



**NORTHEAST CRESCENT HEIGHTS
AREA STRUCTURE PLAN**

BEING A BY-LAW OF THE CITY OF MEDICINE HAT to amend By-law No. 1989 being the "City of Medicine Hat Land Use By-law"; and to adopt the N.E.C.H. Area Structure Plan;

WHEREAS Section 62 of the Planning Act, 1977, enables a Municipal Council to pass by-laws adopting area structure plans to control the subsequent development and subdivision of lands within areas of the municipality;

AND WHEREAS the General Municipal Plan By-law of the City of Medicine Hat designates the N.E.C.H. lands as an area suitable for an area structure plan;

AND WHEREAS it is deemed desirable to implement the development and subdivision of the N.E.C.H. lands;

AND WHEREAS it is deemed necessary to amend By-law No. 1989, being the City of Medicine Hat Land Use By-law by reclassifying the N.E.C.H. area lands from agricultural to such residential classifications as are indicated in the N.E.C.H. Area Structure Plan;

NOW THEREFORE THE MUNICIPAL COUNCIL OF THE CITY OF MEDICINE HAT, ENACTS AS FOLLOWS:

1. This by-law may be cited as the N.E.C.H. Area Structure Plan.
2. The document attached to and forming a part of this by-law entitled the N.E.C.H. Area Structure Plan is hereby adopted as an area structure plan pursuant to Section 62 of the Planning Act, 1977.
3. By-law No. 1989 is hereby amended by including the N.E.C.H. Area lands in those various residential classifications as are listed on page 21 (Map) of the N.E.C.H. Area Structure Plan.
4. This by-law shall take effect as of the date of the final reading hereof.

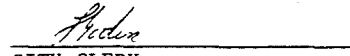
READ A FIRST TIME in Open Council this 8th day of September, A.D., 1981.


MAYOR


CITY CLERK

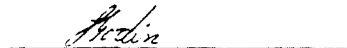
READ A SECOND TIME in Open Council this 15th day of
October, A.D., 1981.


MAYOR


CITY CLERK

READ A THIRD TIME AND FINALLY PASSED in Open Council this
15th day of October, A.D., 1981.


MAYOR


CITY CLERK

NORTHEAST CRESCENT HEIGHTS AREA STRUCTURE PLAN

BY-LAW NO. 2174

ADOPTED BY CITY COUNCIL - 15 OCTOBER 1981

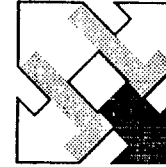


Prepared for the
CITY OF MEDICINE HAT

By
MUNICIPAL DIVISION
SOUTHEAST ALBERTA REGIONAL PLANNING COMMISSION
AUGUST 1981

S. E. Alta. R.P.C.

**CHINOOK PLACE, 623 - FOURTH STREET S.E.
(third floor) MEDICINE HAT, ALBERTA,
T1A 0L1 Ph. 527-3326**



Mayor Ted Grimm
City of Medicine Hat
City Hall
Medicine Hat, Alberta
T1A 0C7

Dear Mr. Mayor:

On behalf of the staff of this Commission it gives me much pleasure in enclosing a copy of the North East Crescent Heights Area Structure Plan for formal consideration by the City Council.

A number of studies are required to supplement the General Municipal Plan and this is one of them. A good and harmonious working relationship has been established with City officials, the Land Development Committee and others. I am confident that it provides a sound basis for guiding the growth of North East Crescent Heights, within the confines of the proposed buffer park and the old S. and T. property.

Yours sincerely

R.W. Balston, AA Dipl. ARIBA, CIP
Director

southeast alberta regional planning commission.

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FORWARD AND ACKNOWLEDGEMENTS

The enclosed Northeast Crescent Heights Area Structure Plan has been prepared in accordance with the requirements of the General Municipal Plan for the City of Medicine Hat. In accordance with the stated principle of orderly and economical development, the main purpose of this Area Structure Plan is to formulate a subdivision plan for the City's 150 acre residential land located in the northeast quadrant of the City.

In completing this plan, the assistance of the technical staff of the School Boards and City departments is greatly appreciated. Similarly, the valuable input and direction provided by the City Directors and the numerous City committees involved in the adoption process is acknowledged with thanks.

With some input from the Municipal Division staff, the following members have been responsible for the preparation of this technical document.

J. DOUGLAS FLEMING, SENIOR PLANNER
IAN BAMFORD, PLANNING TECHNICIAN

It is hoped that this document will provide a sound subdivision plan appropriately integrated with the existing residential development and the proposed Buffer Park and S and T Ranches Area Structure Plan in the area.

A.S. Atwal, MCIP
Assistant Director (Municipal)

INTRODUCTION

Over the past decade, the City of Medicine Hat has been experiencing a significant growth, which in the past few years has been averaging about 3 to 4% per year. This rate is expected to continue for the foreseeable future. To accommodate this growth, the City of Medicine Hat in conjunction with private developers, is continually having to plan and develop new areas.

To assist in achieving this end, in 1979, the City adopted its General Municipal Plan. The purpose of this Plan was to establish areas for future growth and development and to determine the sequence or stages in which these developments would occur. In other words, the General Municipal Plan was prepared to ensure economical and orderly planning for the City of Medicine Hat.

As the name General Plan implies, the directions, policies and strategies laid out in such documents are often broad or general statements that require further elaboration. As a result, the Medicine Hat General Municipal Plan established the requirement that all areas designated for development shall be subject to an Area Structure Plan.

PURPOSE

Area Structure Plans are legally recognized planning documents as set out in Section 62 of the Planning Act, 1977. The purpose of these documents are to provide a more detailed planning analysis for specific areas than can be achieved within a General Municipal Plan. As such, the Area Structure Plan is intended to serve as a guideline for the subdivision designs and resulting developments. To achieve this, an Area Structure Plan must consider: land uses, development stages, density, major transportation routes and major utility location, as well as any other matter that are unique to the area which may influence development.

The area structure plan is also a tool that can be used to achieve the goals and objectives that are established in the General Municipal Plan.

