



Minnesota Regional Transit
Board: Records.

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MEETING OF THE REGIONAL TRANSIT BOARD

Tuesday, January 2, 1990
Mears Park Centre Chambers
4:00 p.m.

AGENDA

1. Call to Order and Roll Call
2. Approval of Agenda
3. Approval of Minutes:
 - A. ~~CA~~ Policy Committee Meeting, December 15, 1989
 - B. Regional Transit Board Meeting, December 18, 1989
4. **CHAIR'S REPORT**
5. **REPORT OF THE POLICY COMMITTEE**
Jeff Spartz, Chair
 - A. Light Rail Transit Development and Financial Plan
6. **OTHER BUSINESS**
 - A. Public Comment

Michael J. Ehrlichmann
Chair



REGIONAL TRANSIT BOARD
Mears Park Centre, 230 East 5th Street
St. Paul, Minnesota 55101
612/229-2700

Minutes of the meeting of the
REGIONAL TRANSIT BOARD
Mears Park Centre Chambers
December 18, 1989

MEMBERS PRESENT: Michael Ehrlichmann, Chair; Doris Caranicas; John T. Finley; Ruth Franklin; Sandra Hilary; Ed Kranz; Terrance O'Toole; Norbert Theis; Elwyn Tinklenberg; Jeff Spartz and Richard Wedell

OTHERS PRESENT: Charles Weaver, Legal Counsel; Dirk deVries, Metropolitan Council; Arnie Entzel, Amalgamated Transit Union; Charleen Zimmer, Strgar-Roscoe-Fausch, Inc.; John Capell, Metropolitan Transit Commission (MTC); Gregory Andrews, Regional Transit Board staff

PUBLIC MEETING ON DRAFT LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

The public meeting on the draft plan was called to order at 4 p.m. (See reporter's transcript).

Andrews introduced new staff members, Garneth Peterson, Sonny Warner, Mary Lutz, David Minister and Cherie Mann.

REPORT OF THE JOINT LIGHT RAIL TRANSIT ADVISORY COMMITTEE

Committee Chair Derus reported on the report adopted by the committee and wished the board well on its deliberations on the complex issues surrounding the development and financing of light rail transit. Ehrlichmann added that the next task assigned to the committee is the development of the Coordination Plan.

The regular meeting of the board was called to order and roll taken. Tinklenberg moved and Spartz seconded approval of the agenda. The motion was unanimously approved.

Finley moved and Theis seconded approval of the minutes of the Policy Committee meeting of November 27, the Regional Transit Board meeting of December 4, and the Policy Committee meeting of December 7, 1989; the motion was unanimously approved.

REPORT OF THE ADMINISTRATION AND FINANCE COMMITTEE

Committee Chair Tinklenberg reviewed the report of the committee's December 12, 1989 meeting.

Financial Statements - October 1989

Tinklenberg moved and Caranicas seconded:

That the Regional Transit Board receive the October 1989 financial statements and direct that they be placed on file.

The motion was unanimously approved.

1990 Compensation and Benefits Package, Resolution No. 89-19

Tinklenberg moved and Caranicas seconded:

That the Regional Transit Board adopt Resolution No. 89-19, "Resolution Establishing Compensation and Benefits for 1990."

On a roll call vote, the motion was unanimously approved.

Anoka County Budget - Extension of Anoka County Contract

Tinklenberg moved and Franklin seconded:

That the Regional Transit Board authorize the executive director to extend the 1989 Anoka County Transportation Coordination Program contract adding \$73,709 of RTB subsidy for the period January 1 through June 30, 1990.

The motion was unanimously approved.

1989 Airport Express Amendment

Tinklenberg moved and Theis seconded:

That the Regional Transit Board amend its contract with Airport Express (Contract No. 88/11/07-47) from \$18,181 to \$19,237 in RTB subsidy.

The motion was unanimously approved.

Light Rail Transit Consultant Contract Amendment

Tinklenberg moved and Theis seconded:

That the Regional Transit Board authorize the executive director to amend the existing contract with the firms of Strgar-Roscoe-Fausch, BRW, and Springsted, Inc. to increase the contract by an amount not to exceed \$72,000.

The motion was unanimously approved.

University of Minnesota Travel Demand Management Plan

Tinklenberg moved and O'Toole seconded:

That the Regional Transit Board provide the University of Minnesota an amount not to exceed \$20,000 to cover 50-percent of the costs to undertake a student, staff, and faculty transportation survey to be used in developing travel demand management strategies.

The motion was unanimously approved.

Metropolitan Transit Commission (MTC) Bonding Request

Tinklenberg said there are a number of elements to the recommendation; he moved and O'Toole seconded:

That the Regional Transit Board request the Metropolitan Council to issue \$26,000,000 of general obligation bonds to implement the board's implementation plan.

That the Regional Transit Board request a modification in the purchase order for the remaining 108 buses that are not currently in production by Gillig, Inc. to provide for the installation of wheelchair lifts; and

That Gillig, Inc. provide a written estimate of the additional costs associated with the installation of lifts, and

Further, staff be directed to provide a recommendation for the funding associated with these modifications.

In response to Finley's question, Capell said MTC understands that lifts must be on the buses as soon as possible. He received a FAX today from the manufacturer regarding costs. Based on current information, 78 of 108 buses can be lift-equipped at a cost of \$1.4 million. Per unit cost for the lifts would be \$18,023. Earlier he had indicated that 58 buses could be modified if the change order was submitted by January 19. Modification of the the additional 20 buses requires change orders by December 20.

The chair said a total 208 buses are being purchased, which represents 25-percent of the fleet. He noted that a letter from the United Handicapped Federation was distributed (Ehrlichmann is no longer president of that organization). A more economical means of transporting transportation disabled people must be found. Mainline access would provide an alternative to paratransit for a significant percentage of the wheelchair-user population. We are facing a crisis of an unending, open system in which the end of the demand cannot be forecasted. It is unfortunate that the board did not have an opportunity to discuss access before this point but it is the responsibility of the board to determine the policy. Before the system can be effective, 50-percent of it must be accessible. There was a discussion of the reliability of the lift equipment used by Gillig and the experience of other cities. Spartz said he will support equipping the 78 buses, but will not support this kind of action again until the board has developed a policy on how to manage the use of Metro Mobility.

In response to Franklin's question, Andrews said in the MTC budget approved by the board there is cash flow that is a result of the \$26 million bond sale. The funds flow to the MTC and based on current projects, the cash balance would be \$1.5 million at the end of calendar 1991. The board must include the requirement of an amendment to

provide for the lifts. In response to Finley's request for clarification, Andrews said there would be no change to the request for bonding authorization. Staff's request is to authorize the maximum allowed by the Legislature. MTC would have to amend its budget. Tinklenberg and O'Toole accepted that amendment. The motion was unanimously approved.

Amendment to 1990 Regional Transit Board Budget

Tinklenberg moved and O'Toole seconded:

That the Regional Transit Board approve an amendment to the 1990 Work Program and Budget to adopt total sources of funds of \$100,792,018 and expenditures of \$93,375,696, as detailed in the 1990 RTB Budget dated December 12, 1989.

The motion was unanimously approved.

REPORT OF THE POLICY COMMITTEE

Spartz reviewed the report of the committee meeting of December 7, 1989.

Dispute Resolution Board Findings on Southwest Metropolitan Transit Commission

Spartz moved and Kranz seconded:

That the Regional Transit Board:

1. Affirm the decision of the Southwest Metropolitan Transit Commission to award a contract to the Metropolitan Transit Commission to operate Route 53 express service; and
2. Authorize the Metropolitan Transit Commission to charge Southwest Metro the marginal price as submitted.

The motion was unanimously approved.

OTHER BUSINESS

There being no other business, O'Toole moved and Caranicas seconded that the meeting be adjourned. The motion carried and the meeting was adjourned at 6:20 p.m.

Respectfully submitted,

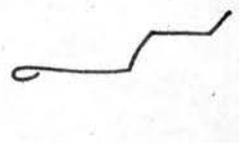
Mary Fitzgerald
Secretary

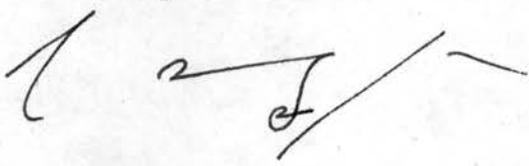
Approved by the board: _____.

handout 1/2/90
J.S.

That the following additional conditions be met before approval for construction be granted:

- 1 - 20% local match is required for Group B and C lines
- ~~2 - certification that all right-of-way is under the control of the implementing agency~~
- 2 - federal funding may be used as a substitute for local share on any Group B ~~or C~~ line

MJE *Smiley* 

③  B + C 92 - 14 ca


et → to make 10% local match

REGIONAL TRANSIT BOARD

ROLL CALL AND ATTENDANCE SHEET

DATE: 1/2

BOARD OR COMMITTEE: Board

Member Name	Present	Vote							
Mike Ehrlichmann	✓	no	yes	no	no	no	no	no	no
Doris Caranicas	✓	no							
John Finley	✓	no							
Ruth Franklin	✓	no							
Ed Kranz	✓	no							
Sandra Hilary	✓	no							
Terry O'Toole	✓	no							
Jeff Spartz	✓	no							
Norbert Theis	✓	no							
Elwyn Tinklenberg	✓	no							
Richard Wedell	✓	no							

Visitors
 Entzel
 Steven
 Tom Todd
 Chin
 T Johnson TSB

Wolfe
 Priority
 Brant
 Dip
 Chin
 De Spiegler

Amend
 100
 100
 100



REGIONAL TRANSIT BOARD

Mears Park Centre
230 East 5th Street
St. Paul, Minnesota 55101

DATE: January 2, 1990
TO: Regional Transit Board Members
FROM: Michael J. Ehrlichmann, Chair
SUBJECT: Reappointment of Officers and Committee Members

We are required to reappoint officers and make committee appointments each year. Since we went through this process in August, I suggest that the board simply reaffirm those appointments.

RECOMMENDATION

That the Regional Transit Board approves the extension of the terms of board officers through 1990, and

That the members presently serving on the Administration and Finance Committee and the Policy Committee continue to serve through 1990.

MJE/mf



REGIONAL TRANSIT BOARD

Mears Park Centre
230 East 5th Street
St. Paul, Minnesota 55101

*Amended
- see memo*

Minutes of the meeting of the
POLICY COMMITTEE
Room 2A, Mears Park Centre
December 15, 1989

MEMBERS PRESENT: Jeff Spartz, Chair; Doris Caranicas; Sandra Hilary; Terrance O'Toole and Norbert Theis

MEMBERS EXCUSED: Sandra Hilary

OTHERS PRESENT: RTB Members John T. Finley, Richard Wedell, Elwyn Tinklenberg, Ed Kranz, Ruth Franklin and Michael Ehrlichmann; Legal Counsel Charles Weaver; Roger Peterson, Association of Metropolitan Municipalities (AMM); Robert Pulscher

The meeting was called to order at 2:00 p.m. and roll called. Caranicas moved and Theis seconded approval of the agenda. The motion was unanimously approved.

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

Committee Chair Spartz reconvened the meeting, which had recessed on December 7. The committee will debate the policy issues on staging and funding.

Weaver explained the Fiscal Disparities Bill and answered questions on how it works. Roger Peterson spoke against changing the bill until the tax implications are clear.

Chair Ehrlichmann distributed a document entitled "Suggested Clarifications on Light Rail Transit Development and Financial Plan." The document, herein referred to as "Clarifications," listed ten items for the committee to consider.

Ehrlichmann suggested that the Policy Committee's alternatives were to approve the recommendations of the Joint LRT Advisory Committee or the "Alternative Staging Plan Recommendation" offered by the chair at the last Policy Committee meeting. He then requested that, as the main motion, the committee adopt Item 2 from the document "Clarifications."

Caranicas moved and O'Toole seconded as the main motion, Item 2, Clarifications:

That the Regional Transit Board establish the following priorities by groups:

Group A

- | | |
|-------------------------------|---------------|
| * Yard/Shop | \$ 50 M |
| * Minneapolis Downtown Tunnel | \$150M |
| * St. Paul Downtown | \$ 22M |
| * Central Corridor | <u>\$149M</u> |
| | \$371M |

Group A represents the core of the regional LRT system and would receive first priority for regional funds. The Central Corridor ranks significantly higher than other corridors under all technical evaluation criteria. However, a sunset provision should be established so that construction can proceed on other corridors if the central corridor is significantly delayed.

Group B (no priority among corridors)

* Hiawatha to GSA	\$ 69M
* Minneapolis Northeast to Northtown	\$181M
* Minneapolis Northwest to 63rd Avenue	\$116M
* Minneapolis South to 96th Street	\$ 75M
* St. Paul South	<u>\$118M</u>
	\$559M

Group B corridors could proceed to construction on a first-ready basis if all conditions for approval are met. The conditions previously approved by the Joint LRT Advisory Committee are: all environmental approvals are obtained; full funding is available to support the corridor's capital cost; final design is completed and has received all required approvals; the corridor can be operated efficiently in coordination with other lines constructed or under construction; and existing transit services are coordinated within the corridor.

Group C (no priority among corridors)

* Minneapolis Southwest to T.H. 169	\$157M
* St. Paul Northeast to I-694	\$ 79M
* St. Paul Northwest to County Road C	<u>\$ 96M</u>
	\$332M

Group C corridors could complete ten percent preliminary design, complete an Environmental Impact Statement, and acquire right-of-way.

Group D (no priority among corridors)

- * All extensions to above corridors in the 20-year plan
- * St. Paul East (I-94 to Radio Drive)

Group D corridors could complete a generalized study of alignment and comprehensive planning.

Group E (no priority among corridors):

- * Post-20-year corridors

Group E corridors could be included in local comprehensive plans

At this point Committee Chair Spartz suggested that the main motion, Item 2, Clarifications, be tabled. The motion was unanimously approved.

O'Toole moved and Caranicas seconded that the main motion be amended to include Item 3, Clarifications:

That the core system (Group A) be built as expeditiously as possible and be funded 100 percent with regional and state funds.

The motion was unanimously approved.

In order to consider Clarifications items as amendments, Spartz asked for a motion to remove the main motion, Item 2, Clarifications, from the table. Caranicas so moved and O'Toole seconded the motion. The motion was unanimously approved.

Returning to Item 5, Tinklenberg asked if the specific language for implementation is consistent with language in Item 3 and does the board really want to deal with that particular line only in terms of what happens to that roadway. He asked if the decision will be entirely in the hands of another agency. Spartz said the Department of Transportation (Mn/DOT) has indicated that if light rail is the preferred mass transit alternative for 35W, they would like to build it in conjunction with reconstruction of the freeway. Ehrlichmann said he believes the board should communicate to the Commissioner of Transportation that light rail transit should be the alternative for this neighborhood. It would demonstrate that as a body the board believes LRT should be considered in that corridor.

Caranicas moved and This seconded that the main motion be amended to include Item 5, Clarifications:

That the Regional Transit Board strongly recommend the implementation of light rail transit in the Minneapolis South corridor in conjunction with reconstruction of I-35W.

The motion was unanimously approved.

Returning to the main motion and referring to page 48 of the draft document, Ehrlichmann said that the advisory committee had recommended that Group B should include Minneapolis South to T.H. 13 in Dakota County. Blin said the additional cost would be \$50 million to cross the river. The annual cost increment is \$3.20 for the entire corridor. The Joint LRT advisory committee had acted to include that in the ten-year plan. Finley said both Groups B and C are in the ten-year plan of the advisory committee and questioned whether they should be combined at this point as a second group. There would be Group A and others that meet criteria and Item 10 requires that the plan be updated every two years as part of the RTB's Five-Year Transit Plan, and no community should feel that those plans could not be modified to react to current conditions.

Caranicas moved and This seconded that the main motion be amended to include Item 6, Clarifications:

That all corridors in Groups B and C be allowed to proceed with alignment studies, preliminary engineering, environmental reviews and right-of-way acquisition.

The motion was unanimously approved.

Caranicas moved and This seconded that the main motion be amended to include Item 10, Clarifications:

That the plan be updated every two years as part of the RTB's Five-Year Transit Plan.

The motion was unanimously approved.

Caranicas moved and This seconded that the main motion be amended to include Item 1, Clarifications:

That the staff recommendations for the maximum ten- and twenty-year plans be accepted. (Does not include St. Paul East as recommended in the twenty-year plan by the LRT Advisory Committee or the T.H. 13 terminus for Minneapolis South in the ten-year plan.)

Finley spoke against elimination of St. Paul East, stating that it should be in the twenty-year plan. Spartz said Item 10 was adopted because the board shares that concern. When that corridor becomes viable it could be included.

In response to Kranz' question regarding Group B, Minneapolis South, Spartz said "to 96th Street" is part of the main motion. There was discussion of the Mn/DOT plans for a river crossing and those costs.

Vote was taken on Item 1; the motion failed.

Spartz said the main motion as amended deals with staging, which should be dealt with more thoroughly. Ehrlichmann said he shares those concerns, but this is an opportunity to proceed with the plan presented, which allows each authority to proceed with the planning in its jurisdiction along the lines established for each regional railroad authority. It offers a staging plan that can be brought to the Legislature and financing sought. The plan will be reviewed annually and formally addressed every two years, which will compensate for difficulties that might be encountered in the future.

O'Toole called the question. Vote was taken on the main motion as amended. The motion was unanimously approved.

Caranicas moved and Spartz seconded Items 3 and 8:

That the core system (Group A) be built as expeditiously as possible and be funded 100 percent with regional and state funds.

Priorities for regional funding sources are:

Legislative authorization for:

- 1) Regional sales tax for broad based transportation purposes
- 3) RTB bonding authority (supported by RTB debt service levy)
- 2) 40-percent of new growth in fiscal disparities

Vote was taken on the motion.. The motion was unanimously approved.

Spartz said the committee should adopt Item 4:

That corridors outside of Group A require a 20-percent county match. the local match would be provided with regional funds for those corridors that receive federal funding.

Caranicas so moved; Spartz seconded the motion. Ehrlichmann said Group A was not included because he does not view Midway as a corridor. It is a link of the Central Business Districts and financing methods beyond it should be handled separately. Vote was taken and the motion failed.

Caranicas moved approval of the Draft Regional Light Rail Transit Development and Financial Plan as amended. O'Toole seconded the motion. The motion was unanimously approved.

There being no other business, the meeting was adjourned at 4:05 p.m.

Respectfully submitted,

Mary Fitzgerald
Secretary

Approved by the board _____, 1990

REGIONAL TRANSIT BOARD

Mears Park Centre
230 East Fifth Street, St. Paul, Minnesota 55101
292-8789

DATE: January 2, 1990
TO: Regional Transit Board
FROM: Howard Blin, Planning Manager *HB*
SUBJECT: LRT Development and Financial Plan

Attached is the draft LRT Development and Financial Plan as recommended by the Policy Committee. Key revisions to the recommendations of the Joint LRT Advisory Committee include:

- Staging Plan. The Policy Committee recommended the staging plan based on construction readiness (so-called "ABC" staging plan). The Committee further recommended that preliminary engineering and right-of-way acquisition be permitted for Group C corridors.
- Financing Plan. The Policy Committee approved the recommendations for regional, state and federal funding with the exception of the following priorities for regional funding sources:
 1. Regional Sales Tax
 2. ~~40~~ Percent of the Growth in Fiscal Disparities
 3. RTB Bonding Authority

Note: The minutes of the December 15 Policy Committee meeting transposed priorities 2 and 3.

HB:jmo
Attachment

REGIONAL TRANSIT BOARD

Mears Park Centre
230 East Fifth Street, St. Paul, Minnesota 55101
292-8789

DATE: January 2, 1990
TO: Regional Transit Board
FROM: Howard Blin, Planning Manager *HB* *gt*
SUBJECT: LRT Development and Financial Plan

Attached are written comments received on the draft LRT Development and Financial Plan.

HB:jmo
Attachments



C I T Y O F H O P K I N S

OFFICE OF THE MAYOR

December 21, 1989

Michael Erlichman
Regional Transit Board
230 East Fifth Street
St. Paul, MN 55101

Dear Mr. Erlichman,

Enclosed is a resolution from the Hopkins City Council supporting the construction of a light rail transit line in the Minneapolis Southwest Corridor. The Hopkins City Council does not believe that the Southwest Corridor should be assigned to Category C.

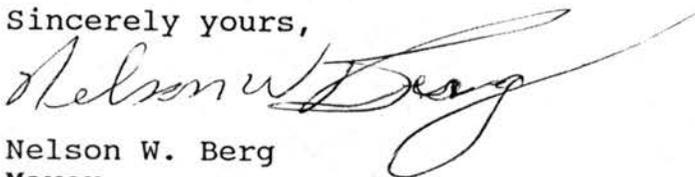
The assignment of the Southwest Corridor to Category C is dependent upon certain numbers such as transit dependent population and expected ridership. I would like to point out that the Draft Environmental Impact Statement for the Hennepin County Light Rail Transit System differs in several areas from the Draft Report Light Rail Transit Regional Development and Financial Plan.

The biggest difference is in the estimate of current transit ridership. The draft report has current ridership at 8,100 per day. The DEIS estimates 21,460 riders per day. There are also differences in system costs and projected LRT ridership.

The City of Hopkins believes that further review will demonstrate that the Minneapolis Southwest Corridor should be given equal priority with other suburban lines.

Thank you for your consideration.

