Assessment of Community Planning for Mass Transit: Volume 7—Minneapolis-St. Paul Case Study

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PREFACE

This report on urban transportation planning in the Minneapolis-St. Paul, Minnesota metropolitan area is one of nine case studies undertaken by the Office of Technology Assessment to provide an information base for an overall assessment of community Planning for mass transit.

The findings of the overall study are reported in the summary document, *An Assessment of Community Planning for Mass Transit,* which forms the first volume of this series. The assessment was performed at the request of the Committee on Appropriations of the U.S. Senate, on behalf of its Transportation Subcommittee.

The study was directed by the Office of Technology Assessment's Transportation Program Staff with guidance and review provided by the OTA Urban Mass Transit Advisory Panel. The firms of Skidmore, Owings and Merrill and System Design Concepts, Inc., were contractors for the study. This assessment is a joint effort, identifying different possible points of view but not necessarily reflecting the opinion of any individual.

INTRODUCTION

This report assesses how one of nine major United States metropolitan areas made its decisions about the development or modernization of rail transit.

The assessment of the nine cities attempts to identify the factors that help communities, facing critical technological choices, make wise decisions that are consistent with local and national goals for transit. The study investigates the following issues:

- Are there major barriers to communication and cooperation among governmental agencies involved in transit planning and operating? Do these barriers interfere with making sound decisions ?
- Do transit decisions reflect the combined interests of all major public groups, including citizen organizations, trade unions, the business community, and others ?
- Does the planning process provide enough information about the advantages and disadvantages of alternative courses of action to provide a solid basis for making decisions ?
- Does the availability or lack of financing, or the conditions under which financing has been provided, unnecessarily limit the range of options that are considered?

The ultimate purpose of the work has been to cast light on those prospective changes in national transit policy and administrative programs which might improve, in different ways and to different extents, the way communities plan mass transit systems. The nine cities were selected to represent the full range of issues that arise at different stages in the overall process of planning and developing a transit system.

San Francisco, for example, has the first regional rail system built in decades, while Denver is planning an automated system, and voters in Seattle have twice said “no” to rail transit funding proposals.

The assessment of transit planning in each of the nine metropolitan areas has been an inquiry into an evolving social process. Consequently, the study results more closely resemble historical analysis than classical technology assessment.

This study employs a set of evaluation guidelines to orient the investigation in the nine metropolitan areas and to provide the basis for comparative judgments about them. The guidelines were derived from issues identified during preliminary visits to the metropolitan areas, a review of Federal requirements for transit planning, and an investigation via the literature into the state-of-the-art in the field.

The evaluation guidelines cover major topics which were investigated during the case assessment process. They deal with the character of the institutional arrangements and the conduct of the technical planning process,

GUIDELINES FOR ASSESSMENT: INSTITUTIONAL CONTEXT

Some of the most significant influences on transit planning are exerted by the organizations responsible for conducting the planning and making the decisions. Three guidelines were used to evaluate the institutional arrangements in the nine metropolitan areas:

- Agencies responsible for various aspects of transit decisionmaking should cooperate effectively in a clearly designated “forum”.
- The participants in this forum should have properly designated decisionmaking authority, and the public should have formal channels for holding decisionmakers accountable for their actions.
- Citizens should participate in the transit planning process from its beginning and should have open lines of communication with decisionmakers.

GUIDELINES FOR ASSESSMENT: TECHNICAL PLANNING PROCESS

The technical planning process provides the information that public officials and their constituents draw upon in making plans and decisions. Four guidelines were used to assess the technical planning process in the nine metropolitan areas:

- Broad, explicit goals and objectives should guide technical planning and decision-making.
- A range of realistic alternative solutions should be developed.
- The evaluation of these alternatives should give balanced consideration to a full range of goals and objectives.
- A practical and flexible plan for financing and implementation should be developed.

During visits to each of the nine metropolitan areas, the study team interviewed the principal representative of the transportation planning institution and other main participants in the local planning process. The visits were supplemented by interviews with UMTA officials in Washington. Pertinent documents—official plans, reports, studies, and other material—were reviewed in each case.

The information thus collected was used in compiling a history of the transit planning process in each case area, organized around key decisions such as the decision to study transit, the selection of a particular transit system, and public ratification of the decision to pay for and build the system. The main political, institutional, financial and technical characteristics affecting the conduct of the planning process were then assessed in light of the evaluation guidelines.

The same set of guidelines used in assessing each case metropolitan area was employed in making a generalized evaluation of the metropolitan experience. The results of the generalized evaluation are summarized in the report, *A n Assessment of Community* Planning for *Mass Transit: Summary Report,* issued by the Office of Technology Assessment in February 1976.

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Summary and Highlights

- The Twin Cities metropolitan area has been studying and planning for a short-term and long-range transit system since 1968.
- No decision has been made thus far on what kind of public transit service to provide in the long term.
- This is in part due to the fact that Twin Cities does not feel impelled to make rapid decisions on transit system selection and implementation because it has a good bus transit system, In addition, it does not have a severe air quality problem; highway and street congestion is not perceived as being severe; and fuel shortages apparently were not as severe as in many other metropolitan areas.
- It is also due in part to deep divisions between the two agencies involved: the comprehensive planning agency (Metropolitan Council), and the transit agency (Metropolitan Transit Commission). Transit systems proposed by the Council have relied primarily on bus transit, while all of the Commission's proposed systems have contained a backbone rail transit system.
- The Metropolitan Transit Commission has taken over and significantly improved the bus transit operation.
- A variety of well-designed and competently managed studies have been carried out.
- Twin Cities, to a greater extent than any other of the case assessment cities, has studied and evaluated different concepts in public transportation service.
- The Metropolitan Transit Commission has competently designed and managed a series of study programs so that consultants have played only a technical staff and support role.
- Transit planning has been closely tied to land use and development planning, partially because the Metropolitan Council, in addition to transportation review powers, has and exercises limited control over land development.
- The State Legislature has become deeply involved in transit policy and planning and will probably ultimately make the decision on what kind of system will be adopted and implemented.

Metropolitan Setting[1]

GENERAL CHARACTERISTICS

The downtowns of Minneapolis and St. Paul are located about 10 miles apart on opposite banks of the Mississippi River. St. Paul is Minnesota's capital city.

The metropolitan area, over 3,000 square miles, is a major industrial, financial, cultural, and service center for an area from Wisconsin to the Midwestern States of Iowa, Nebraska, and the Dakotas. It ranks among the five fastest-growing regions in the Nation, with a 1970 population of 1.8 million. Today its population is greater than 2 million with over 60 percent living outside the municipal boundaries of the two areas. As has been the case in many U.S. metropolitan areas, the population growth in the Twin Cities between 1960 and 1970 took place in the suburban ring; the center city population declined (see Figure 2). The population density is relatively low, and there are no major physical conditions shaping growth.

A 30 percent rise in total work trips occurred between 1960 and 1970. The pattern of increase within the region kept pace with the changing population distribution. The greatest increases occurred in trips from the center cities to the suburban ring, and within the suburban ring. Many of the new trips used the private automobile. The proportion of trips by automobile increased 52 percent between 1960 and 1970, while relative numbers of trips on transit declined (see Figure 3).

In 1968 Minneapolis reconstructed eight blocks of downtown Nicollet Avenue as a landscaped pedestrian mall with a 2-lane transitway. The mall is one of the first and most successful urban auto-free zones in the country. Both downtown areas are developing sophisticated pedestrian "skyways" connecting their major commercial establishments.

EXISTING PASSENGER TRANSPORTATION SYSTEM

The Twin Cities metropolitan area has an excellent highway system encircling and traversing the entire region (see Figure 4). Four interstate highways provide the major links: I-94, I-35W, and the circumferential routes I-494 and I-694. Highways systems represent the dominant transportation facility for metropolitan area travel. The streets and highways in the metropolitan area total about 11,100 miles of roads, of which about 6,800 are located within the urban service area and 4,300 in the rural area. z

The physical growth of the urban area was encouraged by the development of a horse-drawn streetcar system beginning in 1872. The Twin Cities Rapid Transit Company (TCRT) began electric streetcar operations in 1889. The RTCRT replaced the horse-drawn streetcars and at its peak ran 444 route-miles with a 1,000-car fleet. It linked the Minneapolis and St. Paul central business districts with residential, employment, and recreational areas covering approximately 800 square miles. The company designed and built all but 141 of its streetcars.

After reaching its highest point during the 1920's, ridership on TCRT'S streetcar and bus fleet slumped during the Depression but surged again during World War II, reaching 201 million by 1946. Thereafter patronage declined steadily, bottoming out at 50.5 million by 1970 (see Figure 5).

TCRT, locally owned from its inception, was bought by an outside investment firm in 1949. The new management immediately began to retire the streetcars and completely replaced them with buses by 1954. In that year the newly organized Twin City Lines had a ridership of 86.6 million and a total bus fleet of approximately 820.

I See Figure 1, pages 8 and 9.

