

## Appendix A. Reports on States That Were Visited

### CALIFORNIA

#### Population

California is the most populous state in the nation, with an estimated population of 28.2 million in 1988.<sup>1</sup> The state has a population density of 163.9 persons per square mile, with 91.3 percent of the population concentrated in urban areas. State population increased by 189,020 people in 1984. The major metropolitan areas include Los Angeles, San Francisco, and San Diego.<sup>2</sup>

#### Geographic Area and Topography

The state ranks third in the nation in total area with 158,693 square miles. The topography consists of a long mountainous coastline, a central valley, the Sierra Nevada mountain range on the east, desert basins in the southern interior, and rugged mountains to the north.<sup>3</sup>

#### Transportation Statistics

California's transportation infrastructure includes 174,081 centerline miles of maintained streets, roads, and highways. These roads contain 11,840 bridges. In addition, there are 8,044 miles of railroad track in California. In the area of waterways and seaports, California claims 1,896 miles of navigable waterways which are open to the public for commercial and/or recreational purposes and 70 public, private, and military ports, 12 of which are major ports with deepwater channels. Finally, there are 1,500 airports in California, 300 of which are for public use.<sup>4</sup>

California's transportation infrastructure is utilized by 19.6 million registered vehicles. This translates into 207.6 billion vehicle miles of travel. Public transit operators number 114, and serve over 937 million passengers. The state's rail system serves five class I railroads, 34 short-line carriers, five interstate and two intrastate AMTRAK routes. The 12 major ports handle more than one-million tons of cargo annually. Finally, the 14 major airports in the state account for 94.6 million passenger enplanements and deplanements.<sup>5</sup>

#### Economy

The principal industries of the California economy include agriculture, aerospace, manufacturing, construction, and recreation.<sup>6</sup> Industry performance in California has been mixed

with the service and real estate sectors as the brightest spots. Manufacturing, particularly durable goods, has showed renewed strength after having slowed in 1986.<sup>7</sup>

The number of Californians employed has seen an average growth rate of 4 percent since 1982. This growth rate has continually exceeded the national average. The unemployment rate has dropped steadily since the 9.9 percent annual rate experienced in 1982.<sup>8</sup>

## **STATE ECONOMIC DEVELOPMENT**

The lead agency responsible for economic development in California is the California Department of Commerce (CDOC). Within the department, economic development activities are undertaken through the Economic Development Program. The program undertakes a major role in implementing and administering programs designed to keep California competitive in the face of increased competition in the United States and abroad.

The program operates from a comprehensive, long-range preparedness plan that points to the 21st century. The plan, in the Annual Report to the Legislature, outlines specific, ongoing programs to:

1. attract new business and industry;
2. retain existing investment;
3. promote the growth of tourism;
4. help communities strengthen their economies;
5. facilitate the development and expansion of small businesses; and,
6. provide incentives for the investment of business in designated areas of the state that have not fully benefitted from California's growth.

The department describes these programs as broad-based economic development efforts that can provide employment opportunities for a cross-section of the work force. It is a program that promotes everything from commercial utilization of research-and-development technology to encouraging travelers to discover California.

The Office of Business Development within CDOC provides assistance to companies in site location, financing, permit processing, and employee training. As the department's site-selection specialists, the Office of Business Development ensures that companies looking to California for business location or expansion are fully aware of potential California sites, as well as the state's competitive advantages for business.

Conspicuously missing from the Economic Development Program, specifically the site-location process, is any reference to transportation or transportation planning and how, or if, it should fit into economic development. This probably indicates a general lack of communication between the CDOC and state and local transportation planning entities. In addition, this shows the department's role as that of promoter, rather than planner.<sup>9</sup>

## **STATE AGENCIES INVOLVED IN TRANSPORTATION**

In California, the main actor in transportation activities is the California Department of Transportation (CALTRANS). CALTRANS is directed by the seven-member California Transportation Commission, whose members are appointed by the governor. The Department of Motor Vehicles (DMV) handles vehicle registration and licensing. The California Public Utilities Commission controls intrastate regulation of the rail and motor carrier operations, but is not involved in the planning aspects of these transportation modes. All port-related planning is done by the respective port authorities and is not conducted by CALTRANS.

### **California Transportation Commission**

Organization and Responsibilities. The commission is composed of seven members, who are appointed by the Governor. The members elect a chairman and a vice chairman. Also serving as ex-officio members are two members of the legislature, one from each chamber. The commission employs an executive director, who serves at the pleasure of the commission members.

The California Transportation Commission is responsible for various activities. It adopts the State Transportation Improvement Plan, which includes an estimate of state funds over a five-year period for transportation projects and allocates these funds to projects prioritized in keeping with statewide interests. It also allocates state funds for capital improvements to specific highway, toll-bridge, public mass transportation, and aeronautics projects upon readiness for construction. Project funding is made within the constraint of available financial resources. Additionally, projects are based on identified local, regional, and state transportation needs.

The commission recommends funding priorities to the legislature among the various elements of the state's mass transportation program, including the State Intermodal Facilities Program. In addition, it provides policy guidance for the administration and legislature by identifying key issues on finance, operations, and future needs in transportation through the annual report to the legislature. Another responsibility is the development of statewide guidelines for mandatory, minimum,

local, and private-sector financial participation in the funding of various elements of the state's transportation program. Finally, the commission submits to the legislature an evaluation of the proposed budget of CALTRANS, its adequacy in contributing to a balanced transportation program, and the adequacy of current state transportation revenue, including gasoline tax rates, driver licensing, vehicle registration, and weight fees.<sup>10</sup>

### **California Department of Transportation**

Organization. CALTRANS has broad responsibility for the planning, design, operation, and maintenance of the state highway system. CALTRANS is also responsible for various activities in overall transportation planning, mass transportation, and aeronautics.<sup>11</sup>

The department is operated through a director. Under the director are the chief engineer, the chief deputy director, the deputy director of resource management, and the deputy director of administration and transportation programs. The operations of the department can be broadly classified as follows: highways, under the chief engineer; transportation planning, under the deputy director of resource management; mass transportation, under the chief deputy director; and aeronautics, under the deputy director of administration and transportation programs.

CALTRANS is further organized into twelve regional offices that handle administration on a more local level. These regional offices are instrumental in the implementation of CALTRANS programs; the role of these regional offices in the planning process will be elaborated later.<sup>12</sup>

Programs and Projects. Under the highway program, CALTRANS is responsible for developing, operating, rehabilitating, and maintaining the state highway system. In addition, the program is charged with making operational improvements on the system to increase safety and improve traffic flow. The program seeks to expand the capacity of the system through construction of planned new routes, completion of the interstate highway system, and construction of additional traffic lanes and interchanges on existing highways.

Under the transportation planning program, CALTRANS is responsible for analyzing transportation policy issues and developing a long-range systems plan for the effective integration of the various modes of transportation in short-term project implementation. In addition, the program coordinates evaluation of regional development plans and transportation improvement programs, promotes transportation systems-management measures that make more effective use of transportation facilities, and develops statewide transportation data.

Under the mass transportation program, CALTRANS is responsible for administering various state-funded programs for transit operators, AMTRAK, and the San Francisco peninsula commuter train. In addition, the program administers various federally funded programs for transit operators, provides technical assistance to transit operators, and supports measures to integrate transit facilities with other modes of transportation, wherever feasible. The mass transit division provides planning, technical assistance, and partial funding for park-and-ride programs, ride-sharing, and high-occupancy-vehicle (HOV) lanes. The division does not have involvement with light-rail, since this activity is undertaken at the regional level. The division of rail partially funds capital improvements, but emphasizes passenger rail operations. California is one of six states which pays AMTRAK to provide service, in addition to federally subsidized basic services. The Rail Passenger Development Plan reviews the state's involvement in rail-passenger services, and identifies CALTRANS policies and plans for the continuation of existing intercity and commuter services. It also provides for the implementation of new services.

Under the aeronautics program, CALTRANS is responsible for administering state-funded programs for aiding local governments in general aviation airport acquisition and development. In addition, the program conducts safety and permit inspections of general aviation airport facilities, develops the California Aviation System Plan, conducts general aviation safety education programs, and ensures compliance with the state's airport noise standards.<sup>13</sup>

Funding. The 1989-90 budget for CALTRANS includes total expenditures of \$3.9 billion from federal funds, reimbursements, and various state funds. Of this amount, \$1.9 billion will be spent in support of CALTRANS and local-assistance programs, and \$2 billion will be spent on highway construction projects.<sup>14</sup>

The sources of revenue for the highway program can be broken down as 56 percent from the federal government, 25 percent from highway-user fuel taxes, 13 percent from truck weight fees, and 6 percent from miscellaneous revenues.

The principal state contribution is the fuel tax. Gasoline is taxed at 18 cents per gallon--nine cents by the federal government and nine cents by the state. Federal and state laws earmark this tax, along with other "road user" taxes for transportation. The nine-cent state gasoline tax is apportioned among the cities, counties, and the state by formula. Of the nine-cent federal gasoline tax, eight cents is earmarked for highway construction and reconstruction, with the remaining one cent for mass transit. Additional state highway revenues come from truck weight taxes and can come from vehicle registration

fees and from drivers' licence fees, if such revenue is not required to support the Department of Motor Vehicles.<sup>15</sup>

Reports and Plans. Planning within CALTRANS is decentralized into the twelve regional offices of the department where most of the actual planning takes place. The headquarters of CALTRANS sets program policy guidelines and assures statewide consistency.

The two major planning documents for the agency are the Systems Plan and the State Transportation Improvement Program (State TIP). The Systems Plan is developed by headquarters through input from the 12 regions as to their long-term transportation needs. The plan is multimodal and has a 20-year time horizon. The plan addresses goals, objectives, and policy considerations. This is achieved by comparing a no-build program, with land-use and population forecasts, with a route concept which includes the goals of the department for that time period. This comparison highlights deficiencies in the transportation infrastructure and policy alternatives can then be detailed.

The California State TIP is short-term document that lists specific projects, such as the building of highways and new rail construction. These projects are identified by the regions and must be within the scope of the Systems Plan. The regional offices designate Regional Transportation Planning Agencies (RTPA) for each metropolitan area in the respective region, usually an MPO. It is the responsibility of the RTPA to develop a Regional TIP. The approach of the RTPA in developing the Regional TIP usually involves a request for advice from cities, counties, and transit operators on methods for setting priorities and is followed by a request for nominations of candidate projects for inclusion in the five-year program. CALTRANS headquarters compiles the Regional TIPs into the State TIP. The document is submitted annually by CALTRANS to the California Transportation Commission for approval.

Through the TIP planning process, CALTRANS, in cooperation with the regional offices, which in turn cooperate with the localities, identifies current and long-range problems and constructs possible solutions. The process allows CALTRANS to focus on the most important problems, thus providing an adequate transportation system within the constraints of limited resources. The process ensures grass-roots input through the Regional TIP and the compilation of the State TIP and final approval by the California Transportation Commission ensures that projects adhere to the multimodal, long-range, System Plan.<sup>16</sup>

## **MPOs AND LOCALITIES INVOLVED IN TRANSPORTATION**

There are 12 metropolitan planning organizations (MPOs) in California. The MPOs have become increasingly important in the transportation picture in California as the state has faced increased growth. In addition, California law requires that a five-year transportation improvement program be developed for each urbanized area. Inclusion in the capital improvement program is a prerequisite for CALTRANS project development and for release of state and federal funds for construction activities.

### **Southern California Association of Governments**

The Southern California Association of Governments (SCAG), is the MPO for the southern California area, including the counties of Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial. The area includes 180 cities, consisting of 14 million people and 6 million jobs. SCAG's responsibilities include planning for transportation, air quality, and water quality, although transportation is the main focus of the agency. Approximately 80 percent of SCAG's funding comes from the federal government, while the remainder is from membership dues and some state funding.

SCAG's main document is a growth plan for the area that predicts major growth patterns in industry and population, the areas that will most likely be effected, and what some of the consequences will be without any intervention. The remainder of SCAG's planning activities take place on a study-specific basis. Economic development is site specific and usually is coordinated with community redevelopment agencies.

SCAG's relationship with other levels of government appears to be quite good. SCAG often conducts joint projects with CALTRANS, using SCAG projections. It also leads planning efforts with city and county governments, along with the ports and private industry. SCAG's role is to help staff the committees, create a dialogue among major actors, and work towards a consensus up to the implementation stage. At that point, SCAG's responsibilities are mainly completed.

For economic development and transportation, the major role for SCAG in Southern California is to relieve traffic congestion. Most actions are taken in response to projections of future congestion increases. It attempts to raise the consciousness of all affected members so change can take place to relieve the current or projected congestion problems.

One of the main differences between SCAG and other MPOs is that in southern California transportation improvements are made for existing businesses, not to attract new ones. In fact,

business relocations into the area often required major infrastructure improvements. Businesses pay for the right to build and improve transportation facilities in Southern California. SCAG is not trying to improve economic development, but is instead trying to manage growth through encouraging certain areas over others.<sup>17</sup>

### **Sacramento Area Council of Governments**

The Sacramento Area Council of Governments (SACOG) is an association of city and county governments, organized to provide a forum for the discussion and study of areawide problems of mutual interest and concern, and to facilitate the development of policies and action recommendations for the solution of such problems. The council serves four counties and fifteen cities.

SACOG is governed by ten-member board of directors composed of four county supervisors and six city council members or mayors appointed by the member jurisdictions. In addition to three standing committees composed of board members, the board is advised by six policy-advisory committees and two technical committees.

As the MPO under federal rules, and the Regional Transportation Planning Agency (RTPA) under state rules, SACOG is a participant in the statewide transportation planning process, as well as local comprehensive planning efforts. Under California transportation planning law, SACOG is responsible for administering funds available to transit operators, conducting performance audits of transit operators, preparing Regional Transportation Improvement Programs, and maintaining a Regional Transportation Plan. Technical planning activities by SACOG often support local land-use planning efforts. In addition, SACOG provides a technical assistance program to cities and counties through its planning staff. SACOG has prepared comprehensive long-range planning studies for transit operators and assisted with many shorter-range studies of transportation, land-use, and environmental problems of importance to local and statewide agencies.

SACOG's transportation planning function consists of several components. The technical basis for development of long-range plans is provided by use of an ongoing census and demographic forecasting function in conjunction with a transportation model. Implementing this technical program has involved local planning staffs, as well as CALTRANS. Under state law, SACOG develops, adopts, and updates a Regional Transportation Plan (RTP) on a biennial schedule. One aspect of the planning progress for developing the RTP is the consideration of management strategies that make the best use of existing transportation facilities and services. Another aspect is the development of a projected land-use pattern. In addition to the RTP, SACOG helps develop and



regularly reviews Short Range Transit Plans for public transit operators and maintains an Airport System Plan.

All transportation planning activity is reviewed by two committees: the Policy Advisory Committee composed of key public works, state agency, and local planning staff persons; and a citizens' committee representing all areas within the region.

An additional committee pertinent to transportation is the Regional Transportation Plan Advisory Committee. It is a sixteen-member committee representing cities and counties, CALTRANS, the Sacramento Regional Transit District, the Sacramento-Yolo Port District, and the Hub Area Transit Authority. The committee advises the council on the Regional Transportation Plan and related matters. The committee meets monthly.

Playing a lesser role in transportation planning is the Transit Productivity Advisory Committee. It is a sixteen-member committee composed of transit operators, union representatives, and transit users. It analyzes and recommends productivity improvements to lower the cost of transit operators using state Transportation Development Act funds, and provides input to the transit planning process.<sup>18</sup>

#### **INTERMODAL PLANS, PROGRAMS, AND PROJECTS**

One innovative aspect of CALTRANS is its Intermodal Facilities Program, which is located within the mass transit division. It is intended to help fund intermodal passenger facilities. It presents opportunities for the state to work with local governments and the private sector to promote the use of public transportation systems, while stimulating economic growth. Since its inception in 1978, the program has funded approximately 60 projects totalling \$60 million. Financing for this program comes through the Petroleum Violation Escrow Account, which is approved by the governor.

Examples of projects funded under the program include the Santa Ana Metro Center and the El Cajon Transit Center. The city of Santa Ana undertook planning for an intermodal facility in 1979. Initial planning focused on relocation of AMTRAK rail facilities to a larger site and to the combining of intercity rail service with intercity and local bus service. Funds were received from the state of California in 1981 for the purchase of the facility site and for improvements for parking, lighting, and landscaping. An allocation to the project was also made by UMTA for track purchase and rehabilitation. The facility was opened in 1985.

The Santa Ana Regional Transportation Center is an intermodal facility serving all regional transportation providers operating in Orange County. In addition to a depot for intermodal passenger transfers, the center provides corporate office space, commercial retail space, and community meeting rooms. The ground floor, containing 47,000 square-feet, is used primarily for transportation services. The second and third floors are used for office space and other tenant facilities, while the fourth and fifth floors are conference and meeting rooms, which are available to civic and professional groups. Revenue that contributes to the operation of the center is generated from tenants and rent from the conference rooms. Approximately 550,000 transportation patrons use the center each year.

In 1979, the city of El Cajon received state funding for an intermodal transportation facility. The state funding, in addition to federal and local funding, enabled the city to build the El Cajon Transit Center. The centrally located intermodal facility provides a point of connection between regional bus services (San Diego transit systems), intercity buses (Greyhound), Dial-A-Ride (contracted with Yellow Cab), and Wheels (contracted with Red Cross) for wheelchair users.

The El Cajon Transit Center provides a variety of services for patrons. Greyhound operates staffed offices for intercity bookings and a full-service travel agency exists capable of booking both foreign and domestic travel. The facility also offers eight bus bays, four covered shelters providing seating space for 64 transit users, 300 parking spaces, and a large loading area for taxis and private automobiles.<sup>19</sup>

In the private sector, the Intermodal Container Transfer Facility (ICTF), located at the ports of Los Angeles and Long Beach, is the most noteworthy. The facility is approximately five miles from the terminals of each port, as compared to other facilities in downtown Los Angeles, which are located some 20 miles from the terminals. The \$130 million facility was privately funded by both ports and the Southern Pacific Railroad, which is the sole railroad using the facility. The ICTF handles about 18 percent of the ports' container traffic.

The ICTF is the world's largest intermodal transfer facility. Serving the ports of Los Angeles and Long Beach, the ICTF receives marine containers via truck and transfers them to rail for shipment throughout the country. Owned and operated by Southern Pacific, the facility began operation in November 1986.

The main reason motivating the construction of the ICTF by Southern Pacific was the desire to reduce travelling times from the two ports to existing rail transfer facilities. Prior to the ICTF, marine containers had to be transported over 20 miles into

downtown Los Angeles for transfer. Southern Pacific's facility is located just four miles from either port. Traffic experts predict that the ICTF will save Los Angeles freeways approximately 15 million miles a year by eliminating over 800,000 truck trips.

The 150-acre site operates 24 hours a day and seven days a week, with the capacity to handle up to 1,000 steamship containers per day. The goal of handling 750,000 containers per year may be reached after Phase II additions are completed.

An arriving truck, carrying a marine container, enters the ICTF through one of the precheck intercom stations. The truck is then instructed to proceed to a lane in the all-weather gate structure for inspection of the container and chassis. After inspection, the truck will advance within the ICTF to one of three center parking areas consisting of 2,200 container stalls. There, the truck will either drop off an inbound container or pick up an outbound one.

Once the container is parked, transfer to the rail side is performed by one of five overhead gantry cranes. To complete transfer, crane operators have the choice of using five loading/unloading tracks and two running tracks. These lines make up over seven miles of trackage within the facility. For security reasons 13 closed-circuit cameras monitor the entire facility observing all activities.

In addition to the sheer size of the facility and its proximity to the two ports, the computer capability of the ICTF differentiates it from other facilities. Southern Pacific's program, called Electronic Data Interchange (EDI), transfers manifest data from an ocean carrier directly into Southern Pacific's system. EDI then rearranges this data to formulate the rail waybill and transfer strategy once the container is in the facility. Components of the overall transfer strategy include terminal gate manning requirements, reservation of flatcars and locomotives, formulation of load plans, and coordination of truck transfer from the marine facilities at the ports.

EDI will also allow Southern Pacific to transmit freight bills directly into their customers' computer systems. By enhancing terminal operations through EDI, a truck may complete the gate check-in process, including all inspections and paperwork, within five minutes. In all, a truck averages getting in and out of the ICTF within 15 minutes. The speed and efficiency in handling the processing and transfer of containers means that a 200-container, double-stack train can be loaded and unloaded within seven to eight hours. Southern Pacific reports that this is 40 percent faster than most intermodal yards.

For steamship carriers, EDI saves accounting and clerical resources, as well as transfer time. Carriers are kept constantly aware of the status of their containers within the ICTF. Southern Pacific's Customer Account Report System (CAR) traces shipments while on track. Customers are also able to receive systematic time updates of all container/cat/train movements via Total Operations Planning System (TOPS), operated by Southern Pacific in San Francisco.

Phase II represents additions to the ICTF in order to handle the transfer of 750,000 containers annually in the future. Large growth at both ports has occurred over the past decade and is expected to double by the end of the century. To meet this increased cargo demand, Phase II encompasses the construction of 55 additional acres for parking, five new loading tracks and two new storage tracks.

With the major completion of the ICTF, Southern Pacific has actively begun to court Pacific Rim steamship carriers entering the United States' market. Construction of the ICTF has also enhanced the viability of the ports of Long Beach and Los Angeles in meeting this increased cargo demand. By expanding their rail service within the country and facilitating efficient intermodal transfer, Southern Pacific is also making inroads in the shipping industry that travels through the Panama Canal. Use of a variety of landbridge, minibridge and microbridge arrangements through the Long Beach/Los Angeles area saves eight days of sailing time, as compared to the same container moving via the Panama Canal en route to the East Coast.

## **SUMMARY**

Several general observations can be made on transportation activities in California. First, CALTRANS' reliance on its regional offices to conduct planning is innovative. This arrangement provides a decentralized system of planning that stresses a grass-roots planning process that is in touch with local and regional needs and peculiarities. System planning is achieved in the compilation of the Regional TIPS and approval by the California Transportation Commission. In addition, CALTRANS is generally regarded as a "model" state department of transportation. CALTRANS was formed in the mid-1970s by combining several transportation-related agencies. The department appears to have survived transitional difficulties and now seems to operate in a coordinated and highly professional manner.

Second, the Intermodal Facilities Program is unique for a state DOT-administered intermodal program. This program represents a solid and tangible commitment to passenger intermodal planning and funding, outside of the regular planning

process. This mechanism, in effect, serves to highlight the importance of and need for intermodal projects.

Finally, although economic development is obviously a primary goal of the state, the transportation considerations of economic development have not been specifically addressed by the state's economic development agencies. Most transportation improvements simply take place to accommodate present, and not future economic growth. This is due, in large part, to the critical need for additional transportation infrastructure in the state. Projects are primarily considered based on their necessity. Since transportation facilities are usually overburdened, expeditious expansion of existing facilities or completion of new ones is the main focus. Equally important, California's attractiveness for industry is pervasive enough to lessen transportation access concerns for new and expanding businesses.

## **FLORIDA**

### **Population**

Florida is the fourth most populous state in the nation, with an estimated population of 12.4 million in 1988.<sup>20</sup> The state has a population density of approximately 202.7 persons per square mile, with 84.3 percent of the population residing in urban areas. State population increased by 3.8 million people between 1970 and 1984. One reason for this phenomenal growth is that Florida is a popular state for retirement. Eighteen percent of Florida's population is over 65 years of age. The major urban areas in the state are southeast Florida (Miami and Ft. Lauderdale), Orlando, Tampa, and Jacksonville. Tallahassee is the state capital.<sup>21</sup>

### **Geographic Area and Topography**

The total area of Florida is 58,560 square miles, ranking it twenty-second among the fifty states. Of this total area, land covers 54,136 square miles. In terms of topography, Florida possesses basically flat or rolling terrain, with the highest point being only 345 feet above sea level. Florida's geographic location and long coastline help make shipping and tourism two of the state's major industries.

### **Transportation Statistics**

The state's transportation system depends primarily on highways for movement of people and freight. The state highway system contains 35,248 lane miles of highways. There are approximately 5,400 bridges within the state. The railroads in the state move over about 3,340 miles of track. This rail system consists of twelve railroad carriers, of which three are considered class I carriers (Florida East Coast, CSX, and Burlington Northern). Approximately 138 million tons of freight were transported over Florida tracks in 1986. AMTRAK also operates two passenger trains daily in and out of Florida.

The activity of 12 major deep-water ports, serving the needs of freight and passengers, is very important to the state's transportation system. The increasing amount of air travel is accommodated by some 600 airports, which are major actors in the state's tourism industry. Of these airports, 22 are served by commercial airlines and 6 are considered international airports. Approximately 17 million people visited Florida via air in 1987. The airports of Florida also handled some 554 million pounds of cargo in 1987.

## Economy

The economy of Florida is rather diversified. The principle industries of the state include natural resources (agriculture, forestry, and mining), manufacturing, international trade, and tourism. Of these industries, tourism is the most important to Florida's economy. Thirty-five million tourists visited the state in 1988, contributing about \$8 billion to the state's economy. This reliance on tourism is shifting, however, as the state continues to promote international trade (freight and passengers), based on its excellent proximity to the Caribbean and South America. The state is also beginning to attract a wide range of manufacturers, in addition to its rapidly growing motion-picture industry.

Since 1979, Florida has maintained an unemployment rate below that of the national average. In 1988, the annual average unemployment rate was 5 percent. A significant portion of Florida's new residents are retirees. Because these people tend not to participate in the labor force but do create the need for an expanded service market, unemployment has tended to be relatively low over the past few years.

## STATE ECONOMIC DEVELOPMENT

The Florida Department of Commerce is the lead state agency concerned with the state's economic development. This department is involved in activities at the local, state, national, and international levels. At the local level, the department has direct involvement with the needs of individual communities through key contact persons in each county. The high cost of economic development has made it necessary for the state to become the primary vehicle for promotion rather than the individual localities. The department is organized under the direction of the Secretary of Commerce, who is appointed by the governor. The two major divisions within the department are tourism and economic development. The economic development division is divided into four bureaus: the bureau of industrial development, the bureau of business assistance, the bureau of international trade, and the bureau of economic analysis. These bureaus address the needs of existing industry within the state, as well as those of potential companies. These divisions also promote Florida at the national and international level as a worthwhile location for certain industries, and as a good global export market. The bureau of international trade operates several foreign offices in key locations and organizes periodic trade shows worldwide.

The Florida Department of Commerce has no economic development plan per se. The department has created an Agency Functional Plan (AFP), as legally required by the State

Comprehensive Plan (SCP), which will be discussed in greater detail later. This AFP delineates the role of the department in accomplishing the overall goals of state. The major emphasis of this plan is on economic development and on tourism, as these are the primary concerns of the department. The AFP summarizes what the department expects to accomplish during the fiscal 1987-1991 period.

With regard to transportation involvement, the Florida Department of Commerce does not employ any transportation professionals. The department does work with the Florida Department of Transportation in the administration of the Economic Development Transportation Fund. This fund makes financial assistance available to firms in certain circumstances to improve transportation accessibility. Approximately \$10 million annually are available in this fund to assist current or potential firms in small-scale road improvements. In addition to the promotion of port activity through international trade, the Floridan Department of Commerce is also involved in the Florida high speed rail project, which will be discussed later.

In June 1986, Florida adopted a State Comprehensive Plan (SCP). This plan (Chapter 187, Florida Statutes) evolved out of the realization that the state needed to introduce some major legislative initiatives in order to manage the enormous growth that Florida was beginning to experience. This legislative process began in 1984 with the State Regional Planning Act, which required the creation of the SCP. A year later, the 1985 Florida Legislature adopted the Omnibus Growth Management Act, which focused on the integration of planning at the state, regional, and local levels. These two acts have combined to provide for the formation of a statewide dialogue which addresses the necessary goals and policies of all governmental entities.

In order for the policies of the SCP to be effective, the state adopted into law requirements for the creation of State Agency Functional Plans, Regional Comprehensive Policy Plans, and Local Government Comprehensive Plans. These plans are consistent with the goals of the state as a whole. Each state agency is required to produce its own agency functional plan and, according to the Growth Management Act, each locality within the state must adopt a comprehensive plan along with a set of land development regulations. These plans must address the transportation, sewer, education, and health-care needs of the locality in relation to the amount of growth in the area. Once these plans are approved by the state, the communities may not issue any kind of building permits which would deviate from the plan.

It is because of this legislation that transportation in Florida is regarded as a tool for growth management, rather than as a primary actor in economic development. The Florida



Department of Transportation has determined five issues which are paramount to growth management:

1. provision of infrastructure concurrent with development;
2. coordination of state, regional, and local plans;
3. attraction of desirable development;
4. encouragement of development within urban areas and within transportation corridors; and,
5. management of development in coastal areas.<sup>22</sup>

Through these issues, the department has defined growth management as:

...the implementation of state goals and department policies, objectives and standards to obtain maximum benefit from environmental, physical, social, and economic use of land by working with local governments to control the timing, nature and local [sic] of growth into preferred development patterns.<sup>23</sup>

It is with this approach to growth management that the Florida Department of Transportation has formulated its own policy, as other agencies and localities have issued or are concurrently issuing their policies.

#### **STATE AGENCIES INVOLVED IN TRANSPORTATION**

The primary organization involved in the coordination of Florida's transportation is the Florida Department of Transportation (FDOT). In addition to FDOT, there are other organizations which contribute to the formulation of the state's transportation policy.

#### **Florida Department of Transportation**

Organization. The Florida Department of Transportation is structured functionally. The department operates under the direction of the Secretary of Transportation, who is appointed by and reports to the governor. The Transportation Commission is the advising body to the secretary, and its members are also appointed by the governor. The department is divided into seven districts, each headed by a district secretary. The assistant secretary of transportation oversees the three major divisions of operation: the state transportation planner, the state transportation engineer, and the state operations administrator. Modal policy planning and implementation are centered under the state transportation planner.

Programs and Projects. FDOT has some responsibility in all areas of transportation activity throughout the state. FDOT's

duties vary according to the type of transportation involved. In the areas of highway, railroad, and transit operations, FDOT plays an active role in planning, funding, and project implementation. In aviation, FDOT's role has been more of an advisory nature, but, with the recently published Aviation System Plan, this sector has become increasingly more visible in FDOT activities. Waterports operate almost exclusively under private authorities and are not included within FDOT's jurisdiction to the extent of the other modes. The state also includes pedestrian and bicycle transportation activities in FDOT's responsibilities.

Florida's rapid population increase in recent years, combined with the increasing average age of the population, its density, and the state's diverse economic interests, has created the need for an improved state transportation system. Florida's growing population continues to place stress on the state's public infrastructure, which has been pushed to its feasible limits. It is constantly in need of improvements. Major highways in the state require constant attention in terms of either repair or capacity additions. Also, as more elderly persons move to Florida, the state as a whole "grays" as well. This phenomenon has become a major concern of state planning officials. Decisions regarding the provision of adequate transportation services to the elderly, as well as to the underprivileged, are of significant importance.

Freight movement also grows in importance as the state grows. Efficiency of movement and adequate means of freight shipment are important to FDOT. Maintaining communication and planning assistance is also one of the department's major roles. Coordination among Florida's various agencies has become essential to this improvement process.

The state highway system (SHS) is the primary responsibility of FDOT. In addition to being responsible for the construction and maintenance of the state's highway infrastructure, the department is responsible for providing travel corridors to and through urban areas, and for the enhancement of local traffic circulation by providing access to adjacent property owners. FDOT also classifies all public roads in the state with regard to interregional mobility, route length, traffic volume, and land access. Current highway improvement projects underway in certain regions of the state (particularly the southeastern region) involve the creation of high-occupancy-vehicle (HOV) lanes. These HOV lanes will hopefully improve mobility through the promotion of ride sharing.

FDOT's role with regard to transit is providing technical and planning assistance, undertaking service development projects, and matching the local portion of federal capital funds. The major responsibility of FDOT with regard to transit

is to assist localities in finding ways to improve transit ridership. This assistance is provided through coordinated planning, as well as through funding for eligible programs with the Local Government Cooperative Assistance Program. The department also manages federal transit initiatives, such as small urban/rural programs and elderly/handicapped programs, participates with the private sector in third-party van pools, and provides park-and-ride lots for the development of ride sharing, vanpooling, and express bus service throughout the state.

However, even Florida's rapid growth has not boosted ridership in the state's various transit programs. Transit services include taxis, dial-a-ride systems, fixed-route bus systems, express bus service, ride sharing (car/van pools), and fixed-guideway passenger facilities. These services are provided by the various urban centers in order to reduce traffic congestion. Suburbanization and urban sprawl, however, have combined to maintain Florida's dependence on automobile travel.

The rail division of FDOT is an important participant in the state's transportation system. This division is certified by the Federal Railroad Administration (FRA) to monitor and inspect railroad track, freight-car conditions, and operating practices. This division is dedicated to the planning of statewide transportation enhancement through its interest in having adequate rail access to ports, evaluations of light-density rail freight lines, and the potential acquisition of abandoned rail line rights of way.

FDOT continually evaluates the 1,100 miles of light-density track. Evaluation criteria have been formulated to define and measure the necessity of specific rail services. Statewide rail corridor criteria indicate that rail travel demand between regions will be considered as adequately served when high-speed rail service connects southeast Florida, Orlando, and Tampa by 1995, passenger service is provided to urbanized areas over 500,000 in population, freight service is provided to urbanized areas over 200,000, and rail terminal access is adequate, based on highway criteria.<sup>24</sup> The state legislature has also determined priority categories for ascertaining rail lines eligible for rail-service-assistance funding.

The state has created an advanced right-of-way acquisition program and an abandoned rail right-of-way acquisition program. These programs have enabled the acquisition of a number of properties deemed useful for other transportation purposes. The policy is to acquire, maintain, and manage rights of way which have been designated as a future transportation corridor.

According to the 1988 State Aviation Programs Overview, which is based on the Florida statutes, the essential duties of

FDOT's Bureau of Aviation are to "promote the further development and improvement of air routes, airport facilities and landing fields, and protect their approaches, to stimulate aviation commerce."<sup>25</sup> The policies under which the department operates for this purpose include coordination with local governments, regional planning agencies, and the private sector in protecting and maintaining existing aviation capacity and safety, maximization of capacity and safety at existing facilities, programming of more funds for system capacity, and development of new facilities for additional capacity where required.<sup>26</sup> The department's two basic statewide operational responsibilities are the inspection and licensing of airports and, the preservation of airspace.

