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Kathy Despiegelaere

Ramsey County Regional
Railroad Authority
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Ramsey County Regional Railroad Authority

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AGENDA

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

TUESDAY, AUGUST 14, 1990

10:30 A.M. - LARGE CONFERENCE ROOM - 316

1. * Minutes of July 24, 1990 Meeting
2. Chairman's Comments
3. Cedar Street Bridge over I-94 - Action may be taken *
4. Ridership Forecasts for Midway Corridor - Discussion only
5. Progress on LRT Coordination Plan - Discussion only
6. Grant Applications for Engineering Funds - Discussion only
7. UMTA Response to Request for Federal Funds

*Action is Requested

MINUTES

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

July 24, 1990

The regular meeting of the Board of the Ramsey County Regional Railroad Authority was called to order at 10:45 A.M. in the Large Conference Room of 316, Court House. Chairman Finley presided.

MEMBERS PRESENT: Chairman John Finley
Commissioner Diane Ahrens (entered during Item 3)
Commissioner Ruby Hunt
Commissioner Duane McCarty (entered during Item 3)
Commissioner Hal Norgard
Commissioner Donald Salverda
Commissioner Warren Schaber

Also Present: James Van Houdt, Ed Glaubitz, Robert Clarkson, Hugh Faville, Gary Simpson, Kathleen Peippo, Bill Crawford, Don Flemming, Bob Winter, Toni Baker, Karen Tero, Terry Schutten, Michele Timmons represented the County Attorney's Kathryn DeSpiegelaere, Frances Glendenning

1. Minutes - of the July 10, 1990 Regional Railroad Authority Board Meeting

Commissioner Hunt moved the following recommendation, seconded by Commissioner Salverda.

The Ramsey County Regional Railroad Authority approves the minutes of the regular Ramsey County Regional Railroad Authority Board meeting held on July 10, 1990, as written.

Roll Call: Ayes - 5, Nays - 0
Motion adopted.

2. Chairman's Comments

Chairman Finley will defer any comments he may have until later, as the representatives from Mn/DOT are here, and he would like to get right to the information that they have been kind enough to bring us today.

3. Information on Cedar Street Bridge over I-94

Chairman Finley acknowledged the presence of Bill Crawford, District Engineer from Mn/DOT, Don Flemming, State Bridge Engineer and Bob Winter the I-94 Project Engineer, they are here, and asked that Ms. DeSpiegelaere open this discussion.

Ms. DeSpiegelaere addressed the Board, it came to our attention approximately a month ago that the Department of Transportation was planning on replacing the Cedar Street Bridge over I-94, and this was going through the St. Paul approval process. As you know, in continuing work on the Midway Corridor, Cedar Street has been identified as the most probable alignment for LRT for downtown St. Paul. It appears that the bridge would be able to accommodate LRT, but because of past questions about coordination, she thought it was important for the Board to hear this, also in the past few months at meetings you have asked how we are working with Mn/DOT. She feels it would be very well for the Board to hear about this personally, and as one of the alignments proposed for Midway Corridor, I-94 is under Mn/DOT jurisdiction, and they are planning on making improvements to that. For that reason, three people from Mn/DOT are here, and she would like to turn the meeting over to them.

Bill Crawford said he is here primarily to introduce himself to this Board, and Bob Winter and Don Flemming. Mr. Crawford gave a brief summary, for over thirty years the Minnesota Department of Transportation, and its predecessor, the Minnesota Highway Department have had twin districts for operations and planning in the metropolitan seven county area. About 1956 there was one Metropolitan District, and with the coming of the inter-state system, the work load got such that one group could not handle it, so they split into two districts, and now as the inter-state system is approaching completion, this will pose a significant change in the way we operate, and proposes transportation challenges in the Twin City area. In preparing to meet these challenges, they went through a self-examination two years ago to see how better we could serve our clients one of which is Ramsey County, and the Metro District was created in September 1989. He was appointed District Engineer effective that date.

Mr. Crawford continued, their goals are to provide consistent metropolitan philosophy, consistent client service level, consistent metro wide planning, consistent metro wide freeway management effort integrated into these district operations, and improved resource utilization, both money, people, and equipment, as well as a more focused metropolitan leadership. They have consolidated the Oakdale and the Golden Valley Office last September, and as of today their organization is staffed according to the chart which he distributed to the Board. Their metro district office is in the Transportation Building, Room 120, and there are five of us, four people who report directly to him, a public affairs person, and staff support. They still maintain the Oakdale Office and the Golden Valley Office, their assistant district engineers are still in those two offices. He is in charge of both these offices, so there is no one authority at each office, it is divided along more functional lines now.

Mr. Crawford had a few personal remarks, he has had over 40 years service, he has had a good relationship, has been district engineer at Golden Valley since 1973, and prior to that, he was assistant district engineer. A good share of his career has been on the Hennepin County side of the river. He thinks that he has had over the years a very good relationship with Hennepin County staff, City of Minneapolis staff, and he brings this cooperative effort to this Board, he is here to help this Board meet their objectives, and he has a strong staff to support him.

Mr. Crawford hopes that the Board and Ken Weltzin will feel free to use his staff. He has a commitment to people moving, not necessarily vehicle moving, and he is interested in moving the most people in the safest and most economical way. If that means LRT, that is fine, we will support your efforts in LRT in any way you can. We do sit on some of your Committees, and your staff sits on some of ours. Communication is really the name of the game now.

Commissioner Hunt asked if Mr. Crawford reports directly to the Commissioner, then. Mr. Crawford reports directly to the Assistant for Operations, and he reports to the Deputy, who reports to the Commissioner, so he would be third down.

Chairman Finley wants to say with his LRT hat that he has had on for the last couple of years, and with the RTB since August, that from his reading and what the staffs have told him at both levels, that they feel that the restructuring and the coordination, and placing you specifically in the position for the metro area, this has been a great aid both at the RTB and to us in trying to coordinate LRT with the things that Mn/DOT has been doing, and would have been on the planning board with Mn/DOT for quite some time, and it seems just like the whole attitude of people moving versus automobile moving is really a welcome thing for those of us that are now into transportation planning which is really a new area for many of us who have been with the County for a long time. It is sort of a new area for us, and also breaking ground in a new technical area for doing that. We appreciate your help and he would have to say that Randy Halvorson who sits on some of our Committees has just been terrific in his attendance and his input in some of the Committees that he sits on as well.

Mr. Crawford appreciates Chairman's comments and turned the meeting over to Bob Winter.

Mr. Winter said relative to I-94 project, he is what you call the Corridor Manager. 1990 is the third year of the five year effort to rebuild I-94, and connect with 35 in and around downtown St. Paul, right now we are right in the middle of that effort, they have been very successful, things have moved along well, one of the important things about this year is that they are starting to see some of the benefits of the project. Construction has been going on in a piece-meal basis and it has been difficult if not impossible for anyone to start seeing how all this fits together. There is a master plan, and some of the pieces are starting to fit together. This is an ongoing project, the next phase of the project that will be going on after the completion in and around downtown St. Paul will be essentially a pavement replacement project for 94 between St. Paul and Minneapolis including reconstruction of the University interchange, and some modifications to the 280 interchange, and few other geometric type of improvements along the way to try and manage that project as best they can. That is where they entered into the LRT discussions because they have a project proceeding to reconstruct that piece of roadway, and you are also actively looking at that as an alignment for LRT.

Mr. Winter spoke about Ramsey County's interest in Cedar Street, this Friday they will be opening bids on the next phase of the project which is the reconstruction of mainline 94 between Cedar Street and Lafayette as well as Cedar Street and Lafayette, as well as Cedar Bridge, Jackson Street Bridge, 9th-10th Bridge, and a few other highway ramp bridges. We will be opening those bids on Friday, it is about a \$30 million dollar project, it is a big piece of the project to come, this does include Cedar Street. The Cedar Street bridge as they currently have it planned is four lanes of traffic, sidewalks and enclosed median, and some railings and other pedestrian accommodations, lighting and other things similar to the other bridges that have been constructed on 94.

Mr. Winter than asked Don Flemming to speak in detail about what they have planned for the Cedar Street Bridge and how they feel that LRT can be accommodated in the Cedar Street Bridge.

Commission Ahrens had a question, as some Board members are involved in the planning of a National Conference here in two years, we are interested to know what the status of 94 will be, as some of the people who come for that will be staying in St. Paul, and it would not be fair to encourage that if in fact 94 was all going to be ripped up because they would be going to the Center in Minneapolis. In 1992 what will it be.

Mr. Winter said the bulk of the construction in 1992 will be in downtown St. Paul, this will be the bulk of it, if you are really interested in getting between St. Paul and Minneapolis, there should not be a big problem in that area. In 92 there will be some preparatory work, around some of the bridges, the major construction between the two cities will be in the years of 93 and 94.

Mr. Winter distributed to the Board members Information Brochures which they have been handing out, to keep the motorists and residents of the area informed, this is the latest version that covers the second half of this year. If any Board members have questions, please feel free to give him a call at any time, his number is on the brochure.

Don Flemming brought with him some visuals, to help us understand better the Cedar Street Bridge. This has two sidewalks, two 15 or 14 foot six sidewalks that are enclosed on both sides. The cross section was shown, this will have two lanes of traffic, 29 foot 6 travelways on both sides, and then, the present structure has a grass median, 30 feet wide in the center. Their office did review this for LRT, and looked at possibilities, and what could be done here is to add two additional beams to the bridge, and they could place LRT in that center median. The bridge currently is designed for HS25, 90,000 semi-trailer tractor truck. The LRT units they looked at were three cars, weight 132,000 pounds, to accommodate that they would have to add two beams, they have looked at construction costs basically to do that, and present construction compared to new construction, this would cost about \$186,000, this includes the engineering, as well as the construction costs. They have estimated to come back after they have it constructed, this would cost about \$366,000 so it would cost about \$180,000 more to come back the second time. This is basically what they have looked t.

Commissioner Schaber asked when Ramsey County would have to make the decision regarding Cedar Street.

Mr. Flemming said it should be made very soon because in order to keep these projects on schedule, you have to order your structural steel well in advance. Structural steel deliveries are one of the major things that can hold us up. So, we would need a decision within a month or two would be great, the sooner the better.

Chairman Finley discussed the width of the bridge on their present plan, this would actually accommodate LRT as you already had anticipated this median. Mr. Flemming said they have a 30 foot wide median, so they can actually accommodate the LRT vehicles on the median.

Chairman Finley asked if I-94 were the selected corridor, we still have to get, assuming that Cedar Street is the route or the mall within the downtown area, and coming off of I-94, we are going to get up going north, as we certainly want to service the State Offices and the Capitol. Also coming off of I-94, going south, if we did not go up that way, with the new Wabasha Street Bridge, and this new bridge, do you see any problems that could be created on any of those designs if we came off into the downtown area directly.

Mr. Crawford replied that there are a host of opportunities, they have been working with the Technical Committee, trying to look at it in various levels of detail which we they do not have a lot of detail on hand, at this point they feel fairly confident that a number of these different alignments could be made to work. There is not a natural fit anywhere, no one that is actually going to be easy, but he thinks there are some opportunities and some alternatives that they can continue to look at.

Chairman Finley mentioned that the Wabasha Street Bridge is quite a bit narrower than what Cedar Street will be, this is two lanes, with unusually large sidewalks.

Mr. Crawford said it is two lanes, it is a one way bridge, these go toward the Capitol, as part of the Master Plan for the Capitol Mall the extension of Wabasha Street to Columbus, as well as to Cedar Street, this will be eliminated in the future. So, all the traffic that crosses the Wabasha Street Bridge will be making a left turn either on to the ramps to 94, 35E or to Rice Street. The bridge that had been in place was four lanes wide, the new bridge is two traffic lanes wide, as well as wide sidewalks, the wide sidewalks will be fairly common through all the new bridges in the commons area, so it is not unusual, this is the first one that you are seeing out there. As far as putting LRT on Wabasha, this poses somewhat of a different question in that bridge is there, that would probably require more extensive construction or reconstruction, there would have to be decisions made about how you mix vehicle traffic with LRT traffic, and things of that nature. They have not looked at that in detail as this bridge had been further along, but it would be a much more extensive revision to Wabasha than to Cedar Street Bridge,

Chairman Finley would like to know about the Cedar Street Bridge if it is too late to make this any wider, even though there would be room because of the grassy mall under the present plan for LRT, wider than what you are planning at this stage, by ten or fifteen feet to still accommodate a grassy barrier or whatever or some type of an additional area. Mr. Winter said it is pretty late for this, until the bridge is constructed there is always time, but that would be a major revision to the plan and it is quite late in the stage for that. The objective would be to still maintain some type of a grass median or some buffer zone of some type.

Chairman Finley is concerned about the Architectural Committee around the Capitol, and he is sure they have had to deal with them in your design also. We would not want to get it down, end up with that as the alignment, prepare the structure, pay the extra money, have the beams in and everything, and then run into a roadblock because we may have taken a grassy area for transportation.

Mr. Crawford feels it would be very difficult at this point, in addition to just the bridge Cedar Street on both ends of the bridge are pretty well established. Cedar Street is not planned for any reconstruction, so it would be difficult to change it at this time.

Chairman Finley asked about the timetable on I-94 for 93-94, we would still have time if that was a selected alignment, to incorporate the LRT in the repaving project between the two downtowns. Mr. Winter said timely decisions will be necessary, but your schedule still fits with our schedule.

Commissioner Ahrens would like some information about traffic patterns. Let's assume that this is going to be our alignment downtown, and it would be as she understands it would be a transit mall, so you have cars coming across Cedar, where are those cars going to go as they come across the bridge, if they cannot use Cedar to access downtown, where are the cars going to go.

Ms. DeSpiegelaere explained that the cars could be diverted to adjacent streets, the proposal is to change the direction of Minnesota Street, and to make Robert Street a one-way. There will, however, be some traffic still permitted on Cedar Street, probably not through traffic, but there would be access to building, loading docks, and access to the parking ramps on Cedar Street.

Commissioner Ahrens asked at what point would access be if the people come across street, would the diversion occur at 10th Street. Ms. DeSpiegelaere said this is one possibility, they are considering the possibility of putting a station south I 94, so at this point no decision has been made.

Commissioner Ahrens feels they are planning for a big bridge, and the bridge is going to carry two lanes on both sides, so she is assuming that they are anticipating that it would be fairly heavily used, so people come across it, to access or get out of St. Paul, and then hit a mall which they cannot go down, and besides it is very narrow, can you use those side streets to divert. She would like to know how this is going to fit with our plans. Ms. DeSpiegelaere said there is a possibility it might be diverted before the Cedar Street Bridge.

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Chairman Finley asked if Jackson and Robert Street Bridges will both be in both directions, and this will be.

Commissioner Schaber attended a Northeast Corridor Meeting last night, and one of the suggested alignments is going out I35 toward White Bear and that way, and he asked if there is going to be at some point reconstruction or redesign of that particular area.

Mr. Winter replied that they do not have a project in their work program right now to reconstruct 35E. That project is coming up pretty high in our twenty-year plan, our needs identification. They expect they will probably be doing that needs analysis over the next four to five years, with the hopes that they can get a project in the program to make whatever revisions need to be made. It is not in five years, it may be a ten year period when they could look at doing something. It is not in the work program now, but it is definitely up on their needs list. They will look at it within the next four or five years, construction would be ten years at best and it could be further.

Chairman Finley had a question regarding funding, are they anticipating their projects being pretty much funded with state dollars even on the interstates as far as their maintenance and upkeep, redoing, etc.

Mr. Crawford said the Surface Transportation Act, the Federal Act, that is in place now that funds the interstate, they do not know where they will be, they have published guidelines, the Act expires in mid-91, so Congress has to act on something to replace it, they do not know what that will be. They expect that the interstates will continue to be funded 90 - 10 the way they are now, and there could be one year, one Federal fiscal year where there will be quite a bit of money available. They are talking about spending the trust fund down, they have been letting it build up, and using it to show better numbers, and now it seems to be pretty well thought in Congress that the first thing that they have to spend that trust fund down. These are all speculative, but is pretty well common knowledge that the interstates will be funded, but some of these secondary roads may not be.

Chairman Finley wanted to hear the State's perspective on this, as our perspective, when looking at LRT and other modes of transportation, it is not very optimistic as far as Federal funds are concerned for any significant amount of money, even though it would probably be cheaper for them than some of the interstate. He was concerned about just the maintenance of the interstate. He had heard a speech from Governor Thompson from Illinois, the head of the transportation came from his department in Illinois, and he was talking about just the total infrastructure of the United States, then the counties and the cities within it. The maintenance of that infrastructure has deteriorated substantially over the last five to ten years, and how the gross national product would be substantially improved with just doing what government should be doing in maintaining their assets. It was phenomenal, he had all these figures, and it would be a tremendous boom to the economy of the United States

just taking care of the infrastructure. He is a strong proponent of a huge gas tax at the Federal level, so that the states don't have to be in competition, increasing their gas tax, and then filter it back through.

Ms. DeSpiegelaere suggested that it might be well for the Mn/DOT representatives to hear Ramsey County's perspective on I94 as the alignment for LRT in the Midway Corridor.

Chairman Finley, from his feeling, said it is something that we are looking at, and we are looking at very seriously, because it does move the people faster than the other alignments within that corridor. When you look at it from a metro-wide system of LRT, it makes a lot of sense, when you look at it from just that alignment, it has some problems as far as the number of stops, etc. But, when you look at it from the metro system, much like the highway system had to be looked at, it makes a lot of sense. If you are really going to be moving the personally, and your idea is to take them from Chisago to downtown Minneapolis on an LRT system, it makes a lot of sense. To bog it down on City streets, is not, at least in his perspective, that LRT should not be a replacement of the bus, but rather a replacement of the automobile, or the people using the automobile. This is his feeling. He likes the corridor alignment better than he thought he would, to be honest from his perspective, as we have gotten more and more into engineering.

Commissioner Schaber said the only thing that might be stated, and this might be only for himself, University Avenue does not make any sense, you have area problems there .

Commissioner Ahrens said this happens to go through the area that she serves, and it has great appeal to her for a number of reasons. She agrees with Commissioner Schaber that she thinks that University Avenue is looking less and less appealing, and this really leaves us with two potential corridors. One of the things that Chairman Finley is right about, is the traveling, and getting from Stillwater to Minneapolis, but the other thing is, as we have visited other cities who have used highway alignments. One thing is the construction business, and if you are viewing 94 as a highway anyway, it makes good sense to her to do this at the same time, and sort of pool our effort and resources. The other thing is that you will be going along a highway, and everyone else is sitting in their car backed up, where for those folks something might click. It is worth possibly ten public information people out there trying to sell the deal, which over the long haul would help a lot in the ridership. One of her concerns about the northern area would be the ridership issue, whether there is a psychological one or an access one, or whatever, this may be a problem. She thinks this Board is looking very carefully at 94, and is very openminded to this, and she hopes that the Highway Department is likewise openminded. It would make a big difference in how you do that road.

Chairman Finley added that if we decide it should go on 94, we would prefer the median as opposed to the frontage roads or the hill.

(Commissioner Hunt had left the meeting during this discussion.)

Commissioner Ahrens added that the big issue is getting into the Capitol complex area, this is a big issue as to how we could access that.

Chairman Finley said it is an issue not only from the access, but we are also concerned about the loss of speed then for those who are commuting to the downtown and having to go around the Capitol to get downtown, and whether or not we shouldn't have both possibly. That is one of the problems that we have.

Commissioner Salverda can see the philosophical side, they will see the LRT go by when they are sitting there, not moving on the highways.

Chairman Finley thanked the people for coming in, for taking the time to come in, we really do appreciate this. We really do appreciate the participation that we are having from the staffs and yourselves, this is very good.

Ms. DeSpiegelaere wished to point out that the plan for the Cedar Street Bridge is going ahead without accommodations for LRT.

Chairman Finley suggested that we address this issue at the next Board Meeting. However, Ms. DeSpiegelaere mentioned the differential in cost, which we may be required to pay.

Commissioner Ahrens feels what is needed here is for us to give Mn/DOT some indication that we are interested in the Cedar Bridge issue, and that we are going to be discussing it again because it is critical to our program so that they will know that we have not just dropped it, we are moving ahead with it.

Chairman Finley said that is the clear direction, he does not see any other alignment, or any of the alignments, he thinks we would still very seriously look at LRT on that bridge.

Commissioner Schaber was going to have a question to the fact that regardless of what line comes in, wouldn't we be using Cedar to get it into downtown St. Paul.

Ms. DeSpiegelaere stated that Cedar Street is the preferred alignment in the downtown area, however, the City of St. Paul and Capitol Committee have requested underground alignment as well. However, in conversations with MN/DOT they have indicated that if we are not sure, they will be going forward.

Chairman Finley suggested that Ms. DeSpiegelaere bring this to the next meeting with different alternatives, and then look at our budget as far as funding is concerned.

Commissioner Ahrens in looking at the Map, she is concerned, and Commissioner Norgard has expressed this, the service to St. Paul Ramsey, then would you use Jackson. The question is which bridge, and information in terms of what our consultants were thinking. She would like more information on that.

Chairman Finley discussed this, because of the grade, look at Jackson, as we want to be on straight lines, where you turn, and how you turn, this might be a good idea to explain this at the next meeting.

4. Progress on Coordination Plan

Ms. DeSpiegelaere-the Coordination Plan at the Advisory Committee is being developed. You have before you a proposed resolution that was passed by the Joint LRT Advisory Committee which would allocate \$2 million in Federal planning money to Minnesota to assist with the three LRT corridors that have been identified for Federal funding, 35W, Hiawatha, and Minneapolis Northeast.

On Page 4 there is a draft proposed ten year budget. This budget would have allocated funds in the next ten years to five corridors, the Central, and four of the Group B Corridors. Because there was a surplus, the Joint LRT Advisory Committee recommended that additional corridors be added, so at the meeting last week there were three additional corridors, one more Group B, and two more Group C, none of the B and C corridors have been identified by name at this point in the budget. She understands this could be a controversial item.

Ms. DeSpiegelaere pointed out on Page 5 the schedule calls for completing construction on LRT opening it to service at the earliest in 1997. This schedule was prepared on the basis of what could reasonably be expected. The staff has also prepared a more pessimistic version and a more optimistic version. Assuming that things go fairly smoothly, 97 would be the earliest that LRT would open for service.

Also at a recent meetings action was taken by the Committee on different options for pursuing the merits of low floor light rail vehicles, the Committee had several presentations, and David Minister from the RTB had a discussion with consultants here and in Europe. The recommendation of the Joint LRT Advisory Committee was after deliberation to go with option 1, to stay with the already adopted high platform standard vehicle, that had been adopted by Hennepin and Anoka, and tentatively by Ramsey County.

Commissioner Salverda feels as he looks at the option that this closes the door to low floor vehicles. He thought all options were all good. Ms. DeSpiegelaere said the vote was unanimous, in fact Commissioner Hunt made the motion.

Commissioner Salverda is surprised that in reading David Minister's memo, it seems to him that with the multi million dollars being spent, it is foolish to exclude what could potentially could be very good technology.

Ms. DeSpiegelaere added all these decisions have to be made, and they are still weighing those issues.

(Commissioners Salverda and Norgard left during the discussion of this item.)

Chairman Finley said this is really information as far as we are concerned. Ms. DeSpiegelaere said yes, this is except for the resolution, it was requested that each Railroad Authority adopt this resolution.

Commissioner Ahrens was not at the meeting when this was passed, it seems we do not have any part of this, why are we being asked to approve it. This is not tied in with the other money that is being requested, the earlier money. If it is not tied in with the earlier money, which we said we did not want, why are we not a part of this motion.

Ms. DeSpiegelaere explained why Ramsey County is being asked, is to show the Federal government that there is a unified approach here. As you recall, there was extensive deliberation about planning with the UMTA, at point it was being proposed, that the corridors for Federal Funding include ours, and Commissioner Finley did not want to sign it, as he did not think it appropriate. We want to be part of the region planning for Federal funds, and this gives us a potential role for this, it is important to show that Ramsey County is part of this decision making process, to show to Congress that Ramsey County is included.

The \$2 million is something that was negotitated, when the Chair of the RTB Board, Mike Ehrlichmann was in Washington, it is a special grant, it is not part of the \$24 million.

Chairman Finley said this was in the letter we sent. Ms. DeSpiegelaere said we had asked for more, and they are still negotiating on that. Then, Chairman Finley said this \$2 million is not for what we sent the letter. Then, he would like to know what it is for.

Ms. DeSpiegelaere said it is for funds for 35W, Hiawatha and Minneapolis Northeast. Chairman Finley insisted the letter for the \$2 million was for this.

Commissioner Schaber said what concerns him is the fact that Ms. Despiegelaere had mentioned something about the upgrade of some corridors, but not by name. Is this going to be an addition of two across the river, so that we are falling behind again. This makes him nervous when they do not name them.

Ms. DeSpiegelaere said they are not named, they felt it was ^{not} appropriate, we do not know at which steps they are progressing at this time. We do not know the steps to which these corridors will progress at this time.

Commissioner Ahrens feels they are counting on us to devote all our energies to the Central Corridor, while they move ahead with those alignments over in Hennepin and Anoka County area. Therefore, they will be ahead, and they will be B-1,2,3,4.

Commissioner Schaber asked about Page 5 as they are showing six below the dotted line, does this relate to the \$2 million without assigning any critique to the corridors. Ms. DeSpiegelaere said the \$2 million is for the corridors, the development and financial planning recommended for Federal funding, 35W, Hiawatha, and Minneapolis Northeast, all of which are in the portion

below the dotted line, which is Group B. At the last meeting the Advisory Committee adopted a plan which was different.

Commissioner Schaber is concerned as the Minneapolis Tunnel could be the fourth one, in addition to the three mentioned.

Chairman Finley asked if this is changed, why are we considering this. Ms. DeSpiegelaere said when this documentation was put together this was what we had, and we thought it important to make you aware of this. The change was made after that.

Chairman Finley does not think we should vote on this until we find out what it is, if they are merging B and C, then we will merge C and B which is exactly the vote he lost 6 to 5 on the Financial Plan. He will not merge part of C with all of B, and he does not like the assumption that St. Paul South is only to have a State EIS. We may very well want that to be in the Federal EIS process.

Chairman Finley would like to know where this is coming from, and Ms. DeSpiegelaere said the assumption was based on the fact that there has been some kind of letter sent to UMTA about those three corridors, that these not be ruled out.

Chairman Finley said if we do not have a State EIS we are ruling it out and once these things get into a process, they do not get changed, and the only reason that we agreed was because we were informed that they were further ahead, and this money may be available, and we could probably get it for those corridors. But, this does not mean that we are going to exclude the rest of the corridors within Ramsey County from a Federal participation. It was not just a mutual exclusive, it was just that they were ahead, and the money may be available that we agreed to it to begin with. We are not going to be re-affirming that these are the only corridors that we want Federal funds on in the whole system.

Commissioner Ahrens needs some clarification, is the tunnel a part of Number 1, or isn't it. Chairman Finley said this is part of I-35 to 96th, it depends on how you look at it.

5 Progress on Ridership Forecasts for Midway Corridor

Ms. DeSpiegelaere informed the Board that the ridership forecasts have been delayed for the Midway Corridor, and they are not ready yet. This was expected to be completed a month ago. The Metropolitan Council who is running the models has experienced difficulties. The consultant that we did hire is at the Metropolitan Council this week working with them on this.

Ms. DeSpiegelaere continued, first of all there is a potential for delay in issuing the Draft EIS because other facets of the EIS are dependent on these ridership forecasts, so she has asked BRW to prepare another schedule. She has asked them for a memo about forecasting in general. She would like this Board to be aware that there is uncertainty regarding forecasts, and she would not want anyone to interpret them too liberally. In questioning the Metropolitan Council Staff about whether these forecasts are plus or minus 20%, 15%, or what, the information she had was that the outside consultants who specialize in this specialized area would quantify these.

Ms. DeSpiegelaere has asked BRW to prepare a memorandum about why these delays have occurred in preparing this EIS.

Chairman Finley would like to have a motion asking the Chairman to send a letter of concern to Steve Keefe and the Metropolitan Council members regarding the delay in the ridership model and the concerns in meeting our timelines for decision on the Midway Corridor, as he thinks that we should do that. It is very important for all people to know that we are trying, but we cannot control the universe.

Commissioner Schaber would be very happy to suggest you send a very strong letter. What bothers him more than that are all the projections as to why we should in effect be building a line between Minneapolis and Saint Paul is predicated on the fact that this was the outstanding line, with the most ridership, etc. He has said frankly from the beginning that we should not build a line between Minneapolis and Saint Paul, we should build a line out to Dakota County, out to Washington County and bring these into downtown Saint Paul. He still feels that way. If they do not even have the numbers, and they may be backing off on the numbers to justify this, where does that leave us.

Ms. DeSpiegelaere said Anoka County has forecasts for their Northeast Corridor, and they had the model, and Ken Stevens from Hennepin said even when you get these, you may want to compare them, and wait until you get the information from Hennepin. There are a lot of functions that have to go into the development of forecasts.

Commissioner Schaber commented that even when you finally get them, they may be skewed.

Commissioner Schaber moved the following recommendation, seconded by Commissioner Ahrens.

WHEREAS, Ramsey County Regional Railroad Authority is completing an Environmental Impact Statement and Phase I of preliminary engineering for the Midway Corridor; and

WHEREAS, Forecasts of anticipated ridership for light rail transit in that corridor are an integral part of that study and are necessary for completion of aspects of the Environmental Impact Statement; and

WHEREAS, The Midway Corridor has been identified as the first LRT line to be constructed in Hennepin and Ramsey Counties and the completion of engineering activities in a prompt manner is essential; and

WHEREAS, The ridership forecasts for the Midway Corridor were anticipated to be available in June, 1990, and are being prepared by the staff of the Metropolitan Council after development of the computer model by consultants and the forecasts are not yet available; Now, Therefore, Be It

R90
45
RESOLVED, That the Chairman of Ramsey County Regional Railroad Authority is requested to send a strong letter of concern about the delay in obtaining ridership forecasts to the Chair of the Metropolitan Council, Steve Keefe.

Roll Call: Ayes - 4, Nays - 0
Motion adopted.

6. Quarterly Report of Payments for RCRRA April to June 1990

Commissioner Schaber moved the following recommendation, seconded by Commissioner Ahrens.

R90
46
WHEREAS, Payments have been made from the Ramsey County Regional Railroad Authority budget for the period April through June, 1990, and a record of these disbursements is attached; Now, Therefore, Be It

RESOLVED, That the report of payment is accepted by Ramsey County Regional Railroad Authority.

Roll Call: Ayes - 4, Nays - 0
Motion carried

7. Ratify Partial Payment No. 9 to BRW, Inc. in the amount of \$107,136.59

Commissioner Schaber moved the following recommendation, seconded by Commissioner Ahrens.

WHEREAS, The Ramsey County Regional Railroad Authority has contracted for the professional services of BRW, Inc. for the purpose of conducting Phase I Preliminary Engineering/Environmental Impact Statement studies for the Midway Corridor; and

WHEREAS, Ramsey County Regional Railroad Authority Agreement Number RCRRA-89-003, and the First Amendment thereto, govern the performance of services of and terms of payment to BRW, Inc.; and

WHEREAS, BRW, Inc. has satisfactorily completed portions of the work identified in the referenced agreements, and provided detailed invoice documentation for services and costs accrued through May 31, 1990; and

WHEREAS, To ensure timely payment for services rendered in accordance with Agreement No. RCRRA 89-003, the Ramsey County Regional Railroad Authority authorized (Resolution R89-70) the Director of Light Rail Transit Planning to process payments to BRW, Inc. for work completed and invoiced in accordance with the agreement; and

WHEREAS, Resolution R89-70 requires submittal of invoice and payment documentation to the Rail Authority for ratification at the next scheduled meeting following staff approval of invoice documentation; Now, Therefore, Be It

WHEREAS, BRW, Inc. Invoice No. 58455, Partial Payment No. 9, and attachments thereto, provide the correct documentation of payments due BRW, Inc. through May 31, 1990; Now, Therefore, Be It

RESOLVED, Payment to BRW, Inc. in the amount of \$107,136.59 for Ramsey County Regional Railroad Authority's share of services rendered through May 31, 1990 is hereby ratified.

Roll Call: Ayes - 4, Nays - 0
Motion adopted.

R 90-47

There being no further matters to come before this Board, Chairman Finley declared the meeting adjourned.

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

2

<u>Chairman Finley</u> Originating Department <u>J. T. Finley /s/</u> <u>8/8/90</u> Authorized Signature Date	Board Action Requested CHAIRMAN'S COMMENTS
Request Justification	

Budgeting and Accounting _____ County Attorney _____ Risk Manager _____ Data Processing _____ _____ Previous Action taken on Request _____	Date / Time Received By
---	----------------------------

Comments / Recommendation

Documentation certified complete for:

<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
August 14, 1990	<i>F. L. Glendenning</i>	8/8/90
<u>Board Date</u>	<u>Signature</u>	<u>Date</u>

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

3

<u>Regional Railroad Authority</u> <u>Originating Department</u> <u>K. DeSpiegelaere</u> <u>Authorized Signature</u> <u>8/6/90</u> <u>Date</u>	<u>Board Action Requested</u> Cedar Street bridge over I-94 <u>ACTION MAY BE TAKEN</u>
--	--

Request Justification

- See attached:
- 1) Memorandum from K. DeSpiegelaere
 - 2) Map of At-Grade Alignments in Capitol Area
 - 3) Map of Tunnel Alignments in Capitol Area
 - 4) Excerpt from Regional Transit Board's Development and Financial Plan relating to bridge coordination
 - 5) Letters from Commissioner John T. Finley and Mn/DOT Commissioner Leonard Levine

<u>Budgeting and Accounting</u> <u>County Attorney</u> <u>Risk Manager</u> <u>Data Processing</u> <u>Previous Action taken on Request</u>	<u>Date / Time</u> <u>Received By</u>
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Comments / Recommendation

Documentation certified complete for:

<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
<u>Committee / Meeting Date</u> August 14, 1990	<u>Signature</u> <i>F. L. Glendenning</i>	<u>Date</u> 8/8/90
<u>Board Date</u>	<u>Signature</u>	<u>Date</u>



Room 316 Courthouse
15 W. Kellogg Blvd.
St. Paul, MN 55102
Phone 298-4145

John T. Finley, Chairman

District 3

Diane Ahrens

District 4

Ruby Hunt

District 5

Duane W. McCarty

District 1

Hal Norgard

District 7

Donald E. Salverda

District 2

Warren W. Schaber

District 6

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathryn DeSpiegelaere, Director of LRT Planning *KD*

SUBJECT: Cedar Street Bridge over I-94 - Additional Information

DATE: August 6, 1990

At the July 24 Ramsey County Regional Railroad Authority meeting you requested:

1. Additional information on options for accommodating light rail transit on the Cedar Street bridge over I-94.
2. Information on accommodating LRT on the Jackson Street bridge over I-94.
3. Information on traffic at Cedar Street and 11th Street if LRT is on Cedar Street in downtown St. Paul.

CEDAR STREET BRIDGE

The Minnesota Department of Transportation (Mn/DOT) plans to replace the Cedar Street bridge over I-94. Bill Crawford, Don Fleming, and Bob Winter of Mn/DOT attended the July 24 Regional Railroad Authority meeting to explain the plans.

The design of the Cedar Street bridge has been developed by Mn/DOT with close coordination with the Capitol Area Architectural and Planning Board (CAAPB) and bridge plans were approved by the City Council of St. Paul on July 26. Current plans do not include accommodations for LRT, although LRT could be added at a later time. The width of the proposed bridge is sufficient for LRT, but the structural capacity is insufficient for LRT. The center of the proposed bridge includes a grass median. *[Handwritten arrow pointing to the right]*

The question to be addressed by Ramsey County Regional Railroad Authority is:

Should Mn/DOT be requested to accommodate LRT in its design of the bridge for Cedar Street, necessitating redesign, additional approvals and delays in construction?

One of the important factors to consider in regard to the Cedar Street bridge is cost. Mn/DOT has estimated the additional cost to accommodate LRT on the Cedar Street bridge at this time to be \$184,000 for heavier beams and support slabs. When LRT is added the preparation for LRT has been estimated at \$32,000, for a total cost to accommodate LRT on the bridge of \$216,000. Mn/DOT has estimated that retro-fitting the bridge at a later time for LRT would cost \$366,000.

Adding LRT now could save \$150,000 later.

Discussions with Mn/DOT about who would pay for accommodating LRT on the bridge have not concluded. I have given Mn/DOT this information:

1. I have been advised that in Hennepin County, when the Railroad Authority has selected an alignment for LRT, Mn/DOT has designed bridges to accommodate LRT without expense to the Railroad Authority.

Cedar Street is the most likely candidate for LRT entry into downtown St. Paul, whether LRT is in a tunnel or at surface level.

Attachment 1 is a map of alternatives under study in the Capitol area. Recent meetings held with the CAAPB have provided additional information on these alternatives. This map indicates that Cedar Street is one of four options for connecting to downtown St. Paul over I-94. Attachment 2 is a map of Capitol area tunnel alignments. Cedar Street bridge is the most likely connection to a street-level alignment in downtown St. Paul from a tunnel in the Capitol area. Decisions on these alignments are expected in a few months.

2. Darryl Durgin, Assistant Commissioner for Mn/DOT, serves on the Joint LRT Advisory Committee. Discussions have occurred at those meetings about Mn/DOT accommodating LRT, and the Joint LRT Advisory Committee has passed a motion on this subject that reads, "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 bridge construction, in accordance with the LRT Development and Financial Plan." (Attachment 3)

Cedar Street is a part of the Central Corridor, the first priority corridor for LRT in the Regional Transit Board's Development and Financial Plan.

Mn/DOT has opened bids on the Cedar Street bridge, and an early resolution of this matter would be beneficial for that organization.

Any modification to this structure, now or in the future, will be of interest to the CAAPB. *JK*

JACKSON STREET BRIDGE OVER I-94

Jackson Street bridge over I-94 has a narrow median and LRT *could* not be accommodated unless the number of traffic lanes (~~four~~ *six* are proposed) is reduced. Jackson Street bridge is proposed for reconstruction in 1991. Costs to add LRT to this bridge would be considerably greater than for Cedar Street because the bridge would have to be widened, unless the number of traffic lanes is reduced on the bridge.

TRAFFIC ON CEDAR STREET IN DOWNTOWN ST. PAUL

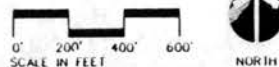
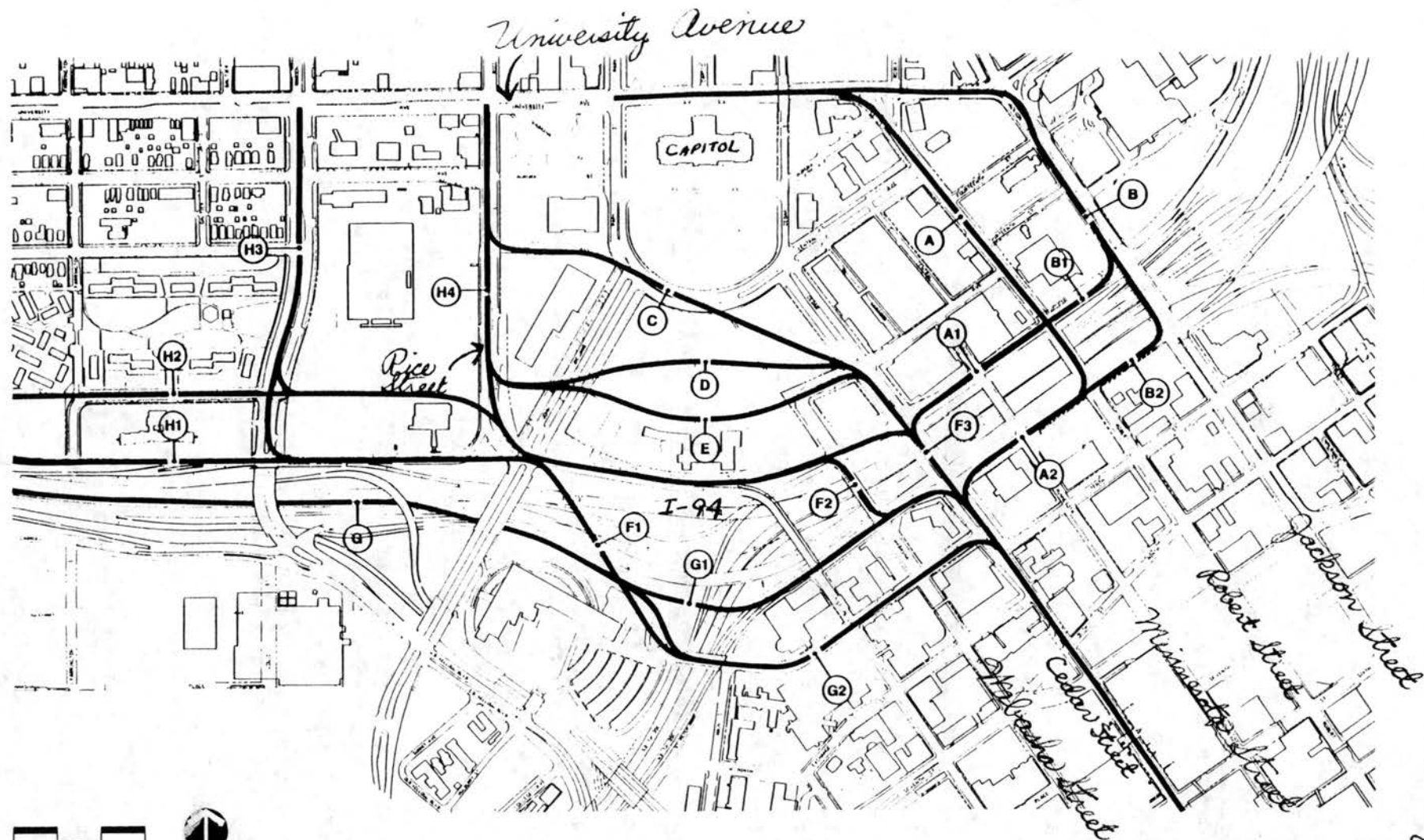
BRW is preparing a traffic study that will identify the impacts of limiting access if LRT is located on Cedar Street and Fourth Street. The area of Cedar Street south of I-94 is one portion of that study. This information will be provided to you when it has been completed.

RECOMMENDATION

The Minnesota Department of Transportation will be represented at the August 14 Regional Railroad Authority meeting. Additional information on the Cedar Street bridge over I-94 may be available for your meeting.

Copies of letters exchanged by Chairman Finley and Mn/DOT Commissioner Levine on this matter are attached. (Attachments 4 and 5).

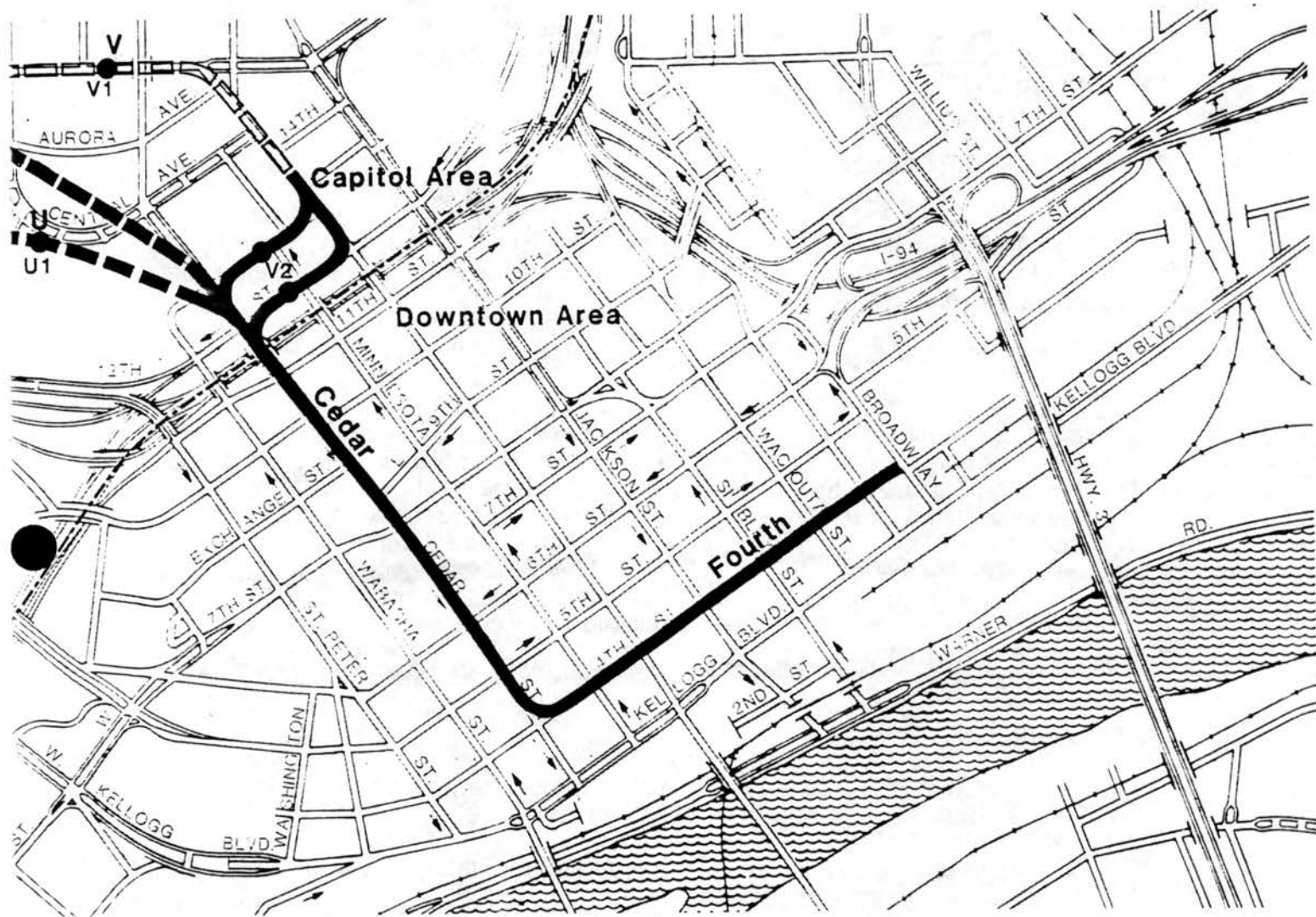
KD/blk
Attachments



BRW

CAPITOL AREA LRT ALIGNMENT STUDY
UNIVERSE OF ALTERNATIVES - A THRU H
AT-GRADE ALIGNMENTS

Attachment 1



NORTH

Legend

■ ■ ■ Tunnel LRT

At-Grade LRT

● Potential Station Location

Capitol Area LRT Tunnel Alignments for Connection to Downtown At-Grade Alignments

**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

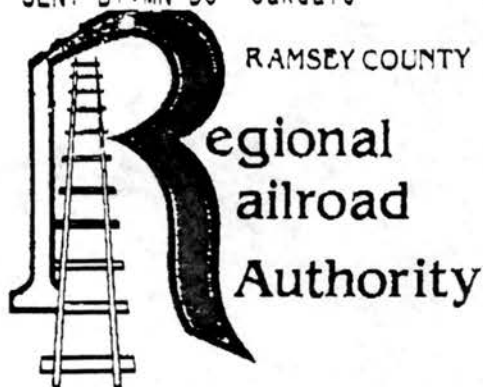
1. That the Joint LRT Advisory Committee approve the Maximum 20-Year Regional Light Rail Transit Plan, as presented in Briefing Paper #9, with the understanding that the plan is subject to review and modification as further information becomes available. (Exhibit 1)
2. That the St. Paul East (I-94) corridor 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)



Attachment 4

John T. Finley, Chairman
District
Diane Ahren
District
Ruby Mur
District
Duane W. McCart
District
Hal Morgar
District
Donald E. Salverd
District
Warren W. Schabe
District

Room 316 Courthouse
15 W. Kellogg Blvd.
St. Paul, MN 55102
Phone 298-4145

June 12, 1990

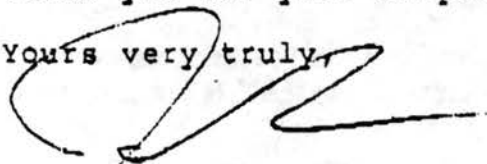
Mr. Leonard Levine, Commissioner
Department of Transportation
Transportation Building
Saint Paul, Minnesota 55155

Dear Commissioner Levine:

It has come to my attention that the Minnesota Department of Transportation plans to replace a bridge over I-94 on Cedar Street just north of downtown St. Paul. At the same time, Ramsey County Regional Railroad Authority, as part of its LRT process, has defined Cedar Street as the preferred location for LRT in downtown St. Paul. I hope that accommodations for LRT will be included in the new bridge on Cedar Street. Regional Railroad Authority staff will be in contact with Mn/DOT staff on this subject.

Thank you for your cooperation.

Yours very truly,


John T. Finley, Chairman
Ramsey County Regional Railroad Authority

JTF/blk

cc: Kathryn DeSpiegelaere, Director of LRT Planning
Bill Crawford, Mn/DOT
Dan Dunford, St. Paul Public Works
Al Lovejoy, St. Paul PED





Minnesota
Department of Transportation
Transportation Building
St. Paul, Minnesota 55155



(612) 296-3000

LEONARD W. LEVINE
COMMISSIONER

July 2, 1990

John T. Finley, Chairman
Ramsey County Regional Rail Authority
Room 316 Courthouse
15 West Kellogg Boulevard
St. Paul, MN. 55102

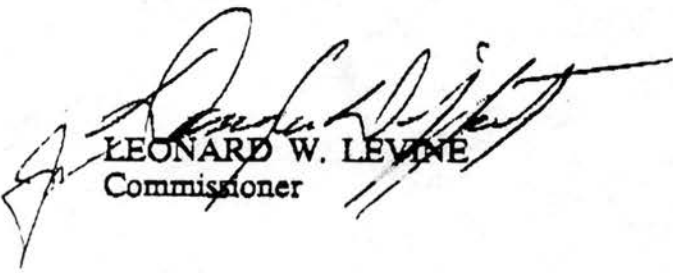
Dear Mr. Finley:

The Cedar Street Bridge over I-94 in downtown St. Paul will be replaced in the summer of 1991 as part of the I-94 reconstruction.

The construction plans are complete and we will open bids this July 27. The design does not include accommodations for LRT on the Cedar Street Bridge. However, the plans do not exclude the possibility of modifying the bridge to accommodate LRT if that decision is made.

When a decision is reached on LRT and if Cedar Street is the selected route, then we should determine the appropriate course of action to make LRT accommodations.

Sincerely,


LEONARD W. LEVINE
Commissioner

cc:
D. H. Differt
L. F. McNamara
W. M. Crawford
S. E. Baker
P. C. Hughes
D. Flemming
R. A. Elasky/Winter
Oakdale District File (C.S. 6282)
Oakdale Staff Letter Log

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

4

<u>Regional Railroad Authority</u> <u>Originating Department</u> <u>K. DeSpiegelaere</u> Authorized Signature <u>8/6/90</u> Date	<u>Board Action Requested</u> Ridership forecasts for Midway Corridor <u>DISCUSSION ONLY</u>
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Request Justification

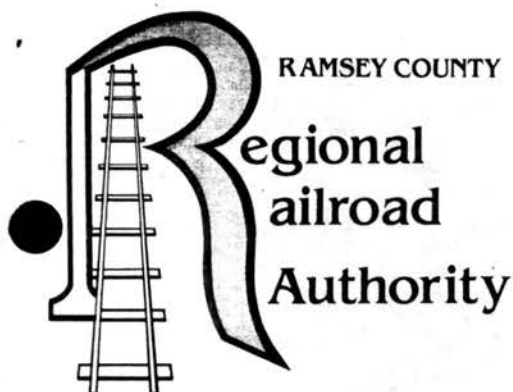
- See attached:
- 1) Memorandum from K. DeSpiegelaere of August 6, 1990
 - 2) Memorandum from K. DeSpiegelaere of March 19, 1990
 - 3) Memorandum from Dave Warner about progress
 - 4) Revised Draft Environmental Impact Statement schedule
 - 5) Memorandum from BRW
 - 6) Letter from Chairman Finley to Metropolitan Council Chair Steve Keefe

<u>Budgeting and Accounting</u> <u>Ed Blantz</u> <u>County Attorney</u> <u>[Signature]</u> <u>Risk Manager</u> <u>Data Processing</u> <u>Previous Action taken on Request</u>	<u>Date / Time</u> <u>Received By</u>
--	--

Comments / Recommendation

Documentation certified complete for:

<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
<u>August 14, 1990</u>	<u>F. L. Henderson</u>	<u>8/8/90</u>
<u>Board Date</u>	<u>Signature</u>	<u>Date</u>



Room 316 Courthouse
15 W. Kellogg Blvd.
St. Paul, MN 55102
Phone 298-4145

John T. Finley, Chairman

District 3

Diane Ahrens

District 4

Ruby Hunt

District 5

Duane W. McCarty

District 1

Hal Norgard

District 7

Donald E. Salverda

District 2

Warren W. Schaber

District 6

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathryn DeSpiegelaere, Director of LRT Planning *XD*

SUBJECT: Ridership Forecasts for Midway Corridor

DATE: August 6, 1990

At the July 24 Ramsey County Regional Railroad Authority meeting, delays in obtaining the ridership forecasts for the Midway Corridor were discussed. The forecasts have not been obtained to date. Information attached on this subject includes:

1. Memorandum I wrote on March 19 for a previous Regional Railroad Authority agenda on the role of the Metropolitan Council in the forecasting process for the Midway Corridor.
2. Memorandum from David Warner, BRW, on the progress on obtaining forecasts. It outlines why delays have occurred and how that has affected the schedule for the Midway Corridor Environmental Impact Statement.
3. Revised schedule dated August 3 for the Midway Corridor Environmental Impact Statement. Note that a decision on alignment is not expected until late February, 1991, by Ramsey County Regional Railroad Authority if the ridership forecasts are obtained by August 15. The previous schedule anticipated an alignment decision in early January.
4. A memorandum from BRW dated July 20 about ridership forecasting in general.
5. A copy of the letter sent by Chairman Finley to Metropolitan Council Chair Steve Keefe on this matter dated July 25.

Recommendation:

For your discussion.

KD/blk
Attachments

John T. Finley, Chairman
District 3
Duane W. McCarty, Vice Chairman
District 1
Warren W. Schaber, Secretary
District 6
Ruby Hunt, Treasurer
District 5
Diane Ahrens
District 4
Hal Norgard
District 7
Donald Salverda
District 2

Ramsey County Regional Railroad Authority

316 Courthouse, St. Paul, Minnesota 55102 612-298-4145 / FAX 292-6689

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathryn DeSpiegelaere, Director of LRT Planning *KD*

SUBJECT: Ridership Forecasts for Midway Corridor

DATE: March 19, 1990

At the March 13 meeting of Ramsey County Regional Railroad Authority (RCRRA), you requested additional information on the approach to ridership forecasting for the Midway Corridor and the potential change in services to be provided by the Metropolitan Council and BRW.

Background

Transit patronage forecasts are an important factor in deciding whether and where to construct transit systems. Patronage influences the cost effectiveness of LRT systems.

In response to a request by Ramsey County Regional Railroad Authority soliciting issues to be addressed in preliminary engineering for the Midway Corridor, Mayor George Latimer responded in 1989, "Of particular interest to the City are accurate patronage projections and cost figures for transit in the Midway Corridor after introduction of any one given alternative LRT alignment. Much debate during the last study centered around whether the patronage figures were accurate estimates. It is critical, if we are to again compare alternative alignments, that the metropolitan travel model at the minimum be used to model patronage."

The Midway Corridor preliminary engineering study being conducted by Ramsey County Regional Railroad Authority (RCRRA) with BRW will yield patronage forecasts to compare the Midway Corridor LRT patronage to that of other corridors in the region and to compare alternative alignments within the Midway Corridor.

The proposal made by BRW in 1989 for patronage forecasts for engineering for the Midway Corridor relied on the regional forecasting model.

Regional Travel Forecasting

The Metropolitan Council has responsibility for transit forecasts within the metropolitan area. The transit forecasts are one element of the travel mode choice model, which predicts whether trips will be made by auto or some other means.

In 1989, in order to improve the accuracy of LRT patronage forecasts, Hennepin County Regional Railroad Authority contracted with BRW and its subcontractors, Barton Aschman, Comsis, and Richard Pratt, to develop patronage forecasts for its LRT corridors. Richard Pratt had been hired by the Regional Transit Board in 1988 to prepare LRT patronage forecasts for the Midway Corridor at a less detailed level than is required for the current work effort. Three elements of the current process to develop patronage forecasts that have been completed are:

1. A survey of existing bus riders.
2. A survey of non-bus riders.
3. Development of a model to predict ridership of LRT in 2010.

The survey of existing bus riders was funded in part by the Regional Transit Board, which insisted that it include riders in the entire metropolitan area, not just Hennepin County. The survey of non-bus riders was done in Hennepin County but the results can be extrapolated to other areas. The development of the forecasting model has not proceeded on schedule, but has now been completed by Richard Pratt and Gordon Schultz of Comsis.

Forecast Elements

Some of the steps in generating patronage forecasts for LRT and the responsible parties are:

<u>Step</u>	<u>Responsible Party</u>
1. Develop assumptions	
o Land use (population employment, households)	Metropolitan Council with City concurrence
o Regional travel characteristics (parking costs, highway speeds, transit fares, transfer policy, auto operating costs, inflation rate)	Metropolitan Council/Regional Transit Board/Metropolitan Transit Commission/Regional Railroad Authorities/consultants

2. Set parameters for forecasts

- o Corridor travel characteristics (feeder bus service, alignments, frequency of transit service, location of stops, park/ride availability)

Affected Regional Railroad Authority/affected City/Regional Transit Board/Metropolitan Transit Commission/consultants/Metropolitan Council

- o Other corridors

Affected Regional Railroad Authority/affected City/Regional Transit Board/Metropolitan Transit Commission/consultants/Metropolitan Council

3. Develop model to predict patronage

Consultant, under contract to Hennepin County Regional Railroad Authority, with involvement of other agencies

4. Code data for specific LRT alignments/feeder bus alternatives

Consultant to respective Regional Railroad Authorities with involvement of Metropolitan Council

5. Operate computer to produce forecasts

Metropolitan Council

6. Review information generated from computer runs

Metropolitan Council/Regional Transit Board/Metropolitan Transit Commission/Regional Railroad Authorities/consultants

7. Refinements to model

Metropolitan Council/Regional Transit Board/Metropolitan Transit Commission/Regional Railroad Authorities/consultants

8. Complete final forecasts

Metropolitan Council

9. Review forecasts

Metropolitan Council/Regional Transit Board/Metropolitan Transit Commission/Regional Railroad Authorities/consultants

Change in Approach

In early 1990, Nacho Diaz of the Metropolitan Council indicated that his agency would take on the responsibility for operating the computer to produce the LRT patronage forecasts. So rather than having BRW or its subcontractor perform the computer work, the Metropolitan Council will perform that technical, operational work, not only for the Midway Corridor, but for other LRT corridors throughout the region. The estimated savings to RCRRA for the Midway Corridor forecast is \$70,000. 4

If the Metropolitan Council does not perform this work, BRW does have the capability to do it. No delay in the time schedule would be required for BRW to do that work if that decision is made within the next two weeks.

Influences on Forecasts

Generating patronage forecasts for LRT is a highly technical and specialized task. Although there are many opportunities for errors, the most influential area is that of assumptions. It is particularly critical that accurate assumptions are made for:

1. Feeder bus and level of service for LRT for each alignment within a corridor.
2. Land use, parking costs, and other regional factors.
3. Highway system.
4. Existing conditions for bus service, such as speed, ridership, and vehicle miles of travel.

Recommendations

The primary safeguard Ramsey County Regional Railroad Authority has over the patronage forecasting outcome is involvement in determining the assumptions. As a result of meetings held within the last week to provide you with additional information, I recommend:

1. RCRRA staff and consultants meet with Metropolitan Council and St. Paul staff to review Metropolitan Council assumptions for employment, population, and number of households.
2. RCRRA staff and consultants continue meetings with Metropolitan Council, Regional Transit Board, Metropolitan Transit Commission and St. Paul staff to develop feeder bus and other assumptions for alignments within the Midway Corridor.
3. Because of the complexity of forecasting transit patronage, RCRRA staff should retain an independent consultant familiar with forecasting to review Metropolitan Council work and should have continuing contact with consultants familiar with forecasting to advise RCRRA staff on this matter. It is essential to make sure that the critical questions are being asked at the appropriate time. A critique of work after it is completed is less effective than frequent, early involvement in assumptions.

M E M O R A N D U M

DATE: August 6, 1990
TO: Kathy DeSpiegelaere, Jim Tolaas, RCRRA
FROM: David M. Warner, PE
RE: RCRRA Midway Corridor LRT PE & EIS
RIDERSHIP FORECAST PROGRESS REPORT

The purpose of this memorandum is to report the present situation of transit ridership forecasts being prepared for the Midway Corridor project.

Current Status

Transit ridership forecasts were originally scheduled to be available for use by June 15, 1990. As of this date, preliminary forecasts are expected by about August 15 (per Steve Wilson, 8-1-90); these forecasts will be evaluated and a determination made regarding their suitability by the consultant team, Metropolitan Council staff, RCRRA staff and RCRRA staff.

Reasons For Delay

Completion of transit ridership forecasts has been delayed because various component models of the ridership forecasting computer model have not performed as expected. This includes the calibrated transit network, the non-work modal split model, and the mode of arrival model. Each of these model components are new or remodeled versions of the regional travel model, developed specifically for the current round of LRT studies in the Twin Cities area. Previous versions of these models are outdated. Because of the importance of ridership estimates to the LRT planning process, new models were developed to provide a more accurate forecast of ridership in the metropolitan area.

Implications of Delays

Ridership forecasts are on the critical path for EIS completion. Analysis of significant EIS and preliminary design issues rely on ridership forecasts. Ridership forecasts are required to analyze station area traffic and ROW acquisition impacts, air quality impacts and economic development impacts.

If ridership forecasts had been available on June 15, as originally scheduled, the DEIS would have been submitted to the Environmental Quality Board (EQB) on September 24. If usable results are available on August 15, the DEIS will be submitted to the EQB on about November 7. The alignment decision for the Midway Corridor, if it is to occur after the public review period, would not be made by the RCRRA until late February 1991.

If the forecasts expected on August 15 are used in further analysis, and it later becomes apparent that the numbers are significantly different, additional costs will be incurred in repeating the analysis using the correct forecast.

If methods identified to resolve problems with the models are not successful, further and substantial delays could result.

Situation Remedies

Throughout preparation of the forecasts, Metropolitan Council staff responsible for model operation has been in regular contact with the model authors (Gordon Schultz of COMSIS Corporation, and Dick Pratt of RH Pratt Associates). In addition, the RCRA, through BRW, has retained the services of Cambridge Systematics, another modeling expert, to consult with and assist in processing of the forecasts.

The HCRA has also authorized the use of Dick Pratt to directly provide assistance in refining the computer models being used to prepare the forecasts.

RCRA staff has authorized BRW to rent two computers (at a cost of \$1,600.00 per month) to be used by Metropolitan Council staff to run the computer models. Because the models are very large and require a great deal of computer time, the additional hardware will allow staff to be more efficient in forecast preparation.

Alternative Means of Producing Forecasts

No totally satisfactory alternative means of forecast production is available. Alternatives include:

1. Use forecasts prepared for Midway Corridor Planning Analysis.
2. Use previous versions of transit forecasting module in regional travel model.
3. Employ "turning point" forecast methodology (used in Metropolitan Council's Long-Range Transit Analysis, 1987).

All three alternatives produce only overall forecasts of bus and LRT ridership. All details regarding route-by-route, station-by-station and mode of arrival estimates would have to be synthesized.

Alternatives 1 and 2 both rely on the previous version of the transit forecasting module of the regional model.

If it is determined that an alternate method of ridership forecast preparation is to be used, Alternative 3 is recommended because it uses readily available information which relates directly to transit ridership (existing transit ridership, growth in population, households and employment).

Conclusion

At this time, BRW recommends continuing to work toward producing ridership forecasts with the computer models, recognizing that delays are possible. BRW is monitoring the situation and will reevaluate the recommendation regularly.

cc: Doug Moore, BRW
Dick Wolsfeld, BRW
Ken Stevens, HCRA
Steve Wilson, Metropolitan Council
Dave Minister, Regional Transit Board
Project File: 41-8927

BRW, Inc.
August 3, 1990

Ramsey County Regional Railroad Authority
Midway Corridor
Preliminary Engineering/Environmental Impact Statement

REVISED DRAFT ENVIRONMENTAL IMPACT STATEMENT SCHEDULE

Submit DEIS to EQB	November 7, 1990
DEIS Notice of Availability Published in <u>EQB Monitor</u>	November 26, 1990
Public Hearing(s) Regarding DEIS	December 18, 1990 to January 10, 1991
Comment Period Closes	January 28, 1991
RCRRA Identifies Preferred Alternative	February 26, 1991
Submit FEIS to EQB	March 25, 1991
FEIS Notice of Availability Published in <u>EQB Monitor</u>	April 1, 1991
RCRRA Determination of Adequacy/Notice of Determination	April 30, 1991
Notice of Determination in <u>EQB Monitor</u>	May 20, 1991

NOTE: Depends on availability of ridership
forecasts on August 15, 1990

Ramsey County Regional Railroad Authority
Midway Corridor
Preliminary Engineering/Environmental Impact Statement

RIDERSHIP FORECASTS

During the course of the Midway Corridor Study, a great deal of interest has been expressed in the forecasts of transit ridership which are being prepared. This is a short description of what we can expect from the ridership forecasts, how they will be used, and what their limitations are. (The lines are numbered for easy reference during discussion.)

Transit Forecast Content

1. Total System-Wide Daily Transit Ridership for the Year 2010
2. Total System-Wide Peak Hour Transit Ridership for the Year 2010
3. 1. and 2. will be available for feeder bus and LRT routes in the system.
4. LRT ridership will be presented by station.
5. LRT ridership will be presented by direction, on's and off's.
6. For each LRT station, the percent of riders who reach the station by walking, by driving and parking at the station (park and ride), by being dropped off by another driver (kiss and ride), or by feeder bus will be stated.

Use of Transit Forecasts

7. To determine size requirements of transit system components, such as:
 - a. Number of vehicles (buses and LRV's) required on each transit route during different periods of the day.
 - b. LRT and bus headways (time between buses or LRV's).
 - c. Number of park-and-ride spaces required at each LRT station.
 - d. Number of drop-off/pickup spaces required at each LRT station.
 - e. Number of bus waiting spaces needed at each LRT station.
 - f. Number of LRV's in a train.
 - g. LRT platform size (maximum number of people expected to be on the platform at one time).
8. To assess the performance of various corridors and each of the alternatives within the corridors. In addition to the actual patronage forecasts, many ratios have been used, including:
 - a. Riders per route mile.
 - b. New riders per route mile.
 - c. Passenger miles per route mile.

- d. Operating cost per passenger.
- e. Operating cost per passenger mile.
- f. Operating cost per route mile.
- g. Capital cost per passenger.
- h. Capital cost per passenger mile.
- i. Capital cost per route mile.
- j. Annualized capital cost per passenger.
- k. Annualized capital cost per passenger mile.
- l. Annualized capital cost per route mile.
- m. Operating revenue per route mile.
- n. Operating revenue per passenger mile.

Limitations of Ridership Forecasts

9. Ridership forecasts are prepared using computer models (i.e., a series of formulas and calculations) which use, as inputs, forecasts of future population, number of households, and employment for each of nearly 1,100 traffic analysis zones (TAZ's). The model, which is based on local conditions, estimates transit ridership by comparing time and cost factors including:
- a. Walking time
 - b. Waiting time
 - c. In-vehicle travel time
 - d. Automobile operating cost
 - e. Parking cost
 - f. Transit fare

In general, the ridership forecasts are "good" as long as the data used to make the forecasts is "good." In practice, it is not reasonable to expect that all our forecasts of future conditions will be correct; it is likely, however, that our forecasts of some input variables will be high, and that some will be low, and that, overall, the forecasts will still be "good."

10. As more and more detailed information is sought from the forecasts, the reliability of the results decreases. For example, confidence level in the forecast of total transit ridership would be greater than the confidence level in an estimate of the number of people expected to walk to the Dale Street station.
11. The ridership forecasts generate no information about individual trips. The greatest level of detail is at the TAZ level. The TAZ's range in size from about four city blocks in a very densely developed area in a downtown area, to several square miles in a far suburban area of the metropolitan area (See 10.).

Ramsey County Regional Railroad Authority

316 Courthouse, St. Paul, Minnesota 55102 612-298-4145 / FAX 292-6689

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District 1
Warren W. Schaber, Secretary
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Donald Salverda
District 2

July 25, 1990

Mr. Steve Keefe, Chair
Metropolitan Council
Mears Park Centre
230 East Fifth Street
Saint Paul, Minnesota 55101

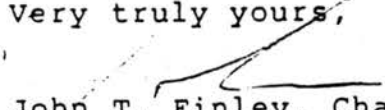
Dear Steve:

Ramsey County Regional Railroad Authority Commissioners have requested that I write a letter to you indicating our strong concern about the delay in obtaining ridership forecasts for LRT in the Midway Corridor.

Your staff is running the computer model to produce the forecasts. We understand that ongoing discussions have occurred with our staff and BRW about the problems being encountered that have delayed the forecasts and that your staff is devoting extraordinary efforts to this task, but you need to be aware that the schedule for completion of the Environmental Impact Statement (EIS) for the Midway Corridor is being delayed by the absence of ridership forecasts we can rely on for continuing our work.

The schedule for the Environmental Impact Statement for this corridor assumed that forecasts would be available a month ago. Delays in obtaining ridership forecasts prevent Ramsey County Regional Railroad Authority from completing its EIS and preliminary engineering decision on the alignment for the corridor which everyone agrees is the top priority for LRT for the Metropolitan area.

Very truly yours,


John T. Finley, Chairman
Ramsey County Regional Railroad Authority

JTF/blk

cc: Mike Ehrlichmann, Chair, Regional Transit Board
John Derus, Chair, Joint LRT Advisory Committee
Ramsey County Regional Railroad Authority Commissioners
Regional Transit Board Members
Joint LRT Advisory Committee Members
Kathryn DeSpiegelaere, Director of LRT Planning
Dick Wolsfeld, BRW, Inc.

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

5

Regional Railroad Authority

Originating Department

K. DeSpiegelaere 5/6/90
Authorized Signature Date

Board Action Requested

Progress on LRT Coordination Plan

DISCUSSTION ONLY

Request Justification

- See attached:
- 1) Memorandum from K. DeSpiegelaere
 - 2) LRT/Land Use Coordination Plan
 - 3) Summary of Implementation Strategy and Organizational Plan
 - 4) Ten Year Schedule and Budget for LRT

Budgeting and Accounting

County Attorney

Risk Manager

Data Processing

Previous Action taken on Request

Date / Time

Received By

Comments / Recommendation

Documentation certified complete for:

Committee / Meeting Date

Signature

Date

Committee / Meeting Date

Signature

Date

August 14, 1990

F. L. Henderson
Signature

8/8/90

Board Date

Date



John T. Finley, Chairman

District 3

Diane Ahrens

District 4

Ruby Hunt

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Room 316 Courthouse
15 W. Kellogg Blvd.
St. Paul, MN 55102
Phone 298-4145

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathryn DeSpiegelaere, Director of LRT Planning *KD*

SUBJECT: Progress on LRT Coordination Plan

DATE: August 6, 1990

Several elements of the LRT Coordination Plan are being considered by the Joint LRT Advisory Committee at its meeting on August 8. They are:

1. **Coordination of LRT and Land Use.** This information (copy attached) is the subject of a forum sponsored by the Metropolitan Council on August 7. Regional Railroad Authority and City staff were participants in its preparation. From Ramsey County, the participants were: Peggy Reichert, Allen Lovejoy, Roger Ryan, Mark Filipi (St. Paul); Rick Jopke (Roseville); Kathryn DeSpiegelaere (RCRRA).

On this same subject, **Jim Prost**, economic impact subconsultant from Annapolis, Maryland, to Ramsey County Regional Railroad Authority for the Midway Corridor, will attend the **August 28** Regional Railroad Authority meeting and is expected to have a summary of his firm's final report to share with you on that date. He may also attend meetings with the St. Paul City Council and Planning Commission.

2. **An Executive Summary of Implementation Strategy and Organization** prepared for the Regional Transit Board (RTB) by **O'Brien-Kreitzberg & Associates, Inc.**

A copy of the summary is attached. It recommends that the RTB be responsible for the implementation of LRT in the metropolitan area. It recommends a conventional approach for construction of LRT in the Central Corridor, rather than a turnkey approach.

3. **A 10-year budget that is based on varying assumptions of 1/2 cent or 1/4 cent sales tax for LRT construction.** You received a draft version of a portion of this at your July 24 Regional Railroad Authority meeting.

Recommendation:

For discussion.

KD/blk
Attachment

DRAFT

LRT/LAND USE COORDINATION:

THE LAND USE ELEMENT

OF THE REGIONAL TRANSIT BOARD'S

LIGHT RAIL TRANSIT COORDINATION PLAN

July 1990

Regional Transit Board and
Metropolitan Council of the Twin Cities Area
230 East Fifth Street, Mears Park Centre
St. Paul, Minnesota 55101

Publication No.

THIS REPORT WAS PREPARED WITH THE GUIDANCE OF THE
LRT/LAND USE COORDINATION TASK FORCE

St.Paul	Peggy Reichert, Allen Lovejoy, Roger Ryan, Mark Filipi
Minneapolis	Perry Thorvig
Minnetonka	Ann Perry
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Richfield	Byron Wallace
Burnsville	Greg Konat
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RTB	David Minister, Garneth Peterson
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Hennepin County	Ken Stevens
Ramsey County	Kathy Despiegleare
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LRT/LAND USE COORDINATION REPORT:
AN ELEMENT
OF THE REGIONAL TRANSIT BOARD'S
LRT COORDINATION PLAN

INTRODUCTION AND PURPOSE

The purpose of this report is to provide a planning framework to ensure adequate coordination between the development of a light rail transit (LRT) system and land use related activities. This framework can be utilized at different stages of LRT development to take advantage of development opportunities and to preserve stable neighborhoods and businesses in the vicinity of LRT lines. This report serves as information and guidance to cities in the Twin Cities Metropolitan Area, which are ultimately responsible for land use related decisions, and to the Regional Transit Board (RTB) and regional rail authorities which are primarily responsible for the development of an LRT system in the Twin Cities.

LRT has the potential to have a long-term impact on urban development. It can encourage, as documented in this report, new development and redevelopment along corridors, particularly around stations, because it provides increased accessibility. It is important, however, that this development occurs in a manner compatible with the philosophy and vision that individual communities have developed within the land use components of their local comprehensive plans. It also is important to ensure that neither the physical presence of the LRT line, nor the potential land development and redevelopment that might accompany it, create negative environmental impacts on existing urban development.

Cities have ultimate responsibility and authority for land use decisions. Cities can ensure that LRT will help further community goals, while protecting stable neighborhood and business environments, by becoming actively involved in station area planning as LRT is being designed and engineered.

LRT lines and stations are proposed for location in many different community settings: highly developed commercial areas, such as Minneapolis and St. Paul downtowns; less intense linear commercial and residential areas, and medium- to low-density residential areas in the suburbs. Land use planning efforts would be applied according to the environment in which LRT is placed. In addition, different cities may desire LRT to do different things within their communities. LRT offers communities a number of opportunities and can be used, among other things:

- * As a development tool, to shape and focus city growth, consuming less land and generating less traffic and pollution.

- * To intensify development around station areas, creating more imaginative and dynamic urban nodes in a more pedestrian-friendly environment, with an active, human character.
- * To upgrade an area through redevelopment of rundown or underutilized properties, revitalizing that portion of the community.
- * As a means to increase a community's property tax base.
- * To provide its businesses and residents with a high quality transportation alternative.
- * To enhance and buffer existing neighborhoods through sensitive design and landscape treatments.

In land use planning for LRT, a sensitive balance needs to be achieved between protection of communities and skillful accommodation of an appropriate level of supportive development, while maintaining a high level of service to LRT users.

In summary, careful consideration of land use planning in conjunction with LRT development can allow cities to realize desired development opportunities, while preserving the integrity of stable neighborhoods. This report is offered as a framework for cities to consider as they undertake land use planning in conjunction with county regional rail authority LRT design, engineering and construction.

CONTENTS

This report is organized in three parts.

Part 1 documents how land use and LRT have thus far been coordinated (or are being coordinated) in the Twin Cities through the planning efforts of the county regional rail authorities, local government review and comprehensive land use planning processes, and how transportation planning activities have regional review.

Part 2 proposes a more specific and proactive process for cities to undertake where LRT is under study that allows the city to assess its current land use, identify opportunities for development and redevelopment, and identify ways to preserve existing stable neighborhoods and businesses along proposed LRT routes, involving neighborhoods and businesses in the planning process. The proposed process further reinforces the link between transit and land use that cities have the responsibility and authority to guide.

Part 3 provides guidance to cities regarding land use planning options and station area building and infrastructure principles that will ensure that the community environment in the vicinity of LRT station areas is designed in a manner that is conducive to LRT use and sensitive to pedestrian needs, while incorporating the neighborhood development and/or preservation goals. These guidelines recognize all the different types of community environments where LRT lines and stations will be implemented, including central business districts, urban neighborhoods, as well as suburban environments. The guidelines are offered as options for cities to utilize in planning for LRT.

Part 4 is a bibliography of resources that communities may wish to reference in conducting land use planning and development in coordination with LRT. It includes studies, reports, papers, articles, videos, and other references.

PART 1: EXISTING LRT/LAND USE COORDINATION PROCESSES

The existing regulatory environment provides a number of opportunities for interaction between LRT and land use planning activities. The most significant examples of this interaction are as follows:

LRT Reviews

- * County Regional Rail Authority LRT preliminary and final design plans are reviewed approved by affected cities, and by the RTB which must find these plans consistent with the adopted regional LRT Development and Financial Plan. This plan must be approved by the Metropolitan Council.
- * County Regional Rail Authorities have solicited city official and public input in review of LRT studies. Although not required by law, rail authorities have asked cities to assess impacts of proposed alignments and stations, held community meetings, and made presentations to assure community participation.
- * Environmental Assessment Worksheets (EAW's) and Draft and Final Environmental Impact Statements (EIS's) for proposed LRT corridors are prepared during the preliminary design stage (10 percent engineering) and may extend later into preliminary engineering. EAW's and EIS's are required to be submitted to affected local jurisdictions and to regional agencies for review and comment.

Comprehensive Plan Reviews

- * Cities are required to prepare land use and comprehensive plans that are consistent with Metropolitan Council policy. Amendments to these plans are initiated at the discretion of local jurisdictions in response to Metropolitan Council policy changes and/or development proposals that require a change in land use designation. Land use and transportation concerns resulting from a proposed development or comprehensive plan amendment that would negatively impact LRT can be handled in the context of the comprehensive plan amendment approval process coordinated by the Metropolitan Council. There are opportunities for review of city comprehensive plan amendments by adjacent local governments and counties, as well as RTB and the Minnesota Department of Transportation (Mn/DOT).

Development Reviews

- * Proposed new developments that may have direct impact on LRT may be subject to regional review under three types of existing mechanisms: comprehensive plan amendments; EAW's and EIS's; and Indirect Source Permits (ISP's). First, a proposed development may require regional review when it requires a local comprehensive plan amendment due to a change in land use designation. Second, EAW's or EIS's are required by the Minnesota Environmental Quality Board to be submitted by proposed larger developments (determined by square feet thresholds for different land use types, and 2000 or more parking spaces). EAW's and EIS's require regional agency review. Third, new developments that require Indirect Source Permits (ISP's) (hinging on parking thresholds) issued by the Minnesota Pollution Control Agency (MPCA) also allow for regional review. (MPCA is currently revising

the regional review procedures and thresholds that instigate an ISP.) Where a development is proposed that is consistent with a city's approved comprehensive plan and zoning, and does not require an EIS, EAW, or ISD, no regional review is necessary.

Roadway Project Reviews

- * Major roadway projects typically require EAW's and EIS's and need to be coordinated between multiple jurisdictions and agencies, including Mn/DOT, cities and counties. In certain Metropolitan Highway System corridors, LRT is being planned as part of the roadway improvement solution. These projects are led by a coordinated project management team comprised of Mn/DOT, Metropolitan Council, RTB, cities and counties.

The above opportunities do not constitute a continuous, well established process for the interaction of LRT and land use planning activities. The reviewing agencies which perform their responsibilities at discrete points in time (e.g. at the end of EIS's, preliminary and final design plans) are positioned in a reactive mode. The proposed process in Part 2 will ensure that LRT development takes place in the overall context of comprehensive land use and transportation planning, by recommending a more structured, proactive approach. Implementation of an LRT line and the development that will take place along it will be closely related to other aspects of comprehensive planning, including sewers, streets, schools and other public facilities, and cities can ensure consistency between all of these elements.

This recommended process is structured in such a manner that should allow each city to do the level of land use planning that is appropriate to that community, and wherever a county rail authority is in the LRT engineering process. While proposed LRT corridors are all at different stages in the LRT engineering process, and some are nearing completion of the first engineering stage, the land use planning activities outlined in Part 2 can be used by cities to feed into LRT design and engineering as it proceeds.

PART 2: LRT STATION AREA LAND USE PLANNING PROCESS

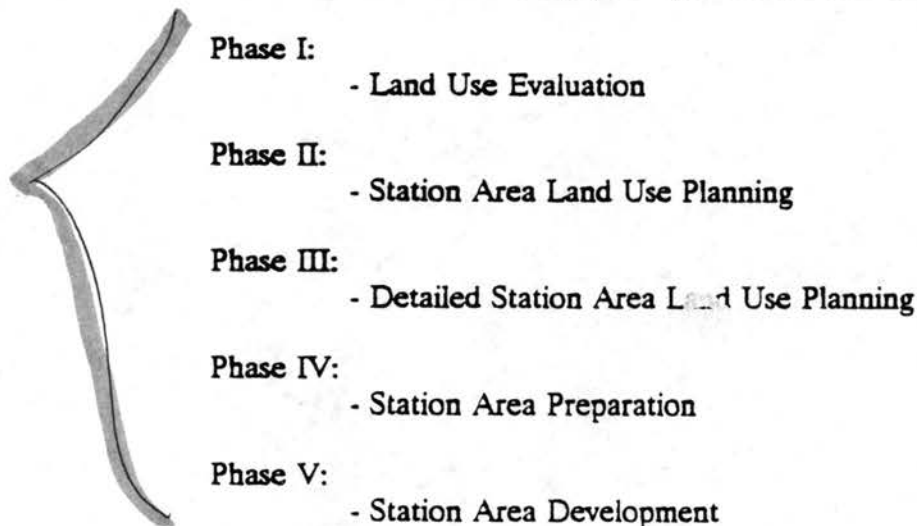
The main purposes of the proposed process are to permit cities to better plan for land use and zoning changes in conjunction with LRT development and to enhance development and redevelopment opportunities in the vicinity of station areas. Cities would also be able to plan in advance for related capital improvements, including pedestrian amenities and station area access needs, as well as for impact mitigation measures (such as landscaping, buffering, etc...).

LRT station areas are defined generally as the area within a reasonable walking distance from an LRT station, or within 1/4 to 1/2 mile of a station. City land use planning would be focused mainly on the 1/4 to 1/2 mile radius, as opposed to the station site itself, which will be addressed by rail authorities in design and engineering of the LRT line. However, through following the land use planning process described in this section, cities will have many opportunities to impact alignment, station location, park/ride siting, and preservation and mitigation measures decisions that are the responsibility of the rail authorities working with the cities.

Specific objectives of the LRT/Land Use Planning Process are to:

- Integrate land use decisions with the LRT development process.
- Maintain the scale, character and quality of well established, stable neighborhoods and businesses.
- Encourage the preservation, restoration and enhancement of existing stable and attractive structures, particularly those with historic value.
- Minimize potential disruption associated with LRT construction and operation.
- Establish a pedestrian friendly environment around stations.
- Establish land use and development patterns that maximize the benefits of increased transit accessibility and encourage LRT ridership.
- Develop LRT station area environments that encourage LRT use and minimize the need for single-occupant vehicle use.

The LRT Station Area Land Use Planning process, is divided into five phases:



Phase I would result in a preliminary evaluation of proposed LRT alignments from a land use perspective, including development objectives and concepts, and an identification by cities of land use issues and impacts that the county rail authorities should include in the LRT Environmental Impact Statement (EIS). This would be concluded prior to the completion of the LRT EIS and the 0-10 percent level of LRT preliminary design and would feed into the rail authority's alignment and preliminary station location decisions. Phase I work would provide a basis for city review of the rail authority's LRT preliminary design plans and EIS.

Phase II would expand on the work initiated during Phase I and would involve identification of alternative land use concepts and goals, community amenities to be preserved, potential LRT impacts, and mitigation needs related to the selected LRT alignment and its potential station areas. Cities, in conjunction with the appropriate county rail authority, would work closely with community groups during Phase II. This work would be completed prior to the completion of 10-30 percent level of preliminary engineering.

