

East Regional Context Study



2009 April



THE CITY OF
CALGARY
LAND USE PLANNING & POLICY

PUBLISHING INFORMATION

TITLE: EAST REGIONAL CONTEXT STUDY

AUTHOR: LAND USE PLANNING & POLICY
PLANNING, DEVELOPMENT AND ASSESSMENT

STATUS: ADOPTED BY RESOLUTION OF COUNCIL
2009 APRIL

PRINTING DATE: 2009 APRIL

ADDITIONAL COPIES: THE CITY OF CALGARY
RECORDS & INFORMATION MANAGEMENT (RIM)
DEVELOPMENT & BUSINESS APPROVALS
P.O. BOX 2100, STN "M" #8115
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EAST REGIONAL CONTEXT STUDY

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EAST REGIONAL CONTEXT STUDY

EXECUTIVE SUMMARY

The East Regional Context Study area (East RCS area) is planned to serve as a residential, employment, and industrial growth corridor for Calgary's east and southeast sectors. Eight communities have been identified within the study area: seven primarily residential communities with a projected population of over 160,000 people, and one industrial area with approximately 21,000 jobs.

In evaluating the feasibility of proceeding with more detailed planning through the Area Structure Plan (ASP) process, the following key points should be noted:

- ASPs should proceed based on direction from the Growth Management Principles and Criteria endorsed by Council through the forthcoming Municipal Development Plan.
- Area Structure Plans are required to be prepared for Cells A and B to supersede existing Municipal District of Rocky View legislation that became outdated when the lands were annexed to the City in 2007.
- To create complete, sustainable communities, a number of local and regional City services and facilities will be required in all cells.
- While sour gas well setbacks exist within the RCS area, none of the identified land use constraints would preclude future development within any of the proposed ASP areas in the long term after decommissioning and reclamation of sour gas wells is undertaken.

The Growth Management Recommendation provides a recommended sequencing of growth; however, it does not provide a timeline for the commencement of future ASPs in the RCS area beyond those for Cell A and B. As part of the growth management analysis, the timing of subsequent ASPs should take into account the availability of the land supply on the east side of the City, in relation to residential growth, and the ability to finance the cost of extending services into the ASP Cells.

East Regional Context Study

Map 1

Study Area

Legend

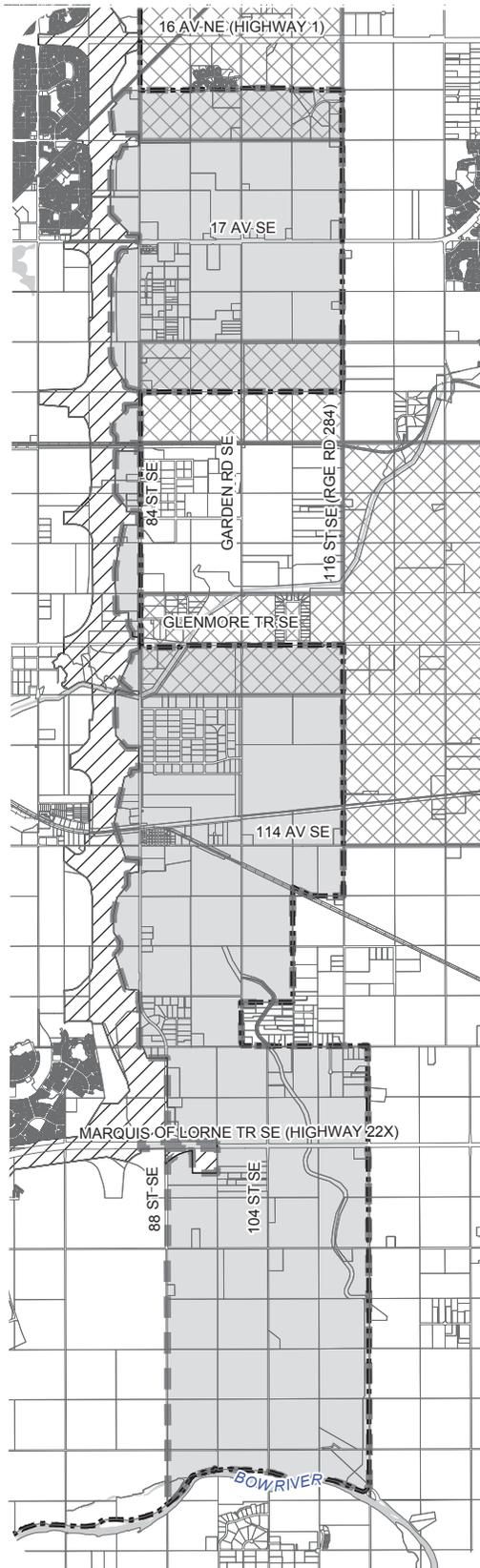
-  City Limits
-  Railway
-  Transportation/ Utility Corridor
-  Study Area
-  City of Calgary/ M.D. of Rockyview Joint Planning Areas



This map is conceptual only. No measurements of distances or areas should be taken from this map.



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Approved: 2009/04/06
Amended:

1.0 VISION

The East Regional Context Study will include seven well integrated, sustainable, and vibrant residential communities, as well as a major industrial employment area. The residential communities are complete, sustainable, and inclusive, providing a mix of housing types to meet the present and future needs of a broad socio-economic group. The communities are connected by a wide pallet of streets and a high quality transit service. The ability to live, work, shop, learn and recreate within the community is highlighted by mixed use nodes and corridors, as part of a system of activity centres within the community, and includes an emphasis on high quality design, a variety of residential densities and a broad mix of land uses. Innovation in community and building design is encouraged in the East RCS area.

Industrial development is concentrated in a corridor north of the Hamlet of Shepard, which includes a variety of fully serviced industrial and office uses sensitively interfaced with adjacent residential development and open space to minimize their visual impact.

Essential regional services are strategically located throughout the East RCS area. These services include Fire/EMS stations, regional recreation facilities, libraries, Park N Ride stations, Recycling Depots, bulk water lift stations, Roads and Animal and Bylaw Services depots.

The East RCS area is serviced by a regional road network consisting of expressways and major roads. The major north-south expressway is the East Freeway, which forms the western boundary of the RCS area; east-west connectors include Glenmore Trail and Marquis of Lorne Trail/Highway 22x. Easy access to Calgary's downtown is provided from the East RCS area by a high quality transit system including a rapid transit route along 17 Avenue.

The natural open space system is highlighted by the Shepard wetland complex, the focal point of the wetland system in the East RCS area. Urban development is sensitively interfaced with natural features including the extensive wetland system, significant vegetation stands and the Bow River escarpment that are all connected by a comprehensive regional pathway system facilitating pedestrian and bicycle access within the East RCS area.

The East RCS area consists of complete, sustainable, liveable communities that comply with all statutory legislation as well as the 11 Sustainability Principles adopted by Calgary City Council, the Key Directions and Triple Bottom Line.

East Regional Context Study

Map 2

Future Planning Cells

Legend

-  City Limits
-  Railway
-  Transportation/ Utility Corridor
-  Study Area Boundary
-  Planning Cell

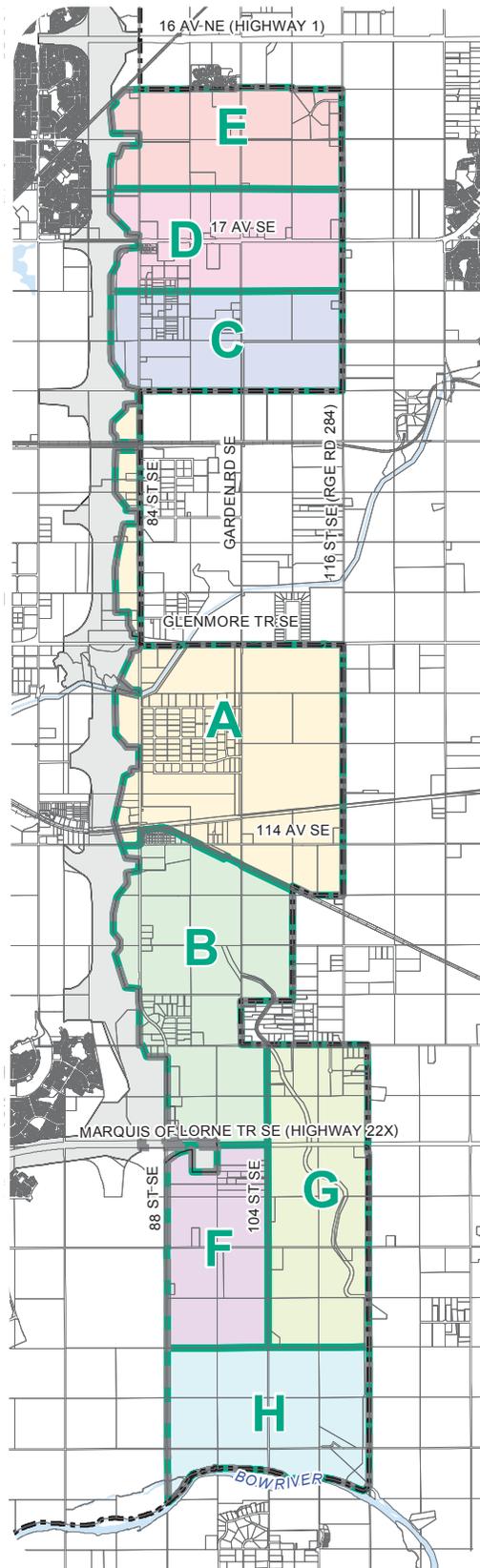


As amended by Calgary City Council.
Areas do not correspond with maps B, C, F, G and H in Appendix A.

This map is conceptual only. No measurements of distances or areas should be taken from this map.



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Approved:
2009/04/06
Amended:

2.0 CITY OF CALGARY STRATEGIC POLICIES

The application of Council's relevant strategic policies is integral to the success of the East Regional Context Study, and subsequent Area Structure Plans. In addition, the East RCS will be required to comply with the 2006 Annexation Agreement between The City of Calgary and MD of Rocky View, and with all applicable statutory policies including the Municipal Government Act and the Municipal Development Plan.

2.1 Sustainability Principles

On January 8, 2007, City Council approved the Terms of Reference for the Integrated Land Use and Mobility Plan which included the 11 Sustainability Principles for Land Use & Mobility, which are based on the Melbourne Principles adopted by the United Nations Environment Program. The sustainability principles shall be considered in the formulation of ASP's and review of subsequent applications within the RCS area.

- Principle 1:** Create a range of housing opportunities and choices.
- Principle 2:** Create walkable environments.
- Principle 3:** Foster distinctive, attractive communities with a strong sense of place.
- Principle 4:** Provide a variety of transportation options.
- Principle 5:** Preserve open space, agricultural land, natural beauty and critical environmental areas.
- Principle 6:** Mix land uses.
- Principle 7:** Strategically direct and manage redevelopment opportunities within existing areas.
- Principle 8:** Support compact development.
- Principle 9:** Connect people, goods and services locally, regionally and globally.
- Principle 10:** Provide transportation services in a safe, effective, affordable and efficient manner that ensures reasonable accessibility to all areas of the city for all citizens.
- Principle 11:** Utilize green infrastructure and buildings.

2.2 Recommended Key Directions

The East RCS and all subsequent Area Structure Plans will be required to comply with the *Recommended Key Directions* to develop the Municipal Development Plan and Calgary Transportation Plan, which require:

1. **Achieve a balance of growth between established and Greenfield communities** - Planned land supply and strategic planning objectives will be considered in the timing for ASP preparation in the East RCS area.
2. **Provide more choice within complete communities** - The East RCS provides opportunity for a variety of housing types throughout residential areas. In addition, nodes and corridors will consist of mixed-use development comprised of business, residential, recreational and public uses.
3. **Direct land use change within a framework of nodes and corridors** - High densities and mixed land uses will be focused around the nodes and corridors identified within the East RCS.
4. **Link land use decisions to transit** - High density mixed use nodes and corridors, including employment uses and community facilities, will be organized around major transit facilities.
5. **Increase mobility choices** - The East RCS lands will be serviced by an extensive transit system, pedestrian and cyclist pathways, and roadways.
6. **Develop a primary transit network** - Transit service will be provided throughout the East RCS area, including a rapid transit route along 17 Avenue SE.
7. **Create complete streets** - Mixed use nodes and corridors will provide the opportunity for residents to live, work, shop, learn and recreate in their community.
8. **Optimize infrastructure** - The East RCS provides recommendations for sequencing of ASPs based on the logical and efficient extension of municipal infrastructure.

