OUTLINE PLAN

FALCON RIDGE

NE1/4 Sec 23, Twp 39, Rge 7, W5M

ROCKY MOUNTAIN HOUSE ALBERTA

PREPARED FOR:

HASCO DEVELOPMENT CORPORATION LTD.

PREPARED BY

CHALLENGER ENGINEERING
(A DIVISION OF CHALLENGER GEOMATICS LTD.)

1400, 10117 Jasper Ave Edmonton, Alberta T5J 1W8

Adopted October 7, 2008

TABLE OF CONTENTS

1.0	LOCATION AND PURPOSE	3
2.0	POLICY FRAMEWORK	4
3.0	SITE CHARACTERISTICS	5
3.1	Legal Description and Ownership	5
3.2	Existing Land Use	
3.3	Vegetation	5
3.4	Adjacent Land Use	5
3.5	Land Form	5
3.6	Access	6
3.7	Geotechnical Considerations and Environmental Assessment	
3.8	Legal Considerations	
3.9	Site Servicing	
4.0	PROPOSED DEVELOPMENT	7
4.1	Development Concept	7
4.2	Land Use and Density	
4.3	Open Space and Trail System	
5.0	TRANSPORTATION	12
6.0	UTILITY SERVICES	13
6.1	Site Preparation and Fill	13
6.2	Sanitary Services (Figure 7)	
6.3	Water Supply & Distribution (Figure 6)	
6.4	Stormwater Management (Figure 5)	
6.5	Franchise Utilities	
7.0	PHASING (Figure 8)	15

APPENDIX

- FiguresC of T

LIST OF FIGURES

Figure 1: Location Plan

Figure 2: Topography

Figure 3: Summary of Constraints

Figure 4: Outline Plan

Figure 5: Overall Stormwater Management Plan

Figure 6: Overall Watermain Plan

Figure 7: Overall Sanitary Sewer Plan

Figure 8: Phasing

1.0 LOCATION AND PURPOSE

The proposed Falcon Ridge development is located in the east part of the Town of Rocky Mountain House (Figure 1). The site is contained within the East Area Structure Plan and contains approximately 128.54 acres. The site is legally described as part of the NE 23-39-7-5.

This Outline Plan is being submitted by Challenger Engineering on behalf of the landowner, HASCO Development Corporation Ltd. of Edmonton. The Outline Plan has been prepared to generally follow the direction of the East Area Structure Plan and reflect the constraints and unique features of the site. Through the process of preparing a more detailed plan, a number of amendments to the concept described in the existing area structure plan have been identified. The purpose of the Outline Plan is to provide more specific direction and detail leading to the subdivision and development of the site in the near future.

A number of factors and issues affect the planning in this area. The key planning factors affecting this area are as follows:

- gas pipeline rights-of-way that intersect the area (Figure 3)
- 100 m set back from gas wells (Figure 3)
- 300 m setback from landfills (Figure 3)
- view of the mountains peaks from this area
- access to the shoreline of Mud Lake
- transition between commercial, industrial and residential land-use

The key principles used in planning this development are as follows:

- avoiding or minimizing any deviation from the East Area Structure Plan
- following all legislated setbacks
- respecting the planning and presence of the proposed Eagle Ridge development to the east of this development
- balancing the development aspirations of the Developer with the interests of the community at large

2.0 POLICY FRAMEWORK

The Town of Rocky Mountain House Municipal Development Plan (MDP) provides broad general directions for the land use patterns and development within the Falcon Ridge area. The most significant is the identification of the NE 23 as a mixture of highway commercial, industrial, residential and public uses. Highway commercial is focused along the north boundary and the frontage with Highway 598 while industrial is identified next to the existing industrial park to the west. Residential is directed to the east portions of the NE 23.

The East Area Structure Plan, adopted by Bylaw No. 00/18 LU, by the Council on July 24, 2001, provides more detail on the land use patterns laid out in the MDP and provides a general framework for this urban development plan. The area covered by the Falcon Ridge Outline Plan is identified as part of Outline Plan Area "A" in the East Area Structure Plan document.

