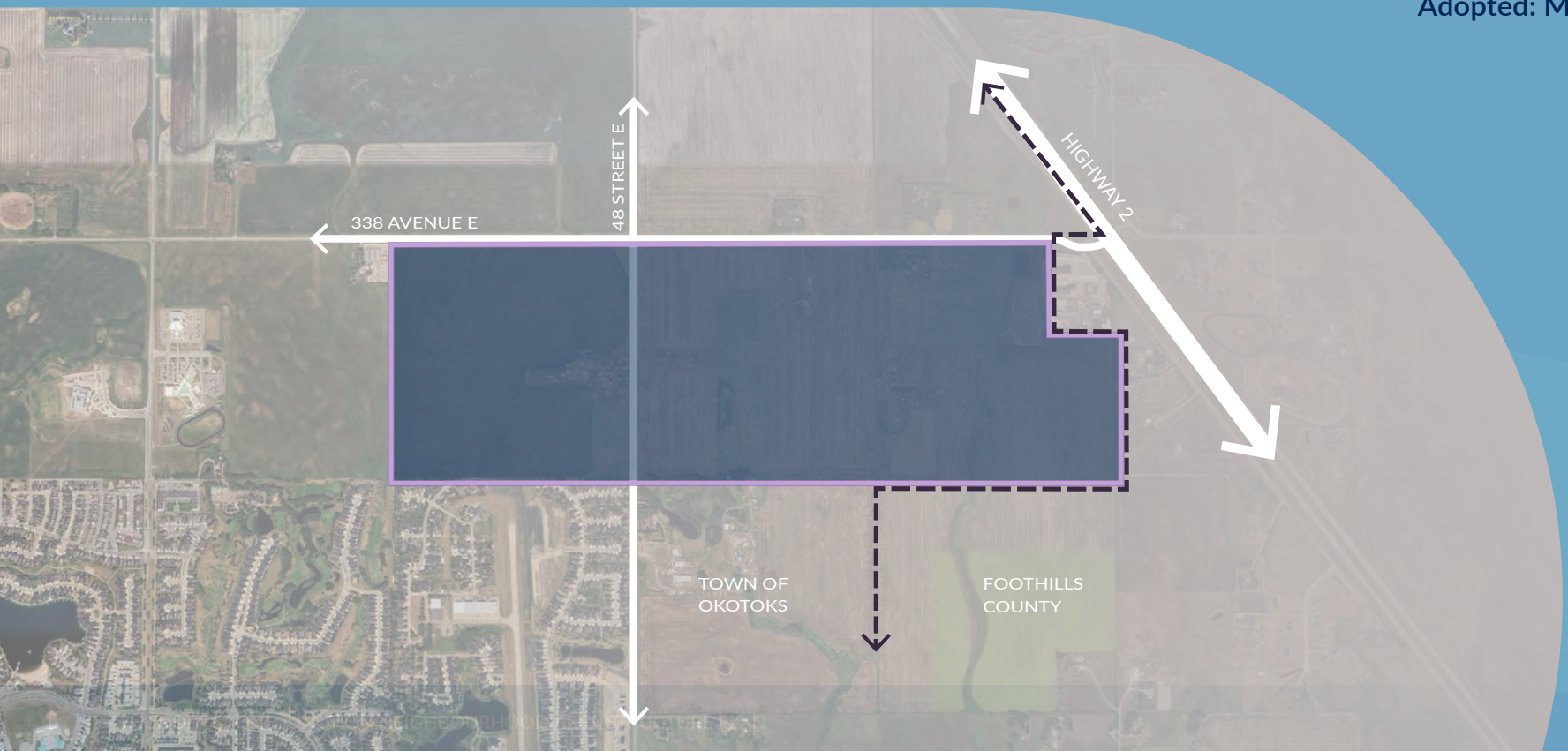
THUNDER STONE JUNCTION
Neighbourhood Area Structure Plan

Bylaw 02-26 - Schedule 'A'
Adopted: March 23, 2026



THUNDER STONE JUNCTION
NEIGHBOURHOOD AREA STRUCTURE PLAN

BYLAW No: 02-26 - Schedule 'A'
ADOPTED: March 23, 2026

Prepared for: Town of Okotoks

Prepared by: Tetra Tech Canada Inc. (Tetra Tech)

In association: LA West (Calgary) Inc.
Soriak Consulting and Research Ltd.

Land Acknowledgement

The Town of Okotoks acknowledges the original stewards of this land that we know and call Treaty 7 Territory, which includes the Blackfoot Confederacy First Nations the Kainai, Siksika and Piikani. The Stoney Nakoda First Nations, which includes the Bearspaw, Chiniki and Goodstoney, the Dene First Nation of Tsuut'ina and the Metis Nation of Alberta. We vow to continue honouring and respecting the Indigenous Peoples Sacred and Traditional ways of life and will carry on this special relationship with the land so that generations to come can enjoy, use, and live off the land as their ancestors did. We honour and respect this space, the water, the animals, and all the beings who have a spirit and have been here long before us.

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1 Introduction

1.1 Purpose

The Thunder Stone Junction Neighbourhood Area Structure Plan (NASP) provides a neighbourhood-level long-term planning and policy framework to guide the development of new employment lands in northeast Okotoks. This NASP aligns with and refines policy set at the Area Structure Plan (ASP) level and higher-order statutory plans, such as the Municipal Development Plan (MDP).

The Plan Area is located within the Trilogy Plains and North Point ASP (Bylaws 08-23 and 20-24). The western portion of Thunder Stone Junction is the second phase of development within the Trilogy Plains ASP, while the eastern portion is the first phase of development within the North Point ASP.

The NASP outlines land use and servicing to guide future re-designation, subdivision, and development of approximately 187.58 hectares (462.52 acres) of land south of 338 Avenue E and east of Ridgemont NASP.

The plan addresses the following elements:

- Neighbourhood vision and guiding principles;
- Distribution of land use;
- Transportation network and road layout;
- Parks, open space, and amenities;
- Active transportation corridors and trail network;
- Transitions and interfaces with neighbouring residential;
- Utility and infrastructure services;
- Staging and development sequence;
- Overall neighbourhood design guidelines.

1.2 Policy Interpretation

The Thunder Stone Junction NASP has been prepared in accordance with Policy 1.7.2 of the MDP and is a statutory plan adopted by Town Council. Policy statements contained in this plan must also be read in conjunction with other relevant statutory and non-statutory plans.

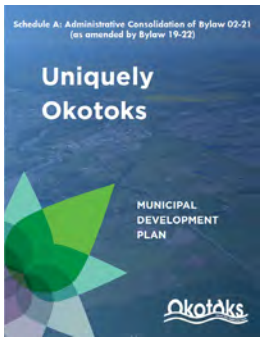
This NASP contains tables and illustrations which provide information and context for policy statements. If a conflict arises between the text and the policy statements, the policy will take precedence.

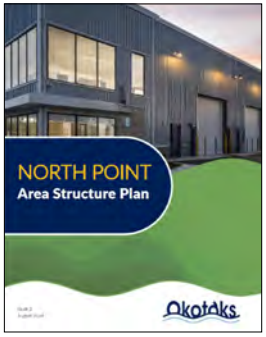
Specific terminology is used throughout NASP policy. Policies in this plan are intended to be interpreted as follows:

1. Where policy contains the words "must," "will," or "shall", compliance is considered mandatory.
2. Where policy contains the word "should", compliance is strongly encouraged, but may be relaxed by the Approving Authority in the following circumstances:
    i. The policy can be achieved through alternative means that will result in an improved or equivalent outcome.
    ii. Application of the policy is not feasible, reasonable, or practical, and this can be clearly identified to the Approving Authority.
    iii. If unforeseen circumstances require an alternative approach, the general intent of the policy is met or satisfied.
4. Where a statement contains the word "may", there is a choice in applying the policy, but the Approving Authority has discretion in decision making and must give the policy due consideration.

1.3 Map Interpretation

1. A boundary, land use area, or location of any symbol or numerical figure on a map in the NASP will be interpreted as approximate and not absolute.
2. Specific areas or measurements, tables or figures of this NASP are subject to variation at the Land Use Amendment and Subdivision Application stage.
3. Plans and figures that show lot lines and building footprints are for conceptual purposes only. Actual lot boundaries and building locations will be more clearly defined at the Subdivision stage of development but must maintain compliance with all applicable policies.
4. Plans and renderings showing the nature of future parks and pathways are conceptual only, and variations from these concepts may occur during the detailed design stage.
5. It is recognized that maps and figures within this NASP are subject to further refinement at the Land Use Amendment, Subdivision and Development permit stage. No amendment to the NASP will be required for these refinements as long as the intent of the policies contained herein are adhered to.

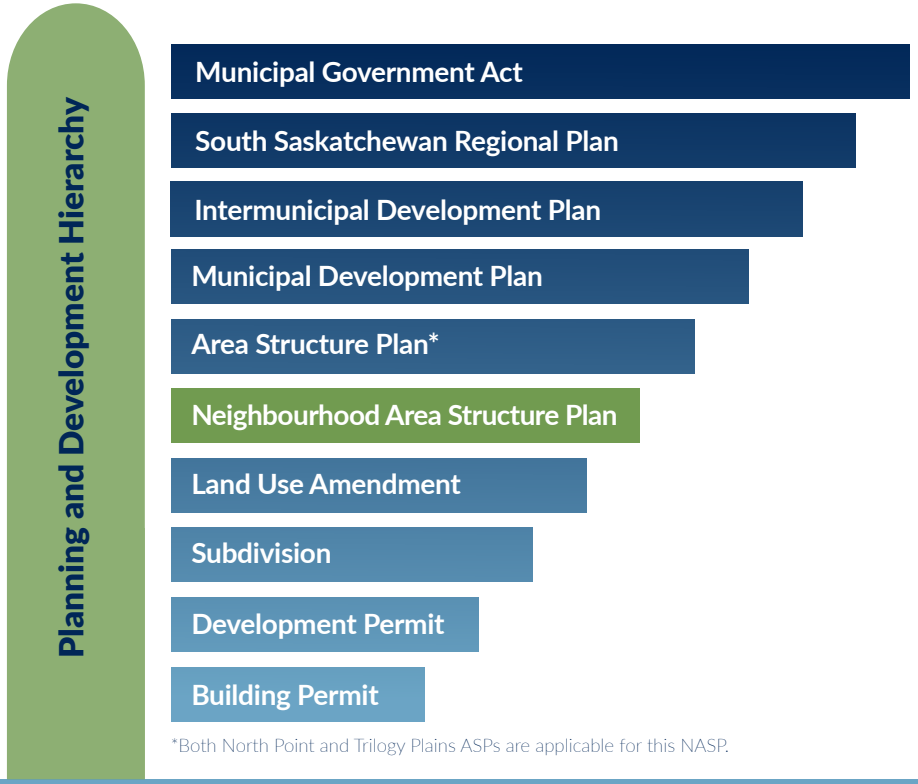




1.4 Policy Framework

The Thunder Stone Junction NASP is designed to provide key non-residential employment lands, strategically prioritized for development by the Town in the MDP and in alignment with the preferred growth scenario outlined in the 2025 Growth Strategy. Additionally, focus on non-residential development in Thunder Stone Junction directly supports the Town's goal of establishing a balanced tax assessment base.

The Thunder Stone Junction NASP area is located entirely within the boundaries of two approved ASPs: the Trilogy Plains ASP (2023) and the North Point ASP (2024). The western portion of the NASP area falls within the Trilogy Plains ASP, while the eastern portion is contained within the North Point ASP. Together, these ASPs establish high-level policy and a land use framework, serving as the basis that guides neighbourhood planning through this NASP.



*Both North Point and Trilogy Plains ASPs are applicable for this NASP.

Both ASPs identify Thunder Stone Junction lands for future employment uses, including a mix of commercial, business, light industrial, logistics, and warehousing. These land uses are intended to support regional economic development and capitalize on future access to the Highway 2 and 338 Avenue E interchange.

Beyond the parent ASPs, the land use concept and policies in this plan respond to and are guided by the documents that make up the Town of Okotoks planning framework.

This NASP should be read in conjunction with the statutory and non-statutory documents listed below.

Statutory Plans:

- South Saskatchewan Regional Plan (2018)
- Town of Okotoks/MD of Foothills Intermunicipal Development Plan (2016)
- Town of Okotoks Municipal Development Plan (2021)
- Trilogy Plains Area Structure Plan (2023)
- North Point Area Structure Plan (2024)

Non-Statutory Plans and Studies:

- Okotoks Growth Strategy (2025)
- 2022-2025 Town of Okotoks Strategic Plan
- Active Transportation Strategy (2015)
- Local Transit Plan (2019)
- Transportation Master Plan Update (2020)
- 338 Avenue Function Planning Study (2024)
- Economic Development Strategic Plan (2024)
- Environmental Master Plan (2018)
- Recreation, Parks & Leisure Master Plan (2023)
- Natural Asset Inventory (2020)
- Water Master Plan (2020)
- North Okotoks Annexation Lands Stormwater Master Drainage Plan (2024)
- Stormwater Management Plan and Flood Mitigation Plan (2014)
- Sanitary Master Plan Update (2024)

1.5 Public Engagement

The Thunder Stone Junction NASP was developed considering a range of input from Plan Area landowners, impacted parties, the public, and technical experts from the Town of Okotoks and consultant team.

With engagement completed at the ASP level, the overall approach for engagement on the Thunder Stone Junction NASP focused on communication to ensure everyone, from adjacent neighbours to the broader public, were informed on the project. Communication efforts and the public open house focused on planning context and education around what an NASP is, overview of how community could be involved in the process, early plan development and draft elements. An exit and accompanying online survey asked for written feedback and provided space to ask questions or submit comments. Once developed, the draft plan was made available on the project webpage with an open ended form for the public to submit any written feedback.

This section provides an overview of engagement conducted as part of NASP development. The full Thunder Stone Junction What We Learned Report is available in Appendix A.

Project Webpage

A dedicated project webpage on the Town of Okotoks Shape Our Town community engagement platform was launched in early April 2025: shapeourtown.okotoks.ca/thunder-stone-junction. The page served as a central and consistent location to find project information, updates about the NASP, ways to get involved including digital engagement activities, and contact information to reach the project team for questions or comments.

Early Engagement and Communications

Early engagement for the NASP focused on proactive, targeted communication with key impacted parties. Intermunicipal consultation with Foothills County was also initiated to provide early notice and invite feedback and dialogue on the Plan.

Plan Area landowners and businesses as well as adjacent landowners in Okotoks and Foothills County were recipients of a direct letter mail out inviting them to the open house. The public was also encouraged to attend, and the open house was advertised on the Shape Our Town webpage, on Town social media, and in the Western Wheel newspaper.

PARTICIPATION

40
Open house attendees

23
Survey responses
(9 hardcopy and 14 online)

94
Feedback form responses

1
Email

Engagement Activities - Phase 1

The drop-in style public open house was held on June 24, 2025, at the Crystal Ridge Golf Course, with information boards and project team members (Town staff and consultant team) available to answer questions. The information provided included project background, NASP process and timeline, partial draft plan material, and next steps.

Participants were encouraged to share their feedback on sticky notes and an exit survey asking for general input was available for participants. Approximately 40 people attended the open house.

For those unable to attend in person, the open house information boards were made available on the Shape Our Town project webpage and an online survey, with the same questions asked of in-person participants, was open from June 25 to June 30, 2025. In total, 23 participants filled out surveys.

Feedback from this first phase of engagement was considered in plan development alongside input from the Town and consultant technical experts, key stakeholders, as well as feedback received from external agencies.

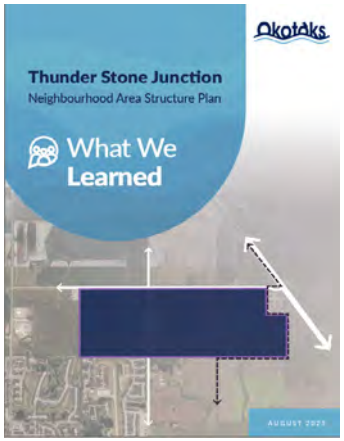
Engagement Activities - Phase 2

Plan development continued through the summer months and a first draft of the NASP was submitted for review by Town departments in the fall. Once revised, the NASP was made available to the public on Shape Our Town, and a request for online feedback was open from December 11, 2025, to January 16, 2026.

In this second round of engagement, 94 responses were received through the online form, and one direct email was received by the Town.

What We Learned

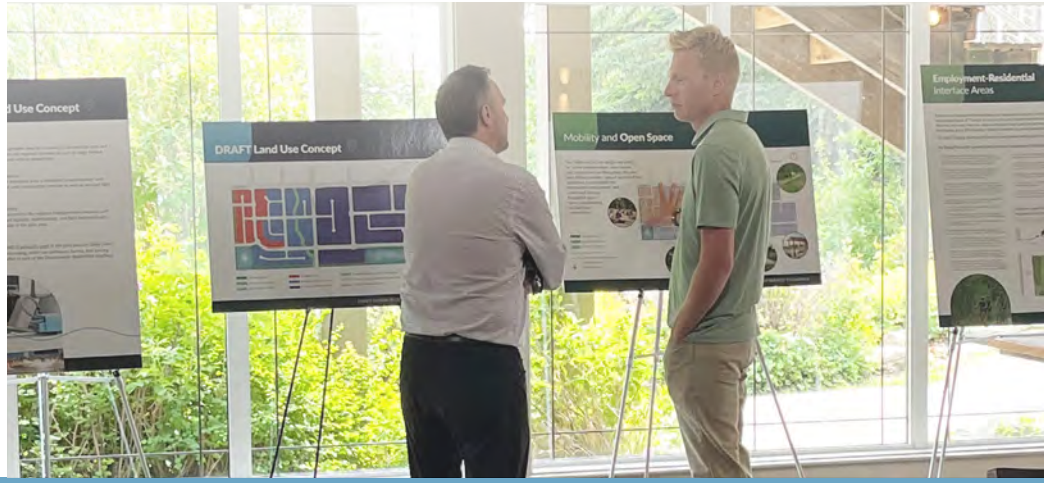
After the engagement activities were complete, a What We Learned Report (WWLR) was created to summarize the feedback received. Frequently heard themes expressed in participant feedback were identified and are provided in the WWLR along with verbatim survey responses.