2 Metropolitan Council's report to the legislature, The *Automated Small Vehicle Guideway Study*, April, 1975.

LAND AREA (197 0)
(square miles)

Minneapolis	53.4
St. Paul	52.2
Suburban Ring	2,002.4
Entire SMSA	2,108

POPULATION

	Suburban Ring	Minn.	St. Paul
1960	685,747	482,872	313,411
1970	1,069,553	434,400	309,828

DENSITY
(population/square mile)

	Suburban Ring	Minn.	St.Paul
1960	342	9,043	6,004
1970	534	8,135	5,935

POPULATION
Percent Change 1960-1970

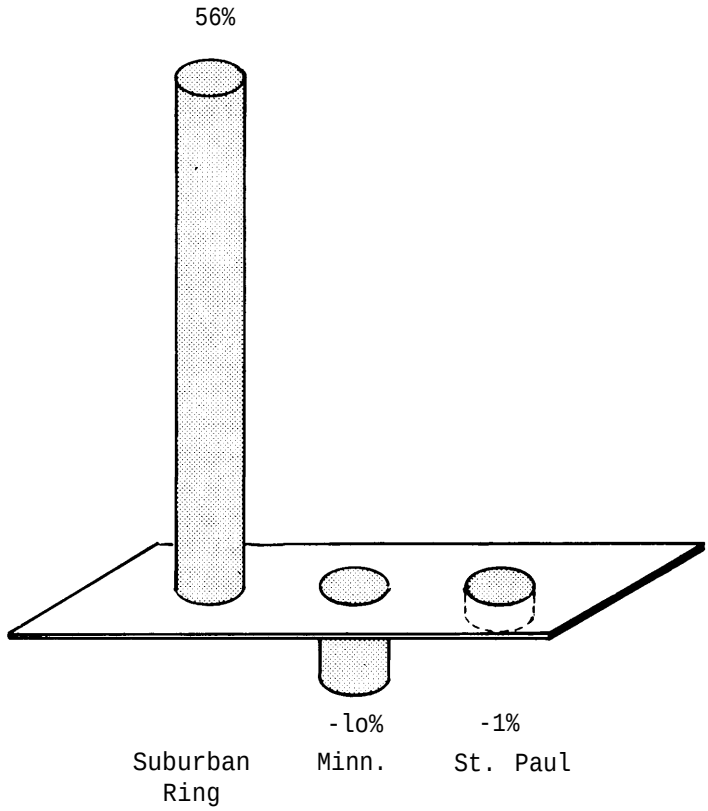


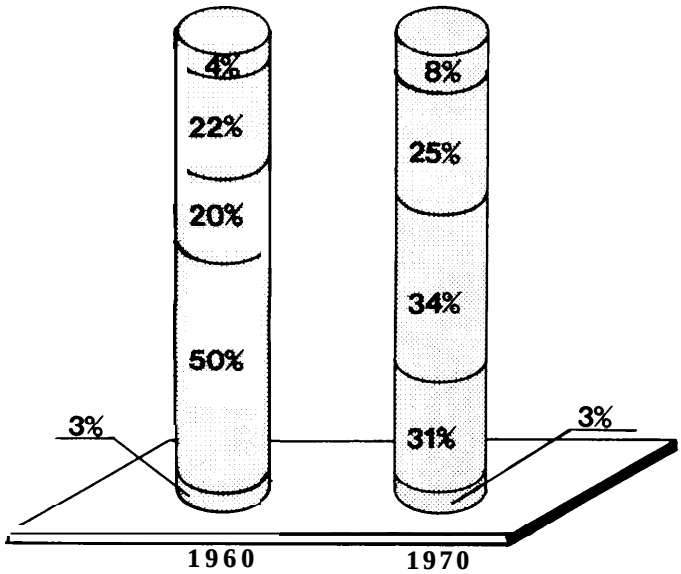
FIGURE 2:TWIN CITIES METROPOLITAN CHARACTERISTICS

Figures do not reflect the addition of five counties to the SMSA since 1970: Scott, Carver, Chisago, Wright, St. Croix.

Source: Urban Transportation Fact Book, American Institute of Planners, and the Motor Vehicle Manufacturers Association of the U.S., Inc., 1974.

A Standard Metropolitan Statistical Area (SMSA) includes a center city (or cities) , usually with a population of at least 50,000, plus adjacent counties or other political divisions that are economically and socially integrated with the central area.

WORK TRIP DISTRIBUTION



From Minneapolis and St. Paul to Suburban Ring

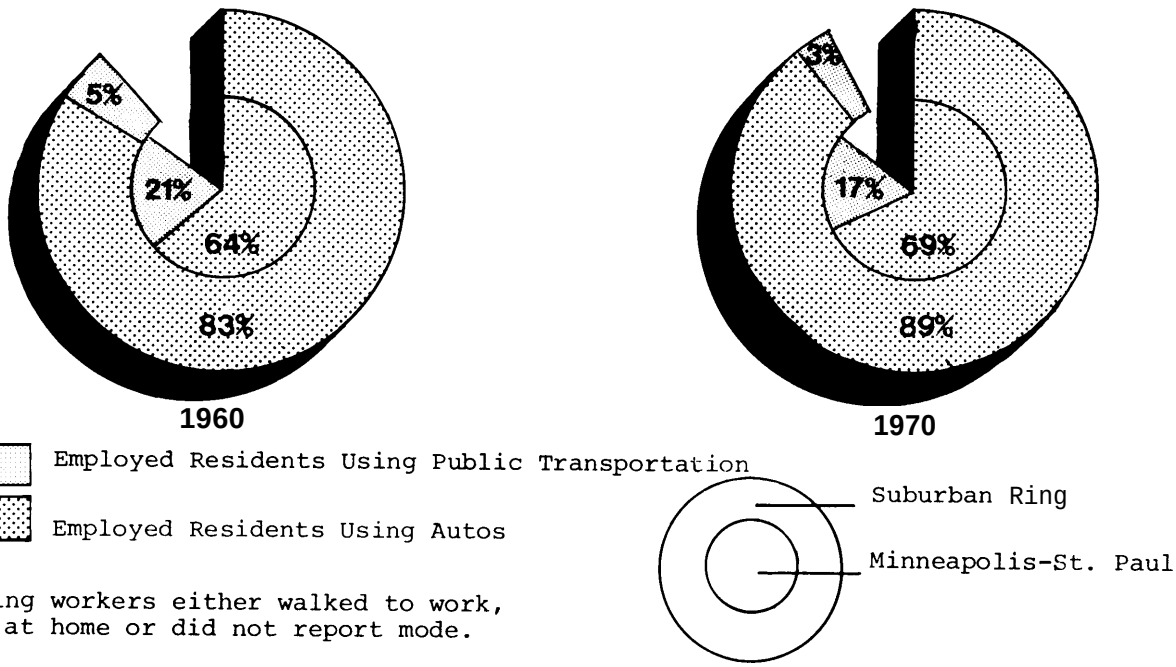
Suburban Ring to Minneapolis and St. Paul

Beginning and Ending in Suburban Ring

Beginning and Ending in Minneapolis

Between Minneapolis and St. Paul

WORK TRIP MODE



Remaining workers either walked to work, stayed at home or did not report mode.

FIGURE 3: TWIN CITIES SMSA TRAVEL CHARACTERISTICS 1960-1970

Source: Urban Transportation Fact Book, American Institute of Planners, and the Motor Vehicle Manufacturers Association of the U.S. , Inc. , 1974.

A Standard Metropolitan Statistical Area (SMSA) includes a center city (or cities) , usually with a population of at least 50,000, plus adjacent counties or other political divisions that are economically and socially integrated with the central area.

