

**DRAFT**



Area Structure Plan

# **BEACON AI HUB**

April 16, 2025



**This draft area structure plan was prepared for: Rocky View County**

**It was prepared by:**

Beacon Data Centres and Stantec Consulting Ltd.

# Contents

<b>PART I: INTRODUCTION .....</b>	<b>1</b>
1. PLAN PURPOSE .....	2
2. PLAN ORGANIZATION .....	4
3. PLAN AREA.....	5
4. BEACON TODAY .....	9
5. PLANNING FOR TOMORROW .....	11
6. BEACON AI HUB VISION AND GOALS .....	15
<b>PART II: POLICIES.....</b>	<b>17</b>
<b>A. LAND USE.....</b>	<b>18</b>
7. BEACON AI HUB LAND USE STRATEGY .....	18
8. LAND USES .....	20
9. INTERFACE POLICIES .....	26
10. DARK SKY POLICY .....	32
<b>B. SERVICES .....</b>	<b>33</b>
11. OPEN SPACES AND PATHWAYS .....	33
12. TRANSPORTATION .....	35
13. NATURAL ENVIRONMENT .....	37
14. EMERGENCY SERVICES .....	39
<b>C. UTILITIES AND INFRASTRUCTURE.....</b>	<b>40</b>
15. UTILITY SERVICES .....	40
16. SOLID WASTE AND RECYCLING .....	46
17. OIL AND GAS .....	47
<b>PART III: IMPLEMENTATION .....</b>	<b>49</b>
18. DEVELOPMENT PHASING.....	50
19. LAND USE REDESIGNATION .....	52
20. DEVELOPMENT PERMIT PROCESS .....	53
21. DEVELOPMENT GUIDELINES.....	54
<b>PART IV: PUBLIC ENGAGEMENT .....</b>	<b>58</b>
22. STAKEHOLDER ENGAGEMENT .....	59

## Table of Figures

Figure 1: Beacon AI Hub Plan Area .....	6
Figure 2: Aerial Photo .....	7
Figure 3: Regional Context .....	8
Figure 4: Existing Land Use .....	10
Figure 5: Existing Conditions .....	13
Figure 6: Vegetation, Wetlands and Water Bodies .....	14
Figure 7: Land Use Strategy .....	19
Figure 8: Development Concept .....	25
Figure 9: Plan Area Interfaces .....	28
Figure 10: Beacon AI Hub – Industrial Interface .....	29
Figure 11: Beacon AI Hub – Other Land Uses Interface .....	30
Figure 12: Beacon AI Hub – Township Road 232 Interface .....	32
Figure 13: Transportation Links .....	36
Figure 14: Servicing Strategy .....	45
Figure 15: Development Sequencing .....	51

## Glossary

Apiculture	Apiculture is the practice of beekeeping, which involves the care, management, and maintenance of honeybee colonies.
Data Centre Campus	Data Centre Campus refers to a large-scale facility designed to house extensive computer systems and associated components, for supporting cloud computing, data security, data storage, management and processing digital media, information and applications. This facility encompasses ancillary structures that support its primary function, including but not limited to administrative offices, educational and training facilities, associated advanced technological and scientific opportunities maintenance facilities, substations, and security buildings.
Solar / Agrivoltaics Facility	Solar / Agrivoltaics Facility refers to a facility that combines solar energy generation with agriculture. It involves the co-location of solar panels with agricultural activities, where solar panels are installed above or alongside crops, grazing land, or other agricultural uses. The goal is to maximize land use by generating renewable energy while still allowing for agricultural productivity.

The background of the page features a series of overlapping, translucent, light gray geometric shapes, primarily triangles and quadrilaterals, arranged in a way that creates a sense of depth and movement. These shapes are layered over a plain white background.

## **PART I: INTRODUCTION**

## 1. PLAN PURPOSE

### **What is an Area Structure Plan**

An Area Structure Plan (ASP) is a statutory document approved by Council and adopted by bylaw. It delineates the future development blueprint for a specific area, encompassing aspects such as land use, transportation, environmental protection, emergency services, general design, and utility service needs.

An ASP guides Council and Administration with a road map when considering land use changes, subdivision, and development. When making decisions regarding development within an ASP, Council must consider the plan and a wide range of other factors such as the economic goals of the County, County-wide growth, and the ability to provide servicing.

This ASP has been led by the developer, Beacon AI Centers, and prepared in collaboration with Rocky View County. The plan's vision, goals, and policies reflect the County's vision and interests of stakeholders within the Plan Area.

The Alberta Municipal Government Act states an ASP must describe:

- the sequence of development proposed for the area,
- the land uses proposed for the area, either generally or with respect to specific parts of the area,
- the density of population proposed for the area either generally or with respect to specific parts of the area,
- the general location of major transportation routes and public utilities and may contain other matters the council considers necessary.

The policies in an ASP are informed by the general planning policies contained in the County Plan and will offer direction how more detailed planning should be reviewed. ASP policies must align with the County Plan and applicable County policies. The ASP must be based on sound planning principles and respond to the particular natural and physical development of the Plan Area.

## Plan Interpretation

The following describes the meaning of some of the key words that are contained in a policy:

- |             |   |
|-------------|---|
| Shall/Must: | a directive term that indicates the actions outlined are mandatory and therefore must be complied with, without discretion, by Administration, the developer, the development authority, and subdivision authority. |
| Should:     | a directive term that indicates a preferred course of action by Council, Administration, and/or the developer, but one that is not mandatory.   |
| May:        | a discretionary term, meaning the policy in question can be enforced by the County if it chooses to do so, dependent on the particular circumstances of the site and/or application.                                |



## 2. PLAN ORGANIZATION

The Beacon AI Hub ASP is organized in four parts.

### **Part I: Introduction**

This part outlines the Plan purpose, boundaries, policy terminology, relationship to other plans, the public engagement process, and key issues, opportunities, and design ideas that informed the plan preparation process. Finally, it presents a vision of what Beacon AI Hub could be like at full build out and provides nine broad goals that will guide the development of the area over this period.

### **Plan II: Plan Policies**

This part is the core of the Plan, containing the policy direction to guide development in the Beacon Plan Area. Part II contains sections \_\_\_\_ that deal with specific land uses, services, or infrastructure in the subject area. Each section contains an overall purpose statement, a list of objectives, introductory paragraphs, and a series of policies addressing the subject area. Where a purpose statement or introductory paragraph introduces a series of policies, it is provided for information to enhance the understanding of the policies.

### **Part III: Implementation and Monitoring**

This part presents the Plan implementation process, provides information on local plan areas and development criteria, specifies requirements to ensure the Beacon ASP policies and strategies are adhered to, and provides direction regarding the process for the review and amendment of the Plan.

### **Part IV: Public Engagement**

This section outlines the public engagement process conducted during the planning of the Beacon AI Hub ASP. Information about the ASP Open House was advertised in the Rocky View Weekly newsletter, and an open house was held on April 15 to provide more details and gather feedback. Public concerns raised during the engagement process will be discussed in this section. Additionally, further information on intergovernmental collaboration will be included.

### 3. PLAN AREA

The Beacon site, shown in **Figure 1: Beacon AI Hub Plan Area**, covers 383 hectares (946 acres), primarily used for agriculture, and is located approximately 3.2 kilometers (2 miles) east of Calgary and 2.4 kilometres northwest of the Hamlet of Indus. Although the site is adjacent to the Rocky View County/City of Calgary Intermunicipal Development Plan (IDP), it is outside the IDP boundary. To the west lies an area designated as a City of Calgary Industrial Growth Area under the IDP. The site also borders lands within the Prairie Gateway Area Structure Plan (ASP), which outlines a framework for industrial and warehousing development.

The Project is proposed on lands currently designated as a Direct Control (DC) District, DC-166 within the County's Land Use Bylaw, which is intended for solar farm development. The ASP would support the co-location of the Beacon Data Centre Campus with a complimentary Solar / Agrivoltaics Facility.

The regional location of the Project is shown on **Map 3: Regional Context**. The Project proposed in the following six quarter sections are referred to as the "Plan Area" in this ASP:

- Pt. NE-11-023-28W4 (144.99 acres)
- NW-11-023-28W4 (160 acres)
- SE-11-023-28W4 (160 acres)
- SE-14-023-28W4 (160 acres)
- SW-11-023-28W4 (160 acres)
- SW-14-023-28W4 (160 acres)