Key themes expressed include:

- Concern over potential traffic and noise
- Desire for increased green space, ponds, and larger buffers in the employment-residential interface areas
- General opposition from residents in the Air Ranch neighbourhood
- General support for light industrial uses east of 48 Street and desire to limit industrial uses to west of 48 Street
- General concern over growth and pressures on infrastructure across Okotoks
- Desire for the Highway 2 interchange to be completed quickly

The full WWLR is included in the attached appendices.



2 Plan Area Context

2.1 Ownership

2.2 Existing Land Use

2.3 Existing Conditions & Background Studies

2.1 Ownership

The Thunder Stone Junction NASP encompasses approximately 187.58 hectares (463.52 acres) in the northeast quadrant of Okotoks including land annexed into the Town from Foothills County in July 2017. The Plan Area is bordered to the north by 338 Avenue E; by the Air Ranch, agricultural lands, and country residential to the south; Ridgemont NASP lands directly to the west; and its eastern edge falls at the municipal boundary adjacent to Highway 2.

Land ownership within the Plan Area is detailed in Table 1 and illustrated on Figure 2. The Plan Area currently consists of five (5) parcels, owned by several landowners.

Table 1 | Ownership

No	Legal Description	Title	Approx Area* (Ha)	Approx Area* (Ac)	%
1	NE 34-20-29-4	191 202 923	64.7	160	34.7
2	NW 35-20-29-4	201 165 685	64.31	158.9	34.5
3	Plan 051 0337 Blk 1 Lot 1	101 107 702 +4	7.99	19.74	4.3
4	Plan 161 1823 Blk 1 Lot 2	171 100 881	9.31	23	5.0
5	NE 35-20-29-4	161 173 959 +1	40.38	99.78	21.6

*Areas indicated in the above table are based on spatial data and may vary slightly from areas specified on title.

Figure 1 | Ownership

2.2 Existing Land Use

Lands within the Thunder Stone Junction NASP are currently zoned Agricultural and Land Holdings District (ALH) and identified in the Okotoks MDP future land use concept as future employment lands. ALH is provided to "continue to support rural agricultural activities prior to transitioning to urban style development".

The Plan Area consists of primarily cultivated agricultural parcels with minimal built development. All existing land use districts are illustrated on Figure 2: Existing and Surrounding Land Uses.

The Plan Area is bordered by a mix of existing and planned land uses that shape both its opportunities and constraints. To the north, lands are designated ALH and remain largely undeveloped.

To the east, the Plan Area abuts the municipal boundary with Foothills County, adjacent to Highway 2. Adjacent lands within the County are currently supporting rural and agricultural uses as indicated in the County's land use bylaw.

To the west, the Ridgemont NASP designates future residential and school lands. Current zoning in the Ridgemont area includes primarily ALH with Recreation and Open Space District (ROS) in the west. The Ridgemont plan includes a park network and residential streets that will connect to the Thunder Stone Junction area, requiring coordinated edge treatments and active transportation linkages. Ridgemont lands are expected to transition to mainly Traditional Neighbourhood District (TN) with some higher density Neighbourhood Core District (NC), and a General Commercial District (GC) node in the northwest as development proceeds.

To the south, the established residential community of Air Ranch contains land uses including TN and ROS districts, with airport lands designated Aerodrome District (A). Housing surrounding the Air Ranch Airport is made up of mainly single detached residences.

Interfaces with existing and planned neighbourhoods that surround the Plan Area are defined by land use, policy and guidance provided in this NASP. Considerations and policy for land use adjacent to the airport is provided in the following section.

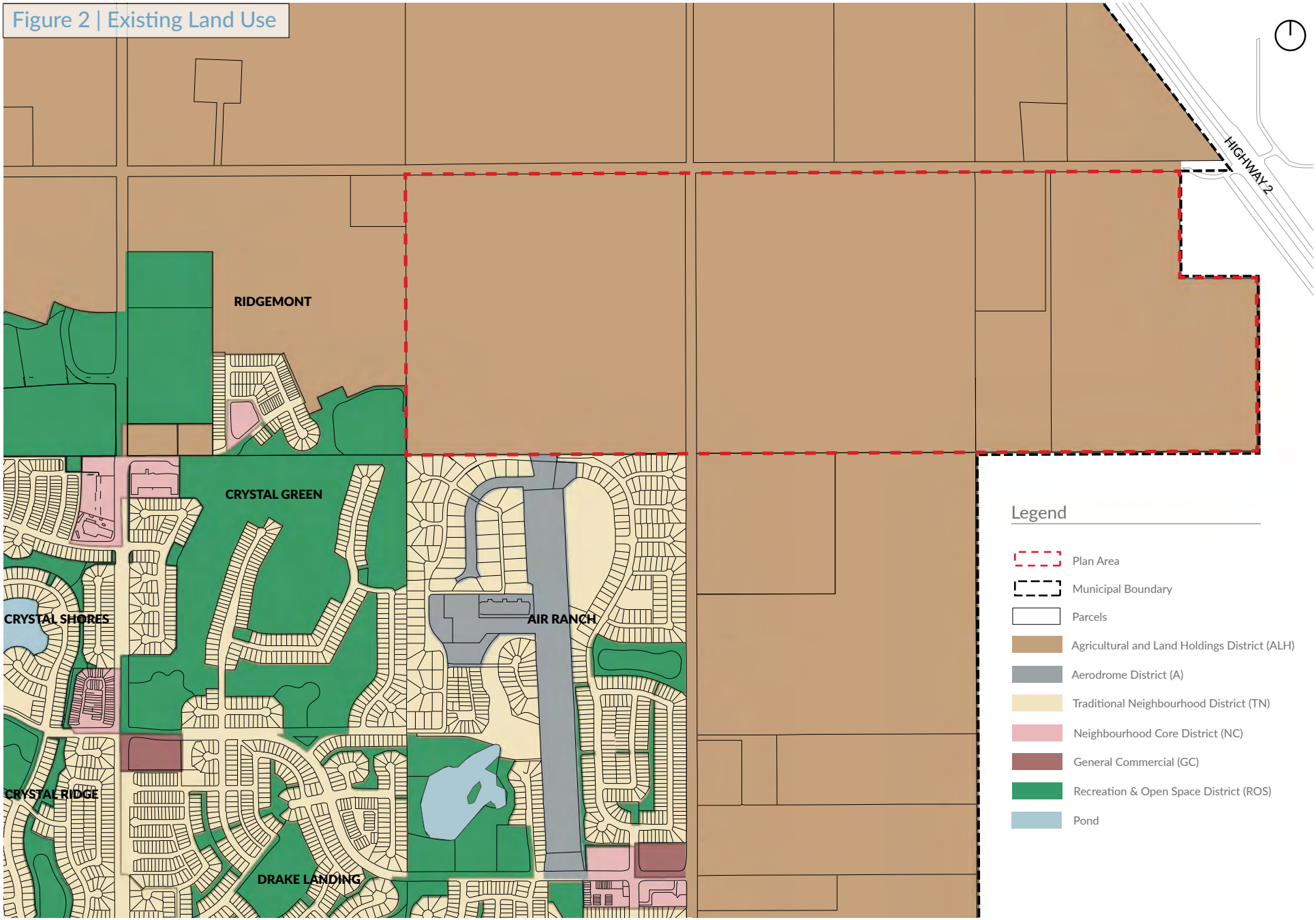
2.2.1 Okotoks Air Ranch Airport

Development in the western quarter of the Plan Area will adhere to all applicable regulations and restrictions for land use in proximity to aerodromes to ensure compatibility with the Air Ranch Airport.

Figure 3 illustrates the Noise Exposure Forecast (NEF) contours within the NASP related to noise produced by the Air Ranch Airport. Figure 4 illustrates maximum height restrictions for buildings, structures, and natural elements within the vicinity of the Air Ranch Airport runway. NEF contours are used to determine compatible land use within the vicinity of the airport, while height restrictions are required to ensure the safe travel of aircraft through runway approach areas.

While residential uses are not provided for in the Thunder Stone Junction NASP, they are further prohibited within the 30 NEF contour of the airport area. Further consideration for specific uses within the vicinity of the airport runway are provided in the following policies.

Figure 2 | Existing Land Use



AIRPORT POLICIES	
2.1	All development proposals should adhere to applicable federal rules, regulations, and/or guidelines related to development in proximity to aerodromes.
2.2	Development within the NASP should adhere to height restrictions, or Obstacle Limitation Surfaces (OLS) for the Okotoks Air Ranch Airport. Proponents may be required to submit obstacle clearance forms to Transport Canada to verify compliance in accordance with Canadian Aviation Regulations.
2.3	No person should place, erect or construct, or permit to be placed, erected or constructed, on any lands in respect of which the OLS for the Okotoks Air Ranch Airport apply, any building, structure or object, or an addition to any existing building, structure or object, the highest point of which would exceed an approach surface in elevation at the location of the building, structure or object.
2.4	The height of landscaping within the linear park / buffer area north of Air Ranch Airport runway 16/34 shall align with all Airport Height Limitation requirements and regulations applicable at time of development.
2.5	Residential land uses should be prohibited within the Air Ranch Airport 30 NEF contour.

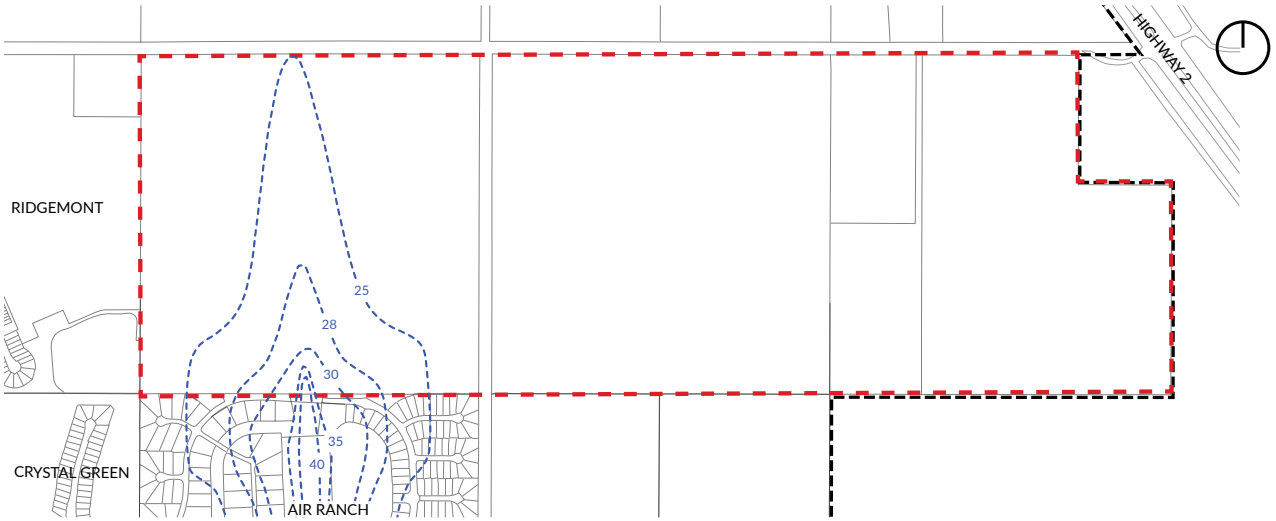
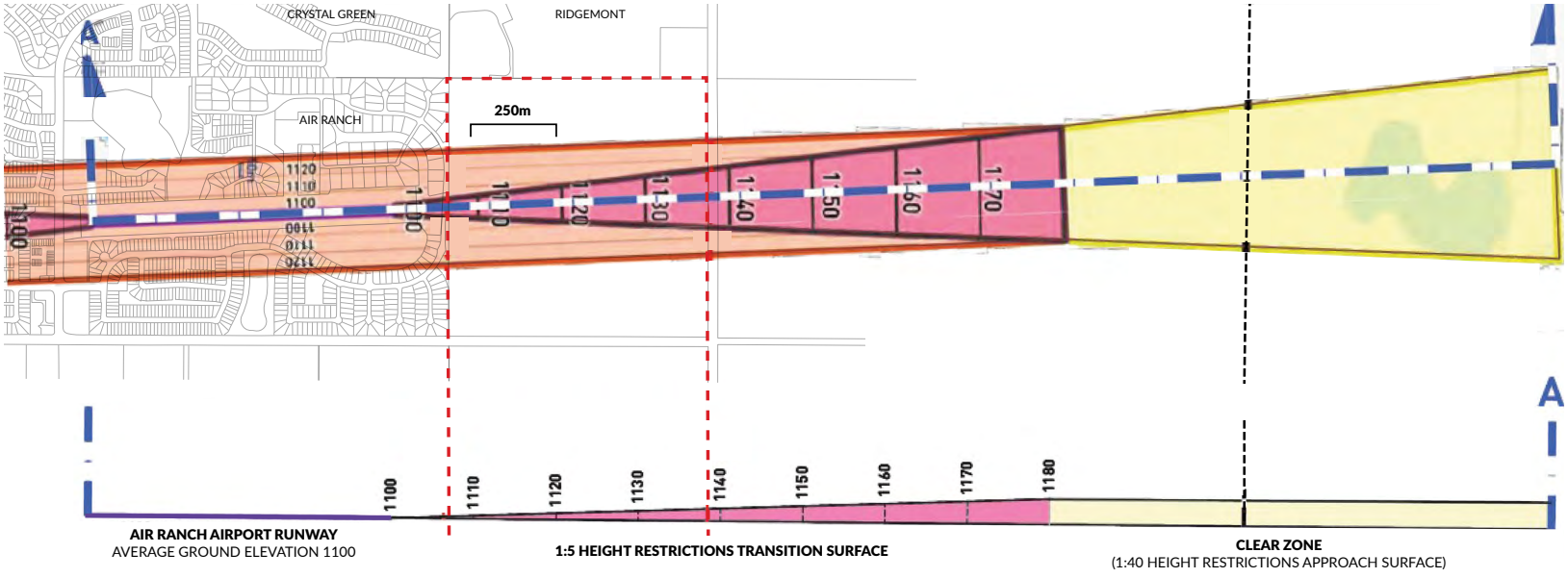


Figure 3 | NEF Contours

Legend

- Plan Area
- Municipal Boundary
- Parcels
- NEF Contours

Figure 4 | Height Limitations



Legend

- Plan Area
- Municipal Boundary
- Parcels
- Clear Zone
- 1:5 Height Restrictions Transition Surface
- Take Off Approach Surface
- Air Ranch Airport Runway
- 250m Height Limitation Segments

2.3 Existing Conditions & Background Studies

The Plan Area consists primarily of cultivated agricultural lands, with some minor topographic variation and temporary drainage features including wetlands and watercourses. The area slopes generally from north to south, with the lowest point in the plan's southeast corner. Elevations range from 1,110 m in the northwest to 1,086 m in the southeast.

Most land within the NASP has been disturbed or cultivated; however, there are some semi-natural areas including pasture, as well as natural areas including low vegetation grasslands and woodlands. The Natural Asset Inventory and Ecosystem Service Assessment prepared by Fiera Biological Consulting Ltd. in 2020, provides a comprehensive overview and inventory of natural and semi-natural assets across the Town of Okotoks and measures their condition. The condition scores of natural and semi-natural assets found within the NASP rank low to moderate, likely because of the extent of agricultural disturbance in the area.

Several rural single-family residences and associated farm buildings exist within the Plan Area. Water servicing is provided through groundwater wells and private sewage treatment systems.

A high-pressure gas pipeline intersects with the southeasternmost corner of the plan, requiring a 15 m development setback.

A number of technical studies and reports were undertaken to better understand the Plan Area context and the opportunities and constraints that may impact future development. These studies include:

- Biophysical Impact Assessment (BIA)
- Historical Resources Overview
- Environmental Review and Recommendations
- Desktop Geotechnical Review

2.3.1 Biophysical Impact Assessment

A desktop BIA was completed by Tetra Tech in May 2025.

The Plan Area consists primarily of disturbed agricultural areas, one intermittent watercourse, several ephemeral watercourses, one dugout pond, marshes and stands of trees around private residences. Wetlands identified are considered temporary and seasonal marshes and are mostly lentic (ponded) without surface water connections in average precipitation years, while some marshes are associated with and are present along the watercourses.

Several wetlands have been annually impacted by agricultural activities and cultivation continues to reduce native plant species diversity and regional agricultural runoff may impact water quality. The assessment found no wetlands within the Plan Area to be permanent or claimable by the Crown.

