



# **AGENDA**

## **REGULAR MEETING OF PICTURE BUTTE TOWN COUNCIL COUNCIL CHAMBERS**

**Monday, 12<sup>th</sup> February, 2024 at 6:30 pm**

### **1.0 CALL TO ORDER**

### **2.0 ADOPTION OF THE AGENDA**

### **3.0 ADOPTION OF THE MINUTES**

3.1 Regular Council Meeting Minutes – 22<sup>nd</sup> January, 2024

### **4.0 PUBLIC HEARING**

4.1 Bylaw No. 941-24 Road Closure bylaw

### **5.0 DELEGATION**

5.1 Dr. Leishman (Closed Session, coming at 7:00 p.m.)

### **6.0 REQUESTS FOR DECISION**

6.1 Bylaw No. 941-24 Road Closure Bylaw – 1<sup>st</sup> Reading

6.2 Bylaw No. 942-24 Butte Landing Area Structure Plan – 1<sup>st</sup> Reading

6.3 Bylaw No. 944-24 Municipal Borrowing Bylaw – Line of Credit

6.4 Bylaw No. 945-24 Health Professional Recruitment and Retention  
Committee bylaw

6.5 Council appointments to the Health Professional Recruitment and Retention  
Committee

6.6 Snow Removal Policy

6.7 4<sup>th</sup> Street sign installations

### **7.0 MAYOR'S REPORT**

### **8.0 COUNCIL'S REPORT**

## **9.0 ADMINISTRATION'S REPORT**

- 9.1 CAO Report
  - 9.1.1 Director of Operations Report

## **10.0 CORRESPONDENCE**

- 10.1 Lethbridge County – Health Professional Recruitment and Retention Committee appointment
- 10.2 Alberta Municipalities – Resolution submissions
- 10.3 Southern Alberta Economic Summit
- 10.4 Municipal Affairs – Hon. Ric McIver meetings
- 10.5 National Police Federation lobbying request
- 10.6

## **11.0 INFORMATIONAL ITEMS**

- 11.1 FCSS Healthier Together Resource Fair Poster
- 11.2 Environment and Protected Areas – Drought preparation
- 11.3 Health Professional Recruitment and Retention Committee – Meeting Minutes – January, 2024

## **12.0 CLOSED SESSION**

- 12.1 FOIP Act Division 2 Section 20 – Wastewater Compliance Notice

## **13.0 ADJOURNMENT**

**MINUTES**  
OF THE  
**PICTURE BUTTE TOWN COUNCIL MEETING**  
HELD IN  
**COUNCIL CHAMBERS**  
**Monday, January 22<sup>nd</sup>, 2024 AT 6:30 PM**

**PRESENT:** Mayor C. Moore Deputy Mayor C. Papworth Councillor T. Feist  
Councillor H. de Kok Councillor C. Neels

**ALSO PRESENT:** Chief Administrative Officer – K. Davis  
Director of Corporate Services – M. Overbeeke  
Director of Emergency Services – F. West  
Administrative Assistant – C. Johnson

**1.0 CALL TO ORDER**

Mayor Moore called the Regular Council Meeting to order at 6:30 p.m.

**2.0 ADOPTION OF THE AGENDA**

010 2401 22 MOVED by Councillor de Kok that the agenda be approved as presented.  
CARRIED

**3.0 ADOPTION OF THE MINUTES**

3.1 Regular Council Meeting – January 8<sup>th</sup>, 2024

011 2401 22 MOVED by Deputy Mayor Papworth that the Regular Council Meeting  
minutes of January 8<sup>th</sup>, 2024 be approved as presented.  
CARRIED

**4.0 PUBLIC HEARING – None for this meeting**

**5.0 DELEGATION – None for this meeting**

**6.0 REQUESTS FOR DECISION**

6.1 Mayors and Reeves of Southwest Alberta – Drafted terms of reference

012 2401 22 MOVED by Councillor de Kok to agree to the Mayors and Reeves of  
Southwest Alberta Terms of Reference and to the increase of the annual  
membership fee to \$200.00.  
CARRIED

6.2 Federation of Canadian Municipalities membership

013 2401 22 MOVED by Councillor de Kok to include the Federation of Canadian  
Municipalities membership fee of \$674.00 into the 2024 operating budget.  
CARRIED

6.3 Town Office Signage

014 2401 22 MOVED by Deputy Mayor Papworth to direct Administration to proceed with  
purchasing signage for the Town Office as recommended and according to  
the quote from Zircon Graphics.  
CARRIED

6.4 Remembrance Day Wreath

015 2401 22 MOVED by Councillor Neels to donate an excess Remembrance Day  
wreath to the Picture Butte Elks lodge.  
CARRIED

## 7.0 MAYOR'S REPORT

### 7.1 Mayor's Report

January 15 Attended a Committee of the Whole meeting

016 2401 22 MOVED by Mayor Moore that the Mayor's Report be accepted as presented.  
CARRIED

## 8.0 COUNCIL'S REPORT

### 8.1 Council's Report

Councillor Feist advised Council of her recent activities:

January 15 Attended a Committee of the Whole meeting

Councillor de Kok advised Council of his recent activities:

January 15 Attended a Committee of the Whole meeting

Deputy Mayor Papworth advised Council of her recent activities:

January 10 Attended Green Acres Board Christmas Party

January 11 Attended a Chamber of Commerce meeting

January 15 Attended a Committee of the Whole meeting

January 17 Attended a Green Acres Orientation

Councillor Neels advised Council of her recent activities:

January 15 Attended a Committee of the Whole meeting

017 2401 22 MOVED by Councillor de Kok that the Council Reports be accepted as presented.  
CARRIED

## 9.0 ADMINISTRATION'S REPORT

### 9.1 CAO Report

018 2401 22 MOVED by Councillor Feist to accept the CAO Report as presented.  
CARRIED

#### 9.1.1 Director of Emergency Services Report

019 2401 22 MOVED by Councillor Neels to accept the Director of Emergency Services Report as presented.  
CARRIED

## 10.0 CORRESPONDENCE

### 10.1 Government of Alberta – Police governance consultations

020 2401 22 MOVED by Deputy Mayor Papworth to assign two councillors to attend the Provincial Police Services Agreement virtual information session for municipalities scheduled for February 2<sup>nd</sup>, 2024.  
CARRIED

### 10.2 Picture Butte & District Chamber of Commerce – Countdown to Christmas financial report

021 2401 22 MOVED by Councillor de Kok to receive and file 10.2 Picture Butte & District Chamber of Commerce – Countdown to Christmas financial report.  
CARRIED

### 10.3 Alberta Health Services – Lab and Diagnostic services at Piyami Health Centre

022 2401 22 MOVED by Councillor de Kok to receive and file 10.3 Alberta Health Services – Lab and Diagnostic services at Piyami Health Centre.  
CARRIED

10.4 The Council Animal Advocacy – Animal Control bylaw

023 2401 22            MOVED by Councillor Neels to receive and file 10.4 The Council Animal Advocacy – Animal Control bylaw.  
CARRIED

**11.0 INFORMATIONAL ITEMS**

11.1 Fortis Alberta 2022 Franchise Presentation

024 2401 22            MOVED by Councillor de Kok to receive and file Informational Items 11.1 Fortis Alberta 2022 Franchise Presentation.  
CARRIED

**12.0 CLOSED SESSION**

12.1 FOIP Act Division 2 Section 24 – Senaltek’s drafted North County Recreation Complex – Building Condition Assessment Report

025 2401 22            MOVED by Deputy Mayor Papworth to close the meeting to the public in accordance with Division 2 Section 24 of the Freedom of Information and Protection of Privacy Act to discuss Senaltek’s drafted North County Recreation Complex – Building Condition Assessment Report at 7:05 p.m.  
CARRIED

026 2401 22            MOVED by Councillor Feist to open the meeting to the public at 7:48 p.m.  
CARRIED

**13.0 ADJOURNMENT**

The next Regular Council Meeting is scheduled for February 12<sup>th</sup>, 2024 beginning at 6:30 p.m.

027 2401 22            MOVED by Councillor Neels that the Regular Council Meeting adjourn at 7:48 p.m.  
CARRIED

\_\_\_\_\_  
Cathy Moore  
Mayor

\_\_\_\_\_  
Keith Davis  
Chief Administrative Officer



## Request for Decision

**Our Vision:** *Picture Butte is the Community of Choice to work, live and play in Lethbridge County*

**Our Mission:** *Picture Butte is a thriving community dedicated to serving our people through fiscal responsibility and transparency.*

Date: 8 February, 2024

To: Mayor, Council

From: CAO

### **Re: Bylaw No. 941-23 Road Closure Bylaw – Crescent Ave**

#### **Background:**

With the development of Phase 2 of Sunset Park, Alberta Transportation (AT) would not allow a new road (9<sup>th</sup> Street N) and Crescent Avenue to exit onto Highway 25 in front of the Water Distribution Centre. The Town was required to come up with an alternate road alignment that would facilitate 9<sup>th</sup> Street North. The alternate road alignment that was agreed upon by Council and the adjacent land owners at the time and is what has been constructed.

Due to the new road alignment of Crescent Avenue we have to register a new alignment of Crescent Avenue and also close a part of Crescent Avenue. In order to do this the Town has to pass a road closure bylaw, which is attached.

#### **Process:**

A road closure bylaw is quite a bit different than other bylaws Council would pass. The following procedure is what we need to do in order to officially close apart of Crescent Avenue:

1. Advertise for two weeks prior to conducting 1<sup>st</sup> reading - Completed
2. Have a public hearing prior to 1<sup>st</sup> reading – Conducted tonight
3. Conduct 1<sup>st</sup> reading of the bylaw
4. The bylaw and associated documentation then gets sent to Alberta Transportation (AT)
5. Once AT have approved the application for the road closure Council can conduct 2<sup>nd</sup> and 3<sup>rd</sup> reading.

#### **Recommendation:**

1. To conduct 1<sup>st</sup> reading of Bylaw No. 941-23

**Submitted by:** Keith Davis, CAO

**TOWN OF PICTURE BUTTE  
BYLAW NO. 941-23**

**A BYLAW OF THE TOWN OF PICTURE BUTTE, IN THE PROVINCE OF ALBERTA, FOR THE PURPOSE OF CLOSING PUBLIC TRAVEL AND CREATING TITLE TO PORTIONS OF A PUBLIC HIGHWAY IN ACCORDANCE WITH SECTION 22 OF THE *MUNICIPAL GOVERNMENT ACT*, CHAPTER M26.1, REVISED STATUTES OF ALBERTA 2000, AS AMENDED.**

**WHEREAS** the lands hereafter described are no longer required for public travel, and

**WHEREAS** application has been made to Council to have the highway closed, and

**WHEREAS** the Council of the Town of Picture Butte deems it expedient to provide for a bylaw for the purpose of closing to public travel certain roads, or portions thereof, situated in the said municipality, and therefore disposing of same, and

**WHEREAS** notice of the intention of Council to pass a bylaw has been given in accordance with Section 606 of the Municipal Government Act, and

**WHEREAS** Council was not petitioned for an opportunity to be heard by any person claiming to be prejudicially affected by the bylaw

**NOW THEREFORE BE IT RESOLVED** that the Council of Picture Butte in the Province of Alberta does hereby close to public travel for the purpose of creating title to the following:

FIRSTLY

PLAN \_\_\_\_\_

AREA 'A'

CONTAINING 0.002 HECTARES (0.01 ACRES) MORE OR LESS  
EXCEPTING THEREOUT ALL MINES AND MINERALS

SECONDLY

PLAN \_\_\_\_\_

AREA 'B'

CONTAINING 0.025 HECTARES (0.06 ACRES) MORE OR LESS  
EXCEPTING THEREOUT ALL MINES AND MINERALS,  
subject to rights of access granted by other legislation:

Received first reading this \_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Cathy Moore  
Chief Elected Official  
<seal>

\_\_\_\_\_  
Keith Davis  
Chief Administrative Official

APPROVED this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_,  
Minister of Transportation  
<seal>

Approval valid for \_\_\_\_\_ months

Received second reading this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Received third reading this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_,  
Cathy Moore  
Chief Elected Official  
<seal>

\_\_\_\_\_,  
Keith Davis  
Chief Administrative Official



# PUBLIC HEARING NOTICE TOWN OF PICTURE BUTTE

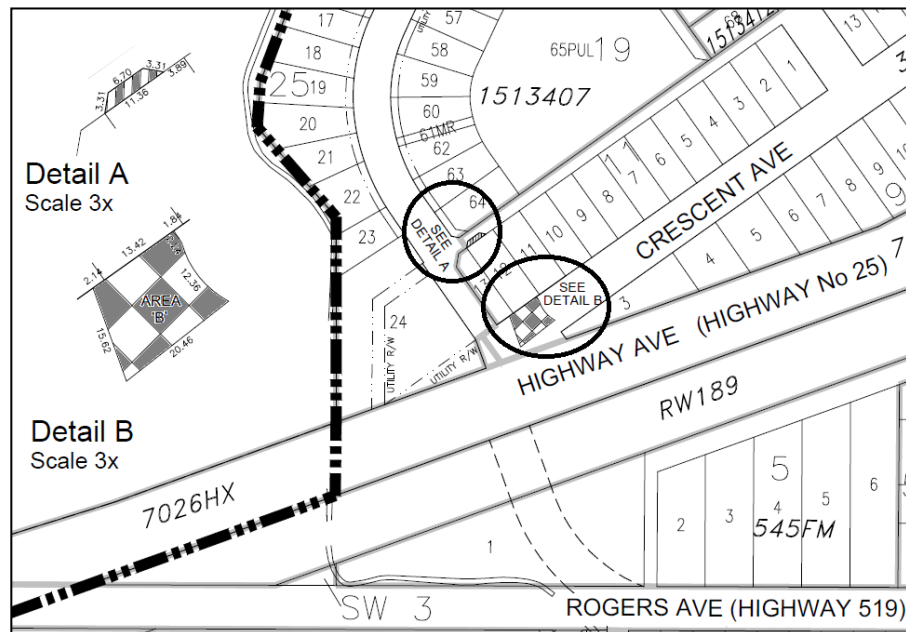
## PROPOSED ROAD CLOSURE BYLAW NO. 941-23

**PURSUANT** to Section 22 of the Municipal Government Act, Revised Statutes of Alberta 2000, Chapter M-26, as amended, notice is hereby given that the Council of the Town of Picture Butte will consider a bylaw to close and create a title in the name of the municipality for subsequent disposal of the land through consolidation with adjacent land and realign the roadway as illustrated in Schedule A diagram and described as:

FIRSTLY  
PLAN \_\_\_\_\_  
AREA 'A'  
CONTAINING 0.002 HECTARES (0.01 ACRES) MORE OR LESS  
EXCEPTING THEREOUT ALL MINES AND MINERALS  
SECONDLY  
PLAN \_\_\_\_\_  
AREA 'B'  
CONTAINING 0.025 HECTARES (0.06 ACRES) MORE OR LESS  
EXCEPTING THEREOUT ALL MINES AND MINERALS

**THE PURPOSE** of the bylaw is to close the road and lane not needed for public travel in their current configuration and a new road plan being registered to accommodate such use.

**THEREFORE, TAKE NOTICE THAT** a public hearing to consider the proposed Bylaw No. 941-23 will be held in the **Town of Picture Butte Council Chambers at 6:30 p.m. on December 18, 2023.**



**AND FURTHER TAKE NOTICE THAT** anyone wishing to make a presentation regarding the proposed bylaw should, in writing, notify the Town of Picture Butte no later than **3:00 p.m., on December 15, 2023.** Both written and/or verbal presentations may be made to Council at the public hearing.

**AND FURTHER TAKE NOTICE THAT** a copy of the proposed Bylaw may be inspected at the Town of Picture Butte office located at 120 – 4<sup>th</sup> St. N. Picture Butte, AB during normal business hours.

DATED at the Town of Picture Butte in the province of Alberta this 29<sup>th</sup> day of November 2023.

Keith Davis  
Chief Administrative Officer



## Request for Decision

**Our Vision:** *Picture Butte is the Community of Choice to work, live and play in Lethbridge County*

**Our Mission:** *Picture Butte is a thriving community dedicated to serving our people through fiscal responsibility and transparency.*

Date: 8<sup>th</sup> February, 2024

To: Mayor, Council

From: CAO

### **Re: Bylaw No. 942-24 Butte Landing Area Structure Plan – 1<sup>st</sup> Reading**

#### **Background:**

The attached bylaw is for the adoption of an Area Structure Plan (ASP) for lands located at 3A Street South or Highway 843 and as described in the ASP. These lands fall within Planning Area 3A within the intermunicipal Development (IDP) that the Town has agreed to with Lethbridge County. A condition of the IDP is that future development of lands within this area require an ASP to be created and approved by the Town and County.

The Town, with assistance from ORRSC planners Steve Harty and Kattie Schlamp, have been working with the owners and consultants in the creation of this ASP. The ASP must be adopted by bylaw and we are presenting Bylaw No. 942-24 Butte Landing Area Structure Plan for 1<sup>st</sup> Reading.

Notifications have been sent to the associated agencies and to Lethbridge County for their feedback on the ASP. We have scheduled a Public Hearing for this ASP to occur on the 26<sup>th</sup> of February, 2024. Agencies and Lethbridge County will have an opportunity to raise any concerns they may have in regards to the ASP and these will be considered by Council on the 26<sup>th</sup> of February.

If Council is satisfied that there are no major issues that need addressing then they may conduct 2<sup>nd</sup> and 3<sup>rd</sup> reading of the bylaw and accept the ASP on the 26<sup>th</sup> of February.

Kattie Schlamp our planner from ORRSC will be in attendance at the Council meeting and can answer any questions Council has and may elaborate on the ASP.

#### **Recommendation:**

1. To conduct 1<sup>st</sup> reading of Bylaw No. 942-24 Butte Landing Area Structure Plan

#### **Attachments:**

1. Bylaw No. 942-24 Butte Landing Area Structure Plan

**Submitted by:** Keith Davis, CAO

**TOWN OF PICTURE BUTTE  
IN THE PROVINCE OF ALBERTA  
BYLAW NO. 942-24**

**A BYLAW OF THE TOWN OF PICTURE BUTTE IN THE PROVINCE OF ALBERTA TO ADOPT BYLAW 942-24 THE BUTTE LANDING AREA STRUCTURE PLAN.**

**WHEREAS** in accordance with Section 633 of the Municipal Government Act, RSA-2000, Chapter M-26, and all amendments thereto, the Council of the Town of Picture Butte deems it advisable to adopt the Butte Landing Area Structure Plan Bylaw No. 942-24 as provided in Schedule “A”;

**AND WHEREAS** the purpose of proposed Bylaw No. 942-24 is to adopt an Area Structure Plan that provides a framework for dealing with future subdivision and development of lands within the plan area with a diversity of multi-unit housing options;

**AND WHEREAS** the municipality wishes to provide for orderly growth and development to occur;

**AND WHEREAS** a Public Hearing, as required by Section 692 of the Municipal Government Act, will be held prior to second reading of this Bylaw;

**NOW THEREFORE**, the Council of the Town of Picture Butte in the Province of Alberta hereby enacts as follows:

1. This bylaw may be cited as the Butte Landing Area Structure Plan.
2. That the Butte Landing Area Structure Plan attached hereto as Schedule “A” and forming Bylaw No. 942-24 be adopted.
3. This bylaw comes into effect upon third and final reading hereof.

READ a **first** time this 12<sup>th</sup> day of February 2024.

\_\_\_\_\_  
*Mayor – Cathy Moore*

\_\_\_\_\_  
*Chief Administrative Officer – Keith Davis*

READ a **second** time this \_\_\_ day of \_\_\_\_\_ 2024.

\_\_\_\_\_  
*Mayor – Cathy Moore*

\_\_\_\_\_  
*Chief Administrative Officer – Keith Davis*

READ a **third** time and finally passed this \_\_\_ day of \_\_\_\_\_ 2024.

\_\_\_\_\_  
*Mayor – Cathy Moore*

\_\_\_\_\_  
*Chief Administrative Officer – Keith Davis*

# butte landing

AREA STRUCTURE PLAN



**TITLE** Butte Landing Area Structure Plan

**BYLAW NO.** XXXX

**VERSION/DATE** DRAFT - JANUARY 2024

**AUTHOR** Stantec Consulting Ltd. on behalf of  
Oak Pointe Inc.

*With contributions from:*

Town of Picture Butte  
Oldman River Regional Services Commission  
(ORRSC) Planning Services  
Global Raymac Surveys Inc.

**ADDITIONAL COPIES** Picture Butte Town Office  
120 - 4th Street North, Box 670  
Picture Butte, Alberta T0K 1V0

Town of Picture Butte 2023



# Contents

## **EXECUTIVE SUMMARY .....IV**

### **1 INTRODUCTION ..... 1**

- 1.1 Plan Area..... 1
- 1.2 Purpose of the Plan ..... 1
- 1.3 Plan Interpretation.....3
- 1.4 Regulatory & Planning Framework..... 4

### **2 PLAN AREA & CONTEXT.....5**

- 2.1 Site Context.....5
- 2.2 Municipal Development Plan.....6
- 2.3 Plan Area Features.....7

### **3 PLAN CONSIDERATIONS .....10**

### **4 LAND USE CONCEPT.....11**

- 4.1 Vision .....11
- 4.2 Development Framework.....11
- 4.3 Land Use Areas.....11
- 4.4 Plan Statistics.....12
- 4.5 Intermunicipal Coordination.....14
- 4.6 Reserves.....14

### **5 TRANSPORTATION..... 15**

- 5.1 Transportation Network .....15

### **6 SERVICING..... 17**

- 6.1 General.....17
- 6.2 Shallow Utilities .....17
- 6.3 Water .....17
- 6.4 Sanitary .....17
- 6.5 Stormwater .....20

### **7 IMPLEMENTATION ..... 23**

- 7.1 Phasing.....23

## **APPENDICES ..... 25**

## **LIST OF MAPS**

- Map 1 Plan Area Location..... 2
- Map 2 Site Context ..... 5
- Map 3 MDP - Guide Map (Map 4) ..... 6
- Map 4 Natural Features ..... 8
- Map 5 Existing Land Use..... 9
- Map 6 Land Use Concept ..... 13
- Map 7 Transportation Network..... 16
- Map 8 Water Servicing..... 18
- Map 9 Sanitary Servicing..... 19
- Map 10 South Residential Drainage Strategy... 20
- Map 11 Stormwater Servicing - Option 1 ..... 21
- Map 12 Stormwater Servicing - Option 2 ..... 22
- Map 13 Phasing & Implementation Plan..... 24

# EXECUTIVE SUMMARY

The Butte Landing Area Structure Plan (ASP) provides a vision for future development of a ±4.13 ha (±10.22 ac) residential community located in southeast Picture Butte. This ASP offers a unique opportunity in a safe and engaging environment bound by Highway 843 to the west and the Piyami Coulee to the north and east.

The ASP and Land Use Redesignation for Butte Landing identifies the development parcels, defines the road network, and provides provisions for Municipal Reserve (public park space) within the public realm. The land uses and intensity of residential development described, enables a vibrant community that thrives and can evolve over time with the needs of its residents.

As the town continues to grow, this ASP works to build upon existing housing and amenities in the area while continuing to attract investments that enhance the quality of life for all residents. The ASP also facilitates the future delivery of needed housing that will support current and planned employment centres within the Town.

Informed by supporting engineering, transportation, and geotechnical studies, this ASP has analyzed and evaluated key attributes and constraints in the Plan Area. Through this analysis, the ASP outlines a community designed to provide all residents with orderly and efficient development while providing enhanced recreational opportunities and access to surrounding natural features.

Butte Landing looks to establish its own unique, and complete “sense of place” that will integrate seamlessly with the existing community.

The ASP for Butte Landing has been prepared to:

- Address the need for additional housing in the Town of Picture Butte;
- Meet the vision of the Municipal Development Plan (MDP);
- Enhance the natural features and location assets of the land; and
- Create a vibrant community that meets the needs of its residents in a unique and exciting manner.

The Butte Landing ASP also considers and implements strategic objectives and policies of higher-level plans including the South Saskatchewan Regional Plan (SSRP) and the Lethbridge County/Picture Butte Intermunicipal Development Plan (IDP).

# 1 INTRODUCTION

## 1.1 PLAN AREA

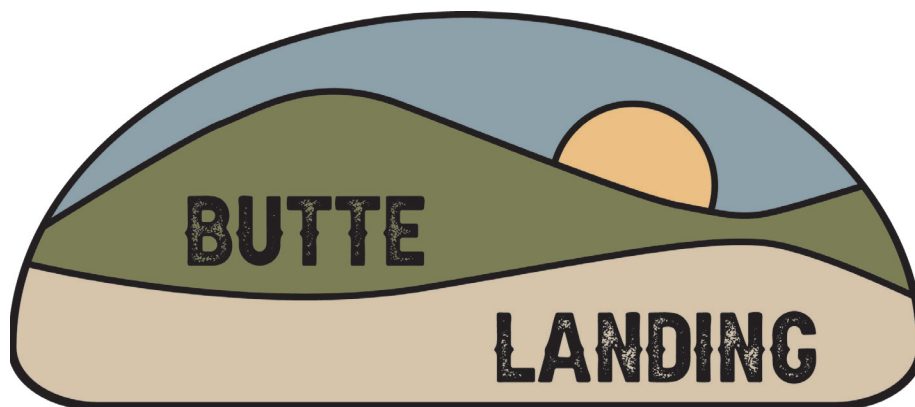
The Butte Landing Area Structure Plan (ASP) consists of ±4.13ha (±10.22ac) of land entirely located within one quarter section in southern Picture Butte. The majority of the Plan Area, ±3.72ha (±9.19ac) is entirely located within and along the western boundary of NW Section 34 (legally described as Plan 2311035, Block 3, Lot 2). The second lot, ±0.42 ha (±1.04 ac) is located on the west side of the Plan Area in the northwest corner of NW Section 34 (legally described as Plan 2311035, Block 3, Lot 1).