The state promotes aviation capacity improvements through FDOT's distribution of appropriate grant programs. These programs provide assistance for airport improvement, land acquisition, economic development, master planning, and "resource airports," that is, facilities that are regarded as valuable to the state's future aviation needs.

The major role of FDOT in regard to waterport activity is to provide better land access to the ports through improved highways and railroads. There are 12 major deep-water ports in Florida. Most of these ports are owned by their respective city's or county's regional port authority. Due to the nature of port activity in Florida, the ports have not required the attention of FDOT. The competition which ports experience has led to major improvements with regard to private shipping interests.

The Florida Department of Transportation also works closely with individual metropolitan planning organizations (MPOs) in protecting and acquiring rights of way within certain corridors. These corridors are protected for possible future use as extensions of Florida's Turnpike, commuter rail, or high-speed rail operations, as well as for extensions of the local-road system.

Funding. Much of the department's activities are financed by revenues deposited in the State Transportation Trust Fund. Except for aviation, which derives its funding from an aviation fuel tax, the State Transportation Trust Fund is funded entirely from gasoline tax revenues. For fiscal year 1989, the total budget for FDOT is \$950.4 million.<sup>27</sup> This funding level is somewhat lower than some of the previous budgets which surpassed \$1 billion. Highway needs accounted for almost 88 percent (\$834.8 million) of the total budget, while rail received 6 percent (\$56.6 million), aviation 4 percent (\$34.1 million), and transit 2 percent (\$24.9 million). Because budgeting for Transportation Trust Fund revenues is based on forecasts of gasoline usage, Florida has recently encountered some difficulty in deriving adequate funding for its projects. The state's

current overall tax structure is believed to be one of the major factors that attracts new residents and industry to locate in Florida. The state has no income tax. In order to fund the major long-term projects on which the state is embarking, FDOT is currently looking at innovative financing techniques.

In 1988, the state adopted the Florida Transportation Corporation Act to provide for private-sector landowner participation in the establishment of transportation corridors. The legislature also enacted this bill to include "nonmember, nonstock, nonprofit corporation(s)" in the promotion and development of designated projects under contract with the department."<sup>28</sup> Justifications have been advanced for proposed additional sources of funding, including the state sales tax, as well as increased appropriations from the state's general fund. Arguments have been made that the state's transportation system contributes importantly to the state's economic well-being and thus is entitled to additional legislated revenue. One unpopular option the state has at its disposal is to raise taxes. The entire funding issue is currently one of the major topics scheduled for deliberation in the 1989 legislative session.

Reports and Plans. Under the State Comprehensive Plan, the Agency Functional Plan for the FDOT is the Florida Transportation Plan (FTP). This plan documents the department's policies, directs the department's programming and budgeting activities, and guides and assists local transportation activities. Contained within the FTP is the mission statement of FDOT which specifies the goal of developing and maintaining "modal systems plans for a multimodal statewide transportation system".<sup>29</sup> The FTP essentially is a strategic policy plan and, therefore, does not specify projects to be undertaken. The FTP is not a comprehensive transportation plan, but it does delineate policies and processes that are required to carry out individual projects.

FDOT also produces specific modal system plans. The Florida Rail System Plan is a five-volume document that follows the general framework of the FTP. The plan addresses specific issues regarding rail activity in Florida and sets out FDOT's guidelines in terms of rail access to ports, light-density rail freight line evaluations, evaluation of projects considered for financial assistance, abandoned rail line right-of-way acquisitions, and issues, policies, and conclusions. In addressing these various railroad needs, FDOT is proposing a more coordinated effort by 1990 in the area of intermodal activity.

FDOT has also recently produced the Florida Aviation System Plan. Published in March 1989, this document addresses the growing aviation problems and needs associated with a rapidly expanding population. Air travel to and from the state is quickly becoming a greater factor in satisfying the transportation needs of tourists and residents alike. This

system plan addresses three primary issues: the need to add a great deal of capacity to existing airports and the need to build several new air facilities; the need for government/private-sector cooperation to finance necessary capital expenditures; and the need for improved management of airspace to deal with heavy levels of air traffic and to avoid interference from tall structures.<sup>30</sup>

### **Florida High Speed Rail Commission**

The Florida High Speed Rail Commission was formed in 1984 to establish high-speed rail service between Miami, Orlando, and Tampa by 1995. This commission, a separate entity not affiliated with the FDOT, has a small staff whose responsibilities are to coordinate the application process to award the franchise for the high-speed rail service. Funding, however, for this commission is allocated from the FDOT's general operating budget. The most interesting aspect of the funding of the train service itself is that it will be financed entirely by the private sector. Private firms are competing for the franchise rights to finance this rail system. The awarding of the franchise will occur in 1991. The applicant ultimately awarded the franchise will have financial incentives for development such as property development rights along the high-speed rail corridor and the availability of federal tax-exempt bonding authority. In exchange, the franchise holder must comply with state, regional, and local environmental and growth management plans as required by the State Comprehensive Plan.

### **Tri-County Commuter Rail Organization**

The southeast region of Florida includes Broward, Dade, and Palm Beach counties. It is one of the fastest growing regions in the nation; by the year 2000, population is expected to increase 50 percent, from 3.6 million to 5.4 million people. While the first effort to establish some form of mass transit in this tri-county area occurred in 1971, no progress was made until 1984 regarding the type of transportation that would best suit the tri-counties' needs. The Florida Department of Transportation provided technical and financial assistance for a proposed commuter rail service. Use of this service was to coincide with the proposed major reconstruction of Interstate 95, which is the main artery for transportation activity in the region. Representatives from each of the counties' MPOs formed the Tri-County MPO Committee on Regional Transit in 1985. An interlocal agreement established about six months later created the South Florida Tri-County Commuter Rail Organization (TCRO) which is a local policy organization comprised of elected officials from the three counties. This organization was necessitated by the fact that implementation of commuter rail service is quite a lengthy process. FDOT purchased the CSX's rail line corridor within this region for \$300 million, and is responsible for one-half of the

operating costs of the system; TCRO will pay the remainder. The individual local counties agreed to pay for feeder bus service to support the rail system.

### **Florida Ports Council**

The Florida Ports Council is a private organization set up primarily as a lobbying forum for the state's ports. The council works with the state Legislature, FDOT, and the Florida Department of Commerce to address the common needs and goals of Florida's ports. One of the primary objectives of the council is to maintain an equal balance of competition between Florida's ports and those of neighboring states. Many of the ports in other states receive considerable financial aid from their respective state governments. It is not likely that Florida's ports would favor state financial assistance due to the number of "strings" that would be attached through the use of public funds. However, the Florida Ports Council does rely on other forms of state assistance, such as land-side accessibility and trade development programs in order to foster competition. The state of Florida is unique among southeastern states in that its ports are completely independent of state funding. Some of the other surrounding states have a direct financial interest in the success of their respective ports.

### **Florida Airport Managers Association**

The Florida Airport Managers Association is another organization directly involved in Florida's transportation issues. Comprised of airport officials statewide, this association addresses the concerns of local and regional airports with regard to Federal Aviation Administration regulations, airspace congestion, and a number of growth-related issues. The association is similar in nature to the Florida Ports Council in that it represents the interests of all airport facilities. However, the Florida Airport Managers Association has a more active dialogue with FDOT through regular meetings with the Bureau of Aviation and the bureau's active involvement in the airports' needs.

### **Florida Transit Association**

The Florida Transit Association (FTA) is yet another group of transportation officials concerned with promotion of their membership's particular needs. The FTA is a trade organization comprised of transit officials working together to promote statewide public transit. Members pay annual dues to finance lobbying efforts before the state legislature for support and promotion of legislative initiatives. The Florida Department of Transportation's Rail/Transit Office maintains a formal working relationship with the FTA to assist in meeting the needs of individual localities throughout the state.

## **MPOs AND LOCALITIES AND INVOLVED IN TRANSPORTATION**

The state of Florida has 21 metropolitan planning organizations (MPOs). The State Comprehensive Plan has established the importance of long-range planning at all levels of government, but especially at the local level. Through this legislation, all of the local planning organizations in the state are required to present a comprehensive plan, incorporating all related issues including transportation planning. A detailed description of the requirement for local transportation plans to be included in all state-planned activities is contained in the Florida statutes (1987). A "systematic planning process" aimed at developing a statewide transportation plan, which integrates the individual plans of MPOs will be created by FDOT with the assistance of the Metropolitan Planning Organization Advisory Committee. This committee, composed of a representative from each MPO in the state, is charged with making recommendations to FDOT with regard to this statewide plan. Because of this legislative involvement, every MPO in the state is active in the planning process, but to varying degrees.

### **Tallahassee-Leon County MPO**

The Metropolitan Statistical Area consisting of Leon and Gadsden Counties experienced a 17 percent growth in population from 190,329 people in 1980, to 222,657 in 1987. This increase was only about one-half of that experienced in central and southeastern Florida.<sup>31</sup> Due to its relatively slower growth rate, the structure of the Tallahassee-Leon County MPO differs somewhat from other MPOs in Florida. The city of Tallahassee is the only metropolitan area within Leon County, and Leon County is the only county within this particular MPO. Because of this structure, the Tallahassee-Leon County MPO is made up of all five city commissioners and all seven county commissioners. This organization presents both benefits and difficulties in making necessary decisions.

As opposed to the structure of many of the other MPOs throughout the state, the Tallahassee-Leon MPO has the advantage of having all of the important politicians required for most policy decisions present at MPO meetings. A problem with this structure, however, is that the city and the county often disagree over planning proposals. This is a common problem nationwide, but is particularly difficult in Tallahassee, because the staff of the MPO also belong to the city of Tallahassee's own planning department. The city planning department employs economic development professionals, but there is not much coordination between these individuals and transportation planners.



In addition to coordinating the activities of the city and county commissions, the MPO is responsible for the preparation of the local comprehensive plan under the terms of the State Comprehensive Plan, the development of a long-range transportation plan, and the study and identification of future right-of-way corridors for FDOT. The Tallahassee Municipal Airport is a division within the city's organization, but operates almost entirely independently under Federal Aviation Administration regulations. The airport does work with the MPO by including any pending capital improvements in the Transportation Improvement Program, but collects all data independently of the MPO.

TalTran is Tallahassee's mass transit authority. Due to various local factors such as the age, health, and income of the city as a whole, the use of TalTran services is quite low. Because of low ridership on the city's transit service, the ever-growing impact of automobile use is a major concern of the local MPO. As a result, the transportation planning department of Tallahassee is involved almost exclusively in maintaining adequate road and bikeway conditions and availability. Bikeway infrastructure needs are evaluated at the same time that new roadway construction or improvements are undertaken. The growth of Tallahassee has begun to have important effects on the city's infrastructure. The state legislation requiring that the necessary infrastructure be in place concurrent with any future local development has been the source of frustration to the city.

The problem from the city's perspective is the lack of adequate financial aid from the state, particularly in the area of transportation. One estimate reveals that with the current funding sources, only about 20 percent of the needed \$500 million will be available to meet the requirements of a transportation plan for the year 2010. A proposal to assist in revenue generation is the creation of a system of levying a transportation impact fee for all development. Under this plan, any development (commercial or residential) would be assessed a fee based on the estimated trip-generation rate of that development. Another source of frustration to the city is the fact that, because of budget shortfalls, the state has pushed back some of the projects included in the Tallahassee five-year plan.

#### **Miami (Metro-Dade) MPO**

The Miami (Metro-Dade) MPO is considerably different from the Tallahassee MPO for three major reasons. One difference is in the structure of the organization. In 1988, Senate Bill 295 increased the total number of voting members on the MPO's board from nine to eleven. These governor-appointed members include the Metro-Dade mayor and the eight Dade County Commissioners, an elected municipal official, and a representative from the

unincorporated area of Dade County. Also on the MPO board are two non-voting representatives from FDOT.

The second major difference is in the degree of coordination that the MPO has with other agencies in regard to regional transportation planning. Due to the nature of growth in southeast Florida, of which Miami is the hub, entities such as the South Florida Regional Planning Council, the Broward and Palm Beach Counties MPOs, and the previously mentioned Tri-County Rail Organization play a major role in the planning activities of the area's transportation needs.

A third item which distinguishes the activities of the city of Miami from those of Tallahassee is the level of transit service which the Metro-Dade Transit Agency (MDTA) provides. MDTA is the third largest department of the Metro-Dade county government, and is responsible for planning and providing all public transit in Dade County. There are three major components of this transit system. These items are the Metrobus fleet which operates 23 hours per day providing service to most areas of Dade County; Metrorail, an elevated, electrically powered rapid transit system that serves some 21 miles of the Miami area with transfer facilities in development to connect with the Tri-County Rail and Metromover services; and Metromover, a 1.9-mile, double-loop elevated people mover which provides service to the downtown central business district of Miami. MDTA carries over 200,000 riders per day on these three components.

In addition to MDTA, the Metro-Dade MPO also solicits participation from other transportation departments within the municipal government. The Metro-Dade Seaport Department and Aviation Department provide staff resources and technical support to the MPO.

#### **INTERMODAL PLANS, PROGRAMS, AND PROJECTS**

The emergence of the state of Florida as a major competitor in import and export activity has created the necessity for efficient operations among the state's port facilities. Due to the nature of port involvement in the state's economic well being and the success of the private sector in these operations, FDOT has essentially stayed out of intermodal operations. However, FDOT's interest in providing adequate transportation service in all modes entering or leaving all ports is a major factor allowing the ports to focus their attention on improving their own intermodal facilities to maintain their competitiveness. Multimillion-dollar improvements are currently under way or were recently completed at many of these major maritime ports. Many of these improvements have been brought about not only because of the need for additional space, but also because of the increasing necessity for the efficient transfer of goods through intermodal

activity. While it is not unique in its intermodal capabilities, the Port of Jacksonville, by virtue of its location, is an excellent example of the value of intermodal capabilities.

The Jacksonville Port Authority (JPA) is an independent city agency, which is chartered by the state of Florida. JPA owns and operates two maritime facilities, as well as three aviation facilities. The port is located on the St. John's River and provides easy access to the Atlantic Ocean. Jacksonville is also located at the intersection of Interstates 10 and 95 and is near Interstate 75. This location allows excellent truck access to the port from most of the major U.S. markets. Rail access is also a key to Jacksonville's good location. Rail lines operated by CSX, Norfolk Southern, and Florida East Coast railroads extend north, south, and west. The fourth mode of transportation, which is important to Jacksonville's intermodal activity, is air travel. The JPA operates three airports of which the Jacksonville International Airport is the largest. This facility is served by 18 cargo carriers, in addition to numerous passenger lines. Currently, this airport is undergoing expansion in order to facilitate the handling of its growing passenger and cargo traffic. The fact that the JPA owns and operates air and maritime facilities is important to the future development of intermodal activities.<sup>32</sup>

The two maritime terminals operated by JPA are the Blount Island Marine Terminal and the Talleyrand Marine Terminal. These two facilities handle paper products, scrap metal, clay, peanuts, wood pulp, citrus, South American and Australian food perishables, coal, coffee, iron, steel, lumber, petroleum, and automobiles. Blount Island is the more active of the two terminals in terms of its intermodal capabilities. A \$55 million expansion program (funded by the issuance of revenue bonds) will allow the port to effectively handle more containerized cargo. These improvements will include the addition of three new fourth-generation container cranes, bringing the number of cranes on Blount Island to seven. Other plans include the addition of 550 feet of wharf space, the paving of container storage areas, and the building of a new four-lane road to provide even better highway access to the port. Another significant improvement to the port is the addition of a 50-acre, on-terminal, rail intermodal yard.

Still another factor which making the Port of Jacksonville a major competitor in the shipping market is the addition of the Jacksonville Intermodal Yard. This facility, known as the Duvall Terminal, is conveniently located near the intersection of Interstates 10 and 295. It was constructed at a cost of \$19.3 million, and is owned and operated by CSX Transportation.<sup>33</sup> CSX/Sea-Land Intermodal (CSL) is quite active throughout Florida in providing service to Tampa, Orlando, Miami, and Jacksonville. The CSL intermodal facility at Jacksonville is served daily by

six inbound and six outbound trains. These trains benefit from the piggyback and container capabilities at this facility, which utilize two working tracks (possessing an 80-car capacity) and seven supporting tracks that store 200 flatcars. The facility operates three LeTourneau sideloaders that perform an average of 12,000 lifts per month.

## **SUMMARY**

The state of Florida is considered by many to be a front-runner among the states in transportation activity. This leadership is based on several innovations which Florida has begun to implement. In the case of Florida, transportation improvements have resulted from (instead of causing) rapid increases in population size and industrialization. Transportation facilities have struggled to keep up with the demands of such an explosion of growth.

The most notable of these innovations is the State Comprehensive Plan. The use of this plan as a growth-management tool is a somewhat unique concept that Florida has established in response to the growth it is experiencing. In order to manage growth statewide, Florida has decided to start at the local level and work its way toward an overall state policy. By involving the various local or regional planning organizations through the Metropolitan Planning Organization Advisory Council, ideally every aspect of the impacts of growth on the state and the concerns of the localities will be evaluated.

In order for the State Comprehensive Plan to be successful, however, there are two related issues which must be addressed: budget shortfalls and concurrency. The state is currently experiencing difficulty in raising revenues for its transportation programs. Because of this shortfall, some projects are being postponed indefinitely. Related to this issue is the problem of concurrency. Under the State Comprehensive Growth Management Act, individual localities are solely responsible for providing the necessary infrastructure prior to development of any kind. By binding cities to such requirements, the state has created some serious difficulties for the cities. The financial hardships of localities will tend to prevent any development needed to manage the state's growth. Once an MPO submits a strategic plan and it is adopted by the state, it is legally binding.

In the opinion of many critics, including some MPO officials, unless more financial assistance is provided, the state will have to lessen the restrictions upon localities for the State Comprehensive Plan to succeed. This opinion is countered by some state level officials who contend that, in the area of transportation, localities have alternatives that will

enable them to deal effectively with concurrency. Some suggested alternatives include improved transportation system management, alternate zoning and land-use regulations, and more flexible financing sources such as impact fees. Improved communication between the state and communities has also been proposed as an aid in dealing with these issues. FDOT is active in MPO activities and is trying to make them stronger in the transportation coordination arena.

A second impressive feature is the Tri-County Commuter Rail Project (Tri-Rail), located in the Miami area. This is a unique undertaking due to the fact that it is the first such project started in the United States in the past 20 years.<sup>34</sup> The rapid growth of the Miami area has placed a strain on all means of transportation. Through the operation of this commuter rail program, the state hopes to relieve some of the congestion in the Interstate 95 corridor; the corridor will require major reconstruction over the next few years. The Tri-Rail project was initially established to help relieve this strain on highway travel and, if successful, will alleviate many of the transportation problems in south Florida.

The third major project of national significance is the promotion of Florida's high-speed rail facility. This project is unique in two ways. First of all, the facility will be the first such project in the United States, even though several European and Asian countries have operated high-speed rail programs for many years with a great deal of success. The introduction of this type of travel into the United States will be quite significant. The second important aspect of this project is in its unique financing mechanism.

In the opinion of several state transportation officials, Florida has been placed in the national spotlight because of the demands of the state's growth. Few states have been thrust into the situation of being forced to develop innovative programs in such a relatively short period of time as Florida has. Because of the unique position of Florida as a major export market and tourist market, the state has had to be creative in its efforts to enhance transportation at different levels.

Another commonly held opinion regarding the reasons why Florida has become nationally renowned for its transportation programs is simply publicity. Florida's location as a tourist state has allowed it to be the host for many conventions and meetings for transportation officials from throughout the country. Training programs sponsored by FDOT have enabled members of other state transportation agencies to carry back with them ideas which may or may not be revolutionary, but will be associated with Florida, thus labeling Florida as a leader in transportation policy.

This opinion is significant in evaluating Florida's transportation activities. Not everything the state has attempted or will attempt will prove successful. An example of this is seen in the scrutiny under which the Tri-Rail Project has fallen and the criticism it has received from no less than the President of the United States. The initial ridership of this commuter train has been low in comparison to initial estimates. However, the project is in its very early stages and it is too soon to determine whether or not it will be a failure. The fact that the state is attempting to diversify from a primarily highway-dominated society to alternate means of travel is very important. In so doing, the state may possibly allow for relatively steady growth, rather than a "boom-to-bust" situation.

In the case of Florida, state involvement in intermodal activity is not a priority. The demands on the transportation system due to the rapid growth have dictated that FDOT focus its attention on the immediate concerns of the state's transportation system. In some cases, such as that in southeast Florida where the Tri-County Rail project interfaces with Miami's MetroRail, the state is involved in limited intermodal activity. However, when it comes to freight, nearly all intermodal projects are left to the private sector (particularly to the ports) which seem to function quite efficiently and competitively. According to one state official, any intermodal activity in which the public sector is involved should be pursued by the local planning agencies. As of now, however, intermodalism has not been actively pursued at any significant public level.

## **ILLINOIS**

### **Population**

Illinois is the sixth most populous state in the nation, with an estimated population of 11.5 million in 1988.<sup>35</sup> The state's population density is 206.5 persons per square mile, with 83.3 percent of the population living in urban areas. State population decreased by 686,300 people from 1970 to 1980. Major urban areas include Chicago, East St. Louis, and Springfield.<sup>36</sup>

### **Geographic Area and Topography**

Illinois has 55,748 square miles of land area, placing the state as 24th largest. The state's western, southern, and eastern boundaries are formed by the Mississippi, Ohio, and Wabash rivers, respectively. Illinois's vast highway and rail network is due in part to the state's generally flat terrain. The state's topography is marked by prairie and fertile plains dominating most of the state.

### **Transportation Statistics**

Three major east-west interstate highways (I-70, I-80, and I-90) cross the state, with seven other interstates passing through the state at some point. Illinois has 1,711 total miles of interstate mileage, more interstate mileage than all but two other states. The remaining highway network is comprised of 17,300 miles of state-administered roads. The state also has 25,100 bridges. Interstate and state roads are used by 23,000 truck lines, 9,000 of which provide intrastate service. This number of trucking firms translates into a yearly average of 85 billion ton-miles of freight moved on the state's highway system.

Illinois has an extensive railroad network, with 10,100 miles of track, and major rail freight centers located in Chicago and East St. Louis. Illinois's rail system is the second largest in the nation, carrying 130 billion ton-miles of freight annually. Rail freight service is provided by 46 companies, with 57 percent of all Illinois communities having rail service. Passenger rail service is provided by AMTRAK, which operates regularly scheduled service between Chicago and Springfield, Chicago and Champaign, and Chicago and Quincy.

Aircraft in the state are served by 1,100 airports and heliports. Twelve of these airports are classified as primary, and serve the state's larger metropolitan areas. The largest of these, Chicago's O'Hare International Airport, recorded 28 million enplanements in 1987. In addition to these primary airports, the state has 50 general aviation and 49 private

airports. Illinois is home to 18,000 registered pilots and 6,800 aircraft.

Commerce in the state is aided by the fact that rivers in the state provide 1,110 miles of commercially navigable waterways. These waterways provide links to the Atlantic Ocean and the Gulf of Mexico. The Port of Chicago provides shippers with 75 terminals that are equipped to handle containerized, liquid-bulk, and dry-bulk freight. The port is served by four railroads and has access to Interstates 90 and 94. In addition to the major Chicago port, several other terminal facilities are located on the Illinois, Mississippi, Ohio, Kaskaskia, and Wabash rivers. Illinois waterways carry a annual average of 80 billion ton-miles of freight.

Extensive public transit systems in the Chicago area give the state the second largest public transit system in the nation. The Regional Transit Authority (RTA) and the Chicago Transit Authority (CTA) operate bus and passenger rail service in the Chicago metropolitan area, while 14 smaller transit systems operate passenger services in downstate communities. All totaled, these systems carry approximately 800 million passengers annually.

### **Economy**

Manufacturing is the dominant component of the state's economy, with 23 percent of the gross state product supplied by the manufacturing sector. Major manufactured products include nonelectrical machinery, such as farming, construction, and metal-working machinery. Other major manufactured goods are food products, primary and fabricated metals, chemicals, household appliances, and printed materials.

Wholesale and retail trade, services, finance, insurance, and real estate account for 52 percent of the gross state product. Agriculture, construction, transportation, public utilities, government, and mining round out the remaining 25 percent of the gross state product.

Illinois has 5.7 million people in its workforce, with over 60 percent of this workforce centered in the Chicago metropolitan area. An examination of the workforce shows that 25 percent are involved in wholesale and retail trade; 24 percent in services; 20 percent in manufacturing; 15 percent in government; 7 percent in finance, insurance, and real estate; 6 percent in transportation; 1 percent in mining; and 1 percent in agriculture. Unemployment now stands at 5 percent, down from a high of 10 to 15 percent that occurred during late 1970s.

Personal income in Illinois stood at \$178 billion in 1986, reflecting a 6.6 percent annual growth in the period between 1983



and 1986. Per capita income was \$15,420 in 1986, ranking the state tenth in per capita income.

Illinois was among several industrial states that suffered heavy losses during the rust-belt period, but recently, the state has seen a steady growth, especially in the northeast portion of the state. Still, some areas of the state have not experienced a great deal of growth, and this reality is reflected in the state's economic development efforts.

## **STATE ECONOMIC DEVELOPMENT**

Attracting new industries and retaining existing industries has been a top priority in Illinois, at both the state and local levels of government. The development of new funding programs and innovative marketing strategies by state agencies has played a significant role in the state's economic recovery. The lead agency in the state effort has been the Department of Commerce and Community Affairs (DCCA).

Companies considering possible locations for plants in Illinois often contact DCCA first for information about suitable sites throughout the state. Through the Division of Sites, Buildings, and Community Profiles, DCCA can provide a prospective firm with a wide variety of information about numerous sites. This information comes from a database of 5,000 building sites and 300 community profiles, and is supplied to prospective firms at no charge.

This computerized information service was started in 1981 and is continually updated by DCCA personnel. Updated or new site information is supplied to DCCA by commercial and industrial brokers, real estate companies, railroad and utility companies, industrial development corporations, community officials, private individuals, and DCCA marketing representatives. In order to be placed on the computer system, persons or groups having sites must submit an industrial site report to DCCA. This report consists of a form compiled by the Division of Sites, Buildings, and Community Profiles, and covers such topics as site location, site ownership, zoning, land-use restrictions, topography, surrounding environment, fire protection, utility connections, and transportation access.

Community profiles also provide prospective companies with detailed information that can help in their evaluation of potential sites. Community profiles play an important role in the site-selection process because often a company is interested in a community as a whole, and not just one particular site. Illinois has an abundance of industrial sites; therefore, the attributes of a community can often be the deciding factor in a company's decision. These profiles follow a format established

by DCCA and include information on population, climate, municipal services, commercial services, health and education facilities, labor force, tax structure, and transportation systems.

If a prospective firm chooses to contact DCCA regarding possible sites or communities, the firm must supply DCCA with a listing of its criteria for a site or community. Sites, Buildings, and Community Profiles staff then match the firm's criteria to suitable sites or communities in its database. Companies are then referred to DCCA's regional marketing staff, which coordinates contacts between prospective companies and local officials.

Contacts between prospective companies and the state are often of this nature, but companies do employ different approaches when evaluating sites or communities. For competitive and various other reasons, companies many times want to evaluate potential locations in secrecy. In such a case, DCCA will conduct tours of sites or communities without notifying local officials or giving local officials any information about the prospective company. Some companies will employ a consultant to contact DCCA, while still others will forego DCCA site and community data by contacting local officials directly. Companies seeking to locate plants that may produce products offensive to some residents often send investigators into communities incognito in order to gain a better sense of community sentiments towards certain types of plants. This "undercover" type of investigative work by prospective companies represents considerable sophistication in evaluating sites.

While DCCA is the lead economic development agency in the state, one cannot conclude that DCCA is the focus for firms evaluating potential sites or communities. However, companies frequently approach DCCA because of the many benefits the state can provide, especially in terms of funding and infrastructure improvements. Because the focus of this research project is transportation, we will devote our attention only to those programs relating to transportation improvements. The major state funding program falling into this category is known as the "Build Illinois Public Infrastructure Loan and Grant Program."

The "Build Illinois" program was first introduced in 1985 by Illinois Governor James R. Thompson. Funding for the program was supplied by a state bond issue and a new tax on the sale of used automobiles. This \$2.3 billion, five-year program has been used to attract new industry to the state, as well as retain existing industry. "Build Illinois" funds have been used to finance sewer line and water main construction and transportation access improvements, if such projects are vital in a community's effort to attract new industry or to retain existing firms.

The legislation creating "Build Illinois" stipulated that funding be directed at projects that would create or retain a significant number of full-time jobs. In an effort to improve its competitive position with other states, Illinois developed the program to increase its attractiveness to prospective firms. However, the state is not able to provide free transportation access improvements to every prospective firm. In some cases, the state will require that the firm pay some or all of the improvement costs. Requiring firms to pay these costs is a delicate decision and is based on the size of the firm, the number of jobs it will create, and the importance of attracting development to an area.<sup>37</sup> If the state decides to use "Build Illinois" funds, DCCA must have a commitment from the firm that it fully intends to locate a plant on the chosen site. Firms must provide loan commitments from private lenders and other forms of documentation to DCCA for verification before "Build Illinois" funds can be used.

Firms evaluating sites may need transportation access improvements at the site in order for the site to be considered seriously. If improvements are needed, DCCA will contact the Illinois Department of Transportation, which will conduct an evaluation of the site and determine the cost of access improvements. If the prospective firm will create a significant number of new full-time jobs by locating at the site, the department can propose the use of "Build Illinois" funds to pay for the improvements. This proposal becomes part of an incentive package presented to the prospective company by DCCA.

If improvements are made on state-controlled roads, the state, using "Build Illinois" funds, will pay 100 percent of the improvement costs. On local roads, the state will provide 50 percent of the funding, with local governments providing the remaining 50 percent. Since 1985, the Illinois Department of Transportation has spent, on average, \$5 million in "Build Illinois" funds per year on transportation improvements. The department has its own "Build Illinois" funding program and is restricted to transportation projects. DCCA also has access to "Build Illinois" funds, with most its projects being nontransportation infrastructure projects. In 1987, DCCA coordinated 15 projects using "Build Illinois" funds, leading to the creation or retention of 3,543 jobs. Total funding for these projects was \$7.5 million.

One specific project funded by "Build Illinois" does merit special mention because of its massive economic impact on the state. This project involved the Diamond Star Corporation, a cooperative venture between the Chrysler Corporation and the Mitsubishi Corporation. Diamond Star was evaluating sites in three states--Indiana, Kentucky, and Illinois--and transportation access improvements were a major factor in Diamond Star's decision regarding suitable locations. The site in Illinois

being considered was west of the Bloomington-Normal area. Major highway access improvements and rail access were needed for a plant that would employ 3,000 workers and cover over 200 acres. As part of the Illinois incentive package, the state offered to pay for all necessary transportation improvements, as well as the land for the site.

The state was successful in its efforts to attract the Diamond Star plant, but the initial investment by the state was considerable. Transportation improvements alone cost the state \$25 million, with a large portion of this going to the addition of an interchange to Interstate 74; however, the plant's contribution to the state's economy will be tremendous in terms of tax revenues and payroll. The state's contribution will be recouped in a few years, confirming the state's view that such investments of public funds are beneficial to the long-term economic development of the state.<sup>38</sup>

The "Build Illinois" program has been instrumental in improving the state's economy, but state officials doubt that the program will be renewed in 1990.<sup>39</sup> The program has substantially increased state debt and has not produced the level of proceeds originally envisioned. The tax on used-auto sales has proven especially difficult to enforce because many transactions take place between two private parties. Consequently, the value of sales between private parties are often underreported so that taxes due on sales can be decreased.

Also, the program became somewhat of a "pork barrel" fund, often being used to finance projects having little relation to economic development.<sup>40</sup> A reauthorization of the program would require an increase in state taxes to cover revenue shortfalls, and, to date, Governor Thompson has proposed tax increases only for alcohol and tobacco products. Revenues from these "sin" taxes do not benefit the "Build Illinois" program.

State and local officials agree that "Build Illinois" has been a valuable tool in the state's economic development effort, but it is uncertain whether the state can maintain the current level of funding, given the state's debt position and the political difficulties associated with tax increases.

Innovative funding programs such as "Build Illinois" are one part of the state's economic development strategy. Another important innovation spearheaded by DCCA and aimed at local economic development planning has been the "Corridors of Opportunity" program, the first of its kind in the United States. This program was also initiated by Governor Thompson and was formally started in 1986. The "Corridors" program embodies the philosophy that communities should play a more important role in marketing themselves and their regions to prospective firms.<sup>41</sup> Another primary purpose of the program has been to decrease

competition among communities in a corridor, and encourage cooperation and joint marketing efforts that will benefit the corridor as a whole.

The "Corridors" title is derived from the fact that the state has been divided for the purposes of this program into regions called transportation corridors. This classification is based on the traditional interstate transportation corridors throughout the state. Other factors, such as concentrations of one type of industry (for example automobile plants), can define a corridor, but the interstate corridors form the basis for defining most regions. To date, 20 such corridors have been defined by DCCA.

DCCA's primary role in this program is assisting local officials in organizing corridor committees which have the responsibility for marketing the corridor. DCCA provides marketing training for corridor officials, as well as funding to cover operational expenses, such as economic analyses and advertising. DCCA has, to date, channeled \$2.2 million in state funds to corridor committees. A major component of DCCA's training effort is to make corridor officials more aware of the unique attributes and resources of the corridor and use these elements as the basis for corridor marketing efforts.

One might conclude that the inception of the corridor concept would set the stage for competition among corridors for economic development. This has not been the case, however, because most corridors are quite distinct in terms of natural resources, labor force, and other factors important in locational decisions.<sup>42</sup> In the majority of cases, companies do not compare the assets of two or more corridors. State officials also cite the sophistication and foresightedness of state and local economic planners as another reason why competition among communities and corridors has lacked the ferocity seen in other states.<sup>43</sup> Planners view economic growth as beneficial, regardless of where it occurs in the state.

While DCCA holds a the leadership role in economic development at the state level, local economic development is usually coordinated and encouraged by Chambers of Commerce and local government officials. In the Springfield area, the Springfield Chamber of Commerce is the focus of economic development.

Like DCCA, the chamber maintains a database of site profiles for use by companies considering locating a plant in Springfield. These site profiles are more detailed than DCCA's files, but the service provided by the chamber is similar. Prospective companies provide the chamber with criteria for a suitable site, and the chamber will attempt to match available sites to those criteria.