Sincerely yours,


Nelson W. Berg
Mayor

CITY OF HOPKINS

Hennepin County, Minnesota

Resolution No. 89-131

RESOLUTION TO THE REGIONAL TRANSIT BOARD IN SUPPORT OF THE CONSTRUCTION OF A LIGHT RAIL TRANSIT LINE IN THE SOUTHWEST CORRIDOR OF HENNEPIN COUNTY

WHEREAS, the Minneapolis Southwest corridor serves a high concentration of population and businesses; and

WHEREAS, the Minneapolis Southwest corridor serves a population which has traditionally made use of mass transit; and

WHEREAS, the Minneapolis Southwest corridor serves an increasingly transit dependent population; and

WHEREAS, Light Rail Transit in the Minneapolis Southwest corridor will provide access to employment for central city residents; and

WHEREAS, the surrounding land uses and zoning in the Minneapolis Southwest corridor are compatible with Light Rail Transit; and

WHEREAS, Hennepin County owns the railroad right-of-way needed to construct light rail transit in Hennepin County; and

WHEREAS, a draft environmental impact statement and other preliminary studies have already been completed for the Minneapolis Southwest corridor; and

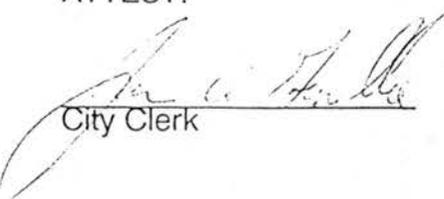
WHEREAS, the Joint LRT Advisory Committee recommended that the Minneapolis Southwest Corridor be included in Stage 1; and

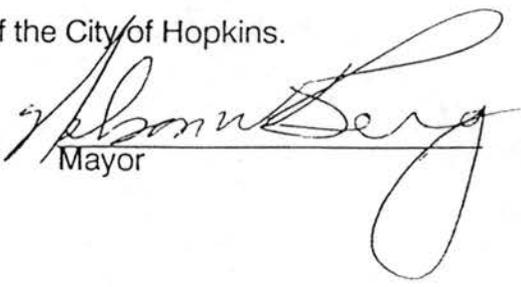
WHEREAS, based on the ability to get a corridor ready for construction and the availability of financing, the Minneapolis Southwest Corridor was assigned to Category C;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Hopkins hereby endorses and supports the construction of Light Rail Transit in the Minneapolis Southwest Corridor as soon as feasible. Be it further resolved, that the City Council of the City of Hopkins hereby endorses and supports the concept that construction of Light Rail Transit in the Minneapolis Southwest Corridor is an integral part of any Light Rail Transit system and should therefore have an equal priority with other corridors which connect central cities to suburban areas.

Adopted December 19, 1989 by the City Council of the City of Hopkins.

ATTEST:


City Clerk


Mayor

CITY OF
White Bear Lake

RECEIVED
DEC 26 1989
R.T.B.

December 22, 1989

Mr. Howard Blin
Regional Transit Board
230 East 5th Street
7th Floor
St. Paul, MN 55101

Dear Mr. Blin:

At its regular meeting of December 12, 1989, the White Bear Lake City Council reviewed the proposed regional light rail development plan. The City of White Bear Lake has been an active participant in development of the Ramsey County rail plan and has concern over the proposed St. Paul northeast corridor.

As you are aware, the Ramsey County plan proposed the northeast corridor along the former Burlington-Northern route and proposed extension of the route to the north county line. The proposed regional plan separates that route into two segments; the first terminating at Interstate 694 and the second component extending to White Bear Lake.

The White Bear Lake City Council strongly requests that the regional plan be amended to treat this corridor as a single unit and proposes acquisition of right-of-way and construction of the line from St. Paul to the northern boundary of Ramsey County simultaneously.

In the opinion of the City, it is important that the opportunity for acquisition of the right-of-way formerly used for Burlington-Northern tracks not be lost nor the cost greatly increased by separating the acquisition into two transactions.

Secondly, considering the fact that the rail bed is in place and necessary bridgework and other infrastructure improvements already exist along the corridor, the City is of the opinion that the additional capital improvement cost for the additional one and one-half mile segment between 694 and White Bear Lake would not be significant when compared to other proposed corridors. Additionally, given the population projections and density for the White Bear Lake area in the five to ten year time frame, the additional operating costs and ridership should compare favorably with other routes.

Thirdly, the proposal to terminating the first phase of the route at 694 appears to overlook the significance of downtown White Bear Lake as a transit destination. Historically, downtown White Bear Lake has served as a commercial center and provides prime access to several recreation opportunities serving the entire region. Considering these facts, it is the City's opinion that the ridership and cost effectiveness of the northeast St. Paul route would be enhanced if the terminus for the first phase is White Bear Lake rather than Interstate 694.

Mr. Howard Blin

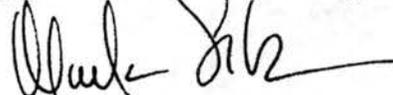
- 2 -

December 22, 1989

Again, the City respectfully requests consideration of these points and asks that the regional plan be amended to treat the northeast St. Paul corridor as a single component without phasing the construction. The City is of the position that the information mentioned above may not have been considered in preparation of the draft plan. If the Regional Transit Board believes significant justification exists to separate the corridor into two components, the City requests that it be provided with that information.

Thank you for your consideration.

By direction of the City Council

A handwritten signature in black ink, appearing to read "Mark Sather", written over the typed name below.

Mark Sather, City Manager

MS/jmj

cc - Mayor and City Council
John Finley
Representative Brad Stanius
Senator Fritz Knaak

DEPARTMENT OF PUBLIC WORKS
203 CITY HALL
MINNEAPOLIS, MINNESOTA 55415

minneapolis

city of lakes

December 19, 1989

PERRY D. SMITH, P.E.
CITY ENGINEER - DIRECTOR OF PUBLIC WORKS

MARVIN A. HOSHAW, P.E.
DEPUTY CITY ENGINEER

J. M. GARBER DIRECTOR, ADMINISTRATION
J. F. HAYEK DIRECTOR, WATER WORKS
R. KANNANKUTTY DIRECTOR, ENGR'G DESIGN
M. J. KROENING DIRECTOR, GEN'L SERVICES
B. J. LOKKESMOE DIRECTOR, OPERATIONS
A. E. MADISON MANAGER, FINANCE
M. J. MONAHAN DIRECTOR, TRAFFIC ENGR'G
T. B. SADLER SUPERINTENDENT, EQUIPMENT
S. J. SKOKAN MANAGER, PUBLIC WORKS BILLING

Mr. Howard Blin
Regional Transit Board
Mears Park Centre Building
230 East Fifth Street
St. Paul, Minnesota 55101

Re: Minneapolis City Council Resolution

Dear Mr. Blin:

Transmitted herewith for the records of the RTB is a certified copy of City Council Resolution 89R-510 adopted by the Minneapolis City Council on December 15, 1989. This Resolution sets forth the City position with respect to the LRT Development and Financial Plan being prepared by the RTB.

Members of the City Council did not have available to them information distributed and discussed at the RTB Policy meeting the afternoon of December 15. The action of the City Council is therefore based on the information that was developed and distributed at the RTB Policy meeting of December 7 or previously.

Sincerely,



Robert S. Morgan, P.E.
Transportation Planning Engineer

RSM:gb

cc: Council Member Hilary
Council Member Coyle
Council Member Cramer
Council Member Johnson

AFFIRMATIVE ACTION EMPLOYER

TTY/VOICE (612) 348-2157

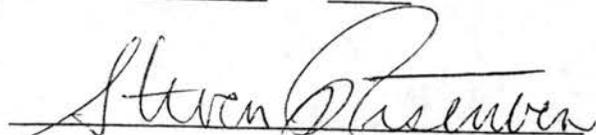


STATE OF MINNESOTA)
COUNTY OF HENNEPIN) SS
CITY OF MINNEAPOLIS)

I, Steven J. Ristuben, Assistant City Clerk of the City
of Minneapolis, in the County of Hennepin, and State of
Minnesota, do hereby certify that I have examined the
attached copy of Resolution 89R-510

adopted by the City Council of said City on the 15th
day of December, 19 89, at an adjourned session of
the regular City Council meeting of December 8,
19 89, and have carefully compared the same with the
original thereof now on file in this office, and that
said attached copy is a true and correct copy of said
original and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto
set my hand and affixed the corporate
seal of said City this 19th day of
December, 19 89.


Assistant City Clerk

RESOLUTION 89R-510

Setting forth the City's position on Light Rail Transit (LRT) Development and Financial Plan being considered by the Regional Transit Board (RTB).

Whereas, the Minnesota Legislature has created a Light Rail Transit (LRT) Advisory Committee to develop and recommend to the Regional Transit Board (RTB) a LRT Development and Financial Plan and said Committee has developed such a Plan and made its recommendation to the RTB; and

Whereas, these recommendations include all LRT corridors within Minneapolis in the Five-Year (1992-1997) Stage I Plan with the exception of the Minneapolis South Corridor, said Corridor not included based upon the assumption that the construction schedule and status of the I-35W EIS make it unlikely that LRT can be built in this Corridor in Stage I; and

Whereas, the City believes that LRT could be built in the Minneapolis South Corridor between a south tunnel portal at the Soo Line (29th Street) railroad tracks and the I-35W/TH 62 Common Section within the Stage I period; and

Whereas, the City is on record giving strong support to the Metropolitan Transportation Development Guide/Policy Plan which identifies six LRT Corridors for the Metropolitan Area for initial implementation and identifies the Central Corridor and the Minneapolis South Corridor as the two "First Priority" Corridors and sets forth criteria to guide in the selection of corridors for implementation or for addition to the LRT Plan; and

Whereas, the Chair and staff of the RTB have developed an alternative staging proposal which places the Central Corridor in the first priority grouping, the Minneapolis South Corridor, the Minneapolis Northwest Corridor, the Minneapolis Northeast Corridor and the Hiawatha Corridor in a second priority grouping, and the Minneapolis Southwest Corridor in a third priority grouping, and provides that those corridors in the second priority grouping that have met conditions set by the RTB and are ready for implementation will be considered for implementation as the RTB updates its LRT plan; and

Whereas, the RTB must adopt a LRT Development and Financial Plan in December, 1989; and

Whereas, Minneapolis is vitally interested in LRT planning and implementation and has participated in all such current and previous planning;

Now, Therefore, Be It Resolved by The City Council of The City of Minneapolis:

That it reaffirms its support for the Metropolitan Transportation Development Guide/Policy Plan, in particular as it relates to LRT.

That it supports the alternative staging approach proposed by the RTB which establishes groups of priorities. The identification of two priority groups which could proceed to implementation if all conditions set by the RTB are met keeps responsibility for advancing the corridor with the counties and their affected municipalities given that if the corridor is not advanced, other corridors will proceed to implementation instead.

That it reaffirms its previous position that LRT should be included within the I-35W right-of-way in the I-35W alternative selected by the Commissioner of Transportation for implementation as part of the I-35W EIS.

Adopted. Yeas, 12; Nays none.

Absent - Dziedzic - 1.

Passed December 15, 1989.
Alice W. Rainville, President of Council.

Approved December 15, 1989.
Donald M. Fraser, Mayor.

Attest: Merry Keefe, City Clerk.



December 19, 1989

Joint Light Rail Transit Advisory Commission
230 East 5th Street
Seventh Floor
St. Paul, MN 55101

To Whom It May Concern,

I have read several news releases and reports on the proposed Light Rail Transit report, and while I have deep concerns regarding the cost of the project, my major concerns deal with who pays for the project. I assume that if history is followed, the majority of the costs will be spread throughout the metro area which includes Farmington. The City already has to help pay for a bus service which provides extremely limited benefit for the City.

If your traffic projections are correct indicating that increased commercial development in Bloomington, Minneapolis and St. Paul will require an increase in transportation capacity, why not make the developments pay for it?

In summary, while I agree that there will be a need to increase the capacity of the Metropolitan Area's transportation system, I do not feel that Farmington should participate financially because of the limited benefit.

Sincerely,

Eugene "Babe" Kuchera

Eugene "Babe" Kuchera
Mayor

cc: Larry Thompson
Mayor and Council
Senator Pat Pariseau
Rep. Eileen Tompkins
file

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DRAFT

LIGHT RAIL TRANSIT
REGIONAL DEVELOPMENT
AND
FINANCIAL PLAN

REGIONAL TRANSIT BOARD



STRGAR-ROSCOE-FAUSCH, INC.
BRW, INC.
SPRINGSTED, INC.

**DRAFT REPORT
LIGHT RAIL TRANSIT
REGIONAL DEVELOPMENT AND FINANCIAL PLAN**

REGIONAL TRANSIT BOARD

JANUARY, 1990

STRGAR-ROSCOE-FAUSCH, INC.

BRW, INC.

SPRINGSTED, INC.

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Light Rail Transit Regional Development and Financial Plan sets forth a staged plan for the implementation of Light Rail Transit (LRT) in the Twin Cities metropolitan area and proposes a strategy for financing LRT construction and operation. The plan was developed at the direction of the Minnesota Legislature and in cooperation with the Regional Railroad Authorities and other state and regional agencies.

WHY LIGHT RAIL TRANSIT?

The Twin Cities, like many other growing metropolitan areas, will face severe transportation problems in the future. Population and employment are growing. Travel patterns are changing. Congestion is increasing while highways are deteriorating. Transportation problems in the metropolitan area can no longer be easily solved. Resources are limited; right-of-way for new highways is no longer available; and people are demanding better alternatives. It is clear that transit will be relied upon more heavily in the future to meet peak hour transportation needs in congested corridors, in the downtowns, and in suburban employment centers.

LRT offers an opportunity to revitalize regular route transit service in the Twin Cities and to restructure transit services to better meet changing travel needs throughout the metropolitan area. Key potential benefits of LRT are:

- LRT can significantly increase transit ridership.
- LRT will enhance the existing bus system.
- An LRT and bus system is more cost-effective than an all-bus system.
- LRT can play an important part in relieving peak hour congestion in key commuter corridors and in the downtowns.
- LRT can improve accessibility for transit dependent people.
- LRT can provide environmental benefits, reducing air pollution and noise in downtowns and neighborhoods.
- LRT can help focus retail and residential development.
- LRT can enhance the economic vitality of the metropolitan region and, therefore, indirectly benefit the economy of the entire State.

GOALS FOR LIGHT RAIL TRANSIT

The Joint LRT Advisory Committee has endorsed the following goals for the implementation of LRT in the Twin Cities:

- Maximize ridership and improve transit service by reducing travel time, operating in exclusive right-of-way where feasible, and providing a high quality of service.
- Improve cost-effectiveness of transit service.
- Improve service to transit dependents.

PLAN ORGANIZATION AND PROCESS

Legislation requires the RTB to prepare two specific plans:

- The Development and Financial Plan is to be prepared by the RTB in consultation with the Joint LRT Advisory Committee by January 1, 1990 and must have the following elements:
 - Staging Plan
 - Ten-Year Development Plan, including a statement of needs, objectives and priorities; ridership projections; and long-term capital funding policies.
 - Five-Year Development Plan, including policies regarding facility ownership, policies regarding funding capital and operating costs, and additional cost for tunnel construction.
- The Coordination Plan is to be prepared by the Joint LRT Advisory Committee and submitted to the RTB for approval by July 1, 1989.

The Joint LRT Advisory Committee, chaired by Hennepin County Commissioner John Derus, is composed of members from each of the Regional Railroad Authorities, the Minnesota Department of Transportation and the Metropolitan Transit Commission. The Joint LRT Advisory Committee reviewed all technical materials and made recommendations to the RTB on staging and financial policies. A Staff Committee composed of staff from each represented agency provided technical advice to the Joint LRT Advisory Committee.

RECOMMENDED DEVELOPMENT PLAN

All corridors proposed in comprehensive LRT plans prepared by the Regional Railroad Authorities were considered candidate LRT corridors for the regional LRT plan. Patronage forecasts, cost estimates and other data used in the evaluation were normalized for all corridors. The corridors were then evaluated on a comparative basis for inclusion in a maximum 20-year plan, a maximum 10-year plan and a staging plan. The criteria used to evaluate candidate LRT corridors were:

- Daily patrons per route mile
- Daily passenger miles
- Total annual cost per annual patron

- Total annual cost per passenger mile
- Service to transit dependents
- New transit riders
- Congestion relief
- Timing constraints
- Financial capabilities

Maximum 20-Year Plan

The recommended maximum 20-year plan is shown in Figure i. The Joint LRT Advisory Committee approved the staff recommendation with the addition of the St. Paul East (I-94) corridor.

Maximum 10-Year Plan

The recommended maximum 10-year plan is shown in Figure ii. The Joint LRT Advisory Committee approved the staff recommendation with addition of the extension of the Minneapolis South (I-35W) Corridor to T.H. 13.

Staging Alternatives

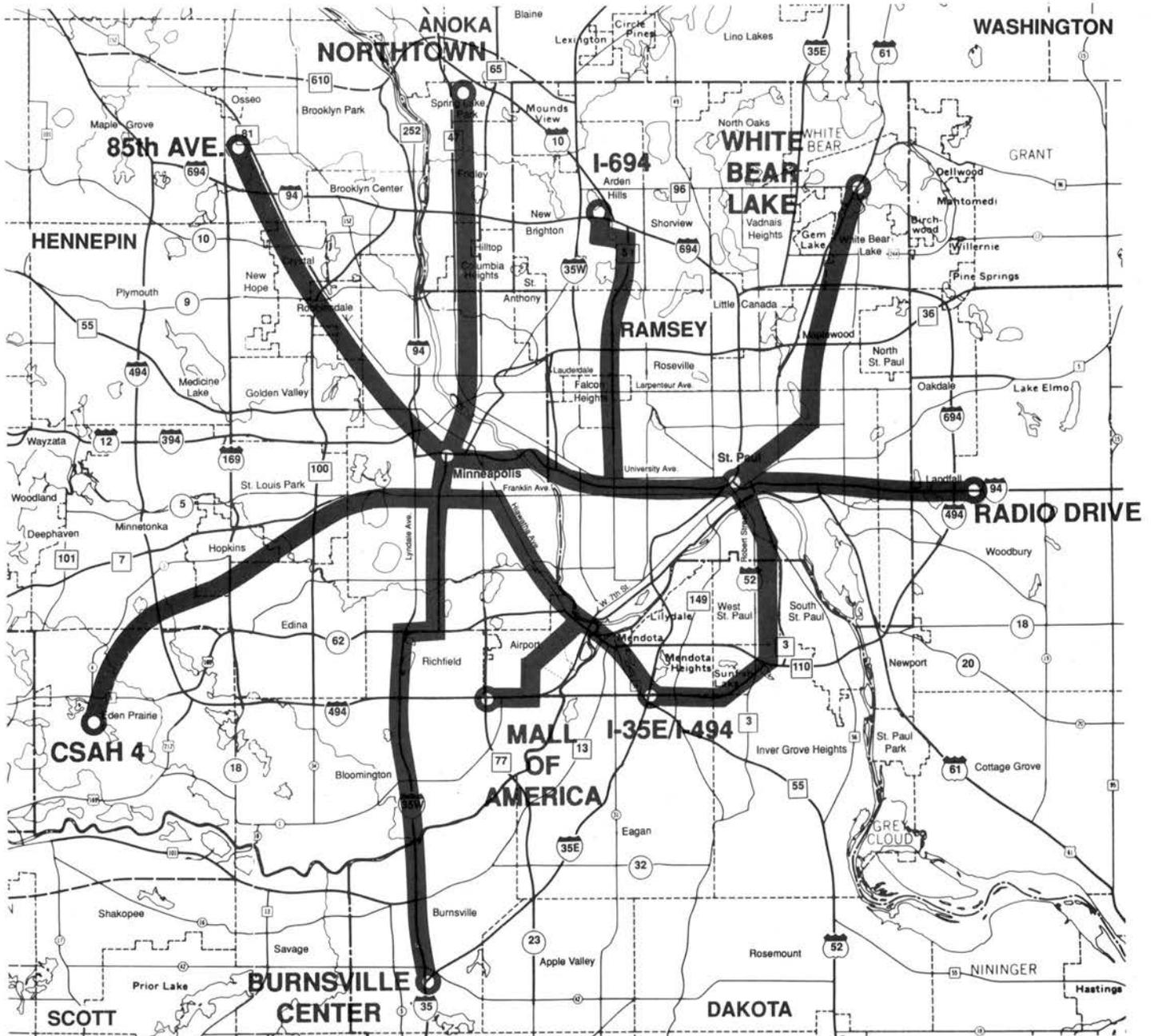
Three staging alternatives were developed for discussion by the Regional Transit Board, based on technical evaluation criteria rankings, recommendations from the Joint LRT Advisory Committee, and construction readiness. The staging approach selected by the RTB is shown in Figure iii.

RECOMMENDED FINANCIAL PLAN

Background information on financing alternatives for LRT was developed through a financial forum, case studies of LRT systems in other cities, and an analysis of potential sources of regional or local funding. Key recommendations on LRT financing are:

- It should be the goal of the region to obtain at least 20 percent federal funding and 30 percent state funding for the ten-year LRT plan. RTB should seek federal funds for corridors which are strongest in meeting federal eligibility requirements to ensure the best change to maximize federal funding.
- Increased MVET funds and increases in the RTB property tax levy as needed to supplement MVET funds should be used for LRT operation.
- Corridors which meet technical performance thresholds and have obtained the necessary environmental and design approvals should be eligible for up to 50 percent combined federal and state matching funds.
- The RTB should seek authorization from the Legislature for a regional tax to support the construction of LRT. Priorities are: (1) regional sales tax for broad-based transportation purposes, (2) 40 percent growth in fiscal disparities, and (3) RTB bonding authority supported by the RTB debt service levy.

- Any regional tax should include a method for feathering (variable tax rates) or redistribution of taxes for those counties which contribute taxes but receive limited short to mid-term benefits from the LRT system.
- The Yards-and-shops should receive first priority in the allocation of federal, state and regional funds. Advance funding for yards-and-shops by a regional railroad authority should be reimbursed.
- The regional railroad authorities should retain their current property tax levy authority for LRT.
- The regional railroad authorities should be able to construct any LRT corridor within the maximum ten-year plan using 100 percent county funds if appropriate environmental and design approvals, including approval from the RTB, have been obtained. Advance funding for Group A and B corridors to the budgeted amount of construction should be reimbursed if regional funds become available.
- The regional railroad authorities should aggressively pursue private participation in the funding of LRT construction, particularly transit stations.



