

Calgary Metropolitan Region Servicing Plan

CONTENT DRAFT

Revised April 29, 2021v2

~~Revised April 8, 2021~~

~~Revised March 21, 2021(ver.2)~~

~~Preliminary Content Draft March 21, 2021 (ver.1)~~

~~Annotated Revised Outline March 4, 2021~~

~~Working Preliminary Draft January 28, 2021~~

Contents

1	INTRODUCTION	1
1.1	Links to the Growth Plan	1
1.2	Regulatory Framework	4
2	SERVICE PILLARS	5
2.1	Plan Hierarchy	5
2.2	Board Goals	5
2.3	Focus of the Servicing Plan	5
2.4	Servicing Plan Pillars	5
3	TRANSPORTATION AND TRANSIT	8
3.1	Background and Intent	8
3.2	Servicing Priorities	8
3.3	Working Groups	10
3.4	Evidence-Based Decision-Making	10
3.5	Actions	11
4	LONG-TERM WATER STRATEGY	14
4.1	Background and Intent	14
4.2	Servicing Priorities	15
4.3	Working Groups	16
4.4	Evidence Based Decision Making	16
4.5	Actions	16
5	WATER AND WASTEWATER SERVICING	18
5.1	Background and Intent	18
5.2	Servicing Priorities	18
5.3	Working Groups	19
5.4	Evidence Based Decision Making	20
5.5	Actions	20
6	STORMWATER MANAGEMENT	22
6.1	Background and Intent	22
6.2	Servicing Priorities	23
6.3	Working Groups	24

6.4	Evidence Based Decision Making	24
6.5	Actions.....	24
7	RECREATION	25
7.1	Background and Intent.....	25
7.2	Servicing Priorities	25
7.3	Working Groups.....	25
7.4	Evidence-Based Decision Making	26
7.5	Actions.....	26
8	IMPLEMENTATION.....	27
8.1	Working Groups Guiding Principles	27
8.2	Data Collection and Monitoring	28
8.3	Plan Update and Review.....	28

Figures

Figure 1: Growth Plan Regional Structure	3
Figure 2: Regional Transit and Transportation Corridors.....	12
Figure 3: Potential Future Regional Transit Service in the CMR Source: CMRB Transit Background Report, 2020	13
Figure 4: Regional Water and Wastewater Utility Corridors.....	21
Figure 5: Administrative Structure for Servicing Plan.....	27

Definitions

(NOTE: FOR THIS DRAFT, THESE DEFINITIONS ONLY INCLUDE THOSE DEFINITIONS NOT IN THE GROWTH PLAN. WHEN COMPLETE, ALL DEFINITIONS USED IN THE SERVICING PLAN WILL BE INCLUDED)

Evidence-Based Decision-Making means basing decisions on information which is accurate and applicable to the context. Accuracy includes proper interpretation of gathered information and/or descriptive statistics keyed to the circumstances, demonstrating cause and effect of proposed actions. The purpose of evidence-based decision making is to use “evidence/information” in decision making, which demonstrates “causation” as opposed to “co-relation” of data.

Higher Order Transit is frequent and reliable transit service, that is given priority in mixed - traffic or separated partially or completely from general traffic and able to maintain higher levels of speed and reliability.

Regional Stormwater Servicing means the collection, conveyance, storage and discharge of stormwater that crosses intermunicipal boundaries, through engineered infrastructure or natural drainage.

Servicing means the provision or use of infrastructure required for utilities, recreation, transportation, or transit.

Stormwater means runoff from rainstorms, hailstorms or melting snow that is shed from urban and rural landscapes.

1 Introduction

The Calgary Metropolitan Region Board's (CMRB) Servicing Plan supports the CMRB Growth Plan (Growth Plan) and outlines how the planning and coordination of regional servicing will support the implementation of the Growth Plan. It is intended as a key supporting document to the Growth Plan and should be read and interpreted alongside the Growth Plan.

Key components of the Servicing Plan include:

- Recognizing that Preferred Growth Areas identified in the Growth Plan are priority servicing areas; and
- A commitment from member municipalities to find cost-effective and efficient servicing solutions together that align with the Growth Plan.

1.1 Links to the Growth Plan

The Servicing Plan supports the policy direction of the Growth Plan by identifying opportunities for efficient, cost effective, and collaborative service delivery. The Growth Plan is a policy framework for managing growth for the next million people in the region. Through growth management and the efficient use of land, the Growth Plan sets out to achieve reductions in water consumption, greenhouse gas emissions, infrastructure costs and energy costs as the Region accommodates the next million people, in approximately 25 to 30 years. The Growth Plan identifies regionally significant growth areas, called Preferred Growth Areas that support the future coordination of servicing. By identifying Preferred Growth Areas, the Growth Plan creates direction to coordinate service delivery, including cost and benefit sharing, amongst member municipalities.

Providing services to growth areas requires a significant investment of time, capital and other resources. By providing a clear plan for growth, the Growth Plan helps create certainty for municipalities and developers, allowing for the best economic, environmental and social servicing options to be identified.

The Growth Plan provides direction around forms of development, called Placetypes. Placetypes prescribe the density of development, but they also refer to the quality of development, including higher densities, compact, walkable and mixed-use communities.

Preferred Placetypes include:

- Infill and Redevelopment;
- Masterplan Communities; and
- Mixed-Use / Transit Oriented Development.

Preferred Placetypes reduce the negative impacts of growth associated with water use, vehicle kilometres travelled, and capital investment in infrastructure. The application of Preferred Placetypes enables creation of more integrated communities with a range of housing types and land uses.

Together, Preferred Growth Areas and Preferred Placetypes encourage an efficient and cost-effective growth pattern, by clearly identifying areas for investment in servicing, while promoting development forms that are higher in density, with a mix of uses.

The Growth Plan Regional Structure map is shown as Figure 1.