Some of the key guidelines provided by the ASP document are as follows:

- Section 5.3, sub-section 5.3.2: Residential Estate Lots, category contains single detached dwellings on individual parcels with a minimum area of 0.2 hectares with municipal water and sanitary sewer services.
- Section 5.4, sub-section 5.4.2: The Commercial use will be directed to the area along Secondary Highway 598.
- Section 5.5, sub-section 5.5.1: Industrial use will consist of two categories, light industrial and general industrial. Industrial development will be undertaken in a manner that mitigates the impact of industrial uses on surrounding residential areas.
- Section 5.7, sub-section 5.7.2 and 5.7.3. Both these sections refer to areas around the lake as well as MR dedication. This has been followed.

The East Area Structure Plan purposefully restricts the future residential population in the area to a relatively low density compared to typical urban development. This is meant to reduce the need for schools and intensive recreational facilities in the area east of Highway 11.

3.0 SITE CHARACTERISTICS

3.1 Legal Description and Ownership

The Certificate of Title for the land is provided in the Appendix.

3.2 Existing Land Use

At the present time, the land is undeveloped. Some of it has been used for agricultural purposes.

3.3 Vegetation

The south east corner of the land is covered with deciduous trees, as can be seen in Figure 2.

3.4 Adjacent Land Use

There is an existing light industrial development to the west of this land, and a proposed estate residential area to the east. There is a lake on the south, and the north is bordered by Highway 598. On the west boundary of the proposed development is an abandoned landfill, on land belonging to the Town of Rocky Mountain House. The landfill was abandoned several years ago, and at the present time the lots (C of T 65C245) are being rented out to a contractor as a storage site for his materials. There is a narrow private road/driveway leading from Highway 598 to the abandoned landfill site.

In the NE corner, Lot 5 Blk 1 012 3734 is a church site. C of T 140 U 201 882 2544 and Lot 3 Blk 1 882 2544 are both used as a cemetery. Lot 1 802 2518 and Lot 4 Blk 1 892 1373 are both privately owned and occupied by a residence and an autowrecker/salvage operation.

There is an existing gas well on the property, with pipeline rights-of-way going to the northeast and northwest as shown on the drawings.

3.5 Land Form

The topography of the site is provided in Figure 2. The area has a ridge dividing the land into an area that drains towards the north, and an area that drains towards the south to Mud Lake. This has also been pointed out in the Area Structure Plan document.

3.6 Access

Access to the site will be from Highway 598 at 40th Street, and also from the Range Road along the east boundary of the site. Extension of 47 Avenue will create a third access point in the southwest portion of the site.

3.7 Geotechnical Considerations and Environmental Assessment

A geotechnical report was done by Parkland Geotechnical Consulting Ltd. in December 2005. The key findings were that the subsurface conditions at this site are typical for Rocky Mountain House and suitable for the proposed residential/commercial development. The findings of the geotechnical investigations did not reveal any issues that would make the area unsuitable for the proposed form of development. The report states that there are areas of loose surficial soils, as well as areas where shallow bedrock will be encountered during the construction of utilities. This would necessitate the use of special construction equipment for the installation of municipal infrastructure. Additionally, the report recommends that basements in the residential area near Mud Lake be higher than the existing water table by raising building site grades and installation of a permanent weeping tile system.

A Phase 1 Environmental Site Assessment was undertaken in September 2005 for the site by AMEC Earth & Environmental. This was updated in relation to the possible impact of the auto wrecker site in November 2007. The assessment did not identify any concerns with respect to environmental constraints that would make the site unsuitable for the intended industrial, commercial and residential uses.

3.8 Legal Considerations

The site is subject to ten encumbrances. They can be seen in the Certificate of Title attached in the Appendix. The encumbrances that have an impact on the development concept for the area, are the gas rights-of-way, and the lease area around the gas well. Care has been taken to treat the gas line rights-of-way as green strip, and the area where the gas well is located has been left as a green area contiguous with the green area around the lake. No development can take place with 100 metre radius of the well.

3.9 Site Servicing

The site can be serviced by all municipal services (i.e. water, sanitary sewer, storm water management) and shallow utilities. This is discussed further in the utility services section of the plan.

4.0 PROPOSED DEVELOPMENT

Based on the East Area Structure Plan, market considerations and the characteristics of the site, an Outline Plan has been prepared for this site. The following are the development concepts as well as servicing concepts, including storm water management, for the proposed development.