2.3 Triple Bottom Line

In February 2004, Calgary City Council endorsed a *Triple Bottom Line Policy Framework* to ensure a more comprehensive, systematic and integrated approach to decision making. Triple Bottom Line (TBL) is an approach to decision making that considers economic, social and environmental issues in a comprehensive, systematic and integrated way.

Social

The East RCS provides for the logical, cohesive development of residential communities, integral for the development of a successful residential area, by identifying the future residential cells, pedestrian and cyclist pathway connections, community facilities, major road roadwork and Bus Rapid Transit (BRT) alignment. The East RCS identifies mixed use nodes and corridors, comprised of business, residential, recreational and public uses, which will create an improved job to housing balance and function as transit-oriented, mixed-use and high density node/corridors.

Economic

The East RCS is a step in The City's planning process that provides for the conversion of predominantly raw land to a developed state. As a growth area within Calgary, the East RCS area provides land for both residential and industrial growth. It is anticipated that the East RCS area will accommodate over 160,000 residents and approximately 57,000 jobs at ultimate build out.

Environmental

The East RCS policies provide the direction for the protection of natural features, and identify those natural features to be examined in further detail through the ASP preparation process. The protection of wetlands will be subject to the requirements of the *Wetland Conservation Plan* and all other applicable City policies and/or Provincial legislation.



3.0 PURPOSE

3.1 Purpose of the Regional Context Study

Regional Policy Plans, now known as Regional Context Studies, are identified in the amendments to The Calgary Plan (Bylaw 13P2006). In Part 4, *“Moving Forward”*, of Bylaw 13P2006, *“Regional Policy Plans are intended to provide a level of strategic planning between the Calgary Plan, area structure plans and community plans. They identify key land use and transportation components and establish the sequencing of subsequent area structure plan or community plan preparation.”*

In Supporting Information, *“Glossary of Terms”*, of Bylaw 13P2006, a Regional Policy Plan is defined as *“A non-statutory plan for larger sectors of The City which provide direction to subsequent area structure plans and community plans. The purpose of the plan is to:*

- *refine and implement The City’s broader planning objectives in the area,*
- *to identify key land use and transportation components, and*
- *establish the sequencing of subsequent area structure plan and community plan preparation to ensure that urban growth proceeds logically and efficiently.”*



3.2 Interpretation of the Regional Context Study

Map Interpretation

Unless otherwise specified within the East RCS, the boundaries or locations of any symbols or areas shown on the maps in the East RCS are approximate only, not absolute, and shall be interpreted as such. They are not intended to define exact locations except where they coincide with clearly recognizable physical features or fixed boundaries such as property lines or registered road and utility rights-of-way.

Regional Context Study Interpretation

Where “shall” is used in the East RCS, the requirement is considered mandatory. However, where actual quantities or numerical standards are used, these quantities or standards may be varied provided that the variance is necessary to address the unique circumstances that would otherwise render compliance impractical or impossible, and the general intent of the study direction is achieved.

Where “should” is used in the East RCS, the intent is that the direction statement is to be complied with. However, the direction statement may be varied in a specific situation provided that the variance is necessary to address unique circumstances that will otherwise render compliance impractical or impossible, or an acceptable alternate means to achieve the general intent of the direction statement is introduced.

Where the submission of studies, analysis or information is required, that requirement shall not be considered all inclusive, and the form and content of the studies, analysis or information required may be readdressed in any manner notwithstanding the provisions of the policy.

4.0 SCOPE OF THE EAST REGIONAL CONTEXT STUDY

The East RCS provides a framework for the subsequent preparation of more detailed ASPs within the East RCS area. The East RCS preparation process involved the formulation of transportation, environmental, land use and servicing studies; input from landowners and other stakeholder groups; and public consultation.

The East RCS area is planned to accommodate residential and employment growth for The City's east and southeast sectors. Eight ASP cells have been identified within the East RCS area (Map 2) with a projected population of over 160,000 people. Major features of the East RCS area include:

- The Hamlet of Shepard, an existing residential community,
- The existing community of Garden Heights,
- A major wetland complex, including the Ralph Klein Legacy Park, located south and east of the Hamlet of Shepard,
- An industrial growth area, and
- Three Joint Planning Areas with the Municipal District of Rocky View: Highway 1 East Corridor, Peigan Trail Extension and Highway 560 (Glenmore Trail) Joint Industrial Corridor (Map 1).

4.1 Location

The East RCS area comprises approximately 6,102 hectares (15,079 acres) of land in the east and southeast sectors of Calgary. The East RCS area, identified on Map 1, is bounded by the Transportation and Utility Corridor to the west; 116 Street SE and 120 Street SE (Range Road 284 / 285) and the City limits to the east; the Bow River to the south; and, 8th Avenue NE to the north.

Within these boundaries, lands under the jurisdiction of the Municipal District of Rocky View do not form part of the East RCS area; they are:

- the lands bounded by Peigan Trail and Township Road 240 to the north, Glenmore Trail / Secondary Highway 560 to the south, and 84th Street to the west; and
- the South East quarter of Section 8 as well as the South half and North East quarter of Section 5, all within Township 23, Range 29, East of the fourth Median.

4.2 Timeframe of the Regional Context Study

The East RCS, as part of the Municipal Development Plan, is future oriented and depicts a broad land use and transportation pattern for the East RCS Area. The East RCS has no specific timeframe.

4.3 Joint Planning Areas/Intermunicipal Development Plan

The joint planning areas for The City of Calgary and the Municipal District of Rocky View, as identified on Map 1, were negotiated as a part of The City of Calgary/MD of Rocky View 2006 Annexation Agreement. The joint planning areas are areas of mutual interest to both the MD and The City that include:

- (1) common highway entranceways to both municipalities,
- (2) areas in which the MD and The City have determined that the integration of land use policies is desirable, and
- (3) areas for interface and infrastructure planning between the MD and City.

Portions of the East RCS area are located within joint planning areas between The City and the M.D. of Rocky View. An Intermunicipal Development Plan (IDP) with the MD of Rocky View (currently under development) will further define how matters of planning and development within these joint planning areas will be addressed. Future ASPs and development applications within the joint planning area will be subject to the terms of the IDP.

4.4 Ownership Pattern

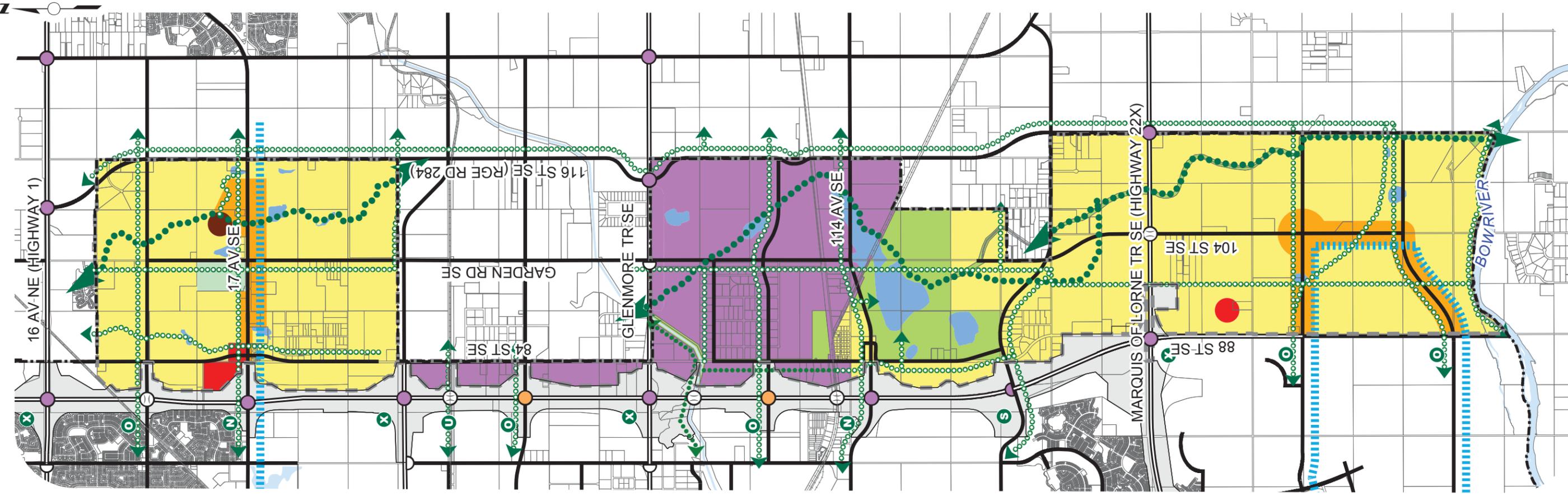
There are approximately 550 titled parcels of land within the East RCS area. Of these parcels, 263 are privately held, with the remaining 286 being publicly or corporately owned. There is no single majority owner. Many of the parcels are large and consist of the unsubdivided quarter sections, particularly in the southern portion of the East RCS area. In other cases, the quarter sections have been previously subdivided into smaller agricultural, industrial, or residential lots.

5.0 LAND USE CONCEPT

Regional land uses for the East RCS area are shown on the Land Use Concept & Transportation Map (Map 3). This map consists of a series of areas and symbols that define the broad future land use components for the East RCS area. The East RCS outlines the intent of these areas and symbols. The general location, alignment and design of areas and symbols on the Land Use Concept & Transportation Map will be determined through the ASP preparation process and refined at the Outline Plan/Land Use Amendment application stage.

As part of the preparation of an ASP, the location of the various components shown on the Land Use Concept & Transportation Map may be re-evaluated. The re-evaluation process may result in revisions to the map to ensure that the map and any subsequent Area Structure Plan remain consistent.

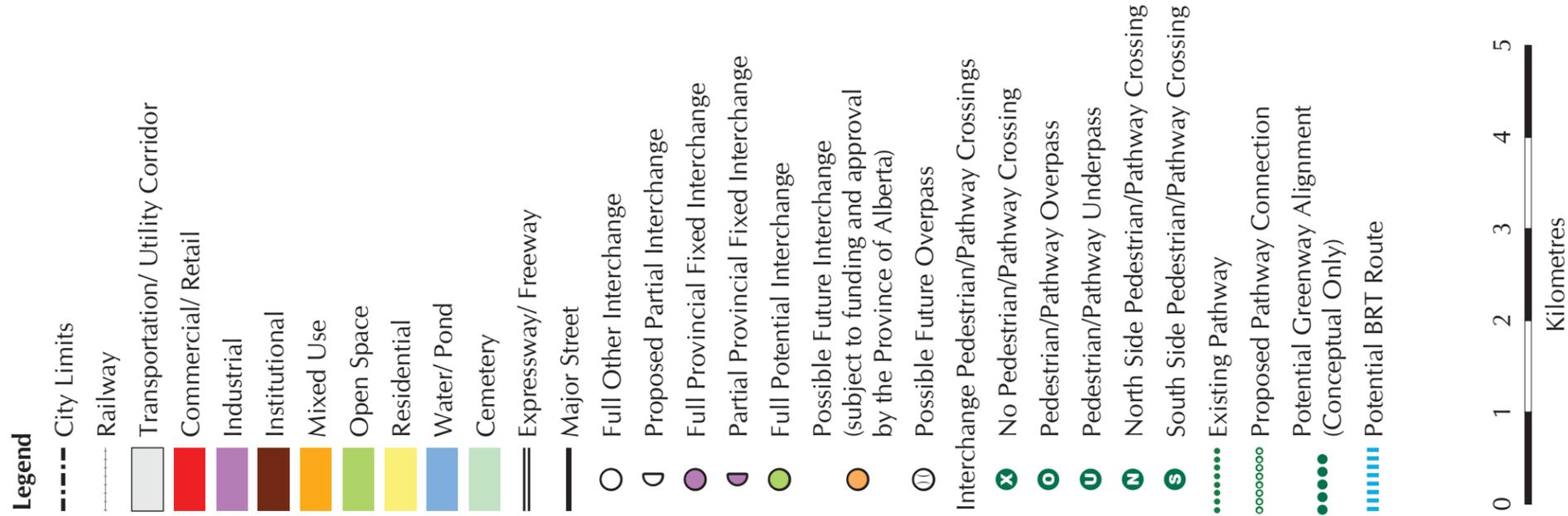
Some lands within the East RCS area will remain in agricultural uses for some time prior to development. Future ASP's within the East RCS area should include policies addressing interim agricultural uses, including interface between urban development and adjacent agricultural lands, traffic management to allow for continued food production and drainage onto adjacent farmland.



East Regional Context Study

Map 3

Land Use Concept & Transportation



Approved: 2009/04/06
Amended:

This map is conceptual only. No measurements of distances or areas should be taken from this map.



