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L.R.T. South Corridor Land Use Study

THE CITY OF CALGARY
PLANNING DEPARTMENT

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PREFACE

The City of Calgary Planning Department is happy to present this South Corridor Study which addresses the question of potential land use changes around the seven station sites along the south Light Rail Transit corridor.

The study has the dual objectives of optimizing development opportunities around the station sites and protecting abutting stable communities. Jointly funded by the Province of Alberta and the City of Calgary, the study has been undertaken over the past two and a half years with extensive public participation, particularly with the directly affected communities along the corridor.

One major thrust of the study relates to the identification of a new, important opportunity around the station sites for people to live, to work and to recreate. While the pros and cons of this concept have provoked considerable controversy and public debate during the planning process, the Planning Department believes that such activities can co-exist and thrive in proximity to L.R.T. station sites.

The recommendations of the study consist of both broad policies and site-specific guidelines. The broad policies, which will find application in other L.R.T. corridors, together with the site-specific guidelines, will allow for an effective implementation of the recommendations and provide a positive direction to guide land use changes along the south corridor.

George Steber, Jr.
DIRECTOR OF PLANNING

Part I

Summary

A. EXECUTIVE SUMMARY

The L.R.T. South Corridor Land Use Study establishes land use planning policies in the first of Calgary's Light Rail Transit Corridors. The planning approaches and recommended policies are important not only for the L.R.T. South Corridor but also for the planning of future L.R.T. Corridors in Calgary's proposed City-wide system. Effective land use planning of the L.R.T. Corridors will contribute substantially to the success of the L.R.T. System by encouraging development of a type, density, and design oriented to L.R.T. use which will also be compatible with adjacent communities.

In the Calgary General Municipal Plan (1979), City Council adopted policies encouraging employment and residential opportunities along major transit corridors. This decentralized corridor-oriented development is considered as a desirable supplement to the low density suburban development and to the highly centralized Downtown growth primarily due to its more efficient use of existing transportation and servicing systems. The key recommendations in the L.R.T. South Corridor Land Use Study reflect these policies by encouraging the creation of high density, mixed use development nodes at the L.R.T. Stations. These compact office and residential development centres will generate high L.R.T. use as substantial populations will be located adjacent to the Stations. The combination of uses including office and residential uses complemented by retail, service and entertainment functions, will also add excitement and vitality to the Corridor. The Station Area Plans for the seven South Corridor L.R.T. Stations make detailed land use recommendations which affect approximately 160 ha. The Plans recommend a maximum development framework which, if totally realized, could provide accommodation for 40,000 to 50,000 people as well as commercial development roughly equivalent to that allowed by the existing land use designations.

Within these mixed use nodes, residential development has been recognized as a preferred land use. The apartments, which would be built close to the L.R.T. Stations, would have high L.R.T. ridership rates while producing significantly fewer automobile trips than office development, a prime consideration in the congested Macleod Trail Corridor.

In the Station Areas, the highest development densities are recommended for the sites closest to the Stations with the densities diminishing further from the Stations. This creates an activity centre close to the Station, providing the necessary focus for the development nodes and locating the greatest population where L.R.T. usage is most likely.

Throughout the Study, the vital importance of convenient, safe and comprehensive pedestrian systems in the Station Areas is emphasized. By providing these systems, the different activities and developments in the Station Areas will be linked together and access to the Stations facilitated.

As the recommendations in the Land Use Study range from general policy considerations to site-specific land use proposals, the implementation of the recommendations will proceed on a number of levels. On July 29, 1980, City Council approved the Study policies as amended as well as By-law 12P80, the related amendment to the Calgary General Municipal Plan. Area Redevelopment Plans will be initiated for Erlton and for the Chinook and 42nd Avenue Station Areas coupled with Parkhill/Stanley Park. Redesignation of certain land parcels deemed critical to the achievement of the Study objectives, these being primarily redevelopable land within 400 m of the Stations, will also be undertaken by the City. The Civic development review and approval process will continue as the implementation tool on a site-specific basis.

In addition to the continuing trend for commercial development along Macleod Trail, the Land Use Study anticipates a growing market demand for housing in the Station Areas. Experience in other cities and the market demand study for Calgary (Appendix I) suggest that multi-dwelling residential developments close to transit stations will become more attractive.

Although the accessibility of the L.R.T. Station Areas increases their attractiveness to development, the Land Use Study has not assumed that development will occur at the L.R.T. Stations simply because "development follows transit". Other contributing factors such as surrounding land uses and road access have been evaluated and their influence considered. The development climate in Calgary and the growing attractiveness of the Macleod Trail Corridor for office development, even before the decision to build the L.R.T. System, will contribute to the realization of the unique development opportunities afforded by the L.R.T. Station Areas. Development in these Station Areas will continue well beyond the ten-year timeframe of the Land Use Study.

Throughout the preparation of the Land Use Study, an extensive public participation program was undertaken in which nineteen communities were analyzed for L.R.T.-related impacts; meetings were held in each Station Area; and two series of public information centres were presented. Further meetings were held at the request of some communities to discuss the potential impact of the L.R.T. System.

The report is presented in three major sections. Part I includes the Executive Summary and the Summary of Recommendations providing a brief outline of the Study and its proposed recommendations. Part II is composed of chapters addressing Station Area Development Policies, Station Area Plans, Implementation and Impact Monitoring and Management Strategies. Part III consists of the background information and technical analyses related to the Study recommendations, including the public participation schedule, urban design performance standards, Station Area planning considerations and community concerns. The general impact analyses are also presented as well as the transportation considerations and summaries of consultant reports on market opportunities and Station Area parking and traffic impacts. The approved Calgary General Municipal Plan amendment, By-law 12P80, is included as well as a summary of the decisions of the Civic Approving Authorities regarding the Study and a bibliography of related literature.

B. SUMMARY OF RECOMMENDATIONS

1. STATION AREA DEVELOPMENT POLICIES

a. BENEFIT FEATURES AND BONUS SYSTEM

i. New development in the Station Areas shall provide benefit features related to the movement systems or to the development itself. The relative importance of the benefit features and the site's proximity to the Station shall determine whether the provision of the feature is a mandatory requirement or optional.

ii. The development policies and the bonus system shall apply to the L.R.T. Station Areas as generally defined by the 400 m radius. However, they may be extended to sites beyond this distance where developments can successfully demonstrate their connection and contribution to the functioning and quality of the Station Area.

iii. A bonus system shall be implemented as a method to support and encourage new development with appropriate benefit features. Subject to the policy guidelines established in the Station Area Plans and the Station Area Development Policies, the bonus system allows:

- higher density development potential or parking relaxations for certain movement-related benefit features; or
- higher density development potential for development-related benefit features.

iv. The "Bonus System" outlined in Part II, Chapter C shall be adopted as a framework outlining:

- mandatory benefit features required without eligibility for bonuses;
- mandatory benefit features required and eligible for bonuses;
- elective benefit features eligible for bonuses; and
- the bonus ratio for each benefit feature.

b. MOVEMENT-RELATED BENEFIT FEATURES

i. In the Station Areas, the Primary Pedestrian Circulation Corridors are defined, which must be provided as a mandatory condition of development. Where the Primary Corridor crosses private land, it shall be the mandatory responsibility of the property owner to provide the necessary pedestrian connection. Where the Primary Corridor crosses transportation rights-of-way, it shall be a general principle that the provision of this link shall require contributions on a negotiated basis by the adjacent private property owners who benefit from the improvement.

ii. On an elective basis, developers may provide Secondary Pedestrian Circulation Corridors across their private lands and transportation rights-of-way. To be eligible for consideration for bonussing, the Secondary Corridor must connect with the Primary Corridor.

iii. The City ensure that the Primary Pedestrian Circulation Corridor be provided in the following ways:

- at the time of redevelopment by the owner for both the on-site segments and the share of the adjacent crossing of transportation rights-of-way;

- prior to redevelopment, the City may provide the grade-separated connection across transportation rights-of-way as warranted and in future recover the cost from and offer the commensurate bonus to the adjacent owner at the time of redevelopment;

- from existing development:

  o negotiation based on the development agreement indicating a future link to the Station and/or grade-separated crossing of a right-of-way;

  o in the absence of a development agreement pertaining to the provision of a pedestrian link, it may be necessary for the City to provide the grade-separated crossings as warranted;

- as a capital improvement funded by the City for the benefit of the general public.

iv. Pedestrian facilities conform with the performance standards and guidelines regarding dimensions and treatments set forth in Part II, Chapter C, and Part III, Appendix D.

v. The parking policy framework for Station Areas be adopted to guide the site-specific review of development by the Planning and Transportation Departments, incorporating the following opportunities for relaxations of the Calgary Land Use By-law standards:

- shared use of parking in mixed use developments based on the review of the parking requirements by the component uses and their parking occupancy rates throughout the day;

- shared use of L.R.T. parking by adjacent uses with parking needs during non-commuter hours, such as hotels, entertainment, some institutions and residential visitors;

- range of relaxations from 0 to 20 percent both for residential uses based on analyses of anticipated car ownership rates and for commercial office uses based on analyses of anticipated modal split to transit.

vi. The quality of parking facilities conform with current City standards and the guidelines in Part II, Chapter C, which includes requirements of a maximum surface parking area of 20 percent of the site and at least half of the parking provided underground or in a parking structure.

c. DEVELOPMENT-RELATED BENEFIT FEATURES

i. The Calgary Land Use By-law establishes minimum requirements for the provision of amenities and landscaping for residential and commercial development, which are mandatory and not eligible for bonus awards. It is recommended that the provision of such benefit features for Station Area development such as additional open space, public facilities and amenities above the By-law standards be considered for bonuses of additional development potential.

2. SOUTH CORRIDOR STATION AREA PLANS

The recommended land uses and intensities as well as the development guidelines set forth in the Station Area Plans be adopted for the recommended implementation processes.

3. IMPLEMENTATION

a. City Council adopt by Resolution the L.R.T. South Corridor Land Use Study which shall serve to guide future land use changes and development in the Study Area (approved as amended on July 29, 1980).

b. The Calgary General Municipal Plan be amended to incorporate the land use objectives, development policies and other recommendations set forth in the Study (approved as amended By-law 12P80 on July 29, 1980).

c. Erlton be designated as an area suitable for an Area Redevelopment Plan (A.R.P.) and that the A.R.P. program be initiated in 1980. It is further recommended that the Chinook and 42nd Avenue Station Areas, as well as Parkhill/Stanley Park, be designated as areas suitable for A.R.P. programs as soon as possible and that an A.R.P. be undertaken for Parkhill/Stanley Park simultaneously with the 42nd Avenue Station Area program.

d. The Planning Department be instructed to initiate the land use amendment process to amend the existing land use designations for the land parcels within the Station Areas as recommended in the Station Area Plans. Redesignation of other Station Area lands, for which a future change of land use is recommended, may be undertaken by the private sector.

e. The appropriate land use districts of the Calgary Land Use By-law, including the Direct Control (D.C.) district, be utilized to

respond to the requirements of the Station Area. Also specialized new L.R.T. land use districts be considered during the Implementation Stage.

f. Within the present Civic circulation process for land use amendments and development permits, it is recommended that the Transportation Department be directed to review all major development proposals with respect to potential traffic impact on the existing road system and, if warranted, to advise the Approving Authority of the improvements required to allow the proposed development. It is further recommended that the developer may be required to contribute towards the necessary road access improvement costs so as to service the proposed development.

g. The Transportation Department be directed to review the requirements for the roadway improvements, as development proceeds throughout the South Corridor.

h. The proposed capital expenditures for improvements as detailed in the Station Area Plans be approved in principle.

i. The policy of optimizing development opportunities of City-owned land in transit station areas be endorsed, and the establishment of an inter-Departmental committee co-ordinated by the Land Department be explored as a means to implement this policy.

j. An initial planning policy review be undertaken for the L.R.T. South Corridor Land Use Study in 1986 after the L.R.T. System has been in operation for five years in light of the available impact data, to be followed by a complete review at the conclusion of the planning period in 1991.

4. IMPACT MONITORING AND MANAGEMENT STRATEGIES

a. A monitoring system be established, co-ordinated by the Planning Department and involving the responsible Civic Departments, to evaluate the L.R.T. System and associated development in terms of its relevant characteristics and impact within the South Corridor. This monitoring system should address both the individual development proposals and the L.R.T. System facilities at the specific local level and the broader context of the South Corridor. This information would be used for evaluation of the existing policies and as input in the planning of future transit corridors.

b. Effective management strategies be formulated and implemented to deal with specific impacts on local services and community facilities as outlined in Part III, Appendix F.

Part II
The Plan

Chapter A

Introduction

A. INTRODUCTION

As evidenced in a number of North American cities with rail transit systems, sound supportive land use policies coupled with effective implementation programs are critical to the total success of the transit system. In early 1978, in response to City Council's decision to develop the first leg of the Light Rail Transit System (L.R.T.) from Downtown to the south along the Macleod Trail Corridor, the Planning Department commenced a Land Use Study to anticipate and guide land use changes for the areas subject to potential L.R.T. impact.

The Transportation Department is responsible for the transportation planning and functional aspects of the L.R.T. System. The Planning Department Study deals with land use and development aspects of the overall planning for the South Corridor, focussing on the Station Areas. Through the co-ordination of land use and transportation policies, transit usage from existing neighbourhoods and development throughout South Calgary would be encouraged to contribute to the overall success of the L.R.T. System. A generalized concept plan for a Station Area is illustrated in Part III, Appendix B to provide an impression of how the transit facilities and the future development nodes may fit together with the existing communities and development.

1. Planning Context

The Calgary General Municipal Plan, approved by City Council in 1979, provides a general framework for the development of the City. The following are the major strategies contained in the Calgary General Municipal Plan that set the context for the L.R.T. South Corridor Land Use Study. These include:

a. Residential Growth

The adopted Growth Strategy envisages an increase of 32,000 people in the built-up area. This additional population is to be accommodated through development on land that is either vacant or under-utilized. It is also stressed that this additional residential population be directed to areas with spare servicing capacity and to areas close to major transit corridors such as Macleod Trail and Crowchild Trail. (Paragraphs 2.3.43 and 2.3.44)

The density of residential development should be increased adjacent to main transit corridor routes. (Paragraphs 3.3.50, H.25; and 3.4.22, T.10)

b. Employment Growth

The Downtown will continue to be the dominant employment centre which will accommodate approximately 40 percent of the City's total projected increase in employment to 1996. The bulk of the remainder will be accommodated in major industrial areas in the southeast and north, and along major transit (L.R.T. and bus) corridors, particularly along Macleod Trail in the south and Crowchild Trail in the north. (Paragraph 2.1.16) As much new employment as possible should be decentralized along transit corridors in order to reduce traffic congestion in the Downtown and Inner City. (Paragraphs 3.2.12, EA.9 and 3.4.22, T.12)

c. Public Transit Usage

Land uses which would make maximum use of the public transit portion of the transportation system should be emphasized along major travel corridors. (Paragraph 3.4.22, T.13)

d. Development Guidelines

The design and layout of buildings should take into account the need to minimize noise from traffic and other sources. (Paragraphs 3.3.69, H.31; 3.4.22, T.18; and 3.4.5, E.18)

2. Objectives of Study

The objectives of the L.R.T. South Corridor Land Use Study are:

a. to formulate policies regarding land use, development intensity and circulation patterns in order to optimize development opportunities supporting the transit system along the L.R.T. South Corridor, particularly around Station sites, subject to the consideration of servicing and transportation constraints within the planning period to 1991,

b. to analyze the potential impacts of the L.R.T. System and new development on the adjacent residential communities in order to protect abutting areas from adverse impacts;

c. to design effective implementation techniques for the recommended land use policies;

d. to ensure an adequate level of public participation throughout the planning process.

3. Study Area

As illustrated on the accompanying maps, the South Corridor Land Use Study encompasses the Primary Impact Area and the broader context of the adjacent communities. The Primary Impact Area has focussed on:

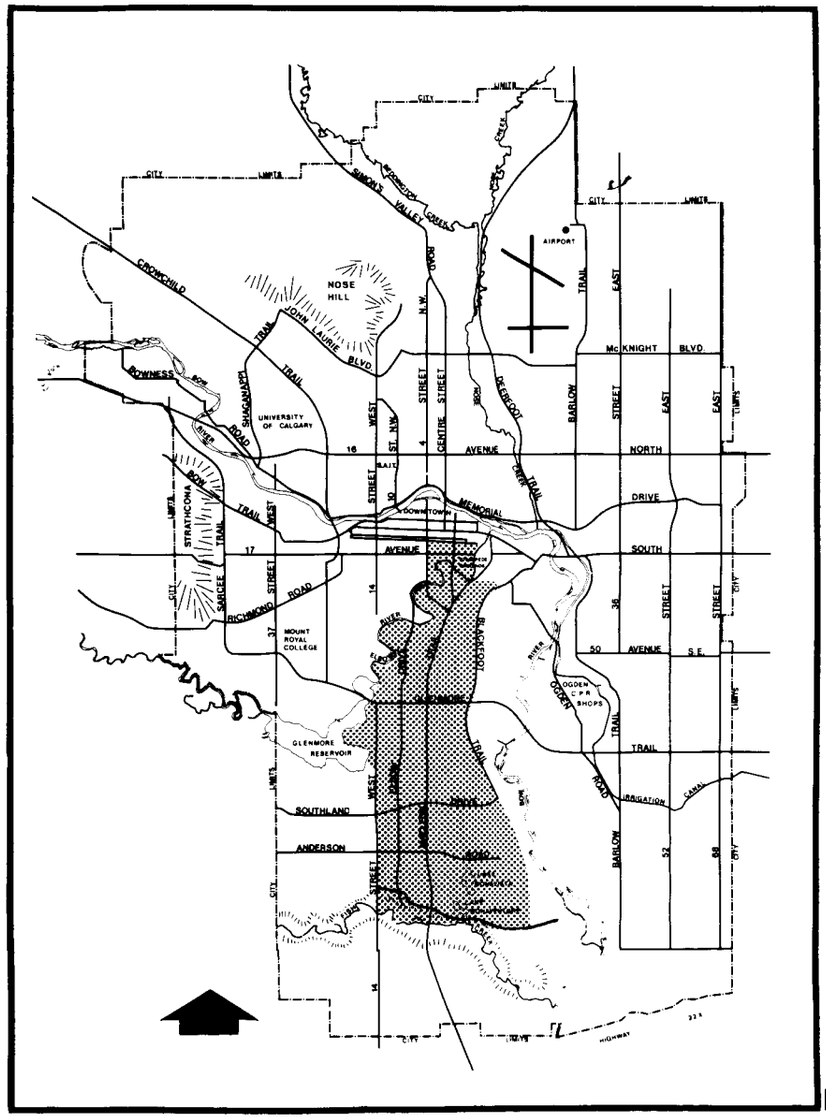
- the seven Station Areas of Stampede, Erlton, 42nd Avenue, Chinook, Heritage, Southland and Anderson as defined by the 400 m distance from each L.R.T. Station site, and

- the intervening areas adjacent to the L.R.T. alignment and/or Macleod Trail.

These areas have been defined on the basis of either anticipated potential development opportunities or environmental impacts.

In the future, the L.R.T. System in South Calgary may be changed by the addition of new Stations or spur lines and extensions of the System. As these changes occur, appropriate L.R.T.-related planning policies shall be formulated.

Study Area In City-Wide Context

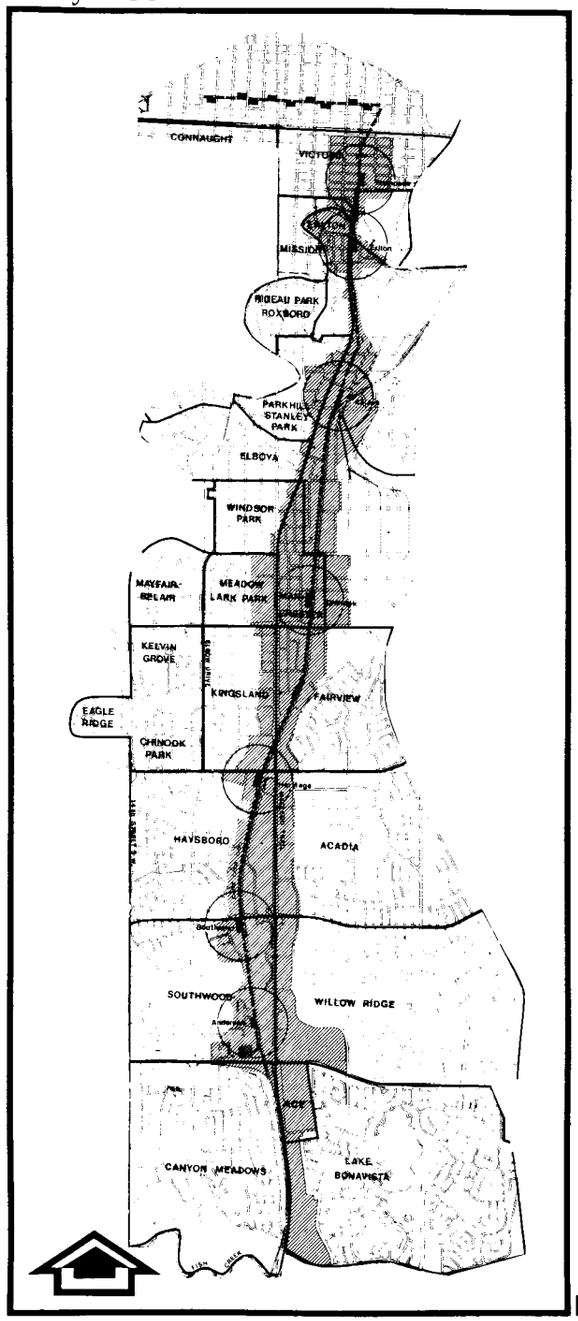


Map 1

LEGEND

- LRT ALIGNMENT
- STATION AREA (400 METER RADIUS)
- PRIMARY IMPACT AREA
- COMMUNITY BOUNDARY

Study Area



Map 2

4. Planning Period

This Study is intended as a policy guide for land use and development along the L.R.T. South Corridor for a period of ten years of the System's operation, that is, to 1991. It is recommended that an initial review of the Study be carried out after five years of operation (1986) in light of available impact data to be followed by a complete review at the conclusion of the planning period (1991).

5. Planning Process

The Study has addressed issues at three different spatial scales:

- a broad contextual survey of the entire South Corridor including the immediately abutting communities. A series of Background Information Packages[1] has been produced at this stage;

- detailed examination of the Primary Impact Area flanking the L.R.T. alignment along the South Corridor;

- focus on the L.R.T. Station Areas as defined by the 400 m radius for specific land use recommendations and an implementation program[2].

Specifically, the evolution of land use policy recommendations has gone through four major steps as illustrated in the accompanying Figure 1:

- formulation of objectives,

- generation of land use alternatives,

- evaluation of land use alternatives, and

- development of policy and land use recommendations.

Technical inputs from consultants have included the IBI Group for the traffic and parking impact study and Urbanics Consultants Ltd. for the market feasibility study as summarized in Appendices H and I. Throughout the planning process of the Land Use Study, analyses and evaluations have been checked and tested with input from the affected communities through the public participation program which forms an integral part of the Study program.

6. Public Participation Program

As shown in Figure 1, the Public Participation Program consists of five stages leading to the Public Hearing of City Council[3].

a. Stage I - Introduction

In this stage, an introductory meeting was held with executives of the Community Associations in the Study Area to explain the purpose, objectives and proposed process of the Land Use Study. Participants were encouraged to disseminate the information to their respective communities.

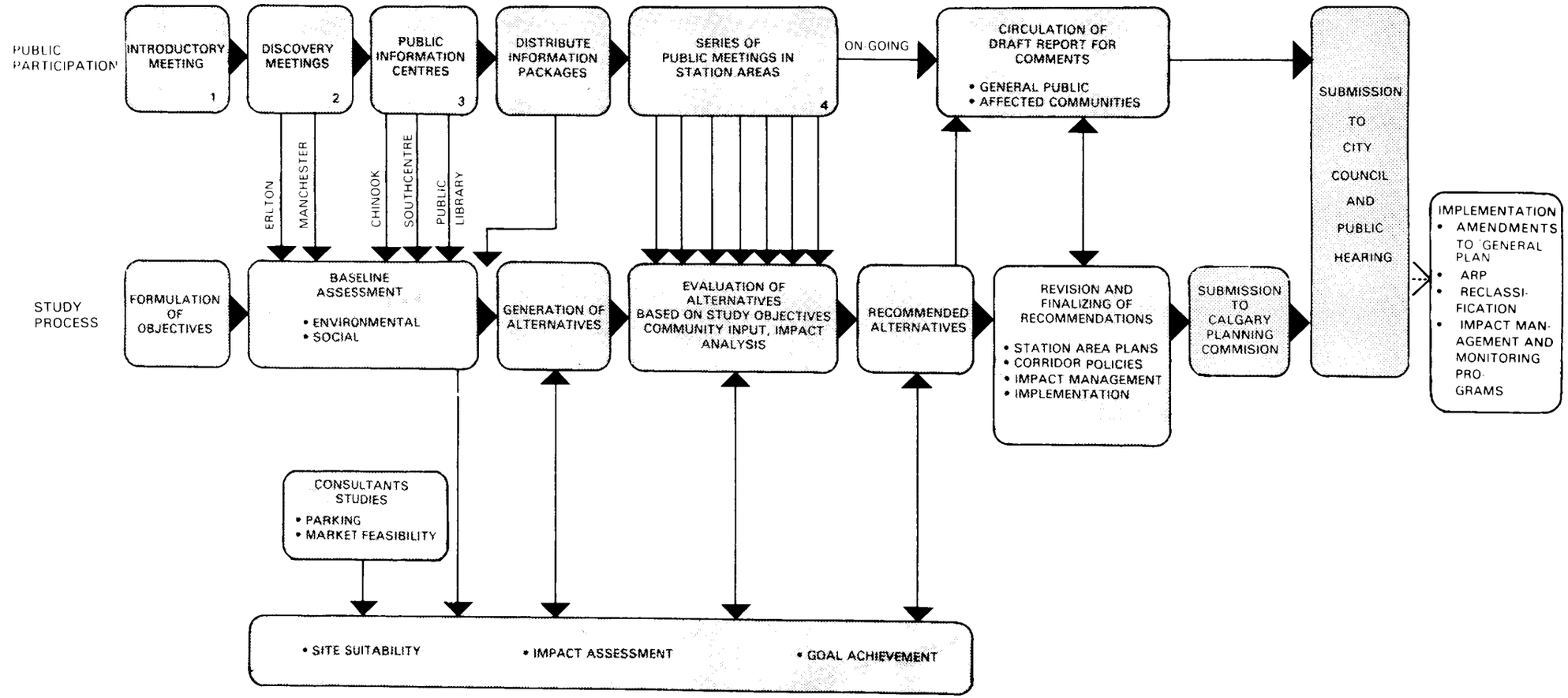
1. Available from Planning Department Information Centre.

2. It is pointed out that except for the Cemetery Hill section, the seven Station Area Plan areas when joined together will cover the entire Primary Impact Area along the South Corridor.

3. A more detailed summary of the program has been included in Part III, Appendix C, Chronology of Major Events - Public Participation Program.

FIGURE 1

PLANNING PROCESS - LRT SOUTH CORRIDOR LAND USE STUDY



b. Stage II - Discovery Meetings

Meetings were held for the Erlton and Manchester communities during this stage. These communities required special consideration due to the active redevelopment pressure and imminent dissolution of the Community Association in Manchester and the absence of a Community Association in Erlton.

c. Stage III - Information Centres

Public information centres, held in Southcentre and Chinook Shopping Centre, provided an opportunity to obtain the opinions and concerns of a large number of residents and property owners of the Study Area and the City as a whole.

d. Stage IV - Public Workshops

At this stage of the program, public meetings in the form of workshops were held in each of the Station Areas. At the workshops, interested citizens, including local residents and property owners, were encouraged to discuss and comment on alternate development scenarios presented by the Study Team. Specific community issues such as potential parking overspill, traffic infiltration, compatibility of future development and overloading of community facilities were discussed. Background Information Packages, providing general data on the Station Areas and the adjacent communities, were made available to the public prior to the public workshops.

e. Stage V - Circulation of Draft Report and Public Information Centres

The draft report of the Land Use Study was made available to the public for review and comment. The major draft recommendations were presented to the general public at Southcentre and Chinook Shopping Centre for their information and comment. The Planning Department has taken the input received from the public into consideration in finalizing the recommendations for submission to City Council.

f. Public Hearing

The final phase of the Study and the Public Participation Program was the Public Hearing of City Council for the Land Use Study on June 24, 1980. At the Public Hearing, citizens had the opportunity to comment directly to City Council on the recommendations of the Land Use Study.

On July 29, 1980, City Council concluded this statutory Public Hearing with the approval of the Study and the related amendment of the Calgary General Municipal Plan, both as amended.

g. Ongoing Contact

Throughout the Study, the Study Team has had numerous meetings and discussions with interested citizens including local residents and property owners who have contacted the Planning Department. This process has proven useful in promoting understanding and exchange of ideas and viewpoints. It is anticipated that this ongoing contact will continue through to the implementation phase of the Study.

Chapter B

Major Planning Considerations

B. MAJOR PLANNING CONSIDERATIONS

The recommendations of the L.R.T. South Corridor Land Use Study have resulted from the synthesis of the planning analyses and evaluations of major factors and considerations outlined in this Chapter.

1. Achievement of Basic Study Objectives

It is the purpose of this Land Use Study to formulate policies regarding land use, development intensity and circulation patterns addressing the dual objectives for optimum development with strong transit-orientation and ridership potential and for the minimization of adverse L.R.T.-related impacts on adjacent communities and areas.

a. Optimizing Transit Orientation and Ridership

Focussing medium and high density development within an easy walking distance of the L.R.T. Stations has been identified as an effective method of significantly increasing transit use and underlies many of the Study recommendations. The modal split, the probability that a person will use transit rather than a private vehicle, has been predicted to increase greatly in the L.R.T. Station Areas. Based on current Transportation Department analyses, the shift towards transit has been predicted to be high within 400 m of the Station. For the Stations north of Chinook Station, the peak hour ridership is predicted as 50 percent for residential uses and 40 percent for office uses. The modal split to transit in the suburban Station Areas is predicted to be approximately 40 percent and 30 percent respectively for residential and office development. This increase in modal split to transit from present levels is primarily due to the decreased travel time to the Downtown made possible by the L.R.T. System. The direct relationship between increased modal split to transit and greater proximity to the L.R.T. Station supports the creation of high density development nodes around the Stations.

The Land Use Study has laid the groundwork for the development of such nodes through recommended increases in building density, requirements for extensive pedestrian systems and a bonus system encouraging the provision of amenities and benefit features which will create a more convenient and pleasant environment in the Station Areas. Residential development close to the Stations has been emphasized both for its high modal split characteristics and for its addition of vitality and day-round activity to the Station Areas. To further encourage varied activities and interaction in the Station Areas, mixed use developments are recommended combining office and residential uses often with supporting retail, service and entertainment facilities. The different component uses would contribute to a dynamic and varied development.

b. Minimizing Adverse Impacts on Adjacent Communities

The introduction of the L.R.T. System as well as new development will have both positive and negative implications for the existing residential communities and non-residential areas. The Land Use Study has identified and considered these potential impacts and sought to avoid or to mitigate adverse impacts on the adjacent areas. The public participation program focussing on the communities adjacent to the L.R.T. Stations and alignment proved one way of identifying potential community impacts and defining community objectives and desires. Based on this extensive formal and informal public input and other planning considerations, a series of impact monitoring and management strategies are recommended to deal with the possible adverse effects stemming from the System itself and potential development in the Station Areas.

2. Approved City Policies

As outlined in the Introduction, the Calgary General Municipal Plan has established policies which are relevant to the South Corridor and provide a general framework for this Study's policy formulation. The approved policies of the Inner City Plan: Revised Draft Proposal (1979) affect the Inner City communities around the Stampede, Erlton and 42nd Avenue Stations. Within the Inner City Plan policy framework, this Land Use Study has developed more detailed recommendations, reflecting the policies of conservation or increased residential concentration in certain communities.

The approval of the L.R.T. System for the Macleod Trail Corridor has superimposed a major new transportation mode on an already heavily travelled, heavily used commercial strip. The Study re-evaluated the planning policies and land use designations under the City of Calgary Land Use By-law #2P80 to determine their relevance in the context of the L.R.T. Corridor.

3. Site-Specific Considerations

In addition to examining the Station Areas from the broader perspective of policy objectives and impact management strategies, each individual site was analyzed with respect to a set of criteria to determine its suitability for specific types and densities of land uses. These criteria included: location, size, orientation, access, surrounding and existing land uses, environmental conditions and potential impact on existing development, community facilities and services.

The special characteristics of the individual Station Areas have also been recognized. For example, in the Anderson and Chinook Station Areas, the connections between the Stations and the adjacent regional shopping centres have provided a focus for area development. The opportunity for 17th Avenue South to become a stronger pedestrian-oriented commercial district near the major attractions of the Stampede Grounds and the L.R.T. Station has been fostered by the recommended development policies in the Stampede Station Area Plan.

4. Transportation System Characteristics

The characteristics of the transportation system including the capacity of the existing road system and the effects of possible improvements have provided an important input to the formulation of the Study recommendations regarding land use types and intensities (Part III, Appendix G).

Macleod Trail is presently operating at near capacity level and, as a primary route into the City from the south, it seems destined to continue to carry high traffic volumes. The future traffic demands on Macleod Trail will have many sources including regional trips to and through the Downtown, the highway commercial businesses, new suburban office development, the L.R.T. Stations and associated new development.

Recognizing that Macleod Trail has a limited capacity beyond which major economic and environmental impacts arise, it is clear that a coherent development strategy for the Corridor is required.

In the Land Use Study, the Planning and Transportation Departments have adopted an approach to the combined L.R.T. South Corridor and Macleod Trail based on increasing the use of the L.R.T. System. The Study recommends the creation of high density, pedestrian-oriented development nodes at the L.R.T. Stations. These nodal developments provide the opportunity for increasing L.R.T. ridership through locating employment and residential centres within an easy walk of the Stations. This development generally contributes to a more efficient, decentralized urban structure.

This approach recognizes that the feeder bus system will be the key mode of access to the L.R.T. Stations which can serve a large majority of the L.R.T. users. The pedestrian walk-on volumes could be increased through appropriate land use planning policies in adjacent areas. Park 'n' Ride facilities will be provided at the suburban L.R.T. facilities. In the case of Anderson Station, the parking facilities will be particularly important to capture the regional commuters who are not well served by feeder bus systems into the Stations.

The Station Area Plan recommendations seek to balance the possible increase in transit ridership resulting from nodal development with the possible increase in traffic on the major roads resulting from this new development. To achieve this balance, the Study has recommended incorporation of a significant residential component in the mixed use developments for the achievement of the maximum density levels on many Station Area sites. Residential development is preferred over commercial development for several transportation-related reasons[1]:

- high density residential development produces significantly fewer total vehicle trips when compared with an equivalent area in an office or retail development. Retail development can generate more than ten times the vehicular traffic compared to a similarly sized residential development, thus retail development potential is limited in the Station Areas;

- the prime employment area, the Downtown, lies directly on the L.R.T. System route so a high proportion of Station Area residents will be able to use the L.R.T. in peak hours for work trips;

- residential trips display a greater spread in distribution throughout the day with a lower portion of the total trips occurring in the peak hours compared with office-generated traffic.

Therefore, the recommendations for the introduction of residential development potential in the Station Areas have allowed higher overall development potential on individual sites than would have been possible with solely commercial uses by reducing the transportation impacts.

1. Institute of Transportation Engineers, Trip Generation (Virginia, U.S.A., 1976).

It is anticipated that the proposed roadway improvements in the Macleod Trail Corridor and the construction of Deerfoot Trail will ease some of the traffic pressure on the intersections and Station access points along Macleod Trail. In several Station Area sites, interchange construction should be phased with major development. The timing of the road improvements, such as the interchanges of Macleod Trail at Anderson Road, Southland Drive and Heritage Drive, will be reviewed and possibly changed as part of the Transportation Improvement Priority Study program, which considers the construction program on a ten-year basis.

The Transportation Department impact analyses regarding the South Corridor L.R.T. are summarized in Part III, Appendix G. The development capacity in the South Corridor Station Areas based on these analyses would total approximately 738,555 m^2 of commercial space and nearly 20,000 residential units. Although the recommended land use policies of this Study would allow a significantly higher overall development potential, the Planning Department does not anticipate that either commercial or residential development in the Station Areas will exceed this total of 738,555 m^2 or 20,000 units during the Study period to 1991, given a combination of factors such as existing development, market conditions and site constraints. In 1991, it is recommended that the Study policies be thoroughly reviewed.

Development within the South Corridor proceeds on a project basis, requiring review by the Civic Departments and Approving Authority. Therefore, the Transportation Department will review each project with respect to its acceptability in terms of impacts on the roadway system. Individual developments in the Station Area will proceed in incremental steps in balance with the municipal systems, either as existing or in phase with planned improvements.

5. Development Trends

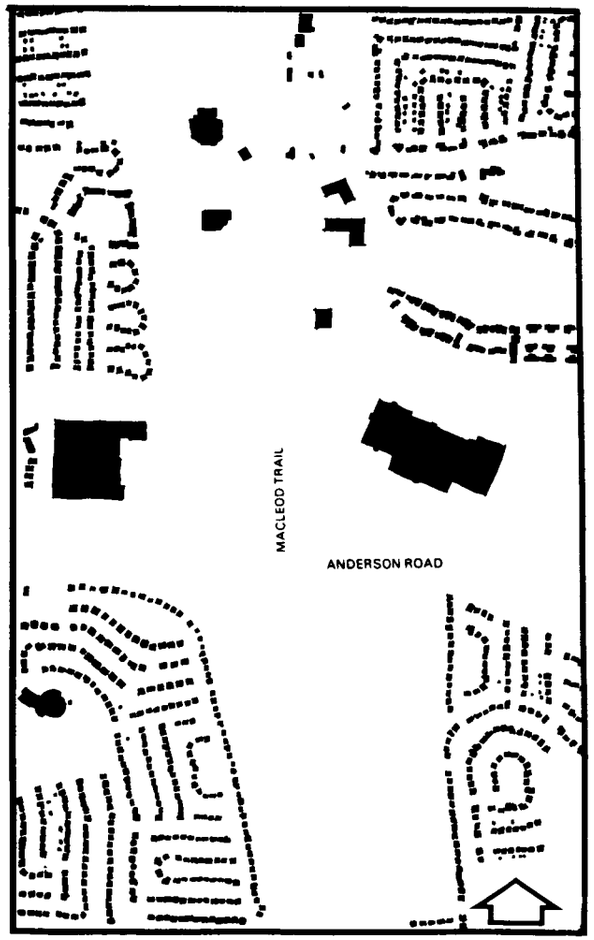
The Macleod Trail corridor, which traditionally has been a car-oriented highway commercial strip, is adding another facet to its character as higher density offices are being developed. During the course of the Study, several major comprehensive mixed use developments incorporating office and residential components, consistent with the Study's recommendations, have been approved by City Council.

The market potential along Macleod Trail which has attracted development interest will contribute to the realization of the Land Use Study recommendations. Development occurring between Stations along Macleod Trail, however, will likely be extensively car-oriented and not provide any benefit to the L.R.T. System. It has been a principle of the Land Use Study to focus the appropriate development activity in high density nodes close to the Stations, while allowing Macleod Trail highway commercial development to continue in the intervening areas.

Continued development activity in the Station Areas has been predicted by the market consultants as an input to this Study (Part III, Appendix I). The development types favoured by developers will likely be medium to high density residential developments oriented to adults and offices not requiring a Downtown location. The experience of other cities with rail transit systems support these predictions of extensive development opportunities in the Station Areas.

FIGURE 2:

PATTERN OF DEVELOPMENT AT INTERSECTION OF MACLEOD TRAIL AND ANDERSON ROAD



6. Urban Design Considerations

As the major highway serving as the City's southern gateway, Macleod Trail has evolved into a continuous ribbon of commercial development served by numerous road access points along its length. The Macleod Trail highway commercial strip is characterized by a distinctive building pattern based on its orientation to car traffic. As illustrated by the maps of development at the intersections of Macleod Trail with Anderson Road (Figure 2) and Glenmore Trail (Figure 3), large-scale commercial buildings are relatively isolated from each other as a result of their car-orientation.

Superimposed on this existing linear pattern of development along Macleod Trail is the L.R.T. System, which is also functionally a linear system, but which only stops at Stations at prescribed intervals. Unlike the frequent access and egress points serving the commercial strip along Macleod Trail, the Stations serve to focus passenger movement and provide an opportunity for development concentrated into nodes. Within 400 m of L.R.T. Stations, higher intensity nodal development fostering pedestrian movement and transit usage shall be encouraged. Therefore, concentrated development opportunities in the Station Areas would be superimposed over the existing Macleod Trail highway commercial strip, solely oriented to cars.

Two key development approaches are necessary for development in the Station Areas to achieve the Study objectives for successful pedestrian orientation:

a. continuity of development and integrated pedestrian spaces;

b. higher intensity of development focussed on the L.R.T. Stations.

FIGURE 3:

PATTERN OF DEVELOPMENT AT INTERSECTION OF MACLEOD TRAIL AND GLENMORE TRAIL

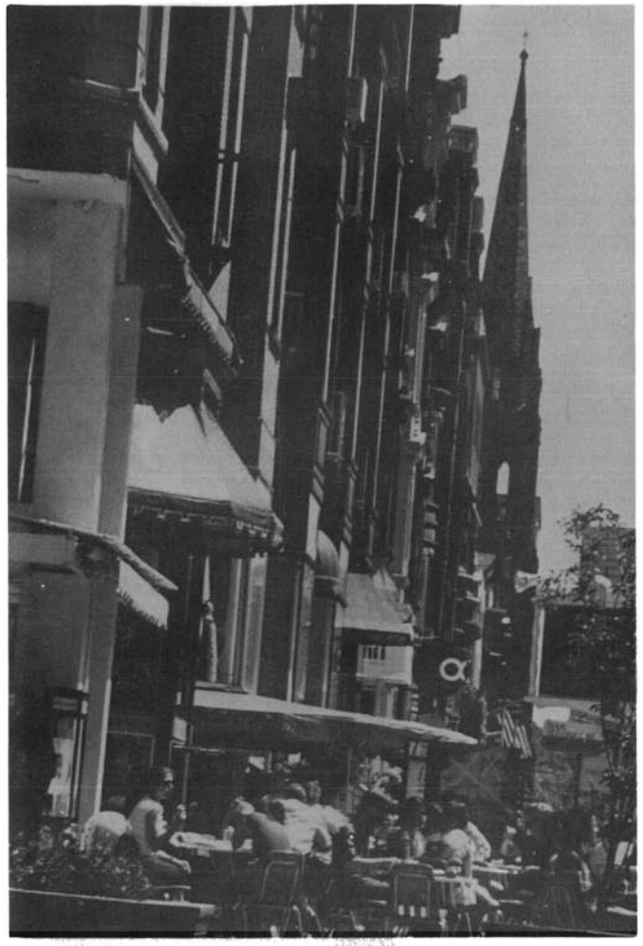


FIGURE 4: BUILDING WALLS RELATED TO PEDESTRIANS

a. Continuity of Development and Integrated Pedestrian Spaces

Development should respond to the nature of pedestrian movement which favours continuous sheltering from the elements as well as accommodating "stop and go" activities.

Features which support pedestrian movement include:

i. building walls, fronting on streets which are articulated to the scale of pedestrians (Figure 4);

ii. buildings with public activities at grade level, such as retail or other commercial uses (Figure 5);

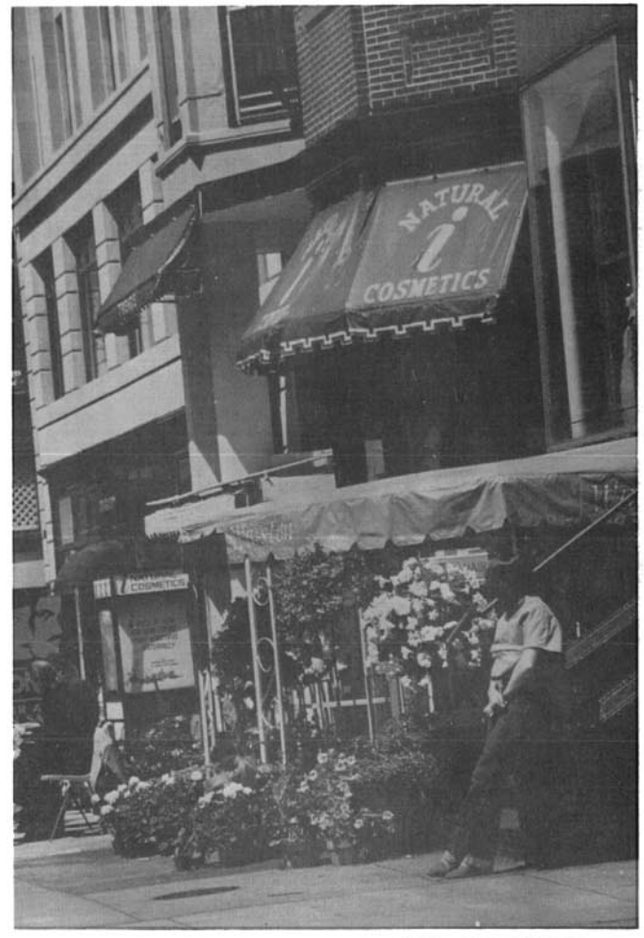


FIGURE 5: PUBLIC ACTIVITIES AT-GRADE

FIGURE 6: BUILDING WITH HIGH GROUND COVERAGE PROVIDING SHELTERED PUBLIC SPACES

iii. buildings with high ground coverage, providing sheltered and enclosed spaces for the public (Figure 6);

iv. buildings with spaces of generous dimensions adjacent to the commercial uses to allow public activity on the sidewalk area (Figure 7).

FIGURE 7: GENEROUS SIDEWALK AREA FOR PUBLIC ACTIVITIES AND PEDESTRIAN MOVEMENT

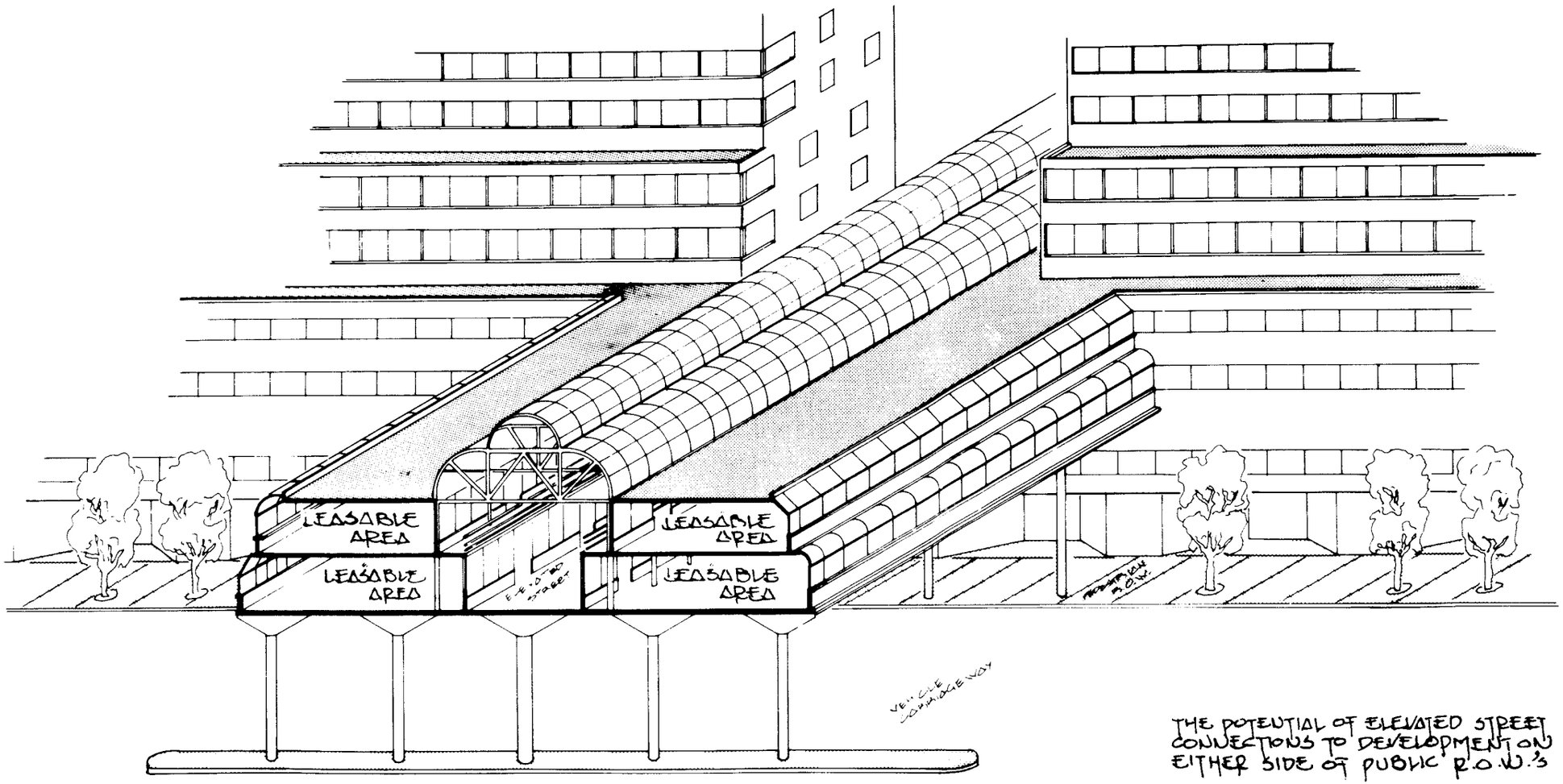


FIGURE 8: SKETCH OF "AIR RIGHTS" DEVELOPMENT WITH CONTINUOUS PEDESTRIAN MOVEMENT ABOVE PUBLIC RIGHT-OF-WAY

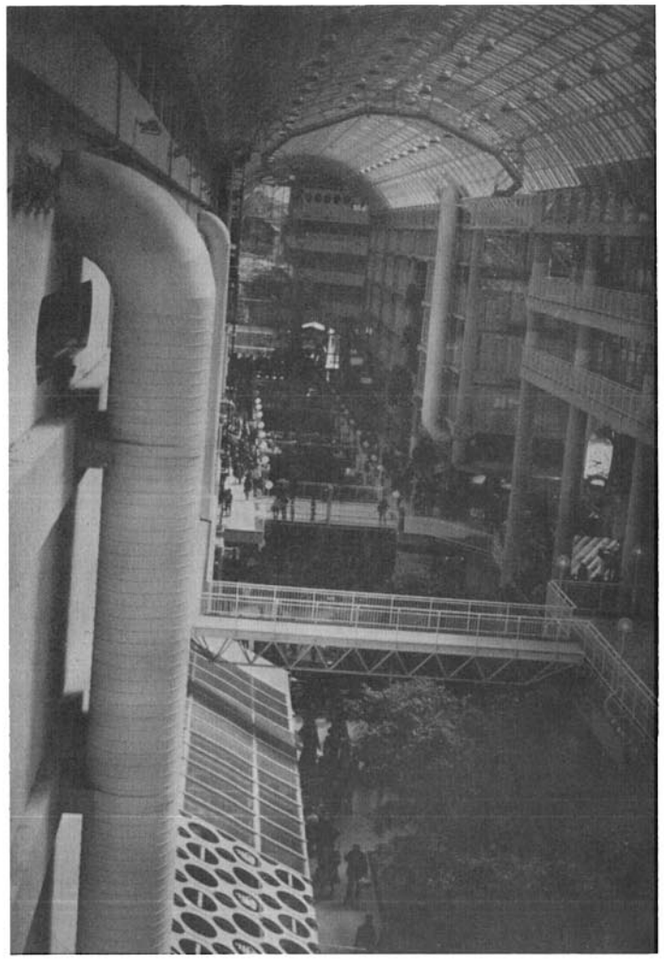


FIGURE 9: EATON CENTRE MALL CONNECTED WITH TRANSIT STATION FACILITIES

v. development capable of maintaining pedestrian continuity and public activities across major transportation rights-of-way, such as roads, which disrupt pedestrian movement (Figure 8);

vi. development which provides for a direct link into the Station mezzanine, (as in the Eaton Centre mall, Figures 9 and 10).

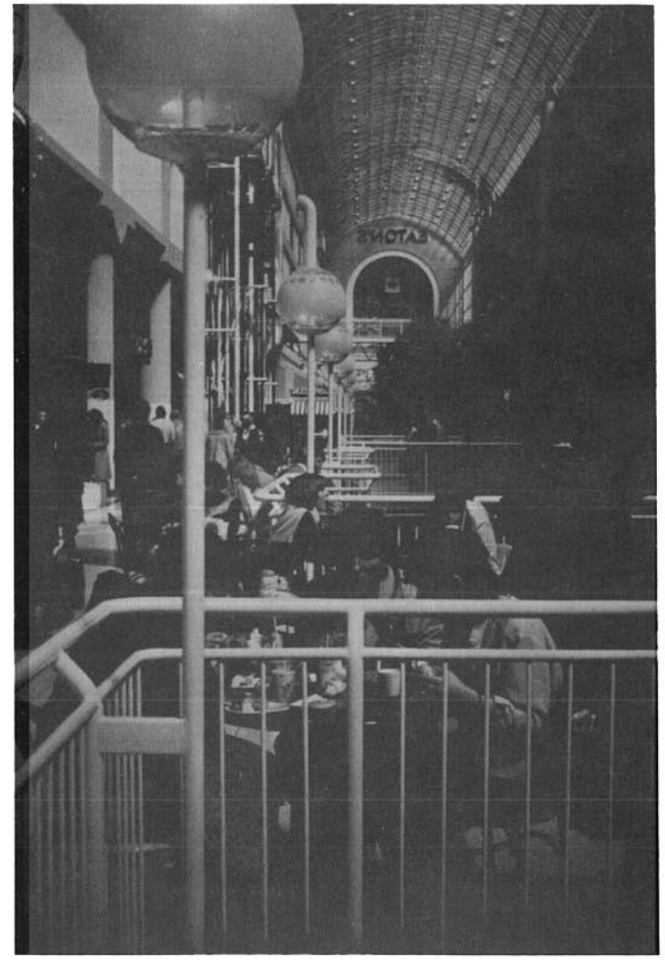


FIGURE 10: EATON CENTRE MIXED USE CONCOURSE

b. Higher Intensity of Development Focussed on the L.R.T. Station

The Study objective regarding the optimization of transit ridership has led to recommendations for higher intensity, mixed commercial and residential development focussed on the Stations. To support this nodal development oriented to pedestrians and transit usage, the Study recommendations emphasize special Station Area Development Policies including a bonus system for the provision of benefit features and special parking policies (Part II, Chapter C).

Mixed use developments combining commercial and residential components present the potential for development attuned to the special characteristics of Station Areas. The mixed use development may involve a single building with different uses separated vertically on different levels or else as several buildings, often connected at lower levels by a commercial and/or recreational complex.

Within these developments, uses and functions should be complementary, combining an employment centre with a residential environment and associated services like retailing and entertainment. Although the complex would not attain total self-containment, it would allow easy internal movement and access to services without generating additional car traffic.

Mixed use projects located adjacent to L.R.T. Stations may expand the residential choices for individuals who do not own cars or do not wish to use them regularly for their journey to work and other frequent trips. Similarly, the types of commercial development attracted to these complexes should not be directly oriented to car traffic, such as the uses characterizing highway commercial districts, but rather would tend toward offices and other commercial uses drawing much of their business from the complex or the adjacent area.

The built form of mixed use complexes may be infinitely variable in details; however, this Study sets forth some basic guidelines. The combination of residential uses close to commercial uses dictates attention to their interrelationship, particularly in the Station Areas which are affected by proximity to existing industries and major roads and rail lines. The residential component may require siting and shielding from these less desirable effects. Particular attention should be paid to residential environmental quality in the L.R.T. Station Areas through the development review process.

The Village by the Grange project in Toronto (Figure 11) illustrates a mixed use complex with an approximate F.A.R. of 4.0. The exterior of the project shields roads on either side creating a quiet interior to the project. This interior space is suited to a residential project and is enhanced by landscaped public areas on the second level. Retail and commercial uses are located on the lower levels. A streetcar loop is located on-site with the building stacked above this transportation right-of-way.

Eaton Centre in Downtown Toronto (Figure 9) combining retail and other commercial uses is oriented to pedestrian movement internally. The north and south ends of the mall are served by the Dundas and Queen Street transit stations, providing excellent pedestrian traffic through the complex enhancing the viability of the mall operations.

On certain sites, there are opportunities for an "air rights" form of development to re-use land presently used for surface parking and transportation rights-of-way. These large surface areas may create environmental blight and remove public activities, making inefficient use of valuable land resources. The "air rights" development form may stack buildings above surface parking or transportation facilities by a deck or other means of vertical separation (as in the Village by the Grange example). On some sites, the development potential may be realized by accommodating the parking requirements in a parking structure rather than surface lots, thereby "freeing up" that area for development.

The sensitive fit of new development in the Station Areas with the adjacent low density residential neighbourhoods would be addressed through development guidelines for individual projects. The environmental quality of adjacent residential communities should also be ensured by the review of the impact from new development in the Station Areas. However, this Study's concerns regarding the need for direct sunlight on public pedestrian rights-of-way and existing low density residences has led to performance standards

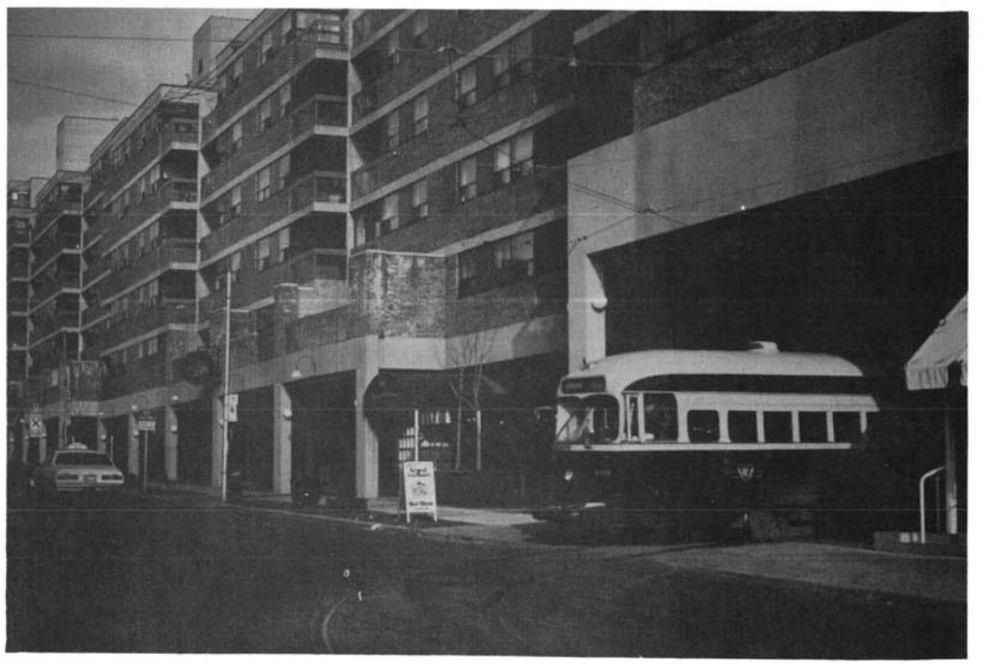
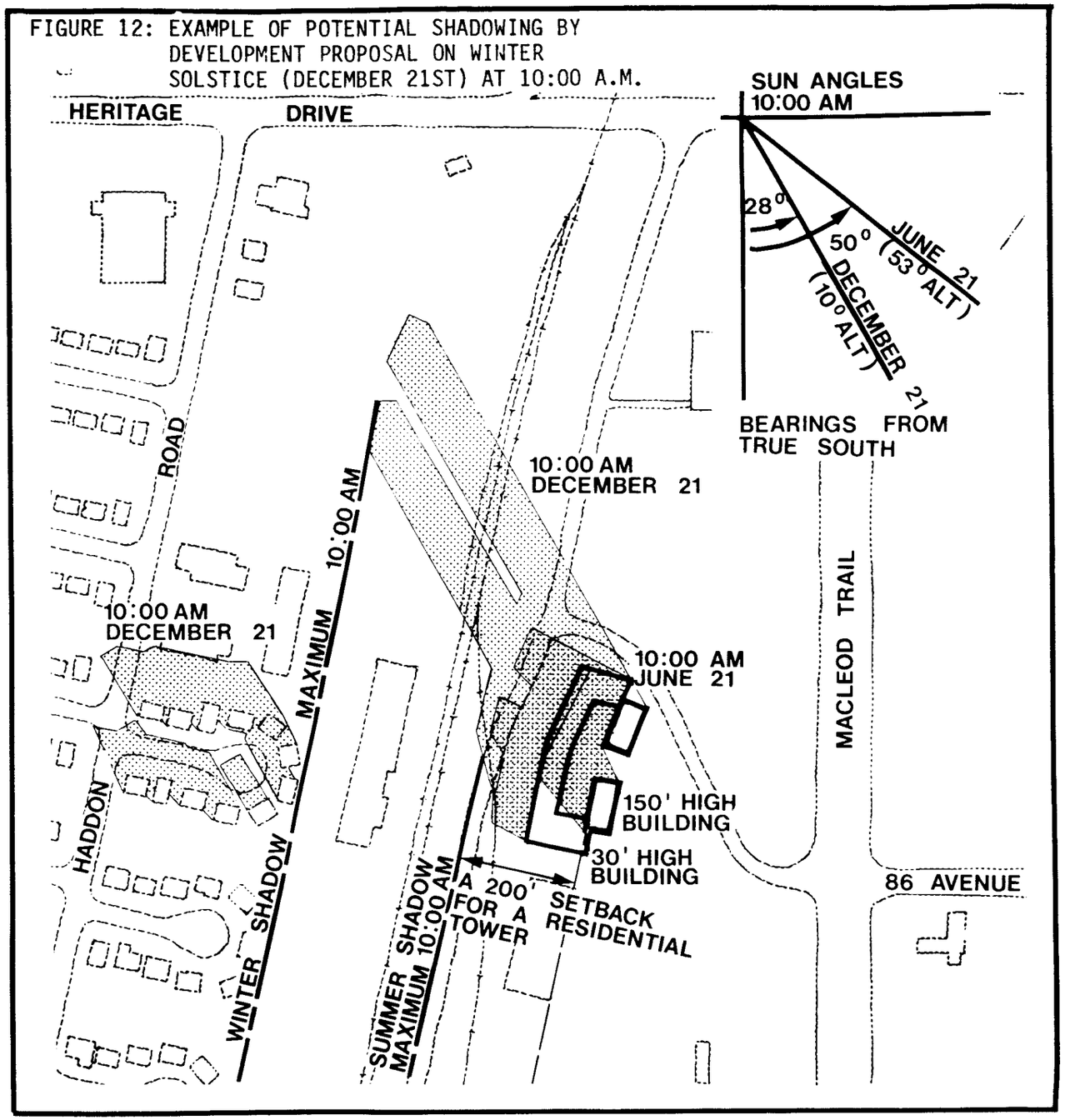


FIGURE 11: VILLAGE BY THE GRANGE MIXED USE DEVELOPMENT INCORPORATING "AIR RIGHTS" DEVELOPMENT OVER A STREETCAR LOOP

FIGURE 12: EXAMPLE OF POTENTIAL SHADOWING BY DEVELOPMENT PROPOSAL ON WINTER SOLSTICE (DECEMBER 21ST) AT 10:00 A.M.



detailed in Part III, Appendix D. The physical impact created by shadows from new development will be limited with the determination of a "maximum shadow line", on the winter solstice (December 21) at 10:00 a.m. or 2:00 p.m. as illustrated in the example of Figure 12. The southerly Station Areas of Anderson, Southland and Heritage all have designated shadow line boundaries to limit the shadowing of existing low density housing.

In order to further enrich the vibrant highway development spine of Macleod Trail, the mixed use development nodes related to the L.R.T. Stations will be superimposed. Both the intensity and type of new development focussed on the Station Areas and its built form and associated features shall foster its orientation to pedestrians and transit.

Chapter C

Station Area Development Policies

C. STATION AREA DEVELOPMENT POLICIES

1. OVERVIEW

New development attracted to the L.R.T. Station Areas requires special development policies regarding pedestrian circulation, transit orientation and environmental quality for users and residents. This Chapter sets forth the recommended development policies for the provision of benefit features in new developments related to both a framework of basic requirements and a bonus system.

These development policies and the bonus system shall primarily apply to the L.R.T. Station Areas as defined by the 400 m radius. However, they may be extended to sites beyond this radius distance when developments demonstrate their successful connection and contribution to the functioning and quality of the Station Area without negatively affecting the development potential or available transportation system capacity of the central Station Area.

In the context of the Station Areas, new developments may provide benefit features for either public or private use which further the Study objectives of facilitating L.R.T. System usage or enhancing the environmental quality for residents and users. These benefit features fit into two broad categories of elements provided in development which are related to the movement systems for pedestrians, vehicles and transit or to the development itself.

The relative importance of the provision of these benefit features depends on the development's location and use. If a benefit feature is integral and essential to the proper functioning of the L.R.T. Station Area or the development itself, it is considered a mandatory requirement for development. The provision of other benefit features may proceed on an optional basis where this feature constitutes an improvement which enhances the development or area but is not considered to be of critical importance.

In order to support and encourage new developments with the characteristics and benefit features appropriate to an L.R.T. Station Area, a bonus system is recommended as a method of implementation. The bonus system would allow the public sector to offer either higher development potential or parking relaxations, subject to the policy guidelines embodied in the more detailed Station Area Development Policies and the Station Area Plans.

Although some benefit features shall be mandatory requirements for development without eligibility for additional bonuses, the provision of other features will be mandatory but will earn a commensurate bonus. Some benefit features or improved treatments of mandatory features would be provided at the developer's option and bonuses could be awarded.

The quantitative relationship between the benefit feature provided by the private developer and the bonus offered by the City has been modelled on the existing bonus system operating in the Downtown, with a series of bonus ratios, as discussed in more detail regarding each feature.

2. BENEFIT FEATURES

a. Movement-Related Benefit Features

New development in the Station Areas will have specialized requirements related to movement regarding:

- Pedestrian Circulation;
- Parking;
- Transit Facilities Integrated with Development.

Detailed policy guidelines are recommended regarding pedestrian circulation and parking provision. However, specialized forms of development would be required to connect with and integrate transit facilities like the Station entrances and mezzanines or bus loops. No generalized guidelines are recommended but rather the merits of each project would be evaluated individually.

i. Pedestrian Circulation

Within the Station Areas, the circulation of pedestrians shall be an important factor in the achievement of the overall objectives for successful, intensive development oriented to transit use.

Policy Framework

Based on the precedent of the Downtown +15 System, the pedestrian circulation network focussed on the Station is of critical importance to the functioning of the Station Area. Therefore, the essential basic routes of the Primary Pedestrian Circulation Corridors, as outlined in the Station Area Plans, are considered mandatory requirements to be provided by new development. Additional connecting routes constitute Secondary Pedestrian Circulation Corridors which may be provided on an elective basis. Administrative policies and procedures for the Station Area pedestrian network would be modelled on those adopted for the Downtown +15 System.

As a general principle, the pedestrian circulation system shall be provided by the major parties deriving benefits from its provision and improved accessibility. Where the Primary Corridor crosses private property, it shall be the owner's mandatory responsibility to provide the necessary on-site pedestrian facilities at the time of development. Where the Primary Corridor crosses a transportation right-of-way, private owners whose property is directly on or adjacent to the crossing shall be required to contribute toward the provision of the grade-separated connection. The level of contribution required and the commensurate share of potential bonus shall be determined through the negotiation process between the

owner or owners and the City. Through this negotiation process, the private sector may bear the total cost of the link or a variable share with the public sector dependent on the particular connection and its benefits. For certain crossings which benefit a general community rather than specific development sites, the City may bear the total cost of the connection.

Private developers may wish to assume similar responsibilities for the provision of the Secondary Corridor across their private property as well as the provision of grade-separated crossings of transportation rights-of-way. Secondary Corridors must be linked into the Primary Corridors to ensure the continuity of pedestrian movement with development.

In Figure 13, the respective responsibilities for the provision of the pedestrian network are summarized.

Figure 13: PROVISION OF STATION AREA PEDESTRIAN NETWORK

CROSSING OF	PRIMARY PEDESTRIAN CIRCULATION NETWORK	SECONDARY PEDESTRIAN CIRCULATION NETWORK
Private Property	Provision Mandatory Responsibility of Owner	Provision Optional Responsibility of Private Owner
Transportation Rights-of-way	Provision Mandatory with Contributions from Benefitting Private Owner/Owners and Potential Public Sector Contributions	Provision Optional with Contributions from Benefitting Private Owner/Owners and Limited Potential Public Sector Contributions

The provision of the pedestrian circulation network across private property shall proceed at the time of major redevelopment. In the interim, the existing and recommended expanded sidewalk grid in the public right-of-way shall be used. However, the provision of the grade-separated segments of the critical Pedestrian Circulation Corridors across transportation rights-of-way may proceed in the following ways:

- a connection is provided concurrently with redevelopment of an adjacent site - this would occur through the process of public and private sector negotiations at the time of application and approval of a land use amendment or development permit;

- a connection is provided by the City prior to redevelopment on an adjacent site - the City could provide the grade-separated connection as warranted and, in the future, charge back to the owner the cost and the commensurate bonus benefit at the time of redevelopment;

- a connection is required but major development has already occurred - in some cases, the existing development agreement included a statement or concept plan indicating a future link to the L.R.T. Station, which may be used as a basis for negotiation. In other cases, the L.R.T.-related pedestrian connection has not been included in the development agreement and approval so it may be necessary for the City to undertake the provision of the pedestrian connection, as warranted.

- a connection benefits a general neighbourhood area - the City could undertake the provision of the grade-separated crossing, as warranted, as a capital improvement for the general public benefit.

Development Guidelines and Bonus Ratios

In Station Areas, the pedestrian circulation network may incorporate segments in a wide range of forms, being above-, below-, or at-grade on either public or private land. The pedestrian system must satisfy criteria regarding safety, convenience, continuity and positive environmental quality in the accommodation of existing and new pedestrian desire lines. The detailed standards for the pedestrian systems are set forth in Part III, Appendix D: "Urban Design - Performance Standards".

At-Grade Pedestrian Right-of-Way

The provision of sidewalks in the public right-of-way shall conform with the City Engineering Department requirements and practice as a minimum requirement. However, improved walkway treatments incorporating wider widths and landscaping are recommended as appropriate for provision by the adjacent owners. This improved benefit feature would be considered for bonussing at a rate of one unit area of improved walkway for five units of area of bonus. If the public right-of-way could not accommodate the full improved walkway, it could be located partially within the adjacent private property, requiring a public access easement. The at-grade pedestrian system is also subject to the guidelines regarding exposure to direct sunlight in Part III, Appendix D.

FIGURE 14: ARCADE AS PART OF DOWNTOWN PEDESTRIAN SYSTEM

Arcades and Malls

New development may accommodate pedestrian movement in arcades open to the exterior or in enclosed temperature-controlled malls in conformity with the standards outlined in Part III, Appendix D. Their eligibility for bonussing shall be based on their continuity and location either on or directly connected to the Primary Pedestrian Circulation Corridor. Where this continuity cannot be achieved at the outset, plans indicating future connections should be submitted. To ensure the vitality and security of malls and arcades, at least 50 percent of the mall frontage should accommodate activities open to the public like retailing, personal services, entertainment and recreational facilities.

The bonus system shall accord a ratio of one unit area of arcade space to ten units of area of bonus while the temperature-controlled mall may earn a ratio of one unit area of mall space to 15 units of area of bonus. Further bonussing may apply to adjacent exterior areas when the mall-face may be opened to the exterior by devices such as sliding panels and doors.

Grade-Separated Crossings of Transportation Rights-of-Way

To be eligible for bonussing consideration, the grade-separated crossing must be incorporated into a continuous pedestrian movement system, which may include walkways, arcades, malls and other bridges or elevated streets. Where this continuity cannot be achieved at the outset, plans indicating future connections should be submitted.

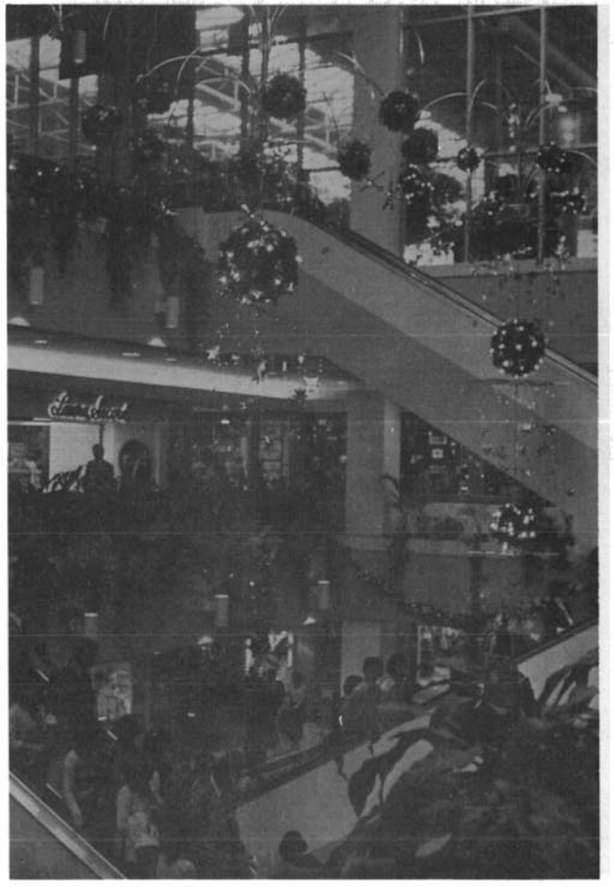


FIGURE 15: INTERIOR MALL AS PART OF DOWNTOWN PEDESTRIAN SYSTEM

Minimum Simple Bridge

Modelled on the Downtown +15 System with similar requirements for widths, enclosure and transparency, the simple bridge should be modified to accommodate the different heights required for road and rail traffic or site variations. The review of the connection's design shall be based on the factors of safety, locational and functional requirements of roads and other services, structural requirements, aesthetics and legalities. All bridge connections, even if integrated into development, must provide direct links from the grade level to the bridge connection. Similar to the Downtown +15 System, a ratio of one unit area of the benefit feature to 30 units of area of bonus would be awarded.

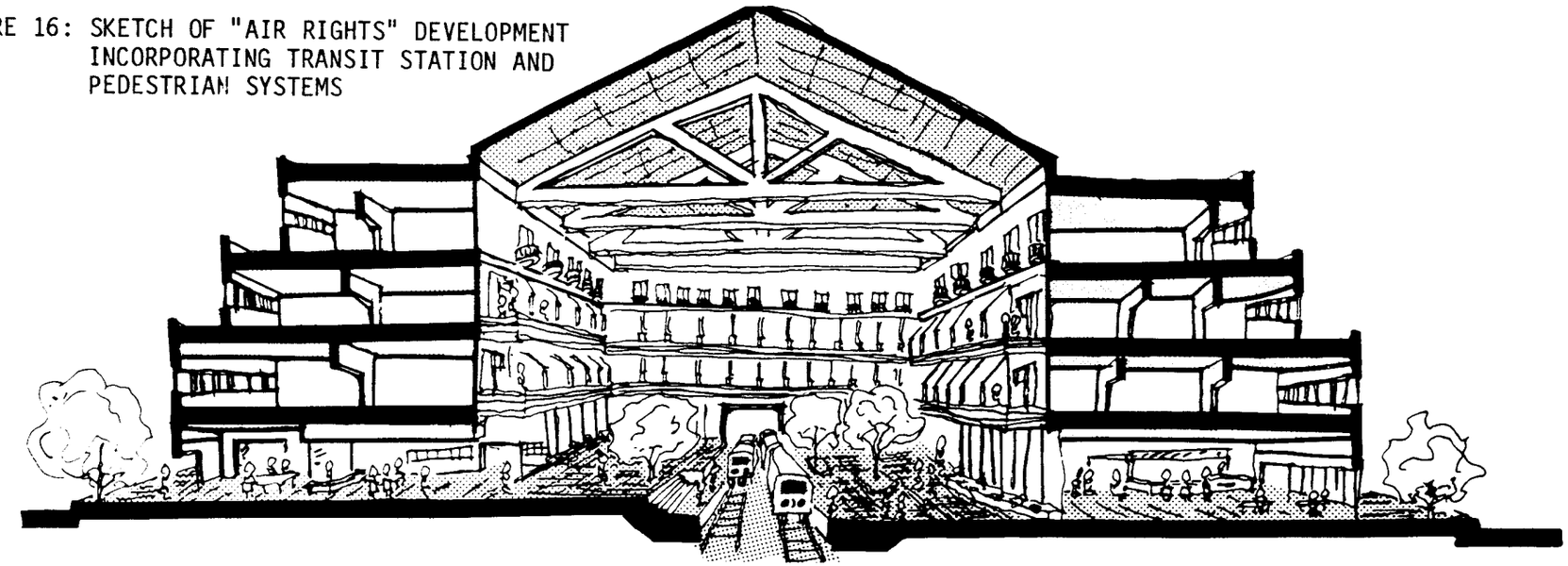
Elevated Street

Beyond the basic requirements of the simple bridge, there may be opportunities for "air rights" development in the form of an elevated street. The system becomes a pedestrian corridor with flanking leaseable space. This arrangement would allow "air rights" development above the public right-of-way, which the public sector could lease to the private sector. The detailed design of this innovative "air rights" development shall be reviewed by the responsible Civic Departments to satisfy their requirements.

Other Grade-Separated Crossings of Transportation Rights-of-Way

Due to particular site conditions, grade-separation between road/rail traffic and pedestrians may be achieved

FIGURE 16: SKETCH OF "AIR RIGHTS" DEVELOPMENT INCORPORATING TRANSIT STATION AND PEDESTRIAN SYSTEMS



in a form other than the usual above-grade method. These approaches, whether at-grade or below-grade, would necessitate site-specific review.

ii. PARKING

Based on the experience of other municipalities with rail transit systems, it is anticipated that development in the Station Areas may require less parking than the City-wide parking standards dictate. The parking policy framework sets forth the type of land uses and situations where parking relaxations from the Calgary Land Use By-law standards may be considered. For development within the Station Areas to receive parking relaxations, the Planning and Transportation Departments will review projects on a site-specific basis relative to their anticipated travel and car ownership characteristics to determine the allowable parking relaxation. The maximum reduction in parking requirements determined through this process cannot be exceeded in the application of the bonus system. To assist in this review process, the Transportation Department will undertake a study of the parking requirements and traffic generation characteristics of mixed use development in transit corridors to determine their optimum parking requirements.

Shared Use of Parking in Mixed Use Development

It is recommended that the potential for the shared use of parking be recognized in the review of mixed use developments based on the composition of uses and their magnitude. Different land uses exhibit needs for different amounts of parking supply at varying times of the day. For example, theatres, hotels and other entertainment uses require the most parking in the evenings, while offices have greater requirements during weekday business hours. If office and entertainment uses were combined in one complex, some of the parking supply could be shared by the office users during the day and the entertainment users during the evening. Although the Calgary Land Use By-law has recognized this potential, the application of shared parking use standards in the interim would require site-specific review by the Planning and Transportation Departments involving the steps of:

- calculating the parking requirements of each component use under the Calgary Land Use By-law;
- considering the pattern of parking occupancy by time of day relative to these component uses;
- determining the peak accumulation of parking need by time of day and number of stalls to ascertain the minimum required parking provision level.

Shared Use of L.R.T. Parking Facilities

As a special case of the shared use approach, it is recognized that the L.R.T. Park 'n' Ride lots may potentially share their spare parking capacity outside commuter hours with uses like entertainment, hotels, certain institutions and residential visitor parking within nearby Station Area developments. The on-site parking requirements for these uses in adjacent development could be reduced by sharing the unused parking capacity available at the L.R.T. lot during non-commuter hours. However, parking reductions in adjacent developments would be limited and sufficient parking accommodation would be ensured for L.R.T. patrons in off-peak periods.

