTTransit was the recipient of Federal Transit Administration funds supplied under the 2001 Emergency Supplemental Appropriations Act for Recovery from and Response to Terrorist Attacks on the United States. Four full scale emergency preparedness drills, two in the Hartford area and two in the New Haven area, took place between January and November 2003, and involved scenarios such as a bomb on a bus, a bus hijacking, a chemical agent in a building and an explosive device in a building. The drills were designed to make sure that “transit systems are well prepared for potential terrorist threats and attacks.” The FBI, State police and other emergency responders participated along with CT Transit personnel.
9. Financial Plan

This chapter provides an overview of the cost of projects recommended in the Transportation Plan and an estimate of the revenues that will be used to finance the improvements. Since this is a long-range systems-level plan, many of the cost estimates and most of the revenue estimates are preliminary. The intent is to prepare an approximate, but realistic, estimate of total program cost; and a similar estimate of total revenues that the Region can expect to receive over the next 20 years. A goal of this process is to prepare a ‘financially constrained plan’ whose costs can to be paid from the 20-year revenue stream.

Capital Costs & Revenues

Capital Costs. The estimated capital cost of implementing the Plan is about $1,201,200,000. Most of the cost estimates are based on current design estimates or estimates prepared for other planning studies from which the respective projects were derived. These include the New Britain Busway design project, the Griffin Busway Feasibility Study, the NHHS Rail Feasibility Study, Regional Transit Strategy, and the arterial corridor studies.

The transit program is estimated to cost $639,000,000 and includes all the major new services recommended in the Regional Transit Strategy. The transit program represents 53 percent of the cost for the entire regional transportation plan.

The freeway and arterial programs combined cost $508,000,000 or 42 percent of the entire transportation plan. Combined with the roadway improvements listed under the Bradley Airport access improvements, the roadway components account for $535,000,000 or 45 percent of the cost of the Plan.

Bicycle and pedestrian element of the plan is estimated to cost $27,000,000 or just over two percent of the total cost.

Capital Revenues. The revenue estimate is based on continuation of existing annual revenues and anticipated special discretionary funds that the Region has applied for or already received. The estimated revenues to the Region over the next 20 years will total about $1,242,458,000. This is the total amount of State and federal transportation capital funds that will likely flow to the Region. The estimate is based on the assumption that current funding levels continue and that the Region continues to get its fair share of both federal and State funds.

Regional Allocation. The regional allocation of $871,226,000 is the largest source of anticipated revenues and accounts for over 70 percent. The regional allocation estimate was prepared by the Connecticut Department of Transportation (ConnDOT) for each region in the State. It is each region’s share of ConnDOT’s estimate of all highway funds available for ‘system enhancements’ for the next 20 years. Although it is based on highway funds, it can be allocated to either highway or transit projects within the 20-year plan.

Projects of Statewide Significance. When ConnDOT prepared the regional allocation estimates, they also reserved some of the future revenue for projects that they deemed to be of ‘statewide significance.’ Two projects in the Capitol Region are on the list of statewide projects. $153,247,000 was reserved for Route 6, and $38,000,000 was reserved for the I-84 improvements at interchanges with routes 4, 6, and 9.

13 Most federal funds are appropriated annually to states or urban areas based on formulas specified in federal legislation. These formulas typically use variables such as population, VMT, and federal gas tax receipts. Some federal programs are ‘discretionary’ programs in which the State or region must apply and compete against other applicants for funds. These funds are awarded at the discretion of the Congress or US Secretary of Transportation.
### Table 9-1 CAPITAL COST ESTIMATE