The lands are bounded by 3A Street S (Highway 843) to the west, residential lands to the north and east, and a cemetery forming part of the Netherlands Reformed Congregation Church to the south, as illustrated in **Map 1** (herein referred to as the 'Plan Area').

## 1.2 PURPOSE OF THE PLAN

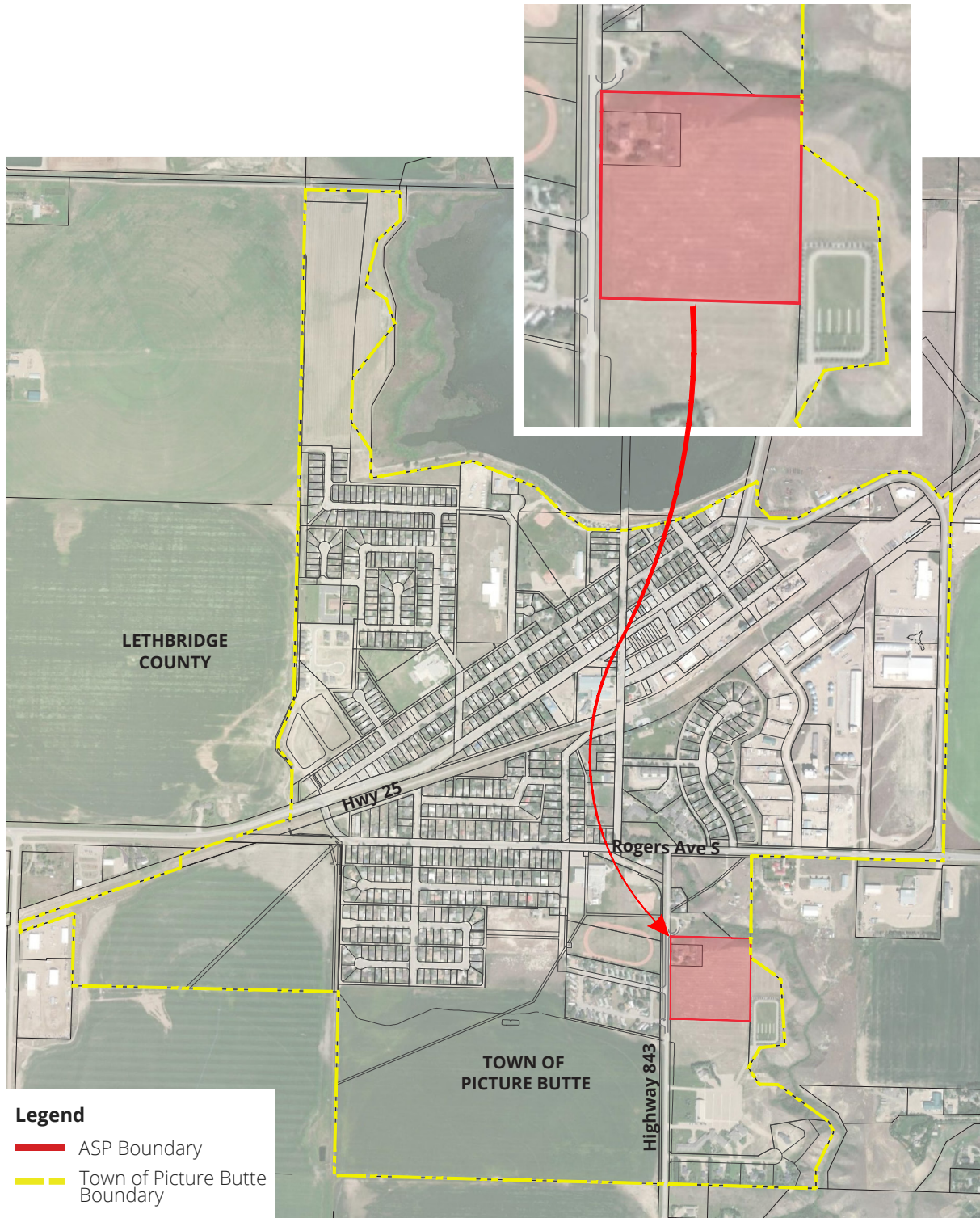
The decision to proceed with this ASP reflects the need to update the policies and vision for the land east of Highway 843, previously approved for subdivision and subsequent development in 1980. Since this subdivision approval, servicing deficiencies were found in the approved layout, and thus the direction of the parcel has shifted. Due to this, the parcels were then consolidated to return the lands to their original state, with the exception of the additional parcel created for the existing residence in the northwest corner.

Through this ASP a more comprehensive and consolidated approach has been taken to consider and facilitate a future residential development based on current market factors. Due to growing demand for residential accommodation, the increasing costs within the real estate market, and employers requiring more skilled labour in the region, this ASP has been established to provide the framework required to consider planning, transportation, key infrastructure and servicing required, such as sanitary, storm, and water, to support residential growth in this area. This Plan works towards helping ensure a sufficient supply of planned residential lands are available for the projected increase to the population, while supporting a healthy, competitive residential land market that attracts investment and employment opportunities to Picture Butte. To accomplish these goals, this Plan outlines the general land use and servicing framework, along with a set of policies to guide future development through an implementation plan until such time as the ASP lands are fully built out.





Map 1 Plan Area Location



## 1.3 PLAN INTERPRETATION

### 1.3.1 Policy Interpretation

The ASP uses language that provides either specific or general policy direction. Where specific direction is used, such as the built form policies and the general policies, the ASP must be exactly followed. Where general direction is given, such as the Land Use Concept future development direction, flexibility should be used in the interpretation of the ASP.

Where the term **'shall'** or **'must'** is used in a statement, the direction the statement provides is mandatory; exceptions would require an amendment to the ASP.

Where the term **'should'** or **'may'** is used in a statement, the direction the statement provides is intended to be followed; however, the direction may be deviated from in order to address specific circumstances while still achieving the general intent of the statement.

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

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

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

### 1.3.2 Plan Limitations

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

Policies and guidelines in the ASP must not be interpreted as approvals for specific uses for individual sites. Site conditions or constraints, including environmental constraints, adjacency and compatibility of residential uses, and all other constraints must be assessed on a case-by-case basis through future planning applications and required technical studies, as determined by the Town during the Land Use, Subdivision, or Development Permit application stage.

### 1.3.3 Map Interpretation

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

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

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

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

### 1.3.4 Photos & Imagery Interpretation

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

## 1.4 REGULATORY & PLANNING FRAMEWORK

The ASP has been prepared in accordance with applicable legislative requirements outlined in the Municipal Government Act (MGA) and overarching Town plans, such as the MDP, as well as other applicable Town policies and guiding documents.

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

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



### What Guides the ASP?

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

- The MGA and any associated regulations,
- The South Saskatchewan Regional Plan (**SSRP**), a southern Alberta regional plan based around the South Saskatchewan watershed,
- The Intermunicipal Development Plan (**IDP**), a local co-operative plan with Lethbridge County and Town of Picture Butte, and
- The Municipal Development Plan (**MDP**).

Other documents considered as part of developing this Plan include the Picture Butte Land Use Bylaw, and Town's Infrastructure Master Plan.

### What Comes After an ASP?

Following the adoption of an ASP, developers may prepare a Land Use Bylaw (**LUB**) amendment for application to the municipality to rezone specific lands, in alignment with the vision proposed in the ASP.

Once the land uses are confirmed/adopted by Council, the developer may proceed, if required, to the Subdivision stage. Finally, DP and Building Permit (**BP**) submissions are prepared and applied for, these applications provide the municipality the highest level of detail and serves as the final stage of municipal approvals required prior to construction and occupancy. Development proposals may be supported by additional servicing analysis or technical studies (e.g., Geotechnical, Biophysical Impact Assessment [BIA], Environmental Site Assessment [ESA], etc.), as required by the municipality.

### What Are the Requirements of an ASP?

As per the MGA, an ASP must describe:

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

# 2 PLAN AREA & CONTEXT

## 2.1 SITE CONTEXT

The Plan Area is located in the southeast corner of the Town of Picture Butte, comprising of ±4.13ha (±10.22ac). The ASP is located within one quarter section and is generally defined by Highway 843 to the west and the Piyami Coulee and Lethbridge County boundary to the east, with one (1) existing single detached dwelling located within the Plan Area (identified on **Map 2**). Surrounding developments including a number of adjacent residential developments, the Maple Estate Mobile Home Park, the Netherlands Reformed Congregation and the Bethesda Home for Seniors, do not form part of this ASP.

Agricultural pursuits are observed to be the predominant land use utilized within the southern half of the Town, more specifically south of Rogers Ave S, although the area has been identified within the MDP for urbanization and development through the adoption of ASPs. An underground coal mine owned by Northern Coal Co. Ltd (Mine Number 1414) is located north of the Plan Area, however, this mine has been abandoned and is no longer active.

**Map 2 Site Context**



## 2.2 MUNICIPAL DEVELOPMENT PLAN

The MDP is the guiding policy document for the Plan Area, which guides the planning, transportation and associated considerations of the area (illustrated on **Map 3**). Relevant policies include:

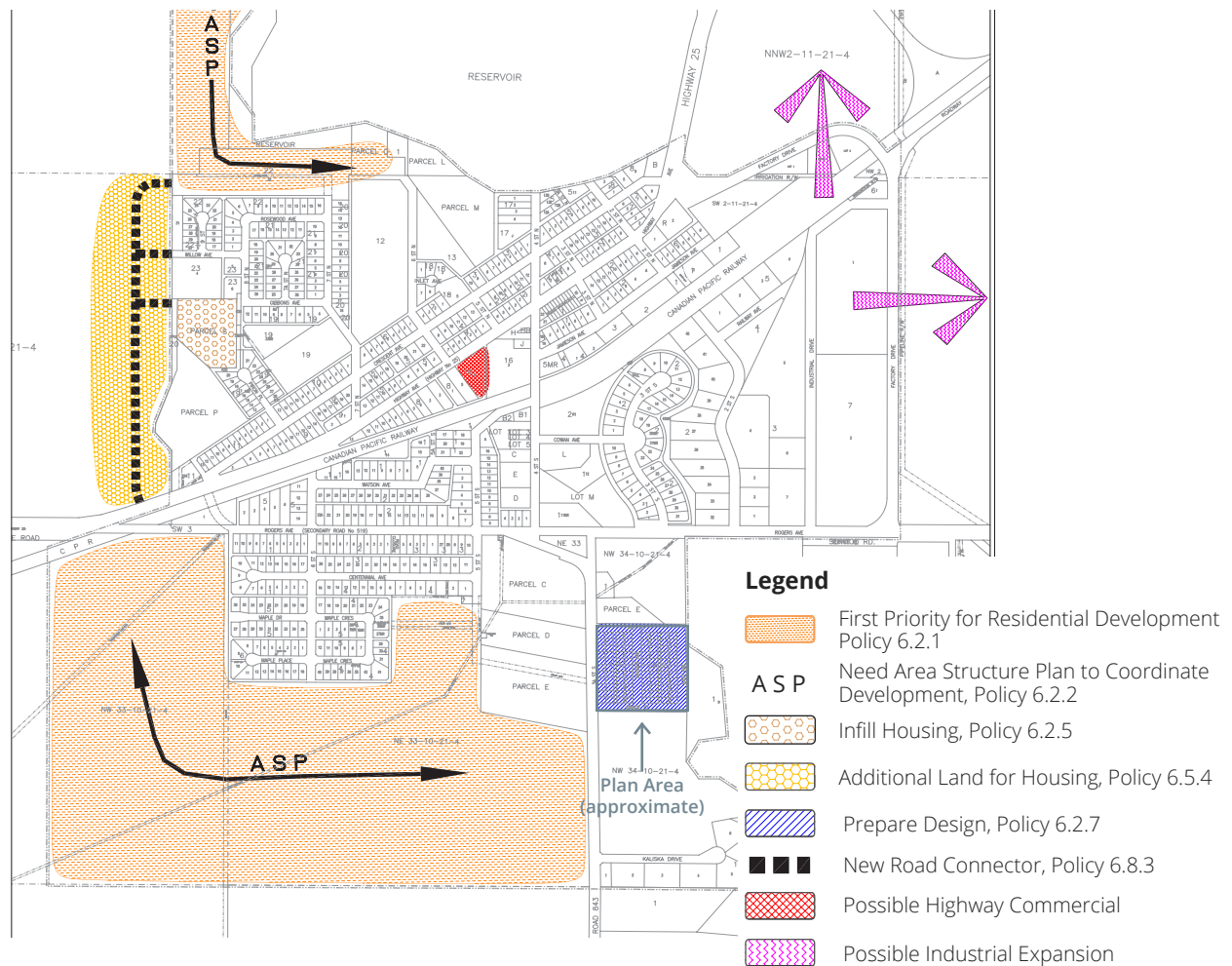
7.1.1 *The priority for housing in the future should be:*

- continue toward the south,
- infill the northwest,
- the area south and west, as shown on Guide Map 4.

7.1.3 *Developers should be encouraged to provide a diversity of housing types. A variety of housing may be promoted in areas of town such as:*

- in new area structure plans being adopted by council,
- on sites where existing houses are to be redeveloped,
- on larger sites that may become available such as the hospital site or the former water reservoir site,
- area of land east of the manufactured home park – the town owns some of this land.

**Map 3 MDP - Guide Map (Map 4)**



*7.1.4 Council should consider being more active in the provision of multi-dwelling housing developments by either entering into some private-public partnership or actually develop projects. Particular interest for council may be to provide low-maintenance, higher density housing aimed at older segments of the population.*

*7.1.7 The approval authorities should use its discretion to relax development standards when considering applications that would result in a considerable improvement to an existing lot that requires redevelopment.*

Currently, the Town primarily consists of single family dwellings which do not provide sufficient variation in purchase or rental pricing, maintenance requirements and may not suitable or allow for flexibility to an aging population. As noted within the MDP, a concern for the Town is that “in the future, the lack of multi-unit accommodation will affect the ability of the town to accommodate a diverse labour force and a variety of age groups” (Section 4.2). Development enabled by this ASP will contribute to the desired diversity of housing types, consisting of town home, multiplex and multi-unit dwellings, which contributes to the goals of the MDP being met.

## 2.3 PLAN AREA FEATURES

### 2.3.1 Natural Features

The Plan Area is characterized by flat prairie lands, with moderate water holding capacity and texture soils. Utilized for hay production with a partial development on the northwest corner, the site generally drains towards the northeast corner which abuts the side slopes of the Oldman River tributary Coulee (Piyami Coulee). A Slope Stability Assessment was completed to establish developable area within the site and resulted in the determination of a minimum development setback distance reflective of 16m from the top of bank (illustrated on **Map 4**).

The topography is generally flat (897.5m to 899.7m) with minor variation throughout the site. The subsurface of the Plan Area is generally comprised of a surficial layer of topsoil, underlain by native clay and clay till deposits.

### 2.3.2 Historic Resources

Under the Historic Resources Act (HRA), historic resources include archaeological and paleontological sites, Indigenous traditional use sites, historic structures, and geological or natural resources. The Plan Area is identified within the Listing of Historic Resources as lands with the potential to include undiscovered archaeological and paleontological historic resources (categorized as 5a, p).

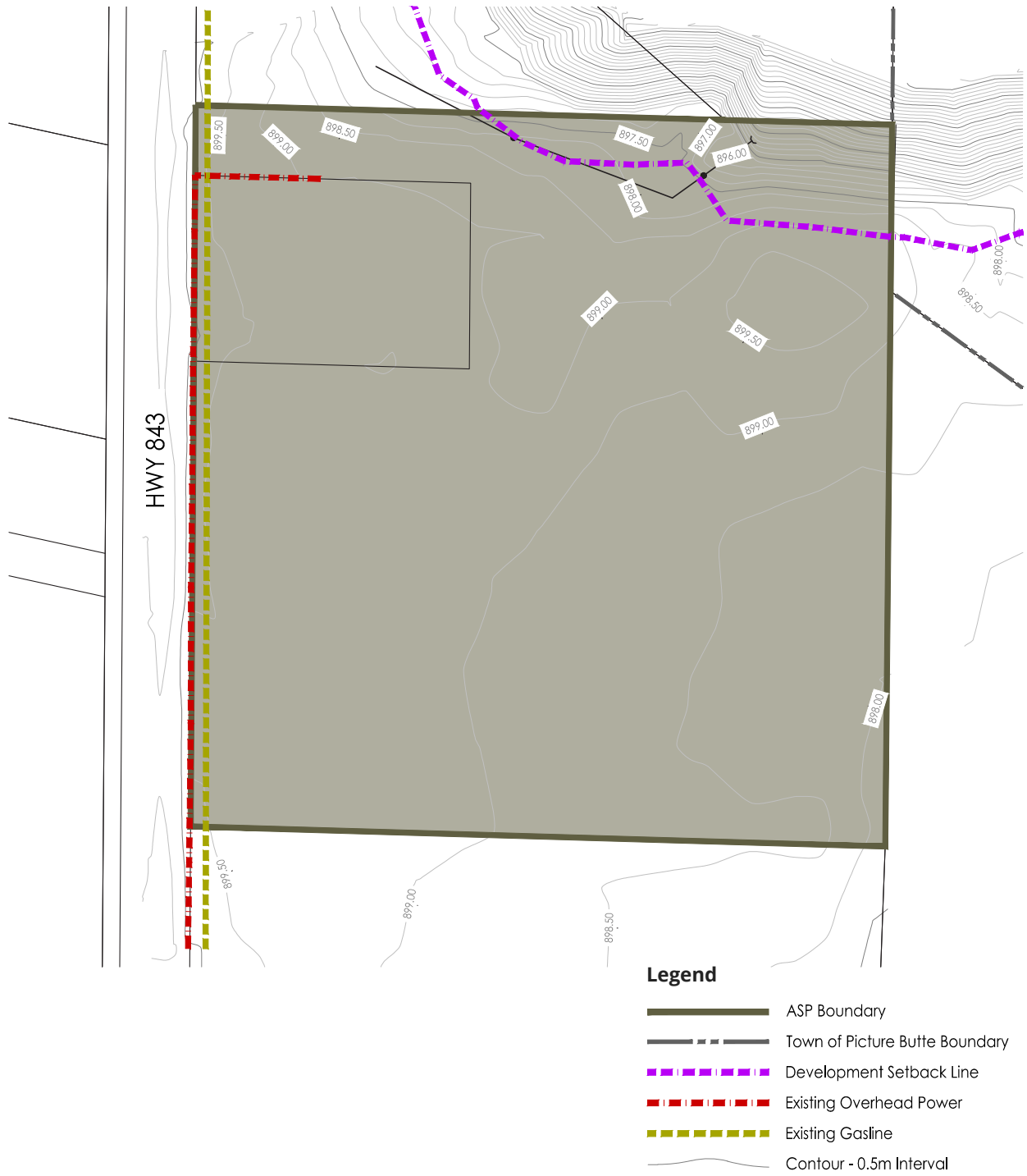
An approval under the HRA has been provided by Alberta Culture, Multiculturalism, and Status of Women (CMSW) for the development proposed in this ASP. Further review through a Historic Resources Impact Analysis (HRIA) is not required.

### 2.3.3 Existing Land Use and Development

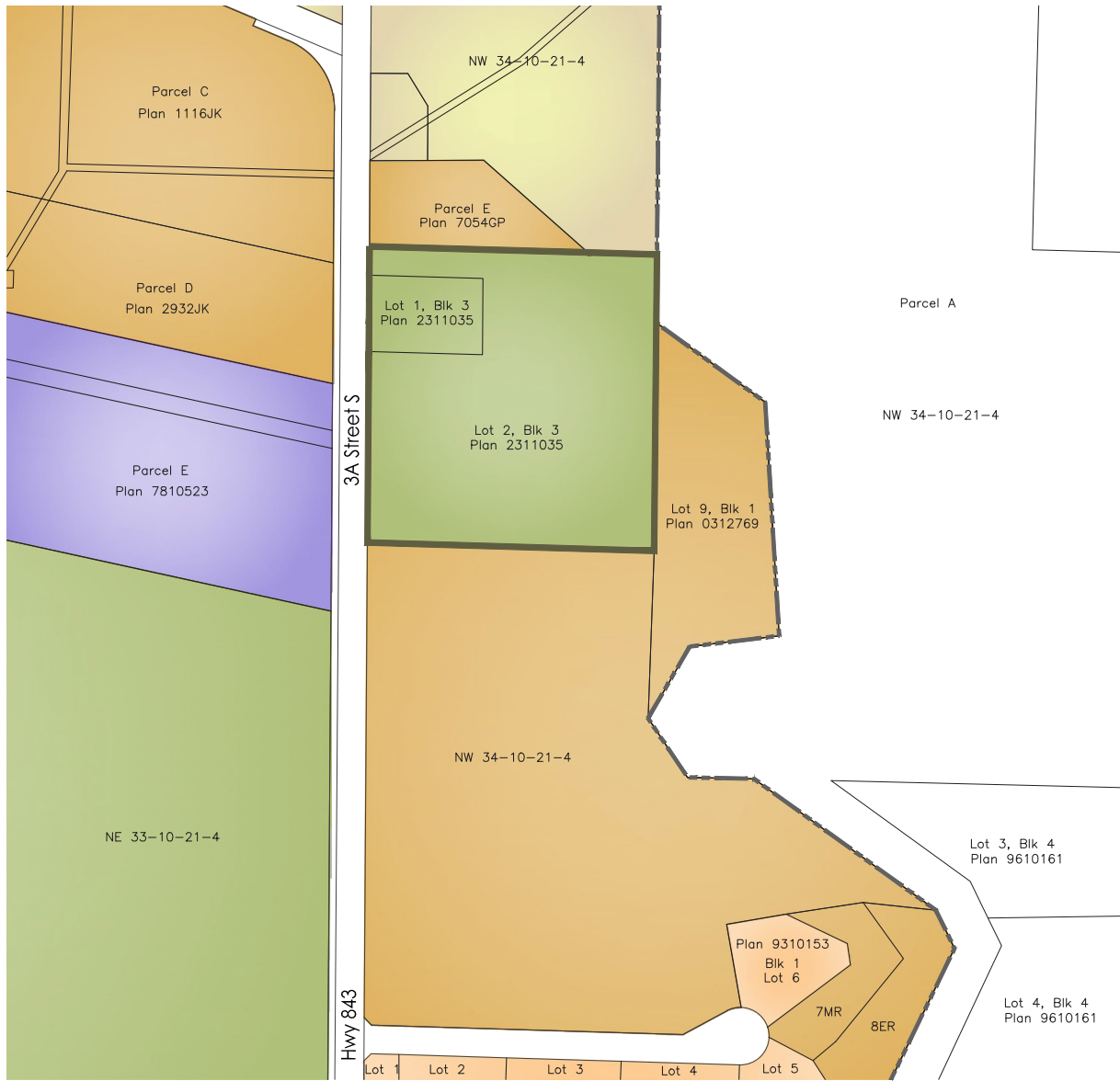
The Plan Area is currently zoned under the LUB as Urban Reserve (UR) land use district (illustrated on **Map 5**). This district is utilized as a temporary land use to maintain areas identified by the Town for urban developments, prior to planning documents and servicing being in place. The Plan Area is characterized by vacant agricultural land, with the exception of the existing single detached dwelling. All future zoning applications and subdivision (if required) within the Plan Area shall be developed in accordance with the direction and intent of the Municipal Development Plan and the Land Use Bylaw.

Uses adjacent to the Plan Area include a mix of agricultural, residential, and public service uses, including the Maple Estate Mobile Home Park, Picture Butte Memorial Cemetery, Netherlands Reformed Congregation, Bethesda Home for Seniors and the Picture Butte High School.

Map 4 Natural Features



**Map 5 Existing Land Use**



**Legend**

- |  |                                |  |                         |
|--|--------------------------------|--|-------------------------|
|  | ASP Boundary                   |  | MAanufactured Home - R2 |
|  | Town of Picture Butte Boundary |  | Public - P              |
|  | Residential - R1               |  | Urban Reserve - UR      |
|  | Large Lot Residential - R3     |  |                         |



# 3 PLAN CONSIDERATIONS

This section provides a summary of notable Plan Area attributes and constraints that may require special attention for future development within the Plan Area. This is not meant to be an exhaustive list. Those developing in the Plan Area must practice due diligence in the development process as it relates to all future planning considerations, inclusive of those identified within this section. The information outlined within this section may be subject to change and should be verified at the time of land use, Subdivision, or DP stage as new information arises and further development occurs within the Plan Area. Reports completed for the ASP include:

- *Geotechnical Evaluation and Slope Stability Analysis (2023)*
- *Historical Resources Act Clearance (2023)*
- *Butte Landing ASP Transportation Impact Assessment (2023)*
- *Phase 1 Environmental Site Assessment (2023)*

Copies of completed reports and studies may be obtained by request to the Town, referencing the report title.

