Canada

Griesbach

Neighbourhood Area Structure Plan

Office Consolidation
June 2015

Canada Lands Company
Société immobilière du Canada

Stantec

Griesbach Neighbourhood Structure Plan

Office Consolidation June 2015

Prepared by:

Current Planning Branch
Sustainable Development Department
City of Edmonton

Bylaw 12936 (as amended) was adopted by Council in March 2002. In June 2015, this document was consolidated by virtue of the incorporation of the following bylaws, which were amendments to the original Bylaw 12936.

Bylaw 12936	Approved March 18, 2002 (to adopt Griesbach NASP)
Bylaw 13192	Approved October 17, 2002 (Incorporate zoning in Section 900 of Zoning Bylaw, Amend Chapter 8 of Griesbach NASP)
Bylaw 13565	Approved March 1, 2004 (Expand Aging –in-Place Campus)
Bylaw 14234	Approved March 23, 2006 (Revise Medium Density, Waterway and Parks in south portion of NASP)
Bylaw 14531	Approved May 4, 2007 (Re-designate Low Density Residential uses to Municipal Reserve uses and Medium Density Residential uses and reconfigure the north boundary of the Village Centre)
Bylaw 14631	Approved July 9, 2007 (Provide development of a linear park and allow for the development of a non-standard design of single and semi-detached residential development)
Bylaw 15337	Approved January 20, 2010 (Switch the location of land identified for Low Density Residential with Minor Row Housing uses with land identified for School/Recreation uses)
Bylaw 15314	Approved April 28, 2010 (Redesigns the circulation and stormwater management system, reconfigures the mixed use residential and the westerly school site, realigns portions of the road network, enhances pedestrian links to the central park and redistributes low and medium density residential uses in the western area of the Plan.)
Bylaw 17228	Approved June 9, 2015 (Re-designate a portion of Medium Density Residential uses to Local Commercial uses to extend the commercial area along Ad Astra Boulevard).

Editor's Note:

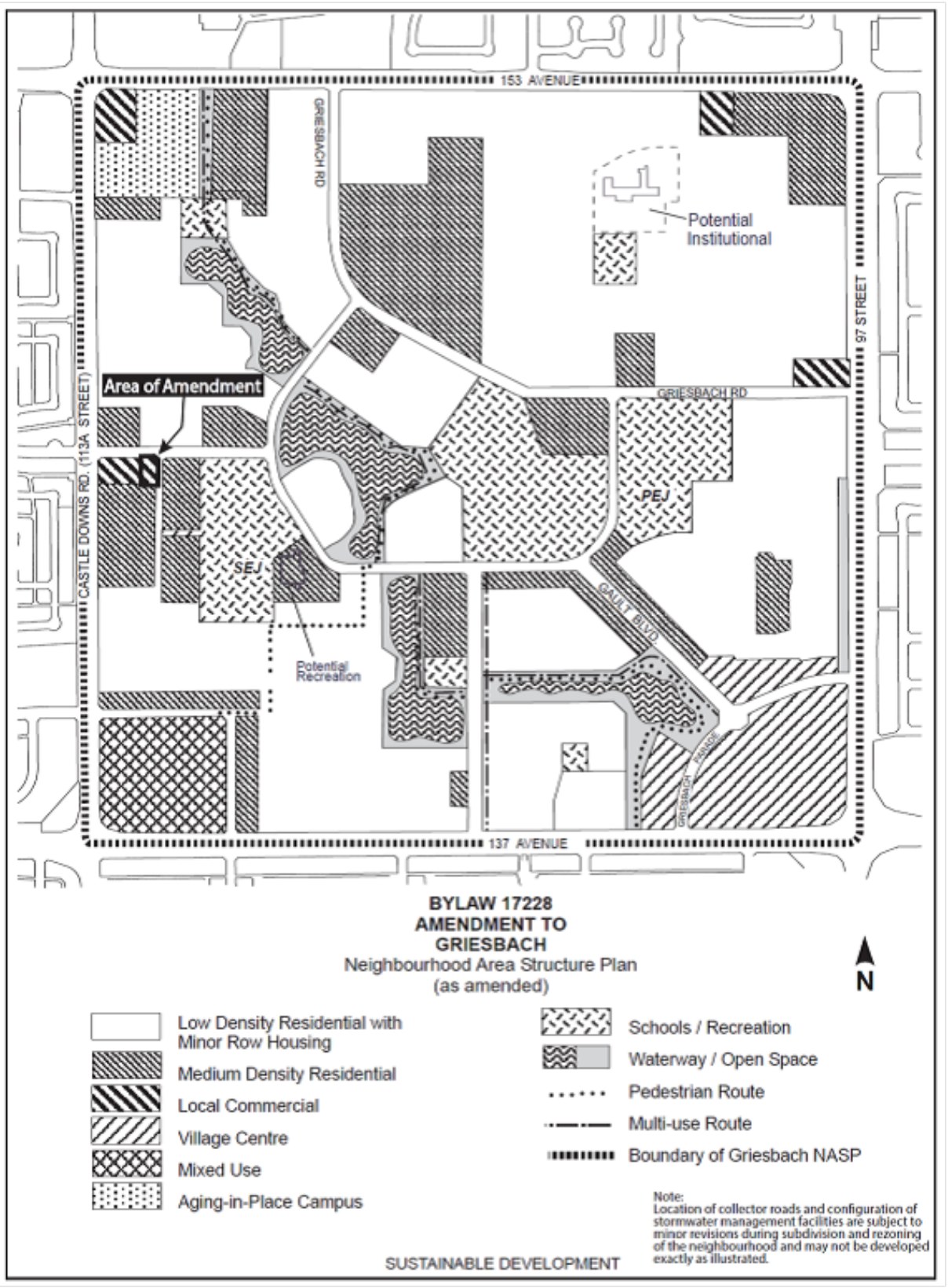
This is an office consolidation edition of the Griesbach Neighbourhood Area Structure Plan, Bylaw 12936, as approved by City Council on March 18, 2002. This edition contains all subsequent amendments and additions to Bylaw 12936. For the sake of clarity, new maps and a standardized format were utilized 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 and are gray-scaled and 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
Sustainable Development Department

Map 1* Griesbach Neighbourhood Area Structure Plan

As amended by Bylaw 17228 Approved June 9, 2015



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1. Introduction

Introduction

Note: This section was amended by the Editor

Developed as a National Defence facility in the 1950s, Canadian Forces Base Griesbach became available for new uses because of the consolidation of armed forces activity at Lancaster Park.

On behalf of *the developer, a Crown Corporation* Stantec Consulting requested that Edmonton City Council authorize the preparation of a neighbourhood area structure plan for the former CFB Griesbach. After receiving a favourable recommendation from the Planning and Development Department, City Council authorized an area structure planning process on January 30, 2001.

This planning process was to require a realistic level of study and analysis; encourage effective public participation; minimize the time for development approval; foster the orderly, efficient and economic development and redevelopment of the site; and find the right balance between certainty and flexibility for a statutory plan to guide long term site development.

This plan contains maps and narrative that address conformity with *Plan Edmonton*; includes an analysis of existing conditions, states development objectives, describes the movement network, addresses the environmental impact, expresses development and design guidelines for the various land uses and their inter-relationships, identifies major servicing infrastructure, outlines an implementation and staging sequence, and presents a statistical summary of land use, population, and school students.

This plan is complemented by various supporting documents. These include a traffic impact assessment, a phase 1 environmental site assessment, a tree inventory, and an area servicing report.

Location

The plan area, as shown on ***Figure 1.0: Location Plan***, includes all those lands in north Edmonton surrounded by 97 Street on the east, 137 Avenue on the south, Castle Downs Road (113A Street) on the west, and 153 Avenue on the north. The plan area is northwest of the 97 Street/137 Avenue commercial node containing Northtown Mall, Northwood Mall, and the Rosslyn Hotel.

The surrounding neighbourhoods include Evansdale and Northmount on the east, Rosslyn on the south, Carlisle and Caernarvon on the west, and Beaumaris on the north. The Castle Downs Town Centre is directly north adjacent to Lake Beaumaris.

Ownership

Note: This section was amended by the Editor

The parcels and their current ownership are shown on ***Figure 2.0: Ownership***. *The Government of Canada is* finalizing details of the land transfer process that is to be completed over the next few months. *A Crown Corporation* will become the new landowner.

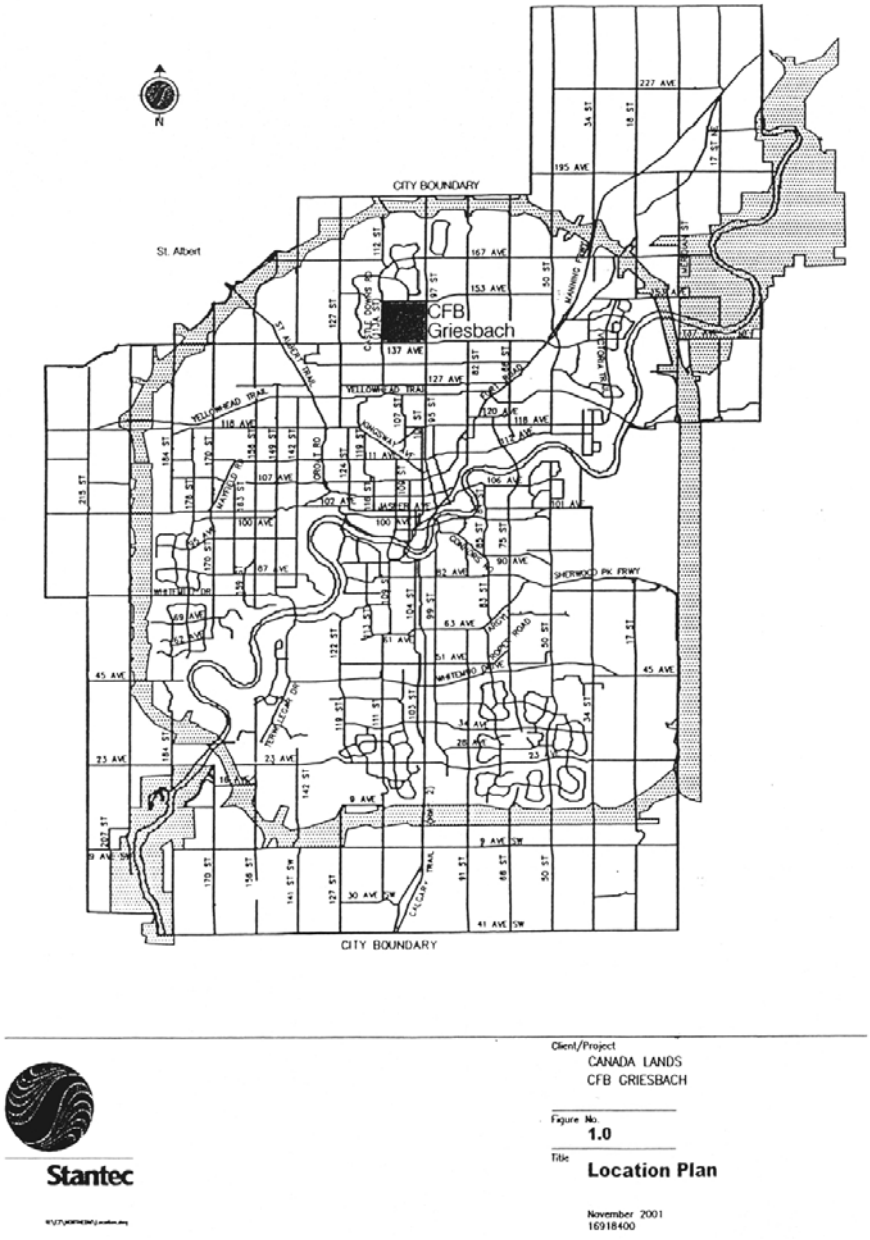
There is one minority *private land* owner in the plan area with a small already developed commercial site that was subdivided out of the northwest corner years ago.

The plan area contains approximately 250 ha (620 acres) consisting of four quarter sections with some road widenings removed from the titles. There is an easement along the edge of 97 Street for sewer and telephone lines.

The plan area is a well-defined planning unit of consolidated ownership and independent character. City Council will be asked to approve this as a neighbourhood area structure plan.

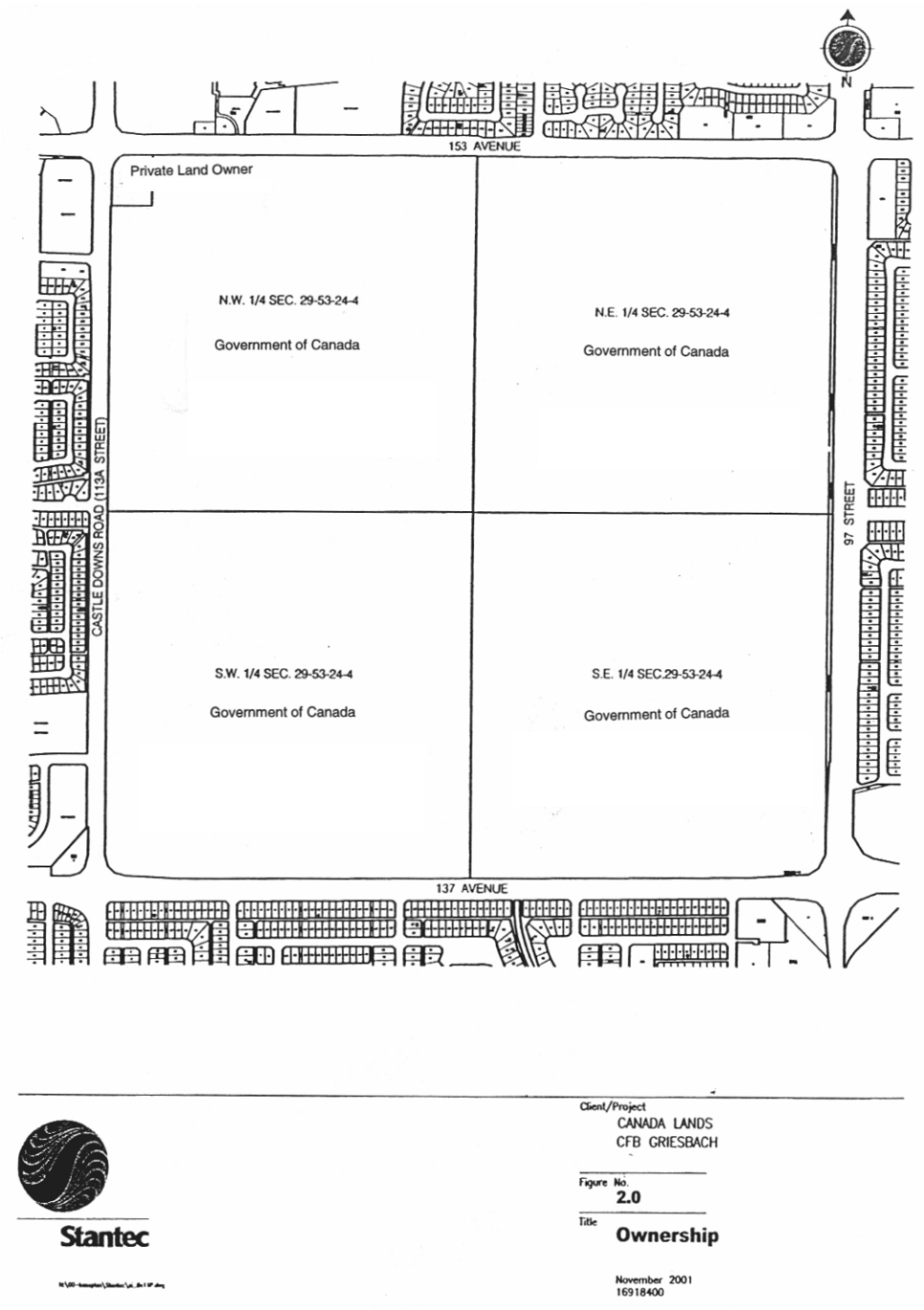
The photo above is courtesy of Major (Ret.) David Haas. He is the curator of the Loyal Edmonton Regiment Museum. It is a picture he took of his father, at Griesbach, in 1960.