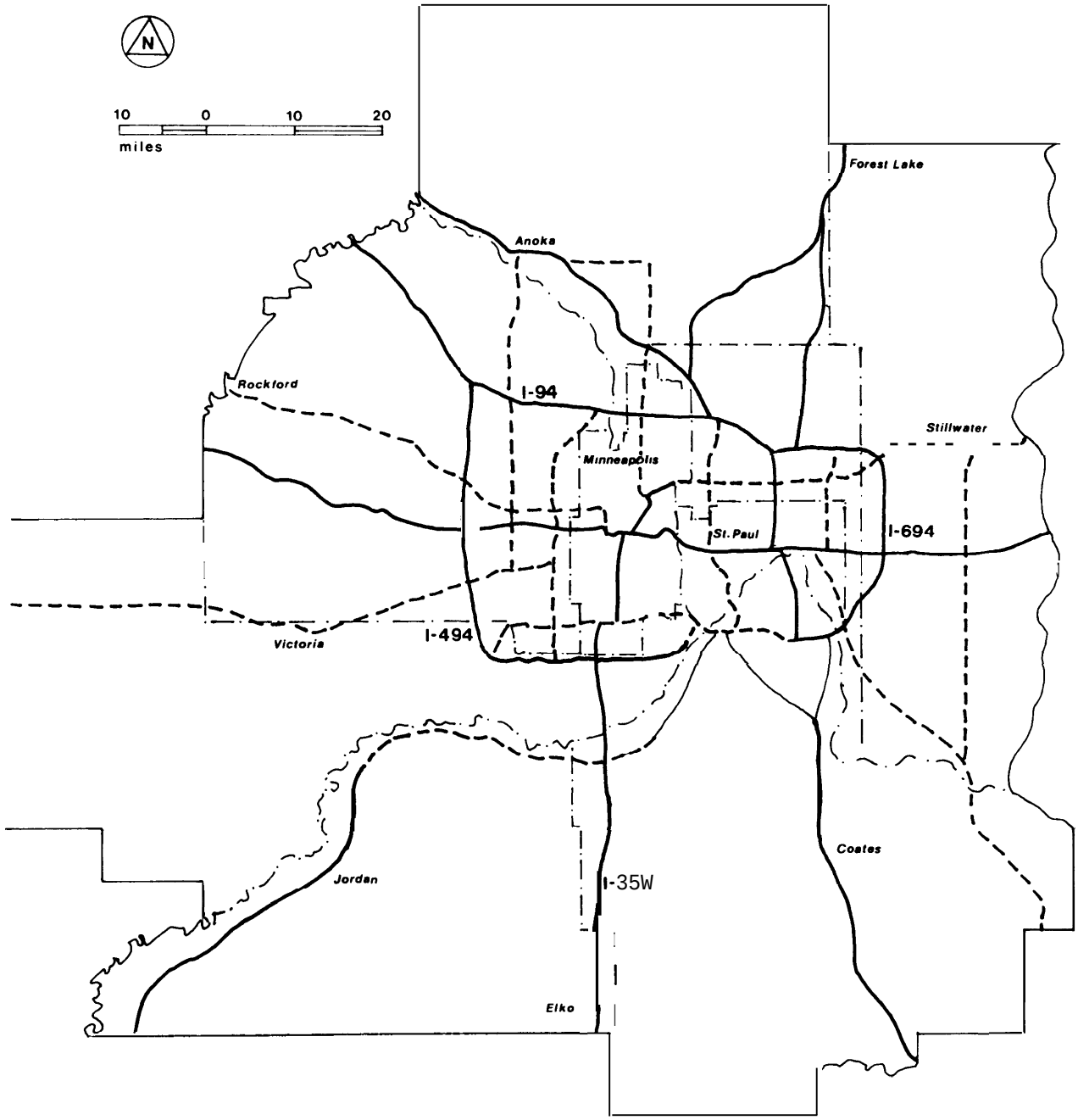
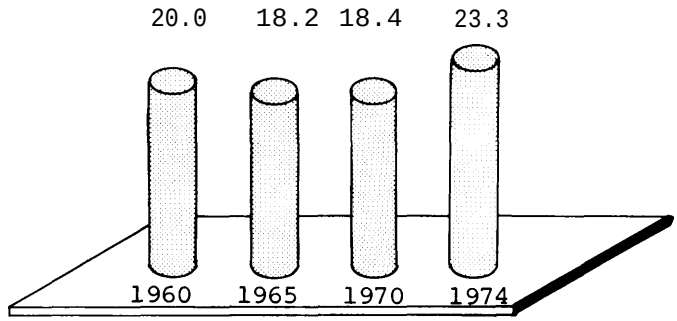


FIGURE 4: TWIN CITIES— EXISTING HIGHWAY SYSTEM

Principal Arterial
Intermediate Arterial
County Boundary

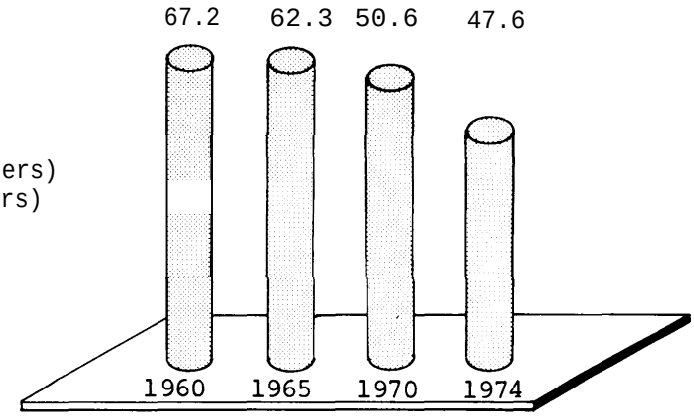
VEHICLE MILES OPERATED
(millions of miles)

Peak year = 1974 (23.3 million miles)
Low Year = 1967 (15.9 million miles)



REVENUE PASSENGERS
(millions of passengers)

Peak Year = 1960 (67.2 million passengers)
Low Year = 1974 (47.6 million passengers)



NET OPERATING REVENUE
(millions of dollars)

Peak Year = 1966 ($2,517,233)
Low Year = 1974 (-$11,493,181)

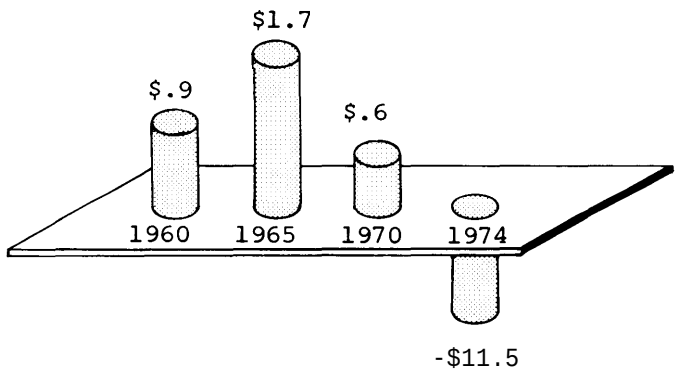


FIGURE5: TWIN CITIES TRANSIT OPERATIONS 1960-1974

Source: American Public Transit Association records for operations of the Twin City lines and the Metropolitan Transit Commission.

Data for 1972 not available.
A Standard Metropolitan Statistical Area (SMSA) includes a center city (or cities) , usually with a population of at least 50,000, plus adjacent counties or other political divisions that are economically and socially integrated with the central area.

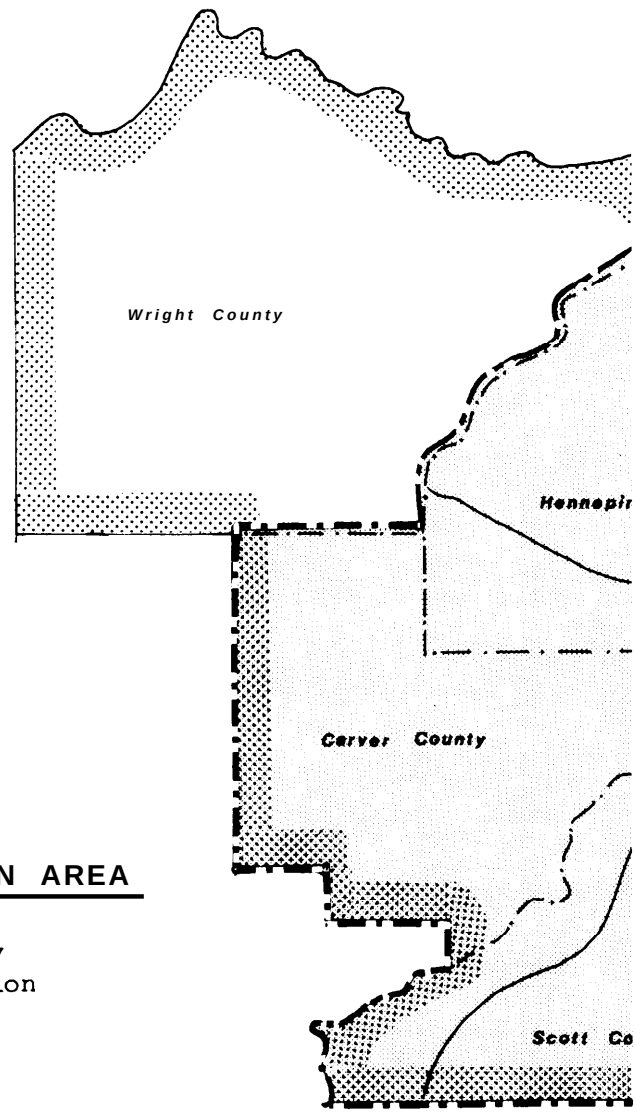
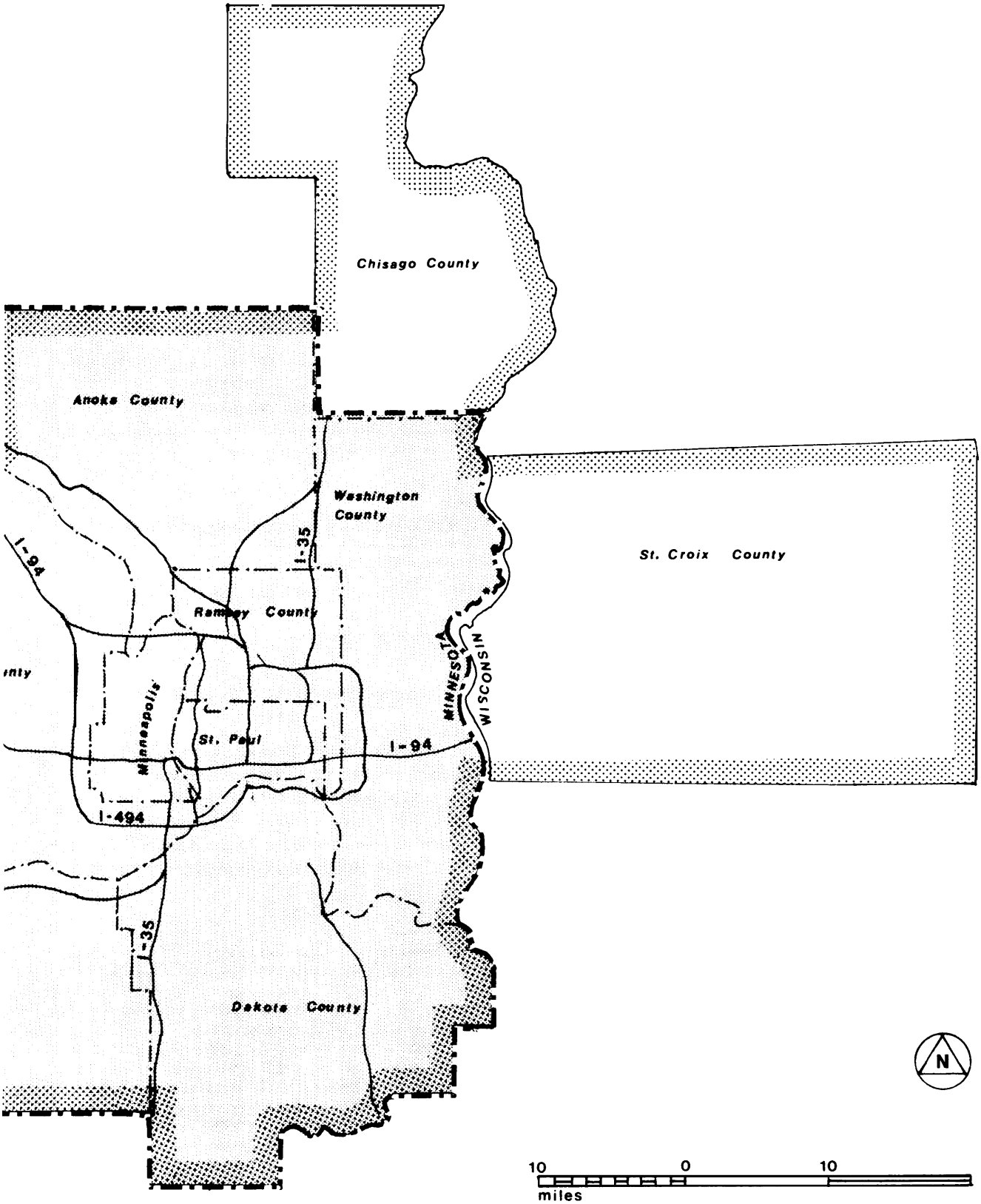