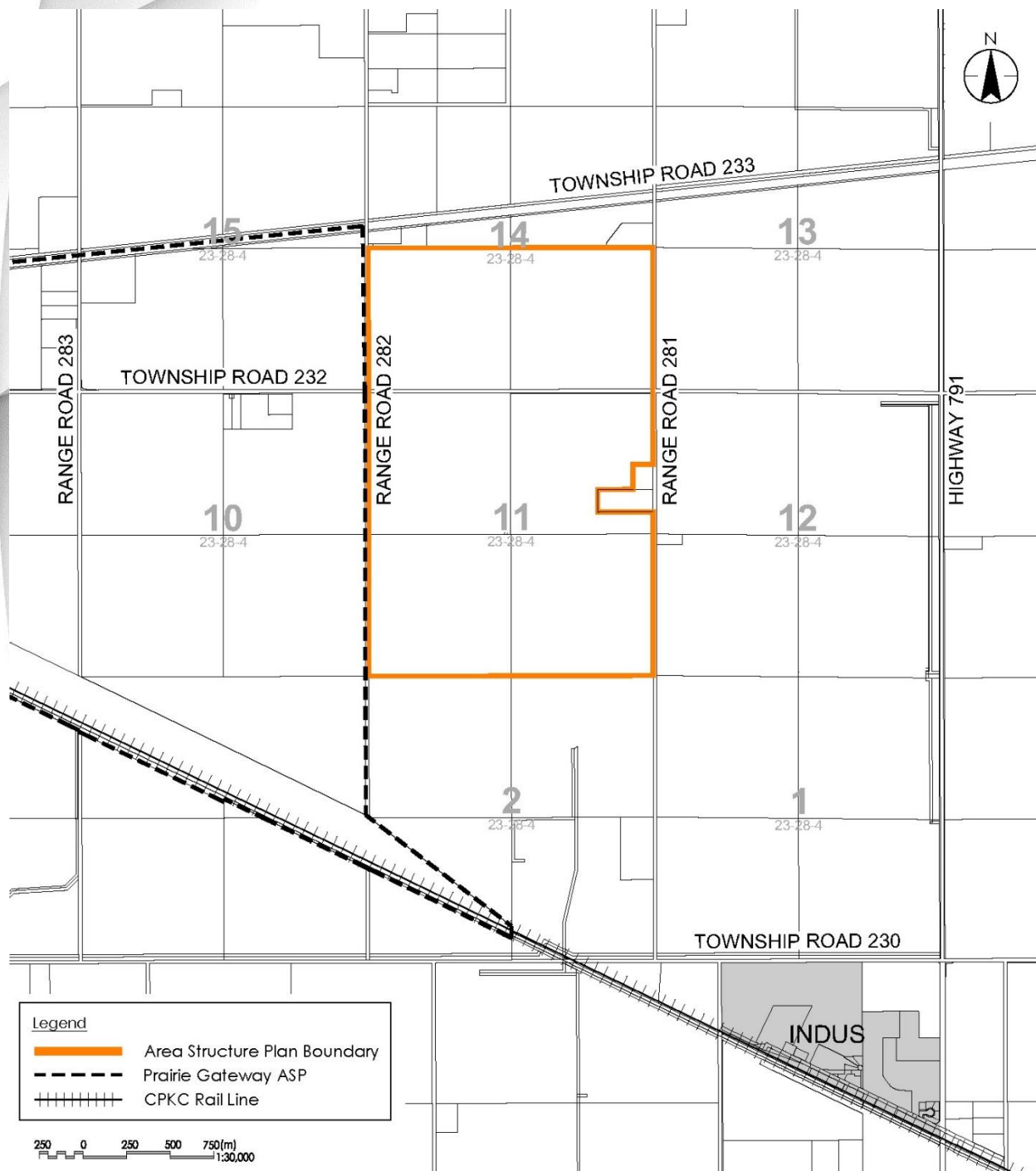


Figure 1: Beacon AI Hub Plan Area



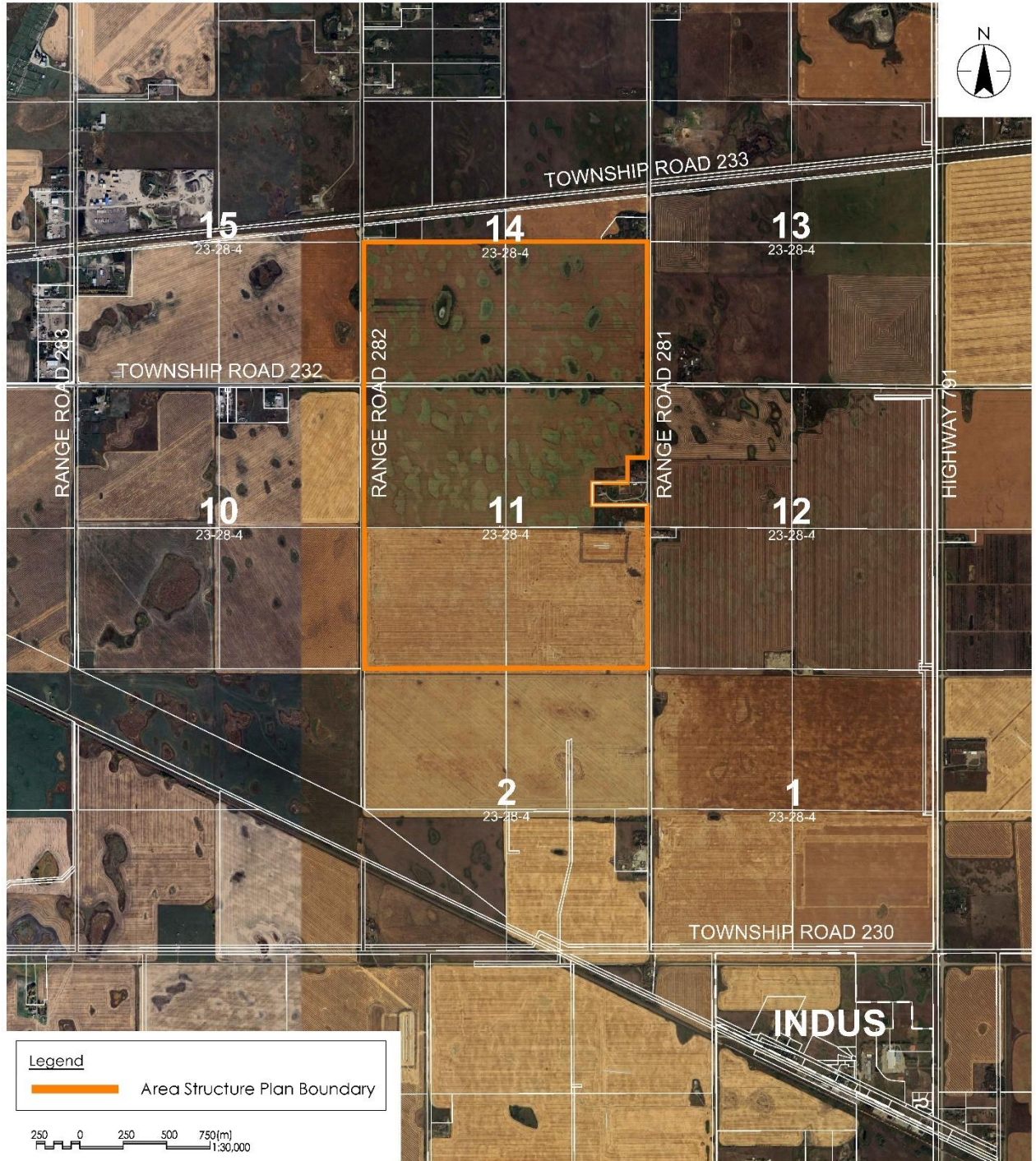


Figure 2: Aerial Photo



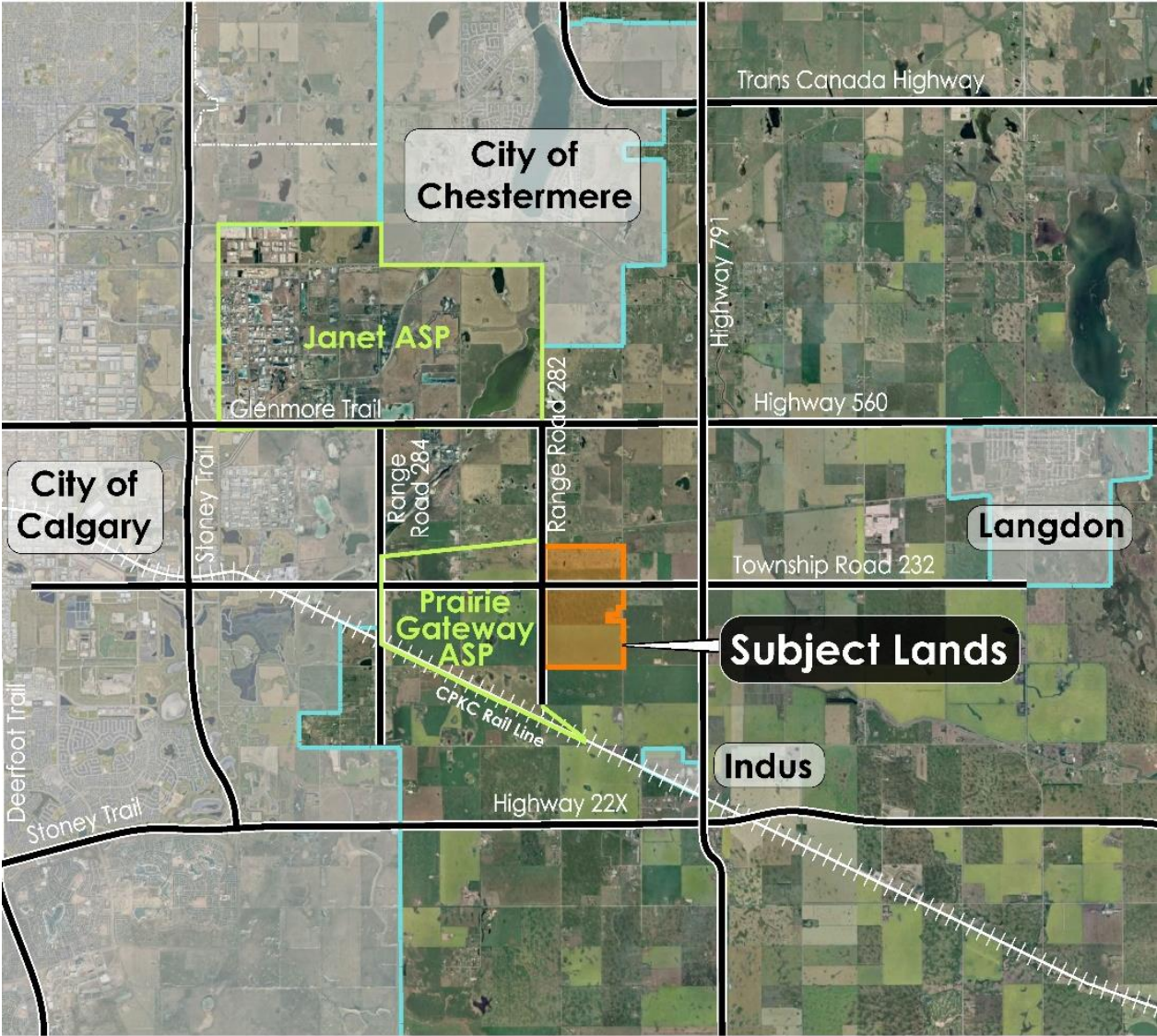


Figure 3: Regional Context

## 4. BEACON TODAY

### History

The Plan Area as shown in **Figure 2: Aerial Photo** has seen minimal changes over the past 75 years. Initially zoned for agricultural use, the area was re-designated in 2020 to DC-166, with the specific purpose of facilitating the development of solar farms in Rocky View County . Notably, there was a minor development in 1977 at the farmyard residence located on the east side of the site.

### Surrounding Context

The land surrounding the Plan Area to the north, east, and south is primarily agricultural, zoned as Agricultural, General District (A-GEN). To the west lies the Prairie Gateway Area Structure Plan (ASP), which encompasses several zones, including A-GEN, DC-166, Rural Residential (R-RUR), Light Industrial (I-LHT), Business Agricultural (B-AGR), and Small Parcel Agricultural (A-SML). The Prairie Gateway ASP, approved in February 2025 is planned for industrial development. The Plan Area itself spans approximately 946 acres of land, previously utilized for agricultural purposes. The surrounding area as shown in **Figure 3: Regional Context** continues to feature extensive farmland, as well as smaller rural residential developments, particularly the nearby hamlet of Indus.

The site is situated 3.2 kilometers east of Calgary and 2.4 kilometers northwest of Indus, within RVC. While the region has been historically dominated by agriculture, in recent years the area has witnessed an increasing shift towards industrial and technological developments, owing to its proximity to Calgary and the expansion of tech-related industries in the region.

### Existing Land Use

The existing land uses within the Plan Area are depicted on **Map 4: Existing Land Use**. The current land use within the Plan Area remains agricultural. The site is primarily dedicated to annual cultivation, a pattern consistent with the land to the east, west, and south. To the north, the land is predominantly used for pasture and further agricultural activities.

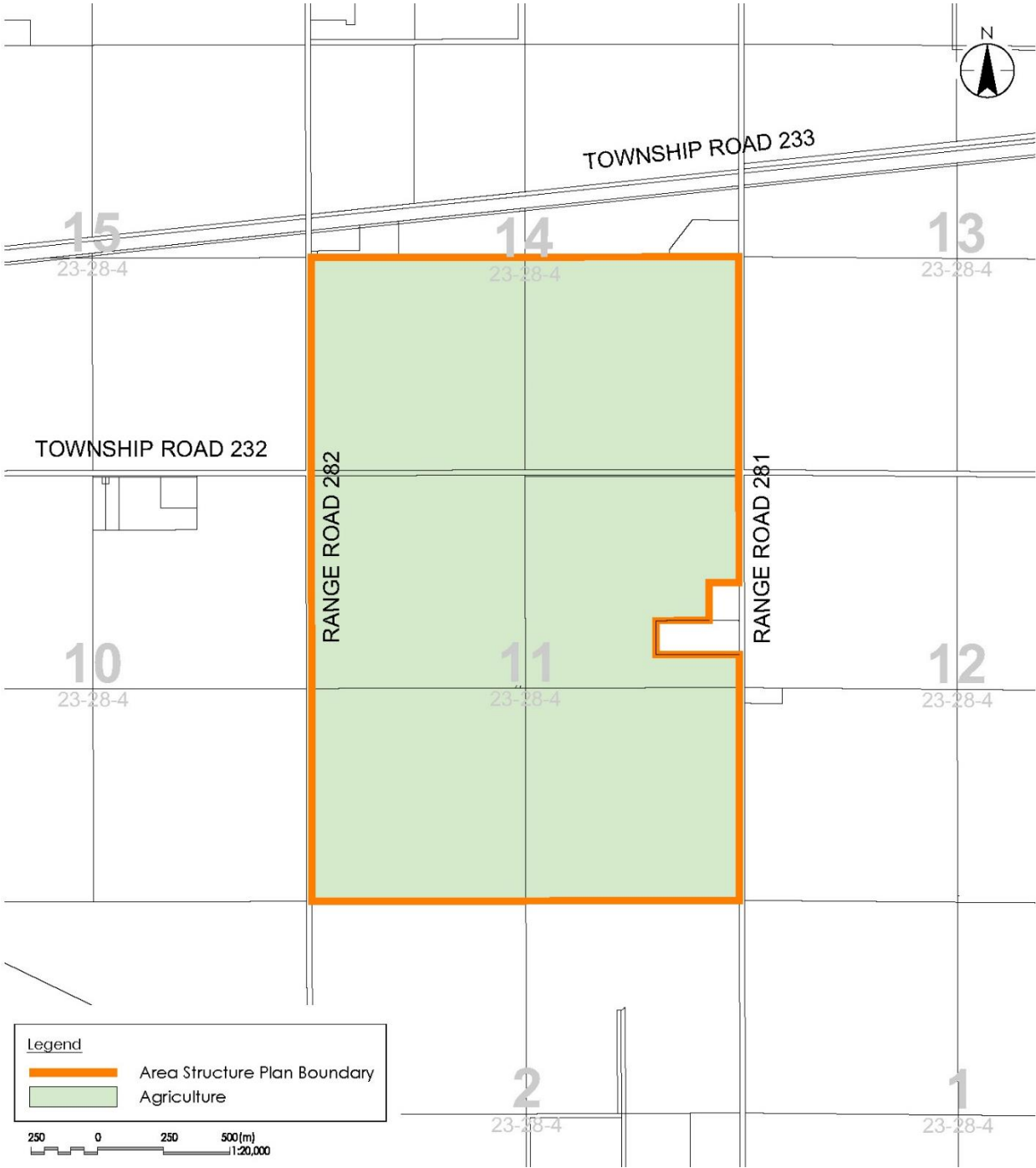


Figure 4: Existing Land Use

## 5. PLANNING FOR TOMORROW

An Artificial Intelligence (AI) Hub is a dedicated area or facility designed to foster innovation, research, development, and commercialization in the field of artificial intelligence. It brings together a mix of businesses, research institutions, startups, and experts, all focused on advancing AI technologies and their applications. AI Hubs integrates data centre as a key component. These data centres provide the necessary infrastructure for storing, processing, and managing the massive amounts of data required for AI training and operations, particularly for machine learning and deep learning algorithms. Together, AI research, development, and data centres create a dynamic environment that drives the growth and application of artificial intelligence technologies.

This ASP will define the land uses, infrastructure, and services needed for the subject area referred to as the 'Plan Area', as delineated in **Figure 1: Beacon AI Hub Plan Area**. Over time, the site could evolve into a major tech district, with potential for growth into research centres, innovation labs, and additional data processing units.

The Beacon AI Hub represents a unique opportunity for the County, the greater Calgary region, and Alberta. The site represents a strategic location which is the nexus of strategic power infrastructure in the region. This location leverages the County's unique geographical positioning in supporting large scale digital infrastructure.

Land immediately surrounding the ASP area may experience a future shift in land use from agriculture to tech and industrial purposes. A portion of the Beacon site will integrate a Solar / Agrivoltaics facility, which will align with Alberta's sustainability goals. The region's flat land and sunny climate offer excellent potential for solar power generation, helping to power the AI hub sustainably and reduce the environmental impact of the data centre's energy consumption.

The surrounding areas, including Indus, are likely to see economic shifts due to the influx of new jobs and businesses supporting the AI hub, such as local service providers, retailers, and tech-focused companies.

### POLICY DIRECTION FROM OTHER PLANS

#### *South Saskatchewan Regional Plan*

The review of the Beacon ASP will be guided by the South Saskatchewan Regional Plan (SSRP), adopted by the Province in September 2014. The ASP will align with the broader regional goals outlined in the SSRP, ensuring that development in the area supports long-term sustainability and responsible land use. Several key policies and objectives from the SSRP will inform the review, including a specific policy on the efficient use of land, which outlines six principles to minimize the environmental footprint of development.

#### *Municipal Development Plan, Rocky View County*

Section 14.0 of RVC's Municipal Development Plan (MDP), also known as the County Plan (approved in 2013 and amended in 2025), directs business development in the County. The Beacon ASP site is not shown on Map 1 (Managing Growth) of the County Plan, which outlines areas for residential and business growth. However, Section 14.0 allows for new business areas if their location is justified, and other criteria are met. The adoption of the proposed ASP does not depend on the MDP update being completed.