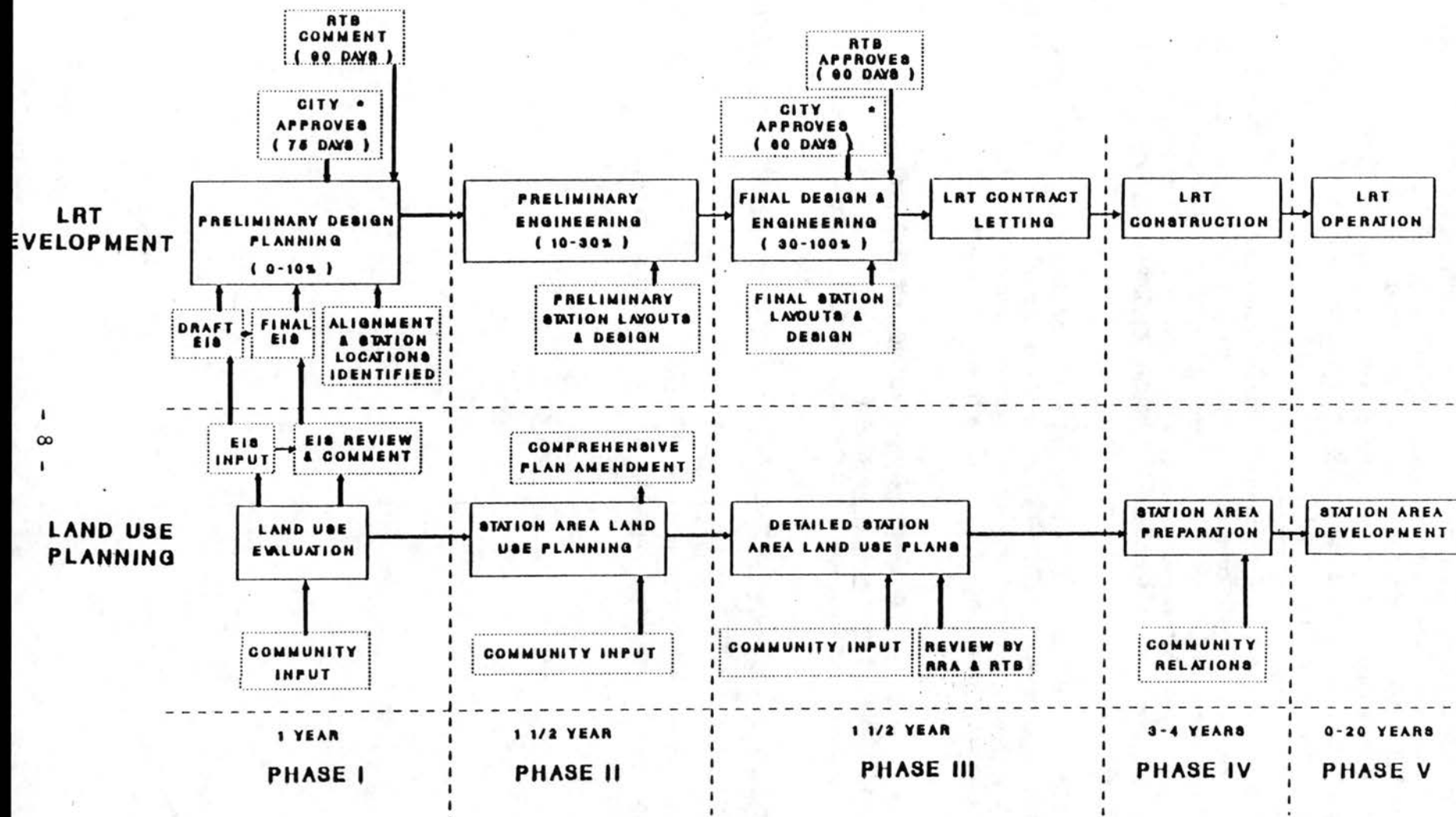
Phase III would be initiated once an LRT alignment begins the final engineering stage of LRT development (30-100 percent engineering level) and would involve the development of a detailed station area land use plan, including a station area inventory, land use analyses, implementation plan, and would involve community participation. Phase III work would be completed prior to construction of the LRT line.

Phase IV would be done during the 3 to 4 year LRT line construction period and would involve definition of the city's station area development strategy and preparation of the station areas for potential development and to accommodate the station access needs, as well as a community relations element.

Phase V, station area development, if it is desired, would likely begin at the onset of the LRT line's operation and continue 10 to 20 years.

The LRT/land use planning relationship is shown in Figure 1 and described in detail on pages 9 through 14. Appendix A offers selected graphic illustrations of how different cities have approached land use planning for LRT.

Figure 1
LRT/LAND USE COORDINATION PROCESS



• IF CITY DISAPPROVES, RTB HOLDS PUBLIC HEARING AND WITHIN 90 DAYS RECOMMENDS AMENDED PRELIMINARY AND / OR FINAL DESIGN PLAN.

PHASE I.

LAND USE EVALUATION

Where LRT has been identified within the RTB's adopted Regional LRT plan, cities should undertake a general review of city land use and transportation comprehensive plans and policies, zoning, social, economic and physical characteristics, and community features, structures and amenities that lie within 1/4 to 1/2 mile of the proposed alignments. As part of this process the city should, at a minimum, evaluate:

- The potential role of each proposed LRT line in achieving the city's development goals and objectives and desirable level of urban growth acceptable to the city. This evaluation should assess development and redevelopment opportunities around potential station sites, based upon vacant, developable, and redevelopable land. Broad alternative land use concepts for potential station areas should be considered, that might include "no-change" (preservation of existing neighborhoods and land uses), intensification, changed land use designations, down-zoning, or other concepts.
- Comprehensive land use and transportation policies and goals that might require amendment in order that the city's comprehensive plan be supportive of LRT. Cities might find it necessary to undertake such amendments prior to the formal city review of the LRT preliminary design plan.
- The potential impacts of the LRT lines on the corridor as a whole, valued community amenities that should be preserved, and the issues, impacts, and mitigation measures that the regional rail authorities should address in the EIS process and in further LRT engineering phases.
- Accessibility issues as they relate to station location, such as the city's view of station spacing, and sizing and location of LRT park/ride facilities, as well as associated vehicle access requirements.

The city should conduct this evaluation in an interactive manner with the regional rail authority in the preliminary design planning phase (0-10 percent engineering) and in preparing the land use element of the Environmental Impact Statement (EIS). During Phase I, preferably as part of the EIS scoping process, the city should prepare an outline of issues that the rail authority should address in preparing the EIS, emphasizing land use issues. It should be recognized that EIS preparation and review, while shown in Figure 1 occurring during Phase I, may for certain corridors extend into Phase II.

During Phase I, the city, working closely with the rail authority, should seek business and neighborhood input. Communication with property owners is recommended to show how stable businesses and residences can be preserved, buffered and even enhanced with LRT, and how possible associated development in station areas can benefit a community.

The end of the preliminary design stage results in an alignment selection and preliminary station locations identified. The land use evaluation conducted by the cities during Phase I can be utilized in the city review of preliminary design plans and can be expanded upon during Phase II.

PHASE II.

STATION AREA LAND USE PLANNING

During the LRT preliminary engineering stage, a city should expand and refine the evaluation done during Phase I. Station area land use planning during this phase should involve:

- Station area land use planning boundary identification (generally, within 1/4 to 1/2 mile of the station site). Neighborhoods, commercial areas, and natural community features may define the station area boundaries.
- Preliminary station area plans that identify, for each identified station location, one or two land use concepts that take into account stable neighborhoods, areas requiring redevelopment, and underdeveloped land. Alternative land use concepts might include "no-change" (preservation of existing land uses), intensification, higher residential densities, mixed uses, down-zoning, and multiple variations of these concepts within a particular station area. These concepts should be communicated with public officials and property owners within the broader station area boundaries through preliminary urban design drawings and plans. Business and resident input can be used to develop and further refine the station area land use concepts.
- Comprehensive land use and transportation amendments that are necessary to support station area land use planning and development. These amendments would bring the city's comprehensive plan into conformance with the mandatory requirements of local comprehensive plans identified in Appendix C of the Metropolitan Council's Transportation Development Guide/Policy Plan. These amendments should be completed prior to initiation of LRT final design and engineering.
- Development/redevelopment opportunities around proposed station locations, based upon vacant, developable, and redevelopable land, and a desirable level of urban growth that is acceptable to the city.
- Further review of sizing and location of LRT park/ride facilities, and associated vehicle access requirements.
- Valued community amenities that need to be preserved.
- Issues, potential impacts, and possible mitigation measures that the regional rail authorities should address in final engineering and design, and
- A draft community relations plan, developed jointly with the rail authority, to be implemented during final engineering and construction phases of LRT development.

Station area land use planning should be conducted by the city in an interactive manner with the rail authority during the 10 to 30 percent level of preliminary engineering for the LRT line.

The city, working with county rail authorities, should use business and neighborhood input in developing the station area plans and in identifying potential issues, impacts and mitigation measures. Graphic illustrations of potential revisions to land use and zoning where development opportunities exist, identification of stable areas where land use, zoning and community amenities will be preserved, and identification of areas where impacts may need to be mitigated will help the community better understand how LRT implementation will affect their community.

PHASE III.

DETAILED STATION AREA LAND USE PLANNING

Phase III, detailed station area land use planning, would only be necessary when a corridor moves into the final design and engineering stage of LRT development (30 to 100 percent engineering).

Phases I and II may reveal that certain proposed station locations do not require any formal land use or zoning changes, and the county rail authorities during final engineering stages will effectively mitigate any impacts resulting from park/ride, feeder buses, transit platforms and shelters. The rail authorities would work with the city, adjacent businesses, and neighborhoods in addressing issues. No further station area planning may need to take place. The cities, working with the county rail authorities, would use the planning tools developed in Phase II to communicate with neighborhoods.

However, where an LRT station area requires land use and/or significant access changes, or where a city may wish to redevelop, intensify or upgrade, a Detailed Station Area Land Use Plan should be prepared by the city. This plan should be developed in an interactive manner with the preparation of the Final Engineering and Design Plan (30 to 100 percent engineering) for the LRT line. Detailed Station Area Land Use Plans should be reviewed by the regional rail authority and by the RTB. The following suggests tasks the city should undertake during Phase III.

Existing Station Area Inventory

- Redefinition of the station area boundaries;
- Existing land uses and land supply analysis;
- Existing square feet of development;
- Land and improvement values;
- Land ownership;
- Condition of structures;
- Vacant or marginally developed sites, and inappropriate or deteriorated uses;
- Current zoning requirements;
- Existing and forecasted population, employment and housing;
- Public facilities (schools, fire and police protection)
- Utilities (water, sewer, telephone, gas and electric)
- Existing and forecasted traffic counts, existing and planned street network, and right-of-way width, pavement width, number of lanes, signals;
- Existing and proposed street and lot/ramp parking;
- Current and future station area circulation needs;
- Urban form and urban character (neighborhood and landscape features)
- Existing urban edge (setbacks), curb cuts, parking lots, sidewalks and pedestrian amenities;
- Current area activities and trends;
- Amenities to be preserved, such as parks, trees, stable attractive environments, schools, pleasant features;
- Issues and problems to be mitigated, including pedestrian and vehicular access needs, and visual and noise impacts;

Land Use Planning Considerations

- Identification of potential development opportunities for each station area.
- Development of revised goals, policies, principles and guidelines for each station area in response to the alternative land use concept desired, as appropriate to the community setting. Examples of alternative development options are discussed in Part 3.
- Definition of the land use capacity of the station area, including land use density limits and land use designations based on community development goals and access constraints due to roadway capacity, and other data collected in the inventory.
- Preparation of an economic market analysis, to include total market potential for residential, office, retail, hotel and commercial uses based on trends, current economic conditions, population, housing and employment growth projections.
- Development of final land use goals, land use options, density ranges based upon capacity and economic market analysis.
- Development of final station area land use plan, including:
 - Revised land use types and intensities, considering station area planning rings;
 - Building height restrictions;
 - Pedestrian access and amenities, vehicular access (necessary street improvements), parking controls;
 - Mitigation plan for off-station park/ride, feeder bus, and general traffic increases;
 - Urban design concept and architectural theme;
 - Refinement of the community relations plan in conjunction with rail authority.

Implementation Plan

Cities should prepare an implementation plan to include regulatory changes, capital improvements and financial considerations. Major tasks would include:

- Further amendment of comprehensive land use and transportation plans, if necessary;
- Revise zoning ordinance to accomplish community objectives with respect to LRT, possibly incorporating special overlay zoning and including performance standards;
- Review, and if necessary, amend redevelopment plan;
- Consider development moratoriums or transition zoning in order to protect station areas and line rights of way, and to ensure development that enhances community goals and LRT use;

- Prepare a capital improvements plan that covers:
 - * Enhancements--street additions, pedestrian amenities, plazas, esplanades enhancements for persons with disabilities, bike paths, parks, desired types of open and public spaces, trails, and other options (See Part 3: Building and Infrastructure Standards)
 - * Landscaping, buffering and other mitigation methods
- Prepare a property acquisition plan for redevelopment purposes
- Prepare a station area financial plan that outlines options for financial arrangements for development in vicinity of stations, a financial and fiscal feasibility analysis, that includes evaluation of land and air rights values, project capital and operating costs, income, financing and equity requirements and analysis of cash flow and returned equity,
- Identify development incentives such as bonus incentives for developer provision of transit-related amenities.

The preparation of the Implementation Plan should be completed prior to construction but could extend beyond the Final Design and Engineering phase and into the period when construction contracts would be let. (See Appendix A for selected illustrations of other cities' land use planning approaches in preparing for LRT.)

PHASE IV: STATION AREA PREPARATION

Once construction is initiated, the cities will have to address actual implementation of development proposals and define a development strategy in the station area. Three possible strategy options can be considered:

- Laissez Faire approach: the city reacts to development proposals by the private sector.
- Private/Public Partnership approach: the city works actively with the private sector to jointly put together development proposals.
- Project Packaging approach: the city or a development corporation created for this purpose takes the lead in putting together development proposals.

The last two options have proven to be more successful in producing new development along rail lines. In either case the following tasks have to be performed either jointly (i.e. public/private partnership) or by the public sector (i.e. project packaging):

- Acquire land for development and provide relocation assistance
- Negotiate with developers to obtain commitments for station area development
- Implement financial plan

The final steps in the process are as follows:

- In close cooperation with the rail authority, implement a community relations element that involves work with neighborhood businesses and residents to preserve and/or improve the character of the neighborhood by implementing land use preservation, buffering, landscaping etc.
- Implement station access improvements

PHASE V

STATION AREA DEVELOPMENT

Station area development will occur about the time the LRT system begins operation and will continue 10 to 20 years after the system is open.

PART 3: GUIDELINES FOR LRT STATION AREA LAND USES AND BUILDING AND INFRASTRUCTURE STANDARDS

Part 3 offers cities ideas to consider in conducting station area land use planning. The guidelines were developed based on the experiences of other communities such as Calgary, Portland, Edmonton, Santa Clara County and Toronto as LRT was being built and land uses were planned around station areas. Not all of the guidelines will apply in all station areas. For example, a station area in a downtown may have far different land use planning requirements than a station in an urban area outside of the downtown, and a suburban station may again have a totally different cast than a station in a mature neighborhood. The guidelines are offered to cities as options to consider in station area planning appropriate to that community setting.

Part 3 covers two general aspects of LRT station area planning (station areas are generally within walking distance of a station, between one quarter and one half mile radii). First, A) Land Use Planning Guidelines present alternative policy options for a city to consider if there is a desire to redevelop, develop or intensify development. Second, B) Building and Infrastructure Standards highlight principles for designing station area environments that are supportive of LRT use and sensitive to pedestrian and vehicle access needs. Each element of Parts A and B includes general guidelines that are supportive of LRT and pedestrian environments and/or sensitive to neighborhood preservation and enhancement needs. Following the general guidelines are examples of policy statements from other cities' land use plans for LRT station areas.

Cities may wish to consider the guidelines and example policy statements when amending comprehensive plans. A third section, C) Experiences of Cities with LRT and Land Use Planning, includes a summary from a regional land use/LRT forum held in May of 1990 and highlights other cities' experiences in integrating land use with LRT.

A. LAND USE PLANNING GUIDELINES

These guidelines are offered as development options for a city to consider if it wishes to develop, redevelop or intensify development in the vicinity of proposed LRT stations (1/4 to 1/2 mile from the station itself). However, down-zoning or preserving existing zoning also may be the result of land use evaluations conducted by cities.

Development Guidelines for LRT Station Areas

While station area development scale and densities should be premised on available roadway capacity and the proposed LRT capacity, certain types of development are known to have a positive impact on LRT ridership: medium to higher density residential areas anchored at least on one end of the line by higher density employment and/or large educational facility concentrations. For higher transit mode splits to occur, concentrations of higher residential densities should be located reasonably close to and geographically aligned with areas of high employment density.

Examples:

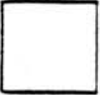
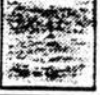
--Over the length of an LRT line a minimum desirable average net residential density is seven dwelling units per acre.

--Where additional residential development is desired as part of the station area development plan, a minimum residential density should be established; low to medium density apartment

development should average a minimum of 35 units per residential acre, while medium to high density apartments should average a minimum of 96 units per acre.

--Where additional commercial development is desired as part of a station area development plan, a minimum employment density should be established. An employment density of 50 or more employees per employment acre in activity centers with 10,000 or more jobs is an indicator of significant transit use. Where employees per acre increase from 25 to 60, mode split increases can go from one percent to between 6 and 11 percent.

Figure 2, from the city of Edmonton's Northeast Corridor LRT Land Use Study, shows a general description of the types and intensities of land uses allowed throughout the LRT corridor. Figures 3 and 4, from the same study, reveal an example of what current zoning allows, versus what actually exists.

CATEGORY		NAME		DENSITY		
KEY	NO			FSI	UPA	PPA
OPEN SPACE						
	1	CITY PARK		-	-	-
	2	SCHOOLS AND PLAY FIELDS		-	-	-
		COMMON OPEN SPACE LAND - SCAPED BUFFER		-	-	-
		PRIVATE OPEN SPACE		-	-	-
RESIDENTIAL						
	3	SINGLE FAMILY DETACHED SEMI DETACHED DWELLINGS		-	9	34
	4	SINGLE FAMILY ROW HOUSING		-	14	49
	5	TWO FAMILY ROW HOUSING (45' HEIGHT MAX.)		0.85	29	101
	6	LOW-RISE, HIGH DENSITY APARTMENTS (60' HEIGHT MAX.)		1.05	41	140
	7	HIGH-RISE, HIGH DENSITY APARTMENTS (90' HEIGHT MAX.)		1.89	110	292

COMMERCIAL						
	8	RETAIL COMMERCIAL PARKS		0.6	-	-
	9	STREET RELATED RETAIL WITH OFFICES ABOVE		1.5	-	-
	10	OFFICES WITH ASSOCIATED RETAIL		3.0	-	-
INDUSTRIAL						
	12	LIGHT INDUSTRIAL / MANUFACTURING WITH ASSOCIATED OFFICES		0.6	-	-

Land Use Typology

FSI = Equivalent of FAR
UPA = Units per Acre
PPA = Persons per Acre

Figure 2: Allowable Land Uses and Intensities

Source: City of Edmonton, "Land Use Plans: Northeast Light Rail Transit Corridor Study"

CURRENT ZONING: Conventional Medium to High-Density Apartment Development

Zone	Site Area (Net Acres)	No. of Units	Gross Floor	Population	Persons/ Net Acre	Average Units/ Net Acre	F.S.I.
R3-R5	17.34	1125	849840	2583	148.9	64.9	1.12
R5-R6	2.96	412	296160	885	299	139.2	2.30
C1-R6	.88	123	88440	264	300	1139.8	2.31
M3-R6	8.69	1212	871740	2606	300	139.5	2.30
	29.87	2972	2106180	6338	212.2	96.1	1.62

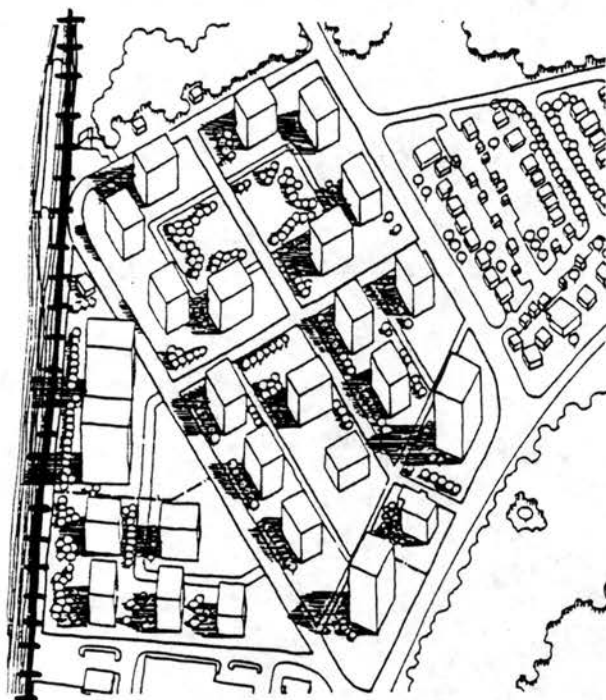


Figure 3: Current Zoning and Built Form

LET LINE +++++

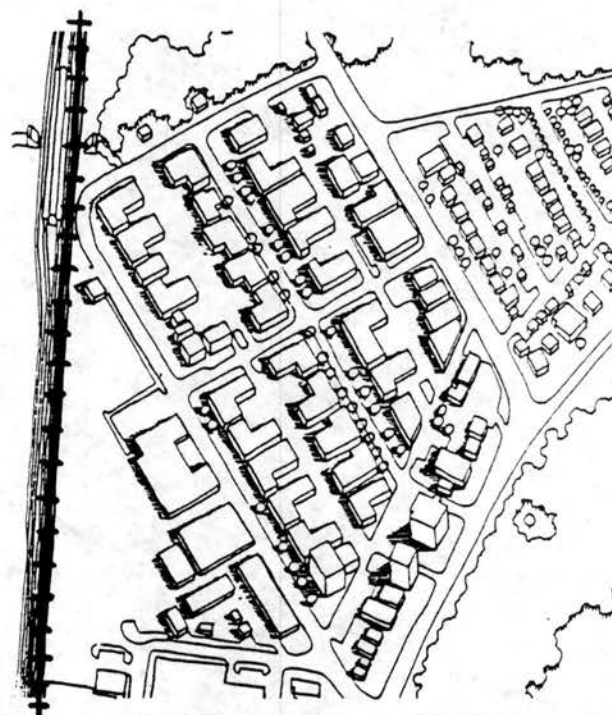


Figure 4: Existing Situation and Built Form

EXISTING SITUATION: low to medium density apartment development mixed with industrial and some retail commercial uses

Zone	Site Area (Net Acres)	No. of Units	Gross Floor	Population	Persons/ Net Acre	Average Units/ Net Acre	F.S.I.
R3	17.34	532	420540	1294	74.6	30.7	0.56
R5	2.96	192	144960	440	148.6	64.9	1.12
C1	.88						
M3	8.69						
	29.87	724	565500	1734	85.4	35.7	0.64

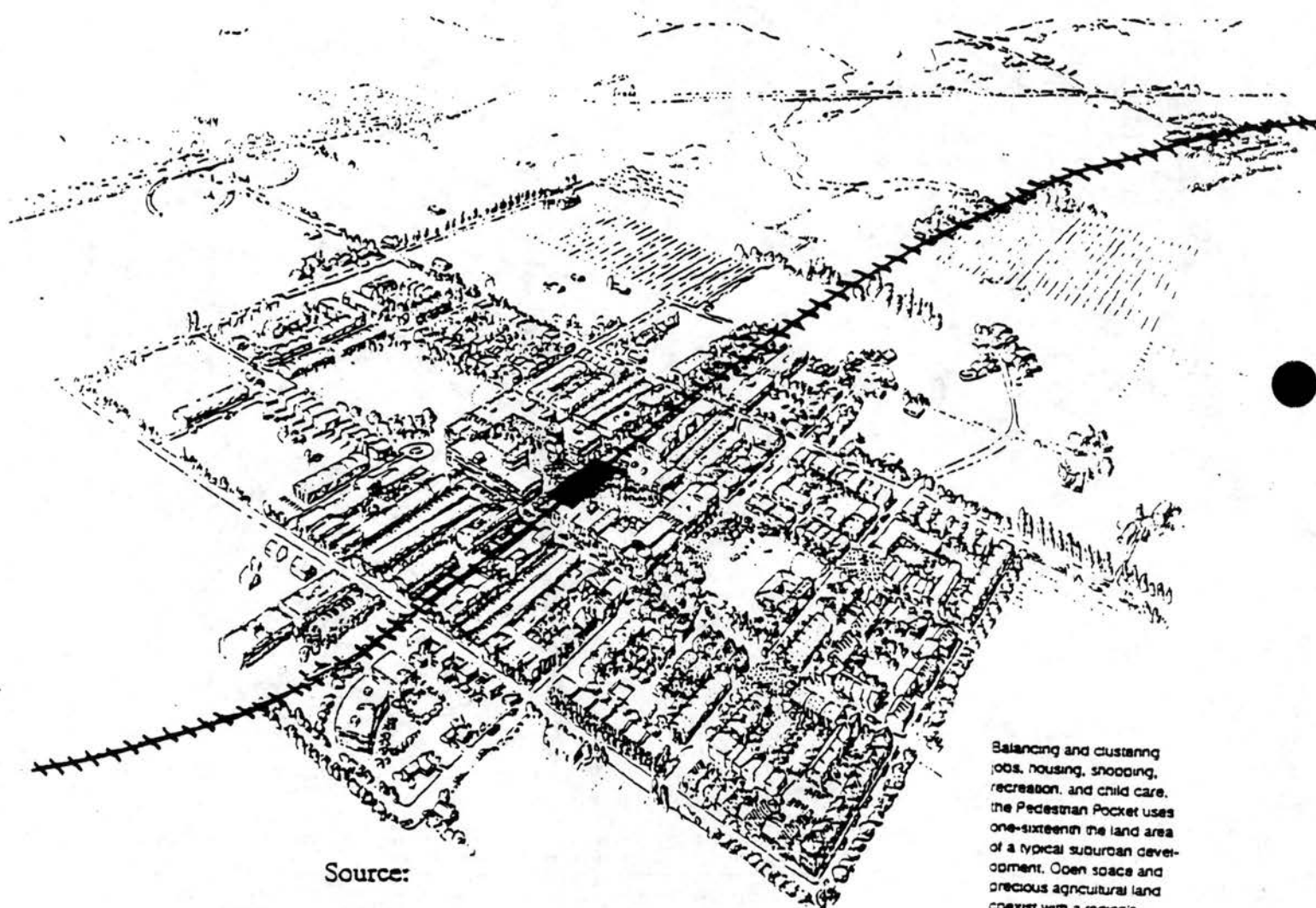
Source:

City of Edmonton, "Land Use Plans:
Northeast Light Rail Transit Corridor"

The most intense uses should be located nearest the stations with intensities diminishing furthest from the stations. Figures 5 through 8 show alternative LRT station area development concepts as developed in a design charrette at the University of Washington (Pedestrian Pocketbook).

Alternative LRT Station Area Development Concepts

Figure 5



Source:

"The Pedestrian Pocket Book"
Princeton Architectural Press

Balancing and clustering jobs, housing, shopping, recreation, and child care, the Pedestrian Pocket uses one-sixteenth the land area of a typical suburban development. Open space and precious agricultural land coexist with a region's growth.

LRT LINE + + + +
LRT STATION ■

Alternative LRT Station Area Development Concepts (continued...)

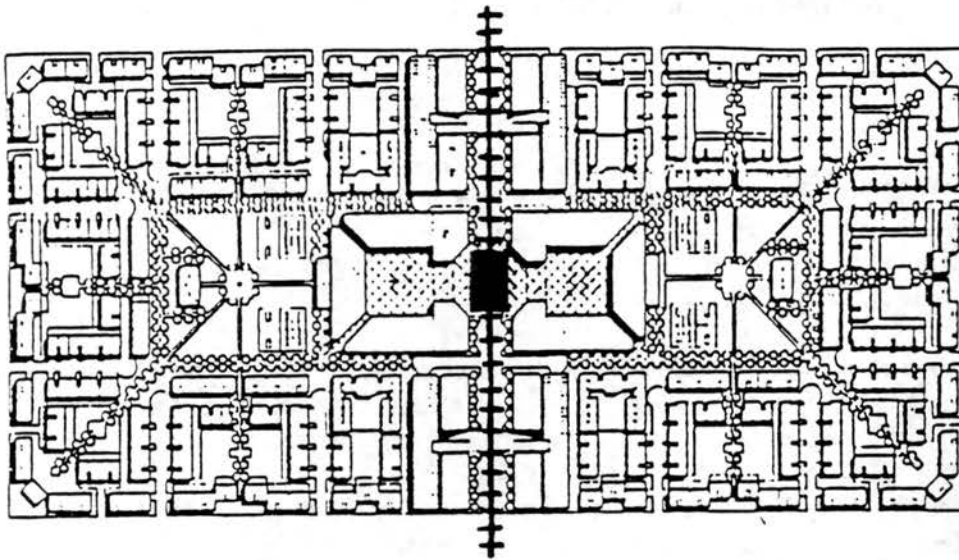


Figure 6
Generic diagram for a 60-
acre Pedestrian Pocket.

Figure 7

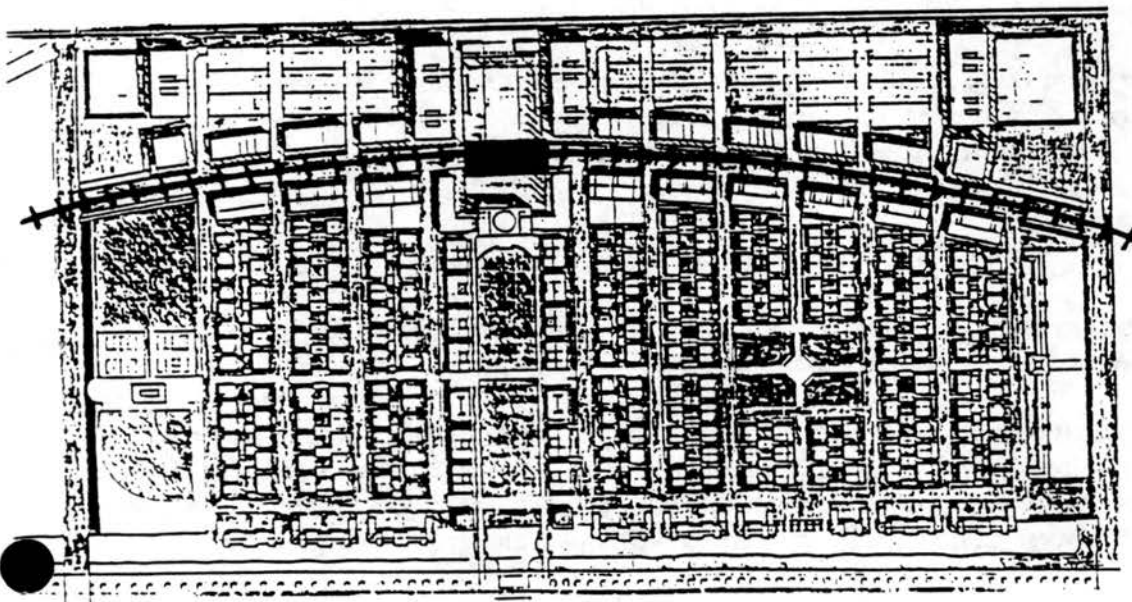
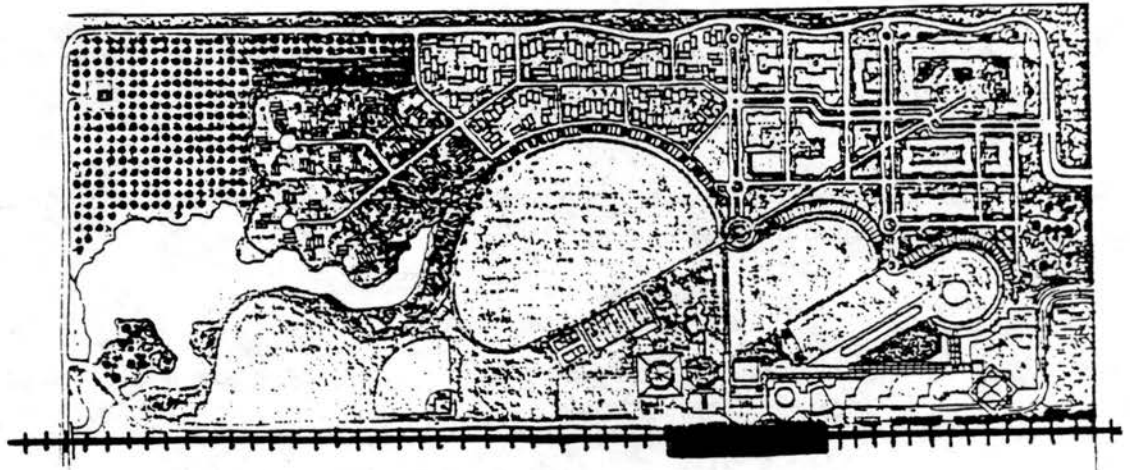


Figure 8

Source: "The Pedestrian Pocket Book"
Princeton Architectural Press

LRT LINE ++++
LRT STATION ■

The following policy statements are examples of how other cities have channeled higher intensity land uses nearest LRT stations.

Examples:

- Major redevelopment sites should be restricted to the edges of residential neighborhoods.
- New LRT compatible developments within the city should be encouraged where possible to locate within the LRT station area boundaries.
- Adult-oriented housing should be developed adjacent to commercial areas and the LRT station, with family-oriented higher density housing providing a buffer between high density commercial or residential mixed uses and the existing low density residential neighborhood.
- Larger development parcels should be restricted to the immediate station vicinity and transition zones provided between high density and low density development; infill development should be encouraged further out.

Land that is currently underutilized or used for industrial purposes in station areas should be considered for redevelopment, providing an opportunity to upgrade and revitalize that part of the community.

The following policy statements are examples of how other cities have incorporated this idea into LRT station area land use plans:

Examples:

- Run-down or underutilized parcels (below existing zoning densities) should be encouraged for redevelopment and reuse.
- Industrial land near stations should be converted to office, residential and/or commercial use.

Mixes of uses and clustering of these mixed uses are positive and benefit both the city and LRT by adding an active pedestrian environment in these nodes. (See Figure 5). The following policy statements are examples of how other cities have incorporated these ideas into LRT station area land use plans:

Examples:

- High density developments and compatible services should be clustered within the station areas to encourage pedestrian movement among them.
- High quality, compatible land uses should be encouraged in the LRT station area; the station area should function as a recognizable central core that serves as a focus for people-oriented activities that are highly demanded before and after work and at midday (ie., restaurants, dry cleaners, health clubs, day care centers, pharmacies, banks, convenience shopping).

Development Tools

To implement station area plans, communities have a wide variety of tools to protect existing neighborhoods and to enhance redevelopment where appropriate. Tools include traditional zoning ordinances, innovative zoning, design performance standards, development moratoria, density bonuses, etc.

Examples:

--Consider use of development zones with growth radiating in an orderly fashion from the station.

--Downtown development and large suburban retail or office developments should be encouraged to incorporate the LRT directly within the buildings, as shown in Figures 9 and 10.

Incorporating LRT Into Developments

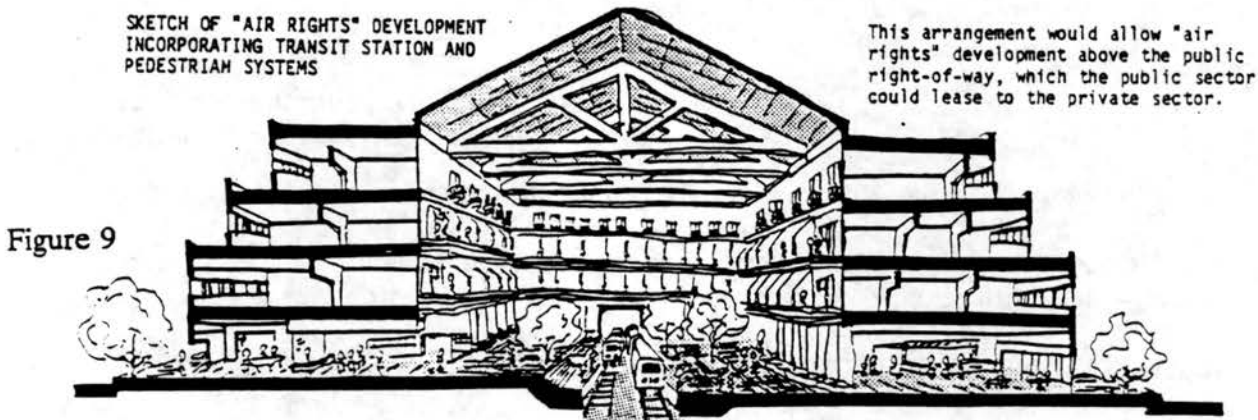
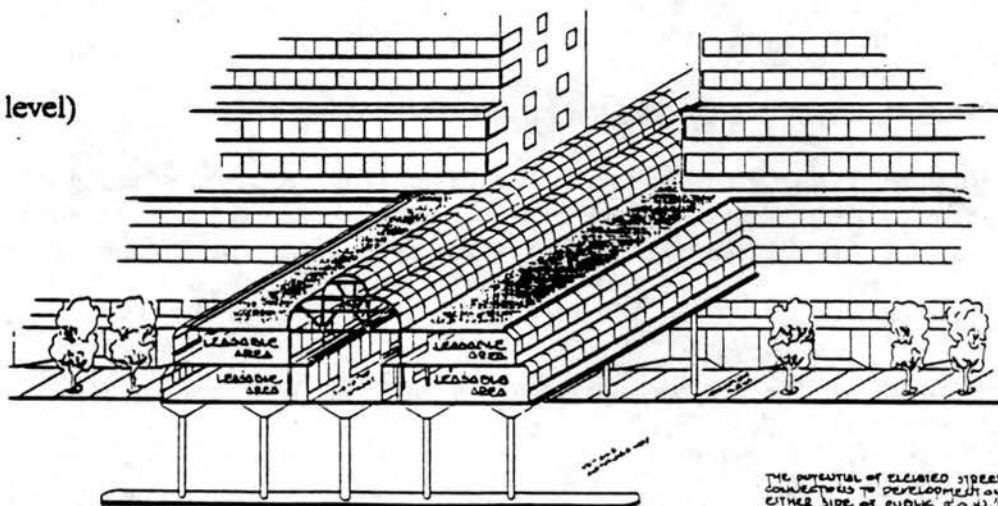


Figure 10

(LRT is at street level)

Source:

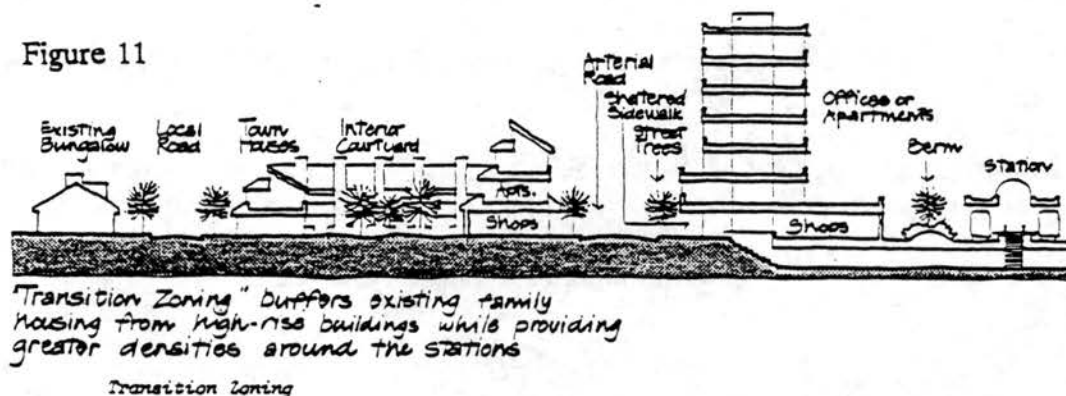
City of Calgary,
"South Corridor LRT
Land Use Study"



--Clearly identify public and private opportunities and responsibilities for development and redevelopment and associated amenities and infrastructure.

- Consider use of development moratoria in station areas where development pressure is strong.
- Employ interim zoning where necessary to assure orderly transition to new land uses.
- Protect existing stable neighborhoods and businesses from intrusion of inappropriate new development by means of transition zoning. (See Figure 11).

Figure 11



Source: City of Edmonton's Northeast
LRT Corridor Land Use Plans

- Make use of overlay zoning where appropriate in station areas
- Develop a system of bonus incentives for new development, such as increased density allowances with reduced parking requirements and height restrictions.

B. BUILDING AND INFRASTRUCTURE STANDARDS

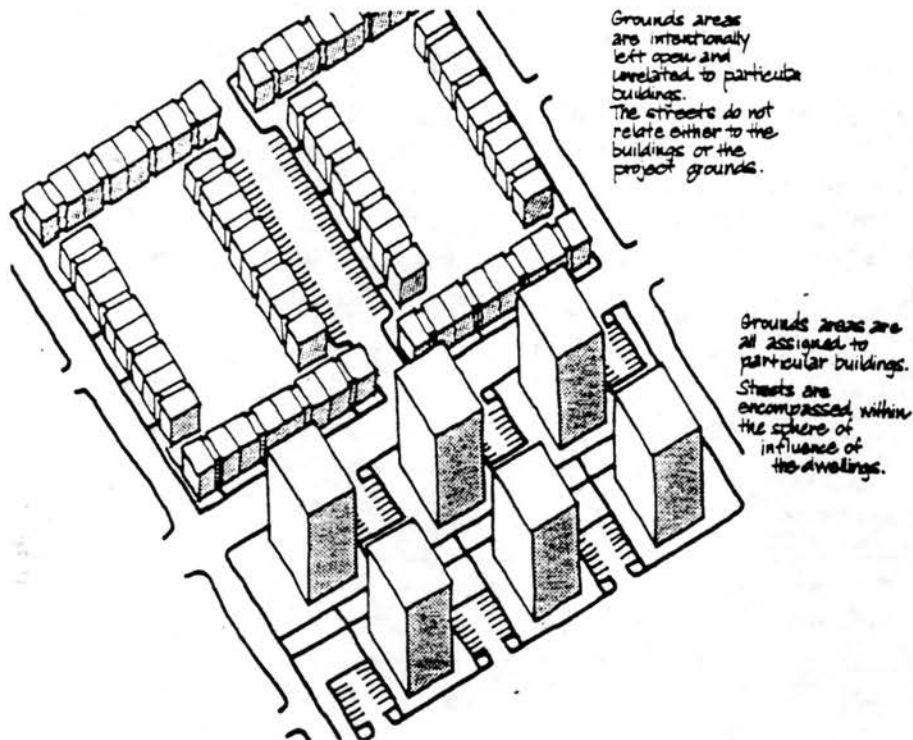
The following standards should be considered by cities in creating station areas that are conducive to LRT use, ensure preservation of neighborhoods, and offer opportunities to a city for enhancing the pedestrian environment.

Building Orientation, Placement and Height

Building design, siting and placement can be key elements in encouraging transit use. Buildings that provide easy access to stations for pedestrians and commuters and provide a pleasant environment within reasonable walking distances encourage pedestrians to use transit.

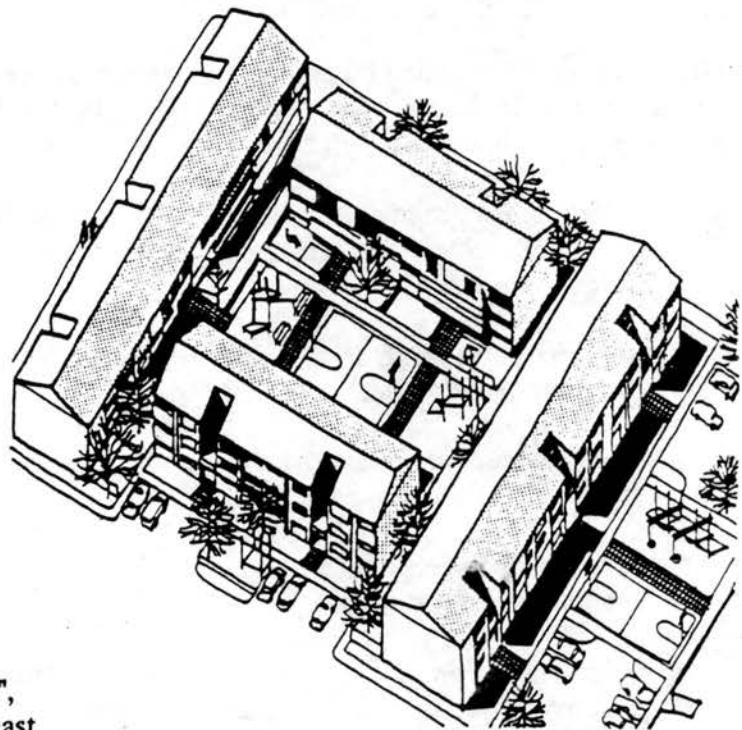
Examples:

- Building massing should be organized so as to maximize usable open space, where applicable. (See Figures 12 and 13).
- Scale of buildings should be complementary to the community setting and encourage pedestrian movement between development.
- Low rise, courtyard placed development is encouraged for higher density development. (See Figures 12 and 13).



Comparison Between Low-Rise Courtyard Development and High-Rise Scheme at the Same Density

Figures 12 and 13: Building Massing and Courtyard Placement



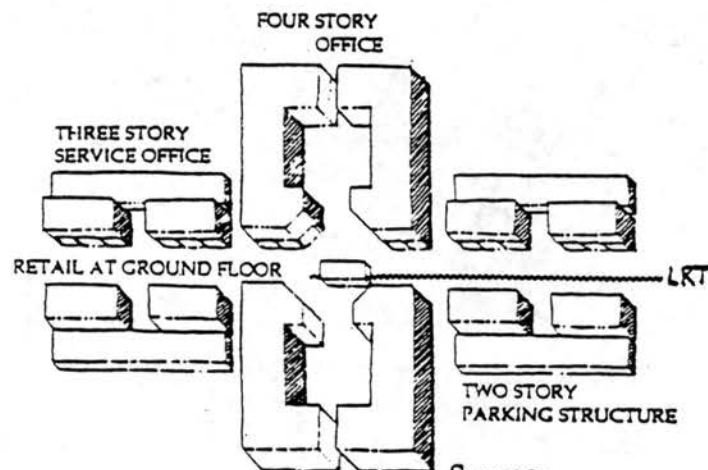
Walk-up Multiple Family Housing Designed to Create Secure Communal Areas

Source:

"Design Guidelines for Creating Defensible Space",
Oscar Newman; from City of Edmonton's Northeast
LRT Corridor Land Use Plans

--Building setbacks between roadways, sidewalks, and building entrances should be minimized/shortened rather than separating buildings from streets and sidewalks with large parking and landscaped areas; new residential and commercial buildings and their entrances should be oriented to LRT stations, streets and pedestrian ways. (See Figure 14). The desired effect is "pedestrian friendly" building placement.

Figure 14: Building Set-Back Elimination and Orientation



Source:

Roadway Access/Vehicle Circulation

"The Pedestrian Pocket Book"
Princeton Architectural Press

Vehicle access to stations and adjacent development needs to be planned for at least one-half mile from a station. In designing roadways, preference should be given to vehicles that carry multiple passengers including buses, high occupancy vehicles, etc.

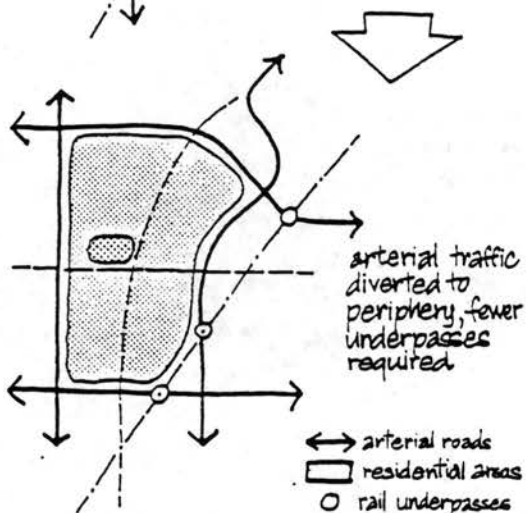
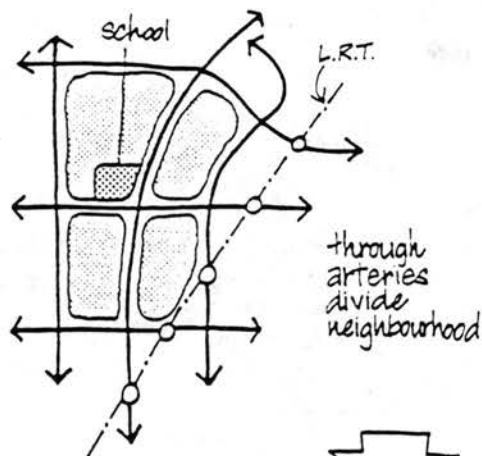
--Station area roadways should be designed to accommodate increases in traffic generated by the LRT station and any new development while diverting traffic to the periphery of neighborhoods.

--Vehicular through traffic, with the exception of buses traveling designated routes, should be discouraged within neighborhoods.

--High-occupant vehicle roadways, lanes and bypasses should be considered for linkage to station areas and parking.

--Roadway systems that accommodate buses should be adequate in width, pavement thickness, turning and intersection radii.

--Redesignation of roadways should be considered in station areas to protect neighborhoods and minimize LRT line conflicts. (See Figures 15 and 16).

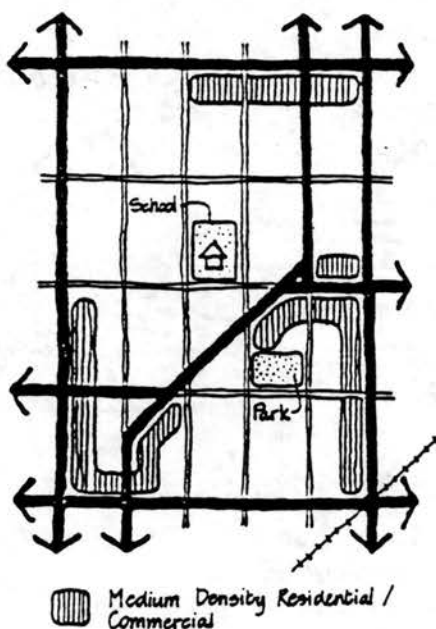


Figures 15 and 16:

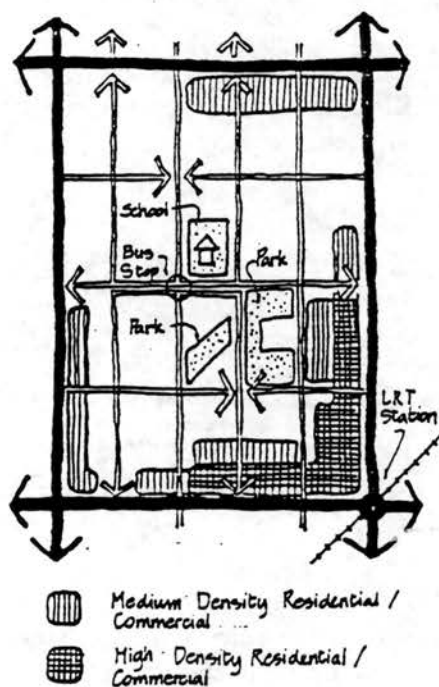
Roadway Changes to Accommodate LRT

Source: City of Edmonton, "Northeast LRT Corridor Land Use Plans"

Application of the Arterial Grid Strategy to a Typical Neighbourhood



Existing Road Network Disrupts Neighbourhood



Future Road Network and Land Use Distribution Reinforces Neighbourhood

Source: City of Edmonton, "Belvedere Station Area Redevelopment Plan Bylaw"

Pedestrian Access and Amenities

Transit and pedestrian-oriented uses can be enhanced by providing a pleasant, safe and all-season environment. Figure 17 shows an active LRT station environment where auto access is limited.



Figure 17: Pedestrian Environment in LRT Station Area

Source: "The Pedestrian Pocket Book"
Princeton Architectural Press

Examples:

--Sheltered, weather protected pedestrian walkways should be provided between developments and the LRT station; direct pedestrian access should be provided between buildings and through adjacent developments rather than along site perimeters. (See Figure 18)

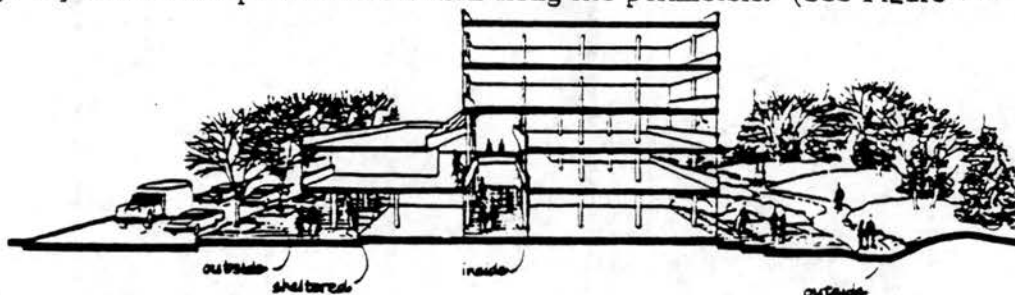
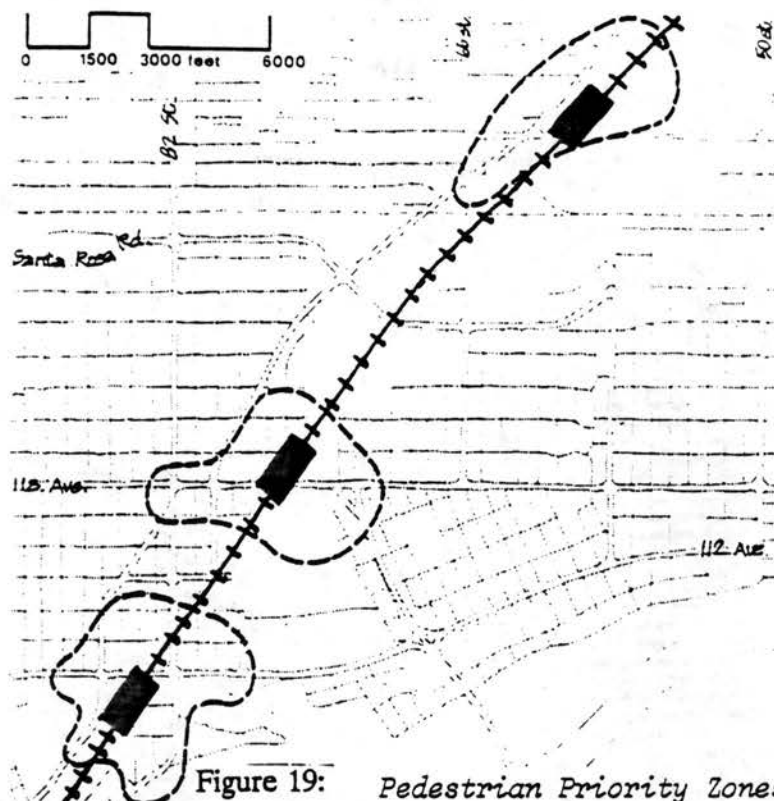


Figure 18: *Types of Pedestrian Walkways*

Source: City of Edmonton, "Northeast LRT Corridor
Land Use Plans"

--A pedestrian priority zone should be established within a five-minute walking distance from the LRT station where a strong pedestrian network links public and private properties; adjacent development should be coordinated in order to ensure continuity of pedestrian circulation. (See Figure 19).



LRT LINE +++
LRT STATION ■

--Development applications should include a plan showing how pedestrian connections will be achieved and responsibility for cost and construction of pedestrian walkways and amenities would be assumed by the development by means of the development agreement.

--Higher density uses should have direct and easy access to pedestrian and bike-ways as well as the LRT station and parking.

--Walkways between developments and the LRT station should have adequate lighting, attractive landscaping, public art and seating, adequate snow removal, and be traffic protected.

--Wheelchair curb cuts and other accommodations should be provided for persons with disabilities.

--Pedestrian rights-of-way should be designed to accommodate snow removal without adverse impacts on pedestrian function.

Parks, Open Space, Public Space (Indoor and Outdoor)

Parks, green spaces, plantings, innovative landscaping and berming can enhance a neighborhood and can buffer different land uses as well as LRT lines in station areas.

Examples:

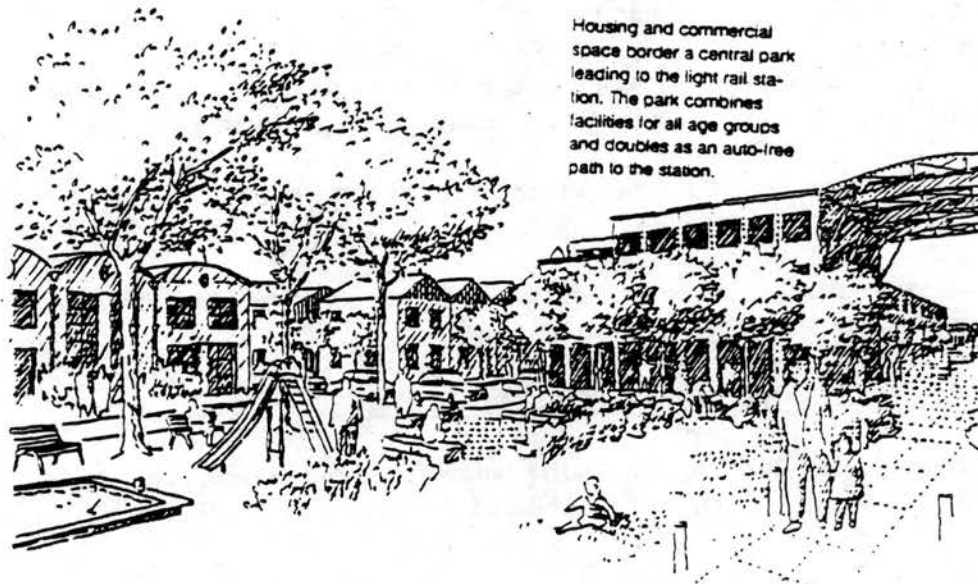
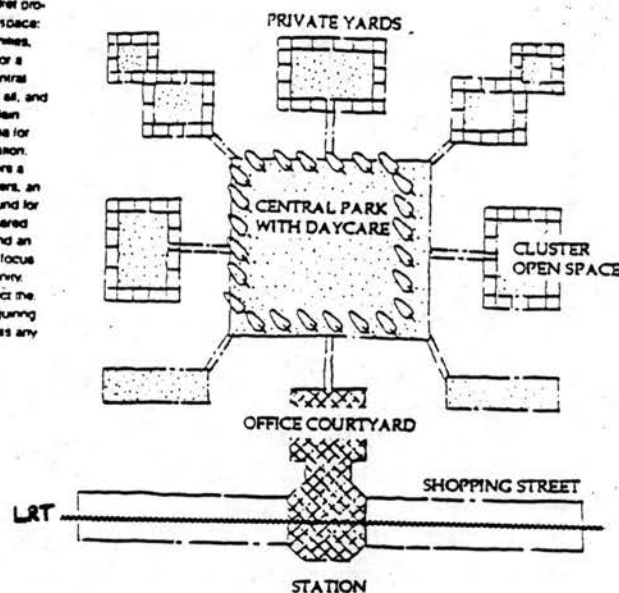
--Linear parks can be utilized as the buffer for LRT lines, attracting pedestrian and bicycle use.

--New medium and high density residential development should be designed to encourage well defined outdoor space between buildings.

--Additional parks and open spaces and community-oriented recreation facilities should be provided in LRT station areas. (See Figures 20 and 21).

Figures 20 and 21: Use of Parks and Green Space in LRT Station Areas

The Pedestrian Pocket provides diverse open space: private yards for families, semi-public space for a group of houses, central parks to be used by all, and courtyards and a "Main Street" shopping area for the extended population. The central park offers a lunch place for workers, an after school playground for the kids, a site for shared day-care facilities, and an evening or weekend focus for the whole community. Walking paths connect the entire site without requiring the pedestrian to cross any streets.



Housing and commercial space border a central park leading to the light rail station. The park combines facilities for all age groups and doubles as an auto-free path to the station.

Parking

Source: "The Pedestrian Pocket Book"
Princeton Architectural Press

Cities should develop parking policies which directly encourage use of LRT and should limit parking and therefore commuting as a viable alternative for high density areas such as downtowns.

Examples:

--Parking restrictions should be established and enforced on station area streets to prevent commuter parking from overflowing into adjoining neighborhoods. (See Figure 22).

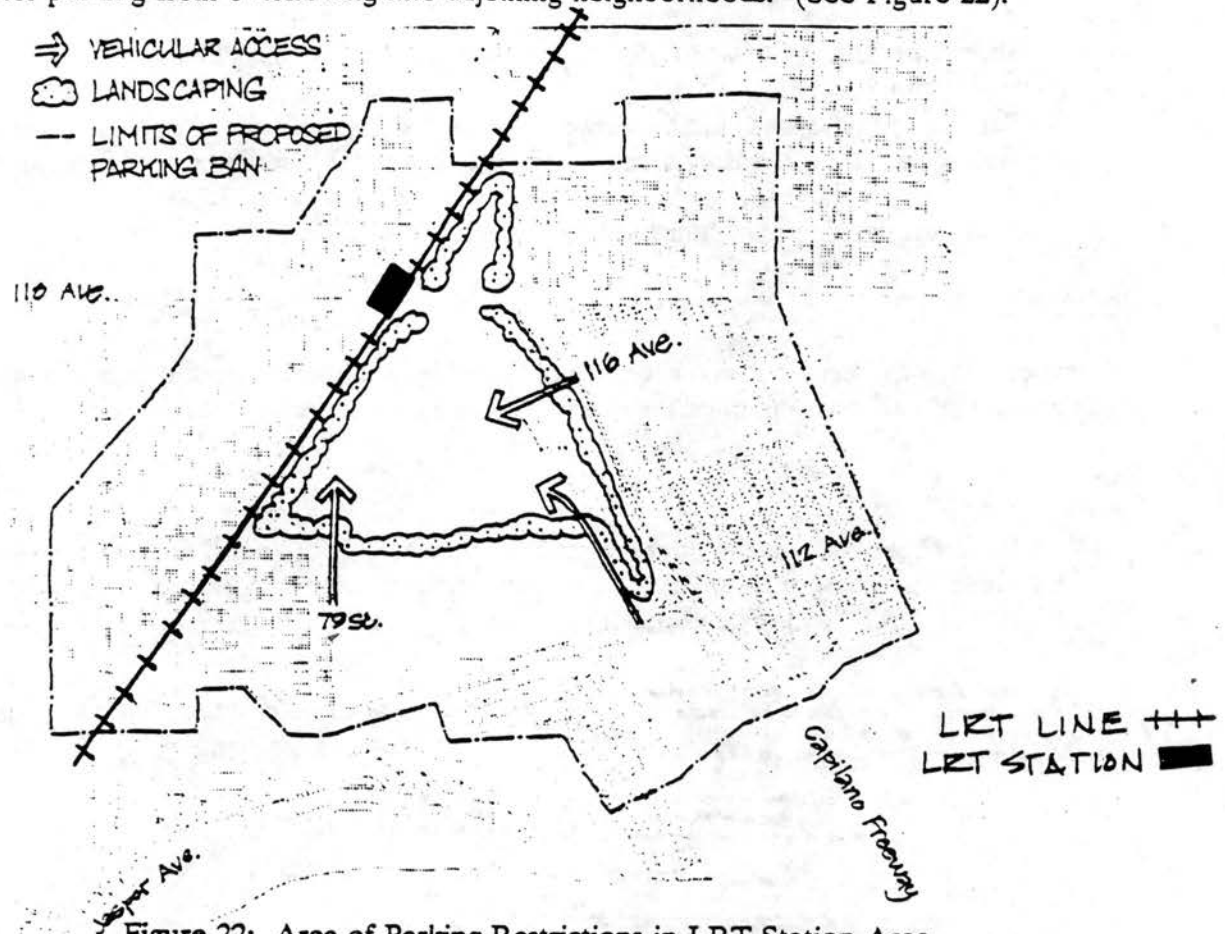
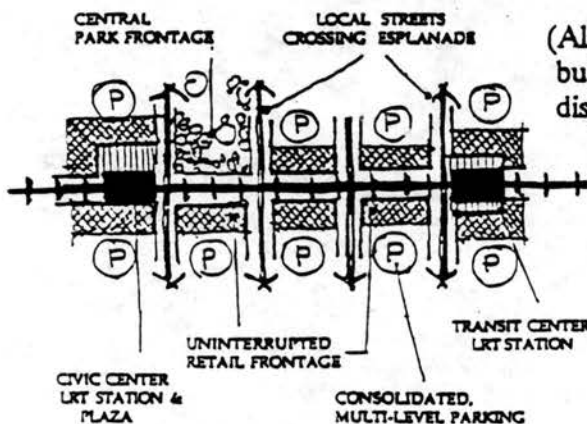


Figure 22: Area of Parking Restrictions in LRT Station Area

Source: City of Edmonton, "Northeast LRT Corridor Land Use Plans"

--Parking serving residential, commercial and mixed uses should be located away from the pedestrian environment, behind or to the side of buildings instead of in front. (See Figure 23).

Figure 23: Parking Locations in LRT Station Areas



(Also shows elimination of setbacks, fronting of buildings on LRT line, allowing shop window displays to be viewed from LRT cars.)

Source:

"Central Beaverton Development Program: Draft Downtown Development Plan", Fred Glick Associates, Portland; Sedway Cooke Associates, San Francisco; Robert Conradt, San Rafael.

--The number of parking spaces added for new development above and beyond those provided in park and ride facilities should be minimized and preferential parking for pools provided.

--Shared parking by adjacent developments should be encouraged.

--Parking reductions should be allowed for new development when located within LRT station areas, especially when they agree to provide additional incentives for transit users.

--Establish parking maximums for new development in LRT station areas.

Buffering Methods

Mitigation and buffering measures should provide maximum visual separation and noise absorption, and can even enhance the quality of the environment.

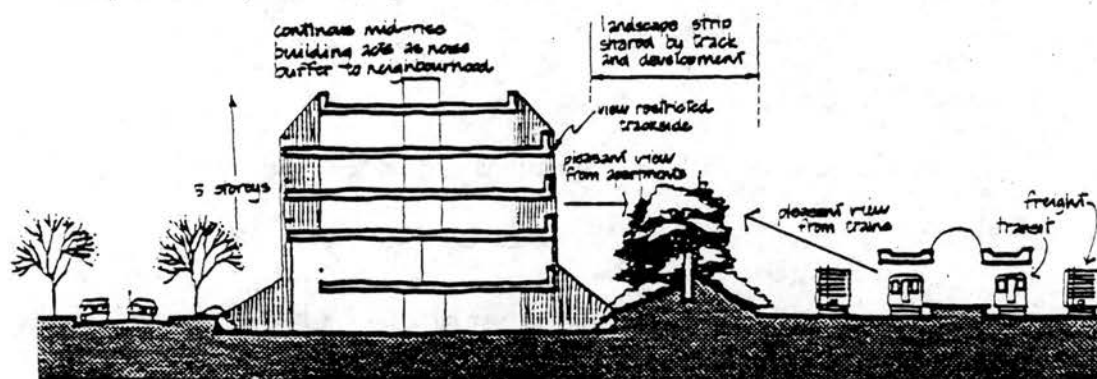
Examples:

--Landscaped edges should be provided between LRT right of way, stations, parking, residential areas, incompatible uses and adjacent development to create pleasant views between LRT facilities and buildings. (See Figures 24 through 27).

Figure 24: Trackscape and Noise

A landscaped strip should be provided between the track and adjacent development to create a pleasant view from the trains and the buildings, to buffer noise at grade and to promote safety.

Source: City of Edmonton, "Northeast LRT Corridor Land Use Plans"



Principles of Trackscape Improvement

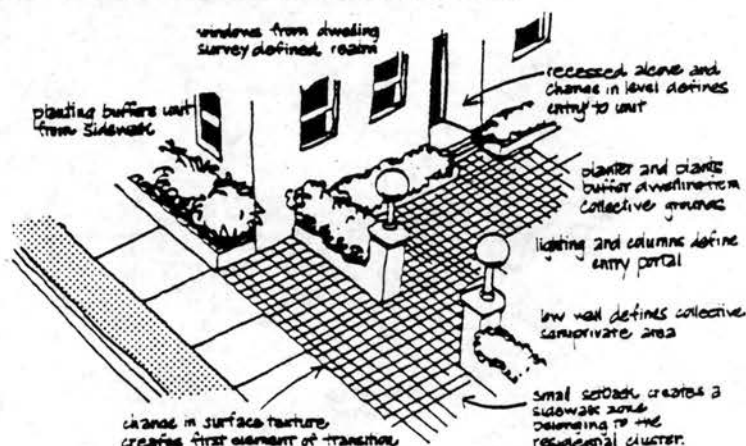
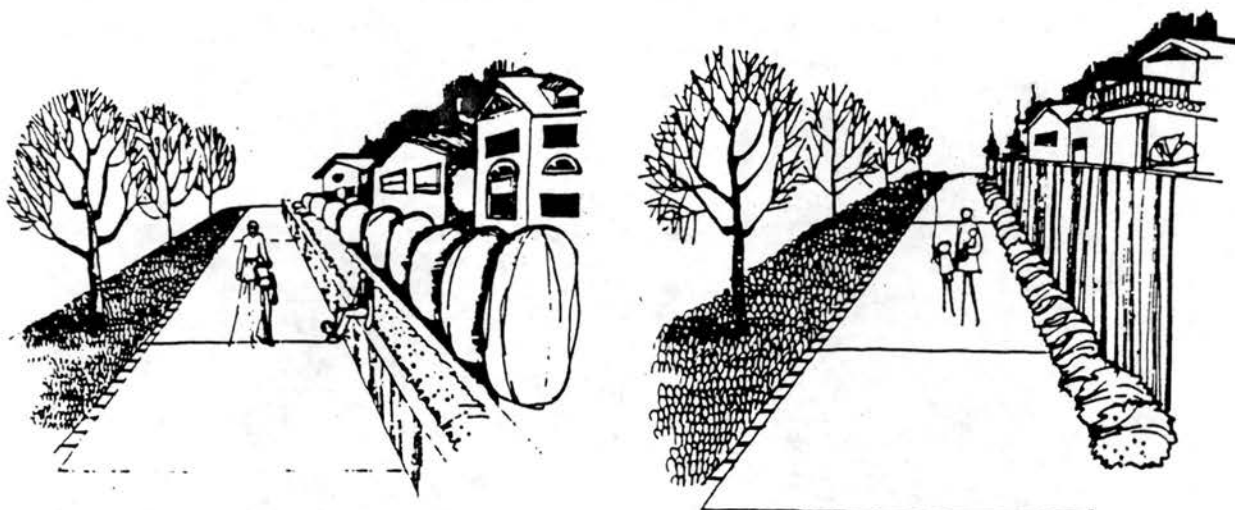


Figure 25:

Examples of Design Elements Used to Define Space Between Public and Private Realms

Source:

"Design Guidelines for Creating Defensible Space", Oscar Newman. From City of Edmonton's "Northeast LRT Corridor Land Use Plans"



Figures 26 and 27: *DECORATIVE FENCES & SEATING WALLS*

Source: "Banfield Light Rail Project: Transit Station Area Planning Program; Multnomah County Urban Design Element, Volume 1 (DRAFT); Fred Glick Associates, Portland.

--Landscaped edges should screen parking, providing a safety and visual buffer. (See Figures 28 and 29).

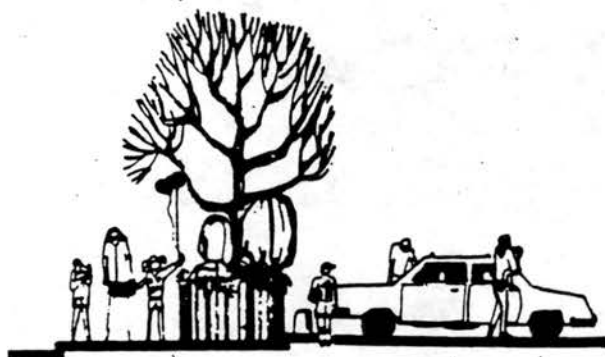


Figure 28:
PARKING/ PEDESTRIAN SEPARATION
Example of screen between parking & pedestrian use.

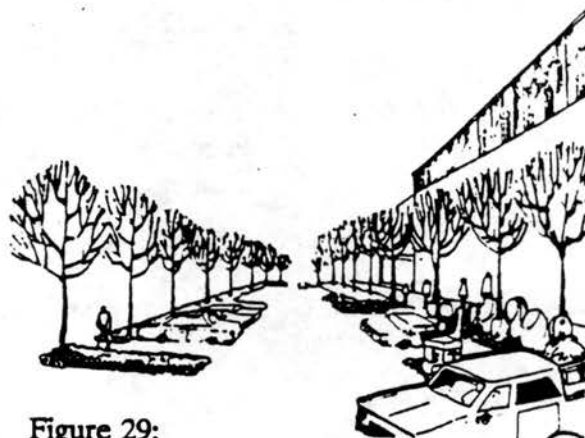


Figure 29:
PLANTINGS SCREEN REAR PARKING LOT.

Source: "Banfield Light Rail Project: Transit Station Area Planning Program: Multnomah County Urban Design Element, Volume 1 (DRAFT); Fred Glick Associates, Portland.

--Deciduous trees should be planted to provide summer shade and coniferous trees to provide shelter from winter winds around buildings, especially in dedicated pedestrian areas/plazas. (See Figure 30).

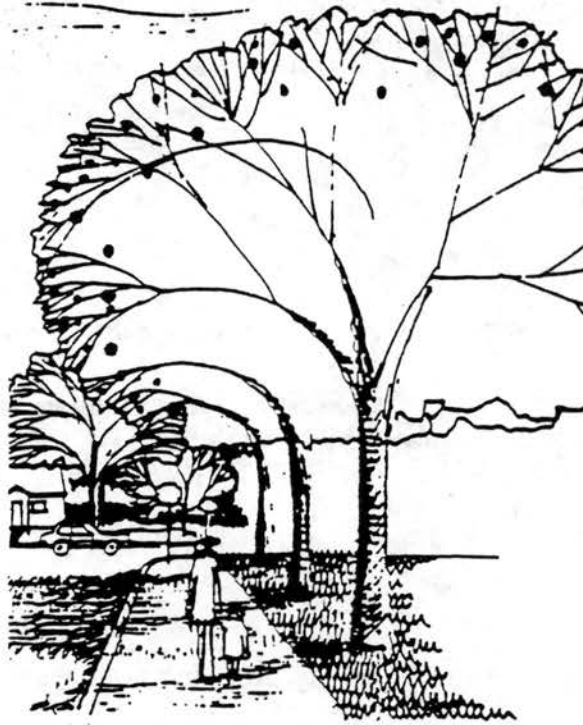


Figure 30: **STREET TREES PROVIDE
CANOPY FOR PEDESTRIANS**

Source:

"Banfield Light Rail Project: Transit Station Area
Planning Program: Multnomah County Urban Design
Element, Volume 1 (DRAFT); Fred Glick Associates, Portland.

Bicycle Access

Bicycle access should be incorporated as part of the urban design in LRT station areas.

Example:

--Cities should construct bike paths, curb cuts, bike lockers and stands, and other bicycle enhancements in LRT station areas to encourage bicycle and LRT interface.

--Bicycle ways, pedestrian areas, roadways and LRT should all be designed for compatibility.

C. EXPERIENCES OF OTHER CITIES WITH LRT AND LAND USE PLANNING

Regional LRT/Land Use Forum

The Regional Transit Board and Metropolitan Council co-hosted a panel session on May 18, 1990, when representatives from Portland, Toronto and Calgary made presentations on the subject of land use planning and development related to LRT. These panelists were invited to help guide the preparation of the LRT/Land Use Element of the RTB's LRT Coordination Plan. A proposed LRT/Land Use Coordination element will be presented to the Joint Light Rail Transit Advisory Committee at the July 11th meeting.

About 75 to 100 persons attended the presentations; over half of the registrants represented local units of government.

Common themes emerged relative to land use and development impacts as experienced in Portland, Calgary and Toronto:

Positive Transportation Impacts

- *LRT provides these cities a fast, reliable, highly visible, high capacity transportation alternative.
- *Overall transit system ridership can be increased, decreasing sole reliance on roadways to accommodate travel.
- *The potential of financing transit with private sector sources can be enhanced with LRT.

Positive Development Impacts

- *LRT not only moves people, but because of the enhanced accessibility, offers cities an opportunity to shape and guide additional city growth, consuming less land and generating less traffic.
- *Increased land use densities around stations can create more dynamic pedestrian centers that possess an active, human character.
- *Under-utilized or rundown properties in the vicinity of stations can be redeveloped or upgraded, revitalizing that portion of the community.
- *LRT can increase a community's property tax base with increased land valuations, particularly in LRT station areas.
- *Commercial properties in station areas attribute improved business to the increased pedestrian activity and visibility that the LRT has provided.

Effective Preservation of Stable Neighborhoods and Businesses

*Early involvement of existing businesses and neighborhoods in station area planning ensures the community that their concerns will be positively handled, developing a greater degree of public trust.

*Station area planning graphics were utilized to communicate with existing businesses and neighborhoods concerning proposed land use changes, access and pedestrian amenities, and where no significant changes would be made, to assure neighborhoods that no further development would occur.

*Community environments in the vicinity of stations have been preserved and even enhanced with effective urban design and landscaping measures, and in some cases with down-zoning.

Need for Careful Land Use Planning and Controls

*In order to achieve positive development and transportation impacts, cities where LRT systems were built carefully considered the opportunities and impacts that LRT would present by preparing plans that address:

- alternative land use opportunities and development scenarios,
- economic development potentials,
- natural community amenities, businesses, and residential neighborhoods and required preservation methods and enhancements,
- vehicular access needs and roadway improvements,
- necessary land use and regulatory changes,
- pedestrian- and transit-supportive actions (such as parking controls and enforcement measures, development site design and set-back requirements, and pedestrian amenities),
- and a station area financing, capital improvements and development program.

Other Cities' Approaches to Land Use Planning and Development for LRT

More than a dozen North American communities over the last ten years have developed or expanded light rail transit systems. Some have built or added to their heavy rail transit systems. These communities have adopted a wide range of planning approaches to land development in and around station areas. Most cities with new LRT systems initially did not actively plan for development around station areas with the result that the station areas have attracted little new development until recently. In contrast, Portland, Calgary and Toronto actively planned for land use around station areas with the result of significant new development around station areas. In every example, the major development adjacent to LRT has occurred or is expected to occur after the system has been in operation several years and when ridership potential has been proven. In developing an approach to station area planning in the Twin Cities, it may be helpful to learn from other successful communities. There follows a brief summary of approaches to land use planning around station areas in Portland, Calgary, Toronto and Edmonton. In addition, Appendix A includes graphic illustrations of Portland's, Calgary's and Edmonton's approaches to land use planning around selected LRT stations.

PORTLAND

The Portland Area has over 15 years experience in land use planning around light rail transit stations. About the time the Tri-county Metropolitan Transportation District of Oregon (Tri-Met) was considering light rail as an alternative to additional freeway lanes to serve the city, a mandatory planning law was adopted. This law required all communities and counties to prepare a comprehensive land use plan. As part of this effort, Tri-Met passed through Urban Mass Transportation Administration funds for communities and counties to prepare land use and urban design plans around transit stations.

The area planning agency in cooperation with the counties prepared a planning framework within which all of the communities could prepare detailed station area land use and urban design plans. The Transit Station Area Planning Program laid the foundation for development along the line by determining market potentials, planning for urban fit and rezoning station areas. The specific process took different forms in each county and community. The underlying premise of the system was that the transit solution is fashioned by the "...community's vision of how it wants to grow." Since in the Portland area, the overriding vision was for a more compact development, the light rail solution was appropriate, and "...the land use vision dictated the transit solution." Tighter, more compact development will in turn reinforce the transit system's success by increasing ridership on the LRT.

WHO? State of Oregon, Tri-Met, Metropolitan Service District (METRO), Counties, local communities, developers.

WHAT? Created an integrated, tiered approach to land use planning and transit planning. Portland has thus far constructed one 15-mile LRT line (MAX) in a fairly low density, auto oriented region on a freeway, arterial street and railroad right-of-way. The cost to construct the LRT portion was \$214 million. Daily ridership is 20,000. The LRT has influenced the shape and configuration of downtown Portland. Development activity is greatest in the downtown and Lloyd Center, which is located to the east of downtown across a river that before LRT was a physical barrier to development. LRT was a factor in the developer's decision to purchase, renovate and expand development at and adjacent to Lloyd Center. The presence of LRT was a critical

factor also in the decision to locate the Oregon Convention Center across the river, removed from the downtown. A future shopping mall in Gresham plans to incorporate the LRT directly inside the mall.

HOW?

Developed a unified system with enough flexibility to accommodate the needs of counties and local communities. Provided incentives through legislation and funds to foster planning around light rail stations. Developed policies that placed a lid on downtown parking.

SUCCESS?

Generally considered a success. Portland claims their successes to be as follows: New development around MAX already exceeds cost of the system three times. Reduced the need for additional freeway lanes. Allowed downtown Portland to grow without additional parking spaces. Over \$690 million in development totaling 5.9 million square feet has been completed or is under construction since the decision to build LRT. Virtually every adjacent vacant parcel has changed hands, been developed or has development announced. Other communities are competing for lines.

WHY?

Strong political leadership in favor of transit alternatives. Strong environmental consciousness of citizenry; decided to build LRT instead of major highway.

CALGARY

The city of Calgary has planned and built a light rail system incorporating three lines combined with a reduced roadway construction program from previously proposed levels. Calgary's primary goal was to encourage transit to be used for downtown trips. Calgary built LRT ridership by first instituting significant bus service in potential LRT corridors. Since the city has ultimate authority for planning, the need for multi-jurisdictional planning was unnecessary. Nevertheless, from the beginning the city recognized that "effective land use planning of the LRT corridors will contribute to the success of the LRT system by encouraging development of a type, density, and design oriented to LRT use which will be compatible with adjacent communities." To this end, the city council adopted policies that would encourage residential and employment opportunities along the transit corridors. Around station areas, the adopted policies encourage creation of high density, mixed use development nodes around station areas. The planning radius for station areas is approximately one-quarter mile. Highest development densities are recommended for the sites closest to the stations with the densities diminishing away from the station.

Studies of the 7.7 mile South LRT Corridor (the initial LRT line first opened in 1981) indicated LRT has been a catalyst for development in station areas and there was a sharp increase in property values in the LRT corridor. Station areas have attracted concentrations of residential and mixed land uses. Parking and traffic overspills occurred as a result of increased development and station area usage and development so that Calgary had to enforce parking restrictions during peak hours. Development densities and heights have in places exceeded city recommendations and caused neighborhood concerns. Prior to construction of the LRT lines, extensive land speculation occurred and resulted in development opportunities and a multitude of requests for land use redesignations.

WHO?

City of Calgary

- WHAT? The city of Calgary adopted land use policies encouraging high density, mixed use development within one-quarter mile of transit stations.
- HOW? The city built a three-line LRT system, adopted comprehensive land use and redevelopment plans for station areas and squeezed parking and roadway supply.
- SUCCESS? The city has been successful in stimulating new development and tax base around station areas. Patronage on the South LRT line is around 40,000 passengers daily and another 65,000 daily rides are provided in two other LRT corridors. Peak hour work trip transit modal split is 55 percent in Calgary.
- WHY? The city controls all aspects of planning and development. Transportation functions are consolidated in one city department, and together with the city's uni-jurisdictional nature, facilitate development and coordinated implementation of policies on land use, parking and transportation.

TORONTO

Metropolitan Toronto has been developing and promoting some form of rail transit since 1954. Today the city has a large, well-integrated and coordinated network of heavy rail and light rail, commuter rail and bus lines. The city of Toronto has used rail transit as a tool to encourage dense new urban development, not just to serve existing development. In fact, it built the Scarborough LRT system, an extension of the original system, not only to serve the existing transit requirements of the area, which alone did not justify its capital costs, but to serve as a demonstration of LRT as a land use tool to encourage transit-oriented residential, commercial and retail development. The city attributes significant development and subsequent increases in land values to rail transit.

- WHO? Metropolitan Toronto
- WHAT? Creation of an extensive heavy rail, light rail, commuter rail and bus transit system to serve the central business district as well as in Metropolitan Major Centres and Designated Intermediate Centres, located along rapid transit lines.
- SUCCESS? Judging from the city's own literature, a huge success in stimulating development and increasing land values.
- WHY? Strong Metropolitan Toronto Transit Commission with a long history of building and maintaining transit systems, and regional land use vision, power and controls.

EDMONTON

The city of Edmonton built its light rail transit system to satisfy its existing transit requirements without relying on future development to make the line viable. On the other hand, it encouraged development on the line and around station areas to increase ridership and operation of the system. A major thrust of the Edmonton plan was to ensure that new development could only occur if it upgraded or was at least compatible to the neighborhoods already existent. The city opted for a pattern of transit-oriented growth in which the downtown remained dominant and the older, industrial and underutilized lands adjacent to the transit corridors would be redeveloped to a density in between the downtown and the rest of the city.