Figure 1* Location Plan



***Bylaw 12936 March 18, 2002**

Figure 2* Ownership



***Bylaw 12936 March 18, 2002, as Amended by the Editor**

Major General Griesbach, CB, CMG, DSO, VD, KC

CFB Griesbach was named after Major General William 'Billy' Antrobus Griesbach.

Born in 1878 at Fort Qu'Appelle in what is now Saskatchewan, he moved to the Edmonton area in 1883 when his father (an original member of the NWMP) was transferred to head the Fort Saskatchewan detachment. The family then moved to Edmonton in 1886, when the population of Edmonton was less than 300.

He took his early schooling here before going to St. John's College School in Winnipeg. He returned to Edmonton as a junior articled clerk in a local law office. He was active in the local athletic community and a member of the local volunteer fire department. Mr. Griesbach worked at the Imperial Bank for a while before completing his law examinations.

Mr. Griesbach served, for two years, in the South African War as part of the Canadian Mounted Rifles. He was awarded the Queen's Medal with four clasps. Returning to Edmonton in 1901, he soon became an alderman of the City of Edmonton, then was elected its youngest mayor, at age 29, in December 1906.

He returned to his law practice, which he continued for many years, becoming King's Counsel in 1918. He became an officer of the 19th Alberta Dragoons reserve militia, was sent overseas as a cavalry officer, then raised and commanded the 49th Battalion, Canadian Expeditionary Force in World War I in which he served, until appointed Brigadier and commanded an infantry brigade. He was twice decorated for gallantry under fire. He was described as a fearless soldier and resourceful officer in the thick of much of the heavy fighting on the western front.

Major General Griesbach was elected as Member of Parliament for Edmonton West in 1917. He was appointed to the Canadian Senate in 1921. During World War II, he was recalled to serve as Inspector General of Western Canadian Forces.

In an editorial in 1951, the *Edmonton Journal* stated *in deciding to name the huge Army centre north of the city in honour of the late Major-General Griesbach, federal defence authorities have taken a step which will have the immediate and unanimous approval of the people of Edmonton.*

Photos courtesy of City of Edmonton Archives.

Inspector General Griesbach died in 1945. As he wrote in his autobiography, *to recognize the **opportunity**, to seize it and exploit it is, it seems to me, the difference between success and failure.*

The Opportunities

Note: This section was amended by the Editor

The site is large, strategically located, and surrounded by existing development in North Edmonton. The adjacent communities will benefit from integrating Griesbach with the surrounding context.

As the site is partially occupied, the plan area can be kept active and vibrant through the redevelopment process. There is potential for various interim and transitional uses for the existing buildings and site until full development is reached.

There is opportunity to maximize the positive community value that will come from respecting unique site features such as the significant trees and recreation facilities. There are two existing school buildings and a recreation centre that can be incorporated into the future land use plan.

The site is already well serviced by existing arterial roads that bound the site. Existing or proposed utility services can be integrated with the surrounding infrastructure systems. Being adjacent to the Northgate Transit Centre on 97 Street, the site has very good public transit access.

All these positive factors can be exploited in a comprehensive manner in building a new community. Redevelopment and the development of large vacant areas, combined with the community emphasis of *a Crown Corporation*, provides the opportunity to build a unique community.

The Process

Note: This section was amended by the Editor

A Crown Corporation hired a consulting team to collaborate with the City Administration, the school boards, other agencies, and the community. It has been *the developer's* intention to develop consensus on planning and servicing proposals for the area. The consulting team was Stantec Consulting for project management, planning and transportation; UMA for engineering and landscape; Earth Tech for environmental; and IBI for market analysis.

The public participation process for area structure plans as outlined in the City of Edmonton's *Planning and Development Handbook* was followed. This included early notification of ward councillors, community leagues, and adjacent property owners. Discussion with the public took place throughout the review of the plan. The plan proponents and the City Administration solicited input, include holding a public meeting and an open house to discuss and identify any public concerns. This was supplemented with a series of meetings with area community leagues and interest groups.

The developer is working with the Department of National Defense and the Canadian Forces Housing Association to ensure that their needs are incorporated in an orderly transition of land ownership, redevelopment, and development.

Ultimately, the plan will be formally advertised according to the provisions of the *Municipal Government Act* and City procedures with a public hearing held by Edmonton City Council.

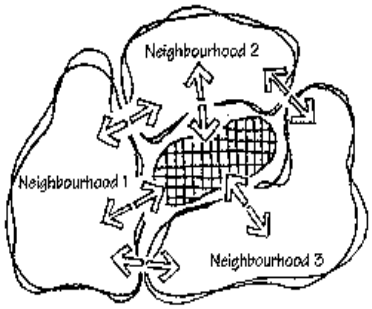
Timing

Note: This section was amended by the Editor

It is the desire of *the developer* to have a neighbourhood area structure plan approved in order to continue the subdivision and rezoning process so construction could begin on the first phases in 2002.

The photo above is looking southeast towards Griesbach over the Castle Downs town centre and Lake Beaumaris.

2. Policy Context



Introduction

The City of Edmonton guides its land use planning process through a hierarchy of plans. This includes the municipal development plan, area structure plans, neighbourhood area structure plans, and neighbourhood structure plans.

This plan, as a link between the *Municipal Development Plan* and implementation, is to be a guide for future rezoning, subdivision, and development.

Conformity with Plan Edmonton

Plan Edmonton, 1998 is a 'big picture' plan that outlines broad policies of growth and development. There are two main considerations.

First, it is a requirement that a new neighbourhood area structure plan be consistent with the overall community growth strategy defined in *Plan Edmonton*. In other words, the plan must be prepared with an understanding of how the development and redevelopment fits within the context of not only north Edmonton, but also the City as a whole.

One thrust of Edmonton's planned growth strategy is *make the most of what we have already built.* This encourages development, redevelopment, and renewal of an area like CFB Griesbach, especially given its proximity to existing infrastructure and major arterial roads. CFB Griesbach falls within the 'Mature Area' as defined on *Map 1: Land Development Concept*.

Plan Edmonton includes the following strategies in support of the wise redevelopment of Griesbach

- **Strategy 1.3.3**: support contiguous development that is adjacent to existing development in order to accommodate growth in an orderly and economical fashion;
- **Strategy 1.3.4**: promote intensification of development around transportation corridors and employment areas; and
- **Strategy 1.3.5**: support increased densities of land use through infill development that is sensitive to existing development.

Second, the neighbourhood area structure plan must apply the principles of *Plan Edmonton.* This includes the promotion of urban design principles that contribute to the safety, attractiveness, and convenience of neighbourhoods. Residential areas are to provide for choice of housing style and density, including a mix of single and multiple -unit housing. Plans will provide for a variety of business areas appropriate to these activities.

Conformity of the proposed neighbourhood area structure plan with *Plan Edmonton* will be ensured through the planning process.

Housing Mix Guideline

Historically, the City of Edmonton had not established as a policy requirement a numerical proportion for the housing mix for specific new residential development. Instead, the City encouraged a mix of housing types to accommodate a range of housing needs.

About ten years ago, Council adopted a guideline (and not a policy) to evaluate new development areas using housing mix ranges of 15% to 35% multiple units and 65% to 85% single family units.

While this may be appropriate in the context of new suburban developments, it is not appropriate for a comprehensively planned development, such as Griesbach with its unique features, within the area designated as 'Mature Area' by *Plan Edmonton.*

The diagram above illustrates focusing on community features from the City of Edmonton's *Suburban Neighbourhood Design Principles*

Suburban Planning Guidelines

The City of Edmonton's *Suburban Neighbourhood Design Principles* describes a variety of design principles intended to encourage flexibility in the design and servicing of new neighbourhoods. There are some key suggestions that can be accommodated in the redesign of CFB Griesbach, including the following:

- design the community to focus on community features and share common infrastructure;
- schools and community facilities should provide inter-neighbourhood focal points;
- distribute neighbourhood traffic on a multitude of streets that access the grid system;
- accommodate pedestrians, cyclists, and vehicles by designing roads to their purpose;
- provide circulation systems to match destinations within and outside the neighbourhood;
- locate key transit users and destinations at inter-neighbourhood focal points and edges with good access;
- provide for schools in early development phases;
- ensure that neighbourhood design accounts for life cycle changes;
- disperse parks and open space to meet local needs;
- optimize by sharing land and facilities to reduce costs;
- create a linked open space system of parks, ponds, and schools;
- locate multiple-unit housing at edges and focal points; and
- use stormwater management to provide an alternative to typical lakes/ponds

It is only through the interplay of these principles, rather than focusing on one to the exclusion of the others, that *community building* can be achieved.

3. Site Features

Site History

The decision to locate a huge multi-million dollar ordinance plant in Edmonton to supply armed forces in Western Canada was announced in 1949. The site was purchased for $233,000. After site location and planning approvals, construction started on the Griesbach site in late 1950. The first PMQs (family housing) were built for $7200 each. Construction of the site, including armed forces facilities and the supporting residential community, was completed by the late 1950s.

Over the last 50 years, Griesbach has housed many military personnel- whether in barracks or families in the married quarters. Children went to school here, customers bought gas at the Canex, people played hockey and worked out at the gym.

With the decision in the mid-1990s to consolidate several army bases at Lancaster Park (at Namao, north of Edmonton), activities at Griesbach have started to wind down. By the end of 2000, many facilities had been relocated to Namao. The relocation of the remaining armed forces facilities is scheduled for an orderly transition over the coming years.

A small commercial centre was subdivided and developed at the very northwest corner of the plan area.

There will be, of course, many opportunities to embrace the military history, as important as it is to Edmonton, into the redevelopment of Griesbach. However, there are no buildings older than the early 1950s or any of significant architectural value.

Surrounding Uses

Since CFB Griesbach was developed in the 1950s, the City of Edmonton has expanded and developed to surround Griesbach.

The site is bounded on all four sides by major arterial roadways. Across these arterials, there are a variety of land uses. For the most part, the adjacent land uses are modern suburban residential neighbourhoods (with primarily lower density single and multiple-unit housing) that back onto the arterials. The Rosslyn neighbourhood to the south, however, fronts on to a service road and directly faces Griesbach.

There are a variety of other key uses that are adjacent. These include the major commercial concentration at 97 Street/137 Avenue, the Castle Downs Town Center to the north, the Castle Downs district park to the northwest, and smaller commercial sites to the north and west.

The former CN rail line to Griesbach, now abandoned, provides a path from 137 Avenue as far as the Calder Yards.

Topography

The site is flat, with an elevation at about 675 m. The west edge rises to 677 m while the southeast corner slopes slightly to an elevation of about 673.5 m.

This relatively flat topography, under the circumstances, presents no major challenges to servicing. It does, however, suggest that urban design can be advanced through thoughtful manipulation of site grading.

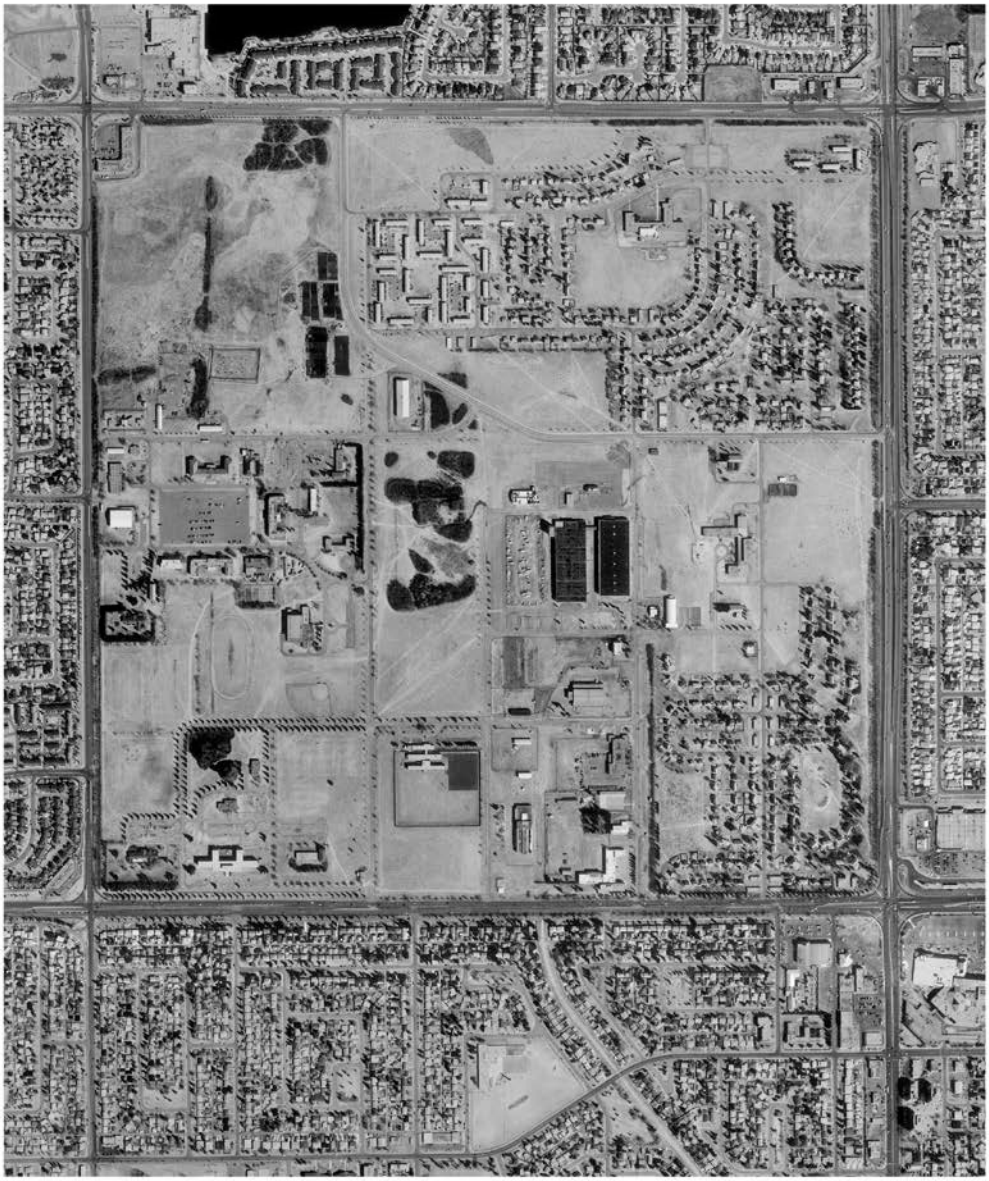
Existing Uses

Note: This section was amended by Bylaw 15337, January 2010 and by the Editor

Site features are shown on ***Figure 3.0: Air Photo*** and on ***Figure 11: Existing Buildings*** in the ***Appendix***. The site has two areas developed as PMQs, most of which are still occupied by armed forces personnel and some other federal civilian personnel. These are located in the southeast corner and in the area north of Griesbach (the existing bus route). They contain approximately 750 dwellings in single, semi-detached, and row housing units. This housing was mostly constructed in the 1950s, partially on the Radburn concept of focusing on a walkway system.