5.1 Residential Area

The predominant land use in the residential area (Map 3) shall be residential, with a diversity of housing types to be provided in each community to create dynamic and interactive residential communities. Recreational, institutional, public, local commercial and accessory uses may be permitted within the Residential Area where determined to be compatible and complimentary to residential development.

The density of the Residential Area shall be in accordance with the density requirements contained in the Municipal Development Plan.

The detailed layout of residential land use areas will be identified at the ASP stage and refined through the Outline Plan / Land Use Amendment application process.

The following photograph provides a conceptual visual of potential residential development within the East RCS area.



5.2 Mixed Use Nodes and Corridors

Two high density mixed use nodes and associated corridors have been identified in the East RCS area. The mixed use nodes and corridors are intended to create an improved job to housing balance and function as transit-oriented, mixed-use, high density nodes/corridors. The mixed use nodes/corridors shall be comprised of business, residential, recreational and public uses. The exact size, composition and location of mixed use nodes/corridors will be determined through the ASP preparation process.

The following photograph provides a conceptual visual of potential mixed use development within the East RCS area.



5.3 Commercial/Retail Areas

Two gateway commercial centres have been identified in the East RCS area. Gateway commercial centres are large scale, peripherally located developments that are intended to provide retail goods and services to a regional market. The following photograph provides a conceptual visual of potential gateway commercial development within the East RCS area.



The extent of commercial development required for the East RCS area, its resulting land requirements, and impact on municipal infrastructure shall be analyzed in further detail at the ASP preparation stage.

5.4 Industrial Area

The predominant use of land within the industrial area (Map 3) shall be mixed industrial uses. It is anticipated that the industrial area will accommodate a wide range of fully serviced industrial and office uses. In addition, institutional, local and/or ancillary commercial, recreational and other land uses considered to be appropriate and compatible may also be considered in this area. The following photograph provides a conceptual visual of potential industrial development within the East RCS area.



Land use districts within the industrial area shall be compatible with adjacent land uses. Industrial and office uses should be appropriately located to address context. The composition of the industrial area shall be further refined at the ASP preparation stage.

5.5 Institutional

Landowners within Cell D have proposed a satellite college campus. The exact location, layout and design of the campus will be further refined at the ASP and Outline Plan/Land Use Amendment stage.

5.6 Population

The table below outlines the projected number of residents in each of the Area Structure Plan Areas. These projections are subject to refinement at the ASP stage and the Outline Plan / Land Use Amendment stage.

ASP AREA	Size (ha/ac)	Size (Gross Residential ha/ac)	Projected Minimum Population
A	1356 ha (3350 ac)	0 ha (0 ac)	0
B	1027 ha (2540 ac)	452 ha (1,120 ac)	21,200
C	589 ha (1455 ac)	454 ha (1,122 ac)	22,800
D	589 ha (1456 ac)	368 ha (909 ac)	21,500
E	581 ha (1437 ac)	451 ha (1,114 ac)	21,700
F	672 ha (1660 ac)	527 ha (1,302 ac)	28,750
G	523 ha (1292 ac)	280 ha (692 ac)	19,550
H	765 (1889 ac)	434 ha (1,072 ac)	26,300
Total	6102 ha (15,079 ac)	3076 ha (7,603 ac)	161,800

6.0 GROWTH MANAGEMENT

This section provides an evaluation of the feasibility of preparing subsequent ASPs for lands within the East RCS area. This evaluation requires an examination of the planning, infrastructure servicing, transportation, and development implications of all ASPs.

6.1 Growth Management Recommendation

ASPs for Cells A and B will replace existing joint City of Calgary/MD of Rocky View policy. This policy framework was in place prior to annexation; new land use policy is required to guide development in this area.

6.2 Development Prior to an Area Structure Plan

Until such time as an ASP is approved for a future planning area, applications for Outline Plans, Land Use Amendments, Subdivision or Development Permits will be considered premature. Exceptions to this may be made by Council for essential public services / facilities, crop-based intensive agriculture to encourage local food production, temporary uses or uses that will not compromise future urban growth in any way. All temporary uses shall be subject to a limited time frame, to be determined at the time of application.

Exceptions will also be considered when Development Applications were previously approved by the MD of Rocky View, or were submitted to the MD prior to annexation and are currently being reviewed by The City.

6.3 Timing of Area Structure Plans

An Area Structure Plan is the primary mechanism for controlling the location and extent of new suburban growth. As such, a comprehensive evaluation of the timing of each ASP will need to be carried out.

The timing for the preparation of an ASP shall be determined by Council in accordance with the City's Growth Management Principles and Core Criteria, to be defined for corridor development as part of the Municipal Development Plan review anticipated to be approved in 2009, including, but not limited to

- (a) planned land supply,
- (b) efficient utility servicing,
- (c) suitable transportation capacity,
- (d) strategic planning objectives,

- (e) financial impact of infrastructure and operating costs to The City, and
- (f) landowner interests.

Landowners requesting the preparation of an ASP shall be required to submit a Growth Management Analysis based on the criteria to be identified in the Municipal Development Plan. The decision to commence preparation of an ASP shall be made by City Council.

6.4 Sequencing of Area Structure Plans

It is recommended that the preparation of ASPs in the RCS area proceed in the following sequential manner as identified on Map 2:

- 1) Presently an ASP is being prepared for Cell A. This ASP addresses the need to increase the supply of industrial land within The City. It is also necessary to replace the policy framework of the existing joint City of Calgary/MD of Rocky View Shepard Industrial and Shepard Business Park ASPs.
- 2) It is recommended that Cell B be the first residential ASP to proceed in order to replace the existing joint City of Calgary/MD of Rocky View policy framework that predates annexation. Cell B contains the existing Hamlet of Shepard, the Ralph Klein Legacy Park, and future phases of residential development. Sanitary services to the southwest portion of Cell B can be provided via the forcemain planned for the developing community of Mahogany to the west.
- 3) It is recommended that either Cell C or Cell D or Cell E be the next ASP to proceed after Cell B. The decision to commence an ASP requires Council direction and an analysis of the City's Growth Management Principles and Core Criteria.

An ASP for Cell D will include policy for the approved gateway commercial centre, located near the intersection of 17th Avenue SE and 84th Street SE, and is necessary to guide future development permit applications in this area. Additionally, this ASP will provide policy for the development of the 17 Avenue SE BRT corridor.

- 4) It is recommended that Cell F or Cell G or Cell H be a future ASP to proceed, based on direction from the Growth Management Principles and Criteria endorsed by Council.

6.5 Estimated Cost to Develop

The municipal infrastructure costs to enable development of each of the eight cells within the East RCS area are illustrated on Map B, Map C and in Section A2.10 of Appendix A of the RCS document.

The Core Infrastructure Costs table contained in Section A2.10 summarizes the current estimated costs for deep utilities servicing, transportation infrastructure and fire protection for each cell. The purpose of the costing information is to provide an approximation of the magnitude of the required municipal investment.

At the Area Structure Plan stage of planning, a high level review of the operating costs of City services related to community form and staging of development shall be included in the ASP document.



APPENDIX A: SUPPORTING INFORMATION

A1.0 NATURAL FEATURES

A preliminary natural inventory and biophysical analysis has been conducted for the East RCS area. The predominant features in the study area are wetlands, including the Shepard wetland complex. Other natural features include native grasslands, tree stands, and a mix of riparian areas and native grasslands associated with the Bow River escarpment (Map A).

Natural features of regional significance in the East RCS area include a major wetland and upland grassland complex. These features include the Shepard slough that extends northeast from the vicinity of 130 Avenue SE; the Bow River escarpment and riparian zone, which forms the southernmost boundary of the East RCS area; and a wetland/tree stand complex located in the northernmost portion of Cell E.



The inventory of natural features in the East RCS area will be subject to further analysis and refinement at the ASP and Outline Plan/ Land Use Amendment application stage. The protection of wetlands will be subject to the requirements of The City's *Wetland Conservation Plan* and all other applicable City policies and/ or Provincial legislation. Subsequent ASPs shall identify those wetlands and other features of environmental significance to be dedicated, acquired or otherwise protected. The ASP shall identify the measures and process for the conservation of the identified natural features.

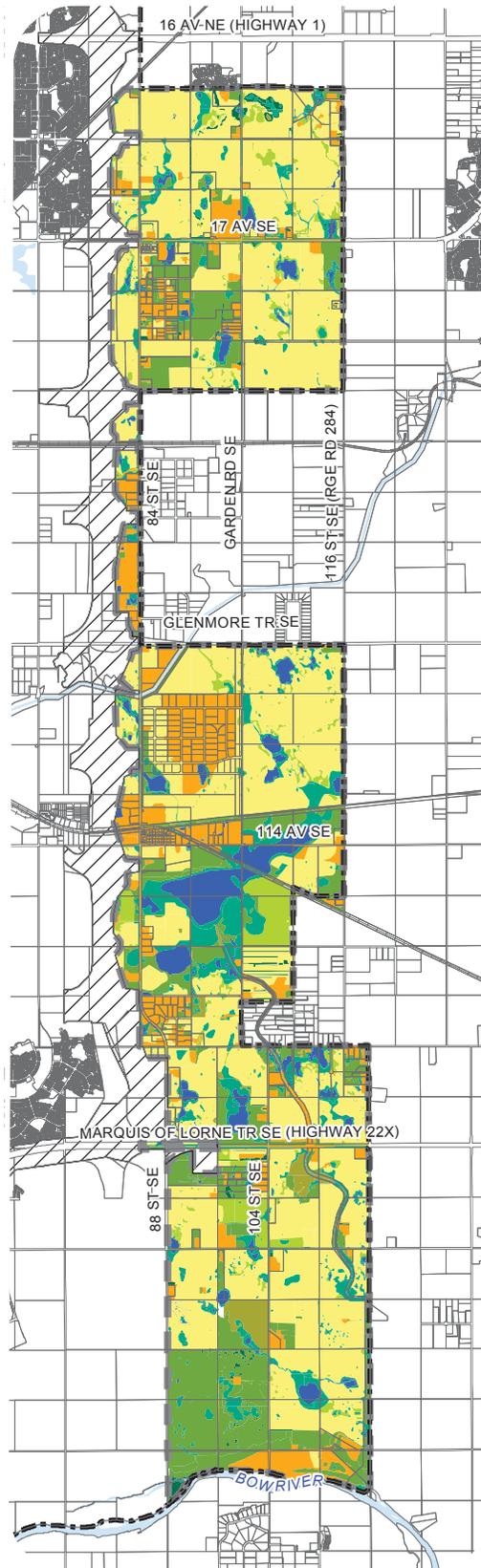
East Regional Context Study

Map A

Natural Features

Legend

-  City Limits
-  Railway
-  Transportation/ Utility Corridor
-  Study Area Boundary
-  Anthropogenic
-  Cropland
-  Deciduous Trees
-  Grassland
-  Open Water
-  Shrubland
-  Wet Cropland
-  Wetland



This map is conceptual only. No measurements of distances or areas should be taken from this map.



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Approved:
2009/04/06
Amended:

A1.1 Potential Greenway Corridor and Regional Pathway Network

The opportunity exists for a region-wide greenway, extending from north of the East RCS area to the Bow River to the south. The greenway would be comprised of natural features, recreation areas and corridors. The greenway is intended to be a contiguous, multi purpose system linking major natural areas and features. The greenway will form part of the city-wide regional pathway and bikeway network, and will be easily accessible to residents. The greenway should follow natural systems such as wetlands and creeks, engineered waterways such as surface drainage canals or creeks, utility rights-of-way, railway tracks, and road rights-of-way.

Acquisition of land for the greenway may occur through reserve dedication, use of utility corridors and rights of way, purchase, or other practical and appropriate means. These opportunities should be further investigated at the ASP stage.

A potential alignment for a greenway corridor has been identified on the Land Use Concept & Transportation Map (Map 3) based on logical connections between natural areas. The conceptual location, alignment and design of the greenway and regional pathway network will be determined through the ASP preparation process and refined at the Outline Plan/Land Use Amendment application stage.



A2.0 GROWTH MANAGEMENT SEQUENCING AND COSTING

A2.1 Population

The table below outlines the projected number of residents in each of the Area Structure Plan Areas. These projections are subject to refinement at the ASP stage and the Outline Plan / Land Use Amendment stage.