DRAFT - For TAG Discussion Only

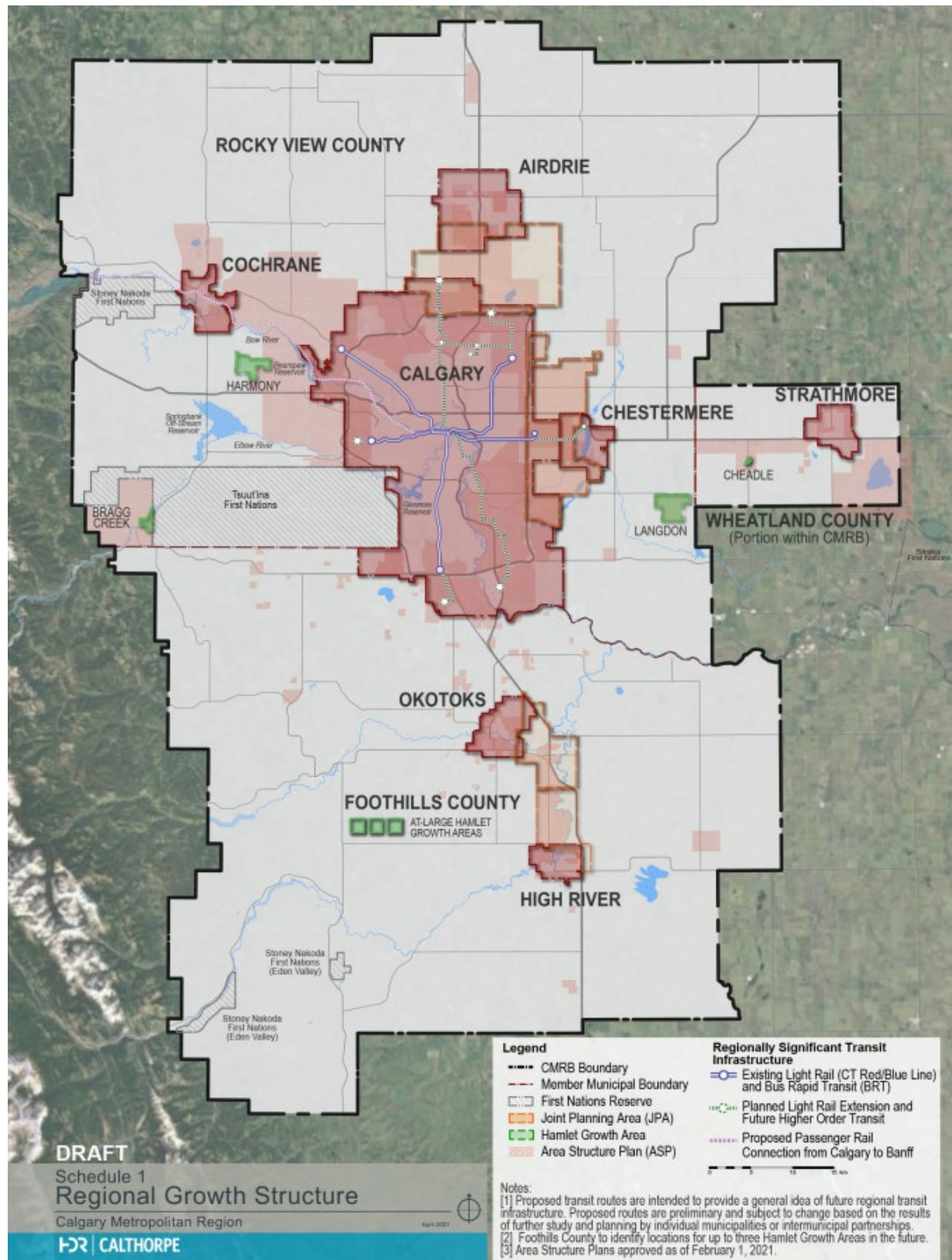


Figure 1: Growth Plan Regional Structure

1.2 Regulatory Framework

The Servicing Plan is regulated by the Calgary Metropolitan Region Board Regulation that came into effect on January 1, 2018. The CMRB Regulation stipulates the completion of a Growth Plan and a Servicing Plan within three years of the Regulation coming into force. While originally due was January 1, 2021, an extension to June 1, 2021 was granted for the completion of both plans.

The objectives for the Servicing Plan as set out in the CMRB Regulation are to:

- identify the services required to support the goals of, and to implement the Growth Plan;
- support the optimization of shared services to enhance use of ratepayer dollars; and
- facilitate orderly, economical and environmentally responsible growth in the Calgary Metropolitan Region.

The Servicing Plan will fulfill these objectives through a flexible and adaptive approach that:

- identifies servicing priorities in the Region;
- creates a collaborative regional framework for municipal engagement; and
- promotes evidence-based decision-making, which is grounded in research undertaken in accordance with recognized and scientifically proven research methodology.

2 Service Pillars

2.1 Plan Hierarchy

While there are many servicing matters that impact the Calgary Metropolitan Region municipalities, the purpose of the Servicing Plan is to focus on collaborative servicing, including intermunicipal servicing, regional servicing, and/or sub-regional servicing.

2.2 Board Goals

The Board has established goals for six thematic areas that are the framework for the Growth Plan and guidance for the Servicing Plan. These thematic areas include:

- Growth Management and Efficient Use of Land,
- Economic Wellbeing,
- Environmentally Responsible Land Use,
- Water Stewardship,
- Ensuring Efficient Shared Services, and
- Celebrating Urban-Rural Differences.

2.3 Focus of the Servicing Plan

The Servicing Plan focuses on six servicing priorities where the optimization of services can be improved through regional cooperation and coordination, as follows:

- transportation and transit;
- long-term water strategy;
- water and wastewater servicing;
- stormwater; and
- recreation.

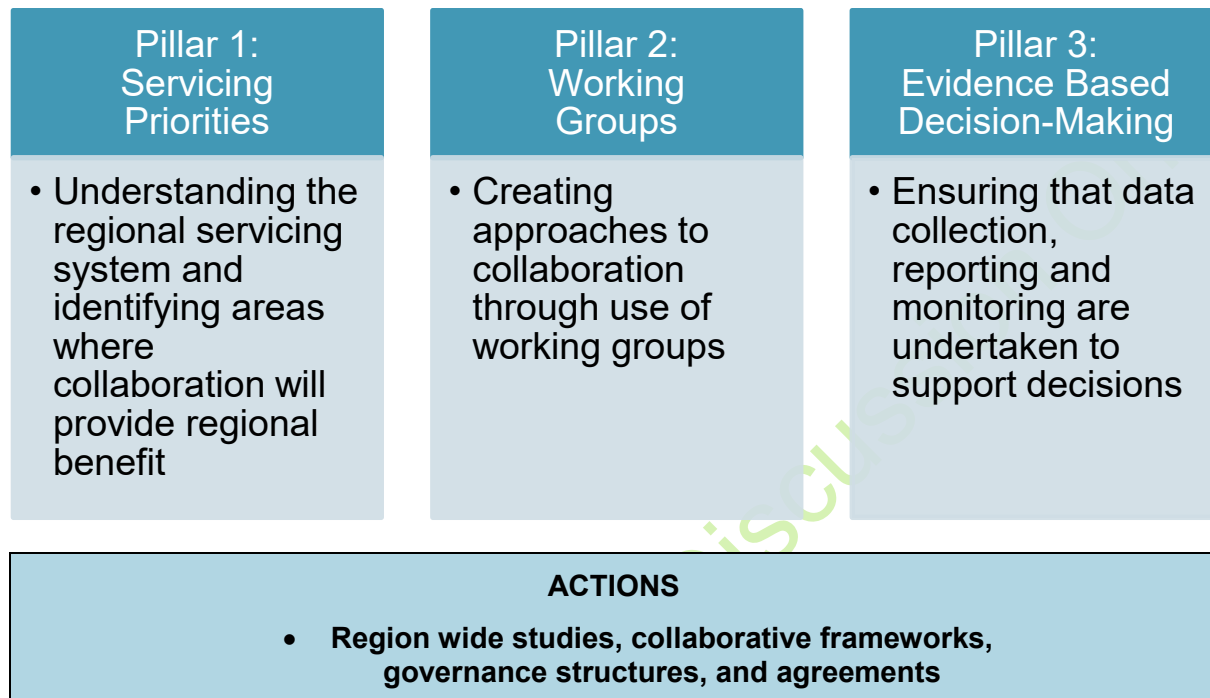
While additional services may be added in the future, these servicing priorities were deemed by the Board to be important for the inaugural Servicing Plan.

2.4 Servicing Plan Pillars

Servicing Plan objectives outlined in the CMRB Regulation (cited above) are supported by three Servicing Plan pillars, that shape the structure of each section of this Plan. The intent of the pillar-based approach to the Servicing Plan is to ensure implementation is broad and does not rely on a single method. Collectively the three pillars address key questions related to intermunicipal servicing:

1. What are the beneficial collaborative servicing priorities for the Region?
2. What on-going work should occur across the Region on servicing, to better understand how services are currently delivered, where there are gaps in service provision, or how to best approach regional servicing?

3. How can the region use evidence-based decision making to create innovative, meaningful and measurable improvements to service delivery for rate payers? What information or data is required at the regional level to assist future decision-making?



Pillar 1 – Servicing Priorities: The CMRB has completed several studies and technical reports that gather data and identify the existing regional system for regional services. The Servicing Plan builds opportunities for the CMRB to work together to identify both broad regional servicing priorities and approaches, as well as supporting more detailed discussions about servicing for Preferred Growth Areas. The relationship between these two scales of planning must be thoughtfully coordinated to allow any approach to detailed planning to feed into the broader regional discussion and vice versa. This coordination will be provided by CMRB Administration, the Land Use and Servicing Committee, and the working groups who will be providing technical support at the regional and sub-regional scales.

Pillar 2 – Working Groups: The creation of a broad regional network of collaborative working groups is a key component to the Servicing Plan. These groups are intended to bring together regional experts to guide the planning process for different services and to advise the Board on the studies, collaborations or processes that should occur to optimize cost-effective service delivery. Coordination between disciplines and working groups will also be critical as many issues crossover into numerous technical disciplines. While some servicing priorities within the Plan emphasize establishment of a working group, to a greater extent than others, this is an important tool to optimize servicing.

Working groups will establish:

- a clear mandate and/or terms of reference;
- a work plan; and
- measurable goals and outcomes that identify how the work of the group optimizes cost-effective service delivery to the benefit of every citizen.

Working groups will achieve the identified goals and outcomes through collaboration, and efficient, cost-effective service delivery.