## PHYSICAL ATTRIBUTES

An evaluation of the Plan Area's physical attributes as shown in **Figure 5: Existing Conditions** was undertaken to guide future development. These are discussed below:

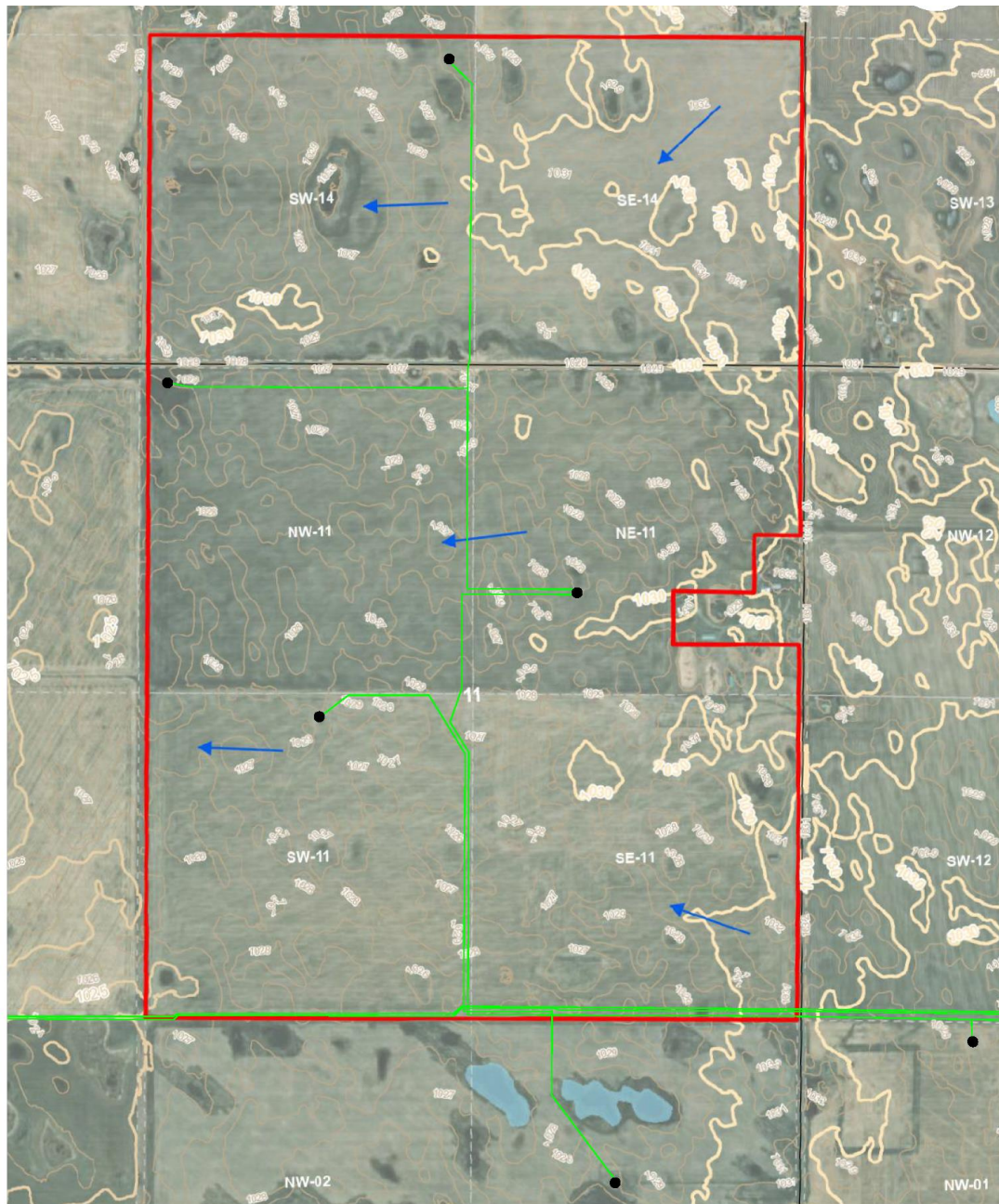
### **Vegetation, Wetlands and Water Bodies**

There are seasonal, semi-permanent and permanent wetlands and throughout the Plan Area as shown in **Figure 6: Vegetation, Wetlands and Water Bodies**. There are no native grasslands or other high-value terrestrial habitats onsite or within the Project Area. Mitigation measures will be required during the design of the Data Centre campus and Solar/Agrivoltaics facility to avoid impacts on these wetlands.

### **Pipelines and Gas Wells**

There is ongoing oil field activity within the site boundary and on the surrounding properties. These areas are of potential environmental concern due to drilling and the operation of the well. Plans are in place to decommission and reclaim the well sites, as well as abandon pipelines within the site boundary to mitigate these concerns.

The evaluation of the Plan Area's physical attributes has highlighted key environmental considerations that must be addressed during the planning and development process of the Beacon AI Hub ASP.



Legend



Site Boundary



Water Body



Powerline



Railway



Road



General Drainage Direction

Existing Pipeline



Existing Wellhead

Major Contours (10m)

Intermediate Contour (5m)

Minor Contour (1m)

Figure 5: Existing Conditions

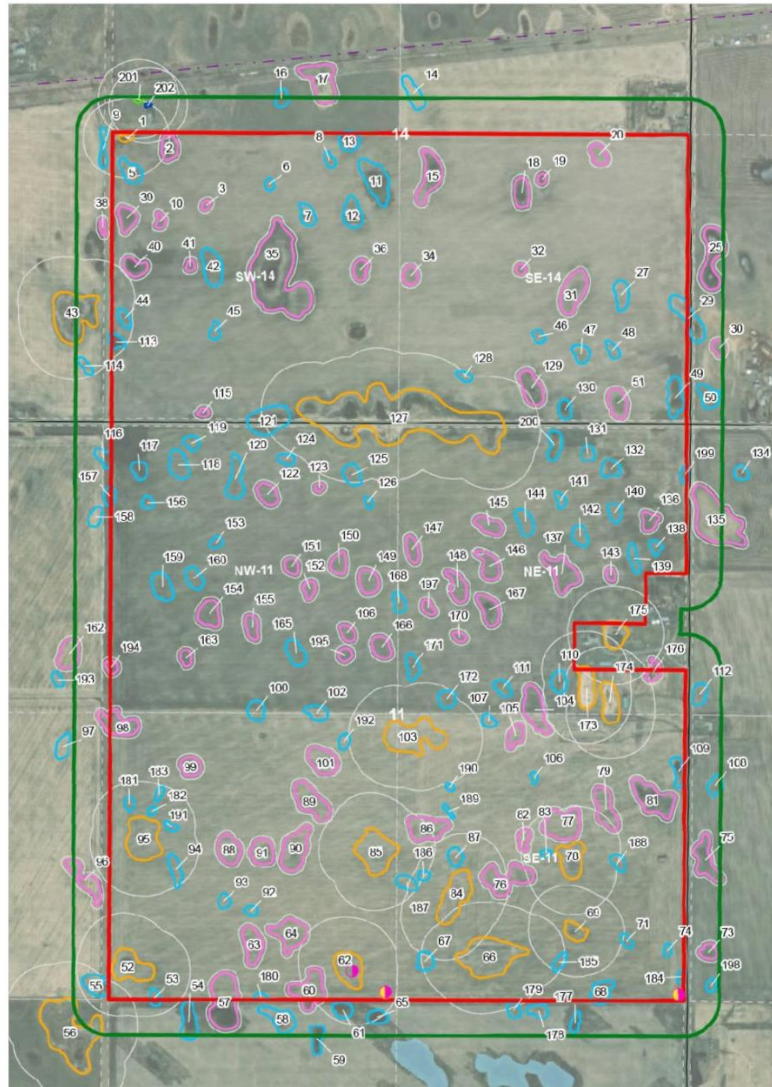


Figure 6: Vegetation, Wetlands and Water Bodies



## 6. BEACON AI HUB VISION AND GOALS

### Vision

The ASP for the subject site will facilitate the development of a Data Center Campus and supporting Solar / Agrivoltaics Facility with particular regard for the planning of servicing, stormwater, and transportation infrastructure. Nine goals intended to realize the plan vision guided the formation of this Plan. These goals are based on the Terms of Reference, existing physical characteristics of the Plan Area, input from Public Engagement, and site opportunities and constraints.

### Goals

#### Land Use

1. Land Use and Resource Management: Develop a land use framework that balances industrial, technological uses with surrounding agricultural uses, while preserving the natural environment.
2. Smart Growth and Resilience: Promote smart, sustainable growth that adapts to changing economic, environmental, and technological trends.

#### Community Stewardship and Economic Growth

3. Innovation and Technology Leadership: Facilitate the development of the Plan Area as an industrial area and establish advanced technological innovation, AI, and data processing in an integrated hub.
4. Economic Diversification and Job Creation: Foster a diverse, resilient local economy by creating high-tech jobs in AI and data processing. Encourage partnerships between the AI hub, local businesses, educational institutions, and government organizations. Attract complementary industries like tech infrastructure, research and development centres, and innovation hubs to support long-term economic growth.

#### Environment

5. Sustainability and Environmental Stewardship: Promote sustainable development and environmental stewardship, ensuring that the area's growth aligns with Alberta's renewable energy and conservation goals.

#### Transportation

6. Infrastructure and Connectivity: Ensure the site is well-served by infrastructure and utilities to support future growth and develop transportation network to connect with the broader surroundings.

#### Servicing

## Draft Document

7. Effectively manage existing stormwater on-site to prevent flooding, reduce erosion, and protect water quality while supporting sustainable development.

### Safety

8. Safety and Well-being: Support the health and well-being of workers, residents, and visitors in the area by implementing wellness-focused initiatives like accessible green spaces, and recreational areas as well as offering spaces for relaxation, socialization, and physical activity.

### Engagement

9. Foster a transparent and inclusive planning process that involves key stakeholders, including the local community, businesses, and government.



## **PART II: POLICIES**

## A. LAND USE

### 7. BEACON AI HUB LAND USE STRATEGY

#### Purpose

Beacon AI Hub Land Use Strategy implements the vision for the Beacon AI Hub ASP by detailing the physical organization of land use in the Plan Area, as identified on **Map 7: Land Use Strategy**. Developed through a collaborative process between Rocky View County and Beacon AI Centers, the strategy identifies the general land use, boundaries of the land use areas, and the policies that guide development within the designated area.

The strategy was shaped through a multi-faceted process that considered key factors such as the County Plan direction, public input from the Beacon AI Hub engagement process, and the existing physical characteristics. Background technical studies were conducted to plan infrastructure capacity, including transportation, utilities, and stormwater management. Additionally, a Fiscal Impact Assessment was completed to prepare the Beacon AI Hub ASP.

#### Strategy

Beacon AI Hub is envisioned as an **Innovation Area** which serves as a strategic land use dedicated to fostering a cutting-edge, sustainable facility dedicated to the advancement of AI technologies. Central to its infrastructure will be integrated data centres, supporting high-performance computing, storage, and data management crucial for AI infrastructure. In addition, the AI Hub will incorporate solar and agrivoltaics systems, harnessing renewable energy to power operations while promoting sustainable land use practices. This hub will unite research institutions, startups, technology companies, and experts, fostering a collaborative ecosystem for AI innovation and commercialization.

The project is designed with scalability in mind and is divided into a series of three distinct phases as outlined in **Section 19: Development Phasing** of this section. These phases can be advanced sequentially, or a combination of incremental phases may be consolidated into a single phase, depending on project needs and timelines. Internal and external factors such as regulatory requirements, market conditions, or technological advancements will influence the progression of each phase. As such, individual phases may either be expedited or deferred, based on the evolving requirements of the project and the broader environment.

The top two quarter sections in the north will generally be the focus of the associated Solar / Agrivoltaics Facility, while the remainder of the lands remainder of the lands will focus on the provision of Data Centres and associated uses such as administration and campus facilities as well as for advanced technological and scientific opportunities. Stormwater management will be handled in the south-west corner to manage on-site runoff, and a substation will be centrally located to supply power to the Plan Area. Additionally, set backs will be maintained from existing oil wells and pipelines to ensure safety and compliance.

#### General Policies

- 7.1 Beacon AI Hub shall support uses related to development in general accordance with the Land Use Strategy as shown in Figure 6.
- 7.2 Current agricultural operations are supported until such time that a transition to uses in accordance with this Plan are proposed.

- 7.3 Development abutting agricultural lands should employ design, set backs, parking, open space buffering or landscaping to mitigate the impact of differing development forms. These mitigations should be included in the development permit applications. Development abutting agricultural lands shall include transition and interface policies in accordance with the County's Agricultural Boundary Design Guidelines.
- 7.4 To provide a holistic, efficient, and thorough approach to Beacon AI Hub development, the development permit applications shall be prepared in accordance with this Plan and Land Use District.

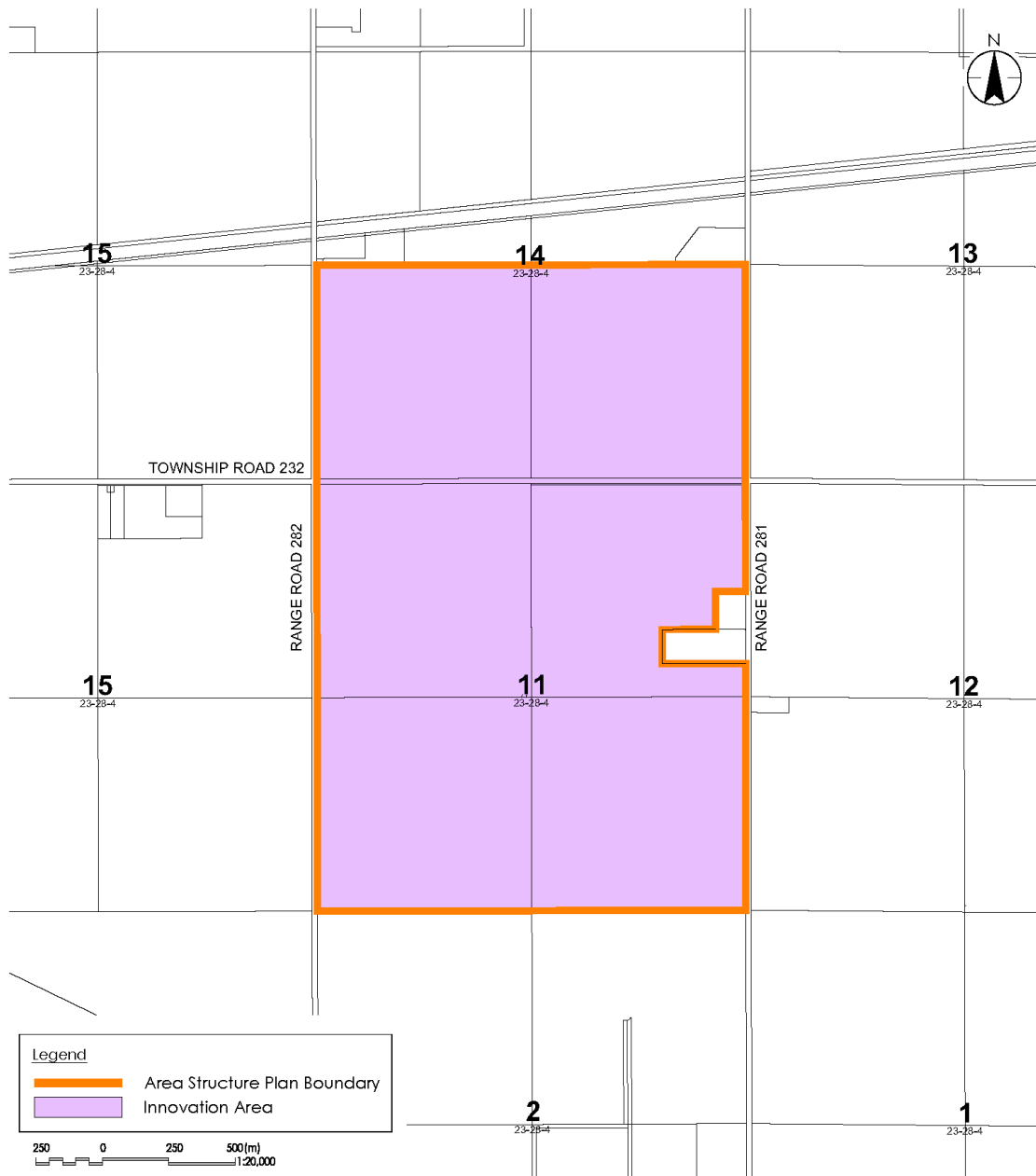


Figure 7: Land Use Strategy



## 8. LAND USES

The overall intent of the Plan Area is to include a range of uses, comprising a Data Centre Campus development, complimentary Solar / Agrivoltaics Facility as well as other compatible uses such as education components and supportive agriculture. **Figure 8: Development Concept** offers a conceptual layout of how the Plan Area could be broken down into various development areas, however, the Land Use Concept may change at a later stage without amendment to this ASP.

