MacEwan Neighbourhood Area Structure Plan

Office Consolidation August 2003

Prepared by:

Planning and Policy Services Branch
Planning and Development Department
City of Edmonton

Bylaw 12860 (as amended) was adopted by Council in August 2001. In August 2003, this document was consolidated by virtue of the incorporation of the following bylaws which were amendments to the original Bylaw 12860.

Bylaw 12860 Approved August 21, 2001
Bylaw 12992 Approved March 12, 2002
Bylaw 13118 Approved July 8, 2002
Bylaw 13201 Approved November 6, 2002
Bylaw 13425 Approved June 24, 2003

Editor's Note:

This is an office consolidation edition of the MacEwan Neighbourhood Area Structure Plan, Bylaw 12860, as approved by City Council in August 2001. This edition contains all subsequent amendments and additions to Bylaw 12860. For the sake of clarity, new maps and a standardized format were utilized in this Plan. All names of City departments have been standardized to reflect their present titles. Private owner's names have been removed in accordance with the Freedom of Information and Protection of Privacy Act. Furthermore, all reasonable attempts were made to accurately reflect the original Bylaws. All text changes are noted in the right margin and are italicized where applicable.

This office consolidation is intended for convenience only. In case of uncertainty, the reader is advised to consult the original Bylaws, available at the office of the City Clerk.

City of Edmonton
Planning and Development Department

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Section 1
Introduction

1.1 PURPOSE

The purpose of this Neighbourhood Area Structure Plan is to describe the land use framework and development objectives for the MacEwan, consisting of 111.356 hectares and one of 14 neighbourhoods within the plan area governed by the Heritage Valley Servicing Concept Design Brief (see Figure 1.0 - Location Plan). Heritage Valley is a 2,118 hectare area of land immediately south of the Transportation and Utilities Corridor (TUC) and west of Calgary Trail within south Edmonton.

The Neighbourhood Area Structure Plan (NASP) will implement the general land use framework set out in the Heritage Valley Servicing Concept Design Brief (SCDB) by more specifically identifying the type, size and location of various land uses, density and pattern of development, location of roadways, conceptual servicing schemes and sequence of development.

The MacEwan NASP has been prepared on behalf *three private land* owners and/or beneficiary owners of 51.36 hectares of land within the NASP.

Amended by Editor

1.2 Definition of Plan Area

The MacEwan Neighbourhood Area Structure Plan is comprised of a number of parcels within the south half of Section 30-51-24-4 plus a few other adjoining parcels. The total area for the NASP is 111.356 hectares. As shown on Figure 2.0 - Context Plan, the NASP is defined by the following boundaries:

- **Northern Boundary** - Transportation & Utilities Corridor/Ring Road Corridor
- **Western Boundary** - Transportation & Utilities Corridor / Approximately 127 Street
- **Eastern Boundary** - 111 Street
- **Southern Boundary** - Ellerslie Road (9 Avenue S.W.)

The MacEwan NASP constitutes a logical planning unit with respect to identifiable plan boundaries and servicing considerations and is consistent with the area identified in the Heritage Valley

SCDB for preparation of the NASP.

1.3 Land Ownership

Approximately 96% of the land in the MacEwan NASP is privately owned. The remaining land is held *by the Province of Alberta.* Current land ownership is shown on Figure 3.0 - Land Ownership. A listing of the legal parcels is provided on Table 1 – Land Ownership.

Amended by Editor

TABLE 1*

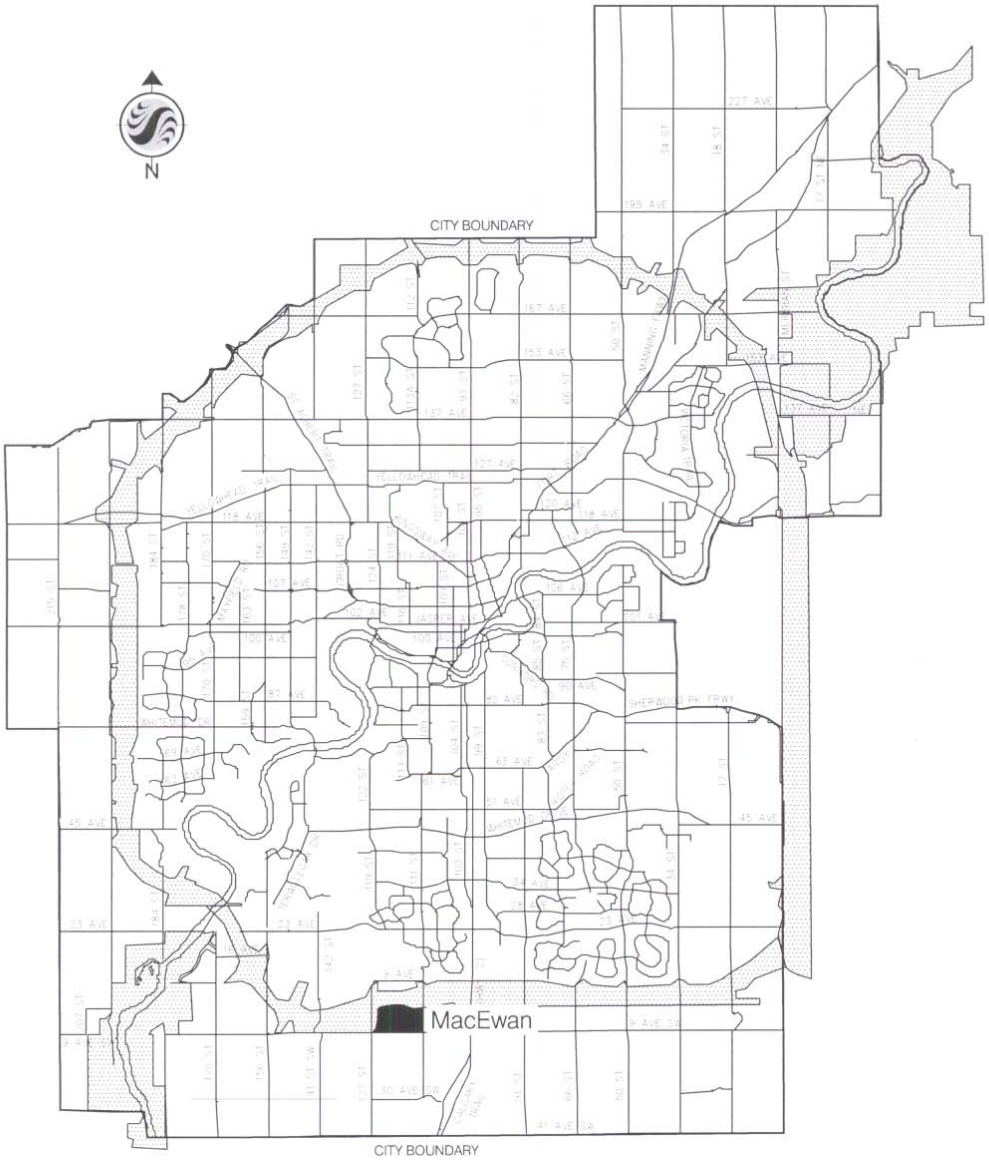
LAND OWNERSHIP

MacEwan NASP

	Titled Owner	**Legal Description**	**Area (ha) in NASP**
1	Province of Alberta	NW ¼ 30-51-24-4	1.17
2	Province of Alberta	NE ¼ 30-51-24-4	1.07
3	Private Owner	Plan 8921432 Blk.1	0.50
4	Private Owner	Plan 1548 MC East Half of Lot B.	8.12
5	Private Owner (s)	Plan 1548 MC West Half of Lot B	8.12
6	Private Owner	Plan 1548 MC Lot A	15.68
7	Private Owner	Plan 1548 MC Lot C	15.966
8	Private Owner	Plan 1548 MC Lot D	11.60
9	Private Owner (s)	SW ¼ 30-51-24-4	32.3
10	Private Owner (s)	Plan 3746 MC Block A	15
11	Province of Alberta	NE ¼ 30-51-24-4	0.23
12	Province of Alberta	NE ¼ 30-51-24-4	1.60
		TOTAL AREA	**111.356**

*** Amended by Editor**

Figure 1* Location Plan



Stantec

Client/Project
MACEWAN
NEIGHBOURHOOD AREA STRUCTURE PLAN

Figure No.
1.0

Title
Location Plan

June, 2001
16106620

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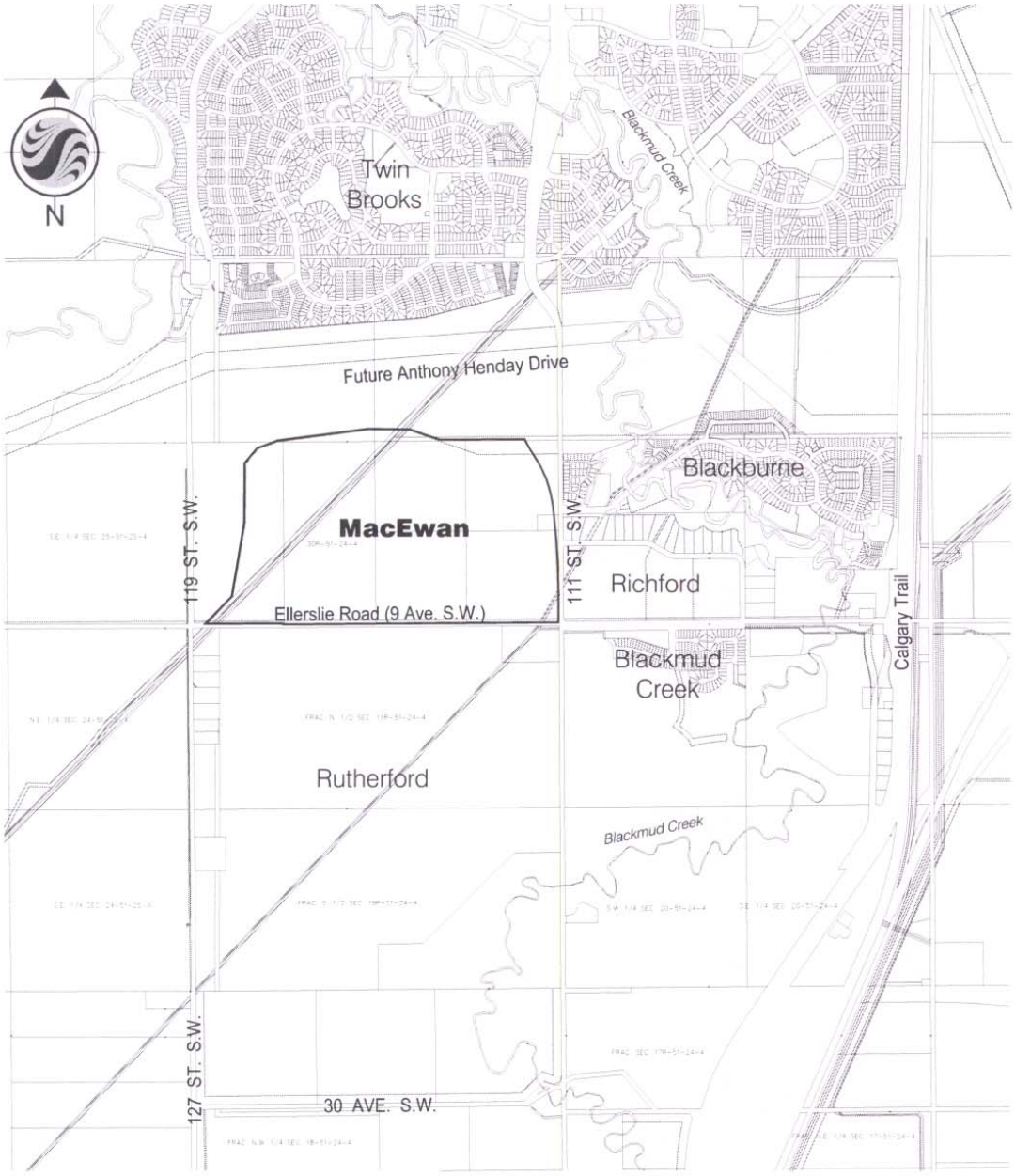
***Bylaw 12860 August 21, 2001**

