



West Regional Context Study

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Part One:
West Regional Context Study

Executive Summary

The West Regional Context Study (WRCS) developed through a consultation process that included presentations and discussions with members of the public, land owners and members of Council and staff from The City of Calgary and Rocky View County.

The WRCS area covers an area of 866 hectares (2,140 acres) and is located in the West planning sector of Calgary, straddling the Trans-Canada highway and extending north along the Bearspaw Reservoir. The area was annexed from Rocky View County in 2007 for the purpose of accommodating both employment and residential growth. The land south of the Bow River is part of a Joint Planning Area with Rocky View County. When built out, the WRCS area will accommodate approximately 22,000 residents and 7,000 jobs.

The WRCS is a non-statutory plan intended to provide a level of strategic planning between the Municipal Development Plan (MDP) and subsequent Area Structure Plans (ASPs). Specifically, the WRCS is meant to:

- refine The City's broader planning objectives in the area;
- identify key land use, transportation, deep utility servicing, municipal facilities and environmental components; and
- establish the sequencing of subsequent area structure plans and to ensure that urban growth proceeds logically and efficiently.

The WRCS area contains a number of significant natural features including the Bow River, a ravine system, escarpments and creeks. These features provide amenities that will be protected and integrated into the overall land use concept. To this end, the land use concept includes a regional park that will adjoin Glenbow Ranch Provincial Park located in the north portion of the WRCS area, with connections to the regional park and pathway system throughout the rest of the city.

The land use concept also sets the framework for the development of complete communities both north and south of the Bow River. To the south, a community activity centre is planned along the Trans-Canada Highway. This centre will provide enhanced opportunities for residents on the west side of Calgary to live closer to their place of employment.

The residential neighbourhoods will offer a range of housing choices at transit-supportive densities, integrated with the employment centre and retail amenities. Regional facilities, such as a community recreation centre and a fire hall are also included in the land use concept. Details of how these features will be integrated will be determined through the preparation of subsequent ASPs.

Two ASP cells have been identified within the WRCS area, one south of the Bow River (Cell A), the other on the north side (Cell B). Council has directed Administration to prepare and present an ASP for Cell A to Council before the end of 2010.

1.0 Vision

When developed, the WRCS area will contain residential communities and commercial areas that are well-integrated with the area's natural features and exhibit high standards of functional, environmental and aesthetic design. The social, commercial and recreational opportunities required to sustain a vibrant community are provided throughout the area, located to provide residents with easy and convenient access. Mobility is accommodated through a network of pathways, transit services and roads that link destinations within the area to those across the city and throughout the region.

The area is rich with natural features including the Bow River, ravines and escarpments, wetlands and native prairie fescue that are valued for their natural function. They also provide a network of green spaces that serve residents as a recreational amenity and facilitate the regional pathway network, connecting people and places.

Building on these natural amenities, the area includes Haskayne Park, a 146 hectare regional park in the northern portion of the WRCS area. The park is part of a natural parkland corridor that extends from Calgary to Cochrane through Glenbow Ranch Provincial Park.

Housing in the area exhibits a high standard of design, with a range of sizes, styles and densities mixed throughout residential areas. The mix of housing types meets the needs of a broad range of Calgarians from across the socio-economic spectrum. Higher density developments are located in nodes and along corridors, providing a concentration of residents capable of supporting local businesses, community events and transit service.

The area also contains commercial activity centres that provide goods, services and employment opportunities to the local community, the city and the surrounding region. Local commercial uses are well-integrated with residential areas and feature high quality design standards that encourage residents to walk or cycle to access their daily needs. Employment areas contain a variety of businesses that provide employment opportunities on the west side of Calgary.

Calgary Transit provides convenient and reliable service that allows Calgarians to easily access destinations in the community and throughout the city. Transit hubs, designed with safety, comfort and convenience in mind, are located at higher density nodes and corridors and are accessible via the pathway network.



2.0 City of Calgary Strategic Policies

The application of Council's relevant strategic policies is integral to the success of the West Regional Context Study and future ASPs. These strategic policies and other arising Council policies will, as determined appropriate, be refined through Future ASPs in order to guide and direct the decisions on Outline Plan/Land Use Amendment and/or Development Permit applications.

2.1 Sustainability Principles

City Council has approved 11 sustainability principles for Land Use & Mobility, which are based on the Melbourne Principles adopted by the United Nations Environment Programme. The sustainability principles shall be considered in the formulation of ASPs 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 WRCS and all future ASPs are required to comply with the Municipal Development Plan (MDP, Bylaw 24P2009) and Calgary Transportation Plan (CTP), including the following key directions:

1. Achieve a balance of growth between established and Greenfield communities;
2. Provide more choice within complete communities;
3. Direct land use change within a framework of nodes and corridors;
4. Link land use decisions to transit;
5. Increase mobility choices;
6. Develop a primary transit network;
7. Create complete streets;
8. Optimize infrastructure.

2.3 Triple Bottom Line

In February 2004, 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 the social, environmental, economic and smart growth impacts of all its decisions and actions, with regard to planning, policy, strategies, services, operations, approvals and all other City business.

2.4 Compliance with Other Policies

In addition to policies previously outlined, the WRCS shall comply with the 2006 Annexation Agreement between The City of Calgary and Rocky View County, and with all other applicable statutory policies.

3.0 Role of the Regional Context Study

3.1 Purpose of the Regional Context Study

A Regional Context Study (RCS) is a non-statutory plan for large sectors intended to provide a level of strategic planning between the Municipal Development Plan (MDP) and subsequent Area Structure Plans (ASPs) and/or community plans. The purpose of the RCS is to:

- refine and implement The City's broader planning objectives in the area;
- identify key land use, transportation, deep utility servicing, municipal facilities and environmental components; and
- establish the sequencing of subsequent ASP preparation to ensure that urban growth proceeds logically and efficiently.

The growth management analysis (Appendix C) provides capital cost estimates for infrastructure, services and facilities that are required in both Cell A and B. These estimates can be used in the capital budget process and to determine the timing of an ASP in Cell B.

3.2 Interpretation of the Regional Context Study

3.2.1 Interpretation of Maps and Data

Unless otherwise specified within the WRCS, the boundaries or locations of any symbols or areas shown on the maps in the WRCS are approximate only 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.

Likewise, forecasts of population and employment for the area are based on a number of factors that can, and do, change over time. This information is therefore not meant as specific targets but rather as general estimates for use in infrastructure and servicing models.

3.2.2 Interpretation of Terms

Where "shall" is used in the WRCS, 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 WRCS, 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.

3.3 Monitoring of the Regional Context Study

The WRCS shall be monitored over time to ensure that it remains current and relevant. When necessary, the WRCS should be updated either generally or in response to specific issues.

4.0 Scope of West Regional Context Study

4.1 Scope

The WRCS area was annexed to The City of Calgary in 2006. Preparation of this study involved the co-ordinated planning of land use, transportation, environmental, facility and servicing studies; input from landowners and other stakeholder groups and public consultation. The WRCS is intended to provide a framework for the subsequent preparation of more detailed Area Structure Plans (ASPs). Two ASP cells have been identified within the WRCS area, one south of the Bow River and one north.

The WRCS area is expected to accommodate both residential and employment growth in The City's west sector. According to the scenario developed for the WRCS, the area could have an overall population of approximately 22,500 residents and 7,000 jobs. Major features of the West RCS area include:

- The Bow River;
- Ravine system and escarpments;
- A regional park that will adjoin Glenbow Ranch Provincial Park to the north of the WRCS area;
- Employment centres located near the Trans-Canada Highway;
- Residential communities; and,
- A Joint Planning Area with Rocky View County that encompasses the entire WRCS area south of the Bow River.

4.2 Location

The WRCS area is comprised of 866 hectares (2,140 acres) of land in The City's west sector. Approximately 562 hectares (1,388 acres) are situated north and east of the Bow River, with the remaining 304 hectares (752 acres) situated south of the Bow River. The WRCS boundaries are illustrated in Map 1.



4.3 Timeframe of the Regional Context Study

The WRCS is future-oriented and depicts a broad land use and transportation pattern for the study area. The WRCS has no specific timeframe.

4.4 Joint Planning Areas / Inter-municipal Development Plan

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

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

Portions of the WRCS area are located within joint planning areas between The City and Rocky View County. An Inter-Municipal Development Plan (IDP) with Rocky View County (currently being developed) will further define how matters of planning and development within these joint planning areas will be addressed. Future ASPs and Outline Plan/Land Use Amendment applications within the Joint Planning Area will be subject to the terms of the IDP.