### Objectives

- To provide a holistic, efficient, and thorough approach to development of the Beacon AI Hub.
- Support the development of uses associated with the development of a Data Centre Campus and a complimentary Solar / Agrivoltaics Facility-
- Minimize development impacts on adjacent land uses.
- Provide for the growth of local and regional employment opportunities.
- Provide for an efficient pattern of development and phasing.
- Support industrial development to meet the County's fiscal goals.
- Promote financial sustainability by increasing the County's business assessment base.
- To allow for the coexistence of agricultural activities within the solar fields.
- Ensure that the Solar / Agrivoltaics Facility is designed to complement the Data Centre Campus, with consideration given to shared infrastructure and energy needs.
- Encourage sustainable farming practices within the solar fields, supporting both agricultural production and clean energy generation.

### Policies

#### GENERAL

- 8.1 Development related to Data Centre Campus development and complimentary Solar / Agrivoltaics Facility shall be located in the areas identified on **Figure 8: Development Concept**.
- 8.2 Development of Beacon AI Hub should proceed in an orderly manner and be supported by cost effective and efficient changes to the County's existing infrastructure and transportation networks.
- 8.3 Beacon AI Hub development shall be separated, screened, and buffered from adjacent non-industrial, non-business land use, and roads.
- 8.4 Residential land uses are not considered appropriate uses within the Plan Area.

**“Data Centre Campus”** refers to a large-scale facility designed to house extensive computer systems and associated components, for supporting cloud computing, data security, data storage, management and processing digital media, information and applications. This facility encompasses ancillary structures that support its primary function, including but not limited to administrative offices, educational and training facilities, associated advanced technological and scientific opportunities, maintenance facilities, substations, and security buildings.

**“Solar / Agrivoltaics Facility”** refers to a facility that combines solar energy generation with agriculture. It involves the co-location of solar panels with agricultural activities, where solar panels are installed above or alongside crops, grazing land, or other agricultural uses. The goal is to maximize land use by generating renewable energy while still allowing for agricultural productivity.

## **LAND USE**

- 8.5 Uses related to or required for Data Centre Campus development and Solar Facility, such as but not limited to buildings and structures for power, cooling, equipment yards, ancillary uses and storage facilities for server rooms and networking equipment that do not have a significant offsite nuisance impact are appropriate within the Plan Area.
- 8.6 Innovative or Advanced Technologies, institutional, business, and education-related uses that are compatible with the uses in Policy 8.5 should:
- a) have minimal impact on the local infrastructure, and
  - b) do not generate large retail traffic volumes may be appropriate within the industrial area.
- 8.7 Uses that support coexistence of agriculture should be considered, including apicultural, horticulture, and rotational farming.

## **DATA CENTRE CAMPUS**

### **Policies**

#### **Noise**

- 8.8 Data Centre Campus development shall adhere to Rule 012, which sets out requirements for noise control for facilities under the jurisdiction of the Alberta Utilities Commission (AUC).
- 8.9 A detailed noise impact assessment shall be provided at the development permit stage, identifying noise mitigation measures required to meet Rule 012 regulations.
- 8.10 Any noise generated by power generators supporting the Data Centre Campus should be mitigated by housing equipment in sound-attenuated enclosures with proper exhaust systems.

### *Lighting*

- 8.11 External lighting shall adhere to Dark Sky Principles as outlined in Section 11 of this Plan to mitigate the impacts of lighting on surrounding properties, minimize light pollution, and ensure that lighting is directed downward and properly shielded to reduce glare.
- 8.12 Detailed external lighting plans shall be submitted at the development permit stage.
- 8.13 External Lighting should:
  - a) consider illuminating pathways, entrances, and critical areas, while avoiding excessive brightness.
  - b) focus on security and visibility immediately surrounding the data centre halls.

### *Water*

- 8.14 Recycling and reuse of water is encouraged and should be explored at the development permit stage.
- 8.15 Cooling design for the Data Centre Campus that involves water usage shall be assessed at the development permit stage.

### *Power*

- 8.16 Power for the Data Centre Campus should be sustainably sourced.
- 8.17 The Data Centre Campus shall be designed and operated to ensure a stable power grid.
- 8.18 Provision of power for the Data Centre Campus should align with phasing in accordance with Section 19 of this Plan.

### *Sustainability and Environment*

- 8.19 Development is encouraged to:
  - a) use locally produced or manufactured materials; and
  - b) incorporate recycled or reused materials.

## **SOLAR FACILITY**

### **Policies**

- 8.20 A Glint and Glare Assessment shall be conducted as part of the development permit application process to evaluate the potential impact of solar panel reflections on nearby properties, roads, aviation routes, and other sensitive areas. The Glint and Glare Assessment should include:
- a) site analysis of the area allocated for Solar / Agrivoltaics Facility,
  - b) solar panel orientation and configuration,
  - c) glare and reflection Modeling to predict the potential glare and glint from solar panel reflections, and
  - d) identification and mapping of sensitive areas where glare could pose safety concerns, and
  - e) recommendations for mitigating any identified glare impacts.
- 8.21 The Solar Facility should minimize glare through:
- f) the use of solar panels with non-reflective coatings and
  - g) ensure that panels are designed to reduce visual disturbances for surrounding communities.
- 8.22 The Solar / Agrivoltaics Facility should optimize energy capture while minimizing glare at various times of the day and across different seasons. To achieve this careful specification of the orientation and tracking mechanisms of the solar panels should be considered at the development permit stage.

### ***Sustainability and Environment***

- 8.23 The development and operation of the Solar Facility should minimize negative environmental impacts. This includes careful consideration of:
- a) local wildlife habitats,
  - b) impact on soil health,
  - c) impact on water resources, and
  - d) impact on biodiversity.
- 8.24 The Solar Facility is encouraged to increase agricultural production as high as possible while recognizing local variables (climate and weather), changes in soil nutrient profiles, and key choices on inputs and production methods.
- 8.25 The development should consider opportunities for coexistence of agriculture. This may include modern rotational farming techniques, apicultural, or horticultural opportunities. As per the Agrivoltaics Plan, agrivoltaics plant will be developed based upon the site-specific location of facilities, panels and ancillary infrastructure. Developer shall undertake project approvals as part of the municipal requirements as well as the Alberta Utilities Commission approval at the development permit stage.



8.26

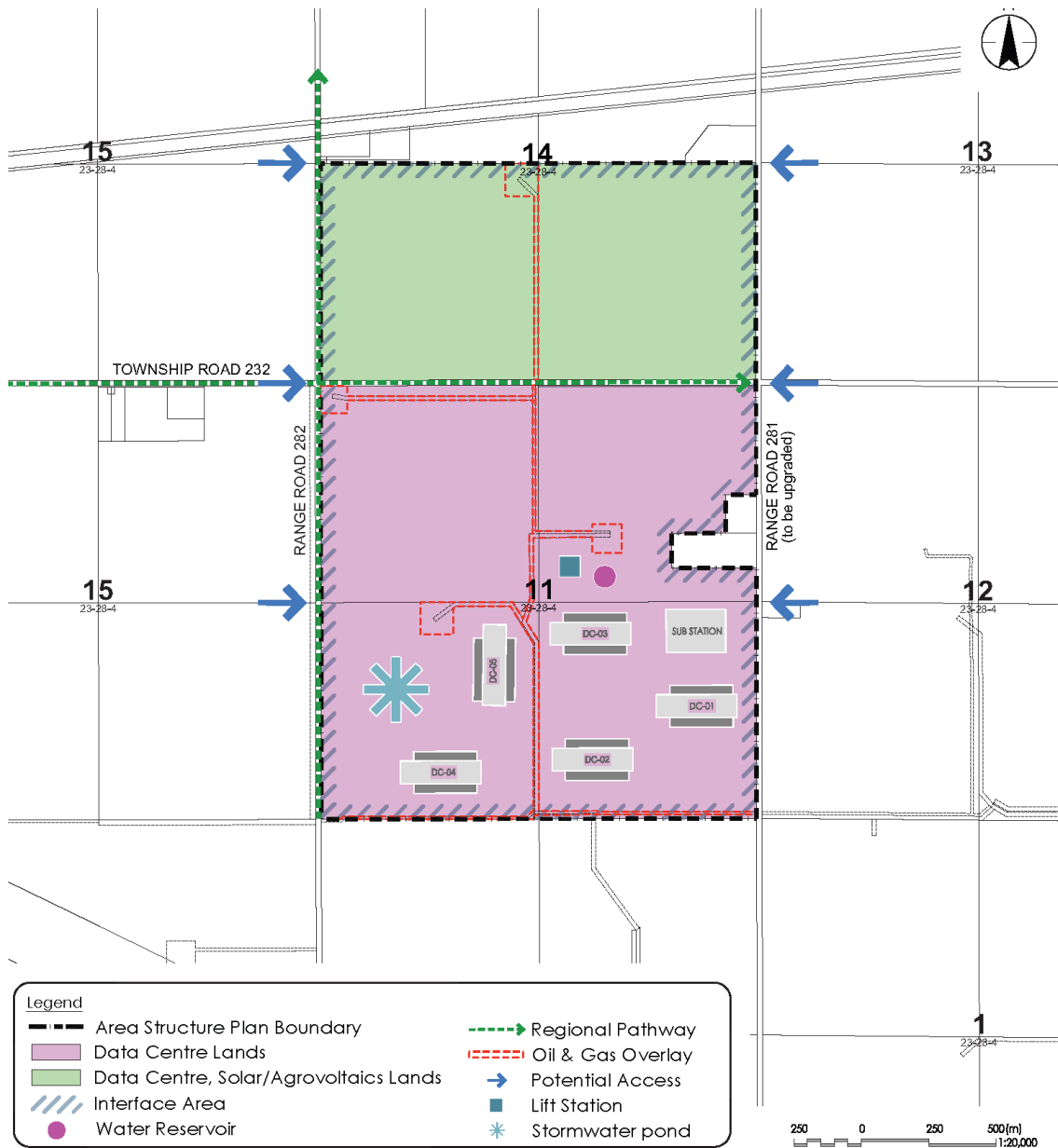


Figure 8: Development Concept

## 9. INTERFACE POLICIES

This section integrates identification and design response to the various interfaces within the Plan Area with a corresponding Landscape Plan. General policies are provided for types of interfaces (e.g. residential and agricultural) which are summarized in **Figure 9 – Plan Area Interfaces**.

### Objectives

- Ensure that land uses surrounding the Plan are compatible with each other at their interfaces, minimizing conflicts such as noise, traffic congestion, or visual intrusion.
- Design transportation network and access points at the interfaces to facilitate safe, efficient, and convenient movement between different land uses, both for vehicles and pedestrians.
- Safeguard the health and safety of residents, workers, and the environment by addressing potential hazards or nuisances at interfaces, especially between industrial zones and residential areas.

### Policies

- 9.1 Development should utilize tools outlined in the Agricultural Boundary Design Guidelines to minimize potential interface conflicts.
- 9.2 Detailed landscaping requirements for development shall be addressed as part of a Landscape Plan submitted at the development permit stage.
- 9.3 A Landscape Design and Implementation Plan shall be prepared and submitted to the County at the development permit stage. This Plan shall include:
  - a) Detailed landscape design drawings for all landscaped areas with specification for plant species to be incorporated within the Plan Area;
  - b) Selected species should have low or no maintenance requirements, and be drought tolerant;
  - c) Identification of the methods of irrigation and maintenance for landscaped areas;
  - d) Detailed design for areas of mass plantings: and
  - e) Include details of hardscape landscaping items, including non-plant elements, such as pathways, patios, retaining walls, entry features, and other structures. This section should describe the materials, dimensions, and placement of these features.
  - f) A Maintenance Strategy that identifies requirements for the ongoing care and maintenance of the landscape, including pruning, fertilization, pest management, and irrigation schedules (where relevant)
  - g) An estimated budget for the landscape project, including costs for plants, materials, labor, and any additional expenses.
- 9.4 All landscaping and maintenance within the Beacon AI Hub shall be the responsibility of the owner/developer.

- 9.5 All landscaping areas requiring higher intensity landscaping shall provide a minimum of one tree for every 30 m<sup>2</sup> and one shrub for every 40 m<sup>2</sup> of landscaped area shall be provided.
- 9.6 Where applicable, deciduous trees shall be a minimum 63 mm caliper measured 450 mm from ground level and coniferous trees shall be 2.5 metres in height, as per the County's Land Use Bylaw.
- 9.7 At the time of the development permit application, a lighting plan shall be submitted for any development adjacent to Interface Condition 1. This plan should demonstrate measures to limit lighting along the shared boundary, minimizing impacts on adjacent agricultural land.
- 9.8 Uses that may have an effect on the safety, use, amenity, or enjoyment of adjacent or nearby sites due to appearance, noise, odour, emission of contaminants fire or explosive hazards, or dangerous goods, are discouraged where they share a boundary with Interface Condition 1. Additional details and studies may be requested by the County at time of the development permit application process to ensure development does not create a nuisance on adjacent agricultural land.
- 9.9 Applications for non-agricultural development adjacent to agricultural lands should adhere to the County's Agricultural Boundary Design Guidelines.
- 9.10 Buildings within the ASP area adjacent to existing residential uses shall be set back a minimum of 50 metres from the adjoining property line.
- 9.11 A minimum 6.0m landscaping buffer, including mass plantings and trees, shall be provided along the entirety of the residential interface to minimize the visual impact of the non-residential buildings. Screening/fencing should also be considered to support an appropriate interface to the existing residential use.
- 9.12 The proposed Regional Pathway along Range Road 282 shall be constructed after development of parcels for non-agricultural uses on either side of Range 282.