<table>
<thead>
<tr>
<th>Unfunded Needs</th>
<th>Cost</th>
<th>Improvement Program</th>
</tr>
</thead>
<tbody>
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<td>0</td>
<td>639,000,000</td>
<td>Transit &amp; Ridesharing Program</td>
</tr>
<tr>
<td></td>
<td>5,000,000</td>
<td>ITS for bus system</td>
</tr>
<tr>
<td></td>
<td>218,000,000</td>
<td>New Britain BRT</td>
</tr>
<tr>
<td></td>
<td>126,000,000</td>
<td>Griffin BRT</td>
</tr>
<tr>
<td></td>
<td>100,000,000</td>
<td>Manchester BRT (phases 1a, 1b, &amp; 1c)</td>
</tr>
<tr>
<td></td>
<td>80,000,000</td>
<td>New Haven-Springfield Rail (low cost option)</td>
</tr>
<tr>
<td></td>
<td>10,000,000</td>
<td>Downtown Circulator</td>
</tr>
<tr>
<td></td>
<td>100,000,000</td>
<td>Rocky Hill BRT</td>
</tr>
<tr>
<td>286,000,000</td>
<td>292,600,000</td>
<td>Freeway Program</td>
</tr>
<tr>
<td></td>
<td>5,000,000</td>
<td>ITS: phase 3</td>
</tr>
<tr>
<td></td>
<td>153,200,000</td>
<td>Rt 6: new freeway</td>
</tr>
<tr>
<td></td>
<td>38,000,000</td>
<td>I-84: Rt 6/Rt 9/Rt 4</td>
</tr>
<tr>
<td></td>
<td>61,000,000</td>
<td>I-84: Hartford - Flatbush access</td>
</tr>
<tr>
<td>286,000,000</td>
<td></td>
<td>I-84: Hartford - Sisson access</td>
</tr>
<tr>
<td></td>
<td>10,400,000</td>
<td>I-84: West Hartford - operational lanes</td>
</tr>
<tr>
<td></td>
<td>25,000,000</td>
<td>I-84: access to Rentschler redevelopment area</td>
</tr>
<tr>
<td>TBD</td>
<td></td>
<td>I-91: access to Day Hill industrial area</td>
</tr>
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<td>0</td>
<td>215,700,000</td>
<td>Arterial Program</td>
</tr>
<tr>
<td></td>
<td>10,000,000</td>
<td>Traffic signal system - some costs included below</td>
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<tr>
<td></td>
<td>125,700,000</td>
<td>Arterial corridor study recommendations</td>
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<td>80,000,000</td>
<td>Other arterials - including municipal</td>
</tr>
<tr>
<td></td>
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<td>Access management</td>
</tr>
<tr>
<td>0</td>
<td>27,000,000</td>
<td>Bicycle &amp; Pedestrian Program</td>
</tr>
<tr>
<td></td>
<td>22,000,000</td>
<td>Complete major interregional trails</td>
</tr>
<tr>
<td></td>
<td>5,000,000</td>
<td>Other Bike &amp; pedestrian programs</td>
</tr>
<tr>
<td>0</td>
<td>26,900,000</td>
<td>Bradley Airport</td>
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<tr>
<td></td>
<td>26,900,000</td>
<td>Better Ground Access - Roadway</td>
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<td>Better Ground Access - Transit</td>
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<td>(B)</td>
<td>Better Economic Development Opportunities</td>
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<td>Better Air Passenger Service</td>
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<td>Better Air Cargo Service</td>
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<td>Freight Transport System</td>
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</tr>
<tr>
<td></td>
<td>(B)</td>
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<td>Air</td>
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<td>Water</td>
</tr>
<tr>
<td>286,000,000</td>
<td>1,201,200,000</td>
<td>TOTAL CAPITAL COST</td>
</tr>
<tr>
<td></td>
<td>1,242,458,000</td>
<td>TOTAL REVENUES</td>
</tr>
<tr>
<td></td>
<td>871,226,000</td>
<td>Assumed Sources of Revenue:</td>
</tr>
<tr>
<td></td>
<td>153,247,000</td>
<td>Regional Allocation: CRCOG allocation from DOT statewide 20-year estimate</td>
</tr>
<tr>
<td></td>
<td>38,000,000</td>
<td>Funds for projects of statewide significance: Route 6</td>
</tr>
<tr>
<td></td>
<td>2,000,000</td>
<td>Funds for projects of statewide significance: I-84/Rt 4/Rt 6/Rt 10</td>
</tr>
<tr>
<td></td>
<td>4,375,000</td>
<td>Committed funds: funds already committed for bike projects</td>
</tr>
<tr>
<td></td>
<td>29,610,000</td>
<td>Committed funds: funds already committed for Downtown Circulator</td>
</tr>
<tr>
<td></td>
<td>109,000,000</td>
<td>New Start funds: New Britain BRT - application pending</td>
</tr>
<tr>
<td></td>
<td>35,000,000</td>
<td>Transportation Strategy Board: assumes CRCOG receives 5% of TSB funding</td>
</tr>
<tr>
<td></td>
<td>1,242,458,000</td>
<td>TOTAL</td>
</tr>
<tr>
<td>0</td>
<td>Shortfall: amount 'over' the budget limit</td>
<td></td>
</tr>
<tr>
<td>41,258,000</td>
<td>Reserve: amount 'under' the budget limit</td>
<td></td>
</tr>
</tbody>
</table>

(A) Costs are included in projects listed in the Transit section: NHHS Rail and Griffin Busway.
(B) Recommendations are general policy statements and do not included specific capital improvement recommendations.
(C) This is the full cost of the project. No portion of the cost has been to assigned to other regions.
Committed Funds. For some projects, requests for discretionary funding were made through Connecticut’s Congressional delegation, and special Congressional earmarks were secured. These funds are now available to be used for the specified projects. The funds are considered as ‘committed’ and include: the New Britain Busway ($29,610,000), the Downtown Circulator ($4,375,000), and the Charter Oak Greenway ($2,000,000).