Transit Station Area Parking Standards by Use

Residential

In residential development within the Station Areas, it is anticipated that car ownership rates may be lower than the area-wide averages based on analyses of the factors of comparative travel times between transit and private vehicles[1], the residential development type, and the attraction of transit-dependent persons as residents. The potential relaxations of residential parking requirements of the Calgary Land Use By-law would range from 0 to 20 percent. The determination of the degree of relaxation should be based on the site-specific review by the Planning and Transportation Departments of the following factors:

- proximity of the site and the quality of the pedestrian connection to the Station;
- type of development in terms of its composition and tenure;
- location within the South Corridor relative to the Downtown.

Commercial

For commercial development, the potential for parking relaxations would be related to the anticipated rate of transit usage in the Station Area.

1. In the IBI Group's "Parking and Traffic Impact Study" (Appendix H), travel times to all destinations were weighted for their frequency and compared to transit and car travel for individuals residing within 500 m of the Station. Based on this analysis, a decline in car ownership of between 0.05 to 0.1 cars per household was predicted as possible within 500 m of the Station.

Retail and Hotel

No general relaxation in standards would be possible except through the shared use of parking in mixed use developments.

Office

For office development, the modal split to transit may improve significantly in Station Areas, allowing a parking relaxation from 0 to 20 percent based on an anticipated range from the present rates of modal split to transit up to the level of 50 percent in certain locations. The determination of the degree of relaxation should be based on a site-specific review by the Planning and Transportation Departments of the following factors:

- proximity of the site to the Station and quality of the pedestrian connection,
- type of commercial office activities, and
- location within the South Corridor relative to the Downtown.

Development Standards and Bonus System

In addition to satisfying the quantitative parking standards, Station Area development shall require attention to the qualitative aspects of the appropriate siting, type and treatment of parking. The qualitative principles and standards for parking provision which are established in the C.P.C.-endorsed Urban Design Guidelines: Parking for Apartments should be respected by new residential development in the Station Areas.

Where applicable, the relevant requirements of the Calgary Land Use By-law shall be met with respect to standards such as stall size. In addition, new development in the Station Areas should not provide surface parking in excess of 20 percent of the site area to ensure appropriate at-grade site treatment.

Since underground and structured parking have lesser negative effects on the environment and the total development potential of the site, at least half of the parking required in the development must be provided underground and/or in a parking structure. In recognition of the greater desirability of underground parking provision, the bonus system has included a ratio of five units of underground parking floor area earning one unit area of bonus.

b. Development-Related Benefit Features

i. Policy Framework

More intensive development in the Station Areas should provide benefit features to enhance its environment and utility for users and residents. The Calgary Land Use By-law establishes minimum requirements for the provision of private residential amenities and landscaping which are mandatory for development to proceed and would not be considered for bonus awards. However, new development may exceed these basic standards in terms of the amount of area provided for public use or private and communal amenities, or of the quality of treatment such as paving and landscaping materials, or of special facilities like indoor and outdoor recreational facilities. In some developments, the owners may opt to provide non-commercial public services and facilities for recreational, cultural, institutional and entertainment activities. These additional benefit features could be considered for the awarding of bonuses of additional development potential since it is recognized that higher densities require special attention to the environment and service needs of residents and users.

ii. Development Guidelines and Bonus Ratios

A wide range of benefit features provided in individual developments could be handled in a variety of physical forms with different treatments. Therefore, the Approving Authority would be responsible for determining whether the benefit features were adequately designed on a discretionary basis, with the assistance of the Calgary Land Use By-law and the C.P.C.-endorsed Urban Design Guidelines: Amenities for Apartments.

Due to the wide range of possible benefit features, the bonus system has left the relationship between the benefit feature area provided and commensurate bonus open for negotiation at the approval stage. However, the open space ratios are simplified from the Downtown Bonus System to a standard of a maximum of one unit of area of at-grade open space to fifteen units of area of density bonus, or a maximum one unit of area of above-grade open space to ten units of bonus area, both available only where the open space is readily accessible and visible from grade and/or the +15 System.

2. BONUS SYSTEM

The bonus system serves as an implementation technique to support and encourage new developments providing benefit features appropriate to locations in proximity to L.R.T. Stations. The public sector has two major bonuses to offer the private sector in return for certain benefit features, these being:

- additional development potential above the base level to the maximum level recommended in the Station Area Plan land use and intensity policies, and

- parking relaxations from the general Calgary Land Use By-law standards, subject to the limits established by the parking policy framework and the site-specific review of the Planning and Transportation Departments.

The bonus of additional development potential may be awarded to benefit features related either to movement or development. However, only benefit features related to the improvement of the movement systems shall be eligible for the awarding of parking relaxations, if the land use composition of the development is deemed eligible.

Figure 17: "Bonus System" outlines the benefit features and their status as mandatory with or without bonus eligibility or optional with bonus eligibility. As indicated by the arrows between columns, the provision of a particular benefit feature may be mandatory but its treatment technique may vary, above the basic minimum performance standards, on an elective basis. For example, the link of the Primary Corridor may be achieved from the most basic level of a simple at-grade walkway to more sophisticated treatments like arcades and malls with varying qualities of materials including paving, glazing, art work and landscaping.

FIGURE 17:

BONUS SYSTEM

BENEFIT FEATURES	MANDATORY		ELECTIVE WITH BONUS	RATIO OF UNIT AREA OF BENEFIT FEATURE TO BONUS
	NO BONUS	WITH BONUS		
Movement-Related				
1. Pedestrian Circulation				
- Primary Corridor		X →	X	
- Secondary Corridor including:			X	
o at-grade walkways				1:5
o arcades				1:10
o malls				1:15
o bridges				1:30
o elevated streets and other grade-separated connections.				Negotiable
2. Parking Provision				
Underground Structure			X	5:1
3. Integration with Transit Facilities				
- Comprehensive development incorporating transit facilities and operations		X dependent on site	X dependent on site	Negotiable
Development-Related				
1. Public Services and Facilities Including non-commercial recreational, cultural, institutional, services.			X	Negotiable
2. Public Open Space	X → (Basic By-law Requirement)		X	
- At-grade				1:15
- Above-grade				1:10*
3. Ancillary On-Site Amenities	X → (Basic By-law Requirement)		X	Negotiable
- Private Amenities				
- Communal Amenities				

* The ratio of 1:10 for open space should be a maximum available only where the open space is readily accessible and visible from grade and/or the +15 system.

Similar to the bonus system operative in the Downtown, it has been necessary to consider the relationship between the benefit accruing from the feature and the benefit offered by the City for its provision. These trade-offs between the public and private sectors would take into account the value and quality of the benefit feature in supporting pedestrian and transit use or enhancing the development, as well as the potential cost and the necessary degree of incentive for its provision. As summarized in the final column of Figure 17, the bonus system incorporates a numerical ratio to quantify the relationship between a unit area of the benefit feature and the corresponding unit area of bonus.

To illustrate the operation of the bonus system, a series of examples are provided in the accompanying Figure 18. The calculation of the bonus ratio may be directly translated into the additional development potential accrued. For movement-related benefit features, it may be converted into a potential parking relaxation by dividing the bonus product by the average area for one parking stall (32.5 m^2). It must be noted that these potential bonuses are still subject to limits imposed on the maximum parking relaxation by the site-specific review of the Planning and Transportation Departments within the parking policy framework as well as the land use composition and density limits established in the Station Area Plans. It would also be essential that each increment of additional development provide the corresponding increase in other aspects like parking and amenities.

In conclusion, the application of the bonus system yields a range of development potential for each site, subject to the limits established by the Station Area Plan and the Station Area Development Policies for parking provision. Thus a site may achieve the basic density as set forth in the Station Area Plan and be subject to the general By-law parking standards. However, many sites must also provide mandatory benefit features like the Primary Pedestrian Circulation Corridor as a condition of development and, in turn, may become eligible for the bonus awards of either additional development intensity or parking relaxations. On an elective basis, new developments may incorporate additional benefit features or improved treatments which may be awarded bonuses to allow the site's realization of the maximum development intensity and/or maximum parking relaxation. Therefore, the bonus system offers a method to encourage development in the Station Areas which fosters the achievement of the Study objectives regarding transit and pedestrian orientation and environmental quality.

FIGURE 18:

EXAMPLE 1: Provision of Primary Pedestrian Circulation Corridor Across Adjacent Public Right-of-Way in Simple Grade-Separated Connection

Benefit Feature: Bridge of 31 m in length by 4.6 m in width producing area of 142.6 m^2

Ratio of Benefit Feature to Bonus: 1:30

Bonus Offered: Additional Development Potential of 4278 m^2 or Potential Parking Relaxation of 131 spaces (if allowed)

$\left(\frac{4278\ m^2}{32.5 m^2} = 131.6 \text{ spaces}\right)$

EXAMPLE 2: Provision of Underground Parking in Development

Benefit Feature: 250 stall underground garage of 8125 m^2 in size

Ratio of Benefit Feature to Bonus: 5:1

Bonus Offered: Additional Development Potential of 1625 m^2 or Potential Parking Relaxation of 50 spaces (if allowed)

$\left(\frac{1,625 m^2}{32.5 m^2} = 50 \text{ spaces}\right)$

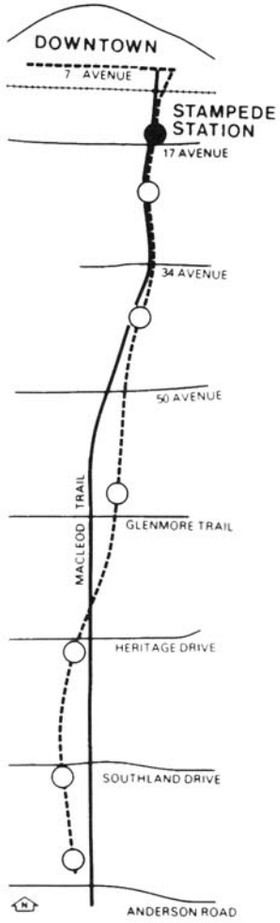
EXAMPLE 3: Provision of Plaza in Development

Benefit Feature: Open Space of 23 m by 15.25 m producing an area of 350.75 m^2

Ratio of Benefit Feature to Bonus: 1:10

Bonus Offered: Additional Development Potential of 3507.5 m^2

Chapter D
Station Area Plans



L.R.T. South Corridor Land Use Study

Stampede Station Area Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT
October 1980

1

SUBJECT TO CITY OF CALGARY LAND USE BYLAW

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 - 12m - density 210 u.p.h.* (85 u.p.a.)**
RM-7	Residential High Density Multi-Dwelling District - building height - 46m. - density 395 u.p.h* (160 u.p.a.)**
C-3	General Commercial District - building height - 46m
CM-2	Central Business Commercial District
I-2	General Light Industrial District - building height - 12m.
A	Agricultural and Open Space District
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	Map 3	Stampede Station October 1980

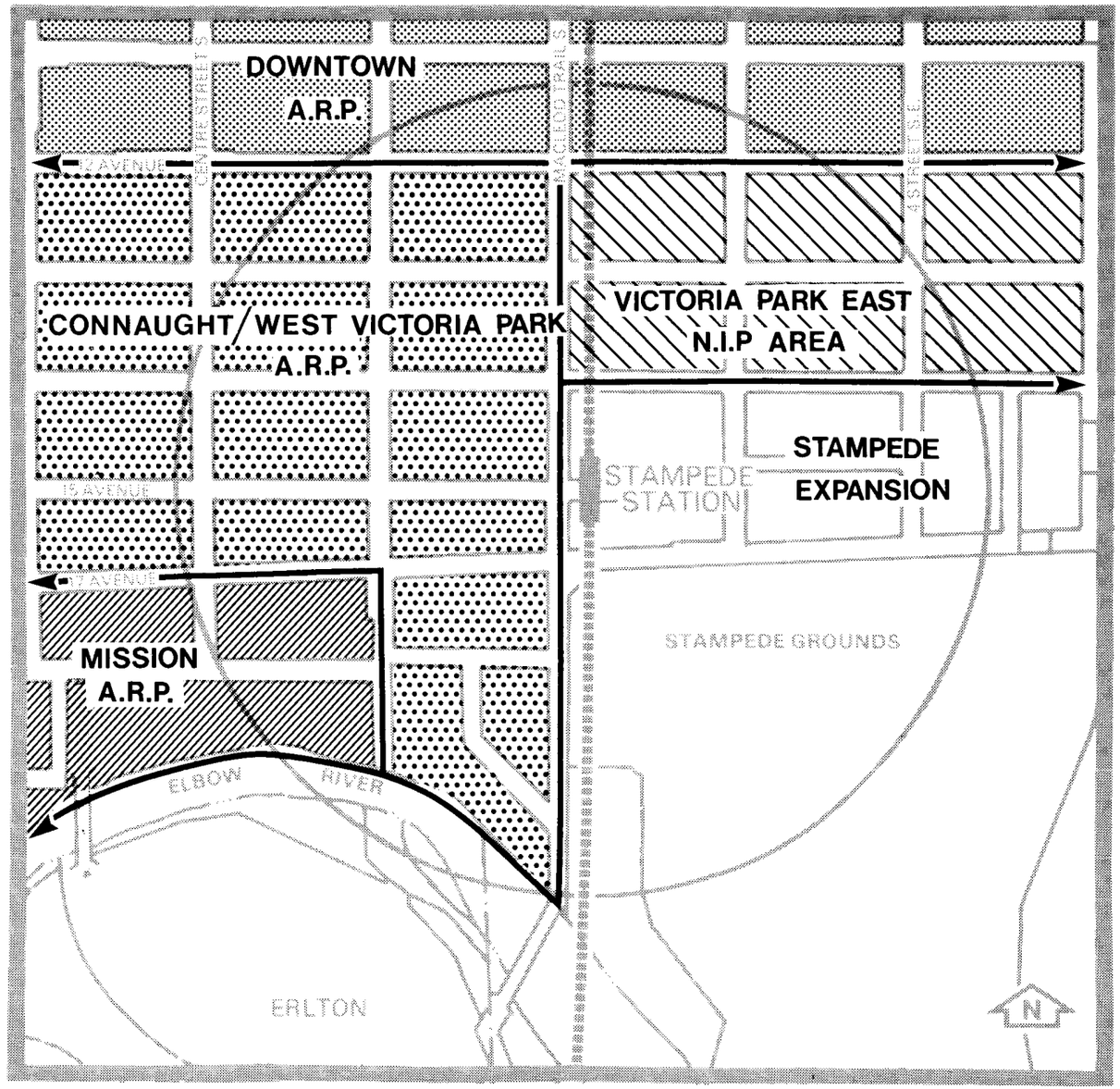
Stampede Station Area

The Stampede L.R.T. Station, located east of Macleod Trail at 15th Avenue S.E., will be the first L.R.T. Station in the South Corridor outside the Downtown. Service to the Stampede Grounds will be one of the main functions of this Station. A pedestrian bridge across Macleod Trail will provide convenient and safe access from the Station to the west side of Macleod Trail.

The Stampede Station Area includes parts of the Connaught/ West Victoria Park and Mission districts, as outlined in Map 4, for which Area Redevelopment Plans are scheduled in the future. Policies for the sector of the Primary Impact Area north of 12th Avenue S.E. are being considered currently within the terms of reference of the Downtown Area Redevelopment Plan.

The Inner City Plan outlined a broad policy framework within which this Study makes more detailed recommendations regarding development types and intensities for the Primary Impact Area of the Stampede Station. Following the Study's approval, these policy recommendations will be considered for incorporation into the Connaught/West Victoria Park and Mission Area Redevelopment Plans. The Council-approved policies of the Victoria Park East Design Brief (March, 1977) have been respected.

Map 4 Area Redevelopment Plans



a. DEVELOPMENT CONCEPT

The thrust of the Stampede Station Area Plan is to create an exciting shopping, entertainment, employment and living centre immediately surrounding the Station through two specialized districts.

One district involves a linear shopping and entertainment district along 17th Avenue South with specialty shops, boutiques, restaurants and other services. The provision of pedestrian amenities along 17th Avenue South such as sidewalk improvements, landscaping and continuous arcading of retail frontages, would serve to enhance this district. The Plan also recognizes the potential for medium to high density mixed use development to act as a buffer along Macleod Trail, 1st Street S.E. and 12th Avenue. Retail uses would be encouraged at ground level where pedestrian circulation will be predominant, while on other levels, commercial, office and residential uses would complete the complexes.

In the areas between the Macleod Trail couplet from 12th Avenue to 15th Avenue S.E., to the west of 1st Street S.E., along 18th Avenue S.E. and south to the Elbow River, the Plan recommends the creation of medium to high density residential districts.

Between the Macleod Trail couplet, improved pedestrian circulation through the interior of the area would be encouraged. Pedestrian bridges over the major roads and "air rights" development would be encouraged to ensure the system's continuity. A landscaped walkway system along the riverbank is also recommended.

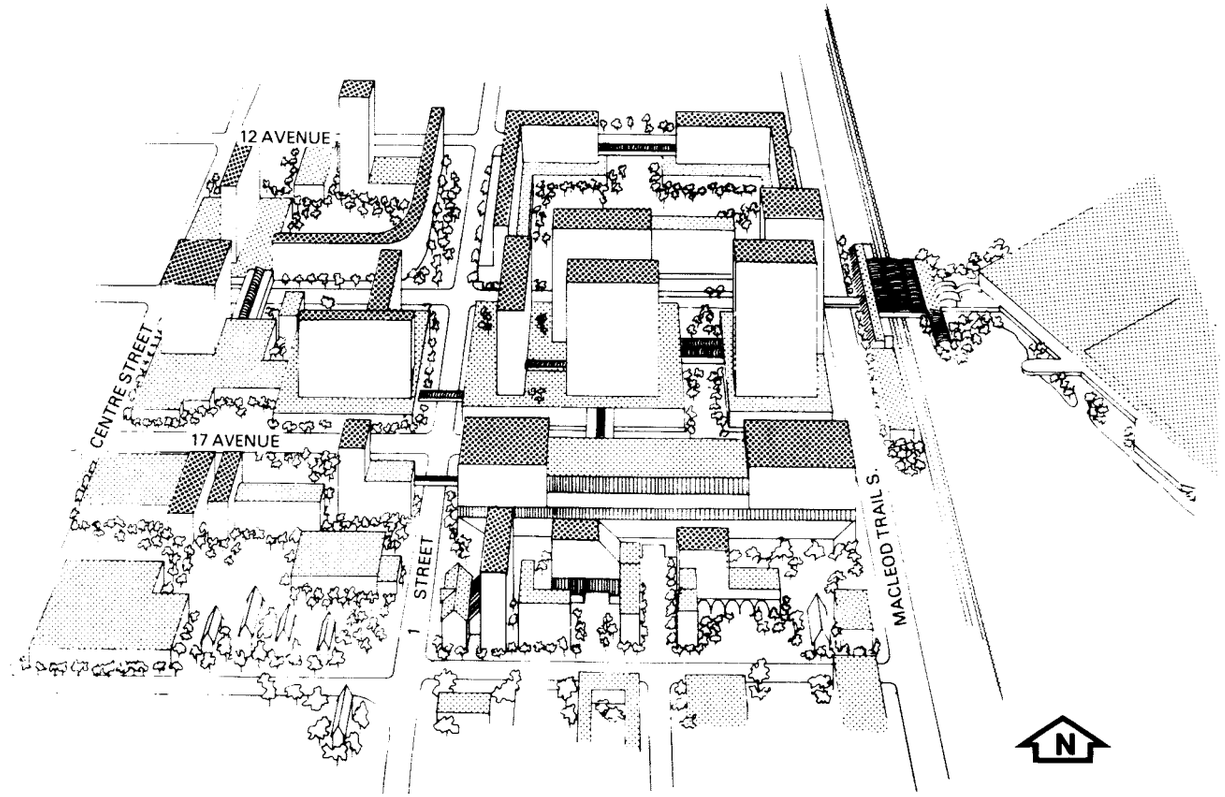


FIGURE 19: STAMPEDE STATION AREA DEVELOPMENT CONCEPT

b. RECOMMENDED LAND USE AND DEVELOPMENT GUIDELINES

Higher intensity land uses are recommended for this Station Area. However, limited capacity on the major arterials and other regional transportation constraints, as identified by the Transportation Department, have greatly influenced the policy recommendations regarding the type of land uses and the intensity of development.

To accommodate comprehensive developments in the area, minor flexibility in height, scale and form could be considered within the Calgary Land Use By-law designation and could be fine-tuned with special guidelines in the Connaught/West Victoria Park Area Redevelopment Plan. However, if substantially different land use composition and density are proposed, the onus would be on the developer to apply for a land use amendment, illustrating the individual merits of the project and its features which overcome certain constraints to the satisfaction of the Transportation and Planning Departments and/or City Council.

i. High Density Mixed Use

The heavy traffic volumes and established commercial character of development along the Macleod Trail couplet are recognized through the recommendation that these "edges" have the potential for commercial or mixed use development. For the existing C-3: General Commercial District parcels along Macleod Trail (Site 1), a commercial development potential to a maximum F.A.R. of 3 is recommended. The introduction of a significant residential component in a mixed use project would allow an overall maximum F.A.R. of 4 to be reached, if the environmental problems were dealt with satisfactorily. Similarly, commercial development could proceed to a ceiling F.A.R. of 2 along 1st Street S.E. on Site 3 but an overall maximum F.A.R. of 4 could be achieved with the introduction of residential use.

For the blocks flanking 17th Avenue South (Site 3), a similar maximum commercial potential in the order of an F.A.R. of 2 is recommended with a potential overall maximum F.A.R. of 4 if a significant residential component is introduced. As set forth in the Inner City Plan, the unique pedestrian character of 17th Avenue South should be fostered by design guidelines for:

- the continuity of retail frontage;
- the low building scale abutting the sidewalk;
- the bulk of the building being recessed and located towards 15th and 18th Avenues S.E. This feature would be important, especially for the south side of 17th Avenue South to minimize shading of the public pedestrian right-of-way (Part III, Appendix D);
- adequate provision of attractive features such as arcades, street furniture, small open spaces and landscaping.

Development along the south side of 12th Avenue S.E. is influenced by its proximity to Downtown as evidenced by its existing CM-2: Central Commercial Business District designation. It is recommended that development on Site 5 be allowed a commercial ceiling of a maximum F.A.R. of 5 whether in a single or mixed use complex. An overall maximum F.A.R. of 8 could be achieved for mixed use development with a significant residential component.

With respect to mixed use development, City Council has directed that the recommended minimum proportion of residential use as a mandatory requirement be made flexible to accommodate individual projects. However, on Sites 1, 3, and 5, residential use would not be mandatory.

ii. High Density Residential Use

The commercial or mixed use "edges" of the Macleod Trail couplet, 12th Avenue S.E. and 17th Avenue S.E. define interior precincts suitable for high density residential development to an approximate maximum F.A.R. of 4 or approximately 321 to 395 units per hectare (130 to 160 units per acre), corresponding with the RM-7: Residential High Density Multi-Dwelling District densities.

The positive environmental features of the Elbow River should be recognized by new development in Site 2 through building layout and orientation. To achieve a successful transition in scale, it is recommended that the maximum building height along the River be 12 m scaled up to a maximum of 46 m. Future development along the River in Sites 1, 2 and 3 shall be subject to the 30 m setback zone established in the Calgary General Municipal Plan[1]. There would also be the potential for redevelopment to provide for a riverbank walkway and public access from Park Road, satisfying the regional and City-wide objective of a continuous riverbank system for public use.

For the parcels north of 18th Avenue S.E. adjacent to the 17th Avenue S.E. mixed use district, the potential for comprehensive through-block development is recognized and encouraged as long as the project remains primarily residential in character along 18th Avenue S.E. Within this area, development should incorporate at-grade and above-grade pedestrian connections to link through the blocks to 17th Avenue S.E. and the L.R.T. Station.

Within the Macleod Trail couplet, the residential precinct of Site 4 could be enhanced by attention to the treatment of at-grade levels and +15 levels, allowing pedestrian-oriented commercial uses on the first and second storeys.

The area between Centre Street and 1st Street S.E. (Site 4) is recommended for high density residential development consistent with its present RM-7 designation. Along the east side of Centre Street S.E., the potential for a buffer of commercial uses limited to the first and second storeys is recognized and would be possible within the RM-7 district.

iii. Victoria Park East Neighbourhood

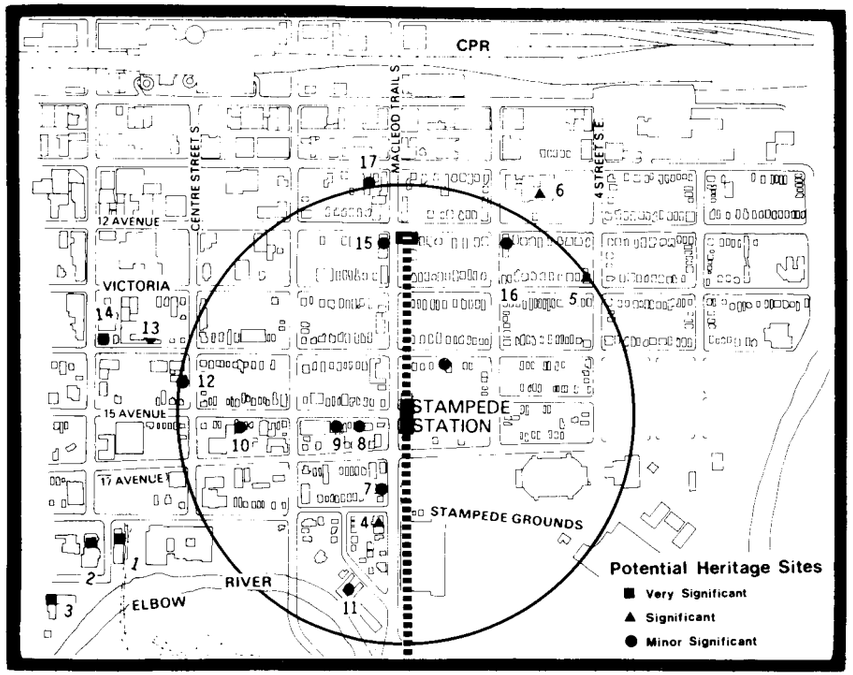
It is recommended that the area east of Macleod Trail and the L.R.T. alignment between 12th and 14th Avenues S.E. (Site 6) remain in the existing land use designations in conformity with the Council-approved policies of the Victoria Park East Design Brief and the Inner City Plan.

iv. Institutional Complex

The St. Mary's institutional complex, in the southwest sector of the Station Area, provides important services not only to the local community of Mission but also the Inner City and the City as a whole. Therefore, it is anticipated that this complex will remain as a focal point in the area and its character should be preserved and protected.

1. In accordance with the existing "Floodplain Management Policy" (1974), new development or redevelopment, not existing buildings, within the "floodplain" must meet certain structural requirements. No new permanent structures are permitted in the "floodway" area. The Planning Department's proposed "Calgary River Valleys Plan" would deal with these floodplain management policies and is tentatively scheduled to be presented to City Council late in 1980.

Map 5 Potential Heritage Sites



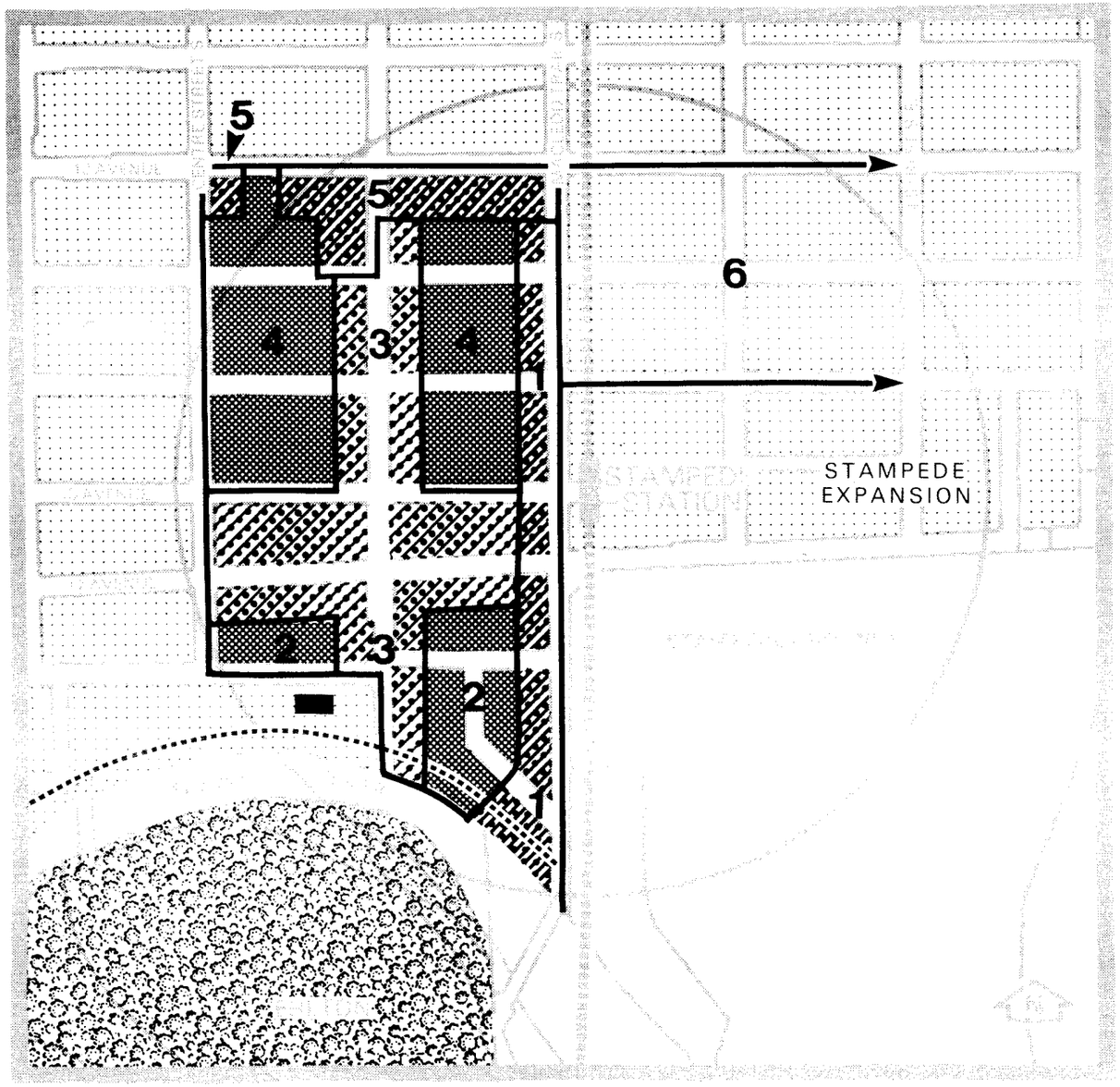
1.	C.N.R Station (St. Mary's Parish Hall)	18 Ave. & 1 St. S.W.
2.	St. Mary's Cathedral	18 Ave. & 1 St. S.W.
3.	Sacred Heart Convent	225 - 19 Avenue S.W.
4.	Fire Hall/Police Station #2 (Old)	1801 - 2 St. S.E.
5.	Westbourne Baptist Church	436 - 13 Ave. S.E.
6.	Victoria School	411 - 11 Ave. S.E.
7.	Fletcher Block	1711 - 2 St. S.E.
8.	Wallace Apartments	231 - 15 Ave. S.E.
9.	MacDonald Apartments (Mt. Royal Apts.)	215 - 15 Ave. S.E.
10.	Powell Block	117 - 15 Ave. S.E.
11.	Hatfield Court	1833 Park Road S.E.
12.	Healy Apartments	1411 Centre St. S.
13.	First Church of the Nazarene	116 - 14 Ave. S.E.
14.	Findlay Apartments	1324 - 1 St. S.W.
15.	Curtis Block	1201 - 2 St. S.E.
16.	Davoe Apartments	401 - 12 Ave. S.E.
17.	Calgary Labor Temple	229 - 11 Ave. S.E.

v. Stampede Grounds Expansion

The Calgary Stampede Board has planned an expansion of the Stampede Grounds encompassing the blocks between 17th and 14th Avenues S.E. from Macleod Trail to the Elbow River. Since the L.R.T. Station is located at the western edge of this expansion area, it will be of critical importance that good pedestrian connections are fostered between the L.R.T. Station and the facilities in the Stampede Grounds. A Trade Centre, recently approved by City Council, will be located to the northwest of the Stampede Corral and will connect these facilities directly to the Station. A 30 m buffer strip on the south side of 14th Avenue will act as a border to the expansion of the Stampede Grounds. This buffer strip will be landscaped and provide needed open space for area residents.

vi. Heritage Potential

The Provincial Government has designated the Old No. 2 Police Station/Firehall on Macleod Trail S.E. as a Registered Historic Resource. The old CNR Station west of Centre Street should also be actively considered for designation and re-use, possibly associated with Lindsay Park. Also, as illustrated on Map 5, there are a number of sites of historical interest which should be examined to determine their potential for registration as heritage sites. Upon such registration, new development around these sites should be built in a manner which is sensitive to their scale and character.



30 METRE SETBACK ZONE ALONG ELBOW RIVER

HIGH DENSITY COMMERCIAL

MEDIUM DENSITY COMMERCIAL

HIGH DENSITY RESIDENTIAL

RESIDENTIAL BONUS: MEDIUM TO HIGH DENSITY RESIDENTIAL

NEIGHBORHOOD CONSERVATION/APPLICATION OF EXISTING COUNCIL POLICIES

MAJOR OPEN SPACE/RECREATIONAL FACILITIES

ST. MARY'S SCHOOL COMPLEX

L.R.T. South Corridor Land Use Study

Generalized Land Use Concept Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 6

Stampede Station
October 1980

FIGURE 20 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[c] HEIGHT	SPECIAL CONSIDERATIONS
1	C-3	●Commercial Ceiling[d] ●Mixed Use with Significant Residential Component[e]	F.A.R. 2 F.A.R. 2	F.A.R. 3 F.A.R. 4	12 m along River Scaled to Maximum 46 m.	Subject to flood-plain policies near River.
2	PM-5 D.C.	●Residential[e]	210 units/hectare (85 units/acre)	321-395 units /hectare (130-160 units/acre)	12 m along River Scaled to Maximum 46 m	Subject to flood-plain policies near River.
3	PM-7 C-3 D.C.	●Commercial Ceiling[d] ●All Residential ●Mixed Use with Significant Residential Component[e]	F.A.R. 2 F.A.R. 2 F.A.R. 2	N/A F.A.R. 4 F.A.R. 4	12 m along River Scaled to Maximum 46 m. Subject to Performance Standards for Direct Sunlight and Shadowing on 17th Avenue S.E. Pedestrian Right-of-Way.	Portions of Site 3 extend approximately 46 m on both sides of 1st Street S.E. Subject to flood-plain policies near River. Potential through-block development of parcels north of 18th Avenue S.E. to 17th Avenue S.E. Incorporation of pedestrian connections through blocks between River and 17th Avenue S.E.
4	PM-7	●Residential	210 units/hectare (85 units/acre)	321-395 units /hectare (130-160 units/acre)	46 m	Potential improved at-grade and +15 level pedestrian treatments allowing pedestrian-oriented commercial uses between the Macleod Trail couplet and along Centre Street.
5	CM-2	●Commercial Ceiling[d] ●All Residential ●Mixed Use with Significant Residential Component[e]	F.A.R. 4 F.A.R. 4 F.A.R. 4	F.A.R. 5 F.A.R. 8 F.A.R. 8	46 m	Potential improved at-grade and +15 level pedestrian treatments.
6	C-3 PM-4	●Existing Land Use Designations	Existing Land Use Designations	N/A	Existing Land Use Designations	Consistent with policies of Victoria Park East Design Brief.

a. It is recommended that the City undertake redesignation procedures 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.

b. 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.

c. Maximum heights shall be reviewed on a site-specific basis, subject to the performance standards regarding direct sunlight and other development guidelines.

d. Commercial ceiling is used to limit the density of commercial use both in all commercial developments, where residential use is not mandatory, and the intensity of mixed use developments where a residential component is mandatory.

e. 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. It should be noted that residential use is not a mandatory requirement of development on Sites 1, 2, and 5.

N/A Not Applicable

c. CIRCULATION SYSTEMS

i. L.R.T. Station and Related Facilities

The Stampede L.R.T. Station will be located to the east of Macleod Trail between 14th Avenue S.E. and 17th Avenue S.E. Its prime function will be to serve the Stampede Grounds and for this purpose, the Station will be designed to allow an overhead pedestrian connection from the Station to the recently approved Trade Centre and the Big 4 Building. The closure of 17th Avenue S.E. east of Macleod Trail and the removal of the Stampede Express Bus drop-off will significantly improve the Stampede Grounds entrance.

The entrance to the Station platform will be from the fare processing area on the elevated pedestrian bridge, approximately mid-way along the platform. The platform may be completely covered and will contain heated pedestrian shelters. During the Stampede and other special events, as many as 5,000 people per hour may use the Station. A third track may be constructed in the future to allow an extra L.R.T. train to be parked awaiting crowds leaving the Stampede Grounds. The Station will not provide Park 'n' Ride or Kiss 'n' Ride facilities.

ii. Bus Service

Calgary Transit is currently planning the integration of the bus and L.R.T. Systems in consultation with the affected communities. It is anticipated that a route similar to the present #10 - Capitol Hill/Manchester will likely be continued in order to serve the areas between L.R.T. Stations.

iii. Vehicular Circulation and Improvements

North of the Elbow River, the L.R.T. track will run along the east side of Macleod Trail. Between the River and 17th Avenue S.E., Macleod Trail will be relocated 4.6 m to the west to compensate for the lane required for the L.R.T. alignment on the east side of the road. The sidewalk beside the Big 4 Building will be removed and pedestrians will have to use the sidewalk on the west side of Macleod Trail. The realignment will move Macleod Trail closer to the Old No. 2 Police Station/ Firehall, but will not otherwise affect this historic resource.

The Transportation Department will undertake a functional study to consider the realignment of the 11th/12th Avenues South couplet, including an alternative for 11th and 12th Avenues to join as one street at some point east of Macleod Trail rather than in the present couplet arrangement. The roadway arrangements would be evaluated for their impact on the Victoria Park community. The Transportation Department is also considering the widening of 17th Avenue S.E. between Centre Street and Macleod Trail.

In June 1979, City Council approved the use of 4th Street S.E. as the northern entrance to the Stampede Grounds following the closure of 17th Avenue S.E. east of Macleod Trail. The City is upgrading 4th Street S.E. as well as building new sidewalks and planting trees in the boulevard. Traffic signals will be installed at 12th Avenue S.E. and 4th Street S.E.

L.R.T. ALIGNMENT & STATION

DIRECTION OF TRAFFIC FLOW

PROPOSED TRAFFIC LIGHTS

STAMPEDE EXPANSION

PROPOSED PEDESTRIAN OVERPASS

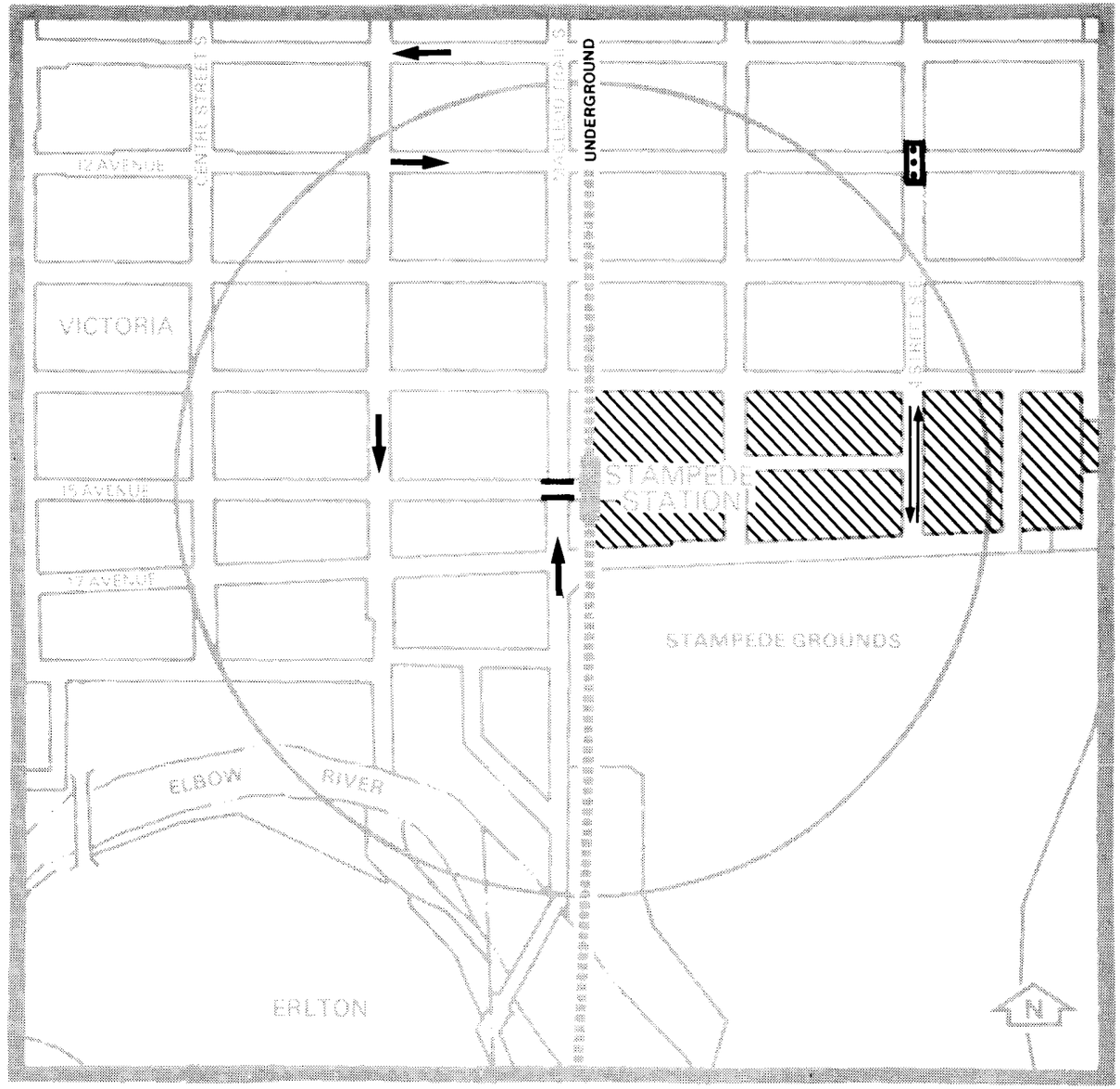
L.R.T. South Corridor Land Use Study

Vehicular Circulation & Improvements

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 7

Stampede Station
October 1980



iv. Pedestrian Circulation and Improvements

The Station is designed to allow an overhead pedestrian connection from the Station to the proposed Trade Centre and the Big 4 Building. The connection from the Station to the commercial and residential districts west of Macleod Trail will be by a pedestrian overpass crossing Macleod Trail at 15th Avenue S.E. This link will allow pedestrians to avoid crossing Macleod Trail at-grade and provide a safe entrance into the Stampede Grounds.

The closures of 13th Avenue S.E. and 14th Avenue S.E. to the east of Macleod Trail will reduce traffic on these streets, improving the environment for the residents of the area. The L.R.T right-of-way will be fenced as it runs parallel to Macleod Trail, but an at-grade pedestrian crossing will be provided at the present 14th Avenue S.E. intersection with Macleod Trail. In order to serve the Victoria Park community, a pedestrian walkway will be provided to the east of the L.R.T. trackage parallel to Macleod Trail between 12th Avenue S.E. and the Station.

The Plan proposes an integrated pedestrian circulation network to the west of Macleod Trail which is considered a vital element for the functioning of the Station Area. Since the Primary Pedestrian Circulation Corridors leading towards the Station would follow 15th and 17th Avenues S.E. and Park Road, it is recommended that sidewalks on both sides of these streets be widened, improved and landscaped through adjacent redevelopment. Along 17th Avenue S.E., these improvements should be enhanced by arcades and activity spaces integrated into the abutting development to create a pleasant and lively pedestrian environment. In the blocks adjacent to Macleod Trail, new developments should also foster movement from 15th and 18th Avenues S.E. to 17th Avenue S.E. and the Station.

As Secondary Pedestrian Circulation Corridors, there would be the potential for improved walkway treatments along the major roads of Macleod Trail, 1st Street S.E., Centre Street and 12th Avenue S.E. as well as the other avenues in the grid system. The potential for integrated development with through-block connections in the area between the Macleod Trail couplet and grade-separated pedestrian connections over 1st Street S.E., 17th Avenue S.E. and 12th Avenue S.E. should be recognized.

In recognition of the opportunity to provide pedestrian access along the Elbow River in conformity with Civic policies, it is recommended that a landscaped walkway system be developed along the riverbank as redevelopment occurs.

L.R.T. ALIGNMENT & STATION

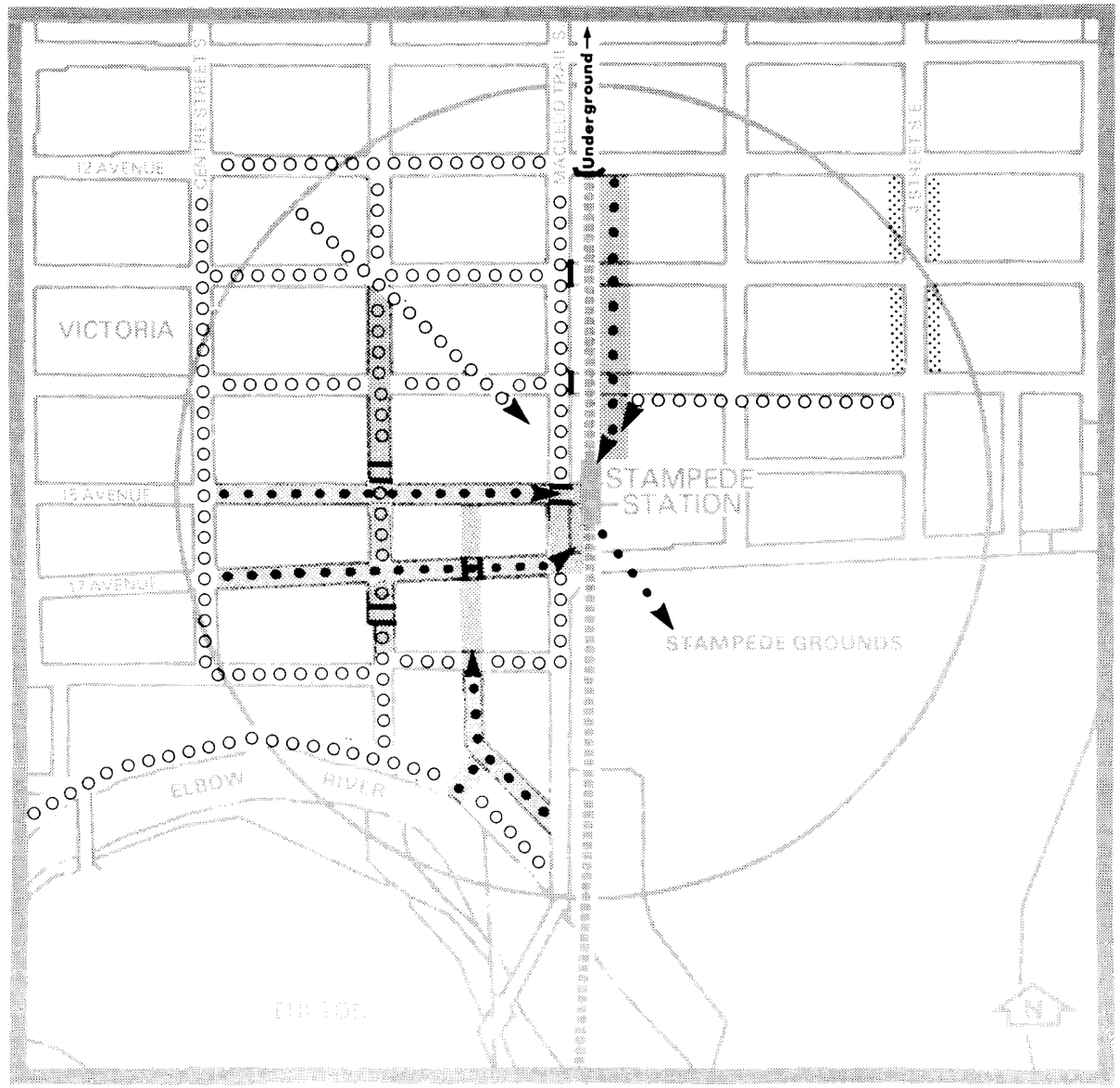
PRIMARY PEDESTRIAN CIRCULATION CORRIDOR

SECONDARY PEDESTRIAN CIRCULATION CORRIDOR

PUBLIC IMPROVEMENTS (SIDEWALKS)

ROAD CLOSURE

PROPOSED PEDESTRIAN GRADE-SEPARATION



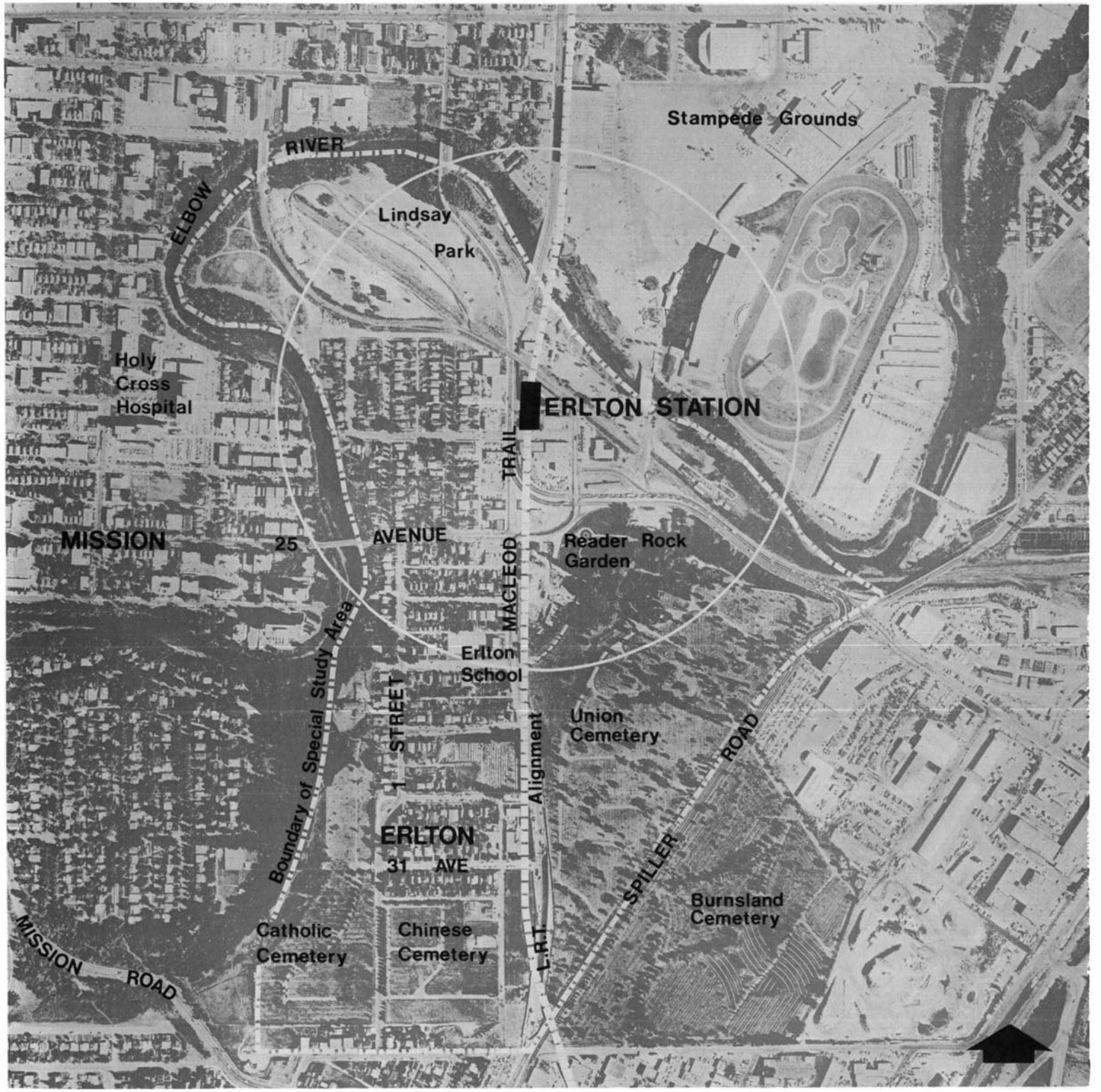
L.R.T. South Corridor Land Use Study

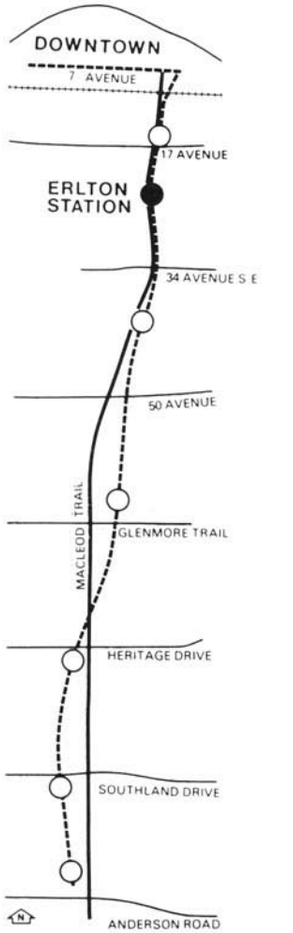
Pedestrian Circulation & Improvements

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 8

Stampede Station
October 1980



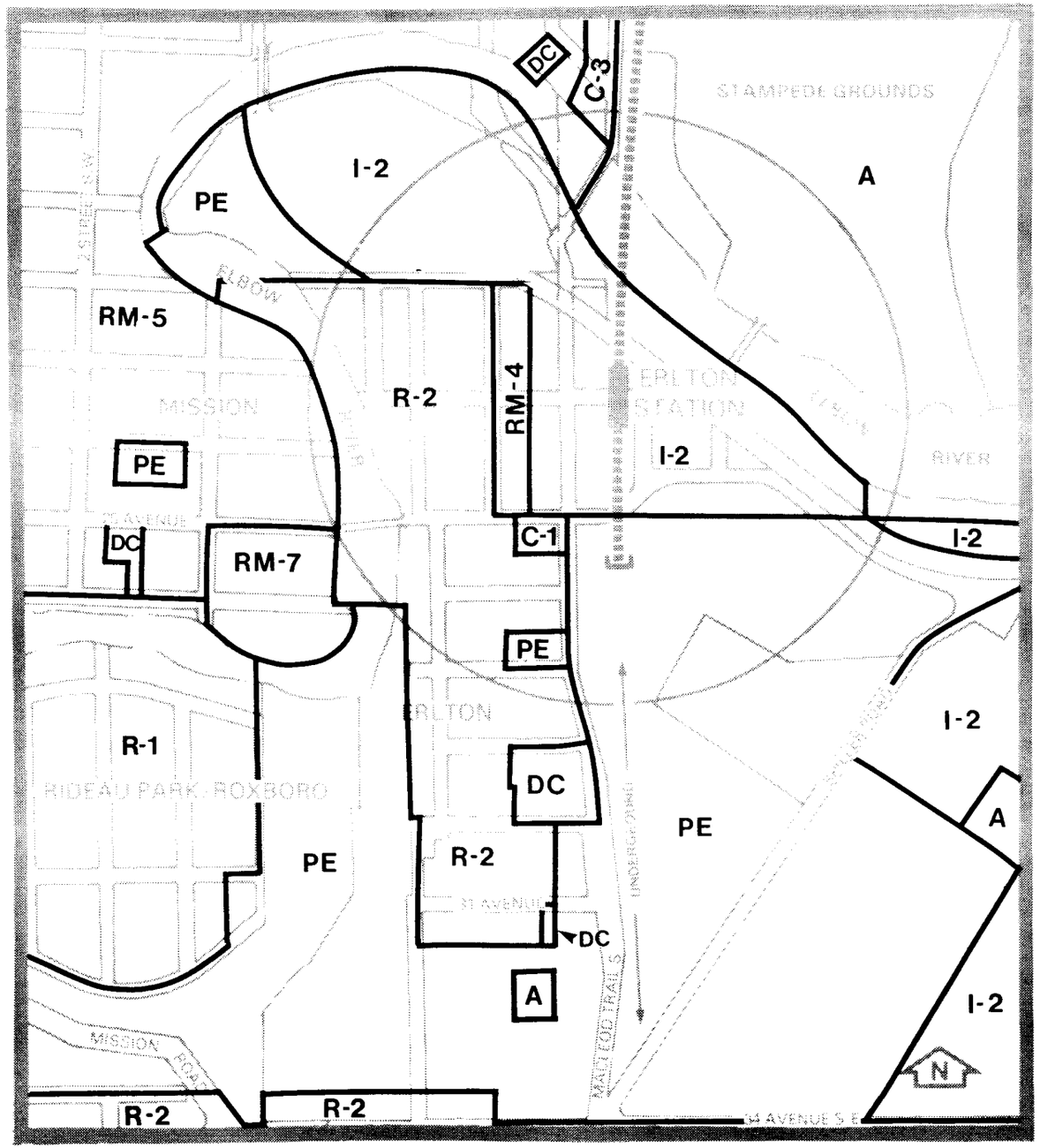


L.R.T. South Corridor Land Use Study

Erlton Station Area Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT
October 1980

2



SUBJECT TO CITY OF CALGARY LAND USE BYLAW

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 - 12m. - density 210 u.p.h.* (85 u.p.a.)*
RM-7	Residential High Density Multi-Dwelling District - building height - 46m. - density 395 u.p.h.* (160 u.p.a.)**
C-1	Local Commercial District - building height - 10m
C-3	General Commercial District - building height - **46m.**
I-2	General Light Industrial District - building height - 12m.
A	Agricultural and Open Space District
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

Map 9

Erlton Station
October 1980

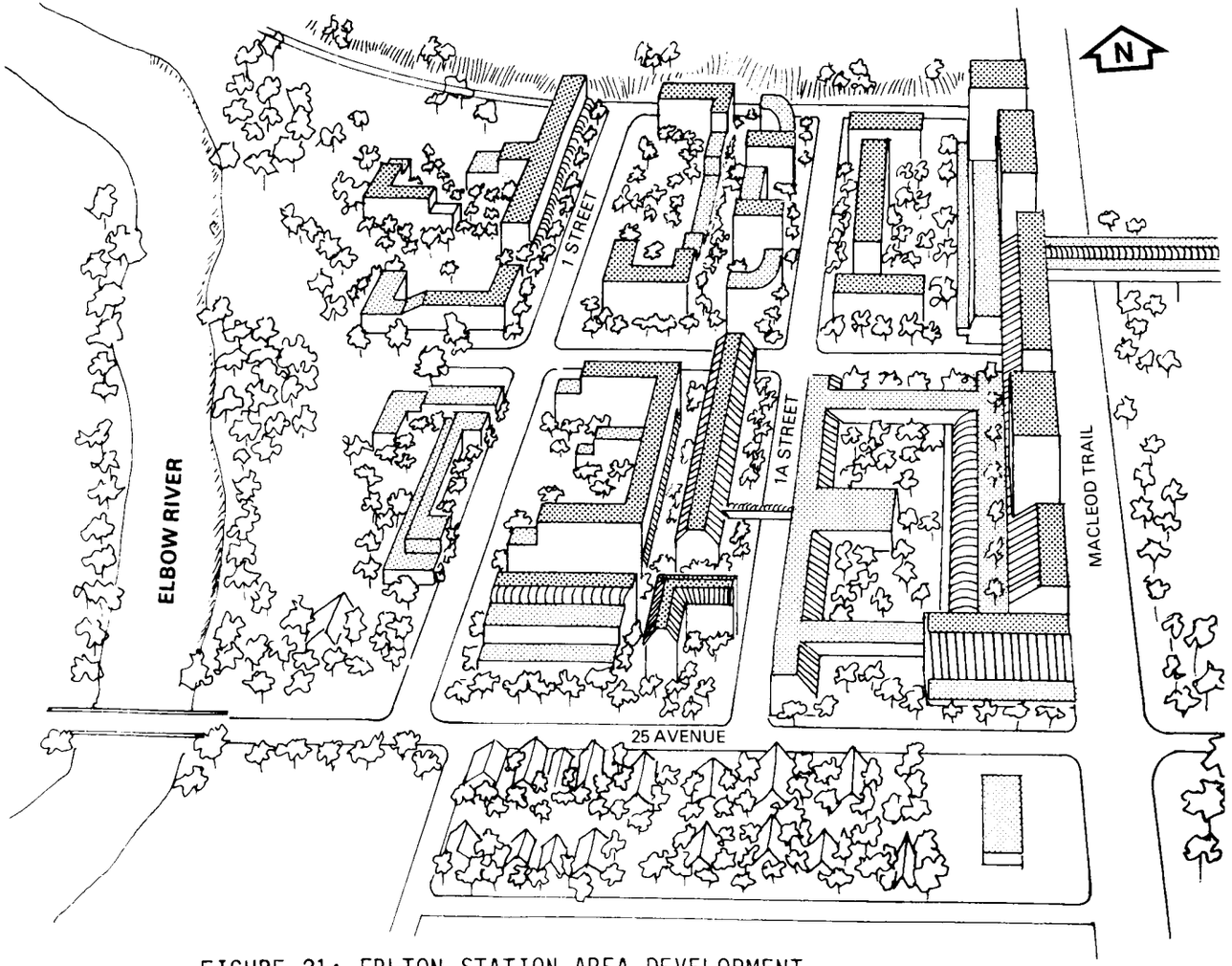


FIGURE 21: ERLTON STATION AREA DEVELOPMENT CONCEPT

2. Erlton Station Area

The Erlton Station Study Area, less than 2 km from the heart of Downtown, includes the Inner City residential community of Erlton as well as part of the Mission District and the North Manchester Industrial Area. Located at 24th Avenue S.E. directly east of Macleod Trail, Erlton Station will provide convenient service to Erlton and some Mission residents.

Approximately two-thirds of the area within the boundaries of the Erlton Community Association falls within a distance of 400 m from the Station site. The existing land uses in this Primary Impact Area are mainly low density housing and light industry.

In accordance with the City Council directions upon the adoption of the Inner City Plan, a "Special Study" has been undertaken for the Erlton area within the context of the L.R.T. South Corridor Land Use Study. The Study effort has been closely co-ordinated with the Erlton Community Association Executive Committee and other area representatives who have provided valuable input towards the development of the policies for the Land Use Plan. Following the approval of the L.R.T. South Corridor Land Use Study policies, it is recommended that the "Special Study" for the Erlton area be completed by the preparation of an Area Redevelopment Plan (A.R.P.) as one of the implementation strategies of the Study.

a. DEVELOPMENT CONCEPT

The Plan for Erlton recognizes the opportunity to emphasize the community identity and to use the Station as a focus for the area. The thrust of the Plan is to create a pleasant and exciting living environment with a variety of housing types, community facilities and services complemented by shopping, entertainment, businesses and professional services immediately surrounding the Station. The Plan also recommends

policies for the conservation of the established low density residential neighbourhood south of 25th Avenue S.E. Through the community planning process, neighbourhood improvements to support the conservation policy have been identified for further detailed study during the recommended Area Redevelopment Plan process.

Mixed use development is recommended close to the L.R.T. Station combining residential uses with commercial uses including retailing, services and offices. Comprehensive mixed use development should provide malls on the first and second storeys, so that the second level could connect with an enclosed pedestrian bridge across Macleod Trail linked to the Station.

The Plan recommends a landscaped walkway system along the banks of the Elbow River and medium density family residential accommodation is recommended for the area between the River and 1A Street S.E. north of 25th Avenue. The development form should recognize the positive environmental factors as well as achieve a successful transition in scale from the adjacent low density housing south of 25th Avenue S.E. and the high density mixed use development east of 1A Street S.E.

b. LAND USE AND DEVELOPMENT GUIDELINES

i. "Conservation Area"

Low Density Residential Use

In accordance with the community objectives and the Council-approved Inner City Plan policy, the area south of 25th Avenue S.E. (Site 1) shall remain as a "Conservation Area". The existing designation of R-2: Residential Low Density District shall be retained. Infill housing compatible with the existing neighbourhood character and streetscape shall be encouraged in a variety of forms including single family detached structures on narrow lots (minimum 7.5 m lot width), zero lot line development, duo-style and other attached housing forms. The rehabilitation and renovation of the existing older housing stock shall be encouraged. It is also recommended that the area be considered for inclusion in the Residential Rehabilitation Assistance Program. Where redevelopment takes place adjacent to the Elbow River, the acquisition of setback land for public use should be encouraged.

Non-Residential Uses

Within this general "Conservation Area", a number of non-residential uses are located including a service station, Cable TV facility, cemeteries and a school.

The existing designation of the Erlton Public School (Site 3) as PE: Public Park, School and Recreation District is appropriate. If, in the future, the land and school building are no longer required by the Calgary Public School Board for school purposes, it is recommended that the City be given the first right to negotiate for the purchase of the land in accordance with the Calgary General Municipal Plan policy (Paragraph 3.6.16). The existing building could serve a variety of community and social service functions in addition to its educational programs.

The Erlton community has expressed serious concerns about the expansion of the non-residential uses threatening the neighbourhood's viability. It is recommended that no further expansion of the commercial developments and the cemeteries be allowed into the residential "Conservation Area".

ii. Medium Density Residential Use

The area north of 25th Avenue S.E. between the Elbow River and 1A Street S.E. (Site 5) provides an attractive opportunity for medium density residential development with an average intensity in the order of F.A.R. 1.5, ranging from a base level of 1.3 F.A.R. to a maximum F.A.R. of 1.8, or approximately 148 to 210 units per hectare (60 to 85 units per acre).

New residential development should be suitable for family accommodation with a variety of unit sizes and satisfactory private and public at-grade space, particularly close to the Elbow River. The form, scale and massing of development should serve to create a gradual transitional area abutting the "Conservation Area" to the south and higher intensity mixed use development to the east. Since the City is a major landholder in this sector, social housing programs for senior citizens and families could be explored during the A.R.P. process.

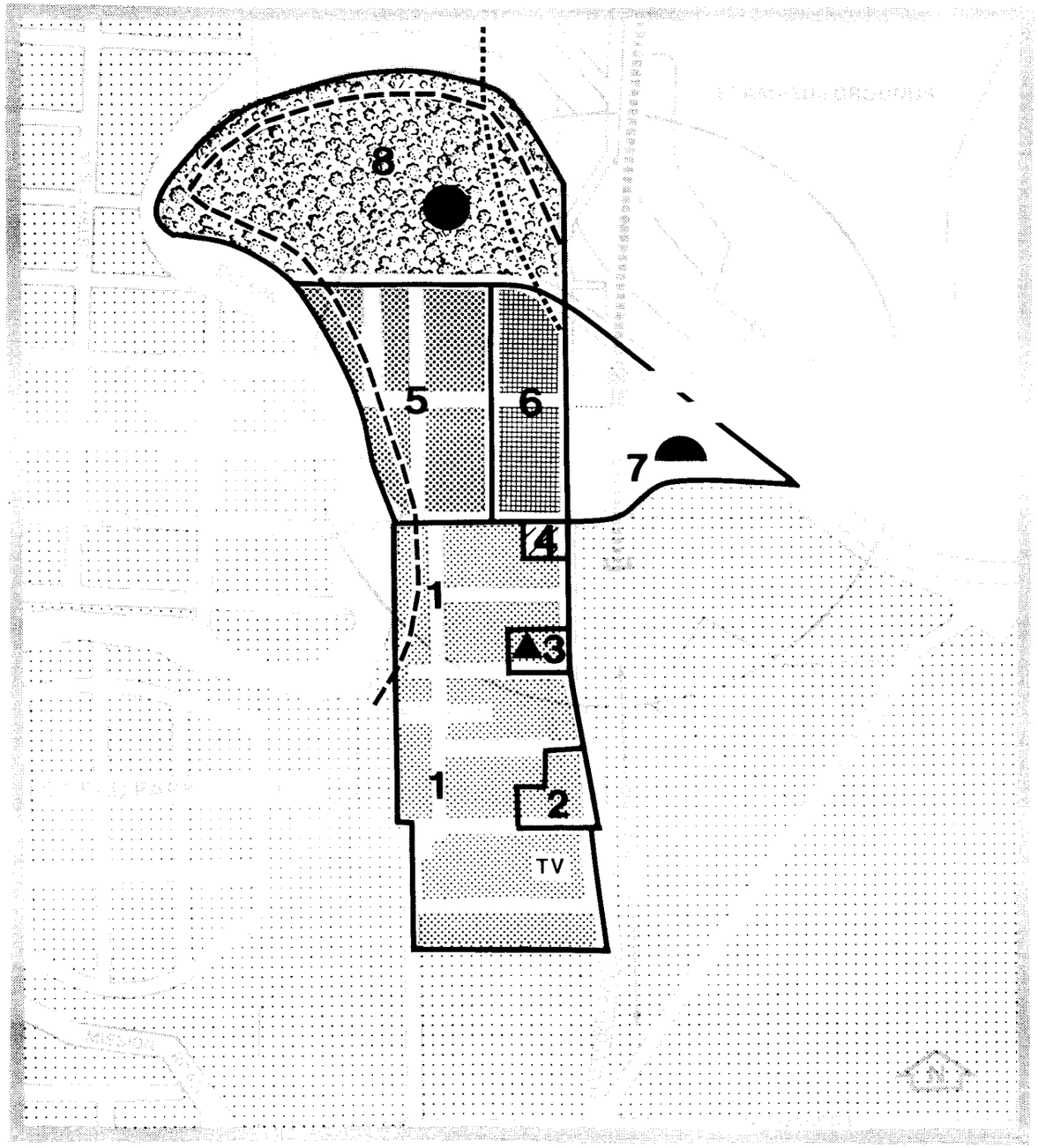
To accommodate comprehensive development, flexibility in height, scale and form could be considered and fine-tuned with special guidelines in the Erlton Area Redevelopment Plan. However, if substantially different land use composition and density are proposed, the developer could apply for a land use amendment which would be reviewed on its individual merits.

The Calgary Municipal General Plan has established a 30 m setback zone for any new development or redevelopment along the banks of the Elbow River[2]. This setback zone offers an opportunity for a continuous public walkway along the River as well as a positive feature for adjacent residential development. Where redevelopment takes place adjacent to the Elbow River, the acquisition of setback land for public use should be encouraged by the following means:

a. comprehensive development which would enable application of density transfers and bonuses with a height limitation of 10 to 12 m adjacent to the River with increased height allowances to the east;

b. closure and transfer of public road rights-of-way in exchange for river setback land.

2. In accordance with the existing "Floodplain Management Policy" (1974), new development or redevelopment, not existing buildings, within the "floodplain" must meet certain structural requirements. No new permanent structures are permitted in the "floodway" area. The Planning Department's proposed "Calgary River Valleys Plan" would deal with these floodplain management policies and is tentatively scheduled to be presented to City Council late in 1980.



LOW DENSITY COMMERCIAL

FUTURE SITE OF COLISEUM

FUTURE SITE OF AQUATIC CENTRE AND FIELD HOUSE

APPLICATION OF
EXISTING COUNCIL POLICIES

HIGH DENSITY MIXED USE

MEDIUM DENSITY RESIDENTIAL

NEIGHBORHOOD CONSERVATION/ LOW DENSITY RESIDENTIAL

MAJOR OPEN SPACE/RECREATIONAL FACILITIES

TV — CABLE T.V.

PROPOSED 26 AVE. CONNECTOR

ERLTON SCHOOL

30 METRE SETBACK ZONE ALONG ELBOW RIVER

L.R.T. South Corridor Land Use Study

Generalized Land Use Concept Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map
10

Erlton Station
October 1980

FIGURE 22 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[c] HEIGHT	SPECIAL CONSIDERATIONS
1	R-2	●Residential	Subject to R-2: Residential Low Density District Requirements	N/A	10 m	The building style and design shall be compatible in character with the streetscape, containing such features as front entrances, elevated front porches, verandas, bay windows, sloped roofs and/ or details. The building materials, exterior finishes and colours should be in harmony with the adjacent houses on the street. Where redevelopment takes place adjacent to the Elbow River, the acquisition of setback land for public use should be encouraged.
2	D.C.	●Cemetery	N/A	N/A	N/A	N/A
3	PE	●Erlton Public School/Community Facility	N/A	N/A	N/A	N/A
4	C-1	●Local Commercial	Existing C-1	N/A	10 m	N/A
5	R-2	●Residential	F.A.R. 1.3 or approximately 148 units/hectare (60 units/acre)	F.A.R. 1.8 or approximately 210 units/hectare (85 units/ acre)	12 m	A minimum of 50 percent of the units shall contain two or more bedrooms and have direct access to private outdoor amenity space. Improved treatment of sidewalks along 25th Avenue S.E. shall be encouraged as part of the Primary Pedestrian Circulation Corridor. Where redevelopment takes place adjacent to the Elbow River, the acquisition of setback land for public use should be encouraged.

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[c] HEIGHT	SPECIAL CONSIDERATIONS
6	PM-4 I-2	Mixed Commercial and Residential Use (With Approximately Half Residential)[d]	F.A.R. 3	F.A.R. 4	The maximum height should be scaled down from 46 m along Macleod Trail to a maximum of 24 m along 1A Street.	Along 25th Street S.E., emphasis should be given to a continuous and active pedestrian environment, taking the form of an arcaded area for retail facilities together with improved sidewalks, lighting and landscaping. Residential component of the development shall be oriented towards the western portion of the site and shall be designed to be compatible with adjacent medium and lower density housing in scale and massing. Internal malls in development between Macleod Trail and 1st Street S.E. shall be provided to link with the required grade-separated pedestrian connection above Macleod Trail to the Station.
7	I-2	Future Coliseum and ancillary facilities.	N/A	N/A	N/A	The design of the Coliseum facilities incorporate the special development guidelines approved by Council (May 1980).
8	I-2 PE	Park and Recreational Facilities	N/A	N/A	N/A	The Parks/ Recreation Department prepare a comprehensive park plan for Lindsay Park incorporating the special development guidelines regarding the Aquatic Centre and Mini-Fieldhouse approved by Council (May 1980).

a. 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.

b. 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.

c. Maximum heights shall be reviewed on a site-specific basis, subject to the performance standards regarding direct sunlight and other development guidelines.

d. 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.

N/A Not Applicable

iii. High Density Mixed Use

These blocks flanking Macleod Trail (Site 6) have the strong potential for orientation to the Station. New development shall provide a grade-separated pedestrian connection over Macleod Trail as well as internal pedestrian mall systems oriented through the development to the Station connection. It is recommended that this mixed use development site be allowed to achieve a maximum F.A.R. of 4 with a mandatory residential component of approximately half the floor area, subject to Council's direction that the minimum proportion of the mandatory residential use be made flexible to accommodate individual projects. To accommodate comprehensive development, flexibility in height, scale and form could be considered and fine-tuned with special guidelines in the Erlton Area Redevelopment Plan. However, if substantially different land use composition and density are proposed, the developer could apply for a land use amendment which would be reviewed on its individual merits.

iv. North Manchester Industrial District

The existing designations of the industries and the cemeteries in the North Manchester Industrial District are to be retained, except for the Station site area (Site 7).

v. Public Parks and Community Facilities

Because of its unique location and the heavily built-up surrounding residential areas, it is recommended that Lindsay Park be designated for parks, recreational and cultural uses from the existing land use designation of I-2: General Light Industrial District. It is further recommended that the City Parks/Recreation Department develop a comprehensive parks plan for Lindsay Park.

The future use of this area has been considered by the Sports Facilities Advisory Committee, which reported to City Council through the Commissioners at the special Public Hearing on May 27, 1980. City Council approved both the Aquatic Centre and the Mini-Fieldhouse as a composite facility to be located in Lindsay Park and directed that a consultant be engaged to produce detailed designs. As a further condition of this approval, Council approved:

"That the Planning Department's Recommendation No. 2 be approved and the Department be instructed to work closely with the consultant to ensure the incorporation into his detailed report of the various factors of Recommendation No. 2."

This Recommendation 2 from Appendix "B" of the Commissioners' Report to Council states:

"It is recommended that the City Parks/Recreation Department develop a comprehensive park plan for Lindsay Park. It is further emphasized that district and regional open space functions of Lindsay Park in the context of Inner City and Downtown need to be recognized. Therefore, it is further recommended that future development of Lindsay Park must properly relate to the needs of the adjoining communities, roads, transit and river banks system. It is recommended that the feasibility of construction of an Aquatic Centre and a Mini-Fieldhouse on Lindsay Park be considered under the following guidelines:

- Planning for any major recreational facilities must consider possible environmental impacts including the adverse effects of traffic and parking on the surrounding areas, particularly Erlton. In consideration of this impact, access to

Lindsay Park shall be directly from the Macleod Trail couplet rather than from the Erlton area.

- Building orientation should provide the appropriate setback zone and river edge which allows continuous pedestrian movements and which positively uses the river bank area.

- Building orientation and scale should minimize any adverse impacts of these sports facilities on the abutting residential district of Erlton.

- Direct pedestrian access and connections from the surrounding residential districts of Mission, Beltline, West Victoria and Erlton should be facilitated (for example, old C.N.R. bridge as a pedestrian bridge, pedestrian bridge over Elbow River close by the Holy Cross Hospital).

- Direct pedestrian connections between the sports facilities on Lindsay Park, development on the west side of Macleod Trail, the L.R.T. Station and the Coliseum to the east should be emphasized and adhered to.

- Adequate measures should be taken to reduce the impact of parking and car access in the residential district of Erlton.

- Dependency upon L.R.T. and pedestrian movement should be maximized with complete physical integration with potential development on the west side of Macleod Trail and elevated pedestrian connection directly to the L.R.T. Station."

In the design of Lindsay Park and through the A.R.P. process, it shall be important to protect the integrity of the Lindsay Park area as a park.

The Erlton Community should be invited to participate in the planning of Lindsay Park, particularly the park's open space component.

The amount of parking for the Lindsay Park facilities should be minimized and considered carefully in the facilities' design and A.R.P. processes due to its potential environmental and community impacts as well as its economic cost. As in other Station Areas, parking relaxations could be warranted due to the facilities' close location to the L.R.T. Station and the bus transit system as well as the availability of existing parking on the Stampede Grounds. The amount of parking associated with the sports facilities as well as consideration of the retention of the existing C.N.R. berm will be investigated in the design of Lindsay Park.

The construction of the Olympic Coliseum on the Erlton L.R.T. Station site, as recommended by the Sports Facilities Advisory Committee, was also approved by Council on May 27, 1980. For the purposes of accommodating the future Coliseum, the L.R.T. Station and potential development facilities around the Station, it is recommended that the existing land use designation of Site 7 as I-2: General Light Industrial District be changed to reflect Council's special development guidelines, based on the approved recommendations of the Commissioners' Report on the Sports Facilities Advisory Committee Report (May 27, 1980) including Recommendation 1 of Appendix B as follows:

- "Building orientation should provide the appropriate setback zone and river edge which allows continuous pedestrian movement and which positively uses the river edge of the Coliseum.

- Direct pedestrian connections between the Coliseum, the L.R.T. Station, development on the west side of Macleod Trail and the facilities in Lindsay Park should be emphasized and adhered to.

- Adequate measures should be taken to reduce the impact of parking of cars and car access in the residential district of Erlton.

- Dependency upon L.R.T. and pedestrian movement should be maximized with complete physical integration of L.R.T. and Coliseum entrances and exits.

- Parking, if any, should be structured to economize on land.

- Parking relaxations are warranted due to L.R.T. and the availability of existing parking in Stampede Grounds.

- Consideration should be given to an alternative alignment for the 26th Avenue Connector with an at-grade connection to tie directly into the signalled intersection of Macleod Trail and 25th Avenue S.E., thereby improving pedestrian movement and releasing land for a better flexibility in siting the Coliseum as well as ancillary transit facilities and service vehicles."