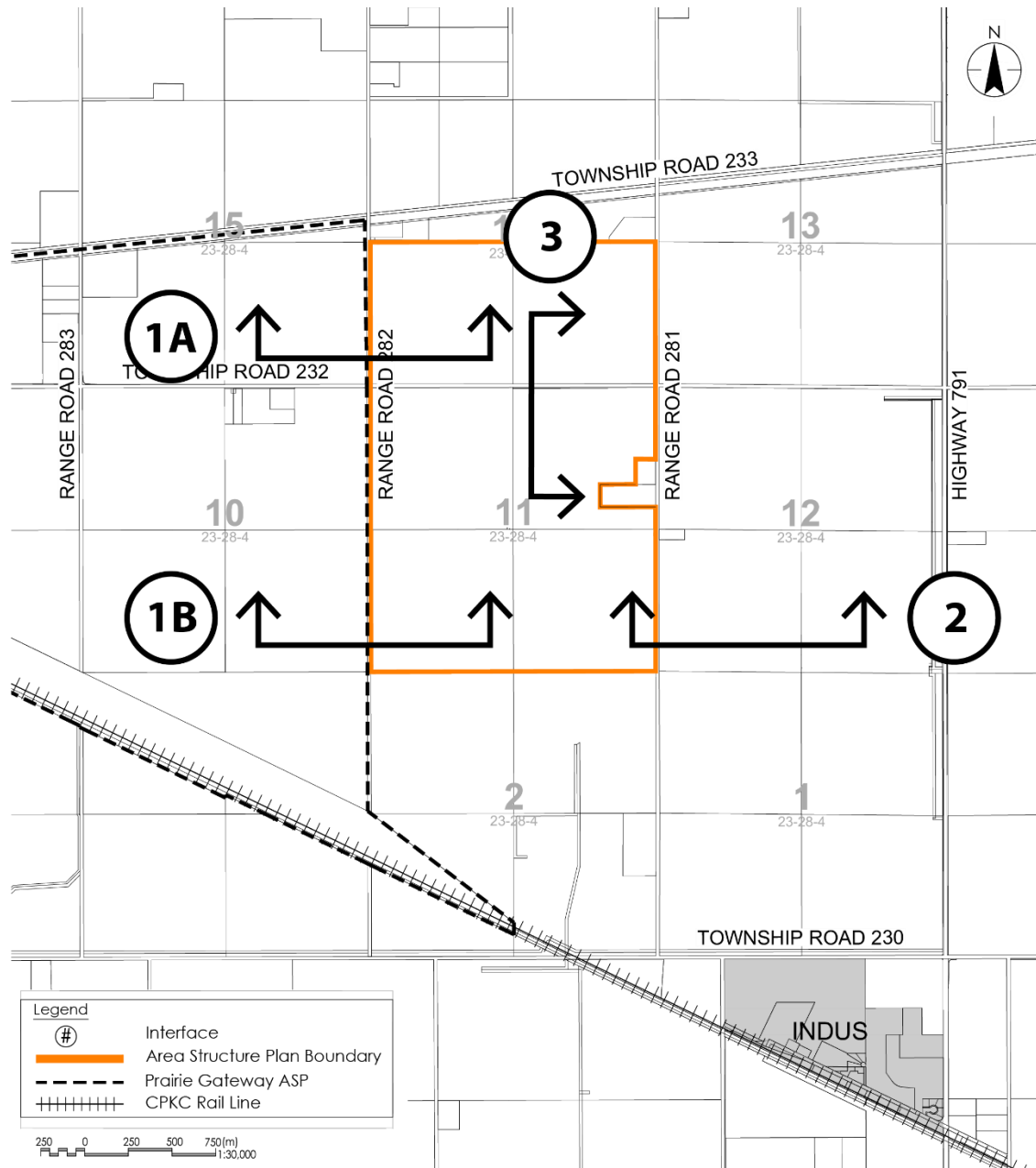


Figure 9: Plan Area Interfaces

## INTERFACE CONDITION 1: BEACON AI HUB – INDUSTRIAL

The objective of this interface as shown in **Figure 10: Beacon AI Hub - Industrial Interface (A. Beacon AI Hub – Solar Farm, B. Beacon AI Hub – Data Centre and Stormpond)** is to create an industrial area that integrates seamlessly into the broader context of the plan area, while ensuring the smooth functionality of the development. Given the compatibility of uses along the western boundary (Range Road 282), no significant or intensive interface treatment is required. The design should reflect the existing character of the area and provide a cohesive transition between the Beacon AI Hub and the adjacent industrial uses within the Prairie Gateway ASP area.

### Policies

- 9.13 The interface cross-section should have:
  - a) a 19.0 metre cross-section to accommodate traffic, utilities, and landscaping and
  - b) trees provided along the site boundary to create a visual landscape buffer.
- 9.14 At the development permit stage, detailed design drawings for the stormwater facilities shall include a detailed landscape plan, including areas for group plantings.

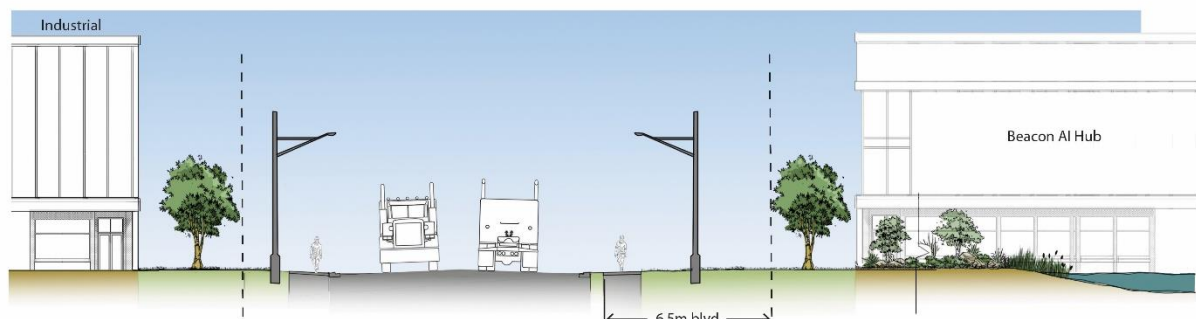
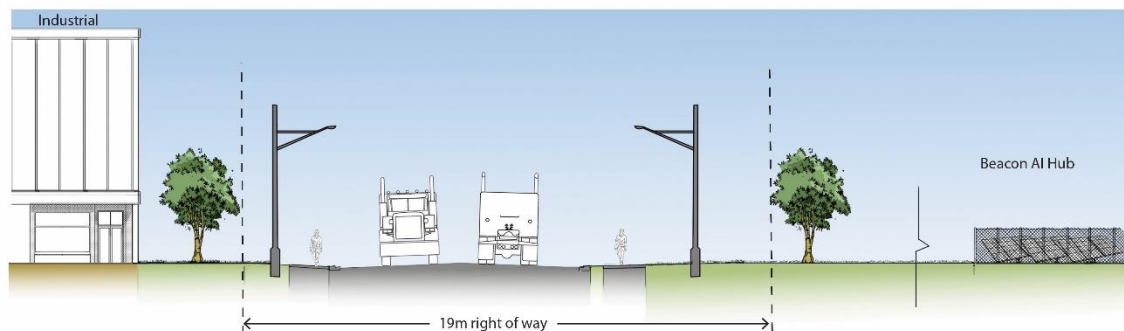


Figure 11: Beacon AI Hub - Industrial Interface (A. Beacon AI Hub – Solar Farm, B. Beacon AI Hub – Data Centre and Stormpond)

## INTERFACE CONDITION 2: BEACON AI HUB – OTHER LAND USES

This interface as shown in **Figure 12: Beacon AI Hub – Other Land Uses Interface** is along the majority of the eastern, northern and southern boundary of the Plan Area. Given the existence of agricultural and residential uses along this roadway, design and interface requirements are necessary.

### Policies

- 9.15 The interface cross-section should have:
- a) a 19.0 metre cross-section to accommodate traffic, utilities, and landscaping and
  - b) trees provided along the site boundary to create a visual landscape buffer.
- 9.16 Buildings within this interface should have soft appearance and should have
- a) a tiered building setback
  - b) portions of buildings higher than 20.0 metres requiring additional setback (15.0 metres) from the front boundary.
- 9.17 A minimum setback of 30 metres (100 feet) shall be required from the building line to the property line of adjacent land uses. This setback may be designed with a combination of fencing and/or visual landscaping to ensure effective separation and buffering.
- 9.18 Appropriate screening must be provided for buildings within this interface used for storage. This screening must be installed in the form of structures, fencing, additional landscaping, or a combination of these.

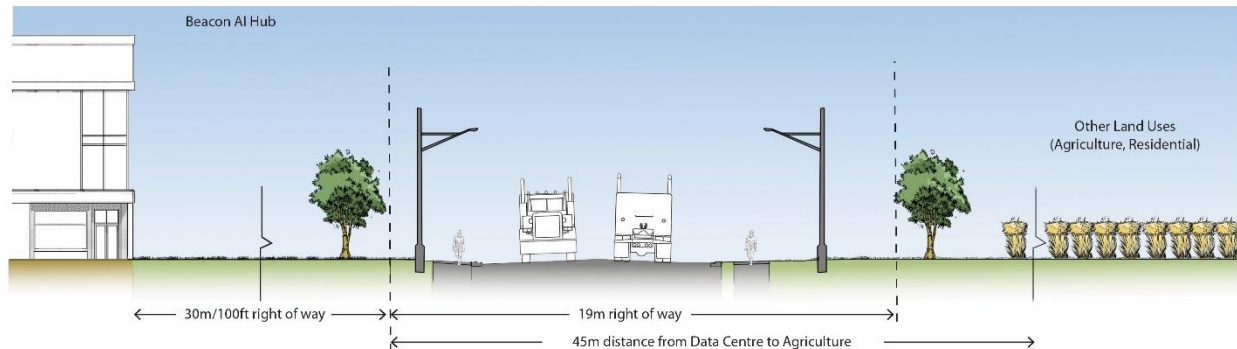


Figure 13: Beacon AI Hub – Other Land Uses Interface

## INTERFACE CONDITION 3: BEACON AI HUB – TOWNSHIP ROAD 232

This interface as shown in **Figure 12: Beacon AI Hub - Township Road 232 Interface** addresses interface conditions along Township Road 232. The objective is to enhance the visual appeal and provide a cohesive transition between the road right-of-way and the Beacon AI Hub. Landscaping will play a significant role in mitigating the visual impact of the development while providing an effective buffer between different land uses. Additionally, this interface aims to create a smooth transition to the Regional Pathway network extending from the Prairie Gateway ASP area.

## Policies

- 9.19 Trees should be provided within the regional path of the road right-of-way, with the adjacent Beacon AI Hub providing sufficient room.
- 9.20 There should be a minimum of 6.0 metre landscaped set back from any buildings within the Plan Area which will act as a buffer.
- 9.21 At the development permit stage, landscape drawings for the area within this interface shall include a detailed landscape plan, including areas for group plantings. No landscape berms are proposed/considered necessary for this interface condition.

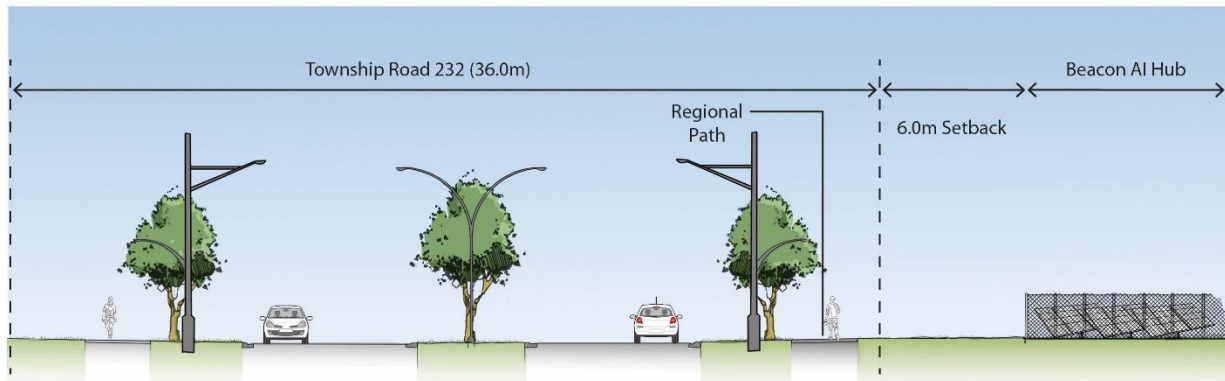


Figure 12: Beacon AI Hub - Township Road 232 Interface

## 10. DARK SKY POLICY

All lighting within the Plan Area should create a unified visual character and should align with both the County's Dark Sky policy and the International Dark Sky Association guidelines. In adhering to these policies, the development will be designed to be as visually unobtrusive as possible while still providing enough lighting to maintain visibility for safety and wayfinding. The scale of lighting should be considered along pathways to respect the pedestrian scale, for example, by installing low mounted lighting. Internal roads shall have street lighting that adheres to County design standards.

### Objectives

- Minimize the impact of artificial lighting on the night sky by implementing lighting practices that reduce glare, sky glow, and light trespass into natural areas and residential zones.

### Policies

- 10.1 Low impact lighting should be incorporated to mitigate light pollution.
- 10.2 Flood lights, spot lights, or any other large-area, high intensity lighting shall be prohibited.
- 10.3 At the development permit stage, an outdoor lighting plan should be completed to the satisfaction of Rocky View County and shall demonstrate;
  - a) Lighting techniques to maintain visibility for safety; and
  - b) Rationale for how the outdoor lighting meets the Rocky View County's Dark Sky policy.

## B. SERVICES

### 11. OPEN SPACES AND PATHWAYS

Open spaces and pathways are integral to the vision for the Beacon AI Hub's development. These will provide a harmonious balance among the high-tech infrastructure of the Data Centre Campus and the surrounding natural ecosystem. The open spaces will offer areas for relaxation, recreation, and environmental conservation, enhancing the overall quality of the Plan Area. Meanwhile, the pathway system will ensure accessibility and connectivity for site users, linking key areas within the site and with open spaces.

Since no further subdivision of the subject lands is intended, this ASP does not propose the provision of any Municipal Reserve (MR) or Environmental Reserve (ER) lands within the Plan Area.

#### Objectives

- Create a harmonious, sustainable, and accessible environment for site users.
- Integrate green spaces, pedestrian and vehicular circulation, and the natural landscape to enhance the overall functionality, aesthetic appeal, and environmental sustainability of the area.

#### Policies

- 11.1 Pathways should be planned within the Plan Area to connect the Data Centre Campus and Solar / Agrivoltaics Facility, providing easy access to potential green spaces and communal areas.
- 11.2 Open spaces should be designated for employee wellness and recreation, such as walking trails, small parks, or rest areas, to improve employee health and productivity. These spaces should include benches, shade, and areas for relaxation.
- 11.3 The use of flexible outdoor spaces for meetings and events in open areas should be encouraged. These can be designed for seasonal use and can help build a sense of place.
- 11.4 Buffer zones, which serve as green buffers should be designed to visually screen Beacon AI hub from the neighbouring land uses. These areas may include native plantings, tree canopies, and low-impact water management solutions, such as bioswales and rain gardens.
- 11.5 Pathways and open spaces shall be designed to be safely separated from high-security zones, such as the Data Centre itself and solar fields, using physical barriers (e.g., fencing, hedges) to ensure safety while maintaining aesthetic integration. Pathways and open spaces design should be submitted at the development permit stage.
- 11.6 Use native plant species for landscaping in open spaces and along pathways to reduce maintenance, conserve water, and support local biodiversity.