The chamber is also very active in meeting the growth needs of existing firms in the city. Requests from existing firms for transportation improvements are addressed through the chamber's transportation committee. This committee is a planning body which brings together representatives from private businesses, city government, the regional planning commission, and the state department of transportation. The primary functions of the committee are to consider requests for improvements, prioritize these requests, and channel projects to the appropriate agency. If a proposed improvement involves a city road, the committee works with the city department of public works to initiate the project. Projects involving state roads within the city are referred to the state department of transportation. These efforts by the chamber are a significant factor in retaining local industry, especially when transportation improvements are vital to a firm's plans for expanding a plant.<sup>44</sup>

The transportation committee of the chamber provides a forum for discussion of these kinds of needs and brings together the appropriate state and local transportation agencies that have the resources and authority to carry out a project. These state and local "action" agencies translate economic development plans into the actual transportation projects that can be instrumental in attracting an industry to a community or retaining an existing firm.

## **STATE AGENCIES INVOLVED IN TRANSPORTATION**

### **Illinois Department of Transportation**

The Illinois Department of Transportation is the primary state agency charged with building and maintaining the state's transportation system. The department is divided into functional offices and modal divisions. The functional offices conduct departmental planning, prepare the agency budget, and provide other support services for the modal divisions. The modal divisions are responsible for individual transportation modes, such as highways, rail, airports, and public transit. In the following sections, we examine the department's organization, programs, and projects relating to intermodal planning and economic development, departmental funding, modal plans, and special reports prepared by the department.

Organization. The department was created in 1972 by the Illinois General Assembly and assumed authority over areas previously controlled by the former Illinois Department of Public Works and Buildings, as well as planning and safety inspection responsibilities held by various state agencies. The department was also given responsibility for providing state assistance to local mass transportation agencies. At the top of the its

organizational structure is the secretary, whose office is responsible for the administration and operation of the offices and divisions within the department. The five offices are Chief Counsel, Finance and Administration, Intergovernmental Affairs, Planning and Programming, and Public Affairs. The five divisions are Aeronautics, Highways, Public Transportation, Traffic Safety, and Water Resources. The department's headquarters is located in Springfield, the state capital, while nine district offices are located throughout the state.

The chief counsel's office is responsible for providing legal counsel to the department on policy issues and proposed actions affecting any of the operating divisions or offices. This office also prosecutes all litigation involving the department in cooperation with the state attorney general.

The finance and administration office develops and administers the department's annual budget. In addition, the office provides accounting and auditing functions for the department and delivers personnel services to the department's 7,500 employees.

The intergovernmental affairs office develops the department's policy goals, as well as the federal and state legislative programs and strategies. The office is the liaison between the department and the state legislature, and keeps the secretary's office well-apprised of federal actions regarding transportation.

The policy and planning office is responsible for developing programs designed to improve the state's transportation system. Through its bureaus of railroads, statewide program planning, and urban program planning, the office develops plans for passenger and freight rail services, the state's highway system, aviation, and urban public transportation. The office also coordinates the planning activities of the state's 14 metropolitan planning organizations.

The public affairs office provides the public with information on the department's plans, and assists in the news media's coverage of departmental activities.

These offices provide support services for the modal divisions, where departmental planning and funding ultimately produce tangible transportation projects.

The aeronautics division provides financial and technical advisory assistance to public airports authorities for planning, construction, and improvement of the state's airports. The division is responsible for safety inspections of aircraft and the certification of public airports and heliports.

The highway division is composed of numerous operational and program bureaus, and nine district engineer offices. This division has its own support offices that provide policy guidance and coordination with other state and local agencies involved in transportation. The local roads and streets bureau assists communities in planning, financing, constructing, and maintaining local roads not under state jurisdiction. This bureau also serves to communicate local requests for transportation improvements to departmental management, and it acts as a coordinator for joint projects involving cities and counties or townships.

The public transportation division is divided into two bureaus, one that focuses on Chicago-area public transportation, and another that deals with downstate public transportation systems. Both bureaus channel state funds to local public transportation systems and provide these systems with technical assistance in their planning efforts.

The traffic safety division is responsible for developing programs for decreasing traffic fatalities and injuries. The division promulgates departmental regulations for hazardous materials transport, vehicle inspections, accident reporting, and motorcycle rider training.

The water resources division develops and implements departmental programs in the areas of flood control, erosion control, surface drainage, water supply, and water allocation. The division's primary transportation responsibility is to develop a comprehensive plan for waterborne transportation. Housed within the division is the Ports Management Section. The primary function of this section is to issue construction permits and hire out the management of public terminals to the private sector as well as some planning. There are 11 active port districts within the state of Illinois. Each is responsible for administering construction permits for private terminals and assisting private interests in developing both public and private terminals.<sup>45</sup>

Programs and Projects. In the areas of intermodal and multimodal programs and projects, the department has no formal intermodal or multimodal program or office that coordinates such efforts. The office of planning and programming is the designated planning entity for the department, and it acts as an informal coordinator for projects involving more than one mode, but projects of this nature are the exception rather than the rule. If a project requires a joint-planning effort between two modal offices, planning is coordinated on an ad-hoc basis. Most projects needing transportation improvements require the attention of only one modal office, so joint efforts are seldom necessary.<sup>46</sup>



Some projects, such as port facilities, are intermodal by their very nature, and the Chicago port is no exception. An example of recent state involvement in the port was the construction by the state of a container loading facility for Great Lakes and ocean-going ships. The state constructed the facility to improve the attractiveness of the Port of Chicago to the commodities export industry.

Another major intermodal project considered by the state, but not constructed, was a proposed freight facility for the Quad Cities area. Local officials wanted an intermodal facility that theoretically would attract industry to the area, but the department concluded that the potential volume of traffic to use the facility was insufficient to justify a large investment of state resources.

The project mentioned above demonstrates the department's reluctance to develop and fund projects that are speculative in nature. Economic development, as a result of the construction of a facility or other transportation projects, is not always guaranteed; consequently, the department devotes most of its economic development-related activities to meeting needs as they arise. This approach is referred to by state planners as "event-oriented".<sup>47</sup>

A prime example of this is the way port facilities or terminals are constructed. The ports management section does not have the funds or manpower to substantially assist private industry in developing a terminal should a company feel there is a need.<sup>48</sup> Each port district has the authority to tax, but considers it prudent not to do so, relying instead on state funds. However, the company can go to the state legislature or to the Illinois Department of Commerce and seek financial assistance. Under this method, it may take up to eight years to bring a project from the proposal stage to the construction stage, as was the case in one situation. There is currently a proposal in the Illinois legislature to create a fund from which the port districts would be able to borrow money to finance the development of facilities. This could be done on fairly short notice, since the money would already exist, with the only procedure being the borrowing process.<sup>49</sup>

As previously mentioned, the Illinois Department of Commerce and Community Affairs, along with local chambers of commerce lead economic development efforts in the state. If transportation improvements are needed for a site as part of an incentive package prepared by DCCA, the Illinois Department of Transportation will conduct a study of the site and provide cost estimates. The department will provide DCCA information on available funds and will give an engineering opinion of the necessary improvements.

Thus, while the Illinois Department of Transportation has no formal economic development program, it is deeply involved through other agencies in economic development by virtue of its contribution to the transportation aspects of a project. The Diamond Star project is clear evidence of how the department is involved in a coordinated effort to attract a firm to the state.

Departmental planners stress that most transportation improvement projects are intended purely to meet existing or future transportation needs. Most local requests for transportation improvements are based on traffic congestion problems, rather than economic development concerns. Economic development that often follows the construction of four-lane highways or loops around cities is a by-product of the improvement but is not the determining factor from the perspective of the department.

Funding. The "Build Illinois" program is an important component of the total transportation funding picture for the state, but this program was intended to be only temporary, and was restricted to specific purposes relating to economic development. The bulk of transportation funding regularly comes from state general revenue, special fuel taxes, state bond issues, and federal funds. Each of the modal areas receives funding from various sources, and in most cases, funding for a mode is a combination of state and federal dollars.

Aviation in Illinois is substantially funded by the federal government, with 78 percent of the state's 1989-1993 aviation budget coming from the federal government. Federal funds are generated by taxes and user fees on the aviation community, and are placed in the federal Aviation and Airway Trust Fund. The state and local governments supply the remaining 22 percent. State funds come from Series "B" Aeronautics bonds and general revenue, while local funds come from a variety of sources. The 1989-1993 aviation budget calls for \$500 million in expenditures, with 45 percent going to the state's primary airports, 34 percent to reliever airports, 17 percent for general aviation, and 4 percent to commercial service airports.

Highway funding requires a larger state contribution, as the 1989 budget demonstrates. Out of a total budget of \$827 million, the state is providing 58 percent, the federal government 53 percent, and local governments 4 percent. State funding comes from a 13-cent-per-gallon tax on gasoline and a 15.5-cent-per-gallon tax on diesel fuel. The "Build Illinois" program is contributing \$128 million to the state's portion for projects such as the Central Illinois Expressway, the U.S. 51 corridor, and other projects having economic development impact. Most of the 1989 budget will go to the state highway system, while a smaller portion will be devoted to local projects and township bridges.

Rail freight in Illinois has benefited greatly in recent years from the addition of the "Build Illinois" program. Since 1980, the program has provided \$16.5 million in low-interest loans and grants to railroad companies for the rehabilitation or expansion of rail lines. The bureau of railroads in the Illinois Department of Transportation estimates that approximately 12,428 jobs and 300 industries have benefitted from "Build Illinois" funding. The 1989 rail freight budget calls for \$4 million in "Build Illinois" funds, or 64 percent of the budget. Federal contributions comprise 24 percent of the 1989 budget, with the balance being supplied by state general revenue funds, and some smaller state loan programs.

For rail passenger service, the state is providing 56 percent of the \$5 million 1989 budget, all of which will come from the state general revenue fund. AMTRAK provides 38 percent, while local governments supply the balance. The state is also committed to pay 65 percent of AMTRAK's operating deficit and 50 percent of its capital costs. The 1989 operating deficit is expected to be \$3.8 million.

Public transportation, like aviation, is heavily funded by the federal government. From a total capital budget of \$324 million for 1989, 73 percent will be provided by the federal government. Local governments will provide 4 percent, while the state is expected to supply the balance. State funds come from Series "B" bonds, but the issue for northwestern Illinois has been depleted, so a \$50 million shortfall exists. Most operating expenses come from local sources and are generated by fares and taxes imposed by local transportation authorities. For the 1989 public transit operating budget, local governments are projected to supply 70 percent of the total, while the state will contribute 20 percent, and the federal government 10 percent.

Reports and Plans. The department prepares planning documents for aviation, highways, rail, and public transportation, and each plan is published as a separate document. No all-encompassing plan is assembled by the department; rather, each modal plan is developed and assembled by the appropriate bureau within the office of planning and programming. Also to be covered in this section are two special reports prepared by the office of planning and programming. One deals with the transportation of coal in the state and with how coal transportation could be improved to help the economically depressed Illinois coal industry. Another focused on southwestern Illinois and considered a variety of strategies--not all of which were transportation oriented--that would improve the region's economic development prospects.

State aviation plans generally follow a format established by the Federal Aviation Administration for prioritizing projects.

Highest priority is given to safety-related projects, such as the addition of over-run areas, navigational aids, and grooving of runway surfaces. Projects designed to upgrade or expand facilities are given lower priorities. Major future plans include the possible addition of a third major airport in the Chicago area, and a new regional airport in central Illinois.

State highway plans focus primarily on rehabilitation of decaying interstate highways, many of which are over 20 years old. Another major element of the state plan is the rehabilitation of bridges.

Rail plans are aimed at maintaining an adequate level of freight service throughout the state, with state efforts being limited to light-density projects. Plans call for a large expenditure of "Build Illinois" funds for the rehabilitation of abandoned lines or other lines facing abandonment.

Most public transit planning is directed at the Chicago metropolitan area and is focused primarily on capital improvements to transit systems that were built in the early 1900s. The region is faced with decaying stations and commuter rail bridges, and it also must meet new demands for public transportation services in the high-growth suburban areas. Downstate plans call for the acquisition of more buses for transit systems in the state's smaller cities.

The special report on coal transportation, entitled Illinois Coal: Market and Delivery Systems, was completed in 1983 and was undertaken as part of a state government effort to assist the Illinois coal industry, which was suffering economically because of new federal air-pollution restrictions on sulfur emissions.<sup>50</sup> Illinois coal is high in sulfur content; consequently, many utility companies were forced to switch to other suppliers of low-sulfur coal in order to comply with federal emissions limitations.

The Illinois Department of Transportation was directed to examine ways in which the existing coal transportation system could be improved to make the delivery of Illinois coal less expensive and improve access to additional markets. The study considered the state's waterway system, highway transport, and slurry pipeline transport. The study concluded that the state should promote water and highway transport because of the existing availability of adequate systems in both areas. The department did not support the construction of a slurry pipeline because such a system could have made coal from other states less expensive and hurt Illinois coal's competitive position.

The study of southwestern Illinois was a unique undertaking for the department, most notably because the department was directed by the governor to lead a multi-agency effort to devise

an economic development strategy for the region. The department was given the lead role because local officials in the region originally wanted the state to construct a four-lane highway through the region. Representatives from the state's Department of Energy and Natural Resources, DCCA, the Illinois Environmental Protection Agency, the Department of Agriculture, the Illinois Historic Preservation Agency, and the Department of Conservation worked with local government officials and private citizen representatives to develop an economic development strategy that would encompass more than just transportation issues, even though transportation was at the heart of the issue.

With coordination by the Illinois Department of Transportation, the actual study was prepared by a consultant, with input from the various state and local representatives. The study incorporates a combination of strategies designed to stimulate economic development in the region; however, the study concluded that the construction of a four-lane highway was unnecessary.<sup>51</sup> The consultant and the department judged that the region was adequately served by highways. Supporters of the four-lane highway rejected the report in its entirety and did not consider other possible development strategies suggested in the report.<sup>52</sup>

State planners report that a planning process similar to the one used in the southwestern Illinois study will probably not be used in the future, regardless of the fact that the planning process functioned well and brought together several state agencies and local officials in a coordinated effort.<sup>53</sup> This reality can be attributed to two major reasons. First, the study came to a different conclusion than the highway supporters wanted. Secondly, some state and local officials do not support state-directed economic development planning; rather, they see economic development as a local issue.

#### **MPOs AND LOCALITIES INVOLVED IN TRANSPORTATION**

The 14 metropolitan planning organizations in Illinois play an important role in the coordination of transportation planning in their respective regions. These MPOs provide valuable support functions for state and local agencies that fund and build transportation projects. Administrative staffs of MPOs provide other agencies with transportation data and other forms of information that aid in their planning efforts. Various committees within MPOs bring together the "action" agencies and serve to coordinate the planning process. As part of the federally mandated "3C" planning process, MPOs are in constant interaction with state and local agencies in order to assure that all transportation projects being considered within the MPOs jurisdiction are consistent with overall regional plans. For this project, the Springfield-Sangamon County Regional Planning

Commission (SSCRPC) and the Chicago Area Transportation Study (CATS) are discussed in detail.

### **Springfield-Sangamon County Regional Planning Commission**

The original Springfield-Sangamon County Planning Commission was formed in 1957 and was reorganized in 1973 in order to become the designated metropolitan planning organization for the region, thereby making the region eligible for federal funding. The most recent reorganization occurred in 1987. Today, the SSCRPC has 17 members that represent Sangamon County, the city of Springfield, and special districts. The commission also has as members three citizens that are appointed by the chairman of the Sangamon County Board.

Membership on the commission is established in the MPOs charter. The chairman and two other officials of the Sangamon County Board are members, as well as the mayor of Springfield and two city alderman. Directors of the Springfield Park District, Springfield Airport Authority, Springfield Mass Transit District, Springfield Metro Sanitary District, and the Springfield School District are also members of the commission. Policy directives for the commission come from a seven-member Executive Policy Board.

Commission meetings provide a public forum for consideration and debate of transportation issues in the region, whereas actual planning takes place in the closely related Springfield Area Transportation Study (SATS). The SSCRPC and SATS act as parallel bodies, each with specific functions, and both supported by the administrative staff of the SSCRPC. SATS is composed of two committees, a policy committee, and a technical committee, which bring together professional transportation planners from the state, the county, and the city. The policy committee is composed of the executive director of the SSCRPC and representatives from Sangamon County, Springfield city government, the Illinois Department of Transportation, and the Springfield Mass Transit District. Coordination of regional planning occurs in the policy committee, while the SATS technical committee provides engineering opinions on proposed transportation projects and supports the activities of the policy committee. The technical committee is composed of members from the same bodies having representation on the policy committee. Some persons on the policy committee are also members of the technical committee.

As mentioned above, the administrative staff of the SSCRPC provides both the SSCRPC and SATS policy and technical committees with support services. The administrative staff has nine full-time employees and is headed by the executive director of the SSCRPC. Under the executive director is an assistant director, five planners, and two support personnel.

All government bodies having membership in SATS provide funding for the organization's planning activities and administrative costs. For the 1987 fiscal year, the SSCRPC and SATS had a combined budget of \$284,932. In addition to state, county, and city contributions, 22 percent of the budget was supplied by UMTA funds and the Springfield Mass Transit District. Personnel costs accounted for 83 percent of all expenditures in fiscal year 1987, with the balance going towards printing, building rental, telephone service, office supplies, and contractual services.

The SSCRPC and SATS are involved in some capacity in most all transportation projects in the region. This is due to the fact that if such projects use federal funds, all plans must be reviewed and approved by the SSCRPC. The commission reviews projects in accordance with the federal A-95 review process, and all approved plans must be included in the commission's Transportation Improvement Plan.

Current projects involving the SSCRPC include the completion of a highway loop on Springfield's northwest side, and a study of transportation needs on the city's west side. The completion of the northwest loop has been promoted by area businesses, the state department of transportation, and local citizens who wanted improved access to the city's airport.

The Chamber of Commerce has promoted the completion of the project because of the potential for economic development in the airport area, while the Illinois Department of Transportation and local citizens want the project because of the benefits to travel. Since federal funds are being used for the project, the SSCRPC was required to review the project for consistency with regional plans. In reviewing the project, the SSCRPC did not consider the economic development aspect of the project; instead, the project was justified on its transportation improvement merits. The MPO is not an economic development agency, so it evaluates projects from the perspective of improving transportation, leaving economic development planning to the Chamber of Commerce and the city.<sup>54</sup>

A second major project involving the SSCRPC is a comprehensive study of transportation needs in west Springfield. This area of the city has experienced rapid residential growth in the last ten years; however, street planning and construction have not kept pace with growth. Also, opposition from homeowners to having major thoroughfares passing in front of or near their homes has contributed to current congestion problems. From the SSCRPC's perspective, development occurred without adequate consideration of the required street network.<sup>55</sup> The result has been an increase in traffic congestion on side streets and an absence of sufficient major thoroughfares to carry traffic

through the area. The SSCRPC is now examining strategies for improving transportation in the area, given the existing problems.

In addition to these specialized projects, the administrative staff of the SSCRPC regularly prepares documents as required of all MPOs by the federal government. These documents include a five-year Transportation Improvement Program (TIP), the Annual Element which lists projects having priority within a single fiscal year, a Technical Work Program which details all administrative activities, and a Citizen Involvement Program which documents the SSCRPC's efforts to involve local citizens in the transportation planning process. Also, the SSCRPC administrative staff prepares special research reports for the city, the Chamber of Commerce, and other agencies needing transportation-related data on the region. These special reports are often in the form of parking surveys, traffic counts, and demographic data.

### **Chicago Area Transportation Study**

The Chicago Area Transportation Study (CATS) is the MPO for the Chicago and northeastern Illinois region. Membership in CATS includes the state of Illinois, the Regional Transportation Authority, six county governments, the city of Chicago, the Chicago Transportation Authority, Pace (Suburban Transit Authority), the North Eastern Illinois Planning Commission, and 260 municipal governments. The primary function of CATS is to conduct long-range transportation planning in accordance with federal guidelines that ensure funding from UMTA and the FHWA.<sup>56</sup>

CATS is organized into a policy committee which includes representatives from the above-mentioned agencies. The policy committee evaluates and votes on plans proposed by members. The planning process resembles the structure of a pyramid. Individual members or planning agencies in the region develop proposals for their area. These proposals are then consolidated by CATS to ensure that they fit in with the regional transportation needs and satisfy the requirements for continued federal financial assistance.

CATS is responsible for producing a 20-year Transportation Development Plan, a 5-year Transportation Improvement Program with the Annual Element, and each year a Unified Planning Work Program for transportation. The northeastern Illinois Planning Commission is responsible for ensuring that these and other transportation plans produced by CATS mesh with the regional transportation needs of the entire northeastern Illinois area.<sup>57</sup>

The planning process appears to work relatively smoothly, given the number of interests involved. This seems to be a result of the structure of the CATS policy committee, which does



not allow one player or special interest to block programs brought before it. For example, a small residential area may object to a new expressway, but it may not have enough votes on the policy committee to veto the project. This theoretically ensures that the good of the whole area is taken into account above more narrow interests.<sup>58</sup>

There are no components within CATS that are expressly named "economic development." Economic development is taken into account in most of the plans produced by CATS. It is in fact one of the stated goals of CATS to enhance transportation in a manner that encourages economic development. As stated in the 2010 Transportation Development Plan, the goal of CATS is to "develop a transportation system which fosters economic development and provide transportation services that help to retain existing businesses and attract new business enterprises to the region. Further, the plan states that CATS shall "enhance the Chicago region's position as a major hub of national and international passenger and freight travel."<sup>59</sup>

Cooperation between CATS and the private sector exists as far as communication of transportation development ideas are concerned, but cooperation is not extensive. For example, a Freight Advisory Council within CATS fields ideas, concerns and complaints from private carriers in the region. This council sits on the policy committee but has little, if any, power. CATS depends on its members to develop specific transportation proposals which match the narrow concerns of individual, private carriers unique to their region.<sup>60</sup>

Specific plans and projects related to economic development are seemingly geared toward maintaining and improving access and circulation to and from the central business district (CBD). This is especially true in the areas of transit. Up to 80 percent of the CBD work force relies on mass transit. The success of this program seems to rely on the extensive rail and bus system, and the interaction between the two. For example, a passenger can catch a Pace bus in the suburbs to a commuter rail terminal which runs to a station near downtown Chicago, and, from there, catch a Chicago Transit Authority bus to the CBD. As unwieldy as this may sound, it is facilitated by the ability to purchase tickets or long-term passes which serve all three components. The high volume of users is evidence of this system's success.<sup>61</sup>

Other activities related to economic development include planning for the eventual development of a third major commercial airport in south Chicago. The Illinois Department of Transportation has taken the lead in the development of this project, which is intended to enhance Chicago as a major hub of passenger and freight transportation. It is also intended to provide jobs and foster economic growth in the immediate

vicinity, as did O'Hare International Airport for the northwestern region of Chicago. CATS is primarily concerned with securing and maintaining control of rights of way in this area in order to develop arterials and expressways to serve the proposed airport. This is mentioned as a goal in the current 2010 Transportation Development Plan.

Funding for the transportation system in the Chicago area is apparently becoming an issue of some concern, particularly in the area of capital costs. Money for capital transportation improvements comes from federal, state, and local sources. The federal funds are derived primarily from the federal tax on gasoline. Federal funds for projects are available through a variety of programs, most of which pay for 50 to 90 percent of the total project cost. The remainder, termed local match, is provided by the sponsors of the project. Local sources include motor fuel taxes, vehicle registration fees, and in some areas property taxes. The Illinois State Toll Highway Authority generates funds for operating and capital costs from tolls. The Regional Transportation Authority derives revenue from a sales tax, although this money is used mainly to meet operating costs.<sup>62</sup>

#### **INTERMODAL PLANS, PROGRAMS, AND PROJECTS**

Intermodal projects in Illinois are primarily the domain of private industry. The Illinois Department of Transportation is not involved in intermodal planning in a formal sense, but one should not conclude that no intermodal planning occurs. If the department is involved in a project that involves the attention of more than one modal division, planning is accomplished on an ad hoc basis. Some coordination is supplied by the office of planning and programming, but informal contacts among department directors are sufficient to facilitate the planning process.

Restrictions placed on the uses of funding are cited as one major reason why intermodal planning is not formalized. Funds are usually restricted to specific modes and cannot be used for other purposes. For example, highway planners have specific funds for highway improvements, while rail planners have specific funds for rail improvements. These two groups do not often work together because their concerns lie where their funding will go. The state has no "intermodal fund"; consequently, planning efforts are usually directed towards well-defined areas.

Notable state involvement in intermodal projects includes the Port of Chicago and a proposed intermodal facility in the Quad Cities area. These two projects were mentioned briefly in a previous section and will be discussed in more detail here.

The state recently spent \$5 million to construct a container facility in the Port of Chicago, with the intention that such a facility would contribute to the economic growth of the port. Before building the facility, The Illinois Department of Transportation estimated that the facility would handle 30 to 40 thousand containers per year and would make the port more attractive to export shippers.

Since the facility was constructed, however, only approximately 2000 containers per year have passed through the facility. The department has discovered that most shippers prefer to move containers by rail to East or West Coast ports, and then load the containers on ocean-going vessels. Competitive pricing from rail lines has made the Chicago port a less attractive alternative than departmental planners had envisioned. Containers on flat cars can reach the East coast in one day, whereas the journey from the Port of Chicago via the St. Lawrence Seaway takes four days. Also, many of the larger, deep-draft vessels cannot dock at Chicago because the port is not deep enough.

The proposed Quad Cities intermodal facility never reached the construction stage because the department and a consultant concluded that such a facility could not guarantee economic development for the area. Even though local officials contended that such a facility would attract industry to the area, the department was unable to identify any substantial industries that would locate in the area because of the facility. Because there was no immediate demand for the facility, the consultant advised the state that insufficient justification existed for the construction of the facility and the use of state funds.<sup>63</sup>

## **SUMMARY**

Intermodal planning at the state or local level in the formal sense is clearly not a high priority; rather, transportation planners focus on individual modes, relying on informal arrangements to coordinate projects involving more than one mode. Projects involving such coordination are rare, and often only one mode in a project requires attention.

While the Illinois Department of Transportation is not an economic development agency, transportation can play a vital role in attracting industry to an area or retaining a firm that needs access improvements or upgrading of the surrounding transportation system. Here, the state, through the Illinois Department of Commerce and Community Affairs, has effectively used transportation as an important element in incentive packages presented to prospective industries.

The "Build Illinois" program has proven to be a valuable asset in funding projects designed specifically to create or retain jobs. While it is uncertain whether the program will be renewed, state and local planners agree that the program has been an important tool in the state's economic development strategy.

Another innovative economic development strategy has been the "Corridors of Opportunity" program. With state funding and training, local economic development officials can become better organized and more skilled in marketing their regions. The "Corridors" program promotes cooperation between communities within a region and encourages communities to pool their resources.

These programs, plus a spirit of cooperation, make Illinois unique and more advanced than other states in terms of planning arrangements and funding programs, according to state and local planners. These planners agree that communities and regions in the state are not locked into self-defeating competition for industry. If one community is chosen over another, no animosity exists because communities consider that the state as a whole will benefit, and not just one community.

## **IOWA**

### **Population**

Iowa is the 29th most populous state, with a population of 2.8 million in 1988.<sup>64</sup> The state has a population density of 52.0 persons per square mile, with 58.6 percent of the population living in urban areas. State population decreased by 60,491 people from 1970 to 1980. The major metropolitan areas include Des Moines, Ames, Davenport, and Cedar Rapids.<sup>65</sup>

### **Geographic Area and Topography**

Iowa has 56,290 total square miles. The state is a watershed that runs from the northwest to the southeast, with soil that is especially rich for agriculture. Much of the state is characterized by level land. The state is bordered on the east and west sides by the Mississippi and Missouri Rivers, respectively.

### **Transportation Statistics and Infrastructure**

Iowa's transportation infrastructure includes over 113,000 miles of roads and streets. The state's primary road system comprises only 9 percent of all large-truck travel. The secondary road system is by far the largest system in the state, with 90,000 miles of roadway providing access to rural Iowa and managed by 99 counties. The major county road system is the trunk system, with 12,000 miles of road providing service for major intracounty movements.

Iowa has a total of 4,841 miles of rail in the state, with 23 railroads in operation. The three major class I railroads in the state are the Chicago and North Western, Burlington Northern, and Soo Line. Ten new railroads have started business in Iowa in the last ten years due to the massive restructuring of Iowa's rail system. Since 1975, railroad companies have abandoned 4,564 miles of track in an effort to reduce their systems to a profitable size. Rail carriers have acquired 1,544 miles of abandoned track, while 3,030 miles of track have been permanently lost. Statewide, railway operating revenue in 1987 from Iowa operators exceeded \$580 million.

Iowa has 112 publicly owned airports that are eligible for state funding. The four major commercial service airports are Cedar Rapids, Des Moines, Sioux City, and Waterloo. With respect to Iowa's use of waterways, a total of 12.7 million tons of commodities crossed the docks of the 66 Iowa terminals on the Mississippi River and the ten Iowa docks on the Missouri River during 1985.

## **Economy**

Iowa is rich in human, natural, and capital resources. The principal industries that drive the Iowa economy are manufacturing and agriculture. Its economy is basically sound and growing.

### **STATE ECONOMIC DEVELOPMENT**

Iowa faces the economic challenge of maintaining and building upon its solid economic base so that living standards will continue to improve steadily. State economic development strategies are based upon The Iowa Strategic Plan for Economic Growth.<sup>66</sup> This report considers how state government can best contribute to achieving this goal and presents a strategic plan for promoting Iowa's economic development. Above all, it defines the principles and criteria that should guide legislators, officials, and agency staff as they design and implement policies for economic development. This may be accomplished by:

1. increasing the value of public services including infrastructure services, relative to taxes for mobile resources;
2. providing information that changes perceptions of the returns from locating in Iowa;
3. providing financial, technical, job training, and other assistance to both newly formed and existing businesses;
4. changing regulations that affect resource returns;
5. ensuring that state policies are stable and predictable; and,
6. assisting local communities in their economic development efforts.

The state's main strategy in its development policy is to generate and demonstrate new opportunities for productive employment of economic resources within Iowa's private sector by encouraging an existing business in Iowa to expand into a new line of production, by attracting new industry, or by encouraging business start-ups. Basically, the general objective is to expand and diversify Iowa's economic base and to retain the businesses that presently make up that base. The state's economic development funding comes from general funds and the state lottery.

The Iowa Department of Economic Development interacts regularly with the Iowa Department of Transportation and the

private sector but does not interact with local transportation agencies.

Transportation is considered one of the basic support facilities that government provides to foster economic activity. Decisions to build a new infrastructure facility or to replace an existing one translate into investment decisions that are guided by efficiency criteria. The efficiency criteria suggest that Iowa should invest in infrastructure if, and only if, the present value of the services it provides exceeds the costs of constructing, maintaining, and operating the facility. If Iowa can adjust its infrastructure capacity upward or downward as needed, it can better support business activity while keeping costs as low as possible.

### **STATE AGENCIES INVOLVED IN TRANSPORTATION**

The Iowa Department of Transportation (IDOT) handles all major transportation issues in the state. It is responsible for aeronautics, highway, rail, transit, motor vehicles, and regulation. It provides assistance to ports and waterways, but the ports themselves are locally or privately owned.

#### **Iowa Department of Transportation**

Organization. The Iowa Department of Transportation is divided into five divisions: highway, general services, motor vehicle, air and transit, and rail and water. "The transportation goal for Iowa is to provide and preserve adequate, safe, and efficient transportation services based on the use and/or benefits that serve the public."<sup>67</sup>

The general policy of the department is to provide a participatory planning process involving public, private, and citizen interests, promote financing of the transportation system in an equitable manner, and to administer the lands and resources under its jurisdiction in a manner that both protects the rights of individuals and gives consideration to the effects of its activities on the environment.<sup>68</sup>

The department has the financial control and responsibility for the regulation of motor vehicles and freight movement. Its policy is to develop, promote, administer, and enforce equitable procedures for the registration, regulation and operation of motor vehicles and common carriers of passengers and freight.

The department does provide financial assistance in numerous forms. In aeronautics, state funds are used for the development of runway, ramp, and taxiway projects. The Rail Assistance Program helps railroads rehabilitate deteriorating branch lines with partial funding through loans or grants. The Iowa Rail

Finance Authority is a separate state agency with broad financing powers to preserve essential rail service. It is staffed by IDOT personnel, and offers assistance for acquisition, refinancing, and maintenance of rail lines. Financial assistance for public transit is the responsibility of the department, which distributes and administers all state transit assistance. For highways, IDOT uses its RISE program, which will be discussed shortly.