New Start Funds. ConnDOT has applied to the Federal Transit Administration for ‘New Start’ funding for the New Britain Busway, and has received a rating of ‘recommended.’ The recommended rating does not guarantee funding, but does indicate that the project meets all the FTA criteria. It is reasonable to expect that ConnDOT will be awarded a ‘Full Funding Grant Agreement’ (FFGA) when it formally submits its FFGA request sometime within the next year. The New Britain Busway prospects are good for several reasons. First, FTA has been encouraging Bus Rapid Transit projects as a less costly alternative to rail projects, and the New Britain BRT has been supported by FTA through its Bus Rapid Transit Demonstration Program. Second, at $216,000,000 it is relatively inexpensive compared to most rail projects competing for New Start funds, and it received good ratings through the New Starts evaluation process. In the 2004 evaluation, the project was rated as medium in both the project justification category and the financial category. The current finance plan for the New Britain Busway is based on the assumption that ConnDOT will receive $109,000,000 in federal New Starts funds. This is the amount of ‘anticipated’ discretionary funding that is shown in the list of revenues for the 20-year plan.

TSB Funds. A second source of discretionary funds, which is assumed for purposes of this plan, is the Transportation Strategy Board. Connecticut passed legislation that raises various motor vehicle fees and dedicates the new revenues to projects funded through the TSB. While much of this funding is expected to go to projects in the I-95 corridor, it is reasonable to expect that at least 5 percent of the funding will be allocated to projects in the Hartford area. The TSB funding is expected to be about $35,000,000 per year or about $700,000,000 over a 20-year period. A 5 percent share of $700,000,000 is $35,000,000.

Operating & Maintenance Costs

The primary focus when assessing the financial viability of the Transportation Plan is on the capital cost of the Plan. However, the costs of operating and maintaining the transportation system are not ignored. Rather, the maintenance costs were already accounted for by the Connecticut Department of Transportation in the financial planning guidelines they issued for each region. A summary of the estimated costs for the Capitol Region is provided in Table 9-2.

Highway Maintenance Costs. ConnDOT estimates that it will cost $1,810,000,000 to maintain all State roads in the Region over the next 20 years. Since the State places a high priority on maintenance, the funds to pay for a maintenance program have already been identified in the State’s financial planning guidelines. Thus, individual regions are not required to identify funding sources for the costs of keeping roads in good repair.

Transit Operating & Replacement Costs. As with the highway maintenance costs discussed above, the Connecticut DOT has already identified both the costs of operating the existing transit systems, and the revenues to finance them. However, the estimate below does not include any funds to cover the additional operating subsidy for any ‘new’ transit services. For each of the new transit services proposed as part of this Plan, we will have to identify new revenues sources before the service can be implemented. Typically, this funding commitment occurs after a feasibility study is complete, but before the design phase is started. ConnDOT has committed to provide the operating funds needed to operate the New Britain Busway.

Existing Transit Services: Existing transit services subsidized with public funds include CT Transit bus services, a few privately operated commuter bus services, local and regional dial-a-ride services for the elderly and the disabled, and ridesharing services. The annual operating subsidies to these services amounts to about $33,500,000. This is a total of $669,300,000 over a 20-year period.
Vehicle replacement costs are also provided below. The estimated replacement cost of $146,800,000 is based on existing fleet size and assumes an average life expectancy of 12 years for regular transit buses and 5 years for special transit (ADA and dial-a-ride) vehicles. At the present time, CT Transit has 232 buses in its fleet and there are about 150 vehicles in the various special transit services operated by the Greater Hartford Transit District and the towns. The vehicle replacement cost for the vanpools operated by the Rideshare Company are not included in the table, since the capital costs of the vans are paid through fares collected from riders. At the current time the Rideshare Company operates over 300 vanpools statewide and the program is growing. About 25 percent of the vanpools are serving employment centers in the Hartford area. Vans are financed over a 5-year period, which is the assumed life expectancy for these vehicles.

Table 9-2 **Operating & Maintenance Costs (20 years)**

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<thead>
<tr>
<th></th>
<th>Highways</th>
<th>Transit</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Maintenance</td>
<td>1,810,000,000</td>
<td>------</td>
<td>1,810,000,000</td>
</tr>
<tr>
<td>Operating</td>
<td>------</td>
<td>669,300,000</td>
<td>669,300,000</td>
</tr>
<tr>
<td>Replacement</td>
<td>------</td>
<td>146,800,000</td>
<td>146,800,000</td>
</tr>
<tr>
<td>Total</td>
<td>1,810,000,000</td>
<td>816,100,000</td>
<td>2,626,100,000</td>
</tr>
</tbody>
</table>

**New Transit Services.** The Plan recommends five new rapid transit services plus improvements in existing bus service. Each of the new busways is expected to require $3-5 million per year in state subsidy to operate. The CT Department of Transportation is committed to providing the operating subsidy for the New Britain Busway, which is the first of the busways and is currently under design. At this time, there is no commitment to fund the operating subsidies for the other new services. Operating subsidy decisions will be made after the feasibility studies are completed.

**Timetable for Implementation**

A proposed schedule for implementation is shown in Table 9-3. It is a tentative schedule based on a general assessment of how funding availability might affect implementation dates. While it is possible to design all the projects early in the 20-year period, the annual revenue stream will force the Region to defer many of the projects until the second decade. The schedule is merely a financial planning tool. It is a tentative schedule that can be revised periodically to reflect changing conditions. Factors such as delays in acquiring environmental permits, priorities elsewhere in the State, and availability of special discretionary funds could alter the schedule substantially.