4.1 Development Concept

The concept that is shown in Figure 4 has basically followed the East ASP in terms of the allocation of land use. The major elements entail:

- Highway commercial use proposed along Highway 598, in the approximate amount of 14.5 acres;
- Light industrial use with lots each approximately 0.75 acre in size has been provided in the area adjacent to the existing industrial area to the west;
- General industrial use with lots of approximately 1.5 acres in size have been provided in the south west area;
- Residential use comprised of estate lots with a minimum area of 0.18 ha or 0.45 acre provided in the east part of the development;
- Open space along the lake and in the general location as suggested in the Area Structure Plan in the form of environmental reserve and municipal reserve;
- A major trail system connecting to the existing trail along Highway 598 and linking through the residential and open space areas to Mud Lake;
- A major collector road network that provides access to the residential area via Highway 598 and a connection through the industrial area between Highway 598 and the extension of 47 Avenue.

 A series of roadways using a semi-urban cross section which combines paved road surfaces and pedestrian routes with drainage ditches in the boulevards.

4.2 Land Use and Density

The proposed land uses for the Falcon Ridge area are highway commercial, light industrial, general industrial and residential.

The form of **Highway Commercial** is based on the Highway Commercial District of the Town's Land Use Bylaw. The purpose of this District is to facilitate the development of commercial businesses intended to serve vehicular traffic in locations along arterial roadways and highways in order to minimize the intrusion of vehicular traffic into residential areas and provide for the orderly flow of traffic accessing these sites. The primary focus is on commercial land uses which are built at low densities and generally serve the Town and surrounding region.

The highway commercial uses that may develop in the areas shown on Figure 4 may include retail establishments, restaurants, hotels and accommodation, district shopping centres or similar types of uses that provide commercial services to residents and the travelling public.

The proposed development pattern for the highway commercial area is based on the creation of larger lots that may be developed along the lines of a power centre. No further subdivision is envisioned at this stage. Should future subdivision be proposed, there will be a need to secure easements for shared utility services and joint access and parking arrangements.

A small portion of the highway commercial area falls within the 300m setback from the former landfill site. No food related commercial businesses or food establishments (as defined in the Food Regulation) will be allowed in this area unless a formal variance has been provided by the Province.

The **Light Industrial** area will provide for a limited range of light industrial and service commercial businesses that may have limited outdoor storage and carry out their operations such that no nuisance is created or apparent outside an enclosed building. In addition, this area will provide for businesses which may be incompatible in commercial districts. Typical uses may include light repair services, warehousing and some manufacturing industries where operations are conducted inside a building.

The Light Industrial area acts as a buffer between the General Industrial and the Residential areas. The requirement to provide screen fencing along the backs and sides of the industrial lots closest to and facing the residential lots will be addressed through individual development permits.

Most of the light industrial area falls within the 300m setback from the former landfill site. No food related commercial business, food processing or food establishments (as defined in the Food Regulation) will be allowed in this area unless a formal variance has been provided by the Province.

The existing private driveway belonging to the Town and leading from Highway 598 to the former landfill lots is being swapped for a new access. This takes the form of the PUL leading from the cul-de-sac in the light industrial area to the landfill lots.

The **General Industrial** area is intended to accommodate a wide range of manufacturing, assembling, fabricating, processing and storage of goods in which nuisance factors may occur. This includes such uses as freight and transportation depots, heavy equipment assembly and servicing, manufacturing industries and open storage yards.

All of the general industrial area falls within the 300m setback from the former landfill site. No food related commercial business, food processing or food establishments (as defined in the Food Regulation) will be allowed in this area unless a formal variance has been provided by the Province.

The **Residential** area shown in Figure 4 has been designed based on the parameters of the Rural Low Density Residential District (R-1R) in the Town's Land Use Bylaws and the concept of Residential – Estate Lots described in the East Area Structure Plan. It is intended as an area for low density residential development in the form of detached dwellings and complementary uses in a semi-rural setting with the full range of municipal utility services.

The residential area will consist of approximately 81 lots for individual single detached dwellings. The minimum size of each lot will be 0.18 ha (0.45 acres) with parcel widths of 20m (66 ft) or greater.

The lots backing onto the cemetery and the auto wrecker site are to have a row of trees planted for buffering between the residential development and the cemetery etc. This planting will be done by the Developer. Additionally, the development concept has the ability to accommodate future residential development of the auto wrecker site by extending a road into it and developing it as a cul-de-sac.

Residential lots along the road south of the highway commercial area will not be permitted to use this road for access. Access to the individual residential lots will instead be provided through the local road on their south boundary.

