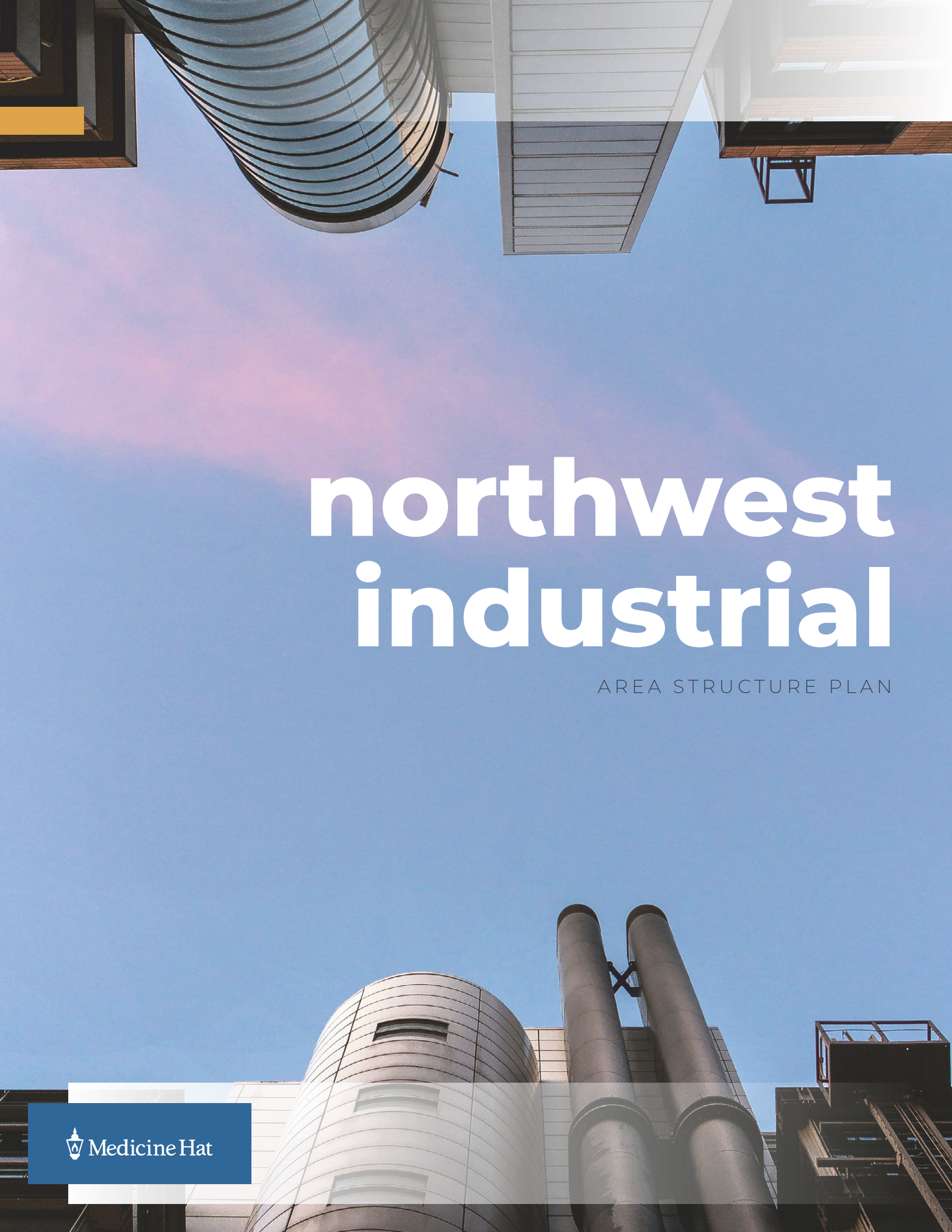




northwest industrial

AREA STRUCTURE PLAN

TITLE	Northwest Industrial Area Structure Plan
BYLAW NO.	4692
VERSION/DATE	FINAL - APRIL 2022
AUTHOR	Stantec Consulting Ltd. on behalf of City of Medicine Hat - Invest Medicine Hat (IMH) <i>With contributions from:</i> City of Medicine Hat Planning & Development Wood Environmental & Infrastructure Solutions Global Raymac Surveys Inc.
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Medicine Hat



Stantec

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EXECUTIVE SUMMARY

The Northwest Industrial Area Structure Plan (ASP) provides the vision and framework for future development of ± 388.0 ha (± 958.7 ac) of land (approximately six quarter sections) in northwest Medicine Hat. The Plan Area is bounded by Boundary Rd NE (Town of Redcliff border) to the west, Broadway Ave NW to the south, Box Springs Rd NW to the east, and undeveloped agricultural lands to the north.

These lands are important for the ongoing economic development of Medicine Hat and integral to the continued rise of the city as a source of quality, well serviced industrial opportunities for the southeast Alberta region. The Northwest Industrial ASP is envisioned to provide ample opportunity for industries such as heavy processing and manufacturing centres, technical research facilities, warehousing and distribution, as well as more locally focused light/medium industrial opportunities, among others.

The Northwest Industrial ASP also outlines key infrastructure considerations required to support future industrial growth in this area through:

- Future high-pressure gas connections, supplied by TC Energy, to service heavy industrial operations,
- An integrated network of industrial roadways linked to the nearby Trans-Canada Highway, and
- Opportunities for connecting to the Canadian Pacific Railway (CP Rail) network.

The Northwest Industrial ASP considers and implements strategic objectives and policies of higher-level plans including the South Saskatchewan Regional Plan (SSRP), Tri-Area Intermunicipal Development Plan (IDP), and the mymh Medicine Hat Master Plan (the City's Municipal Development Plan [MDP]). It is also influenced by the Medicine Hat City Council Strategic Plan (2019-2022).

The Northwest Industrial ASP has been informed by engineering, transportation, and ecological studies that analyze and evaluate attributes and constraints within the Plan Area. Opportunities and challenges are evident throughout, with several development constraints defined by existing and planned regional infrastructure in the area such as overhead power lines, utility rights-of-way, oil and gas infrastructure, among others. However, these constraints also provide opportunities for industry to utilize existing infrastructure within and adjacent to the Plan Area to service future employment generating industrial development moving forward.

The Northwest Industrial ASP has evolved through consultation with adjacent industries, intermunicipal collaboration, City Administration, special outdoor recreation uses (clubs) within the Plan Area, and the public. Policies and guidelines have been developed as a result of this consultation to direct future Outline Plan, land use, Subdivision and Development Permit applications, to help manage overall growth that will collectively shape future development of the Plan Area.

PLAN HIGHLIGHTS



$\pm 1,902$ jobs



New **Rail** opportunities for industrial land connections to CP Rail Network



± 388 ha (± 959 ac)
Overall **Plan Area**



Integrated servicing for the Plan Area, utilizing a logical and organized staging approach



± 192 ha (± 474 ac)
of new **heavy industrial** lands



Flexible development opportunities for light/medium and heavy industrial uses within the Plan Area

1 INTRODUCTION

1.1 PLAN AREA

The Northwest Industrial Area Structure Plan (ASP, herein referred to as 'the Plan') consists of ± 388.0 ha (± 958.7 ac) of land (approximately six quarter sections) in northwest Medicine Hat. The lands are bounded by Boundary Rd NE/ the Town of Redcliff boundary to the west, Broadway Ave NW to the south, Box Springs Rd NW to the east, and undeveloped agricultural lands to the north, illustrated in **Map 1** (herein referred to as the 'Plan Area').

1.2 ASP PURPOSE

The decision to proceed with this ASP reflects the need to update the policies and vision for the three quarter sections of land north of Broadway Ave NW (SW, SE, and NW Section 15), contained within the existing *Medicine Hat Box Springs Business Park ASP* (adopted 2006, amended 2013). An additional three quarter sections (NW Section 15, and SE, SW Section 22) were then incorporated into the Plan Area in order to undertake a more comprehensive and consolidated approach to organizing future industrial growth in Northwest Medicine Hat for City owned lands.

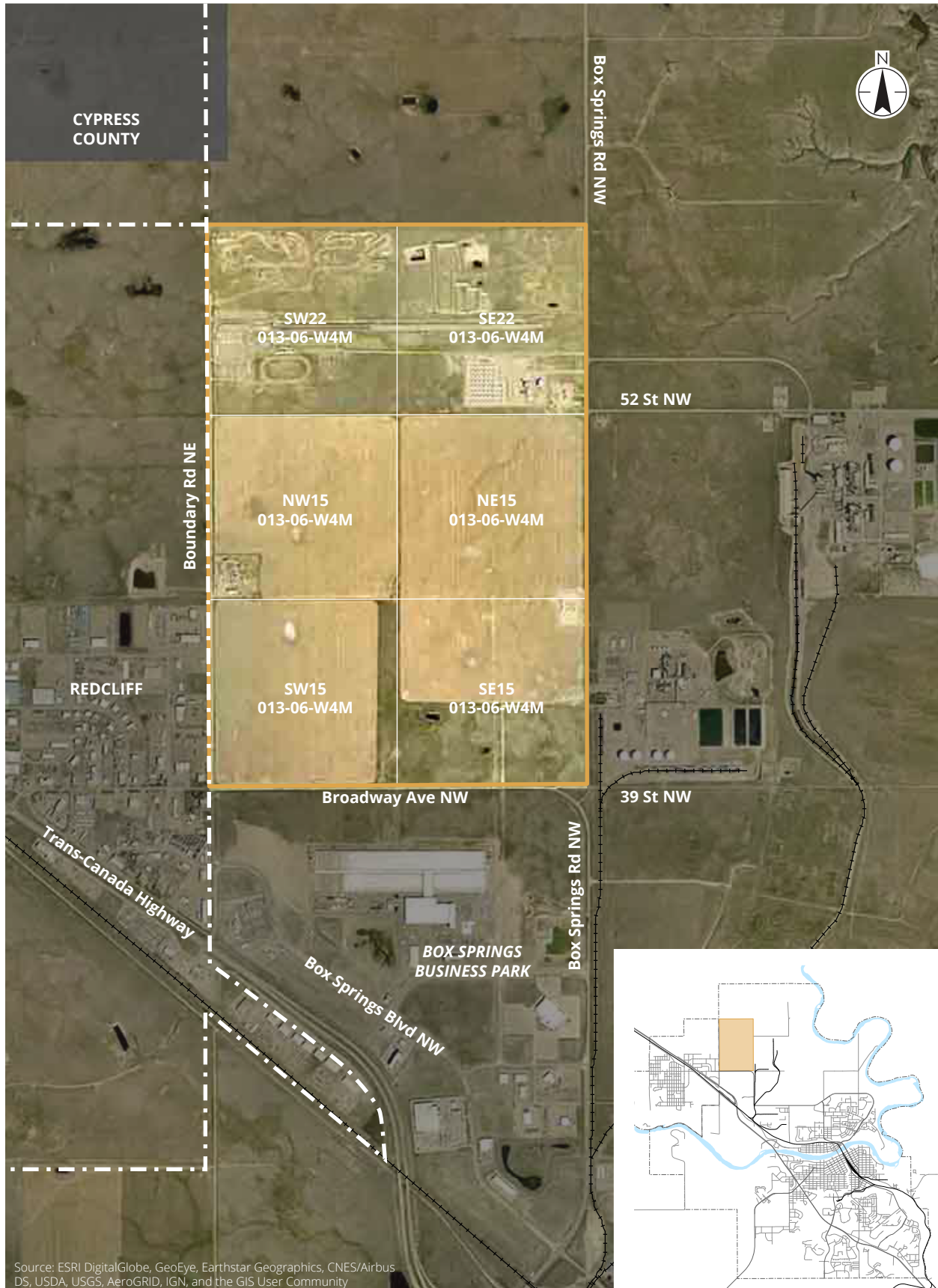
This updated vision for the Plan Area is based on the recently approved mymh Medicine Hat Master Plan, confirming general land use direction in alignment with the mymh Medicine Hat Master Plan's goals for this area. This Plan also addresses the need for comprehensive planning in this area to outline implementation of key infrastructure (such as sanitary, storm, and water) required to support industrial growth. This Plan works towards helping ensure a sufficient supply of planned industrial lands are available for a wide range of industrial uses (particularly those focused on heavy industrial opportunities), diversify the City's economic base, and support a healthy, competitive industrial land market to attract investment and bring new employment opportunities to Medicine Hat. To accomplish these goals, this Plan outlines the general land use and servicing framework, along with a set of policies to guide future development through a vision that will direct future development stages until such time as the Plan Area is fully built out.

1.3 RELATION TO BOX SPRINGS ASP

Policies contained within this Plan pertaining to the three quarter sections of SW, SE, and NW Section 15 within the Plan Area supersede all policies regarding the same lands contained within the *Medicine Hat Box Springs Business Park ASP* (2006, amended 2013). The *Medicine Hat Box Springs Business Park ASP* will also be amended to remove SW, SE, and NW Section 15 from its Plan Area.



Map 1 Plan Area Location



1.4 PLAN INTERPRETATION

1.4.1 Policy Interpretation

Where a description of a land use area and/or context statement accompanies a policy section, it is provided as information only to illustrate the intent and enhance the understanding of policies for that general land use area. If an inconsistency arises between the information/context statement and a policy, the policy takes precedence.

Policies that use the words **“shall”** or **“must”** apply to all situations, without exception, usually in relation to a statement of action, legislative direction, or situation(s) where a desired result is required.

The word **“should”** is used to clarify the directional nature of an associated policy statement. Policies that use **“should”** are to be applied in all situations, unless it can be demonstrated to the satisfaction of the Development Authority that the policy is not reasonable, practical, or feasible in a given situation. Proposed alternatives will comply with the applicable policies and guidelines to the satisfaction of The City of Medicine Hat (‘the City’) with regard to design and performance standards.

Policies that use the word **“may”** apply to situations that are permitted to occur as it relates to the overall objectives of the Plan.

1.4.2 Plan Limitations

The Plan is a long-term planning document. As such, it promotes a vision for the Plan Area and includes policies and guidelines that work towards achieving that vision over time. The Plan may be amended from time to time, either in relation to a City initiative or future land use applications.

Policies and guidelines in the Plan must not be interpreted as approvals for specific uses for individual sites. No representation is made herein that any particular site is entirely suitable for a particular purpose. Site conditions or constraints, including environmental constraints, adjacency and compatibility of light, medium, and heavy industrial uses, and all other constraints must be assessed on a case-by-case basis through future planning applications and required technical studies, as determined by the City during the Outline Plan, Land Use, Subdivision, or Development Permit application stage.

1.4.3 Map Interpretation

Plan maps and any subsequent amendments shall be interpreted as identified below:

Unless otherwise specified in the ASP, boundaries or locations of any symbols or areas depicted on maps within the Plan and its appendices are approximate, not absolute, and must be interpreted as such. The locations of symbols are not intended to define exact locations, except where they coincide with clearly recognizable physical features or fixed boundaries, such as property lines or road or utility rights-of-way. The precise location of these boundaries, for the purpose of evaluating development proposals, will be determined by the Development Authority at the time of Outline Plan, land use, Subdivision, and/or Development Permit application.

Measurements of distances or areas must not be taken from maps in the ASP or its appendices.

Land use areas, roadway alignments and classifications, and utility alignments may be subject to further study and may be further delineated at the Outline Plan, Subdivision, or land use stage, in alignment with applicable policies in this Plan and the *Northwest Industrial ASP Servicing Strategy* (2021). Any major changes to the maps in this Plan and its appendices may require an amendment to the Plan at the Development Authority's discretion.

1.4.4 Photos & Imagery Interpretation

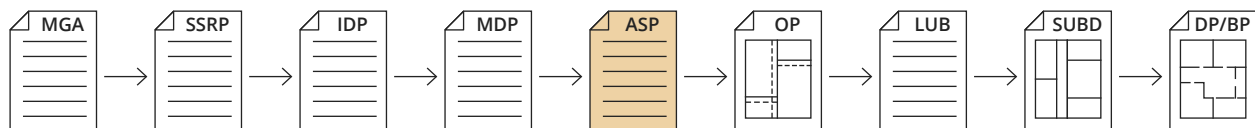
Photographs and precedent imagery contained within this ASP are provided for illustrative and reference purposes only and are not indicative of the final outcome, nor meant to limit the built form or specify the urban design in any way.

1.5 REGULATORY & PLANNING FRAMEWORK

The Plan has been prepared in accordance with applicable legislative requirements outlined in the Municipal Government Act (MGA) and overarching City policies, such as the mymh Medicine Hat Master Plan (the City's Municipal Development Plan [MDP]), as well as other applicable City policies and guiding documents.

In accordance with the MGA, all statutory plans passed by a municipality must be consistent with each other. Should a conflict or inconsistency arise between this ASP and the mymh Medicine Hat Master Plan, the mymh Medicine Hat Master Plan prevails to the extent of the conflict or inconsistency, unless otherwise noted.

The diagram below illustrates the planning hierarchy in Alberta (generally), and where an ASP fits in with the process, with each heading highlighted in **bold** throughout the text below:



What Guides the ASP?

The Plan has been prepared to be consistent with, and to support the goals, of higher-level legislation and plans including:

- The **MGA** and any associated regulations,
- The South Saskatchewan Regional Plan (**SSRP**), a southern Alberta regional plan based around the South Saskatchewan watershed,
- The Tri-Area Intermunicipal Development Plan (**IDP**), a local co-operative plan with Medicine Hat, Redcliff and Cypress County, and
- The mymh Medicine Hat Master Plan (**MDP**).

Other documents considered as part of developing this Plan include the *Medicine Hat Box Springs Business Park ASP* (2013), Medicine Hat Land Use Bylaw, and Municipal Servicing Standards Manual (MSSM).

What Are the Requirements of an ASP?

As per the MGA, an ASP must describe:

- The sequence of development for the Plan Area,
- Land uses proposed for the Plan Area (generally, or with respect to specific parts of the Plan Area),
- Density of population proposed for the area either generally or with respect to specific parts of the area (where applicable),
- General location of major transportation routes and public utilities, and
- Other matters Council may consider necessary.

What Comes After an ASP?

Following the adoption of an ASP, developers may prepare an Outline Plan (**OP**) and Land Use Bylaw (**LUB**) amendment to zone specific lands, from the City of Medicine Hat Land Use Bylaw. Under certain circumstances, applicants may proceed directly to Subdivision (**SUBD**) or Development Permit (**DP**) applications if their preferred land use is already in place, and an Outline Plan is not considered a requirement by the City. Outline Plans are required to provide more detailed land use, servicing, and transportation information, typically done at the quarter section level.

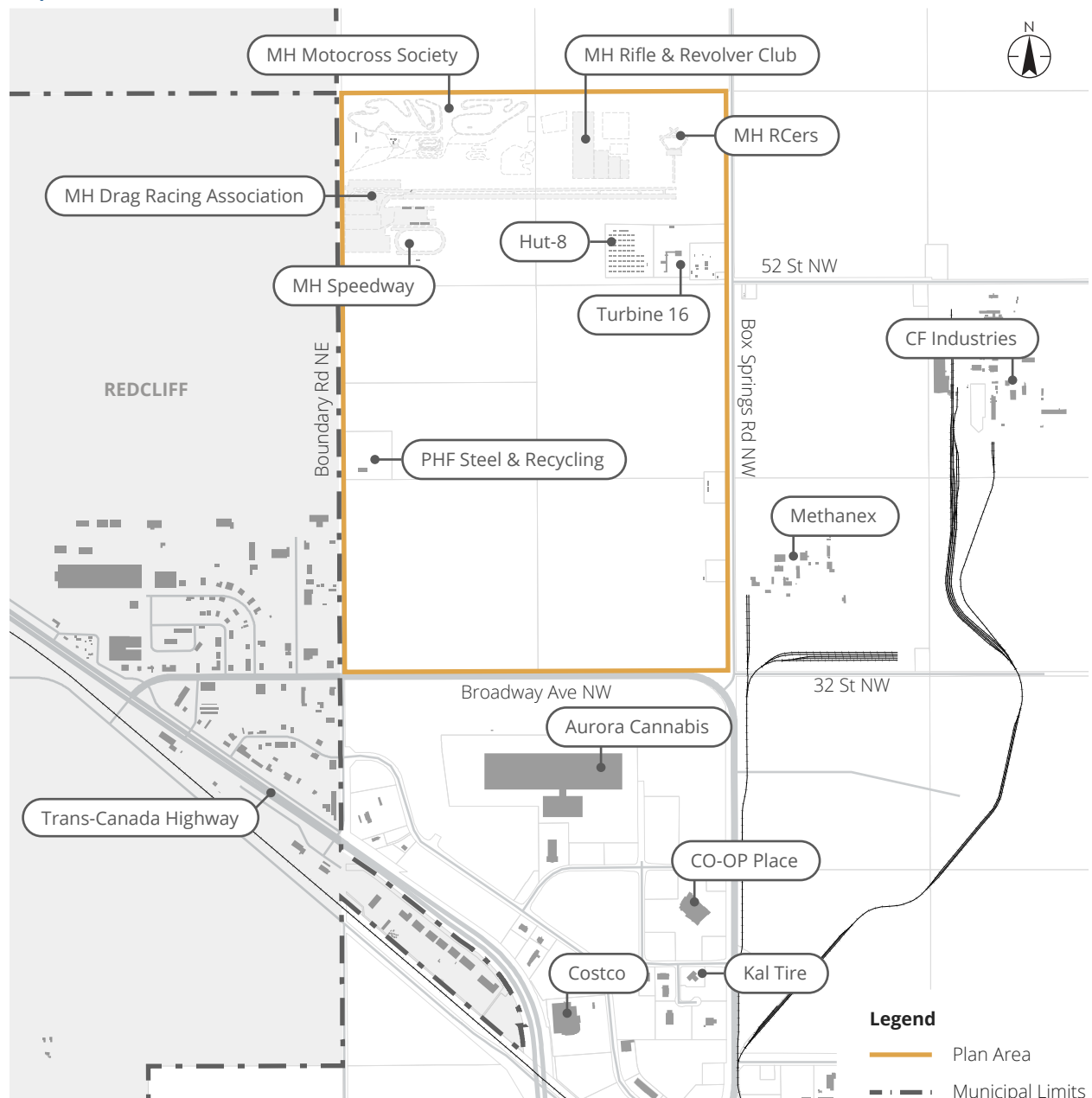
Once the Outline Plan is approved and land uses are confirmed/adopted by Council, the developer advances to the Subdivision stage. Finally, Development Permit and Building Permit (**BP**) submissions are prepared, which provide the highest level of detail and serves as the final stage of implementation prior to occupancy. All development proposals are supported by technical studies (e.g., Geotechnical, Biophysical Impact Assessment [BIA], Environmental Site Assessment [ESA], etc.), and a detailed Functional Servicing Report (FSR) which outlines key servicing requirements for the area.

2 PLAN AREA & CONTEXT

2.1 SITE CONTEXT

The Plan Area is located in the developing northwest commercial-industrial sector of Medicine Hat. A number of developments currently operate within and adjacent to the Plan Area including multiple special outdoor recreation uses (clubs), adjacent industries and businesses including CF Industries (CF), Methanex, Costco, and CO-OP Place, among others (identified on **Map 2**). The Plan Area is also in close proximity to the Trans-Canada Highway, accessed primarily via Broadway Ave NW through the town of Redcliff to the west and Box Springs Rd NW to the south.