Figure 2* Context Plan



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E2 \WEDGWOOD\161090701\DRAWINGS\NASP-CONTEXT.DWG

Client/Project
MACEWAN
NEIGHBOURHOOD AREA STRUCTURE PLAN

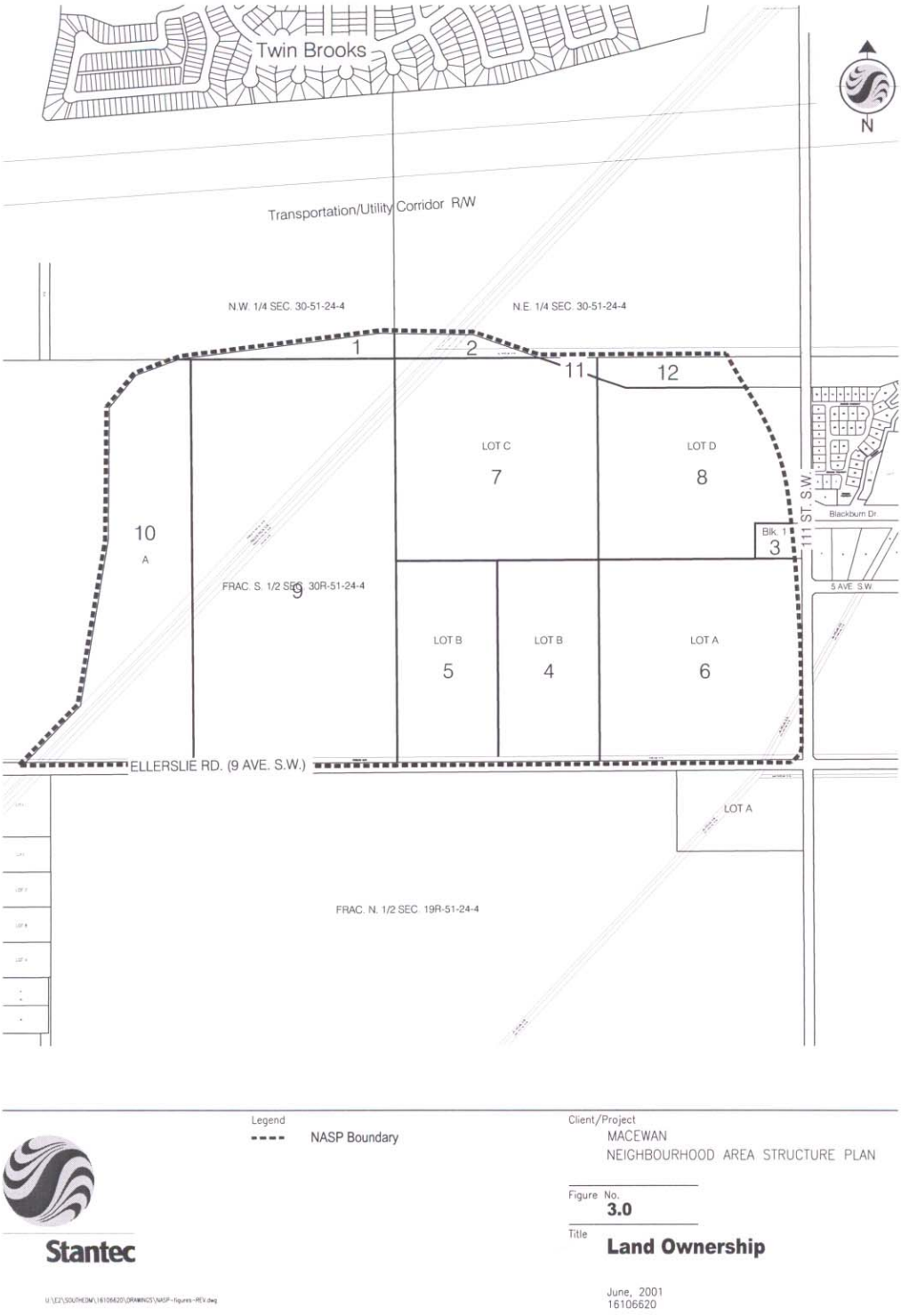
Figure No.
2.0

Title
Context Plan

June, 2001
161 09023

***Bylaw 12860 August 21, 2001**

Figure 3* Land Ownership



*** Bylaw 12860 August 21, 2001**

Section 2
Statutory Plan and Policy Context

2.1 Edmonton Municipal Development Plan

The land within the MacEwan NASP is designated in the City of Edmonton's Municipal Development Plan (MDP) as a Suburban Area, meaning that it is intended for suburban residential development. As noted earlier, a Servicing Concept Design Brief has been approved for lands south of the TUC between Calgary Trail and Whitemud Creek, which includes MacEwan.

Numerous strategies are cited in the MDP regarding Planned Growth and other areas of responsibility. The following sections highlight those of particular relevance to the MacEwan NASP.

2.1.1 Planned Growth – Land Development Philosophy

"Develop and utilize a land development philosophy that meets the City's long-term development needs and achieves the optimal balance between residential, industrial, commercial, institutional and recreational land use."

Strategy 1.1.1 – *Provide for choices regarding the types of developments in which people want to live and do business.*

The MacEwan NASP provides for low, medium and high density residential and commercial development opportunities within a growing sector of the City of Edmonton while accommodating existing uses within the plan.

Strategy 1.1.2 – *Address compatibility of land use in the development and review of land use plans and development proposals.*

The MacEwan NASP proposes the development of low, medium and high density housing adjacent to existing urban services and commercial development, developing residential communities, pipeline corridors and major arterial roadways. Careful attention has been paid to addressing the interface and compatibility of land uses.

Strategy 1.1.12 - *Place a high priority on the effective and efficient use of land*

The MacEwan NASP plans for a mix of residential, commercial, open space and existing land uses in an efficient land use pattern while respecting both ownership boundaries and other development constraints. Nodes such as park areas, commercial areas and transit stops have been located along collector and arterial roadways to ensure the efficient movement of traffic. These nodes are also linked via a network of walkways and sidewalks which provide for alternative forms of circulation (pedestrian/cycle) throughout the neighbourhood.

Strategy 1.1.13 – *Plan for urban development which is environmentally friendly and fiscally sustainable in the long term, based on the City's financing, infrastructure and environmental strategies.*

MacEwan will be developed in as environmentally responsible a fashion as possible. A portion of the natural area will be preserved to the greatest extent possible. Park and other open spaces have been planned adjacent to pedestrian corridors to enhance their accessibility and usability. Residential densities will be relatively high to ensure efficient use of land. A pedestrian network and future transit corridor will encourage alternatives to the automobile. The stormwater management facility will incorporate designs elements to enhance the quality of stormwater runoff and provide additional habitat for wildlife.

The MacEwan NASP provides for the efficient, cost effective and coordinated delivery of engineering services. Existing water services are to be extended and constructed at the cost of the developer. Stormwater is to be detained onsite and discharged at predevelopment rates via a series of stormwater management facilities. The sanitary sewerage system is to be constructed on site at the developers cost and ties into in to the SESS – SW1 trunk currently being constructed. The costs associated with the SESS system are recovered from new developments via a per hectare assessment on all benefiting areas. The developers will pay for the construction f the first two lanes of arterial roadways through the Arterial Roadway Assessments program, and will pay the full cost of collector and local roadways within the neighbourhood.

Strategy 1.1.14 – *Maintain the integrity of pipelines and utility corridors while planning for growth and development.*

The MacEwan NASP contains a significant southwest-northeast corridor which has been integrated into the plan and, where appropriate, will be employed in the open space and walkway system.

2.1.2 Planned Growth - Utilization of Existing Infrastructure
"Encourage maximum development around City infrastructure."

Strategy 1.3.3 - *Support contiguous development that is adjacent to existing development in order to accommodate growth in an orderly and economical fashion.*

The MacEwan NASP is situated immediately west of neighbourhoods already under development. Development on the north side of the TUC within south Edmonton is, for the most part, complete. Furthermore, the lands within the NASP can be serviced from the same existing and planned infrastructure being installed along 111 Street and Ellerslie Road.

Strategy 1.3.4 – *Promote intensification of development around transportation corridors and employment areas.*

The MacEwan NASP has grouped a significant amount of medium and high density residential (MDR) housing along the Ellerslie Road and 111th Street corridors. Careful attention has been paid to locating MDR uses in close proximity to the commercial and transit node in the southeast corner. A second significant area of MDR has been placed next to the central park area locating higher densities in proximity to open space and pedestrian corridors.

2.1.3 Planned Growth - Managing Suburban Growth
"Manage suburban growth in a manner that ensures adequate infrastructure and services and maintains a balance of residential, commercial, industrial and recreational land uses."

Strategy 1.7.1 - *Accommodate growth in an orderly, serviced and cost-effective manner.*

Given its contiguous nature with other developing and approved Neighbourhood plans, the MacEwan NASP represents a logical location in south Edmonton for the development of residential land uses. Services can be extended into this area in a cost effective manner.

Strategy 1.7.2 - *Provide for a range of housing types and densities in each residential neighbourhood.*

The MacEwan NASP allows for a range of low, medium and high density residential development to take place. The ratio of low to medium density residential development is consistent with current City Council guidelines.

Strategy 4.3.5 – *Support initiatives which encourage the reduction of transportation-induced impacts on Edmonton's natural*

environment.

The MacEwan NASP builds on the principles outlined in the Heritage Valley SCDB regarding the location of higher densities next to areas served by transit.

Strategy 4.4.4 – *Consider environmental impact as a factor in the decision making process for, land, transportation and infrastructure development.*

Careful consideration has been given the natural areas located in NASP area. Stage 1 and Stage 2 Natural Site assessments have been conducted to ensure areas of retention are logical and sustainable within an urban environment.

2.2 Heritage Valley SCDB

The Heritage Valley SCDB provides general guidelines to facilitate the orderly development of the plan area in terms of proposed land uses, density of development, location of major roads and facilities and sequence of development. The MacEwan NASP is a more detailed extension of the general land use framework described in the SCDB. The Heritage Valley SCDB has been designed on the basis of a community structure that groups a number of neighbourhoods to form a community cluster that provides community and neighbourhood service to more than one or two neighbourhoods.