While the IDOT has responsibility for all areas except ports, it does provide technical assistance to commercial navigation projects. The department's role in commercial navigation includes promoting the use of waterways, assisting in the development of port and terminal facilities, and monitoring and participating in numerous policy-related studies. However, there is no funding for terminal facilities.<sup>69</sup>

Programs and Projects. The department's main planning document is the Iowa Transportation Improvement Program. The document's purpose is to encourage and assist in the development of general aviation, highway transportation, public transit, railroads, river transportation, and transportation educational programs. The transportation plan considers all transportation modes as interacting elements. It encourages more efficient use of energy resources and recommends appropriate investment and funding procedures.<sup>70</sup>

The Iowa Aviation System Plan provides long-range guidance for policy and program discussions. Local master plans for aviation have also been completed by 65 cities since 1974. Funding for the state aviation program comes from the State Aviation Fund and the federal Airport and Aviation Trust Fund. The aviation program receives revenues from aircraft registration and aviation gas taxes. The federal Airport and Aviation Trust Fund receives revenues from taxes on aviation gas, a passenger ticket tax, and waybill tax on air freight.<sup>71</sup>

The Iowa DOT also has full responsibility for highways. The Five-year Construction Program contains a list of all projects associated with each county and the RISE program.<sup>72</sup> A Quadrennial Highway Needs Study provides a projection of the costs of bringing all roads and streets up to ideal design guidelines over a single 20-year period.<sup>73</sup>

IDOT has two programs to help preserve the state's essential rail network. The Rail Assistance Program helps railroads rehabilitate deteriorating branch lines, while the Iowa Rail Financial Authority has broad powers to preserve essential rail service, including the issuance of revenue bonds if necessary.<sup>74</sup>

Ports in Iowa are owned by localities and private industry. IDOT's involvement in ports is limited to assisting in the



development of facilities, and monitoring and participating in policy studies.<sup>75</sup>

IDOT plays an important role in public transit through numerous assistance programs. The department provides training assistance for transit personnel and provides operating and capital assistance to transit programs. It also oversees local transit-related procurements involving federal funds, and assistance to local transit systems for marketing campaigns.<sup>76</sup>

The Intermodal Pilot Project Program is a new program which provides funds for intermodal projects. Funds are intended for upgrading marginal commercial projects in hopes of improving Iowa's economy. The program is in its first year and was created by means of a line-item appropriation. To be eligible for funding, the project must have a plan for a new intermodal facility or for the improvement or rehabilitation of an existing intermodal transportation facility.<sup>77</sup>

The Commercial and Industrial Network multimodal project is made up of approximately 2,250 miles of the most important noninterstate, primary highway routes in Iowa. The project is intended to speed the flow of commerce; make travel more convenient, safer, and less expensive; and better connect Iowa with regional, national, and international markets.<sup>78</sup>

Funding. Funding for IDOT primarily comes from the Road Use Tax Fund, which provided \$391 million in 1988. The Road Use Tax Fund relies on revenue collected from drivers license payments, user taxes, registration fees, and fuel taxes. The Federal Highway Trust Fund provides additional funding for highway improvement programs.<sup>79</sup>

Reports and Plans. The Revitalize Iowa's Sound Economy (RISE) program was created by the Iowa Legislature in 1985 to assist in promoting economic development in Iowa through the construction or improvement of roadways. It is funded by a two-cent increase in the motor fuel tax and receives approximately \$32 million in funds annually. IDOT developed the direction and structure of the RISE program with the help of representatives from all levels of local government, private sector business leaders, and developers. The program is designed to emphasize local initiative and involvement, maximize the economic benefit, and address situations requiring immediate response and commitment of funds.

County or city governments may apply for RISE funding. IDOT may also initiate projects. The legislation which creates the program requires that 25 percent of the funding must be spent on city streets, 25 percent on secondary roads, and 50 percent on primary roads.

There are three types of projects available for funding: Immediate Opportunity Projects, Local Development Projects, and Regional Development Projects. Immediate Opportunity Projects are reserved for those which are related to an immediate, nonspeculative opportunity for permanent job creation or retention. Local Development Projects support local economic development but do not require an immediate commitment of funds. The Regional Development Projects address the needs of a geographic area beyond the scope of a single county, city, or site. These projects usually are large scale and high cost.

During the first two years of the RISE program, 103 projects were approved for funding, totaling \$45.7 million. Twenty-six projects received funding from the Immediate Opportunity Program. The creation or retention of approximately 9,800 jobs was assisted in the process.<sup>80</sup>

### **Other State Agencies**

As the only state agency dealing with transportation planning in Iowa, IDOT makes it a policy to cooperate with local organizations. It provides for a participatory planning process, which includes public and private institutions. This cooperation is evident in the consulting that was done with local communities for the development of the RISE program.

### **MPO'S AND LOCALITIES INVOLVED IN TRANSPORTATION**

The state of Iowa has eight metropolitan planning organizations (MPOs). They are the Linn County Regional Planning Commission (Cedar Rapids), Bi-State Metropolitan Planning Commission (Davenport-Rock Island-Moline), Des Moines Area Transportation Committee, East Central Intergovernmental Association (Dubuque), Johnston County Council of Governments (Iowa City), Omaha Council Bluffs Metropolitan Area Planning Agency (Omaha, Neb.-Iowa), Siouxland Interstate Metropolitan Planning Council (Sioux City), and Iowa Northland and Regional Council of Governments (Waterloo).

Some metropolitan planning organizations conduct transportation analyses as part of their primary mission; others engage in transportation planning only as a complement to their primary responsibilities. Some agencies build highway or transit systems; others only study their effects. No matter how professional and analytical these agencies may be, they have differences in priorities and interests that lead them to different conclusions and decisions about the importance of specific transportation issues.

## Des Moines Area Transportation Committee (MPO)

The Des Moines Area Transportation Committee (DATC) is responsible for the urbanized area of Polk County, as well as Des Moines, Altoona, Clive, Johnston, Pleasant Hill, Urbandale, West Des Moines, Windsor Heights, the Des Moines International Airport, and the Des Moines Metro. Official committee members include an elected policy board, a policy committee, technical committee (engineers and planners), subcommittees (review technical and policy plans), long-range planning committee, transportation systems management committee (reviews small projects), and task groups (review work programs).

DATC works on long-term transportation planning, whereas local transportation departments for each city work on short-term planning. DATC is presently working on unifying all planning functions within the region.

The interaction of DATC and IDOT is on a technical level. They are working together on a long-range transportation modeling plan. They are also coordinating their efforts in the production of the new freeway system (currently under study), where they exchange statistical information and data. IDOT attends seven DATC meetings per year (sometimes more frequently if needed). IDOT votes on the DATC's technical committee and acts as an advisory board on all other committees.<sup>81</sup>

In 1985, DATC produced a Year 2000 Street and Highway Plan. The purpose of this plan is to identify major street and highway improvements that will be needed in the greater Des Moines area by the year 2000. This plan is the long-range component of the total transportation plan for the area. It includes major route improvements, such as street widening and the construction of new streets. The goals are to provide for safe and convenient movement throughout the area, and to provide modal facilities to meet the needs of different people.<sup>82</sup>

DATC is responsible for producing a Transportation Improvement Program (TIP) for the Des Moines Urbanized area. The TIP is required to qualify for the federal-aid urban system funding. The TIP is an annually updated list of major transportation projects scheduled for completion over the next five years in the Des Moines metropolitan area. The TIP is an important part of the transportation planning process. It allows decisionmakers to compare short-term needs with the construction of a comprehensive transportation network needed by future community residents. Projects selected and constructed today will make up the street system of the future. The TIP also helps different metropolitan communities to coordinate projects and project scheduling.<sup>83</sup>

## Bi-State Metropolitan Planning Commission (MPO)

The Bi-State Metropolitan Commission (BSMPC) is responsible for Scott County in Iowa and Rock-Island County in Illinois. Official committee membership is comprised of members of the governing board, transportation policy and technical committees, and an elderly-and-handicap transportation committee.

A unique feature of this MPO is that, among the 50 bi-state MPOs in the nation, this MPO is the only one that is equally dispersed in population between the two states. This unique aspect surely the need for extensive cooperation between the two regions.

The BSMPC receives funding from three sources: Federal Highway Demonstration Planning Funds, UMTA, the Iowa DOT. The MPO is responsible for long-range planning and prepares a twenty-year plan in addition to a five-year TIP plan. It also collects and compiles highway and transit data. A biannual accident study is produced in which frequencies of accidents are recorded and intersections are analyzed geometrically for safer results. "Trip to Work" data is in the process of preparation for the 1990 Census.<sup>84</sup>

The BSMPC also has the authorization for economic development plans. This economic development division is funded separately by the Economic Development Administration funds. It prepares socioeconomic studies and maintains an economic development program. This program looks at the goals, objectives, and strategies for BSMPC future economic development.

There is extensive interaction between the BSMPC and IDOT. IDOT operates the transportation model for the BSMPC. It also provides the MPO with short-term traffic data. In return, the BSMPC develops a long-range plan that IDOT reviews and implements.

The BSMPC has executed an extensive intermodal study on Quad City Intermodal Freight Transportation. Briefly, the study concerns an intermodal barge-rail-truck facility to be located in the Quad cities. The existing intermodal facility, located on an East Davenport industrial site, handles only rail-truck operations, and is inadequate to serve the new purpose (largely due to capacity restraints). The recommendation of the study is to relocate the facility.<sup>85</sup>

As a consequence, a major \$1.4-million intermodal project is currently underway in West Davenport. The new facility will be called the Quad-City Container Transfer Terminal. This terminal will be used to transfer containers from rail cars to trucks. One-half of the funding is provided by the state and the remainder from private investors.<sup>86</sup>

## **Davenport Department of Municipal Transportation (DDOMT)**

The Davenport Department of Municipal Transportation is responsible for regional transportation planning for Scott County, which includes the city of Davenport. DDOMT has only one commission, the Airport Commission, which consists of five members who are appointed by the city council. The Airport Commission serves only in an advisory capacity.

The DDOMT is responsible for four transportation activities: the Davenport Airport, traffic engineering, downtown parking, and the city's transit system. The Davenport Airport is considered a reliever airport, and is not used for commercial purposes; rather it is used for general aviation traffic. Moline Airport, in Illinois, serves as the region's hub for commercial air traffic. Fifty percent of the maintenance funds for the Davenport Airport is collected from leasing space, and the other 50 percent is from derived from surrounding farm land revenues.

The city's transit system owns and operates 27 buses. This department shares a common facility with Rock Island County Transit System in Illinois, where buses are taken for maintenance purposes. Its funding comes primarily from property taxes which constitute 55 percent of the fund. Fifteen percent comes from farebox revenue, and 30 percent comes from the federal government. The interaction between the DDOMT and the Iowa Department of Transportation is basically on three levels: airport, transit, and traffic engineering. The two agencies interact solely for funding purposes.<sup>87</sup>

The DDOMT has no intermodal projects underway. Some discussions have led to proposals to conduct truck-rail operations planning. Yet, a truck-rail-barge intermodal project has been rejected as unfeasible because of conditions during the winter.

## **Metropolitan Transit Authority**

The Des Moines Metropolitan Transit Authority (MTA) is municipally owned by five cities: Des Moines, Clive, Urbandale, West Des Moines, and Windsor Heights. Each city appoints a representative (in the case of Des Moines, three representatives) to the Joint Board of Transit Trustees. This board establishes policy for the MTA.

The MTA receives funding from several sources in addition to farebox revenue (35 percent). The sources for the remaining 65 percent of funding are the five local cities, the federal government, and IDOT. The funding received is used for operating expenses and capital purchases.

The MTA maintains a fleet of 107 coaches. Also, in addition to regular-route coaches, the MTA owns five older vehicles which are used to provide contracted school services. At the present time, MTA operates nine double-ended regular routes and six express routes. Bus routes are primarily designed to serve the central business district, the major traffic generator in Des Moines.<sup>88</sup>

The MTA interacts with two divisions in IDOT. The air and transit division provides statistical information and financial assistance. The MTA also interacts with the planning division of IDOT.

The MTA has a four-year Apprenticeship Program. The program is considered the only one of its kind within the United States. The program consists of a four-year schedule of on-the-job training and classroom instruction. Decreased maintenance costs and increased productivity are two by-products of the apprenticeship program.<sup>89</sup> No Intermodal projects have been considered yet.

A feasibility study was also done for a mass transit intermodal project for downtown Des Moines. The study was to determine the feasibility of a Walnut Street Transit Mall, which would complement the developing skywalk system and help to alleviate the traffic circulation and parking needs.<sup>90</sup>

## **INTERMODAL PLANS, PROGRAMS, AND PROJECTS**

### **Pilot Project**

The Intermodal Pilot Project in Iowa's Department of Transportation is an innovative way of funding intermodal projects. The pilot project is a commitment by the Iowa Legislature to examine further the value of intermodal transportation facilities. The project is believed to be vital to the economic development of the state, and provides money for marginal commercial projects. The state assists with financial support through low-interest loans or grants to help fund these intermodal projects.

To be eligible for funds, the project must meet specific conditions. The project must have a specific plan for a new intermodal facility, or for the improvement, restoration, conservation, repair, rehabilitation, or expansion of an existing intermodal transportation facility. The project must be a site, structure, or equipment that accomplishes or aids in the transfer of freight from one mode of transportation to another, including, but not limited to, ports, terminals, freight distribution centers, intermodal rolling stock, bulk-breaking facilities, and loading facilities. The project must be located within Iowa, but

may involve freight and equipment which travels into other states, provided that any permanently located facility is located within Iowa.<sup>91</sup> The pilot project was created by a line-item appropriation and is administered by IDOT. So far, it has been in existence for one year and has made a \$750,000 loan to a project entailing the transportation of grain.

### **The Commercial and Industrial Network Project**

Iowa's Commercial and Industrial Network is designed to enhance the future economic prospects of Iowa communities by improving their access to markets, resources, and workers and by removing transportation impediments to development. The project was proposed as an integral part of the 1986 "Transportation 2000" multimodal transportation finance proposal.

"Transportation 2000" envisioned a large financial commitment to the development of commercial network of highways (initially of about 2,000 miles), which would be a mixture of two-lane and four-lane facilities. The proposal involved annually dedicating \$60 million in new state funding to the network.

In 1988, the transportation committee and IDOT staff reviewed the proposal and officially designated a 2,250-mile, noninterstate network, route system. The plan reviewed key issues involved in planning the network, along with current roadway conditions and traffic patterns. This strategic development plan is intended to provide the broad direction needed to take the network into the project planning, design, and construction phases.

If the purchasing power of the program is maintained by offsetting the impacts of inflation, by the year 2000, the state of Iowa will have made substantial multimodal progress in upgrading the Commercial and Industrial Network. By the year 2020, Iowa expects to be able to have upgraded the entire network to at least a very high-quality, two-lane standard (called "Super Two"), with all initially planned four-lane and intermediate-level segments in place.<sup>92</sup>

### **Walnut Street Transit Mall**

During the past decade, over \$250 million has been invested in the downtown Des Moines area. Experience in other diverse cities has demonstrated that new downtown transit facilities can substantially improve public transportation services and create an environment that benefits the entire downtown. In fact, a transitway or transit mall can often serve as a catalyst for major additional retail and office development beyond that already planned.

This transportation system is composed of several elements, each complementing the other. The MTA study was to determine the feasibility of a transit mall in the downtown area to complement the developing skywalk system, the traffic circulation and parking needs generated by additional development planned, and in particular, the planned Walnut Mall development activity.

After considering the benefits, it was decided to build a transit mall on Walnut Street. It was funded by a federal grant for \$2.8 million to construct phase I, and an UMTA grant for \$1.6 million to construct phase II. The city of Des Moines pledged \$2.2 million towards the construction of the total project. The total project was completed in November 1986.<sup>93</sup>

### **Quad City Intermodal Freight Transportation study**

This particular study was initiated to determine whether a river-linked intermodal transportation terminal in the Quad Cities could be established to become an economically important positive contributor to the economy of the area. It was hoped that the terminal would have some of the characteristics of a base industry. The term "Quad City" embraces the following four cities: Davenport, Bettendorf, Rock Island, and Moline.

The Quad Cities area is the only location between St. Louis and Minneapolis which have good river, rail, and highway links. There are a number of truck-rail intermodal facilities in the upper Midwest, but few or no barge-rail or barge-truck facilities dedicated to intermodal cargo.

The primary objective of the study was to determine whether a barge-based intermodal facility could be established in the Quad Cities which would represent a new base economic activity or industry, therefore creating a new increment in economic growth for the area.

A detailed cost model was developed to assess the prospects for a container-on-barge intermodal service serving the Quad Cities. The results of this study indicated that, under the best possible assumptions, the container-on-barge service probably would offer some cost savings. However, it would also involve significantly longer door-to-door transit times, lessened reliability, less choice of ocean carrier, and service interruptions for two months of the year.<sup>94</sup>

All of these service deficiencies militate against any transportation service directed toward high-value cargo, particularly cargo moving to assembly operations such as typifies container shipments into and out of the Quad City area. Also, costs would be significantly higher during the start-up phase and would have to be subsidized by the promoter or by some other group.



In summary, such a service is not likely to be competitive. Similar, but more modest, services which have been tried previously on the Mississippi River failed.

### **Quad-City Container Transfer Terminal Project**

Four Davenport investors, with the help of the Soo Line Railroad Company, hope to operate a \$1.4 million Quad City container transfer terminal in southwest Davenport. The funding for this project is one-half private and one-half state. On the state side, there is a \$750,000 grant and loan application to the IDOT.

Basically, the terminal is to be used to transfer containers from rail cars to trucks. The plan is to build a terminal that will use a huge crane to remove 60,000- to 90,000-pound containers from rail cars. The containers will be stored at the terminal or transferred to semitrailers for immediate delivery. Currently, construction is in process.

This concept is very important to many Quad City businesses. The reason is that large containers presently must go to Chicago (sometimes rolling through the Quad Cities on rail cars) before they can be unloaded and sent back to the Quad cities. This means higher shipping costs and delays in delivery. This transfer terminal would eliminate the 320 miles of trucking and railroad travel from Chicago on West Coast shipments. This facility will cut down on costs and time.<sup>96</sup>

### **SUMMARY**

Officials in Iowa agree that intermodal facilities are important to the state's future. The role of government in both state and local economic development is seen as promoting growth in two ways: it can make Iowa an attractive place for employment of mobile capital and labor, and it can help make the state's resources more productive. It therefore must identify instances in which the market activities of individuals and businesses fail to make the best possible use of scarce economic resources, and then take actions that result in a net improvement.

One of the problems in Iowa has been that the closest intermodal container facility (which requires special equipment to unload and store containers) is in Chicago. Large containers must first go to Chicago before they can be unloaded and sent back to Iowa.

As highlighted before, the Quad City Container Transfer Terminal project is a concept that is very important for that region's businesses. Other than the Davenport area, downtown Des

Moines has the Walnut Street Transit Mall, which serves as an intermodal mass transit project. Over the past decade, the skyline and character of the downtown area has changed dramatically. Over a dozen projects are planned in the next five years. The MTA, in cooperation with the IDOT, has put a combined effort in to revitalize the growth in the area through mass transit projects.

Two aspects of the IDOT merit further attention. They are the RISE program and the Intermodal Pilot Project. The RISE program is not multimodal by preference, but is a unique feature of a commitment to funding transportation needs for the improvement of the Iowa economy. The emphasis of RISE is on economic development for Iowa. The Intermodal Pilot Project shows the respect that the state gives to intermodal projects. It helps to fund marginally commercial projects that will create jobs and enhance the efficient transportation of goods. Nevertheless, it is a pilot project that is not guaranteed additional funding beyond this year.

## **MARYLAND**

### **Population**

Maryland is the eighteenth most populous state in the nation, with an estimated population of 4.6 million in 1988.<sup>96</sup> The state has a population density of 439.7 persons per square mile, with 80.3 percent of the population concentrated in urban areas. State population increased by 48,000 people between 1970 and 1980.<sup>97</sup>

### **Geographic Area and Topography**

Maryland's total area is 10,577 square miles, making it forty-second among the states in terms of size. The land area is 9,981 square miles, or 94.4 percent of the total area. The climate is described as continental in the western portion of the state and sub-tropical in the southern part. Maryland is a mid-Atlantic state and is bordered on the north by Pennsylvania, on the west by West Virginia, on the south by Virginia, and on the east by the Atlantic Ocean. The Chesapeake Bay splits the state in half, forming the Eastern Shore and Central Maryland. The area at the western end of the state is referred to as western Maryland. The Blue Ridge Mountains run along the western part of the state. Washington, D.C., is located between Maryland and Virginia. Annapolis is the state capital.<sup>98</sup>

### **Transportation Statistics**

Because the state is divided by a major waterway--the Chesapeake Bay--transportation becomes a major issue. Not all of the state's waterways are suitable for transportation, but a large amount of waterborne traffic exists, specifically around the ports of Baltimore and Cambridge. Bridges are important in the state for connecting one area to another. The major bridge across the Chesapeake Bay is the William Preston Lane, Jr., Bridge, formerly known as the Chesapeake Bay Bridge. Other bridges are the Francis Scott Key Bridge, crossing the Baltimore Harbor; the Thomas J. Hatam Bridge, crossing the Susquehanna River; the Harry W. Nice Bridge, crossing the Potomac River south of Washington, D.C.; and the Choptank River Bridge.

The two tunnels in the Baltimore area are the Fort McHenry Tunnel and the Baltimore Harbor Tunnel. The Fort McHenry is the world's only eight-lane vehicular tunnel and the newest facility operated by the state's Mass Transit Administration (MTA). The Baltimore Harbor Tunnel is a four-lane tunnel across Baltimore Harbor.

There are 38 public-use airports in Maryland. The Baltimore-Washington International Airport (BWI) handles air traffic for the area and is a major multimodal facility. In 1988, BWI served 30,000 passengers on an average day. Martin State Airport (MTN) is the largest general aviation airport in the state. Washington National Airport serves local traffic for Washington, D.C.

There are over 26,000 miles of roadways in the state. The state owns and maintains 5,200 miles, or approximately 20 percent, of the total. There are 4,600 bridges in the state, one-half of which are maintained by the state. The State Highway Administration (SHA) oversees these facilities.

Approximately 1.7 million commuters were moved through the Baltimore-Washington region in 1987 on the railroad commuter service (MARC). There are four light-density rail lines on the Eastern Shore and two in central Maryland, using over 100 miles of track.<sup>99</sup>

### **Economy**

Maryland's principle industries are tourism, agriculture, and manufacturing. Primary manufactured goods are food and related products, primary metals, and electric and electronic equipment. The major crops are tobacco, corn, and soybeans. Livestock include cattle, pigs, sheep, and poultry. Timber production is limited to hardwoods. Minerals are crushed stone, sand and gravel, clay, and shale. Commercial fishing is an important industry,<sup>100</sup> as is tourism, which includes horse racing and beach resorts.

There are approximately 4,000 manufacturing establishments in Maryland, which produced \$25 billion worth of goods and services in 1985. The value added by the state's industry grew approximately 17.5 percent between 1982 and 1985. During the last six years, investments in expanded facilities have totaled \$7.5 billion. These facilities will be able to accommodate 188,700 new workers when completed.<sup>101</sup>

### **STATE ECONOMIC DEVELOPMENT**

Economic development in Maryland is an ongoing process handled through the Maryland Department of Economic and Employment Development. Governor Schaefer recently created the Maryland International Division (MID), which is an interdepartmental entity. Representation of three state departments form the membership of MID: the Maryland Department of Agriculture, the Department of Transportation, and the Department of Economic and Employment Development. In addition, the governor has appointed task forces to study housing,

education, and transportation. All of these efforts increase communication among departments and between the public and private sectors. Transportation is viewed as an important part of the state's economic development efforts.<sup>102</sup>

Several services have been established to assist commerce in the state, both at the national and international levels. The Maryland Department of Economic and Employment Development provides information on confidential location assistance, flexible public financing, state-funded employee training, sales to government, enterprise zones, and foreign trade zones.

State legislation has been passed to assist business in the financial area. The state has repealed the personal property tax on business. The five-year property tax credits for state enterprise zones have been extended to ten years. Certain specialized software has been exempted from the state sales tax. There is also a reciprocal regional banking arrangement in the state. Small business has been given access to tax-exempt capital. The Office of International Trade was established to develop business overseas. Finally, the Maryland Department of Economic and Community Development has several offices located throughout the state and in Brussels, Belgium, and Tokyo, Japan. All of these efforts are intended to increase productivity and commerce.<sup>103</sup>

## **STATE AGENCIES INVOLVED IN TRANSPORTATION**

The Maryland Department of Transportation (MDOT) is the primary state agency with responsibilities in transportation. However, several special task forces and multidepartment agencies appointed by the governor also have important roles to play.

### **Maryland Department of Transportation**

Organization. The Maryland Department of Transportation (MDOT) was formed in 1970 as a multimodal agency and is responsible for state-owned transportation facilities and functions. MDOT has direct control over planning; its primary functions are planning, financing, construction, and operation and maintenance of transportation facilities, as well as licensing and administration. The administrations under the control of MDOT are the Maryland Aviation Administration (MAA), the Maryland Port Administration (MPA), the Motor Vehicle Administration (MVA), the Mass Transit Administration (MTA), the State Highway Administration (SHA), and the State Railroad Administration (SRA). The department is directed by a secretary and deputy secretary, who report to the governor.

In addition to the modal transportation administrations, there are other offices and commissions needed for administration

and planning. The Office of Transportation Planning is under the secretary. Other offices under the secretary are the Office of Financial Planning and Budget, the Maryland Transportation Commission, the secretary for management studies, assistant secretary for transportation, the Professional Services Selection Board, the Board of Administration, the Office of Policy and Program Analysis, and the Office of General Council.<sup>104</sup>

Programs and Projects. One of the unique features of the state is its wetlands. MDOT, in coordination with the Maryland Department of Natural Resources, is responsible for protecting wetlands while work is taking place on construction projects. This activity is part of the highway planning process. Specific permits are required by the Corps of Engineers, the Maryland Department of Natural Resources, and the Maryland Department of the Environment. The SHA has established a special multidisciplinary task force responsible for identifying and ensuring that regulations are enforced. The task force coordinates its efforts with federal agencies as well.

Noise abatement also has become a major factor that the state must address. The SHA has constructed noise-abatement walls along many of the state's highways to protect the neighboring developments. Noise abatement is similarly a concern at airports.

In 1988, the Mass Transit Administration (MTA) initiated the statewide transit development plan. This plan inventories transit needs and monitors progress on project implementation. The Statewide Special Assistance Program (SSTAP) is administered by the department. This program focuses on the elderly and the handicapped. The MTA also operates three sections of the light-rail, metrorail system.<sup>105</sup>

Transit service in the Washington area is provided by the Washington Metropolitan Area Transit Authority (WMATA). It operates the metrorail system and the metrobus system. In 1986, WMATA's board of directors entered into a "full funding agreement" with the federal Urban Mass Transit Administration (UMTA) for the completion of 89 miles of the planned metrorail system.<sup>106</sup>

The State Railroad Administration (SRA) operates commuter rail service between Baltimore and Washington, D.C., and between Washington, D.C., and Brunswick. Six commuter stations are being planned. The SRA helps to manage the "freight service program" on the Eastern Shore and in central Maryland by giving direct subsidies to rehabilitate some of the lines. The two major railroad companies operating in the state are the CSX and AMTRAK.<sup>107</sup>

The "Reach the Beach" program is intended to reduce traffic congestion to the beach resorts along the Atlantic coast of Maryland. The agencies responsible for this program are the State Highway Administration, the Mass Transit Administration, and the Maryland Transit Authority.

The Seagirt Marine Terminal, funded by both the Maryland Transportation Authority and the Maryland Port Administration, is an example of a partnership between state agencies. Another example of a partnership involves Maryland and Virginia in their coordination of snow removal. A third partnership effort was viewed as the cooperation manifested by the governor, legislators, government officials, and private groups to gain a revenue increase in 1987 for road and bridge construction.

Additional programs include the governor's Central Corridor light-rail construction schedule, the Baltimore-Washington, D.C., International Airport expansion project, and the MARC commuter rail service.<sup>108</sup>

Funding. Financing of transportation projects is provided by the Transportation Trust Fund. The fund collects revenues from a variety of taxes, user fees, charges, bond proceeds, federal aid, and operating proceeds of the department, but it does not include the tolls collected by the Maryland Transit Authority (MTA). The purpose of the fund is to combine all transportation-related receipts into a single trust fund. MDOT may use the state's share of the trust fund for any lawful purpose within an approved budget. All expenditures are made from the trust fund, including revenue shared with local jurisdictions. The trust fund supports debt service, maintenance operations, capital expenses, and administrative expenses. Expenditures are allocated by the secretary and approved by the governor and the General Assembly. There are legislatively mandated expenditures for development and operations of mass transit projects in the Washington, D.C., region.

Seventy percent of the motor fuel and motor vehicle revenue goes to the MDOT. The remaining 30 percent goes to the local governments, with one-half allocated in proportion to the number of highway miles being maintained within a jurisdiction, and the remainder allocated in proportion to the number of vehicles registered in the area.

In 1987, a revenue increase was accomplished through an additional five-cent-per-gallon tax on gasoline. Moreover, vehicle registration fees were increased. House Bill 256 stipulated that the revenue gained from the gasoline tax increase and any bond proceeds associated with those revenues be earmarked for construction of highways and bridges. In addition, 70 percent of MDOT's total capital program from fiscal year 1988 through fiscal year 1992 is to be allocated to roadway projects.

Seventy-six percent of the transportation revenue sharing account goes to the state, and the remainder to local governments. Each county receives its portion of the money based on population. The city of Baltimore receives 10 percent. The principle areas receiving federal aid are highway and transit projects and services. Smaller portions go to aviation and railroad services. Revenues are also received from the transportation facilities, such as port facilities; the World Trade Center leases, bus and rail fares, advertising; and charters. Airports generate income from parking, cargo, warehousing, terminal leases, concessions, and landing fees.<sup>109</sup>

Reports and Plans. The Maryland Department of Transportation has produced a variety of studies, reports, and plans. The State Report on Transportation, Volume 1: Maryland Transportation Plan, published annually, presents an overview of the department's activities in terms of goals and objectives, levels of funding, policies, and programs.<sup>110</sup> Volume 2 also contains individual sections describing the accomplishments of each administration within the department. The State Report on Transportation, Volume 2: Consolidated Transportation Program provides greater detail on the specific methods of funding for each administration and gives a description of the activities associated with each project and program intended for implementation over the next five years. The capital program summary for each administration is outlined, and then each project is described first by administration and then by county.<sup>111</sup>

The 1989 Maryland State Rail Report is produced by the State Railroad Administration. The report describes funding, the local rail assistance program, the rail line acquisition program, future plans for out-of-service rail lines, freight capital, and finally rail issues and trends.<sup>112</sup>

The Baltimore-Washington Commuter Rail Accessibility Study, initiated in late 1986, looks at the Baltimore-Washington Corridor commuter rail service. This study is a joint effort by the Maryland Department of Transportation (MDOT), the Baltimore Regional Planning Council (RPC), the Metropolitan Washington Council of Governments (COG) and the Washington/Baltimore Regional Association (W/BRA). Study participants include representatives of the public and private sectors, transportation providers, planners, and business leaders. The report examines several modes of transportation between Baltimore and Washington: roads, mass transit, light-rail and commuter rail systems. Intermodal connection improvements are highlighted.<sup>113</sup>

The Port of Baltimore puts out the Baltimore Portfolio which describes facilities, services, and operations of the Port of Baltimore. The many facilities that comprise the port are



described in terms of their capabilities. In addition, descriptions are offered of the channel networks and the transportation connections to the Baltimore-Washington International Airport.<sup>114</sup>

The State Aviation Administration (SAA) at the Baltimore-Washington International Airport (BWI) oversees both planning for the airport and produces reports on trends in aviator activities at the airport. The master plan was produced in response to the deregulation of the airline industry in 1978. The Master Plan Executive Summary, Baltimore/Washington International Airport is an overview of the trends in the passenger traffic and airport operations. It describes the plans for the future development of the facility and access to it.<sup>115</sup> Volume 1--Overview of Baltimore/Washington International Airport, Master Plan Update, prepared in January of 1987, offers greater detail of individual activities; it describes air and ground facilities, the highway plan, environmental considerations, and the cost and scheduling of airport improvements.<sup>116</sup> The report Trends at BWI Since Deregulation 1978-1987, prepared in 1988, describes the trends at the airport, and compares them with the two neighboring airports--Washington Dulles and Washington National. Categories discussed are passenger traffic, freight, mail, commercial, and general aviation.<sup>117</sup>

#### **MPOS AND LOCALITIES INVOLVED IN TRANSPORTATION**

Two metropolitan planning organizations play a vital role in the coordination functions between the counties and state government; they are the Regional Planning Council (RPC) in the Baltimore region, and the Metropolitan Washington Council of Governments (COG).

#### **The Regional Planning Council (RPC)**

The Regional Planning Council (RPC) was established in 1963 by the Maryland General Assembly. Its function is to serve as the public forum for state and local officials and private citizens of the Baltimore region to address regional issues. It is responsible for preparing a general plan and providing planning and technical assistance to state and local governments.

The RPC's region can be delineated in three different ways. Its legal boundaries are comprised of the city of Baltimore and Anne Arundel, Baltimore, Carroll, Hartford, and Howard counties. Its census boundaries include the above entities plus Queen Anne County. And its market boundaries include all of the above entities, plus Caroline, Cecil, Dorchester, Kent, and Talbot counties.

The mission of the Regional Planning Council (RPC) is to "...cooperatively resolve regional issues and resource allocation concerns critical to the quality of life in the Baltimore Region and the state of Maryland..." The RPC provides a common meeting ground for public and private organizations to address social, economic, and governmental issues. It serves as a regional information and resource center and performs policy analysis research.

The RPC is composed of an executive director, standing committees, the advisory and coordinating committees, the Regional Information Center; the Fiscal and EDP Services, Development Planning, Economic Research and Information Systems, Housing and Community Development, and Transportation Planning. Transportation Planning is divided into three sections: Plan and Policy Development, Systems Analysis and Technical Services, and Entrepreneurial Services.<sup>118</sup>

There are two transportation management associations: The Greater BWI Commuter Transportation Center, Inc., and the Towson Transit Management Association, Inc. Their memberships consist of representatives from state and local government agencies and private firms in the area. Operating funds are obtained from dues and fees, government grants, and in-kind services. The purpose of the associations is to provide a forum for local communities to voice their opinions and concerns about transportation issues.<sup>119</sup>

The RPC, in cooperation with the Maryland Department of Transportation, prepares the five-year Transportation Improvement Program (TIP) for the Baltimore Region. In addition, it annually prepares the Unified Transportation Planning Program.

The Transportation Improvement Program (TIP) describes specific improvement projects. The TIP translates the transportation plan for the Baltimore region into a program of improvements. It lists multimodal projects for which federal funding is requested.<sup>120</sup>

The Unified Transportation Planning Program describes the long-range and the short-range planning efforts of the Baltimore region. The long-range planning considerations include demographics, urban goods movement, interregional modeling, and highway capacity analysis to mention a few. Some of the long-range planning studies deal with mass transit, the Baltimore-Washington Accessibility Study (a joint effort by the RPC and the Metropolitan Washington Council of Governments), and the Downtown Transportation Study. Short-range planning activities include studies for specific counties or areas.<sup>121</sup>

## **Metropolitan Washington Council of Governments (COG) and the National Capital Region Transportation Planning Board (TPB)**

The National Capital Region Transportation Planning Board (TPB), formed in 1965, represents all local governments in the National Capital Region, and transportation agencies in Maryland, Virginia, and Washington, D.C. In 1966, the Metropolitan Washington Council of Governments (COG) was recognized by the federal government as the official agency for the Metropolitan Washington Region. In the same year, the TPB became the COG's Transportation Policy Committee.