During the A.R.P. process, potential negative impacts of the future major recreational facilities in the area, including the Coliseum on the Erlton L.R.T. Station site and the Aquatic Centre and Mini-Fieldhouse in Lindsay Park, should be considered and measures formulated and implemented to enhance the positive features as well as minimize the potential adverse impacts.

vi. Mission Residential Area

It is unlikely that new development related to the L.R.T. will be attracted to the Mission area although residents on the eastern periphery of Mission will be within easy walking distance of the Erlton L.R.T. Station, via the 25th Avenue bridge. The whole Mission neighbourhood is designated for the preparation of a comprehensive Area Redevelopment Plan.

vii. Community Facilities and Services

The needs of the Erlton community for a community facility associated with local open space, as well as social service and parks and recreation programs, will be examined through the recommended Area Redevelopment Plan process.

Through this detailed planning process, various alternatives for the provision of a community hall will be evaluated, including:

- a new freestanding Community Association hall;

- the re-use of a portion of the Erlton School building if that facility were to become available;

- the renovation of an existing City-owned house on the riverbank;

- the provision of community space in future large-scale developments close to the L.R.T. Station.

The community is also in need of local open space and children's play areas with the following possible alternatives:

- the construction of a tot lot on Erlton School grounds;
- the provision of a tot lot in the 30 m setback area along the Elbow River concurrently with future housing and riverbank parkway development;
- the incorporation of a tot lot in a comprehensive plan for Lindsay Park.

A variety of Civic programs for social services and parks and recreation would also be considered relative to the identified community needs.

c. CIRCULATION SYSTEMS

i. L.R.T. Station and Related Facilities

The Erlton L.R.T. Station will be constructed on the City-owned site located on the east side of Macleod Trail north of 25th Avenue S.E. The existing CNR overpass will be dismantled at the time of the widening of Macleod Trail. The Station will normally handle an estimated 500 trips per day. During Stampede Week and other special events held at Stampede Park, it is projected that up to 15,000 to 20,000 trips per day are possible through the Erlton Station. The centre-loading platform will be constructed with pedestrians gaining entry via 25th Avenue and 2A Street S.E. Park 'n' Ride facilities are not planned for this L.R.T. Station since it is close to Downtown.

Most transit riders will likely walk to the L.R.T. Station so convenient access to the Station from Erlton is important. It is recommended that the Erlton Station platform accommodate a second entrance towards the south end to facilitate successful integration of new development west of Macleod Trail with the Station via a pedestrian bridge.

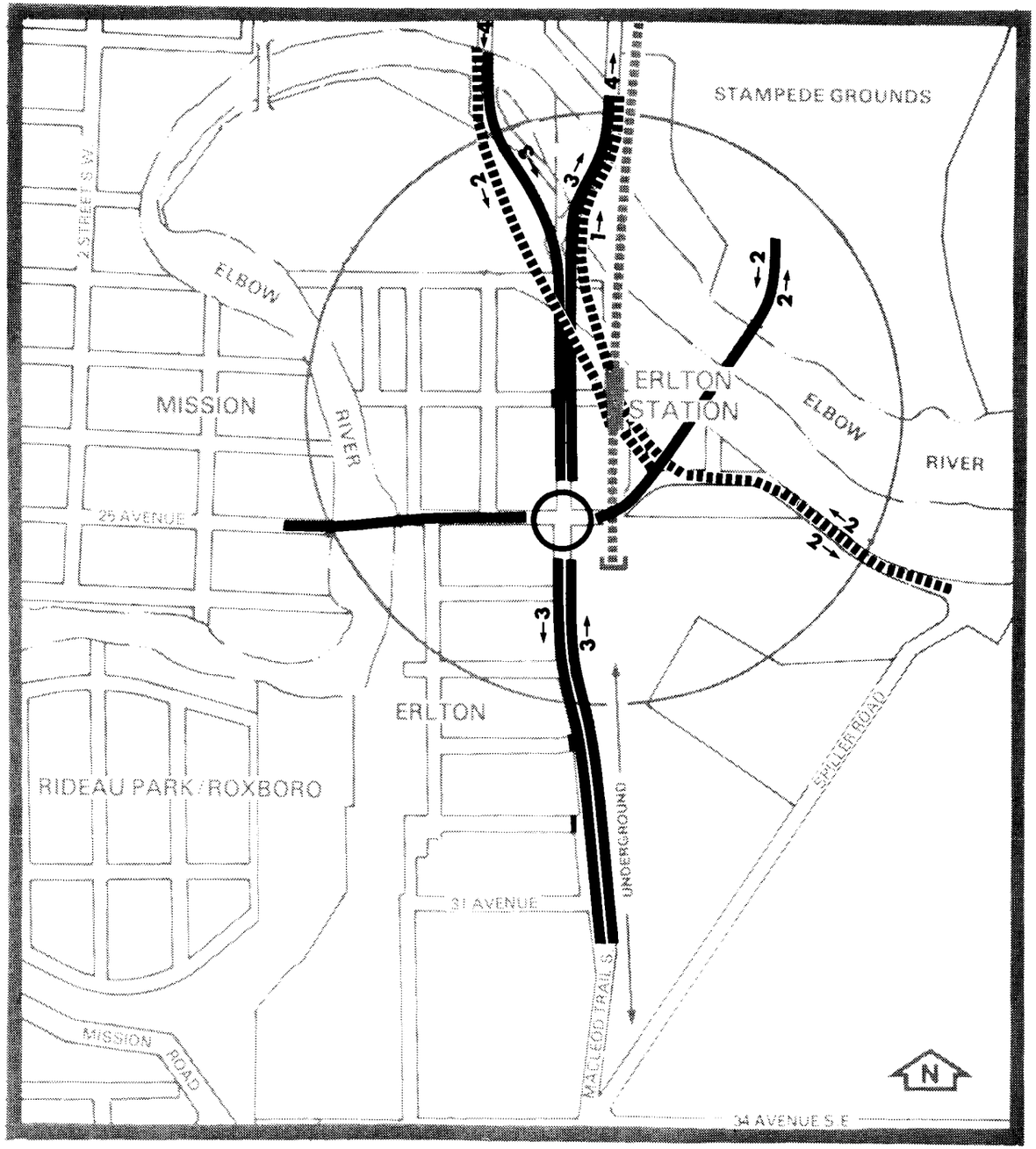
ii. Bus Service

In light of a decision to locate the future Coliseum on the Erlton Station site, the Calgary Transit bus station which is planned to be the terminal for Stampede Express service providing access from all parts of the City to the southern entrance of the Stampede Grounds, will be located east of the Coliseum facility. This bus station will replace the Stampede bus facility on 17th Avenue S.E. and operate during Stampede Week and special events only. During special events at the Stampede Grounds, large numbers of pedestrians will likely use the eastern entrance of the Erlton Station and the Stampede's southern gate.

Calgary Transit is currently planning the integration of the bus and L.R.T. Systems in consultation with the affected communities. It is anticipated that a route similar to the present #10 Capitol Hill/Manchester bus will likely be continued in order to serve the areas between L.R.T. Stations.

iii. Vehicular Circulation and Improvements

A new four-lane bridge crossing the Elbow River will serve as the main southern entrance to the Stampede Grounds. This bridge will be closed to vehicular circulation during Stampede Week in order to serve as a major pedestrian access to the Stampede Grounds.



L.R.T. ALIGNMENT & STATION

PROPOSED 26 AVE. CONNECTOR

MAJOR THOROUGHFARE

ALL TURNS PERMITTED

2 NUMBER OF LANES & DIRECTION OF TRAFFIC FLOW

L.R.T. South Corridor Land Use Study

Vehicular Circulation & Improvements

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 11

Erlton Station
October 1980

Macleod Trail will be widened to three traffic lanes in each direction from the Elbow River to 34th Avenue S.E. Access to Macleod Trail would be permitted from 25th, 27th, 28th, 31st and 34th Avenues S.E. The closures of 29th and 30th Avenues S.E. at Macleod Trail indicate that access to properties fronting on these Avenues will be via Mission Road, 34th Avenue and 1st Street S.E. from the south or 25th Avenue and 1st Street S.E. from the north. Vehicular circulation will also be allowed on 24th Avenue S.E. The 26th Avenue Connector is proposed to provide access to the Station Area and Macleod Trail for vehicles travelling westbound from Blackfoot Trail.

In conformity with Council's previous decision regarding the 26th Avenue Connector and its approval of the Olympic Coliseum in the Erlton area, it is recommended that the functional study of the 26th Avenue Connector in conjunction with the South Downtown Bypass (as directed by Council on December 3, 1979) show the need and alignment alternatives as well as addressing the concerns raised regarding environmental and community impacts in consultation with the adjacent community. Concurrently, it is recommended that the Erlton A.R.P. process be undertaken and consider the roadway design alternatives and their impacts, including the determination of the facility's elevation (below-grade, at-grade, or above-grade). The major recreational facilities and their impacts on the community should also be addressed during the A.R.P. process in consultation with the affected community.

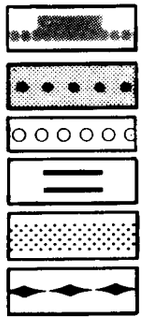
It is recommended that a detailed traffic plan be undertaken for Erlton during the Area Redevelopment Plan process to address identified community concerns. It is anticipated that, due to the limited capacity of 25th Avenue S.E., people may try to avoid traffic congestion and use 27th, 28th and 31st Avenues S.E. as other access points to the neighbourhood. Therefore, the closure of 27th, 28th and 31st Avenues S.E. should be seriously considered in the traffic plan.

The noise and air pollution associated with the traffic on Macleod Trail has been identified as a serious community concern, particularly for the flanking residential properties. Therefore, it is recommended that, during the Area Redevelopment Plan process, effective techniques be formulated for implementation to improve the environmental conditions along Macleod Trail. Therefore, the concerns regarding sound attenuation along Macleod Trail and necessary road closures on the avenues intersecting Macleod Trail would be addressed in the preparation of the Area Redevelopment Plan.

iv. Pedestrian Circulation and Improvements

The Plan proposes an integrated pedestrian circulation network to the west of Macleod Trail. This is considered to be a vital element for the functioning of the Station Area. The Primary Pedestrian Circulation Corridor shall encompass segments of 1A Street S.E., 1st Street S.E. and 25th Avenue S.E. leading towards the Station.

It is recommended that concurrent with redevelopment, appropriate sidewalk widths and treatments be encouraged on the north side of 25th Avenue S.E. to ensure a pleasant route for pedestrians and L.R.T. patrons and to serve as a buffer strip between the "Conservation Area" to the south and the medium density residential district and the high density area to the north. Erlton is fortunate to have several tree-lined streets. Sidewalks on both sides of 1st Street S.E. and 25th Avenue S.E. should be improved and



L.R.T. ALIGNMENT & STATION

PRIMARY PEDESTRIAN CIRCULATION CORRIDOR

SECONDARY PEDESTRIAN CIRCULATION CORRIDOR

PROPOSED PEDESTRIAN GRADE-SEPARATION

PUBLIC IMPROVEMENT (SIDEWALKS)

BICYCLE PATH

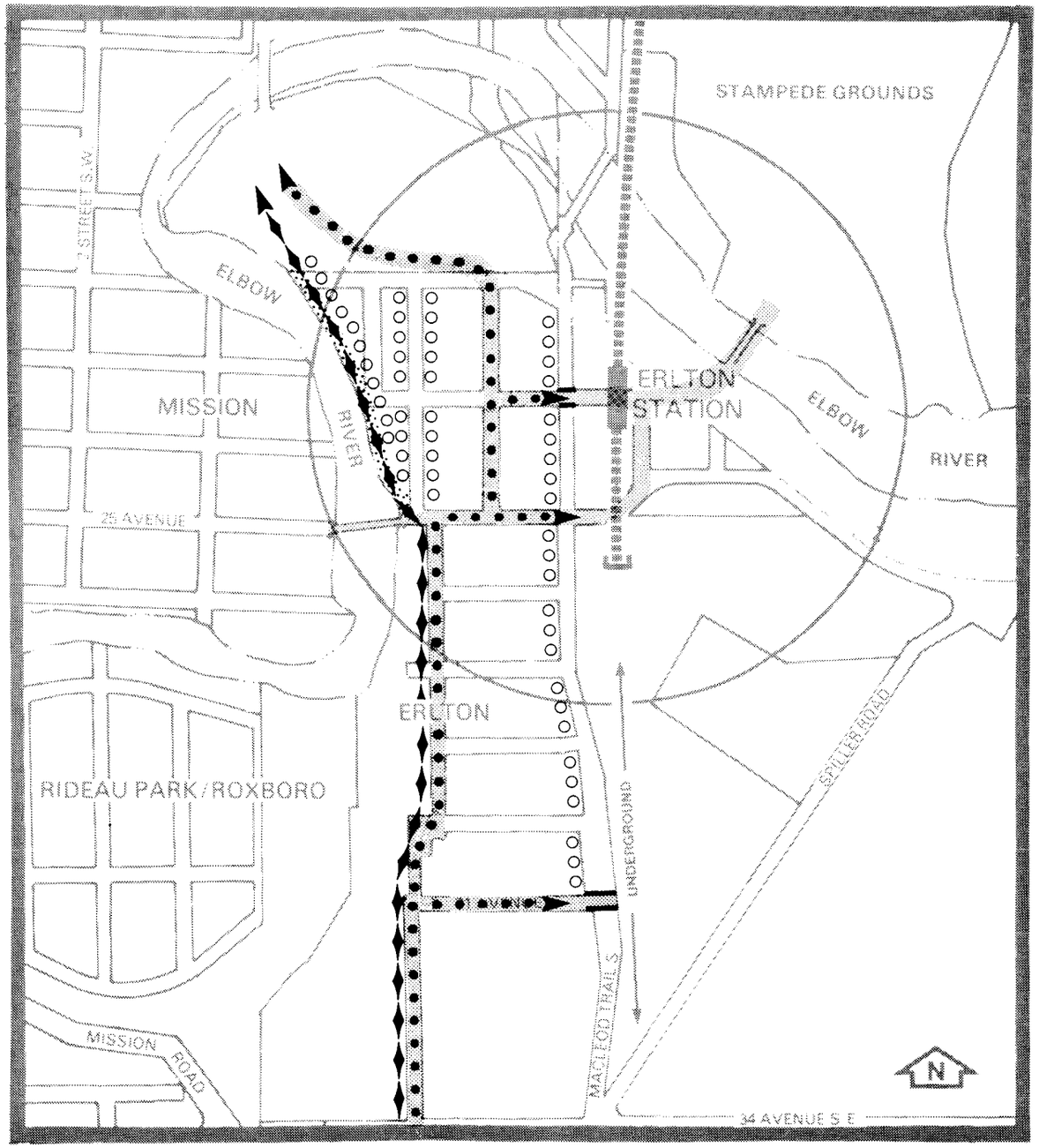
L.R.T. South Corridor Land Use Study

Pedestrian Circulation & Improvements

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 12

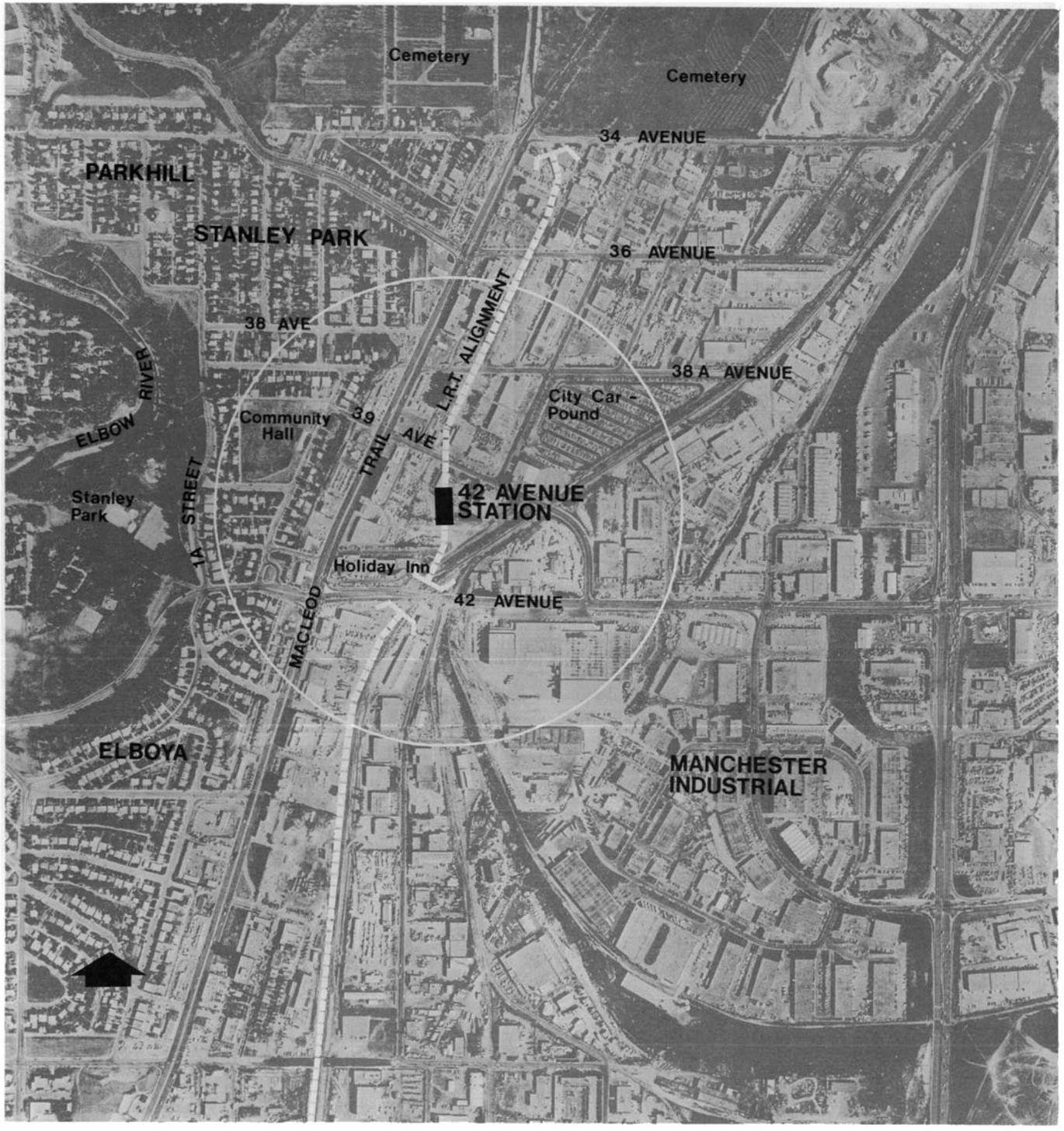
Erlton Station
October 1980

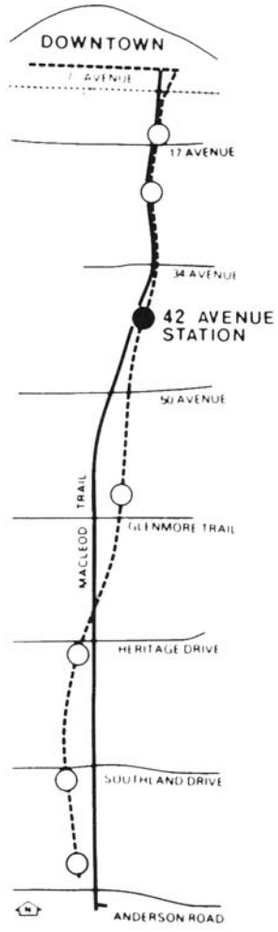


landscaped where needed as part of the Primary Pedestrian Circulation Corridor. As a Secondary Pedestrian Circulation Corridor, the potential for the improved treatment of sidewalks along the other local streets and avenues should be considered to complement the overall pedestrian network.

In recognition of the opportunity to provide pedestrian access along the Elbow River, it is recommended that a landscaped walkway system be developed along the riverbank when and if redevelopment occurs. Future developments in the blocks to the north of 25th Avenue S.E. west of 1A Street should facilitate continuous pedestrian movement to the riverbank, Lindsay Park and the Station.

A grade-separated, climate-controlled pedestrian connection over Macleod Trail to the north of 25th Avenue S.E. is recommended as an important access to the Erlton Station and shall be required as a condition of future development immediately to the west of Macleod Trail. To facilitate safe pedestrian circulation and to serve transit patrons, a second above-grade pedestrian crossing will be provided over Macleod Trail close to the bus stop at the intersection of 31st Avenue S.E.



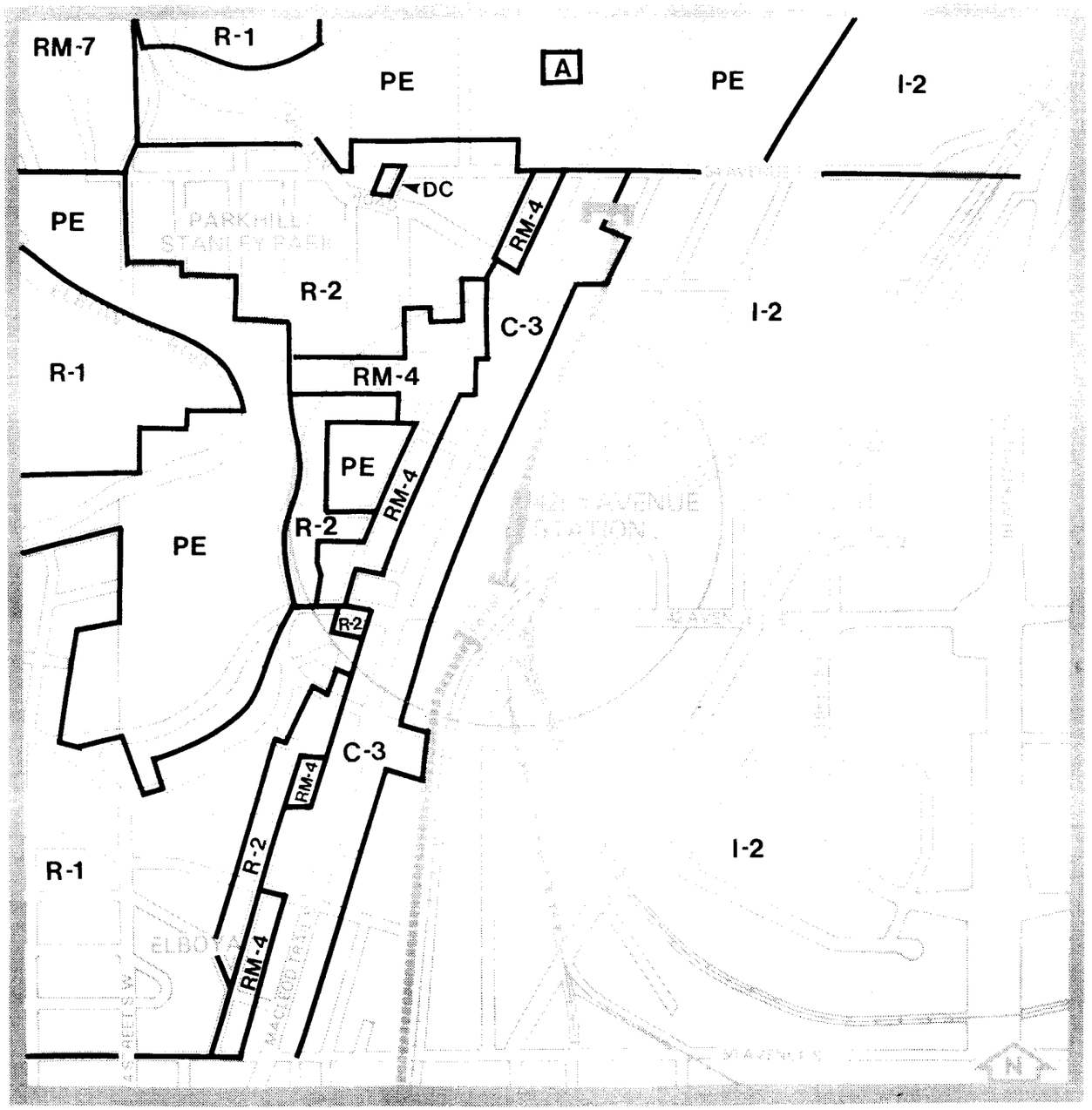


L.R.T. South Corridor Land Use Study

42nd Avenue Station Area Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT
October 1980

3



SUBJECT TO CITY OF CALGARY LAND USE BYLAW

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RM-7	Residential High Density Multi-Dwelling District - building height - 46m. - density 395 u.p.h.* (160 u.p.a.)**
C-3	General Commercial District - building height - 46m.
I-2	General Light Industrial District - building height - 12m
DC	Direct Control District
PE	Public Park, School and Recreation District
A	Agricultural and Open Space 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	Map 13	42nd Avenue Station October 1980

3. 42nd Avenue Station Area

The 42nd Avenue L.R.T. Station lies less than 3.5 km from Downtown Calgary. In the Station Area, Macleod Trail separates two major types of land use: to the west lies the established residential community of Parkhill/Stanley Park, composed mainly of low and medium density housing and the regional Stanley Park; to the east lie industrial lands. Macleod Trail is bordered by existing low and medium density commercial uses oriented to car traffic. The recent applications for land use amendments and development permits for medium density residential development to the west and commercial development in the industrial area to the east are indications of the current development pressures as a result of the area's favourable location relative to Downtown and general commercial growth along Macleod Trail.

With the approval of the Inner City Plan, City Council designated Parkhill/Stanley Park as a "Conservation Area" and as a community within the Area Redevelopment Plan (A.R.P.) program, with scheduling as time and staff permits. It is further recommended that the Study policies be implemented as soon as possible by the preparation of Area Redevelopment Plans for both the 42nd Avenue Station Area and Parkhill/Stanley Park, to proceed simultaneously due to their related nature.

a. DEVELOPMENT CONCEPT

This Station Area Plan will focus development pressures on the L.R.T. Station and conserve the residential community of Parkhill/Stanley Park. New development east of Macleod Trail will be carefully directed through density ceilings, development form rules, land use composition and movement features to ensure that the form and type of development is working in unison with the needs of the L.R.T. System, with special emphasis on the pedestrian environment and mode of movement.

The area east of Macleod Trail presents opportunities for comprehensive L.R.T.-oriented projects through the consolidation of the currently low density industrial parcels. Comprehensive mixed use projects with the potential for both commercial and residential components are recommended for the sites east of Macleod Trail. Development is anticipated to be of a commercial nature initially and gradually include more residential components as the general environment improves, with the addition of benefit features such as open space and specialized spaces for public use.

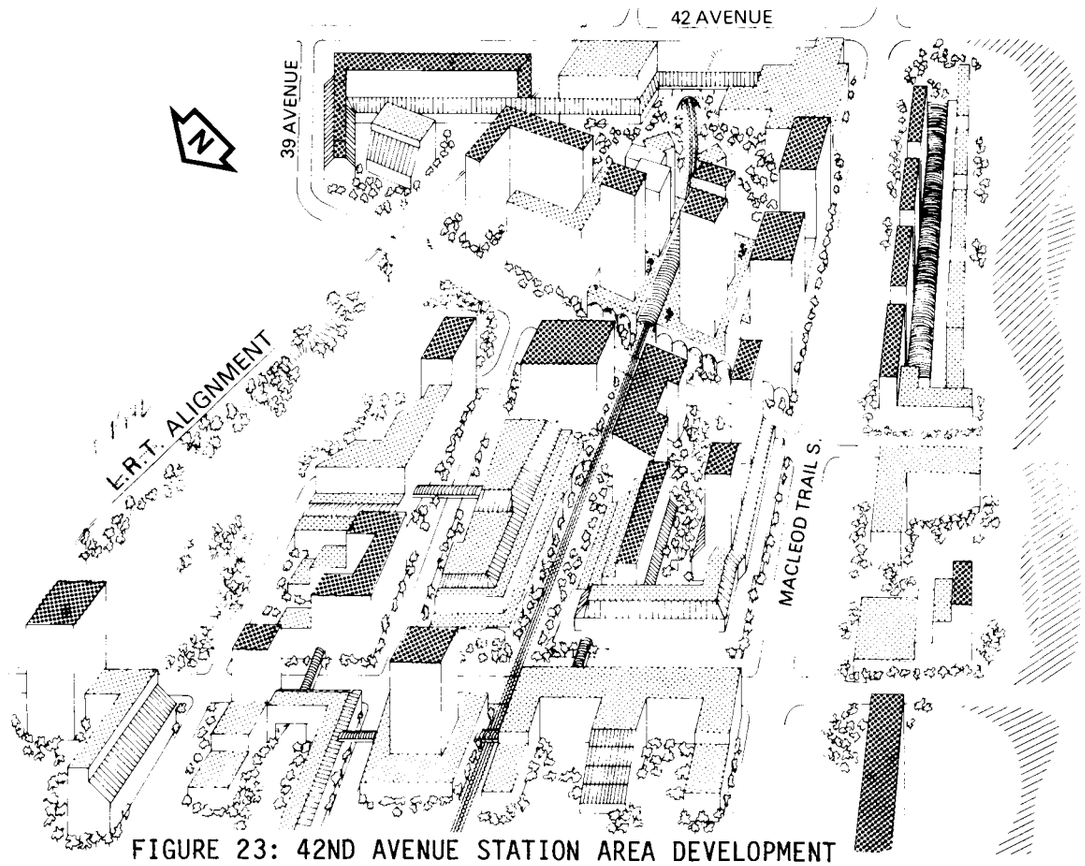


FIGURE 23: 42ND AVENUE STATION AREA DEVELOPMENT CONCEPT

The commercial lands along the west side of Macleod Trail have special development guidelines to accommodate the commercial and residential edges. A set of development guidelines is recommended for specific areas west of Macleod Trail in the Parkhill/Stanley Park community.

The preparation of an Area Redevelopment Plan (A.R.P.) is recommended as an implementation technique for the Station Area east of Macleod Trail. The extent of changes recommended in this area from industrial to mixed use; the need to implement specific land use composition, intensity and development controls for L.R.T.-oriented development; and the need for transportation policies optimizing transit use warrant an A.R.P. process following the Study. Through the A.R.P. process, a system of redevelopment levies on all new development may be established to assist in the acquisition of the necessary public open space in this area.

b. RECOMMENDED LAND USE AND DEVELOPMENT GUIDELINES

i. Mixed Use

The intent of mixed use development policies is to recognize the opportunities resulting from both the road system and the superimposed L.R.T. System. Mixed use development combining residential and commercial components is recommended with the greatest potential intensity focussed on the Station. This L.R.T.-related development can achieve higher densities than could solely car-oriented development because of its support from pedestrians and transit users combining to overcome the significant roadway constraints affecting this area. In conjunction with the recommended A.R.P. process, the Planning and Transportation Departments will jointly study the strategy of a ceiling on parking provision by commercial uses.

Although development may proceed to its commercial density ceiling as a single use throughout the Station Area, there are density incentives for the introduction of residential development. The density ceilings are permissive in the sense that mixed use development may reach the recommended commercial ceiling alone, or in combination with a residential component, it can reach the overall maximum density. For example, on Site 1, the project may proceed to its commercial ceiling of an F.A.R. of 3 and then, in combination with a residential component of an F.A.R. of 2, achieve the maximum overall F.A.R. of 5 as a mixed use project. This system will also allow predominantly residential development up to a maximum F.A.R. in the order of 5. Although residential use would not be mandatory on any potential mixed use sites in this Station Area, it should be noted that Council has directed that the recommended minimum proportion of residential use as a mandatory requirement in a mixed use development would be made flexible to accommodate individual projects.

The grade-level treatment of both predominantly commercial and residential developments is expected to relate to public activities including retailing, commercial services, entertainment and recreational uses. Projects will also be encouraged to incorporate such activities on another level, either above- or below-grade. Projects may be developed with buildings covering a relatively high proportion of the site in order to provide pedestrian-related activities and spaces.

Due to the present industrial character of the area east of Macleod Trail, the residential component of any mixed use project will be carefully studied to ensure the proper treatment and orientation of its residential elements,

relative to existing industrial development. Once residential development commences, it is anticipated that the initial residential projects will be shielded and oriented to the site's positive features and amenities such as interior courtyards.

Commercial densities are highest at the Station and along Macleod Trail in recognition of its traditional commercial character. Due to transportation constraints, only commercial uses with low car traffic generation characteristics would be acceptable to locate in the Station Area. Development along Macleod Trail will be required to provide an at-grade pedestrian right-of-way as well as at least one other feature such as an arcade, mall or extended walkway.

To the east of Macleod Trail, development may proceed to medium and high density commercial ceilings to an F.A.R. in the order of 2.5 on Site 2 northeast of the Station, with a maximum commercial F.A.R. of 3.0 allocated immediately around the Station on Site 1 and on Site 3 on Macleod Trail. The introduction of a significant residential component in mixed use development shall allow greater potential intensities, ranging from an F.A.R. in the order of 4.5 on Sites 2 and 3 to an F.A.R. of 5 on Site 1.

Further from the Station east of Macleod Trail, the recommended land use composition remains basically the same but the potential intensities decrease. South of 42nd Avenue, the commercial potential of Site 9A would reach a maximum F.A.R. of 2.0 but the potential for a residential component in a mixed use development would allow a maximum overall F.A.R. of 3.5. North of 38A Avenue, Site 6A would retain a commercial potential to a maximum F.A.R. of 1.5 with a mixed use potential to a maximum F.A.R. of 3.5.

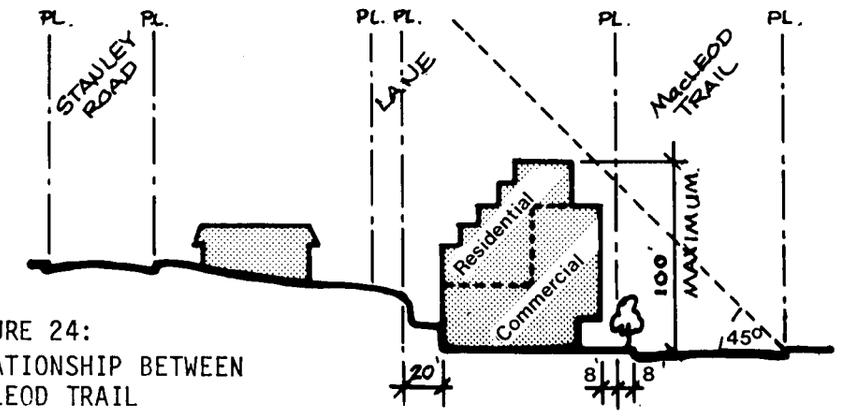
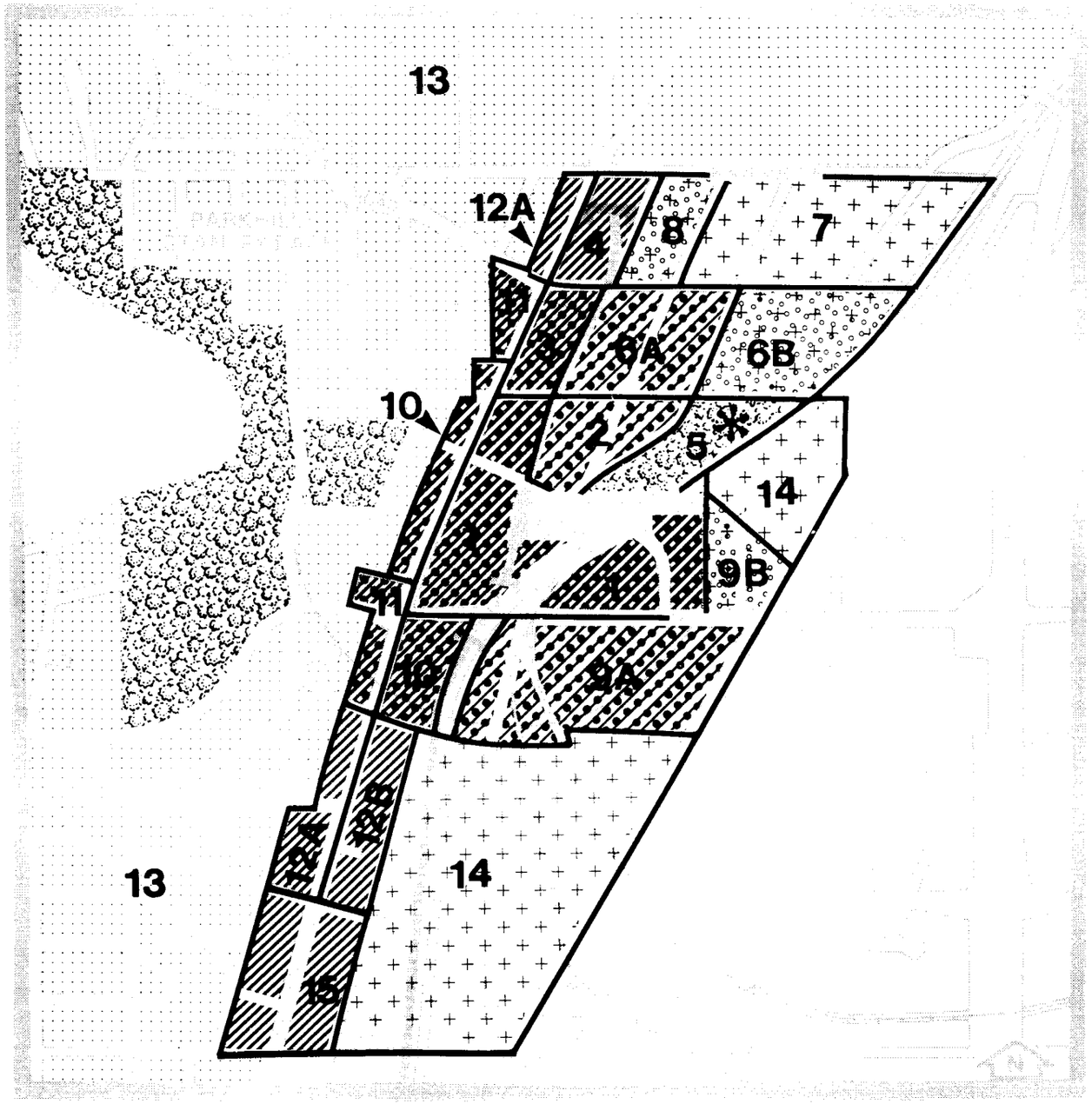


FIGURE 24:
RELATIONSHIP BETWEEN MACLEOD TRAIL COMMERCIAL AND RESIDENTIAL DEVELOPMENT

To the west of Macleod Trail within the Station Area, the recommended commercial development potential reaches a maximum F.A.R. of 3 on Sites 10 and 11. For Sites 10 and 11, mixed use development with a significant residential component could achieve an overall F.A.R. of 4 and an F.A.R. of 3.5 respectively. However, this existing C-3 General Commercial district west of Macleod Trail would be subject to development guidelines, limiting the maximum height to 30.5 m and requiring terracing on the west face of the building to ensure a satisfactory transition from the existing low and medium density residential districts. Between 41st and 43rd Avenues, the sensitive treatment of this residential/commercial interface is particularly critical in the absence of an escarpment. For Sites 12A, 12B and 15, the existing Macleod Trail commercial potential would continue with no residential density bonus offered although the residential potential does exist within the existing C-3 designation.



HIGH DENSITY COMMERCIAL

MEDIUM DENSITY COMMERCIAL

RESIDENTIAL BONUS: MEDIUM AND HIGH DENSITY RESIDENTIAL

NEIGHBORHOOD CONSERVATION/APPLICATION OF EXISTING COUNCIL POLICIES

LIGHT INDUSTRIAL

MAJOR OPEN SPACE/RECREATIONAL FACILITIES

TRANSITIONAL ZONE

PROPOSED PARK SITE

L.R.T. South Corridor Land Use Study

Generalized Land Use Concept Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 14

42nd Avenue Station
October 1980

FIGURE 25 SUMMARY OF RECOMMENDED LAND USE, INTENSITY AND DEVELOPMENT GUIDELINES[a]

SITE	EXISTING LAND USE DESIGNATION	RECOMMENDED LAND USE	BASE DENSITY[b] MAXIMUM WHEN BONUS SYSTEM IS NOT APPLICABLE (IN THE ORDER OF)	MAXIMUM DENSITY WITH BONUS (IN THE ORDER OF)	MAXIMUM[c] HEIGHT	SPECIAL CONSIDERATIONS
1	C-3 I-2	●Commercial Ceiling[d] ●Mixed Use (Residential and Commercial)[e]	F.A.R. 2.5 F.A.R. 4.0	F.A.R. 3.0 F.A.R. 5.0	46 m	Potential development integration with Station and Primary Pedestrian Circulation Corridor.
2	I-2	●Commercial Ceiling[d] ●Mixed Use (Residential and Commercial)[e]	F.A.R. 2.0 F.A.R. 3.5	F.A.R. 2.5 F.A.R. 4.5	46 m	Improved pedestrian treatment by development along segments of the Primary Pedestrian Circulation Corridor
3	C-3 I-2	●Commercial Ceiling[d] ●Mixed Use (Residential and Commercial)[e]	F.A.R. 2.5 F.A.R. 3.5	F.A.R. 3.0 F.A.R. 4.5	46 m	Improved pedestrian treatment by development along Macleod Trail and other segments of the Primary Pedestrian Circulation Corridor
4	C-3 I-2	●Commercial Ceiling[d] or Mixed Use[e]	F.A.R. 2.5	F.A.R. 3.0	46 m	Improved pedestrian treatment by development along Macleod Trail and along other segments of the Primary Pedestrian Circulation Corridor
5	I-2	●Subject to Satisfactory Relocation of Civic Facilities, Future Park Space and Consideration for Other Uses	To Be Determined	To Be Determined	To Be Determined	Following satisfactory relocation of Civic facilities and new development levels warrant park space, responsible Civic Department would undertake detailed planning for site.
6A	I-2	●Commercial Ceiling[d] ●Mixed Use (Residential and Commercial)[e]	F.A.R. 1.0 F.A.R. 3.0	F.A.R. 1.5 F.A.R. 3.5	46 m	Improved pedestrian treatment by development along segments of the Primary Pedestrian Circulation Corridor.

SITE	EXISTING LAND USE DESIGNATION	RECOMMENDED LAND USE	BASE DENSITY[b] MAXIMUM WHEN BONUS SYSTEM IS NOT APPLICABLE (IN THE ORDER OF)	MAXIMUM DENSITY WITH BONUS (IN THE ORDER OF)	MAXIMUM[c] HEIGHT	SPECIAL CONSIDERATIONS
6B	I-2	●Light Industrial (Transitional)	N/A	N/A	12 m	Future consideration of more intensive development as conditions change.
7	I-2	●Light Industrial	N/A	N/A	12 m	
8	I-2	●Light Industrial (Transitional)	N/A	N/A	12 m	Future consideration of more intensive development as conditions change.
9A	I-2	●Commercial Ceiling[d] ●Mixed Use (Residential and Commercial)[e]	F.A.R. 1.5 F.A.R. 3.0	F.A.R. 2.0 F.A.R. 3.5	46 m	Improved pedestrian treatment by development along segments of the Primary Pedestrian Circulation Corridor.
9B	I-2	●Light Industrial (Transitional)	N/A	N/A	12 m	Future consideration of mixed use development demonstrating successful continuity of pedestrian movement and development form to Station Area.
10	C-3	●Commercial Ceiling[d] ●Mixed Use (Residential and Commercial)[e]	F.A.R. 2.5 F.A.R. 3.5	F.A.R. 3.0 F.A.R. 4.0	30.5 m west of Macleod Trail, 46 m east of Macleod Trail.	Terracing of west building elevation on sites west of Macleod Trail and improved pedestrian treatment along Macleod Trail segments of the Primary Pedestrian Circulation Corridor.
11	C-3	●Commercial Ceiling[d] ●Mixed Use (Residential and Commercial)[e]	F.A.R. 2.5 F.A.R. 3.0	F.A.R. 3.0 F.A.R. 3.5	30.5 m	Terracing of west building elevation and improved pedestrian treatment along Macleod Trail segments of the Primary Pedestrian Circulation Corridor.

SITE	EXISTING LAND USE DESIGNATION	RECOMMENDED LAND USE	BASE DENSITY[b] MAXIMUM WHEN BONUS SYSTEM IS NOT APPLICABLE (IN THE ORDER OF)	MAXIMUM DENSITY WITH BONUS (IN THE ORDER OF)	MAXIMUM[c] HEIGHT	SPECIAL CONSIDERATIONS
12A	C-3	●Commercial Ceiling[d] or Mixed Use[e]	F.A.R. 2.5	F.A.R. 3.0	30.5 m	Terracing of west building elevation and improved pedestrian treatment along Macleod Trail segments of the Primary Pedestrian Circulation Corridor.
12B	C-3	●Commercial Ceiling[d] or Mixed Use[e]	F.A.R. 2.5	F.A.R. 3.0	46 m	
13	R-1 R-2 RM-4	●Residential "Conservation Area"	Existing Designations	N/A	Existing Limits	Guidelines re siting/subdivision on blocks between 38th and 38A Avenues.
14	I-2	●Light Industrial	Existing Designations	N/A	12 m	
15	C-3	●Commercial	F.A.R. 3	N/A	46 m	

a. It is recommended that the City undertake redesignation procedures in conjunction with the Area Redevelopment Plan 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.

b. 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.

c. Maximum heights shall be reviewed on a site-specific basis, subject to the performance standards regarding direct sunlight and other development guidelines.

d. 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.

e. 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. However, it should be noted that none of the potential mixed use development sites in this Station Area have a mandatory residential component.

N/A Not Applicable

ii. Public Open Space

The creation of a node of higher intensity mixed use development shall necessitate the provision of public services and amenities like open space and recreational facilities. The City holds Site 5, a large property which is presently used for the impoundment of vehicles and animals. These facilities would not enhance the Station Area development node and their relocation should be investigated. When these facilities are satisfactorily relocated, this site should be considered for open space and recreational purposes in order to improve the environmental quality of the Station Area, providing a buffer from the rail tracks and heavier industry to the east. In conjunction with the recommended Area Redevelopment Plan process, the Planning and Parks/Recreation Departments shall study the amount of park space necessary as major redevelopment occurs. If all of Site 5 is not warranted for parks purposes, the A.R.P. process would determine the alternate use of the land, including its potential for mixed use development. Through the Area Redevelopment Plan process, the imposition of a redevelopment levy will be explored as a method to offset some of the park acquisition costs.

iii. Industrial Use

The trend in the existing industrial area is for the replacement of industrial uses with small-scale commercial projects on a random basis. This Plan recommends redesignation of most industrial lands within 400 m of the Station to commercial, residential and mixed uses consistent with the Study objectives relative to L.R.T. System usage and environmental quality.

For some of the industrial areas beyond the 400 m radius (Sites 7 and 14), it is recommended that the existing light industrial district be retained until the general transformation of the Station Area warrants a policy review. However, new light industrial development should be of a high environmental standard given the proximity of these sites to the Station Area development.

iv. Industrial/Commercial Transition

At the periphery of the 400 m radius from the Station site, there are intermediate sites which constitute a transitional zone where the existing light industrial district may be considered for

medium to high density commercial development in the future. This evolution to commercial development would require continuous and improved pedestrian circulation to the Station and integrated compatible development demonstrated either at the time of application or by future plans.

This transitional zone affects Site 9B which shall initially retain its industrial designation; however in the future it may be considered for higher density mixed use development. Similarly, Sites 6B and 8 could be considered for a change from their present industrial designation in the future, dependent on neighbouring development and site-specific review by the Planning and Transportation Departments. In the future, the highway-oriented commercial and industrial character of Site 4 may evolve to a mixed use type of development, subject to similar conditions.

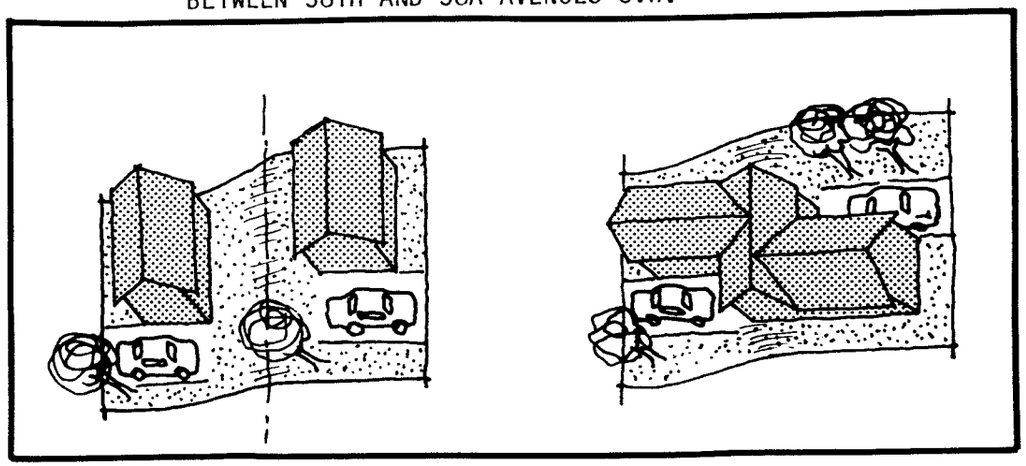
v. Established Communities

The established community of Parkhill/Stanley Park to the west of Macleod Trail has been designated as a "Conservation Area" in the Inner City Plan. It is recommended that the existing low to medium density residential land use districts be retained prior to the comprehensive Area Redevelopment Plan process.

During the planning process, the community has raised land use concerns regarding the relationship between the Macleod Trail commercial district and the low to medium density residential uses along Stanley Road. Special development guidelines for commercial development on Sites 10, 11, and 12A are recommended.

Within the community area, a set of development guidelines have been formulated to encourage the medium density residential block between 38th and 38A Avenue to unify the residential areas to its north and south. At present, 38th Avenue is used mainly as a car parking area while 38A Avenue serves mainly as a pedestrian street for residential units. It is intended that there be a pedestrian-oriented streetscape on both 38th and 38A Avenues, preventing 38th Avenue from becoming a parking lot only. The guidelines illustrated in Figure 26 would allow the subdivision of the existing lots (15.2 m by 45.7 m) into two lots (15.2 m by 22.8 m), subject to the approval of the Subdivision Officer. The effect of this subdivision would be to allow residential units to front on both 38 and 38A Avenues. An alternate guideline would be the use of building modules of 7.6 m in width without the subdivision of the lots. These building modules could be built through the depth of a 45.7 m lot and permit pedestrian access from both 38 and 38A Avenues.

FIGURE 26: DEVELOPMENT ALTERNATIVES FOR BLOCKS BETWEEN 38TH AND 38A AVENUES S.W.



c. CIRCULATION SYSTEMS

i. L.R.T. Station

The L.R.T. Station consists of two side-loading platforms with the entrance area located south of 39th Avenue. The opportunity exists within the Station to link with potential connections from surrounding private development, allowing comprehensive development in the Station Area to incorporate the platforms into their design.

ii. Bus Service

There is a need to develop an intensive east/west feeder bus network which will serve this Station since feeder buses generally deliver the vast majority of passengers to transit stations thereby reducing car traffic and its impact on adjacent communities. Current bus routes which travel through this area will be revised to connect with the L.R.T. Station. The bus routes will be finalized after discussions between the City Transportation Department and citizens in the district.

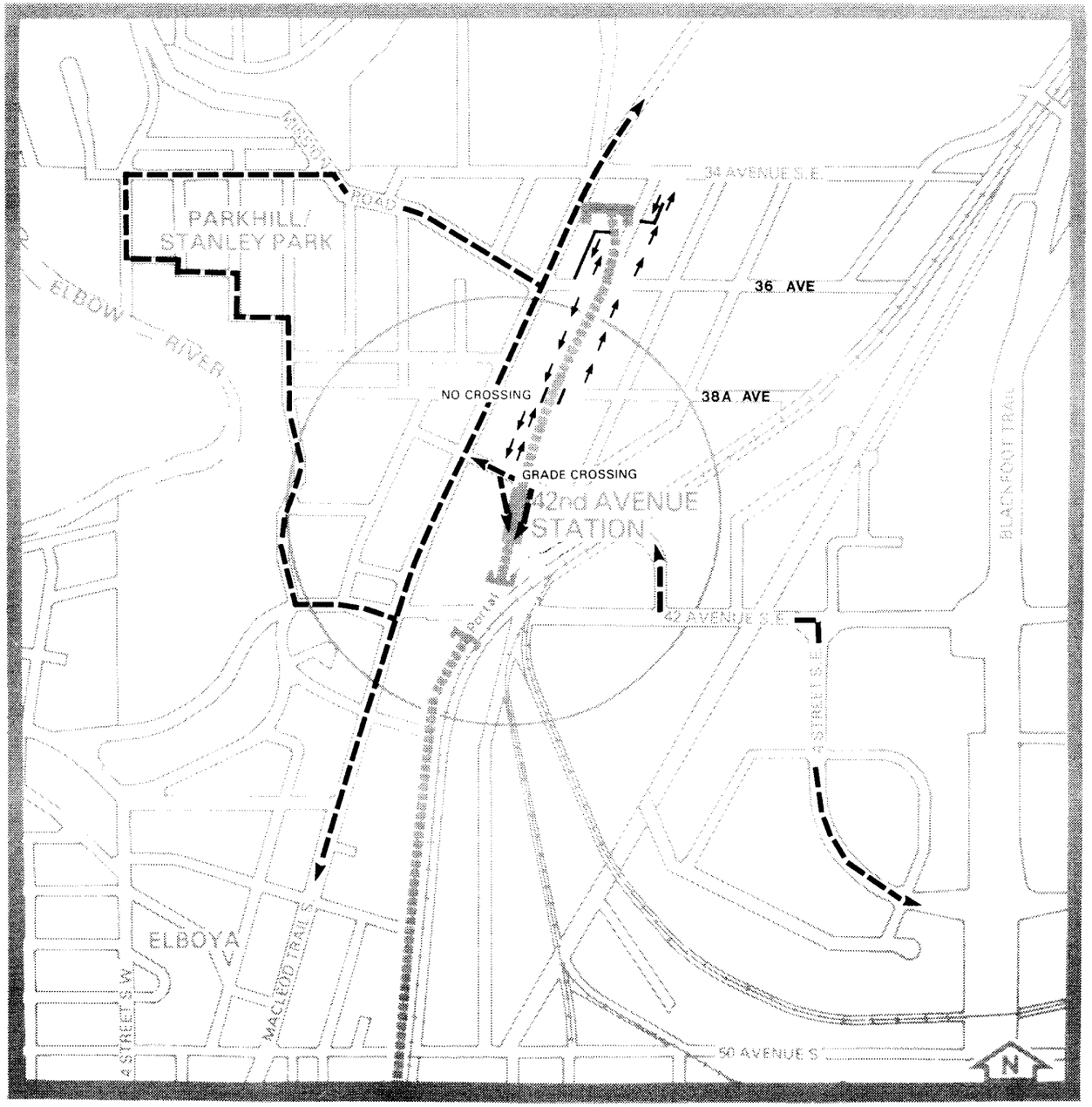
iii. Vehicular Circulation and Road Improvements

The road system in this area has undergone modification as a result of the surface alignment of the L.R.T. System from 34th Avenue to 42nd Avenue. The area is served by peripheral roads which form a loop around new development associated with the L.R.T. Station; that is, Macleod Trail and Blackfoot Trail constitute major north/south arteries and 42nd Avenue serves as the major east/west connector. To the north of this area, 34th Avenue is not affected by L.R.T. construction and continues to serve developments in the northern part of the Station Area. The Transportation Department indicates that there are limits on road capacity at the signalized intersections within the Station Area.

iv. Pedestrian Network

East of Macleod Trail will be a number of mandatory Primary Pedestrian Circulation Corridors, as illustrated in Map 16. New development east of Macleod Trail must accommodate these Primary Pedestrian Circulation Corridors with the inclusion of special development features such as arcades, malls, pedestrian rights-of-way or elevated streets.

These Primary Pedestrian Corridors generally follow the edges of the existing block pattern while the Secondary Corridors could include mid-block circulation routes. It is the intent of this range of pedestrian systems throughout the Station Area to focus movement within development on the L.R.T. Station, to foster pedestrian movement by appropriate building form and design and to provide alternatives to reduce the need for car movement in the Station Area.



L.R.T. ALIGNMENT & STATION

ROAD CLOSURE

DIRECTION OF TRAFFIC FLOW

BUS ROUTE*

* BUS ROUTES TO BE FINALIZED FOLLOWING PUBLIC PARTICIPATION PROGRAM WITH AFFECTED COMMUNITIES.

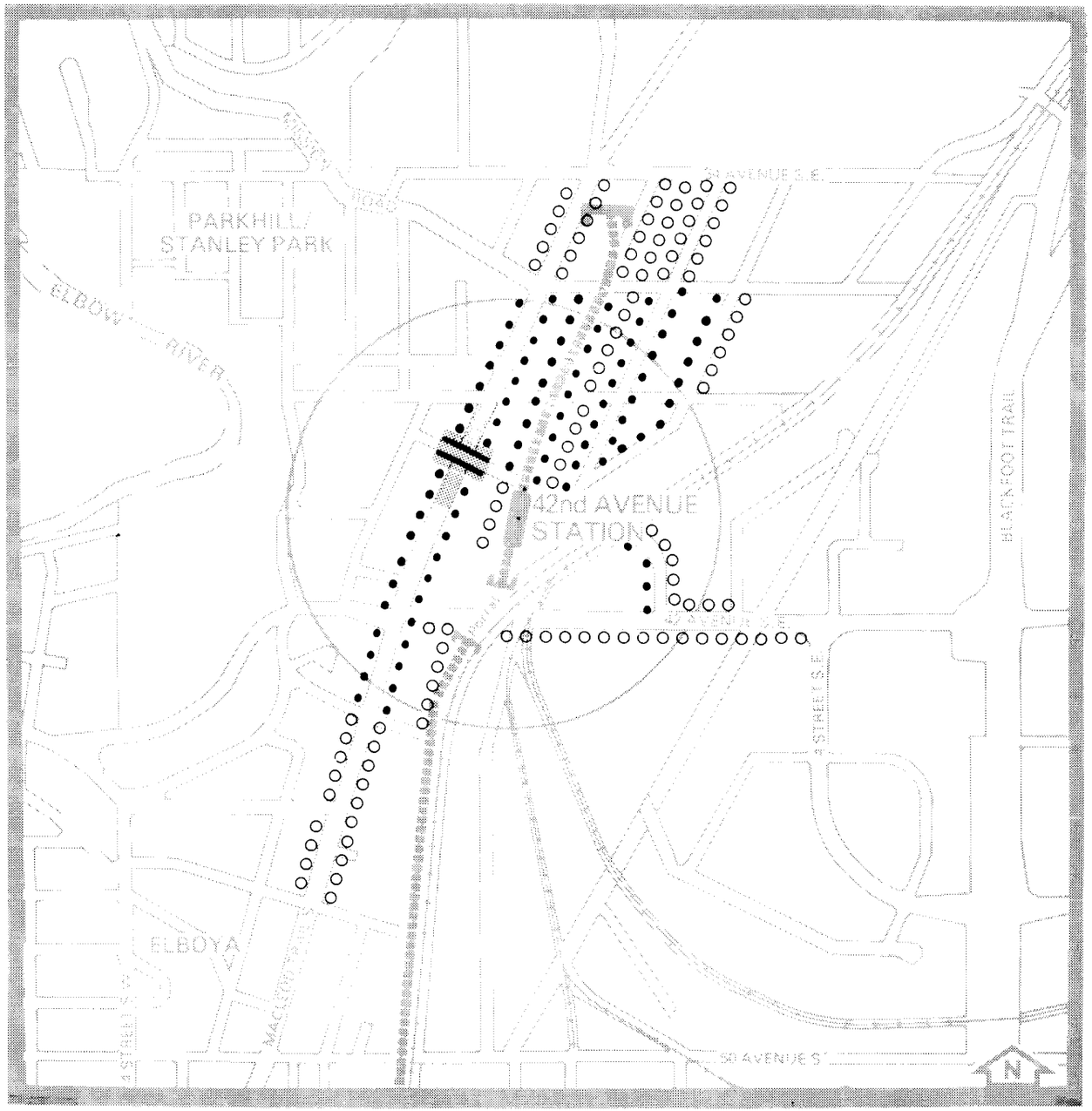
L.R.T. South Corridor Land Use Study

Vehicular Circulation & Improvements

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 14

42nd Avenue Station
October 1980



L.R.T. ALIGNMENT & STATION

PRIMARY PEDESTRIAN CIRCULATION CORRIDOR

SECONDARY PEDESTRIAN CIRCULATION CORRIDOR

PROPOSED PEDESTRIAN GRADE-SEPARATION

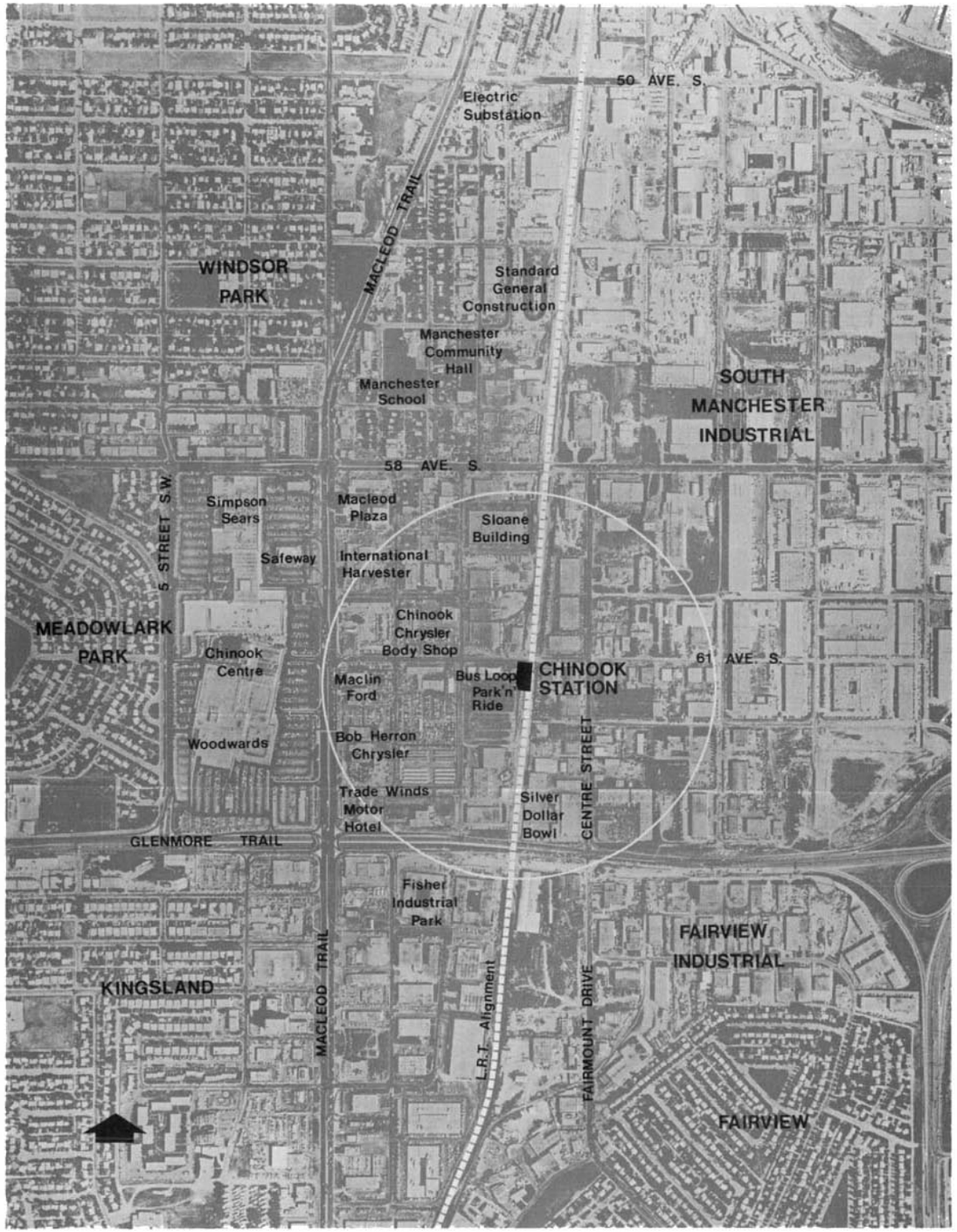
L.R.T. South Corridor Land Use Study

Pedestrian Circulation & Improvements

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 15

42nd Avenue Station
October 1980

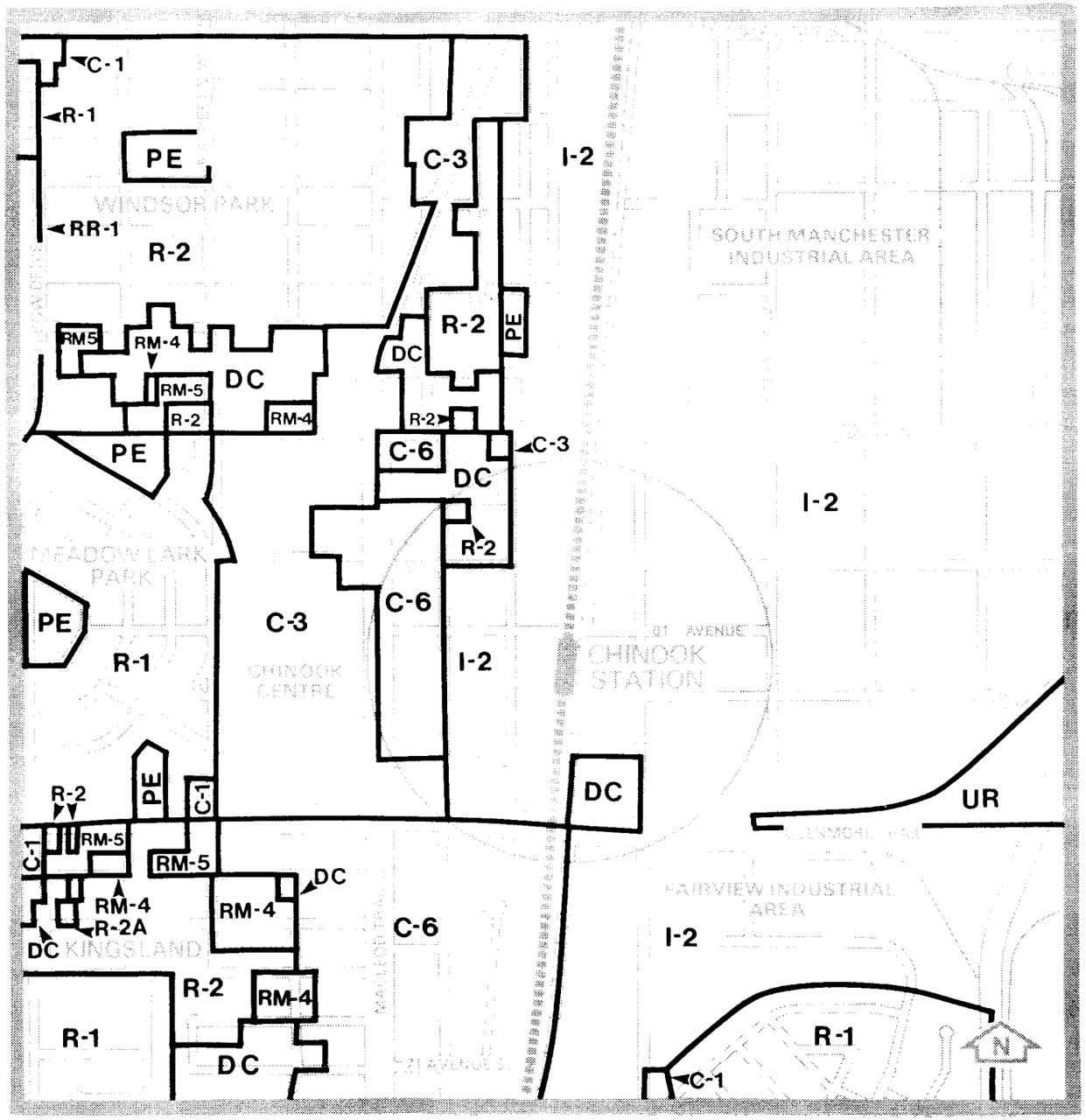


L.R.T. South Corridor Land Use Study

Chinook Station Area Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT
October 1980

4



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	Map 17	Chinook Station October 1980

4. Chinook Station Area

The Chinook Station is located approximately 5.5 km south of Downtown. The Station's Primary Impact Area includes land parcels located within the 400 m radius of the Station and the Manchester community to the north which lies outside the 400 m radius of the Station.

The Primary Impact Area is characterized by large under-utilized parcels with industrial uses abutting the railway tracks, and highway-oriented uses and automobile-related activity along Macleod Trail. In recent years, the whole area has experienced substantial development activities with the approval of new office buildings with ground floor retail space throughout the area. Office and industrial developments have significantly eroded the residential character of Manchester. In 1978, a large mixed use project with a significant residential component was approved by City Council in the existing industrial district within a five minute walking distance of the Station.

It is anticipated that the Chinook Station Area will emerge as the prime site for future development activities, particularly for mixed use projects, based on market analyses and factors such as proximity to major employment centres and major thoroughfares as well as the availability of large land parcels (Part III, Appendix I). However, it must be noted that the existing environmental quality presents concerns to future development, particularly for projects with a residential component. These environmental concerns include the industrial image of the area, noise from the adjacent major thoroughfares, additional traffic from new developments, particularly from commercial uses and lack of open space. Comprehensive development on large parcels may be necessary to overcome these negative environmental factors by providing superior design solutions and adequate amenities to overcome the negative environmental concerns in this area.

a. DEVELOPMENT CONCEPT

i. 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.

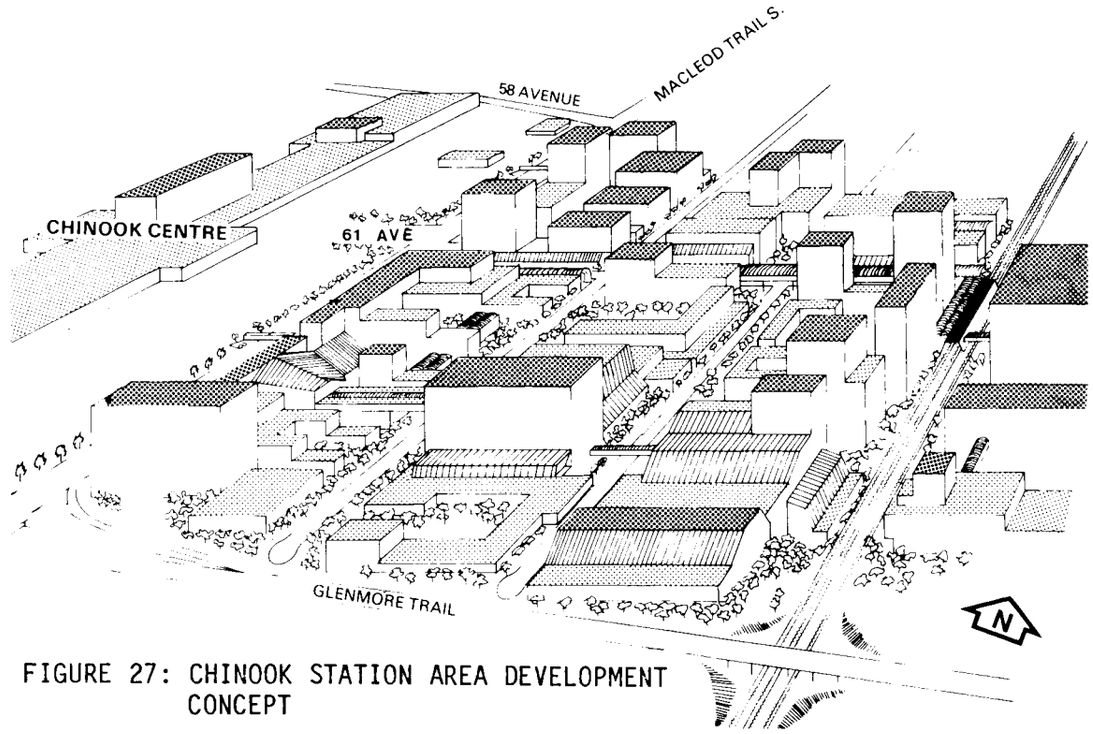


FIGURE 27: CHINOOK STATION AREA DEVELOPMENT CONCEPT

ii. The Chinook Station Area shall act as an important "subcentre" in providing additional employment opportunities to the region. The recommended land use policies, guided by the decentralization policy of the Growth Strategy in the Calgary General Municipal Plan, shall encourage the Area's restructuring to form a regional employment "subcentre". Similarly, the introduction of a significant residential component shall foster the achievement of the Calgary General Municipal Plan policies for residential concentration on major transit lines.

iii. Not only is the provision of a "subcentre" incorporating a diverse range of activities important but also the functional integration of these uses through movement linkages is critical. The introduction of an integrated pedestrian circulation network within the mixed use district has been strongly recommended and emphasized as part of the Station Area Plan strategy. The recommended movement system will consider the pedestrian linkages, roadway and access improvements and other related policies.

b. RECOMMENDED LAND USE AND DEVELOPMENT GUIDELINES

i. High Density Mixed Use

The location and mix of commercial uses in the Chinook Station have been influenced by the constraints of available road network capacity and site access as outlined by the Transportation Department (Part III, Appendix G).

High density mixed use development is recommended adjacent to the Station and along the 61st Avenue pedestrian spine (Site 1). In order to optimize the L.R.T. ridership potential, to ensure housing opportunities and to provide vitality in the Station Area, approximately half of the floor area in new development must be in residential use, subject to Council's direction that the recommended minimum proportion of residential use as a mandatory requirement of mixed use development be made flexible to accommodate individual projects. Wherever possible, provision of senior citizens' housing adjacent to the Station shall be explored.

Due to the pedestrian-oriented nature of the Station Area and the roadway access and capacity constraints, the commercial uses should not be oriented to heavy traffic exposure and volumes like regional shopping centres and car-oriented services. In general, retail uses should be limited to the first or second level and be located along major pedestrian spines. Commercial activity should be primarily office uses with some opportunities for hotel and entertainment uses integrated into comprehensive developments.

On Site 5, at the corner of Glenmore Trail and Centre Street in the existing industrial area, a mixed use project with a significant residential component to an overall F.A.R. of 3.49 was approved by City Council in 1978.

ii. Medium Density Mixed Use

For the areas abutting the high density mixed use district (Sites 2 and 4), it is recommended that commercial uses, primarily offices, be permitted to a maximum ceiling of an F.A.R. of 2. Although not mandatory, the introduction of a residential component in a mixed use development is encouraged through a density bonus of an overall maximum F.A.R. of 3, if approximately one-third or more of the floor area is residential. A similar commercial ceiling of an F.A.R. of 2 is recommended for the presently industrial site south of Glenmore Trail east of the tracks (Site

8), with the overall mixed use development potential of an F.A.R. of 3 if one-third of the floor area is residential. A maximum commercial F.A.R. of 1.5 is recommended for the Manchester area in Site 11. However, mixed use development to a maximum F.A.R. of 3 would be permitted if projects included approximately one-third residential space.

iii. High Density Commercial Use

Adjacent to Macleod Trail within the Station Area (Site 3), high density commercial uses from a base level of an F.A.R. 2 to a maximum F.A.R. of 3 are recommended. This segment of the Macleod Trail commercial strip should benefit from its exposure to the major thoroughfare and to the transit and pedestrian-oriented development node around the Station.

iv. Medium Density Commercial Use

The area east of the rail tracks south of 58th Avenue (Site 6) is recommended for a medium density commercial ceiling of an F.A.R. of 2.

v. Regional Shopping Centre and Highway-Oriented Commercial Use

It is recommended that all highway-oriented commercial uses be directed away from the Station and be located along the major thoroughfares. Therefore, the Chinook Shopping Centre and Macleod Trail highway commercial strip, both north of 58th Avenue and south of Glenmore Trail (Sites 10 and 12) should retain their present land use designations and type of development.

vi. Industrial Uses

High quality industrial uses which are visually attractive and environmentally compatible with the Station and adjacent uses are recommended east of Centre Street and adjacent to the C.P.R. tracks outside the 400 m radius of the Station. Labour-intensive industrial activities which would not require extensive outdoor display and storage areas and are compatible with adjoining uses shall be supported in the industrial areas of Sites 7, 9, 13 and 14.

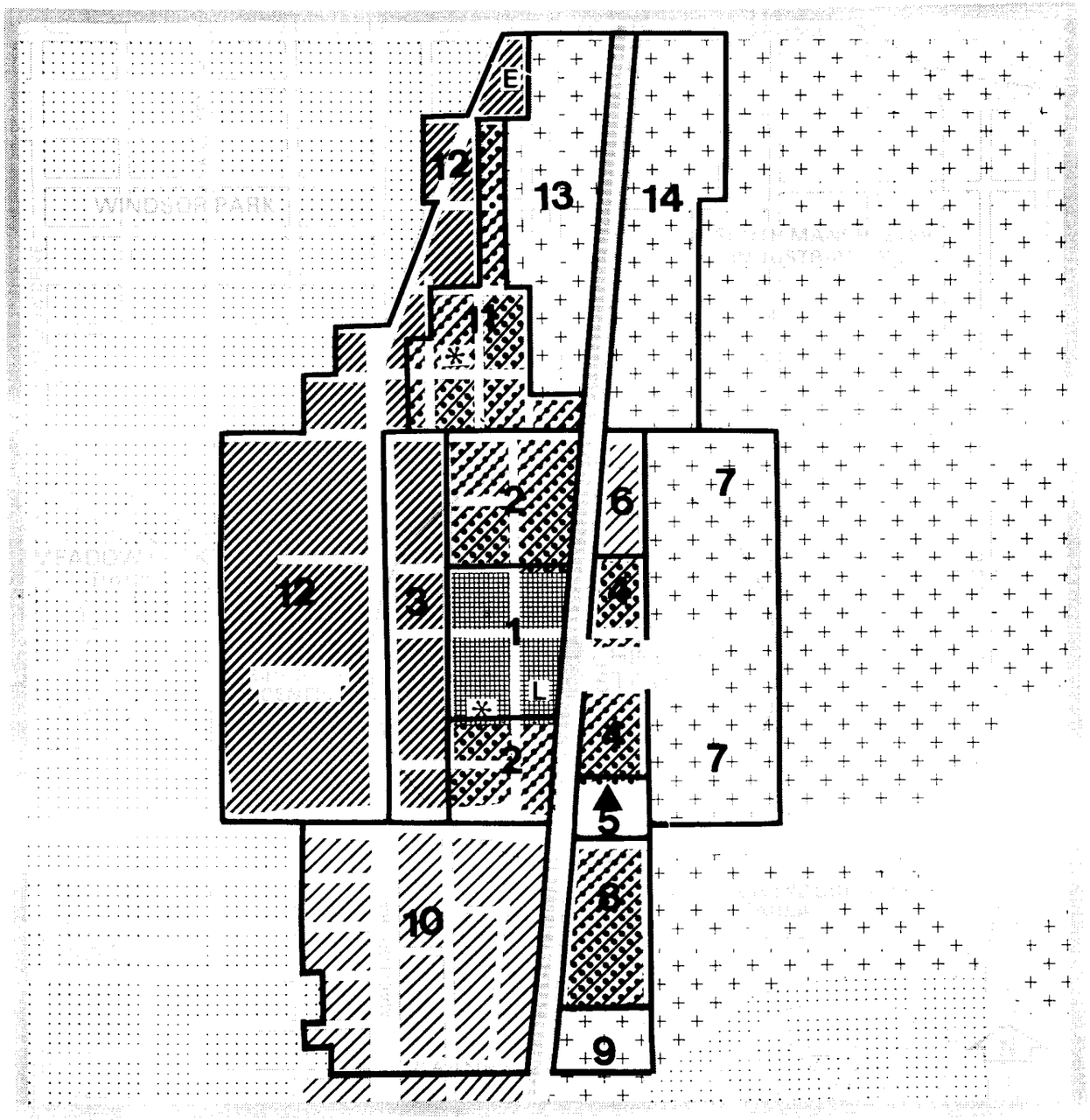
Within 400 m of the Station, the existing low density and/or heavy industrial uses shall be encouraged to relocate by the land use recommendations for higher density development.

vii. Established Communities of Windsor Park and Meadowlark Park

No land use changes in the established residential communities of Windsor Park and Meadowlark Park are recommended as a result of this L.R.T. Land Use Study.

viii. Open Space and Community Facilities

The Manchester Public School site (1.24 ha) was the community's only school until 1973 when it was closed due to low enrolment. It is currently used as one of the Public School Board's area offices. A City-owned open space (0.16 ha) occupied by the Community Hall has not been in active use due to the dissolution of the Manchester Community Association, which was caused by a rapid decline in area population.