Numerous strategies are cited in the SCDB regarding Community Design Principles. Given the relatively small size of the MacEwan Neighbourhood not all of the strategies are applicable however a number of the principles are relevant and do apply.

2.2.1 Community Design Principle 3.1 – A Compact, Integrated Community

Principle 1 – *Promote Sustainable Community Design*

The MacEwan Community contains a concentration of higher density land uses along a transit corridor providing an area of intensified lands uses clustered around a transit corridor. This clustering allows for better use of land and associated infrastructure.

Principle 3 – *Create a compact, pedestrian-oriented community*

MacEwan offers a number of development cells with direct pedestrian access to either the pipeline corridor/walkway or sidewalk system. Pedestrian linkages are also provided to the community commercial node in the south east corner of the plan.

Principle 6 – *Provide for a broad mix of land uses*

The MacEwan NASP proposes the development of low, medium and high density housing adjacent to existing urban services, commercial development, developing residential communities, pipeline corridors and major arterial roadways.

2.2.2 Community Design Principle 3.2 – Livable Neighbourhoods

Principle 1 – *Encourage innovative designs and urban patterns in the built environment*

MacEwan will see the location of a high density site on the edge of the community and adjacent to transit infrastructure and commercial services. This approach is a departure from past practices in suburban development which mostly contemplated medium density development in such areas.

Principle 2 – *Provide adequate urban services, facilities and amenities in accordance with the planning principles outlined in the SCDB and the requirements established through existing city policies*

MacEwan locates a community park area adjacent to a concentration of medium density land uses and the pipeline corridor/ walkway.

Principle 3 – *Provide for a mix of compatible land uses*

The MacEwan NASP provides development opportunities for low, medium and high density land uses. Careful attention has been paid to locating these land uses next to transit infrastructure, commercial services, open space areas and walkway corridors.

Principle 5 – *Provide a diversity of housing types in each neighbourhood*

MacEwan provides for a variety of housing in low, medium and high density forms.

Principle 6 – *Support housing at increased densities in support of the City's intensification strategies and to encourage the use of transit*

In accordance with the SCDB, the MacEwan NASP concentrates medium and high density uses along the commercial area and transit corridor ensuring a greater number of users in close proximity to the services.

2.2.3 Community Design Principle 3.3 – An Attractive, Well Designed Community

Principle 2 – *Ensure that each neighbourhood is designed with a focal point*

Three focal points are provided for in the MacEwan neighbourhood each providing different opportunities and appealing to different interest and users. A portion of the exiting North Virginia Woodlot will be retained providing for aesthetic and educational opportunities for users, the community commercial area in the south east will fill many of the commercial needs of area residents and community park site will provide recreational and open space opportunities for residents.

Principle 3 – *Design for direct linkages (pedestrian, bicycle, vehicular) from the surrounding communities to the neighbourhood centre and amities*

MacEwan provides for direct vehicular, bicycle and pedestrian access to the community park site by virtue of its location next the east west collector roadway and pipeline corridor / walkway.

A portion of the retained North Virginia Woodlot will have direct street frontage providing the site with ample access.

The community commercial area in the south east corner of the plan contains direct pedestrian linkages from the north and west providing access from the adjacent medium and high density uses as well as the low density residential area.

2.2.4 Community Design Principle 3.5 – Balanced Transportation System

Principle 1 – *Provide a balanced network for movement*

MacEwan contains logical system of collector and local roadways with safe and convenient connections to perimeter roadways and the Anthony Hendey Drive.

MacEwan is bound on the east by a transit corridor providing ample access to residents to public transit.

A cluster of medium density uses and community park site have been located next to the pipeline corridor / walkway to ensure high level of exposure to users.

2.2.5 Community Design Principle 3.6 – Efficient Servicing / Green Infrastructure

Principle 1 – *Encourage the efficient and cost-effective development*

The MacEwan NASP provides for the efficient, cost effective and coordinated delivery of engineering services. Existing water services are to be extended and constructed at the cost of the developer. Stormwater is to be detained onsite and discharged at predevelopment rates via a series of stormwater management facilities. The sanitary sewerage system is to be constructed on site at the developers cost and ties into in to the SESS – SW1 trunk currently being constructed. The costs associated with the SESS system are recovered from new developments via a per hectare assessment on all benefiting areas. The developers will pay for the construction f the first two lanes of arterial roadways through the Arterial Roadway Assessments program, and will pay the full cost of collector and local roadways within the neighbourhood.

2.2.6 Community Design Principle 3.7 – Preservation / Enhancement of the Environment

Principle 1 - *Protect and enhance the natural features of the community when designing and planning neighbourhoods, facilities and services*

Careful consideration has been given the natural areas located in NASP area. Stage 1 and Stage 2 Natural Site assessments have been conducted to ensure areas of retention, under the provisions of municipal reserve, are logical and sustainable within an urban environment.

2.3 Airport Protection Overlay

The Edmonton International Airport Vicinity Protection Area Regulation regulates land use that may affect the use of the Edmonton International Airport, and establishes Noise Exposure Factor (NEF) contours within which residential development may be controlled or precluded. The MacEwan NASP lies entirely outside the designated area. Therefore, there is no restriction on residential development within the plan area arising from this regulation.

2.4 Suburban Neighbourhood Design Principles

The City of Edmonton's Suburban Neighbourhood Design Principles report describes a variety of design principles intended to encourage flexibility and innovation in the design and servicing of new neighbourhoods. Given the relatively small area of the MacEwan NASP, a number of the principles do not specifically apply. However, the proximity of the MacEwan NASP to other approved and proposed neighbourhoods does allow it to share neighbouring facilities:

Design Principle 1 - *Design neighbourhoods with the intent of sharing common infrastructure facilities among neighbourhoods.*

Infrastructure to service the MacEwan NASP is part of a larger system to service lands in the vicinity such as the Blackmud Creek and Richford NASP areas. Existing roadways such as 111 Street and Ellerslie Road will be upgraded and widened with the overall pace of development. Intersections will be aligned to share future signalized traffic movements.

Design Principle 2 - *Design and locate school and community facilities to provide inter-neighbourhood focal points.*

While the MacEwan NASP is not large enough to justify a school/park site within its boundaries, neighbourhood residents will be able to access schools in neighbouring communities.

Design Principle 3 – *Design the arterial and collector roads along a grid pattern, peripheral to the neighbourhoods.*

The boundaries of MacEwan are defined by the future ring road and the future major arterial roadways of 111 Street and Ellerslie Road which are aligned in a grid pattern peripheral to the plan area. The east-west and north-south collector roadway within MacEwan provides ease of access within the Neighbourhood without dominating the area nor providing short-cutting routes from Ellerslie Road to 111 Street.

Design Principle 4 - *Design neighbourhood streets (both neighbourhood design and cross section of roadway) with standards that cater to the main intended use of the road.*

Roadways within the neighbourhood are intended to be developed as a mixture of collector and local roadways. Adjacent land uses will assist in the determination of appropriate road right-of-way widths and cross sections.

Design Principle 5 – *Provide convenient pedestrian and bicycle access throughout the neighbourhood and especially between destination points within and outside the neighbourhood.*

Bicycle and pedestrian movement throughout MacEwan and the larger Heritage Valley SCDB area is intended to follow the local, collector and arterial roadway network in addition to walkways and other open space corridors.

Design Principle 6 – *Provide Transit Services to the edges of new neighbourhoods using the arterial and collector roadways in conjunction with appropriately designed, strategically located and*

conveniently accessed transit waiting zones.

Future transit service is appropriate along the collector roadway network as well as along Ellerslie Road, 111 Street and 127 Street, the southern, eastern and western boundaries of the neighbourhood. Given the shape of MacEwan and the alignment of the collector roadway, access to transit is generally within 400m walking distance of virtually all parts of the neighbourhood.

The Heritage Valley SCDB designates a future Transit station in the adjacent commercial area in Rutherford which will provide direct linkages to the University of Alberta, Downtown, Commonwealth Stadium, Skyreach Centre and the Northlands area. In the interim, the Heritage Valley SCDB contemplates the location of a transit centre on the commercial site with the adjacent 111th Street designated as a busway. This will ensure convenient express transit service until the ultimate configuration.

Design Principle 7 - *At the area and neighbourhood planning stage, plan the location of the school/park facilities relative to neighbourhood staging such that they can be consolidated, serviced and available early in the development of a neighbourhood or catchment area.*

The central park site within MacEwan has been located such that a majority of the site is located within one ownership. The other municipal reserve parcels within the neighbourhood have been proposed to retain a portion of existing natural areas. This site is within single ownership property boundaries and does not require consolidation to assemble and may be pre-dedicated early in development.

Design Principle 11 - *Create a linked open space system through open spaces created by stormwater management facilities, some utility rights-of-way, preservation of appropriate natural areas and drainage courses, and school and park open spaces.*

The pipeline corridor within and extending beyond MacEwan provides excellent opportunities for linkages throughout and beyond the plan area to connect residents with amenities. The community park area has been located adjacent to this corridor to provide convenient access and is linked to the stormwater management facility provide opportunities both for visual amenity and as additional open space for residents.

A portion of the North Virginia Park Woodland Natural Area will be retained through municipal reserve dedication to provide additional amenity space to residents. The area and configuration of

the sites have been subject to Stage 1 and Stage 2 Natural Site Assessments to ensure sustainability in the context of urban development.

Design Principle 12 - *Locate multi-family uses toward the edge of new neighbourhoods and close to the community and neighbourhood focal points.*

Medium density residential parcels of varying sizes have been designated throughout the plan area alongside collector and arterial roads, SWM facilities, pipeline corridors, park sites and commercial areas. Some parcels are located at the periphery of the neighbourhood while others are more internalized but still easily accessed by pedestrian, bicycle, transit and vehicle traffic. In accordance with the Heritage Valley SCDB, higher density uses have been concentrated in the south and east portions of the plan area, next to commercial and transit facilities.

Design Principle 13 - *Use stormwater management techniques which provide an alternative (s) to the man made lakes and dry ponds typical to Edmonton.*

Alternative SWM techniques may be considered. Techniques as discussed in Table 1 of the Suburban Neighbourhood Design Principles Report may, where appropriate, be pursued at the subdivision and building stage if the Drainage Branch determines them to be suitable alternatives.

Design Principle 14 - *Minimize the use of public utility lots and maximize the use of easements for underground services not located in road rights-of-way.*

This principle is recommended for use in the MacEwan NASP and can be best implemented at the subdivision and engineering design stage.

Design Principle 15 - *Provide opportunity through the residential districts of the Land Use Bylaw for the intensification of housing forms and for alternative site design and building siting.*

A range of low, medium and high density residential housing forms will be developed within the MacEwan NASP with concentrations of higher densities in the southeast portions of the plan area. In accordance with market demands, opportunities for innovative site design and building siting can be pursued through the redistricting and subdivision processes.