Map 2 Site Context



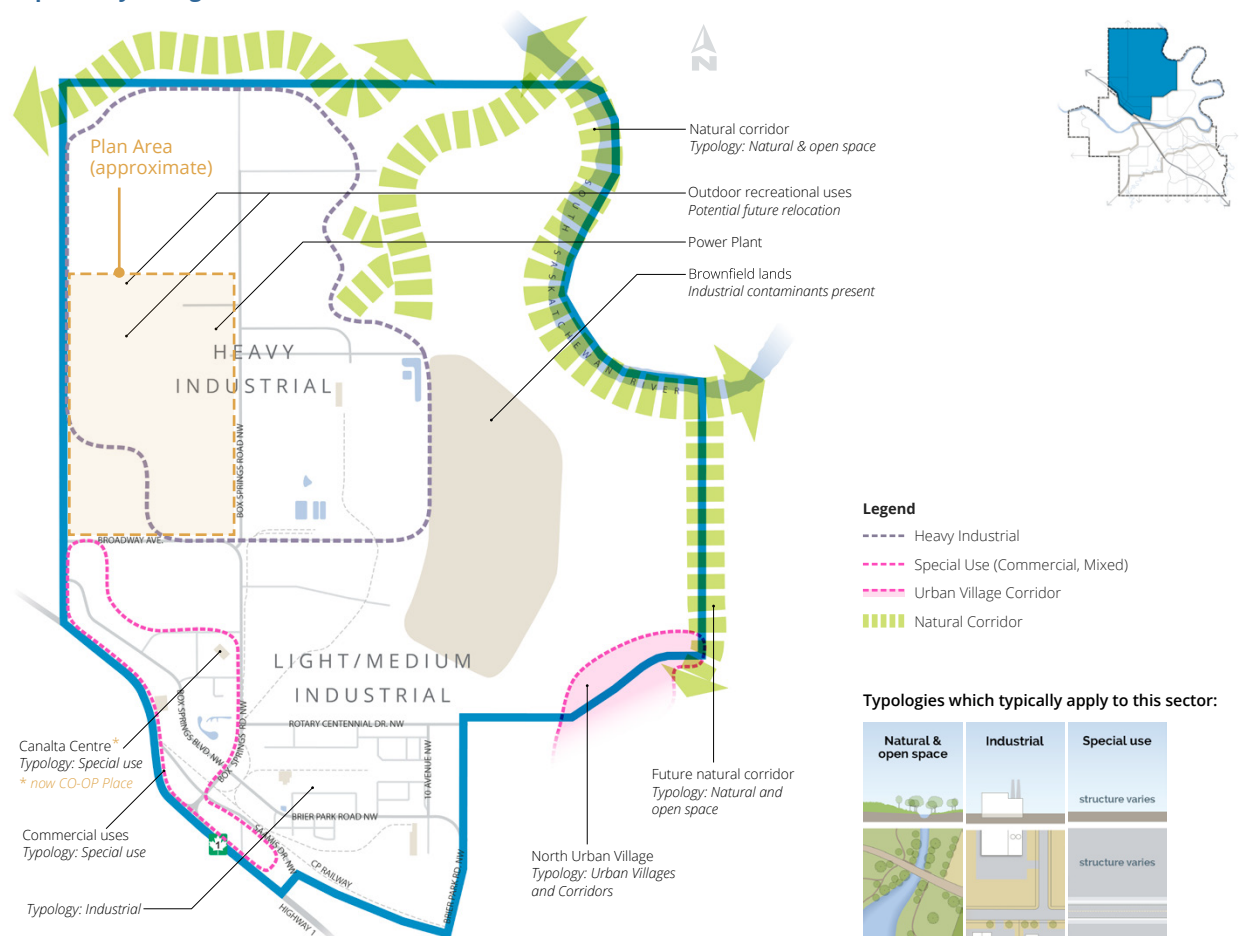
2.2 MYMH MEDICINE HAT MASTER PLAN

The Plan Area is located within the North Employment Sector of the mymh Medicine Hat Master Plan (**Map 3**). This sector represents $\pm 3,210$ ha ($\pm 7,900$ ac) of land bordering Redcliff to the west, Trans-Canada Highway to the south, and contains railway main and spur lines.

No residential land uses are allowed in this sector. Typologies of the Urban Transect which typically apply to this sector include Industrial, Special Use, and Natural & Open Space sections. These built forms within the transect typically provide for lower densities of more uniform land uses and lower municipal service level requirements (such as transit, open space amenities, etc.).

Following the direction of the mymh Medicine Hat Master Plan, land uses in this Plan will be focused on providing employment generating industrial uses. Light/medium industrial uses are to be located in the southwestern portion of the Plan Area, with the remainder well suited to accommodate future heavy industrial growth. Built forms in the Plan Area are to follow those identified in the mymh Medicine Hat Master Plan's Urban Transect for the North Sector, consisting of industrial type structures and special use types (such as major distribution centres, factories, or refineries in heavy industrial areas).

Map 3 mymh Figure 4 North Sector



2.3 PLAN OWNERSHIP

As of time of Plan preparation, the entirety of the Plan Area is owned by The City of Medicine Hat, with the exception of a ± 4.0 ha (± 10.0 ac) parcel owned by Pacific Steel & Recycling of Canada Ltd. located along the western edge of the Plan Area in the southwest corner of NW Section 15 (legally described as Plan 0411745, Block 1, Lot 1), and a ± 0.1 ha (± 0.3 ac) parcel owned by Nova Gas Transmission Ltd. along the eastern edge of the Plan Area in the southeast corner of SE Section 22 (legally described as Plan 7710051, Meter Station Site).

2.4 PLAN AREA FEATURES

2.4.1 Natural Features

The Plan Area is located within the Dry Mixedgrass Natural Subregion of Alberta. The topography of the Plan Area is generally flat with slightly hummocky (meaning a low mound or ridge of earth) terrain. Small waterbodies and drainages occur throughout the Plan Area within depressions in the landscape. The Plan Area lands slope generally from the northwest to the eastern edge and southeast corner, with the highest elevations appearing in the central-western and northwestern portions.

Although the majority of the Plan Area consists of agricultural lands, there are numerous waterbodies and natural drainages throughout. Semi-native and modified grassland are found throughout the Plan Area in lands that have not been cultivated or developed. Agricultural cropland and grazing lands are also found throughout a majority of the Plan Area's land cover.

Generalized details of the Plan Area's topography and natural features are illustrated on **Map 4**. Additional biophysical information is provided in **Appendix B**.

2.4.2 Historic Resources

Under the Historic Resources Act (HRA), historic resources include archaeological and paleontological sites, Indigenous traditional use sites, historic structures, and geological or natural resources. The northeast portion of the Plan Area is within the Listing of Historic Resources as lands with the potential to include undiscovered archaeological historic resources.

Prior to Outline Plan, Subdivision, and/or land use applications, a Historic Resources application or Historic Resources Impact Assessment (HRIA) may be required, as determined by Alberta Culture, Multiculturalism, and Status of Women (CMSW). Where required, the applicant shall undertake protective or mitigative measures identified by Alberta CMSW.

2.4.3 Existing Land Use and Development

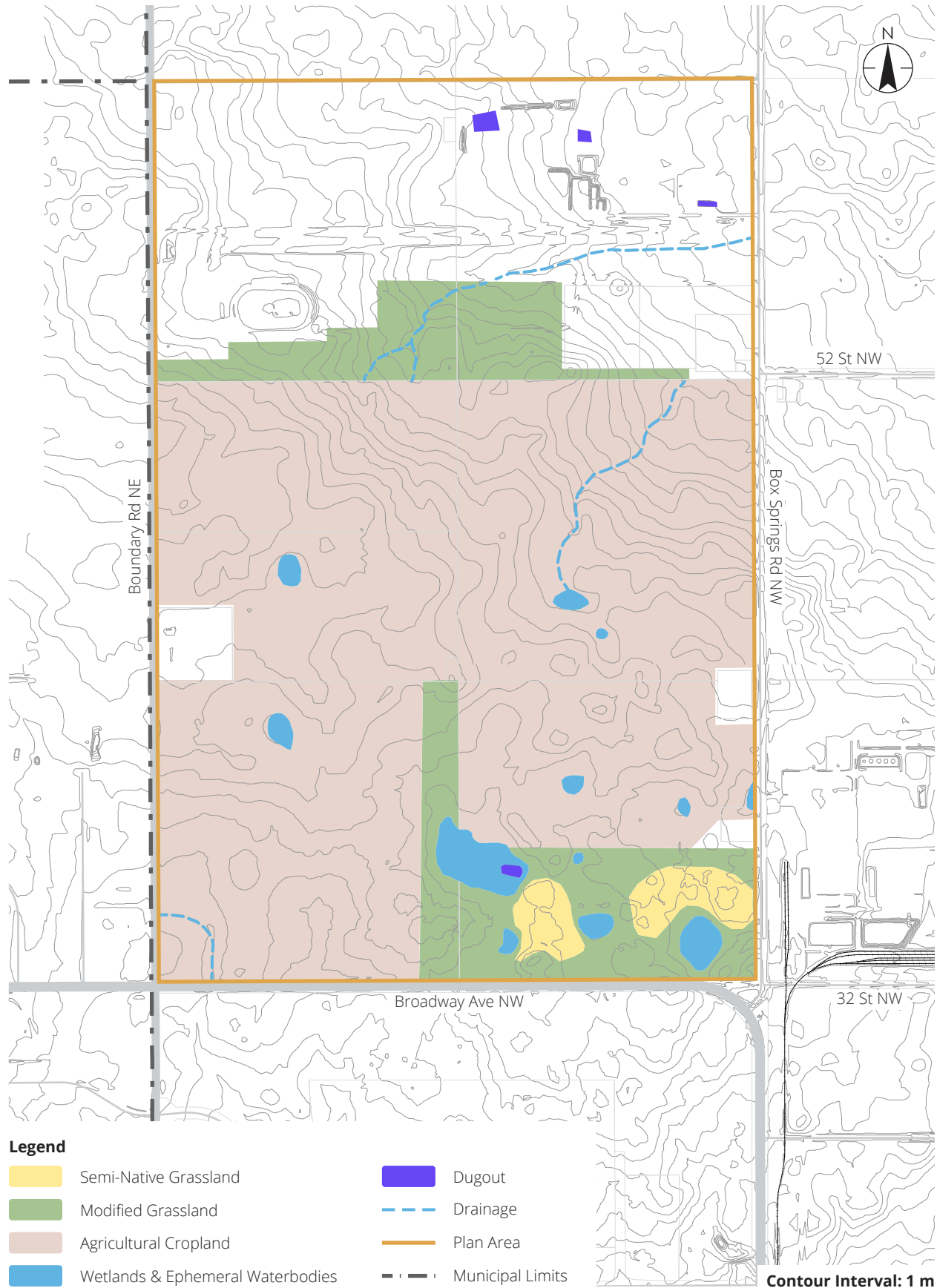
The southern portions of the Plan Area are primarily used for agricultural purposes, while the northern portions are used for utilities, industrial, and special outdoor recreation uses (clubs).

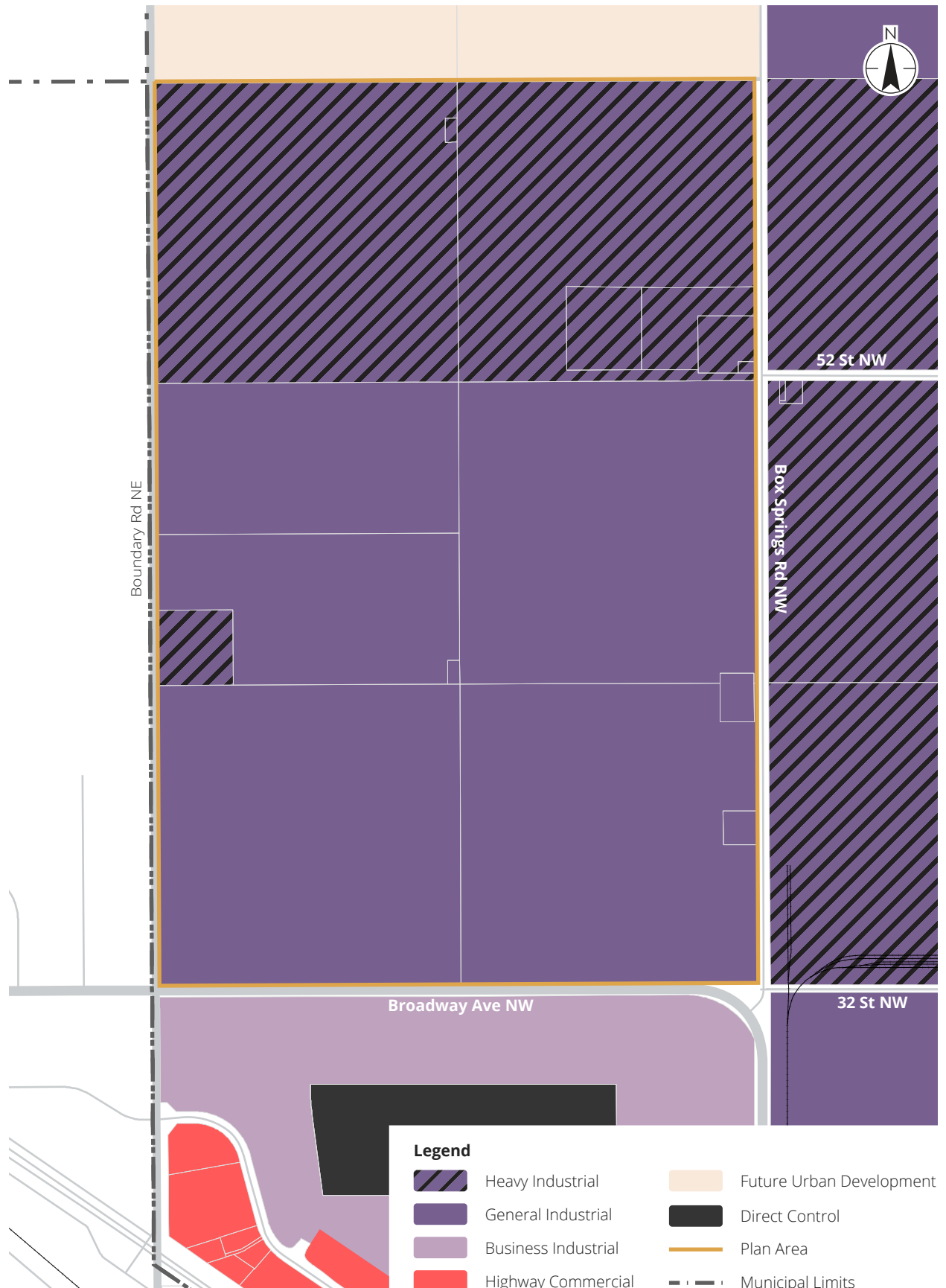
As shown on **Map 2**, a number of businesses and special outdoor recreation uses currently exist and operate within the Plan Area. These uses are outlined and described in more detail in **Section 3.6**.

Uses adjacent to the Plan Area include a mix of agricultural, commercial, light/medium industrial, and heavy industrial uses, including CF and Methanex to the east, as well as Box Springs Business Park to the south. Existing land use districts for these operations are shown on **Map 5**.



Map 4 Natural Features





3 PLAN CONSIDERATIONS

This section provides a summary of notable Plan Area attributes and constraints that may require special attention for future development within the Plan Area (see **Map 6**). This is not meant to be an exhaustive list. Those developing in the Plan Area must practice due diligence in the development process as it relates to all future planning considerations, inclusive of those identified within this section.

Numerous studies have been conducted in support of the Plan and were used to inform key planning considerations throughout the document and outlined in this section at a high-level. Reports completed for the Plan are noted below.

- *Northwest Industrial ASP Biophysical Inventory & Impact Assessment* (BIIA, 2021)
- *Phase I Environmental Site Assessment: Northwest Industrial Park Medicine Hat, AB* (ESA, 2021)
- *Geotechnical Investigation: Industrial Land Development Broadway Avenue NW* (2021)
- *Historical Resources Act Clearance* (see BIIA)
- *Northwest Industrial ASP Transportation Impact Assessment* (2021)
- *Northwest Industrial ASP Servicing Strategy* (2021)

Copies of completed reports and studies may be obtained by submitting a request to City of Medicine Hat Planning & Development Services, referencing the report title.

The information outlined within this section may be subject to change and should be verified at the time of Outline Plan, land use, Subdivision, or Development Permit Stage as new information arises and further development occurs within the Plan Area.

3.1 AIR & NOISE EMISSIONS

The SSRP outlines annual ambient air quality limits for Nitrogen Oxide (NOx) emissions, in addition to action levels, triggers, and limits for Ground-level Ozone (O₃) and fine particulate matter (PM_{2.5}) limits within the South Saskatchewan Region (outlined in Schedule A of the SSRP). Air Zones have been established as part of Alberta's implementation of the national Air Quality Management System (AQMS) and are responsible for air quality reporting and management. Medicine Hat is located in the South Saskatchewan Air Zone.

Future developments with significant air emissions that require operating approvals through the Environmental Protection and Enhancement Act (EPEA) will require an air quality impact assessment as part of the application submission and approval process. Recent air quality impact assessments completed in this area have noted potential concerns with air emissions in regards to facilities being able to meet the provincial Ambient Air Quality Objectives, regulated by Alberta Environment and Parks (AEP).

Depending on the outcome of the Air Quality Assessment, there may be a need to integrate best available technologies into the design of the facility to mitigate against impacts (done in collaboration with AEP). Those developments which may require air quality monitoring are encouraged to coordinate with the Palliser Airshed Society and City Environmental Services Department.

Noise emissions from heavy industrial, oil and gas, and power facilities are regulated at a provincial level. As part of relevant facility approval applications to the provincial regulators, proposed developments may be required to complete noise impact assessments that demonstrate their operations meet relevant noise requirements. The City's previous experience in the northwest area indicates a potentially noise constrained area. As such, developers may need to consider noise abatement design in their development proposals in order to meet provincial regulatory requirements.

3.2 ENVIRONMENTAL

The records review and site visit of the *Phase I Environmental Site Assessment: Northwest Industrial Park Medicine Hat, AB* (ESA, 2021) identified historic and existing land uses (within and surrounding the Plan Area) that are considered areas of potential environmental concern.

Select recommendations from the Phase I ESA are identified below:

- If stained soil or unusual odours are discovered within areas surrounding abandoned natural gas pipelines during development of the Plan Area, it is recommended that further assessment by an environmental consultant take place, and that these soils be removed and disposed of under the supervision of a qualified professional at such time.
- The City is recommended to verify any setback distances required from the electrical substation located in SE15-013-06-W4M prior to development of the surrounding area.
- Records review identified several water wells throughout and within 300 m of the Plan Area. If these water wells have the potential to be impacted by development or are no longer needed for use, they should be decommissioned by a qualified professional, in accordance with provincial guidelines prior to any potential development of the Plan Area.
- Based on the current historical land uses within the Plan Area and surrounding area, a subsurface soil and groundwater investigation is recommended to evaluate the environmental quality of subsurface materials throughout the Plan Area.

The full Phase I ESA report can be obtained from Planning & Development Services, referencing the report title: *Phase I Environmental Site Assessment: Northwest Industrial Park Medicine Hat, AB* (2021).

3.3 UTILITY RIGHTS-OF-WAY

Several utility rights-of-way divide the Plan Area along a number of north-south and east-west alignments (illustrated in **Map 6**). Many of these rights-of-way serve as important intermunicipal servicing connections with Redcliff and Cypress County, and pose as potential challenges to implementation of easements and access considerations for future development. Developers should discuss their proposals with the applicable utility provider and/or City department(s) for any setback, access, maintenance, or other requirements when considering development adjacent to potentially impacted utility rights-of-way, prior to Outline Plan, land use, Subdivision, or Development Permit stage.

3.4 ACCESS EASEMENTS

A number of private access/mutual access easements exist throughout the Plan Area. These easements provide access to oil and gas facilities and active lease areas, among others. Some easements have been discontinued/decommissioned over time and are now access rights-of-way in name only, with locations previously accessed by the rights-of-way now utilizing an alternative means of access.

Future subdivision of affected parcels should review the status of any evident access easements and coordinate with the leaseholder where they may no longer be required. Additionally, existing private access areas may be designated as public right-of-way should the preference be to retain an existing alignment, or amalgamate into a larger road right-of-way.

3.5 ELECTRIC TRANSMISSION LINE

The Plan Area is currently bisected by a northwest-southeast running, overhead electric transmission line within a ± 15 m wide right-of-way. This transmission line, currently operated by AltaLink, extends from south of the 52 St NW intersection through to Box Springs Rd NW, north of the Broadway Ave NW intersection, illustrated in **Map 6**. This transmission line is not anticipated to be relocated. Developers are encouraged to discuss their proposals with the utility provider (AltaLink) where lands abut the existing right-of-way.

3.6 EXISTING DEVELOPMENT

The Plan Area contains a number of existing developments including key City utilities and infrastructure (generally located along the eastern boundary of the Plan Area), oil and gas facilities, operating industrial businesses, and not-for-profit special outdoor recreation uses. Existing developments are generally identified and outlined on **Map 6**.

Major Energy Infrastructure

Multiple major energy infrastructure facilities are located within the Plan Area (identified on **Map 6**), with select facilities noted below for reference:

- Power Plant Turbine 16 (5270 Box Springs Rd NW),
- Compressor Station (762 52 St NW), and
- Electrical Substation & Gas Distribution Compressor (4970 Box Springs Rd NW).

These facilities are anticipated to remain in their current locations. Proponents in proximity to these existing facilities are encouraged to consult with the City's energy & infrastructure division for any special considerations or setback requirements, where applicable.

Oil and Gas Facilities

A number of oil and gas facilities and pipelines exist within the Plan Area. Oil and gas facilities, their associated infrastructure, and their operations are uses that have the potential to affect public safety, development of the Plan Area, and the natural environment. The co-existence of these oil and gas activities with other forms of development in the Plan are an important consideration for the area's development.

Industrial Businesses

Two industrial businesses currently operate within the Plan Area, consisting of Pacific Steel & Recycling of Canada Ltd. (a steel and recycling facility specializing in metal products and metal recycling services), and of Hut 8 Mining (a digital data mining operation). The locations of these two operations are identified on **Map 2**. Pacific Steel & Recycling operates on privately owned land, whereas Hut 8 Mining is located on City owned lands with a lease interest registered on Title at time of Plan preparation. Both operations are considered fully in compliance with the objectives of this Plan and are anticipated to remain in place.

Special Outdoor Recreation Uses (Clubs)

The Plan Area is home to several special outdoor recreation uses (or 'clubs'), located in the northern two quarter sections of the Plan Area (SW and SE Section 22). These not-for-profit clubs operate on City owned lands through lease agreements, generally issued for long-term periods (e.g., 10+ years), and have enjoyed a long-standing presence in their current locations, some over the past 25+ years.