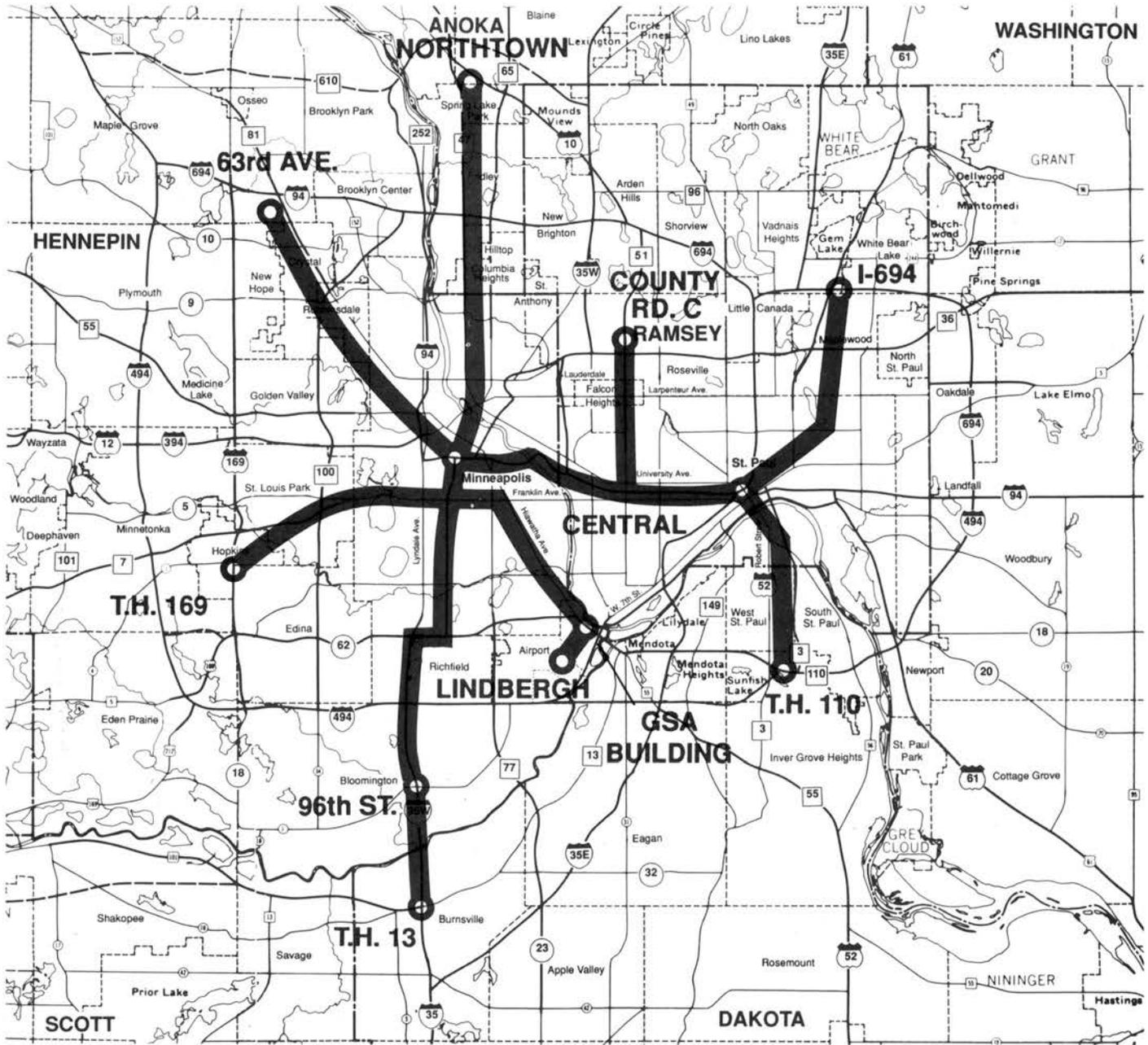
LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

MAXIMUM 20 - YEAR LRT PLAN



FIGURE I

SRF/BRW/SPRINGSTED



LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

MAXIMUM 10-YEAR LRT PLAN



FIGURE ii

SRF/BRW/SPRINGSTED

CHAPTER 1

**LRT AND
THE TWIN CITIES TRANSPORTATION SYSTEM**

CHAPTER 1 LRT AND THE TWIN CITIES TRANSPORTATION SYSTEM

This report, the Light Rail Transit Regional Development and Financial Plan, responds to the following legislation passed by the 1989 Minnesota Legislature.

"The RTB shall adopt a regional LRT plan...to ensure that LRT facilities in the metropolitan area will be acquired, developed, owned, and capable of operation in an efficient, cost-effective and coordinated manner as an integrated and unified system on a multi-county basis in coordination with buses and other transportation modes and facilities. To the extent practicable, the RTB shall incorporate into its plan appropriate elements of the plans of regional railroad authorities in order to avoid duplication (Minnesota Statutes 473.399, Subd.1)."

The report includes a plan for the staged construction of Light Rail Transit (LRT) and for the financing of an LRT system for the Twin Cities metropolitan area. The plan was developed in close coordination with the Joint LRT Advisory Committee and the seven Regional Railroad Authorities.

TRANSIT GOALS OF THE RTB AND THE METROPOLITAN COUNCIL

The Metropolitan Council states in its Transportation Development Guide/Policy Plan (1989) that transit is important to the Twin Cities because it:

- "Serves transit-dependent people, those with physical and/or mental disabilities and economic and age-related limitations."
- "Reduces dependence on the private automobile, and helps protect the region against unforeseen contingencies such as fuel shortages."
- "Supports higher-density land uses such as those found in the two downtowns, regional business centers, and the University of Minnesota--developments that cannot be served exclusively by private automobiles because of capacity limitations of the highway, street and parking systems and environmental constraints, such as air quality limits."
- "Reduces the need for additional freeway capacity, particularly in areas where expanding existing roadways or building new ones would be difficult and expensive."

The Metropolitan Council further states in the Transportation Development Guide/Policy Plan that: "the overall approach of the transit system plan is to provide incentives to share rides, to satisfy the needs of persons dependent on transit and to strengthen conventional regular route service to make it more competitive with the automobile."

The RTB has the responsibility for implementing these transit policies by providing transit services which maximize transit ridership but are cost-effective. The RTB has identified five areas of emphasis, all aimed at maximizing ridership, in its Five Year Transit Plan (1989). These are:

- Relieving congestion
- Getting ready for Light Rail Transit
- Meeting the needs of transit dependents
- Responding to changing travel needs
- Coordinating the regional transit system

Light Rail Transit will play an important role in meeting these objectives for the improvement of transit service in the Twin Cities.

TRENDS AFFECTING TRANSIT SERVICE IN THE TWIN CITIES

In developing regional policies and transit service strategies, both the Metropolitan Council and the RTB have recognized a number of important trends in the Twin Cities which impact transit services and point to the need for improved and restructured transit services in the future.

Population Growth

The population of the metropolitan area is expected to increase from 2 million to 2.5 million by 2010 according to the Metropolitan Council. Total personal travel in the region is also expected to increase significantly. Transit service will become a more important transportation alternative as areas become more developed and congestion increases.

Transit Dependent Population

The number of transit dependents, including people with disabilities and the elderly, will increase steadily in the future. The highest number of transit dependent persons will continue to reside within the central cities. Annual ridership on Metro Mobility grew 140 percent between 1986 and 1988 and the number of eligible participants continues to increase by more than 40 percent annually based on RTB data. The need for transit services will grow as the number of transit dependent people increases.

Employment Growth

The number of jobs in the Twin Cities is expected to increase by 41 percent by 2010 (Metropolitan Council). While the two downtowns will continue to see employment increases, many new jobs will be located in suburban areas. This changing pattern of growth and employment concentration will require a transit system which is responsive to changing needs, including the increased demand for reverse commute transit services.

Travel Pattern Changes

The Metropolitan Council predicts a 63 percent increase in daily vehicle miles traveled from 35 million in 1980 to 57 million by 2010. This increase is caused not only by growth but also by increases in the number and length of trips people are making.

Traffic Congestion

Traffic congestion is increasing significantly on the metropolitan highway system. Travel demand is expected to grow 50 percent by 2010 while peak period vehicle occupancy rates have continued to decline. Costs for highway improvements are increasing and the ability to keep pace with the demand is declining. The Metropolitan Council predicts that, by 2010, most of the 590-mile metropolitan highway system will require major rebuilding. Projected highway needs by 2010 are shown in Figure 1. With limited resources for construction of new highways and increased environmental concerns, transit must take on a larger role in relieving congestion in key commuter corridors. LRT has the potential to reduce or delay investments in the highway system or, at a minimum, increase capacity where it cannot be provided with highway improvements. For example, in the Hiawatha Corridor, LRT and a signalized arterial highway will be constructed rather than a freeway. In the Minneapolis South (I-35W) Corridor, transit facilities (either LRT or High Occupancy Vehicle Lanes) will be built because adequate capacity cannot be provided with only highway improvements. Likewise, in areas such as the two downtowns and the University of Minnesota, there are limited opportunities for reducing street and highway congestion without new highway construction--an option which is extremely expensive and could require massive right-of-way acquisition.

Transit Ridership

After eight consecutive years of decline, ridership on the regular route system showed a slight increase in 1988 based on RTB data. At this point it is uncertain whether ridership has stabilized for the long term. The continuing challenge will be to increase ridership while maintaining cost-effectiveness.

LRT CAN REVITALIZE THE TRANSIT SYSTEM

Light Rail Transit is an important tool for responding to the transportation challenges being faced by the Twin Cities. It is certain that significant improvements in the level and quality of transit service will be needed in the future. The planning and implementation of an LRT system in the 1990s may avoid a transit crisis in the 21st century.

While LRT is not a panacea for all transportation needs, it offers distinct qualities which could bring significant benefits to the Twin Cities. Most importantly, LRT offers an opportunity to revitalize regular route transit service in the Twin Cities and to restructure transit services to better meet changing travel needs throughout the metropolitan area. Key potential benefits of LRT are:

- **LRT can significantly increase transit ridership** by providing better service coverage, better frequency, and shorter travel times for transit trips. The modern design, quality image, and high predictability of rail attracts many new riders who would not typically consider bus transportation. Once introduced to LRT service, new riders have a higher tendency to use the bus for connecting service to LRT.
- **LRT will enhance the existing bus system.** Buses will continue to serve most transit needs, including the important function of a "feeder system" to LRT lines. Restructuring of existing bus routes will provide better suburb-to-suburb connections, improved neighborhood circulation, and better transit opportunities for the reverse-commuter. This restructuring around fixed LRT schedules will provide an opportunity to improve the timeliness of the entire bus system and coordinate a wide variety of transit service options and providers.
- **An LRT and bus system is more cost-effective** than an all-bus system in moving large numbers of people. The primary reason for this operating cost advantage is that LRT is less labor intensive--one operator/driver can serve up to 450-500 passengers. Often the cost of constructing an LRT system can be recovered over several years through operating cost savings.
- **LRT can play an important part in relieving peak hour congestion** in key commuter corridors. LRT has been successful in attracting people away from the automobile in highly congested corridors because it decreases transit travel times. The improved service coverage, trip frequency and reliability of LRT also adds to the perception that LRT is a high-speed mode of transportation which is competitive with the automobile.
- **LRT can also play an important role in relieving downtown congestion** and improving air quality by reducing the number of buses and automobiles using downtown streets and reducing the need for additional parking.
- **LRT's physical characteristics provide a wide range of operating advantages** over other modes of transit including improved ride quality, increased operating speed, variable capacity, increased cost efficiency and all-weather reliability.
- **LRT offers people with special transit needs a new versatility**, increased freedom of movement, and much broader access to the metropolitan area. LRT can provide better accessibility for transit dependent people, as well as better mobility for all riders.
- **LRT can provide environmental benefits** by reducing auto and bus emissions as riders choose the clean powered electric rail service over gasoline powered modes. LRT also runs quietly because of its electrical power source.
- **LRT can help focus retail and residential development.** It can be used to complement existing or planned developments or to restructure new development activity.
- Finally, **a strong transit system will enhance the economic vitality of the metropolitan region**, making it more attractive to new businesses, visitors and special events. By enhancing the quality of life and economic attractiveness of the Twin Cities metropolitan area, LRT indirectly benefits the economy of the entire State.

GOALS FOR LIGHT RAIL TRANSIT

The Joint LRT Advisory Committee has endorsed the following goals for the implementation of LRT in the Twin Cities:

- **Maximize Ridership and Improve Transit Service.** LRT can increase transit ridership by improving the competitiveness of transit service with the single-occupant automobile. To accomplish this, LRT should reduce travel time; operate in exclusive right-of-way, where feasible; and provide a high quality of service.
- **Improve Cost Effectiveness of Transit Service.** LRT should be implemented where it provides a cost-effective transit alternative.
- **Improve Service to Transit Dependents.** LRT should be implemented where it improves the level of service for persons dependent upon transit for basic mobility.

CHAPTER 2
PLANNING PROCESS

CHAPTER 2 PLANNING PROCESS

Planning for new transit technologies for the Twin Cities started in the late 1960s when LRT and other rail systems were studied. The pace has accelerated since 1987 when the Minnesota Legislature gave authority for rail transit planning to the Regional Railroad Authorities. The relationship of past and future activities related to LRT planning and construction is shown in the timeline in Figure 2. Some of the major past and current events relating to LRT planning in the Twin Cities are:

- 1967: Metropolitan Council and the Metropolitan Transit Commission (MTC) conduct analysis of alternative transit technologies.
- 1970: MTC continues study of various transit technologies.
- 1975: Minnesota Legislature prohibits rail transit planning.
- 1980: Minnesota Legislature lifts prohibition of rail transit planning.

LRT is selected as preferred alternative in Hiawatha Avenue Environmental Impact Statement (EIS).

State legislation enables counties to establish railroad authorities.

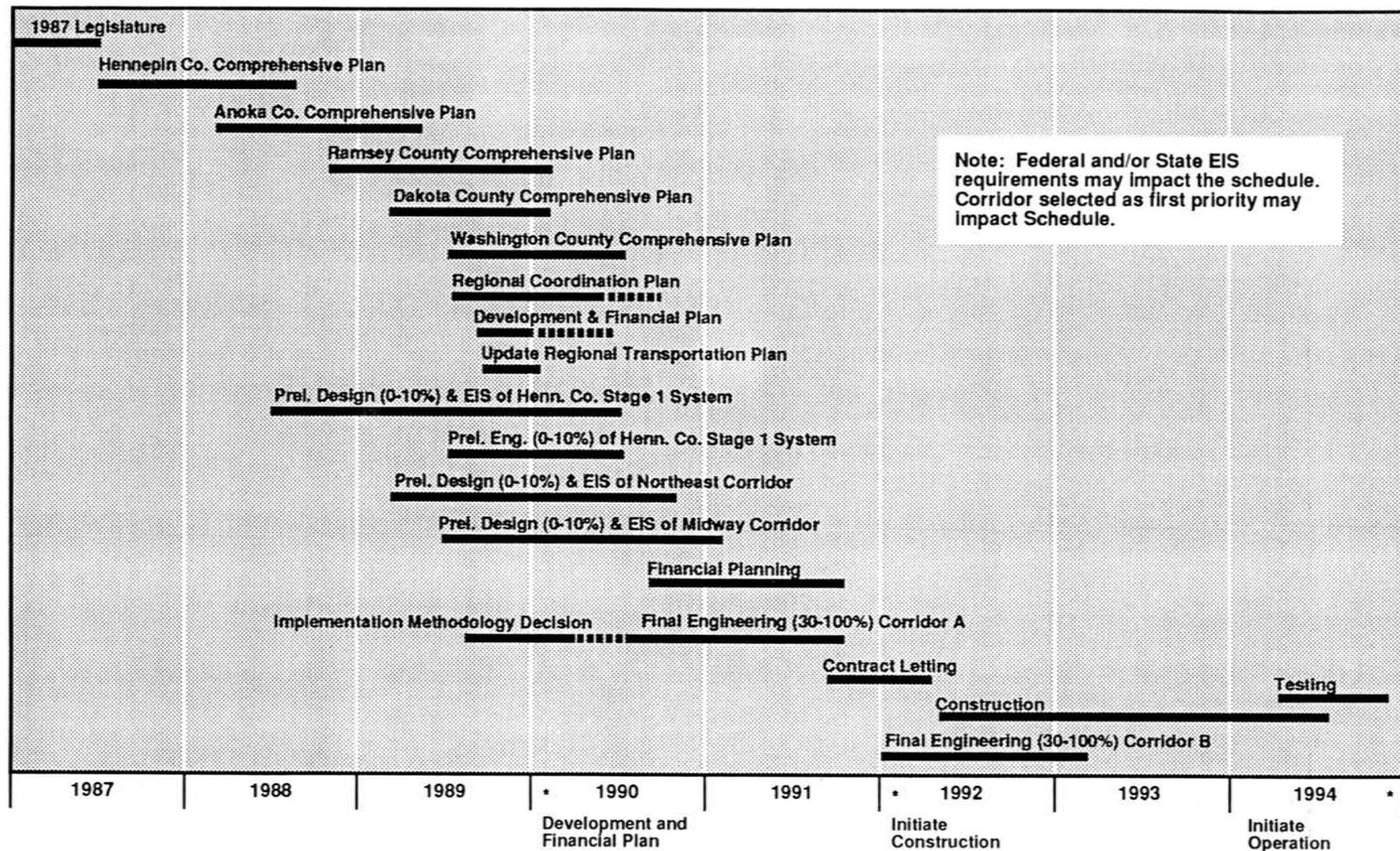
Hennepin County establishes first regional railroad authority.
- 1981: Metropolitan Council conducts "Light Rail Transit Feasibility Study".
- 1984: Hennepin County sponsors "LRT Implementation Planning Program".

Minnesota Legislature creates Regional Transit Board.
- 1985: Metropolitan Council completes "University/Southwest Alternatives Analysis".

Minnesota Legislature prohibits expenditures of public funds on LRT.
- 1986: Metropolitan Council completes "A Study of Potential Transit Capital Investments in Twin Cities Corridors--Long Range Transit Analysis".
- 1987: Minnesota Legislature removes 1985 prohibition, gives Regional Railroad Authorities authority to conduct rail transit planning, and sets maximum levy limit for railroad authorities.
- 1988: Comprehensive LRT System Plan for Hennepin County (Hennepin County Regional Railroad Authority).

Light Rail Transit Planning Analysis for the Midway Corridor (Regional Transit Board and Ramsey County Regional Railroad Authority).

Legislature appropriates funds for railroad authorities for engineering design and construction of LRT.



LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

**TIMELINE OF MAJOR ACTIVITIES
FOR LIGHT RAIL TRANSIT IN THE TWIN CITIES**



FIGURE 2

SRF/BRW/SPRINGSTED

- 1989: Comprehensive LRT Plan for Anoka County (Anoka County Regional Railroad Authority).
- Comprehensive LRT Plan for Ramsey County (Ramsey County Regional Railroad Authority).
- Minnesota Legislature clarifies roles of Regional Transit Board, Metropolitan Council and Regional Railroad Authorities concerning planning, implementation and financing of LRT.
- Ongoing: Comprehensive LRT Plan for Dakota County (Dakota County Regional Railroad Authority).
- Comprehensive LRT Plan for Washington County (Washington County Regional Railroad Authority).
- Preliminary Engineering and EIS for LRT in Hennepin County (Hennepin County Regional Railroad Authority).
- Preliminary Engineering and EIS for LRT in Midway Corridor (Ramsey and Hennepin County Regional Railroad Authorities).
- Regional LRT Development and Financial Plan (Regional Transit Board).
- Regional LRT Coordination Plan (Regional Transit Board).

LEGISLATIVE REQUIREMENTS

In order to ensure a coordinated approach to Light Rail Transit (LRT) planning and development, the 1989 Minnesota Legislature required the RTB to prepare a regional LRT plan. The legislation requires two specific plans:

Development and Financial Plan

To be prepared by the RTB in consultation with the Joint LRT Advisory Committee by January 1, 1990. Legislatively mandated elements include:

- Staging Plan
- Ten-Year Development Plan, including:
 - Statement of needs, objectives and priorities
 - Ridership projections
 - Long-term capital funding policies
- Five-Year Development Plan, including:
 - Policies regarding facility ownership
 - Policies regarding funding capital and operating costs (use of property tax for operating funds capped at 35 percent)
 - Additional cost for tunnel construction

Coordination Plan

To be prepared by the Joint LRT Advisory Committee and submitted to the RTB for approval by July 1, 1990. Legislatively mandated elements include:

- Plan for Coordination of Construction, Ownership, and Operating, including:
 - Coordination of vehicle specifications
 - Provisions for single operator
 - Coordination method if turnkey implementation is used
- Development of System Standards and Specifications
- Operating and Performance Standards and Specifications
- Feeder Bus and Park-and-Ride Policies, Standards and Plans
- Method for Ensuring Ongoing Coordination
- Provision for Operation by MTC

ORGANIZATIONAL STRUCTURE

The organizational structure used for participation in, and approval of, the LRT Regional Development and Financial Plan is shown in Figure 3. The roles of the participants are described below.