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

Map 18

Chinook Station

October 1980

FIGURE 28 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[c] 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)[e]	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 260 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	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[c] 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	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	

a. 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.

b. 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.

c. Maximum heights shall be reviewed on a site-specific basis, subject to the performance standards regarding direct sunlight and other development guidelines.

d. 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.

e. 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.

N/A Not Applicable

Based on the land use recommendations, future population and employment are expected to increase. Since this future population is expected to be adult-oriented, the planned open space requirements should offer a place for informal physical activity. It is, therefore, proposed that a mini-park (0.4 to 0.6 ha) be provided north of 58th Avenue in the vicinity of the school site. The existing open space should not be disposed of until an alternate site has been established. Another mini-park of similar size should also be provided in the high density mixed use district south of 58th Avenue in the vicinity of the Station.

Preliminary discussions with the Parks/Recreation Department indicate that while the Department does not currently have plans for the construction of a "leisure centre", the Chinook Station Area would be examined a possible location. The "leisure centre" could include a variety of recreational and cultural activities catering to the future population of the Station Area and adjoining communities. The "centre" could be integrated with future redevelopment occurring over the Park 'n' Ride site so a feasibility study for the inclusion of a "leisure centre" facility should be considered for any future development on this site.

c. CIRCULATION SYSTEMS

i. L.R.T. Station and its Related Facilities

The Chinook L.R.T. Station site is bounded by 61st Avenue to the north, 1A Street to the west, and the C.P.R. tracks to the east, occupying an area of approximately 1.92 ha. The Station will provide bus and passenger drop-off facilities. The Park 'n' Ride lot will accommodate approximately 350 parking stalls. The Station will be an end-loading platform with access by an escalator from the north end of the Station.

The Station has been designed to take into account the redevelopment potential of the site. The Park 'n' Ride and other related facilities may be integrated into future new developments adjacent to the site or relocated within the adjacent industrial area, thus releasing that part of the site for possible future redevelopment. It is recommended that the Land Department, in consultation with other Civic Departments, actively explore the opportunities to acquire additional parking sites east of the tracks in the industrial area.

Vehicular access would be primarily via Macleod Trail, 61st Avenue and Glenmore Trail from the west and south, and via Centre Street and 61st Avenue from the east, with the major entrance to the Station from 1A Street. Initially, pedestrian access would be predominantly from 61st Avenue via an at-grade crossing of the C.P.R. and L.R.T. tracks. Future connections over the tracks could be provided when redevelopment occurs on the east side of the tracks. The at-grade pedestrian route will ultimately be supplemented by an interior upper level pedestrian link continuing along the alignment of the existing overhead bridge, as an integral part of comprehensive redevelopment of the blocks between the Station and Macleod Trail.

ii. Bus Service

The bus and L.R.T. System shall be integrated to facilitate and encourage the use of public transit. The existing bus routes shall be re-examined to feed into the Chinook Station. The planned changes in Calgary Transit routes shall be discussed with the affected communities prior to the formulation of the final plans. The need to provide shuttle bus service linking the Chinook Station and Chinook Shopping Centre with the adjoining residential neighbourhoods and industrial sites should be examined to co-ordinate with the operation of the L.R.T. System.

iii. Vehicular Circulation and Network Improvements

Macleod Trail and Blackfoot Trail will remain the most significant north-south arterial roads to Downtown through the Chinook Primary Impact Area. East-west service is provided by Glenmore Trail and 58th Avenue South.

The Transportation Department has indicated that the existing traffic volumes along Macleod Trail would pose severe limitations if a significant portion of the Station Area were to be redeveloped to its maximum ultimate development potential. The major problem is the limited capacity of Macleod Trail, particularly at its critical intersections with 61st and 58th Avenues and Glenmore Trail. In peak hours, the road is already operating at almost full capacity at some intersections. The approved and planned network improvements will augment the capacity of the system to some extent to allow additional trips to be accommodated in this Station Area. It must be stressed that the programs for transportation improvements would have to be co-ordinated with future redevelopment, particularly for those uses that rely heavily on Macleod Trail for primary access. It is anticipated that, with the approved and proposed road improvements, the transit-oriented development guidelines and other appropriate access modifications, the recommended development potential would be allowed, particularly for parcels adjacent to the Station. The key roadway improvements evaluated in the Chinook Station Primary Impact Area include (Part III, Appendix G):

- interchange at Glenmore Trail and Fairmount Drive (under construction);
- grade-separation of Glenmore Trail and the C.P.R./L.R.T. tracks (under construction);
- interchange at Glenmore Trail and 5th Street S.W. (proposed for the period 1987 - 1996);
- widening of Centre Street (in conjunction with the interchange construction at Glenmore Trail and Fairmount Drive) and widening of 61st Avenue South; and
- geometric improvements at 61st Avenue and Macleod Trail as well as at 50th Avenue and Macleod Trail.

Deterioration of existing streets is prevalent in the Primary Impact Area so improvements should be undertaken to bring them up to normal City standards.

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

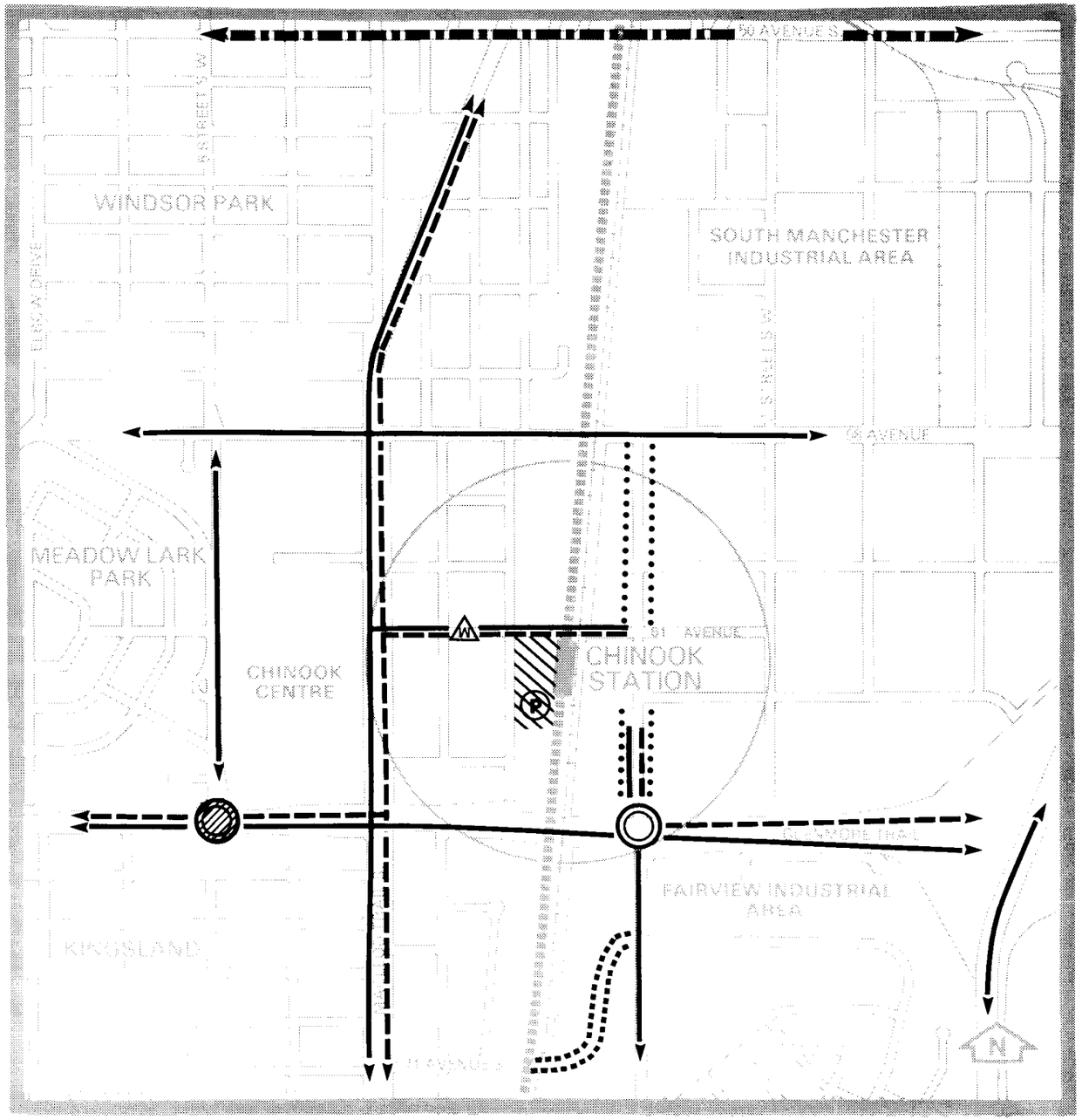
BUS ROUTES*

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 19

Chinook Station

October 1980

iv. Pedestrian Circulation and Improvements

The future of the Station Area shall be increasingly directed towards activities oriented to pedestrians and riders of public transit. In the development concept, connectivity and integration of the various facilities through the Station Area have been given the greatest emphasis. The Plan proposes to foster the creation of a safe, convenient and pleasant pedestrian network connecting the major facilities through a system of pedestrian linkages both at-grade and above-grade as shown in Map 20.

The Primary Pedestrian Circulation Corridor would follow 61st Avenue which should be enhanced by improved at-grade widths and landscaping as adjacent redevelopment proceeds. This would be supplemented by an interior upper level pedestrian link south of 61st Avenue as redevelopment occurs such that this Primary Pedestrian Circulation Corridor is provided. The above-grade public pedestrian connection should have an easement of a minimum width of 4.9 m to link the Station with the existing overhead footbridge over Macleod Trail at the mid-point of the blocks. Future redevelopment should accommodate and enhance the recommended and existing pedestrian system in the Station Area. The detailed plans for grade-separated crossings of Macleod Trail shall be determined during the recommended Area Redevelopment Plan process.

The City, in consultation with the Chinook Shopping Centre management, should examine the feasibility of:

- constructing another overhead pedestrian bridge over Macleod Trail in the vicinity of the Sears department store to facilitate pedestrian movement generated from areas lying north of 61st Avenue; and

- improving the pedestrian environment from the existing pedestrian overpass to the nearest entrance of the Chinook Shopping Centre. Provision of a pleasant and sheltered walkway through the existing parking lots could be one solution.

Standard sidewalks should be constructed throughout the Station Area under the Local Improvement By-law. Also, any deteriorated sidewalks should be repaired or replaced.

L.R.T. ALIGNMENT & STATION

PRIMARY PEDESTRIAN CIRCULATION CORRIDOR

MAJOR PEDESTRIAN DESIRE LINES

PUBLIC IMPROVEMENT (SIDEWALKS)

B 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

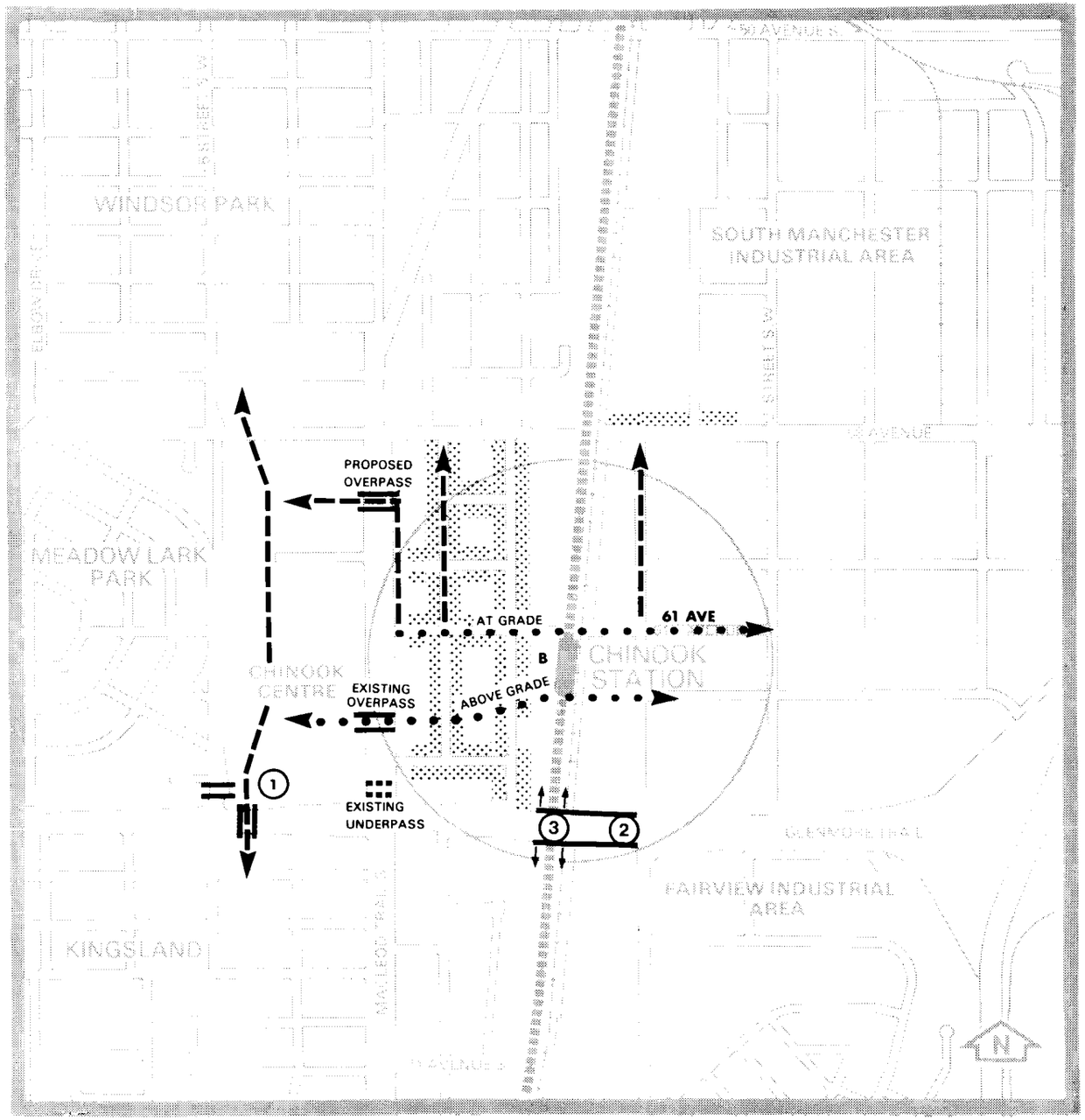
L.R.T. South Corridor Land Use Study

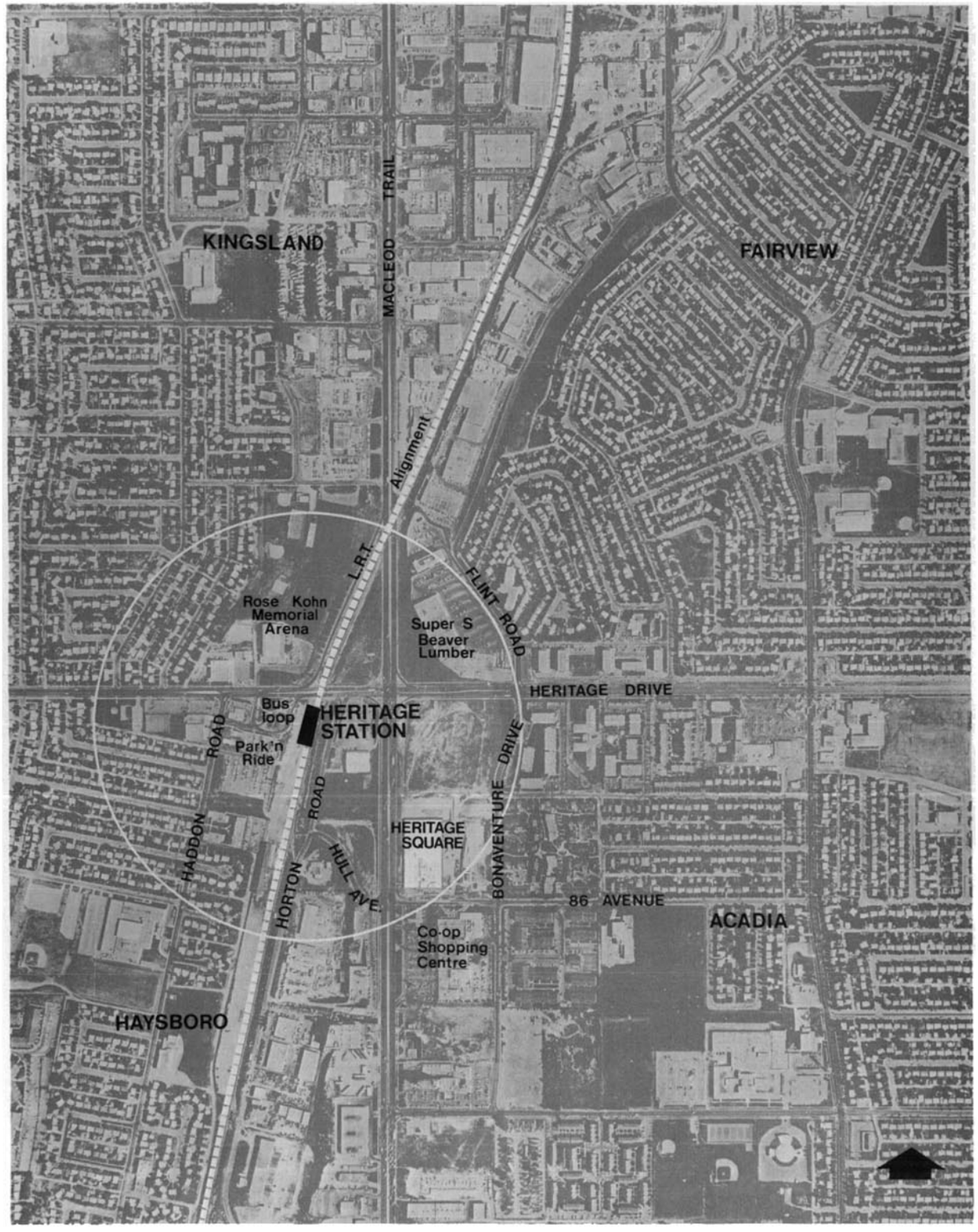
Pedestrian Circulation & Improvements

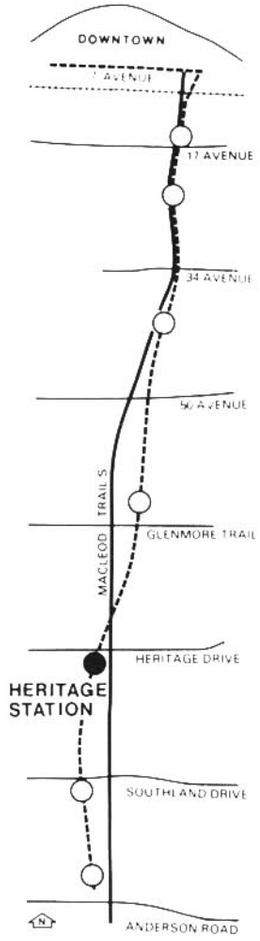
THE CITY OF CALGARY PLANNING DEPARTMENT

Map 20

Chinook Station October 1980





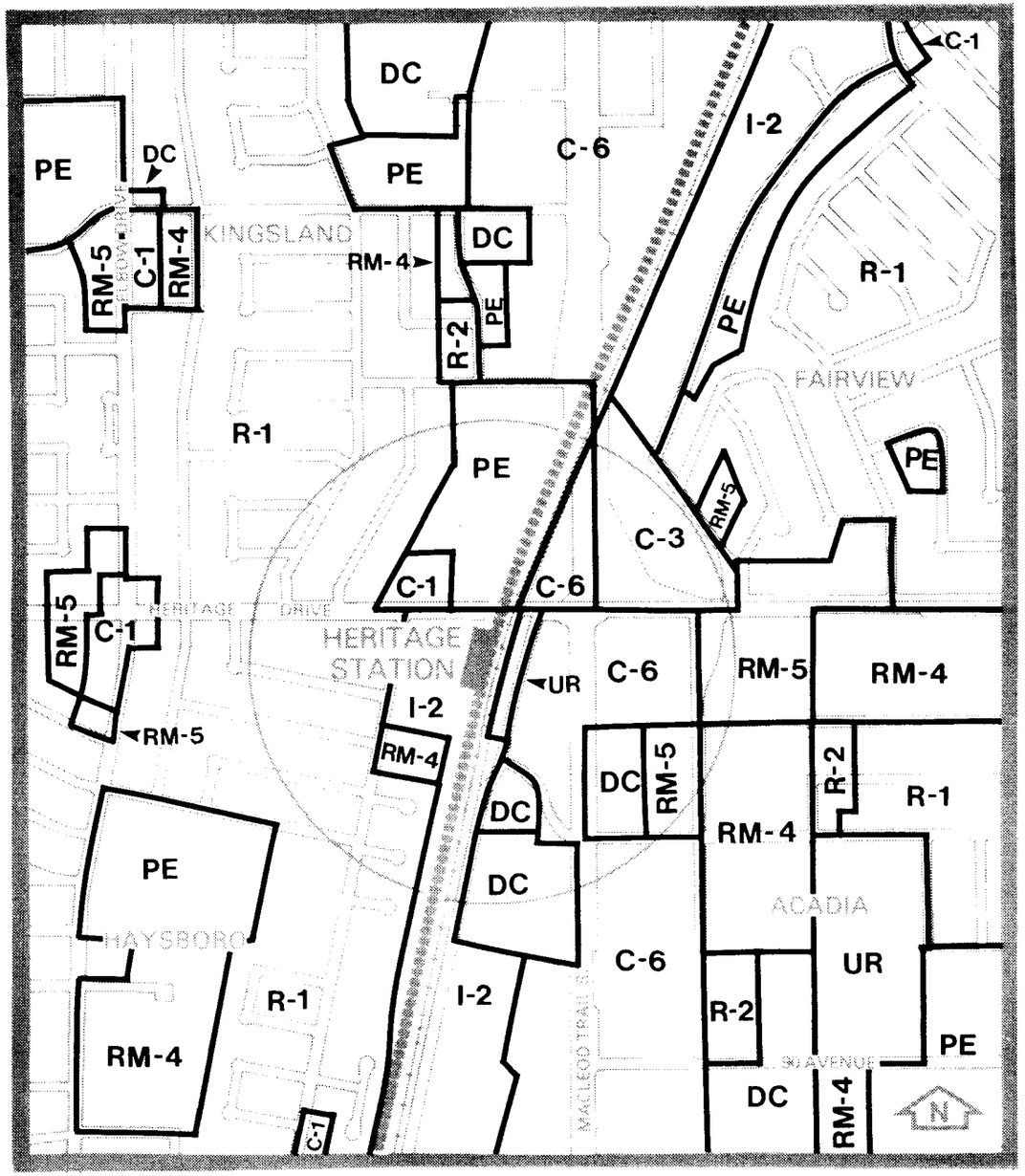


L.R.T. South Corridor Land Use Study

Heritage Station Area Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT
October 1980

5



SUBJECT TO CITY OF CALGARY LAND USE BYLAW

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 - 12m - density 395 u.p.h.* (160 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.
UR	Urban Reserve District
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	Map 21	Heritage Station October 1980

5. Heritage Station Area

The Heritage L.R.T. Station, 7.2 km south of the Downtown, introduces a new transportation mode to the surrounding suburban residential neighbourhoods of Haysboro, Kingsland, Fairview and Acadia, the Macleod Trail highway commercial district and the Haysboro Industrial Park. Due to the improved accessibility, the existing low density and vacant parcels adjacent to Macleod Trail and the Station Area are coming under increased pressure for change.

a. DEVELOPMENT CONCEPT

The Heritage Station Area presents a significant opportunity for a node of higher intensity development straddling Macleod Trail and linked to the L.R.T. Station. Mixed use development would be encouraged to provide a range of commercial and residential uses to contribute to the vitality of the Station Area. To foster the proper functioning of the Station Area, the pedestrian network should be integrated with the new comprehensive developments on both sides of Macleod Trail, ensuring a convenient linkage to the Station from the west. The design of new development must overcome the negative environmental conditions attributable to the proximity to both Macleod Trail and the rail lines. Also new development must be sensitive to the transition in scale and character from the adjacent stable, low density residential communities.

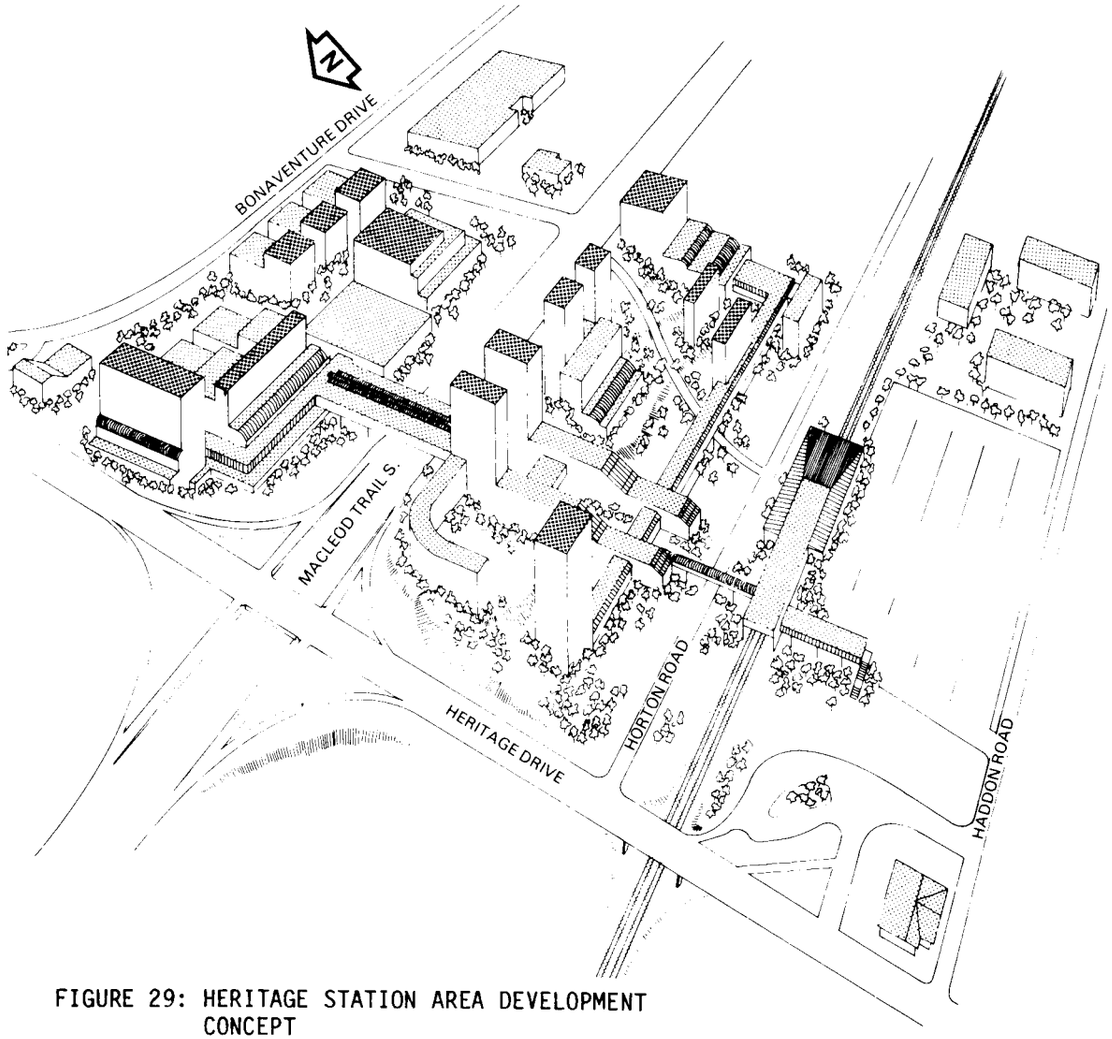
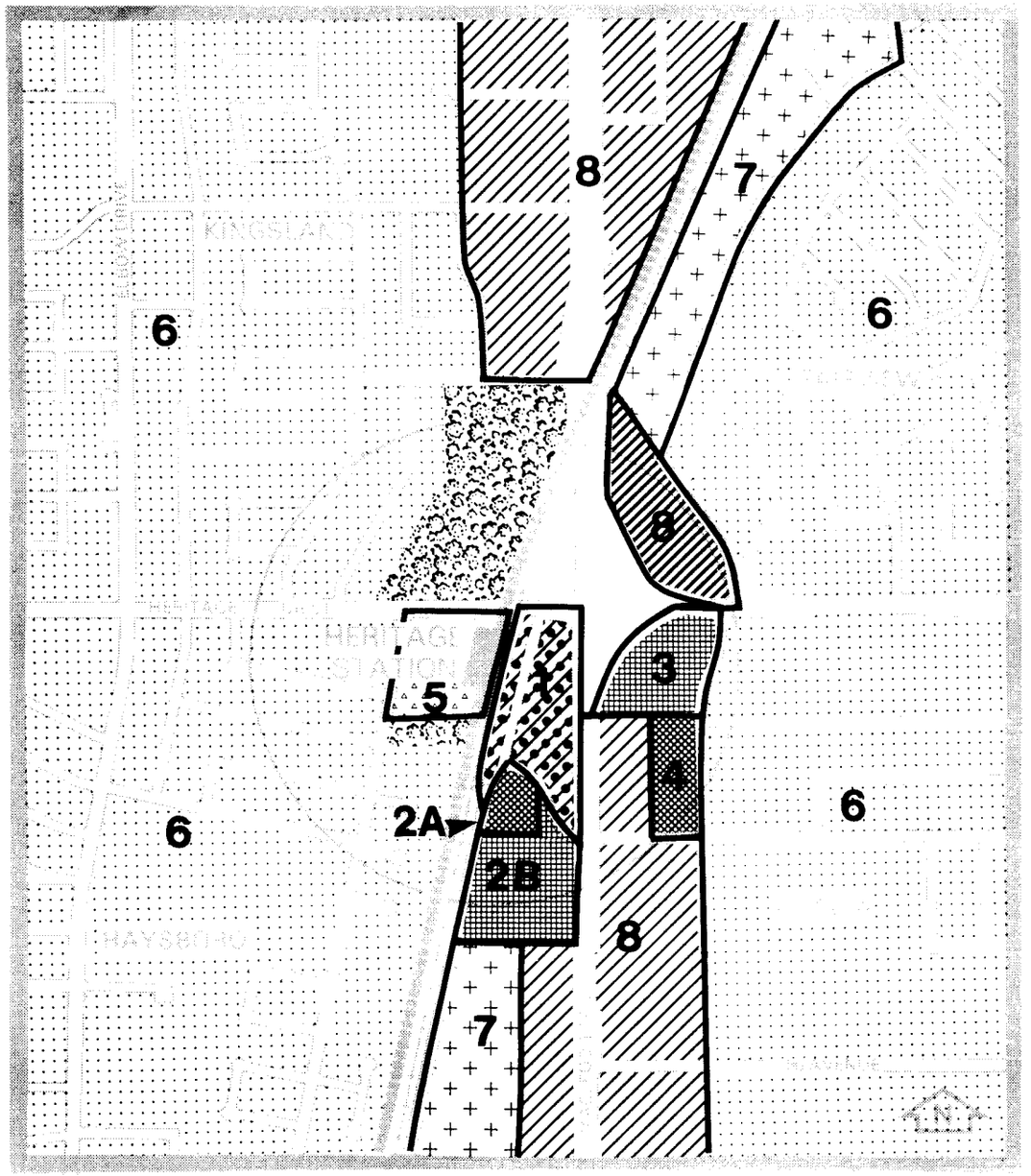


FIGURE 29: HERITAGE STATION AREA DEVELOPMENT CONCEPT



HIGH DENSITY MIXED USE

HIGH DENSITY COMMERCIAL

MEDIUM DENSITY COMMERCIAL

HIGH DENSITY RESIDENTIAL

RESIDENTIAL BONUS: MEDIUM TO HIGH DENSITY RESIDENTIAL

CONTINUATION OF EXISTING LAND USE DESIGNATION

LIGHT INDUSTRIAL

MAJOR OPEN SPACE/RECREATIONAL FACILITIES

L.R.T. RELATED FACILITIES

L.R.T. South Corridor Land Use Study

Generalized Land Use Concept Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 22

Heritage Station
October 1980

b. RECOMMENDED LAND USE AND DEVELOPMENT GUIDELINES

i. High Density Mixed Use

The prime sites along Macleod Trail east of the rail tracks can realize their potential for commercial and residential development through their recommended designation for high density mixed use.

On Sites 1 and 2B located between Macleod Trail and the rail lines, it is recommended that commercial development may proceed to a ceiling of an F.A.R. of 2, in a totally commercial complex or, optionally, in combination with residential use to a maximum mixed use F.A.R. in the order of 4. In February of 1980, City Council approved a land use amendment on the site at the southeast corner of Hull Avenue and Horton Road (Site 2A) for a high density residential complex of an approximate F.A.R. of 4. In September of 1980, City Council also approved a land use amendment on Site 2B to the south for a major mixed use complex incorporating residential, retail, hotel and office components to an overall F.A.R. of 3.

For the City-owned Site 3 east of Macleod Trail, comprehensive mixed use development is recommended with a major residential component in combination with commercial office uses. There would be some flexibility in the recommended minimum proportion of residential use as a mandatory requirement of this mixed use development to accommodate an individual project. In conjunction with the new office development to the south, there is the potential for this complex to provide a retail mall connecting with the Macleod Trail pedestrian overpass. In the future, the comprehensive development of this site should also recognize the potential for integration with the Police District C Office to be located on the southwest corner of Bonaventure Drive and Heritage Drive.

ii. Medium to High Density Residential Use

Medium to high density residential development on Site 4, integrated with the new Heritage Square office-entertainment complex on Macleod Trail, would contribute to the mixed use character of the Station Area as well as providing an appropriate scale and type of development with respect to the adjacent townhouses in Acadia.

iii. Established Residential Communities

The suburban residential character of the stable communities of Haysboro, Kingsland, Fairview and Acadia should be respected through the retention of their existing low to medium density residential designations.

iv. Macleod Trail Highway Commercial Use

The highway commercial district along Macleod Trail serves a vital function so the existing land use designations should remain beyond the 400 m radius.

v. Low Density Industrial Use

In the older Haysboro and Fairview Industrial Parks, the existing light industrial designation of I-2 should continue outside the 400 m radius. The Haysboro Industrial Park is undergoing a gradual transition to low and medium density commercial office uses which are more appropriate in the area intervening between the Heritage and Southland Station Area nodes and would provide a better interface with the new development types.

FIGURE 30 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[c] HEIGHT	SPECIAL CONSIDERATIONS
1	C-6	●Commercial Ceiling[d] ●All Residential ●Mixed Commercial and Residential[e]	F.A.R. 2 F.A.R. 2 F.A.R. 2	N/A F.A.R. 4 F.A.R. 4	46 m	Development must integrate east/west and north/south Primary Pedestrian Circulation Corridors. Building form should allow penetration of views from sites east of Macleod Trail.
2A	D.C. (R-5)[f]	●Residential Use (Approved by City Council in February 1980)	F.A.R. 3.79 or 450 units per hectare (180 units per acre)	N/A	46 m	Development guidelines as approved including pedestrian connections.
2B	D.C.	●Mixed Commercial and Residential (Approved by City Council in September 1980)	F.A.R. 3	N/A	46 m Subject to standards regarding direct sunlight on Haysboro residential district.	Development must integrate north/south Pedestrian Circulation Corridor. Building form should allow penetration of views from sites east of Macleod Trail.
3	C-6	●Mixed Commercial and Residential Use (Minimum of Approximately Half Residential)[e]	F.A.R. 2	F.A.R. 4	Maximum of 46 m scaled down to 12m along Bonaventure Drive, subject to standards regarding direct sunlight on Acadia residential district.	Potential integration of development with Police District Office and mall continuing Macleod Trail pedestrian overpass.

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[c] HEIGHT	SPECIAL CONSIDERATIONS
4	RM-5	•Residential	210 units/hectare (85 units/acre)	321 units/ hectare (130 units/ acre)	Maximum of 30.5 m at distance of 46 m west of Bonaventure Drive scaled down to 12 m along Bonaventure Drive, subject to standards regarding direct sunlight on Acadia residential district.	Proper interface with commercial phase.
5	I-2	•Municipal Uses including L.R.T. Facilities Clinic and Playground	N/A	N/A	N/A	--
6	R-1, R-2, RM-4, RM-5	•Haysboro, Kingsland, Fairview, Acadia Residential	Existing Designations	N/A	Existing Limits	--
7	I-2	•Light Industrial	Existing I-2	N/A	Existing 12 m	Review of projects regarding treatment along L.R.T. alignment and relationship with adjacent new Station Area development.
8	C-6 C-3	•Commercial	Existing C-6 and C-3	N/A	Existing limits	Review of projects considering potential connection to pedestrian network focussed on Station.

a. It is recommended that the City undertake redesignation procedures 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.

b. 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.

c. Maximum heights shall be reviewed on a site-specific basis, subject to the performance standards regarding direct sunlight and other development guidelines.

d. 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.

e. 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. On Sites 2A and 2B, Council has approved specific land use amendments requiring residential development. Residential use would be a mandatory component of mixed use development on Site 3, being optional on Site 1.

f. Some D.C. guidelines remain based on districts from Development Control By-law #8600.

N/A Not Applicable

vi. L.R.T. Station and Facilities

The Heritage L.R.T. System facilities are located on Reserve land, designated prior to the Planning Act (1963), which has allowed its use for municipal purposes. Therefore, it is recommended that Site 5 be redesignated to reflect its municipal uses for the L.R.T. facilities, the Health and Dental Clinic and the public playground.

c. CIRCULATION SYSTEMS

i. L.R.T. Station and Facilities

The Heritage Station is comprised of a centre-loading platform with access from west of the trackage by means of escalators near the mid-point of the platform. Half of the platform is enclosed as is the fare processing area. Associated with the Station will be the bus loop, the Kiss 'n' Ride stalls, and the Park 'n' Ride lot accommodating 330 vehicles. The principal vehicular access shall be from Haddon Road, similar to the present Blue Arrow arrangement. In the future, the operation of the L.R.T. facilities should be monitored to ascertain whether additional facilities would be necessary.

ii. Bus Service

Calgary Transit is planning to integrate its bus and L.R.T. services, requiring the re-orientation of some bus routes to provide feeder service focussed on the Heritage Station. Preliminary plans for these changes are presently being formulated by the Transportation Department, which will lead to an extensive public participation program with the affected communities prior to route changes.

iii. Vehicular Circulation and Network Improvements

In the Heritage Station Area, the grade-separation of Macleod Trail above the combined rail alignments is scheduled for completion by the commencement of the L.R.T. System's operation in 1981. Interchanges of Macleod Trail at both Southland Drive and Heritage Drive are planned but are not included in the next ten year program of the Transportation Improvement Priority Study - Update (May, 1979). However, if the recommended level of development in the Station Area proceeds, it will be necessary to re-evaluate the priority of these interchanges.

Based on the present analyses of the Transportation Department, the design of the future interchange of Macleod Trail and Heritage Drive should allow Horton Road to remain open. Horton Road and Bonaventure Drive will serve the development sites since the interchange will disallow direct access from Macleod Trail to sites between Heritage Drive and Hull Avenue/86th Avenue.

Road closures may be necessary to consolidate two sites including:

- the unused right-of-way of Hull Avenue/84th Avenue (Site 1), and

- the road connecting Heritage Drive and Macleod Trail north of the rail alignment (Rose Kohn Arena Complex).

iv. Pedestrian Circulation

The pedestrian circulation system, as outlined in Map 24, shall be a vital element in the functioning of the Station Area.

L.R.T. ALIGNMENT & STATION

L.R.T. STATION FACILITIES

ENTRANCE

PROPOSED INTERCHANGE

OVERPASS UNDER CONSTRUCTION

PROPOSED OVERPASS

BUS ROUTES*

* BUS ROUTES TO BE FINALIZED FOLLOWING PUBLIC PARTICIPATION PROGRAM WITH AFFECTED COMMUNITIES.

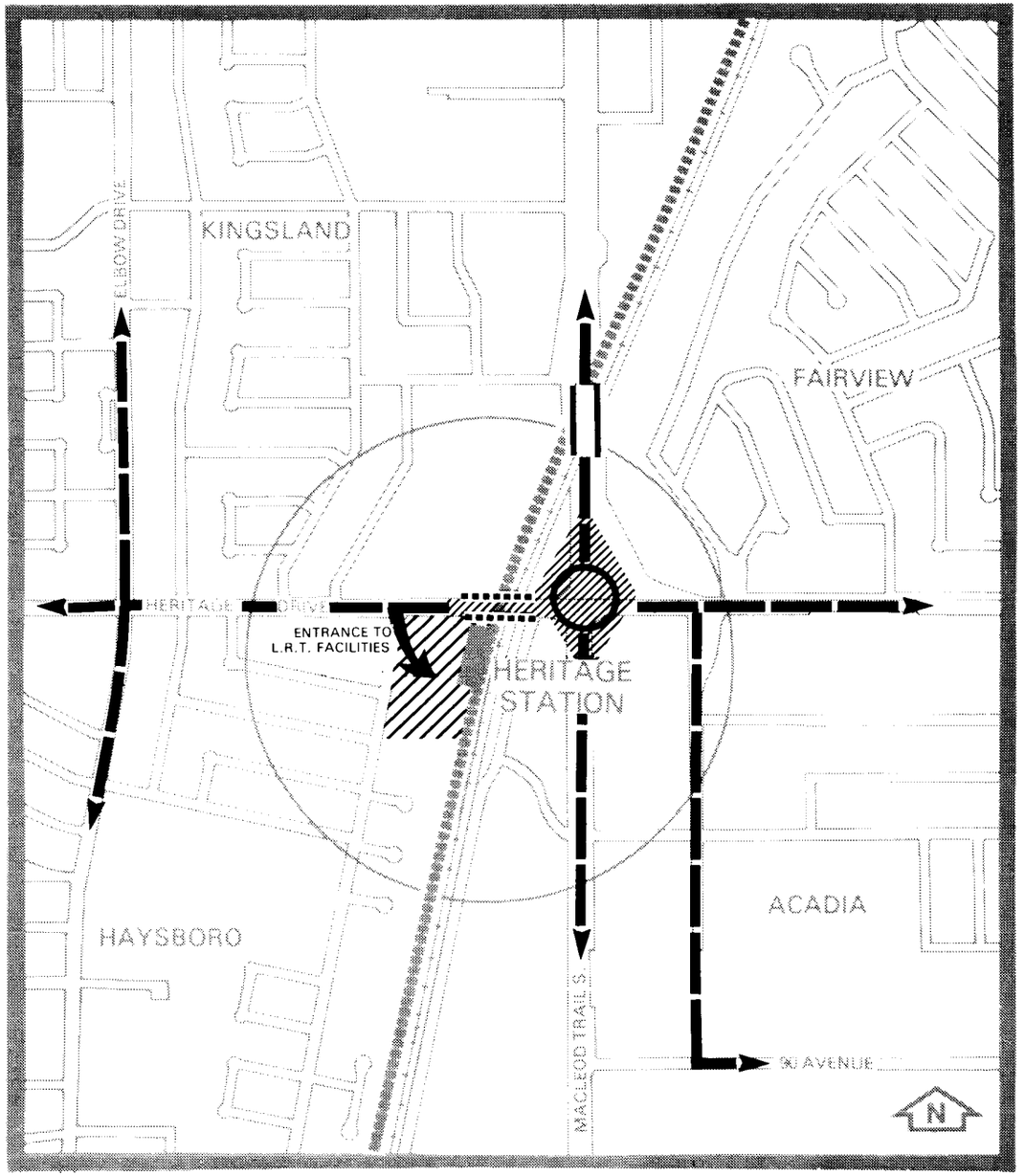
L.R.T. South Corridor Land Use Study

Vehicular Circulation & Improvements

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 23

Heritage Station
October 1980



Primary Pedestrian Circulation Corridor:

The Primary Pedestrian Circulation Corridor, a mandatory benefit feature, shall include the following grade-separated links above the transportation rights-of-way:

East/West - from the Station above the rail right-of-way and Horton Road; and above Macleod Trail at the approximate alignment of 84th Avenue South;

North/South - above Hull Avenue.

The development on Sites 1, 2A, 2B, 3 and 4 as well as the Heritage Square complex would provide the appropriate integrated pedestrian connections to complete the important Primary Pedestrian Circulation Corridors.

Future Public Pedestrian Improvements:

A pedestrian crossing of Heritage Drive between the Station and the Rose Kohn Memorial Arena Complex should be provided in the future design of the grade-separation of Heritage Drive above the rail alignment. The existing sidewalks along Heritage Drive and Macleod Trail also should be provided in the future interchange design.

Sidewalks:

The pedestrian sidewalk grid in the public rights-of-way should be completed throughout the Station Area, including an extension into the Haysboro Industrial Park. This network could be enhanced by individual developers undertaking better sidewalk and landscaping treatments, to be considered for bonusing.

L.R.T. ALIGNMENT & STATION

PRIMARY PEDESTRIAN CIRCULATION CORRIDOR

SECONDARY PEDESTRIAN CIRCULATION CORRIDOR

PUBLIC IMPROVEMENT (SIDEWALKS)

PROPOSED PEDESTRIAN GRADE-SEPARATION

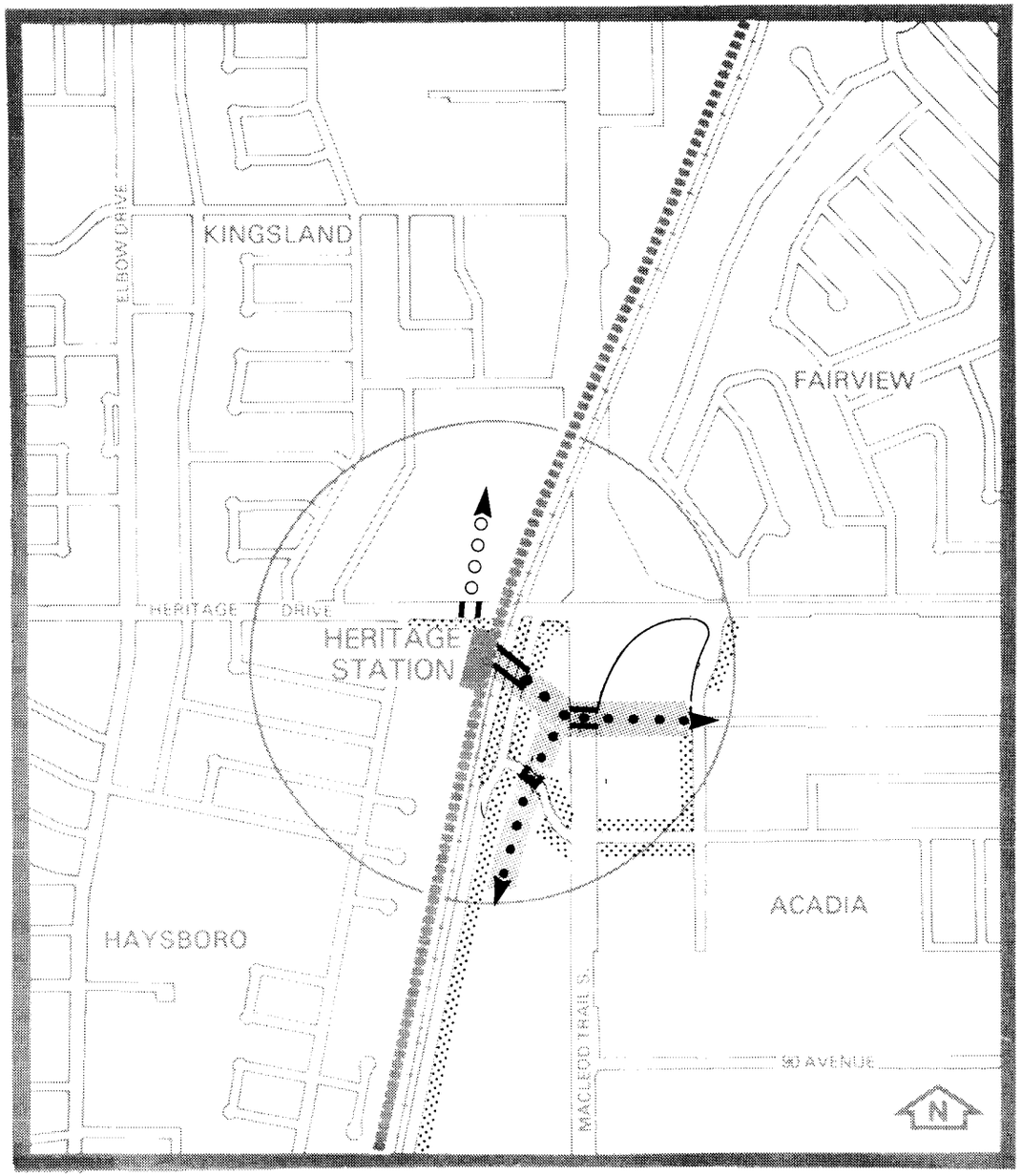
L.R.T. South Corridor Land Use Study

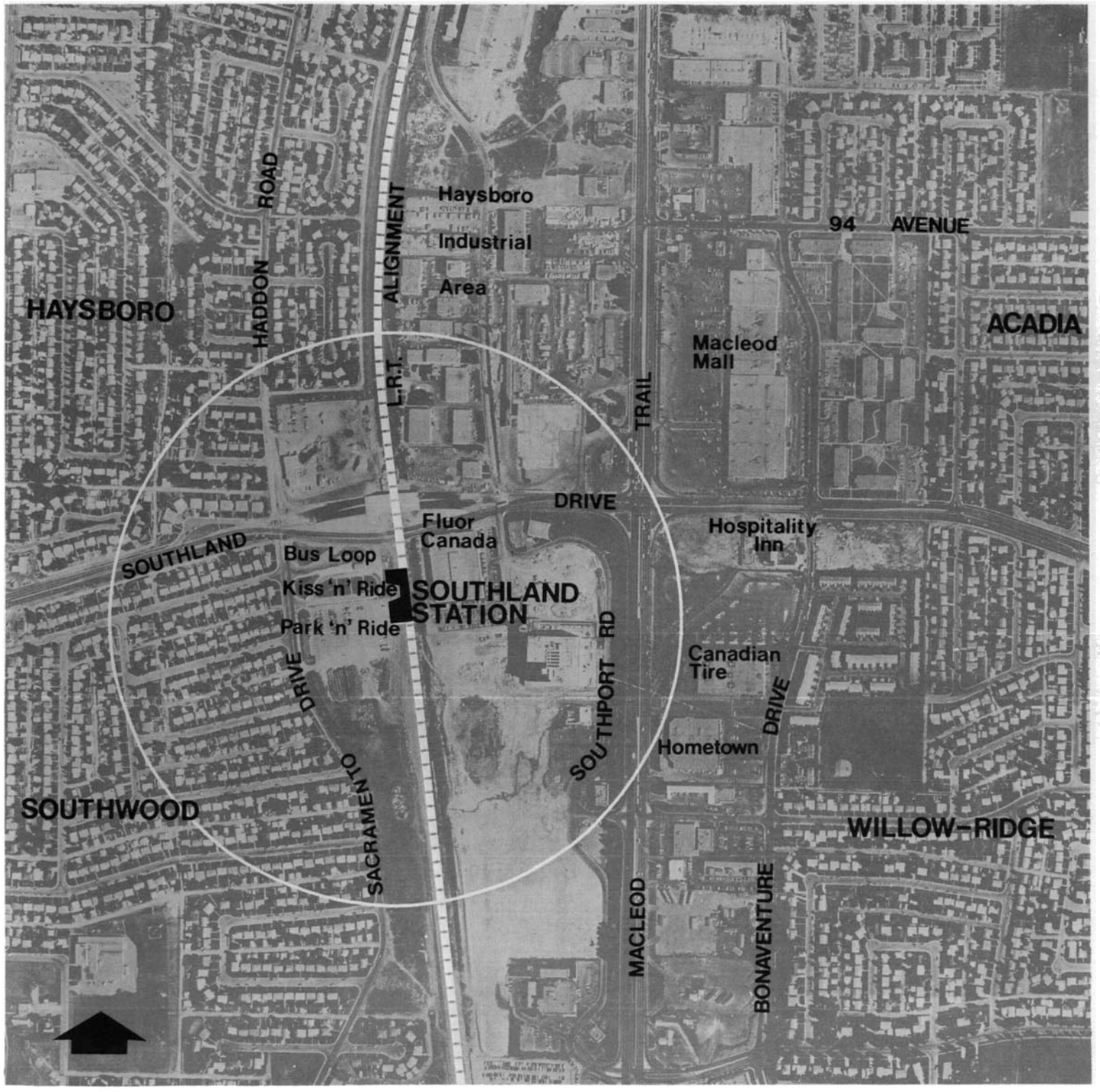
Pedestrian Circulation & Improvements

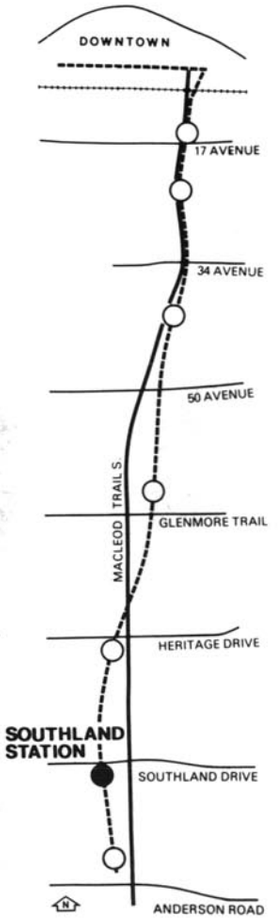
THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 24

Heritage Station
October 1980





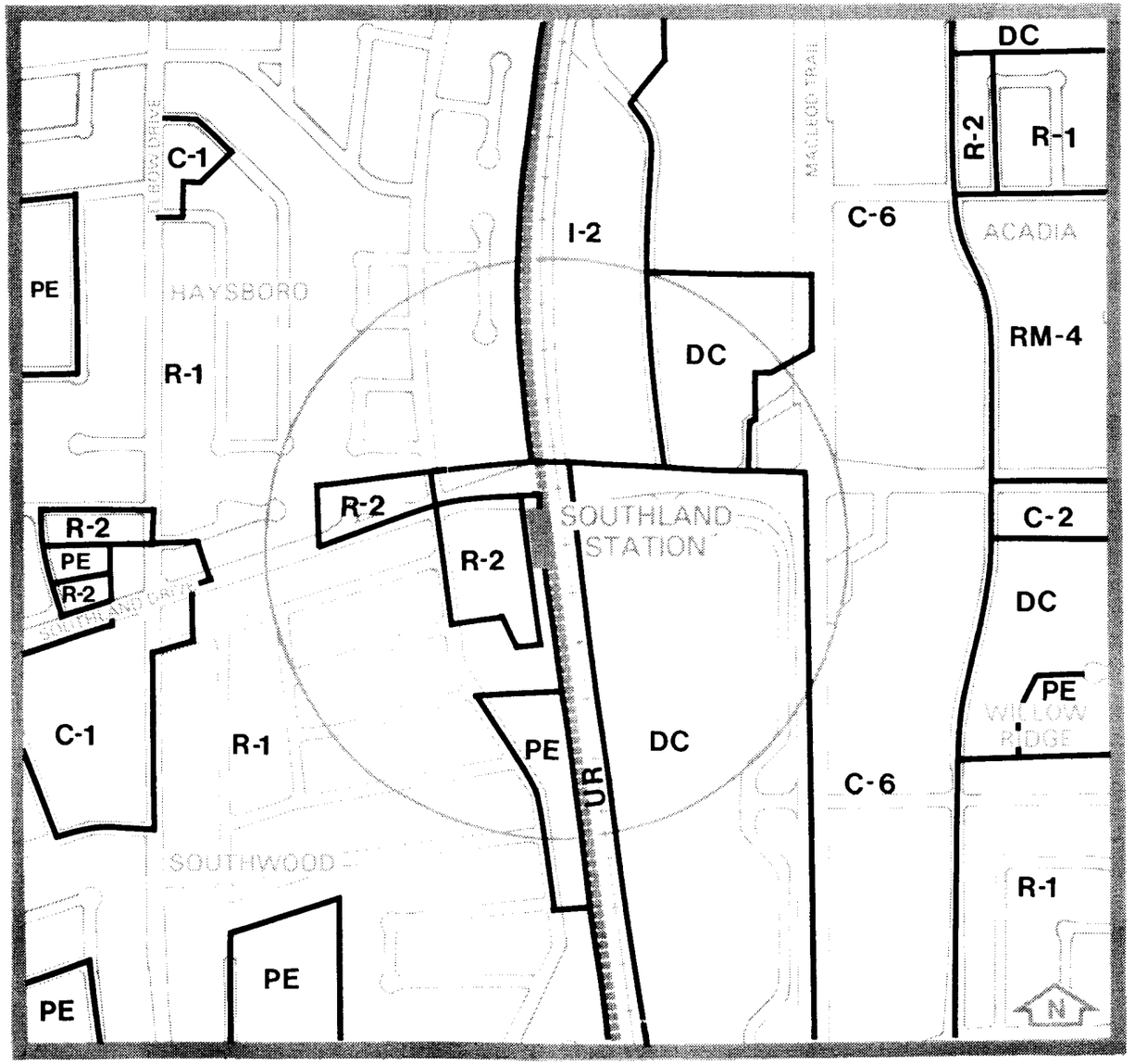


L.R.T. South Corridor Land Use Study

Southland Station Area Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT
October 1980

6



SUBJECT TO CITY OF CALGARY LAND USE BYLAW

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.)**
C-1	Local Commercial District - building height - 10m.
C-2	General Commercial District - building height - 23 m.
C-6	Highway Commercial District - building height - 12m.
I-2	General Light Industrial District - building height - 12m
UR	Urban Reserve District
DC	Direct Control District
PE	Public Park, School and Recreation District

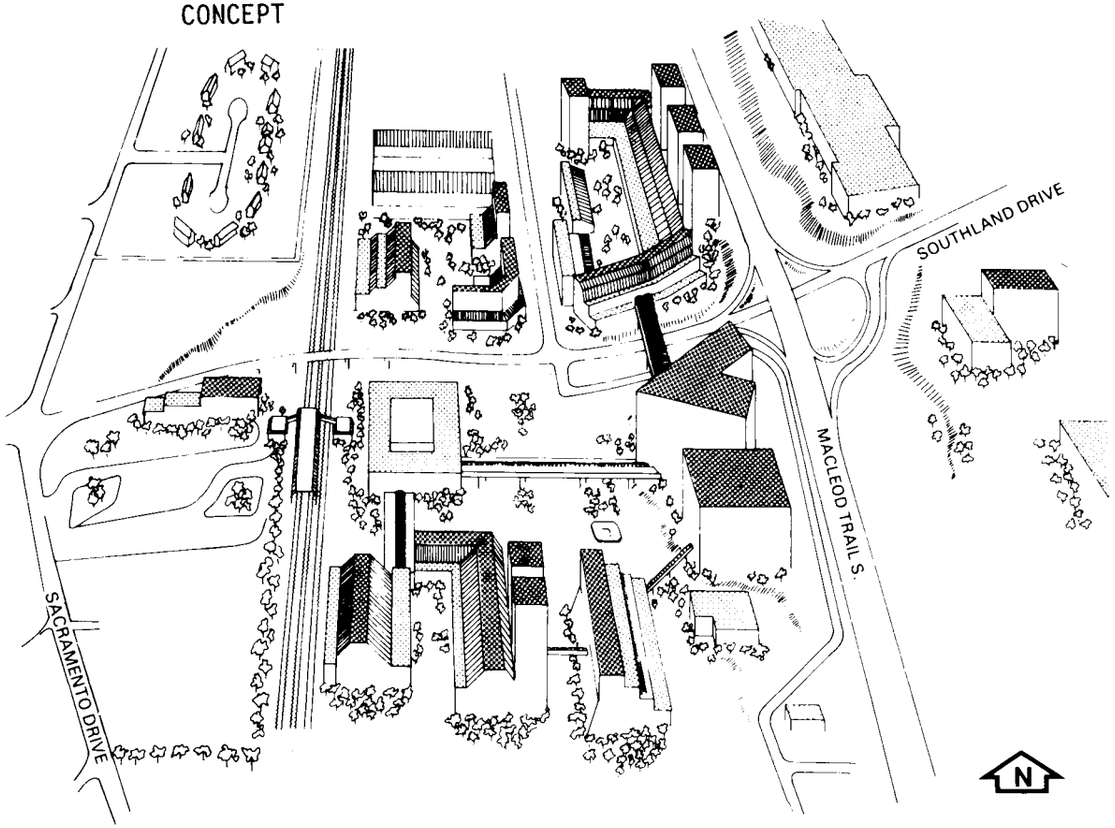
* units per hectare
** units per acre

L.R.T. South Corridor Land Use Study

Existing Land Use Designations

THE CITY OF CALGARY PLANNING DEPARTMENT	Map 25	Southland Station October 1980

FIGURE 31: SOUTHLAND STATION AREA DEVELOPMENT CONCEPT



6. Southland Station Area

The Southland L.R.T. Station is located south of Southland Drive approximately 9 km from Downtown. The Station Area, defined by a 400 m radius, encompasses sectors of the four suburban residential communities of Southwood, Haysboro, Acadia and Willow-Ridge. East of the tracks, the Station Area is characterized by large tracts of privately owned land between the CPR right-of-way and Macleod Trail, including the new office business park development of which approximately 50 percent remains undeveloped and an existing industrial area north of the Station. Considerable development pressure has been experienced recently in the immediate vicinity of the L.R.T. Station as evidenced by the continuing development of the Southwood Business Park and the recent City Council approval of a land use amendment permitting a high density mixed use development north of Southland Drive.

a. DEVELOPMENT CONCEPT

The Station Area development concept recommends a general increase in density, primarily within 400 m of the Station. The existing land use designations have provided a base density level for development intensity. For the major developable parcels, mixed use development is recommended, with the introduction of a residential component allowing the achievement of higher bonus densities. This Plan also recommends that the portion of the Haysboro Industrial Park within 400 m of the Station ultimately be redeveloped to more L.R.T.-related uses. Comprehensive development for the entire area is encouraged to provide pedestrian linkages between new developments and the L.R.T. Station.

For the abutting residential communities of Haysboro, Southwood, Acadia and Willow-Ridge, the Southland Station Area Plan confirms the established low to medium density residential uses and recommends no change in land use.

b. RECOMMENDED LAND USE AND DEVELOPMENT GUIDELINES

i. High Density Mixed Use

The major developable sites along Macleod Trail and Southland Drive are recommended for high density mixed use development supportive of the L.R.T. System. The City Transportation Department has indicated that the planned transportation system could not accommodate the full "ultimate" commercial development potential of all the developable land parcels under their existing land use designations. Related to these transportation constraints, a residential potential has been introduced through the bonus system for an overall F.A.R. in the order of 3.5 where approximately half of the floor area would be residential for Site 6A and the remaining undeveloped quadrant of Site 5. For both of these sites, residential use is not mandatory if the bonus density is not employed. Council directed that the recommended minimum proportion of residential use as a mandatory requirement of mixed use development be made flexible to accommodate individual projects. For Site 4, City Council approved a land use amendment for a high density mixed use development, consistent with the Study objectives. On Site 5, another commercial building was recently approved for the northeast quadrant of the site.

ii. High Density Commercial Use

It is recommended that the existing land use designation (D.C. with C-2 and C-HWY-2 guidelines[3]), continues to be operative for Site 6B which is outside the 400 m radius.

3. These designations from the previous Development Control By-law #8600 would be roughly equivalent to D.C. with C-3 and C-6 guidelines under the present Calgary Land Use By-law.

iii. Medium Density Commercial Use

It is recommended that the portion of the existing Haysboro Industrial area within the 400 m radius of the L.R.T. Station (Site 3) be redesignated to a maximum commercial F.A.R. in the order of 2.0, or mixed use with a maximum F.A.R. in the order of 3.5 if residential uses constitute approximately half of the floor area.

iv. Low Density Multi-Dwelling Residential Use

For Site 8 on Southland Drive, a low density multi-dwelling residential land use is recommended since it will integrate well with the single family residences to the east and the townhouses to the south[4].

v. Highway Commercial Use

Macleod Trail serves as an important highway-oriented commercial strip. Therefore, outside the 400 m radius both to the north of the Station and on the east side of Macleod Trail, highway commercial land uses are recommended as appropriate along Macleod Trail.

vi. Light Industrial Use

It is recommended that the existing Haysboro Industrial Park north of the 400 m radius (Site 9) retain its existing land use designation as a general light industrial district.

4. In October of 1980, City Council approved a land use amendment on Site 8 to the C-2: General Commercial District to allow a hotel/motel use.

vii. Civic Facilities

It is recommended that the Civic facilities on Site 1 be redesignated to reflect their public service function as well as the future potential for ancillary commercial uses. This ancillary commercial use might take the form of retail stores primarily for the convenience of transit patrons, being permitted only after the site conditions were monitored and deemed suitable for this type of development.

The City Engineering Department does not presently plan to vacate its maintenance depot site at Southland Drive and Haddon Road. However, should the depot be relocated, it is recommended that this site be re-examined and appropriate land use recommendations be formulated in consultation with the adjacent communities.

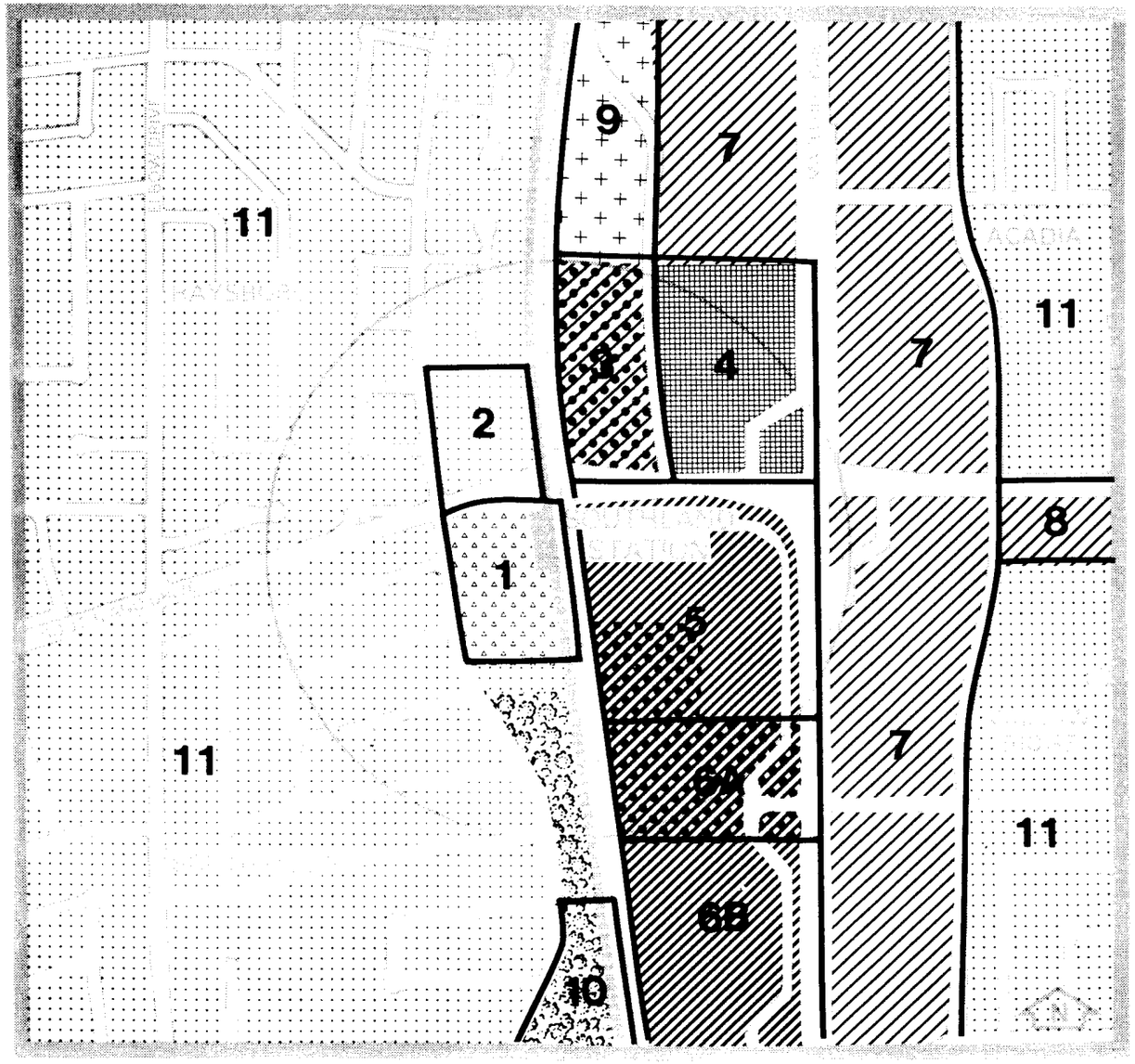
viii. Public Open Space

The existing public park space south of the L.R.T. facilities should be retained for community use. On July 29, 1980, City Council directed that the vacant parcel of City-owned land east of Sacramento Drive north of Sierra Crescent (Site 10) become park space following the proper redesignation procedures.

On June 23, 1980, Council approved the Commissioners' Report to Operations and Development Committee (June 2, 1980) regarding the "Southwood Community Concerns" and instructed the Transportation Department to investigate the need for pedestrian crossings and/or corridors across Sacramento Drive to gain access to the community playground/tot lot. The Parks/Recreation Department was also instructed to implement suitable measures for fencing or otherwise protecting the community playground/tot lot from traffic on Sacramento Drive and to complete this work prior to the opening of the South L.R.T. Leg.

ix. Established Residential Communities

No changes in the present land use designations in the existing residential communities of Haysboro, Southwood, Acadia and Willow-Ridge within or adjacent to the Primary Impact Area are recommended in order to preserve their stable low to medium density residential character.



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

L.R.T. RELATED FACILITIES

MAJOR OPEN SPACE/RECREATIONAL FACILITIES

L.R.T. South Corridor Land Use Study

Generalized Land Use Concept Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 26

Southland Station
October 1980

FIGURE 32 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[c] HEIGHT	SPECIAL CONSIDERATIONS
1	R-2	●Public Service and Ancillary Commercial (as per Section 6.b.vii)	N/A	N/A	10 m	Development to be located along north edge of site, integrating pedestrian network into L.R.T. Station.
2	R-1	●Appropriate future land use to be determined if Engineering Department operations are relocated.	N/A	N/A	N/A	Future consideration of alternatives in consultation with adjacent communities.
3	I-2	●Commercial Ceiling[d] ●Mixed Use (With Approximately Half Residential)[e]	F.A.R. 2 F.A.R. 2	N/A F.A.R. 3.5	46 m Scaled down on western edge subject to standards regarding direct sunlight on Haysboro residential district.	If residential development, attention to interface with existing industrial uses.
4	D.C.	●Mixed Commercial and Residential Use as per ●Land Use Amendment approved by City Council on March 14, 1980.	Existing D.C. Guidelines of F.A.R. 3.79	N/A	Existing D.C. Guidelines of 76 m along Macleod Trail and 46 m along Horton Road.	Existing D.C. Guidelines including Primary Pedestrian Circulation Corridor above Southland Drive.
5	D.C./C-HWY-2 and C-2[f]	●Commercial Ceiling[d] ●Mixed Use (With Approximately Half Residential)[e] Applicable only to undeveloped southwest quadrant.	F.A.R. 2.8 F.A.R. 2.8	N/A F.A.R. 3.5	46 m	High density residential to be located nearest to L.R.T. Station. Provision of Primary Pedestrian Circulation Corridor with pedestrian overpasses at L.R.T./C.P.R. right-of-way and at Southland Drive.

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[c] HEIGHT	SPECIAL CONSIDERATIONS
6A	D.C./C-HWY-2 and C-2[f]	●Commercial Ceiling[d] ●Mixed Use (With Approximately Half Residential)[e]	F.A.R. 2.8 F.A.R. 2.8	N/A F.A.R. 3.5	46 m	Development will integrate Primary Pedestrian Corridor. High density residential development to be sited nearest to L.R.T. Station.
6B	D.C./C-HWY-2 and C-2[f]	●General Commercial and Highway Commercial	Existing D.C./ C-HWY-2 and C-2 Guidelines	N/A	46 m	Development will focus future pedestrian system in a north/south orientation connecting into Primary Pedestrian system shown for Site 6A.
7	C-6	●Highway Commercial	Existing C-6	--	12 m	--
8	C-2	●General Commercial (As approved by City Council in October of 1980)	F.A.R. 2	N/A	23 m	--
9	I-2	●General Light Industrial	Existing I-2	--	12 m	--
10	R-1	●Open Space	PE	N/A	N/A	N/A
11	R-1 R-2 RM-4	●Established Residential Neighbourhoods	Existing Land Use Designations	N/A	Existing Land Use Designations	--

a. It is recommended that the City undertake redesignation procedures 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.

b. 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.

c. Maximum heights shall be reviewed on a site-specific basis, subject to the performance standards regarding direct sunlight and other development guidelines.

d. 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.

e. Council has directed that the recommended minimum proportion of residential use as a mandatory requirement of mixed use developments be made flexible to accommodate individual projects. However, it should be noted that mixed use with a residential component is optional rather than mandatory on Sites 3, 5, and 6A.

f. D.C. Guidelines are based on districts from Development Control By-law #8600.

N/A Not Applicable

c. CIRCULATION SYSTEMS

i. L.R.T. Station and Facilities

The Southland L.R.T Station will be constructed on the existing Blue Arrow bus site south of Southland Drive. Vehicular access to the site will be via Sacramento Drive. The Station site will provide a drop-off area for Kiss 'n' Ride and bus passengers as well as parking for approximately 400 vehicles.

The platform design will be centre-loading. This means passengers will have access to northbound trains on one side of the platform and southbound trains on the other side. Access to the platform for users will be from the north end via stairs and escalators. The platform area will be partially enclosed and contain heated shelters, as will the processing area.

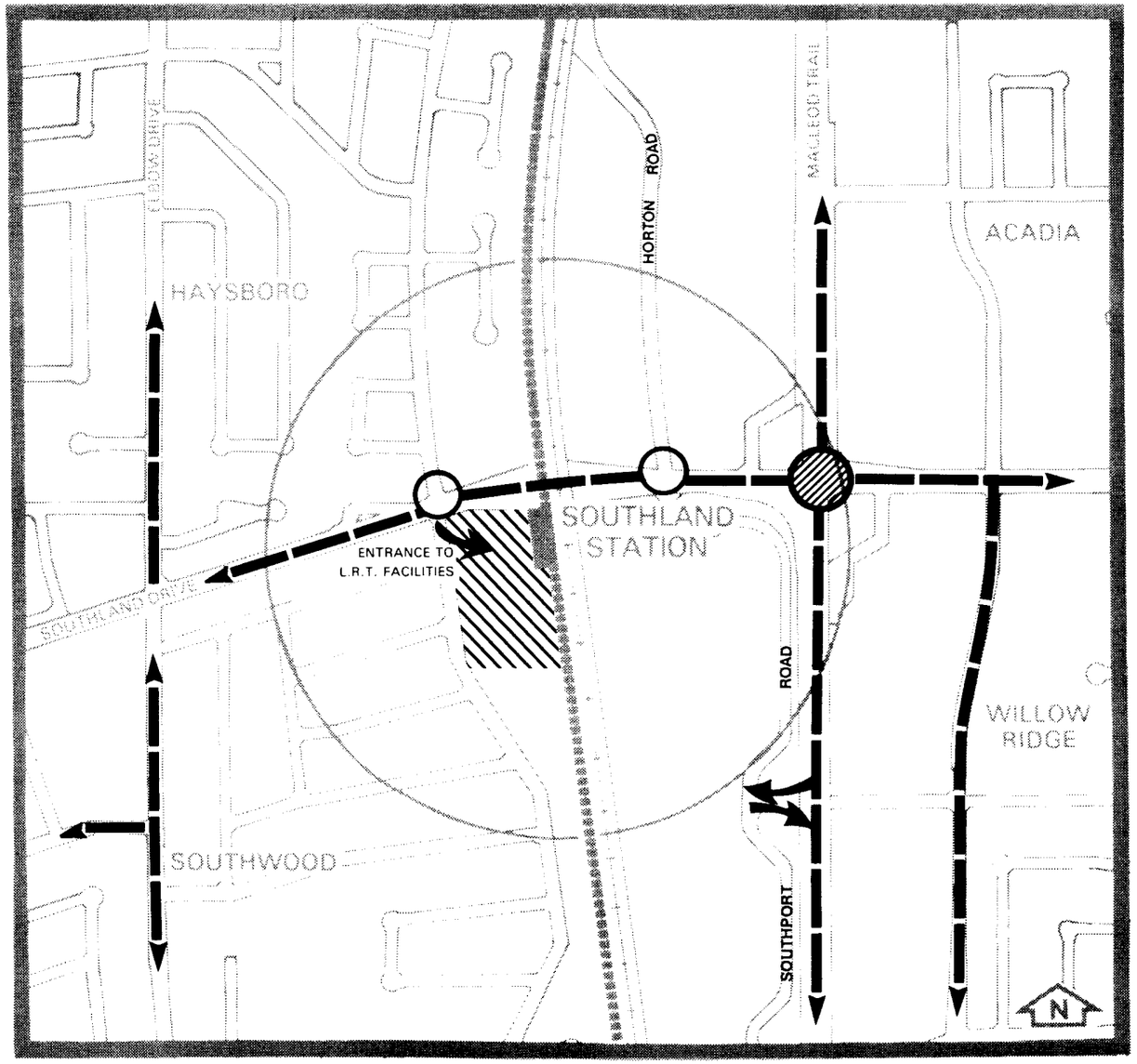
ii. Bus Service

Preliminary plans by Calgary Transit propose to re-route local bus routes as feeders into the Southland L.R.T. Station. It is anticipated that two bus routes to the Downtown will continue along Elbow Drive and Fairmount Drive/Macleod Trail but these will not connect with the Southland L.R.T. Station. Prior to route finalization, there will be a public participation program with the affected communities.

iii. Road System and Improvements

The Southland L.R.T. Station Area will be affected by a future major road improvement. A grade-separated interchange for Macleod Trail and Southland Drive is proposed by the Transportation Department. This is not scheduled in the Transportation Improvement Priority Study - Update to be constructed within the next ten year period. However, the timing of the interchange construction could be revised depending on the intensity and rate at which new development occurs in the Southland Station Area.

To accommodate significant new commercial development north of Southland Drive, the widening of Horton Road and further detailed road analyses by the City Transportation Department may be necessary. Improvements to Southport Road may also be required to handle further commercial traffic.



L.R.T. ALIGNMENT & STATION

L.R.T. STATION FACILITY

ENTRANCE

ALL TURNS PERMITTED

PROPOSED INTERCHANGE

TURNS ALLOWED AS SHOWN

BUS ROUTES*

* BUS ROUTES TO BE FINALIZED FOLLOWING PUBLIC PARTICIPATION PROGRAM WITH AFFECTED COMMUNITIES.