# 4 LAND USE CONCEPT

## 4.1 VISION

Butte Landing is designed to establish a unique neighbourhood within the Town of Picture Butte that can accommodate much needed permanent and temporary housing options through a fully serviced community. Designed to connect with the vibrant natural environment, this ASP brings community members together while integrating high-quality private spaces with public recreational outdoor spaces. The unique landscape and topography also allow for attractive building integration and open spaces that respond to natural slopes and creates connectivity opportunities to the broader community. The Plan Area is well situated and identified for residential growth and integrates with the surrounding developments seamlessly to create a cohesive sense of community in the area.

## 4.2 DEVELOPMENT FRAMEWORK

There are a number of elements that will shape the future development of the Plan Area, each playing a role in shaping when and how the ASP is developed. Full build out of the Plan Area will likely take a number of years and is highly dependent on market demand, available financing and ownership type. The ASP provides a general configuration and the approximate boundaries of the land use areas. However, if a proposed development is sought in the Plan Area that is not consistent with the ASP, it may be considered so long as it remains consistent with the overall vision of the ASP.

Furthermore, the ASP focuses on the following elements as key to achieving a balanced and integrated neighbourhood:

- Balance the overall mix of residential uses in the Town to create a multi-generational community;
- Integrate the open space to compliment the residential housing units and the surrounding area; and
- Provide for a density and mix of housing types that organizes the development parcels and integrates open space to achieve safe and logical connections within the site and, where possible, to adjacent neighbourhoods.

---

## 4.3 LAND USE AREAS

The Land Use Concept Plan (illustrated on **Map 6**), has been developed through careful analysis of the opportunities and constraints applicable to the Plan Area, in addition to the needs of the Town, the public, and adjacent public service uses through proactive engagement with key stakeholders and Town departments.

The ASP provides general land use areas and a primary roadway network alignment and is intended to positively integrate with existing developments surrounding the Plan Area. Density considered within the Plan Area is utilized to support variations in housing options for a sustainable and growing municipality. This diversity is proposed to accommodate the needs of a variety of residents in all stages of their lives (singles, young families, and seniors).

When contemplated through the Land Use Bylaw, one secondary suite may be considered within a dwelling unit to the discretion of the Development Authority in accordance with the Land Use Bylaw. Secondary suites, are described as a self-contained residence with two or more rooms and includes a kitchen, living, sleeping and sanitary facility, meeting all requirements as per the Building Code.

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

## Residential

Located centrally within the Plan Area, illustrated on **Map 6**, the residential land use within this ASP provides the opportunity to accommodate multi-unit residential densities that work to achieve the targeted density as identified by the Town. This housing typology includes but is not limited to town home, multiplex and multi-unit dwellings, however, opportunities may exist for other housing types and densities overtime. By utilizing reduced individual lot footprints the Plan Area is able to reduce infrastructure requirements and create servicing efficiencies through design of the site.

## Future Residential

At time of report preparation, the future residential area is characterized by an existing single detached dwelling. To ensure that this area is maintained until the time in which it is needed for multi-unit development, it has been separated from the primary residential lands to ensure sequencing of development is followed within the Plan Area. Development within the Future Residential area may continue to operate as a single detached dwelling until such time as insufficient lands are available within the ASP to accommodate further development.

Future development of these lands is intended to provide a flexible expansion for future development through concentrated higher density residential development. This housing typology includes but is not limited to multiplex, multi-unit dwellings and apartment buildings.

## 4.4 PLAN STATISTICS

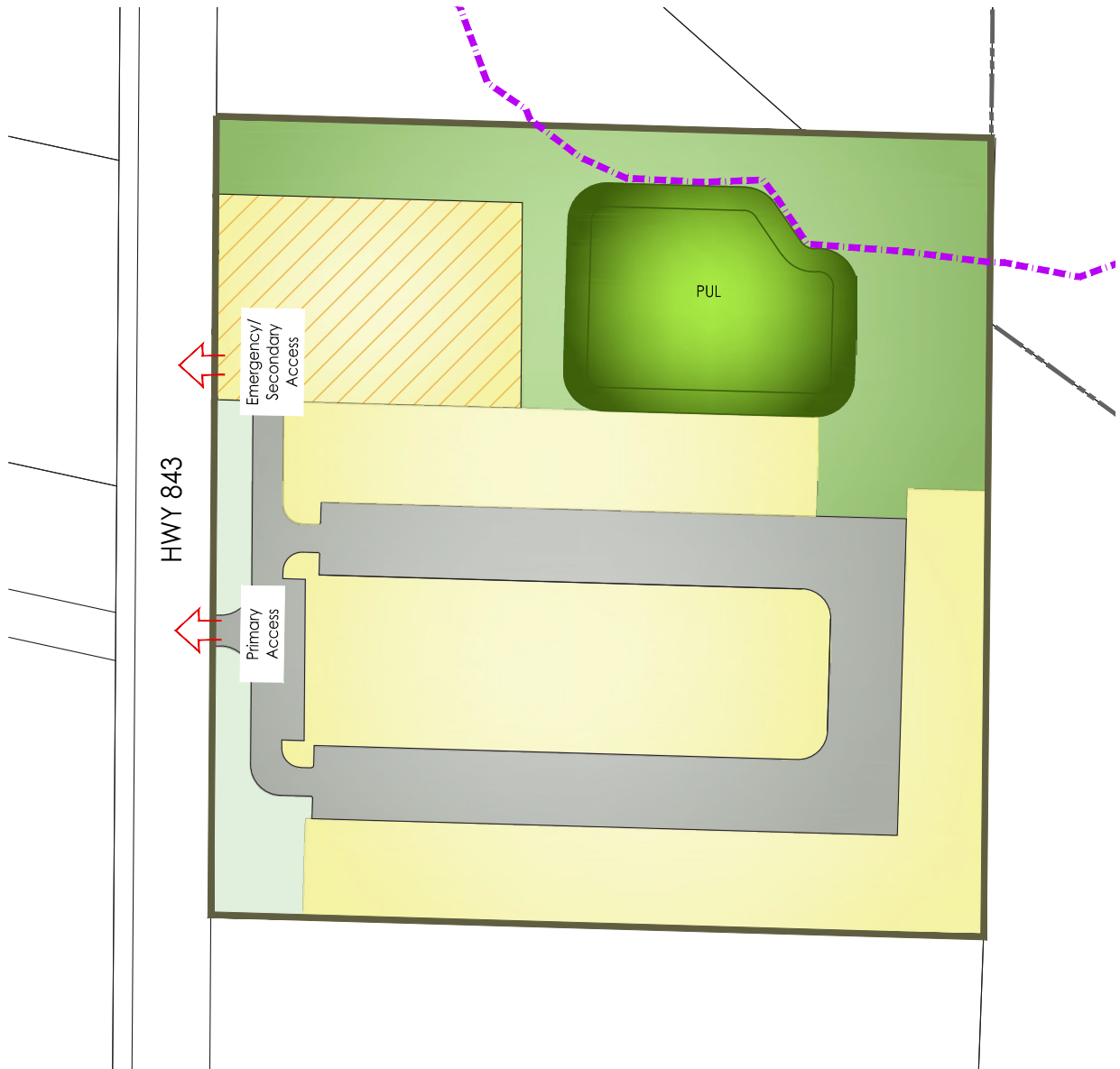
This plan is looking to establish a successful community through sustainable growth while continuing to maintain a strong sense of Town values and citizen involvement through appropriate amounts of growth. All calculations including reference to population density have been calculated to consider the highest potential population within the Plan Area.

### PLAN AREAS

Land Use Type	Gross Area		%	Estimated Dwelling Units	Estimated Population*
Residential ( <i>Multi unit</i> )	±1.61 ha	±3.98 ac	±39%	80	216
Future Residential ( <i>Multi unit</i> )	±0.42 ha	±1.04 ac	±10%	48	130
Municipal Reserve	±0.91 ha	±2.25 ac	±22%		
Roads	±0.79 ha	±1.95 ac	±19%		
Stormwater Management Facility	±0.40 ha	±1.00 ac	±10%		
<b>Total</b>	<b>±4.13 ha</b>	<b>±10.22 ac</b>	<b>100%</b>	<b>128</b>	<b>346</b>

\* Assumed an average of 2.7 people per household, as per Census data.

Map 6 Land Use Concept



**Legend**

- |  |                                      |  |                                      |
|--|--------------------------------------|--|--------------------------------------|
|  | ASP Boundary (3.71Ha / 9.17ac)       |  | Residential (1.61Ha / 3.98ac)        |
|  | Town of Picture Butte Boundary       |  | Municipal Reserve (0.74Ha / 1.83ac)  |
|  | Roadway Access Location              |  | Open Space (0.17Ha / 0.42ac)         |
|  | Public Utility Lot (0.40Ha / 1.00ac) |  | Roads (0.79Ha / 1.95ac)              |
|  | Development Setback Line             |  | Future Residential (0.42Ha / 1.04ac) |

## 4.5 INTERMUNICIPAL COORDINATION

The ASP lands are entirely contained within the Intermunicipal Development Plan (IDP) between the Town of Picture Butte and Lethbridge County. This plan identifies areas of mutual interest within the Town and establishes policies and processes of shared information and referrals between the municipalities. The Plan Area is referred to within this document, more specifically, within Planning Area 3 and Special Planning Area 3A. Relevant policies include:

*6.6.3 Planning Area 3 is an area foreseen to be further planned for, subdivided and developed in consultation between the County and Town, and in consideration of the planning and development standards as outlined in this Plan.*

*6.6.4 Sub-planning Area 3A is identified as potentially suitable for business, highway commercial type land use just to the south of Highway 519. The south portion of Area 3A may also be considered for mixed land use or grouped country residential use if appropriately planned and with consideration of transitioning to existing grouped country residential uses to the south. The area identified in sub-planning Area 3A as a "Special Planning Area" will require an Area Structure Plan to be prepared prior to any subdivision or at the redesignation stage for development proposals.*

*6.6.5 For land within the Town on the west side of the municipal boundary and coulee draw, also within sub-planning Area 3A, highway commercial and residential uses may be considered with additional planning undertaken.*

*6.6.8 Storm water management and drainage considerations, especially along the highway, must be addressed as part of the area structure plan preparation and subsequent development of lands.*

The IDP identifies the Plan Area for further development of residential uses through the creation of an ASP. This ASP has considered and appropriately placed the density to align with future developments and considered the transition to future commercial uses in the north and existing residential uses to the west in alignment with the goals of the IDP. Additionally, the density proposed will contribute to the success of a highway commercial district by having a higher number of residents in the area. Through this development we are working to support the long-term interest of the County and Town through an efficient development pattern that achieves a balance of land uses compatible with the area.

## 4.6 RESERVES

Municipal Reserves (MR) and Environmental Reserves (ER) are lands dedicated to the Town as public land during the subdivision process. MR is dedicated to enhance the community by providing land for parks, schools, and recreational amenities, as required. ER supports the protection of the natural environment by preventing development in hazardous areas such as ravines, floodways, or coulees.

The determination of exact reserve allocation and analysis of MR owing within the Plan Area should be addressed at time of Subdivision in accordance with the provisions of the MGA and refer to any/all applicable Town policies or Deferred Reserve caveats registered on title at time of application. MR has been collected in full on Lot 1 (±1.04ac). The remaining MR within Lot 2 (±9.19ac) is contemplated under a Deferred Reserve Caveat registered on title. This caveat describes MR owing within the remaining portion of the Plan Area within Lot 2. MR is expected to be provided through the dedication of land or by the payment of cash-in-lieu at subdivision stage.

Any MR dedication required within the Plan Area is anticipated to be accomplished within the open space located centrally within the residential land use area or to the north. Additional areas may be considered for dedication of MR without requiring an amendment to this plan reviewed at time of DP.

# 5 TRANSPORTATION

## 5.1 TRANSPORTATION NETWORK

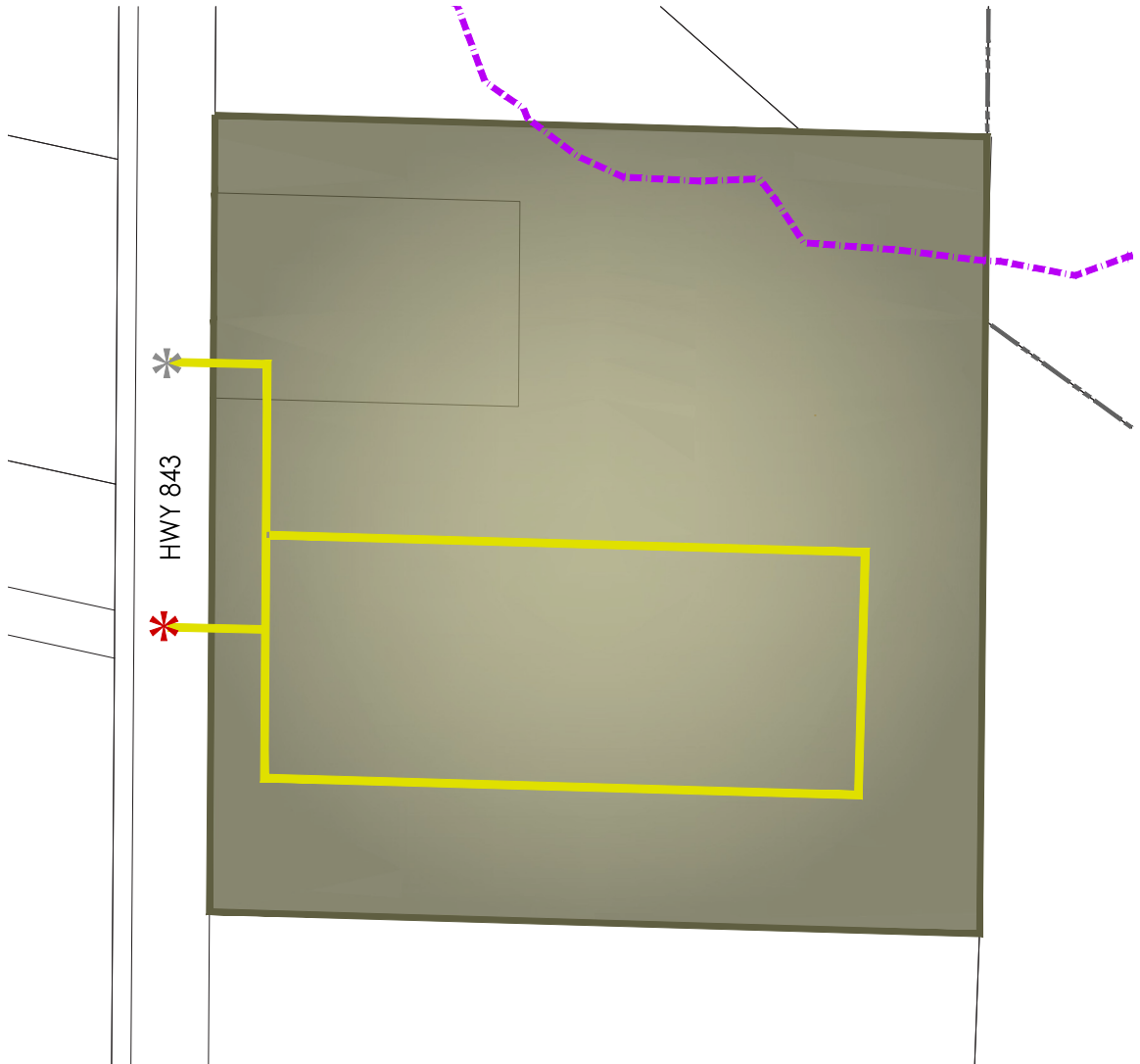
To support the residential development proposed by this ASP, a Transportation Impact Assessment (TIA) was prepared to evaluate the adequacy and impact to the study area intersections and road links in order to accommodate the opening day and long-term (20 year) traffic horizons. The TIA also considered and determined if any roadway improvements are required to incorporate the proposed development.

The transportation network for the Plan Area (illustrated on **Map 7**) is designed to accommodate anticipated traffic volumes at full build out in an efficient, safe, and effective manner. The internal transportation system has been configured as a circular roadway that connects to a primary access point on Highway 843, with a secondary access located to the north. Access and internal transportation system will allow for two traffic and allow for two points of emergency access to the development.







The connection to Highway 843 will be a Type 1 intersection given the low traffic volumes, posted speeds, and the urbanization occurring in the area. To the discretion of Alberta Transportation, this intersection will align with the existing intersection utilized by the Maple Estates Mobile Home Park to the west, converting the existing 3-leg intersection to a 4-leg intersection at the existing location, limiting the number of access points to the highway. This intersection will have a stop control on the westbound movements, and free flow on Highway 843. The development is anticipated to produce a relatively small amount of traffic, so no further improvements to Highway 843 are anticipated due to additional development traffic.

The developer shall be responsible to provide a publicly dedicated road network and all servicing infrastructure to municipal standards. If future development proposals involve a type of bareland condominium subdivision plan, the developer may propose alternative road and infrastructure standards for consideration by the Town. Additionally, if required and at the developers expense, a Development Agreement shall be entered into with the municipality to address the terms and requirements of providing the necessary municipal infrastructure for the development and any roadway or intersection improvements.

Map 7 Transportation Network



**Legend**

-  ASP Boundary
-  Town of Picture Butte Boundary
-  Local Road
-  Primary Access
-  Secondary/Emergency Access
-  Development Setback Line

# 6 SERVICING

## 6.1 GENERAL

A servicing strategy for the ASP has been developed based upon municipal servicing standards and with reference to the Town of Picture Butte's Infrastructure Master Plan (IMP) 2017 (ISL Engineering and Land Services). Water and sanitary servicing is readily available for the Plan Area. Stormwater management for this parcel is part of a larger municipal strategy, as outlined in the IMP. The following sections outline the servicing strategy for the Plan Area, including interim and permanent scenarios for stormwater management, and provides a summary of the estimated flows and volumes that will be received by downstream conveyance and treatment infrastructure. All calculations including reference to population density have been calculated to consider the highest potential population within the Plan Area.

## 6.2 SHALLOW UTILITIES

Electrical, Gas and Telecommunication services are available from Highway 843. Servicing strategies for these utilities will be completed at the time of subdivision during detailed engineering design, in accordance with all municipal standards.

Developers, at their expense, shall be responsible for the installation of all required shallow utilities and streetlights within the Plan Area through a single utility Right of Way.

## 6.3 WATER

The Town's existing water distribution system and the proposed internal distribution system including hydrants is identified on **Map 8**. A 200mm diameter looped waterline within the Plan Area, connecting to the 250mm diameter line existing in Highway 843, is proposed. The proposed water servicing and fire suppression is based on an estimated population between 346 to 467 people and the following assumptions:

Average Day Demand	177m <sup>3</sup> /day
Maximum Day Demand	355m <sup>3</sup> /day
Peak Hour Demand	16 L/s
Maximum Day Demand + Fireflow	87 L/s

Assumed water volumes and flow rates have been derived from the IMP data: Average Day Demand (ADD) 380 L/p/d; Maximum Day Demand 2 x ADD; Peak Hour Demand 4 x ADD; Fire flow Residential 83 L/s.

Municipal confirmation that downstream infrastructure has the capacity to convey and treat water to the proposed development shall be required for Subdivision and/or Development Permit approvals.

## 6.4 SANITARY

The Town's existing sewage conveyance system and the proposed internal conveyance system is identified on **Map 9**. A 200mm conveyance sewer connecting to a 375mm diameter line existing in the NW corner of the parcel is proposed. This area is serviced by an existing lift station. The proposed sanitary servicing is based on a full build out scenario with the maximum estimated population of 467 people, a service area of 4.13ha, and the following assumptions:

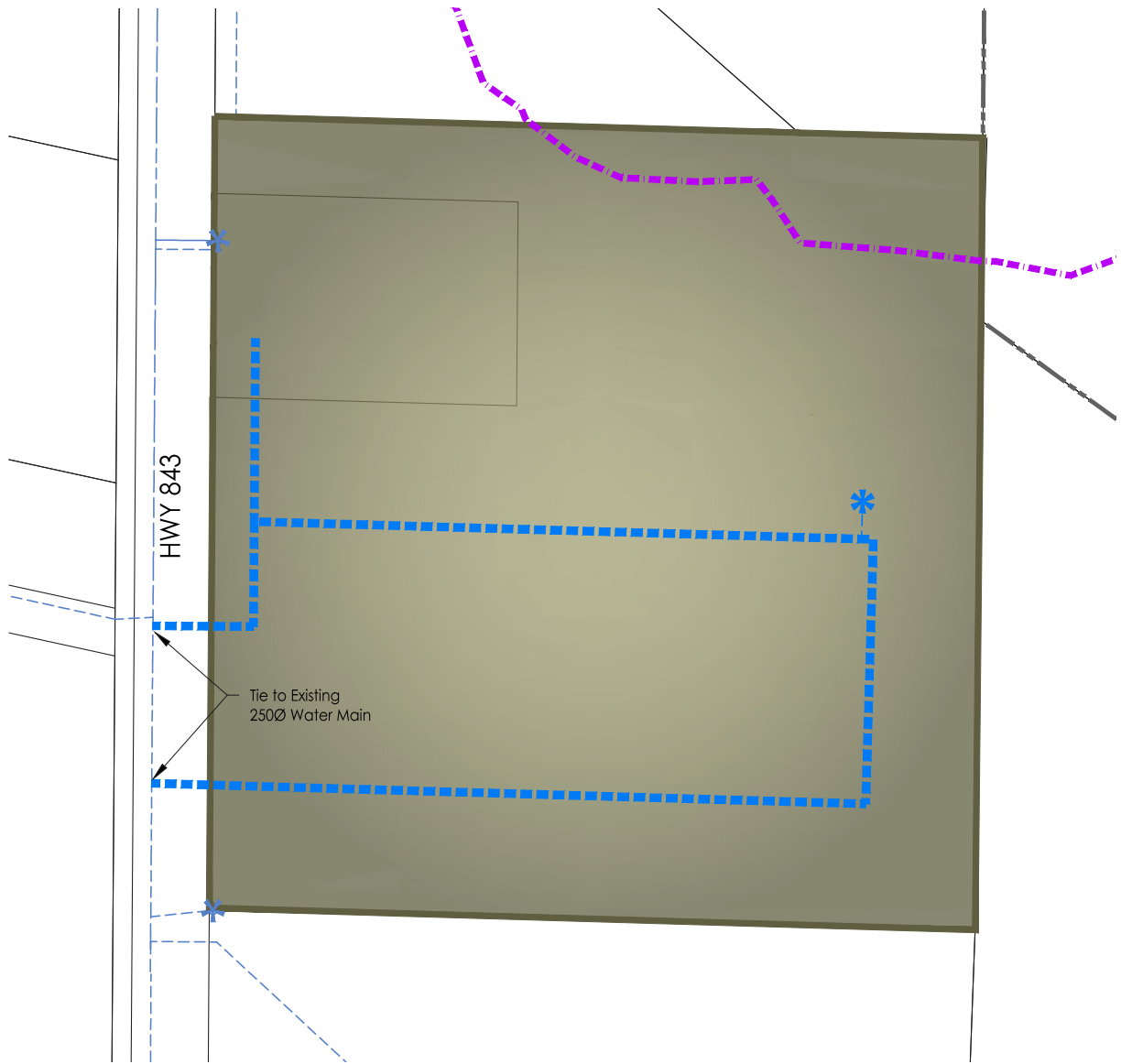
Average Day Sewage Generation	159m <sup>3</sup> /day
Peak Dry Weather Flow (DWFx4)	7.3 L/s
Inflow and Infiltration (I&I)	1.2 L/s
Peak Wet Weather Flow	8.5 L/s

Assumed sewage volumes and flow rates have been derived from the IMP data: Dry Weather Flow (DWF) 340 L/p/d; Wet Weather I&I 0.28L/s/Ha.








Subdivision and Development Permits may only proceed following Municipal confirmation that downstream infrastructure has the capacity to convey and treat wastewater from the proposed development.