Regional Transit Board

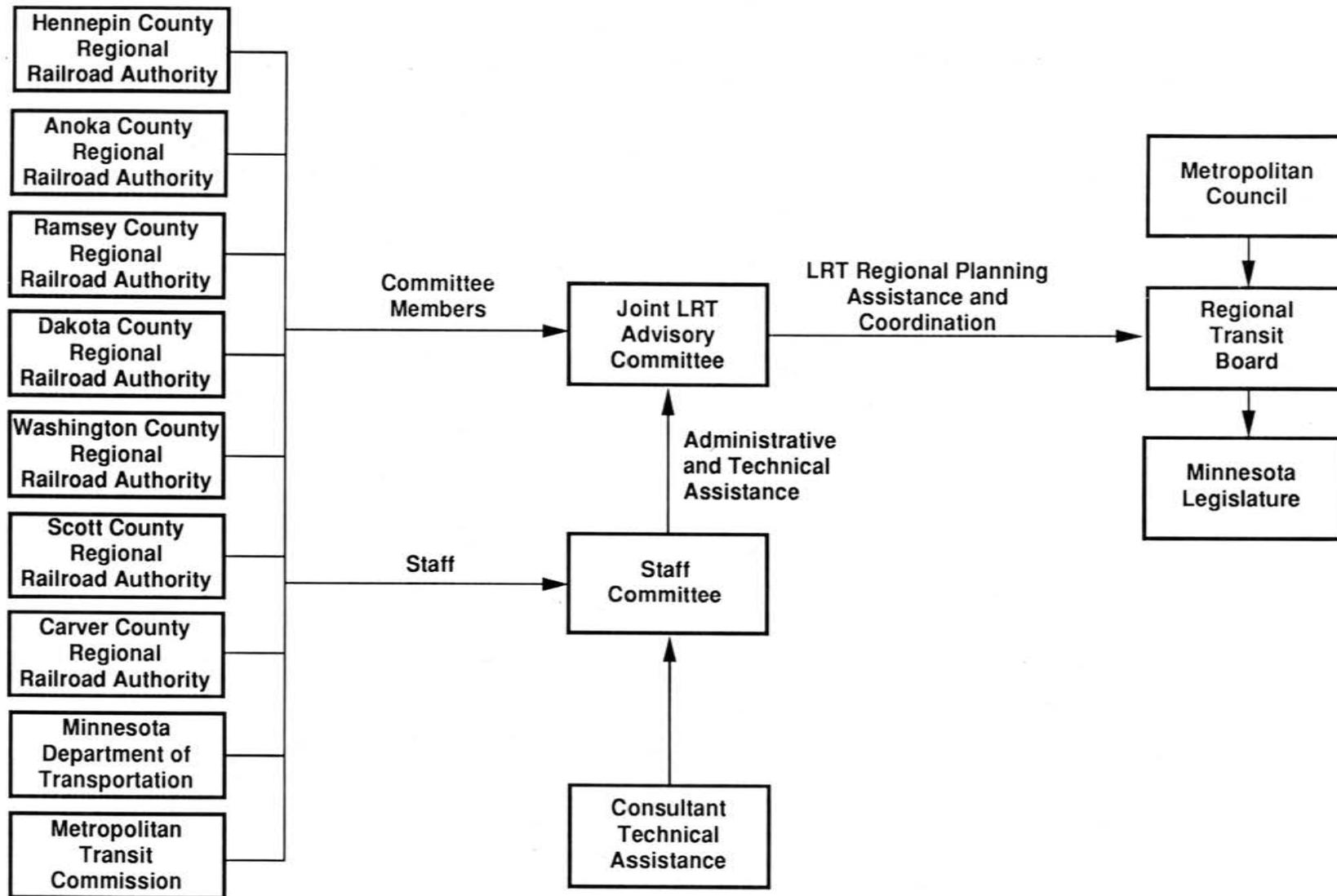
The RTB is comprised of ten board members and a full-time chair. Eight board members are appointed by the Metropolitan Council. Two additional members and the chair are appointed by the governor. The RTB conducts its business through its Policy, and Administration and Finance Committees. Each committee meets monthly and the board, as a whole, meets at least twice monthly.

The role of the RTB in this project is to approve the LRT Regional Development and Financial Plan for submittal to the Metropolitan Council and the Minnesota Legislature.

Joint LRT Advisory Committee

During the 1989 Legislative Session, the RTB was directed to establish the Joint LRT Advisory Committee. This committee has been established to advise the RTB on pertinent issues associated with planning and implementation of a light rail transit system in the metropolitan area. The Committee consists of:

- Two RRA Board members of each Regional Railroad Authority funded for preliminary engineering of an LRT line
- One additional member from the Hennepin County Regional Railroad Authority
- One Board member of each Regional Railroad Authority funded for planning LRT facilities not otherwise represented



LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN



PLAN ORGANIZATION



FIGURE 3

SRF/BRW/SPRINGSTED

- Two members of the Metropolitan Transit Commission
- One representative from Mn/DOT

The role of the Joint LRT Advisory Committee in this project is to review and comment on the LRT Regional Development and Financial Plan and to make recommendations related to staging and financing to the Regional Transit Board. The Joint LRT Advisory Committee is also responsible for developing the coordination component of the RTB's regional LRT plan. John Derus, Hennepin County Commissioner, has acted as chairman of the Joint LRT Advisory Committee during the development of the LRT Development and Financial Plan.

Staff Committee

A technical committee composed of staff from each represented agency has also been formed to advise the Joint LRT Advisory Committee on relevant issues. The role of the Staff Committee in this project is to review technical information and staff recommendations for presentation to the Joint LRT Advisory Committee.

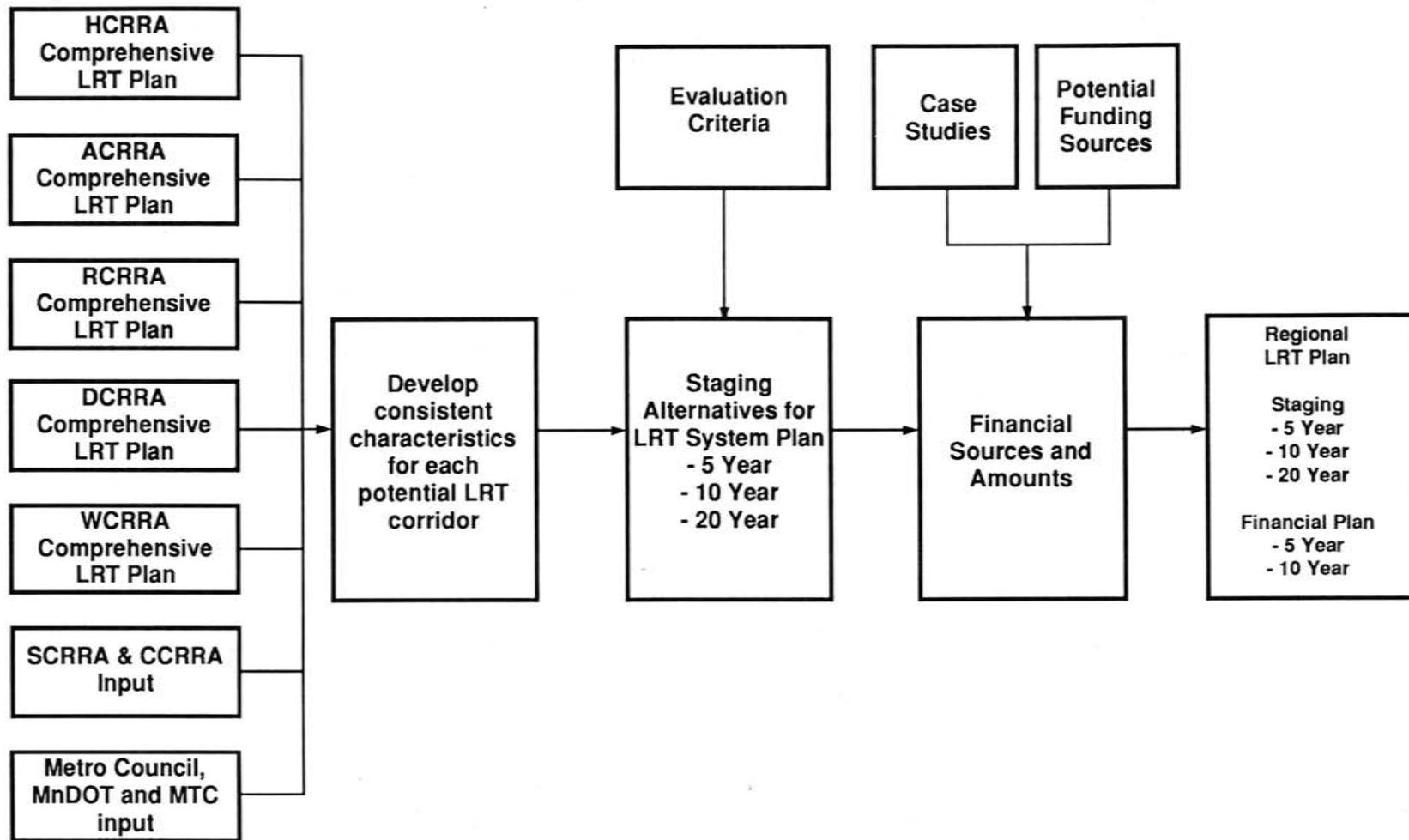
The RTB, the MTC, Mn/DOT, Metropolitan Council and each of the Regional Rail Authorities provide staff for technical and administrative assistance. In addition, consultant services have been procured to provide technical assistance on this project to the staff and the Joint LRT Advisory Committee.

PLANNING PROCESS

The planning process used to develop the Regional LRT Development and Financial Plan is illustrated in Figure 4. Analysis, data and recommendations from each County's Comprehensive LRT Plan, planning study or other current applicable information were used as input to this plan. Initially, based on each County's input, consistent characteristics were developed for each candidate LRT corridor. Criteria were defined for evaluating candidate LRT corridors. The evaluation criteria, both quantitative and qualitative, were used to assist in the development of a twenty-year plan and alternative staging plans.

Financial analysis included a review of case studies and an evaluation of alternative regional and local funding sources. A financial forum with a panel of national experts was held to review LRT experience in other North American cities and identify the advantages and disadvantages of various funding sources. Alternative funding sources were evaluated according to their applicability and likelihood in the Twin Cities region. Applicable funding sources were identified and funding amounts were established for each of the staging time periods--five-year (1992-1996), ten-year (1997-2001) and twenty-year (2010). Corridor alternatives and segments were staged based on the analysis of the evaluation criteria and level of funding identified for each of the time periods.

Staff recommendations and background briefing papers were presented to the Joint LRT Advisory Committee. The Committee developed its recommendations through a series of motions addressing specific staging and financing issues. The staff report and Joint LRT Advisory Committee recommendations were presented to the Policy Committee of the RTB. The Policy Committee, in turn, made recommendations to the Regional Transit Board. The recommended Regional LRT Development and Financial Plan resulted from this process.



LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

PLANNING PROCESS TO DEVELOP REGIONAL LRT SYSTEM PLAN



FIGURE 4

SRF/BRW/SPRINGSTED

CHAPTER 3

**FRAMEWORK FOR
EVALUATING STAGING ALTERNATIVES**

CHAPTER 3 FRAMEWORK FOR EVALUATING STAGING ALTERNATIVES

Legislation requires that the regional LRT Development and Financial Plan be based, to the extent practicable, on the twenty year LRT plans prepared by the Regional Railroad Authorities. The process used to accomplish this task was shown in Figure 5 (see Chapter 2) and included the following key steps:

- Selection of evaluation criteria
- Verification of patronage forecasts
- Verification of cost estimates
- Collection of data used for other evaluation criteria
- Evaluation of corridors for the maximum twenty-year plan
- Evaluation of corridor segments for the maximum ten-year plan
- Evaluation of corridor segments, considering timing and financial constraints, for alternative staging plans

DESCRIPTION OF CORRIDORS

The candidate corridors evaluated in the Regional Development and Financial Plan included only those corridors identified as part of a 20-year comprehensive LRT plan prepared by a Regional Railroad Authority. These corridors are shown in Figure 5 and are described below.

Central Corridor

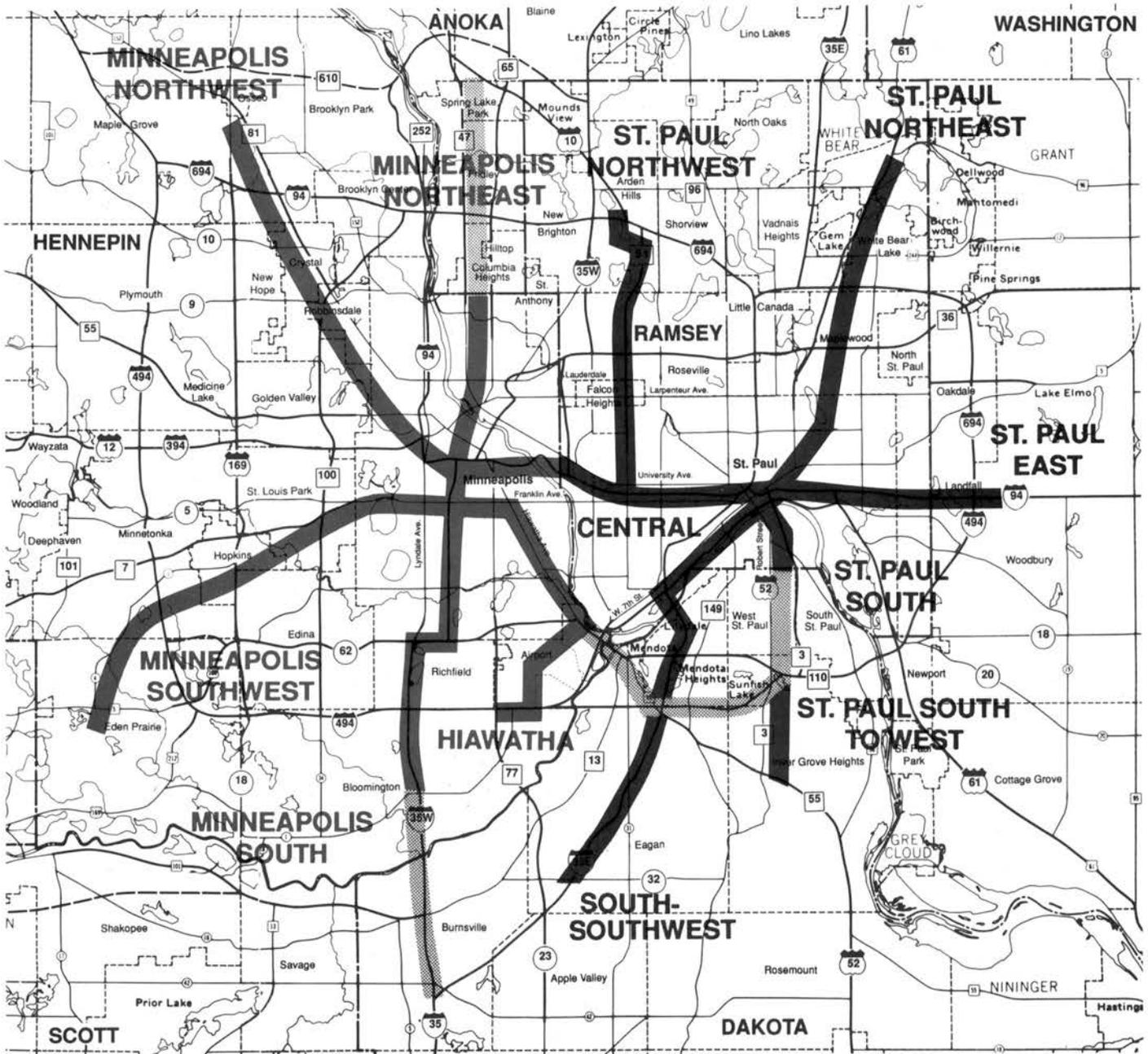
The Central Corridor connects downtown Minneapolis, downtown St. Paul, the State Capitol, and the University of Minnesota. It includes both the Midway Corridor (Ramsey County) and the University Connector (Hennepin County). Three alignments are under consideration east of Oak Street: University Avenue, I-94 and Burlington-Northern/Pierce Butler. West of Oak Street, the proposed alignment is along Washington Avenue through the University of Minnesota campus, eventually connecting to the downtown Minneapolis tunnel. Preliminary engineering and environmental analysis are currently underway for both segments of the corridor.

Minneapolis Northwest Corridor

The Minneapolis Northwest Corridor (Hennepin County) extends from the downtown Minneapolis tunnel to 85th Avenue in Osseo. The proposed alignment follows Olson Memorial Highway and the Burlington Northern Railroad. The recently published Draft EIS for Hennepin County's Stage 1 system includes this corridor to 63rd Avenue.

Minneapolis Northeast Corridor

The Minneapolis Northeast Corridor (Anoka County) extends from the downtown Minneapolis tunnel to the Northtown Shopping Center. University Avenue and Central Avenue are alternative alignments currently under study. Anoka County is currently conducting preliminary design and environmental analysis.



- HENNEPIN PLAN
- RAMSEY PLAN
- ANOKA PLAN
- DAKOTA PLAN

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

LRT CORRIDORS PROPOSED IN 20-YEAR COUNTY PLANS



FIGURE 5

SRF/BRW/SPRINGSTED

St. Paul Northwest Corridor

The St. Paul Northwest Corridor (Ramsey County) would extend north of the Central Corridor along or near Snelling Avenue to approximately I-694. A specific alignment has not been selected for this corridor.

St. Paul Northeast Corridor

The St. Paul Northeast Corridor (Ramsey County) would extend from downtown St. Paul along either T.H. 61 or the Burlington Northern Railroad. While a specific alignment has not been selected for this corridor, the Ramsey County Regional Railroad Authority is exploring an opportunity to acquire the railroad right-of-way for potential use as an LRT line.

St. Paul East Corridor

The St. Paul East Corridor (Ramsey County) would extend from downtown St. Paul to Radio Drive in Washington County along or near I-94. While the staff recommendation did not include this corridor within the 20 year timeframe, the Joint LRT Advisory Committee has recommended inclusion of the corridor in the regional 20-year plan.

St. Paul South and St. Paul South to West Corridors

The St. Paul South Corridor would extend south from downtown St. Paul into Dakota County along either Robert Street or Lafayette Freeway. The corridor would terminate at either T.H. 55 or would swing to the west along or near I-494, terminating at I-35E. In both cases, a new bridge would be required to cross the Mississippi River out of downtown St. Paul.

South-Southwest Corridor

The South-Southwest Corridor (proposed in the Ramsey County Comprehensive LRT Plan) would extend southwest out of downtown St. Paul along Shepard Road. It would cross the Mississippi River at I-35E and swing southwest into Dakota County along or near I-35E. This corridor was moved to a post-20-year status in the regional 20-year plan.

Hiawatha Corridor

The Hiawatha Corridor (Hennepin County) would utilize the proposed Minneapolis tunnel south of downtown Minneapolis to 29th Street. It would turn east along the Soo Line Railroad to Hiawatha Avenue. It would then turn southeast along Hiawatha Avenue to the GSA Building near Fort Snelling. At this location, it would either swing to the west to the Lindbergh and Humphrey Airport Terminals (via a tunnel) and terminate at the Mall of America or it would continue along T.H. 55, crossing the Minnesota River

into Dakota County and terminating at I-35E. The section of this corridor north of 46th Street has been included in the Hennepin County Stage 1 LRT plan. Preliminary design is underway. A federal EIS was prepared for this corridor in 1980 as part of the highway improvement planning process. LRT was the preferred transit alternative in that EIS.

Minneapolis South Corridor

The Minneapolis South Corridor extends south of downtown Minneapolis in the vicinity of I-35W. Proposed alignments include I-35W and the Soo Line Railroad. An EIS is currently being prepared for this corridor by the Minnesota Department of Transportation and the Metropolitan Council. A preferred transit alternative has not yet been selected for the corridor. Both LRT and High Occupancy Vehicle (HOV) lanes are being studied. The proposed terminus in the EIS is 96th Street in Bloomington. The proposed terminus in the Hennepin County Comprehensive LRT Plan is 106th Street. The proposed terminus in the Dakota County Comprehensive LRT Plan is Burnsville Center.

Minneapolis Southwest Corridor

The Minneapolis Southwest Corridor would likely utilize the proposed Minneapolis tunnel to 29th Street where it would turn to the west via the Soo Line Railroad. It remains in railroad right-of-way, swinging to the southwest through St. Louis Park, Hopkins, Minnetonka and Eden Prairie, terminating at C.S.A.H. 4 in Eden Prairie. The Hennepin County Stage 1 LRT system includes this corridor to T.H. 169 in Hopkins. This section of the corridor is included in the recently published draft EIS.

EVALUATION CRITERIA

A number of evaluation criteria were used to evaluate corridors for the twenty year plan and the five and ten year staging plans. These criteria, which were approved by the Joint LRT Advisory Committee on October 4, 1989, are described below:

- **Daily Patrons per Route Mile.** Forecasts for daily LRT passengers for the year 2010 were used to estimate daily patrons. Total daily patronage was divided by the total length of the corridor to determine patrons per route mile.
- **Daily Passenger Miles.** The average transit trip length per sector for each LRT corridor was estimated based on data from a 1989 Metropolitan Council on-board survey of bus riders. This trip distance was multiplied by the number of forecasted LRT patrons from each corridor sector to determine the total number of estimated passenger miles per corridor. This measure includes the distance travelled on both LRT and feeder bus.
- **Total Annual Cost per Annual Patron.** Annualized capital cost plus annual operating costs were compared to projected annual LRT ridership to determine annual cost per annual patron.
- **Total Annual Cost per Annual Passenger Mile.** Annualized capital cost plus annual operating costs were compared to projected annual passenger miles to determine annual cost per annual passenger mile.

- **Service to Transit Dependents.** Service to transit dependents was measured by the number of people living within the service area of each corridor with one or more of the following characteristics: transportation disabled, no auto ownership, over age 65, between age 10 and age 15.
- **New Transit Passengers.** New transit passengers were estimated based on a comparison between travel time on LRT and travel time on the existing bus system in each corridor.
- **Congestion Relief.** Congestion relief occurs when there is a high level of congestion in a corridor and when a high number of new transit passengers is attracted to LRT. Since new transit riders is a separate criterion, this criterion was defined as the degree of congestion in each corridor.
- **Timing Constraints.** Timing constraints which were considered in the staging analysis include construction schedules, status of the environmental review process, status of preliminary engineering, design issues, right-of-way needs, and coordination with other projects.
- **Financial Capabilities.** In the final analysis, financial capability dictates the staging of LRT construction as it is unlikely that funds will be available to finance the proposed staging plans.

PATRONAGE FORECASTS

The projection of future LRT ridership is based on existing transit ridership, projected employment and population, LRT travel times, transit service coverage, and accessibility to the LRT system. Patronage forecasts for the year 2010 were completed for all LRT corridors in each of the County comprehensive LRT plans.

Two different sketch planning methodologies were used in the Regional Railroad Authority forecasts in addition to the regional travel forecasting model. In a few cases, these base forecasts were increased proportionately when LRT corridors were lengthened after the initial forecast was completed.

Verification Forecast

Since two different sketch planning models were used to develop base forecasts, an independent verification forecast was completed to assure that the models were yielding results comparable to each other and the regional model. The Minneapolis Northwest Corridor was used as the test case. The forecasting results for the Minneapolis Northwest Corridor were:

Corridor sketch planning model -	25,500
Service area sketch planing model -	23,900
Difference -	1,600 (6 percent)

Since the two sketch planning models resulted in similar forecasts and previous comparisons had been made to the regional model, it was determined that the results of forecasts using the three base methodologies were comparable for purposes of corridor evaluation in the Development and Financial Plan.

All candidate corridors will require more detailed patronage forecasting before completion of preliminary engineering.