AREA ASP	Size (ha/ac)	Size (Gross Residential ha/ac) ¹	Projected Minimum Population ²
A	1356 ha (3350 ac)	0 ha (0 ac)	0
B	1027 ha (2540 ac)	452 ha (1,120 ac)	21,200
C	589 ha (1455 ac)	454 ha (1,122 ac)	22,800
D	589 ha (1456 ac)	368 ha (909 ac)	21,500
E	581 ha (1437 ac)	451 ha (1,114 ac)	21,700
F	672 ha (1660 ac)	527 ha (1,302 ac)	28,750
G	523 ha (1292 ac)	280 ha (692 ac)	19,550
H	765 (1889 ac)	434 ha (1,072 ac)	26,300
Total	6102 ha (15,079 ac)	3076 ha (7,603 ac)	161,800
<p>1. The gross residential area calculations for each ASP area excludes potential Environmental Reserve, Conservation Study Areas and other non-developable lands, high school sites, regional facilities, the industrial lands in Cell A and regional non-residential type uses.</p>			
<p>2. Based on a density of 10 dwelling units per estimated gross residential acre. Gross residential acres include both low-density residential areas and higher density nodes and corridors. Average people per unit range is from 1.5 to 3.3, depending on dwelling type and locational factors. This figure is an estimate based on preliminary data and is subject to change.</p>			

A2.2 Projected Employment Distribution

The table below outlines the projected number of jobs in each of the ASP Areas based on projected land uses and corresponding job densities for those land use types in existing areas of the city. These projections are subject to refinement at the Area Structure Plan stage and the Outline Plan / Land Use Amendment stage.

Study Area Sub Regions	Projected Minimum Population	Projected Jobs
North of Peigan Trail (Cells C, D & E)	66,000	13,200
Shepard Industrial (Cell A)	0	21,000
Shepard Residential (Cell B)	21,200	3,800
Southeast Residential (Cells F, G & H)	74,600	19,000
TOTAL	161,800	57,000

A2.3 Land Supply

The City strives to ensure that a suitable supply of land exists to meet established targets. The following table summarizes the The City’s land supply status in relation to these targets.

City-Wide Land Supply

VACANT CITY-WIDE LAND SUPPLY TARGETS		
Land Supply	Target	Current Status 2007
Vacant Suburban Land Supply ²	30 year supply	Exceeds 30 years
Vacant Planned Suburban Land Supply ³	Up to 15 year supply	Approximately 12 years ¹
Vacant Serviced Suburban Land Supply ⁴	Up to 5 year supply	Approximately 3.5 years
<ol style="list-style-type: none"> 1. Based on current forecasted growth; reviewed annually and subject to change. 2. Vacant Suburban Land Supply are undeveloped lands within The City’s corporate limits likely to be developed for predominately residential use. 3. Vacant Planned Suburban Land Supply are undeveloped lands within an Area Structure Plan or Community Plan. 4. Vacant Serviced Land Supply are undeveloped lands for which there is existing servicing capacity to develop without requiring significant City expenditures for storm trunks, water mains, reservoirs, etc. 		

The *Suburban Residential Growth 2008-2012* document estimates the unbuilt capacity for the suburbs city-wide. The capacity of both vacant subdivided and unsubdivided land with approved Community Plans or ASPs in place represents the potential for approximately 101,954 residential units that could house 274,600 people.

A2.4 Sector-Based Land Supply

While the city-wide land supply is indicative of the development potential of the city as a whole, it is also necessary to examine the development potential of the sectors in which the East RCS area lands are located.

Cells C, D and E fall within the city's east sector. As there are no current ASPs or Community Plans approved in the east sector, the *Suburban Residential Growth 2008-2012* document indicates that there is no serviced or partially serviced land available for residential development within the east sector at this time. However, the residential land demand in this area is accommodated by the city's larger northeast quadrant.

Cells A, B, F, G and H fall within the city's southeast sector. According to *Suburban Residential Growth 2008-2012*, the total estimated unbuilt capacity for the Southeast Sector, combining both vacant subdivided and unsubdivided capacity with approved Community Plans or Area Structure Plans is 1,495 hectares (3,969 acres). This represents the potential for 32,110 units and a population of about 85,246 people. This does not include the development of remaining land within the approved Southeast Regional Policy Plan area that can accommodate an additional 61,000 people (22,000 units). This represents a total potential population of 146,000 people (54,000 units), with an approximate 20 year build out within the southeast sector, excluding lands within the East RCS area.

A2.5 Constraints Summary

A number of constraints have been identified within the East RCS area, as identified on Map D, Section A3.0, particularly sour gas wells and pipelines. Both ERCB safety setbacks and, where applicable, nuisance setbacks will apply to the sour gas wells and pipelines, however these setbacks do not preclude the potential development of any of the future planning cells over the long term after decommissioning and reclamation of sour gas wells is undertaken.

Level 1 Sour gas wells, requiring a 100 metre ERCB safety setback, are located in Cells A and C. The Level 1 well in Cell C will require an additional 200 metre City of Calgary nuisance setback from future residential uses.

Level 2 Sour gas wells and/or pipelines that require a 500 metre ERCB safety setback are located in Cells E, F and G.

A2.6 Transportation Summary

The regional transportation network is identified on Map E, and in Section A4.0. The existing road network of Glenmore Trail, 114 Avenue S, and Conrich Road supports development of Cell A first. Development of Cells C, D and E should follow the 17 Avenue SE, Peigan Trail and Memorial Drive SE corridors. Southerly progression of the road network allows for development of Cells B, H, G, and F.

A2.7 Deep Utilities Summary

The City Water Resources Department has completed an analysis of the infrastructure required to service each of the future ASP Cells.

Cells C, D and E require significant upgrades to existing infrastructure.

Development of lands located within the existing Southeast Regional Policy Plan would have to take place prior to services being extended into Cells F, G and H.

Section A2 of the East RCS provides a summary of the cost to provide required core municipal infrastructure including deep utilities.

A2.8 Redevelopment of Small Landholdings

Portions of the East RCS area were previously subdivided for country residential uses. It is expected that following the approval of an ASP, these areas will eventually be redeveloped for general urban uses. To ensure that redevelopment occurs in a comprehensive manner, an ASP shall contain policy that identifies redevelopment cells and the information that will be required at the Outline Plan / Land Use Amendment Stage in order to demonstrate that servicing and development of these landholdings occurs in a logical manner. Landowners will be strongly encouraged to co-ordinate development with neighbouring landowners.

A2.9 Summary of Growth Management Issues

Cell	Sequence of Development	Estimated Cost of Development	Growth Management Considerations
A	First	<p>Complete Community Cost \$236 million</p> <p>Core Infrastructure \$154 million</p>	<ul style="list-style-type: none"> • New ASP required to replace existing joint policy between The City and The MD of Rocky View • Additional costs includes \$80 million for a Level 3 Regional Recreation Facility
B	Second	<p>Complete Community Cost \$210 million</p> <p>Core Infrastructure \$89 million</p>	<ul style="list-style-type: none"> • New ASP required to replace existing joint policy between The City and The MD • Additional cost includes \$100 million for a Level 3/4 Regional Recreation / Tournament Facility
C	To Be Determined	<p>Complete Community Cost \$85 million</p> <p>Core Infrastructure \$73 million</p>	<ul style="list-style-type: none"> • Peigan Trail from 52 Street SE to 68 Street SE must be constructed prior to development of Cell C • A residential ASP in this area is not required at this time
D	To Be Determined	<p>Complete Community Cost \$105 million</p> <p>Core Infrastructure \$42 million</p>	<ul style="list-style-type: none"> • Sanitary trunk must come through Cell C to service Cell D
E	To Be Determined	<p>Complete Community Cost \$72 million</p> <p>Core Infrastructure \$62 million</p>	<ul style="list-style-type: none"> • Sanitary trunk must come through Cells C and D to service Cell E • Level 2 sour gas well acts as a development constraint for a portion of Cell E

Cell	Sequence of Development	Estimated Cost of Development	Growth Management Considerations
F	To Be Determined	<p>Complete Community Cost \$94 million</p> <p>Core Infrastructure \$51 million</p>	<ul style="list-style-type: none"> • A large residential land supply currently exists in the city’s Southeast sector • The Southeast Planning Area (west of the East Freeway) must be developed prior to servicing being extended into Cell F • Level 2 sour gas well and pipeline act as a development constraint for a portion of Cell F
G	To Be Determined	<p>Complete Community Cost \$58 million</p> <p>Core Infrastructure \$30 million</p>	<ul style="list-style-type: none"> • A large residential land supply currently exists in the city’s Southeast sector • The Southeast Planning Area (west of the East Freeway) must be developed prior to servicing being extended into Cell G • Level 2 sour gas well and pipeline act as a development constraint for a portion of Cell G
H	To Be Determined	<p>Complete Community Cost \$113 million</p> <p>Core Infrastructure \$83 million</p>	<ul style="list-style-type: none"> • The Southeast Planning Area (west of the East Freeway) must be developed prior to municipal services being extended in to Cell H
<p>The purpose of the costing information is to provide an approximation of the magnitude of the investments.</p> <p>The figures contained in this table can be refined at the Outline Plan/Land Use Amendment stage without requiring an amendment to this document.</p>			

A2.10 Infrastructure Costs

Core Infrastructure ¹								
	Cell A	Cell B	Cell C	Cell D	Cell E	Cell F	Cell G	Cell H
Utility Servicing								
Water	\$28 M	\$12 M	\$11 M	\$11 M	\$11 M	\$12 M	\$7 M	\$12 M
Sanitary	\$35 M	\$16 M	\$23 M	\$16 M	\$15 M	\$10 M	\$8 M	\$12 M
Storm	\$24 M	\$19 M	\$22 M	\$15 M	\$18.5 M	\$12 M	\$9 M	\$14 M
Transportation Infrastructure	\$50 M	\$7.5 M					\$6 M	\$28.5 M
Fire	\$17 M	\$34 M	\$17 M		\$17 M	\$17 M		\$17 M
TOTAL²	\$154 M	\$89 M	\$73 M	\$42 M	\$62 M	\$51 M	\$30 M	\$83 M

The purpose of the costing information is to provide an approximation of the magnitude of the investments. It is recognized that acreage assessments will offset some of the costs incurred by development of lands within the RCS area.

The figures contained in this table can be refined at the Outline Plan/Land Use Amendment stage without requiring an amendment to this plan.

Notes:

- Above are costs for infrastructure inside and outside the ERC area that are required to service the study area.
- Wastewater Treatment Plant and Water Treatment Plant costs have been excluded. It is assumed that plant upgrades will be required with increased population in spite of geographical area of development.

Assumptions:

Water

- Water reservoir storage is required for Cells A, B, F, G, H. The cost of the reservoirs and pump stations is distributed to Cells A, B, E, and F by area ratio.

Sanitary

- The costs of servicing cells C, D, E & A include downstream sanitary system upgrades (52 St system, Douglasdale system).
- It is assumed that "south" sanitary infrastructure (lift stations, tunnel, etc) was designed for ultimate population of "Southeast Sanitary subcatchments" (roughly cells B, F, G & H).

Storm

- The storm servicing costs are based on "Natural Channel" type conveyance. The Shepard Drainage Committee has not finalized the drainage option (work in progress), therefore, these costs may change if different option is chosen.
- Cost recovery mechanism is not developed at this time. Storm costs were estimated based on individual cell areas (area-weighted), assuming south to north development (i.e. north areas C, D & E can not develop before cells A, B, etc at this cost, since the downstream infrastructure is not there to connect to).
- Wetland compensation costs are not included.
- Shepard ditch and bypass upgrade costs are not included (could be an additional \$12M).
- Land cost of \$75K/ha is assumed for additional storage in Upper Shepard Storage Complex and for conveyance.
- Costs based on \$18,000/ha servicing cost (conveyance system and storage in Upper Shepard Slough Complex).

¹ All dollar amounts in millions

² Numbers may not add up due to rounding

³ All costs are preliminary estimates only and are subject to change.