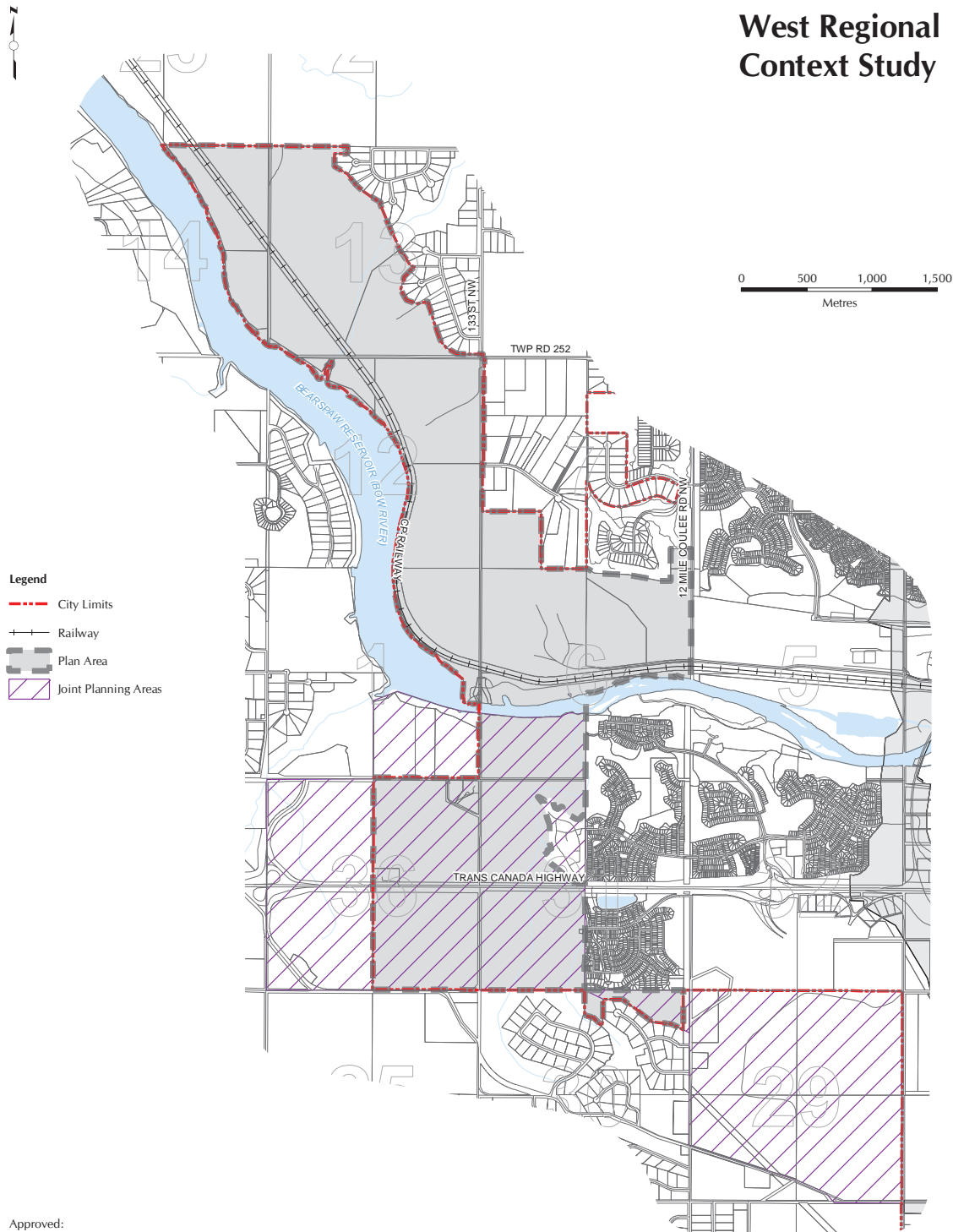


4.5 Land Ownership

There are approximately 30 titled parcels of land within the WRCS area. There is no single majority owner. Subdivision of quarter sections into smaller lots has been limited.

Map 1 – West Regional Context Study Area

West Regional Context Study



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

5.0 Land Use

5.1 Land Use Concept Map

General land uses for the WRCS area are shown on the Land Use Concept Map (Map 2). This map consists of a series of areas and symbols that define the broad future land use components for the WRCS area. The WRCS outlines the intent of these areas and features. The location, alignment and design of areas and features on the Land Use Concept 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 Map may be refined. The refinement process may result in revisions to the map to ensure that the map and any subsequent ASP remain consistent.

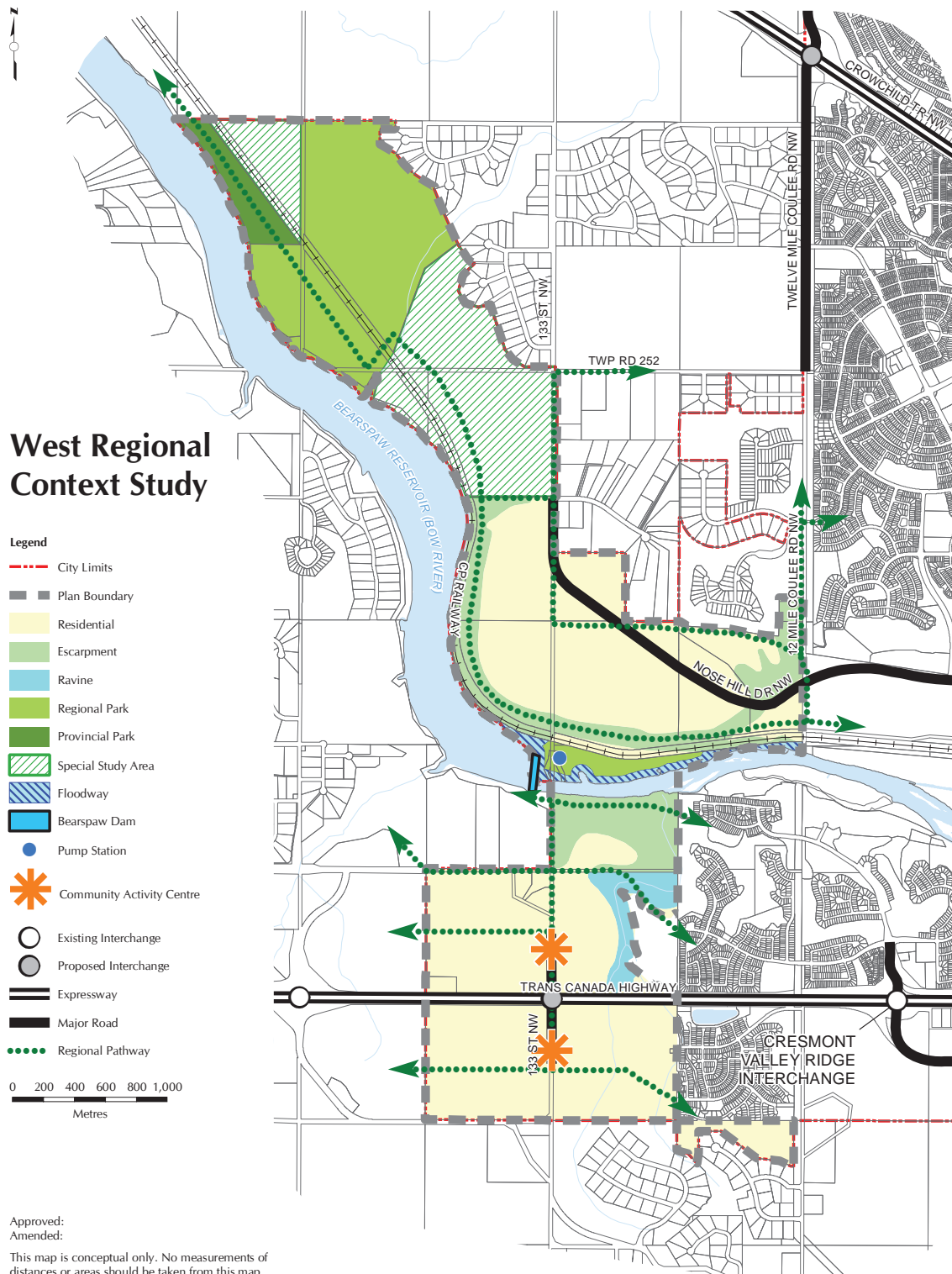
ASPs will guide the development of complete communities. Complete communities are based upon a compact well-designed urban form that efficiently utilizes land and infrastructure. Complete communities also provide a range of housing choices at transit-supportive densities, local services and employment and promotes mobility options.