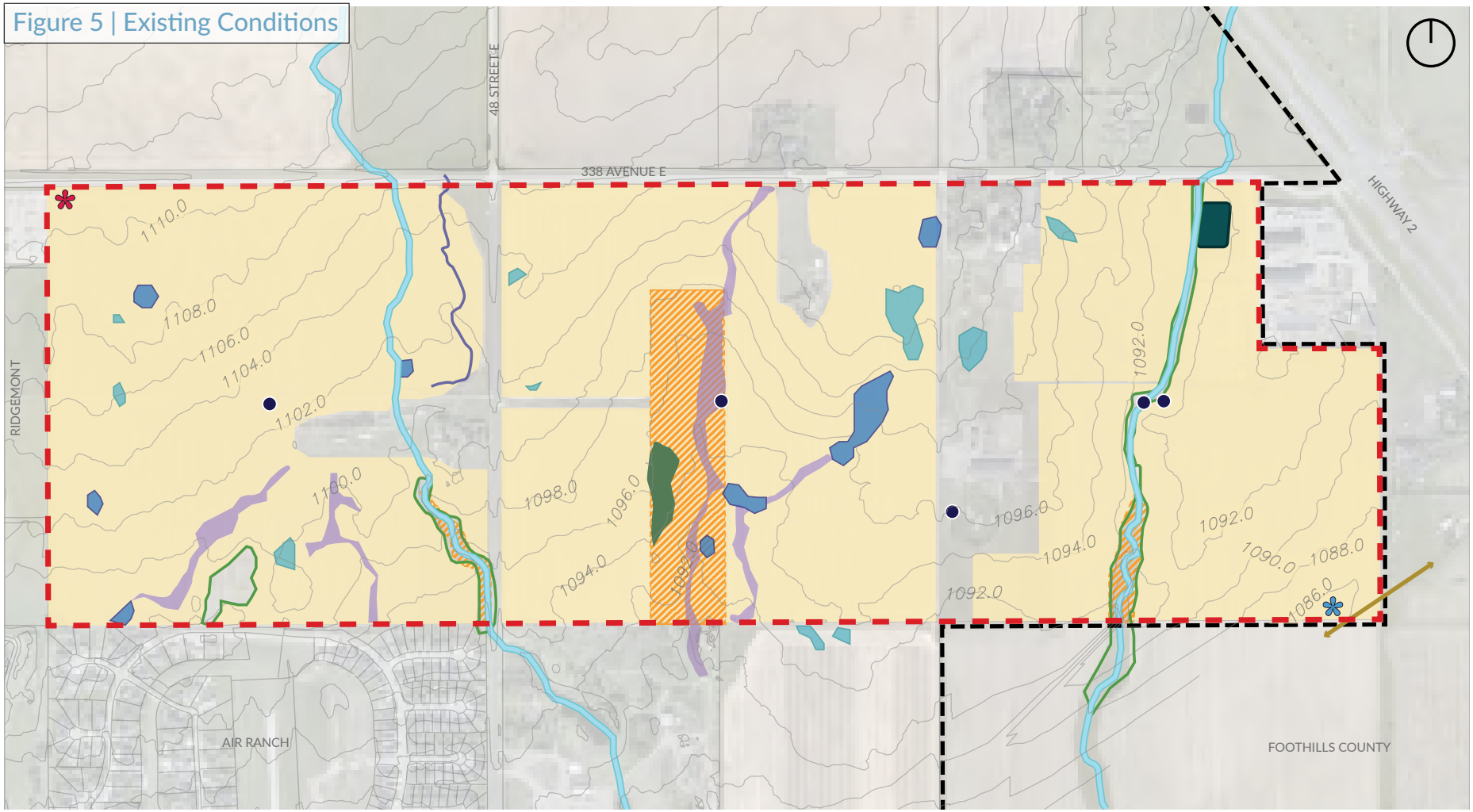
The BIA identifies two important connected watercourses and seasonal marsh lands that span across adjacent lands beyond the Plan Area. These watercourses have been set apart from the surrounding cultivation activity and are good candidates for restoration activities and integration into the NASP design and stormwater management plan as natural infrastructure. Incorporation of major natural drainage features helps to maintain natural drainage patterns and hydrological inputs and outputs.

The report recommends that further analysis be conducted through field survey prior to development to verify study findings including existing wetlands and watercourses, infrastructure, vegetation, and any sensitive wildlife conditions in the Plan Area and a 100 m buffer.

General location of biophysical features is identified on Figure 5.

BIOPHYSICAL ASSESSMENT POLICIES	
2.6	A biophysical field survey shall be completed at the future development stage (i.e., land use amendment or subdivision), as recommended in the BIA submitted with this NASP.

Figure 5 | Existing Conditions



Legend

- Plan Area
- Municipal Boundary
- Cultivated Lands
- Elevated Potential for Historical Resources*
- Seasonal Marsh
- Temporary Marsh
- Water Well
- Ephemeral Drainage
- Ephemeral Waterbody
- Dugout
- Watercourse
- Intermittent Drainage
- Abandoned Gas Pipeline
- Topography
- High Point
- Low Point

*Historical Resources Review conducted in support of this NASP identified undisturbed areas of elevated potential to contain archaeological resources. Additional assessment may be required. See Section 2.3.4.

2.3.2 Environmental Review & Recommendations

A Phase 1 Environmental Site Assessment (ESA) was conducted for the Trilogy Plains ASP by Trace & Associates in May 2021. Similarly, a limited Phase 1 ESA was conducted for the North Point ASP in January 2022 by Basin Environmental. These studies identify potential past or present environmental threats or impacts to the ASP lands that may require further environmental assessment.

In preparation of the Thunder Stone Junction NASP, the above ESAs were reviewed by Tetra Tech Canada and a report was prepared with recommendations for each existing parcel within the NASP that may warrant a Phase II ESA prior to development. A future Phase II ESA is recommended to assess conditions on three (3) of the parcels within the Plan Area.

Without expected date(s) for land ownership change or development, there is potential risk of changes to conditions or areas of concern prior to that development which would require redoing all or a portion of the assessment. As a result, further environmental assessment as noted for each parcel is recommended to occur at the land use amendment or subdivision stage to ensure accuracy and relevance.

ENVIRONMENTAL POLICIES	
2.7	Further environmental assessment shall be completed at the future development stage (i.e., land use amendment or subdivision) as per recommendations of the Phase II Environmental Assessment Recommendations letter report submitted with this NASP.
2.8	A Phase II ESA shall be completed at the future development stage (i.e., land use amendment or subdivision) for specific conditions on parcels identified in the Phase II Environmental Assessment Recommendations letter report submitted with this NASP, including lands at legal addresses 4;29;20;35;NE, 4;29;20;34;NE, and 0510337;1;1.

2.3.3 Geotechnical Desktop Study

A Geotechnical Desktop Study was completed for the Thunder Stone Junction lands in June 2025 to assess geotechnical conditions of the Plan Area and identify constraints. The desktop study included a review of historical information and subsurface information based on geology maps and geotechnical borehole database.

The surficial geology of the NASP area is expected to be comprised of clay, silt, sand and/or gravel overlying Porcupine Hills formation bedrock and is expected to contain glacial till deposits. There is a potential of fill material being present from previous farming and grading activities on the project site.

The desktop study provides preliminary overview of soil and groundwater conditions and potential geotechnical risks across the NASP; however, further geotechnical evaluations (i.e., subsurface exploration, geophysical) should occur at the land use amendment or subdivision stage to refine and confirm findings of the desktop study.

Appropriate geotechnical investigation is required to provide the anticipated thickness and depth of each soil and rock layer for the purpose of design and construction work.

GEOTECHNICAL INVESTIGATION POLICIES	
2.9	Appropriate geotechnical investigation, as recommended in the Geotechnical Desktop Study submitted with this NASP, shall be conducted at the future development stage (i.e., land use amendment or subdivision).

2.3.4 Historical Resources Review

A desktop Statement of Justification (SoJ) for historical resources was completed by Soriak Consulting in August 2025. The SoJ is a desktop-based review that outlines potential archaeological and historic structure constraints relative to the Town of Okotok's proposed Thunder Stone Junction NASP.

The review found general archaeological potential for the region to be high with 22 previously recorded archaeological sites located within 2.5 km of the NASP (19 prehistoric and 3 historic) and 222 sites located within 5km of the NASP.

Aerial imagery indicates agricultural use of the area since at least 1962, so much of the NASP consists of previously disturbed and cultivated land. Three areas were identified within the NASP that have elevated potential to contain archaeological resources consisting of undisturbed terrain, primarily adjacent to hydrological features. These general areas are shown on Figure 5.

Based on the SoJ, Application to the Province for the NASP footprint was submitted with recommendation for Historical Resources Act (HRA) approval for all portions of the plan located within low archaeological potential areas (i.e., heavily disturbed or cultivated lands) which make up most of the site. Future assessment may be required for the identified areas within the NASP that have elevated archaeological potential, and recommendations are provided in the SoJ.

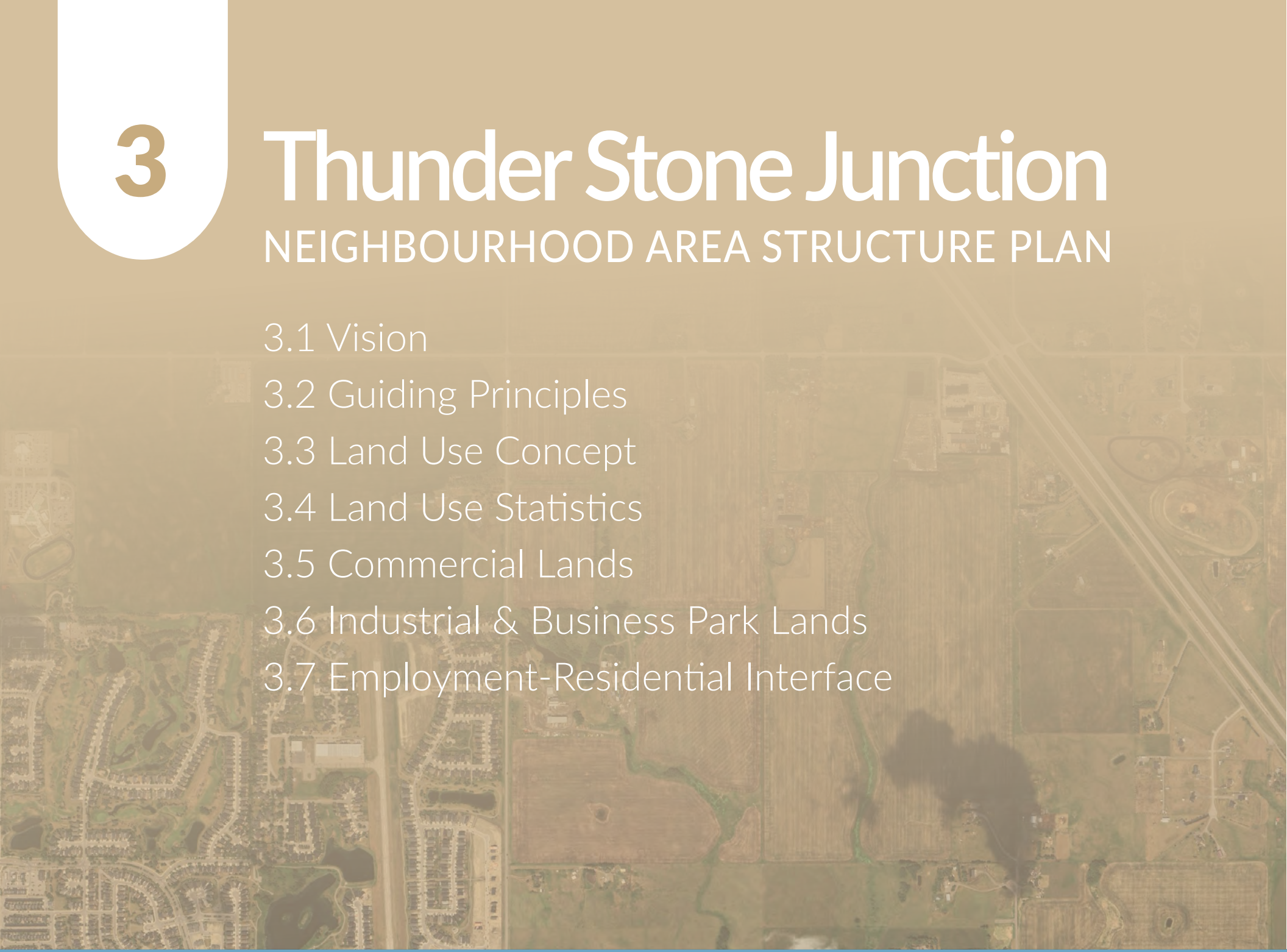
HISTORICAL RESOURCES POLICIES	
2.10	HRA Clearance may be required at future subdivision and development permit application submissions.

2.3.5 Traditional Knowledge & Land Use Assessment

The Town of Okotoks Traditional Knowledge and Land Use Assessment (TKLUA) describes the cultural significance of the area in which the Town is locacted and identifies important traditional resources and land use sites within the Town. The TKLUA was a collaborative effort engaging Elders and experts from the Blackfoot Confederacy, Tsuut'ina and Stoney Nakoda First Nations, facilitated and compiled by Arrow Archaeology Limited and supported by the Town of Okotoks.

Based on the findings of the TKLUA, no further site specific assessment is required for the Thunder Stone Junction NASP.

3 Thunder Stone Junction
NEIGHBOURHOOD AREA STRUCTURE PLAN



3.1 Vision

Thunder Stone Junction will be a high-profile employment district at the regional gateway to northeast Okotoks that offers a range of commercial and business park uses with thoughtful connection and sensitive transitions to adjacent neighbourhoods.

Adjacent to quickly growing residential neighbourhoods along Okotoks' northeast development corridor, Thunder Stone Junction provides both regional-scale destination retail to service these communities as well as flexible business and industrial employment opportunities, all bringing an estimated 3,373 jobs for the Town. The plan provides a diverse range of commercial and industrial offerings that support both local workers and commuters, at a prime location with regional visibility that will help to strengthen the Town's competitiveness for investment and business attraction. Anchored by the future Highway 2 / 338 Avenue East interchange planned by Alberta Transportation and Economic Corridors (ATEC), the NASP is strategically located to foster and support economic opportunity with direct access to major provincial transportation networks.

Employment lands at Thunder Stone Junction will be complimented by high-quality open spaces that extend toward the southwest to connect the business community, integrate stormwater management, create green buffers for residential neighbours, and contribute to Okotoks' larger open space network. Natural assets will be preserved where possible and naturalized pathways, amenity and wetland features will allow employees, patrons, and neighbouring residents to gather and enjoy passive recreation activities.

Thunder Stone Junction serves to plan for deliberate and sensitive transition from the residential portion of Trilogy Plains in the west towards the employment areas of that ASP and to North Point, bridging the two ASPs to guide land use and scale, character and typology between neighbouring residential communities and employment lands. Interface areas with adjacent residential include park space and green buffers as well as smaller-scaled businesses with specific building and landscaping requirements to ensure the NASP is integrated appropriately into the broader community. Land uses within the plan transition in the west from smaller scale to regional commercial and business park uses to light industrial, logistics, warehousing and larger scale business opportunities in the east where direct access to the regional transportation network is key. The plan's flexible lot sizing and variety of non-residential uses align with the Town's long-term economic development objectives and strategy to attract investment supporting employment growth and economic diversification.

3.2 Guiding Principles

The development of Thunder Stone Junction is guided by the following principles, which support the overall vision for the employment neighbourhood. These principles further align with the goals of the Trilogy Plains and North Point ASPs as well as the broader Town of Okotoks' planning framework.

Innovation & Business Expansion

This plan was designed to encourage further business investment in the Town of Okotoks and allow for innovative new business opportunities to thrive and choose to call Okotoks their home base. Existing businesses within Town that may have outgrown existing operations have the opportunity to flourish here in a regulatory environment and plan that supports their expansion opportunities.

Diverse & Inclusive Economic Opportunity

A range of lot sizes and land use formats accommodate commercial, flex office, light industrial, and logistics development. The plan is prescriptive where necessary to protect natural assets, interface areas, overall character and logical transition of uses, but flexible enough to allow variation in business usage to respond to developing market needs.

Regional Connectivity

The plan location provides direct connectivity to the regional transportation network at the future 338 Avenue E and Highway 2 interchange, supporting business development and logistics opportunities. Within the plan, a modified grid of roads and pathways support active transportation between employment uses and nearby destinations integrated into the broader parks and regional pathway system. Together, the plan's transportation network promotes active mobility for workers and visitors, while also providing access to major transportation routes, making it a strategic hub for businesses trying to reach broader markets.

Community Integration

The plan incorporates infrastructure servicing strategies, connectivity, and interface treatments that ensure compatibility with surrounding residential areas while reinforcing the high-profile character of the employment lands. Strategies include landscaped buffers and pathway corridors along residential edges, coordinated access and circulation to direct heavy vehicle traffic away from neighbourhood streets, and policy and urban design measures that mitigate potential nuisance impacts. Together, the plan provides functionality and a cohesive transition between residential neighbourhoods and new commercial, business flex, and industrial uses.