Design Principle 16 - *Use current population and student generation formulas when planning facilities for a neighbourhood. Take into account the life cycle of the neighbourhood.*

The population and student generation ratios provided in the Suburban Neighbourhood Design Principles report were used to develop demographic projections in the NASP. Although there are no school facilities planned within MacEwan, it is essential to identify the future student populations generated from the area in order to appropriately plan for facilities in neighbouring communities.

Section 3
Site Context and Development Consideration

3.1 Topography and Vegetation

The topography of the lands within the MacEwan NASP is generally flat throughout rising in the south central portion and dropping to the east and west in the north with overall elevations ranging from 681m to 689m. (See Figure 4 - Site Contours)

With the exception of the North Virginia Park Woodland located in the southeast corner of the neighbourhood, there is limited vegetation scattered throughout the plan area mostly associated with existing dwellings and uses.

Soils in the area are a blend of moderately to well drained Orthic Black and Gleyed Black Chernozems on glaciolacustrine material. The soil conditions do not present any impediment to urban development.

3.2 Existing Land Uses

As shown on Figure 5.0 – Site Features and Constraints, the Victory Christian Center, which consists of church and school facilities is located along Ellerslie Road in the east-central portion of the plan. These facilities currently occupy approximately the south half of Victory Christian Center's property with the north half remaining vacant.

There are four existing farmhouse/residential properties within the Neighbourhood; three within the central portion accessed off Ellerslie Road and the other accessed immediately off 111 Street. The remainder of the lands are cleared and under cultivation. None of these uses pose any particular constraints to future urban development. However, future development of any and all properties within the neighbourhood is the option of the respective landowners.

3.3 Surrounding Land Uses

The plan area is bound on the north and west by the Transportation and Utilities Corridor and on the south and east by future major

arterial roadways, Ellerslie Road (9 Avenue SW) and 111 Street. Eastward across 111 Street lie the recently approved and developing residential neighbourhoods of Richford and Blackmud Creek. To the south of Ellerslie Road lies the Rutherford NASP area and the existing Virginia Park Greenhouse on the southwest corner of Ellerslie Road and 111 Street.

3.4 Environmental Resources

The City of Edmonton's Inventory of Environmentally Sensitive and Significant Natural Areas (1993) identifies one Significant Natural Areas within the MacEwan NASP. The Inventory also identifies a much larger Environmentally Sensitive Area, the Southwest Mixedwood Natural Area (SW6001) south of the Neighbourhood across Ellerslie Road and another Significant Natural Area, the Virginia Park Woodland (SW31) further south along 111 Street.

3.4.1 North Virginia Park Woodland (SW74)

The Inventory identifies the 5.7 hectare North Virginia Park Woodland within the southeast corner of MacEwan (see Figure 5.0) as a Significant Natural Area. The Inventory notes that the site is a "relatively healthy, mature mixedwood stand composed mainly of white spruce and to a lesser extent, balsam poplar and white birch," with the latter ranging in age from "85 to 100 years old and 20-24 m in height." The Woodland provides a "habitat for white-tailed deer, red squirrel, great horned owl and a number of songbirds."

The Inventory notes that the Woodland has already been negatively affected by forest fragmentation, as it was once part of a larger mixedwood stand consisting of the Southwest Mixedwood Natural Area and the Virginia Park Woodland to the south.

In order to further document the characteristics of the North Virginia Park Woodland, a Stage One Preliminary Natural Site Assessment was undertaken by Bruce Thompson & Associates in June of 1999 and submitted under separate cover.

The basic objective of a Stage One Preliminary Natural Site Assessment is to screen the natural site to identify important environmental issues. The objective of Step One of this process is to identify important environmental elements on a site and determine the site's natural sustainability in its own right. Step One also seeks to determine whether any changes have taken place since the 1993 Inventory, which would alter the site's significance.

The Stage One, Step One Assessment confirmed that no significant changes were apparent on the Site in terms of human developments or successional changes in habitat, as compared to the description given in the Inventory.

or successional changes in habitat, as compared to the description given in the Inventory.

The Assessment noted that the site may be considered to have a moderate habitat diversity, consisting predominantly of spruce dominated forest, with a small wetland area. The diversity of animal and plant species that were recorded were typical of mature coniferous forests in the Edmonton area. No rare or threatened species of plant or animal were actually observed during the site reconnaissance, which took place during the growing season.

The small wetland area may be of some value as a waterfowl nesting, rearing and staging habitat. However, the small size of the wetland area, and its proximity to a heavily utilized roadway would tend to diminish its natural value as waterfowl habitat in an overall context.

While it does not represent a particularly rare type of ecosystem, it is typical of a woodland assemblage that has been in decline as the City expands and additional land is cleared for housing, transportation and commercial purposes. The diversity of wildlife and plants is not unusually high for this type of woodland stand, probably due to the relative structural uniformity of the stand. A key value may be its use as a dispersion corridor for ungulate (white-tailed deer and possibly occasional moose) and other wildlife, as it provides cover and browsing opportunities. The small wetland area, while exposed to highway traffic noise and disturbance would be worth preserving. This can only be done if drainage plans are devised in such a way as to maintain a favourable water balance that will prevent such wetlands from drying up.

In terms of the natural sustainability of ecosystems on the Site, if the site were to be left as it is with no further development, the spruce dominated portions of it would maintain the natural progress of succession until some event such as fire. The bird community would remain largely as it presently exists. The future makeup of the mammalian (e.g. deer) populations would depend to a large extent on the disposition of lands bordering the Area, as this will affect their migration among “islands” of forest cover and browsing habitat.

In the Preliminary Assessment, several valued environmental components were identified which are potentially sustainable in their own right but potentially affected by human activities and development. Since portions of the site were planned for retention, it was recommended that a Stage Two (Detailed) Natural

Assessment be conducted prior to approval of the NASP.

A Stage Two Assessment on the Virginia Park Woodland carried out by Bruce Thompson and Associates in December 2000. The purpose of the Stage Two Assessment was to identify and assess the potential effects of development and related activities on the Woodland. The study was carried out in the context of a defined development scenario with three scenarios of retention.

Alternative 1 proposed the clearing of all the tree stand resulting in a loss of 5.7 hectares of mature white spruce-poplar/aspen stand. Alternatives 2 and 3 proposed the retention of approximately 1.1 ha of the mature white spruce-poplar/aspen stands in different configurations. Alternative 2 proposed the creation of a 1.1 ha. municipal reserve site in an approximately square parcel in the north east corner of the site while alternative 3 proposed the retention of a rectangular portion along the east side of the site.

On the basis of the old-growth spruce dominated stand, the site currently may be regarded as ecological sustainable. The loss of 4/5 of the stand, as proposed in Alternatives 2 or 3, will reduce the sustainability of the stand. However, given the age of the tress, the presence of regenerating spruce and provided the surface drainage is maintained, the remaining portion can still remain intact, although supporting less diverse wildlife and plant community. Alternative 2 is favored because of its square shape, which will result in more of the stand being distant from the edges and providing cover habitat. Furthermore, this alternative would result in more of the retained stand being in conditions of favorable soil drainage.

Based on this information, development around the natural area is configured as recommended in alternative 2. The land use layout for the area has resulted in a design that increases the area for retention from 1.1 ha to 1.3 ha.

3.5 Environmental Site Assessment

Phase I Environmental Site Assessments (ESA) have been undertaken on the United Inc., Dykstra Construction Ltd. and Qualico Developments (West) Ltd. lands as part of the preparation of the MacEwan NASP. These reports have been submitted under separate cover. Given the largely agricultural history of the land holdings, there are no outstanding concerns and no further investigation is required.

3.5.1 Non-Participating Land Owners

No other Phase I Environmental Site Assessments have been

undertaken on the remaining lands within the MacEwan NASP. In light of this, the Environmental Planning Group of the Planning & Development Department typically recommended that ESAs or disclosure statements be provided by the minority land owners at the redistricting stage.

3.6 Energy and Natural Resources

3.6.1 Oil & Gas Well Sites

A review of information provided by the Alberta Energy & Utilities Board (AEUB) has indicated that there are no active or suspended oil or gas wells within the boundaries of the MacEwan NASP.

3.6.2 Pipeline Rights-of-Way and Facilities

As shown on Figure 4.0, there are a number of pipeline transmission facilities within the MacEwan NASP. These facilities are clustered within four rights-of-way, one located along Ellerslie Road on the southern boundary of the plan area, a major corridor cutting diagonally through the westerly portion of the neighbourhood, a corridor cutting just through the southeast corner of the neighbourhood and one running east-west along the north boundary of the NASP by the TUC.

The Alberta Energy and Utilities Board Pipeline License Register identifies these pipeline transmission licenses within the MacEwan Neighbourhood Area Structure Plan (summarized on Table 2 - Existing Pipeline Transmission Facilities)

The pipeline corridors adjacent to Ellerslie Road, the TUC and the one on the southeast corner have only a limited impact on the land use plan for MacEwan since they do not bisect the neighbourhood to any large extent. The other major utility right-of-way which bisects the westerly portion of the Neighbourhood will have to be accommodated within any future development.

The City of Edmonton's ***Policy Guidelines for the Integration of Transmission Pipelines and Urban Development (1985)*** and any other relevant Provincial legislation will be employed when considering rezoning and subdivision applications near or adjacent to the above noted pipelines.

TABLE 2*
MacEWAN NASP
EXISTING PIPELINE TRANSMISSION FACILITIES

Company	Substance	H_2S Content (mol/kmol)[1]	Max. Operating Pressure (kPa)[2]	Max. Outside Diameter (mm)[3]
Private	HVP Hydrocarbon	0.00	3,450	60.3
Private	Crude Oil	0.00	5,170	219.1
Private	Natural Gas	0.00	6,890	609.6
Private	Natural Gas	0.00	N/A	N/A
Private	HVP Hydrocarbon	0.00	4,140	114.3
Private	LVP Hydrocarbon	0.00	N/A	88.9
Private	HVP Hydrocarbon	0.00	9,930	219.1
Private	HVP Hydrocarbon	0.00	7,000	273.1
Private	HVP Hydrocarbon	0.00	9,930	323.9
Private	Natural Gas	0.00	6,205	610
Private	Natural Gas	0.02	6,070	323.9
Private	Natural Gas	0.00	6,200	609.6

[1] sour natural gas occurs when the H_2S content is greater than 10.0 mol/kmol
[2] a high pressure line has a maximum operating pressure greater than or equal to 3,475 kPa
[3] a high pressure line has an outside diameter greater than or equal to 323.9 mm

***Amended by Editor**

Figure 4* Site Contours

*** Bylaw 12860 August 21, 2001**

Figure 5* Site Features and Constraints

Legend
NASP Boundary

Stantec

H:\E2\SOUTHEDM\16106620\DRAWINGS\NASP-SITEFEATURES-REV.DWG

Client/Project
MACEWAN
NEIGHBOURHOOD AREA STRUCTURE PLAN

Figure No.
5.0

Title
Site Features and Constraints
June, 2001
16106620

***Bylaw 12860 August 21, 2001**

Section 4
Development Objectives and Principles

4.1 Development Objectives

The MacEwan NASP has been prepared as a comprehensively planned residential neighbourhood taking advantage of both the natural topography, pipeline corridors and locational attributes of the area. The main objectives of the MacEwan NASP are:

- to develop a plan consistent with the general intent and purpose of the City of Edmonton Municipal Development Plan and the Heritage Valley Servicing Concept Design Brief.
- to provide a framework to deliver a high quality, comprehensively planned residential area by defining the general pattern and composition of land uses, linkages, servicing designs and development staging.
- to address and accommodate existing uses (i.e. the Victory Christian Center's property and existing residential development) within the plan.
- to ensure implementation of the plan on an orderly, staged basis.

