TECUMSEH AREA STRUCTURE PLAN

3055 Tecumseh Road
Municipality of Crowsnest Pass

Submitted to:
Municipality of Crowsnest Pass

Prepared for:
SentrySix Land Corp.

SentrySix
Land Corp.

Prepared by:
McElhanney Ltd.

McElhanney

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1.0 INTRODUCTION

1.1 Purpose

The Tecumseh Area Structure Plan (ASP) provides a statutory framework to guide the orderly, environmentally responsible, and economically sustainable subdivision and development of the Plan Area. Its purpose is to ensure that future development:

a. Aligns with the relevant policies in the Municipality of Crowsnest Pass' Municipal Development Plan and Land Use Bylaw and other relevant planning frameworks;

b. Is compatible with surrounding rural land uses;

c. Preserves key environmental values; and

d. Supports a high quality of life through thoughtful site planning and servicing strategies.

1.2. Plan Area Location

The Plan Area is situated in the northwestern region of the Municipality of Crowsnest Pass, approximately 1 kilometre north of Highway 3 (20 Avenue) and to the west of the community of Coleman. It consists of a single titled parcel encompassing a total area of 41.06 hectares. The parcel is municipally addressed as 3055 Tecumseh Road and is legally described as the Northwest Quarter of Section 15, Township 8, Range 5, West of the Fifth Meridian (NW ¼ Sec. 15, Twp. 8, Rge. 5, W5M).

The site is directly accessible via Tecumseh Road bordering the southwestern boundary of the property.

Figure 1. Plan Area Location within the Municipality of Crowsnest Pass

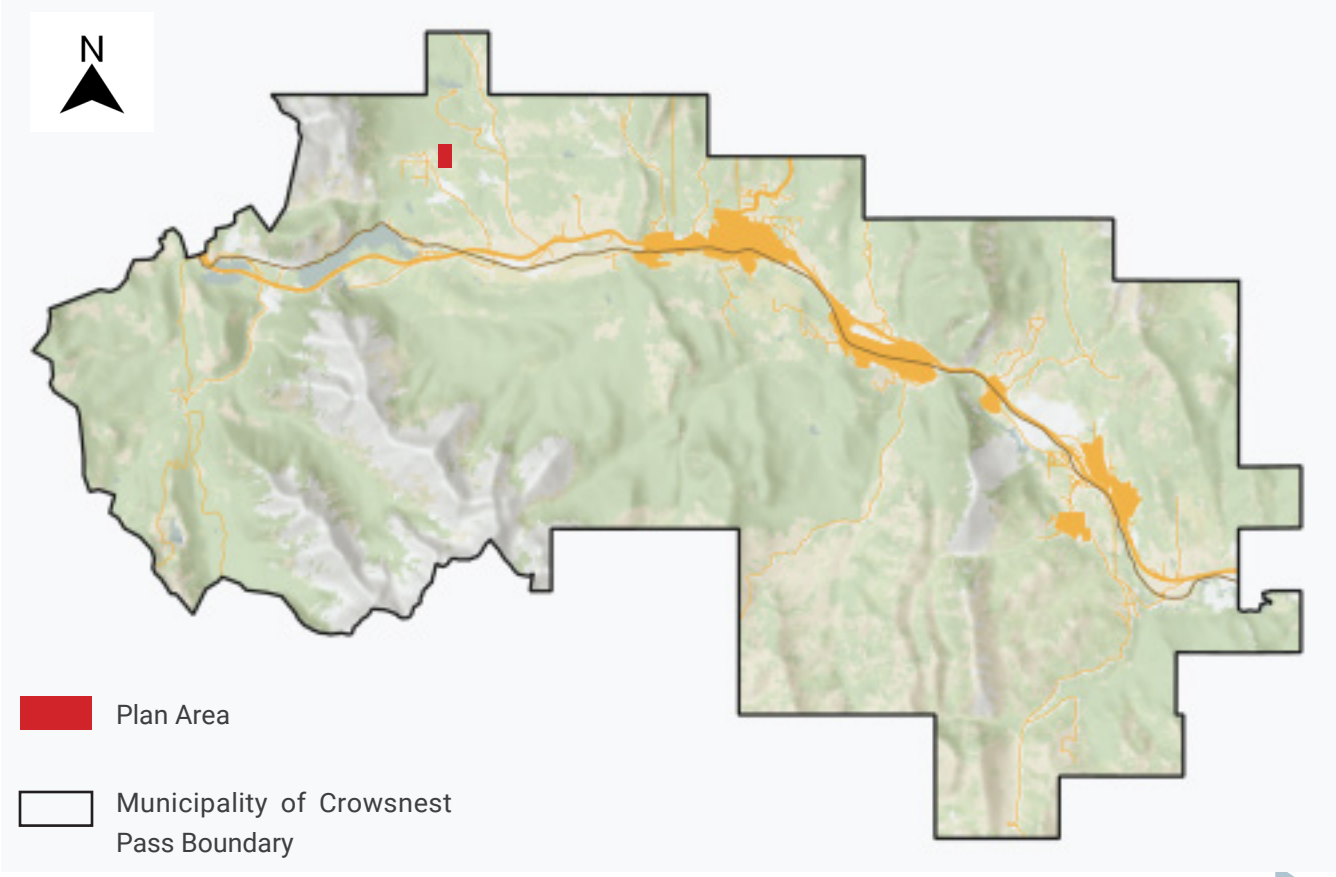

Figure 2. Plan Area Parcel Map

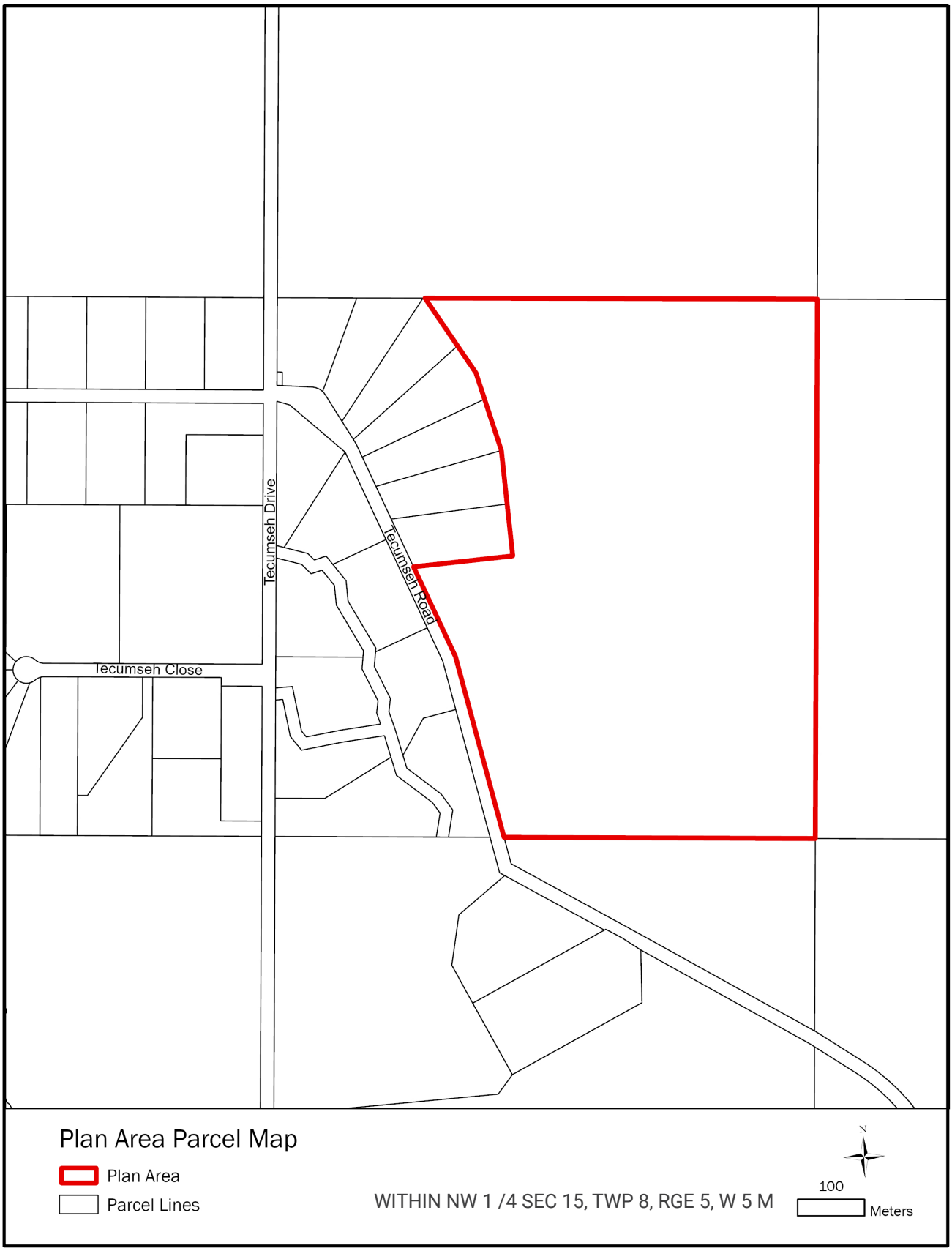

Figure 3. Plan Area Aerial Photo

1.3. Property Ownership

The entire Plan Area is owned by SentrySix Land Corp., a locally based company established in 2023 by three families with a shared vision of fostering gentle, environmentally responsible country residential living in Crowsnest Pass. The company is committed to a development approach that balances rural lifestyle opportunities with long-term ecological stewardship.

SentrySix has prior experience in the region, having successfully developed the SentryRidge community, located directly northwest of the Plan Area. SentryRidge comprises seven three-acre rural residential lots and reflects the same principles of low-impact development, landscape sensitivity, and community character that guide the current proposal.

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1.0 INTRODUCTION cont.

1.4. Plan Preparation

This ASP has been prepared in accordance with the Municipality of Crowsnest Pass Area Structure Plan Applications Policy and associated Procedure, which outlines the expectations, scope, and submission requirements for statutory plan preparation.