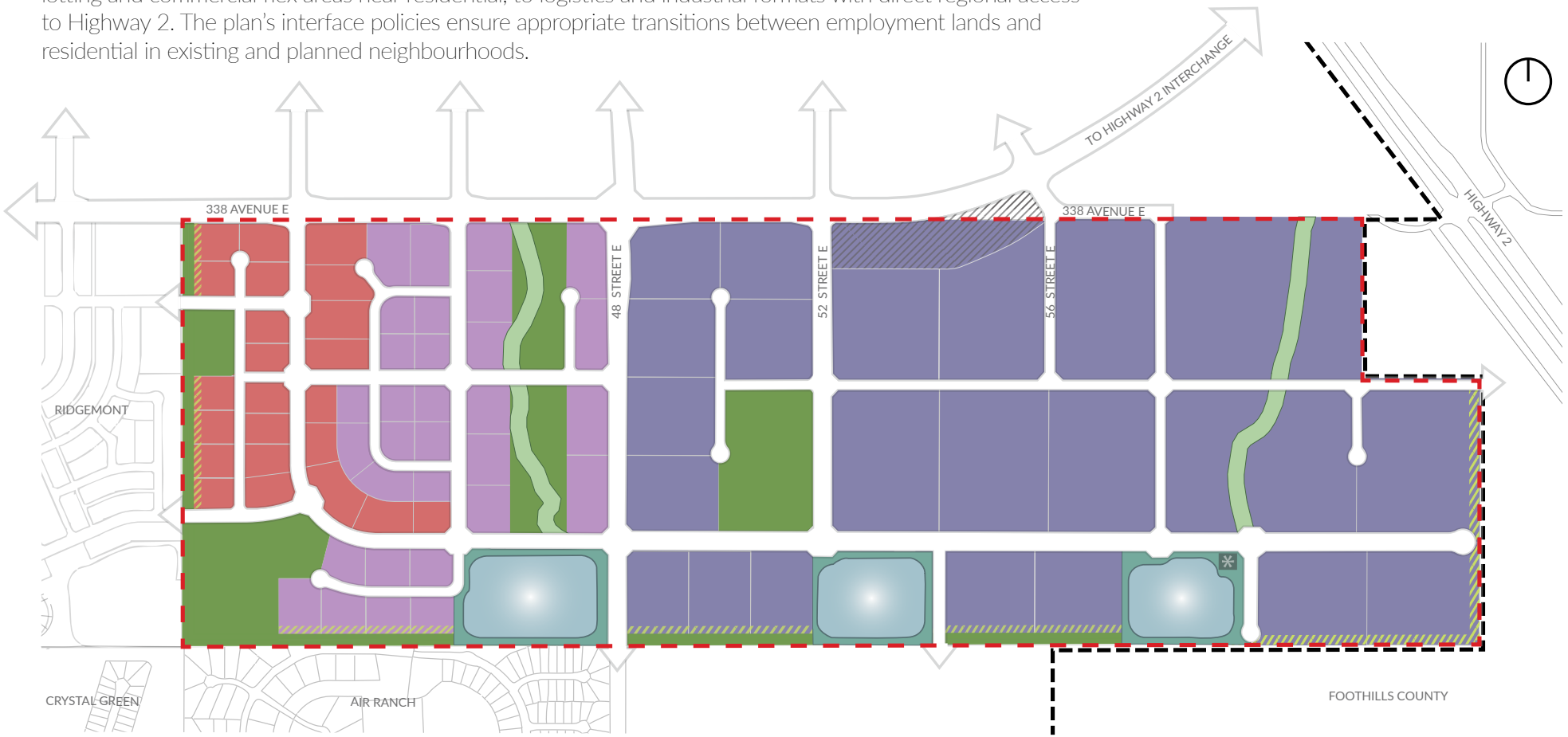
Sustainable Development

Infrastructure and site design are intended to support low impact design (LID) features, staged servicing with sustainable practices for stormwater management and water re-use, as well as green street objectives. These measures contribute to a more climate-resilient community, demonstrating leadership in sustainable growth while lowering long-term servicing costs.

3.3 Land Use Concept

The Land Use Concept shown on Figure 6 shows the general layout and location of proposed land use, transportation and open space design for Thunder Stone Junction. Employment districts have been structured to accommodate varied parcel formats, encourage clustering of compatible uses, and allow for staged extension of utilities and roads. The layout emphasizes a west-to-east intensity gradient, transitioning from finer-grained lotting and commercial flex areas near residential, to logistics and industrial formats with direct regional access to Highway 2. The plan's interface policies ensure appropriate transitions between employment lands and residential in existing and planned neighbourhoods.

Figure 6 | Land Use Concept



Legend

- Plan Area
- Municipal Boundary
- ATEC Right of Way
- Primary Commercial
- Business Flex
- Industrial Business Park
- Environmental Reserve
- Municipal Reserve
- PUl (Stormwater Management)
- Lift Station
- Interface Overlay

3.4 Land Use Statistics

Table 2 provides a breakdown of land use distribution within Thunder Stone Junction. The plan is largely industrial with commercial uses to the west of 48 Street. Municipal Reserve land has been dedicated at 10%. Together with Environmental Reserve dedicated to preserve natural drainage channels and Public Utility lands taken for constructed wetlands and stormwater management these areas contribute to an open space network that comprises 34.64 hectares (85.61 acres) or approximately 18.47 % of the total Plan Area.

The Thunder Stone Junction NASP establishes a non-residential land use framework that supports the Town's economic development goals by providing for a range of employment generating uses. Land use designations for the Plan Area are based on existing statutory policy, adjacent land use context, and goals of the MDP and 2025 Growth Study.

Thunder Stone Junction provides an overall 126.37 hectares (312.26 acres) of commercial and industrial employment area anticipated to provide 3,373 jobs upon full build out.

Table 2 | Land Use Statistics

Land Use Description	Land Use District	Hectares (ha)	Acres (ac)	% of GDA
Total Area		**187.58**	**463.52**	
Environmental Reserve	Natural Areas District (NA)*	3.65	9.02	
Gross Developable Area		**183.93**	**454.50**	**100%**
Primary Commercial	General Commercial (GC)*	13.68	33.80	7.45%
Business Flex	General Commercial (GC)*	20.53	50.73	11.16%
Industrial Business Park	Industrial Business Park (IBP)*	92.16	227.73	50.10%
Municipal Reserve	Recreation and Open Space (ROS)*	18.39	45.45	10.00%
Public Utility - Stormwater Facility and Lift Station	Recreation and Open Space (ROS)*	12.60	31.14	6.85%
Road Area	-	26.58	65.68	14.45%

*Or similar district provided in most current version of the Town of Okotoks Land Use Bylaw.

Table 3 | Employment Projections

Land Use Description	Hectares (ha)	Acres (ac)	Anticipated Jobs*
Primary Commercial	13.68	33.80	622
Business Flex	20.53	50.73	539
Industrial Business Park	92.16	227.73	2,212
TOTAL	**126.37**	**312.26**	**3,373**

*Anticipated job projection calculations are adapted from the Trilogy Plains ASP and assume a floor area ratio of 0.35 FAR for Commercial and 0.3 FAR for Business Flex and Industrial areas. Employment ratios are assumed at 1 job per 50 m2 for commercial, 1 job per 80 m2 for Business Flex, and 1 job per 100 m2 for Industrial.

The following general land use districts are applied within the Plan Area:

- **Commercial focused uses** – applied to lands west of 48 Street.
- **Industrial focused uses** – applied to lands east of 48 Street.

This general and flexible combination of zoning districts ensures the Plan Area will accommodate a diverse range of employment opportunities, while also responding to infrastructure availability, servicing efficiency, and land use compatibility. The following sections further describe land use within these districts and provide associated policy.

GENERAL LAND USE POLICIES	
3.1	The Plan Area is reserved exclusively for non-residential use; no residential land uses shall be permitted.
3.2	Non-employment related uses may be considered within the Plan Area if, in the opinion of the Town, market conditions require their inclusion.
3.3	Variances to the land use concept at the land use amendment or subdivision stage do not require an amendment to this plan or its parent ASP(s) if they are deemed minor in nature by of the Town.
3.4	Development within 800 m of the Highway 2 centreline shall require a Roadside Development Permit from ATEC.
3.5	Electric Vehicle ready charging stations should be incorporated into development permit submissions for fleet and public vehicles.
3.6	Lands within the Thunder Stone Junction NASP can remain as agricultural use until redevelopment occurs.
3.7	No agricultural or country residential subdivisions shall be permitted within the Plan Area.

3.5 Commercial Focused Lands

Commercial focused lands in Thunder Stone Junction are concentrated west of 48 Street and intended to accommodate a broad range of employment supporting uses. These lands are organized into two components: a Primary Commercial area and a Business Flex area.

GENERAL COMMERCIAL POLICIES	
3.8	Commercial lands are those identified on Figure 6 | Land Use Concept and constituting the Plan Area west of 48 Street.
3.9	Commercial lands are intended to support commercial, retail, and business service uses with opportunities for light industrial uses at the discretion of the Town.
3.10	The commercial lands shall be designated to commercially focused land uses.
3.11	Development proposals within the commercial lands area shall include architectural controls and urban design guidelines as part of their submission, unless otherwise directed by the Approving Authority.
3.12	Parking for commercial uses must adhere to the requirements of the Okotoks Land Use Bylaw.
3.13	Parking at the rear of buildings is encouraged in the commercial lands.
3.14	Where parking is visible from the street, appropriate screening (such as landscaped vegetation etc.) will be required.
3.15	Where possible, pedestrian connections should be provided through commercial sites to adjacent pathways or sidewalks.
3.16	Where on-site stormwater is being considered within commercial development, low impact development strategies should be used.

3.5.1 Primary Commercial Area

The Primary Commercial area will interface with nearby residential neighbourhoods, including Air Ranch and Ridgemont, and is intended to support a sensitive transition through building orientation, massing, landscaped setbacks, and screening. Smaller format uses such as retail, food service, and personal services are encouraged to provide a finer grained edge along residential interfaces.

PRIMARY COMMERCIAL POLICIES	
3.17	Commercial Lands are intended to accommodate small-scale commercial and retail uses.
3.18	Light industrial uses are discouraged within the Primary Commercial area.
3.19	Parcels within this area are required to orient access and egress to adjacent collector roads where possible.
3.20	Building frontages within this area should be oriented towards adjacent collector roads.

3.5.2 Business Flex Area

The Business Flex area may accommodate larger format commercial and offices with light industrial as an option at the discretion of the Town. Business Flex uses in interface areas will be developed with appropriate buffering, landscaping, and site design to ensure compatibility with adjacent development.

BUSINESS FLEX POLICIES	
3.21	The Business Flex Area is intended to accommodate a mix of commercial, office, and professional service uses with potential for inclusion of light industrial at the discretion of the Town.
3.22	Parcels within this area are required to orient access and egress to adjacent collector roads where possible.
3.23	Larger format retail anchors may be permitted within the Business Flex Area, provided they are designed to contribute to an attractive and pedestrian-accessible streetscape.
3.24	Office and professional service uses are encouraged within the Business Flex Area, particularly along collector roads and in highly visible locations.
3.25	Development in the Business Flex Area shall ensure compatibility with adjacent Primary Commercial and Industrial Business Park lands to the satisfaction of the Approval Authority.
3.26	Access and egress shall be oriented to collector roads wherever possible, with site circulation designed to minimize conflicts between heavy vehicle and passenger vehicle traffic.

3.6 Industrial Focused Lands

Lands to the east of 48 Street are planned as industrial focused lands. This area will accommodate logistics, warehousing, distribution, advanced manufacturing, and other light industrial uses that require larger parcels and efficient access to the regional road network. The area is strategically positioned to leverage proximity to the future Highway 2 / 338 Avenue interchange, with direct arterial connections via 48 Street and 52 Street. Parcel sizes are anticipated to range from smaller flexible sites to larger blocks suitable for logistics and warehouse operations. This flexible lotting approach supports the employment land framework established in the North Point ASP and provides a range of lotting aligned with the Town's 2021 Industrial and Commercial Market Study.

INDUSTRIAL FOCUSED LANDS POLICIES	
3.27	Industrial lands are those identified on Figure 6 | Land Use Concept and constituting the Plan Area east of 48 Street.
3.28	The industrial lands shall be designated to industrial focused land uses.
3.29	Industrial focused lands are intended to support logistics, warehousing, advanced manufacturing, and light industrial uses.
3.30	Appropriately scaled retail uses may be permitted in the industrial focused lands at the discretion of the Town.

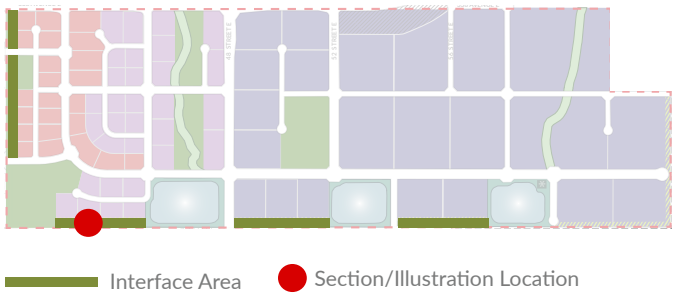
3.7 Employment-Residential Interface

In alignment with the parent ASPs, an Employment-Residential Interface Area has been established along the southern and western edges of Thunder Stone Junction to ensure that new employment uses transition sensitively to adjacent residential neighbourhoods. The Interface Area represents a land use policy overlay where only compatible, low-impact employment activities are permitted. The location of the Employment-Residential Interface Areas are illustrated on Figure 7. Within the Employment-Residential Interface area, more intensive or nuisance-generating uses are not allowed, and additional design requirements apply. This includes a minimum 30-metre building setback from adjacent residential property lines.

The 30-metre setback will be delivered through a combination of public and private measures. The first 20 m within the Plan Area adjacent to residential property lines will be provided as Municipal Reserve (MR) for a landscaped linear park and pathway, while remaining required setback will be implemented on the employment parcels and restricted to landscaping, berms, stormwater facilities, pathways, or screened surface parking (up to 5 m). No storage or other activities will be permitted within this setback.

These interface strategies promote compatibility and visual cohesion with surrounding neighbourhoods while maintaining flexibility for employment-generating uses.

Figure 7 | Employment-Residential Interface



EMPLOYMENT-RESIDENTIAL INTERFACE POLICIES	
3.31	The Employment-Residential Interface Area shall be located as generally shown on Figure 7: Interface Areas.
3.32	Acceptable land uses within the Employment-Residential Interface Area include activities primarily carried out within an enclosed building that generate no significant nuisance factors (noise, dust, odour, vibration) outside of an enclosed building.
3.33	Development shall not be permitted in the Interface area if, in the opinion of the Approving Authority, it uses are likely to produce negative effects on the use and enjoyment of adjacent residential areas.
3.34	A 30-metre minimum building setback from the residential property shall be maintained within the Employment Residential Interface Area. a. The first 20 m of the setback measured from the back of property line of residential development will be provided as Municipal Reserve (MR), which shall include a linear park with pathway, landscaping, and berming (as required) to buffer residential properties from employment land uses. b. The remaining 10 m of the setback will be provided on employment lands, where permitted uses include landscaping, berms, landscaped private stormwater ponds, surface parking (up to 5 m) provided it is screened by berms and landscaping.
3.35	No storage or other uses besides those specified in policy 3.34 above are permitted within the 30 m setback area.
3.36	The treatment of the Employment-Residential Interface will be finalized through the land use and subdivision process.
3.37	Building heights within the Employment-Residential Interface Area should not exceed 2 storeys or 10 m.
3.38	Garbage storage, loading bays, loading doors, or other activities creating heavy truck movements and noise on lots adjacent to a residential area shall not face the residential area.
3.39	Façades of buildings facing adjacent residential areas should consist of high-quality materials that vary in architectural detail, including durable and attractive finishes and materials, glazing techniques etc. in alignment with applicable architectural controls.
3.40	Private lands within the interface areas are encouraged to incorporate bioswales for stormwater management.

4 Parks & Open Space

4.1 Environmental Reserve

4.2 Municipal Reserve

4.3 Parks & Open Space Concept

The Thunder Stone Junction open space system supports the employment lands by integrating ecological features and connectivity that reinforce the character of the lands, ensure compatibility with adjacent neighbourhoods, and enhance the appearance of major corridors. Although primarily non-residential, the plan introduces a linear network of multi-use pathways, a large southwestern park, and green buffers that integrate stormwater management and active transportation routes. Open spaces in the NASP provide larger parks, formalized frontage treatments, and interface areas with landscape buffers adjacent to residential areas. Towards the east these spaces transition to green corridors and stormwater features within the industrial interior.

Open space elements in the NASP align with the Town's Recreation, Parks & Leisure Master Plan by:

- Supporting pathway continuity across neighbourhoods including Ridgemont and potential connection to future development to the north and south;
- Reinforcing visual and recreational buffers at key gateway and interface locations; and
- Integrating naturalized landscapes to enhance environmental value and passive recreation potential.

4.1 Environmental Reserve

Environmental planning in Thunder Stone Junction balances economic and employment land objectives with the conservation of ecological functions and sustainable infrastructure design. Although no provincially significant natural features were identified within the Plan Area, several temporary and seasonal drainage corridors and vegetated features have been integrated into the land use and servicing concept.

The BIA completed as part of this NASP identifies two watercourses as having potential for retention and integration into the plan as Environmental Reserve (as indicated on Figure 5). Responding to these features, the proposed 3.56-hectare Environmental Reserve (ER) area for the NASP is shown on Figure 6. As provided in the MGA, this reserve area would consist of the watercourse and a strip of land, not less than 6 m in width, abutting the bed and shore of the body of water for the purpose of preventing pollution and providing public access. The BIA further identifies temporary and seasonal wetland features (marsh) along the watercourses. A 15 m setback on each side of the watercourse is recommended to help preserve adjacent hydrological features, protect system flows and water quality, and improve opportunities for public access.