Above are David Haas (the tall one), his mother, and two brothers as Griesbach looked in 1960.

Figure 3* Air Photo



Note: All buildings are identified on Figure 11 in the Appendix

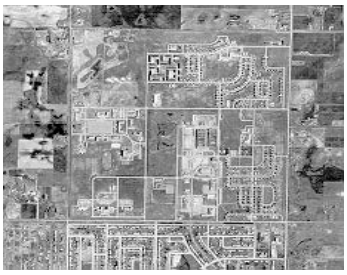
Stantec

Client/Project
CANADA LANDS
CFB GRIESBACH

Figure No.
3.0

Title
Air Photo

November 2001
161118400



Reflecting four decades of military use, armed forces' buildings that are either already abandoned or will soon be vacated occupy significant areas of the site. Their locations can be categorized as follows:

- a more 'industrial' area of warehouses and service buildings centered on the alignment of the previous rail line (including the power plant and the former pumphouse) along the west side of 102 Street;
- the barracks area, including the drill hall, on the west side around the old parade square;
- other uses, such as the recreation centre and its playing fields, are located on the edge of the barracks area; and
- the office and military services area in the southwest corner of the site, including the former jail.

There are various buildings (residential, recreation centres, and churches, etc.) that may be incorporated into the final plan. *As of December 2008, there are three (3) buildings listed on the City's Inventory of Historic Resources in Edmonton. The buildings include Major General Griesbach School, the Quarter Master and Technical Stores and the Quarter Master Stores (Building H20). In order to implement the Province's proposal for the construction of a new school, a notification to City Council regarding the demolition of the Major General Griesbach School must be made in a report to City Council.* Several of the existing buildings can be adapted for interim uses as the site is redeveloped.

There are significant areas of vacant land in all portions of Griesbach.

There are two schools:

- *Major General Griesbach School located south of Griesbach Road is a Public School; and*
- *Brigadier General Hamilton Gault School located between 153 Avenue and Griesbach Road, is being used on an interim basis as the headquarters for Land Forces Western Area.*

Both existing school sites are readily accessible by a variety of existing roads.

A small commercial centre was subdivided and developed at the very northwest corner of the plan area. It is modern, prosperous, and no changes are anticipated.

Environmental Assessments

A Phase 1 Environmental Site Assessment was researched and prepared in accordance with Canadian Standards Association document *CSA Z768-94, Phase I Environmental Site Assessment*.

Its purpose was to determine whether there is any evidence suggesting the potential for contamination to exist on the property due to both on and off-site sources. Aerial photographs, historical land titles, municipal, provincial and federal records, previous environmental reports, DND files and historical drawings were examined. Site inspections of the buildings and grounds were also completed along with interviews of people familiar with the site and its operations.

Compared to other bases, this site is in good shape from an environmental perspective. Uses have been well documented, it was not developed until after WWII, and is in its original format without layers of redevelopment. A total of 33 areas of concern were identified by the Phase I ESA, as shown on ***Figure 12: Environmental*** (and listed in its accompanying table) in the ***Appendix***. Most are anticipated to be relatively minor and easily dealt with. A detailed subsurface investigation at these areas is recommended in order to determine if subsurface contamination actually exists and to accurately delineate previously identified contamination. In order to allow for future redevelopment of this property, all these areas of concern will be investigated and remediated to the applicable criteria for the designated future land use. This investigative work is now underway by DND and will define required remediation. The remediation work will be completed prior to or be determined through the rezoning process.

The areas of concern generally relate to the storage and handling of petroleum products and storage and disposal of hazardous materials.

The air photo above shows Griesbach as it looked in the early 60's.

Airports

Note: This section was amended by the Editor

Because of its distance from the Namao airport and the orientation of the runways there, CFB Griesbach is not impacted by any airport protection regulations. Height limitations for the northern approach to City Centre airport apply to Griesbach, but they are high enough this far from the airport not to impact on the proposed development heights.

Vegetation

Note: This section was amended by the Editor

Redevelopment of Griesbach will retain as much of the existing plant material as possible and incorporate it into the fabric of the proposed neighbourhood. This view is strongly held by both *the Crown Corporation* and the neighbouring communities. As a first step to accomplish this, a tree inventory was undertaken to provide recommendations on how best to incorporate the existing trees.

A 'broad brush' inventory documented the species, approximate size and condition of the existing trees found within the military and residential areas on-site. A variety of styles planting were identified (shelterbelt, native stand, boulevard, etc.) in the *CFB Griesbach Tree Inventory*. Approximate anticipated life expectancies of the existing plant materials and the expected viability of the vegetation, with regard to construction and rehabilitation were also documented. This determined if retention is viable for each species and/or style of planting. Each area of trees was ranked on aesthetics, i.e., how the plant material could contribute from a visual perspective to the future neighbourhood. The resulting analysis was utilized to refine the design concept to enhance tree retention.

Perimeter planting is ranked highly along with selected sites within the neighbourhood. Street tree planting rankings vary dependant upon species, condition and location as do foundation and shelterbelt plantings. Details of the ranking are found within the inventory report. Largely, the planting within CFB Griesbach is of an ornamental character with the majority of trees being planted in a boulevard, foundation planting or shelterbelt style.

The top photo was taken in 2001 of boulevard trees in the southwest corner. The bottom photo, from 1997, looks northwest across the corner of 97 Street/137 Avenue over Griesbach.

Species include but are not limited to spruce, pine, crabapple, birch, bur oak, amur maple, willow, elm, caragana, honeysuckle, and ash. Conditions of each planting vary considerably and will require additional review during detailed design to fully determine their viability within the new development.

Native stands are also found within the neighbourhood. Species such as trembling aspen, poplar, dogwood, buffaloberry, saskatoon, willow, raspberry and rose dominate these stands. Again ranking varies, with four of the twenty-four stands identified as being of high aesthetic value – that is, in good condition and having a high potential for retention. The remaining stands show signs of disease and disturbance to varying levels.

Recommendations were made for future, more detailed analysis of the site and plant material, maintenance of the existing plant material, considerations of plant material in subdivision planning and an implementation program for the protection and incorporation of plant material during construction.

This report will also provide a base level of information for future, detailed site planning. Additional, more detailed inventory and analysis will have to be undertaken as the planning and development process progresses.

Road System

The existing road system within Griesbach appears to have evolved in a rather ad hoc manner, corresponding to the needs of residential, industrial, and office accessibility requirements as the base developed. In residential areas, crescents and loop roads are common. Parking is typically grouped in communal garages within residential areas. In the remainder of the site, grid-style roads are more typical, with multiple access points onto the bounding arterial roads. The Griesbach access points are often offset from local and collector accesses to neighboring communities, creating closely-spaced T-intersections. One of the access routes (onto 153 Avenue) passes through a parking lot that has been developed on either side of the roadway.

Griesbach Road, the transit route from 153 Avenue to 97 Street now serving the community, was realigned a number of years ago to a somewhat curvilinear alignment through the north portion of the community. Moving the intersection north reduced the potential for shortcutting.

4. Planning Principles

Overall Objective

Note: This section was amended by the Editor

The developer, as an arms-length non-agent federal Crown corporation, optimizes value for the Government of Canada through the management, redevelopment, development, or timely sale of land no longer required for federal programs. In carrying out its mandate in a self-funding manner, *the developer* implements innovative property solutions and contributes to the economic revitalization of communities.

Redevelopment of Griesbach presents unique opportunities for innovative, community oriented, and environmentally friendly design. As such, *the developer's* objectives are to build a better community, involve the public in planning these communities, and achieve good financial results.

The overall objective is to transform the existing military base into an award winning community to be appreciated by its future residents.

Community

The focus is on a well-planned community. The plan will provide a framework for delivering a high quality, comprehensively planned community. A range of complementary uses such as commercial, recreational, and institutional will support the community. This is consistent with the desire to minimize travel requirements.

Housing

There will be an integrated wide range of housing, from affordable new and refurbished housing to new upper end housing and including innovative lotting configurations. This will provide for an eclectic and mixed residential community that caters to a wide variety of consumer choice, including singles, young families, empty nesters, and seniors.

Urban Design

The plan will develop a community that respects nature by preserving existing trees wherever possible into the new community pattern, provides safe streets and areas, establishes high quality in the public realm, and recognizes and celebrates the heritage of the site. Axial roads focusing on the central park, an orientation of housing towards the street, a linear waterway, and a pedestrian scale village centre will ensure a unique urban experience. Design will foster a safer community by being responsive to the principles of crime prevention through environmental design as discussed in Edmonton's *Design Guide for a Safer City*.

Reuse

Note: This section was amended by the Editor

The planning process will account for transitional and interim uses to ensure efficiencies and the maintenance of a vibrant site throughout the development process. As part of this, much housing will be reused.

Other existing facilities will be reused where possible to maximize efficiencies and amenity value for the community (amended by Bylaw 15337 January 20, 2010).

Recreation

A major and centrally located park will be the focus of recreation and circulation systems. Integrating a path with an extended waterway provides opportunities for recreation and access to community facilities. Some park space is dispersed to provide convenient local access in all sectors of the plan. There will be a diversity of recreation opportunities.

Integration

On a broad scale, the community will fit with and be connected to adjacent neighbourhoods through the roadway system, public transit, waterway pathways, and bike routes. Within the plan area, lands uses will be integrated into a functioning and attractive community.

Movement

The plan will provide a circulation system that supports the land use patterns and urban design concept by providing many optional routes for vehicles, bicycles, pedestrians, and transit.

The circulation system blends suburban and inner-city design principles for movement, reflecting the unique characteristics and potential of the area while recognizing the need to provide facilities consistent with user expectations and established design practices. To achieve the overall objectives of the development, movement is to be accommodated through customization of transportation facilities (e.g. roadway cross-sections, alignments, intersection treatments, transit service principles, pedestrian/bicycle provisions). This approach focuses on performance of movement systems, and does not necessarily require 'reductions' relative to normal practices.

Services

The plan will foster an economical servicing system, as a logical staged extension of existing systems, that supports the land use concept. Existing services will service continuing activity and will be reused, where it can be incorporated into new development.

Implementation

The project will be implemented through phased rezonings and subdivisions that match development and market demand. Any necessary environmental site remediation will be completed before reuse.

Plan changes and approvals will provide for community input and the interplay of market forces. There will be an orderly transition for the exit of the military and continuation, for some period, of existing military housing.

The photo above illustrates townhouses oriented to a high quality urban space. The photo below shows a high quality urban space, interpreting the military history, ringed by street oriented housing.

5. The Plan

Overall Concept

Note: This section was amended by Bylaw 15337, January 2010 and the Editor.

The one-mile square site has been planned on a comprehensive and integrated manner. ***Figure 4.0: Development Concept*** illustrates the overall system for land use and movement.

The roadway network focuses on a large central community park. The surrounding residential area is primarily single detached housing, with ground oriented multiple-unit housing and apartments at locations with amenity and good access.

Two school sites and the recreation centre have been incorporated into the plan. Significant amenity is introduced into large areas of the plan by including a waterway with a parallel walkway system. A commercial village centre has been located at the key transportation node at the southeast corner. A potential mixed-use business campus has been designated in the southwest corner.

Residential

Note: This section was amended by Bylaw 13192, October 2002; Bylaw 15337, January 2010; and the Editor.

Residential development is the major thrust of the plan. *The developer* want to provide a wide variety of housing in the area suitable for a wide variety of households. This will include:

- **Low density residential**

The site now contains a mix of low density (single detached and semi-detached) housing in two main clusters north and south of Griesbach Road (the existing bus route). Some of these units, particularly in the southeast corner, will be removed or relocated to other designated low density residential areas.

Areas for the rehabilitation and infill of existing low density military housing are located primarily in the sector north of Griesbach Road and that area between Major General Griesbach School and the village centre. Where salvageable marketable housing remains, there will be renovation and refurbishment as well as infill of either new or relocated housing.

Relocation and refurbishment of existing Permanent Married Quarters (PMQs) will be phased in conjunction with military requirements. Some newly developing areas will absorb relocated housing in the early stages. The low-density residential areas further to the west will be developed with new single and semi-detached dwellings.

The developer wishes to stress variety of low density housing opportunities so as to contribute to a lively and eclectic community. This will meet consumer preference for a variety of lot and house sizes, price ranges, and styles.

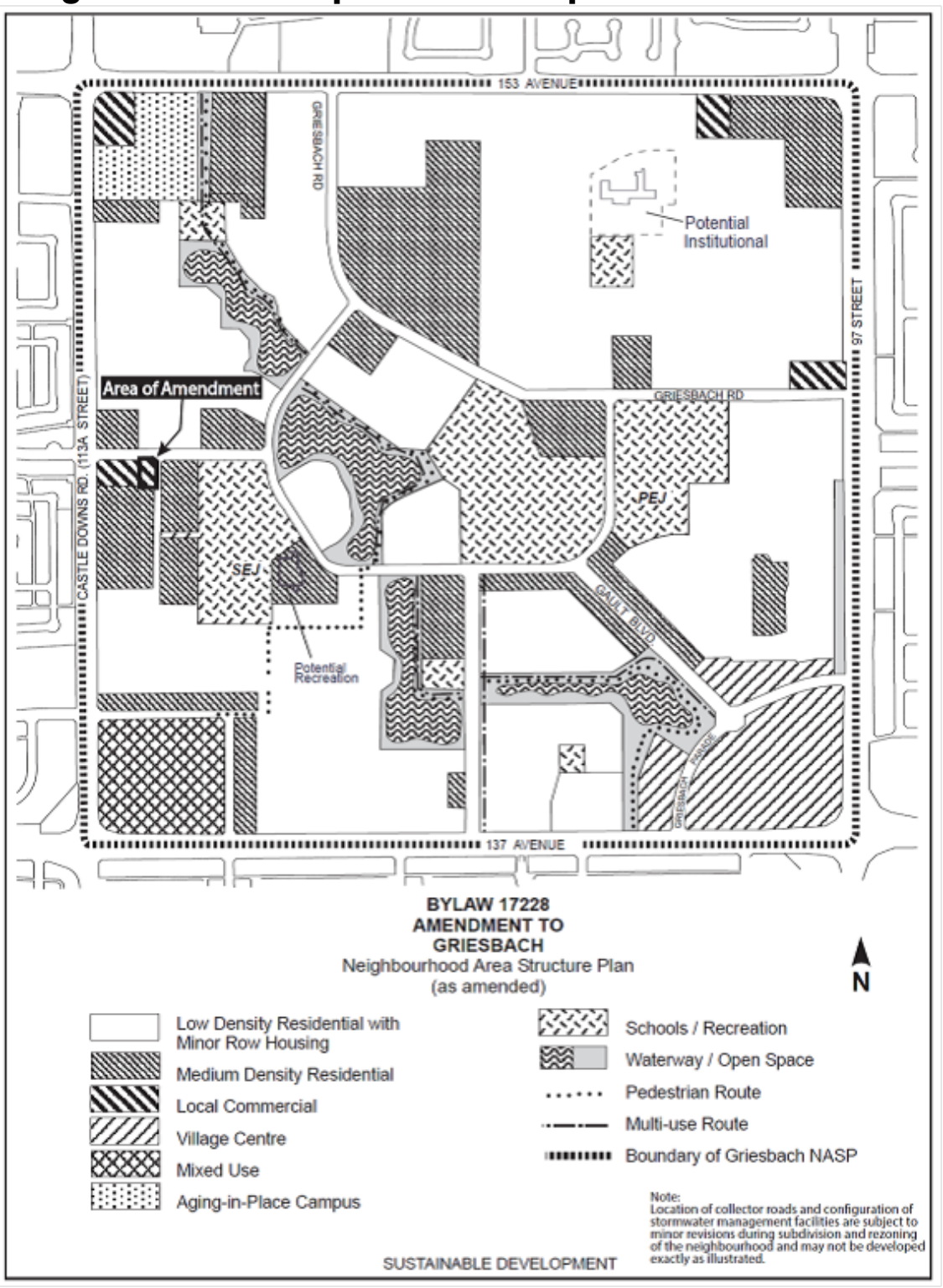
Where low-density residential land uses are located adjacent to 97 Street, design provisions will be made to mitigate traffic noise impacts. The design provisions will vary along 97 Street and may include customized lot configurations for new and relocated housing (e.g., flanking-on), architectural controls incorporating noise-mitigating features, or solid-barrier screen fencing. Where lots and streets adjacent to 97 Street are retained as existing, mitigation measures may be negligible since the rear amenity space is further from 97 Street and sheltered by houses. In all cases, design provisions will recognize the importance of preserving the tree line along 97 Street.