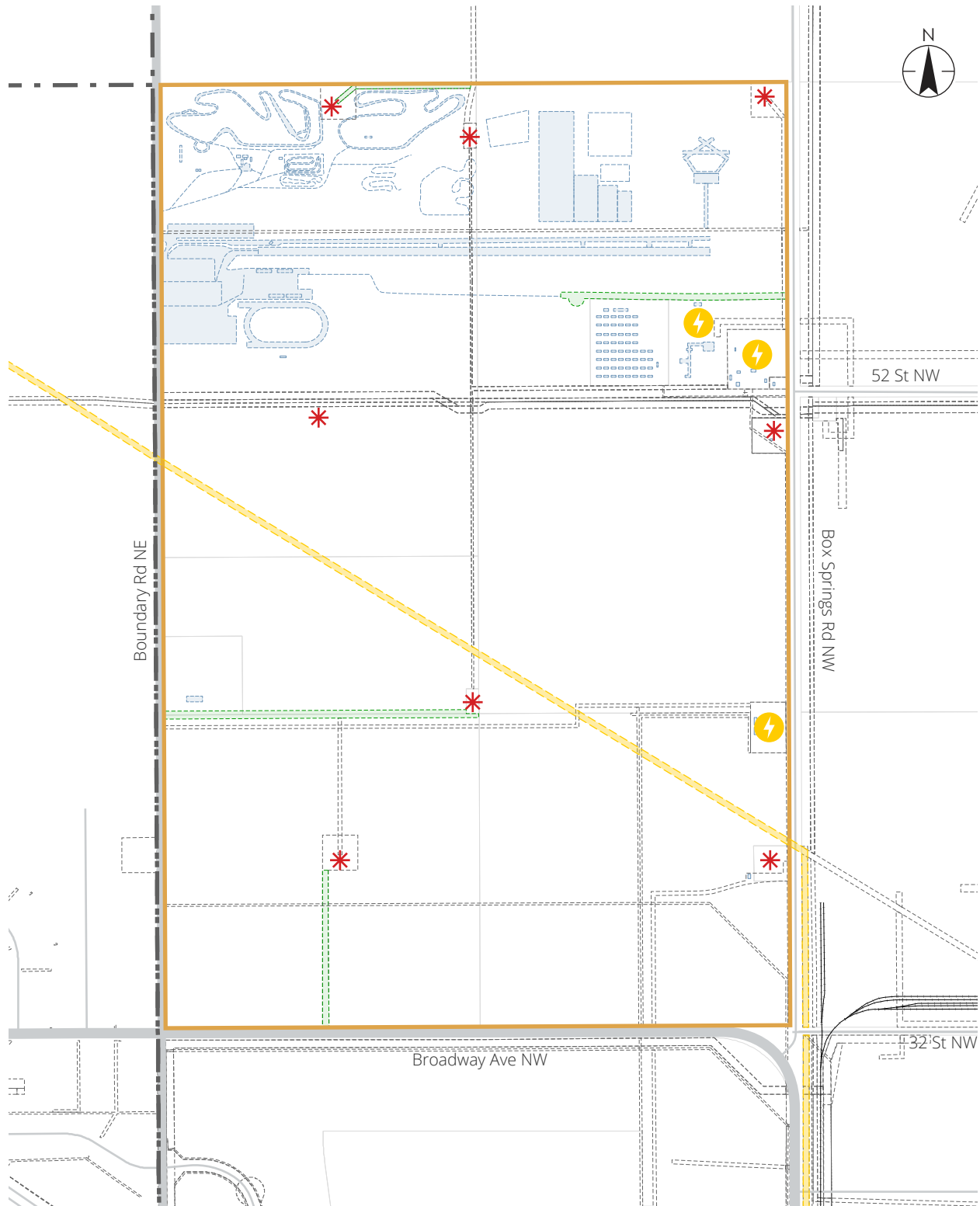
These clubs offer a wide range of specialized outdoor recreational uses for residents of, and visitors to, Medicine Hat, including motocross, drag racing, auto racing (oval track), shooting (rifle and revolver), and radio/remote control (RC) model aviation activities. Clubs existing within the Plan Area at time of Plan preparation are identified on **Map 2**, and generally outlined on **Map 6**, and consist of:

- Medicine Hat Motocross Society (MHMS)
- Medicine Hat Rifle and Revolver Club (MHRRC)
- Medicine Hat Speedway
- Medicine Hat Drag Racing Association (MHDRA)
- Medicine Hat RCers (RC flying club)

All clubs within the Plan Area possess strong membership bases and provide valuable community services to residents of Medicine Hat. In addition to regular member services, several of the clubs offer youth programs, special interest groups activities and training, and host wide-reaching events and competitions which support tourism in Medicine Hat.

Initial development south of 52 St NW will require special consideration and attention to ensure that impacts to club operations are mitigated (e.g., dust from construction impacting the drag race/speedway tracks). Mitigation measures and monitoring frequency will be confirmed by the developer as part of the Development Permit/Development Agreement process.

Map 6 Plan Considerations



Legend

	Plan Area		Utility/Pipeline Right-of-Way		Oil and Gas Facility
	Municipal Limits		Existing Club Lands/Existing Development		Major Energy Infrastructure
	Access Right-of-Way		Electric Transmission Line Right-of-Way		

4 VISION & GUIDING PRINCIPLES

4.1 PLAN VISION

The Plan represents one of the premier large industrial, business, and employment hubs in the southeast Alberta region. It serves as an ideal location for new and existing industrial businesses looking for expansion and growth opportunities in Medicine Hat, supported by efficient connections to the Trans-Canada Highway, with opportunities to connect to the CP Rail network and integrate rail into their operations. Industrial uses in this area are supported by the City and encouraged to incorporate green infrastructure, environmentally friendly building technologies, and integrate available innovative, environmentally sensitive land development techniques, where possible.

4.2 GUIDING PRINCIPLES



Provide Flexible Development Opportunities

Establish a land use concept that is flexible for future parcel configurations and sizes in order to accommodate a wide variety of users, multiple types of industry, and respond to evolving market demands for future industrial developments.



Maximize Employment Opportunities

Establish a land use concept capable of accommodating a variety of industrial uses that allow for flexibility at land use stage, maximizing opportunities to generate employment for residents of Medicine Hat and enhance business development potential throughout the region.



New Rail Connection Opportunities

Provide rail connections both to and throughout the Plan Area for future linkages to industrial developments who can take advantage of this valuable opportunity moving forward.



Create a Strong Network of Road Connections

Incorporate a grid-based road network with limited interruptions for effective goods and traffic movement, allowing for efficient connections to the Trans-Canada Highway and surrounding region.



Consider Existing Clubs

Phased development that supports the continuation of existing special outdoor recreation uses (clubs) until development of City-leased lands to another use is deemed desirable by Council.



Encourage Green Design

Accommodate and encourage innovative approaches to site layouts, servicing, building design, and encourage appropriate integration of available renewable and energy-efficient technology.

4.3 STAKEHOLDER CONSULTATION

Due to the effects of the COVID-19 global pandemic, the approach to public engagement shifted to a primarily online/virtual format. The program focused on ways to provide effective outreach and engagement opportunities with impacted stakeholders (including CF, Methanex, adjacent municipalities, and special outdoor recreation uses (clubs) within the Plan Area), as well as the public, to share their views and input on the Plan directly with the project team.

How Engagement Occurred



Direct - Virtual

14 virtual meetings held via Microsoft Teams with club leaders, adjacent industry (CF and Methanex), Town of Redcliff, and Cypress County



Email correspondence with adjacent industry, municipalities, and clubs



Multiple, direct phone calls with stakeholders



Shape Your City

35 questions and comments were received through the *Shape Your City* platform with each submission responded to individually by the project team



Follow up meetings with interested public, adjacent industry, municipalities, and clubs



Site visits to clubs and attendance at club annual general meetings

This Plan represents the result of a collaborative engagement process which started in March 2021 and continued through to Plan adoption. Representatives of businesses and local clubs in the area have taken part in smaller group meetings to provide input and perspective on Plan policy, the Land Use Concept, and infrastructure considerations within the Plan Area. The draft Plan was presented to the public in November 2021 to hear ideas, listen to concerns, and incorporate feedback, where possible.

Key observations noted by adjacent industries involved future rail connection opportunities and mitigation of impacts to Box Springs Rd NW. Policies in this Plan have been prepared to address the issues and constraints noted by CF and Methanex in an effort to aid in mitigating impacts to existing operations and enhance access opportunities, where possible (e.g. the future 52 St NW roadway).

Special outdoor recreation uses (clubs) located within the Plan Area indicated they had several concerns with respect to long-term development within SW and SE quarters of Section 22, outlined below:

- The clubs provide a valuable service to the community which need to be reflected and identified in the Plan.
- The clubs contribute to the City's tourism base through events that attract regional, inter-provincial, and international (US) participants and visitors.
- The clubs possess strong membership bases with some having 1,000+ members.
- Club leaders desire long-term policy direction in order to invest in existing facilities and secure future sponsors.
- Nearby development can affect club operations, and should be accounted for in the planning process.

Where possible, policies were developed to address these concerns and provide greater context to the Plan in order to reflect the ongoing operations and city-wide contributions of the clubs (see **Section 3.6** and **Section 5.5**). These policies work to ensure that existing clubs are provided with longer-term assurances, while maintaining the vision of the mymh Medicine Hat Master Plan for the North Sector as long-term, heavy industrial development for the Plan Area.

5 LAND USE CONCEPT

5.1 OVERVIEW

The Land Use Concept Plan for the Plan Area is shown on **Map 7**. This plan has been developed through careful analysis of the opportunities and constraints applicable to the Plan Area, in addition to the needs of the City, the public, and adjacent industry through proactive engagement with key stakeholders and City departments.

The Plan lays out the general land use areas, primary/secondary roadway network, and potential rail alignment to support a leading edge industrial centre in northwest Medicine Hat. The Plan is intended to positively integrate with existing development surrounding and within the Plan Area and provide for meaningful future employment opportunities in the Medicine Hat region.

The land use areas of the Plan are intended to be flexible and evolve with potential Land Use Bylaw changes over time. Any refinements to the exact land use boundaries and districts may be made without an amendment to this ASP so long as the overall vision and core values of the Plan are maintained. Current and future land use areas with respect to location, size, and mix of light, medium, or heavy industrial uses will be confirmed at Outline Plan, land use, Subdivision, or Development Permit stage (whichever applies, under the discretion of the Development Authority), to provide flexibility and adaptability to market conditions at the appropriate time.

5.2 DEVELOPMENT FRAMEWORK

There are a number of elements that will shape the future development of the Plan Area, each playing a role in shaping when and how the Plan is developed.

Evolution Over Time: Development of the Plan Area will not happen immediately and will require substantial infrastructure investments, future planning approvals, and further environmental assessments and studies for certain types of industries. Full buildout of the Plan Area will likely take a number of years and is highly dependent on market demand and available financing from both the City and prospective developers.

Flexible Parcel Configurations: Future industrial development is impossible to accurately predict. The current industrial market demand in the southern Alberta region requires a significant amount of land each year, with individual operations/industrial parks ranging in size from as little as 2 ha (5 ac), up to 64 ha (160 ac) or more. Therefore, the Plan provides a general configuration of land use areas that may accommodate a variety of parcel sizes in order to provide for a wide range of industrial opportunities. Parcels and development within the Plan Area may take on a variety of sizes going forward, in alignment with the overall vision of the Plan.

Market Conditions: Development of the Plan Area is highly dependent on industrial market conditions in the southern Alberta region. Like the required parcel sizes of future industrial developers, future demand for industrial land is difficult to accurately predict. A major demand for industrial lands in the southern Alberta region may result in a faster buildout of the Plan Area (e.g., 10-15 years), whereas lower demand for industrial development will result in a lengthier buildout (e.g., 25+ years).

Servicing: Water, sanitary, and stormwater servicing will require upgrades to downstream infrastructure in order to accommodate certain forms of development. Details regarding key servicing considerations are outlined in **Section 7**.



5.3 DEVELOPMENT RISK

The Plan Area is anticipated to contain industries that have hydrocarbon-based operations, work with dangerous substances (such as pesticide or other “designated materials”), and/or have potentially fine particulate matters associated with the use. As such, some forms of future industrial uses within the Plan Area will come with certain levels of risk with respect to development in proximity to sensitive, non-industrial uses, such as residential, overnight accommodations, spectator sporting venues, regional commercial/retail, among others.

With the Plan Area in proximity to some of these sensitive land uses already (such as a large arena and hotel in Box Springs Business Park), it is important to ensure that future developments involving higher risk operations, such as heavy industries dealing with hazardous materials or noxious odours, are distanced from sensitive, non-industrial uses nearby. For example, a hazardous material or chemical recycling plant may require additional buffers from a spectator sporting venue. In this case, the Development Authority must work to ensure that development is sufficiently distanced from areas where large amounts of people gather (i.e., a spectator sporting venue), and that development proposals for sensitive uses near high-risk uses are not considered in high-risk locations.

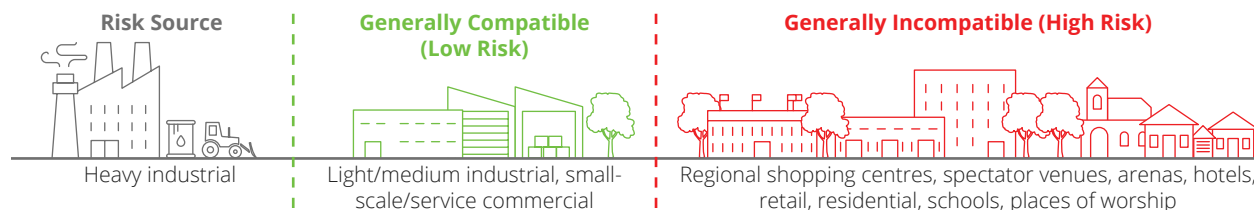
Several types of high-risk operations have industry recommended setbacks from sensitive, non-industrial uses (such as residential, schools, overnight accommodations, hospitals, spectator sporting venues, among others.). Available industry guidelines, provincial and federal agency recommendations, and Land Use Bylaw setback requirements will be referred to and incorporated as part of the review and approval process for any proposed high-risk developments, or other uses in proximity to existing/proposed high-risk

developments within the Plan Area. An illustration of how high-risk source developments are typically assessed is illustrated at the bottom of this page.

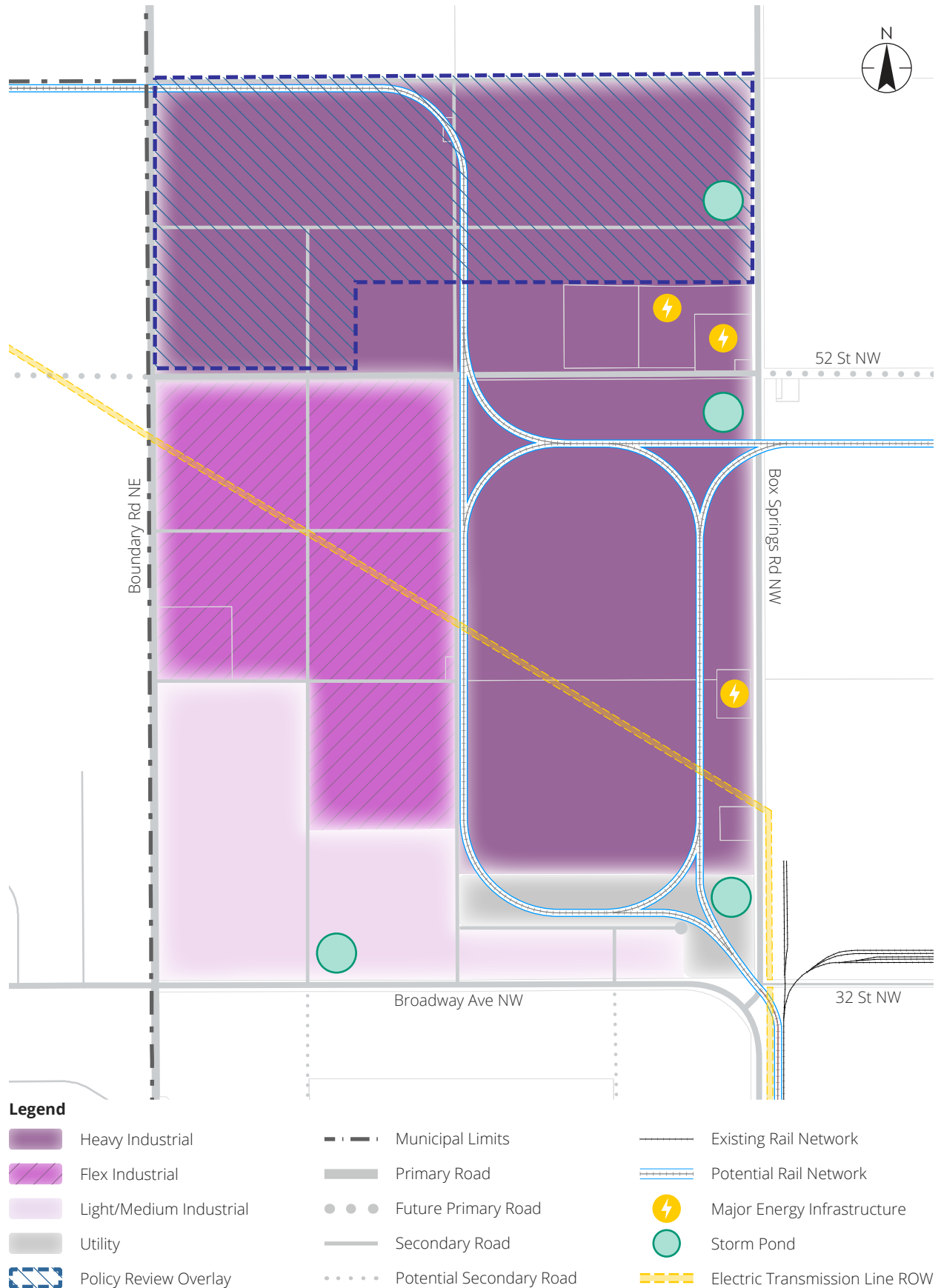
Regulations registered by AEP regarding maintenance, reclamation, and/or restoration of land associated with applicable heavy industrial operations will also be referred to in the preparation of management plans for applicable development proposals. Heavy/high-impact industrial activities will be encouraged to establish and maintain a buffer around their facility that provides sufficient space between them and any sensitive non-industrial-type uses in the area. The need for, and size of buffer from sensitive or non-industrial uses will be determined through an assessment of the risk associated with each facility as determined by the developer's own due diligence, applicable environmental management programs, and relevant City requirements, where applicable.

Developments requiring the use of energy capture, storage, or upgrading are governed and subject to regulatory approval by the Alberta Energy Regulator (AER). In addition to energy-based operations, several developments in Alberta require provincial environmental approvals prior to construction and operation. For reference, approvals are required for developments which fall under and/or contain some form of conservation, potable (drinking) water, substance release, waste management, and miscellaneous (pesticides, designated materials). Approvals for uses that incorporate these properties are granted by AEP under the Environmental Enhancement and Protection Act (EPEA). These approvals are typically valid for 10 years, at which time, an application for renewal must be submitted. This includes a review of how the facility has operated over the past 10 years, including any environmental effects.

Development Risk Considerations



Map 7 Land Use Concept



5.4 PLAN STATISTICS



PLAN AREAS

Land Use Type/Feature	Area		%
Light/Medium Industrial	±47 ha	±116 ac	±16%
Flex Industrial	±69 ha	±171 ac	±14%
Heavy Industrial	±192 ha	±474 ac	±48%
52 St NW Right-of-Way	±8 ha	±20 ac	±2%
Roads (Primary/Secondary/Local)	±51 ha	±126 ac	±14%
Storm Pond Areas	±9 ha	±22 ac	±2%
Utility Area	±12 ha	±30 ac	±4%
Total	±388 ha	±959 ac	100%
<i>Policy Review Overlay *</i>	<i>±99 ha</i>	<i>±245 ac</i>	-

* Policy Review Overlay not included in overall Plan Area totals



ANTICIPATED JOBS

Land Use Type	Jobs
Light/Medium Industrial Area	705
Flex Industrial Area	621
Heavy Industrial Area	576
Total	1,902

Notes:

Area calculations are approximate (±) estimations only, and exclude potential reserve areas, right-of-way purchase area(s), rights-of-way required for rail, and any other land requirement considerations not otherwise noted. These estimations are subject to change without notice and do not require an amendment of this plan.

Employment projections provided are estimations only and are based on the following assumptions:

- Light/medium industrial: ±15 jobs/ha (±6.0 jobs/ac)
- Flex industrial: ±9 jobs/ha (±3.6 jobs/ac)
- Heavy industrial: ±3 jobs/ha (±1.2 jobs/ac)

Employment projections are derived from similar heavy industrial operations within Medicine Hat, also referencing available statistics from other municipalities for comparable benchmarks (such as heavy industrial, general industrial, and industrial-commercial type uses of similar size and scale). An average between the light and heavy industrial districts was taken to obtain Flex Industrial Area job density assumptions. The employment projections represent a full buildout scenario for the entirety of the Plan and may take several years to achieve.



The following policies apply to the entirety of the Plan Area with respect to the Land Use Concept, and are to be considered throughout the lifespan of this Plan, as amended from time to time.

5.4.1 General Land Use Policies

5.4.1.1 In the event of a conflict between this Plan and the *Medicine Hat Box Springs Business Park ASP*, the policies within this Plan shall prevail.

5.4.1.2 Development proposals shall preserve adequate area (i.e., a minimum of ± 15 m) for future rail right-of-way, identified as the potential rail network alignment on **Map 7**, where applicable.

5.4.1.3 Developments able to effectively utilize the potential rail network should be located adjacent to the potential rail network identified on **Map 7**.

5.4.1.4 Developments not requiring rail should not be located adjacent to the potential rail network identified on **Map 7**.

5.4.1.5 Soft landscape areas (e.g., street boulevards, open setback areas on private parcels, etc.), should seek to mimic existing native grassland species throughout the Plan Area, where applicable.

5.4.1.6 Green building technologies including, but not limited to, on-site renewable energy generation and stormwater best management practices should be encouraged within the Plan Area in accordance with evolving technologies and practices, and supporting City programs, where applicable.*

* Any power generated in excess of on-site requirements is not eligible for contributing to the City's power distribution service area, as per the *Electric Utilities Act*.

5.4.1.7 Subdivision and development shall adhere to all relevant, required setbacks identified by Directives and Bulletins of the AER, as well as various provincial legislation, plans, or guiding documents with respect to: railways, energy infrastructure (including but not limited to oil and gas facilities and electrical transmission lines), or other applicable requirements for development adjacent to heavy industrial operations.

5.4.1.8 Where lands abut oil and gas infrastructure, railway corridors, and/or the transmission line corridor, the location of any potentially required easements or access rights-of-way should be addressed in consultation with the licensee, CP Rail, or transmission provider at the applicable stage (i.e., Outline Plan, Subdivision, land use, or Development Permit).

5.4.1.9 Prior to any development in areas adjacent to and/or nearby rail, active oil and gas facilities, or pipelines, an evaluation of the potential impacts and, if required, a need for mitigation strategies shall be developed, where applicable.



Photo by Crystal Kwok on Unsplash

5.4.1.10 Development proposals that may contribute to further air emissions within the South Saskatchewan Air Zone should consult with the applicable City Environmental Services Department and Palliser Airshed Society with respect to potential impacts, contributions to the allowable emissions limits, and potential mitigation measures.

5.4.1.11 Depending on the type and location of a proposed development (e.g., a light/medium industrial development in proximity to a heavy industrial development), a Human Health Risk Assessment (HHRA) may be required at the discretion of the Development Authority.

5.4.1.12 Proponents shall reference the recommendations of the Phase I ESA (*Phase I Environmental Site Assessment: Northwest Industrial Park Medicine Hat, AB, 2021*).

5.4.1.13 Utility rights-of-way and/or Access Easements that are no longer required should be discharged from Title at time of Subdivision by the affected landowner/developer.

5.4.1.14 Existing special outdoor recreation uses within the Plan Area, as identified in **Section 3.6**, may continue to operate until such time as the lands are required by the City for alternative development and the Policy Overlay Review area is amended by Council, subject to lease agreements/conditions and other applicable regulatory requirements.

5.4.1.15 Where applicable, developments in proximity to existing special outdoor recreation uses (clubs), as identified in **Section 3.6**, which may impact club operations shall consult with impacted clubs, and confirm mitigation measures prior to, or as part of, the Development Permit review process.