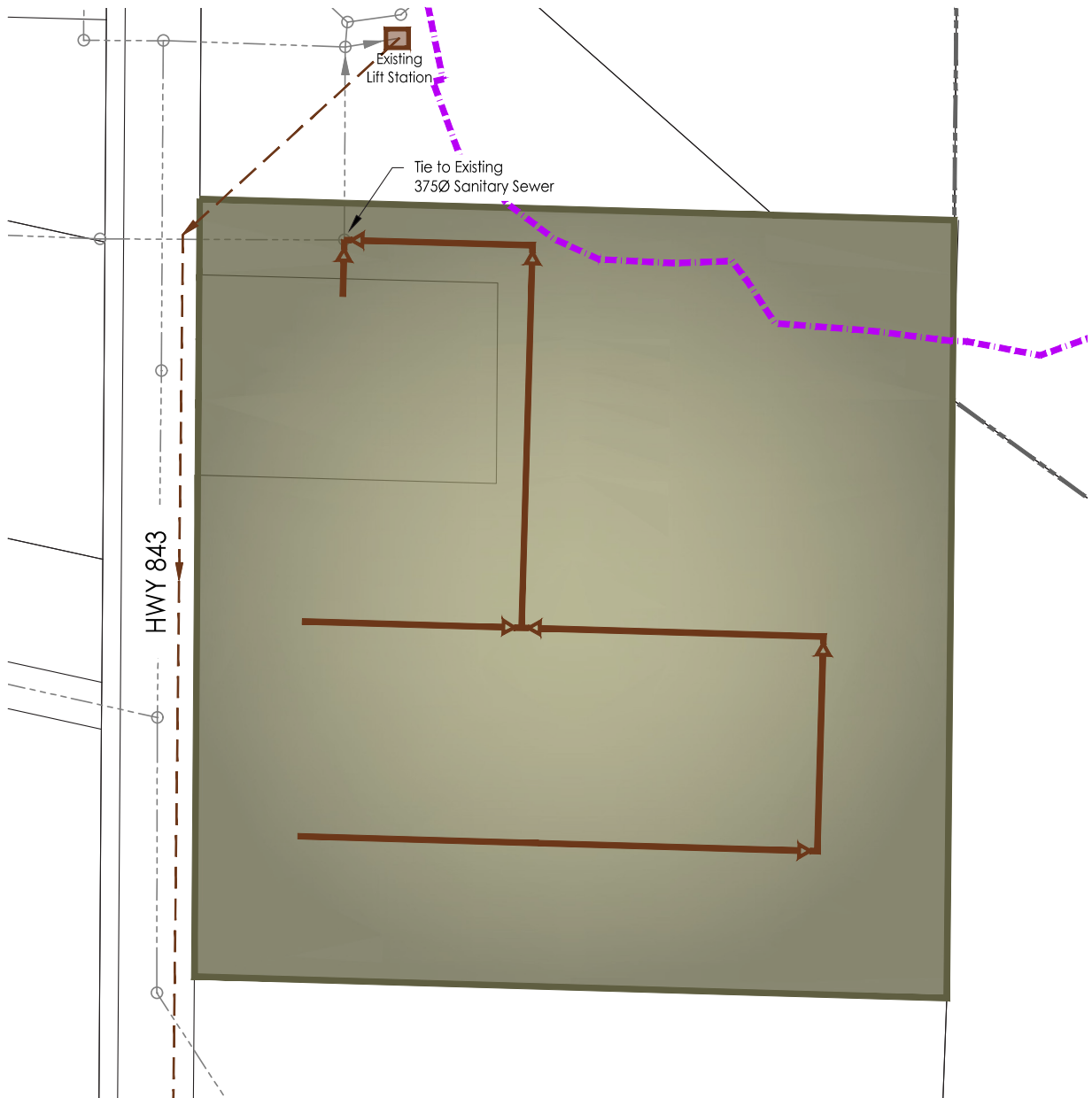
Map 8 Water Servicing









**Legend**

-  ASP Boundary
-  Town of Picture Butte Boundary
-  Proposed Watermain
-  Proposed Hydrant
-  Existing Watermain
-  Existing Hydrant
-  Development Setback Line

Map 9 Sanitary Servicing



Legend

-  ASP Boundary
-  Town of Picture Butte Boundary
-  Proposed Gravity Sewer
-  Existing Forcemain
-  Existing Gravity Sewer
-  Development Setback Line

## 6.5 STORMWATER

The ASP is in a future southerly drainage catchment as defined in the IMP that has allocated a 1.16 L/s/Ha release rate to a new Piyami Coulee outfall. It is assumed that construction of this future stormwater trunk system and regional ponds is not a near term development project for the municipality, as identified on **Map 10**. The Plan Area has been identified as a priority location for urban growth within the Town and is situated at the northerly margin of this drainage catchment, the following servicing options would allow for near term development.

### Option 1

A new outfall to Piyami Coulee will be designed and constructed (subject to regulatory approval) as illustrated on **Map 11**. Under this scenario, a dry pond will accommodate pre-development drainage levels and will discharge to the Piyami Coulee with appropriate treatment and erosion control measures

### Option 2

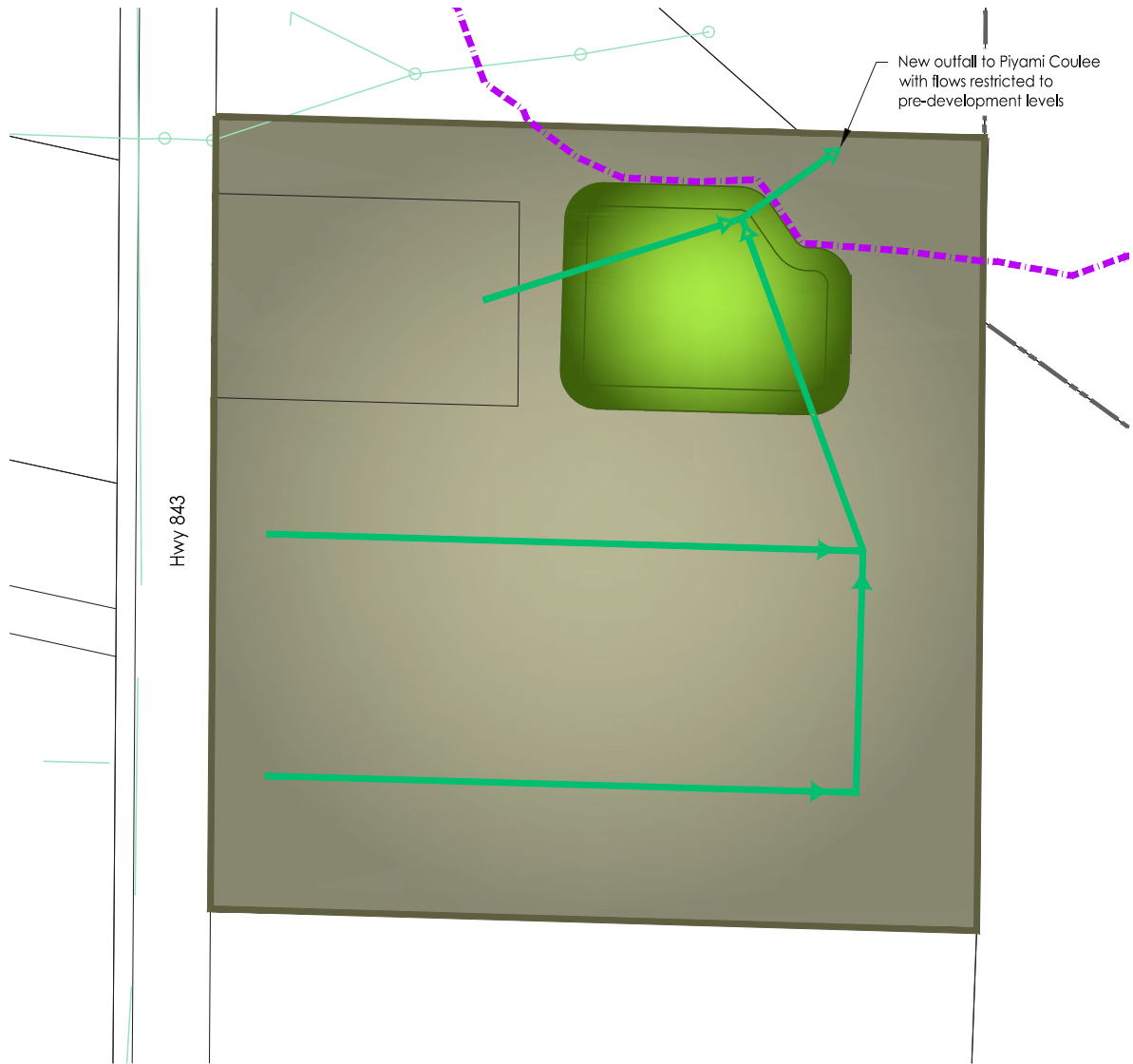
The development will be connected to the existing outfall as illustrated on **Map 12** along the north boundary of the Plan Area. Under this scenario, drainage from the dry pond will be restricted to a prescribed release rate that is confirmed by the municipality and utilizes a portion of the residual capacity of the existing outfall. The approval of a new outfall under the Water Act would not be required, however, water diversion from existing drainage patterns would still require Water Act approval.

Regardless of the outfall option that is chosen for the development, Butte Landing will incorporate a stormwater management system that conveys, treats, and attenuates urban development flows to pre-development conditions using a minor storm sewer system and a major storm system that manages surface run-off during extreme rainfall events. All parcel and lot grading plans shall conform with the overall stormwater management plan as required by the Town at the subdivision or development stage.







**Map 10 South Residential Drainage Strategy**



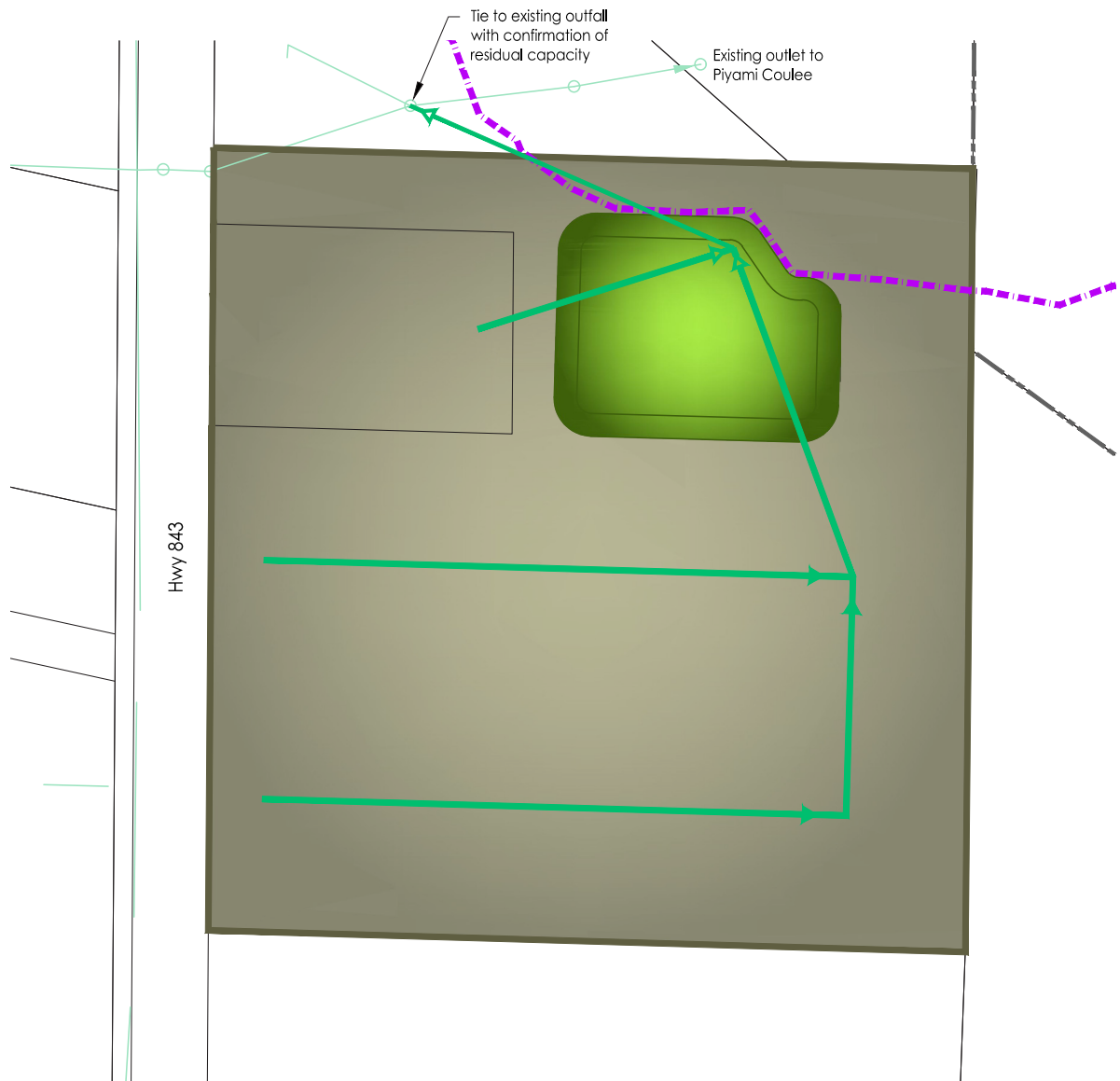
Map 11 Stormwater Servicing - Option 1









**Legend**

-  ASP Boundary
-  Town of Picture Butte Boundary
-  Proposed Storm Sewer
-  Existing Storm Sewer
-  Stormwater Management Facility
-  Development Setback Line

Map 12 Stormwater Servicing - Option 2



**Legend**

-  ASP Boundary
-  Town of Picture Butte Boundary
-  Proposed Storm Sewer
-  Existing Storm Sewer
-  Stormwater Management Facility
-  Development Setback Line

# 7 IMPLEMENTATION

The ASP outlines the vision for growth in the community and provide guidance with regard to infrastructure, land use, subdivision, and development. The purpose of this section is to describe how this vision will be implemented and provide detail on the sequencing of development.

Following ASP adoption, implementation of Butte Landing will proceed through land use re-designation, subdivision and detailed engineering, the construction of infrastructure and a multi-unit development through to occupancy. It is the intent that all on-site utilities and roads will be under the direct control of a condo/strata corporation and that the municipality's ownership and maintenance of infrastructure will be limited to future improvements within the ASP boundary.

At the time of subdivision or development the Town will require a detailed site plan which all include the delineation of required parking spaces, driveways and roads, amenity areas, and utility right of ways.

## 7.1 PHASING

The development envisioned in this ASP will occur in phases as identified on **Map 13**. A summary of integral infrastructure improvements in support of phased development are identified below.

### **Phase 1 development will require:**

- Completion of Primary and Secondary Emergency site access points. The secondary access will be limited to emergency vehicles only and will not be open to public use until full build out of the development occurs.
- Completion of Stormwater Management Facility, Outflow Controls, Off-site Storm Sewer and Water Act Approvals.
- Completion of one water connection to the 250mm water main in Highway 843 with suitable terminations for flushing.
- Completion of sewer connection to 375mm sanitary sewer in the NW of the Plan Area.

### **Phase 2 development will require:**

- Extension of all infrastructure east with suitable terminations of utilities and vehicle turnarounds.

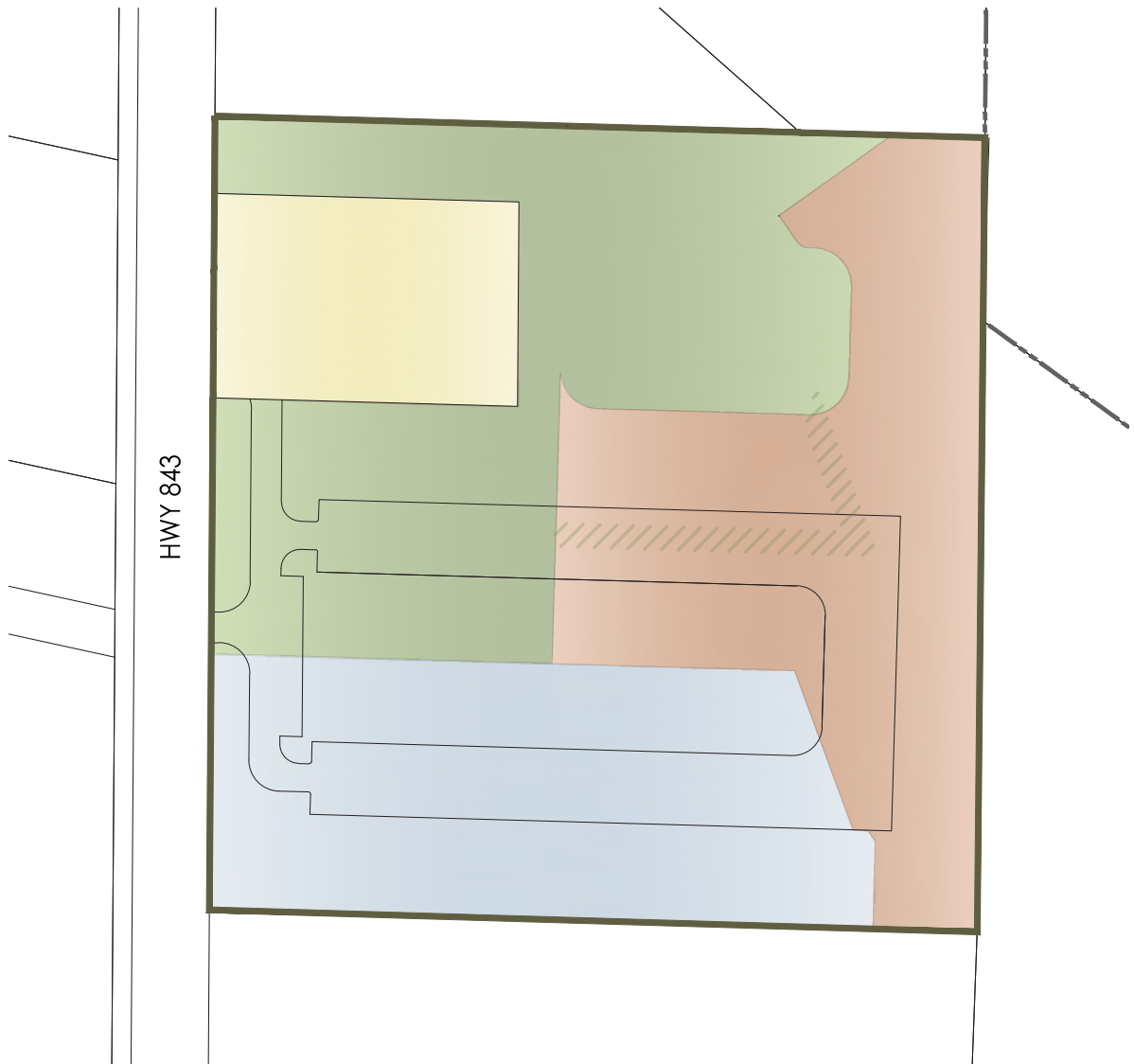
### **Phase 3 development will require:**

- Extension of all infrastructure west with final water line looping to the 250mm water main in Highway 843.






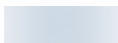
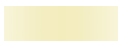
### **Phase 4 development will require:**

- Extension of all utilities from Phase 1 into the remaining lands of the Plan Area.
- Reconstruction of the secondary emergency access into an urbanized community access point.

Map 13 Phasing & Implementation Plan



**Legend**

-  ASP Boundary
-  Town of Picture Butte Boundary
-  Phase 1
-  Phase 1 Offsite Storm
-  Phase 2
-  Phase 3
-  Phase 4

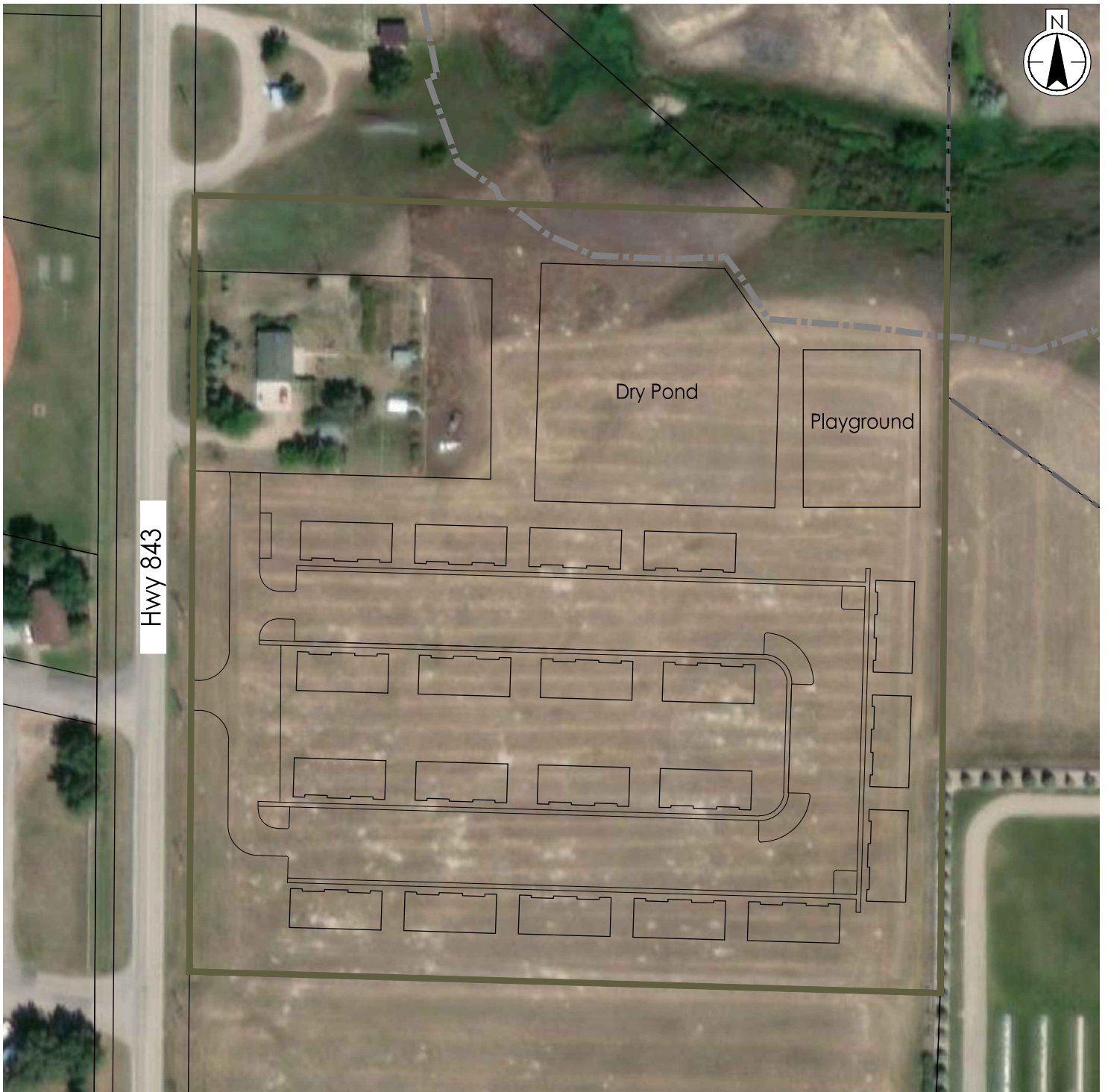
# APPENDICES

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

## **Appendices Contents**

- Appendix A: Conceptual Site Layout
- Appendix B: Geotechnical Evaluation and Slope Stability Analysis (2023)
- Appendix C: Historical Resources Act Clearance (2023)
- Appendix D: Transportation Impact Analysis (2023)
- Appendix E: Phase 1 Environmental Site Assessment (2023)





- ASP Boundary
- Town of Picture Butte Boundary



The purpose of this section is to provide an illustration of potential building locations within the Residential lands. This development staging is conceptual in nature and may not reflect actual buildout.

MAP A1 | BUTTE LANDING - AREA STRUCTURE PLAN  
**Conceptual Site Layout**



116549067  
 January 17, 2024

PREPARED FOR: OAK POINT INC.  
 U:\116549067\drawings\figures\ASP\116549067\_Conceptual Layout - Appendix A.dwg  
 2024/01/23 1:55 PM By: Van Maanen, Marvin

CONCEPT ONLY: THIS DRAWING IS AN ARTISTIC REPRESENTATION OF DESIGNS PREPARED BY STANTEC CONSULTING LTD. IT IS CONCEPTUAL IN NATURE AND SUBJECT TO CHANGE. COPYRIGHT RESERVED.

# **Geotechnical Evaluation and Slope Stability Analysis Oak Pointe Residential Subdivision Picture Butte, Alberta**



PRESENTED TO  
**Stantec Consulting Ltd.**

AUGUST 2023  
ISSUED FOR USE  
FILE: ENG.LGEO04650-01

---

This page intentionally left blank.