4.2 Development Principles

Development of the various land uses within the MacEwan NASP is defined through the following general principles:

4.2.1 Residential

- Provide for residential development within the MacEwan NASP to allow for a variety of housing forms and options consistent with consumer preferences and in conformance with municipal standards and policies.
- Establish sufficient overall residential densities within the MacEwan NASP to help support the efficient provision of neighbouring educational facilities, recreational facilities and municipal services such as public transit in a timely fashion.
- Employ applicable design principles from the Suburban

Neighbourhood Design Principles report within the plan area.

- Employ applicable Community Design Principles from the Heritage Valley SCDB.
- Locate residential development so as to take advantage of natural and man-made features such as SWM facilities, park/open space and pipeline corridors.
- Orient larger parcels of medium density residential development toward the collector and/or arterial road system to provide easy access and, where appropriate, to provide a transitional land use between adjacent single family development and major roads and commercial uses.
- Integrate smaller parcels of medium density residential development within the neighbourhoods adjacent to low density residential development to provide alternative housing options within the community.

4.2.2 Commercial

- Build upon the commercial node at 111 Street and Ellerslie Road identified in the SCDB by providing for shopping centre commercial development within MacEwan at that location.
- Locate and orient commercial sites along arterial and/or collector roadways to ensure high visibility and to provide convenient access opportunities.
- Ensure that the impact of commercial development on adjacent land uses is minimized through the orientation of land uses and the application of setbacks/buffering available through the Zoning Bylaw.
- Provide convenient pedestrian linkages to commercial areas and Transit station

4.2.3 Municipal Reserve

- Provide dispersed park space within the Neighbourhood to provide open space and opportunities for recreation for residents.
- Where possible and economically viable and sustainable, retain portions, via Municipal Reserve, of the North Virginia Park Woodland Area for environmental, aesthetic and educational benefits.

4.2.4 Existing Uses

- Accommodate the continuing use of the Victory Christian Center's facilities and any existing residential development while allowing for future re-development of these lands if and when the owners choose to pursue that opportunity.

4.2.5 Circulation

- Provide a logical, safe and efficient transportation systems within the plan area to address the pedestrian, bicycle and vehicular transportation needs of residents moving to, from and within the MacEwan NASP.
- Integrate pipeline corridors into the neighbourhood make use of their walkway and linkage potential having regard for the safe, ongoing operation of these transmission facilities.
- Protect a corridor for future extension of Transit to the Heritage Valley Town Centre.
- Minimize walking distances by creating an interconnected street network and providing walkways where roadway connection is not feasible.

4.2.6 Ecological Stewardship

- Preserve and enhance natural areas by integrating them into the built form of MacEwan and linking them to other open spaces where possible.
- Develop land in an efficient manner and encourage intensive development.
- Incorporate natural areas into compatible land uses such as naturalized storm ponds, park sites or housing adjacent to them where possible.
- Encourage naturalized landscaping on public and private lands to minimize environmental and economic costs associated with their maintenance.

4.2.7 Resource Operations

- Accommodate the safe and nuisance-free operation of existing utility rights-of-way and integrate pipeline corridors into the development concept as walkways and open space linkages where feasible.

Section 5
Development Concept

5.1 Neighbourhood Unit

The development concept for the MacEwan NASP has been prepared in response to current and anticipated residential market trends in the Edmonton region. An analysis of these trends and an assessment of their implications help shape the plan with respect to the type, size and location of various land uses.

The MacEwan NASP is comprised of 111.356 hectares and is bound on all sides by existing/future arterial roadways and the Transportation & Utilities Corridor to create a logical planning unit as shown on Figure 6.0 - Development Concept.

5.2 Residential

The majority of land within MacEwan is intended for residential development as shown on Figure 6.0 – Development Concept. A mix of low, medium density and high density residential dwelling units is described and will be implemented based on market conditions and consumer preferences at the time of development. Residential densities of 22 units per net residential hectare for low density residential, 50 units per hectare for medium density residential and 125 units per hectare for the high rise residential area results in approximately 61 people per gross developable hectare.

5.2.1 Low Density Residential

As shown on Figure 6.0, consideration has been given to locating low density residential development in proximity to the amenity offered by the stormwater management facilities, walkways and municipal reserve sites. Within the low density residential area identified in the plan, housing forms will be predominantly single and semi-detached housing catering to a variety of lot and house sizes.

Low Density residential development will be planned in clusters/cells to provide a greater sense of identity to the various sub-areas and to help create a safe pedestrian environment. The area, number of dwelling units and population attributed to low density residential development is shown in *Table 3 (See Appendix in original Bylaw 12860 August 21, 2001 for original statistics)*.

Amended by Editor

5.2.2 Medium Density Residential

Opportunities exist within the MacEwan NASP for a variety of medium density housing forms and densities including townhouses, stacked townhouses and low rise apartment buildings. Future market demands will determine the type of medium density residential pursued in each particular circumstance.

In accordance with the Heritage Valley SCDB, a concentration of medium density residential sites have been located along the 111 Street corridor with second concentration of medium density uses located in the east central portion of the plan area. This centrally located node has direct access to liner walkway and community park area.

All sites will have access to the internal collector roadways with the exception of the site located on the west side of commercial area adjacent to Ellerslie Road and a site located north of the commercial area. Access to site on the west side of the commercial area will be via Ellerslie road and will be directly across access in the Rutherford neighbourhood. The site north of the commercial area will gain access to the collector network via the local road system. These medium density developments also serve as a transitional land use in portions of the plan between low density residential development, high density residential development, commercial parcels and arterial roadways.

While many of the medium density parcels are likely to be developed on a self contained basis, opportunities exist to develop street-oriented townhousing designs. These developments will be integrated along side low density residential housing through sensitive streetscape design and attention to transitioning.

The area, number of dwelling units and population attributed to medium density residential development is shown in *Table 3 (See Appendix in original Bylaw 12860 August 21, 2001 for original statistics)*.

Amended by Editor

5.2.3 High Rise Apartment Residential

In accordance with the Heritage Valley SCDB, which encourages densification along the 111 Street corridor, one High Density Residential site has been located directly north of the commercial site. This site strategically places a high density land use adjacent to commercial amenities and services and transit to ensure maximum usage.

To ensure appropriate buffers and transitions to LDR uses, an area of MDR land use is located directly to the west of the HDR site.

5.3 Commercial

5.3.1 Shopping Centre Commercial

Consistent with the Heritage Valley SCDB, a portion of the neighbourhood centre site has been designated on the northwest corner of Ellerslie Road and 111 Street as part of a larger agglomeration of commercial development at this intersection of arterial roadways. Given its exposure and access to 111 Street and Ellerslie Road and pedestrian linkages, the site will act as focal point for surrounding neighbourhoods in the area. The area is intended to be developed as a Shopping Centre Commercial Area.

The site is of sufficient size to support a wide range of retail, business, medical and professional office uses to serve residents of MacEwan and surrounding neighbourhoods.

5.4 Stormwater Management Facilities

A stormwater management facility has been located in the north eastern portion of the neighbourhood. This location conforms with the natural contours of the land and low lying areas. This facility presents amenity opportunities, consideration will be given regarding views from both residential enclaves as well as from the open space and collector / arterial roadway networks.

5.5 Open Space and Pedestrian Linkages

Greenways, or linear open space corridors, are an important element of the Heritage Valley SCDB. As shown on Figure 7.0 – Pedestrian Linkages, a greenway has been planned for MacEwan occupying the main pipeline corridor and will provide an excellent diagonal linkage through the western portion of the neighbourhood linking medium density residential sites and the community park area. Adjacent residential development will also be connected to the greenways with pedestrian walkways to facilitate their recreational use and convenience as alternative routes through the neighbourhood.

Pedestrian access is provided to the commercial area from both the adjacent medium and high density sites and surrounding low density residential areas.

A central community park area is provided adjacent to the greenway. This area is sufficient in size and configuration to accommodate the City of Edmonton's programming requirements.

Open space will also be provided around the stormwater management facilities as part of the public utility lot (PUL). The

extent of public open space (and private land) around the facilities will conform with City policies at the time of development.

Portions of the North Virginia Park Woodland Natural Area have been designated for retention through the dedication of municipal reserves. Natural site assessments have been completed for the areas and provide suggestions for management plans to further ensure the long term viability of the areas. Steps to ensure the sustainability include:

1. Practices to avoid root damage of the retained trees will be employed during construction.

2. Ensuring that pedestrian access in and around the area is controlled to ensure the sustainability of the area.

3. The development of a sound plan for surface water management (stormwater management) will be incorporated into the development plan, in order to maintain soil drainage. Poor surface drainage could result in a lowering of the water table, or soils that are too wet, with resultant changes in tree vigour and stability.

5.5.1 North Virginia Park Woodland

The development concept for Heritage Valley MacEwan designates an approximately 1.3 hectare portion of the North Virginia Park Woodland along 111 Street as being retained through the dedication of municipal reserves. Consideration was given to the retaining a portion of the woodland with an existing, weathered, edge to ensure sustainability. The size and shape of the site being retained is of sufficient dimensions to remain relatively stable and viable in the long term. Residential land uses have been planned around the site in addition to convenient public roadway and walkway access so that the area may be enjoyed by many.