5.4.1.16 The following uses shall be prohibited within the Plan Area, and are not limited to:

- a. Residential (including, but not limited to duplex, single detached housing, tiny homes, backyard suites, cluster housing, manufactured home communities, etc.).
- b. Prisons, remand centres, and other similar detention facilities.
- c. Hospitals and other medical facilities (e.g., walk-in clinic, doctor's office, emergency care, etc.).
- d. Long-term care facilities.
- e. Child care/day care services.
- f. Overnight accommodations (e.g., hotels, motels, bed and breakfasts, etc.).
- g. Regional or large-scale commercial (e.g., shopping malls, retail/"big box" power centers, supermarkets, etc.).
- h. Farmers market.
- i. Dedicated indoor recreation facilities (e.g., hockey arenas, indoor pools, gyms, etc.).
- j. Regional outdoor recreation facilities and/or new special recreational uses (does not apply to existing special outdoor recreational uses - see **Section 3.6**).
- k. Select retail uses at the discretion of the Development Authority.
- l. Places of worship and funeral homes.
- m. Liquor and cannabis stores/retailers (does not include breweries or large-format cannabis growing operations).
- n. Campgrounds.
- o. Casinos.
- p. Self-storage facilities.
- q. Recreational Vehicle (RV) storage facilities.
- r. Confined Feeding Operations (CFOs).

5.5 LAND USE AREAS

This section provides policies for the general land use areas and symbols shown on **Map 7**. An Outline Plan, land use, Subdivision, and/or Development Permit application submitted for a site within the Plan Area shall demonstrate compliance with the policies of the land use area or symbol in the approximate area the site is located.

Light/Medium Industrial Area

Purpose & Scale

The purpose of the Light/Medium Industrial Area is to provide a wide variety of general, lower-intensity industrial uses within the context of a fully-serviced industrial area. The Light/Medium Industrial Area is intended to match the scale and intensity of existing and planned industrial areas south of Broadway Ave NW, and west of Boundary Rd NE in Redcliff. These areas generally consist of one to three storey structures providing a range of light and medium industrial type uses.

Appropriate Activities

Appropriate activities in this Area could include local services and industries to support Medicine Hat and the surrounding area, as well as regional-based service and industries such as contractor services, oil and gas servicing companies, small/large equipment rentals and repairs, industrial vehicle sales and rentals, motor vehicle repair, appliance sales, minor manufacturing, catering services, breweries, and landscape supply

companies. Industrial focused office uses may also occur in the Light/Medium Industrial Area including those used by land developers and surveyors.

Some minor forms of limited commercial uses may also occur within the Light/Medium Industrial Area that will enhance the quality of life for industrial operations within the Plan Area. These uses could include convenience stores, small-scale dining establishments (such as a coffee shop, cafe, or restaurant) to serve nearby industrial businesses, motor vehicle fueling stations (such as a gas bar or cardlock station), and electronic vehicle charging stations.

The Light/Medium Industrial Area is not suited for large-format, regional, or specialized commercial/retail areas, nor is it intended to accommodate medical, or recreational activities. Sports fields, regional recreation areas, and campgrounds are also not suitable uses within the Light Industrial Area. For a comprehensive list of prohibited uses in the Plan Area (inclusive of the Light/Medium Industrial Area), see Policy **5.4.1.16**.



5.5.1 Light/Medium Industrial Policies

5.5.1.1 At the discretion of the Development Authority, some local commercial and service commercial uses may be considered within the Light/Medium Industrial Area for lands located adjacent to Broadway Ave NW, so long as:

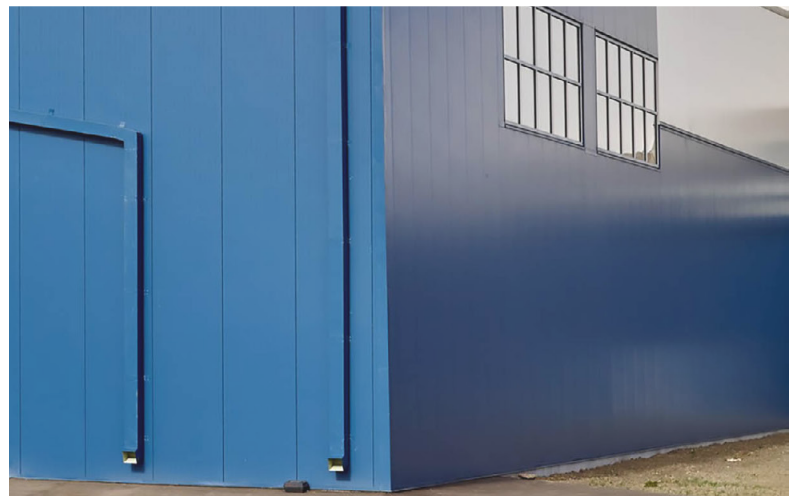
- a. The development is not considered to be incompatible with an adjacent heavy industrial use by the applicable Development Authority (or Authorities), and
- b. The use is not considered to be a 'regional commercial use' by the Development Authority.

5.5.1.2 A pre-application meeting with Planning & Development Services shall be required for any proposed commercial use within the Plan Area prior to Subdivision or Development Permit application submission.

5.5.1.3 Notwithstanding Policy 5.5.1.1, applicants proposing service commercial and/or office uses shall demonstrate appropriate interface treatments with any adjacent heavy industrial uses (either adjoining property lines or across a local industrial street), to the satisfaction of the Development Authority, where applicable.

5.5.1.4 Where a commercial land use application is deemed viable by the Development Authority and is not considered to have significant impact on adjacent uses by the Development Authority, no amendment to **Map 7** is required.

5.5.1.5 Limited service industrial (e.g., industrial operations not requiring connection to City services) should not be located within 120 m of Broadway Ave NW.



Flex Industrial Area

Purpose & Scale

The intent of the Flex Industrial Area is to provide flexible options for multiple forms of industrial related uses. Buildout of the Flex Industrial Area could take a variety of forms depending on market conditions and landowner requirements. Possible scenarios for buildout include, but are not limited to:

- 100% light/medium industrial uses,*
- 100% heavy industrial uses,
- North-south or east-west split of light/medium & heavy uses, or
- Mix or “checker” layout of industrial uses.

** The existing heavy industrial operation located in the southwestern parcel of the Flex Industrial Area is considered in compliance with the vision and intent of the Plan, as well as the Heavy and Flex Industrial Areas, specifically.*

Potential buildout scenarios are described and conceptually illustrated in **Appendix D**.

Appropriate Activities

All light/medium and heavy industrial type uses described in this Plan are considered appropriate activities in the Flex Industrial Area (see descriptions in the Light/Medium Industrial Area and Heavy Industrial Area sections).

5.5.2 Flex Industrial Policies

5.5.2.1 In addition to Policies included in **Section 5.5.2**, light/medium industrial uses within the Flex Industrial Area are subject to the Policies outlined in **Section 5.5.1**.

5.5.2.2 In addition to Policies included in **Section 5.5.2**, heavy industrial uses within the Flex Industrial Area are subject to the Policies outlined in **Section 5.5.3**.

5.5.2.3 Commercial and office-type uses as a principal use should not be located within the Flex Industrial Area. Administrative, office, or retail/sales areas may, however, be incorporated as an accessory or secondary use to the principal industrial use.

5.5.2.4 Applicants proposing a directly adjacent, contrasting use and/or intensity (e.g., heavy industrial use adjacent to a light industrial use) should demonstrate how their proposal will appropriately interface with adjacent, contrasting uses to the satisfaction of the Development Authority at Outline Plan, Subdivision, or Development Permit stage (whichever applies).

5.5.2.5 The City may require additional setbacks for heavy industrial uses where offsite impacts could negatively impact adjacent properties.



Heavy Industrial Area

Purpose & Scale

Developments in the Heavy Industrial Area may require large parcels and may have “nuisance” impacts on adjacent sites. The Plan, due to its size (land area), location, and ability to connect to key infrastructure (such as high-pressure gas and rail), is well suited to accommodate and support continued expansion of heavy industrial opportunities in Medicine Hat that require large parcels of land. Parcel sizes in this Area may vary and will be addressed at Outline Plan, land use, Subdivision, and/or Development Permit stage.

Appropriate Activities

Appropriate activities in this area are anticipated to contain industries such as chemical processing operations, major/intensive manufacturing, construction materials processing, major recycling plants, air separation units, carbon dioxide purification plants, and similar high impact uses, as well as industries that would support and complement these activities.

Existing special outdoor recreation uses (clubs) located within the Heavy Industrial Area are also considered appropriate uses for as long as they remain in operation.

The Heavy Industrial Area is not suited for regional destination, personal service, or large public gathering type use areas such as arenas, spectator sporting venues, and other areas which may cause safety issues being adjacent to heavy industry (excluding existing special outdoor recreation uses). For a comprehensive list of prohibited uses in the Plan Area (inclusive of the Heavy Industrial Area), see Policy **5.4.1.16**.

Regulatory Requirements

Heavy industries are required to obtain all necessary municipal, provincial, and federal government approvals, and comply with regulations governing the potential environmental impacts of their operations. Uses in the Heavy Industrial Area could include co-generation power facilities, or similar type uses.

As noted in Plan Considerations, industry is expected to comply with the Alberta Ambient Air Quality objectives and integration of best available technologies may be required to do so. Those developments which may require air quality monitoring are encouraged to coordinate with the Palliser Airshed Society and City Environmental Services Department. Potential noise emissions mitigation measures may also apply, depending on the type of industry proposed within the Heavy Industrial Area.



Photo from Medicine Hat mymh Medicine Hat Master Plan

5.5.3 Heavy Industrial Policies

5.5.3.1 Industries with the potential to create offsite and/or environmental impacts such as noise, dust, noxious odours, emission of contaminants, unsightly appearance, light pollution, and explosive, hazardous or dangerous goods, should be situated in the Heavy Industrial Area.

5.5.3.2 Heavy industrial developments within the Plan Area (identified on **Map 7**) shall adhere to all relevant provincial emission standards, policies and guidelines, where applicable.

5.5.3.3 Subdivision of smaller lots (e.g., parcels less than ± 1 ha | ± 2.5 ac) should be discouraged within the Heavy Industrial Area to preserve sufficient land area for larger, heavy industrial-type operations.

5.5.3.4 For all heavy industrial uses, an analysis of impacts shall be undertaken at the discretion of the Development Authority, which may consist of one or more of the following:

- Noise study,
- Odour study,
- Dust study,
- Traffic study,
- Interface study,
- Airborne emissions study, and
- Other studies as required by the applicable Development Authority (or authorities).

5.5.3.5 Proposed developments adjacent to existing major energy infrastructure should be oriented with parking, loading, and receiving areas located closest to the major energy infrastructure site, where possible.

5.5.3.6 Airborne particulate matter originating from storage areas, yards or roads should be minimized by landscaping, paving, or by other means considered appropriate by the City and in accordance with sound environmental practices.



Photo by Cody Nottingham on Unsplash

Policy Review Overlay

A Policy Review Overlay (PRO) has been established for lands which are currently occupied by special outdoor recreation uses (non-profit organizations, or 'clubs') operating on City owned, leased lands, as described in **Section 3.6**. To protect the interests of the existing special outdoor recreation uses in this area and ensure that proper sequencing of development is followed within the Plan Area, the PRO provides a framework for review of lands currently occupied by special outdoor recreation uses within the Plan Area.

Existing special outdoor recreation uses within the PRO at time of Plan adoption may continue to operate, conduct site improvements, and expand operations within their existing footprints (as defined by lease agreements), subject to required development approvals by the Development Authority (or Authorities). Industrial development within the PRO should not be allowed to occur until the Heavy and Flex Industrial Areas have been built out to the extent that insufficient heavy industrial lands are available to accommodate further development.

5.5.4 Policy Review Overlay Policies

5.5.4.1 With the exception of special outdoor recreation uses existing at time of Plan adoption, the City shall not support applications for Outline Plans, Subdivision, land use, or Development Permit until the PRO, or a portion thereof, has been removed.

5.5.4.2 Amendments to reduce, remove, or otherwise alter the PRO either independently, or together with an Outline Plan, land use, Subdivision, or Development Permit application shall require an amendment to this Plan.

5.5.4.3 Amendments to the PRO should not be considered until at least $\pm 75\%$ of the Heavy and Flex Industrial Areas have obtained Development Permit approvals.

5.5.4.4 Amendments to the PRO shall be at the sole discretion of Council.

5.5.4.5 Applications to remove all or a portion of the PRO shall include the following, to the satisfaction of Council:

- a. Rationale for industrial development within the PRO. This rationale could include, but is not limited to planning, infrastructure, economic, and municipal servicing/operational considerations,
- b. Rationale for industrial development proposed outside of the overall sequencing of development identified in **Map C1** (if applicable),
- c. A public engagement process involving area stakeholders (i.e., active/operating special outdoor recreation uses within the PRO), and
- d. Considerations regarding the impact(s) the proposed development may have on active/operating special outdoor recreational uses, providing for buffers and mitigation measures between uses, where necessary.

5.5.4.6 The PRO should be subject to regular review every five years by City administration, or at the discretion of Council.

5.5.4.7 Special outdoor recreation uses existing as of time of Plan adoption shall not be permitted to expand their operations outside of their allowable buildable area(s), as defined by the associated lease agreement(s).

5.5.4.8 Should an existing special outdoor recreation use (i.e., club) cease operations, relocate, or permanently close, no new special outdoor recreation use shall be permitted to occupy or redevelop in the same (vacated) lands.

Utility Area

Due to the potential rail alignment and location of future stormwater management facilities (storm ponds), utilization of the lands (labeled “Utility” on **Map 7**) for future development will be highly challenging. As such, the Utility Area is well suited to act as a “fill in” for this area, providing natural/semi-natural open space area transition between key infrastructure components, as well as between light and heavy industrial type uses.

The intent for the Utility Area is meant to serve as a logical transition for key infrastructure components, and is not meant to serve as a regional/local destination area with any form of active recreational programming. Due to the nature of nearby existing and potential heavy industrial type uses, major public park/destination open space type uses may not be considered for this area.

The Utility Area is not meant to deter future development from utilizing portions of the land should their development proposal require. If a development proposal is received that encroaches into the general Utility Area identified on **Map 7**, applications may be considered so long as they do not interfere with the potential rail network or required stormwater management facilities.

5.5.5 Utility Area Policies

- 5.5.5.1** Area required for stormwater management facilities within the Utility Area shall be designated as Utilities (U), or its equivalent as per current City of Medicine Hat Land Use Bylaw designation.
- 5.5.5.2** The Utility Area shall not contain any major destination recreational programming or significant public destination areas (e.g., major park, playground, or athletic field, among others).
- 5.5.5.3** Subdivisions, and/or development proposals for industrial land uses may encroach into the Utility Area without requiring an amendment to this Plan.



5.6 INTERMUNICIPAL COORDINATION

Context

The Plan is bordered by the town of Redcliff to the west and kitty-corner to Cypress County at the northwest corner of the Plan Area. With light/medium industrial and rural development making up a majority of the adjacent land uses west/northwest of the Plan Area, future industrial development within the Plan Area should provide for an appropriate and compatible built form for interface conditions along Boundary Rd NE.

Intermunicipal Review & Consultation

The Tri-Area IDP (approved by the Councils of Cypress County, Redcliff, and Medicine Hat) identifies areas of mutual interest within the borders of Medicine Hat and establish policies and processes for dealing with issues that may arise. The three western quarter sections of the Plan Area (SW22, NW15, and SW15) fall within the Urban Referral Area of the *IDP Future Land Use Concept*.

The Urban Referral area identifies where the County would be provided with information respecting urban planning and expansion within Redcliff and Medicine Hat. New ASPs and amendments to existing ASPs within 800 m of municipal boundaries are subject to referrals to the neighbouring municipality. In addition, studies and initiatives that are not typical planning referrals (such as engineering studies and municipal land use studies) would be referred to the County for comment.

Box Springs Rd NW also serves as an important access road to several properties located within Cypress County, north of Medicine Hat. Potential impacts to Box Springs Rd NW including potential rail crossings, new intersections, potential construction impacts, etc. should be referred to the County for information and comment, where appropriate.

5.6.1 Intermunicipal Coordination Policies

5.6.1.1 The Plan and any subsequent amendments to the Plan, as well as any future Outline Plans, land use, Subdivision and Development Permit proposals for projects located within the western half of the Plan Area (SW22, NW15, and SW15) shall be circulated to The Town of Redcliff and Cypress County for comment.

5.6.1.2 Policies for the Urban Referral Area of the Tri-Area IDP shall be referenced for any proposed development within 800 m of the adjacent municipality (Redcliff and/or Cypress County).

5.6.1.3 The City shall consult with The Town of Redcliff and Cypress County on development proposals that involve or impact Broadway Ave NW, Box Springs Rd NW, and Boundary Rd NE.

5.6.1.4 Businesses adjacent to and north of Broadway Ave NW should seek to:

- Minimize the visual impact of parking, loading, and other outdoor activities visible from Broadway Ave NW, or
- Suitably screen loading areas, outdoor storage areas, service areas (including outdoor sales lots), at-grade mechanical equipment, and areas with high levels of truck activity from Broadway Ave NW when considered a requirement by the Development Authority, in accordance with applicable requirements of the Land Use Bylaw.

5.7 RESERVES

Reserve allocation and analysis pending future land use and Subdivision applications should refer to any/all applicable City and Provincial Reserve policies in place at time of application.

Policies within this section are intended to provide an understanding and aid in decisions made regarding dedication of Municipal Reserve (MR) land within the Plan Area. MR owing on a parcel of land should be addressed at time of Subdivision in accordance with the provisions of the MGA.



5.7.1 Reserves Policies

5.7.1.1 A reserve analysis should be conducted by the developer in collaboration with the Subdivision Authority during preparation of an Outline Plan, Subdivision, or Development Permit application (where Subdivision is not required), to determine the amount of reserves owing within the Plan Area. The reserve analysis should include a determination of:

- a. The total gross area of the proposed Outline Plan, Subdivision, or Development Permit application (where Subdivision is not required),
- b. Other reserves owing on an ownership basis (if applicable), and
- c. The amount of residual reserves, if any, that are to be taken as money-in-lieu of land.

5.7.1.2 MR owing on a parcel of land should be provided as money-in-lieu of reserve land at the time of Subdivision in the entire amount owing on the parcel.

5.7.1.3 The Subdivision Authority may register a Deferred Reserve caveat on a parcel of land owing MR in order to facilitate a transfer of MR required to another location, pending the developer has additional lands located outside the Plan Area in a location more suitable for additional MR dedication.

6 TRANSPORTATION

6.1 TRANSPORTATION NETWORK

The transportation network for the Plan Area (illustrated on **Map 8**) is designed to accommodate anticipated traffic volumes at full buildout in an efficient, safe, and effective manner. Local and private roadways will be determined at Outline Plan, Subdivision, or Development Permit stage (whichever applies), to service future developments, without requiring an amendment to this Plan. Future development of the road network will be done considering potential rail crossing(s) as illustrated in **Map 10**.

The Plan Area is currently bounded by three primary roads (Boundary Road NE, Box Springs Rd NW and Broadway Ave NW), each currently developed to an “interim standard” as two-lane cross-sections. Box Springs Rd NW also serves as an important transportation corridor serving areas of Cypress County to/from Medicine Hat.

Additionally, the mymh Medicine Hat Master Plan identifies 52 St NW Street as a future roadway connection through the Plan Area. As development of the Plan Area progresses, these roadways will be upgraded as required, according to the MSSM. Private entries to service individual parcels within the Plan Area will be limited along primary roadways.

Roadway Classifications

Roadway classifications in this ASP are based on full buildout of the Plan Area. Staged construction of primary roadways should be considered as required or desired by the City; however, primary road rights-of-way should be protected in the initial stages of development.

Internal secondary roads have been aligned as a grid style network and are conceptually represented in **Map 8**. Ultimate locations and alignments are intended to be confirmed during Outline Plan stage when more understanding is available with respect to future parcel development and continued investment by the City. Unless otherwise shown on **Map 8**, local industrial roads/service roads are not identified as their alignments are contingent upon future subdivisions, determined at Outline Plan Stage. The northernmost east-west road identified on **Map 8** will require additional right-of-way for a future secondary road, subject to further development north of the Plan Area.



Photo by Zetong Li on Unsplash

Cross-Sections

Urbanized road cross-sections are intended for primary and secondary road designations. However, a rural style cross-section with open drainage ditch systems could be considered at the detailed design for local industrial and service roads provided this public conveyance system meets the requirements of future stormwater management plans and parcel rainfall run-off restrictions (see **Section 7.4**).

Intersection Treatments

Final intersection treatments will be confirmed during Outline Plan, Subdivision, or Development Permit (detailed design) stage. At this time, the 52 St NW | Box Springs Rd NW and Broadway Ave NW | Box Springs Rd NW intersections will require special attention. Further details regarding these intersections are outlined within this section and highlighted on **Map 8** as “Future Intersection Upgrade (TBD).”

52 St NW | Box Springs Rd NW Intersection

The ultimate alignment/configuration of the 52 St NW | Box Springs Rd NW intersection will require consideration of property line/right-of-way constraints located in quarter section NW22 (containing the power plant substation and City gas infrastructure). The existing intersection is offset ± 15 m in the north-south direction (illustrated in the image below), which requires consolidation and minimal curvature to align the west and east approaches.

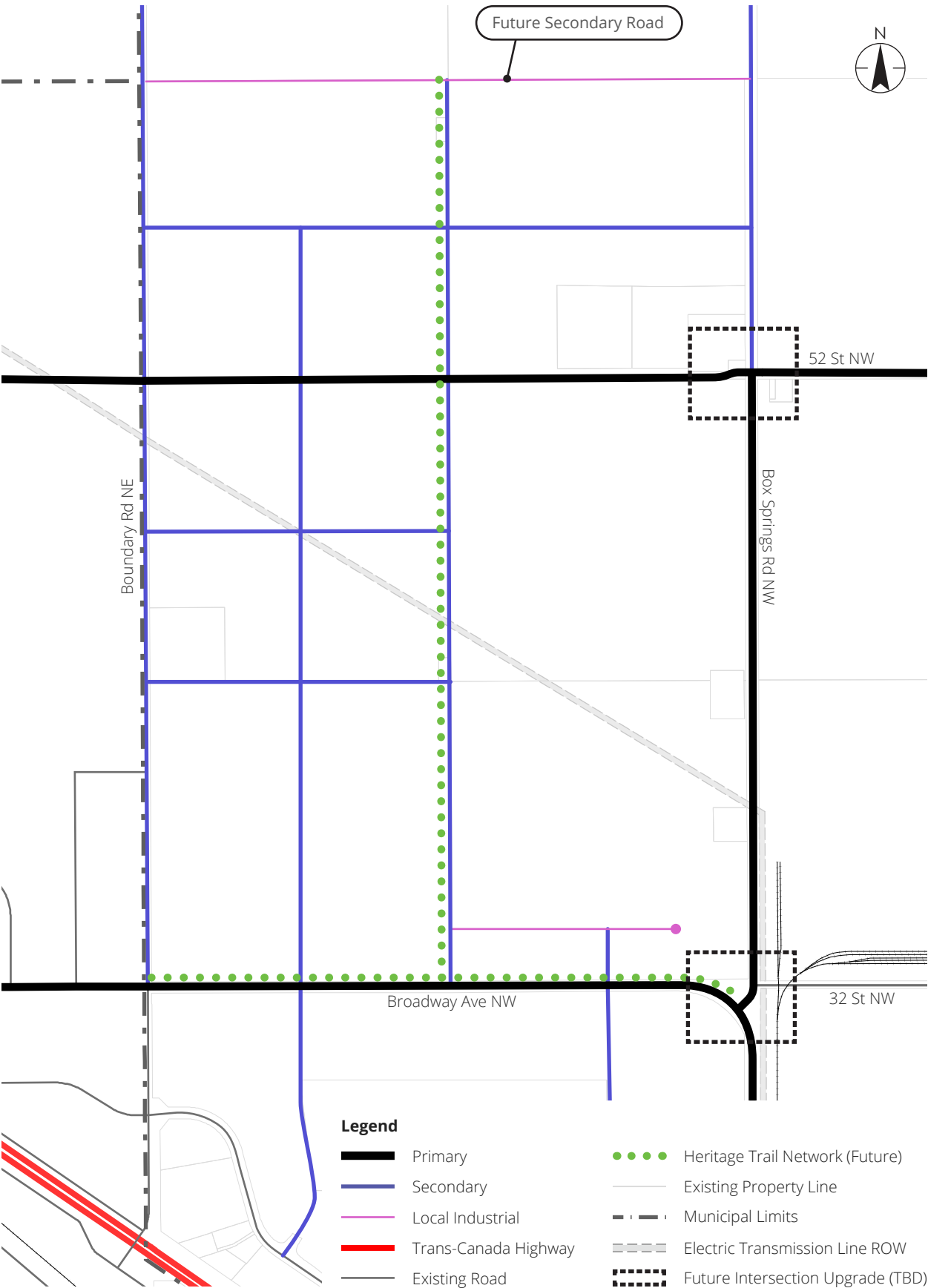
Additionally, the southern boundary of the future 52 St NW right-of-way will require an additional utility right-of-way area for a future high-pressure gas pipeline. Representation of the future 52 St NW road alignment is generally illustrated in **Map 8**.