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14 Initial financing of van purchases is done through a special revolving fund, but funds are always repaid to the revolving fund as fares are collected.
<table>
<thead>
<tr>
<th></th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
<th>Total</th>
</tr>
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<tr>
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<td>Year 1-5</td>
<td>Year 6-10</td>
<td>Year 11-20</td>
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<tr>
<td><strong>Total</strong></td>
<td>233,000,000</td>
<td>180,000,000</td>
<td>226,000,000</td>
<td>639,000,000</td>
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<td><strong>Cost Improvement Program</strong></td>
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<td>218,000,000</td>
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<td></td>
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<td>126,000,000</td>
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<td>100,000,000</td>
</tr>
<tr>
<td><strong>Transit &amp; Ridesharing Program</strong></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>5,000,000</td>
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<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>233,000,000</td>
<td>180,000,000</td>
<td>226,000,000</td>
<td>639,000,000</td>
</tr>
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<td><strong>Freeway Program</strong></td>
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</tr>
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<td>153,200,000</td>
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<td>153,200,000</td>
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<td></td>
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<td>38,000,000</td>
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<td>0</td>
<td>61,000,000</td>
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<td>61,000,000</td>
</tr>
<tr>
<td><strong>Arterial Program</strong></td>
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<td>25,100,000</td>
<td>62,900,000</td>
<td>37,700,000</td>
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<td>16,000,000</td>
<td>40,000,000</td>
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<td>27,000,000</td>
<td>215,700,000</td>
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<td><strong>Bicycle &amp; Pedestrian Program</strong></td>
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<td>11,000,000</td>
<td>4,400,000</td>
<td>22,000,000</td>
</tr>
<tr>
<td></td>
<td>1,300,000</td>
<td>2,500,000</td>
<td>1,200,000</td>
<td>5,000,000</td>
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<tr>
<td><strong>Bradley Airport</strong></td>
<td>2,700,000</td>
<td>18,800,000</td>
<td>5,400,000</td>
<td>26,900,000</td>
</tr>
<tr>
<td><strong>Freight Transport System</strong></td>
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<tr>
<td><strong>TOTAL CAPITAL COST</strong></td>
<td>343,100,000</td>
<td>498,400,000</td>
<td>359,700,000</td>
<td>1,201,200,000</td>
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<tr>
<td></td>
<td>28.6%</td>
<td>41.5%</td>
<td>29.9%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
10. ENVIRONMENTAL JUSTICE

The Capitol Region Council of Governments is committed to fully integrating the basic principles of environmental justice into all of our transportation planning programs and activities. These principles are:

- Reaching out to involve minority groups and low income groups in our planning process;
- Prevent “disproportionately high and adverse” impacts of transportation decisions on minority groups, low-income, and transit dependent groups; and
- Assure these same groups receive a proportionate share of benefits.

This commitment was first included in the 2001 Regional Transportation Plan. Since then CRCOG has made substantial progress in advancing these core principles. We completed a full assessment of our planning process as part of a federally funded Environmental Challenge Grant project completed in 2002. That project recommended adoption of an Environmental Justice Action Plan. The Action Plan was adopted in June 2002. Key elements of the plan that were implemented are:

- **Environmental Justice Advisory Board.** An Environmental Justice Advisory Board was established as a standing CRCOG committee. Its purpose is to provide guidance on how to improve our planning process to achieve environmental justice goals, and to provide input into the development of major planning products such as the Regional Transportation Plan.

- **Transportation Committee Membership.** An Advisory Board member was appointed to the Transportation Committee to allow direct involvement in our core transportation planning activities.

- **Equity Assessment Methods.** Equity assessment methods were developed to evaluate the distribution of burdens and benefits from projects funded through the transportation program.

- **Bus Users Forum.** A bus users forum was established to provide an opportunity for transit dependent residents to discuss bus service issues directly with transit operators and planners.

These are critical components of CRCOG’s environmental justice action program that we will continue to pursue and improve. We remain committed to involving minority groups and low-income groups in our planning process, and to developing plans and programs that provide an equitable distribution of benefits and burdens. We are also committed to identifying and addressing transportation issues that are of special concern to minority, low-income, and transit dependent households. To begin the latter task, we undertook a special effort to identify issues of special concern. The effort and issues are described below.

**Issues of Special Concern**

There are a number of transportation issues that were identified as ones of particular importance due to their potential to affect minority, low-income, or transit dependent populations. These issues were identified by members of the EJ Advisory Board during a focus group workshop held during the development of this Plan.\(^\text{15}\) The issues and associated recommendations are provided below.

**CRCOG COMMITTEE STRUCTURE**

CRCOG’s recently revised its Committee structure to include an Environmental Justice Advisory Board, and a representative from that Board on the Transportation Committee. The new structure provides better

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\(^{15}\) The focus group work was based on earlier efforts to identify issues that were conducted through the Environmental Justice Challenge Grant and the Transit Users Forum.
opportunities for the involvement of environmental justice communities in the transportation planning process, and should be continued.