5.6 Transportation

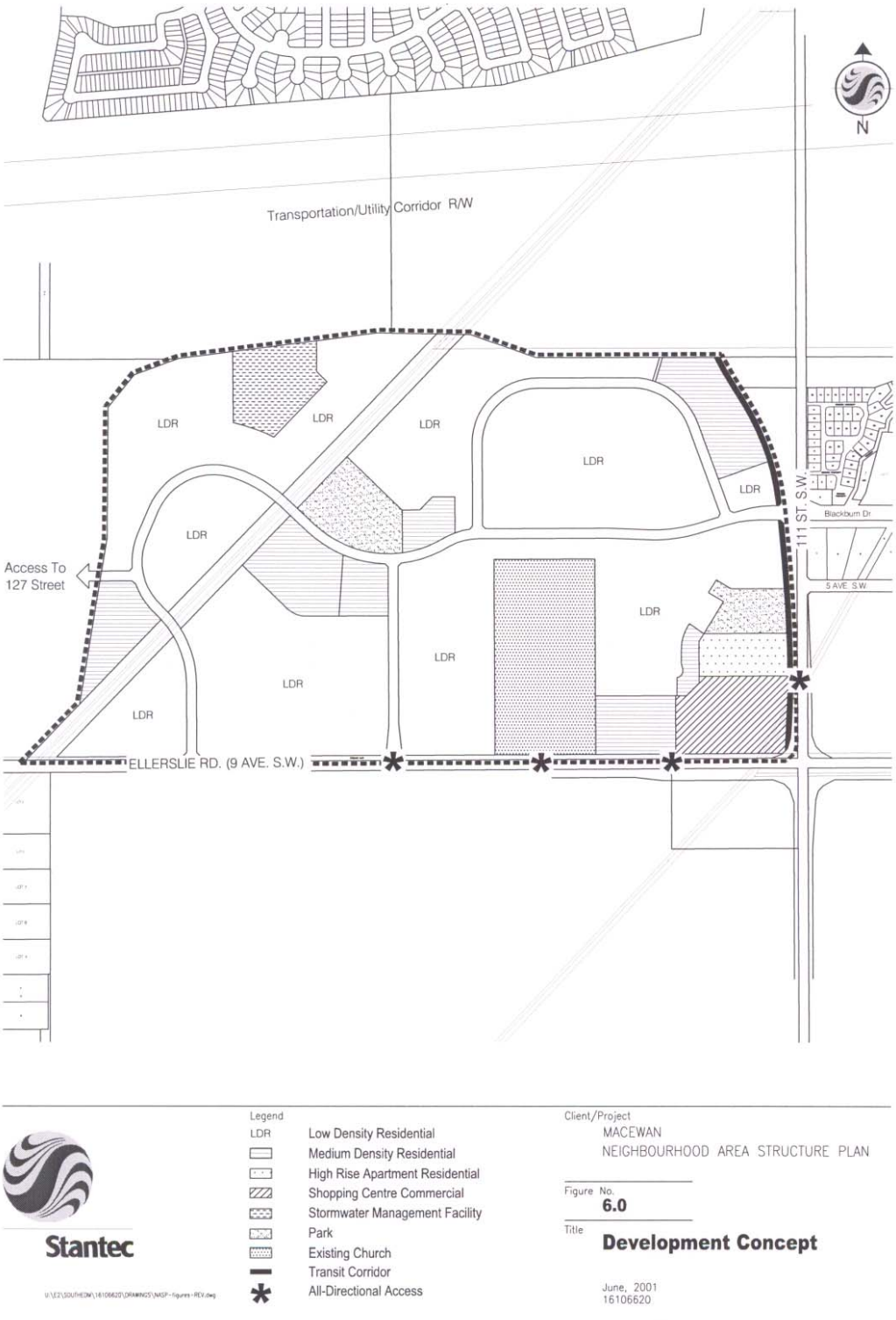
The MacEwan NASP is well served by arterial roadways as shown on Figure 8.0. There are *three* access points into the neighbourhood - one off 111 Street *and* two off Ellerslie Road. These access points have been planned based on existing and future anticipated intersections on the opposite side of the respective roadways. Access into the shopping centre commercial site is expected to be available off Ellerslie Road and 111 Street.

Bylaw 13201
November 6,
2002 (editor)

Collector roadways provide east-west and north-south access through the Neighbourhood and connects with the local roadway network.

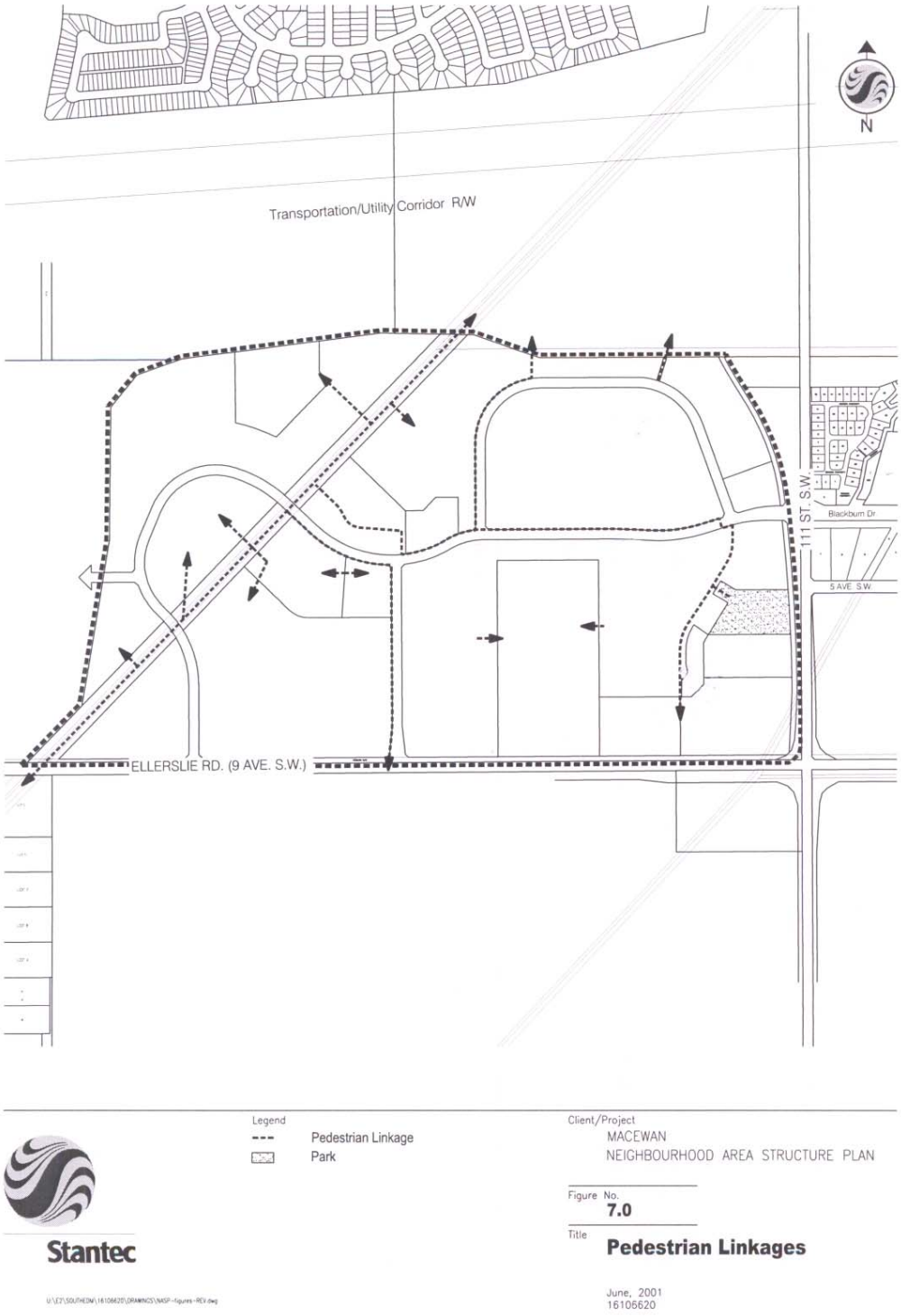
Walkways will be provided throughout the plan area to connect points within and outside the neighbourhood including the commercial area. Any physical improvements to the utility corridors will be done in consultation with the City of Edmonton and the respective utility companies.

Figure 6* Development Concept



***Bylaw 12860 August 21, 2001**

Figure 7* Pedestrian Linkages



*** Bylaw 12860 August 21, 2001**

Section 6
Engineering Services

6.1 Stormwater Drainage

As shown on Figure 8.0 - Stormwater Drainage, one stormwater management facility is designated within MacEwan located in the northwest portion of the plan area adjacent to the TUC. This facility has been located based on the natural drainage patterns of the area. This facility will have an outfall to Whitemud Creek.

The eastern portion of the neighbourhood will drain into a stormwater management facility located within the TUC. Negotiations have taken place with Alberta Infrastructure and it has been resolved that a joint facility will be constructed and will service the 111 Street interchange and the east portion of the plan area. This facility will have an outfall to the Blackmud Creek.

Further details regarding the stormwater drainage schemes for MacEwan are provided in the associated Neighbourhood Designs Report submitted under separate cover.

6.2 Sanitary Servicing

As shown on Figure 9.0 – Sanitary Drainage, sanitary services for MacEwan will connect into the South Edmonton Sanitary Sewer (SESS) drop structure at Ellerslie Road and 111 Street. The on-site sanitary network will follow the internal roadway network and associated public utility lots.

Further details regarding the sanitary drainage schemes for MacEwan are provided in the associated Neighbourhood Servicing Review submitted under separate cover.

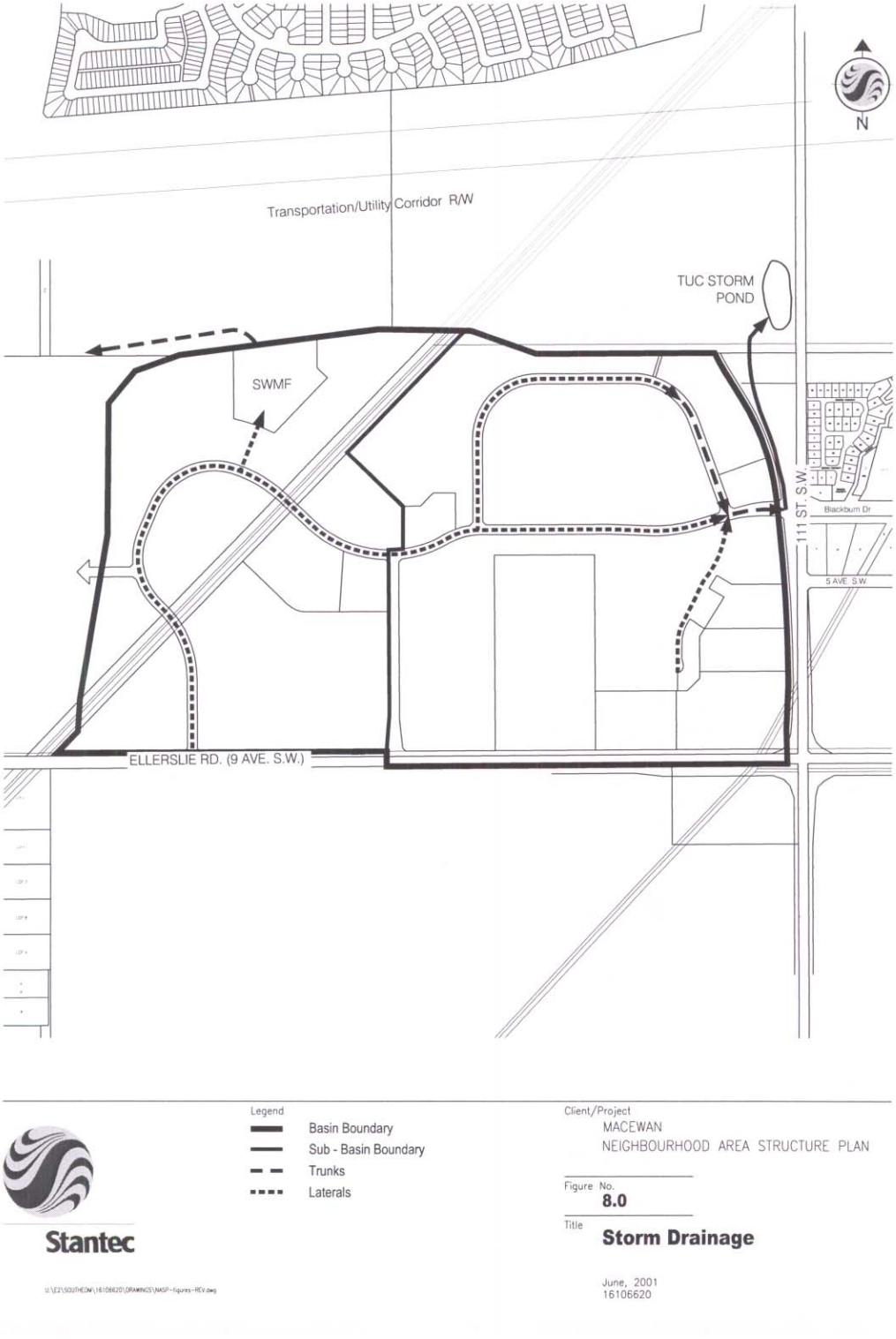
6.3 Water Servicing

A 450mm watermain is proposed to be constructed along Ellerslie Road from Highway 2 to 111 Street to service future development in this general area. This watermain is expected to be in place prior to initiation of new development in the MacEwan NASP. Water servicing within the neighbourhood will be designed to provide peak hour flows and fire flows for low density and medium density uses. Water looping will be provided in accordance with the requirements of EPCOR. Prior to detailed design, a Water Network Analysis will be submitted to EPCOR for review and approval.