Natural assets and naturalized features incorporated into the NASP are designed to function as visual buffers, habitat corridors, and stormwater conveyance zones, reinforcing ecological performance within the urbanized employment area.

Thunder Stone Junction's environmental approach aligns with the Town's Environmental Master Plan and Natural Asset Inventory by:

- Preserving and enhancing naturalized drainage patterns;
- Supporting biodiversity and passive ecological services;
- Integrating green infrastructure into the utility and open space networks; and
- Reducing long-term servicing and maintenance costs through naturalized systems.

The environmental strategy prioritizes resilience, sustainability, and regulatory compliance, while enabling flexible implementation at the subdivision stage.

ENVIRONMENTAL RESERVE POLICIES	
4.1	Natural features to preserve existing drainage patterns should be integrated into stormwater infrastructure where feasible.
4.2	The Town encourages the use of green infrastructure such as bioswales, vegetated buffers, and naturalized storm ponds.
4.3	Environmental buffers may be required where development interfaces with retained wetlands or other sensitive natural features.
4.4	The Town encourages the preservation of tree stands or vegetated buffers identified in supporting biophysical assessments.
4.5	The potential ER area is located as shown on Figure 6. Minor adjustments to the boundary shown may be approved at the discretion of the approving authority considering detailed design grades, slope stability analysis, regional pathway constructability and maintenance.
4.6	Any land dedicated as ER shall be in accordance with the Municipal Government Act and dedicated at the time of subdivision.
4.7	ER lands shall be integrated with the open space network where possible.
4.8	No provincially recognized wetlands were found in desktop biophysical assessment. If future field study finds wetlands claimable by the Crown, wetlands should be retained and enhanced wherever possible.

4.2 Municipal Reserve

Municipal Reserve (MR) requirements for the NASP are outlined in Table 4: Municipal Reserve Requirements. The MGA specifies that 10% MR dedication for gross developable areas is required. In accordance with the MGA, MR within Thunder Stone Junction is required for the entirety of the Plan Area as land and will be dedicated at 10%.

Table 4 | Municipal Reserve Requirements

Land Use Description	Hectares (ha)	Acres (ac)
Total Plan Area	**187.58**	**463.52**
Environmental Reserve	3.65	9.02
Gross Developable Area	**183.93**	**454.50**
Total Municipal Reserve Requirement 10%	18.39	45.45

MUNICIPAL RESERVE POLICIES	
4.9	MR shall be dedicated through the subdivision process in accordance with the Municipal Government Act and the provisions of this plan.
4.10	MR is required for the entirety of the Plan Area as land.
4.11	MR must be developed in accordance with current Town of Okotoks general design and construction specifications.
4.12	Future development, programming and amenities located within MR shall be determined by the Town through comprehensive planning and direction from the Recreation, Parks, and Leisure Master Plan.

4.3 Parks & Open Space Concept

Thunder Stone Junction's parks and open space system is structured to support the character of the employment area while functioning to provide buffering, connectivity, and stormwater integration. Thunder Stone Junction integrates a connected greenway system that provides a natural buffer between new development and existing residential areas. A greenspace corridor runs along the majority of the southern boundary, with linear pathway connections extending north to promote movement throughout the site. The green network is anchored by the retention and integration of two natural watercourses as Environmental Reserve, ensuring that these natural assets continue to function as drainage corridors while also contributing to landscape character.

Naturalized wetlands and a stormwater pond are incorporated for effective stormwater management and serve to enhance the landscape with wildlife friendly, visually appealing features. Each stormwater area is looped by the pathway system connecting these areas to the greenspace corridor that runs along the Plan's southern boundary.

A large MR park is located at the southwest corner of the plan, adjacent to the Ridgemont stormwater pond. The park is designed to blend with and complement this neighbouring open space, while also providing a landscaped buffer and an attractive gateway entrance into Thunder Stone Junction's commercial employment lands.

The pathway system in Thunder Stone Junction is designed primarily to support connectivity and mobility within the Plan Area and to adjacent neighbourhoods. Pathways are aligned with buffer spaces, MR areas, and stormwater corridors to provide clear and continuous routes. This system establishes a functional network that ensures safe and efficient movement for pedestrians and cyclists between lots, along corridors, and to key intersections.

Several additional unprogrammed MR areas make up the total 10% land dedication. These spaces are intended to be flexible to accomodate future programming needs as the Plan Area is developed. Locations have been strategically chosen to further enhance and provide larger buffers for natural assets where possible. Park design will be solidified at the subdivision stage.

Open spaces and pathways within the plan are intended to:

- Connect to the Town's regional trail network to support recreation and commuting;
- Provide flexibility for future use and diverse of programming;
- Provide neighbourhood links to adjacent communities and parks;
- Integrate with natural areas and community amenities; and
- Support walkability and cycling through connections to local streets and employment sites, for all ages and accessibility levels.

Figure 8 | Parks & Open Space Concept

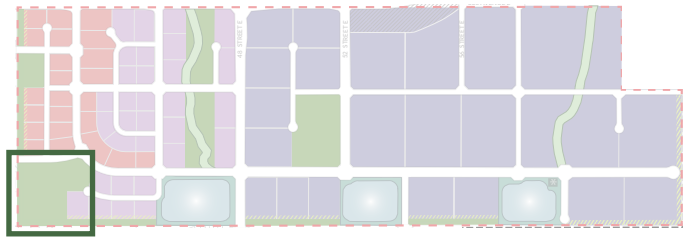
Legend

- A — West Community Park (MR)
- B — West Constructed Wetland (PUL)
- C — Central Pond (PUL)
- D — East Constructed Wetland (PUL)
- E — Linear Environmental Reserve
- F — Linear Park (MR)
- G — Non-programmed MR
- Seating Node
- Open Space Amenity
- Pathway/Trail Network
- Proposed Lift Station Location

Note: Incorporated into Thunder Stone Junction's open space system and pathway network, the constructed wetlands and central pond serve to manage stormwater drainage from across the Plan Area. Details on stormwater management can be found in Section 7.5.

Open space plan and illustrations are conceptual and subject to change.

Figure 9 | West Community Park



PLAN KEY

4.3.1 West Community Park

The community park located at the southwest corner of the Plan Area represents the primary MR green space node in Thunder Stone Junction. This park space is directly adjacent to the planned stormwater pond in Ridgemont and residential lots in the northwest portion of Air Ranch. The park is intended to provide a green buffer between employment and residential areas, to connect with the regional pathway system, and provide extended open space amenity in an area where four neighbourhoods converge.

Park design will be coordinated with the neighbouring Ridgemont open space to ensure continuity across the plan boundary. Strategically placed bioswales will be incorporated at the design stage to capture stormwater and provide habitat for a diversity of fauna. The proposed park is designed to accommodate flexible passive recreation opportunities for nearby residents and employees with pathways linking into the broader open space and mobility network identified in this NASP. Passive recreation programming may include open lawns for passive play, shaded seating areas, a potential playground facility, and/or designated barbecue sites.

Legend

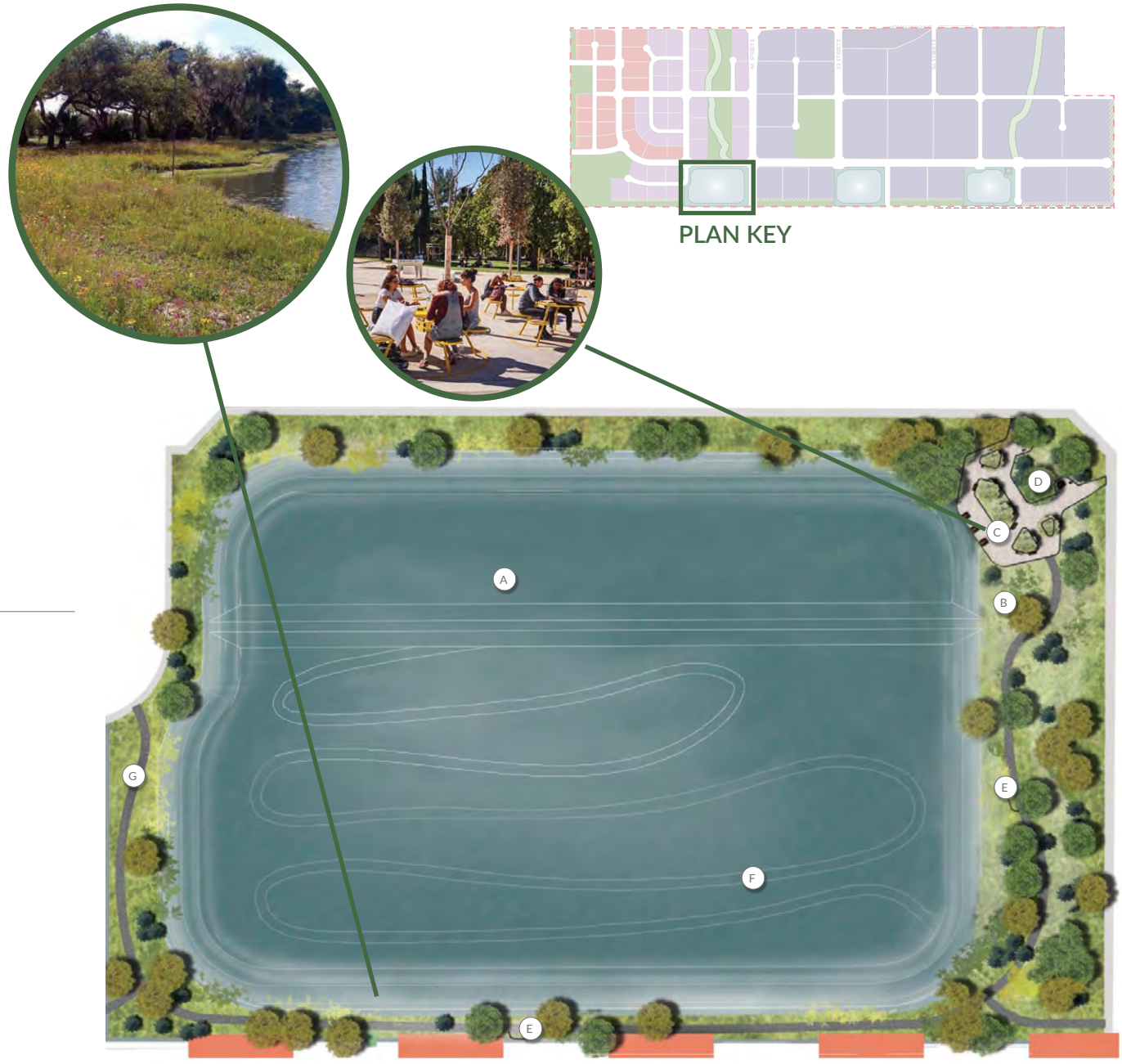
- A — Shade Shelter/Picnic Area
- B — Possible Playground
- C — Picnic Lawn
- D — BBQ Pit/Picnic Nodes
- E — Open Lawn/Informal Play Area
- F — Seating Node
- G — Naturalized Area
- H — Pedestrian Pathway

Open space plan and illustrations are conceptual and subject to change.

4.3.2 West Constructed Wetland

Figure 10 | West Constructed Wetland

Connected by the southern linear greenway and a northern Environmental Reserve pathway corridor, the west stormwater management facility is designed as a naturalized wetland that supports effective stormwater management, enhances wildlife habitat, and contributes to the site's ecological connectivity. Pathways adjacent to the pond will be aligned to provide perimeter access and offer connection opportunities for additional seating or picnic areas. The wetland will serve as a visual and environmental amenity, with a dedicated viewpoint located in the northeast corner of the site.



Legend

- A — PUL Stormwater Management Facility
- B — Naturalized Area
- C — Seating Area/Picnic Plaza
- D — BBQ Pit/Picnic Nodes
- E — Seating Nodes
- F — Constructed Wetland/Naturalized Area
- G — Pedestrian Pathway

Open space plan and illustrations are conceptual and subject to change.

Figure 11 | Central Pond

PLAN KEY

4.3.3 Central Pond

The central stormwater management facility is designed as a more formal, (non-naturalized) pond area. A perimeter pathway will be provided around the pond to support pedestrian circulation and connect into the linear greenway along the southern boundary of the Plan Area. Seating or rest areas may be incorporated as part of pathway design, subject to detailed design at subdivision.

Legend

- A — PUL Stormwater Management Facility
- B — Seating Node
- C — Naturalized Area
- D — Pedestrian Pathway

Open space plan and illustrations are conceptual and subject to change.

4.3.4 East Constructed Wetland

The east stormwater management facility is designed as a naturalized constructed wetland that provides stormwater management functions, supports habitat value, and integrates with the southern linear greenway. Pathways will connect the facility to the Environmental Reserve corridor extending north through the Plan Area, providing continuity in the open space and mobility network. Designated viewpoints for observing the wetland and local wildlife may be enhanced with a shade shelter or lookout point structure. Park design will consider recreation needs at the time of development and will be finalized at the detailed design stage.

Figure 12 | East Constructed Wetland

Legend

- A — PUL Stormwater Management Facility
- B — Proposed Lift Station Location
- C — Shade Shelter Lookout Point & Picnic Area
- D — Constructed Wetland/Naturalized Area
- E — Pedestrian Pathway

Open space plan and illustrations are conceptual and subject to change.

PARKS & OPEN SPACE POLICIES	
4.13	Pathways shall be designed to support pedestrians, cyclists, mobility aid users and other active modes.
4.14	Pathway linkages to adjacent residential communities shall be provided to support connectivity and active transportation.
4.15	Regional pathways will be designed and constructed to Town of Okotoks specifications considering accessibility and maintenance. Some variance to these standards may be considered by the Approving Authority for specific circumstances without compromising accessibility.
4.16	The design of parks and open spaces should include the integration of trees and landscaping that support biodiversity and maximize year-round use and interest
4.17	Landscape design and treatment must support the safety, accessibility, and usability of parks and open spaces.
4.18	Low-water and drought tolerant landscaping is encouraged in all parks and open spaces where feasible.
4.19	Design of public open spaces, and regional and local pathways should implement Crime Prevention through Environmental Design (CPTED) principles to support safe urban design.
4.20	Detailed design of open spaces will be determined through the subdivision process, in consideration of policies and conceptual designs provided in this NASP, access and use, maintenance and operations, and the Town's standards as outlined in its Infrastructure Design & Construction Specifications and Landscape Design and Construction Specifications.

4.21	Stormwater management systems should be integrated with parks and recreation infrastructure development. Land used for stormwater management systems shall be designated as PUL and not considered as part of MR dedication.
4.22	Landscape design of stormwater management facilities should be completed in consultation with the subdivision authority and the Town.
4.23	Stormwater facilities shall be designed, where possible, to support passive recreational use, such as perimeter pathway segments and seating and viewing nodes.
4.24	Utility rights-of-way associated with stormwater infrastructure may be utilized for open space for pathways so far as such elements do not interfere with operations and maintenance.
4.25	Strategically located bioswales should be incorporated into parks design to capture stormwater and provide habitat for wildlife.

5 Built Form & Urban Design

The Plan Area sits in a highly visible location in the northeast corner of Okotoks and includes or is in proximity to several major transportation corridors, e.g. 338 Avenue, 48 Street, and Highway 2 to the east. The IDP identifies the future Highway 2 / 338 Avenue interchange in the plan's northeast periphery as an important intermunicipal gateway that should be developed to a high standard.

The Town of Okotoks expects new communities and employment areas to present a cohesive character, integrate with their surroundings, and contribute positively to the Town's identity. To achieve this, high-quality urban design practices will be applied along the NASP's most visible and sensitive edges, including the 338 Avenue corridor, 48 Street, as well as in residential interface areas.

5.1 Urban Design Guidelines

Streetscapes, edge treatments, and landscape features within the plan's public realm will contribute to the overall identity of the employment lands. Street trees, landscaped medians, berming, and fencing shall be used to establish a consistent public realm character along major corridors. Wayfinding, signage, and furnishings will be coordinated to promote legibility and reinforce the area's role as a gateway. Public art or landmark features that emphasize Thunder Stone Junction's identity may be considered at key intersections or neighbourhood entrances along the gateway corridor.

5.2 Corridor & Gateway Design

In alignment with provisions for the Gateway areas in the IDP, development fronting onto the 338 Avenue gateway and corridor is expected to demonstrate attractive development aesthetics. This treatment includes but is not limited to, visually interesting architecture, articulated building forms, durable and attractive materials, and enhanced landscaping treatment.

Plan Area entrances along 338 Avenue and 48 Street are important points of arrival, and buildings in these locations must reinforce their role through appropriate massing, site layout, and visual identity.

URBAN DESIGN POLICIES	
5.1	Signage shall be pedestrian scaled and integrated with building architecture, using materials and colours consistent with the overall design theme of the development.
5.2	Permanent Ground Signs (as defined in the Town of Okotoks Land Use Bylaw) are encouraged on private frontages particularly in gateway and commercial areas. Ground Signs must include landscaping and be integrated and/or utilize the same materials and architectural detailing as the building façade.
5.3	Development shall utilize energy efficient, dark-sky compliant lighting fixtures to minimize light spillover into adjacent residential or natural areas and reduce energy use.
5.4	Site furnishings including benches, trash bins, and bike racks should incorporate consistent materials and colours across the Plan Area.
5.5	Landscaping shall use native and drought tolerant plant species and be designed to soften building edges, parking areas, and loading bays.
5.6	Landmark design features such as enhanced landscaping, public art, or distinctive architectural treatments are encouraged in prominent entrance areas, including within the 338 Avenue corridor and the proposed intersection at 48 Street/338 Avenue.
5.7	Service areas, loading bays, and outdoor storage shall be oriented away from public frontages and screened through a combination of built form and layered landscaping.
5.8	Preservation of existing tree stands within landscape plans is strongly encouraged. Preserved trees will be counted towards total tree count for landscaping requirements as per the Land Use Bylaw.