52 St NW | Box Springs Rd NW Intersection - Current Configuration



Image not to scale: for illustrative purposes only

Map 8 Transportation Network



Broadway Ave NW | Box Springs Road NW

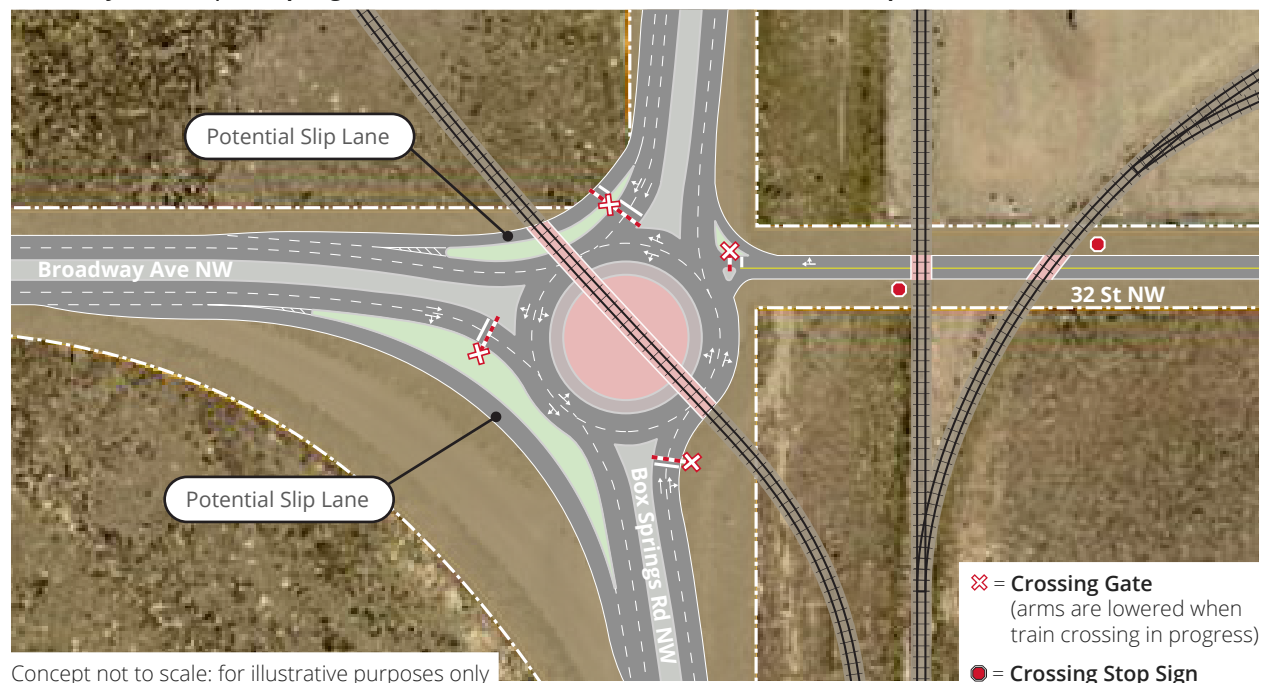
The ultimate configuration of the Broadway Ave NW | Box Springs Rd NW intersection (both primary roadways) is one that will need to accommodate large vehicle/trucking traffic from existing heavy industrial businesses (CF and Methanex) east of Box Springs Rd NW, as well as new development within the Plan Area. Emergency vehicle access through this intersection will also be important to consider for both existing and future industries, until such time as a second, primary road to this area is complete (i.e., the 52 St NW primary road).

With respect to potential rail access to the Plan Area, an optional rail connection through this intersection has been considered. The combination of rail and roadway traffic provides unique design and safety challenges. Should a rail connection be further developed and implemented in this location, designs for the intersection must ensure effective traffic flows and limited vehicular conflicts through this area, respecting a potential rail crossing. One option for this intersection involves a potential roundabout, conceptually illustrated below. This illustration is conceptual in nature and represents only one potential outcome. Future designs are to be confirmed as development progresses throughout the Plan Area.

6.1.1 Road Network Policies

- 6.1.1.1 The proposed transportation network should generally align with **Map 8**.
- 6.1.1.2 Development of the 52 St NW roadway connection to Division Ave N / Parkview Dr NW should be prioritized by the City to provide a second, primary access to the northwest industrial area, within city limits.
- 6.1.1.3 At Outline Plan (if required by the Development Authority), Subdivision, or land use stage, a Traffic Impact Assessment (TIA) may be required to support the development proposal (scope to be determined by the Development Authority in collaboration with the developer, if required).
- 6.1.1.4 Adjustments to the alignment and number of roads identified within the Heavy Industrial areas as shown on **Map 7** may occur without requiring an amendment to this plan at the discretion of the Development Authority.

Broadway Ave NW | Box Springs Rd NW - Potential Roundabout Intersection Concept



6.2 PEDESTRIAN & ACTIVE MOBILITY

Pedestrian mobility should be integrated as part of the Plan Area; however, applied with the understanding and context of an industrial area that experiences heavier, large-vehicle (i.e., truck) traffic volumes. Pedestrian accessibility throughout the Light/Medium Industrial Area will be prioritized, whereas requirements for sidewalks and other pedestrian enabled infrastructure in the Flex and Heavy Industrial Areas will be relaxed.

Currently, the Medicine Hat Heritage Trail Network (regional pathway system) does not reach the Plan Area, nor are there any existing plans for a potential extension to service the Plan Area as of time of Plan preparation. However, this pathway network has the ability to provide valuable pedestrian and cycling connections for both commuting to the Plan Area and recreational use for the surrounding area. Future pathway connections, once they reach the Plan Area, should extend to provide safe and convenient connections to businesses located within the Plan Area, as well as surrounding Box Springs Business Park and town of Redcliff.

6.2.1 Active Modes Policies

- 6.2.1.1 Roadway cross-sections within the Light/Medium Industrial Area shall provide at least one sidewalk as part of the right-of-way.
- 6.2.1.2 The Heritage Trail Network should be aligned as conceptually identified on **Map 8**.
- 6.2.1.3 Affected rights-of-way which contain the Heritage Trail Network (as conceptually identified on **Map 8**) shall provide a cross-section that contains a 3.0 m shared walkway (regional path), or similar.
- 6.2.1.4 Development of the Heritage Trail Network shall be planned for within applicable rights-of-way (as shown on **Map 8**); however, may be staged and/or construction of the pathway delayed until such time as:
 - a. Adjacent pathway connections to the Plan Area (i.e., from Box Springs Business Park or Redcliff) become available, and
 - b. It is considered financially viable for construction by the City.

6.3 TRANSIT

Currently, Medicine Hat Transit routes do not service the Plan Area, nor are there any existing plans for a potential extension of the transit network to service the Plan Area as of time of Plan preparation. However, future servicing of the Plan Area with transit have the ability to offer valuable, alternative methods for future employees and patrons commuting to the Plan Area.

6.3.1 Transit Policies

- 6.3.1.1 Subject to financial feasibility, the City and/or interested landowners/developers should explore methods to connect regular or on-demand Transit services to the Plan Area.



mht now Icon and Photo via City of Medicine Hat Twitter

6.4 RAIL

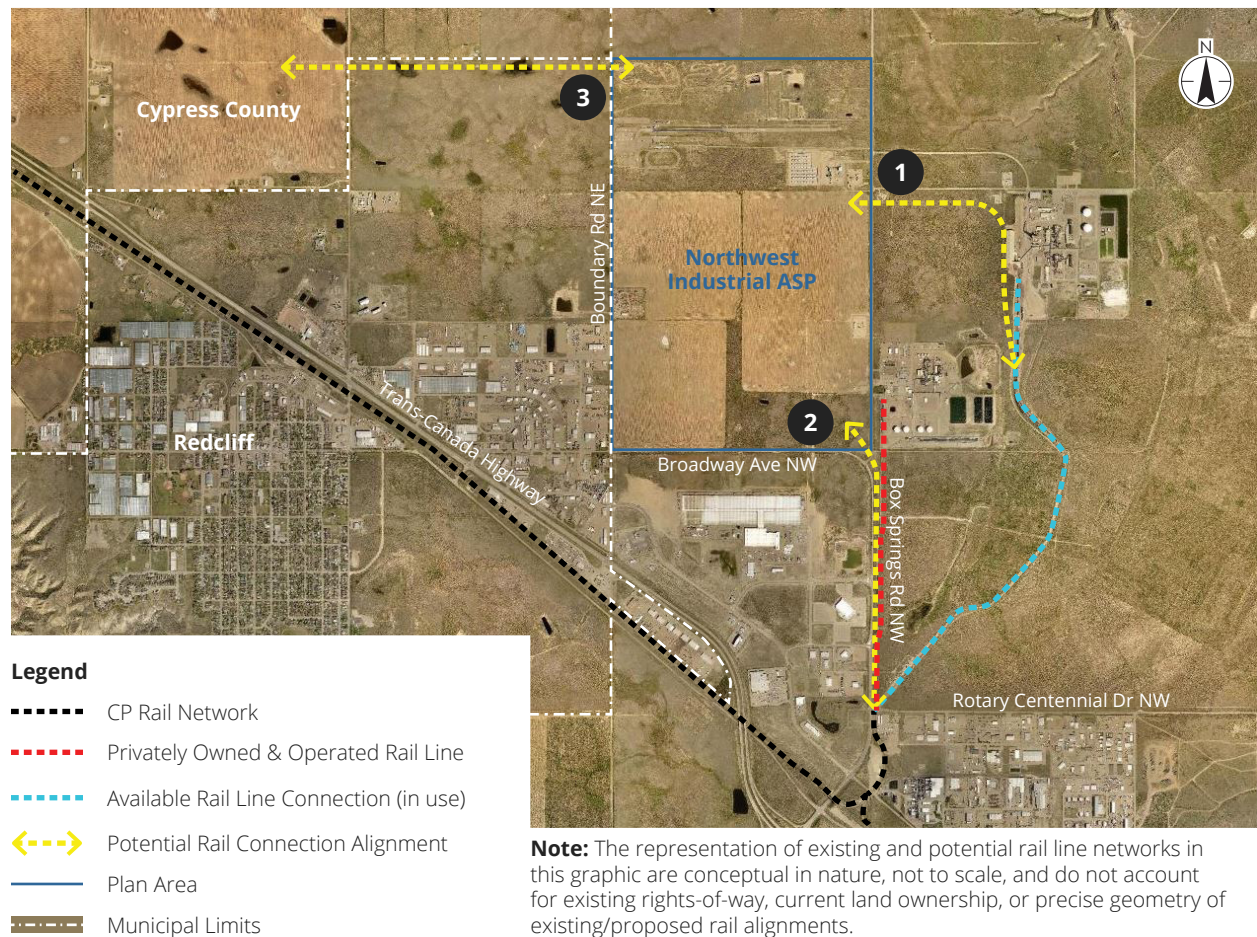
Rail has served as a vital form of transportation for goods and services since the 1800s and will remain an important part of the industrial landscape for years to come. Industrial rail service remains in demand due to the many benefits it offers, with several industries continuing to seek new opportunities to connect with the CP Rail network for their businesses. In response to this anticipated demand, connection opportunities to the larger CP Rail network, including an internal loop and spur network (illustrated on **Map 10**), are incorporated in this Plan.

Potential Rail Connections

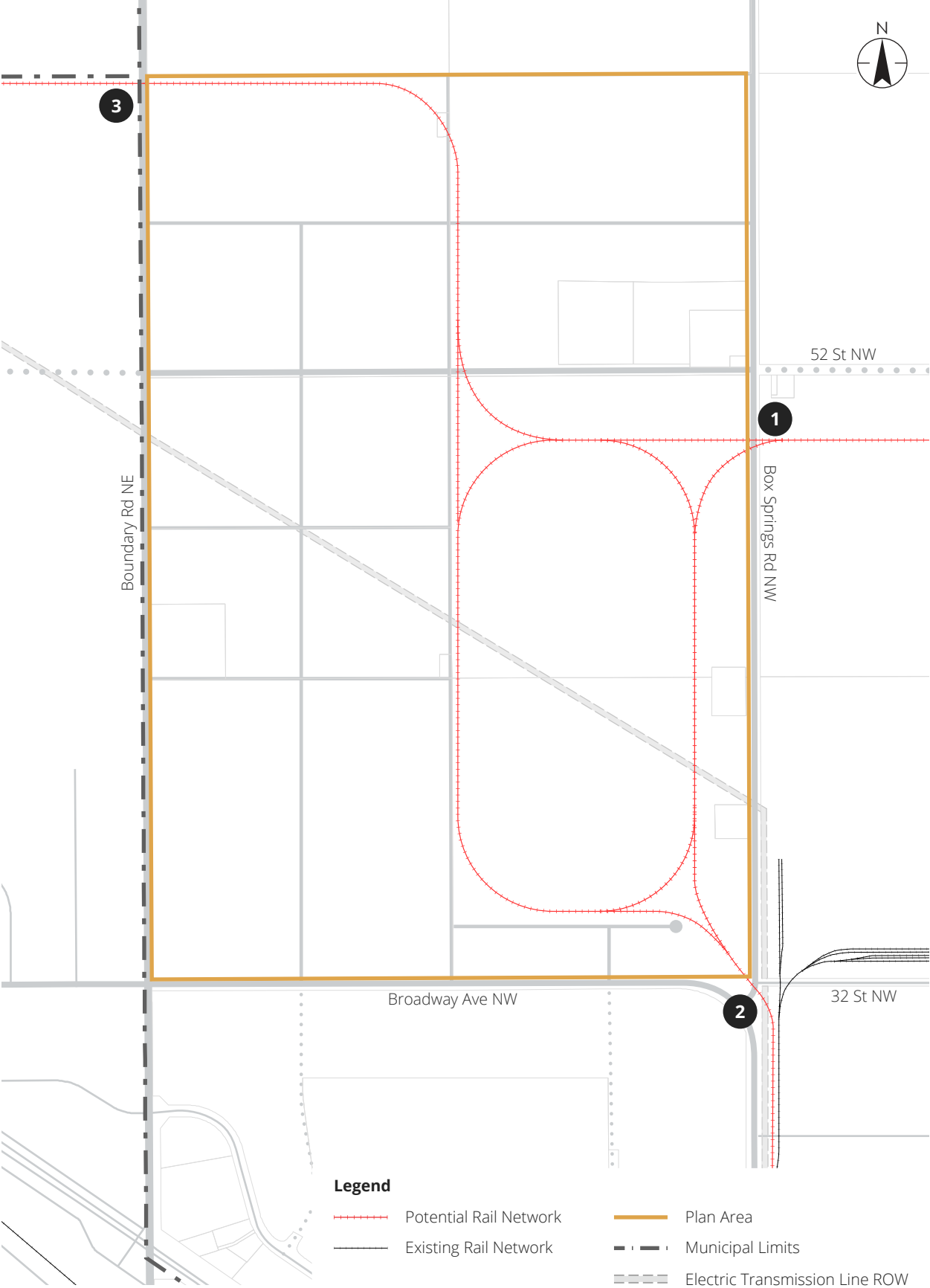
Three potential connection points to provide the Plan Area with rail service have been identified and are conceptually illustrated on **Map 9** below. Each option has its own set of opportunities and constraints which require consideration of existing and future land uses prior to development of rail connection(s) to the Plan Area.

Existing rail operations for adjacent industry must be respected, and potential disturbances or interruptions caused by connections to the Plan Area kept to a minimum. Policies included in this section reflect these impacts to adjacent industry and outline the preferred direction of the Plan to work toward the Plan Area being able to implement rail connectivity moving forward in a practical, logical manner.

Map 9 Conceptual Rail Connections



Map 10 Potential Rail Network



The following summaries outline key considerations related to each potential rail network connection option for the Plan Area. This is not meant to be an exhaustive list of the benefits and constraints to each option; however, highlights several key considerations that contributed to informing rail policies of the Plan (see **Section 6.4.1**).

1 Option 1: Eastern Connection (52 St NW)

The northern, eastern connection to the Plan Area parallel to 52 St NW (identified on **Map 10**) is the preferred rail connection point for the Plan Area.

Benefits:

- Minimizes operational impacts to existing operations of adjacent industry.
- Utilizes the existing CP Rail connection that extends to the intersection of Rotary Centennial Dr NW and Box Springs Rd NW.
- Provides a direct, accessible rail connection to the eastern boundary of the Plan Area.
- Effectively services the eastern heavy industrial area of the Plan.
- The method for extending the existing rail line (utilized by adjacent industry) is understood to be viable with respect to existing operations of adjacent industry.
- Facilitates additional connection opportunities to parcels north and south of the alignment area (north of 52 St NW).
- Least amount of physical land disturbance with respect to existing operations of the adjacent, developed area.

Constraints:

- Purchase of land for a right-of-way is required for implementation and construction.
- The rail alignment must traverse through privately owned land east of the Plan Area, requiring potential compensation by the developer and/or City to the affected landowner(s) for the required right-of-way.
- Grading of rail line may be challenging in this area, requiring further investigation at detail design stage.

2 Option 2: Southeastern Connection (Broadway Ave NW & Box Springs Rd NW)

The southeastern connection to the Plan Area (identified on **Map 10**) represents the second, preferred rail connection point for the Plan Area. The alignment calls for adjustment of the existing, privately owned and maintained rail line in order to run an adjacent, parallel line. However, there are several elements to consider prior to detailed investigations for implementation of this potential connection.

Benefits:

- Most direct access for rail to the Plan Area.
- Contextually consistent with the area (rail adjacent to Box Springs Rd NW).
- Effectively services the eastern Heavy Industrial Area of the Plan.
- Utilizes the existing CP Rail connection that extends to the intersection of Rotary Centennial Dr NW and Box Springs Rd NW.

Constraints:

- Significant amount of utilities and infrastructure are present within the existing right-of-way that must be addressed or relocated at the expense of the developer and/or City.
- Cost of realignment, purchase of adjacent lands to accommodate the right-of-way, and construction of both rail lines would be the responsibility of the developer and/or City.
- Ongoing rail operations of adjacent industry must be allowed to continue during construction of a parallel line.
- Potential impacts to Box Springs Rd NW traffic flow and emergency response.
- Grading of a parallel rail line may be challenging in this area, requiring further investigation at detailed design stage.
- This option also requires crossing of the intersection at Box Springs Rd NW and Broadway Ave NW which could cause disruptions to traffic.

3

Option 3: Direct Connection to CP Rail Network West of Trans-Canada Highway

The northern, western connection to the Plan Area (identified on **Map 10**) represents a long-term approach to providing rail connectivity to the Plan Area. This connection is one that is not likely triggered by the rail connectivity needs of the Plan Area, but represents the strategy for a larger, regional initiative requiring an intermunicipal and provincial coordination approach.

This approach has many benefits from a direct connection to the Plan Area perspective, as well as several potential regional benefits. However, there are significant barriers to implementation that is contingent on the status of the clubs operating at time of Plan adoption (subject to PRO policies listed in **Section 5.5.4**), and must involve several landowners, municipalities, and provincial government agencies in order to successfully implement over the long-term.



Photo by Dan Loran on Unsplash

Benefits:

- Enables a potential relocation of the existing downtown rail terminal to the North Sector/northwest industrial area.
- Does not impact any existing or planned major roadway corridors such as Box Springs Rd NW.
- Provides a primarily linear connection to the larger CP Rail Network.
- Allows for rail to effectively enter and exit a primary service area in Medicine Hat more conducive to major truck traffic than the existing downtown yard location.

Constraints:

- Timing for future implementation is unknown and difficult to predict as of time of Plan preparation.
- Significant cost is required to implement this connection including, but not limited to a Trans-Canada Highway overpass and land acquisition for future rail right-of-way.
- Significant collaboration is required with Medicine Hat, Redcliff, Cypress County, Alberta Transportation, individual landowners, among others, to determine ultimate rights-of-way west of the Plan Area and impacts to the Trans-Canada Highway.
- Impacts to landowners and municipalities outside of the Plan Area are unknown as of time of Plan preparation.
- Multiple Range Road crossings within Cypress County will require consideration and special attention where intersections occur.
- The northern component of the potential rail network, including the western connection option, is subject to the status of special outdoor recreation uses (clubs) operating in the Plan Area at time of Plan adoption.
- Implementation of a potential connection in this area will be subject to Council's discretion as per the PRO policies listed in **Section 5.5.4**.

6.4.1 Rail Policies

- 6.4.1.1** The rail network should generally follow the alignment as shown on **Map 10**.
- 6.4.1.2** Rail connection “Option 1” should be prioritized for providing rail connectivity to the Plan Area, in collaboration with affected businesses and landowners.
- 6.4.1.3** Potential implementation of rail connection “Option 2” shall be done in collaboration with users of the existing rail line parallel to Box Springs Rd NW.
- 6.4.1.4** Potential rail connections “Option 1” and “Option 2” shall prioritize mitigation of potential impacts and disruptions to rail operations of existing industry.
- 6.4.1.5** Potential implementation of rail connection “Option 3” shall be done in collaboration with the Town of Redcliff, Cypress County, Alberta Transportation, CP Rail, potentially impacted landowners, and other relevant agencies as determined by the Development Authority.
- 6.4.1.6** Proposed realignment of the potential rail network as shown in **Map 10** shall require an amendment to this Plan, in addition to an Outline Plan application (or Outline Plan amendment if an existing Outline Plan is in effect).
- 6.4.1.7** Notwithstanding Policy 6.4.1.6, an amendment to this Plan is not required when:
- Proposed changes to the rail network that, in the opinion of the Development Authority, do not deviate significantly from the proposed network shown on **Map 10**, and
 - The developer can demonstrate functionality of the overall rail network within the Plan Area to the satisfaction of the applicable Development Authority (i.e., City & CP Rail).
- 6.4.1.8** Potential implementation of rail contained within quarter sections SE and SW Section 22 (i.e., north of 52 St NW), are subject to PRO policies listed in **Section 5.5.4**.
- 6.4.1.9** Subdivision or Development Permit applications directly adjacent to an existing rail line shall be circulated to the applicable railway operator at the discretion of the relevant Development Authority (or Authorities).