6.4 Shallow Utilities

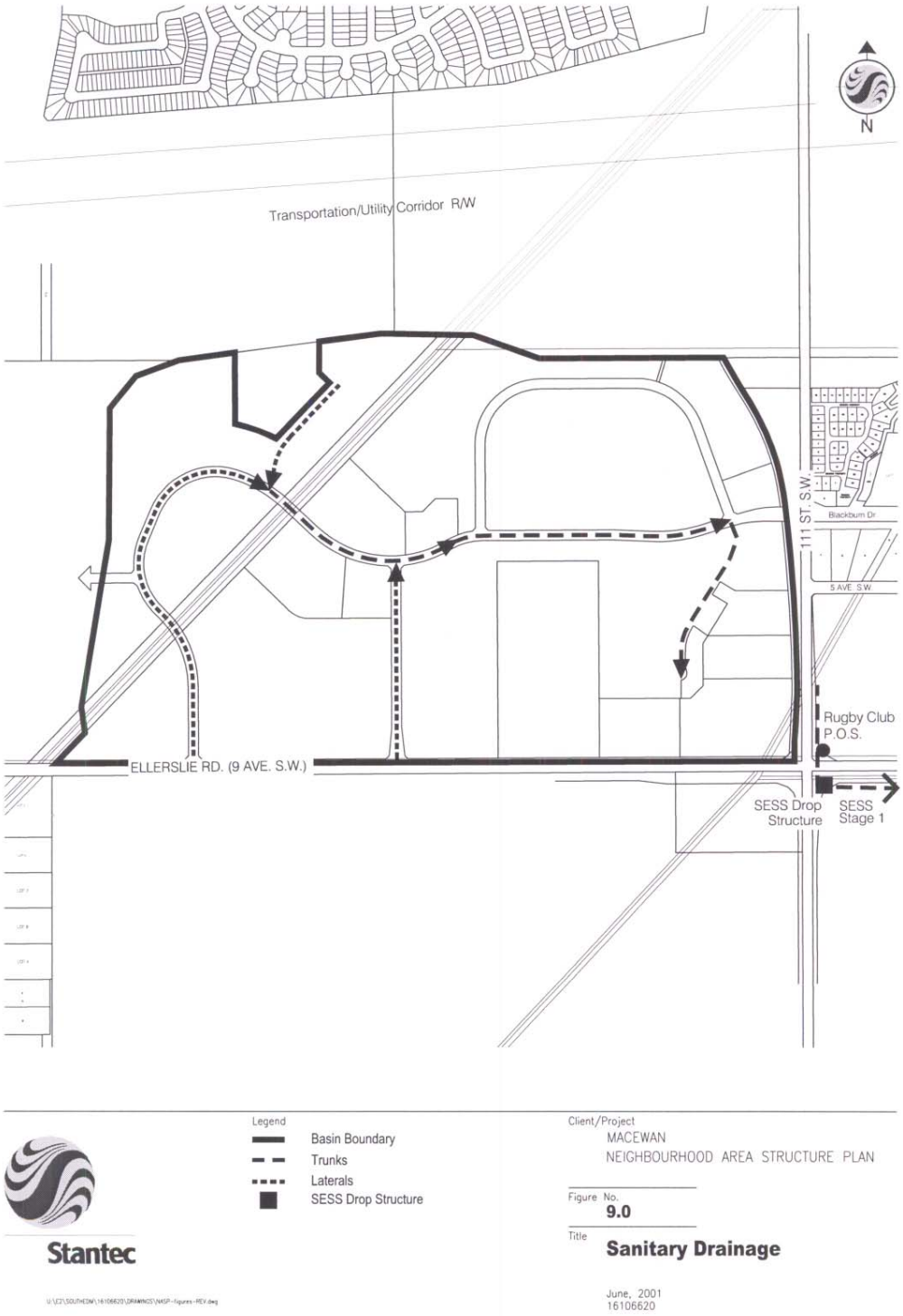
Power, gas and telecommunication services are all located within close proximity to the MacEwan NASP and will be extended as required.

Figure 8* Storm Drainage



*** Bylaw 12860 August 21, 2001**

Figure 9* Sanitary Drainage



*** Bylaw 12860 August 21, 2001**

Section 7
Transportation

7.1 Transportation

The transportation network bordering and within the MacEwan NASP consists of a system of arterial, collector and local roadways and walkways to accommodate the movement of automobiles, pedestrians and bicycles.

This hierarchy of roads will provide the necessary interconnections appropriate to efficiently and effectively accommodate traffic flows at the arterial, collector and local roadway levels.

7.2 Roadway Network

As shown on Figure 10.0 – Circulation, the proposed development will enjoy a high level of accessibility by virtue of its close proximity to the following major arterial roadways:

- Ellerslie Road (9 Avenue S.W.)
- 111 Street S.W.
- Ring Road / 127 Street

An east-west and north-south collector roadway system will provide access off the arterial roadway network into the neighbourhood and onto the local roadway network. A collector loop off of the east west collector will service the northeast portion of the plan area.

There will be two accesses to the commercial site. An all directional joint access from 111 Street will be shared by High Density Residential Site and Commercial Area. This access will be located on the common boundary of the two sites. A second all directional access will be provided form Ellerslie Road and will align with the all directional access contemplated in the Rutherford NASP.

Other access and roadway requirements will be determined at the redistricting and subdivision stages to the satisfaction of the Transportation & Streets Department.

7.3 Roadway Staging

A roadway staging plan was prepared as part of the review and approval process for the Blackmud Creek and Richford NASP's to service lands in this area. Upgrades have been undertaken to 111 Street and Ellerslie Road and further improvements will be necessary as development proceeds in MacEwan. Ellerslie Road will require extension west of 111th Street. Initially, this extension will consist of the construction of 2 lanes representing the north half of the ultimate roadway configuration.

7.4 Transit Service

Existing and future transit routes will follow Ellerslie Road, 111 Street and 127 Street / Ring Road and have been / will be established on the basis of the proportion of trips which are expected to be generated from within the neighbourhood and adjacent areas. The majority of land within the MacEwan NASP is within 400 m of either Ellerslie Road, 111 Street and 127 Street and could readily access transit zones along these arterial roadways. The Heritage Valley SCDB designates 111th street as an express busway ensuring convenient express transit service.

Future transit service may be accommodated within the Neighbourhood if demand warrants its delivery and if it can be provided for financially. The collector roadway will be developed to a suitable standard to accommodate transit service and would provide readily accessible service to all areas of the neighbourhood.

7.5 Pedestrian and Bicycle Circulation

Sidewalks will be provided along all adjacent arterial roadways, collector and internal local roadways in accordance with City policies and practices. Walkways (Figure 7.0) will be provided to connect sidewalks along the internal roadway network with the stormwater management areas and pipeline corridors.

The commercial site has walkway connections from adjacent medium and high density residential sites as well as the adjacent low density residential area.

The bicycle circulation system for MacEwan and adjacent neighbourhoods will be developed with wide curb lanes on Ellerslie Road and 111 Street and wide sidewalks on one side within the residential area.

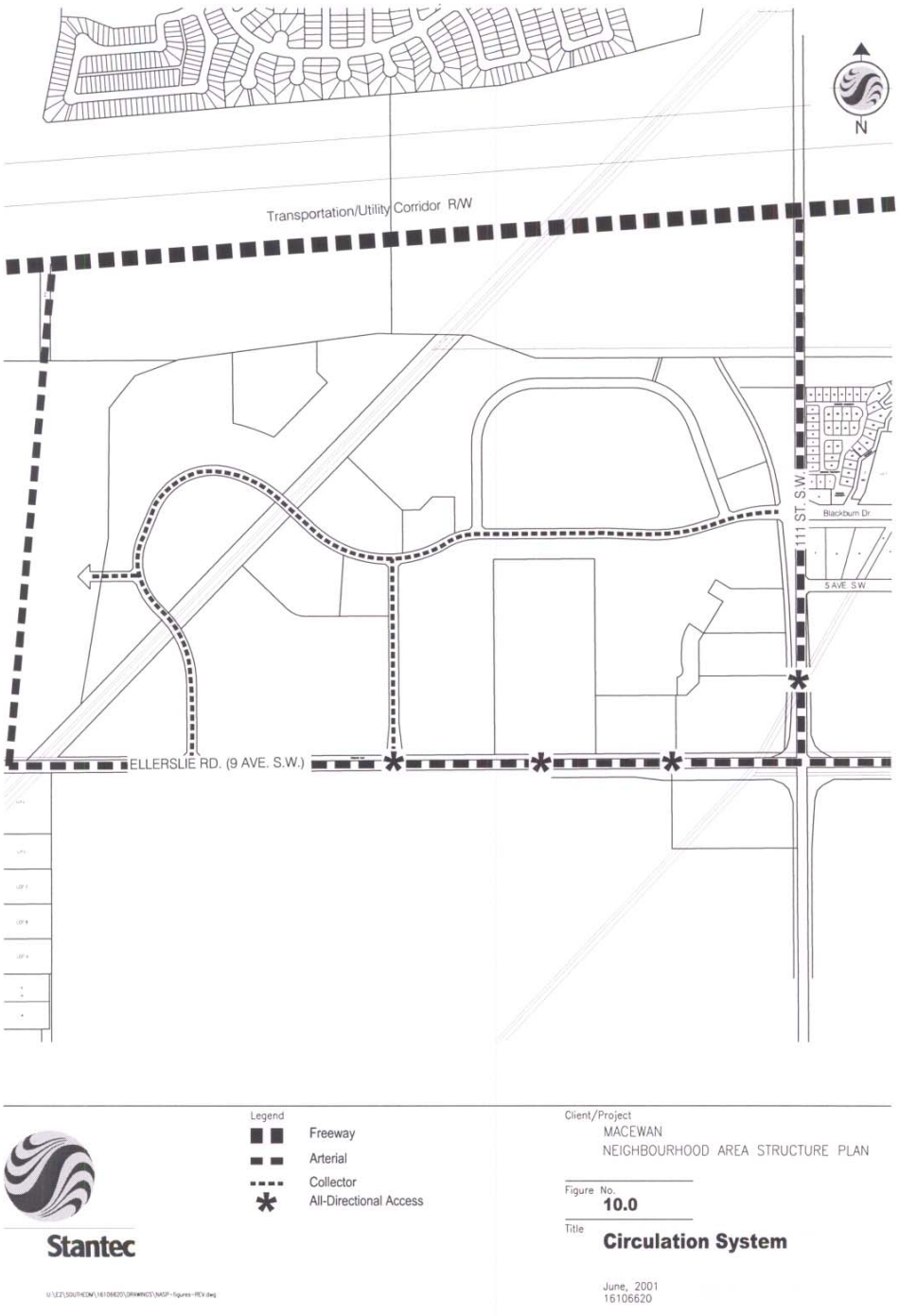
7.6 Parking

Parking for vehicles will generally be provided off-street in conjunction with residential development.