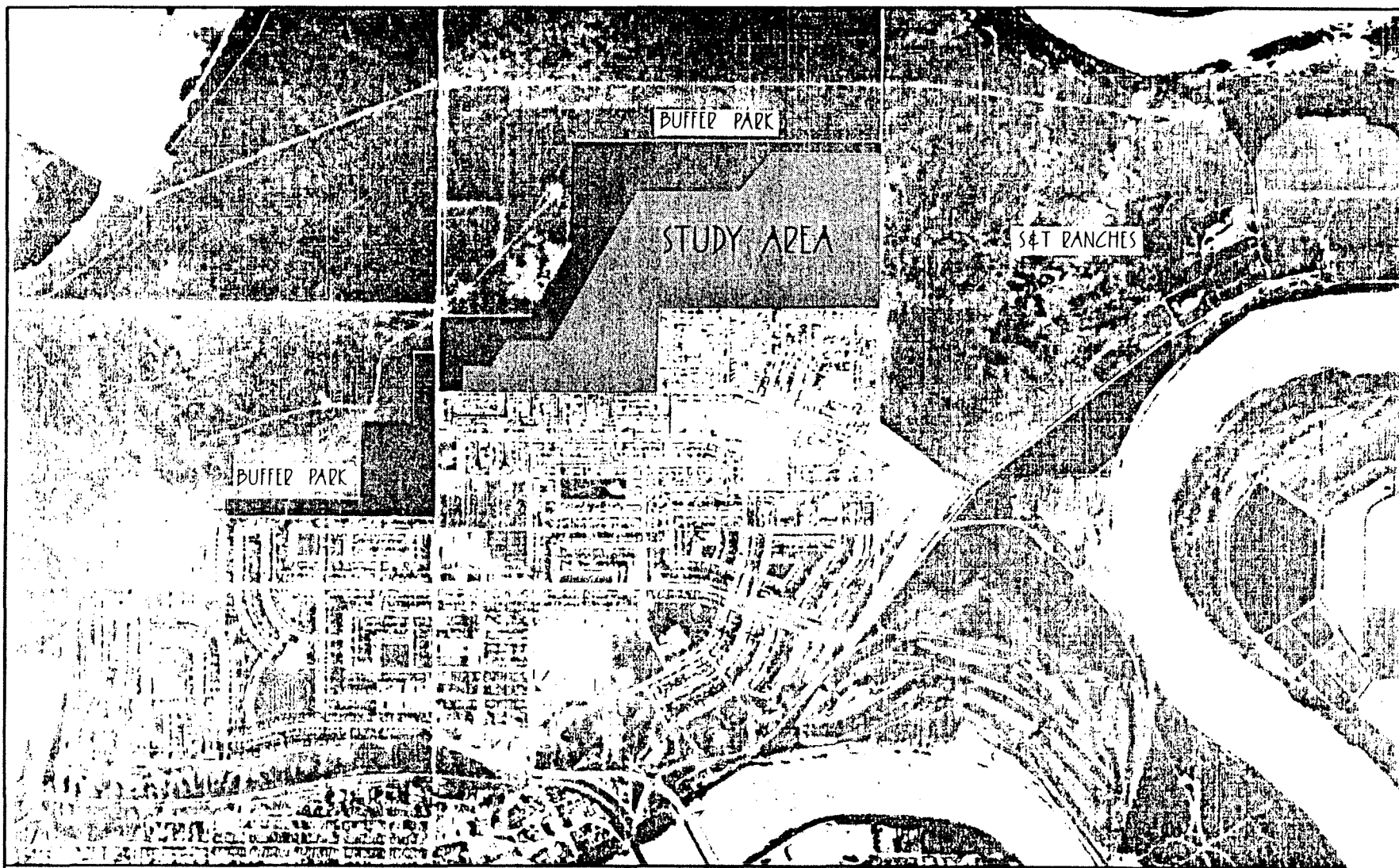
STUDY AREA

The land involved in the Northeast Crescent Heights Area Structure Plan (N.E.C.H.) is an area containing 60.82 hectares (150.29 acres) which lies north of the existing Northeast Crescent Heights development, between Division and 11th Avenue N.E. and south of the Western Co-operative Fertilizer Ltd. Buffer Area as shown on Registered Plan 801 0575. The study area is also flanked on the east by the S & T Ranches property which was recently annexed to the City and for which an Area Structure Plan is being reviewed.

HISTORICAL BACKGROUND

The history of this area goes back to 1974, at which time the City of Medicine Hat and Western Co-operative Fertilizers Ltd. began negotiations to sell the City 150 acres of residential land in exchange for the development of an 80 acre buffer park that would be leased to the City on a 99 year lease. In 1979 after much negotiations, the final agreement was signed and the City purchased 60.82 hectares of land from W.C.F. Ltd. and they also agreed to develop and maintain the 31.509 hectare (77.86 acre) buffer park. The idea behind this agreement is that the City of Medicine Hat will use the profits from the land sales to develop and maintain the park, and that no revenues from this area be placed into the City's General Revenues.





N.E.C.H Area Structure Plan

STUDY AREA



MAP 1



SITE ANALYSIS

TOPOGRAPHY

The site of the N.E.C.H. Area Structure Plan is a relatively flat upland bench overlooking the South Saskatchewan River Valley which slopes gently from its highest point located approximately in the centre of the site, to the west and to the northeast. To the east of this site are the upland of the S & T Ranches which lie above an escarpment that drops down to the lowlands adjoining the river. The site elevation range from a high of 2,338 feet to a low of 2,318 feet above sea level, and with the exception of a few minor depressions, the site does not undulate to any great extent.