The Geotechnical Report's recommendation regarding the minimum elevation of the house footings being 0.6 m higher than the water table will be part of the architectural guidelines for this development. These guidelines will be established and managed by the Developer. The respective uses are illustrated in the following Table 1:

Table 1: Development Statistics

Total area	128.75 acres	52.12 hectares	
Lake and Bed/Shore	6.61 acres	2.67 hectares	
Environmental Reserve	1.82 acres	0.73 hectares	
Total developable area	120.32 acres	48.71 hectares	100.00%
Residential	40.51 acres	16.40 hectares	33.67%
Highway Commercial	14.47 acres	5.86 hectares	12.03%
Light Industrial	18.46 acres	7.47 hectares	15.34%
General Industrial	12.05 acres	4.88 hectares	10.01%
MR	11.55 acres	4.68 hectares	9.60%
Road area	17.28 acres	6.99 hectares	14.36%
Road widening	1.82 acres	0.74 hectares	1.51%
Public Utility Lots	4.18 acres	1.69 hectares	3.47%

The projected population, based on the development concept, is 241 persons assuming an average household size of 2.97 persons and the creation of 81 residential lots.

4.3 Open Space and Trail System

The open space system and related trail network follows the concepts of the East ASP as well as utilizes the constraints of the site to its advantage, providing good access to the lake shore, and accommodating a system of trails for the neighbourhood. The main features of the open space system include the park area along the north shoreline of Mud Lake, the large open area around the existing gas well and the linear corridors connecting the major park areas.

An environmental reserve area has been identified along the shoreline of Mud Lake. The limits of this area represent the lands that would be impacted by the

1:100 year water level of the lake and the high water level based on the elevation of the existing outflow route in the southeast end of the lake. This area, while providing opportunity for public access to the lake, will be left in its natural state with the only exception being the need to connect the major trail routes shown on Figure 4.

The major trail system is proposed to link the future Eagle Ridge area to the east, the area around the lake, and the central green space, with the residential areas. These trails connect to the existing trail along Highway 598 and allow for extension around the lake as other lands are developed. The major trail system is supplemented by the pedestrian circulation or sidewalk system that is included in the road cross sections shown on Figure 8.

The park area around the existing gas well will require a detailed landscaping plan. All landscaping and improvements needed to make this a public park area will be provided by the Developer. This includes landscaping that screens the appearance of the gas well and the industrial area to the west from the residential to the east. Fencing around the gas well and lease area will also be required.

Given the size of the individual residential lots and the relatively low density population, no formal playground or tot lot is planned for the area.

The amount of municipal reserve dedication required at the time of subdivision is based on 10% of the developable area and the amount indicated in the Deferred Reserve Caveat registered on title. This amounts to approximately 12.75 acres (5.16 ha). Municipal reserve areas shown on Figure 4 that overlap pipeline rights-of-way will be accepted but only half of the area over the right-of-way will be credited against the total amount of reserve owing. Any outstanding municipal reserve dedication, beyond what is shown as land on Figure 4 and subject to the restriction relating to pipeline rights-of-way, will be provided in the form of cashin-lieu.

5.0 TRANSPORTATION

The primary access to the Falcon Ridge area will be at the intersection of 40th Street and Highway 598. A second access will be provided through the extension of 47 Avenue through the acreage in the southwest corner of the NE 23. This second access will become available when the owner of the acreage chooses to subdivide and develop their property. A third access into Falcon Ridge will be available in the long term subject to the development of the North-South arterial along the east boundary of the NE 23.

Two collector roads, shown on Figure 4, connect the residential and industrial areas to the access on Highway 598. The collector in the west mainly serves the industrial related traffic and connects to the 47 Avenue extension. A temporary turn-around bulb is intended at the south end of the industrial road. This bulb will be abandoned once the road is extended to join 47 Ave, as shown in Figure 4.

The east collector mainly serves the residential area and connects to the North-South arterial opposite a future access into Eagle Ridge. This collector road will carry traffic from Eagle Ridge through Falcon Ridge until such time as a decision on constructing the North-South arterial has been made.

Access to the cemetery and church along the south side of Highway 598 will be maintained through a local road connecting to the east collector road. The existing service road access off Highway 598 will be converted to an emergency vehicle only access point. A second emergency vehicle only access is available using the lease road in the south east corner of the NE 23.

A traffic impact assessment (TIA) has been prepared by Alliant Engineering. It identified the types of intersections, and the extent of improvements that will be required for this development. The intersection improvements identified in the TIA will be sufficient to accommodate the projected 2026 traffic volumes for this area. Approval of the detailed design and construction of the intersection at 40th Street and Highway 598 and other changes to Highway 598 by Alberta Infrastructure and Transportation will be required.