⁴ Numbers may not add up due to rounding

East Regional Context Study

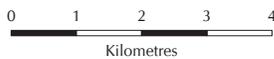
Map B

Core Municipal Infrastructure Costs (Deep Utilities, Transportation, Fire)

Legend

-  City Limits
-  Railway
-  Transportation/ Utility Corridor
-  Study Area Boundary
-  Sequencing of Utility Services
-  Utility Servicing for This Cell From More Than One Adjacent Cell

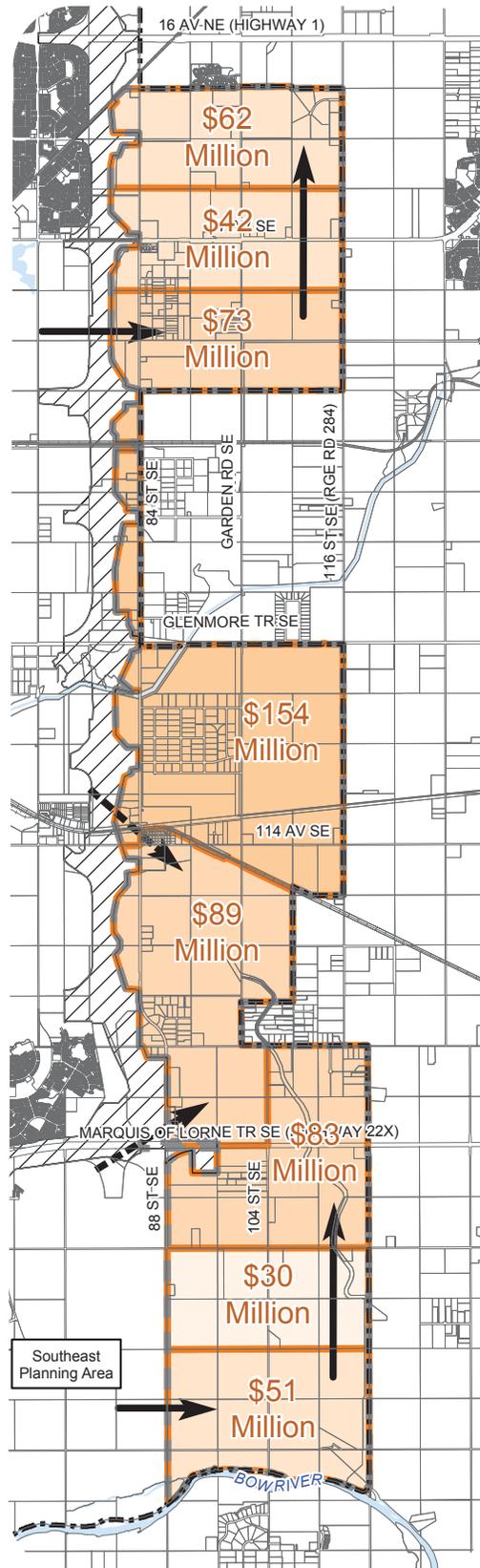
All servicing costs are preliminary estimates only and subject to change.



This map is conceptual only. No measurements of distances or areas should be taken from this map.



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Approved: 2009/04/06
Amended:

Complete Community Infrastructure ³								
	Cell A	Cell B	Cell C	Cell D	Cell E	Cell F	Cell G	Cell H
Utility Servicing								
Water	\$28 M	\$12 M	\$11 M	\$11 M	\$11 M	\$12 M	\$7 M	\$12 M
Sanitary	\$35 M	\$16 M	\$23 M	\$16 M	\$15 M	\$10 M	\$8 M	\$12 M
Storm	\$24 M	\$19 M	\$22 M	\$15 M	\$18.5 M	\$12 M	\$9 M	\$14 M
Transportation Infrastructure	\$50 M	\$7.5 M					\$6 M	\$28.5 M
Transit								
BRT				\$13.9 M	\$2.6 M	\$7.2 M	\$7.2 M	\$2.2 M
Bus Service	\$1.8 M	\$2.2 M	\$2.6 M	\$0.6 M	\$17 M	\$17 M		\$17 M
Fire	\$17 M	\$34 M	\$17 M		\$0.075 M	\$0.075 M		\$0.075 M
Community Recycling Deposits		\$0.075 M	\$0.075 M					
Libraries		\$12 M		\$12 M			\$12 M	
Recreational Facilities								
Regional/Tournament Level 3/4		\$100 M						
Regional Level 3	\$80 M							
Regional Level 2				\$20 M		\$20 M		
Local Level 1		\$8 M	\$8 M	\$16 M	\$8 M	\$16 M	\$8 M	\$16 M
Roads Depot								\$10 M
Animal & Bylaw Services Depot			\$1.2 M				\$1.2 M	
Bulk Water Station	\$0.575 M			\$0.575 M				\$0.575 M
TOTAL⁴	\$236 M	\$210 M	\$85 M	\$105 M	\$72 M	\$94 M	\$58 M	\$113 M

The purpose of the costing information is to provide an approximation of the magnitude of the investments. It is recognized that acreage assessments will offset some of the costs incurred by development of lands within the RCS area.

The figures contained in this table can be refined at the Outline Plan/Land Use Amendment stage without requiring an amendment to this plan.

Notes:

- Above are costs for infrastructure inside and outside the ERC area that are required to service the study area.
- Wastewater Treatment Plant and Water Treatment Plant costs have been excluded. It is assumed that plant upgrades will be required with increased population in spite of geographical area of development.

Assumptions:

Water

- Water reservoir storage is required for Cells A, B, F, G, H. The cost of the reservoirs and pump stations is distributed to Cells A, B, E, and F by area ratio.

Sanitary

- The costs of servicing cells C, D, E & A include downstream sanitary system upgrades (52 St system, Douglasdale system).
- It is assumed that "south" sanitary infrastructure (lift stations, tunnel, etc) was designed for ultimate population of "Southeast Sanitary subcatchments" (roughly cells B, F, G & H).

Storm

- The storm servicing costs are based on "Natural Channel" type conveyance. The Shepard Drainage Committee has not finalized the drainage option (work in progress), therefore, these costs may change if different option is chosen.
- Cost recovery mechanism is not developed at this time. Storm costs were estimated based on individual cell areas (area-weighted), assuming south to north development (i.e. north areas C, D & E can not develop before cells A, B, etc at this cost, since the downstream infrastructure is not there to connect to).
- Wetland compensation costs are not included.
- Shepard ditch and bypass upgrade costs are not included (could be an additional \$12M).
- Land cost of \$75K/ha is assumed for additional storage in Upper Shepard Storage Complex and for conveyance.
- Costs based on \$18,000/ha servicing cost (conveyance system and storage in Upper Shepard Slough Complex).

¹ All dollar amounts in millions

² Numbers may not add up due to rounding

³ All costs are preliminary estimates only and are subject to change.

⁴ Numbers may not add up due to rounding

East Regional Context Study

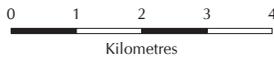
Map C

Complete Community Costs
(Core Infrastructure and Community Facilities)

Legend

-  City Limits
-  Railway
-  Transportation/ Utility Corridor
-  Study Area Boundary

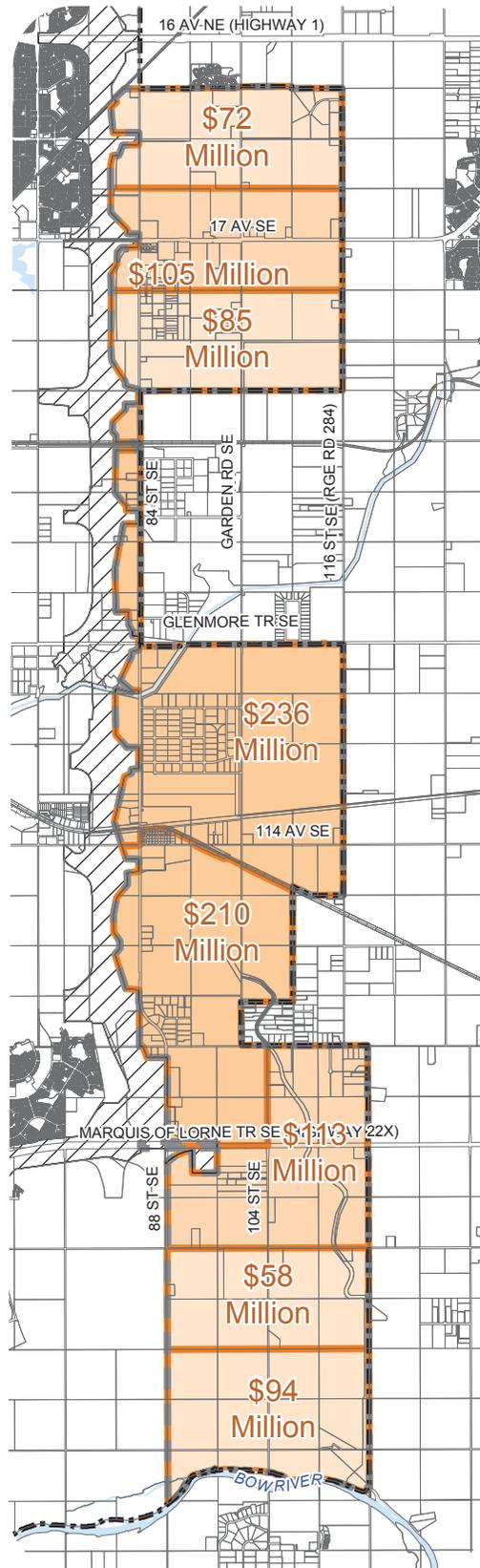
All servicing costs are preliminary estimates only and subject to change.



This map is conceptual only. No measurements of distances or areas should be taken from this map.



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Approved: 2009/04/06
Amended:

A3.0 LAND USE CONSTRAINTS

A3.1 Landfill Sites

The Shepard Landfill and the East Calgary Landfill are both located adjacent to the East RCS area, west of the Transportation and Utility Corridor.

The 300 metre permanent setback areas for the Shepard Landfill site and the East Calgary Landfill site, as required by the Subdivision and Development Regulations, are shown conceptually on the Constraint Areas Map (Map D) but do not affect the East RCS area. However, a temporary setback of 450 metres from the working areas of the landfills may apply at the time of development. Additional assessment may be required at the ASP stage to refine the location of any applicable setbacks and to determine the appropriateness of uses within and adjacent to the setback area.

Although not subject to landfill setbacks, historical dumping grounds have been identified in the East RCS area. Further environmental assessment of these sites is required prior to approval of the Outline Plan or Land Use Amendment to ensure the land is suitable for the intended use.

A3.2 Floodway Protection

Lands within the Bow River Floodway shall be incorporated as part of the public open space and natural corridor system. At the ASP preparation stage, the extent of the floodway shall be determined and policies shall be developed that address the development restrictions within the floodway.

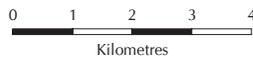
East Regional Context Study

Map D

Land Use Constraints

Legend

-  City Limits
-  Study Area
-  Transportation/ Utility Corridor
-  Railway
-  Sour Gas Well
-  Sour Gas Pipeline
-  Sour Gas Well/Pipeline Setback (E.R.C.B.)
-  300 m Sour Gas Nuisance Setback (City of Calgary)
-  Western Headworks Canal
-  240 kV Power Lines
-  Proposed Annexation by Town of Chestermere
-  Landfill Site
-  Landfill 300m Permanent Setback
-  Landfill 450m Working Area Setback



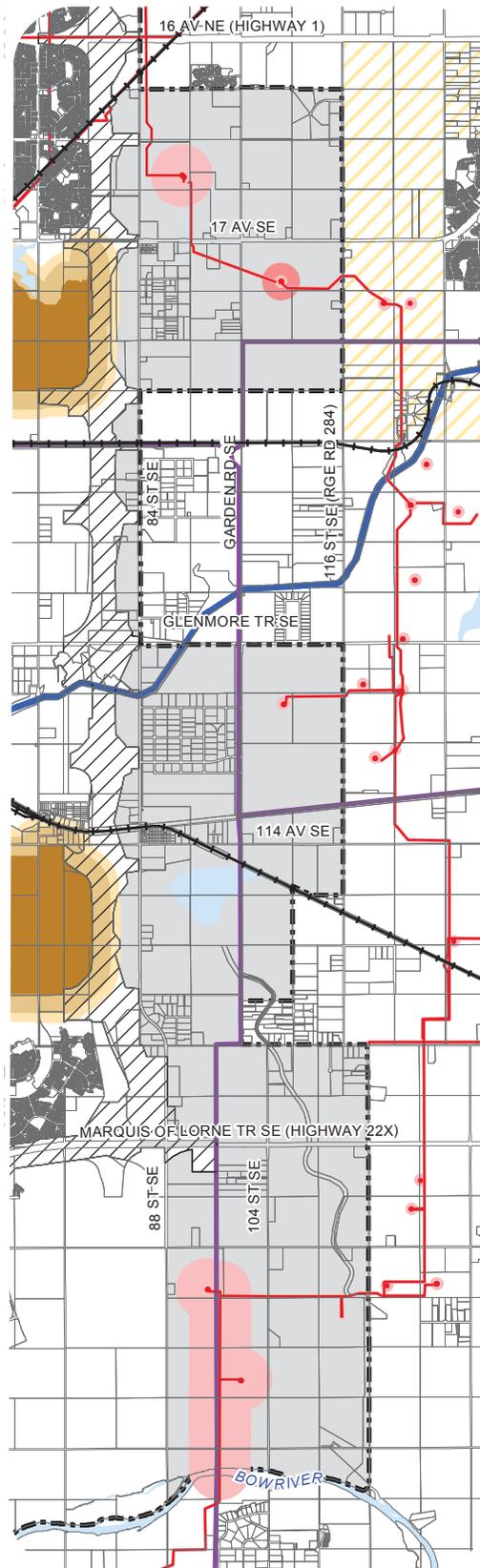
The information shown on this map is subject to verification and change.