# TABLE OF CONTENTS

- 1.0 INTRODUCTION..... 1**
- 2.0 PROJECT DESCRIPTION AND SCOPE OF WORK ..... 1**
- 3.0 GEOTECHNICAL FIELD AND LABORATORY WORK..... 2**
- 4.0 SITE CONDITIONS..... 2**
  - 4.1 Surface Features .....2
  - 4.2 Mining Activity .....2
  - 4.3 Soil Stratigraphy.....3
    - 4.3.1 Topsoil .....3
    - 4.3.2 Clay .....3
    - 4.3.3 Clay Till .....3
  - 4.4 Groundwater Conditions .....3
- 5.0 RECOMMENDATIONS ..... 4**
  - 5.1 Site Development .....4
    - 5.1.1 Topsoil Depth.....4
    - 5.1.2 Lot Grading .....4
    - 5.1.3 Backfill Materials .....5
    - 5.1.4 Construction Excavations .....5
    - 5.1.5 Trench Backfill and Compaction .....5
  - 5.2 Pavement Structures .....6
    - 5.2.1 Subgrade Preparation.....6
    - 5.2.2 Gravel Pavement Structures.....6
    - 5.2.3 Asphalt Pavement Structures .....6
  - 5.3 Foundations .....7
    - 5.3.1 General .....7
    - 5.3.2 Limit States Design.....7
    - 5.3.3 Shallow Foundations .....8
    - 5.3.4 Foundation Perimeter Drainage Requirements .....8
    - 5.3.5 Below-Grade Walls .....9
    - 5.3.6 Floor Slab System .....9
    - 5.3.7 Building Site Grading .....10
    - 5.3.8 Seismic Design .....10
    - 5.3.9 Cement Type .....10
    - 5.3.10 Frost Protection .....10
  - 5.4 Stormwater Dry Pond Development .....10
    - 5.4.1 General .....10
    - 5.4.2 Design Considerations.....11
    - 5.4.3 Pond Construction .....11
- 6.0 SLOPE STABILITY ASSESSMENT AND DEVELOPMENT GUIDELINES..... 12**
  - 6.1 Site Description.....12

**6.2** Site Reconnaissance ..... 12

**6.3** Slope Stability Analysis..... 13

**6.3.1** General ..... 13

**6.3.2** Soil Strength Parameters..... 13

**6.3.3** Long-Term Stability..... 14

**6.3.4** Impact of Development..... 14

**6.4** Development Setback Requirements ..... 14

**6.5** Development Guidelines..... 15

**7.0 DESIGN AND CONSTRUCTION GUIDELINES ..... 15**

**8.0 CLOSURE..... 16**

**LIST OF TABLES IN TEXT**

Table A: Groundwater Monitoring Data – June 29 and July 11, 2023..... 4

Table B: Recommended Pavement Structures ..... 7

Table C: Soil Resistance Factors – Shallow Foundations ..... 8

**APPENDIX SECTIONS**

**FIGURES**

- Figure 1 Site Plan
- Figure 2 Borehole Location Plan
- Figure 3 Site Plan Showing Site Survey
- Figure 4 Section A and B
- Figure 5 Section C
- Figure 5 Development Setback Limits

**PHOTOGRAPHS**

- Photo 1 Northwest End of the Site – Facing East.
- Photo 2 Northeast End of the Site – Facing Northwest.
- Photo 3 Across Tributary Coulee – Facing South at Site Slope.
- Photo 4 Across Tributary Coulee – Facing Southwest at Site Slope.
- Photo 5 Culvert Upstream of the Tributary Coulee.
- Photo 6 Culvert Along Site Slope.
- Photo 7 Channel Visible at the Toe of the Site Slope – Facing South Across the Tributary Coulee.
- Photo 8 Historical Instability on Slope North of Site – Facing East.

**APPENDICES**

- Appendix A Limitations on Use of This Document
- Appendix B Borehole Logs
- Appendix C Design and Construction Guidelines



## **LIMITATIONS OF REPORT**

This report and its contents are intended for the sole use of Stantec Consulting Ltd., and their agents. Tetra Tech Canada Inc. (Tetra Tech) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Stantec Consulting Ltd., or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this document is subject to the Limitations on Use of this Document attached in Appendix A or Contractual Terms and Conditions executed by both parties.

## 1.0 INTRODUCTION

This report presents the results of a geotechnical evaluation conducted by Tetra Tech Canada Inc. (Tetra Tech) for the proposed Oak Pointe residential subdivision development, to be located within the town of Picture Butte, Alberta (Figure 1). The site legal address is described as Legal Subdivision 13, Section 34, Township 04, Range21, West of the fourth Meridian.

The scope of work for the geotechnical evaluation was outlined in a proposal (Tetra Tech File No. PENG.LGEO04650-01) issued to Mr. Marvin Van Maanen, of Stantec Consulting Ltd. (Stantec), on June 7, 2023. The objective of this evaluation was to determine the general subsurface stratigraphy and groundwater conditions in the area of the proposed development and to provide general recommendations for the geotechnical aspects of design and construction for the project.

Authorization to proceed with the evaluation was provided by Mr. Van Maanen, of Stantec, by a signed Services Agreement on June 13, 2023.

## 2.0 PROJECT DESCRIPTION AND SCOPE OF WORK

It is understood that the proposed residential subdivision will comprise 18, four-unit buildings for a total of 72 three-bedroom units with underground utilities, a stormwater dry pond, paved roadways, a mini storage facility, and a playground. The total planned area is approximately 3.72 hectares (ha.).

Shallow foundations with a floor slabs-on-grade system are typically considered for residential developments in southern Alberta. Alternatively, a deep pile foundation system, such as bored cast-in-place piles or screw piles, is also considered feasible; however, may not be as economically viable when compared to a shallow foundation system for the relatively light loaded residence structures.

The scope of work for this evaluation comprised the drilling of four (4) boreholes, a laboratory program to assist in classification of the subsurface soils, and this report providing the following design and construction recommendations:

- General site grading.
- Slope stability assessment and development setbacks.
- Construction of below-grade utilities.
- Shallow foundations and below-grade structures.
- Design and installation of floor slabs-on-grade system.
- Suitability of compacted clay liners.
- Design and construction of dry pond.
- Classification of site for seismic design.
- Volumetric changes of soil due to changes in moisture content and/or frost.
- Construction of subgrades, backfill materials, and compaction.
- Roadway subgrade preparation.
- Concrete type for structured elements in contact with soil.



## 3.0 GEOTECHNICAL FIELD AND LABORATORY WORK

The fieldwork for this evaluation was carried out on June 20, 2023. A truck-mounted drill rig was contracted from Chilako Drilling Services Ltd. of Coaldale, Alberta. The rig was equipped with 150 mm diameter solid stem continuous flight augers. Tetra Tech's field representatives were Mr. Jackson Meadows and Daniel Linderman. Buried utility locating was carried out through Alberta One-Call.

Four (4) boreholes (23BH001 through 23BH004) were drilled across the site to depths of between 24.8 m and 6.6 m below the existing ground surface. The borehole locations are depicted on Figure 2. The borehole elevations were interpreted from the information provided by Stantec, with coordinates obtained by Tetra Tech using a handheld GPS. Borehole coordinates and elevations are shown on the borehole logs provided in Appendix B.

In all boreholes, disturbed grab samples were obtained at depth intervals of approximately 600 mm. Standard Penetration Tests (SPT) were completed at intervals of 1.5 m. All soil samples were visually classified in the field, and the individual soil strata and the interfaces between them were noted. The borehole logs are presented in Appendix B. An explanation of the terms and symbols used on the borehole logs is also included in Appendix B.

Slotted 25 mm diameter polyvinyl chloride (PVC) standpipes were installed in each of the boreholes in order to monitor the groundwater levels. Auger cuttings were used to backfill around the standpipes and the boreholes were sealed at the ground surface with bentonite chips.

Soil classification tests, including natural moisture content, Atterberg Limits, and soluble sulphate content, were subsequently performed in the laboratory on samples collected from the boreholes to aid in the determination of engineering properties. The results of the laboratory tests are presented on the borehole logs in Appendix B.

## 4.0 SITE CONDITIONS

### 4.1 Surface Features

The site is located at prairie level within the southeast portion of the town limits of Picture Butte, Alberta, adjacent to Highway 843 to the west and the Picture Butte Memorial Cemetery to the southeast. The site is currently hay land with partial development on the northwest corner, approximately 3.72 ha. in area (Figure 2). The overall site drains towards the northeast corner which abuts sideslopes of an Oldman River tributary coulee (Photo 1 through Photo 4).

As part of the evaluation, Tetra Tech reviewed historical aerial photographs of the site and surrounding area. The following observations were noted:

- The site was relatively undeveloped agricultural land as far back as 1951 (oldest aerial photographs available).
- Structures in the northwest corner of the project site were visible in the 1970 aerial photograph.
- Further development in the northwest corner of the project site and a berm/dam structure across the tributary coulee to the northwest of the site was visible in the 1978 aerial photograph. The berm/dam structure appears to be installed to handle seasonal water.
- The structures closest to the tributary were gone in the 1999 aerial photograph.

### 4.2 Mining Activity

Research was conducted by Tetra Tech to review the possible existence of mine workings within the boundary of the site, including publications by the Alberta Energy Regulator and various documents contained in Tetra Tech's library regarding the coal mining industry in Picture Butte. The literature indicated the presence of a mine located adjacent to the subject site to northwest of the surrounding area (Figures 2 and 3).

Based on Tetra Tech's review of these mining characteristics, given the depth of the coal mine workings and the distance from the site, it is considered unlikely that the proposed development would have significant adverse effects due to the presence of historical mine workings.

### 4.3 Soil Stratigraphy

The general subsurface stratigraphy of the project site generally comprised a surficial layer of topsoil, underlain by native clay and clay till deposits. The following subsections provide a summary of the stratigraphic units encountered at the specific borehole locations across the site. A more detailed description is provided on the borehole logs presented in Appendix B.

#### 4.3.1 Topsoil

Topsoil was encountered at the borehole locations, with thicknesses of between 50 mm and 200 mm. Due to previous agricultural practices and depositional processes (i.e., wind), the topsoil layer is expected to vary in thickness. A detailed topsoil investigation may be required to determine stripping volumes.

#### 4.3.2 Clay

A layer of clay was encountered at three (3) of the borehole locations under the topsoil layer (23BH002, 23BH003, and 23BH004), extending to depths of between 1.0 m and 1.8 m below grade level. The clay was generally described as silty, trace sand to sandy, damp to moist, very stiff, generally low to high plastic, and light brown or brown with occasional white precipitates. Moisture content tests taken on clay samples generally ranged between 9% and 17%.

A SPT "N" value within this layer indicated 12 blows per 300 mm penetration, indicative of a stiff to very stiff consistency.

#### 4.3.3 Clay Till

Clay till was encountered beneath the clay layer, extending to the borehole termination depths. The clay till was generally described as silty, some sand, trace gravel, moist to very moist, low to medium plastic, stiff to very stiff, and brown with dark brown mottling, grey brown, and grey green, with coal and oxide specks. Occasional silt and sand pockets, and high plastic clay inclusions along with interbedded silt layers were encountered within the clay till. Moisture content tests taken on clay till samples ranged between 12% and 24%. Atterberg Limits testing (six tests) indicated Liquid Limits ranging between 24% and 30%, and Plastic Limits ranging between 13% and 15%; indicative of low to medium plasticity.

A medium to high plastic clay layer was encountered within the clay till in 23BH002 and 23BH003 with thickness of approximately 400 mm to 800 mm. Atterberg Limits testing (one test from 23BH002) indicated a Liquid Limit of 66% and a Plastic Limit of 25% indicative of high plasticity.

SPT "N" values within this layer ranged from 10 to 25 blows per 300 mm penetration, indicative of a stiff to very stiff consistency.

### 4.4 Groundwater Conditions

During the field drilling, no groundwater seepage or sloughing was encountered in the boreholes. The groundwater levels were measured on June 29, 2023, and on July 11, 2023. Table A summarizes the groundwater monitoring data.

**Table A: Groundwater Monitoring Data – June 29 and July 11, 2023**

Borehole Number	Depth of Standpipe (m)	Borehole Elevation (m)	Depth to Groundwater (m)		Groundwater Elevation (m)	
			June 29, 2023	July 11, 2023	June 29, 2023	July 11, 2023
23BH001	24.8	897.54	16.37	13.23	881.17	884.31
23BH002	24.8	899.25	15.32	11.98	883.93	887.27
23BH003	6.6	899.73	Dry	Dry	-	-
23BH004	6.6	899.23	Dry	Dry	-	-

## 5.0 RECOMMENDATIONS

The recommendations that follow provide varying options intended to aid in the development of project concepts and specifications. The recommendations are based on the understanding and condition that Tetra Tech will be retained to review the relevant aspects of the final design (drawings and specifications) and to conduct such field reviews as are necessary to ensure compliance with the geotechnical aspects of the National Building Code - 2019 Alberta Edition, the Town of Picture Butte Land Use Bylaw No. 841-18, the 2019 Lethbridge County Engineering Guidelines & Minimum Servicing Standards, this report, and the final plans and specifications. Tetra Tech accepts no liability for any use of this report in the event that Tetra Tech is not retained to provide these review services.

Specific recommendations that apply to this project are provided for site development, pavement structures, foundations and floor slab systems, stormwater management facilities (dry pond), and development setback lines with respect to the potential slope stability issues.

### 5.1 Site Development

#### 5.1.1 Topsoil Depth

The initial topsoil stripping depth should be considered as being of particular importance with regard to site subgrade grading design elevations. Based on the findings of the field drilling program, the surficial topsoil (A Horizon) layer thickness generally varies between 50 mm and 200 mm; however, may be somewhat variable in thickness due to historical cultivation practices of the land surface and/or depositional processes (i.e., wind). Consideration can be given however, to incorporating the underlying B Horizon layer (organic content <5%) into the fill mass during general site grading. Full-time monitoring by experienced personnel is recommended in order to avoid over-stripping and to ensure appropriate material mixing and placement.

#### 5.1.2 Lot Grading

It is assumed that surficial drainage will be directed towards a catchment pond or dry pond to be located on the north end of the site (Figure 3). The following recommendations are provided for lot grading.

Following organic topsoil stripping, all lots should be graded for drainage at a minimum gradient of 2.0%. The existing site soils, comprising low to medium plastic clay and clay till which are considered suitable for use as landscape fill materials and for use as general engineered fill materials for lot grading, provided they are acceptably moisture conditioned. High plastic clay should be expected at some locations and be separately stockpiled and not be used for generally engineered fill due to its high swelling potential. The moisture content of the site soils generally appear to be variable with respect to the anticipated optimum moisture content (OMC). Moisture conditioning will likely be required at the site for proper compaction. Although soil moisture variability should be expected, the earthwork contractor should assess the requirements and should consider such factors as weather and construction procedures.

General engineered cohesive fill materials for lot grading should be moisture conditioned to within a range of 0% to +2% of the OMC prior to compaction and compacted to a minimum of 98% of Standard Proctor Density (SPD). Granular materials, if used, placed as “general engineered fill” should be compacted within a range of  $\pm 1\%$  of OMC.

### 5.1.3 Backfill Materials

The low to medium plastic soils on site, including native clay and clay till, are considered acceptable as general engineered fill materials for site grading purposes. Any sand or silt, if locally encountered, are only considered suitable for landscaping purposes or backfill below frost protection depths due to high frost susceptibility. High plastic clay, if encountered, should not be used as general engineered fill materials. The near-surface clay soils appear to be variable in moisture content across the site; and therefore, moisture conditioning will be required for proper backfill placement. The earthwork contractor should make his/her own estimate of the requirements for moisture conditioning to the recommended standards and should consider such factors as weather and construction procedures.

Further recommendations regarding backfill materials and compaction are contained in Appendix C.

### 5.1.4 Construction Excavations

Excavations should be carried out in accordance with Alberta Occupational Health and Safety Regulations. For excavations required for underground utilities, for example the water lines, the excavation depth is understood to be less than 3.0 m from final grade. The following recommendations notwithstanding, the responsibility of all excavation cutslopes resides with the Contractor, who should take into consideration site-specific conditions concerning soil stratigraphy and groundwater. All excavations should be reviewed by the Contractor prior to personnel working within the base of the excavation.

Based on the findings of the drilling program, very stiff clay soils, in damp to moist conditions, are generally anticipated to be encountered within 3.0 m below grade during excavation. Short-term excavations (open for less than one month) within the very stiff clay soils which are to be deeper than 1.5 m should have the sides shored and braced or the slopes should be cut back no steeper than 1.0 horizontal to 1.3 vertical (1.0H:1.3V). In areas where compact sandy soils or firm to stiff clay soils or seepage are encountered, a cutslope of 1.0H:1.0V or flatter should be considered.

Spill piles or temporary surcharge loads should not be allowed within a distance equal to the depth of the excavation from an unsupported excavation face, while mobile equipment should be kept back at least 3.0 m. All excavations should be checked regularly for signs of sloughing, especially after rainfall periods. Small earth falls from the sideslopes are a potential danger to workers and must be guarded against.

General recommendations regarding construction excavations are contained in Appendix C.

### 5.1.5 Trench Backfill and Compaction

The level of compaction of the backfill must be suitable to limit post-construction trench settlement. A minimum compaction level of 95% of SPD is recommended for backfill within the pipe zone of the trench (to 300 mm above the top of pipe). For the remainder of the trench backfill, a minimum compaction standard of 98% of SPD should be utilized in all areas. The compacted thickness of each lift of backfill shall not exceed 250 mm. Moisture conditioning to OMC and 2% over OMC of the soils should be specified for general trench backfill. During placement of the backfill materials it is recommended that ‘notching’ of the excavation sidewalls (1.0H:1.0V) occur with every 1 m of height to develop a bond between the native soils and backfill materials, resulting in less potential for long-term settlement or consolidation.

It should be noted that the ultimate performance of the trench backfill is directly related to the uniformity of the backfill compaction. In order to achieve the uniformity, the lift thickness and compaction criteria should be strictly enforced. General recommendations regarding backfill materials and compaction are contained in Appendix C.

For frost protection, pipes buried with less than 2.0 m of soil cover (above top of pipe) should be protected with insulation to avoid frost damage to, or breakage of, the pipes. Rigid insulation placed under areas subject to vehicular wheel loadings should be provided with a minimum thickness of 600 mm of compacted granular base.

General recommendations regarding construction excavation and backfill materials and compaction are contained in Appendix C.

## **5.2 Pavement Structures**

### **5.2.1 Subgrade Preparation**

Within all roadway areas, following stripping of topsoil, the exposed subgrade should be proof-rolled to assess the subgrade characteristics. Following the proof-roll, a minimum subgrade preparation depth of 300 mm is recommended in all areas in order to improve subgrade uniformity. Where softer soils are encountered, subgrade preparation of 600 mm or more may be necessary. Subgrade preparation includes scarification, moisture conditioning to between OMC and +1% of OMC, and uniform compaction to a minimum of 98% of SPD.

Backfill to raise the subgrade level should be general engineered fill materials, as defined in Appendix C, moisture conditioned and compacted as noted previously. The subgrade should be prepared and graded to allow drainage into drainage ditches or catchbasins, if available. Proof-rolling of the prepared surface is recommended to identify localized soft areas and for an indication of overall subgrade support characteristics.

It is imperative that positive surface drainage be provided to prevent ponding of water within the roadway structure and subsequent softening and loss of strength of the subgrade materials. Surrounding landscaping should be such that runoff water is prevented from ponding beside paved areas in order to avoid softening and premature failure of the pavement surface.

### **5.2.2 Gravel Pavement Structures**

The following minimum gravel pavement structure, using the subgrade preparation procedures in Section 5.2.1, is recommended. Both gravel materials should be compacted to 100% of SPD.

- 100 mm of crushed gravel or base gravel (25 mm minus), over
- 200 mm of pit run gravel or sub-base gravel over prepared clay subgrade.

It is imperative that positive surface drainage of gravel pavement be established to prevent ponding of water. Recommended minimum grades of 2% should be used in gravel surfaced areas. Surrounding landscaping should be such that runoff water is prevented from ponding beside gravelled areas.

### **5.2.3 Asphalt Pavement Structures**

With no detailed traffic load available at the time of this reporting, Tetra Tech recommends the use of the “Local/Residential Roads” pavement structure in accordance with the Lethbridge County Engineering Guidelines & Minimum Servicing Standards (2019) for light duty parking areas and access roadways with light traffic or less than 0.3 million of 20-year of design equivalent single axle loadings (ESALs). The light duty structure is suitable for occasional single-axle delivery trucks and perhaps weekly garbage trucks. If more frequent truck traffic or design ESALs of greater than 0.3 million but less than 1.0 million is expected, the moderate duty structure should be used. The recommended pavement structures are presented in Table B.

**Table B: Recommended Pavement Structures**

Material Type	Light Duty (Local)	Moderate Duty (Arterial/Collectors)
Asphalt Pavement (mm)	120	150
Granular Base Course (mm)	300	300
Subgrade Preparation (mm)	300	300

For heavy duty loading aprons and refuse collection pads, the use of a Portland Cement concrete pavement is recommended, with a minimum thickness of 180 mm overlying 200 mm of crushed granular base course.

The recommended pavement layer thicknesses generally refer to average values and recognize typical construction variability. As-constructed layer thicknesses should satisfy the thickness tolerances identified in the Lethbridge County Engineering Guidelines & Minimum Servicing Standards (2019) (or equivalent) for granular materials and asphalt concrete.

## 5.3 Foundations

### 5.3.1 General

Based on the soil conditions encountered at the borehole locations, shallow foundations are considered suitable for the proposed residential development. Deep pile foundations are considered technically feasible; however, may not be preferred due to the relatively high cost and are not discussed and included in this report.

All shallow foundation design recommendations presented in this report are based on the assumption that an adequate level of monitoring by Tetra Tech will be provided during construction and that all construction will be carried out by suitably qualified contractors, experienced in foundation and earthworks construction. An adequate level of monitoring is considered to be the following:

- For shallow foundations; inspection of bearing surfaces prior to placement of concrete or mudslab, and design review during construction.
- For earthworks; full-time monitoring and compaction testing.

Suitably qualified persons, independent of the Contractor, should carry out all such monitoring. One of the purposes of providing an adequate level of monitoring is to check that recommendations, based on data obtained at discrete borehole locations, are relevant to other areas of the site.

### 5.3.2 Limit States Design

The design parameters provided in the following sections may be used to calculate the ultimate foundation capacity in each case. For the Limit States Design (LSD) methodology, in order to calculate the factored load capacity, the appropriate Soil Resistance Factors must be applied to each loading condition as follows:

$$\text{Factored Capacity} = \text{Ultimate Capacity} \times \text{Soil Resistance Factors}$$

In general, the soil resistance factors in Table C should be incorporated into the foundation design. These factors are considered to be in accordance with the Canadian Foundation Engineering Manual (CFEM) (2006) as well as the 2019 National Building Code of Canada - Alberta Edition.

**Table C: Soil Resistance Factors – Shallow Foundations**

Item	Soil Resistance Factor
Bearing Resistance	0.5
Passive Resistance	0.5
Horizontal Passive Resistance	0.5

Under LSD methodology, foundations should be designed on the basis of factored Ultimate Limit States (ULS) parameters. In order to determine the applicable working capacity, Serviceability Limit States (SLS) must also be considered.

### 5.3.3 Shallow Foundations

Shallow footings should be constructed a minimum of 1.4 m below the final design ground surface (frost protection requirement for footings under heated structures). For unheated structures, the footings should be constructed a minimum of 2.1 m below grade.

All footings should be founded on the stiff to very stiff native clay soils. Such soils meet the minimum bearing requirement for residence structures in accordance with the National Building Code – 2019 Alberta Edition. For specific foundation design, the ultimate static bearing pressure may be taken as 300 kPa, subject to other recommendations in this report. Factoring should be considered as noted in the previous section. Footing dimensions should be in accordance with the minimum requirements of the National Building Code – 2019 Alberta Edition.

Bearing certification by a geotechnical engineer is recommended to ensure that the shallow foundations are placed on competent native soils during construction. If weak soils are encountered at footing level, recommendations may be provided to remove the weak materials and bring the subcut back to design elevation with low strength lean mix concrete. Alternatively, it may be possible to lower the footing elevation to more competent native soils.

It is recommended that a grade-all bucket be used for final excavation to the foundation subgrade elevation to minimize disturbance of the founding soils. A 50 mm concrete mudslab should be placed immediately following excavation and inspection to protect the bearing surface from disturbance and inclement weather.

Further recommendations regarding shallow foundations are given in Appendix C.

### 5.3.4 Foundation Perimeter Drainage Requirements

It is recommended that a weeping tile and sump system be constructed around the outside perimeter of the buildings with basements to be constructed (at the base of the footings, if selected) to maintain a relatively consistent moisture profile of the subgrade soils. The weeping tile system should comprise a perforated weeping tile, in turn surrounded with a minimum of 150 mm thick blanket of washed rock (maximum size 20 mm), with the granular layer wrapped in non-woven geotextile. The weeping tile should have a minimum 0.5% slope leading to a sump.

### 5.3.5 Below-Grade Walls

All below-grade walls should be designed to resist lateral earth pressures in an “at-rest” condition. This condition assumes a triangular pressure distribution and may be calculated using the following expression:

$$P_o = K_o (\gamma H + Q)$$

Where:

- $P_o$  = Lateral earth pressure “at-rest” condition (no wall movement occurs at a given depth).
- $K_o$  = Coefficient of earth pressure “at-rest” condition (use 0.5 for cohesive backfill and 0.45 for sand and gravel backfill).
- $\gamma$  = Bulk unit weight of backfill soil (use 19 or 21 kN/m<sup>3</sup> for cohesive or granular backfill, respectively).
- $H$  = Depth below final grade (m).
- $Q$  = Surcharge pressure at ground level (kPa).