Provision has been made for road widening along the north and east boundaries of the site.

Semi-urban road cross sections have been developed for the roads in the residential and industrial portions of the Falcon Ridge area. Road rights-of-way and pavement widths for the various roads have been provided in Figure 8. The placement of the utilities within the right-of-way will follow the Town guidelines. Urban road cross sections will be used in the commercial portion of Falcon Ridge.

The collector road alignment and configuration in the area southwest of the existing religious assembly site may be adjusted at the time of subdivision to provide an access

to the southwest corner of the religious assembly site (curve where Street 7 meets Street 2 as shown on Figure 8) without requiring an amendment to the outline plan

6.0 UTILITY SERVICES

The following sections provide an overview of the proposed utility service systems that will be used for the Falcon Ridge development and highlights some of the major utility servicing issues that must be addressed as development progresses. More detail is available in the Municipal Servicing Study and the Storm Water Management Plan which have been submitted as separate technical support documents.

6.1 Site Preparation and Fill

Prior to development the non-residential portions of the quarter section will be stripped of vegetation and topsoil. Within the residential portion of the quarter, stripping and grading will be kept to a minimum to preserve as much existing vegetation as possible. It is anticipated that areas close to the northwest end of Mud Lake will require fill materials to as part of the overall site grading plan.

Where buildings are located on areas where the fill depth exceeds 1.2m bearing certificates will be required from the homebuilder. These lots will be identified on the detailed grading plans and on the Building Grade Certificate that is supplied to the purchaser of the lot.

Where existing wetlands are impacted by site grading and the placement of fill materials the no net loss provisions of the Provincial Wetlands Policy will be applied. Arrangements to compensate for the loss of wetland area in a location outside the NE 23 will be made with Alberta Environment.

6.2 Sanitary Services (Figure 7)

The terrain of the development is such that a gravity system cannot be provided everywhere. The industrial and commercial lots are to be serviced by gravity with residential lots to be serviced by low pressure system. Both these systems will culminate in a lift station located on the north boundary of the NE 23, from where a force main will convey the sewage to the existing town system. This force main will parallel the south boundary of Highway 598 in a public utility lot and connect to the existing sanitary sewer line in 43rd street to the west.

The lift station will be designed such that the effluent from the future development of Eagle Ridge can be accommodated. In the event that a decision is made to extend sanitary sewer into the McNutt subdivision the lift station will be designed to accommodate effluent from that area as well.

The area shaded in yellow on Figure 7, which is the highway commercial and industrial, will be serviced by gravity to the lift station.

The residential area will be on a STEP system (Septic Tank Effluent Pumping), where each property has its own septic tank with an effluent pump, which pumps the effluent (grey water not the solids) to a receiving low pressure forcemain leading to the nearest manhole of the gravity system leading to the lift station. While the Town will be responsible for maintaining the low pressure forcemain individual lot owners will be responsible for having their septic tanks pumped out on a periodic basis.

6.3 Water Supply & Distribution (Figure 6)

The details of the existing system layout of the Town were procured from the Town's Engineering Department. As well, Section 2 of the Town Standards was referred to, for formulating the water network concept for this development.

The existing water distribution system of the Town provides for a connection on the northwest of the development, another through an easement north of the existing Lot 6 of Block 62 in the industrial park, and also on south west of development at the intersection of 47th Avenue, and 43rd Street as shown in Figure 6.

A looped water system, which is required for the full development of the NE 23, can be achieved by using at least two of these connections to the existing Town system to the west. In addition, water mains will be extended to the east through the Falcon Ridge area to provide opportunities to create a looped water system for Eagle Ridge.

The sizes of the proposed network of mains shown in Figure 6 conform to the Town Standards, to ensure sufficient flows for fire fighting purposes. Hydrants will be provided throughout the development at the requisite distances. A network analysis was undertaken by Stantec to confirm the proper sizing of the mains, based on boundary conditions provided by the Town.

6.4 Stormwater Management (Figure 5)

The stormwater management concepts are shown in Figure 5. The development straddles two watersheds, shown as Area A and Area B. Area A (9.0 hectares) drains to the north, and at the present time, runs into a drainage course through a culvert under Highway 598, with run –off eventually ending up in the North Saskatchewan River. Area B (40 hectares) drains south into Mud Lake and from there flows through ditches to eventually empty into Trappers Creek.