CORRIDOR & GATEWAY POLICIES	
5.9	Development within the 338 Avenue gateway and corridor must incorporate design and site planning measures such as enhanced landscaping, berms, and screening to minimize views of service, storage, and loading areas from the public realm.
5.10	Development fronting onto the 338 Avenue corridor shall be designed to a high aesthetic standard, with articulated facades, coordinated materials, and complimented by landscaping to maintain an attractive corridor edge.
5.11	Primary plan entry points within the gateway corridor at 338 Avenue / Highway 2 and 48 Street / 338 Avenue, or other identified prominent plan entry points, should be reinforced with landmark features such as public art, monument signage, or distinctive architectural/ landscaping treatments to reinforce their role as primary arrival points into Okotoks.
5.12	Signage, fencing, and landscaping shall comply with the Town's Land Use Bylaw.
5.13	Outdoor storage adjacent to the 338 Avenue and 48 Street corridors shall not be permitted.
5.14	Primary façades in the corridor and gateway areas should incorprate a mix of materials such as stone, brick, etc.

5.3 Industrial & Logistics Frontages

Lands east of 48 Street are intended for logistics, warehousing, and light industrial uses. Operational elements such as loading, storage, and service areas shall be located internally, away from corridor frontages. Within internal IBP areas, design expectations will focus on functional site planning, landscaping, and screening rather than detailed architectural theming. This functional approach allows flexible conditions for employment-generating uses while maintaining a cohesive character along key corridors.

Where buildings in the IBP face 48 Street or 338 Avenue, design shall emphasize articulated façades, high-quality cladding, and landscaped screening to reinforce a cohesive and visually appealing employment district.

INDUSTRIAL FRONTAGE POLICIES	
5.15	Where industrial sites are visible from and face onto Highway 2, architectural controls will be required.
5.16	Where industrial sites front onto 48 Street, architectural controls may be required at the discretion of the Town to ensure appropriate building articulation, façade design, and landscape screening.
5.17	Buildings fronting arterial roads must avoid blank façades by incorporating articulated design elements such as material changes, glazing, and vertical breaks.
5.18	Industrial frontages shall employ enhanced landscaping treatments, berming, or screening walls to minimize views of service areas from public roads.
5.19	Pedestrian connections should be provided from principal entrances to public sidewalks and pathways to support walkability within employment areas.

6 Mobility & Transporation

6.1 Regional Road Network

6.2 External Road Network

6.3 Internal Road Network

The Thunder Stone Junction NASP builds on the regional transportation network established by the Town of Okotoks and Foothills County. The future interchange at Highway 2 and 338 Avenue E will provide continuity with Okotoks' internal road system and accommodate the employment oriented nature of this plan. The mobility network is designed to balance heavy vehicle traffic associated with logistics and warehousing with multi-modal connections that integrate with the Town's broader active transportation systems.

6.1 Regional Road Network

Thunder Stone Junction is served by three primary regional roads. 338 Avenue E provides east-west access connectivity between Highway 2A (Northridge Drive) to the west, Highway 2 to the east and runs along the north edge of the Plan Area, and 48 Street which runs from north to south. Currently 338 Avenue E consists of a rural two-lane collector road.

A Functional Study was conducted in partnership between The Town of Okotoks, Foothills County, and ATEC in June 2023 for a proposed interchange at Highway 2 and 338 Avenue E. Funding for the construction of the interchange is currently not in the provincial program, however, the Province has initiated the detailed design portion to identify right-of-way requirements.

Road alignments and intersection locations provided in this NASP reflect the recommendations of the 338 Avenue Functional Study, the North Point ASP, Trilogy Plains ASP, Highway 2 and 338 Avenue Functional Study as well as the Town's long-range transportation network plans. Design allowances have been made for future road widening, roundabouts, and rights-of-way dedication consistent with long-term arterial classifications.

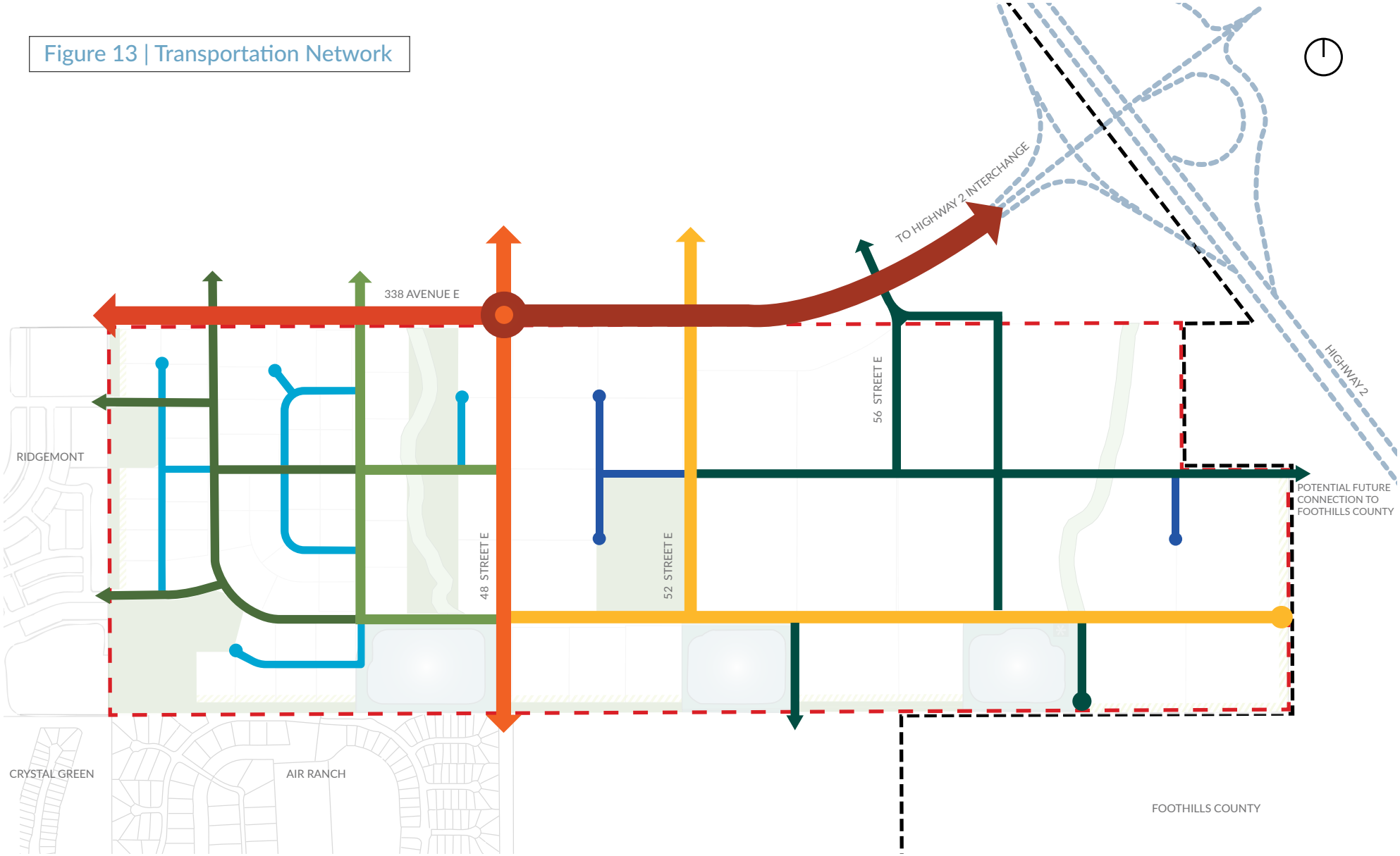
6.2 External Road Network

The Thunder Stone Junction Plan Area is framed by two primary regional corridors. 338 Avenue East forms the northern boundary of the Plan Area and is a critical east–west connection. It links directly to Highway 2 to the east and to surrounding neighbourhoods to the west. While currently built to a rural standard, 338 Avenue is anticipated to be upgraded to a multi-lane arterial consistent with the Town's long-range transportation plans. There are two studies which include the upgrade of 338 Avenue. The upgrades are outlined in the 338 Avenue Functional Study and the Highway 2 and 338 Avenue interchange design which were completed by ATEC. ATEC plans to construct a Highway 2/338 Avenue E interchange to alleviate existing traffic operational concerns. ATEC has engaged a design consultant to complete the detailed design and to identify the required rights-of-way; however, the timing of interchange construction has not been included within the provincial program. Until the interchange is constructed, the existing Highway 2 and 338 Avenue intersection will remain operational. Once the Highway 2/338 Avenue interchange is constructed and operational, the existing Highway 2 and 338 Avenue intersection will be closed. Road alignments and intersection locations within this NASP have been planned to reflect the recommendations of the Functional Studies and the Town's broader transportation network strategy.

48 Street runs through the Plan Area and provides a north–south connection between 338 Avenue and Milligan Drive to the south. This corridor will serve as the primary connector for both commuter and goods movement traffic, providing direct access into the Town's internal road network. Over time, 48 Street is expected to be upgraded to an arterial standard with a 36 m right-of-way (ROW), accommodating higher traffic volumes and supporting the logistics and employment functions of Thunder Stone Junction.

Together, 338 Avenue E and 48 Street establish the framework for external mobility, ensuring the Plan Area is well connected to both the regional road system and surrounding neighbourhoods. These corridors are planned to accommodate both general traffic and truck-oriented movements, and a right-in right-out access on 52 Street onto 338 Avenue E which are consistent with the Trilogy Plains and North Point ASPs.

Figure 13 | Transportation Network

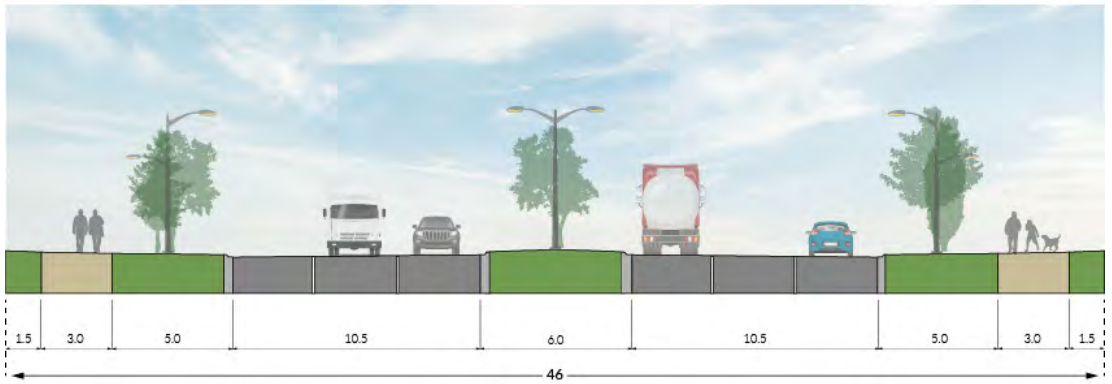


Legend

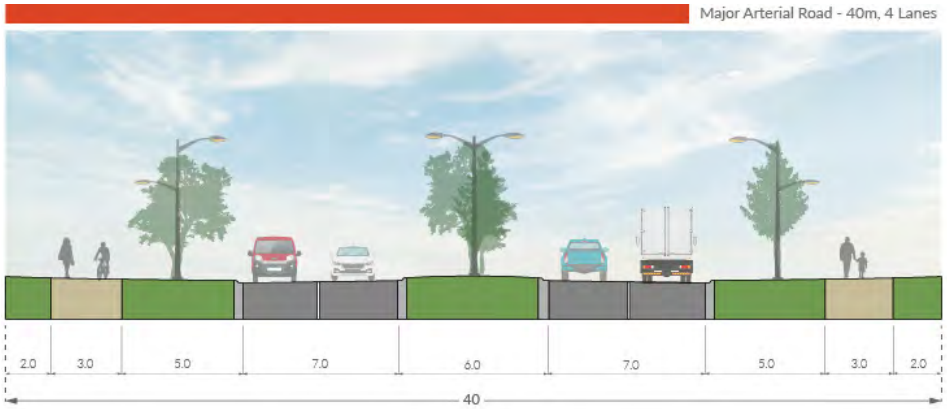
- Plan Area
- Municipal Boundary
- Proposed Highway 2 Interchange
- Major Arterial Road - 46m, 4 Lanes
- Major Arterial Road - 40m, 4 Lanes
- Arterial Road - 36m, 4 Lanes
- Industrial Arterial - 30m, 4 Lanes
- Collector Road - 25.2m, 2 Lanes
- Collector Road - 22m, 2 Lanes
- Industrial Street - 20m, 2 Lanes
- Local Industrial Road - 19m, 2 Lanes
- Local Industrial Road with Separated Sidewalk - 19m, 2 Lanes

Figure 14 | Cross-sections 1

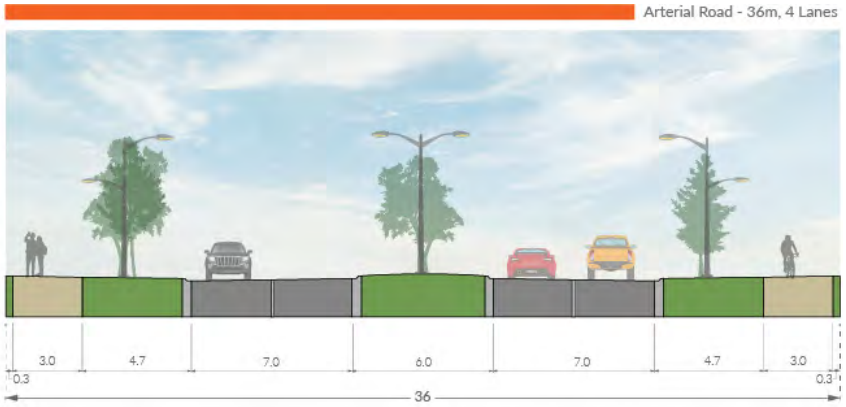
Major Arterial Road - 46m, 4 Lanes



Major Arterial Road - 40m, 4 Lanes

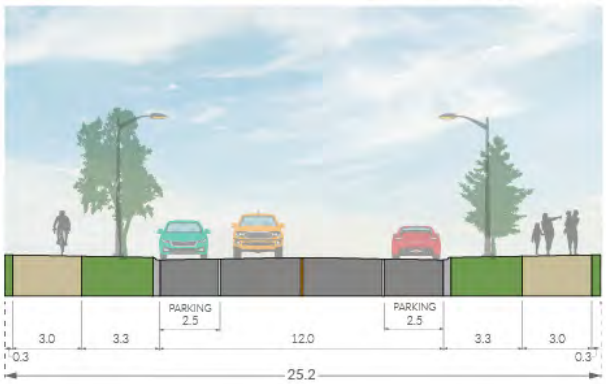


Arterial Road - 36m, 4 Lanes



Industrial Arterial - 30m, 4 Lanes

Collector Road - 25.2m, 2 Lanes



Collector Road - 22m, 2 Lanes

6.3 Internal Road Network

The internal road network for Thunder Stone Junction has been designed as a modified grid of collector and local roads that responds to the functional requirements of employment-oriented development. Roads are structured to accommodate higher-volume and higher weight truck traffic, provide full movement access to all parcels, and align with servicing and drainage infrastructure. The network has also been designed to integrate with surrounding communities while strategically limiting heavy vehicle traffic from re-entering adjacent residential neighbourhoods.

Collector roads within the Plan Area will include multi-use pathways and landscaped boulevards consistent with the Town's Infrastructure Design and Construction Specifications. These roads will provide safe and convenient access for all modes while maintaining the heavy duty pavement standards necessary for commercial and industrial traffic.

- The plan accommodates a 46.0 m right-of-way for 338 Avenue east of 48 Street, and 40.0 m right-of-way west of 48 Street, consistent with the Town's future arterial cross-section requirements. 48 Street is planned to be 36m arterial street within the Plan Area.
- A 3.0 m regional multi-use pathway has been provided on at least one side of all collector roads and arterial frontage roads, including along 338 Avenue and 48 Street.
- Along 338 Avenue, the first allowable intersection west of the Highway 2 interchange will be the 52 Street intersection. As part of the Highway 2/338 Avenue interchange construction, an interim roadway will connect 338 Avenue, west of 52 Street, to the 52 Street intersection to provide Stage 1 development access to the realigned 338 Avenue and the new Highway 2 interchange. The interim roadway would be decommissioned when Stage 2 is completed since a roadway will be built which connects Stage 1A developments to 52 Street.

The internal road network is illustrated in Figure 13: Transportation Network and will be refined at the subdivision stage in consultation with the Town. Details of the internal transportation network and interim accesses is provided in the Thunder Stone Junction Traffic Impact Assessment.