WHO? City of Edmonton

WHAT? Created a 6-mile light rail transit line (now being extended) with strong land use policies to encourage transit related development

HOW? Developed policies and standards and incentives to assure transit related development

SUCCESS? Carries about 25,000 passengers a day. It is being extended south from the downtown across the river to the large University of Alberta campus, which should add considerably to its ridership and perceived success.

WHY? Edmonton has a strong Canadian "Uni-City" form of government where all land use/development and transportation are well planned, integrated and coordinated.

PART 4: PARTIAL BIBLIOGRAPHY OF REPORTS, ARTICLES AND VIDEOS
RELATED TO LRT AND LAND USE PLANNING

PRINT MATERIALS

No.

1. "Joint Development". Sedway Cooke Associates, Urban Land, July, 1984. The article discusses several different approaches to planning for development around transit stations. The Laissez-Faire Approach was used by San Francisco when planning for the BART system. This approach resulted in less than desired results in this city. A Coordinated Development Approach was used in Washington D.C. and Atlanta, with "stations designed to optimize future joint development opportunities." A Project Packaging Approach was adopted in several communities, including Portland, Oregon. The article concludes with five reasons for public agencies to become involved in station area development process.
2. "LRT Helps Reshape a City". William D. Middleton, Railway Age, February, 1990. This article describes the experience of the city of Portland, Oregon with its MAX system. It provides a case study of the successful coordination of transportation development with urban planning goals.
3. Pedestrian Pocket Book: A New Suburban Strategy. Princeton Architectural Press, 1989. This small book introduces the concept of "Pedestrian Pockets", which are balanced, mixed use areas within a quarter mile or a five minute walking radius of a suburban transit station. The functions within this 50 to 100-acre zone include housing, offices, retail, day care, recreation, and parks. This book was the result of a design charrette held by the Department of Architecture at the University of Washington lead by renowned architects. Teams were asked to develop a multiple use design concept for development of a 120 acre parcel around an LRT station that enhances transportation alternatives and pedestrian activities.
4. L.R.T. South Corridor Land Use Study. The City of Calgary Planning Department, May 1980. This report establishes land use planning policies in the first of Calgary's Light Rail Transit Corridors. The report outlines station area development policies, station area plans, implementation programs, and impact monitoring and management.
5. "Light Rail and Land Use: A Portland Success Story". G.B. Arrington, 1989. Presents a description and evaluation of the Portland experience in planning for light rail and land use in light rail corridors and station areas. Includes a detailed listing of development adjacent to MAX, the light rail system.
6. "Metropolitan Toronto: The Transit/Development Connection". A promotional brochure which explains the history of the Toronto transit system, which includes both subways and now light rail. The brochure documents the new construction which has occurred in Toronto since 1954 when the first subway opened.
7. "Going Places". Landscape Architecture, March/April, 1985, Fred Glick. A description of the land use planning efforts associated with the Banfield Light Rail Project in the city of Gresham, Multnomah County, Oregon. Includes a detailed flow chart listing the steps in the planning process.

8. Light Rail Transit Regional Development and Financial Plan (Final Report). Regional Transit Board, Strgar-Roscoe-Fausch, Inc., BRW, Inc., Springsted, Inc., February, 1990. Establishes a staged plan for the implementation of Light Rail Transit (LRT) in the Twin Cities metropolitan area.
9. Excerpts from Workscope of "Banfield Light Rail Transit Station Area Planning Program." A joint station area-planning project between the city of Gresham, Metro, Multnomah County, Oregon Department of Transportation, Tri-Met and the city of Portland.
10. "Tasman Corridor LRT/Land Use Integration Work Plan," from Santa Clara County Transportation Agency, San Jose, California
11. "Land Use Guidelines for Light Rail Transit," prepared as part of Hennepin County's Comprehensive LRT System Planning process.
12. "Property Values Impact Analysis: Guadalupe Corridor Supplemental Environmental Impact Report," 1987, prepared by Mills-Carnaghi-Bautovich, Inc. An economic analysis of the property impacts of freeway and rail transit projects.
13. "Phase I: Guadalupe Corridor Joint Development Study," 1990. Study which evaluates the joint development potential of the 10 park and ride lots proposed along the San Jose's Guadalupe Corridor. The report screens, analyzes and ranks the park and ride lots with respect to their suitability for high density housing development.
14. "Transit-Related Growth Forecasts and Related Development Policy Issues--Twin Cities Light Rail Lines". 1984, prepared by Robert J. Harmon and Associates, Inc. This study describes the benefits of joint development (defined as the planning and implementation of both the transit improvements and changes in land use and circulation) within approximately a 2,500 foot radius of a transit station. It outlines joint development options for public agency involvement.
15. "LRT Integration Study". City of Calgary Transportation Department. 1984. The study develops the concept of integrating LRT into a predominantly low density suburban community and formulates a number of principles related to both the design of the LRT system and the design of the community.
16. "LRT South Corridor Impact Monitoring Study: Land Use and Development Trends Summary Report". City of Calgary Planning and Building Department, 1984. This report provides information on the land use impacts of light rail transit in Calgary.
17. "City of Edmonton Land Use Plans: Northeast Light Rail Transit Corridor Study." By the city of Edmonton Planning Department and Du Toit Associates Ltd. 1978. This study analyzes the effects of an LRT line and potential development on the surrounding area and formulates guidelines that maximize positive impacts of LRT, and minimizes the negative. Detailed land use plans and urban design criteria are proposed for each station area.
18. "Joint Use Policy: Metrorail". Prepared by the Dade County Transportation Administration/Metro Dade County, Florida. 1981. This study summarizes three cities' experiences with rail and joint use development: Washington, Atlanta and Toronto. It recommends policy and procedures to encourage and promote private development in

conjunction with the Metrorail transit system.

19. "Belvedere Station Area Redevelopment Plan Bylaw." Prepared by the City of Edmonton Planning Department and Du Toit Associates, Ltd. 1980. Station area plan, objectives and actions that relate to ridership enhancement, community integrity, development intensity, impact mitigation, pedestrian and automobile circulation, etc. It further provides plans for land use districts, circulation systems and district regulations.
20. "Central Beaverton Development Program: Draft Downtown Development Plan." Prepared for Beaverton by Fred Glick and Associates, et.al. 1990. This plan is made up of: design and development principles to guide future public and private development actions; a downtown framework that establishes the type and location of desired land uses; the network of roads and transit facilities to serve these uses; and the design concept for integrating these land uses and transportation facilities to ensure a well-functioning and attractive downtown.
21. "Banfield Light Rail Project: Transit Station Area Planning Program" Multnomah County Urban Design Element, Vols. I and II. By Fred Glick and Associates, 1983. Urban design plan for a five-mile LRT corridor which details issues of importance to the community such as the disposition of large underdeveloped areas, the preservation and upgrading of existing communities and environmentally sensitive considerations. Volume I includes: station area goals and plans for nine stations; performance standards for developments; parking; access; corridor edge; visual privacy; vegetation preservation; landscape requirements; and solar access and energy conservation. Volume II includes: an evaluation of existing land use regulations (zoning ordinance); and proposes a new zoning ordinance and transit districts.
22. "Where Transit Works: Urban Densities For Public Transportation". Regional Plan News, August, 1976. This is a summary of a two-year study, "Urban Densities for Public Transportation" prepared by the Regional Plan Association. The study addresses two questions: 1) new urban facilities are being built; what pattern of location and what density can support what type and quality of transit? and 2) Transit systems are being extended and new ones built; what kind of transit service can be supported where, and at what cost? In general, the study finds that the land use policies that will do most for public transportation are those which will help cluster non-residential floorspace in downtowns and other compact development patterns.
23. Public Transportation and Land Use Policy. Boris Pushkarev and Jeffrey M Zupan, Indiana University Press, 1977. This book addresses the relationship between urban density and public transit use and calls for changes in land use policy to support public transit.
24. Urban Rail in America: An Exploration of Criteria for Fixed-Guideway Transit by Boris S. Pushkarev, Indiana University Press, 1982. This book explores the key criteria and range of volumes that defines a corridor traveled heavily enough to make a fixed guideway transit system cost-effective. It offers an assessment of the number and location of such corridors and indicates where site-specific analysis might be focused most profitably.
25. Encouraging Public Transportation Through Effective Land Use Actions. Prepared for METRO, Municipality of Metropolitan Seattle, May 1987. This report provides information for local planning staffs on the effects of land use decisions on public transportation service and provides guidelines for the private sector on how to design new projects to be compatible with public transportation. It examines some of the most effective land use tools and

transportation management approaches that have been developed to enhance the use of public transportation.

VIDEOS

1. "Reach of Rail", 15 min., Los Angeles County Transportation Commission. Provides an overview of LRT and the positive impacts of LRT. Features Portland, San Jose, Calgary, Cleveland, Boston, and San Francisco.
2. "Greening the Rail", 15 min., CATV Public Access Studio in Oregon. for Fred Glick and Associates. Video was made as a marketing tool and serves as a documentary on the urban design and planning process and community relations efforts in the East Burnside Neighborhood portion of the Banfield LRT corridor. Depicts LRT construction in progress and includes testimonials from citizens, politicians, business leaders, owners and planning professionals on positive impacts of LRT.
3. "Light Rail Transit: A Proven Alternative", 15 min. "Transit Gloria Mundi" Production, Baltimore Md. Provides a good definition of LRT and includes business and politician testimonials. Good general video for policy-makers, business and civic leaders as well as the general public.
4. "LRT: A Metro Area Transit Option," 15 min., Regional Transit Board (RTB) production, St. Paul, MN. Footage from transit systems in U.S. and Canada. LRT is described and testimonials to benefits of LRT included. Twin Cities' corridors planned for implementation of LRT within the next 20 years are shown.

APPENDIX A

The graphic illustrations in the appendix will provide cities with ways to approach land use planning in LRT areas.

Exhibit A: Corridor-wide Land Use Evaluation for Proposed LRT Alignment in Edmonton

Source: City of Edmonton, "Land Use Plans: Northeast Light Rail Transit Corridor Study", 1978

- | | |
|-------------------------------|---|
| Figure A-31 | An inventory of city land holdings within the proposed LRT corridor. |
| Figure A-32 | Identifies existing planning and development activity in the corridor. |
| Figure A-33 to
Figure A-37 | Show initially proposed development concepts in the LRT corridor. |
| Figure A-38 | Reveals the final land use plan for the LRT corridor. |
| Figure A-39 | Reveals the resultant zoning freeze boundaries around LRT stations. |
| Figure A-40 | Shows required transportation changes as a result of LRT development and final land use plan revisions. |
| Figure A-41 | Shows underpasses required due to LRT. |
| Figure A-42 | Shows a plan for reducing the number of underpasses. |

Exhibit B: Land Use Analysis and Planning for Edmonton's Stadium Station Area

Source: City of Edmonton, "Land Use Plans: Northeast Light Rail Transit Corridor Study," 1978

- Figure B-43 Identifies areas near the station that are marginally developed or with inappropriate uses as well as areas that are resistant to change and those that should be preserved.
- Figure B-44 Shows priorities for development and in need of upgrading near the Stadium Station.
- Figure B-45 & Depict descriptions of contiguous and homogeneous sites in the Stadium
Figure B-46 Station Area.
- Figure B-47 Proposes a new Stadium Station Area land use circulation plan.
- Figure B-48 Sets priorities for those changes.
- Figure B-49 to Results of a land use planning case study for a specific neighborhood
Figure B-51 (Elmwood Park) near the proposed Coliseum Station in Edmonton. An impact analysis and initial development concepts are shown in Figure B-49. Figures B-50 and B-51 highlight a general phased approach to development and transportation improvements.

Exhibit C: Chinook Station Area Land Use Planning and Issues Analysis, City of Calgary

Source: City of Calgary, "LRT South Corridor Land Use Study," 1980.

- | | | |
|------------------------------|--|---|
| Figure C-52 | | Shows the Chinook Station Area, 5.5 km south of downtown Calgary. |
| Figure C-53 | | Shows existing land uses. |
| Figure C-54 | | Proposes a new development concept for the station area. |
| Figure C-55 &
Figure C-56 | | Reveals the new land use concepts and associated intensities and development guidelines for the Chinook Station Area. |
| Figure C-57 | | Shows citizens' concerns identified in public meetings, workshops, and discussion sessions with corresponding response by the city. |
| Figure C-58 | | Graphically shows planning considerations to be addressed for the Chinook Station Area. |
| Figure C-59 &
Figure C-60 | | Shows pedestrian and vehicular access needs for the Chinook Station Area. |

Exhibit D: 148th Street Station Area Urban Design Planning, Banfield LRT, Portland, Multnomah County, Oregon.

Source: Fred Glick, Associates, Portland, Oregon, "Going Places," Landscape Architecture, March/April, 1985.

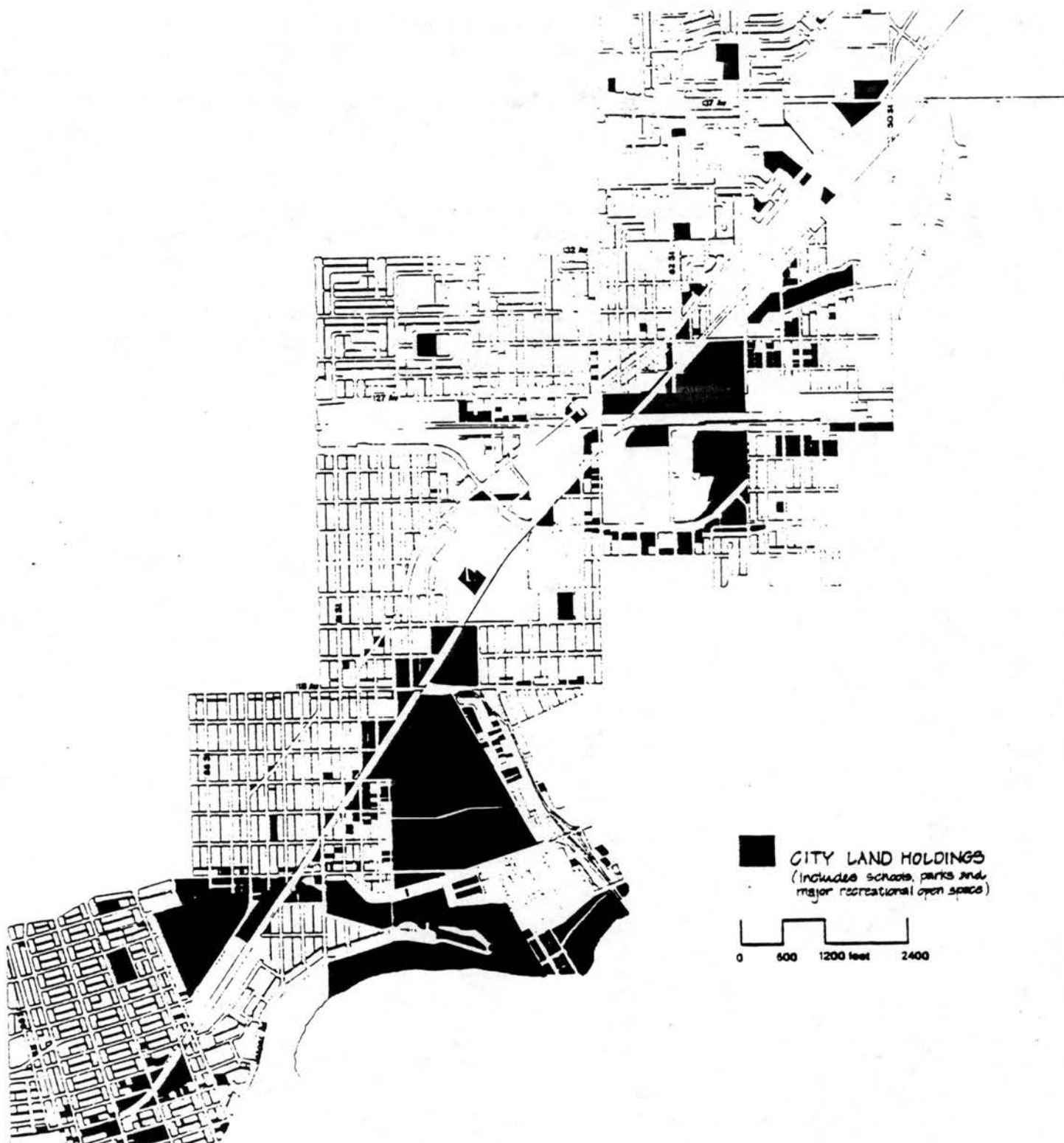
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|-------------------------------|---|---|
| Figure D-61
Figure D-62 | & | Shows how Multnomah County applied the "Conceptual Development Zone" concept to the 148th Street Station Area. |
| Figure D-63
Figure D-64 | & | Shows how redevelopable land was identified, along with existing housing and treestands and a preliminary station area urban design plan for the station area was developed. |
| Figure D-65 | | Shows the Final Urban Design Plan for the 148th Street Station Area which was the ultimate result of the graphic plans that were used for review and discussion with developers, neighborhoods, financiers and transit representatives. |
| Figure D-66 &
Figure D-67 | | Defines the existing and an improved "urban edge or frame." |
| Figure D-68 to
Figure D-71 | | Shows ways of enhancing the environment in conjunction with LRT. |

Exhibit E: Land Use Issues Analysis for a Proposed LRT Corridor in Edmonton and Proposed Planning Recommendations

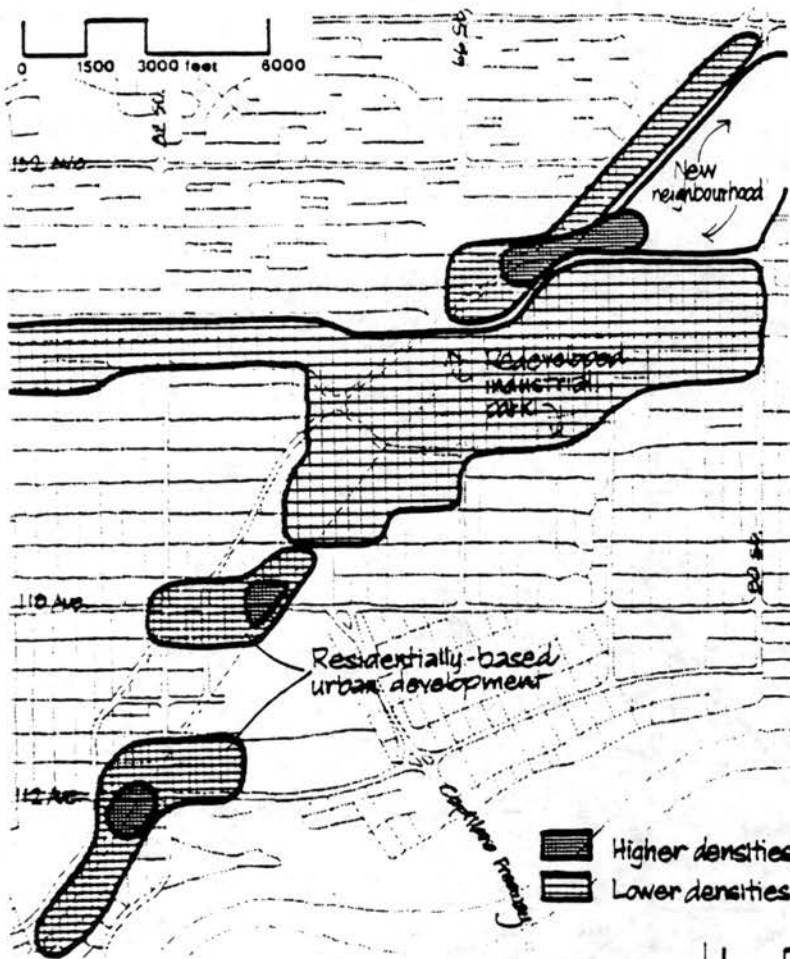
Source: City of Edmonton, "Land Use Plans: Northeast Light Rail Transit Corridor Study," 1978.

Figure E-72 to
Figure E-77

Reveals how Edmonton conducted analysis of issues by type and station area in response to neighborhood, business and officials' concerns. Recommendations for resolution of issues were made to the Edmonton City Council. Some of the issues and recommendations that Edmonton identified in this analysis are delineated in these figures and include the topics of housing, commercial and industrial uses, parks, schools, land values and ownership, auto and pedestrian access, parking, utilities, air quality, etc.



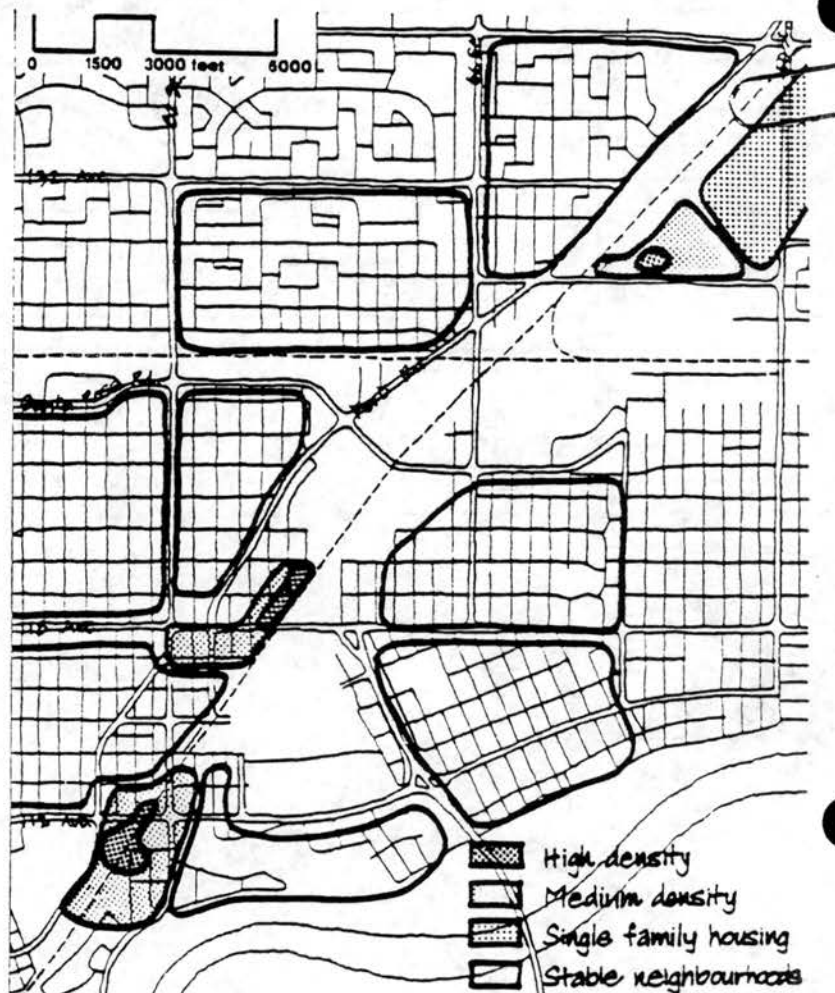
Municipal Land Ownership in the Corridor



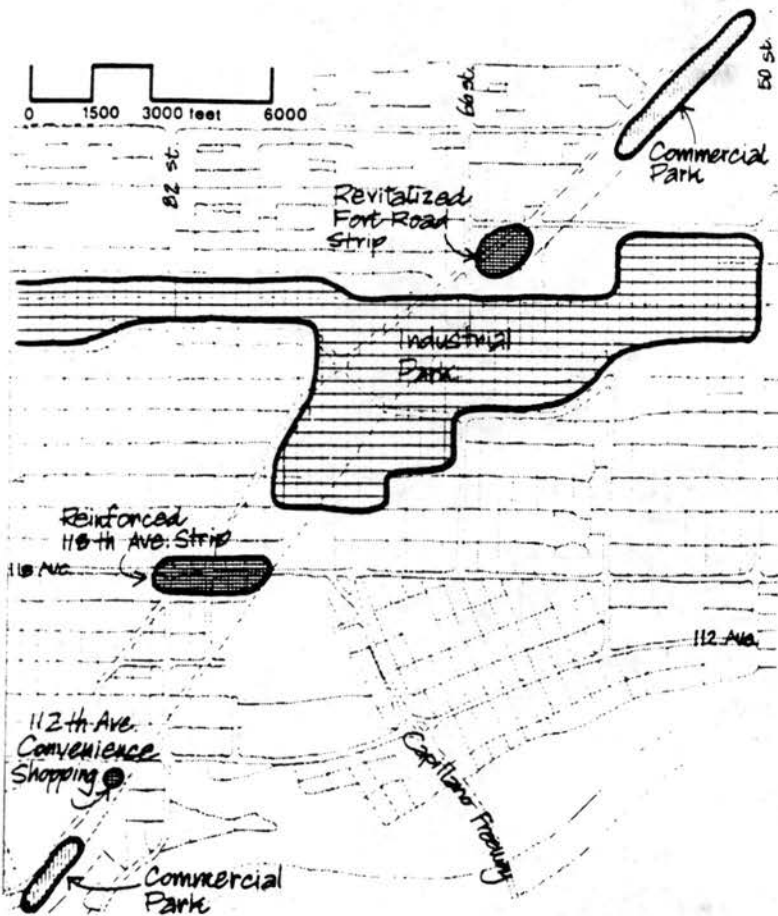
Proposed Development Pattern

A - 33

A - 34



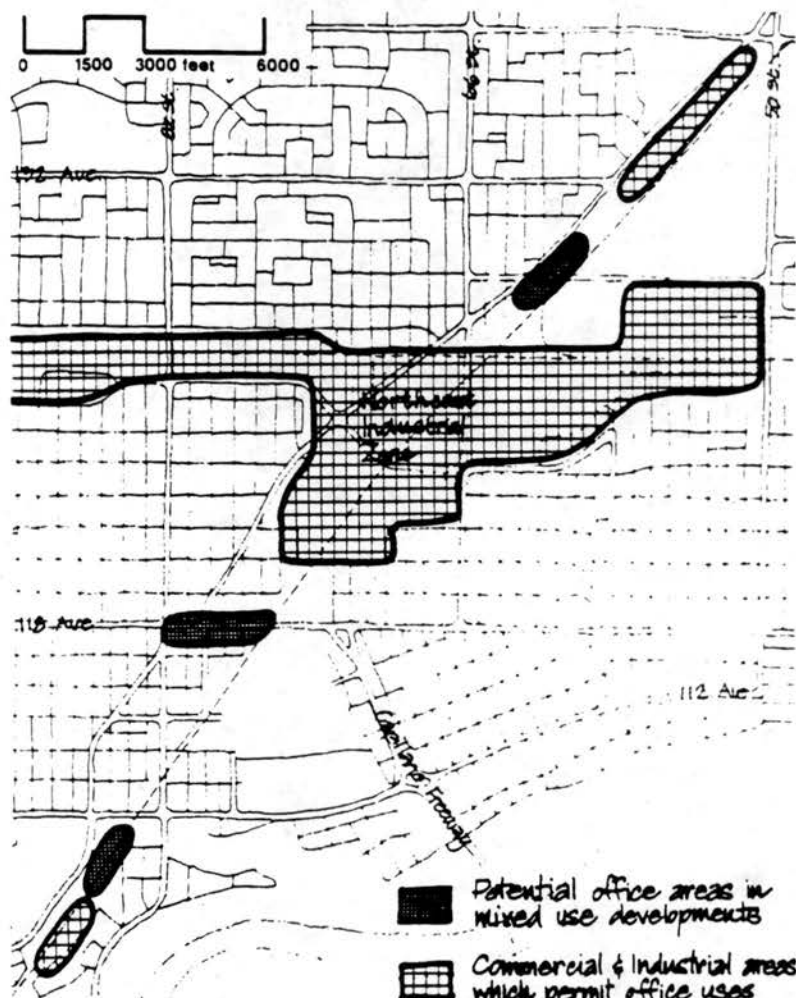
Housing Strategy



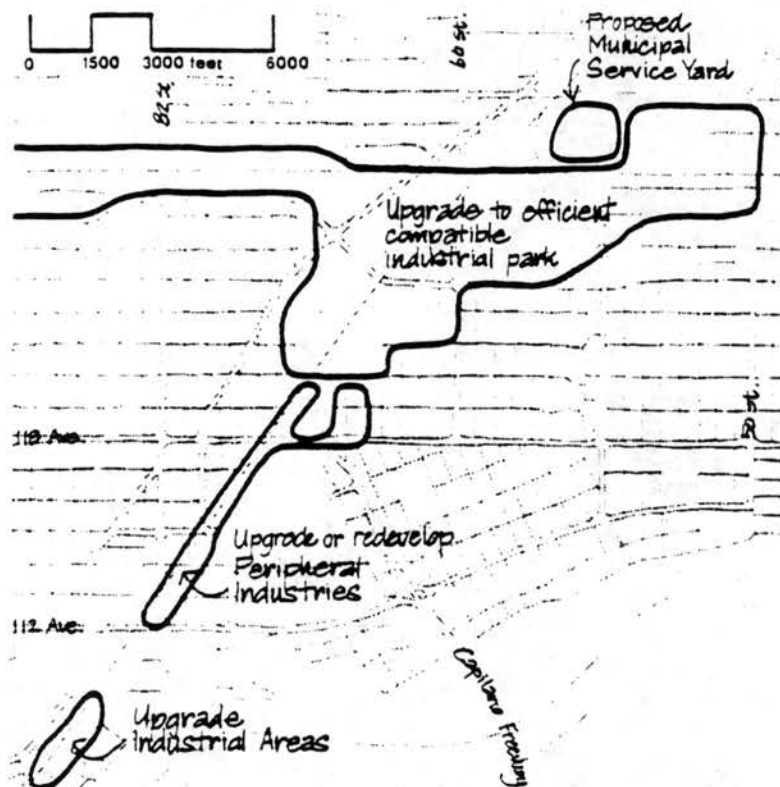
A - 35

Retail Strategy

A - 36

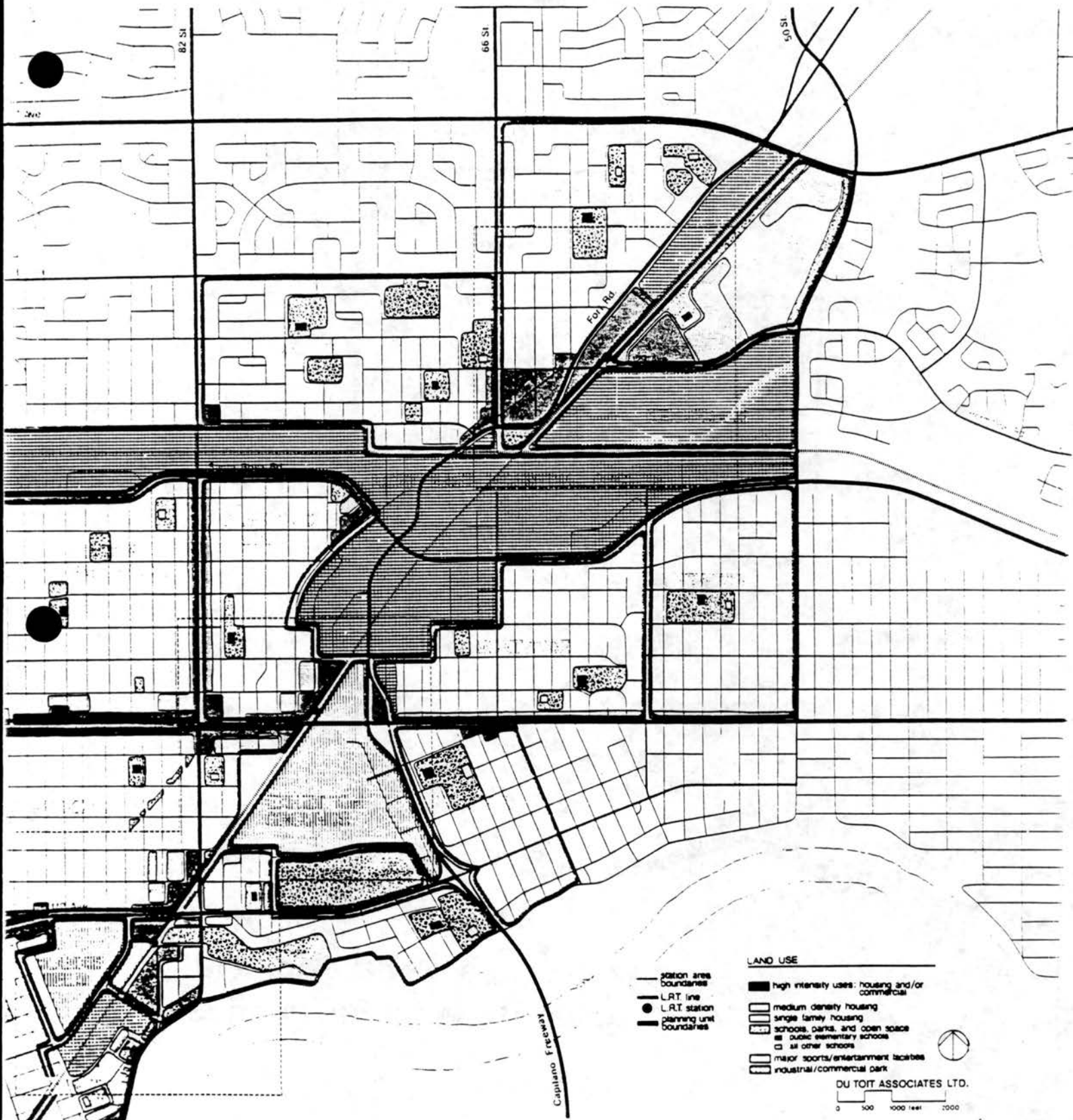


Office Development Strategy

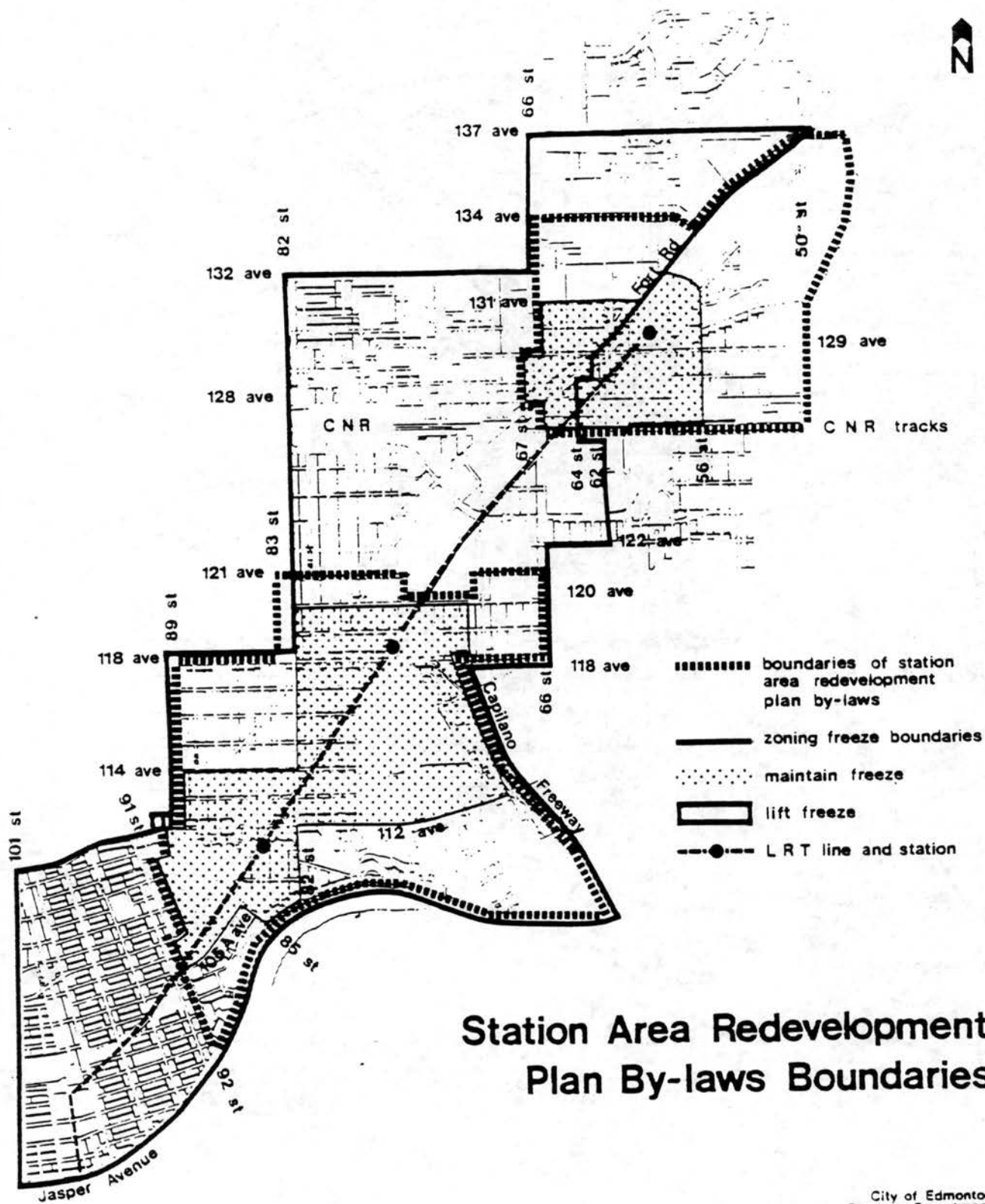


A - 37

Industrial Land Use Strategy

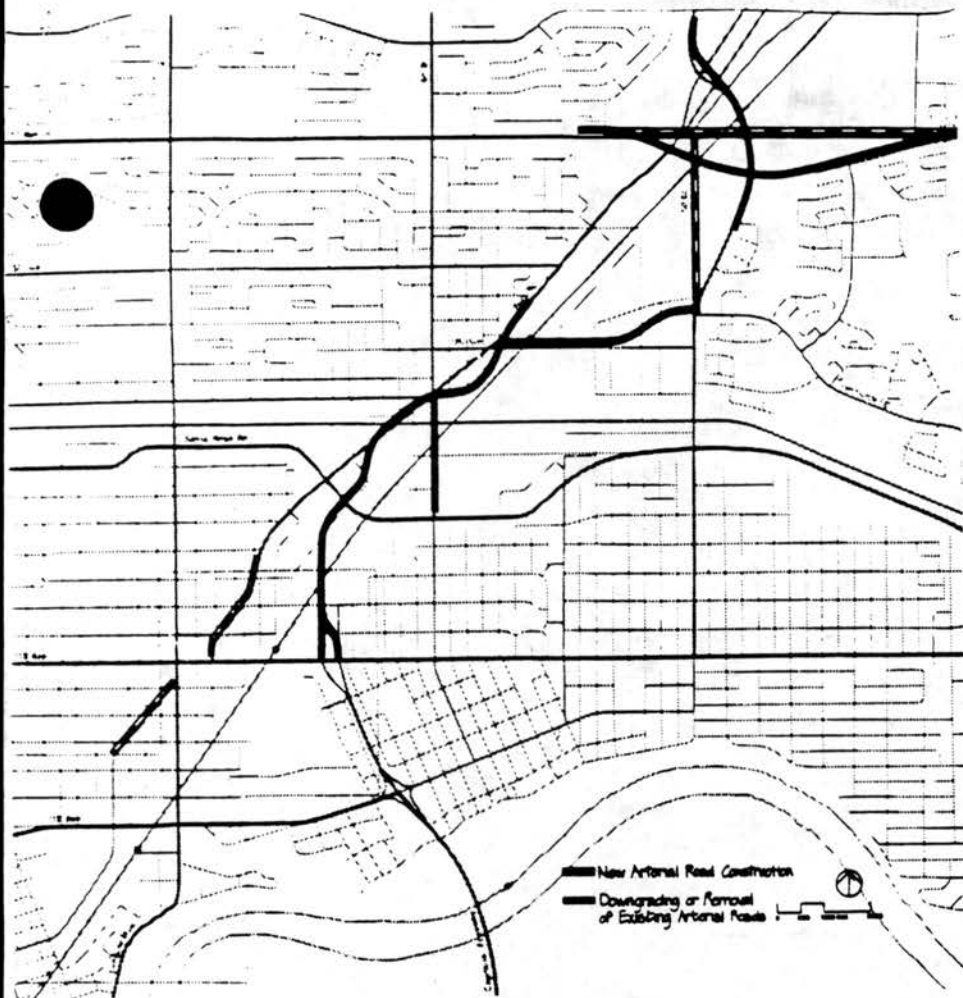


Corridor Plan B



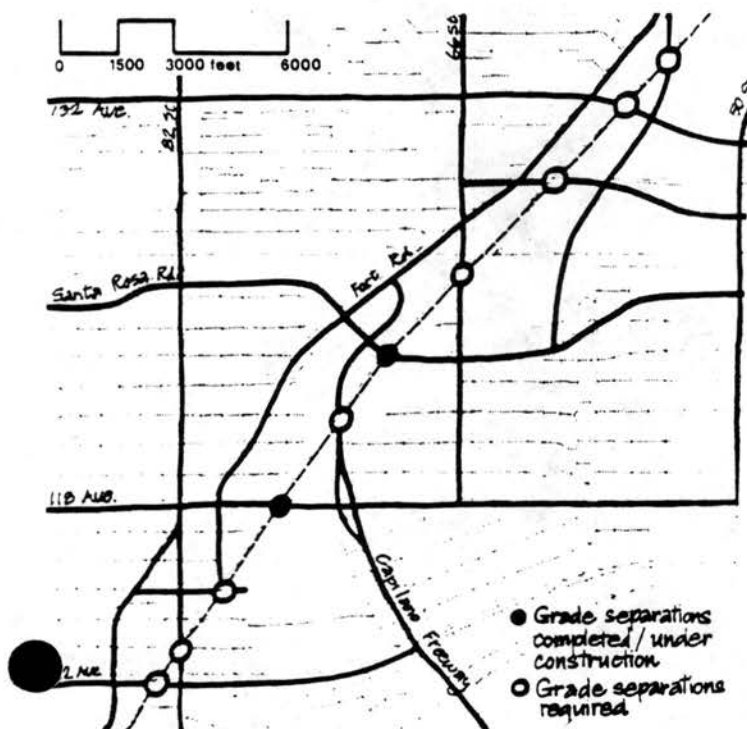
Station Area Redevelopment Plan By-laws Boundaries

City of Edmonton
Planning Department
Community Planning Branch
n.t.s.
August 1978



A - 40

Corridor Plan B - Required Transportation Changes



L.R.T. Underpasses Required

A - 41

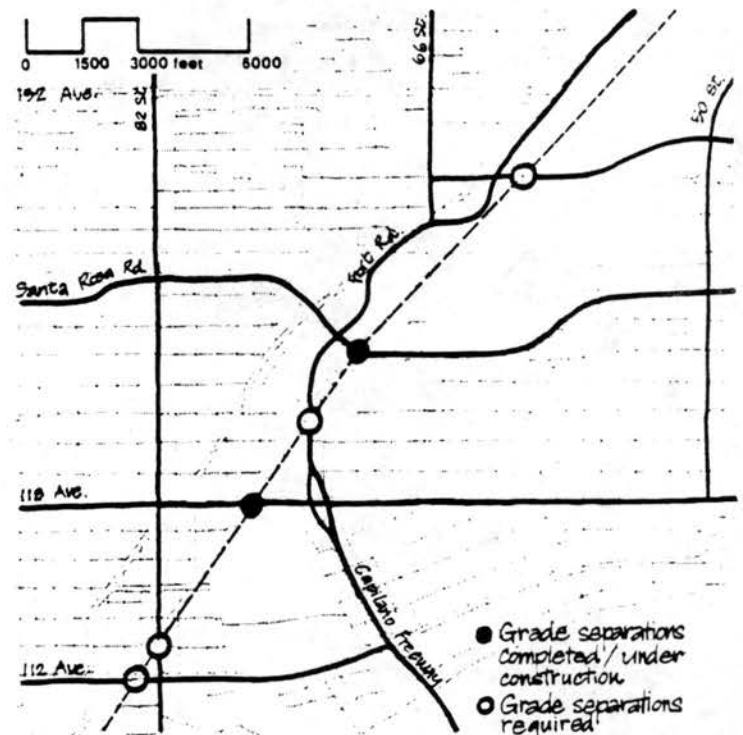


Fig. 64 Proposal for Minimizing the Number of L.R.T. Underpasses Required

A - 42

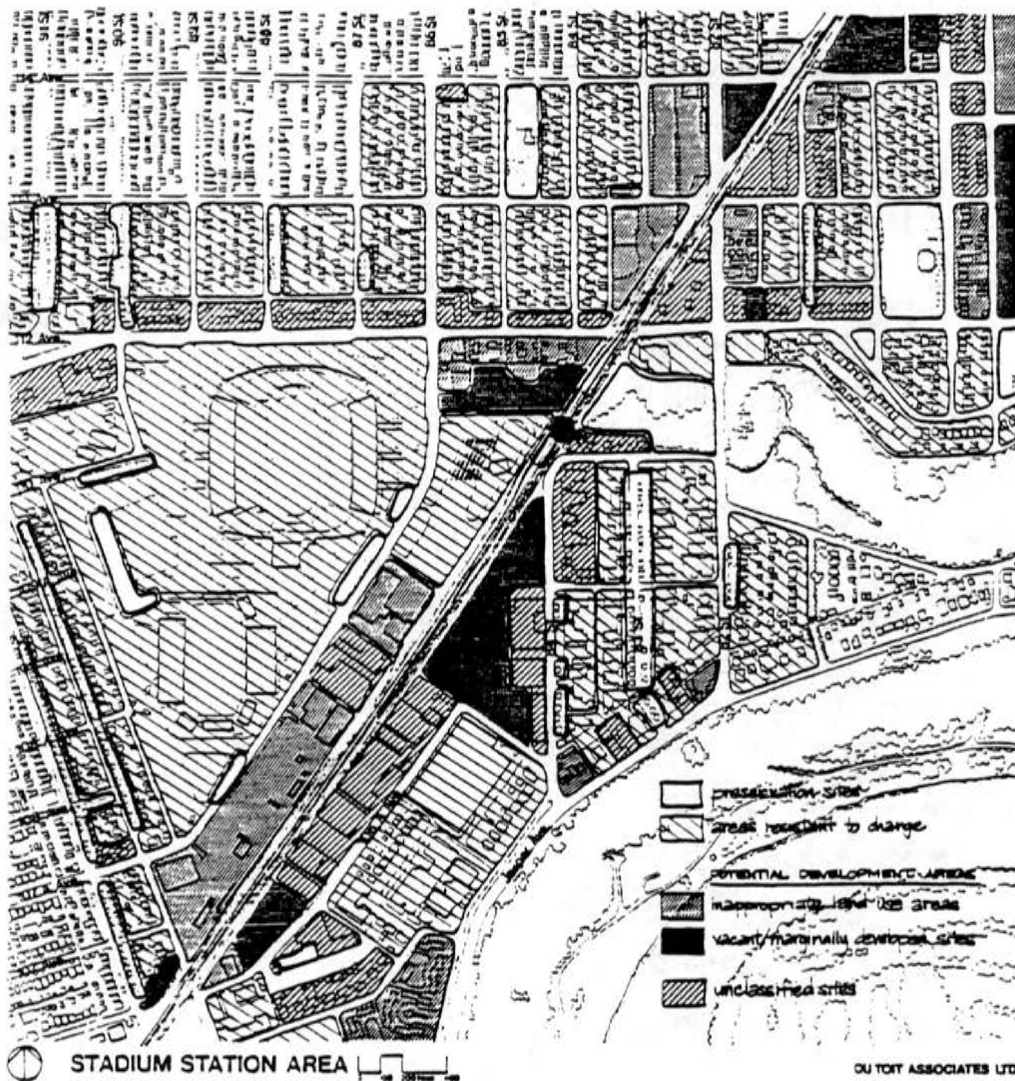
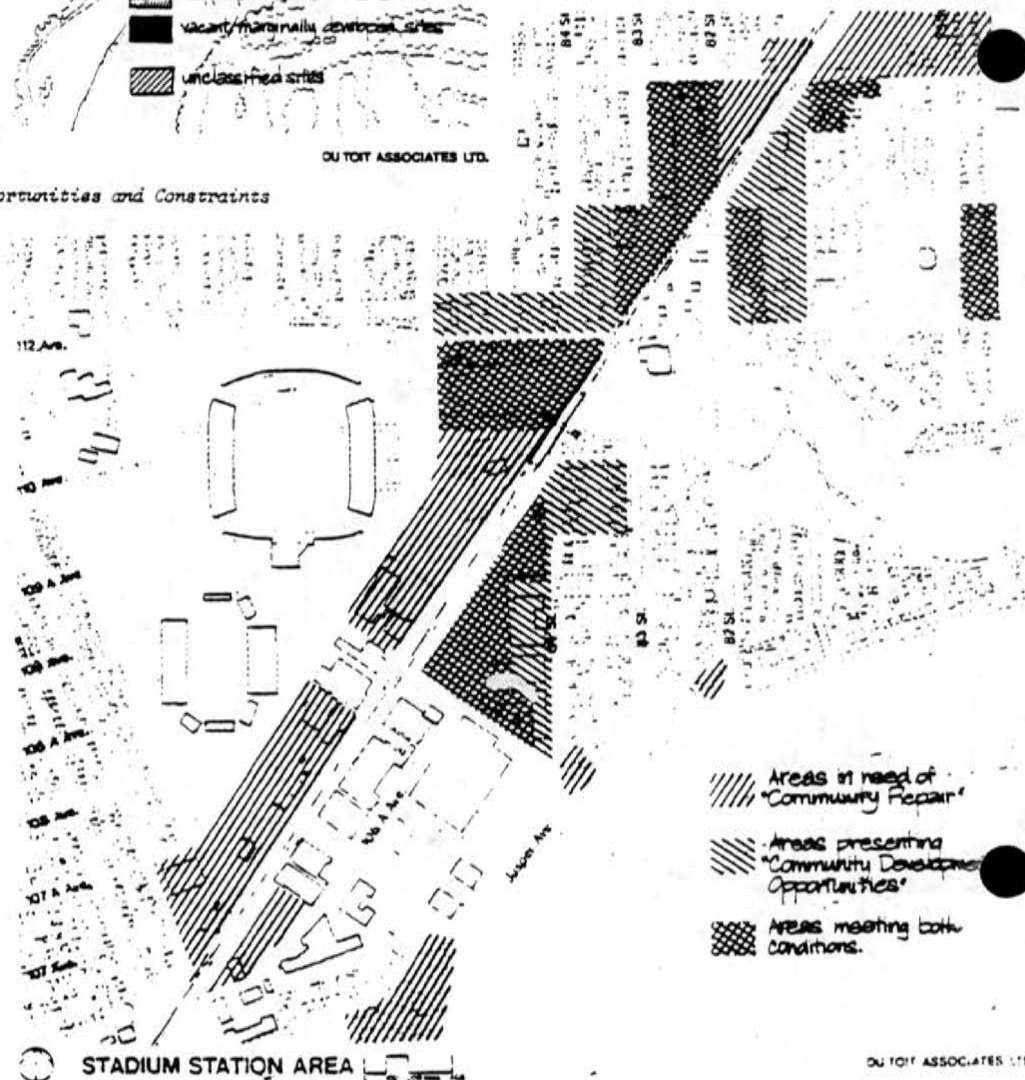


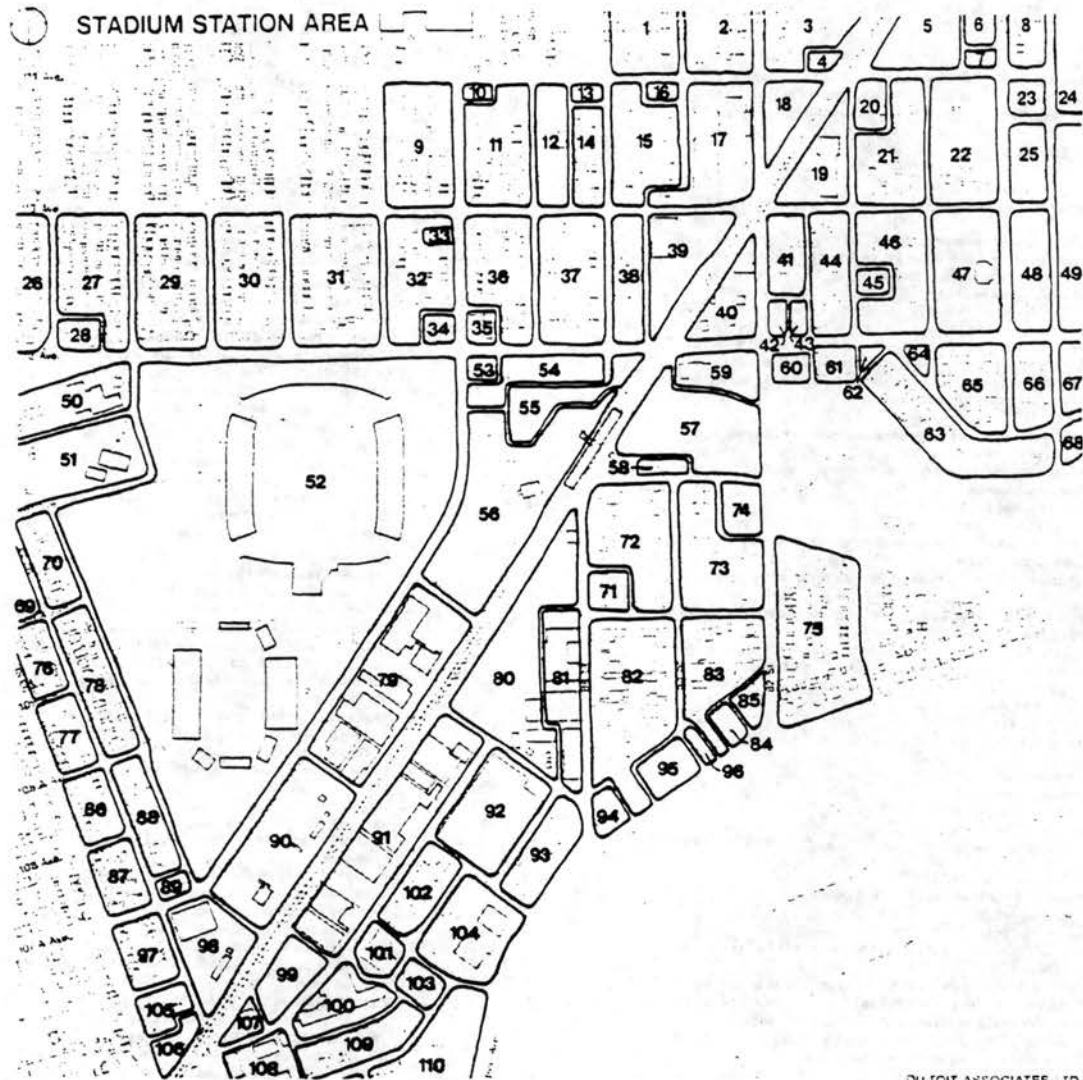
Fig. 30 Stadium Station Area - Development Opportunities and Constraints

B - 43



B - 44

Site Development Priorities



Stadium Station Area - Homogeneous Site Units

DU TOIT ASSOCIATES LTD

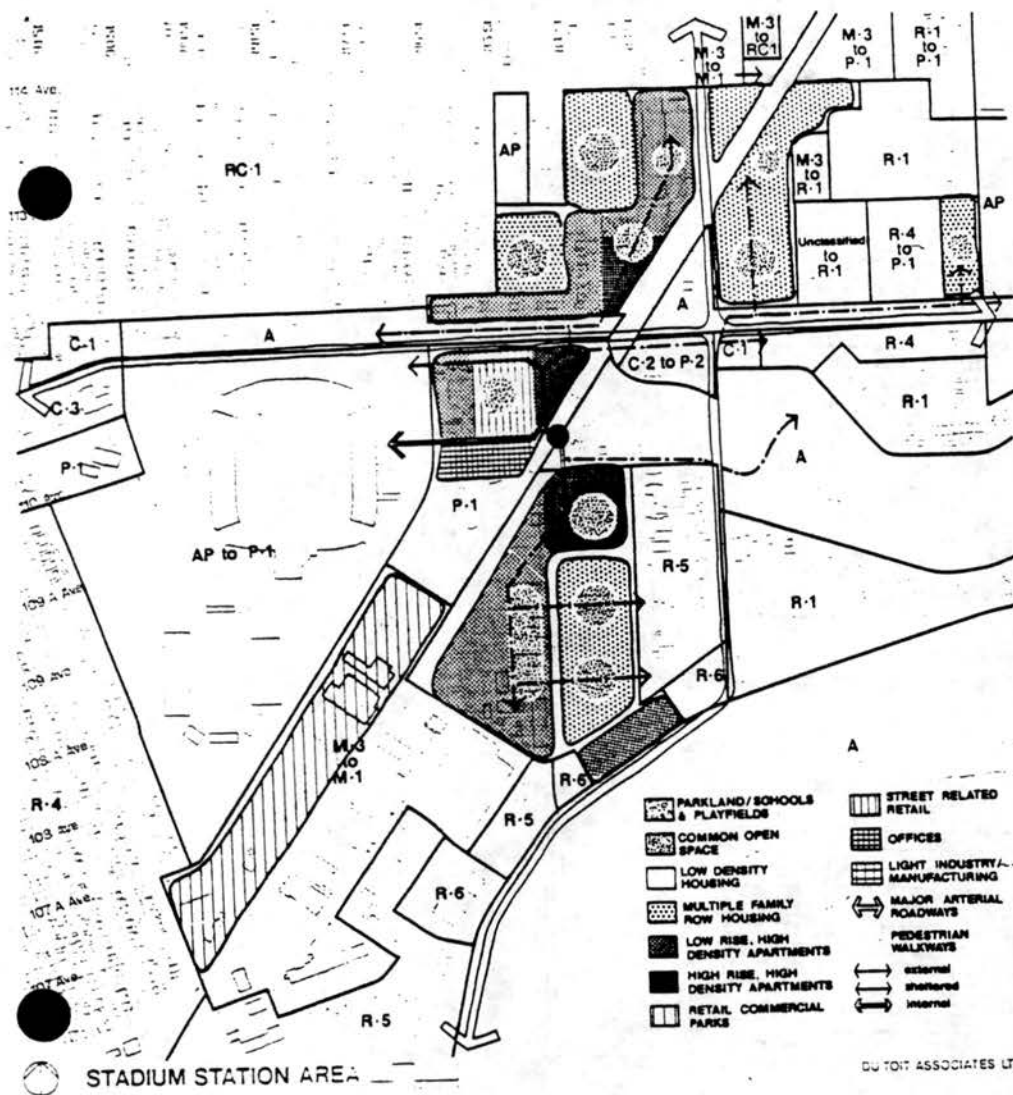
STADIUM STATION PRIMARY IMPACT AREA:
SITE UNIT DESCRIPTIONS

Site Unit No.

Description

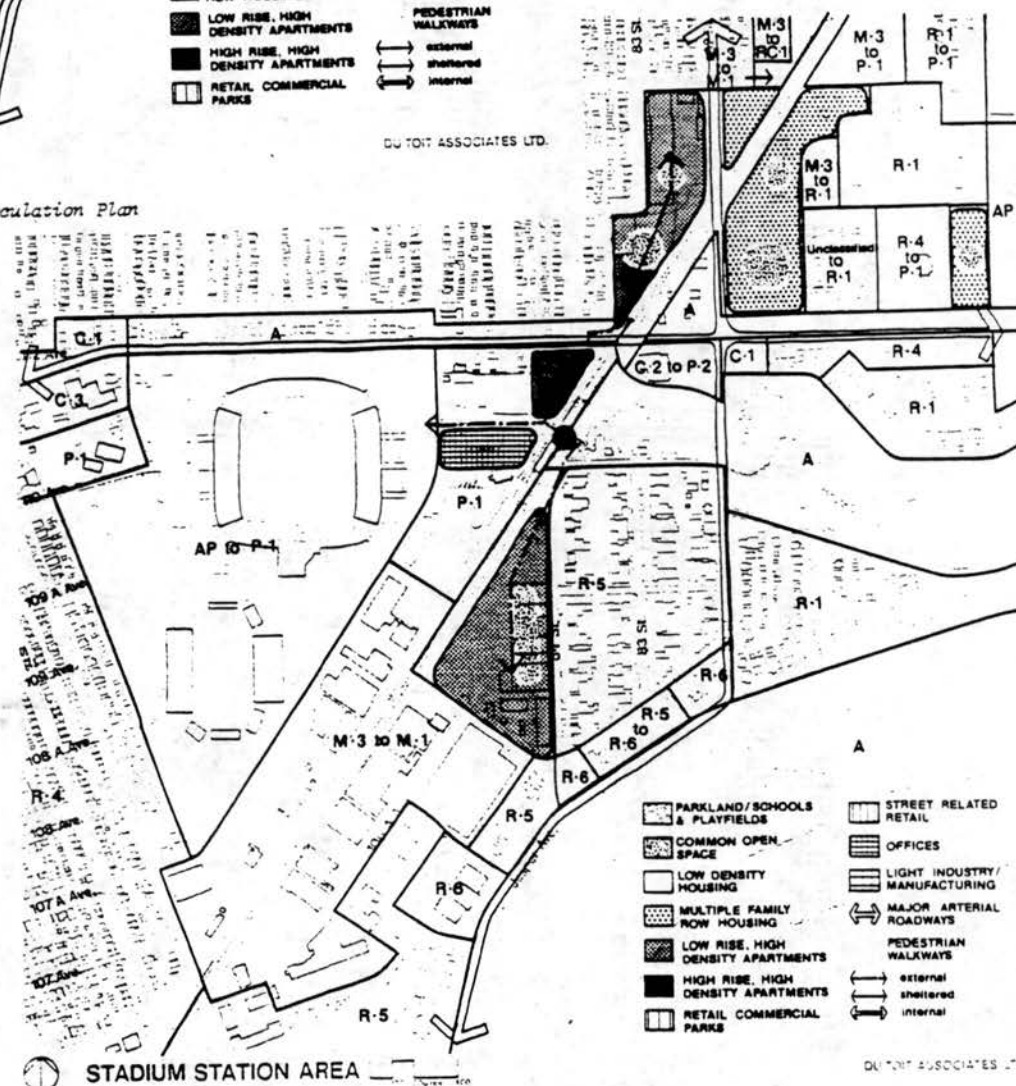
1. Sound, single family detached dwellings.
2. Sound, single family detached dwellings.
3. S.f. dwellings showing some signs of deterioration.
4. Sheet metal fabricator housed in marginal premises.
5. Fenced storage area for Exhibition grounds.
6. Unpaved parking area serving Exhibition grounds.
7. Dilapidated residential structure converted into a corner store.
8. Small dwelling units adjacent to the Exhibition grounds showing signs of advanced deterioration.
9. Residential block occupied by s.f. dwellings generally in good repair.
10. See description for unit 9.
11. Parkdale Playground. Well-equipped and landscaped children's play area is heavily used, however the small recreation (?) building located on the same site appears to be poorly maintained.
12. Free Methodist Church.
13. See description for unit 9.
14. See description for unit 9.
15. Small, attractive, and well-maintained corner grocery store.
16. Canadian Bedding Co., manufacturing plant. Two to four storey buildings of concrete blocks and brick construction and associated storage yards. Overall appearance is poor due to unkempt storage areas and buildings in poor repair.
17. Vacant, unpaved area used for car parking.
18. Acme Discount Centre and lumber storage yard, originally the Dominion Envelope and Carton Co. Ltd., factory built in 1908. The building is of brick construction with an unusual vaulted timber roof structure. Some consideration should be given to the restoration of this historical building.
19. Marginal unkempt small-scale commercial enterprises (e.g. signage manufacturer, taxidermist).
20. Well-kept residential block of smaller one and two storey brick and clapboard houses.
21. See description for unit 21.
22. Part block of small, older homes with rear yard gardens. This area seems vulnerable to deterioration because of its proximity to the Exhibition.
23. Exhibition Grounds. The Northlands stables are dominant here.
24. A half block of s.f. dwellings with some double storey clapboard structures.
25. Sound, single storey, s.f.d. residential block with some renovation activity apparent. Some deterioration is noticeable along the 112th Avenue frontage.
26. See description for unit 26.
27. Stable, street-related retail. Older brick building located within this area at the corner of 91st Street and 112th Avenue.
28. See description for unit 26.
29. See description for unit 26.
30. See description for unit 26.
31. See description for unit 26.
32. Small retail building located within a s.f.d. residential block.
33. Viable street-related retail.
34. Stadium Car Wash. Reasonably well-maintained.
35. See description for unit 26.
36. See description for unit 26.
37. One and one-half storey houses with rear yards abutting industrial land uses.
38. Two storey office and warehouse building and storage yard for Bennett and White General Contractors. This facility appears to be underutilized and shows signs of neglect.
39. Commercial strip type development i.e. drive-in restaurants, gas bar and auto body shop.
40. Marginal commercial land uses in badly deteriorated condition. Some vacant structures interspersed with active businesses.
41. S.f. dwellings in good repair but almost totally surrounded by commercial land uses.
42. Vacant residential lot.
43. Reasonably stable residential area composed of one and one-half storey homes, requiring maintenance in some instances (particularly along the 112th Street frontage).
44. Vacant residential lot.
45. See description for unit 44.
46. Crowdsale School. Modest, well-built brick schoolhouse circa 1935 in an attractive park-like setting framed by trees along the 80th Street and 79th Street frontages.
47. Small houses in generally poor condition, particularly in the area south of the laneway.
48. Unpaved parking lot adjacent to Borden Park.
49. Mix of assorted street-related retail including gas stations, construction contractor's offices and yard, etc. Condition of buildings is varied: some are fairly new and serviceable, others are older and in poor repair.
50. Convent and Santa Maria Goretti Church. Attractive grounds provide setting for older brick buildings and newer residences.
51. Clarke Field. The main structures here are the existing Clarke Stadium and the new Commonwealth Games Stadium (presently under construction). The latter structure (at 80 ft. to 90 ft. in height above street level) will have considerable visual impact upon the surrounding low-rise residential area. Substantial landscaping is planned.
52. Small-scale service station operation.

53. Housing in advanced stages of deterioration, pressured by major developments to the west (Commonwealth Games Stadium) and south (rapid transit facilities).
54. Vestiges of once attractive ravine land largely destroyed by construction to the south.
55. Site of bus transfer facilities associated with the Stadium rapid transit station and Clarke Field.
56. Head of the Kinnaird Ravine. This area is attractive and well-treed, however access is limited.
57. Large older homes located on the edge of the ravine. These are suffering somewhat from neglect. There is also a boardwalk leading to the transit station entrance which should perhaps be maintained in keeping with the ambience of the site.
58. Norwood Branch of the Royal Canadian Legion. Modern institutional construction with a large parking lot and some landscaping.
59. Large modern service station.
60. Large attractive two storey clapboard dwellings.
61. Well-landscaped one and one-half storey homes on the edge of the Kinnaird Ravine. The potential of the ravine as a visual amenity has not been fully utilized here.
62. Landscaped open space area.
63. Sound, single family detached dwellings.
64. Sound, single family detached dwellings.
65. Landscaped open space located to the south of Borden Park. Although the area is quite large, its triangular configuration makes it difficult to use for recreational purposes.
66. See description for unit 63.
67. Stable residential block with tree-lined streets (one and one-half storey detached dwellings).
68. Residential block with tree-lined street frontage. Rear yards adjacent to Clarke Field grounds (i.e. parking lots and some landscaped open space).
69. Parish of Our Lady of Fatima Church.
70. Residential block occupied by two and one-half storey walk-up apartments. Attractive streetscape along 83 Street frontage. Mid-block paved parking areas are, by contract, unsightly.
71. See description for unit 72.
72. Small pocket of attractive single storey houses located within an area of walk-up apartments.
73. Well-maintained, attractive homes on western edge of Viewpoint residential area.
74. See description for unit 69.
75. See description for unit 69.
76. See description for unit 70.
77. Industrial offices and some manufacturing facilities for Alberta Concrete Products, Canadian Linen, Prairie Maid Cereals and Canadian Liquid Air. Some landscaping and well-maintained buildings help to minimize visual impact although storage tanks and mechanical equipment are unsightly.
78. Muttarts lumber storage yard. A source of visual blight in need of improvement, particularly along 8th Street.
79. Storage and warehouse retail outlets. Scale and appearance reasonably compatible with adjacent residential block.
80. See description for unit 72.
81. See description for unit 72.
82. Solitary single family dwelling within walk-up apartment district.
83. Vacant service station and small corner grocery store. Area slated for a 6 to 8 storey apartment development.
84. See description for unit 69.
85. See description for unit 69.
86. See description for unit 70.
87. Corner grocery store. Building and grounds are poorly maintained.
88. Alberta Concrete Products yard. Vehicle storage, mixing plant and piles of aggregate and sand are unsightly. A rail siding also serves the site.
89. Building supplies storage and retail outlets, warehousing, etc. (i.e. Muttarts, C.P.I., Mendersons, MacCosham, G.W.G.).
90. Serviceable buildings in reasonable condition.
91. G.W.G. manufacturing plant. A light, high-standard industrial land use housed in an attractive single storey brick warehouse with offices attached.
92. Well-landscaped and maintained single family detached dwellings overlooking the river.
93. Pockets of dilapidated houses apparently waiting for demolition and re-development.
94. Two new, but poorly constructed, 6 storey apartment blocks with open parking below at grade.
95. Single family dwelling within walk-up apartment district.
96. See description for unit 69.
97. Coast Machinery Company. Low scale building of concrete block and glass construction. Long term viability is questionable.
98. Edmonton Vester and Sanitation service facility. Building is in fair condition but adjacent storage yard is unkempt and unsightly.
99. Big Four Cartage. This warehouse operation is housed within the old federal penitentiary building built in 1903 and now designated as an historic site. Restoration to include new uses appropriate to the building should be considered.



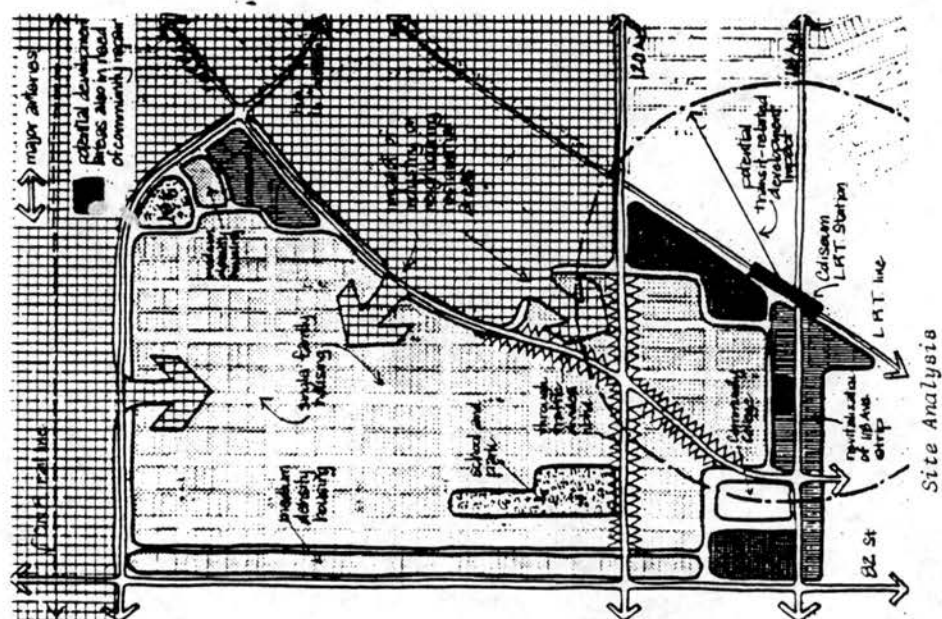
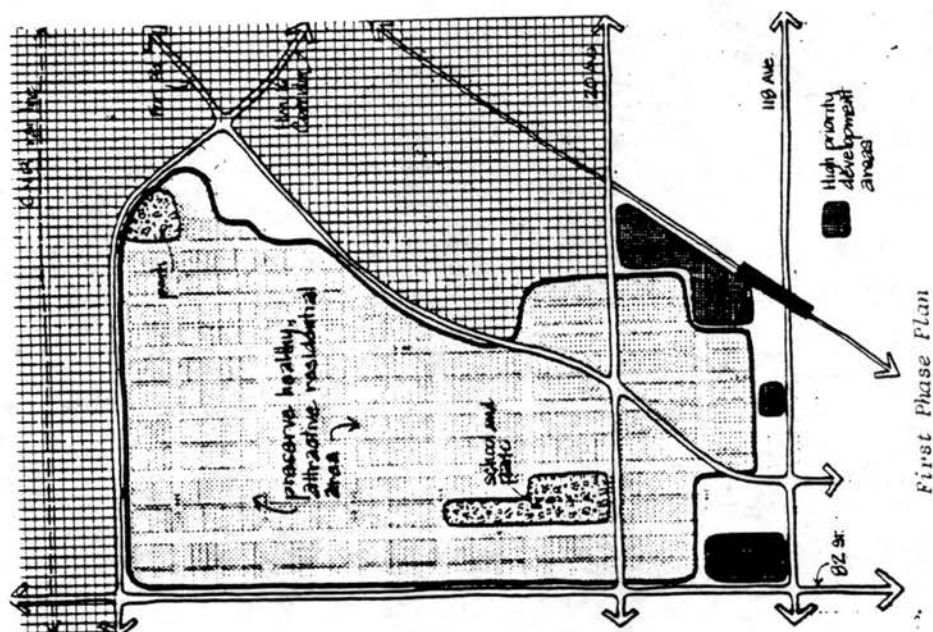
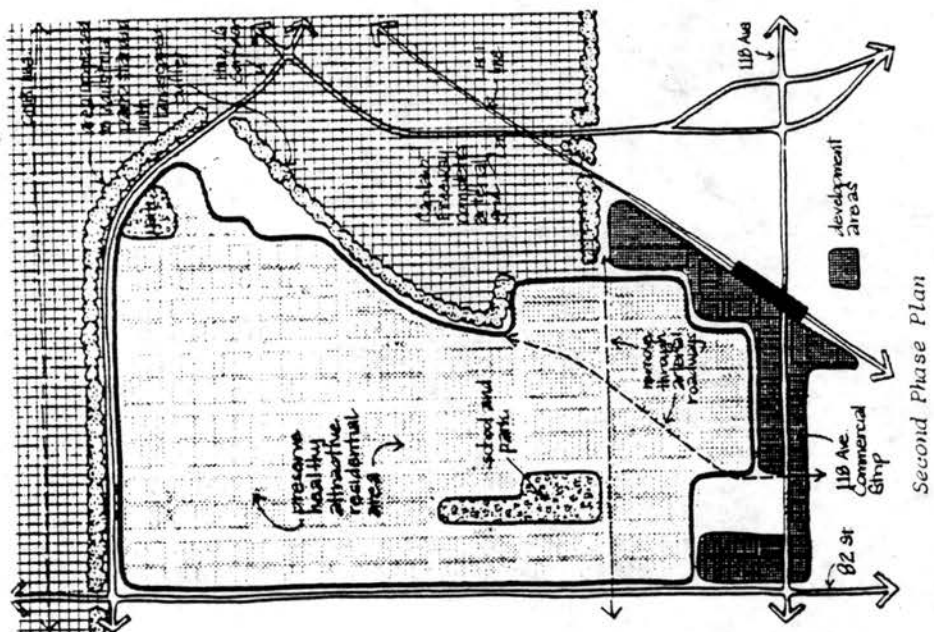
B - 47

Stadium Station Land Use and Circulation Plan



B - 48

First Phase Land Use and Circulation Priorities



B - 49, B - 50
B - 51



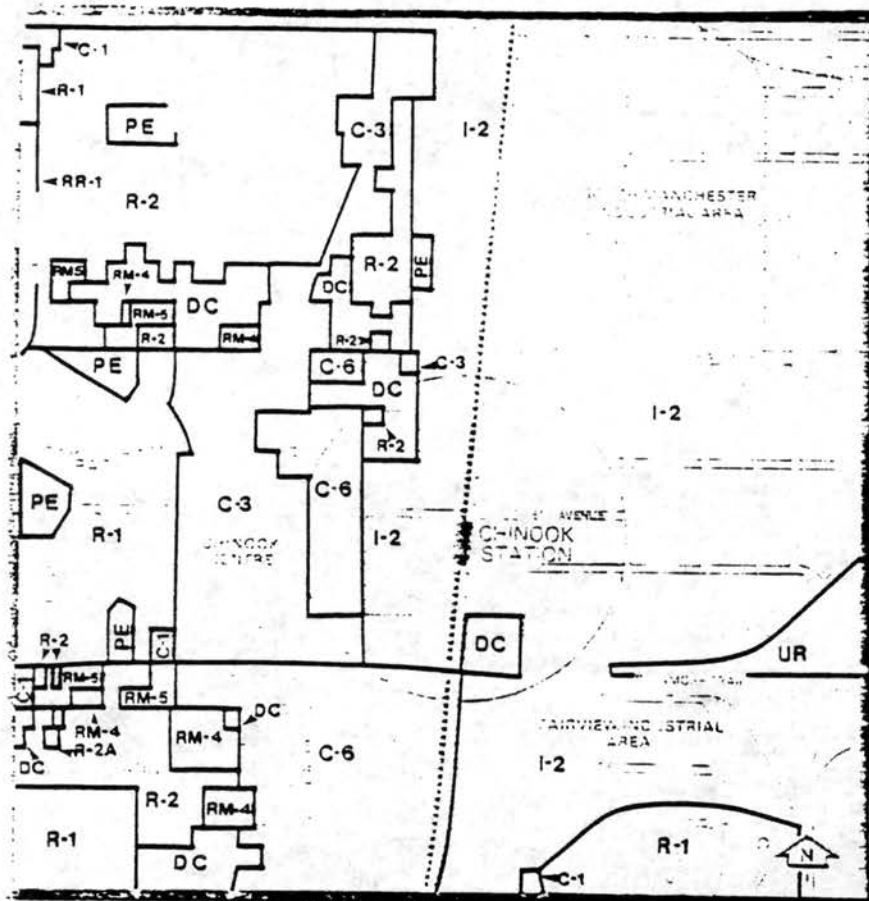
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L.R.T. South Corridor Land Use Study

Chinook Station Area Plan



THE CITY OF CALGARY
PLANNING DEPARTMENT
October 1980



SUBJECT TO CITY OF CALGARY LAND USE BYLAW

- RR-1 Restricted Residential Single - Detached District
- building height - 10m
- R-1 Residential Single-Detached District
- building height - 10m.
- R-2 Residential Low-Density District
- building height - 10m.
- RM-4 Residential Medium Density Multi-Dwelling District
- building height - 9m
- density 148 u.p.h.* (60 u.p.a.)**
- RM-5 Residential Medium Density Multi-Dwelling District
- building height - 9m
- density 210 u.p.h.* (85 u.p.a.)**
- C-1 Local Commercial District
- building height - 10m.
- C-3 General Commercial District
- building height - 46m.
- C-6 Highway Commercial District
- building height - 12m.
- I-2 General Light Industrial District
- building height - 12m.
- DC Direct Control District
- PE Public Park, school and Recreation District

* units per hectare
** units per acre

L.R.T. South Corridor Land Use Study

Existing Land Use Designations



THE CITY OF CALGARY
PLANNING DEPARTMENT

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Chinook Station
October 1980

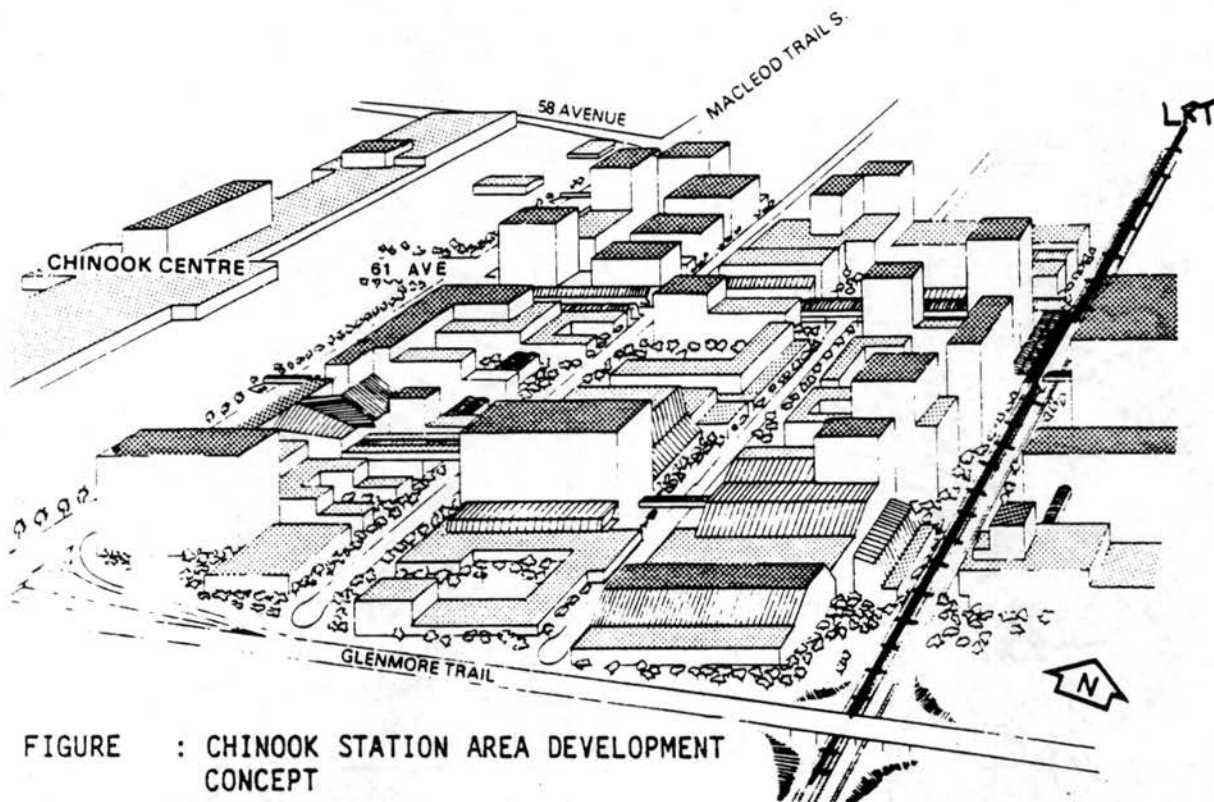
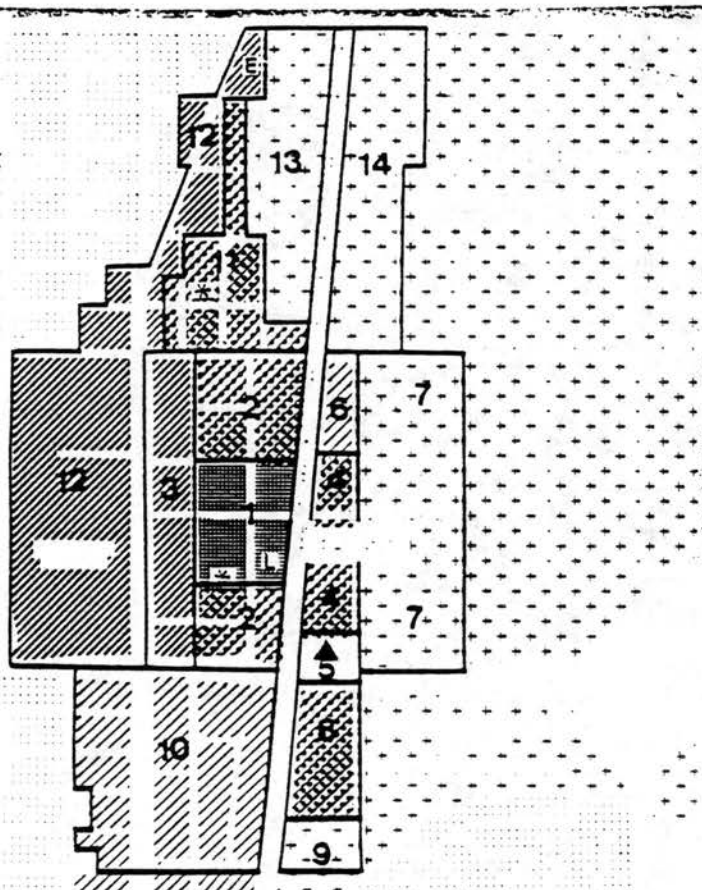


FIGURE : CHINOOK STATION AREA DEVELOPMENT
CONCEPT

DEVELOPMENT CONCEPT

The planning goal is to foster the development of a "multi-purpose regional subcentre" that would be visually and functionally integrated with its surrounding land uses. The Chinook Shopping Centre will continue to be the dominant shopping and recreational focus. It will, together with the Station facilities, act as a node for additional concentrations of commercial, residential, cultural and other social activities based on the accessibility provided by public transit and the major thoroughfares.