**RECOMMENDATION:** The revised committee structure is satisfactory and should be continued.

**ACCESS TO JOBS**

Access to jobs is one of the most critical issues for low-income and transit dependent households in the Region. The growth of employment in suburban areas and the lack of good transit service to these areas often pose a problem for these residents when they search for job opportunities. CRCOG administers a program to provide special transportation services to and from work for welfare-to-work clients and other low-income workers. The program supplements regular CT Transit bus service to serve hours or routes not previously served by CT Transit.

**RECOMMENDATION:** CRCOG should continue to support the Jobs Access program as a high priority program.

**BETTER TRANSIT SERVICE.**

The region’s regular transit service is not a convenience, but rather a necessity for transit dependent residents. Whether they live in the City of Hartford or some of our inner ring suburbs served by transit, these residents depend on the service for virtually all their transportation needs.

**RECOMMENDATION:** CRCOG should continue to support better bus service as part of its environmental justice program. CRCOG should also continue its efforts to give transit users a voice through the bus users forum, and continue its efforts to address bus stop issues.

**RAPID TRANSIT SYSTEM.**

Rapid transit proposals form the cornerstone of the Regional Transportation Plan. Bus rapid transit is proposed for several corridors, and a commuter rail service is being evaluated for the New Haven-Hartford-Springfield corridor. These rapid transit services can be designed to meet the needs of transit dependent residents as well as those of suburban residents who have easy access to automobiles.

**RECOMMENDATION:** Rapid transit services should be designed to serve the needs of transit dependent residents as well as those with access to automobiles.

**CLEAN FUEL BUSES.**

The current bus fleet is composed almost exclusively of diesel powered vehicles. The primary bus routes traverse many low-income, minority, and transit dependent neighborhoods. Diesel emissions can pose a health hazard in these urban neighborhoods where asthma rates are often higher than in suburban neighborhoods.

**RECOMMENDATION:** CRCOG’s transportation plans, policies, and programs should advance the goal of reducing diesel emissions, especially diesel emissions from buses.

**PEDESTRIAN & BICYCLE SAFETY IN URBAN AREAS.**

Pedestrian and bicycle safety is an important issue that affects minority, low-income households, and especially transit dependent households living in our more urbanized communities. More than ten percent of the residents in the Region do not own an automobile, and for many of them, walking and riding a bike is an important means of travel. However, pedestrians and cyclists face many safety hazards in urban areas where traffic volumes are high. The rate of pedestrian accidents in Hartford, which is nearly four times higher than any other town in the Region, illustrates the serious nature of these urban hazards.

**RECOMMENDATION:** CRCOG’s transportation plans, policies, and programs should advance the goal of improving pedestrian and bicycle safety in urban areas of the Region.
Equity Assessment: Burdens & Benefits

Each of the relevant elements of the Regional Transportation Plan were reviewed to determine if there were any disproportionately high and adverse impacts on minority groups, low-income, and transit dependent groups; and to assure that these same groups received a proportionate share of benefits. The assessments are provided below.

Linking Land Use and Transportation

The recommendations for better integrating land use and transportation planning will have no adverse effect on minority, low-income, or transit dependent populations.

Transit Program

The transit program recommended in this Plan is expected to benefit minority and low income households by increasing transit service available to them and by increasing their access to jobs and other opportunities. As part of the Regional Transit Strategy, an analysis was conducted of the two primary alternatives: low capital or ‘better bus’ alternative, and the high capital or ‘rapid transit’ alternative. As shown in the table below, both alternatives significantly increased the number of jobs available to low-income neighborhoods within 30 minutes travel time.

<table>
<thead>
<tr>
<th>ALTERNATIVE</th>
<th>Jobs within 30 Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Transit Improvements</td>
<td>132,640</td>
</tr>
<tr>
<td>Low Capital Improvements: Better Bus</td>
<td>145,857</td>
</tr>
<tr>
<td>High Capital Improvements: Rapid Transit</td>
<td>188,602</td>
</tr>
</tbody>
</table>

More recently, special equity assessments were conducted for two of the proposed rapid transit elements of the Regional Transit Strategy: the New Britain Busway and the Griffin Busway. Both analyses found a large share of project benefits going to transit dependent households (0-car households). The results are summarized below.

<table>
<thead>
<tr>
<th>User Benefits for Busway Proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>(hours of travel time savings)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>New Britain Busway</td>
</tr>
<tr>
<td>0-car HHs 1,558</td>
</tr>
<tr>
<td>1-car HHs 943</td>
</tr>
<tr>
<td>Multi-car HHs 1,599</td>
</tr>
<tr>
<td>Total Hours 4,100</td>
</tr>
<tr>
<td>29.0% 38.0% 39.0% 100.0%</td>
</tr>
<tr>
<td>Griffin Busway</td>
</tr>
<tr>
<td>0-car HHs 551</td>
</tr>
<tr>
<td>1-car HHs 437</td>
</tr>
<tr>
<td>Multi-car HHs 912</td>
</tr>
<tr>
<td>Total Hours 1,900</td>
</tr>
<tr>
<td>29.0% 23.0% 48.0% 100.0%</td>
</tr>
</tbody>
</table>

Other transit recommendations in the Plan are specifically intended to improve mobility for low-income households. Our Jobs Access Program is designed to help low income workers gain access to job site otherwise unavailable to them. The recommendation to extend hours of service for the bus system is intended to benefit the transit dependent person who often cannot access certain activities because bus service stops after 6:00 at night on many routes.