This ASP is organized into the following sections:

a. **Section 1 – Introduction:** Outlines the purpose, vision, and intended use of the ASP. It describes the location and context of the Plan Area and provides direction on how the document is to be interpreted and applied in the planning and development process.

b. **Section 2 – Policy Context and Compliance**: Reviews applicable provincial legislation, statutory municipal documents, and local policies. This section demonstrates how the ASP aligns with the Municipality of Crowsnest Pass's Municipal Development Plan, Land Use Bylaw, and other relevant planning frameworks.

c. **Section 3 – Technical Site Analysis:** Summarizes the results of supporting technical studies—including environmental, hydrogeological, geotechnical, archaeological, and servicing assessments—that inform the land use concept and infrastructure design within the Plan Area.

d. **Section 4 – Engagement:** Provides an overview of the engagement process, including statutory notification, consultation with interested parties, agency referrals, and direct neighbour discussions. The section summarizes key feedback themes and how input influenced the ASP's policies and structure.

e. **Sections 5 - Land Use Concept:** Illustrates the proposed development layout, including land use designations, road alignments, environmental reserves, and open space buffers.

f. **Section 6 – Land Use Policies:** Establishes the policy framework that will guide future subdivision and development decisions. Policies address residential use, lot sizes, landscaping, environmental protection, and compatibility with surrounding land uses.

g. **Section 7 – Transportation:** Defines the internal road network and access strategy, including road standards, emergency access, pedestrian connectivity, and traffic management policies.

h. **Section 8 - Servicing and Utilities:** Outlines servicing strategies for water, wastewater, stormwater, and shallow utilities based on engineering best practices and technical assessments. Policies support long-term sustainability and servicing feasibility.

i. **Section 9 – Implementation:** Provides direction for how the ASP will be implemented over time, including land use redesignation, subdivision approval, development agreements, and the process for potential amendments.

1.0 INTRODUCTION cont.

1.5. Plan Interpretation

The policies contained in this ASP shall be interpreted in accordance with the following directives:

- The terms "**shall**," "**must**," "**will**," and "**require**" indicate policies that are mandatory and must be applied.
- The term "**should**" indicates policies that are expected to be followed, but may be modified where warranted due to unique site conditions or practical limitations.
- The term "**may**" denotes discretionary policies, which provide flexibility in implementation.

Unless otherwise specified, all terms and expressions used in this ASP have the meanings assigned to them in the Municipal Government Act, Municipal Development Plan, and Land Use Bylaw.

1.6. Development Vision

The Tecumseh ASP envisions a thoughtfully planned, low-density rural country residential neighbourhood that embraces the natural beauty, rural character, and ecological integrity of Crowsnest Pass. Situated on a gently sloping site with panoramic views of the Rocky Mountains and Crowsnest Pass, the Plan Area is uniquely positioned to support a development that is both scenic and sustainable.

This vision emphasizes site-responsive design, where lot layouts, building envelopes, and infrastructure are carefully planned to preserve important natural features—such as wetlands, wildlife corridors, and mature forest stands—while maintaining privacy, view corridors, and the rural character of the landscape. Open space integration, native landscaping, and FireSmart principles will be key components of the design, reinforcing safety and long-term ecological resilience.


Plan Area Photos


Plan Area Photos

2.0 POLICY CONTEXT AND COMPLIANCE

This ASP has been prepared in accordance with the MGA and is intended to guide the orderly and sustainable subdivision and development of the Plan Area. The ASP has been informed by, and is consistent with, all applicable municipal policies, statutory plans, and regulatory frameworks in place within the Municipality of Crowsnest Pass.

2.1. Alignment with the Municipality of Crowsnest Pass Municipal Development Plan (MDP)

The MDP provides policy direction for long-term growth of the Crowsnest Pass, both in the urban communities and the areas outside of the urban communities. This ASP aligns with the policies of the MDP relevant to the areas outside of the urban communities, as outlined in the table below:

Table 1. Policy Alignment with the MDP

MDP Policy	ASP Alignment	Relevant ASP Sections
1.2.6 Municipal Reserve Dedication Criteria	The municipality proposes municipal reserve dedication to consist of dedication of 10% of gross developable area, consistent with the MGA and MDP provisions.	6.7.
2.3.4 FireSmart Residential Development	FireSmart design principles have been incorporated, including vegetation buffers, building material guidelines, and defensible space measures.	6.3.
2.3.5 Country Residential Development	The ASP supports country residential development with rural-appropriate road networks, passive recreation opportunities, and trail connectivity. The proposed development is outside urban growth nodes and meets MDP criteria for an appropriate residential designation.	6.1. and 6.2.
4.2.5 Environmental Reserve	The ASP establishes Environmental Reserve Easements over wetlands, buffers, and the old growth forest wildlife corridor.	6.6.
4.2.6 Wetlands	Wetlands identified in the biophysical assessment are protected with 30 m buffers and integrated into the stormwater and land use plans.	6.6.
4.2.7 Wildlife Linkage Zones	A continuous wildlife corridor has been established in this ASP.	6.6.
4.3.1 and 5.1.4 Storm Water Management	Stormwater management strategies include on-site infiltration, runoff control, and discharge to wetlands at pre-development rates.	8.3.
4.3.2 Soil Stabilization	Subdivision and development policies address erosion control, sediment protection, and slope-sensitive design.	8.3.

2.0 POLICY CONTEXT AND COMPLIANCE cont.

2.2. Compliance with the Land Use Bylaw (LUB)

The current land use designation of the subject lands under the LUB is Non-Urban Area – NUA-1. This district is intended to accommodate limited rural development. While Single-Detached Dwellings are listed as a discretionary use in the NUA-1 district, the form of clustered rural development proposed in this ASP may be more aligned with an appropriate country residential district available in the land use bylaw.

To enable the proposed land uses, a land use bylaw amendment will be required to re-designate the Plan Area to an appropriate country residential district in the land use bylaw. The ASP will guide future subdivision and development to ensure full compliance with the updated land use designation and other applicable regulations in the Land Use Bylaw, such as those relevant to private sewage disposal. The development shall comply with other associated district regulations, and municipal servicing standards.

2.3. Other Municipal Plans, Policies, and Standards

In addition to the MDP and the LUB, this ASP has been developed with reference to the following municipal documents and strategies:

- Strategic Plan
- FireSmart Bylaw
- Safety Codes Permit Bylaw Amendment – FireSmart Principles
- Engineering and Development Standards

This ASP has been prepared to reflect the intent and direction of all relevant municipal plans, guidelines, and best practices. Where applicable, the ASP provides policy frameworks to implement these objectives at the site level.

Plan Area Photos

3.0 ENGAGEMENT

3.1. Engagement Overview

The preparation of the Tecumseh ASP followed a transparent engagement process consistent with the requirements of Section 636 and 692 of the MGA and the Municipality of Crowsnest Pass Area Structure Plan Area Structure Plan Applications Policy and associated Procedure. Engagement efforts were structured in two key phases:

- **Pre-engagement Notification Phase**, which invited early input from affected landowners, referral agencies, and community organizations;
- **Formal Community Engagement Open House**, which included a Community Open House following the submission of the draft ASP.

This section outlines the engagement objectives, summarizes the process undertaken to date, identifies the interested parties involved, and documents the feedback received and how it was considered in the preparation of the ASP.

3.2. Pre-engagement Phase Process

Purpose

The purpose of the pre-engagement phase is to comply with Section 636 of the Municipal Government Act (MGA) and Section 2.2 of the Municipality of Crowsnest Pass Area Structure Plan Applications Policy and associated Procedure. The objectives of this phase are twofold:

- To formally notify interested and affected parties of the landowner's intent to initiate an ASP for the subject lands, which is being prepared at the landowner's expense.
- To invite early input and representations from interested parties on a variety of planning considerations, including—but not limited to—land use, development density, transportation infrastructure, utility servicing, environmental conservation, and compatibility with surrounding uses. This phase also establishes a process for interested parties to register their intent to remain informed and engaged throughout the ASP preparation and approval process.

Interested Parties

Engagement during the pre-engagement phase included outreach to a range of interested and affected parties, including:

- Adjacent and nearby landowners
- Provincial government departments and regulatory agencies (e.g., Alberta Transportation, Alberta Environment and Protected Areas)
- Utility and infrastructure referral agencies
- Targeted community groups and local organizations with an interest in land use planning and environmental conservation.

3.0 ENGAGEMENT cont.

Engagement Process

On March 13, 2025, a formal Letter of Notification was distributed by the Municipality of Crowsnest Pass to identified interested parties. The notification outlined the intent to prepare an ASP and invited early feedback on the proposed development concept and planning framework. Recipients were requested to provide comments and suggestions no later than April 11, 2025.

An information package, prepared by the applicant and attached to the letter, included:

- A description of the proposed development vision
- The guiding principles for the ASP
- An outline of the engagement process and opportunities for participation
- A Frequently Asked Questions (FAQ) section to address common inquiries and clarify the planning framework and approval process

This early notification phase was designed to support transparent communication and to ensure that key interested parties were given the opportunity to participate at the outset of the planning process and register their intent to remain involved.

Numerous responses were received from adjacent landowners and nearby residents.

Nature Conservancy of Canada (NCC), through discussions with the developers, expressed appreciation for the planning team's approach and provided recommendations regarding environmental protection.

Individual phone call conversations were conducted with residents living directly adjacent to the Plan Area. These discussions provided site-specific perspectives on groundwater availability, protection of natural features, and the need for visual and privacy buffers between new development and existing homes.

3.3. What We Heard and How Input Was Incorporated into the ASP

A total of 22 responses were received from individual residents, utility providers, public agencies, and environmental groups. Key feedback themes are summarized below:

Regulatory and Utility Agency Responses

- ATCO and TELUS both confirmed they had no objections to the ASP, and no conflicts with their infrastructure were identified.
- Fortis Alberta similarly indicated no objection, subject to future application for shallow services at the time of subdivision.
- Alberta Health Services – Environmental Public Health (AHS-EPH) emphasized that:
  - All lots must have a legal and potable water source;
  - Any private water or wastewater systems must be entirely contained on the property to avoid future conflict;
  - AHS supports connection to municipal water and sewer where feasible and requests review of the draft ASP and subdivision plan.