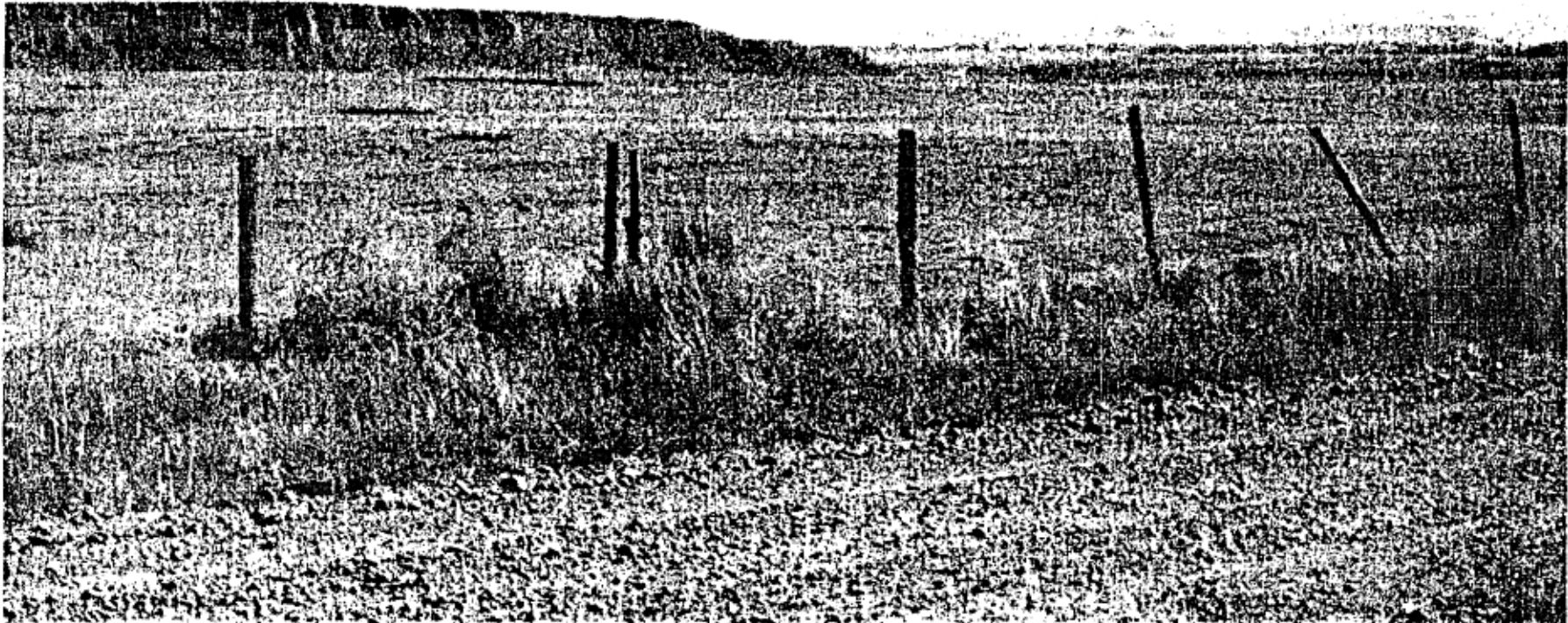
The soils in this area are predominantly glacial sand deposits with some bands of clay. The extent of these clay desposits are not known, however, from experiences encountered during the construction of the existing portion of Crescent Heights, indicate there are such bands which form barriers or dams thus trapping the ground water. It is thought that this perched water table is the supply source of small pond located in the Buffer park area, and there is some concern that when the underground utilities such as water and sewer are installed this water will be released and allowed to flow along these trenches and thus the pond will lose its water supply and this unique feature will disappear.

VEGETATION

The area to the north and east of the City of Medicine Hat is a rather dry and sparsely vegetated area that is primarily used for pasture land, with some dryland farming occurring. The study area is no exception. The sandy soil and limited moisture in this area create a landscape that resembles a semi-arid climate, supporting only short native prairie grasses, Russian Thistles (tumble weeds) and several small varieties of cactus. The area is barren of any trees with the exception of a few small bushes found around the small pond in the Buffer Park. The only other trees in the vicinity are located outside the Study Area on the lowlands adjacent to the River.

LAND USE

As just described, the site is a vacant prairie land that has been used to graze a few head of horses. This land prior to being sold to the City of Medicine Hat formed part of Western Co-operative Fertilizer Ltd.'s "safety buffer" that separated residential development from the Industrial Plants. The site also lies north of the existing residential developments of Crescent Heights and west of the unoccupied pasture lands of the S & T Ranch property, which will be developed at the same time as this area.



DEVELOPMENT PLAN

GROWTH STRATEGY

An overall growth strategy for the City was worked out in the Medicine Hat General Municipal Plan. The General Municipal Plan identifies a number of areas that are slated for future urban development and also the sequence which these developments are to follow. In addition, the plan provides a range of policies and objectives that are to serve as guidelines to future urban growth.

The area involved in this Structure Plan and a portion of the S & T Ranches are two of the areas identified as Stage I developments in the General Municipal Plan. The following Residential Development Staging table from the Plan lists the various Development Areas, the stage or stages they will be developed in and the estimated population that they will generate.

From this table, it is evident that N.E.C.H. is scheduled to be developed in Stage I with an estimated population of 2,250 persons.

STRUCTURE PLAN

Based on the Growth Strategy of the Medicine Hat General Municipal Plan, this N.E.C.H. Area Structure Plan is to provide a detailed plan for this area and to ensure that its planning and development will be compatible with the surrounding areas, both existing and proposed. This plan will also strive to promote the policies and objectives set out in the General Municipal Plan and help to create an attractive urban environment, with a range of residential choices.

LAND USE

The general land use for this area as set out in the General Municipal Plan is residential. This classification is a rather broad one and includes such uses as local commercial, institution and parks and schools, etc. Therefore, it is the task of this Structure Plan to establish more detailed uses for this site and to determine their location.

To ensure compatibility with the adjacent Crescent Heights development, the area will be developed as low density residential. The goal is to maintain an overall gross population density of 15 persons per acre. This will mean that some multi-family development will occur. In keeping with the objectives of the General Municipal Plan and past City policies, multi-family developments will be incorporated at various spots throughout the site.

Other land uses in this area will be restricted to uses that are compatible and complementary to residential development and ones necessary to service this area. With this in mind, the following details were developed.

TRANSPORTATION

To provide adequate road connections to this area, a collector road system was designed. A main controller road will run north then east from 7th Avenue to connect with S & T Ranches at 11th Avenue. A second collector will intersect at a "T" intersection and run westerly and then southerly through the centre of the site and connect with 20th Street. 20th Street will be widened and continued through to Division Avenue.

Local residential roads will then loop to the collect roads, thus keeping through traffic on residential roads to a minimum. It should be noted that the location of this collector system is such that all areas are within ¼ mile of the system and this will enable the road system to function as a route for the Transit system.

Access to the remainder of the City, primarily the City centre would be along either of two routes. The first being south to 20th Street, then east to Parkview Drive and south to Maple Avenue Bridge. The alternative route being west along 20th, then south along Division Avenue to the Maple Avenue Bridge. In either case, the Maple Avenue Bridge is the common river crossing, and it is for that reason that during the General Municipal Plan preparation concern was raised over the capacity of this bridge and its limiting factor on development in the northeast sector of the City.