Some lands within the WRCS area will likely remain in agricultural use or for resource extraction use for several years prior to development, particularly in Cell B. Future ASPs within the WRCS area should include policies addressing these interim uses.

There are also a number of land uses adjacent to the WRCS area. Subsequent ASPs will address issues of interface between urban development and adjacent land uses in Rocky View County.



Map 2 – Land Use and Transportation Concept



5.2 Residential Area

The predominant land use in the Residential Area (Map 2) should be residential, with a diversity of housing types provided in each community as per the Municipal Development Plan. Recreational, institutional, public, local commercial and accessory uses may be permitted within the Residential Area where determined to be compatible and complementary to residential development.

The density of the Residential Area shall comply 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.

Adjacent residential areas of Rocky View County, such as Artist View Park (located directly south of the existing community of Crestmont) and Bearspaw (located adjacent to Cell B) contain low density residential development. The City, while adhering to the density requirements contained in the MDP, will endeavour to provide transitional buffers between urban residential areas in The City and existing residential development in the County, as described in the IDP.

5.3 Community Activity Centres

Schedule D of the 2006 Annexation Agreement identifies the Trans Canada Highway West Corridor for "employment growth to better balance jobs and population by locating employment opportunities closer to residential areas on the west side of the City." Accordingly, Map 2 identifies two potential community activity centres in the WRCS area. The extent of land planned for these centres, the location and the impact they may have on municipal infrastructure shall be analyzed in further detail during preparation of the ASP.

5.4 Regional Park

The WRCS area includes Haskayne Park, a 146 hectare Regional Park under development in the northern portion of Cell B. The Park will form part of a natural parkland corridor between Calgary and Cochrane that is intended to preserve and protect the prairie landscape along the Bow River. Haskayne Park will be developed in conjunction with City-owned Bearspaw Park, located directly across the Bow River in Rocky View County.

5.5 Provincial Park

Glenbow Ranch Provincial Park, located to the northwest of Cell B, extends along the Bow River from Cochrane into the WRCS area. This section of the park forms a critical link connecting the Provincial Park to the future Haskayne Park.

5.6 Special Study Area

The Special Study Area identifies land that may be located on a subsurface alluvial aquifer extending from the nearby Bow River / Bearspaw Reservoir. Further study of the subsurface composition of this land is required to determine whether the aquifer exists and if so, its extent and relationship to the adjacent Bow River / Bearspaw Reservoir. The results of this study will be important in determining appropriate land uses for this area.



6.0 Population and Employment Projections

The table below outlines the projected number of residents and jobs in each of the Planning Cells based on projected land uses, applicable policies and historic trends. Residential densities shall comply with policies described in the MDP.

These projections are subject to refinement during the preparation of ASPs and the Outline Plans / Land Use Amendments.



Planning Cell	Total Area	Gross Developable Area ¹	60 people/jobs per hectare ³		70 people/jobs per hectare ³	
			population	jobs	population	jobs
A (S. of Bow River)	304 ha (752 ac)	247 ha (610 ac)	10,000	5,800	11,600	5,950
B (N. of Bow River)	562 ha (1388 ac)	162 ha (400 ac) ²	8,850	850	10,300	1,100
Total	866 ha (2140 ac)	409 ha (1010 ac)	18,850	6,650	21,900	7,050

1. The gross developable area calculations for each planning cell excludes potential Environmental Reserve, Haskayne Park, Special Study Area and right-of-way for the Trans-Canada Highway.

2. Cell B contains land identified as a Special Study Area. The results of hydrological analysis may deem all, some or none of this land suitable for development. An Area Structure Plan for Cell B will reflect the results of this analysis.

3. Jobs related to the employment areas in Cell A result in overall intensity figures that exceed the 60 and 70 people and jobs per hectare indicated in the column headings.

7.0 Growth Management

This section provides an evaluation of the feasibility of preparing ASPs for lands within the WRCS area. An ASP is the primary mechanism for controlling the location and extent of new suburban growth.

7.1 Future Planning Areas

The WRCS area is divided into two planning cells as identified on the Future Planning Areas Map (Map 3). Each planning cell will be the subject of an ASP prepared in accordance with the requirements of the *Municipal Government Act*.

ASP cell	ASP sequence	Total Area
A	First	304 ha (752 ac)
B	Second	562 ha (1388 ac)

7.2 Timing of Area Structure Plans

An ASP 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 will be determined by Council in accordance with the MDP and The City's Growth Management Principles and Criteria that includes but is not limited to the following considerations:

- (a) Advancing the objectives of the MDP, CTP and other corporate strategic initiatives;
- (b) An assessment of The City's financial capacity;
- (c) An assessment of The City's infrastructure;
- (d) A demonstrated need for planned land within the city;

- (e) Consideration of the operating life-cycle costs to The City in supplying and maintaining infrastructure;
- (f) The City's ability to provide efficient and cost-effective utility servicing;
- (g) Opportunities for land use that supports Primary Transit Network;
- (h) Landowner interest; and
- (i) Community interest

Landowners requesting the preparation of an ASP shall be required to submit a Growth Management Analysis based on the criteria above and an associated amendment to the Growth and Change map in the MDP (Map2). In the case of the WRCS area, Administration has been directed by Council to bring forward an ASP for Cell A for their consideration by the end of 2010. An ASP for Cell B will commence as determined by Council, including a comprehensive Growth Management Analysis.

7.3 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 should be subject to a limited time frame, to be determined at the time of application.

7.4 Estimated Capital Costs of Development

A detailed description of the transportation, utility and facility requirements of each ASP cell is provided in Appendix B, and a complete list of infrastructure costs is provided in Appendix C. The purpose of the capital cost information is to provide an approximation of the magnitude of the required municipal investment.

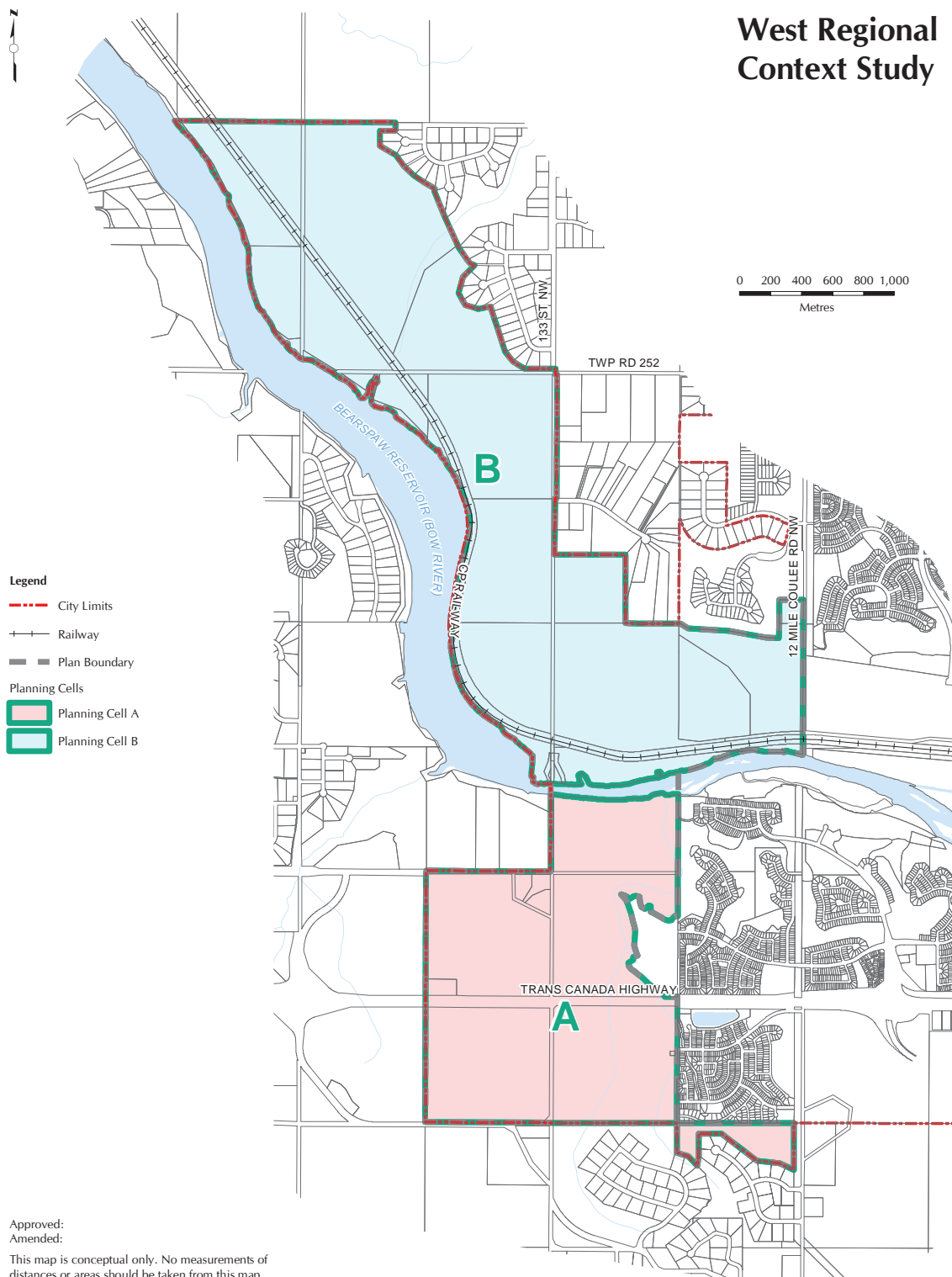
The Core Infrastructure Costs table contained in Appendix C summarizes the current estimated capital costs for provision of utility servicing, transportation infrastructure and fire facilities in each ASP cell. The Complete Community Infrastructure Costs table include capital costs for transit services and facilities such as a recreation centre and a bulk water station in addition to the core infrastructure costs.