The low density areas will allow for a minor degree of row housing, primarily in the form of street oriented units with lane access. This will allow for a greater mix of unit types consistent with project objectives. *Locations will be determined at the subdivision stage* and will be established on the basis that there will not be extended continuous areas of row housing and that no structure will contain more than four units. Row housing may be interspersed within an area being rezoned, but it will not be located on the edge of any individual stage of development where it would abut single detached housing. Row housing shall not exceed 5% of the proposed low density areas.

No less than 50% of the lots in the low density residential areas shall meet a minimum of RF1 dimensions. Further, no more than 20% of the lots in the low density residential areas shall be zoned RPL (zero lot line).

The photo above shows how a military semi-detached dwelling can be refurbished.

Figure 4* Development Concept



***Bylaw 17228 June 9, 2015**

- **Medium density residential**

Opportunities exist within Griesbach for a variety of medium density housing forms including townhouses (on both a street oriented and project basis), stacked townhouses, and low-rise apartment buildings.

This housing is concentrated in two basic locations; the village centre and the northeast corner of the neighbourhood.

Future market demand will determine the type of medium density residential pursued in each particular circumstance. *They will be integrated alongside low density housing through sensitive streetscape design and attention to transitioning at the subdivision stage (amended by Bylaw 15337 January 20, 2010).* It is anticipated that seniors housing will be included – there are obvious locations at key amenities and where access to services and public transit is greatest, especially at the village centre.

The residential land area, the number of dwelling units, and the resulting population is detailed in ***Section 9: Statistics***. The proportion of multiple-unit housing is similar to that provided by typical new suburban development, consistent with the City's guidelines for housing proportions in new suburban areas.

In the proposed medium density residential areas a minimum of 200 housing units shall be senior housing, extended care facilities or similar low traffic generating projects.

This density is consistent with *Plan Edmonton* Strategy 1.3.5 which is to s*upport increased densities of land use through infill development that is sensitive to existing development* and Strategy 1.3.4 which is to *promote intensification of development around transportation corridors and employment areas.* This mix of housing will support the village centre - approximately 45% of all multiple housing is located adjacent to the village centre. As well, an aging population is expected to foster more market demand for multiple-unit housing.

Recreation

Note: This section was amended by Bylaw 14234, March 2006, Bylaw 14631, July 2007, Bylaw 15314 and the Editor.

The central park, of approximately 9.0 ha, is a focus that defines the community and integrates the surrounding residential areas. The stormwater lake will be an important aesthetic amenity for the future community. The site is to include some athletic uses, a large man-made hill at the geographic centre of Griesbach, passive recreation, and, where possible, retention of existing high-value vegetation- especially in the southwest corner.

Other recreation space is located in conjunction with schools and the existing Griesbach recreation centre (Building H-2 on Figure 11: Existing Buildings on the Appendix) that will be maintained for community recreation activities. This will be subject to a future agreement between *the developer* and Community Services.

There are four smaller local parks (1 ha and smaller) to provide more amenity and play space for those residential areas in the northwest, northeast, and south that are further removed from school sites and the central community park. The goal of the two smaller park sites in the south is to retain two small, significant stands of trees.

The developer will dedicate, in land, the 10% requirement of the *Municipal Government Act* for schools and parks. The allocation of municipal and school reserves is detailed in ***Section 9: Statistics***.

A linear park will be developed along 97 Street incorporating such features as:

- *1.5 m concrete north-south walkway;*
- *entrance features, legacy signage, and monumentation (in keeping with features previously installed elsewhere in the neighbourhood);*
- *appropriate lighting;*
- *site furniture (i.e. park bench/garbage bins); and*
- *enhanced landscaping.*

The developer will be responsible for all construction and costs associated with the park development as determined at the time of subdivision.

Retention of the remaining trees along 97 Street in accordance with the provisions of the current Neighbourhood Area Structure Plan and the Master Agreement will require alternative measures other than municipal reserve designation. Similarly, if trees along 137 Avenue, 113 Street/Castle Downs Road and/or 153 Avenue are to be retained, this must be achieved by means other than municipal reserve.

Preservation of trees in the neighbourhood will be in accordance with the Master Agreement between Canada Lands and the City of Edmonton and the responsibility of the land owner (developer).

The central hill will be designed and built by the developer with program (i.e., passive and active recreation), aesthetic (landscape), maintenance, drainage and safety (CPTED), geotechnical and environmental) as the governing principles. The program of the central park will be established through a collaborative process to achieve a mutually agreed upon design incorporating the input from key stakeholders including the developer, Parks, Community services and neighbourhood/area recreation groups.

Waterway

The waterway plays an important aesthetic and functional role in the plan. While its primary role is to handle stormwater, it will also provide some recreational opportunities, perhaps skating. The functional aspects of the waterway are described in more detail in ***Section 7: Services***.

Pathways are proposed along sections of the waterway for both pedestrians and cyclists. The waterway path provides public access and ensures community resources are inter-connected.

Circulation

The road layout is based on a strong urban design element of having several axial roadways directed to focus on the central hill in the central park.

As suggested by the Edmonton neighbourhood design principles, the local road layout will be designed to distribute neighbourhood traffic on a multitude of streets that access the grid system, rather than focusing all the traffic on local collectors. Convenient access is provided to all higher order uses such as schools, recreation, multiple-unit housing, and commercial development.

In conjunction with the waterway path, some other pedestrian connections (including some parts of the 'Radburn concept' paths in the northeast corner that may be retained by infill subdivision planning) complete the linkages through the neighbourhood and to key off-site destinations. The transportation system is described in more detail in ***Section 6: Transportation***.

Institutional

Note: This section was amended by Bylaw 15337 Janurary 2010, Bylaw 15314 April 2010 and the Editor

Section 9: Statistics documents the proposed student generation from the proposed land use pattern.

A public elementary/junior school and park site, approximately 6.1 ha will be located to the east of the central park. Griesbach School is currently operated by the Edmonton Public School Board.

A site for a new Catholic school has been designated as part of a

school and park site just southwest of the central park. The site is proposed to be approximately 6.0 ha;

The northern school, of a similar design but with four fewer classrooms, currently is used as office headquarters for Land Forces Western Area. It is anticipated that this headquarters function will be relocating off-site in about five years. While this site is not required by either of the two school boards, it could be reused as a private school. If no opportunities arise for this, ***Figure 4.0: Development Concept*** designates this for future low density residential development.

There is one existing church site that may be incorporated into the new plan; otherwise the sites will be redeveloped for residential uses. It is anticipated that some new sites may be developed for religious assemblies as need is identified, provided they meet the requirements of the *Zoning Bylaw*. Religious assemblies are discretionary uses in most residential zones.

Village Centre

The plan designates a village centre at 97 Street and 137 Avenue. To be successful, there must be a critical density of uses including housing, to encourage an active and vibrant centre. As a main focus of activity, up to 400 dwelling units and 18,500 m2 of commercial space is anticipated.

The village centre will provide a wide variety of goods and services to the surrounding neighbourhoods. It will be attractive and comfortable to users- a feature in its own right. The concept and design principles for the various component of the village centre are:

Access: the primary vehicular access to the village centre will be from a loop road that connects both 97 Street and 137 Avenue to the axial roadway to the district park. As such, this links much of the plan area, and external users, to the village centre. There will also be some site access between the loop road and the 97 Street/137 Avenue intersection.

Uses: consistent with mixed use, the design will accommodate a mix of residential (primarily apartment housing, seniors housing, congregate care, etc.), residential related (live/work, apartment hotel), commercial (retail, personal service, professional offices, medical, financial services, hotel, etc.), and institutional development (government services, religious assembly, etc.). The combination of uses will be based on market conditions and the optimum balance of uses, rather than a domination of only one use.

Location: residential development will be freestanding on some sites, particularly north of the loop road, and mixed with commercial development on sites on both sides of the loop road. Both residential and commercial development may be oriented towards the adjacent waterway system to provide a variety of activities along the waterway.

Pedestrian Orientation: in keeping with a pedestrian orientation, buildings on both sides of the loop street will be located with minimal setback to the street to provide a fairly continuous urban frontage on the loop street. Uses fronting the streets will be primarily retail, personal service, or restaurants and similar uses. The street orientation will be extended into the area south of the loop road, primarily along the axial alignment. The vehicle movement system is to support the village centre, not to overpower it.

Public Space: public space is a key to establishing the urban village character of the centre. This includes integrating the sidewalks and identifiable pedestrian paths to local streets and pathways (to adjacent residential development and the adjacent linear waterway and walkway systems). Not only are the connections important, the quality of the space must encourage pedestrian use through urban design and landscaping. A major heritage statement is intended in the traffic circle. Public space will have design quality well above basic functional requirements.

Built Form: buildings will be oriented to the public street, emphasize the extension of the

The sketch above is an artist's conception of the street oriented nature of the village centre and the adjacent waterway.

axial focus south of the loop road, and take advantage of the amenity value of the adjacent waterway system. Commercial development (except perhaps for a hotel, etc.) along the loop road will be primarily limited to the first one or two storeys, with residential development above to a maximum of four storeys. Residential development, when free standing, may be up to four storeys. This village centre will not include typical 'big box' development, like many other arterials in Edmonton, but be smaller scale, pedestrian oriented in a 'high street' manner with a high level of landscaping. It is anticipated that the village will contain a significant food store, perhaps on the order of 5,000 m^2. The village centre will provide a variety of natural and built form experiences through attention to building design, ground level relationships, texture, signage, and colours. The centre is to be thematically integrated.

Site Coverage: site coverage for commercial development will be on the order of 25% with higher site coverage, up to 50%, for residential development.

Tree Preservation: there are many fine tree specimens that will fall within the village centre. Wherever feasible, they will be incorporated into yards and retained in parking areas to provide visual amenity. In particular, the amur maple planting along 97 Street is to be retained wherever possible.

Transition: village centre uses will abut lower density residential development to the north and may have existing residential across major roads. In either case, building orientation and landscaping will ensure a sensitive transition.

Parking: parking for residential development, either as free standing sites or over and behind commercial development, will be primarily underground. Parking for commercial development will generally be at grade. Parking will be convenient to front doors, but not dominate the buildings. Street parking will be available on the loop road subject to operational requirements.

Zoning: although innovative in design and mix, the village centre may be accommodated by CB2 zoning, direct control or a combination of the two. This decision will be made at the detailed zoning stage. The *Zoning Bylaw*'s *Pedestrian Commercial Shopping Street Overlay* may be utilized for portions of the village centre.

Mixed Use Centre

A mixed use centre is proposed for the southwest corner of the plan. Site planning for this component will require creativity and a high degree of flexibility as the project evolves. The concept and design principles for the various components of the mixed use area are:

Access: the primary vehicular access to the village centre will be from a loop road that connects both 113A Street and 137 Avenue to the axial roadway to the district park. As such, this links much of the plan area, and external users, to the mixed use area. There will also be some site access between the loop road and the 113A Street/137 Avenue intersection.

Uses: drawing upon some of the precepts of the new urbanism, and recent examples from the US and Canada, the centre is seen as a blend of employment and residential uses in close proximity, or in some instances, in the same structures. Employment uses will include a blend of office, home-office, retail and 'cottage' or artisan-based businesses. Residential is likely to take the form of artist's lofts and multiple dwellings (not family-oriented), with residential above retail or business uses.

Location: residential development may be freestanding on some sites, particularly south of the loop road, and mixed with commercial development on the remainder of the site.

Built Form: buildings will be oriented to address the public streets and emphasize the

extension of the axial focus south of the loop road. Development may be up to four storeys. The village centre will provide a variety of natural and built form experiences. This will require attention to building design, ground level relationships, texture, signage, and colours. These elements are to be integrated thematically into an urban campus setting.

Development: site coverage for commercial development will be on the order of 25% to 50%.

Building Reuse: some of the existing structures, that have potential for economic reuse, might be sensitively incorporated into the new plan.

Tree Preservation: there are many fine tree specimens that will fall within the mixed use area. Where practical, they will be incorporated into yards, along boulevards and retained in parking areas to provide visual amenity.

Transition: mixed use centre uses will be adjacent, across the loop road, to lower density residential development to the north. In some areas they will be across major roads from existing neighbourhoods. In either case, building orientation and landscaping on public and private lands will ensure a sensitive transition.

Parking: parking for commercial development will generally be at grade. Parking will be convenient to front doors, but not dominate the buildings. Street parking will be available on the loop road subject to operational requirements.

Zoning: because of the mixed uses and innovative nature of proposed development, zoning would, in all likelihood, take the form of direct control rather than standard single land use zones.

Local Commercial

As shown on ***Figure 4.0: Development Concept***, three small-scale local commercial sites are located at the community entrances. These will provide for a range of convenient commercial services for passers-by and residents.

The plan accommodates the existing commercial development in the northwest corner.

Tree Retention

Note: This section was amended by the Editor

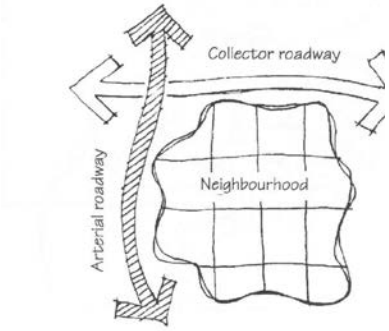
The developer initially identified tree retention within Griesbach as being very important to the development of this future community. Tree retention was also identified and supported in the consultation process as being important to the neighbouring communities. Particular attention focused on the shelterbelt of amur maples, colourful in the fall, along the west side of 97 Street.