Adjustments for Forecast Overlaps

When the individual county plans were combined into a regional system, there were some geographic overlaps among county plans which required adjustments so that ridership would not be significantly overestimated. These adjustments included the following:

- Forecasts were adjusted in those corridors which had overlapping geographic service area (travel sheds).
- Forecasts made for corridor extensions were adjusted to reflect more consistent assumptions on the relationship between corridor length and increases in ridership.
- Forecasts were adjusted in those corridors where changes had occurred in Metropolitan Council population and employment projections.
- High-low ranges were established for all corridors. The mid-point of this range was used for comparative evaluation.

2010 LRT Patronage Forecasts

The resulting forecasts for all candidate LRT corridors and corridor segments are shown in Table 1. Adjustments to forecasts were made for the St. Paul Northwest, St. Paul South, Hiawatha and Minneapolis Northeast corridors.

Several checks of reasonableness were made by comparing various characteristics of candidate corridors. The results of these comparisons are shown in Tables 2 and 3 and include the following factors:

- Population growth
- Growth in transit ridership
- Change in transit riders per 1000 population
- Change in transit travel time

COST ESTIMATES

Available capital and operating cost estimates for each candidate LRT corridor (from county comprehensive LRT plans) were reviewed and adjusted to assure consistency in cost assumptions. Adjustments in both capital and operating costs were made to all candidate corridors.

Corridor	Terminus	Projected Range 2010 Daily LRT Ridership	Midpoint of 2010 Daily LRT Ridership
Minneapolis Northwest	63rd St.	18,000 - 23,500	20,800
	85th St.	19,600 - 25,500	22,600
Minneapolis Northeast	•Central	Northtown	24,400
	•University	Northtown	17,600
St. Paul Northwest	Co. Rd. C	12,600 - 14,400	13,500
	I-694	14,000 - 16,000	15,000
St. Paul Northeast	I-694	9,900 - 11,700	10,800
	White Bear Lake	11,000 - 13,000	12,000
St. Paul South	T.H. 110/I-494	13,300 - 15,900	14,600
	I-35E/I-494	16,000 - 19,200	17,600
Hiawatha	GSA Building	15,500 - 18,500	17,000
	Lindbergh Terminal	16,200 - 19,400	17,800
	Humphrey Terminal	16,400 - 19,600	18,000
	Mall of America	19,100 - 22,900	21,000
	I-35E/I-494	16,800 - 20,200	18,500
Minneapolis South	82nd St.	23,400 - 30,000	26,700
	96th. St.	24,700 - 31,600	28,200
	T.H. 13	25,800 - 33,100	29,500
	Burnsville Ctr.	26,500 - 34,000	30,300
Minneapolis Southwest	T. H. 169	13,900 - 18,500	16,200
	I-494	15,900 - 21,100	18,500
	C.S.A.H. 4	16,600 - 22,000	19,300
Central	• University	CBD to CBD	41,900
	• I-94	CBD to CBD	42,500
	• Burlington Northern	CBD to CBD	37,200
	• University Connector	Oak St.	10,600

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

**ADJUSTED 2010 DAILY LRT RIDERSHIP
FOR CANDIDATE CORRIDORS**



TABLE 1

SRF/BRW/SPRINGSTED

Corridor (1)	Terminus	Population			Transit Ridership		
		1988	2010	% Change	Bus 1988	LRT 2010	% Change
Minneapolis Northwest	85th Ave.	219,000	264,000	21%	14,600	22,600	55%
Minneapolis Northeast							
• Central	Northtown	194,500	234,000	20%	10,900	24,400	124%
• University	Northtown	194,500	234,000	20%	11,800	17,600	49%
St. Paul Northwest	I-694	178,000	196,000	10%	7,300	15,000	105%
St. Paul Northeast	White Bear Lake	140,000	154,000	10%	9,900	12,000	21%
St. Paul South to West	I-35E/I-494	82,000	154,000	88%	7,200	17,600	133%
Hiawatha	Mall of America	192,000	185,000	-4%	11,600	21,000	81%
	I-35E/I-494	215,000	259,000	20%	11,900	18,500	55%
Minneapolis South	Burnsville Center	428,000	507,000	18%	15,700	30,300	93%
Minneapolis Southwest	C.S.A.H. 4	175,000	207,000	18%	8,100	19,300	138%

(1) Comparable data not available for Central Corridor.

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

**COMPARISON OF PROJECTED GROWTH IN POPULATION AND TRANSIT RIDERSHIP
FOR CANDIDATE LRT CORRIDORS IN 20-YEAR PLAN**



TABLE 2

SRF/BRW/SPRINGSTED

Corridor ⁽¹⁾	Terminus	Transit Ridership Per 1,000 Population			Travel Time from Terminus		
		1988	2010	% Change	Bus 1988	LRT 2010	% Change
Minneapolis Northwest	85th Ave.	67	86	28%	43	35	19%
Minneapolis Northeast							
• Central	Northtown	56	104	86%	44	39	11%
• University	Northtown	61	75	23%			
St. Paul Northwest	I-694	41	77	88%	46	38	17%
St. Paul Northeast	White Bear Lake	71	78	10%	34	30	12%
St. Paul South to West	I-35E/I-494	88	107	22%	28	24	14%
Hiawatha	Mall of America	60	114	90%	32	27	16%
	I-35E/I-494	55	71	29%	46	38	17%
Minneapolis South	Burnsville Center	37	60	62%	50	43	14%
Minneapolis Southwest	C.S.A.H. 4	46	93	102%	39	32	18%

(1) Comparable data not available for Central Corridor.

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

**COMPARISON OF PROJECTED CHANGES IN TRANSIT RIDERSHIP AND TRAVEL TIMES
FOR CANDIDATE LRT CORRIDORS IN 20-YEAR PLAN**



TABLE 3

SRF/BRW/SPRINGSTED

Capital Costs

Capital costs were based on the cost estimates developed in the County comprehensive LRT plans. These base costs were adjusted as necessary to include vehicles, park/ride lots, right-of-way, a share of yards-and-shops cost, and a share of tunnel or downtown LRT system costs. The resulting capital costs are shown in Table 4. Vehicle costs were based on estimated vehicle requirements for each corridor. The number of park/ride spaces assumed for each corridor was based on a percent of daily riders. Right-of-way cost estimates were based on data available from the County comprehensive LRT plans.

Annual Operating and Maintenance Costs

Vehicle requirements for each corridor were estimated based on estimated hourly riders, distance, and LRT travel time. Operating and maintenance (O & M) costs for each corridor were estimated based on these vehicle requirements. Net cost savings for feeder bus service was estimated based on the projected decrease in number of bus miles. The resulting annual O&M costs for each candidate corridor are shown in Table 4. Operating and maintenance cost estimates were based on the following policies regarding LRT operation.

- Hours of Service

Weekday:	5:30 a.m. to 1:30 a.m.
Weekday Peak:	6:30 a.m. to 9:00 a.m. 3:30 p.m. to 6:00 p.m.
Evening:	6:00 p.m. to 10:00 p.m.
Late Evening:	10:00 p.m. to 1:30 a.m.
Weekend:	7:00 a.m. to Midnight

- Policy Headways

AM & PM Peak:	10 minutes (or 7 1/2 minutes if required)
Mid-day:	15 minutes
Evening:	30 minutes
Late Evening:	30 minutes

- Vehicle Capacity - 165 people seated/standing per vehicle

- Hourly Passenger Demand in Peak Direction

Peak Hour:	10 percent of daily LRT patronage
Mid-day:	5.5 percent of daily LRT patronage
Evening:	2 percent of daily LRT patronage

Corridor	Terminus	Length (Miles)	Capital Cost (Millions)	Annual Capital Cost (Millions)	Annual O & M Cost (Millions)	Total Annual Cost (Millions)
Minneapolis Northwest	63rd Ave.	10.2	\$130	\$11.7	\$5.2	\$16.9
	85th Ave.	13.3	166	15.0	7.7	22.7
Minneapolis NE - Central	Northtown	11.6	194	17.5	5.9	23.4
Minneapolis NE - University	Northtown	11.1	158	14.2	4.1	18.3
St. Paul Northwest	County Road C	4.1	99	8.9	2.6	11.5
	I-694	8.1	164	14.8	4.0	18.8
St. Paul Northeast	I-694	8.0	86	7.7	2.3	10.0
	White Bear Lake	11.3	117	10.6	3.4	14.0
St. Paul East	Radio Drive	8.2	165	12.7	1.3	14.0
St. Paul South	T.H. 110/I-494	5.7	126	11.3	2.6	13.9
	I-35E/I-494	10.1	176	15.8	5.2	21.0
South-Southwest	Cliff Road	13.2	211	19.0	4.3	23.3
Hiawatha	GSA Bldg.	7.4	105	9.5	1.3	10.8
	Lindbergh Terminal	8.7	166	14.9	2.0	16.9
	Humphrey Terminal	10.3	184	16.6	2.4	19.0
	Mall of America	12.1	204	18.4	4.5	22.9
	I-35E	12.2	173	15.6	3.6	19.2
Minneapolis South	82nd St.	9.5	167	15.0	4.1	19.1
	96th St.	11.4	194	17.4	5.3	22.7
	T.H.13	15.4	249	22.4	8.3	30.7
	Burnsville Center	17.8	281	25.3	11.2	36.5
Minneapolis Southwest	T.H. 169	9.0	112	10.1	3.0	13.1
	I-494	11.8	137	12.3	5.0	17.3
	C.S.A.H. 4	15.6	175	15.8	7.5	23.3
Central - University	CBD to CBD	10.1	162	14.6	5.7	20.3
Central - I-94	CBD to CBD	9.7	193	17.4	5.3	22.7
Central - BN	CBD to CBD	9.9	166	15.0	4.9	19.9
University Connector	Oak St.	2.6	55	4.9	1.1	6.0

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

**SUMMARY OF COSTS FOR CANDIDATE
LRT CORRIDORS IN 20-YEAR PLAN**



TABLE 4

SRF/BRW/SPRINGSTED

- Vehicles Per Train

The number of vehicles or cars per train was determined based on the estimated hourly ridership forecasts and operating headways as shown below:

<u>Headway (minutes)</u>	<u>Estimated Hourly Passengers</u>		
	<u>1 Vehicle Per Train</u>	<u>2 Vehicles Per Train</u>	<u>3 Vehicles Per Train</u>
7.5	1,320	2,640	3,960
10.0	990	1,980	2,970
15.0	660	1,320	1,980
30.0	330	660	990

- Operating Cost Per Vehicle Mile

One vehicle per train -	\$8.00
Two vehicles per train -	\$6.50
Three vehicles per train -	\$6.00

OTHER DATA

Other factors considered in the evaluation of candidate LRT corridors included transit dependent population, passenger miles, new transit riders and roadway congestion. Data for these factors were not uniformly available from the County comprehensive LRT plans. Thus, new data were assembled for the LRT Development and Financial Plan.

FRAMEWORK FOR DEVELOPING STAGING PLANS

Legislation requires that the LRT Development and Financial Plan include a five and ten-year staging plan for the implementation of Light Rail Transit. The five year plan is defined as construction starts between 1992 and 1996. The ten year plan is defined as construction starts between 1997 and 2001. The evaluation of candidate corridors and the development of staging alternatives involved the following steps:

- A maximum twenty-year plan was developed based on Metropolitan Council's cost-effectiveness threshold of \$4.00 total annual cost per annual patron. All corridors which met this threshold were considered candidates for construction during a twenty-year time period, assuming funding were to become available.
- A maximum ten-year plan was developed based on a cost-effectiveness threshold of \$3.00 total annual cost per annual patron. All corridors which met this threshold were considered candidates for construction during a ten-year time period, assuming funding were to become available.
- Staging alternatives were developed based on all evaluation criteria. Candidate corridors were ranked based on a composite of the technical evaluation criteria.
- Five and ten-year staging alternatives were developed based on timing constraints and financial limitations as well as technical evaluation criteria.

STAGING SCENARIOS

Staging scenarios were based on the evaluation criteria approved by the Joint LRT Advisory Committee and included the following:

- Maximize riders per route mile
- Maximize passenger miles
- Minimize annual cost per annual patron
- Minimize annual cost per passenger mile
- Maximize service to transit dependent populations
- Maximize new transit riders
- Priority to corridors with high roadway congestion
- Composite of technical evaluation criteria
- Construction readiness

The primary purpose in developing these staging scenarios was to provide a better understanding of the strengths of various corridors in relationship to specific LRT goals, individual evaluation criteria and the resulting tradeoffs. These staging scenarios were presented to the Joint LRT Advisory Committee for discussion and recommendations. The results of that process are described in Chapter 5 of this report.

CHAPTER 4

**FRAMEWORK FOR
EVALUATING FINANCIAL ALTERNATIVES**

CHAPTER 4 FRAMEWORK FOR EVALUATING FINANCIAL ALTERNATIVES

The process by which financial alternatives were identified and evaluated for the LRT Regional Development and Financial Plan is illustrated in Figure 6. This process focused discussion on several key financial policy issues including:

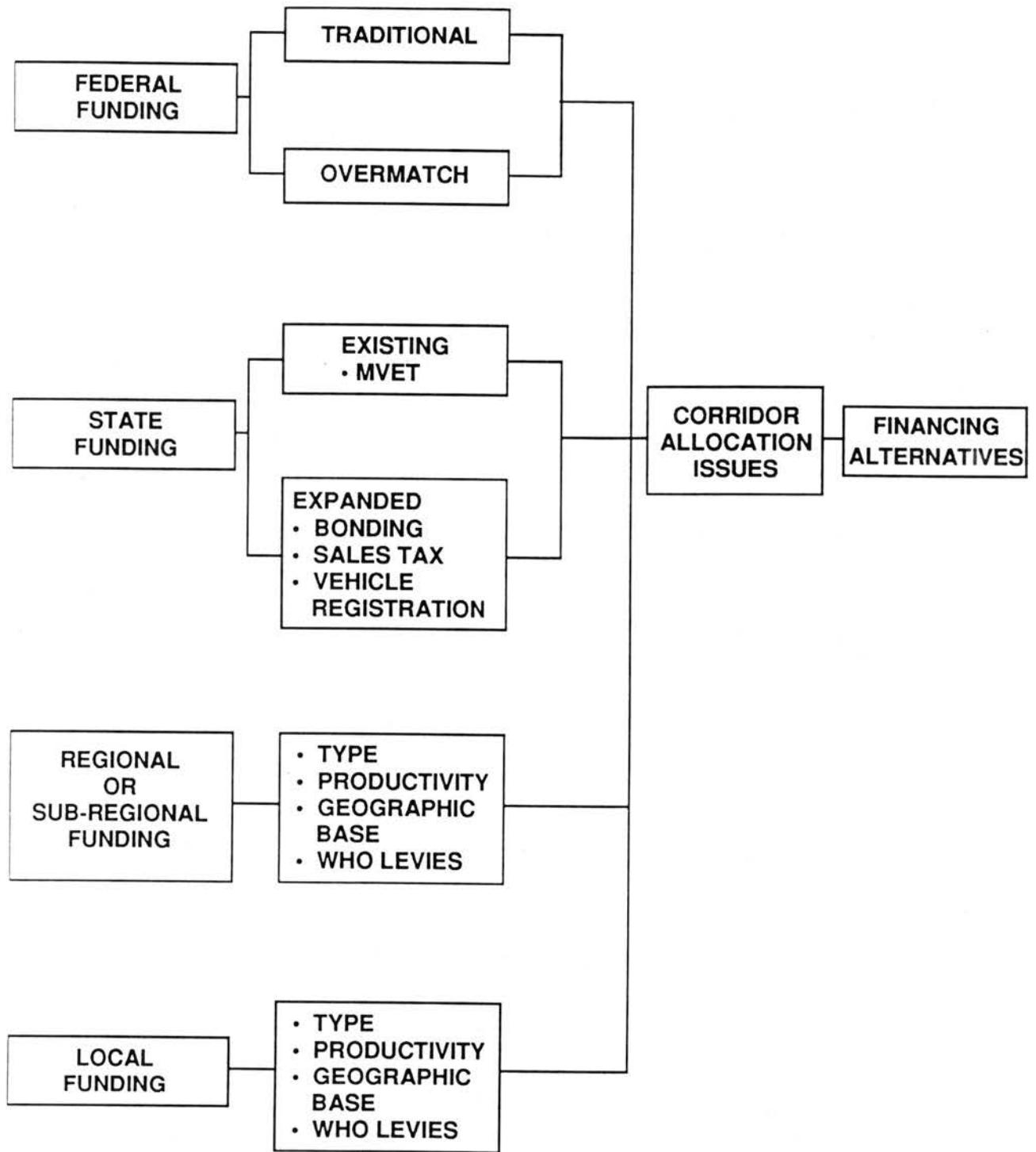
- The role of federal funding
- The role of state funding and the allocation of state funds
- The role of regional funding and the allocation of regional funds
- The role of local funding
- Alternative regional/local funding sources

The purpose of this chapter is to describe the background information developed on financial issues and to present the analysis of alternatives for regional/local financing of LRT.

FINANCIAL FORUM

A forum on Light Rail Transit financing was held on October 11, 1989 for members of the Regional Transit Board, the Joint LRT Advisory Committee, Regional Railroad Authorities, and other interested parties. Five panel members gave case studies of LRT systems in other cities and discussed major financing issues. Rail transit systems which were presented during the forum included San Diego, Portland, Sacramento, San Francisco, Baltimore, Washington D.C., Atlanta, Tampa and Dallas. Conclusions drawn by the panel members were:

- There is a legitimate financial role for federal, state, local and private interests. Every locality uses a different combination of funding sources and that combination changes over time.
- Federal funding should be pursued but care should be taken to avoid negative impacts on construction timetables.
- There must be an adequate regional tax base. Broad-based revenue sources are most desirable because they provide significant funds and are reliable.
- There must be a fair relationship between payments into the system and benefits received.
- Financial planning is needed for operations as well as for capital costs.
- It is important to concentrate on building a successful project using whatever funds are available. The first line must be one that is manageable and most likely to succeed. Future systems can then build upon the success and lessons of the first line.
- Public and political support is critical to obtaining adequate funding. Funding proposals which tie LRT with other transportation funding needs have been more successful than funding requests for LRT alone.



LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

**PROCESS FOR DEVELOPING
FINANCIAL ALTERNATIVES**



FIGURE 6

SRF/BRW/SPRINGSTED

CASE STUDIES

Four case studies were documented on the financial strategies of existing rail transit systems in other cities which have been funded with different types of local/regional taxes. The cities which were studied included Portland (payroll tax), San Diego (sales tax), San Francisco (property tax) and Tampa (combination property and sales tax). Observations from these case studies are summarized below:

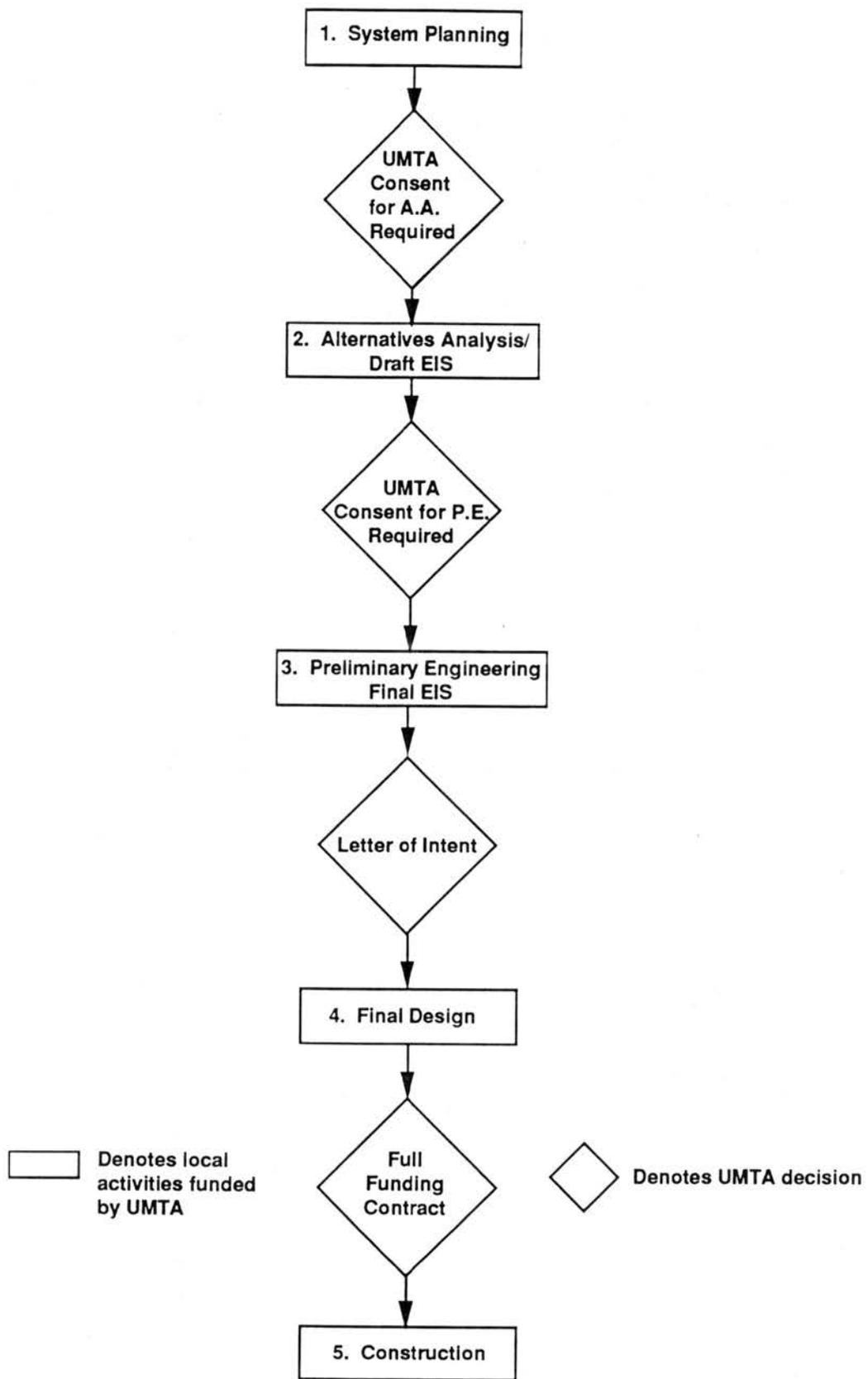
- In all areas, taxes for LRT are levied by a regional agency over a regional taxing district or the entire metropolitan area. Taxes are often collected by another unit of government (for example, state or county).
- Typically there is opposition to expanding the use of property taxes. There is also opposition by employers to the use of a payroll tax.
- Taxes for LRT that are packaged with other transportation funding are more widely supported.
- All cities have had to seek new or additional funding sources and new taxing authority.