Note: setbacks may be revised as new information becomes available.

This map is conceptual only. No measurements of distances or areas should be taken from this map.



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Approved:
2009/04/06
Amended:

A3.3 Sour Gas Setback

Five sour gas wells and associated sour gas pipelines are located within the East RCS area as shown on the Constraint Areas Map (Map D). The Energy Resources Conservation Board (ERCB) requires a 100 metre safety setback area for Level 1 sour gas wells and a 500 metre safety setback for Level 2 sour gas wells. The ERCB requires a 30 metre safety setback for Level 1 sour gas pipelines and a 500 metre safety setback for Level 2 sour gas pipelines.

Existing Council-approved planning documents require an additional 200 metre nuisance setback from Level 1 sour gas wells located within non-industrial areas. The nuisance setback will not apply to the Level 2 sour gas wells that are already subject to a 500 metre ERCB safety setback. These sour gas setbacks are conceptually identified on the Constraint Areas Map (Map D). Additional assessment may be required at the ASP stage to determine the appropriateness of uses within the nuisance setback and adjacent to the ERCB safety setback areas.

The designated levels of facilities, wells and pipelines may be subject to change. The planning impacts should be reviewed at the time of subsequent planning processes.

Future development areas in the vicinity of sour gas facilities may be subject to facility specific Emergency Response Plans. The planning impacts (e.g. Notification, Emergency Response Planning, etc.) should be reviewed at the time of subsequent planning processes.

A3.4 Historical Resources Overview

A Historical Resources Overview (HRO) shall be undertaken at the ASP stage to identify any potentially significant historical areas or sites. The HRO will be reviewed by the Heritage Resource Management Branch, Province of Alberta. Based on the results of the HRO, specific areas within the East RCS area may require further assessment and evaluation at the Outline Plan/Land Use Amendment application stage to determine their significance for protection.

A3.5 High Voltage Transmission Lines

The East RCS area is currently transected by north/south and east/west 240kV transmission lines within 40 metre wide rights of way, operated by Altlank. These existing rights of way are projected to be required into the future.

The Alberta Electric System Operator (AESO) has indicated the need for additional transmission lines with up to 100 metre wide rights of way in the future, with the number of lines required dependant upon the amount of power generation occurring within and near the Calgary region. No locations or expansion scenarios have been determined at this time.

The responsibility for final land acquisition to implement the additional transmission lines lies with the operator. Expansion of the 240kV transmission line network will require further exploration at the ASP stage.

A4.0 TRANSPORTATION NETWORK

A4.1 Road Network

The Transportation Map (Map A5) identifies the regional road network and related interchanges for the East RCS area. Regional roads include expressways and major streets bordering and intersecting the East RCS area that accommodate through traffic, local traffic, and bus transit service within the future planning sub-areas. The internal collector street network serving the future planning sub-areas will be developed at the ASP stage.

Transportation Analysis

Additional transportation analysis or functional design may be required at the ASP stage or if the level of proposed development warrants the need to re-evaluate the adequacy of the regional road network. The identified transportation network is conceptual and will be refined as required at the ASP preparation stage. Additionally, each of the required roads and any associated interchanges will be comprehensively reviewed with respect to alignment and function through the ASP preparation process. As determined appropriate, an ASP should address interface and character of key entranceway roads.

The internal collector street network serving the future planning sub-areas will be developed at the ASP stage. A transportation analysis shall be prepared as a part of this process.

Road Network Design

The regional road network should be designed to

- accommodate efficient and safe traffic flow, including safe pedestrian and bicycle circulation,
- provide for appropriate truck route connections,
- provide for appropriate transit service,
- create a logical community structure,
- avoid, where feasible, lands of higher environmental significance, and
- implement appropriate mitigation measures where roads are determined to be warranted on lands of higher environmental significance.

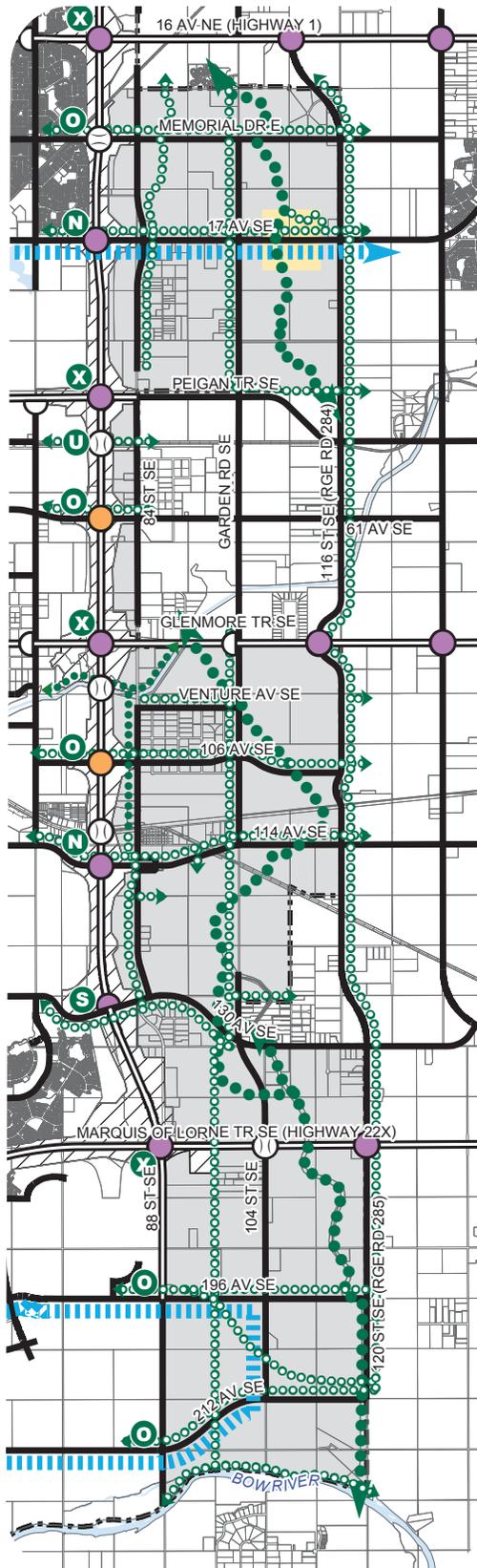
East Regional Context Study

Map E

Transportation

Legend

- City Limits
 - Study Area
 - Railway
 - Transportation/ Utility Corridor
 - Expressway/ Freeway
 - Major Street
 - Full Other Interchange
 - Proposed Partial Interchange
 - Full Provincial Fixed Interchange
 - Partial Provincial Fixed Interchange
 - Full Potential Interchange
 - Possible Future Interchange (subject to funding and approval by the Province of Alberta)
 - Possible Future Overpass
 - Potential BRT Route
 - Existing Pathway
 - Proposed Pathway Connection
 - Potential Greenway Alignment (Conceptual Only)
 - No Pedestrian/Pathway Crossing
 - Pedestrian/Pathway Overpass
 - Pedestrian/Pathway Underpass
 - North Side Pedestrian/Pathway Crossing
 - South Side Pedestrian/Pathway Crossing
 - Reduced Auto Focused Area
- 0 1 2 3 4
Kilometres



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Approved: 2009/04/06
Amended:

East Freeway Interchange Function and Design

The East Freeway is classified as an expressway and is under the jurisdiction of the Province of Alberta.

Interchanges are planned at 17 Avenue SE, Peigan Trail, Glenmore Trail, 114 Avenue SE, 130 Avenue SE and Marquis of Lorne Trail. Further access to the East Freeway will not be provided.

Flyovers are planned at Memorial Drive, 61 Avenue SE and 106 Avenue SE.

Marquis of Lorne Trail and Glenmore Trail

Marquis of Lorne Trail and Glenmore Trail are classified as expressways and are under the jurisdiction of the Province of Alberta.

On Marquis of Lorne Trail, interchanges are planned at the East Freeway and at 120 Street SE/Range Road 285.

A partial interchange is proposed at 100 Street SE and Glenmore Trail but is subject to Provincial approval.

Major Streets

Memorial Drive SE, Venture Avenue SE, 106 Avenue SE, 114 Avenue SE, 130 Avenue SE, 196 Avenue SE, 212 Avenue SE, Garden Road, 84 Street E, 104 Street SE and 120 Street SE are classified as major streets, Serving as key entrance roads into future planning areas. 84 Street E shall be discontinuous at Glenmore Trail but right of way shall be protected for possible pedestrians and bicycles crossings.

17 Avenue SE

Serving as a key entrance road into future planning areas, 17 Avenue SE is classified as a major street. The transportation principles behind 17 Avenue SE are to reduce the auto focus of the roadway and support a shift to transit, walking and cycling.

Although yet to be determined, the ultimate roadway alignment may be altered from its present alignment to further reduce the auto focus and promote walking and cycling.

Peigan Trail

Serving as key entrance road into future planning areas, Peigan Trail is under joint jurisdiction with The City of Calgary and the Municipal District of Rocky View. This roadway extension will establish the interface between industrial (MD) and residential (City) development in this area. On 2006 September 25, Calgary City Council adopted the following motion:

That the Administration ensure that the future alignment of Peigan Trail/ 43 Avenue SE, east of the Transportation Utility Corridor (TUC) does not unnecessarily bisect private property and allows for optimum land use as part of joint planning work in this area, which may require a municipal boundary adjustment.

Peigan Trail is classified as a Major Arterial.

East Freeway Extension

Serving as key entrance a road into future planning areas, the above roadway is classified as an expressway from Marquis of Lorne Trail to 196 Avenue SE. South of 196 Avenue SE, the roadway is classified as a major street.

116 Street SE/Range Road 284

116 Street SE/Range Road 284 is within the jurisdiction of the Municipal District of Rocky View. It shall be classified a major arterial.

Truck Routes

All major streets in the RCS area will serve as truck routes.

Intermunicipal and Regional Jurisdiction

The alignment of regional roads and associated interchanges and intersections, where those roadways cross jurisdictional boundaries, shall be co-ordinated with the Municipal District of Rocky View and the Province of Alberta.

A4.2 Transit Service

The transit system for the RCS area will comprise a hierarchy of transit routes serving different functions.

One primary transit route has been identified and is shown on the Transportation Map (Map E). This route will operate along the 17 Avenue SE corridor, to serve the mixed use and institutional node.

The location of bus routes, and design of BRT Stations, Park and Ride areas and transit hub facilities should be addressed at the Area Structure Plan stage and refined at the Outline Plan / Land Use Amendment stage, and should be provided in accordance with approved policies. Development adjacent to transit stations and within Transit Oriented Development (TOD) nodes shall be subject to the requirements of the TOD Guidelines and include increased residential densities and a more intensive mix of uses.

A4.3 Regional Pathway and Bikeway System

A system of regional pathways and bikeways will be extended throughout the RCS area to provide connections to key destination points within and beyond the RCS area, as identified on the Land Use Concept and Transportation Maps (Maps 3 and B).

The conceptual location, alignment and design of regional pathways and bikeways will be determined through the ASP preparation process and refined at the Outline Plan/Land Use Amendment application stage.

A5.0 UTILITY SERVICES

The East RCS area will be serviced with water and sewer infrastructure and stormwater management facilities. Without these municipal services, development shall not occur.

The ability to finance and provide servicing for an ASP shall be a key consideration in the timing of subsequent ASPs.

A servicing analysis to determine the type, alignment and capacity of the municipal utilities required to support urban development for each planning cell within the RCS area shall be undertaken through the ASP and Outline Plan preparation processes.

A5.1 Stormwater Management

Stormwater management for the East Regional Context Study must align with The City of Calgary Stormwater Management Strategy and the Bow Basin Watershed Management Plan.

Water reuse strategies, including stormwater, treated wastewater and gray water reuse, can be considered for the East RCS area as a tool to achieve volume reduction targets.

At the time the East RCS was undertaken, Westhoff Engineering Resources had prepared a report, entitled “Drainage Servicing Strategies for the Shepard Drainage Corridor”, on behalf of The City of Calgary, the MD of Rocky View, the Town of Chestermere, Alberta Environment and the Western Irrigation District (WID). This document identified a conceptual alignment for a regional drainage conveyance system, several options for the type of conveyance system, storage and stormwater release rates. A funding mechanism has not been determined for this future multi-jurisdictional infrastructure. The conceptual alignment of the conveyance system within the East RCS area is illustrated on Map F.