16 The analysis considered only transit dependent neighborhoods, which were defined as neighborhoods where 20% or more of households do not own a car. See chapter 5 of RTS report for full discussion.
**Freeway Program**

None of the proposed freeway improvements are expected to adversely affect any minority or low-income neighborhoods. The proposed improvements to Route 6 would not affect any minority or low-income neighborhood. The operational and safety improvements will all occur largely within existing rights of way and not affect residential neighborhoods.

**Arterial Program**

The recommendations included in the recent corridor studies are not expected to adversely affect any minority or low-income neighborhoods. The proposed improvements for Route 44 (Albany Avenue) in Hartford were developed with involvement of the Upper Albany and Clay-Arsenal neighborhoods. The proposed traffic improvements are mostly small operational improvements with few adverse impacts. The primary recommendations include reconfiguration of the 3-lane roadway to a 2-lane roadway (with turn lanes at intersections), traffic calming on side streets, and streetscaping along Albany Avenue. While the lane reconfiguration is expected to improve safety, it will be done without any roadway widening and will have no negative impacts on the neighborhoods. By contrast, the traffic calming and streetscaping proposals will benefit the community and were strongly supported by the neighborhoods.

**Bicycle & Pedestrian Program**

The bicycle and pedestrian program has no negative impacts on low-income or minority neighborhoods. The Plan includes a specific recommendation that CRCOG’s transportation plans, policies, and programs should advance the goal of improving pedestrian safety in urban areas of the Region. As a result of this recommendation, CRCOG staff will devote more of its bike and pedestrian planning efforts to safety issues in urban areas.

**Bradley Airport**

The proposed program of improvements and policies described in the Airport chapter has no negative impact on environmental justice target communities. The roadway projects do not impact any low-income or minority neighborhood, and the proposed transit services will likely benefit low-income residents who live in Hartford and work at the Airport.

**Freight Transportation System**

The primary recommendation in this chapter is to initiate a freight transport planning program at CRCOG. This will have no adverse effect on environmental justice target communities.
11. PUBLIC INVOLVEMENT

The primary changes to the Capitol Region Transportation Plan that occur with the adoption of this 2004 edition of the Plan are an increased emphasis on making a better connection between the Region’s land use policies and its transportation policies, a strong transportation policy that supports development of Bradley International Airport as a transportation facility and as an engine of economic growth, the reaffirmation of support for the Region’s Jobs Access Program and the better bus recommendations of the Regional Transit Strategy, a renewed emphasis on ITS for transit, and the inclusion of recommendations from the Bradley Area Transportation Plan and the Route 190 Corridor Transportation Plan.

These changes are the result of a public involvement process undertaken specifically for this Plan update, but they also reflect community involvement through several closely related planning activities. The activities conducted specifically for the Plan update are:

- **Focus Groups to Identify New Issues.** Two sessions were held early in the update process.
- **Public Outreach.** A significant outreach effort through the media was undertaken to inform the public of opportunities for comment on the draft Plan.
- **Public Comment Period for Draft Plan.** A 30-day public comment period began on February 23, 2004.
- **Public Involvement Meetings on Draft Plan.** Public information meetings held on the draft Plan on March 16, 17, and 22.

The changes also incorporate the results of several related planning projects that had their own community involvement activities. The other planning projects that most directly influenced this update are listed below.

- CRCOG’s Bradley Area Transportation Study
- CRCOG’s Route 190 Corridor Study
- CRCOG’s Regional Plan of Conservation and Development
- CRCOG’s Environmental Justice Challenge Grant & subsequent Action Plan

Each of these efforts is described below and includes a summary of how the individual plan or this Plan was modified to reflect public input.

### A. Community Involvement Specific to This Plan

**Focus Groups**

Prior to the preparation of this Plan, CRCOG held a series of Focus Groups to discuss particular sections of the 2001 Plan and to define new policy directions to be addressed in this Plan. The Focus Groups brought together persons with a particular interest or expertise in the Focus Group subject.

**Economic Development Focus Group.** The purpose of this Focus Group meeting was to explore how the Regional Transportation Plan should be revised to make it more supportive of regional economic growth. Representatives of MetroHartford Alliance, the Regional Growth Council, CT Department of Transportation, the Connecticut Transportation Strategy Board, the business community, and CRCOG’s Transportation Committee and CRCOG’s Policy Board met on November 6, 2003 to discuss ways to insure
that transportation policies and programs were developed to support the growth of the Region's economy. As a result of this meeting, the Plan was changed to include a new focus on supporting development at Bradley International Airport, and a renewed and strengthened policy on linking land use and transportation.