During preparation of the ASPs, a review of the operating costs of municipal services related to community form and staging of development shall be performed and will be included in the ASP.

7.5 Growth Management Recommendation

Council has directed Administration to prepare and present an ASP for Cell A to Council before the end of 2010. The growth management analysis provides cost estimates for infrastructure, services and facilities that are required in both Cell A and B that can be used in the capital budget process and to determine the timing of an ASP for Cell B.

Map 3 – Area Structure Plan Cells



Part Two: Supporting Information

Appendix A

Natural Areas and Land Use Constraints

A.1 Natural Features

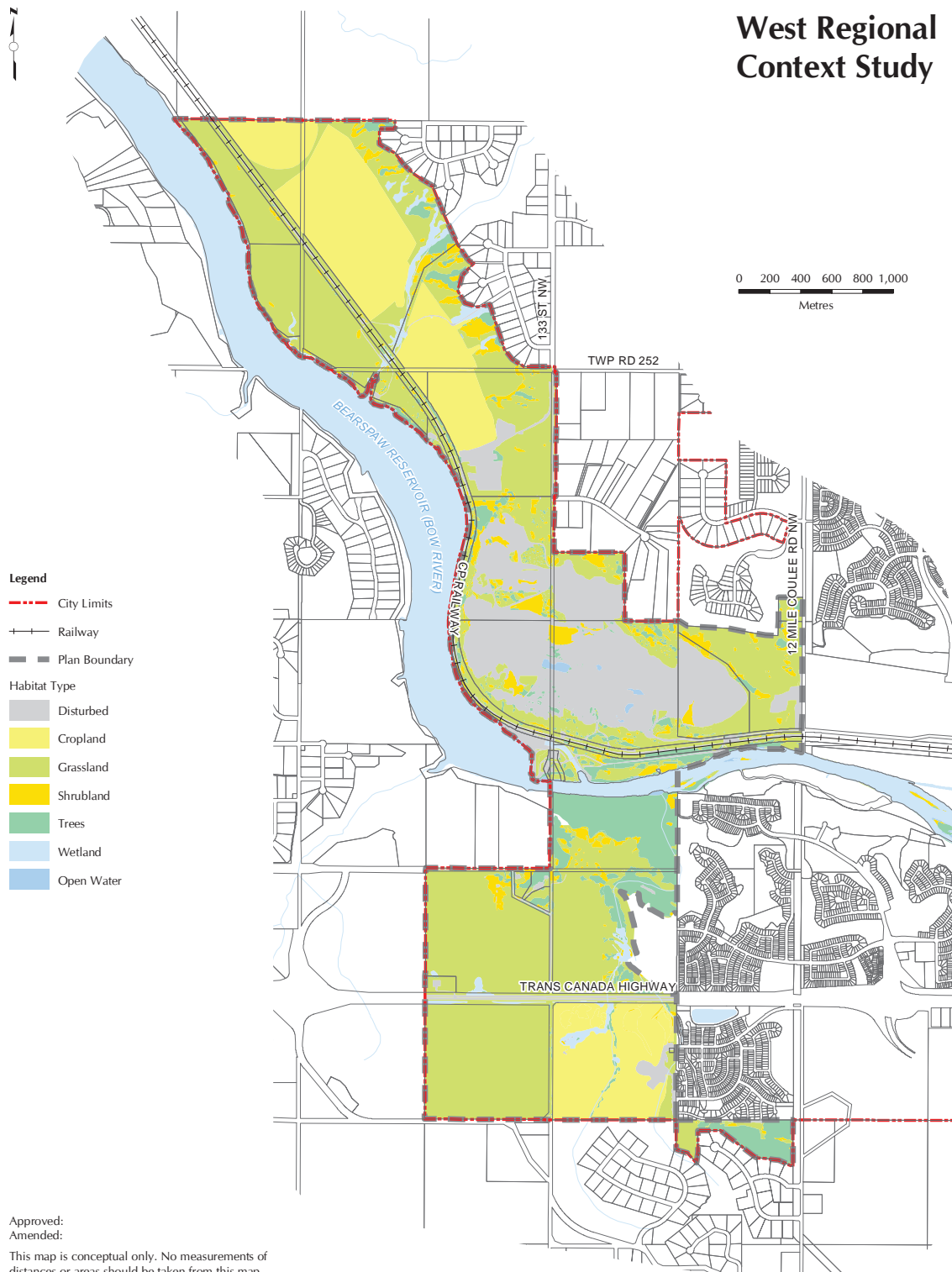
A preliminary natural inventory and biophysical analysis has been conducted for the WRCS area. The predominant natural features in the area are the Bow River, a major ravine and significant escarpments. Other natural features include native fescue grasslands, tree stands, and a mix of riparian areas and native grasslands associated with the Bow River escarpment (Map A1).

The inventory of natural features in the WRCS area will be subject to further analysis and refinement at the ASP and Outline Plan/ Land Use Amendment application stage. The protection of environmentally significant features will be subject to the requirements of applicable City policies and/or Provincial legislation. Subsequent ASPs will identify other features of environmental significance to be dedicated, acquired or otherwise protected.



Map A1 - Natural Features

West Regional Context Study



A.2 Land Use Constraints

A.2.1 Floodway

Lands within the Bow River Floodway (Map 2) shall be incorporated as part of the public open space and natural corridor system. During preparation of ASPs, the extent of the floodway shall be determined and policies shall be developed that address development restrictions within the floodway.

A.2.2 Ravine System and Escarpments

A ravine system runs through the eastern portion of Cell A from south of the Trans Canada Highway, north to the Bow River. A portion of this ravine system forms a natural barrier between the community of Valley Ridge to the east and the WRCS area to the west. There is also a significant escarpment that extends through both Cell A and Cell B along the Bow River. Both features are shown on Map 2.

A.2.3 Special Study Area

The Special Study Area identifies land that may be located on a subsurface alluvial aquifer extending from the nearby Bow River / Bearspaw Reservoir. Further study of the subsurface composition of this land is required to determine whether the aquifer exists and if so, the extent of the aquifer and its relationship to the adjacent Bow River / Bearspaw Reservoir. The results of this study will be important in determining the appropriate land uses for this area.

A.2.4 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 WRCS area may require further assessment and evaluation at the Outline Plan/Land Use Amendment application stage to determine their significance for protection.



Appendix B Transportation, Utility Servicing and Facilities

B.1 Transportation

B.1.1 Regional Pathway Network

A system of regional pathways, sidewalks and on-street bikeways will provide pedestrians and cyclists with safe and convenient connections to transit stops, schools, regional recreational facilities, employment and commercial areas, major parks and natural areas within the WRCS area and throughout the city.