FIGURE 1: TWIN CITIES METROPOLITAN AREA

Metropolitan Council Boundary
Metropolitan Transit Commission District

SMSA Boundary
County Boundary

A Standard Metropolitan **Statistical Area (SMSA) includes** a **center city (or** cities) , usually with a population of at least 50,000, plus adjacent counties or other political divisions that are economically and socially integrated with the central area.


Chisago County
Anoka County
Washington County
St. Croix County
Ramsey County
Minneapolis
St. Paul
Dakota County
I-94
I-35
I-494
MINNESOTA
WISCONSIN
N
10
0
10
miles

In 1970 the Metropolitan Transit Commission took over the private transit operations. Since then hundreds of new buses have been purchased and a minibus line installed in the two central business districts. Additional improvements have increased the mileage of routes by 50 percent and have eliminated fares for elderly passengers during nonpeak hours. The bus patronage has steadily grown—by a total of about 22 percent—since the public takeover in 1970. The existing transit system includes 834 buses covering 85,752 miles of daily scheduled bus miles operating over 1,303 miles of routes (see Figure 6). Table 1 shows a breakdown of Federal transit support to Twin Cities since the early 1960's.

TRANSPORTATION PLANNING INSTITUTIONS

The major institutions involved with transportation planning in the metropolitan area include the Metropolitan Council, the Metropolitan Transit Commission, the Minnesota Highway Department, and the State legislature.

Metropolitan Council (MC)

The Metropolitan Council was created by State legislation in 1967 to establish a framework to coordinate regional. development in the Minneapolis-St. Paul metropolitan area. Sixteen members of the Metropolitan Council are appointed by the Governor on a nonpartisan basis, after consulting with members of the legislature from the candidate's Council district. j The chairman of the Metropolitan Council is appointed by the Governor as the seventeenth voting member of the Council and must be experienced in the field of municipal and urban affairs.

As the regional A-95 agency, the Metropolitan Council has power to review all proposals from the area organizations for Federal funds.[4] It also is responsible for the 3-C functions for the metropolitan areas The Council measures plans of other area bodies against its *Metropolitan Development Guide.* Minnesota's Metropolitan Reorganization Act of 1974 designated the Metropolitan Council as the policymaking body with final approval power for transportation development in the metropolitan area.

TABLE I.=Federal Assistance to Twin Cities Transit Programs From F.Y. 1962 to May 31, 1975

Type of Assistance	Federal Share	Total Costs
Capital Grants	$30,647,000	$45,682,000
Technical Studies	2,666,000	6,512,000
TOTAL	$33,313,000	$52,194,000

Source: Urban Mass Transportation Administration

TABLE 2.—Federally Recognized Regional Agencies

Designation	Agency
A-95	Metropolitan Council
MPO	Metropolitan Council

Metropolitan Transit Commission (MTC)

The Metropolitan Transit Commission was established by the State legislature early in 1967 and covers the same seven-county area. The recent Metropolitan Reorganization Act now provides for the Commission members to be selected by the Metropolitan Council as terms of present members

3 Before 1974 Metropolitan Council districts corresponded to legislative districts; Minnesota's Metropolitan Reorganization Act of that year reorganized them on the one-man, one-vote principle.

4 The Office of Management and Budget Circular A-95 requires one agency in each region to be empowered to review all proposals for Federal funds from agencies in that region. Circular A-95 replaced Circular A-82, which was created to implement Section 204 of the Demonstration Cities and Metropolitan Development Act of 1966 (42 U.S.C. 3301).

5 The Urban Mass Transportation Administration and the Federal Highway Administration require Governors to designate a Metropolitan Planning Organization (MPO) in each area to carry out the "continuing, comprehensive transportation planning process . . . carried out cooperatively . . ." (the "3-C" process) mandated by the Federal-Aid Highway Act of 1962 and the Urban Mass Transportation Assistance Act of 1974. According to joint UMTA-FHWA regulations published in September 1975, MPO'S must prepare or endorse (1) a long-range general transportation plan, including a separate plan for improvements in management of the existin, transportation system; (2) an annually updated list of specific projects, called the transportation improvement program (TIP), to implement portions of the long-range plan; and (3) a multiyear planning prospectus supplemented by annual unified planning work programs.

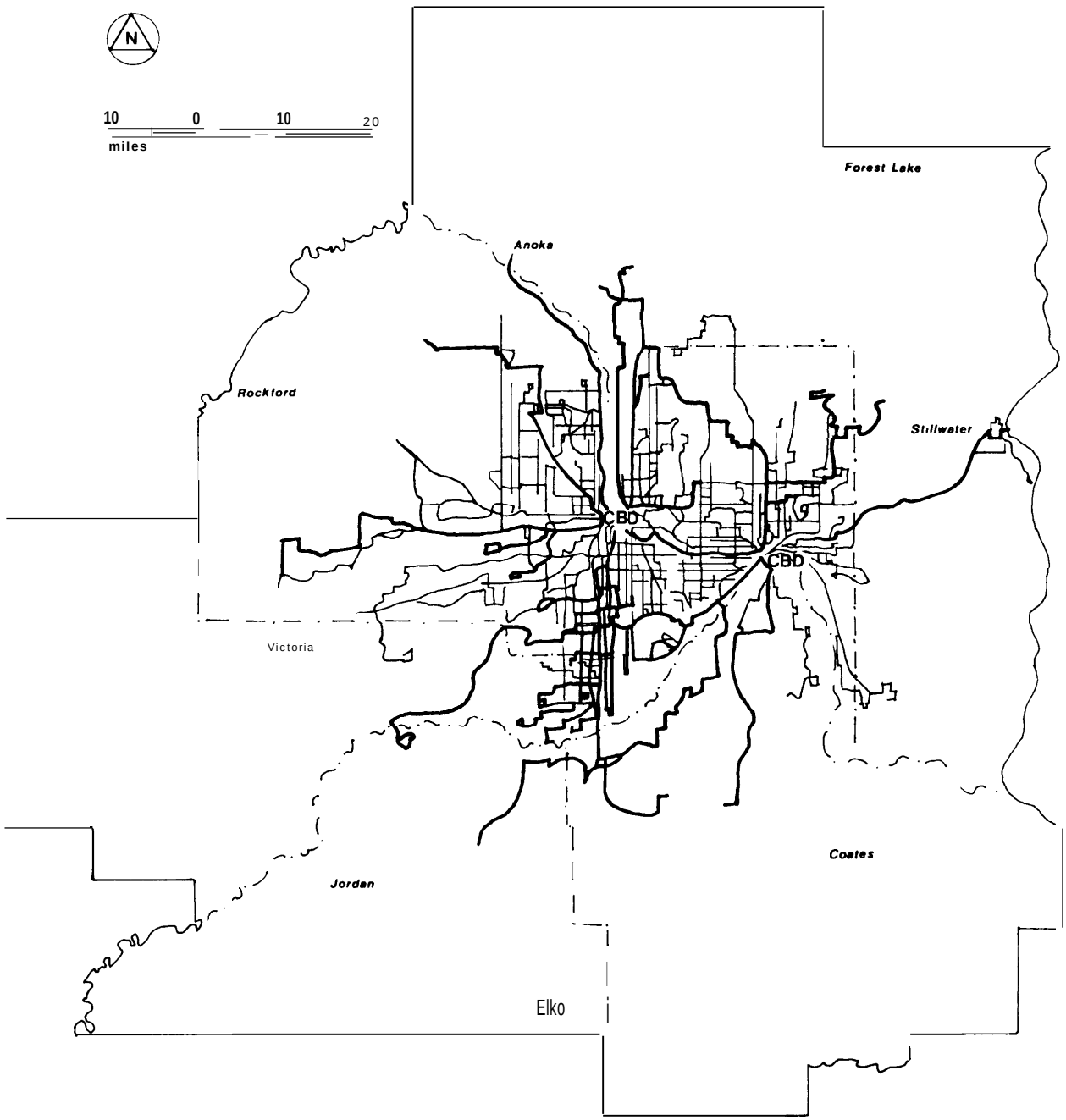


FIGURE 6: T WIN CITIES— FIXISTING BUS TRANSIT SYSTEM

MTC Express or limited stop routes
MTC local service and private operator routes
County Boundary

expire. The Governor still appoints the chairman of the Commission.