- 11.7 Where applicable, solar-powered lighting should be used along pathways and in open spaces to reduce energy consumption and support the solar facility's sustainability goals.
- 11.8 Pathways and open spaces should incorporate low-impact development (LID) techniques, such as permeable pavement, bioswales, and rain gardens, to manage stormwater and reduce runoff into nearby water systems.
- 11.9 Construction of pathways and any infrastructure installed in open spaces should prioritize use of sustainable, low-impact and non-toxic materials such as recycled aggregates.
- 11.10 Construction of pathways and any infrastructure installed in open spaces should avoid materials that may negatively impact local ecosystems.
- 11.11 Pathways and open spaces should be designed to mitigate the urban heat island effect by using reflective materials or shade-providing trees and structures to reduce surface temperatures in outdoor areas, especially in areas around the data center and solar facilities.
- 11.12 Landscaping should be designed to be climate-resilient, using drought-tolerant plants and maintaining soil health to minimize water requirements.
- 11.13 Water-efficient irrigation systems should be used where possible.
- 11.14 Open spaces areas should be designed to allow for flexible use and repurposing, enabling adaptation to evolving needs over time.

## 12. TRANSPORTATION

As part of the Beacon AI Hub ASP process, Stantec completed a Traffic Impact Assessment (TIA) to identify the most suitable access points to the Plan Area and assess the potential impact of the proposed development on the existing road network. The development will not include a public transit network; however, private internal roadways will be constructed within the Plan Area to provide vehicular access as shown in **Figure 13: Transportation Links**.

### Objectives

- Provide for an internal road network that contributes to a high-quality built environment, and efficiently and safely aligns to the regional road network. .
- Implement an efficient internal road network that ensures smooth internal circulation for vehicles, maintenance, and emergency services.
- Design the internal road network and pathways to meet safety and functional requirements for both pedestrian and vehicular traffic, including clear signage, proper lighting, and adequate width for all users.

### Policies

- 12.1 A detailed transportation impact assessment will be required at the development permit stage to ensure:
  - a) detailed development plans are consistent with transportation assumptions and recommendations identified in the TIA and adhere to the County Servicing Standards; or
  - b) any changes to transportation assumptions as a result of detailed development plans are reflected in transportation recommendations and Conditions of the development permit.
- 12.2 Transportation infrastructure upgrades to support development within the Plan Area shall be confirmed at the development permit stage.
- 12.3 The developer shall address any required road improvements through a development agreement process at the development permit stage.



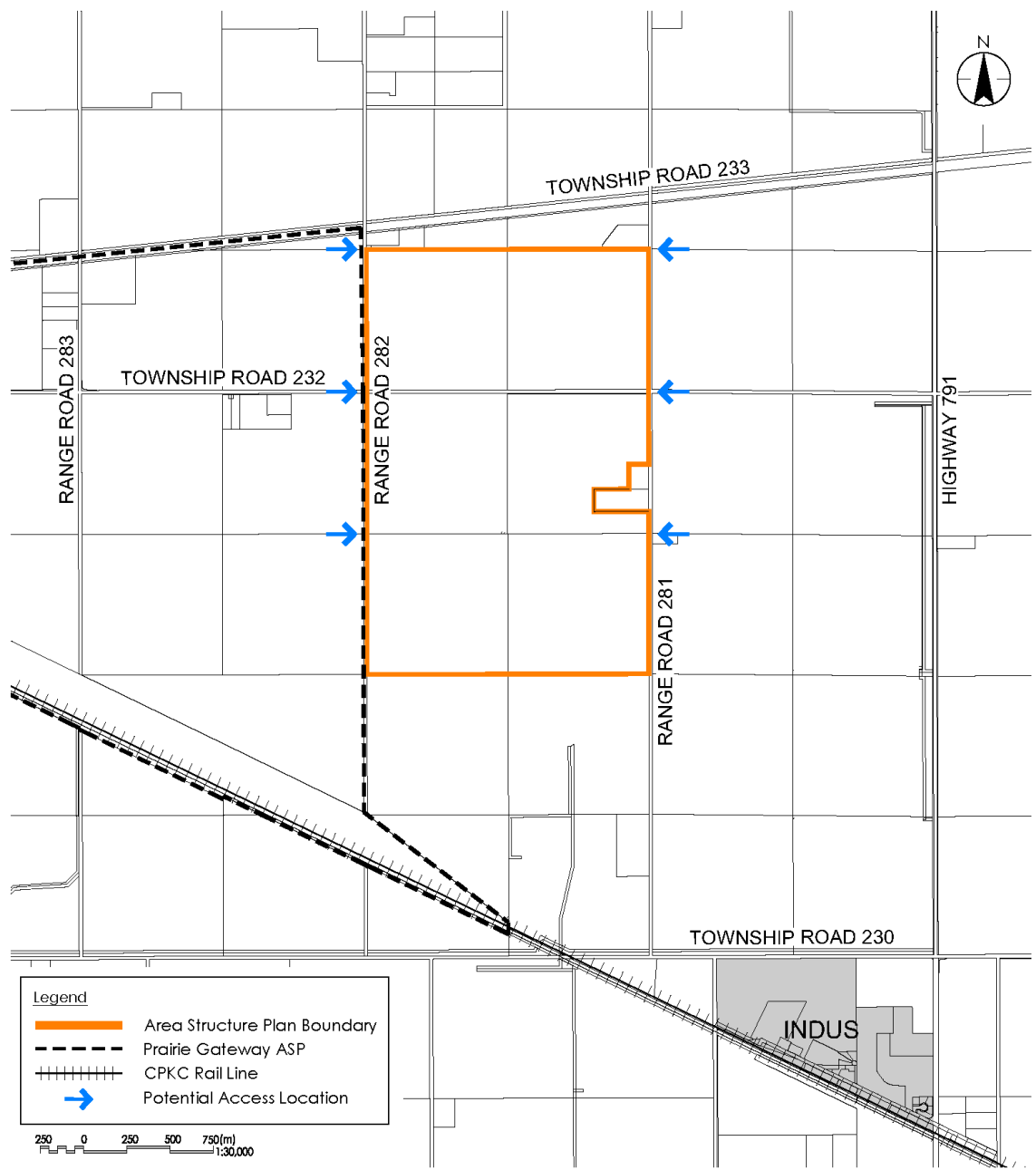


Figure 16: Transportation Links

## 13. NATURAL ENVIRONMENT

The preservation of the biophysical assets such as vegetation, wetlands, water bodies, wildlife habitats, and topographical features is vital to maintaining a healthy ecosystem and community well-being. As such, it is essential to ensure that the proposed development minimizes adverse impacts on these ecological assets, while integrating sensitive design practices that respect and adapt to the natural environment. By carefully planning the development and implementing mitigation strategies, the goal is to achieve a balance between sustainable development and the protection of the Plan Area's natural resources.

### Objectives

- Ensure that development identifies and considers biophysical assets within the Plan Area.
- Minimize the disturbance caused by development to the topography, landscape features, wildlife habitat, and water resources of the Plan Area through sensitive design that adapts to the natural environment where possible.
- Preserve wetlands and watercourses of ecological value within the Plan Area where practicable.

### Policies

#### **NATURAL ENVIRONMENT**

- 13.1 If an application varies from the boundaries of the Plan Area within the Biophysical Impact Assessment, an updated report, or update letter, shall be submitted at the development permit application stage.
- 13.2 Development should minimize disruption of natural areas by:
  - a) incorporating ecological features such as natural vegetation, topography, and water bodies into the design at redesignation and development permit stages,
  - b) implementing the mitigation measures identified in the Biophysical Impact Assessment; and
  - c) utilizing environmentally friendly landscaping where practical.
- 13.3 At the development permit stage, applications should demonstrate the connectivity and function of all retained natural features
- 13.4 The solar / agrivoltaics facility should be planned to avoid significant natural ecosystems, such as ancillary wetlands, wildlife corridors where possible, and sensitive vegetation areas. Where avoidance is not feasible, appropriate mitigation measures, including habitat restoration and compensation shall be implemented.

## **WETLAND AND WATER BODIES**

- 13.5 Wetland assessment and protection shall be guided by County, regional, and Provincial policy.
- 13.6 The Developer shall obtain all required provincial and municipal approvals related to wetlands prior to construction commencing within areas of the Plan Area disposition. This includes obtaining approval for and compensation for any existing wetlands proposed to be removed within the Plan Area.
- 13.7 At the development permit stage, the developer shall submit a Geotechnical Investigation, prepared by a suitably qualified professional engineer, and in accordance with County Servicing Standards. Solar racking, panels and MV collector lines are considered a temporary disturbance and should be installed within temporary wetlands after the approval of a *Water Act* Application along with approval by Alberta Utilities Commission (AUC) for the Solar / Agrivoltaics facility.
- 13.8 More permanent solar project components such as inverter pads, roads, or a permanent operations trailer site should be sited to avoid wetlands. Where wetlands cannot be avoided, this will be detailed at the development permit stage and subject to provincial regulations.

## **WILDLIFE SPECIES AND WILDLIFE HABITAT**

- 13.9 Development to minimize removal of existing wildlife by providing necessary setbacks may be considered.
- 13.10 A 100m setback around wetlands should be fenced off during construction activities to ensure vehicle traffic does not occur within this area to reduce habitat loss and soil compaction.
- 13.11 At the development permit stage, an erosion and sediment control (ESC) plan shall be developed, and ESC measures shall be implemented as needed, for the duration of the construction activities to further minimize potential impacts to wetlands and amphibian habitat.

## 14. EMERGENCY SERVICES

Fire suppression and water supply infrastructure shall be provided to deliver appropriate levels of fire protection within the Plan Area.

### Objectives

- Provide adequate and efficient fire and protective services to meet the needs of the development.
- Ensure that the development is designed and constructed in a way that maximizes the effectiveness and accessibility of fire and protective services.
- Employ design features, such as CPTED principles, to mitigate or prevent emergencies.

### Policies

- 14.1 All development shall provide fire suppression systems in compliance with the County's Fire Suppression Bylaw as well as the current edition of the Alberta Building Code, Alberta Fire Code, and/or other relevant Federal or Provincial legislation.
- 14.2 Water infrastructure including ancillary water storage facilities serving development within the Plan Area shall be designed to provide adequate water pressure and volume to combat fires.
- 14.3 At the time of development, the Developer, through direct consultation with the Emergency Services of Rocky View County, shall prepare a safe campus strategy for implementation within the Plan Area.
- 14.4 At the time of development, the Developer, through direct consultation with the Fire Services of Rocky View County shall prepare and implement a Fire Smart strategy to the satisfaction of the Fire Services.
- 14.5 As a condition of development, the Developer shall provide a Construction Emergency Response Plan to the satisfaction of the Fire Services of Rocky View County.
- 14.6 Crime prevention through environmental design (CPTED) features should be considered in the design and construction of all new development.
- 14.7 At the development permit stage, a suppression plan shall be submitted. This plan shall address fire suppression requirements and ensure water and necessary infrastructure is available to all development. The fire suppression plan should consider opportunities and locations that allow for shared infrastructure with adjacent ASP or local plan areas.
- 14.8 Where the proposed development may pose a significant risk or hazard to adjacent properties, the County may require the proponent of the development to complete an independent hazard risk assessment. The County, at its sole discretion, may require the proponent to undertake measures to reduce the hazard risk.

## C. UTILITIES AND INFRASTRUCTURE

### 15. UTILITY SERVICES

Well-designed and effective utility services are the foundation of a well-planned community. Development within the Plan Area will be serviced by public and private infrastructure and services. Water and wastewater infrastructure will be provided in accordance with the supporting technical assessments prepared as part of this ASP. The preliminary proposed water and wastewater infrastructure network for the Plan Area is illustrated in **Figure 14: Servicing Strategy**.

An initial review of existing information and site reconnaissance identified respective municipal and private water service options for the project area. Notably, Langdon Waterworks owns and operates the closest domestic water treatment and distribution system.

The proposed water servicing strategy conceptualizes a 9.6 km, 100-mm PVC C900 water main connecting to the Langdon system, along with the installation of a water tank on the south side of the site to meet local fire protection codes. This system is designed to meet estimated daily water demands of 30,000 litres, with a peak hourly demand of 31.3 litres per minute for domestic use, in accordance with local regulations and fire protection requirements.

In terms of wastewater, the site plans to connect to the existing East Rocky View Sanitary Sewer Forcemain, which runs south along Range Road 275 and east along Township Road 33, ultimately conveying wastewater to the treatment plant in Langdon, Alberta. The development, once fully operational with 400 staff, is expected to generate an estimated sewage flow of 30,000 litres per day. Using a design flow of 75 litres per day per person (20 gallons per day per unit, as per the EPA's "Typical Wastewater Flows from Commercial Sources Table 4-6" in Appendix B), the maximum flow rate after applying a peaking factor of 1.5 would be 45,000 litres per day.

#### Objectives

- Ensure potable water and wastewater systems are provided to the Plan area in a safe, cost effective, and fiscally sustainable manner.
- Ensure development proceeds in alignment with the availability of supporting utilities and services.
- Ensure development minimizes reliance on potable water.
- Require utility rights-of-way and easements to accommodate utilities and infrastructure for development within the Plan Area.
- Allow temporary water solutions under strict conditions, including compliance with provincial regulations and deferred service agreements.

#### Policies

#### WATER

- 15.1 The proposed water servicing plan within the Plan Area shall proceed generally as illustrated on **Figure 14: Servicing Strategy**.