-  HIGH DENSITY MIXED USE
-  HIGH DENSITY COMMERCIAL
-  MEDIUM DENSITY COMMERCIAL
-  RESIDENTIAL BONUS: MEDIUM TO HIGH DENSITY RESIDENTIAL
-  CONTINUATION OF EXISTING LAND USE DESIGNATION
-  LIGHT INDUSTRIAL
-  MINI-PARK (POSSIBLE)
-  ELECTRIC SUBSTATION
-  POSSIBLE LEISURE CENTRE
-  MIXED USE DEVELOPMENT AS APPROVED BY CITY COUNCIL

L.R.T. South Corridor Land Use Study

Generalized Land Use Concept Plan



THE CITY OF CALGARY
PLANNING DEPARTMENT

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Chinook Station
October 1980

SUMMARY OF RECOMMENDED LAND USE, INTENSITY AND DEVELOPMENT GUIDELINES^a

SITE	EXISTING LAND USE DESIGNATION	RECOMMENDED LAND USE	BASE ^b DENSITY MAXIMUM WHEN BONUS SYSTEM IS NOT APPLICABLE (IN THE ORDER OF)	MAXIMUM DENSITY WITH BONUS (IN THE ORDER OF)	MAXIMUM HEIGHT	SPECIAL CONSIDERATIONS
1	I-2	Mixed Use (With Approximately Half Residential) ^d	F.A.R. 4	F.A.R. 5	46 m	Development should be related to the Major Pedestrian Corridors. Retail use should be limited to the ground level and along major above-grade pedestrian corridors. Park 'n' Ride site may potentially include a "Leisure Centre".
2	I-2 C-3 D.C. R-2	Commercial Ceiling ^e All Residential Mixed Use (With Approximately One-third Residential) ^d	F.A.R. 2 F.A.R. 2 F.A.R. 2	N/A F.A.R. 3 F.A.R. 3	46 m	Design techniques to overcome existing negative environmental conditions.
3	C-6 C-3 D.C.	Commercial Ceiling ^e or Mixed Use ^d	F.A.R. 2	F.A.R. 3	46 m	Orientation to Macleod Trail and pedestrian systems of Station Area.
4	I-2	All Commercial ^e All Residential ^d Mixed Use (With Approximately One-Third Residential) ^d	F.A.R. 2 F.A.R. 2 F.A.R. 2	N/A F.A.R. 3 F.A.R. 3	46 m	Design techniques to overcome existing negative environmental conditions.
5	D.C.	Mixed Use (With a Major Residential Component of a Minimum of 250 dwelling Units)	F.A.R. 3.49	N/A	46 m	As approved by City Council in 1978.
6	I-2	Commercial Ceiling ^e	F.A.R. 2	N/A	46 m	
7	I-2	Light Industrial	N/A	N/A	12 m	
8	I-2	Commercial Ceiling ^e All Residential Mixed Use (With Approximately One-Third Residential) ^d	F.A.R. 2 F.A.R. 3 F.A.R. 3	N/A N/A N/A	46 m	Design techniques to overcome existing negative environmental conditions.

SITE	EXISTING LAND USE DESIGNATION	RECOMMENDED LAND USE	BASE ^b DENSITY MAXIMUM WHEN BONUS SYSTEM IS NOT APPLICABLE (IN THE ORDER OF)	MAXIMUM DENSITY WITH BONUS (IN THE ORDER OF)	MAXIMUM HEIGHT	SPECIAL CONSIDERATIONS
9	I-2	Light Industrial	N/A	N/A	12 m	
10	C-6	Commercial	N/A	N/A	12 m	
11	R-2 PE I-2 D.C.	Commercial Ceiling ^e All Residential Mixed Use (With Approximately One-Third Residential) ^d	F.A.R. 1.5 F.A.R. 3 F.A.R. 3	N/A N/A N/A	46 m	Attention to design of interface with commercial and industrial development.
12	C-3 R-2 C-6 D.C.	Commercial Ceiling ^e	F.A.R. 3	N/A	46 m	
13	I-2	Light Industrial	N/A	N/A	12 m	
14	I-2	Light Industrial	N/A	N/A	12 m	

- It is recommended that the City undertake redesignation procedures in conjunction with the Area Redevelopment Plan process for the screened areas after Council's approval of the Study in order to meet the objectives of the Station Area Plan. Details regarding exact land use district boundaries and development guidelines for parcels will be worked out during the implementation stage of the land use amendment process.
- Certain land use districts in the Calgary Land Use By-law do not use floor area ratios or units per hectare to regulate the density, including C-6 and I-2. The exact density of these districts shall be subject to the provisions of the district in the By-law, e.g. yard and height restrictions.
- Maximum heights shall be reviewed on a site-specific basis, subject to the performance standards regarding direct sunlight and other development guidelines.
- Council has directed that the recommended minimum proportion of residential use as a mandatory requirement of mixed use development be made flexible to accommodate individual projects. Residential use is a mandatory component of development only on Site 1 in this Station Area.
- Commercial ceiling is used to limit the intensity of commercial use both in all commercial developments where residential use is not mandatory and in mixed use developments.

b. CITIZEN CONCERNS*

ISSUE	AREA	RESPONSE
1. Walking distance between the Station and the adjacent communities is considered too far by the residents.	Meadowbank Park Windsor Park Manchester	The Transportation Department will review the existing bus routes. The feasibility of providing shuttle bus service to link up the communities, major developments and the Station could be undertaken after the operation of the L.R.T. System. Pedestrian circulation will be improved through the upgrading of sidewalks, provision of grade-separated pedestrian crossings over or under major roadways, and provision of internal walkway systems by major developments.
2. Walking distance between the Station and the Chinook Shopping complex is too far. The walking environment is also very unattractive particularly during the winter months.	General Comments from the Public	The Plan recommends upgrading of 61st Avenue as the major at-grade pedestrian spine, which will be supplemented by alternate above-grade internal pedestrian corridors when redevelopment occurs. Shuttle bus service may be another solution to tie these two centres together. This would be examined after operation of the L.R.T. System.
3. Parking overspill from the L.R.T. Station and its related developments.	Meadowbank Park Windsor Park	The Plan recommends that the traffic and parking situation be monitored. Should parking overspill become a problem, the Transportation Department will initiate appropriate measures to resolve this issue.
4. Parking relaxation for new development is not favoured. Excessive on-street parking in existing communities is a concern.	Meadowbank Park Southern portion of Windsor Park and Manchester	Parking relaxation is granted when development is located within a reasonable walking distance of the Station and that its design can be integrated with the recommended pedestrian circulation system. Policies as stated in Part II, Chapter C of the document will safeguard excessive on-street parking resulting from inadequate provision of parking stalls by new developments, as all development applications will be reviewed in detail by the Planning and Transportation Departments to see if the specific development merits any relaxation.
5. The number of redevelopment and redesignation applications create significant land use instability and speculation in the area.	Manchester Windsor Park	Redevelopment pressure has been quite active prior to the approval of the L.R.T. System. Manchester and the southern portion of Windsor Park have been undergoing a land use transformation in the past decade. Approval of this policy document might assist in reducing the amount of land speculation in these neighbourhoods.
6. Low density residential use is inappropriate. The existing housing stock is old and quite deteriorated. Maintaining the existing housing stock would not be feasible.	Manchester	The Plan recommends the existing low density housing be replaced by mixed use development. Residential development would be encouraged through the "bonus system".
7. The Manchester and Chinook Station Areas offer great opportunities for housing additional population. The existing shopping facilities, proximity to Downtown and employment centres are the major attractions. High density residential development should be accommodated in the Station and Manchester area. Accommodation of medium to high density residential units in the Station Area might reduce the redevelopment pressure currently experienced in Windsor Park.	Manchester Windsor Park	For sites adjacent to the Station, residential development is a mandatory use component in a mixed use project. Outside this area, bonus density is given to encourage the provision of additional residential units in the medium density mixed use districts.

* The issues were identified by the communities and interested citizens in the various workshops, public meetings and discussion sessions held during the course of the Study. The Study seeks to address these issues as indicated in the "response" column.



Windsor Park Community Concerns

- Possible overspill of parking from Chinook Centre and L.R.T. Station
- Potential increase in L.R.T. related traffic

Manchester Community

- Significant land use instability
- Land use uncertainty due to significant number of reclassification applications
- Active redevelopment pressure and land speculation
- Invasion of commercial and industrial uses
- Declining population and housing stock
- Poor housing stock
- Closing of the School and Community Hall
- Broken sidewalks and roads

Manchester Industrial District

- Lack of adequate landscaping
- Extensive outdoor storage not adequately screened
- Heavy industrial uses

Environmental Concerns

- Potential noise from L.R.T.
- Train noise from passing C.P.R. trains
- Negative visual quality from existing industrial uses
- Industrial truck traffic
- Lack of open space, landscaping and community facilities
- Noise from major thoroughfares

Station Area

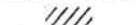
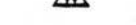
- Auto-related uses occupied a significant portion of the Station Area
- Extensive outdoor storage area
- Inappropriate land use designation (e.g. 1-2, 1-3)
- Disjointed pedestrian network
- Lack of pleasant pedestrian environment
- Lack of proper sidewalks
- Lack of adequate landscaping
- Development pressure and potential commuter parking within 5 minutes walking distance of the Station
- Walking distance between the Station and Chinook Centre is a concern
- No grade-separated pedestrian crossing north of 51st Avenue South

Roadway and Access Constraints

- Limited road capacity along Macleod Trail to serve new development
- Access limitation at 58th Avenue and 61st Avenue South
- Existing roadways present great barriers to pedestrians

CHINOOK CENTRE

STATION

-  L.R.T. ALIGNMENT & STATION
 -  L.R.T. STATION FACILITIES
 -  PROPOSED INTERCHANGE
 -  WIDENING OF 61 AVE. S. AS PROPOSED BY TRANSPORTATION DEPARTMENT
 -  MAJOR THOROUGHFARE
 -  APPROVED STREET WIDENING
 -  APPROVED INTERCHANGE IMPROVEMENTS
 -  BUS ROUTES*
 -  PARK & RIDE FACILITY
 -  FREEWAY R.O.W. (PROTECTED)
 -  POSSIBLE FUTURE 71ST AVE. EXTENSION
- * BUS ROUTES TO BE FINALIZED FOLLOWING PUBLIC PARTICIPATION PROGRAM WITH AFFECTED COMMUNITIES.

L.R.T. South Corridor Land Use Study

Vehicular Circulation & Improvements

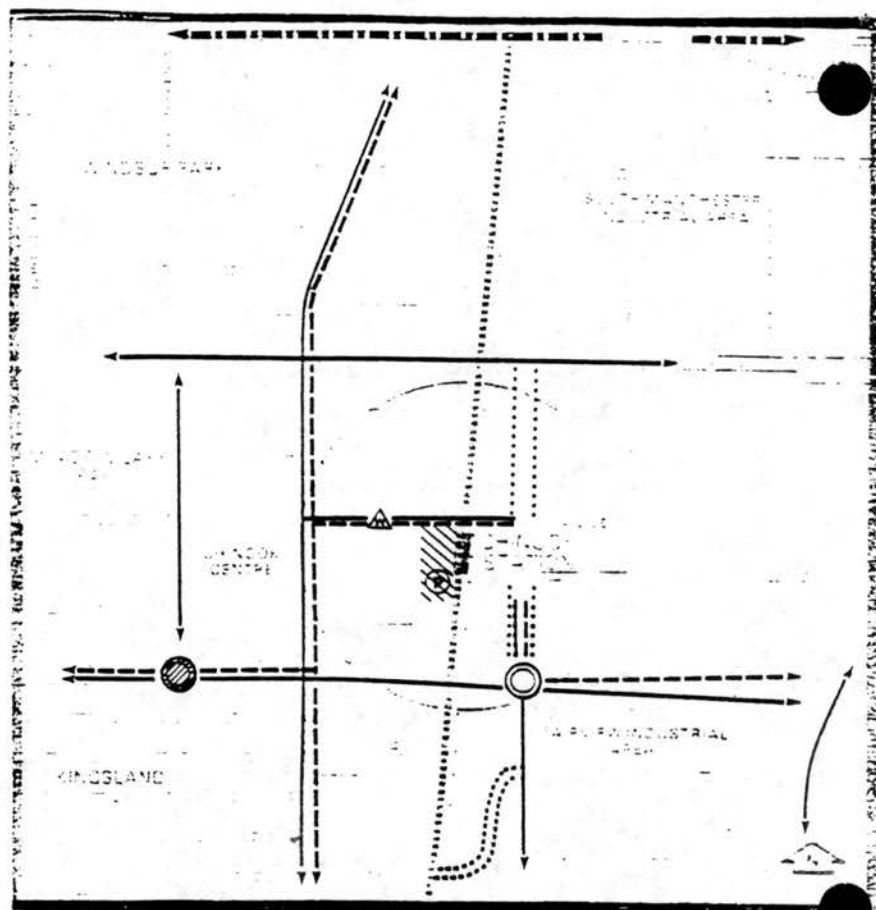


THE CITY OF CALGARY
PLANNING DEPARTMENT

Map
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Chinook Station
October 1980

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-  L.R.T. ALIGNMENT & STATION
-  PRIMARY PEDESTRIAN CIRCULATION CORRIDOR
-  MAJOR PEDESTRIAN DESIRE LINES
-  PUBLIC IMPROVEMENT (SIDEWALKS)
-  BUS LOOP
-  ① PROPOSED PEDESTRIAN CONNECTION IN CONJUNCTION WITH FUTURE UPGRADING OF 5TH STREET INTERCHANGE
-  ② PEDESTRIAN SIDEWALK ALONG FAIRMOUNT DRIVE/CENTRE STREET
-  ③ PEDESTRIAN UNDERPASS UNDER CONSTRUCTION

L.R.T. South Corridor Land Use Study

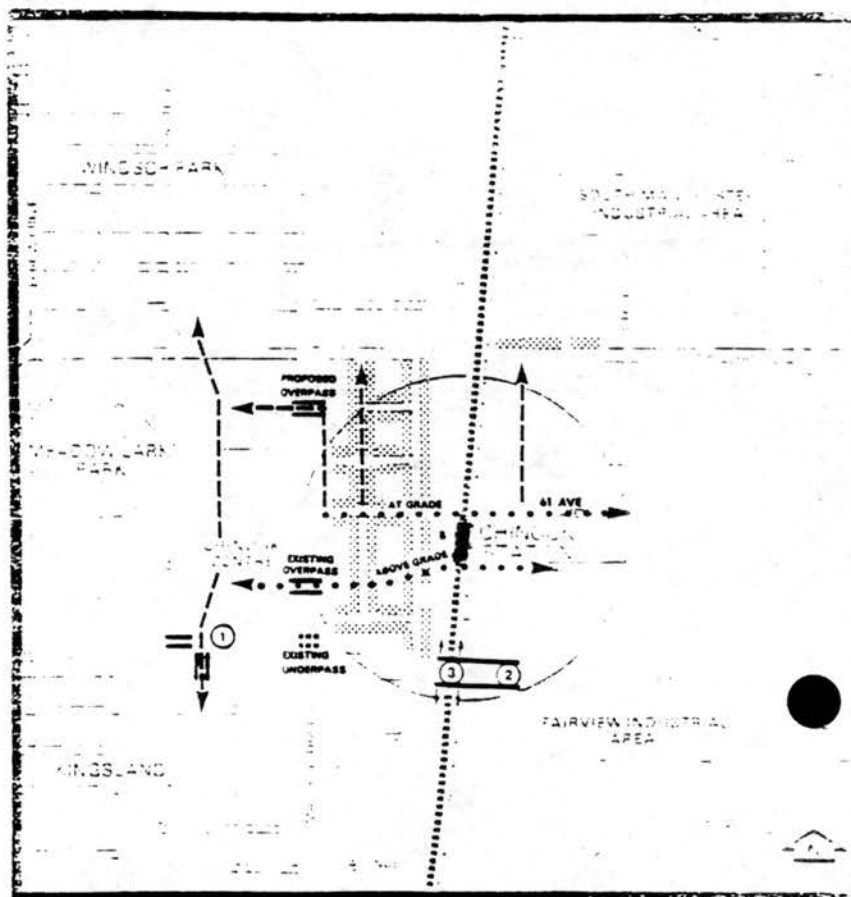
Pedestrian Circulation & Improvements

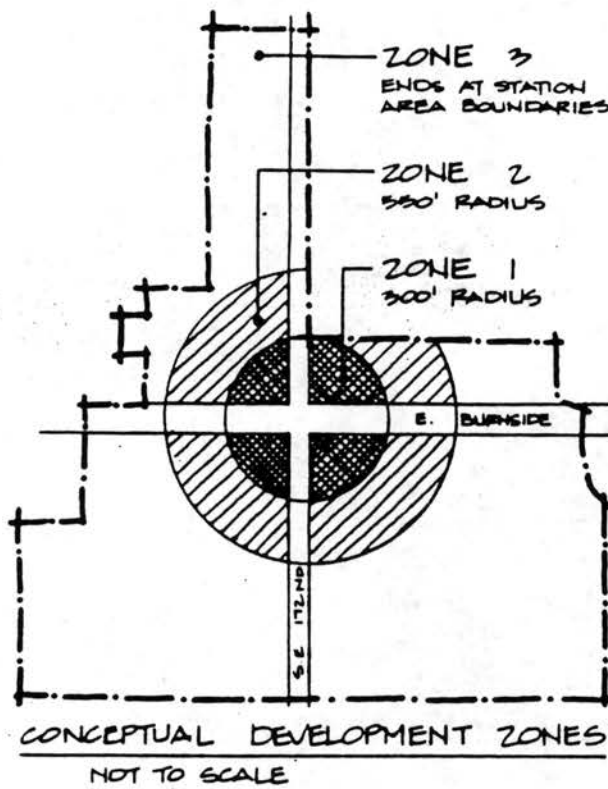


THE CITY OF CALGARY
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Map
20

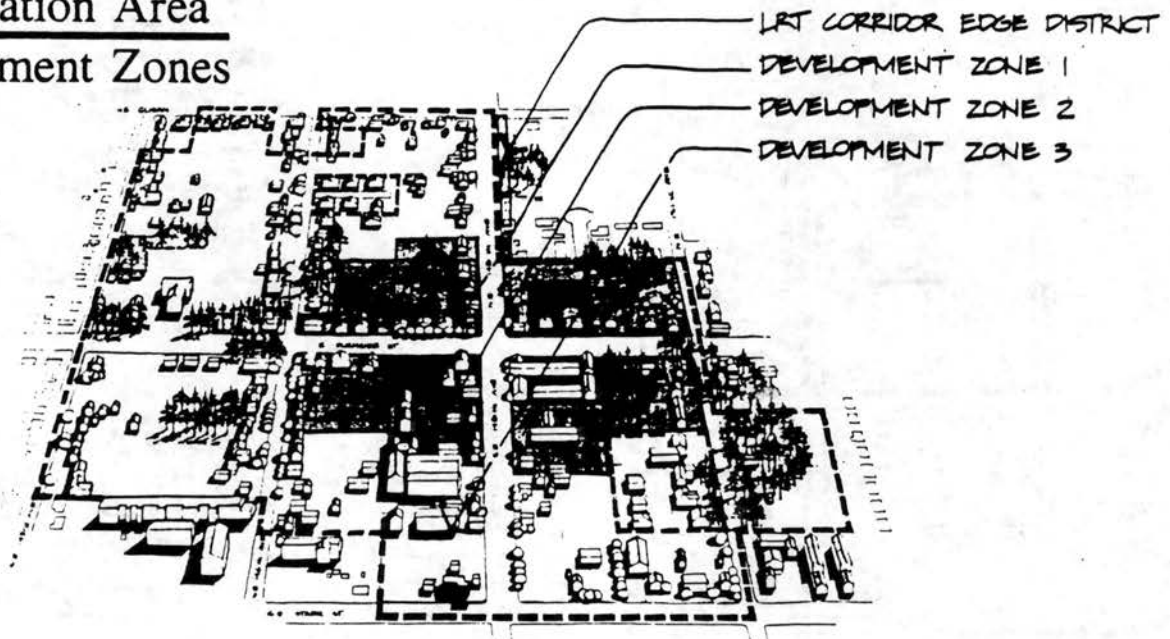
Chinook Station
October 1980





D - 61

148th Station Area Development Zones



D - 62

148th Station Area Redevelopable Land

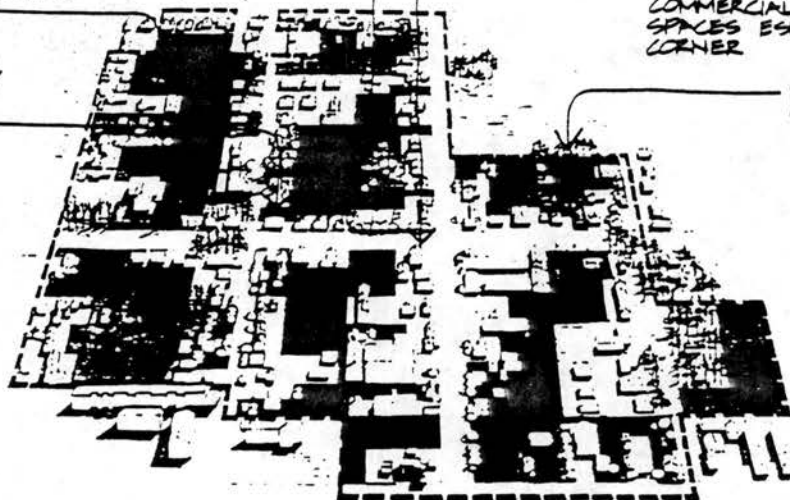
SUPERBLOCKS OFFER RESIDENTIAL DEVELOPMENT OPPORTUNITIES AND REQUIRE BOTH PEDESTRIAN & VEHICULAR ACCESS OPTIONS

DESIGN OPTIONS FOR HIGH DENSITY RESIDENTIAL ON SMALL LOTS

CO-EXISTENCE OF LOW DENSITY WITH NEWER HIGH DENSITY RESIDENTIAL DEVELOPMENT

DEVELOPMENT OPTIONS AT 148th & BURNSIDE WITH MIXED USE TRANSIT COMMERCIAL AND INCLUSION OF PUBLIC SPACES ESPECIALLY AT SOUTHWEST CORNER

PRESERVATION POTENTIAL OF WOODED AREAS; INTEGRATION OF NATURAL INTO NEW AREAS



D - 63

148th STATION AREA PRELIMINARY URBAN DESIGN PLAN

1 MEDIUM DENSITY RESIDENTIAL

- 601,200[±] TOTAL AREA
- 623,936[±] T.R.L.A.
- 170 UNITS POSSIBLE
- 2 STORY

2 HIGH DENSITY RESIDENTIAL

- 646,200[±] TOTAL AREA
- 555,190[±] T.R.L.A.
- YEAR 1990
- 100 UNITS
- 2 STORY
- 2.10 UNITS PERMANENTLY AVAILABLE

3 LOW DENSITY RESIDENTIAL

- 270,000[±] TOTAL AREA
- 156,306[±] T.R.L.A.
- YEAR 1995
- 45 UNITS

8 HIGH DENSITY RESIDENTIAL

- 614,400[±] TOTAL AREA
- 766,104[±] T.R.L.A.
- YEAR 1995
- 170 UNITS
- 2 STORY
- 2.10 UNITS PERMANENTLY AVAILABLE

9 MEDIUM DENSITY RESIDENTIAL

- 617,200[±] TOTAL AREA
- 46,704[±] T.R.L.A.
- 60 UNITS AVAILABLE
- 2 STORY

7 NEIGHBORHOOD RETAIL

- 61,200[±] TOTAL AREA
- 49,506[±] T.R.L.A.
- 19,700[±] AVAILABLE RETAIL SPACE
- 40% P.A.R.

10 NEIGHBORHOOD RETAIL

- 66,700[±] TOTAL AREA
- 34,000[±] T.R.L.A.
- 14,700[±] AVAILABLE RETAIL SPACE
- 40% P.A.R.

4 HIGH DENSITY RESIDENTIAL

- 340,700[±] TOTAL AREA
- 107,700[±] T.R.L.A.
- YEAR 2000
- 100 UNITS
- 2 STORY
- 2.10 UNITS PERMANENTLY AVAILABLE

5 HIGH DENSITY RESIDENTIAL

- 66,000[±] TOTAL AREA
- 33,000[±] T.R.L.A.
- 50 UNITS AVAILABLE
- 2 STORY

6 NEIGHBORHOOD RETAIL

- 70,500[±] TOTAL AREA
- 30,500[±] T.R.L.A.
- 31,500[±] AVAILABLE RETAIL SPACE
- 40% P.A.R.

LEGEND

- T.R.L.A. TOTAL REDEVELOPABLE LAND AREA
- * SQUARE FEET
- MAJOR PEDESTRIAN WAY
- ooo MAJOR PEDESTRIAN WAY
- REDEVELOPABLE LAND
- USE AREA
- OPTION AREA BOUNDARY
- LIGHT RAIL TRANSIT WITH STOP

DEMAND DATA

1980-85	1985-90	1990-95	1995-2000
10 UNITS	100	100	100

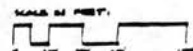
OFFICE AND RETAIL PROJECTION
THERE IS NO DEMAND PROJECTED FOR OFFICE AND RETAIL SPACE AT THIS STATION DURING THE NEXT 20 YEARS.

BUILD-OUT PATTERN

YEAR	AREA	NO. UNITS	TOTAL
1980-85	5	45	45
1985-90	2.5	100	145
1990-95	0.5	100	245
1995-2000	0.5	100	345

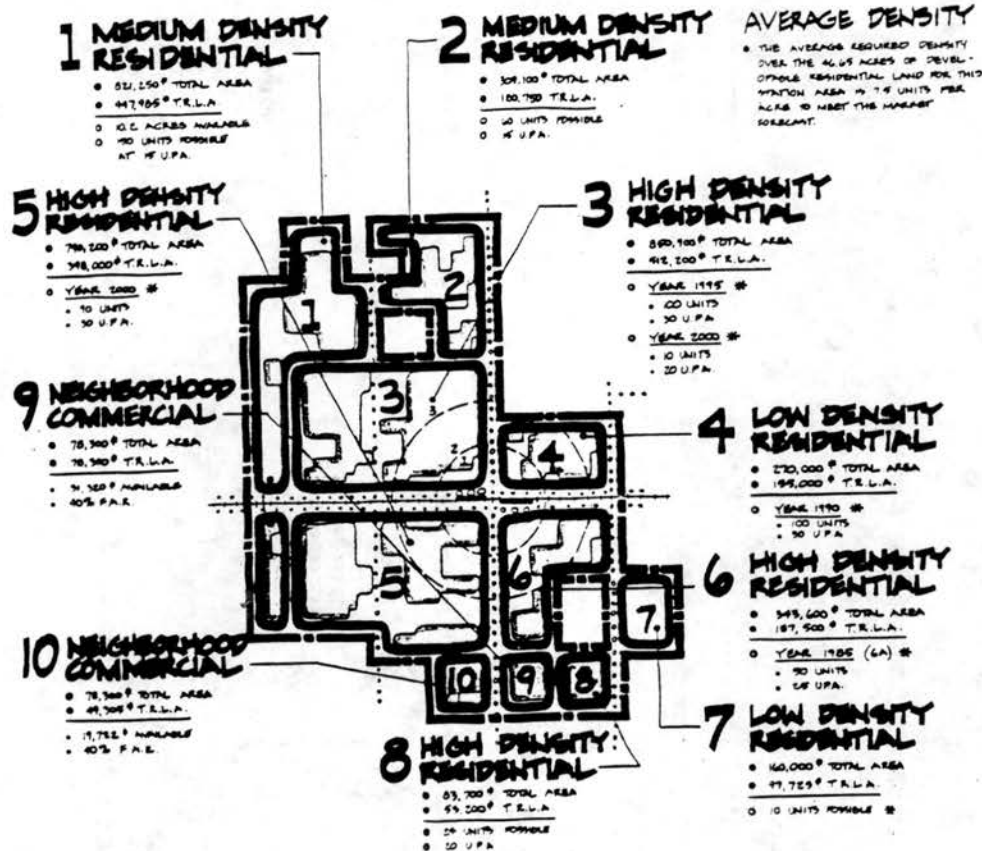
BANFIELD LIGHT RAIL TRANSIT STATION AREA PLANNING PROGRAM MULTNOMAH COUNTY, OREGON

PREP BLACK ARCHITECTS - SUITE 407 - COMMERCE BUILDING
280 5th AVENUE - PORTLAND OREGON 97201 (503) 441-1741
URBAN DESIGN LANDSCAPE ARCHITECTURE PLANNING



D - 64

148th Station Area Final Urban Design Plan



LEGEND

- T.R.L.A. TOTAL REDEVELOPABLE LAND AREA
- SQUARE FEET
 - MINOR PEDESTRIAN WAY
 - ooo MAJOR PEDESTRIAN WAY
 - REDEVELOPABLE LAND
 - USE AREA
 - * SIGNIFICANT VEGETATION PRESENT
 - U.P.A. UNITS PER ACRE
 - LIGHT RAIL TRANSIT PLATFORM
 - DEVELOPMENT ZONES
 - STATION AREA BOUNDARY

DEMAND DATA

RESIDENTIAL PROJECTION (N. UNITS)

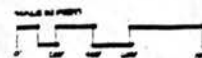
1990-95	1995-00	1990-95	1995-00
100	100	100	100

BUILD-OUT PATTERN

YEAR	AREA	NO. UNITS	TOTAL
1990-95	10	50	50
1995-00	10	100	150
1990-95	10	100	250
1995-00	10	10	260

* ALL PROJECTED DEVELOPMENT CAN BE ACCOMMODATED AT REQUIRED MINIMUM DENSITIES IN AREAS 3 + 6.

* 444 ADDITIONAL UNITS ARE POSSIBLE AT MAXIMUM DENSITY WITHIN T.R.L.A. AT THIS STATION.

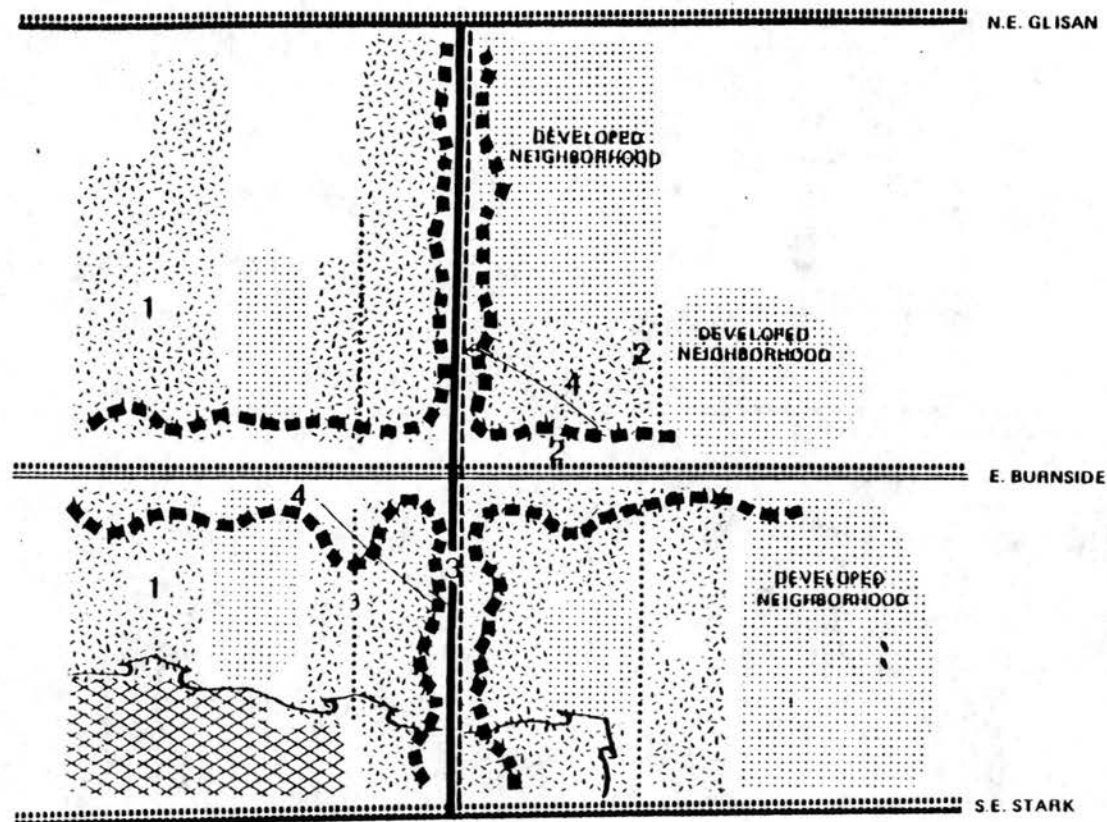


148th STATION AREA URBAN FRAME

148TH AVENUE

BANFIELD LIGHT RAIL TRANSIT STATION AREA PLANNING PROGRAM

MULTNOMAH COUNTY, OREGON



LEGEND

- LAND USE
- Low Density Residential
- CIRCULATION
- Surface Arterials
- Collector
- Major Pedestrian
- Minor Pedestrian
- Street Needs Repair
- Bus
- PHYSICAL ANALYSIS
- Soft Area - Undefined in Transition
- Transitional Area with Mixed Use
- Encroachment
- Undefined Edge

NOTES:

1. Isolated large lot development potential
2. Provide direct pedestrian access to Burnside and along Burnside.
3. Widened to three (3) lanes.
4. Direct auto traffic away from Burnside

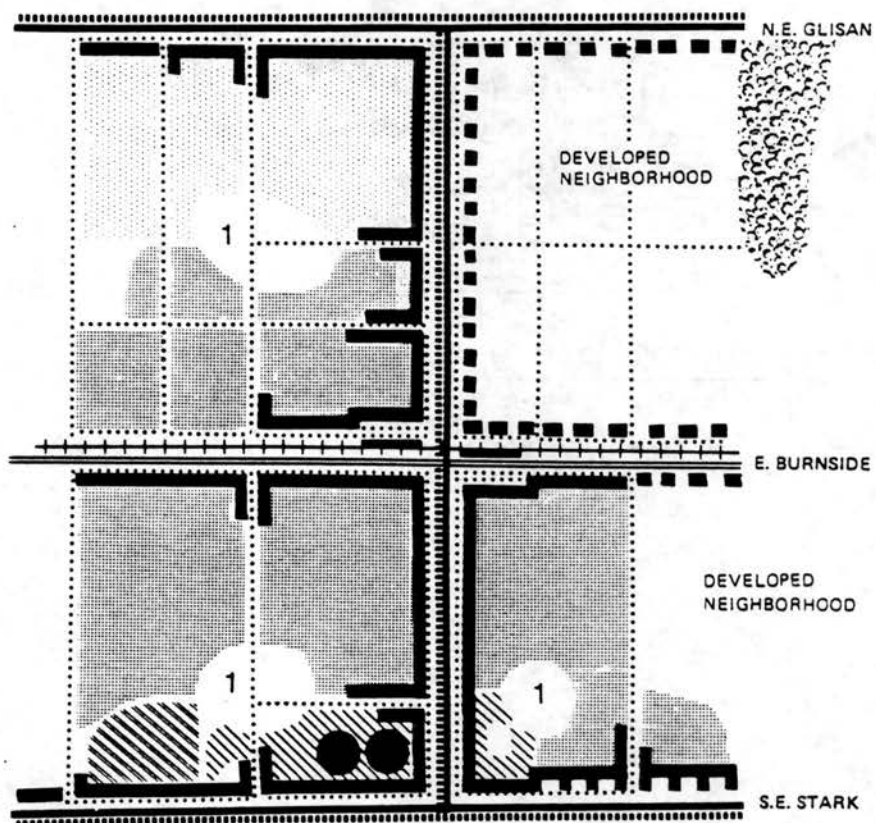
148th Station Area Urban Frame

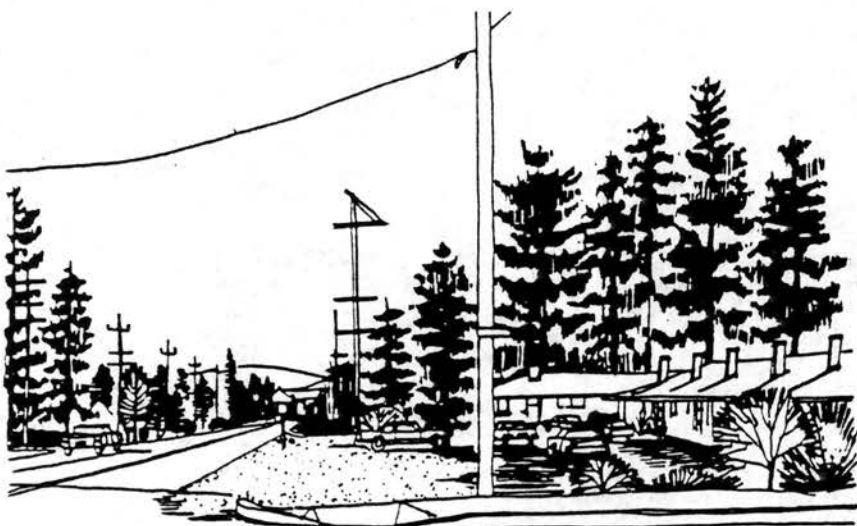
LEGEND

- LAND USE**
- Low-Density Residential
 - High-Density Residential
 - Minor Retail
 - Open Space
 - Office
- CIRCULATION**
- Major Pedestrian
 - Minor Pedestrian
 - Bus
 - Collector
 - Surface Arterial
 - Light Rail Transit with Station
- PHYSICAL ANALYSIS**
- Undefined Edge
 - Defined Edge
 - Buffer
 - Activity Node - Major/Minor

NOTES:

1. Mid-block joint-use parking.

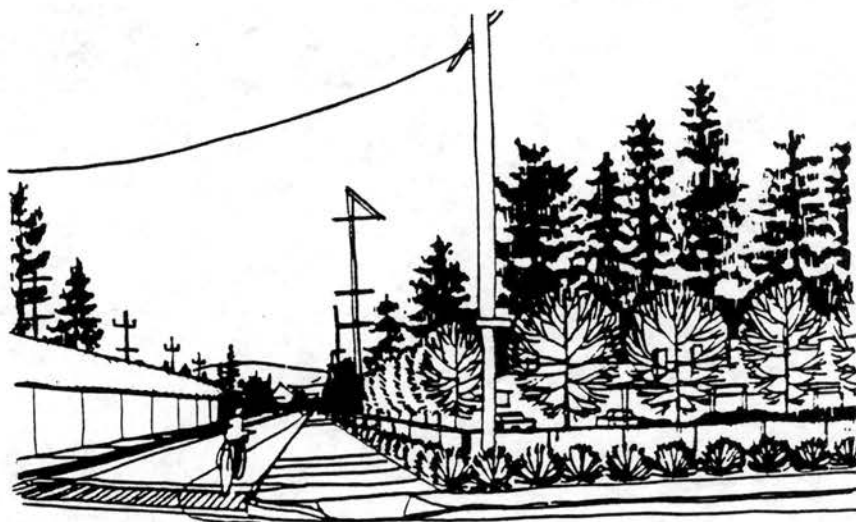




D - 68

SOUTHEAST CORNER OF 148th AVENUE - EXISTING

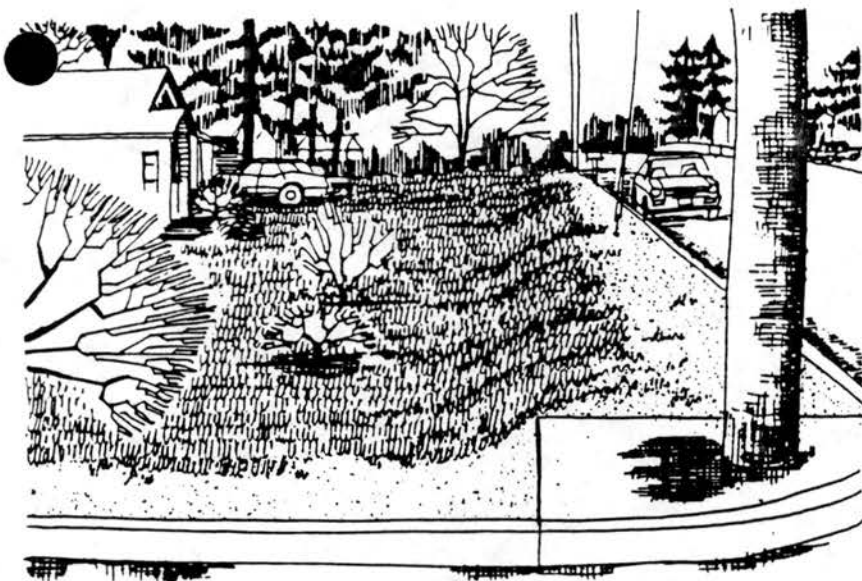
Undefined street edge along Burnside also lacks pedestrian amenities. Open vehicular access encourages traffic at cross-purposes. Curb-cut for the handicapped and for bicyclists 'cut' nowhere.



D - 69

SOUTHEAST CORNER OF 148th AVENUE - POTENTIAL

Privacy screen, shrubs, and small trees define edge while creating a corridor space between the LRT platform and the private multi-family residential site. (Merely one of several options.) LRT platform shown for its relationship to the corner.



D - 70

SOUTHWEST CORNER OF 148th LOOKING WEST - EXISTING

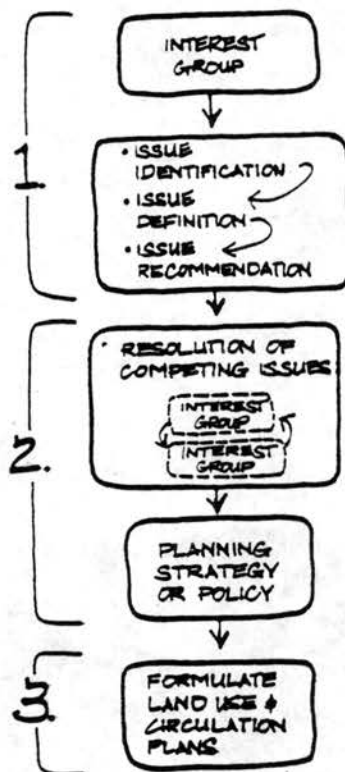
Narrow embankment at street is only separation between private residential property and street close to the projected LRT platform. Utility pole in center of future crosswalk(s) is in extremely awkward position; may become a safety issue.



D - 71

SOUTHWEST CORNER OF 148th LOOKING WEST - POTENTIAL

Embankment is extended to base of potential new privacy screen. Shrubs stepping-down in size provide transition between fence and new sidewalk. Utility pole has been moved into planting bed for ease of transition from crosswalk onto sidewalk and for pedestrian safety. Future light rail platform is shown to bear close relationship to the 'shut-off' way treatment in forming a pedestrian-oriented intersection.



Role of Issues in the Planning Process

PRESENT SITUATION

ISSUES (SOURCE)

PLANNING RECOMMENDATIONS

HOUSING STOCK & DENSITY

<u>Stadium & Coliseum Stations</u> - -Mostly older single-family units in fair to good condition, with low non-resident ownership. -A few walk-up apartments in good condition in Riverview Community. -Some deterioration of homes in areas which face uncertainty from future changes redevelopment associated with L.R.T. Lines; 112 Avenue widening; growth of Exhibition Grounds; use of Clarke/Commonwealth Stadium area; and future of industrial areas near C.N.R. tracks. -Stadium Station (1971) - 61.01 single-family and 39.02 apartments. -Coliseum Station (1971) - 64.52 single-family and 35.52 apartments. -Some homes are being purchased by Edmonton Exhibition Association outside their growth boundaries (i.e. N.E. corner of 112 Avenue and 82 Street) and due to poor property maintenance, these homes are having a degrading affect on the surrounding area. <u>Belvedere Station</u> - -Mostly single-family homes in good condition, with some two-family dwellings. -1971 - 79% single-family housing and 20.21 apartments. -Little non-resident ownership. -No community housing station areas.	1. Preserve single-family dwellings in good condition. (Issues Summary). 2. Redevelop older dilapidated single-family homes (Issues Summary). 3. Deal with impacts of removing disadvantaged groups (i.e. low income, senior citizens, natives, etc.) from existing residential units, mostly rented (e.g. Boyle/McCauley) (Issues Summary and Alberta Housing). 4. Provide some family housing to better utilize some Inner-City schools such as Cromdale (Issues Summary). 5. Ensure design of new housing is compatible with surrounding single-family residences in terms of parking standards, height, etc. (Issues Summary). 6. Ensure that future housing, in terms of density and the extent of the area redeveloped does not place unwarranted pressures on existing community facilities such as open spaces, schools, etc. (Issues Summary). 7. Stop removal of existing single-family housing stock by Edmonton Exhibition Association within approved growth boundaries for new facilities, such as horse barns, and parking, stop purchase of homes outside approved boundaries (Public Meetings). 8. Prevent deterioration in areas which are up-zoned, and not redeveloped immediately (Working Paper #3). 9. Confine redevelopment in station areas to specific areas (Public Meetings). 10. Phase future redevelopment in the Northeast Corridor with the future capacity of the L.R.T. line (P. Flynn - Cromdale). 11. The pressure for extension of Downtown development into the Boyle/McCauley area.	1. Have identified stable single-family areas which will remain or be re-zoned to RC-1/R-1 to ensure no major redevelopment within these areas. 2. Have identified deteriorated residential areas and will suggest residential redevelopment of these areas. 3. Have identified potential sites for housing for disadvantaged groups in station areas, and will examine possibility of implementing community housing schemes with either Alberta Housing, City Real Estate and Housing Department, or private developers. As well, residents of rental accommodation in the Northeast Corridor who are displaced by redevelopment will receive priority on the Housing Registry of the Real Estate and Housing Department. 4. Station plans permit some redevelopment to low to medium density family housing. The purpose being to increase the population in these areas where schools have low enrollments. 5. Development guidelines will control future residential development by restricting heights of building forms (i.e. apartments will be no more than 9 storeys), and ensuring adequate parking. 6. Redevelopment of station areas will be phased and of a density that can be accommodated by existing or planned community facilities. 7. The expansion of the Edmonton Exhibition Association will be limited to the growth boundaries approved by City Council in 1972, and it will be recommended that they not be allowed to purchase homes outside this boundary. 8. Existing property standards will be strictly enforced. Zoning will change only upon application and therefore, a time limit on redevelopment will be in effect. 9. Redevelopment will be permitted in selective zones in the station areas. 10. Redevelopment in the Northeast Corridor will be phased. The future capacity of the L.R.T. line will not serve as a constraint to the level of future redevelopment. Land ownership and land costs will be much more important factors. 11. These pressures will be examined by the Planning Department in 1978-80, in their preparation of the Boyle Street/McCauley Land Use Plan.
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PRESENT SITUATION

ISSUES (SOURCE)

PLANNING RECOMMENDATIONS

COMMERCIAL ENTERPRISES

-Most businesses are located on commercial strips along 118 Avenue and Fort Trail Road. -Businesses offer a wide range of products and services. -Serve local market, as well as through traffic on main roadways. -Many businesses are marginal and very sensitive to competition, and thus, there is a high turnover rate. -High ownership level of business in Coliseum area and high rental level businesses in Belvedere area. -Lack of parking (customer and employee), and good access are common problems of businesses. -Most employees of businesses live outside the Northeast Corridor (i.e. less than 25% live in Corridor).	1. Limit competition from new commercial establishments by controlling types and size of new business as permitted in station areas (Issues Summary and East Edmonton Business Association). 2. Prohibit patrons of L.R.T. from utilizing on-street parking spaces which serve businesses (Public Meetings). 3. Do not remove existing viable businesses in station areas by redevelopment (Issues Summary). 4. Ensure that traffic and parking generated by new commercial/office redevelopment does not affect adjacent residential areas (Issues Summary). 5. Improve roadway access to businesses for customers/employees and suppliers (Issues Summary). 6. Improve parking facilities for businesses, both in terms of the number of spaces, and access (Business Survey). 7. Prevent deterioration in areas which are up-zoned and not redeveloped immediately (Working Paper #3). 8. Ensure that future commercial uses permitted in the station areas are compatible with the adjacent communities (Technical Advisory Committee). 9. No need for office redevelopment in the Stadium or Coliseum Station areas (Public Meetings). 10. Increase the amount of commercial zoned property in the station areas (Meeting - Business Community).	1. Control types and size of new businesses permitted in station areas by development guidelines. 2. Following a before and after survey and an identification of a parking problem, establish parking bans 7-9 a.m., Monday through Friday, within a five minute walking distance of the stations. 3. Limit commercial redevelopment to areas where marginal businesses are located. 4. Confine new commercial establishments to main roadways so through traffic can be accommodated. Ensure adequate parking facilities for these establishments. 5. A long-term roadway plan - Corridor Plan B, recommends creating a more efficient and continuous roadway network in the Northeast Corridor. 6. Encourage consolidated parking facilities with redevelopment of commercial strips on 118 Avenue and Fort Trail Road, in Coliseum and Belvedere Station Land Use Plans, respectively. 7. Strictly enforce property standards. 8. Type and design of uses in commercially redeveloped areas will be controlled so that they are compatible with adjacent neighbourhoods. 9. Land use plans will permit a small amount of office redevelopment next to Stadium Station (112 Avenue and Stadium Road, and more office development along 118 Avenue in the Coliseum Station. Office space in Stadium Station will be oriented to services local to surrounding communities (e.g. dentists, doctors). In the Coliseum Station offices will follow the existing trend of providing services of a City-wide nature. Office space will also increase reverse flow on L.R.T. line. 10. The amount of commercial designated space in each of the L.R.T. station areas has been increased.
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PRESENT SITUATION

ISSUES (SOURCE)

PLANNING RECOMMENDATIONS

INDUSTRIAL ENTERPRISES

-There are many older unattractive original industries near the railway tracks in M-3 areas, which generate considerable traffic, and associated noise, dust and safety problems.

-The long established meat packing industry creates odour problems for the adjacent residential area.

-Industries have a high degree of dependence on roadway network for provision access for employees/clients and suppliers.

-Poor roadway access is a significant problem to industries.

-Only 20% of major industries employ more than 50% of employees from Northeast Corridor - however, one of these industries have a significant number of their total employees residing in the Corridor (e.g. Swifts (1000), Capital Packers (50), Style Master Slacks (50), Canadian Linen Supply (100).

1. Reduce traffic congestion produced by trucks from industries (Issues Summary).

2. Eliminate visual and odour problems caused by many industries in Northeast Corridor (Issues Summary).

3. Examine the suitability of the industrial land use proposal for the Kennedale area (i.e. Kennedale District Outline Plan), and develop a residential land use option (Public Meetings and Working Paper #3).

4. Relocate some of the most noxious industries (i.e. Alaskan Rendering and Edmonton Rendering) to an industrial estate (Issues Summary).

5. Replace older unattractive industries along the C.N.R. railway tracks with light industrial/commercial and/or residential land uses (Business and Industrial Survey).

6. Prevent deterioration in areas which are up-zoned and not redeveloped immediately (Working Paper #3).

7. Concern about employment opportunities displaced from Northeast Corridor by relocation of any meat-packing industries (Public Meetings).

1. A long-term roadway plan - Corridor Plan B, recommends creating a more efficient and continuous roadway network in the Northeast Corridor.

2. Environmentally upgrade many industries and confine related industries (e.g. meat-packing, trucking) in an industrial park setting in the Northeast Corridor.

3. A feasible long-term residential option, with a different roadway network than currently approved, is being developed for the Kennedale Area.

4.6
5. Up-zone areas along railway tracks (e.g. south of 118 Avenue), to encourage future relocation of existing industries, and to attract some new light industrial/commercial establishments. Develop strict environmental standards for meat-packing related industries.

6. Strictly enforce property standards.

7. To date, only Edmonton Rendering is proposed for relocation. This company employs 25 people. In the long term, this Study recommends environmental upgrading of industry versus relocation.

-There are some older, larger industrial sites (e.g. Muttart's, Canadian Bedding) along railway.

-In the Corridor, there are also large parcels of City-owned land (e.g. Exhibition, light rail transit stations, service yards, etc.).

-Most property ownership is fragmented, and consolidation of land for redevelopment may be difficult.

-Some residential and industrial area land values are low due to negative impacts from noise of heavy traffic on roadways, noxious industries; and traffic and parking problems of Exhibition Grounds.

-These impacts result in maintenance in these areas being poor, and thus turnover rates of property are low.

-Generally low non-resident ownership of residential land in the Northeast Corridor.

1. What will be the extent of change to land values in the station areas, caused by the introduction of L.R.T. and associated redevelopment (Public Meetings).

2. There is uncertainty about future use of land in the station areas, and pressure from developers on homeowners to sell land (Public Meetings).

3. There may be difficulty in redeveloping older single family areas, where lots are small, under individual ownership, and land values are relatively high (Technical Advisory Committee).

4. Wish City to break even on resale of land near L.R.T. stations (Real Estate and Housing Department).

5. Wish City to acquire land in station areas and lease to non-profit and co-op groups for community housing (Edmonton Social Services).

6. End zoning freeze in Northeast Corridor as soon as possible (City Assessors Department).

7. Reasons behind City's purchase of land in the Northeast Corridor (G. Bonneau - Parkdale).

8. City should re-zone station areas to permit a variety of land uses (e.g. recreational, commercial) in these areas and encourage investment in the Northeast Corridor. In re-zoning, bonuses should be given for provision of landscaping and off-street parking (Edmonton Housing Association).

9. Extend the Northeast L.R.T. line to Clareview (Public Meetings).

10. Build a commuter parking lot in Clareview from, which there is shuttle bus service to the Belvedere Station to serve residents of outlying areas in Northeast Corridor, and residents of Fort Saskatchewan, etc. (East Edmonton Business Association).

1. Land values will rise in the areas which are up-zoned, and in some areas which are down-zoned, land values may experience some decrease.

2. The preparation of station land use plans should generally stabilize land values in these areas by reducing the uncertainty with respect to future changes.

3. Development guidelines to direct redevelopment will be available to developers. However, this redevelopment may in fact not occur due to high land values, property ownership, etc.

4. The future use of City-owned land in the station areas, has undergone the same level of analysis as privately-owned sites, and the development guidelines prepared for these areas have taken into account the planning strategies similar to privately owned land.

5. Sites, both City-owned and private, will be selected in the station areas for provision of future community housing.

6. The zoning freeze in Northeast Corridor will be terminated when development guidelines for station areas are approved.

7. Real Estate and Housing Department has purchased land for various Civic Departments to facilitate the widening of roads (e.g. 112 Avenue), construction of L.R.T. stations, and location of new Civic facilities (e.g. Kennedale Civic Service Yard).

8. Selective re-zoning will occur in the station areas to permit a variety of land uses. Areas will be up-zoned and this should encourage investment. Bonuses may be given, as long as the density increases are compatible with overall station plans.

9. The extension of the L.R.T. line to Clareview is included as part of the future L.R.T. extension plan, passed by City Council on October 17, 1977. Funding for future extensions of the L.R.T. will not be considered until the Northeast line operation has been monitored for 1 year.

10. Bus service is being improved in the Clareview area, in terms of the number of routes and frequency. In order to transport residents of Clareview and outlying areas in the Northeast Corridor to the Belvedere Station. The L.R.T. line is not intended to serve these areas.

PRESENT SITUATION

ISSUES (SOURCE)

PLANNING RECOMMENDATIONS

SCHOOLS

-There are a few schools in the southern portion of the Northeast Corridor which have relatively low utilization rates (e.g. Cromdale School, Victoria School).

-Many of the schools in the northern section of the Northeast Corridor are, in contrast, operating at close to capacity (i.e. using all existing classrooms with no use of additional rooms).

-School enrollments, are declining and will continue to drop in the future due to lower birth rates.

-Many school catchment areas overlap the railway tracks, and thus create a potential safety problem with future L.R.T. operation.

1. Provide some family oriented housing to better utilize existing schools (Issues Summary).

2. Ensure that future redevelopment suggested by the station land use plans can be accommodated by the existing schools (Public Meetings).

3. Ensure that the L.R.T. line is fenced, and safe crossings for school children are provided across the line (Public Meetings).

1. The Stadium Station land use plan recommends low to medium density residential redevelopment with family units to better utilize existing schools.

2. The level and timing of redevelopment in the station areas will be in accordance with existing school capacities.

3. The L.R.T. line will be fenced, and it will be recommended that school guards assist children in crossing the L.R.T. line at at-grade crossings.

-Most roadway links in the Northeast Corridor are operating at an uncongested level of service (A.M. peak hour).

-There is traffic congestion at key intersections (e.g. 66 Street and Fort Trail Road), and along significant portions of main roadways (e.g. along 112 Avenue and 82 Street).

-Due to the significant number of at-grade crossings of the CNR railway line, there are few continuous roadway links in the Northeast Corridor.

-Several main roadways dissect communities, causing safety and air pollution problems for adjacent single-family residences (e.g. Fort Trail Road through Parkdale, and 66 Street through Montrose).

-There are only 2 grade-separated railway crossings of the C.N.R. rail line (i.e. 118 Avenue and 125 Avenue) and the other eight at-grade crossings create significant delays for traffic and some safety problems (i.e. 5 accidents along C.N.R. line 1971-76).

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Increased traffic congestion along main roadways, (e.g. 112 Avenue and 118 Avenue) and at major intersections (e.g. 82 Street and 112 Avenue) from L.R.T. patrons, and associated redevelopment in the station areas (Issues Summary). 2. Improve access on the roadways in the Northeast Corridor to Downtown, especially from the suburban areas east of the railway tracks (e.g. Belmont and Homestead) (Issues Summary). 3. Potential increase of traffic through residential streets, as people try to take short cut trips and avoid traffic congestion on the main roadways (Public Meetings). 4. Provide more overpasses/underpasses across Northeast CNR line. 5. Maintain existing status of Fort Trail Road (i.e. 4 lane undivided), since it is a main access route to Downtown Interdepartmental Transportation Committee). 6. The construction of Manning Freeway is not necessary (Public Meetings). 7. Traffic problems during Commonwealth Games (Meetings with communities). | <ol style="list-style-type: none"> 1. Computerized traffic controls will be established at key intersections (e.g. 82 Street and 112 Avenue) to improve the traffic flow at the adjacent railway crossing. As well, the level and timing of redevelopment in the station areas will be coordinated with the existing and future transportation facilities. 2. A long term roadway plan which will establish a more efficient and continuous roadway network is recommended for the Northeast Corridor. 3. Traffic movements near the station areas will be monitored, and if the need arises, traffic measures (e.g. one-way streets, closing of local streets, etc.) will have to be implemented to cut down trips through residential areas. 4. The construction of future roadway grade separations of the L.R.T. line have been given high priority in relation to the rest of the City. This will improve opportunities for obtaining funding of these expensive structures. 5. The Study will recommend that the future level of service provided on Fort Trail Road, and its necessity for traffic movement be examined in the 1978 Northeast Edmonton Transportation Review. 6. An analysis of the need for this roadway will be examined in the 1978 Northeast Edmonton Transportation Review. 7. A City committee has been established to deal with anticipated traffic problems during the Games. |
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MAJOR PEDESTRIAN MOVEMENT PATTERNS

-Railway tracks are not fenced and all pedestrian crossings are at roadway crossings of the railway.

-There are few signed mid-street pedestrian crossings, especially across major arterial roadways (i.e. 112 Avenue, 118 Avenue, 82 Street).

-There are no pedestrian walkways between open spaces or major activity centres.

-School catchment areas now encompass areas on either side of main arterial roadways and the railway tracks (e.g. Cromdale School, Parkdale School).

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Concern about the pedestrian safety hazard presented by crossing of L.R.T. line especially in peak hour when trains passing every 5 minutes (Public Meetings). 2. Need for safe pedestrian crossings (e.g. overhead walkways or signalized crossings) between Stadium L.R.T. Station and Commonwealth/Clarke Station area (Public Meetings). 3. Concern about lack of open space walkways in Northeast Corridor (Working Paper #3). 4. Concern about school children having to cross main roadways and railway tracks (Working Paper #3). 5. Need for special access and facilities at station sites for disabled (e.g. ramps, extra wide parking stalls, elevators), and consideration of handicapped in design of walkways. (Public Meetings). | <ol style="list-style-type: none"> 1. L.R.T. line will be fenced and pedestrians will be able to cross line by arterial roadway crossings, which will be controlled by signals and gates. 2. Pedestrians will have to cross between the Stadium L.R.T. station and the Commonwealth/Clarke Station at the lights on 112 Avenue at Stadium Road. 3. Where possible, open space walkways will be provided as part of new major developments in the station areas. 4. School catchment areas will be reassessed in light of future redevelopment in the station areas; safety hazards presented by the L.R.T. trains on the tracks; and increased traffic on the main roadways. 5. Station site walkways will be designed to accommodate the needs of handicapped. |
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PRESENT SITUATION

-Residential parking in the communities is limited by both number of residential spaces available and use of street parking by business customers/employees.

-Residents are now required to park on streets some distance from their homes.

-Major activity areas in the Northeast Corridor (i.e. Exhibition Grounds, Commonwealth/Clarke Stadium area), generate large amounts of traffic and cause interference with residential parking in surrounding communities.

-With the introduction of the L.R.T. line, there will be some commuter parking provided at the Belvedere light rail transit station (i.e. 150 spaces).

-No commuter parking will be provided at the Stadium or Coliseum stations.

ISSUES (SOURCE)

1. Concern about non-residential street parking around stations by L.R.T. patrons (Issues Summary, Public Meetings, Community Groups).

2. Concern about adequate parking facilities being provided with new redevelopment in the station areas (Public Meetings).

3. Concern about non-residential street parking generated by people using facilities in the Exhibition Grounds, or attending activities in the Commonwealth/Clarke Stadium area (Public Meetings).

4. The need for commuter park-n-ride facility in the northern part of the Northeast Corridor (e.g. Clareview), to serve L.R.T. patrons who travel from this section of the Corridor and residents of Fort Saskatchewan, etc. (East Edmonton Business Association).

5. Wish to have parking bans implemented, when L.R.T. begins operation (Public Meetings).

6. Wish to have large scale park-n-ride facility near Belvedere Station (i.e. on vacant land nearby) (P. Flynn's letter - Cromdale).

7. Relate cost of parking at L.R.T. stations to cost of parking Downtown (Meetings with communities).

PLANNING RECOMMENDATIONS

STREET PARKING

1. Upon identification of a commuter parking problem, a parking ban between 7:00 and 9:00 a.m., Monday to Friday, will be implemented in that area being affected.

2. Redevelopment projects in the station areas will be required to provide adequate parking facilities.

3. A parking ban within a ten minute walking distance of major events at the Clarke/Commonwealth Stadium area will be recommended.

4. At this time no park-n-ride service will be provided to residents in the Clareview area of the Northeast Corridor. Residents of these areas wishing to use the L.R.T. system can take a bus to the Belvedere L.R.T. station or park at the spaces provided at the same station.

5. See #1.

6. It is anticipated that most patrons of L.R.T. using the Belvedere Station will arrive by bus. However, automobile parking for 150 spaces will be provided adjacent to the station. Obtaining land for a larger park-n-ride area would be an expensive and an inefficient use of land.

7. The price for parking at the Belvedere Station will be related to cost of building and operating a parking facility, as well as the cost of parking Downtown.

UTILITIES

-Existing water, storm and sanitary sewers, and gas utilities are all meeting present demands.

-Some upgrading of existing water mains and abandonment of some lines, will be necessary in the station areas, if 100% of the planned redevelopment occurs.

-There is enough capacity in the sanitary sewers to accommodate future planned redevelopment in station areas, but storm water discharge control measures (e.g. zero run-off) will be required to accommodate future redevelopment.

1. The ability of existing utilities to be able to accommodate future redevelopment in station areas (Working Paper No. 3).

2. Redevelop the City waterworks building area (Public Meetings).

1. The station land use plans will encourage redevelopment to occur with a minimum of re-subdivision of land, and to be phased to avoid significant utility improvements. Development guidelines will ensure that the design of future redevelopment projects will generate zero storm water run-off.

2. Plans for moving this City facility to the Kennedale area have not yet been finalized.

PRESENT SITUATION

ISSUES (SOURCE)

PLANNING RECOMMENDATIONS

COMMUNITY CHARACTER & STABILITY

-Mostly older single-family housing districts with moderate income levels.

-A few apartments in some areas (e.g. walk-ups south of 112 Avenue and west of 82 Street).

-Communities have a physical maturity (i.e. homes and landscaping).

-Majority of dwelling units are owner-occupied.

- | | |
|--|--|
| <p>1. Wish to preserve single family and older character of communities (Issues Summary).</p> | <p>1. In the station area plan areas, homes in good condition will be preserved, by not permitting redevelopment to higher densities in these areas.</p> |
| <p>2. Need to address special housing needs of disadvantaged groups (i.e. senior citizens, low income) (Issues Summary).</p> | <p>2. Sites will be designated in the station areas to provide housing for disadvantaged groups. As well, units for these groups may be able to be designated in private developments.</p> |
| <p>3. Concern about adequacy of existing and planned recreation facilities, social services and schools to meet needs of increasing population levels in station areas (Public Meetings).</p> | <p>3. Future redevelopment in the station areas will be phased and coordinated with the existing and planned social, recreational and community facilities.</p> |
| <p>4. Wish to add more family-oriented housing in the communities to provide population to stabilize some schools (Issues Summary).</p> | <p>4. Family-oriented housing will be introduced into the communities near the stations in order to stabilize some schools.</p> |
| <p>5. Include in the station area plans some areas for community facilities (i.e. daycare, medical clinics) (Issues Summary).</p> | <p>5. Some areas will be designated in the stations for commercial and institutional uses which will permit community services to be established. Facilities such as day care centres will be required as part of large redevelopment projects.</p> |
| <p>6. Incorporate into station land use plans, defensible space guidelines (Police Department).</p> | <p>6. Guidelines for future redevelopment in the station areas, will attempt to ensure that the designs of new structures take into account defensible space guidelines (e.g. that open space, walkways, roadways are within view of adjacent residences).</p> |
| <p>7. Wish to have community plans prepared for neighbourhoods near stations, such as Parkdale, Cromdale, Montrose - Newton (Public Meetings).</p> | <p>7. As part of the City's community plan preparation process, these and other communities in the Northeast Corridor will be evaluated in 1978, in terms of their priority for community plans.</p> |
| <p>8. Concern that the station area land use plans will encourage transient types of people to live in these areas, who may cause many social problems for adjacent communities (e.g. increase in vandalism) have less of a commitment to community interests.</p> | <p>8. Many areas in the stations will be re-zoned to permit family-oriented housing, some of which may be owner occupied. These residents will likely display a strong interest in adjacent communities.</p> |
| <p>9. There is an uncertain feeling in the communities in the Northeast Corridor about the future changes from: L.R.T. and associated redevelopment/ future growth in Exhibition Grounds and Clarke Stadium/ Commonwealth Stadium areas; and future roadway widenings and railway crossings (Public Meetings).</p> | <p>9. The uncertain feeling in the communities in the Northern Corridor will likely be greatly reduced by: confining future redevelopment to specific districts; eliminating further extension of Exhibition Grounds; and providing status to future roadway improvements.</p> |
| <p>10. Will the built form in the communities near the station areas radically change (Public Meetings).</p> | <p>10. The Stations Area Land Use Plans will permit two storey (e.g. townhouse) structures, adjacent to communities, small areas of five and nine storey apartment buildings next to the Light Rail Transit Station. This built form will be compatible with communities adjacent to the stations.</p> |

PRESENT SITUATION

ISSUES (SOURCE)

PLANNING RECOMMENDATIONS

PARKS & RECREATIONAL FACILITIES

-There is a high concentration in the Northeast Corridor of large City-wide recreational facilities and open space (e.g. Borden Park, Exhibition Grounds, Clarke/Commonwealth Stadiums). These facilities have a significant negative impact on adjacent communities, in terms of traffic, noise, dust, and visual impact.

-There are no pedestrian linkages (e.g. walkways) between open spaces.

-There is a deficiency in recreation facilities and open space in most communities especially in the Inner-City areas (e.g. Boyle/McCauley). However, a recent survey has shown this deficiency to be less than in other Inner-City communities (i.e. Garneau, Oliver, Strathcona).

-Development/redevelopment which occurs according to existing zoning designations, does not permit much useable open space.

-There is no landscaping along the railway.

1. Provide new community open space and recreational facilities, especially with future station area redevelopment (Issues Summary).

2. Landscape the L.R.T. line and station areas (Issues Summary).

3. Encourage more community utilization of relinquished space in Clarke Stadium area (Issues Summary).

4. Provide more pedestrian linkages between open spaces in the Corridor, especially within a five minute walking distance of the stations (Working Paper #3).

5. Implement control measures (i.e. pedestrian movement, traffic flows) near large recreation facilities (Working Paper #3).

6. Encourage better community utilization of school buildings and open space (Parks and Recreation Department).

1. Will add open space to station areas through dedication of open space from redeveloped parcels and possible use of City-owned land.

2. Will provide, where possible, landscaped buffering on new developments along L.R.T. lines and on City-owned land. Station areas will be landscaped.

3. Recommend immediate development of vacated space in Clarke Stadium area for community facilities (e.g. community halls, etc.).

4. Designate in station land use plan areas which areas have priority for provision of future open space walkways (e.g. link between Muttatta site and Kinnard Ravine).

5. Parking bans within a ten minute walking distance of the Exhibition Grounds, will be implemented during major events. Recommendations will be made in regard to which roadways should serve as entrances and exits to these areas.

6. Study will recommend that School Boards, and Parks and Recreation Department better coordinate the use of existing school buildings and open space for community needs.

PRESENT SITUATION

ISSUES (SOURCE)

PLANNING RECOMMENDATIONS

AIR QUALITY

-The Northeast Corridor has been identified by Provincial studies to have serious odour problems, relative to other areas of the City.

-The general source of noxious odours is from the meatpacking industries (e.g. Burns, Swifts and rendering plants, etc.). The odour problems extend for at least a one mile radius around these industries into residential areas (e.g. Montrose).

-Many of the industries causing odour problems have very low standards for odour control (i.e. batch rendering processing and trucks moving with uncovered carcasses).

-Vehicle exhaust emissions will increase along major arterial roads (e.g. Fort Trail Road) in the station areas. This will result from the significant increases in bus movements, and some increase in automobile traffic, as a result of the operation of the L.R.T. line. The largest increase in vehicular emissions from buses will be at the Belvedere Station, where there will be a park-n-ride facility for automobiles, and a large number of buses commuting from outlying communities (e.g. Clareview).

1. Eliminate odours from meatpacking and other industries (Public Meetings and Issues Summary).

2. Concern about air pollution from a great number of buses arriving/departing at L.R.T. stations (Public Meetings).

1. That the meatpacking industries be required to environmentally upgrade (i.e. introduce strict air pollution control measures and equipment). One of the most objectionable industries (e.g. Edmonton Rendering) is being expropriated by the City. Development guidelines for new redevelopment in the station areas, will ensure that the design of future buildings do not create dead air basins that trap air pollution.

2. The L.R.T. stations will be landscaped to provide some increased oxygen supply to dilute pollution from vehicles. Schedules of buses and L.R.T. trains will be coordinated to minimize delays of buses at L.R.T. station, and hence air pollution.

Low to Moderate Income HousingSocial Housing

-Social housing may be described as home-ownership programs and rental accommodation for persons in a moderate income bracket. These programs are provided through the Provincial and Federal Governments. To date, most developments have been located in the new outline plan areas of the City.

Community Housing

-Community housing is developed and owned by all levels of government. Administration is the responsibility of the Edmonton Housing Authority. The main objective of this program is to provide families with low to moderate incomes with decent accommodation at a fair rent. Rents are geared to family incomes and numbers of dependent children. If the applicant is receiving Social Assistance, the rent is fixed.

PRESENT SITUATION

ISSUES (SOURCE)

PLANNING RECOMMENDATIONS

SOCIAL/COMMUNITY HOUSING

1. The development of what appears to be a concentration of social/community housing, along with the increased population densities of the new outline plan areas, have created serious problems in the provision of schools, roads, transportation, open space and social services.

2. Accommodation for one-parent families are provided for and dependent upon the availability of community housing facilities.

3. As the number of one-parent families increase, the demand for community housing units will also increase.

1. That the Real Estate and Housing Department investigate the possibility of providing non-profit and community housing on City-owned land in the L.R.T. station areas, giving consideration to the following:
-proposed development conforms to planning strategies identified in the Northeast L.R.T. Corridor Study
-constructing social/community housing developments at smaller scales.
-providing facilities for daycare at other community uses.
-designing housing form to consider impacts on existing services, (i.e. schools and parks).

Senior Citizen Housing

Senior citizen housing is the responsibility of the Provincial Government which plans and develops housing for seniors through the Alberta Housing Corporation, and Alberta Housing and Public Works. Suitable sites are purchased and once developed, turned over to a non-profit community organization for administration and management.

Senior citizen housing projects which are planned or currently under construction in the Northeast quadrant of the City include: Edmonton Boyle Street - 93 Street and 103A Avenue; Edmonton Chinese Elders - 96 Street and 102 Avenue; Edmonton Norwood - 95 Street and 117 Avenue; Edmonton St. Andrews Ukrainian Orthodox - 82 Street and 101 Avenue, for a total of 357 units. The number of existing units in the area is approximately 265.

1. People over the age of 65 are the fastest growing segment of our population, by 1986 the number of seniors will increase by 47 per cent. Funding to meet this expected increase in demand for senior citizen housing will have to be substantially increased (E.S.S.).

2. People over the age of 65 tend to be concentrated in the older areas of the City, (i.e. Northeast quadrant of the City). The current trend of constructing senior citizen housing in areas of high senior citizen composition should be encouraged so that older people may remain in the neighbourhood of familiar surroundings and associates (E.S.S.).

3. It is important that senior citizen housing have good access to transportation, shopping facilities, recreational opportunities and other resources (E.S.S.).

1. That Real Estate and Housing Department and responsible Provincial Government Agencies investigate the feasibility of providing for senior citizens housing in the L.R.T. station areas.

2. That the recommendations contained in section C and section D of the Report "A Plan for the Development of Services for Senior Citizens in Edmonton" be supported in planning new facilities for seniors.

-Current traffic volumes on main arterial roadways within the Northeast Corridor create significant noise levels (eg. 112 Avenue).

-Increased vehicular traffic on roadways and the concentration of buses at L.R.T. stations, will increase the noise level in the Northeast Corridor.

-Bus noise level is fairly high (86 to 93 decibels (A) at a distance of 50 feet and travelling at 25 m.p.h.).

-Future redevelopment at the stations will generate increased traffic volumes on main roadways in the station areas and hence, increased noise levels.

-L.R.T. trains operating will produce noise levels which are fairly low and have little impact on adjacent land uses.

-Noise level of L.R.T. trains is low (70 to 75 decibels (A) at a distance of 50 feet from the centre of the track, and travelling at 30 m.p.h.).

1. Concern about planned medium to high density redevelopment in the station areas near the L.R.T. tracks and along major arterials (eg. 112 Avenue and 118 Avenue), and the noise which these developments will experience from automobiles and trains, respectively (Public Meetings and Issues Summary).

2. Noise from increased vehicular traffic on the roadways and at the L.R.T. stations (Public Meetings and Issues Summary).

1. Design requirements in the development guidelines, will require redevelopment projects to have an inward-orientation instead of facing towards tracks or roadways, as well as special noise reducing building materials.

2. The L.R.T. stations will be landscaped to provide some noise buffering. Also, where possible, buffering will be established along the L.R.T. tracks on City-owned land, or as part of future private redevelopment in the station areas. Design guidelines for future redevelopment in the station areas along major arterials, will try to reduce the impact from noise by: increasing building setbacks from the roadway; encouraging use of noise-buffering materials on construction of buildings to be inward-oriented instead of street-oriented.

REGIONAL COORDINATION PLAN FOR LRT

TASK 1 -- IMPLEMENTATION STRATEGY

AND

TASK 2 -- ORGANIZATIONAL PLAN

EXECUTIVE SUMMARY

Prepared for

REGIONAL TRANSIT BOARD

St. Paul, Minnesota

July 1990

O'Brien-Kreitzberg & Associates

DRAFT

EXECUTIVE SUMMARY

INTRODUCTION

BACKGROUND AND PURPOSE

To ensure coordination in the planning and development of a Light Rail Transit (LRT) system for the Twin Cities metropolitan area, the Regional Transit Board (RTB) has been charged by the Minnesota State Legislature, under subdivision 1, Section 12 (473.399), to develop both a Light Rail Transit Regional Development and Financial Plan and a Light Rail Transit Regional Coordination Plan.

This report on Tasks 1 and 2, *Implementation Strategy and Organizational Plan*, provides input to the Joint LRT Advisory Committee and the RTB for inclusion in the Regional Coordination Plan.

TASK 1 AND 2 REQUIREMENTS

Due to the important, but controversial nature of these issues, the Regional Transit Board (RTB) required that recommendations on organization and implementation be developed by an independent consultant of national stature with experience in the management and programming of transit projects, and who was not presently involved in the local LRT planning and development process. O'Brien-Kreitzberg & Associates (OK) was selected by the RTB to fulfill this role and was directed to provide an objective, third party viewpoint on the implementation and organizational issues. This report incorporates the results of OK's research and its recommendations for the implementation of LRT in the Twin Cities metropolitan area.

Analysis and recommendations contained herein are based on compliance with applicable state and federal regulations for implementing rail transit projects.

Task 1 -- Implementation Strategy

Alternative strategies for implementing a light rail system in the Twin Cities area include:

- *Traditional* -- Completion of design to the 100 percent level; multiple contract packages competitively bid.
- *Design/Build* -- Completion of multiple preliminary engineering (30 percent) packages or performance specifications; competitive or negotiated bid.

- *Turnkey* -- Completion of preliminary engineering (30 percent); final design and build for entire system under a single contract; negotiated bid process.
- *Super Turnkey* -- Same as turnkey but with the addition of financing for all or part of the system.
- *Combinations* -- Combination of the above strategies.

Task 2 -- Organizational Plan

The results of Task 1 were utilized to develop an organizational structure to carry out the implementation. The final product of Task 2 is the development of a preferred organizational structure including a governing board, advisory committees as appropriate, and a staffing plan. Additionally, recommendations on related implementation issues, such as ownership of the system elements are included.

TASK 1 -- IMPLEMENTATION STRATEGY

OVERVIEW OF IMPLEMENTATION ISSUES

LRT project implementation is a complex undertaking requiring the involvement and coordination of many different activities and many different people -- the owner, consultants, outside agencies, community groups and contractors. As used in this report, *implementation* is defined as the design and construction of the LRT system and consists of the activities required to complete the project's physical components. These components are generally divided into two major categories: *facilities* and *systems*.

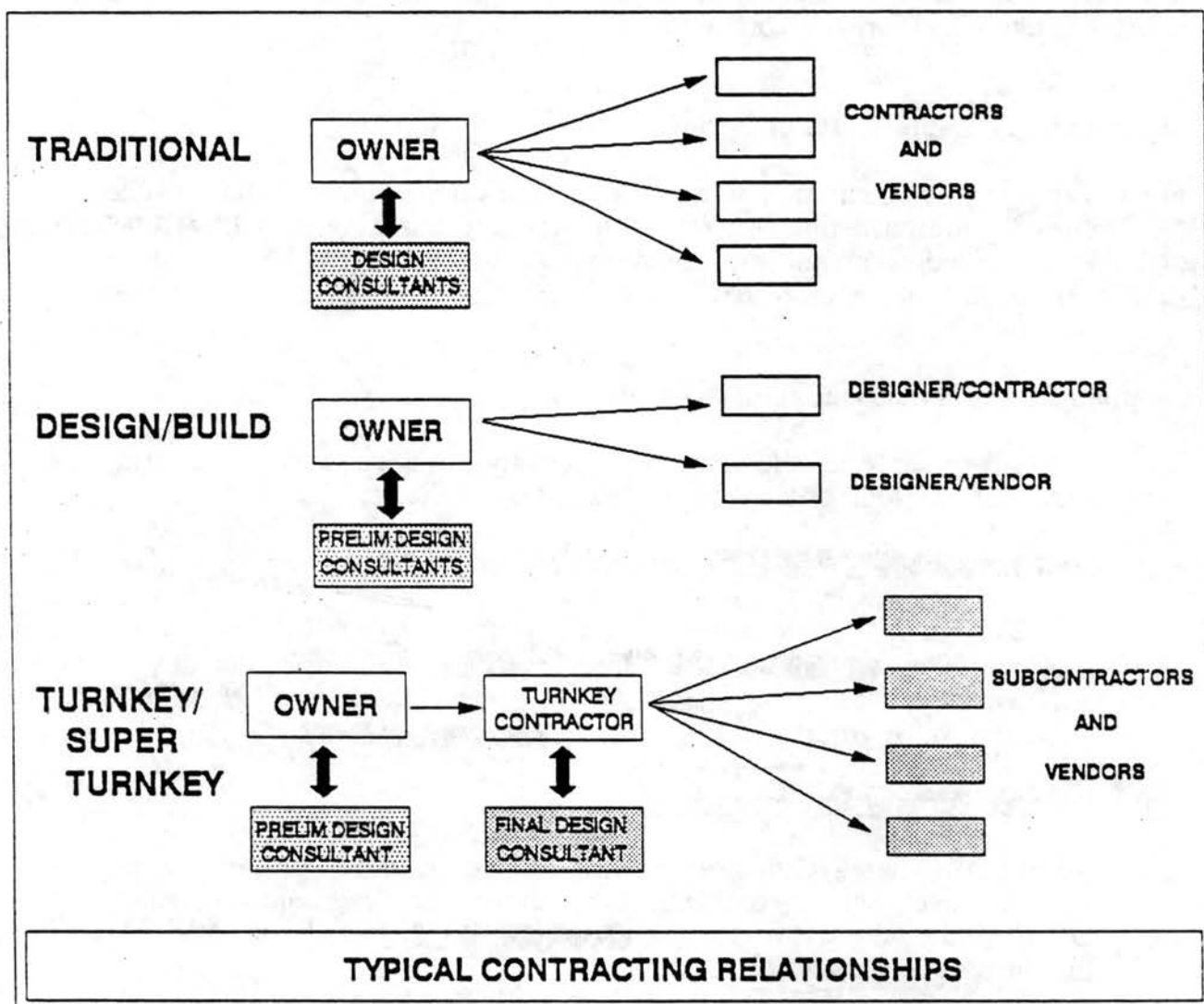
- **Facilities** -- the civil or uniquely constructed elements of the system including the roadbed or guideway, foundations, bridges, subsurface structures such as tunnels and electrical ductbanks, grading and sitework, stations and parking lots including access for the elderly and handicapped, and yard and shop facilities.
- **Systems** -- all common elements within the system which are system-wide in nature such as the vehicles, trackwork, electrification systems, signals, communications systems and fare collection equipment.

In developing the implementation strategies for the Twin Cities LRT system, it is not necessary to commit to a single implementation strategy for the entire 10-year program. The implementation strategy selected for a given corridor must recognize the conditions and characteristics specific to the corridor, such as right-of-way issues, funding sources (local, state or federal), and degree of outside agency coordination required. A strategy appropriate for one corridor may not be desirable for use on another. However, to achieve the goal of a unified and operable regional system, the system-wide elements must be coordinated to achieve compatibility and interchangeability within the system. It is important when designing a regional system to leave options and not become totally committed to a proprietary system. In addition, there are significant policy and procedural controls that should not and, in some cases, cannot be delegated to a contractor.

Given a project with appropriate characteristics suited to a given strategy, careful planning, proper contract document development and specification along with the appropriate level of management and owner control, any of the alternative strategies can be used successfully.

DEFINITION OF PRINCIPAL ALTERNATIVE STRATEGIES

The various approaches that could be used to implement a transit project can be categorized into four principal categories of implementation strategies: Traditional, Design/Build, Turnkey and Super Turnkey. Each of these alternatives follows the same sequence of basic steps from completion of preliminary design (10 percent) to completion of construction, testing and start-up. One of the most significant differences between the alternatives is the division of responsibility and risk between the public agency (owner) and the contractor(s). The figure below illustrates in simplified form the differences in contracting relationships between the four principal alternatives.



Traditional Implementation Strategy

The Traditional implementation strategy is that most commonly used for major public works projects such as roads and municipal infrastructure. All elements (facilities and systems) are designed to 100 percent completion by the owner or the owner's consultants.

Design/Build Implementation Strategy

Design/Build implementation shifts from the owner-managed and controlled final design and construction management in the Traditional implementation to management of a group of Design/Build and Design/Furnish/Install contracts, following preliminary engineering (30 percent) by the owner.

Turnkey Implementation Strategy

A Turnkey contract is a total project Design/Build contract with a single contractor, and places all of the responsibilities for Design/Build and Design/Furnish/Install elements under the Turnkey contractor.

Super Turnkey Implementation Strategy

Super Turnkey implementation is a further elaboration of the turnkey concept. In a Super Turnkey approach the Turnkey contractor also participates in the funding of the project. This funding arrangement may include the entire project or, alternatively, a significant portion of the project with the owner supplying the balance of the funds.

Combinations of Implementation Methods

Recent transit projects in the United States and Canada have used primarily two combinations of the four principal implementation strategies:

- Conventional Implementation (current industry practice)

The Conventional implementation strategy, used for most LRT system construction projects today, is a combination of the Traditional (100 percent design and then bid) strategy for the facilities elements, and the Design/Build (or Design/Furnish/Install) strategy for the systems elements.

- Systems Turnkey Implementation

Recent Automated Guideway Transit or people mover projects in the US and Canada have used a combination of either the Traditional alternative or the Design/Build alternative for the facilities elements, and the Turnkey approach for the systems elements.

EXPERIENCE WITH ALTERNATIVE STRATEGIES

Transit Project Implementation in Other North American Cities

Data was gathered on 16 new starts or major extensions to Light Rail Transit (LRT) or Automated Guideway Transit (AGT) projects since 1980 in the United States and Canada. The following table identifies these projects and the implementation strategies used. The typical LRT projects, with the exception of Pittsburgh and Scarborough (which used a Traditional approach), utilized the Conventional strategy --Traditional (100 percent design and then bid) for the facilities and Design/Build for the systems elements. The Turnkey strategy has been used to date primarily on Automated Guideway Transit (AGT) or people mover projects where the proprietary systems technology for the vehicle and its propulsion and guidance system were packaged by the vendor. No LRT project has been implemented using the turnkey strategy in North America.

