

**CITY OF COLD LAKE
BYLAW #288-LU-07**

A BYLAW OF THE CITY OF COLD LAKE, IN THE PROVINCE OF ALBERTA, TO PROVIDE FOR AN AREA STRUCTURE PLAN IN NW 11-63-2-4, SW 11-63-2-4, NW 2-63-2-4, Pt of SW 2-63-2-4, and Pt of SE 2-63-2-4

WHEREAS, it is deemed expedient to provide a framework for subsequent subdivision and development of the land legally described as NW 11-63-2-4, SW 11-63-2-4, NW 2-63-2-4, Pt of SW 2-63-2-4, and Pt of SE 2-63-2-4; and

WHEREAS, the Council of the City of Cold Lake has deemed it expedient and proper to describe the sequence of development of NW 11-63-2-4, SW 11-63-2-4, NW 2-63-2-4, Pt of SW 2-63-2-4, and Pt of SE 2-63-2-4; and

WHEREAS, it is further deemed expedient to identify land uses generally and with respect to specific parts of NW 11-63-2-4, SW 11-63-2-4, NW 2-63-2-4, Pt of SW 2-63-2-4, and Pt of SE 2-63-2-4; and

WHEREAS, it is deemed expedient to identify the density of population proposed for the areas generally in respect of NW 11-63-2-4, SW 11-63-2-4, NW 2-63-2-4, Pt of SW 2-63-2-4, and Pt of SE 2-63-2-4; and

WHEREAS, it is deemed expedient to provide a general location of major transportation routes and public utilities in NW 11-63-2-4, SW 11-63-2-4, NW 2-63-2-4, Pt of SW 2-63-2-4, and Pt of SE 2-63-2-4

THEREFORE, pursuant to the authority of the Municipal Government Act, Statutes of Alberta, 1994, Chapter M-26.1, Section 663, the Council of the City of Cold Lake, duly assembled, enacts as follows:

That an Area Structure Plan be approved for NW 11-63-2-4, SW 11-63-2-4, NW 2-63-2-4, Pt of SW 2-63-2-4, and Pt of SE 2-63-2-4, as attached to and forming part of this bylaw as Appendix "A".

1. That this bylaw shall take effect on the date of the final passing thereof.

FIRST READING passed in open Council duly assembled in the City of Cold Lake, in the Province of Alberta, this 24th day of April, A.D. 2007, on motion by Councillor Pelechosky.

**CARRIED
UNANIMOUSLY**

SECOND READING passed in open Council duly assembled in the City of Cold Lake, in the Province of Alberta, this 14th day of August, A.D. 2007, on motion by Councillor Plain.

CARRIED

THIRD READING passed in open Council duly assembled in the City of Cold Lake, in the Province of Alberta, this 14th day of August, A.D. 2007, on motion by Councillor Gagnier.

CARRIED

CITY OF COLD LAKE



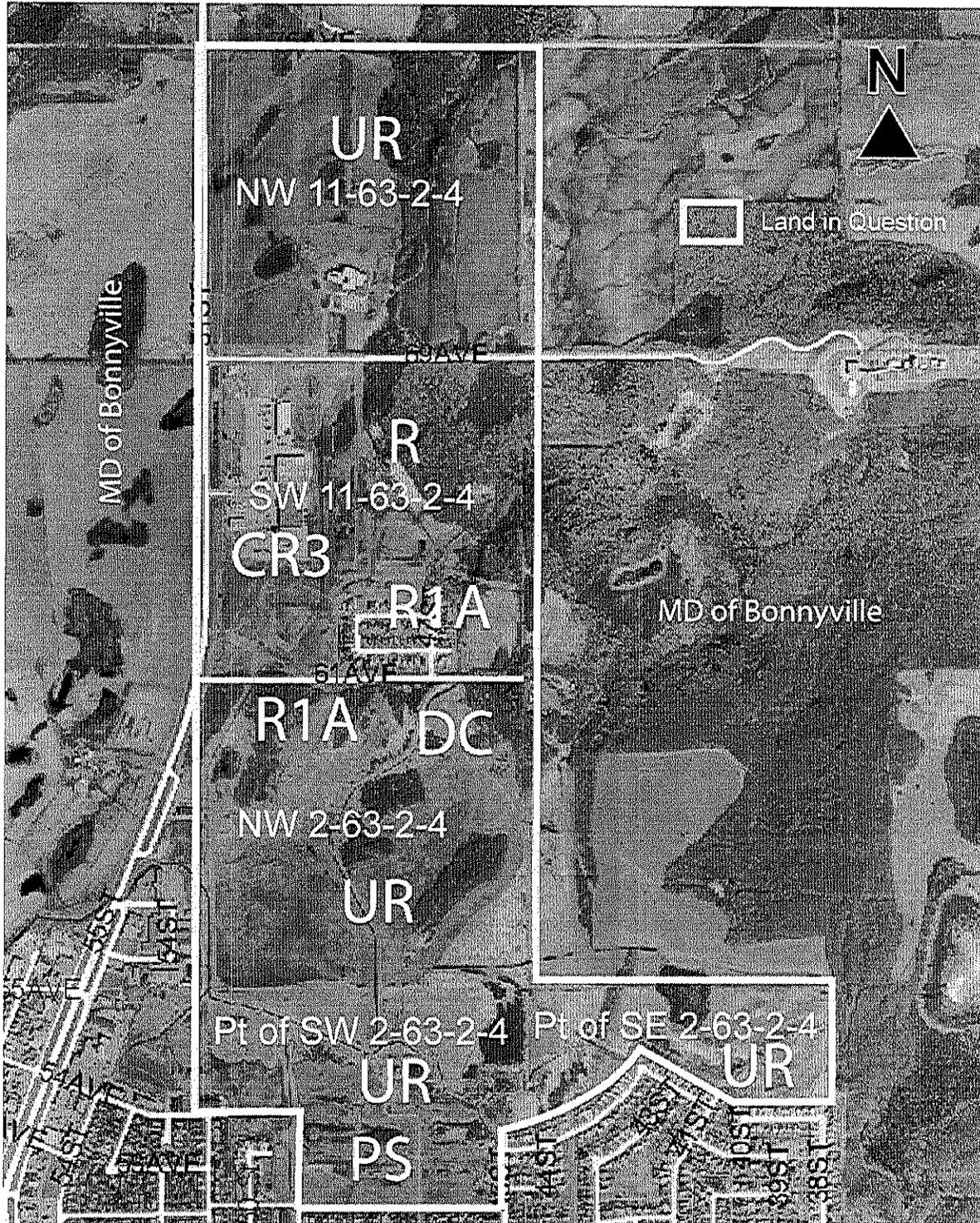
MAYOR



CHIEF ADMINISTRATIVE OFFICER

Map of Land in Question

(NW 11-63-2-4, SW 11-63-2-4, NW 2-63-2-4, Pt of SW 2-63-2-4, and Pt of SE 2-63-2-4)



Appendix A

City of Cold Lake
Central Cold Lake Area Structure Plan

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April 2007



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1.0 Introduction

1.1 Purpose

The purpose of this Central Cold Lake Area Structure Plan (ASP) is to establish a land use and servicing framework for the development of lands east of Highway 28 that form part of the corridor connecting north and south Cold Lake.

This ASP addresses the City's current strategic priorities for community growth and development, and replaces the former Northeast ASP, as amended, originally adopted in 1989 by the former Town of Grande Centre.

This Area Structure Plan will enable the implementation of the desired distribution of land uses, define the routing of major roadways and utility servicing, and the phasing of development.

1.2 Plan Area and Land Description

The ASP comprises most of four quarter-sections of land legally described by the Alberta Township Survey System as being within the West ½ of Section 11-63-2-W4M, the West ¼ of Section 2-63-2-W4M, and the northern parts of the South ½ of Section 2-63-11-W4M. The total area for the ASP is approximately 248 hectares.

As shown in **Figure 1**, the ASP has the following boundaries:

- North Boundary – Imperial Park
- East Boundary – Municipal District of Bonnyville
- South Boundary – 54th Avenue in south Cold Lake
- West Boundary – Highway 28

1.3 Land Ownership

The pattern of existing area subdivisions and the holdings of large landowners with yet undeveloped areas are identified in **Figure 2**.

2.0 Statutory Plan and Policy Context

2.1 Municipal Government Act

An Area Structure Plan is a statutory plan authorised in Section 633 of the Municipal Government Act (MGA), Statutes of Alberta, 1994, Chapter M-26.1, for the purpose of providing a framework for the future subdivision and development of lands within a municipality. An ASP must describe:

- sequencing of development;
- proposed land uses, either generally or specifically;
- population density;
- the general location of major transportation and public utilities; and
- any other planning matters that Council may consider necessary.

The MGA also requires an ASP to be consistent with a municipality's other statutory planning documents.

2.2 Cold Lake Municipal Development Plan

The land within the ASP City of Cold Lake Municipal Development Plan provides policy direction to guide future growth, development, and capital investment in infrastructure within City of Cold Lake. The following are Strategic Priorities from the MDP that have particular relevance to this ASP.