3.0 ENGAGEMENT cont.

Table 2. Pre-engagement Summary

What We Heard From Adjacent Land Owners and Community Organizations	How We Addressed the Feedback in the ASP	Relevant ASP Sections and Policies
Water Supply and Servicing Concerns • Emphasized groundwater protection. • Questions about capacity for new wells and septic systems without significant infrastructure upgrades. • Risk of well interference and septic field saturation on sensitive lots.	• Groundwater Availability Assessment completed to confirm sustainable well capacity. • Well yield testing requirements established for any lot relying on private groundwater wells. • Mandatory cistern installations required on each well-serviced lot to reduce peak aquifer demand and support groundwater sustainability. • Geotechnical assessment confirmed site suitability for private septic systems; wastewater servicing policies ensure systems are fully contained on-site.	4.5 4.6 8.2 8.3 8.4
Transportation and Secondary Access • Concerns about increased traffic. • Adequacy of secondary access routes.	• A 6-metre-wide laneway and additional parking area included to enhance response access and provide secondary access routes. • Road design standards incorporated to ensure safe sightlines, secondary access, and signage.	5.7 5.8 7.4 7.5
Environmental Protection • Strong emphasis on preserving natural features, wildlife corridors, wetlands, and minimizing tree clearing. • Recommendation to create Environmental Reserve Easements (EREs) around sensitive habitats. • Support for establishing a dedicated wildlife corridor through old-growth forest. • Recommend timing construction to avoid migratory bird and elk movement periods.	• Protection of all identified wetlands through Environmental Reserve dedication and Environmental Reserve Easements, supported by 30-metre vegetated buffers to protect water quality and habitat. • A continuous wildlife corridor established as Municipal Reserve, ensuring connectivity to regional wildlife movement routes • Construction timing policies included to avoid disturbance during migratory bird and elk movement seasons.	5.3 5.4 5.5 5.6 6.4 6.5 6.6 6.7
Visual Impact and Rural Character • Desire to preserve scenic views. • Support for increased lot sizes to reduce environmental and visual impacts. • Request for privacy buffers between new development and existing homes.	• Strategic landscape buffer policies included to minimize visual impacts, maintain privacy for adjacent landowners. • Policies reinforce native vegetation retention, avoid formal urban-style landscaping, and maintain rural character. • Larger lot sizes and clustered development patterns minimize overall environmental footprint.	5.2 5.3 6.1 6.2 6.3 6.4 6.5

3.0 ENGAGEMENT cont.

3.4. Community Open House

To represent best practice in transparent, participatory planning and to meaningfully involve residents and interested parties in the refinement of the proposed ASP, a community open house was held on June 18th, 2025, from 4:00pm to 8:00pm at the Blairmore Lion's Pride Club. Approximately 24 participants attended the event.

Ten boards were on display at the open house inviting participants to engage in dialogue with the applicant and planning team as well as posting sticky notes in response to information displayed. The open house provided an opportunity for interested parties identified during the pre-engagement phase to review and comment on the proposed land use framework, development concept, and policy direction outlined in the draft ASP.

Objectives of the Open House included:

- Presenting the proposed land use concept and key planning policies in an accessible and informative format;
- Facilitating dialogue between the applicant and community members;
- Collecting comments, questions, and suggestions from attendees through feedback forms, interactive display boards, and direct discussions; and
- Clarifying the ASP process, timelines, and how public input will influence the final version of the plan.

Feedback collected during the open house was compiled, analyzed, and summarized by the applicant and planning team. The draft ASP was reviewed in light of this feedback, as well as comments provided by municipal administration, and revised accordingly to better reflect community interests, technical findings, and policy alignment. Themes from the engagement summary are presented below.

The following concerns were identified during discussions at the open house:

- **Environment** - Participants were very concerned about the proposed development's impact to wildlife.
- **Water** - Participants were concerned that development would impact groundwater availability.
- **Condition of Tecumseh Road** - Participants were concerned about the additional traffic on the road and how it would affect the road conditions.
- **Privacy** - While not as prominent as the above concerns, this was brought up by two participants.

Our response/what we changed in the draft ASP to address the above concerns:

- **Environment** - Based on the completed environmental study, this was addressed by preserving a significant portion of the property through environmental reserve, along with environmental reserve easement around all of the wetlands. An additional 30-metre environmental reserve easement corridor was added to the NW corner of the Plan Area adjacent to the existing subdivided lots (shown on the Land Use Concept) to connect the wildlife corridors to the north and south with Wetland #1 (shown on Figure 7). Additionally, policy 6.5.3.f was revised to require wildlife-friendly fencing (e.g., split-rail fencing or low-impact plantings) in landscape buffers throughout the entirety of the Plan Area, as opposed to what it stated previously only requiring it where buffers adjoined the Wildlife Corridor. Policy 6.6.4.f was revised to discourage new barbed wire fencing and require it to follow Alberta Conservation Society guidelines for maximum top wire height, minimum bottom wire height, and smooth top

3.0 ENGAGEMENT cont.

and bottom wires if installed.

- **Water** - This has been addressed through the completion of the hydrology study, highlighting capacity for 17 parcels to have wells in addition to cisterns, and any parcels beyond the initial 17 to have cisterns only.
- **Condition of Tecumseh Road** - As this is a municipal road and thus outside the scope of this ASP, this would be addressed by the municipality. The project team will continue to highlight this as a concern raised by participants for municipal consideration.

3.5. Next Steps - Council Consideration

The ASP will be brought forward to Council for consideration and decision-making, including a public hearing and three readings.

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4.0 TECHNICAL SITE ANALYSIS

4.1. Existing and Surrounding Land Uses

The Plan Area currently contains a vacant trailer structure, which is expected to be removed. The remainder of the site is undeveloped and has historically been used for horse grazing.

Surrounding land uses include:

- West: Established country residential lots, designated GCR-1.
- North: Crown land containing the 1201L 500 kV AltaLink powerline, designated ATV and cross-country ski trails.
- East & South: Privately owned quarter-sections designated as Non-Urban Area, with low-density residential dwellings.

4.2. Topography

The Plan Area has a varied landscape, with elevations ranging from 1,427 metres in the south to 1,446 metres in the northwest.

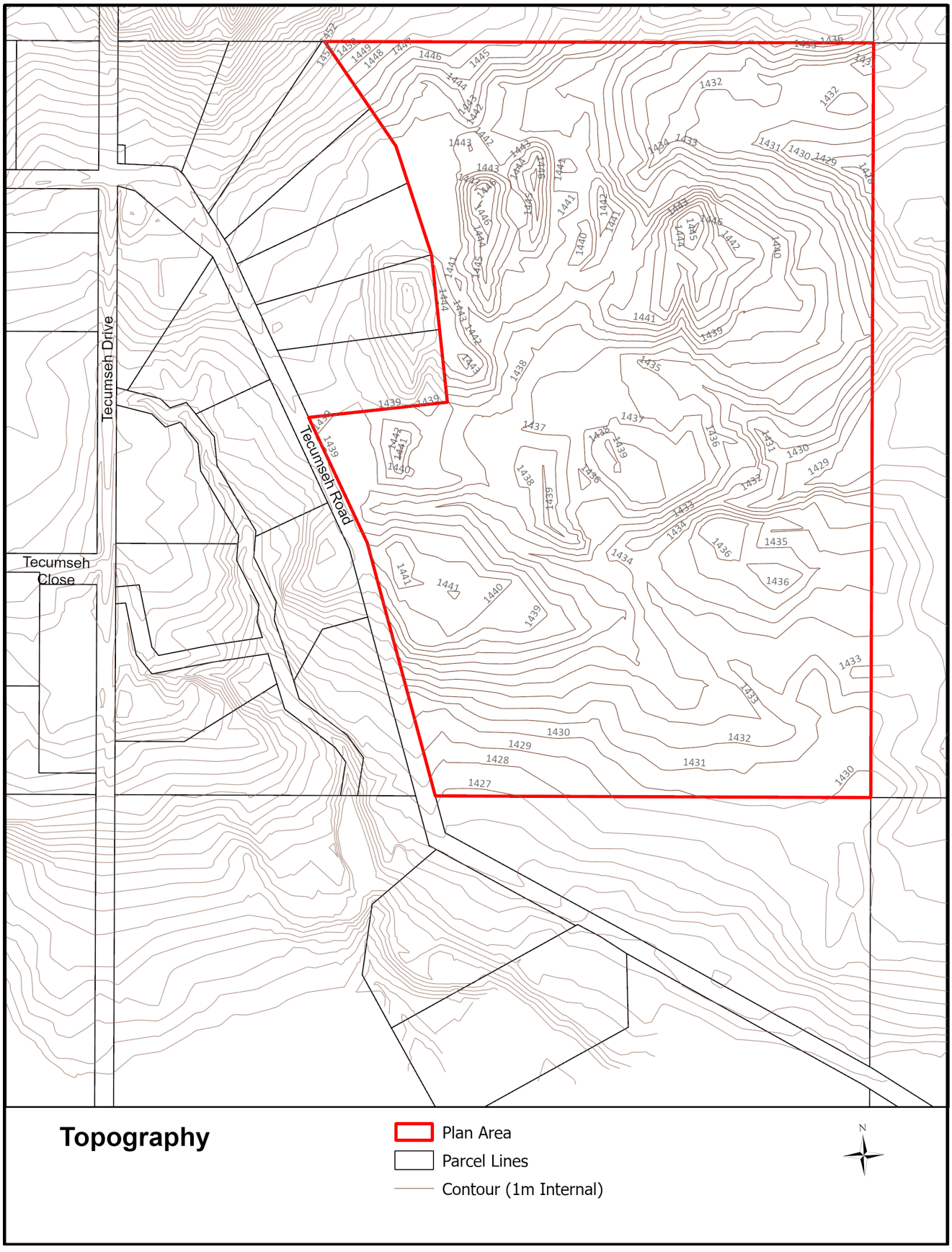
- The central and northern portions contain knolls and steeper ridges.
- The southern and eastern parts have gentler, more rolling terrain.


Plan Area Photos


Plan Area Photos


Plan Area Photos

Figure 4. Topography Map



4.0 TECHNICAL SITE ANALYSIS cont.

4.3. Historical and Archaeological Review

A Historical Resources Impact Assessment (HRIA) was completed by Atlatl Archaeology Ltd. in October 2023, in accordance with Alberta's Historical Resources Act, to support the ASP. The assessment included a desktop review, pedestrian survey, 166 shovel tests, five deep backhoe tests, and the examination of 97 natural exposures across the project area. The objective was to identify any archaeological sites or materials that may be affected by the development. Given the limited cultural material recovered, the negative results across the majority of test areas, and the lack of features indicating significant archaeological potential, no further archaeological work is recommended. The report concludes with a recommendation for historical resources clearance, allowing the project to proceed without additional archaeological constraints.

Alberta's Historic Resources Management Branch granted Historical Resources Act approval for the Plan Area on February 15, 2024.

In accordance with Section 31 of the Historical Resources Act, the ASP will include the following policy: "...a person who discovers an historic resource in the course of making an excavation for a purpose other than for the purpose of seeking historic resources shall forthwith notify the Ministry of the discovery".

4.4. Wetland and Biophysical Assessment

A Biophysical Assessment (BA) was completed by McElhanney Ltd. on February 21, 2025 in support of the ASP. The purpose of the BA was to identify valued ecosystem components (VECs) and environmentally sensitive features that may influence the future layout and development of the Plan Area. Key findings indicate the presence of nine wetlands and areas of high value forest, which provide moderate to high value habitat for wildlife. The site lies within provincial wildlife sensitivity zones and is adjacent to Nature Conservancy of Canada (NCC) conservation lands, reinforcing the ecological importance of the area. The report recommends preserving the old growth forest corridor and all nine wetlands, aligning them with a proposed wildlife corridor that supports regional connectivity. Development should avoid high-value habitats where possible, concentrate within previously disturbed areas, and follow best management practices. Future permitting requirements under the Alberta Water Act and other environmental legislation may apply if impacts to wetlands or sensitive species cannot be avoided.