It is assumed that drainage will be provided for all below-grade walls through the installation of a weeping tile system, as described above, and hydrostatic pressures will not be a factor in design.

Backfill around concrete walls should not commence before the concrete has reached a minimum two thirds of its design strength and first floor framing is in place or the walls are laterally braced. Only hand-operated compaction equipment should be employed within 600 mm of the concrete walls. Caution should be used when compacting backfill to avoid high lateral loads caused by excessive compactive effort. A compaction standard of 95% of SPD is recommended. To avoid differential wall pressures, the backfill should be brought up evenly around the walls. A minimum 600 mm thick clay cap should be placed at the ground surface to reduce the infiltration of surface water.

### 5.3.6 Floor Slab System

#### 5.3.6.1 Floor Slabs-on-Grade

Construction of floor slabs-on-grade for this project is considered feasible, provided the following precautions and construction recommendations are followed.

Following removal of topsoil and excavation to design elevations, the exposed native subgrade should be scarified to a minimum depth of 300 mm, and moisture conditioned to a range of optimum to 2% over OMC. In areas where general engineered fill placed during site grading is encountered, a minimum depth of 150 mm subgrade preparation is recommended; however, if weathering is evident, 300 mm subgrade preparation is required. The minimum compaction should be 98% of SPD. The prepared subgrade should be inspected and any, soft or loose pockets detected should be reconditioned, as recommended above, or over-excavated and replaced with general engineered fill.

A levelling course of clean well-graded crushed gravel, at least 150 mm in compacted thickness, is recommended directly beneath the slabs-on-grade, unless a thicker course is required for structural purposes. The subgrade beneath slabs-on-grade should be protected at all times from moisture or exposure which may cause softening or disturbance of the subgrade soils. This applies during and after the construction period (and before and after placement of the required general engineered fill). Should the exposed surface become saturated or disturbed, it should be reworked to achieve the above standards.



If the subgrade is properly prepared, as noted above, floor slab movements should be limited to less than approximately 25 mm. Slabs-on-grade should be separated from bearing members to allow some differential movement. If this movement is unacceptable, the owner should consider a structurally supported floor.

Recommended procedures for compaction and backfill materials, and further recommendations for floor slabs-on-grade construction are included in Appendix C.

### 5.3.7 Building Site Grading

Drainage of surface water away from buildings should be maintained during construction. The finished grade of the proposed building site should be designed so that surface water is drained away from buildings by the shortest route. All drains should discharge well clear of the buildings. If there is a roof drain for a building, caution should be taken where downspouts discharge due to the high probability of ice forming in the winter. Downspouts may be discharged onto landscaped areas, provided the water is carried, by means of a concrete splash pad or extendable section so the point of discharge of the water is at least 2 m from the building. Landscaped surfaces adjacent to the walls of the buildings should be graded to slope away from the buildings at a gradient of at least 5% within 2 m of the buildings' perimeter. General landscaped areas should have grades of no less than 2% to minimize ponding.

### 5.3.8 Seismic Design

The site classification recommended for seismic site response is Classification D, as noted in Table 4.1.8.4.a of the 2019 National Building Code of Canada – Alberta Edition.

### 5.3.9 Cement Type

Based on soluble sulphate concentration test results from selected samples (23BH003 and 23BH004) taken during the field program and Tetra Tech's experience on local soils, the properties of concrete for foundations in contact with soil shall meet the requirements of the Canadian Standards Association (CSA) A23.1-14, Class S-2 exposure including water/cementing materials (w/cm) ratio of 0.45, air entrainment of 4% to 7% (for 14 mm to 20 mm nominal maximum aggregate size), and a minimum specified 56-day compressive strength of 32 MPa.

For this exposure classification, alternatives include the usage of Type HS (sulphate-resistant) Portland Cement or blends of cement and supplementary cementing materials conforming to Type HSb cements.

### 5.3.10 Frost Protection

For protection against frost action, all perimeter footings must be placed a minimum of 1.4 m below final grade for heated structures, or 2.1 m for unheated structures.

Pipes buried with less than 2.1 m of soil cover should be protected with insulation to avoid frost effects that might cause damage to, or breakage of, the pipes.

## 5.4 Stormwater Dry Pond Development

### 5.4.1 General

The geotechnical aspects of design and construction of the stormwater management facility, should be in accordance with the pertinent sections of the "*Stormwater Management Guidelines for the Province of Alberta*", dated March 2013 and prepared by the Municipal Program Development Branch of Alberta Environmental Protection. Detailed recommendations for the design and construction of this facility are provided in this section. In addition, consideration should be given to local municipal jurisdictional requirements for these types of facilities.

A stormwater dry pond is understood to be proposed for this development and is to be constructed within the upper reach of the coulee (Figure 2). Specific details of the dry pond, with respect to footprint and depth are still under consideration and have not yet been finalized. It is recommended that Tetra Tech be provided the opportunity to

review the final configuration, as well as the design and construction aspects of the facility prior to construction, to ensure that the following recommendations are adhered to.

## 5.4.2 Design Considerations

Due to the proximity of the coulee slopes, where the slope stability is sensitive to the moisture increase of the slope soils, the dry pond should be designed with minimal water infiltration during storm events. Clay liner should be installed at the pond bottom and extend up along the interior sideslopes to the maximum operation water level, this will reduce the amount of potential seepage into the slope soils. A weep tile could be installed under the bottom of the pond to collect leakage water and improve the rate of the pond bottom drying out for easy maintenance. The water detention should be limited to 24 hours after the storm events in accordance with dry pond design requirement.

The use of the native clay till materials with medium to high plasticity encountered on this site (or clay till blended with the upper clay) for construction of a remoulded clay liner for the pond is considered feasible, provided certain precautions are undertaken, as recommended in the following sections. Clay liner should be provided with a minimum thickness of 600 mm at the pond bottom and interior sideslopes.

It is recommended that below the normal water level, the interior sideslopes should be no steeper than 4H:1V to 5H:1V, with a minimum slope in the bottom of the pond of 1% (2% is preferred). The maximum exterior sideslopes should be no greater than 3H:1V.

## 5.4.3 Pond Construction

### 5.4.3.1 General Base Preparation

Full-time monitoring is recommended by suitably qualified persons, independent of the Contractor. One of the purposes of providing an adequate level of monitoring is to check that recommendations, based on data obtained at discrete borehole locations, are relevant to other areas of the site.

Following stripping of any organic material from the base and sideslopes of the pond, the containment basin areas should be over-excavated beneath the proposed invert elevation in order to allow sufficient thickness of compacted clay base liner. The clay soils within the base of the excavation should then be scarified to a minimum depth of 300 mm, moisture conditioned to between OMC and +2% of OMC, and recompacted to a minimum of 98% of SPD. The intent is to improve the base conditions and to provide a low permeable pond base, effectively increasing the clay liner thickness by 300 mm.

The basin sidewalls in the cut areas (up to the maximum operation water level) should also be over-excavated a sufficient amount to allow the construction of a compacted clay liner with the exposed subgrade scarified, moisture conditioned, and compacted as noted above.

Monitoring of excavated soils within the pond footprint is recommended so that unsuitable materials, such as low plastic silts or cohesionless sands if encountered, are wasted or incorporated only in general landscape areas (above the maximum operation water level), where low permeability is not a requirement.

The composition and consistencies of the soils encountered on site are such that conventional hydraulic excavators should be able to remove these materials. Cobbles and boulders may be present within the clay till matrix, albeit infrequently. General recommendations regarding backfill materials and compaction, as well as construction excavations are given in Appendix C

### 5.4.3.2 Remoulded Clay Liner

The following recommendations for the design and construction of remoulded clay liners are based on compliance with Alberta Environment's publication, "*Stormwater Management Guidelines for the Province of Alberta*", dated March 2013.

The plan dimensions of the excavation should exceed the final "toe-to-toe" interior basin dimensions to provide an overlap between the pond floor liner and berm or sideslope liner. The subgrade should be relatively level and proof-rolled to provide a good base for compacting the first liner lift to the specified density. Soft pockets that would prevent sufficient compaction of the liner must be over-excavated and replaced with compacted cohesive clay fill materials.

Careful site observation and testing will be required to avoid incorporating low or non-plastic materials into the liner. It is recommended that materials with a Liquid Limit of less than 30 not be incorporated into the liner; however, low plastic clays, silt, or sands not meeting liner requirements, may be used in the top area of the embankment above the maximum operation water level or outside the liner zone for berms.

Soil moisture contents for the clay till are generally variable with respect to the OMC for the composite clay till material. Moisture conditioning will be required during liner construction for the pond. Appropriate methods of moisture conditioning should be reviewed with qualified construction personnel prior to final design of the liner system.

Subsequent to the preparation of the pond floor (to 0.3 m depth), the excavated clay soils (liner borrow material) should be moisture conditioned to between OMC and +2% over the OMC. Each lift should then be compacted to a minimum of 98% of SPD in lifts of maximum 150 mm compacted thickness to a total placed liner thickness of 0.6 m for the base, as recommended above.

A maximum "clod" size of 100 mm during moisture conditioning (prior to compaction) will produce a relatively uniform moisture content throughout the soil matrix and a relatively homogenous compacted soil structure. The size of the "clods" can be controlled with agricultural equipment such as a disk. As far as practical, the liner should be built up in a uniform fashion over the containment basin area, in order to avoid sections of "butted fill" where seepage paths may develop. Compaction should be carried out utilizing "kneading" type compaction equipment such as vibratory padfoot or sheepfoot type compactors. Completed liner areas should have the surface smoothed by a vibratory smooth drum roller.

All general engineered fill placement in excavation cuts (or abutted to natural slopes following topsoil removal) must be 'notched' into the native slope materials a minimum of 0.5 m to ensure a bond with the native materials to reduce seepage.

## **6.0 SLOPE STABILITY ASSESSMENT AND DEVELOPMENT GUIDELINES**

### **6.1 Site Description**

As described in Section 4.1 the proposed residential development footprint, adjacent to slopes of a tributary coulee of the Oldman River, is generally orientated east-west (in the area of the proposed development).

The proposed subdivision is on the flat prairie land with elevations varying from approximately Elevation 897.5 m to Elevation 899.7 m. The coulee bottom adjacent to the development area varies from approximate Elevation 885 m from the west edge to 882 on the east edge of the development area with elevation differences ranging between 12.5 m and 15.5 m. Figures 3, 4, and 5 depict the general topography of the coulee, based on the survey information provided by Stantec.

### **6.2 Site Reconnaissance**

Tetra Tech personnel conducted a detailed site reconnaissance for the site. The reconnaissance included reviewing the existing condition of the slopes and a visual assessment of the slopes and areas at both the crest and toe of the slopes. The following pertinent points were noted:

- Groundwater seepage was not visible along the slopes; however, areas of lush vegetation were present along the slopes which may be an indication of high moisture condition of the slope soils (Photos 3 and 4). Two culverts were visible within the tributary coulee; one was present upstream of the tributary coulee (Photo 5), while another culvert was visible north of the site at the toe of the site slope surrounded by rip-rap (Photo 6).

Due to water meandering through the tributary coulee from the culverts, a drainage channel had formed along the toe of the slopes (Photo 7).

- Historical slope instability was evident along the upper portion of the slope face directly north of the site in the form of slumping (Photos 4 and 8).
- The entire slope north of the site was well vegetated by grass and shrubs, with trees located nearer to the toe of the slope (Photos 3, 4, 6, and 7).

## 6.3 Slope Stability Analysis

### 6.3.1 General

Tetra Tech conducted a slope stability analysis using modelling software, Slope/W by GeoStudio (2012). Slope geometry was based on elevation contours which were provided by Stantec. Based on the elevation contour data, three (3) representative slope cross-sections (A-A', B-B', and C-C') were generated and reviewed (Figure 3).

The minimum safe development setback distance was determined based on a minimum Factor of Safety (FOS) against slope instability of 1.5. This FOS is considered to be the current engineering standard for this type of development.

### 6.3.2 Soil Strength Parameters

Assumed soil strength parameters used in the analysis were based on the test results and Tetra Tech's local experience on similar soils in this area. Groundwater parameters were selected by Tetra Tech to represent post-development conditions assuming an increase in soil moisture caused by the development (lawn irrigation, limited leakage from dry pond installed with clay liner, etc.) and reduced evapotranspiration due to development cover (streets, sidewalks, residential dwellings, etc.).

The soil strength and groundwater parameters selected for the analyses, modelling the worst-case conditions (post-development), were as follows:

#### Material: Clay (CH)

- Unit Weight: 18.5 kN/m<sup>3</sup>
- Cohesive Intercept c': 0 kPa
- Friction Angle: 24°/12° (peak/residual)
- Pore Water Pressure Parameter r<sub>u</sub>: 0.2

#### Material: Clay and Clay Till (CL-CI)

- Unit Weight: 19 kN/m<sup>3</sup>
- Cohesive Intercept c': 0 kPa
- Friction Angle: 28°
- Pore Water Pressure Parameter r<sub>u</sub>: 0.2

### 6.3.3 Long-Term Stability

The present stability of the slopes adjacent to the proposed development area has been reviewed based on the site reconnaissance, analyses using Limit Equilibrium Modelling (Slope/W by GeoStudio), and past experience with other slope stability assessments of the Oldman River Valley and coulee slopes in this area. Visual observations of the slopes in the project area indicate that the slopes are generally in stable conditions.

A parametric study was conducted on the slope sections to model the observed slope conditions by varying pore water pressure coefficients and the soil parameters. The parametric study included the used of residual friction angles in the upper high plastic clay and the high plastic clay within the upper zone of the clay till.

Based on the stability analyses and findings during the site reconnaissance, three potential failure mechanisms are identified for long-term considerations under assumed post-construction conditions, as follows:

- Surficial slope failure due to the loss of suction of slope soils during precipitate events.
- Shallow rotational failure or transitional failure along the upper high plastic clay layer.
- Medium depth combined rotational failure or transitional failure along the high plastic clay layer within the clay till deposit.

### 6.3.4 Impact of Development

Site development generally results in an increase in soil moisture due to irrigation, reduced evapotranspiration due to increased soil cover and reduced vegetation, septic field systems, and other buried utilities, etc. The anticipated increase in soil moisture has been incorporated into the stability model.

Development of the site will bring about changes in the factors which contribute to the present stability of the slopes. Evaporation of soil moisture will be reduced by the presence of ground cover (from structures, roadways, parking areas, etc.). Irrigation and possible leakage of water from underground utilities and the dry pond will increase the amount of water infiltrating the site subsoils. This combination of reduced evaporation of subsoil moisture and increased infiltration of water to the subsoils is considered to be the most significant influence of development on the factors that contribute to the future stability of the slopes. Increasing soil moisture content produces a reduction in the apparent cohesion and effective stress of the slope soils, resulting in a decrease of soils resistant strength against slope failures. For post-development analysis, the pore water pressure  $ru$  were selected to model anticipated increase in soil moisture. The results of the analysis, using the revised parameters and attaining FOS of 1.5, established the development setback requirements as presented in Section 6.4 and Figure 3.

## 6.4 Development Setback Requirements

Based on the results of the slope stability analyses, as well as local experience and the information discussed herein, Tetra Tech has determined the minimum development setback distance which is a minimum 16 m from the Top of Bank<sup>1</sup> and presented on Figure 3. The development setback distances have been determined by establishing a point within the subject site which results in a minimum FOS of 1.5 against slope instability impacting the development.

---

<sup>1</sup> Top-of-Bank: means the line where the general trend of the slope changes from greater than 15% to less than 15% and remains at less than 15%, as determined by field survey.

## 6.5 Development Guidelines

Precautionary measures, which should be included in the geotechnical aspects of the design of the proposed development, are outlined as follows:

- Any fill excavated from basements should be disposed of well away from the slope, and well behind the development setback line.
- Positive grading should be provided to ensure drainage off of the upper part of the property (i.e., at Top-of-Bank) is directed as sheet flow over the crest of the slopes (i.e., avoiding concentrating the flow which causes erosion).
- All utilities and plumbing should be carefully installed and regularly inspected to ensure they are in good working order.
- Normal, prudent design and construction procedures should be followed during development of the residences, including consideration of stormwater management. Stormwater retention facilities should be kept well away from the development setback line with clay liner to be installed, unless the recommendations contained in this report are strictly followed.
- The zone between the development setback line and Top-of-Bank should be treated as a restricted development zone. This involves the following:
  - Maintain vegetation cover.
  - No irrigation or discharge of water for any reason.
  - Earthworks is not allowed without review by a geotechnical engineer.
  - No dumping of grass cuttings, branches, or other materials of any kind.

Notwithstanding the recommendations discussed above, some surficial sloughing and slope movement may occur. The purpose of the development setback is not to prevent slope failure, but rather, to protect the development from being affected by the failure when it occurs.

## 7.0 DESIGN AND CONSTRUCTION GUIDELINES

Recommended general design and construction guidelines are provided in Appendix C, under the following headings:

- Shallow Foundations
- Construction Excavations
- Backfill Materials and Compaction
- Floor Slabs-on-Grade

These guidelines are intended to present standards of good practice. Although supplemental to the main text of this report, they should be interpreted as part of the report. Design recommendations presented herein are based on the premise that these guidelines will be followed. The design and construction guidelines are not intended to represent detailed specifications for the works although they may prove useful in the preparation of such specifications. In the event of any discrepancy between the main text of this report and Appendix C, the main text should govern.

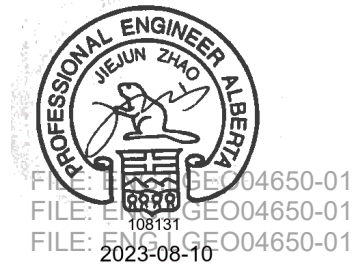
## 8.0 CLOSURE

We trust this report meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,  
Tetra Tech Canada Inc.



FILE: ENG.LGEO04650-01  
FILE: ENG.LGEO04650-01  
FILE: ENG.LGEO04650-01



PROFESSIONAL ENGINEER ALBERTA  
JIEJUN ZHAO  
108131  
2023-08-10  
FILE: ENG.LGEO04650-01  
FILE: ENG.LGEO04650-01  
FILE: ENG.LGEO04650-01

Prepared by:  
Jackson Meadows, C.E.T.  
Geotechnical Project Manager  
Prairie Engineering  
Direct Line: 587.220.3801  
jackson.meadows@tetrattech.com

Reviewed by:  
Jiejun Zhao, P.Eng.  
Senior Geotechnical Engineer  
Prairie Engineering  
Direct Line: 403.359.6513  
jiejun.zhao@tetrattech.com

<p><b>PERMIT TO PRACTICE TETRA TECH CANADA INC.</b></p> <p>RM SIGNATURE: _____</p> <p>RM APEGA ID #: _____</p> <p>DATE: _____</p> <p><b>PERMIT NUMBER: P013774</b></p> <p>The Association of Professional Engineers and Geoscientists of Alberta (APEGA)</p>
--

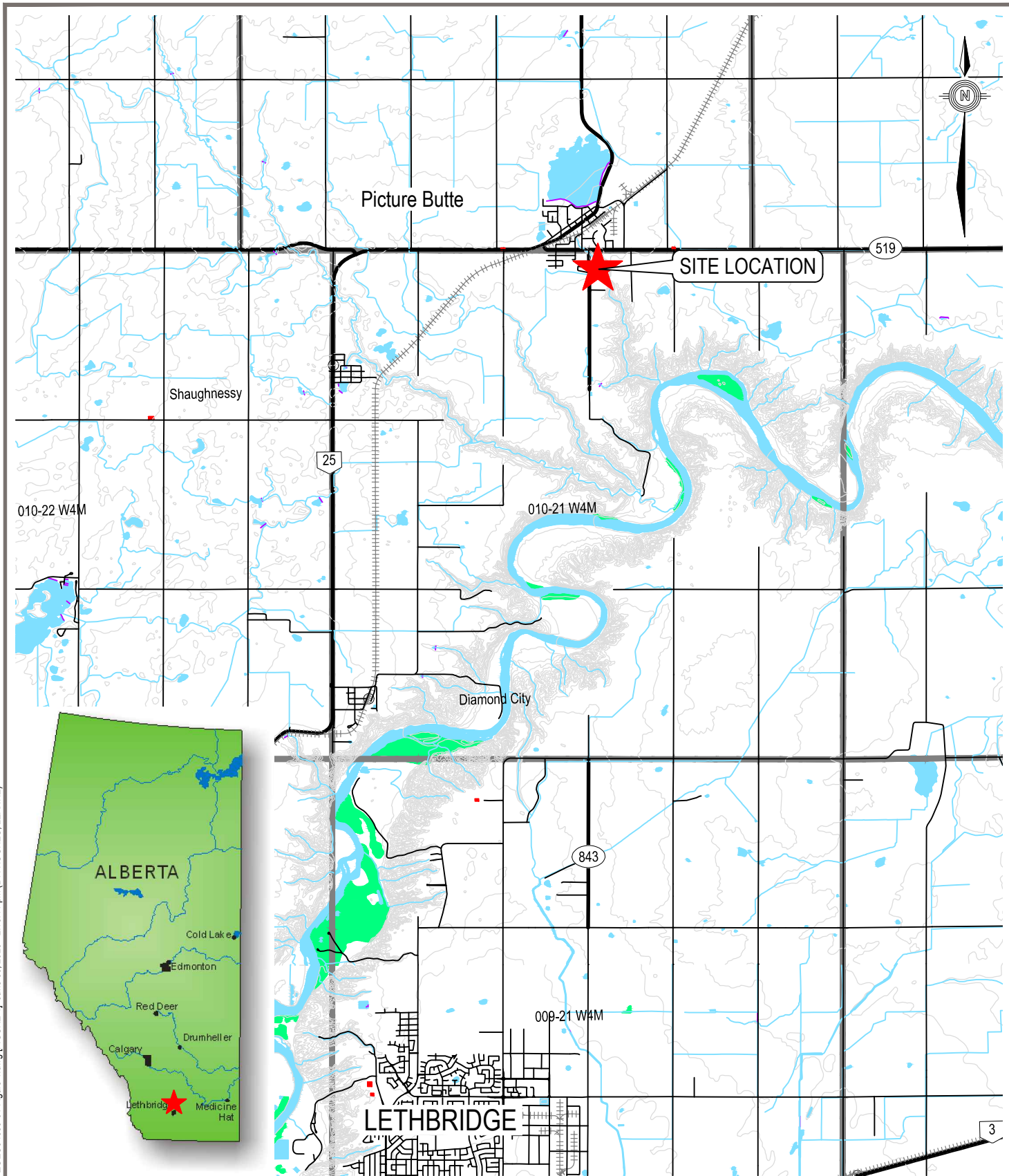
# FIGURES

---

Figure 1	Site Plan
Figure 2	Borehole Location Plan
Figure 3	Site Plan Showing Site Survey
Figure 4	Section A and B
Figure 5	Section C
Figure 5	Development Setback Limits







C:\Lethbridge\Drafting\ENG.LGEO\4650\CAD\LGEO04650-01 Figure 1.dwg [FIGURE 1] June 30, 2023 - 2:13:11 pm (BY: HUGHES, LEANNE)

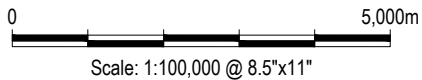
**NOTES**  
 DRAWING PROVIDED BY "© Department of Natural Resources Canada. All rights reserved."