Photo by Dan Loran on Unsplash

7 SERVICING

7.1 GENERAL

This section provides a general overview of sanitary, water, and storm servicing within the Plan Area. Utilities will include the extensions of existing municipal infrastructure from the south of Broadway Ave NW, and in the case of stormwater management could include the drainage of treated stormwater to a natural outfall location in the northern area of the Plan. It should be noted that potable water infrastructure installed to the west of the development is owned and operated by the Town of Redcliff, and extensions of this infrastructure have not been considered in the development of a servicing strategy for this area.

The existing terrain of the ASP lands has been reviewed to establish a logical sequence of utility installation and grading. Regarding grading, the Plan Area is divided into southern and northern drainage areas with the boundary of these areas roughly defined by the AltaLink overhead power line that bisects across the Plan Area from northwest to southeast (illustrated on **Map 6**). It is recommended that natural topography and existing drainage be incorporated into future designs wherever possible to minimize extensive grading efforts for future development. Given the existing grade-breaks and elevation of existing connection points, lift stations as identified will be required within the Plan Area, although the ultimate locations shall be subject to future detail design and staging opportunities.

All utilities within the plan area will be subject to further refinement through:

- Functional Servicing Reports (FSRs),
- Outline Plans, and/or
- Subdivision and detailed design.

The purpose of the Plan is to provide overall direction and guidance on the logical sequencing of infrastructure within the Plan Area, and has considered that designs for future development will be required to adhere to the MSSM, applicable City bylaws, provincial standards (e.g., Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems) and other applicable provincial legislation, policies, and guidelines.

The ultimate characteristics of public and private infrastructure investment within industrial developments is challenging to quantify given the range of servicing requirements within industrial type land uses. For example, water demand and sewage generation for light industrial development may be quite similar to commercial or residential land uses, while heavy industrial uses may require significant water volumes, as well as added capacity to convey and treat large amounts of sewage.

The intent of infrastructure planning at the ASP stage is to provide the City with flexible development direction, given that the scale and timing of future investment by private industry in Medicine Hat is largely unknown as of time of ASP preparation, and constantly evolving.

7.1.1 General Servicing Policies

- 7.1.1.1** The location, size and general standards of the water, sanitary sewer and stormwater management systems shall conform to applicable City guidelines and standards.
- 7.1.1.2** Adequate rights-of-way, easements, or public utility lots shall be provided, as required, accommodating development or extension of necessary municipal utilities.
- 7.1.1.3** Any required facilities should be located to maximize efficiency and integration with existing and future development, while minimizing the burden on any one landowner.
- 7.1.1.4** System capacities shall be reviewed prior to Development Permit approval, with the allocation of capacities to the development determined by the City.
- 7.1.1.5** Locations and sizes of infrastructure should follow the general servicing direction as outlined in the ASP, finalized at detailed design stages of development.

7.2 WATER

A looped, potable water system is recommended to be completed through the Plan Area, as illustrated on **Map 11**. Final pipe-sizing and routing through the Plan Area will be determined at the FSR and detailed design (Subdivision or Development Permit) stage. Final pipe-sizing and future water servicing requirements are subject to industry demands and will be further refined once definitive design flow information is made available through proposed Subdivision and Development Permit proposals.

System Capacity Considerations

The ultimate buildout of the Plan Area exceeds current capacities of downstream systems (at time of Plan adoption) with respect to conveyance and treatment of potable water. Previous infrastructure master planning by the City was limited to approximately half of the current gross developable area of the Plan Area. As a result, short-term growth and infrastructure expansion, while possible, must proceed in a cautious manner through a continuous assessment of system capacities versus development demands. It is recommended that:

1. Continuous engagement with the City's department responsible for water and wastewater occur during all planning and engineering stages to confirm residual capacities within the current water distribution network (refer to **Section 7.2.1** policies).
2. The City undertake Infrastructure Master Planning for the north sector of the city, inclusive of the Plan Area, to ensure that the City's strategic objectives, with respect to investment and growth, can be adequately supported by infrastructure through timely upgrades and new capital investment projects like booster stations, reservoirs, and pipe transmission networks.

Fire

At time of Plan preparation, the Plan Area is located outside of the City's 6 min 20 sec Fire response time standard. Hydrant spacing are to be in accordance with current MSSM standards.

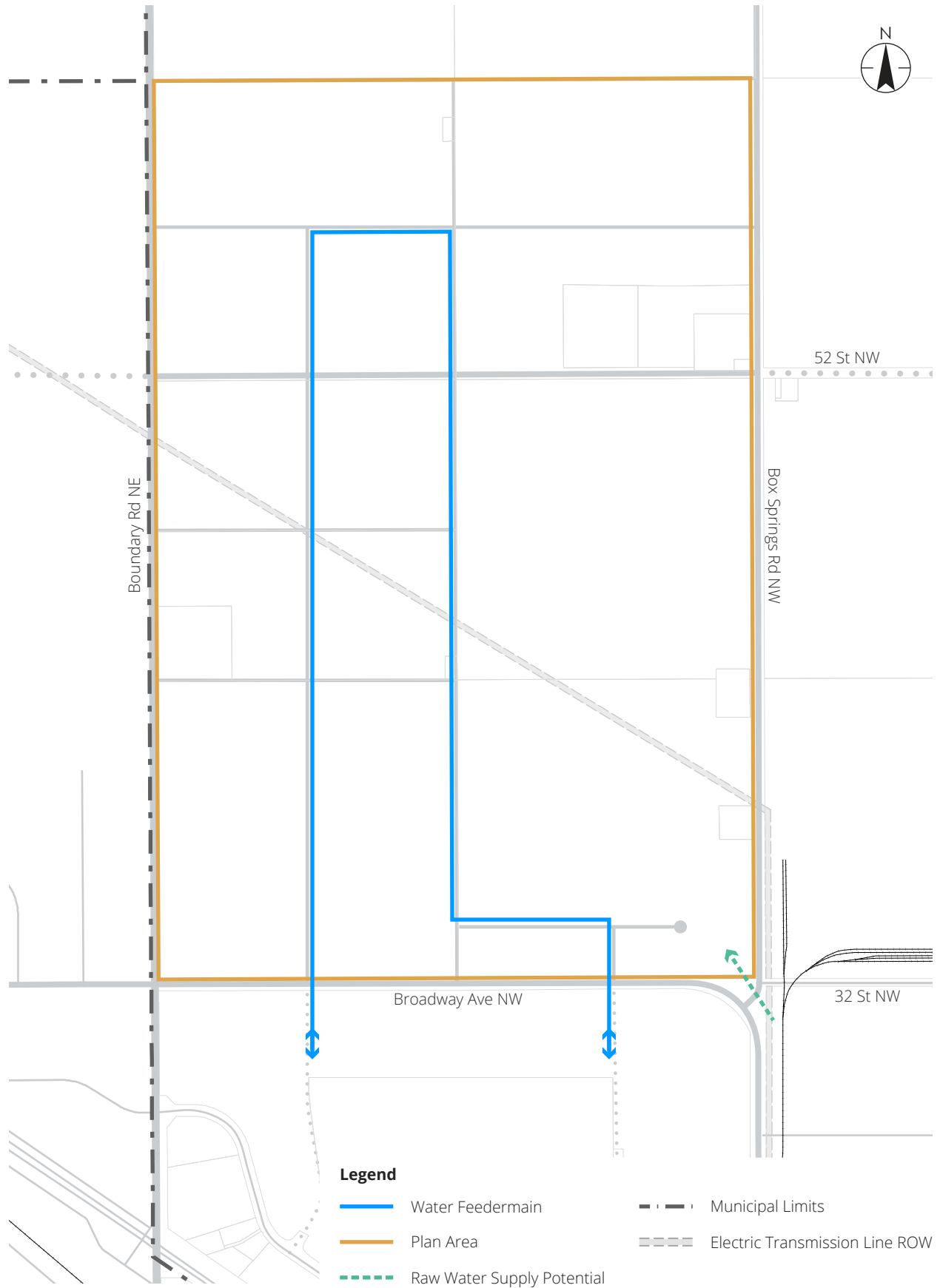
Raw Water Supply

Development of a raw water supply system to the northwest industrial sector of Medicine Hat may be considered by industries who do not require potable water for internal processing/operations. Development of this system would be provided east of the Plan Area and must be coordinated with adjacent landowners and applicable City departments.

7.2.1 Water Servicing Policies

- 7.2.1.1 Proponents shall be required to prepare estimated water demands to the applicable City utility department(s) prior to Subdivision and/or Development Permit application submission.
- 7.2.1.2 Developments anticipating significant water consumption shall demonstrate to the Development Authority that proposed utility extensions will not adversely affect existing users connected to the same system.
- 7.2.1.3 City confirmation that downstream infrastructure has the capacity to convey and treat water to the proposed development shall be required for Subdivision and/or Development Permit approvals.
- 7.2.1.4 The use of raw water for heavy industrial purposes within the Plan Area should be encouraged, where practical.
- 7.2.1.5 Reuse of potable water delivered to large industrial sites within the Plan Area should be encouraged, where practical.

Map 11 Water Servicing



7.3 SANITARY

The proposed sanitary sewer system identified on **Map 12** represents a combination of gravity sewers, a pressurized forcemain, and a lift station in the northeastern region of the Plan Area. As noted in **Section 7.1**, the Plan Area is divided into two major drainage zones. “Sewershed A” will function as a gravity sewershed, serviced by existing infrastructure from the south, and “Sewershed B” will be controlled by a wet well/lift station system that pumps back to “Sewershed A,” or a new sewer trunk system.

System Capacity Considerations

The ultimate buildout of the Plan Area exceeds the capacities of downstream systems (at time of Plan adoption) with respect to conveyance and treatment of sewage. Previous infrastructure master planning by The City of Medicine Hat was limited to approximately half of the current gross developable area of the Plan Area. As a result, short-term growth and infrastructure expansion, while possible, must proceed in a cautious manner through continuous assessment of system capacities versus development demands. It is recommended that:

1. Continuous engagement with the City department responsible for water and wastewater occur during all planning and engineering stages to confirm residual capacities within the current sewer system (refer to **Section 7.3.1** policies).
2. The City undertake Infrastructure Master Planning for the north sector of the city, inclusive of the Plan Area, to ensure that the City's strategic objectives, with respect to investment and growth, can be adequately supported by infrastructure through timely upgrades and new capital investment projects like regional lift stations, forcemains, sewer trunks, and downstream upgrades.

Development of lands north of Broadway Ave NW may proceed in the short-term, based on the following:

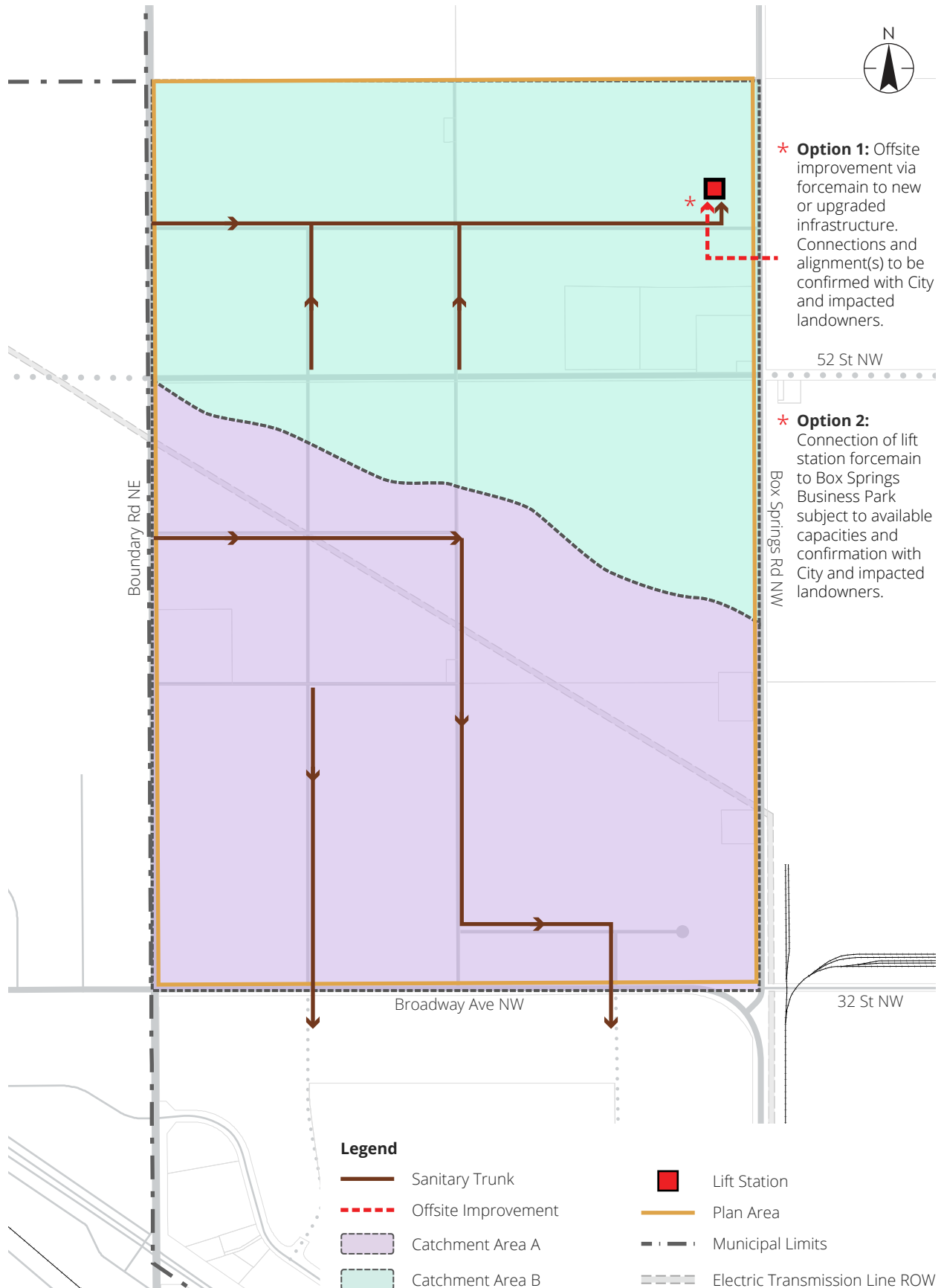
- Existing infrastructure extensions have been sized to accommodate light industrial development in the SE quarter of the plan and for development of light industrial along Broadway Ave NW.

- Available sanitary sewer capacity to the Plan Area for heavy industrial users will be determined once downstream upgrades are confirmed.
- On-site private sewage storage with off-peak system discharge to City systems may be considered at the Development Permit stage on a case-by-case basis.
- Heavy industrial development may be required to create private sewage treatment of wastewater.

7.3.1 Sanitary Policies

- 7.3.1.1** Proposed medium and heavy industrial uses shall be required to prepare estimated sanitary sewage flows and effluent characteristics as part of the Outline Plan or Subdivision/Development Permit application.
- 7.3.1.2** Sewage discharged to public systems shall meet all applicable effluent characteristic requirements of the City and as such, developments may be required to complete on-site treatment of sewage prior to release.
- 7.3.1.3** Reuse of on-site water should be encouraged over wastewater released to municipal sewage systems, where practical.
- 7.3.1.4** Subdivision and Development Permits may only proceed following City confirmation that downstream infrastructure has the capacity to convey and treat wastewater from the proposed development.
- 7.3.1.5** Residual capacities of sewer systems should be re-evaluated by the City at every development stage to ensure the efficient utilization of downstream infrastructure.

Map 12 Sanitary Servicing



7.4 STORMWATER

The stormwater management design for the Plan is governed by the *City of Medicine Hat Northwest Drainage Study*. System design is predicated on a restricted release rate of 3L/s/ha to Outfall F in the South Saskatchewan River. This drainage study included approximately 140 ha of land from the southern boundary of the Plan Area as defined by the boundary between Catchments B and C of the *City of Medicine Hat Northwest Drainage Study*. Lands north of this were not considered in the above mentioned report and as such, a new stormwater management strategy will be required to service the Plan Area.

Map 13 identifies optional stormwater management strategies that should be further investigated prior to Development Permit approvals. Options to facilitate these drainage strategies are described below.

General Design Criteria

The Plan storm systems will be comprised of a minor pipe system network that drains parcels and roadways to major stormwater storage and treatment systems that will in turn discharge to approved outfall locations defined herein as “Nodes”. Roadways and other drainage rights-of-way will also convey emergency overland flow to pond systems when rainfall event intensity exceeds pipe system capacities as defined under current municipal servicing standards.

Given the possibility of parcels with significant levels of impervious surfacing, it is recommended that private parcels be restricted to a 50 L/s/ha release rate and provide for on-site stormwater storage at the 1:100 year rainfall event. The net result of this will be a reduction in:

- Municipal stormwater management facility sizes,
- Minor system pipe sizing in municipal roads, and
- Cumulative effects of overland flows draining to ponds in an emergency rainfall event.

As identified in **Section 6**, a rural roadway cross-section with open ditches could be considered in localized areas. However, the widespread use of road ditches throughout the Plan Area could impact

private parcel development trying to achieve a flow restriction and storage requirement under the criteria identified above. Implementation of ditch systems and ongoing cost of maintenance should also be carefully considered prior to implementation.

It is recommended that pond catchments, as defined, govern overall grading and development strategies to reduce initial capital investment by the City. The creation of large, centralized stormwater management facility can create a significant financial burden to development and, therefore, a staged strategy with multiple pond locations is likely to make investment and growth more manageable.

Facilities in the vicinity of the discharge node are recommended to be created as a wet pond for treatment purposes, with dry ponds and other hybrid facilities being considered elsewhere (i.e., upstream of terminal wet ponds).

Catchment A

Opportunities for development of light/medium industrial catchment is flexible based on two distinct staging strategies. Previous planning documents had defined an interconnection between Catchment B through Catchment A, discharging to Box Springs Rd NW. Under this scenario, Pond B and significant downstream infrastructure would need to be developed to allow for any servicing and development in the southwest sector of the Plan Area. While this option is viable, it may not provide the necessary growth flexibility in the southwest region of the Plan Area without development beginning in the southeast area. In addition, providing for the continuity of emergency overland flow routes from Catchment A to Catchment B is difficult due to terrain (the lands are relatively flat), and may require significant trapped low development along roadways as identified in previous servicing reports and studies for northwest Medicine Hat.

The secondary option is to consider Catchment A as an isolated system that operates as a “zero-release pond,” oversized to allow for off-peak discharge to adjacent stormwater conveyance systems at Broadway Ave NW.

Catchment B

The management of stormwater drainage in Catchment B remains largely unchanged from previous studies and plans produced for this region, and the intent is that either a lift station will be installed to discharge post-development release rates to existing ditches, or that a new trunk line will extend north along Box Springs Rd NW to allow for gravity control of outflow.

Catchment C

Catchment C has been defined to allow for stormwater management without the need for ultimate stormwater facilities in Catchment D. 52 St NW and its stormwater management systems should be incorporated into the design of Catchment C. The creation of a control structure at Pond C can take the form of either a gravity discharge north, or a lift station discharge south as described below.

1. Pond C (see **Map 14** Pond C Option 1) may be created as a zero-release facility that discharges via an interim lift station and force-main to Node C following severe rainfall events “off-peak”. Ultimately, the lift station control would be replaced by a gravity bypass line to Pond D that regulates restricted flow north, or
2. Pond C (see **Map 14** Pond C Option 2) may be designed to allow for pre-development discharge to a natural drainage course North East of the plan area (Node D). Due to terrain of the area, a gravity control discharge to the natural outlet could be completed without a lift station.

Discharge of pre-development flows to the east will require coordination with the adjacent landowner(s) and follow all provincial regulations and legislation.

Catchment D

This catchment area north of 52 St NW is assumed to be the last sector of industrial development within the Plan Area and there are two optional methods of constructing and operating this system:

1. Pond D (see **Map 15** Pond D Option 1) may be created as a zero-release facility that discharges via a lift station and force-main to Node C following severe rainfall events “off-peak”, or
2. Pond D (see **Map 15** Pond D Option 1) may be designed to allow for pre-development discharge to a natural drainage course east of the plan area (Node D). Due to the terrain of the area, this system is likely to be controlled by a lift station and force-main system. However, opportunities for gravity control systems could be considered for future planning stages (i.e., Outline Plan or Subdivision/Development Permit stage).

Discharge of pre-development flows to the east will require coordination with the adjacent landowner and follow all provincial regulations and legislation.

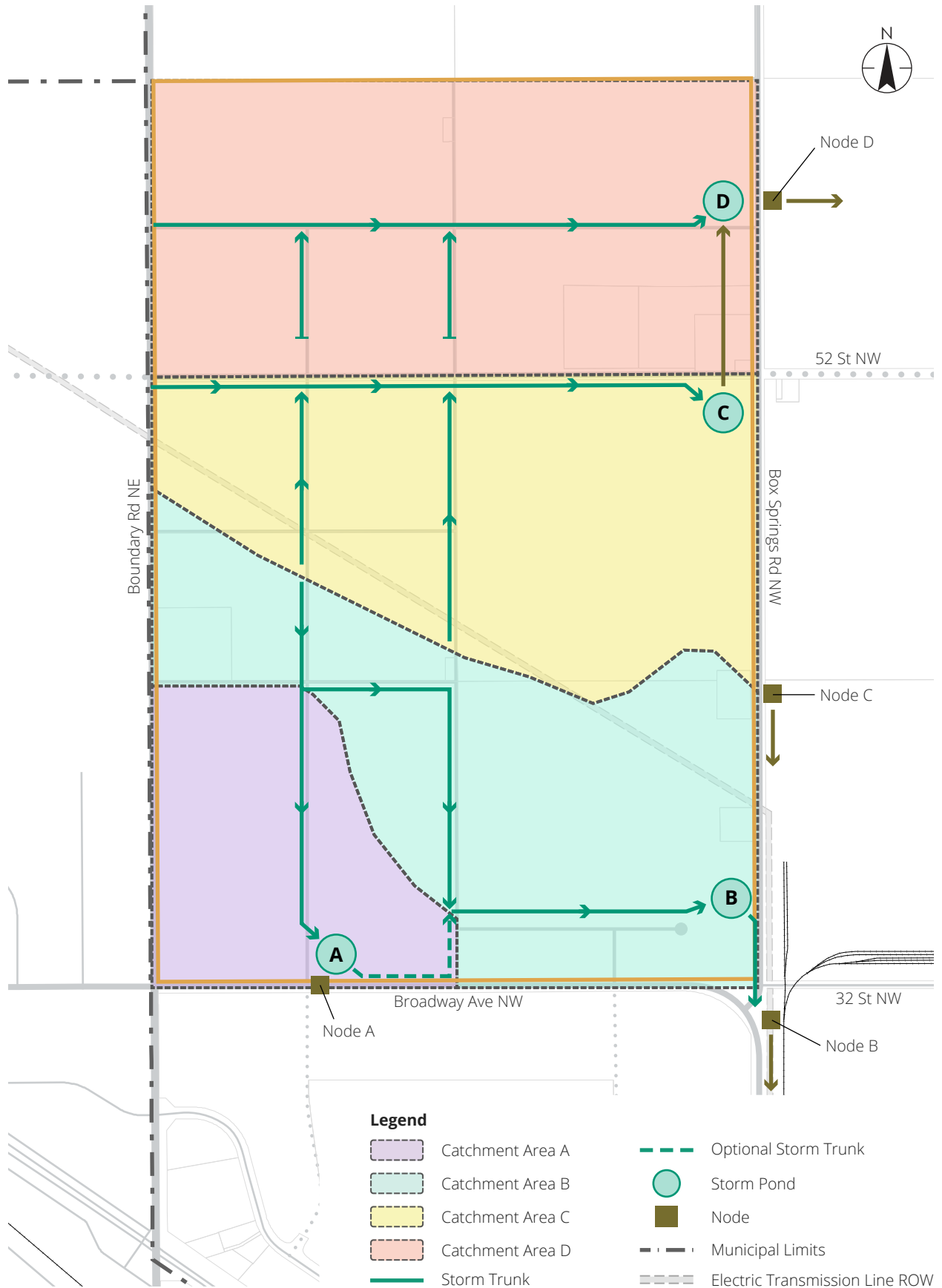
7.4.1 Stormwater Management Policies

7.4.1.1 Stormwater management facilities should be designed to minimize operation and maintenance costs whenever possible.