The Metropolitan Transit Commission is empowered to plan, construct, equip, and operate a transit system in accordance with the Council's policy plans. It was directed by the reorganization act to design a transit development program that fits within the policy plans specified by the Metropolitan Council. The original enacting legislation provided for a wheelage tax to finance operations. This tax subsequently was ruled unconstitutional, and the 1975 legislature provided about $22 million of nonproperty revenues for MTC operations, a part of which will be used to make up for a reduction of about one mill in MTC'S areawide"property tax.

Minnesota State Highway Department

The Minnesota State Highway Department participates as a member of the Transportation Advisory Board of the Metropolitan Council. The Highway Department also provides transit assistance in rural areas. It has provided continuing technical assistance to the Metropolitan Council's planning efforts in both highway and transit.

Minnesota State Legislature

Finally, the Minnesota State Legislature has also played a role in the urban transportation planning process by overseeing the development of metropolitan government in the Twin Cities and by taking an active part in the planning of a public transportation system.

Critical History of Transit Planning and Decisionmaking

This historical narrative describes briefly the events that unfolded in each of three decision-making periods. Early studies in the Twin Cities region proposed highway improvements. The transit planning effort began in 1967, with a legislative initiative leading to the decision to study transit. The decision on system selection is still under debate.

EARLY STUDIES

The first significant metropolitan transportation planning effort, the Twin Cities Area Transportation Study (TCATS), began in 1958 under the direction of the Minnesota Highway Department. Although the Metropolitan Planning Commission was in existence before TCATS began, no formal communication or decisionmaking liaison was established by the Minnesota Highway Department. Therefore, the TCATS effort focused almost exclusively on the highway network in the metropolitan area. However, it should be noted that at this time no funds were available from the U.S. Bureau of Public Roads to study transit. Many of the existing freeways in the area were products of the TCATS work.

In 1962, the Joint Program was established. Participants were the Metropolitan Planning Commission, the Minnesota Highway Department, and other planning and governmental bodies in the region. From 1962 until 1967 the Joint Program was designated the 3-C transportation planning agency. It undertook a major transportation and land use study in the metropolitan area and published a series of four principal reports that made significant early contributions in formulating the concepts of the region's land use and development plan.

DECISION TO STUDY TRANSIT

In mid-1967 the Minnesota State Legislature created the Metropolitan Council to replace the Metropolitan Planning Commission as the regional governmental body. The Metropolitan Council was later designated the A-95 coordinating agency.

In 1969 the Metropolitan Council organized an advisory group called the Transportation Planning Program (TPP) to facilitate the coordinated, comprehensive, and continuous planning of transportation programs. The TPP was formulated through interagency agreements between the agencies responsible for transportation improvements and was composed of three committees—the Management, Policy Advisory, and Technical Advisory committees. Although the TPP was criticized for its lack of effectiveness, it provided a valuable forum for the exchange of ideas, issues, and technical information. The new Transportation Advisory Board created by the Met ropolitan Council pursuant to the Metropolitan Reorganization Act of 1974 has replaced the TPP.

A few days earlier in the same legislative session, the Metropolitan Transit Commission was also established. One of its first actions was to hire the consulting firm of Simpson and Curtin to prepare a report on improvements for the bus system in the seven-county area. One result of this study was the purchase of the Twin City Lines bus company in September 1970 and the present management by contract with the American Transit Enterprises Management Services (ATE).

DECISION ON SYSTEM SELECTION

The Commission's series of long-range planning efforts began in 1968-69 with a long-range transit planning study performed by Alan M. Voorhees, Inc.[6] The Voorhees study made an inventory of some 96 "new concept" vehicle systems and concluded that any new system should evolve from conventional system improvements. Upon completion of the initial phase of the study, a joint

[6] Phase n-Development *of* Long *Range* Transit Improvement *Program for the* Twin *Cities Area* (1969-70).

Metropolitan Transit Commission—Metropolitan Council staff report was prepared to set forth the major components of the long-range metropolitan transit planning program for 1970 -71.7

One of the important conclusions of that joint staff statement was the recognition that transit planning should proceed on the basis of a "family of vehicles" concept. The system was to consist of (1) rapid transit operating on exclusive rights-of-way as the backbone of the system to provide trunk service between selected major centers; (2) express buses operating in mixed traffic in less congested corridors; (3) local and feeder bus service to provide a direct service to centers as well as to complement trunk lines in low-density areas; and (4) passenger distribution service within certain major centers. Subsequently the Commission and the Metropolitan Council selected a transit planning consultant to develop a study design for the remaining long-range transit planning and preliminary engineering activities.

on May 26, 1970, the Metropolitan Council approved the Commission planning grant application of $412,670 for Phase III-A-1, as a follow up to the Voorhees study to examine and refine the conceptual plan.

The two agencies continued to work together in developing and approving the transportation section of the *Metropolitan Department Guide* of February 25, 1971. The findings of the III-A-1 studies provided the basis for the document *Transit in Transportation,* which the Metropolitan Council subsequentl y approved in 1971 to be used as a part of the basis for the refinement of the general transportation plan.

Late in 1970 the Metropolitan Council approved the request of the Metropolitan Transit Commission for a Federal grant application for preliminary engineering activities to develop performance specifications for a fixed-guideway vehicle system (Phase III-A-2). This study followed the "family of vehicles" system concept plan and was focused on refining the transit plans covering determination of route and station locations, and a schedule for implementing the plan in stages. It recommended a fixed-guideway vehicle system utilizing a 40-passenger vehicle as the first link and the backbone component of the regional system.

In 1971, the Minnesota State Legislature further defined the role of the Metropolitan Transit Commission. The Commission's enabling legislation was amended to require its plans to be consistent with the development guide prepared by the Metropolitan Council. This was an early effort by the legislature to remedy its failure in the initial 1967 legislation to coordinte the planning authorities of the two agencies.

From the inception of the long-range transportation planning study (in 1968) until 1972, the cooperative working relationship between the Metropolitan Transit Commission and the Metropolitan Council was generally successful. The Metropolitan Transit Commission had coordinated its work with the Metropolitan Council staff and obtained the requisite approvals for each step in the multiphased process.

In the fall of 1972, conflict over transit planning authority arose between the Metropolitan Council and the Metropolitan Transit Commission. The conflict is best described in two legal opinions prepared by respected law firms—one for the Metropolitan Council and one for the Metropolitan Transit Commission. The legal opinion provided for the Metropolitan Transit Commission states:

> The legislature gave to the Metropolitan Transit Commission the exclusive power to develop a plan for a complete, integrated mass transit system . . . (and) the power of acquisition of an existing transit system is modified to the extent that the Metropolitan Council must approve the acquisition before it is made. This does not diminsih that power, but only conditions the exercise of that power to the extent that Council approval is necessary . . . In looking at the entire scheme of transit legislation . . . the power to plan and engineer must reside somewhere, and it is very obvious that it still resides in the Metropolitan Transit Commissions

The Metropolitan Council also solicited a legal opinion in response to the Metropolitan Transit Commission's request for approval of the proposed Transit Development Program. The Metropolitan Council's legal opinion states:

[7] Februar y 25, 1970.

[8] Legal opinion concerning power of Metropolitan Transit Commission to plan and engineer transit systems, by letter to Douglas Kelm from David S. Doty, Esquire, November 28, 1972.

> In our opinion . . . the Council is the only agency which has the authority to prepare and adopt a long-term comprehensive plan on transportation and transit of the type that would be subject to the review, hearing and appeal provisions of Section 473 B.o6, Subdivision 6.[9]

The present conflict grew out of a difference of opinion over the legislative mandates given the two agencies. Both assumed the authority to plan transit systems. While the Metropolitan Council focused its initial attention on sewers and public parks, the Metropolitan Transit Commission set about developing a public transit plan. When the Metropolitan Transit Commission completed and approved a Transit Development Program in 1972, based on the results of previous transit studies, it requested the Metropolitan Council, pursuant to the 1971 act, to review the Transit Development Program.