Pillar 3 – Evidence-Based Decision-Making: The Board values Evidence-Based Decision-Making to create innovative, meaningful and measurable improvements to cost-effective service delivery for citizens. This process requires information and data that supports problem definition, clear targets, measurable outcomes and monitoring of results. The technical nature of servicing and the high cost of construction, operation, and maintenance makes robust information and data gathering an important tool to support decision-making. The CMRB supports the collection, reporting, and open and timely sharing of data at the regional scale whenever possible to guide the Region towards its identified goals and objectives.

Actions: Each servicing priority identifies actions that are required to optimize cost-effective services. Actions include region-wide studies, agreements, governance structures and collaborative frameworks. Specific actions are stated when possible. In circumstances where this is not possible, due to the complexity of service delivery, lack of regional information, lack of data or other barriers, working groups are the mechanism to undertake additional work to resolve the issue.

3 Transportation and Transit

Regional transportation and transit is the system of arterial roads, highways, rail, pathways, airports, and related services that support intermunicipal travel and/or trade within the CMRB and beyond.

3.1 Background and Intent

The transportation and transit networks are major influences on growth in the region. They connect residents and businesses with goods, services, employment, and social networks. Regional coordination of transit and transportation strengthens the region. An efficient and well-connected transportation system provides many benefits.

- Reliable access to jobs, with choice of travel modes is an important factor in attracting talent to the region.
- Efficient access to markets supports regional commerce and competitiveness.
- Reduction in the total vehicle-kilometres travelled creates shorter commutes, connecting people to the places they need to go, and lessens the environmental impact of travel.
- Regional transit creates equity among residents by providing travel options for those who may not own a car, do not wish to drive, or cannot drive.

This section provides a path to an efficient transportation and transit networks in the region that supports economic growth and high-quality of life. It is informed by the North Calgary Regional Transportation Study, the South and East Calgary Regional Transportation Study (including the NCRTS/S&ECRTS Integration Memo that consolidated the results of the two studies), and the Transit Background Report.

3.2 Servicing Priorities

The transportation corridors are the connective framework of the region, and may include a variety of routes for roads, highways and transit infrastructure. The regional transportation corridors are shown in Figure 2.

3.2.1 Region-Wide Priorities

3.2.1.1 REGIONAL TRANSPORTATION AND TRANSIT MASTER PLAN (RTTMP)

- **Undertake a Regional Transportation and Transit Master Plan (RTTMP) to develop a unified vision for the future regional transportation network that aligns with the Growth Plan.**

The RTTMP should include an update to the regional model to reflect the Growth Plan, including an update to the prioritization process from the North, and South and East Calgary Regional Transportation studies (and Integration Memo), to reflect the goals and policies of the Growth Plan. It will update and define the future regional network, align planning with Preferred Growth

Areas, individual municipalities and the province. An initial list of considerations for a Regional Transportation and Transit Master Plan is provided in Appendix A.

3.2.1.2 TRANSPORTATION CORRIDORS AND REGIONAL ECONOMIC DEVELOPMENT

- **Include assessments of transportation considerations to support economic growth and competitiveness.**

The Growth Plan identifies the strong connection between economic competitiveness and transportation. An effective transportation system provides reliable access to jobs and provides routes to move goods to markets, both of which are important economic growth considerations. A future regional economic development initiative should consider how the regional transportation system can best support the economic growth and competitiveness of the Calgary Metropolitan Region.

3.2.1.3 TRANSPORTATION AND UTILITY CORRIDORS

- **Optimize the use of major transportation corridors by co-locating other utilities and services where appropriate.**

The Growth Plan highlights the need for coordination between services and the importance of the multi-use of corridor to for a variety of services. While this priority can be applied to corridors primarily used by other services, transportation corridors offer the best opportunity for co-location of services.

3.2.2 Preferred Growth Areas Priorities

3.2.2.1 JOINT PLANNING AREA CONTEXT STUDIES

- **Use Context Studies, local transportation master plans, Transit Background Report and the North, and South and East Calgary Regional Transportation Studies (and Integration Memo) to build a better understanding of regional corridors, demand, servicing systems and other key considerations in Joint Planning Areas.**

Context Studies will be the primary mechanism to guide integration of transportation and land use within Joint Planning Areas. The North and South and East Calgary Regional Transportation studies, completed by the CMRB in 2020, assessed the regional transportation network, and established priorities for transportation investment throughout the Calgary Metropolitan Region. These studies will provide a foundation of network information that will need to be further refined as Context Studies are developed. Given the importance of Context Studies, and the requirement to complete them within the Growth Plan, Context Studies will occur in advance of the RTTMP, with the outcomes of the Context Studies informing the RTTMP on Preferred Growth Areas and transportation.

3.2.2.2 PREFERRED GROWTH AREAS OUTSIDE JOINT PLANNING AREAS

- **Address transportation and transit needs for Preferred Growth Areas outside of Joint Planning Areas through local transportation master plans, and through the Regional Transportation and Transit Master Plan and/or a future regional economic development initiative.**

There are several important connections outside Joint Planning Areas that can best be addressed through region-wide planning initiatives and within local transportation plans. Corridors that connect urban municipalities outside Joint Planning Areas and those that connect Hamlet Growth Areas will require specific attention.

3.3 Working Groups

Two groups noted below, comprised of CMRB administration and representatives of member municipalities administrations, worked to coordinate delivery of previous transportation and planning documents.

- The Transportation Technical Advisory Group worked effectively with CMRB administration and consultants to oversee the South and East Calgary Region Transportation Plan, and to integrate with the North Calgary Region Transportation Plan.
- The Transit Subcommittee developed the Transit Background Report.

Working groups will be required to support the development of the RTTMP, the Context Studies and the transportation components of a future regional economic development strategy. In the near term:

- these groups will merge and continue as an advisory Working Group, drawing on the expertise of key external stakeholders such as Alberta Transportation, as required; and
- the status quo approach of delivering transportation infrastructure and services on a case-by-case basis will continue.

In the longer term, and pending the recommendations of Context Studies and the RTTMP, more formalized governance or collaborative structures or agreements may be appropriate, particularly for the delivery of transit.

3.4 Evidence-Based Decision-Making

The following mechanisms provide valuable sources of information, which will enable the Board to undertake Evidence-Based Decision-Making, as defined earlier in this plan:

- **Regional Transportation Model** – Regional transportation models are a fundamental tool to assist with transportation planning. The CMRB has previously partnered with the City of Calgary to maintain a regional version of its transportation model. Sharing of a common model between the CMRB and City of Calgary will simplify planning and reduce the potential for conflicts, particularly associated with development approvals. In addition, Alberta Transportation is a partner with the City of Calgary model, also allowing for consistency between agencies. The land use elements of the regional model should be updated as part of the RTTMP, to reflect the Growth Plan and details established in Context Studies.
- **GIS Database** – The CMRB with inputs from municipalities and Alberta Transportation, should develop and maintain a basic road centerline database, with a long-term goal of creating a central regional repository for transportation and traffic information.

Monitoring of transportation activity can support evidence-Based Decision-Making and can be used to measure the effectiveness of implementation for both the Growth Plan and Servicing Plan. There are several sources of information that can assist in monitoring. The RTTMP should identify a simple and succinct set of metrics, which at a minimum should include network vehicle-kilometers travelled, which in turn can provide estimates of greenhouse gas emissions. In addition, the travel surveys used to update the regional model and the National Household Survey Journey to Work statistics, provide relatively understandable, meaningful and accessible monitoring information.

3.5 Actions

As noted above, the CMRB will:

- complete the Context Studies for the Joint Planning Areas in a way that provides information and data to the broader regional planning initiatives;
- study regional corridors as an element of future regional economic development initiatives;
- facilitate completion of a regional transportation model;
- merge the Transportation Technical Advisory Group and Transit Subcommittee; and
- complete a regional Transportation and Transit Master Plan.