Figure 15 | Cross-sections 2

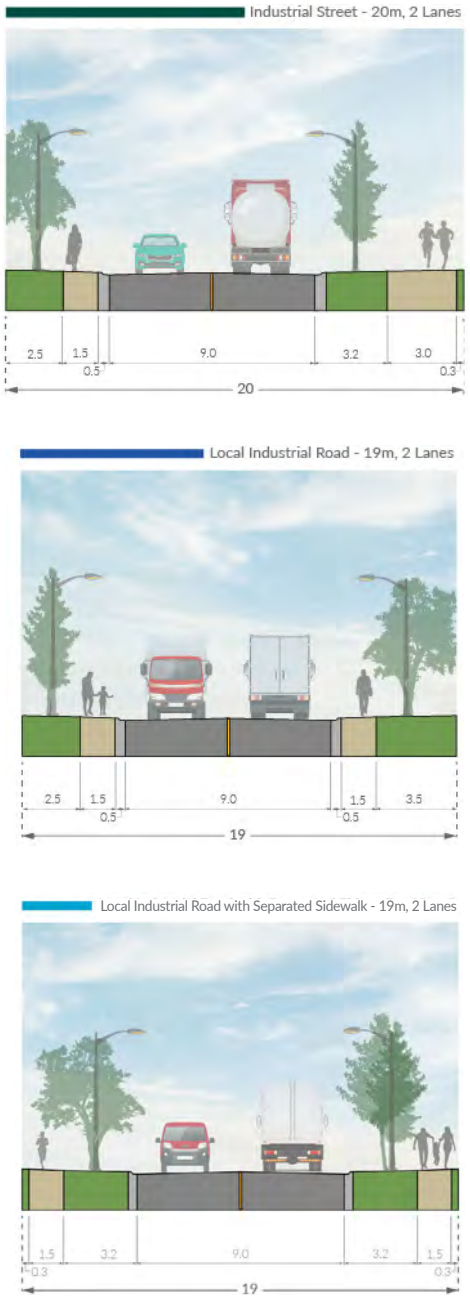


Figure 16 | Active Transport Connectivity

Legend

- Plan Area
- Municipal Boundary
- Multi-use Pathway 3.0m
- Sidewalk 2.0m
- Sidewalk 1.5m

6.3.1 Implementation of Complete Streets Principles

The road network applies Complete Streets principles, as adapted from the City of Calgary's Complete Streets Policy and Guide (2014), by balancing the needs of all users. Collector roads incorporate multi-use pathways to support walking and cycling, while roadway widths and curb radii are designed to accommodate the turning movements of large vehicles. Intersection treatments balance pedestrian safety with efficient vehicle flows, ensuring compatibility between employment uses and the public realm.

6.3.2 Implementation of Green Streets Principles

Green infrastructure elements may also be integrated into the road network. Collector boulevards and medians provide opportunities for landscaped stormwater features such as bioswales, rain gardens, or other low-impact development measures. These treatments will enhance the aesthetic character of the employment area while positively supporting biodiversity in the ecosystem in which the Town resides.

6.3.3 Transit

The NASP accommodates future transit service as envisioned in the Town's Local Transit Plan. Bus stop locations are reserved along 48 Street and 338 Avenue E to ensure convenient access to employment areas. Collector roads have been designed with sufficient roadway widths, turning radii, and queueing space at intersections to accommodate transit vehicles. Pedestrian connections from key employment areas to collector roads will support safe and efficient access to future transit stops.

By integrating transit-supportive design features at the subdivision stage, Thunder Stone Junction will be well positioned to support the introduction of local transit service, particularly in the western commercial lands where higher employee concentrations are anticipated.

6.3.4 Traffic Impact Assessment

A Traffic Impact Assessment (TIA) was completed by Tetra Tech in December 2025 and accompanies this NASP under separate cover. The TIA analyzes traffic capacity under existing, interim, and full build-out conditions, identifies required intersection treatments, and builds off of previous traffic studies that assessed the adequacy of the regional road network to accommodate projected traffic volumes.

Key findings include:

- The existing Highway 2 and 338 Avenue intersection is failing along the eastbound and westbound movements. Additional traffic at the intersection will exacerbate existing operational challenges. ATEC is planning a future interchange at this location and has engaged a design consultant; however, timing for the construction of the interchange is currently unknown. This interchange would alleviate the congestion at the existing intersection;
- Anticipated traffic generation can be accommodated within the existing and planned network, provided recommended upgrades are implemented;
- The intersections at 48 Street / 338 Avenue and 52 Street / 338 Avenue will require roundabouts or signals to manage future development traffic volumes and subsequent designs are to consider appropriate design vehicles for truck movements;
- A right-in/right-out (RIRO) access is recommended by previous studies near the Highway 2 interchange to alleviate right-turning traffic towards the future Highway 2/338 Ave E interchange. The RIRO configuration prevents weaving conflicts; and
- Multi-modal connectivity is supported through complete street cross-sections and continuous active transportation infrastructure.

While this NASP was completed in accordance with the recommendations of the TIA, future TIAs may be required at the time of subdivision/development.

MOBILITY & TRANSPORTATION POLICIES	
6.1	At the time of subdivision, the ultimate right-of-way for 338 Avenue shall align with the 338 Avenue Functional Study and the Town's long-range transportation plans. Rights-of-way dedication requirements will be determined at subdivision, and Municipal Reserve calculations may be revisited once road widening is confirmed.
6.2	At the time of subdivision, the ultimate design of 48 Street shall be confirmed in coordination with the Town. The developer may be required to dedicate additional rights-of-way to accommodate future arterial upgrades.
6.3	Specific land requirements for the Highway 2 / 338 Avenue interchange shall be coordinated with ATEC and the Town at the subdivision stage.
6.4	The internal road network should generally conform to the layout illustrated on Figure 13: Transportation Network. Minor modifications may be made without requiring an amendment to this NASP if connectivity is maintained.
6.5	Collector and local industrial roads shall be designed to accommodate heavy truck traffic, including appropriate turning radii, pavement standards, and access management.
6.6	Site design must accommodate truck turning movements and minimize conflicts with pedestrian and passenger vehicle traffic.
6.7	All road design and construction shall comply with current Town of Okotoks design and construction specifications, unless enhanced standards for employment areas are approved by the Town.
6.8	Multi-use pathways shall be provided along 338 Avenue, 48 Street, and on at least one side of all collector roads, as illustrated on Figure 15.

MOBILITY & TRANSPORTATION POLICIES	
6.9	Pathways shall provide direct connections between employment parcels, adjacent neighbourhoods, transit stops, and regional pathways.
6.10	All pathways will be constructed according to current Town of Okotoks specifications for infrastructure and landscape design and construction.
6.11	Provision for future transit shall be accommodated along 338 Avenue and 48 Street, including the reservation of bus stop zones and pedestrian connections to adjacent employment parcels.
6.12	Any future transit routes should be accommodated on collector roads, as identified in the Town's Local Transit Plan.
6.13	Intersection improvements and access management shall be implemented at the time of subdivision to the satisfaction of the Approving Authority.

7 Utility Servicing

7.1 Plan Servicing

Thunder Stone Junction will be fully serviced by piped water, sanitary sewer, storm drainage, and shallow utilities. Servicing is designed to be provided efficiently, to meet all applicable regulatory requirements and design standards, and to integrate sustainable principles and practices where feasible. The following sections detail the overall servicing approach for the NASP area.

General guidelines for infrastructure design, operation, and maintenance are found below.

GENERAL SERVICING POLICIES	
7.1	The location, size, and general standards for provision of municipal services shall conform to the most recent version of the Town of Okotoks Infrastructure Design and Construction Specifications, at the discretion of the Approving Authority.
7.2	All development within the NASP area shall be fully serviced with municipal water, sanitary, and storm systems.
7.3	Interim servicing strategies may be implemented to support early development stages where long-term servicing capacity is not yet available, subject to Town approval. Deferred Servicing Agreements will be required for any parcels developing ahead of municipal service availability.
7.4	Utility rights-of-way shall be aligned and co-located with roadway and pathway networks where possible to maximize servicing efficiency and minimize land impacts.
7.5	Oversized infrastructure required to serve lands beyond the NASP area shall be constructed by the developer.

7.2 Water Servicing

In support of the Thunder Stone Junction NASP, a water and sanitary Functional Servicing Report was prepared to outline the ultimate servicing for the Plan Area as well as interim servicing strategies.

The provision of water supply volume in the Town of Okotoks is based on the Water Allocation System in Policy CMD-P-3.10. The policy establishes the allocation of the Town's water licence and supply, developed to support growth, along with the Town's strategic priorities, and to ensure that access to the licence capacity is fair and equitable. Development in the Plan Area will only occur when water allocation is available based on the current policy at the time of development.

As part of the Functional Servicing Report, the Plan Area water system was modeled for multiple scenarios, based on the growth scenarios presented in the 2025 Town of Okotoks Growth Strategy. Figure 17 shows the full buildout requirements, pressure zones, and piping network needed to service the Thunder Stone Junction NASP.

The Plan Area is proposed to be in pressure zone 4N, connecting to the 3N pressure zone at the south with a pressure reducing valve.

The NASP water network will be connected to the overall Town network through two 300 mm trunk connections located in Ridgemont, and a third connection to the Air Ranch water system. It is anticipated that Stage 1B will be the first stage to be developed with permanent services. The permanent connections must be in place before Stage 1B can be serviced.

As the entire North Point ASP area is serviced through the Thunder Stone Junction, the water network has been sized to accommodate North Point ASP demands in the Ultimate Scenario.

WATER SERVICING POLICIES	
7.8	Development within Thunder Stone Junction shall adhere to the current Okotoks Water Allocation Policy.

7.3 Water Conservation

As water conservation initiatives are critical to the Town's sustainability, owners and operators of institutional, commercial and industrial facilities should demonstrate how they are incorporating best practices in water conservation and use in their buildings and operations. Water Smart opportunities to consider include:

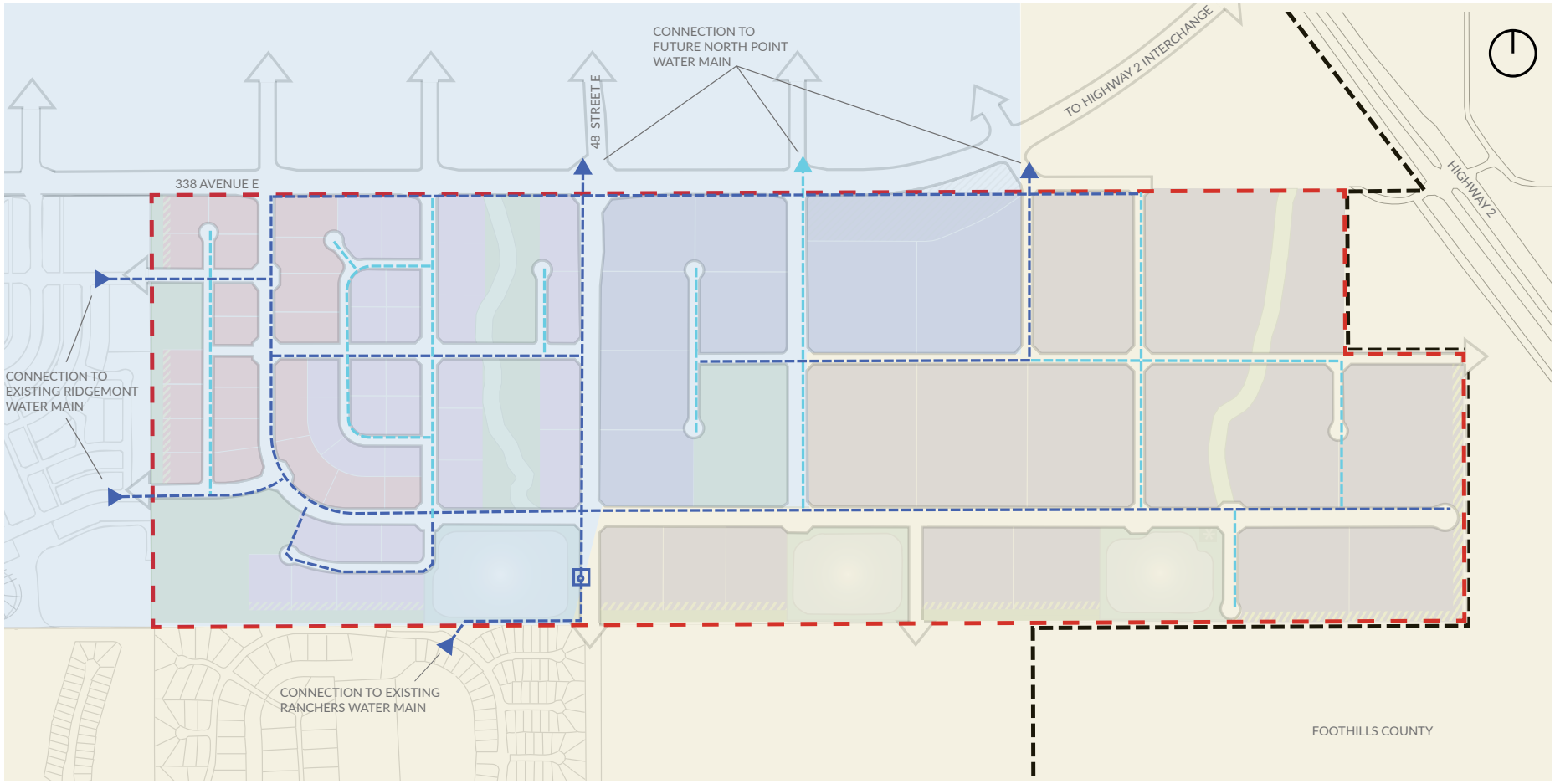
- Water Wise landscaping/xeriscaping
- Rainwater, or storm runoff capture and reuse
- Low water use plumbing fixtures

As the NASP area progresses with development, proponents are encouraged to work with the Town to explore opportunities and incentives available for conservation efforts.

"Water conservation and improved storm and wastewater management will help protect our natural resources and water supply, helping to improve our environmental performance overall. Planning for water sustainability through green infrastructure, water reuse and reduced consumption will help the Town to identify opportunities for cost savings."

-MDP, Section 6.

Figure 17 | Water Servicing Concept



Legend

- Plan Area
- Municipal Boundary
- Pressure Zone 4 North
- Pressure Zone 3 North
- Proposed 300mm Water Main
- Proposed 250mm Water Main
- Pressure Reducing Valve

Figure 18 | Sanitary Servicing Concept

Legend

- Plan Area
- Municipal Boundary
- Proposed 375 mm Sanitary Forcemain
- Proposed 250 mm Sanitary Sewer
- Proposed 375 mm Sanitary Sewer
- Proposed 450 mm Sanitary Sewer
- Proposed 675 mm Sanitary Sewer
- Proposed Lift Station Location
- Temporary Lift Station

7.4 Sanitary Servicing

The Thunder Stone Junction sanitary collection system, as shown on Figure 18: Sanitary Servicing Concept, will provide service to all parcels within the Plan Area.

Sanitary servicing for eastern portions of the Plan Area will be achieved by a series of gravity mains, running to a single lift station in the plan's southeast. The lift station then connects to a force main that runs west and connects to the gravity system in the planned Ridgemont community.

The western portion of the NASP will gravity drain to the Ridgemont area, bypassing the lift station. It is assumed that the Ridgemont connection point will be available at the time the development is initiated for the west stage of Thunder Stone Junction. If the Ridgemont connection is not available at that time, interim servicing solutions will be needed.

The lift station will be located on a Public Utility Lot (PUL) adjacent to the east storm pond. Construction of a temporary lift station may be required depending on how staging of the development occurs.

When the remainder of the North Point ASP is developed, it is designated to be serviced through the Thunder Stone Junction NASP. Therefore, pipe and lift station capacity within the NASP must be designed to accommodate the flow from North Point in the ultimate scenario. Future developments outside of the North Point ASP, north of 338 Avenue E and west of 48 Street are assumed to connect into Ridgemont servicing.

Oversize and cost sharing arrangements will be determined at the subdivision stage.

SANITARY SERVICING POLICIES	
7.9	Sanitary service infrastructure will be sized to accommodate flows from the entire North Point ASP area.

7.5 Stormwater Management

Thunder Stone Junction's servicing and stormwater management strategy incorporates the Town's environmental policies, higher-level planning documents, Infrastructure Design and Construction Specifications, as well as provincial requirements and regulations.

The stormwater system as shown on Figure 19 includes:

- A dual drainage system with an underground pipe network (minor system) and overland conveyance (major system);
- A combination of stormwater management facilities (SWMF), bioswales, and conveyance channels aligned with green corridors;
- Controlled release rates and volume controls in accordance with Town standards, relevant plans and policies;
- Potential for integrating stormwater storage areas within open space buffers or Environmental Reserve corridors;
- Green Street objectives and practices for major collector and arterial roadways;
- Opportunities for stormwater re-use; and
- Consideration for future development.

Technical details are provided in a Staged Master Drainage Plan developed based on North Point Stormwater Master Drainage Plan (Arcadis 2024) and Trilogy Plains ASP Master Drainage Plan (CIMA 2021).

The Staged Master Drainage Plan study limits extend beyond the NASP to include areas to the north and east, both in the Town and in adjacent Foothills County, which flow into the NASP area. Currently, these areas are mostly undeveloped with some proposed for future development north of 338 Avenue E. It is assumed that future development will control flows to existing levels. The proposed Highway 2 and 338 Avenue E interchange to the northeast includes a SWMF which is being assumed to drain into the NASP area.

The SWMFs and overall drainage design take advantage of the natural drainage patterns and environmental features, while accommodating the Town's requirements for stormwater reuse, Low Impact Design (LID) and maintaining downstream drainage patterns. They are designed to provide quality treatment and control flows up to the 1:100-year storm event. Oil and grit separators will provide additional treatment opportunities.