SYSTEM	TOTAL SYSTEMS IMPLEMENTATION	FACILITIES ELEMENTS	SYSTEMS ELEMENTS
BUFFALO LRT	Conventional	Traditional	Design/Build
CALGARY LRT	Conventional	Traditional	● Design/Build
EDMONTON LRT	Conventional	Traditional	● Design/Build
LA-LONG BEACH LRT	Conventional	Traditional	Design/Build
PORTLAND LRT	Conventional	Traditional	Design/Build
SACRAMENTO LRT	Conventional	Traditional	● Design/Build
ST. LOUIS LRT (UC)	Conventional	Traditional	● Design/Build
SAN DIEGO LRT	Conventional	Traditional	● Design/Build
SAN JOSE LRT	Conventional	Traditional	Design/Build
PITTSBURGH LRT	Traditional	Traditional	● Traditional (except vehicles)
SCARBOROUGH ALRT	Traditional	Traditional	Traditional (except vehicles/controls)
DETROIT AGT	▲ Turnkey	Design/Build (cost reim)	Design/Build (fixed price)
JACKSONVILLE AGT	▲ Turnkey	Traditional	Design/Build (fixed price)
LILLE, FRANCE AGT	▲ Turnkey	Design/Build (cost reim)	Design/Build (fixed price)
MIAMI AGT	▲ Turnkey	Design/Build (fixed price)	Design/Build (fixed price)
O'HARE AGT (UC)	▲ Turnkey	Design/Build (fixed price)	Design/Build (fixed price)
VANCOUVER ALRT	▲ Turnkey	Design/Build (cost reim)	Design/Build (fixed price)

AGT - Automated Guideway Transit
 ALRT - Automated Light Rapid Transit
 UC - Under Construction

▲ Proprietary Technology
 ● Off-the-shelf Vehicle

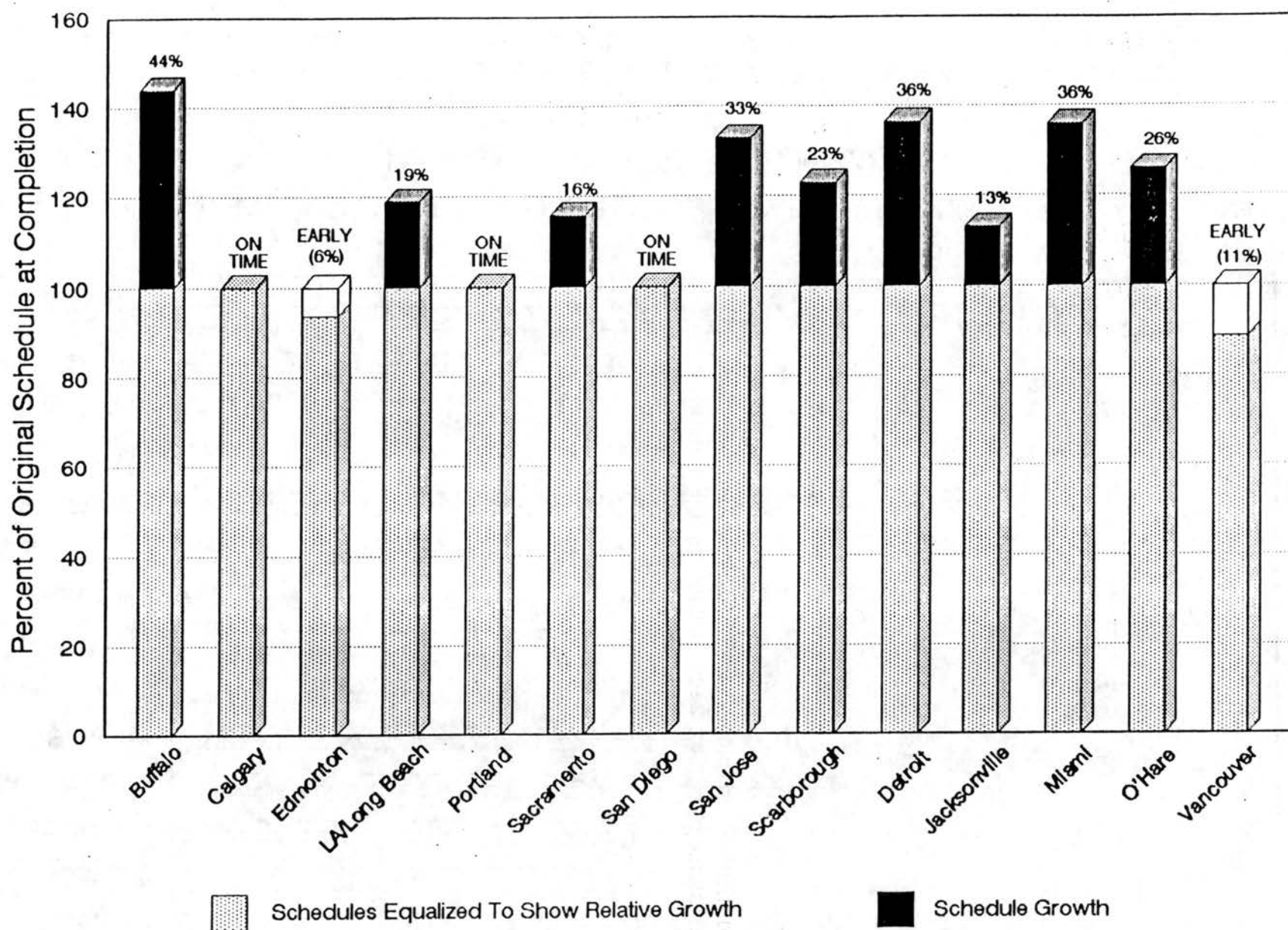
RECENT LRT, ALRT & AGT PROJECT IMPLEMENTATION METHODS

Nearly all of these recent transit projects experienced both cost and schedule growth during implementation for various reasons. The figures which follow compare the cost and schedule growth experienced.

While it is difficult to draw conclusions from a simple comparison, it can be noted that the Turnkey projects experienced the largest percentage of cost growth. Factors including right-of-way impacts, utilities coordination, bid challenges and owner-requested changes which could not be foreseen at the 30% design level (the time of bid) were major contributing factors to cost growth.

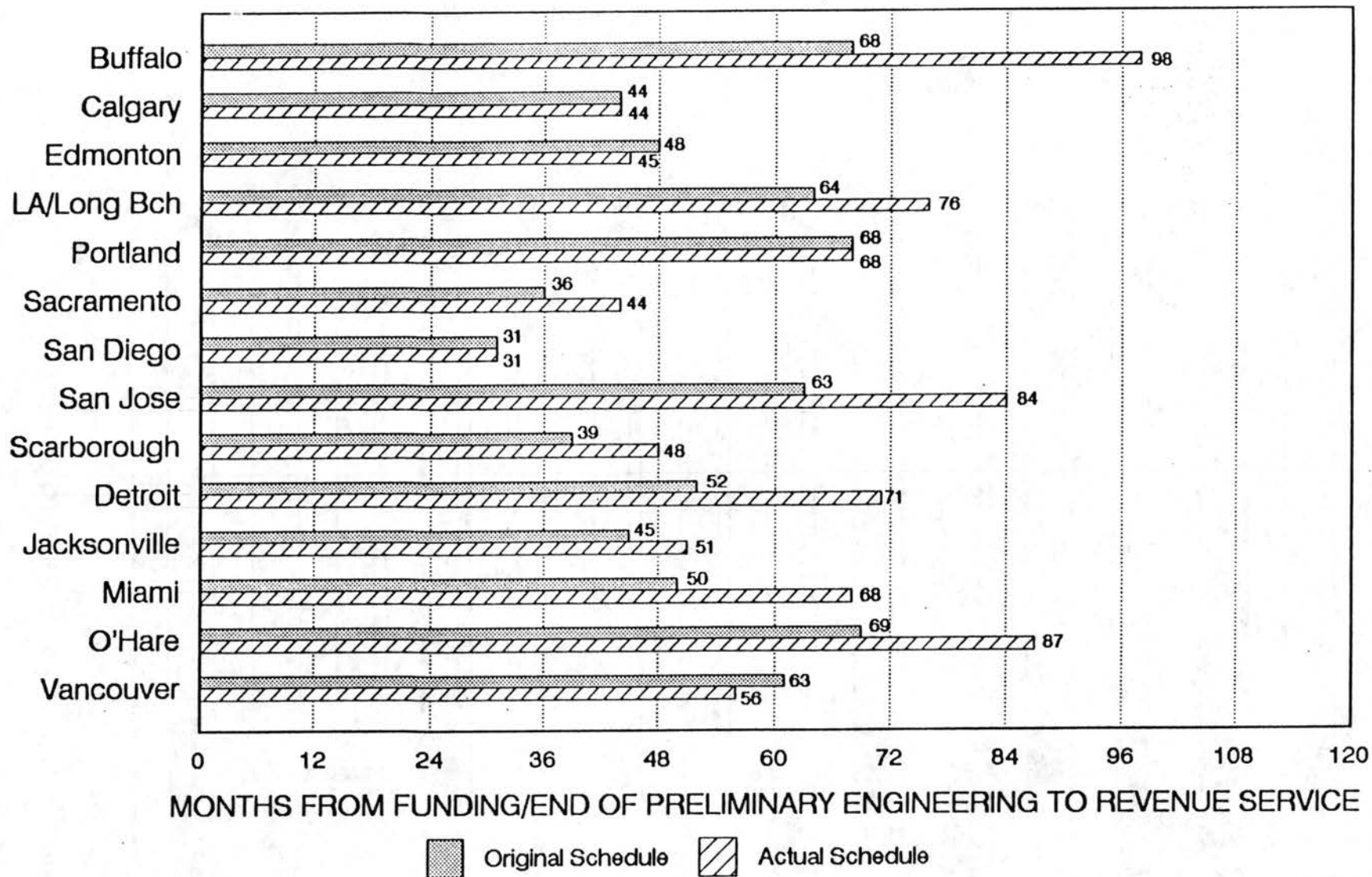
Although each of the projects reviewed had unique conditions, differing contract language and varying degrees of owner control which affected their success, if conclusions can be drawn from the experience of other North American cities in transit implementation they would be summarized as follows:

- The Conventional implementation strategy (Traditional for facilities, design/build for systems) has generally proven successful (from an owner's and community perspective) for recent LRT projects.
- Factors such as right-of-way, utilities coordination, bid challenges and owner-requested changes for the facilities elements of Automated Guideway Transit and Automated Light Rapid Transit projects have resulted in budget and schedule difficulties in most of the North American cities that have used the Turnkey implementation strategy to date for the full system.
- The Turnkey and Design/Build implementation strategies have been successful for the systems elements of both LRT and Automated Guideway Transit projects as the vendors are experienced in these areas and the owner can specify an off-the-shelf system.



Schedule - From Funding of Preliminary Engineering to Revenue Service

SCHEDULE COMPARISON - RECENT LRT, AGT & ALRT PROJECTS



SCHEDULE COMPARISON - RECENT LRT, AGT & ALRT PROJECTS

GUIDING PRINCIPLES FOR SELECTING AN IMPLEMENTATION STRATEGY

In making the important decision on selection of an implementation strategy, the owner must keep in mind the overall goal of providing the best, most reliable transportation system for the community it will serve, and use the following guiding principles in selecting a strategy to achieve that goal:

1. The status of the project at the time of selection -
 - Is the project sufficiently developed to proceed to the next step?
 - What is the availability of right-of-way?
 - Is funding assured?
2. The preparedness of the owner to proceed with any given strategy -
 - Is there adequate, qualified staffing and an organizational plan suited to the strategy to be used?
 - Is the owner experienced in managing the strategy to be used?
 - Is the implementation plan, bidding schedule and design schedule reasonable and achievable?
 - Does the owner have full community and political support to proceed?
 - Are key inter-agency agreements and regulatory approvals in place for the next step?
3. Degree of owner control over project design and construction -
 - What level of control does the owner desire?
 - What level of community and public input is desired or required?
 - How much flexibility does the owner desire to adapt to changing local conditions and developments?
4. Characteristics of the project itself -
 - Are there complex structures or alignment issues which may be difficult to resolve?
 - Are there numerous interfaces with other agencies' facilities (highways, railroads, utilities) which require significant continuing coordination?
 - Are the characteristics of the corridor to be implemented unique and more suited to a particular strategy?

From an owner's point of view, the Traditional or Conventional strategies give the greatest flexibility in scheduling activities and packaging contracts to best meet local conditions. This flexibility is particularly advantageous if there are special high-risk, high-value work items or if there are unresolved location or design issues that could significantly impact costs.

At the other end of the spectrum, the Turnkey strategy requires the owner to engage in a major effort to prepare a single overall bid package with extensive provisions for owner review and approval as the Turnkey contractor completes the final design and constructs the project.

IMPLEMENTATION STRATEGY RECOMMENDATIONS

Any or all of the implementation strategy alternatives could be used effectively to design and construct LRT in the Twin Cities. While there is considerable interest in full Turnkey implementation of transit systems in other North American cities, the limited experience to date indicates that many more difficulties occur related to the civil elements than to the systems elements when utilizing a Turnkey approach. Furthermore, the Twin Cities has not yet constructed an LRT line and there are many complex issues (both technical and political) associated with the proposed Group A core system. Due to these factors, it will be especially important to maintain owner control of key decisions during the final design for Group A facilities. However, as the Twin Cities gains experience in the implementation of LRT, a Turnkey strategy may be desirable for use on one of the Group B corridors to demonstrate the potential benefits of this approach. The best choice would most likely be one of the corridors proposed for federal funding with priority given to the corridor which has the least number of unresolved issues and a clear right-of-way at the end of preliminary engineering (30 percent).

Based on a review of the implementation methods used for other transit projects, the experience of these cities, and the guidelines established earlier in this report, the following recommendations are made for an implementation strategy for the Group A corridors:

1. For the Central Corridor, a Conventional implementation strategy (the Traditional approach for the facilities and Design/Build for the systems elements) is recommended. A modified Turnkey implementation strategy (Traditional approach for facilities and Turnkey or Super Turnkey approach with a single contract for the systems elements) could be used if there is sufficient vendor interest and regional confidence in the program's development and specification. The extent of interest in a Super Turnkey relationship for the systems elements should be determined at an early date for incorporation into both the construction and financial plans.
2. Significant special and unique projects such as the tunnels in Minneapolis, should be handled separately as Traditional or Design/Build packages contracted for directly with the owner.

3. System-wide design and performance criteria should be established and adopted prior to completion of preliminary engineering (30 percent) on the first LRT route.
4. Provisions should be made for incorporating joint development projects at stations into the implementation program.

Due to the interest in Turnkey implementation on the part of local officials as well as UMTA, it is recommended that one of the federally funded Group B corridors should be selected as a demonstration project for a full Turnkey implementation (both facilities and systems). The selected corridor should have a clear right-of-way, a straight-forward design and a minimum number of unresolved issues in order to provide a clear scope for the Turnkey contractor. The definition of the facilities and systems elements which will be completed as a result of the Group A implementation, will give both the contractor and the owner a complete understanding of the project's requirements, and will result in less risk and a more reasonable cost than if attempted on the initial corridor.

OK's recommendation for the Group A corridors is based on the following application of the guiding principles to the Central Corridor project:

- It is likely that the initial Group A corridors will be implemented as a state-funded "demonstration project", the success of which will determine the long-term commitment of state funding to the regional LRT program. The utilization of a more constructive, proven approach to implementation on the initial corridor would minimize the risk involved in an untried approach and increase the chances for success. Both the owner and the potential contractors have little experience in Turnkey contracting for transit facilities and systems.
- The Central Corridor is the most complex in the regional plan with a myriad of technical issues ranging from the proposed downtown Minneapolis tunnel, to the joint use of highway right-of-way. Additionally, this corridor transverses the most jurisdictions (Minneapolis, St. Paul, Hennepin and Ramsey Counties) and will involve the greatest amount of coordination with these jurisdictions as well as developers, property owners and the public. The Conventional contracting approach, with a greater degree of owner control and increased opportunity for community input would be a better option to meet this challenge for the facilities elements.
- The present status of the Central Corridor design and EIS activity is such that those sections in Ramsey County are more than a year behind those in Hennepin County. In order to provide a Design/Build or Turnkey contractor with as complete a package as possible at time of bid, the Ramsey County PE work must be accelerated or the Preliminary Engineering for the Hennepin County Sections put "on the shelf" for almost a year. The opportunity to proceed to contract and construction with the longest lead items -- the downtown tunnel, the vehicle, and

other system elements as they are completed in the design phase -- would be lost if they must be held to complete a full-system Design/Build or Turnkey package. This could cause up to a year's delay in the project and would add escalation for the period of delay. The Conventional approach provides the owner with the flexibility to contract for sections of the work as they are completed, resulting in the lowest practical cost.

- LRT is a new idea in the context of the Twin Cities region, and will have a major impact on its future growth and development patterns as well as the environment. The LRT program's goal is to serve the community as effectively and in as complimentary a way as possible. The ultimate success of the project will be measured in terms of ridership, which in essence is the community's "acceptance", and support of the system. An implementation strategy which therefore maximizes community input through its most delicate, initial introduction into that community, will promote its success. The Conventional strategy achieves this goal.

R01221.sum

TASK 2 -- ORGANIZATIONAL PLAN

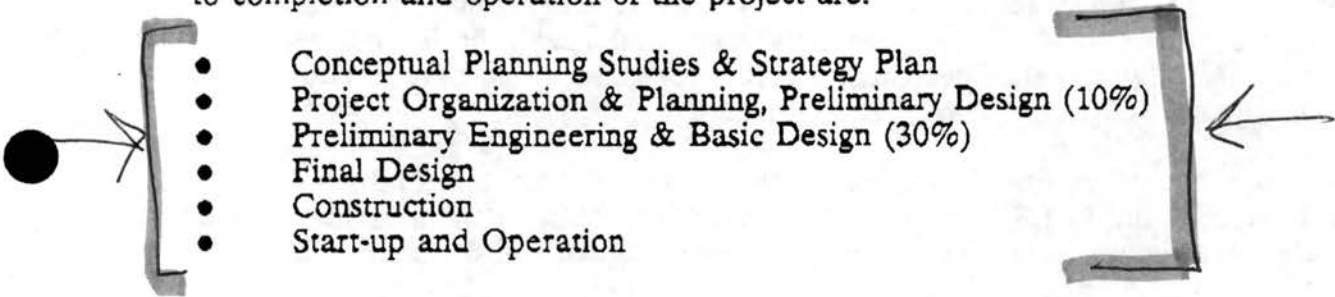
OVERVIEW OF ORGANIZATIONAL ISSUES

The principal focus in the analysis of organizational needs for LRT implementation is to identify all work items included in the various phases of an LRT project and provide an organizational structure that ensures the individual work items will be completed when needed and properly incorporated into the overall project schedule.

PROJECT PHASING

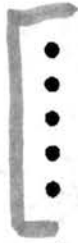
The planning and constructing of an LRT system is a major undertaking and requires a plan of implementation and a project organization to execute the plan. Whether an established organization is expanded or a newly organized entity is created for this specific undertaking, the range of capabilities required of the owner organization must be clearly understood.

The following outline includes all of the typical project phases for implementation which are the essential elements in the development of any LRT starter system. The steps leading to completion and operation of the project are:

- 
- Conceptual Planning Studies & Strategy Plan
 - Project Organization & Planning, Preliminary Design (10%)
 - Preliminary Engineering & Basic Design (30%)
 - Final Design
 - Construction
 - Start-up and Operation

EXISTING AGENCIES

The following discussion of existing agencies concerned with transit planning and development in the Twin Cities metropolitan area is based on the most recent legislation (including legislative changes in 1989) related to organizational structure for the following agencies:

- 
- Minnesota Department of Transportation (MnDOT)
 - Metropolitan Council
 - Regional Transit Board (RTB)
 - Metropolitan Transit Commission (MTC)
 - Regional Railroad Authorities (seven counties) (RRA's)

Currently, planning is performed by a number of local RRA's with the regional coordination and program development responsibilities assigned to the RTB. The major transit operator in the region is the MTC, a public agency established specifically for this purpose under a

policy board whose members are named by the RTB. The MTC has been legislatively designated as the operator of the planned LRT system. Other transit operators provide commuter services, local bus services in the suburban communities and specialized services. These services are all coordinated by the RTB.

CAPABILITIES OF EXISTING TRANSPORTATION AGENCIES

Most of the LRT planning and engineering to date has been done by the Hennepin and Ramsey County RRA's and the RTB. These agencies have small technical staffs and have performed the major portion of their current work by utilizing local and national consulting firms to conduct studies and provide engineering services for conceptual planning and preliminary designs.

The Minnesota Department of Transportation (MnDOT) has a full range of capabilities from planning through construction, primarily for highway facilities. Their organization for construction management is recognized as a model for highway construction. MnDOT's Program Management Division includes a small group responsible for transit operations outside the Twin Cities Metropolitan Area. This group is not set up, nor is it staffed to implement an LRT program. The capabilities of the MnDOT organization, including expertise in right-of-way acquisition, construction management and contract administration would be available for LRT purposes on a cost reimbursable basis. However, MnDOT does not currently have staff dedicated to LRT work and would have to add personnel to take on a major rail transit construction project.

There are a limited number of persons in the present RRA's and RTB who are involved with or experienced in LRT design and construction. Most of the present staff members in the LRT program have planning responsibilities which will continue and probably be increased to support the LRT program.

ORGANIZATIONAL CONCEPTS FOR IMPLEMENTATION

Four types of organizations which have been used or proposed for implementation of LRT, ALRT or AGT projects are presented as follows:

1. *Existing organization - Expanded staff* -- (usually the operating organization) expands staff capability by adding a design and construction group capable of managing the project with consultant assistance.
2. *New organization* -- represents the establishment of a new organization for design and construction management with consultant assistance.
3. *Existing organization - Consultant Project Management* -- calls for minimum expansion of existing organization with a program management consultant responsible for design and construction.

4. *Existing organization - Design/Build or Turnkey* -- ultimate form of delegated project management, particularly if the Full Turnkey approach is used with the contractor responsible for the entire project.

There is demonstrated experience with the first three forms of organization on LRT projects which successfully have been used during the final design and construction phases of a corridor project or single route. The least satisfactory of the three has been the expanded staff, particularly where there are significant periods of low activity between major projects. It is difficult to recruit the number of skilled management and technical personnel needed on a timely basis for a relatively short-term assignment, and to later selectively reduce forces to that required for supporting continued planning and operating requirements.

Design/Build or Turnkey on a total project basis has not been used to date on an LRT project in the United States and there are no reported Super Turnkey projects where the contractor has assumed the financial risk. Accordingly, there are no examples of an organization geared to this strategy.

ORGANIZATIONAL PRINCIPLES FOR LRT DESIGN AND CONSTRUCTION

The first principle which provides a foundation for the organizational structure is the designation of the *owner*. The owner is the agency which is the single point of control for implementation of an LRT project. The owner for this purpose may be a single governmental agency, a department of a larger agency with full administrative capabilities within the department or a joint powers agency.

The owner must have policy control and an assured flow of funding which can be budgeted and disbursed to cover all costs, internal and contractual, associated with designing and building the LRT project. In this role the owner is accountable to the area and the state legislature for performance on the project.

The owner is authorized to commit and enter into all agreements necessary to secure right-of-way and other property, complete environmental agreements, inter-agency agreements and the plethora of clearances, assurances and agreements needed to construct an LRT project under current local, state and federal laws and regulations.

This ownership role does not necessarily mean that every item is owned outright, but the "owner" has the leasehold, permit, lease-purchase agreement, franchise or other evidence of his ability to construct the LRT system on a particular right-of-way and to hold and use equipment and rolling stock even though there may be a different legal owner for tax purposes.

Once construction is completed, the "ownership" would be turned over to the ongoing operating agency.

ALTERNATIVE ORGANIZATIONAL STRUCTURES FOR LRT IMPLEMENTATION IN THE TWIN CITIES

Alternative organizational structures were developed using the organizational principles and functional requirements set forth in the preceding sections. These organizational structures all assumed that regional transportation policy and approval of an LRT corridor for implementation as part of the regional transportation plan would continue to be the responsibility of the Regional Transit Board. This would include approval of the funding plan as well as the physical characteristics of the LRT system.

Five optional organizational structures were developed for LRT project implementation as follows. Organization charts for these options follow the discussion:

1. Joint powers organization of RRA's directly involved in LRT projects
2. Metropolitan Transit Commission (MTC)
3. Minnesota Department of Transportation (MnDOT)
4. Regional Transit Board (RTB)
5. New Light Rail Transit Construction Commission (LRTCC)

The agency listed would function as the "owner" during the construction phase and would be responsible for all facets of the LRT implementation program. MTC would be the operating agency under all alternatives and would either own or have long-term leases covering equipment and facilities needed to operate the LRT system.

The RTB would continue to be the overall public transportation policy and funding agency for the Twin Cities with all funding--federal, state and regional flowing through the RTB to the agency responsible for construction. The RTB would be responsible for representing the region in all dealings with UMTA and for making application and receiving federal funding for LRT. The RTB would also be responsible for all regional planning for future LRT routes, utilizing the planning work already completed by the county Regional Railroad Authorities. Working with the Joint LRT Advisory Committee, which would continue to oversee LRT planning, the RTB would decide which corridors are selected for implementation, prioritize them, approve distribution of funding, and assign the approved and funded corridor to the appropriate agency for implementation.

In several of the options, the RTB would enter into an agreement with the implementing agency.

In one of the options the RTB is also the agency for implementation.

In all cases, the implementing agency would have to recruit and hire appropriate staff and consulting assistance.

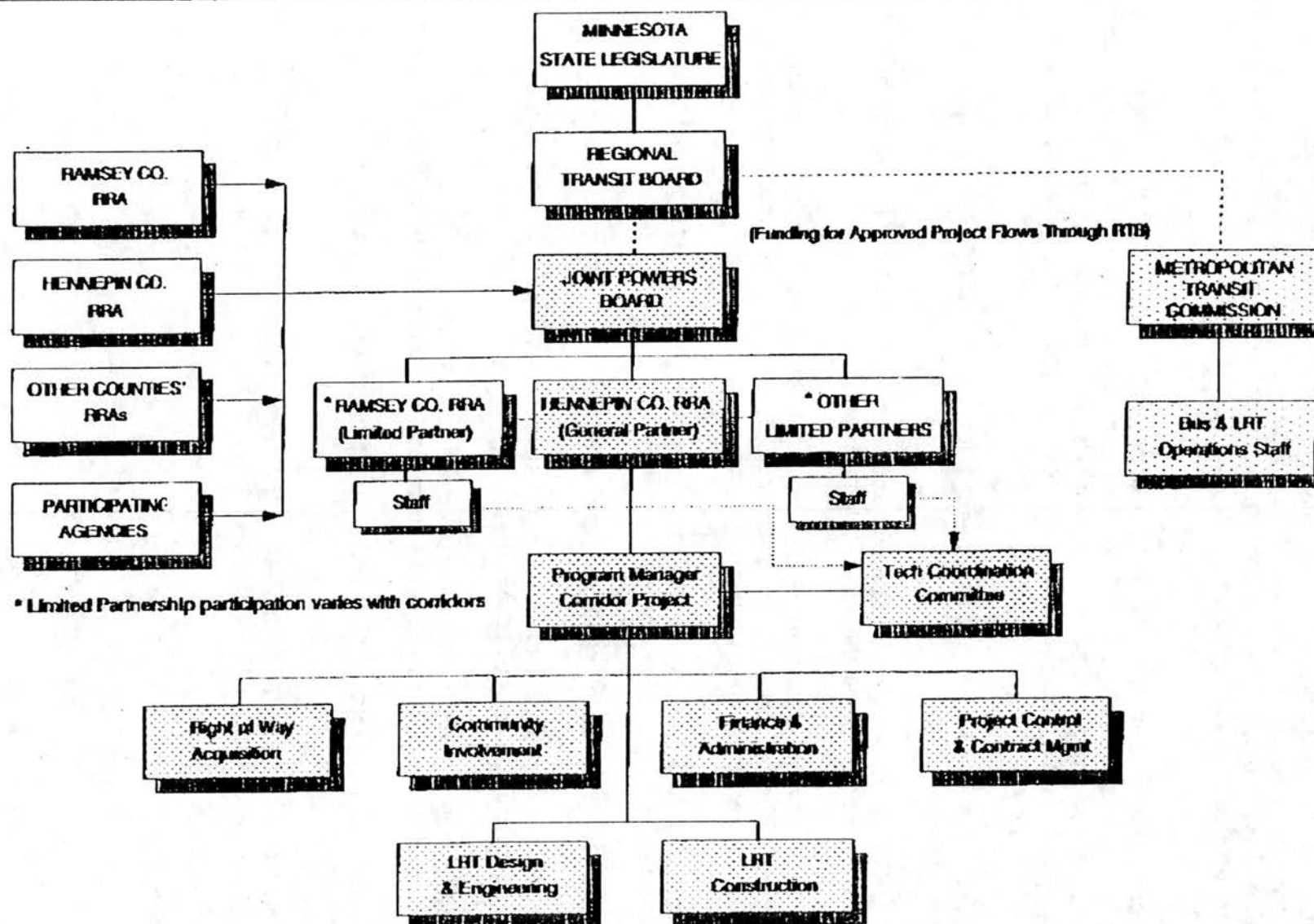
Option 1 - Joint Powers Organization

There is local interest in using a joint powers agreement under existing legislation. Under this alternative there would be a joint powers agreement between the RRA's sharing in the funding of the LRT project. This would include those RRA's along the LRT route and, as appropriate, other RRA's and agencies (MnDOT, MTC, etc.) if they are signatories to the joint powers agreement.

The joint powers agreement establishes a new entity and the individual RRA sponsors are committed to continue their support for the duration of the term of any financial commitments for construction and operation. Each member agency is committed to share the project risks as set forth in the joint powers agreement. The extent of their participation may vary.

Under a Joint Powers Agreement as provided for under current state legislation, the following would apply:

- The RTB would approve the project and its funding, and assign responsibility for implementation over to the Joint Powers Board.
- A joint powers agreement would be established which would delineate the responsibilities of the various participants. These roles and responsibilities would change for each corridor project as required.
- One of the RRA's would be designated as the lead or "general partner" and would serve as the Project Manager.
- Overall project control would be handled by the general partner RRA.
- The design criteria and standards for the system, as well as system-wide coordination would be handled by the general partner.
- Engineering and construction contracts for the project could be managed by either the general partner or each of the members for contracts within its jurisdiction.
- Design and procurement of system-wide elements would be managed by the general partner.
- Technical services agreements with other agencies (MnDOT for example) could be entered into by either the joint powers board or the RRA's.



**Organization for LRT Implementation
Option 1 - New Organization Under Joint Powers Board**

Option 2 - Metropolitan Transit Commission

Under this arrangement the MTC would be assigned the responsibility for LRT implementation using its powers under existing legislation. An agreement would be executed between RTB and MTC to cover the administration and funding procedures for the LRT project to be implemented.

An expanded MTC staff and consultants will be needed since the LRT construction program is much larger and more comprehensive than MTC's bus facility modernization program.

Option 3 - Minnesota Department of Transportation

Under this option the RTB would enter into an agreement with MnDOT for implementation of an LRT project. MnDOT would be the "owner" during implementation and could assign the project to its Operations Division under an Assistant Commissioner. MnDOT would augment its existing staff and employ consultants to design and manage the LRT implementation project. Because MnDOT has well-established financial and administrative procedures, and an experienced right-of-way section, these functions may be assigned to the appropriate Assistant Commissioner instead of creating a new group or, alternatively experienced supervisory personnel may be loaned to the LRT group. MnDOT may elect to create a new Assistant Commissioner for LRT.

Option 4 - Regional Transit Board

Under this alternative the LRT implementation program would be added to the responsibilities of the RTB under a new Deputy Executive Director supported by a new staff organization and consultants. RTB would be the "owner" during implementation under this option and would transfer ownership to MTC upon start up of operations.

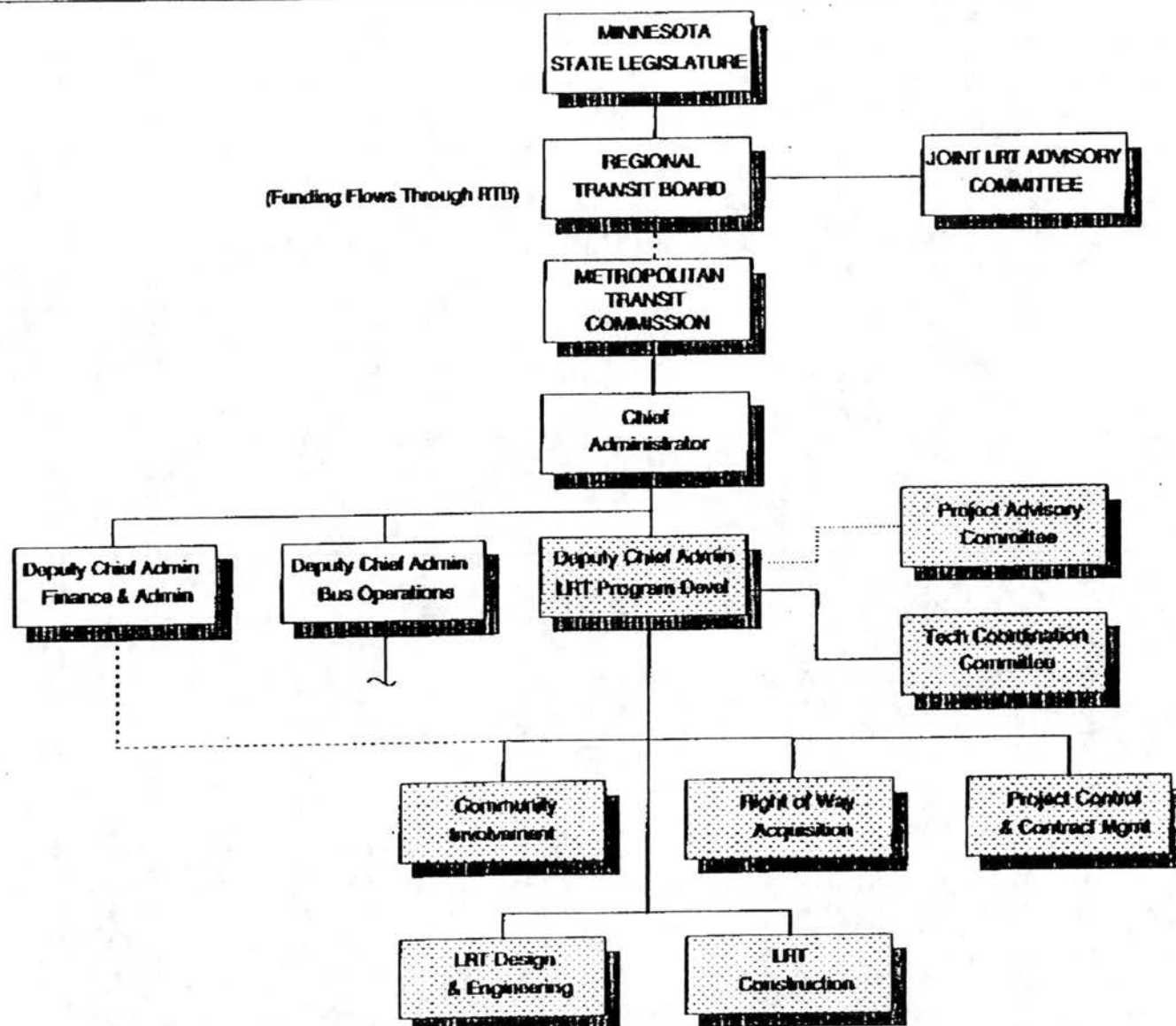
Option 5 - Light Rail Transit Construction Commission (LRTCC)

The LRTCC organizational structure is similar to the structure for the RTB option. The principal difference is the addition of a policy board between the RTB and the staff. In this respect, the organizational relationship to the RTB reflects the current structure for the MTC.

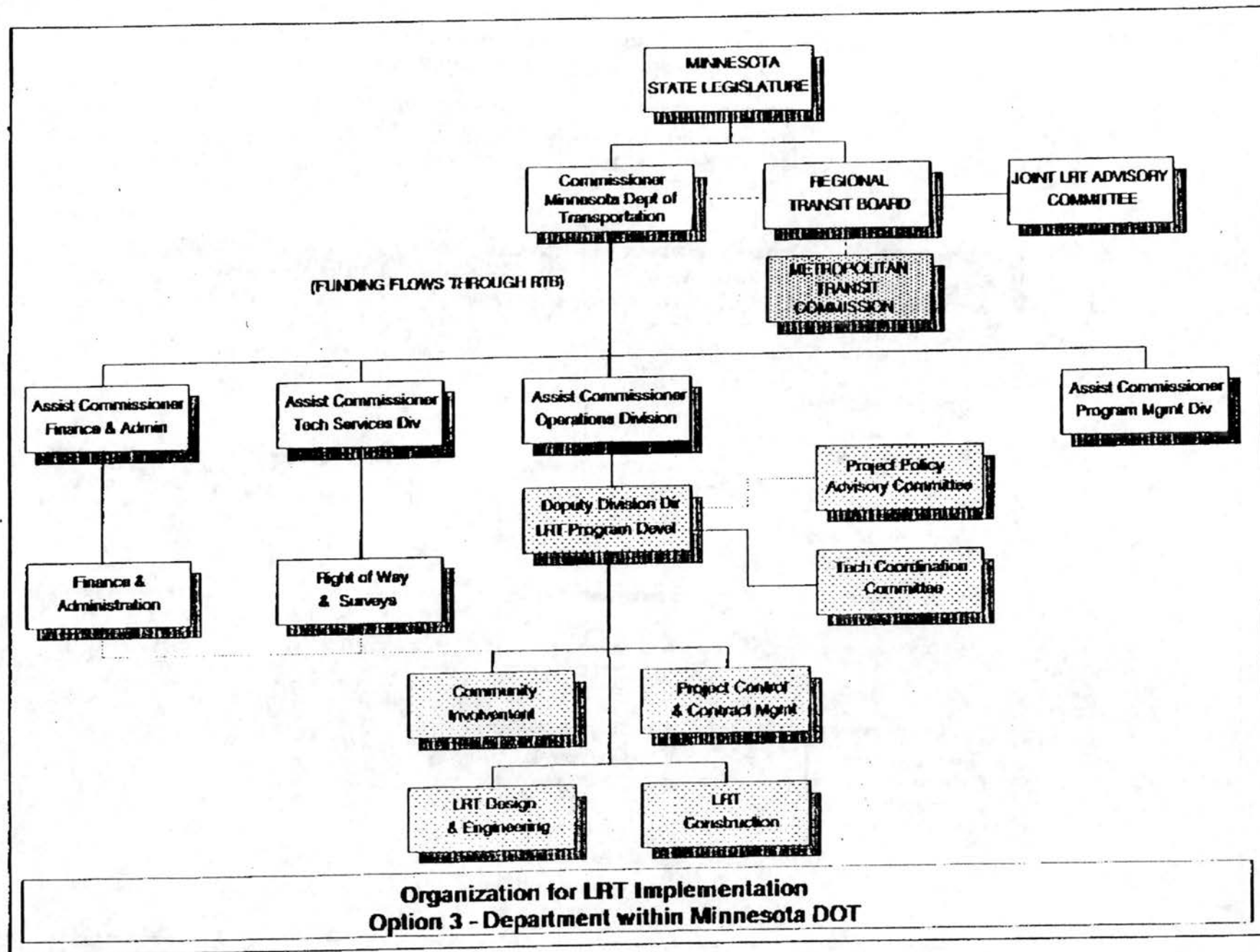
LRTCC Board:

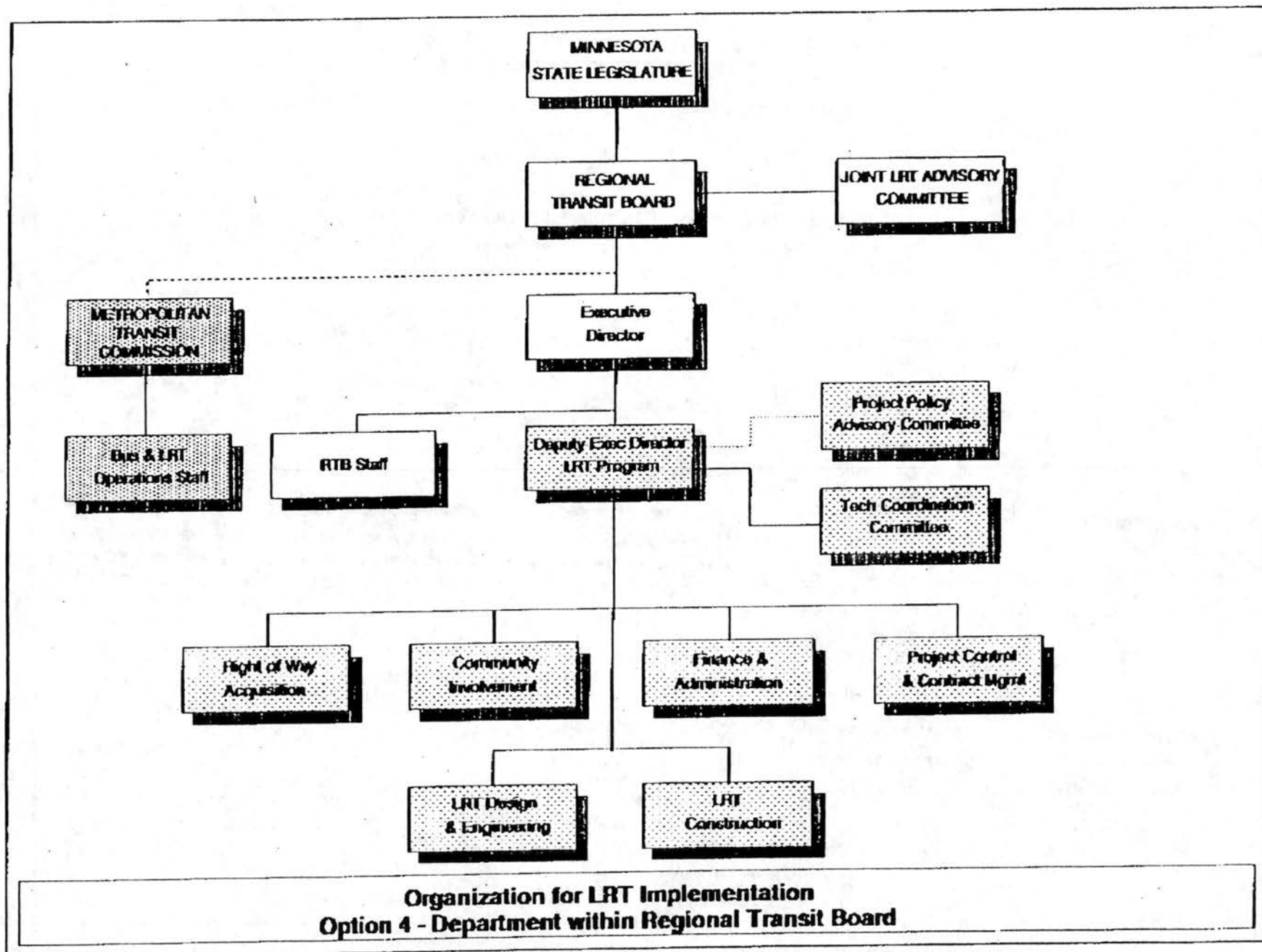
The board of the LRTCC would be appointed by the RTB and composed of seven members as follows:

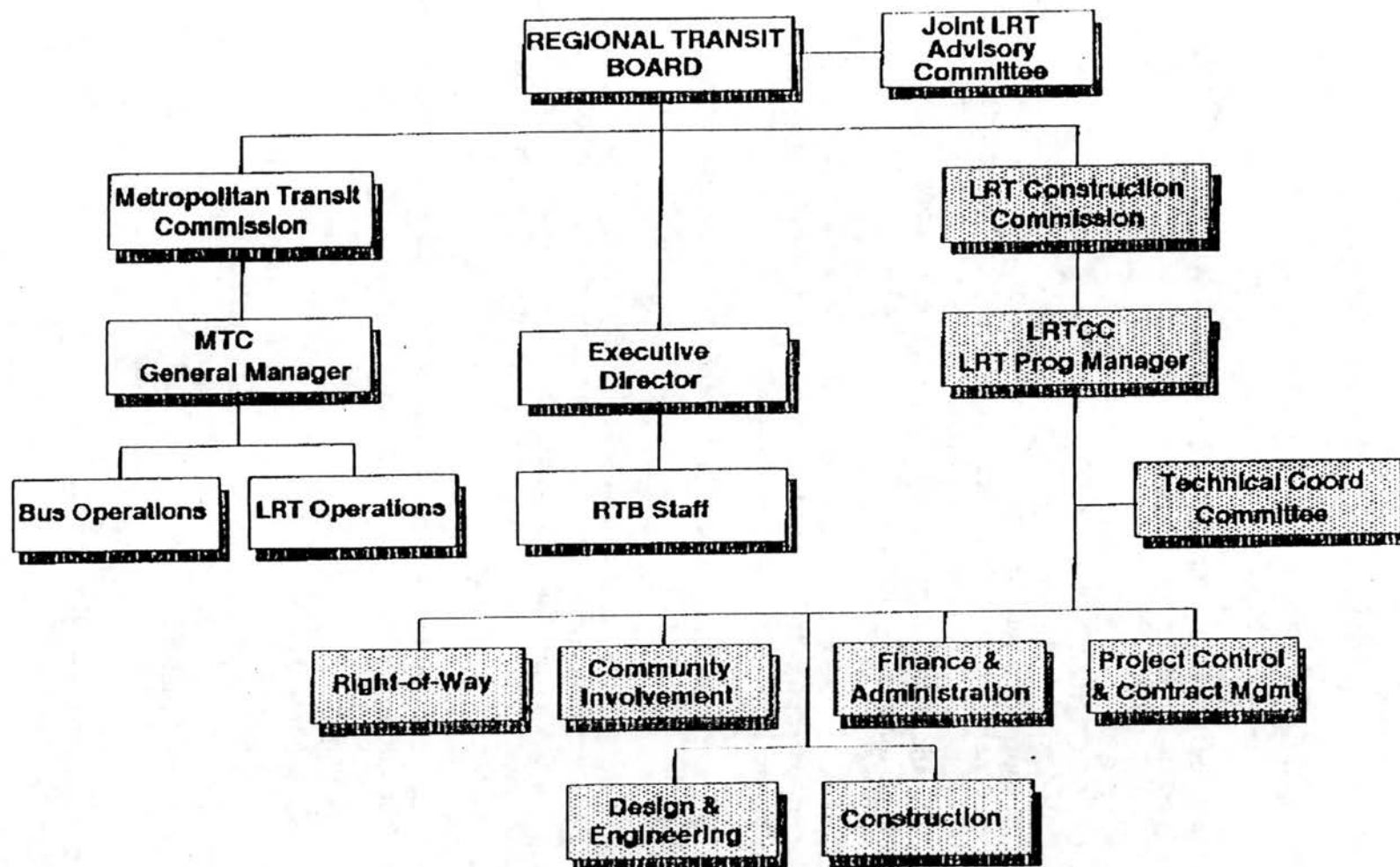
- three at-large County Commissioners (preferably related to the corridor being implemented) -- initially Hennepin, Ramsey and one other.



Organization for LRT Implementation
Option 2 - Department within Metropolitan Transit Commission







Organization for LRT Implementation
Option 5 - LRT Construction Commission under RTB

- two members representing the core cities -- Minneapolis and St. Paul.
- The MnDOT Commissioner (or his representative).
- An MTC Commissioner.

This board includes the same members as are proposed to serve on the Policy Advisory Committee in the other options.

DISCUSSION OF ORGANIZATIONAL ALTERNATIVES

The organizational approaches for implementation of LRT projects are being developed in response to a stated need for an organization which would be responsible initially for a state-sponsored demonstration project in the Central Corridor between Minneapolis and St. Paul. Subsequently, the organization would assume the responsibility for other corridors as they are approved for construction and funding is in hand.

Currently, there is no organization within the Twin Cities area which has the required number of skilled personnel to take on the design and construction administration responsibilities for the LRT Implementation program.

All of the five options for organization can be utilized for the Central Corridor assuming a suitable funding plan is in place.

It is highly desirable, if not a requirement, that the implementing agency be established to be accountable to the state legislature, while at the same time be responsive to the needs and concerns of local agencies and the general public. Accordingly, all of the options presented herein have located the control of the implementation process as high in the regional agency hierarchy as possible.

Each of the organizational options has its own unique advantages and disadvantages. The major ones for each option are summarized below:

Joint Powers Board (Option 1)

Advantages

- No new legislation required
- Some previous LRT experience (planning only)

Disadvantages

- Difficult to establish, complex and requires time
- Lack of continuity for future LRT corridors

Joint Powers Board (cont'd)

- Local political support
- Potential dilution of legislative intent regarding LRT funding and implementation
- Limited past experience in major joint projects
- Conflict between RRA and regional goals in funding and development
- Potential for duplication of staff
- Reliance on Public Works staffs for support
- Board members have other interests, not single focus
- Difficulty in designating "owner" for contracting purposes

Metropolitan Transit Commission (Option 2)

Advantages

- Regional perspective
- Experienced transit staff
- Ability to procure right of way and do construction
- Some knowledge of UMTA procedures
- Operational experience

Disadvantages

- Less responsive to local concerns
- Limited construction experience
- Primary focus on operations
- No lead role in LRT planning

Minnesota Department of Transportation (Option 3)

Advantages

- Statewide and regional perspective
- Largest public works organization in region, with good track record in design and construction
- Accountable to state legislature
- Joint right of way coordination ability
- Experience with federal process (FHWA)

Disadvantages

- Less responsive to local concerns
- No representative board
- Multiple, competing high priority projects
- No lead role in LRT planning
- Large established agency with highway focus

Regional Transit Board (Option 4)

Advantages

- Regional scope with local representation on board
- Transit services are sole function of agency
- Single agency with responsibility for transit policy, planning, and implementation
- Elected officials and transit dependents on board
- Simple organizational structure

Disadvantages

- Requires legislative changes in authority
- No present design or construction capability

LRT Construction Commission (Option 5)

Advantages

- Regional scope with local representation on board
- Accountable to legislature through RTB
- Single focus, on LRT construction
- Simple organizational structure

Disadvantages

- New agency requiring legislative action
- No prior track record
- Requires time to establish new organization, policy and procedures

RECOMMENDATION FOR ORGANIZATION TO IMPLEMENT LRT IN THE TWIN CITIES

Based on the principles and guidelines established previously, and weighing the advantages and disadvantages of each option, organizational Option 4, which expands the capabilities of the RTB with the addition of a new Deputy Executive Director, supporting staff and consultants, is recommended for the Twin Cities. The principal reasons for the recommendation are as follows:

- The RTB is presently structured with a policy board of elected officials and transit dependents, executive management, a high-level advisory committee, and provides transit planning, administration and operations (through MTC) on a regional basis. RTB can incorporate LRT system design and construction effectively, ensuring direct accessibility and reporting to the state legislature and would have all regional transit planning, development and operations under the same entity.
- RTB is a single point of responsibility for system-wide and regional interests, planning, corridor selection and funding.
- The existing Joint LRT Advisory Committee, functioning through the RTB, will be the key group for regional conflict resolution, policy and guidance, consensus building and project advocacy.
- The MTC as the operating entity, will have independent and essential operating input to the RTB.
- The LRT Program Manager has clear lines of communication and accountability to the RTB Executive Director and the Board.
- The Project Advisory Committee will have membership at an executive level from

the core cities, MnDOT, MTC and the RRA's, and will expedite and resolve jurisdictional and regional issues.

- The LRT program design and construction organization is structured to be a single point of control for project implementation.
- The Technical Coordination Committee facilitates third party agreements, design reviews, permits and approvals.
- Through Technical Services agreements, if desired, the expertise of MnDOT could be utilized where most expedient and cost effective; for right of way acquisition, surveying, facilities construction management and contract administration.

The proposed RTB organizational structure meets the immediate needs of the short range (Group A) program and can continue in this role as corridors in Groups B and C are approved for implementation.

STAFFING REQUIREMENTS FOR LRT IMPLEMENTATION

An agency charged with the responsibility for LRT implementation should be staffed with individuals at the executive levels (Program Manager, Manager of Engineering, Director of Construction) who are highly experienced in transit project implementation, and preferably who have had commensurate levels of responsibility through at least one LRT implementation.

Initial staffing would be based on the Conventional strategy. The agency would be fully staffed to handle legal, finance and administration, project control and contract management, risk management, community involvement, and right-of-way/property acquisition functions in addition to engineering and construction management. Total staffing requirements would depend on the size of the construction program but would include core group 10-20 permanent employees and the balance of the required 60-80 professionals could be consultant staff or temporary employees.

The LRT Program Manager's Role

The LRT Program Manager will be accountable to the agency policy board under the RTB for project implementation from completion of preliminary design (10 percent), through final design and construction and delivery of the Light Rail Transit System on time and within the approved budget.

The Technical Coordination Committee's Role

The Technical Coordination Committee should consist of approximately ten members to

include a single senior staff representative at Director of Public Works level from each of the counties, MTC, MnDOT and the cities and, as appropriate, major utilities. The members should be capable of expediting and authorizing decisions effecting their respective agencies.

SUMMARY AND CONCLUSIONS:

Options for organizing and staffing an agency to be responsible for the implementation of an LRT program for the Twin Cities Metropolitan area were developed based on a review of the programmatic needs and the status of current work on elements of the LRT system.

The experience of agencies which had developed LRT systems and similar transit systems was reviewed by our staff members to develop an array of concepts for the Twin Cities area. This was augmented with information supplied during the Peer Review and by information on other public works projects in the Twin Cities areas.

Organization

Insofar as organizational structures were concerned five optional approaches were developed, including as the lead agency or "owner":

- Joint Powers Organization of RRA's
- Metropolitan Transit Commission
- Minnesota Department of Transportation
- Regional Transit Board
- LRT Construction Commission

The first three options were based on using available capabilities of existing organizations and the last two were developed to meet the specific short and long-range requirements for LRT implementation.

The Regional Transit Board option is the preferred option since it maximizes the use of existing and experienced policy board members, advisory board members and staff resources.

Staffing

In all of the options there is a need for substantial increases in the size and capability of the support staff. The recommended staffing approach is:

- An agency core staff of qualified and experienced administrative, engineering and construction managers who will direct the operations of the agency staff and consultants.

- Use of inter-agency service agreements to get the specialized expertise of other local agencies.
- Use of qualified consultants in program management, engineering design, construction management and other support areas to provide their expertise as needed and reduce the size of the agency staff.

This staffing approach provides a basic organization which can utilize any of the implementation strategies developed in this report. The core group can be maintained in the 10-20 range by the use of consultants and the services of specialized groups in other agencies on a task-by-task basis.

An important adjunct group is the Technical Coordination Committee, which is an extension of staff and, unlike the various advisory or policy committees, is concerned with construction-related issues and includes members who can make decisions regarding the work which can improve the design and expedite construction.

In conclusion, the recommended organizational option, a major department for LRT implementation under the Regional Transit Board, staffed with a core staff of 10-20 experienced and competent design and construction managers, and a total staff of 60-80 professionals can assume the responsibility for implementing the initial LRT project in the Central Corridor. The total staff would include the core staff and project staff consultants and the Technical Coordinating Committee to meet the design requirements, contract administration and construction management of the LRT project.

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

6

Regional Railroad Authority

Originating Department

K. DeSpiegelaere 8/6/90
Authorized Signature Date

Board Action Requested

Grant applications for engineering funds

DISCUSSION ONLY

Request Justification

See attached memorandum from K. DeSpiegelaere

Budgeting and Accounting Ed Blauvelt

County Attorney Paul Mac Millan

Risk Manager _____

Data Processing _____

Previous Action taken on Request _____

Date / Time

Received By

Comments / Recommendation

Documentation certified complete for:

Committee / Meeting Date

Signature

Date

Committee / Meeting Date
August 14, 1990

Signature

Date
8/8/90

Board Date

Signature

Date



Room 316 Courthouse
15 W. Kellogg Blvd.
St. Paul, MN 55102
Phone 298-4145

John T. Finley, Chairman

District 3

Diane Ahrens

District 4

Ruby Hunt

District 5

Duane W. McCarty

District 1

Hal Norgard

District 7

Donald E. Salverda

District 2

Warren W. Schaber

District 6

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathy DeSpiegelaere, Director of LRT Planning *KD*

SUBJECT: Grant Application to Minnesota Department of Transportation

DATE: August 6, 1990

The Minnesota Department of Transportation is soliciting applications for LRT engineering funds. Grant applications are due September 28, 1990. The total amount of funds available is \$2,758,000. No single regional railroad authority may receive more than 60% of the funds (\$1,654,800).

Priority for funding will be given first to the Central Corridor, second to "Group B" corridors and third to "Group C" corridors. It is likely that there will be insufficient funds for all needs.

Ramsey County Regional Railroad Authority could apply for:

1. Approximately \$1 million to continue Phase II preliminary engineering for the Midway Corridor (Central Corridor). An updated cost estimate will be prepared for this work.
2. Approximately \$150,000 as RCRRA's share of the South Corridor Environmental Impact Statement and preliminary engineering Phase I. The alignment study for the South Corridor is expected to be completed in mid-1991. The South Corridor is in Group B of the Regional Transit Board's Development and Financial Plan.
3. Approximately \$250,000 to conduct an alignment study in the Northwest Corridor. The Northwest Corridor is in Group C of the Regional Transit Board's Development and Financial Plan.

Recommendation:

For discussion.

*EIS for Northeast
Alignment study for East*

KD/blk

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

7

Regional Railroad Authority

Originating Department

K. DeSpiegelaere 8/7/90
Authorized Signature Date

Board Action Requested

UMTA response to request for federal funds

DISCUSSION ONLY

Request Justification

- See attached: 1) Memorandum from K. DeSpiegelaere of August 7, 1990
- 2) Letter from UMTA Administrator Brian Clymer to Michael Ehrlichmann

Budgeting and Accounting Ed Glantz

County Attorney Don Macmillan

Risk Manager _____

Data Processing _____

Previous Action taken on Request _____

Date / Time

Received By

Comments / Recommendation

Documentation certified complete for:

Committee / Meeting Date

Signature

Date

Committee / Meeting Date

Signature

Date

August 14, 1990

J. L. Glendenning
Signature

8/8/90

Board Date

Date



Room 316 Courthouse
15 W. Kellogg Blvd.
St. Paul, MN 55102
Phone 298-4145

John T. Finley, Chairman

District 3

Diane Ahrens

District 4

Ruby Hunt

District 5

Duane W. McCarty

District 1

Hal Morgard

District 7

Donald E. Salverda

District 2

Warren W. Schaber

District 6

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathryn DeSpiegelaere, Director of LRT Planning *Z/D*

SUBJECT: Response to Request for Federal Funds
for Light Rail Transit

DATE: August 7, 1990

A request was made to the Urban Mass Transportation Administration (UMTA) in May relating to:

1. Federal funding in the amount of \$296 million for the I-35W, Hiawatha, and Northeast LRT Corridors in Hennepin County.
2. The \$24 million grant Hennepin County had been promised by the previous Administrator of UMTA.
3. A \$1.5 million grant Hennepin County had been promised for turnkey planning studies.

A response from UMTA Administrator Brian Clymer is attached. Although it is not always apparent even after several readings what UMTA letters mean, I believe the letter indicates that:

1. Additional studies need to be undertaken and local funding to match the federal request must be in place in order for the three corridors to enter the UMTA process.
2. The \$24 million grant was applied to the entire 29-mile Hennepin County Phase I system and is not available if the metropolitan region plans to leverage the corridors.
3. The \$1.5 million grant should be applied to the region, not just to Hennepin County.

Recommendation:

For your information.

KD/blk



U.S. Department
of Transportation

Urban Mass
Transportation
Administration

The Administrator

CC SM
GA
JH
DM

400 Seventh St., S.W.
Washington, D.C. 20590

AUG - 2 1990

Mr. Michael Ehrlichmann, Chairman
Regional Transit Board
230 East Fifth Street
St. Paul, Minnesota 55101

Dear Mr. Ehrlichmann:

I was delighted to receive your recent letter informing me of the progress that the Twin Cities area is making toward developing a regional fixed guideway transit system. I am aware of the enormous effort which local officials have made in working out a consensus on a regional transit and financing plan. You are to be congratulated and I will be happy to assist in any way that I can to further development of the system.

Before responding to the specific points in your letter, let me review with you the status of the Twin Cities system in terms of UMTA's new start planning and project development process. As you probably know, Federal law requires that UMTA-funded new start projects be based on the results of alternatives analysis, be cost-effective, and be supported by an acceptable degree of local financial commitment. The fixed guideway corridors proposed for Federal funding in the Twin Cities region have not yet undergone alternatives analysis. Cost-effectiveness and financial determinations have not yet been made. Alternatives analysis has been initiated in one corridor, University Avenue, although we understand that the region no longer intends to seek UMTA funding for that part of the system.

Your letter asked that UMTA apply the \$24 million grant offered by former Administrator DelliBovi "as the first installment on the Federal share for the Hiawatha Corridor." The Twin Cities' transit plans have obviously changed dramatically since UMTA indicated its intent to provide up to \$24 million to the Hennepin County Regional Railroad Authority (HCRRRA). The \$24 million was offered with the understanding that it would be the total Federal contribution for a 29-mile, \$500 million system within Hennepin County. This position was reaffirmed by Secretary Skinner in an August 1989 letter to Governor Perpich. The region's request for funds is now clearly part of a \$1.365 billion project with a potential \$296 million Federal share requirement. As the Secretary explained, if HCRRRA wishes to request more than \$24 million in Federal funds for the original 29-mile, \$500 million system, it would have to compete with other projects seeking Section 3 funds.

Second, your letter asked UMTA to designate the Northeast, Hiawatha, and I-35W corridors as "overmatch or potential overmatch corridors" pursuant to Secretary Skinner's Section 3 Overmatch Initiative. Under this initiative, UMTA is willing to consider relaxing its long standing "one corridor at a time" policy for new start projects.

*no streamlining
of requirements*

We certainly applaud your intention to establish revenue sources to pay a major share of transit capital costs, but UMTA is not able to recognize the Twin Cities as a participant in the Overmatch Initiative at this time. The Overmatch Initiative gives credit for non-Federal funding that already is in place or secured, as opposed to merely anticipated or contingent upon some future event. In addition, as noted in conversations between our respective staffs, UMTA has technical problems with the preliminary cost-effectiveness indices provided with your letter. These preliminary indices are needed to address UMTA's alternatives analysis threshold criteria. We understand that the region is currently developing a new ridership forecasting model which presumably could result in acceptable input data for recomputing the cost-effectiveness indices.

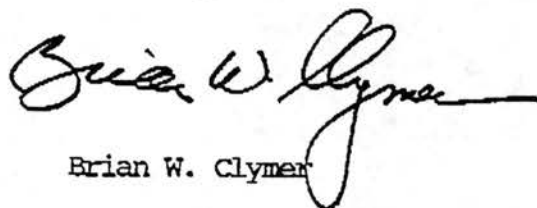
In summary, all three of the corridors mentioned in your letter would require alternatives analysis to be eligible for UMTA new start funding. Once acceptable cost-effectiveness data have been developed, UMTA will be in a position to consider your request to enter alternatives analysis in one corridor. To enter alternatives analysis in more than one corridor, as noted above, both acceptable cost-effectiveness data and in-place local funding would be necessary.

Finally, your letter asked UMTA to permit the HCRA to proceed with implementing a turnkey planning project using \$1.5 million in Section 8 funds approved in 1989. Although the scope of the guideway system and your interest in Federal funding have changed significantly, we agree that the turnkey approach still may have merit. We suggest that the study scope be expanded to encompass other parts of the regional system rather than just the portion located in Hennepin County. The study scope should also recognize that, if Federal funding is to be obtained, the turnkey procurement process will need to be designed in such a way that Federal requirements can be met. UMTA has been discussing these procedural issues with other cities that are considering a turnkey procurement, and we would be happy to discuss them with the Twin Cities as you move forward.

While these matters are being resolved, UMTA is willing to work closely with FHWA, the State, and local agencies involved in the I-35W corridor studies to ensure that the draft EIS currently under development meets all of UMTA's environmental requirements. We will also work with you to determine what additional environmental work would be required in the Hiawatha corridor since the 1985 FHWA-sponsored EIS did not adequately cover all of the proposed light rail project.

It is clear that the Twin Cities region has made significant progress in planning for a fixed guideway system. Obviously, a number of steps still need to be completed. You have my assurance that UMTA will continue to work with you to the maximum extent possible to further the project expeditiously.

Sincerely,



Brian W. Clymer

3.

cc: Steve Keefe, Metropolitan Council
Paul McCarron, Anoka County Regional Railroad Authority
Mark Andrew, Hennepin County Regional Railroad Authority
John T. Finley, Ramsey County Regional Railroad Authority

Kathy Despiegelaere

Ramsey County Regional
Railroad Authority
Documentation

John T. Finley, Chairman

District 3

Duane W. McCarty, Vice Chairman

District 1

Warren W. Schaber, Secretary

District 6

Ruby Hunt, Treasurer

District 5

Diane Ahrens

District 4

Hal Norgard

District 7

Donald Salverda

District 2

Ramsey County Regional Railroad Authority

316 Courthouse, St. Paul, Minnesota 55102 612-298-4145 / FAX 292-6689

AGENDA

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

TUESDAY, AUGUST 28, 1990

1:30 P.M. - LARGE CONFERENCE ROOM - 316

1. * Approve the 1991 proposed Tax Levy of \$3,915,266, which, in accordance with the Truth in Taxation Law, must be certified to the County Taxation Department by September 1, 1990.

* Action is requested.

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

<u>Regional Railroad Authority</u> <u>Originating Department</u> <u>K. DeSpiegelaere</u> <u>8/19/90</u> <u>Authorized Signature</u> <u>Date</u>	<u>Board Action Requested</u> Approve the 1991 proposed tax levy of \$3,915,266 which, in accordance with the Truth in Taxation Law, must be certified to the County Taxation Department by September 1, 1990.
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Request Justification

- See attached: 1) Proposed resolution
2) Memorandum from K. DeSpiegelaere

<u>Budgeting and Accounting</u> <u>Ed Gienahy</u> <u>8/21/90</u>	<u>Date / Time</u> <u>Received By</u>
<u>County Attorney</u> <u>[Signature]</u>	
<u>Risk Manager</u>	
<u>Data Processing</u>	
<u>Previous Action taken on Request</u>	

Comments / Recommendation

Documentation certified complete for:

<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
<u>August 28, 1990</u>	<u>F. L. Glendinning</u>	<u>8/21/90</u>
<u>Board Date</u>	<u>Signature</u>	<u>Date</u>



Resolution

Board of

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

Date: August 28, 1990

No. R90 -

48

WHEREAS, The Truth in Taxation Law requires the Ramsey County Regional Railroad Authority to certify a proposed tax levy each year to the County Auditor; and

WHEREAS, The Minnesota Department of Revenue has notified the Ramsey County Regional Railroad Authority that the proposed tax levy to finance the 1991 budget must be certified by September 1, 1990; and

WHEREAS, A provision of the Truth in Taxation Law is that the approved tax levy for the 1991 budget cannot be more than the proposed tax levy certified by the Ramsey County Regional Railroad Authority by September 1, 1990; Now, Therefore, Be It

RESOLVED, The Ramsey County Regional Railroad Authority hereby establishes the proposed tax levy to finance the 1991 budget in the amount of \$3,915,266, which is equal to the levy approved in 1990.

John T. Finley, Chairman

By Warren W. Schaber, Secretary



Room 316 Courthouse
15 W. Kellogg Blvd.
St. Paul, MN 55102
Phone 298-4145

John T. Finley, Chairman

District 3

Diane Ahrens

District 4

Ruby Hunt

District 5

Duane W. McCarty

District 1

Hal Norgard

District 7

Donald E. Salverda

District 2

Warren W. Schaber

District 6

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathryn DeSpiegelaere, Director of LRT Planning *KD*

SUBJECT: 1991 Budget - Proposed Tax Levy for Truth in Taxation Notice

DATE: August 16, 1990

The Truth in Taxation Law requires the Ramsey County Regional Railroad Authority to certify a "proposed" tax levy each year to the County Auditor. The Minnesota Department of Revenue has notified the Authority that the proposed tax levy to finance the 1991 budget must be certified by September 1, 1990.

AN IMPORTANT PROVISION OF THE TRUTH IN TAXATION LAW IS THAT THE APPROVED TAX LEVY FOR THE 1991 BUDGET CANNOT BE MORE THAN THE PROPOSED TAX LEVY CERTIFIED BY THE RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY BY SEPTEMBER 1, 1990.

It is our recommendation that the proposed tax levy to finance the 1991 budget be set at \$3,916,266 which is equal to the levy approved in 1990.

This amount will provide sufficient funding for all anticipated programs and projects. The reason we are submitting this figure is to allow the Authority the flexibility to review this decision during this year's budget process.

The proposed budget, which will be presented to the Rail Authority later this year, will be less than the levy proposed for certification.

KD/blk

Kathy Despiegelaere

Ramsey County Regional
Railroad Authority
Documentation

file

John T. Finley, Chairman

District 3

Duane W. McCarty, Vice Chairman

District 1

Warren W. Schaber, Secretary

District 6

Ruby Hunt, Treasurer

District 5

Diane Ahrens

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Hal Norgard

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Donald Salverda

District 2

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AGENDA

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

TUESDAY, AUGUST 28, 1990

10:30 A.M. - Large Conference Room - 316

1. * Minutes of the Ramsey County Regional Railroad Authority Meeting of August 14, 1990.
2. Chairman's Comments
3. Update on Ridership Forecasts for Midway Corridor - Discussion
4. Scheduling of Work Sessions - Discussion
5. * Assumptions for park/ride facilities for the Midway Corridor
6. Ten-year budget for LRT in LRT Coordination Plan - Discussion
7. LRT Coordination Plan - Implementation and Organization
- Discussion and Possible Action
8. * Adopt first level evaluation criteria and alignments for further study for Northeast Corridor
9. * Authorize BRW to prepare grant applications for LRT funds to Mn/DOT at a cost not to exceed \$5,000.00
10. * Ratify Partial Payment No. 10 to BRW, Inc. in the amount of \$107,744.28
11. * Ratify Partial Payment No. 2 to SRF, Inc. in the amount of \$18,865.32
12. * Ratify Partial Payment No. 3 to SRF, Inc. in the amount of \$27,848.91
13. * Approve Amendment #2 to Contract Agreement No. 65438 with State of Minnesota, Department of Transportation, and authorize the Chairman of the Railroad Authority to sign on behalf of the Railroad Authority

* Action is requested.

MINUTES

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

August 14, 1990

The regular meeting of the Board of the Ramsey County Regional Railroad Authority was called to order at 10:45 A.M. in the Large Conference Room of 316, Court House. Chairman Finley presided.

MEMBERS PRESENT:

Chairman John Finley
Commissioner Diane Ahrens
Commissioner Ruby Hunt
Commissioner Duane McCarty
Commissioner Hal Norgard
Commissioner Donald Salverda
Commissioner Warren Schaber (entered following Item 1)

Also Present:

Robert Clarkson, Hugh Faville, Steve Wilson, Gary Grefenberg, Paul Mandell, Terry Lindeke, Gary Simpson, Karen Tero, Toni Baker, Terry Schutten, Dave Warner, James Tolaas, Jill Goski, Kenneth Weltzin, Dick Elasky, Peter Vanderpoel, Kathryn DeSpiegelaere, Frances Glendenning

1. Minutes - of the July 24, 1990 Ramsey County Regional Railroad Authority

Commissioner Norgard moved the following recommendation, seconded by Commissioner Hunt.

The Ramsey County Regional Railroad Authority approves the minutes of the regular Ramsey County Regional Railroad Authority Board meeting held on July 24, 1990, as written.

Roll Call: Ayes - 6, Nays - 0
Motion adopted.

Commissioner Ahrens at this time asked if No. 5 could be moved up, as she will have to leave at 11:30, and she would like to hear any discussion.

The Board considered No. 5 at this time, however, the minutes will appear in the regular agenda order.

2. Chairman's Comments

Chairman Finley had no comments at this time.

3. Cedar Street Bridge over I-94

Chairman Finley believes at the last meeting we had Mn/DOT here, and they thoroughly went over and analyzed the I-94 bridge, and we have a memo as to the cost of preparing for it now. It is appropriate that Cedar Street be made available for light rail transit as this is the choice for surface alignment, at this point the question is who would be paying for it. It seems appropriate all the times we were saying we were telling everyone else, you have to apply for light rail, now we have an opportunity to apply for light rail in a project that has not started construction, and maybe we should listen to our own advice to all the other entities that we have given it to.

Ms. DeSpiegelaere wished to remind the Board that at the last meeting the issue was the width of the bridge, this is sufficient for LRT, but the structural capacity, right now the bridge is supposed to be constructed with a grass median, adding LRT now would save about \$150,000 later. She has advised Mn/DOT about matters to consider in the cost issue, and one is that Darrel Jurgen is a member of the LRT Advisory Committee, he has made statements, not specific cost participation, but about Mn/DOT's participation in planning for LRT. In her conversations with Hennepin County they say that in several instances Mn/DOT has accommodated LRT when the alignment has been determined for that.

Ms. DeSpiegelaere informed the Board that Richard Elasky is here today to respond to any questions.

Commissioner Hunt had a question, at the last Capitol Architectural Board Meeting they discussed the alignment, and she left before they finished, and she would like to ask Gary Grefenberg if they ended up with a consensus, and did most of their consensus end up with Cedar Street.

Gary Grefenberg addressed the Board, at the end of the meeting Commissioner Hunt referred to, there was closure that the two surface alignments that needed further study were coming up Cedar, crossing the Cedar Bridge, and going along 12th toward the Service Buildings, and the second momentarily escapes him, and the other one was on I-94 or Como or University, and using this behind the Capitol, down Jackson, so one of the primary alternatives that they will continue to study with the Ramsey staff includes at large the study tunnel alternatives are further behind, they do not want to make a final decision on which alignment they preferred until the tunnel study was up to speed with the at grade alignments, but there is a good possibility that Cedar Street will be a connector between downtown and the Capitol area.

Chairman Finley asked if Mn/DOT has thought about paying for it, can it be included in with the total cost of the I-94, or is that subject to negotiations.

Mr. Elasky informed the Board that Mn/DOT has thought about it, and Ms. DeSpiegelaere has summarized it fairly well in terms of position, he does not

know if he should go through all of the details. There is sufficient width on the structure to accommodate LRT, the structural capacity would have to be modified with positioning of some beams. Contracts have already been let, anticipating construction during the 1991 construction season. It is integral to the structural modification for 94 which has to be done next year. The other factor is that they are carrying steam lines, District Heating, so this has to be dealt with during the summer months, so they would not have any other opportunity to do it next year. The two options that are available would be to prepare a supplemental agreement to the existing contract, and that could be done, the bridge people indicated that this would be approximately \$216,000 if it were to be added today. The other key factor is that this is a steel structure, and steel delivery is running from six to nine months, and in order to do a supplemental agreement, we would have to insure that the steel would be here for next year. The change would have to occur almost immediately.

Mr. Elasky continued, the other option obviously is to come back and retrofit when a firm decision is made of finding implementation dollars. If we do wait and retrofit, it is possible to retrofit, it is possible to do that. The cost could go up, however, the cost would be \$366,000 if we were to retrofit some time in the future. The difference in these options would be about \$150,000. Obviously, there is a risk involved here in term of the additional expenditure, regardless of whether it is county or state funds. The Department feels that the risk is too great to invest the additional dollars now, without really knowing that we have firm commitments. If the County wanted to advance those dollars, the department would certainly be willing to draw up the supplemental agreement. This is a decision for the County Board.

Mr. Elasky had another suggestion, from the Metro District perspective, there is a high degree of interest on the part of Commissioner Levine, and the Deputy Commissioner in cooperating with other agencies on transportation. He would suggest that perhaps the County Board could direct a formal request to the Commissioner asking for consideration of the additional expenditures.

Mr. Grefenberg mentioned that there was some concern that if Cedar is used to carry LRT across the freeway that the design for this into the Cedar Bridge be done in a careful and studied manner, as they designed that bridge not to just be a freeway overpass, and they have been working with the Department of Transportation on this. What we need to do fairly quickly is to ascertain where LRT goes on the bridge, he would not necessarily make the assumption that the only place is the median, the median should be one of the places on the bridge, and therefore, that study on how we accommodate the bridge may have some impact on how much money it is going to cost. So, it is incumbent upon public sector to ascertaining if LRT runs across the bridge what portion of the bridge it uses. This may affect the amount of money. He would like to work with Mn/DOT and Ramsey County Staff to begin to explore that issue further. If his understanding is correct, much of the additional funds are there to make sure that the median can carry LRT. If we are not using the median, but one of the two streets on either side of the median, do they need to spend these extra funds in shoring up the bridge.

Mr. Elasky said they probably would not, but if you are talking about lanes of traffic, they may be able to get by with less capacity on the structure in terms of overall capacity.

Mr. Grefenberg pointed out that those questions need some preliminary answers fairly soon.

Chairman Finley asked if the decision was made to use Cedar Street at a later date, would Mn/DOT revisit the question of funding. Mr. Elasky thinks they would. Almost all of these situations are very unique, and the Department does not have a formal stated policy in terms of participation in terms of LRT in general. The Assistant Commissioner will be making a presentation regarding this in the future, at which time the department will have a formalized position.

Chairman Finley suggested that the Board take Mr. Elasky's suggestion, pass a resolution, instructing the Chairman to request from the Commissioner consideration to accommodate LRT at this point on that bridge, to be funded by a Supplemental Agreement with the highway funds, to make that request of the Commissioner at this point, and see where we go from there.

Commissioner Hunt said the question remains as to whether or not it would be possible to have enough design decisions made. Maybe this is too premature to expect to get an answer that the DOT prior to any final decisions being made as to where on the Cedar Street it would go.

Chairman Finley feels this is a problem as we would not know until after the tunnel study. Ms. DeSpiegelaere said we should know this by October.

Commissioner Hunt asked that Chairman Finley repeat the motion.

Chairman Finley repeated that the Board request that a letter be sent over his signature to Commissioner Levine to see whether or not they could fund. He is sure if he looks at it, he is going to go back to the staff and see what the actual costs are going to be for funding of LRT accommodation on Cedar Street.

Commissioner Salverda commented by endorsing the beefing up of the bridge for the future, we are sending a signal that LRT is coming, and to express our commitment. With the retrofit there is nothing worse in the public eye after the fact. This will be an indication of our commitment to the big picture.

Commissioner Salverda moved the following recommendation, seconded by Commissioner Hunt.

WHEREAS, Ramsey County Regional Railroad Authority has determined with the advice of its Downtown LRT Advisory Committee that the preferred location for LRT, if it is on street level in downtown St. Paul, is on Cedar Street and Fourth Street; and

WHEREAS, The Minnesota Department of Transportation is planning to replace the bridge over I-94 on Cedar Street in 1991 without making accommodations for LRT; Now, Therefore, Be It

RESOLVED, That Ramsey County Regional Railroad Authority Chairman John T. Finley is requested to send a letter to Commissioner of Transportation Leonard Levine requesting that the engineering plans for the Cedar Street bridge over I-94 be revised to accommodate LRT in order to avoid greater expense later and that the funds for that additional engineering work and increased construction costs be provided by the Minnesota Department of Transportation.

Roll Call: Ayes - 6, Nays - 0
Motion Adopted.

R90-50

4. Ridership Forecasts for Midway Corridor

Chairman Finley discussed the delay in this forecast as the Met Council does not have the model done which is delaying the entire process for the Midway Corridor. After the July meeting, he had sent a letter to Steve Keefe regarding our schedule and the forecasting, but to date he has not had a response. Should we take it away from Met Council and let BRW do it.

Dave Warner from BRW was present, and he informed the Board that Met Council is in a position to deliver the forecast with the next two weeks.

Chairman Finley stated that we are still being delayed in our process, and asked what this will mean. Mr. Warner said your decision would not be made until March when the EIS is completed.

Chairman Finley feels this will put this Board three months behind.

Ms. DeSpiegelaere suggested that this might be a matter that should be brought to the attention of the Legislators, as this is a problem.

Chairman Finley requested that Ms. DeSpiegelaere put together a letter to the Legislators regarding this, we are very concerned, we are being asked to make a decision, and cannot make this decision on the basis of information available. This letter should be sent personally to the members of the Legislative Delegation, and a copy to Steve Keefe as to our situation, and the delay in the process.

The Board was in agreement on this.

Commissioner Schaber left during the discussion of this matter.

5. Progress on LRT coordination Plan

Chairman Finley gave his feeling on the Coordination Plan, there are some serious things that concern him, it was the manner in which it was brought in, our staffs did not have a lot of input into the recommendations that came to the LRT Advisory Committee, as he understands it in meeting with Ms. DeSpiegelaere and some of the staffs from the other counties. They came, and now it is there, and it is the recommendation that the RTB do it. He has been sitting on the RTB now for almost a year, and when he originally got on it, he thought that it would probably be a good idea for construction, but he no longer has that feeling. It is volatile, it is political, we have an election year right now, the way it is set up, if you remember, is the Met Council appoints the RTB members, so first of all, you have appointed officials appointing elected officials, which is a little inconsistent. Then you have the Governor appointed three people, and they have no engineering people at all to oversee an actual construction. What we were always thinking of, at least he was, you think of planning that you could save, you look at operations and we already felt that the MTC should operate, but there has always been a gap as to who was going to pound the nails, and put down the track. There are some pros and cons in this LRT Coordination Committee, and he thinks some of the things that they cited as disadvantages of a County Joint Powers for example are actually advantages. We have public works, engineering type people employed. Even with the City of St. Paul, he went to the Mayor a few months ago, and said that we have to get, when we were looking at the Midway Corridor, people with measuring sticks. We do not need people who can think pie in the sky, we need someone who says this fits in 120 feet, or whatever. That is what you need, the engineers, surveyors. So, he does not really concur with the recommendations, and more importantly, he does not like the way it came in to the Advisory Committee without a lot of input with the staff, where the staff could come back to the respective boards at an early date.

Chairman Finley continued, now, the position it is in, and he does not wish to cut off Commissioners Ahrens and Hunt, but he wants to get to the part of it, they passed it back to the staffs. There is a recommendation now for the staffs to try to respond to it, it would be self-serving if they do anything saying that the Counties should be doing it, unless they concur with the recommendation, it is very difficult for them to analyze it. If you say a consultant should do it, or BRW says they should continue doing it, or whatever, everything becomes self-serving except the recommendations that came in. He just not think that was what was intended to begin by either the RTB or probably the Advisory Committee. He thinks we wanted the analysis, but we also wanted a lot of staff input, at least from his standpoint.

Commissioner Hunt said the last LRT Advisory Committee Meeting was a very interesting one. She thought there were some unfortunate things about it, there was a lot of staff bashing that went on that was not quite appropriate. Things could have been said in a much better manner. One of the things that she feels is positive that came out of this report is something that this Board has been talking about a long time ago, and that is that the individual counties should not be doing the construction, and there are some counties that would just as

soon have done it that way, but from our standpoint, because the Midway Corridor crosses two counties, we felt very strongly, and have discussed in the past that it should not be the individual counties that do this.

Commissioner Hunt feels that there is a lot of food for thought in the report that came out from the consultants, and she thinks they are very able consultants, perhaps they should have consulted more with some of the staff, but on the other hand, they did list a variety of alternatives. The prospect of the Department of Transportation filling this kind of a role certainly should be explored because there is a lot of experience there at that level that is not at the RTB level, or necessarily at the County level. Another observation she would have is that there was a lot of discussion on turnkey, this is something that we had expressed some concerns about on that whole process. She thinks the consultant has some very good background on turnkey that backed up the recommendation that the Midway Corridor not be on a turnkey basis, and that it might be considered for some other alternative.

In conclusion, Commissioner Hunt would like to say that the other item on the agenda today, that is Item 7 the UMTA response to the request for Federal Funds, and this letter is very significant from the standpoint of what they are saying and what it does to Hennepin County's maintaining in the past that they were going to get this \$24 million which is really down the drain, and as she pointed out at the meeting, she would like to see if there is some staff way, without a lot of extra staff work, that we are able to get this information. She pointed out to the Committee as a point that as a point that this had been called to her attention that UMTA has not funded any LRT. The funding that has gone on for LRT has strictly come from specific legislation that was passed by Congress. Why we are talking about turnkey as being important because that is the way we are going to get UMTA fund, when no one is getting UMTA funds anyway, then she thinks that we are looking that the advocates of turnkey are advocating turnkey on the basis of a false premise.

Chairman Finley thinks that the letter says what Ms. DeSpiegelaere and he felt when they came back from a meeting a year and a half ago, and reported to this Board where we felt that it was. That it was very, very tenuous, and when we heard around that the money was there. They really did not think it was there, but that Mr. Clymer was essentially saying that.

Commissioner Ahrens addressed the Board, after the meeting last week, she did not appreciate the staff and consultant bashing that went on. There were two things that were discussed, the turnkey and the traditional approach. The traditional approach for the first segment for our segment and Hennepin's segment was not received well by Hennepin County at all. In fact, they said they were doing their own analysis of turnkey. She thinks that we have to watch that real carefully, and be very assertive about that because most of that segment is going to be built in our own county. She is not saying that certain things could not be turnkey, perhaps they could.