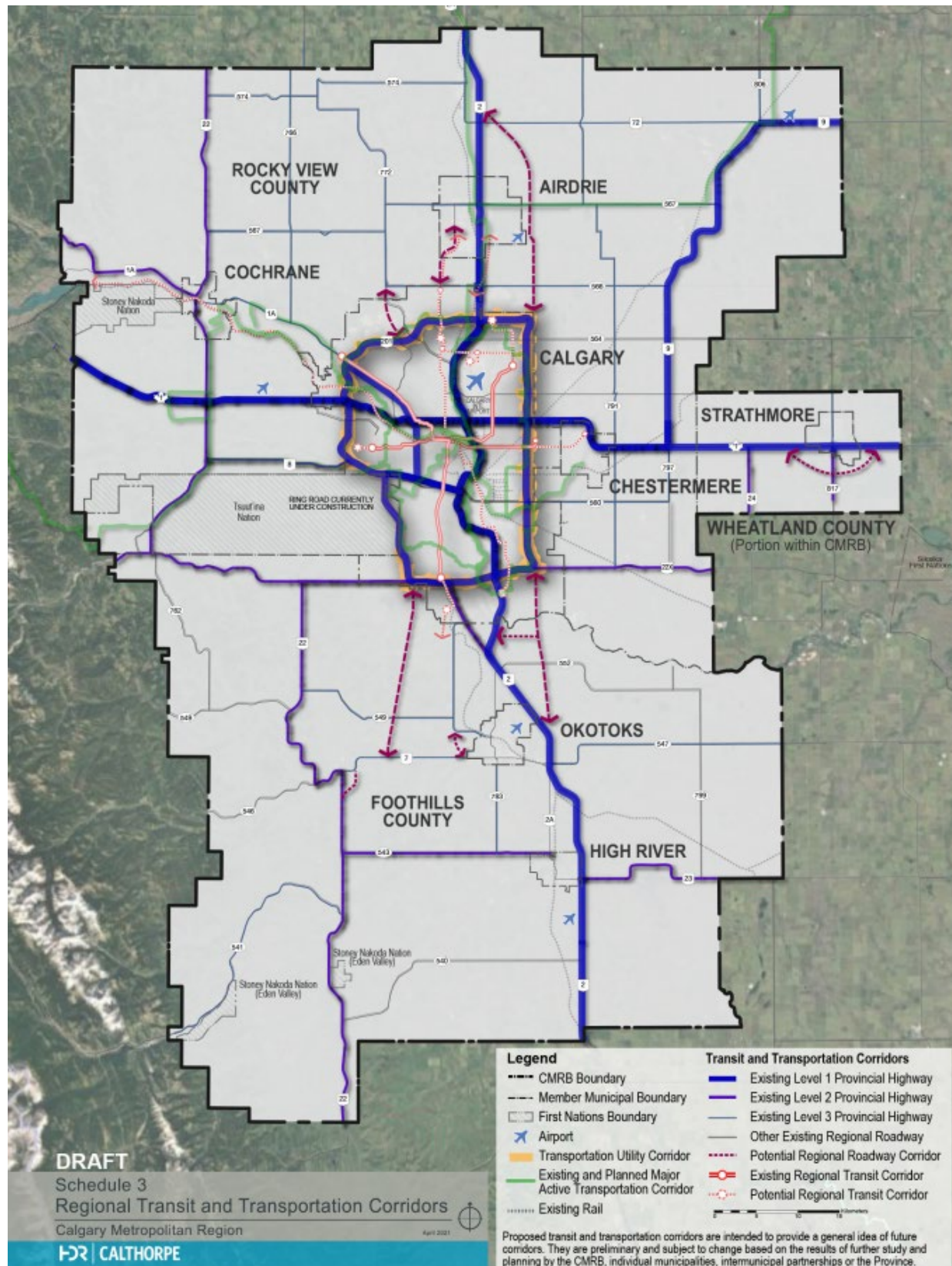


Figure 2: Regional Transit and Transportation Corridors

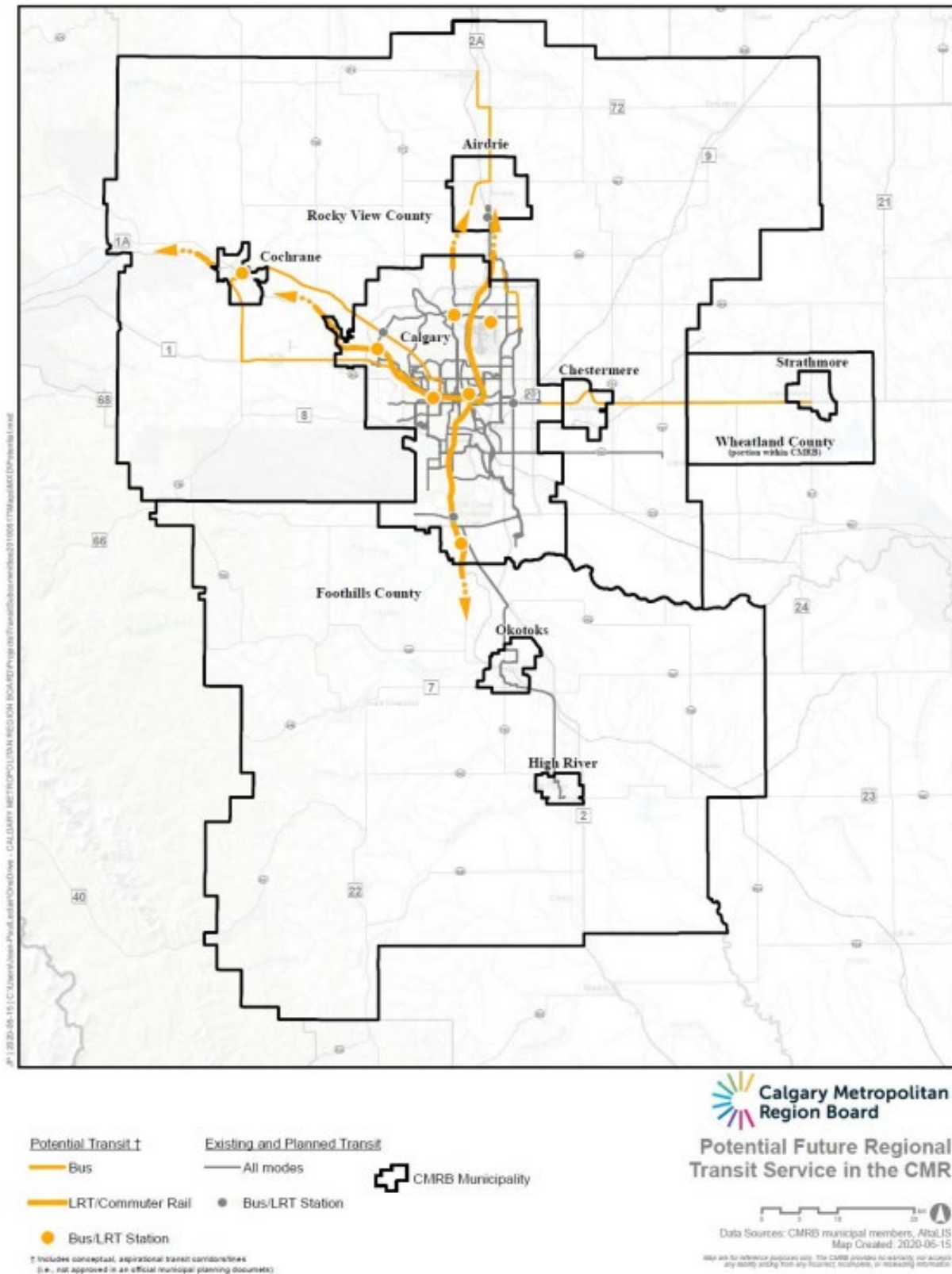


Figure 3: Potential Future Regional Transit Service in the CMR
Source: CMRB Transit Background Report, 2020

4 Long-Term Water Strategy

The long-term water strategy will be the Region's plan to protect and use water in a sustainable and responsible manner to enable continued growth and prosperity.

4.1 Background and Intent

The Calgary Metropolitan Region spans the South Saskatchewan River Basin including the Bow River, Oldman River and Red Deer River sub-basins. These river systems experience a climate that is susceptible to both intense floods and prolonged droughts, often within a short time period.

Continued climate change will amplify the magnitude of these extreme events, thereby necessitating a comprehensive strategy to support growth in the Calgary Metropolitan Region. Physical evidence within the South Saskatchewan Basin points to continued overall decline in average flows within the Calgary Metropolitan Region watersheds, that threaten the overall security and quality of the water supply to existing license holders.

Subsequently, all Calgary Metropolitan Region sub-basins are expected to experience some degree of water quantity constraints within the next 30 years. In response to this, the Bow and Oldman sub-basins were closed to new water license applications in 2007.