The Capital Region Transportation Planning Board is composed of 19 cities and counties, members of the COG, the Metropolitan Area Transit Authority, five federal agencies, and a representative of the COG-sponsored advisory committee. The represented counties are Loudoun, Prince William, and Fairfax counties in Virginia and Frederick, Montgomery, Prince George, and Charles counties in Maryland. The COG has six policy committees: Airport Noise Abatement, Environment, Human Services, Metropolitan Development, Public Safety, and the Metropolitan Transportation Board.<sup>122</sup>

The TPB develops and officially adopts transportation plans and programs. Planning activities involve data collection and analysis of travel patterns and networks. Transportation areas covered include aviation, bikeways, ride sharing, taxicabs, and private providers of transit.<sup>123</sup> Most recently, the TPB has been involved with the Northern Virginia 2010 Transportation Plan.<sup>124</sup> In addition, the COG collaborated with the Baltimore Regional Planning Council on the Baltimore-Washington Accessibility Study.<sup>125</sup>

### **INTERMODAL PLANS, PROGRAMS, AND PROJECTS**

#### **Port of Baltimore**

The Port of Baltimore is a combination of several facilities: Dundalk Marine Terminal and North Locust Point and South Locust Point Terminals. These facilities are clustered around the Baltimore harbor in the northwest quadrant of the Chesapeake Bay. The strategic location on the bay is one of the factors that makes this port significant. The port may be reached from two directions: from the north through the C & D Canal and from the south through the lower end of the Chesapeake Bay. Both directions offer access to the Atlantic Ocean.

According to the Maryland Port Administration (MPA), the mission of the port is to "...stimulate the flow of waterborne commerce through the ports in the state with the intended benefits of encouraging transportation related employment in

Maryland, increasing the tax base in the state, and encouraging the development of industry within the state and related employment."<sup>126</sup>

The Port of Baltimore was known as the "railroad" port at the end of World War II. Almost 90 percent of the cargo-handling facilities were handled by the railroads. In 1956, the general cargo facilities were owned by the Baltimore and Ohio (B&O) Railroad. These facilities were North Locust Point Terminal and Clinton Street Terminal. In 1959, the MPA bought Harbor Field, the city-owned airport, and converted it into the Dundalk Marine Terminal.

The total general cargo through the port was 5.2 million tons in 1987. Exports were 1.5 million tons and imports were 3.6 million tons. The primary hinterland area served by the port is the Midwest. Container imports have increased, and the coal-hauling industry has potential. Rail service to the port is provided by the CSX Company and CONRAIL. Over 160 trucking companies carry goods to the port.

The port offers adequate space for waterfront expansion. Coal terminal capabilities have been expanded, and the port authority is cooperating with the federal government on the construction of a 50-foot deep channel. This construction will be funded by user-fee charges to those vessels which require the additional depth. The environmental sensitivity of Chesapeake Bay is monitored by the state, and strict regulation is carried out by the Maryland Department of Natural Resources.

The World Trade Center is part of the Maryland Port Authority (MPA). It operates the World Trade Center Building and the World Trade Center Institute. The World Trade Center Building leases office space to maritime customers at reduced rates. In addition, there are meeting rooms available to conduct trade-related meetings. The World Trade Center Institute promotes trade and education. Seminars are offered for the private sector and foreign trade is promoted through the Institute.

In general, the Port of Baltimore offers an organized intermodal transportation system. The constant striving to maintain the competitive advantage over other ports is exhibited by its general promotional efforts, the advertising offered by the World Trade Center, and the excellent infrastructure offered to the shippers. In 1987, Governor Schaefer appointed a special committee to investigate what regulations and legislative changes are needed to promote growth in trade. The committee concluded that the Consolidated Transportation Program was responsive and flexible in funding needed projects but recommended the creation of a policymaking board (the Maryland Port Commission).<sup>127</sup>

## **The Baltimore-Washington International Airport**

The Baltimore-Washington International Airport (BWI) is a regional airport located halfway between the cities of Baltimore and Washington, D.C. BWI is Maryland's only major commercial air carrier airport.

The airport was acquired from the city of Baltimore in 1972. At the time, a \$100 million renovation was started. Its name was changed to Baltimore-Washington International Airport, and its orientation became regional. In 1987, 9.2 million passengers moved through the terminal. The terminal handled 239 million pounds of cargo in 1986, reaching 255 million pounds in 1987.

The airport is a partnership between air carriers and governmental agencies. Revenues received from the concessionaires and nonairline tenants, landing fees, and facility leases are important to the funding of airport activities.

An update of the noise-abatement plan is required every five years. The noise abatement plan establishes procedures and restrictions for aircraft using the airport.

The master plan update for the airport was completed in 1987. The following recommendations were offered:

1. an expansion of the general-aviation runway;
2. the construction of a new runway during the 1990s;
3. an expanded Piedmont terminal;
4. increased parking;
5. upgraded roadway network; and,
6. a proposed service to the terminal by the Baltimore Transit Authority.

According to the Maryland Department of Transportation, the important issues facing the airport are to keep pace with the growing airline industry, to provide both adequate land and air facilities to meet the region's needs, noise abatement, and the need to address competition.<sup>128</sup>

### **SUMMARY**

Maryland is moving ahead in the field of transportation planning by forming cooperative public/private partnerships. The proximity of Baltimore to Washington, D.C. makes cooperative planning a necessity. A possibility exists that these two cities will be combined in the 1990 U.S. Census as a consolidated statistical measurement area, similar to Dallas-Fort Worth. Given this connection, combined planning efforts are underway in

efforts such as The Baltimore Washington Commuter Rail Accessibility Study.

One of Maryland's unique features is the proximity of the Port of Baltimore to the Baltimore-Washington International Airport. The connection of these two facilities by rapid transit and other transportation modes has the potential to make the two facilities into a single unified system.

The existence of the light-rail lines and the commuter trains coming together creates an environment for future development of multimodal facilities or terminals. This occurs at several points between Baltimore and Washington. In addition, the AMTRAK stop closest to the Baltimore-Washington International Airport, which is currently served by a minibus system, could be developed into a light-rail connection to the airport. The potential for the development of multimodal facilities at the junctures of rail lines and light-rail line connections to the airport are ideas for the future.

Baltimore and Washington have recognized the need to divert traffic from highways by offering alternative modes of transportation. Incentives to change travel behavior are being introduced. Comfort and safety also are taken into consideration in planning to make these new systems more attractive to commuters.

The unified Transportation Trust Fund is another bright spot in the method of financing transportation infrastructure and promoting economic development. Due to the fact that there is flexibility in the funding of projects that are deemed necessary by transportation planning groups, business is being attracted to Maryland. The state's mass transit system is state of the art, as dictated by the high population density and location of the state. The Port of Baltimore is a major transportation hub, as is the Baltimore-Washington International Airport. The fact that the operation and funding of these facilities comes under one main organization--the Maryland Department of Transportation--has enabled cooperative efforts and multimodal planning to be undertaken as an ongoing process.

## **NEW YORK**

### **Population**

New York is the second most populous state in the nation, with an estimated population of 17.9 million in 1988.<sup>129</sup> The state has a population density of 370.8 persons per square mile, with 84.6 percent of the population residing in urban areas. State population decreased by 136,000 people between 1980 and 1983.<sup>130</sup>

### **Geographic Area and Topography**

New York occupies an area of 47,831 square miles; it ranks thirtieth overall in the United States. Its topographical description, as stated in the 1986 U.S. Almanac, is as follows: highest and most rugged mountains in the northeast Adirondack upland; St. Lawrence-Champlain lowlands extend from Lake Ontario northeast along the Canadian border; Hudson-Mohawk lowland follows the flows of the rivers north and west, 10-30 miles wide; the Atlantic coast plain in the southeast; Appalachian Highlands, covering half the state westward from the Hudson Valley, include the Catskill Mountains, Finger Lakes; plateau of Erie-Ontario lowlands.

### **Transportation Statistics**

New York's highway network consists of over 110,000 miles of roadways and 7,300 bridges. Maintenance and operating responsibility for this system is shared by more than 1,600 units of government. The following list indicates highway jurisdiction: state--15,537 miles and 7,300 bridges; parkways--232 miles; toll road authorities--611 miles; counties--20,402 miles; towns--55,256 miles; villages--6,002 miles; and cities--11,986 miles.

Public transit is comprised of commuter rail, rapid transit, bus, ferry, and various other transit services. Commuter rail lines link the suburban counties of the New York City metropolitan area with the city proper. Over 680 miles of rail rapid-transit lines run through New York City. Buffalo opened a new light-rail transit system in May 1985. Ferry service is provided between Staten Island and downtown Manhattan by the Staten Island Ferry. All major cities and many smaller communities offer scheduled intercity bus service on fixed routes. The New York City bus system alone consists of approximately 230 local and express lines. Intercity buses serve over 1,000 communities. Specialized transit service for "transit disabled persons" is provided within the state's eleven urbanized areas.

AMTRAK is responsible for all intercity passenger service within the state. Rail service is concentrated on two main lines: the 462-mile "Empire Corridor," linking Niagara Falls/Buffalo with New York City and points beyond, and the "Northeast Corridor," connecting Boston and Washington, D.C., via New York City's Penn Station. In 1986, 1.4 million passengers were carried on these lines.

Commuter rail service lines total in excess of 1,400 track miles. The Long Island Railroad and the Metro-North Commuter Railroad Company are the primary carriers serving the New York City area and the counties of Nassau and Suffolk on Long Island, as well as Westchester, Putnam, and Dutchess to the north and the southern portion of the state of Connecticut. Together, they carried over 126,000 passengers in 1987. The Port Jervis and Pascack Valley Lines service the southern portion of the state and northern New Jersey.

The bulk of the state's rail freight traffic is carried on two mainline routes: the Water Level and the Southern Tier. The Water Level route serves the major metropolitan centers of Albany, New York City, Syracuse, Rochester, Buffalo, Watertown, and Messena. The Southern Tier route serves Orange/Rockland County area, Binghamton, Elmira, Corning, Jamestown, and Buffalo. The main system is complemented with branch lines and short lines. These lines feed local pick ups and goods into the main lines.

Primary freight service is provided by the Consolidated Rail Corporation (CONRAIL), privately owned since 1987. Short lines and branch lines are served by 27 independent railroads. The six largest operators are CONRAIL, the Delaware and Hudson Railroad, the Norfolk and Western Railroad, the Baltimore and Ohio Railroad, the Chesapeake and Ohio Railroad, and the Boston and Maine Corporation. In 1985, they carried 570,307 carloads of freight, representing 80 percent of the total carried.

There are 349 airports in the state of New York. These are made up of 22 commercial service airports, 34 publicly owned airports, 119 privately owned airports open to the public, and 174 airports for private use only. Scheduled air service is allowed only at publicly owned airports.

Aviation is supported and maintained by the federal, state, and local governments, transportation authorities, and by airlines, industry, private groups, and individuals. Primary downstate airports are John F. Kennedy International, LaGuardia, Islip, and White Plains. Over 49.5 million passenger trips are served annually at Kennedy and LaGuardia airports. The four largest upstate airports are Buffalo, Rochester, Syracuse and Albany. Medium-sized city airports are Utica, Binghamton, Elmira



and Ithaca. New York State owns and operates two major airports: Stewart Airport in the Hudson River Valley and Republic Airport on Long Island.

New York's waterway system consists of the Barge Canal, the Great Lakes/St. Lawrence Seaway, the Hudson River, and Long Island Sound. There are over 524 miles of lakes, rivers, and canals connecting the Hudson River, Lake Champlain, Lake Ontario, Lake Erie, and Seneca and Cayuga lakes. Much of the waterway system is operated by the private sector.

Private ports handle over 90 percent of all waterborne freight. New York's public ports are located in New York City, Albany, Ogdensburg, and Oswego. Tonnage through the public ports was listed at 869,000 tons in 1986.

Passenger and car/truck ferry service are provided on routes across Lake Champlain, Lake Ontario, Chautauqua Lake, the St. Lawrence River, Long Island Sound, and within New York Harbor. The Manhattan-Staten Island ferry is the dominate waterborne ferry service in New York. Approximately 20 million passengers are carried annually.<sup>131</sup>

## **Economy**

The principal industries in the state are manufacturing, agriculture, finance, communications, tourism, transportation, and services. Between 1980 and 1987, population increased by 1.5 percent. From 1987 to 1988, employment was up by 1.6 percent; unemployment decreased by 1.4 percent. From 1986 to 1987, total personal income increased by 7.2 percent, and per capita income was up by 7.0 percent.<sup>132</sup>

## **STATE ECONOMIC DEVELOPMENT**

In 1987, the New York state legislature passed the Omnibus Economic Development Act creating a new Department of Economic Development. The director of the new department was granted the authority to develop policy and coordinate state activities. The act emphasizes "the delivery of services at the regional level and the integration of services among the State's economic development related agencies."<sup>133</sup>

State economic development strategies are based on the 1987 plan entitled Building on Resurgence: Strategic Economic Policy for New York's Future. This plan identifies nine new economic development policies and initiatives for the state. Goal six, specifically relating to transportation, calls for "Continuing to Maintain and Improve Our Infrastructure." The following programs are cited in line with this goal:

1. Major capital improvements in the New York City metropolitan area. The Port Authority of New York and New Jersey plans to modernize and expand the regional infrastructure. Plans are underway to invest \$1.6 billion in new airport passenger and cargo facilities; make improvements in the region's bridges, tunnels, and terminals; expand ferry service; and improve subway connections to the World Trade Center.
2. Continued support of the Industrial Access Program (IAP). The IAP has provided over \$10 million in grants and loans for road projects that encourage and/or are vital for industrial development. The program encourages businesses to locate and expand in New York.
3. Roadway Improvement Committee. Through the \$1.25 billion Rebuild New York Bond Act of 1983, the state has made significant improvements in highway and bridge infrastructure. In 1988, the state passed a \$3 billion bond issue to continue the efforts of the 1983 Rebuild New York Bond Act.

The director of the Department of Economic Development chairs the economic development subcabinet, which is comprised of representatives from more than 25 state agencies, departments, and public authorities, including a representative from the New York State Department of Transportation (NYSDOT). The subcabinet provides a forum for the integration of ideas and is responsible for drafting the statewide economic development plan.

Statewide economic development efforts are coordinated from Albany, the state capital. The state is divided into ten regional economic development offices; each office is directed by a regional director and supported by professional staff. Although each region operates independently, interaction among the regions is quite normal. Regional offices focus 90 percent of their efforts on assisting the state's existing private firms. Statewide, nine regional economic development cabinets have been formed to develop regional economic development strategies and programs. Cabinet members include representatives from the local business, education, and planning communities.

Transportation is considered an integral element of economic development. It is very common for the Department of Economic Development to refer transportation-related projects to the NYSDOT for implementation. A multimodal or intermodal solution to a particular problem, while not discouraged, is not given more emphasis than any other method. Each project is reviewed independently. Economic development officials recognize that state infrastructure assistance can be a very attractive enticement to retaining an existing company or attracting a new company.<sup>134</sup>

## STATE AGENCIES INVOLVED IN TRANSPORTATION

The New York State Department of Transportation (NYSDOT) is the lead state agency involved in overall transportation planning and operations. Significant downstate regional players include the Port Authority of New York and New Jersey and the Metropolitan Transit Authority. Jurisdictional overlap results in considerable informal interaction among agencies. Good working relations have evolved unencumbered by strict formal organizational structure.

### New York State Department of Transportation

Organization. The New York State Department of Transportation is actively involved in all aspects of transportation planning and system operation. With minor exceptions, the department does not operate any transit systems or transportation facilities. The department is directed by the Office of the Commissioner and supported by appropriate administrative and development offices, such as the Office of Communications and Intergovernmental Relations or the Office of Executive Counsellor.

The department is divided into six offices, which are as follows: Program Planning and Management Group, Office of Engineering, Office of Operations, Office of Public Transportation, Office of Management and Finance, and Office of Human Resources. Within each office are suboffices. Primarily, transportation planning and operation is concentrated in the Office of Public Transportation. Modal responsibilities have been segmented into departments within the Office of Public Transportation. The state of New York is divided into 11 transportation regions.

Programs and Projects. According to the 1987 State Transportation Master Plan, New York State's primary transportation policy is to "plan for, rebuild and maintain a transportation system which supports the State's goals and objectives. These goals include a healthy economy, energy conservation, environmental protection, full employment, and fair and equitable participation programs." Under the Rebuild New York Bond Initiative, the NYSDOT has focused on rebuilding the state's transportation infrastructure with the goal of restoring and preserving its enormous investment. Equally important has been the objective of economic enhancements through transportation assistance.

Planning is an integral function of the department. Through its planning efforts, as stated in the 1987 State Transportation Master Plan, the department "hopes to achieve better linkages

between the modes, coordinate modal activity better and strive to meet the agency's legislated purpose." It is the objective of the department to achieve a system in which the modes are in balance. Planning is viewed in the department as very much a coordinated effort on all levels: local, regional, statewide, and federal. Many studies and projects are co-sponsored with the regional authorities, agencies, MPOs, and the city of New York, to name a few.

The NYSDOT planning has been segmented into three areas: upstate, downstate, and statewide. Upstate and downstate planning are responsible for the metropolitan areas in their respective regions. Statewide planning focuses on the areas between cities. NYSDOT has divided the state into 11 regional offices. Each regional director prepares a list of capital projects, which is reviewed and updated throughout the year. It is not unusual for priorities to change over the course of the year.

Until recently, planning efforts were modally oriented. The department is now in the process of shifting its focus to a multimodal, total systems approach.

The Office of Public Transportation, under the direction of the assistant commissioner, holds in-house monthly meetings to resolve conflicts, define master issues, and to ensure adherence to the master plan. These meetings have increased communication at all levels of transportation planning and operation and have facilitated action.

Project implementation varies considerably from mode to mode. Generally, a rail or aviation project may run six months to a year from conception to completion as compared to a highway project, which could take up to ten years, or a light-rail project, which could take up to twenty years. Whether a project moves swiftly or is delayed for an extended period of time may depend on its source of funding or its economic, environmental, or community impact. All significant projects are reviewed initially through the A-95 Clearinghouse Review Process. This process enables all involved parties to review and comment on a project prior to implementation.

There are four methods by which a project may be identified in New York. First and foremost, the majority of projects are identified by the NYSDOT professional staff. Until very recently, most projects were maintenance related. NYSDOT is now addressing capacity needs. The second method is through the MPO process. Identified by MPO professionals, these projects often stem from a community need. Third, a minimal number of projects result from political pressure; and, fourth, projects are identified in a bond issue. Generally, these projects are the result of some legislative action. Occasionally, NYSDOT may pick

up a project for the simple reason that no other entity will do it.

The department is responsible for the construction, maintenance, and operation of state highways and bridges. In all aspects of operation, safety is a primary concern and responsibility. The NYSDOT is prepared to assist local communities with highway and bridge-related projects by its administration of federal and state assistance programs. The department is responsible for overseeing and providing financial assistance to the state's transit providers. Intrastate bus operators are subject to state safety and economic activity regulation.

As stated in the 1987 State Transportation Master Plan Summary, the department regards its role in rail operation as that of "upgrading the physical and operating quality of essential rail service and the fostering of competition within the rail freight industry between railroads and other carriers." The department will continue to explore passenger and freight-service expansion and system safety analysis and control.

The canal system is owned by the state and operated by NYSDOT. No longer used for freight transportation, the canals provide the state with fresh water and power. In addition, the canals serve as recreational waterways for hikers, boaters, bikers, and picnickers. The Power Authority of the State of New York is responsible for all power-generation aspects of the canals.

Much of the NYSDOT activities can be considered directly or indirectly motivated by economic development concerns. The Industrial Access Program and the Full Freight Access Programs, detailed in a later section, are two such examples.

In 1985, New York state passed into law the Industrial Access Program. Administered by NYSDOT, this program provides up to \$1 million in funding for highway and bridge improvements that will facilitate economic development. The award is granted after it has been demonstrated that the transportation improvements will result in jobs being created or retained. Industrial facilities may include agricultural properties. Funding is considered to be of a last-resort nature in that all other sources, including private financing, have been researched and deemed unobtainable. The funds are considered to be a 60-percent grant and 40-percent interest free loan over five years. Municipalities, government agencies, and private firms are eligible. Private corporations must be sponsored by a government agency. All proposals must be filed with the regional director of transportation.<sup>136</sup>

The department operates two state-owned airports: Stewart Airport and Republic Airport on Long Island. Stewart Airport is an example of a NYSDOT activity motivated by economic development concerns. In 1983, the state legislature transferred responsibility for Stewart Airport from the Metropolitan Transit Authority to the NYSDOT. At that time, it legislatively mandated the NYSDOT to draft a master plan, which would blend economic development and airport operations. Since 1984, the NYSDOT, acting as landlord/developer, has carefully developed an on-site industrial park and, with assistance from local community agencies, has been selectively soliciting park tenants. Substantial state capital has been invested in the airport in order to improve the decayed infrastructure. Stewart required new roads, and new water and sewer lines.

Stewart is quickly gaining a reputation as an ideal development and as a transportation gateway. While corporate passenger and cargo carrier service is rapidly developing, the NYSDOT is trying to sign a commercial carrier. Ultimate airport success will depend upon this occurring. The department hopes to eventually make Stewart a thriving major airport in the Hudson River Valley.<sup>136</sup>

Economic development is synonymous with New York public port activity. The department provides the public ports with financial, technical, and developmental assistance. The department has achieved its objective to develop self-sustaining ports, which provide good service, jobs, and regional economic benefits. The ports are run by public authorities in cooperation with state and regional transportation offices. Success has and will continue to depend on extensive community support and involvement.<sup>137</sup>

Occasionally, transportation projects result in positive economic development for the state. Track consolidation and reconstruction in the Buffalo/Niagara Falls area resulted in an improved rail service and highway network. Track removal opened up land for industrial development and recreation. A by-product of rail improvement was the removal of unnecessary bridges, which unexpectedly amounted to an enormous reduction in planned highway improvement costs. These unanticipated improvements reduced costly truck operations, benefiting local business.

The project was eased through the community after the formation of the Buffalo/Niagara Falls Freight Commission. This group, representing community concerns, was instrumental in guiding the NYSDOT consultant in developing ideas which reflected community interests. The group helped to persuade CONRAIL participation in the project.

Funding. Faced with a deteriorating infrastructure in 1983, Governor Mario Cuomo and the state legislature successfully

proposed a \$1.25 billion bond act entitled the "Rebuild New York Transportation Infrastructure Bond Act." The bond act was specifically targeted for infrastructure rehabilitation. In addition to the regular state transportation capital improvement program, and combined with \$1.92 billion in federal/state matching funds, the total Rebuilding New York initiative amounted to more than a \$7 billion dollar investment in the transportation system for the years 1984-1989. In November 1988, the state passed a \$3 billion bond issue to continue the goals of the Rebuilding New York initiative into the 1990s. This bond issue specifically targets highway-related projects.

The state transportation budget is comprised of state revenues and user fees, federal grants, state tax-dollar monies from the 1967, 1974, 1979, 1983, and 1988 state bond programs and county and local budget allocations. Unlike other states, New York does not have a dedicated funding source for transportation.

The 1986 annual operating costs for state highways were \$498 million for operation, maintenance, and administration, plus \$277 million for transportation-related costs of other state agencies. Toll facilities are self-sustaining through toll collections. Local highway expenditures are estimated at \$1.2 billion, plus an additional \$210 million from special assistance programs. In 1982, the federal government increased funding for highway improvements through charging truck fuel tax and user fees.

In 1986, \$4 billion was spent to operate and maintain the statewide transit system. Just under one-half of all transit expenses are provided through government assistance programs. Ideally, transit riders pay half of the operating costs. Federal funding through the Urban Mass Transportation Administration was provided in 1985 for transit capital improvements and operating assistance. Matching funds were provided by the state. The NYSDOT administers the following transit assistance programs: the capital improvements program, state transit operating assistance program, and two federal programs for the support of special transit services.

Upstate transit operations may be facing a financial shortfall. Revenue funding is provided through the 0.75 percent gross-receipts tax on oil companies. In rural and small urban areas, state transit operating assistance programs provide partial funding toward the development and maintenance of service for the general public and transit-disadvantaged persons.<sup>138</sup>

Rail funding has been secured through the Federal Rail Safety and Service Improvement Act of 1982 in the amount of \$30 million. The state and other sources will match these funds with \$20 million. Both federal and state funding has been granted to improve and eliminate grade crossings.<sup>139</sup>

State aviation funding is provided from the 1967 bond program and the 1983 Rebuild New York bond act. The state will fund only airport planning or development projects once federal funds have been secured. The Essential Air Service funds assist smaller airports in maintaining minimal service levels. Federal funds are provided to improve privately owned general aviation airports that serve as relievers to commercial service airports through the Airport and Airway Improvement Act of 1982.<sup>140</sup>

State funding for ports is also provided through the 1983 Rebuild New York bond act. Canal funding is provide by the state in the amount of \$25 million. Federal funding is expected to cover canal maintenance and rehabilitation.

Most capital projects are financed with federal/state matching funds. These projects generally take a priority order. A small number of projects are actually identified and funded through a bond issue or through the MPO process. When a project has been identified as part of a capital program, funding for that project will be secured only for the five-year duration of the capital improvement program but not necessarily for the entire length of the project. A funding source will be reidentified in order to complete the project at a later date.

Reports and Plans. New York transportation policy is based upon the 1987 State Transportation Master Plan: Rebuilding New York. This plan outlines state short- and long-term transportation needs by focusing on comprehensive transportation planning. It presents the state transportation and management goals, policy for future decisionmaking, and an overview as well as an examination of the transportation system in New York. The state report is highlighted in a brief 25-page summary.

While the state master plan is the most comprehensive plan, individual modal plans also are produced on a regular basis. For example, the most recent rail plan was produced in 1986. The NYSDOT develops, maintains, and monitors the implementation of the state airport system plan. This plan must be periodically updated and adjusted to reflect federal aviation policy changes.

Regional planning boards are instrumental in the development of regional aviation system plans. According to the 1987 State Transportation Master Plan, the state's aviation program focuses on "improved coordination of federal and state airport planning, development and funding activities, and the development of federal programs that are responsive to New York state needs."

Any group which receives state funding is mandated to produce a plan. Within each modal unit, specific project or area master plans exist. For example, within the Division of Port Development, individual port authorities have produced a master plan and development study which addresses their respective port function, facilities, economic role, financial position, and



future use and plans. Similarly, anytime a study is conducted, a report is drawn up and published.

The NYSDOT is in the process of developing a new statewide master plan. In contrast to the 1987 plan, which identified specific issues and could really be considered a "stand alone document," the 1990 plan will focus on strategic issues and will emphasis multimodal planning. The Statewide Planning Department is meeting with each functional area in order to incorporate its ideas into the plan. It hopes to submit a draft of the plan to the public for review prior to publication. Previously, public comment was not sought until after the final plan was released.

### **Other State Agencies**

Public Authorities. Approximately 30 public authorities operate over 40 percent of the state's intrastate highway system and many bridges. Three of the largest are the New York State Thruway Authority, the Port Authority of New York and New Jersey, and the New York State Bridge Authority. Many of the facilities are toll facilities.

Public ports are managed by local governments and port authorities: in New York City by the city's Department of Ports and Trade; in Albany by the Albany Port District Commission, in Ogdensburg by the Ogdensburg Bridge and Port Authority, and in Oswego by the Port Authority of Oswego.

Public airports are operated, and in some cases owned, by the local government or public authorities. For example, the Niagara Frontier Transportation Authority owns and operates the Greater Buffalo International and Niagara Falls International airports.

New York State Thruway Authority. The New York State Thruway Authority (NYSTA) is responsible for the construction, improvement, maintenance, and operation of the 559-mile limited access statewide highway. Until recently, this facility was completely funded by tolls. The acquisition of federal funding for maintenance and improvements will allow for the removal of all tolls by 1996. The NYSTA is also responsible for the Tappan Zee Bridge, which crosses the Hudson River at Tarrytown. The bridge is currently facing severe congestion problems during peak travel periods.

New York State Bridge Authority. The New York State Bridge Authority owns and operates five toll bridges. They cross the Hudson River at and north of Bear Mountain.

The Port Authority of New York and New Jersey. The impact of the Port Authority of New York and New Jersey on the New York metropolitan area is immense in terms of economic and

transportation contributions. Its specific responsibilities include the following: the operation of many highway facilities such as the George Washington Bridge and the Holland and Lincoln Tunnels, the access system to LaGuardia and Kennedy airports, truck access to Port of New York facilities, and several commuter van and carpooling projects. The port authority operates Kennedy and LaGuardia airports and the Port of New York and its facilities, the largest public port in the nation. It is authorized to construct bridges between New Jersey and New York. The port authority has the largest intermodal operations in the state.<sup>141</sup>

The port authority interacts extensively with the following downstate regional transportation agencies: the Metropolitan Transit Authority, the City of New York Department of Ports and Trade, the New York State Department of Transportation, and the Metropolitan Transportation Council. It is quite common for two or more agencies to jointly sponsor a project. Involvement may be in the form of planning, construction, and/or financial assistance.

Although both the Department of Ports and Trade and the Port Authority are in the port business, neither openly feels they are in direct competition. The Port Authority is currently assisting the Department of Port and Trade by studying the cargo potential for the South Brooklyn Marine Terminal and the 42nd Street Pier. Presently, the port authority and the Metropolitan Transit Authority are involved in a joint mass transit system improvement project and the development of several shelters for the homeless. The Port Authority may also pick up large projects which are beyond the capabilities of the MPO. (For more information on the Port Authority of New York and New Jersey, see Appendix C).

Bi-State Interagency Transportation Forum. In February 1988, the Bi-State Interagency Transportation Forum was created between New York and New Jersey. The forum is a cooperative effort designed to informally address transportation-related issues. The forum has no budget or bylaws. Hosted by the Port Authority of New York and New Jersey, membership consists of high-level individuals from the NYSDOT and New Jersey State Department of Transportation, the Metropolitan Transit Authority, the New York City DOT, New York City Transit Authority, and the Port Authority of New York and New Jersey.

#### **MPOS AND LOCALITIES INVOLVED IN TRANSPORTATION**

The local transportation arena in the state of New York is comprised of many significant players. Interaction between agencies and the NYSDOT is frequent and of a cooperative nature. In addition to the state MPO structure, the following two

agencies will be examined: the City of New York's Department of Ports and Trade and the Metropolitan Transit Authority.

The state of New York has 12 metropolitan transportation organizations. They are as follows: New York Metropolitan Transportation Council, Capital District Transportation Committee, Glens Falls Urban Area Transportation Council, Herkimer Oneida Counties Transportation Council, Syracuse Metropolitan Transportation Council, Genesee Transportation Council, Niagara Frontier Transportation Council, Executive Transportation Committee of Chemung County, Binghamton Metropolitan Transportation Study, Newburg Orange County, Poughkeepsie Dutchess County, and Mid Hudson South. MPOs generally concentrate their planning efforts on urbanized areas.

Unlike other states, New York MPOs are not legally constituted governmental agencies. They rely on a voluntary host agency to act as a legal agent to execute contracts, pay bills, and provide staff. These host agencies must be prepared to wait for as long as three months for reimbursement through state-held federal funding. MPOs are often hosted by county planning agencies, public transportation authorities, or by the NYSDOT. The extent to which an MPO is distinct from its host agency varies from MPO to MPO and may often depend upon its size. Many New York MPOs are funded solely by federal funds and matching local funds from NYSDOT and local participants. MPO activities are limited to transportation planning and programming.

#### **Capital District Transportation Committee**

The Capital District Transportation Committee (CDTC) is responsible for regional transportation planning in the four-county region of Albany, Rensselaer, Saratoga, and Schenectady. Official committee membership is comprised of local government officials (cities and counties) and representatives of NYSDOT. Not all local cities and towns are members. Committee membership is divided into the Planning Committee, the Policy Committee, the Administrative and Financial Standing Subcommittee, and several subcommittees and task groups. The central staff of seven consists of five professionals and two clericals.

The CDTC receives its funding from the federal government and through annual membership contributions by its four-county members in the amount of \$75,000. Additional revenue is generated from direct contracts for planning/engineering services with local communities. Although always an issue of concern and considerable attention, CDTC's financial situation is far more secure than other New York MPOs.

The CDTC is responsible for preparing the annual Unified Planning Work Program, the one- or two-year and five-year Transportation Improvement Program (TIP), and the Urban

Transportation Planning Process. The Capital District Planning Committee is the "lead agency for air quality planning" in the district.

Within the region, CDTC pays close attention to local needs and issues. To the extent possible, CDTC is willing to lend the local community informal planning assistance. Communities will contract with CDTC for assistance on larger projects.

CDTC interaction with the NYSDOT and the local community is extensive. A few such areas are as follows:

1. the state owns and operates more roads within the Capital District than any other unit of government;
2. the state is responsible for implementing the TIP highway improvements;
3. the state is ultimately responsible for all of CDTC's primary contractual agreements with the federal government;
4. the state is responsible for reviewing CDTC's Unified Planning Work Program and the Urban Transportation Process; and,
5. the state provides the majority of matching funds for federally-funded transit capital projects.<sup>142</sup>

### **The New York Metropolitan Transportation Council**

The New York Metropolitan Transportation Council (NYMTC) coordinates transportation planning with state, regional, and local agencies for New York City and the counties of Nassau, Suffolk, Westchester, Rockland, and Putnam. In addition, it provides a forum for "cooperative decisionmaking" by state and local officials.

The membership of the NYMTC includes the following: the City of New York, the Metropolitan Transportation Authority, the New York State Department of Transportation, and the counties of Nassau, Suffolk, Westchester, Rockland, and Putnam. Nonvoting members include the Port Authority of New York and New Jersey, the New York State Department of Environmental Conservation, the Federal Highway Administration and Urban Mass Transportation Administration, and the U.S. Environmental Protection Agency.

Committee membership is divided into four areas: the Program, Finance, and Administration Committee; the Transportation Coordinating Committee; the Subregional Planning Program; and the central staff. The central staff of 13 is responsible for the day-to-day business of the council, which

includes technical, planning, and administrative services as well as fulfillment of state and federal transportation planning mandates. The Metropolitan Transportation Committee is funded by federal funds, state matching funds, and council membership fees.

Like the Capital District Transportation Council, the NYMTC is responsible for producing the Unified Planning Work Program and the Transportation Improvement Program (TIP). In 1988, it produced the Metro-Mobility Plan, an interim transportation plan focusing on future needs, objectives, and plans for the next 20 years. Due to the immediacy of the transportation problems in the New York metropolitan region, the MPO emphasizes the TIP.