Key Recommendations:

- Recommended Avoidance Areas Map (Figure 7)
- Preserve all wetlands with 30 m buffers.
- Establish a continuous wildlife corridor through the old growth forest.
- Focus development in already-disturbed areas to avoid habitat loss.

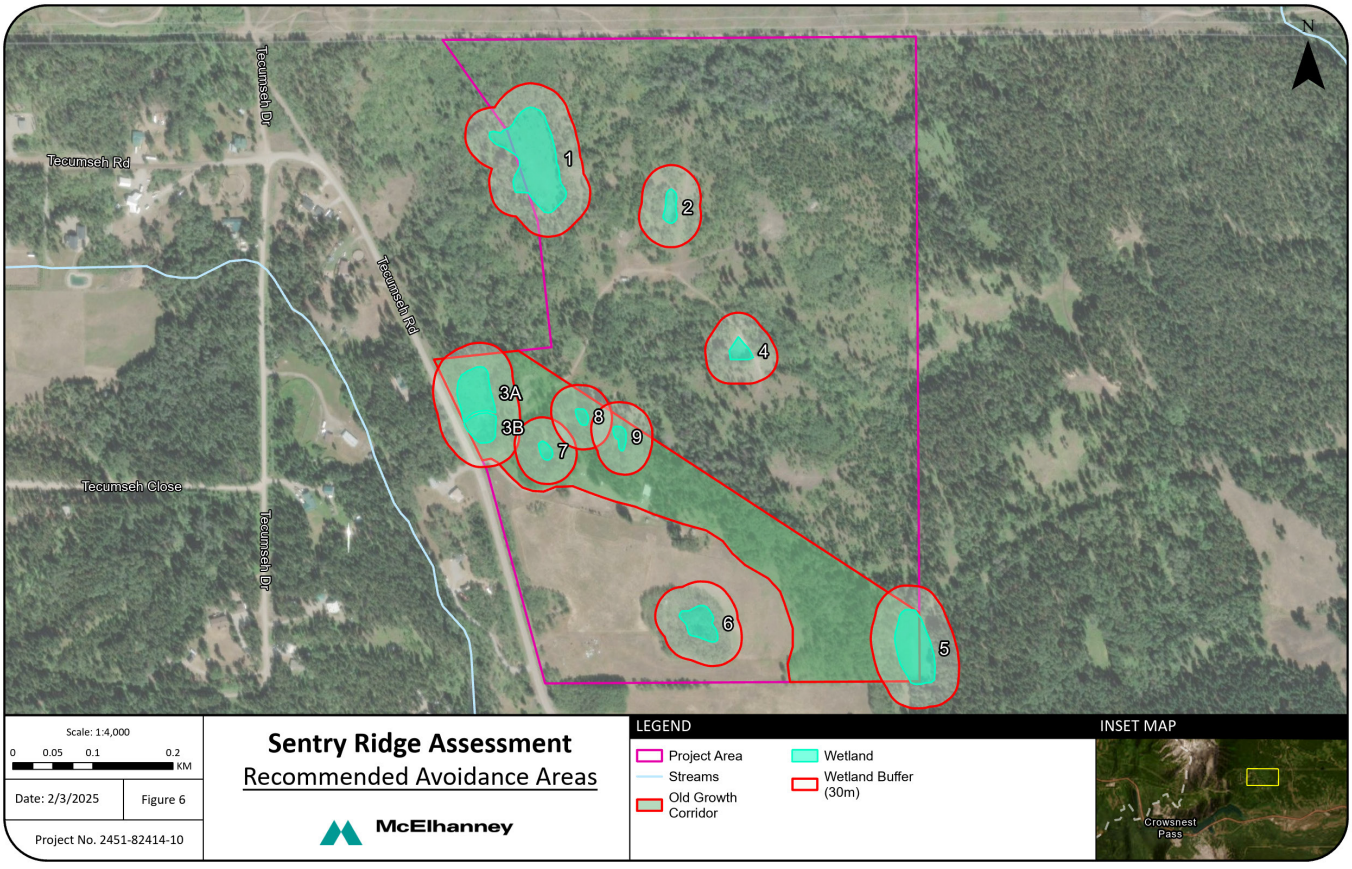
These findings shaped the ASP's land use concept and the designation of Environmental Reserve Easements.

4.0 TECHNICAL SITE ANALYSIS cont.

Figure 5. Shallow open water wetland in northern area

Figure 6. Old growth area, open and dominated by sedge

Figure 7. Recommended Avoidance Areas Map



4.0 TECHNICAL SITE ANALYSIS cont.

4.5. Geotechnical Assessment Report

A Geotechnical Evaluation was completed by BDT Engineering Ltd. in October 2023 to assess soil conditions, groundwater characteristics, and foundation feasibility for the proposed country residential development within the Plan Area. The investigation included excavation of 15 test pits, laboratory testing of soil samples, and installation of groundwater monitoring standpipes to evaluate subsurface profiles and hydrological conditions.

Subsurface Conditions
The Plan Area is underlain by a typical sequence of topsoil, followed by layers of sand, gravel, clay till, and shallow bedrock. Groundwater was generally encountered below 2.5 metres, or not encountered at all, suggesting favourable conditions for development.

Overall Site Suitability
Based on the geotechnical findings, the Plan Area is deemed suitable for low-density residential development. The soils exhibit stable characteristics, and the site supports the use of shallow foundation systems for residential structures. In localized areas with shallow bedrock, excavation may be required, but no major geotechnical constraints are anticipated.

Septic Feasibility and Recommendations
The geotechnical review also confirmed that on-site private wastewater treatment systems (e.g., septic fields, mounds, or alternative systems) are technically feasible across the Plan Area. The soils provide adequate permeability and loading capacity to support typical rural septic systems, provided that final designs are tailored to site-specific conditions at the time of obtaining a PSDS permit for each parcel.

4.6. Groundwater Availability Assessment Report

A detailed Groundwater Availability Assessment was completed by McElhanney Ltd. in February 2025 to evaluate the feasibility of supplying individual water wells for the proposed country residential subdivision within the Plan Area. The study involved drilling, pumping testing, and water quality sampling from multiple wells across the Plan Area.

Groundwater in the area is sourced primarily from a shallow, weathered bedrock aquifer consisting of fractured shale and limestone. Testing revealed moderate variability in well yields, with an average estimated long-term yield of 1.7 m^3/day, which is below the Alberta Water Act household allotment of a maximum of 1,250 m^3/year but exceeds the average household demand of 168 m^3/year.

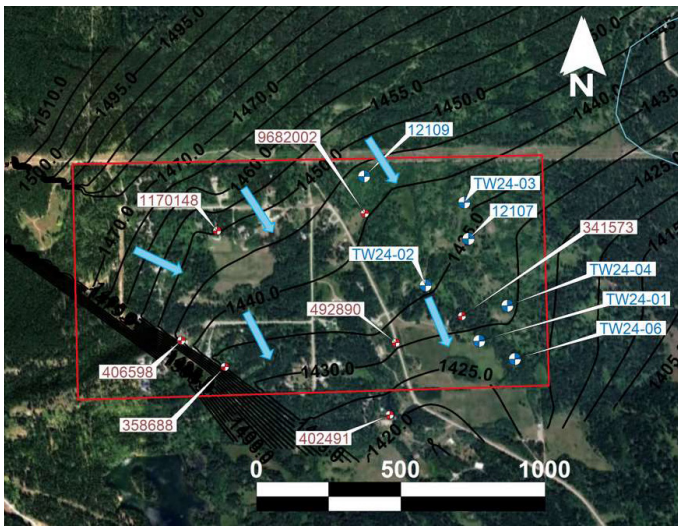
The assessment confirmed that the aquifer has sufficient capacity to support up to 17 additional residential wells, provided each is supplemented by a cistern to reduce peak demand on the aquifer. The study also found that several water quality parameters, including iron and sodium, exceed recommended drinking water guidelines, and as such, individual water treatment systems may be required to ensure safe potable water for residents.

Groundwater Flow and Protection of Adjacent Users

A key finding of the groundwater assessment—especially relevant to adjacent landowners—is that the proposed development will not negatively impact existing groundwater users. The direction of groundwater flow across the site is toward the southeast, away from existing residential wells located within the established GCR subdivision to the west. This hydraulic gradient significantly reduces the potential for interference with upgradient water users. Moreover, the study accounted for potential cumulative effects by incorporating a conservative safety buffer in the recharge

calculations, which further supports the conclusion that even down-gradient users to the south and southeast will remain unaffected by new withdrawals.

Figure 8. Groundwater Flow in Bedrock in Study Area



4.7. Existing Servicing

Water

There is currently no municipal water distribution infrastructure within the Plan Area or the surrounding lands. Existing rural properties in the vicinity are serviced by individual groundwater wells, which are typical for low-density country residential areas in the region.

Future water servicing within the Plan Area will follow a hybrid model, consistent with the findings of the Groundwater Availability Assessment (refer to Section 3.5). A maximum of 17 lots will be permitted to install individual groundwater wells. To support aquifer sustainability, each well-serviced lot will be required to include a cistern system to manage daily peak usage and reduce drawdown pressure.

The detailed water servicing policies are provided in Section 8 of this Plan.

Stormwater

At present, there are no formal stormwater management facilities within the Plan Area. Stormwater is naturally managed through infiltration and overland flow across pervious surfaces, with rainfall and snowmelt absorbed on-site and any excess runoff gradually flowing toward lower-lying areas and nearby wetlands. These conditions reflect the rural, undeveloped nature of the site and its ability to retain and filter surface water through natural hydrological processes.

As development proceeds, stormwater will be managed through strategies designed to maintain pre-development runoff rates and protect the ecological function of receiving environments, particularly the wetland systems. The ASP incorporates stormwater management policies aligned with municipal engineering standards and applicable provincial regulations. These policies will ensure that the quality and quantity of stormwater discharge is controlled post-development and that appropriate infrastructure—such as ditches, swales, and filtration features—is incorporated as outlined in Section 8.

Sanitary

There is currently no municipal sanitary sewer infrastructure within the Plan Area or in the surrounding rural lands. As a result, all development within the Plan Area will be serviced by private, on-site wastewater treatment systems. These systems may include individual septic fields, advanced treatment units, or alternative technologies approved under the Alberta Private Sewage Systems Standard of Practice.

All wastewater systems must be designed to remain fully contained within the property they serve and will be subject to applicable municipal and provincial approval processes. Future subdivision and development must comply with the wastewater servicing policies detailed in Section 8 of this Plan.