- **Growth Management**
 - Promote the orderly, economic, and efficient infilling of the old communities of Cold Lake, Grand Centre and Medley.
 - Promote a centrally located civic centre / core in the vicinity of Imperial Park.
 - Provide mixed use development along the Highway 28 Corridor.
- **Attractive, Complete and Livable Neighbourhoods**
 - Utilize better design criteria in developing complete and attractive neighbourhoods.
 - Provide for a wide range of housing choice to accommodate a range of income, age and lifestyle needs within neighbourhoods.
 - Integrate parks, school sites, and community and municipal services within neighbourhoods.
- **Environmental Stewardship**
 - Preserve and integrate natural features and environmentally sensitive areas to retain environmental quality for future generations.
- **Parks and Open Space**
 - Provide recreation facilities, parks spaces and trail development to meet City growth.
- **Improved Planning Process and Urban Design**
 - Become a leader in sustainable community planning and exemplary development.
 - Neighbourhood design should encourage innovative and high quality development.

2.3 Existing Area Structure Plans

The ASP area is currently defined by the "Area Structure Plan for North East Quadrant - Town of Grande Centre Alberta, Bylaw No. _____", and will be rescinded and replaced by this Central Cold Lake ASP which is consistent with the City's current development objectives.

2.4 Cold Lake Land Use Bylaw

The City of Cold Lake's Land Use Bylaw No. 149-LU-03, as amended, describes a broad range of land use districts that will be used to implement the development framework defined in this ASP. Area lands will be reclassified by City Council to land use districts in conformance with this area structure plan.

This ASP defines a new mixed-use Urban Village land use area and also requires design guidelines be developed. These initiatives will need to be addressed through changes to the land use regulations within the Land Use Bylaw.



3.0 Development Considerations

The development of the ASP lands is influenced by the natural and man-made environment, and important considerations respecting these matters are identified in **Figure 3** and discussed in the following sections as context for the development concept presented in Section 5.0.

3.1 Topography

The topography generally consists of higher gently rolling terrain in the north and central plan areas, and identifiable lower lands that generally trend toward a large flat, low lying area in the south. In the area's southeast the lands rise steeply as the general land form starts to move into higher lands east of the plan area.

The higher land in the ASP's northern areas generally afford good opportunities for urban development, and are where existing developments including Tri-City Mall and residential areas to the east and south of the mall have occurred. A shallow but notable drainage channel with lower wetland areas bisects these higher lands which trends from northeast to southwest. This low-lying natural area remains largely intact north of 69th Avenue (NW 11-63-2-4), and would be desirable for retention as part of the City's open space network. To the south of 69th Avenue this channel has been previously incorporated into urban development.

A large, low-lying and flat area is a dominate feature of the southern plan area. This area is poorly drained and has been subject to shallow flooding during snow melt and heavy rain. Several drainage ditches cross the area that provide an outlet for surface water and stormwater run-off directed to this area from south Cold Lake. In the southeast are some higher lands that rise out of the flat lowlands and abut the northern limit of the existing residential development in south Cold Lake.

3.2 Vegetation

The majority of the area's trees and native vegetation have been long cleared for either agricultural or with urban development. However, significant areas native vegetation still exists in the more hilly areas or around low land areas not ideal for agriculture. The largest of these areas exist along the northern drainage channel (NW 11-63-2-4) and in the north-eastern part of the Tri-City Mall quarter-section (SW 11-63-2-4).

The most significant vegetative communities abutting the northern drainage channel between 69th Avenue and Imperial Park is identified for retention to the extent possible using Municipal Reserve dedication or as part of the stormwater management system. In addition to its ecological value the area also provides opportunities for connection to the municipal pathway system and as a natural separation between eastern lower density uses and the western commercial/mixed-use areas.

3.3 Soils and Groundwater

A good understanding of area soils and groundwater exists from previous studies made for the Northeast ASP, from past municipal projects, and from recent reports by area landowners. In summary, both the high and low lands generally have good soils for development despite occasional layers of sand and some surface peat in the lower lands. A high-water table is also evident in the areas lower elevations.

Geotechnical investigations in the northern two quarter-sections by BBT Geotechnical Consultants Ltd., generally described the lands as good for development where they were well drained. The soils were noted as consisting of a thin topsoil layer underlain by silty clay, then clay till, and eventually reaching sand and silty sand layers. In review of the northern lower areas, particularly along the natural drainage course, some surface peat and a high-water table were observed.

In the southern plan area there are both high and low lying lands, and these have some differences in soil characteristics. The soils in the higher lands are similar to the north and generally consist of a thin topsoil layer underlain by clay, clay till, and sand. In the lower lands the surface may consist of either topsoil or peat which is then underlain by a layered sequence of clay, sand, and clay till, or sand. The areas with peat cover vary in thickness generally between 0.4 metres and 0.7 metres, and where topsoil exists it is typically between 0.1 metres and 0.35 metres thick (Geotechnical Site Investigation NW2-63-2-4; Sabatini Earth Technologies Inc.).

The low, flat areas in the southern ASP area have a high-water table which has persisted over time. The depths to groundwater were recently identified in the Sabatini Investigation as between 0.7 metres and 1.0 metres; however, in the southernmost areas water was recorded at 0.4 metres below the surface. These recent observations confirm the previous findings of the 1975 North End Drainage Study and the 1988 Municipal Servicing Study, both by Associated Engineering Ltd. These studies indicated similar high-water table conditions in the southern flat lands while overall being suitable for development subject to specific geological and ground water investigations with subdivision and development. The recent Sabatini Investigation states that the groundwater table will have to be lowered or the lands must be raised for the construction of conventional single family residents with full depth basements.

3.4 Environmental Confirmation Area

The ASP's southern low, flat lands have a high-water table, and in parts peat moss deposits that exceed 0.4 metres. This area has been identified as an Environmental Confirmation Area for indicating the need for additional geotechnical and hydrological confirmation respecting development in this area with a high water table, and secondly where wetland the status of this area as a. Alberta Environment and Alberta Sustainable Resource Development must be consulted to determine if they have any interest in this lands under either the Water Act or the Public Land Act, and if so to determine potential mitigation and/or compensation that may be required for loss of wetlands.

3.5 Existing Land Uses

3.5.1 Development

The majority of the ASP land is undeveloped natural areas or is being used for low intensity agricultural production (hay fields, etc.). Several development areas consisting of commercial, residential, and school exist including: Tri-City Mall (circa 1992); residential subdivisions progressing east and south of the mall (2003 - 2006); the northern Ecole Voyageur School (2005); and, the southern Lakeland School and abutting residential lots (2006).

3.5.2 Surrounding Development

Areas east of the ASP are within the Municipal District of Bonnyville and development here includes the Cold Lake Museum, some agricultural use, and undeveloped treed and wetland areas. The south generally bounds existing low density residential use except in the southwest where highway commercial and future high density residential uses exist. To the west is Highway 28 and beyond are agricultural uses within the Municipal District of Bonnyville. The ASP's north boundary is formed by Imperial Park which includes ball diamonds, a church, and is the future location of the City's major recreation complex.

3.5.3 Municipal Services

The ASP area is large, and it includes several existing municipal infrastructure elements, including:

- A stormwater management channel provides overland drainage from the residential subdivisions located east of Tri-City Mall to the Highway 28 stormwater crossing point that connects to Palm Creek. This interim channel will be abandoned.
- A channel exists in utility right-of-way plan 932 0621 as an outlet for the stormwater pond located south of Tri-City Mall which crosses 62nd Avenue. This channel will be preserved by easement or public utility lot.
- The undeveloped 51st Street road right-of-way is used for channelling stormwater and underground water and sanitary services. This right-of-way should re-sized for its public utility lot requirements, and the balance defined for open space, trails, or urban development.
- A sanitary forcemain (r/w 832 2393) is a major feature through this area, and it will be maintained and incorporated within road right-of-ways and/or open space network.
- A abandoned watermain right-of-way (r/w 35KS) diagonally crosses the northeast ASP corner which had provided water to the Cold Lake Museum area.
- An overhead electrical transmission line (r/w 3959TR) is located in the southern plan area, and this facility will be removed and the r/w abandoned with development.
- Water and sanitary lines have been extended to Imperial Park in right-of-way crossing undeveloped lands (r/w 062 3004), and it will be incorporated into the road and/or open space network.

3.5.4 Stormwater Management

Stormwater from large portions of the existing south Cold Lake developments located east of Highway 28 drain into the large flat, low area of the south ASP. Overtime a series of drainage channels have been excavated that route this drainage flow and the natural accumulation of surface water to a crossing of Highway 28 located north of 57th Avenue. The majority of the constructed underground storm-sewer system that serves south Cold Lake enters this low area from pipes in 49th Street.

Stormwater management for the developed areas near Tri-City Mall consists of two dry-ponds. The use of dry-ponds is the most acceptable form of stormwater management due to the area's proximity to the airport at 4 Wing – Cold Lake.