7.7 Truck Routes

Currently, 111 Street is designated as a truck route. It is anticipated that 111 Street will retain its Truck Route Status as the MacEwan area develops.

Figure 10* Circulation System



*** Bylaw 12860 August 21, 2001**

Section 8
Implementation

8.1 Development Staging

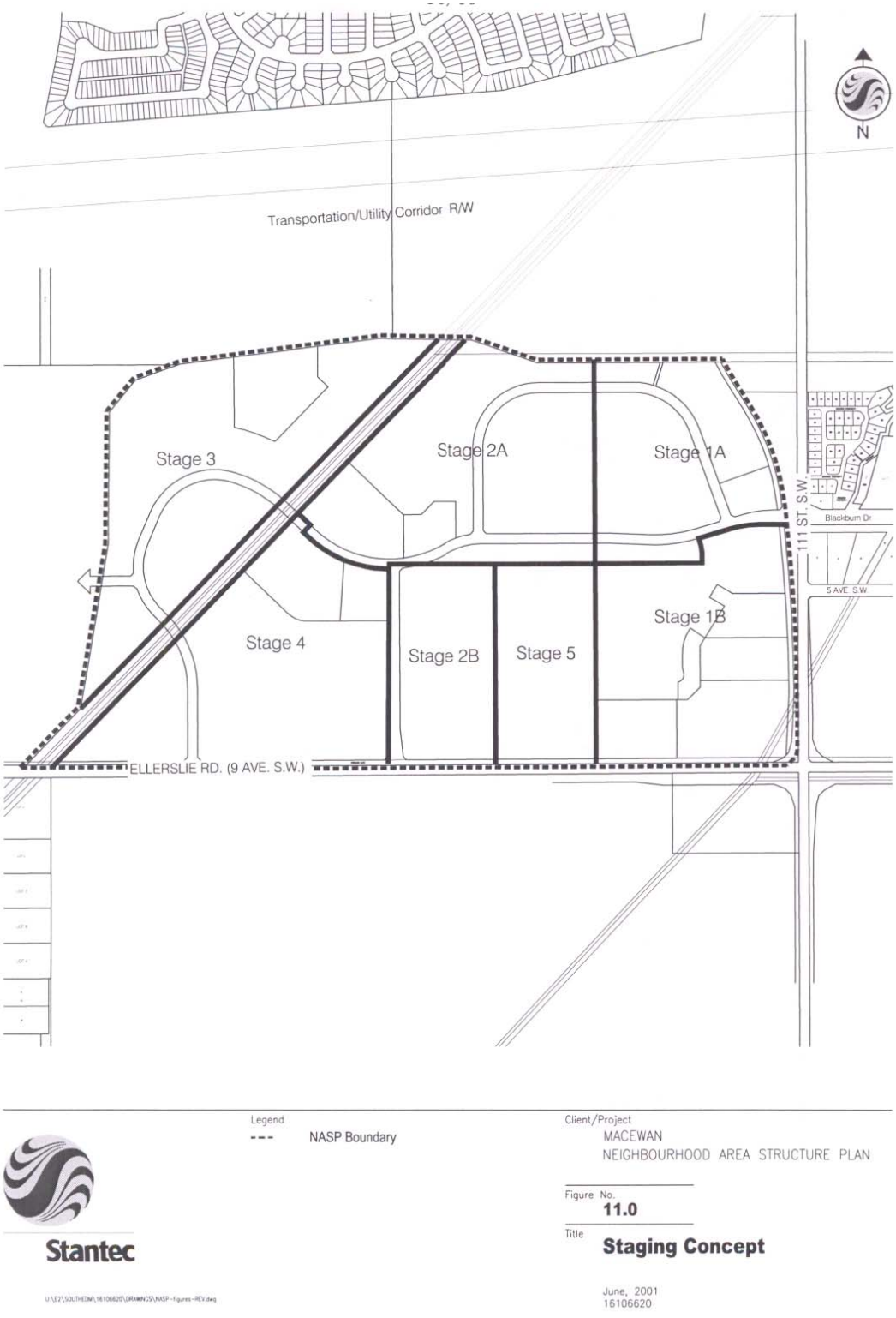
Infrastructure to service the initial stages of the MacEwan will be extended into the neighbourhood from Ellerslie Road and 111 Street.

As shown on Figure 11.0 – Staging Concept, the initial stages of residential development is intended to begin off 111 Street on both sides of the collector roadway entrance. Development will proceed in an east to west fashion depending on the demands of the market and aspirations of the respective landowners.

8.2 Rezoning and Subdivision

Rezoning and subdivision of the land to conform with the land uses designated in the NASP will be undertaken when necessary.

Figure 11* Staging Concept



*** Bylaw 12860 August 21, 2001**

TABLE 3*

MacEwan Neighbourhood Structure Plan
Land Use and Population Statistics

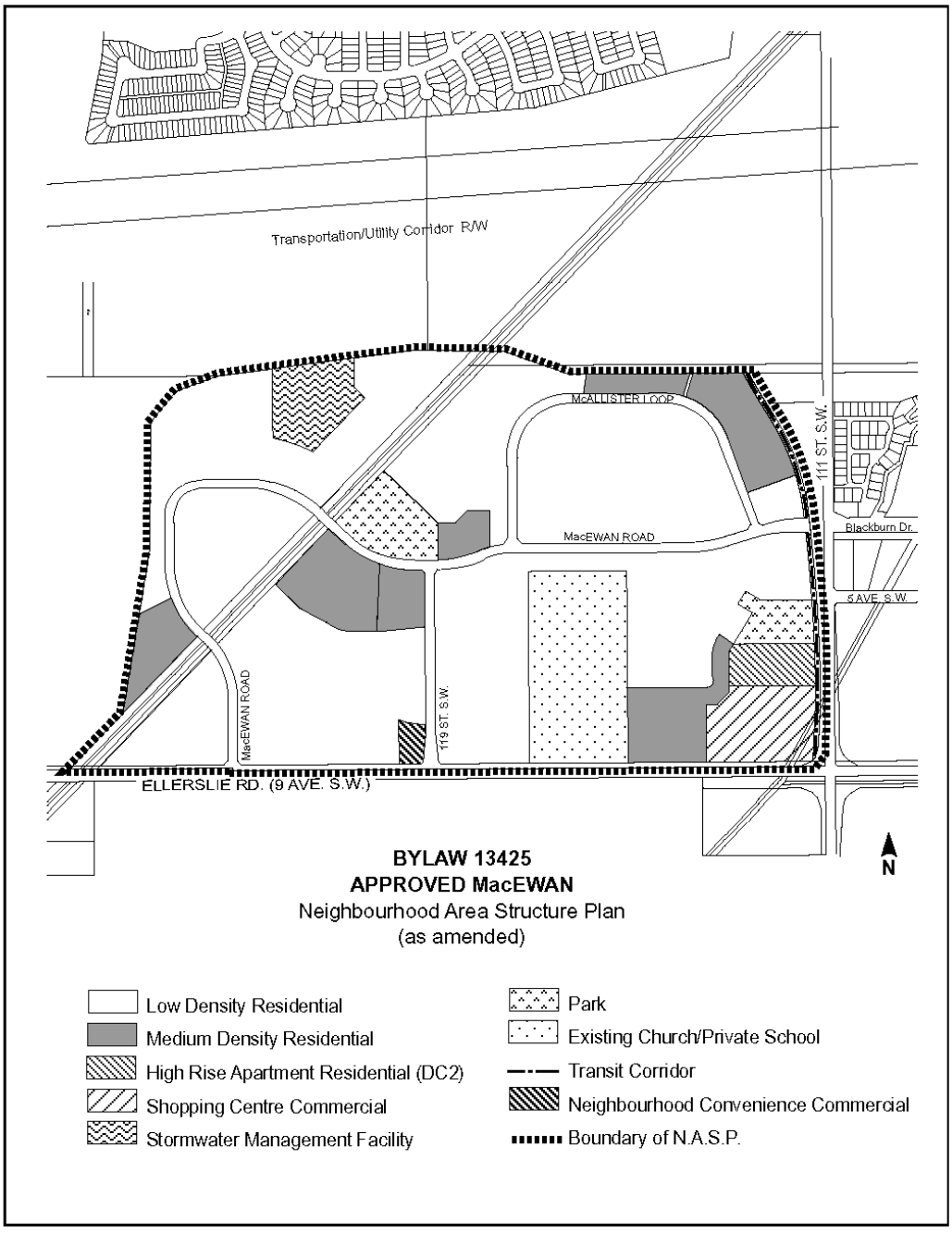
	Area (ha)	% of GDA
Gross Area	**111.36**	
Pipeline Right-of-Way	5.14	
Arterial Road Widening	3.03	
Gross Developable Area	**103.19**	**100**
Stormwater Management Facility	2.55	2.5
Parks and Schools:		
Central Park	2.45	2.4
North Virginia Park Woodland	1.30	1.3
Existing Church Property	7.90	7.6
Circulation	20.64	20
Net Developable Area	**68.35**	**66.2**
Commercial – Shopping Centre	3.3	3.2
Neighbourhood	0.42	0.4
	3.72	3.6
Net Residential Area	**64.63**	**62.6**

	Area (ha)	**Dwelling**	**Units/ha**	**Persons/ Units**	**Unit**
Low Density Residential	50.8	22	1,118	3.46	3,868
Medium Density Residential	12.33	50	616	2.98	1,836
High Density Residential	1.5	150	225	2.05	461
Totals	64.63		1,959		6,165

Density: 30.3 units/net residential ha
Housing Mix: 57% Low Density Residential / 43% Medium and High Density Residential

*** As amended by Bylaw 13425 June 26, 2003**

MAP 1* MacEwan Neighbourhood Area Structure Plan



***Bylaw 13425 June 24, 2003**