4.0 TECHNICAL SITE ANALYSIS cont.

4.8. Existing Transportation Networks

The Plan Area is currently accessed via a single existing driveway connected to Tecumseh Road. Tecumseh Road is classified as a rural local road, providing basic access to area residents and servicing a low-volume rural traffic network.

To support the proposed subdivision, a new internal rural local road will be constructed within the Plan Area. This road will provide primary access to all proposed residential lots and connect directly to Tecumseh Road. The internal road is designed to accommodate low daily traffic volumes typical of rural country residential development and will be constructed in accordance with the Municipality's engineering and development standards. It will also support the safe movement of service vehicles and emergency responders.

Given the low-density nature of the proposed development- the resulting increase in vehicle traffic is expected to be negligible. The Plan Area is not anticipated to generate traffic volumes that would materially impact the operational capacity of Tecumseh Road or the broader rural road network. In alignment with standard transportation planning practice, a Traffic Impact Assessment (TIA) is not required for this ASP.

Nonetheless, future subdivision and development applications will be required to demonstrate safe access and sightlines, and meet municipal road design standards to ensure the continued functionality and safety of the road network.

Plan Area Photos

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5.0 LAND USE CONCEPT

5.1. Land Use Concept Overview

The Land Use Concept for the Tecumseh ASP establishes a framework for the orderly and sustainable development of the Plan Area, ensuring compatibility with the surrounding landscape and the preservation of significant environmental features. Each component of the Land Use Concept reflects a specific purpose, function, and development intent, as described below and illustrated in the Land Use Concept Map.

Section 6 – Land Use Policies outlines specific policies governing land uses within the Plan Area.

5.2. Appropriate Residential Designation

An appropriate country residential district available in the Land Use Bylaw will apply to the developable portions of the Plan Area. The designation is intended for clustered, low-density rural residential development. These areas accommodate detached dwellings on large lots that are serviced by private utilities and accessed via internal local roads.

Relevant policies are provided in Sections 6.2 and 6.3.

5.3. Landscape Buffer

The Landscape Buffer consists of yard setbacks as vegetated corridors located along the perimeter of the Plan Area and adjacent to internal local roads and the proposed laneway, excluding areas already designated as Environmental Reserve Easement (ERE).

These buffers serve multiple purposes:

- Visual screening to soften the appearance of development from surrounding lands, including Crown land, highways, and environmental features;
- FireSmart function as a transitional firebreak, using fire-resistant landscaping and strategic vegetation management to reduce wildfire risk at the wildland-residential interface.
- Rural character preservation by retaining native vegetation and avoiding formal urban-style fencing or landscaping.

Relevant policies are included in **Sections 6.4 and 6.5.**

5.4. Environmental Reserves and Environmental Reserve Easements

Approximately 15% of the Plan Area is protected through Environmental Reserves (ER) and Environmental Reserve Easements (ERE), including the Wetlands and Wetland Buffers, which help preserve natural ecosystems and environmental features.

- **Environmental Reserves (ER):** Lands dedicated to the Municipality of Crowsnest Pass during subdivision, as per Section 664(1) of the Municipal Government Act (MGA). The ASP identifies these lands and includes policies to guide future subdivision and dedication.
- **Environmental Reserve Easements (ERE):** Registered easements on private land in favour of the Municipality, protecting identified environmental features in accordance with Section 664(2)-(5) of the MGA. These lands must remain in a natural, undisturbed state, with no-build and no-disturbance restrictions.

Policies related to ER and ERE are found in **Section 6.6.**

5.0 LAND USE CONCEPT cont.

5.5. Wetlands and Wetland Buffers

Wetlands, identified in the Biophysical Assessment Report, are protected for their ecological significance. They:

- Provide critical habitat for a variety of species;
- Contribute to stormwater retention, filtration, and aquifer recharge;
- Must remain free from encroachment, alteration, or vegetation clearing.

A 30-metre-wide vegetated buffer surrounds each delineated wetland, serving to:

- Filter surface runoff and control erosion;
- Reduce nutrient loading and sedimentation;
- Provide a transition zone between developed areas and sensitive aquatic habitats.

5.6. Wildlife Corridor - Municipal Reserves

The Wildlife Corridor encompasses high-value environmental areas identified for the preservation of wildlife habitat and movement. Dedicated as part of the Municipal Reserve system, the corridor includes forested areas, open clearings, and natural connectivity routes across the Plan Area. This corridor:

- Integrates with regional wildlife networks;
- Protects travel routes for local fauna;
- Enhances long-term ecological resilience.

5.7. Parking - Municipal Reserves

A 0.02-hectare area is designated for public parking within the dedicated Municipal Reserves, located adjacent to the laneway as shown on the Land Use Concept. The parking area is intended to serve as a convenient access point for individuals visiting the Allison/Chinook Public Land Use Zone located directly north of the Plan Area.

The parking area is planned to accommodate approximately 7 - 10 vehicles.

5.8. Road Right-of-Way and Lane

The remainder of the Plan Area accommodates essential infrastructure, including internal local rural roads and a 6-metre-wide laneway that provides pedestrian/trail connectivity to surrounding lands.

The lane serves the following functions:

- Acts as a secondary access route to support emergency response and fire egress;
- Provides potential trail access for residents, enhancing recreational connectivity.

Transportation-related policies are detailed in **Section 7.0.**

5.0 LAND USE CONCEPT cont.

5.9. Land Use Statistics

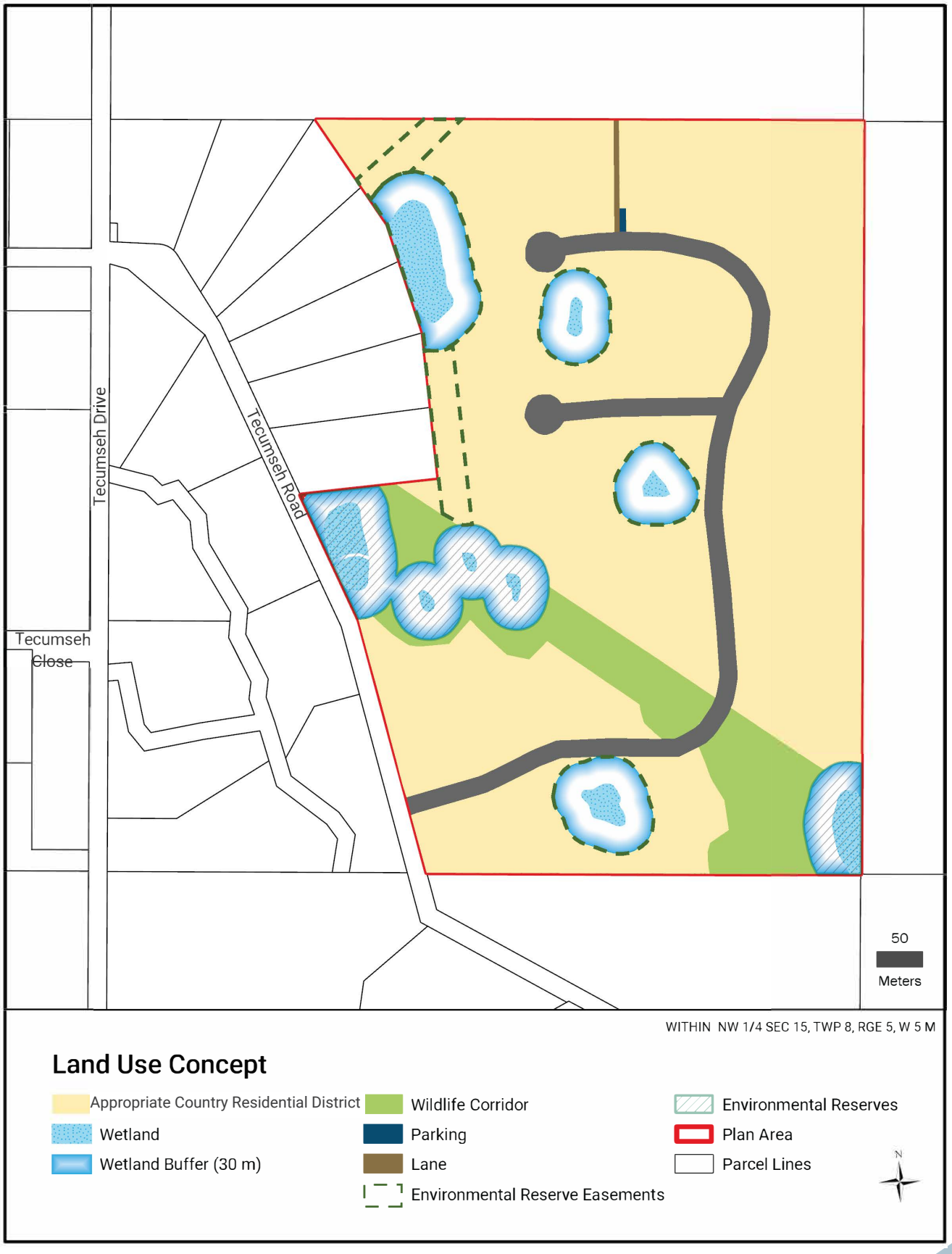
Of the total 41.058-hectare Plan Area, land has been allocated as per the table below. The areas listed are general in nature and may be refined during the subdivision stage. Subdivision of the land should generally align with the land use concept and statistics presented in this table.

Table 3. Land Use Statistics

Land Uses	*Area (hectares)*	*Percentage of Gross Developable Area*
Plan Area	**41.058**	
Environmental Reserves	**2.92**	
Environmental Reserve Easements	**3.46**	
Gross Developable Area	**34.678**	**100%**
Appropriate Residential District	28.41	81.93%
Wildlife Corridor (Municipal Reserves)	3.448	9.94%
Parking (Municipal Reserves)	0.02	0.06%
Road Right-of-Way	2.73	7.87%
Lane	0.07	0.20%

The gross developable area within the Plan Area is 34.678 hectares. The gross developable area does not include the Environmental Reserves and Environmental Reserve Easements.

Figure 9. Land Use Concept



6.0 LAND USE POLICIES

The following land use policies provide a framework to guide subdivision and development within the Plan Area, ensuring that all future land use decisions reflect the principles of sustainable rural development, environmental protection, and alignment with the Municipality's statutory plans and bylaws.

6.1. General Policies

1. All development within the Plan Area shall comply with the Municipal Development Plan, the Land Use Bylaw, and the policies outlined in this Area Structure Plan (ASP).
2. In accordance with Section 31 of the Historical Resources Act, if a historic resource is discovered during excavation unrelated to archaeological purposes, the developer must immediately notify the Minister as per the Standard Requirements for Reporting the Discovery of Historic Resources.