The Metropolitan Council declined to review the Commission's plan on the basis that the 1971 legislation had given the Council exclusive authority to determine long-range comprehensive transit plans. Although the Metropolitan Transit Commission renewed its request for review, the Metropolitan Council maintained its position.

The growing conflict was based not only on a rivalry over authority to plan. It also reflected a difference in the type of transit system favored. While the Transit Commission favored a fixed-guideway system, the Metropolitan Council hired Barton-Aschman Associates, Inc. in 1972 to carry out a $15,000 study to examine the advantages of a bus approach to regional mass transit and to develop implementation strategies. 10

During the same period, the potential of personal rapid transit (PRT) to meet Twin Cities transportation needs began to surface as a public issue, due in large part to energetic sponsorship of this concept by University of Minnesota Professor Edward Anderson.

At this juncture the Metropolitan Transit Commission prepared to take its case to the State legislature. During the 1973 legislative session both houses received information on proposals for an intermediate-capacity fixed-guideway system from the Commission, a plan of exclusive busways from the Metropolitan Council, and a PRT grid network system from others. The House of Representatives approved the implementation of the Commission's plan. However, it was tabled in the Senate Urban Affairs Committee by the chairman, who regarded the Council-Commission controversy as one of metropolitan government responsibility and authority rather than a conflict between two choices of transit mode.

Then the legislature established a study Subcommittee on Mass Transit and adjourned for the summer. During the summer this subcommittee directed staff research on the mass transit controversy, held 17 hours of formal public hearings, took a 6-day trip to five western cities to evaluate transit hardware, and had numerous informal discussions with knowledgeable individuals. The result was a subcommittee report, "The Metropolitan Mass Transit Need" (November 15, 1973), which favored elements of each plan. It agreed with the Commission's extensive bus improvement program and automated fixed-guideway proposal but felt it was too expensive; it agreed with the Metropolitan Council's strategy of incrementally developing a transit system starting with immediate bus system improvements, but rejected a system solely of exclusive busways; and it agreed with the PRT service concept of on-demand, non-stop, origin-to-destination service but rejected the proposed fine-grain network that was to be exclusive PRT. Moreover the subcommittee staff concurred in the Citizens League's findings that low-cost alternatives must be part of any transit solution.

The legislature once again asserted its role as an active participant in Twin Cities transportation planning by enacting the Metropolitan Reorganization Act of 1974 (MRA)[11] along with several pieces of legislation dealing with low-cost transportation alternatives (carpools and employer vans, a bus service expansion program, and a small-vehicle fixed-guideway study).[12]

The latter piece of legislation directed the Metropolitan Transit Commission to plan an automated small-vehicle fixed-guideway system within the metropolitan transit taxing district. The

[9] Letter to Albert J. Hofstede, Chairman of the Metropolitan Council from Thomas S. Hay, Esquire, January 25, 1973.

[10] "Feasibility of a Low Risk, Incremental Investment Strategy for the Twin Cities Regional Transit System" Metropolitan Council, 1973.

[11] Minnesota Session Laws, 1974, Chapter 422.

[12] S.F.No. 2703.

Metropolitan Council was to cooperate with the Metropolitan Transit Commission and to provide general policy guidance in developing the plan. The study was to be completed by January 1, 1975, and reported to the legislature with Commission recommendations as well as to the Metropolitan Council for its review. Based on the plans developed in this study, the Metropolitan Council was to prepare a final report for the legislature before February 1, 1975, setting forth its findings and recommendations based upon the *Metropolitan Development* Guide.

In.accordance with the 1974 MRA legislation, the Metropolitan Transit Commission worked with the Metropolitan Council and its staff members in preparing a study design for Metropolitan Council approval. In order to refine the general directives set forth by the legislature, the Commission convened a study design conference to define key issues to be addressed in the study and to update information on the state-of-the-art in each of a dozen or more issue areas. The conference participants included PRT system advocates, representatives of transportation operating agencies, system planning experts, and manufacturers.

The resulting study design carefully specified the considerations to be studied. The consultant was to analyze and evaluate several alternative small-vehicle fixed-guideway systems and then compare these systems with the current Commission plan.

The Minnesota Legislature provided $300,000 to finance the small-vehicle study. The Metropolitan Transit Commission sought an additional $100,000 from the Urban Mass Transportation Administration to assist in the effort. On August 6, 1974, the Urban Mass Transportation Administration reallocated $127,200 of its technical studies funds to satisfy the Commission's request.

The work began in August 1974, directed and closely supervised by a management committee composed of three representatives from the Metropolitan Council and three from the Metropolitan Transit Commission. A consultant team of DeLeuw, Cather with the support of two local firms took major responsibility for the study, reporting to the management committee. The consultants' final report was a technical report prepared for the Metropolitan Transit Commission showing the required comparison of several types of personal and group rapid transit systems with the Commission's Phase III-A-2 recommended 40-passenger vehicle.

The Commission and the Council drew conflicting findings and recommendations from the small-vehicle study. The Commission found that the optimum system would be one based on a 16-seat vehicle. It recommended implementing a fixed-guideway system of some sort other than conventional large rail transit to serve as the basic element of a transit system. In addition, the Commission recommended against a PRT concept for regional service and suggested that a final systems analysis include light rail transit as a possible alternative to the more heavily automated concepts.

The Metropolitan Council took the more extreme position against any automated fixed-guideway rapid transit for a regional system; instead the Council continues to support a regional bus transit system as the best solution,

Thus, as yet no decision has been made on a long-range public transit plan. Nevertheless, agreement has been reached to concentrate on making short-term improvements in the bus transit system.

Chronology of the Transit Planning Process

1958 The Minnesota Highway Department initiated the area's first metropolitan transportation planning effort, the Twin Cities Area Transportation Study.

1962 The Joint Program was established, consisting of the Metropolitan Planning Commission, the Minnesota Highway Department, and other planning and governmental bodies. It undertook a major transportation and land use study in the metropolitan area.

1967 In mid-1967, the Minnesota State Legislature established the Metropolitan Transit Commission. The Commission began in 1968 with a series of long-range planning studies. A few days later, the State legislature created a new regional governmental body, the Metropolitan Council. The Council set up a Transportation Planning Program to facilitate coordinated transportation planning.

1969 Upon completion of the long-range planning study done for the Transit Commission by Alan M. Voorhees, a joint Commission-Council staff report was prepared, setting forth the major components of a metropolitan transit planning program for 1970-71. The report recommended a "family of vehicles" concept that would use a variety of transportation modes, including fixed-guideway and bus service.

1970 Late in the year, the Metropolitan Council approved a Federal grant to the Transit Commission for preliminary engineering on a fixed-guideway system. The subsequent study proposed a fixed-guideway system utilizing a 40-passenger vehicle as the backbone of a regional system.

1971 The legislature further defined the role of the Transit Commission; it was to implement the development guide prepared by the Metropolitan Council.

1972 In the fall, the Metropolitan Council declined to review the Metropolitan Transit Commission's transit plan on the grounds that the Council had exclusive authority to determine long-range transit plans. Meanwhile, the Council hired Barton Aschman, Inc., to study a bus approach to regional mass transit.

During the same period, further consideration of a personal rapid transit (PRT) system was advocated by University of Minnesota professor Edward Anderson.

1973 On November 15, the legislature's Subcommittee on Mass Transit published a report called "The Metropolitan Mass Transit Need," which favored elements of the Council's bus proposal and the Commission's fixed-guideway plan, as well as selective use of PRT.

1974 The legislature passed the Metropolitan Reorganization Act, directing the Transit Commission to complete by January 1, 1975, a plan for an automated small-vehicle fixed-guideway system within the metropolitan transit taxing district. The Council was to provide policy guidance.

Work began in August 1974 guided by a management committee composed equally of Commission and Council members. The consultant's first report compared the Commission's recommended 40-passenger vehicle system with other alternatives.

	The Commission and the Council drew conflicting findings from the study. The Commission recommended a fixed-guideway system other than concentional rail transit, based on a n-seat vehicle. The Metropolitan Council opposed any fixed-guideway system and continued to support a regional bus system.	
1975		No decision has been made on a long-range public transit plan. However, agreement has been reached to concentrate on short-term improvements to the bus system.

Critical Assessment of the Planning and Decisionmaking Process

INSTITUTIONAL CONTEXT

The conflicts between the Metropolitan Council and the Metropolitan Transit Commission have had both negative and positive effects on the Twin Cities' transit planning process. It is clear that disagreements between the Council and the Commission in particular instances have caused a duplication of some planning efforts and delays in some decisions.

On the other hand, it can be argued that the public has benefited from the airing of the alternative transit solutions that have been advocated. "It was the legislature's purpose to promote open discussion and possible disagreements," noted Metropolitan Transit Commission Chairman Doug Kelm, "with the idea that through debate and discussion, a more thoroughly considered overall plan for the metropolitan area would result . , , indeed the legislature even made provision for itself to be the final arbiter of any dispute that the system was unable to resolve."[13]

Forum for Decisionmaking

The Metropolitan Reorganization Act of 1974 (MRA) clarified the role of each agency concerning transit planning. The Metropolitan Council sets the overall policy framework or plan and then reviews the programs from each commission, including the Metropolitan Transit Commission, to make sure that they are consistent with the policy plan. More specifically, the act states that "the (Metropolitan) Council shall adopt a transportation policy plan as a part of its comprehensive development guide . . . which shall include policies relating to all transportation forums."[14] Q In another section it is further stated, "The Commission shall prepare . . . a transportation development program, providing for the implementation of the policy plan adopted by the Council."[15]

The language cited above from the MRA directed the Metropolitan Council to make broad policy regarding transportation and directed the Metropolitan Transit Commission to develop its specific transportation development program consistent with the policy direction provided by the Council.