The NYMTC spends a great deal of its time collecting regional statistics from various agencies. These statistics are compiled and published in one report for use by other agencies.<sup>143</sup>

### **The New York City Department of Ports and Trade**

The New York City Department of Ports and Trade is responsible for dealing with the maritime industry. Specifically, it is responsible for all waterfront activity: maritime commerce, regulation of waterfront construction, management and development of the city's wholesale and retail food markets, supervision of the city's general aviation and heliport operations, improvement of the city's rail freight network, and the development of new opportunities for international trade.<sup>144</sup> It places particular importance on educating the public on its role in the community.

The department is responsible for overseeing the management of the city's marine terminals: Brooklyn Marine Terminal, the Red Hook Marine Terminal, the Howland Hook Marine Terminal, Piers 36 and 42 East River in Manhattan, and the Passenger Ship Terminal. All terminals are leased to private operators or the Port Authority of New York and New Jersey. The city generates considerable revenue from these leases. The Red Hook Marine Terminal is the most successful of all the city's facilities. In recent years, Manhattan pier activity has been limited to the tourist industry. The piers are unsuited for container operations due to a lack of land. For this very reason, the city does not foresee any change in the situation for years to come. The Department of Ports and Trade's involvement in economic development activities is limited to the promotion of its facilities to domestic and international businesses.

The city maintains two aviation facilities: East 34th Street Heliport and East 60th Street Metroport. East 60th Street Metroport is leased to a private operator. East 34th Street Heliport, the busiest heliport in the nation, is used by emergency service helicopters, businesses requiring quick airport access, and sightseeing tours.

The city is in the process of developing the 65th Street Rail Yard into a full-service intermodal facility. When completed, the yard will contain a modern piggyback terminal and carfloat facilities. The yard will be constructed to handle 20,000 cars annually.

Three rail freight facilities under development are the Harlem River Yard and Oak Point Link, the Bay Ridge Freight Line, and the New York Cross Harbor Railroad. The Harlem River Yard and Oak Point Link will be the city's primary intermodal terminal. This project is jointly financed with the Port Authority of New York and New Jersey. The Bay Ridge Freight Line, a 10.2-mile freight line between Queens and Brooklyn, is currently being rehabilitated. This project is jointly financed with the state of New York. The New York Cross Harbor Railroad provides direct car-float service between Brooklyn and New Jersey.<sup>145</sup>

### **Metropolitan Transit Authority**

The Metropolitan Transit Authority (MTA) is responsible for mass transportation within New York City and the counties of Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester. Its responsibilities include railroad commuter transportation, and bus, marine, and air transportation. MTA board members are ex-officio members or directors of the New York City Transit Authority and the Triborough Bridge and Tunnel Authority (TBTA). Operations and subsidiaries of the authority are the Long Island Rail Road Company (LIRR), the Metro-North Commuter Railroad Company (MNCRC), and the Metropolitan Suburban Bus Authority (MSBA).

The TBTA operates all intrastate toll bridges and tunnels in the metropolitan area. The New York City Transit Authority operates omnibus service, subway transportation, and virtually all bus transportation within the city. Private bus companies operate local and express service on certain routes in the city and between the outer boroughs and Manhattan.

The Staten Island Rapid Transit Operations (SIROTA) operates a single-line, rapid-transit operation on Staten Island. The Long Island Railroad operates rail commuter service between the city, and the counties of Nassau and Suffolk on Long Island. The MNCRC operates the New Haven and the Harlem and Hudson commuter rail services. It provides northern service to the counties of Westchester, Putnam, and Dutchess counties and southern service to the state of Connecticut. The Port Jervis and Pascack Valley Lines provide service through the state of New Jersey to the northern suburban counties of Orange and Rockland.

Supported primarily by fares, fees, and other charges, the MTA also receives TBTA funds, federal and local assistance, and state and regional taxes. The MTA successfully issued a \$6 million revenue bond based upon anticipated fares. This bond issue has enabled the MTA to make significant capital improvements.<sup>146</sup>

Planning is conducted on two levels: corporate strategic planning and transportation strategic planning. Corporate strategic planning includes an examination of the needs, interests, and future growth of the business community. The actual size of the MTA network tends to impede the planning process, particularly on the Queens and Long Island lines. These lines pass through numerous communities, with each community possessing several elected boards. The greater the number of boards, the greater the number of parties which must agree on decisions pertaining to rail lines, noise, parking, and the like. The task of coordinating all these boards has become very laborious.

Intermodal planning, when done, is considered on two levels. Planners focus their attention on two questions: where are the commuters going and by what modes should they be transported? The MTA is attempting to coordinate modes: commuter rail to subway and subway to bus. The MTA is currently in the process of linking the main bus station with Penn Station. Some discussion has taken place regarding the installation of a people mover on the far west side of Manhattan with Penn Station and a subway connection to JFK International Airport.

The MTA annually updates its five-year capital improvement program, as required by the state legislature. By 1992, the MTA plans to have replaced all buses and rail lines with new equipment. Beginning in 1993, the MTA plans to completely review its electronic timing system. Recent efforts have focused on improving the public image of the system by removing all graffiti and cleaning all stations and equipment. This effort, combined with new equipment, has increased overall ridership. Ridership is predicted to increase by 50 percent by the year 2005.

## **INTERMODAL PLANS, PROGRAMS, AND PROJECTS**

### **Cross Westchester Expressway Project**

A task force was established to deal with congestion in the highway corridor from Suffern in Rockland County to Port Chester in Westchester, including crossing the Hudson River. It plans to examine and implement appropriate transportation improvements in the corridor in order "to maximize the people carrying ability of the existing highways." The task force consists of representatives from the New York State Department of

Transportation, the New York Thruway Authority, commissioners of transportation and county executives from Westchester, Rockland, and Orange counties, various transportation officials of Fairfield County, the State of Connecticut, and the Metro-North Commuter Railroads.

The following improvements are being considered: express bus service, commuter ride sharing, park-and-ride lots, high-occupancy-vehicle lanes for peak-period travel, the compatibility of light-rail and rail freight operations with commuter rail, and combined highway/rail crossing possibilities.<sup>147</sup>

### **Stewart Airport Rail Link Feasibility Study**

Consideration is being given to the development of Stewart Airport as the primary passenger airport for the mid-Hudson Valley, as well as its continued development as a corporate and air freight facility and industrial center. Discussion is focusing on the possible construction of a rail link with the airport to the outlying counties in the Metro-North territory, as well as New York City.

The study will be conducted by a consultant, managed by Metro-North Planning Department, and overseen by a steering committee consisting of representatives from the various counties, the Metropolitan Transportation Authority, New York State Department of Transportation, New York State Thruway Authority, New York State Bridge Authority, Port Authority of New York and New Jersey, CONRAIL, and New Jersey Transit.<sup>148</sup>

### **Long Island Expressway Fourth Lane Report**

In order to relieve the heavy volume of traffic and congestion on the Long Island Expressway, the New York State Department of Transportation is examining the feasibility of utilizing the fourth traffic lane as a high-occupancy-vehicle lane.<sup>149</sup>

### **Full Freight Access Program of New York City and Long Island**

The New York State Department of Transportation instituted the Full Freight Access Program (FFAP) to address the following three transportation problems:

1. the present rail system was unable to physically accommodate large, modern rail freight equipment due to low overhead bridge clearances;
2. conflicts with New York City commuter rail operations greatly limited freight movement within the city; and,



3. the lack of a modern intermodal rail terminal in New York City or in the metropolitan area east of the Hudson River.

Funding for the FFAP was provided by voter approval of the 1979 Rail Preservation Bond Act, 1979 energy conservation bond issues, 1983 transportation bond issues, and by the Port Authority of New York and New Jersey.

The following projects were proposed as solutions to the above stated problem: the Hudson Rail Line Bridge Modification Plan provided improved rail clearance between Albany and New York City and modifications were made to eighteen bridges at a cost of \$20 million. Construction was completed in 1983.

The Oak Point Link project will provide a dedicated freight service, single three-mile freight track through the South Bronx. The line will bypass low bridges, overhead clearance problems, and commuter trains. It will connect Highbridge, Harlem River, and Oak Point Yards. The link will accommodate up to 40 trains daily. The project cost is estimated at \$78 million. Project development has temporarily ceased due to construction problems.

When completed, the Harlem River Yard will be the first regional intermodal terminal. Located at the south end of Oak Point Link, the site consists of 85 acres, with excellent rail and highway access. The yard has direct rail connection to Harbridge Yard. The project is estimated to cost \$100 million. NYSDOT is currently considering privatizing the yard.

The Harbridge Yard, completed in 1982 at a cost of \$400,000, is noted for its Road Railer System, which enables the direct mounting of special truck trailers on rails. The yard is located at the north end of Oak Point Link.

The Queens-Brooklyn Rail Line Rehabilitation Project calls for the removal of clearance restrictions on 23 bridges and the rehabilitation of the rail lines in Queens and Brooklyn. Improvements will enable modern freight service between the Oak Point Yard and the Brooklyn waterfront. The East New York Tunnel will be removed. Project cost is estimated at \$9.1 million.

The Long Island Rail Line Bridge Modifications Project will improve bridge clearances by modifying bridges and lowering tracks. The cost of the project is estimated to be \$5 million.<sup>150</sup> Discussions of these issues and projects began as early as 1975. Improvements and modernizations have been driven in part by the motive of economic competitiveness with other urban areas.

## SUMMARY

Since 1983, the focus of activity in New York State has been the rehabilitation of the transportation infrastructure. With minor exceptions, this goal has consumed its total energies: most other problems have been of secondary concern. Today, New York State remains faced with an aging infrastructure, and, in the downstate region, massive congestion problems brought about by age and overcapacity. Port Authority of New York and New Jersey activity dominates the metropolitan New York City region by its sheer size and nature of activity. It is very difficult to identify or to bring discussion to a consensus opinion regarding the realities of the state.

The New York State Department of Transportation has established a variety of mechanisms for facilitating discussion and moving projects at all planning levels: community task forces, inter- and intra-agency forums, and commissions. NYSDOT officials feel quite positive regarding the input from these groups. Whether these groups actually make a difference in the planning process is difficult to assess.

The entire planning process generates mixed comments. While some officials claim that the modes operate in harmony with one another, others disagree, emphasizing the existence of internal politics. A department may focus solely on its own needs while planning a project in order to protect funding, department turf, or its annual budget. Theoretically, the NYSDOT is attempting to integrate the modes as demonstrated by its recent creation of the Commercial Transit Division, which incorporates the rail, port, and highway departments under one division.

Some officials address the issue of attitude and interdepartmental cooperation. Can a highway planner become an effective aviation planner and vice versa? What does aviation have to do with transportation? These questions express a few of the frustrations felt by some DOT professionals. Although the NYSDOT may redefine departments, planning is often constrained by the limited perceptions and attitudes of the planners themselves.

According to MPO officials, NYSDOT approaches planning from a total systemwide perspective, emphasizing area and corridor studies. Individual community needs are left to the counties and local governments. One MPO official stated that this approach was due to the loss of federal funds. MPOs assess regional concerns and focus their energies on specific local problems. Other planning problems cited by MPO officials include the lack of land-use planning in the total planning process and the failure of planners to consider all possible solutions to a problem, even those that are presently unaffordable.

Both NYSDOT and MTA officials express frustration when planning simultaneously for multiple municipalities. The diversity of interests, needs, and opinions limits the planning process considerably.

Intermodal planning is neither emphasized nor discouraged. Officials consider an intermodal solution to a problem no more unique than any other type of solution. The only intermodal unit at the NYSDOT is in the rail freight area. Intermodal projects are quite prevalent in the maritime industry and mass transit area.

Transportation officials now claim that they are taking or are at least considering a multimodal approach when planning. Although it is unclear if multimodal planning will actually occur, it is clear that the passage of a 1988 bond issue will enable the NYSDOT a bit more flexibility when considering planning options.

Transportation and economic development are intertwined in New York State. NYSDOT has developed several incentive programs designed to encourage economic development, for example, the Industrial Access Program (IAP) and the Full Freight Access Program (FFAP). While some local officials have criticized the IAP for being underfunded and thus ineffective, state economic development officials claim that the program is only intended to provide funding for small-scale projects. The Full Freight Access Program is designed to facilitate rail movement within the state by increasing bridge clearances. The economic implications of a project are always considered during the planning process.

Although the philosophy of the Cuomo administration is pro-economic development, the state's approach has been very much a reactive one. It does not demonstrate initiative; companies must approach the state for assistance. The state does not actively solicit new growth.

In the downstate region, specifically in the New York City area, the state is bursting at the seams. While officials are making valiant efforts, action is limited by the age of the systems, be it subway lines or roads, and by the prohibitive costs of improvements. Massive population growth in northern New Jersey has increased transit ridership and highway use. Commuters traveling between New York and northern New Jersey find themselves competing for the same space with commercial vehicles. One MPO official stated that he did not expect to see any significant changes until the public becomes committed to public transportation. The state is actively considering ways to economically relieve congestion such as HOV lanes, light rail, and increased ferry service. The Port Authority of New York and New Jersey is providing up-to-the-minute traffic information for

trucks leaving their facilities. It is also exploring the possibility of moving cargo and mass transportation by ferry.

Internal and external politics play an integral role in New York transportation. It is not unheard of for one project to lose out over another following the application of legislative pressure. This may come about due to a shortage of funding, after which the NYSDOT refuses to support the project. Project constituents, whether local citizens or businesses, may then seek project approval through their local representative. Regardless of the cause, limited funds often result in the loss of a project at some other location within the state. The NYSDOT loses control over projects which are approved in this manner. Projects slated for rural areas are often cut before projects in heavily populated areas.

Quite naturally, adequate funding is critical to the success of any program. Many officials stated that a state dedicated transportation fund should be created. MPO officials criticize the "strings" attached to state matching funds. Additional state project specifications can often drive the cost of a project to prohibitive levels. In these cases, a community will be forced to locate an alternative funding source or to cancel the project.

## **PENNSYLVANIA**

### **Population**

Pennsylvania is the fifth most populous state in the nation, with an estimated population of 12 million in 1988.<sup>151</sup> The state has a population density of 264.7 persons per square mile, with 69.3 percent of the population concentrated in urban areas. State population decreased by 478,000 people between 1970 and 1979.<sup>152</sup>

### **Geographic Area and Topography**

The total land area is 45,333 square miles and ranks thirty-third in the nation. Pennsylvania is one of the Middle Atlantic states; it is bordered on the east by the Delaware River, on the south by Maryland, on the west by West Virginia and Ohio, and on the north by New York State and Lake Erie.

### **Transportation Statistics**

The state has approximately 110,000 miles of roadways, 7,000 miles of rail lines, 534 airports, and 3 port facilities. Approximately 50 railroad companies operate in the state, as well as 3,500 motor common carriers and 500 contract carriers.<sup>153</sup>

### **Economy**

The state's primary industries are steel, travel, health, apparel, machinery, food, and agriculture. Manufactured goods are primary metals, food, fabricated metal products, and nonelectrical machinery. Agricultural products are corn, hay, mushrooms, apples, potatoes, winter wheat, oats, vegetables, tobacco, and grapes. In addition, there are livestock, timber products, and minerals such as cement, lime, crushed stone, and commercial fishing. Economic forecasts show that the high-growth sectors of the Pennsylvania economy will be high-technology and service industries.<sup>154</sup>

## **STATE ECONOMIC DEVELOPMENT**

Economic development has become a cornerstone of state policy with the decline of Pennsylvania's traditional, commodity-based economy. As Pennsylvania steel and coal has become less viable in the world marketplace, the state has been forced to change its past laissez-faire approach to economic development. New strategies, emphasizing higher value-added products with smaller product cycles, have been the focal point of recent

efforts. Formulating overall state strategy is the Pennsylvania Department of Commerce/Economic Development Partnership.<sup>155</sup>

Economic development has become a major priority of Pennsylvania Governor Robert Casey, who has spearheaded recent initiatives in formulating cohesive strategy that crosses agency boundaries. The blueprint of this strategy is Investment in Pennsylvania's Future--The Keystone for Economic Growth, produced by the Department of Commerce. Published in January 1988, the report details initiatives in redirecting public and private resources to attract high-growth industries and improving the comparative advantage potential of certain parts of the state.

Governor Casey's emphasis on transportation as a key component of economic development appears evident in the first part of this plan, representing the overall goals to be achieved by the state government. The Partnership report lists the attainment of three strategic goals as central to enhancing economic development:

1. to improve the competitive position and comparative advantages of Pennsylvania companies in national and international markets;
2. to realize the full potential of Pennsylvania's work force and assist worker and community adjustment to industrial changes; and,
3. to improve the economic infrastructure necessary to support long-term growth.

The report stresses that the attainment of these three goals hinges on building restructured industries and economic arrangements. Emphasis is placed on high-growth, value-added specialty manufacturing, the service economy, and trading high-quality service "products". With this in mind, the report states that Pennsylvania has declined in its competitive position vis-a-vis other markets. Swifter transition from older commodity-based industries to more innovative, value-added ones is necessary. The partnership stresses that to facilitate this transition greater emphasis must be placed on planning and investment in education, research and development, and transportation and environmental infrastructure.

Specifically relating to transportation, the report stresses the challenges that must be met to satisfy the third goal, the improvement of economic infrastructure necessary to support long-term growth. The first is improving infrastructure links and hubs essential to economic growth, which is considered of critical importance. The state is situated in the center of one of the largest markets in the world. Over 120 million Americans,

possessing well over a \$1 trillion in personal income, reside within a 500-mile radius of the state's borders.

Improving the infrastructure is being tackled to some degree by the Pennsylvania Department of Transportation (PennDOT) in its attempts to improve the state's industrial, commercial, and agricultural access networks. Also, PennDOT is attempting to enlarge its bridge and tunnel system to promote freer access for goods travelling across the state.

The report also recommends as a priority making infrastructure financing more attentive to special regional needs. On a more macro level, the state is urged to allocate separate funds for each region to be used to help finance the highest-priority local infrastructure needs. On a micro level, the Governor's Response Team, made up of key contacts in each state agency, works on specific regional projects to improve economic development, ranging from financing to infrastructure construction.

The desired result of these and other initiatives by the Economic Development Partnership and PennDOT is that by rebuilding and expanding the state's highway, rail, air, and water facilities, the resultant lower transportation costs will produce comparative advantages and stimulate economic development. Also cited is an increased emphasis on the financial support given to the state's three ports--Pittsburgh, Erie, and Philadelphia.

There are many impediments in achieving the overriding goals of improving economic and transportation infrastructure. First, the state's core highway system suffers from old age, severe weather conditions, and heavy traffic. Many communities are not served by modern highways. Over 300 bridges in the state become deficient each year, and there is no uniform clearance policy for bridges and tunnels. This fact has often caused a diversion of trucking traffic away from Pennsylvania's roads. Finally, industrial and commercial access to transportation facilities, notably highways, is restricted. The initiatives mentioned by the partnership report are designed to alleviate these problems over time.

Another important report, Profiles of Key Industries in Pennsylvania--Competing in the New Global Marketplace, also stresses transportation. This report was also prepared for the Economic Development Partnership and identifies key industries and their critical needs or opportunities.

## STATE AGENCIES INVOLVED IN TRANSPORTATION

The Pennsylvania Department of Transportation (PennDOT) is the primary agency involved in transportation in the state. It controls several aspects of transportation: the state roadway system, railways, bridges, tunnels, airports, ports, and transit authorities. Other significant actors are the Philadelphia and Pittsburgh MPOs and the Southeastern Pennsylvania Transportation Authority.

### Pennsylvania Department of Transportation

Organization. The Pennsylvania Department of Transportation is headed by the secretary of transportation, a cabinet position. PennDOT is divided into six units, with each headed by a deputy secretary. These six units are Central Administration, Local and Area Transportation, Safety Administration, Highway Administration, Planning, and Aviation. Local and Area Transportation is concerned with mass transit. The Safety Administration and Highway Administration covers safety aspects of transportation and design and construction of state highways, tunnels, and bridges. Planning is responsible for establishing strategies to meet planned objectives, develop and prioritize improvement projects, and monitor and expedite project implementation for the department's other operational units. Aviation has responsibilities for the department's aviation, rail freight, and port programs.<sup>156</sup>

Programs and Projects. Highway concerns drew a large part of the PennDOT's attention in the past, but the location of all modes within the department and the new ties created between economic development and transportation by the Casey administration has required that increased attention be given to multimodal planning. Governor Casey's emphasis on economic development has become a driving force in planning across all modes. Priorities include implementing a highway and bridge restoration program, new construction programs, and revitalizing the state's ports and railways.

The Twelve-Year Transportation Program (discussed in detail later) represents a major investment by the state, especially for highway and bridge improvements. The Pennsylvania Transportation Commission has recommended \$11.7 billion in funding for highway and bridge improvements over a 12-year period, requiring an additional \$345 million per year in new revenue. This new revenue would be generated by raising the liquid fuels tax by six-and-one-half cents per gallon. Of this amount, three cents would be earmarked for a bond-financed, \$1.7 billion economic development package. This bond program is designed to complete the critical missing links in the core highway system. Other major highways associated with uniquely high-potential economic development opportunities would also be included.



Two cents of the liquid fuels tax increase would be devoted to restoring and preserving Pennsylvania's interstate highway system. One cent would be used for similar purposes on noninterstate highways of the core highway system; and a final one-half cent would be used to make highway safety improvements.<sup>157</sup>

Coordination among PennDOT, the Economic Development Partnership, and local private and public entities is accomplished through PennDOT's Response Team Transportation Partnerships. Designed as a project expediter, the Transportation Partnership allows a local government or firm wishing to speed up a particular project already in the 12-year program to come to the state with a detailed funding plan. Normally, the local entity will contribute 50 percent of the funding. The Transportation Partnership allows for projects to be completed faster, frees up state funds, prioritizes projects on the 12-year program, and promotes local private/public initiatives.<sup>158</sup>

Again, the primary focus of the Transportation Partnership is economic development. The Economic Development Partnership will work with PennDOT in assessing project proposals and their economic development impact. An example of a Transportation Partnership project is the Charley Brothers Access Road in Westmoreland County. The \$1.6 million project enabled a wholesale food distributor to consolidate and expand operations, retaining 700 jobs and creating 200 new ones. Within the recommended 12-year program for next year will be a \$15 million reserve, spread over four years to respond to these sorts of projects which promote both transportation and economic development throughout the state.<sup>159</sup>

Another PennDOT program involves working with transportation management associations. Work in this area entails providing assistance to local governments and large corporations in the form of traffic-demand strategies. These strategies include flex-time for workers, and ride or van sharing.<sup>160</sup>

PennDOT presently has two programs aimed at assisting railways. They are designed to help preserve essential rail-freight services where the proposed abandonment or discontinuance of service would cause severe economic disruptions. The two programs are the Rail Freight Assistance and Emergency Rail Freight Assistance programs.<sup>161</sup> PennDOT's goal is to assist rail users in maintaining their profitability, employment levels, and expansion capabilities by ensuring efficient rail facilities.

The Rail Freight Assistance program provides up to 50 percent of the funds required to cover operating deficits and up to 80 percent of maintenance-of-way costs for specific lines

which were not included in the reorganized Consolidated Rail Corporation (Conrail) system in 1976. The Emergency Rail Freight Assistance program provides up to 80 percent of funds needed for accelerated maintenance and rehabilitation for lines abandoned by Conrail since 1981 and for lines handling less than three million gross-ton-miles per mile, per year.<sup>162</sup>

Presently, Pennsylvania does not have a statewide vertical clearance policy for railways. The state's mountainous terrain and the fact that most of the bridges and tunnels were built at what are now outdated vertical clearance standards represent serious impediments to rail freight service in the state.<sup>163</sup> The latter impediment is partially responsible for the Philadelphia Port losing much of its shipping market. The advent of double-stack containers in intermodal transportation has made clearances an even more pressing issue.<sup>164</sup>

A proposed \$38 million, four-year construction program to raise clearances on bridges and tunnels in Pennsylvania to permit double-stack containers is now under consideration.<sup>165</sup> Conservative estimates on the benefits total over \$180 million over 20 years. These include increased transportation and support jobs, expanded market potential, reduced highway damage, strengthening the state as a distribution point for the Northeast, increased attractiveness of the Port of Philadelphia, and improved conditions for economic development throughout the state.<sup>166</sup> Proponents of the program see intermodal freight transport as the key to survival in rail freight and, therefore, the raising of all vertical clearances is viewed as a necessary step for Pennsylvania to fully utilize intermodal transport. While everyone agrees that raising the vertical clearances would help the state's economic outlook, some are skeptical about the state's control over these lines once modified. If the program is approved, the state would grant competitive access and open these lines up to other shippers. Since CONRAIL has invested over \$100 million in raising vertical clearances for many areas on these lines, it is leery of the proposal since it would allow the state to control access on their own lines.<sup>167</sup>

**Funding.** PennDOT expends just over \$3 billion annually in state and federal funds. The department receives most of its state funds through four main sources: the Motor Licensing Fund, the General Fund, the Capital Budget, and the Lottery Fund. The Motor Licensing Fund consists of revenues obtained from the liquid fuel, registration, and license taxes. These taxes represent almost one-half of the department's budget. These taxes are used exclusively for transportation purposes.

Another 25 percent of funding comes from the federal government. The general fund revenues, comprising almost 8 percent of 1987 transportation revenues, aid in the financing of highway projects, public transit, rail freight, and ports and

waterways. The Capital Facilities Fund and Lottery Fund together make up over 8 percent of the department's total revenues.

Over \$1.3 billion was awarded in contracts for road and bridge improvements last year. State matching-fund grants for airport development were increased to \$4.5 million. Funding of 30 rail freight projects in 1987 amounted to \$3.9 million. Mass transit throughout the state received \$500 million in state grants to localities.<sup>168</sup>

Reports and Plans. The planning unit within PennDOT is the key instrument for conducting strategic, long-term transportation policy planning. Of primary importance is the Twelve-Year Transportation Program, updated annually. The initial twelve-year program outlined more than 5,600 major improvement projects for the state's highway, transit, rail, and aviation networks. A primary goal of these projects is to spur economic development.

Moreover, two plans have been developed to deal with improving commodity access to the state's transportation networks. The Pennsylvania Industrial-Commercial Access Network Pilot Study has taken a look at how to better assist industrial and commercial centers through improved transportation access, an acute problem in and around Philadelphia. The pilot study examined four counties within the state. There were several goals. One was to identify essential state and local connecting roadways. Another was to identify obstructions on these roadways for commodity transfer such as weight restrictions or low overhead clearances, both a common problem throughout the state. The study also attempted to integrate the needs of the four counties into a total system to serve as a basis for criteria to be used on a statewide level.

A companion report done in cooperation with the Pennsylvania Department of Agriculture was the Pennsylvania Agri-Access Network Statewide Report. The study looked at the 11,821 miles of rural roads comprising the Pennsylvania Agri-Access Network. After demonstrating the economic importance of agriculture to the state, the study identifies almost 600 obstructions affecting movement of heavy agriculture and lumber loads. Of these, 312 were weight restricted. Improvement projects for bridges and roads were prioritized according to regional and statewide importance.

To help facilitate the expedition of transportation projects on the state's 12-year program, the planning unit has published a "Guideline Manual" for participation in PennDOT's Transportation Partnership. Those local governments and private entities wishing to expedite the implementation of certain projects contained in the 12-year program may find useful information in the Guidelines Manual. The manual lists PennDOT's policy

provisions, key departmental contacts, and outlines the procedures on how to form a Transportation Partnership.

Tying many of these issues together is the February 1988 Economic Development Partnership Infrastructure Task Force's Recommendations. The task force made a variety of recommendations designed to link both transportation and environmental infrastructure to state economic development. The task force lists many general proposals for improvements and new projects directly affecting the core transportation network of all modes.

Pennsylvania experienced close to a 40 percent reduction in its rail network during the 1970s and early 1980s.<sup>169</sup> The significant economic impact that these abandonments had on the surrounding areas lead to the passage of the Rail Freight Preservation and Improvement Act of 1984, known as Act 119. Act 119 created a 13-member Rail Freight Policy Committee and authorized the Comprehensive Rail Freight Study. The completed study evaluates each rail line in the state in terms of its future position within the state rail network. The purpose of the study is to help the Commonwealth better support and maintain rail services vital to its needs and to develop a transportation plan to both attract new industries and retain existing ones.

The final report was completed in January 1987, with an update completed in November 1987. The study concluded that traffic levels are critical in determining the future status of the state's rail network. Therefore, historic loadings were studied for each rail line. Additionally, a statewide economic forecast was developed for those commodities generating rail traffic. The study concluded that the outlook for rail traffic is not very bright in Pennsylvania. The severe decline in coal and steel, traditionally strong rail commodities, does not show signs of reversing in the near future. Projected high-growth sectors in the state, such as high-technology and service industries, do not rely heavily on rail transport. These factors led the study to forecast a decrease of 38 percent in rail traffic from 1984 to 1991.<sup>170</sup>

The study recommended ten initiatives that, along with the existing PennDOT rail programs, could help preserve essential rail services. These include extension of accelerated maintenance, loans for purchasing lines, grants and loans for start-up operations, establishing rail economic development zones, rationalization/coordination projects, an insurance pool, a maintenance pool, dump sites, infrastructure grants and loans, and rail banking. The study identified the establishment of rail economic zones and infrastructure grants and loans as the most important strategies. The economic development zones would be a cooperative statewide program providing incentives to locate rail-oriented industries along essential at-risk lines. It would

also provide funds to install or restore sidings to industries along those lines. The infrastructure grants and loans would be used to attract new businesses to essential lines by providing funds for rail facilities such as loading or unloading systems, intermodal transfer facilities, team tracks, and bulk transfer facilities.<sup>171</sup>

Reaction to the study was positive, but wary. In a letter to the study commission, CONRAIL made numerous specific and general comments on the study's recommendations. While praising the proposal for economic development zones for eliminating barriers to entry for low-margin commodity businesses that would not normally use rail due to the high cost of switching, the letter warned that it is difficult to "force" prospective industries to locate on certain lines. It also commented that major corporations do not generally like to locate on short lines, where the zones would most likely be and that public agencies would have to make long-term commitments to overcome this reluctance. These commitments could become onerous if the industry's economic situation changes. The letter praised the infrastructure program, while warning that liability and security issues could cause significant problems. Also, competition among small operators would significantly hinder cooperation at regional ramps and combined facilities. In summary, the letter agreed with the study's general direction but found several clear weaknesses which would cause great harm to its overall effectiveness.<sup>172</sup>

Another ongoing plan is PennPorts. In February 1988, Governor Casey appointed a special committee to investigate, report, and make recommendations on expanding the Port of Philadelphia's role in the state's economy and tying it together with the Erie and Pittsburgh ports. The ultimate goal of the committee was to recommend how Pennsylvania could regain the market share it has lost to neighboring states and how to become economically competitive in the transportation arena. By addressing the port's problems from the state's perspective, the committee hoped to recommend steps to increase the entire state's economy and not just the port area.<sup>173</sup>

The committee found several problems with the present port situation. One is that all of the ports are now very dependent on "captive-market-share" cargos. That is, each port's viability is dependent on only one major commodity: Pittsburgh on coal, Philadelphia on petroleum products, and Erie on hardwood. The committee saw a need for diversification of the commodities serviced by waterborne transportation to include those not traditionally moved in large bulk volumes. This "general cargo," while too small for the large shippers, is ideal for smaller shipping firms. To support these general cargo shippers, public harbor facilities would need to be constructed. These small-scale shippers would generate substantial direct and indirect

employment and tax revenues for the entire state. Because they are labor intensive, these activities would stimulate growth in many supporting services to include trucking, warehouses, railroads, and ship agents. Also these general cargo facilities could be used as incentives to attract potential new industries.<sup>174</sup>

Another major problem concerns local port authorities. The committee found that the individual port authorities lack long-range planning capabilities, as well as the resources to invest in new technologies needed to keep the ports competitive. The state has both the capability and the resources required. The study concluded that without state assistance, the local government solutions to port problems have the potential to be politically motivated or extremely detrimental to future growth. In Erie, for example, the city decided to demolish underutilized piers and prepare sites for commercial and residential development instead of investing in rehabilitation.<sup>175</sup>

The committee's recommendations involved four steps. The first step consists of the creation of a statewide authority, PennPorts. PennPorts would "take on statewide responsibility for intermodal transportation coordination, strategic planning, and financial planning . . . a true integration of statewide transport considerations, including the three ports." This will have significant state benefits. Transportation issues will be evaluated in terms of a statewide strategy instead of only from a local viewpoint. It will also enable a coordinated marketing approach for the entire state. The second step entails the creation of the Philadelphia Regional Port Authority (PRPA). PRPA would immediately replace the existing 15 to 25 local agencies that are presently involved with the Delaware River Ports. Its primary missions would be to unify the ports, create a long-term plan for the ports' future, and set the stage for eventual bistate unification. The third step consists of the creation of the Three Rivers-Western Pennsylvania Port Authority, encompassing the Pittsburgh ports, and the retention of the existing Erie-Western Pennsylvania Port Authority. With these three regional authorities in place, PennPorts would be able to provide the state with a structure for transportation planning and development in those areas of the state. The final action would be a bi-state unification with New Jersey for the Delaware River ports. During this same time, the Pennsylvania intermodal transportation strategy should be fully developed and included with the port developments.<sup>176</sup>

These steps will create new jobs not only in transportation and port-related businesses, but in other service industries and manufacturing. These initiatives, the committee concludes, will increase the Commonwealth's transportation assets, which, in turn, will spark the economy and provide ultimate benefits to the general public. The three large regional authorities would

assume greater responsibilities in the future. This includes integration or linkages with the airports within their areas to cover all air freight.<sup>177</sup>

## **MPOs AND LOCALITIES INVOLVED IN TRANSPORTATION**

There are 14 metropolitan planning organizations interacting with PennDOT on transportation issues. The two largest are located in Philadelphia, the Delaware Valley Regional Planning Commission (DVRPC), and in Pittsburgh, the Southwestern Pennsylvania Regional Planning Commission. Other key actors in the Philadelphia area are the Greater Philadelphia Economic Development Coalition, the mayor's Office of Transportation, and the Southeastern Pennsylvania Transportation Authority, (SEPTA).<sup>178</sup>

Both the Pittsburgh and Philadelphia MPOs have liaison officers at the state level in Harrisburg. PennDOT works closely with SEPTA as it provides large amounts of funding and technical expertise to the transit authority. The Greater Philadelphia Economic Development Coalition is a private entity made up of 30 large corporations assisting the various public governments in coordinating planning efforts in enhancing economic development and the quality of life in Philadelphia.<sup>179</sup>

### **Delaware Valley Regional Planning Commission**

The city of Philadelphia relies heavily on public transportation. SEPTA reports that in 1987 its public transit ridership was 351.6 million person trips, the fourth highest in the nation. Almost 40 percent of Philadelphia households do not own a car. Approximately 65 percent of workers in the Philadelphia central business district (CBD) use public transit to and from work. Central Philadelphia is also the most concentrated employment center in the state, thereby placing an increased emphasis on mass transit and overall transportation concerns.<sup>180</sup>

The DVRPC and SEPTA plan and operate the broadest mix of public transit vehicles in North America: buses, commuter rail, high-speed rail, light-rail, and trackless trolleys.<sup>181</sup> The DVRPC is primarily responsible for coordinating with area governments on technical studies, maintaining long-range plans, and administering the capital budget for federal programs.<sup>182</sup> The DVRPC is somewhat unique in that its domain spans two states. The commission is responsible for five counties in Pennsylvania (Chester, Delaware, Montgomery, Bucks, and Philadelphia) and four counties in New Jersey (Gloucester, Camden, Burlington, and Mercer).