Although drainage boundaries must be verified, within the northern portion of the East RCS area the majority of Cells C, D and E could be serviced by a conveyance system that extends from the south, through Cell A, the MD of Rocky View and into Cell C. An underdrain will be required at the Western Headworks (WH) Canal. The northeast portion of Cells D and E will be serviced by a conveyance system through the MD of Rocky View and the proposed Annexation lands for the Town of Chestermere. This system will also require an underdrain at the WH canal.

For the central portion of the East RCS area, Cell A will be serviced by the first conveyance system identified above. It will tie directly into the Upper Shepard Slough Complex. Within the southern portion of the RCS area, Cells B, F, G, and H will be serviced by the Shepard Ditch.

A Master Drainage Plan (MDP) should be completed at the ASP preparation and/or Outline Plan stage. Additionally, the MDP should include stormwater engineering solutions to be introduced to ensure the sustainability of those natural wetlands that are identified to be conserved.

East Regional Context Study

Map F

Storm Servicing

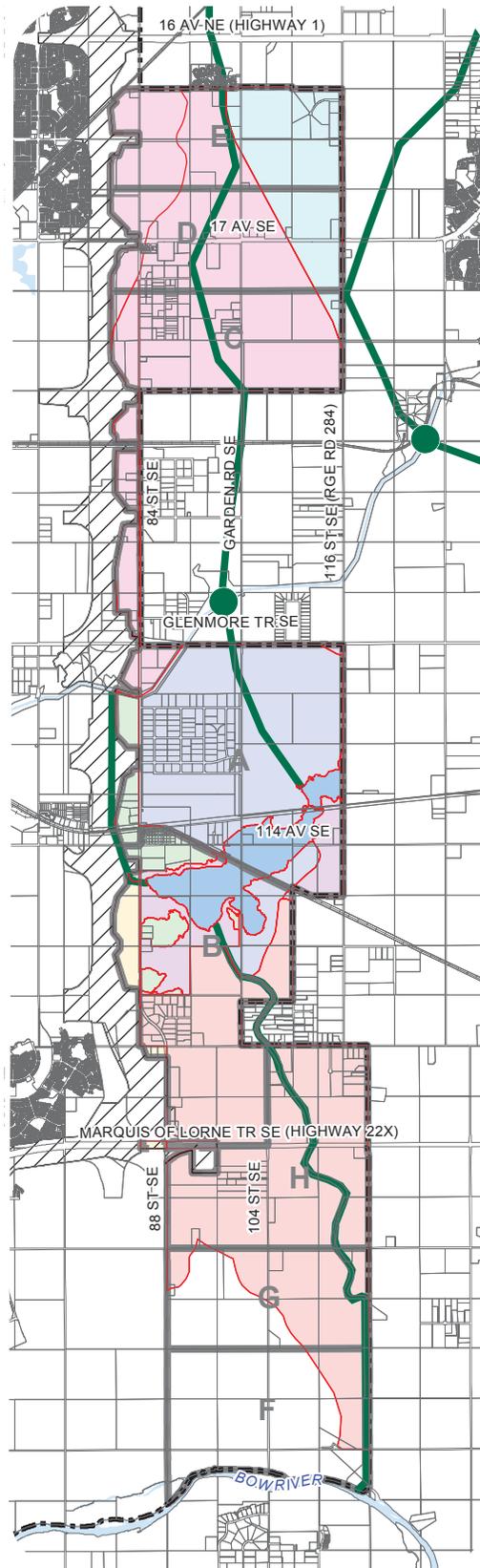
- Legend**
- City Limits
 - Railway
 - Transportation/ Utility Corridor
 - Study Area Boundary
 - Conveyance
 - Underdrain
- Storm Catchment Areas**
- Area 1
 - Area 1A
 - Area 2
 - Area 2C
 - Area 3
 - Area 4
 - Area 5-1
 - Area 5-2
 - Shepard Sloughs
 - Planning Cells



This map is conceptual only. No measurements of distances or areas should be taken from this map.



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Approved: 2009/04/06
Amended:

A5.2 Water Servicing

The general alignments of water feeder mains required to service the East RCS area are identified on Map G. These alignments are conceptual, with the final alignment to be determined at the ASP and/or Outline Plan stage.

Cells C, D and E are located entirely within the Glenmore Pressure Zone and will be serviced by a feeder main loop extended from the existing feeder main network at Memorial Drive SE and 68 St E. The alignment will be located east along Memorial Drive SE and then south along Garden Road NE, and then ultimately connecting to the feeder main on 50 Avenue SE. Substantial upgrades to the existing water servicing system will be required to support the planned growth in this area.

The majority of Cell A is located within the Foothills Pressure Zone and will be serviced by a feeder main extending from 52 Street SE and Glenmore Trail SE. A second feeder main will come from the planned feeder main along 130 Avenue SE and north along the Transportation and Utility Corridor. The southeast corner of Cell A is located within the Ogden Pressure Zone and is likely to be serviced by extending the existing distribution mains in this zone, or pressure reduced from Foothills Pressure Zone.

Cell B is located entirely within the Ogden Pressure Zone and will be serviced by extensions to the planned feeder main along 130 Avenue SE.

Cells F, G, and H are also located within the Ogden Pressure Zone. These cells will be serviced by the planned 130 Avenue SE feeder main loop and a pumped storage facility at Deerfoot Trail SE and Cranston Avenue SE. This infrastructure is also required for development between Deerfoot Trail SE and 84 Street SE, where located south of Highway 22X.

East Regional Context Study

Map G

Water Servicing

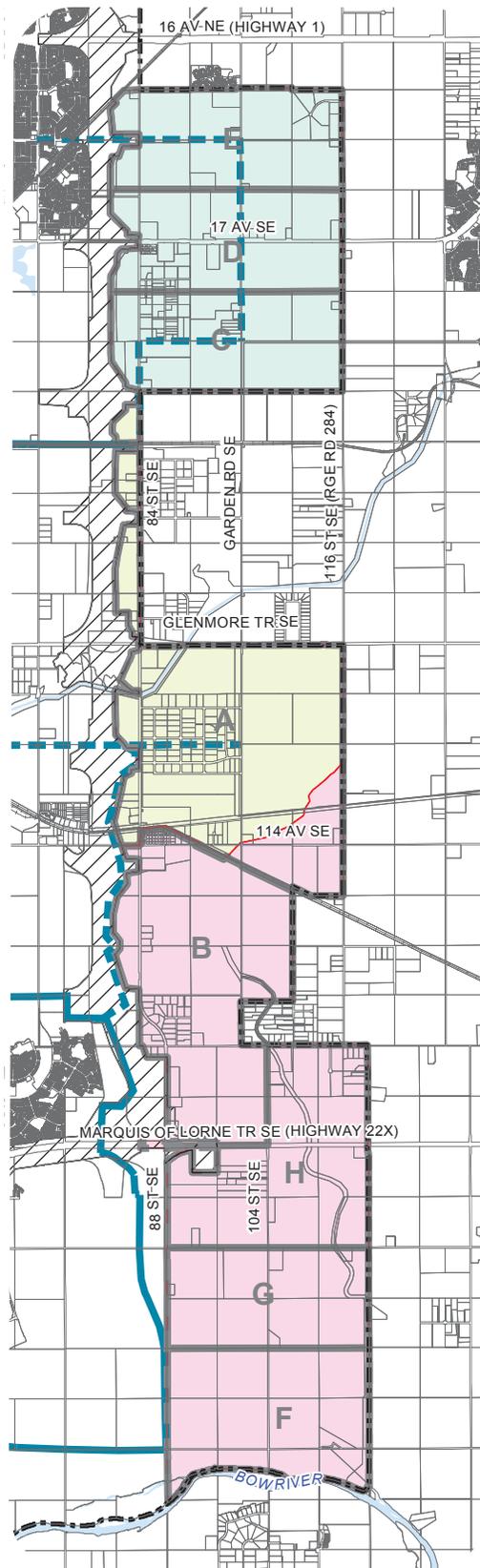
- Legend**
- City Limits
 - Railway
 - Transportation/ Utility Corridor
 - Study Area Boundary
 - Planned Feedermain
 - Proposed Feedermain for RCS
- Pressure Zones**
- Foothills
 - Glenmore
 - Ogden
 - Planning Cells



This map is conceptual only. No measurements of distances or areas should be taken from this map.



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Approved: 2009/04/06
Amended:

A5.3 Sanitary Sewers

The general alignment of the sanitary trunks, forcemains and lift stations required to service the East RCS area are shown on Map H. These alignments are conceptual, with the final alignment to be determined at the ASP preparation stage.

Cell E, the majority of Cell D and the northwest portion of Cell C will be serviced by extensions to the Great Plains trunk system along 68 Street SE. The majority of Cell C will be serviced by a lift station in the southeast corner, and a forcemain that will tie in to the trunk extensions. Development in Cells C, D and E will also trigger significant sanitary upgrades downstream.

The majority of the lands within Cell A, as well as the Hamlet of Shepard, will be serviced by a lift station, located in Section 17, and a forcemain that ties in to the Sanitary trunk system at 52 Street SE and 114 Avenue SE. Those lands located to the south of the Shepard Slough complex will be serviced to the south. Development in Cell A will also require significant sanitary upgrades downstream.

Cells B, F, G and H will be serviced by a series of trunks and lift stations from the south that generally follow the Shepard Ditch, ultimately tying into the planned trunk along 210 Avenue SE. It should be noted that prior to any development in this portion of the East RCS area, development must first occur within the Southeast Regional Policy Plan areas including the communities of Auburn Bay, Mahogany, and future Southeast Regional Policy Plan ASP areas. These areas must develop first, including the installation of municipal infrastructure services, to then enable these services to be extended east to southern portions of the RCS area, located south of Highway 22X.

Further analysis will be required at the ASP stage to determine catchment boundaries and refine the above information as deemed necessary.

A5.4 Transportation and Utility Corridor

The East RCS area is bounded to the west by the Transportation Utility Corridor (TUC) containing the future East Freeway. Alberta Infrastructure is responsible for the administration, management and coordination of approvals for all activities within the TUC.

East Regional Context Study

Map H

Sanitary Servicing

Legend

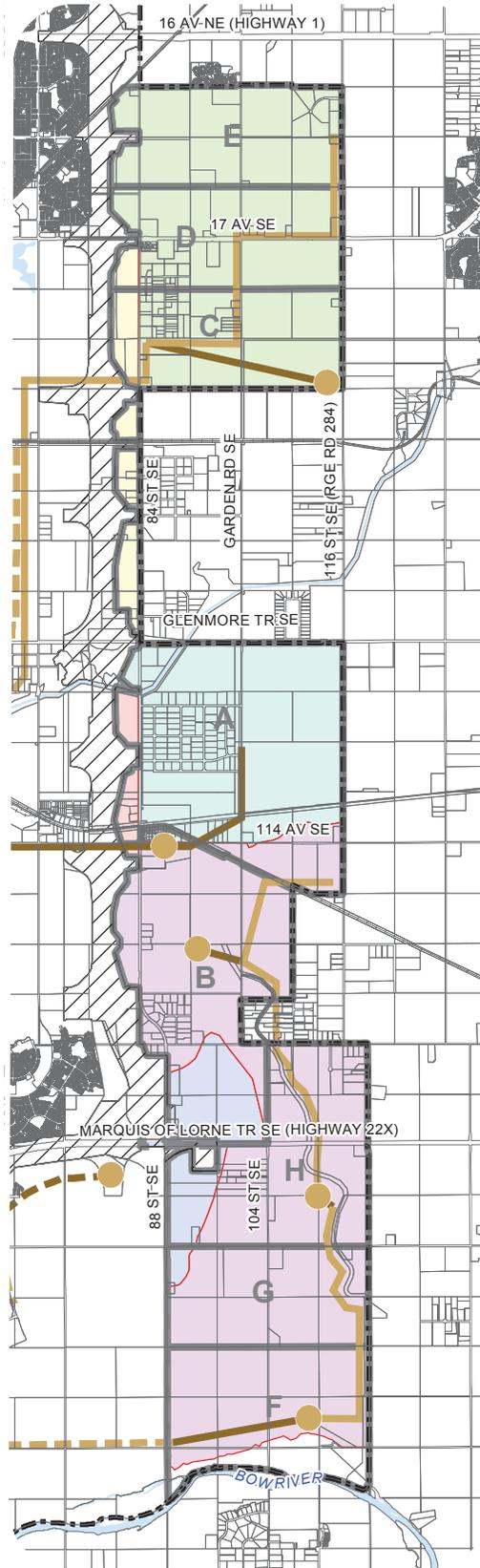
-  City Limits
 -  Railway
 -  Transportation/ Utility Corridor
 -  Study Area Boundary
 -  Sanitary Lift Station
 -  Planned Sanitary Forcemain
 -  Proposed Sanitary Forcemain
 -  Planned Sanitary Trunk
 -  Proposed Sanitary Trunk
- Sanitary Catchment Areas
-  Dufferin
 -  Great Plains
 -  Belvedere
 -  Shepard Industrial
 -  Fish Creek
 -  Southeast
 -  Planning Cells



This map is conceptual only. No measurements of distances or areas should be taken from this map.