- 15.2 Developers shall be required to pay any required off-site levies or cost recoveries, in accordance with County bylaws and policy
- 15.3 Utility rights-of-way and easements shall be provided to accommodate water distribution infrastructure at the development permit, as deemed necessary.
- 15.4 At the development permit stage, the applicant shall provide an updated water demand analysis that confirms the anticipated water usage of the development to ensure water demands align with overall water supply capacity, in accordance with the ASP.
- 15.5 The County encourages the reduction and reuse of water in accordance with provincial laws and regulations.
- 15.6 Water re-use strategies, and low impact development measures are encouraged to reduce the reliance on potable water for irrigation and other non-potable uses.
- 15.7 Potable water provided by a municipal utility system shall not be used for the irrigation of non-residential development areas, with the exception of new landscaped areas for a period of two years from occupancy.
- 15.8 Development permits relying on County water supply and infrastructure shall not be supported until the County has confirmed the provision of required water infrastructure to the Plan Area, to the satisfaction of the County.
- 15.9 Notwithstanding policy 15.8 (above) development may be permitted to provide individual potable water solutions on a temporary basis in accordance with County policy if the following conditions are met:
  - a) The County's potable water system is not yet available to the site;
  - b) The developer enters into a deferred services agreement and connects to services when available;
  - c) The developer agrees that no compensation will be provided to the developer for the costs incurred for the construction of the temporary servicing solution.
  - d) The proposed temporary solution meets provincial regulations; and
  - e) The development is not a heavy water user.
- 15.10 Development and buildings shall use low flow fixtures and appliances.
- 15.11 The County encourages the reduction and reuse of water in accordance with provincial laws and regulations.
- 15.12 Cost recovery agreements may be applicable as per County policy for those developers who frontend the costs and construction of water infrastructure that benefits future developers and landowners.

## **WASTEWATER**

- 15.13 The proposed wastewater servicing plan within the Area Structure Plan shall proceed generally as illustrated on **Figure 14: Servicing Strategy**.
- 15.14 The Developer shall be required to enter into a comprehensive and inclusive development agreement with Rocky View County and other affected parties relating to the design, construction, and maintenance.
- 15.15 Utility rights-of-way and easements shall be provided to accommodate wastewater distribution infrastructure at the development permit stage, as deemed necessary.
- 15.16 Development Permits relying on County wastewater infrastructure shall not be supported until the County has confirmed the provision of required wastewater infrastructure to the Plan Area, to the satisfaction of the County.
- 15.17 Cost recovery agreements may be applicable as per County policy for those developers who frontload the costs and construction of wastewater infrastructure that benefits future developers and landowners.

## **STORMWATER**

- 15.18 The Developer shall ensure the recommendations of the Master Drainage Plan are implemented through the development and building permit stages, in conformity with the provincial approvals.
- 15.19 At the development permit stage, a Stormwater Management Report shall be prepared that provides detailed design and requirements for stormwater management for development, in accordance with the Master Drainage Plan, Cooperative Stormwater Management Initiative (CSMI), County Policy, Servicing Standards, and Provincial regulations.
- 15.20 As a condition of the development permit application, the Developer must provide verification of related municipal, provincial and federal approvals for stormwater infrastructure (e.g. Water Act and EPEA approvals, as relevant).
- 15.21 All new stormwater management facilities shall be constructed, operated, and maintained by the developer.
- 15.22 Utility rights-of-way and easements shall be provided to accommodate stormwater infrastructure at the development permit stage, as deemed necessary.
- 15.23 A comprehensive Storm Water Management Plan shall be developed in accordance with the requirements of Alberta Environment and the County. This plan must be implemented in conjunction with or prior to the development of Phase I to ensure effective management of stormwater and compliance with environmental standards.

## **SHALLOW UTILITIES**

- 15.24 All development shall be serviced with shallow utilities at the expense of the developer. Utilizing best management practices, an overland drainage system, utilizing the existing topography when possible, shall be used for storm water management and accomplished by using piping, roadway ditches, culverts and drainage swales along lot lines and within the green space areas.
- 15.25 The alignments and required utility rights-of-way for franchise utility installations shall be determined at the development permit stage, in accordance with County Servicing Standards. As a condition of development approval, the Developer shall be required to prepare, in accordance with the County's Servicing Standards, an Erosion and Sediment control plan.
- 15.26 Shallow franchise utilities such as gas, electricity, and telecommunications shall be installed and/or financed by the developer at the development permit stage in consultation with the applicable private utility providers.
- 15.27 The Developer shall be required to enter into a development agreement for the provision of potable water distribution and storage of potable water distribution, storm water management facilities; wastewater treatment facility, wastewater lift stations and treated wastewater storage facilities.
- 15.28 Gas utility line assignments shall be provided by private determined at the development permit stage.

## **POWER**

- 15.29 The location, size, and configuration of power infrastructure required within the Plan Area (e.g. substation, pad mounted transformers) shall be determined at time of the development permit stage.
- 15.30 The Developer shall coordinate with power utility providers on the provision and timing of power for implementation of the development.
- 15.31 For utility-scale power generation facilities, the County may request additional technical studies and supporting information, including but not limited to, the following:
  - a) Development Impact Statement and Analysis to evaluate the impact of the proposal on adjacent sites from:
    - i. Noise;
    - ii. Visual appearance;
    - iii. Lighting;
    - iv. Odour; and/or
    - v. Dust impacts.
  - b) Impacts and mitigation of the anticipated vapour/steam by-products;
  - c) Biophysical Impact Assessment; and



- d) Any additional studies to identify safety, health and/or nuisance impacts.

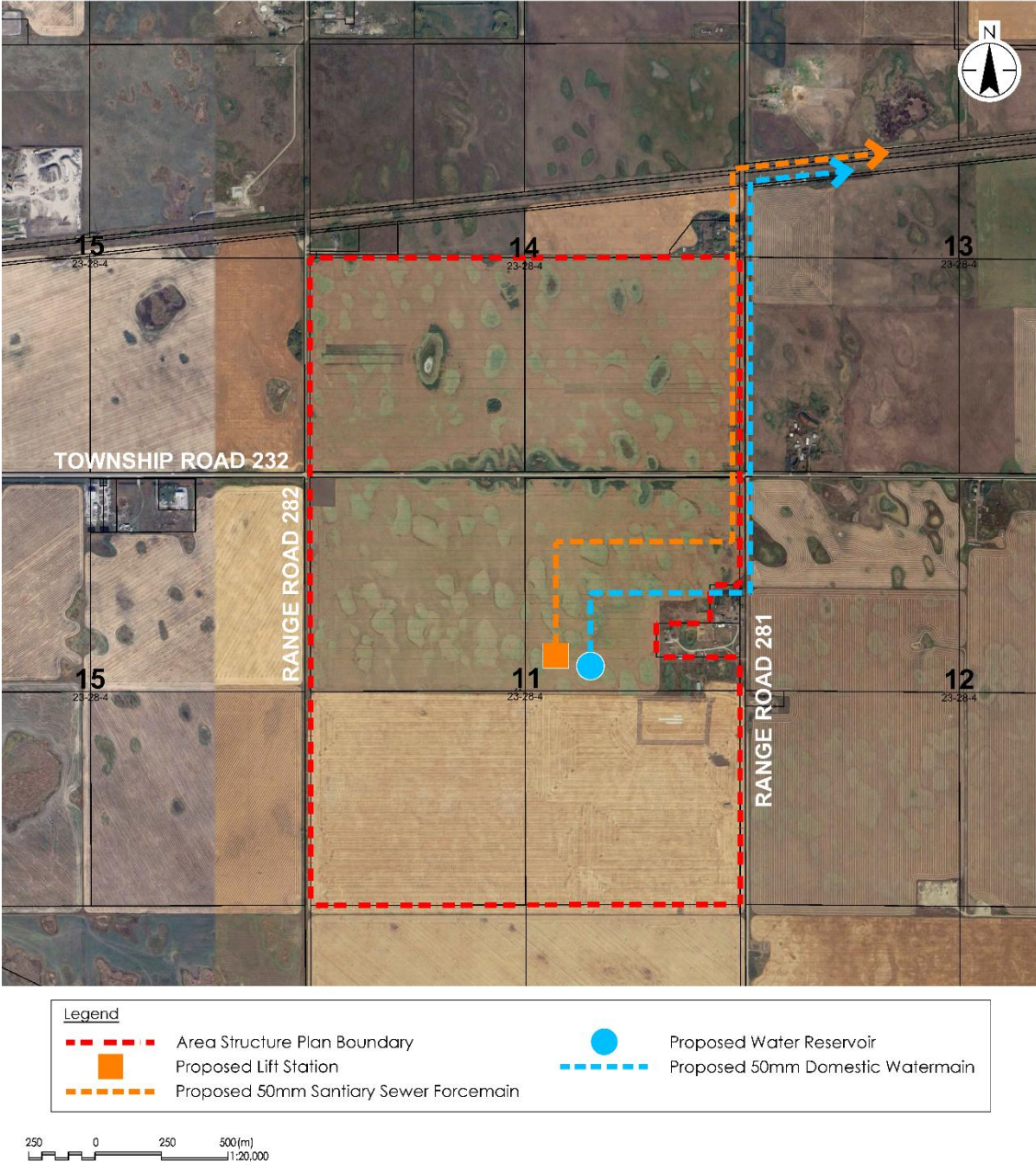


Figure 17: Servicing Strategy

## 16. SOLID WASTE AND RECYCLING

The Developer/end users are responsible for solid waste management at various stages of development, with the Developer responsible for waste management during construction, and the end users responsible for providing their own solid waste services to support their operations. The Langdon Transfer Site is identified as the appropriate waste collection station to service the Plan Area.

### Objectives

- Set clear expectations for the developer and end users as to solid waste management within the Plan Area.
- Encourage waste minimization and waste diversion practices.
- Provide for the necessary infrastructure to support solid waste and recycling management.
- Promote best practices for managing solid waste materials generated during construction activities.

### Policies

- 16.1 Solid waste management shall be guided by the County's Solid Waste Servicing Strategy.
- 16.2 The Developer shall be responsible for the management and disposal of solid waste generated through all stages of construction in accordance with County standards. Industrial and commercial business owners shall be responsible for providing their own solid waste services.
- 16.3 The Developer should encourage waste minimization and waste diversion practices in the Plan Area with a diversion target of 50%.
- 16.4 The Developer shall prepare a Waste Management Plan at the development permit stage, to the satisfaction of the County.
- 16.5 Development shall be responsible for providing their own solid waste services.
- 16.6 Storage of garbage and waste material shall be in weatherproof and animal proof containers located within buildings or adjacent to the side or rear of buildings, and those areas shall be screened from view by all adjacent properties and public thoroughfares.

## 17. OIL AND GAS

The Plan Area is associated with a range of abandoned and active oil and gas infrastructure. The ASP requires this oil and gas infrastructure is adequately addressed as development progresses, in accordance with federal, provincial, and municipal requirements.

### Objectives

- Ensure oil and gas infrastructure within the Plan Area is addressed in adherence to federal, provincial, and municipal requirements for development near oil and gas infrastructure.
- Determine specific development conditions and requirements for oil and gas items before development permit approval.
- Enhance safety by marking abandoned wells during construction and implementing protective measures like fencing and signage.
- Prevent construction within set back areas associated with active, suspended, reclaimed, or abandoned wells through development restrictions.
- Ensure sufficient access is registered to abandoned oil and pipeline infrastructure to meet regulatory and operator standards.
- Enforce minimum building set backs from abandoned wells per regulatory and operator requirements to ensure safety.

### Policies

- 17.1 Development in proximity to pipeline and well infrastructure shall adhere to all Federal, Provincial, and Municipal regulatory requirements, including but not limited to:
- a) Province of Alberta's Pipeline Act
  - b) Province of Alberta's Pipeline Rules
  - c) Environmental Protection and Enhancement Act (EPEA)
  - d) Conservation and Reclamation Regulation (CRR)
  - e) Alberta Energy Regulator (AER):
    - i. Specified Enactment Direction (SED) 002: Application Submission Requirements and Guidance for Reclamation Certificates for Well Sites and Associated Facilities
    - ii. Directive 020: Well Abandonment
    - iii. Directive 77: Pipelines – Requirements and Reference Tools
    - iv. Directive 79: Surface Development in Proximity to Abandoned Wells

- 17.2 Prior to the development permit stage, specific development requirements for each oil and gas infrastructure item located within the Plan Area shall be determined. This will be in accordance with the Municipal Government Act's Subdivision and Development Regulations (Alberta Regulation 160/2012) which requires developers to identify abandoned oil and gas wells and, where present, to comply with setback requirements as identified in the Energy Resources Conservation Board (ERCB) Directive 079: Surface Development in Proximity to Abandoned Wells.
- 17.3 During execution of construction activities approved under the development permit, all abandoned well sites shall be marked with temporary signage identifying the location and depth, if known, of the abandoned well and providing contact information for the Alberta Energy Regulator. Such signage, as well as adequate fencing and any other necessary protective measures, shall be in place during the development process to prevent damage to the abandoned well bore.
- 17.4 At the time of the development permit stage, a restrictive covenant shall be registered that prevents the construction of any building within the set-back area associated with an active, suspended, reclaimed, or abandoned well.
- 17.5 At the time of the development permit stage, the developer shall ensure adequate access is provided to abandoned oil and pipeline infrastructure, in accordance with AER and/or related operator requirements.
- 17.6 All buildings located in proximity to an abandoned well site shall comply with Alberta's Matters Related to Subdivision and Development Regulation and Alberta Energy Regulator set back requirements or provide a minimum building set back as required by the operator(s), whichever is greater.



## **PART III: IMPLEMENTATION**

## 18. DEVELOPMENT PHASING

Development is proposed to be constructed in phases in a logical and practical manner and informed by the availability of power and services. The general sequencing of development is illustrated in **Figure 15: Development Sequencing** and is anticipated to begin at the southeast corner of the Plan Area.

The progression of each phase will be influenced by various key factors. These include market conditions, servicing capacity, as well as the availability of required infrastructure. The development is designed to be scalable, allowing for flexibility in advancing phases individually or by combining multiple phases into a single progression.

### Development Phasing Policies

- 18.1 The development of the Beacon AI Hub should occur in phases as shown in **Figure 15: Development Sequencing**.
- 18.2 Notwithstanding Policy 19.1, the development of the Beacon AI Hub may occur incrementally or by combining multiple phases into a single development stage, based on factors such as landowner needs, market conditions, and infrastructure readiness.
- 18.3 Specific development phasing of development with the Plan Area shall be determined with the first development permit submission.
- 18.4 Initial development is anticipated to be at the southeast corner of the Plan Area. Should the initial phase occur elsewhere, then rationale should be provided at time of development permit.
- 18.5 The Developer shall dedicate an access easement agreement, registered in the name of Rocky View County, to facilitate the provision of essential infrastructure, including potable water distribution systems, wastewater treatment facilities, wastewater lift stations, storage facilities, stormwater management systems, drainage channels, retention and detention ponds, and other necessary stormwater management facilities.
- 18.6 For subsequent phases of the development, the developer shall be required to enter into a Development Agreement with Rocky View County. This agreement shall cover the provision and maintenance of potable water distribution and storage facilities, stormwater management systems, wastewater treatment facilities, wastewater lift stations, and treated wastewater storage facilities.