3.6 Energy & Natural Resources

3.6.1 Oil & Gas Well Sites

An well is located near the geographical centre of ASP's north quarter-section (NE 11-63-02-W4), and a review of Alberta Energy and Utility Board (EUB) information indicates that it is for natural gas.

3.6.2 Pipelines

A total of three pipeline right-of-ways for natural resource transfer within the ASP, and these consist of:

- Right-of-Way Plan 792 2114 – located parallel to the north side of 69 Avenue this right-of-way is identified for but it does not currently contain a gas pipeline. At the time of development the need for this right-of-way should be assessed and closed if not required.
- Right-of-Way Plan 7056MC - this gas line abuts the east boundary in some areas and then cuts through the ASP's southeast corner. This right-of-way will be incorporated into the trail network.
- Right-of-Way Plan 012 2607 – contains a 'flow-line' that connects the natural gas well located in NE 11-63-02-W4 with a larger pipeline located to the north in Imperial Park, and it would be available for abandonment when the gas well is not longer productive. The interim treatment of this pipeline and well should be considered with the more detained planning required for implementing the urban village.

4.0 Development Objectives and Principles

4.1 Development Objectives

The Central Cold Lake Area Structure Plan has been prepared to define a framework for high quality, comprehensively planned development that includes residential, commercial and mixed use components. The main objectives of this ASP are to:

- develop a plan consistent with the vision and strategic priorities of the Municipal Development Plan;
- provide a framework the development of well planned and attractive neighbourhoods with a wide range of housing choice, well-located and compatible commercial developments, an urban village, and an integrated of parks, trails, and open space that contributes to the city-wide system;
- integrate existing development and where feasible natural features into the plan; and
- ensure implementation of the plan in an orderly manner.

4.2 Development Principles

The framework of development within the Central Cold Lake ASP is based on the following planning principles:

4.2.1 Community and Urban Design

- Walkability should be promoted by providing functional and attractive pedestrian linkages between neighbourhoods and trail systems. (MDP 12.3)
- Urban village that group retail and office uses, higher density housing, schools, institutional uses and other community facilities are encouraged as focal points, for minimizing transportation infrastructure, and for encouraging walking and public transit use. (MDP 12.2)
- Design guidelines should prepared and adopted for areas with special characteristics, opportunities and problems including the Highway 28 Corridor and within any urban villages. (MDP 12.1)

4.2.2 Residential

- Residential neighbourhoods should be safe, attractive, and well serviced with: overall density not exceeding 50 persons per gross residential hectare; adequate parks and open space to service, preferably as a larger centralized park which is more usable and easier to maintain; and, include focal points to encourage cohesion and interaction. (12.4)
- Provide a wide range of housing choices including large lot housing, small lot housing, semi-detached dwellings, townhouses and apartments shall be provided to meet varying housing needs, incomes, and lifestyles. (MDP 7.2 & 7.6)
- Overall housing mix of approximately 75% single family dwellings and 25% multi-family dwellings in new neighbourhoods should be encouraged. (MDP 7.8)

- Higher density multi-family development, including seniors housing, should be located adjacent to collector and arterial roadways in proximity to employment centres, shopping and services, and/or adjacent to parks and open spaces. (MDP 7.5 & 7.10)
- Apartments located adjacent to lower density uses should mitigate their bulk and mass through appropriate setbacks, landscaping and/or building terracing. (MDP 7.10)
- Modular home multi-lot subdivisions may be considered where compatible with other housing forms. (MDP 7.11)

4.2.3 Commercial and Urban Villages

- A mixed use urban village centred around the Tri-City Mall, Imperial Park and the Energy Recreation Centre that would include higher density residential building forms, such as row-housing and seniors accommodations, in close walking distance of village amenities (MDP 8.2).
- Neighbourhood commercial centres should be considered in locations on major arterial and collector streets away from school sites and parks and selected to minimize land use conflicts with nearby residential properties while still providing convenient access to neighbourhood patrons. (MDP 8.3)
- The Highway 28 corridor shall be the primary arterial commercial area within the city. Opportunities for intensification of land use, mixed use development and improvements to make the corridor more pedestrian friendly and transit oriented should be promoted and encouraged. (MDP 8.5)
- Shall require commercial developments fronting on Highway 28 and arterial roadways to maintain access through service roads or other forms of shared internal accesses where possible. (MDP 8.6)
- A neighbourhood commercial site may be provided along a collector or arterial street to serve the daily shopping needs of the neighbourhood. (12.4);

4.2.4 Open Space, Schools and Municipal Reserves

- Parks, natural areas, school sites and recreation facilities should provide connections to a continuous City-wide trail system to form greenways. (MDP 10.1)
- Trail systems, wherever possible, should be developed on dedicated rights of way interconnected with existing parks. (MDP 10.3)
- The location, site planning and development of parks, open spaces, and trail connections should consider Crime Prevention Through Environmental Design. (MDP 10.4)
- Up to 50 % municipal reserve credit may be considered for stormwater facility areas between the 1:100 year flood line level and the 1:25 year flood line level provided that: neighbourhood, community and district level service requirements elsewhere in the neighbourhood are not compromised; the proposed municipal reserve credit is usable and functional public space; the developer provides trail surfacing, landscaping, other structures or amenities; and there is an identified need for this type of recreation facility. (MDP 10.5)
- The new Energy Centre in Imperial Park will be the hub of recreation, education, and cultural activities for residents of Cold Lake and the surrounding region. (MDP 10.11)
- City school districts should be cooperatively worked with to determine the best locations, sizes and configurations of future school sites and where possible integrated with adjoining parks. (MDP 10.7)

- Where possible, locate schools so as to ensure that they have frontage along two +roadways to allow for effective vehicular access and egress from the school site. (MDP 10.8)

4.2.5 Environmental Considerations

- Natural areas shall be protected and conserved of by environmental reserve dedication, municipal reserve dedication; environmental reserve easements; conservation easements; donations and bequests; and acquisition through purchase or land trades. (MDP 6.2)
- Sustainable natural areas shall be integrated into new development areas to form part of a linked park and open space system that would include the retention of wildlife corridors and the use of stormwater ponds for forming continuous greenways. (MDP 6.3)
- Trees shall be considered for conservation and any tree surveys required in support of this review process shall be at the developer's expense. (MDP 6.8)
- A Municipal Environmental Impact Assessment may be required for any proposed development that may have a detrimental environmental effect. (MDP 6.10)

4.2.6 Geotechnical

- No development shall be allowed in areas prone to flooding, erosion, landslides, subsidence or any other natural or human-induced hazards unless recommended through geotechnical study. (MDP 6.4)

4.2.7 Resource Operations and Public Utilities

- Accommodate the safe and nuisance-free operation of existing utility rights-of-way and integrate pipeline corridors as walkways and open space linkages where feasible.
- Maintain setback distances from high pressure gas lines as recommended by the A.E.U.B.

4.2.8 Circulation

- MDP Map 4: Transportation Network shall be used as a guide future arterial and collector road development which shall be reflected in future land use and to ensure right-of-ways are preserved for providing required future roadway capacity. (MDP 13.1)
- A traffic impact assessment may be required to evaluate the impacts on the transportation systems prior to the approval of any major development. (MDP 13.4)
- Appropriate noise attenuation measures should be implemented to ensure acceptable noise level standards for new residential development next to major arterial and collector roadways. (MDP 13.5)
- Collector roadways should be designed as future transit routes and that transit service could be provided within a 400 m walking distance of most homes. (MDP 12.4)
- Neighbourhoods should be integrated into the City-wide multi-use trail systems by linking residential areas with open space and activity nodes through municipal, school, and environmental reserves, public utility lots, planned trails, and other amenities. (MDP 12.4)

5.0 Development Concept

The Development Concept defines the future development framework for the Central Cold Lake ASP which responds to the existing physical environment, addresses the development objectives consistent with the Cold Lake MDP, and provides a well designed neighbourhood to meet resident and community needs.

The Central Cold Lake ASP forms a logical planning unit that includes all lands within the City boundary that link existing development in south Cold Lake to Imperial Park and north Cold Lake as shown in **Figure 5 – Development Concept**.

5.1 Residential

The majority of the land within the Central Cold Lake ASP is defined for residential development which has as a main objective the provision of a sustainable housing balance in the neighbourhood for addressing the changing needs of residents over time. A broad range of low, medium, and high density housing options are planned for both ownership and rental opportunities, and provided with local amenities, services, and high standards in urban design to combined form a complete neighbourhood. The residential density for the area neighbourhood is approximately 48.5 persons per net residential hectare.

5.1.1 Low Density Residential

Low-density residential is the predominant neighborhood land use, with housing consisting of single-detached dwellings. These areas have been provided with parks, trail linkages, and other open spaces amenities for creating an attractive and desirable neighbourhood for residents. A combination of parcels with and without lane access will be developed, and these will be provided in a variety of small, medium, and large sizes to offer ownership options for a broader range of income levels and to aide land efficiency.