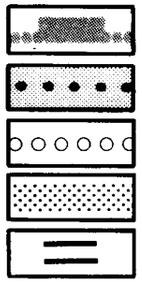
L.R.T. South Corridor Land Use Study

Vehicular Circulation & Improvements

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 27

Southland Station
October 1980



L.R.T. ALIGNMENT & STATION

PRIMARY PEDESTRIAN CIRCULATION CORRIDOR

SECONDARY PEDESTRIAN CIRCULATION CORRIDOR

PUBLIC IMPROVEMENTS (SIDEWALKS)

PROPOSED PEDESTRIAN GRADE-SEPARATION

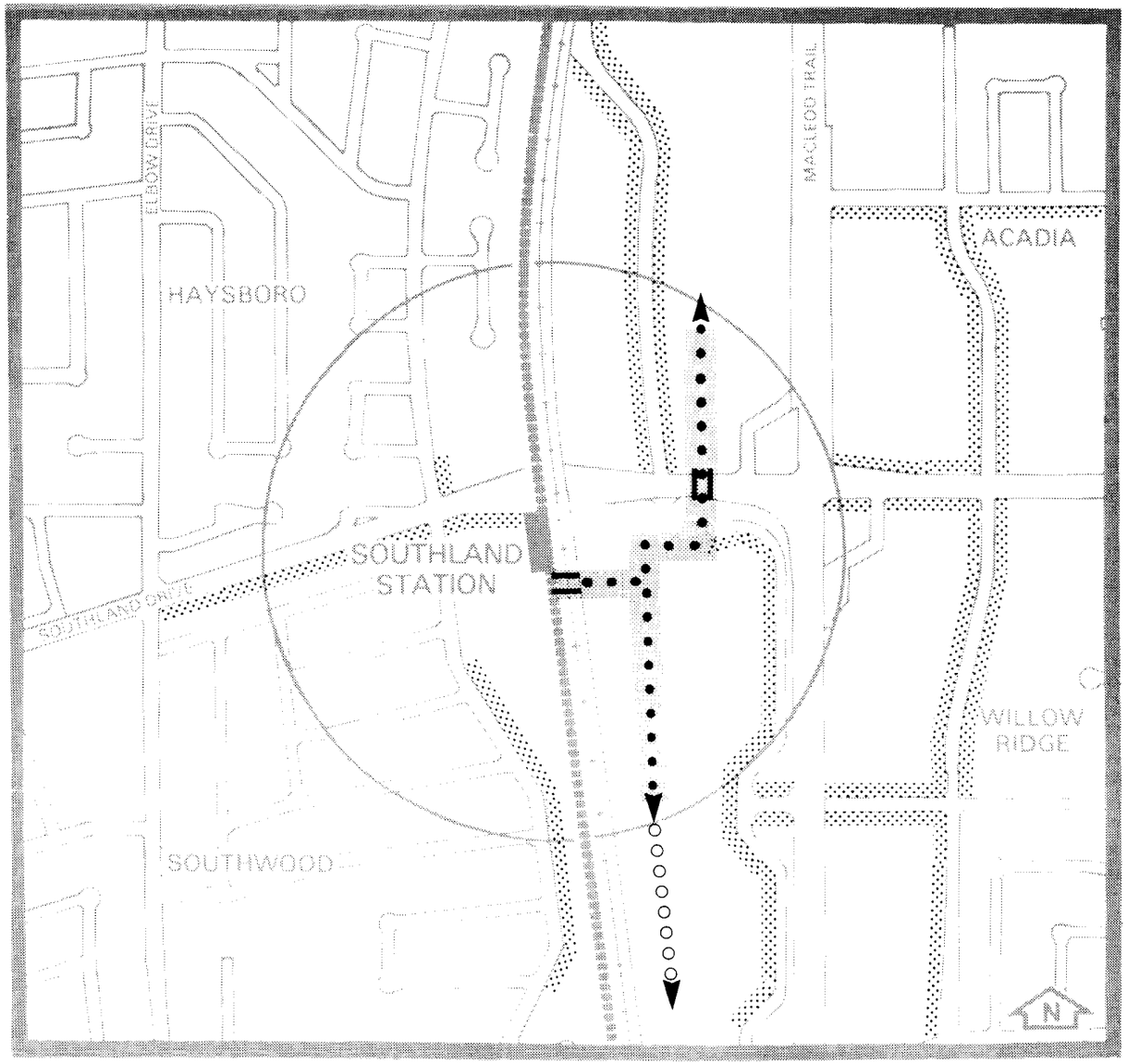
L.R.T. South Corridor Land Use Study

Pedestrian Circulation & Improvements

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 28

Southland Station
October 1980



iv. Pedestrian Circulation

Since the development concept for the Station Area is one which strongly encourages a balance of transportation modes, the pedestrian circulation system constitutes a major element in the overall circulation system for the area.

Primary Pedestrian Circulation Corridor

The pedestrian network should focus on the L.R.T. Station through the mandatory Primary Pedestrian Circulation Corridors eligible for bonuses. These Corridors are located as indicated on Map 28:

- from the north end of Site 4 to the enclosed pedestrian overpass crossing Southland Drive (as recently approved in a land use amendment for this Site);

- from the south property line of Site 6A to the north property line of Site 6A;

- from the north property line of Site 5, at the enclosed pedestrian overpass crossing Southland Drive, to the grade-separated pedestrian connection into the Station also from the south property line of Site 5 into this critical connection to the Station.

Secondary Pedestrian Circulation Corridor

In order to facilitate pedestrian access into the L.R.T. Station Area, new developments will be encouraged to incorporate these Secondary Corridors into their designs to link into the Primary Pedestrian Corridors in the Station Area.

Sidewalks

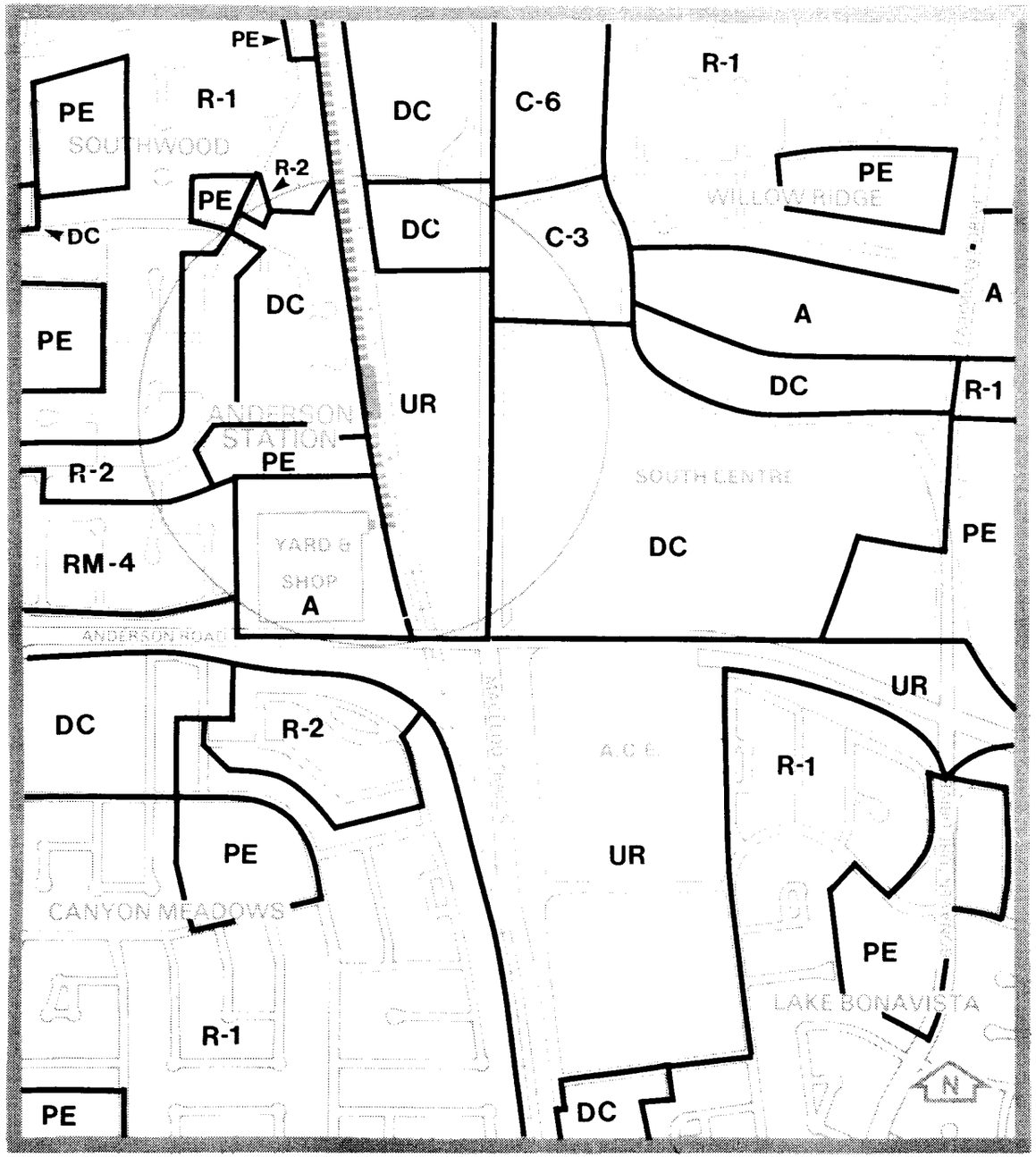
Sidewalks should be completed throughout the Station Area, including the Haysboro Industrial Park.

L.R.T. South Corridor Land Use Study

Anderson Station Area Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT
October 1980

7



SUBJECT TO CITY OF CALGARY LAND USE BYLAW

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.)**
C-3	General Commercial District -building height - 46m.
C-6	Highway Commercial District - building height - 12m.
A	Agricultural and open space District
UR	Urban Reserve District
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	Map 29	Anderson Station October 1980

Anderson Station Area

Anderson Station, the terminal of the first stage of the south leg of the L.R.T. System, is located approximately 12.4 km from the Downtown near the intersection of Macleod Trail and Anderson Road. The L.R.T. Station will make this area more accessible to Downtown and will attract commuters from the surrounding communities south of the City.

In this Station Area, there are relatively large properties adjacent to Macleod Trail in single ownerships, rather than the typical fragmented commercial strip development further north. Several of these properties are undeveloped or developed to a very low intensity, allowing greater development potential in the area in the future. It is likely that the existing development pattern in the Station Area will change significantly as new development is attracted by the area's improved accessibility.

a. DEVELOPMENT CONCEPT

As the terminal L.R.T. Station, major facilities are required at the Anderson Station to accommodate travellers changing transportation modes. The Anderson Station is expected to serve the greatest number of people of the South Corridor Stations and, consequently, will have the largest Park 'n' Ride, Kiss 'n' Ride and bus drop-off facilities.

There are two major obstacles to the development of a coherent integrated urban node in the Anderson Station Area which must be addressed in the Plan. The first would be the major roads of Macleod Trail and Anderson Road, which effectively divide the Station Area. The second is the Park 'n' Ride site which, as presently planned, isolates the L.R.T. Station from the south, east and north by 6 ha of parking lots and circulation roads.

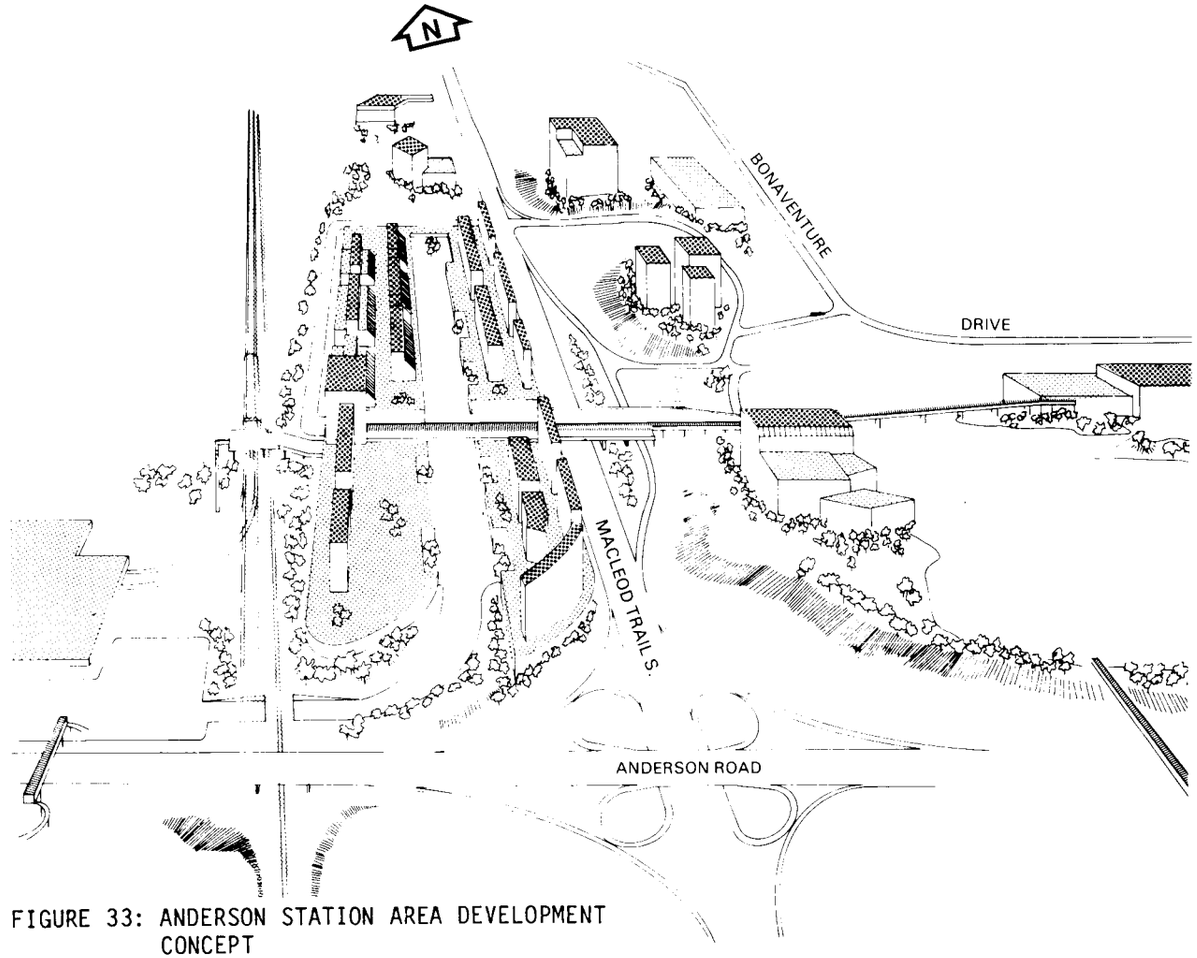


FIGURE 33: ANDERSON STATION AREA DEVELOPMENT CONCEPT

The Plan makes recommendations to overcome these constraints and to facilitate the creation of active pedestrian-oriented as well as vehicle-oriented development supporting the L.R.T. System. Optimum development in the Station Area shall entail the comprehensive redevelopment of the Park 'n' Ride site for commercial and residential uses plus L.R.T. parking, integrated with an extensive pedestrian network including bridges spanning Anderson Road and Macleod Trail. The present vehicle-oriented nature of the area will be changed as medium and high density office and residential developments occur on the sites and as they are linked into the L.R.T. Station through the pedestrian system. Changes in the road system will occur primarily to improve access to existing and future development sites on each side of Macleod Trail.

b. RECOMMENDED LAND USE AND DEVELOPMENT GUIDELINES

i. High Density Mixed Use

Mixed commercial and residential development to maximum F.A.R.'s in the order of 3.5 and 4 are recommended for the development sites within 400 m of the Anderson L.R.T. Station (Sites 2, 3, 4 and 5). To achieve these densities, developers will have to utilize the bonus system allowing density increases from a base F.A.R. of 2 to the maximum allowable density through the appropriate mix of uses as well as the provision of benefit features.

Development on Sites 2 and 3 is recommended to include a residential component of approximately half of the floor area, subject to Council's direction that there would be flexibility regarding the minimum proportion of residential use as a mandatory requirement of mixed use development to accommodate individual projects. The present, highly constrained traffic situation along Macleod Trail in this area will be relieved to some extent by the extension of Deerfoot Trail to Anderson Road. This improvement will be necessary prior to major development on Site 2. The extension of the L.R.T. System to Midnapore by 1988, as recommended in the Transportation Improvement Priority Study - Update, may reduce traffic volumes at Anderson Station and allow higher development densities on Site 2. Significant development of this site should occur after the L.R.T. System has gone into operation.

For the developable sites east of Macleod Trail (Sites 4 and 5), the potential would exist for mixed use development to an F.A.R. in the order of 3.5 through bonussing with the introduction of a residential component. Otherwise commercial development may proceed to the level allowed by the existing designations.

ii. Amy Lorne-Chateau Estates Mobile Home Parks (A.C.E.)

On July 29, 1980, City Council directed that the mobile home parks (Site 8) should be redesignated from the present UR: Urban Reserve designation to the RMH: Mobile Home Park designation to maintain the area in this use. This site would not be a prime site for higher intensity, L.R.T.-related development because of its distance from the Station and its possible impact on the roadway system, jeopardizing development on sites closer to the Station.

iii. Southcentre

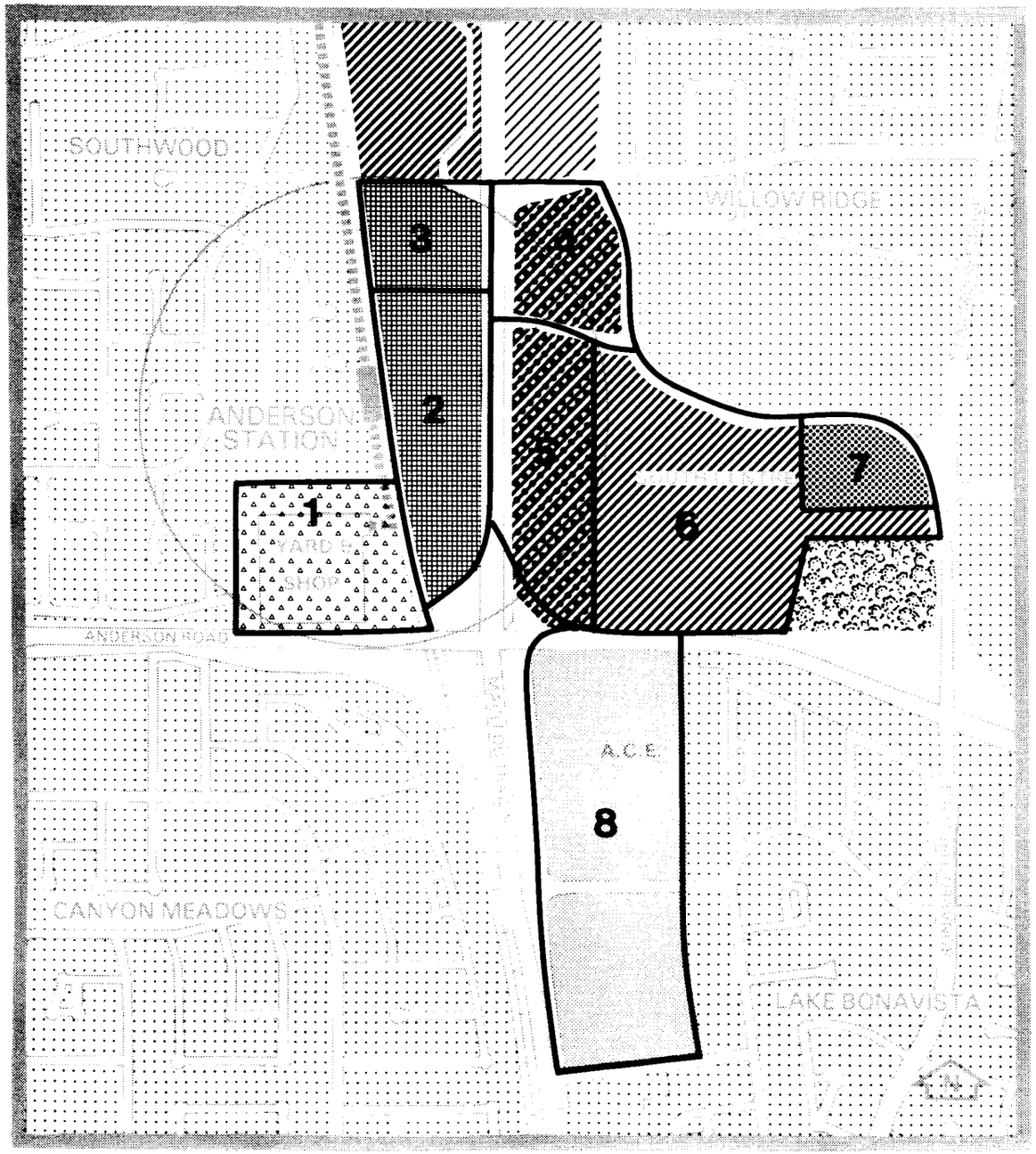
The Southcentre shopping mall (Site 6) contributes significantly to the attractiveness and vitality of the Anderson Station Area. Further expansion of retail facilities and the possible inclusion of an office or residential component could be considered for the shopping centre complex although any major expansion of retail facilities would increase the traffic generation and could require improved access from Macleod Trail.

iv. Medium Density Residential Use

The northeast corner of the Southcentre property (Site 7) is recommended for adult-oriented, medium density residential development at a maximum density of 148 units per hectare (60 units per acre).

v. Established Residential Communities

One major objective of the Anderson Station Area Plan has been to minimize the impact of the L.R.T. System and new development on the residential communities of Lake Bonavista, Canyon Meadows, Southwood and Willow-Ridge. The land use designations in the four surrounding communities are recommended to remain unchanged.



- MOBILE HOME PARK
- RESIDENTIAL BONUS: MEDIUM TO HIGH DENSITY RESIDENTIAL
- HIGH DENSITY MIXED USE
- HIGH DENSITY COMMERCIAL
- MEDIUM DENSITY COMMERCIAL
- MEDIUM DENSITY RESIDENTIAL
- CONTINUATION OF EXISTING LAND USE DESIGNATION
- MAJOR OPEN SPACE/RECREATIONAL FACILITIES
- L.R.T. RELATED FACILTIES

L.R.T. South Corridor Land Use Study

Generalized Land Use Concept Plan

THE CITY OF CALGARY PLANNING DEPARTMENT	Map 30	Anderson Station October 1980

FIGURE 34 SUMMARY OF RECOMMENDED LAND USES, 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[c] HEIGHT	SPECIAL CONSIDERATIONS
1	A	●Public Service - L.R.T. Yards and Shop Complex	N/A	N/A	N/A	
2	UR	●Mixed Commercial and Residential Use (With Minimum of Approximately Half Residential)[d]	F.A.R. 3	F.A.R. 4	46 m	Development design should allow for integration with development on Site 3 to the north.
3	D.C. (C-HWY-2)[e]	●Mixed Commercial and Residential Use (With Minimum of Approximately Half Residential)[d]	F.A.R. 2	F.A.R. 3.5	46 m	Development design should allow for integration with development on Site 2 to the south.
4	C-3	●Commercial Ceiling[f] ●All Residential ●Mixed Use (Commercial and Residential)[d]	F.A.R. 3 F.A.R. 3 F.A.R. 3	N/A F.A.R. 3.5 F.A.R. 3.5	46 m Subject to direct sunlight standards relative to Willow Ridge residences.	Integration of higher intensity development with the existing retail complex.
5	D.C. (C-2)[e]	●Commercial Ceiling[f] ●All Residential ●Mixed Use (Commercial and Residential)[d]	F.A.R. 3 F.A.R. 3 F.A.R. 3	N/A F.A.R. 3.5 F.A.R. 3.5	46 m	Attention to interface with shopping centre.
6	D.C. (C-2)[e]	●Retail Shopping Centre	Existing D.C. Guidelines	Existing D.C. Guidelines	Existing D.C. Guidelines	Attention to interface with new development.
7	D.C. (C-2)[e]	●Residential	148 units/ hectare (60 units/acre)	N/A	12 m	Attention to fit with shopping centre complex.
8	UR	Mobile Home Park	Approximately 54 persons/hectare (22 p.p.a.)	N/A	N/A	

a. It is recommended that the City undertake redesignation procedures 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.

b. 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.

c. Maximum heights shall be reviewed on a site-specific basis, subject to the performance standards regarding direct sunlight and other development guidelines.

d. 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. Only on mixed use Sites 2 and 3 would residential use be mandatory.

e. D.C. Guidelines are based on districts from Development Control By-law #8600.

f. 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.

N/A Not Applicable

c. CIRCULATION SYSTEMS

i. L.R.T. Station and Facilities

The Anderson L.R.T. Station is comprised of a centre-loading platform with access by escalator from the south end. The platform will be covered for approximately one-half of its length and heated enclosures will be provided. Presently under construction are the Kiss 'n' Ride, bus drop-off and Park 'n' Ride facilities, the largest in the L.R.T. System.

In the short-term, access into the Park 'n' Ride site will be from Macleod Trail at a signalized intersection south of Willow Park Drive and by a right-turn-in/right-turn-out point. Feeder buses will use the same Station entrances as the automobile traffic.

When development occurs on the Park 'n' Ride site or if the parking facility is expanded substantially, an access ramp into the Park 'n' Ride site is proposed by the Transportation Department. This ramp would allow traffic northbound on Macleod Trail to enter the Park 'n' Ride lot and Station Area traffic to exit northbound onto Macleod Trail without making left hand turns across Macleod Trail. To ensure good access to the Anderson Park 'n' Ride site and to avoid congestion on Macleod Trail, a right-of-way should be protected on Site 3 for the purpose of a future road connection to Willow Park Drive.

Southwest of the Station is the large single storey Anderson Yard and Shop Complex designed for fabrication, storage, repair and maintenance of the Light Rail Vehicles and storage and maintenance of buses. This is a permanent facility and will not be relocated if the L.R.T. System is extended south to Midnapore as proposed for 1988 in the Transportation Improvement Priority Study - Update.

ii. Bus Service

The majority of the bus routes in the Anderson Study Area are being revised to feed into the Anderson Station. Transit service will continue on Elbow Drive and Fairmount Drive/Macleod Trail to the Downtown but will not provide service into the Anderson Station. Calgary Transit will be conducting public meetings in the affected communities during 1980 to gain public input prior to finalizing the route changes.

iii. Road System and Improvements

Macleod Trail and Anderson Road provide the major access to the Station Area. The heavy traffic volumes on Macleod Trail have constrained the development potential of certain Station Area sites due to intersection capacities, turning restrictions and peak hour volumes between Anderson Road and Southland Drive. For maximum development to be feasible on Sites 2 and 3 on the west side of Macleod Trail, an access ramp will likely be necessary to avoid left hand turns across Macleod Trail traffic. The ramp will also provide access into Southcentre, compensating for the loss of two road entrances due to the proposed construction of the Macleod Trail/Anderson Road interchange in 1985/1986 as recommended in the Transportation Improvement Priority Study - Update.

L.R.T. ALIGNMENT & STATION

PROPOSED FREEWAY

PROPOSED INTERCHANGE

PROPOSED ROAD CLOSURE

TURNS ALLOWED AS SHOWN

ALL TURNS PERMITTED

PROPOSED OVERPASS

BUS ROUTES*

PROPOSED ROAD

* BUS ROUTES TO BE FINALIZED FOLLOWING PUBLIC PARTICIPATION PROGRAM WITH AFFECTED COMMUNITIES.

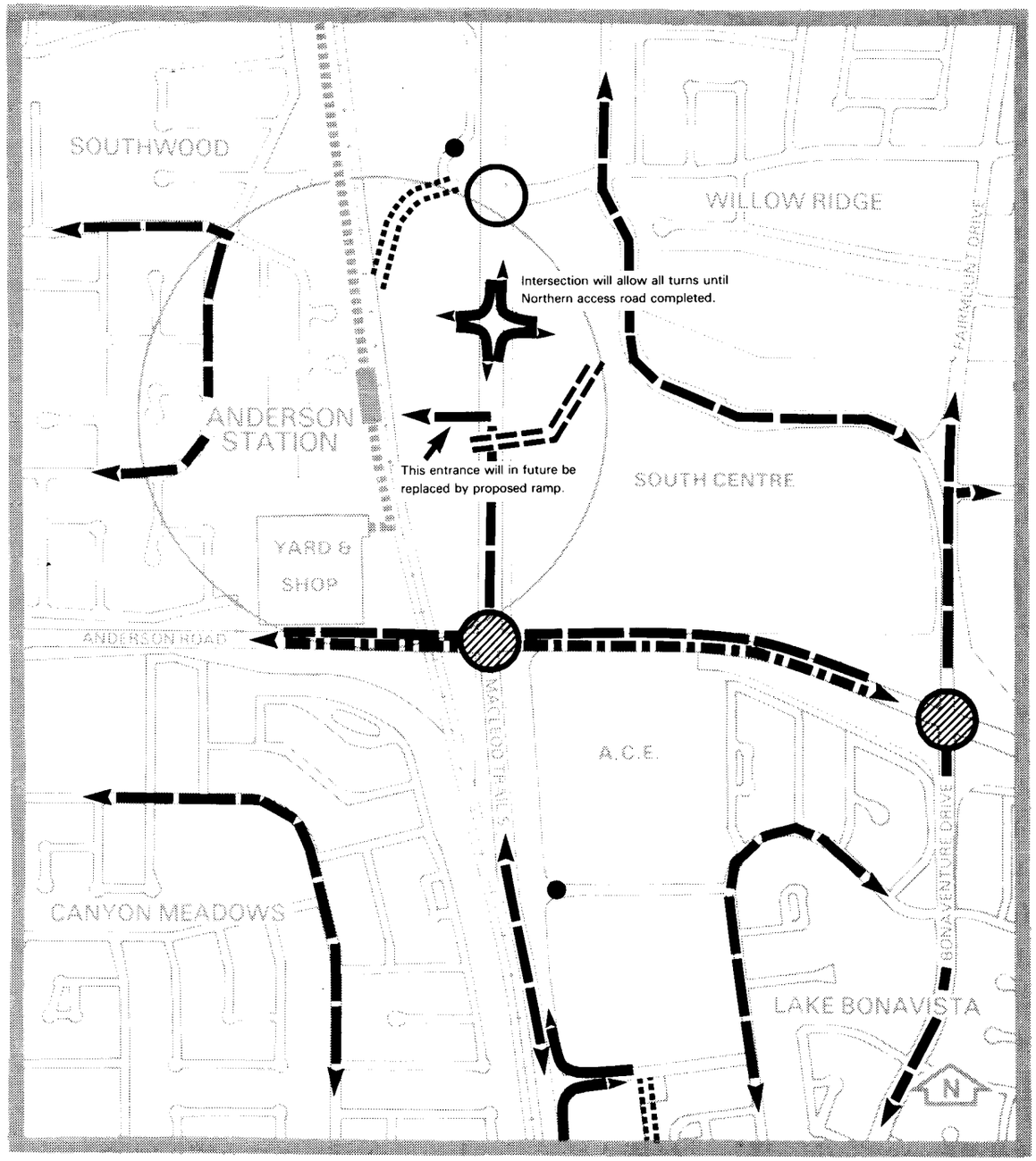
L.R.T. South Corridor Land Use Study

Vehicular Circulation & Improvements

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 31

Anderson Station
October 1980



The interchange will also require the closure of Lake Aspen Road, the existing entrance to the A.C.E. mobile home site. In the future, Anderson Road will be upgraded to freeway standards with grade-separation at all intersections. The Anderson Freeway will connect the proposed Sarcee Trail to the west with Deerfoot Trail to the east.

iv. Pedestrian Circulation

Primary Pedestrian Circulation Corridor

The pedestrian circulation system is important to the optimal functioning of the Anderson Station Area to link together the Station, the new development sites and the existing communities. The Primary Pedestrian Circulation Corridor elements identified are:

- the connection from the Anderson Station across the Park 'n' Ride site to Site 3 to the north;

- the enclosed pedestrian overpass across Macleod Trail from the Park 'n' Ride site to Southcentre, either as part of the access ramp proposed by the Transportation Department as a possible future major entrance to the L.R.T. site or as a separate bridge with facilities for pedestrians and bicycles;

- the link to the Anderson Station from the western end of the connection over Macleod Trail;

- the connections from the east end of the Macleod Trail overpass to the developments on Sites 4 and 5, as well as to Southcentre mall;

- the enclosed pedestrian bridge above Anderson Road linking the mobile home park to the Southcentre site;

- the connection from the north end of the Anderson Road pedestrian bridge from Site 8 into the Southcentre mall and/or to the Macleod Trail overpass;

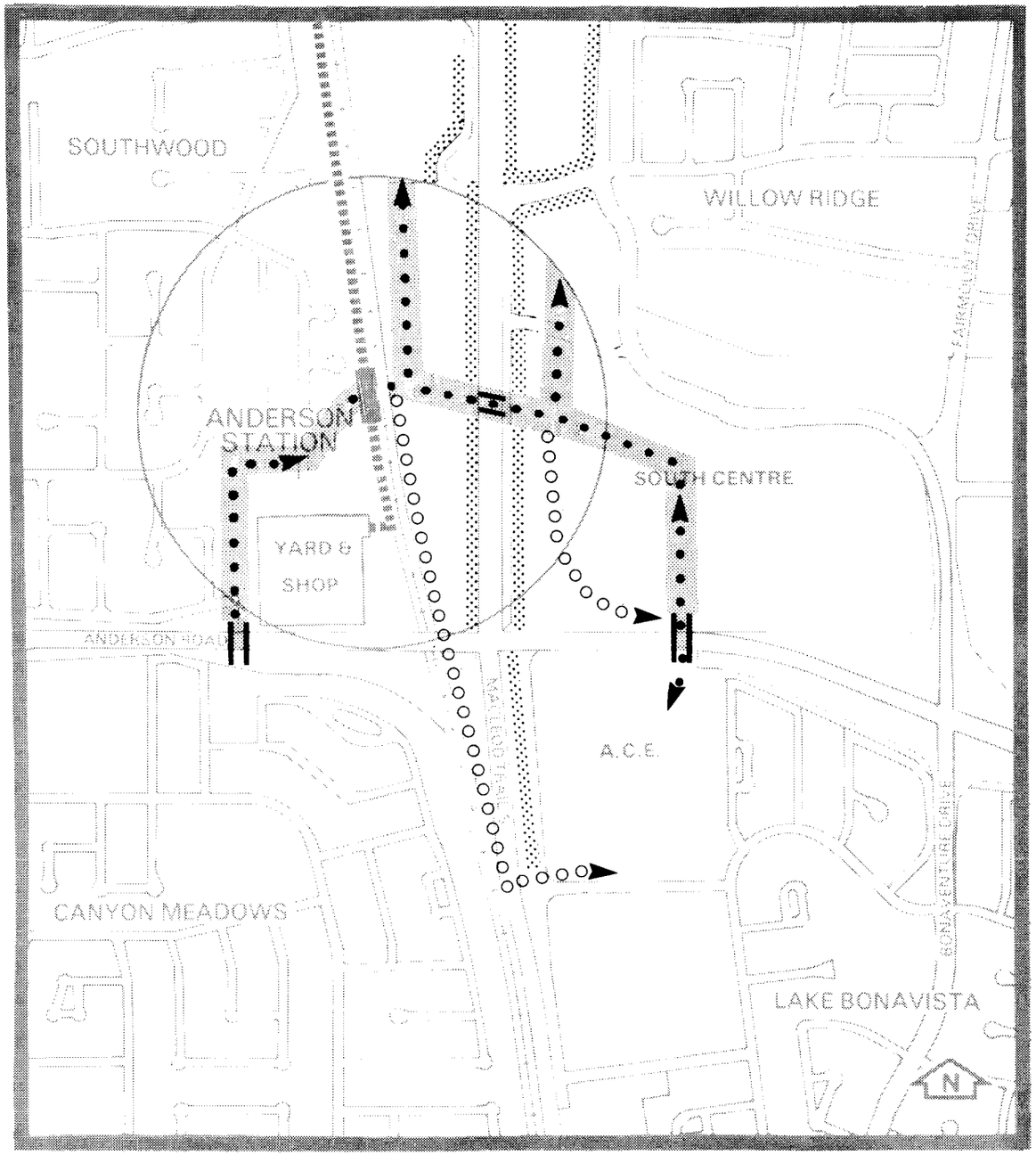
- the enclosed pedestrian bridge from Canyon Meadows to the City property west of the Yard and Shop Complex and a walkway to the L.R.T. Station.

Secondary Pedestrian Circulation Corridor

Secondary Pedestrian Circulation Corridors, which may be eligible for bonuses, can be built in the Station Area at the developer's option to link into the Primary Corridors for the improvement of pedestrian travel.

Sidewalks

The sidewalk system should be completed in the Station Area, including sidewalks along Macleod Trail. This network could be enhanced by private developers wishing to improve their developments, with walkway improvements being considered for bonussing.



L.R.T. ALIGNMENT & STATION

PRIMARY PEDESTRIAN CIRCULATION CORRIDOR

SECONDARY PEDESTRIAN CIRCULATION CORRIDOR

PUBLIC IMPROVEMENT (SIDEWALKS)

PROPOSED PEDESTRIAN GRADE-SEPARATION

L.R.T. South Corridor Land Use Study

Pedestrian Circulation & Improvements

THE CITY OF CALGARY
PLANNING DEPARTMENT

Map 32

Anderson Station
October 1980

Chapter E
Implementation

E. IMPLEMENTATION

The implementation of the L.R.T. South Corridor Land Use Study shall involve statutory plans as well as technical review and programming within the Civic Administration.

1. ADOPTION OF THE L.R.T. SOUTH CORRIDOR LAND USE STUDY BY RESOLUTION

The Study sets out the planning framework to guide future development and land use changes in the Station Areas and the South Corridor. This policy document shall be used as the basis for the preparation and review of land use amendments and development applications. In addition, it shall be employed as the basis for the preparation of any future Area Redevelopment Plans in the Study Area. This Study also makes recommendations for improvements by the various City Departments and by private developers to achieve the Study objectives. It is therefore recommended that City Council adopt by resolution the L.R.T. South Corridor Land Use Study as a policy report which sets out the context to guide future development and land use changes in the L.R.T. South Corridor[1].

2. AMENDMENTS TO THE CALGARY GENERAL MUNICIPAL PLAN RESULTING FROM THE L.R.T. SOUTH CORRIDOR LAND USE STUDY

Under the provisions of The Planning Act 1977, City Council can amend the Calgary General Municipal Plan by by-law to incorporate the land use policies contained in the L.R.T. South Corridor Land Use Study. It is necessary to amend the Calgary General Municipal Plan in order to make the provisions of the policy report part of a legal statutory plan. The recommended amendments shall include the following policies:

a. The approved L.R.T. South Corridor Land Use Study policy recommendations shall be used as the basis for future land use changes and also for the preparation of Area Redevelopment Plans in the South Corridor.

b. The seven L.R.T. Station Areas shall be designated as "multi-purpose" centres suitable for the decentralization of employment opportunities and high density residential developments.

c. Wherever appropriate, high density residential development shall be supported in Station Areas in accordance with the recommended development guidelines in order to optimize the potential for L.R.T. ridership.

d. Integrated mixed commercial and residential development which promotes greater efficiency of urban land utilization, convenience for users and vitality shall be encouraged in Station Areas.

e. The L.R.T.-related Station Area Development Policies regarding benefit features and the bonus system should provide guidance for all new developments located within the Station Areas.

f. The Erlton, 42nd Avenue and Chinook Station Areas shall be designated as areas suitable for the preparation of Area Redevelopment Plans.

g. The land use designations of the Calgary Land Use By-law, including the Direct Control District (D.C.), shall be used in order to achieve the land use policy objectives of the L.R.T. Station Area Plans.

1. On July 29, 1980, City Council approved the L.R.T. South Corridor Land Use Study and By-law 12P80 to amend the Calgary General Municipal Plan, both as amended.

3. PREPARATION OF AREA REDEVELOPMENT PLANS

Within the L.R.T. South Corridor Study Area, Connaught/West Victoria Park, Mission and Parkhill/Stanley Park have been designated by City Council as areas suitable for the preparation of Area Redevelopment Plans. It is further recommended that, within the Study's policy framework, Area Redevelopment Plans be prepared for the Erlton Special Study Area immediately following the Study's approval, as well as the 42nd Avenue and Chinook Station Areas as soon as possible. As the most efficient and consistent approach to organizing land uses and development guidelines, the two A.R.P.'s for Parkhill/Stanley Park and the 42nd Avenue Station Areas should be prepared and proceed simultaneously due to their related nature.

The Area Redevelopment Plan process will provide detailed planning at the community level, allowing opportunities for public input regarding detailed issues which could not be adequately addressed at this Study level. Specific policies, guidelines and implementation techniques can be determined at this stage of plan preparation. In addition, a redevelopment levy may be established and imposed on new developments in accordance with the by-law adopting an Area Redevelopment Plan for the Station Area. The funds collected can be used towards the cost of open space acquisition.

4. LAND USE REDESIGNATIONS UNDER THE CALGARY LAND USE BY-LAW

In order to implement the recommended land uses and development guidelines in the Study Area, it is necessary to redesignate or amend the existing land use designations which are in conflict with the land use proposals. It is recommended that the Planning Department initiate, immediately after the approval of the Land Use Study policies, redesignation procedures for the development parcels generally located within the 400 m radius of a Station as indicated in the various individual Station Plans. Immediate legislative action is necessary for these parcels in view of their strategic location in relation to the L.R.T. Stations. Appropriate land use districts are critical for the success of the L.R.T. System. When land use amendment and development applications are submitted for approval, the policy guidelines should provide a basis for review.

It is recognized that some property owners may request the approval of interim types or levels of development rather than the Study's recommended intensity and uses. The review of these applications shall consider whether the proposal is an acceptable extension of the existing use or a new use which does not jeopardize the site's longer-term redevelopment potential or the Station Area's functioning.

On March 3, 1980, the Calgary Land Use By-law was adopted by City Council and came into effect on March 31, 1980. This By-law is considered to be one of the most effective legal tools in regulating uses and development in the Study Area. It is therefore recommended that the appropriate land use districts from the By-law be utilized wherever possible to respond to the requirements of a particular land parcel in the Station Area. However, if available districts are found to be insufficient to meet the needs of the Station Area land use policies, the "Direct Control District" may then be employed. It is also recommended that during the implementation stage, the Administration explore the need to establish new L.R.T.-related land use districts or an L.R.T. overlay district to be incorporated into the Calgary Land Use By-law as a means of controlling the use of land adjacent to transit station areas.

5. DEVELOPMENT REVIEW

Within this recommended policy framework, actual development proceeds on a project by project basis requiring Civic approval of land use amendments, development permits and building permits. Therefore, development within the Corridor will be reviewed by the Civic Departments relative to the capacity of existing or planned infrastructure as well as concerns regarding its quality and conformity with the Study's planning objectives. It shall be the policy of the Calgary Planning Commission with Council's concurrence on July 29, 1980, that all development applications submitted for lands in the Primary Impact Areas of all the L.R.T. Stations be required to include information which shows how the development proposed:

- contributes to the effectiveness of the L.R.T. System;
- what features the development will contain that will attract people to the L.R.T. Station Areas; and
- how it is designed such that it will not adversely affect the accessibility of the adjacent communities to the L.R.T.

One of the major development constraints identified in the Station Areas is related to the limited road capacities and access along Macleod Trail and at some of its major intersections. In order to assure that the necessary road facilities are available to accommodate the level of development proposed in the Station Plans, it is recommended that:

- all future development proposals be reviewed by the Transportation Department regarding trip generation characteristics and potential traffic impact on the road system to assess the appropriate scale of development;
- the planned road and access improvements be co-ordinated with the level of development activities in each Station Area;
- based on these analyses, the Transportation Department make recommendations to the Approving Authority with regard to the improvements or restrictions considered necessary to maintain the traffic flow at a reasonable level of service in the vicinity of the transit stations;
- the developer may be required to contribute towards the necessary road improvement costs so as to meet the road and access requirements of the proposed development.

6. TRANSPORTATION REQUIREMENTS

The following major road improvements have been identified by the Transportation Department as key elements in the successful implementation of new developments along the L.R.T. Corridor (Part III, Appendix G):

Stampede - South Downtown By-pass (City Council-approved);

Erlton - 26th Avenue Connector;
- Macleod Trail Widening to 6 lanes (City Council-approved);

42nd Avenue and Chinook - 50th Avenue Freeway (ultimate);
- 5th Street S.W./Glenmore Trail Interchange;
- Fairmount Drive/Glenmore Trail Interchange (City Council-approved);

Heritage and Southland - Grade-separation of Heritage Drive and Southland Drive along Macleod Trail

FIGURE 35: SUMMARY OF CITY EXPENDITURES RELATED TO L.R.T. STATION AREA PLANS

RECOMMENDED PROJECTS*	APPROXIMATE TOTAL COST TO CITY FOR STATION AREAS	COMMENTS	RESPONSIBLE DEPARTMENT
Pedestrian Overpasses	$3,000,000	The cost estimates assume fully enclosed, grade-separated bridges; however, some of these links may be integrated into the interchange designs and costs. As set forth in Part II, Chapter C, the City could secure or recover a large portion of these costs at the time of redevelopment.	Engineering
Sidewalk Construction and Improvement	$ 500,000	Through Local Improvement By-laws, the majority of sidewalk costs are charged back to adjacent owners. However, it is anticipated that the City would likely absorb approximately 25 percent of the costs for the recommended sidewalks program. Sidewalks could also be provided by owners at the time of development or redevelopment.	Engineering
Land Acquisition	$1,000,000	Estimates based on acquisition of school sites in Erlton and Manchester (.4 ha) and a further area (.7 ha) close to Chinook Station for open space and recreational purposes. In future, parkland acquisition costs could be offset by the imposition of a redevelopment levy, through the Area Redevelopment Plan (A.R.P.) by-law. Satisfactory relocation of the City Maintenance Depot in the Southland Station Area and the Pounds in the 42nd Avenue Station Area could require further expenditures in the future.	Parks/Recreation
Tree Planting/Landscaping/Beautification	$1,000,000	Through the planned A.R.P. process, landscaping programs may be established in the Stampede, Erlton and 42nd Avenue Station Areas. In other Station Areas, the landscaping program will be developed directly with the responsible Departments.	Engineering/Parks
TOTAL	$5,500,000		

* The Station Area Plans set forth the more detailed information and location of the recommended expenditures.

Anderson - Deerfoot Trail connection to Anderson Road;
- Anderson Road/Macleod Trail Interchange (City Council-approved);
- Access Bridge between Southcentre and the L.R.T. Station site;

These proposed roadway improvements shall be evaluated in detail in the context of the Area Redevelopment Plan processes as well as other comprehensive planning studies. Some of these major road improvements are not identified in the ten year priority list of the Transportation Improvement Priority Study - Update. It is recommended that requirements for these improvements be reviewed as development proceeds throughout the Corridor. The recommended monitoring program regarding the transportation characteristics should be undertaken when the L.R.T. System becomes operational and as development proceeds in order that the development potential and road improvement programs may be fine-tuned over the implementation period and that the potential impacts be assessed adequately by the appropriate Civic Departments.

7. FINANCING IMPROVEMENTS IN STATION AREAS

The Station Area Plans have recommended improvements for the purpose of improving the general environment and accessibility. The cost of these recommended improvements may be borne in several ways.

- The expenditures for programs such as park development and open space acquisition, as well as construction of roadways and some pedestrian improvements are generally included in the annual Capital Budget of the responsible Civic Departments.

- It is recommended that the improvements outlined in the Station Area Plans be incorporated into the annual budget review of the responsible Civic Departments and, as warranted, the appropriate Department's Capital Improvement Program would accommodate the Station Area requirements. The estimated costs for the major municipal improvements in the Station Area Plans are summarized in Figure 35.

- Through the adoption of the recommended Area Redevelopment Plans in designated Station Areas, redevelopment levies may be established and imposed on new development to offset open space acquisition expenditures.

- The costs for sidewalks and other features may be borne by the adjacent owners through Local Improvement By-law charges.

- As recommended in the Station Area Development Policies (Part II, Chapter C), the cost of the Primary and Secondary Pedestrian Circulation Corridors shall be borne generally by the adjacent owners benefitting from the improvements. The pedestrian network will be negotiated during the development review process based on the recommended bonus system and policy requirements. However, some connections benefitting general neighbourhoods may require funding from the Civic capital budget.

8. PARTICIPATION IN DEVELOPMENT OPPORTUNITIES OF CITY-OWNED LAND IN STATION AREAS

Active participation by transit authorities to promote and participate in development activities around Station sites has been undertaken by many cities, including Montreal, Toronto and Washington, D.C. These cities have established policies to "capture" a portion of the financial, environmental and social benefits from the transit system through various management strategies. Lands which are exclusively transportation-oriented may be better utilized for the benefit of both the public and private sectors. Development opportunities on the City-owned sites at/or in close proximity to the L.R.T. Station have been analyzed in the Station Area Plans. It is recommended that the City:

a. adopt a positive development-oriented policy for City-owned lands in and around the L.R.T. Station Areas, and promote the development opportunities of such parcels to:

   i. realize the maximum benefit for the private and public sectors;

   ii. serve the needs of the City and the adjacent communities; and

   iii. optimize transit ridership opportunities;

b. in order to achieve these objectives, it is recommended that an Inter-Departmental Committee co-ordinated by the Land Department be established to promote, procure, co-ordinate and participate in development opportunities in Station Areas;

c. that H.U.D.A.C. and U.D.I. be consulted in conjunction with the planning process for future development on City-owned sites in the Station Areas.

9. IMPACT MANAGEMENT AND MONITORING PROGRAMS

The L.R.T. System has great potential to act as an important force in restructuring urban activities in Calgary. A program can be developed to determine how and to what extent the South Leg of the L.R.T. System has influenced the transportation system and the spatial arrangement of population and land use activities within the City. The environmental effects of the L.R.T. System's operation on the adjacent areas should also be included in this program. The findings should be evaluated with regard to the implications for planning and transportation policies in Calgary. The findings could also be used by decision-makers to establish future policies to enhance the benefits or to reduce the negative impacts of the future extensions of the L.R.T. System.

It is, therefore, recommended that an impact and monitoring program for the L.R.T. South Corridor be established after the approval of the Study to examine the economic, social and environmental impacts at both the micro-scale of the adjacent lands and the macro-scale of the communities and City as a whole. The impact monitoring system and management strategies should be oriented towards "problem-" and "issue-solving", so that appropriate action can be undertaken quickly and effectively. The formulation of the detailed program will involve the Civic Departments responsible for dealing with the impacts.

Chapter F

Impact Monitoring And Management Strategies

F. IMPACT MONITORING AND MANAGEMENT STRATEGIES

Within the terms of reference of the Land Use Study, a comprehensive impact analysis has been undertaken in response to the introduction of a major new mode of transportation into Downtown and South Calgary. The impacts of the L.R.T. System itself and the potential new development attracted to the South Corridor have been analyzed in the context of the abutting communities, then focussing on the immediate Primary Impact Area.

1. Process

The impact analysis, as outlined in Figure 1 of the "Planning Process" Part II, Chapter A, has involved the stages of:

- description of existing or "baseline" conditions relative to various factors;
- identification of potential issues and impacts;
- recommendation of monitoring and/or management techniques to deal with the impacts.

In Part III, Appendix F, the detailed findings of the impact analysis are summarized relative to these stages.

The impact analysis has incorporated the evaluation and assessment of existing neighbourhood conditions, past and projected trends, community concerns and the findings of consultants' studies[1] regarding traffic and parking impacts, the market feasibility of development in the South Corridor, and L.R.T. System noise and vibration effects. This analysis has been undertaken in advance of the availability of any detailed information on the impact of the new L.R.T. System and associated development specifically related to the Calgary situation, although experience can be drawn from other municipalities with rail transit systems.

The impact analysis has led to recommendations identifying the need for monitoring systems and management strategies to deal with impacts. In combination, the possible impacts from potential new development on factors like community facilities have been used in the evaluation of planning recommendations for the Station Area Plans and the Station Area Development Policies.

As the South Leg of the L.R.T. System commences operation, it is important that the recommended impact monitoring processes be undertaken relative to both the site-specific level of individual projects and the cumulative effects at the Corridor-wide level. This monitoring process is necessary to provide the essential information not only to identify the level of impacts and to lead to the necessary actions for controls and improvements but also to provide basic information on the L.R.T. System's impact for application in the planning and policy formulation for future extensions of the System. In conjunction with the monitoring processes, effective impact management strategies shall be formulated and implemented.

1. IBI Group, "L.R.T. South Corridor Traffic and Parking Study" (October, 1978) summarized in Part III, Appendix H; Urbanics Consultants Ltd., "A Study of the Market Development Opportunities in the Light Rail Transit South Corridor Land Use Study Area" (February, 1979) summarized in Part III, Appendix I; Bolt Beranek and Newman Inc., "Noise and Vibration Assessment Study" (December, 1979); prepared for the City of Calgary Transportation Department.

2. Recommended Impact Monitoring and Management Strategies

a. It is recommended that a monitoring system be established, co-ordinated by the Planning Department and involving the responsible Civic Departments, to evaluate the L.R.T. System and associated development in terms of its relevant characteristics and impacts within the South Corridor. This monitoring system should address both the individual development proposals and the L.R.T. System facilities at the specific local level and in the broader context of the South Corridor, where cumulative effects may become evident. This systematic information would be used as a basis for evaluating the effectiveness of the existing policies and refining them as well as for formulating programs, policies and development guidelines in future transit corridors.

b. It is recommended that effective management strategies be formulated to deal with specific impacts with respect to local services and environmental conditions.

c. These two general recommendations lead to a series of more specific recommendations which are outlined in more detail in Figure 36.

FIGURE 36: RECOMMENDED IMPACT MONITORING AND MANAGEMENT STRATEGIES

DEPARTMENT	FACTOR	MONITORING	MANAGEMENT STRATEGY
PLANNING	Land Use Compatibility and Change	It is recommended that the pattern of land use change be monitored in the context of the Calgary General Municipal Plan Review.	The Civic development review and approval process shall evaluate the appropriateness of the new developments in terms of their uses and design. The introduction of mixed commercial and residential developments into the Station Areas, which are presently in highway-oriented commercial or industrial uses shall be carefully reviewed.
PLANNING	Community Character and Stability	The Civic development review process shall review proposals relative to their effect on abutting stable communities.	Land use policies to maintain the stability of adjacent residential communities are recommended in the Station Area Plans.
PLANNING	Environmental Conditions Related to Direct Sunlight and Shadowing		It is recommended that the heights, siting and form of new developments within the Station Areas conform with the recommended Urban Design Performance Standards regarding direct sunlight requirements for pedestrian rights-of-way and abutting existing low density residential development (Part III, Appendix D).

FIGURE 36: RECOMMENDED IMPACT MONITORING AND MANAGEMENT STRATEGIES

PARKS/RECREATION PLANNING AND TRANSPORTATION	Environmental Conditions Related to Views to and from the Transit Station		It is recommended that, where possible, a buffer strip at least 6 m in width be provided along both sides of the L.R.T. alignment. The buffer strip should be landscaped, as part of new development wherever possible and as an ongoing Civic program. This buffer may potentially incorporate a public walkway or bicycle path where continuity is possible and advisable from a recreational and transportational point of view. This buffer would serve to enhance the privacy of abutting residences as well as screening the transit riders from some unattractive views of industrial storage, parking or vehicular movement. Where comprehensive development will be integrated with the Station, possibly through "air rights" development, this buffer would be unnecessary in light of appropriate building design and at-grade treatments.
TRANSPORTATION	L.R.T.-Related Parking	It is recommended that the Transportation Department monitor parking patterns, in terms of demand and supply, within a 400 m distance of the Station sites to identify problems and to formulate appropriate control measures in consultation with the affected communities. Based on the findings of the IBI Group (Part III, Appendix H), this monitoring program should concentrate on the communities close to the suburban Stations, particularly Southwood and Haysboro, as well as existing commercial streets and business parking lots near the Chinook, Heritage, Southland and Anderson Stations. The community planning process has identified similar concerns in Erlton and Parkhill/Stanley Park relative to their proximity to Stations.	In consultation with the affected communities, the Transportation Department will formulate and undertake management techniques to control potential overspill parking problems including: residential parking permit programs, parking bans or time limits during commuter hours, enlarged public parking facilities or leasing agreements with adjacent private owners to accommodate overspill parking. On June 23, 1980, City Council approved the recommendations of the Operations and Development Committee (June 2, 1980) instructing the Transportation Department to install two hour parking zones one month prior to the opening of the L.R.T. line on those residential streets adjacent to the Southland and Anderson Stations which are likely to experience overspill parking of non-local vehicles. There was a further instruction to the Transportation Department to carry out a study, in consultation with the Southwood Community Association, of the possibility of leasing and/or acquiring land on the east side of the L.R.T. tracks, adjacent to Southland Station for a future L.R.T. Park 'n' Ride site. On July 29, 1980, Council also directed the Administration to prepare a report on the feasibility, need, costs, location, timing and land use implications of an extension of the L.R.T. System to Midnapore.
TRANSPORTATION AND PLANNING	Development-Related Parking	It is recommended that the Transportation Department monitor the travel and parking characteristics of new Station Area development and its potential impact on adjacent areas. If problems are identified, the Station Area parking policy framework and its application should be re-evaluated by the Transportation and Planning Departments.	The recommended Station Area parking policies and their application through the site-specific review process by the Planning and Transportation Departments have been formulated to provide sufficient parking in new developments close to the Stations. However, if parking problems arise attributable to new development, on-street parking control measures may be considered.

FIGURE 36: RECOMMENDED IMPACT MONITORING AND MANAGEMENT STRATEGIES

TRANSPORTATION	L.R.T.-Related Traffic	It is recommended that the Transportation Department monitor traffic conditions in the communities abutting the Station sites to identify problems and formulate effective control measures in consultation with the affected communities. Based on the findings of the IBI Group Study (Part III, Appendix H), this monitoring should focus on Southwood (Sacramento Drive) and Haysboro (Healy Drive and Haddon Road). Based on the community concerns raised during the public participation process, the traffic monitoring should also include Parkhill/Stanley Park and Erlton.	If local traffic problems arise related to the L.R.T. Stations, it is recommended that appropriate control measures like turn restrictions, road closures, redesign of critical intersections, parking bans and other techniques be undertaken, as warranted, in consultation with the affected communities. Comprehensive community traffic plans may be undertaken as required or in conjunction with the Area Redevelopment Plan processes. On June 23, 1980, City Council instructed the Transportation Department to carry out a study in consultation with the Southwood Community Association, on the need for controls to restrict L.R.T.-oriented and other traffic from short-cutting in Southwood. On July 29, 1980, Council also directed the Administration to prepare a report on the feasibility, need, costs, location, timing and land use implications of an extension of the L.R.T. line to Midnapore.
TRANSPORTATION	Development-Related Traffic	As an ongoing program, the Transportation Department monitors traffic on critical roadways such as Macleod Trail, Heritage Drive, Southland Drive, Anderson Road and Glenmore Trail to serve as a basis for their long-term planning. This process may be intensified to focus on the Station Areas due to development and roadway improvement needs.	The ongoing process of determining roadway improvement priorities will incorporate the needs of new Station Area development for interchanges and road widenings, as discussed in the Station Area Plans and Part III, Appendix G. The review and assignment of priority for the construction of road improvements should be balanced and phased with the development needs. The process of development review also incorporates the Transportation Department's evaluation of servicing capabilities and impacts.
TRANSPORTATION	Noise and Vibration	The Transportation Department is planning a monitoring program regarding the potential noise and vibration effects attributable to the L.R.T. System to identify problem areas and to design the necessary measures to mitigate any negative effects. Similarly, the Transportation Department is formulating noise policies related to transportation noise, particularly roadways. Therefore, the traffic noise related to Macleod Trail and other major thoroughfares in the Station Areas should be monitored for identification of problems and the need for attenuation techniques.	The Transportation Department is studying noise impacts of the L.R.T. System and will design and construct mitigating structures such as noise barriers and special rail building techniques, as warranted. It is further recommended that buffering techniques be explored for critical segments of major roadways where noise problems are identified.

FIGURE 36: RECOMMENDED IMPACT MONITORING AND MANAGEMENT STRATEGIES

PARKS/RECREATION	Open Space and Recreational Services	New high density residential development is required to provide amenities in conformity with the standards of the Calgary Land Use By-law. However, the changing community recreational needs near the Stations would be monitored by the Parks/Recreation Department to identify the need for additional facilities or services.	As identified in the Erlton Station Area Plan, it is recommended that the Parks/Recreation Department undertake a comprehensive parks plan for Lindsay Park to address the open space and recreational needs of the surrounding residential areas including Erlton as well as the new major recreational facilities. The recommended land use changes in the Erlton, 42nd Avenue, and Chinook Station Areas include future park spaces to serve the future development nodes. In Southwood, additional park space has been approved as well as a direction to consider measures to improve the safety of the existing park space east of Sacramento Drive, in consultation with the Community Association. In conformity with the policies of the Calgary General Municipal Plan, it is recommended that the City negotiate with the School Boards for the acquisition of certain school lands and buildings, as they become available as surplus to Board needs, for community parks and recreational purposes to support the development and population levels recommended in the Station Area Plans, particularly in Erlton and Chinook.
SOCIAL SERVICES	Community Services	The introduction of new residential populations around the Stations would be included in the Social Services Department's ongoing study and programming of needs for daycare, counselling and other services.	It is recommended that, where necessary, new community service facilities be located close to L.R.T. Stations due to their better general accessibility.
FIRE DEPARTMENT	Co-ordination of Services in Event of Rail Disaster Involving Hazardous Materials		It is recommended that the responsible Civic Departments re-evaluate the existing emergency plans for the L.R.T. System and new development along rail lines within the City, including the South Corridor.

Part III
Appendices

A. DEFINITION OF TERMS

1. Area Redevelopment Plan (A.R.P.) and Redevelopment Levy

Under the Planning Act, 1977, an Area Redevelopment Plan for a defined area will detail proposals and policies related to land use distribution and types, circulation systems, public utilities and services, location of open space and reserve lands, schools, community facilities and others. It will be adopted by by-law and will form the legal planning document for that area. Section 64 of the Act also authorizes a development officer to perform the function with respect to the imposition and collection of a redevelopment levy in accordance with the by-law adopting the Area Redevelopment Plan. Pursuant to Section 73 of the Act, the redevelopment levy collected will be used to provide:

- land for a park or land for school buildings designed for the instruction or accommodation of students, or

- land for new or expanded recreational facilities, or both.

2. Air Rights Development

Air Rights Development refers to the right to use and control specified parcels of air space. Such rights may be purchased or leased. Many cities today have recognized that underdeveloped space exists over, under, or across railway tracks, highways, city streets, parking lots, transit facilities, and other public or private properties. This "air space" offers great potential for urban growth. The construction of New York City's Grand Central Terminal and the Park Avenue project over underground tracks of New York Central Railroad in the early 1900's constitutes the first air space development in the United States.

Structures that have been built over or under public rights-of-way in Calgary range from more common pedestrian bridges to complex developments such as multi-use buildings (Gulf Canada Square and Palliser Square) in the Downtown.

3. Bonus

An increase in density given to a developer over and above what is defined as base level in a Station Area Plan or a relaxation of certain By-law requirements. It is usually granted in exchange for benefit features such as public open spaces, pedestrian walkways, pedestrian bridges and other amenities which the developer provides. Bonus density is also granted to encourage residential development in the Station Area Plans. (Part II, Section C)

4. The Calgary General Municipal Plan

The Planning Act, 1977 authorizes the Council of a municipality to adopt a general municipal plan by by-law, which sets out the land use proposed for the municipality, and the manner of and the proposals for future development in the municipality. The Calgary General Municipal Plan was adopted by City Council on March, 1979.

5. The Calgary Land Use By-law (2P/80)

The Planning Act, 1977 provides for the land use controls in a municipality through a land use by-law which may prohibit or regulate and control the use and development of land and buildings within a municipality. On March 3, 1980, City Council adopted the Calgary Land Use By-law (2P/80). This By-law, which replaced the Development Control By-law 8600, came into effect as of March 31, 1980.

6. Commercial

It shall mean retail, personal services, hotel, entertainment and/or office use. Residential use is not normally included.

7. Conservation Area

The intent within the areas designated as "conservation" is to retain the existing character and quality of the area. The existing land use designations and approved Council policies, if applicable, shall be retained and respected.

8. Density, Intensity

The degree to which the land is utilized for uses such as residential, commercial, industrial, recreational and others. The intensity or density of a particular land parcel can be controlled or measured by the number of persons or dwelling units per hectare (or acre), floor area ratio, building bulk, or a combination of these techniques.

9. Floor Area Ratio (F.A.R.)

The floor area ratio means the quotient of the gross floor area of a building divided by the site area of the building. A floor area ratio of 2 means a total gross floor area of 2 times the site area. The Calgary Land Use By-law expresses density for commercial uses in terms of floor area. For example, in the General Commercial District (C-3) the maximum allowable floor area is three times the site area, and for the General Commercial District (C-4) the maximum density is equivalent to four times the site area. For residential density, the density is expressed in number of dwelling units per hectare or acre. For example, in the Residential Medium Density Multi-Dwelling District (RM-4), the maximum allowable density is 148 units per hectare (60 units per acre), which gives an approximate F.A.R. of 1.5. The Residential High Density Multi-Dwelling District (RM-7) allows a density of 321 - 395 units per hectare (130 - 160 units per acre) which gives an approximate 3 - 4 F.A.R. For purposes of this Study, the density is mainly expressed in terms of the amount of floor area space permitted in a particular land parcel.

10. Local Improvement By-law

Pursuant to Sections 145 and 166 of the Municipal Taxation Act, the City may pass a Local Improvement By-law which allows a development charge to be imposed on properties abutting a local improvement. Local improvements may include the construction, repair, and maintenance of a street, lane, sidewalk or other public place. The charge is usually assessed on a frontage rate basis.

11. Mixed Use Development, Mixed Use District

Land use controls such as zoning have traditionally separated land uses in different districts. Improved techniques regarding land use performance standards and shifting social values have led to comprehensive development permitting appropriate mixtures of various activities within a building or a group of buildings in a district. A mixed use development or district is to allow a diversity of land uses in close proximity within a limited area so as to promote a balance of land uses; to facilitate integrated physical design; to encourage interaction among activities within a development or district, and to facilitate development proposals responsive to current and future market conditions. A mixed use development or district, except as explicitly prohibited by a Station Area Plan, should provide more than one use such as office, retail, personal services, residential, hotel or motel, entertainment and recreational, or institutional.

Within a district, there is no restriction on combining different categories of uses within the same building or project, other than those imposed by a Station Area Plan. For instance, residential may be a mandatory requirement and the proportion of the various types of uses within a project may also be regulated. It should be noted that the residential component has been emphasized as an important use component in most mixed use districts that are located within the 400 m radius of a Station.

12. Modal Split

Percentages of trips made by various transportation modes, including private vehicles, transit and pedestrians.

13. Pedestrian Corridor, Pedestrian Links

A defined path or walkway primarily intended for use by people on foot.

14. Road Capacity

Maximum number of vehicles accommodated on a section of roadway under varying operating conditions or level of service.

B. GENERAL L.R.T. STATION AREA CONCEPT

The L.R.T. Stations in the South Corridor are envisaged to become new focal points for the surrounding areas once the L.R.T. System commences operation. The L.R.T. Stations will serve the existing communities and new developments anticipated in the Station Areas.

1. Movement Systems

People will travel to the L.R.T. Stations by various means.

a. Feeder Buses

It is projected that the majority of people will transfer to the L.R.T. System from feeder buses arriving from outlying areas. New feeder bus routes will be formulated, in consultation with affected communities. Except for the Stampede Station, all L.R.T. Stations will have bus drop-off facilities.

b. Private Automobiles

The four southern L.R.T. Stations (Chinook, Heritage, Southland and Anderson) will provide parking facilities for those people who choose to drive to the Station and leave their cars at the Park 'n' Ride; Kiss 'n' Ride facilities are also available where people are driven to the Station and let off.

c. Walk-on

Some people who live or work close to a Station will walk to an L.R.T. Station. It is anticipated that more people will walk to the L.R.T. Stations as new developments are completed in the Station Areas.

d. Pedestrian

Pedestrian movement would be encouraged further when the pedestrian systems are completed to link Stations with existing communities.

2. Land Use

a. L.R.T.-Oriented Uses

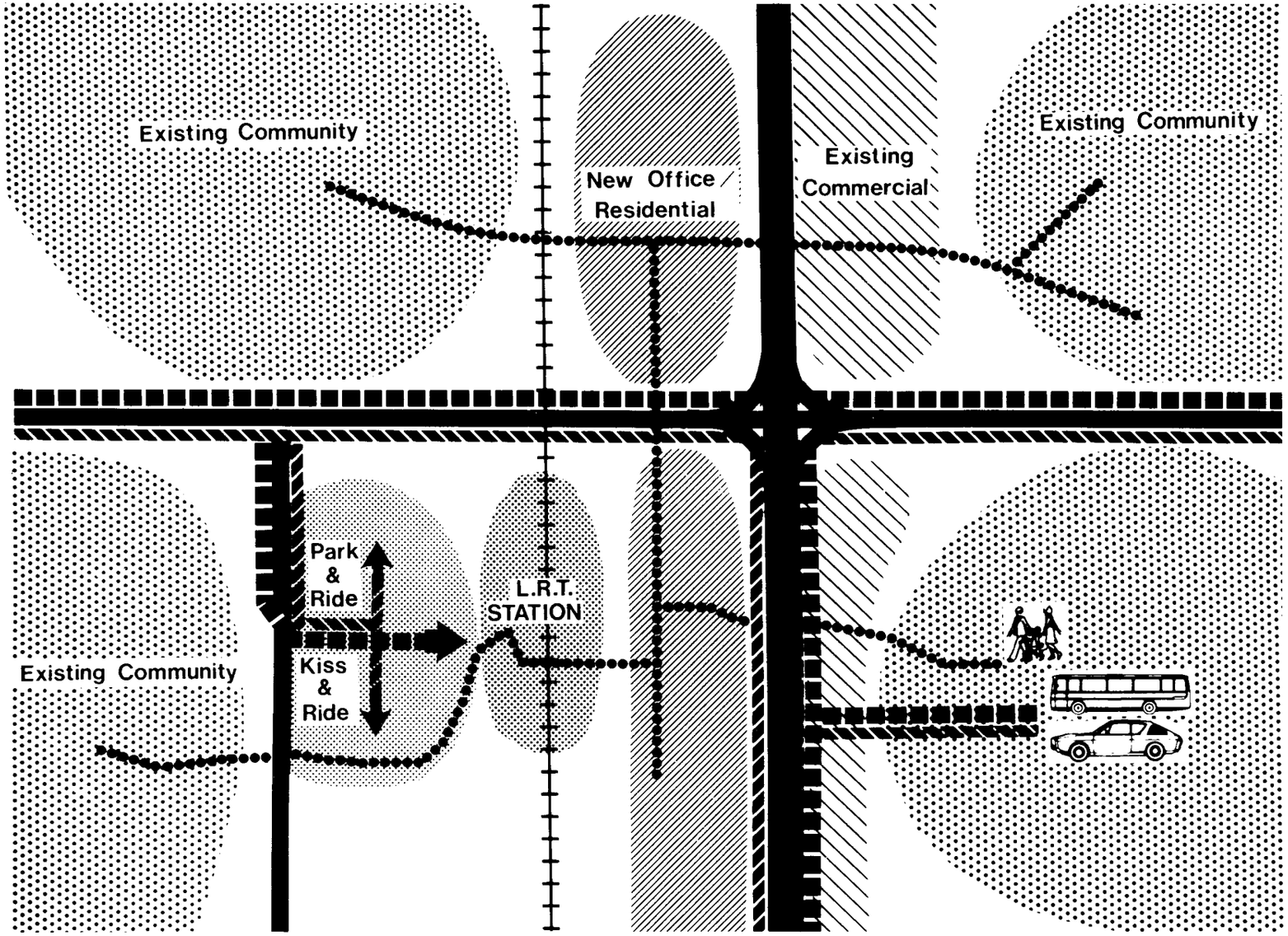
This Study is recommending L.R.T.-oriented land uses for properties close to each L.R.T. Station, primarily within a 400 m radius distance. High density mixed use development, combining residential, office and some retail uses, is generally proposed for each L.R.T. Station.

b. Existing Communities

Except for the recommendations for high density around each L.R.T. Station, the Study is generally recommending that the existing land use designations continue to be applicable for communities adjacent to L.R.T. Stations, some neighbourhoods that are subject to detailed review will receive A.R.P. programs.

c. Highway Commercial Along Macleod Trail

It is intended that the L.R.T. Station Areas will eventually function as transit-oriented high density nodes. Between the L.R.T. Stations, the intervening low density highway commercial uses along Macleod Trail will continue in their present form.



* Illustrations are diagrammatic and not to scale.

L.R T. STATION AREA CONCEPT

C. CHRONOLOGY OF MAJOR EVENTS - PUBLIC PARTICIPATION PROGRAM

June 29, 1978	City Planning Department met with representatives of Community Associations within the Study Area to introduce the Study and its objectives.
July 26-29, 1978	Public Information Centre - Chinook Centre. City Planning Staff disseminated information to and received initial concerns from the public.
August 9-12, 1978	Public Information Centre - Southcentre.
September 20, 1978	"Discovery Meeting" was held by City Planning Staff with interested residents and landowners of the Manchester area which lacked an active Community Association. The meeting was held to introduce the Study to citizens and gain an impression of their concerns and viewpoints.
September 21, 1978	"Discovery Meeting" was held by City Planning Staff with interested residents and landowners of the Erlton Area which lacked a Community Association.
October 5, 1978	A Public Meeting was held for the Erlton residents and landowners. Local residents organized themselves to form a Community Association to work with the Planning Department in providing input to the L.R.T. South Corridor Land Use Study.
January 30, 1979	A public workshop was held, attended by interested citizens from Southwood, Willow-Ridge, Lake Bonavista, Canyon Meadows and the A.C.E. Mobile Home Park. Input regarding the discussion paper which outlined a preliminary set of land use alternatives for the Anderson Station Area was recorded for assessment during the plan preparation process.
February 8, 1979	The Southland Station Area Public Workshop was held and attended by interested citizens from the Haysboro, Southwood, Acadia, and Willow-Ridge Community Associations. Planning Department Staff received input regarding the discussion paper which outlined preliminary land use alternatives.

March 28, 1979	Planning Department Staff met with interested citizens from Haysboro, Acadia, Fairview, Kelvin Grove, Chinook Park and Kingsland at a public workshop for the Heritage Station Area. Preliminary land use alternatives were presented by Planning Staff.
April 21, 1979	City Planning Staff acted as "resource people" at an Erlton Community-sponsored "draw-in". Residents/landowners in the Erlton Area proceeded through a community planning exercise under the guidance of an architect who volunteered his services to the community.
April 30, 1979	The Chinook Station Area Public Workshop was held. Residents/ landowners from Windsor Park, Meadowlark Park and Mayfair/Bel-Aire provided feedback regarding preliminary land use alternatives outlined in the discussion paper.
September 5, 1979	A Public Workshop was held in the Erlton Community. Preliminary land use alternatives were presented by Planning Staff.
September 17, 1979	City Planning Staff held the 42nd Avenue Station Public Workshop attended by interested citizens from the 42nd Avenue area and the neighbouring communities of Parkhill/Stanley Park. Preliminary land use alternatives were presented for the Station Area.
September 18, 1979	A Public Workshop was held by Planning Staff to present preliminary land use alternatives to the East and West Victoria Park Communities in the Stampede Station Area.
February 4 - March 7, 1980	Official circulation of the draft L.R.T. South Corridor Land Use Study to various Civic Departments and the general public for input and comments prior to finalization of the Study for submission to City Council.
February 15-16, 1980	Public Information Centre - Southcentre. City Staff were present to discuss the proposed recommendations of the Study and to receive public input.
February 22-23, 1980	Public Information Centre - Chinook Centre.

February 25, 1980	At the invitation of the Parkhill/ Stanley Park Community Association, City Staff attended a meeting to present the proposed Study recommendations to the Community.
February 27, 1980	City Staff met with members of H.U.D.A.C. and U.D.I. to gain input from the development industry regarding the Draft Report. A follow-up meeting was held on March 12, 1980, to further discuss the Study recommendations.
February 28, 1980	At the invitation of the Victoria Park Community Association, City Staff attended a meeting to present the proposed Study recommendations to the Community.
February 28, 1980	At the invitation of the Haysboro Community Association, City Staff attended a meeting to present proposed Study recommendations to the community.
February 29 - March 1, 1980	Public Information Centre - Erlton School.
March 3, 1980	At the invitation of the Southwood Community Association, City Staff attended a meeting to present proposed land use recommendations for the area.
March 5, 1980	At the invitation of the Amy Lorne-Chateau Estates Mobile Home Park community, Planning Department staff attended a meeting to present the proposed land use recommendations for the site.
March 5, 1980	At the invitation of a group of Erlton residents, City Staff presented the proposed land use recommendations of the Study.
March 6, 1980	The Lake Bonavista Community Association held a meeting attended by City Staff to discuss the proposed land use recommendations for the area.
April 10, 1980	Planning Staff attended a public forum held in the Haysboro Community to discuss land use concerns and transportation implications resulting from the Study recommendations.
June 24, 1980	Special Hearing of City Council: Public Hearing on L.R.T. South Corridor Land Use Study.
July 29, 1980	At a Special Meeting, City Council approved the L.R.T. South Corridor Land Use Study and By-law 12P80, the amendment to the Calgary General Municipal Plan.

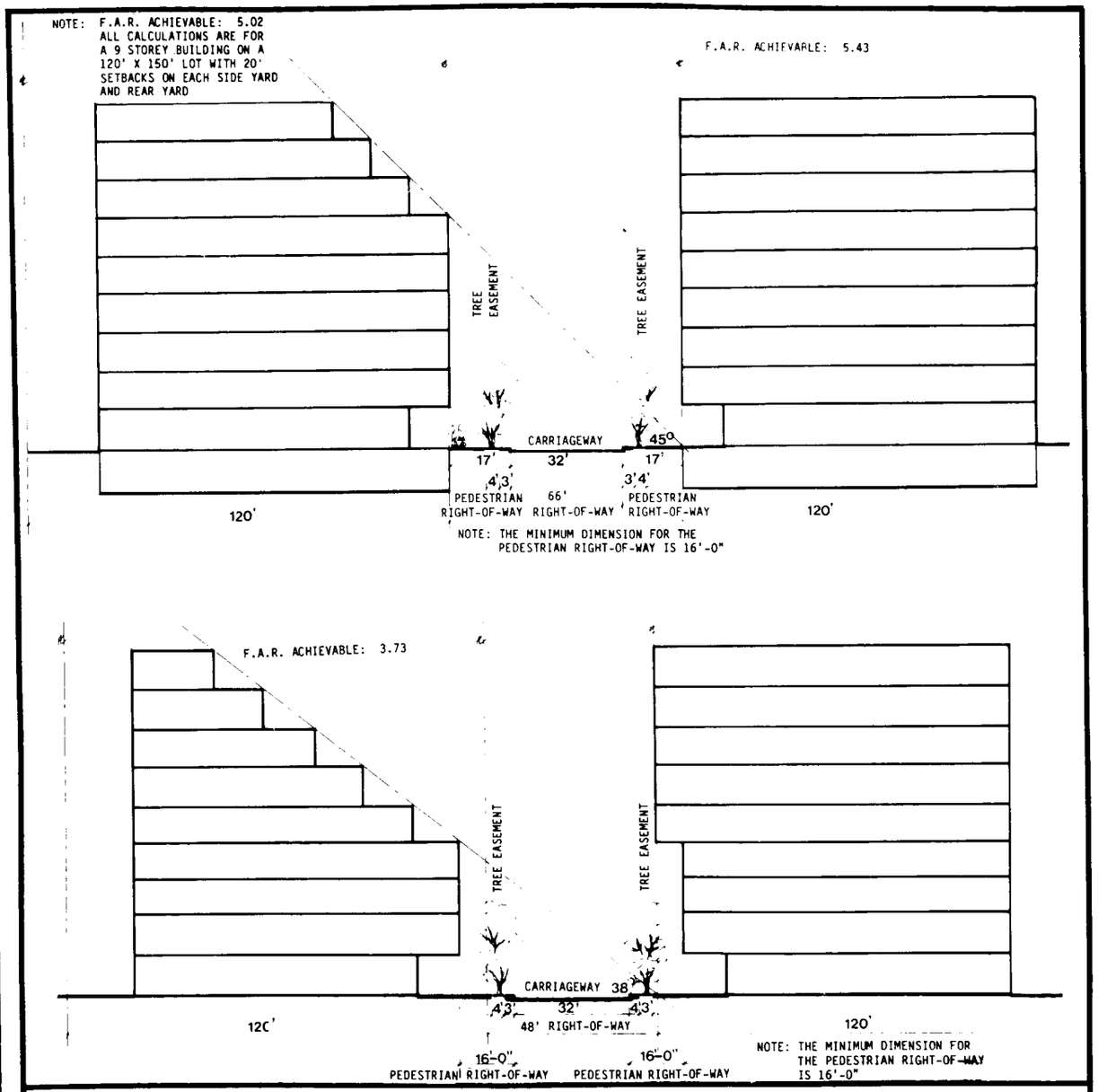
D. URBAN DESIGN PERFORMANCE STANDARDS

The following performance standards set minimum dimensions and details for pedestrian-oriented development. In order for a development to be eligible for the bonus system, the benefit features provided must conform to these minimum standards.