Due to the identified importance of the existing vegetation, a tree inventory was completed and recommendations were made on how best to plan and manage the retention of significant high value vegetation. This is largely in the nature of policy development for neighbourhood planning. More specific retention plans will be developed during the detailed design of the subdivision stages, where existing and proposed servicing, road networks, buildings and vegetation will be mapped and detailed with the maximizing of vegetation retention in mind. Subdivision and detailed site planning will provide for public access to the amur maples for wedding photography.

The central park was designed to incorporate a highly valued, major stand of native vegetation. Most of the shelterbelt along 97 Street is also designated for retention. Other vegetation will be reviewed further as the development proceeds and more details are available. ***Figure 10: Vegetation Overlay***, in the ***Appendix***, shows the location and aesthetic ranking of material determined in the tree inventory within the context of the proposed plan.

The sketch above is an artist's conception of the axial focus looking northwest from 97 Street and 137 Avenue.

6. Transportation



Introduction

The plan area is well served by the mature transportation infrastructure in north-central Edmonton. Unlike some newly-established areas, facilities are already in place for all transportation modes.

External Network

Note: The section on Castle Downs Road was amended by Bylaw 13565, March 2004.

Four arterial roadways bound the plan area.

97 Street, on the east boundary, carries about 40,000 vehicles per day, and also serves as provincial Highway 28 leading to Namao and northern Alberta. 97 Street connects Griesbach south to Yellowhead Trail and points south, including the downtown. The City of Edmonton is widening 97 Street (137 Avenue to 167 Avenue) from four lanes to six lanes in 2001.

137 Avenue, on the south boundary, carries about 30,000 vehicles per day, and traverses north Edmonton from residential communities in the east to the northwest industrial sector of the city.

Castle Downs Road (113A Street), on the west boundary, carries about 20,000 vehicles per day. It connects the Castle Downs area north of Griesbach to 127 Avenue south of the plan area.

153 Avenue, on the north boundary, carries about 20,000 vehicles per day, and runs across north Edmonton between residential communities in the east and others west of 127 Street.

Castle Downs Road from 137 Avenue to 153 Avenue is currently under consideration as a High Speed Transit corridor. If this corridor is approved by City Council, acquisition of additional right of way will be required. The cross-section and right of way requirements may affect future development in Griesbach adjacent to Castle Downs Road.

Internal Roadways

Note: This section was amended by Bylaw 15314, April 2010.

The conceptual layout of the internal roadway system for Griesbach is illustrated in ***Figure 5.0: Transportation Concept***.

The axial roads provide the major connections between the central park area, through the residential, mixed-use, and commercial precincts, to connect to the adjacent arterial road system.

This major system will be supported by a network of numerous grid-based cross streets to distribute traffic more than in a conventional hierarchical road network. Only one access is envisioned to 97 Street north of the commercial centre, in light of the higher standard of this arterial road and desire to save as many trees as possible.

Consistent with the City's *Suburban Design Principles*, connections are envisioned from the area to the other three boundary arterials. *More local streets accessing the arterial system provide more opportunities for access to and egress from the neighbourhood. This distributes neighbourhood traffic on a multitude of streets rather than a few focused points all traffic must use… Roads can become residential streets with 'ownership' by the residents. Further, by distributing traffic over more local roads, local road standards can also change to cater to all mobility modes.*[1]

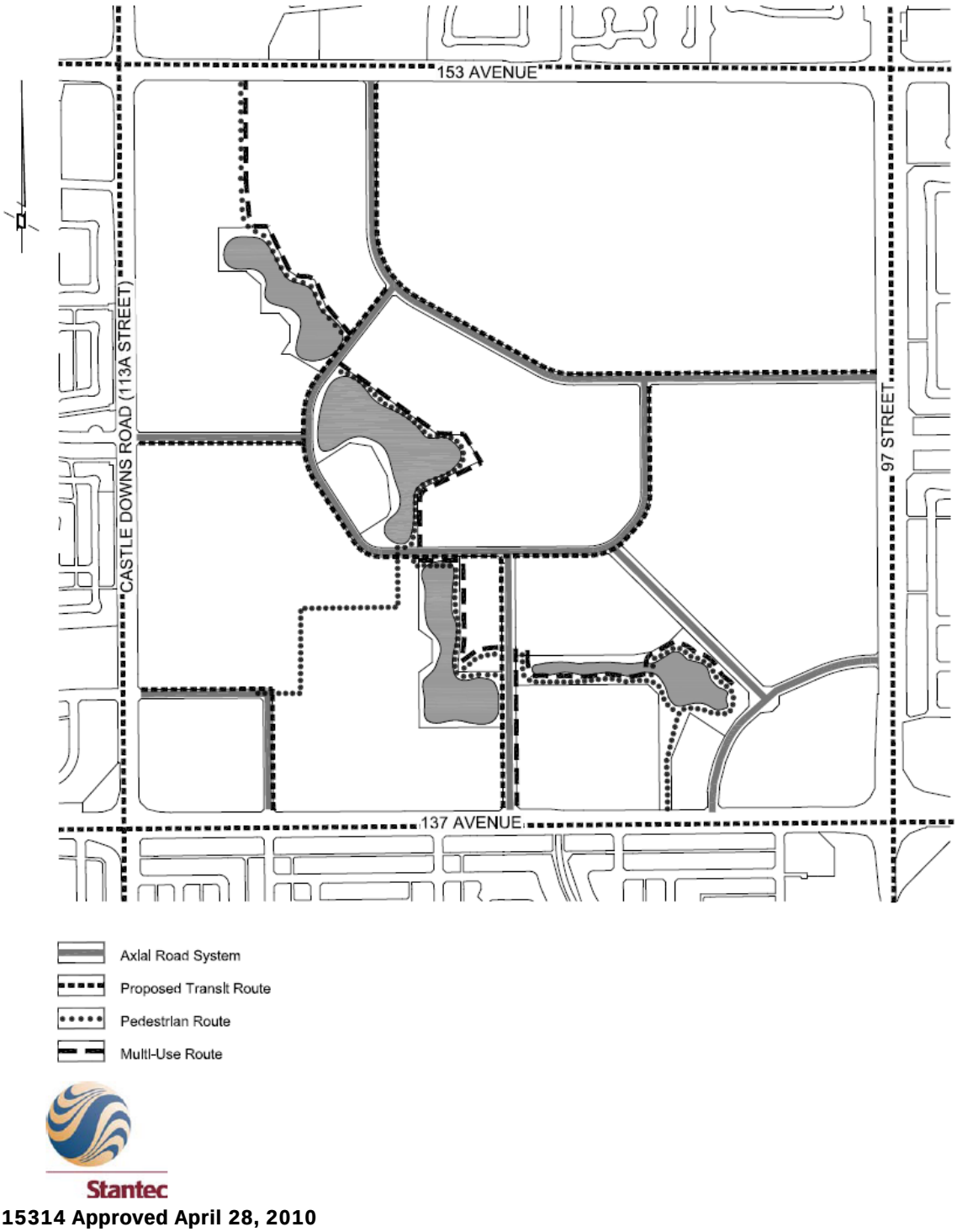
To promote the preservation of the major existing evergreen trees and create and alternative pedestrian environment, the NASP supports the retention of some critical existing road alignments in the SW quadrant through development of a pilot project for alternative street design.

Given the spacing of existing street trees, cross sections, design features, and materials will have to be customized to fit the specific site. A combination of a

The diagram above, from the City of Edmonton's *Suburban Neighbourhood Design Principles,* illustrates a modified grid with access to arterials.

[1] City of Edmonton, Suburban Neighbourhood Design Principles, p. 10.

Figure 5* Transportation Concept



Bylaw 15314 Approved April 28, 2010

variety of possible design options are suggested, including narrower streets, corner and mid-block bump outs, alternative materials, islands, bio-swales, alternating traffic, sidewalks one side only in some locations, parking lay-bys, different edge or curb treatments, etc. Rear lanes should be addressed in conjunction with green street design.

The SW quadrant of Griesbach provides a unique opportunity for some of these innovations to be implemented as a pilot project in the City of Edmonton. Proposals for green street alternatives should be submitted early and reviewed with the City so they don't delay the review of subdivision applications.

Transportation & Streets have agreed that customized design of internal streets will reflect the intended character of the 'grand entrances' and other neighbor-hood focal points. Human-scale design considerations, including provisions for pedestrian and bicycle traffic, will be implemented pro-actively to link the function of internal streets to the unique community design. Traffic calming elements, such as corner bulbs, traffic circles, and raised-table crosswalks, will be considered as an integral part of the development rather than as retrofit measures.Short-cutting is not anticipated to be an issue, as the internal road system is designed to be discontinuous between key links such as 145 Avenue and 144 Avenue. In addition, the mature roadway system in the vicinity of the plan area provides plenty of convenient east/west arterial access routes (e.g. 167 Avenue, 153 Avenue, 137 Avenue) to serve major destinations.

The commercial centre in the southeast corner of the plan will include a 'high street' extending north from 137 Avenue with street-oriented commercial and pedestrian-friendly streetscape. Other direct access will be provided to 97 Street and 137 Avenue in locations cognizant of existing accesses, safety, and neighbourhood requirements.

Attention will be paid, at the subdivision stage, to avoid conflicts with residential driveways and school traffic.

The location and design of the multi-use trail crossings of streets will be confirmed at the subdivision stage.

Public Transit

Note: This section was amended by Bylaw 15314, April 2010

Public transit is currently provided to CFB Griesbach during peak hours only. Service is provided by Route #163, which diverts from 97 Street, in the peak direction only, on a loop using 153 Avenue and Griesbach Road. In the A.M. peak, the southbound bus runs along Griesbach Road to collect passengers bound for Northgate. In the P.M. peak, the northbound bus runs along Griesbach Road to drop-off passengers who have boarded at Northgate.

The transit centre at Northgate (northeast corner of 137 Avenue/97 Street) is a major transfer point on the Edmonton transit system, connecting to all other sectors of the city. At the other corner of the plan area, Castle Downs Transit Centre (northeast corner of 153 Avenue/Castle Downs Road) provides transit access to Griesbach as well as an adjacent rejuvenating commercial centre and new seniors-oriented residential development.

Figure 5.0: Transportation Concept illustrates the roadways identified by Edmonton Transit as being required for public transit service. It is anticipated that the developer may propose additional roads as appropriate for transit routes. One example is possible transit along the southeast axial roadway providing service to potential adjacent seniors and higher-density housing, along with connections to nearby transit centre facilities. Just as it may be possible to add transit linkages, confirmation will be sought at the subdivision stage that the roadways identified for transit in this plan remain consistent with the requirements of Transportation & Streets as well as the objectives of the *NASP*.

The City of Edmonton Transportation Department has retained a consultant to complete an LRT Planning Study from NAIT Station to the northwest City Limits. The study is evaluating all possible alignments that best serve the communities of Northwest Edmonton and will identify a recommended route as well as general station locations. The recommended Northwest LRT route, including general station locations, is expected to be completed by May 2010.

The Griesbach neighbourhood is located immediately adjacent to 113A Street north of 137 Avenue, which is one of the potential LRT corridors currently being considered as part of the planning study. Should the recommended LRT route be along the 113A Street corridor and should it be approved by Council as the preferred route, there may be a requirement for an LRT station and a bus interchange point within or adjacent to the Griesbach neighbourhood, east of 113A Street and north of 137 Avenue. Should an LRT station be located adjacent to or within the Griesbach neighbourhood, the landowner will work with the City to establish a transit oriented planning framework for the Griesbach neighbourhood that is in line with the principles outlined in the City's Integrated Transit Land Use Policy Framework.

Pedestrians

Note: This section was amended by Bylaw 15314, April 2010

Pedestrian access will be provided throughout the plan area by a combination of on-street and off-street facilities. Sidewalks will be provided along local and collector roadways.

A path along one side of the waterway system will provide pedestrian access for both recreation and transportation functions. Design will encourage use of the trail system in all seasons. It will also provide strong linkages between Griesbach and adjacent neighbourhoods, especially to the Castle Downs centre to the northwest.

Additional walkways will be provided at suitable locations to integrate other green spaces with the waterway system and to link local roads and local facilities in an appropriate manner.

A new pedestrian linkage, as shown on Figure 3: Development Concept, was designated in this sector to compensate for the deletion of the southwestern diagonal roadway. It will be provided by a 2.5 m wide sidewalk within the road right-of-way. The cross-sections will include slight roadway increases to the typical cross-sections uses in Griesbach. The cross-sections will be reviewed at the subdivision or engineering drawing stage.

Cycling

Bicycle access for transportation and commuter purposes will be provided throughout the plan area by the internal road system, linking the development to the arterial road system as well as to existing designated bicycle facilities adjacent to Griesbach.

Bicycle access for recreational purposes will be provided along selected portions of the waterway system, and, where provided, will be designed to appropriate engineering standards. Provision will also be made for bicycle access to and within the central park feature, designed to appropriate engineering standards.

The central grand entrance from 137 Avenue will include a linkage to the existing bicycle path on the abandoned rail right-of-way south of 137 Avenue. This route will also connect along the waterway to the village centre.

The location of the bicycle route connection in the northwest sector of the plan may be adjusted at the subdivision stage to better connect with other recreational paths to the north in association with Beaumaris Lake. This will depend on the location of intersections and signalization at that time.

Impact Assessment

A transportation impact assessment, describing the transportation characteristics and requirements of Griesbach in greater detail, has been submitted to the City of Edmonton in conjunction with the review and approval process.

This analysis indicates that the development in Griesbach can be accommodated on the adjacent roadway network within the City's Level of Service Guidelines with associated roadway improvements. The developer will be required to construct an additional northbound lane on 97 Street from south of 137 Avenue to the Village Centre collector roadway when needed for access from 97 Street to the Village Centre. Intersection improvements and additional lane capacity will also be required at the intersection of Castle Downs Road - 137 Avenue to accommodate development in west Griesbach.

7. Services

Introduction

The majority of Griesbach has existing municipal servicing. The sanitary sewer and storm sewer, water lines and some power and telephone facilities are owned and maintained by DND. The shallow utilities are owned and maintained by the utility companies.

Some portions of Griesbach will be redeveloped and the existing services may be utilized where re-utilized infrastructure will give a level of service equivalent to comparable infrastructure in other parts of the City.

Stormwater System

Note: This section was amended by Bylaw 15314, April 2010

The existing network of sewers are connected to an 1800mm sewer located on 137 Avenue at approximately 100 Street. The storm water enters the Kennedale trunk sewer system and ultimately discharges to the North Saskatchewan River.

Existing sewers will be re-used primarily in the northeast sector of the site and wherever else they can be incorporated. Storm water will be directed overland and via catchbasins/storm sewers to the storm water management facilities and waterways located within the area. The stormwater management facilities are comprised of four inter-connected lakes, each with controlled discharge, that receive runoff from three sub-basins. The outlet to these lakes will be connected to the existing 1800mm sewer located on 137 Avenue. The system has been designed, based on computer modelling, to limit the post-development discharge rate into the Kennedale storm drainage system to the 1:5 year existing rates and to reduce site re-grading. These lakes may also provide for some recreational uses.

The stormwater management facilities from the redeveloped area will absorb peak flows and discharge to the existing storm sewer. The facilities will be designed to adequately service the area. They may include some of the existing storm sewers where they can be incorporated into the new system.