The southern lands between the existing residential development and Tri-City Mall form an important link in connecting north and south Cold Lake. Since amalgamation in 1996 it has been desired that these lands would infill, and the residential uses proposed here reflect this desire. However, these low-lying lands are poorly drained resulting in a high-water table and an accumulation of peat moss. The high-water table can be solved by raising these low areas, but with the peat moss provincial agencies have an interest in determining their status as a wetland. Where this review identifies a wetland, its development would require these agencies involvement and potentially mitigation and/or compensation for any net loss of wetlands.

Low-density residential are located on suitable development lands in the area's northeastern, and these form a part of the broad range of residential uses near in proximity of the Mall and the urban village.

5.1.2 Manufactured Home Community

In the east-central plan is an area for manufactured home rentals within a comprehensively planned community. This area is consistent with low-density residential usage with a maximum density of 25.2 units per net hectare, and will contribute to the area's range of housing options and affordability. The community will be connected to municipal water and sewer services, and include on-site paved roads and stormwater management. Recreation space totaling 10% of the gross area and architectural controls are required.

5.1.3 Medium Density Residential

Medium-density residential uses are situated throughout the ASP in locations near collector roadways, employment centres, shopping and services, parks, and other open space areas. The density and siting of these developments are supportive of smart growth principles which promote affordability, walkability, and the efficient use of land and infrastructure.

The medium-density housing forms anticipated in these areas include duplexes, triplexes, and row housing up to four units. Where these housing types are developed as bareland condominium they should be subject to comprehensive site planning to would ensure an attractive final product within the context of the neighbourhood. The use of row housing is anticipated to be used extensively within the northern urban village, and side-by-side duplex units are included in the mixture of land uses east of Tri-City Mall.

5.1.4 High Density Residential

High-density residential uses consist of row housing with five or more units and apartments. Opportunities for these this type of density is provided in proximity to Tri-City Mall and in the northern urban village. The inclusion of apartment uses east of Tri-City Mall are within easy walking distance to goods and services, and they provide a land use transition between commercial and the lower-density uses further east.

Apartment buildings individually or as part of mixed-use developments are intended for development in the mixed use urban village. Here these uses will provide a critical population base to sustain the urban village and contribute to the character, pedestrian orientation, and uniqueness of the urban village. The residential densities for apartments should not exceed 100 units per net hectare.

5.2 Commercial

The Highway 28 corridor within this ASP is a major commercial area within the community that serves both city and regional market areas. This area provides opportunity for locating a broad range of commercial use types with various land needs. The lands in this area are prominent feature within the community and design guidelines should be created and adopted to ensure that the design and distribution of land use reflects this important location. These guidelines should address how large format commercial developments typical the arterial commercial, shopping centre, and urban village areas may be designed pedestrian and transit friendly, aesthetically pleasing, and integrate with surrounding development.

5.2.1 Shopping Centre Commercial

The Highway 28 corridor is the City's primary area for arterial commercial development, and the western ASP lands front this corridor with the Tri-City Mall and approximately 800 metres of vacant land to the north. Combined these two areas are important City-wide resources for locating a wide range of retail and service commercial uses including those needing large sites for on-site storage and parking.

Tri-City Mall shopping centre has been developing since the mid-1990s and still has a significant amount of commercial lands available. The mall will continue to in-fill making it a major commercial and employment draw in the area. Development here is appropriate for larger scale 'big box' retail uses, pad retail, and expansion of the mall.

5.2.2 Arterial Commercial

The remaining Highway 28 frontage north of mall will also overtime be required for larger scale development, and it should be incorporated to function in harmony with the commercial and other uses in the City's central mixed use Urban Village located east of this site. These areas provide locations for a wide range of general retail, shopping centre, service commercial, office, hotels and community service use important to the entire community.

5.2.3 Urban Village Commercial

The northern part of the ASP is centrally located within the City, close to the Imperial Park recreational hub, and includes a major commercial node. It was for these reasons that the Municipal Development Plan identified this location as one of four mixed use urban villages functioning as a centre of community life. The following objectives are proposed for the development of the urban village:

- Dynamic, mixed use, transit oriented functioning as heart of the area;
- Integration of higher density housing forms, institutional uses and churches, parks and recreation facilities;
- Pedestrian orientation
- Integrated with surrounding area
- Attractive, safe, and functional

The development of this area will require an amendment to this ASP including the submission of a detailed outline plan incorporating the urban village objectives, supportive land use districting, and design guidelines all as.

5.2.4 Neighbourhood Commercial (?)

A neighbourhood commercial area has been located in the _____ to provide access to convenience goods with walking distance to a majority of this neighbourhood.

5.3 Parks and Open Space

A variety of parks and open spaces are provided in the plan area with the objective of provide park space within easy walking distance of the majority of housing and for allowing links between parks and open space system for creating a complete and liveable community. The major elements of the plan include numerous parks and trails, open space around and including stormwater management facilities, and the areas two developed school sites.

The area has existing school sites in the north and south, and these will function as joint use joint use education and recreation amenities within the ASP.

Stormwater management facilities have been located to benefit from the natural contours and will present both active and passive opportunities for residents. The facilities are often linked to the overall pedestrian network and will provide landscaped views from residential enclaves as well as the collector/arterial roadway networks.

The existing natural drainage area in the northern lands east of the urban village is identified for special protection as critical open space within the plan area. This area preserves parts of an interesting landscape and allows for pedestrian linkages to and within the urban village, and between Tri-City Mall and recreational opportunities at Imperial Park.

5.4 Religious Assembly

The provision of locations for religious assembly have long been desirable within the plan area as it is conveniently located between north and south Cold Lake and was until recently been located away from the focus of intensive development. In the recent past Subdivisions have been made for the future development of two religious facilities in the ASP's northwest corner on the south side of 71st Avenue. This area has taken on new importance within an amalgamated community and is defined as either arterial commercial or residential within the context of a mixed use urban village.

A total of three locations for three religious facilities have been defined within the ASP area. A site located south of 69 Avenue has been identified. It is desirable to locate religious assembly use on corner sites along collector and arterial roadways

5.5 Urban Design Guidelines

The design of a city is a key determinant of its attractiveness to potential residents and businesses. Design quality is judged by visual criteria such as architectural treatment, visible heritage preservation and landscape design, and by less tangible factors such as pedestrian-friendliness and the vibrancy of its public spaces. A city's 'look', in other words, is affected not only by its physical appearance but by its liveability. This applies not only to downtown centres but to residential areas which, without proper measures, can be adversely affected by neighbouring industrial and/or commercial uses.

The City of Cold Lake shall review its current Land Use Bylaw and amend if necessary to address improved aesthetics and standards for commercial developments. This needs to consider but not necessarily be limited to items such as; site planning, architectural treatment, setbacks, pedestrian circulation, landscaping, and parking.

These design guidelines should apply to commercial, mixed use and medium and higher density residential uses within the ASP. These design guidelines shall be developed and adopted as an amendment to the ASP and having an implementing clause in the Land Use Bylaw, or alternatively they should be incorporated directly as an amendment to the LUB. The guidelines should be developed before further area redistrictings, and apply to current districts where development permits have not been issued.



6.0 Servicing and Transportation

6.1 Sanitary Sewer

The sanitary sewer concept for the ASP lands is shown on **Figure 5**. This system collect area sewer flows by gravity to the existing central lift station located north of 54th Avenue and then pumps these southward through an existing 800mm forcemain to the City's sewage lagoon located southeast of the City.

Sanitary sewer mains for the existing ASP development areas are in place, but these are currently at or beyond operating capacity. A new 600mm diameter trunk sewer line is required to relieve existing capacity problems, and it will also provide new capacity for servicing new development within the ASP and for areas north and east of the ASP boundary. This new trunk is required to be routed northeast of the existing central lift station, and it has been located within the collector road network and along the ASP's east boundary within the Municipal District of Bonnyville.

The City is currently undertaking a sanitary service master plan and when completed sewer sizing and alignments should be confirmed with this document.

6.2 Water Distribution

The ASP water distribution system is provided by the extension of existing or future water mains as shown on **Figure 6**, and is based on the Town of Grand Centre Municipal Servicing Study. This study indicates that a new water reservoir is required on the north boundary of the ASP area. A new water service master plan is being developed by the City and water main sizing and alignments should be confirmed when this document is completed.

The major water network generally consists of 300mm diameter water mains that loop between the existing 400mm diameter water main at 54th Street and the existing 300mm diameter main previously extended through the ASP lands. A minor water distribution system generally following the local road network will typically consist of 200mm mains. These water main sizes and extensions to the ASP boundary should be confirmed and established to suit ongoing development needs through detailed engineering design.

6.3 Stormwater Management

In 2006 a Master Drainage Plan (DMP) defined overall stormwater for the City which has been followed for the ASP stormwater management concept shown on **Figure 7**. The DMP identified seven drainage basins that existing in whole or part within the ASP boundary and proposed stormwater management facility (SWMF) locations for each basin based on the existing drainage patterns and low-lying areas. An overall storage volume of approximately 212,000 cubic metres was determined as required to handle 1 in 100 year peak flow events for lands within the ASP area.