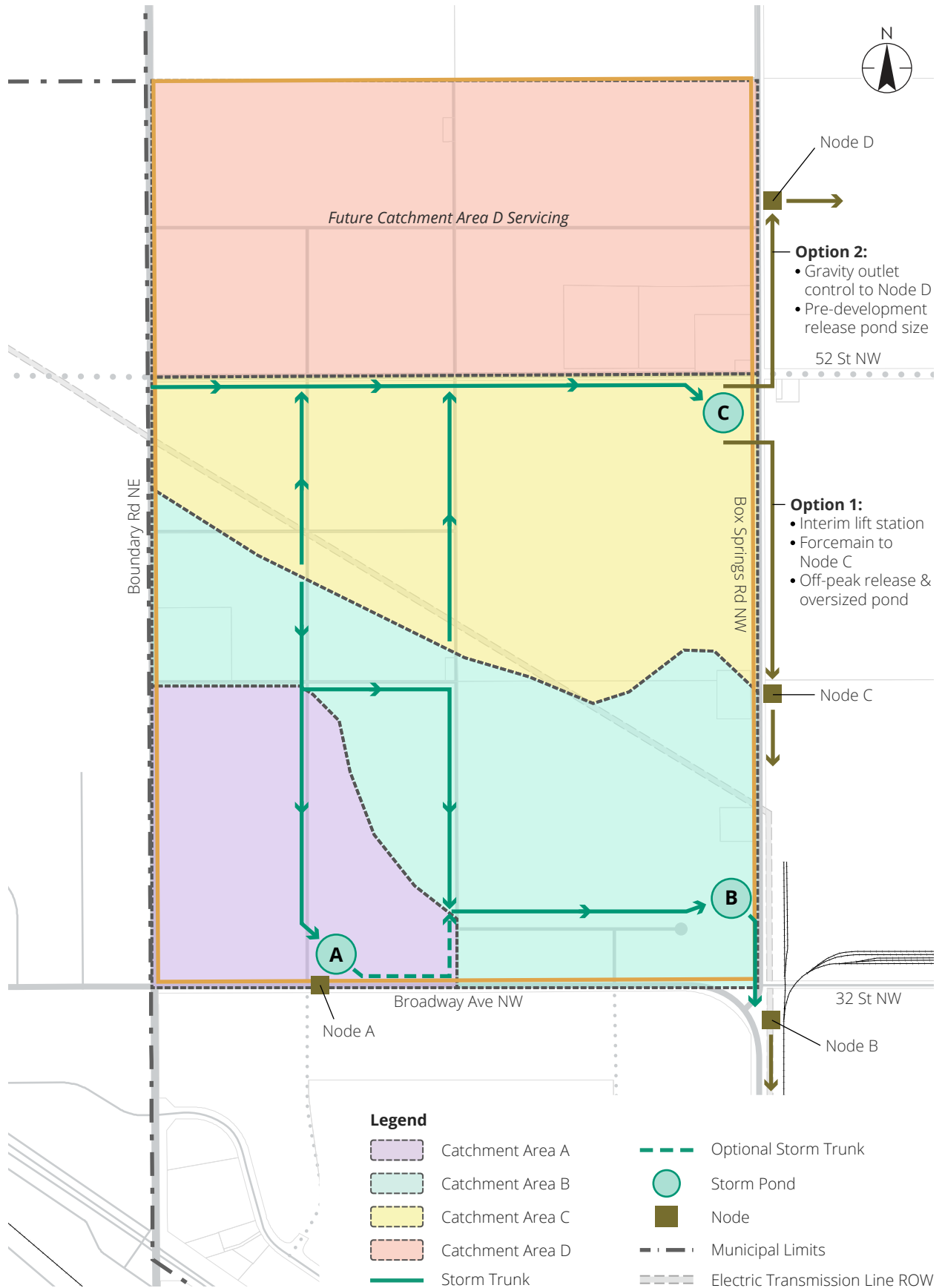
7.4.1.2 Stormwater shall be treated in facilities prior to discharge to municipal systems and natural drainages subject to applicable provincial guidelines and regulations.

7.4.1.3 The ultimate configuration of ponds within the plan area may include additional or fewer number of storm ponds than identified in this Plan, without requiring an amendment to this Plan (subject to the discretion of the Development Authority), depending on the City's needs, development staging, and investment potential. Final location and sizing of ponds shall be determined at Outline Plan/FSR or Subdivision/Development Permit (detailed design) stage.

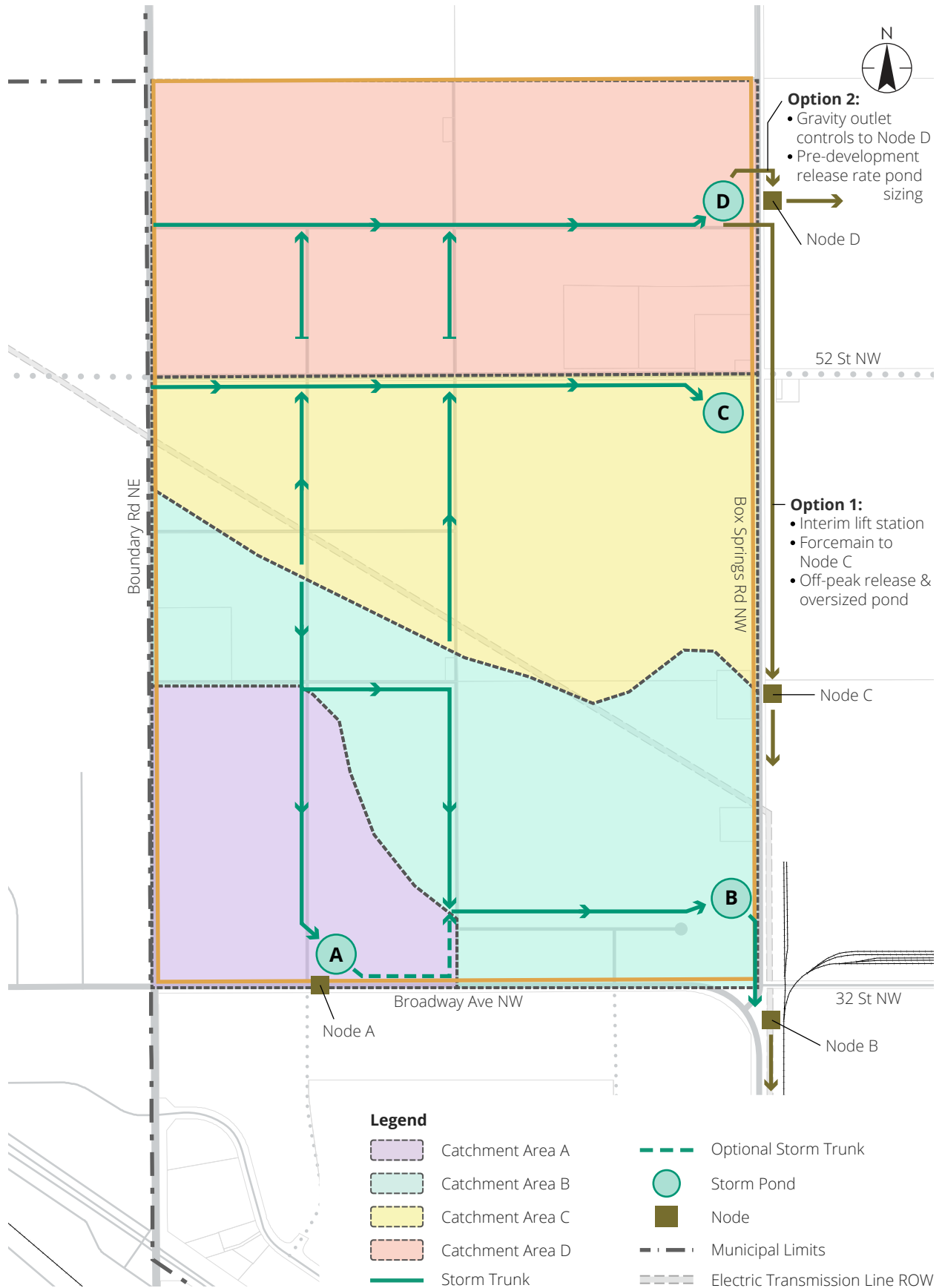
Map 13 Stormwater Servicing



Map 14 Stormwater Pond C Options



Map 15 Stormwater Pond D Options



7.5 SHALLOW UTILITIES

Shallow Utility Servicing includes electricity, natural gas, and telecommunications. The following general information is provided for information and will be subject to confirmation by service providers. Shallow utilities should be constructed prior to, or in collaboration with all associated development within the Plan Area. Rights-of-way and easements are required to accommodate the extension of utility services through the Plan Area.

Shallow utility alignments should be identified at the Outline Plan stage and confirmed prior to or during the Tentative Plan/Development Permit (detailed design) approval stage(s).

Electric

Electricity will be provided by the City from the existing substation (Turbine 16) along Box Spring Rd NW in SE quarter section 22, as generally illustrated on **Map 6**. The substation may require expansion in order to accommodate full buildout of the Plan Area. As such, it is recommended that future developments engage the electrical utility early in the planning and design of their proposed development(s) in advance of Outline Plan and/or Subdivision preparation.

Natural Gas

Natural Gas will be provided by the City and their existing facilities in the area. It is recommended that future developments engage the City's natural gas utility department at Outline Plan stage, or in advance of Subdivision and prior to Development Permit (detailed design) stage.

Telecommunications

Multiple telecommunication providers are anticipated to provide services to the Plan Area. Telecommunication providers have not been engaged as part of Plan preparation. It is recommended that telecommunications service providers be engaged at time of Subdivision or Development Permit/detailed planning and design stage (where Subdivision is not required), to determine the most viable and cost effective servicing for new Subdivision and/or developments within the Plan Area.

8 IMPLEMENTATION

The Northwest Industrial ASP outlines the vision and objectives for the future physical development of the Plan Area and provides guidance with respect to infrastructure development, Outline Plan, land use, Subdivision, and Development Permit decisions. Policies within this section facilitate implementation of this Plan. The principle means of implementation of the Plan should occur through the Outline Plan/land use process.

8.1 PHASING

Phasing identifies the strategy for development of the Plan Area over time. The purpose of the phasing strategy is to provide for the logical and cost effective progression of development. Phasing of development will be driven by the availability of servicing, transportation infrastructure, market demand, and landowner timing.

8.1.1 Phasing Policies

- 8.1.1.1** Industrial uses should develop generally in accordance with the development staging sequence identified in **Map C1**.
- 8.1.1.2** Industrial development proposing to proceed out of sequence may do so without requiring an amendment to this Plan; however, shall be required to provide rationale for the proposal in accordance with the provisions of this Plan and as required by the City.
- 8.1.1.3** Notwithstanding Policy 8.1.1.2, industrial land uses should locate within areas non-adjacent to the potential rail network (identified on **Map 7**) or primary roadway network (as shown on **Map 8**) when the proposed development does not require direct access to primary roadways or the potential rail network.

8.2 OUTLINE PLANS

Outline Plans are considered by the City to be an important component of planning for development of lands within the Plan Area. Outline Plans are generally focused at the quarter section scale or smaller, strategic in character and intended to:

- Establish a local road network and block pattern(s), and apply specific land use districts to the area,
- Clarify technical requirements (e.g., stormwater management, sanitary, etc.), assess impacts to surrounding land uses, and establish appropriate and comprehensive mitigation measures specific to intended development outcomes,
- Facilitate phasing of Subdivision and development, demonstrated through the Outline Plan,
- Facilitate efficient and comprehensive development by encouraging innovative Subdivision design that maximize yields, servicing efficiencies, and on-site development opportunities, and
- Facilitate stakeholder input, where appropriate.

Additional information and guidelines for Outline Plan submissions are provided in **Appendix E**.

8.2.1 Outline Plans Policies

- 8.2.1.1** Except in unique circumstances, or where the future Subdivision of a site is intended, land use, Subdivision, and/or Development Permit approval should not be given unless an approved Outline Plan is in place for the site.
- 8.2.1.2** Applications for land use, Subdivision, and/or Development Permit shall require an approved Outline Plan (or an Outline Plan application submitted concurrently with a proposed Subdivision and/or Development Permit) in areas identified on **Map E1**, unless the City determines one is not required.
- 8.2.1.3** All Outline Plan, Development Permit applications, and any associated infrastructure construction should meet applicable requirements of the IDP, mymh Medicine Hat Master Plan, Land Use Bylaw, this Plan, MSSM, as well as applicable provincial and/or federal requirements.

8.3 SUPPORTING STUDIES

The purpose of these policies is to outline supporting information required by a developer to assist the Development Authority (or Authorities) and Council in evaluating proposals, as well as to ensure their conformity with this Plan.

While implementation of the Plan will be achieved through a variety of planning instruments (e.g., Subdivision, Development Permits, road closures, Development Agreements, etc.), the primary means of implementation should occur through the Outline Plan/land use approval process. As such, comprehensive servicing and transportation studies and analysis shall be conducted in collaboration with Outline Plan preparation, in alignment with relevant information contained within the approved *Northwest Industrial ASP Servicing Strategy*.

8.3.1 Supporting Studies Policies

- 8.3.1.1** In support of any new Outline Plans, proposed development(s), or amendments to this Plan and/or any amendments to existing Outline Plan(s), the City may require one or more of the following supporting studies:
- a. Water and sanitary network analysis.
 - b. Evaluation of noise, air quality, sound, or other hazard and/or environmental conditions within the Outline Plan area.
 - c. Evaluation of on-site geotechnical features.
 - d. Evaluation of on-site environmental conditions.
 - e. Environmental audit of lands within the Outline Plan Area.
 - f. Evaluation of any on-site hydrological conditions.
 - g. Evaluation of proposed servicing.
 - h. Traffic Impact Analysis.
 - i. Any other matter deemed necessary by the City.

8.4 EXISTING DEVELOPMENT

The following policies recognize those existing developments within the Plan Area where land use and Development Permit decisions have been obtained prior to adoption of this Plan.

8.4.1 Existing Development Policies

- 8.4.1.1** An approved use that existed within the Plan Area at the time of adoption of this ASP should be considered to be in compliance with the policies of this Plan.
- 8.4.1.2** All special outdoor recreation uses existing as of time of Plan adoption may be allowed to undergo improvements or minor expansion within existing lease boundaries, subject to evaluation of the proposal by the Development Authority, any overarching regulatory authority or approval body, and, where applicable, condition(s) of land lease.

Appendices

The following appendices do not form part of the statutory portion of the ASP. The intent of the appendices is to provide supplementary information for interpretation of components within the ASP, and additional information with respect to certain policy sections of the ASP.

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Appendix A: Glossary

Abbreviations

The following section expands upon the abbreviations and outlines the meanings of commonly used terms that appear throughout this document.

Abbreviation	Expanded
AER	Alberta Energy Regulator
ASP	Area Structure Plan
CP Rail	Canadian Pacific Railway
ESA	Environmental Site Assessment
HHRA	Human Health Risk Assessment
HRA	Historical Resources Act
HRIA	Historical Resources Impact Assessment
IDP	Intermunicipal Development Plan (known as the 'Tri-Area IDP')
MDP	Municipal Development Plan (mymh Medicine Hat Master Plan)
MGA	Municipal Government Act
MR	Municipal Reserve
MSSM	Municipal Servicing Standards Manual
ROW	Right-of-Way
TIA	Transportation Impact Assessment

Definitions

Area Structure Plan (ASP)

A statutory plan as defined by the Municipal Government Act, that directs the future land use patterns, transportation and utility networks, and sequence of development in new communities.

Biophysical Review

Provides biophysical information to identify significant natural areas and features, facilitating informed decisions regarding protection and enhancement of those features (where necessary), in accordance with City plans and policies carried through subsequent Planning and Subdivision decisions.

City

Where capitalized as the "City of Medicine Hat" or "the City," refers to The City of Medicine Hat as a municipal government or corporation. Where written in lower case as "the city" or as "Medicine Hat," refers to the physical area of the municipality.

Council

The elected Council of The City of Medicine Hat.

Development Authority

The Development Authority is responsible for receiving, processing, and deciding on development applications. A Development Authority may include one or more of: a designated officer, a Municipal Planning Commission, Council, or other persons or organizations (e.g., Alberta Transportation, Alberta Environment and Parks, etc.), associated with the proposed development.

Development Permit

Permission from the Development Authority for construction or changes of use in accordance with the Land Use Bylaw.

Heritage Site

A man-made structure, natural site or other area of historical, cultural and/or architectural significance.

Historical Resources Act (HRA)

Any work of nature or humans that is primarily of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific or aesthetic interest including, but not limited to, a palaeontological, archaeological, historic, or natural site, structure or object.

Historic Resources Impact Assessment (HRIA)

An assessment that evaluates the presence of historical resources in an area and provides recommendations for whether preservation should take place.

Infrastructure

The physical assets developed and used to support the city's people and activities. The City's infrastructure inventory includes such assets as drainage, roads and right-of-way infrastructure, parks and green spaces, buildings, fleet vehicles, transit facilities, buildings, traffic control devices, recreation facilities, computer networks, library, etc.

Intermunicipal Development Plan (IDP)

A plan which provides for the coordination of planning between neighbouring municipalities. Jointly approved and administered by the affected municipalities, it is particularly focused on providing guidance for the development and regulation of lands close to the shared boundary.

Land Use Area

One of the categories of land uses delineated on the Land Use Concept Map and described in policy sections of the ASP.

Municipal Development Plan (MDP)

Titled the "mymh Medicine Hat Master Plan," in Medicine Hat, an MDP is a planning policy document guiding growth and development within The City of Medicine Hat, reflecting the kind of community Medicine Hat would like to see in the future. It is visionary, strategic, long-term, and provides the basis for actions and decisions to both protect and improve quality of life for all residents, present and future.

Municipal Government Act (MGA)

Alberta's provincial legislation which defines how a municipality can function, develop land, raise funds for things like services, and more. The three themes of the MGA are planning and development, governance and administration, and assessment and taxation.

Municipal Planning Commission (MPC)

A committee comprised of representatives from Council and citizen members who have the following functions and duties:

- Act as the principal advisory body to Council in matters relating to land use planning,
- Exercise subdivision powers and duties on behalf of the City in accordance with the Subdivision Authorities Bylaw,
- Carry out the powers and duties of a Development Authority that are assigned to it under the Land Use Bylaw, and
- Carry out other functions and duties that may be assigned to the Commission by Council.

Municipal Reserve (MR)

Land provided, as part of a subdivision, by the developer without compensation for park and school purposes in accordance with the provisions of the Municipal Government Act. This includes lands dedicated as Municipal Reserve (MR), School Reserve (SR) and Municipal and School Reserve (MSR).

Municipal Servicing Standards Manual (MSSM)

Standards which are intended to provide specific guidelines to assist municipalities and developers in the design, preparation and submission of plans and specifications for construction of municipal improvements and systems (roadways, water distribution systems, sewer systems, storm water facilities). Medicine Hat's guidelines are described in the Municipal Servicing Standards Manual (MSSM).

Non-Statutory Plan

Non-statutory plans are bylaws passed by resolution. They are often developed to help encourage a certain direction for development or growth in a particular area. Examples of non-statutory plans include the Roadway Systems Master Plan (2013), Parks System Management Plan (2010), and Cycling Plan (2010), among others.

Outline Plan

A conceptual plan that outlines proposed subdivision, land use classifications, reserves, roadway and trail alignments, parks/open spaces, major utilities, and is supported by research and technical studies but does not contain detailed engineering designs.

Plan Area

The land that is the subject of the ASP.

The Province

Where capitalized as the "Province," refers to the government of the Province of Alberta. Where written in lower case as "the province" or as "Alberta," refers to the physical area of the province.

Public Utility

Development that comprises a system or works used to provide for public consumption, benefit, convenience or use, such as: irrigation; drainage; infrastructure; water/gas/sewer pipes; waste management; telecommunications; among others. Public Utility also may include minor buildings but does not include a water treatment plant, sewage treatment plant, solid waste landfill, or power plant.

Renewable Energy

Energy that is collected from renewable resources, which are naturally replenished on a human timescale, such as solar, wind, rain, watercourse (hydro), and geothermal heat.

South Saskatchewan Regional Plan (SSRP)

A long term regional land use plan for the south area of Alberta including the municipalities of Calgary, Lethbridge, Medicine Hat, Brooks, and Airdrie.

Statutory Plan

A statutory plan is a legal document that must go through three readings and a public hearing before it is adopted. Once adopted, there is a legal obligation on the part of the municipality and residents to adhere to the plan. Examples of statutory plans include MDPs, IDPs, ASPs, and Area Redevelopment Plans (ARPs).

Transportation Impact Assessment (TIA)

A study required to support the transportation aspects of a proposed development that has the potential of generating significant amounts of new transit users, pedestrians, and bicycle and vehicular traffic, or that could potentially change the mobility patterns in the area where it is proposed.

Urban Transect

A method which defines a series of distinct zones in a city, which transition from natural and sparse rural areas to the dense urban core.

Appendix B: Biophysical Review Summary

The general biophysical features in The Plan Area are shown on **Map B1**. The environmental significance rating of each biophysical feature in The Plan Area was ranked as Nil, Low, Moderate or High (**Map B2**). These rankings and their descriptions are summarized in the Northwest Industrial ASP Environmental Features table below. Planning considerations for each feature is also included in the table below.

