EXECUTIVE SUMMARY
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Over a period of ten months, the Steering Committee of the Regional Transportation Policy Advisory Committee evaluated a range of alternative ground transportation system concepts which varied the levels of investment in highway and transit improvements. Working from the two extremes of a total investment in one mode or the other, the Steering Committee then evaluated two multimodal system concepts and one concept which would provide for no improvements to the existing ground transportation system. These concepts were identified as the All Highway Alternative, the All Transit Alternative, the Primarily Highway Alternative, the Primarily Transit Alternative, and the Do Nothing Alternative.

In addition to evaluating these ground transportation system concepts, the Steering Committee also faced the challenge of evaluating four alternative air transportation system concepts for the Intensive Study Area and incorporating selected ground and air transportation alternatives into a Total Transportation Plan for the North Central Texas Region for 1990.

Utilizing methodology developed by the transportation staff of the North Central Texas Council of Governments, 1990 population and employment forecasts were distributed at the small-area level for each of the ground transportation alternatives, and travel characteristics were forecast for each alternative tested based on the distribution of people and jobs. Projected travel behavior for each alternative was then utilized to determine levels of congestion on highway facilities, percentage of trips attracted to transit, and impacts on the environment and natural resources, as well as accessibility to jobs from all areas of the region by both modes.

As a result of this review, the Steering Committee directed the Transportation Department of the North Central Texas Council of Governments to refine the Primarily Highway Alternative in cooperation with the Highway and Public Transportation Technical Committees and the Regional Planning Office of the Texas Highway Department and to evaluate this alternative prior to the August, 1974, meeting of the Steering Committee. This work was accomplished under the following objectives:

- To improve the Primarily Highway Alternative with some additions which would yield a relatively-greater level of highway service.

- To improve upon the transit service provided under the Primarily Highway Alternative.

- To upgrade State Highway 199 in Tarrant County to freeway standards, creating a new freeway into downtown Fort Worth.
The refinement of the Primarily Highway Alternative resulted in the identification of a multimodal ground transportation system, Alternative #6, which provided for extensive improvements to both the highway and transit modes. In applying the same evaluation methodology used for the evaluation of the five basic alternatives, the following results were noted:

**Economics and Land Use**

- Under Alternative #6, it is expected that the transit and highway systems would work together to encourage a higher density development than would be expected under the Primarily Highway Alternative.

- Alternative #6 would likely concentrate employment in the two major central business districts in the region slightly more so than the Primarily Highway Alternative.

**Transportation System Characteristics**

- Alternative #6 represents the greatest capital investment of any of the transportation alternatives evaluated to date, costing approximately $3.1 billion.

- Alternative #6, in general, would result in good utilization of freeway facilities.

- Alternative #6 would likely result in the least congestion of any of the alternatives tested. Arterial congestion could be expected to be reduced by 21 percent from the Primarily Highway Alternative, while freeway congestion could be expected to be reduced by 10 percent.

- Transit ridership under Alternative #6 was comparable to that achieved on much more extensive transit systems which have been evaluated. Furthermore, this alternative would likely achieve the greatest number of riders per dollar invested. However, the cost per transit passenger mile for Alternative #6 would be 4.7¢, as compared with 3.4¢ per transit passenger mile for the Primarily Highway Alternative.

**Natural Resources and the Environment**

- Although Alternative #6 would consume approximately 3 percent less energy than the Primarily Highway Alternative and would result in approximately 5 percent less air pollution emissions, these differences must be regarded as insignificant.
Social and Quality of Life

- Alternative #6 would clearly be superior to the Primarily Highway Alternative in providing access to employment opportunities by both the transit and highway modes of transportation.

Following the evaluation of Alternative #6, alternative airport system concepts were evaluated based on the following criteria:

- The time and distance from a proposed airport to the population or activity center that generate general aviation activity.

- The availability of airspace suitable for aircraft operations.

- The total cost of land and airport facilities.

- The quality of ground access facilities and the demand on these facilities.

- The impact on land use and the environment.

The four concepts evaluated included the Single Runway concept, with a larger number of smaller airports; the Large Urban and Large Suburban airport concepts which were based on a smaller number of relatively-large General Aviation airports; and the Dual-Runway concept, which provides for a medium number of intermediate-sized airports. Of these four, the Dual-Runway concept was found to be the most advantageous.

The ground transportation alternative known as Alternative #6 and the airport concept known as the Dual-Runway concept were then incorporated into a Total Transportation Plan and reviewed by the Public Transportation Technical Committee, the Air Transportation Technical Advisory Committee, and the Highway Technical Committee. These committees forwarded the following recommendations to the Steering Committee:

- It is recommended that the Steering Committee adopt ground transportation system Alternative #6 and the Dual-Runway concept for the airport system as delineated in the Transportation Improvement Program. These two concepts, when integrated, become the 1990 Total Transportation Plan for the North Central Texas Region.

- A review of the proposed highway facilities handling external trips to and from the Intensive Study Area should be conducted. While several of these facilities appear to be under-utilized in Alternative #6, the appropriateness of these facilities cannot be evaluated without a study of their role in the State-wide highway plan.
• Consideration should be given to the feasibility of a transitway or other separate right-of-way transit facility in an alignment parallel to U. S. Highway 80 through the Mid-Cities area.

• It is recommended that the highway and transit systems in the vicinity of the Dallas/Fort Worth Airport be thoroughly reviewed to avoid the possible overloading of State Highways 121 and 114 immediately north of the airport.

• A subsequent major review of the transportation plan with target year 2000 should be begun one or two years from now and should consider expansion of the Intensive Study Area to include Denton and McKinney, perhaps all of Denton and Collin Counties. During the interim period, the planning effort should emphasize refining, checking, and documenting the 1990 Plan.

• The ground transportation systems analyses were conducted under the assumption of unlimited, albeit expensive, fuel. It is highly recommended that Alternative #6 be evaluated under possible contingency situations with regard to fuel availability.

• It is emphasized that this analysis reflects a maintenance of the current (1974) economic conditions. An analysis of the potential impacts of inflation on the financial aspects of the Alternative #6 highway and transit systems is strongly recommended.

It is extremely important to recognize that this is a planning document, and that factors such as fuel and other energy sources, as well as the capabilities to generate local funding are prime design factors that must be carefully considered before implementation of actual design of each increment of this Plan as public demand triggers this action.