All drainage basins are required to be controlled to a discharge rate of 2.0 litres per second hectare, and must be dry ponds due to proximity to the 4 Wing Air Base as wet ponds may attract birds which would affect aircraft safety. Internal ASP drainage will be conveyed to SWMFs by a minor piped system located within area road right-of-ways, and may continue to use vegetated swales and ditches in the interim or in the ultimate design where appropriate. As wet ponds are desirable for improving water quality treatment these could be permitted in place of dry ponds with the agreement of National Defence who holds a caveat over the lands for the protection of the 4 Wing Air Base.

A total of eight SWMFs are distributed throughout the ASP, and the final sizes, surface areas, and locations of these may be adjusted during detailed design to reflect exact contributing area calculations, pond configuration, and final grading. Of these ponds the large SWMF in the southwest is unique as it provides storage for approximately 165 hectares of the developed areas south of ASP and 95 hectares within its boundary. This drainage basin currently drains through southern ASP area via shallow ditches into two 900mm culverts that cross Highway 28 before entering a channel to Palm Creek. Development will require these ditches to be replaced with pipes and a SWMF having capacity to store 99,000 cubic metres of water. It is expected that due to the required storm outfalls into this area the normal dry bottom of this pond will need to be at an elevation lower than the existing culvert across Highway 28. This matter will have to be addressed when development required that this pond be constructed. Options include lowering the pipes crossing Highway 28 and channel upgrades, or the replacement of the existing channel and crossing at a lower level by large diameter pipe.

Developers are required to provide detailed stormwater management plans as part of the subdivision approval process. These plans shall ensure that the proposed stormwater management system is adequate to accommodate post development flows and that adequate detention and polishing can be provided to meet both Alberta Environment and the City of Cold Lake Municipal Engineering Servicing Standards and Standard Construction Specifications.

6.4 Transportation

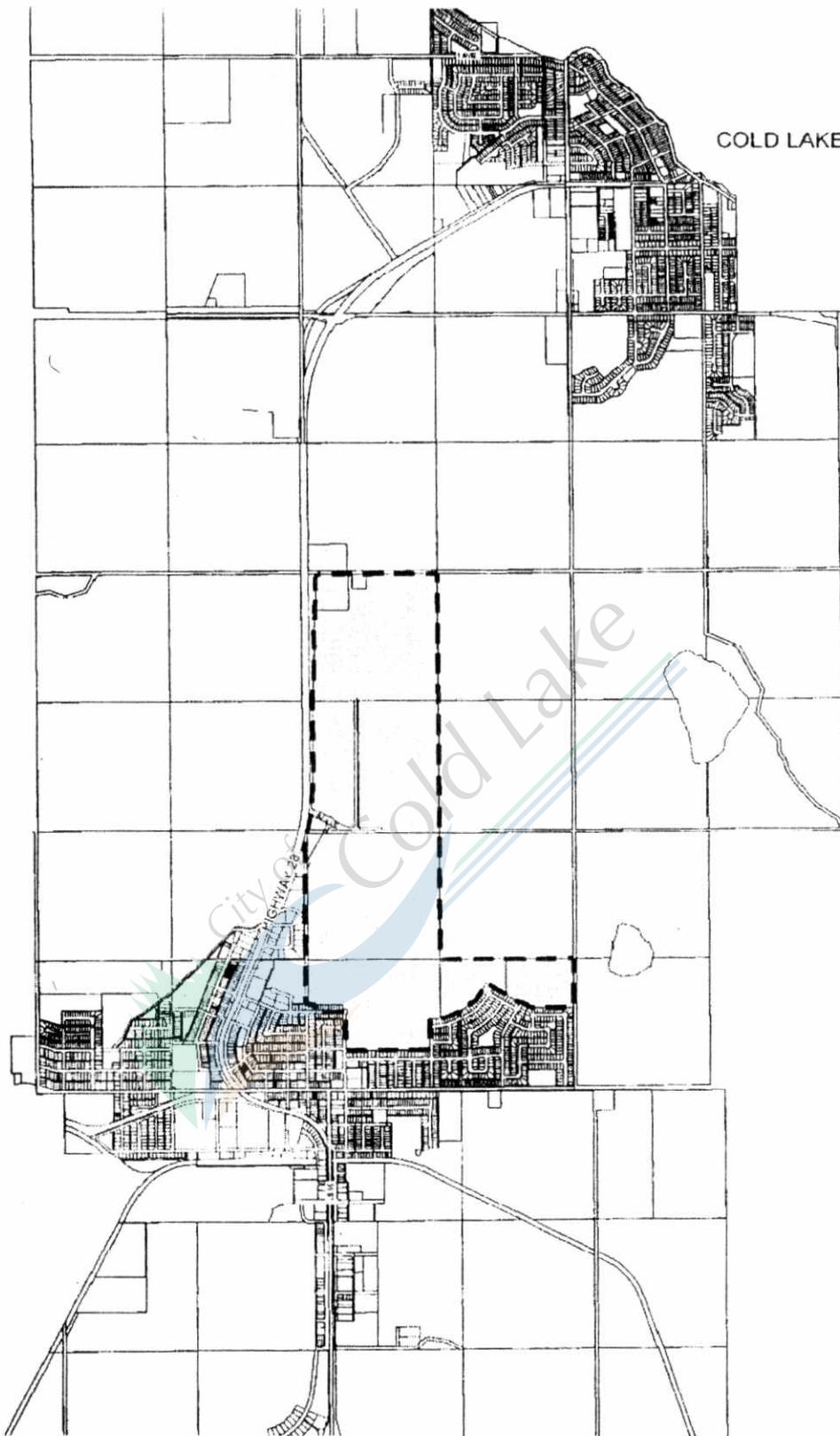
The collector and local road network is illustrated conceptually in Figure 8. Local roads area linked to collector roads within each sub-neighbourhood which in turn connect to a series of east-west collectors including 54th Avenue, 62nd avenue, 69th Avenue, and 71st Avenue at the extreme north.

7.0 Staging

7.1 Staging

Staging of development is affected by the market and other conditions and therefore some flexibility must be maintained. The expected development staging for the ASP is depicted in **Figure 9**, which respects the logical extension of roadways and infrastructure in this area.

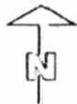




COLD LAKE

LEGEND

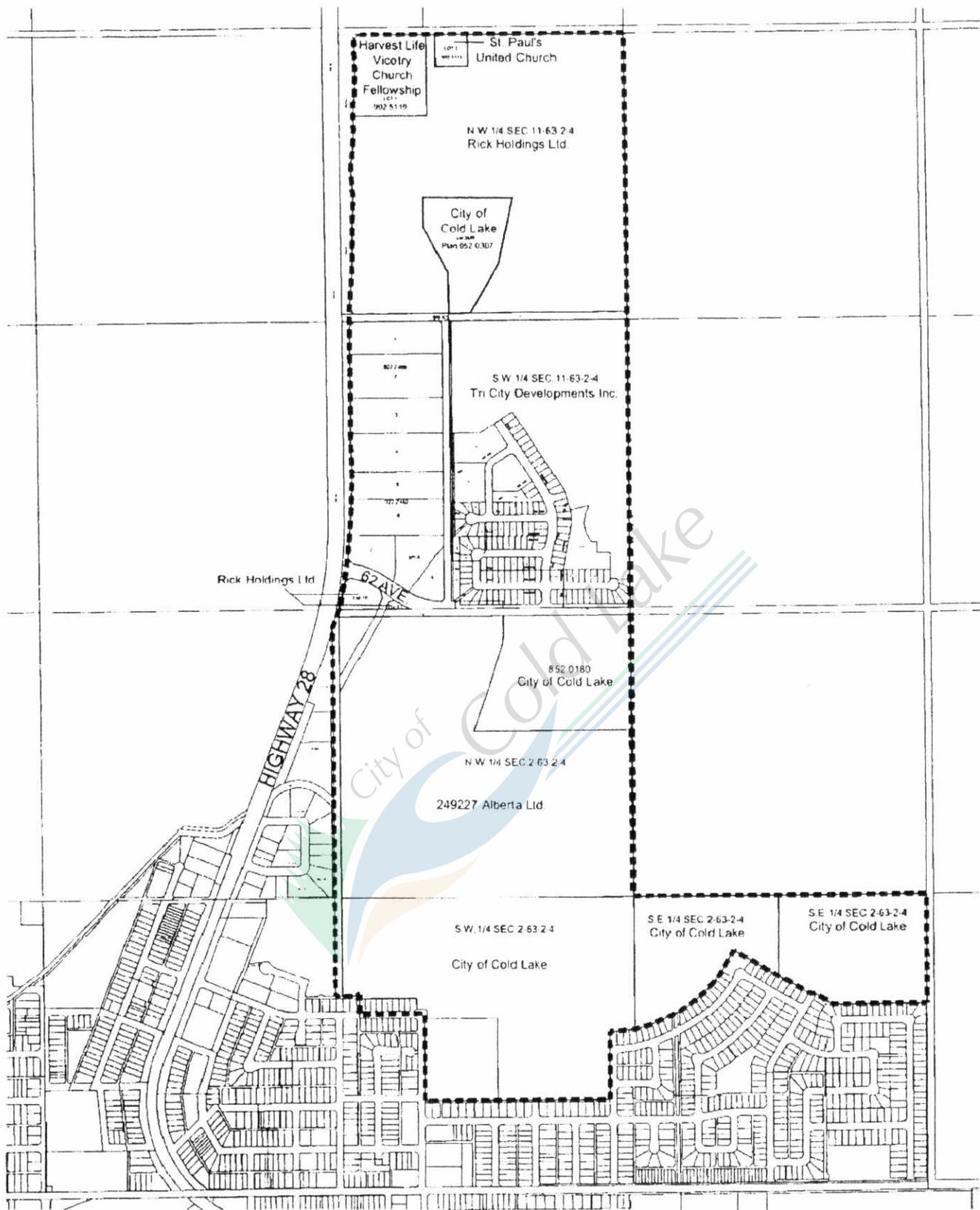
----- ASP BOUNDARY



City of Cold Lake
Central Cold Lake
Area Structure Plan
Location Plan
COUNCIL MEETING