CLIENT

**Stantec Consulting Ltd.**

**PICTURE BUTTE  
 OAK POINTE DEVELOPMENT**

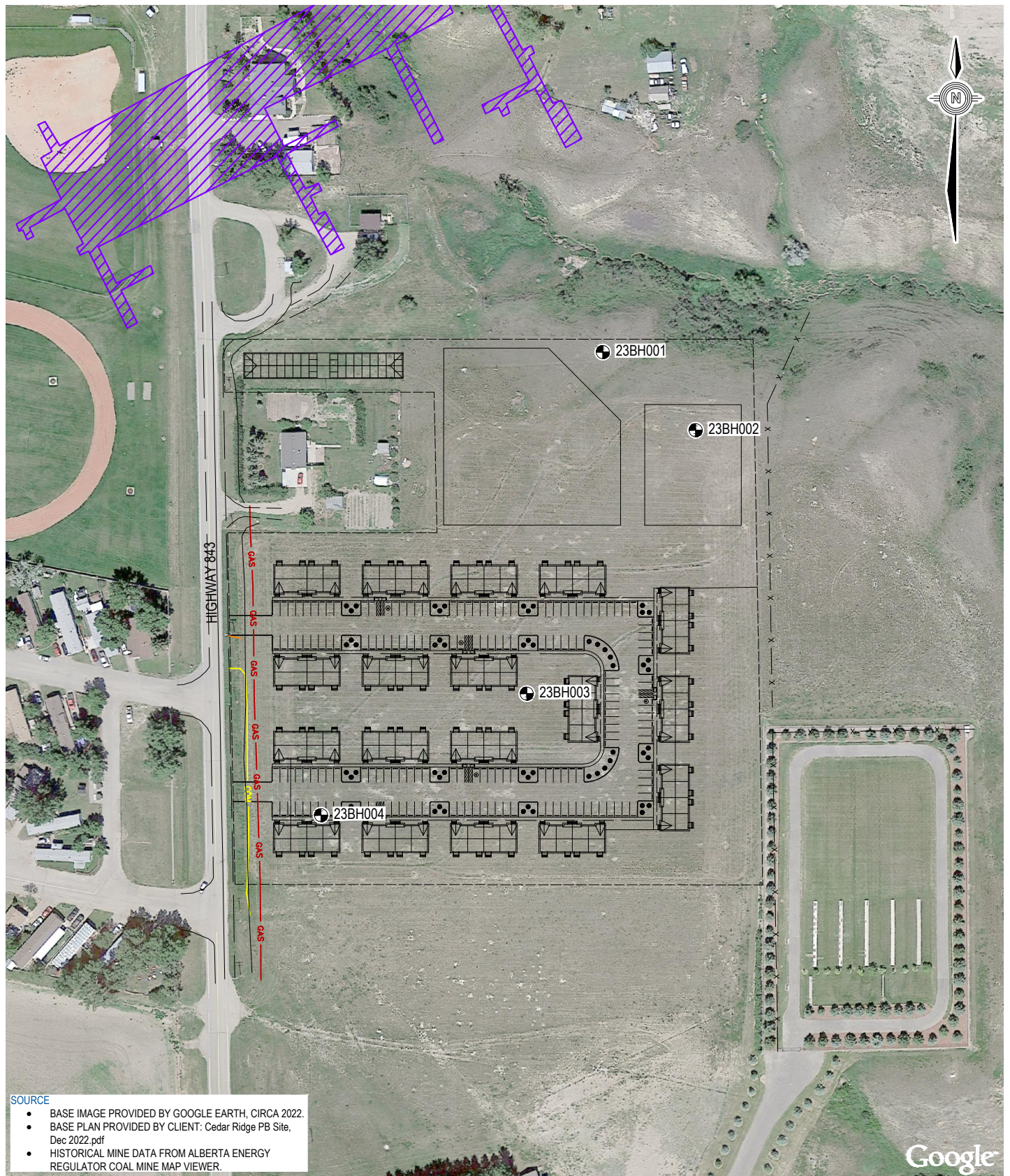
**SITE LOCATION PLAN**



PROJECT NO. ENG.LGEO04650-01	DWN LCH	CKD JM	REV 0
OFFICE Tt Leth	DATE June 2023		

**Figure 1**

C:\Lethbridge\Drafting\ENG.LGEO\LGEO04650\CAD\LGEO04650-01 Figure 2.3,4,5,6.dwg [FIGURE 2] July 24, 2023 - 11:38:17 am (BY: HUGHES, LEANNE)



**SOURCE**

- BASE IMAGE PROVIDED BY GOOGLE EARTH, CIRCA 2022.
- BASE PLAN PROVIDED BY CLIENT: Cedar Ridge PB Site, Dec 2022.pdf
- HISTORICAL MINE DATA FROM ALBERTA ENERGY REGULATOR COAL MINE MAP VIEWER.

**LEGEND**

- BOREHOLE LOCATION
- ▨ HISTORICAL MINE LOCATION

0 100m

Scale: 1:2,000 @ 8.5"x11"

CLIENT

**Stantec Consulting Ltd.**

**TETRA TECH**

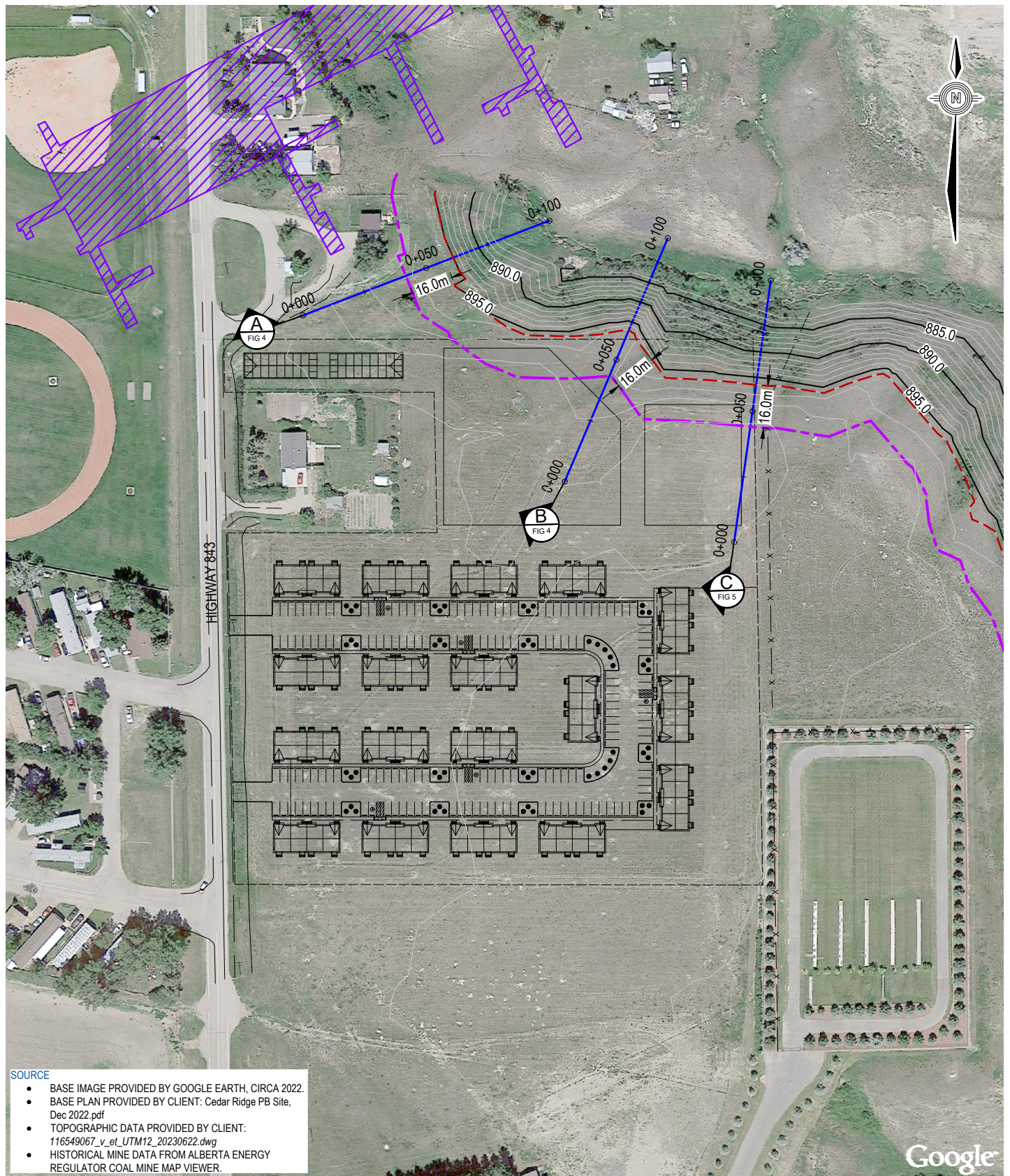
**PICTURE BUTTE OAK POINTE DEVELOPMENT**

**BOREHOLE LOCATION PLAN**

PROJECT NO. ENG.LGEO04650-01	DWN LCH	CKD JM	REV 0
OFFICE Tt Leth	DATE July 2023		

**Figure 2**

C:\Lethbridge\Drafting\ENG.LGEO\LGEO04650\CAD\LGEO04650-01 Figure 2,3,4,5,6.dwg [FIGURE 3] July 17, 2023 - 11:40:43 am (BY: HUGHES, LEANNE)



- SOURCE**
- BASE IMAGE PROVIDED BY GOOGLE EARTH, CIRCA 2022.
  - BASE PLAN PROVIDED BY CLIENT: Cedar Ridge PB Site, Dec 2022.pdf
  - TOPOGRAPHIC DATA PROVIDED BY CLIENT: 116549067\_v\_et\_UTM12\_20230622.dwg
  - HISTORICAL MINE DATA FROM ALBERTA ENERGY REGULATOR COAL MINE MAP VIEWER.

**LEGEND**

- 1.0 m CONTOUR
- CROSS SECTION LOCATION
- DEVELOPMENT SETBACK LINE
- TOP OF BANK
- HISTORICAL MINE LOCATION

0 100m

Scale: 1:2,000 @ 8.5"x11"

CLIENT

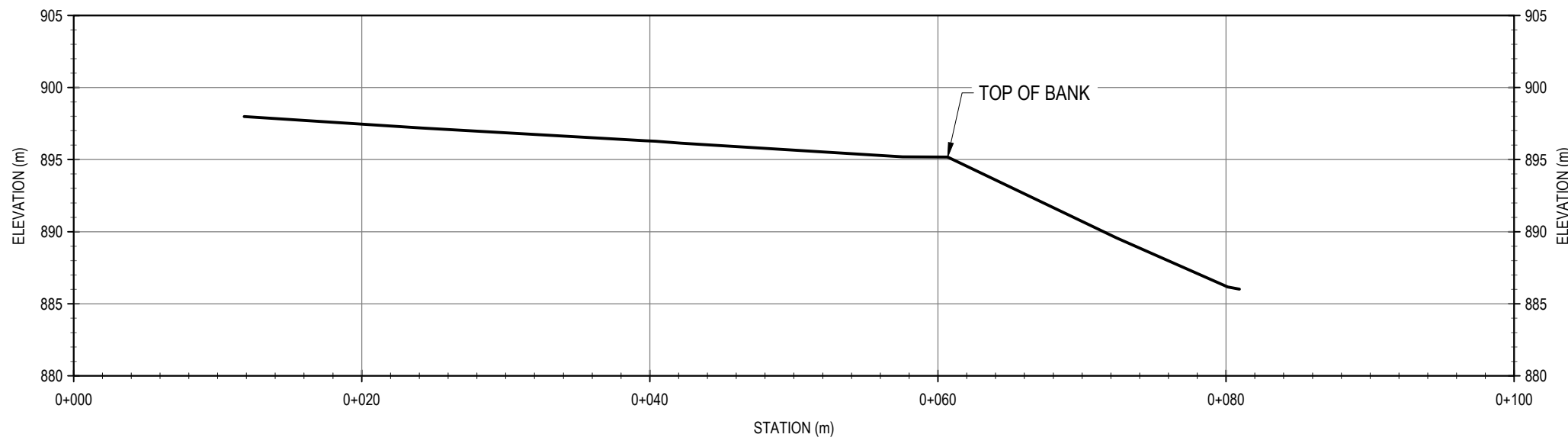
**Stantec Consulting Ltd.**

**PICTURE BUTTE  
OAK POINTE DEVELOPMENT**

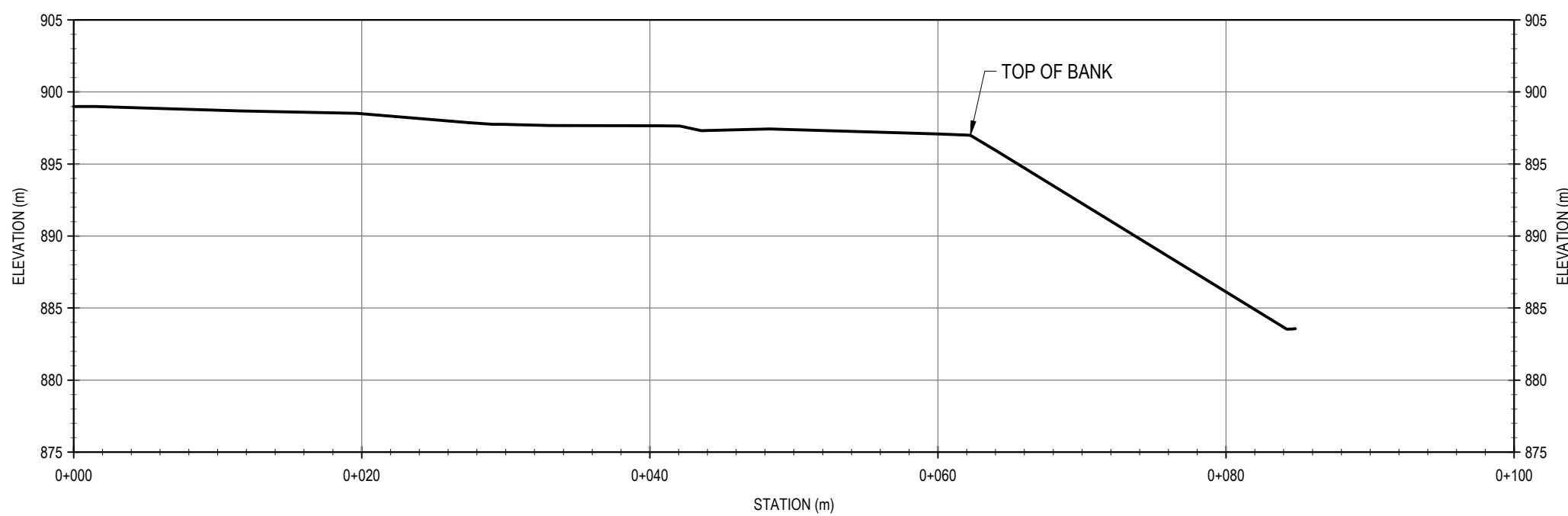
**SITE PLAN SHOWING SITE SURVEY**

PROJECT NO. ENG.LGEO04650-01	DWN LCH	CKD JM	REV 0
OFFICE Tt Leth	DATE June 2023		

**Figure 3**

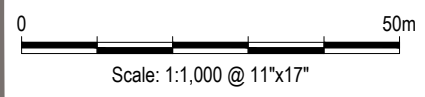


**Section A**



**Section B**

**LEGEND**  
 EXISTING GRADE PROFILE



**SOURCE**  
 • TOPOGRAPHIC DATA PROVIDED BY CLIENT:  
 116549067\_v\_et\_UTM12\_20230622.dwg

**NOTE**  
 • DIMENSIONS AND ELEVATIONS ARE IN METRES, UNLESS NOTED OTHERWISE.

**CLIENT**  
 Stantec Consulting Ltd.



**PICTURE BUTTE  
 OAK POINTE DEVELOPMENT**

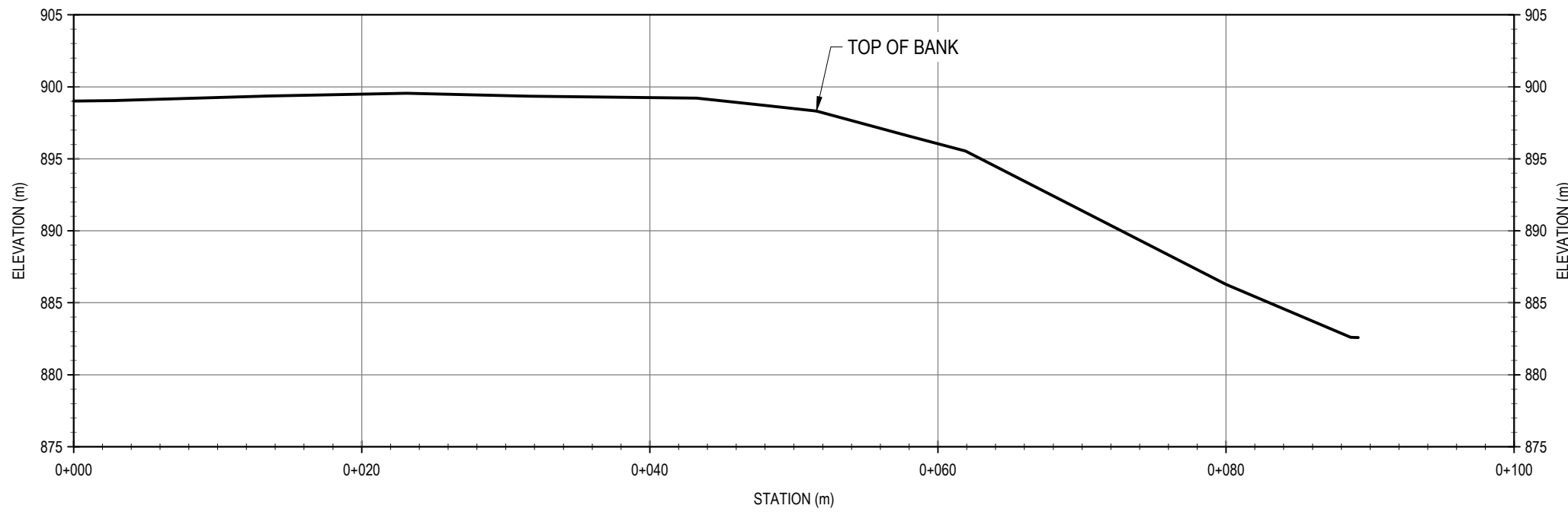
**CROSS SECTIONS A AND B**

PROJECT NO. ENG.LGE004650-01	DWN LCH	CKD JM	REV 0
OFFICE Tt Leth	DATE July 2023		


**Figure 4**

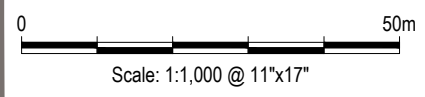
C:\lethbridge\Drafting\ENG.LGE004650\CAD\LGE004650-01 Figure 2,3,4,5,6.dwg [FIGURE 4] July 24, 2023 - 11:38:50 am (BY: HUGHES, LEANNE)

C:\lethbridge\Drafting\ENG.LGEOL\GEO04650\CAD\LGEOL\GEO04650-01 Figure 2,3,4,5,6.dwg [FIGURE 5] July 24, 2023 - 11:39:23 am (BY: HUGHES, LEANNE)



**Section C**

**LEGEND**  
 EXISTING GRADE PROFILE



**SOURCE**

- TOPOGRAPHIC DATA PROVIDED BY CLIENT:  
116549067\_v\_et\_UTM12\_20230622.dwg

**NOTE**

- DIMENSIONS AND ELEVATIONS ARE IN METRES, UNLESS NOTED OTHERWISE.

**CLIENT**  
**Stantec Consulting Ltd.**



**PICTURE BUTTE  
 OAK POINTE DEVELOPMENT**

**CROSS SECTION C**

PROJECT NO. ENG.LGE004650-01	DWN LCH	CKD JM	REV 0
OFFICE Tt Leth	DATE July 2023		

**Figure 5**



# PHOTOGRAPHS

---

Photo 1	Northwest End of the Site – Facing East.
Photo 2	Northeast End of the Site – Facing Northwest.
Photo 3	Across Tributary Coulee – Facing South at Site Slope.
Photo 4	Across Tributary Coulee – Facing Southwest at Site Slope.
Photo 5	Culvert Upstream of the Tributary Coulee.
Photo 6	Culvert Along Site Slope.
Photo 7	Channel Visible at the Toe of the Site Slope – Facing South Across the Tributary Coulee.
Photo 8	Historical Instability on Slope North of Site – Facing East.







**Photo 1:** Northwest End of the Site – Facing East.



**Photo 2:** Northeast End of the Site – Facing Northwest.



**Photo 3:** Across Tributary Coulee – Facing South Toward the Site Slope.



**Photo 4:** Across Tributary Coulee – Facing Southwest Toward the Site Slope.



**Photo 5:** Culvert Upstream of the Tributary Coulee.



**Photo 6:** Culvert Along Site Slope.



**Photo 7:** Channel Visible at the Toe of the Site Slope – Facing South Across the Tributary Coulee.



**Photo 8:** Historical Instability on Slope North of Site – Facing East.

# APPENDIX A

## LIMITATIONS ON USE OF THIS DOCUMENT

---



# LIMITATIONS ON USE OF THIS DOCUMENT

## GEOTECHNICAL

### 1.1 USE OF DOCUMENT AND OWNERSHIP

This document pertains to a specific site, a specific development, and a specific scope of work. The document may include plans, drawings, profiles and other supporting documents that collectively constitute the document (the "Professional Document").

The Professional Document is intended for the sole use of TETRA TECH's Client (the "Client") as specifically identified in the TETRA TECH Services Agreement or other Contractual Agreement entered into with the Client (either of which is termed the "Contract" herein). TETRA TECH does not accept any responsibility for the accuracy of any of the data, analyses, recommendations or other contents of the Professional Document when it is used or relied upon by any party other than the Client, unless authorized in writing by TETRA TECH.

Any unauthorized use of the Professional Document is at the sole risk of the user. TETRA TECH accepts no responsibility whatsoever for any loss or damage where such loss or damage is alleged to be or, in fact, caused by the unauthorized use of the Professional Document.

Where TETRA TECH has expressly authorized the use of the Professional Document by a third party (an "Authorized Party"), consideration for such authorization is the Authorized Party's acceptance of these Limitations on Use of this Document as well as any limitations on liability contained in the Contract with the Client (all of which is collectively termed the "Limitations on Liability"). The Authorized Party should carefully review both these Limitations on Use of this Document and the Contract prior to making any use of the Professional Document. Any use made of the Professional Document by an Authorized Party constitutes the Authorized Party's express acceptance of, and agreement to, the Limitations on Liability.

The Professional Document and any other form or type of data or documents generated by TETRA TECH during the performance of the work are TETRA TECH's professional work product and shall remain the copyright property of TETRA TECH.

The Professional Document is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of TETRA TECH. Additional copies of the Document, if required, may be obtained upon request.

### 1.2 ALTERNATIVE DOCUMENT FORMAT

Where TETRA TECH submits electronic file and/or hard copy versions of the Professional Document or any drawings or other project-related documents and deliverables (collectively termed TETRA TECH's "Instruments of Professional Service"), only the signed and/or sealed versions shall be considered final. The original signed and/or sealed electronic file and/or hard copy version archived by TETRA TECH shall be deemed to be the original. TETRA TECH will archive a protected digital copy of the original signed and/or sealed version for a period of 10 years.

Both electronic file and/or hard copy versions of TETRA TECH's Instruments of Professional Service shall not, under any circumstances, be altered by any party except TETRA TECH. TETRA TECH's Instruments of Professional Service will be used only and exactly as submitted by TETRA TECH.

Electronic files submitted by TETRA TECH have been prepared and submitted using specific software and hardware systems. TETRA TECH makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

### 1.3 STANDARD OF CARE

Services performed by TETRA TECH for the Professional Document have been conducted in accordance with the Contract, in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions in the jurisdiction in which the services are provided. Professional judgment has been applied in developing the conclusions and/or recommendations provided in this Professional Document. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of the Professional Document.

If any error or omission is detected by the Client or an Authorized Party, the error or omission must be immediately brought to the attention of TETRA TECH.

### 1.4 DISCLOSURE OF INFORMATION BY CLIENT

The Client acknowledges that it has fully cooperated with TETRA TECH with respect to the provision of all available information on the past, present, and proposed conditions on the site, including historical information respecting the use of the site. The Client further acknowledges that in order for TETRA TECH to properly provide the services contracted for in the Contract, TETRA TECH has relied upon the Client with respect to both the full disclosure and accuracy of any such information.

### 1.5 INFORMATION PROVIDED TO TETRA TECH BY OTHERS

During the performance of the work and the preparation of this Professional Document, TETRA TECH may have relied on information provided by third parties other than the Client.

While TETRA TECH endeavours to verify the accuracy of such information, TETRA TECH accepts no responsibility for the accuracy or the reliability of such information even where inaccurate or unreliable information impacts any recommendations, design or other deliverables and causes the Client or an Authorized Party loss or damage.

### 1.6 GENERAL LIMITATIONS OF DOCUMENT

This Professional Document is based solely on the conditions presented and the data available to TETRA TECH at the time the data were collected in the field or gathered from available databases.

The Client, and any Authorized Party, acknowledges that the Professional Document is based on limited data and that the conclusions, opinions, and recommendations contained in the Professional Document are the result of the application of professional judgment to such limited data.

The Professional Document is not applicable to any other sites, nor should it be relied upon for types of development other than those to which it refers. Any variation from the site conditions present, or variation in assumed conditions which might form the basis of design or recommendations as outlined in this document, at or on the development proposed as of the date of the Professional Document requires a supplementary exploration, investigation, and assessment.

TETRA TECH is neither qualified to, nor is it making, any recommendations with respect to the purchase, sale, investment or development of the property, the decisions on which are the sole responsibility of the Client.



## 1.7 ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, TETRA TECH has not been retained to explore, address or consider and has not explored, addressed or considered any environmental or regulatory issues associated with development on the subject site.

## 1.8 NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

Classification and identification of soils and rocks are based upon commonly accepted systems, methods and standards employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from the system or method prevail, they are specifically mentioned.

Classification and identification of geological units are judgmental in nature as to both type and condition. TETRA TECH does not warrant conditions represented herein as exact, but infers accuracy only to the extent that is common in practice.

Where subsurface conditions encountered during development are different from those described in this report, qualified geotechnical personnel should revisit the site and review recommendations in light of the actual conditions encountered.

## 1.9 LOGS OF TESTHOLES

The testhole logs are a compilation of conditions and classification of soils and rocks as obtained from field observations and laboratory testing of selected samples. Soil and rock zones have been interpreted. Change from one geological zone to the other, indicated on the logs as a distinct line, can be, in fact, transitional. The extent of transition is interpretive. Any circumstance which requires precise definition of soil or rock zone transition elevations may require further investigation and review.