Residential Development - Staging

Residential Area	Map Identification Number	Ownership-Private Or City	Acres	Population (15 Persons Per Gross Acre)	Residential Area	Map Identification Number	Ownership-Private Or City	Acres	Population (15 Persons Per Gross Acre)
STAGE I									
Southridge	1A	City	128	1,920	S & T Ranches	3C	Private	225	3,375
East Glen	1B	City	85	1,275	Southview	3D	Private	100	1,500
Northeast					Southland	3E	Private	114	1,710
Crescent Heights	1C	City	150	2,250	Burnside	3F	Private	200	3,000
		CITY TOTAL	363	5,445	Dunmore				
S & T Ranches	1D	Private	175	2,625	Interchange Area	3G	Private	50	750
Southview	1E	Private	34	510	Suncrest Mobile				
Ross Glen	1F	Private	75	1,125	Home Area	3H	Private	50	750
					Quarter Section				
					West of Suncrest	3I	Private	50	750
		PRIVATE TOTAL	284	4,260			PRIVATE TOTAL	789	11,835
STAGE II					STAGE IV				
Southridge	2A	City	243	3,645	Burnside Hill	4A	City	301	4,515
Medicine Hat					Kolstar Area	4B	City	480	7,200
Golf Course	2B	City	75	1,125			CITY TOTAL	781	11,715
		CITY TOTAL	318	4,770					
S & T Ranches	2C	Private	100	1,500	S & T Ranches	4C	Private	100	1,500
Southview	2D	Private	100	1,500	Southland	4D	Private	330	4,950
Southland	2E	Private	50	750	Burnside	4E	Private	266	3,990
Burnside	2F	Private	100	1,500	Dunmore				
Dunmore					Interchange Area	4F	Private	100	1,500
Interchange Area	2G	Private	50	750	Suncrest Mobile				
		PRIVATE TOTAL	400	6,000	Home Area	4G	Private	100	1,500
					Quarter Section				
					West of Suncrest	4H	Private	100	1,500
							PRIVATE TOTAL	996	14,940
STAGE III									
Southridge	3A	City	228	3,420					
Burnside Hill (including 54 acres below the Hill)	3B	City	209	3,135					
		CITY TOTAL	437	6,555					
Urban Reserve								ACRES	
City								—	
Private								1,065	

Scheffer Consultants were retained to assess this situation and their findings were; at the end of Stage II of development as shown in the General Municipal Plan, the traffic volumes would exceed the capacity of the Maple Avenue Bridge. The consultants recommended that to alleviate some of this pressure a 24th Street arterial connecting the Northeast area with the Trans Canada Highway should be constructed. At such time as this road becomes necessary it is proposed that this arterial run north of the study area adjacent to the Buffer Park. Access to this road would therefore be possible along Division Avenue, 11th Avenue, or through the S & T Ranches development.

UTILITIES — SANITARY SEWER

The nature of this site and the lie of the land are such that this area would be able to be serviced by a gravity flow sanitary sewer system. At the time the adjacent area was developed, the system was designed to accommodate future development. Therefore, the study area will feed into the existing system.

The present sanitary sewer system in Crescent Heights has an estimated capacity to serve the equivalent of 12,000 persons. However, when existing development is considered, the excess capacity is only sufficient to accommodate an additional 3,000 persons.

The Growth Strategy for the City envisions that a total of 325 acres of land will be developed in this sector by the end of Stage I. This translates to a population equivalent of 4,875 persons, which will result in a short fall in the system of close to 2,000 persons. To accommodate this and other stages of development, the system will require upgrading. The proposal is to construct a new line from the Parkview Drive and 20th Street intersection to a new river crossing which will connect with the sewage lagoon. This proposed upgrading will reduce the load on the present lift station and provide adequate capacity to allow full development in the Northeast Sector.

WATER

Water services for the Study area will also be extended from the existing Crescent Heights system. The City is presently upgrading the main supply system for this area. In the past year, a new 20" line was installed north of 14th Street up to Division Avenue. This line is only part of the overall plan that will provide a looped service and reduce the present water supply problems experienced in the area.

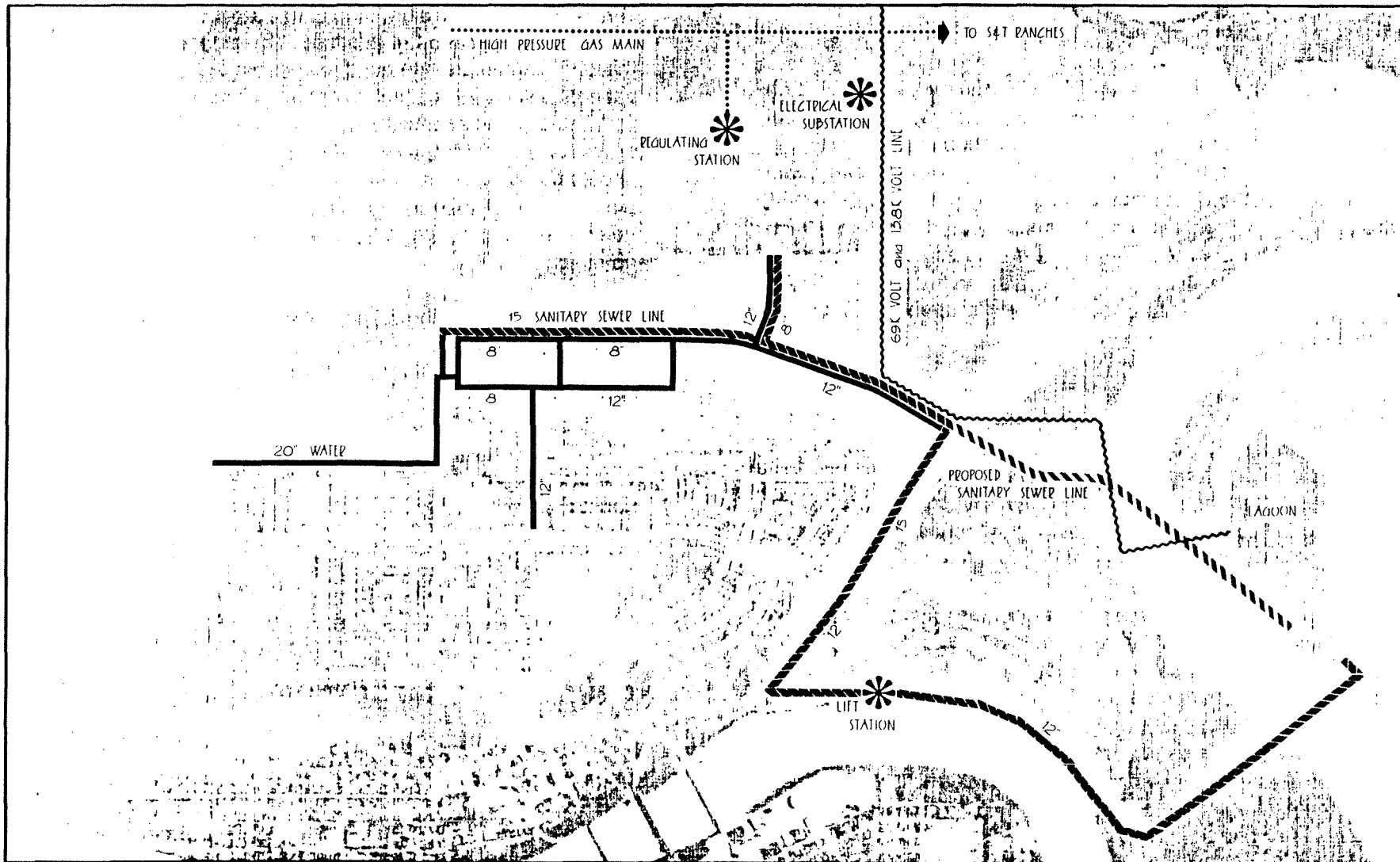
Future construction will include a new supply line under the river from the Treatment Plant, booster station upgrading and extension of the existing lines. The City has hired the engineering firm of Underwood McLellan Ltd., to analyze the overall water situation for this quadrant of the City and come up with designs for a system that will be adequate to service all present and future development.