Figure 6.0: Stormwater Services indicates the existing storm trunk through the area, the approximate location of the SWM facilities, and the outfalls to the existing storm sewer.

Further stormwater servicing details are included in a separate *Area Master Plan.*

Low Impact Development (LID) is an approach to land development using various planning and design practices and technologies to simultaneously conserve and protect natural resource systems and reduce infrastructure costs. The intent is to explore future LID design initiatives, with details to be confirmed at the detailed subdivision and engineering drawing approvals stages-this will require the involvement an approval of various City departments such as Drainage and Transportation. Possibilities for LID initiatives include:

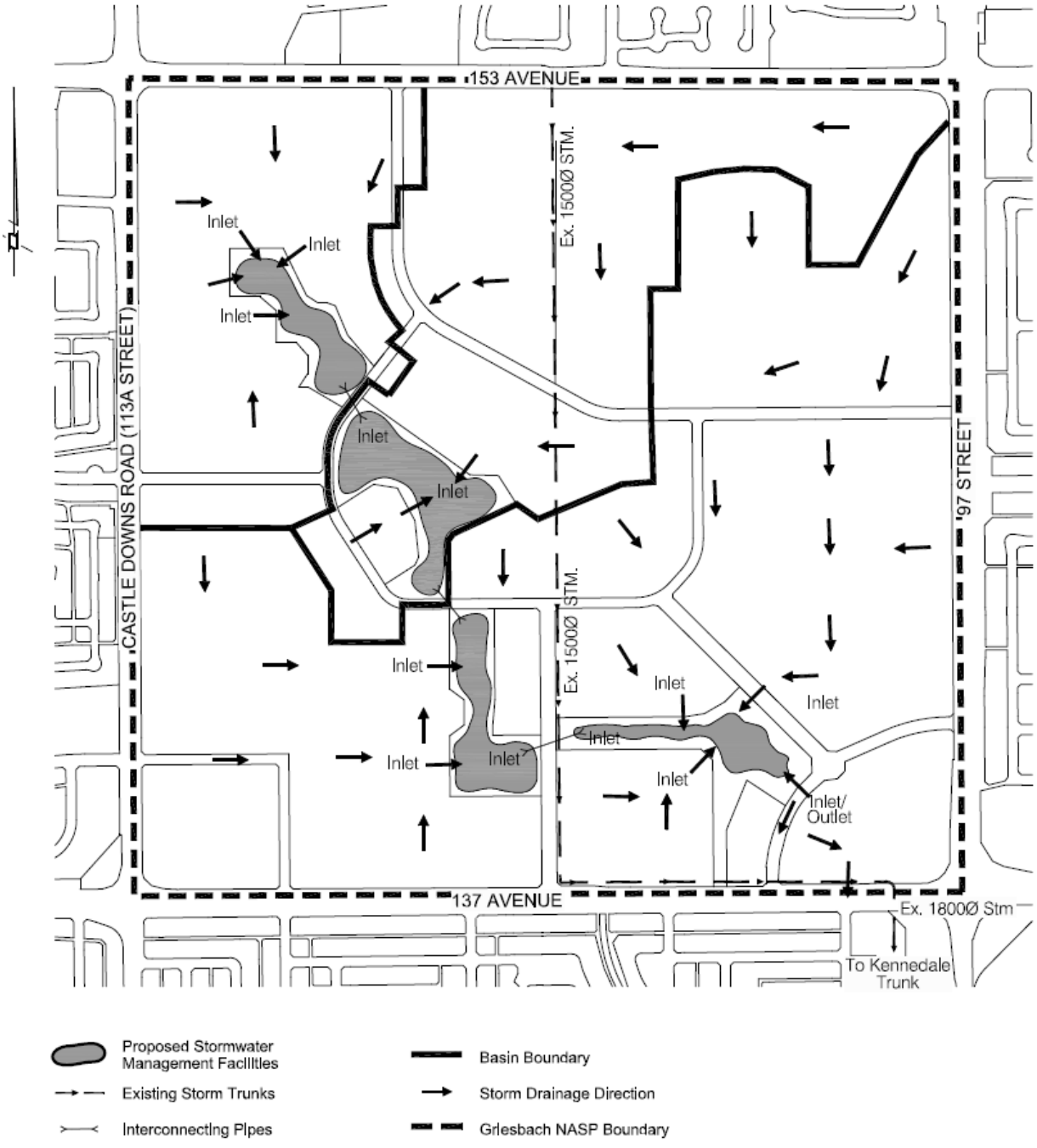
- *using bioswales and rain gardens for storm runoff management;*
- *using permeable pavement to reduce storm runoff and improve water quality of the runoff;*
- *encouraging green roofs where possible to reduce runoff can be reused for irrigation purposes; and*
- *conserving existing landscape (trees and natural areas).*

Griesbach includes several areas of mature landscaping. Planning and engineering will be implemented to minimize the disturbance to and incorporate the existing landscape into development.

Potential LID initiatives, including bioswales, are anticipated in the southwest section in order to conserve the mature evergreens along existing roads.

Further stormwater servicing details will be included in a separate technical report that addresses compliance with the latest version of the City of Edmonton Servicing Standards Manual.

Figure 6* Stormwater Services



Stantec

*Bylaw 15314 Approved April 28, 2010

Sanitary Sewage

Currently the existing sanitary servicing flows south and is connected to the existing trunk sewers at two locations along 137 Avenue and one location on 97 Street. The connection to 97 Street services a small area of the existing residential area of Griesbach. This 97 street connection will be eliminated as the ultimate system is constructed

The 450mm trunk sewers at 137 Avenue flow south and connect at approximately 132 Avenue. Further downstream, the sanitary sewage flows into the City's combined sewer system and into the Goldbar treatment plant near the North Saskatchewan River. The 450mm trunk sewer will be utilized to its capacity as development proceeds.

As the density of the area increases, sanitary flows that exceed the existing capacity will be directed to the North East Sanitary Trunk sewer system (NEST). The NEST system is being constructed in phases as development within the City of Edmonton dictates. The NEST system is located along 153 Avenue and will discharge into the Capital Region Sewage Treatment Plant near Fort Saskatchewan.

It is anticipated that some of the existing sewers will be incorporated into the refurbished areas, primarily in the northeast corner and wherever else practical on the remainder of the site. The existing lift station will be utilized until the ultimate sanitary system is constructed.

Figure 7: Sanitary Services illustrates the existing connections and schematically indicates the location of the proposed system. Further sanitary servicing details are included in a separate *Area Master Plan.*

Water System

A network of water lines, hydrants, and valves exist throughout the site. The existing network of water lines will be utilized wherever possible. The condition of the existing system will be evaluated to establish the viability of using the existing lines. Existing water lines and services not required for the development will be abandoned.

Additional hydrants, valves and connections to the surrounding water lines will be provided to service new development. A new network of water lines will be constructed over most of the area to follow the pattern of proposed roadways and servicing.

The water supply to the site will be available from existing watermains located adjacent to the site on 97 Street, 153 Avenue, and 113A Street. Interim connections will be required to facilitate construction staging and redevelopment of some areas. The two existing meter chambers located at 137 Avenue and 153 Avenue will be abandoned.

Figure 8: Water Services illustrates the existing connection points and configuration of the proposed system. The sizing and alignment for the internal water system will be determined at the time of detailed design.

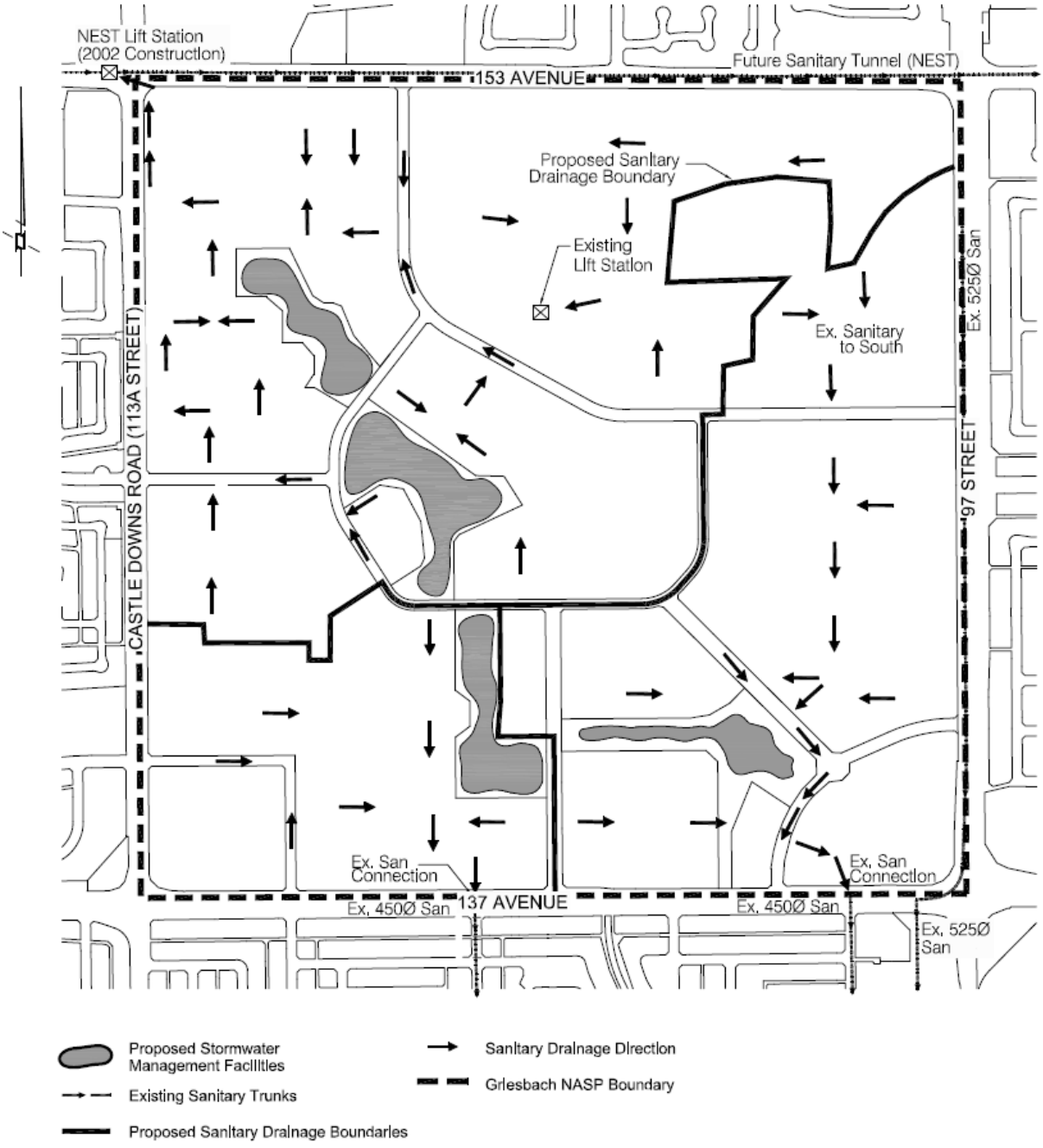
Shallow Utilities

Some of the existing shallow utilities (cable, power, and telephone) will be re-used depending on the location and capacities of the existing systems. The existing overhead and underground power lines will be replaced with underground systems.

Existing gas lines will be abandoned and reused as appropriate for the new and redeveloped areas. Additional gas lines will be required that follow the proposed roadway network. Griesbach is currently serviced with natural gas from one gate station located in the southeast corner of the site. Redevelopment of the area may require additional feeds into the area or modification of the existing gate station.

Extensions of the systems from the neighbouring communities and upgrading of the existing on-site facilities will provide the area with cable television, telephone, power, and natural gas.

Figure 7* Sanitary Services



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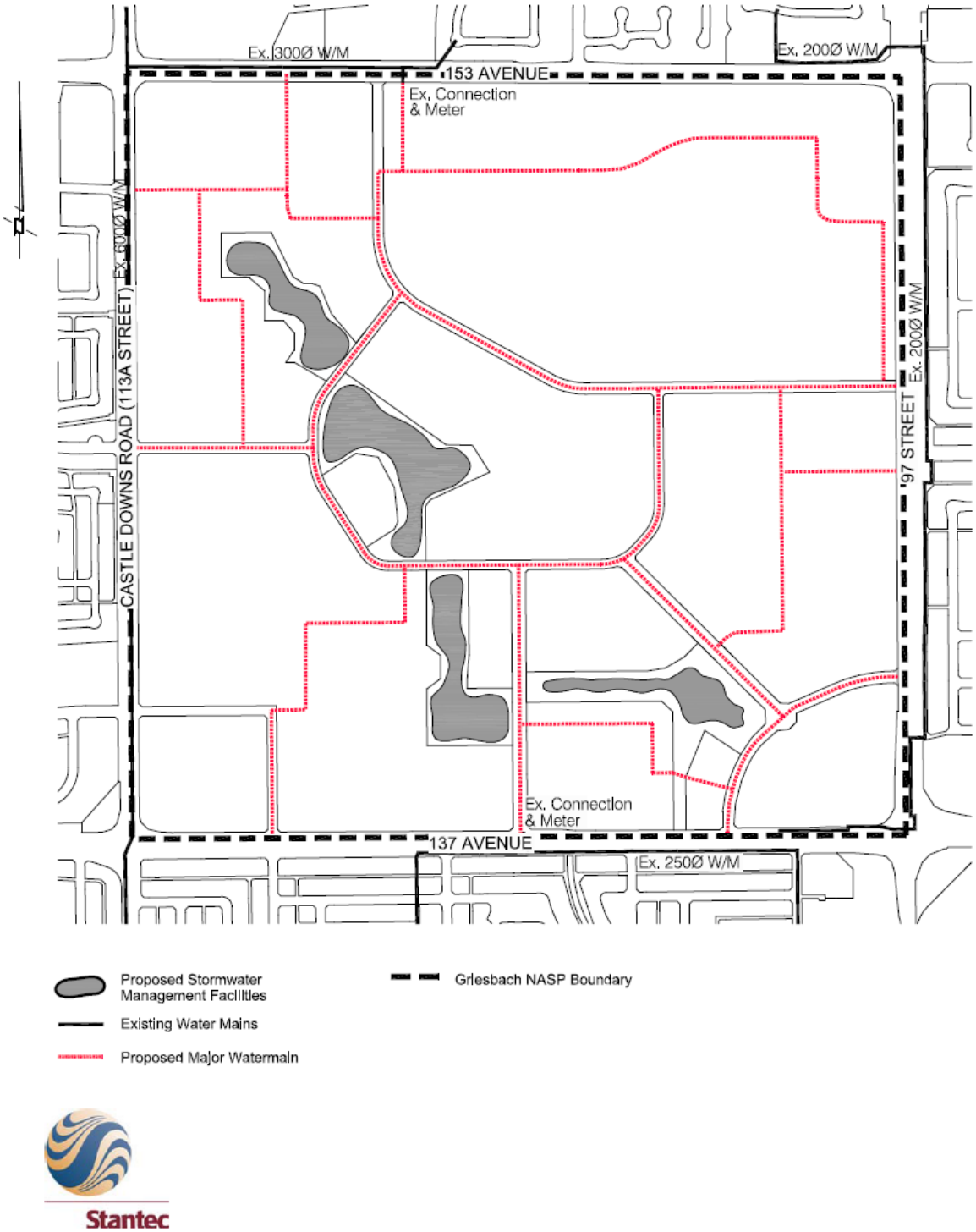
*Bylaw 15314 Approved April 28, 2010

Figure 8* Water Services



*** Bylaw 15314 Approved April 28, 2010**

8. Implementation

Introduction

Note: This section was amended by the Editor

A plan is not implemented overnight. This plan is just one step in a series of collective actions that require the input of *the developer*, City Council, the municipal administration, various government and servicing agencies, builders and developers, and the community.