6.2. Residential Development and Subdivision

Uses and Density

1. Residential uses within the Plan Area must conform to the permitted and discretionary uses of the subject Land Use District as outlined in the Land Use Bylaw.
2. All development activities within the residential parcels shall comply with the Land Use Bylaw, except when the Development Authority approved a variance to a development standard.
3. Maximum Residential Lot Yield: The net residential developable area is approximately 28.41 hectares (70.2 acres). Given the minimum lot size of 1.2 hectares (3 acres) for unserviced lands, a maximum of 23 lots may be developed, subject to Municipal subdivision approval.

Lot Size Parameters

4. Minimum lot size: 1.2 hectares (3 acres).
5. Maximum lot size: 2.02 hectares (5 acres), unless a portion of the lot includes Environmental Reserve Easement (ERE) lands. In such cases, the total lot size may exceed 5.0 acres, though the developable portion must not exceed 2.02 hectares.

Siting and Design of Buildings:

6. Siting should prioritize areas requiring minimal vegetation removal and ground disturbance, while maintaining privacy and a rural character.
7. Building sites must be located on stable land, outside of environmentally sensitive or hazardous areas.
8. Development footprints should be concentrated within previously disturbed areas, such as pastureland, to minimize environmental impact.
9. New development should reflect the low-density rural character of the area by incorporating:
    a. Naturalized landscaping;
    b. Earth-tone or non-reflective building materials;
    c. Architectural forms that blend with the natural setting.

Lighting

10. To preserve dark sky conditions and reduce rural light pollution:
    a. Outdoor lighting should be downward-shielded and motion-activated where practical;
    b. High-intensity lighting and uplighting of structures, trees, or signage is discouraged.

6.0 LAND USE POLICIES cont.

6.3. FireSmart Development Guidelines:

1. All building materials should align with the FireSmart principles as specified in the Crowsnest Pass FireSmart Bylaw, and follow the FireSmart Manual by Partners in Protection.
2. Due to significantly reduced fuel load resulting from logging operations conducted approximately 25 years ago, the Plan Area is not considered to be at elevated wildfire risk. As such, a Wildland Urban Interface Risk Assessment is not required for this ASP.
3. Homeowners are encouraged to:
    a. Use non-combustible mulches (e.g., rock, gravel) within 1.5 m of the house;
    b. Maintain horizontal separation between tree crowns near buildings to reduce the risk of crown fire spread, with a minimum spacing of 3 metres recommended, and greater spacing required on steep slopes, in accordance with FireSmart Canada Guidelines;
    c. Incorporate defensible space zones as recommended in FireSmart Canada Guidelines.

6.4. Landscaping

1. Retain native vegetation and mature trees—especially coniferous or deciduous trees with a diameter at breast height greater than 60 cm—wherever feasible. Tree felling in yard setbacks is prohibited unless a development permit is approved.
2. All land clearing and grading activities must implement erosion and sediment control measures to prevent soil loss, compaction, and runoff into natural areas.
3. Landscape treatments should reflect the natural rural setting, prioritizing:
    a. Native or naturalized species;
    b. Minimal formal ornamental landscaping;
    c. Integration with existing vegetation and terrain.
4. Monoculture lawns, irrigation-heavy gardens, or urban-style landscaping (e.g., synthetic turf, extensive decorative paving) are discouraged.
5. Where trees or vegetation are removed during site preparation, the use of replanting or habitat replacement strategies is encouraged, especially near wetlands or wildlife corridors.
6. Individual lot landscaping should:
    a. Retain natural groundcover and topsoil as much as possible;
    b. Include permeable surfaces (gravel, mulch, wood chips) for driveways and paths;
    c. Avoid the introduction of invasive species listed under Alberta's Weed Control Act.

6.5. Landscape Buffer

1. A Landscape Buffer (minimum yard setbacks) should be maintained along property lines.
2. Development is discouraged within the landscape buffer, except for essential access or utilities, which should be located and constructed in a way that minimizes disruption to the buffer area.
3. The Landscape Buffer should:
    a. Retain existing trees and vegetation.
    b. Prohibit tree felling, consistent with the prohibition outlined in the Municipality's Land Use Bylaw. A development permit for tree-felling within the yard setback area shall be required. This permit is considered a discretionary use and may be refused or be issed subject to conditions as determined by the Municipality.

c. Encourage native landscaping to soften visual impact, enhance privacy, and preserve the rural character.

d. Provide visual screening from public viewpoints such as Tecumseh Road, adjacent properties, and trails.

e. Allow for berms or mounds to enhance noise and light buffering.

f. Incorporate wildlife-friendly fencing or landscaping (e.g., split-rail fencing or low-impact plantings) throughout the entirety of the Plan Area. Installation of new barbed wire fencing is discouraged to avoid harm to wildlife and maintain ecological integrity. If barbed wire fencing is installed, it must follow Alberta Conservation Society guidelines for wildlife-friendly fencing including maximum top wire height, minimum bottom wire height, and smooth top and bottom wires.

g. Allow alteration to accomodate FireSmart Principles

4. The Landscape Buffer should also function as a transitional firebreak:

a. Use native, drought-tolerant, fire-resistant species.

b. Avoid dense coniferous planting immediately adjacent to homes.

c. Manage vegetation as a “shaded fuel break” by thinning underbrush and maintaining spacing between large trees.

d. Maintain low vegetation such as mowed grass and avoid storing combustible materials in buffer zones.

6.6. Environmental Reserves and Environmental Reserve Easements

Designation of Environmental Reserves (ER):

1. The five wetlands within the Old Growth Forest Corridor and, including their 30-metre buffer zones, as identified in the February 2025 Biophysical Assessment Report (McElhanney Ltd.) and depicted on the Land Use Concept, shall be formally dedicated to the Municipality of Crowsnest Pass as Environmental Reserves (ER) in accordance with Section 664 of the Municipal Government Act.

Designation of Environmental Reserve Easements (ERE):

2. The four wetlands and their associated buffer zones, as shown on the Land Use Concept, should be protected through the registration of Environmental Reserve Easements (EREs) at the subdivision stage against the lands containing these areas. These EREs shall be established between the landowner and the Municipality of Crowsnest Pass in favour of the Municipality of Crowsnest Pass for the protection and enhancement of the wetlands.

3. A 30-metre wide corridor in the NW corner of the Plan Area, as shown on the Land Use Concept, shall be protected through the registration of an ERE at the subdivision stage against the lands containing these areas. This ERE shall be established between the landowner and the Municipality of Crowsnest Pass in favour of the Municipality of Crowsnest Pass for the purpose of maintaining ecological connectivity and providing wildlife access to Wetland #1 as identified in Figure 7.

4. The following terms shall be included in all ERE Agreements:

a. Lands shall remain in a natural, undisturbed state.

b. No cultivation, construction, or surface disturbance is permitted, unless approved by the Municipality.

c. Natural vegetation must be preserved to reduce erosion, maintain habitat, and enhance biodiversity, except when vegetation removal is required to be

6.0 LAND USE POLICIES cont.

compliant with municipal FireSmart principles.

d. The Municipality may access ERE lands for inspection or monitoring.

e. No excavations are allowed without written municipal consent.

f. Fencing should be wildlife friendly (e.g., split-rail fencing or low-impact plantings). Installation of new barbed wire fencing is discouraged to avoid harm to wildlife and maintain ecologicial integrity. If barbed wire fencing is installed, it must follow Alberta Conservation Society guidelines for wildlife-friendly fencing including maximum top wire height, minimum bottom wire height, and smooth top and bottom wires.

Environmental Reserve Agreement

5. Upon adoption of the ASP by bylaw, it is an agreement for the purposes of s. 664.1(2)(b) of the MGA.

Wetland Buffer Zone Requirements

6. A 30-metre wetland buffer zone shall be established and maintained around all wetlands, as recommended in the Biophysical Assessment. The wetland buffer zone shall be measured from the boundary of the wetland or waterbody (legal bank, where applicable).

7. Notwithstanding the provisions in subsections 1, 2, and 3, the wetland buffer zones may be reduced at the subdivision stage if a formal wetland perimeter survey is conducted and recommends a reduced buffer than the conservative 30-metre buffer identified in this ASP. The wetland perimeter survey must receive approval from the subdivision authority.

Environmental Protection Requirements

8. Direct and indirect disturbance of all wetlands within the Plan area is strictly prohibited.

9. Any development affecting wetlands must be accompanied by a Wetland Assessment and Impact Report (WAIR) and obtain approval under the Alberta Water Act. Where avoidance is not possible, compensation strategies must be reviewed and approved by a Qualified Wetland Science Practitioner (QWSP).

10. Preserve the hydroperiod of wetlands by regulating grading (land leveling) and surface water flow (how water moves across the land) in adjacent development. The “hydroperiod” refers to the natural timing and duration of water levels in a wetland – how long the wetland stays wet during the year and how it fluctuates with seasons. Ensuring that the hydroperiod is preserved means maintaining the wetland’s natural water cycles, which are critical for the plants and animals that depend on it.

11. Development or road construction is not permitted within Environmental Reserves and Environmental Reserve Easements , except in exceptional cases where crossings are required. In such cases, crossings shall:

    a. Occur at the narrowest points

    b. Include wildlife-friendly infrastructure (e.g., culverts, clear zones)

12. All construction near ER and ERE areas must apply best management practices for sediment and erosion control (e.g., silt fencing, stormwater management).

13. Vegetation removal outside ER and ERE lands should be scheduled outside the migratory bird nesting window (April 15 – August 15). If unavoidable, a pre-clearing nest survey by a Qualified Environmental Professional is required.

14. Prohibit disturbance to raptor nests between May 1 and September 1, unless confirmed inactive through a qualified survey.

15. Amphibian and reptile habitat disturbances should be limited to the period of April 1 to October 15.

16. Adhere to seasonal restrictions within ER and ERE lands, especially avoiding major disturbance from December 15 to April 30.

17. Prohibited noxious and noxious weeds must be actively prevented and removed, consistent with the Weed Control Act (AB 2011). Development must include invasive species management plans. On privately held land, weed control is the responsibility of the land owner.

18. Require low-impact development (LID) techniques to manage surface runoff and protect water quality in adjacent wetlands and the unnamed stream 100m from the site boundary.

19. An Environmental Construction Management Plan (ECMP) is required for all construction phases adjacent to or within proximity to ER and ERE lands.

6.7. Municipal Reserves

1. The gross developable area within the Plan Area is approximately 34.678 hectares. In accordance with the Municipal Government Act (MGA), the developer is required to dedicate 10% of the gross developable area as Municipal Reserve (MR), resulting in a total MR dedication requirement of 3.468 hectares.