ELECTRIC

To service both the City's area and the S & T Ranches, the Electrical Department are proposing to install an electrical substation in the northeast corner of this site and run a major power line along the west side of 11th Avenue. The ultimate plan for this system is to run 2 distribution lines on a single pole line, a 69 kilovolt line which will connect to a power grid that eventually ring the entire City, the other, a 13.8 kilovolt line that will serve as a distribution feeder supplying both the N.E.C.H. site and the S & T property.

GAS

The gas supply of this area will come from a high pressure line that will be constructed north of the Buffer Park and run in an east-west direction. A feeder line will be brought south through the Buffer to a regulator station that will be located approximately in the centre of the area and from which the low pressure feeder services will run to the residential areas.



N.E.C.H Area Structure Plan

UTILITIES



MAP 2

DESIGN CONCEPT

The overall design concept for this study area is shown on Map 3. This plan attempts to bring together many objectives set out in the General Municipal Plan. As mentioned previously, the primary land use for this area will be residential development, with the majority of the residential development being single family, with a number of duplexes and fourplexes located at different locations throughout the area. There are proposed several areas of multi-family, which will be located adjacent to the park lands and school. This will assist to ensure adequate open space for the more dense developments.

The plan shows the collector system bisecting the site from 20th Street to 7th Avenue and looping from 7th Avenue to 11th Avenue. Residential roads then loop off of this system, so that main volumes of through traffic will be restricted to the collector roads rather than the residential streets. The collector roads are also designed so that there are not long stretches of road that will become race ways for traffic passing through the area.

The park situation in this area is perhaps unique in that there is an 80 acre buffer area that will be developed as a park. With this development, it could be argued that the required 10% public reserve in the residential area could be reduced or eliminated. However, because the title to the Buffer area will remain with Western Co-operative Fertilizer Ltd., and will be leased to the City and because the area is to be used for buffer, it is felt that the reserve dedication must be provided. Therefore, 15 acres of public reserve for parks and schools is required.

The concept therefore shows the major portion of public reserve as a joint park and school site, located adjacent to the Buffer area. This reserve was located in this area to provide access and linkage to the Buffer, as well as allowing development of both areas to be integrated, thus providing a larger area overall, which can then be used for a wider range of passive and active recreation uses.

The school being located on a combined site in this area should also promote a better joint use arrangement, as well as reducing the duplication of facilities. The location of the school on this site, should provide good access via the collector roads, and yet not be situated in a high traffic area. The school site will be approximately 6 acres and the public reserve will be approximately 7 acres for a total of approximately 13 acres total. The school site should be sufficient size to accommodate the elementary school planned for the area, however should the need ever arise, additional facilities might be able to locate there because of the adjoining sites.

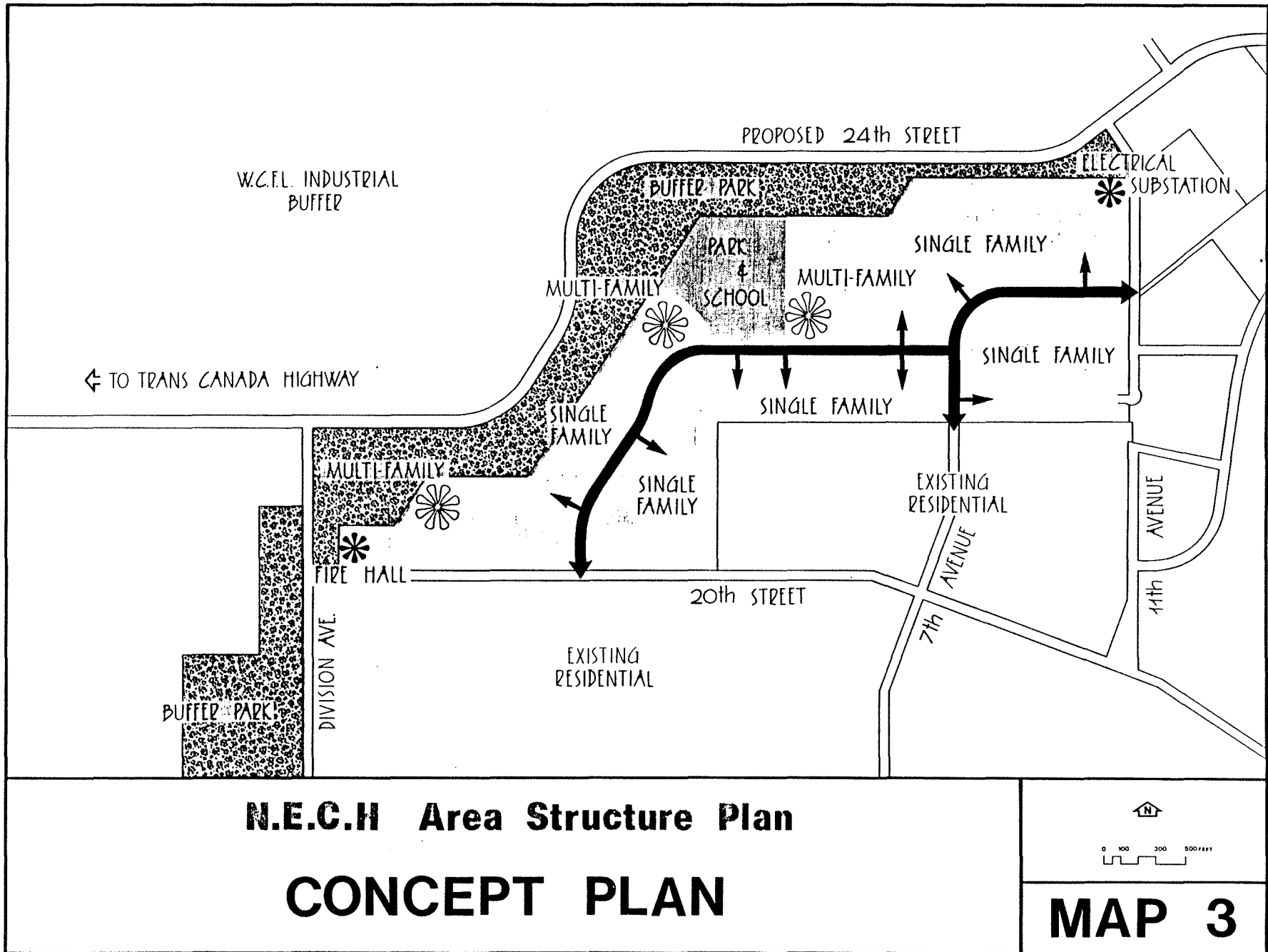
In addition to the large park-school site, several smaller neighbourhood parks or tot lots are planned for the residential areas to serve the residents in the immediate area.