1. Wall Plane Maximums

The at-grade pedestrian routes are expected to receive a minimum level of direct sunlight, and have a wall plane profile which graduates the impact of future development. The 38^0 angle limit for wall planes applies to a right-of-way of 15.2 m or less in width. The 45^0 angle limit for wall planes applies to a right-of-way greater than 15.2 m in width. For all development within a 61 m radius of the Station development, wall planes may exceed both 38^0 and 45^0 angles.

IMPERIAL	METRIC
3'	.914 m
4'	1.219 m
16'	4.877 m
17'	5.182 m
32'	9.754 m
48'	14.630 m
66'	20.117 m
120'	36.576 m



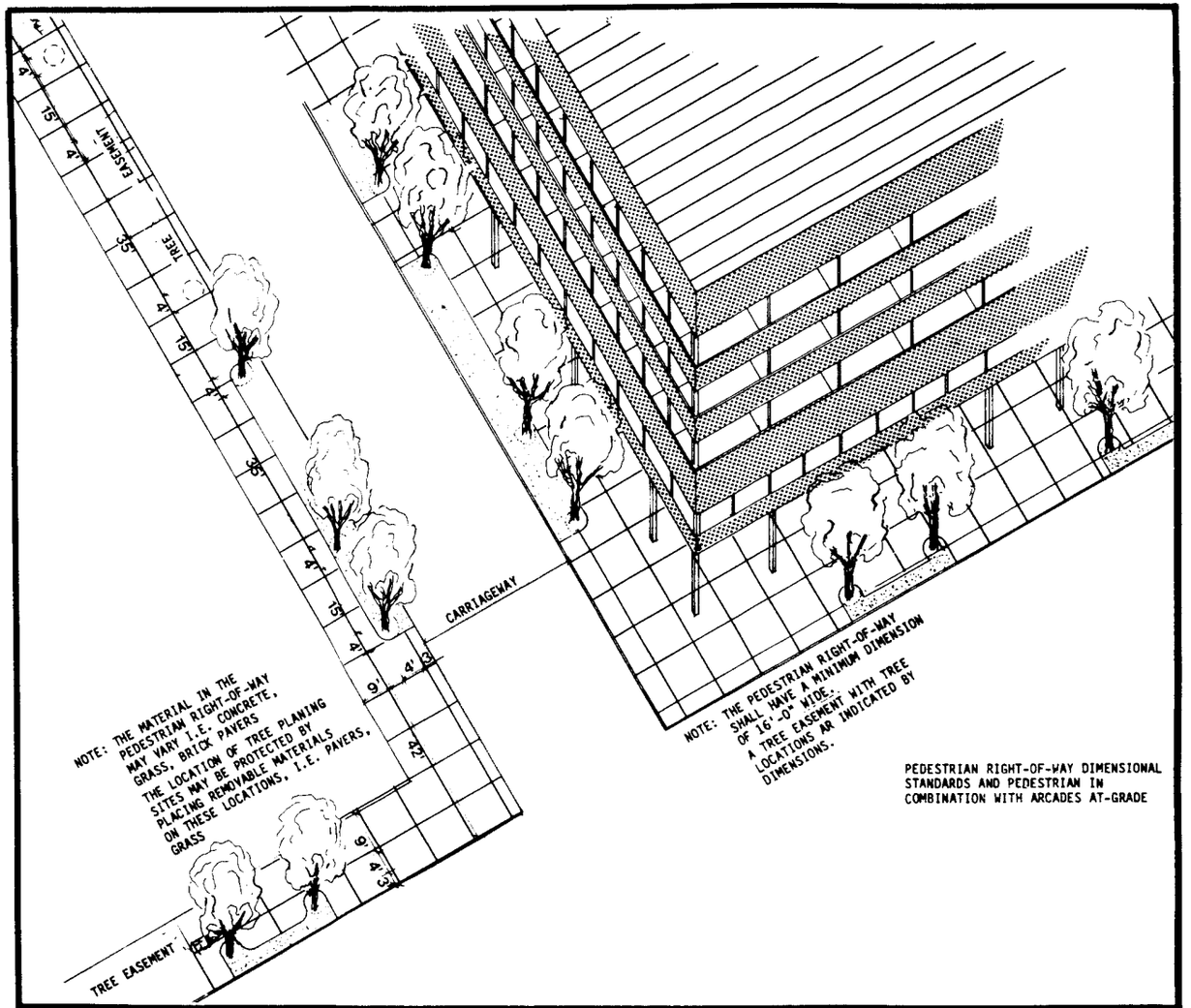
WALL PLANE MAXIMUMS FOR
THE SOUTH AND WEST SIDES OF THE STREET

FIGURE 1

* Illustrations are diagrammatic and not to scale.

2. At-Grade Pedestrian Right-of-Way

The at-grade pedestrian right-of-way may be constructed in increments. The first stage of construction may involve sidewalk details conforming to minimum City standards while making provision for the ultimate design potential of these sidewalks with 'knock-out' panels in the initial sidewalk design for future tree planting and boulevards. Tree planting is expected to conform to the locations noted.



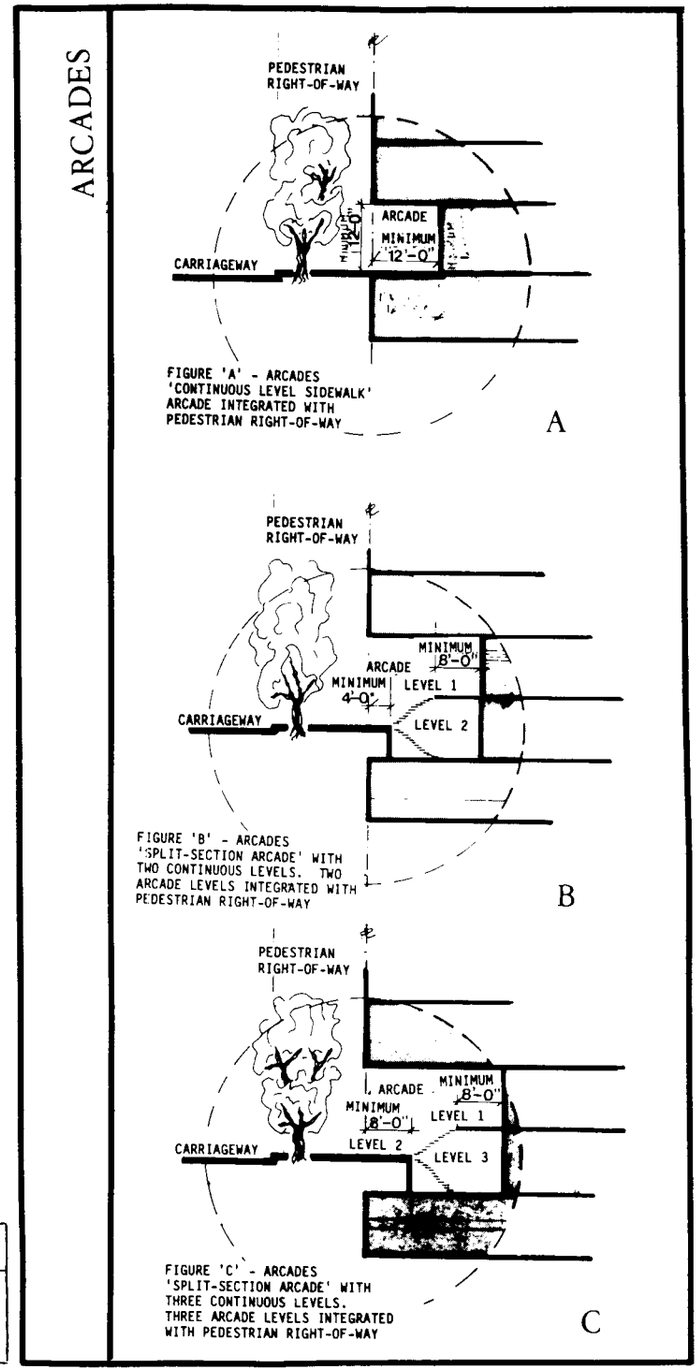
AT- GRADE
PEDESTRIAN R.O.W.

FIGURE 2

IMPERIAL	METRIC
3'	.914 m
4'	1.219 m
9'	2.743 m
15'	4.572 m
16'	4.877 m
35'	10.668 m
42'	12.802 m

* Illustrations are diagrammatic and not to scale.

FIGURE 3



* Illustrations are diagrammatic and not to scale.

3. Arcades

A range of arcade designs are possible, each design being more generous in the perimeter exposure it offers to the public street. Design alternative C is the most desirable as it offers the maximum building surface to the street. Alternative C has the greatest bonus potential relative to A and B as C has the most floor area with its three levels.

IMPERIAL	METRIC
4'	1.219 m
8'	2.438 m
12'	3.658 m

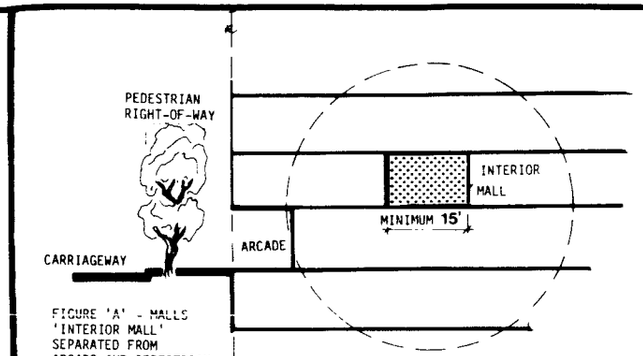


FIGURE 'A' - MALLS
'INTERIOR MALL'
SEPARATED FROM
ARCADE AND PEDESTRIAN
RIGHT-OF-WAY

A

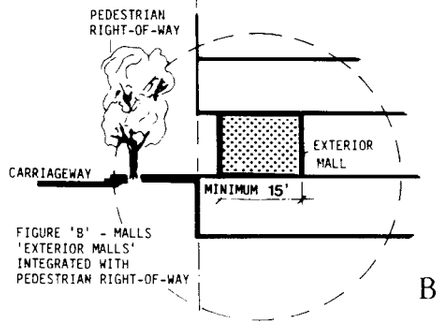


FIGURE 'B' - MALLS
'EXTERIOR MALLS'
INTEGRATED WITH
PEDESTRIAN RIGHT-OF-WAY

B

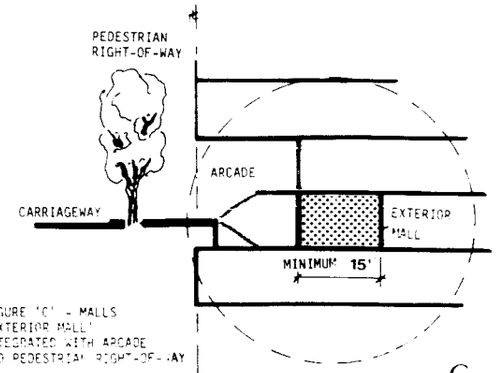
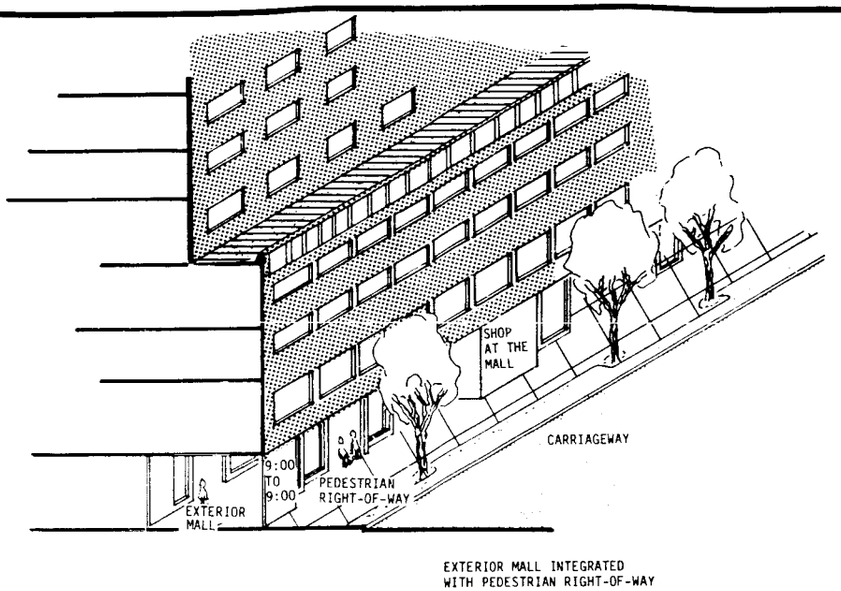


FIGURE 'C' - MALLS
'EXTERIOR MALL'
INTEGRATED WITH ARCADE
AND PEDESTRIAN RIGHT-OF-WAY

C



EXTERIOR MALL INTEGRATED
WITH PEDESTRIAN RIGHT-OF-WAY

fig D

FIGURE 4

IMPERIAL	METRIC
15'	4.572 m

4. Malls

A mall with at least 40 percent of its wall face openable to exterior public areas by means of mechanical devices such as sliding doors or panels may be considered for additional bonusing above that offered to malls in general.

* Illustrations are diagrammatic and not to scale.

FIGURE 5

IMPERIAL	METRIC
6'	1.829 m
8'	2.438 m
12'	3.658 m
15'	4.572 m
20'	6.096 m
25'	7.62 m
40'	12.192 m
50'	15.24 m

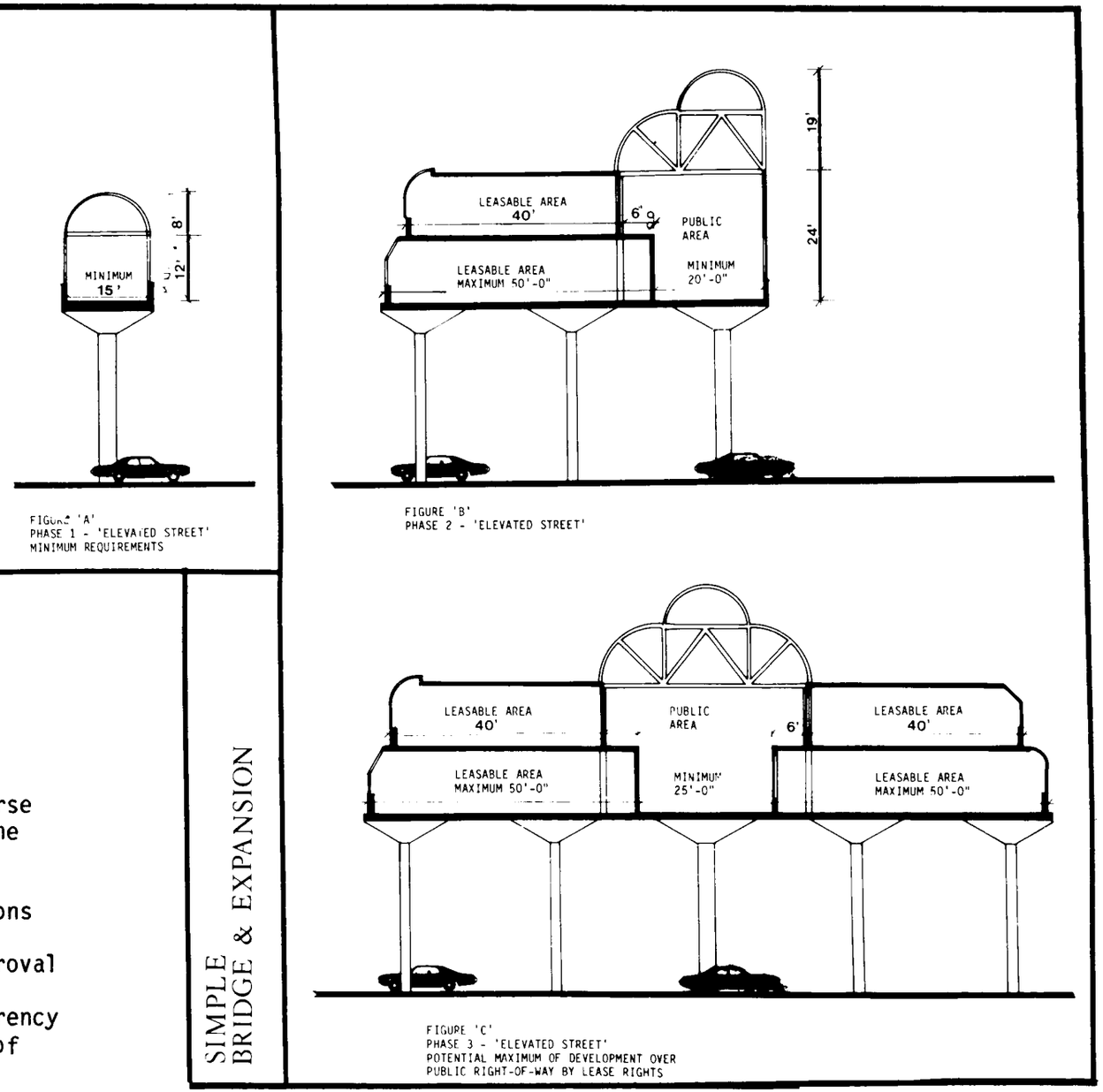


FIGURE 'A'
PHASE 1 - 'ELEVATED STREET'
MINIMUM REQUIREMENTS

FIGURE 'B'
PHASE 2 - 'ELEVATED STREET'

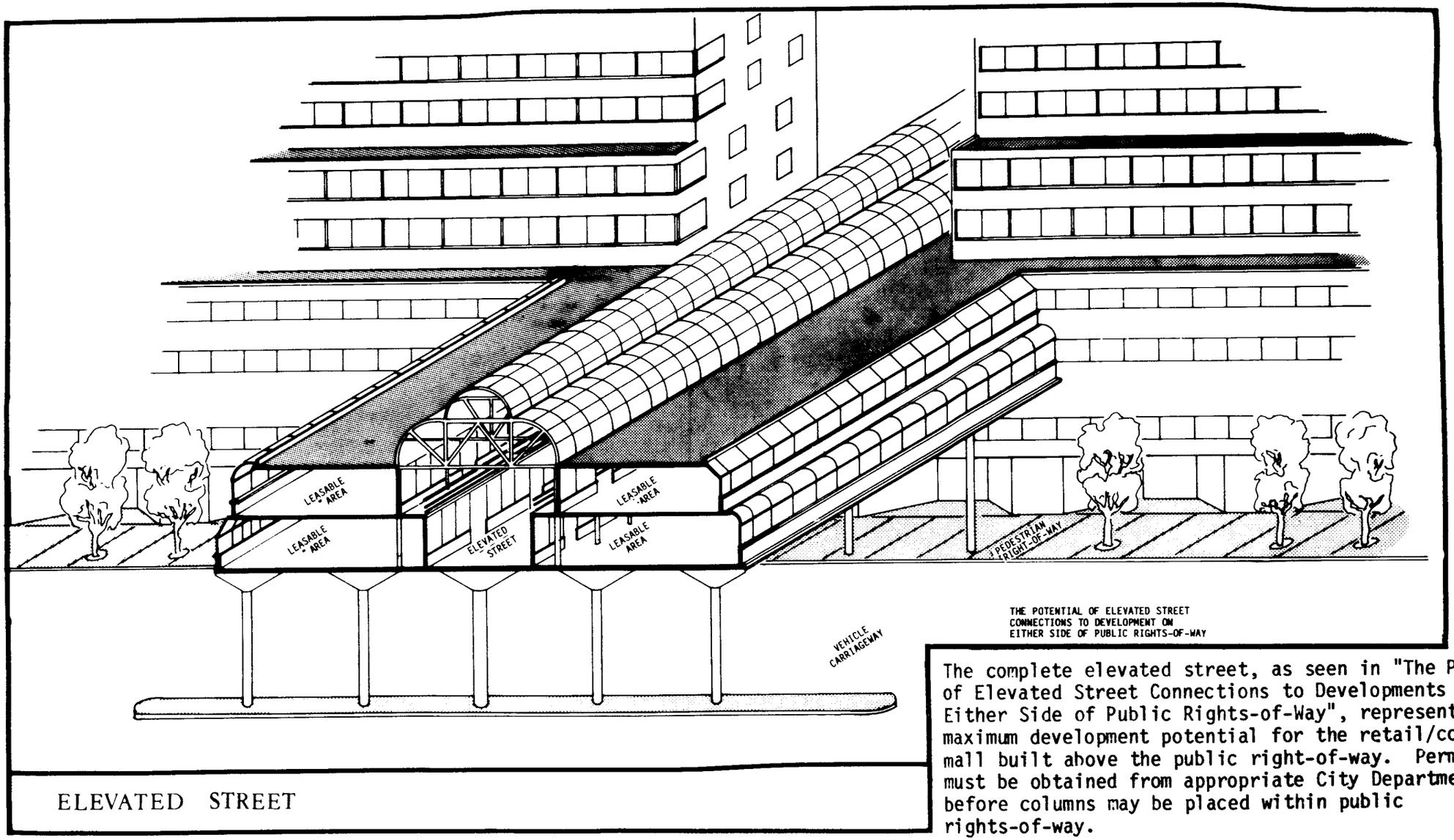
FIGURE 'C'
PHASE 3 - 'ELEVATED STREET'
POTENTIAL MAXIMUM OF DEVELOPMENT OVER
PUBLIC RIGHT-OF-WAY BY LEASE RIGHTS

* Illustrations are diagrammatic and not to scale.

5. Pedestrian Overpasses or "Elevated Streets"

The elevated street is a form of pedestrian concourse or mall situated above the public right-of-way. The requirements of the simple and expanded elevated street refer to the minimum widths of the public circulation areas and the maximum exterior dimensions of the entire structure. Before any pedestrian structure or mall is constructed, it must gain approval from all concerned City Departments. Details concerning items such as sidewall and roof transparency will be finalized at the development permit stage of approval.

FIGURE 6



ELEVATED STREET

The complete elevated street, as seen in "The Potential of Elevated Street Connections to Developments on Either Side of Public Rights-of-Way", represents the maximum development potential for the retail/commercial mall built above the public right-of-way. Permission must be obtained from appropriate City Departments before columns may be placed within public rights-of-way.

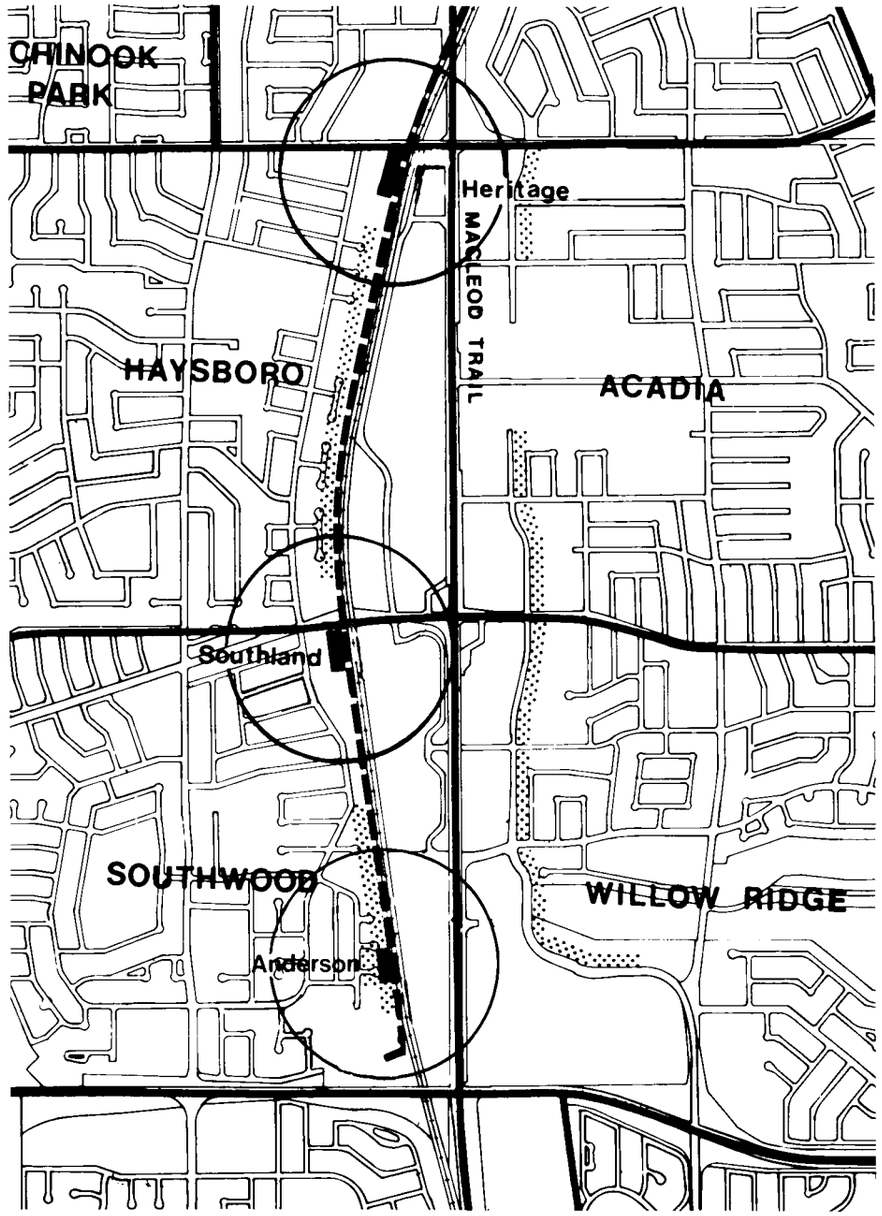
* Illustrations are diagrammatic and not to scale.

6. Maximum Shadow Line (Direct Sunlight)

A "Maximum Shadow Line" has been established to protect suburban, low density residential districts which would be most affected by the shadow impact of future development. The line indicated on the accompanying site map illustrates the permissible limit for shadows from new development, i.e. shadows may not exceed this line to the west for the communities of Southwood and Haysboro, and shadows may not exceed this line to the east for the communities of Acadia and Willow-Ridge.

The standard set in calculating the measurement time for the shadow line to the west of Macleod Trail is 10:00 a.m., December 21st. The set time for development to the east of Macleod Trail is 2:00 p.m., December 21st.

FIGURE 7



E. STATION AREA PLANNING CONSIDERATIONS AND REVIEW OF CITIZEN CONCERNS

1. STAMPEDE STATION AREA*

a. STATION AREA PLANNING CONSIDERATIONS

i. The major City Council policies which affect the planning of the Station Area include:

- policies relating to the "River Valley System and Other Natural Areas" of the Calgary General Municipal Plan which specify that setback zones of 30 m be established for new development or redevelopment along the banks of the Elbow River, and that the river valleys be developed as a parkland system;

- The Downtown Plan: Revised Draft Proposal and the Inner City Plan: Revised Draft Proposal, identify this area as a "Core Transition Area" and designate various sectors of the area as commercial and residential service districts suitable for medium to high density commercial and residential uses subject to development guidelines arrived at through the development of a conceptual plan for the area. At the time of approval of the Inner City Plan, Connaught/West Victoria Park, and Mission were designated for the preparation of Area Redevelopment Plans.

- Policies in the Victoria Park East Design Brief which specify the upgrading and rehabilitation of the neighbourhood with the assistance of the Neighbourhood Improvement Program. In accordance with the policies contained in the approved Design Brief, the Victoria Park East area lying between 11th and 14th Avenues S.E. to the east of Macleod Trail, with the exception of the C-3 area, has been redesignated as RM-4: Residential Medium Density Multi-dwelling district.

ii. The area between the Macleod Trail couplet has undergone a gradual transformation from low density to a high density use. Most of the single family structures have been converted to rooming houses or rental multi-dwelling units. Limited redevelopment has occurred mostly in the form of commercial and office buildings.

iii. The area to the west of 1st Street S.E. is undergoing a change to high density residential development in conformity with its present land use designation of RM-7. Redevelopment in this area has been influenced by its location relative to Downtown and the L.R.T. Station.

iv. The Transportation Department has identified that the traffic capacity in the Stampede Station Area is quite limited. Due to the constraints posed by the roadway capacity of 1st Street S.E., Macleod Trail and 17th Avenue South, the Transportation Department has indicated that overloading of the major streets in the area would occur if the area is fully redeveloped to the present land use designations which include RM-7, C-3 and CM-2.

* Refer to Map 6 for location of specific site parcels.

v. New development around the Station should be planned for the uses that could optimize the benefit of a transit station, while minimizing the adverse environmental impacts resulting from adjacent vehicular traffic particularly along 12th and 17th Avenues South, 1st Street S.E. and Macleod Trail. There is a need to encourage the development of appropriate residential, commercial and office uses which would provide a pleasant living environment in the Station Area. On the basis of the above-cited planning considerations and in view of the constraints identified by the Transportation Department, the intensity of land use both for commercial and residential development in the area needs to be redistributed and limited to a medium to high intensity range and to encourage commercial and/or mixed use along the major roads and residential use in the interior blocks of the area[1].

vi. The environmental factors considered are:

- the attractive setting on the banks of the Elbow River;
- the noise and air pollution associated with traffic on the Macleod Trail couplet;
- parking infiltration, noise and dust problems during Stampede Week activities;
- scattered retail activity and the poor sidewalk environment along 17th Avenue South.

vii. A number of the land owners in the Victoria East Community consider Victoria East as an attractive area for potential redevelopment due to its proximity to the L.R.T. Station and Downtown.

viii. The area has ready access to Lindsay Park and a few small local parks. Lindsay Park, currently vacant, is directly related to the inner city communities of Connaught/West Victoria Park, Mission and East Victoria Park, where there is a high concentration of residential population and a general lack of open space. The introduction of more people through redevelopment in the surrounding residential areas would also require a concomitant increase in the provision of open space and recreational facilities. Lindsay Park, together with Council-approved Aquatic Centre and Mini-Fieldhouse (May 27, 1980), could serve well the open space and recreational needs of the Inner City community.

1. However, in view of the recent traffic systems analysis, the Transportation Department suggests that commercial development in the Primary Impact Area north of 18th Avenue (in Sites 1, 3, 4, and 5) should be limited to medium to low intensity range and that emphasis on residential use would be the preferred alternative.

L.R.T. South Corridor Land Use Study

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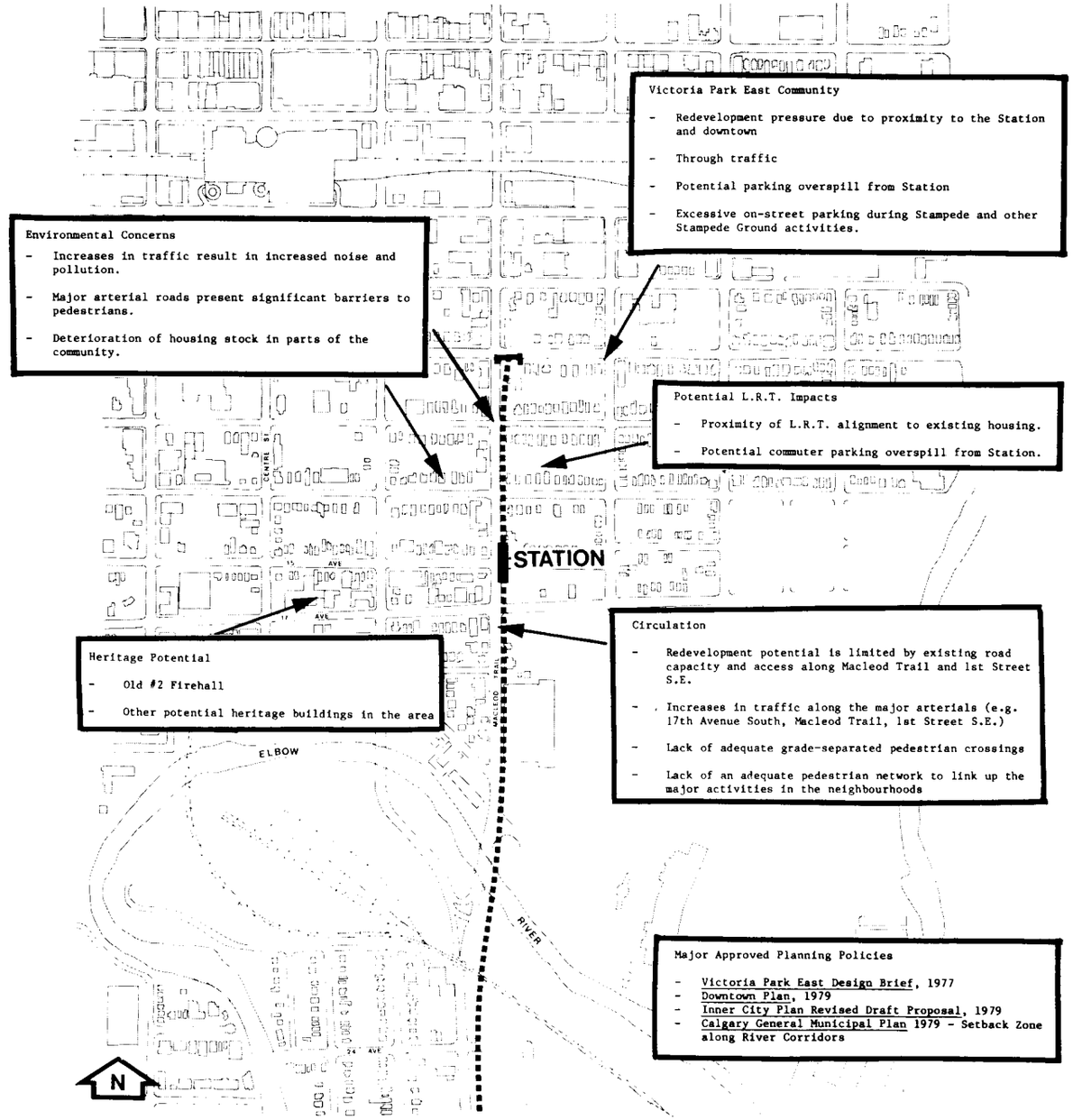
Fig. 1

Stampede Station

October 1980



b. CITIZEN CONCERNS*

ISSUE	AREA	RESPONSE
1. Victoria Park Community is extremely concerned that the Station located adjacent to the community would further add to the redevelopment pressure currently experienced in the community. Some property owners want the existing policies reviewed.	Victoria Park	The recently approved planning policies, i.e. the Victoria Park East Design Brief (1977) and the Inner City Plan (1979), will be used to guide future development in the Victoria Park East community. Citizens should approach the City for another planning review when warranted.
2. Possible construction of the 11th and 12th Avenues South couplets has created significant instability in the community.	Victoria Park	The Transportation Department has not established the priority for the construction of the couplet. However, the right-of-way is protected. The Transportation Department will consult the residents through a public participation program prior to the finalization of the roadway.
3. The 30 m setback from the riverbank may affect the development potential in the area.	Along the banks of the Elbow River	The existing riverbank setback policy is incorporated in the Calgary General Municipal Plan. A master plan for the two major river corridors in the City is currently being prepared. This study will recommend the appropriate policies regarding development adjacent to riverbanks.
4. Deterioration of housing stock is apparent in some areas due to anticipation of redevelopment.	Victoria Park	Maintenance of existing housing quality is difficult to control. The existing Minimum Maintenance By-law regarding housing conditions could be utilized by the City.
5. Commercial development would be more appropriate when located along the noisy arterial routes.	17th Avenue SE Macleod Trail 1st Street SE	Commercial uses are recommended along the block frontages of major roadways and residential uses in the interior of the blocks.
6. Development of comprehensive mixed use projects would be appropriate for 17th Avenue.	17th Avenue	The Plan encourages mixed use development in the Station Area and special treatment along 17th Avenue to encourage pedestrian activities.
7. Noise and on-street parking problems generated from traffic infiltration and heavy traffic along the major thoroughfares (Macleod Trail, 17th Avenue South, 1st Street S.E.) should be addressed.	Macleod Trail 17th Avenue 1st Street SE	Future housing projects should conform to the C.M.H.C. standards regarding noise. The City Transportation Department is conducting a study on noise policies. Sensitive site planning techniques would overcome some of these problems.
8. High density residential development may require additional open space and recreational facilities.	Victoria Park	The Plan recommends that adequate amenities and open space be provided by all new projects in accordance with the By-law requirements and those recommended by the Plan. The major recreational facilities of the Aquatic Centre and Mini-Fieldhouse located in Lindsay Park have been approved by City Council on May 27, 1980. A comprehensive plan for Lindsay Park will incorporate these facilities.
9. Potential noise from the L.R.T. is a concern.	Victoria Park	Should noise from the L.R.T. become a problem, the Transportation Department would initiate appropriate measures to minimize it.

* 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.

2. ERLTON STATION AREA *

a. STATION AREA PLANNING CONSIDERATIONS

i. Existing City Council Policies include:

- policies relating to the "River Valleys System and other Natural Areas" of the Calgary General Municipal Plan, which specify that setback zones of 30 m be established for any new development or redevelopment along the banks of the Elbow River, and that the river valleys be developed as a parkland system;

- the Inner City Plan: Revised Draft Proposal, which identifies this area as comprising two residential districts different in character from each other. The area to the south of 25th Avenue S.E. is designated for "conservation" which functions as a stable residential neighbourhood. The area to the north of 25th Avenue S.E. is designated for high density residential use to accommodate a variety of unit types. The preparation of a "Special Study" for Erlton prior to the implementation of the Inner City Plan policies was supported by City Council.

ii. As identified by the Erlton Community, the ultimate goal in maintaining a "conservation" policy for this area would be to respect the existing street scale which consists of small two-storey houses on 7.6 m lots. The community wishes to avoid further development of the typical R-2 type semi-detached structures on 15 m lots which may detract from the existing scale and character of the neighbourhood. However, the recently formed Erlton Concerned Taxpayers Group has suggested that consideration be given to allow higher densities in this "Conservation Area" in order to meet the housing needs in the Inner City area and to optimize the use of land within the 400 m radius of the Station.

It has also been indicated by members of the community that, they would not be against semi-detached structures per se, and would support R-2 type developments subject to special guidelines which would enhance the neighbourhood and respect the existing neighbourhood character.

iii. Although the area north of 25th Avenue S.E. presently retains a low density character, it has undergone a gradual transformation. Some of the single family structures have been converted to multi-family residential use and rooming houses. Limited redevelopment has occurred in the form of new semi-detached structures and duplexes. Recent surveys indicate that some of the existing older housing in the area may require substantial repairs in order to bring them up to minimum standards. Redevelopment pressure is being felt in this area.

This area is well suited for family accommodation because of its proximity to a school, local open space, and its lack of through traffic. New development around the Station could be planned to take maximum advantage of public transit.

It is considered important that new development intensity in the general area should be planned so as to achieve a gradual transition in building scale and massing relative to the stable low density residential area south of 25th Avenue.

iv. Environmental factors considered include:

- the view potential of Downtown skyline and natural feature provided by the escarpment rising 40 m above the Elbow River;

* Refer to Map 10 for location of specific site parcels.

- the Elbow River and its banks which provide an attractive park-like setting for the area. At present, a pedestrian pathway follows the riverbank along most of its length except at Lindsay Park;

- the noise and air pollution associated with traffic on Macleod Trail. Potential environmental impact of the proposed 26th Avenue Connector on the area also needs to be considered.

v. The road capacity of Macleod Trail is limited, and maximum development potential in this area would be contingent upon capacities of the adjacent major routes, plus other local streets which have a right-in and right-out access to Macleod Trail.

vi. Although the triangular parcel to the east of Macleod Trail will be used for the transit facilities of the L.R.T. Station and Stampede bus terminal, there is the opportunity for future development oriented to these transit facilities. The development potential may be affected by the proposed 26th Avenue Connector which may fragment the parcel and curtail the development of a residential component.

The City Commissioners' Report adopted by City Council, on December 3, 1979, includes the following recommendation: "That further decisions on the ultimate 26th Avenue Connector be deferred pending completion of the Study to determine the location of the South Downtown Bypass."

vii. Public land holdings in this area are extensive and the majority of properties between Macleod Trail and 2A Street S.E. have been acquired for the L.R.T. facilities. Together with other large private holdings around the Station, joint venture projects between the City and the private sector could be considered.

viii. A second southern entrance to the Station needs to be considered in order to provide a convenient access for the Erlton and Mission residents. The location of the Station entrance and platform should ensure the integration of future development on the west side of Macleod Trail.

ix. The Erlton Community is in need of additional community facilities and services. The area is served by one of the smallest schools in the Public School System, which has been recommended for closure by the School Program Consolidation Report.

x. In addition to a small 0.2 ha park located adjacent to the Elbow River, the community has ready access to Lindsay Park which is located less than one km from the city centre. It consists of 12 ha of vacant land which is essentially an integral part of the Elbow River valley system. The entire portion of the land is within the 15,000 cubic feet/second (50 year frequency) floodplain area. The introduction of more people through redevelopment in adjacent Inner City communities and in Erlton would require a concomitant increase in the provision of open space and recreational facilities. Lindsay Park could serve well as the focal point for this purpose.

Recent acquisition of the remaining 8.2 ha of Lindsay Park by the City of Calgary from the Canadian National Railway, includes the condition which specifies that the land shall be used for municipal purposes only, excluding the use for public or other forms of housing. On May 27, 1980, City Council approved Lindsay Park as the location for the major recreational facilities of the Aquatic Centre and Mini-Fieldhouse, which will be incorporated into the comprehensive plan for Lindsay Park.

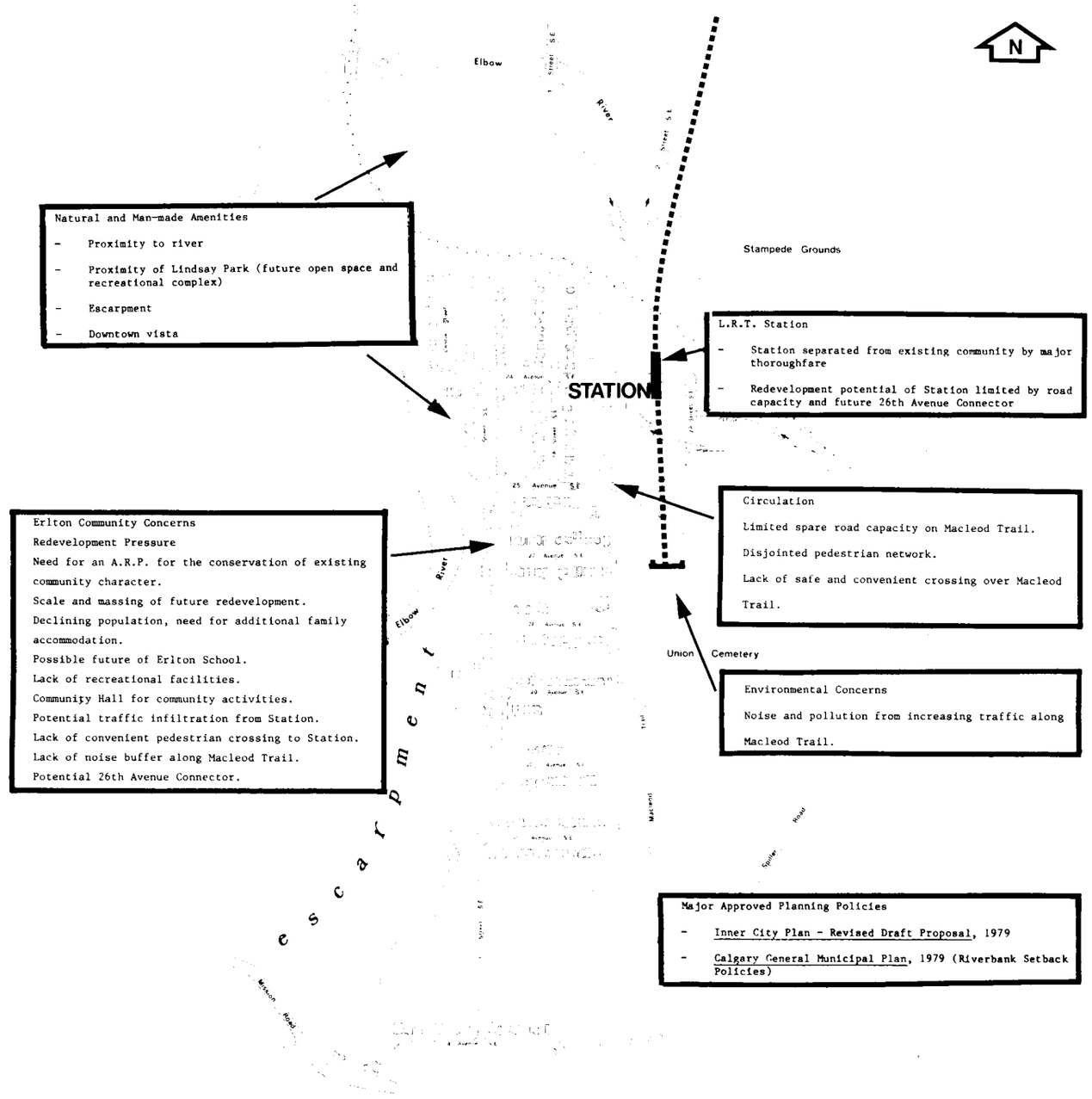
L.R.T. South Corridor Land Use Study

Planning Considerations

THE CITY OF CALGARY
PLANNING DEPARTMENT

Fig. 2

Erlton Station
October 1980



b. CITIZEN CONCERNS*

ISSUE	AREA	RESPONSE
1. Members of the community are concerned that 15 m lot development will alter the character of the community. They would encourage development on individual 7.6 m lots in order to enhance the neighbourhood character and to ensure more family-oriented housing units in the community. On the other hand, members of the "Erlton Concerned Taxpayers Group" have expressed their dissatisfaction with these suggestions. They do not agree with the R-2 land use designation and suggest that consideration be given to allow higher densities to allow for more effective use of land within the 400 m radius of Erlton Station.	"Conservation Area"	The community has expressed mixed feelings concerning development and actual development controls for the "Conservation" area. This development issue is affecting such a substantial portion of the community that, at present, the problem is only noted with the encouragement that new development respect the existing streetscape and character of the Erlton neighbourhood. Further discussion and resolution of these issues must be examined in detail in the A.R.P. process of this Study.
2. The scale and density of future development in the proposed medium to high density residential district should respect the natural amenities of the area, e.g. riverbank and escarpment. Building height should be more compatible with the neighbourhood character south of 25th Avenue.	Area to the north of 25th Avenue S.E.	The density and development guidelines have been established in the Plan to ensure compatibility of future projects with the existing community.
3. Existing high traffic along Macleod Trail and the resulting negative environmental impact on the community should be addressed. Noise attenuation techniques should be included during the upgrading of Macleod Trail.	"Conservation Area"	The Plan recommends that appropriate buffering techniques be initiated during the A.R.P. process which would mitigate traffic noise from adjacent roadways.
4. Commercial uses along Macleod Trail were suggested as a noise buffer for residential use, which should be developed away from major traffic roadways. Residential components should be the predominant use in future mixed use projects.	Area to the north of 25th Avenue S.E.	The Plan proposes limited commercial activities along Macleod Trail. Residential use will be the predominant use due to the existing transportation constraints and policies established in the Inner City Plan.
5. The need for a pedestrian overpass linking the Station directly with the community has been identified. This would not only facilitate the safe and convenient crossing of pedestrians from Erlton to the Station, but would also encourage residents from Mission to use the Station.	Area to the north of 25th Avenue S.E.	Provision of a continuous pedestrian network integrating the Station and the existing neighbourhood facilities with the communities has been included in the Station Area Plan.

ISSUE	AREA	RESPONSE
6. Future 26th Avenue Connector is a concern to the community.	Erlton Community	The 26th Avenue Connector will be subject to a special study by the Transportation Department as well as consideration during the A.R.P. process.
7. The need for additional recreational open space and recreational facilities has been identified. The development of Lindsay Park should take into consideration the needs of the Inner City communities. Regional facilities (e.g. coliseum) which would attract significant regional traffic should not be favoured.	Erlton Community	The Plan recommends that Lindsay Park be used for open space and recreational purposes and that a master plan for this site should take into account the concerns of the Inner City communities. On May 27, 1980, City Council approved Lindsay Park as the location for the Aquatic Centre and Mini-Fieldhouse. Also, Council approved the location of the future coliseum to the east of the Erlton Station site. The potential impacts of these facilities will be considered in the Area Redevelopment Plan process.
8. Continuous riverbank open space creates concerns to property owners abutting the river.	Properties Fronting on the River	This recommendation is in keeping with the policies established by the Calgary General Municipal Plan which takes into account regional and City-wide need for a continuous riverbank system for use of the public at large. The acquisition of setback lands on the riverbanks for public use is encouraged at the time of redevelopment on an opportunity basis.
9. Senior Citizen housing should be included as part of the housing component.	Erlton Community	This may be negotiated between the Planning Department and developers as new projects come forward.
10. The use of City-owned land for public housing is desirable.	Erlton Community	It is recommended that the Planning Department investigate the feasibility of this suggestion.
11. Prohibit through traffic by closures of 27th and 28th Avenues at Macleod Trail.	Area to the south of 25th Avenue	It is recommended that the Transportation Department examine these proposals during the A.R.P. process.
12. Expansion of Community Antenna Television and Cemetery within the community.	Erlton Community	Specific land use recommendations are made for areas surrounding Community Antenna Television and the Cemetery.
13. Opposed to coliseum or similar use that increases parking demand and noise levels in area.	Erlton Community	The Study has recommended specific guidelines for future use of this site to deal with these issues.

* 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.

3. 42ND AVENUE STATION AREA *

a. STATION AREA PLANNING CONSIDERATIONS

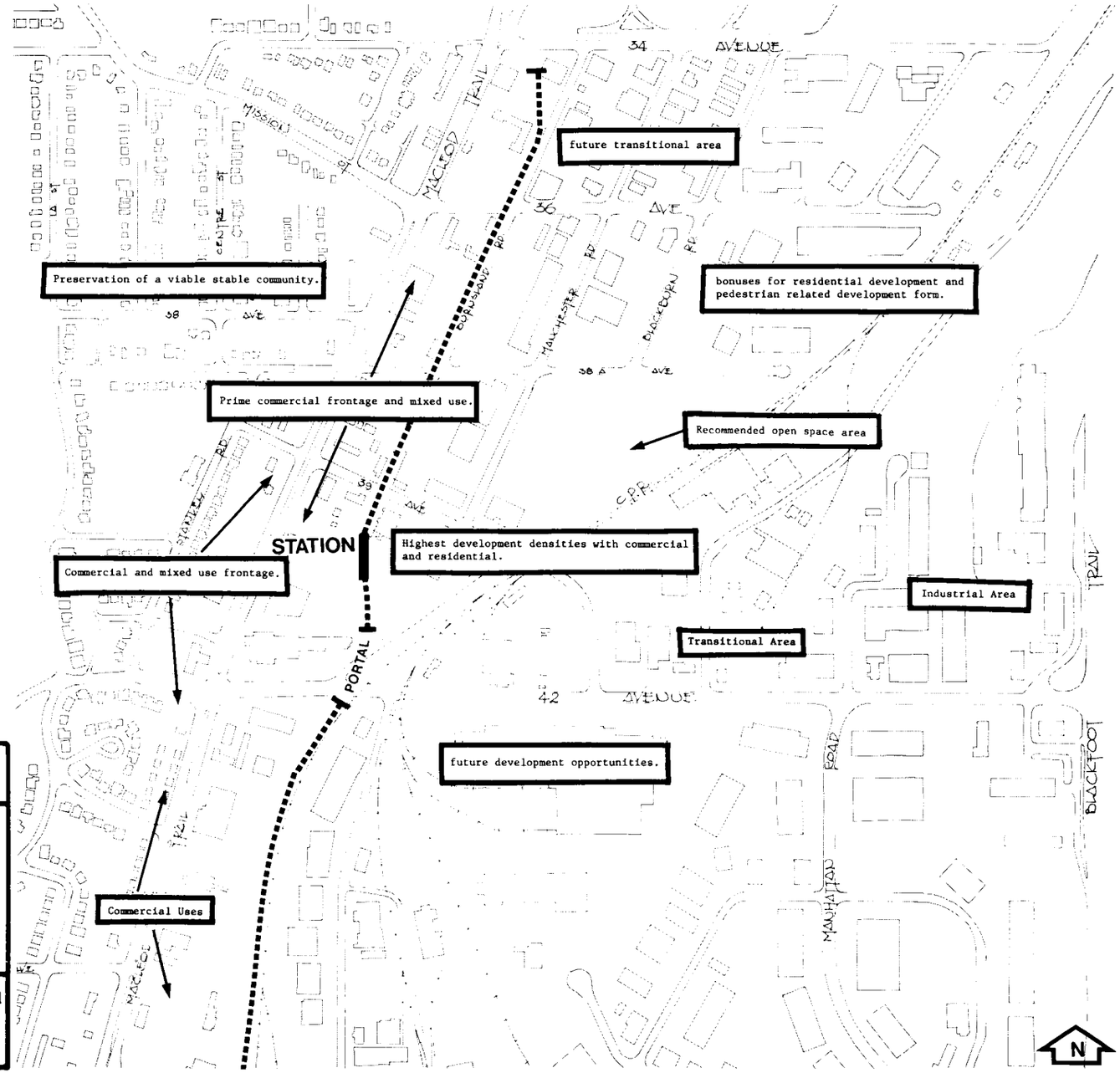
i. The 42nd Avenue Station lies approximately 3.5 km from Downtown. The Station currently surrounded by low density commercial and industrial uses, is located on the east side of Macleod Trail. The existing community of Parkhill/Stanley Park with the "conservation" designation is situated on the west of Macleod Trail. The Station Area Plan proposes to orient and redirect most future development to the east of Macleod Trail, thereby channelling development activities to the areas it can benefit most: the areas around the L.R.T. Station.

ii. The area east of Macleod Trail must undergo environmental improvement before it may be considered as a positive residential area. Public and private means, including the provision of open space and recreational facilities, will help to improve the general environment and quality in this area.

iii. The modal split of movement around the L.R.T. Station is divided among pedestrians, feeder buses and cars. Feeder bus systems and pedestrians would create minimal negative environmental impact to the area and should therefore be used to supplement car movement to the maximum degree possible. Properly designed pedestrian routes can facilitate the movement of a significant number of users of L.R.T. and development. Such pedestrian areas and routes will be implemented within the 400 m radius of the Station.

iv. Potential overspill parking and shortcutting through the existing communities have been reviewed. The Transportation Department will monitor the potential overspill parking from new developments after the operation of the L.R.T. System. Traffic re-routing measures to minimize the impact of traffic short-cutting in the existing communities west of Macleod Trail are currently being developed by the Transportation Department.

* Refer to Map 14 for location of specific site parcels.



L.R.T. South Corridor Land Use Study

Planning Considerations

THE CITY OF CALGARY
PLANNING DEPARTMENT

Fig. 3

42nd Avenue Station

October 1980

b. CITIZEN CONCERNS*

ISSUE	AREA	RESPONSE
1. Lack of amenities for development east of Macleod Trail.	Development east of Macleod Trail	Should the existing facilities currently accommodated in the City-owned land be relocated in the future, consideration of this site for open space and mixed use development is recommended. In addition to this, new development will be expected to provide amenity areas, continuous open and enclosed public spaces which will serve as circulation areas for pedestrian movement to the L.R.T. Through the A.R.P. process for this area, the imposition of redevelopment levies will be investigated as a method to provide funds for the acquisition of open space. The Calgary Land Use By-law will specify the minimum open space requirements related to a specific project.
2. Increase in traffic volume and potential overspill parking from the L.R.T. Station.	Parkhill/ Stanley Park	The Transportation Department is currently examining traffic re-routing measures which will lessen potential overloading of streets within Parkhill/ Stanley Park, (i.e., 1A Street). The Study recommends the monitoring and management strategies (Part II, Chapter F and Part III, Appendix F) to minimize potential parking overspill from new development. A revised feeder bus system in this area may also reduce the need for car transportation to this Station.
3. Potential overshadowing effect of development along the C-3 edge on the community.	Parkhill/ Stanley Park	Development guidelines restricting the height and configurations of the western elevations of potential Macleod Trail development (C-3) have been recommended.
4. To encourage a positive form of development between 38 and 38A Avenues which will help reunite the community north and south of this block in Parkhill/Stanley Park.	This issue affects lots between 38 & 38A Avenues west of Macleod Trail.	Proposed development guidelines address this problem of discontinuity of the residential portion in this area. Although final approval must be sought through the subdivision application process, a number of development approaches are suggested in the Station Area Plan.
5. 15 m lot development with duplex construction will alter the form of the community.	This issue affects all R-2 lands in Parkhill/ Stanley Park	The community has expressed mixed feelings concerning the application of actual development controls which forbid duplex development on 15 m lots. This development issue affects such a substantial portion of the community that, at present, the problem is only noted with the encouragement that new development respect the existing streetscape and character of the Parkhill/Stanley Park community. Further discussion and resolution of these issues must be examined in detail in the future A.R.P.
6. The immediate conversion of former R-3 land uses to RM-4 in the Calgary Land Use By-law.	This affects all former R-3 lands in Parkhill/ Stanley Park	The community feels the density ceiling of 60 upa with RM-4 is unwarranted and seek to have RM-3 as the proper translation of former R-3 for their area. This conflict may not be resolved until the A.R.P. is in progress. The community will have to appeal individual projects in the interim.

* 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 in the "Response" column.

4. CHINOOK STATION AREA *

a. STATION AREA PLANNING CONSIDERATIONS

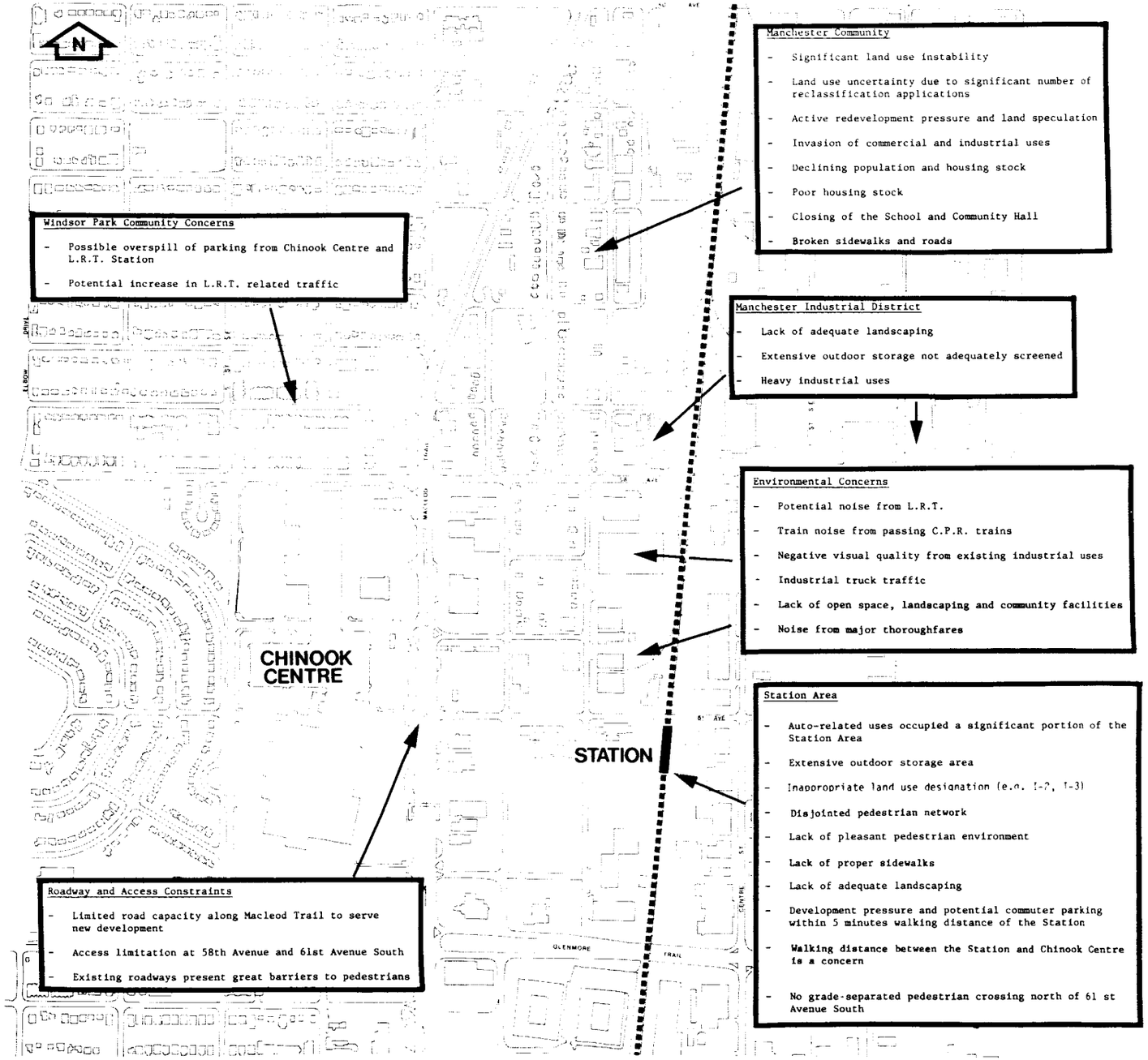
i. The existing transportation system has limited capacity to serve new development in this area. The major problem is the limited capacity of Macleod Trail particularly at its critical intersections of 61st and 58th Avenues. In peak hours, the road is already operating at almost full capacity. The planned improvements will augment the capacity of the system sufficiently to allow additional trips to be accommodated in this Station Area. Future redevelopment, however, would have to be co-ordinated with the transportation improvement programs, particularly those uses that rely heavily on Macleod Trail for primary access. Automobile trip generation from the various uses should be carefully analyzed, so as not to unduly overload the existing road capacity. Residential use and other uses which tend to maximize the public transit system would be favoured in this Station Area.

ii. The pedestrian circulation system, particularly in the Station Area, is disjointed. Sidewalks are non-existent in many areas. Provision of an integrated pedestrian network to link new developments to the Station and the shopping complex would be vital to the successful functioning of this regional sub-centre. New developments in this area should, therefore, maximize the opportunity of linking the Station and its surrounding activities through the concept established in the Station Area Plan. Wherever feasible, pedestrian barriers presented by major roadways, e.g. Glenmore Trail and Macleod Trail, should be overcome by the provision of grade-separated pedestrian crossings.

iii. It is essential for new developments to recognize the environmental quality presented by the existing low density industrial and semi-commercial nature of the district. Special interface treatment should be provided particularly along the L.R.T. and C.P.R. tracks. In addition, noise and vibration generated from traffic, along Macleod Trail, Glenmore Trail and the C.P.R. tracks could pose significant constraints to residential development. Noise and vibration abatement techniques should be undertaken for residential uses. It is, therefore, essential for future development to recognize these environmental constraints in their building layout and design considerations. Comprehensive development, possible on large parcels, would be encouraged since it tends to provide greater flexibility in incorporating superior design solutions to overcome negative environmental concerns.

iv. Residential development should also take into account the lack of community open space and public recreational facilities in this general area. All new residential development should therefore provide adequate amenity areas and recreational facilities to meet the needs of their users.

* Refer to Map 18 for location of specific site parcels.



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. I-2, I-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 61 st 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

L.R.T. South Corridor Land Use Study

Planning Considerations

THE CITY OF CALGARY
PLANNING DEPARTMENT

Fig. 4

Chinook Station
October 1980

b. CITIZEN CONCERNS*

ISSUE	AREA	RESPONSE
1. Walking distance between the Station and the adjacent communities is considered too far by the residents.	Meadowlark 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.	Meadowlark Park Windsor Park	The Plan recommends that the traffic and parking situation be monitored. Should parking overspill becomes 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.	Meadowlark 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.

5. HERITAGE STATION AREA *

a. STATION AREA PLANNING CONSIDERATIONS

i. For Site 1, new development on this sloping site sandwiched between Macleod Trail and Horton Road shall play an important role in ensuring the continuity of pedestrian movement and integrated development essential to the successful functioning of the Station Area. Therefore, the present commercial potential of the C-6: Highway Commercial District in Site 1 shall be respected by the recommended commercial ceiling of an F.A.R. of 2. Completely commercial development to this ceiling would be recommended on this site. It is also recommended that the potential for mixed use development combining commercial and residential uses or totally residential development to a maximum F.A.R. of 4 on this site be allowed. The Transportation Department has indicated that this prime site west of Macleod Trail could be significantly limited to a commercial development potential of an F.A.R. of 1 because of poor road access and road capacity constraints.

Since this site is well separated from the communities to the west by the road, rail and transit facilities, development may reach a maximum height of 46 m subject to the shadowing guidelines on Haysboro. In order to allow views from the sites east of Macleod Trail to the mountains, the building form should not create a continuous wall but rather should allow some view penetration.

ii. In February of 1980, City Council approved a land use amendment for the parcel on the southeast corner of Hull Avenue and Horton Road to a D.C. district allowing a high density residential development to a maximum F.A.R. of approximately 4. Similar to Site 1, development on this site may attain a maximum height of 46 m but the built form should allow views from sites to the east. On the large site to the south (Site 2B), City Council approved a land use amendment for a D.C. district allowing a high density mixed use development to a maximum F.A.R. of 3 in September of 1980.

iii. The City-owned site (Site 3) east of Macleod Trail has the potential for mixed commercial and residential development. Although access to the site would be limited to Bonaventure Drive, commercial development would enjoy exposure to both Macleod Trail and Heritage Drive while acting as a buffer for residential uses towards Bonaventure Drive. To ensure compatibility of new development with the adjacent walk-up apartments, development should be scaled in height from 12 m along Bonaventure Drive to a maximum of 46 m, subject to the shadowing guidelines relative to Acadia. The design of future comprehensive development should foster a strong connection with the pedestrian overpass of Macleod Trail by the creation of a retail mall connecting with the office/entertainment complex to the south. In the future, a proportion of the parking requirements of the new Police District C Office to be located at the southwest corner of Bonaventure Drive and Heritage Drive may be accommodated in the larger complex to ensure integration and optimum use of at-grade areas.

iv. In combination with the Heritage Square office/entertainment complex, future residential development on Site 4 shall contribute to the mixed use character of the area as well as providing a transition in scale and development relative to the adjacent medium density housing in Acadia. The Transportation Department would not support the introduction of additional commercial development to this area based on the potential traffic impact on Bonaventure Drive and certain other critical intersections in this area.

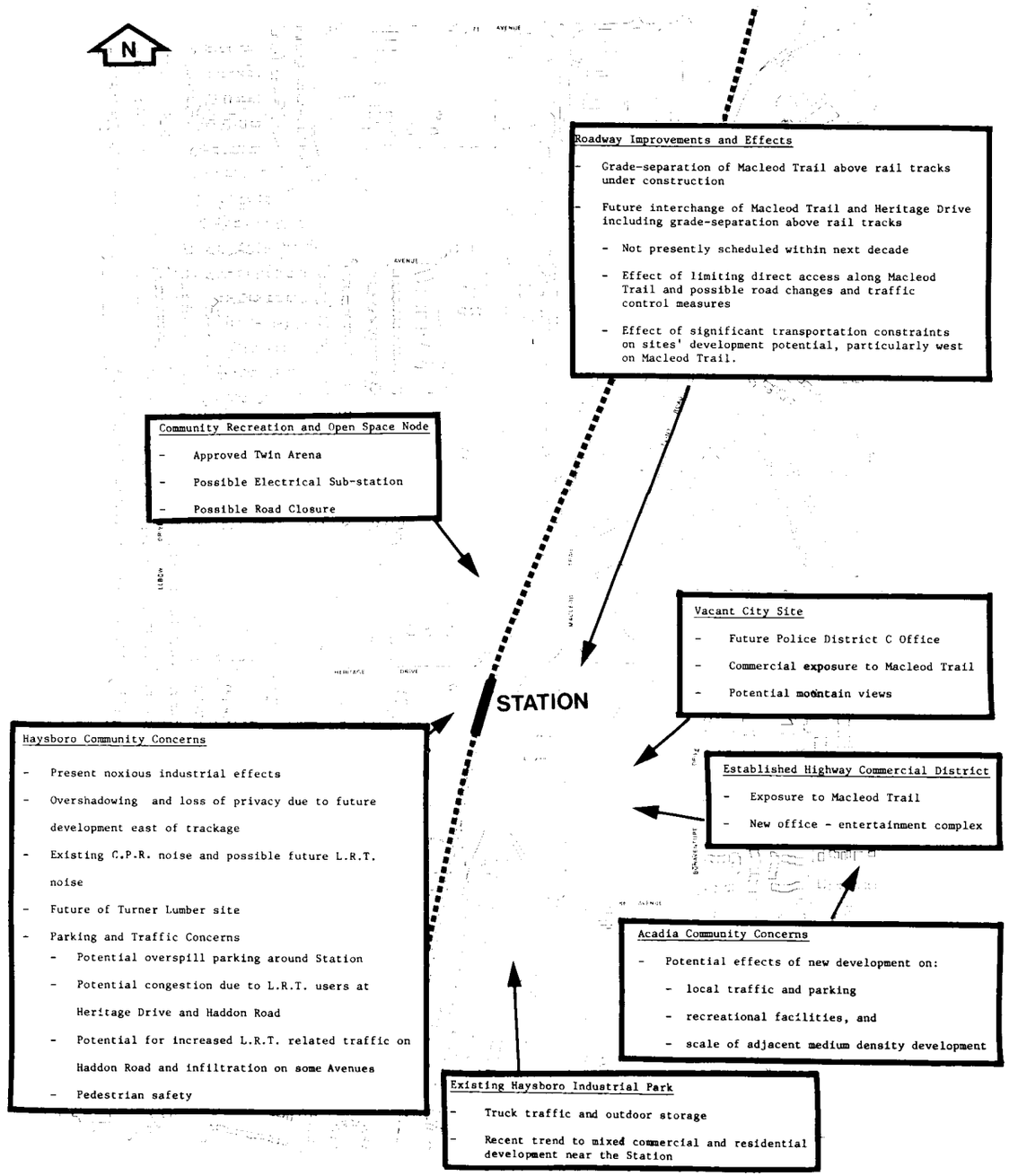
*Refer to Map 22 for location of specific site parcels.

In recognition of the position of the site within the Station Area, a potential residential density has been recommended to range from its existing RM-5 potential of 210 units per hectare (85 units per acre) to the RM-6 level of 321 units per hectare (130 units per acre), with the application of the bonus system. To ensure the fit of the development with the adjacent townhouses, the site layout and building heights will be reviewed for overshadowing and other impacts. A general shadowing guideline has been established which recommends that the building height along Bonaventure Drive shall not exceed 12 m and a maximum height of 30.5 m may be achieved at a distance of 46 m west of Bonaventure Drive.

L.R.T. South Corridor Land Use Study

Planning Considerations

THE CITY OF CALGARY PLANNING DEPARTMENT | Fig. 5 | Heritage Station October 1980



b. CITIZEN CONCERNS*

ISSUES	AREAS	RESPONSE
1. Overloading of community facilities by high density residential development.	Haysboro (Sites 1 & 2) Acadia (Sites 3 & 4)	The Plan recommends that new residential development conform with the amenity standards of the Calgary Land Use By-law and Urban Design Guidelines - Amenities for Apartments. In addition, the application of the bonusing system would also encourage development to provide on-site amenities and recreational facilities which would overcome the isolation of sites and preclude overloading of local facilities.
2. Social impact resulting from high density residential development.	Haysboro (Sites 1 & 2)	The Plan recommends that residential use be optional, and not mandatory, so maximum residential potential will likely not be realized in the area west of Macleod Trail. Significant impact on community facilities is not anticipated.
3. Aesthetic impact of high density development east of tracks on low density neighbourhood.	Haysboro	Planning recommendation proposes that buildings be reviewed for shadow effect on existing housing and for appropriate architectural treatment.
4. Parking overspill - L.R.T.-related	Haysboro	The Study recommends that parking from the L.R.T. System be monitored and, if necessary, solutions be implemented by the Transportation Department in consultation with the affected communities.
- development-related	Acadia	Planning recommendation recognizes the need for adequate provision of on-site parking in new development through policy guidelines.
5. Noise - L.R.T.-related	Haysboro	Transportation Department will monitor noise levels and determine the need for noise buffers along the trackage.
- traffic on major roads	Haysboro Acadia Kingsland Fairview	Development guidelines with respect to road and rail noise in conformity with C.M.H.C. guidelines are recommended for interim use prior to approval of City noise policy proposals currently under preparation.
6. Traffic - L.R.T.-related	Haysboro	The Transportation Department will monitor traffic on local streets in Haysboro as the L.R.T. System operates, and implement necessary solutions in consultation with affected communities.
- development-related	Acadia	Potential development would gain access primarily from major and collector roadways rather than local roads.
7. School closures	Haysboro Acadia	No specific recommendations are proposed due to the present status of the Calgary School Board report.
8. Noxious effects and unsightly views of industrial areas.	Haysboro	In conjunction with the L.R.T. opening, the Transportation Department could consider a program to encourage industrial "clean-up" along the trackage.

* 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.

6. SOUTHLAND STATION AREA *

a. STATION AREA PLANNING CONSIDERATIONS

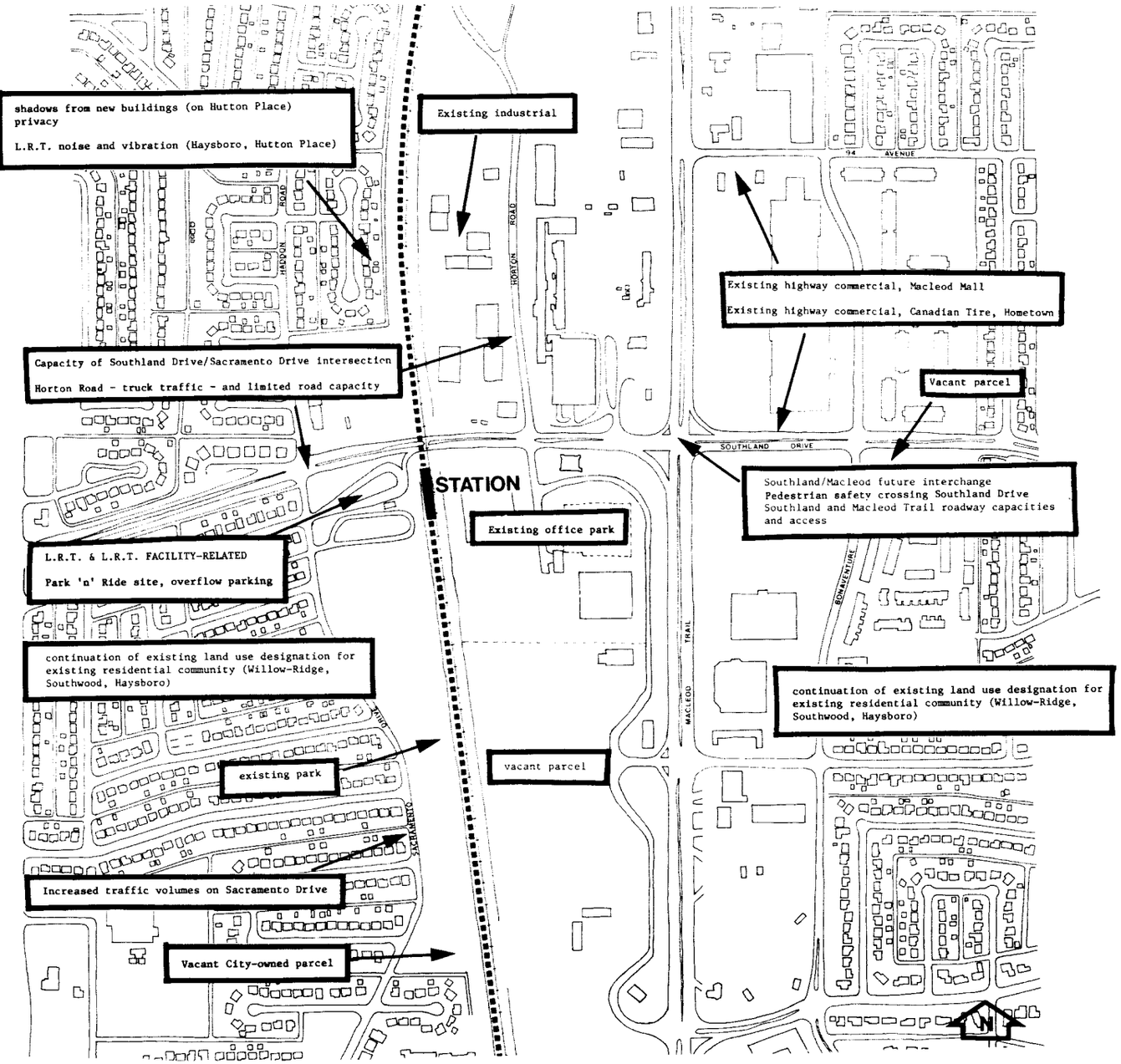
i. The ultimate potential of Area 3 is constrained by the capacity of Horton Road. However, since this area will support existing industrial enterprises and the land parcels are currently under numerous separate ownerships, it is not anticipated that this area will experience redevelopment as quickly as other large land parcels in the vicinity. Any major new development will require the upgrading of Horton Road by the private sector and detailed road analysis by the Transportation Department.

ii. For Site 4, City Council recently approved a land use amendment which consists of 4.8 ha, permitting approximately 186,000 m^2 of mixed use development (residential, office, retail, hotel, cinema and health club) with a development intensity of 3.79 F.A.R. The developer has agreed to provide a climate-controlled pedestrian overpass crossing Southland Drive and to upgrade Horton Road along the length of the property.

iii. A Development Permit has recently been issued for the construction of an office building on the northeast corner of Site 5. The land owner has agreed in principle to incorporate residential use into the fourth and final phases of development for the site.

iv. In October of 1980, City Council approved a land use amendment on Site 8 to the C-2: General Commercial District to allow a hotel/motel use.

* Refer to Map 26 for location of specific site parcels.