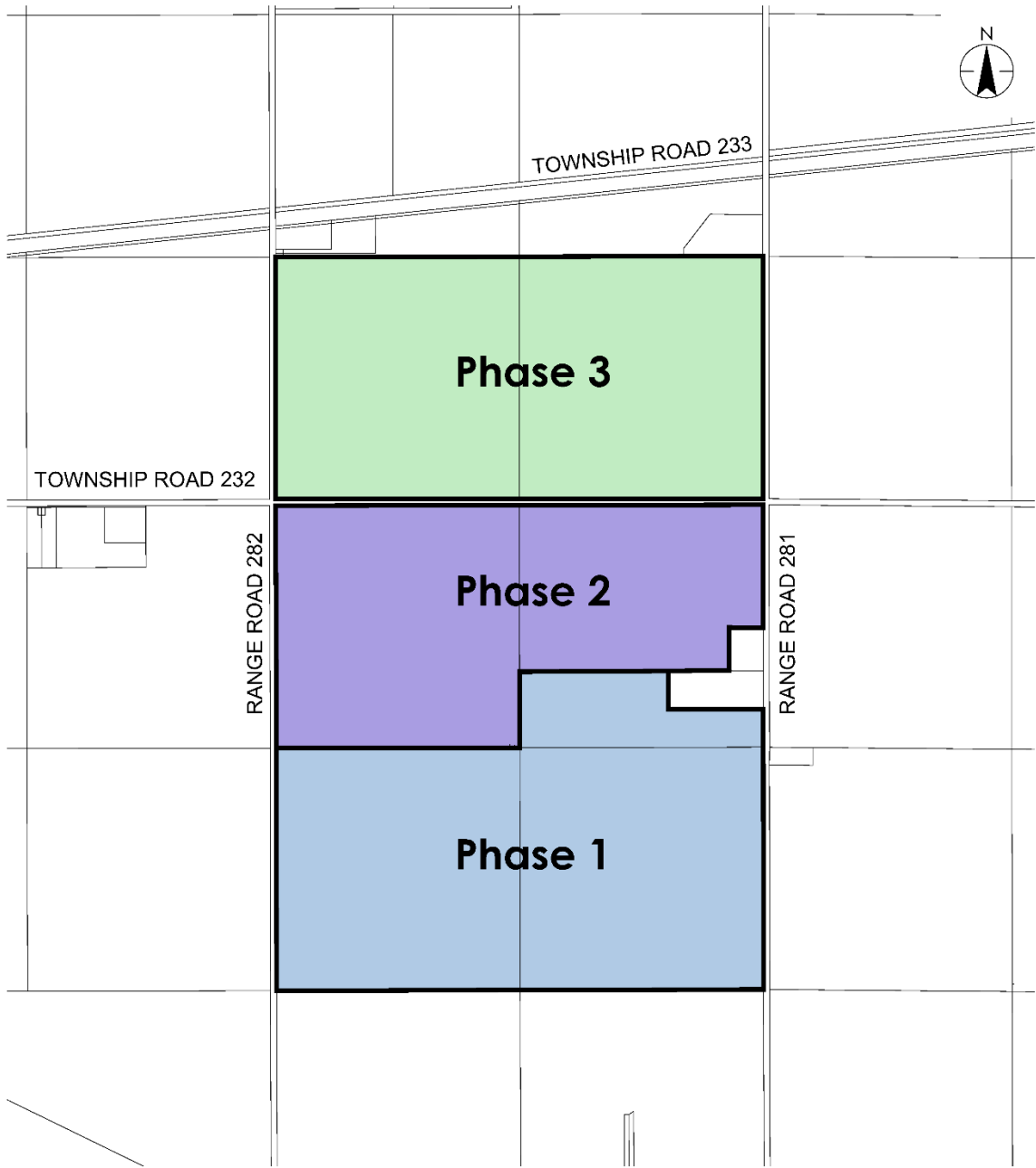


Figure 18: Development Sequencing

## 19. LAND USE REDESIGNATION

The implementation of a land use redesignation has been aligned with the ASP; however, as individual developments progress, further details will need to be refined. Utilizing the distinct approach of applying the S-DAT (Special, Data Centre District) district with customized overlays, additional site controls and uses will be introduced through amendments to the land use regulations.

Site controls may include:

- Building Height
- Building Set backs
- Site Coverage
- Parking Provision
- Landscaping Provisions
- Lighting and Signage provisions

### **Land Use Redesignation Policies**

- 19.1 The subject lands shall be designated as XXX in accordance with the Land Use Bylaw (C-8000-2020)

## 20. DEVELOPMENT PERMIT PROCESS

A development permit application is required to be submitted to the County for each phase of development to address specific matters such as:

- Transportation infrastructure improvements;
- Stormwater management infrastructure improvements;
- Environmental considerations, including wetlands and related dedication of Environmental Reserve;
- Site details including set backs, parking, and building design;
- Landscaping, screening, and fencing;
- Noise control;
- Lighting considerations;
- Site grading and servicing and
- Oil and Gas infrastructure set backs and mitigations.

### **Development Permit Policies**

- 20.1 Implementation of development within the Plan Area is expected to occur in multiple phases, in accordance with the County's development permit process.
- 20.2 The developer acknowledges that new information and/or updates to various plans and technical reporting prepared in support of this ASP shall be provided at the development permit stage.
- 20.3 Erosion and sediment control measures shall be identified and addressed at the development permit stage.
- 20.4 A local plan application is not required prior to the development permit stage, as land use is being implemented with this ASP and no subdivision is required for the Plan Area.

## 21. DEVELOPMENT GUIDELINES

### Site and Building Design

As development proceeds within the Plan Area, the developer shall provide detailed site and building design at the development permit stage in accordance with the policies below.

#### Policies

#### **GENERAL**

- 21.1 Detailed site and building design shall be prepared at the development permit stage.

#### **SITE AND BUILDING DESIGN**

- 21.2 Detailed site and building design shall be submitted and assessed at the development permit stage.
- 21.3 Access requirements and locations for the development shall be incorporated into detailed site planning at the development permit stage, in accordance with the corresponding Transportation Impact Assessment (TIA) update.
- 21.4 All aspects of site and building design shall comply with the applicable Land Use District.
- 21.5 Data Centre Campus buildings shall be sited to avoid wetlands if possible. If avoidance of wetlands is not possible, a Water Act application and a Wetland Assessment Impact Report (WAIR) shall be submitted, and wetland compensation payments shall be made to AEP at the development permit stage.
- 21.6 All buildings shall provide fire suppression systems that are in compliance with the County's Fire Suppression Bylaw and the Alberta Building Code.
- 21.7 Crime Prevention Through Environmental Design (CPTED) features should be considered and incorporated into the design and construction of all new development, wherever possible.
- 21.8 Where buildings exceed 20m in height and face residential areas or roadways, building and site design shall incorporate tools to promote transition in scale between buildings and protecting access to sunlight and sky views. This could include but is not limited to angular planes, step-backs, or landscape features.
- 21.9 Facades of buildings facing existing residential uses, as identified in the Plan's Development Concept, shall include at least three of the following architectural elements to the satisfaction of the Development Authority:
- a) Colour change;
  - b) Texture change;
  - a) Material modular change; and/or

- b) Expression of an architectural bay through a change in plane such as an offset, reveal, or projecting rib.
- 21.10 Rooftop apparatus should be located and concealed to reduce or eliminate public view from adjacent roads or homes.
- 21.11 To the satisfaction of the Development Authority, all buildings and structures shall:
- a) Treat the walls of the primary entrance and walls visible from public roadways with variations in façade, colour, articulations, and architectural elements;
  - b) Be constructed of High-Quality Building Materials;
  - c) Consider rooftop solar system for the purposes of microgeneration; and
  - d) Be oriented to ensure the rear of buildings is not facing a public roadway.
- 21.12 At the development permit stage, development should consider the inclusion of green building techniques and energy efficient designs. This could include, but is not limited to, the use of recyclable materials for buildings and/or rail infrastructure and the implementation of automated monitoring systems to reduce emissions and improve efficiency.

#### ***BUFFERING AND SCREENING***

- 21.13 All areas with equipment within the Plan Area must be fully enclosed to provide screening and reduce noise levels, if mechanically feasible.
- 21.14 If full enclosure is not mechanically feasible, all areas with equipment within the Plan Area relating to cooling, ventilation or power generation must be screened by a wall or similar barrier.
- 21.15 Design details of buffer and screening materials must comply with policies outlined in Land Use District.
- 21.16 Details of buffer and screening shall be submitted at the development permit stage.
- 21.17 Developers should implement landscaping or visual barriers, to shield nearby properties from glare from the Solar / Agrivoltaics Facility. Detail design of landscaping should be submitted along with the development permit application.
- 21.18 Minimum set back distances between Solar / Agrivoltaics Facility and surroundings, such as residential areas, and roads, to reduce glare impacts should be implemented in accordance with the Land Use Bylaw.

## **STORAGE**

- 21.19 All outdoor storage areas, truck bays, loading areas, waste and recycling receptacles, and other areas that have adverse visual impacts to the public shall be screened to the satisfaction of the Development Authority. Screening can include, but is not limited to: landscaping, fencing, louvered panels, mesh screens, green walls or other decorative screens, or a combination thereof.

## **PARKING**

- 21.20 Prior to the development permit approval, the developer shall prepare a parking plan for review and approval of the Development Authority. The plan shall:
- a) ensure storage areas, truck bays, and loading areas are not located in front yards of properties abutting public roads;
  - b) include landscaping buffers within any parking area between a road and the primary entrance;
  - c) clearly distinguish visitor parking from staff parking areas;
  - d) provide pedestrian connections to nearby transit stops and planned open spaces pathways, and trails; and
  - e) incorporate electric vehicle ready charging stations for all vehicles.

## **SUPPORTING CELLS**

- 21.21 Development within the Plan Area cells located on the ground floor facing a private street or internal publicly accessible private street should provide:
- a) windows with views to the street and access to natural light;
  - b) amenity space that could be used for daily activity; and
  - c) lobbies that have well-marked entrances and allow for clear sight lines to and from the building.

## **Lighting, Signage, & Fencing**

The Beacon AI Hub intends to integrate with existing and future adjacent developments. While ensuring safety in operations will be a priority, particularly for the Data Centre Campus, the development is expected to establish and maintain lighting, signage, and fencing standards that align with the County's Land Use Bylaw and the County's Commercial, Office and Industrial Design Guidelines.

## **Policies**

- 21.22 Prior to the development permit approval, the developer shall prepare a lighting plan that implements the following, to the satisfaction of the Development Authority, for all private lighting:

- a) ensures safe and well-lit pedestrian areas, including parking areas and building entrances;
  - b) should be concentrated on the buildings and parking lots;
  - c) should be located within key landscaped areas or along trails;
  - d) must not interfere with adjacent highways and roadways;
  - e) should minimize light trespass onto wetlands;
  - f) should be designed to direct downward, conserve energy, reduce glare, and minimize light trespass onto surrounding properties;
  - g) limits off-site light pollution;
  - h) when not attached to a building, lighting should be solar powered where possible.
- 21.23 In addition to the requirements listed above in Policy 21.22 developer should apply industry best practice dark sky principles to mitigate light pollution, including the following considerations:
- a) A luminaire backlight, uplight and glare value of 0 should be used for public and rail infrastructure;
  - b) Post-top lighting, column lighting, in-pavement lighting and specialty lighting should not be used due to glare, backlight, and other light pollution concerns; and
  - c) Development should implement time of day restrictions and other best dark sky practices to ensure light spill into adjacent properties or the surrounding environment is minimized.
- 21.24 Prior to the development permit approval, the developer(s) shall prepare a signage plan that implements the following to the satisfaction of the Development Authority:
- a) Includes appropriate locations set back 3 metres from the road right-of-way;
  - b) Includes types of signs or features(s); and
  - c) Complies with the County's Land Use Bylaw. If there is a conflict between a requirement in the Land Use Bylaw and the guidelines in this document, the Land Use Bylaw will take precedence.
- 21.25 Fencing shall comply with the County's Land Use Bylaw, with maintenance being the responsibility of the developer.



## **PART IV: PUBLIC ENGAGEMENT**



## 22. STAKEHOLDER ENGAGEMENT

### **Purpose of Consultation**

Rocky View County and Beacon Data Centers are committed to ongoing consultation with adjacent landowners and key community stakeholders to ensure transparent communication about the proposed development.

As part of the Beacon AI Hub ASP planning process, a Public Engagement Strategy was implemented to align with the County's Public Participation Policy (Council Policy C-191) and Circulation and Notification Standards (Council Policy C-327). These policies aim to "create opportunities for meaningful public participation in decisions that directly impact the public at Rocky View County." This process included outreach to intergovernmental organizations, relevant interest groups, affected stakeholders, property owners, and the general public.

### **Public Engagement Process**

Rocky View County's dedication to maintaining an open, transparent, and inclusive approach involved the development of a comprehensive communications and engagement strategy. This strategy was designed to actively involve stakeholders in meaningful discussions throughout the preparation of the Plan. It offered opportunities for landowners, stakeholders, neighboring municipalities, and the public to share their input, helping to shape the final outcome of the Plan. A summary of this process is outlined below:

#### ***Phase 1 – Stakeholder Analysis and Engagement Planning***

This was the initial project initiation phase of engagement that extended from December 2024 to Winter 2025. During this phase, focus was on outlined specific strategies for engaging different stakeholder groups and managing their input.

#### ***Phase 2 – Creation of Draft Plan***

The second phase will focus on the creation of the Draft ASP, which serves as a foundational document outlining the long-term vision, land use, and development strategies for the Plan Area. This phase extended from Winter – Spring 2025, also involves the development of a Stakeholder Registry, a comprehensive list of key stakeholders, including government bodies, community groups, and other relevant parties.

As part of the engagement strategy, the ASP Draft will be circulated with the City of Calgary and a one-on-one meeting to discuss the Plan will be conducted during this phase. This meeting will discuss the project's implications on municipal, regional, and provincial policies.

#### ***Phase 3 – Open House***

This phase is a key phase of the engagement process which focused on community outreach and gathering further feedback from stakeholders through an Open House which was hosted on April 15<sup>th</sup>, 2025. As part of the engagement activities, a notification postcard was mailed out to local residents and stakeholders to inform them about the Open House and provide key details about the project's progress. The Open House was also advertised through the County's website. During the Open House, A survey was distributed during the Open House to collect structured feedback from attendees and those unable to attend in person. The survey was designed to capture community preferences, concerns, and suggestions regarding the draft plan and overall project direction. Following these activities, the team will compile an Engagement

Summary, which will outline the findings from the open house, survey responses, and other engagement efforts.

***Phase 4 – Plan Refinement, Completion and Public Hearing***

This phase will extend from late Spring to early Summer 2025 and will focus on refining the plan, completing the final documentation, and summarizing public review. Feedback gathered from the previous phase will be incorporated into the draft ASP. Once the plan is refined, the final plan will then be prepared for a Public Hearing.