The conceptual location, alignment and design of the regional pathways and bikeways will be determined during the preparation of ASPs and refined at the Outline Plan/Land Use Amendment application stage. A potential alignment for the regional pathway is identified on the Land Use Concept Map (Map 2).

B.1.2 Road Network

The Transportation Map (Map B2) identifies the regional road network and related interchanges for the WRCS area. Regional roads include expressways and arterial streets bordering and intersecting the WRCS 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 as part of the ASP process.

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.

Major features and considerations of the road network include:

B.1.2.1 Trans-Canada Highway

The Trans-Canada Highway is identified in the CTP as part of the Primary High Occupancy Vehicle Network and as a Main Goods Movement Corridor.

A proposed interchange at 133 Street NW and the Trans-Canada Highway (the “interchange”) will provide primary access to the community activity centre and residential communities in Cell A. The interchange is subject to shared provincial and municipal jurisdiction. The City and the Province of Alberta are currently in negotiations regarding the creation of the interchange, any impacts therefrom, and its proposed location and design. Alternative access to the Trans-Canada Highway may also be available via Old Banff Coach Road.

B.1.2.2 Nose Hill Drive NW

Nose Hill Drive NW is classified as an arterial road and will provide access to Cell B. The transportation principles behind Nose Hill Drive NW are to reduce the auto focus of the roadway and support a shift to transit, walking and cycling.

B.1.2.3 Alternative Access to Cell B

A potential alternative means of access to Cell B is from the north through Rocky View County via Highway 1A (an expressway), and Twelve Mile Coulee Road NW. Twelve Mile Coulee Road NW will continue southwards as an arterial street to Township Road 252 (80 Avenue NW). This potential access is subject to ongoing discussions between The City and Rocky View County.

B.1.2.4 Truck Routes

All arterial streets in the area can serve as truck routes

B.1.2.5 Inter-municipal and Provincial Jurisdiction

Where roadways cross jurisdictional boundaries, the alignment of roads and associated interchanges and intersections shall be co-ordinated with Rocky View County and the Province of Alberta.

B.1.3 Transit Service

The transit system for the WRCS area will comprise a hierarchy of transit routes that serve different functions. The location and design of bus routes shall be included in the ASP and be further refined at the Outline Plan / Land Use Amendment stage.

The CTP identifies a future regional rail corridor extending through the WRCS area along the north bank of the Bow River. However, no stations/stops are currently identified by the CTP in the WRCS area.

Development adjacent to transit hubs, 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.

B.1.4 Transportation Analysis

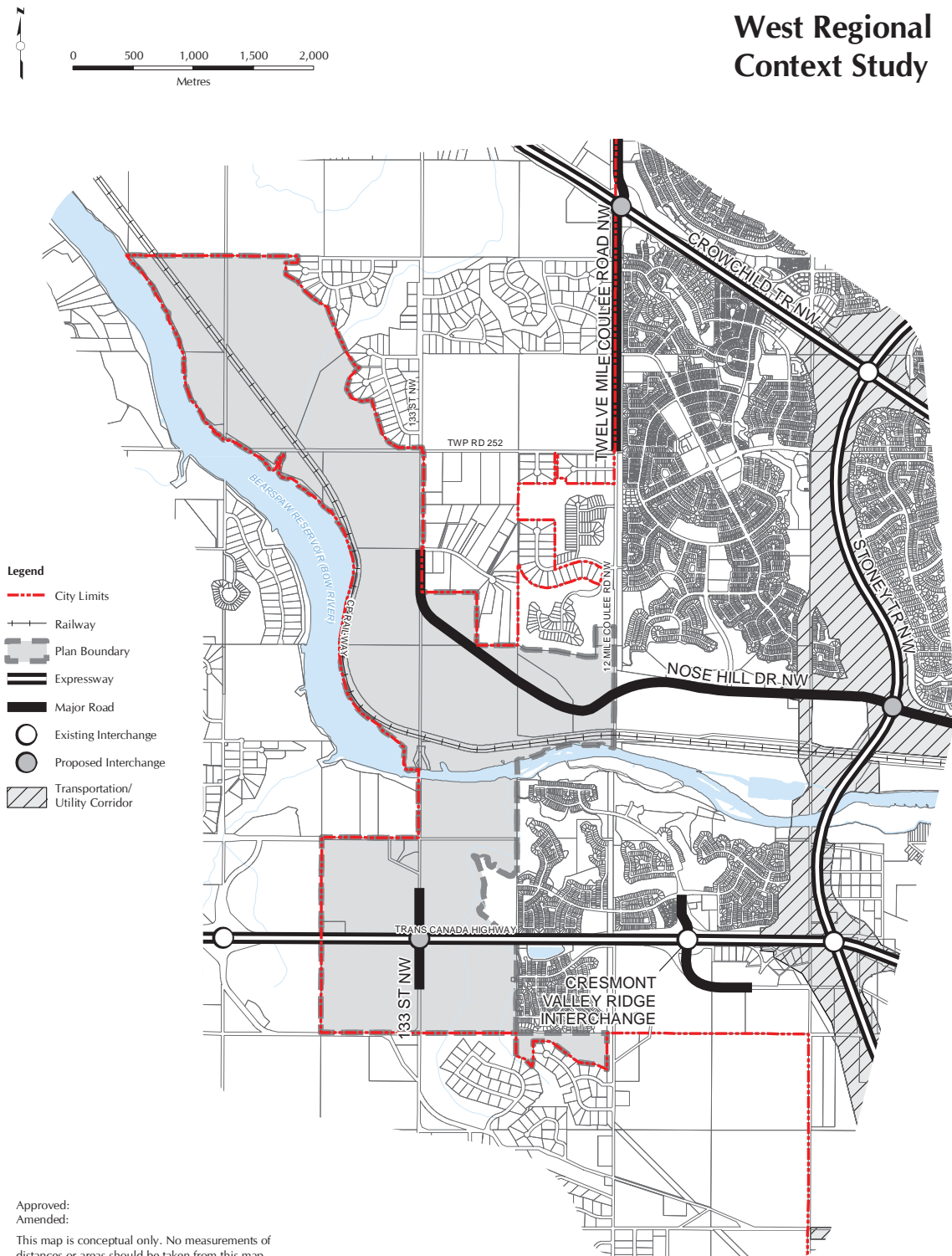
Analysis of the transportation network, including arterial streets and the internal collector network, will occur during the preparation of subsequent ASPs. At that time, all roads and any associated intersections or interchanges will require comprehensive review with respect to alignment and function.

Furthermore, interface and general design characteristics of key entranceway roads will be reviewed during ASP preparation.



Map B1 - Transportation Network

West Regional Context Study



B.2 Utility Servicing

The WRCS 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 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 WRCS area shall be undertaken through the ASP and Outline Plan preparation processes.

B.2.1 Water Servicing

In order to service the WRCS area with potable water several new feeder mains are required in order to meet the fire flow and customer demands. The details provided here are conceptual, and will be finalized during the preparation of ASPs and/or Outline Plans.

B.2.1.1 Cell A

Cell A is located within the Big Hill West, Crestmont and Broadcast Hill Pressure Zones in addition to a new, as yet unnamed pressure zone. The Crestmont Pump Station and the Artist View Feeder main are required to be in service prior to any development within Cell A.

Big Hill West Pressure Zone (South Bank)

The northern portion of Cell A is located in the Big Hill West Pressure Zone (south bank) which is currently at capacity and needs to be connected to the Big Hill West Pressure Zone (north bank). This will require the planned connecting feeder main across the Bow River as well as a proposed feeder main. Pressure reducing valves will also be required in the distribution system from the Crestmont Pressure Zone to the Big Hill West Pressure Zone. Refer to Map B2 for the proposed conceptual alignment of the feeder mains.

Crestmont Pressure Zone

The majority of the southern portion of Cell

A is located in the Crestmont Pressure Zone. Development in this area is dependent on the addition of a proposed feeder main loop as well as distribution main connections to the existing Valley Ridge Pump Station. Refer to Map B2 for the proposed conceptual alignment of the feeder mains.

The Valley Ridge Pump Station requires upgrades to accept additional supply from the Big Hill West Pressure Zone in order to meet the increased water demand. This involves the addition of a proposed feeder main from the planned connecting feeder main to the Valley Ridge Pump Station.

Broadcast Hill Pressure Zone

The majority of the Crestmont Residential Interface located in the NE quarter of Section 30-24-02-05 will be serviced from the Broadcast Hill Pressure Zone through a connection from the planned Crestmont Pump Station.