Staging

Note: This section was amended by Bylaw 15314, April 2010 and the editor.

The site permits a more complex staging pattern than typical of suburban development.

The availability of access and services within and surrounding the site provides an opportunity to begin construction and redevelopment in a number of locations. The infrastructure within the site and along the perimeter of the site will be utilized for permanent and interim connections to facilitate staging and construction in several areas. The existing and proposed utilities will be coordinated to meet the staging requirements as development proceeds.

Allowing some existing uses, either on an interim or permanent basis, may influence staging. Staging is also influenced by the need to maintain a significant military housing component for an, as yet unspecified time.

Is it the developer's intent to emphasize the diversity of land uses and housing types-from new single attached and refurbished housing to multiple-unit housing as well as commercial and employment as early in the process as possible.

Like any other development area, primarily the marketplace will drive the pace of development. It is anticipated that the development will begin in 2002 and proceed over the next 20 years.

Any areas of environmental concern will be remediated prior to or be determined through the rezoning process.

Figure 9.0: Staging indicates that general pattern of future development stages. The plan is divided into a series of general development stages (each of which will have sub-stages determined by future planning and market conditions), as follows:

Area A: The initial stages were approved and developed on two major fronts in the southeastern sector at the Village Centre and near Griesbach Road and 97 Street, in close proximity to General Griesbach School. All development areas have been remediated. Subdivision approval and rezoning is in place for the Village Centre, but development, other than servicing, has not proceeded. Development of both commercial and residential uses can proceed as soon as warranted by market conditions.

Area B: *Residential development was then infilled between the first stages, including the development of the first stormwater lake. This area is primarily complete. The majority of the eastern school and park site has been appropriately rezoned. A new development area was started in the northwest corner with the development of the veterans centre, serviced by a temporary pond.*

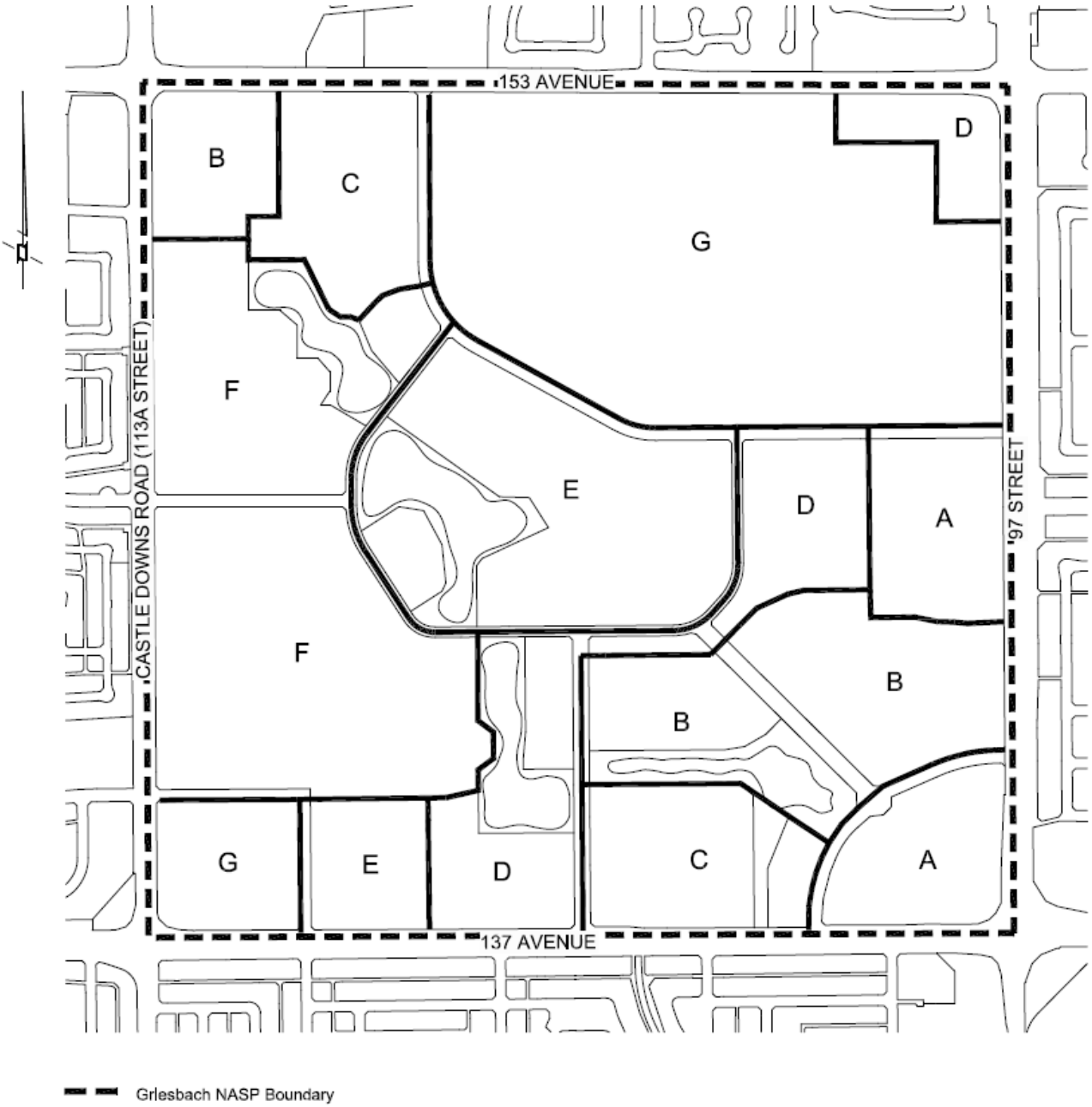
Area C: These areas include both expansion to previous stages in the southeast (serviced by the existing lake) and northwest. Both these areas are subdivided and rezoned, with the southern area serviced with housing construction underway.

Area D: This stage sees continued expansion to previous stages in the southeast (subdivision approvals are in place, lands are rezoned, and the stormwater lake has been constructed for areas east of Pegasus Boulevard). Additional redevelopment and new development in an area in the northeast could proceed.

Area E: This area contains residential development, the third stormwater pond and the central park (of which the central hill has been constructed) as further expansion of earlier stages towards the north and west.

The photo above shows refurbished military housing from Garrison Woods.

Figure 9* Staging



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*Bylaw 15314 Approved April 28, 2010

Area F: This area includes the completion of much of the western sector, including the western school and park site and the fourth stormwater lake. Staging in this area is longer term, depending on the take-up of previous stages.

Area G: The bulk of military housing in this area. it will be rejuvenated and infilled independent of the other development phases as determined by agreements with the military and market conditions. It is anticipated that Brigadier Gault School will be vacated by the military in the next few years and this site will become available for interim or permanent use. The southwest mixed uses area will likely proceed independently at some time in the future depending on market conditions. it will be serviced by extensions of services from previous stages.

Interim Uses

Note: This section was amended by the Editor

Given that there are many buildings with valuable economic life on the site, there is a need to provide for interim uses that will maintain the vibrancy of the site and not prejudice implementation of the plan.

In addition, some of the military functions are expected to continue for some time.

It is also anticipated that transitional and interim uses will influence staging patterns. This will only be possible to determine when the leasing program progresses.

It is also anticipated that *the developer* will enter into various agreements with Community Services and community groups to provide for the interim use of the recreation facilities on the site. As the development is staged, vehicle, pedestrian, and cycling access will be provided to these sites.

Rezoning

At the time of plan preparation, the lands were districted *AJ: Alternative Jurisdiction*. The purpose of this zone is to *prescribe land uses and regulations for these lands if the legal status of these lands change and they become subject to this bylaw.'*

It is expected that rezoning will be completed in a logical staged manner. First, those areas that are suitable to be rezoned to their ultimate use will be rezoned accordingly early in the process. Second, some areas will be rezoned to accommodate some interim or transitional uses to make sure the site is vibrant and sustainable on an ongoing basis. Third, some areas may remain in AGU Urban Reserve Zone as a holding zone until detailed zoning is applied.

There will be public input in this process. The City of Edmonton's *Zoning Bylaw* contains zones that will be appropriate to control and regulate new development consistent with this plan. Site specific direct control (DC2) may be used in some instances, such as the mixed use centre, to promote innovative development.

Subdivision

Note: This section was amended by the Editor

Subdivision design will be consistent with the plan. It will also be sensitive to existing conditions- those buildings and the high value vegetation that can be retained.

Subdivision timing will be determined primarily by market forces and at a pace determined by the desire of *the developer*.

Remediation

The Phase I ESA and subsequent characterization of some sites have delineated some areas of environmental concern. There is a need for further detailed site assessment, which his now underway. In order to allow for future redevelopment, all these areas of concern will be investigated and remediated to the criteria applicable to the proposed land use.

Tree Retention

Consistent with the recommendation of the tree inventory, existing vegetation needs to be handled carefully to

maximize tree preservation. The tree management program includes:

Future analysis: more detailed mapping and analysis to guide the detailed decision making- this will be completed for any area before it is subdivided. This will include a detailed topographic survey locating each tree, a stage by stage survey linking species, size and form to the location survey and additional aesthetic rankings.

Maintenance: development of a pruning and rehabilitation program with input from the City and recognized arborists, and the development of a gopher control program.

Design: being innovative to maximize amenity value and retain trees in situ where possible. This will include the stage by stage development of tree retention, removal and relocation plans.

Implementation: Development of policies and procedures to be utilized during the design and construction process to facilitate the retention and, where necessary, relocation, of trees, including such construction techniques as hoarding of trees, trenching, tunneling, etc.

Note: *The following section - "Special Area Status" - was added through Bylaw 13192, October 2002.*

Special Area Status: *Section 900 of the Zoning Bylaw provides that Special Areas may be designated in order for the use, design and extent of development within specific geographic areas of the City to be regulated in a manner that allows the special or unique attributes of the area or the development to be addressed. Special Areas are to be applied when these special or unique attributes cannot be satisfactorily addressed through conventional land use Zones or Overlays.*

In the case of the Griesbach neighbourhood, the development of custom land use Zones through the use of Special Areas status is preferable to the use of Direct Control. This will allow the creation of new land use Zones and changes to the development regulations of standard land use Zones that will only be applied to lands within Griesbach. Such new zoning regulations will achieve the following urban design principles for the low and medium density residential and the village centre areas as well as the urban design principles stated in Chapter 5.

Low density residential design principles include a fully integrated mixing of different housing types from single detached to small row housing developments, and of smaller to larger lot sizes. Lot depths will not be predetermined, thereby allowing greater flexibility to incorporate existing housing, trees and infrastructure into subdivision plans. Greater site coverage, reflecting the smaller lot and yard sizes, will expand the range of opportunities for affordable housing.

For both low and medium density housing and the village centre, a 20% to 30% increase in building heights over standard zones will allow for taller buildings and steeper roofs. Front and side yards will be smaller, to provide for a more pedestrian friendly street oriented environment.

Additional design principles to promote a pedestrian oriented environment in the village centre area include limitations on vehicle oriented uses, building setbacks that promote interaction with sidewalk traffic, and architectural provisions. Commercial establishments will be limited in size, to promote a smaller scale village style environment with a more eclectic mix of pedestrian friendly shops and personal service uses. It will also prevent the dominance of the area and its streets by large business operations. The heights of freestanding signs will be lower than standard zones and projecting signs will be designed and located to reflect a pedestrian scale."

9. Statistics

As amended by Bylaw 17228 June 9, 2015

		Low Density	Row Housing	Apartments	Veterans' Centre	Commercial	Storm Ponds	Storm/Open Space	Parks	School/Parks	Major Roads	Totals
Major Roads											13.1	13.1
Central Park	ha	9.8		3.0			3.9	1.9	9.5			28.1
	dwellings	167		240								407
Village Centre	ha			2.7		8.6						11.3
	dwellings			400								400
South East	ha	31.4	2.6	0.5			1.8	3.7	1.2	6.1		47.3
	dwellings	534	91	40								665
South West	ha	24.5	7.0	2.7		0.9	2.8	1.4	0.6	6.0		45.9
	dwellings	417	245	216								878
SW Mixed Use	ha		2.0	1.0		3.6						6.6
	dwellings		70	80								150
North West	ha	22.1	3.8	2.9	1.9	1.0	2.2	1.4	0.8			36.1
	dwellings	376	133	232	120							861
North East	ha	46.5	14.1	0.8		1.4			0.8			63.6
	dwellings	791	492	64								1346
Totals	ha	134.3	29.5	13.6	1.9	15.5	10.7	8.4	12.9	12.1	13.1	252.0
		53%	12%	5%	1%	6%	4%	3%	5%	5%	5%	
										10%		
	dwellings	2283	1031	1272	120							
		49%	22%	27%	3%	Dwellings	4706					
	People	7877	3298	2417	120							
		57%	24%	18%	1%	People	13712					