Commissioner Ahrens continued, another issue is the structure for the governance of this whole construction thing, and one of the things that the consultants did, and they said it clearly where there was a lot of discussion about their recommendation on the use of the RTB. They said very frankly that was not their first choice. Their first choice was sort of No. 5, only it was not the No. 5 chart described, it was a separate entity in which they called the LRT Construction Commission, but would be made up of, it was really a hybrid, she referred to Page 24 of the full report. Regardless of what came in, we were looking at something that would be more tailored to the specific needs. The other thing which she thought was important was that they said as the segments are built, and we move out from segment to segment, you can have a different Construction Commission or governing board, whatever you want to call it, maybe even based on the segment that is being built. She thought it was much more fluid than the report was.

There was a lot of discussion, Commissioner Ahrens said, about the Joint Powers issues, and whether this would be a good idea. After her experience on this Committee, that she is absolutely opposed to any Joint Powers which would include a whole lot of people, be they elected or appointed, that have no vested interest, no real interest. This has been part of the problem with the LRT Advisory Committee. We have counties on there that are not building, who don't really don't care, some come to the meetings, and some don't. They either come and vote the wrong way in terms of their own interest, which has happened, or they are completely uninformed, and they sort of go with the wind. She does not think that is useful, and that goes for the appointed as well as the elected people. The people who frankly are the ones who discuss things are from Anoka, Hennepin and Ramsey County, and they are the ones who are prepared, based on their own kind of preparation and interest. If we are going to discuss Joint Powers, it has to be those counties who really have a basic concern about what is being built.

Chairman Finley agreed this is a good point which Commissioner Ahrens had mentioned to him the other day when they were discussing the report. This is sort of a hybrid of the Joint Powers. After thinking about what she had mentioned, he thinks that is probably true that it may be the best way to do it, leaving the structure essentially in place, except that the joint construction be the counties into where the line goes, and the other counties who have an interest, for example, Anoka, even though they are not on the first construction, that they maybe have a non-voting membership, or whatever. There is some type of a hybrid, at the present time the momentum is there under the present structure. Again, one of the things that concerns him is that here we are changing a structure again that, for the first time has actually had pretty good coordination, regardless of the fighting, regardless of the respective positions, this structure has pretty much worked in the last year and a half that the Legislature set up with the RTB and the Advisory Committee. What it has brought out, if nothing else, is the different interests of the different people. But, we have the same thing on the same issue even within St. Paul. So, it is not just a matter of being from Anoka or Hennepin, he still maintains that our biggest problem is right here, not with the RTB or the Advisory

Committee because this is the real nuts and bolts, this is where we are going to have to get it resolved from our standpoint. Chairman Finley feels that the issue is going to be a Legislative decision in any event, and he does not know if we need any action at this point, but we did want to make sure that you had this information.

As he understands it, Chairman Finley said the Committee was to go back to the staffs for a report, which would have probably helped everyone, had that taken place before it ever came to the Advisory Committee.

Commissioner Hunt said, as the Chairman has touched on earlier, she thinks the whole picture could change after the election. The different appointments could be made by whomever is Governor, we will have a discussion that could take place during the election races that are going on - this could have a bearing on the shape of things after the first of January. The question is at what point do we come up with a final agreement.

Chairman Finley thinks that the Coordination Plan calls for submission to the Legislature by the RTB of a Coordination Plan. He agrees, the Governor is going to control the Metropolitan Council seat, the RTB Chairmanship, and at least probably two on the RTB, plus there are appointed positions that will be coming up on the Metropolitan Council, he is not sure how many are up in the next year, but those seats can change, and they appoint the RTB of which there are some seats coming up in 1991. All seats come up during the next term of the Governorship, so it could be completely turned around even if it stayed in the same party. You start thinking about structure, so he tries to get away from the people who are there, and look at the structure, and he is not so sure that the structure as it is right now could work regardless of who was Governor, just because of the volatile nature of how it would be set up with different appointments to the Met Council, RTB. The people will decide who the elected officials will be.

Commissioner Salverda commented that Chairman Finley is sharing some frustration with the RTB, and Commissioner Ahrens with the Advisory Committee. In your contacts with other members of the RTB, do they have the same frustrations as Ramsey County, or are we isolated.

Chairman Finley stated he does not have frustrations with the RTB, he is talking about on the long term, the real construction of light rail transit. The present structure, he does not have a problem with the RTB Board at all, but he is looking at it that this could change, and the membership could change because of the way it is set up through legislation. He does not have any problems the way it is right now, he thinks that we are in a good negotiating position with the present structure with the membership, but that is not always going to be that way, that is his point. We should not base the total construction of a light rail transit based upon personalities, it should be the method of appointment and that is his point. The method of appointment has to be dealt with if the RTB is going to do it, so that there is some continuity, some strength to see the process through, and not really subject to it.

Chairman Finley reiterated, he does not have frustrations with the RTB, but he also knows that they do not have the construction capabilities within their staff as they have never been in the construction business to do it. It would be a whole gearing up of a public works staff for them to do it, unlike Mn/DOT or the counties.

Commissioner Ahrens said they have to come in because of the legislation with some kind of recommendation, and we certainly want to have input into that. It would seem to her that this Board should come to terms with what we would find as acceptable alternatives for the governance, it maybe two, or three that we could live with. They have not discussed the Highway Department doing this, she thinks that has some real benefits, and she personally feels very supportive of that. They have not talked about the hybrid, if we want to go in that direction, and what we would see as a hybrid. There may be another alternative out there that we would want to look at, but she does not think that we can that at this meeting necessarily, but she does think that since we are being driven to a decision because of the process, that we, as a Board, need to participate in that decision, and we need to come to terms with, whether it is what we can live with, we may want to put it in terms of our preferences, A, B, and C. Clearly, she thinks we are saying that there are some things that we do not want to live with, and they would not be on the list. She would like to see us come at it that way, otherwise, she knows that other people are pressing their own agendas in this whole picture, and they may jump into this and say this is the way it should be, and run around selling this. Meanwhile, we may still be struggling.

Commissioner Hunt, in response to Commissioner Salverda, does not wish to say that it is frustration as much as challenging, and she thinks that we have been able to maintain our own position in the Committee activity fairly successfully just by sheer determination, and some good staff work from Kathy DeSpiegelaere who really helps us tremendously on these very complex kinds of things at those meetings. But, she did want to say that she thinks there is another matter in connection with the Coordination Plan which she does not believe they have discussed, and this was an item that came up when Commissioner Ahrens was ^{not} there, she had some reservations when she heard about it. Commissioner Hunt voted in favor of it, but she thinks it is well that we put it on the agenda some time, and talk about it. This is in speeding up the construction of feeder lines into the main spine between downtown St. Paul and Minneapolis. In connection with the RTB, the RTB, over Mike Ehrlichmann's signature, has put out material that indicates that the Midway Corridor line would be a sort of a demonstration project, and once that were established, and in place, it would be determined whether or not we should proceed further, and whether or not LRT was going to be successful. That has been in the material that has come out from the RTB. On the other hand, the LRT Advisory Committee when it discussed the amount of money that would be brought in by a sales tax in the metropolitan area, discovered that there would be much more money than was needed on the regular schedule, they speeded up the construction schedule for additional lines.

Commissioner Hunt continued, without fully understanding the consequences of how that might affect the whole project, she did support that, but she thinks it might be well for some second thoughts as to whether or not that is a good recommendation, as it has some pretty significant implications.

Commissioner McCarty said that perhaps we need to get more information to the news media, as there was an article in the local newspaper from a member of the RTB last week, clearly stating that it was the RTB in the last year with their national experts that developed our plans, Group A, B and C. There is a lot of confusion as to who is doing what. Perhaps we ought to have Chairman Finley representing us more actively with press.

Commissioner Ahrens added, what she objects to is having a facade, a paper speed up when all the experts, who know anything about LRT all over the world, tell you that it takes a certain amount of time to do this. To just say we don't like your timeframe, we are going to speed it up, cut out four years, she does not know who is fooled by this. This is the objection she had. If it could in reality be speeded up, that would be fine, but this was a paper speedup that was not based on any reality.

Ms. DeSpiegelaere said this is on today's agenda, this is the last item for discussion, the ten year schedule and budget for LRT, the sales tax.

Commissioner Schaber asked if the "Tribune" went on record editorially as being opposed to RTB being the group that in effect was going to do construction, which laid out some fairly strong feelings on that issue. Chairman Finley said it was.

Commissioner Schaber thinks that Commissioner Ahrens suggestion is a good one we should have our own alternatives, if we want to do it that way, we should say so, but if we have another suggestion, we should at some point in time be ready to have our feelings known.

Chairman Finley agrees, the hybrid type thing, but not have it structured as a Commission, but possibly the two counties, with Mn/DOT doing the work, there are various alternatives, and those of us who have been around here for a long time and see how things really work sometimes get a better feel for how things can be accomplished, rather than have someone come in, look at it on paper and theory. Mn/DOT has a lot of experience at building the system. Whether it be Mn/DOT or RTB the one concern he has is that citizen participation may be gone, that is a real reality which can create some problems.

Commissioner Schaber feels there is advantage to our having an on hands construction, as we are going to be blamed if someone else takes it over.

Chairman Finley said they had a meeting, and some of the Commissioners had a feeling, and he somewhat feels the same way, we are either going to be in or out.

Commissioner Schaber would like to know where the shops for this line are going to be built, how is our line going to get there.

Ms. DeSpiegelaere explained the proposal is to build the yards and shop south of 94, in Hennepin County, they have a site there. As plans progress, all lines would connect with that facility.

Commissioner Schaber said then there is a logical step that we can assume will happen. Chairman Finley added that Hennepin County RRA bought the property already, and he pointed out on the map the location.

Chairman Finley requested that the staff do whatever the Advisory Committee asked them to do, represent us well as usual. Our Commissioner members of the Advisory Committee have a sense of what we have been saying, as he thinks they sort of spurred this, that possibly some more alternatives should be looked at. Staff does not really have to do the analysis, but one thing that could be touched upon in meeting with the other staffs is that our Board feels there are other possibilities, hybrids is what is being proposed, supervision and construction being done by one, and supervision of the construction by someone else, like Joint Powers, or whatever, turnkey or not turnkey.

Commissioner Ahrens left the meeting at this time.

6. Grant Applications for Engineering Funds

Chairman Finley discussed the memo in the documentation, the three grant applications.

The Board agreed that application should be made for all three projects.

Ms. DeSpiegelaere said it would also be possible to apply for funds to prepare an Environmental Impact Statement for the Northeast Corridor, although that was not included as a recommendation.

Ms. DeSpiegelaere wanted to make the Board aware that application for these grants will require additional staff to work on these projects if they are funded.

Commissioner Hunt moved the following recommendation, seconded by Commissioner Norgard.

WHEREAS, Ramsey County Regional Railroad Authority has been invited by the Minnesota Department of Transportation to submit grant applications for LRT funds; Now, Therefore, Be It

RESOLVED, That applications are authorized to be submitted for the following projects:

1. Approximately \$1 million to continue Phase II preliminary engineering for the Midway Corridor.
2. Approximately \$150,000 for the Ramsey County portion of the South Corridor Environmental Impact Statement.
3. Approximately \$250,000 to conduct an alignment study in the Northwest Corridor.

Roll Call: Ayes - 5, Nays - 0
Motion adopted.

R 90-50

7. UMTA Response to Request for Federal Funds

Chairman Finley discussed the UMTA letter regarding funding, and the fact that no UMTA funding is proposed for the Midway Corridor, although UMTA indicated that was one they would view favorably.

Commissioner Norgard asked where does this leave Hennepin County with regard to their grant.

Commissioner Hunt said that Commissioner Derus had mentioned they were unhappy with the response, and this put them back to square one.

There being no further matters to come before this Board, Chairman Finley declared the meeting adjourned.

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

2

Chairman Finley _____ Originating Department _____ <u>John T. Finley /s/</u> <u>8/21/90</u> Authorized Signature Date	Board Action Requested _____ CHAIRMAN'S COMMENTS
Request Justification _____	

Budgeting and Accounting _____

County Attorney _____

Risk Manager _____

Data Processing _____

Previous Action taken on Request _____

Date / Time _____

Received By _____

Comments / Recommendation _____

Documentation certified complete for:

Committee / Meeting Date _____

Committee / Meeting Date _____

August 28, 1990

Board Date

Signature _____

F. L. Glendon

Signature

Date _____

Date _____

8/21/90

Date

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

3

Regional Railroad Authority

Originating Department

/s/ K. DeSpiegelaere

8/21/90

Authorized Signature

Date

Board Action Requested

Update on Ridership Forecasts for
Midway Corridor.

DISCUSSION ONLY

Request Justification

A verbal report on the status of ridership forecasts for the Midway Corridor will be given at the meeting by BRW staff.

Budgeting and Accounting

Ed Blankity 8/21/90

County Attorney

Risk Manager

Data Processing

Previous Action taken on Request

Date / Time

Received By

Comments / Recommendation

Documentation certified complete for:

Committee / Meeting Date

Signature

Date

Committee / Meeting Date

August 28, 1990

Board Date

Signature

J. L. Henderson

Signature

Date

8/21/90

Date

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

4

<u>Regional Railroad Authority</u> <u>Originating Department</u> <u><i>K. Delpradere</i></u> Authorized Signature <u>8/20/90</u> Date	<u>Board Action Requested</u> Scheduling of work sessions <u>DISCUSSION ONLY</u>
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Request Justification

As it was necessary to cancel the Work Session which had been scheduled for August 21st, new alternate dates for Work Sessions will have to be set, as there may be a conflict with other County Board Committee Meetings.

<u>Budgeting and Accounting</u> <u><i>Ed Blawie</i></u> <u>8/21/90</u> <u>County Attorney</u> <u>Risk Manager</u> <u>Data Processing</u> <u>Previous Action taken on Request</u>	<u>Date / Time</u> <u>Received By</u>
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Comments / Recommendation

Documentation certified complete for:

<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
August 28, 1990	<u><i>J. L. Glendon</i></u>	8/21/90
<u>Board Date</u>	<u>Signature</u>	<u>Date</u>

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

5

<u>Regional Railroad Authority</u> <u>Originating Department</u> <u>K. DeSpiegelaere</u> <u>8/20/90</u> Authorized Signature Date	<u>Board Action Requested</u> Assumptions for park/ride facilities for the Midway Corridor. ACTION IS REQUESTED
---	--

Request Justification

- See attached:
- 1) Proposed resolution
 - 2) Memorandum from K. DeSpiegelaere
 - 3) Memorandum from BRW

<u>Budgeting and Accounting</u> <u>Ed Glantz</u> <u>8/21/90</u> <u>County Attorney</u> <u>Will MacMillan</u> <u>Risk Manager</u> <u>Data Processing</u> <u>Previous Action taken on Request</u>	<u>Date / Time</u> <u>Received By</u>
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Comments / Recommendation

Documentation certified complete for:

<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
<u>August 28, 1990</u>	<u>J. L. Glendenning</u>	<u>8/21/90</u>
<u>Board Date</u>	<u>Signature</u>	<u>Date</u>



Resolution

Board of

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

Date: _____

No. _____

WHEREAS, Ramsey County Regional Railroad Authority is preparing an Environmental Impact Statement for LRT for the Midway Corridor; and

WHEREAS, One assumption for the Environmental Impact Statement concerns the provision of park/ride facilities on each of the three alignments (Soo Line/I-94, University Avenue, and Pierce Butler Route/Burlington Northern) under consideration; and

WHEREAS, The ridership forecasting model has indicated that all three alignments could benefit from the provision of 1,000 to 1,600 park/ride spaces at station areas; and

WHEREAS, BRW has surveyed cities where heavy rail and light rail systems have been constructed to determine the policies relating to provision of park/ride services; and

WHEREAS, Three alternatives, (1) Provide park/ride facilities to meet demand; (2) Provide no park/ride facilities; and (3) Provide park/ride facilities where space is available have been considered; and

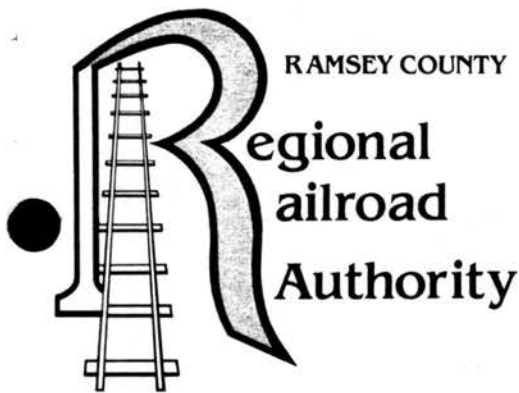
WHEREAS, The three alternatives have been compared to Ramsey County Regional Railroad Authority's goals for LRT; Now Therefore, Be It

RESOLVED, That park/ride facilities will be planned, for the purposes of preparation of the Environmental Impact Statement for the Midway Corridor, ~~on a space available basis~~ *on a maximum basis* on all three proposed Midway Corridor alignments; and Be It Further

RESOLVED, That Ramsey County Regional Railroad Authority will reconsider this matter on the basis of comments received on the Environmental Impact Statement for the Midway Corridor.

John T. Finley, Chairman

By _____
Warren W. Schaber, Secretary



Room 316 Courthouse
15 W. Kellogg Blvd.
St. Paul, MN 55102
Phone 298-4145

John T. Finley, Chairman

District 3

Diane Ahrens

District 4

Ruby Hunt

District 5

Duane W. McCarty

District 1

Hal Norgard

District 7

Donald E. Salverda

District 2

Warren W. Schaber

District 6

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathryn DeSpiegelaere, Director of LRT Planning *ZD*

SUBJECT: Park/Ride Assumptions for Midway Corridor Environmental
Impact Statement and Phase I of Preliminary Engineering

DATE: August 19, 1990

In order to complete the Environmental Impact Statement for the Midway Corridor, an assumption about provision of park/ride spaces for LRT patrons on each of the three alignments will need to be made. A memorandum from BRW that includes a recommendation on this subject is attached. A proposed resolution has been prepared for your consideration.

The provision of park/ride spaces may be a controversial subject. There are obvious advantages to LRT users if park/ride facilities are available to them. If park/ride facilities are not provided, parking on neighborhoods streets may occur and parking permits may be required near LRT stations. LRT users may seek to park in off-street lots of businesses near LRT stations. The land for park/ride facilities and continuing maintenance of them has a cost. St. Paul staff members have indicated that St. Paul may prefer not to have any park/ride spaces on any of the three Midway Corridor alignments, but may want to keep the land around LRT stations for development.

Ramsey County Regional Railroad Authority's goals that are relevant to this subject are:

- o To reduce the need for roadway construction or expansion; to assist in relieving congestion on roadways in Ramsey County.

Increased use of transit by existing auto users could be anticipated if park/ride facilities are provided at LRT stations. That may reduce the need for roadway expansion.

- o To enhance economic development in Ramsey County.

There are two divergent views in regard to park/ride facilities relating to this goal. While LRT may use land that could be developed for other purposes, it may also offer an opportunity for joint development at station areas that could benefit the transit agency or the City.

- o To respond to mobility needs in Ramsey County.

Provision of park/ride facilities would improve overall transit services and mobility.

- o To reduce environmental impacts associated with the automobile in Ramsey County.

It could be argued that the provision of park/ride facilities will bring autos into neighborhoods, rather than encouraging LRT patrons to use the feeder buses. The autos would increase air pollution, although they would not be used for the entire trip, since the occupants will be diverted to LRT.

The neighborhood impacts of having LRT patrons parking on residential streets or in off-street lots of businesses also are related to this goal.

Need for Action:

In order to complete the Environmental Impact Statement, assumptions must be made about park/ride facilities. The decisions made now by Ramsey County Regional Railroad Authority can be revisited, although it would be preferable to assume the alternative with the greatest right of way impacts for the Environmental Impact Statement, and modify that later after comments on the park/ride facilities are received in the review of the Environmental Impact Statement.

Recommendation:

For the purposes of the Environmental Impact Statement for the Midway Corridor, Ramsey County Regional Railroad Authority will assume that park/ride facilities will be provided on a space-available basis on all three Midway Corridor alignments. The conditions relating to space-available basis will be as indicated in the BRW memorandum.



BRW INC.

THRESHER SQUARE

200 THIRD STREET SOUTH

MINNEAPOLIS, MINNESOTA 55415

PHONE 612/370-0700 FAX 612/370-1375

PLANNING
TRANSPORTATION
ENGINEERING
URBAN DESIGN**MEMORANDUM**

DATE: August 17, 1990
TO: Kathy DeSpiegelaere
FROM: Richard P. Wolsfeld
Peter Smoluchowski
RE: Park-and-Ride Facilities for the Midway Corridor

OVERVIEW

Three park-and-ride alternatives in the Midway Corridor are evaluated and an approach for the provision of park-and-ride facilities is recommended. The first alternative provides park-and-ride facilities based on an unconstrained forecast of the need. The second alternative provides no park-and-ride facilities in the Corridor. The third alternative provides for park-and-ride facilities wherever adjacent land is available. This comparison, along with research on the experience of other cities, led to a recommendation. The research (see Appendix) showed that there are a variety of philosophies, no hard-and-fast rules, and that most systems have tried to use a "common sense" approach to the provision of park-and-ride based on transit goals and localized constraints.

PROVIDE FORECASTED PARK-AND-RIDE SPACES

Under this alternative, park-and-ride facilities are provided along the corridor based on an unconstrained (free, unlimited parking) forecast of the demand. Preliminary projections suggest a total of approximately 1,000 - 1,600 spaces would be demanded for any of the three proposed Midway Corridor alignments.

Advantages

- o Minimizes parking on residential streets and in off-street lots of adjacent businesses by transit users.
- o Increases access options to transit system, especially by new riders.
- o Maximizes ridership retention.

Kathy DeSpiegelaere
August 17, 1990
Page 2

- o Parking is available for non-transit use during off-peak (evenings and weekends).
- o Potential future joint use development of property.

Disadvantages

- o Requires acquisition of approximately 12 acres or 560,000 square feet of land.
- o Increases operational and maintenance cost - lighting, snow removal, landscape maintenance.
- o Utilize land adjacent to stations for parking lots.
- o Encourages automobile use and increases traffic congestion at LRT stations.
- o Reduces taxable property.

PROVIDE NO PARK-AND-RIDE SPACES

Under this alternative, no park-and-ride facilities would be provided in the Corridor.

Advantages

- o Minimizes right-of-way acquisition for park-and-ride.
- o Increases the availability of land adjacent to stations for near-term development/redevelopment.
- o Increases feeder bus usage allowing for the provision of better service.
- o Reduces capital costs (\$2,500 to \$10,000/space)
- o Minimizes operating and maintenance costs associated with park-and-ride lots.

Disadvantages

- o Reduces ridership
Maximum loss = 3,300 riders
 $1,600 \times 2 \text{ rides/day} \times 1.2 \text{ passengers/vehicle} \times 1.3 \text{ turnover} = 4,990$
assume 66% = 3,300

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Page 3

- o Increases the possibility of LRT patrons parking on neighborhood streets and in off-street parking lots of adjacent businesses.
- o Reduces the visual impact of the station and perceived level of service.

PROVIDE PARK-AND-RIDE SPACES WHERE POSSIBLE

For this alternative, a policy of providing park-and-ride facilities where land is available has been considered, such as existing government-owned properties, underutilized or abandoned properties.

Advantages

- o Increases access to transit system with minimum capital costs.
- o Maximizes ridership retention.
- o Increases parking availability for non-transit use during off peak hours.
- o Minimizes reduction of property on the real estate tax rolls.
- o Increases potential future joint use development property.
- o Minimizes parking on adjacent streets or off-street parking lots of businesses.

Disadvantages

- o Park-and-ride facilities are not uniformly distributed along the system.
- o Potential inconvenient locations or odd configuration of parking facilities leading to low usage.
- o Patrons come to expect park-and-ride facilities at every station.

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August 17, 1990
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SURVEY OF CITIES

A telephone survey of 15 cities with light and heavy rail transit systems was conducted to determine their park-and-ride policies. The intent of the survey was to find out how far from the each cities' downtown the closest park-and-ride facilities were located as well as design standards of park-and-ride facilities.

Although circumstances are different in every city, in most cases, where there was not a formally adopted policy, park-and-ride facilities are located in less dense urban areas usually at suburban locations. Where adjacent land to the station is available at political and/or financial acceptable costs, park-and-ride facilities are planned for each station.

The Midway Corridor presents a unique situation where the LRT line links two major downtowns. The situation is similar to the LRT line between Los Angeles and Long Beach. Within this eleven mile corridor, there may be opportunities depending on individual station locations that park-and-ride facilities would enhance both the convenience and ridership of the system, without adverse impact of adjacent properties.

The following table depicts a summary of a portion of the survey findings regarding location of park-and-ride facilities.

<u>City</u>	<u>Distance from Downtown to the Nearest Park-and-Ride Facility</u>
Atlanta (Heavy Rail)	1.0 miles
Baltimore (LRT)	3.0 miles
Buffalo (LRT)	6.5 miles
Calgary (LRT)	2.9 miles
Dallas (LRT)	1.0 miles
Los Angeles (LRT)	2.0 miles
Pittsburg (LRT)	2.0 miles
Portland (LRT)	5.0 miles
Sacramento (LRT)	4.5 miles
Saint Louis (LRT)	10.0 miles
San Diego (LRT)	3.5 miles
Washington (Heavy Rail)	4.0 miles

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RECOMMENDATION

Park-and-ride should be provided where at possible LRT stations in the Midway Corridor after an individual station site evaluations have been made. The number of spaces provided will be based on the availability of land. Site conditions may meet one or more of the following conditions:

- o Excess or underutilized City, County or State owned property adjacent to station sites.
- o Vacant land available adjacent to the station.
- o Substandard buildings underutilized on property adjacent to stations.
- o Willing seller.
- o Land available from "partial taking" for other LRT purposes (substations, turn lane, etc.)
- o Potential for sharing of replacement parking and park-and-ride uses.
- o Where neighborhood and commercial parking requires mitigation of LRT parking impacts.

RW/blp
cc: File 62-9004

APPENDIX

SURVEY OF TRANSIT AGENCIES

Questions:

1. Do you have a policy to determine the location and size of park-and-ride lots along the transit system?
2. How far from the downtown are the closest park-and-ride facilities?
3. At park-and-ride lots, what are your design standards for the maximum and minimum distances from the station platform to the first and last parking stall?

ATLANTA MARTA

Jerry Pachucki, Director of Planning:

No formally adopted public standards other than all parking stalls shall be within 1,000 feet of the station platform.

Parking requirements are decided on a station by station basis by using the following questions.

- o Is it an origin or destination station?
- o What is makeup of the market area for each station?

They have done patronage/facilities studies to determine the characteristics of the park-and-ride facilities. The results of the studies included the following items:

- o Market area
- o Turnover rates
- o Peak requirements
- o Average rider/car ratio
- o Maximum amount of traffic

The following are the distances along the line from downtown to the first park-and-ride facility.

Direction Distance

North Line	-	4 3/4 miles
South Line	-	1 3/4 miles
East Line	-	1 mile
West Line	-	1 1/2 miles

They have used the feeder bus system in the determination of the overall design of the station and capacity.

In the park-and-ride requirements for the new line they are planning are the following:

	<u>Type of Station</u>	<u>Number of Stalls</u>
Station #1	Destination	0
Station #2	Destination	0
Station #3	Destination	300-600
Station #4	Overflow for Station #5	1200
Station #5	Terminus/Origin	2500-3000

The parking facilities are adjusted to the shape of the available parcel and the type of design constraints encountered.

The kiss-and-ride areas are a percent of the total required park-and-ride area. They have converted some of the park-and-ride to space for taxi access.

BALTIMORE

Mr. Reichert:

Park-and-ride lots occur at less developed areas. The closest station with park-and-ride facilities is three miles from downtown.

They try to build about 75 parking stalls at each station. The lot is located no more than 300 feet from the platform and the farthest stall is no farther than 500 feet.

BOSTON MBTA

Michael Brennen:

They have no formally adopted standards but look at each site as an individual case study.

- o They charge for park-and-ride stalls. The cost ranges from \$2.00 - \$4.50. (The average parking space in downtown Boston is between \$12-15/day or \$350/month). A recent increase in parking rates has not decreased transit use.
- o They work with each community in which they are proposing a park-and-ride lot to avoid illegal parking around the lot and mitigate negative impacts on adjacent areas.

He found that patrons will always choose the most convenient and least expensive alternative to park around stations. Strict enforcement of illegal parking in a zone around the stations is important when requiring patrons to pay for parking.

The average sizes of lots along the system are the following:

Light and Heavy Rail: 1,500-100 stalls
Commuter Rail: 1,000- 20 stalls

They are planning to build larger parking facilities at major highway intersections.

BUFFALO

Gordon Thomson:

There was no provisions for park-and-ride within the City of Buffalo when the line was first planned and constructed. The only existing park-and-ride facility is located 6.5 miles from the downtown at the north terminus station where an existing university parking lot was converted.

Presently, the construction of a second park-and-ride lot is under consideration at the next station closer to the downtown and all parking stalls will be within 700 feet of the station platform. The 700 feet was determined from study completed in Cleveland and Newark airport. The studies showed that space beyond 700 feet from a pedestrian shelter was not used.

CALGARY

Carolyn Kushner:

They had park-and-ride for bus transit before LRT was constructed and had a departmental policy that there would be no park-and-ride lots closer than five kilometers (three miles) from the downtown. They wanted to intercept the vehicles outside the dense urban development.

Presently, they have a Council-approved policy that each station shall have a park-and-ride lot and it shall be sized so that 15 to 20 percent of all transit users within the geographic area of the station will be provided park-and-ride stalls. The first policy was 10 to 15 percent, but it has been increased by five percent by Councilmembers.

They have concerns that the increase in park-and-ride will affect the ridership on the bus system. The system was initially set up with an intensive feeder bus system, walk on, kiss-and-ride facilities, and short-term turnaround.

Calgary's policy is that a transit stop shall be located within 1,500 feet of each resident. As a result of this policy, park-and-ride facilities adjacent to their stations are no farther than 1,500 feet away.

Park-and-ride facilities were first provided as an option for people to get to the transit system. Now they have evolved into a right. If there isn't space available at the station, people become very angry and feel that the system has not adequately served them.

There is no charge to users of the park-and-ride spaces and 50 percent of the spaces have electrical plugs because of severe winter weather.

The total park-and-ride system contains 5,000 stalls, and there will be 1,000 additional stalls built in September.

The park-and-ride facility closest to downtown is at Franklin Avenue Station, which is located 2.9 miles from the downtown.

CLEVELAND

Mr. York: He worked both on the Dallas (DART) and Atlanta (MARTA) system.

To determine the need for park-and-ride lots, the patronage model for park-and-ride need should be run unconstrained. When the results of the model are known, the individual station sites should be looked at in terms of:

- o Land availability
- o Land cost
- o Length of time projections (ten, twenty, or thirty years)

The general rule is to place the largest park-and-ride facilities at the terminus stations and reduce the amount of the parking availability as the system approaches the downtown area.

A rule of thumb for cost feasibility of a single park-and-ride space is about \$5,000, including cost of acquisition and construction.

DALLAS DART

Jay Kline:

The park-and-ride facility closest to downtown is located one mile from downtown.

Generally, all the parking stalls are within 1,000 feet of the platform.

EDMONTON

Jim Stein:

They have no formally adopted policy. Their transit design guidelines do not even include park-and-ride facilities. Park-and-ride facilities depend solely on the availability of city-owned land around the stations. The City of Edmonton has a land bank which over the years has acquired substantial amounts of the parcels.

Their LRT system consists of nine stations of which five are below grade and four are at-grade. Three of the four at-grade stations have park-and-ride facilities.

He felt that park-and-ride was vital to the success of an LRT system. The number of park-and-ride stalls could be doubled and still be filled to capacity. He felt that people would use the system more when they could drive and park at the stations.

LOS ANGELES

David Seaver:

Have no formally adopted policy. The Red Line has no park-and-ride and the Blue Line that links downtown Long Beach and Los Angeles has park-and-ride facilities within 2 1/2 miles of downtown Long Beach and 11 miles of downtown Los Angeles.

The new Green Line, which will run equidistance from Los Angeles and Long Beach, has park-and-ride facilities at all but three of the fourteen stations.

The size of the park-and-ride facilities was based on the cost of the land.

PITTSBURGH PAT

Dave Wohlwill:

They have no formally adopted park-and-ride standards.

They have rebuilt two light rail lines. The first was rebuilt on the Pittsburgh Railways, and the first park-and-ride facility is at Potomac Avenue and is 8.28 miles from downtown. The second was a rebuilt trolley car line which runs perpendicular on the hillsides surrounding the downtown. Because of the topography, there are no park-and-ride lots along the route. Development of park-and-ride lots along a second line would be too expensive.

They are presently working on a park-and-ride study. They plan to place the lots where there is inexpensive land available. The largest lot is next to a suburban mall. However, they have a large parking garage facility at the last station which is about two to three miles from downtown for people who drive to the CBD. Patrons park in the facility and then take the train to the downtown area.

PORTLAND TRI-MET

Joe Walsh:

There were no formally adopted standards but decisions to provide park-and-ride lots were determined by opportunity, common sense, availability of land and good access from arterial streets.

In the initial construction of the LRT system, there was a conscious policy to have no park-and-ride facilities within the City limit of Portland. Presently, Gateway/99th Avenue is the closest park-and-ride facility to downtown and is located about five miles from it.

They are going through a revision of the park-and-ride lots design standards. There will be a greater percentage of compact parking, the size of car stall will be smaller and the size of the lots will be between 200 to 300 stalls.

SACRAMENTO REGIONAL TRANSIT

Jeffery Gualco:

Park-and-ride lots are located four to nine miles from the downtown.

The parking configuration tends to reflect the shape of the parcel available.

The park-and-ride standards are:

- o First car not more than 50 feet from platform
- o Last car not more than 800 feet from platform

<u>Station Name</u>	<u>Distance from CBD</u>	<u>Number of stalls</u>
Butterfield	9.42 Miles	800
Watt/I-80 West	7.96 Miles	230
Watt/Manlove	7.69 Miles	310
Roseville Road	7.44 Miles	1,100
Power Inn	5.73 Miles	290
Marconi Arcade	5.66 Miles	280
Swanston	4.49 Miles	260

SAINT LOUIS BI-STATE

John McCarthy, Sverdrup:

- o They were very cost conscious. Most of the park-and-ride lots were acquired with no or little money. In most cases, the land was under-utilized and/or owned by other governmental agencies.
- o They located most of the park-and-ride lots and stations where the transit line intersected a major state highways which occurred about a mile apart. They have now tried to extend the line to intersect major interstate highways, such as I-70 and I-170.

There are no park-and-ride lots within the city limits of Saint Louis because there wasn't any land available that could be acquired for little or no cost. They were not willing to tear down existing developments. Within the city limits, they employed feeder bus system to provide access to the transit patrons. The first park-and-ride lots occur about ten to twelve miles from the downtown.

They are planning a park-and-ride structure over their existing yards and maintenance shops on the edge of downtown in conjunction with the Amtrak and Greyhound bus terminal and a new station.

They have considered charging for the park-and-ride spaces where non-transit users tend to use the free spaces, i.e., at the airport and near the university.

SAN DIEGO

Chris Auginstein:

They have no formally adopted standard but build facilities wherever they can. They try to construct park-and-ride lots of at least 100 to 200 spaces.

Forty-Seventh Street Station is the closest located in an urban area and is about 3 1/2 miles from downtown.

Larger lots of 600 stalls are located near major highway intersections. The freeway lots are developed with joint agreements with Cal Trans (State Transportation Agency).

Parking usage has in most cases exceeded expectations.

The most important issue in the design of a park-and-ride facility is security. Lots need to be exposed and seen from all directions, well lit, and contain phones. They are working on joint use of the park-and-ride lots with small businesses such as Fotomat to provide surveillance of the surrounding areas during working hours.

They have developed joint use arrangements with shopping centers to use the peripheral parking spaces for park-and-ride. Usually the number of spaces is between 20 to 40 stalls, for which the transit company provides the insurance, maintenance and presents a public service award to the shopping center owner.

TORONTO TRANSIT COMMISSION

Dominic Garsito:

- o No formally adopted public policy. In most cases, they have acquired whatever surplus land is available next to the stations. In all cases the parking stalls are within 2,000 feet of the station.
- o Their policy has been to locate park-and-ride lots at the terminus stations. Presently they have two terminus lots of 1,370 and 1,500 stalls. If other stations have park-and-ride lots, they are the result of the station acting as a terminus station before the system was extended.

WASHINGTON

Rick Bochner:

The District of Columbia decided that there would be no park-and-ride facilities within its boundaries. There are large parking facilities at the terminus stations. Sizes of the terminus parking facilities are between 3,500 and 4,300 stalls. Park-and-ride lots are located between four and eight miles from the downtown.

Standards for distances of park-and-ride stalls from the platform are:

- o First Car - 100 feet
- o Last Car - 1,500 feet

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

6

<u>Regional Railroad Authority</u> <u>Originating Department</u> <u>K. DeSpiegelaere</u> Authorized Signature <u>8/20/90</u> Date	<u>Board Action Requested</u> Ten-year budget for LRT in LRT Coordination Plan. <u>DISCUSSION ONLY</u>
---	--

Request Justification

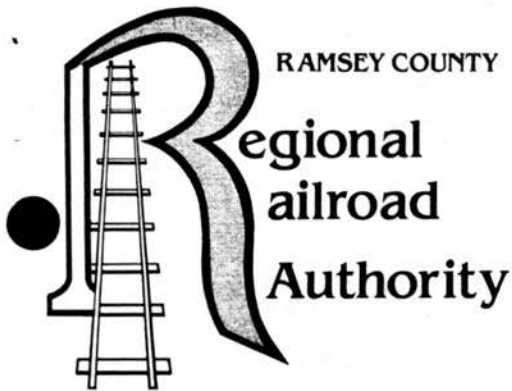
See attached: 1) Memorandum from K. DeSpiegelaere
 2) Assumptions and alternatives

Budgeting and Accounting <u>Ed Blanton</u> <u>8/21/90</u> County Attorney <u>[Signature]</u> Risk Manager _____ Data Processing _____ Previous Action taken on Request _____	Date / Time Received By
--	----------------------------

Comments / Recommendation

Documentation certified complete for:

<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
<u>Committee / Meeting Date</u>	<u>Signature</u>	<u>Date</u>
August 28, 1990	<u>J. L. Henderson</u>	8/21/90
<u>Board Date</u>	<u>Signature</u>	<u>Date</u>



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MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathryn DeSpiegelaere, Director of LRT Planning *ZD*

SUBJECT: Ten Year LRT Budget for LRT Coordination Plan

DATE: August 20, 1990

The Joint LRT Advisory Committee, at its meeting on August 29, will consider a 10-year budget for LRT. A copy of the material on this subject from the Committee's August 8 meeting is attached. If the new material is available before the August 28 Ramsey County Regional Railroad Authority meeting, I will bring copies of it to your meeting.

The alternatives being considered are a 1/2 cent or 1/4 cent sales tax, with differing time periods for beginning work on new LRT corridors. Bonding or pay-as-you go options are being considered. After Commissioners Hunt and Ahrens, members of the Joint LRT Advisory Committee, read the most recent letter from the Urban Mass Transportation Administration, they requested that staff consider the assumption for this analysis that federal funds will provide a significant portion of the capital costs.

Recommendation:

For discussion.

KD/blk
Attachment

CONTENTS

- 1. Analysis Assumptions for Preparation of 10 Year Implementation Plan**
- 2. Alternative Scenarios for 10 Year Implementation Plan**
- 3. Summary of Alternative Scenarios for 10 Year Implementation Plan**
- 4. Bonding Analysis to be Completed**

ANALYSIS ASSUMPTIONS FOR PREPARATION OF 10-YEAR IMPLEMENTATION PLAN

- Use Constant 1991 Dollars
- Increase in Cost of the LRT System Will Be the Same as Increase in Sales Tax Revenue
- Group B Corridors by Name Will Not Be Staged
- An Average Cost/Corridor Will Be Developed for Group B Corridors, Including the Cost of the Minneapolis Tunnel Extension ($\$771.9\text{M} / 5 = \154.4M)
- Group C Corridor Average Cost is $\$81.5\text{M}$ ($\$407.3\text{M} / 5$)
- Three Group B Corridors (B-1, B-3, and B-5) Will Be Assumed To Be Federally Funded
- Federal Funding Will Not Exceed 75% of the Cost of Group B Federal Corridors
- Up to \$200M of Federal Funds Will Be Available
- Interest Income on Fund Reserves and Interest Expenses on Fund Deficits Will Not Be Considered
- 1/2% and 1/4% Sales Options Will Be Developed
- "Pay as You Go" Will Be Used as Funding Method
- Various Months Between Corridor Project Starts Will Be Analyzed

ALTERNATIVE SCENARIOS FOR 10 YEAR IMPLEMENTATION PLAN

- **1/2% Sales Tax, 12 Months Between Corridor Projects, and
"Pay as You Go"**
- **1/4% Sales Tax, 30 Months Between Corridor Projects, and
"Pay as You Go"**
- **1/4% Sales Tax, 36 Months Between Corridor Projects, and
"Pay as You Go"**
- **1/4% Sales Tax, 42 Months Between Corridor Projects, and
"Pay as You Go"**

**COSTS/REVENUE FOR 10-YEAR LRT IMPLEMENTATION SCHEDULE
ASSUMING 12 MONTHS BETWEEN CORRIDOR PROJECT STARTS
(1991 \$M AND 1/2% SALES TAX)**

ITEM	CALENDAR YEAR									
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
COSTS	4	12	31	56	56	17	--	--	--	--
A-1. Downtown St. Paul/Midway										
A-2. Downtown Minneapolis/University/Y & S	15	38	68	68	21	--	--	--	--	--
B-1 Group B (FE 6/93 & FED\$)	2	7	12	47	48	35	2	--	--	--
B-2 Group B (FE 6/94 & N-F\$)	1	2	7	12	47	48	35	2	--	--
B-3 Group B (FE 6/95 & FED\$)	--	1	2	7	12	47	48	35	2	--
B-4 Group B (FE 6/96 & N-F\$)	--	--	1	2	7	12	47	48	35	2
B-5 Group B (FE 6/97 & FED\$)	--	--	--	1	2	7	12	47	48	35
C-1 Group C (FE 6/98)	--	--	--	--	1	1	4	6	24	25
C-2 Group C (FE 6/99)	--	--	--	--	--	1	1	4	6	24
Subtotal	22	60	121	193	194	168	149	142	115	86
REVENUES										
Regional Sales Tax (1/2%)	106	106	106	106	106	106	106	106	106	106
Federal Funds	--	--	10	40	25	25	25	25	25	25
County (10% of Group B)	--	--	1	1	5	6	8	5	4	-
Subtotal	106	106	117	147	136	137	139	136	135	131
Net	84	46	(4)	(46)	(58)	(31)	(10)	(6)	20	45
Cumulative	84	130	126	80	22	9	(19)	(25)	(5)	50

Note: Cost of all Group B Corridors and Minneapolis Tunnel Extension were totaled and averaged, to arrive at a cost/corridor of \$154.M

Note: \$200M of Federal Funds are utilized.

COSTS/REVENUE FOR 10-YEAR LRT IMPLEMENTATION SCHEDULE ASSUMING 30 MONTHS BETWEEN CORRIDOR CONSTRUCTION (1991 \$M and 1/4% Sales Tax)

ITEM	CALENDAR YEAR									
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
COSTS										
A-1. Downtown Minneapolis/University	15	38	68	68	21	--	--	--	--	--
A-2. Downtown St. Paul/Midway	4	12	31	56	56	17	--	--	--	--
B-1 Group B (FE 6/94 & FED\$)	1	2	7	12	47	48	35	2	--	--
B-2 Group B (FE 12/96 & N-F\$)	--	--	1	1	5	9	35	48	47	8
B-3 Group B (FE 6/99 & FED\$)	--	--	--	--	1	1	2	7	12	47
B-4 Group B (FE 12/01 & N-F\$)	--	--	--	--	--	--	1	1	5	9
Subtotal	20	52	107	137	130	75	73	58	64	64
REVENUES										
Regional Sales Tax (1/4%)	53	53	53	53	53	53	53	53	53	53
Federal Funds	--	--	5	9	36	37	28	7	9	35
County (10% of Group B)	--	--	--	--	--	1	4	5	5	2
Subtotal	53	53	58	62	89	91	85	65	67	90
Net	33	1	(49)	(75)	(41)	16	12	7	3	26
Cumulative	33	34	(15)	(90)	(131)	(115)	(103)	(96)	(93)	(67)

Note: Cost of all Group B Corridors and Minneapolis Tunnel Extension were totaled and averaged, to arrive at a cost/corridor of \$154.M

Note: Only \$166.M of Federal Funds are utilized.

**COSTS/REVENUE FOR 10-YEAR LRT IMPLEMENTATION SCHEDULE
ASSUMING 36 MONTHS BETWEEN CORRIDOR CONSTRUCTION
(1991 \$M and 1/4% Sales Tax)**

ITEM	CALENDAR YEAR									
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
COSTS										
A-1. Downtown Minneapolis/University	15	38	68	68	21	--	--	--	--	--
A-2. Downtown St. Paul/Midway	4	12	31	56	56	17	--	--	--	--
B-1 Group B (FE 12/94 & FED\$)	1	1	5	9	35	48	47	8	--	--
B-2 Group B (FE 12/97 & N-F\$)	--	--	--	1	1	5	9	35	48	47
B-3 Group B (FE 12/00 & FED\$)	--	--	--	--	--	--	1	1	5	9
B-4 Group B (FE 12/03 & N-F\$)	--	--	--	--	--	--	--	--	--	1
Subtotal	20	51	104	134	113	70	57	44	53	57
REVENUES										
Regional Sales Tax (1/4%)	53	53	53	53	53	53	53	53	53	53
Federal Funds	--	--	4	7	26	36	36	7	4	7
County (10% of Group B)	--	--	--	--	--	1	1	4	5	5
Subtotal	53	53	57	60	79	90	90	64	62	65
Net	33	2	(47)	(74)	(34)	20	33	20	9	8
Cumulative	33	35	(12)	(86)	(120)	(100)	(67)	(47)	(38)	(30)

Note: Cost of all Group B Corridors and Minneapolis Tunnel Extension were totaled and averaged, to arrive at a cost/corridor of \$154.M

Note: Only \$127.M of Federal Funds are utilized.

**COSTS/REVENUE FOR 10-YEAR LRT IMPLEMENTATION SCHEDULE
ASSUMING 42 MONTHS BETWEEN CORRIDOR CONSTRUCTION
(1991 \$M and 1/4% Sales Tax)**

ITEM	CALENDAR YEAR									
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
COSTS										
A-1. Downtown Minneapolis/University	15	38	68	68	21	--	--	--	--	--
A-2. Downtown St. Paul/Midway	4	12	31	56	56	17	--	--	--	--
B-1 Group B (FE 6/95 & FED\$)	--	1	2	7	12	47	48	35	2	--
B-2 Group B (FE 12/98 & N-F\$)	--	--	--	--	1	1	5	9	35	48
B-3 Group B (FE 6/02 & FED\$)	--	--	--	--	--	--	--	1	1	2
Subtotal	19	51	101	131	90	65	53	45	38	50
REVENUES										
Regional Sales Tax (1/4%)	53	53	53	53	53	53	53	53	53	53
Federal Funds	--	--	--	5	9	35	36	27	2	1
County (10% of Group B)	--	--	--	--	--	--	1	1	4	5
Subtotal	53	53	53	58	62	88	90	81	59	59
Net	33	2	(48)	(73)	(28)	23	37	36	21	9
Cumulative	33	35	(13)	(86)	(114)	(91)	(54)	(18)	3	12

Note: Cost of all Group B Corridors and Minneapolis Tunnel Extension were totaled and averaged, to arrive at a cost/corridor of \$154.M

Note: Only \$115.M of Federal Funds are utilized.

8/7/90

SUMMARY OF ALTERNATIVE SCENARIOS FOR 10-YEAR IMPLEMENTATION PLAN

Level of Sales Tax	Frequency of Corridor Starts	Federal Funds Used	Total LRT Cost 1991\$ 1992-2001	Federal Funds As Percent of Total Cost	Maximum Deficit	Fund Balance 2001	Number of Corridors Started
1/2%	12 MN.	\$200M	\$1,250M	16%	(\$25)	\$50M	8
1/4%	30 MN.	\$166M	\$780M	21%	(\$131)	(\$67M)	5
1/4%	36 MN.	\$127M	\$703M	18%	(\$120)	(\$30M)	5
1/4%	42 MN.	\$115M	\$643M	18%	(\$114)	\$12M	4

BONDING ANALYSIS TO BE COMPLETED

- **10-Year, 1/4% Sales Tax, and 30 Month Start Between Corridors**
- **20-Year, 1/4% Sales Tax, and 24 Month Start Between Corridors**
- **Add "Interest Income/Interest Expense" Line in Analysis**
- **Assume 7% Coupon for 10-Year Bond**
- **Assume 8% Coupon for 20-Year Bond**
- **Bond Issue Cost of 2%**
- **Federal Share Is 20% of Corridor Cost**

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

7

<u>Regional Railroad Authority</u> Originating Department <i>K. DeSpiegelaere</i> <i>8/20/90</i> Authorized Signature Date	Board Action Requested LRT Coordination Plan - Implementation and Organization <u>DISCUSSION AND POSSIBLE ACTION</u>
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Request Justification

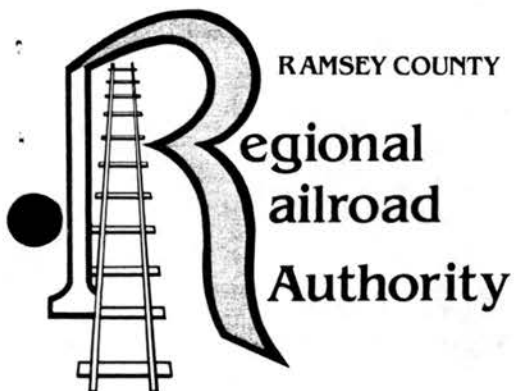
See attached: 1) Memorandum from K. DeSpiegelaere
 2) Summary of O'Brien-Kreitzberg report

Budgeting and Accounting <i>Ed. Glanville</i> <i>8/21/90</i> County Attorney <i>Dick Macmillan</i> Risk Manager _____ Data Processing _____ Previous Action taken on Request _____	Date / Time Received By
--	----------------------------

Comments / Recommendation

Documentation certified complete for:

Committee / Meeting Date	Signature	Date
Committee / Meeting Date	Signature	Date
<i>August 28, 1990</i>	<i>F. L. Glendenning</i>	<i>8/21/90</i>
Board Date	Signature	Date



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District 6

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathryn DeSpiegelaere, Director of LRT Planning *ZD*

SUBJECT: LRT Coordination Plan -- Implementation and Organization Options

DATE: August 20, 1990

At the last Ramsey County Regional Railroad Authority meeting, you received a summary of the O'Brien-Kreitzberg report on who and how LRT should be implemented. My brief summary of the report and recommendations is attached.

The staff of the Joint LRT Advisory Committee has met several times to discuss the directives given us by the Joint LRT Advisory Committee to develop a list of the advantages and disadvantages of various organizational options and to consider how a transition from one organization to another could occur. I may have written material to distribute on this subject at your Regional Railroad Authority meeting, but none is available at this time.

It was agreed that each of the organization options would be developed further by the respective organizations. Anoka, Dakota, Hennepin, and Ramsey County staff members are meeting on the joint powers options, considering how it would work and what the strengths and weaknesses are of that approach to implementing LRT. Other agencies proposed to implement LRT, Minnesota Department of Transportation, the Regional Transit Board, and the Metropolitan Transit Commission, are doing the same work.

One option you may wish to consider is to define principles that are important to Ramsey County Regional Railroad Authority Commissioners in assessing which organization or combination of organizations is best able to implement LRT. I have, therefore, proposed principles for your consideration at your August 28 meeting:

1. The active involvement of local elected, rather than appointed officials, is important to ensure accountability to constituents.

2. Community participation at both the regional and neighborhood levels is necessary in implementing LRT.
3. There should be regional coordination, but a single point of authority for LRT implementation to ensure that paralysis by indecision or disagreement does not occur.
4. Because County Regional Railroad Authority Commissioners have become knowledgeable about LRT and because County Regional Railroad Authorities are the only organization that has been successful in furthering LRT plans, their continued involvement in LRT should be included in implementing plans.
5. No organization in Minnesota is equipped with the staff to implement LRT. A stable organization with a history of construction of major public projects should be the implementing organization for LRT.
6. The organization that implements LRT should agree to the commitment of staff and policy-maker time to make progress on LRT. Plans prepared by Regional Railroad Authorities should not languish because of insufficient resources if another organization is selected to implement LRT. We ascribe to the San Diego philosophy of having LRT engineering plans prepared for LRT corridors so that they can be constructed as funds become available. LRT should be a high priority for the implementing organization and should not come in second in competition for resources with other transit or highway projects.
7. Good-faith promises made to the community by Regional Railroad Authorities that their concerns will be considered as LRT plans progress should be honored by the agency that is charged with implementing LRT.
8. There have been many changes in LRT responsibilities over the years. Rather than a quick fix that will result in the need for additional changes, a long-term approach that will yield a consistency in LRT responsibilities should be considered. The public needs to know who to go to for information. Changes require duplication of efforts and there is a lag time before progress can be made.
9. It is important that the agency responsible for LRT implementation have involvement throughout plan development, engineering studies, and construction of the LRT system. Fragmentation of responsibilities should be avoided.

Recommendation:

For discussion and possible action.

KD/blk
Attachment

LRT SEQUENCE OF EVENTS

Planning - Comprehensive LRT Plan

Preliminary Design/Environmental Impact Statement (10%)

Preliminary Engineering (30%)

Final Design (100%)

Construction

System Testing

Open for service

DEFINITIONS OF LRT COMPONENTS

Facilities

Civil elements of system including roadbed, bridges, tunnels, stations, parking lots, yards and shops.

Systems

System-wide elements including vehicles, tracks, electrification, signals, fare collection equipment.

LRT IMPLEMENTATION OPTIONS

- All methods follow the same sequence of events from planning through construction and opening for service.
- The difference between the implementation options is the division of responsibility and risk between the owner and the contractor.

Traditional

Owner or its consultants design all elements to 100% level of engineering. Contracts for elements of systems and facilities are separate and with owner.

Design/build

After completion of 30% design by owner or its consultants, contractor takes over on some elements. There are multiple contracts managed by owner.

Turnkey

One contractor for entire project for a fixed price after 30% engineering. Contractor, not the owner, manages the individual contracts.

Superturnkey

Turnkey with contractor participating in funding of project through loans, leases, or joint development.

Conventional

Traditional for facilities; design/build for systems

Systems turnkey

Traditional or design/build for facilities; turnkey for systems elements.

Recommendations

The recommendations by O'Brien-Kreitzberg are:

1. For the Central Corridor, a conventional implementation strategy (the traditional approach for the facilities and design/build for the systems elements) is recommended.
2. Due to the interest in turnkey implementation on the part of local officials as well as the Urban Mass Transportation Administration (UMTA), it is recommended that one of the federally funded Group B corridors (Hiawatha, 35W, or Minneapolis Northeast) should be selected as a demonstration project for turnkey implementation (both facilities and systems).

OPTIONS FOR ORGANIZATION TO IMPLEMENT LRT

O'Brien-Kreitzberg assessed five options for implementing LRT. They are:

1. Joint powers organization of regional railroad authorities directly involved in LRT projects.
2. Metropolitan Transit Commission
3. Minnesota Department of Transportation
4. Regional Transit Board
5. New Light Rail Transit Construction Commission

For each option, it was assumed that the organization would have responsibility for all aspects of LRT, including planning, design, engineering, and construction.

Recommendation

The recommendation by O'Brien-Kreitzberg is that the Regional Transit Board be responsible for LRT implementation.

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

8

Regional Railroad Authority

Originating Department

K. DeSpiegelaere 8/20/90
Authorized Signature Date

Board Action Requested

Adopt first level evaluation criteria and alignments for further study for Northeast Corridor.

ACTION IS REQUESTED

Request Justification

- See attached: 1) Proposed resolution
2) Memorandum from K. DeSpiegelaere
3) Memorandum from SRF

Budgeting and Accounting

County Attorney

Risk Manager

Data Processing

Previous Action taken on Request

Date / Time

Received By

Comments / Recommendation

Documentation certified complete for:

Committee / Meeting Date

Signature

Date

Committee / Meeting Date

Signature

Date

August 28, 1990

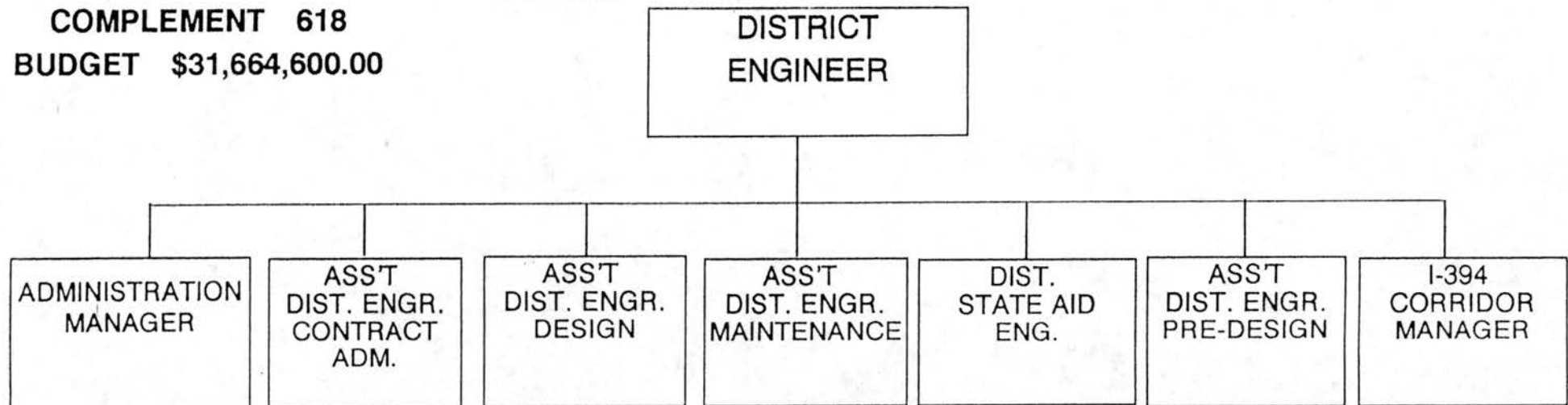
Board Date

J. L. Glendonning
Signature

8/20/90
Date

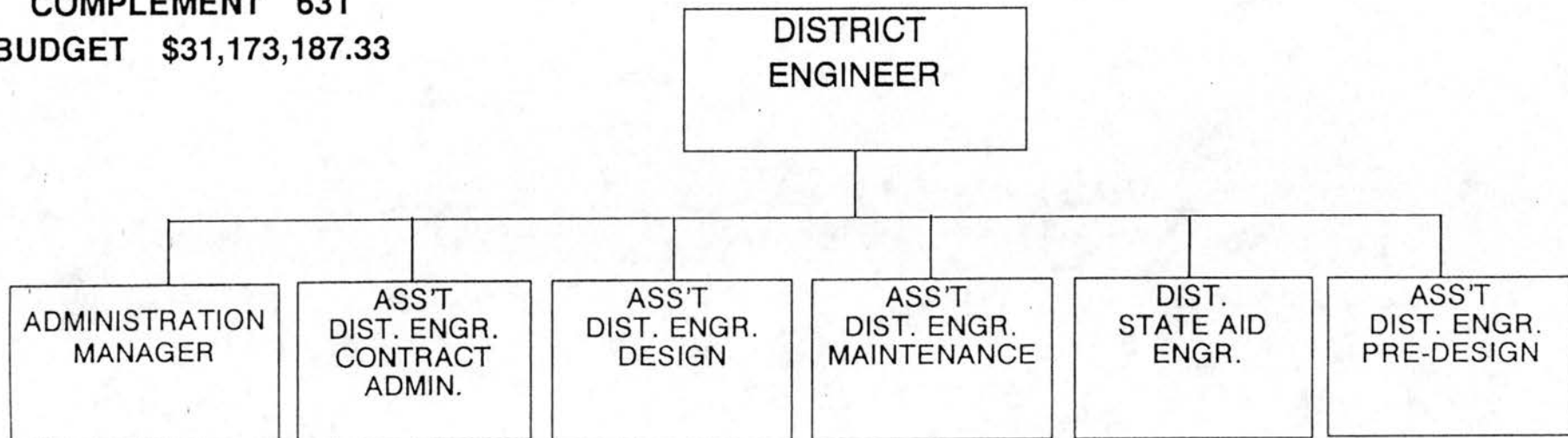
DISTRICT FIVE

COMPLEMENT 618
BUDGET \$31,664,600.00



DISTRICT NINE

COMPLEMENT 631
BUDGET \$31,173,187.33



Metro DISTRICT

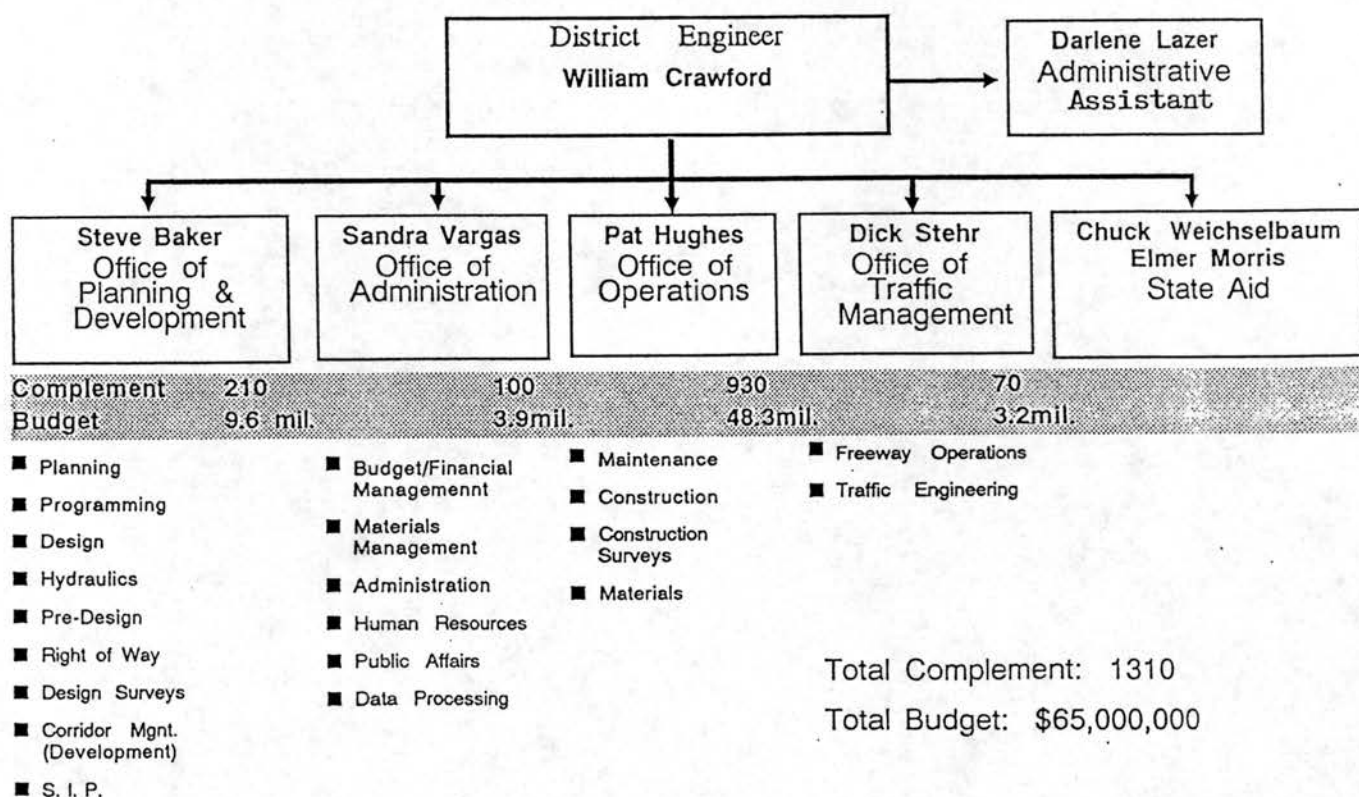
MINNESOTA DEPARTMENT OF TRANSPORTATION

For over thirty years, Mn/DOT has been working on parts of the Interstate Highway system in the Metropolitan Area. As our interstate system approaches completion, the 1990s pose significant transportation challenges for Mn/DOT in the Twin Cities Metropolitan Area. To prepare Mn/DOT to meet these challenges the Metropolitan District was created effective September 1, 1989. Our goals are to provide:

- A consistent Metropolitan philosophy.
- Consistent client service levels.
- Consistent Metropolitan-wide planning.
- Improved coordination with Metro Council and Metro Transportation agencies.
- A metro-wide freeway management effort integrated into District operations.
- Improved resource utilization.
- More focused Metropolitan leadership.

To best address these mounting challenges, Mn/DOT consolidated the Oakdale and Golden Valley Districts to form the Metropolitan District on September 1, 1989. Mn/DOT top staff felt that a consolidated Metropolitan District is best able to exhibit leadership in the metro area.

William M. Crawford became the first District Engineer of the newly-formed Metropolitan District. At the close of September, the Freeway Operation Office joined the Metro District. As of today, March 6, 1990, the Metro District's organization looks like this:





Resolution

Board of

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

Date: _____

No. _____

WHEREAS, Ramsey County Regional Railroad Authority is conducting an alignment study of the Northeast Corridor for LRT; and

WHEREAS, Recommendations for first level evaluation criteria and for alignments for additional study have been reviewed at a public forum on July 23, reviewed with the Technical Committee and have been recommended by the Northeast Corridor Task Force and the Intergovernmental Committee; Now, Therefore, Be It

Resolved, That Ramsey County Regional Railroad Authority adopts the following as the first level evaluation criteria for the Northeast Corridor:

1. Serve most of the Northeast Corridor study area.
2. Serve major trip generators.
3. Minimize route circuitry and travel time.
4. Capability for high-speed transit service.
5. Have adequate right-of-way width.
6. Provide opportunity for future expansion;

and Be It Further

RESOLVED, That Ramsey County Regional Railroad Authority recommends the following alignments for additional study in the Northeast Corridor:

Sub-Area 1: Downtown Area

This area includes the connection between the alignment alternatives and the downtown circulation system. For purposes of this study, it will be assumed that LRT will operate on Fourth Street with a connection in the vicinity of the Gillette Plant property. specific recommendations on connections to each alignment will be provided at a later date.

John T. Finley, Chairman

By _____
Warren W. Schaber, Secretary



Resolution

Board of

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

Date: _____

No. _____

Sub-Area 2: St. Paul Area

This sub-area includes the geographic area between the Chicago and North Western Railroad on the south and the Willard Munger Trail. There are several alignments and potential alignment combinations recommended for further study in this sub-area. They are:

- o Burlington Northern Railroad
- o Arcade Street/T.H. 61
- o Arcade Street/T.H. 61/Willard Munger Trail to Burlington Northern Railroad
- o Mississippi/Westminster/Willard Munger Trail to T.H. 61
- o I-35E

Other combinations of these segments may also be possible but are not recommended for study as separate alignment alternatives.

Sub-Area 3: T.H. 36 Area

This sub-area includes the geographic area north of the Willard Munger Trail to I-694. There are three alignments recommended for further study in this sub-area:

- o Burlington Northern Railroad from Willard Munger Trail to I-694
- o T.H. 61 from Willard Munger Trail to I-694
- o I-35E from Willard Munger Trail to I-694

Sub-Area 4: I-694 Area

This sub-area includes the entire geographic area north of I-694. These are three alignments recommended for further study in this sub-area:

- o Burlington Northern Railroad from I-694 to downtown White Bear Lake.

John T. Finley, Chairman

By _____
Warren W. Schaber, Secretary



Resolution

Board of

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

Date: _____

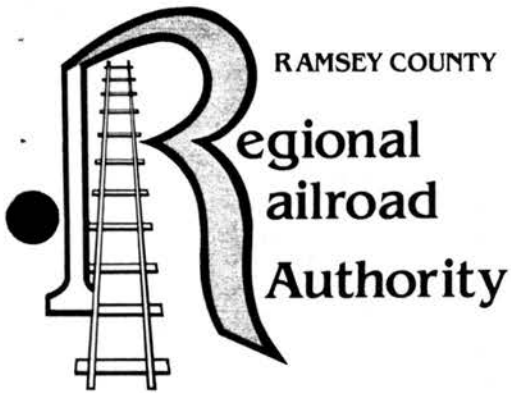
No. _____

-
- o T.H. 61 from I-694 to Goose Lake, following the Burlington Northern Railroad north of Goose Lake to downtown White Bear Lake.
 - o Burlington Northern Railroad from the I-694/I-35E interchange to downtown White Bear Lake.

John T. Finley, Chairman

By _____
Warren W. Schaber, Secretary

3



Room 316 Courthouse
15 W. Kellogg Blvd.
St. Paul, MN 55102
Phone 298-4145

John T. Finley, Chairman

District 3

Diane Ahrens

District 4

Ruby Hunt

District 5

Duane W. McCarty

District 1

Hal Norgard

District 7

Donald E. Salverda

District 2

Warren W. Schaber

District 6

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathryn DeSpiegelaere, Director of LRT Planning *KD*

SUBJECT: Recommended First Level Evaluation Criteria and
Recommended Alignments for Further Study for Northeast
Corridor

DATE: August 20, 1990

Recommendations on criteria to be used for evaluation of LRT alignments as a first step in assessment for the Northeast Corridor are proposed. Those criteria were used to develop recommended alignments for further study in the Northeast Corridor.

The evaluation criteria and proposed alignments have been reviewed and recommended as proposed to you by both the Northeast Corridor Task Force and the Intergovernmental Committee.

A memorandum from SRF outlining the specific recommendations and the basis for the recommendations is attached.

Recommendation:

Consider proposed resolution on criteria for evaluation and on alignments to be studied further in Northeast Corridor.

KD/blk
Attachment

ACTION REQUESTED NORTHEAST CORRIDOR LRT ALIGNMENT STUDY

1. RECOMMENDED FIRST LEVEL EVALUATION CRITERIA

The proposed evaluation criteria to establish the set of alignment alternatives for further study include (changes of consultant/staff recommendations are as recommended by the Northeast Corridor Task Force and are underlined or deleted):

1. Serve most of the Northeast Corridor Study area.
2. Serve major trip generators.
3. Minimize route circuitry and travel time.
4. Capability for high-speed transit service.
5. Have adequate right-of-way width available.
6. Provide opportunity for future expansion.

Additional criteria will be used for more detailed evaluation of retained alternatives.

2. RECOMMENDED ALIGNMENTS FOR FURTHER STUDY

The recommended study alignments, after applying the evaluation criteria, include:

Sub-Area 1: Downtown Area

This area includes the connection between the alignment alternatives and the downtown circulation system. For purposes of this study, it will be assumed that LRT will operate on Fourth Street with a connection in the vicinity of the Gillette Plant property. Specific recommendations on connections to each alignment will be provided at a later date.

Sub-Area 2: St. Paul Area

This sub-area includes the geographic area between the Chicago and Northwestern Railroad on the south and the Willard Munger Trail. There are several alignments and potential alignment combinations recommended for further study in this sub-area. They are:

- . Burlington Northern Railroad
- . Arcade Street/T.H. 61

- . Arcade Street/T.H. 61/Willard Munger Trail to Burlington Northern Railroad
- . Mississippi/Westminster/Willard Munger Trail to T.H. 61
- . I-35E

Other combinations of these segments may also be possible but are not recommended for study as separate alignment alternatives.

Sub-Area 3: T.H. 36 Area

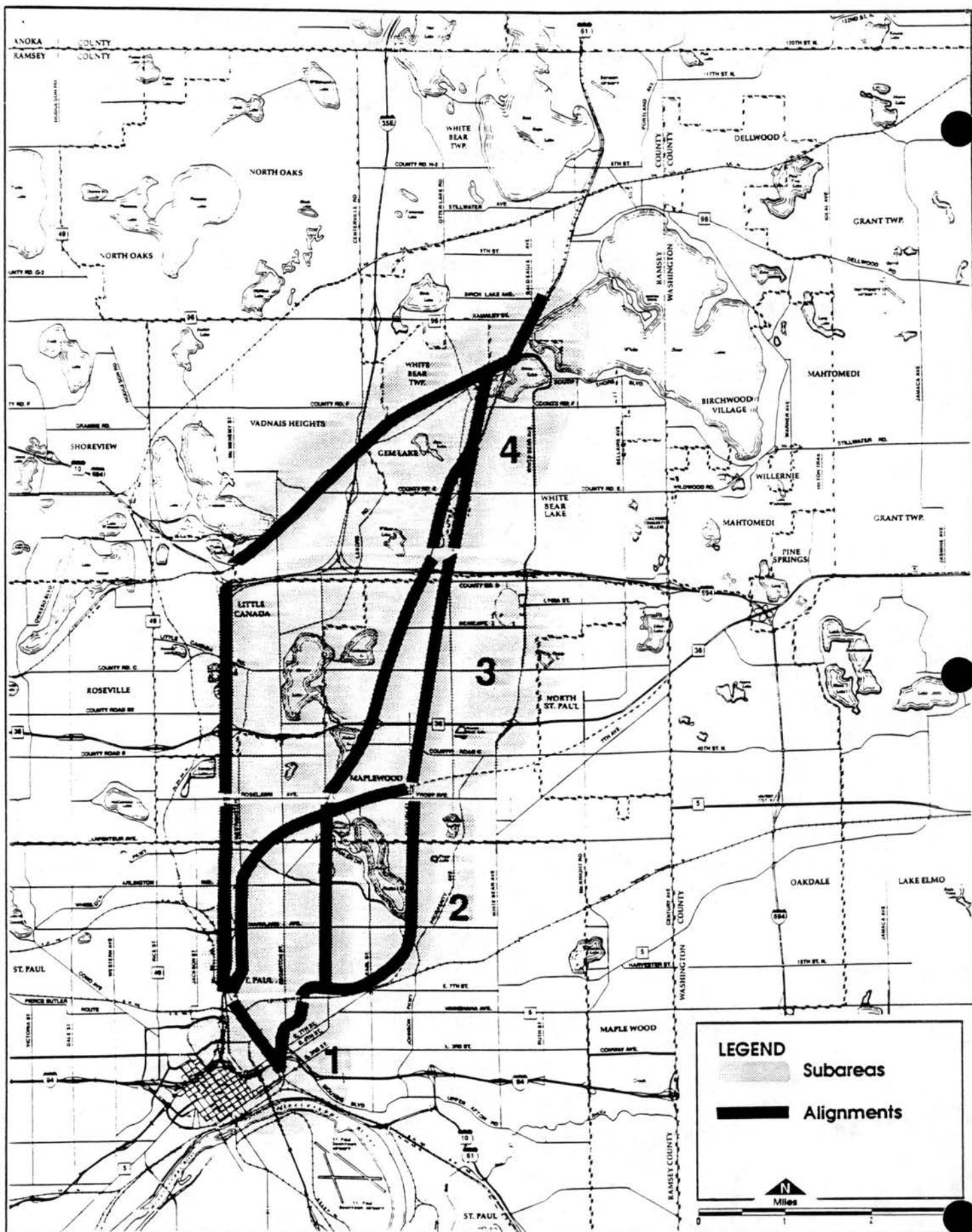
This sub-area includes the geographic area north of the Willard Munger Trail to I-694. There are three alignments recommended for further study in this sub-area:

- . Burlington Northern Railroad from Willard Munger Trail to I-694.
- . T.H. 61 from Willard Munger Trail to I-694.
- . I-35E from Willard Munger Trail to I-694.

Sub-Area 4: I-694 Area

This sub-area includes the entire geographic area north of I-694. There are three alignments recommended for further study in this sub-area:

- . Burlington Northern Railroad from I-694 to downtown White Bear Lake.
- . T.H. 61 from I-694 to Goose Lake, following the Burlington Northern Railroad north of Goose Lake to downtown White Bear Lake.
- . Burlington Northern Railroad from the I-694/I-35E interchange to downtown White Bear Lake.



Northeast Corridor LRT Alignment Study



SRF

Recommended
Subareas/Alignments



STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS
TRANSPORTATION ■ CIVIL ■ STRUCTURAL ■ PARKING ■ LAND SURVEYORS

SRF No. 0901380

TECHNICAL MEMORANDUM NO. 2

TO: Kathryn DeSpiegelaere
Director of LRT Planning, RCRRA

FROM: Charleen Zimmer, AICP

DATE: Revised July 23, 1990

SUBJECT: DEVELOPMENT OF ALTERNATIVE ALIGNMENTS
NORTHEAST CORRIDOR LRT ALIGNMENT STUDY

The purpose of the Northeast Corridor LRT Alignment Study is to perform the technical analysis necessary to assist in the selection of a preferred alignment for Light Rail Transit in the Northeast Corridor.

The first step in the study process is to define the LRT alignment alternatives to be evaluated. A workable number of feasible alignments will be selected using a set of basic evaluation criteria. Data from the Comprehensive Light Rail Transit Plan for Ramsey County, current LRT design guidelines, and other supplementary data will be used to screen the range of alternatives.

The purpose of this memorandum is to identify the recommended selection criteria, summarize the initial evaluation results, and present the alignments recommended for further detailed study.

OBJECTIVES

As expressed in the Ramsey County Comprehensive LRT Plan, the Ramsey County Regional Railroad Authority's (RCRRA's) goals for LRT are stated below. Evaluation criteria were used which focus on potential response to the RCRRA's goals and objectives for LRT in Ramsey County.

1. To integrate a Ramsey County LRT system with other counties' LRT systems, with other transit services and other transportation services in the metropolitan area.
2. To reduce the need for roadway construction or expansion; to assist in relieving congestion on roadways in Ramsey County.

Suite 150, One Carlson Parkway North, Minneapolis, Minnesota 55447
612/475-0010 FAX 612/475-2429

3. To enhance economic development in Ramsey County.
4. To decrease costs of transportation services in Ramsey County.
5. To respond to mobility needs in Ramsey County.
6. To reduce environmental impacts associated with the automobile in Ramsey County.
7. To promote financing the planning, construction and operation of an LRT system in Ramsey County with broad-based funding to minimize the impact to Ramsey County taxpayers.

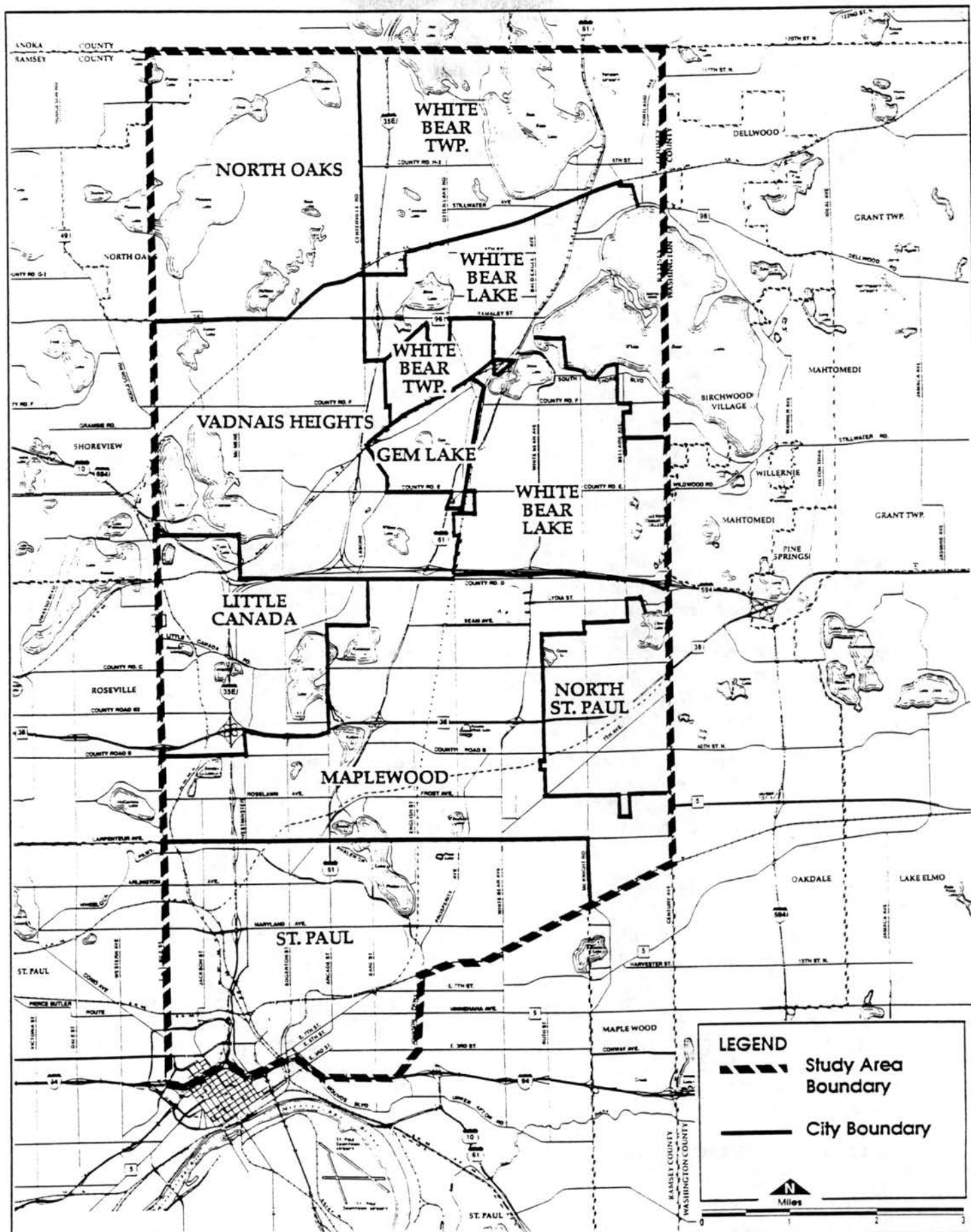
STUDY AREA

The study area is the geographic area within which a Northeast Corridor alignment would operate. The Northeast Corridor study area is generally the eastern half of Ramsey County north of I-94 and the Chicago and Northwestern Railroad. The study area should not be confused with the corridor service area, which is the area from which the LRT alignment will draw its ridership. Each proposed alignment in the study area will have a slightly different service area. The definition of a geographic study does not presume an LRT alignment or a specific terminus of an LRT line.

The proposed study area and the communities within are identified in Figure 1. The area is bounded by Rice Street on the West, the Anoka/Ramsey County boundary on the north, Century Avenue (Ramsey/Washington County boundary) on the east, and East Seventh Street/Johnson Parkway/Chicago and Northwestern Railroad on the south. This area includes part of the City of St. Paul, Maplewood and North Oaks and all of Little Canada, North St. Paul, Vadnais Heights, Gem Lake, White Bear Lake and White Bear Township.

INITIAL EVALUATION CRITERIA

The purpose of this initial evaluation step is to narrow the full range of possible alternatives to those which are most feasible. The initial evaluation criteria were used to identify alignments or portions of alignments that have weaknesses severe enough to threaten the likelihood of successful implementation of LRT. These criteria identify major deficiencies such as excessive route circuitry and right-of-way constraints that can hamper transit ridership, impair traffic flow, or negatively impact neighborhoods.