Environmental Justice. Another Focus Group meeting was held on December 18, 2003, this one to discuss environmental justice concerns. Environmental Justice Advisory Board members met to review elements of the 2001 Plan; to identify transportation issues that were of continuing concern to the region's minority, low-income, and transit-dependent communities; and to explore how the Plan could be revised to address those issues.

As a result of this meeting, five transportation issues of concern to the Region's minority, low-income, and transit dependent populations were added to the Transportation Plan. The Region will address them over the next three years. These issues of special concern are: the acquiring buses with fewer diesel emissions, improving the existing bus system, continuing the Access to Jobs program, assuring the proposed busway projects serve the transit dependent, and improving safety for pedestrians and bicyclists in the urban areas.

Public Involvement – Outreach to the Community

A legal notice informing the public of three public information meetings, opportunities for submitting comments during the March Transportation Committee and Policy Board meetings, and venues for submitting written comments was published on February 24, 2004 in The Hartford Courant, a daily paper with wide circulation in the Region. Display advertisements were published on March 10 in The Hartford Courant and in The Hartford News, a regional English and Spanish language newspaper. The display ad in The Hartford News was published in both English and Spanish.

Information about the meetings was also made available on the Hartford Cable Access Channel, Cox Communications Community Calendar and the Simsbury News Channel. A news release about the meetings and opportunities for comment was sent to 79 media contacts. A news item about the Plan and public information meeting was broadcast on WFSB-TV on the morning of March 22.

The draft plan was posted on CRCOG’s website on February 23, 2004 along with notice of the public information meetings and other opportunities to comment. A copy of the draft Plan was delivered to the main library in each town in the Region with the request that it be made available for view by the public.

Public Comment Period - February 23 to March 24, 2004

The 30-day public comment period on the Plan commenced on February 23, 2004, when CRCOG’s Transportation Committee members voted to approve the release of the draft Plan for consideration by the public. The comment period ended on March 24, 2004, when CRCOG’s Policy Board voted to approve the Plan with minor revisions based on comments received.

Changes made to the draft Plan that reflect comments received during the public comment include:

- A member of CRCOG’s Transportation Committee suggested that a section on the Rocky Hill - Glastonbury Ferry be added to the Plan. This section was added to the Arterial Chapter. This section calls for continued operation of the ferry with reasonable hours of operation and reasonable fares.

- Local officials in the Town of Suffield recommended that the Plan stress the need to plan Bradley Airport improvements in a manner that is sensitive to the concerns of adjacent communities. A recommendation was added to the Airport chapter to address this.

- Officials from the New Haven region request that a recommendation in support of “New Haven area’s efforts to develop bus service between the airport and New Haven” be deleted given the fact that New Haven area officials have not made an effort to develop such a service. Following a discussion
of this suggestion by CRCOG’s Transportation Committee, this section of the Bradley Chapter was revised to include a recommendation reflecting our identification of a need for improved bus service from the airport to metropolitan areas in the I-91 corridor.

Public Information Meetings - March 16, 17 and 22, 2004

Public information meetings on the draft Plan were scheduled for March 16, 17 and 22, 2004. The meeting on March 16 was to be held at 7 p.m. at Capitol Community College on Main Street in Hartford, but that meeting had to be cancelled because of a snowstorm. Due to the late date in the process, and the fact that another meeting was already scheduled for Hartford, this meeting was not rescheduled. The March 17 meeting was held at the CT Fire Academy near Bradley International Airport in Windsor Locks, also at 7 p.m. The March 22 meeting was held at 11 a.m. to accommodate the needs of persons unable to attend evening meetings. It was held at the South Congregational Church in Hartford.

The locations of these meetings were specifically chosen to reflect the major changes to the Plan. The Hartford locations, in addition to being central to the Region and relatively convenient to all residents, are in the heart of the Region’s environmental justice target neighborhoods. EJ concerns are especially recognized in this revised Plan. The Bradley location was chosen because the Plan includes a new chapter on Bradley Airport issues. Each meeting was open to any member of the public and all comments, regardless of the focus, were considered.

Each meeting was planned to follow a similar format. A formal presentation was to be made at the beginning of the meeting, and attendees would then be invited to ask questions and comment on the Plan. However, the attendance at each of the two meetings was very small. An informal discussion about the Plan and more general transportation issues was held instead. No specific comments about the Plan were received at these meetings.

B. Related Community Involvement Efforts

CRCOG Corridor Studies

Two new corridor plans were added to the Transportation Plan with this update: the Bradley Area Transportation Study and the Route 190 Corridor Study. These studies were based on an extensive community involvement process that is based on the key elements summarized below.

1. **Local Advisory Committee.** A separate Local Advisory Committee (LAC) is formed for each community to guide the study, and it includes local elected officials, town planners, and citizens.

2. **Steering Committee.** For studies involving many towns, a Steering Committee is also formed. Members include the chief elected official from each town, other local representatives, and relevant agencies and institutions. This committee assures larger corridor issues are addressed.