L.R.T. South Corridor Land Use Study

Planning Considerations

THE CITY OF CALGARY
PLANNING DEPARTMENT

Fig. 6

Southland Station
October 1980

b. CITIZEN CONCERNS*

ISSUE	AREA	RESPONSE
1. Overspill parking from L.R.T. facilities.	Southwood	The Planning Department recognizes that the potential exists for commuter parking demand to exceed the 400 parking stalls at Southland Station. Because of the difficulty in projecting the magnitude of overflow parking, it is recommended that the Transportation Department be instructed to monitor the parking situation and implement solutions in consultation with the affected communities. On June 23, 1980, City Council approved the recommendations of the "Commissioners' Report Re: Southwood Community Concerns Re: Potential Impacts of L.R.T." to the Operations and Development Committee (June 2, 1980), including the directions: "That the Transportation Department be instructed to install two hour parking zones one month prior to the opening of the L.R.T. line on those residential streets adjacent to the Southland and Anderson Stations which are likely to experience overspill parking of non-local vehicles. Furthermore, that the designation of these streets be done in consultation with the affected community." The Transportation Department has also been instructed to study the possibility of leasing and/or acquiring land on the east side of the L.R.T. tracks, adjacent to Southland Station, for a future L.R.T. Park 'n' Ride site.
2. "Short-cutting" traffic through the community to L.R.T. facilities.	Southwood	The possibility exists for vehicular traffic to attempt to short-cut through the Southwood Community to the L.R.T. Station via: Sacramento Drive, Seattle Drive, Sabrina Road and 104th Avenue. It is recommended that the Transportation Department be requested to monitor vehicular traffic on the above-mentioned roads after the opening of the L.R.T. and to implement solutions in consultation with the affected communities. On June 23, 1980, City Council approved the following recommendations of the Commissioners' Report to Operations and Development Committee: "That the Transportation Department be instructed to carry out a study in conjunction with the Southwood Community Association, addressing the following: - the need for controls to restrict L.R.T.-oriented and other traffic from shortcutting through Southwood ...".
3. Use of L.R.T. Park 'n' Ride facilities by office workers in adjacent offices.	Southwood	New offices, as well as any other developments, will be required to provide adequate on-site parking for employees and visitors, as required by City policies.

b. CITIZEN CONCERNS*

ISSUE	AREA	RESPONSE
4. Open space standards in the community.	Southwood	In 1978, the population in Southwood was 7,625. The community has about 63 acres of open space, which exceeds the City standard of 5.5 acres per 1,000 people. New residential developments on the east side of the tracks will be required to provide adequate on-site amenities. As part of the Study recommendations, the community's open space needs will be closely monitored to ensure an acceptable level of open space in the community. On July 29, 1980, City Council approved additional park space in Southwood by instructing the Administration to redesignate to the park district the vacant, City-owned parcel south of the existing park east of Sacramento Drive.
5. Major recreational facilities lacking in community.	Southwood	The new Palliser regional recreational complex has been approved for 19th Street and Southland Drive. This is intended to also serve the Southwood area. Recreational facilities such as racquet clubs and theatres may become available to the community as development occurs east of the tracks. The additional population resulting from such development in Southwood may justify the need to expand the existing public recreational facilities in the area.
6. Safety of Park along Sacramento Drive.	Southwood	Because of increased traffic volumes along Sacramento Drive generated by L.R.T. Stations at Southland Drive and Anderson Road, it is recommended that the provision of crosswalks crossing Sacramento Drive and design measures such as fencing, berming or landscaping be investigated by the City's Transportation and Parks/Recreation Departments to ensure the safety of park users. On June 23, 1980, City Council approved the following recommendations: That the Transportation Department be instructed to carry out a study in conjunction with the Southwood Community Association regarding "the need for pedestrian crossings and/or corridors across Sacramento Drive to gain access to the community playground/tot lot;" and "that the Parks and Recreation Department be instructed to implement suitable measures for fencing or otherwise protecting the community playground/tot lot from traffic on Sacramento Drive and to complete this work prior to the opening of the South L.R.T. line."

b. CITIZEN CONCERNS*

7. Location of City Engineering depot between Haddon Road and L.R.T./C.P.R. right-of-way.	Haysboro	It is recommended that if and when the existing City Engineering Depot is relocated to a suitable alternate site, appropriate land use recommendations would be made at that time in consultation with affected communities.
8. Shadow effects of tall buildings on private residences (Hutton Place).	Haysboro	The building height of new developments in the Haysboro Industrial strip will not significantly interfere with the availability of morning sunlight for residences to the west of the Haysboro Industrial Area. All future new development will be subject to the guidelines regarding shadow effects established in Part II, Chapter B and Part III, Appendix D.
9. Residents opposed to draft recommendation for low density multi-dwelling use of the publicly owned site on Sacramento Drive north of Sierra Crescent.	Southwood	On July 29, 1980, City Council directed that this site be redesignated as park space.
10. Residents opposed to the draft recommendation for any high density multi-dwelling use in Southland Station Area.	Southwood Haysboro	Residential use is not a mandatory land use in the Southland Station Area Plan. Only when developers elect to use the bonussing system does residential become a mandatory component. Residential use is necessary in the Station Area since few cars are generated (in comparison with office or commercial use) and residential use generates greater L.R.T. ridership. It also satisfies the planning objective of encouraging mixed use development in Station Areas and adding vitality to the area.
11. Increased traffic through community, particularly along Sacramento Drive.	Southwood	It is recommended that the Transportation Department monitor traffic in the community and implement solutions when warranted.

* 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.

7. ANDERSON STATION AREA *

a. STATION AREA PLANNING CONSIDERATIONS

i. The City-owned Park 'n' Ride site (Site 2) at the Anderson Station holds considerable promise for developments which are supportive of the L.R.T. System due to its location and municipal ownership. Numerous examples in other cities attest to the value recapture possibilities which can be realized through the leasing of publicly-owned property close to rapid transit stations for development by private interests. In the development agreement with the private developer, the City can specify that certain basic conditions be met in the project such as the provision of pedestrian circulation routes and amenities beyond those required in the Calgary Land Use By-law as well as ensuring that the operation of the L.R.T. System is not impaired.

It will also be important that development on this site presents an acceptable interface to the adjacent community, overcoming the overshadowing effects. Sensitive design treatment is also considered to be an important element.

Future major development will only be possible subsequent to road improvement in the Station Area and the completion of the Deerfoot Trail/Anderson Road interchange.

ii. Convenient access from Site 3, to the L.R.T. Station will be provided by a pedestrian system which will connect the Park 'n' Ride site. As with the Park 'n' Ride site, the western edge of development on Site 3 will have to be sensitive to the adjacent community.

iii. Most of the present Willow Park Village Shopping complex (Site 4) is within a 400 m radius of the L.R.T. Station and will have convenient pedestrian access to the Station via the proposed pedestrian bridge over Macleod Trail. As with the other Station Area sites, the interface between new development on the site and the existing community will have to be carefully handled to avoid negative impacts on privacy and sunlight.

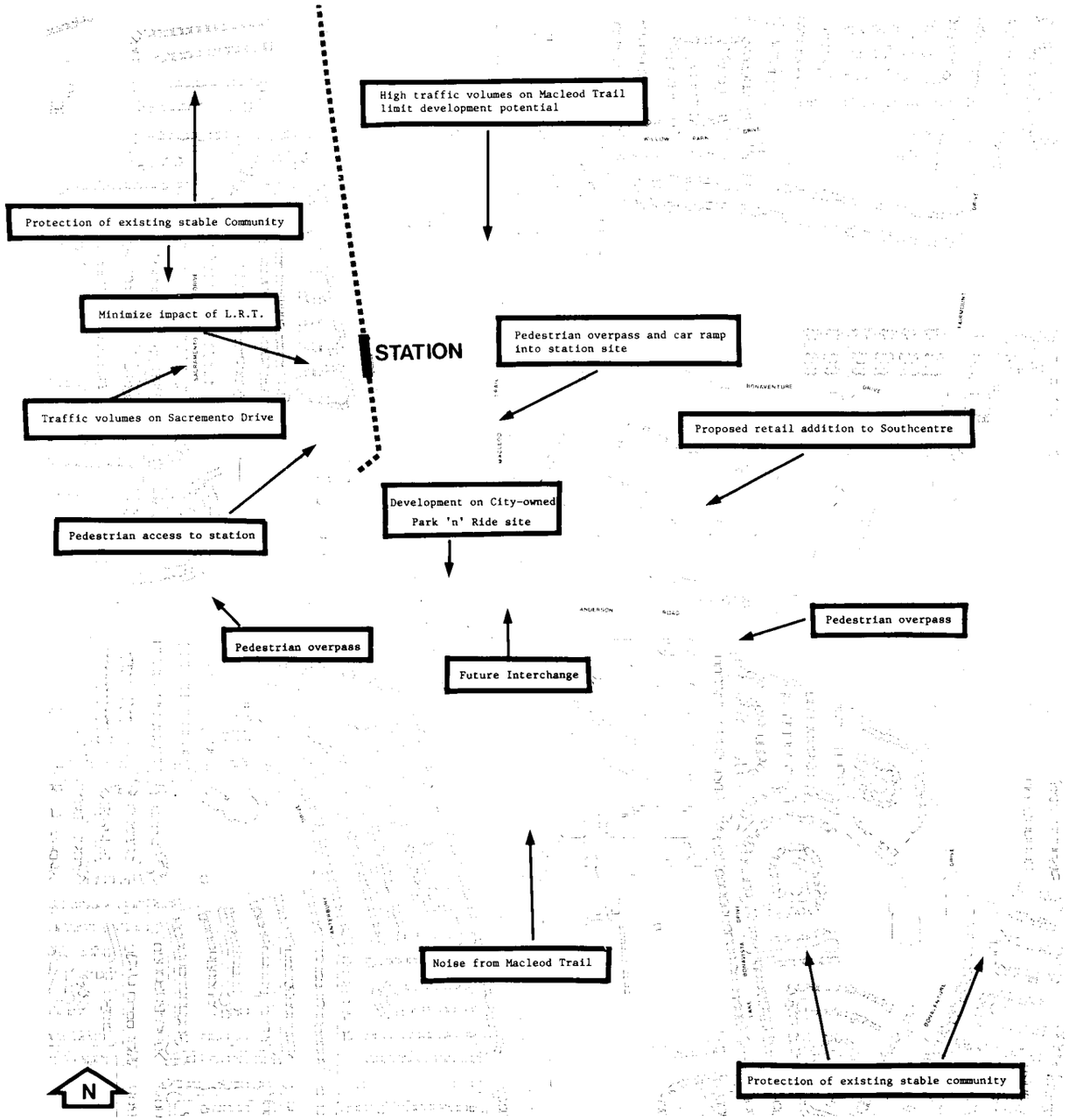
iv. Site 5 includes the existing Executive Office Tower and a portion of the west parking lot area of Southcentre. The potential bridge and ramp into the Park 'n' Ride site will directly link up with Site 5.

v. The Study envisages that Southcentre (Site 6) will remain as a regional shopping centre with a possible retail expansion. Other land uses could be considered for this site but would require detailed analysis of their impact on the adjacent neighbourhoods and the road network in the area.

vi. Site 7, presently vacant, is recommended for more adult-oriented multi-dwelling development or senior citizen housing. Its proximity to major roadways, Southcentre and the various community facilities makes residential use attractive in this location.

vii. The A.C.E. Mobile Home Park (Site 8) presently accommodates approximately 1400 people. City Council has directed that this site be redesignated as a Mobile Home Park at an approximate density of 22 persons per acre.

* Refer to Map 30 for location of specific site parcels.



L.R.T. South Corridor Land Use Study

Planning Considerations

THE CITY OF CALGARY
PLANNING DEPARTMENT

Fig.7

Anderson Station
October 1980

2. CITIZEN CONCERNS*

ISSUE	AREA	RESPONSE
1. Relocation of residents of mobile home parks should the sites be redeveloped.	Amy Lorne-Chateau Estates Mobile Home Parks (A.C.E.)	Currently, there are no City-approved policies to relocate residents in privately-owned mobile home parks. The Anderson Station Area Plan, as amended and as approved by City Council on July 29, 1980, has included the policy that Site 8 be redesignated as mobile home park use.
2. Traffic infiltration and increased traffic volumes on local and collector roads. Possible spillover parking from L.R.T. and new developments.	Lake Bonavista	Transportation Department advises that the increase in traffic on road system in the Lake Bonavista area will be relatively minor.
	Southwood	Transportation Department will monitor traffic conditions on streets in Southwood subsequent to the operation of the L.R.T. System and will implement corrective techniques, upon consultation with the community, should problems develop as discussed in detail in the Southland Station Area.
3. Compatibility of possible future development on A.C.E. site with existing community.	Lake Bonavista	As amended and approved by City Council on July 29, 1980, Site 8 shall be subject to redesignation as a mobile home park use.
4. Overloading of facilities in existing communities by residents of proposed development.	Lake Bonavista Southwood	New residential development must conform with amenity standards of the Calgary Land Use By-law and Urban Design Guidelines - Amenities for Apartments and must provide sufficient on-site facilities to minimize the additional load on existing facilities of neighbouring communities.
5. Desire to avoid high-rise development close to existing communities.	Southwood Willow Ridge	The Plan recommends that high-rise developments should not be located directly adjacent to an existing community. In situations where medium-rise development is permitted, a series of guidelines addressing issues such as overshadowing, setbacks, use of community facilities and parking will be recommended at the redesignation stage to reduce or remove the impact on the community.
6. Request for pedestrian bridges across Anderson Road.	A.C.E. Canyon Meadows	This has been recommended as part of the pedestrian circulation system in the Primary Circulation Corridor of the Station Area Plan.
7. Concern over revision of bus routes.	General Comments	Changes in bus routes will be discussed in public meetings in affected communities during 1980.
8. Inclusion of church, daycare facilities on Park 'n' Ride site.	Comments from general public and local residents.	The overall development plan of this site will take into consideration the inclusion of institutional facilities such as church, daycare and others.
9. Concern about possible hotel development on Site 7.	Willow Ridge	The Plan recommends the designation of this site for medium density residential use.
10. Need for a cinema in this area.	General Public	Theatre facilities would be permitted on Southcentre or the Park 'n' Ride development sites.

* 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.

F. GENERAL IMPACT ANALYSIS

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
1. Population and Facilities a. Population and Age Structure The population and age structure in the L.R.T. South Corridor indicate a varied pattern. The older northern neighbourhoods reflect a population decline with a mature family structure, a higher proportion of teenagers and young adults, and a lower ratio of children especially in the Inner City communities. The population decline is characteristic of Inner City and inner suburban communities over the past decade due to a combination of factors. These include: a decline in interest shown by families with children to live in the Inner City areas, demolition of dwelling units and their replacement by non-residential uses, natural aging processes of the population, and a generally lower birth rate. The newer southern districts reflect population increases and age structure characteristics closely resembling the overall City pattern. The population increases are anticipated to level off as the subdivisions are fully developed.	The number of dwelling units are expected to increase due to high density residential development within the Station Areas. This will contribute to an increase in the total population living in the Corridor. The majority of these residents will likely be singles, young couples, and perhaps senior citizens, unlike the existing communities adjacent to the Corridor. Future populations, therefore, will have different needs relating to community and recreational facilities and services.	New developments will provide on-site facilities, as required by the Calgary Land Use By-law. The utilization of the bonus system by developments may avoid over-taxing the facilities in neighbouring communities. The appropriate Civic Departments will also closely monitor the requirements of future residents living in the Station Areas. The need to provide senior citizen housing and/or public housing in the vicinity of the Station could be examined during the processes of development approvals or the preparation of A.R.P.'s.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
b. Regional and Local Facilities i. Schools Some of the communities in the L.R.T. South Corridor are experiencing a decline in school enrollment, particularly at the elementary level. This trend seems characteristic of many Inner City and suburban communities. These neighbourhoods have reached a "mature" stage with fewer families with young children. However, the neighbourhood cycle may reverse, with families with young children moving back into these communities. It was noted that except for the Lake Bonavista and Canyon Meadows areas, there are excess school capacities. Children have been bused from other areas to these schools. ii. Parks and Recreation Facilities There are a range of recreational facilities and park spaces for use by residents of the neighbourhoods located in the L.R.T. South Corridor. Open space ratios for the majority of the communities in the L.R.T. Corridor meet, and in many instances, exceed the present City policy guideline of 5.5 acres per 1,000 population for new areas. As with most of the Inner City communities, there is a deficiency of local open space and recreational facilities in the Erlton and Stampede Station Areas. However, both of the Station Areas have ready access to Lindsay Park, which was recently acquired from Canadian National Railways by the City of Calgary for municipal purposes.	The School/Program Consolidation Report, prepared by the Calgary Public School Board, included several area schools (Victoria, Erlton, Haddon Road, Haysboro, and Windsor Park) in the list of potential school closures. However, no decision has been made to close these schools or any others in these communities. Consultations with both School Boards indicate that the introduction of additional population in this sector of the City will not affect the school system in any of the communities, as children from new developments can either be accommodated in existing schools or be bused to other schools until new facilities are warranted within the community. The anticipated population increase in the Study Area will create additional demands on local and regional resources. On the basis of the anticipated increase in population resulting from the Study recommendations, additional open space provision in some communities may be required in the future.	The Study recommendations emphasize the conservation of low density, stable neighbourhoods. This would support family accommodation in neighbourhoods such as Parkhill/Stanley Park, Southwood, Haysboro, Acadia, Fairview and parts of Erlton. It may also serve well to stablilize such neighbourhoods and bring back school age children to justify local area schools. As stated in the Calgary General Municipal Plan, if, in the future, certain lands and buildings owned by the School Boards are no longer required for educational purposes, the City should be given the first option for the purchase of these lands for parks and neighbourhood recreation purposes in support of the increased densities anticipated in communities. Provision of adequate on-site private and public amenity space in new residential projects, as required by the Calgary Land Use By-law, will improve the general environment for each project, as well as relieve additional demands on the existing parks and recreational facilities. Recommendations such as dedication of land for park use, acquisition of additional open space, and provision of additional recreational facilities have been included in some Station Plans, e.g. 42nd Avenue and the Chinook Station Areas.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
As approved by City Council on May 27, 1980, the major recreational facilities of the Aquatic Centre and a Mini-Fieldhouse will be located on Lindsay Park, to be incorporated into a comprehensive park plan. The Aquatic Centre is planned to include two 50 m pools, food services, fitness areas, meeting rooms, dressing rooms, media facilities and seating for approximately 1,200 people. In combination, the Mini-Fieldhouse and Aquatic Centre provide an opportunity to provide a comprehensive field and water sports facility, with the potential for capital cost savings through the integration of design and energy conservation measures, to be considered in the detailed planning and design processes. As recommended by the Sports Facilities Advisory Committee and approved by City Council on May 27, 1980, a Coliseum will be located to the east of the Erlton L.R.T. Station. The coliseum is planned to have a minimum seating capacity of 18,000 people to accommodate ice sport events and public functions such as concerts, entertainment and featured speakers. This type of facility would be needed to host the 1988 Winter Olympics. The Stampede Grounds serve as a city-wide recreational facility during Stampede Week and other special events. A major recreational complex is being planned by the Acadia Community Association for the site adjacent to Lord Beaverbrook High School. Adjacent to Heritage Station, a node of recreational facilities has developed, including Rose Kohn Memorial Arena, the future twin arena, and the Kingsland Athletic fields. The south branch of the YMCA has recently added an indoor racquet court at Heritage Drive and Haddon Road.		

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
The Parks and Recreation Department is developing multi-functional leisure centres including the Palliser Centre to meet the regional recreational requirements.		The proposed Palliser Leisure Centre, to be located at Southland Drive and 19th Street S.W., is intended to be a major regional recreational facility primarily servicing the communities west of Macleod Trail between Heritage Drive and Fish Creek. This leisure centre will serve a population of 80,000 - 100,000 people.
iii. Community Services A range of community services including a health centre, dental clinic and other facilities, is available in the general area of the L.R.T. South Corridor. The Haysboro and Southcentre Health and Dental Clinics are located in the Heritage and Anderson Station Areas respectively. Library services are presently available at the Southwood branch on Southland Drive near Elbow Drive and at the Macleod Trail branch in Willow-Ridge. The communities in the L.R.T. South Corridor receive Fire and Police Services from district stations in the area. A fire station is located in Haysboro on Macleod Trail near Southland Drive. The new District "C" Police Office is being planned for the southwest corner of Heritage Drive and Bonaventure Drive in Acadia.	Increases in population resulting from new development in Station Areas and the continued growth south of the Corridor will increase the demand for additional community services.	Major social service facilities developed in the future will likely be of a multi-service nature similar to the Thornhill Tri-Service Centre which incorporates social services (juvenile probation, daycare, family counselling), a public health unit and a library. These are seen as the preferred community service model because of land and financial constraints and the potential for a more integrated service system that is afforded by multi-service centres. Locating these centres close to L.R.T. Stations could promote increased accessibility and utilization of the services offered. Most community services are provided in response to the actual needs of a population. Accordingly, the Social Services Department will monitor the needs of existing and future population in the South Corridor for programming of additional services. Various social service agencies may consider leasing or purchasing space within new developments to provide on-site service to new population in the Station Areas.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
iv. Utility Services Due to the increasing demands of the City's southern region, the City Electrical Systems Department is seeking a site for an electrical substation in the general Corridor area, with the possibility of sharing the transportation/utility right-of-way.	Potential new developments as recommended for Station Areas will result in increased demand on water, storm and sanitary trunk systems.	The water, storm and sanitary trunk systems are of sufficient size to handle the proposed development in the Station Areas. However, in order to meet the demands of individual developments, extensive modifications to local systems will be required, including the new construction and/or the relocation and upgrading of existing systems. Under the present City policy, works of this nature are funded by the developer.
v. Shopping and Entertainment The regional shopping facilities in the L.R.T. South Corridor include: - highway-related commercial uses along Macleod Trail such as vehicle and tire sales, fast food outlets, furniture stores, hotels and motels, etc.; - shopping centres along Macleod Trail: Southcentre, Chinook Centre, Macleod Mall, Macleod Plaza, Co-op; - local commercial and neighbourhood shopping facilities such as retailing, medical, insurance and real estate services and other services, on Elbow, Fairmount, Acadia, Southland and Heritage Drives; - entertainment facilities such as Chinook Theatre, Studio 82 and some of the lounges in the larger hotels provide evening entertainment.	The anticipated population in Station Areas will require additional shopping and entertainment facilities. Various existing communities surrounding the L.R.T. Station sites have expressed a need for additional entertainment facilities such as theatres, cinemas, nightclubs, etc. which have been identified in the individual Station Area Plans.	Macleod Trail already contains a variety of shopping and entertainment facilities. As mixed uses are encouraged and bonused in accordance with the proposals of this Study, new projects could include a variety of support facilities within the development. The clustering of various land uses will also promote pedestrian movement to these facilities.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
2. Community Character and Stability Impact analysis in this category examines the physical structures of the communities in terms of their residential, commercial, and industrial land use components, land use changes, density trends and how the land use recommendations will affect the community character and stability. a. Residential Uses Towards the south, the neighbourhoods in the Station Areas generally consist of owner-occupied, sound single-family dwellings and multi-dwelling units scattered throughout many areas. Development of the majority of these neighbourhoods has occurred within the last two decades, and is still continuing in some areas. The older housing stock in the inner suburban neighbourhoods is low density semi-detached and single-family dwellings in fair to good condition, with scattered infill redevelopment in the apartment districts. Towards the Inner City, the age of older housing stock dates back to the 1900's and ranges from good, fair to poor condition. Some neighbourhoods have undergone drastic changes. For instance, Manchester, one of the oldest neighbourhoods in Calgary, has already undergone a radical land use change due to the infiltration of industrial as well as commercial uses in the area.	Some of the neighbourhoods are experiencing redevelopment pressures associated with the introduction of L.R.T. in the South Corridor. Redevelopment pressures are contributing to the uncertainty about the future of some of these neighbourhoods. This uncertainty may contribute to the cause of deterioration of housing conditions in some areas. It is anticipated that some parts of a neighbourhood may come under pressure for change to higher intensity residential uses. Displacement of existing residents in these areas could be an issue to be considered. The scale of development adjacent to existing low density neighbourhoods may be of special concern, due to its potential negative interface treatment.	Station Area Plan recommendations re-affirm the existing low density residential land use designations in stable neighbourhoods to ensure the stability of these communities and the retention of good housing stock. Parkhill/Stanley Park and part of the Erlton Community are recognized as having neighbourhood forms which are stable and viable. These neighbourhoods will have "Conservation Area" status applied to them. Private applications to redesignate land use to higher intensities in these existing neighbourhoods will be examined critically during the application approval stage or at the Area Redevelopment Plan process. Recommendations for selective redesignation to higher intensities of residential and mixed uses will maximize the development potential of vacant lands and/or will permit future redevelopment of deteriorated residential areas around Station sites. All proposed projects will be reviewed in light of the development guidelines stated in this report, to encourage a scale and form of development which would be compatible with abutting communities.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
In the Erlton area, more than 50 percent of the housing stock to the south of 25th Avenue S.E. is owner-occupied. To the north of 25th Avenue, the majority of older housing stock is in poor condition and has been converted to multi-dwelling rental units and rooming houses. In the Victoria Park West area, owner-occupancy rates are below 5 percent. There is some deterioration of homes in some neighbourhoods which have been influenced by the existing higher land use designations and redevelopment pressures to higher intensity uses.		
b. Commercial Uses Most of Macleod Trail and the area between Macleod Trail and the CPR tracks reflect uses related to auto-oriented highway commercial activities such as hotels, restaurants, low to medium density offices, retail and wholesale outlets, auto-related sales, regional shopping centres such as Southcentre, Chinook and Macleod Mall as well as other types of commercial and industrial enterprises. Other neighbourhood commercial enterprises are located on major arteries intersecting Macleod Trail as well as on Elbow, Fairmount, Acadia and Bonaventure Drives. In the north end of the L.R.T. Corridor, 17th Avenue South is identified as a regional pedestrian-oriented commercial strip with specialty shops, boutiques, restaurants and other services reflecting the uniqueness of the shopping street.	The existing widespread C-6 land use designations and the highway commercial activities along Macleod Trail promote the automobile-oriented mode of transportation and consequently add to the vehicular traffic on Macleod Trail. Lack of amenities for pedestrians also encourages the use of automobiles. Recent proposals in the Corridor have included a few mixed use developments which are in conformity with the Study objectives. The special shopping character of the 17th Avenue South commercial strip may be difficult to preserve if guidelines are not enforced in accordance with the recommendations contained in the Inner City Plan.	Station Area Plans recommend changes in land use designations to permit L.R.T. and pedestrian-oriented commercial, residential and mixed land uses in Station Areas. Station Area Plans also recognize the importance of compatibility of commercial use in terms of its building form, traffic generation and orientation with abutting residential neighbourhoods. Therefore, Station Area Plans have specified the necessary commercial activities and public amenities to be provided especially along the Primary Pedestrian Circulation Corridors. Activity nodes in Station Areas have been emphasized by encouraging the provision of cultural, entertainment, personal services and recreational facilities.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
c. Industrial Uses There are significant tracts of land presently classified as I-2 for light industrial uses along the L.R.T. Corridor in the Erlton, 42nd Avenue, Chinook, Heritage and Southland Stations. Some of these older, unattractive industrial uses generate considerable truck traffic, noise and dust problems which detract from the concept of a pedestrian-oriented L.R.T. Station Area. The majority of the industrial uses are of a low density nature requiring large lots, which does not support L.R.T. patronage. In the Station Areas, some of the lands designated for industrial use are located within close proximity to low density residential areas creating a change in land use.	Land utilization and environmental problems associated with industrial uses are generally incompatible with residential or mixed use developments in Station Area Plans. The impact of the selective redesignation of industrial lands to other uses will likely result in relocation of certain low density industrial uses to other parts of the City as lands close to L.R.T. Stations are redeveloped to more intensive uses. A significant amount of I-2 land is recommended for redesignation in the Primary Impact Areas of Erlton, 42nd Avenue, Chinook, Heritage and Southland Station Areas.	Application of the recommended parking policies (Part II, Chapter C) will encourage pedestrian circulation and the opportunities for shared use of parking facilities in Station Areas. Recommendations contained in the Stampede Station Area Plan set forth detailed development guidelines for new developments to recognize the special character of the 17th Avenue commercial strip and to enhance the pedestrian environment. Outside the 400 m radius of Station sites, it is generally recommended that the existing C-6 highway commercial type of land use designation be retained along Macleod Trail and that mixed use developments be encouraged within the 400 m radius. Station Area Plans recommend the land use redesignation of significant parcels in existing I-2 industrial uses to permit L.R.T. and pedestrian-oriented higher density residential, commercial office and retail land uses in Erlton, 42nd Avenue, Chinook, Heritage and Southland Station Areas. The application of the Calgary Land Use By-law requirements will ensure a higher quality of environment for new developments. The development review process guided by the development guidelines outlined in Station Area Plans will ensure an appropriate interface treatment between the industrial uses and new mixed commercial and residential uses. It is recommended that certain areas remain in the existing industrial use designation and that no redesignation be undertaken by the City at this time, but that the development review process be aware of the potential relationship between the Station nodes and continuing industrial operations.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
		The Study recommendations will encourage the provision of open spaces, plazas, mini-parks as well as ensure the provision of adequate on-site amenities by the private sector at the time of development to better the environment of the Station Areas. Within the context of the General Plan review process, the economic impact, particularly locational patterns of industrial uses including relocation of individual businesses in the South Corridor area, could be examined.
3. Environmental Concerns a. Noise and Vibration Existing airborne noise sources along the L.R.T. alignment are primarily from the road and rail traffic. Traffic from Macleod Trail is one of the major noise sources in the Corridor. Between 42nd Avenue and Anderson Road, the L.R.T. alignment runs parallel to the existing CPR rail tracks. Significant noise along this section of the Corridor orginates from freight train movement which generally consists of six train passages per day; two in the morning, two during the afternoon; and two during the night. These trains are usually in the order of 100 cars in length and operate at speeds of 25 to 50 kmph. Other noise sources along the CPR section of the alignment include local street traffic, industrial operations, and bus traffic in the vicinity of Heritage, Chinook and Southland Stations. Residential areas to the east and west of Macleod Trail and south of Heritage Drive are buffered to a certain extent from the airborne noise by the highway commercial development along Macleod Trail. Similar to the noise environment, the existing vibration environment along the L.R.T. South Corridor is dominated by road and rail traffic.	The existing noise and vibration environment along Macleod Trail, the L.R.T. alignment, and other major arteries would require special design considerations when residential uses are included in future projects along the Corridor.	It is recommended that as an interim guideline, applications for development close to the L.R.T. alignment and major roadways be required to incorporate siting and design techniques in accordance with the C.M.H.C. guidelines regarding rail and road setbacks in order to ameliorate surrounding noise conditions, until specific policies regarding noise control are formulated by the City's Planning and Transportation Departments. The L.R.T. Division will be monitoring the noise conditions associated with the L.R.T. System as it begins operation, to assess the need for mitigation techniques and will then design control devices if required.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
b. Views and Orientation The higher sites along Macleod Trail offer pleasant long views to the Rocky Mountains and the skyline of Downtown. In many of the Station Areas, the topography is such that the eastward and westward slopes would provide views towards the Station sites. Towards the southern half of Erlton an escarpment rises almost 40 m above the Elbow River. This escarpment provides excellent views to the river and skyline of Downtown.	Potential development and/or redevelopments along the L.R.T. alignment may be the source of uninvited views and loss of privacy for neighbouring residential areas. High-rise developments may affect the loss of uninterrupted views in certain areas (e.g. the mountains). The existing environmental quality in certain industrial and commercial areas of some Station Areas, such as Chinook and 42nd Avenue, presents a negative impact for potential new mixed use development especially those with a residential component.	The development guidelines contained in some of the Station Area Plans encourage the maximization of pleasant views and minimization of negative impacts relative to direct views into neighbouring residences. Development guidelines also specify height restrictions in certain areas which require the form and scale of development to respect the existing residential communities. New development located in close proximity to industrial uses should optimize the more pleasant views and minimize the negative visual environment of surrounding industrial uses. Where appropriate, building design and layout should take advantage of western orientation and distant views to the mountains and downtown. View potential of other sites should be respected. Development guidelines pertaining to the provision of landscaping and amenities have been included to improve local conditions.
c. Sunlight The existing residences along the alignment currently are not affected by overshadowing effects from adjacent buildings.	New high rise developments may block sunlight, casting shadows on existing residences.	As detailed in Part II, Chapter B, and Part III, Appendix D, new developments will conform to the "Maximum Shadow Line" guidelines thereby minimizing the overshadowing effect on adjacent properties.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
4. Circulation Patterns a. Pedestrian Circulation The highway commercial uses along Macleod Trail promote the automobile-oriented mode of transportation and are not conducive to pedestrian circulation. Defined convenient walkways integrating major open spaces or activity centres are often lacking. In certain industrial areas, convenient pedestrian circulation systems are often poor or non-existent. In most cases, pedestrians are required to cross major roadways such as Macleod Trail through signalized major intersections with the exception of the Chinook Shopping Centre where an elevated pedestrian walkway is provided. The Macleod Trail couplet passes through the Victoria Park neighbourhood which makes it inconvenient for residents to walk to local community facilities, services, and/or schools located on either side of the couplet.	The lack of a grade-separated pedestrian circulation system, over major roads, may cause inconvenience to pedestrians when crossing major roads with high traffic volume.	Pedestrian precincts will be established in the Station Areas by development of a Primary Pedestrian Circulation System primarily within the 400 m radius of Station sites. These may incorporate elevated streets, arcades, malls, improved sidewalks and walkways accompanied by associated activity-oriented land uses on abutting lands in order to provide safe and convenient pedestrian routes to the Stations. The recommended pedestrian circulation system will help to create a continuous, safe and convenient pedestrian linkage to Station Areas, which would integrate the surrounding local and regional open spaces and recreational facilities. It is recommended that the necessary and vital pedestrian linkages be provided prior to and/or during the early phase of L.R.T. operation. Provision of these linkages will involve both the private and public sectors based on policies established in Station Area Plans. Other provisions to improve and enhance the Primary System will be encouraged by the use of a bonus system in terms of additional density and/or relaxations in parking requirements.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
b. Automobile Circulation i. Traffic There is presently only one grade-separated interchange along Macleod Trail at Glenmore Trail. Except for this grade-separation, the major at-grade crossings of Macleod Trail are at Anderson Road, Southland and Heritage Drives, 34th and 42nd Avenues South, and the CPR rail line. The grade-separation of the CPR crossing Macleod Trail at-grade immediately to the north of Heritage Drive is presently under construction. Many Station Areas with significant developable land parcels are located close to the intersection of two major roads. Macleod Trail will be widened to three lanes in each direction between the Elbow River and 34th Avenue South.	The planned improvement of Macleod Trail will place certain constraints on the development potential of sites located close to major intersections. These constraints are necessary to prevent adverse effects on major roadway capacities. Without proper control, major new developments in Station Areas could potentially result in severe congestion of existing roadways. For the prime development sites, the access will be primarily from major roadways. Therefore, local residential streets would not be adversely affected. However, the potential increase of traffic through local residential streets may occur as people try to short-cut through a community to avoid traffic congestion on the major roadways.	Because the L.R.T. System is a new mode of transportation in the City, precise estimates of potential vehicular generation cannot be determined. Therefore, it is recommended that the traffic operations and L.R.T. ridership in the South Corridor be monitored by the Transportation Department. After new data is obtained, this information may be used to determine if roadway improvements are necessary in the L.R.T. Station Areas. Traffic movements near Station Areas will also be monitored, and if warranted, traffic measures will be implemented to minimize adverse effects of through traffic on local residential streets. In the development review process for Station Area sites, the Transportation Department will review the proposed development uses and intensities in light of access and roadway capacities. The maximum allowable densities will only be permitted based on transportation and other planning considerations as stated in the Study. It is anticipated that some major redevelopment projects may be required to undertake certain roadway improvements to increase site accessibility. Transportation constraints identified by the City Transportation Department have also influenced the policy considerations. Attempts have been made to relate the potential types of land use and intensity of development to road capacities.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
		It is recommended that the Transportation Department undertake detailed traffic studies to identify and resolve the traffic problems. Appropriate control measures such as turn restrictions, road closures, redesign of control intersections, parking bans or other measures, will be undertaken, as warranted in consultation with affected communities. This process could also be initiated as a transportation plan or in the context of future Area Redevelopment Plans. In City Council's approval of the Study on July 29, 1980, the Administration has been directed that the A.R.P. processes should address traffic issues, notably in the Erlton area. Through Council's approval of the Commissioner's Report to the Operations and Development Committee (June 2, 1980) on June 23, 1980, the Transportation Department has been instructed to undertake studies in conjunction with the Southwood Community Association regarding the need for controls to restrict L.R.T.-oriented and other traffic from short-cutting through Southwood, as well as addressing the need for pedestrian crossing of Sacramento Drive.
ii. Parking With the introduction of L.R.T., Park 'n' Ride facilities will be provided at Anderson, Southland, Heritage and Chinook Stations. No commuter parking facilities will be provided at 42nd Avenue, Erlton, and Stampede Station Areas.	It is anticipated that potential parking overspill on local streets within 400 m of the suburban stations may arise due to a possible undersupply of Park 'n' Ride spaces by 1991. The Heritage and Southland Stations could have the most critical problems as identified by the IBI Group Consultant Study (Part III, Appendix H). These potential problems are also considered in Part II, Chapter F and Part III, Appendix G.	It is recommended that the potential parking overspill problems that may develop at the suburban Stations be recognized based on IBI Group findings; and that the Transportation Department be directed to review the potential impact zones and to consider the solutions in anticipation of critical problem areas, in consultation with local residents through a public participation process. It has been recognized that the nature of development focussed on an L.R.T. Station may offer opportunities for relaxations of the City-wide parking standards due to anticipated different car ownership rates and modal split characteristics.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
		New developments in the Station Areas will be required to provide adequate parking facilities and the amount of surface parking will also be controlled. Structured or underground parking will be encouraged. It is recommended that the parking characteristics of new developments be monitored on a regular basis by the Transportation Department to ensure that the relaxation of parking standards fit the needs of the new Station Area developments as the L.R.T. System operates and expands. Through Council's approval of the Commissioners' Report to the Operations and Development Committee (June 2, 1980 and June 23, 1980), the Transportation Department has been instructed to install two hour parking zones one month prior to the opening of the L.R.T. line on those residential streets adjacent to the Southland and Anderson Stations which are likely to experience overspill parking of non-local vehicles. There was a further instruction to the Transportation Department to carry out a study on the possibility of leasing and/or acquiring land on the east side of the L.R.T. tracks, adjacent to Southland Station, for a future L.R.T. Park 'n' Ride Site.
c. Bus Routes A bus terminal will be located at Erlton Station to provide convenient service for L.R.T. and transit patrons during Stampede Week and other special events held on the Stampede Grounds. The entire bus route system in the South Corridor is being redesigned to reinforce the efficient use of the L.R.T. System.	The changes in bus routes may cause some inconvenience to a number of residents. However, the combined feeder bus/L.R.T. transit system will provide significant time savings for the majority of people.	Calgary Transit will be conducting public meetings in the communities affected by bus route changes. These meetings will likely commence in 1980 and will be advertised in City newspapers.In general, Calgary Transit's policy is to provide service within a 460 m walk of each residence.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
d. Cycle Route The "Cycle Route" report prepared by the Transportation Department identifies the existing and planned cycle routes. Some existing roadways within the boundaries of the Land Use Study are designated cycle routes.	Cycle routes offer an alternate mode of transportation and would facilitate safe bike travel from surrounding areas to L.R.T. Stations. The development of a bikeway system around L.R.T. Stations would require the involvement of the private and public sectors. Provisions may be made by the private sector on private land for the continuity of the bikeway system through the use of the bonus system.	The formulation of appropriate bikeway policies for application in the Station Areas should be pursued jointly by the Planning and Transportation Departments. These policies should ensure the continuity of bikeway systems in Station Areas and linkage with the City-wide system. Bicycle storage facilities will be provided at Park 'n' Ride Sites.
e. L.R.T. Route Large sections of the land along the L.R.T. route are occupied by industrial uses. In the suburban areas, the route passes in close proximity to single family residences.	Along the alignment, the visual quality of industrial areas with unattractive outdoor operations and storage requires consideration. The potential loss of privacy by residents adjacent to the L.R.T. alignment would also have to be considered.	It is recommended that, where possible, a buffer strip of a minimum width of 6 m be provided along both sides of and adjacent to the L.R.T. route. Part of this buffer strip (a minimum width of 3 m) should be landscaped with trees as part of new private development or on City-owned land. A pedestrian walkway and/or a cycle route could also be incorporated in the buffer strip where appropriate. A landscaped strip is recommended: a. to provide a visual buffer and to maximize the privacy of residents close to the alignment; b. to provide visual enhancement for the benefit of L.R.T. passengers. This recommendation is not applicable to development which will be integrated with the Station and/or the air rights of the Station and/or the rail lines. To minimize the negative impacts of industrial uses along the L.R.T. route, it is recommended that unattractive outdoor storage and operations be discouraged wherever possible.

Factors/Existing Conditions	Issues/Potential Impacts	Recommended Impact Management Techniques
5. Economic Implications of Future Land Use in Station Areas Many existing land parcels close to the Station sites have already been subject to land speculation. The presence of a transit station may have contributed to an increase in land values. Property owners may have high expectations in terms of the development potential that a Station Area may offer. There has been uncertainty about future use of land in certain Station Areas. Real estate activities have been quite active in some neighbourhoods. Several major developments in the Corridor have been approved by City Council in recent years.	There are numerous factors affecting land value which make it difficult to accurately predict the actual impact of L.R.T. on land values. In general, the potential for higher density development increases with improved site accessibility as provided by L.R.T. particularly at Station locations. Thus, lands classified for medium to high density development within close proximity to L.R.T. Stations may be expected to appreciate in value. In communities such as Victoria Park, because of their special population and social structure, a relatively small change in the cost of accommodation could have a significant effect on a large number of individuals. New development presently occurring in Victoria Park will affect the social structure of the community as some people are displaced by the demolition of older housing while others are moved into newly constructed apartments. This new mode of transportation may influence the redistribution of economic activities in the Study Area and the City as a whole. This is in keeping with the City objectives: a. to optimize development potential in close proximity to Station sites in order to encourage L.R.T. ridership; and b. to decentralize employment along transit corridors in order to reduce traffic congestion in Downtown and Inner City. The recently approved major projects and future new developments in the Station Areas will likely provide substantial employment opportunities in the clerical, professional, managerial and service sectors.	Land use recommendations will assist in restructuring the land use patterns, intensities of use and activities in Station Areas. This is in conformity with the Calgary General Municipal Plan policies relating to the decentralization of employment and the growth strategy. Sufficient amounts of land have been recommended in the Study to accommodate the various economic activities. In general, the land use recommendations put forth by this Study should assist in stabilizing the land uses and reducing the uncertainty in certain Station Areas. It is proposed that the City monitor the various land use activities to determine the extent of economic impacts, including relocation by individual businesses. It is also recommended that the Planning and Transportation Departments be directed to establish a monitoring program to identify the physical, social and economic impacts, if any. This process should assist in identifying areas for special action and provide a data base for future L.R.T. land use studies in the Calgary region.

G. TRANSPORTATION IMPACTS OF REDEVELOPMENT ALONG MACLEOD TRAIL

1. INTRODUCTION

The Transportation Department of the City of Calgary has reviewed a number of land use alternatives proposed for each L.R.T. Station Area in the South Corridor with the view of determining density limits for redevelopment based upon site access, roadway capacity; and for providing the optimum mix of development (i.e. residential, commercial) that would be supportive of L.R.T. The specific tasks which were undertaken when reviewing Station Area Plans are listed below:

- o analysis of arterial capacity and protected traffic flows comprising horizon year (2001) and new development traffic volumes around L.R.T. Stations as well as L.R.T. traffic (Park 'n' Ride, Kiss 'n' Ride) where applicable. Major road improvements are recommended to allow higher intensity development to occur around certain Stations;

- o review of local access constraints specific to developable sites and local road improvements required;

- o design of a traffic circulation system around L.R.T. Stations to accommodate increased development volumes and appropriate treatments (i.e. right turns in/out);

- o assessment of alternative land use proposals by the Planning Department at each Station, based upon trip generation characteristics, anticipated modal split to L.R.T. and site-specific access constraints;

- o a corridor-wide analysis (using the Transportation Department's model) to review the overall impact of development along Macleod Trail on future traffic projections and arterial capacity.

The following sections briefly outline an evaluation of the land use plans proposed in each of the seven L.R.T. Station Areas based upon the above criteria and possibilities for improving the road system to allow for increased development density.

2. STATION AREA TRAFFIC ANALYSES

a. Stampede L.R.T. Station Area

Major redevelopment around this Station is proposed west of Macleod Trail to Centre Street, north from the Elbow River to 12th Avenue, encompassing an area of approximately 20 acres. Four primary sites which might redevelop have been identified, as shown in Exhibit 1, with recommended mixed use development of medium to high density and high density residential (Bonus F.A.R. of 3.0 to 4.0).

Heavy traffic volumes are projected along the major roads which abut the developable sites, particularly 11th and 12th Avenues, Macleod Trail, 1st Street S.E., and 17th Avenue S.E. For example, 2001 background traffic projections on the South Downtown Bypass roads (11th and 12th Avenues) approximate 2800 vph in the peak rush hour while 1st Street S.E. carries 2500 vph immediately north of 17th Avenue. Traffic along 17th Avenue is heavy, as well just west of 1st Street S.E., in the order of 2400 vph (two-way). A capacity analysis shows restrictions at the intersections of 11th, 12th and 17th Avenues along 1st Street S.E. and also at Centre Street and 17th Avenue. These constrictions at key intersections would hamper access to the south from both the South Downtown Bypass and Macleod Trail Couplet.

* This section was prepared by the Transportation Department of the City of Calgary.

In reviewing the proposed land uses in this Station Area, in light of the restricted road access, it is recommended that redevelopment of intensive commercial uses be discouraged between 12th Avenue and 17th Avenue for the following reasons:

- o commercial uses generate far more vehicle trips during peak rush hours than high density residential;
- o Sites 1, 3, and 5 are bounded by the Macleod Trail and South Downtown Bypass couplets with little capability of accommodating more traffic;
- o local avenues, used for accessing parking facilities, could not handle heavy traffic volumes and direct access off Macleod Trail should be discouraged.

In Site 3, along 17th Avenue where commercial development is proposed, density limits must be set (F.A.R. 2.0) since the focal point for access (17th Avenue and 1st Street S.E.) is highly congested with little opportunity for major improvements. Widening of 17th Avenue between Centre Street and Macleod Trail is necessary to provide adequate laning (four through lanes) and turning bays from this two-way major road.

North of 17th Avenue, a major residential component is recommended to minimize traffic impacts because of good accessibility to the L.R.T. Station. The residential uses would be oriented more towards the interior of the blocks with low density commercial uses bordering on Macleod Trail and 1st Street S.E. No major road improvements are possible here.

West of 1st Street S.E. over to Centre Street intensive commercial development cannot be accommodated because of projected background traffic on all major access roads and the impossibilities for road improvements. High density residential development is a reasonable alternative in this parcel of land with low density commercial located along the major roads (12th Avenue, 1st Street S.E.). It is questionable if high density commercial uses will be L.R.T. or transit-oriented because of the long walking distance to the Stations and the availability of parking.

The following table lists an upper density limit for commercial and residential uses in the Stampede Station Area and local road improvements which will be required.

Commercial	Residential	Road Improvements
900,000 sq. ft.	+3300 D.U. (apartments)	Widening of 17th Avenue between Centre Street and Macleod Trail

b. Erlton L.R.T. Station Area

Redevelopment around the Erlton L.R.T. Station has been proposed north of 25th Avenue along both sides of Macleod Trail. Medium density residential development in Site 5 and high density mixed uses in Site 6 (see Exhibit 1) may be easily accommodated by the major road system particularly with the widening of Macleod Trail to six lanes which will improve the capacity of the 25th Avenue/Macleod Trail intersection.

Site 7, the land parcel east of Macleod Trail, could possibly be reduced in size by the proposed alignment of the 26th Avenue Connector (see Map 1) and the private land holdings of Poole Construction. The traffic analysis for Site 7 shows that direct access from the 26th Avenue Connector from the north is available (via a signalized intersection at 25th Avenue and the access road into Stampede Park) and good access to the south from Macleod Trail and Blackfoot Trail. With these connections, higher intensity commercial development could proceed (approximately 500,000 square feet - F.A.R. 3.0) while without them, development in Site 7 would be restricted significantly.

In addition, a corridor analysis of Macleod Trail with a limited development scenario, indicates that the 26th Avenue Connector would siphon off a significant number of daily trips from Macleod Trail and consequently reduce the traffic volumes on this roadway all the way south to Glenmore Trail. Insofar as the traffic restricted development at Erlton, 42nd Avenue and Chinook Stations inherently assumes reduced background traffic along Macleod Trail, it follows that future development at these Stations requires a connection to Blackfoot Trail to significantly lower through traffic volumes on Macleod Trail.

In summary, the following table lists the recommended development densities at the Erlton Station based upon local traffic constraints.

Commercial	Residential	Road Improvements
900,000 sq. ft.*	1000 D.U.	26th Avenue Connector

* Limit set if 26th Avenue connection to Blackfoot Trail is provided for accessing Site 7.

c. 42nd Avenue L.R.T. Station Area

Redevelopment in the 42nd Avenue L.R.T. Station Area is proposed primarily along the east side of Macleod Trail between 36th Avenue and 42nd Avenue. The highest intensity occurs in the vicinity of the Station itself where commercial uses may be developed to an F.A.R. of 3.5 and, with residential, is allowed a bonus F.A.R. of 5.0.

Analysis of traffic generation associated with redevelopment inside the Primary Impact Area raises some concern for intensive commercial development at 42nd Avenue. From the standpoint of road access and arterial capacity the following points are noteworthy:

- the distribution of development traffic at 42nd Avenue is north/south oriented, that is, Macleod Trail and Blackfoot Trail provide the sole access routes;
- the intersections of 42nd Avenue at Macleod Trail and Blackfoot Trail are critical in terms of accommodating incremental development traffic volumes;
- any commercial development north of 39th Avenue would lack proper road access because of the limited capacity of roads such as 39th Avenue and Manchester Road;
- access to individual development parcels in the proximity of the Station focusses on 39th Avenue with the exception of frontage on Macleod Trail and 42nd Avenue. Because of the heavy turning movements and restricted capacity of 39th Avenue and Manchester Road, commercial development must be strictly limited in intensity and types to minimize auto traffic.

The rationale for limiting the commercial development in this Station is essentially two-fold. Firstly, high density commercial uses would generate significant auto trips during peak rush hours and tax the two critical intersections along 42nd Avenue. For example, heavy left turn movements (PM peak) from 42nd Avenue to Macleod Trail south cannot exceed 600 vehicles/hour (PM peak), otherwise, traffic will shortcut over to Stanley Drive to avoid the congestion. In addition, 39th Avenue should accommodate less than 10,000 trips/day so as not to hamper access around the L.R.T. Station for vehicular, pedestrian and bus traffic.

Secondly, traffic generated by new development would predominantly use Macleod Trail south to Glenmore Trail and as such affect the carrying capacity of roads in the vicinity of the Chinook L.R.T. Station.

Based upon the recognized transportation constraints for redevelopment in the 42nd Avenue Station Area, the following mix of land uses is recommended:

Site	Commercial	Residential	Road Improvements
10 & 11 west of Macleod Trail	300,000 sq. ft.	150 D.U.	
1 east of Macleod Trail - L.R.T. Station Parcel	600,000 sq. ft.	3,000 D.U.	Geometric improvements to the intersection at 39th Avenue and 42nd Avenue (all turns)
2 & 5 east of Macleod Trail & north of 39th Avenue	Limited due to poor local access.		39th Avenue and Macleod Trail (right turns in/ out only)

d. Chinook L.R.T. Station Area

The focus of attention for redevelopment in the Chinook Station area lies entirely in blocks east of Macleod Trail extending from south of Glenmore Trail to 50th Avenue. Within the 400 m Primary Impact Area, medium to high density mixed uses are proposed (F.A.R. of 5.0) with an emphasis on residential close to the Station. Sites beyond the 400 m radius area of influence predominantly are north of 58th Avenue and in the vicinity of the Fairview Industrial Park.

Four areas were keyed upon when conducting the transportation analysis at Chinook Station as illustrated in Exhibit 1.

Site 1 has the best potential for higher density commercial/residential development due to its proximity to the L.R.T. Station and available road access. Primary access points which would accommodate the heaviest directional movements include the following intersections:

- Macleod Trail and 58th Avenue;
- Macleod Trail and 61st Avenue;
- Centre Street and 58th Avenue;
- Fairmount Drive/Centre Street and Glenmore Trail.

The new interchange currently under construction at Fairmount Drive and Glenmore Trail provides access only to east Glenmore Trail and projected turning movements oriented west could not be solely handled by the Macleod Trail/Glenmore Trail intersection. Therefore, a key intersection in this Station is 58th Avenue and Macleod Trail which provides an essential link to 5th Street and Glenmore Trail for westerly access.

Development east of the L.R.T./C.P.R. tracks (Site 2) shares the same transportation constraints as Site 1, in that Centre Street and 58th Avenue must accommodate any new development traffic. In considering the projected daily volumes to be carried by major roads in the vicinity of Sites 1 and 2, the following table lists the road improvements required to accommodate an acceptable level of development.

Road Section	Average Week-day Traffic (2-Way in 2001)	Estimated Section Capacity	Improvement Required
Centre Street (61st Avenue to 58th Avenue)	14,000 vpd	22,000	Full channel-ization at Intersections
Centre Street (61st Avenue to Glenmore Trail)	14,000 vpd	18,000	Full channel-ization at Intersections
58th Avenue (Centre Street to Macleod Trail)	20,000 vpd	18,000	None
61st Avenue (Macleod Trail to Centre Street)	32,000 vpd	30,000	Six lanes and turn bays

It is easily seen that very little capacity is available on just the access roads to meet the pressure of redevelopment.

Site 3 is far removed from the Primary Impact Area, yet could certainly affect (development traffic) the available road capacity closer to the Station. As such, limits on commercial development are recommended to provide a good balance of land uses throughout the Chinook Station Area.

Site 4, as well, is removed from the Chinook Station but development here could easily impact northerly roads such as Centre Street and 58th Avenue because of the restricted westerly access to and from Glenmore Trail. A possible connection of 71st Avenue from Macleod Trail to Fairmount Drive is under consideration to improve the access from this area to Macleod Trail and points west. Location of an L.R.T. Station in this area is currently under review.

In summary, the following mix and density of new development is recommended and road improvements necessary to accommodate projected traffic volumes.

Site	Commercial	Residential	Road Improvements
Site 1 L.R.T. Station Area	650,000 sq. ft.	1650 D.U.	Major 5th Street S.W. and Glenmore Trail interchange
Site 2 East of L.R.T. Tracks	300,000 sq. ft.	1200 D.U.	Local Channelization at key intersection along Centre Street, 61st Avenue and 58th Avenue
Site 3 North of 58th Avenue	350,000 sq. ft.	1550 D.U.	Widening 61st Avenue to 6 lanes
Site 4 South of Glen-more Trail	550,000 sq. ft.	1100 D.U.	71st Avenue connection from Fairmount Drive to Macleod Trail

e. Heritage L.R.T. Station Area

Development in this Station Area has been proposed in parcels of vacant land located south of Heritage Drive along the east and west sides of Macleod Trail.

The four key sites shown in Exhibit 1 encompass approximately 24 acres with mixed use density proposed in the order of an F.A.R. of 4.0.

Primary access to Sites 1 and 2 would be provided via Horton Road with right turns in/out allowed from Macleod Trail at a realigned Hull Avenue. In addition, it is recommended that Horton Road access to Heritage Drive (right turns in/out) be retained giving allowance for northward movements to Macleod Trail. Unfortunately, access to the west cannot be accommodated, thereby restricting commercial density in Sites 1 and 2 because of its traffic generation characteristics. The bonus F.A.R. of 4.0 is satisfactory if residential uses are a prime component.

In Sites 3 and 4, along the east side of Macleod Trail, good access to Bonaventure Drive and Heritage Drive (signalized) allows the sites to develop to the proposed densities and composition. Mixed use development (commercial/residential) is recommended particularly because a commercial venture of 300,000 square feet north of 86th Avenue is now under construction and medium density commercial development on both Sites 3 and 4 could not be handled by the road system. Access to Macleod Trail at 86th Avenue will allow for right turn movements only.

In evaluating the combined impact of traffic generated by full development of all four sites in the Heritage Station, it is apparent that grade-separation of the Macleod Trail/Heritage Drive intersection is required. This conclusion is drawn from the projected heavy turning movements to/from Macleod Trail during the peak rush hours and the observation that this intersection is the focal point for access to all developable sites and the L.R.T. Station as well (Park 'n' Ride, Kiss 'n' Ride traffic). Although not included in the T.I.P.S. Update ten-year road improvements program, the requirements for this interchange will be re-evaluated as development proceeds. A functional design of the proposed Heritage Drive/Macleod Trail interchange may be found in Map 2-A. It should be noted that an eight lane section on Macleod Trail from Heritage Drive to Southland Drive is recommended to accommodate right turns in and out from private property while not to interfere with through traffic.

The following development guidelines are recommended to satisfy transportation capacity and access constraints.

Site	Commercial	Residential	Road Improvements
Sites 1 and 2 West Side of Macleod Trail	350,000 sq. ft.	1,250 D.U.	Major Grade-separate Macleod Trail at Heritage Drive Local Channelize Horton Road at Heritage Drive (Right turns in and out only) Access to Macleod Trail (Hull Avenue - right turns only)
Sites 3 and 4 East Side of Macleod Trail	400,000 sq. ft. (+300,000 sq. ft. committed)	700 D.U.	Upgrade Bonaventure Drive/ Heritage Drive intersection. Access to Macleod Trail (86th Avenue - right turns only)

f. Southland L.R.T. Station Area

The Southland Drive L.R.T. Station Area is bounded on the east by four large sites which are prime for development. These are specifically:

- o Richfield Properties - southwest corner of Southland Drive and Macleod Trail (15 acres, Site 5);
- o United Management land holdings - south of the Richfield site (25 acres, Site 6);
- o Haysboro Industrial Park - north of Southland Drive between the C.P.R. tracks and Horton Road (8 acres, Site 3);
- o MBS land holdings (Keith site) - northwest corner of Southland Drive and Macleod Trail intersection (12 acres, Site 4).

Presently, an office complex of 285,000 square feet is situated on the Richfield site and 100,000 square feet commercial development on United Management's land. The proposal for land reclassification in the Southland Station Area focusses upon mixed use development with a bonus density F.A.R. of 3.5 if a residential component is included.

Access to sites west of Macleod Trail is essentially restricted to Horton Road on the north side of Southland Drive and Southport Drive, to the south, which weaves through the Richfield/United Management properties. As was the case with Heritage Station, the major intersection, Southland Drive and Macleod Trail, is the focal point for distribution of development traffic.

In the northwest quadrant (Sites 3 and 4) road access to developable parcels is oriented to Horton Road which requires upgrading to four lanes with full channelization at the intersection of Southland Drive. It should be noted that Southland Drive west of Horton Road is restricted to four lanes (through) across the railway overpass with a left turn bay at the Horton Road intersection.

South of Southland Drive (Sites 5 and 6) the transportation constraints of poor road access, capacity of Southport Drive and size of the developable land parcels require that limitations be set on the intensity of any new commercial developments. Access to Macleod Trail (right turns in/out) is provided from Southport Drive at 99th Avenue. Southport Drive also connects with Southland Drive at a future signalized intersection. Widening Southport Drive to four lanes and intersection channelization will be required to handle the anticipated traffic volumes.

In summary, inadequate road access to the four developable sites and capacity limitations at the intersections of:

- o Horton Road/Southport Drive and Southland Drive, and
- o Macleod Trail and Southland Drive,

disallows commercial development from proceeding unabated in this Station Area. Poor vehicle access within the large land parcels necessitates placing limits on commercial development and setting guidelines for a minimum residential component to reduce traffic generation.

Examination of the key intersection of Macleod Trail and Southland Drive indicates the need for grade-separation to accommodate the heavy turning movements during peak hours in light of expected redevelopment. Similar to the recommendations for Heritage Drive, the requirements for both interchanges will be re-evaluated as part of the T.I.P.S. ten-year road improvements program. The interchange design at Southland Drive is shown in Map 2-B along with the road right-of-way.

The following land use schedule is recommended to meet transportation requirements.

Site	Commercial	Residential	Road Improvements
Sites North of South-land Drive	1,200,000 sq. ft.	1,500 D.U.	Major Grade-separate Southland Drive/ Macleod Trail Local Upgrade Horton Road and South-port Drive to four lanes with intersection channelization.
Sites South of South-land Drive	550,000 sq. ft. (+470,000 sq. ft. existing development)	1,500 D.U.	

g. Anderson L.R.T. Station Area

Development around the Anderson Station has been proposed generally within the 400 m Impact Area of the Station and in a parcel of land lying south of Anderson Road. Mixed use development is favoured with allowable bonus density F.A.R. of 4.0 if certain criteria are met.

Sites 2 and 3 (see Exhibit 1) are closest to the L.R.T. Station on the west side of Macleod Trail with present access provided at the signalized intersection of Macleod Trail and the entrance to Southcentre.

Further to the north at Willow Park Drive, right turns in/out are allowed into Site 3 from Macleod Trail, however, there is no access road which directly connects both sites together.

Upon opening of the L.R.T. line (1981), almost all of Site 2 will be consumed by Park 'n' Ride surface parking (1,100 spaces), Kiss 'n' Ride and bus loop facilities. Heavy peak hour vehicular movements are expected particularly during the morning rush when all traffic (bus and auto) must converge into the signalized intersection.

Analysis of the projected vehicular and bus flows in this intersection shows minor delays encountered if good access to Bonaventure Drive can be maintained. Access from Macleod Trail south would allow for dual left turns at the signals to accommodate the expected heavy left turn movements into the Park 'n' Ride site. Bonaventure Drive access is key to the operation here for reducing the buildup of traffic along Macleod Trail. To ensure satisfactory operation of the Park 'n' Ride facility at Anderson Road, it is recommended that the northerly access route (via Willow Park Drive) be immediately approved and arrangements made to acquire the road right-of-way in Site 3.

With potential for redevelopment of Sites 2 to 5, an entirely new road access scheme was conceived in order to accommodate development traffic. The road system is highlighted in Map 3 which shows the future grade-separation of Anderson Road and Macleod Trail and an access ramp crossing Macleod Trail further to the north. Given the intensity of development proposed around the Station and a requirement to provide access into Southcentre off Macleod Trail, a bridge connection between Site 2 and Southcentre as well as the local circulation roads are recommended. This road scheme would replace the existing signalized (all turns)

intersection into Southcentre with right turns in/out only. All left turn movements across Macleod Trail would thereby be eliminated, improving the operation of this roadway. The development proposed in Sites 2 and 3 would generate significant traffic volumes and along with heavy Park 'n' Ride traffic warrant construction of this bridge. Development may therefore only proceed upon approval of this road scheme. The right-of-way requirements are shown in Map 4.

Sites 4 and 5, east of Macleod Trail, are proposed to develop either commercial or mixed uses up to an F.A.R. of 3.5. These sites derive access from Macleod Trail via the proposed road system or from Bonaventure Drive as an alternate route to Anderson Road. Development may proceed here without the Macleod Trail bridge connection in place, although access to Southcentre would be re-oriented with construcion of the Anderson Road/Macleod Trail interchange (T.I.P.S. - 1985/1986). The proposed road system affords good access into Southcentre from Macleod Trail by eliminating left turn movements.

Development in the vicinity of the Anderson L.R.T. Station hinges upon the following transportation requirements:

- o Deerfoot Trail connection to Anderson Road is made prior to full development;
- o L.R.T. traffic demand (Park 'n' Ride) plus full development in Sites 2 and 3 require the bridge connection across Macleod TRail and road infrastructure seen in Map 3;
- o future extension of L.R.T. to Midnapore will reduce L.R.T.-related traffic allowing further development of Sites 2 and 3.

Site 8 has recently undergone detailed review by both the Transportation and Planning Departments in light of interest shown by the owners of the mobile home park for high density residential development. The site presently houses approximately 440 mobile units and the proposal would change the composition to around 3800 apartment units.

To accommodate the transportation requirements of high density residential development, a flyover ramp off Macleod Trail into the site has been proposed as well as direct access onto Macleod Trail via Lake Willow Road and Lake Fraser Road. In addition, closures of Lake Aspen Road and Lake Willow Road along the eastern boundary of Site 8 was seen to be necessary to avoid heavy traffic infiltration into the Bonavista community.

Residential development in Site 8 is recommended, however, lower density would reduce any likelihood of heavy traffic filtering over to Bonaventure Drive with the congestion anticipated at key access points on Macleod Trail and within the Macleod Trail/Anderson Road interchange.

The following mix and density of land uses are recommended in the Anderson L.R.T. Station Area.

Site	Commercial	Residential	Road Improvements
Sites 2 and 3 (West side of Macleod Trail)	500,000 sq. ft.	1,500 D.U.	Bridge across Macleod Trail, and local access roads seen in Map 3.
Sites 4 and 5 (East side of Macleod Trail)	400,000 sq. ft. (+130,000 existing development)	450 D.U.	Anderson Road/ Macleod Trail Interchange

3. SOUTH CORRIDOR ROAD CAPACITY ANALYSIS

In the previous section, each Station Area was analyzed individually as to its development potential with respect to the capacity of local intersections and roads to accommodate incremental traffic volumes. On a broader scale, a traffic analysis was conducted to assess the impact of L.R.T. Station Area development on the major roads in South Calgary. A transportation model projected traffic volumes to the year 2001 with the associated land use base and road network*. The new land uses around the seven L.R.T. Stations were added to the 2001 base - resembling those which are recommended in Section 2 as a development ceiling. A capacity analysis of the major southerly routes showed certain deficiencies in future planned road improvements.

North of Glenmore Trail, both Macleod Trail and Blackfoot Trail would operate at their practical capacity limits although some spare capacity is available on Deerfoot Trail. Traffic volumes on Macleod Trail in the vicinity of the Erlton Station are exceptionally low because of the South Downtown Bypass and 26th Avenue Connector siphoning traffic away from Macleod Trail in its northerly section. In the vicinity of Chinook Station, however, Macleod Trail is congested with no capacity available. Turning movements are excessively heavy and cross-streets such as 58th Avenue and 61st Avenue are not capable of accommodating the traffic being generated from this regional employment centre. An alternative route such as the 50th Avenue freeway section identified in By-law #8500 may be used to alleviate the pressure created around Chinook Station.

South of Glenmore Trail, capacity restrictions along Macleod Trail at Heritage Drive and Southland Drive are evident without grade-separation of these intersections. Interchanges at these locations are required to allow proper access into developable parcels of land. Full grade-separation of Heritage and Southland Drives as well as Anderson Road (slated for 1985/1986 in T.I.P.S.) will not entirely provide free flow conditions south of Glenmore Trail because of minor signalized intersections along Macleod Trail and direct access allowed onto this major road. An eight lane section is recommended between Heritage Drive and Southland Drive to reduce conflicts between through traffic on Macleod Trail and development access. The connection of Deerfoot Trail to Anderson Road is a critical link for reducing traffic volumes on Macleod Trail and allowing more intensive development to proceed around the L.R.T. Stations.

The following major road improvements are necessary for successful implementation of the land use strategy outlined in this document.

Station	Major Road Improvement
Stampede	- South Downtown Bypass (approved by City Council in the Downtown Plan)
Erlton	- 26th Avenue Connector - Widening of Macleod Trail (six lanes approved by City Council)
42nd Avenue and Chinook	- 50th Avenue Freeway (ultimate) - 5th Street S.W./Glenmore Trail Interchange - Fairmount Drive/Glenmore Trail Interchange (approved by City Council)
Heritage and Southland	- Grade-separation of Heritage Drive and Southland Drive along Macleod Trail - Widening Macleod Trail to eight lanes
Anderson	- Deerfoot Trail connection to Anderson Road - Anderson Road/Macleod Trail Interchange (approved in T.I.P.S. update) - Access bridge between Southcentre and L.R.T. Station site

* City of Calgary By-law #8500 - Transportation System.

4. CONCERNS RAISED AS TO TRAFFIC IMPACTS IN THE LAND USE STUDY

Public input into the South Corridor L.R.T. Land Use Study revealed some concern with traffic impacts around L.R.T. Stations. The following section summarizes these concerns with the Transportation Department's comments.

AREA	CONCERNS	RESPONSE
1. Erlton L.R.T. Station Area	The 26th Avenue Connector will be a detriment to the community and to potential development east of Macleod Trail. An alternate solution should be found.	A corridor analysis for Macleod Trail shows that the 26th Avenue Connector is an essential link in the system as a bypass route for through traffic from Macleod Trail north. As such, redevelopment around north L.R.T. Stations such as Erlton and 42nd Avenue may proceed because of lower traffic volumes on Macleod Trail and surplus road capacity. In Erlton, the 26th Avenue Connector provides improved access to the parcel of land east of Macleod Trail and consequently allows more density. A functional study will soon be undertaken to consider alternate alignments for the connection to Blackfoot Trail.
	Buffering the community from Macleod should be more specific as to sound attenuation techniques used to minimize the impact of Macleod Trail's increased capacity. Walls of sufficient height should be considered as well as restricting truck traffic to business hours only.	Sound attenuation walls along the west side of Macleod Trail cannot be accommodated within the road right-of-way after Macleod Trail is widened to six lanes. To adequately reduce the existing noise level (60 dBa), a 14' to 18' high wall would be required and its desirability is questionable. An earth berm is preferred, however, land acquisition costs would be substantial. With widening Macleod Trail from 34th Avenue to the Elbow River, traffic volumes are not expected to increase dramatically contrary to public opinion. There are 'bottlenecks' on Macleod Trail south of here (e.g. at Glenmore

AREA	CONCERNS	RESPONSE
Erlton (continued)		Trail) which constrain through traffic along the entire length of the route. If traffic volumes do increase, they would likely be more locally oriented. Truck traffic, a major contributor to noise, is not significantly heavy in this area as compared with other major truck routes in the City. The 26th Avenue Connector with access to Blackfoot Trail would likely reduce truck volumes on Macleod Trail near Erlton.
2. 42nd Avenue L.R.T. Station Area	The need for a comprehensive feeder bus service to serve neighbouring communities such as Parkhill/Stanley Park & Elboya.	Design of the feeder bus routes throughout the L.R.T. corridor has begun and Community Associations will be asked for their input throughout this summer.
	Parking and traffic impacts due to the L.R.T. System as well as present traffic problems.	No Park 'n' Ride facilities are planned at the 42nd Avenue L.R.T. Station because of its proximity to Downtown. It is not desirable to attract suburban Park 'n' Ride patrons to this Station since they would add to the current traffic congestion problem along Macleod Trail. Feeder bus service will be the primary mode of access to L.R.T. for local residents in order to minimize auto traffic generation.
3. Heritage L.R.T. Station Area	The proposed 330 car parking lot at Heritage Station is inadequate and additional cars will park on neighbouring streets. The following solutions are appropriate: a. develop overflow areas such as City parks land or Studio 82; b. joint use of development parking facilities in sites east of the Station; c. construction of a parking garage over the proposed lot. Traffic levels are too high already and L.R.T. traffic would make things worse.	The IBI report (Appendix H) has identified certain typical characteristics of the Park 'n' Ride user. Park 'n' Ride users generally live a fair distance from a mass transit station (i.e. 4 km), travel on uncongested roads to reach the Station, and would drive all the way to work rather than take a lengthy feeder bus trip. Observations of past operations at the Heritage and Southland Park 'n' Ride lots show that Heritage Station has been used to a much greater degree due to its higher level of bus service (Blue Arrow). The present combined travel time of auto Park 'n' Ride and Blue Arrow express will be improved in 1981 when feeder bus service to the L.R.T. line goes into operation. Consequently, local residents will be more inclined to travel by bus to the Heritage Station rather than drive. The demand for Park 'n' Ride space at Heritage Station has been estimated by IBI for the year 1991 and was found to far exceed the planned supply (850 - 1400 demanded vs 350 provided). More recent estimates for the opening of L.R.T. are much lower, in the range of 300 spaces demanded, which reflects the smaller catchment area that the Heritage lot would serve. To provide additional Park 'n' Ride space to meet the expectations of a future uncertain demand would run the risk of creating new traffic problems and influencing travel behaviour. The following points should be considered:

AREA	CONCERNS	RESPONSE
Heritage (continued)		a. providing substantially more parking (e.g. a garage) in the vicinity of the Station would increase traffic volumes in rush hours on Haddon Road and likely affect bus movements. The IBI Report acknowledges that Haddon Road would be an attractive access route particularly with the future congestion levels on Heritage Drive. Means to control this would be difficult. Furthermore, by attracting more residents to Park 'n' Ride, feeder bus service would suffer (because of more traffic delays experienced around the Station); b. joint use of development parking facilities (along the east side of the tracks) would minimize traffic impacts in the community; however, the schedule of development here is uncertain. Use of existing facilities in the area could be investigated but the traffic impacts, such as on Haddon Road would remain. In summary, increasing the supply of Park 'n' Ride space at Heritage Station is not recommended. To ensure that possible Park 'n' Ride overspill is contained, a two hour on-street parking restriction is recommended for all streets in the immediate vicinity of the L.R.T. Station. Residents would be issued 24 hour parking stickers.
	Traffic problems at Macleod Trail and Heritage Drive will worsen with increased density of office and residential uses along Horton Road.	Mixed use development of lower intensity commercial use is proposed to minimize traffic generation from new developments along Horton Road. Road improvements are recommended to accommodate any increased traffic.
	The priority of interchanges at Macleod Trail/ Heritage Drive and Macleod Trail/Southland Drive must be increased and included in the next T.I.P.S. program.	A grade-separation of the Macleod Trail/Heritage Drive intersection is recommended with redevelopment occurring around the L.R.T. Station. It will be re-evaluated in the next T.I.P.S. update.
	Office/retail land use is more appropriate than residential since traffic peaks during rush hours only.	Office and retail uses generate far more total daily vehicle trips than residential and, in addition, affect the transportation system most dramatically during rush hours.
4. Southland L.R.T. Station Area	Traffic congestion will occur throughout the community because of the proximity to the L.R.T. Station. Shortcutting through the community may arise and solutions are requested prior to L.R.T. start-up.	Access to the Southland Park 'n' Ride site (400 spaces) is provided from Sacramento Drive and the possibility exists of using this road from the south to bypass Southland Drive. Southland Drive presently carries heavy volumes during rush hours and nearby major intersections (Elbow Drive, Macleod Trail) are congested. Some shortcutting on Sacramento Drive is presently observed, primarily during peak periods, and means to discourage this practice will be reviewed by the Transportation Department and discussed with the Southwood Community Association.

AREA	CONCERNS	RESPONSE
Southland (continued)	Spillover parking would create a problem on local streets in the area of the Park 'n' Ride site.	The IBI Report has indicated a future (1991) shortage of Park 'n' Ride space at Southland Station though not as severe as at Heritage Station. Although frequent feeder bus service should reduce the demand by local residents to Park 'n' Ride at Southland Station, it is recognized that a potential problem may arise with on-street parking. Therefore, it is recommended that a two hour on-street parking restriction be enforced on local streets near the Park 'n' Ride site to discourage all day parking. Residents in the area would be issued parking permits.
	Construction of the Southland Drive/Macleod Trail interchange is required in the near future considering that it is now severely congested.	Congestion at the Southland Drive/Macleod Trail intersection during peak hours is directly a result of the heavy turning movements. Many intersections along Macleod Trail south of Glenmore Trail experience congestion and with the opening of Deerfoot Trail to Anderson Road some of this pressure will be alleviated. Redevelopment in the Southland Station area requires the grade-separation of Macleod Trail at Southland Drive in the future. The priority for this interchange will be determined in the next T.I.P.S. update.
	Park 'n' Ride facilities should be expanded.	Feeder bus service to the Southland L.R.T. Station is by far the most efficient access mode. Attracting local residents to feeder buses is a priority and should not take second place to the provision of unlimited Park 'n' Ride facilities. For start-up operations of L.R.T., the planned supply of space is considered adequate.
5. Anderson Station Area	The proposed interchange at Anderson Road/ Macleod Trail does not allow for direct access (a flyover) into the L.R.T. Station site. This situation would force all bus traffic and commuters wishing to use the 1,100 car parking lot into the interchange and onto Macleod Trail competing with through traffic. To make L.R.T. viable, it is imperative that feeder buses will be able to move in and out of the station quickly.	The current interchange design at Macleod Trail/ Anderson Road shows an elevated Anderson Road over Macleod Trail and this configuration disallows any possibility (geometrics and grades) of providing direct access into the L.R.T. site from Anderson Road. Concerns were raised with the difficulty in gaining access into the Park 'n' Ride site (because of left turn maneuvers). A distribution analysis of potential Park 'n' Ride users shows approximately 35% of all trips accessing from Anderson Road west. The majority approach via Macleod Trail and Anderson Road east.

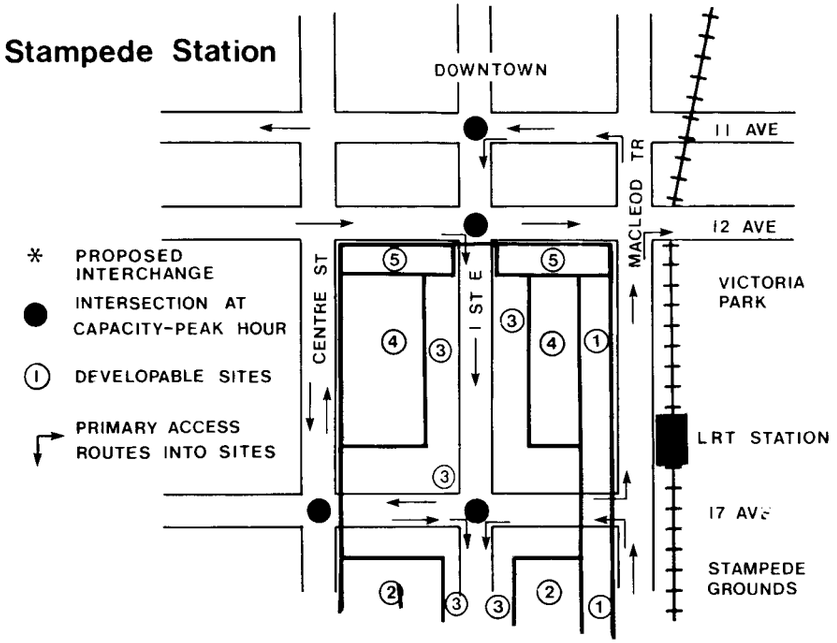
AREA	CONCERNS	RESPONSE
Anderson (continued)		Approximately 60 buses would serve the L.R.T. Station in peak hours with most approaching from Anderson Road east. Access into the L.R.T. Station is provided at the signalized intersection of Macleod Trail and a private road into Southcentre. Traffic from Macleod Trail south and Anderson Road west would turn left at this signal to access Park 'n' Ride facilities and bus turnaround. Dual left turns would be allowed to increase turning capacity in the
		intersection. Traffic from Anderson Road east could use Bonaventure Drive and Southcentre access to Macleod Trail thereby distributing traffic at the signals to avoid congestion. A traffic analysis shows this intersection capable of accommodating the high volume traffic movements anticipated in peak rush hours. Summarizing, direct access into the Anderson L.R.T. Station off Anderson Road west would only accommodate a small portion of L.R.T.-related traffic (and in one direction only) and is not recommended by the Transportation Department. Plans for access into the L.R.T. Station will provide adequate road capacity to handle the projected volumes of bus and vehicular traffic.
	The road bridge over Macleod Trail to access the L.R.T. Station site and construction of a road behind the existing car dealership should be addressed by the Transportation Department for improving road access in the Anderson L.R.T. Station Area.	The Transportation Department has proposed a road system plan which would improve access in the L.R.T. Station area and direct traffic into Southcentre off Macleod Trail. This long range scheme is proposed in concert with construction of the Anderson Road/Macleod Trail interchange and upgrading of Anderson Road to freeway status. The plan centres around a bridge crossing Macleod Trail north of Anderson Road to connect the L.R.T. Station site and Southcentre eliminating left turns to and from Macleod Trail proper. Grade and right-of-way constraints have dictated feasible designs. Development proposed by the Planning Department around the L.R.T. Station has been the impetus for such road improvements not Park 'n' Ride traffic demand alone.
		To ensure good road access into the Park 'n' Ride site in the near future, a second connection from Willow Park Drive is proposed. A roadway joining Willow Park Drive (and Bonaventure Drive) would provide alternate access to Park 'n' Ride facilities - this road requires a dedicated 60 foot right-of-way east of the C.P.R. property along the Tower Chrysler site and one lot further to the north. The Transportation Department recommends protection of this property for the future road connection to Willow Park Drive.

AREA	CONCERNS	RESPONSE
Anderson (continued)	Parking and access on and off Macleod Trail is limited and added development will worsen the situation.	A road access scheme is proposed which would limit access into developable parcels and segregate through and turning traffic on Macleod Trail. This plan is essential to provide safe operations on Macleod Trail once development proceeds in the area of the Station.
	A.C.E. Mobile Home Park Site - proposed high density residential development. Redevelopment to a higher residential density might be highly supportive of L.R.T. with improved pedestrian facilities. The site is approximately 3000 feet walking distance from the Anderson Road L.R.T. Station and research has shown that at that distance over 30 percent of the work and school trips will be made on rapid transit.	The sheer magnitude of the project would generate substantially more L.R.T. trips than the present mobile home development. Research conducted for the Transportation Department does not show such a liberal modal split to transit when residents are confronted with walking distances in excess of 1200' - 1500'. It is recognized that the majority of trips made from this site would be vehicle oriented.
	Analysis of Macleod Trail traffic capacity as it restricts A.C.E. redevelopment - high density residential development will be satisfied elsewhere if not in the A.C.E. site where the absence of L.R.T. will provoke traffic problems.	The L.R.T. South Corridor Land Use Study proposes substantial residential development along the L.R.T. line to minimize traffic impacts. This residential development is located within an easy walking distance of the L.R.T. Stations, often adjacent to the Stations.
	The need to preserve vehicle capacity on Macleod Trail is partially because of L.R.T.-related development, particularly commercial uses. The Transportation Department analysis of traffic constraints are based on commercial development which far exceeds the findings of a market analysis.	The Transportation Department has indicated in this Appendix an upper development ceiling throughout the Macleod Trail corridor based upon capacity constraints of local access roads and major arterials. The overall limit (7 million square feet of commercial uses) is much closer to the market study findings than the ultimate development potential of all reclassified land parcels. Capacity constraints at Anderson Station are partially due to redevelopment proposed here and related traffic, but in addition: a. L.R.T. Park 'n' Ride traffic; b. proximity to a major regional shopping centre; c. background or through traffic on Macleod Trail (future time-frame 2001).