The commission is comprised of a technical advisory committee, planning coordinating committee, and an executive board. Besides planning, the commission provides additional assistance by evaluating federal transportation studies of the area and by placing area transportation projects in the annual Transportation Improvement Program. A recent study by the DVRPC is Implementation of Transportation Partnerships in Southeastern Pennsylvania. The report found that area municipalities have not adequately used the partnership to date because of its strict requirements and a lack of understanding of alternatives offered by the transportation act which created the partnership.

The commission has also developed a Survey of Transportation Service Providers in the Delaware Valley Region. The survey lists and describes the 600 bus, taxi, limousine, and paratransit companies in the area. Descriptions of transportation support services such as consultants, management, engineering, and maintenance also are included. In-depth profiles of the major firms are given.

A major long-range plan formulated by the commission is its Year 2010 Regional Development Strategy. This plan is the third done by the commission and focuses on major regional transportation projects and water quality and supply issues. Of particular importance to the DVRPC is intergovernmental cooperation and its role in implementing a cohesive transportation strategy for the future.

In this area, the commission is often hamstrung in its planning and implementation capabilities because of the uniquely weak county government structure in Pennsylvania. Within the nine-county MPO, there are 352 local governments. Pennsylvania's weak county structure means that a county has no authority to plan and implement a countywide economic development strategy. Because of this, each local municipality has the authority to accept or deny any development, right-of-way, or zoning initiatives that cross municipality boundaries. Thus, any transportation project that crosses a local boundary has the very real potential of breaking down should any municipality decide not to participate.<sup>183</sup>

Fortunately for Philadelphia, the entire city comprises Philadelphia County so that planning projects within the city itself are more cohesive. Nonetheless, the commission, as well as PennDOT, have found it difficult to plan and implement transportation projects because of the multiplicity of public actors exercising authority.

The general geography of the city also hampers the implementation of new projects designed to relieve traffic congestion, promote economic development, or improve access to the center of the city and port. There are two major interstate



highways, I-76 (the Schuylkill) and I-95. Interstate 95 travels in a north-south direction and is hemmed in on the east by the Delaware River and on the west by the central business district. Access to the highway is difficult and has been a contributing factor in the decline of business for the Port of Philadelphia.

New construction on the Schuylkill is also a problem, as it is constrained by mountains on one side and by the Schuylkill River on the other. The city is currently without an east-west freeway or a loop connecting the two interstates. Both are expected in the near future in the form of the Vine Street east-west freeway and completion of Route 202 in the south, giving the area something close to the type of loop commonly found in major metropolitan areas in the south. The combined problems of geography, age of the city, and municipality autonomy have severely reduced the DVRPC's ability to develop strong strategic plans that realistically may be carried out.

### **Southwestern Pennsylvania Regional Planning Commission**

The Southwestern Pennsylvania Regional Planning Commission (SPRPC) was organized in October 1962. It is a public planning body but not a traditional arm of local government. It serves and is supported by Allegheny, Armstrong, Beaver, Butler, Washington, and Westmoreland counties, as well as by the city of Pittsburgh. Each of the six member counties can appoint five voting members to the board. The city of Pittsburgh has four voting members. Three state agencies have voting members on the board; they are PennDOT with two, the Governor's Office of Policy Development with one, and the Department of Environmental Resources with one. Seven other federal, state, and local government agencies have nonvoting representatives on the commission. A staff of approximately 30 persons supports the commission and executes the commission's plans.<sup>184</sup>

As opposed to Philadelphia, the Pittsburgh area is mainly concerned with intermodal transportation, as it relates to goods movements. The Port of Pittsburgh is the world's largest inland port. Historically, rail and barge have hauled large quantities of goods throughout the area.<sup>185</sup> Recently, the transportation planners at SPRPC have been applying the goods movement principles similar to those outlined in the state's PennPorts report and used this concept as a key ingredient to an overall plan of tying in several modes of transportation, ranging from barges to rail to trucking to air.<sup>186</sup>

As required by federal regulations, SPRPC, as the region's designated Metropolitan Planning Organization, develops a Transportation Improvement Program (TIP) and the Annual Element (AE). The TIP for 1988-92 includes many aggressive programs for improving and upgrading deficient bridges and roadways. Additionally, the TIP, guided by the 1987 Surface Transportation

Assistance Act, includes 3 of 121 demonstration projects to be run nationally. Most notable is \$5.5 million for preliminary engineering and design of the Southern Expressway to access the new Midfield Air Terminal. The act also includes a pilot program for federal toll road funding for just seven facilities nationwide. The Mon Valley Expressway was designated as Pennsylvania's pilot project. This tollway is seen as an important step in reviving the region's economically depressed Mon Valley.<sup>187</sup>

SPRPC initiated a study this year to evaluate multimodal options along the growing Parkway West corridor. Travel in this corridor is expected to increase significantly due to the new Midfield Air Terminal. Extensive commercial and office development is expected in the areas adjacent to the new terminal.<sup>188</sup> A complete description of the Midfield Airport is in the final section.

SPRPC is also working under a 1984 UMTA policy intended to increase private enterprise in urban transit planning. Working with the region's transit operators committee, SPRPC has developed an integrated policy establishing cooperative roles and responsibilities for sponsor's of transit service in the Pittsburgh and Monessen urbanized areas.<sup>189</sup>

In the last ten years, the focus of transportation planning has changed from one of traditional beltways and connectors to a more pragmatic system of intense highway maintenance and upgrading. A more recent development is the partnership concept of linking transportation to the area's economic development.<sup>190</sup> Transportation facilities are a crucial ingredient in SPRPC's Regional Industrial Property System (RIPS). Essentially a marketing tool, RIPS is a computerized interactive system which catalogs all property in the region with associated economic information. This creates a "one stop service" for potential developers.<sup>191</sup> The planners at SPRPC translate good transportation into more and better jobs. The Mon Valley Expressway is one example of this concept. The completion of this highway is hoped to provide the spark to improve the economy in the entire area.<sup>192</sup> Another example is the Midfield Air Terminal which is more of an intermodal project. It is discussed in the next section.

## **INTERMODAL PLANS, PROGRAMS, AND PROJECTS**

The main emphasis in terms of goals for intermodal projects in Pennsylvania has been in public transportation. These projects are primarily located in Philadelphia. Although the state has placed a great deal of focus on commodity transfers to promote economic development, the brunt of this attention has been spent on items other than intermodal transportation. In the

attempt to improve access to the core transportation system, time and funds have been devoted to revitalizing rail and the ports, repairing infrastructures, and widening bridge and tunnel clearances. All of these activities take a front seat to specific intermodal projects for commodity transfers.

The role of intermodalism in the city of Philadelphia, from the DVRPC to the mayor's office, has been that of creating intermodal interchanges to help solve a variety of inner-city ills. First and foremost, new intermodal terminals serving some of the various transit modes may rejuvenate blighted areas by increasing property values and commercial development. In this respect, inner-city intermodal terminals are looked upon in a similar fashion as the major urban commercial redevelopment projects like Inner Harbor in Baltimore. Another goal is to increase public transit ridership. Making transit transfers easier and the facilities more attractive will result in increased ridership, which will help reduce traffic and pollution on already congested roads and highways.<sup>193</sup>

### **Center City Commuter Connection**

A major intermodal project accomplishing these goals is the Center City Commuter Connection. Located in the center of the downtown business district, the project connects the two major commuter rail lines with a subway station. The rail lines are linked by an underground tunnel. In 1980, the city received a \$9.5 million grant from UMTA to build the project. The project application lists increasing use of Philadelphia's rail system and improving declining commercial activity in the center city as dual goals. The Center City Commuter Connection now boasts a shopping mall where commuters and others shop. Ridership has increased over the years, and the city is realizing a return on its investment.<sup>194</sup>

### **Olney Terminal**

Another intermodal public transfer facility is the Olney terminal, located in North Philadelphia. North Philadelphia is an extremely depressed area of the region and has been targeted by the mayor's office for economic development and revitalization. The Olney terminal links transfers for trolley, bus, and rapid transit. Again, revitalization through higher adjacent real estate worth created commercial-development growth, as well as relieved traffic congestion in the area.<sup>195</sup>

The Upper Darby region also has been targeted by SEPTA for an intermodal terminal. The \$12 million renovation of the old turn-of-the-century terminal on 69th Street is designed to preserve the terminal's architectural style and renew attraction to the facility by area commuters and merchants. A new shopping center has sprung up to accommodate passengers. The 69th Street

terminal offers a high-speed trolley line, surface trolleys, subway, and bus transfer locations.

Construction of a new transportation center in Norristown is designed to spur similar commercial activity, as well as offer multiple transit transfers. The facility will cost \$9.5 million. Buses, light-rail trolleys, and commercial trains will serve the transportation center. An off-street bus terminal will contain ten loading bays and an enclosed passenger waiting area.<sup>196</sup>

### **Midfield Air Terminal Extension**

An extremely large-scale intermodal project now under construction is the Midfield Air Terminal extension. Comprising more than just a \$560 million upgrading of an airport terminal, the Midfield project is a complete transportation and economic development package. The airport will become the hub for US Air. Presently, 80 percent of all flights involve US Air. When completed in 1992, the airport will have risen from 18th to the 8th busiest and will be the second largest in terms of land space in the nation. This second fact, coupled with its strategic east-coast location, makes this area very desirable for future economic growth.<sup>197</sup>

The Airport Area Development Advisory Commission was formed in 1989 to foster and promote orderly, stable, and qualitative growth for the airport area. The commission consists of six task forces or committees: Inter-County Cooperation, Marketing, Finance, Environmental Systems, Land-Use, and Transportation. The transportation task force is further divided into a Roads Division and a Mass Transit Division.<sup>198</sup> Over \$1 billion will be spent on projects associated with the construction of the terminal.<sup>199</sup> These include a \$90 million extension of the Southern Expressway.<sup>200</sup> Mass transit is being considered in all phases of the planning for both the prospective increase in traffic to the terminal of both passengers and workers and for the ancillary industries that develop.<sup>201</sup>

Because the airport will be a major hub, it is hoped that it will serve as an excellent drawing card for industries interested in international and national markets. The county is using the airport as the focal point for extensive economic development. The affected area is projected to include all of southwestern Pennsylvania.<sup>202</sup> Economic impact forecasts for the next 20 years are estimated at \$9.46 billion.<sup>203</sup> The airport is also forecast to create more than 17,000 jobs over the next ten years and generate \$20 million in annual tax revenues by 1999.<sup>204</sup> The commission is attempting to put planning mechanisms in place now to control the growth as it develops. It is trying to prevent after-the-fact planning and the "any growth is good growth" syndrome that rapid growth frequently causes.

## SUMMARY

Economic development or growth is the driving force in Pennsylvania today. All state policy is based on gaining and sustaining controlled growth. Transportation is one of the key elements of any plan discussing development. The present thought is that by improving the state's transportation facilities and infrastructure, the state's marketability will be enhanced. The Twelve-Year Transportation Program and the proposed rail clearance program are good examples of this.

The role of transportation extends beyond rehabilitation of existing systems to construction of new modal and intermodal facilities and whole programs based on a transportation plan. The expansion of the Midfield terminal is the focal point of the entire southwestern region's economic-growth plans. Seen as more than just an increase in operations, the expansion is viewed as a chance for the area to gain access to new international and national markets. The PennPorts proposal ties in the entire state's transportation-planning activities with the three ports. By increasing the ports' authority and responsibility, the state will be able to implement plans of larger scope. In larger urban areas, such as Philadelphia, mass transit improvements are being used to retain existing industries and attract new business. Transportation, both unimodal and intermodal, is a common thread in all economic development plans.

This policy of tying transportation to economic development is not unique to Pennsylvania. However, the political leadership being exercised is exemplary. Pennsylvania Governor Casey has placed economic development as his number one priority. The state has moved past the planning stage by ensuring that needed projects and programs are implemented.

The state, working through PennDOT, is promoting economic growth in individual regions as well as on the state level. Funding is set up so that individual regions receive assistance to finance their high-priority infrastructure needs. The Governor's Response Team assists on specific regional transportation and economic development issues. The Economic Development and Transportation Partnerships work to increase local input, while decreasing project wait time.

Pennsylvania is presently still trying to recover from the fall of the steel and coal industries. Governor Casey is strongly backing economic development plans which rely heavily on transportation. At both the state and local levels, the attitude of transportation as a catalyst for development is widely accepted and followed. Planning is not restricted to solely unimodal projects but instead encompasses numerous intermodal transportation projects for both mass transit and goods movement.

## WASHINGTON STATE

### Population

Washington is the nineteenth most populous state in the nation, with an estimated population of 4.6 million in 1988.<sup>205</sup> The state has a population density of 64.6 persons per square mile, with 73.5 percent of the population concentrated in urban areas. State population increased by 514,600 people between 1970 and 1983. The major urbanized areas are Bellingham, Bremerton-Seattle-Everett-Tacoma, Longview, Olympia, Portland, Oregon-Vancouver, Richland-Kennewick, Spokane, and Yakima.<sup>206</sup>

### Geographic Area and Topography

Washington's 68,192 square-mile area makes it the twentieth largest state. The eastern portion of the state contains the Cascade Mountain Range and highlands in the northern corner. The Columbia River Basin lies between the Cascades and the coast. The Pacific Coast is open and flat, except for the Olympia Mountain Range in the northwest corner of the state. The majority of the urbanized areas are located along Puget Sound, also in the northwest part of the state.

### Transportation Statistics

Washington's transportation infrastructure includes 7,140 miles of state highways, 705 miles of interstate highways, 2,494 miles of principle arterials, 2,465 miles of minor arterials, and 1,053 miles of collectors. These roads contain 7,281 bridges. The state is also crisscrossed by 4,600 miles of rail. Water commerce can dock at eleven major public ports or travel 400 miles of inland waterways on Puget Sound and the Columbia and Snake Rivers. Washington also features five private natural gas, crude oil, and refined petroleum pipelines. Finally, there are 84 public airports in Washington. Four of these facilities feature regularly scheduled interstate flights, while 56 are devoted to general aviation.

Washington's transportation infrastructure is utilized by 3.2 million registered vehicles. Twenty-two public transportation systems also carry 115 million passengers each year. The state is served by 14 railroads. Burlington Northern and Union Pacific are the only class I carriers in the state and own 90 percent of the rail. AMTRAK and 14 smaller railroads use the rest of the track. Thirty airlines fly to Henry M. Jackson International Airport (Seattle-Tacoma); ten fly to Spokane; three fly to Pasco; and two fly to Yakima. The Washington State Ferry (WSF) system and five county ferry systems ply the inland waterways. WSF alone carries 50,000 people each day.<sup>207</sup>

## Economy

Washington's principle industries include aerospace, forest products, food products, petroleum refining, primary metals, tourism, and agriculture. Among these, the first is undoubtedly the most important, since Boeing Aircraft now employs over 100,000 people in the state. Boeing, as well as the more traditional resource-based industries, such as apples, wheat, and timber depend heavily on export markets. One in six Washingtonians owe his job to international trade. Specifically, 70 percent of Washington's exports travel to East Asia and particularly Japan.

Although statewide unemployment declined significantly since the 1981-1982 recession, 98 percent of new jobs since 1982 were created in the urbanized Puget Sound corridor. Eastern Washington's agricultural and raw material-based economy is still suffering due to declining world commodity prices and the capricious U.S. dollar. The term "Two Washingtons" is widely embraced to describe this geographical dichotomy. Location aside, wages for all Washington employees have fallen by 5.5 percent since 1979. This is a result of job creation in the comparatively low-paying retail and service sectors. Overall, the decline in unemployment is marred by disparities in region and quality of work, while falling incomes further cloud Washington's economic future.<sup>208</sup>

## STATE ECONOMIC DEVELOPMENT

Two governmental organizations are concerned primarily with statewide economic development in Washington: the Department of Trade and Economic Development (DTED) and the Washington State Economic Development Board (WEDB). The former does not plan for growth; rather, it is a small 84-person, result-oriented agency dedicated mainly to attracting and retaining desirable employers and opening potential export markets for them. The DTED is a member of the governor's Economic Development Cabinet along with the departments of Community Development, Employment Security, Revenue, Energy, and Agriculture. Both individually and collectively, the constituent agencies of the Economic Development Cabinet are charged with implementing the governor's Economic Development Agenda. The agenda is a continually updated one-to-five-year list of specific economic development tasks. The DTED is the most important member of the cabinet because its purview extends across industries and governmental functions.

It will be informative to examine a sampling of DTED projects completed under the Economic Development Agenda. First, DTED publishes the Directory of Business Assistance Programs in Washington State to inform the private sector of potentially

beneficial state programs. Second, DTED initiated several marketing and research consortiums between the resource industry and state universities such as the Center for International Trade in Forest Products. Next, DTED's Office of Industrial Retention serves as an ombudsman for ailing industries. Moreover, DTED offices in Japan, China, and Taiwan strive to open those countries to smaller or first-time exporters. Additionally, DTED facilitated local involvement in economic development by awarding \$25,000 grants to each of the state's 39 counties for participation in the Team Washington roundtable. Finally, DTED's Community Economic Revitalization Board (CERB) targets infrastructure improvement projects in distressed localities. CERB has handed out over \$11 million to 12 communities in order to create 2,700 jobs. While the previous five examples certainly do not exhaust the scale of DTED's activity, they should demonstrate its breadth.

The Department of Trade and Economic Development is only incidentally involved in transportation issues. It employs no transportation professionals and receives only a minor share of money from the Washington State Department of Transportation for tourist information centers. Although DTED's position is that Washington needs infrastructure improvements, such as light rail to ease urban congestion, it limits its involvement to minor road extensions or repaving operations under CERB. This limited role is more a function of scarce funding and resources than lack of desire.<sup>209</sup>

Contrary to DTED's hands-on approach, the Washington State Economic Development Board was created by the state legislature in 1985 specifically to address long-range 5- to 20-year planning. The WEDB is chaired by the governor and includes 27 other members from government, industry, and academia.

Since January 1977, WEDB has published five volumes detailing its vision of Washington's economic future. These reports contain input from over 1,700 citizens gathered at 16 meetings statewide. The above volumes and the massive public outreach campaign boil down to ten recommendations:

1. develop a highly educated work force;
2. increase local decisionmaking and coordination;
3. protect the Northwest environment;
4. improve capital accessibility to business;
5. reform the tax structure (adopt a state income tax and lower sales taxes);
6. streamline business regulation;
7. commercialize research and development;
8. market Washington worldwide;
9. maintain and improve basic infrastructure; and,
10. create an independent council to oversee strategy.



While the above list certainly seems comprehensive, it conceals two problems. First, WEDB sunsets in June 1989 and there is not yet "an independent council to oversee strategy." Although a rectifying bill is now before the state legislature, such a council is not a panacea since WEDB's recommendations are not statutory. Currently, Governor Gardner is monitoring agency progress on the WEDB agenda by memo. However, agency compliance, especially for nonexecutive agencies, such as the Washington State Department of Transportation (WSDOT), is purely voluntary. Nevertheless, WSDOT Secretary Duane Berentson has pledged to support transportation related recommendations three, seven, nine, and ten.

Second, WEDB's ninth recommendation to maintain and improve basic infrastructure refers only minimally to transportation. In fact, the board's 27 members did not initially create a transportation task force as they did for education, job creation, and many other topics. This error of omission caused WSDOT to approach WEDB and the latter to accept input from the Transportation Technical Advisory Group (TTAG). TTAG consists of 63 transportation professionals from WSDOT, municipalities, and the private sector appointed by the governor. It is WEDB's ad hoc transportation task force. In its June 1988 Final Report, TTAG issued five major recommendations which WEDB fully embraced:

1. increase public awareness of the importance of transportation to growth,
2. develop a tax structure adequate to fund all modes,
3. integrate local, regional, and state planning,
4. create a \$30 - \$50 million dedicated transportation fund to match private money in distressed areas, and
5. grant localities more transportation repair taxing authority. TTAG, like WEDB, will sunset in June 1989.

While DTED strives to fulfill the governor's Economic Development Agenda and WEDB peers into the state's economic future, events in the 1989 regular session of the state legislature hold the potential of superceding both. Washington's gasoline tax is currently 18 cents per gallon. A hike in the tax is widely perceived to be the answer to Washington's lack of transportation funds to relieve congestion in the Puget Sound Corridor among other priorities. Both Governor Gardner and House Speaker Joe King (Democrat - Vancouver) favor an increase too. However, each politician is trying to combine the tax hike with his own pet project.

Specifically, Governor Gardner desires a state income tax to replace Washington's crazy quilt of permanently temporary revenue sources, based on a 6.5 percent sales tax which soars to 8.2 percent in Seattle. Gardner thinks this sales tax is regressive and that other features of the tax code are too complex to

administer. Consequently, Gardner has proposed a stop-gap gas tax hike, which would fund new transportation infrastructure until 1991. By not solving transportation financing in perpetuity, Gardner has another reason for instituting a state income tax. After 1991, more transportation revenue will be needed, and the latter will be an option. Moreover, Gardner has threatened to veto any major gas tax bill unless lawmakers put his tax-reform plan on the ballot.

The governor's stop-gap proposal has three prongs: 1) a 3-cent gas tax increase to 21 cents per gallon, 2) a 60 percent increase in truck weight fees, and 3) allowing municipalities to set up independent transportation taxing authorities so east and west Washington can avoid cross-subsidization antagonism. Unfortunately for Gardner, Washingtonians generally consider income taxation to be anathema. Moreover, the grass-roots group Washington State Citizens for Improved Transportation (WSCFIT) was organized by the King County (Seattle) Economic Development Council to separate transportation financing from tax reform in the legislature. WSCFIT is calling for a 9-cent gas tax hike to 27 cents per gallon in addition to the second and third prongs of Gardner's plan. This approach would fund infrastructure improvement and expansion for the foreseeable future. Whatever the case, the powerful truckers' lobby is dead set against either plan due to the increase in truck weight fees. Although the regular session of the Washington Legislature ends on April 28, most observers feel a special session to sort out these problems is inevitable.<sup>210</sup>

Meanwhile, House Speaker Joe King is stirring up at least as much controversy. He has pledged not to allow any vote on a gas tax hike unless the legislature first creates a 15-member Growth Strategies Commission. The commission would recommend a coordinated system of local, regional, and state growth planning to the legislature by January 1991. Moreover, King wants to hold one-half of all gas tax revenue in escrow until the legislature approves the commission's recommendations. On February 22, 1989, State Representative Maria Cantwell introduced King's measure as House Bill 2140. Cantwell's bill recognizes the importance of transportation to orderly growth and calls for the commission to "Provide for highly efficient multimodal transportation systems that are based on regional consensus and priorities."

House Bill 2140 faces public opposition from WSCFIT, which finds the escrow idea as offensive as Gardner's stop-gap funding. Additionally, there is a strong populist tradition in Washington, which recoils against anything resembling comprehensive land-use planning. Although King and Cantwell pledge that HB 2140 does not mandate land-use planning, they admit the Growth Strategies Commission may eventually call for that in January 1991. Finally, many legislators fear the consequences of raising the gas tax and not having any results to show for it while funds are

held in escrow. The aforementioned special session may be an arena for resolving HB 2140 too. Whatever the case, the Washington State Department of Transportation's 1990 State Transportation Plan Steering Committee is addressing the same comprehensive planning issue in hopes of offering a compromise piece of legislation. More details are forthcoming in the next section.<sup>211</sup>

## STATE AGENCIES INVOLVED IN TRANSPORTATION

The Washington State Department of Transportation (WSDOT) is by far the largest and most important organization involved in transportation policy and planning. Nevertheless, it is informative to briefly examine the efforts of two other organizations after reviewing WSDOT in more detail.

### Washington State Department of Transportation

Organization. WSDOT was created in 1977 out of the existing Department of Highways, the Highway Commission, the Toll Bridge Authority, the Aeronautics Commission, the Canal Commission, and the transportation elements of the Department of Planning and Community Development. As these precursor agencies suggest, WSDOT was intended to be a unified transportation department. Section 47.01.011 of the Washington State Code states that the coordination of "transportation modes" is an "imperative" need and mandates a "statewide transportation development plan" with that in mind.

WSDOT is organized both geographically and modally. The secretary of transportation is chosen by the governor's select Transportation Commission and approved by the state senate. Unlike the agencies in the Economic Development Cabinet, WSDOT is not an executive department whose secretary reports directly to the governor. Instead, WSDOT's chief reports to the same Transportation Commission which selected him. This organizational arrangement was made to depoliticize the department due to the need for expenditure continuity and certainty when dealing with large capital projects such as roads and other infrastructure improvements. The Transportation Commission is composed of equal members of both political parties and residents of eastern and western Washington to ensure neutrality.

The secretary of transportation oversees six regional districts, which are relics from the pre-1977 Highway Department. A district administrator runs each district. Five assistant secretaries each head a major division and also report to the secretary. Three of these divisions are mode specific. The Aeronautics Division is located at Boeing Field in Seattle. Its statutory duties include assisting the development of a statewide

airport system, cooperating with federal civil aviation authorities, and regulating the safety of "aeronautics of every character". The Washington State Ferry Division is based at Colman Dock in Seattle. Its statutory duty is to operate a safe, reasonably priced ferry system with harmonious labor relations. The Highway Division is located in WSDOT's Olympia headquarters. Its myriad functions include design of roads and bridges, maintenance, construction contract negotiation, and motor vehicle permitting.

The remaining WSDOT divisions are also housed at headquarters in Olympia. The Management Services Division is the budget, audit, and management information service arm of the department. Finally, the Planning, Research, and Public Transportation Division funnels UMTA grants, conducts surveys and public opinion polls, and offers technical assistance to counties and municipalities.<sup>212</sup>

Programs and Projects. WSDOT fulfills its statutory duty and indeed conducts multimodal planning. Although the department considers the coordination of modes, its operation of actual intermodal facilities is limited to park-and-ride and the Washington State Ferry (WSF). It is apparent that Washington's private sector is the leader in intermodalism.

WSDOT reports its programs and projects in the following five modal categories. First, the department is pursuing seven actions regarding the state highway system. WSDOT is trying to ease urban traffic congestion with the standard solutions such as park-and-rides, high-occupancy-vehicle (HOV) lanes, traffic light synchronization, turn lane installation, and the elimination of on-street parking. The department is also using HOV lanes, climbing/passing lines, and road widening to handle increased traffic on the state's rural highways. Moreover, WSDOT wishes to finish the interstate highway system in Washington. Additionally, WSDOT annually repaves 1,200 miles of state highways and replaces thirty bridges. Since the department recognizes the importance of tourism, it is expanding ancillary facilities, such as rest areas and information centers. Finally, WSDOT is deciding whether designated but unconstructed routes still need to be built.

The department's second modal category for reporting programs and projects is public transportation. Although the state does not operate any municipal transit systems, WSDOT is pursuing two strategies in the field. It wants to market and provide user incentives for public transportation, while ensuring that user fees defray the largest possible percentage of costs. WSDOT's next modal category of activity is aeronautics. Unlike public transportation, WSDOT accounts for nearly all programs and projects in this area. The department is undertaking eight initiatives. Specifically, it is conducting analyses of market

feasibility to attract commuter air service to unserved areas and providing financial assistance to localities that wish to obtain existing private airports. Also, WSDOT issues land-use compatibility suggestions for developments near airports and helps localities acquire federal airport development funds to complement the department's 50 percent share. The WSDOT is also expanding aerial search-and-rescue activities and investigating new air safety techniques. Finally, WSDOT is attempting to maintain its network of 18 emergency airports and increase the percentage of state airports with navigational aids/control towers beyond the current 8.5 percent.

WSDOT's marine activities focus on the WSF. WSF operates eight routes in the Puget Sound area over 88 miles. It owns 22 ferries with a capacity of 2,412 automobiles and 28,761 passengers. The geography of the Puget Sound Corridor makes ferry commuting a virtual necessity. Passengers and vehicles served are expected to grow by roughly 3 percent for the rest of the century. That corresponds to yearly totals of 17 million miles and 12 million passengers by the year 2000. The WSDOT endeavors to create a more flexible ferry schedule to accommodate seasonality and insure maximum utilization of the system. At the same time, the department is expanding terminal parking and park-and-ride areas while holding fare hikes at or below the Seattle Consumer Price Index and simplifying the lengthy fare schedule.

The WSDOT's last modal reporting category is rail. Just as municipalities were mainly responsible for public transportation, the private sector dominates rail activity. Nevertheless, WSDOT is pursuing three projects in rail. Specifically, it is studying the rail industry to determine the aftermath of deregulation and will incorporate its findings into the state transportation plan. The WSDOT also administers a currently unfunded state rail rehabilitation loan program to fill the void of federal Local Rail Service Assistance (LRSA) money. Finally, WSDOT is concerned about inadequate AMTRAK passenger service in Washington but is waiting for direction from the state legislature.

Funding. It will be informative to examine transportation funding sources and amounts by the above five modal categories. Yet, it is important to remember that the following figures reflect county and municipal activity, as well as WSDOT's aforementioned efforts.

First, state highway revenue stems from the federal-aid highway program, roughly 95 percent of the 18 cents per gallon Motor Fuel Tax (MFT), roughly 75 percent of the \$23 Motor Vehicle License Fee (MVLFF), and all of the variable Gross Weight Fees. Between 1985 and 1997, expenditures in this category are expected to total \$8.3 billion. However, anticipated revenues of only \$6.2 billion will yield a \$2.1 billion shortfall to be financed from other sources.

Second, public transportation revenue comes from UMTA, fares, one-half of the 2.2 percent Motor Vehicle Excise Tax (MVET), 0.3 percent maximum of the Local Option Sales Tax, and one dollar per month maximum of the Local Option Household Tax. Between 1985 and 1997, expenditures in this category are expected to total \$5.2 billion. However, anticipated revenues of only \$4 billion will yield a shortfall of \$1.2 billion.

Third, aeronautics revenue comes from federal Airport Improvement funds, a 3 percent General Aviation Fuel Tax, a five-dollar Pilot Registration Fee, and variable airport user fees. Between 1985 and 1997, \$1.7 billion of aeronautics expenditures are anticipated. However, inadequate revenues will produce a \$50 million shortfall. Next, marine revenues stem from WSF fares, 10 percent of MWET, roughly 6 percent of MFT, 27.3 percent of MVLF, and a maximum of \$500,000 biennially from marine counties. Between 1985 and 1997, anticipated expenditures of \$2.3 billion and revenues of \$1.8 billion will yield a \$500 million shortfall.

Finally, rail revenues are from dwindling federal LRSA money and any locally generated revenues so assigned. This lack of funding is not surprising considering rail's private sector tradition. Between 1985 and 1997, expenditures and revenues are expected to balance at \$6 million.

Since four fifths of the above categories expect deficits, it is no surprise that hiking Washington's MFT, as well as an overhaul of the entire state revenue system, is currently under consideration.

Reports and Plans. The aforementioned Planning, Research, and Public Transportation Division's fundamental duty to publish a statewide transportation plan under section 47.01.011 is in flux. The first state transportation plan was issued in 1980 and superceded in 1984 by the second plan, which covered the remainder of the century. Although this ambitious document should be in effect for 11 more years, WSDOT decided in 1988 that it was too large for legislative decisionmaking, unnecessarily focused on state-owned modes, and blind to long term trends. Therefore, WSDOT is now preparing a 1990 State Transportation Policy Plan. This replacement document will be a general multimodal and multijurisdictional legislative agenda; it will also be the source of direction for specific unimodal plans.

Secretary Berentson appointed a 30-member State Transportation Policy Plan Steering Committee to write the new document. The steering committee is composed of state and local politicians, WSDOT employees, representatives from FAA, FHWA, and trade associations, and academics. The Steering Committee set up ten subcommittees on a variety of transportation topics:

1. transportation goals;
2. trends and conditions;
3. interjurisdictional transportation planning coordination;
4. maintenance of existing facilities;
5. urban mobility;
6. intercity/rural mobility;
7. freight and goods mobility;
8. land use;
9. economic development; and,
10. financing.

Each subcommittee is chaired and staffed by members of the steering committee. WSDOT employees provide clerical and research support to each subcommittee. As of March 1989, most chairmen are still recruiting non-Steering Committee participants to round out their subcommittees. There is a six-step timeline for completing the 1990 Transportation Policy Plan. First, the subcommittees will report their initial recommendations by June 1989. A draft plan is due by August 1989 and will be aired at regional forums in September 1989. The final plan is scheduled for completion in November 1989 with Transportation Commission approval coming the following month. This will allow the state legislature to see the plan in January 1990.