The basis for storm water management is always two-fold, namely:

- · Water quality control and pollution prevention, and
- Water quantity and flood control.

The southern area is divided into two sub-basins with an area of 18 ha (west, largely industrial) and another area of 22 ha (east, largely residential). Two wet ponds have been proposed as detention facilities for these areas. The purpose of these wet ponds is to provide quality remediation and a limited amount of quantity control since the surface area of the receiving water body (Mud Lake) is very large and will not be significantly affected by the slight increase in post development runoff from the 40 ha sub-basins.

For the **northern** 9.3-ha basin, encompassing the commercial area, it is proposed to provide on-site detention as quantitative control in the parking lots and roof areas (as is typical in municipalities in the Edmonton area). A Stormceptor will be installed on the storm line to remove oil and grease coming from the parking areas.

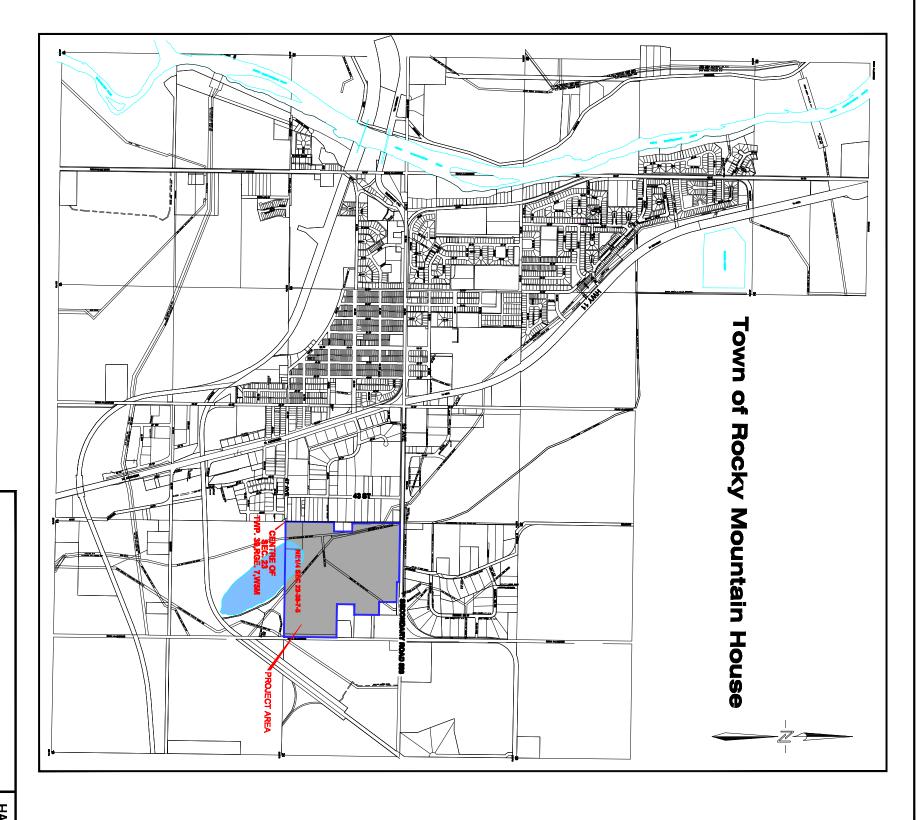
6.5 Franchise Utilities

Gas, power, telephone and cable will be provided by franchise utilities, and are readily available. Easements required by these utilities will be established and provided at the detailed design stage, after the alignments of the deep utilities have been fixed.

7.0 PHASING (Figure 8)

It is the desire of the Developer at this time to commence and complete the development of Falcon Ridge in one stage. This approach is contingent upon the ability to provide a second water feed to create a looped water system supporting the development of the entire quarter.

APPENDIX



1400, 10117 Jasper Ave. Edmonton, Alberta T5J 1W8 CHALLENGER

Challenger Engineer

A Division of Challenger Geometre

Pr Engineering sallenger Geometics Ltd. syors and Town Planners
Bus: (780) 424-5511
Fax: (780) 424-3837

HASCO DEVELOPMENT CORPORATION N.E.1/4 SEC. 23, TWP. 39, RGE. 7 ROCKY MOUNTAIN HOUSE - ALBERTA

LOCATION PLAN

FIGURE

DRAWING NAME: 3098 LAYOUT: LOC PLAN