The three SWMF discharge to the south into existing drainage courses. The northern pond from the North Point ASP will discharge to the east pond, to mimic existing drainage patterns. The small area west of 48 Street E, and east of the drainage channel, will be directed to the central SWMF, to better preserve the drainage channel. The SWMFs will be designed to control flows from 338 Avenue E, west of the interchange.

The Staged Master Drainage Plan was developed with the Town's policies and requirements in consideration. Existing drainage patterns and natural areas have been preserved as closely as possible to their original conditions.

Design of the ATEC interchange at 338 Avenue E and Highway 2 has not been completed at this time. The NASP stormwater system design is dependent on ATEC maintaining the existing conditions in the design of the interchange. The Staged Master Drainage Plan should be confirmed with the completion of interchanged design.

The east and west SWMFs are intended as constructed wetlands, to provide enhanced amenity space, stormwater treatment, and integrate passive recreation opportunities with the preserved drainage channels. The constructed wetlands have been incorporated into landscape designs to provide opportunities for the public to experience the natural diversity of the area. These SWMFs are designed to accommodate stormwater reuse for irrigation of the southwest MR space, as well as irrigation of linear park spaces that are in proximity to the ponds.

The southern edges of the NASP and the southeast corner are the furthest downstream and it may not be possible to direct them to a SWMF. The extents of this uncontrolled area will be determined in detailed design, and SWMFs can provide additional control to their flow to compensate for any uncontrolled sheet flow to the south.

As the NASP is comprised of primarily commercial and a large industrial area that contains limited greenspace, opportunities for stormwater irrigation may be limited. Water/stormwater reuse will be primarily done at a lot level to meet the 6,250 m3/year/quarter section requirements provided in the Town's Infrastructure Design and Construction Specifications.

The Plan Area has a discharge rate limited to 2.5 l/s/ha and a preferred volume target of 98 mm per year. The maximum volume target for commercial/industrial lands is 250 mm. The target for the Thunder Stone Junction NASP will be 200 mm. This requires a higher level of reuse and LID at the individual site level. Geotechnical investigation of the SWMF areas will be required in detailed design to determine accurate infiltration rates.

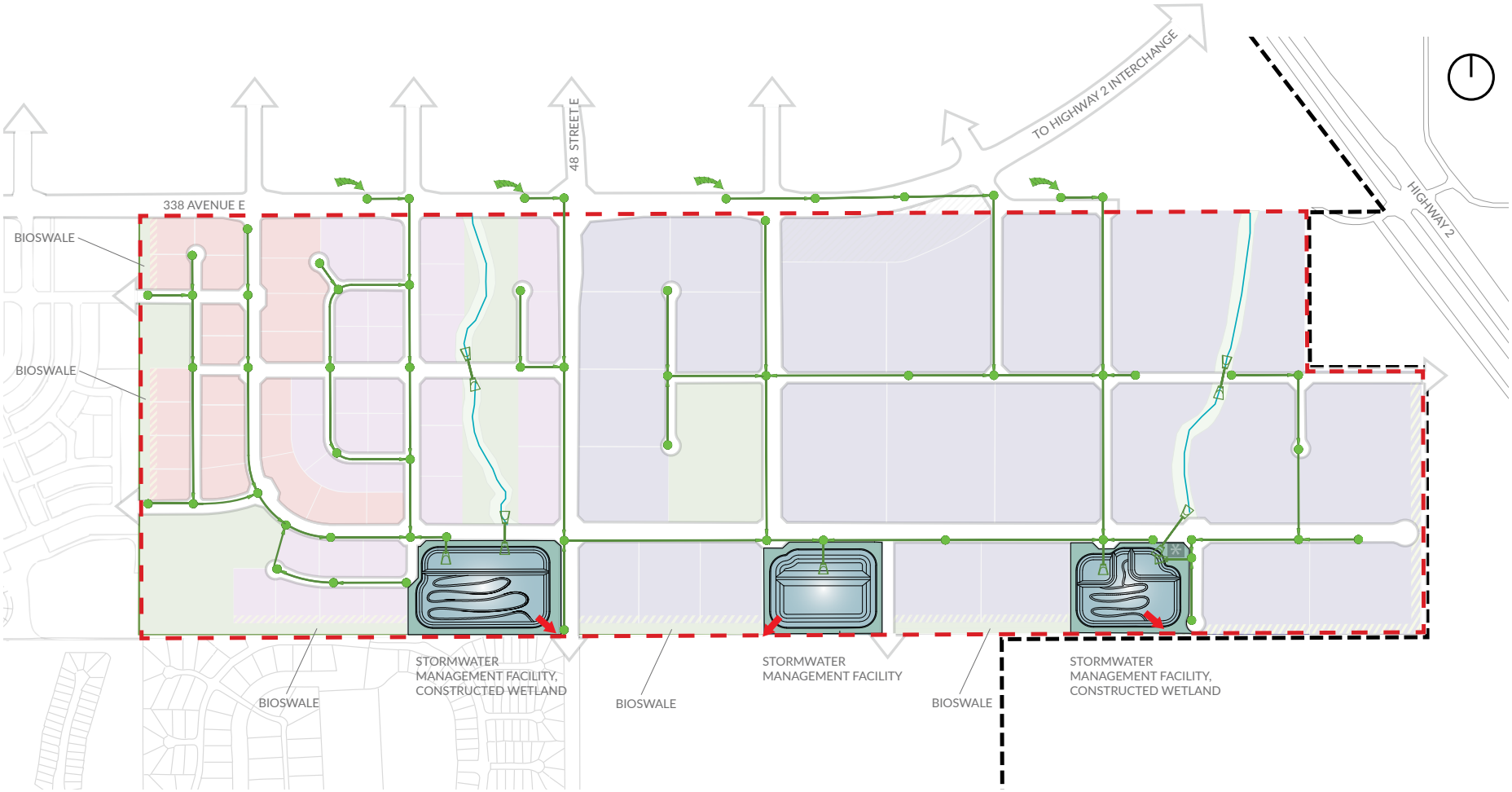
At the subdivision and development permit stage, developers will be required to provide details and analysis to demonstrate that annual runoff volumes and rates are achieved.

The two main drainage channels in the Plan Area have been preserved (see Figure 19), as per the recommendations contained in the desktop BIA completed in support of the NASP as well as in accordance with the Town's Natural Assets Inventory. Individual site designs must preserve these environmental features and incorporate them into site design. This will include identifying specific measures to conserve and enhance the assets and integrating natural features into the design.

"Sustainable water planning is essential as the population grows and areas become more 'water stressed' through drought and increased incidents of flooding."

-MDP, Section 6.

Figure 19 | Stormwater Management Concept



Legend

- Plan Area
- Municipal Boundary
- Proposed Storm Sewer
- Outside Contributing Area Flow
- Manhole
- Emergency Escape Route
- Preserved Drainage Channel

7.5.1 Lot Level Stormwater Management Practices

Lot level Best Management Practices that are encouraged in order to meet volume control requirements are:

- Low Impact Design measures;
- Onsite storage and onsite reuse;
- Grey water for toilet flushing;
- Roof Leaders directed to landscape areas;
- Rain gardens;
- Green Roofs; and/or
- Permeable hard surfaces.

Other options will be considered. Developers are encouraged to meet with the Town at the development stage, to discuss opportunities. Typical commercial/ light industrial lands in the area are 85% impervious. The target for the NASP area is 80%.

7.6 Shallow Utilities

All shallow utilities will be provided by franchised utility providers and coordinated through subdivision design, including:

- Natural gas service along major collector roads;
- Underground telecommunications and fibre-optic service to all lots; and
- Three-phase power for industrial sites, with provisions for load variability.

Where possible, utility corridors will be co-located within road rights-of-way to minimize land impact and maximize design efficiency.

STORMWATER MANAGEMENT POLICIES	
7.10	Geotechnical investigation of the stormwater management facility areas will be required at the detailed design phase to determine accurate infiltration rates.
7.11	At the subdivision and development permit stage developers will be required to provide details and analysis to demonstrate that annual runoff volumes and rates are achieved.
7.12	Individual site designs must preserve environmental features and incorporate them into the site design. This will include identifying specific measures to conserve and enhance the assets and integrating natural features into the design.
7.13	Lot level Best Management Practices are encouraged in order to meet volume control requirements, in addition to the centralized storm ponds.
7.14	Stormwater reuse infrastructure shall be considered for non-potable uses where feasible and supported by the Regulatory Requirements.
7.15	A Water Quality Management Plan (WQMP) is required once developments will be connected to municipal services.

SHALLOW UTILITIES POLICIES	
7.16	Shallow utilities, including power, gas, telecommunications, and fibre optics shall be provided to all parcels at the time of development, in accordance with utility provider standards.

8 Staging

8.1 Staging Plan

8.2 Interim Servicing Considerations

8.1 Staging Plan

Development within the Thunder Stone Junction NASP will proceed in a logical, staged sequence aligned with the extension of municipal infrastructure and guided by market demand for employment lands. General Staging identified in this section is in alignment with the MDP and preferred growth sequencing as shown in the Town of Okotoks' 2025 Growth Strategy. Staging for development and provision of utility services is illustrated conceptually on Figure 20.

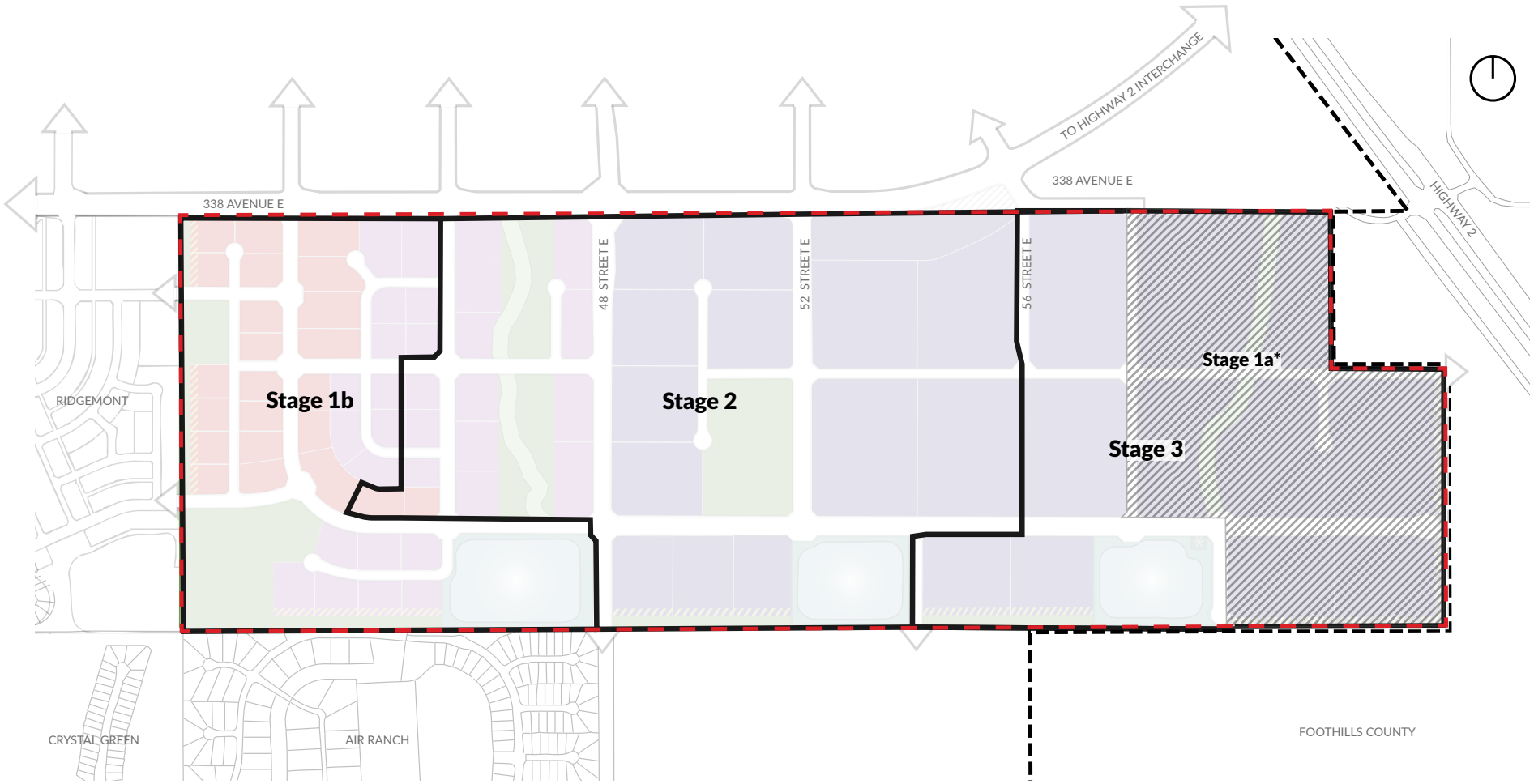
The first stage of development is expected to focus on lands with the most direct access to 338 Avenue East and the future Highway 2 interchange. This stage of early development will be initially serviced using interim strategies until sequenced development from the west brings municipal utilities to the eastern edge of the Plan Area.

Subsequent stages will continue in a contiguous manner, beginning at the western plan boundary and expanding eastward as utility infrastructure is extended and market absorption of earlier stages occurs. The Staging strategy allows for flexibility to respond to economic conditions while ensuring that each stage of development can be serviced efficiently and maintains logical transportation and land use connections. Detailed infrastructure and access considerations, including water, wastewater, and transportation networks, will be refined through ongoing technical studies and in alignment with Town growth priorities.

As current parcels in the Plan Area are owned by a number of private landowners, timing and continuity of development is also dependent on landowner initiative.

STAGING POLICIES	
8.1	Development shall generally proceed in a logical sequence from west to east based on the availability of servicing and access infrastructure, with the exception of Stage 1a which will be serviced through interim strategies.
8.2	The NASP area shall be subdivided into development stages as shown conceptually on Figure 20. The actual sequencing may vary to respond to market demand and infrastructure timing.
8.3	Municipal Reserve dedications shall be satisfied on a per-stage basis unless otherwise deferred by agreement with the Town.

Figure 20 | Staging Plan



*Stage 1a is expected to be developed first with interim servicing strategies and then brought to full serviced build out in the final stage of Thunder Stone Junction's development as part of Stage 3.

8.2 Interim Servicing Considerations

It is anticipated that initial development at Thunder Stone Junction will occur before municipal service connections are available, as the first stage of development will likely occur in the east portion of the Plan Area, and municipal services are currently located to the west. Provision will be made to allow for interim services which will incent early development in these areas prior to full municipal services being available.

Alternate forms of servicing such as cisterns, individual water wells, and onsite treatment for water supply on individual lots will be considered at the discretion of the Town, for the first stage of development, subject to environmental and water act requirements and approvals. For sanitary sewer service, holding tanks, private sewage disposal systems, and private treatment systems will be considered at the discretion of the Town. Communal systems will not be considered. As the east stormwater management facility will not be available until municipal service has been extended to the area, onsite detention such as evaporation ponds and drywells will be considered to meet stormwater management targets.

Because of site contours, a temporary lift station may be required for land in Stage 2, until the final stage of development, when a lift station in the ultimate location will be required. This is dependent on how staging occurs and needs to be reviewed in more detail at the land use amendment stage.

As municipal servicing will progress from west to east, as outlined in the North Point ASP, responsibility for the funding and extension of the trunks for the water distribution system and wastewater collection systems will be determined at the land use redesignation stage.

Land acquisition, the availability of rights-of-way, and the sequence of development will affect the ability to service the developments.

Deferred Servicing Agreements will be required for properties developing without available service connections.

INTERIM SERVICING POLICIES	
8.4	At the discretion of the Town, provision will be made to allow for interim services including water, wastewater, stormwater, and/or roads, which will incent early development in the Plan Area prior to full municipal services being available. Interim servicing shall be the responsibility of the developer.
8.5	Each development stage shall demonstrate that it can operate independently with respect to water and sanitary services, access, emergency services, and other utilities without reliance on subsequent stages.
8.6	Deferred Servicing Agreements will be required for properties developing without available service connections and/or road connections and must be registered on title at the time of subdivision or as a condition of Development Permit.
8.7	Staging will be coordinated to provide emergency access as required over the course of development. Access for fire and other emergency services must be provided for at all times, to the satisfaction of the Town.
8.8	Off-site levy requirements shall apply to all development within the NASP area per the Town's Off-site Levy Bylaw in effect at the time of subdivision.
8.9	Subdivision and development applications shall demonstrate compliance with the policies of this NASP and include detailed engineering and design submissions as required.

9 Plan Amendments

The Thunder Stone Junction NASP is a statutory plan adopted by bylaw of Town Council in accordance with the Municipal Government Act (MGA). Any amendments to the NASP must also be adopted by Council through a bylaw in accordance with MGA requirements.

Amendments to the NASP may be required where:

- Proposed changes materially alter the overall land use framework or development concept established by this plan;
- Additional land uses not contemplated by this NASP are proposed; or
- The scale or character of development is inconsistent with the vision, guiding principles, and intent of the plan.

Minor modifications to the NASP that do not alter its general intent will not require a formal amendment.

Such modifications may include, but are not limited to:

- Adjustments to the alignment of local or collector roads;
- Refinements to parcel configuration, size, and boundaries;
- Relocation of pathways, buffers, or stormwater facilities, provided overall connectivity and servicing intent are maintained; and
- Adjustments to the timing or sequence of development stages.

The determination of whether a change is considered minor or requires a formal amendment shall rest with the Approving Authority.