3. **Formal Public Meetings.** Formal public meetings are held at important steps in the process: prior to the development of alternatives, after development of the alternatives, and for the draft plan.

4. **Outreach to Citizens.** CRCOG staff also meet with individual property owners, interested citizens, and neighborhood groups. These meetings can have a significant influence on the final proposals.

5. **Town Endorsement.** As a last step, each town is asked to officially endorse the Plan.

**Bradley Area Transportation Study.** A Local Advisory Committee was established for each of the towns involved in this study: East Granby, Suffield, Windsor, and Windsor Locks. In addition, an area-wide Steering Committee was established. Members included the two representatives from each town, the Bradley Airport Commission, the Bradley Development League, Connecticut DOT, CT Transit, the Connecticut Motor Truck Association, the Pioneer Valley Planning Commission (Springfield), the National...
Guard, and the Federal Aviation Administration. CRCOG staff also conducted an extensive outreach campaign to affected property owners, interested citizens, and neighborhood and business groups. More than 50 meetings were held with individuals or groups during the study.

**Route 190 Corridor Study.** As in the Bradley Study, a Local Advisory Committee was established for each town in the study, in this case, Enfield and Somers. And also as in the Bradley Study, CRCOG staff met with interested citizens, and neighborhood groups. Input from these individuals and groups resulted in plans that were more responsive to the needs of the community.

**Plan Modifications.** It is impossible to describe all the ways in which the plans were modified in response to community input since that input was continuous. Likewise, the process of developing the plans was an evolutionary one that was driven by community input to refine alternatives. A few examples are:

- **Bradley Study - Northern Access Road.** Following meetings with the abutting landowners, this project was scaled down to a two-lane roadway with a 35-mph design speed. Enhancements such as a multi-use trail and landscaped buffers were added.

- **Bradley Study - Route 75.** This proposal was changed after several meetings with the owners of businesses on this roadway. The proposed raised median was eliminated and replaced with a center left-turn lane.

- **Route 190 Study - Route 83 Intersection.** A citizens group in Somers expressed an interest in preserving the Woodward House now located on the southeast corner of this intersection. Following meetings with group members and discussions with the State Historical Commission, a plan was developed that called for the relocation of the Woodward House within Somers center.

- **Route 190 Study - Scitico Road.** CRCOG proposed to limit access to Scitico Road by allowing only turns into Scitico Road. Following a public information meeting, it was determined that local residents favored either ‘right turn in only’ or complete elimination of access from Route 190. The plan was changed to reflect those comments.

**CRCOG’s Environmental Justice Challenge Grant & Action Plan**

As the last Capitol Region Transportation Plan was being finalized in early 2001, CRCOG received notification that it was one of four agencies across the nation to be awarded a federal Environmental Justice Challenge Grant. This grant allowed us an opportunity to assess how well our transportation planning programs met the federal environmental justice requirements and to identify ways in involve more minorities and low-income residents in the planning process. The results of our year-long undertaking are described more fully in the final report for that project.

The goal of the grant was to involve more people in the transportation planning process, and the way to do that was to involve the minority and low-income communities from the start. We held four workshops throughout the course of the study. At those workshops, participants proposed several topics that should be addressed in this Plan and as a result, they have been either added to, or reaffirmed in the Plan. The topics are:

- Support for replacing CT Transit’s current bus fleet with clean fuel buses, and for the provision of clean fuel buses on the Regions proposed busways.

- Support for improving transit service to the region’s minority neighborhood, including better bus stops, better advertising of new services, continuation of the L-Route service, better access to daycare, and easier access to bus schedules.

- Support for addressing safer bicycle travel in the City of Hartford.

Also as a result of the work undertaken with the EJ Challenge Grant, we held a special focus group on environmental justice to help update the Plan. The focus group identified additional issues to address in
the Plan which are described above under ‘Focus Groups.’ As a result the new Plan incorporates many issues that evolved from the community involvement process done for environmental justice.

**CRCOG’s Regional Plan of Conservation and Development**

The new chapter on Linking Land Use and Transportation Planning is based in large part on CRCOG’s new Regional Plan of Conservation and Development (RPCD). Since the Transportation Plan update draws heavily from the RPCD, it is worth noting the public involvement effort conducted for the RPCD.

The preparation of the new Regional Plan of Conservation and Development was based on a long process of input from the 29 member communities of the CRCOG region. A representative from each community on CRCOG’s Regional Planning Commission had a role in framing the issues to be addressed in the Regional Plan and participated extensively, on a monthly basis over a two-year time. Additionally, a draft of the Plan and its associated policy maps were distributed to municipal planning directors, and a CRCOG staff member met with each of the 29 municipal planners.

Three public forums were held in locations across the region. These sessions were intended to garner public input to the draft Regional Plan, the executive summary of which had been distributed to the town offices, municipal libraries in each of the 29 member towns, and was available on the CRCOG website. These sessions were advertised in Hartford Courant and Manchester Journal-Inquirer, both of which ran short feature stories on the Regional Plan draft. A public meeting was also held on the final draft Plan.