Also shown on the concept plan, are electrical and a fire hall substation. Both of these facilities are required to improve the services to this area as well as the entire north sector. The electrical substation will be located at the northeast corner of the site so that a main power line can be extended to the west to complete a power grid that will eventually ring the entire city, on the other hand, the fire hall substation will be located adjacent to 20th Avenue so that it will have good access to the major roads and thus enable this site to serve the whole Crescent Heights area.

HOUSING MIX AND DENSITY

In keeping with the General Municipal Plan, the overall density of this area should be no more than 15 persons per acre.

To achieve this overall density, the housing mix is an important fact that will have direct implication on the subdivision design. The concept for this area is to provide a range of housing alternatives and thus support a wider range of life-styles. This objective is in keeping with City policies as outlined in the General Municipal Plan. As previously stated, these housing alternatives will be located in various areas of the site rather than in one concentrated spot. This will then keep the density of the Study Area relatively uniform and hopefully achieve a more integral community.



The exact mixture of lots will be determined in the final subdivision stages, however, input into this matter will be obtained from a number of groups and City Departments such as: Land Development, Land Sales, Community Services, Hudac and others.

The latest census data on the housing mix in the City of Medicine Hat shows that the following mix by percentage exists:

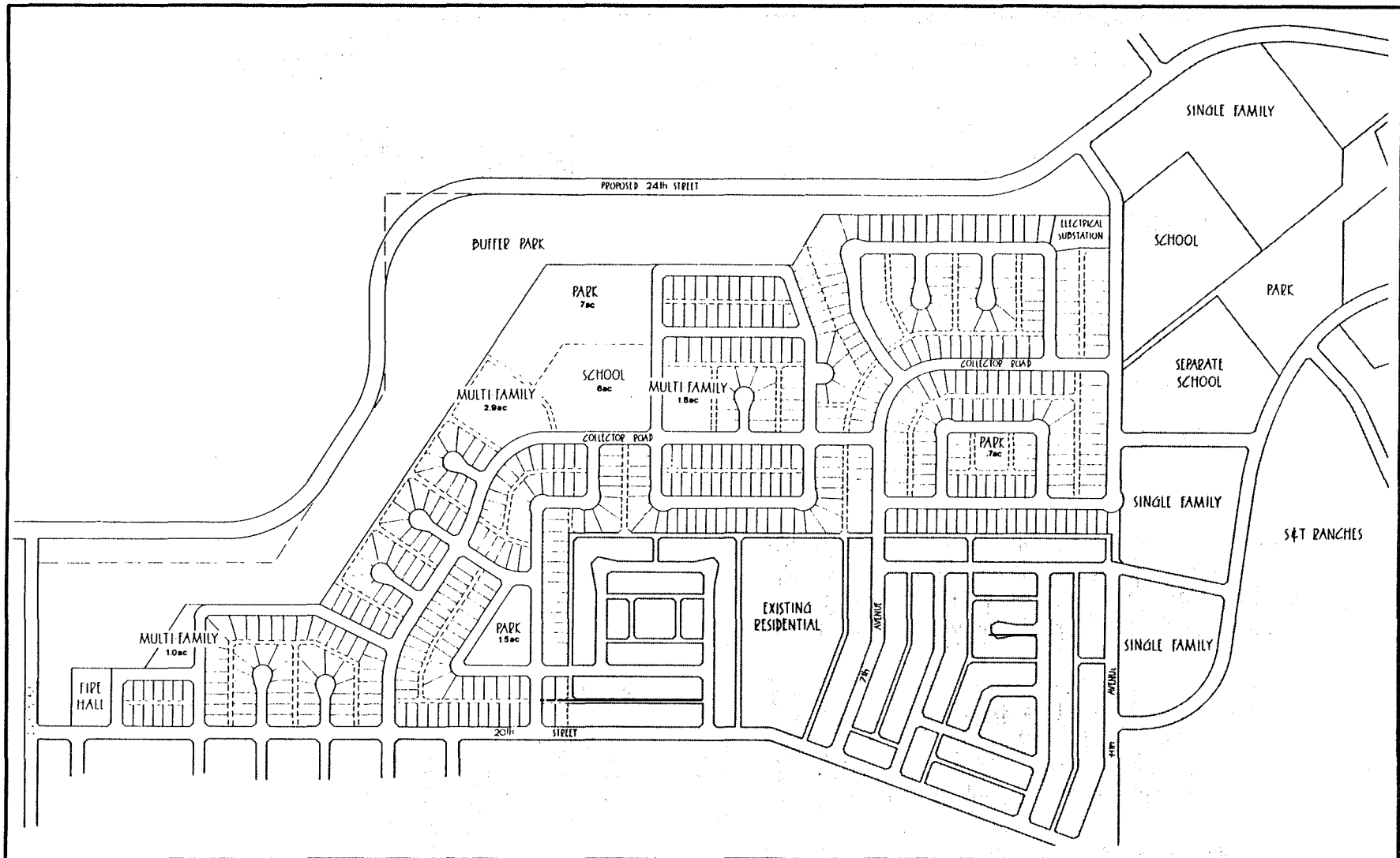
Single family dwellings	70%
Duplexes and 4 plexes	5%
Apartments	20%
Others	5%

This structure plan recommends that a similar mixture be more or less adhered to.