"The SSRP sets the stage for robust growth, vibrant communities and a healthy environment within the region for the next 50 years. The SSRP establishes the need to consider cumulative environmental impacts in decision making and the need to establish a cumulative environmental management system to manage the cumulative effects of development on air, water, land and biodiversity to ensure the value and benefit of these environmental systems are sustained at the regional level and contribute to provincial outcomes. The SSRP has established baseline outcomes and objectives along with strategies and actions that will be used to achieve them. Integrated monitoring, evaluation and reporting systems are essential as they are used to assess progress in achieving outcomes and objectives"

- South Saskatchewan Regional Plan

Sub-regional entities, including individual municipalities and other sub-basin groups play an important part in watershed planning. Watershed Planning and Advisory Councils and Watershed Stewardship Groups have taken a lead in watershed protection and planning, with support from the province by developing water management plans for some of the sub-watersheds in the Calgary Metropolitan Region. These water management plans align water stewardship goals in the region, and provide cumulative benefits that improve outcomes, at both the sub-watershed and watershed levels.

There are opportunities to improve the way that water is managed and delivered between member municipalities, with other regional partners and stakeholders, and within the Preferred Growth Areas. Collaborative servicing and watershed planning could provide opportunities to reduce our impact on the watershed, improve efficiency, and support regional economic growth.

4.2 Servicing Priorities

As previously noted, there are many groups working towards a long-term water strategy for the region and its watersheds. Given the anticipated growth to occur over the lifetime of the Growth Plan, and the water required to support that growth, it is imperative that the CMRB determine how it best fits into the ongoing deliberations around water. This is a complex topic, and an effective strategy is necessary to ensure the future supply of water for the region and the health of the watershed. These two considerations are intricately linked.

4.2.1 Region-Wide Priorities

4.2.1.1 WATERSHED PLANNING

- **Determine how the CMRB can contribute to and integrate with regional watershed planning**

Watershed planning focuses on broad watershed protection, and the issues of water quality and quantity. Watershed planning is most effective at the watershed scale, and the Calgary Metropolitan Region represents only a portion of the South Saskatchewan River Basin. The South Saskatchewan Regional Plan is the guiding document for planning in the watershed. The South Saskatchewan Regional Plan cites policies to enable the Province to limit activities that impact water quality and quantity and provides broad guidance for watershed protection. The South Saskatchewan Regional Plan is the tool that implements the South Saskatchewan Region Surface Water Quality Management Framework. This provincial framework establishes the guiding principles, and the province's management system of water quality monitoring for all water users in the South Saskatchewan Region, in which the Calgary Metropolitan Region is located. The Calgary Metropolitan Region and its members must be compliant with the South Saskatchewan Regional Plan and can advocate for enhanced protection of the watersheds that the Calgary Metropolitan Region relies on, including watersheds within and outside of the region's boundary.

4.2.1.2 WATER USE AND EFFICIENCY

- **Identify opportunities to improve water efficiency through regional collaboration**

All Calgary Metropolitan Region members have implemented water conservation initiatives at some level, and these include initiatives such as water metering, consumer education, subsidies for low-flow fixtures, outdoor watering restrictions and tiered rate structures, to promote conservation/efficiency. These initiatives have reduced per capita water use in the Calgary Metropolitan Region in the past decade, based on current consumption patterns. However, continued conservation and efficiency efforts to further reduce per capita water use will be needed to align long-term growth with available licenses and to minimize the effects of water withdrawal from the region's watersheds.

4.2.1.3 ADVOCACY

- **Identify common regional issues for advocacy with the Province**

In alignment with the direction of the CMRB Advocacy Committee, the Water Working Group will determine a consensus position on working with the Province regarding regulatory barriers to

shared water servicing experienced in the region. Following this, the Water Working Group will recommend next steps to the Advocacy Committee on how best to proceed.

4.2.2 Preferred Growth Areas Priorities

4.2.2.1 OPPORTUNITY FOR LEARNING

- **Incorporate lessons learned through planning in the Joint Planning Areas into the region's long-term water strategy**

Preferred Growth Areas may have water management plans for consideration in the long-term water strategy, as appropriate. The findings from the Context Studies in Joint Planning Areas may provide additional information and considerations for the regional long-term strategy, as appropriate.

4.3 Working Groups

As demonstrated by the plethora of issues at different scales and under different authorities and jurisdictions, the development of a long-term water strategy for the Calgary Metropolitan Region will be a significant task, and will be undertaken in parts that will ultimately form a cohesive long-term water strategy. To begin to address these issues, water subject matter experts from each member municipality (known as the "Water Table") developed a "Water Road Map", which outlines the iterative process for water-related planning in the Calgary Metropolitan Region. The Water Table will continue as the Water Working Group and will update the Water Road Map by engaging with external groups and organizations. This initiative is important and necessary to advance a long-term water strategy for the region.

The Water Table has guided several background studies noted below, which should be referenced and used to inform the next steps of a long-term water strategy:

- Water Use and Conservation in the Calgary Metropolitan Region Study
- Natural and Managed Capacity of Regional Water Supply in the Calgary Metropolitan Region Report
- Calgary Metropolitan Region Existing Water and Wastewater Servicing and Regional Potential Report
- Stormwater Background Report

Developing a long-term water strategy for the Region is an inherently collaborative exercise, given that a significant part of the Region fits within one watershed, being the South Saskatchewan River Basin.

4.4 Evidence Based Decision Making

The working group will need to determine what information and data it requires to address the long-term water strategy priorities. The priorities will build on an evidence-based approach that can be measured and monitored.

4.5 Actions

- Update the Water Road Map to identify the best path to a long-term water strategy.

- Address priorities to begin development of a long-term water strategy, which includes:
 - identification of existing barriers and gaps to water security;
 - goals for the long-term water strategy;
 - applicable international or regional best practices;
 - ongoing regional initiatives and how the CMRB supports or integrates with this ongoing work;
 - a framework for water security including studies, collaborations, stakeholder engagement, data collection or other necessary elements;
 - a work plan for achieving the goals of the strategy; and
 - other considerations.
- Complete Context Studies for the Joint Planning Areas in a manner that considers stormwater management and conservation of environmentally sensitive areas, to support a greater long-term water strategy, and to provide information and data for broader regional planning initiatives.

5 Water and Wastewater Servicing

Water and Wastewater Servicing includes the access, treatment and servicing of water and wastewater for development. Primary aspects include water and wastewater treatment, conveyance via major corridors, and licensing.

5.1 Background and Intent

Continued growth in the Region is predicated on not only water availability, but on the efficient and affordable provision of water to residents and businesses. This includes the collection, treatment and distribution of potable water, and the conveyance, treatment and discharge of wastewater.

The wastewater systems in the region mirror the water systems, with many municipalities owning and operating their own collection lines and wastewater treatment facilities. The Calgary Metropolitan Region Existing Water & Wastewater Servicing & Regional Potential background report provides a baseline inventory of existing water and wastewater servicing capacity in the region, and identifies major treatment and sub-regional transmission facilities.

Some member municipalities have recently taken the initiative to provide sub-regional water servicing through collaboration. An example is the Foothills/Okotoks sub-regional water pipeline project. The two municipalities plan to build a raw water pipeline from the Bow River, and share costs based on usage. This project will enable continued water access and growth while providing value to residents through cost sharing.

The Foothills/Okotoks sub-regional water pipeline project was partially spurred by water license limitations. Under current regulations, water must be used and returned to the same watershed from which it was withdrawn. Water licensees can draw water from the river system up to their allotted limits, which include annual and instantaneous withdrawal amounts permitted. While water access in times of shortage is governed using Alberta's priority system from the Water Act, there may be opportunities to advance the management and allocation of water to enable more efficient use and sharing within the region. This will require working with the Province, and specifically Alberta Environment and Parks.

The following servicing plan, priorities, and action items outline a way forward to address these water, wastewater and water licensing issues.

5.2 Servicing Priorities

5.2.1 Region-Wide Priorities

5.2.1.1 REGIONAL UTILITY SYSTEM

- **Assess opportunities for shared servicing at the regional level based on findings and lessons learned through Context Studies and at the sub-regional level**

There is no regional water and wastewater utility provider in the Calgary Metropolitan Region. Although there are municipal utilities that provide services to other municipalities, they are provided to customers on a cost recovery basis. Municipalities that receive water and wastewater services from other providers, typically treat and distribute the water within their own municipal boundaries. In some cases, provision of water includes development of intermunicipal infrastructure. An example of an existing intermunicipal facility is the East Calgary Regional Water Line, which delivers water from Calgary to the Town of Strathmore and City of Chestermere.