FEDERAL FUNDING

Federal funding for LRT is provided by the Urban Mass Transportation Administration (UMTA). Many of the new LRT systems in operation in the United States received a high percentage of federal funding for initial construction. Generally, these projects received 75 percent federal funding with a 25 percent local match. However, federal funds for capital transit projects have declined significantly in recent years. UMTA currently has an annual expenditure of approximately \$400 million to fund 60-65 project requests with a total cost of \$28 billion. Hennepin County is expected to receive \$24 million from UMTA for their first phase LRT system, assuming the completion of federal environmental review requirements.

Recently, UMTA has proposed an "overmatch" program. Under this program, local governments provide more than the traditional 25 percent share. UMTA would give preference in its rating process to cost-effective projects that have a local share in excess of 25 percent. In turn, UMTA will process the grants more expeditiously and will reduce the amount and kind of pre-award and post-award review required for the project.

All projects receiving federal funding through UMTA must complete a federally approved Environmental Impact Statement and follow the UMTA project development process (see Figure 7). UMTA usually will consider funding requests for only one LRT corridor at a time. However, under the "overmatch" program, more than one corridor in a region may be considered if 30 percent or less federal funding is required. Typically, the federal process requires additional time to complete the necessary reviews and obtain the necessary approvals. Therefore, the potential for federal funding must be weighed against the additional costs and delays incurred by following the federal review process.



LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

UMTA PROJECT DEVELOPMENT PROCESS



FIGURE 7

SRF/BRW/SPRINGSTED

STATE FUNDING

Current state funding for LRT is from the Motor Vehicle Excise Tax (MVET) which is collected on sales of new and used vehicles. In Fiscal Year 1988, the State collected \$236 million in MVET revenues. Metro area transit received about \$16 million from this source, or approximately 7 cents for every dollar collected (see Figure 8). MVET funds are allocated to LRT projects on a 50/50 cost-sharing basis.

MVET funds, as well as some general revenue funds, are also used for funding transit operations in the metropolitan area.

REGIONAL/LOCAL FINANCIAL ALTERNATIVES

Currently, the only source of regional/local revenues for LRT is a property tax levy by the Regional Railroad Authorities. Each county has the authority to levy up to 0.4835 percent times a county's estimated market value. If all seven counties levied the maximum amount in 1990, the total revenue raised would be about \$40 million. Partial rebates to counties not initially served by LRT would reduce this total to \$30-32 million.

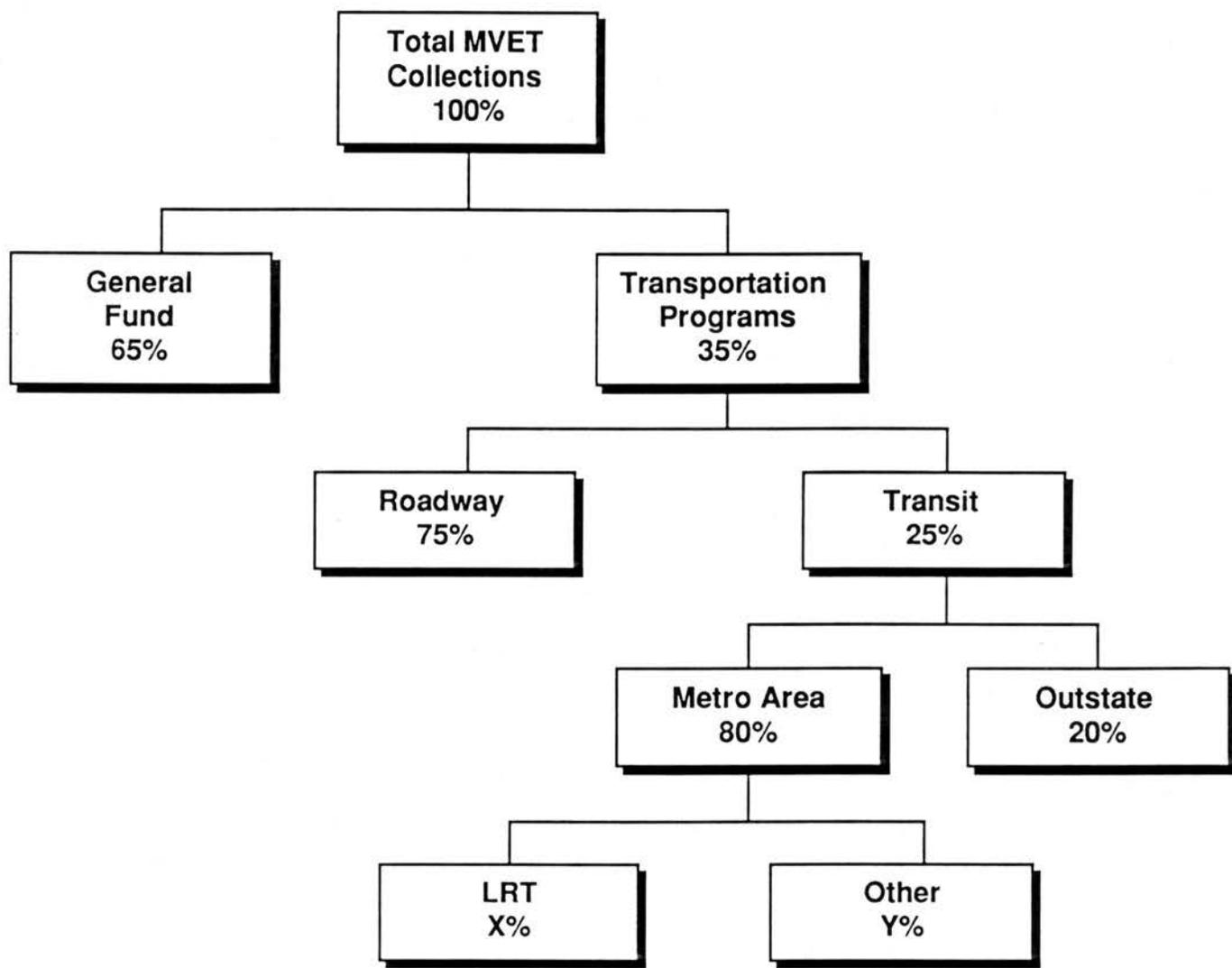
Other regional/local financial options were investigated to determine the amount of revenue which could be generated and the tax rates that would be required to finance the maximum 20-year plan (\$1.9 billion capital cost). Options investigated included property tax, sales tax, payroll tax, sales tax on gasoline, the use of fiscal disparities funds, and a combination of revenue sources. The following assumptions were made for purposes of evaluating these alternatives:

- While the regional goal is to maximize state and federal funding, it was assumed for analysis purposes that state and/or federal funding would cover 30 percent of capital costs; and the regional/local share of capital costs would be 70 percent for all stages.
- All capital costs were expressed in present day dollars. No inflation was assumed; any increase in costs or revenues represents real growth.
- The regional/local share of capital costs would be financed by bond issues issued at the start of three project construction stages.
- Bond issue assumptions were 20-year term, 8 percent interest rate, level annual debt service structure. Debt service requirements by year are shown in Table 5.

Using these assumptions, cash flow analyses were completed for each financing alternative resulting in a projection of future annual revenues and a calculation of the tax rates required over the course of the financing program.

Property Tax

As noted above, the Regional Railroad Authority property tax is the only source of regional/local revenue currently available for LRT. The RTB has the authority to levy property taxes for debt service and operation, but no authority to issue bonds without legislative action. Three options were considered for use of property tax: (1) increase in the Regional Railroad Authority levy, (2) use of the RTB's debt service levy to support bonding, and (3) use of 40 percent of the future growth of fiscal disparities.



FY 1988 MVET Collection: \$236 million
 MVET Collections to Metro Transit: \$16.5 million

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

MOTOR VEHICLE EXCISE TAX DISTRIBUTION FORMULA



FIGURE 8

SRF/BRW/SPRINGSTED

Project Staging		Yrs. 1-5	Yrs. 5-10	Yrs. 11-20	Totals
Project Costs in Yr. 0 Dollar		500,000,000	500,000,000	700,000,000	1,700,000,000
Fed. & State Share 30%		150,000,000	150,000,000	210,000,000	510,000,000
Combined Local Share 70%		350,000,000	350,000,000	490,000,000	1,190,000,000
Assumed Bond Issue Dates		01-Jan-92	01-Jan-97	01-Jan-2002	
Levy Year	Maturity Year	\$350,000,000 Bond Issue*	\$350,000,000 Bond Issue*	\$490,000,000 Bond Issue*	Totals
1991	1993	35,648,273			35,648,273
1992	1994	35,648,273			35,648,273
1993	1995	35,648,273			35,648,273
1994	1996	35,648,273			35,648,273
1995	1997	35,648,273			35,648,273
1996	1998	35,648,273	35,648,273		71,296,546
1997	1999	35,648,273	35,648,273		71,296,546
1998	2000	35,648,273	35,648,273		71,296,546
1999	2001	35,648,273	35,648,273		71,296,546
2000	2002	35,648,273	35,648,273		71,296,546
2001	2003	35,648,273	35,648,273	49,907,582	121,204,128
2002	2004	35,648,273	35,648,273	49,907,582	121,204,128
2003	2005	35,648,273	35,648,273	49,907,582	121,204,128
2004	2006	35,648,273	35,648,273	49,907,582	121,204,128
2005	2007	35,648,273	35,648,273	49,907,582	121,204,128
2006	2008	35,648,273	35,648,273	49,907,582	121,204,128
2007	2009	35,648,273	35,648,273	49,907,582	121,204,128
2008	2010	35,648,273	35,648,273	49,907,582	121,204,128
2009	2011	35,648,273	35,648,273	49,907,582	121,204,128
2010	2012	35,648,273	35,648,273	49,907,582	121,204,128
2011	2013		35,648,273	49,907,582	85,555,855
2012	2014		35,648,273	49,907,582	85,555,855
2013	2015		35,648,273	49,907,582	85,555,855
2014	2016		35,648,273	49,907,582	85,555,855
2015	2017		35,648,273	49,907,582	85,555,855
2016	2018			49,907,582	49,907,582
2017	2019			49,907,582	49,907,582
2018	2020			49,907,582	49,907,582
2019	2021			49,907,582	49,907,582
2020	2022			49,907,582	49,907,582
Totals		712,965,462	712,965,462	998,151,646	2,424,082,570

* Assumes interest rate of 8% and bond term of 20 years.

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

**SUMMARY OF PROJECTED CAPITAL COST
DEBT SERVICE REQUIREMENTS**



TABLE 5

SRF/BRW/SPRINGSTED

The principal advantage of the property tax is that it is currently available and could be used to finance up to \$350 million capital cost in a first stage system. However, current levies would not provide adequate funding beyond \$350 million.

Property taxes may be feathered; they can be assessed over a taxing district rather than whole counties; and collection/administration systems are already in place. However, current property tax levies would have to be tripled to cover the entire cost of the maximum 20-year plan.

Fiscal Disparities

Under Fiscal Disparities property taxes collected as a result of new commercial and industrial growth are put into a metropolitan pool and redistributed to counties, cities and school districts throughout the metropolitan area on the basis of population and tax base. Since 1980, the average annual dollar increase in the Fiscal Disparities Pool has been \$24 million. Since 1987, the average annual dollar increase has been \$33 million.

The Joint LRT Advisory Committee has proposed that 40 percent of future new growth contributions to the Fiscal Disparities Pool be dedicated to LRT construction. This would provide adequate funding for the maximum 20-year plan. State enabling legislation would be required.

Regional Sales Tax

Under this alternative, a regional sales tax would be assessed in the seven county metropolitan area and dedicated for LRT construction. While the tax would be levied at a uniform rate across the entire area, a method of redistribution to counties not directly benefited by LRT could be established. A regional sales tax would generate approximately \$186 million annually for each cent of tax levied. A tax rate of approximately 1/4 to 5/8 cent would be needed to fund the maximum twenty-year plan. While state enabling legislation would be required, a regional sales tax would generate enough revenue to be the sole revenue source for the regional/local share of LRT capital costs.

Sales Tax on Gasoline

Under this alternative, the current 6 percent sales tax would be levied on gasoline. This tax would raise an estimated \$72 million annually in the metro area or about \$12 million for each cent of tax. A tax rate of approximately 3-10 cents per dollar of sales would be needed to fund the entire maximum twenty-year plan. An opinion of the Minnesota Attorney General may be needed on whether a sales tax on motor fuel would violate the State constitutional requirement that all motor fuel tax revenues be used for highway purposes. While state enabling legislation would be required, this would be a large enough revenue source to serve as the major source of financing for the regional/local share of LRT capital costs.

Payroll Tax

Under this alternative, a payroll tax would be levied in the seven county metropolitan area. Taxes could be collected from employers or employees based on gross payroll. Taxes could cover employers in private, public, and nonprofit sectors; the self-employed could be covered by an equivalent self-employment tax. While it is assumed that a single uniform tax rate would be levied on all payrolls without floor or ceiling amounts, such conditions could be established. In addition, a redistribution system could be developed to return some portion of the revenues to those counties not benefiting directly from LRT. A regional payroll tax would generate approximately \$148 million annually (1989) for each 1/2 percent of tax levied. A tax rate of 1/8 percent to 3/8 percent per dollar payroll would be needed to fully fund the maximum twenty-year plan. While state enabling legislation would be required, the payroll tax would be large enough to serve as a sole revenue source for the regional/local share of LRT capital costs.

Summary of Regional/Local Financial Alternatives

Table 6 provides a summary of the characteristics of the regional/local financial alternatives described above. In addition, a comparison is made of the tax rates which would be required for each if 50 percent federal/state funding were assumed rather than 30 percent. Only property taxes can be easily levied within a taxing district that includes parts of counties. Only property taxes can be easily feathered; that is, assess different tax rates in different geographic areas. While other taxes must be collected on a regional basis, a formula could be developed for redistribution of some share of taxes to counties receiving marginal benefit from the early LRT lines.

	Property Tax	Regional Sales Tax	Sales Tax on Gasoline	Payroll Tax	Combined Property/Sales		Combined Property/Payroll		Fiscal Disparities
					Property Tax	Sales Tax	Property Tax	Payroll Tax	
Tax Levy at 30% Federal/State Funds									
Years 1-5	0.045%	0.22 cents	2.8 cents	0.125%	0.045%	0 cents	0.045%	0.000%	40% of growth
Years 6-10	0.074%	0.40 cents	5.6 cents	0.225%	0.037%	0.20 cents	0.037%	0.120%	40% of growth
Years 11-20	0.106%	0.63 cents	9.7 cents	0.375%	0.045%	0.45 cents	0.031%	0.250%	40% of growth
Tax Levy at 50% Federal/State Funds									
Years 1-5	0.032%	0.16 cents	2.0 cents	0.100%	0.032%	0 cents	0.032%	0.000%	40% of growth
Years 6-10	0.053%	0.30 cents	4.0 cents	0.180%	0.026%	0.15 cents	0.026%	0.085%	40% of growth
Years 11-20	0.076%	0.47 cents	6.9 cents	0.270%	0.022%	0.33 cents	0.022%	0.190%	40% of growth
Taxing Area	Metro Transit Taxing District	Metro Counties	Metro Counties	Metro Counties	Metro Transit Taxing District	Metro Counties	Metro Transit Taxing District	Metro Counties	Metro Counties
Feathering or Redistribution	Feather	Redistribute	Redistribute	Redistribute	Feather	Redistribute	Feather	Redistribute	Redistribute
Collection and Administration	RTB or Rail Authorities	"Piggyback" on state sales tax	"Piggyback" on state sales tax	New	RTB or Rail Authorities	"Piggyback" on state sales tax	RTB or Rail Authorities	New	New
Annual Revenue Generated	\$35 million at current levy	\$186 million at 1% tax	\$72 million at 6% tax	\$148 million at 1/2% tax	\$35 million at current levy	\$186 million at 1% tax	\$35 million at current levy	\$148 million at 1/2% tax	Cumulative Starting at \$18-21 Million
State Authorization Required	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes
Debt Service:	1-5 years	6-10 years	11-20 years						
30% Federal/State:	\$36 million	\$71 million	\$121 million						
50% Federal/State:	\$25 million	\$51 million	\$87 million						

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

COMPARISON OF REGIONAL/LOCAL FINANCIAL ALTERNATIVES



TABLE 6

SRF/BRW/SPRINGSTED

CHAPTER 5
REGIONAL LRT SYSTEM PLAN

CHAPTER 5 REGIONAL LRT SYSTEM PLAN

The Regional LRT Development and Financial Plan addresses both the staging and the financing of LRT construction in the Twin Cities over the next ten years. In addition, the Plan identifies a maximum twenty-year plan which includes corridors potentially suitable for LRT construction, should funds become available. This chapter summarizes recommendations on the Development Plan.

MAXIMUM TWENTY-YEAR PLAN

The recommended maximum twenty-year plan is shown in Figure 9. Table 7 summarizes the evaluation of candidate corridors for a maximum twenty-year LRT plan. After review of all evaluation criteria, it was determined that a threshold for inclusion in the twenty-year plan should be based on cost-effectiveness as measured by annual cost per annual patron. This measure was used for the twenty-year threshold because it is consistent with Metropolitan Council policies and it is the most inclusive of the evaluation criteria. The threshold for inclusion in the maximum twenty-year plan was \$4.00 total annual cost per annual patron.

Two corridors proposed in County comprehensive LRT Plans were initially identified as post-twenty-year corridors: the St. Paul East Corridor (I-94) into Washington County and the St. Paul South-Southwest Corridor (Shepard Road/I-35E) into Dakota County. These corridors have significantly higher projected costs per annual patron than other corridors. The Joint LRT Advisory Committee approved the maximum 20-year plan on November 1, 1989, but recommended addition of the St. Paul East Corridor to the maximum 20-year plan on November 29, 1989.

A number of other corridors were identified as appropriate for consideration of LRT beyond the twenty-year timeframe (see Figure 10). These corridors should be considered candidates for other improvements in transit services in the next twenty years and possible candidates for right-of-way preservation.

- Extension of Minneapolis Northeast corridor
- Extension of St. Paul Northeast corridor
- Extension of Minneapolis South corridor along the Soo Line Railroad or the Chicago-Northwestern Railroad into Scott County
- Extension of Minneapolis Southwest corridor to Carver County
- St. Paul Southwest corridor to airport
- East-Northeast corridor to Stillwater
- East-Southeast corridor to Cottage Grove and Hastings
- Minneapolis West (T.H. 55) corridor
- I-494 corridor
- T.H. 36 corridor

Corridor	Terminus	Total Daily Passengers	Daily Patrons per Route Mile	Daily Passenger Miles	Annual Cost per Annual Passenger ⁽²⁾	Annual Cost Per Annual Passenger Mile ⁽³⁾	Transit Dependent Population	New Transit Riders	Corridor Congestion
Minneapolis Northwest	63rd Ave.	20,800	2,000	145,000	\$2.50	\$0.35	37,000	6,000	Medium
	85th Ave.	22,600	1,700	169,000	\$3.10	\$0.40	41,000	6,000	Medium
Minneapolis NE-Central	Northtown	24,400	2,100	194,000	\$3.00	\$0.40	46,000	5,000	High
	Minneapolis NE-University	17,600	1,600	140,000	\$3.30	\$0.40	46,000	4,000	High
St. Paul Northwest	C.R. C	13,500	1,600	86,000	\$2.60	\$0.40	32,000	4,000	High
	I-694	15,000	1,200	101,000	\$3.80	\$0.55	38,000	5,000	High
St. Paul Northeast	I-694	10,800	1,400	79,000	\$2.90	\$0.40	30,000	4,000	Medium
	White Bear Lake	12,000	1,100	93,000	\$3.60	\$0.45	31,000	4,000	Medium
St. Paul East	Radio Dr.	9,000	1,000	67,000	\$5.19	\$0.65	19,000	3,000	Medium
St. Paul South	T.H. 110/I-494	14,600	2,600	113,000	\$3.00	\$0.40	22,000	4,000	High
	I-35E/I-494	17,600	1,700	139,000	\$3.80	\$0.45	22,000	4,000	High
South-Southwest	Cliff Road	11,500	900	107,000	\$6.30	\$0.70	13,000	4,000	Medium
Hiawatha	GSA Bldg.	17,000	2,300	78,000	\$2.00	\$0.45	43,000	2,000	Very High
	Lindbergh Terminal	17,800	2,000	83,000	\$3.00	\$0.65	43,000	2,000	Very High
	Humphrey Terminal	18,000	1,700	84,000	\$3.30	\$0.70	43,000	2,000	Very High
	Mall of America	21,000	1,700	103,000	\$3.40	\$0.70	56,000	3,000	Very High
	I-35E	18,500	1,500	94,000	\$3.30	\$0.65	46,000	3,000	Very High
Minneapolis South	82nd St.	26,700	2,800	169,000	\$2.20	\$0.35	90,000	5,000	Very High
	96th St.	28,200	2,500	181,000	\$2.50	\$0.40	94,000	5,000	Very High
	T.H.13	29,500	1,900	198,000	\$3.20	\$0.50	97,000	5,000	Very High
	Burnsville Center	30,300	1,700	209,000	\$3.80	\$0.55	98,000	5,000	Very High
Minneapolis Southwest	T.H. 169	16,200	1,800	85,000	\$2.50	\$0.50	46,000	5,000	Medium
	I-494	18,500	1,600	96,000	\$2.90	\$0.55	48,000	6,000	Medium
	C.S.A.H. 4	19,300	1,200	103,000	\$3.80	\$0.70	49,000	6,000	Medium
Central - University	CBD to CBD	41,900	4,100	205,000	\$1.60	\$0.30	109,000	7,000	High
Central - I-94	CBD to CBD	42,500	4,400	208,000	\$1.70	\$0.35	109,000	7,000	High
Central - BN	CBD to CBD	37,200	3,800	182,000	\$1.70	\$0.35	109,000	7,000	High
University Connector ⁽¹⁾	Oak St.	10,600	4,100	52,000	\$1.80	\$0.35	N.A.	2,000	Very High

⁽¹⁾ University Connector is included in Central Corridor Alignments.