Northeast Corridor LRT Alignment Study



SRF

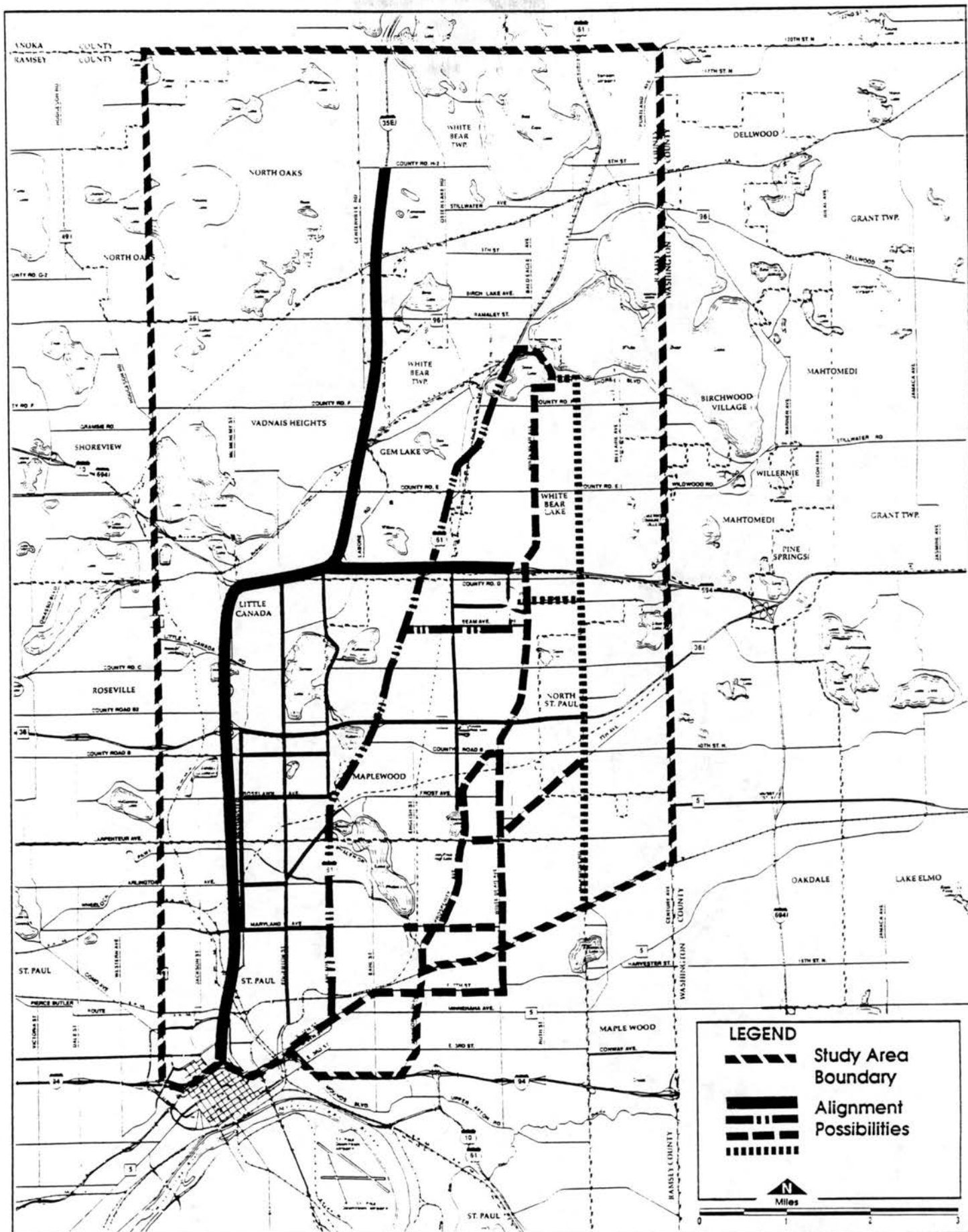
Figure 1
Cities in the Northeast
Corridor Study Area

The initial criteria used for selection of alternative alignments are listed below. Any recommended alignment should have these characteristics:

1. **Serve most of the Northeast Corridor study area.** The LRT Comprehensive Plan for Ramsey County identified several LRT corridors with minimal overlap in service area. This criterion helps to minimize overlap with the Northwest and East Corridors.
2. **Serve major trip generators.** In order to maximize ridership, the corridor should directly serve as many current and emerging major trip generators as possible, particularly high density residential areas.
3. **Minimize route circuitry.** A direct route will reduce travel times for LRT riders thereby enhancing the competitiveness of the service with the automobile.
4. **Capability for high-speed transit service.** LRT on local streets and in residential areas must operate at lower speeds and cross frequent intersections. High-speed service is preferred based on RCRRA objectives.
5. **Have adequate right-of-way width available.** Ideally, the alignment should accommodate double-track LRT and provide for efficient traffic flow within the existing right-of-way so as to minimize community impacts and lower costs.
6. **Provide opportunity for future extension.** The alignment terminus away from downtown St. Paul should be located so as to permit staged extension in coordination with future land use development and regional LRT expansion.

SELECTION PROCESS

The range of alignment alternatives was initially developed by identifying all continuous primary north-south alignments within the study area. These included the Soo Line, I-35E, T.H. 61, the Burlington Northern, White Bear Avenue and McKnight Road. Each of these basic north-south alignments have multiple options for connecting into downtown St. Paul and for terminus locations. In addition, various segments of these alignments can be combined together to create new alignments. Figure 2 shows initial street and highway alignment possibilities that were then screened against the evaluation criteria. Figure 3 shows railroad and trail alignment possibilities.

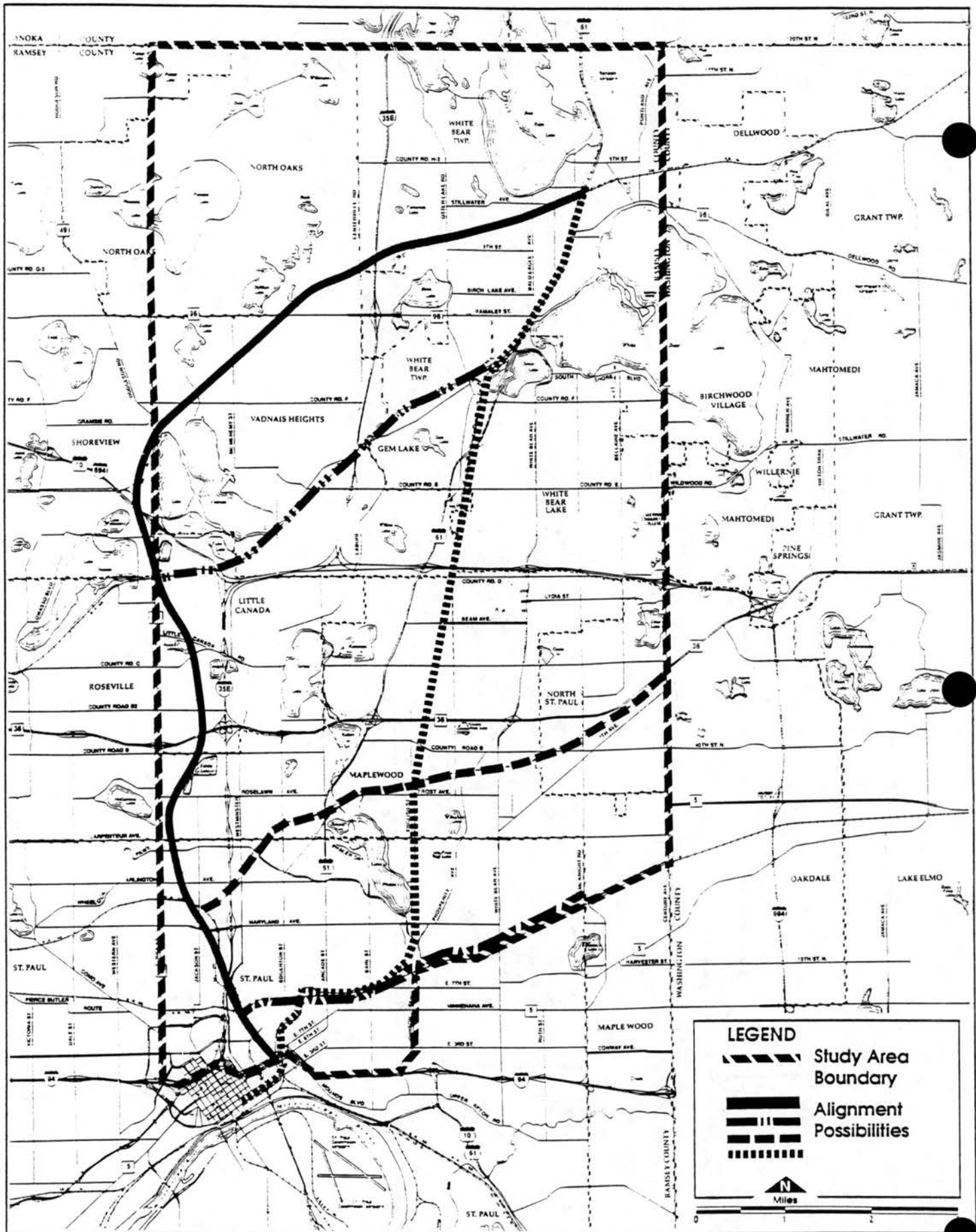


Northeast Corridor LRT Alignment Study



SRF

Figure 2
Initial Alignment Possibilities
along Streets and Highways



Northeast Corridor LRT Alignment Study



SRF

Figure 3
Initial Alignment Possibilities
along Railroads and Trails

Criterion 1: Serve Most of the Study Area

Two alignments operate on the fringes of the study area: the Soo Line Railroad and Chicago and Northwestern Railroad/McKnight Road alternative. As a result, neither alignment would serve the entire study area. In addition, their ridership service areas significantly overlap those of adjacent LRT corridors.

Figure 4 shows the projected service area around the Soo Line Railroad alignment. The western part of the study area is well served by this alignment, but not the southern and eastern portions. Residents south of White Bear Lake would find the alignment inconvenient in terms of access. This service area overlaps that of the Ramsey County Northwest Corridor.

Figure 5 shows the area served by the East Seventh Street/Chicago and Northwestern Railroad/McKnight Road alignment. This alignment serves the eastern part of the study area, but not the western half. The service area of this alignment takes on an odd configuration due to the abrupt change in direction taken at McKnight Road. This service area overlaps that of the Ramsey County East Corridor.

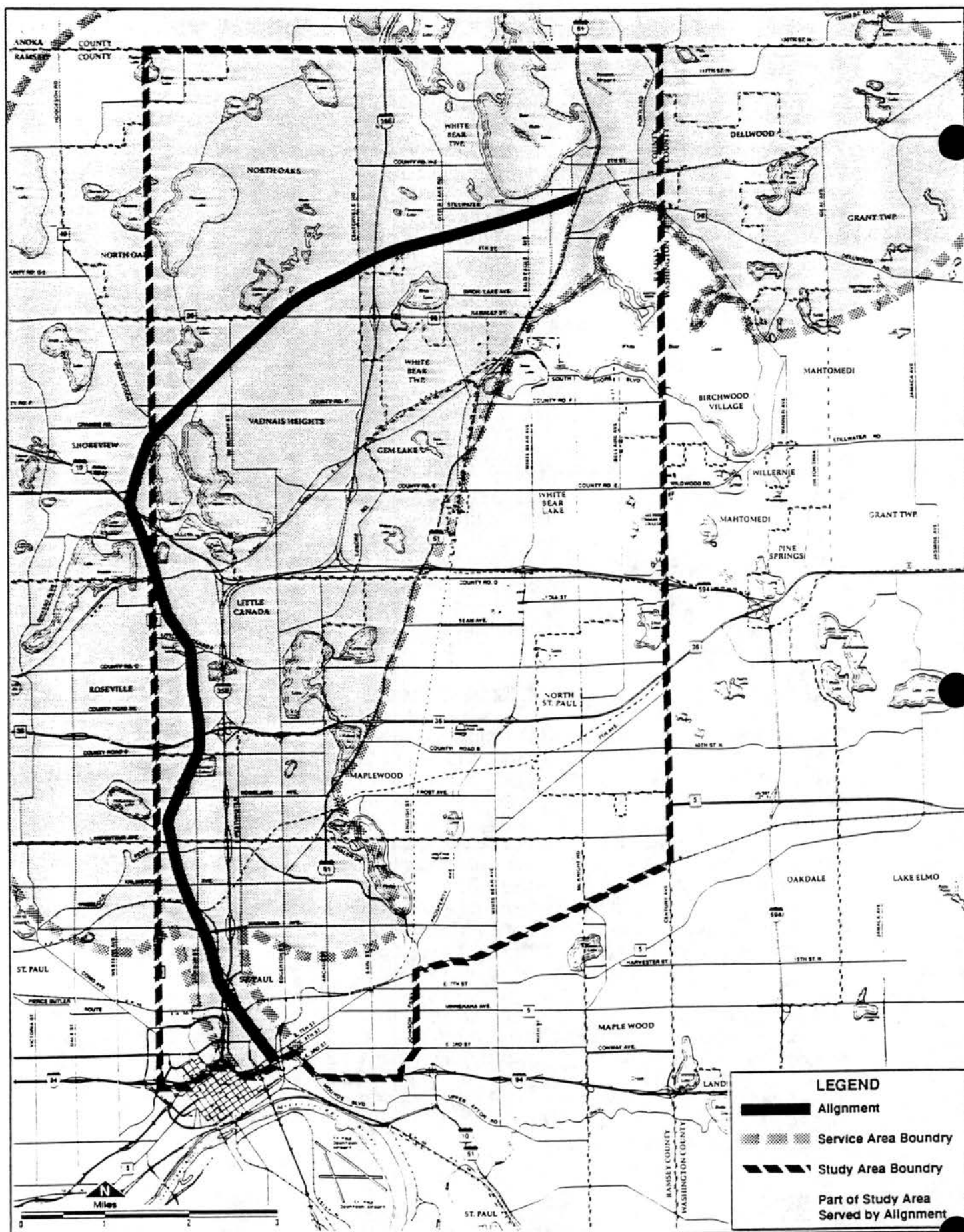
Since these alignments also do not provide direct service to significant transit trip generators, they are not recommended for further study.

Criterion 2: Serve Major Trip Generators

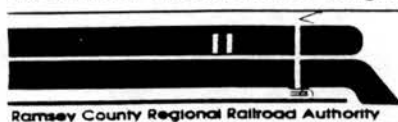
The range of initial alignments was guided by the objective of directly serving the major trip generators in the study area. LRT lines can be further strengthened by anchoring the terminus with active land uses.

Transit trip generators located in the Northeast Corridor were identified in the LRT Comprehensive Plan (see Figure 6). These include the Maplewood Mall, St. Johns Hospital and White Bear Lake CBD, among others. Maplewood Mall is the only designated Regional Business Concentration in the study area and is undergoing expansion. White Bear Lake has a concentrated retail base and strong recreational activity.

LRT alignments are desired that can link with or terminate in these primary locations and provide service to the secondary and emerging generators. Such alignments include T.H. 61, the Burlington Northern and White Bear Avenue. The Soo Line, the McKnight Road alignment and an I-35E alignment extended beyond I-694 would be less successful in serving major existing and future trip generators.

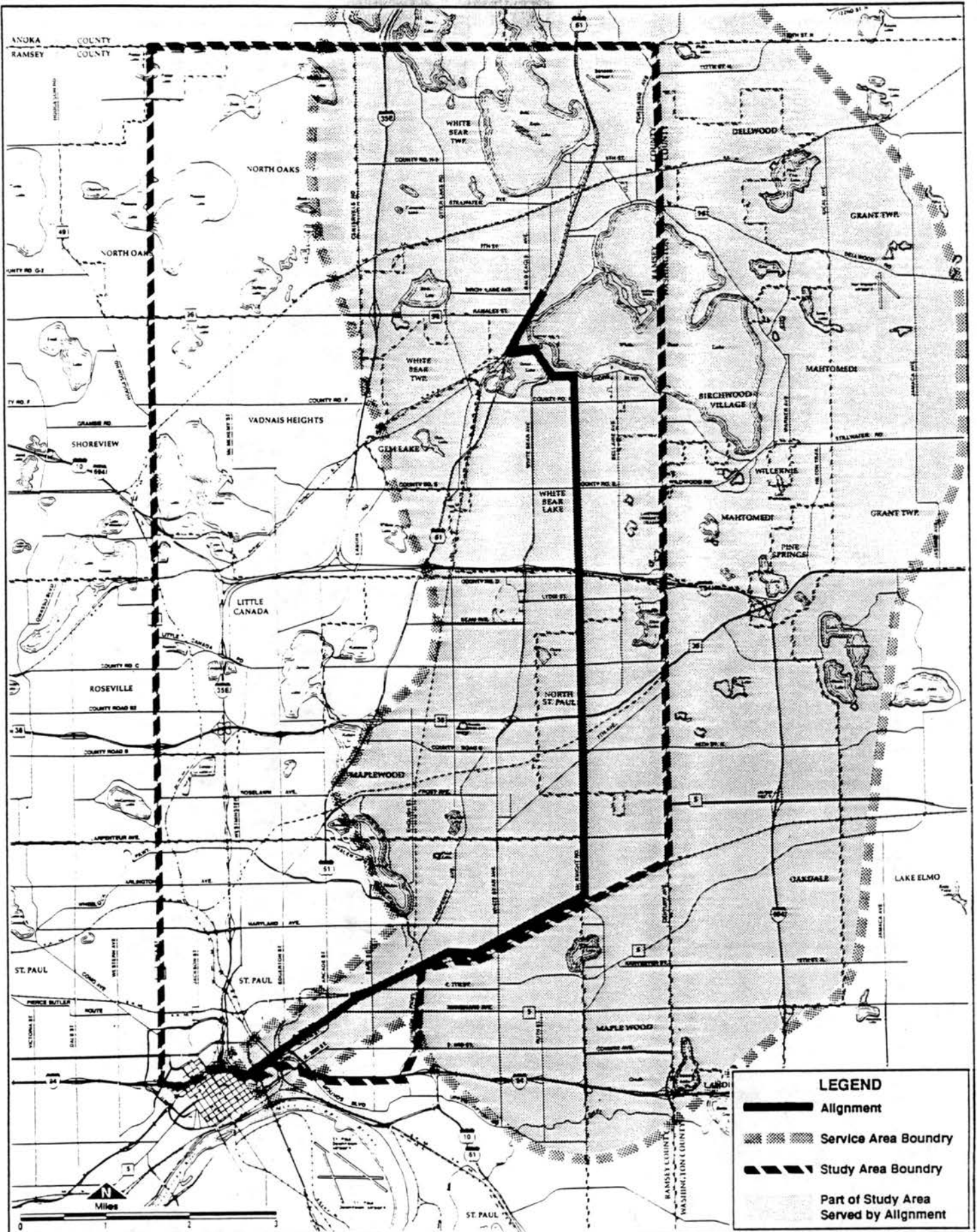


Northeast Corridor LRT Alignment Study



SRF

Figure 4
Area Served By Soo Line
Railroad Alignment

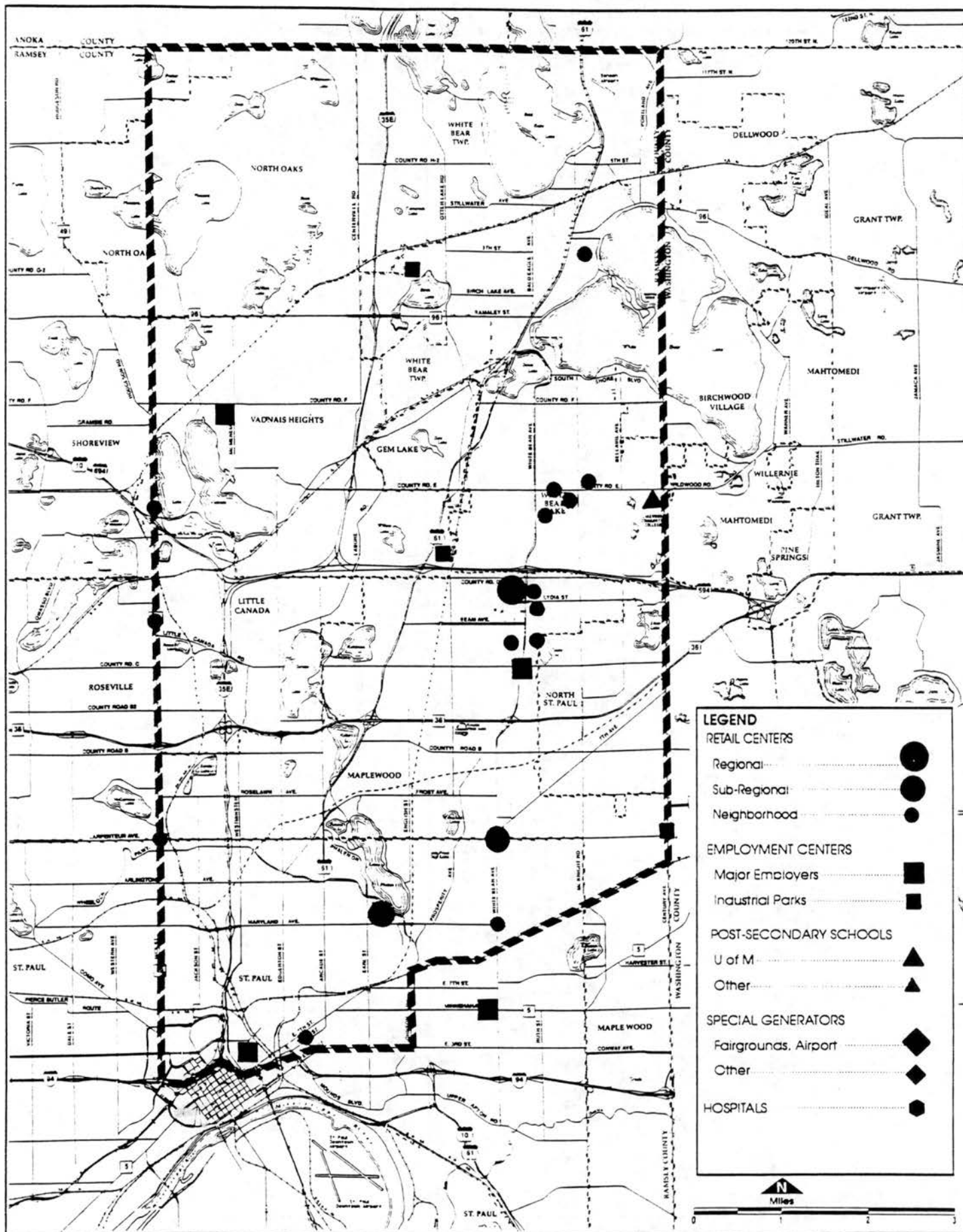


Northeast Corridor LRT Alignment Study



SRF

Figure 5
Area Served By E. 7th St./C & NW RR
McKnight Rd. LRT Alignment



Northeast Corridor LRT Alignment Study

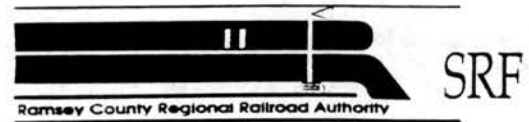


Figure 6
Existing Transit Generators in the
Northeast Corridor Study Area

Future growth should also be served by LRT. Employment and population in the corridor is expected to grow 10 to 12 percent by year 2010. Growth rates may be higher in the areas north of I-694 that have vacant land and are well served by freeways and railroads. The alternative alignments will be evaluated in more detail in later tasks regarding service to future growth areas and the extent to which LRT might stimulate or focus growth in the Northeast Corridor.

Criterion 3: Minimize Route Circuity

Two primary alignment possibilities perform poorly in terms of overall travel time to the end of the line. These are the Soo Line Railroad and McKnight Road. In addition, many possible street alignment combinations would add travel time due to circuity of the route. These longer distances translate to longer travel times, lower ridership, and high capital and operating costs. Other primary alignment alternatives are significantly more direct, although downtown and cross-connectors will affect actual travel times.

Criterion 4: Capability for High-Speed Transit Service

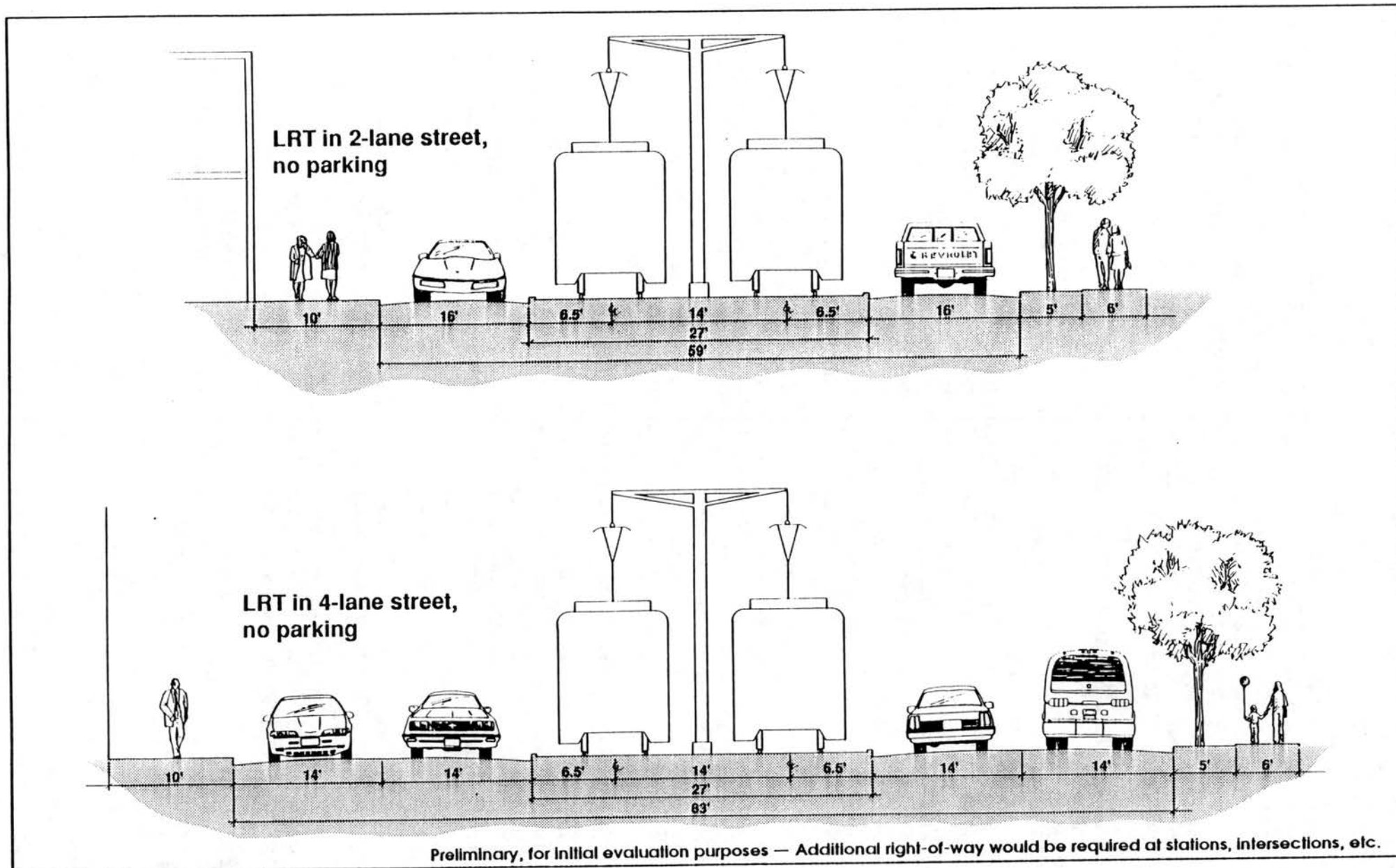
The RCRRA objectives support the concept of an LRT system which significantly reduces travel time for transit riders. This is necessary to compete successfully with the automobile and capture new transit riders from congested streets and highways. Most of the local street alignment possibilities do not meet this important criterion. Thus, most residential street options were considered inappropriate for detailed study.

Criterion 5: Availability of Right-of-Way

The overall right-of-way required to accommodate Light Rail Transit will vary with the alignment facility and LRT system features. For initial screening purposes, a set of minimum desirable cross-sections were developed. These cross-sections depict LRT on different types of alignments including local streets, highways and railroads as shown in Figures 7, 8 and 9. LRT is assumed to be double track.

It should be noted that a desired cross-section and specific right-of-way requirements must be determined for each alignment. Both will vary depending on local circumstances. This requires an in-depth evaluation of existing conditions. The data presented in this memorandum were developed for preliminary assessment purposes only.

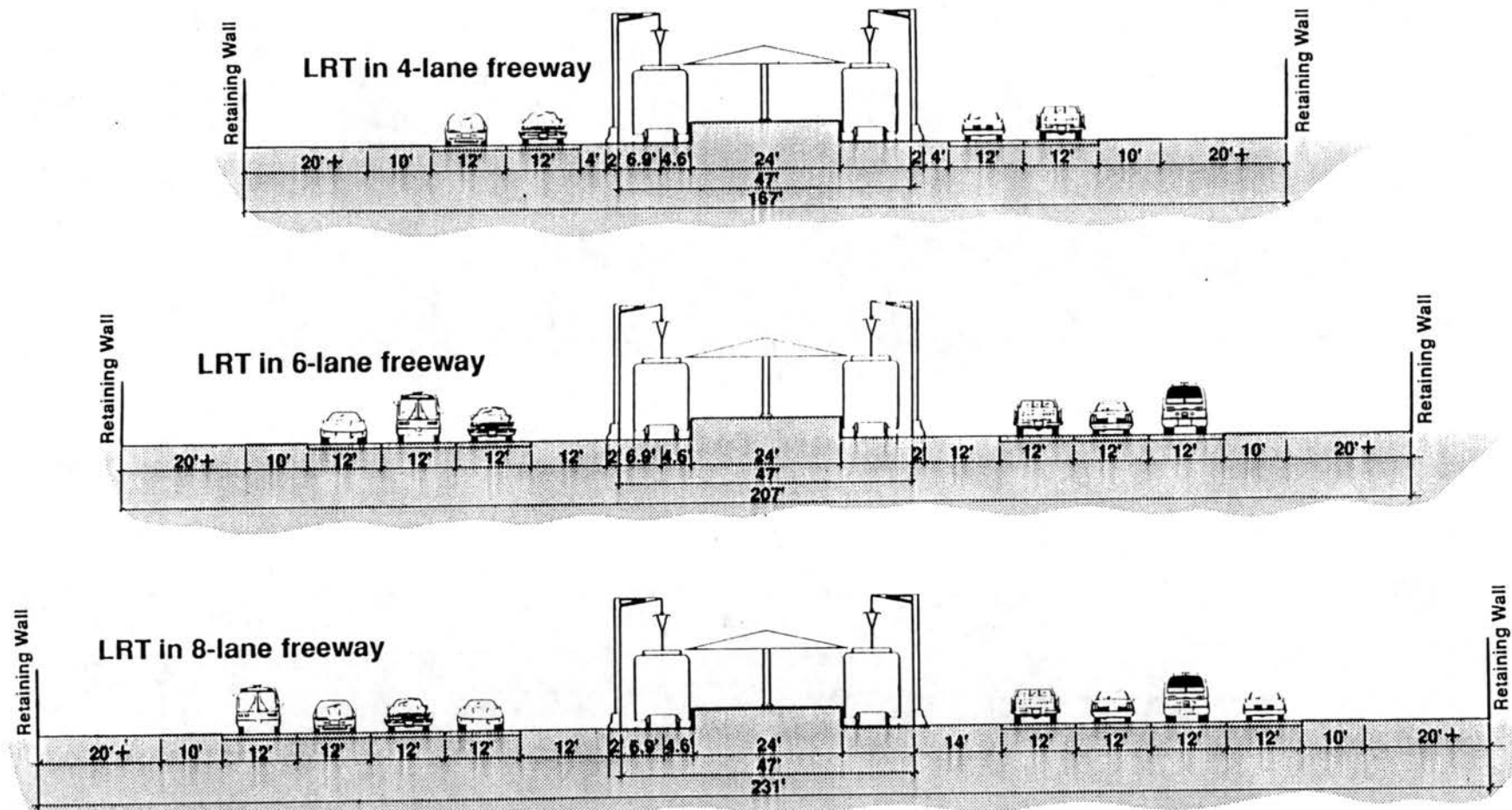
For freeway alternatives, the minimum desirable right-of-way includes width for a station platform. A constant width is preferred to avoid weaving the freeway mainlines between stations.



Northeast Corridor LRT Alignment Study

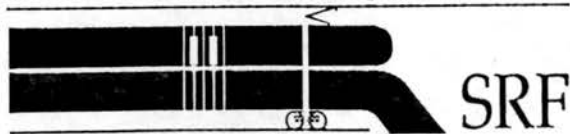


Minimum Desirable Cross-Section
in a City Street
Figure 7



Preliminary, for initial evaluation purposes — Additional right-of-way would be required at stations, intersections, etc.

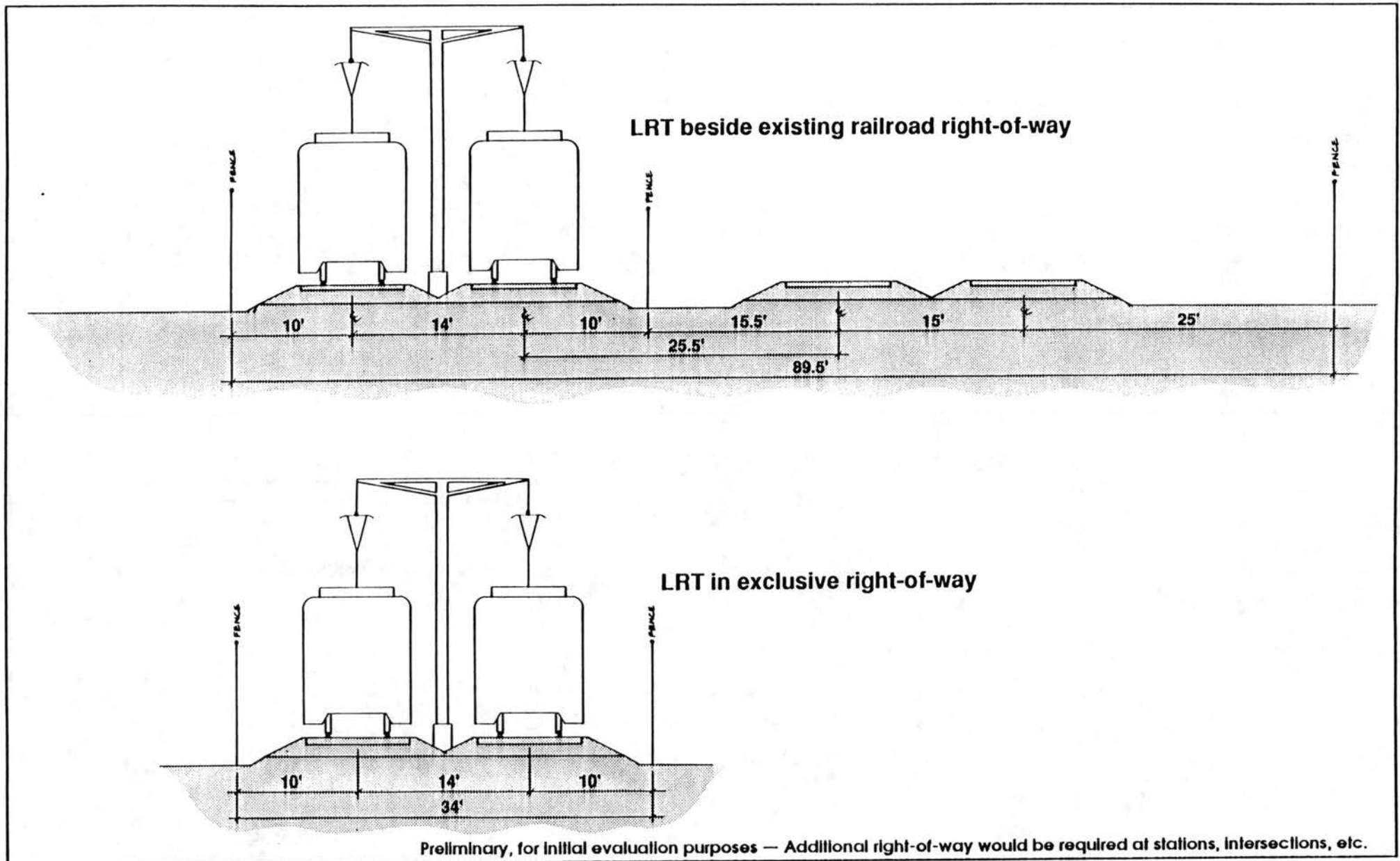
Northeast Corridor LRT Alignment Study



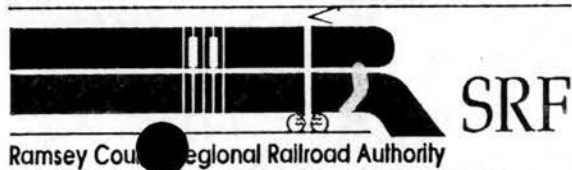
Ramsey County Regional Railroad Authority

Minimum Desirable Cross-Section
in a Freeway

Figure 8



Northeast Corridor LRT Alignment Study



Minimum Desirable Cross-Section
LRT and Railroad

Figure 9

For each potential LRT alignment segment, the existing right-of-way width was determined from county plat maps. These widths were compared to the minimum desirable cross-sections as shown in Table 1. Where capacity improvements are planned on Mn/DOT roadways, the improved segment was utilized as the base for determining right-of-way availability. This preliminary analysis does not include any right-of-way required for stations or park-and-ride lots.

TABLE 1
MINIMUM DESIRABLE CROSS-SECTIONS FOR LRT

Alignment Type	Minimum Desirable Width of Right-of-way (feet)*
LRT + 2-lane street	61
LRT + 4-lane street	93
LRT +4-lane expressway or freeway	167
LRT +6-lane freeway	207
LRT +8-lane freeway	231
LRT on exclusive railroad right-of-way	34
LRT + single track railroad	70
LRT + double track railroad	90

* Additional right-of-way would be required at station platforms, intersections, interchanges, etc.

As a result of this very preliminary analysis, a number of alignments or alignment segments were identified as having severe right-of-way constraints. (Additional information is provided in the Appendix.)

1. Arcade: East Seventh to Wheelock Parkway
2. East Seventh Street:
 - Burlington Northern to Arcade
 - Arcade to Earl Street
 - Earl Street to White Bear Avenue

3. White Bear Avenue:
East Seventh Street to Chicago and Northwestern Railroad
Chicago and Northwestern Railroad to Larpenteur Avenue
Ripley Avenue to County Road B
County Road B to County Road C
County Road E to County Road F
County Road F to T.H. 61
4. T.H. 61:
Wheelock Parkway to Willard Munger Trail
5. Other:
Maryland Avenue: Prosperity to White Bear Avenue
Prosperity Avenue: Maryland Avenue to Wakefidd
Parkway Drive: Wheelock Parkway to T.H. 61

These segments should be avoided where possible. Alignments with several such segments, such as White Bear Avenue, are not recommended for further study.

Criterion 6: Opportunity for Future Extension

All alignments should terminate north rather than south of I-694. This location will eliminate substantial traffic crossing I-694 to reach a southern station location. It would also allow for easier future extension to the north. All alignments selected for detailed study should have the potential for future connections north of I-694.

ALTERNATIVE ALIGNMENTS RECOMMENDED FOR DETAILED STUDY

After application of the initial evaluation criteria, recommended alignment alternatives were identified. Figure 10 shows these remaining alignments. Conceptually, the corridor is divided into four sub-areas. Within each sub-area, there are several feasible segments for routing LRT. Segments can be combined to form various alignments. Detailed evaluation of these segments and the alignment alternatives identified below is recommended.

Sub-Area 1: Downtown Area

This sub-area includes the connection between the above alignment alternatives and the downtown circulation system. For purposes of this study, it will be assumed that LRT will operate on 4th Street with a connection in the vicinity of the Gillette property as recommended in the Midway Corridor Environmental Impact Statement/Preliminary Design. Specific recommendations on connections to each alignment alternative will be provided at a later date.

Sub-Area 2: St. Paul Area

This sub-area includes the geographic area between the Chicago and Northwestern Railroad on the south and the Willard Munger Trail. There are several alignments and potential alignment combinations recommended for further study in this sub-area. They are:

- . Burlington Northern Railroad
- . Arcade Street/T.H. 61
- . Arcade Street/T.H. 61/Willard Munger Trail to Burlington Northern Railroad
- . Mississippi/Westminster/Willard Munger Trail to T.H. 61
- . I-35E

Other combinations of these segments may also be possible but are not recommended for study as separate alignment alternatives.

Sub-Area 3: T.H. 36 Area

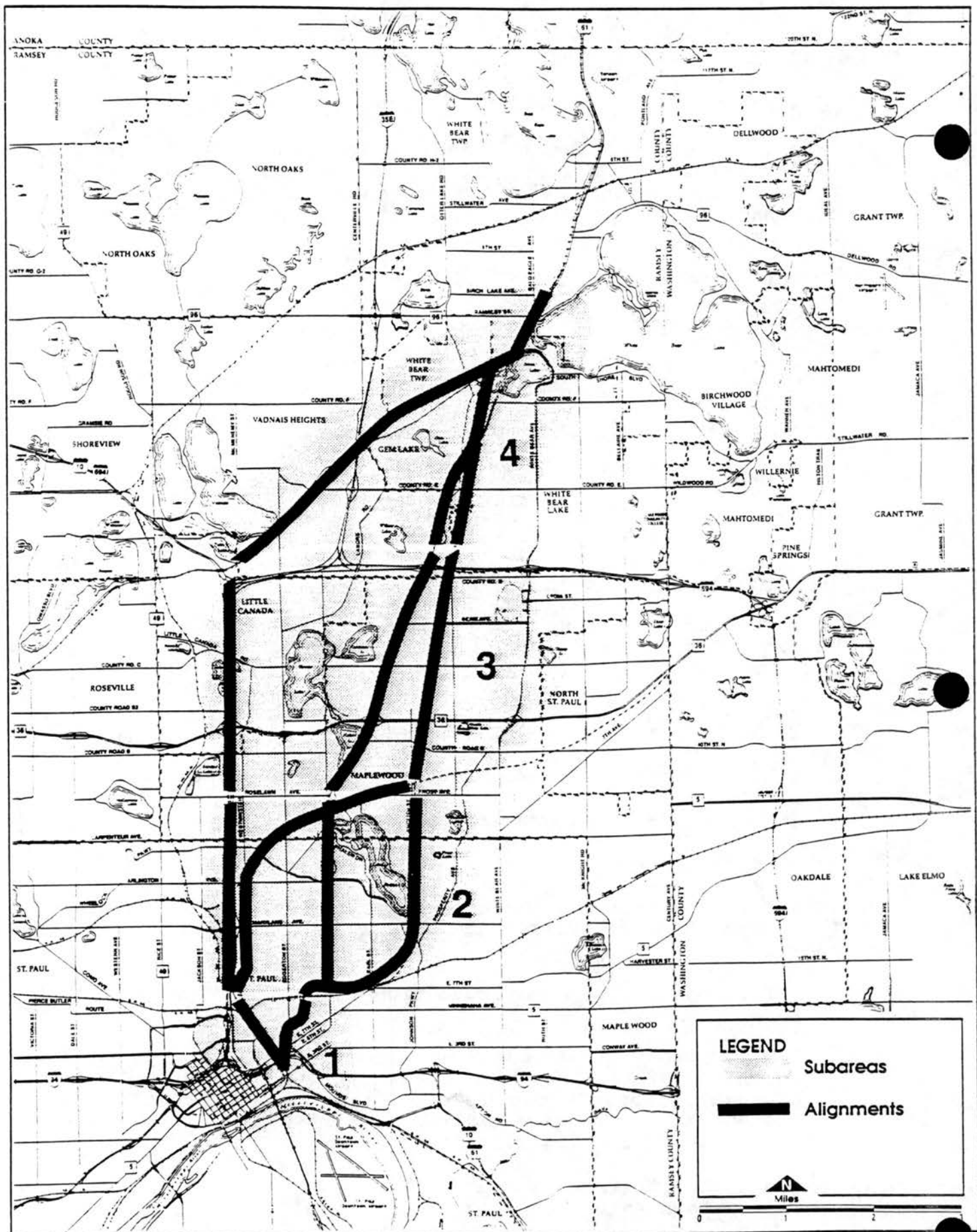
This sub-area includes the geographic area north of the Willard Munger Trail to I-694. There are three alignments recommended for further study in this sub-area:

- . Burlington Northern Railroad from Willard Munger Trail to I-694.
- . T.H. 61 from Willard Munger Trail to I-694.
- . I-35E from Willard Munger Trail to I-694.

Sub-Area 4: I-694 Area

This sub-area includes the entire geographic area north of I-694. There are three alignments recommended for further study in this sub-area:

- . Burlington Northern Railroad from I-694 to downtown White Bear Lake.
- . T.H. 61 from I-694 to Goose Lake, following the Burlington Northern Railroad north of Goose Lake. (T.H. 61 is built on a causeway through Goose Lake. Inclusion of LRT through this segment would require additional filling in the lake and, thus, would have significant environmental impacts.)
- . Burlington Northern Railroad from the I-694/I-35E interchange to downtown White Bear Lake.



Northeast Corridor LRT Alignment Study



SRF

Figure 10
Recommended
Subareas/Alignments

APPENDIX

- A. RESOURCE MATERIALS
- B. RIGHT-OF-WAY AVAILABILITY
- C. ACTIVE RAILROADS IN NORTHEAST STUDY AREA
- D. ROADWAYS UNDER MN/DOT JURISDICTION IN NORTHEAST CORRIDOR

A. RESOURCE MATERIALS

RESOURCE MATERIALS USED FOR INITIAL EVALUATION

- . RCRRA LRT Comprehensive Plan
- . Aerial photos (1985)
- . Photo log of potential alignments
- . Street series map
- . Ramsey County plat maps
- . Railroad map
- . Existing transit routes/ridership
- . Traffic volumes
- . Munger Trail ordinances

B. RIGHT-OF-WAY AVAILABILITY

TABLE B-1

Location	Segment	Right-of-Way (feet)	
		Existing	Minimum Desirable
B. RIGHT-OF-WAY AVAILABILITY			
<u>BURLINGTON NORTHERN ALIGNMENT</u>			
East 7th Street to C&NW RR		70	34
C&N RR to Arcade Street		100	34
Arcade Street to east of Earl Street		200 min	90
Railyard east of Earl Street to Maryland Avenue		100 - 450	34
Maryland Avenue to Frost Avenue		100	34
Frost Avenue to County Road C		100	34
County Road C to Wolters Boulevard extended		150	34
Wolters Boulevard extended to T.H. 61		200	34
T.H. 61 to 1,000 feet north of County Road F		100	34
North of C.R. F to Ramaley Street		125 min	34 - 70
Ramaley Street to 2nd Street		70 - 85	34 - 70
<u>35E ALIGNMENT</u>			
Pennsylvania to T.H. 36		340 min	231
Westminister: Maryland to T.H. 36		60 - 66	61
T.H. 36 to I-694		375 min	231
I-694 to White Bear Avenue		284 min	207
35E/I-694 to BN RR		290 min	207
BN RR: I-694 to north of C.R. F			
<u>T.H. 61 ALIGNMENT</u>			
East 7th Street to Arcade		80	93
Arcade to Wheelock Parkway		60	93
Wheelock Parkway to Willard Munger Trail		170	167
Edgerton: Payne Avenue to Willard Munger Trail		66	61
Soo Line RR to 35E		N/A	90
35E to Willard Munger Trail		340	231
Willard Munger Trail: 35E to Wheelock Parkway		100	34
Wheelock Parkway to T.H. 61		120	34
Willard Munger Trail to County Road B		170	167
County Road B to County Road C		170 - 210	167
County Road C to County Road F		210 min	167
County Road F to Second Street		175 min	167

RIGHT-OF-WAY AVAILABILITY (Continued)

Location	Segment	Right-of-Way (feet)	
		Existing	Minimum Desirable
<u>WHITE BEAR AVENUE ALIGNMENT</u>			
7th Street:	BN to Arcade Street	80	93
	Arcade to Earl Street	66	93
	Earl Street to White Bear Avenue	66	93
White Bear Avenue:	East 7th to CNW RR	66	93
	CNW RR to Larpenteur Avenue	66	93
	Larpenteur Avenue to Ripley Avenue	99	93
	Ripley Avenue to County Road B	63	93
	County Road B to County Road C	63 - 86	93
	County Road C to Beam Avenue	99	93
	Beam Avenue to County Road D	124	93
	County Road D to County Road E	99	93
	County Road E to County Road F	86	93
	County Road F to T.H. 61	86 min	93
Johnson Parkway:	CNW RR to Maryland Avenue	66	61
Maryland Avenue:	Prosperity to White Bear Avenue	60	61
Prosperity Avnue:	Maryland Ave. to Wakefield Lk.	60	61
Wakefield Lake to County Road B		76	61
Hazelwood:	Frost Avenue to Beam	66	61
<u>SOO LINE RAILROAD ALIGNMENT</u>			
35E to Magnolia Avenue		100 min	34 - 90
Magnolia Avenue to Wheelock Parkway		175 min	34 - 90
Wheelock Parkway to I-694		100	34 - 90
I-694 to Rice Street		250	34 - 90
Rice Street to T.H. 61		100	34 - 90
<u>CNW RR/MCKNIGHT ROAD ALIGNMENT</u>			
BN RR/Soo Line RR to Edgerton		200 min	90
Edgerton to Flandrau Street		100	90
Flandrau Street to McKnight Road		150	90
McKnight Road to Larpenteur Avenue		66	61
Larpenteur Avenue to Holloway		66 - 86	61
Holloway to County Road B		66	61

RIGHT-OF-WAY AVAILABILITY (continued)

Location	Segment	Right-of-Way (feet)	
		Existing	Minimum Desirable
<u>CNW RR/MCKNIGHT ROAD ALIGNMENT (Continue)</u>			
County Road B to T.H. 36		66 - 73	61
T.H. 36 to County Road C		73	61
County Road C to County Road D		66	61
Lydia to White Bear Avenue		80	61
County Road D to County Road E		70	61
County Road E to South Shore Boulevard		66	61
South Shore Boulevard to White Bear Avenue		66 - 76	61
White Bear Avenue to T.H. 61		86 min	93
T.H. 61 to Ramaley Street		175 min	167
<u>OTHER</u>			
T.H. 36:	35E to T.H. 61	300 min	194
	T.H. 61 to Hazelwood Street	247 min	167
	Hazelwood Street to McKnight Road	224 min	167
Roselawn Avenue:	Westminister to T.H. 61	63 - 66	61
Parkway Drive:	Wheelock Parkway to T.H. 61	60	61
Arlington:	Westminister to Arcade	66	61
Maryland Avenue:	Westminister to Arcade	66	61
Parkway Drive/Frost Avenue:	T.H. 61 to Hazelwood	66	61
Beam Avenue:	T.H. 61 to White Bear Avenue	120 min	93

C. ACTIVE RAILROADS IN NORTHEAST STUDY AREA

C. ACTIVE RAILROADS IN NORTHEAST STUDY AREA

The Rail Operation office in Mn/DOT maintains a map which charts the number of train movements on each rail line in the metropolitan area. Table C-1 and Figure C-1 describe current train movements on active rail lines in the Northeast Corridor LRT Alignment Study Area.

TABLE C-1
TRAIN MOVEMENTS IN NORTHEAST CORRIDOR

Railroad	Segment	# of Trains
Burlington Northern	Beam Avenue to M & D Jct.	Infrequent
	I-35W to M & D Jct.	8/week
	M & D Junction to Hugo	8/week
Soo Line	CBD to I-694	3/day
	I-694 to Wisconsin Central Tracks	5/day
Chicago & Northwestern	CBD to Wisconsin	9/day

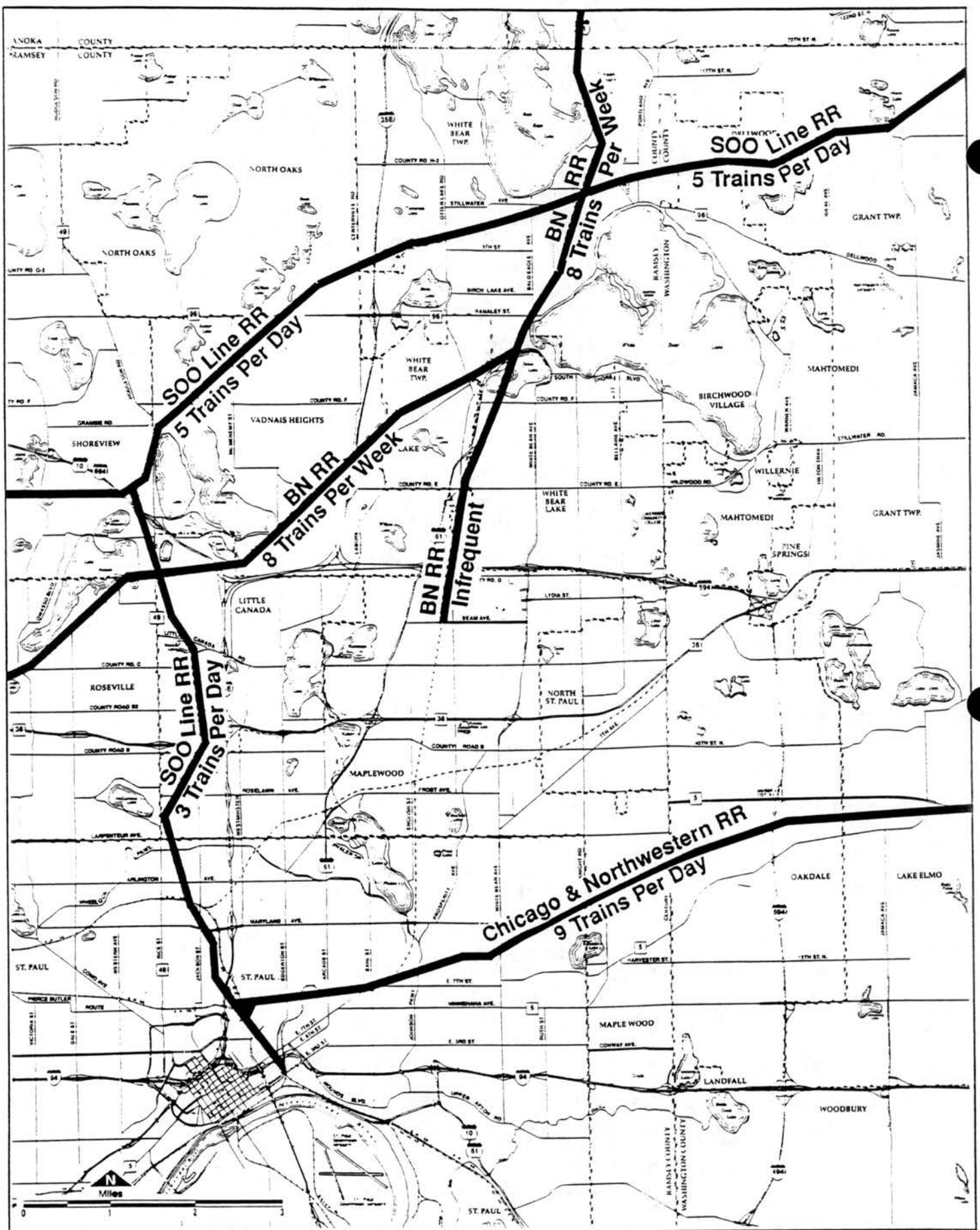
EVALUATION

Burlington Northern

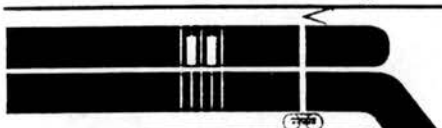
The Burlington Northern tracks in the northern part of the study area are not heavily utilized with about one train per day. Light rail transit could share these tracks or be built alongside. The Burlington Northern Railroad is willing to discuss potential use by LRT with RCRRA. Burlington Northern Railroad tracks could be needed under several alignment possibilities as shown in the attached figure.

Soo Line

The Soo Line tracks in the study area are used on a daily basis. In addition, they represent the only access by which the Wisconsin Central Railroad currently gains entry to the Twin Cities. The Soo Line has indicated, in the past, their willingness to negotiate with the RCRRA.



Northeast Corridor LRT Alignment Study



Ramsey County Regional Railroad Authority

Figure C-1
Active Railroads In
Northeast LRT Corridor

Chicago and Northwestern Railroad

The Chicago and Northwestern Railroad tracks in the study area represent this railroad's only connection into the Twin Cities and is their mainline to Chicago. An average of nine trains per day use these tracks.

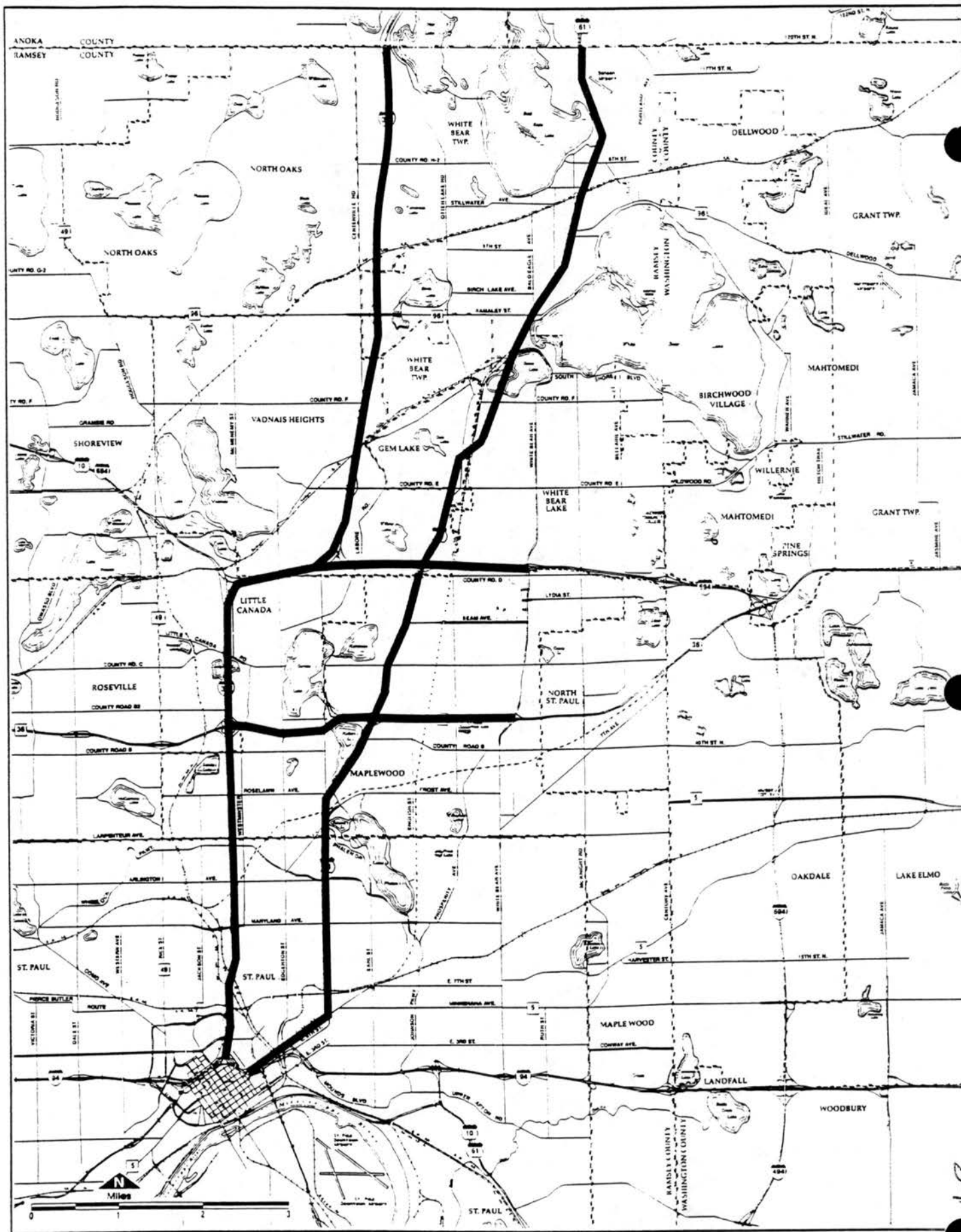
**D. ROADWAYS UNDER MN/DOT JURISDICTION
IN NORTHEAST CORRIDOR**

D. ROADWAYS UNDER MN/DOT JURISDICTION IN NORTHEAST CORRIDOR

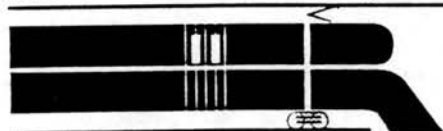
Figure D-1 identifies the roadways under Mn/DOT jurisdiction in the Northeast LRT Corridor that are being considered for light rail transit. Table D-1 lists the capacity improvements being proposed by Mn/DOT in the preliminary draft of the Metro 20-Year Plan.

TABLE D-1
PROPOSED CAPACITY IMPROVEMENTS ON MN/DOT ROADWAYS

Highway	Segment	Project Description
I-35E	I-94 to I-694	Expand to 8 lane freeway
	W. Jct. I-694 to T.H. 96	Expand to 6 lane freeway
T.H. 36	I-35W to T.H. 61	Expand to 6 lane freeway
	T.H. 61 to I-694	Rebuild to 4 lane freeway
I-694	I-35W to I-35E	Expand to 6 lane freeway
	E Jct. I-35E to T.H. 36	Expand to 6 lane freeway
T.H. 61	I-94 to T.H. 96	No improvements planned



Northeast Corridor LRT Alignment Study



Ramsey County Regional Railroad Authority

Figure D-1
In Northeast Study Area Roadways
Under Mn/DOT Jurisdiction

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

9

Regional Railroad Authority

Originating Department

K. DeSpiegelaere 8/20/90
Authorized Signature Date

Board Action Requested

Authorize BRW to prepare grant applications for LRT funds to Mn/DOT at a cost not to exceed \$5,000.

APPROVAL IS REQUESTED

Request Justification

- See attached: 1) Proposed resolution
2) Memorandum from K. DeSpiegelaere

Budgeting and Accounting

Ed Glautz 8/21/90

County Attorney

David MacTavish

Risk Manager

Data Processing

Previous Action taken on Request

Date / Time

Received By

Comments / Recommendation

Documentation certified complete for:

Committee / Meeting Date

Signature

Date

Committee / Meeting Date

Signature

Date

August 28, 1990

Board Date

F. L. Glendinning
Signature

8/21/90

Date



Resolution

Board of

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

Date: _____

No. _____

WHEREAS, Ramsey County Regional Railroad Authority wishes to submit grant applications to the Minnesota Department of Transportation for LRT funds for:

1. Continuation of Phase II preliminary engineering for the Midway Corridor.
2. Preparation of an Environmental Impact Statement for the South Corridor.
3. Preparation of an alignment study for the Northwest Corridor;

Now, Therefore, Be It

RESOLVED, That Ramsey County Regional Railroad Authority authorizes BRW to prepare the grant applications at a cost not to exceed \$5000 and that funds for preparation of the applications shall be provided from the consulting account in the 1990 budget adopted by Ramsey County Regional Railroad Authority, And Be It Further

RESOLVED, That the Chairman of Ramsey County Regional Railroad Authority is authorized to sign a contract for this work.

John T. Finley, Chairman

By _____
Warren W. Schaber, Secretary



Room 316 Courthouse
15 W. Kellogg Blvd.
St. Paul, MN 55102
Phone 298-4145

John T. Finley, Chairman

District 3

Diane Ahrens

District 4

Ruby Hunt

District 5

Duane W. McCarty

District 1

Hal Norgard

District 7

Donald E. Salverda

District 2

Warren W. Schaber

District 6

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
FROM: Kathryn DeSpiegelaere, Director of LRT Planning *KD*
SUBJECT: Preparation of Grant Applications to Mn/DOT
DATE: August 20, 1990

At the August 14 Ramsey County Regional Railroad Authority, you authorized the preparation of grant applications for LRT funds for the following work:

1. Continuation of preliminary engineering Phase II for the Midway Corridor.
2. Environmental Impact Statement for the South Corridor.
3. Alignment study for the Northwest Corridor.

BRW prepared last year's grant application for Ramsey County Regional Railroad Authority for the Midway Corridor preliminary engineering. BRW has estimated that grant applications for the three projects would cost \$5,000.

Recommendation:

Consider the proposed resolution authorizing BRW to prepare the grant applications for a cost not to exceed \$5,000 to be funded from the consulting account in the 1990 Ramsey County Regional Railroad Authority budget and authorize the Chairman of the Railroad Authority to sign a contract for preparation of the grant applications.

The completed grant applications will be returned to Ramsey County Regional Railroad Authority before the September 28 deadline for submission.

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

10

Regional Railroad Authority

Originating Department

Kathryn Despiplac 8/16/90
Authorized Signature Date

Board Action Requested

Ratify Partial Payment No. 10 to BRW, Inc.
in the amount of \$107,744.28.

ACTION IS REQUIRED

-Request Justification

Ramsey County Regional Railroad Authority has contracted the professional services of BRW, Inc. for the purposes of conducting Phase I Preliminary Engineering/Environmental Impact Statement Studies for the Midway Corridor. Contract No. RCRRA-89-003 governs the performance of services and terms of payment. Payment in the amount of \$107,744.28 for the period ending June 30, 1990, has been issued in accordance with contract provisions and Rail Authority Resolution No. R-89-70. Payment documentation is being submitted for ratification in compliance with the latter. Attachments are:

- 1) Proposed resolution ratifying payment
- 2) Accounts Payable form and Partial Payment No. 10
- 3) BRW, Inc. Invoice No. 58740 and attachments

Budgeting and Accounting

Ed Blankety 8/21/90

County Attorney

Paul Marshall

Risk Manager

Data Processing

Previous Action taken on Request

Date / Time

Received By

Comments / Recommendation

Documentation certified complete for:

Committee / Meeting Date

Signature

Date

Committee / Meeting Date

August 28, 1990

Signature

J. L. Glendinning

Date

8/21/90

Board Date

Signature

Date



Resolution

Board of

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

Date: _____

No. _____

WHEREAS, The Ramsey County Regional Railroad Authority has contracted for the professional services of BRW, Inc. for the purpose of conducting Phase I Preliminary Engineering/Environmental Impact Statement studies for the Midway Corridor; and

WHEREAS, Ramsey County Regional Railroad Authority Agreement Number RCRRA-89-003, and the First Amendment thereto, govern the performance of services of and terms of payment to BRW, Inc.; and

WHEREAS, BRW, Inc. has satisfactorily completed portions of the work identified in the referenced agreements, and provided detailed invoice documentation for services and costs accrued through June 30, 1990; and

WHEREAS, To ensure timely payment for services rendered in accordance with Agreement No. RCRRA 89-003, the Ramsey County Regional Railroad Authority authorized (Resolution R89-70) the Director of Light Rail Transit Planning to process payments to BRW, Inc. for work completed and invoiced in accordance with the agreement; and

WHEREAS, Resolution R89-70 requires submittal of invoice and payment documentation to the Rail Authority for ratification at the next scheduled meeting following staff approval of invoice documentation; Now, Therefore, Be It

WHEREAS, BRW, Inc. Invoice No. 58740, Partial Payment No. 10, and attachments thereto, provide the correct documentation of payments due BRW, Inc. through June 30, 1990; Now, Therefore, Be It

RESOLVED, Payment to BRW, Inc. in the amount of \$107,744.28 for Ramsey County Regional Railroad Authority's share of services rendered through June 30, 1990 is hereby ratified.

John T. Finley, Chairman

By _____
Warren W. Schaber, Secretary

ACCOUNTS PAYABLE

(1) CHARGE TO: Dept. Regional Railroad Authority Date August 13, 1990

(2) Appropriation Item Consulting Services

For Accounting Use Only

Claim #		Date Paid
CA	PA800	1
1-2		3-7
8		9-14

WARRANT NO.

(3) Code				
RFC	Fund	Dept	Object	Amount
	591	59103	020102	107,744.28
15-17	18-20	21-25	26-31	32-41

107,744.28

Total 72

(4) PAY TO: 2 * 02207
 8 First Name & Initial 9-22
BRW, Inc.

Last Name or Firm Name 23-52
Thresher Square

3 700 Third Street South 53-76

8 Address 9-32
Minneapolis, MN

City State 33-54 Zip Code 55-59 Fed Tax ID 60-71

(5) On Check Stub Put: 4 Partial Pymt 10; Inv. #58740; Phase I PE/EIS Studies for
9-60 Midway Corridor
5 Agreement #PA800; Acct. 59103-020102; 6/30/90
9-60

For Risk Management Use Only 6 8 9-24
 Last Name First Name

(6) SEND TO: _____ Use only if Payee and/or
 Address _____ Address differs from
 Item 4

(7) Attach to the back of this form: Original Invoices, Receipts, Certified Claims
 or other documents.

Preparer's Signature: /s/ Bette Kurysh

(8) I declare that the above materials and/or services have been received, are
 for Ramsey County, allowed by law, and approved for payment.

Authorized Signature: Cathryn Halpiel

NOTE: The vendor's Social Security Number will be used to report taxable income to the
 Internal Revenue Service. This data is considered private under Minnesota
 Statutes 15.165, but we will not be able to process this claim without it.

BA-354 (02 - 89)

FOR INSTRUCTIONS SEE ACCOUNTING SYSTEM PROCEDURES MANUAL

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

PARTIAL PAYMENT NO. 10

PREPARED BY: [Signature]

PROJECT: PHASE I PE/EIS STUDIES FOR THE MIDWAY CORRIDOR
CONTRACT AGREEMENT NUMBER RCRRA-89-003

ENTERED BY: [Signature]

PROJECT COST CENTER: 59103

AGREEMENT NO: PA 800

DATE: AUG 13 90

RAMSEY COUNTY REGIONAL
RAILROAD AUTHORITY
316 COURTHOUSE
ST. PAUL, MN 55102

CONTRACTOR: BFW, INC.
THRESHER SQUARE
700 THIRD STREET SOUTH
MINNEAPOLIS, MN 55415

ACCOUNT NUMBER 59103-020102	PERCENT COMPLETED	46.5%
TOTAL VALUE OF WORK CERTIFIED - 30 JUNE 90		\$650,539.91
LESS 5% RETAINAGE		\$32,527.00
AMOUNT DUE		\$618,012.91
LESS PREVIOUSLY APPROVED PAYMENTS:		\$496,652.13
ALLOWABLE PAYMENT FOR THIS PARTIAL:		<u>\$121,360.78</u>

THIS IS TO CERTIFY THAT I HAVE EXAMINED THE WORK AND DETAIL OF THE INVOICE, AND
FIND THE TASKS LISTED HAVE BEEN COMPLETED IN ACCORDANCE WITH AGREEMENT REQUIREMENTS.

8/16/90 Kathryn Halpigelauer
DATE DIRECTOR, RC REGIONAL RAILROAD PLANNING

8/14/90 David M. Warner
DATE CONSULTANT

PREVIOUS PARTIALS:	RCRRA SHARE	HCRRA SHARE	TOTAL
PARTIAL PAYMENT NO. 1	\$22,793.28	\$2,960.20	\$25,753.48
PARTIAL PAYMENT NO. 2	\$16,204.16	\$2,162.13	\$18,366.29
PARTIAL PAYMENT NO. 3	\$11,462.24	\$1,450.12	\$12,912.36
PARTIAL PAYMENT NO. 4	\$25,132.71	\$3,244.59	\$28,377.30
PARTIAL PAYMENT NO. 5	\$50,216.59	\$6,662.10	\$56,878.69
PARTIAL PAYMENT NO. 6	\$55,234.37	\$7,274.62	\$62,508.99
PARTIAL PAYMENT NO. 7	\$74,637.71	\$9,938.04	\$84,575.75
PARTIAL PAYMENT NO. 8	\$75,747.93	\$10,078.03	\$85,825.96
PARTIAL PAYMENT NO. 9	\$107,136.59	\$14,316.72	\$121,453.31
PARTIAL PAYMENT NO. 10	\$107,744.28	\$13,616.50	\$121,360.78
PARTIAL PAYMENT TOTAL:	\$546,309.86	\$71,703.05	\$618,012.91

SUMMARY OF AGREEMENT

ORIGINAL AGREEMENT AMOUNT:	\$1,398,039.00
LESS TOTAL PARTIAL PAYMENTS (INCLUDING THIS PAYMENT)	\$618,012.91
AMOUNT REMAINING ON AGREEMENT	<u>\$780,026.09</u>

INVOICE 58740

MINNEAPOLIS • DENVER • PHOENIX • TUCSON • ST. PETERSBURG

Mr. James Tolaas
Ramsey County RRA
316 Courthouse
15 West Kellogg Blvd.
St. Paul, MN 55102

Mr. Ken Stevens
Hennepin County RRA
A-2307 Government Center
Minneapolis, MN 55487-0237

DATE: June 30, 1990

JOB NO: 41-8923 through
41-8939, 62-8944,
62-8954, 26-8956,
62-9004 through
62-9010, 26-9001
through 26-9003

INVOICE PERIOD: June 1 - June 30, 1990
INVOICE DATE: June 30, 1990
FEDERAL TAX ID NUMBER: 41-1625272

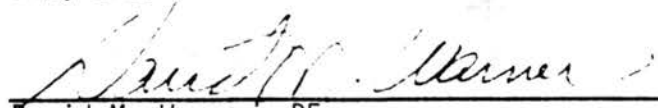
For Professional Services provided to the Ramsey County Regional Railroad Authority and the Hennepin County Regional Railroad Authority in preparation of Phase I Preliminary Engineering and an Environmental Impact Statement for light rail transit in the Midway Corridor, in accord with Agreement No. RCRRA 89-003.

AGENCY	DUE THIS BILLING	PAST AMOUNT INVOICED	TOTAL INVOICED TO DATE
Ramsey County RRA	\$ 113,415.03	\$ 461,647.99	\$ 575,063.02
o Less 5% Retainage	5,670.71 ⁵	23,082.34 ⁴⁰	28,753.16 ⁵
o Due This Billing	\$ 107,744.26 ²⁰	\$ 438,565.65 ⁵⁹	\$ 546,309.86 ⁷
Hennepin County RRA	\$ 14,333.16	\$ 61,143.73	\$ 75,476.89
o Less 5% Retainage	716.66	3,057.22 ¹⁹	3,773.88 ⁶
o Due This Billing	\$ 13,616.50	\$ 58,086.51 ⁴	\$ 71,703.07 ⁴

NOTE: See the attached details on cost by work tasks and allocation of cost to each RRA.

I hereby certify that the above statement is just and correct and payment has not been received.

BRW, INC.


David M. Warner, PE
Senior-Associate

ATTACHMENT NUMBER 1 TO AGREEMENT RCRA - 89003
 COST DETERMINATION BY WORK TASK FOR RCRA AND HCRA
 INVOICE PERIOD : JUNE 1, 1990 - JUNE 30, 1990
 FILENAME: 89003_1

WORK TASK	JOB NUMBER	LABOR \$	DIRECT EXPENSES \$\$	TOTAL	RCRA ALLOCATION AMOUNT %	HCRA ALLOCATION AMOUNT %
0 PROJECT MANAGEMENT	41-8923	\$3,814.20	\$51.63	\$3,865.83	89% \$3,440.59	11% \$425.24
1 PROJECT INITIATION	41-8924	\$0.00	\$0.00	\$0.00	88% \$0.00	12% \$0.00
2 COMMUNITY PARTICIPATION PROGRAM	41-8925	\$8,288.54	\$448.78	\$8,737.32	90% \$7,863.59	10% \$873.73
3 SYSTEM PLANNING AND ENGINEERING	41-8926,41-8937, 62-8944,62-9009, 26-8956,26-9002	\$40,752.40	\$175.48	\$40,927.88	88% \$36,016.53	12% \$4,911.35
4 ROUTE ENGINEERING AND DESIGN	41-8927,41-8938, 62-9004,62-9010, 26-9001,26-9003	\$33,506.72	\$276.61	\$33,783.33	88% \$29,729.33	12% \$4,054.00
5 PROTOTYPICAL STATION ZONE DESIGN	41-8928,41-8939, 62-9005,62-9014	\$1,081.60	\$0.00	\$1,081.60	90% \$973.44	10% \$108.16
6 SUPPORT FACILITIES	41-8929,62-9006	\$0.00	\$0.00	\$0.00	100% \$0.00	0% \$0.00
7 COST ANALYSIS	41-8930,62-9007	\$0.00	\$0.00	\$0.00	88% \$0.00	12% \$0.00
8 FINANCE AND MANAGEMENT ANALYSIS	41-8931,41-8936	\$0.00	\$0.00	\$0.00	90% \$0.00	10% \$0.00
9 IMPLEMENTATION PLANNING	41-8932	\$0.00	\$0.00	\$0.00	90% \$0.00	10% \$0.00
10 ENVIRONMENTAL STUDIES	41-8933,62-8954, 62-9015,26-9007	\$31,938.35	\$1,067.28	\$33,005.63	88% \$29,044.95	12% \$3,960.68
11 SELECT LOCALLY PRE- FERRED ALTERNATIVE	41-8934	\$0.00	\$0.00	\$0.00	88% \$0.00	12% \$0.00
12 WORK PROGRAM- PHASE II PRELIMINARY ENGINEERING	41-8935,62-9008	\$0.00	\$0.00	\$0.00	88% \$0.00	12% \$0.00
13 CAPITOL AREA TUNNEL	26-9005,41-9023, 62-9029	1240.2	0	\$1,240.20	100% \$1,240.20	
14 DOWNTOWN AREA TUNNEL	26-9004,41-9022, 62-9016	5106.4	0	\$5,106.40	100% \$5,106.40	
TOTAL		\$125,728.41	\$2,019.78	\$127,748.19	\$113,415.03	\$14,333.16

ERW, INC.

JUNE 30, 1990
INVOICE NO. DRAFT
JOB NO. 02690.07

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
JENSEN, STEVEN	4.0	13.94	55.76
THOMAS, MICHAEL	4.3	16.63	72.97
TOTALS	8.3		128.13

TOTAL LABOR	128.13
-------------	--------

TOTAL THIS INVOICE \$	128.13
-----------------------	--------

=====

BRW. INC.

JUNE 30, 1990
INVOICE NO. DRAFT
JOB NO. 04169 23

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
WOLSFELD, RICHARD	6.5	135.20	878.80
SR. ASSOCIATE			
WARNER, DAVID	37.0	78.00	2,886.00
TECHNICIAN I			
ASHLAND, CAROL	0.6	26.00	15.60
HAMRICK, CLAUDIA	0.1	26.00	2.60
ROTHOUDE, NANCY	1.2	26.00	31.20
SUBTOTALS	45.4		49.40
TOTALS	45.4		3,814.20

TOTAL LABOR 3,814.20

TOTAL THIS JOB \$ 3,814.20

MIDWAY LRT SYSTEM ENG

JOB NO. 02454 36

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

BRW, INC.

INVOICE NO. DRAFT

JOB NO. 04189.23

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
ERICKSON, GARY	6.5	135.20	878.80
PROFESSIONAL II			
SKOW, BRADLEY	102.0	57.20	5,834.40
PROFESSIONAL I			
MORWITZ, BARBARA	1.0	44.20	44.20
TECHNICIAN II			
BLUM, BARBARA	1.4	33.80	47.32
MCKELIS, JOHN SCOTT	2.0	33.80	67.60
SUBTOTALS	3.4		114.92
TECHNICIAN I			
JENSEN, KENNETH	1.2	26.00	31.20
KRUEGER, DUFF	1.9	26.00	49.40
SUBTOTALS	3.1		80.60
TOTALS	116.0		6,952.92

TOTAL LABOR 6,952.92

TOTAL THIS JOB \$ 6,952.92

MIDWAY LRT ROUTE ENG

JOB NO 02690 01

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
TECHNICIAN I			
JENSEN, KENNETH	0.2	26.00	5.20
TOTAL LABOR			5.20
TOTAL THIS JOB \$			5.20

BRW, INC.

INVOICE NO. DRAFT
JOB NO. 04189.23

MIDWAY LRT DWNTH SVS PLN

JOB NO. 02690.02

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
ERICKSON, GARY	3.0	135.20	405.60
ASSOCIATE			
BERTENSEN, JOHN	15.0	72.80	1,092.00
PROFESSIONAL II			
SKOW, BRADLEY	50.0	57.20	2,860.00
SR. TECHNICIAN			
HANFORD, DONALD	3.0	41.60	124.80
TECHNICIAN II			
BLUM, BARBARA	0.4	33.80	13.52
TOTALS	71.4		4,495.92

TOTAL LABOR 4,495.92

TOTAL THIS JOB 5 4,495.92

MIDWAY LRT DWNTH TUNNEL

JOB NO. 02690.04

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
ERICKSON, GARY	7.0	135.20	946.40

BRW, INC.

INVOICE NO. DRAFT
JOB NO. 04189.25

PROFESSIONAL II			
FISCHER, DOUGLAS	11.5	57.20	657.80
TOTALS	18.5		1,604.20

TOTAL LABOR 1,604.20

TOTAL THIS JOB \$ 1,604.20

MIDWAY LRT CAP TUNNEL

JOB NO. 02690.05

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
ERICKSON, GARY	1.5	135.20	202.80

PROFESSIONAL II			
FISCHER, DOUGLAS	3.0	57.20	171.60

TOTALS	4.5		374.40
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TOTAL LABOR 374.40

TOTAL THIS JOB \$ 374.40

MIDWAY LRT-COMMUNITY PAR

JOB NO. 04189.25

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			

BRW, INC.

INVOICE NO. DRAFT

JOB NO. 04189.23

WOLSFELD, RICHARD	15.5	135.20	2,095.60
SR. ASSOCIATE			
WARNER, DAVID	21.0	78.00	1,638.00
PROFESSIONAL I			
COLEBURN, ELIZABETH	81.0	44.20	3,580.20
TECHNICIAN III			
PATRICK, CHRISTOPHER	1.0	36.40	36.40
TECHNICIAN II			
HAWKINSON, TOM	4.3	33.80	145.34
TECHNICIAN I			
ASHLAND, CAROL	3.1	26.00	80.60
BEVER, GINA	0.3	26.00	7.80
BUCKLEY, SUSAN	1.5	26.00	39.00
DENEY, PAMELA	1.8	26.00	46.80
GRATIK, KAREN	1.2	26.00	31.20
HARRICK, CLAUDIA	0.3	26.00	7.80
HENDERSON, JAKE	2.0	26.00	52.00
JENSEN, KENNETH	0.0	26.00	20.80
KRUEGER, DUFF	2.2	26.00	57.20
MERRILL, GREGORE	1.6	26.00	46.80
MOLITOR, LINDA	2.5	26.00	59.80
NIHART, JAMES	11.6	26.00	306.80
POPE, LEZLIANNE	1.0	26.00	26.00
SCHODNERBERG, KATHY	0.4	26.00	10.40
SUBTOTALS	30.5		793.00
TOTALS	153.3		8,288.54

TOTAL LABOR 8,288.54

TOTAL THIS JOB \$ 8,288.54

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MIDWAY LFT-SYSTEM PLAN

JOB NO. 04189.26

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

BRN. INC.

INVOICE NO DRAFT

JOB NO. 04169 23

	HOURS	RATE	AMOUNT
SR. ASSOCIATE			
PRESTON, HOWARD	7.0	78.00	546.00
WARNER, DAVID	11.0	78.00	858.00
SUBTOTALS	18.0		1,404.00

ASSOCIATE			
MOORE, DOUGLAS	1.5	72.80	109.20

PROFESSIONAL II			
SMITH, WILLIAM	111.5	57.20	6,377.80

TECHNICIAN I			
ASHLAND, CAROL	2.6	26.00	67.60
HARRICK, CLAUDIA	3.0	26.00	78.00
HENDERSON, JANE	2.8	26.00	72.80
JENSEN, KENNETH	3.9	26.00	101.40
KRUEGER, DUFF	0.4	26.00	10.40
MOLITOR, LINDA	0.5	26.00	13.00
ROXHOVDE, HANCO	2.0	26.00	52.00
SUBTOTALS	15.2		395.20

TOTALS	146.2		8,286.20
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TOTAL LABOR 8,286.20

TOTAL THIS JOB \$ 8,286.20

MIDWAY LRT-ROUTE ENG.

JOB NO. 04169 27

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
WOLSFELD, RICHARD	1.5	135.20	202.80
SR. ASSOCIATE			
WARNER, DAVID	38.0	78.00	2,964.00
PROFESSIONAL II			
IDZOREK, EDWARD	0.6	57.20	34.32

BRW, INC.

INVOICE NO. DRAFT

JOB NO. 04189.23

RUSCO, BRENT	26.0	57.20	1,467.20
TRDE, WILLIAM	3.0	57.20	171.60
SUBTOTALS	29.6		1,638.80

TECHNICIAN II

ANDERSON, LAURIE	88.0	33.60	2,974.40
BLUM, BARBARA	1.0	33.60	33.60
HANSON, KATHY	142.0	33.60	4,799.60
SUBTOTALS	231.0		7,807.60

TECHNICIAN I

ALLEN, DAVID	0.5	26.00	13.00
BUCKLEY, SUSAN	0.2	26.00	5.20
JENSEN, KENNETH	0.5	26.00	13.00
WINFREY, MARK	12.0	26.00	312.00
SUBTOTALS	13.2		343.20

TOTALS	313.8		13,010.92
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TOTAL LABOR 13,010.92

TOTAL THIS JOB \$ 13,010.92

MIDWAY LET-ENVIRON. STDV

JOB NO. 04189.33

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
WOLSFELD, RICHARD	5.0	135.20	676.00
SR ASSOCIATE			
WARNER, DAVID	8.0	78.00	624.00
ASSOCIATE			
HEPPELMANN, TONY	18.0	72.80	1,310.40
PROFESSIONAL II			
KUNKEL, BETH	15.0	57.20	772.20
KILES, MARK	99.0	57.20	5,662.80
POMMREHN, SUSAN	24.0	57.20	1,372.80

BRW, INC.

INVOICE NO. DRAFT

JOB NO. 04169.23

TROE, WILLIAM	8.0	57.20	457.60
SUBTOTALS	144.5		8,265.40
PROFESSIONAL I			
GEORGESON, TIM	4.0	44.20	176.80
GREEN, ROBERT	6.0	44.20	265.20
HINKER, CHRISTIAN	35.9	44.20	1,586.78
HORWITZ, BARBARA	0.5	44.20	22.10
RINGROSE, MICHAEL	23.0	44.20	1,016.60
WITZIG, JEANNE	4.5	44.20	198.90
SUBTOTALS	73.9		3,266.36
SR. TECHNICIAN			
BARTEL, DAVID	2.5	41.60	104.00
TECHNICIAN III			
PATRICK, CHRISTOPHER	63.5	36.40	2,311.40
TECHNICIAN II			
ANDERSON, BETTY	16.5	33.80	557.70
FAGRELIUS, CAROLE	1.0	33.80	33.80
HAWKINSON, TOM	0.6	33.80	20.28
LAMPPA, JASON	12.5	33.80	422.50
NASAH, CAROL	3.0	33.80	101.40
SUBTOTALS	33.6		1,142.44
TECHNICIAN I			
ASHLAND, CAROL	1.2	26.00	31.20
BEVER, GINA	6.2	26.00	161.20
CEPATIN, KAREN	1.5	26.00	39.00
GREEN, KENT	9.0	26.00	234.00
HARRICK, CLAUDIA	3.6	26.00	93.60
HENDERSON, JANE	2.8	26.00	72.80
JENSEN, KENNETH	1.6	26.00	41.60
KRUEGER, DUFF	1.8	26.00	46.80
MCKENZIE, BRYAN	14.5	26.00	377.00
NIMART, JAMES	122.2	26.00	3,177.20
ROTHOUDE, HANCOY	1.3	26.00	33.80
SCHODENBERG, KATHY	5.7	26.00	148.20
WINFREY, MARK	136.0	26.00	3,536.00
ZIMMERMAN, MICHAEL	27.5	26.00	715.00
SUBTOTALS	335.1		6,712.60
TOTALS	684.3		26,412.62

TOTAL LABOR 26,412.62

TOTAL THIS JOB \$ 26,412.62

BRW, INC.