A broad regional approach to utility servicing is not being pursued by the Calgary Metropolitan Region at this time, as it would be an extensive and expensive undertaking, and is not anticipated to have a significant regional benefit. Most Preferred Growth Areas already have utility servicing planning provided. Remaining growth areas should be considered on a case-by-case basis. A bottom-up approach to collaboration will be used, where the background studies and planning documents for Preferred Growth Areas will inform the need and direction of subsequent regional or sub-regional collaboration for water and wastewater servicing.

5.2.2 Preferred Growth Areas Priorities

5.2.2.1 SUB-REGIONAL SERVICING

- **Evaluate opportunities for servicing collaboration through planning in the Preferred Growth Areas**

Preferred Growth Areas are an ideal place to start collaborating inter-municipally to optimize the regional water and wastewater servicing system, and they could bring to light opportunities for collaboration in other locations. Starting with these areas will create a clear path to service optimization and allow for targeted discussions around location, land use, level of service, cost-benefit impacts, levies, and other considerations deemed relevant.

5.3 Working Groups

Strategies for sub-regional servicing will be identified in the Context Studies for the Joint Planning Areas. The Context Studies will be led by the Calgary Metropolitan Region and developed by members. The working group, or a sub-committee working group will act as an advisor to the process, providing consistency between the different Joint Planning Areas.

Municipalities will be required to collaborate in the Context Studies in Joint Planning Areas and associated discussions on water servicing. Similarly, where there is a need for water or wastewater servicing in other Preferred Growth Areas (Hamlet Growth Areas and Urban Municipalities), municipalities with capacity to provide services to these Preferred Growth Areas are required to jointly review potential servicing strategies with the municipality requiring servicing.

Through collaboration, all municipalities are encouraged to supply water and wastewater services in the most cost-effective manner possible, while ensuring negative consequences to the environment are avoided.

5.4 Evidence Based Decision Making

Evidence based decision making for water and wastewater services will require information on a range of variables, including the land use / Placetypes need, infrastructure capacity, water quality and water quantity, regulatory and environmental constraints and cost-effectiveness. It will also require reliable data sources to understand how water is currently being used, which requires effective monitoring.

The CMRB will set standards for data collection to ensure the provision of consistent regional data to all members, and to inform planning in the Preferred Growth Areas. Guidance on evidence-based decision making will be provided by the working group, some of which will be garnered through the Context Studies for Joint Planning Areas.

5.5 Actions

- Complete the Context Studies for the Joint Planning Areas in a manner which considers servicing optimization and cost-effectiveness for all parties involved.
- Update the Water Roadmap with the working group, given the identification of Preferred Growth Areas in the Growth Plan.
- The working group will identify areas for Preferred Growth Areas, that may require support from regional partners, due to lack of water or wastewater capacity over the life of the Servicing Plan. The working group will identify ways to determine which municipalities can most efficiently and effectively provide servicing to the Preferred Growth Area being evaluated.

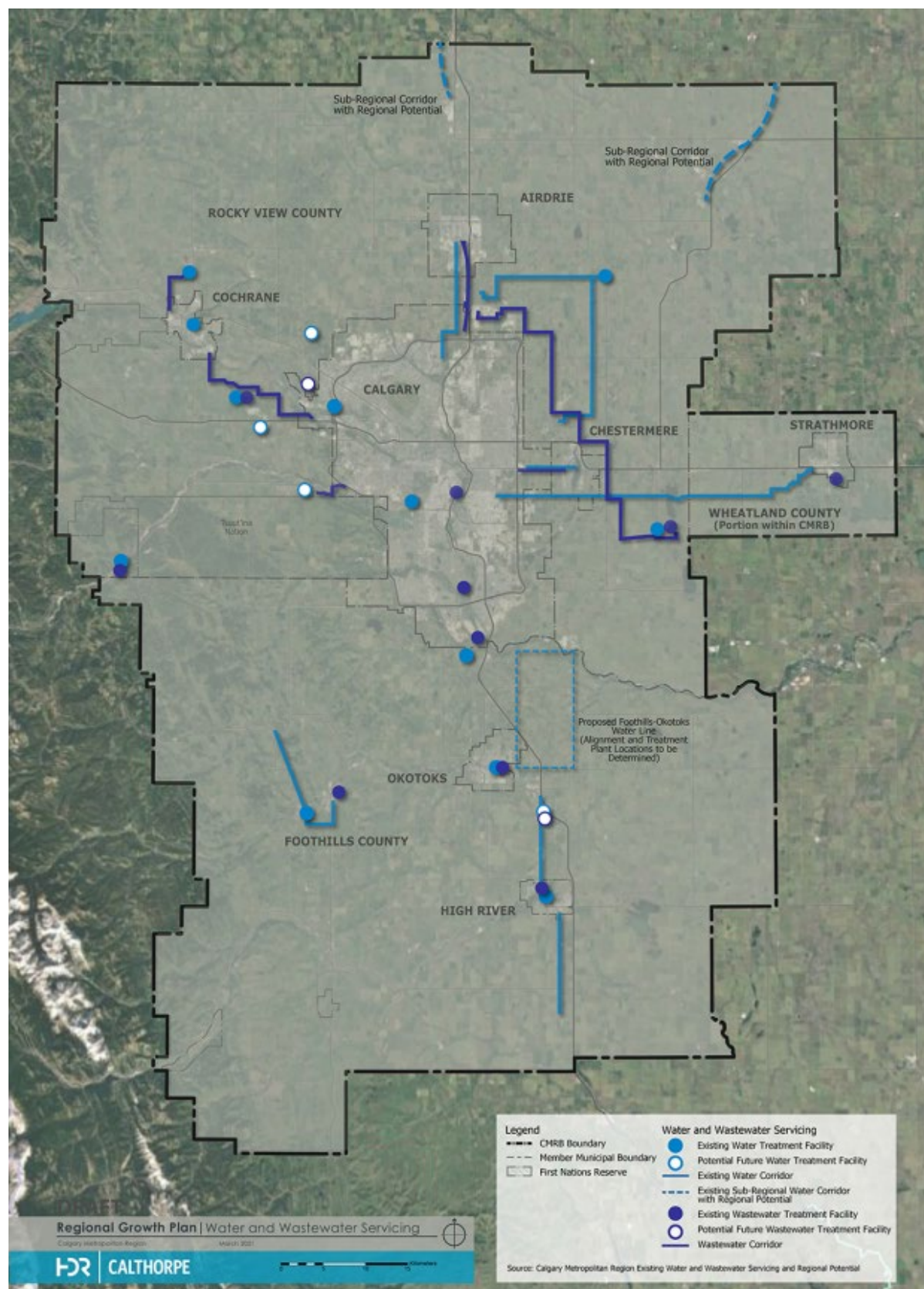


Figure 4: Regional Water and Wastewater Utility Corridors

6 Stormwater Management

Stormwater is runoff from rainstorms, hailstorms or melting snow that is shed from urban and rural landscapes.

6.1 Background and Intent

Stormwater management is one of the topics to be addressed in the Context Studies required by the Growth Plan in the Joint Planning Areas. However, given the values of the Board and the mandate to ensure environmentally responsible growth, it is appropriate that the Calgary Metropolitan Region consider region-wide opportunities, to improve environmental outcomes related to stormwater management. Regional priorities include:

- Drinking water quality for public health and safety
- Affordability of water treatment
- Water quality for ecosystems and downstream users
- Management of nutrient loading
- Protection of people, land, property and ecosystems
- Stormwater use
- Increase public utilization of stormwater infrastructure

Quality and quantity requirements for stormwater runoff are regulated by the Province, which grants municipalities jurisdiction over the design and operation of stormwater facilities through land use plans. Stormwater management is necessary to protect drinking water, the aquatic health of rivers, and environmentally sensitive areas. It also protects communities and infrastructure from flooding, reducing improvement/upgrade costs, which ultimately benefits ratepayers. Improved stormwater management also provides opportunities, such as stormwater use where appropriate, to reduce water needs.