⁽²⁾ Rounded to nearest ten cents.

⁽³⁾ Rounded to nearest five cents.

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

EVALUATION OF CANDIDATE LRT CORRIDORS FOR MAXIMUM 20-YEAR PLAN



TABLE 7

SRF/BRW/SPRINGSTED

MAXIMUM TEN-YEAR PLAN

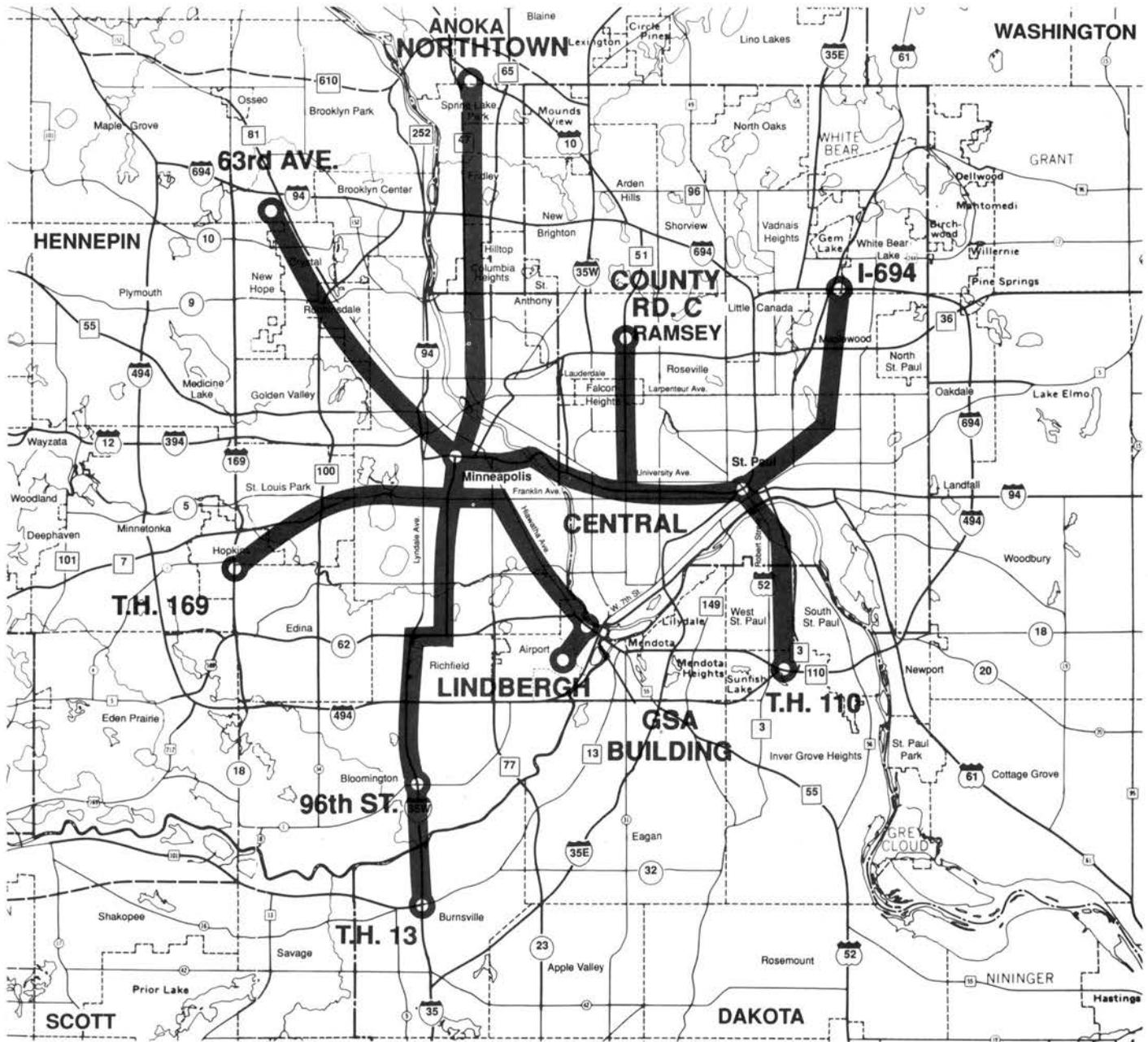
The recommended maximum ten-year plan is shown in Figure 11. The Joint LRT Advisory Committee approved this plan with the recommended extension of the Minneapolis South Corridor to T.H. 13. Table 8 summarizes the evaluation of candidate corridors for a maximum ten-year LRT plan. After review of all evaluation criteria, it was determined that a threshold for inclusion in the ten-year plan should be based on cost-effectiveness as measured by annual cost per annual patron. This measure was used for the ten-year threshold because it is consistent with Metropolitan Council policies and it is the most inclusive of the evaluation criteria. The threshold for inclusion in the maximum ten-year plan was \$3.00 total annual cost per annual patron. Funding availability will determine how many of the corridors can actually be built within the ten year planning period.

FIVE AND TEN YEAR STAGING PLAN

The primary purpose of staging is to assure that planned capital investments are consistent with expected revenues. Three alternative approaches to staging construction of LRT corridors were developed for discussion by the Regional Transit Board, without recommendation: (1) Staging based on a composite of evaluation criteria (see Table 9), (2) the recommendations of the Joint LRT Advisory Committee (see Appendix B), and (3) staging based on construction readiness.

The recommended staging approach does not assign specific corridors to specific time periods. Rather, it groups corridors based on technical criteria and establishes an approach for staged construction based on ability to get a corridor ready for construction and availability of financing. The premises of this approach are:

- The technical distinctions among several of the candidate corridors are small, making it difficult to clearly define a five-year plan on the basis of technical criteria alone.
- Each LRT corridor in the maximum ten-year plan has potential problem areas that could cause delay in the ability to initiate construction (see Table 10).
- It is common to "over-program" for the short-range component of a plan because of the difficulty in accurately predicting construction schedules (FAU funds are a good example of this.)
- In many cases, the ability to implement is the deciding factor for transportation investments within a five-year period.
- Staging on the basis of construction readiness can create an incentive for the timely completion of the required engineering process (Interstate Discretionary funds are an example of this).



Miles



LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

MAXIMUM 10-YEAR LRT PLAN



FIGURE 11

SRF/BRW/SPRINGSTED

Corridor	Terminus	Total Daily Riders	Riders per Route Mile	Daily Passenger Miles	Annual Cost per Annual Patron	Annual Cost Per Annual Passenger Mile	Transit Dependent Population	New Transit Riders	Degree of Congestion
Minneapolis Northwest	63rd Ave.	20,800	2,000	145,000	\$2.50	0.35	Moderate	High	Medium
Minneapolis Northeast									
Central	Northtown	24,400	2,100	194,000	\$3.00	0.40	Moderate	High	High
University	Northtown	17,600	1,600	140,000	\$3.30	0.40	Moderate	Moderate	High
St. Paul Northwest	C.R. C	13,500	1,600	86,000	\$2.60	0.40	Moderate	Moderate	High
St. Paul Northeast	I-694	10,800	1,400	79,000	\$2.90	0.40	Moderate	Moderate	Medium
St. Paul South	T.H. 110/I-494	14,600	2,600	113,000	\$3.00	0.40	Low	Moderate	High
Hiawatha	GSA Bldg.	17,000	2,300	78,000	\$2.00	0.45	Moderate	Low	Very High
	Lindbergh Terminal	17,800	2,000	83,000	\$3.00	0.65	Moderate	Low	Very High
Minneapolis South	82nd St.	26,700	2,800	169,000	\$2.20	0.35	High	High	Very High
	96th St.	28,200	2,500	181,000	\$2.50	0.40	High	High	Very High
	T.H. 13	29,500	1,900	198,000	\$3.20	0.50	High	High	Very High
Minneapolis Southwest									
	T.H. 169	16,200	1,800	85,000	\$2.50	0.50	Moderate	High	Medium
Central BN									
University	CBD to CBD	37,200	3,800	182,000	\$1.70	0.35	High	High	High
I-94	CBD to CBD	41,900	4,100	205,000	\$1.60	0.30	High	High	High
University Connector	CBD to CBD	42,500	4,400	208,000	\$1.70	0.35	High	High	High
	Oak St.	10,600	4,100	52,000	\$1.80	0.40	High	Low	Very High

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

COMPOSITE OF EVALUATION CRITERIA FOR MAXIMUM TEN-YEAR PLAN



TABLE 8

Corridor	Terminus	Daily Riders per Route Mile	Daily Passenger Miles	Annual Cost per Annual Patron	Annual Cost per Annual Pass. Mile	Transit Dependent Population	New Transit Riders	Degree of Congestion	Combined Ranking	Composite Ranking
Minneapolis Northwest	63rd Ave.	7.5	5	6	3	8	2	10	41.0	5
Minneapolis Northeast-Central	Northtown	6	2	11	4.5	4.5	4.5	6.5	39.0	4
St. Paul Northwest	County Rd. C	10	7	7	8	9	8	6.5	55.5	9
St. Paul Northeast	I-694	11	10	8	7	10	8	10	64.0	11
St. Paul South	T.H. 110	3	6	9.5	4.5	11	8	6.5	48.5	7
Hiawatha	GSA	5	11	2	9	7	10.5	2.5	47.0	6
	Lindbergh	7.5	9	9.5	11	6	10.5	2.5	56.0	10
Minneapolis South	82nd St.	2	4	3	2	3	4.5	2.5	21.0	2
Minneapolis South	96th St.	4	3	4	6	2	4.5	2.5	26.0	3
Minneapolis Southwest	T.H. 169	9	8	6	10	4.5	4.5	10	51.5	8
Central	CBD to CBD	1	1	1	1	1	1	6.5	12.5	1

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

**RANKING OF EVALUATION CRITERIA
FOR MAXIMUM TEN-YEAR PLAN**



TABLE 9

Corridor	Potential Problems
Minneapolis Northwest	Station locations and design, environmental problems and mitigation, and park impacts
Minneapolis Northeast	Alignment decision, railroad coordination and right-of-way acquisition and other right-of-way acquisition for stations/park-and-ride
St. Paul Northwest	Environmental problems, mitigation, and right-of-way acquisition
St. Paul Northeast	Railroad coordination and railroad right-of-way acquisition
St. Paul South	Environmental problems, station locations, right-of-way acquisition, and coordination with roadway
Hiawatha	Railroad coordination, railroad right-of-way acquisition and coordination with roadway construction through Minnehaha Park
Minneapolis South	Selection of preferred transit mode in I-35W EIS, coordination with roadway, environmental impacts, and right-of-way requirements
Minneapolis Southwest	Railroad coordination, railroad right-of-way acquisition and environmental mitigation
Central	Alignment decision, construction of roadways to replace capacity lost due to Washington Avenue bridge closure, environmental problems and park takings

LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

**POTENTIAL PROBLEMS THAT COULD DELAY
IMPLEMENTATION OF LRT IN PLANNED CORRIDORS**



TABLE 10

The following staging approach is recommended based on these premises (see Figure 12).

Group A (\$340 million):

- Yard/Shop
- Minneapolis tunnel
- St. Paul downtown loop
- Central Corridor (CBD to CBD)

Group A represents the core of the regional LRT system and would receive first priority for regional funds. The core system should be built as expeditiously as possible and be funded 100 percent with regional and state funds. Construction of elements in Group A could proceed immediately. A sunset provision would allow construction to proceed on other corridors if the Central Corridor is significantly delayed.

Group B (\$630 million):

- Hiawatha Corridor to GSA Building
- Minneapolis Northeast to Northtown (Central alignment)
- Minneapolis Northwest to 63rd Avenue
- Minneapolis South to 96th Street
- St. Paul South to T.H. 110

Group B corridors (no priority among corridors) could proceed to construction on a first ready basis if all conditions for approval are met. Some of these corridors would also be good candidates for application for federal funding. Implementation of LRT in the Minneapolis South Corridor should be in conjunction with the reconstruction of I-35W.

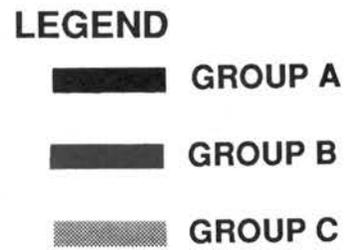
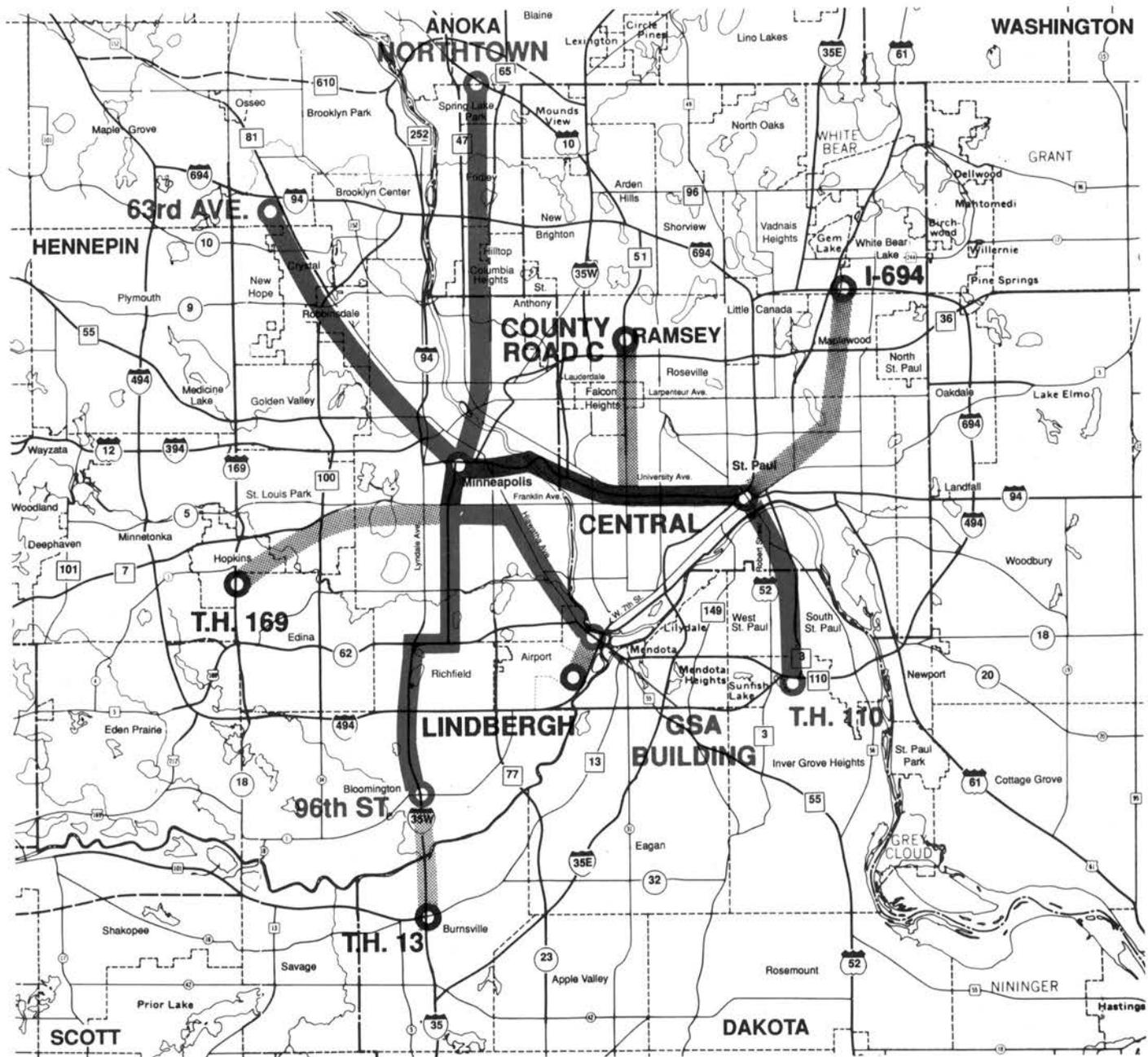
Group C (\$360 million):

- Minneapolis Southwest to T.H. 169
- St. Paul Northeast to I-694
- St. Paul Northwest to County Road C
- Extension of Hiawatha to Lindbergh Terminal
- Extension of Minneapolis South to T.H. 13

Group C corridors (no priority among corridors) could complete 10 percent preliminary engineering and EIS, and could acquire right-of-way.

Group D (remainder of maximum 20-year plan):

This group would include all extensions to corridors in the Maximum Ten-Year Plan and all remaining corridors in the Maximum Twenty-Year Plan. Corridors would be suitable for generalized alignment studies, comprehensive planning and right-of-way preservation.



LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

LRT STAGING PLAN



FIGURE 12

TIMING OF CONSTRUCTION

While initial analysis indicates that all corridors within the ten year plan can be operated cost-effectively and can result in benefits to the Twin Cities metropolitan area, final design and environmental reviews have not been completed for any corridor. One of several steps in the implementation process could delay a particular corridor. In order to minimize the cost consequences of delay, it will be important to proceed as efficiently as possible once construction begins. Therefore, ease of implementation should be a major factor in determining when corridors are constructed.

Construction would be permitted to begin on any corridor within Group A or B when it meets the following conditions:

- All environmental approvals are obtained.
- Full funding is available to support the corridor's capital cost.
- Final design is completed and has received all required approvals.
- The corridor can be operated efficiently in coordination with other LRT lines constructed or under construction.
- Existing transit services are coordinated within the corridor.
- All right-of-way has been acquired or is controlled by the implementing agency.

REVISIONS TO STAGING PLAN AND PRIORITIES

A provision is needed for periodic review of corridor staging priorities as circumstances change and more information becomes available from detailed engineering studies. Therefore, the LRT Development and Financial Plan will be reviewed annually and formally updated every two years as part of RTB's update of the Five Year Transit Plan. Changes in corridor priorities will be based on the following conditions:

- Selection of corridor alignment.
- Outcome of environmental review process.
- Significant changes in cost.
- Significant changes in patronage forecasts.
- Any other significant changes in projected performance of the corridor.

CHAPTER 6
REGIONAL LRT FINANCIAL PLAN

CHAPTER 6 REGIONAL LRT FINANCIAL PLAN

There are several questions regarding the financing of Light Rail Transit which the Development and Financial Plan attempts to answer for the Twin Cities metropolitan area. These are:

- Should the region pursue Federal funding?
- Should the State participate in funding LRT and, if so, how should State funds be allocated to candidate corridors?
- Should local/regional revenues be used, and if so, what are the best sources of local/regional funds?
- Over what geographic area should local/regional taxes be collected, if local revenues are used?
- Who should levy local taxes if local/regional revenues are used?
- How should LRT operations be funded?

The purpose of this chapter is to present a discussion of these issues and recommendations on LRT financing in the Twin Cities.

ROLE OF FEDERAL FUNDING

Federal funding is very beneficial to the metropolitan area and the State of Minnesota, allowing more flexibility in the expenditure of limited state, regional and local funds. Federal funds are presently very limited for transit capital projects and, therefore, there is significant competition for available federal dollars. However, a new Surface Transportation Act will be passed in 1992 and funding for transit projects could change significantly. It is generally in the region's best interest to maximize federal funding. Completion of the federal requirements and application for federal funding would not preclude the use of local funds for a corridor if local funds became available first. However, not completing the federal requirements would automatically preclude a corridor from use of federal funds. Therefore, the following guidelines have been established regarding the role of federal funding:

- It is the goal of the region to obtain at least 20 percent federal funding for the ten-year LRT plan.
- Federal funds should be sought by the RTB for individual corridors which are strongest in meeting federal eligibility requirements to ensure the best chance to maximize federal funding.
- The following corridors should pursue the federal environmental review requirements to assure eligibility for federal funding:
 - Hiawatha Corridor--Request that UMTA approve the existing Federal Highway Administration (FHWA) EIS.

- Northeast Corridor--Pursue an Alternatives Analysis/Draft EIS (AA/DEIS) with a completion goal of 18-20 months from initiation.
- I-35W--Complete the federal EIS currently being prepared with UMTA as a cooperating agency.
- The Central Corridor and the two downtown distribution systems should not pursue federal funding to ensure the earliest possible implementation of the highest priority corridor. This would be subject to modification dependent upon changing federal regulations.
- Construction should proceed on Group A and B corridors without waiting for federal funds if state or regional monies become available to fully fund Group A and B corridors.

ROLE OF STATE FUNDING

All corridors in the ten-year plan have potential benefits to the metropolitan area and, therefore, to the State of Minnesota. All corridors in the ten year plan should be eligible for state funding unless it is a local decision to accelerate the construction of a corridor using 100 percent local dollars. Current state funding practices for allocating state funds is based on a 50 percent state match to local and/or regional funds.

The RTB currently funds transit operations with legislative appropriations, including MVET monies, and the RTB property tax levy. The current levy is approximately 2 mills across the RTB taxing district. It generates approximately \$56 million per year. Current annual state funding is approximately \$25 million and includes general funds and MVET monies. LRT operation of the ten-year plan, assuming a farebox recovery rate of 65 percent, will increase net operating costs by approximately \$12 million. Additional state and regional funds will be needed to fund increased operating costs.

Therefore, the following guidelines were developed with regard to the role of state funding.

- The goal of the region will be to obtain at least 30 percent state funding for the ten-year LRT plan.
- MVET funds should be increased for purposes of operating LRT along with an increase in the RTB property tax levy as needed to supplement MVET funds for LRT operation.
- The Yards-and-shops should be given first priority in the allocation of available state funds.
- Corridors which meet technical performance thresholds and have obtained the necessary environmental and design approvals should be eligible for up to 50 percent combined federal and state matching funds.
- State funds should be allocated to individual corridors on a sliding scale relationship to federal funds, with the goal of achieving a 30-50 percent total federal-state funding share for all corridors.

ROLE OF REGIONAL FUNDING

Since the proposed ten-year LRT plan is a regional system and would benefit the entire region, it is appropriate that it be funded with a regional source of revenue. However, the only current source of funding for LRT is a county property tax. This source of revenue is limited and not adequate to fund the maximum ten-year plan. Any of the proposed revenue sources could support the proposed ten-year plan. However, all would require legislative authorization and broad public support. Since some counties will receive less direct benefits than others, it would be desirable to feather regional taxes or redistribute some portion of the taxes collected to outlying counties for other transportation or transit purposes. Therefore, the following policies were established regarding the role of regional funding for LRT construction.