In other words, the Metropolitan Council makes "policy" decisions and the Metropolitan Transit Commission makes "technical" decisions. The Council-Commission controversy now centers on what are "policy" decisions as distinct from "technical" decisions. The selection of a transit mode is the unresolved fundamental decision which remains subject to this controversy. The Metropolitan Transit Commission feels that choice of mode is a "technical" *decision while the* Metropolitan Council believes that the choice of mode is a "policy ''decision, or at the least, has a very significant impact on implementing its policies for the region in all areas. [16]

A final judgment concerning the success of MRA in resolving the transit planning conflict between the Metropolitan Council and the Metropolitan Transit Commission must be deferred until the decisionmaking process it put in motion has produced a long-range plan.

Public Involvement

The early phases of long-range planning conducted by the Metropolitan Transit Commission in cooperation with the Metropolitan Council relied on a 41-member Advisory Committee on Transit (ACT), a volunteer group composed of representatives chosen by the commissioners themselves.

13 Statement by Commission Chairman Doug Kelm on the "roles and Relationships of the Metropolitan Council and the Metropolitan Transit Commission," January 22, 1973.

14 Minnesota Statutes 1971, Section 473A. 051, Subdivision 1.

15 Minnesota Statutes 1971, Section 473 A.06, Subdivision la.

16 The Council's report (April, 1975) to the legislature pursuant to the Small Vehicle Study points out that a decision to implement a regional, fixed-guideway system would preclude other needed regional service improvements, p. 37.

An ACT member serves on the Project Management Board of some studies as the public representative. In addition, the group hears presentations on all projects. The poor attendance at ACT meetings and the countless other responsibilities of its members may be two reasons why the group has been ineffective as a significant influence on the Commission's decisions.

.Although the Metropolitan Transit Commission does not utilize conventional public hearings as a method of community participation, it has frequently made informal public presentations on the course of its studies.

When the Metropolitan Reorganization Act of 1974 placed responsibility for long-range comprehensive transportation planning with the Metropolitan Council it also contained a provision for public agency and citizen involvement which states as follows:

> The Council shall assure administration and coordination of transportation planning with appropriate State, regional and other agencies, counties, and municipalities, and together with the Commission shall establish such an advisory body consisting of citizen representatives, Commission, municipality, county and appropriate State agency representatives in fulfillment of the planning responsibilities of the Council and the Commission.

Under this authority, the Metropolitan Council established the Transportation Advisory Board in September 1974 to replace the old Transportation Planning Program (TPP) for the purposes of providing a forum for local officials and citizens to discuss transportation matters, for assisting and advising the Metropolitan Council, and to satisfy the planning requirements of the Section 134 provision of the Federal-Aid Highway Act. Its three major activities were to consist of reviewing and approving the unified transportation planning program, monitoring the work of that program, and developing an annual report.

The transportation Advisory Board has held one or two meetings per month primarily focused upon short-range issues of transportation concern. The Board tends to reflect the views of county and suburban officials. Overall, the Transportation Advisory Board appears to have the potential for being a more effective channel for agency and community input than the TPP was, inasmuch as it has been assigned its own staff coordinator and appears to have better access to the Metropolitan Council.

Generally, the discussion of transit issues in the Twin Cities outside the walls of the formal planning institutions has been widespread, perceptive, and sophisticated. One reason is the work of the Citizens League. The League is an independent, nonpartisan educational organization in the Twin Cities area, founded in 1952, which has specialized in questions of government planning, finance, and organization. It has a number of volunteer research committees which are supported by full-time professional staff. Several such committees have produced a number of reports since 1965 addressing transit issues. These reports have had wide circulation and significant influence on the transit planning process.

Other reasons can be cited for the high level of community awareness of transit issues, including extensive amount of press coverage by individuals who understand the key issues, the open, well-publicized discussion forums in the legislative arena, and the large number of interest groups (for example, the Minnesota Public Interest Research Group, MPIRG) which are concerned with transportation issues.

In developing its family of vehicles plan, the Commission ran into significant community opposition. People questioned the need for a transit plan consisting primarily of radial rail corridors focused on downtown Minneapolis, where only 5 percent of all metropolitan trips were destined. With two downtowns and a relatively low population density in the region, citizen groups felt another type of solution would be more appropriate. The Citizens League conducted a series of studies to develop innovative solutions to the region's transportation problems, based on an initial premise that it was important first to build transit ridership and not necessarily transit facilities.

The Minnesota Legislature has provided the Twin Cities metropolitan area with one of the strongest and most comprehensive regional planning agencies anywhere in the country. Compared with the more conventional Council of Governments, which has only the review powers given it by the Federal A-95 process as applied to federally aided projects, the Metropolitan Council

has been provided with a means by which disputes can be settled at the regional level.

The Council was authorized in its enacting legislation to prepare and adopt a comprehensive development guide for the metropolitan area encompassing physical, social, and economic needs of the area. It is further authorized to review all long-term comprehensive plans for the metropolitan area, and if the Council determines that such plans have "metropolitan significance," it has the power to temporarily set aside the plans.

More specifically, in order to implement plans the Metropolitan Council has the further powers to:

- Review and comment on comprehensive plans of local governments which are required to subm-it such plans.
- Review and comment on metropolitan interstate and State trunk highway proposals.
- Review and comment on Federal aid applications, including those for transit planning or development where such review is required by Federal law or a Federal agency.
- Veto grant applications of local governments for open space land acquisition if the project is not in accord with established priorities.
- Operate a metropolitan sanitary sewer and disposal plant system through a subordinate board appointed by the Metropolitan Council.
- Operate an open space program through a subordinate board appointed by the Metropolitan Council.
- Regulate the location and use of solid waste disposal sites.

The Minnesota Legislature is considering the enactment of a new mandatory planning bill that would substantially increase the power of the Metropolitan Council. The new act would require each of the 189 municipalities and each of the seven counties to develop a comprehensive plan by July 1, 1979. Each comprehensive plan would include public facilities, implementation program and financing, and a land use plan which would be reviewed by the Metropolitan Council for consistency with the metropolitan plan. However, the Metropolitan Council would first prepare a Metropolitan System Statement by July 1, 1976, outlining the capacity of each system—parks, transportation, sewers, and airports. If then in the determination of the Metropolitan Council a particular comprehensive plan is not consistent with metropolitan plans, the Metropolitan Council could require modification as appropriate. The new act would permit the Metropolitan Council to seek court enforcement in order to implement these review and modification powers.

Municipal control is preserved in all areas except the four omitted in the Council's System Statement. The new act is intended to enable the Metropolitan Council to plan effectively for these regional systems. To date, this is the strongest legislation ever seriously considered by any State or even debated in any State legislature.

TECHNICAL PLANNING PROCESS

This section evaluates the technical planning work performed in the two major transit studies in the Twin Cities area: the Metropolitan Transit Commission's three-phase, long-range transit study, beginning in 1968, and the recent (March 1975) Automated Small Vehicle Guideway Systems Study.

In summary, both studies were well designed and meet many of the guidelines for a commendable technical process. No significant criticism of the technical work has been raised in the public debate in the Twin Cities region. When a significant segment of the community concluded the earlier studies had not adequately investigated the small-vehicle alternative, the legislature responded with a mandate for the additional study. The current debate results from disagreement over the level of service to be provided. The differences of opinion probably are not susceptible to solution by provision of any additional technical information.

Goals and Objectives

The long-range transit study begun in 1968 was ahead of its time in that it formalized its goals. Three major goals were identified in the Metropolitan Development Guide: "to provide for ease of movement through the area" and "to provide for a variety of modes of travel to meet the needs of different people. " These two goals are directly related to the third and most important

goal, the achievement of what is generally called "a higher quality of life." Although these goals were very general, they provided the basis for evaluation criteria which were applied in the analysis of each alternative.

Development and Evaluation of Alternatives

The first effort in the long-range study program was a technical report titled "Screening and Evaluation of Public Transit Systems." This report considered nearly 100 transportation vehicle concepts and concluded that prospects for viable transit system alternatives would be limited to conventional transit technology. The study found that "new concept technology" was insufficient for trunk, line transit systems although it might be applicable for higher-density areas (presumably circulation system application). Therefore, the consultants selected more conventional transit systems in a comparative evaluation for the long-range development program.

The basis for the comparative evaluation was a set of criteria developed by the consultant after an assessment of the area's transportation requirements, extensive discussion with the Transit Commission and its staff, the Metropolitan Council, and other Federal, State, and local officials as well as private citizens. Criteria also were selected from the regional goals as expressed in the Metropolitan Development Guide, which had been prepared by the Joint Program.[17]

The range of alternatives did not include a "pure highway" alternative or a "do-nothing" alternative. It did consider several low-level capital investment alternatives, including buses on freeways and streets (System B), and metered freeway buses (System E). The remaining alternatives included:

System A	Rapid Rail Transit
System A-1	Rapid Rail Transit With Extended Station Spacing
System C	Commuter Railroads
System D	Busways Without Downtown Subways
System D-1	Busways With Downtown Subways

[17] Report No. 5 (1968).