Two subcommittees merit special attention. First, the financing subcommittee is largely dormant due to the steering committee's belief that the state legislature will supercede any work they may do. In contrast, the interjurisdictional transportation planning coordination subcommittee is extremely active. Although the legislature is also considering this topic (King and Cantwell's bill), the subcommittee plans to offer a compromise bill through steering committee member State Representative Ruth Fisher, chairwoman of the House State Government Committee. The compromise bill proposes the creation of regional transportation planning organizations (RTPOs) to "Develop and adopt a regional transportation plan that is coordinated with local land-use and economic development plans, and local and state transportation plans." Although Fisher would not put gas-tax money in escrow like Cantwell and King, the compromise bill does withhold up to \$3 million of planning funds biannually from substate governments without mutually consistent plans. The main rationale for the bill is that there is currently no ongoing funding of substate transportation planning. This is especially true in rural non-Metropolitan Planning Organization areas. The bill seeks to counteract the inevitable confusion stemming from inconsistent planning.<sup>213</sup>

#### **Other State Agencies**

Washington State Rail Development Commission. The Washington State Rail Development Commission (RDC) was created in

1987 by the state legislature to examine the future of freight and passenger rail service. The legislature was reacting to rampant freight line consolidation by Burlington Northern and Union Pacific and the concomitant roadway congestion and deterioration. RDC consists of 17 local elected officials and citizen representatives from each of Washington's eight U.S. Congressional Districts. RDC presented its final report to the legislature in December 1988 and will sunset in June 1989. Its Final Report recommended that the state acquire abandoned rail corridors and rights-of-way, and subsidize local rehabilitation of light-density lines. This option was found to be generally less expensive than maintaining overutilized roads. RDC further called for the state to facilitate and initially fund regional rail transit authorities which would construct and operate rail-based mass transit systems.<sup>214</sup>

Washington Public Ports Association. The Washington Public Ports Association (WPPA) is a trade association composed of officials from 59 of Washington's 73 port districts. WPPA is committed to improving, or sometimes acquiring, port facilities for its members. WPPA has contracted with private civil engineering firms to publish three studies. The first study, in 1975, covered the state's ocean ports, while the 1980 publication considered Washington's inland waterways. WPPA's most recent effort was a joint venture with WSDOT in 1985. This study examined the impact of inland transportation systems on ports. It predicted an increase in containerization across all modes concomitant with break-bulk commodities being transported to shallow secondary ports, aside from Puget Sound. As mentioned above, WPPA was represented in both the Team Washington roundtable and the 1990 State Transportation Policy Plan steering committee.<sup>215</sup>

Transportation Improvement Board. The Transportation Improvement Board (TIB) was formed in 1987 to provide quick responses to multijurisdictional, economic development infrastructure requests. It consists of six county, six city, and three WSDOT officials who employ a set of nonpartisan criteria for awarding money. It is expected that the private-sector initiator would pitch in too. Currently, TIB has a \$20 million available pool. Whatever gas tax measure is enacted will go partially to increase that amount. Although TIB was designed for speedy decisionmaking, the strict Environmental Impact Statement requirement of the State Environmental Protection Act has proved to be a roadblock in the past.<sup>216</sup>

## **MPOs AND LOCALITIES INVOLVED IN TRANSPORTATION**

There are eight metropolitan planning organizations (MPOs) in Washington State. Seven of the eight are also Councils of Governments (COGs) in their respective localities. The remaining



MPO (Thurston Regional Planning Council) is simply the planning arm of both Thurston County and the city of Olympia. The relationship between localities and MPOs and economic development is uncertain due to events in the legislature and WSDOT's RTPO proposal. However, most MPOs in Washington now solicit economic development input for their federally mandated transportation plans from Chambers of Commerce or the statewide network of county Economic Development Councils (EDC).

### **Thurston County Regional Planning Council**

The Thurston Regional Planning Council (TRPC) is funded by the city of Olympia and Thurston County. It publishes the comprehensive plan for both governments and complies with federal MPO requirements by issuing the Transportation Plan, Unified Projects Work Program, Transportation Improvement Program, and the Annual Element for Greater Olympia. Although TRPC employs no economic development professionals, its statutory MPO documents are reviewed by a 12-member Technical Advisory Committee, which contains private sector, Port of Olympia, and EDC representatives. Moreover, the inevitability of growth on the south shore of Puget Sound keeps orderly economic development in TRPC's mind.

Both of the above comprehensive plans address the linkages between transportation and economic growth. Yet, neither specifically mention multimodalism or intermodalism. Rather, the City of Olympia Comprehensive Plan realizes that the city's livelihood depends inordinately on the public sector (state capital). To diversify the economy and thus ensure stability, the plan recommends luring businesses to concentrated industrial parks, which are prebuilt with easy access to roads, railroads, ports, and airports. If zoning cannot push industry into one area, it is hoped that the preexisting infrastructure will. Since TRPC wrote the Thurston County Comprehensive plan too, it is not surprising that the latter mimics Olympia's desire to shunt growth into zoned areas with adequate infrastructure. However, Thurston County's plan also mentions the need to prepare for passenger rail in the Puget Sound Corridor. A leading passenger rail proposal is the Puget Sound Council of Government's (PSCOG) Multi-Corridor Project.<sup>217</sup>

### **Puget Sound Council of Governments**

PSCOG is the MPO for, and is funded by, King, Pierce, Snohomish, and Kitsap counties in greater Seattle. It employs transportation professionals to publish the federal MPO documents, and economists to forecast demographic trends. PSCOG leaves economic development activities to the EDC in each of the above four counties.

For the past two years, PSCOG's work has centered on planning and promoting the Multi-Corridor Project. The PSCOG and Seattle Metro want to create a regional rail authority (RRA) with independent taxing power to build a light-rail system across Puget Sound consistent with existing park-and-rides, bus terminals, and the WSF. The Washington State Legislature should decide by the end of this session whether or not to create an RRA, and possibly who would govern it. The PSCOG considers the former to be a foregone conclusion, but is heavily involved in the fractious debate over the latter.

Because PSCOG has thrown nearly all its resources behind the Multi-Corridor Project, it has not studied freight movement in Greater Seattle. Moreover, its constituent municipalities and the private sector have coopted some of the transportation agenda. For example, the cities and counties around Puget Sound, instead of PSCOG, poll existing businesses about placement of arterials and collectors. Additionally, the private sector Air Carrier Task Force coalesced from area Chambers of Commerce without government prodding. This group seeks to expedite the construction of a larger airport, with more freight capacity, to replace Henry M. Jackson International Airport (SeaTac).<sup>218</sup>

#### **INTERMODAL PLANS, PROGRAMS, AND PROJECTS**

Aside from the potential Multi-Corridor Project across Puget Sound and the current Washington State Ferry System, there are eight explicit intermodal projects in Washington. A majority of the latter are owned or run by the private sector. This reflects the government's emphasis on multimodal planning as opposed to intermodal project construction and operation.

All of the following facilities handle freight, instead of people. Union Pacific (UP) runs one facility, Burlington Northern (BN) operates six, and the Port of Tacoma owns the remaining two. The government was involved only to the extent that the federal Railroad Revitalization and Regulatory Reform Act of 1976 and the Staggers Rail Act of 1980 allowed UP and BN more competitive latitude to operate such new terminals after closing old ones.

Union Pacific's Argo "intermodal ramp center" rests near Seattle harbor. It is served by Interstate 5 and contains piggyback tracks for trailer-on-flat-car (TOFC) and container-on-flat-car (COFC) operations. However, seaborne containers depend on land drayage to reach or leave the Argo yard. UP operates three double-stack trains per week for American President Lines and Maersk Lines from Argo and receives two inbound TOFC/COFC trains daily. Argo's freight yard has parking room for 500 trailers.

Burlington Northern operates three types of intermodal facilities. The Wenatchee ramp is a nonmechanized yard, specializing in perishable fruit. It ships out 7,000 to 9,000 TOFC cars per year. Second, BN's South Seattle, Pasco, and Spokane locations are termed "hub centers". Each is mechanized and trailers are placed on flatcars with cranes or front-end loaders. The three hub centers tallied 132,000 lifts in 1986. South Seattle operates a dedicated piggyback train and 16 such trains pass through Spokane each day. The latter is a consolidation center for eastbound loads and a breakup center for westbound loads.

Finally, BN's new Seattle International Gateway (SIG) is only 300 yards from the Port of Seattle docks. The SIG is equipped to handle double-stack container trains and sends out and receives six of them per day. It executed 138,000 lifts in 1986 dwarfing BN's four other hub centers. The SIG features an airport-like control tower where dispatchers examine incoming containers and produce manifests by the time incoming trucks reach the front gate. This reduces turnaround times to less than ten minutes.

The Port of Tacoma operates two intermodal yards within one mile of the containership facilities. Interstate 5 services both yards and the Port Terminal Railroad connects each to UP and BN track. The North Yard allows direct off-loading from containers ships to railcars via "straddle carriers". The South Yard is leased by Sea Land but operated by port officials. Together, the North and South yards handled 661,155 tractor equivalent units in 1986.<sup>219</sup>

## **SUMMARY**

The above information warrants at least four general observations. First, governments at all levels in Washington understand and publicly embrace the linkage between transportation infrastructure, land-use planning, and economic development. However, the linkage is understood more in terms of easing urban congestion than as theoretical precepts about multimodalism or intermodalism. Nevertheless, the 1990 Transportation Policy Plan is truly a multimodal document. It embraces transportation policy goals such as intrastate passenger transportation without any preconceived notion of the proper mode for the job. It may sound like reinventing the wheel, but it at least gives all modes a fair hearing and tends toward coordination.

The state does operate two types of intermodal facilities: park-and-rides and the WSF. Yet, they both focus on passenger traffic. Washington seems to be satisfied that if it maintains roads the private sector will handle any necessary intermodal

freight transfers. Although this has been the case so far, the private sector's drive for efficiency via intermodal center consolidation is causing wear and tear on the state road system at large. The state's laissez-faire attitude on freight may be about to change since the 1990 State Transportation Policy Plan steering committee has a subcommittee on freight goods mobility.

Second, any public sector economic development or transportation infrastructure efforts are largely stymied by financial uncertainty. The situation is paradoxical. More spending may attract businesses, but the spending cannot be afforded without more revenue, which comes in part from new businesses. Hopefully, the state legislature will resolve this dilemma and realize that upfront spending may have a long benefit stream. If money continues to be available, CERB and TIB especially appear to be innovative models for other states to copy. The flexibility they offer may be the key to attracting new business just as Tennessee snared Nissan.

Next, "turf battles" are ubiquitous. Washington's myriad MPOs, commissions, and boards, thrown in with a currently activist legislature and the possibility of RTPOs or a Growth Strategies Commission, smacks of too many cooks. Public officials are confused over who is the lead planning agency in a given location. Moreover, they are often frustrated because of the separation between planning and implementation authority. A general housecleaning is needed in the public sector. Since Washington believes that transportation, land use, and economic development are interrelated, why not have a tricameral comprehensive plan with concomitant tricameral agencies at the state, county, and local level? Such an organizational scheme could build on preexisting MPOs or EDCs or start anew. The question is not rhetorical. Despite the current problems, Washington's bureaucracy has no confidence that such comprehensive coordination is feasible. What agency has the resources or political capital to get the ball rolling? Wouldn't the turf battles be even worse between three different types of planners forced to cohabitate in the same agency? Whatever the case, "planning" evokes negative public sentiment in Washington, which may cause what the bureaucrats perceive as perpetual underfunding.

Finally, the private sector is strangely silent in Washington. Despite that many believe that decreasing government regulation can create truly intermodal companies, private-sector transportation executives just want to be left alone. There is a bitter legacy from the era of pervasive regulation. Although executives periodically serve on bodies such as the Rail Development Commission, they do not sit on the all-important 1990 State Transportation Policy Plan Steering Committee. Even their trade association proxies are grossly outnumbered in public-sector discourse. Moreover, the private sector seems to have no

legislative or regulatory agenda, and they envision no partnerships with government. There is little recognition of the potential for meaningful interaction with government.

## Notes

1. "The Fifty States: 4th Annual State Financial Report," City & State (April 24-May 7, 1989), p. 15.
2. The World Almanac and Book of Facts (New York, N.Y.: Newspaper Enterprise Association Inc., 1985), p. 634.
3. Ibid.
4. California Department of Transportation, California Transportation Facts (Sacramento: 1986), pp. 1-5.
5. Ibid.
6. The World Almanac and Book of Facts, p. 634.
7. California Department of Commerce, Annual Report to the Legislature (Sacramento: 1987), p. 3.
8. Ibid.
9. Ibid., pp. 2-16.
10. Secretary of State's Office, California Roster (Sacramento: 1988), p. 66.
11. Ibid., pp. 66-7.
12. California Department of Transportation, Organizational Charts (Sacramento: 1989).
13. California Roster, pp. 66-7.
14. Office of the Governor, Governor's 1989-90 Budget (Sacramento: 1989), pp. 125-37.
15. California Transportation Facts, pp. 1-5.
16. Telephone interview by Paul Casey with Joan Borucki, System Planner, Division of Transportation Planning, California Department of Transportation, Sacramento, California.
17. Interview by Paul Casey with Gordon Palmer, Head of Economic Planning and Development, Southern California Association of Governments, Los Angeles, California, March 9, 1989.
18. Sacramento Area Council of Governments, Overall Work Program for FY 1989-90 (Sacramento: February 3, 1989), pp. 21-30.

19. California Department of Transportation, Intermodal Facilities Program Report, In-house working document (Fiscal Year 1986-7), pp. 16-20.

20. "The Fifty States: 4th Annual State Financial Report," p. 18.

21. The World Almanac and Book of Facts 1986, p. 636.

22. Patrick J. McCue, "Florida's Challenge: Managing Explosive Growth," Paper prepared for presentation at TRB Conference-A Look at the Future: Year 2020, June 22-24, 1988, Washington, D.C., p. 9.

23. Ibid., p. 10.

24. Florida Department of Transportation, Division of Planning and Programming, Florida Transportation Plan (Tallahassee, Florida: September 1986), p. 4-29.

25. Florida Department of Transportation, State Aviation Programs Overview (Tallahassee, Florida: August 4, 1988), p. 1.

26. Ibid., p. 1.

27. Interview by Brock J. Curry with J. Fred Wise, Jr., Manager-Transit/Rail Office, Florida Department of Transportation, Tallahassee, Florida, March 10, 1989.

28. Florida Legislature, Florida Transportation Corporation Act, chapters 88-271 (Committee Substitute for House Bill No. 621), July 5, 1988, p. 2.

29. Florida Transportation Plan, p. iii.

30. A Partnership of Florida Airports and Communities, the Florida Department of Transportation, and the Federal Aviation Administration, The Florida Aviation System Plan - Executive Summary 1989-2005 (Tallahassee, Florida: March 1989), p. ii.

31. Tallahassee-Leon County Planning Department, Statistical Digest 1989 (Tallahassee, Florida), pp. 18-19.

32. The Jacksonville Port Authority, The Jacksonville Port Authority - 1987 Official Directory (Miami: International Port and Airport Publishing Corporation, 1987), pp. 4-27.

33. "Partnershiping," Monthly Report from CSL Intermodal, vol. I, no. 5 (Hunt Valley, Maryland: October 1988), p. 3.

34. Interview with J. Fred Wise, Jr., March 10, 1989.
35. "The Fifty States: 4th Annual State Financial Report," p. 23.
36. The World Almanac and Fact Book, p. 638.
37. Interview by Monty Headley with L. Thomas Hamrick, Director, Sites, Buildings, and Community Profiles, Illinois Department of Commerce and Community Development, Springfield, Ill., March 9, 1989.
38. Interview by Monty Headley with Keith Sherman, Chief, Transportation Planning Section, Office of Planning and Programming, Illinois Department of Transportation, Springfield, Ill., March 9, 1989.
39. Interview with L. Thomas Hamrick, March 9, 1989.
40. Interview with L. Thomas Hamrick, March 9, 1989.
41. Interview with L. Thomas Hamrick, March 9, 1989.
42. Interview with L. Thomas Hamrick, March 9, 1989.
43. Interview with Keith Sherman, March 9, 1989.
44. Interview by Monty Headley with Michael J. Farmer, Vice President of Economic Development, The Greater Springfield Chamber of Commerce, Springfield, Ill., March 10, 1989.
45. Interview by Eric Stockton with Jim Johnson, Deputy Chief, Ports Management Section, Illinois Department of Transportation, Chicago Ill., March 29, 1989.
46. Interview with Keith Sherman, March 9, 1989.
47. Interview by Monty Headley with Robert L. York, Chief, Urban Program Planning, Office of Planning and Programming, Illinois Department of Transportation, Springfield, Ill., March 9, 1989.
48. American Association of State Highway and Transportation Officials, Survey of State Funding of Landside Port Facilities and Cargo Terminals 1977-1984, 1986, pp. 6-23.
49. Interview with Jim Johnson.
50. Illinois Department of Transportation, Illinois Coal: Markets and Delivery Systems (Springfield, Ill.: 1983), p. 1.



51. Illinois Department of Transportation, Economic Development Strategy for Southwestern Illinois, Springfield, Ill., 1986, p. VI-12.
52. Interview with Keith Sherman, March 9, 1989.
53. Interview with Keith Sherman, March 9, 1989.
54. Interview by Monty Headley with Harry H. Hopkins, Executive Director, Springfield-Sangamon County Regional Planning Commission, Springfield, Ill., March 10, 1989.
55. Interview with Harry H. Hopkins.
56. Chicago Area Transportation Study, Year 2000 Transportation System Development Plan (Chicago, Ill.: 1985), pp. 1-11.
57. Chicago Area Transportation Study, Recommended 2010 Transportation System Development Plan, Chicago, Ill., 1989, pp. 1-7.
58. Interview by Eric Stockton with Eugene Ryan, Deputy Director of Planning, Chicago Area Transportation Study, Chicago, Ill., March 21, 1989.
59. Chicago Area Transportation Study, Recommended 2010 Transportation System Development Plan, pp. 1-7.
60. Interview with Eugene Ryan, March 21, 1989.
61. Interview with Eugene Ryan, March 21, 1989.
62. Chicago Area Transportation Study, Unified Work Program for Transportation, Northeastern Illinois, Fiscal Year 1989, Chicago, Ill., 1988, pp. E1, F1.
63. Interview with Keith Sherman, March 9, 1989.
64. "The Fifty States: 4th Annual State Financial Report," p. 23.
65. The World Almanac and Book of Facts, p. 639.
66. Iowa Department of Economic Development, Directions for Iowa's Economic Future (Des Moines: March 1987), pp. 1-2, 13, 37.
67. Iowa Department of Transportation, Iowa Transportation Improvement Program 1988-92 (Ames, Iowa: December 1987), p. IV.
68. Ibid.

69. Telephone interview by Paul Casey with Gunnar Rorbakken, Transportation Planner, Office of Advanced Planning, Iowa Department of Transportation, Ames, Iowa, November 20, 1988.

70. Iowa Transportation Improvement Program 1988-1992, p. 1.

71. Ibid., p. 5.

72. Ibid., p 77.

73. Iowa Department of Transportation, Planning and Research Division, Report on Highways, Roads, and Streets for Study Years 1986 through 2005 (Ames, Iowa: January 1987), p. 1.

74. Iowa Transportation Improvement Program 1988-1992, p. 16.

75. Iowa Transportation Improvement Program 1988-1992, p. 33.

76. Iowa Transportation Improvement Program 1988-1992, p. 41.

77. Intermodal Pilot Project Program, charter (Ames: 1987).

78. Iowa Department of Transportation, Planning and Research Division, The Commercial and Industrial Network Project (Ames, Iowa: 1988), p. 1.

79. Iowa Transportation Improvement Program 1988-1992, p. III.

80. Ibid., p. 59.

81. Telephone interview by Habib Kharrat with Rudy Wagner, Transportation Planning Supervisor, Office of Planning and Zoning, The Des Moines Area Transportation Planning Committee, Des Moines, Iowa, March 23, 1989.

82. Des Moines Area Transportation Planning Committee, Planning Division, Year 2000 Street and Highway Plan (Des Moines, Iowa: July 1985), chapter I, p. 1.

83. Des Moines Area Transportation Planning Committee, Planning Division, Transportation Improvement Program (Des Moines, Iowa: September 1988), p. 1.

84. Telephone interview by Habib Kharrat with Gary Vallem, Executive Director, Bi-State Metropolitan Planning Commission, Rock Island, Iowa, March 22, 1989.

85. The Bi-State Metropolitan Planning Commission, Department of Transportation, Quad-City Intermodal Freight Transportation Study (Davenport, Iowa: February 1989), pp. 1-4.

86. Rod Thomson, "Quad-City Container Transfer Terminal Project," Quad-City Times, April 24, 1988, pp. 1-4.
87. Telephone interview by Habib Kharrat with Byron Baxter, Director of Transportation, Davenport Department of Municipal Transportation, Davenport, Iowa, March 27, 1989.
88. Telephone interview by Habib Kharrat with Sherry Kyras, Transportation Planner, Planning Management Department, Metropolitan Transit Authority, Des Moines, Iowa, March 28, 1989.
89. Des Moines Metropolitan Transit Authority, Facts (Des Moines, Iowa: April 1986), p. 6.
90. Ibid., p. 3.
91. Intermodal Pilot Project Program.
92. The Commercial and Industrial Network Project, pp. 1-5.
93. Facts, p. 2.
94. Quad-City Intermodal Freight Transportation Study, pp. 1-4.
95. Rod Thomson, "Quad-City Container Transfer Terminal Project".
96. "The Fifty States: 4th Annual State Financial Report," p. 24.
97. The World Almanac and Book of Facts, (New York: Newspaper Enterprise Associates, Inc., 1985), p. 641.
98. Ibid.
99. Maryland Department of Transportation, 1989 State Report on Transportation, Volume 1: Maryland Transportation Plan (Baltimore: 1989), pp. I2-IX4.
100. The World Almanac and Book of Facts, p. 641.
101. Maryland Department of Economic Development, Maryland, A Business Inventory of Major Locational Factors (Baltimore: 1989), Industrial Base section.
102. Telephone interview by Nancy Yahn with Eric Feldman, Office of International Trade, Maryland Department of Economic Development, March 9, 1989.
103. Maryland, A Business Inventory of Major Locational Factors, Government and Taxes section.

104. Maryland Department of Transportation, 1988 State Report on Transportation, Volume 1: Maryland Transportation Plan (Baltimore: 1988), pp. I1 and Organizational Chart.

105. 1988 State Report on Transportation, Volume 1: Maryland Transportation Plan, pp. IV2-IV6.

106. Ibid., pp. V1-V7.

107. Ibid., pp. VIII1-VIII8.

108. 1989 State Report on Transportation, Volume 1: Maryland Transportation Plan, pp. I6-I7.

109. 1989 State Report on Transportation, Volume 1: Maryland Transportation Plan, pp. I4-I6 and 1988 State Report on Transportation, Volume 1: Maryland Transportation Plan, pp. I3-I7.

110. 1989 State Report on Transportation, Volume 1: Maryland Transportation Plan, pp. I1-IX7.

111. 1989 State Report on Transportation, Volume 2: Consolidated Transportation Program, FY 1989 - FY 1994 (Baltimore: 1989), pp. 1-503.

112. State Rail Administration, Maryland Department of Transportation, 1989 Maryland State Rail Report (Baltimore: 1989), pp. 1, 6-3.

113. Washington/Baltimore Regional Association, Baltimore/Washington Commuter Rail Accessibility Study (Baltimore-Washington, D.C.: 1989).

114. Maryland Port Administration, Maryland Department of Transportation, 1987-1988 Port of Baltimore Portfolio (Baltimore: 1988), pp. 1-63.

115. State Aviation Administration, Maryland Department of Transportation, Master Plan Executive Summary, Baltimore/Washington International Airport (Baltimore: 1987), pp. 1-11.

116. The Ralph M. Parsons Company, Volume 1, Overview of Baltimore/Washington International Airport, Master Plan Update (Baltimore: 1987), pp. 1-116.

117. State Aviation Administration, Maryland Department of Transportation, Trends at BWI Since Deregulation 1978-1987 (Baltimore: 1988), pp. 1-51.

118. Regional Planning Council, Baltimore Region Briefing Report RPC Operations and Relationships (Baltimore: 1988), pp. 1-11.

119. Regional Planning Council, Baltimore Region Briefing Report RPC Operations and Relationships (Baltimore: 1988), p. 20.

120. Regional Planning Council, Baltimore and Maryland of Transportation, Baltimore Region Transportation Improvement Program 1989-1991 (Baltimore: 1988), pp. 1-199.

121. Regional Planning Council, Baltimore and Maryland Department of Transportation, Unified Transportation Planning Program, FY 1988 (Baltimore: 1988), pp. 1-125.

122. Metropolitan Washington Council of Governments, The Region, Metropolitan Washington Council of Governments, and The National Capital Region Transportation Planning Board, "A Transportation Special Report" vol. 28, no. 3 (Washington, D.C.: Winter 1987), inside cover.

123. Metropolitan Washington Council of Governments, Metropolitan Washington Council of Governments (Washington, D.C.: 1989), pp. 1-19.

124. Policy Committee of the Northern Virginia Sub-Regional Transportation Plan, Virginia Department of Transportation, Northern Virginia 2010 Transportation Plan (Washington, D.C.: 1989), pp. 1-12.

125. Regional Planning Council, Metropolitan Washington Council of Governments, Baltimore-Washington Accessibility Study (Baltimore-Washington, D.C.: 1988), pp. 1-121.

126. 1988 State Report on Transportation, Volume 1: Maryland Transportation Plan, p VII.

127. Ibid., pp. VII-18.

128. Ibid., pp. VIII-19.

129. "The Fifty States: 4th Annual State Financial Report," p. 28.

130. The World Almanac and Book of Facts, p. 647.

131. New York State Department of Transportation, State Department Master Plan: Rebuilding New York (Albany, NY: 1987).

132. New York State Department of Economic Development, Division of Policy and Research, New York State Economic Indicators (November 10, 1988).

133. Vincent Tese, "Building on Resurgence: Strategic Economic Policy for New York's Future" (New York, NY: May 1987).

134. Ibid.
135. New York State Department of Transportation. Information for Applicants, Industrial Access Program (Albany, NY).
136. Terrence Laughlin, "Countdown to Takeoff: Hudson Valley," Hudson Valley Magazine (September 1988).
137. Ogdensburg Bridge and Port Authority, Ogdensburg Port Master Plan and Development Study (Ogdensburg, NY: June 1985).
138. New York State Department of Transportation, State Transportation Master Plan: Rebuilding New York.
139. New York State Department of Transportation, New York State Rail Program Report 1986 (Albany, New York: December 1986).
140. New York State Department of Transportation, Statewide Aviation System Planning Framework Study (Albany, New York: 1977).
141. New York State Department of Transportation, State Transportation Master Plan: Rebuilding New York (Albany, New York).
142. Capital District Transportation Committee, Continuing Operation Plan (Prospectus) 1985-1990 Volume I (Albany, New York: September 1985).
143. New York Metropolitan Transportation Council, Unified Work Program, 1988-89, (New York, NY.: February 19, 1988).
144. New York City Departments of Ports, International Trade and Commerce, The City of New York Department of Ports, International Trade (New York, NY.).
145. Andrews & Clark, Inc., New York State Department of Transportation, Full Freight Access Program- New York and Long Island (Albany, New York: March 1984).
146. Bond Official Statement, "Metropolitan Transportation Authority" (New York, NY.: 1988).
147. New York State Department of Transportation, HOV/TSM Newsletter, I287 Suffern-Port Chester Corridor (Albany, NY.: October 1988).
148. Planning and Development, Region 10, Hauppauge, New York State Department of Transportation, Hudson River Rail Crossing and Stewart Airport Rail Link Feasibility Study (Albany, NY.: March 31, 1988).

149. New York State Department of Transportation, Long Island Expressway Fourth Lane Report-Nassau/Suffolk Counties (Hauppauge, NY.: October 1986).

150. Andrews & Clark, Inc., Full Freight Access Program-New York and Long Island.

151. "The Fifty States: 4th Annual State Financial Report," p. 30.

152. The World Almanac and Book of Facts, p. 650.

153. Pennsylvania Department of Transportation, Annual Report, 1987 (Harrisburg, Pennsylvania).

154. The World Almanac 1986, p. 650.

155. Interview by Jody Young with Ivan Tylawsky, Director of Regional and Community Initiatives, Department of Commerce/Economic Development Partnership, Harrisburg, Pennsylvania, March 9, 1989.

156. Annual Report, 1987.

157. Ibid.

158. Interview by Jody Young with Bob Baron, Planning Manager and Ellis Harnett, Transportation Specialist III, Pennsylvania Department of Transportation, Harrisburg, Pennsylvania, March 9, 1989.

159. Pennsylvania Department of Transportation, Transportation Partnership-Guidelines Manual (Harrisburg, Pennsylvania).

160. Interview with Bob Baron and Ellis Harnett, March 9, 1989.

161. Pennsylvania Department of Transportation, A Comprehensive Freight Rail Study for Pennsylvania, pp. vii-ix.

162. Ibid., pp. ix.

163. Temple, Barker, and Sloane, Inc., Opening Pennsylvania Rail Routes for Double-Stack Containers, p. 2.

164. Interview by Jody Young with Stanley Vale, Director of Ports and Waterways, Pennsylvania Department of Transportation, Harrisburg, Pennsylvania, March 9, 1989.

165. Ibid.

166. Opening Pennsylvania Rail Routes for Double-Stack Containers, p. 2.

167. Interview by Jody Young with Larry DeYoung, Office of Government Affairs, Consolidated Rail, Philadelphia, Pennsylvania, March 10, 1989.

168. Annual Report, 1987.

169. A Comprehensive Freight Rail Study for Pennsylvania, p. i.

170. Ibid., p. v-vi.

171. Ibid., pp. ix-xi.

172. Ibid., Appendix D.

173. The Economic Development Partnership Committee on the Ports of Pennsylvania, A Report to the Governor, p. 3.

174. Ibid., pp. 8-10.

175. Ibid., p. 8.

176. Ibid., pp. 25-32.

177. Ibid., p. 32.

178. Interview by Jody Young with Richard Bickle, Assistant Director for Economic Development, Delaware Valley Regional Planning Commission, Philadelphia, Pennsylvania, March 8, 1989.

179. Interview by Jody Young with Lynn Haskins, Deputy Director, Greater Philadelphia Economic Development Coalition, Philadelphia, Pennsylvania, March 8, 1989.

180. Southeastern Pennsylvania Transportation Authority, Annual Report for Fiscal Year 1987 (Philadelphia, Pennsylvania).

181. Interview by Jody Young with Denise Goren, Director of the Mayor's Office of Transportation, Philadelphia, Pennsylvania, March 10, 1989.

182. Interview with Richard Bickle, March 8, 1989.

183. Ibid.

184. Southwestern Pennsylvania Regional Planning Commission, About SPRPC, p. 1.

185. The Economic Development Partnership Committee on the Ports of Pennsylvania, A Report to the Governor, p. 61.



186. Telephone Interview by Chris Caplice with Chuck DiPietro, Manager, Transportation Planning, Southwestern Pennsylvania Regional Planning Commission, Pittsburgh, Pennsylvania, March 23, 1989.

187. Southwestern Pennsylvania Regional Planning Commission, 1988-1992 TIP for SPRPC, pp. 1-4.

188. Telephone Interview by Chris Caplice with Steve George, Director, Airport Area Development Advisory Commission, Pittsburgh, Pennsylvania, March 27, 1989.

189. Southwestern Pennsylvania Regional Planning Commission, 1988-1992 TIP for SPRPC, pp. 9-12.

190. Telephone interview with Chuck DiPietro, March 23, 1989.

191. Southwestern Pennsylvania Regional Planning Commission, A Regional Industrial Property System (RIPS), pp. 41-43.

192. Southwestern Pennsylvania Regional Planning Commission, Highway Needs in Southwestern Pennsylvania (August 1987), pp. 7-8.

193. Interview with Denise Goren, March 10, 1989.

194. Southeastern Pennsylvania Transportation Authority, Annual Report for Fiscal Year 1987.

195. Mayor's Office of Transportation, Olney Terminal Project Description (Philadelphia, Pennsylvania).

196. Southeastern Pennsylvania Transportation Authority, Annual Report for Fiscal Year 1987.

197. Telephone interview with Steve George, March 27, 1989.

198. Allegheny County Board of Commissioners, Airport Area Development Advisory Committee Briefing Book.

199. Allegheny County Board of Commissioners, An Agenda for Development of Greater Pittsburgh International Airport Impact Area Plan, p. 1.

200. Southwestern Pennsylvania Regional Planning Commission, The Economic Impact of Aviation in Southwestern Pennsylvania, p. 5.

201. Telephone interview with Steve George, March 27, 1989.

202. Ibid.

203. Southwestern Pennsylvania Regional Planning Commission, The Economic Impact of Aviation in Southwestern Pennsylvania, p. 5.

204. Allegheny County Board of Commissioners, An Agenda for Development if Greater Pittsburgh International Airport Impact Area Plan, p. 5.

205. "The Fifty States: 4th Annual State Financial Report," p. 33.

206. The World Almanac and Book of Facts, p. 654.

207. Washington State Department of Transportation, Executive Summary - Washington State Transportation Plan/1985-2000 (Olympia, Washington: January 26, 1984).

208. Washington State Economic Development Board, Washington Works Worldwide (Olympia, Washington: November 1988), pp. 15-17.

209. Governor Booth Gardner, "The Washington Economic Development Agenda," Olympia, Washington: Office of the Governor, January 7, 1988; and Interview by Thomas Pippin with Dennis A. Matson, Deputy Director, Operations, Department of Trade and Economic Development, February 23, 1989.

210. Interview by Thomas Pippin with John M. Henchman, Director, Economic Development Affairs, Washington State Department of Transportation, February 23, 1989.

211. Mark Matassa, "House Speaker Testing Out New Tactic with Gas-Tax Plan," Seattle Times, February 24, 1989, p. C1; and State Transportation Plan Steering Committee, "Agenda and Draft Scopes of Work - Meeting No. 7," Olympia, Washington: June 1988.

212. Washington State Department of Transportation, Executive Summary.

213. State Transportation Plan Steering Committee, "Agenda and Draft Scopes of Work - Meeting No. 7"; and Washington State Department of Transportation, "Status Report of the 1990 Transportation Policy Plan," Olympia, Washington: January 1989 and February 1989.

214. Washington State Rail Development Commission, Final Report (Olympia, Washington: September 1988).

215. Tippetts-Abbett-McCarthy-Stratton, Engineers and Planners, Ports and Transportation Systems Study (Seattle, Washington: December 1985).

216. Interview with John Henchman, February 23, 1989.

217. Interview by Thomas Pippin with Kathleen Burgess, Associate Director, Thurston Regional Planning Council, February 23, 1989; and Thurston Regional Planning Council, Thurston County Washington Comprehensive Plan; and City of Olympia, Washington Comprehensive Plan (Olympia, Washington: June 1988).

218. Interview with Curtis R. Smelser, Executive Director, Puget Sound Council of Governments, February 24, 1989; and Puget Sound Council of Governments, "Multi-Corridor Project" (Seattle, Washington: April 1986).

219. Ken L. Casavant and Jerry C. Lenzi, "Changes in Intermodal Transportation in Washington and Impacts of Road Infrastructure," Olympia, Washington: Washington State Department of Transportation, August 1987.