2. A total of 3.468 hectares of land has been identified and dedicated as Municipal Reserve within the Land Use Concept. This includes:

    a. 3.448 hectares for the Wildlife Corridor, supporting habitat connectivity, ecological function, and public recreation;

    b. 0.02 hectares for a public parking area, located adjacent to the laneway and intended to provide access to the Allison/Chinook Public Land Use Zone to the north of the Plan Area.

3. The MR obligation will be satisfied through the dedication of these lands at the time of subdivision.

4. The Municipality reserves the right to use MR lands for public park development, recreational facilities, trail systems, or other eligible public purposes as outlined in Section 666 of the MGA.

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7.0 TRANSPORTATION

7.1. General Policies

1. The proposed transportation network, as illustrated in the Road Network Map, is designed to:
    a. Provide efficient internal access to residential lots;
    b. Connect to the external municipal road system; and
    c. Accommodate recreational and emergency access, as well as low-volume non-motorized use.
2. Right-of-way planning and road dedication shall generally conform to the road layout depicted in the Land Use Concept Map, subject to further refinement at the subdivision and detailed design stages. All road alignments must adhere to the applicable policies and standards identified in this ASP.
3. Minor technical modifications to road alignment or configuration—such as adjustments due to topography, lot layout optimization, or geotechnical conditions—may be approved at the subdivision stage without requiring a formal amendment to the ASP.

7.2. Design Standards

1. All roads and lanes within the Plan Area shall be constructed in accordance with the Municipality of Crowsnest Pass Engineering and Development Standards. These roads will be gravel surfaces.
2. Local Public Roadways shall be constructed to Rural Local Road standards, as defined in Table 2.2.2 – General Design Guidelines, with a minimum right-of-way width of 20.0 metres.
3. The lane, as shown in the Land Use Concept, shall have a minimum width of 6.0 metres, constructed to municipal standards.
4. Cul-de-sacs must comply with fire truck turning radius and snow storage requirements. Turning bulbs must be designed to accommodate large emergency and service vehicles in accordance with FireSmart Residential Development Guide access standards.
5. Sidewalks are not required on either side of the rural local roads. The road surface is intended to support multi-modal use, including pedestrian walking and casual cycling, consistent with rural country residential design standards.

7.3. Secondary Access

1. The northern lane connection point shall function as a secondary egress, and must remain free from obstruction at all times. Signage and gating may be installed if approved by the Municipality.
2. The 6-metre-wide lane shall also serve as a multi-purpose connection between the internal road system and the surrounding recreational trails network, enhancing pedestrian and non-motorized connectivity.

7.4. Traffic

1. Given the low-density, rural residential character of the proposed development, the anticipated increase in vehicular traffic is minimal and will not significantly impact the existing road network. As such, a Traffic Impact Assessment (TIA) is not required.

7.5 Safety

1. A stop sign shall be installed on the internal road leg of the intersection at Tecumseh Road and the proposed road to ensure safe entry and exit from the Plan Area.
2. A clear sightline triangle must be maintained at all internal intersections and driveway access points, especially where the proposed road intersects with Tecumseh Road. All new driveway locations shall meet municipal sight distance requirements.

7.0 TRANSPORTATION cont.

7.6. Property Approaches

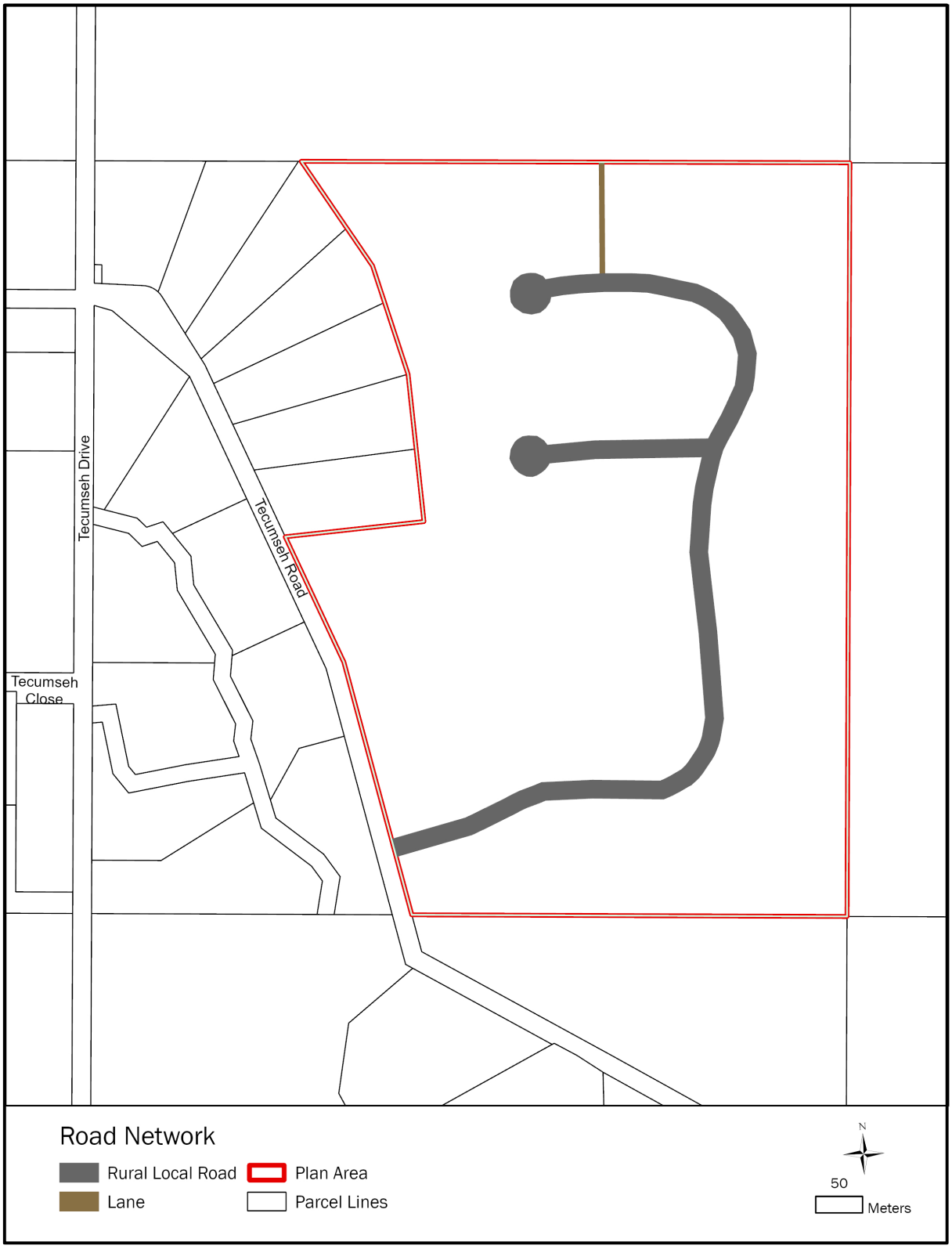
1. Driveway access to each parcel shall be constructed by the home builder or property owner at the time of development. Each driveway shall include a culvert where required, designed and installed to the satisfaction of the Municipality. All driveway designs should ensure proper drainage and shall be reviewed and approved by the Municipality prior to construction.

7.7. Excavation Practices

1. Excavation and construction activities related to internal roads, driveways, and approaches shall be undertaken in accordance with the applicable recommendations outlined in the Biophysical Assessment Report and the Geotechnical Report prepared in support of this Area Structure Plan.

7.0 TRANSPORTATION cont.

Figure 10. Road Network Map



8.0 SERVICING AND UTILITIES

8.1. General Servicing Policies

1. All infrastructure shall be developed in accordance with provincial regulations, the MCNP Engineering and Development Standards, and this ASP and the biophysical assessment and geotechnical assessment prepared for it.

2. Details regarding wells, cisterns, and water volume availability are available in the Mcelhanney Phase 3 Groundwater Availabilty Assessment , dated February 21, 2025.

8.2. Water Servicing

1. All residential parcels must have access to a legal and reliable source of potable drinking water in accordance with the Alberta Public Health Act and Alberta Health Services (AHS) recommendations and Sections 21 and 23 of the Water Act.

2. Based on the Mcelhanney Phase 3 Groundwater Availabilty Assessment, no more than 17 residential lots within the Plan Area shall be permitted to install individual water wells. To protect the aquifer and support sustainable water use, each lot permitted to drill a well must:

    a. Be serviced by a combination of an individual groundwater well and a cistern system.

    b. Use water from the well only for statutory household purposes, in accordance with the Alberta Water Act, with a maximum withdrawal of 1,250 m^3/year per household.

    c. Install a balancing cistern of a size recommended by a local installation professional to reduce peak aquifer demand.

    d. Register a restrictive covenant on title requiring the installation and continued use of the cistern as a condition of subdivision approval.

3. At the sole discretion of the subdivision authority, any additional lots over 17 lots (up to a maximum of 6 lots) may be approved on the condition that they shall not be permitted to drill wells and must instead:

    a. Be serviced by an on-site cistern, with a minimum size of 3000 gallons, filled through licensed potable water hauling services;

    b. Have a separate restrictive covenant registered on title prohibiting well installation;

    c. Demonstrate availability of contracted water delivery prior to final subdivision endorsement.

4. The assignment of the 17 lots permitted to be serviced by groundwater wells will be finalized at the subdivision approval stage, based on the following considerations:

    a. The developer's proposal identifying which lots will be serviced by groundwater wells and which will be cistern-only;

    b. A balanced distribution of cistern-only lots throughout the Plan Area, to the extent feasible;

    c. Individual lot suitability, including assessment of topography, soil conditions, potential drawdown impacts, and required setback distances from other wells and private sewage systems;

    d. Review and approval by the Subdivision Authority in consultation with Alberta Environment and Protected Areas (AEPA), Alberta Health Services (AHS), and the Municipality.

5. All private water systems should be:

    a. Fully contained within the property boundaries they serve;

    b. Located, operated, and maintained in accordance with provincial legislation and health regulations.

6. All proposed lots in the subdivision applications relying on wells should have a completed water well and a

48-hour minimum duration pumping test, with results analyzed and certified by a qualified hydrogeologist.

7. Well completion should aim to access deeper vertical fractures, where feasible, to reduce cumulative pressure on the upper weathered bedrock interval.

8. As per Section 8 of the McElhanney Phase 3 Groundwater Availabilty Assessment , dated February 21, 2025, the subject property can accommodate a maximum of 17 lots with wells.

9. For lots serviced exclusively by hauled water, the developer shall provide purchasers with:

    a. Written confirmation of availability of water delivery services, including provider name and service frequency;

    b. Estimated monthly costs (e.g., $200 per 3,000-gallon load, lasting approximately 2 months for a typical family);

    c. Sample restrictive covenant language ensuring no future well installation.