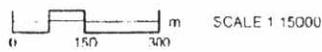
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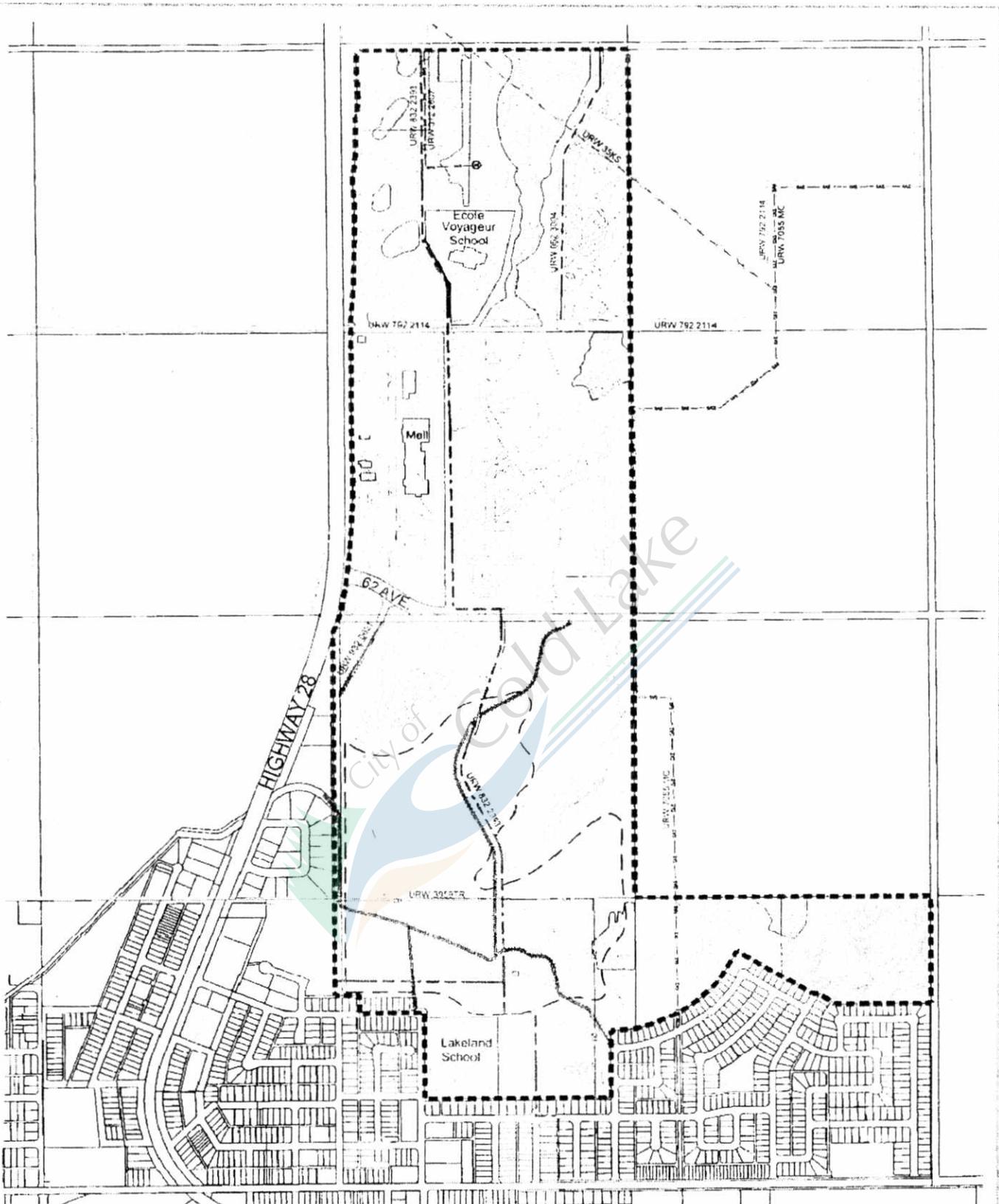
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----- ASP BOUNDARY



City of Cold Lake
Central Cold Lake
Area Structure Plan
Land Ownership
COUNCIL MEETING

Figure 2067

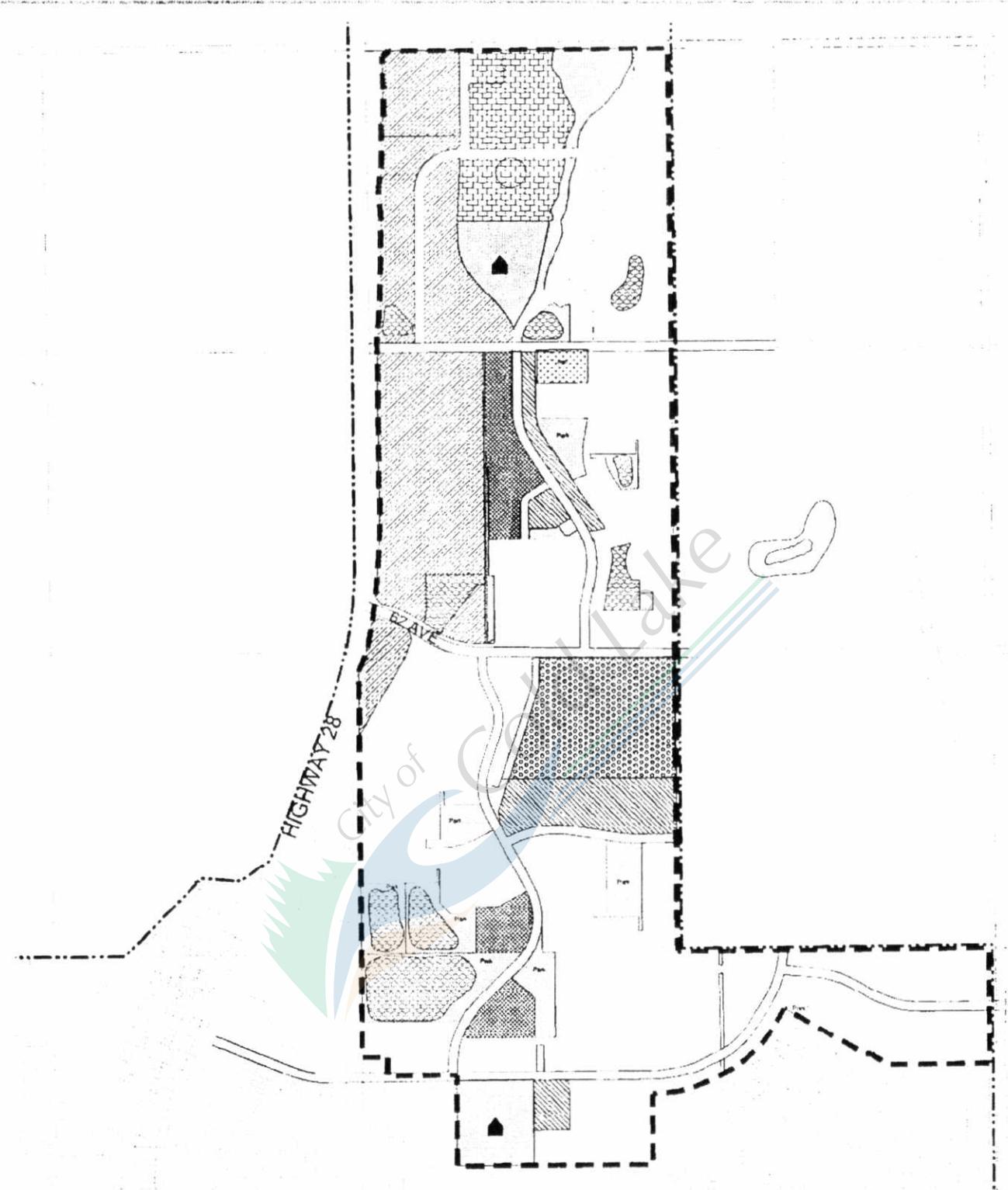


- LEGEND
- - - ASP BOUNDARY
 - - - ENVIRONMENTAL CONFIRMATION AREA
 - ⊗ WELL SITE
 - ▭ NATURAL AREA
 - ▬ DRAINAGE CHANNEL
 - OVERHEAD POWERLINE
 - SANITARY FORCE MAIN
 - WATER/SANITARY LINE
 - WATER MAIN
 - - - GAS PIPELINE