- The RTB will seek authorization from the Legislature for a regional tax to support the construction of LRT. That tax should be based on the following priorities: (1) regional sales tax for broad-based transportation services, (2) 40 percent growth of fiscal disparities (commercial/industrial property tax), and (3) RTB bonding authority (supported by RTB debt service levy).
- Any regional tax should include a method for feathering (varying tax rates) or redistribution of taxes for those counties which contribute taxes but receive limited short to mid-term benefits from the system.
- The request for authorization of any new regional tax for LRT should be tied to a funding package for other transportation/transit needs in the metropolitan area.
- Until a new regional revenue source is authorized, the RTB will seek bonding authority supported by the RTB property tax levy.
- Regional funds will be allocated to individual corridors based on priorities established in the LRT Development and Financial Plan.
- If federal or state monies are not available, the Yards-and-shops will be funded 100 percent with regional funds. Advance funding for yards-and-shops by a regional railroad authority should be reimbursed.

ROLE OF LOCAL FUNDING

As noted above, the proposed LRT system will be a regional system serving the entire metropolitan area. Therefore, it is appropriate over time to move toward a regional funding base. However, at the present time the only source of funding for LRT construction is the property tax levy authority of the Regional Railroad Authorities. The Regional Railroad Authorities also have the authority to plan, design and construct LRT. While some counties are more willing to exercise their levy authority than others, it is appropriate for individual counties to retain some authority to fund additional LRT facilities within their jurisdictions. Therefore, the following policies were established with regard to the role of local funding.

- The Regional Railroad Authorities should retain their current property tax levy authority for LRT.

- Regional Railroad Authorities may construct any LRT corridor within the maximum ten year plan using 100 percent county funds if appropriate environmental and design approvals including approval from the RTB have been obtained.
- If no regional funds are available, the Regional Railroad Authorities may proceed with construction of approved corridors in Group A or B using 100 percent county funds. Advance funding for construction would be reimbursed to the railroad authorities for the budgeted amount of construction if and when a regional revenue source is authorized.

ROLE OF PRIVATE FINANCING

While direct private financing typically accounts for a small percentage of overall capital LRT funding, it can be an important source of financing for LRT stations where direct benefit to commercial properties can be documented. Examples of approaches which might be taken include impact fees, special assessment districts, joint development, cost-sharing for special design features, and land contributions. Therefore, the following policy was established regarding the role of private financing of LRT construction.

- The Regional Railroad Authorities should aggressively seek private participation in the funding of LRT construction, particularly for transit stations.

APPENDIX A
LIST OF COMMITTEE MEMBERS

JOINT LRT ADVISORY COMMITTEE

John Derus, Chair
Hennepin County Regional Railroad Authority

Diane Ahrens
Ramsey County Regional Railroad Authority

Donald Chapdelaine
Dakota County Regional Railroad Authority

Carolyn Cochrane
Metropolitan Transit Commission

Darryl Durgin
Minnesota Department of Transportation

Dan Erhart
Anoka County Regional Railroad Authority

Earl Gnan
Carver County Regional Railroad Authority

Ruby Hunt
Ramsey County Regional Railroad Authority

John Keefe
Hennepin County Regional Railroad Authority

Bill Koniarski
Scott County Regional Railroad Authority

Edward Kranz
Regional Transit Board

Russ Larkin
Washington County Regional Railroad Authority

Paul McCarron
Anoka County Regional Railroad Authority

Glenn Olson
Metropolitan Transit Commission

Sam Sivanich
Hennepin County Regional Railroad Authority

STAFF COMMITTEE

Judith Hollander, Chair
Regional Transit Board

Beverly Auld
Metropolitan Transit Commission

Howard Blin
Regional Transit Board

Larry Bousquet
Washington County Regional Railroad Authority

Kathy DeSpiegelare
Ramsey County Regional Railroad Authority

Natalio Diaz
Metropolitan Council

Roger Gustafson
Carver County Regional Railroad Authority

Randy Halvorson
Minnesota Department of Transportation

Brad Larson
Scott County Regional Railroad Authority

Allen Moe
Dakota County Regional Railroad Authority

Ken Stevens
Hennepin County Regional Railroad Authority

Tim Yantos
Anoka County Regional Railroad Authority

APPENDIX B

REPORT OF THE JOINT LRT ADVISORY COMMITTEE

**REPORT OF THE
JOINT LRT ADVISORY COMMITTEE
TO THE REGIONAL TRANSIT BOARD**

LRT DEVELOPMENT AND FINANCIAL PLAN

DECEMBER 6, 1989

**APPROVED FOR SUBMITTAL TO THE
POLICY COMMITTEE OF THE
REGIONAL TRANSIT BOARD
ON DECEMBER 6, 1989**

REPORT OF THE JOINT LRT ADVISORY COMMITTEE
LRT DEVELOPMENT AND FINANCIAL PLAN

The following motions have been passed by the Joint LRT Advisory Committee and, in combination, represent the Committee's recommendations to the Regional Transit Board on the LRT Development and Financial Plan.

TWENTY-YEAR LRT PLAN

1. That the Joint LRT Advisory Committee approve the Maximum 20-Year Regional Light Rail Transit Plan, as presented in Briefing Paper #9, with the understanding that the plan is subject to review and modification as further information becomes available. (Exhibit 1)
2. That the St. Paul East (I-94) corridor be included in the 20-Year LRT Plan.
3. That the Joint LRT Advisory Committee approve the post 20-year LRT corridors as presented in Briefing Paper #6 with the four additional corridors suggested by committee members: I-94 East and Ramsey County Northeast extension (both pending final action by Washington County), east/west corridor north of Highway 55 in Hennepin County, and either the corridor along the Soo Line or the corridor along the Chicago-Northwestern in Scott County. (Exhibit 2)
4. That Mn/DOT, counties and municipal governments be requested to give special attention to the needs of LRT in all highway construction, and in particular in bridge construction, in accordance with the LRT Development and Financial Plan.

TEN-YEAR PLAN

1. That the Joint LRT Advisory Committee adopt the proposed Maximum Ten-Year Plan, without corridor ranking, as presented in Briefing Paper #11. (Exhibit 3)
2. That an average capital investment of approximately \$130 million per year be assumed for purposes of staging LRT construction during the first ten-year period.

STAGING PLAN

1. That the following system components and corridor segments be included in the five-year Stage 1 plan: Minneapolis and St. Paul downtown LRT systems; yards and shops; Central Corridor (CBD to CBD); Hiawatha Corridor to GSA Building; Minneapolis Northeast--Northtown (Central Avenue alignment); St. Paul South to 110; Hennepin County Northwest; and Hennepin County Southwest. (Exhibit 4)

2. That the following corridor segments be included in the Stage 2 (1998-2002) plan:
 - Minneapolis South to T.H. 13 (subject to decision on preferred alternative in the I-35W EIS)
 - St. Paul Northeast to I-694
 - St. Paul Northwest to County Road C
 - Hiawatha to Lindbergh Terminal
3. That construction may begin on a corridor if it meets the following conditions: all environmental approvals are obtained; full funding is available to support the corridor's capital cost; final design is completed and has received all required approvals; the corridor can be operated efficiently in coordination with other lines constructed or under construction; and existing transit services are coordinated within the corridor.

FEDERAL AND STATE FUNDING:

1. That the Joint LRT Advisory Committee recommend that federal funding continue to be pursued, where appropriate, while proceeding to pursue state and local funding to avoid possible delays by the federal government.
2. That it will be the goal of the region to obtain 20 percent federal and 30 percent state funding for the ten-year LRT plan.
3. That, to be conservative, an assumption of 30 percent combined federal and state funding be used for estimating necessary regional and local revenue contributions and setting local/regional levies.
4. That federal funds be sought by the RTB for individual corridors which are strongest in meeting federal eligibility requirements to assure the best chance to maximize federal funding.
5. That the following corridors pursue the federal environmental review requirements to assure eligibility for federal funding:
 - Hiawatha Corridor - Request that UMTA approve the existing Federal Highway Administration (FHWA) EIS.
 - Minneapolis Northeast Corridor - Pursue an Alternatives Analysis/Draft EIS (AA/DEIS) with a completion goal of 18-20 months from initiation.
 - I-35W - Complete the federal EIS which is currently being prepared with UMTA as a cooperating agency.
6. That the Central Corridor and the two downtown distribution systems not pursue federal funding to ensure the earliest possible implementation of the highest priority corridor. The above would be subject to modification dependent upon changing federal regulations.

7. That construction should proceed on Stage 1 corridors without waiting for federal funds if state or regional monies become available to fully fund the Stage 1 system.
8. That state funds be allocated to individual corridors on a sliding scale relationship to federal funds.
9. That corridors that meet technical performance thresholds and have obtained the necessary environmental and design approvals be eligible for up to 50 percent combined federal and state matching funds.
10. That the yards and shops be given first priority in the allocation of available state funds.

REGIONAL FUNDING:

1. That the RTB seek authorization from the legislature for a regional tax to support the construction of LRT. That tax should be based on the following unranked priorities set by the LRT Advisory Committee: 40 percent of growth or whatever dollar amount is needed, whichever is less, of fiscal disparities (commercial/industrial property tax), sales tax on gasoline (if constitutional), and regional sales tax.
2. That any regional tax include a method for feathering or redistribution of taxes for those counties that contribute taxes but receive limited short- to mid-term benefits from the system.
3. That the request for authorization of any new regional tax for LRT be tied to a funding package for other transportation/transit needs in the metropolitan area.
4. That until a new regional revenue source is authorized, the RTB seek bonding authority supported by the RTB property tax levy.
5. That regional funds be allocated to individual corridors based on priorities established in the LRT Development and Financial Plan.
6. That, if federal funds or state monies are not available, the yards and shops be funded 100 percent with regional funds. Advance funding for yard and shops by any regional railroad will be reimbursed.

FUNDING BY REGIONAL RAILROAD AUTHORITIES:

1. That levying by regional railroad authorities continue if and when chosen to use by a railroad authority.
2. That the Regional Railroad Authorities retain their current property tax levy authority for LRT.
3. That Regional Railroad Authorities may construct any LRT corridor within the maximum ten-year plan if appropriate environmental and design approvals, including approval from the RTB, have been obtained.

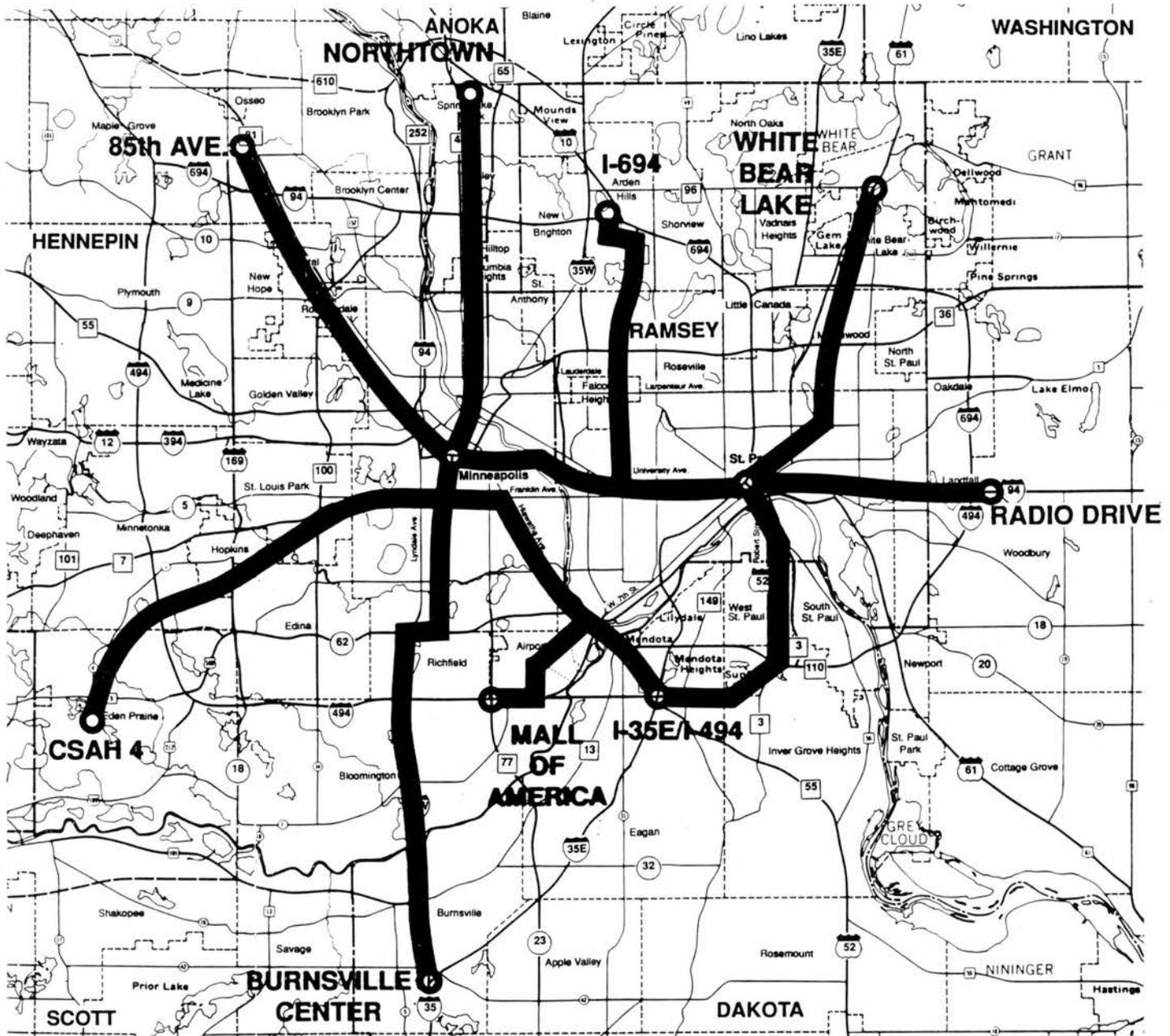
4. That if no regional funds are available, the regional railroad authorities may proceed with construction of approved Stage 1 corridors using 100 percent county funds. Advance funding for Stage 1 construction would be reimbursed to the regional railroad authorities for the budgeted amount of construction if and when a regional revenue source is authorized.
5. That the regional railroad authorities aggressively seek private participation in the funding of LRT construction, particularly for transit stations.

FUNDING FOR LRT OPERATIONS

1. That MVET funds be increased for purposes of LRT operation.
2. That RTB increase its property tax levy as needed to supplement MVET funds for LRT operation.

UPDATE OF LRT DEVELOPMENT AND FINANCIAL PLAN

1. The LRT Development and Financial Plan should be reviewed and priorities should be reevaluated every year as part of the RTB's update of the Five-Year Transit Plan.
2. Changes in corridor priorities should be based on the following conditions: selection of corridor alignment, outcome of environmental review process, significant changes in cost, significant changes in patronage forecasts, and any other significant changes in projected performance of the corridor.



LIGHT RAIL TRANSIT DEVELOPMENT AND FINANCIAL PLAN

**MAXIMUM 20-YEAR LRT PLAN
RECOMMENDED BY THE JOINT LRT
ADVISORY COMMITTEE**



EXHIBIT 1

APPENDIX C

**ADVANTAGES AND DISADVANTAGES
OF SUBSURFACE CONSTRUCTION**

COMPARISON OF TUNNEL AND AT-GRADE ALTERNATIVES FOR CENTRAL AREA OF MINNEAPOLIS

The Hennepin County Regional Railroad Authority has completed a detailed evaluation of tunnel and at-grade alignment alternatives for the Central Area of the City of Minneapolis. This work is reported in the Draft EIS dated November 7, 1989, and also reported in a Technical Memorandum.

The study area for the comparison was defined by a set of common points on each alternative. Those points include:

- The Lyndale station on the Southwest Corridor
- The Chicago station on the Hiawatha Corridor
- The Portland station on the University Connector
- The Emerson station on the Northwest Corridor

The following tables present a summary of the evaluation of the tunnel and at-grade alternatives. The main points of comparison are:

- The tunnel capital cost is \$105 million more than the at-grade alternative. The construction cost of the tunnel from portal to portal is approximately \$150 million.
- The at-grade alternative on Nicollet between 29th Street and the Convention Center would ultimately have to accommodate three LRT lines (Southwest, I-35W, and Hiawatha) and would create significant traffic and access problems.
- Locating three LRT lines at-grade on Nicollet with slow speed operation is not consistent with the transit philosophy in the rest of the corridors.
- The travel times on the LRT for the tunnel alternative are 25 to 40 percent faster than the at-grade alternative in the study area; the travel times from the vehicle to a typical destination are shorter for the at-grade alternative because of the travel time on the escalators to reach the surface from the tunnel.
- The tunnel as compared to the at-grade alternative is superior in the following areas: schedule reliability, long-term viability, elderly and handicapped access, public safety, and user comfort.

SUMMARY EVALUATION OF TUNNEL ALTERNATIVE FOR THE CENTRAL AREA OF MINNEAPOLIS

Evaluation Criteria	Tunnel Option
• Capital Cost (Millions)	\$262.1 (includes tunnel and connections to tunnel from Emerson, Portland, Chicago and Lyndale stations - portal to portal tunnel cost is \$150 million)
• Travel Time (Minutes) Within Study Area	
- Hiawatha to Northwest	16.8
- University to Southwest	12.4
• Patronage	The decreased travel times afforded by the Tunnel Option result in 2 to 9 percent increases in patronage.
• Impacts on Nicollet (13th to 29th Street)	No impacts
• Downtown Traffic Impacts (Intersection Level of Service)	No impacts to Central Area traffic are anticipated with the Tunnel Option.
• Long-Term Viability	Provides a viable solution for the long-term in the Central Area due to the lack of interface with other surface functions. Can accommodate two minute headways.
• Interface with Other Transportation Modes	Does not require the rerouting of other Central Area transportation facilities. Because of the additional time required to access the below-grade platforms, additional time (up to 2.5 minutes) may be needed to walk between some platforms and some destinations. Tunnel Option LRT travel time savings are substantial enough in other cases to result in platform-to-destination walk time savings of up to 3.0 minutes, despite the additional time required to access the platforms.
• Elderly / Handicapped Accessibility	Climate controlled environment, convenience in changing lines, avoid surface-level traffic.
• Construction Impacts	Minimal impacts at street-level. Greatest impacts will be below grade.
• User Comfort	Provides climate controlled waiting areas.
• Schedule Reliability	Few activities to interfere with LRT operations.

SUMMARY EVALUATION OF AT-GRADE ALTERNATIVE FOR THE CENTRAL AREA OF MINNEAPOLIS

Evaluation Criteria	At-Grade Option
• Capital Cost (Millions)	\$156.9 (includes downtown at-grade system and connections from Emerson, Portland, Chicago and Lyndale stations - portal to portal tunnel cost is \$150 million)
• Travel Time (Minutes) Within Study Area	
- Hiawatha to Northwest	24.1
- University to Southwest	15.7
• Patronage	
• Impacts on Nicollet (13th to 29th Street)	All on-street parking would be removed, mid-block access would be restricted, sidewalk areas at stations would be reduced in width, and some traffic would be diverted to parallel streets (Blaisdell and / or 1st Avenue).
• Downtown Traffic Impacts (Intersection Level of Service)	Sixteen Central Area intersections were analyzed (under both partial and full signal pre-emption scenarios) based on 1995 traffic volumes with at-grade LRT added. Level of Service under the full pre-emption scenario, were found to be: 5 intersections Level of Service B, 7 intersections Level of Service C, 3 intersections Level of Service D, one intersection Level of Service F.
• Long-Term Viability	Regional forecasts indicate the Central Area will grow in population, households, and employment by year 2010. The levels of service described above will worsen as traffic grows.
• Interface with Other Transportation Modes	<p>Would require relocation of existing regular and express bus routes. Would require introduction of shuttle service from hub facilities to the downtown core.</p> <p>More direct access to surface-level transportation facilities and destinations.</p> <p>Would require mitigation measures and capital improvements such as removal of curb-side parking and signal pre-emption.</p> <p>Auto, bus, LRT, and pedestrian congestion in the vicinity of stations would be significant. Increased pedestrian volumes within limited sidewalk capacity. Sidewalk width on Marquette and 2nd Avenues would be reduced from 15 to 8 feet at station areas.</p>
• Elderly / Handicapped Accessibility	Street-level obstacles to accessing platforms, changing lines requires at least one block walk distance, accessing platform.
• Construction Impacts	Major street-level impacts. Redesign of entire streets may be required. Access to retail / office buildings will be impacted. Sidewalks will require reconstruction.
• User Comfort	Waiting areas subject to weather conditions.
• Schedule Reliability	Potential interference with traffic congestion, pedestrian street-level activity, and emergency vehicles.

APPENDIX D
LIST OF BRIEFING PAPERS

APPENDIX D

LIST OF BRIEFING PAPERS

1. Work Plan and Schedule (September 28, 1989)
2. Review of Existing Light Rail Transit Plans (September 28, 1989)
3. Evaluation Criteria and Methodology (Revised October 19, 1989)
4. Financial Forum (September 28, 1989)
5. Report on LRT Financial Forum (October 11, 1989)
6. Corridor Segments for Purposes of Analysis (Revised October 30, 1989)
7. Patronage Forecasts for Candidate LRT Corridors (Revised November 8, 1989)
8. Estimated Capital and Operating/Maintenance Costs for Candidate LRT Corridors (Revised November 8, 1989)
9. Evaluation of Candidate Corridors and Proposed Twenty-Year Regional LRT Plan (Revised November 8, 1989)
10. Alternative Financing Scenarios for the Regional Share of LRT Capital Costs (November 10, 1989)
11. Preliminary Evaluation of Staging Alternatives (November 14, 1989)
12. Recommended Premises for LRT Capital Financing (November 13, 1989)
13. Evaluation of Alternatives for Staging LRT Construction (November 22, 1989)
14. Local and Regional Financing Alternatives (November 22, 1989)

Unnumbered publications:

- Policy Statement and Goals (November 13, 1989)
- Case Studies on Transit Financing (November 15, 1989)
- Suggested Motions on Proposed Staging Plan (November 22, 1989)
- Suggested Motions on Proposed Financial Plan (November 22, 1989)