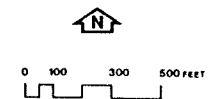
SUBDIVISION DESIGN

The attached design is the proposed subdivision plan for this N.E.C.H. area. This design includes a number of land uses as discussed in the Area Structure Plan. The following is a statistical land use breakdown.

	LAND USE	AREA	TOTAL	% OF TOTAL
Residential	- Single Family & Duplexes	93.5 Acres	99.1 Acres	65.9
	-Multi Family	5.6 Acres		
Parks & Open Space	- School	6.0 Acres	15.3 Acres	10.2
	- Public Reserve	7.0 Acres		
	- Tot Lots	2.3 Acres		
Roads & Utilities	-Electrical Substation	1.0 Acres	35.9 Acres	23.9
	- Fire Hall Substation	1.3 Acres		
	- Roads	25.9 Acres		
	-Lanes	7.7 Acres		
TOTAL			150.3 Acres	100.0



N.E.C.H Area Structure Plan **SUBDIVISION DESIGN**



MAP 4

In the design, the residential land use is the largest component, generating the following housing mix and population.

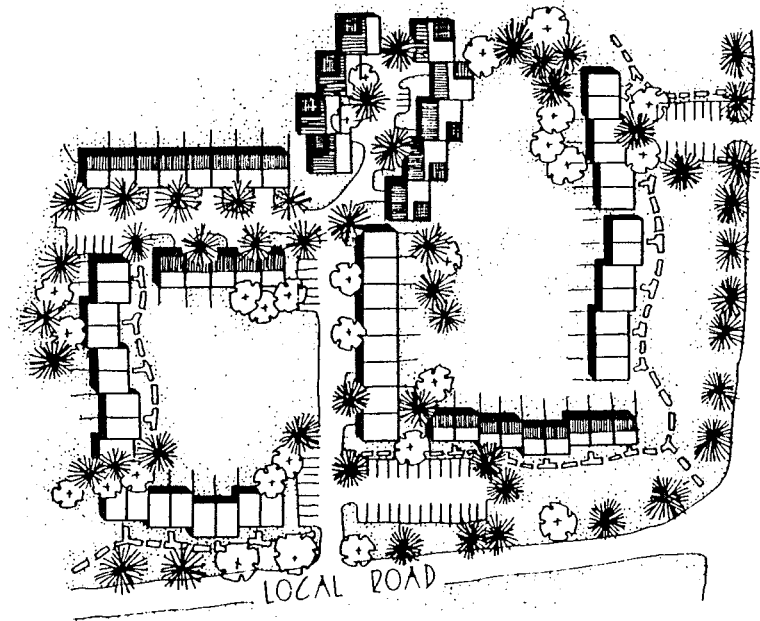
DWELLING TYPES	NO. OF UNITS	PERSON/ UNIT	POPULATION
Single Family	525 units x	3.0	1,575 persons
Duplexes	28 units x	2.75	77 persons
Fourplexes	20 units x	2.75	55 persons
Multi-family	150 units x	2.75	412 persons
TOTAL			2,119 persons

The final number and sizes of lots may be adjusted at the subdivision application stage, however, it is not expected to vary significantly. The single family lots should be varied in size from 45 to 60 feet in width to provide an adequate range for various house styles and types.

The multi-family development, is expected to be primarily apartments. The number of units proposed is based on 3 to 4 storey apartments at 30 units per acre, which is in line with present apartment developments located throughout the City.

DEVELOPMENT CONTROLS

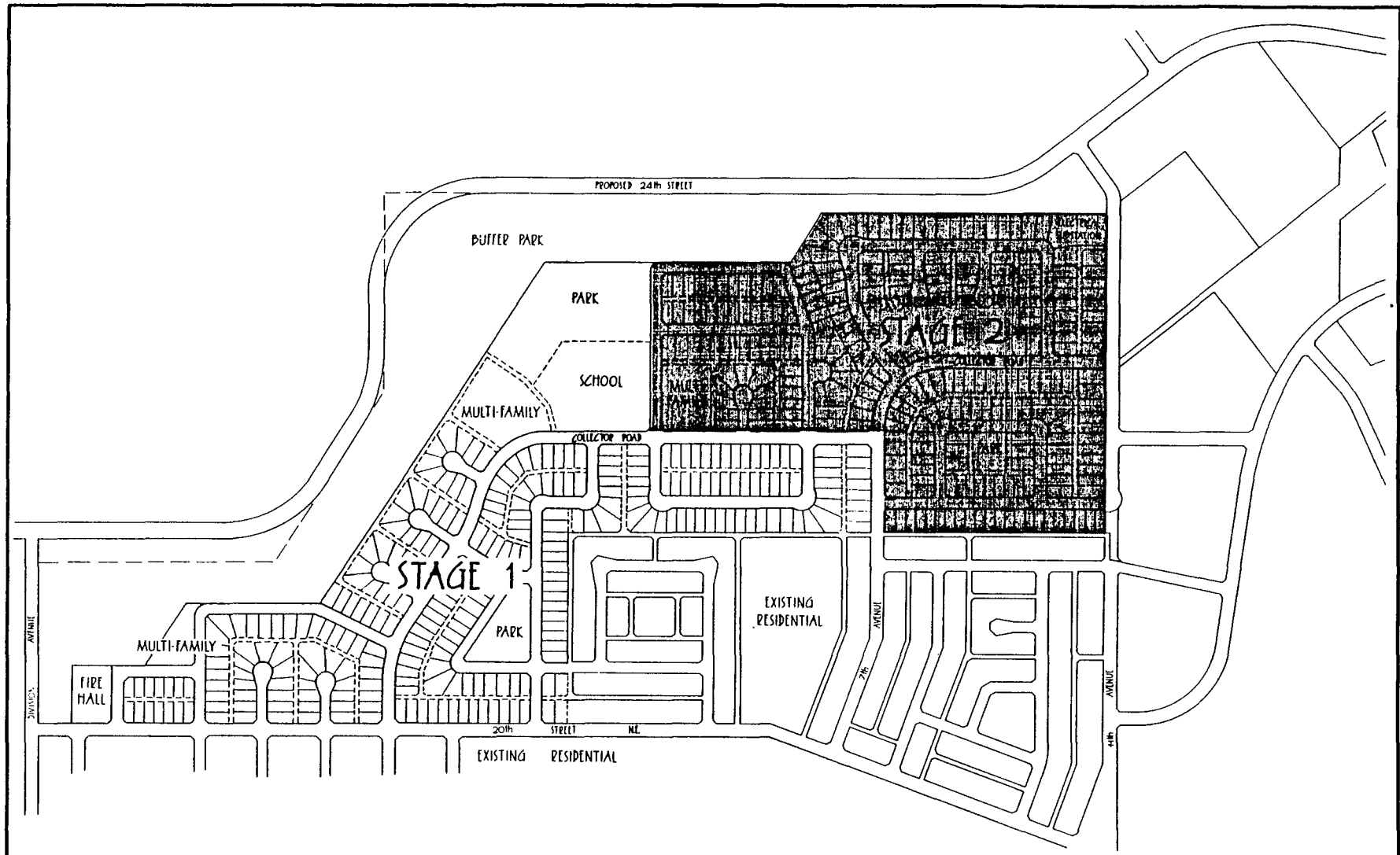
To ensure that this N.E.C.H. area develops in an attractive manner, it is recommended that in addition to the provisions of the Land Use By-law, architectural controls be established. Such controls could ensure that the multi-family developments would be an integrated part of the neighbourhood and thus reduce the conflicts with the surrounding land uses.