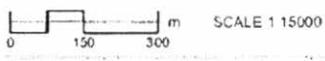
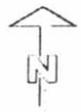
**City of Cold Lake
Central Cold Lake
Area Structure Plan
Existing Site Conditions**

APR 24 2007
Figure - 3



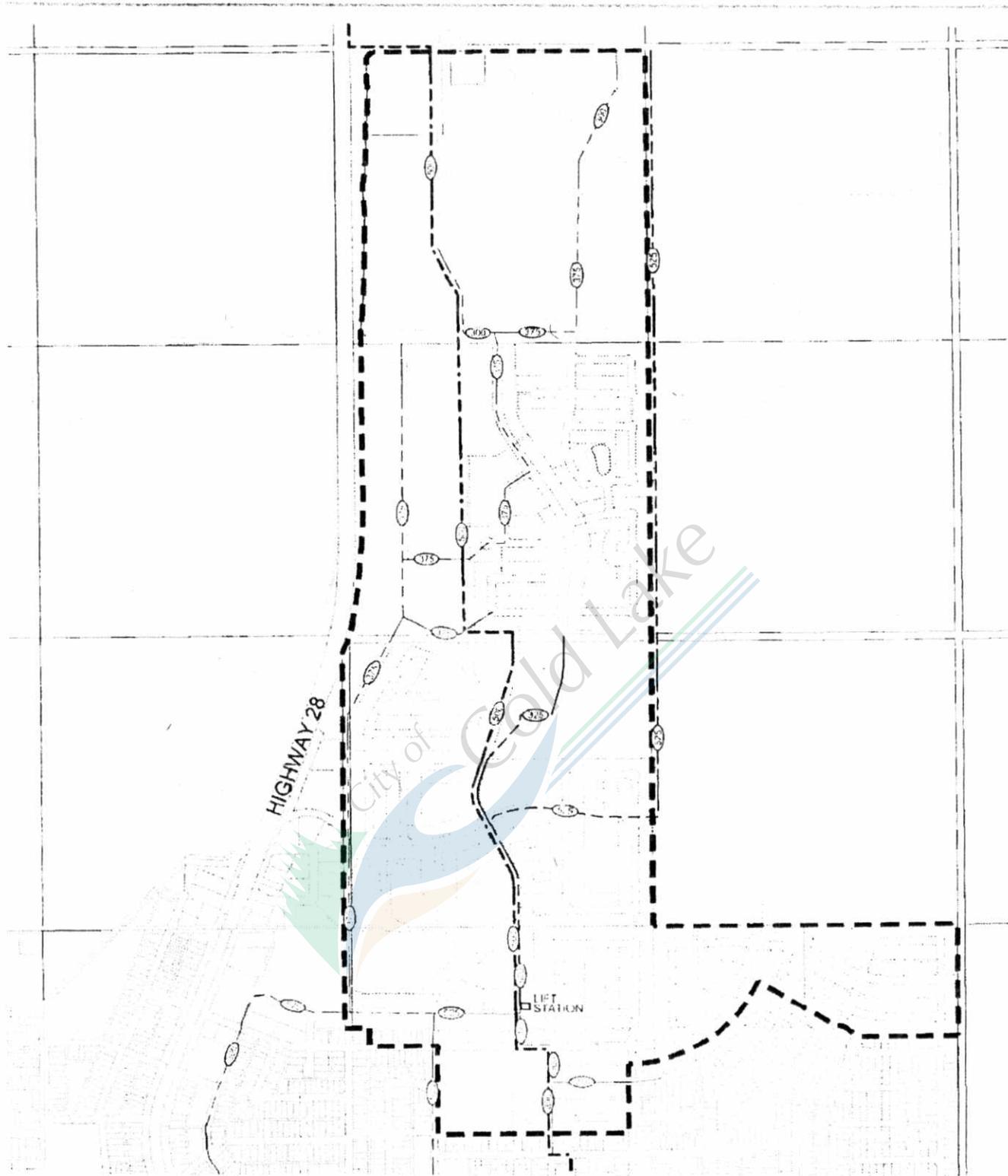
LEGEND

- ASP BOUNDARY
- CITY BOUNDARY
- LOW DENSITY RESIDENTIAL
- MED DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- MOBILE HOME SUBDIVISION
- COMMERCIAL
- RELIGIOUS FACILITY
- MIXED USE
- OPEN SPACE/PARK
- STORMWATER FACILITY
- FUTURE COLLECTOR ROADWAY
- FUTURE ARTERIAL ROADWAY
- SCHOOL
- PEDESTRIAN NETWORK



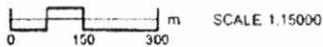
**City of Cold Lake
Central Cold Lake
Area Structure Plan Update
Development Concept**

APR 24 2007
Figure 4



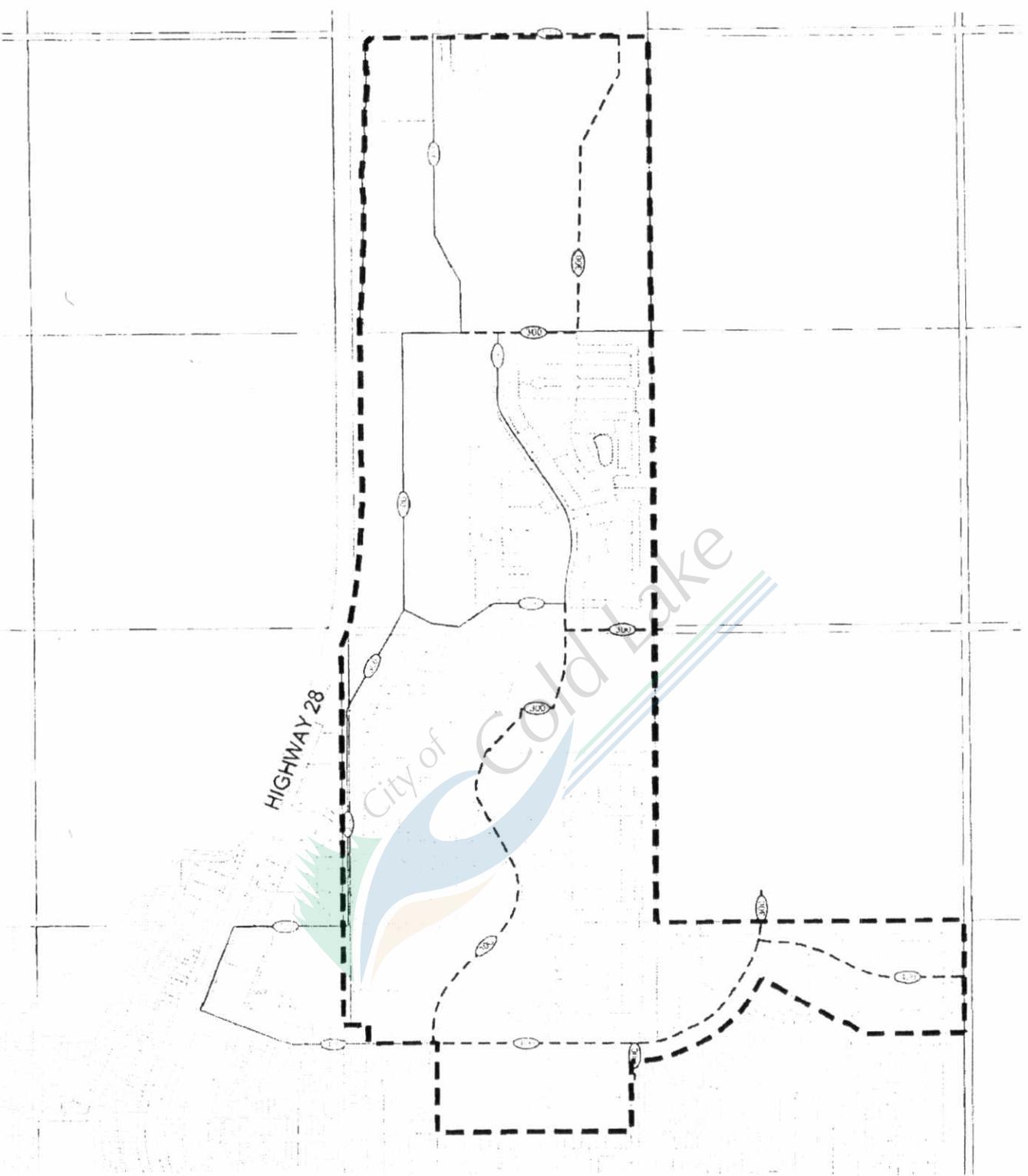
LEGEND

- ASP BOUNDARY
- (500)--- EXISTING FORCE MAIN
- (150)--- EXISTING SEWER TRUNK
- (150)--- PROPOSED SEWER TRUNK



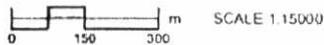
City of Cold Lake
Central Cold Lake
Area Structure Plan
Sanitary Servicing
COUNCIL MEETING