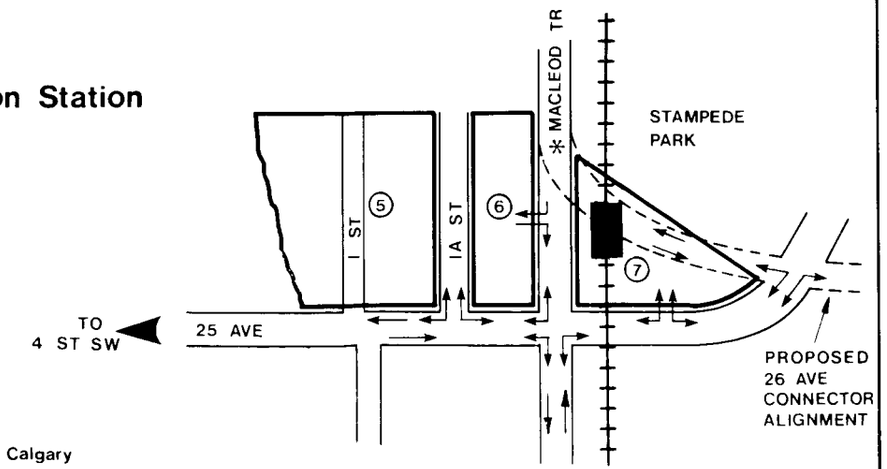
EXHIBIT 1

TRAFFIC CIRCULATION-MAJOR ROADS
SOUTH L.R.T. CORRIDOR

Stampede Station



Erlton Station



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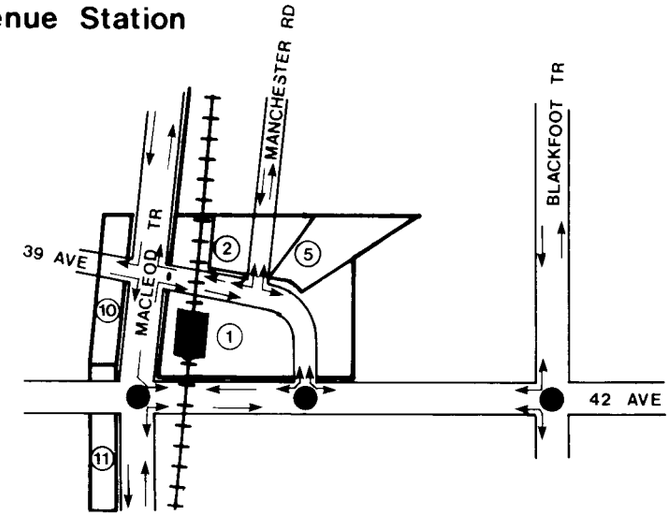
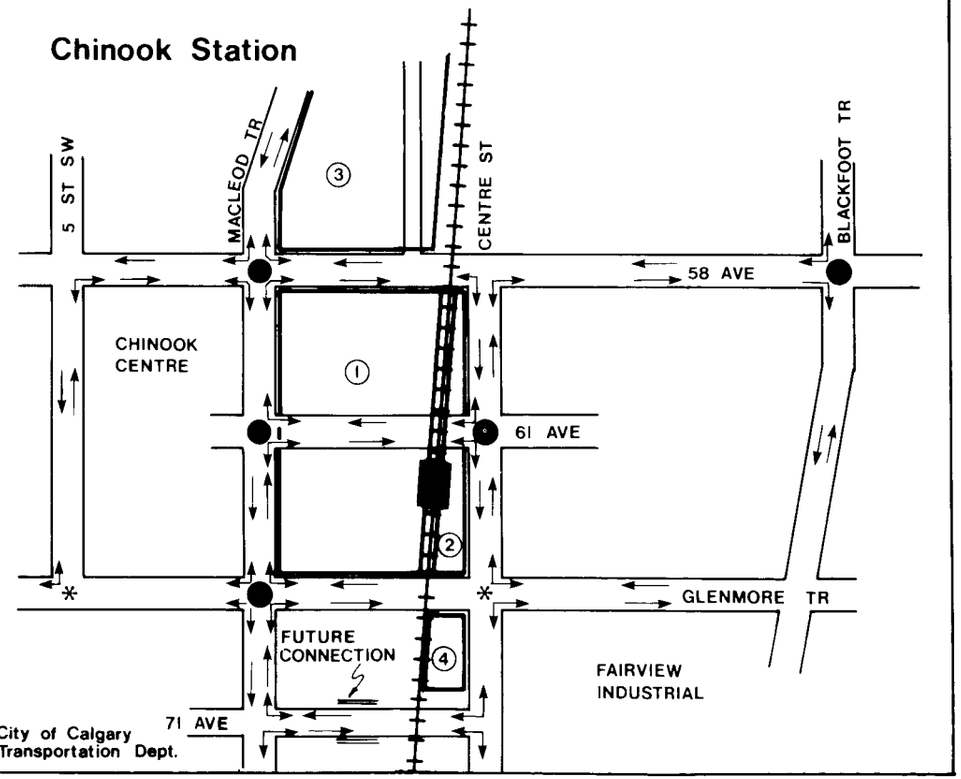
Transportation Dept.

42 Avenue Station



Chinook Station



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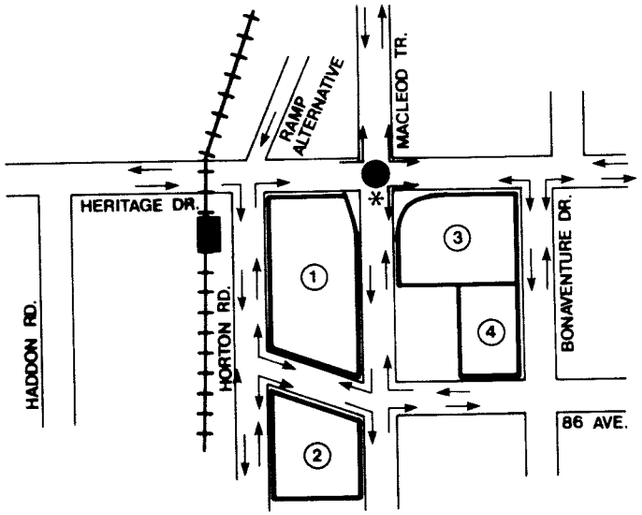
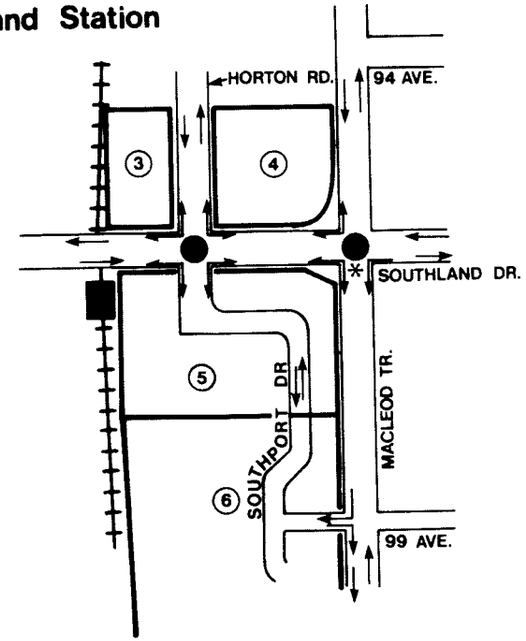
Transportation Dept.

* Illustrations are diagrammatic and not to scale.

Heritage Station



Southland Station



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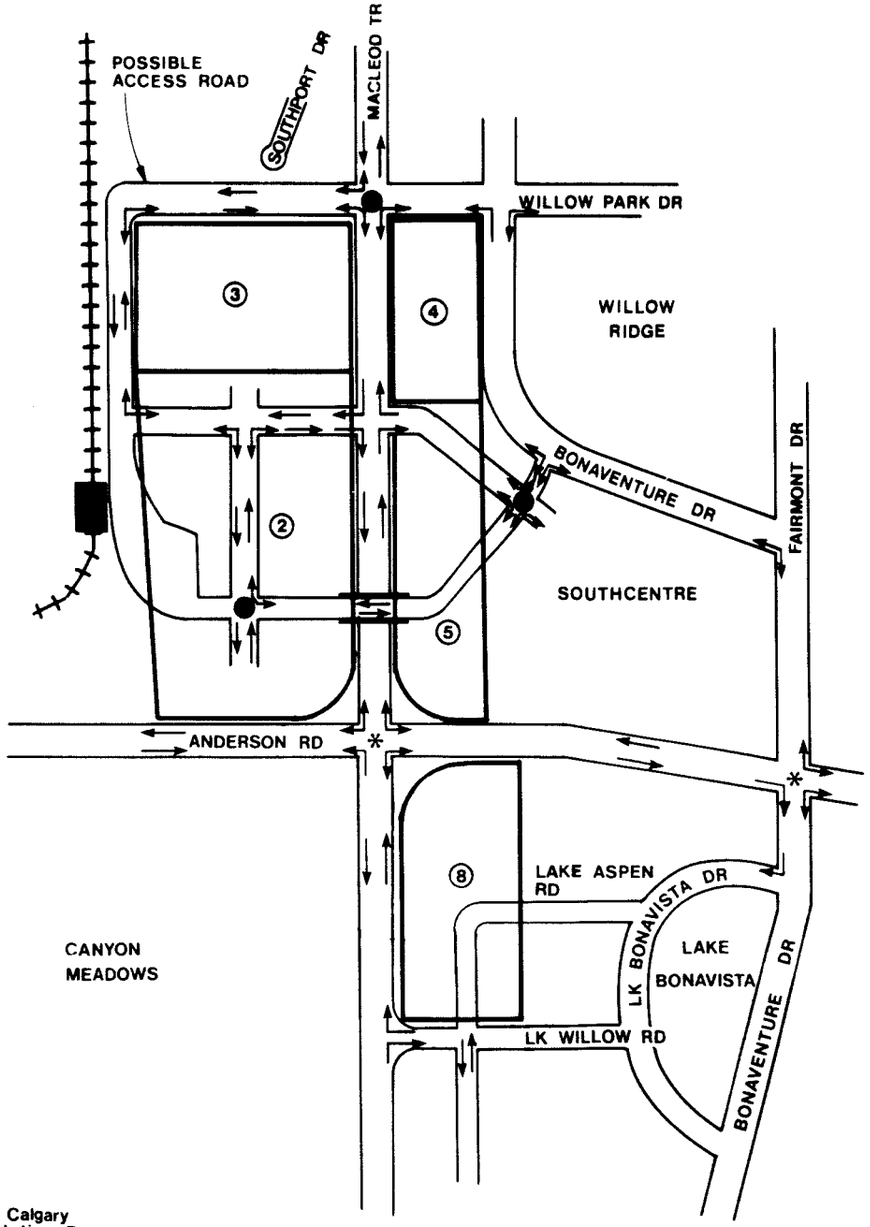
Anderson Station



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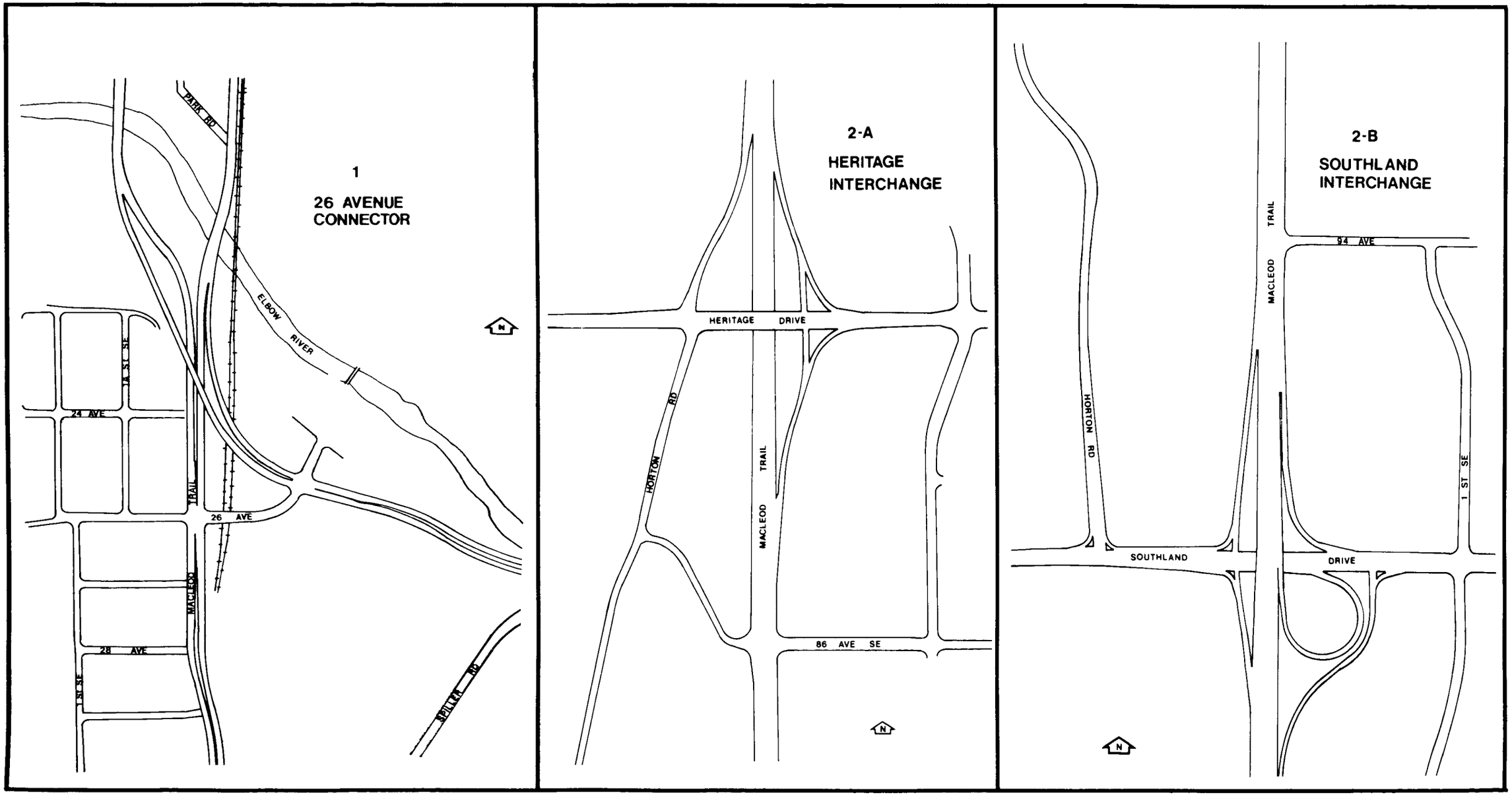
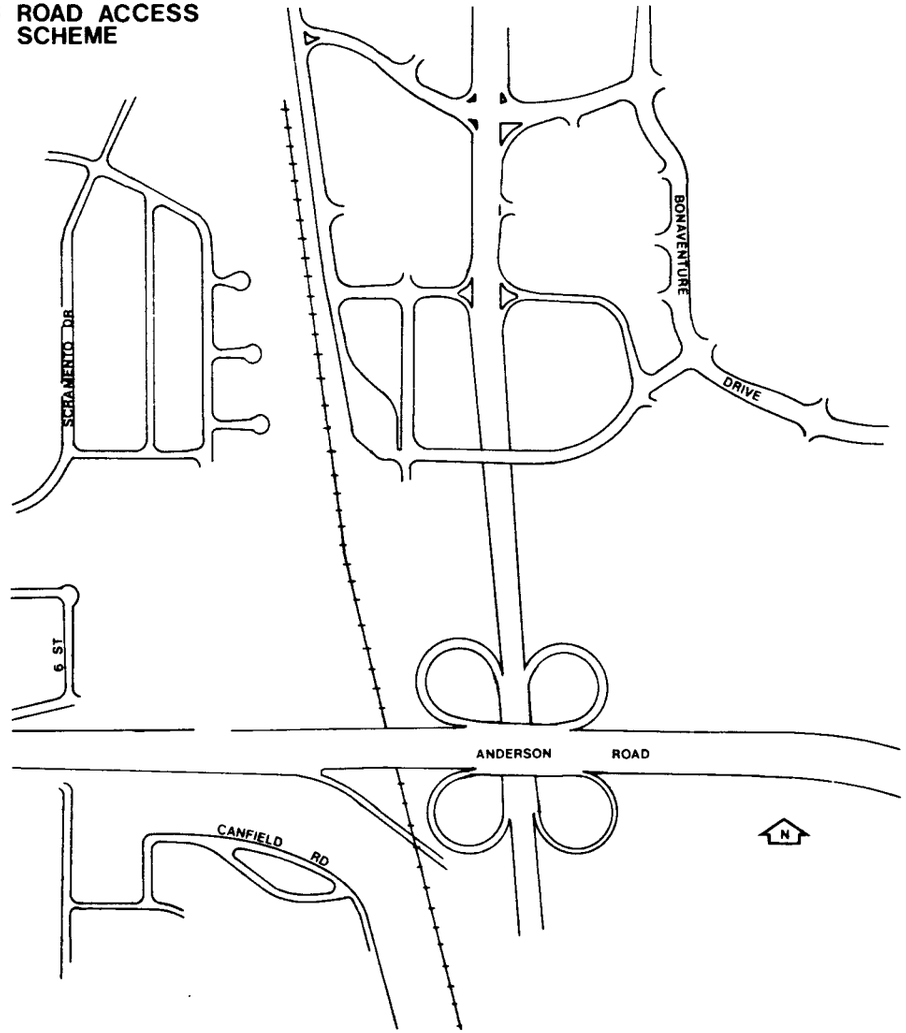


* Illustrations are diagrammatic and not to scale.

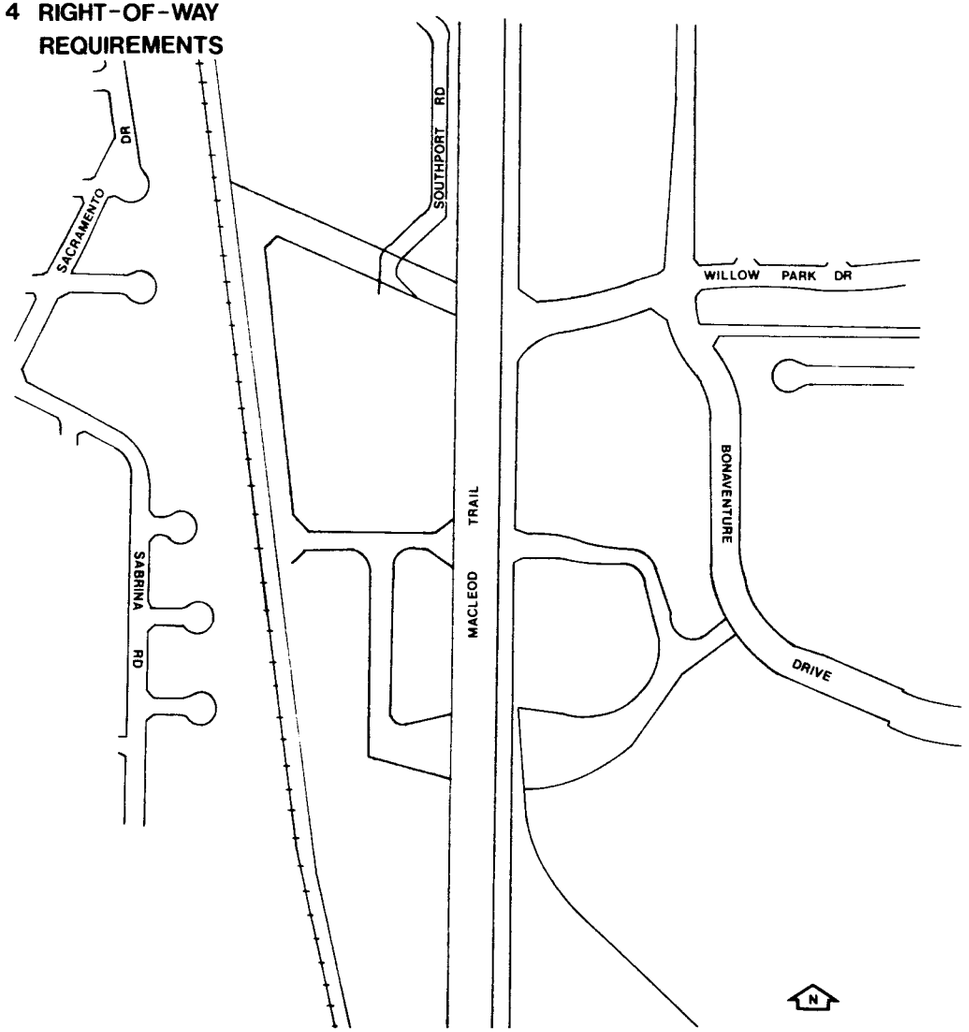
Anderson Station

3 ROAD ACCESS SCHEME



Anderson Station

4 RIGHT-OF-WAY REQUIREMENTS



* Illustrations are diagrammatic and not to scale.

H. SUMMARY OF "L.R.T. SOUTH CORRIDOR TRAFFIC AND PARKING STUDY", IBI GROUP, OCTOBER 1978

1. STUDY TERMS OF REFERENCE

The IBI Group, a planning and architectural consulting firm, was commissioned by the Planning Department to undertake this study as an input to the preparation of the L.R.T. South Corridor Land Use Study. The "Terms of Reference" were to study:

a. The parking needs of various types of land uses and mixed use developments near the L.R.T. Stations and the potential for shared use of L.R.T. parking facilities with adjacent development.

b. The impact of the L.R.T. and its related facilities on local parking and circulation in adjacent communities and the evaluation of various methods to minimize the potential adverse effects.

2. SUMMARY OF FINDINGS AND RECOMMENDATIONS

a. Parking Requirement Guidelines for the L.R.T. South Corridor

Based on the analyses of the Calgary Transportation Study (C.A.L.T.S.) transportation models, the change in travel patterns due to the introduction of the L.R.T. System in the South Corridor has been predicted in order to assess possible changes to parking requirements in this area. While changes to parking requirements in the Development Control By-law 8600 should be based on data drawn from a statistically valid sample of each land use class, until such data is available, the following guidelines may be used for approximate parking requirements in the South Corridor:

i. 2.6 spaces per 100 sq. m (2.4 spaces per 1,000 sq. ft.) of office net floor area;

ii. a minimum of 2.5 spaces per 100 sq. m (2.3 spaces per 1,000 sq. ft.) of net floor area for any type of retail establishment; higher requirements where warranted (e.g. shopping centres);

iii. 1.2 spaces per dwelling unit (Page II-17).

Therefore, based on the analysis of modal split characteristics for "superzones" throughout the South Corridor, general parking relaxations have not been supported. However, for residential uses, the analysis has been based on the change in travel time ratios weighted by frequency to all destinations with respect to the area within 500 m of the Stations. It has been found that a decrease in car ownership rates of 0.05 to 0.10 cars per household would be possible, but that this would not be "significant enough to warrant creation of special zones with reduced (parking) requirements, but might be used to consider allowance of reductions on an ad hoc basis" (Page II-9).

The application of these guidelines should aim for an overall balance of supply and demand, including both available curb parking and parking supplied as part of the new development (Page II-17).

There is also some potential for shared use of parking in the Corridor, particularly between L.R.T. commuter parking and restaurants, hotels,

and cinemas and within new developments, particularly among offices, hotels, restaurants, cinemas and shopping centre uses. The shared use of parking would be based on an analysis of the number of spaces required under the By-law parking standards for each component use and their varying occupancy rates throughout the day. Then by applying the estimated percentage parking requirements by time of day for each land use class, the need for the maximum or peak accommodation in total would be determined (Page II-11).

b. Traffic and Parking Impact at L.R.T. Stations

i. Traffic

The potential problems of traffic related to the L.R.T. facilities have been studied based on the factors of the anticipated modes of access to the Stations and their different characteristics and impacts*.

Although the present City transportation models do not incorporate explicitly Station access traffic, the analysis has been based on assumptions that by 1991, the four southernmost Stations will have:

- 40 percent feeder bus access;
- Station parking supply as planned for the 1981 opening;
- re-distribution of some auto-related car access from Heritage to Southland and Chinook;
- diversion of 25 percent of Park 'n' Ride access demand to feeder bus, 25 percent to Kiss 'n' Ride and 50 percent to auto drive (Page III-9).

* The statistics on access modes to L.R.T. (percentages) assumed by the consultants are now considered to be out-of-date by the Transportation Department (March, 1980).

For each Station, potential traffic impact and possible solutions are summarized as follows:

Anderson

The present designated access to the L.R.T. facilities will be a signalized intersection at Macleod Trail, which could experience significant congestion affecting both Station traffic and through travel by 1991. One or more additional right-turn-only ramps on or off Macleod Trail could probably accommodate the future traffic volumes. West of the L.R.T. Station, use of local streets in Southwood would likely be limited to Kiss 'n' Ride users since major parking access is from Macleod Trail (Page III-10).

Southland

Since the L.R.T. facilities will gain access from Sacramento Drive, the intersection of Southland Drive and Sacramento Drive will be used more heavily with the potential for some delays but not serious congestion. At peak hours, there could be more traffic seeking to travel via Sacramento Drive, Sabrina Road and 104th Avenue from Elbow Drive and the local area to reach the Station.

Possible control measures include:

- one-way westbound operation on Sabrina Road and 104th Avenue;
- prohibition of right turns from Sacramento Drive into the Park 'n' Ride lot;
- development of improved separate access to/from Southland Drive (Page III-11).

Heritage

Since the road access to the Station will be by the existing entrances on Haddon Road, anticipated heavy traffic loads on the Heritage Drive/Haddon Road intersection could cause extra congestion at Heritage Drive, making Haddon Road, 96th and 89th Avenues attractive access routes.

Measures to control infiltration on 96th and 89th Avenues may be developed but problems on Haddon Road may be difficult to resolve because of the capacity limitations at Heritage Drive. A range of alternatives might be considered including:

- prohibition of right turns from Haddon Road into the Station and left turns from the Station to Haddon Road in peak hours (recognizing the consequent enforcement problems);

- accepting higher volumes on Haddon Road and eliminating curb parking to accommodate it;

- seeking a second Station access point off Heritage Drive or Horton Road (Page III-12).

Chinook

Access would be primarily from Macleod Trail and 61st and 63rd Avenues from the south and west, and via Centre Street and 61st Avenue from the east. It is anticipated that L.R.T.-related traffic could be accommodated by the existing system. However, curb parking bans might have to be extended beyond 61st Avenue (Page III-12).

- 42nd Avenue

  It is anticipated that any traffic attracted to the Station would be limited to light Kiss 'n' Ride traffic only.

- Erlton and Stampede

  It is anticipated that auto traffic attracted to the Stations will be very limited.

If serious congestion problems develop at Station access points as a result of increasing the parking supply in the future, possible solutions include one or more exclusive Station access roadways directly to and from adjacent major arterials. These facilities could be either at-grade or grade-separated (Page II-19).

ii. Station Parking Impact

Based on the analysis of parking demand and supply, it is anticipated that by 1991 there will be a general undersupply of long-term parking at L.R.T. Stations which will expose an area within 400 to 500 m walking distance of each Station to the risk of becoming an informal or overflow parking area for that Station. This overflow would, in turn, restrict the supply of curb and off-street parking available to residents and other establishments in the neighbourhood (Pages III-12-13).

Generally, long-term parking could be discouraged by the creation of a special parking zone under the Traffic By-law (No. 145/75, Section 12) which would restrict parking to one or two hours during business hours with residents issued permits for parking. Where necessary, agreements could

be made between the City and owners of adjacent parking lots which have spare capacity during commuter hours. In addition to these possible solutions to potential parking problems, the following stategies should be investigated to provide additional parking:

- as part of developments being introduced within 500 m of the Station;
- in multi-level structures on existing sites;
- at Midnapore Station on an extended L.R.T. route (Page III-18).

Kiss 'n' Ride traffic is more difficult to control since it is often local residents and "no stopping" zones are difficult to enforce.

Anderson

With the largest parking lot, it is anticipated that overflow parking would be limited, perhaps involving the western edge of the Southcentre parking lot and some local Southwood streets (Pages III-13,14).

Southland

There would be the potential overspill of parking into local Southwood streets and possibly the adjacent Southwood Business Park parking lots (Page III-14).

Heritage

There could be potential overspill parking into the Haysboro community and adjacent service facilities like the Y.M.C.A. and Rose Kohn Memorial Arena parking lots. The adjacent commercial uses of Studio 82 and Fairway Furniture could also attract overspill parking (Page III-15).

Chinook

Potential parking overspill would likely use the available curb-side parking throughout the area (Page III-16).

Stampede, Erlton and 42nd Avenue

Significant commuter parking demand is not anticipated (Page III-16).

I SUMMARY OF "A STUDY OF THE MARKET DEVELOPMENT OPPORTUNITIES IN THE L.R.T. SOUTH CORRIDOR LAND USE STUDY", URBANICS CONSULTANTS LTD. FEBRUARY, 1979

1. INTRODUCTION & TERMS OF REFERENCE

The Urbanics Consultants Limited, a land economics and marketing consulting firm was commissioned by the Planning Department to undertake a study to assess the potential market demands of transit-related land uses in the vicinity of the Light Rail Transit Corridor. The principal focus of this study is on high density office and residential land uses with secondary consideration being given to retail and hotel uses. The purpose of this study is to obtain information on developer intentions and market opportunities that are required in the analysis and evaluation of various land use options arising from the L.R.T. Land Use Study. Specifically, the terms of reference of the study are:

a. To determine the market potential of high density residential, office, retail/commercial and hotel uses in the City of Calgary to 1991 based on factors such as historical trends, population, employment and provincial growth rates.

b. To determine the market share of the various land uses in the Macleod Trail L.R.T. Land Use Study Area on the basis of factors such as historical trends, existing and proposed developments, public policies and information provided by questionnaire surveys.

c. To determine the likely market share amongst the proposed nine L.R.T. Station Areas. Allocation of market share should reflect an explicit ranking of each station impact area in terms of its relative suitability and attractiveness of the sites for various developments.

d. To examine the necessity, if any, and probable effectiveness of stimulating the market for L.R.T.-oriented uses. Recommendations will be made as to changes in land use types, intensity of use and/or provision of incentives where discrepancies exist between potential market demand and existing levels of classifications.

2. METHODOLOGY

The methodology employed in the analysis consists:

a. Establishing the "macro" growth framework for the City of Calgary

Projections of the overall growth framework have been derived from an assumption about the continued economic health of the Province. The average annual real growth rates assumed in this study are 4.5%,5% and 5.5% for low, medium and high estimates respectively. Employment projections have been derived utilizing a defined relationship with economic growth. Population projections have been calculated utilizing City of Calgary's population projection model with assumptions about fertility rates and net immigration which reflect the latest available evidence.

b. Establishing the overall demands for the various types of land uses

i. Office space demands are calculated from employment based equations.

ii. Housing demand and its distribution by type of dwelling are derived from population projections using trends in household size, composition and propensities to occupy a given dwelling type.

iii. Retail space demands are calculated by using population projection and income growth assumptions.

iv. Hotel room demands are derived from employment based equations.

c. Allocation of demand to the Study Area

In assessing the probable allocation of the various land use demands to the L.R.T. South Corridor Land Use Study Area within the context of the total city, the following considerations were undertaken to assume a more realistic approach in allocating distributions:

i. A random sample of existing downtown office users was utilized to determine their locational requirements and flexibility of location relative to the L.R.T.

ii. A field survey of office tenants in the purpose-built offices currently located in the Macleod Trail Corridor was conducted. The objective of this survey was to determine the characteristics, composition, space requirement, and rent paying abilities of office users.

iii. Historical growth of residential development in the various geographical parts of the City, coupled with existing city policies (e.g. the approved Growth Strategy) were utilized in allocating residential demands.

iv. Records of experience from San Francisco and Toronto were utilized to assess potential transit impact on development.

d. Allocation of potential demands to individual station impact areas

For office use and high density residential allocations, the methodology employed is based on a weighted ranking procedure which takes into account all of the factors considered to have some influence on the demand of that particular type of use. Each of the factors was assigned with an appropriate weight depending on its relative importance in the market for that particular type of use. Each station was then ranked individually against each factor, and then a composite ranking score for each station was derived. This was further used as a guide to approximate the space demand for individual station areas.

A number of leading developers and companies in the commercial and residential field had been interviewed to determine their attitudes and intentions regarding development along the L.R.T. Transit Corridor and the importance of incentives. Developers who currently have their development intentions in the Study Area were also interviewed in order to assess their rationale.

The consultants emphasized that a study of this nature necessitates the making of a large number of assumptions and judgements. However these assumptions and judgements were based on the evidence available at the time of the study and the awareness of emerging social and economic trends. The consultants also pointed out that each new level of forecast introduces increasing uncertainty; they could be fairly certain about the City of Calgary projections, less certain about the Study Area projections, and even less certain about the station area projections. The actual space demands are very much subject to

individual decisions, decisions which, if altered, could fundamentally change the apparent demand in a given area, even though a locational decision would not alter the overall demand within the city as a whole. The macro-to-micro approach does ensure, however, that all forecast demands for the various land uses are reasonable within the context of the total city.

3. MAJOR FINDINGS AND CONCLUSIONS

a. MACRO GROWTH AND ANALYSIS (MEDIUM GROWTH SCENARIO)

i. Employment

Calgary's share of the Alberta Employment is estimated to increase from 26.61% in 1977 to 29.12% in 1991. By 1991, Calgary's employment projected will total 375,000 compared to 227,000 in 1977, for an average increase of 3.65%. (Projected sector share and employees of total employment are shown in Tables 5 and 6 of the report.)

ii. Population

The population of Calgary is expected to increase from 508,718 in 1978 to 774,000 by 1991, assuming a 1.75 fertility level and a level of 12,000 net immigration per annum.

iii. Housing Demand

Projected total requirements for housing units by type for the low, medium and high scenario have been calculated. Under the medium growth scenario, apartment housing demand will average 2,750 units per annum during 1978 - 1981, 2,450 during 1981 - 1986 and 2,200 units during 1986 - 1991.

iv. Office Space Demand

The office space demand is expected to average 869,000 sq.ft. per annum. Using the actual 1977 figure (12,307,000 sq.ft.) as a base, the "medium" projection forecasts a total demand of office space of 24,475,000 sq.ft., by 1991, which represents 2.0 times the amount of office space existing at the end of 1977. This forecast is particularly sensitive to changes in the growth rate of the provincial economy: for example, a 0.5% increase or decrease in the gross provincial product growth rate will increase or decrease the annual absorption rate of office space by about 100,000 sq.ft.

v. Retail Space Demand

Additional warranted space will reach 2.53 million sq.ft. of gross leaseable area for department store space, 2.52 million sq.ft. for non-department store space and 813,000 sq.ft. for food store space by 1991.

vi. Hotels

An additional 4,447 of hotel rooms will be required for the next 13 years to meet the demand.

b. CORRIDOR DEMANDS (MEDIUM GROWTH SCENARIO)

i. Office Demand (Purpose - Built Office Buildings Only)

The concentration of office buildings will remain in the Downtown area. However, the decentralization of a certain amount of office space outside the Core may be expected

to continue. It is estimated that by 1991, total suburban office space will have increased from the existing 8.4% to 15%. This means that a total of 3,670,000 sq.ft. out of a total of 24,475,000 sq.ft. in Calgary may be expected to be located outside the Core area.

The Macleod Trail office share of the City total will increase from 5.75% in 1978 to 9.75% of the city total by 1991.

It is also estimated that 65% of the non-downtown office space will be located within the Macleod Trail Study Area by 1991.

Total office demand in the Study Area over the next 13 years is projected to average 120,000 sq.ft. per annum which represents an addition of 1,560,000 sq. ft. over the next 13 years. An estimate of the likely "divertible" office space from Downtown to Macleod Trail as a result of the L.R.T. construction was based on the results of a sample survey of downtown office users. The proportion of positive responses was used as an indication of interest. The results show that the L.R.T. is not a significant factor in influencing relocation of downtown offices (only 1.75% of the total responses were interested). The results were also applied to the suburban areas.

The consultants concur with a number of developers that they foresee an over supply of office in the Macleod Trail by 1980 with development proposals coming to the City at their current levels.

The consultants also feel that L.R.T. will be a significant factor in reinforcing and consolidating the Downtown area as a focus of commercial - office activity. The total projected office demand in the Study Area will generate approximately 6,200 office employees. It would therefore appear that the policy of decentralization as specified in the Calgary Plan would be substantially aided if the Land Use Plan can recognize the potential projected market demand in the corridor as identified by the study.

ii. High Density Apartment Demand

An addition of some 10,600 units is expected to be required by 1991. In computing the projected demands, an allowance for the attractiveness of the L.R.T. was added. Historical data from selected areas of the Toronto subway system was utilized as indicators of possible L.R.T. influence.

Provision of the market demand level of apartments seem to be in line with City policies (Calgary Plan) regarding infill and selective residential densification.

iii. Retail Space Demand

Most of the additional space identified in the regional context will be developed in planned shopping centres. Population specified in the adopted Growth Strategy of the Calgary Plan was utilized to project the various retail space demands in the South Corridor. Because the area of influence (trade area) extends beyond the L.R.T. Study

Area, the demand projection was then extended to cover also areas adjacent to the Study Area including areas designated for annexation in the southeast. Additional warranted space is expected to reach 718,000 sq.ft. for department store type space, 809,000 sq.ft. for non-department store and 230,000 sq.ft. for food store space for the next 13 years. A regional shopping centre (between 35 to 45 acres) would be warranted in the Midnapore area.

iv. Hotels

During the 1967 - 1977 period, just over one-third (35.6%) of the total hotel room supplies occurred in Downtown with Trans-Canada and Macleod Trail clusters accounting for another 35% and 17.3% respectively. No significant short-term change is anticipated in the relative attractiveness of the Study Area. It is anticipated that an additional 860 rooms could be absorbed in the Study Area during the forecast period.

v. Mixed Land Uses

Within the planning period, most of the development in the Macleod Trail area will likely include two significant land uses, i.e. office with ground floor retail, but will lack the scale and functional diversity as conventionally required in a true mixed use development. The most viable location for an integrated mixed development is Downtown.

Within the planning period, Chinook Station Area is identified as the only location with the highest potential for a true large-scale mixed use development outside the Core because of the existing infrastructure of development activities, transportation network and urbanized environment.

The factor of market synergism created by large mixed use development could be utilized to capture a greater share of the market potential for the various land uses as determined by the report. However, the consultants regard that the number of such large scale developments in the Macleod Trail area will likely be constrained by the total development in the City as a whole and the highly attractive location of Downtown.

c. INCENTIVES

i. The results from a survey of developers regarding responses on the variety of incentive programs, suggest that the levels of market demand as identified for the Study Area during the next 13 years are unlikely to be significantly enhanced by the introduction of such incentive programs.

ii. Some developers thought that depending on the exact areas rezoned, "upzoning" might increase their interest to develop. The consultants suggest that rezoning could be utilized by the City to achieve policy goals and facilitate development in station areas. However, rezoning will not be able to change the total space demand in the City but will only modify the locations of the space being developed.

iii. The only incentive required, if any, is the provision of appropriate land use classifications. A form of comprehensive development district such as "D-C" coupled with a specific development plan indicating design, land use types and densities, while allowing individual developers to formulate their own ideas within this framework was regarded as being important by developers.

iv. Some interest was expressed in the bonusing concept (e.g. by permitting a higher density) if some conditions are met such as provision of connections to transit stations.

v. The value of providing infrastructure or beautification by the City around station areas is not significant to induce development.

vi. Possibility of using governmental rental space as an impetus to stimulate development should be investigated.

vii. The consultants regard that it is essential that City policies to control development in the L.R.T. stations be decided upon as soon as possible, such policies should be translated into physical plans, so that anyone interested is dealing with a known quantity. This in itself would remove one of the attendant risks of real estate development.

d. STATION AREA ANALYSIS AND RECOMMENDATIONS

Based on the review of existing physical and other planning considerations in the Study Area, there appears to be no general supply based constraints such as lack of developable land that would prevent the projected market demand from being accommodated.

i. Stampede Station

- Market Demand for Offices - 96,000 to 114,000 sq.ft.
- Market Demand for Apartments - 1,190 units to 1,280 units
- Food - 3,000 sq.ft.
  Non-Department Store - 15,000 - 25,000 sq.ft.
  Services - 20,000 - 30,000 sq.ft.
- Hotels - 268 rooms - (gravitate to the proposed Convention Centre and Stampede expansion proposals)
- No incentives or changes appeared necessary for office development.
- R-5 and CM-2 classifications are both appropriate and adequate to permit market demand.

ii. Erlton Station

- Office Demand - 109,000 to 130,000 sq.ft.
- Apartment Demand - 1,430 to 1,550 units. Attractive location for residential development.
- Food - 0 - 3,000 sq.ft.
  Non-Department Store - 5,000 - 15,000 sq.ft.
  Services - 10,000 - 20,000 sq.ft.
- Residential development in M-2 zoning is inappropriate. M-2, R-2, R-3 should be rezoned for apartments to satisfy the market.

* Districts under Development Control By-law #8600.

iii. 42nd Avenue Station

- Office Demand - 130,000 to 150,000 sq.ft.
- Apartment Demand - 760 units to 820 units.
- Food - 0 - 2,000 sq. ft.
  Non-Department Store - 5,000 - 10,000 sq.ft.
  Services - 5,000 - 15,000 sq.ft.
- Present classification along Macleod Trail, that is, C-3, could satisfy the office demand. However, rezoning certain industrial sites close to the station impact area to permit office development would be beneficial and could change the "industrial" image of the area.
- The triangular area formed by the L.R.T. station would be a valuable commercial site.
- In the Parkhill/Parkview area, there is great potential for apartment development from the market viewpoint. Reclassification of R-2 and R-3 to R-4 could provide the necessary impetus.

iv. Chinook Station

- Office Demand - 302,000 to 360,000 sq.ft.
- Apartment Demand - 1,530 to 1,650 units.
- Food - 5,000 - 10,000 sq.ft.
  Non-Department Store - 40,000 - 50,000 sq.ft.
  Services - 25,000 - 35,000 sq.ft.
- The station area has emerged as the prime site for development in the Study Area.
- Potential for "tie-in" with Chinook shopping complex.
- Potential sites for integrated mixed use develoment.
- "Mall" type of retail development viable.
- "High class" auto retailing in enclosed showrooms to be located in the lower floors of office towers would be viable.
- Key to the success of the development concept is "connectivity", e.g. provision of an integrated pedestrian network.
- Reclassification of M-2, M-3 and C-HWY-2 to "D.C." to permit promulgation of an integrated nodal concept.

v. Heritage Station

- Office Demand - 246,000 to 293,000 sq.ft.
- Apartment Demand - 1,150 to 1,240 units

- Food - 0 - 3,000 sq.ft.
  Non-Department Store - 5,000 - 15,000 sq.ft.
  Services - 10,000 - 20,000 sq.ft.

- Mixed development viable close to station area. Reclassification of highway commercial uses to "D.C." classification is appropriate.

- Residential potential exists for the Park'n'Ride site. However, design problems and political implication may act as deterrents to development.

vi. Southland Station

- Office Demand - 291,000 to 346,000 sq.ft. (great potential for office development in this location).

- Apartment Demand - 730 to 790 units. Land availability constraints in the station area may divert the demand to other sites in the general vicinity where there is sufficient flexibility.

- Food - 0 - 2,000 sq.ft.
  Non-Department Store - 5,000 - 15,000 sq.ft.
  Services - 10,000 - 20,000 sq.ft.

- No problem to accommodate the market demand of office developments.

- Reclassification of part of the station area and the city owned vacant parcel to R-4 is appropriate. Residential area development might be feasible to the north of Southland Drive.

vii. Anderson Road Station

- Office Demand - 258,000 to 307,000 sq.ft.

- Apartment Demand - 1,310 to 1,410 units. Attractive location for residential development.

- Retail Demand:
  Department Store - 100,000 - 125,000 sq.ft.
  Non-Department Store - 45,000 - 55,000 sq.ft.
  Services - 25,000 - 35,000 sq.ft.
  Food - 35,000 - 40,000 sq.ft.

- Planning consideration should be given to the concept of creating an interesting corridor from the station to Macleod Trail, and to be "tied-in" with Southcentre.

- Potential to provide residential and office spaces in the Park'n'Ride site is available. "A-R" should be rezoned to "D.C." with accompanying City policies.

- The existing mobile home site offers great potential for apartment development.

J. By-Law Number 12P/80

Being a By-law of the City of Calgary
Amending the City of Calgary General
Municipal Plan

(General Municipal Plan Amendment No. 6)

* * * * * * * * * * * * * * * * * * * *

WHEREAS the Council of the City of Calgary did, on the 12th day of March, 1979, enact By-law 143/78 to adopt a general municipal plan;

AND WHEREAS The Planning Act, 1977 authorizes the Council of a municipality to amend a by-law adopting a general municipal plan;

AND WHEREAS it is deemed desirable that the City of Calgary General Municipal Plan be amended to reflect policies adopted by Council as the Light Rail Transit South Corridor Land Use Study;

NOW THEREFORE THE COUNCIL OF THE CITY OF CALGARY ENACTS AS FOLLOWS:

1. This By-law may be cited as "The City of Calgary General Municipal Plan Amendment No. 6 By-law".

2. By-law 143/78 is hereby amended by making the substitutions and additions to the Calgary General Municipal Plan set forth in Schedule "A" attached to and forming part of this By-law.

3. This By-law comes into force upon being given third reading.

READ A FIRST TIME THIS 29th DAY OF July, 1980 A.D.

READ A SECOND TIME THIS 29th DAY OF July, 1980 A.D.

READ A THIRD TIME THIS 29th DAY OF July, 1980 A.D.

MAYOR

CITY CLERK

AMENDMENTS TO THE GENERAL PLAN - BY-LAW NO. 12P/80

SCHEDULE "A"

CHAPTER 2

LAND USE IN THE L.R.T. SOUTH CORRIDOR

INTRODUCTION

4.2.1 This chapter of the Plan is concerned with the land use planning policies for the first leg of the City's Light Rail Transit system which runs from Downtown to the south along the Macleod Trail Corridor for a distance of approximately 12.5 kilometres. The policies in it are based on the findings and recommendations of the L.R.T. South Corridor Land Use Study, which was completed by the City Planning Department in 1980.

BACKGROUND

4.2.2 Planning for a new form of transportation mode--that is, rapid transit--began in the mid-sixties. The growing appreciation of the role that public transit would have to play in the future led to the appointment in 1966 of Simpson and Curtin Ltd. as consultants to the City. Their studies, which were reported to Council between 1967 and 1971, provided the basis for the adoption of By-law 8500 by Council in 1972 and allowed for the protection of a rapid transit corridor in the south and northwest areas of the city.

4.2.3 In 1975, the Transportation Department carried out a study to update the transit plans in the light of changing conditions. The Light Rail Transit (L.R.T.) concept was subsequently recommended to and adopted by City Council in May 1976. In May 1977, City Council decided to proceed with the implementation of the L.R.T. alignment as shown in the consultant's report entitled "South Corridor Light Rail Project - Predesign Report". Recognizing that a rail transit system would have a significant impact on land use and development, and that supportive land use policies would contribute significantly to the success of the system, City Council also instructed the Administration to "explore with the senior levels of government, the funding for preparation of a report on land use adjacent to the south corridor". With funding from Alberta Transportation, the City Planning Department initiated a comparative land use study in order to maximize the opportunities afforded by the L.R.T. System and to minimize the potential negative effects along this alignment.

LOCATION

4.2.4 As illustrated on the accompanying map, Figure 4.2.1, the study focussed on the Primary Impact Areas of the seven Station Areas, as defined by the 400-metre radius of each L.R.T. station, and on the areas between them. This focus was selected on the basis of anticipated potential development opportunities and environmental impacts.

PLANNING CONTEXT

4.2.5 The policies contained in the Calgary General Municipal Plan set the context for the L.R.T. South Corridor Land Use Study. They include:

(i) The adopted growth strategy which envisages an increase of population in the built-up area. The additional population is to be accommodated through development on land that is either vacant or under-utilized. It is stressed that the additional residential population should be located in areas with spare servicing capacity and in areas close to major transit corridors, such as Macleod Trail and Crowchild Trail.

(ii) The density of residential development should be increased adjacent to main transit corridor routes(Policies H.25 and T.10).

(iii) Downtown will continue to be the dominant employment centre of the city. The bulk of the remaining employment growth will be accommodated in major industrial areas in the southeast and north and along major transit (L.R.T. and bus) corridors, particularly along Macleod Trail in the south and Crowchild Trail in the north.

(iv) As much new development as possible should be decentralized along transit corridors in order to reduce traffic congestion in the Downtown and Inner City (Policies EA.9 and T.12).

(v) Land uses which would make maximum use of the public transit portion of the transportation system should be emphasized along major travel corridors (Policy T.13).

THE L.R.T. SOUTH CORRIDOR LAND USE STUDY

4.2.6 With this background, a special study was undertaken of the land use policies for the corridor. The purpose of the Study was to establish the planning framework to guide future development and land use change in the Station Areas and the South Corridor generally. The resulting document will be used as a basis for the preparation and review of land use amendments and development applications. It will also be used as the basis for the preparation of any future Area Redevelopment Plans in the Study Area. The Study also recommended that certain improvement projects should be undertaken by the various civic departments.

4.2.7 In detail, the objectives of the L.R.T. South Corridor Land Use Study were:

(i) to formulate policies regarding land use, development intensity, and circulation patterns in order to optimize development opportunities which would support the transit system;

(ii) to analyse the potential impact of the L.R.T. system and new development on adjacent residential communities and to identify means of minimizing the adverse impacts; and

(iii) to design effective implementation techniques for the recommended land use policies.

THE POLICIES

LAND USE

4.2.8 Sound supportive land use policies coupled with effective implementation programs and strategies are critical in ensuring the success of a rail transit system. Therefore, the following policies have been developed:

(i) The L.R.T. Station Areas shall be designated as "multi-purpose" centres suitable for high density residential development and decentralization of employment opportunities in accordance with the General Plan's directives (Policies H.25, T.10, EA.9, T.12).

(ii) Wherever appropriate, integrated mixed-use commercial and residential development in Station Areas will be encouraged in order to promote greater efficiency of urban land utilization, convenience for users and the general vitality of those areas.

(iii) High density residential development shall be supported in Station Areas in order to add to their vitality and to maximize the potential L.R.T. ridership. However, decisions as to the nature and extent of high density development shall take into consideration the impact of such development on adjacent communities.

(iv) The recommended land use types, intensities and development guidelines set forth in the L.R.T. South Corridor Land Use Study, as adopted by City Council, shall provide guidance for all future new development and land use changes within the Study Area. They should also be used as the basis for the preparation of any future Area Redevelopment Plans located within the Study Area.

(v) The established residential character of the communities adjacent to the L.R.T. alignment (for example, Southwood, Haysboro and others as identified by the Study) shall be respected by the retention of existing land use designations except where such designations conflict with the Station Plan proposals for the area within a 400-metre radius of each Station. Comprehensive land use planning reviews, for example, through the process of preparing Area Redevelopment Plans, shall be undertaken prior to other land use changes within a community.

(iv) The bonus system as recommended in the Study shall be used as a means to encourage the provision of residential units and benefit features in accordance with the Station Plan recommendations.

DEVELOPMENT FORM

4.2.9 Development in the L.R.T. Station Areas will require special development guidelines, particularly in relation to pedestrian circulation, transit orientation and environmental quality. The general principle to be adhered to is that development should be oriented to the stations themselves. Higher intensity uses and mixed-use developments should be located as close to the stations as possible, in order to encourage greater use of the L.R.T. system, but there also needs to be a cohesive, integrated approach to the design and development of the Station Areas as a whole. Pedestrianized circulation systems will play an important part, as will such features and facilities as walkways, malls, arcades, recreation facilities and open space. "Air Rights" development, which can help to maximize the surface parking area and transportation right-of-way, is also to be supported in Station Areas.

COMPATIBILITY WITH ADJACENT USES

4.2.10 Every effort will be made to ensure that new development in the Station Areas is compatible with the existing adjacent communities. Particular attention will be given to such problems as parking overspill, traffic generation, short-cutting and shadow effects. The performance standards and impact monitoring and management strategies recommended in the L.R.T. South Corridor Land Study will be used in reviewing development applications.

CIRCULATION SYSTEMS

4.2.11 Recognizing that Macleod Trail has a limited capacity, beyond which major negative economic and environmental impacts would arise, it is clear that a coherent development strategy for the L.R.T. South Corridor is required. The Land Use Study has adopted a development strategy which will promote and rely significantly on increased usage of the L.R.T. system and other forms of public transit. The nodal development around Station Areas will encourage greater L.R.T. ridership by locating employment and residential centres within an easy walking distance of the stations. The encouragement of high density residential development in preference to intensive commercial uses in many Station Areas will have a similar effect.

4.2.12 It is anticipated that a comprehensive feeder bus system which can serve a large number of L.R.T. users will be the key mode of access to the L.R.T. stations. Park 'n' Ride facilities will be provided at the suburban L.R.T. stations to capture the regional commuters who are not well served by the feeder bus systems. The pedestrian walk-on traffic will be increased through the provision of improved pedestrian facilities in station areas.

4.2.13 In order to ensure that the necessary transportation facilities are available to accommodate the level of development proposed in the Station Areas, the Study has identified the necessary road improvements that will be required to accommodate the maximum development potential. It is anticipated that the proposed roadway and access improvements in the Macleod Trail Corridor and the completion of the regional road network, with facilities such as Deerfoot Trail, will ease some of the traffic pressure on the intersections and station access points along Macleod Trail. The

planned road and access improvements should be coordinated with the level of development in each Station Area. The timing of road improvements such as the interchanges of Macleod Trail at Anderson Road, Southland Drive and Heritage Drive will be reviewed and revised as part of the Transportation Improvement Priority Study program which considers the capital road improvement programs on a ten year basis.

4.2.14 As development within the South Corridor proceeds on a project by project basis, the Transportation Department will review each project in terms of its impact on the road system. If warranted, it will advise the Approving Authority with regard to the improvements considered necessary to maintain the traffic flow at a reasonable level of service.

PARKING

4.2.15 Based on the experience of other cities with rail transit systems, it is anticipated that development in the Station Areas may require less parking than the city-wide parking standards would allow. The parking policy frame-work sets forth the types of land uses and conditions for which parking relaxation from the Calgary Land Use By-law standards may be considered for developments located within the 400 metre radius of a Station. The Planning and Transportation Departments will review each project on a site specific basis, taking account of the anticipated travel and car ownership characteristics, in order to determine the allowable parking relaxation.

IMPLEMENTATION

4.2.16 The implementation of these and other policies developed through the L.R.T. South Corridor Land Use Study will involve the preparation of statutory plans as well as technical review and programming by the various civic departments. The major implementation techniques will include:

(i) Preparation of Area Redevelopment Plans: Within the L.R.T. South Corridor Land Use Study Area, it is recommended that Area Redevelopment Plans be prepared for the Erlton Special Study Area and for the 42 Avenue and Chinook Station Areas. The Area Redevelopment Plan process will provide detailed planning at the community level, allowing opportunities for public input regarding issues which could not be adequately addressed by the corridor study. Specific policies, guidelines and implementation techniques can be determined at the stage of plan preparation. In addition, the imposition of a redevelopment levy for open space aquisition may be explored.

(ii) Land Use Designations Under the Calgary Land Use By-law: In order to implement the recommended land use and development guidelines in the Study Area, it is necessary to redesignate or amend those existing land use designations which are in conflict with the study proposals. Appropriate land use districts, particularly for the land parcels located within the Primary Impact Area of a station, are critical for the total success of the L.R.T. system. The Planning Department will initiate land use amendment procedures for the land parcels generally located within the 400-metre radius of the station in accordance with the proposals of the Station Area Plans. Appropriate land use districts from the Calgary Land Use By-law should be utilized whenever possible to respond to the requirements

of a particular land parcel in the Station Area. However, if available districts are found to be insufficient to meet the needs of the Station Area policies, the "Direct Control District" or new land use districts should be used as a means of controlling the use of land adjacent to transit station areas.

(iii) Development Review: As development proceeds on a project by project basis, it will be reviewed by the appropriate civic departments in relation to the capacity of existing or planned infrastructure, as well as in relation to its quality and conformity with the Study's objectives.

(iv) Financing Improvements in Station Areas: Projects to improve the general environment around and accessibility to the Station Areas should be undertaken. The projected cost of park development and open space acquisition, the construction of grade-separated pedestrian crossings and roadway improvements should be included in the annual capital budget reviews of the responsible civic departments.

(v) Taking Advantage of Development Opportunities on City-owned Land in Station Areas: Transit authorities have promoted and taken advantage of development opportunities around station sites in many cities, including Montreal, Toronto and Washington D.C. These cities have established policies to "capture" a portion of the financial, environmental and social benefits from the transit system through various management strategies. Lands which are exclusively transportation-oriented may also be utilized for the benefit of both the public and private sectors. The policy to promote and maximize development opportunities on city-owned land in transit station areas should be supported, and the establishment of an inter-departmental committee to be co-ordinated by the Land Department should be explored as a means to implement this policy.

IMPACT MANAGEMENT AND MONITORING PROGRAMS

4.2.17 The L.R.T. system has great potential to act as a force to restructure urban form and function in Calgary. A program will be developed to determine how and to what extent the South Leg of the L.R.T. system has influenced the transportation system and the spatial arrangement of population and land use within the city. The environmental effects of the L.R.T. system and its related development on adjacent areas will also be included in this program. The impact monitoring and management strategies will be formulated and oriented towards "problem solving", so that appropriate action can be undertaken quickly and effectively to deal with specific impacts on local services or community facilities. The findings will also be evaluated with regard to the implications for planning and transportation policies generally in Calgary. The findings could be used by decision-makers to establish future policies to enhance the benefits or reduce the negative effects of future expansion of the L.R.T. system.

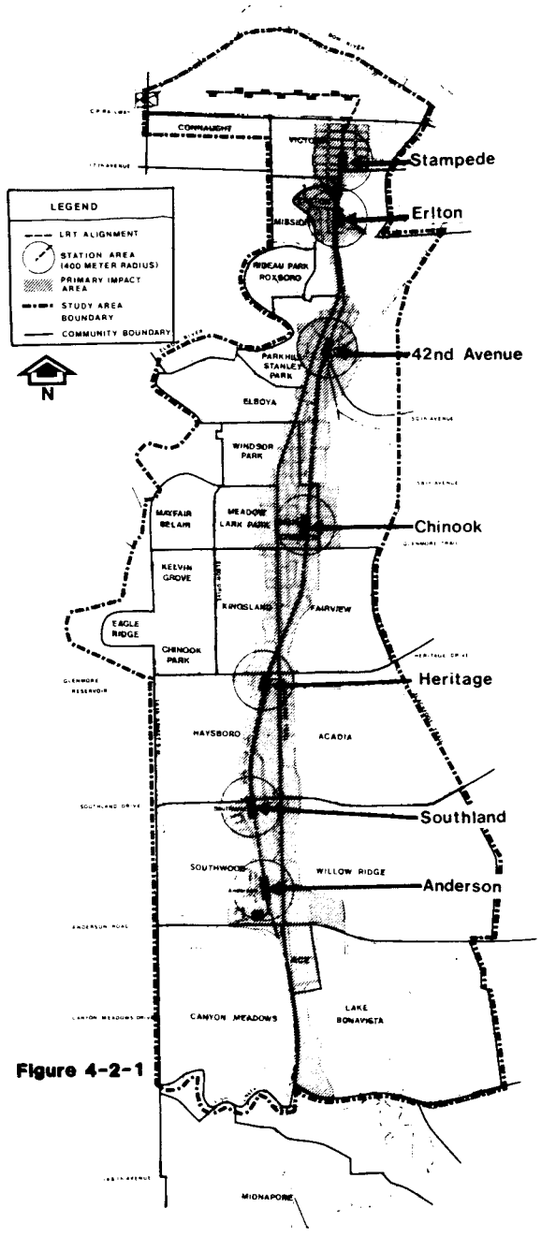


Figure 4-2-1

Boundary of Study Area For Community Impact Analysis

K. Summary of Decisions by Approving Authorities

The "L.R.T. South Corridor Land Use Study" and the related Calgary General Municipal Plan amendment (By-law 12P80) were approved as amended by City Council on July 29, 1980. The Study has been revised to reflect Council's decisions, however, this Appendix has been included to draw together the relevant decisions of the Approving Authorities. On June 4, 1980, the Calgary Planning Commission considered the Study and By-law and made recommendations to City Council. City Council held a Statutory Public Hearing regarding the Study and Calgary General Municipal Plan amendment on June 24, 1980. As a result of the concerns raised through submissions and presentations of the members of the public as well as the Council Members, the Planning Department prepared a report regarding the concerns. This report and the Commissioners' Report E.80-22 of July 22, 1980 were considered by City Council at the meeting of July 29, 1980 and Council approved both the Study and the By-law as amended.

1. CALGARY PLANNING COMMISSION DECISION OF JUNE 4, 1980

A. The Commission RECOMMENDED APPROVAL to City Council of the recommendations contained within the L.R.T. South Corridor Land Use Study and recommended that the Study be used as a guide for the planning period up to 1991 in accordance with the Planning Recommendation subject to the following amendments:

"That all isometrics be amended to show the north directional figure and the street/avenue names, subsequent to Council approval of the report."

(Moved by L. Ward - Carried)

Page 46[1]

"That Map 6 be amended to indicate the open space setback of 30 m (100 feet) along the Elbow River."

(Moved by F. McHenry - Carried)

1. All page references in this Appendix related to the revised report "L.R.T. South Corridor Land Use Study", published in May 1980.

Page 58

"That Map 10 be amended to show the entire open space stretch along the Elbow River escarpment to be obtained on redevelopment or on an opportunity basis."

(Moved by F. McHenry - Carried)

Page 59 - Erlton Station, Addition of the Following Directional Note:

"That the Planning Department take the following into consideration in the preparation of the Area Redevelopment Plan:

Where redevelopment takes place adjacent to the Elbow River, the acquisition of setback land for public use should be encouraged by the following means:

a. comprehensive development which would enable application of density transfers and bonuses with height limitations of 10 or 12 m adjacent to the river with increased height allowances to the east;

b. closure and transfer of public road rights-of-way in exchange for river setback land."

(Moved by F. McHenry - Carried)

That a statement be added to the report to read as follows:

"Approval of this plan in no way approves the concept of redevelopment levies."[2]

(Moved by M.T. Moriarity - Carried)
(Opposed by F. McHenry, G. Steber, Jr., and G. Husband)

2. As indicated in the following Section 3, City Council did not concur in this statement but rather adopted the Study recommendation that redevelopment levies be investigated as an implementation technique through the Area Redevelopment Plan processes.

Page 35 - Note to be added to Figure 17

"That the ratio 1:10 be a maximum to be available only where the open space is readily accessible and visible from grade and/or the +15 system.

(Moved by F. McHenry - Carried)

RECOMMENDATIONS FROM THE COMMISSION

"That whereas the concerns that the Commission has regarding the impact on suburban stations and access thereto from the surrounding communities could be alleviated by extension of the L.R.T. into Midnapore, the Commission recommends that City Council instruct the Administration to prepare, at an early date, a report on the feasibility, costs and the land use implications of an extension of the L.R.T. line to Midnapore."

(Moved by P. Donnelly - Carried)
(G. Husband - Absent)

RECOMMENDATION FROM THE COMMISSION

"That Calgary Planning Commission requests that City Council concur in the Commission's policy that all Development Applications submitted for land in all Primary Impact Areas of the Heritage, Southland and Anderson Stations include information which shows how the Development proposed:[3]

a. contributes to the effectiveness of the L.R.T. System;

b. what features the development will contain that will attract people to the L.R.T. Station Areas; and

c. how it is designed such that it will not adversely affect the accessibility of the adjacent communities to the L.R.T."

(Moved by P. Donnelly - Carried)
(G. Husband - Absent)

B. The Commission RECOMMENDED APPROVAL to City Council of the amendments to the Calgary General Municipal Plan resulting from the L.R.T. South Corridor Land Use Study as contained in By-law 12P80 in accordance with the Planning Recommendation subject to the deletion of the first sentence from "Circulation Systems" 4.2.11 that reads:

"As a primary route into the City from the south, Macleod Trail is already operating at near capacity level, and traffic on Macleod Trail will increase in future with the projected growth of population in the City."

(MAIN MOTION MOVED BY G. STEBER, JR. - CARRIED)
(C.G. Smith and G. Husband - Absent)

3. City Council concurred in this policy and extended it to the Primary Impact Areas of all L.R.T. Stations (July 29, 1980).

2. PUBLIC HEARING OF COUNCIL, JUNE 24, 1980

Presentations by:

Mr. D. Thom, IBI Group on behalf of Co-Operators Joint Venture Group
Mrs. I. Bruzga, on behalf of 33 Victoria Park East property owners
Mr. A. Barrett, Barrett and Johnson
Mr. L. Parke, on behalf of United Management
Mr. M. Rogers, 202 - 29th Avenue S.E.
Mr. R. Lajeunesse, Lake Bonavista Community Association
Mrs. M. King, Parkhill/Stanley Park Community Association
Mr. J. E. L. Phillippe, representing the A.C.E. Community
Mr. A. Bell, H.U.D.A.C.
Mr. T. Symmonds, Pendergast, Peter and Symmonds, Architects of behalf of T & A Holdings
Mr. J. MacDonald, Southwood Community Action Group
Mr. G. Dixon
Mr. P. Hailey
Mr. J. Salmon
Mr. D. C. Hicks, Damas and Smith Ltd.
Mr. M. Poole
Mr. E. Patton, Erlton Community Association
Mr. B. Campbell
Mr. N. Wuotila

Submissions by:

33 Property Owners in Victoria Park East
Mr. E. A. Patton, Erlton Community Association
Mr. M. Poole, Erlton Concerned Taxpayers Group
Mr. R. B. Klippenstein, Genstar and Mr. W. Richards
Mrs. M. King, Parkhill/Stanley Park Community Association
Southwood Community Action Group
Mr. D. C. Hicks, Damas and Smith Ltd.
Mr. J. E. L. Phillippe, representing A.C.E. community
Mr. M. J. Webb, Walsh Young on behalf of Comfort Investments Co.

3. COUNCIL MEETING, JULY 29, 1980

SUMMARY OF AMENDMENTS APPROVED[4]

A-1 Environmental Quality of New Residential Development and the Impact of New Development on Existing Communities

Part II, Chapter B, Section 6.b on "Urban Design Considerations" (pages 20 - 21) be amended as follows:

Particular attention should be paid to residential environmental quality in the L.R.T. Station Areas through the development review process. The environmental quality of adjacent residential communities should also be ensured by the review of the impact from new development in the Station Areas.

A-2 Transit-Related Land Use Planning Experience From Other Cities

Part III include a bibliography of literature surveyed in the course of the Study as an additional appendix.

A-3 Implementation: Development on City-Owned Sites

Part II, Chapter E, Section 8 (pages 137 - 138) be amended to read as follows:

c. that H.U.D.A.C. and U.D.I. be consulted in conjunction with the planning process for future development on City-owned sites in the Station Areas.

4. The section numbers refer to the headings used in the Commissioners' Report E.80-22 of July 22, 1980.

A-4 Erlton Station Area Plan: Transportation Impacts

Part II, Chapter D.2, Section c.iii (page 64) be amended as follows:

The sound attenuation along Macleod Trail and necessary road closures on avenues intersecting Macleod Trail be a part of the planning exercise and that these concerns be addressed in the preparation of the Area Redevelopment Plan.

A-5 42nd Avenue Station Area: Recommended Area Redevelopment Plan

Part II, Chapter E, Section 3 (page 134) be amended as follows:

The A.R.P. processes for Parkhill/Stanley Park and the 42nd Avenue Station Area should proceed simultaneously as two Plans due to their related nature.

B-1 Station Area Development Policies: Parking Standards

Part II, Chapter C, Section 2.a.ii (page 31) be amended as follows:

That the Transportation Department be directed to undertake a study of the parking requirements and traffic generation characteristics of major mixed use development in transit corridors to determine their optimum parking requirements.

B-2 Environmental Impact: Contingency Plan Related to the Transport of Hazardous Materials on the CPR Line

Part II, Chapter F, Figure 36 (pages 142 - 144) be amended with the addition of:

Under "Department" - Fire Department

Under "Factor" - Co-ordination of Services in Event of Rail Disaster involving Hazardous Materials

Under "Management Strategy" - That the responsible Civic Departments re-evaluate the existing emergency plans for the L.R.T. System and new development along rail lines within the City, including the South Corridor.

B-3 Transportation Impact of L.R.T. System - Southwood Community Concerns

Part II, Chapter F, Figure 36 (pages 142 - 144) be amended to include the recommendations of the Commissioners' Report to Operations and Development Committee regarding traffic and parking control measures in Southwood which were approved by City Council on June 23, 1980.

B-4 Transportation Impacts of the L.R.T. System Extension to Midnapore

City Council concurred with the Calgary Planning Commission recommendation:

That whereas the concerns that the Commission has regarding the impact on the suburban stations and access thereto from the surrounding communities could be alleviated by the extension of the L.R.T. into Midnapore, the Commission recommends that City Council instruct the Administration to prepare, at an early date, a report on the feasibility, costs and land use implications of an extension of the L.R.T. line to Midnapore.

The functional study should also address the need, location and timing of the extension.

B-5 Transportation Operation: Access to Anderson Park 'n' Ride Site

Part II, Chapter D.7, Section c.i (page 126) be amended as follows:

To ensure good access to the Anderson Park 'n' Ride site and to avoid congestion on Macleod Trail, a right-of-way should be protected on Site 3 for the purpose of a future road connection to Willow Park Drive.

B-6 Stampede Station Area: Land Use Recommendations on Sites 1 and 4

Part II, Chapter D.1, Section b.i (page 43) be amended as follows:

To accommodate comprehensive developments in the area, minor flexibility in height, scale and form could be considered within the Calgary Land Use By-law designation and could be fine-tuned with special guidelines in the Connaught/West Victoria Park Area Redevelopment Plan. However, if substantially different land use composition and density are proposed, the onus would be on the developer to apply for a land use amendment, illustrating the individual merits of the project and its features which overcome certain constraints to the satisfaction of the Transportation and Planning Departments and/or City Council.

B-7 Erlton Station Area Plan: Effect of 26th Avenue Connector

Part II, Chapter D.2, Section b.iii (page 64) be amended as follows:

In conformity with Council's previous decision regarding the 26th Avenue Connector and its approval of the Olympic Coliseum in the Erlton area, it is recommended that the functional study of the 26th Avenue Connector in conjunction with the South Downtown Bypass (as directed by Council on December 3, 1979) show the need and alignment alternatives as well as addressing the concerns raised regarding environmental and community impacts in consultation with the adjacent community. Concurrently, it is recommended that the Erlton A.R.P. process be undertaken and consider the roadway design alternatives and their impacts, including the determination of the facility's elevation (below-grade, at-grade, or above-grade). The major recreational facilities and their impacts on the community should also be addressed during the A.R.P. process in consultation with the affected community.

B-8 Erlton Station Area Plan: Lindsay Park and the Coliseum

Part II, Chapter D.2, Section b.v (pages 57 and 61) be amended to add Council's decision regarding the Aquatic Centre and the Mini-Fieldhouse and Recommendation 2.

Recommendation 2 from Appendix "B" of the Commissioners' Report to Council regarding the Sports Facilities Advisory Committee Report states:

"It is recommended that the City Parks/Recreation Department develop a comprehensive park plan for Lindsay Park. It is further emphasized that district and regional open space functions of Lindsay Park in the context of Inner City and Downtown need to be recognized. Therefore, it is further recommended that future development of Lindsay Park must properly relate to the needs of the adjoining communities, roads, transit and river banks system. It is recommended that the feasibility of construction of an Aquatic Centre and a Mini-Fieldhouse on Lindsay Park be considered under the following guidelines:

a. Planning for any major recreational facilities must consider possible environmental impacts including the adverse effects of traffic and parking on the surrounding areas, particularly Erlton. In consideration of this impact, access to Lindsay Park shall be directly from the Macleod Trail couplet rather than from the Erlton area.

b. Building orientation should provide the appropriate setback zone and river edge which allows continuous pedestrian movements and which positively uses the river bank area.

c. Building orientation and scale should minimize any adverse impacts of these sports facilities on the abutting residential district of Erlton.

d. Direct pedestrian access and connections from the surrounding residential districts of Mission, Beltline, West Victoria and Erlton should be facilitated (for example, old CNR bridge as a pedestrian bridge, pedestrian bridge over Elbow River close to the Holy Cross Hospital).

e. Adequate measures should be taken to reduce the impact of parking and car access in the residential district of Erlton.

f. Dependency upon L.R.T. and pedestrian movement should be maximized with complete physical integration with potential development on the west side of Macleod Trail and elevated pedestrian connection directly to the L.R.T. Station."

Also it should be added that:

In the design of Lindsay Park and through the A.R.P. process, it shall be important to protect the integrity of the Lindsay Park area as a park. The Erlton Community should be invited to participate in the planning of Lindsay Park, particularly the park's open space component.

The amount of parking for the Lindsay Park facilities should be minimized and considered carefully in the design and A.R.P. processes due to its potential environmental and community impacts as well as its economic cost. As in other Station Areas, parking relaxations could be warranted due to the facilites close location to the L.R.T. Station and the bus transit system as well as the availability of existing parking on the Stampede Grounds.

A further amendment was added: That the amount of parking associated with the sports facilities as well as consideration that the existing CNR berm be retained be investigated in the design of Lindsay Park.

b. Part II, Chapter D.2, Section b.iv (page 57), references to Site 7 be deleted and Part II, Chapter D.2, Section b.v (pages 57 and 61) be amended with the addition of Council's decisions regarding the Olympic Coliseum located on the Erlton L.R.T. Station site, including the guidelines known as Recommendation 1, as follows:

The construction of the Olympic Coliseum on the Erlton L.R.T. Station site, as recommended by the Sports Facilities Advisory Committee, has been approved by Council. For the purposes of accommodating the future Coliseum, the L.R.T. Station and potential development and facilities around the Station, it is recommended that the existing land use designation of Site 7 as I-2: General Light Industrial District, be changed to reflect Council's special development guidelines, based on the approved recommendations of the Commissioners' Report on the Sports Facilities Advisory Committee Report (May 27, 1980) including Recommendation 1 of Appendix B as follows:

i. Building orientation should provide the appropriate setback zone and river edge which allows continuous pedestrian movement and which positively uses the river edge of the Coliseum.

ii. Direct pedestrian connections between the Coliseum, the L.R.T. Station, development on the west side of Macleod Trail and the facilities in Lindsay Park should be emphasized and adhered to.

iii. Adequate measures should be taken to reduce the impact of parking of cars and car access in the residential district of Erlton.

iv. Dependency upon L.R.T. and pedestrian movement should be maximized with complete physical integration of L.R.T. and Coliseum entrances and exits.

v. Parking, if any, should be structured to economize on land.

vi. Parking relaxations are warranted due to L.R.T. and the availability of existing parking in Stampede Grounds.

vii. Consideration should be given to an alternative alignment for the 26th Avenue Connector with an at-grade connection directly to tie into the signalled intersection of Macleod Trail and 25th Avenue S.E., thereby improving pedestrian movement and releasing land for a better flexibility in siting the Coliseum as well as ancillary transit facilities and service vehicles.

c. Part II, Chapter D.2, Section b.v (pages 57 and 61) include the statement that:

During the A.R.P. process, potential negative impacts of the future major recreational facilities in the area, including the Coliseum on the Erlton L.R.T. Station site and the Aquatic Centre and Mini-Fieldhouse in Lindsay Park, should be considered and measures formulated and implemented to enhance the positive features as well as minimize the potential adverse impacts.

B-9 Erlton Station Area Plan: Land Use Policy Recommendations for Area North of 25th Avenue S.E.

Part II, Chapter D.2, Section b.iii - High Density Mixed Use (page 57) be amended as follows:

To accommodate comprehensive development in Sites 5 and 6, flexibility in height, scale and form can be considered and fine-tuned with special guidelines in the Erlton Area Redevelopment Plan. However, if substantially different land use composition and density are proposed, the developer could apply for a land use amendment which could be reviewed on its individual merits.

B-10 42nd Avenue Station Area Plan: Parking Ceiling for Commercial Development

Part II, Chapter D.3, Section b.i (pages 70 - 71) be amended as follows:

That a ceiling on parking provision by commercial uses be studied jointly by the Planning and Transportation Departments in conjunction with the recommended A.R.P. process.

B-11 Suburban Station Area Plans: Special Study for the Year Following the L.R.T. System Opening

City Council concurred with C.P.C.'s general policy, extending its application to the Primary Impact Areas of all the L.R.T. Stations, as follows:

That all Development Applications submitted for land in all Primary Impact Areas of all the Stations include information which shows how the Development proposed:

a. contributes to the effectiveness of the L.R.T. System;

b. what features the development will contain that will attract people to the L.R.T. Station Areas; and

c. how it is designed such that it will not adversely affect the accessibility of the adjacent communities to the L.R.T.

C-4 Land Use Recommendations Regarding Mixed Use Development

All relevant sections of Part II, Chapter D: Station Area Plans be amended as follows:

The recommended minimum proportion of residential use as a mandatory requirement of mixed use development be made flexible to accommodate individual projects.

C-7 Transportation Operations: Transit Service Changes

That Alderman Blough's motion re Dial-a-Bus be tabled to Administration for a report to come back to Council in conjunction with the report on feeder bus systems to the L.R.T. stations.

C-14 Southland Station Area Plan: Safety of Park Space East of Sacramento Drive

That this item be referred to the Standing Policy Committee on Operations and Development to be considered when the report requested from the Transportation Department in OP80-56 re crosswalk or pedestrian corridor on Sacramento Drive comes forward.

C-15 Southland Station Area Plan: Designation of Park Space East of Sacramento Drive

Part II, Chapter D.6, Figure 32 and Map 26 (pages 113 and 112) and any other references to the vacant City-owned parcel east of Sacramento Drive be amended as follows:

That this site be designated as park space.

C-17 Anderson Station Area Plan: Recommended Future Land Use For Mobile Home Park Sites (Site 8)

Part II, Chapter D.7, Figure 34 (page 125) and Section b.ii (page 123) regarding Site 8, the Mobile Home Parks, be amended as follows:

That the Administration be instructed to initiate the land use redesignation to RMH for Site 8 in conjunction with the other land use redesignations in the L.R.T. South Corridor, and further, that the Land Use Study reference to and recommendation of specific density and height limitations on future redevelopment of Site 8 in the Anderson Station Area Plan (The Amy Lorne-Chateau Estates Mobile Home Parks) be deleted, and "in the order of 22 p.p.a." be substituted therefor.

On July 29, 1980, City Council approved the Study as amended above, the C.P.C. recommendations (except as noted above) as well as giving three readings and approval to By-law 12P80, the amendment to the Calgary General Municipal Plan, as amended above.

L. Bibliography

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A M E N D M E N T

On February 22, 1982 City Council approved the following recommendation: to the following L.R.T. South Corridor Land Use Plan:

RECOMMENDATION:

1. That redesignation of selected key land parcels within the 400 m radius of the South Corridor L.R.T. Station Areas as identified in the L.R.T. South Corridor Land Use Study be undertaken by the land owners at their own initiative rather than by the City as originally recommended.

2. That the Planning Department be instructed to prepare Public Area Improvement Plans for the 42nd Avenue and Chinook Station Areas instead of Area Redevelopment Plans.

3. That the L.R.T. South Corridor Land Use Study and the Calgary General Municipal Plan be amended to reflect these policies.