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Approved:
2009/04/06
Amended:

A6.0 REGIONAL FACILITIES & SERVICES

A6.1 Regional Facility Requirements

The regional facilities and services required in the East RCS area, and their general locations, are identified on the Regional Facilities and Services Map (Map I). These facilities should be located to optimally serve their catchment areas, recognizing the flexibility to adjust their location through the ASP preparation process. In addition, opportunities for co-location with compatible facilities should be explored at the ASP preparation stage.

Section A6.0 of Appendix A outlines the site and locational criteria for each facility/service. The responsibility for final site acquisition to implement these facilities rests with the applicable land acquisition authorities.

East Regional Context Study

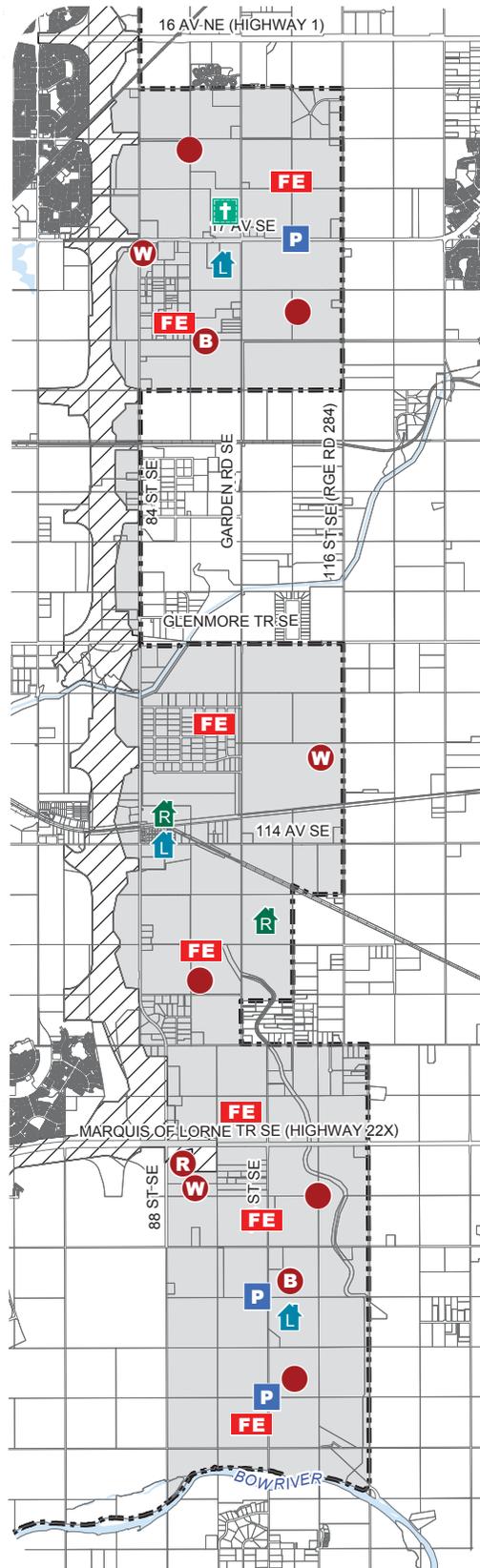
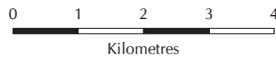
Map I

Regional Facilities & Services

Legend

-  City Limits
-  Railway
-  Transportation/ Utility Corridor
-  Study Area
-  Recycling Depot
-  Bulk Water Facility
-  Animal and Bylaw Services Depot
-  Roads Depot
-  Existing Cemetery
-  Fire and EMS Station
-  Park and Ride
-  Library
-  Regional Recreation Centre

All locations are conceptual only and subject to change. Actual locations to be determined at Area Structure Plan/ Outline Plan and Land Use stage.



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Approved:
2009/04/06
Amended:

The following regional facilities and services are required in the East RCS area:

Facility	Number Required	Size per facility
Fire/EMS Station	7	0.8 ha (2 ac)
Library site	3	2 ha (5 ac)
Calgary Police Service Training Site	1	40 ha (100 ac)
Calgary Police Services Station	1	1.2 – 1.6 ha (3-4 ac)
Regional Recreation/Tournament Centre site (Level 3/4)	1	24.2 ha (60 ac)
Regional Recreation Centre site (Level 3)	1	20 ha (50 ac)
Regional Recreation Facilities (Level 2)	2	2.4 – 4 ha (6 - 10 ac)
Local Recreation Facilities (Level 1)	10	1.2 – 1.6 ha (3 – 4 ac)
Regional Park (Ralph Klein Legacy Park and Shepard Environmental Education Centre)	1	38 ha (93.5 ac)
Roads Maintenance Depot	1	2.4 ha (5 ac)
Bus station / Park N Ride	3	Cells F, G: 2 ha (5 ac) Cell D: 4 ha (10 ac)
Bulk Water Lift Station	3	0.4 ha (1 ac)
Animal & Bylaw Services Depot	2	0.8 ha (2 ac)
Community Recycling Depots	5	200– 700m ² (0.2 – 0.5 ac)
Public School Board High School site (see section 9.3)	2 - 3	9 ha (23 ac) ¹
Calgary Catholic School District High School site	1	9 ha (23 ac)
1. High school site size based on CBE criteria.		

A6.2 Recreational Facilities

Local Recreation Facilities (Level 1)

In accordance with the Joint Use Site Guidelines, a 1.2 to 1.6 hectare (3 to 4 acre) community site will be required per community. Potential uses for these sites are to meet the local community's social, sport, recreation and arts and cultural needs. The provision of local recreation facilities should be considered in conjunction with the provision of facilities within elementary and junior high schools, and will be reviewed in further detail at the ASP preparation stage.

Regional Recreation Facilities (Levels 2 & 3)

Facilities to meet regional social, sport, recreation and arts and cultural needs are required for the East RCS area. The actual activities to be accommodated will be identified through needs and preference studies that will be conducted part of the ASP preparation process. The provision of regional recreation facilities should be considered in conjunction with the provision of facilities within senior high schools.

The 20 hectares (50 acres) of Municipal Reserve in Cell A that has been leased to the Shepard Community Association for 60 years is a likely level 3 Regional Recreation Centre site.

City-wide / Specialty Recreation Facilities (Levels 4 & 5)

These facilities are intended to meet city-wide and specialty social, sport, recreation, and arts and culture needs. The 24 hectares (60 acres) of Municipal Reserve east of Ralph Klein Legacy Park (Cell B) is a suitable site for a future Indoor / Outdoor Recreation site. Development of this and other sites will be dependent on the results of needs and preference studies, specialty requirements and associated program development.

A6.3 Public High School Sites

At this time it has not been determined which school board will be responsible for public school sites in the East RCS area. It is anticipated that two to three public high school sites will be required. The number and general location of high school sites should be determined at the ASP preparation stage.

A6.4 Regional Site Criteria

FIRE STATION & FIRE/ EMS STATION	SITE DETAILS	COMMENTS
Site Size / Site Considerations	Fire only or Fire / EMS 0.8 ha (2 acres)	Rectangular Lot, wide frontage Building 743 to 1114 m ² (8,000 – 12,000 ft ²) Preferably situated on highest elevation in district
Access	High Importance	Minimum of two vehicular access points (one for public, one for apparatus) Dedicated, all turns direct access to major roadway for apparatus Control of signals if required
Response Time	Within 6 minutes 90% of the time	Minimize response times to all areas within service district

LIBRARY	SITE DETAILS	COMMENTS
Site Size / Location	15,000 – 20,000 ft ² building envelope for a community library.	Requires a convenient and highly visible location adjacent to a major community focal point Access is highly important, including transit and pedestrian access.
Catchment Distance	3.5 km for a community library.	
Population Threshold	40,000 – 60,000 for a community library.	

HIGH SCHOOL	CALGARY BOARD OF EDUCATION	CALGARY CATHOLIC SCHOOL DISTRICT
Population Base	50,000 to 60,000	90,000 to 120,000
Students per School	1,500	1,000 to 1,200
Site Size	9 ha (23 ac)	9 ha (23 ac)
Synergies (applies to both CBE and CCSD)	No single model exists, although it is preferable to locate adjacent to an LRT/Transit facility. Other possible uses near a high school could include one or a combination of the following: a recreation centre, library, skating rink, swimming pool, retail and/or community hall. Transportation impacts need to be considered when locating such facilities close to one another.	

REGIONAL RECREATION/ TOURNAMENT CENTRE (LEVEL 3/4)	SITE DETAILS	COMMENTS
Site	1 – 24 ha (60 ac)	
Access	Highly Important	Collector or arterial road access.
Connectivity	Highly Important	Connections to the regional pathway system, and transit, to provide access to non-vehicular users are very important.

REGIONAL RECREATION CENTRE (LEVEL 3)	SITE DETAILS	COMMENTS
Site	1 – 20 ha (50 acres)	
Access	Highly Important	Collector or arterial road access.
Connectivity	Highly Important	Connections to the regional pathway system, and transit, to provide access to non-vehicular users are very important.

REGIONAL RECREATION FACILITIES (LEVEL 2)	SITE DETAILS	COMMENTS
Site	2.4 – 4 ha (6 – 10 ac)	
Service Level Population		Potential partnerships within surrounding communities may influence the size, design and available amenities of the centre.
Access	10 – 30 minutes via walking, biking or public transit. To support access by a range of travel modes, facilities should be located on major transit routes and must connect geographic hubs and other recreation and community facilities by natural and hard surface pathways, including the regional pathway system.	The provision of regional recreation facilities should be considered in conjunction with the provision of facilities (i.e. gymnasiums) within senior high schools.

LOCAL RECREATION FACILITIES (LEVEL 1)	SITE DETAILS	COMMENTS
Site	1.2 – 1.6 ha (3 – 4 ac)	
Service Level Population	One local recreation facility site to be provided per community.	Potential partnerships within surrounding communities may influence the size, design and available amenities of the centre.
Access		The provision of local recreation facilities should be considered in conjunction with the provision of facilities (i.e. gymnasiums) within elementary and junior high schools.

EMERGENCY MEDICAL SERVICES (EMS) REGIONAL STATION	SITE DETAILS	COMMENTS
Site	0.4 – 0.8 ha (1-2 acres)	
Service Area		Population of 50,000 requires 12 hour unit Population of 100,000 requires 24 hr unit

ROADS MAINTENANCE SATELLITE DEPOT	SITE DETAILS	COMMENTS
Site	2.4 ha (5 acres) flat	Rectangular or square site preferable due to trucks turning radii Minimum one all-turns access
Access	Easy access to major roads	

CALGARY POLICE STATION	SITE DETAILS	COMMENTS
Site	Building size approximately 3600 square metres (36,000 square feet)	
Access	Direct access as possible for emergency call out response	

CALGARY POLICE SERVICES TRAINING FACILITY	SITE DETAILS	COMMENTS
Site	40 ha (100 acres) North / south orientation Little / low visibility Edge of industrial area Facility size 8500 square metres (85,000 square feet)	Due to the size, nature and variety of training components, there are extensive site considerations involved in placing this facility
Access	Direct access as possible for emergency call out response	

PARK & RIDE	SITE DETAILS	COMMENTS
Site Size / Site Considerations	2 – 4 acres	Co-location to allow shared parking with facilities with different peak hours is preferable
Access	High Importance	Locate on a collector or major road Locate in neighbourhood centre

BULK WATER LIFT STATION	SITE DETAILS	COMMENTS
Site Size / Site Considerations	0.4 ha (1 acre)	Prefer co-location with other municipal services

COMMUNITY RECYCLING DEPOTS	SITE DETAILS	COMMENTS
Site Size / Site Considerations	200 – 700m ² (0.2 – 0.5 acres)	Locate near residential on retail location with frequent household usage (shopping centre)
Access	Adjacent to major / collector roads	
Required Population	1 / 40,000 residents	