10. All well water should be tested for compliance with Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ). Where exceedances occur (e.g., iron, fluoride, sodium, turbidity), lot owners shall be responsible for on-site water treatment systems.

11. Due to the carbonate-rich bedrock, water hardness and mineral scale issues are anticipated. Treatment systems such as reverse osmosis or ion exchange are recommended for long-term maintenance of water quality and plumbing systems.

12. The developer will register a restrictive covenant on the parcel as a condition of subdivision which will limit the number of lots with wells to 17. Upon subdivision, each parcel in the subdivision will be registered as a dominant tenement of the restrictive covenant to allow for enforcement of the restriction on lots which are not permitted to drill a well. The restrictive covenant will run with the land, and may not be amended or removed without prior written notification to the Municipality of Crowsnest Pass.

8.3. Stormwater Management

1. All subdivision and developments within the Plan Area shall implement on-site stormwater retention strategies designed to ensure that post-development discharge rates do not exceed pre-development conditions. Stormwater shall be directed to adjacent wetlands or natural low-lying areas only where such discharge.

    a. Maintains the hydrologic integrity of the receiving feature;

    b. Is approved through a Stormwater Management Plan (SWMP) and applicable provincial regulations.

2. At the time of subdivision or development permit application, the applicant shall submit a detailed Stormwater Management Report (SWMR) prepared by a qualified professional. The report shall include:

    a. Pre- and post-development hydrology modeling;

    b. Stormwater volume and rate control calculations;

    c. Drainage maps and outlet locations;

    d. Erosion and sediment control plans;

    e. Integration with wetland protection and Environmental Reserve Easement (ERE) areas.

3. Roadside ditches shall be incorporated along both sides of the public roadways within the 20-metre road right-of-way to:

    a. Collect and convey stormwater away from the road surface;

    b. Reduce the risk of road surface deterioration and icing;

    c. Direct runoff to designated infiltration or dispersion

points;

d. Be vegetated or armored with erosion-resistant materials where necessary;

e. Maintain positive drainage flow without impeding driveway access or creating standing water.

4. Ditch and culvert design shall comply with the Municipality's Engineering and Development Standards. During development of lot driveways, the property owner will be required to install a culvert constructed to the Municipality's standards, subject to the Municipality's approval.

5. Where possible, the stormwater system should incorporate Low-Impact Development (LID) practices, including:

   a. Shallow swales or bio-swales;

   b. Grass buffers and naturalized drainage corridors;

   c. Level spreaders or infiltration trenches;

   d. Rock check dams and silt fencing during construction phases.

6. No stormwater from private driveways, rooftops, or yard drainage shall be permitted to flow directly into roadways or adjoining properties. Instead, runoff shall be:

   a. Contained within each lot;

   b. Directed into vegetated swales, infiltration trenches, or the roadside ditch network;

   c. Managed to avoid concentration of flow that may cause erosion or ponding.

7. Stormwater runoff from individual lots should be retained, diffused, and treated on-site to the extent feasible, using naturalized or engineered methods, before reaching municipal drainage or wetland features.

8. Stormwater discharge into any identified wetlands shall be:

   a. Pre-treated through filtration or sedimentation where necessary;

   b. Limited to controlled release points approved through the subdivision design;

   c. Managed to prevent changes to wetland hydroperiods or water quality.

9. A construction-phase erosion and sediment control (ESC) plan may be required for all phases of subdivision and lot-level development, ensuring that sediment-laden runoff does not reach roads, ditches, or environmentally sensitive areas.

10. Stormwater infrastructure, including ditches, culverts, swales, and erosion control measures, shall be constructed and fully operational at the Construction Completion Certificate stageand shall be maintained by the developer until the Municipality assumes responsibility.

8.4. Wastewater System

1. All residential lots within the Plan Area shall be serviced by private on-site wastewater treatment systems, in the form of conventional or advanced septic systems, designed, installed, and maintained in accordance with:

   a. The current Alberta Private Sewage Systems Standard of Practice;

   b. Alberta Safety Codes Act;

   c. Site-specific geotechnical and hydrogeological conditions identified through subdivision and development applications.

2. Each lot shall be required to demonstrate, through a qualified professional, that:
    a. Soil percolation and loading rates are suitable for the proposed system;
    b. A suitable area for a septic field or alternative system exists outside of building envelopes, water wells, and environmental reserve easements;
    c. There is sufficient separation from wetlands, watercourses, and shallow groundwater.
3. A Level IV Private Sewage Treatment System Design Report shall be required as a condition of Disposal System Permit approval for each lot, which includes but is not limited to:
    a. Soil assessment and percolation test results;
    b. Septic field or treatment unit location;
    c. System type (e.g., septic tank and field, mound system, advanced treatment unit);
    d. Maintenance requirements and servicing plan.
4. Where soil or site conditions do not permit a conventional field-based system, engineered alternative systems (e.g., sand mounds, packaged treatment plants, holding tanks) shall be required, and subject to approval by a certified Safety Codes Officer.
5. At the time of subdivision, the applicant must submit a subdivision-level wastewater servicing report, prepared by a professional engineer or a qualified private sewage designer, in accordance with applicable provincial regulations and the Municipality of Crowsnest Pass Land Use Bylaw. This report must:
    a. Confirm feasibility for all lots based on soil and terrain conditions;
    b. Identify any lots that may require specialized or off-site solutions;
    c. Demonstrate compliance with all applicable provincial and municipal regulations, including required setbacks from water bodies, wells, and property lines, as well as loading rates and system sizing criteria.
6. No communal wastewater systems or municipal extensions are proposed or supported within the Plan Area.

8.5. Utilities

1. All utility servicing within the Plan Area shall be consistent with the Municipality's engineering and development standards, and coordinated with relevant provincial and private utility providers during subdivision.
2. The developer shall be responsible for the extension, installation, and connection of all shallow and dry utility services, including:
    a. Natural gas (provided by ATCO Gas);
    b. Electric power (provided by Fortis Alberta);
    c. Telephone and internet (provided by TELUS or equivalent third-party provider);
    d. Other franchise utilities as applicable.
3. At the time of subdivision and development, all shallow utilities shall be located within the road right-of-way, in dedicated utility corridors to ensure orderly installation, access for maintenance, and to avoid conflict with environmental reserves or infrastructure.
4. Utility alignments should be coordinated between service providers and the Municipality at the time of detailed design and may include:
    a. Joint-use trenching strategies;

8.0 UTILITIES cont.

   b. Use of utility easements registered on title where off-road placement is unavoidable.

5. Above-ground utility infrastructure (e.g., pedestals, transformers, meters) should be:

   a. Located to minimize visual and functional conflicts with driveways and landscaping;

   b. Protected by barrier posts or bollards as required;

6. Utility extensions shall be phased in accordance with the approved subdivision plan and:

   a. Be installed prior to final surface grading of roads;

   b. Ensure that each lot has access to essential services at the time of construction;

   c. Include all trenching, conduit installation, and restoration.

7. Developers shall consult with utility providers during subdivision design to ensure adequate service capacity and distribution.

8. Where shallow utilities cannot be located entirely within the public road right-of-way, appropriate utility easements shall be secured and registered on title prior to endorsement of subdivision plans.

9. No buildings, structures, or permanent landscaping shall be permitted within utility easements. These areas must remain accessible for inspection, repair, and future upgrades.

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9.0 IMPLEMENTATION

The Tecumseh ASP provides a high-level policy framework to guide future subdivision, land use redesignation (redistricting), and development approvals within the Plan Area. Implementation of this ASP will occur through a combination of planning tools and municipal processes, including the MDP, the Land Use Bylaw, subdivision review, development agreements, development permitting, and safety codes permitting.

This section outlines how the ASP will be put into effect over time and provides guidance on plan amendments, development staging, and regulatory approvals.

9.1. ASP Amendments

The Land Use Concept and policy framework presented in this ASP are intended to provide general guidance on land use pattern, servicing strategy, and environmental protection within the Plan Area. The land use designations shown on the Land Use Concept Map are not intended to represent surveyed boundaries and may be adjusted through subdivision and detailed design.

An amendment to the ASP will not be required for minor changes in lot configuration, road alignment, or servicing approach, provided that:

- The overall development vision and intent of the ASP are maintained;
- Environmental Reserve and Landscape Buffer areas are respected or enhanced;
- The number of residential lots does not exceed the maximum supported by the servicing studies and ASP policies.

A formal amendment to the ASP will be required if:

- The proposed development introduces a new land use designation not contemplated in this ASP;
- There is a significant shift in the location or extent of designated Environmental Reserve or Landscape Buffer areas;
- There is a substantial increase in residential density beyond the limits supported by the technical assessments.

9.2. Development Staging

Development within the Plan Area is expected to occur in a single or limited number of contiguous phases, guided by:

- Access to Tecumseh Road and internal rural road construction;
- Logical servicing connections;
- Market demand for country residential lots.

While no detailed staging plan is required at this time, development will generally proceed from west to east, starting with the area most accessible to Tecumseh Road. The phasing of road construction, utility installation, and environmental protection measures shall follow the sequence of lot development. The Municipality may consider flexibility in staging, and ASP amendments will not be required to accommodate alternate development sequences that remain consistent with the overall intent of this Plan.

9.0 IMPLEMENTATION cont.

9.3. Land Use Redesignation (Redistricting) and Subdivision

Prior to subdivision or development, the subject lands must be redesignated from the current NUA-1 (Non-Urban Area) district to another suitable district in alignment with the Land Use Bylaw.

Subdivision applications will be reviewed and evaluated based on the following criteria:

- Conformance with the Land Use Concept and policies outlined in this ASP;
- Compliance with the Municipal Development Plan and Land Use Bylaw;
- Fulfilment of applicable engineering design standards and environmental protection requirements;
- Demonstrated capacity for potable water supply, on-site wastewater treatment, and stormwater management, as per supporting technical assessments.

As part of the subdivision process, the Municipality may require:

- Execution of a development agreement to secure construction of Municipal and third party infrastructure;
- Dedication and registration of Environmental Reserve lands over lands identified in the ASP as environmental reserves.
- Registration of Environmental Reserve Easement covenants over lands identified in the ASP as environmental reserve easements.
- Dedication of Municipal Reserve (MR) lands through registration on title, in accordance with the Municipal Government Act and as described in Section 5 and 6 of this ASP.
- Registration of restrictive covenants on title to ensure compliance with servicing limitations and groundwater protection measures, such as prohibiting well drilling on cistern-only lots or requiring cisterns for well-supported lots.

TECUMSEH AREA STRUCTURE PLAN

3055 Tecumseh Road | Municipality of Crowsnest Pass, AB

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