It should be noted that in 1968 and 1969 no Federal requirements called for consideration of alternatives; consideration of the "do-nothing" alternative was almost unknown. In fact, Federal aid monies were not available to a transit agency to examine highway alternatives as potential solutions nor was it considered appropriate to infringe upon the jurisdiction of another transportation agency. The coordination between the Commission and the Council was primarily at the policy level and not at the technical level.

The study attempts to define each alternative under study in comparable terms to the extent possible. Although the base data information in the forecasting model and patronage figures were criticized by some,[18] generally the problems identified were generic problems attendant with the state-of-the-art. The data represented the most recent and best available.

Next, each of the alternatives was evaluated by the selected criteria using a five-point rating system. This rating system, which utilized the terms "superior," "excellent," "good," "fair" and "poor," was also criticized as lacking sufficiently precise measures to be able to point out significant differences.[19] However, the major role of the evaluation section was to present a comparative evaluation of the way in which each alternative transit system satisfies generally the designated criteria so that the reader can gain a maximum understanding of the tradeoffs in the process of system selection. The study evaluation indicated that rapid rail transit (System A) had the best overall rating, although busways with CBD subways placed a close second. The study evaluation appears to be comprehensive in considering and discussing the application of each criterion. The consultant also developed and described a transit improvement strategy for long-range implementation and a recommended transit development program.

The consultant's study in Phase II recommended conventional rail rapid transit to serve as the backbone of a regional system for Twin Cities. Notwithstanding this recommendation, the Commission moved forward in May 1970 with Phase III, which was intended to carry the total regional transit system to the point where all facilities would

[18] MPIRG Report, "The MTC Long-Range Transit planning Process: We're not Gettin' There," November 8, 1972.

[19] Ibid.

be sufficiently well-defined for the initiation of final design. The Phase III work was divided into three sub phases as follows:

Phase III-A-1	System Concept Plan and Refinement of Subsystems (1970-71)
Phase III-A-2	Development of Performance Specifications for Regional Fixed- Guideway System (1971-72)
Phase III-B	Preliminary Design and Detailed Impact Analysis

The Phase III-A-1 study directly followed the completion of the Phase II study. The study refined transit corridors, further investigated development impacts, produced financial plans, and identified the functional roles of the members of the "family of vehicles." However, this study did not recommend a fixed-guideway vehicle nor vehicle technology to satisfy this function,

The study produced seven technical reports and a final report entitled "Transit Options for the Twin Cities Metropolitan Region," which summarized the findings of the technical reports and offered some conclusions. One of the technical reports[20] presented a discussion of new transit systems pertaining to those systems in which the Federal Government has expressed interest. The technical work in examining alternative new technology systems was criticized for excluding the discussion of any foreign systems and presenting those systems considered in a highly generalized fashion. [21]

As mentioned earlier, the findings of the III-A-1 study provided the basis for the development of the Commission's major policy statement entitled 'Transit in Transportation" (January 1971) which contains objectives, policies, and a system concept plan based on the "family of vehicles" concept.

The Phase III-A-2 study was called "Development of Performance Specifications for a Regional Fixed Guideway System." This report was the last to be finished in the Commission's phased approach. This study again considered five generic systems from which a recommended system was selected:

Type A—Rapid Rail Transit
Type B—Transit Expressway (Intermediate Capacity Rapid Transit)
Type C—Activity Center Transit
Type D—Personal Rapid Transit
Type E—Bus on Busways

The last alternative, Type E, was added late in the study at the request of the Metropolitan Council. The analysis of these five transit systems indicated that a conventional rail transit system (Type A), while as cost-effective as the intermediate-capacity fixed-guideway system (ICRT) (Type B), was rejected on the basis that it would not provide adequate service to the outlying major diversified centers. The bus-on-busways sytem (Type E) was ruled out on two counts—high annual cost and the extreme difficulty in integrating buses into the downtown areas. The PRT (Type D) and activity center transit (Type C) (now called Group Rapid Transit or GRT) were rejected primarily because they were not cost-effective. Thus, the Commission developed performance specifications for the ICRT system (Type B). It estimated that for a first stage of the regional backbone system for the family of vehicles approach, a 37-mile, $550 million fixed-guideway system using 600 vehicles and 25 stations should be constructed. [22]

The most recent study (March 1975), the automated small vehicle fixed guideway systems study, represents a technically sound and well-presented culmination of work comparing the capabilities and costs of several types of small vehicle systems among themselves and with an intermediate-capacity transit system. Within the limitations and specific direction prescribed by the legislature, the joint management effort of the Metropolitan Council and the Metropolitan Transit Commission in directing a consulting team appears to be quite successful.

The consultant's technical report to the Metropolitan Transit Commission demonstrates a meticulous approach to defining, developing, and evaluating the alternative small-vehicle systems. The consultant team produced detailed working papers over the course of the study. These working

20 Technical Report No. 3 entitled "Review of Technology and Federal Urban Transit Programs."

21 MPIRG Report, op. cit., p. 39.

22 "performance and General System Specifications for the Regional Fixed Guideway System," Metropolitan Transit Commission (January 1974).

papers covered objectives and criteria, data-base development and analysis methodology, system configurations, screening of small vehicle options, selection of optimum small vehicle systems, traffic forecasts, and system analysis simulation results (in several drafts). The papers were reviewed by the management committee and advisory participants to obtain input in the course of the study.

The study devoted considerable time to the analysis of policy direction given by the Commission, the objectives and criteria which would be utilized to compare the relative merits of one system over another, and the methodology by which the evaluation could be performed. The thorough discussion of this study framework basis appears to have assured the in put of all interested parties.

The definition of the generic types of small-vehicle systems was very specific and appears to have allowed the maximum opportunity for direct comparison. In that regard, perhaps one of the unique features of this study was the active participation of a Transit Systems Supplier Advisory Committee composed of transit industry representatives, which also reviewed and commented on the working papers. In addition, there were two technical conferences sponsored for the benefit of this study. Their input was valuable in making the necessary adjustments among generic systems to allow comparison. In addition to the precise definition of alternatives to be considered, the study includes a comprehensive inventory of both domestic and foreign transit systems throughout the world, indicating their status of operation. The more important foreign systems are outlined and discussed in the study's technical report.

Finally, the small vehicle study updated the work of the Metropolitan Transit Commission on its intermediate-capacity rapid transit system and compares this system with the other small-vehicle fixed-guideway systems. The alternatives were compared in relation to each of the evaluation criteria, and, where possible, presented in tabular form. Once again, the evaluation of alternatives appears to have been done in a comprehensive and thorough manner. Each evaluation criterion was discussed in the evaluation section, noting the advantages and disadvantages of the systems compared. Significant work was done to present the costs and present value analysis of the alternatives in an intelligible and precise manner.

The technical report by the consultants did not recommend a preferred alternative. A determination of specific findings and conclusions from which recommendations would result was left to the Metropolitan Transit Commission and the Metropolitan Council in accordance with the legislative directive.

Summary Case Assessment

The purpose of this section is to summarize the nature of the transit planning and decisionmaking process in the Twin Cities region in light of the guidelines listed in the Introduction to the case assessments. The summary therefore is divided into two parts: (1) Assessment of the Institutional Context and (2) Assessment of the Technical Planning Process.

1. ASSESSMENT OF THE INSTITUTIONAL CONTEXT

- **Forum for Decisionmaking. -The** State of Minnesota Metropolitan Reorganization Act of 1974 clarified the roles of the Metropolitan Council and the Metropolitan Transit Commission in transit planning. Full resolution of competition between these two organizations will come only after the present process of selecting a transportation development program is worked out. On the other hand, the coordination between transportation planning and land use and development planning has been very effective due to the activities of the Metropolitan Council in both these fields. The Minnesota State Legislature has provided the Metropolitan Council with one of the strongest and most comprehensive sets of powers given a regional agency anywhere in the country.
- **Accountability of Decisionmakers.—The** Metropolitan Council and Metropolitan Transit Commission are appointed bodies. Since members of both have relatively long-term appointemnts and no immediate ties to local officials, these institutions have developed a more regional approach to problem-solving.

Ž **Public Involvement .—** Both the Metropolitan n Council and the Metropolitan Transit Commission maintain citizen advisory committees. However, the bulk of citizen response and contribution occurs outside the formal institutions through several sophisticated and influential citizen organizations.

2. ASSESSMENT OF THE TECHNICAL PLANNING PROCESS

- **Goals and Objectives.—The** Metropolitan Transit Commission's series of long-range studies selected a comprehensive set of goals and objectives and applied them in evaluating each study alternative.
- **Development of Alternatives.-The** range of alternatives considered in the first phases of the Metropolitan Transit Commission's long-range studies was consciously limited to conventional transit technology; in order to fully consider "new technology" transit, the commission launched a third phase. The recent automated small vehicle fixed guideway systems study also demonstrates a meticulous approach to defining and developing alternatives.
- **Evaluation of Alternatives.—** Although evaluation procedures in the first Commission study were criticized for lacking exact quantitative values and the second for overgeneralizing the systems considered, the Small Vehicles Study is regarded as thorough and highly competent,

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