Unnamed Pressure Zone

Lands in the southeast of the Crestmont Residential Interface (~1.6 ha), with elevations above 1249 m will remain unserved.

B.2.1.2 Cell B

Cell B is located within the Spy Hill West, North Hill and Glenmore Pressure Zones.

Spy Hill West Pressure Zone

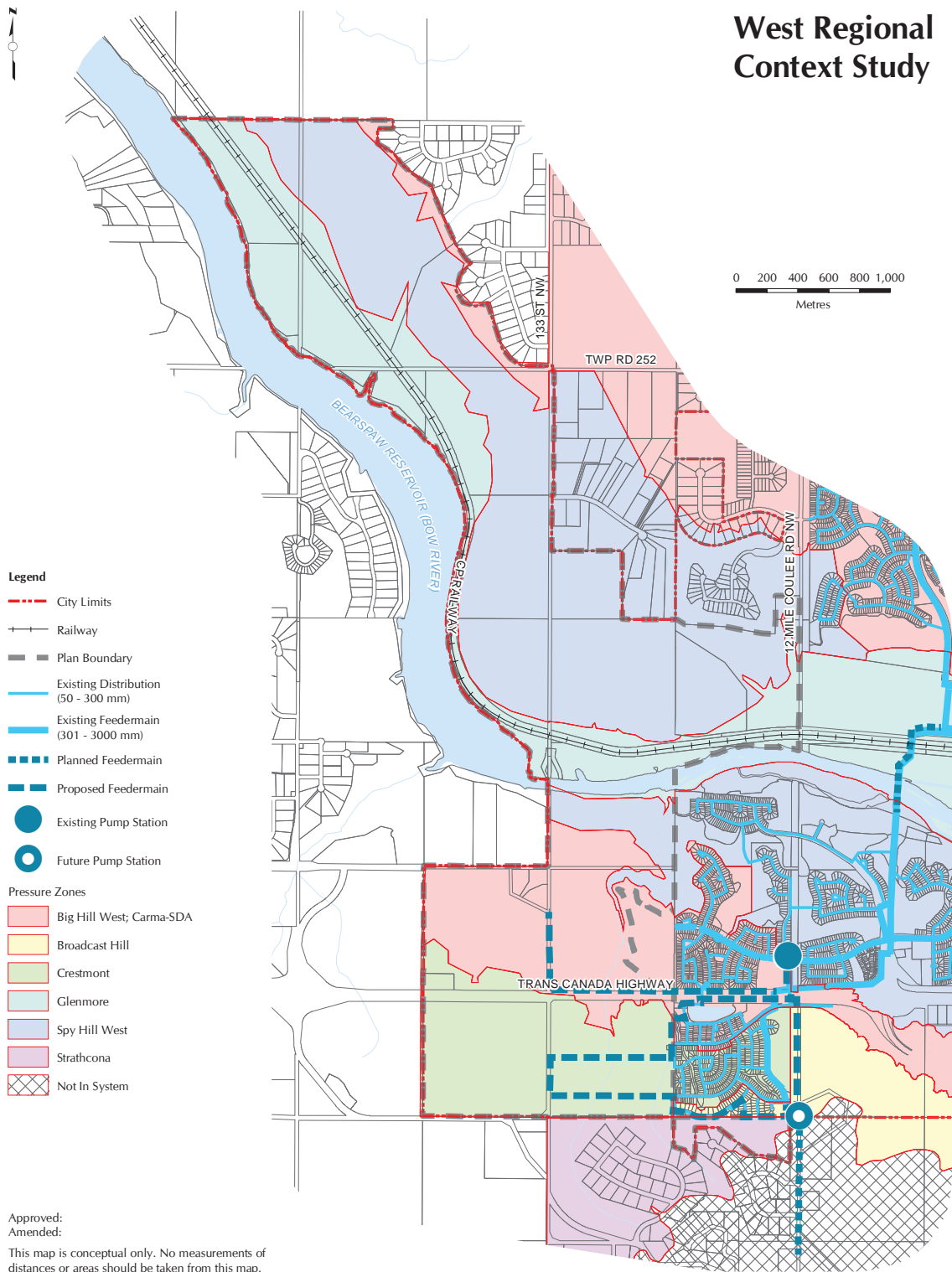
The majority of Cell B is located at elevations that are equivalent to the Spy Hill West Pressure Zone. It will be serviced by pressure reduction from the adjacent Big Hill West Pressure Zone. A distribution loop within Cell B lands can be connected to the existing feeder main on Bearspaw Dam Road at the junction with the feeder main which crosses the Bow River to the south. The loop can be closed with a connection to the feeder main south of Tuscany Estates Point NW along Tuscany Hill NW. Upgrades will be required to the local distribution network in this area.

North Hill and Glenmore Pressure Zones

The residential areas along the escarpment are at lower elevations than other residential areas and will require pressure reducing valves. The elevations within this area coincide with elevations in the North Hill and Glenmore Pressure Zones.

Map B2 – Water Servicing

West Regional Context Study



B.2.2 Sanitary Servicing

The general alignment of the sanitary trunks required to service the RCS area are shown on Map B3. These alignments are conceptual, with the final alignment to be determined during preparation of subsequent ASPs and/or at the Outline Plan / Land Use Amendment application stage.

B.2.2.1 Cell A

The northern portion of Cell A can be serviced by local lift stations, gravity pipes and local forcemain running south to connect to the proposed 675mm sanitary trunk along the Trans Canada Highway. The proposed sanitary trunk will tie to the Bowness sanitary trunk, likely triggering the need for upgrades to the existing system downstream, such as trunks and siphons.

The southern portion of Cell A will be serviced by local gravity pipes, as well as a local lift station and forcemain tying to the proposed 675mm gravity trunk running along the Trans Canada Highway, as shown on Map B3.

B.2.2.2 Cell B

Cell B will be serviced by a 675mm sanitary trunk roughly following the north bank of the Bow River tying into an existing 900mm gravity trunk located along the railroad (as shown on Map B3). Depending on the extent and location of development in the area, two local lift stations may be required in Cell B to accommodate the service load as well as a siphon under the ravine. Also of note, sanitary servicing will need to cross environmentally significant features such as the escarpment, located just north of the Bow River and portions of Haskayne Park depending on the type and location of facilities required there. Downstream upgrades, such as sanitary trunks and siphons will likely be required.

Many of these issues will be more thoroughly addressed during the preparation of subsequent ASPs when more detail regarding park development is known.