INVOICE NO. DRAFT
JOB NO. 04189.23

MIDWAY LRT DWNTN SYS PLN

JOB NO. 04189.37

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
WOLSFELD, RICHARD	9.5	135.20	1,284.40
PROFESSIONAL II			
MILES, MARK	51.5	57.20	2,945.80
PROFESSIONAL I			
HINKER, CHRISTIAN	21.8	44.20	963.56
TECHNICIAN III			
PATRICK, CHRISTOPHER	13.0	36.40	473.20
TECHNICIAN II			
HARRISON, TOM	0.2	33.80	6.76
TECHNICIAN I			
ASHLAND, CAROL	2.2	26.00	57.20
BEVER, GINA	1.8	26.00	46.80
BUCKLEY, SUSAN	0.5	26.00	13.00
HARRICK, CLAUDIA	1.0	26.00	26.00
HENDERSON, JANE	0.5	26.00	13.00
JENSEN, KENNETH	0.1	26.00	2.60
KOLA-BANKOLE, FELICIA	16.2	26.00	421.20
NEKRILL, GREGORY	1.2	26.00	31.20
NIHART, JAMES	5.6	26.00	150.80
POPE, LEZLIANNE	1.3	26.00	33.80
ROMHOUE, NANCY	2.1	26.00	54.60
SCHODENBERG, KATHY	1.6	26.00	41.60
SUBTOTAL	34.3		891.80
TOTALS	130.5		6,565.52

TOTAL LABOR 6,565.52

TOTAL THIS JOB \$ 6,565.52

BRW, INC.

INVOICE NO. DRAFT

JOB NO. 04189.23

MIDWAY LRT DWTH RTE EHS

JOB NO. 04189.36

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
WOLSFELD, RICHARD	4.0	135.20	540.80
		TOTAL LABOR	540.80

		TOTAL THIS JOB \$	540.80
			=====

MIDWAY LRT DWTH TUNNEL

JOB NO. 04190.22

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
WOLSFELD, RICHARD	9.5	135.20	1,284.40
PROFESSIONAL II			
HILES, MARK	14.0	57.20	800.80
TECHNICIAN I			
RONHOUE, HANCO	0.5	26.00	13.00
TOTALS	24.0		2,098.20
		TOTAL LABOR	2,098.20

		TOTAL THIS JOB \$	2,098.20
			=====

BRW, INC.

INVOICE NO. DRAFT
JOB NO. 04189 23

MIDWAY LRT CAPITOL TUNNE

JOB NO. 04190.23

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
WOLSFELD, RICHARD	1.5	135.20	202.80
TOTAL LABOR			202.80

TOTAL THIS JOB \$			202.80
			=====

RCRR SYSTEM PLAN/ENS

JOB NO. 06269.44

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PROFESSIONAL II			
GUNDERSON, ROBERT	4.0	57.20	228.80
RILEY, STEPHEN	36.5	57.20	2,087.80
SUBTOTALS	40.5		2,316.60
TOTAL LABOR			2,316.60

TOTAL THIS JOB \$			2,316.60
			=====

BRW, INC.

INVOICE NO. DRAFT
JOB NO. 04189.23

MIDWAY LRT ROUTE ENG DSS

JOB NO. 06290.04

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
SR. ASSOCIATE			
SMOLUCHOWSKI, PETER	81.5	78.00	6,357.00
SR. PROFESSIONAL			
MALLOY, STEPHEN	76.5	67.60	5,171.40
PROFESSIONAL II			
RILEY, STEPHEN	7.0	57.20	400.40
WICHMAN, TODD	78.0	57.20	4,461.60
SUBTOTALS	85.0		4,862.00
PROFESSIONAL I			
HORWITZ, BARBARA	0.5	44.20	22.10
SR. TECHNICIAN			
BLANKENSHIP, TIMOTHY	17.0	41.60	707.20
TECHNICIAN III			
MORD-SHEPTAK, CANDIS	2.0	36.40	72.80
PATRICK, CHRISTOPHER	1.0	36.40	36.40
SUBTOTALS	3.0		109.20
TECHNICIAN II			
BLUM, BARBARA	0.8	33.80	27.04
HAWKINSO, TOM	1.2	33.80	40.56
JOST, SCOTT	11.0	33.80	371.80
WICKLUND, DAVID	53.5	33.80	1,808.30
SUBTOTALS	66.5		2,747.70
TECHNICIAN I			
DEVER, STAN	0.6	26.00	15.60
CONNEL, DUNCAN	6.8	26.00	176.80
GUNDERSON, ANJA	0.5	26.00	13.00
HAMRICK, CLAUDIA	0.3	26.00	7.80
JENSEN, KENNETH	1.4	26.00	36.40
KRUEGER, DUFF	2.0	26.00	52.00
MCCORMICK, ANGELA	2.2	26.00	57.20

BRW, INC.

INVOICE NO. DRAFT

JOB NO. 04189.23

MOLITOR, LINDA	1.2	26.00	31.20
SCHOONENBERG, KATHY	3.2	26.00	83.20
SUBTOTALS	18.2		473.20

TOTALS	348.2		19,949.80
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TOTAL LABOR 19,949.80

TOTAL THIS JOB \$ 19,949.80

MIDWAY LRT DWMTS SYS PLM

JOB NO. 06290.09

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
SR. ASSOCIATE			
SMOLUCHOWSKI, PETER	25.5	78.00	1,989.00
SR. PROFESSIONAL			
HALLON, STEPHEN	2.5	67.60	169.00
PROFESSIONAL II			
RILEY, STEPHEN	14.5	57.20	829.40
WICHMAN, TODD	32.7	57.20	1,870.44
SUBTOTALS	47.2		2,699.84
SR. TECHNICIAN			
BLANKENSHIP, TIMOTHY	40.0	41.60	1,664.00
TECHNICIAN III			
MORD-SHEPTAK, CANDIS	74.0	36.40	2,693.60
TECHNICIAN II			
JOSE, SCOTT	24.5	33.80	828.10
WICKLUND, DAVID	10.0	33.80	338.00
ZIMMERMAN, MARK	11.5	33.80	388.70
SUBTOTALS	46.0		1,554.80
TECHNICIAN I			
ASHLAND, CAROL	0.7	26.00	18.20
BEVER, GIWA	4.4	26.00	114.40

BRW. INC.

INVOICE NO. DRAFT

JOB NO. 04189.23

CONNEL, DUNCAN	44.5	26.00	1,157.00
GUNDERSON, ANJA	0.5	26.00	13.00
HENDERSON, JAKE	0.6	26.00	15.60
JENSEN, KENNETH	0.6	26.00	15.60
MERRILL, GREGORE	1.2	26.00	31.20
SUBTOTALS	52.5		1,365.00

TOTALS	287.7		12,135.24
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TOTAL LABOR 12,135.24

TOTAL THIS JOB \$ 12,135.24

MIDWAY LRT DWXTH STAT DS

JOB NO. 06290.14

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
PRINCIPAL			
JARVIS, PETER	8.0	135.20	1,081.60

TOTAL LABOR 1,081.60

TOTAL THIS JOB \$ 1,081.60

MIDWAY LRT CULTURAL RES

JOB NO. 06290.15

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
ASSOCIATE			
HUDAK, JOSEPH	15.0	72.80	1,092.00

BRW, INC.

INVOICE NO. DRAFT
JOB NO. 04129.23

PROFESSIONAL II			
BAILEY, THOMAS	72.0	57.20	4,118.40
TECHNICIAN I			
GRATRIX, KAREN	4.0	26.00	104.00
HAMRICK, CLAUDIA	3.2	26.00	83.20
SUBTOTALS	7.2		187.20
TOTALS	94.2		5,397.60

TOTAL LABOR 5,397.60

TOTAL THIS JOB \$ 5,397.60

MIDWAY LRT DWTX TUNNEL

JOB NO. 06290.14

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL	HOURS	RATE	AMOUNT
SR. ASSOCIATE			
SKOLUCHOWSKI, PETER	18.0	78.00	1,404.00
TOTAL LABOR			1,404.00

TOTAL THIS JOB \$ 1,404.00

MIDWAY LRT CAP TUNNEL

JOB NO. 06290.29

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JUNE 30, 1990

PROFESSIONAL PERSONNEL	HOURS	RATE	AMOUNT
SR. ASSOCIATE			

BRW. INC.

INVOICE NO. DRAFT
JOB NO. 04189.23

SMOLUCHOWSKI, PETER	8.5	78.00	663.00
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TOTAL LABOR	663.00
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TOTAL THIS JOB \$	663.00
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INVOICE TOTALS

TOTAL LABOR	125,600.28
TOTAL CONSULTANTS	
TOTAL EXPENSE	
TOTAL FEE	
TOTAL INTEREST	

125,600.28
=====

BRW, INC.

BILLING SUMMARY

CURRENT PERIOD COSTS	-- LABOR --		-- EXPENSES --	
	HOURS	AMOUNT	REIMB.	DIRECT&IND
TOTALS	2526.3	39,111.76	2,026.49	

COSTS THIS RUN

TOTAL LABOR	125,726.41
TOTAL CONSULTANTS	
TOTAL EXPENSE	
TOTAL FEE	
TOTAL INTEREST	

** END OF BILLING RUN **

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

//

Regional Railroad Authority

Originating Department

K. Laspiogelare
Authorized Signature

8/16/90
Date

Board Action Requested

Ratify Partial Payment No. 2 to SRF, Inc.
in the amount of \$18,865.32.

ACTION IS REQUIRED

Request Justification

Ramsey County Regional Railroad Authority has contracted the professional services of SRF, Inc. for the purposes of conducting Alignment Studies for the Northeast Corridor. Contract No. RCRRRA-90-001 governs the performance of services and terms of payment. Payment in the amount of \$18,865.32 for the period ending June 30, 1990, has been issued in accordance with contract provisions and Rail Authority Resolution No. R90- . Payment documentation is being submitted for ratification in compliance with the latter. Attachments are:

- 1) Proposed resolution ratifying payment
- 2) Accounts Payable form and Partial Payment No. 2
- 3) SRF, Inc. Invoice No. 2 and attachments

Budgeting and Accounting

Ed Beatty *8/21/90*

County Attorney

Don Macmillan

Risk Manager

Data Processing

Date / Time

Received By

Previous Action taken on Request

Comments / Recommendation

Documentation certified complete for:

Committee / Meeting Date

Signature

Date

Committee / Meeting Date

August 28, 1990

Signature

J. L. Henderson
Signature

Date

8/21/90

Board Date

Date



Resolution

Board of

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

Date: _____

No. _____

WHEREAS, The Ramsey County Regional Railroad Authority has contracted for the professional services of Strgar-Roscoe-Fausch, Inc. for the purpose of conducting alignment studies for the Northeast Corridor; and

WHEREAS, Ramsey County Regional Railroad Authority Agreement Number RCRRA-90-001, govern the performance of services of and terms of payment to Strgar-Roscoe-Fausch, Inc.; and

WHEREAS, Strgar-Roscoe-Fausch, Inc. has satisfactorily completed portions of the work identified in the referenced agreements, and provided detailed invoice documentation for services and costs accrued through June 30, 1990; and

WHEREAS, To ensure timely payment for services rendered in accordance with Agreement No. RCRRA 90-001, the Ramsey County Regional Railroad Authority authorized (Resolution R90-) the Director of Light Rail Transit Planning to process payments to Strgar-Roscoe-Fausch, Inc. for work completed and invoiced in accordance with the agreement; and

WHEREAS, Resolution R90 - requires submittal of invoice and payment documentation to the Rail Authority for ratification at the next scheduled meeting following staff approval of invoice documentation; Now, Therefore, Be It

WHEREAS, Strgar-Roscoe-Fausch, Inc. Invoice No. 3, Partial Payment No. 2, and attachments thereto, provide the correct documentation of payments due Strgar-Roscoe-Fausch, Inc. through June 30, 1990; Now, Therefore, Be It

RESOLVED, Payment to Strgar-Roscoe-Fausch, Inc. in the amount of \$18,865.32 for Ramsey County Regional Railroad Authority's share of services rendered through June 30, 1990 is hereby ratified.

John T. Finley, Chairman

By _____
Warren W. Schaber, Secretary

ACCOUNTS PAYABLE

(1) CHARGE TO: Dept. Regional Railroad Authority Date August 14, 1990

(2) Appropriation Item Consulting Services

For Accounting Use Only

Claim #		Date Paid	
CA	PA017	1	
1-2		3-7	
8		9-14	

WARRANT NO.

(3) Code

RFC	Fund	Dept	Object	Amount
	591	59107	020102	\$18,865.32
15-17	18-20	21-25	26-31	32-41

\$18,865.32

Total

(4) PAY TO: 2 8 First Name & Initial 9-22

STRGAR-ROSCOE-FAUSCH, INC.
Last Name or Firm Name 23-52

3 53-76
One Carlson Parkway North, Suite 150

8 Address 9-32
Minneapolis, MN

City State 33-54

55447

Zip Code 55-59

Soc Sec No
OR

Fed Tax ID 60-71

(5) On Check Stub Put: 4 Partial Pymt 2; Inv. No. 2; NE Corridor Alignment Study 9-60

5 Agreement PA017; Acct. 59107-020102; 6/30/90 9-60

For Risk Management
Use Only

6 9-24
Last Name First Name

(6) SEND TO: _____ Use only if Payee and/or
Address _____ Address differs from
Item 4

(7) Attach to the back of this form: Original Invoices, Receipts, Certified Claims or other documents.

Preparer's Signature: /s/ Bette Kurysh

(8) I declare that the above materials and/or services have been received, are for Ramsey County, allowed by law, and approved for payment.

Authorized Signature: K. H. Spiegelaere

NOTE: The vendor's Social Security Number will be used to report taxable income to the Internal Revenue Service. This data is considered private under Minnesota Statutes 15.165, but we will not be able to process this claim without it.

BA-354 (02 - 89)

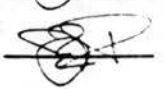
FOR INSTRUCTIONS SEE ACCOUNTING SYSTEM PROCEDURES MANUAL

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

PARTIAL PAYMENT NO. 2

PREPARED BY: 

PROJECT: NORTHEAST CORRIDOR ALIGNMENT STUDY
CONTRACT AGREEMENT NUMBER RCRA-90-001

ENTERED BY: 

PROJECT COST CENTER: 59107

AGREEMENT NO: PA017

DATE: 10 AUG 90

RAMSEY COUNTY REGIONAL
RAILROAD AUTHORITY
316 COURTHOUSE
ST. PAUL, MN 55102

CONTRACTOR: STIGAR-ROSCOE-FAUSCH, INC.
ONE CARLSON PARKWAY NORTH, SUITE 150
MINNEAPOLIS, MN 55447

ACCOUNT NUMBER 59107-020102	PERCENT COMPLETED	8.8%
TOTAL VALUE OF WORK CERTIFIED - 30 JUN 90		\$21,512.85
LESS 5% RETAINAGE		\$1,075.64
AMOUNT DUE		\$20,437.21
LESS PREVIOUSLY APPROVED PAYMENTS:		\$1,571.89
ALLOWABLE PAYMENT FOR THIS PARTIAL:		<u>\$18,865.32</u>

THIS IS TO CERTIFY THAT I HAVE EXAMINED THE WORK AND DETAIL OF THE INVOICE, AND
FIND THE TASKS LISTED HAVE BEEN COMPLETED IN ACCORDANCE WITH AGREEMENT REQUIREMENTS.

8/16/90 Kathryn Halpern
DATE DIRECTOR, RC REGIONAL RAILROAD PLANNING

8/15/90 Charles Zimmer
DATE CONSULTANT

PREVIOUS PARTIALS:

PARTIAL PAYMENT NO. 1	\$1,571.89
PARTIAL PAYMENT NO. 2	\$18,865.32
PARTIAL PAYMENT NO. 3	\$0.00
PARTIAL PAYMENT NO. 4	\$0.00
PARTIAL PAYMENT NO. 5	\$0.00
PARTIAL PAYMENT NO. 6	\$0.00
PARTIAL PAYMENT NO. 7	\$0.00
PARTIAL PAYMENT NO. 8	\$0.00
PARTIAL PAYMENT NO. 9	\$0.00
PARTIAL PAYMENT TOTAL:	\$20,437.21

SUMMARY OF AGREEMENT

ORIGINAL AGREEMENT AMOUNT:	\$244,865.00
LESS TOTAL PARTIAL PAYMENTS (INCLUDES THIS PAYMENT)	\$20,437.21
AMOUNT REMAINING ON AGREEMENT	<u>\$224,427.79</u>

STRGAR-ROSCOE-FAUSCH, INC.
Consulting Engineers-Land Surveyors
One Carlson Parkway North, Suite 150
Minneapolis, MN 55447

Telephone: (612) 475-0010

Refer to File: 0901380
Invoice Date: 6/30/90
Invoice No.: 2
Period Ending: 6/30/90

Ms. Kathryn DeSpiegelaere
Director of Light Rail Transit Planning
RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY
Room 316 Courthouse
15 West Kellogg Blvd.
St. Paul, MN 55102

re: NORTHEAST LRT CORRIDOR STUDY
Agreement No. RCRRA-90-001

Summary of professional engineering services rendered during June:

	CURRENT PERIOD	CUMMULATIVE TO DATE
Total Labor and Overhead	19,456.59	21,108.67
Total Direct Non-Salary Costs	401.64	404.18
TOTAL FEE EARNED	19,858.23	21,512.85
Less 5% Retainage	992.91	1,075.64
TOTAL	18,865.32	20,437.21
TOTAL AMOUNT DUE THIS INVOICE	18,865.32 =====	

COMMISSION # 901380
 NORTHEAST LRT CORRIDOR STUDY
 PERIOD ENDING JUNE 30, 1990

EMPLOYEE	CLASSIFICATION	RATE/HR	HOURS	AMOUNT
P. Fausch	Principal	85.00	5.0	425.00
F. Robinson	Principal	80.00	11.5	920.00
C. Zimmer	Principal	80.00	41.5	3320.00
J. Kern	Associate	80.00	1.0	80.00
W. Gardner	Trans. Planner	63.82	107.0	6828.74
F. Loetterle	Trans. Planner	44.15	45.0	1986.75
D. Dusheck	Land Surveyor	62.70	0.5	31.35
L. Wilev	Landscape Architect	36.30	39.0	1415.70
J. Peake	Sr. Technician	50.79	7.0	355.53
J. Hoffman	Sr. Technician	39.93	11.0	439.23
D. Paulu	Sr. Technician	39.60	19.5	772.20
A. Tassoni	Technician	36.20	0.5	18.10
V. Martinez	Technician	35.51	33.5	1189.59
W. Baker	Technician	34.65	25.0	866.25
L. Grover	Technician	31.35	10.3	322.91
J. Lubenda	Admin. Assistant	44.55	4.1	182.66
B. Bersie-Ashfeld	Word Processor	41.25	4.9	202.13
L. Charlev	Word Processor	27.72	3.1	85.93
D. Roscoe	Clerical	18.15	0.8	14.52
----- TOTALS -----			370.2	19456.59

901380

DIRECT NON-SALARY COSTS (SUMMARY)
PERIOD ENDING JUNE 30, 1990

NORTHEAST LRT CORRIDOR STUDY

CAT #	CATEGORY	
1	MILEAGE	155.74
2	PARKING	24.50
13	IN-HOUSE COPY DUPLICATION	15.40
14	BLUELINE PRINTS	0.48
21	FILM & DEVELOPING	10.31
22	SUPPLIES	3.47
51	CPP 10 X 12 PAPER	76.80
52	CPP 12 X 18 PAPER	5.88
55	CPPAB 10X12 PAPER. ADHES.BACK	10.40
58	CPFAB 10X12 FILM. ADHES.BACK	55.52
71	CPF 20 X 24 FILM	25.60
80	BRUNING BOND PRINTS	15.54

TOTAL DIRECT EXPENSES

401.64

DIRECT NON-SALARY COSTS (DETAILS)
PERIOD ENDING JUNE 30, 1990

CAT.	DATE	SOURCE	NO. ORGS	NO. EACH	LENGTH	WIDTH	TOTAL COPIES	NO. STATS	NO. UNITS	MILES	AMOUNT	TOTAL CHARGE
1	1	C Zimmer								45.0		11.70
1	29	A Tassoni								5.0		1.30
1	30	F Robinson								90.0		23.40
1	30	C Zimmer								90.0		23.40
1	30	W Gardner								75.0		19.50
1	30	F Loetterle								224.0		58.24
1	30	V Martinez								65.0		16.90
1	30	K Dooley								5.0		1.30
2	30	F Robinson									7.50	7.50
2	30	C Zimmer									8.50	8.50
2	30	C Zimmer									3.75	3.75
2	30	W Gardner									4.25	4.25
2	30	V Martinez									0.25	0.25
2	30	V Martinez									0.25	0.25
13	25	In-House	22	7			154					15.40
14	27	In-House			24.0	36.0	1					0.48
21	26	In-House									2.41	2.41
21	26	In-House									3.17	3.17
21	26	In-House									2.41	2.41
21	26	In-House									2.32	2.32
22	11	Accounts Payable									1.02	1.02
22	25	Accounts Payable									2.45	2.45
51	18	In-House						2				9.60
51	21	In-House						2				9.60
51	22	In-House						1				4.80
51	25	In-House						2				9.60
51	27	In-House						9				43.20
52	18	In-House						1				5.88
55	19	In-House						2				10.40
58	21	In-House						2				12.56
58	25	In-House						1				6.28
58	27	In-House						4				25.12
58	28	In-House						2				12.56
71	27	In-House						2				26.60
80	8	In-House			36.0	60.0	2					2.70
80	11	In-House			36.0	55.0	2					2.48
80	11	In-House			24.0	36.0	1					0.54
80	13	In-House			36.0	50.0	1					1.13
80	14	In-House			36.0	50.0	1					1.13
80	19	In-House			36.0	50.0	6					6.75
80	20	In-House			36.0	36.0	1					0.81

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

12

Regional Railroad Authority

Originating Department

F. H. Spiegelauer *8/17/90*
 Authorized Signature Date

Board Action Requested

Ratify Partial Payment No. 3 to SRF, Inc.
 in the amount of \$27,848.91.

ACTION IS REQUIRED

Request Justification

Ramsey County Regional Railroad Authority has contracted the professional services of SRF, Inc. for the purposes of conducting Alignment Studies for the Northeast Corridor. Contract No. RCRRA-90-001 governs the performance of services and terms of payment. Payment in the amount of \$27,848.91 for the period ending July 31, 1990, has been issued in accordance with contract provisions and Rail Authority Resolution No. R90- . Payment documentation is being submitted for ratification in compliance with the latter. Attachments are:

- 1) Proposed resolution ratifying payment
- 2) Accounts Payable form and Partial Payment No. 3
- 3) SRF, Inc. Invoice No. 3 and attachments

Budgeting and Accounting *Ed Glanville* *8/21/90*
County Attorney *W. L. McNeill*
Risk Manager _____
Data Processing _____
Previous Action taken on Request _____

Date / Time
 Received By

Comments / Recommendation

Documentation certified complete for:

Committee / Meeting Date

Signature

Date

Committee / Meeting Date

Signature

Date

August 28, 1990

Board Date

Signature

8/21/90

Date



Resolution

Board of

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

Date: _____

No. _____

WHEREAS, The Ramsey County Regional Railroad Authority has contracted for the professional services of Strgar-Roscoe-Fausch, Inc. for the purpose of conducting alignment studies for the Northeast Corridor; and

WHEREAS, Ramsey County Regional Railroad Authority Agreement Number RCRRA-90-001, govern the performance of services of and terms of payment to Strgar-Roscoe-Fausch, Inc.; and

WHEREAS, Strgar-Roscoe-Fausch, Inc. has satisfactorily completed portions of the work identified in the referenced agreements, and provided detailed invoice documentation for services and costs accrued through July 31, 1990; and

WHEREAS, To ensure timely payment for services rendered in accordance with Agreement No. RCRRA 90-001, the Ramsey County Regional Railroad Authority authorized (Resolution R90-) the Director of Light Rail Transit Planning to process payments to Strgar-Roscoe-Fausch, Inc. for work completed and invoiced in accordance with the agreement; and

WHEREAS, Resolution R90- requires submittal of invoice and payment documentation to the Rail Authority for ratification at the next scheduled meeting following staff approval of invoice documentation; Now, Therefore, Be It

WHEREAS, Strgar-Roscoe-Fausch, Inc. Invoice No. 3, Partial Payment No. 3, and attachments thereto, provide the correct documentation of payments due Strgar-Roscoe-Fausch, Inc. through July 31, 1990; Now, Therefore, Be It

RESOLVED, Payment to Strgar-Roscoe-Fausch, Inc. in the amount of \$27,848.91 for Ramsey County Regional Railroad Authority's share of services rendered through July 31, 1990 is hereby ratified.

John T. Finley, Chairman

By _____
Warren W. Schaber, Secretary

ACCOUNTS PAYABLE

(1) CHARGE TO: Dept. Regional Railroad Authority Date August 14, 1990
 (2) Appropriation Item Consulting Services

For Accounting Use Only

Claim #		Date Paid	
CA	PA017	1	

1-2 3-7 8 9-14

(3) Code

RFC	Fund	Dept	Object	Amount
	591	59107	020102	\$27,848.91

15-17 18-20 21-25 26-31 32-41

\$27,848.91

Total

(4) PAY TO: 2
 8 First Name & Initial 9-22
STRGAR-ROSCOE-FAUSCH, INC.
 Last Name or Firm Name 23-52
3 One Carlson Parkway North, Suite 150 53-76
 8 Address 9-32
 Minneapolis, MN 55447
 City State 33-54 Zip Code 55-59

Soc Sec No
 OR
 Fed Tax ID 60-71

(5) On Check Stub Put: 4 Partial Pymt 3; Inv. No. 3; NE Corridor Alignment Study
5 Agreement PA017; Acct. 59107-020102; 7/31/90
 9-60
 9-60

For Risk Management Use Only 6
 8
 Last Name First Name 9-24

(6) SEND TO: _____ Use only if Payee and/or Address differs from Item 4
 Address _____

(7) Attach to the back of this form: Original Invoices, Receipts, Certified Claims or other documents.

Preparer's Signature: /s/ Bette Kurysh

(8) I declare that the above materials and/or services have been received, are for Ramsey County, allowed by law, and approved for payment.

Authorized Signature: K. H. Spiegelaere

NOTE: The vendor's Social Security Number will be used to report taxable income to the Internal Revenue Service. This data is considered private under Minnesota Statutes 15.165, but we will not be able to process this claim without it.

BA-354 (02 - 89)

FOR INSTRUCTIONS SEE ACCOUNTING SYSTEM PROCEDURES MANUAL

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

PARTIAL PAYMENT NO. 3

PREPARED BY: 

PROJECT: NORTHEAST CORRIDOR ALIGNMENT STUDY
CONTRACT AGREEMENT NUMBER RCRRA-90-001

ENTERED BY: 

PROJECT COST CENTER: 59107 AGREEMENT NO: PA017

DATE: 13 AUG 90

RAMSEY COUNTY REGIONAL
RAILROAD AUTHORITY
316 COURTHOUSE
ST. PAUL, MN 55102

CONTRACTOR: STIGAR-ROSCOE-FAUSCH, INC.
ONE CARLSON PARKWAY NORTH, SUITE 150
MINNEAPOLIS, MN 55447

ACCOUNT NUMBER 59107-020102	PERCENT COMPLETED	20.8%
TOTAL VALUE OF WORK CERTIFIED - 31 JUL 90		\$50,827.49
LESS 5% RETAINAGE		\$2,541.37
AMOUNT DUE		\$48,286.12
LESS PREVIOUSLY APPROVED PAYMENTS:		\$20,437.21
ALLOWABLE PAYMENT FOR THIS PARTIAL:		<u>\$27,848.91</u>

THIS IS TO CERTIFY THAT I HAVE EXAMINED THE WORK AND DETAIL OF THE INVOICE, AND
FIND THE TASKS LISTED HAVE BEEN COMPLETED IN ACCORDANCE WITH AGREEMENT REQUIREMENTS.

8/17/90 Kathryn Despiegelacere
DATE DIRECTOR, RC REGIONAL RAILROAD PLANNING

8/13/90 Charles Zimmer
DATE CONSULTANT

PREVIOUS PARTIALS:

PARTIAL PAYMENT NO. 1	\$1,571.89
PARTIAL PAYMENT NO. 2	\$18,865.32
PARTIAL PAYMENT NO. 3	\$27,848.91
PARTIAL PAYMENT NO. 4	\$0.00
PARTIAL PAYMENT NO. 5	\$0.00
PARTIAL PAYMENT NO. 6	\$0.00
PARTIAL PAYMENT NO. 7	\$0.00
PARTIAL PAYMENT NO. 8	\$0.00
PARTIAL PAYMENT NO. 9	\$0.00
PARTIAL PAYMENT TOTAL:	\$48,286.12

SUMMARY OF AGREEMENT

ORIGINAL AGREEMENT AMOUNT:	\$244,865.00
LESS TOTAL PARTIAL PAYMENTS (INCLUDES THIS PAYMENT)	\$48,286.12
AMOUNT REMAINING ON AGREEMENT	<u>\$196,578.88</u>

STRGAR-ROSCOE-FAUSCH, INC.
Consulting Engineers-Land Surveyors
One Carlson Parkway North, Suite 150
Minneapolis, MN 55447

Telephone: (612) 475-0010

Refer to File: 0901380
Invoice Date: 7/31/90
Invoice No.: 3
Period Ending: 7/31/90

Ms. Kathryn DeSpiegelaere
Director of Light Rail Transit Planning
RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY
Room 316 Courthouse
15 West Kellogg Blvd.
St. Paul, MN 55102

re: NORTHEAST LRT CORRIDOR STUDY
Agreement No. RCRRA-90-001

Summary of professional engineering services rendered during July:

	CURRENT PERIOD	CUMMULATIVE TO DATE
Total Labor and Overhead	27,451.61	48,560.28
Total Direct Non-Salary Costs	1,863.03	2,267.21
TOTAL FEE EARNED	29,314.64	50,827.49
Less 5% Retainage	1,465.73	2,541.37
TOTAL	27,848.91	48,286.12
TOTAL AMOUNT DUE THIS INVOICE	27,848.91	=====

COMMISSION # 901380
 NORTHEAST LRT CORRIDOR STUDY
 PERIOD ENDING JULY 31. 1990

EMPLOYEE	CLASSIFICATION	RATE/HR	HOURS	AMOUNT
F. Robinson	Principal	80.00	5.5	440.00
C. Zimmer	Principal	80.00	39.5	3160.00
D. Evler	Principal	80.00	2.0	160.00
J. Kern	Associate	80.00	45.0	3600.00
M. Kennedv	Sr. Engineer	54.58	0.5	27.29
W. Gardner	Trans. Planner	63.82	142.5	9094.35
F. Loetterle	Trans. Planner	44.15	40.0	1766.00
L. Wiley	Landscape Architect	36.30	57.4	2083.62
J. Hoffman	Sr. Technician	39.93	0.5	19.97
D. Paulu	Sr. Technician	39.60	76.0	3009.60
V. Martinez	Technician	35.51	3.5	124.29
W. Baker	Technician	34.65	51.0	1767.15
L. Grover	Technician	31.35	20.4	639.54
K. Jullie	Technician	26.40	11.0	290.40
J. Lubenda	Admin. Assistant	44.55	17.5	779.63
B. Bersie-Ashfeld	Word Processor	41.25	4.4	181.50
L. Charlev	Word Processor	27.72	4.2	116.42
K. Dooley	Clerical	26.23	4.2	110.17
D. Roscoe	Clerical	18.15	4.5	81.68
----- TOTALS -----			529.6	27451.61

DIRECT NON-SALARY COSTS (SUMMARY)
PERIOD ENDING JULY 31, 1990

NORTHEAST LRT CORRIDOR STUDY

CAT #	CATEGORY	
1	MILEAGE	109.20
2	PARKING	11.50
9	SPECIAL DELIVERY	129.55
10	POSTAGE	98.18
13	IN-HOUSE COPY DUPLICATION	9.70
17	PRINTING	419.05
19	EQUIPMENT RENTAL	476.39
21	FILM & DEVELOPING	193.79
22	SUPPLIES	8.41
50	CPP 8.5 X 11 PAPER	9.15
51	CPP 10 X 12 PAPER	240.00
52	CPP 12 X 18 PAPER	76.44
55	CPPAB 10X12 PAPER. ADHES.BACK	10.40
56	CPF 10 X 12 FILM	56.40
80	BRUNING BOND PRINTS	14.86

TOTAL DIRECT EXPENSES

1863.00

DIRECT NON-SALARY COSTS (DETAILS)
PERIOD ENDING JULY 31, 1990

CAT.	DATE	SOURCE	NO. ORGS	NO. EACH	LENGTH	WIDTH	TOTAL COPIES	NO. STATS	NO. UNITS	MILES	AMOUNT	TOTAL CHARGE
1	31	J Kern								44.0		11.44
1	31	W Gardner								233.0		60.58
1	31	D Paulu								50.0		13.00
1	31	W Baker								5.0		1.30
1	31	K Jullie								60.0		15.60
1	31	K Dooley								22.0		5.72
1	31	D Roscoe								6.0		1.56
2	31	J Kern									3.25	3.25
2	31	W Gardner									8.25	8.25
9	11	Accounts Payable									13.00	13.00
9	11	Accounts Payable									13.00	13.00
9	19	Accounts Payable									21.75	21.75
9	31	Accounts Payable									15.00	15.00
9	31	Accounts Payable									66.80	66.80
10	17	In-House									2.05	2.05
10	17	In-House									22.20	22.20
10	17	In-House									1.70	1.70
10	24	In-House									4.13	4.13
10	24	In-House									54.00	54.00
10	24	In-House									3.90	3.90
10	25	In-House									10.20	10.20
13	17	In-House	27	1			27					2.70
13	17	In-House	1	50			50					5.00
13	20	In-House	1	20			20					2.00
17	1	Accounts Payable									160.00	160.00
17	10	Accounts Payable									100.00	100.00
17	23	Accounts Payable									5.20	5.20
17	30	Accounts Payable									62.40	62.40
17	30	Accounts Payable									83.10	83.10
17	30	Accounts Payable									8.35	8.35
19	31	Accounts Payable									10.60	10.60
19	31	Accounts Payable									465.79	465.79
21	11	Accounts Payable									21.49	21.49
21	11	Accounts Payable									21.54	21.54
21	19	Accounts Payable									12.72	12.72
21	31	Accounts Payable									108.12	108.12
21	31	Accounts Payable									6.36	6.36
21	31	Accounts Payable									8.32	8.32
21	31	Accounts Payable									15.24	15.24
22	31	D Dusheck									8.41	8.41
50	2	In-House						2				9.16
51	2	In-House						3				14.40
51	2	In-House						3				14.40
51	17	In-House						12				57.60
51	20	In-House						21				100.80
51	26	In-House						11				52.80
52	10	In-House						11				64.68
52	18	In-House						1				5.88

DIRECT NON-SALARY COSTS (DETAILS)
PERIOD ENDING JULY 31, 1990

CAT.	DATE	SOURCE	NO. ORGS	NO. EACH	LENGTH	WIDTH	TOTAL COPIES	NO. STATS	NO. UNITS	MILES	AMOUNT	TOTAL CHARGE
52	20	In-House						1				5.88
55	2	In-House						2				10.40
56	20	In-House						10				56.40
80	10	In-House			36.0	80.0	1					1.80
80	12	In-House			22.0	36.0	1					0.50
80	20	In-House			36.0	80.0	2					3.60
80	20	In-House			36.0	80.0	4					7.20
80	23	In-House			36.0	78.0	1					1.76

WE ARE NOT RESPONSIBLE FOR ANY LOSS OR DAMAGE

2

#1380 Parking

07-24-90

21

0.1 *325

*325

*500

*175

28-0934

14-11

CS AT TL

THIS CHECK MUST BE PRESENTED AT CASHIER'S
WINDOW TO OBTAIN CAR

ALLRIGHT CASH RECEIPT

DATE July 16, 1990
RECEIVED \$ 400
BY H. J.

FORM 57-V & M PRINTING (7-13) 837-8700

WE ARE NOT RESPONSIBLE FOR ANY LOSS OR DAMAGE

1380
07-16-90
01
*375
*375
*375
000
20-9231
17-30
110

CG AT TL

THIS CHECK MUST BE PRESENTED AT CASHIER'S WINDOW TO OBTAIN CAR

WE ARE NOT RESPONSIBLE FOR ANY LOSS OR DAMAGE

5
1380
07-24-90
01
*325
*325
*500
*175
20-0935
14-12
110

CG AT TL

THIS CHECK MUST BE PRESENTED AT CASHIER'S WINDOW TO OBTAIN CAR



1380

RECEIPT FOR PAID PARKING

96594 LOCATION
\$1.25 AMOUNT
7-24-90 DATE
[Signature] CASHIER

110



1308

RECEIPT FOR PAID PARKING

96594 LOCATION
\$2.00 AMOUNT
7-16-90 DATE
[Signature] CASHIER

110

SENDER ACTIVITY SUMMARY

INVOICE NO. 4-017-34940 ACCOUNT NO.

FAUSCH INC
150
PARKWAY N STE
MN 55447

DER'S NAME
ADDRESS

SCHREINER
R-ROSCOE-FAUSCH INC 150
LSON PARKWAY N STE
MN 55447

OUTH,
OFF 06/19/90

REEN ZIMMER
GAR-ROSCOE-FAUSCH INC 150
LSON PARKWAY N STE
MN 55447

MOUTH,
OP OFF 06/21/90

RECIPIENT INFORMATION AND
PROOF OF DELIVERY

RAMANA
BARRIENTAS & ASSOC
118 S CLINTON ST IA 52240 AA
TOWA CITY,
DELIVERED 06/20/90 09:51
SIGNED: J.WING

JERE HINKLE
DE LEEMU CATHY & CO
525 W MONROE ST IL 60606 AA
CHICAGO,
DELIVERED 06/21/90
SIGNED: D.VASQUEZ

PACKAGES
& WEIGHT

1/ 1

SERVICES

PRIORITY PAK
DISCOUNT

CHARGES

22.50
-2.50

NET
CHARGES

695.8

20.00

15.50
-2.50

1380

13.00

Job 695 - Amt
Job 1380 - Amt

20.00 - AC 524 -
13.00 - AC 524 -

33.00 PAY THIS AMOUNT

33.00 AC -

SENDER SUBTOTAL

Job - Amt

QUESTIONS? CALL OUR BILLING SERVICE CENTER, 800-822-1147, 7 AM - 7 PM (CST) MONDAY-FRIDAY



BILL TO: STRGAR-ROSCOE-FAUSCH INC
1 CARLSON PARKWAY N STE 150
PLYMOUTH, MN 55447

SENDER ACTIVITY SUMMARY

PAGE 1 OF 1
DATE 07/05/90
INVOICE NO. 4-023-61740 ACCOUNT NO. 1170-8403

TRACKING NOS REFERENCE	SENDER'S NAME AND ADDRESS	RECIPIENT INFORMATION AND PROOF OF DELIVERY	PACKAGES & WEIGHT	SERVICES	CHARGES	NET CHARGES
4790916966 ✓	STRGAR-ROSCOE-FAUSCH INC 1 CARLSON PARKWAY N STE 150 PLYMOUTH, MN 55447	JERE HINKLE DELEUN CATHER & CO 525 W MONROE ST CHICAGO, IL 60606 AA DELIVERED 06/21/90 09:06 SIGNED: E.FOSTER	1/ NA	PRIORITY LTR DISCOUNT	15.50 -2.50	1380 ✓
62179331 1	DROP OFF 06/20/90					13.0
4776560596 ✓	JAMES D HANSON STRGAR-ROSCOE-FAUSCH INC 1 CARLSON PARKWAY N STE 150 PLYMOUTH, MN 55447	EXAMINING BOARD BO OF ARCH PROF ENGRS DESIGNE 1400 E WASHINGTON AVE MADISON, WI 53708 AA DELIVERED 06/29/90 09:00 SIGNED: B.ROBINSON	1/ 3	PRIORITY PAK DISCOUNT	27.00 -2.50	Jim Hanson 24.5
62244210 1	DROP OFF 06/28/90					
4776560876 ✓	BILL SARDNER STRGAR-ROSCOE-FAUSCH INC 1 CARLSON PARKWAY N STE 150 PLYMOUTH, MN 55447	LIN ENGL LAIDLAW TRNSIT INC 14801 CALIFA ST VAN NUYS, CA 91411 AA DELIVERED 06/29/90 13:20 SIGNED: P.ROMAN	1/ NA	STANDARD LTR DISCOUNT	11.50 -2.50	1308 ✓
62244243 1	DROP OFF 06/28/90					9.0
CONTINUED NEXT PAGE						

FedEx M-0145 5/89

QUESTIONS? CALL OUR BILLING SERVICE CENTER, 800-822-1147, 7 AM - 7 PM (CST) MONDAY-FRIDAY

ROSCOE-FAUSCH INC
SON PARKWAY N STE 150
MN 55447

SENDER ACTIVITY SUMMARY

INVOICE NO. 4-029-36448 ACCOUNT NO. 1170-8403-5
DATE 07/02/90

SENDER'S NAME AND ADDRESS
BILL GARDNER
STRGAR-ROSCOE-FAUSCH INC
1 CARLSON PARKWAY N STE 150
PLYMOUTH, MN 55447
DROP OFF 07/02/90

RECIPIENT INFORMATION AND PROOF OF DELIVERY
JERE HINKLE
DELEW CATHER CO
525 W MONROE ST IL 60606 AA
CHICAGO
DELIVERED 07/03/90 08:17
SIGNED: B.STACKHORNE

PACKAGES & WEIGHT	SERVICES	CHARGES	NET CHARGES
1/ 2	PRIORITY PKG DISCOUNT	24.25 -2.50	1380 ✓
			21.75
			21.75

Vendor ID # 00060
Job 1380 Amt 21.75 ✓ AG 524 ✓
Job Amt AG
Job Amt SENDER SUBTOTAL
Job Amt

21.75 PAY THIS AMOUNT

QUESTIONS? CALL OUR BILLING SERVICE CENTER, 800-822-1147, 7 AM - 7 PM (CST) MONDAY-FRIDAY



BILL TO: STRGAR-ROSCOE-FAUSCH INC
1 CARLSON PARKWAY N STE 150
PLYMOUTH, MN 55447

SENDER ACTIVITY SUMMARY

PAGE 1 OF 1
DATE 07/18/90
INVOICE NO. 4-035-43542 ACCOUNT NO. 1170-8403-5

TRACKING NOS REFERENCE	SENDER'S NAME AND ADDRESS	RECIPIENT INFORMATION AND PROOF OF DELIVERY	PACKAGES & WEIGHT	SERVICES	CHARGES	NET CHARGES
4776560854	BILL GARDNER STRGAR-ROSCOE-FAUSCH INC 1 CARLSON PARKWAY N STE 150 PLYMOUTH, MN 55447	JERE HINKLE DELEUM CATHER 525 W MONROE ST CHICAGO, IL 60606 AA DELIVERED 07/12/90 14:09 SIGNED: E.FOSTER	1/ 3	STANDARD TBE DISCOUNT	17.50 -2.50	
62182875	1 DROP OFF 07/11/90			00060 #1380		15.00
			Job 1380	Am't 15.00	A/C 24	
			Job	Am't	A/C	
			Job	Am't	A/C	
SENDER SUBTOTAL			15.00	PAY THIS AMOUNT		15.00

FedEx M-0145 5/89

QUESTIONS? CALL OUR BILLING SERVICE CENTER, 800-822-1147, 7 AM - 7 PM (CST) MONDAY-FRIDAY



USE THIS AIRBILL FOR DOMESTIC SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII.
USE THE INTERNATIONAL AIR WAYBILL FOR SHIPMENTS TO PUERTO RICO.
QUESTIONS? CALL 800-238-5285 TOLL FREE.

AIRBILL
PACKAGE
TRACKING NUMBER

4776560854

9242M

4776560854

#1380

SENDER'S COPY

Sender's Federal Express Account Number 1170-8403-5		Date 7-11-90	
From (Your Name) Please Print Bill Gardner		Your Phone Number (Very Important) 812-475-0010	
Company SPRGAR-ROSCOE-FAUSCH INC		To (Recipient's Name) Please Print Jere Hinkle	
Street Address 1 CARLSON PARKWAY N STE 150		Recipient's Phone Number (Very Important)	
City PLYMOUTH State MN ZIP Required 55447		Company Deleum Cather	
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes) 525 W. Monroe St.		City Chicago State Ill ZIP Required 60606	
YOUR BILLING REFERENCE INFORMATION (First 24 characters will appear on invoice.)			
IF HOLD FOR PICK-UP, Print FEDEX Address Here			
PAYMENT ☒ Bill Sender ☐ Bill Recipient's FedEx Acct No ☐ Bill 3rd Party FedEx Acct No ☐ Bill Credit Card			
City State ZIP Required			
5 ☐ Cash Expiration Date			
SERVICES (Check only one box)		DELIVERY AND SPECIAL HANDLING	
Priority Overnight Service (Delivery by next business morning*) 11 ☐ YOUR PACKAGING 51 ☐ 16 ☐ FEDEX LETTER * 56 ☐ FEDEX LETTER * 12 ☐ FEDEX PAK * 52 ☐ FEDEX PAK * 13 ☐ FEDEX BOX 53 ☐ FEDEX BOX 14 ☐ FEDEX TUBE 54 ☒ FEDEX TUBE		1 ☐ HOLD FOR PICK-UP (Fill in box #) 2 ☐ DELIVER WEEKDAY 3 ☐ DELIVER SATURDAY (Extra charge) 4 ☐ DANGEROUS GOODS (Extra charge) 5 ☐ CONSTANT SURVEILLANCE SVC. (CSS) (Extra charge - Recipient Signature Not Applicable) 6 ☐ DRY ICE (Extra charge) 7 ☐ OTHER SPECIAL SERVICE 8 ☐ 9 ☐ SATURDAY PICK-UP (Extra charge) 10 ☐ 11 ☐ 12 ☐ HOLIDAY DELIVERY (Extra charge)	
Economy Service (Normally Standard Air Delivery by second business day*) 30 ☐ ECONOMY SERVICE		DIM SHIPMENT (Heavyweight Services Only) ☐ Regular Size ☐ On-Cat Size ☐ Drop Size Received At: FedEx Emp No:	
Heavyweight Service (For Extra Large or any package over 150 lbs.) 70 ☐ HEAVYWEIGHT ** 80 ☐ DEFERRED HEAVYWEIGHT ** *Declared Value Limit \$100 **Call for delivery schedule		Total Total Total 5 Release Signature Date Time	
SERVICE CONDITIONS, DECLARED VALUE AND LIMIT OF LIABILITY Use of this airbill constitutes your agreement to the service conditions in our current Service Guide, available upon request. See back of sender's copy of this airbill for information. We will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, and document your actual loss for a timely claim. Maximum amount limitations found in the current Federal Express Service Guide apply your right to recover from Federal Express for any loss, including inherent value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the declared value specified in the bill. Recovery cannot exceed actual documented loss. In the event of untimely delivery, Federal Express will at your request and with some limitations, refund all transportation charges paid. See Service Guide for further information. Sender authorizes Federal Express to deliver this shipment without obtaining a delivery signature and shall indemnify and hold harmless Federal Express from any claims resulting therefrom.			
Federal Express Use Base Charges Declared Value Charge Other Other 2 Total Charges REVISION DATE 8/89 PART #11-9501 FEDEX 8/89 FORMAT 8014 014 © 1989 F.E.C. PRINTED IN U.S.A.			



American Eagle Express
 5909 Baker Road
 Suite 560
 Minnetonka, Minnesota 55345
 612-935-5573

STRGAR-ROSCOE-FAUSCH, INC.
 1 CARLSON PARKWAY NORTH
 SUITE 150
 PLYMOUTH, MN 55447

STATEMENT
 DATE

07/15/90

The amounts shown by
 month are in TOTAL and
 do not necessarily equal
 any specific invoice or
 item.

PREVIOUS BALANCE	
MONTH DUE	AMOUNT DUE

THIS STATEMENT
 REFLECTS 15 DAY
 BILLING PERIOD

MO.	DATE DAY YR.	REFERENCE	JOB/DEPT./P.O.	CHARGES	CREDITS	BALANCE
	07/05/90	01072485	799012 -			
	07/09/90	01074385	799013 - <i>wasn't ready</i>	27.20		1380 27.20
	07/09/90	01074072	799015 - <i>first time stopped by</i>	5.00		1380 5.00
	07/09/90	01074070	799014 -	12.20		1310 12.20
	07/09/90	01073540	799013 - <i>was ready this time</i>	17.20		1310 17.20
	07/09/90	01074110	799016 -	4.70		1380 4.70
	07/12/90	01076197	799018 -	19.70		1348 19.70
	07/12/90	01076194	799017 -	16.70		1360 16.70
	07/13/90	01076844	799019 -	18.20		1360 18.20
	07/13/90	01077232	799020 -	18.45		1380 18.45
	07/13/90	01077233	799021 -	16.70		1360 16.70
				11.45		1380 11.45
THANK YOU FOR USING AMERICAN EAGLE!						
Vendor ID #		00006				
1380		66.80		524		
Job 1310		29.40		A/C 524		
1348		19.70		524		
Job 1360		33.40		A/C 524		
Job		18.20		724		
		167.50		A/C		
				167.50		167.50
						167.50

Accounts Due and Payable Upon Receipt.

Service Charge will be added on all Past Due invoices at the rate of 1½% per month.

PLEASE PAY THIS AMOUNT

Accounts Due and Payable Upon Receipt.

Service Charge will be added on all Past Due Invoices at the rate of 1 1/4% per month.

PLEASE PAY
 THIS AMOUNT



OMEGA LITHOGRAPH, INC.
15090 23RD AVE., N. PH. 612-475-1828
MINNEAPOLIS, MN 55447



DATE

NUMBER

06/29/90 4911

P. O. No. 525
Acct. No. 87133
Job No. 5595

STRGAR-ROSCOE-FAUSCH, INC.
Suite 150
One Carlson Parkway North
Minneapolis, MN 55447

TERMS: NET 30 DAYS

Quantity	Description	Price
100	Sets NE LRT Study	160.00

Comm. 1380 ✓

ORDER # 00156

NO 1380 Amt 160.00 A/C 525

Job _____ Amt _____ A/C _____

Job _____ Amt _____ A/C _____

Sub Total

Sales Tax

TOTAL

160.00

0.00

160.00

THANK YOU FOR YOUR ORDER

OK

**OMEGA LITHOGRAPH, INC.**15090 23RD AVE., N. PH. 812-475-1826
MINNEAPOLIS, MN 55447

DATE

NUMBER

07/10/90 4932

P. O. No. 527

Acct. No. 87133

Job No. 5602

STRGAR-ROSCOE-FAUSCH, INC.
Suite 150
One Carlson Parkway North
Minneapolis, MN 55447

TERMS: NET 30 DAYS

Quantity	Description	Price
1,000	Public Forum	100.00

Comm. 1380

Order ID #

00156

1380

Amt

100.00

A/C

525

Job

Amt

A/C

Job

Amt

A/C

Sub Total

Sales Tax

TOTAL

100.00 ✓

0.00

100.00

THANK YOU FOR YOUR ORDER



OMEGA LITHOGRAPH, INC.
15090 23RD AVE., N. PH. 812-475-1828
MINNEAPOLIS, MN 55447



DATE	NUMBER
------	--------

07/23/90 4985

P. O. No. 548
Acct. No. 87133
Job No. 5656

STRGAR-ROSCOE-FAUSCH, INC.
Suite 150
One Carlson Parkway North
Minneapolis, MN 55447

TERMS: NET 30 DAYS

Quantity	Description	Price
100 ✓	NE Public Forum	5.20

RLRA

Comm. 1380 ✓ Mor ID # 10156

1380 Amt 5.20 A/C 525

Job _____ Amt _____ A/C _____

Job _____ Amt _____ A/C _____

Sub Total	Sales Tax	TOTAL
5.20 ✓	0.00 —	5.20 OK

Entered in OOPS 7/30

THANK YOU FOR YOUR ORDER

**OMEGA LITHOGRAPH, INC.**15090 23RD AVE., N. PH. 612-475-1828
MINNEAPOLIS, MN 55447

DATE

NUMBER

07/30/90 5018

P. O. No. 550

Acct. No. 87133

Job No. 5672

STRGAR-ROSCOE-FAUSCH, INC.
Suite 150
One Carlson Parkway North
Minneapolis, MN 55447

TERMS: NET 30 DAYS

Quantity	Description	Price
100 /	Sets Public Forum ✓	
30 /	Sets LRT Connection Memo ✓	
30 /	Sets Prel. Recommendations ✓	62.40
Comm. 1380		
Vendor ID # 00156		
Job 1380 Amt 62.40 A/C 525		
Job Amt A/C		
Job Amt A/C		
Sub Total	Sales Tax	TOTAL
62.40	0.00	62.40

Entered oops 7-30-90

THANK YOU FOR YOUR ORDER

DATE

NUMBER



OMEGA LITHOGRAPH, INC.

 15090 23RD AVE., N. PH. 612-475-1828
 MINNEAPOLIS, MN 55447


07/30/90 5017

P. O. No. 551

Acct. No. 87133

Job No. 5680

 STRGAR-ROSCOE-FAUSCH, INC.
 Suite 150
 One Carlson Parkway North
 Minneapolis, MN 55447

TERMS: NET 30 DAYS

Quantity	Description	Price
45 ✓	Sets Agenda	
15 ✓	Sets Prel. Recommendations	
45 ✓	Sets Minutes	
35 ✓	Sets Tech Memo 2	
		83.10
	Comm. 1380 ✓	
	Vendor ID # <u>00156</u>	
	Job <u>1380</u> Amt <u>83.10</u> A/C <u>525</u>	
	Job _____ Amt _____ A/C _____	
Sub Total	Sales Tax Job _____ Amt _____ A/C TOTAL	
83.10	0.00	83.10

Entered oops 7-30-90

THANK YOU FOR YOUR ORDER

**OMEGA LITHOGRAPH, INC.**15090 23RD AVE., N. PH. 812-475-1826
MINNEAPOLIS, MN 55447

DATE

NUMBER

07/30/90 5016

P. O. No. 552 -

Acct. No. 87133

Job No. 5685

STRGAR-ROSCOE-FAUSCH, INC.
Suite 150
One Carlson Parkway North
Minneapolis, MN 55447

TERMS: NET 30 DAYS

Quantity	Description	Price
----------	-------------	-------

13 ✓	Sets Prel. Recommendations	
10 ✓	Sets Memo Willard Munger Trail	
		8.35

Comm. 1380 ✓

Order # 00156Job 1380 Amt 8.35 A/C 525

Job _____ Amt _____ A/C _____

Job _____ Amt _____ A/C _____

Sub Total

Sales Tax

TOTAL

8.35

0.00

8.35

OK*Entered oops 7-30-90*

THANK YOU FOR YOUR ORDER

AUDIO/VISUAL WHOLESALE

RENTAL

Account # _____

Salesperson # _____

Date _____

15395 31st AVE. N. PLYMOUTH, MN 55447

59-5123 or 559-9666

BILL TO:

NAME

ADDRESS

CITY, STATE & ZIP

ATTENTION

TELEPHONE NUMBER

Delivery/Pickup Date

Pickup/Return Date

DELIVER TO:

NAME

ADDRESS

CITY, STATE & ZIP

TELEPHONE NUMBER

PO #

CONTACT

Show Date

Show Time

QUAN.	EQUIPMENT	DESCRIPTION	DAYS USED	RATE	
				DAY	EXTENSION
	35MM CAROUSEL				
	16MM				
	OVERHEAD				
	VIDEO REC/PLAY				
	TELEVISION				
	MONITOR				
	CART				
1	70X70	4502			10.00

Accessories/Special Instructions

Labor

Hours

Rate

A NOTE FROM...

Molly,

Had to rent a screen
for Bill Gardner for a
meeting at RCKRA.
They'll bill us -

Gloria

CI #1380

NI

TOTAL
GOODS

TAX

TOTAL

10.00
10.60

All claims and returns must be accompanied by this bill. Interest will be charged on all past due accounts at the rate of 1.5% per month, 18% per annum.

The above signed hereby accepts the above listed equipment in good condition at the above stated price and shall be responsible for this equipment during the period of this rental. Any damage or loss of this equipment will be paid for by the above signed thereof. Audio Visual Wholesalers assumes no obligation in case of the theft of this equipment while covered by this agreement. BE SURE TO HAVE YOUR RECEIPT WHEN RETURNING THIS EQUIPMENT SO THAT YOU CAN SHOW PROOF OF RETURN.

BERG COMMUNICATIONS INC.

EQUIPMENT RENTAL CONTRACT

86872

RENTAL SERVICE SINCE 1963

GENERAL OFFICE

645 N. Wash. Ave.

Minneapolis, MN

55401

(612) 333-1271

FAX (612) 333-0225

BRANCH OFFICE:

1621 East 79th St.

Bloomington, MN

55425

(612) 854-4222

OTHER LOCATIONS:

Fort Lauderdale, FL

Orlando, FL

Tampa, FL

Boca Raton, FL

Palm Beach, FL

DATE **7-18-90** SS CODE = **71** P.O. NO.

CREDIT

CUSTOMER NUMBER

COO

EXEMPT. CERT.: ON FILE ☐ ATTACH ☐

CHARGE TO **Strgar-Roscoe-Fausch**

DELIVER TO

ADDRESS **One Carlson Parkway #150**

ADDRESS **East Branch YMCA
1075 Arcade St.**

CITY & STATE **Plymouth, MN 55447**

CITY & STATE **St. Paul**

ORDERED BY **Gloria**
PHONE **475-0010**

ATTENTION **Bill Gardener**
PHONE

☐ PICKUP ☒ DEL. DATE **7-23 at 5:30 PM** DATE TO BE RET'D. **7-23 at 9:30 PM** DATE RET'D. ☐ A.M. ☐ P.M.

CODE	QTY.	EQUIPMENT	DESCRIPTION	DAYS USED	RATE		DAYS TO BE USED:
					DAY	EXTENSION	
C	2	Monitor	25"		75.00		
C	1	Video Projector					
		VCR 1/2"	VHS		55.00		
		VCR 3/4"					
		Camera					
		Tripod					
		Lighting					
I	2	Cart			12.50		
		Computer					
		Disk Drive					
		Printer					
		Computer Interface					
		Data Projector					
		35mm Slide					
		Lens					
		Sound/Slide					
		Dissolve					
		Programmer					
B	1	Tape Recorder	2820		15.00		
		Stacker					
		Stand					
H	1	Screen	8 x 8 tripod		17.50		
		Draping					
		Amplifier					
F	2	Microphone	1-table 1-floor		12.50		
F	1	Speaker	Anchor 3500		30.00		
		Mixer					
		Lectern					
		16mm					
		Flipchart/Easel					
		Overhead					
	1	Projectionist	5:30 PM -10:00 PM or 10:30 PM	L	125.00		
		Setup					
		Freight					
		Labor					
	2	Other	AVX 120	P	2.00		

CABLES AND ACCESSORIES:

COMMENTS:

#1380 COO
321.50
19.29 tax
125.00 labor
465.79 total

One mic for speaker
and one for audience

Meeting is downstairs
--no elevator

BLOOMINGTON

"IN THE EVENT THAT COLLECTION
PROCEEDINGS ARE NECESSARY,
BUYER IS RESPONSIBLE FOR
COSTS INCURRED INCLUDING
REASONABLE ATTORNEY FEES"

The lessee hereby accepts the above listed equipment in good condition for rental at the above stated rates and shall be responsible for this equipment during the period of the rental. Any damage or loss of said equipment whether resulting from theft, casualty, or other cause will be paid by lessee. Lessee agrees to permit lessor to remove this equipment from lessee's premises during normal business hours in the event that invoiced amounts are not paid when due. Lessee agrees to indemnify and hold harmless lessor against and in respect of any claims, losses, expenses, obligations and liabilities (including reasonable attorney fees) which arise as a result from use of the product or negligence of the lessee.

RECEIVED BY

X



PHOTO AND DIAZO REPRODUCTION SERVICES

Photo Lab
RM B21
296.2401

Blueprint Room
RM B4
296-2405

Special Instructions/Notes

Name _____

Address

Cost Center Charge Identified

S.P. No.

Department/Section

Phone 101 Date 10/10/10

Approved by _____

Francis Loeffler
Stanger Assoc. Inc.
475-0010

com942

Photo and Diazo Reproduction Services use ONLY

TC 32

1	Event Date
5	

2 Cost Center

2 Batch Page

1 3 5 0 2

No. of Originals	Copies Needed	Total Copies	Type of Process	Size-specify Feet or Inches	Description	L 1 2 N 7 E	Charge Identifier	1 1 0 0 5 6	Work Item	1 0 9	C O M M O N	Unit Price	Amount
						01					I		
3	1	3	B&W	10X10	AAH K-7, 11, 15	02					I	4.40	13.20
					S. Mrs. TA	03					I	.	7.75
					Handling	04					I	.	7.50
						05					I	.	
						06					I	.	
					7-9-90 Tim Dackler	07					I	.	
					Signature	08					I	.	
						09					I	.	
						10					I	.	

Photo and Diazo Reproduction Services use ONLY

Note: Page must balance to zero

11

Blueprint Services

0016 | S

9

12

Photo Services

0018 | S

S

2123 28343

STEGAR ROSSONE FAUCSH

00 453000

MOT. PHOTO

WAYZATA MN

DATE

X *[Signature]*

PURCHASER SIGN HERE

890734

CASH	QUAN.	DESCRIPTION	DEPT.	PRICE	AMOUNT
000	3 p4p				28.72
PD OUT					-6.77
☒ PAID BY		all #1380			
☒ ON ACCT.		Frank L.			
☐ RET. MOSE.					
OTHER CH					
OTHER CR					
PURCHASE ORDER #				SUB TOTAL	20.32
				TAX	1.22
				TOTAL	21.54

PROCOLOR

Professional Color Service Inc.
3 Hennepin Avenue South • Minneapolis, Minnesota 55403-1884
Telephone (612) 332-7721 • FAX (612) 332-7791

RECEIVED INVOICE

INVOICE NO.

A 74193

Strgar-Roscoe-Fausch, Inc.

SOLD TO

009799
STRGAR-ROSCOE-FAUSCH, INC.
SUITE #150
1 CARLSON PKWY NORTH
MINNEAPOLIS MN55447
(612) 475-0010

SHIP TO

STRGAR-ROSCOE-FAUSCH, INC.
SUITE #150
1 CARLSON PKWY NORTH
MINNEAPOLIS MN55447

CUST. JOB NO.:

JOB DESC:

ORDERED BY:

ORDERED BY: DTANE								
DATE IN	TIME IN	CUSTOMER P.O. NO.	S/R	ORDER WRITTEN BY	TERMS	SHIPPED VIA	INVOICE DATE	
07/13/90	09:01	183658			NET 30 DAYS	W SUBURBS	07/13/90	
PRODUCT NO.	DESCRIPTION			NO. OF ORIG.	NO. DUPES /ORIG.	UNIT PRICE/ FIRST	PRICE/ ADDITIONALS	EXTENSION
E24MT	PROCESS 135 E-6 20/24 PLASTICS			2	1	6.00	.00	12.00
THANK YOU FOR YOUR BUSINESS								
Vendor ID # 00175								
Job 1380 ✓ Amt 12.72 ✓ A/C 525 ✓								
Job _____ Amt _____ A/C _____								
Job _____ Amt _____ A/C _____								

LIMIT OF LIABILITY: Submitting any film, print, slide, negative or art work to this firm for processing, printing or other handling constitutes an AGREEMENT by you that any damage or loss by our company, subsidiary, or agents, even though due to the negligence or other fault of our company, subsidiary, or agents, will only entitle you to replacement with a like amount of unexposed film and processing. Except for such replacement, the acceptance by our company, subsidiary and/or agents of the film, print, slide, negative or art work is without other warranty or liability, and recovery for any incidental or consequential damages is excluded.

SUB TOTAL	12.00
DISCOUNT	.00
SALES TAX	.72
SHIPPING	.00
PAYMENTS	.00
AMOUNT DUE	OK 12.72

ORIGINAL

26

INVOICE #2582
July 18, 1990

VISIONS DESIGN STUDIO, INC.
475 No. Cleveland Ave. Suite 207
St. Paul, MN. 55104

Strgar-Roscoe-Fausch, Inc.
1 Carlson Parkway North
Suite 150
Minneapolis, MN. 55447
Attn: Ms. Diane Paulu

#1380

P.O.#:

Date Delivered: 7-13-90

Job Name: Mac Slide Imaging

Cost: 35mm Slide Imaging:

17-mac files

\$102.00

Sales Tax 6.12

TOTAL DUE \$108.12

Terms: Payment due within 30 days of invoice date.

Vendor ID # 00223

Job 1380 ✓ Amt 108.12 ✓ A/C 525 ✓

Job _____ Amt _____ A/C _____

Job _____ Amt _____ A/C _____

OK by D Paulu.

PROCOLOR

Professional Color Service Inc.

909 Hennepin Avenue South • Minneapolis, Minnesota 55403-1884
Telephone (612) 332-7721 • FAX (612) 332-7791

INVOICE

INVOICE NO.

A 79351

S
O
L
D

T
O

009799
STRGAR-ROSCOE-FAUSCH, INC.
SUITE #150
1 CARLSON PKWY NORTH
MINNEAPOLIS MN55447
(612) 475-0010

S
H
I
P

T
O

STRGAR-ROSCOE-FAUSCH, INC.
SUITE #150
1 CARLSON PKWY NORTH
MINNEAPOLIS MN55447

CUST. JOB NO.:

JOB DESC:

ORDERED BY: VINCE MARTINEZ

JOB DESC:

ORDERED BY: VINCE MARTINEZ

DATE IN	TIME IN	CUSTOMER P.O. NO.	S/R	ORDER WRITTEN BY	TERMS	SHIPPED VIA	INVOICE DATE
07/25/90	08:59	183682	TN	MQ	NET 30 DAYS	PICK-UP	07/25/90
PRODUCT NO.	DESCRIPTION		NO. OF ORIG.	NO. DUPES /ORIG.	UNIT PRICE/ FIRST	PRICE/ ADDITIONALS	EXTENSION
E24MT	PROCESS 135 E-6 20/24 PLASTICS		1	1	6.00	.00	6.00
	THANK YOU FOR YOUR BUSINESS						
Comm # 1380 Vendor ID # 00175 Job 1380 ✓ Amt 6.36 ✓ A/C 525 ✓ Job _____ Amt _____ A/C _____ Job _____ Amt _____ A/C _____							

LIMIT OF LIABILITY: Submitting any film, print, slide, negative or art work to this firm for processing, printing or other handling constitutes an AGREEMENT by you that any damage or loss by our company, subsidiary, or agents, even though due to the negligence or other fault of our company, subsidiary, or agents, will only entitle you to replacement with a like amount of unexposed film and processing. Except for such replacement, the acceptance by our company, subsidiary and/or agents of the film, print, slide, negative or art work is without other warranty or liability, and recovery for any incidental or consequential damages is excluded.

SUB TOTAL	6.00
DISCOUNT	.00
SALES TAX	.36
SHIPPING	.00
PAYMENTS	.00
AMOUNT DUE	6.36

ORIGINAL

28

RECEIVED OF PETTY CASH

DATE 7-12-90

DESCRIPTION OF ITEM / SERVICE PURCHASED	AMOUNT
Special Film	15 24
\$525	
CHARGE TO ACCOUNT #7380	TOTAL 15 24
Wendy B RECEIVED BY	APPROVED BY

UTHO IN U.S.A.

1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801

20. 2004.

051 4308 741-790

**city of
bloomington, minnesota**

Municipal Building
2215 West Old Shakopee Road
Bloomington, Minnesota 55431-3096

**SUPPLEMENTAL
RECEIPT 14262**

RECEIVED FROM <i>Dean Dusheck</i>		DATE <i>7-13-90</i>	AMOUNT	
IN PAYMENT OF				
<i>Bench mark copies</i>				
		SALES TAX (If Applicable)		
		TOTAL	<i>1</i>	<i>50</i>
DIVISION <i>Eng / cr</i>		An Affirmative Action/Equal Opportunity Employer The City of Bloomington does not discriminate on the basis of disability. CASH REGISTER VALIDATION		
ACTIVITY NUMBER				
SIGNED BY				

WHITE COPY: CUSTOMER;

YELLOW COPY: CASHIER;

PINK COPY: ORIGINATING DIVISION

#1350

THE CITY OF BLOOMINGTON
MINNESOTA
OFFICE OF THE CITY CLERK
100 N. 3RD ST.
BLOOMINGTON, MN 55401

RECEIVED

IN 07:02AM FROM 07/13/90 10 0003-2110
OUT 06:01AM FROM 07/13/90 00 00 000000

AMOUNT PAID: 20.51.00

THANK YOU

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

REQUEST FOR BOARD ACTION

13

Regional Railroad Authority

Originating Department

K. DeSpiegelaere 8/20/90
Authorized Signature Date

Board Action Requested

Approve Amendment to Contract Agreement No. 65438 with the State of Minnesota, Department of Transportation, and authorize the Chairman of the Railroad Authority to sign on behalf of the Railroad Authority.

ACTION REQUESTED

Request Justification

- See attached: 1) Memorandum from K. DeSpiegelaere
 2) Proposed resolution
 3) Supplemental Agreement #2

Budgeting and Accounting

Ed. Giantz 8/21/90

County Attorney

Paul M. Miller

Risk Manager

Data Processing

Previous Action taken on Request

Date / Time

Received By

Comments / Recommendation

Documentation certified complete for:

Committee / Meeting Date

Signature

Date

Committee / Meeting Date
 August 28, 1990

Signature

Date

Board Date

Signature

Date

F. L. Henderson

8/21/90



Resolution

Board of

RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

Date: _____

No. _____

WHEREAS, State Grant Contract #65438 provides funding for Phase I Preliminary Engineering and Environmental Impact Statement Studies for the Midway Corridor; and

WHEREAS, The existing contract period is 24 months; and

WHEREAS, Due to delays in study progress, the work will extend beyond existing contract period; and

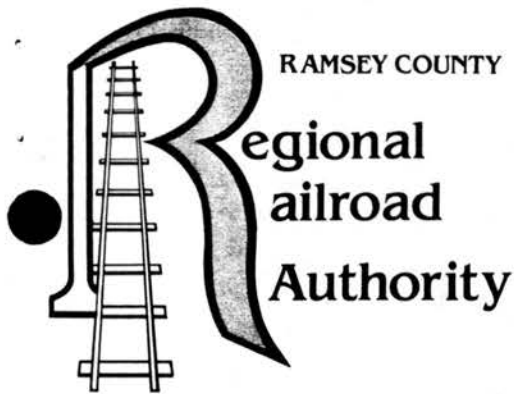
WHEREAS, Amendment #2 to Contract #65438 extends the contract period from 24 months to 36 months; Now, Therefore, Be It

RESOLVED, That Amendment #65438 is approved and the Chairman of the Ramsey County Regional Railroad Authority is authorized to sign the amendment on behalf of the Authority.

John T. Finley, Chairman

By _____
Warren W. Schaber, Secretary

1



Room 316 Courthouse
15 W. Kellogg Blvd.
St. Paul, MN 55102
Phone 298-4145

John T. Finley, Chairman

District 3

Diane Ahrens

District 4

Ruby Hunt

District 5

Duane W. McCarty

District 1

Hal Norgard

District 7

Donald E. Salverda

District 2

Warren W. Schaber

District 6

MEMORANDUM

TO: Ramsey County Regional Railroad Authority Commissioners
Terry Schutten, Executive Director

FROM: Kathryn DeSpiegelaere, Director of LRT Planning *KD*

SUBJECT: State Grant Contract No. 65438
Amendment #2 - Time Extension

DATE: August 16, 1990

Grant Contract No. 65438 provides funding for Phase I Preliminary Engineering and Environmental Impact Statement Studies for the Midway Corridor. The existing contract period is 24 months. Due to delays in study progress, the work will extend beyond the contract period.

Attached is Amendment #2 to the Grant Contract extending the contract period from 24 months to 36 months. The contract amount and all other contract provisions remain the same.

Recommendation:

Approve Amendment #2 to State Grant Contract #65438 and authorize the Chairman of the Ramsey County Regional Railroad Authority to sign on its behalf.

KD/blk



Minnesota Department of Transportation
Transportation Building, St. Paul, MN 55155



July 19, 1990

Kathryn Despiegelaire, Director
Light Rail Transit Planning
Ramsey County Regional Railroad Authority
Room 316, Courthouse
15 W. Kellogg Boulevard
St. Paul, Minnesota 55102

Dear Kathy:

Enclosed is Amendment #2 to Contract #65438 extending contract period from 24 months to 36 months. Please have the appropriate people sign the amendment, and the "Acknowledgement of recipient's Authorized Signatures". (enclosed is a copy of this form)

For your information, MnDOT paid the Ramsey County Regional Railroad Authority \$228,592.75 on April 6, 1990 for LRT Contract #66617. This was an error on our part, the first three quarters of 1990, \$56,250 should have been dispersed per quarter, and the fourth \$54,000. What we will do is not issue payments for the 2nd and 3rd quarters, but give you a check for \$18,907.25 in the fourth quarter (December 1990).

If you have any questions, do not hesitate to contact me.

Sincerely,

Dale E. Maul
Management Services Section
Senior Transportation Planner

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
CONTRACT AMENDMENT

Amendment #2 to Contract #65438 between the Minnesota Department of Transportation and the Ramsey County Regional Railroad Authority.

WHEREAS, the laws of Minnesota for 1988, Chapter 684, Article 2 provides a state appropriation for distributing to Regional Railroad Authorities in the metropolitan area if matched by other (local) funds on a dollar to dollar basis for planning, preliminary engineering, design and construction of Light Rail Transit (LRT) facilities; and

WHEREAS, due to recipient being unable to complete all portions of LRT contract within specified contract period;

NOW, THEREFORE, it is mutually agreed that all terms and agreements of Contract #65438 are expressly reaffirmed for the purpose of the following amendment:

Section VA, Page 4 - Unless the Recipient receives (has received) written Mn/DOT approval, the term of this contract shall not exceed twenty-four (24) months. "Delete" twenty-four (24); "Insert" Thirty-six (36).

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

By *David E. Dwyer?*
Title Assistant Commissioner
Date 7/16/90

APPROVED
COMMISSIONER OF ADMINISTRATION

By _____
Date _____

APPROVED AS TO FORM AND EXECUTION

By _____
Title Special Assistant Attorney
General
Date _____

ENCUMBERED
COMMISSIONER OF FINANCE

By _____
Date _____

RECIPIENT
RAMSEY COUNTY REGIONAL RAILROAD AUTHORITY

For _____

By _____
John T. Finley
Title Chairman

By XXXXXXXXXX

Title XXXXXXXXXXXXXX

Date August 28, 1990

ACKNOWLEDGEMENT OF RECIPIENT'S
AUTHORIZED SIGNATURES

STATE OF MINNESOTA

COUNTY OF RAMSEY

On this 28th day of August, 1990, before me
appeared John T. Finley and xxxxxxxxxxxxxxxxxx

to me personally know, who being by me duly sworn, did say they are
Chairman
respectively _____ and
(title)

xxxxxxxxxxxxxxxxxx of Ramsey County
(title)

Regional Railroad Authority

RECIPIENT

By _____

Title Chairman

By xxxxxxxxxxxxxxxxxx

Title xxxxxxxxxxxxxxxxxx

NOTARY _____

KEITH LANGSETH

Senator 9th District
RR 2
Glyndon, Minnesota 56547
and
Room 24G State Capitol
St. Paul, Minnesota 55155

Senate
State of Minnesota

August 16, 1990

TO: Senator Roger Moe
Representative Robert Vanasek
Representative Henry Kalis
Hennepin Co. Commissioner John Derus
Mn/DOT Commissioner Leonard Levine
RTB Chairman Michael Erhlichman
Mn/DOT Assistant Commissioner Darryl Durgin

FROM: Senator Keith Langseth *K.L.*
Chair, Transportation Study Board

SUBJECT: Action taken at Transportation Study Board Meeting

During its meeting of August 15, 1990, the Transportation Study Board unanimously passed a motion offered by Paul Bailey supporting the contents of my August 14th letter (attached) which contains the conclusion that: after the review of various options, the Transportation Study Board has concluded that responsibility for design and construction of LRT should lie with the state Department of Transportation. It is also recognized that because the counties, cities and the RTB have all contributed in varying degrees, their roles should be blended into the design and construction program in a meaningful way.

The resolution adopted reads as follows: That the Transportation Study Board endorse the letter sent to John Derus from Senator Langseth indicating that Mn/DOT should be the entity with responsibility for the design and construction of light rail transit.

KEITH LANGSETH

Senator 9th District
RR 2
Glyndon, Minnesota 56547
and
Room 24G State Capitol
St. Paul, Minnesota 55155

Senate

State of Minnesota

August 14, 1990

Mr. John Derus, Commissioner
Hennepin County Board of Commissioners
2400 Government Center
Minneapolis, Minnesota 55487

Dear John:

I appreciated the opportunity to meet with you on August 3, 1990 to discuss light rail transit. I share with you the philosophy that LRT offers the opportunity to improve transportation in the Twin Cities, especially in the corridor between St. Paul and Minneapolis. John, you are to be complimented for your leadership and initiative in bringing LRT development to the point we are at today.

The Transportation Study Board has adopted a supportive position in regard to LRT construction and funding as part of its preliminary findings. It appears that LRT will be an important element in our report and recommendations provided that remaining issues can be worked out in some form prior to the 1991 Legislative Session. As Chairman of the Transportation Study Board, I will be authoring a broad legislative package prepared by the Board, which will most likely include an LRT component. It is important for you to know that I believe we should proceed cautiously in funding this major project. The first corridor, connecting St. Paul and Minneapolis should demonstrate that LRT can improve transit's cost-effectiveness and benefits. In addition, I support the concept of regional funding as proposed, and hope to count on your support on this issue.

As discussed during our meeting, I feel that responsibility for design and construction of LRT should lie with Mn/DOT. There will need to be a transitional period as it relates to current responsibilities. The Rail Authorities have contributed a significant amount of time and funding, and their role, along with that of the RTB, Metropolitan Council and local municipalities should be blended into the program in a meaningful way.

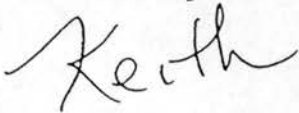
Page 2

Mr. Johns Derus

August 14, 1990

I look forward to working with you and others who support LRT as we strive to gain approval for the Transportation Study Board's recommendations as well as support for Mn/DOT and early implementation of the Midway Corridor.

Sincerely,

A handwritten signature in cursive script, appearing to read "Keith".

Senator Keith Langseth

cc: Commissioner Leonard Levine

Mike Erhlichman

Senator Roger Moe

Rep. Robert Vanasek

Rep. Henry Kalis

Minutes of the Regular Commission Meeting
August 21, 1990

Page 4

Solicit Bids for Landscaping - As recommended by the Committee, Commissioner Paulson moved that the Commission authorize advertisement in solicitation of bids for provision of landscape work to include lawn irrigation in accordance with specified plans; Commissioner Snowden seconded the motion, and the motion carried.

Solicit Bids for Furniture - As recommended by the Committee, Commissioner Paulson moved that the Commission authorize advertisement in solicitation of bids for provision of furniture for the Nicollet Garage facility as specified; Commissioner Snowden seconded the motion, and the motion carried.

Change Order #7 to Nicollet Garage Construction Project - As recommended by the Committee, Commissioner Paulson moved adoption of the following resolution; Commissioner Snowden seconded the motion.

RESOLUTION 90 - 60

RESOLUTION AUTHORIZING CHANGE ORDER NO. 7 TO THE NICOLLET
GARAGE CONSTRUCTION PROJECT

WHEREAS the Commission authorized the Chief Administrator to negotiate and execute a contract with Penn-Co Construction Company for the construction of Nicollet Garage; and

WHEREAS we are asking that this contract be changed to include Item #1 - relocate structural sway braces and Item #2 - relocate access trench.

WHEREAS there are adequate funds budgeted to fund this change order of \$1,611.00 for this procurement

BE IT THEREFORE RESOLVED that the Chief Administrator is authorized to issue a Change Order to the contract with Penn-Co Construction Company to include items #1 and #2 for Nicollet Garage facility in an amount not to exceed \$1,611.00

Upon a roll call vote as follows, the resolution was duly adopted:

Yea: Commissioners Paulson, Snowden, Waldron and Faricy

Nay: Commissioner Nawrocki

Absent at the Time: None

Specific Items Placed on the Agenda

Draft Regional Coordination Plan for LRT - Ms. Auld circulated and reviewed information contained in two documents: 1) a letter addressed to John Derus, Hennepin County Commissioner, by Minnesota State Senator Langseth; and 2) a position statement drafted by staff with respect to MTC's support of a lead agency to oversee the construction of the proposed LRT system.

Minutes of the Regular Commission Meeting
August 21, 1990

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On a motion by Commissioner Waldron, seconded by Commissioner Nawrocki, and carried, the Commission authorized Ms. Auld to present the following as the MTC's position with respect to supporting the designation of a lead agency to design and construct the Metropolitan LRT system.

As the Regional Rail Authorities have jointly worked to develop proposals for the establishment of a Metropolitan Light Rail Transit system and have successfully carried the project through to its present stage of development, MTC supports the Regional Rail Authorities as the lead agency for construction of LRT with the understanding that the MTC (designated by statute to operate and maintain the LRT system) will work hand-in-hand with the staff of the agency designated for systems design, procurement and implementation to ensure a successful transition from the design and construction phases to the operation phase of the project.

Ms. Auld said that the State Transportation Study Board adopted Senator Langseth's position that the Mn/DOT serve as lead agency. Staff of the Regional Rail Authorities, said Auld, maintain the position that the Authorities act jointly to design and construct the system.

Mr. Capell confirmed Commissioner Nawrocki's observation that discussion of the lead-agency topic did not appear on the circulated agenda of the Transportation Study Board. John Derus, said Auld, has made it clear that he does not support Senator Langseth's position.

Commissioner Paulson suggested that the title of the document circulated be changed to read: "Advantages and Disadvantages to the MTC Serving as Lead Agency for Systems Implementation of LRT."

Commissioner Nawrocki indicated the position statement should include language which states that the MTC is designated by statute to serve as operator of the LRT system to be constructed. Because the system will be a metropolitan agency, said Nawrocki, the lead agency should be a metropolitan agency. Commissioner Waldron supported Commissioner Nawrocki's comments.

Chair Faricy indicated that Mn/DOT is the agency having the necessary experience to construct the system. The infrastructure is lacking in other agencies, she said. Commissioner Nawrocki responded that Mn/DOT would also find it necessary to establish a separate component to carry out the work. The Counties, said Nawrocki, have had experience working with joint-powers groups.

Commissioner Snowden indicated that since the final decision will not be made by the MTC, he would recommend that the MTC be willing to support either or both agencies (Mn/DOT and/or Regional Rail Authorities) as the designated authority (ies) to carry out the design and construction phases of the project system. He confirmed that the Regional Rail Authorities have contributed "vastly" more than other agencies have contributed to the development of light rail transit.

Minutes of the Regular Commission Meeting
August 21, 1990

Page 6

Commissioner Paulson suggested that the MTC remain actively involved in the overall development process to ensure a facile transition from construction to operation. Ms. Auld confirmed that it is essential for the MTC to be actively involved in the preliminary design and engineering so that when the systems and operations aspect of the operation is handed over, the MTC will be thoroughly familiar with the various development aspects. She suggested that the MTC staff serve in an advisory capacity with the responsibility to review and comment upon preliminary design and construction plans and processes.

Other Items Which May Properly Come Before the Meeting

Legal Services Report - Commissioner Paulson circulated copies of a report on Legal services and requested that Commissioners review the document. He suggested that discussion of the report be placed on the agenda of the Operations Committee scheduled to meet August 28.

Budget Timeline - Responding to a question by Commissioner Nawrocki, Mr. Capell said that staff intends to bring the proposed 1991 budget to Committee in mid September and to allow the Commission a month to review the proposals. Mr. Thompson indicated that the MTC is not governed by the timelines established by the "Truth in Taxation" legislation. He said that the RTB concurs that the MTC submit its 1991 budget proposal in October, 1990.

Adjournment

The meeting was adjourned at 5:49 p.m.