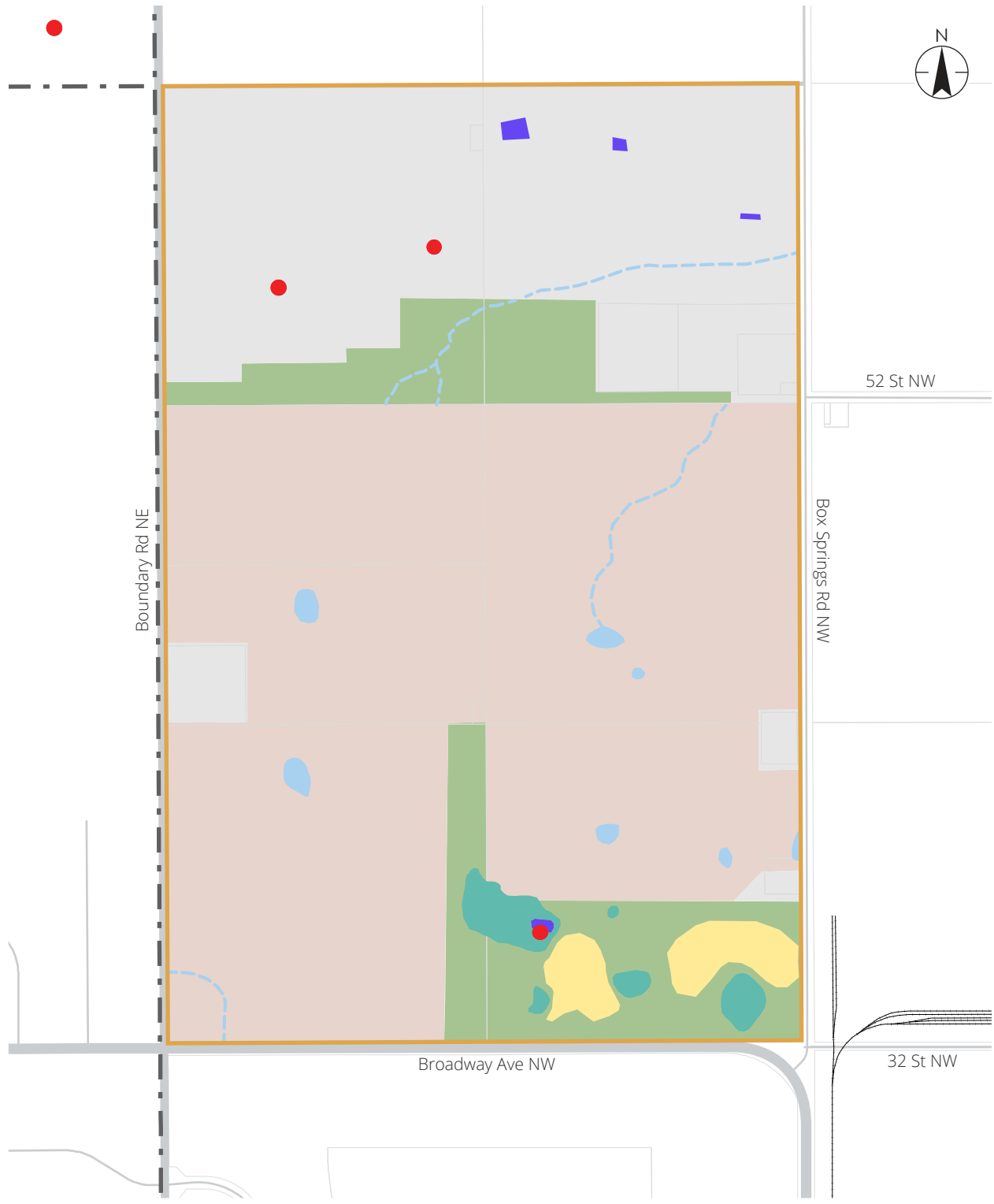
Northwest Industrial ASP Environmental Features

Biophysical Feature (see Map B1)	Environmental Significance Rating	Description & Planning Considerations
Semi-Native Grassland	Moderate	The Semi-native Grassland community supports wildlife habitat for many groups of wildlife including migratory birds, ground-nesting owls, and mammals. The vegetation is composed of moderate density of native species with some exotic species due to historic and surrounding disturbances. Surrounding industrial and agricultural use and development decrease the overall habitat potential of the Semi-native Grassland. Higher quality habitat exists outside the Plan Area closer to the South Saskatchewan River. Preservation of Semi-native Grassland within the Plan Area is challenging given the anticipated industrial use of the future development. Soils within the community may be suitable for use in landscaping to retain the native seedbank and encourage the use of native plantings. If possible, restoration or landscaping using the existing soils should be encouraged in naturalized or non-landscaped areas to allow re-establishment of these species. If landscaping using the existing soils is not possible, it is recommended to reference the species inventoried within the Biophysical Inventory and Impact Assessment report to inform future seeding and planting plans.
Wetlands	Moderate	Temporary marsh wetlands are surrounded by Modified or Semi-native grassland vegetation and provide moderate habitat potential on the landscape. Wetlands are impacted by agriculture and historical disturbances, decreasing the overall habitat potential. While temporary marsh wetlands provide ecosystem services in the form of surface water storage and storm attenuation functions, these small prairie pothole waterbodies are not suitable candidates for waterbody retention in an industrial setting. Not recommended for further study or retention.

Northwest Industrial ASP Environmental Features (continued)

Biophysical Feature (see Map B1)	Environmental Significance Rating	Description & Planning Considerations
Modified Grassland	Low	The Modified Grassland community supports wildlife habitat for many groups of wildlife including ground-nesting owls, migratory birds, and mammals. Biodiversity of the area is low with limited native vegetation. Surrounding industrial and agricultural use and development decrease the overall significance of this feature. Soils within the community may be suitable for use in landscaping to retain the native seedbank and encourage the use of native plantings; however, Semi-native Grassland soils should be prioritized over Modified Grassland.
Ephemeral Waterbodies and Drainages	Low	Ephemeral waterbodies and drainages are heavily impacted by agricultural use and cultivation, decreasing the overall significance of these features. Not suitable candidates for retention in an industrial setting due to ephemeral hydrology and existing disturbances. Not recommended for further study or retention.
Artificial Ponds and Dugouts	Low	Artificial ponds and dugouts are anthropogenic features with some potential habitat for wildlife use increasing overall significance; however, habitat for wildlife and migratory birds should be discouraged for industrial developments as some operations may be directly or indirectly harmful to wildlife. Not suitable candidates for retention and not recommended for further study.
Agricultural Cropland	Low	Agricultural cropland areas have low potential to provide wildlife habitat and no potential for biodiversity. Not recommended for further study or retention.
Industrial/ Commercial Areas	Nil to Low	Provides random and incidental potential for wildlife habitat that have habituated to urban and commercial disturbances; however, habitat for wildlife or migratory birds should be discouraged for industrial developments as some operations may be directly or indirectly harmful to wildlife. Existing incidental wildlife features not recommended for further study or retention.

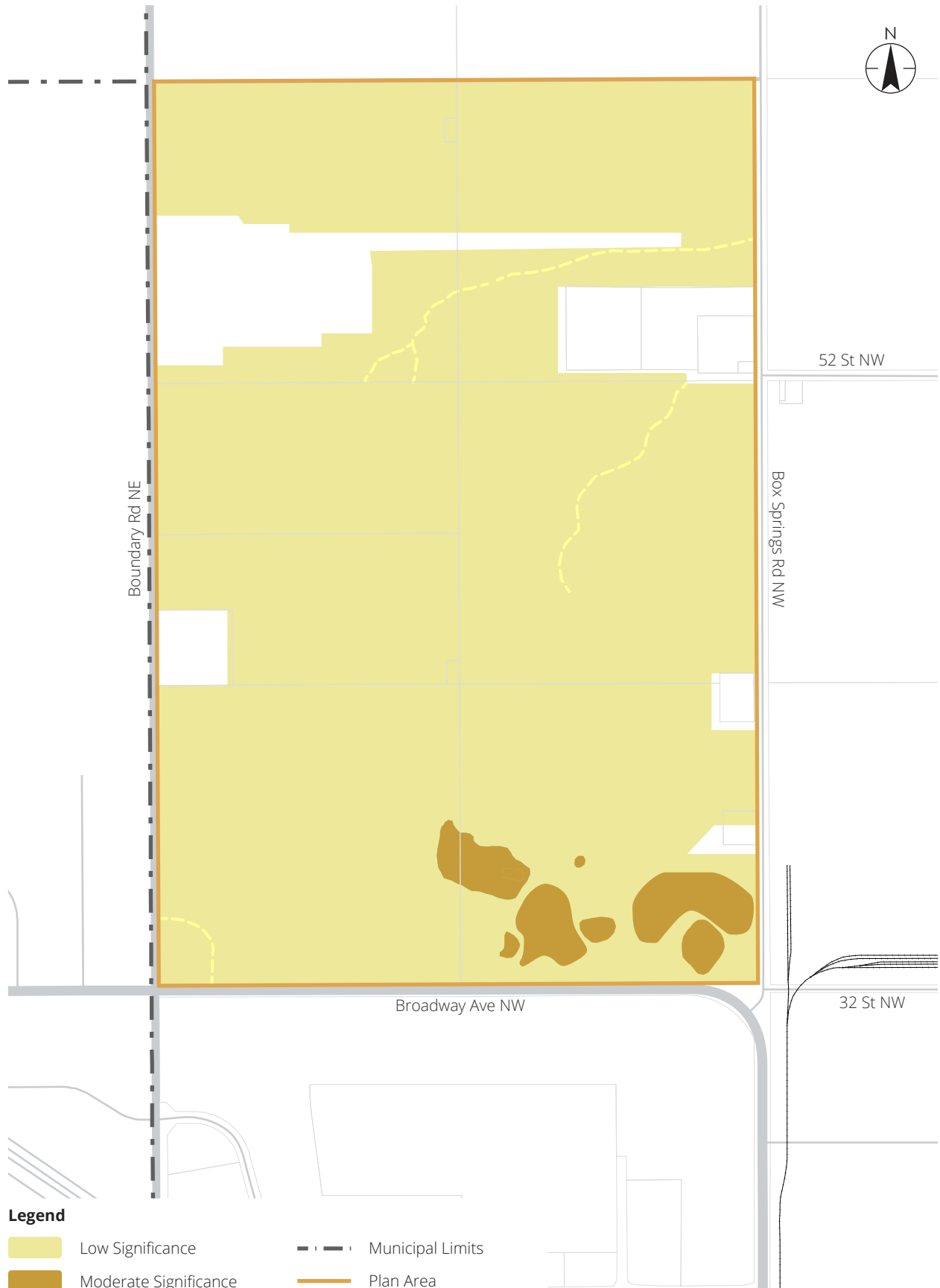
Map B1 Biophysical Features



Legend

 Semi-Native Grassland	 Ephemeral Waterbody	 Wildlife Feature & Observation
 Modified Grassland	 Temporary Marsh	 Plan Area
 Agricultural Cropland	 Dugout	 Municipal Limits
 Industrial/Commercial	 Drainage	

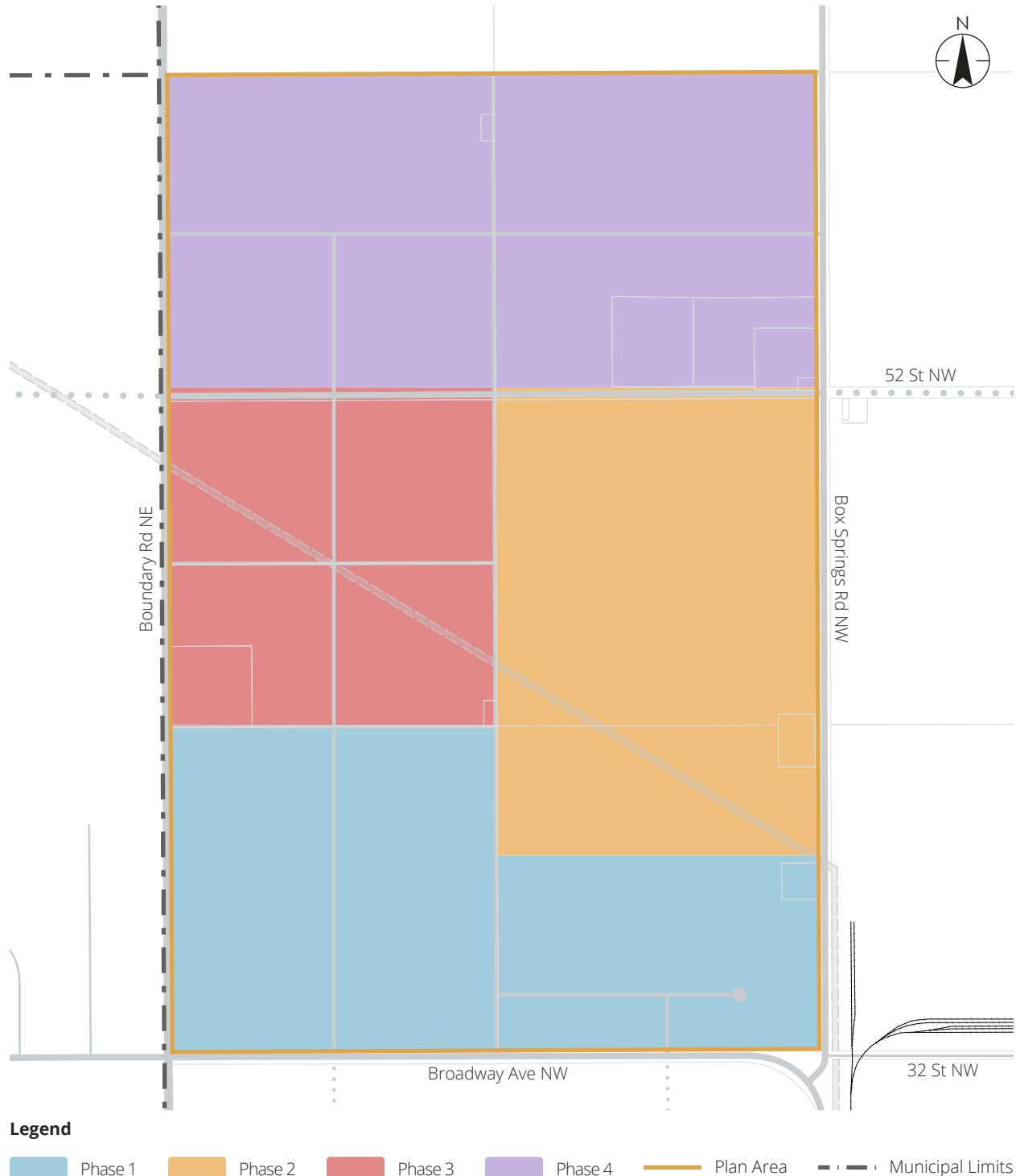
Map B2 Environmental Areas



Appendix C: Development Sequencing

Development of the Plan Area will generally follow the alignment of proposed utility services (i.e., water, sanitary, and storm). This will proceed in a general south to north manner as the ultimate infrastructure is built out, illustrated on **Map C1**. However, the development staging shown below is conceptual in nature and may not reflect actual buildout.

Map C1 Development Sequencing



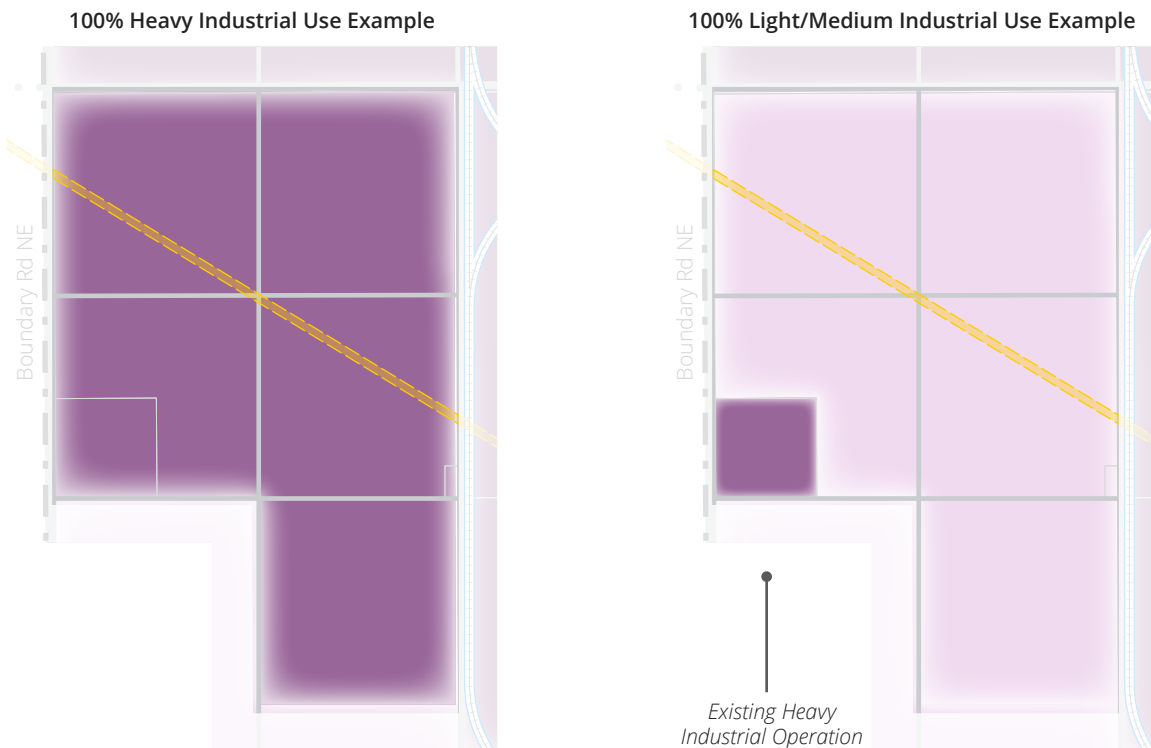
Appendix D: Flex Industrial Scenarios

The purpose of this section is to provide for information regarding potential Flex Industrial Area development scenarios. These illustrations show only some of the potential outcomes for the Flex Industrial Area, illustrating a series of land use type combinations and demonstrating how the interaction between alternate types of industrial uses which may occur within the primary Flex Industrial Area quarter section of the Plan Area.

Where light industrial uses interface with heavy industrial uses in close proximity (e.g., when sharing a property line, are separated by a right-of-way, or separated by a local industrial road), developers are encouraged to look at possible buffering and/or screening to facilitate positive interface conditions recommendations from a functional and aesthetic outcome perspective. Methods of buffering for more significant impacts of heavy industrial uses that would prohibit development in proximity to other light industrial or commercial uses should be considered as per applicable environmental, health, or industry requirements and standards. Designs for potentially conflicting light and heavy industrial land uses should consult with Planning and Development Services for potential treatment options as part of the pre-application meeting process.

Scenario Example 1: 100% Light/Medium or 100% Heavy Industrial Area Type Uses

The Flex Industrial Area may be occupied by all Heavy or Light/Medium Industrial Area type uses. The examples below illustrate allowable industrial use types that may occupy the entirety of the quarter section.

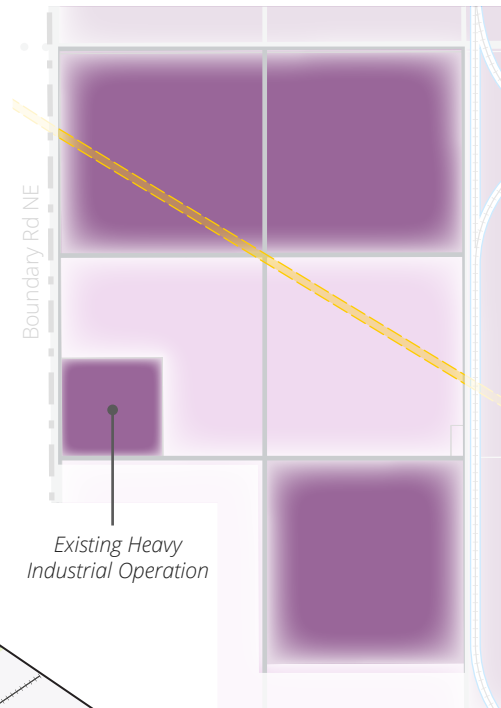


Scenario Example 2: Split of Heavy and Light/Medium Industrial Area Uses

This scenario illustrates a split of light/medium industrial use types occupying the southern half of the NW15 quarter section, with an east-west split occurring along the center of NW15. This is only one example that may occur within the Flex Industrial Area. Other split scenarios could include any configuration in which the Flex Industrial Area is comprised of roughly half Heavy and half Light/Medium Industrial distributed throughout the area.

The example scenario illustrated below shows a single heavy industrial operator occupying the entirety of the Heavy Industrial Area contained in the northern half of NW15. Additionally, should the potential rail network be incorporated within the Plan Area, this illustration demonstrates at a conceptual level how a spur line may be integrated within a heavy industrial site.

Example Split of Industrial Use Types

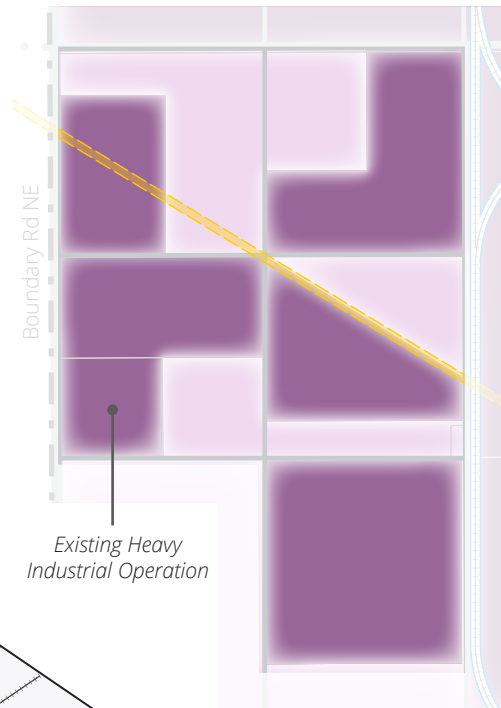


Scenario Example 3: Mixed or “Checker” Layout of Industrial Uses

The mixed or “checker” layout of industrial uses represents the truest mix and flexibility of industrial use types that may be accommodated throughout the Flex Industrial Area.

The example buildout scenario below illustrates one type of potential “checker” pattern that could occur; however, there are multiple types of combinations of light/heavy industrial patterns that could develop within the Flex Industrial Area.

Mixed or “Checker” Layout Example



Appendix E: Outline Plans

Outline Plans are required in those areas identified in **Map E1**. This map will be updated from time to time and approved Outline Plans added to this appendix following approvals.

Outline Plans demonstrate that a site is suitable in terms of its size and configuration to accommodate the intended development and/or ensure proposed Subdivision designs are, or can be, appropriately integrated with the subject area(s).

Outline Plan Requirements

Outline Plans submitted within the Plan Area should contain the following information:

- Specific industrial land use district(s)
- Public roads and description of the road hierarchy structure within the Outline Plan area (e.g., Arterial, collector, local industrial classifications)
- Cross-section details associated with each roadway contained within and immediately adjacent to the Plan Area (from the Medicine Hat MSSM)
- Stormwater management facility areas (i.e., storm ponds)
- Utility alignments (e.g., storm, water, sanitary, etc.)
- Shadow Plan for the surrounding area (if necessary), to ± 100 m of additional context outside the Outline Plan area
- Landscape concepts, berming, and maintenance program proposed (if/where applicable)
- Site concept plan (illustrating proposed building area(s), parking area(s), etc.), where deemed necessary by the Development Authority
- Site grading (existing and/or proposed)
- Transit stops (if any)
- Heritage Trail Network location (if applicable)
- Any other matters deemed appropriate by the City

Outline Plan requirements may be relaxed or modified by the Development Authority where deemed necessary in response to a specific proposal. A high-level description of operational and management strategies of the proposed industrial activity may also be required.

Supporting Studies

The evaluation of an Outline Plan requires submission of supporting transportation, servicing, environmental, market and land use studies. The following guidelines clarify specific technical studies which may be required to accompany Outline Plan applications within the Plan Area:

- Biophysical Impact Assessment (BIA)
- Environmental Site Assessment (ESA) Phase I or II
- Environmental Impact Assessment
- Geotechnical Report
- Transportation Impact Assessment (TIA)
- Impact analysis for one or more of the following, where applicable and as required:
 - Noise and/or Odour Study
 - Air Quality Impact Assessment
 - Human Health Impact Assessment
 - Human Resources Impact Assessment
- Site Grading Plan
- FSR (includes functional engineering design of Water, Sanitary and Storm systems)
- Any other studies deemed necessary by the Development Authority (or Authorities).

Supporting study requirements may be relaxed or modified by the Development Authority where deemed necessary in response to a specific proposal.

Notes:

- ESA Level II requirements are to be determined by the Development Authority, in alignment with the recommendations of the *Phase I Environmental Site Assessment: Northwest Industrial Park Medicine Hat, AB* (2021).
- TIAs should demonstrate the impact of traffic on the municipal and provincial road system, in alignment with the *Northwest Industrial ASP Transportation Impact Assessment* (2021).
- Noise, odour, and air quality impact assessments should be provided to the City for information with approvals obtained through the relevant provincial/federal approval authorities, where applicable.
- Provision of on site and off-site public and private utilities necessary to support full development of the site are to be incorporated in the FSR.

Map E1 Outline Plans in Effect