B.2.3 Stormwater Management

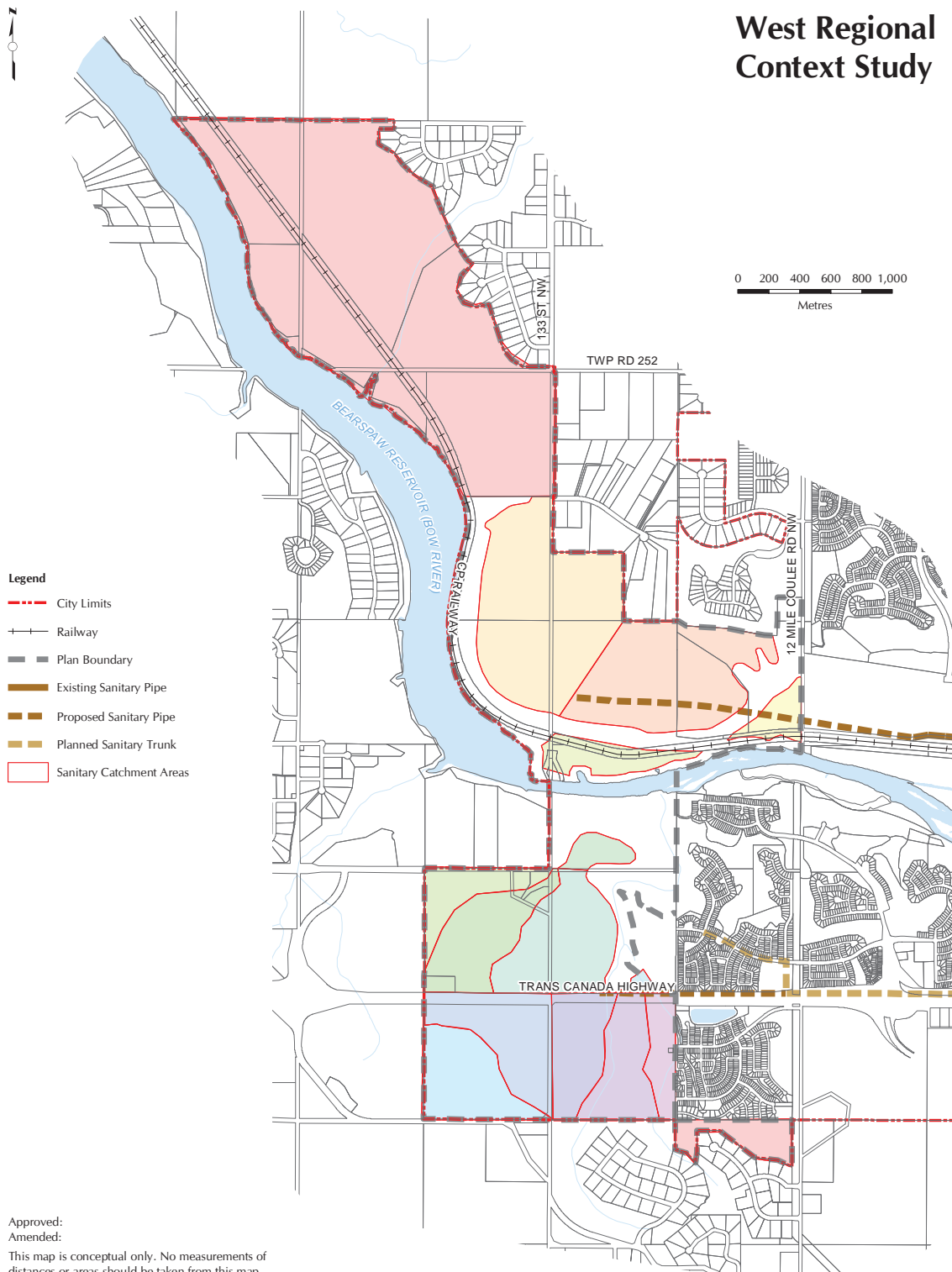
Both Cell A and Cell B are within the Bow River watershed. Stormwater management for the WRCS must align with The City of Calgary Stormwater Management Strategy and the Bow Basin Watershed Management Plan. Peak flow discharge control and runoff volume control will be required. Stormwater source control practices and low impact development strategies approved by Water Resources shall be implemented within the WRCS area to meet stormwater targets.

A Master Drainage Plan should be completed prior to or during preparation of subsequent ASPs and at the Outline Plan / Land Use Amendment application stage. Additionally, the Master Drainage Plan should include stormwater engineering solutions to ensure the long-term sustainability of the natural wetlands that are identified for conservation. In particular, Master Drainage Plans must include strategies that prevent direct discharge of untreated stormwater into the Bearspaw Reservoir.

Stormwater reuse strategies should be considered as a tool to achieve volume reduction targets. Because many storm water management details require further study, there is no map provided at this time.

Map B3 – Sanitary Servicing

West Regional
Context Study



B.3 Regional Facilities Requirements

The regional facilities and services required in the WRCS area, and their general locations, are identified on the Regional Facilities and Services Map (Map B4). These facilities should be located to optimally serve their catchment areas, recognizing their location may be adjusted during preparation of the ASP. In addition, opportunities for co-location with compatible facilities should be explored at that time.

This section outlines the site and location criteria for each facility/service. The responsibility for final site acquisition to implement these facilities rests with the applicable land acquisition authorities.

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

Facility	Number Required	Area Required
Emergency Response Station (Fire Station, possibly combined with EMS)	1	0.8 ha (2 ac)
Small Regional Recreation Facility	1	5 ha (12 ac)
Regional Park (Haskayne Legacy Park)	1	145 ha (360 ac)
Bulk Water Station	1	0.4 ha (1 ac)

B.3.1 Emergency Response Station

The need for an Emergency Response Station has been identified for Cell B, north of the Bow River. In addition to serving as a fire station, the facility may also accommodate Emergency Medical Services, although that has yet to be determined.

B.3.2 Small Regional Recreation Facility

A Small Regional Recreation Facility is required in Cell A to meet regional social, sport, recreation, arts and cultural needs of residents. The actual activities to be accommodated will be identified through needs and preference studies. The provision of community recreation facilities should be considered in conjunction with the provision of facilities within senior high schools, where possible.

B.3.3 Haskayne Legacy Park

No decisions regarding the types of facilities required for this park have been made at this time. Further consideration will be made during the ASP process.

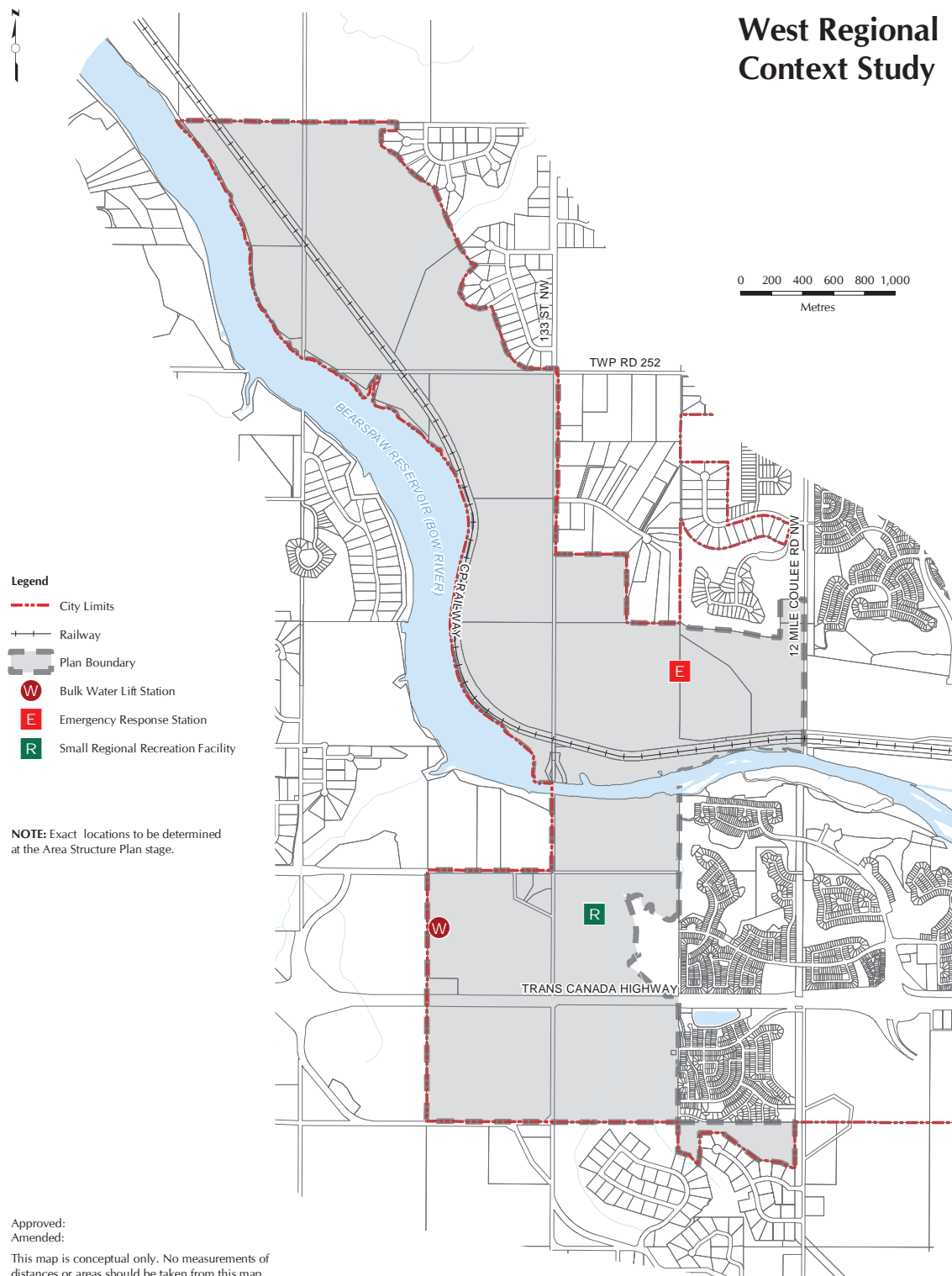
B.3.4 Bulk Water Station

A bulk water station is required in Cell A of the RCS area.

B.3.5 Public High School Site

At this time it has not been determined if any high school sites will be required in the WRCS area. Given the small size of the WRCS area, it is unlikely that one will be required. However, this will be confirmed with the school boards at the ASP preparation stage.