Stormwater management challenges that the Calgary Metropolitan Region is facing include:

- source water quality concerns related to upstream land uses;
- relatively flat terrain in some areas of the region, that increases risk of overland flooding during extreme events; and
- limited access to receiving water bodies within the northeast portion of the region, resulting in development restrictions due to zero discharge requirements.

Stormwater management creates challenges and opportunities for land development and watershed protection in the Calgary Metropolitan Region. Collaborative management and planning, both regionally and within the Preferred Growth Areas, represents a way forward in stormwater management and has a role in collaborative watershed protection initiatives.

6.2 Servicing Priorities

6.2.1 Region-Wide Priorities

6.2.1.1 STORMWATER USE AND WATER REUSE

- **Advocate for stormwater use**

Many jurisdictions around the world have used innovative strategies to purify grey water and re-use stormwater as measures to effectively increase water supply. The province is working on guidance to progress opportunities for the capture, treatment, and reuse of stormwater. As member municipalities consider potential water shortages in the future, due to natural climate variations and human induced climate change, stormwater use becomes an attractive solution with wide ranging benefits. Key challenges around stormwater use in the CMRB include:

- incomplete provincial direction regarding stormwater use;
- extreme variability in flows associated with intense rainfall events;
- addressing snow and hail events in the design of engineering systems intended for the collection and conveyance of stormwater;
- nutrient loading and high salinity associated with early-spring runoff from impermeable surfaces;
- undertaking cost-benefit evaluations of stormwater use versus raw water treatment/distribution; and
- potential for cross-contamination with sewer overflows.

Stormwater use has been identified by the public, member municipalities and the CMRB Advocacy Committee as a common opportunity for municipalities to augment their supply with fit-for-purpose management strategies, while respecting public health and safety. The CMRB can advocate to the province for stormwater reuse on behalf of its members, and work to enable innovative stormwater management strategies for the benefit of ratepayers.

6.2.1.2 REGIONAL INITIATIVES

- **Lead collaboration at the regional and sub-regional levels to improve stormwater management**

As a regional body, the CMRB can lead discussions between members at the regional and sub-regional levels to facilitate opportunities for coordination and cooperation. This may include coordination with external stakeholders such as the Province, First Nations, the Western Irrigation District, Watershed Planning and Advisory Councils, Watershed Stewardship Groups, and other intermunicipal watershed protection groups. Increased collaboration between CMRB members has the potential to improve the operating efficiencies and economics of stormwater management infrastructure, while the alignment of plans in adjacent municipalities can ensure the cumulative effects of stormwater on quality and quantity of water are managed.

An example of cooperative stormwater and drainage management is the Nose Creek Watershed Water Management Plan. The Plan provides recommendations for setbacks and

stormwater management principles that are being adopted within Airdrie, Calgary, Rocky View, Crossfield and the Calgary Airport Authority. The establishment of the Cooperative Stormwater Management Initiative (CSMI) is another example of collaboration between municipal and other water users, in this case an irrigation district, to mitigate the effects of stormwater runoff on irrigation water quality, while reducing the restrictions that stormwater discharge imposes on land development.

Preferred Growth Areas Priorities

6.2.1.3 CONTEXT STUDIES FOR JOINT PLANNING AREAS

- **Initiate stormwater management collaboration in Preferred Growth Areas**

The Preferred Growth Areas will be the priority locations for collaboration on stormwater management. Context Studies for the Joint Planning Areas will provide an opportunity to determine if there are sub-regional gaps in conveyance or drainage, or concerns regarding the quality and capacity of receiving water bodies. The need for collaborative solutions can be determined through the Context Studies.

6.3 Working Groups

Stormwater initiatives will be coordinated through the same working group as the long-term water strategy, and water and wastewater servicing.

6.4 Evidence Based Decision Making

Member municipalities should work together to catalogue and establish tools for innovative stormwater management. These can be used to support discussions with citizens and the development community on the best practices for greenfield development and stormwater management. This could include the cataloguing of management practices such as stormwater infrastructure ponds and recreational amenity management approaches. Other data gathering functions can be identified in the future, as required.

6.5 Actions

- Update the Water Roadmap to identify stormwater priorities.
- Working group to identify areas that may have regional stormwater issues that would benefit from a regional approach.
- Complete Context Studies for the Joint Planning Areas in a way that considers stormwater management and environmentally sensitive areas.
- Context Studies may identify opportunities to support a greater long-term water strategy, and provide information and data to the broader regional planning initiatives.

7 Recreation

Regional recreation includes facilities, spaces, programs or services that are owned or operated by a CMRB member municipality, and have a realistic potential of use by, and broader benefits to, residents from outside the municipal boundaries in which they are provided.

7.1 Background and Intent

The recreation system across the Calgary Metropolitan Region is diverse, complex, and multifaceted. Recreation services provided by municipalities leads to residents and visitors being more physically active, promoting improved physical fitness. Recreation also brings people together which can, positively contribute to desired outcomes for other important societal needs, including public education, and positive mental health.

Municipalities are interested in coordinating servicing efforts, where new community growth, within a potential recreation service area is occurring. Due to the high capital costs of recreation facilities, increasing operation and maintenance costs for delivering this service, and the public's increasing demand for services, municipalities are finding it difficult to balance fiscal constraints with public demand for recreation. For these reasons, paired with a sincere interest for municipalities to provide residents with a high quality of life, a more collaborative approach is necessary. Once a facility, program or service is defined as regional, areas for collaboration and coordination may include evidence-based planning for capital investment, operations and maintenance or facility planning.

7.2 Servicing Priorities

7.2.1 Region-Wide Priorities

7.2.1.1 MUNICIPAL COLLABORATION

- **Collaborate to realize mutually agreed upon outcomes.**

Collaboration can lead to cost savings, risk-reduction, resources and responsibility sharing, while improving the quality of services delivered. There are some areas of the Calgary Metropolitan Region where collaboration is thriving and other areas where the full benefits from collaboration have yet to be realized.

7.3 Working Groups

A Recreation Working Group will identify regional or sub-regional priorities on a voluntary case-by-case basis. Regional collaboration should be an ongoing activity, built on a foundation of partnerships and evidence-based decision making. The Recreation Technical Advisory Group should evolve to a working group comprised of member municipality experts to facilitate collaboration by identifying areas of common interest, coordination, regional challenges and to

share information. The working group should establish collaborative processes for regional recreation decision-making, and shared-services integration that will build trust, be transparent, and respect an individual municipality's right to make its own recreation decisions.

7.4 Evidence-Based Decision Making

Calgary Metropolitan Region member municipalities should establish processes that incorporate evidence-based decision making to the greatest extent possible. Creating a common understanding of the current state of recreation in the Region will require establishment of common region-wide metrics to support data gathering, assessment, and study. Member municipalities will collect and share data in support of evidence-based approaches to decision-making at the regional level.

7.5 Actions

- Establish a Recreation Working Group.
- Provide advice on recreation servicing for Context Studies.

8 Implementation

The implementation of the Servicing Plan will be enacted primarily through the completion of the actions identified within each service area. These actions are either specifically identified within this Plan or stated generally and will be further detailed as various working groups fulfill their respective mandates. As shown in Figure 5 below, the overall administrative structure for the Servicing Plan includes the Board, who approves the Plan, Committees of the Board, CMRB Administration, and working groups. Regional stakeholders, municipal, and consultant experts will engage with the working groups, on an as needed basis. The data collected, the studies, and the timing of work will be coordinated through CMRB Administration.