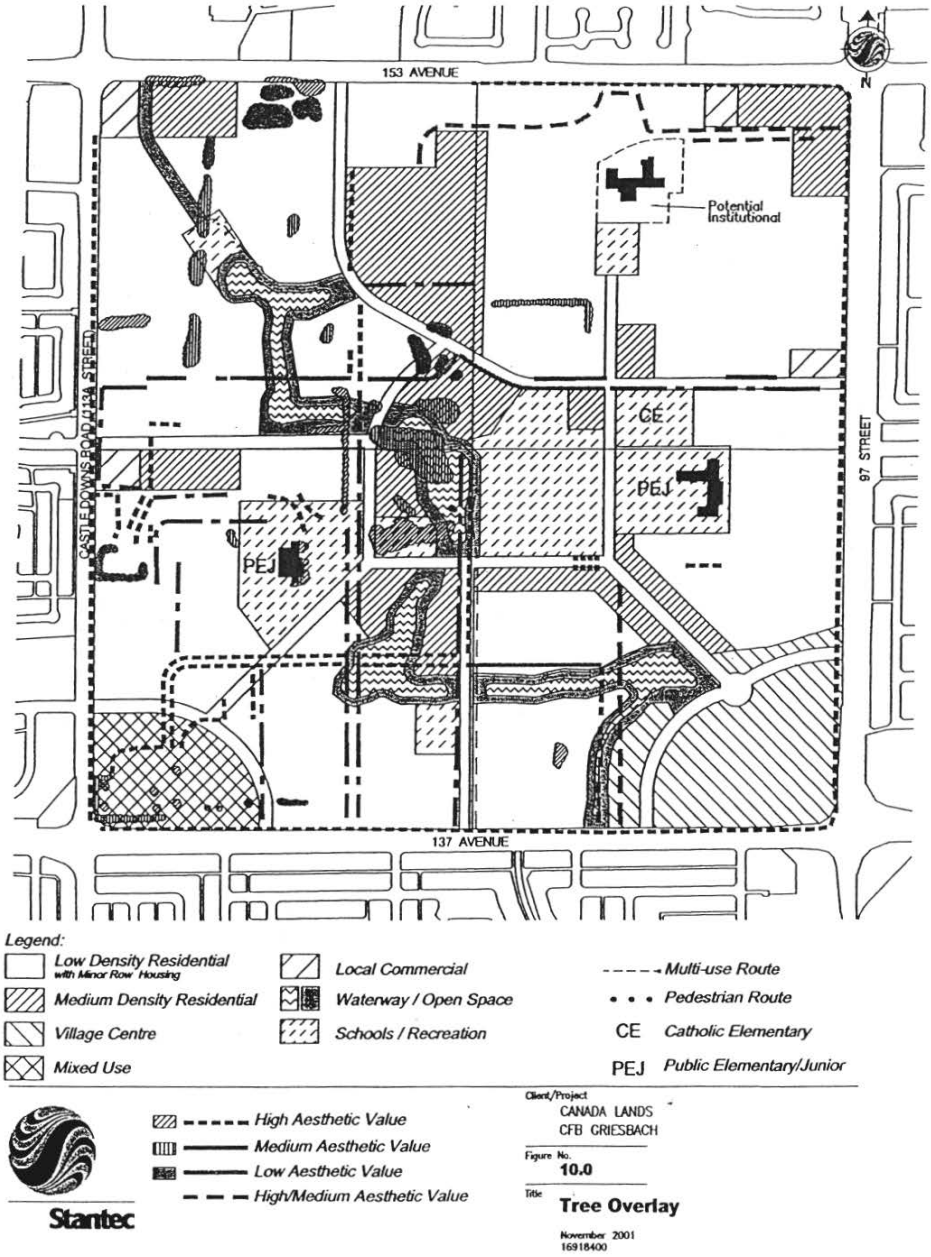
Griesbach: Student Generation

	Dwelling Units	Public Elementary	Public Junior	Public Senior	Catholic Elementary	Catholic Junior	Catholic Senior	Totals
Lower Density	**2213**	**722**	**283**	**269**	**376**	**155**	**155**	**1965**
Row Housing	**1077**	**338**	**117**	**103**	**162**	**54**	**43**	**817**
Apartments	**859**	**242**	**77**	**66**	**52**	**17**	**17**	**471**
Totals	**4149**	**1302**	**477**	**438**	**589**	**226**	**215**	**3253**

10. Appendix

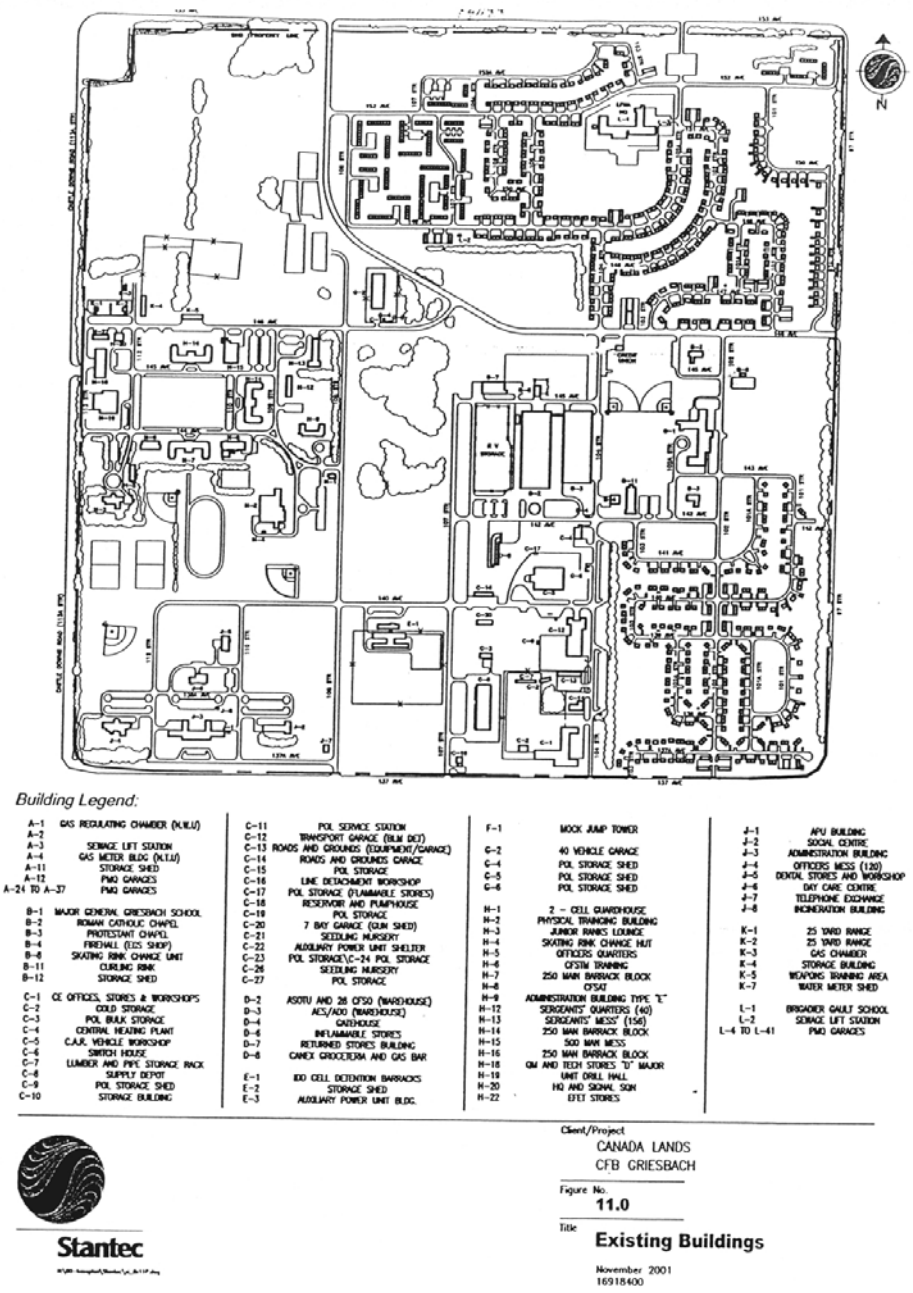
The sketch above is an artist's conception of a view east over the waterway in the central park.

Figure 10* Tree Overlay



*** Bylaw 12936 March 18, 2002**

Figure 11* Existing Buildings



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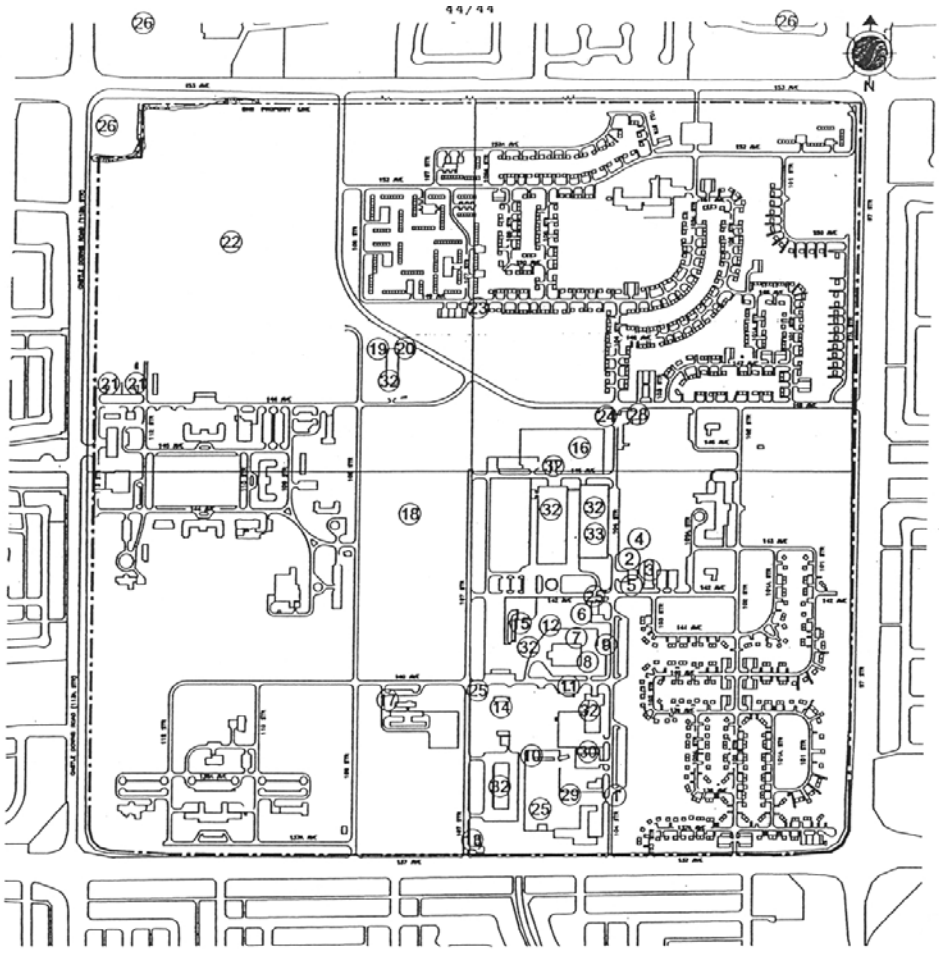
Phase I Environmental Site Assessment

Summary of Areas of Concern Requiring Additional Investigation

Reference Number	Building Number	Location	Concern	Observation	Overall Level of Environmental Concern	Comments
1	A3	Sewage Lift Station	POL Storage	UST, removed 1992	Medium	Site partially remediated, Residual BTEX/TPH levels in two soil samples exceed Alberta PST Level II Guidelines
2	B4	Fire Hall, north side	POL Storage	Staining on ground	Low	TPH in one borehole (shallow sample) >18,000 ppm, exceeds AB Tier 1, only minor amount of staining on ground surface
3	B4	Fire Hall, east side	POL Storage	Minor amount of staining	Low	Not investigated in 1996, minor staining on ground noted in site inspection
4	B4	Fire Hall, north side	Fire Training Area	Free product	High	Free Product, 800 m3 of soil exceeding 1999 CCME C/I, site partially remediated to CCME residential criteria
5	B4	Fire Hall, south side	Hazardous Materials	Battery acid disposal pit	Low	Not investigated in 1996, underground power crosses pit location
6	C4	Heating Plant	POL Storage	UST Removed	Medium	Exact tank location unknown, B. Env. O. indicated site was clean, no confirmation soil samples, minor stain on asphalt south of plant
7	C5	Vehicle Workshop	Hazardous Materials	Acid pit	Low	Metal concentrations exceed 1999 CCME R/P (Cr/Ni), previously investigated, concrete surfaces around acid disposal sink in poor condition
8	C5	Vehicle Workshop	POL Storage	Staining on ground	Low	TPH in one shallow soil sample 41,000 ppm, EBA assumed to be cross contaminated with asphalt
9	C6	Switch House	Hazardous Materials	Leaking Transformer	Low	Two large transformers on west side of building, one leaking, PCB levels less than 50 ppm.
10	C7	Pipe Storage Rack	POL Storage	Staining on ground	Low	TPH in one shallow soil sample 2,780 ppm, minor amount of staining below AST
11	C11	Refueling Depot	POL Storage	USTs removed	Medium	Site remediated, Residual E & X exceed CCME R/P, TPH 3,600 exceeds PST Level I, Quality of fill material unknown
12	C17	POL Storage Shed	POL Storage	Staining on ground	Low	TPH levels (2,700-6,300 ppm exceeds AB Tier I), metals exceed CCME R/P, minor amount of surface staining
13	C18	Water Reservoir	POL Storage	UST, removed 1992	Low	Site remediated, Residual BTEX/TPH levels in one composite soil sample less than CCME R/P, AE PST Level I
14	C20	7 Bay Garage	POL Storage	Staining on ground and in pit	Low	Garage built on top of stained area, no samples collected or analyzed, oil staining in maintenance pit inside building
15	D5	Loading Dock	POL Storage	Staining on ground	Low	TPH levels adjacent to rail line 1,380 ppm (shallow depth)
16	D6	Inflammable Storage	Hazardous Materials	Inside and outside storage	Low	Storage of PCBs and radionuclides inside building, torn asbestos waste bags outside
17	E1	Detention Barracks	POL Storage	UST, removed 1992	Low	Residual BTEX/TPH levels below CCME R/P criteria, only one confirmation sample collected
18	F1	Mock Tower	Hazardous Materials		Low	Wooden timbers treated with creosote line hiking trails in wooded area
19	G2	40 Bay Garage	Hazardous Matls.	Acid pit	Low	Metal concentrations exceed 1999 CCME R/P (Cr/Ni)
20	G2	40 Bay Garage	POL Storage	Staining on ground	Low	Metal concentrations exceed 1999 CCME R/P (Cr/Ni)
21	K1/K2	25 Yard Ranges	Hazardous Matls.	Pistol ranges	High	Potential for lead contamination, no previous assessments completed on either range
22		Northwest field	Solid waste disposal	Unsupervised filling activities	High	Potential for unrestricted disposal of hazardous materials
23	L2	Sewage Lift Station	POL Storage	UST, removed	Medium	Underground tank removed prior to 1992, no samples collected, no observations of contaminated material encountered during testpitting
24		CANEX	POL Storage	UST	High	Site Remediated to CCME C/I criteria, however contamination exceeding criteria remained on the east side of 104 Street
25		Various locations	Hazardous Matls.	PCBs	Low	Transformers with PCB levels greater that 50 ppm once used/stored at various locations
26		Various Locations	POL Storage	Fuel Storage	Low	Service Stations on Adjacent Properties
27		Rail Siding	Hazardous Matls.		Low	Rail Line existed on the property, connected to D2, D3, D5, no analysis for PAHs, metals, herbicides in former track area
28		Former Canex	POL Storage	Fuel Storage	High	Canex reports indicated that a Gulf service station existed between from 1960s to 1981
29	C-14	Roads & Grounds	POL Storage	Potential for staining in pit	Low	Below grade maintenance pit filled in and covered with concrete, potential for soil contamination below pit
30	C-13	Roads & Grounds	POL Storage	Potential for staining in pit	Low	Below grade maintenance pit filled in and covered with concrete, potential for soil contamination below pit
31	C-12	Transport Garage	Hazardous Matls.	Staining around floor sumps	Low	Potential for contaminants to have migrated below floor drains and seperators into surficial soils
32		Various Locations	Hazardous Matls.	Floor drains/sumps	Low	Confirmation of connection of floor drains to a sewer system has not been completed in Buildings C5, C8, C12, C13, D2, D3, D6 G2
33		Various Locations	Hazardous Matls.	Radioactive material	Low/Med.	Radioactive materials have been stored and used in many onsite buildings, complete base wide radiological survey is recommended

Note: This is a summary of the areas identified in the Phase 1 Environmental Site Assessment. The complete report should be reviewed for interpretation. A Phase 2 Environmental Site Assessment is underway to further review these areas. Reference number shows the location on Figure 12. Building locations may be identified on Figure 11.

Figure 12* Environmental



① *Areas for Further Environmental Review*

Stantec

Client/Project
CANADA LANDS
CFB GRIESBACH

Figure No.
12.0

Title
Environmental

November 2001
16918400

***Bylaw 12936 March 18, 2002**