STAGING

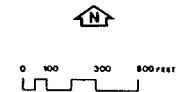
The N.E.C.H. area is shown in the General Municipal Plan as being within Stage I development. Therefore the entire area can be developed at this time. However, to assist the servicing of this area it is "recommended" that the area be developed in two stages.

The first stage as shown on the map, will begin at 20th Street and work north to include the park and school sites and then include the lots south of the collector road up to 7th Avenue. The second phase will then include the remainder of the site which ties to the northeast. This will allow the servicing of this area to be carried out over several years and yet provide sufficient lots for sale over a number of years.



N.E.C.H Area Structure Plan

STAGING









MAP 5

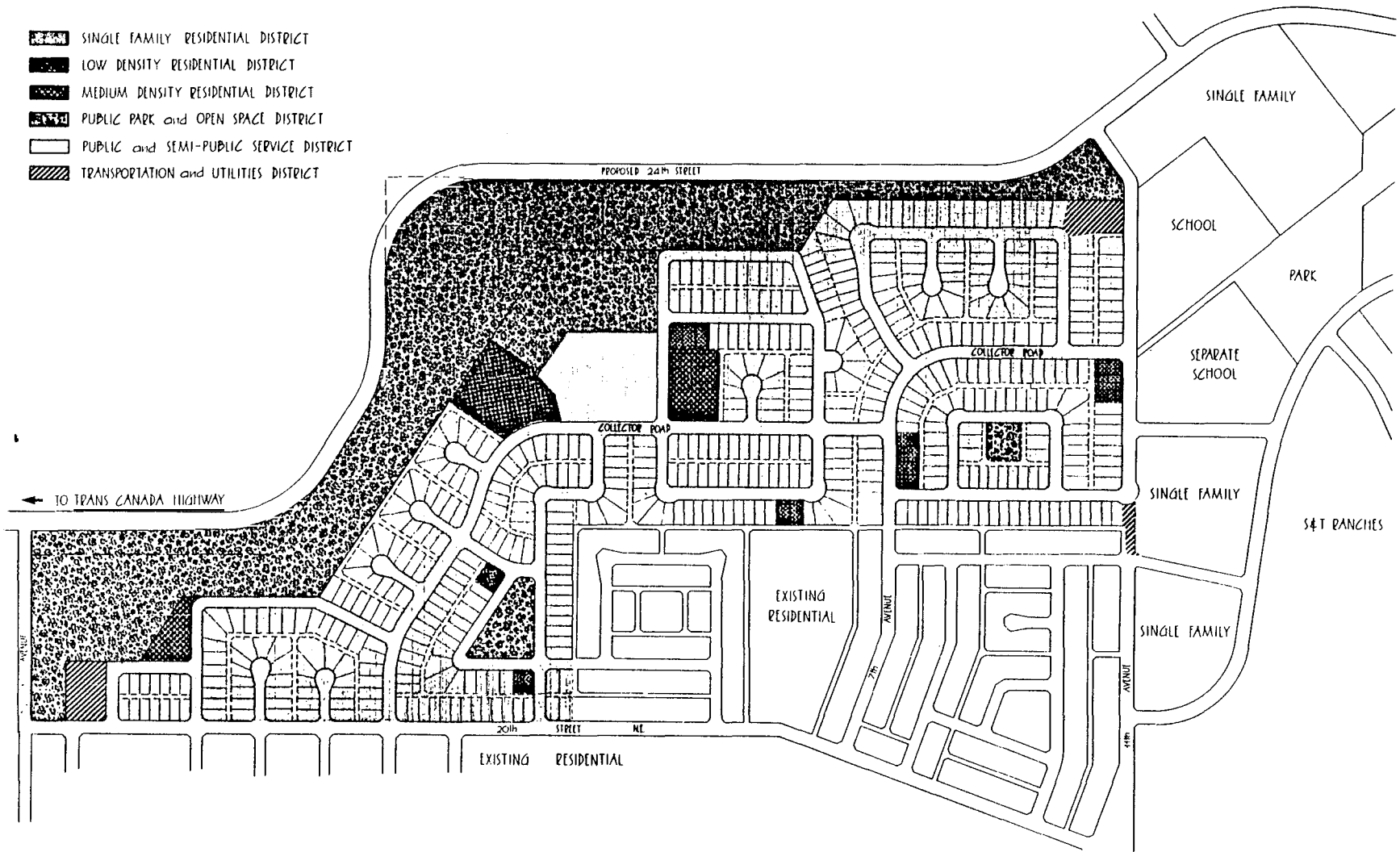
IMPLEMENTATION

The Planning Act, 1977 requires that an Area Structure Plan be adopted by by-law, and that the Council in dealing with this proposed by-law adopting the Area Structure Plan must hold at least one public hearing prior to giving second and third readings. Once the Plan is adopted, then all subdivision and development plans are required to conform to this Structure Plan.

This Plan has been circulated to the many agencies and organizations as set out under the City's Area Structure Plan review process, and after reviewing their comments, revisions have been made. It is now intended for final review by the Municipal Planning Commission and the Land Development Committee prior to presentation to Council.

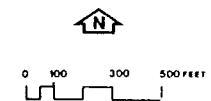


-  SINGLE FAMILY RESIDENTIAL DISTRICT
-  LOW DENSITY RESIDENTIAL DISTRICT
-  MEDIUM DENSITY RESIDENTIAL DISTRICT
-  PUBLIC PARK and OPEN SPACE DISTRICT
-  PUBLIC and SEMI-PUBLIC SERVICE DISTRICT
-  TRANSPORTATION and UTILITIES DISTRICT



H.E.C.H. Area Structure Plan

LAND USE CLASSIFICATION



MAP 6