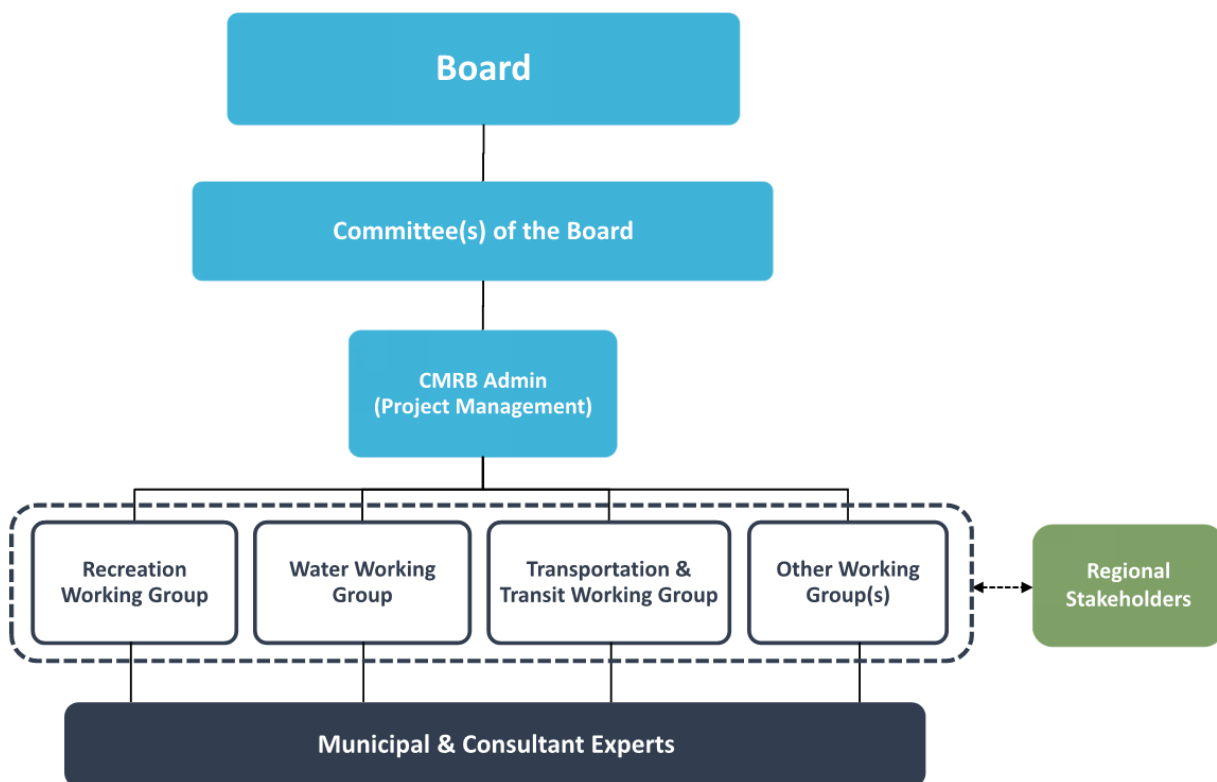


Figure 5: Administrative Structure for Servicing Plan

8.1 Working Groups Guiding Principles

The following principles will guide the future work of all Working Groups:

- Actively seek opportunities for efficient service provision and equitable sharing of costs and benefits.
- Work with a Regional mindset that considers the collective good of our citizens.
- Pursue innovative research, technology, and best practices.
- Build, collect, and openly share regionally relevant data, information and knowledge in a timely way.

- Support regionally scaled service investments informed by evidence regarding customer, fiscal and environmental outcomes.
- Prioritize sub-regional service initiatives that align with the Growth Plan.
- Recognize the autonomy and individuality of municipalities and how this influences service delivery.
- Prioritize the provision of safe and reliable services to citizens and businesses in the CMR.
- Act and advocate in a regional manner with a unified voice.

8.2 Data Collection and Monitoring

One of the key pillars of the Servicing Plan is evidence-based decision-making, which requires timely collection and monitoring of information. This pillar is vital to the implementation and success of the Plan. CMRB administration will be a data repository, that will provide the Region with a valuable collection of region-wide data, which is not present at this time. CMRB administration, with the assistance of working groups and municipalities, will reach out to research institutions, universities and colleges to obtain the most current information and ensure the data is available for decision making and monitoring. The information collected will be updated regularly and integrated into the CMRB's data collection and monitoring system.

The benefits to the Region of a strong region-wide data collection system include:

- improved economic development initiatives for attraction and retention of businesses in a globally competitive economy;
- cost-savings for municipalities;
- data consistency across the Region;
- improved environmental stewardship;
- better land use planning; and
- improved decision-making through use of innovative data modeling and scenarios.

In summary, a strong region-wide data collection system will support the optimization of regional services, identified in earlier sections of this Plan.

8.3 Plan Update and Review

Implementation of the Servicing Plan will require reviews and updates to ensure continued alignment with the Growth Plan, and potentially new directions from the Board.

The Plan should be reviewed and updated every five and ten years when the Growth Plan is updated, or any other time when directed by the Board or Minister.

Appendix A

Considerations for a Regional Transportation and Transit Master Plan and for Context Studies

1. Regional Transportation and Transit Master Plan

The RTTMP should consolidate plans within the region and address several topic areas to support the next million population in the Region, and to support “foreshadowing” of longer term needs beyond the next million people.

a) Road and Highway Network – The North and South and East Calgary Regional Transportation studies set the framework for road and highway planning in the Region, including prioritization of infrastructure projects. The RTTMP should define what is regionally significant with regard to roads. The provincial highway network is an important component of the regional roads and highways network, and therefore Alberta Transportation should be a direct participant in the RTTMP development.

b) Goods Movement – The goods movement network is directly connected to and part of the regional road and highway network, but also includes the rail and air modes of transportation. It includes truck and dangerous goods routes, including high and wide load corridors in the region. The RTTMP should:

- Identify strategies to minimize the effects of commuter congestion on important goods movement and trade routes;
- Identify a network of priority routes for regional goods movement, linking key hubs such as intermodal facilities and the Calgary International Airport with an emphasis on reliability; and
- Protect the integrity of major goods movement routes by coordinating adjacent land use planning with the provision of adequate truck accessibility.

c) Transit - There are a range of municipally and privately provided transit options at both the regional and local scales. Calgary, which offers 4,369 km of transit routes, 159 bus routes and 45 LRT stations, has the most rapid transit riders per million residents of any major Canadian city. Airdrie offers fixed route, on-demand, and intermunicipal bus service. Both Cochrane and Okotoks offer on-demand transit services in their communities. Private operators are creating connections and accessibility for residents across the region, while providing services for vulnerable populations in rural areas. Chestermere and Calgary are currently investigating extension of Calgary Transit service to Chestermere. The RTTMP should reference the Transit Background report as a starting point for defining desired outcomes.

d) Active Transportation – There are several regional active transportation corridors that serve a dual function as recreational corridors and transportation routes. Coordination of these routes among municipalities will allow for a well-connected regional network that can support a variety of purposes. Additionally, regional active transportation should also consider how active modes

can be integrated with other modes, including transit, and the importance of compact growth in supporting active transportation. The RTTMP should consider how regional active transportation activity is measured, how needs are assessed, and how ongoing monitoring is undertaken.

e) Air – The Calgary Airport Authority operates the primary airports in the Calgary Metropolitan Region, including Calgary International Airport and the Springbank Airport. There are several other airfields throughout the region, providing a variety of services. The RTTMP should identify connectivity requirements for the regionally significant airports (the Calgary Airport Authority airports at a minimum).

f) Rail – Rail provides an important connection for cargo in the Region. Although there are currently no passenger rail services (excluding the Rocky Mountaineer tourist train), future opportunities associated with rail or high-speed rail between Calgary and Edmonton and the proposed Calgary-Banff commuter rail corridor, should be monitored and further evaluated in the RTTMP.

g) Governance – Responsibility and jurisdiction for provincial highways, airports and railways are outside the jurisdiction of the CMRB. While there are opportunities for additional collaboration related to maintenance and operation of municipal roads, it is anticipated that responsibility will remain with individual municipalities in the foreseeable future.

As the region grows, increased transit demand, and related regional demand may present opportunities for alternative delivery options for transit in the Calgary Metropolitan Region. The RTTMP should investigate potential regional service delivery models, with consideration to the location and scale of growth areas outlined in the Growth Plan.

2. Context Studies for Joint Planning Areas

Context Studies should consolidate the relevant components of:

- integration with growth areas;
- individual municipal transportation plans;
- provincial plans;
- any applicable Regional Transportation Studies (e.g. North Calgary, South and East Calgary, and Integration Memo); and
- Transit Background Reports.

Context Studies should also identify additional regional needs to support intended growth patterns within the Joint Planning Area, including:

- Planning for regional multi-use corridors including, but not limited to, transportation, utility, communications, and active transportation
- designation of key future transportation corridors, including major roads with regional connections;
- regional transit corridors and transit-ready corridors for Transit-Oriented Development; and
- pathways and active transportation networks.