APR 24 2007
Figure - 5



LEGEND

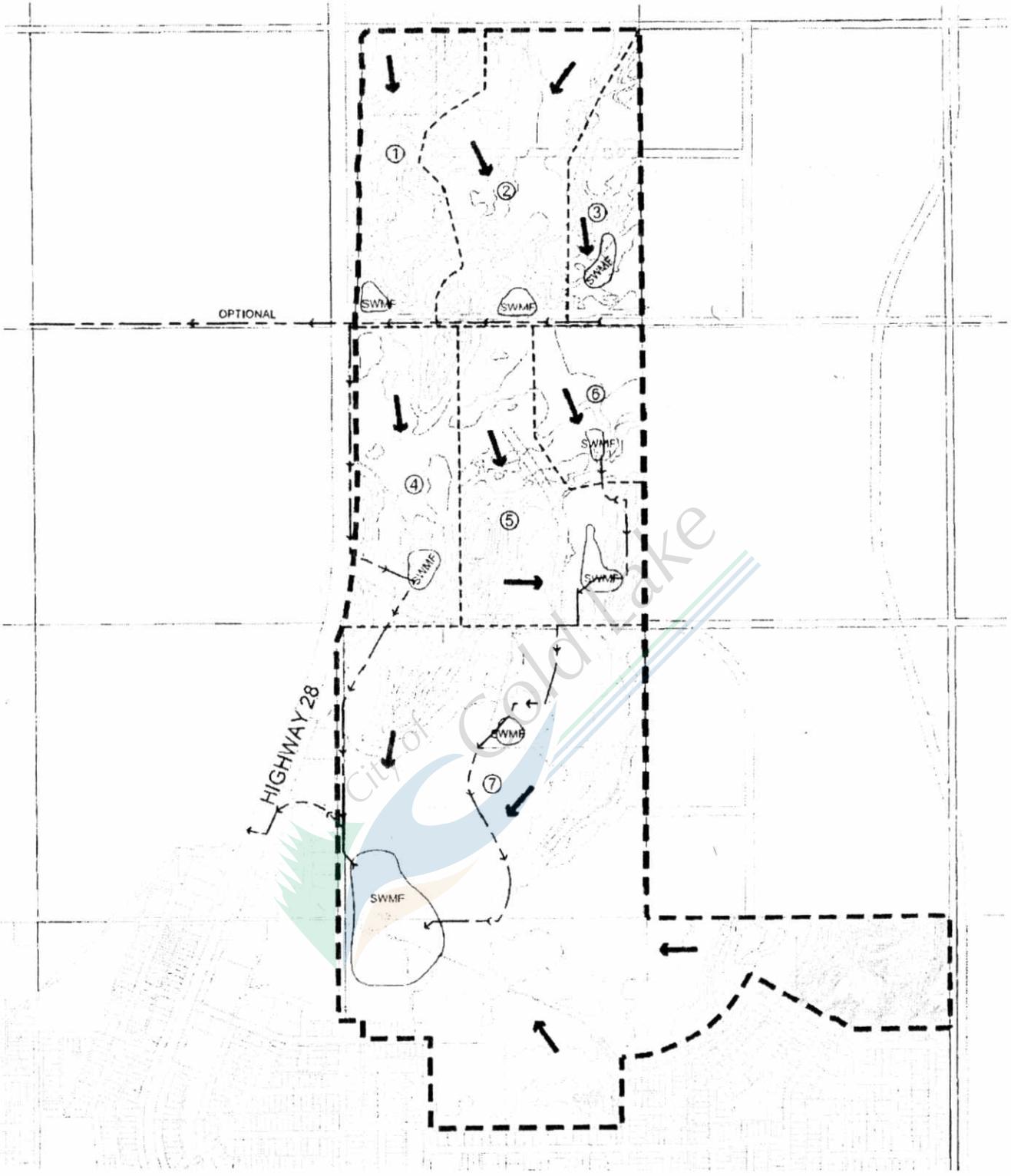
- ASP BOUNDARY
- EXISTING WATER MAIN
- PROPOSED WATER MAIN



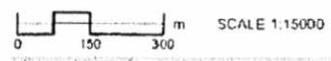
City of Cold Lake
Central Cold Lake
Area Structure Plan
Water Distribution
COUNCIL MEETING

Figure 6
APR 21 2006

UMA ACCOM



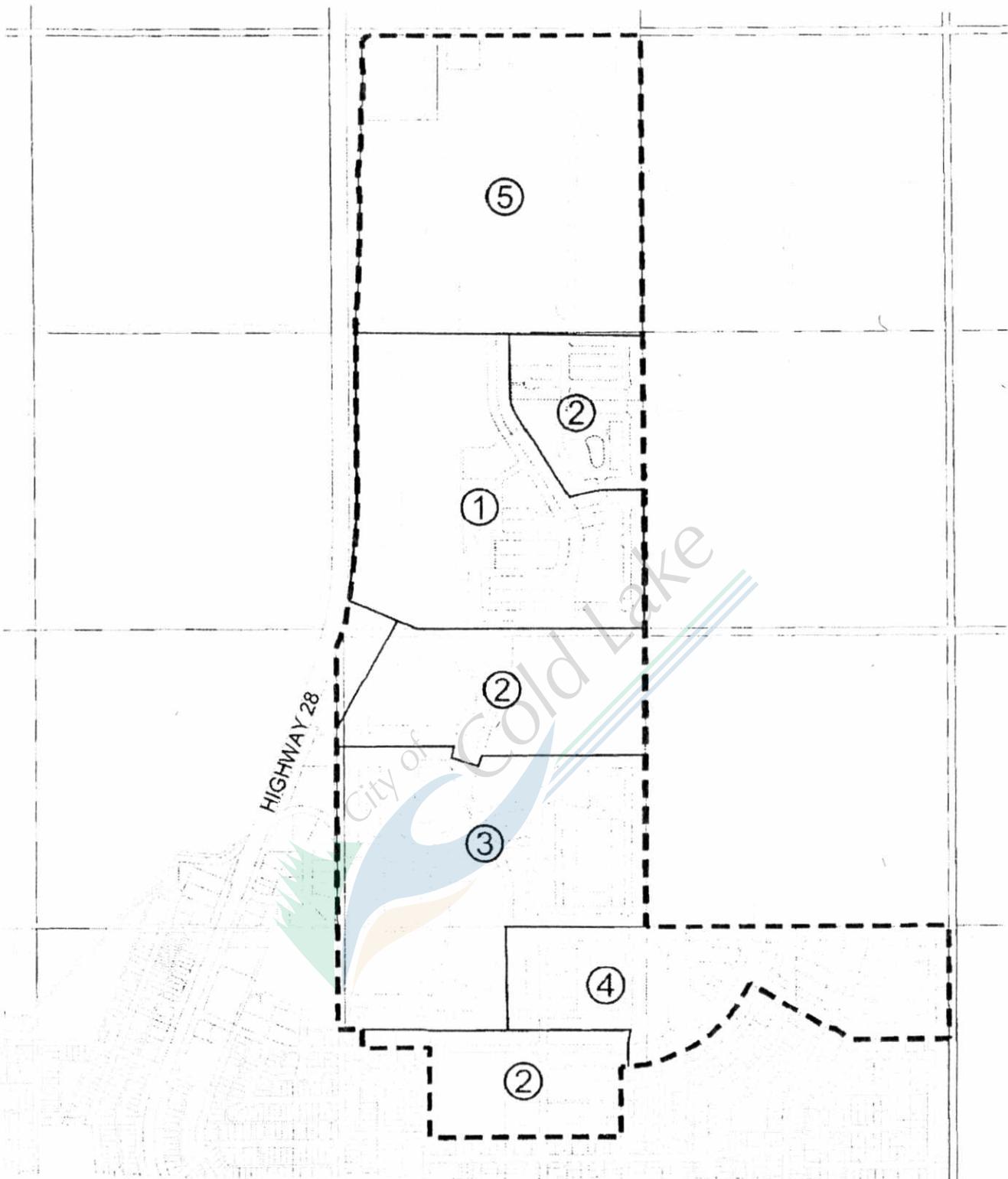
- LEGEND**
- ASP BOUNDARY
 - INTER-CONNECTING PIPE SYSTEM
 - ① DRAINAGE BASIN
 - DRAINAGE DIRECTION
 - SWMF STORMWATER MANAGEMENT FACILITY



City of Cold Lake
 Central Cold Lake
 Area Structure Plan

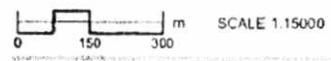
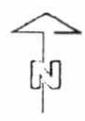
Stormwater Management COUNCIL MEETING

APR 24 2007
 Figure - 7



LEGEND

--- ASP BOUNDARY



**City of Cold Lake
Central Cold Lake
Area Structure Plan
Development Staging**

APR 24 2007
Figure 9