Map B4 - Regional Facilities



Appendix C

Growth Management

C.1 Land Supply

C.1.1 City-wide Land Supply

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

The *Suburban Residential Growth 2009-2013* document estimates the remaining residential capacity for suburban areas city-wide. The capacity of vacant land, both subdivided and un-subdivided, with approved Community Plans or ASPs is approximately 101,400 residential units that could house 269,000 people.

VACANT CITY-WIDE LAND SUPPLY TARGETS		
Land Supply	Target	Latest Update (April 2008)
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
<p>1. Based on current forecasted growth; reviewed annually and subject to change.</p> <p>2. Vacant Suburban Land Supply is undeveloped land within The City's corporate limits likely to be developed for predominately residential use.</p> <p>3. Vacant Planned Suburban Land Supply is undeveloped land within an Area Structure Plan or Community Plan.</p> <p>4. Vacant Serviced Land Supply is undeveloped land for which there is existing servicing capacity to develop without requiring significant City expenditures for storm trunks, water mains, reservoirs, etc.</p>		

C.1.2 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 WRCS area lands are located.

C.1.2.1 West Sector

Cell A of the WRCS area is located in the city's west sector. According to the Suburban Residential Growth 2009-2013 document, the west sector has enough land with approved ASPs (or community plans) in place to accommodate approximately 8,600 residential units. This represents a nine to 11 year supply of housing in this sector, depending on the rate of growth.

C.1.2.2 Northwest Sector

Cell B of the WRCS area is located in the city's northwest sector. According to the Suburban Residential Growth 2009-2013 document, the total estimated capacity for growth in the northwest sector is approximately 420 residential units. This represents a housing supply of less than two years in this sector. Adjacent development in Rocky View County consists of low density residential development on large lots.



C.2 Infrastructure Costs

C.2.1 Core Infrastructure Costs

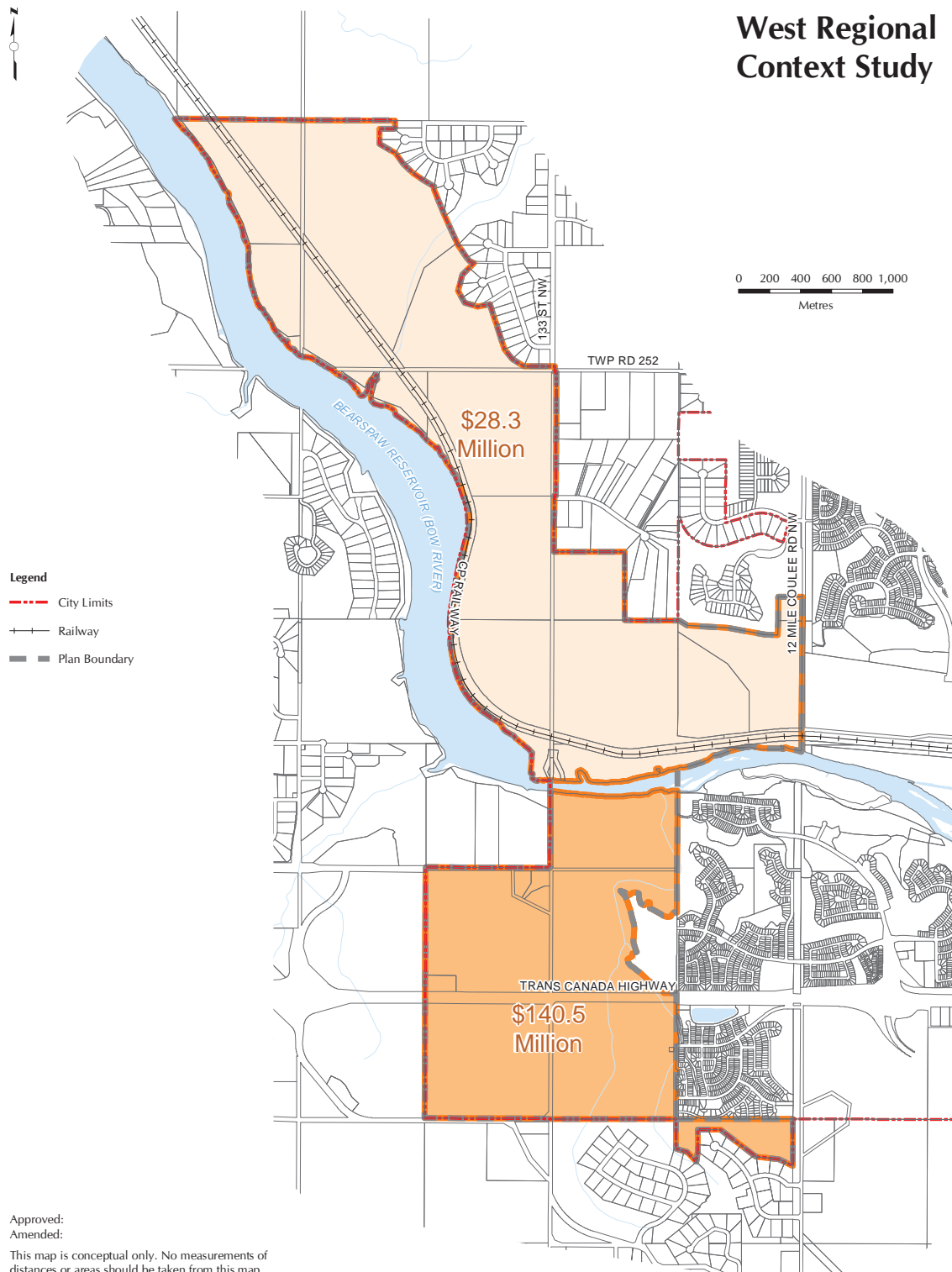
Core Infrastructure Costs (in millions)		
	Cell A	Cell B
Utility Servicing		
Water	\$55M ¹	\$0M
Sanitary	\$25M ²	\$12M
Storm ³	\$0.5M	\$0.5M
Transportation Infrastructure	\$60M	\$0M
Emergency Response Station	N/A	\$15.8M ⁴
TOTAL	\$140.5M	\$28.3M
<p>Notes:</p> <p>The purpose of the costing information is to provide an approximation of the magnitude of the investments.</p> <p>Infrastructure costs will be addressed in accordance with the Standard Development Agreement.</p> <p>The figures contained in this table can be refined during preparation of ASPs and at the Outline Plan / Land Use Amendment application stage without requiring an amendment to this plan.</p> <p>¹ \$31M is already in the capital budget for the Valley Ridge Feedermain, Artist View Feedermain and Crestmont Pump Station.</p> <p>² \$15M is already in the capital budget for the Valley Ridge Sanitary Trunk Upgrade.</p> <p>³ Stormwater costs may increase as a result of more detailed analysis carried out for master drainage plans.</p> <p>⁴ excludes cost of land. ~\$1M more for land acquisition.</p>		

C.2.2 Complete Community Infrastructure Costs

Complete Community Infrastructure Costs (in millions)		
	Cell A	Cell B
Utility Servicing		
Water	\$55M ¹	\$0M
Sanitary	\$25M ²	\$12M
Storm ³	\$0.5M	\$0.5M
Transportation Infrastructure	\$60 M	\$0 M
Transit - Bus Service	\$2M	\$2M
Emergency Response Station	N/A	\$15.8M ⁴
Small Regional Recreation Facility	\$35M	N/A
TOTAL	\$177.5M	\$30.3M
<p>Notes:</p> <p>The purpose of the costing information is to provide an approximation of the magnitude of the investments.</p> <p>Infrastructure costs will be addressed in accordance with the Standard Development Agreement.</p> <p>The figures contained in this table can be refined during preparation of ASPs and at the Outline Plan / Land Use Amendment application stage without requiring an amendment to this plan.</p> <p>¹ \$31M is already in the capital budget for the Valley Ridge Feedermain, Artist View Feedermain and Crestmont Pump Station.</p> <p>² \$15M is already in the capital budget for the Valley Ridge Sanitary Trunk Upgrade.</p> <p>³ Stormwater costs may increase as a result of more detailed analysis carried out for master drainage plans.</p> <p>⁴ excludes cost of land. ~\$1M more for land acquisition.</p> <p>* Option if required – Bulk Water Station in Cell A at a cost of \$0.6M</p>		

Map C1 – Core Infrastructure Costs

West Regional Context Study



Map C2 - Complete Community Infrastructure Costs