## 1.10 STRATIGRAPHIC AND GEOLOGICAL INFORMATION

The stratigraphic and geological information indicated on drawings contained in this report are inferred from logs of test holes and/or soil/rock exposures. Stratigraphy is known only at the locations of the test hole or exposure. Actual geology and stratigraphy between test holes and/or exposures may vary from that shown on these drawings. Natural variations in geological conditions are inherent and are a function of the historical environment. TETRA TECH does not represent the conditions illustrated as exact but recognizes that variations will exist. Where knowledge of more precise locations of geological units is necessary, additional exploration and review may be necessary.

## 1.11 PROTECTION OF EXPOSED GROUND

Excavation and construction operations expose geological materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration. Unless otherwise specifically indicated in this report, the walls and floors of excavations must be protected from the elements, particularly moisture, desiccation, frost action and construction traffic.

## 1.12 SUPPORT OF ADJACENT GROUND AND STRUCTURES

Unless otherwise specifically advised, support of ground and structures adjacent to the anticipated construction and preservation of adjacent ground and structures from the adverse impact of construction activity is required.

## 1.13 INFLUENCE OF CONSTRUCTION ACTIVITY

Construction activity can impact structural performance of adjacent buildings and other installations. The influence of all anticipated construction activities should be considered by the contractor, owner, architect and prime engineer in consultation with a geotechnical engineer when the final design and construction techniques, and construction sequence are known.

## 1.14 OBSERVATIONS DURING CONSTRUCTION

Because of the nature of geological deposits, the judgmental nature of geotechnical engineering, and the potential of adverse circumstances arising from construction activity, observations during site preparation, excavation and construction should be carried out by a geotechnical engineer. These observations may then serve as the basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein.

## 1.15 DRAINAGE SYSTEMS

Unless otherwise specified, it is a condition of this report that effective temporary and permanent drainage systems are required and that they must be considered in relation to project purpose and function. Where temporary or permanent drainage systems are installed within or around a structure, these systems must protect the structure from loss of ground due to mechanisms such as internal erosion and must be designed so as to assure continued satisfactory performance of the drains. Specific design details regarding the geotechnical aspects of such systems (e.g. bedding material, surrounding soil, soil cover, geotextile type) should be reviewed by the geotechnical engineer to confirm the performance of the system is consistent with the conditions used in the geotechnical design.

## 1.16 DESIGN PARAMETERS

Bearing capacities for Limit States or Allowable Stress Design, strength/stiffness properties and similar geotechnical design parameters quoted in this report relate to a specific soil or rock type and condition. Construction activity and environmental circumstances can materially change the condition of soil or rock. The elevation at which a soil or rock type occurs is variable. It is a requirement of this report that structural elements be founded in and/or upon geological materials of the type and in the condition used in this report. Sufficient observations should be made by qualified geotechnical personnel during construction to assure that the soil and/or rock conditions considered in this report in fact exist at the site.

## 1.17 SAMPLES

TETRA TECH will retain all soil and rock samples for 30 days after this report is issued. Further storage or transfer of samples can be made at the Client's expense upon written request, otherwise samples will be discarded.

## 1.18 APPLICABLE CODES, STANDARDS, GUIDELINES & BEST PRACTICE

This document has been prepared based on the applicable codes, standards, guidelines or best practice as identified in the report. Some mandated codes, standards and guidelines (such as ASTM, AASHTO Bridge Design/Construction Codes, Canadian Highway Bridge Design Code, National/Provincial Building Codes) are routinely updated and corrections made. TETRA TECH cannot predict nor be held liable for any such future changes, amendments, errors or omissions in these documents that may have a bearing on the assessment, design or analyses included in this report.

# APPENDIX B

## BOREHOLE LOGS

---



# TERMS USED ON BOREHOLE LOGS

## TERMS DESCRIBING CONSISTENCY OR CONDITION

**COARSE GRAINED SOILS** (major portion retained on 0.075mm sieve): Includes (1) clean gravels and sands, and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as inferred from laboratory or in situ tests.

DESCRIPTIVE TERM	RELATIVE DENSITY	N (blows per 0.3m)
Very Loose	0 TO 20%	0 to 4
Loose	20 TO 40%	4 to 10
Compact	40 TO 75%	10 to 30
Dense	75 TO 90%	30 to 50
Very Dense	90 TO 100%	greater than 50

The number of blows, N, on a 51mm O.D. split spoon sampler of a 63.5kg weight falling 0.76m, required to drive the sampler a distance of 0.3m from 0.15m to 0.45m.

**FINE GRAINED SOILS** (major portion passing 0.075mm sieve): Includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as estimated from laboratory or in situ tests.

DESCRIPTIVE TERM	UNCONFINED COMPRESSIVE STRENGTH (KPA)
Very Soft	Less than 25
Soft	25 to 50
Firm	50 to 100
Stiff	100 to 200
Very Stiff	200 to 400
Hard	Greater than 400

**NOTE:** Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes of weakness or cracks in the soil.

## GENERAL DESCRIPTIVE TERMS

**Slickensided** - having inclined planes of weakness that are slick and glossy in appearance.

**Fissured** - containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.

**Laminated** - composed of thin layers of varying colour and texture.

**Interbedded** - composed of alternate layers of different soil types.

**Calcareous** - containing appreciable quantities of calcium carbonate.;

**Well graded** - having wide range in grain sizes and substantial amounts of intermediate particle sizes.

**Poorly graded** - predominantly of one grain size, or having a range of sizes with some intermediate size missing.

# MODIFIED UNIFIED SOIL CLASSIFICATION

MAJOR DIVISION		GROUP SYMBOL	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA		
<b>COARSE-GRAINED SOILS</b> More than 50% retained on 75 µm sieve*	<b>GRAVELS</b> 50% or more of coarse fraction retained on 4.75 mm sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	$C_u = D_{60} / D_{10}$ Greater than 4 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting both criteria for GW	
		GRAVELS WITH FINES	GP	Poorly graded gravels and gravel-sand mixtures, little or no fines		
		<b>SANDS</b> More than 50% of coarse fraction passes 4.75 mm sieve	CLEAN SANDS	GM		Silty gravels, gravel-sand-silt mixtures
			SANDS WITH FINES	GC		Clayey gravels, gravel-sand-clay mixtures
	<b>FINE-GRAINED SOILS (by behavior)</b> 50% or more passes 75 µm sieve*	<b>SILTS</b> Liquid limit	<50	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands of slight plasticity	For classification of fine-grained soils and fine fraction of coarse-grained soils. <div style="text-align: center;"> <b>PLASTICITY CHART</b> </div>
			>50	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts	
		<b>CLAYS</b> Above "A" line on plasticity chart negligible organic content Liquid limit	<30	CL	Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays	
			30-50	CI	Inorganic clays of medium plasticity, silty clays	
			>50	CH	Inorganic clays of high plasticity, fat clays	
		<b>ORGANIC SILTS AND CLAYS</b> Liquid limit	<50	OL	Organic silts and organic silty clays of low plasticity	
>50	OH		Organic clays of medium to high plasticity			
<b>HIGHLY ORGANIC SOILS</b>		PT	Peat and other highly organic soils	*Based on the material passing the 75 mm sieve Reference: ASTM Designation D2487, for identification procedure see D2488. USC as modified by PFRA		

SOIL COMPONENTS				OVERSIZE MATERIAL	
FRACTION	SIEVE SIZE		DEFINING RANGES OF PERCENTAGE BY MASS OF MINOR COMPONENTS		Rounded or subrounded COBBLES 75 mm to 300 mm BOULDERS > 300 mm
	PASSING	RETAINED	PERCENTAGE	DESCRIPTOR	
GRAVEL coarse fine	75 mm	19 mm	>35 %	"and"	Not rounded ROCK FRAGMENTS >75 mm ROCKS > 0.76 cubic metre in volume
	19 mm	4.75 mm	21 to 35 %	"y-adjective"	
SAND coarse medium fine	4.75 mm	2.00 mm	10 to 20 %	"some"	
	2.00 mm	425 µm	>0 to 10 %	"trace"	
	425 µm	75 µm			
SILT (non plastic) or CLAY (plastic)	75 µm		as above but by behavior		

TT\_Modified Unified Soil Classification.cdr

# BOREHOLE KEYSHEET

## Water Level Measurement



Measured in standpipe,  
piezometer or well



Inferred

## Sample Types



A-Casing



Core



Disturbed, Bag,  
Grab



HQ Core



Jar



Jar and Bag



NQ Core



No Recovery



Split Spoon/SPT



Tube

## Backfill Materials



Asphalt



Bentonite



Cement/  
Grout



Drill Cuttings



Grout



Gravel



Sand



Slough



Topsoil Backfill

## Lithology - Graphical Legend<sup>1</sup>



Asphalt



Bedrock



Cobbles/Boulders



Clay



Coal



Concrete



Fill



Gravel



Limestone



Mudstone



Organics



Peat



Sand



Sandstone



Shale



Silt



Siltstone



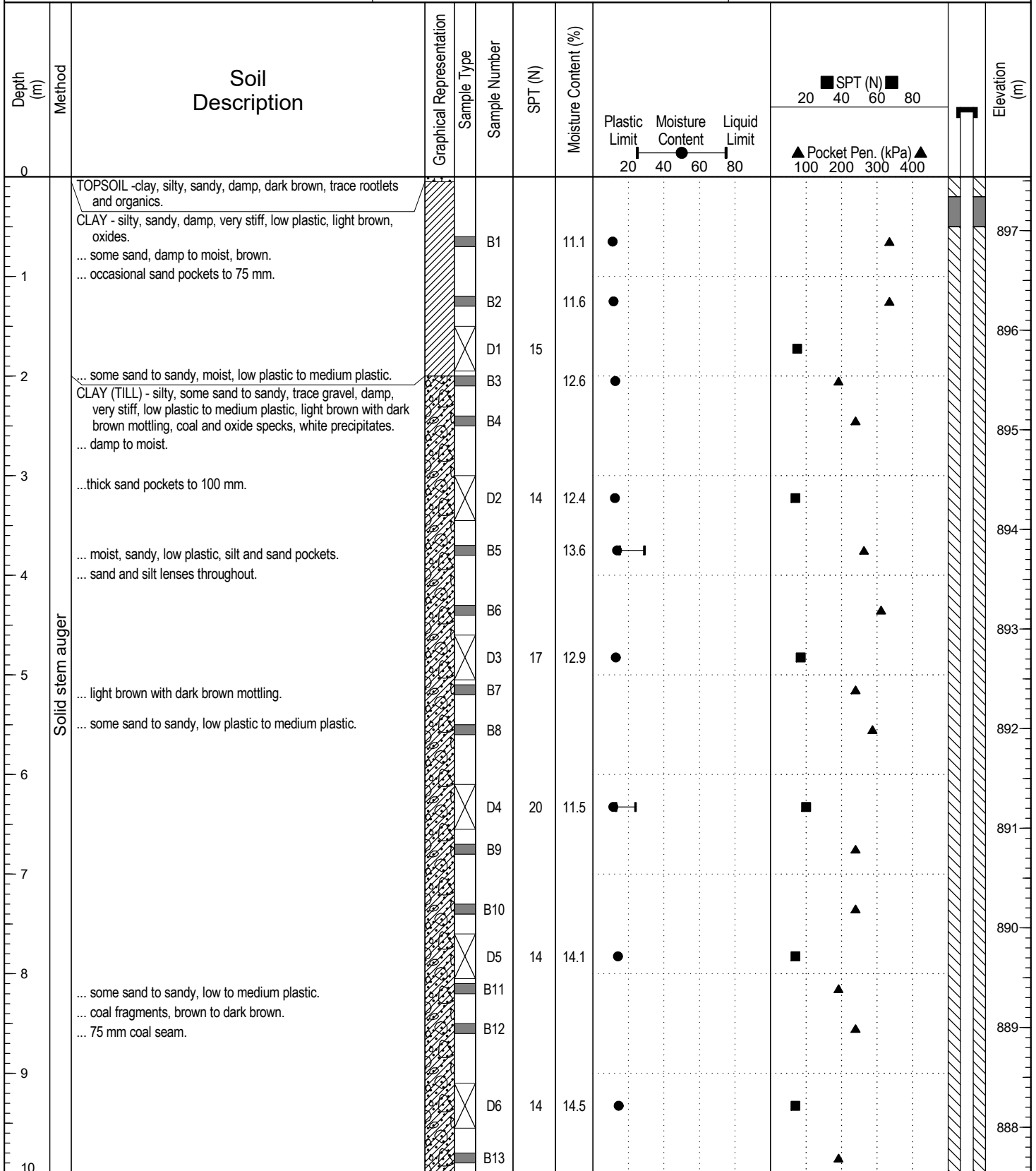
Till



Topsoil

1. The graphical legend is an approximation and for visual representation only. Soil strata may comprise a combination of the basic symbols shown above. Particle sizes are not drawn to scale





Contractor: CHILAKO DRILLING LTD.

Completion Depth: 24.8 m

Equipment Type: 150mm Solid Stem

Start Date: June 20, 2023

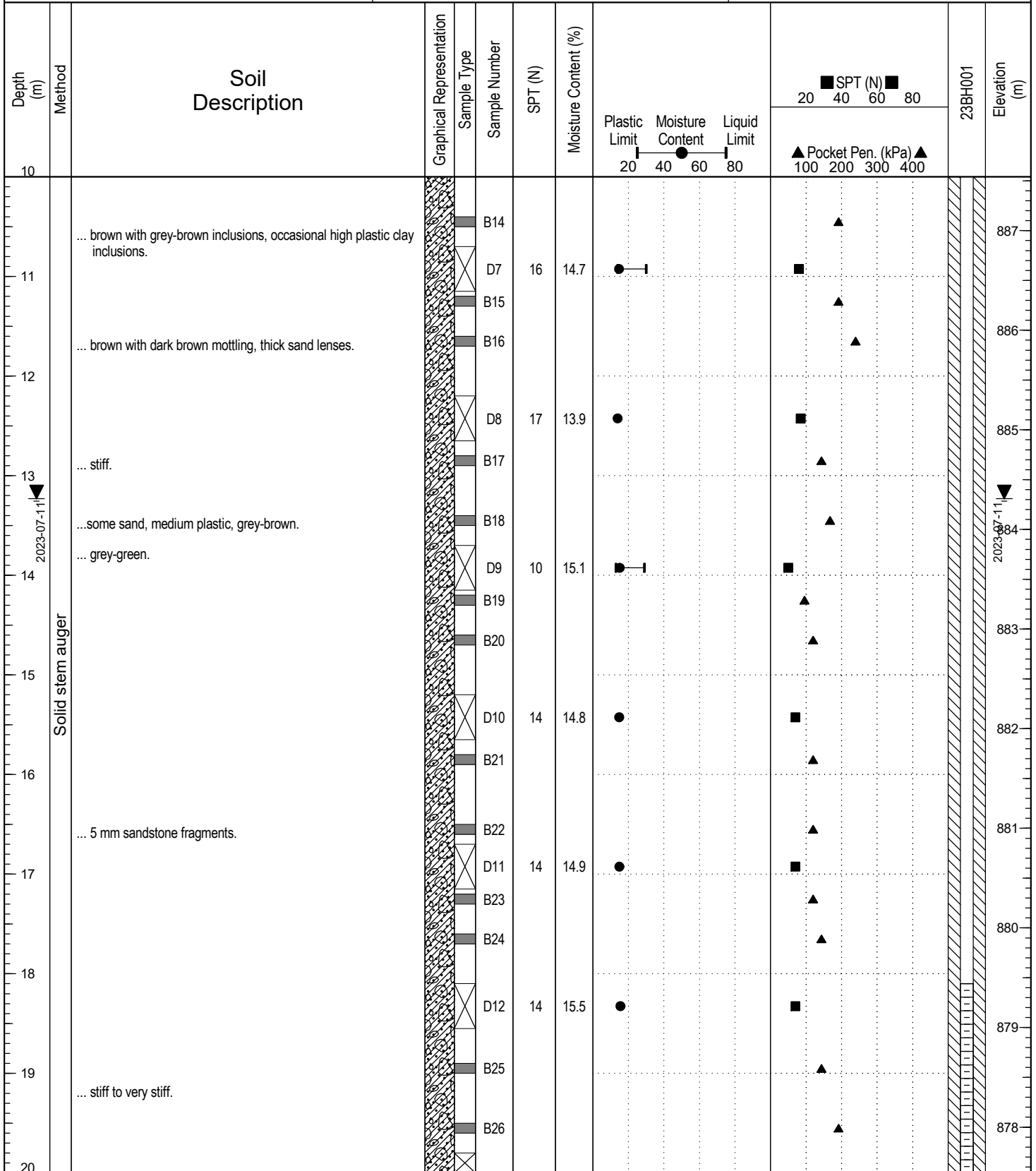
Logged By: JM

Completion Date: June 20, 2023

Reviewed By: JZ

Page 1 of 3





Contractor: CHILAKO DRILLING LTD.

Completion Depth: 24.8 m

Equipment Type: 150mm Solid Stem

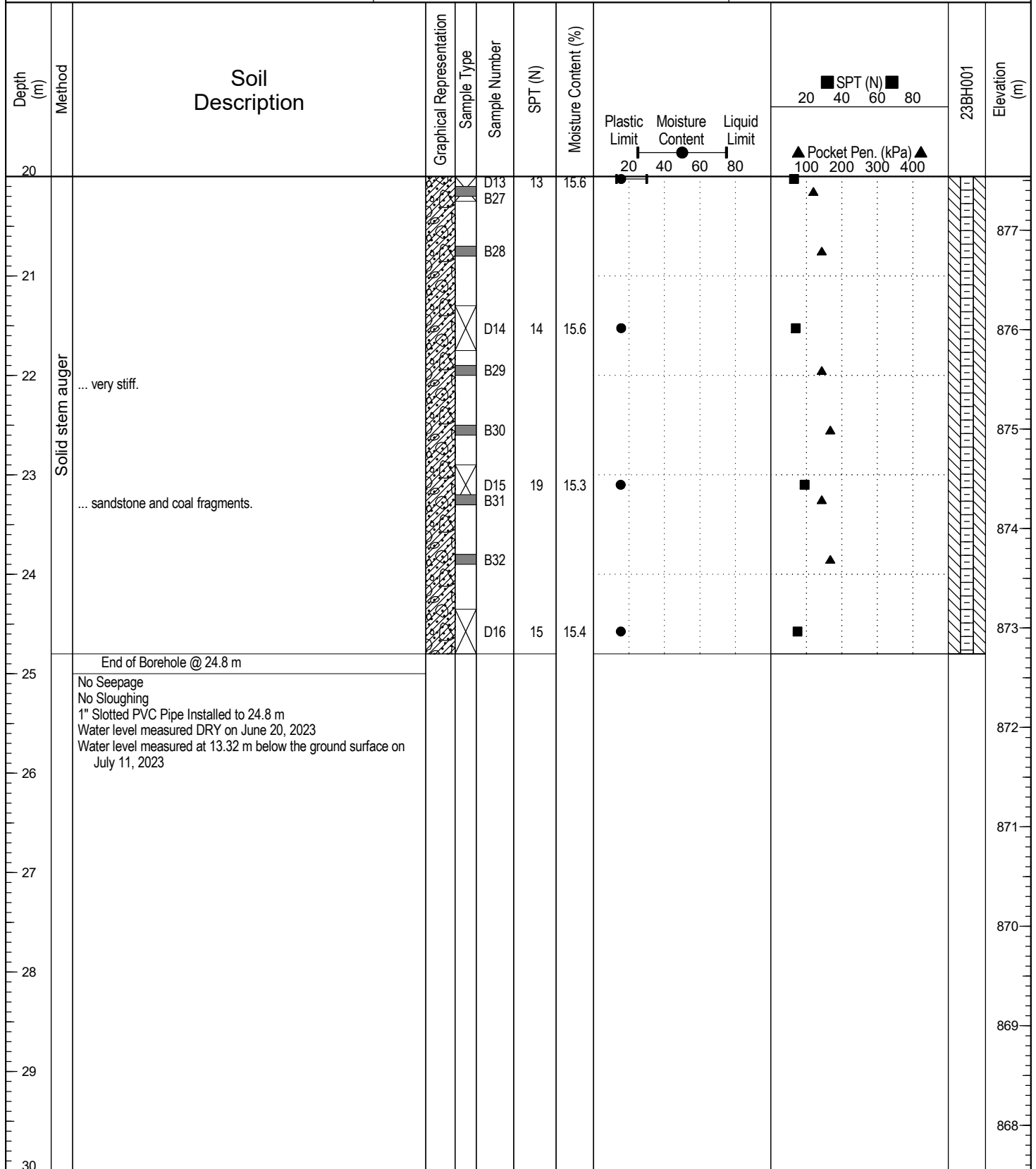
Start Date: June 20, 2023

Logged By: JM

Completion Date: June 20, 2023

Reviewed By: JZ

Page 2 of 3



End of Borehole @ 24.8 m  
 No Seepage  
 No Sloughing  
 1" Slotted PVC Pipe Installed to 24.8 m  
 Water level measured DRY on June 20, 2023  
 Water level measured at 13.32 m below the ground surface on July 11, 2023



Contractor: CHILAKO DRILLING LTD.

Completion Depth: 24.8 m

Equipment Type: 150mm Solid Stem

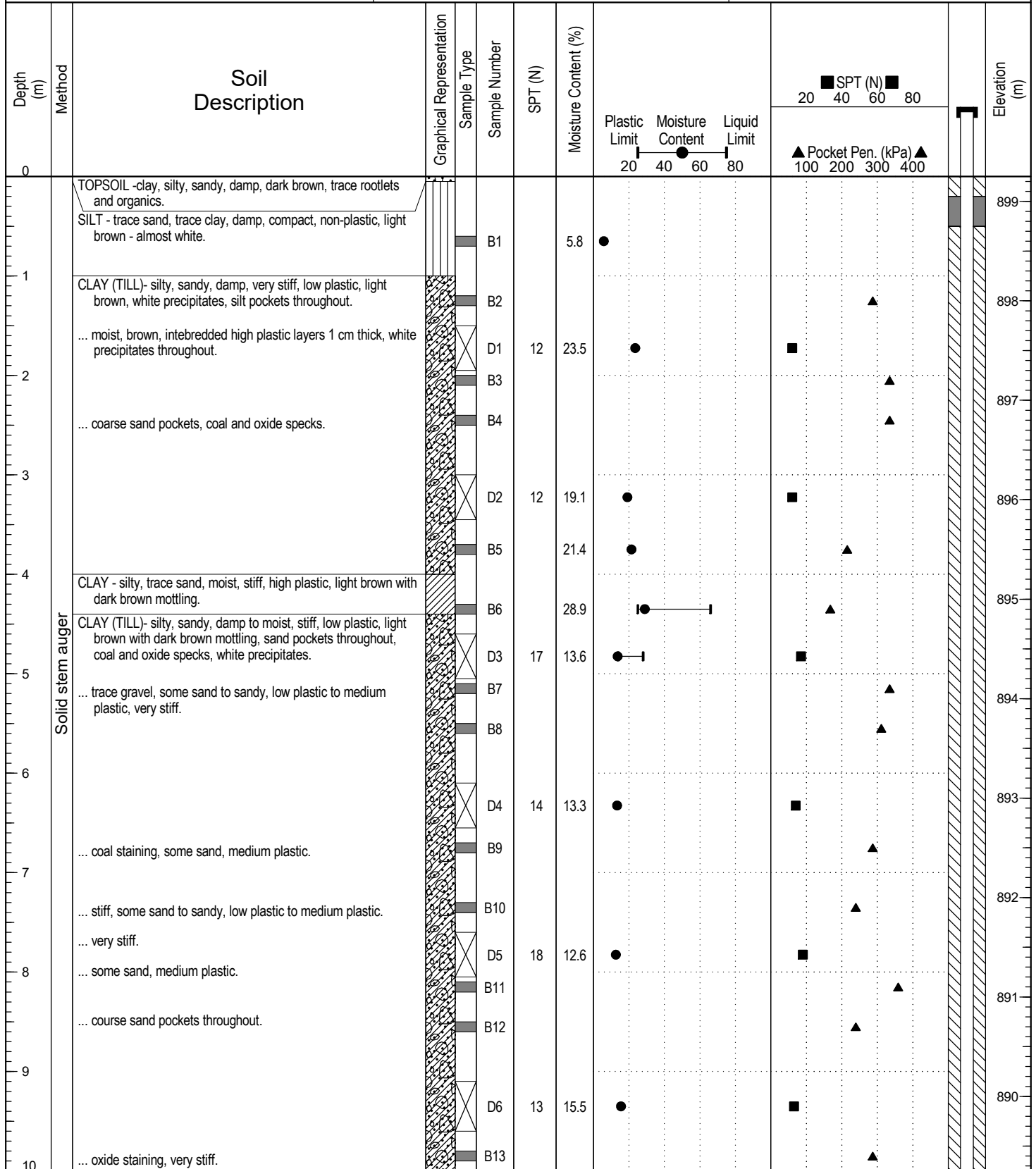
Start Date: June 20, 2023

Logged By: JM

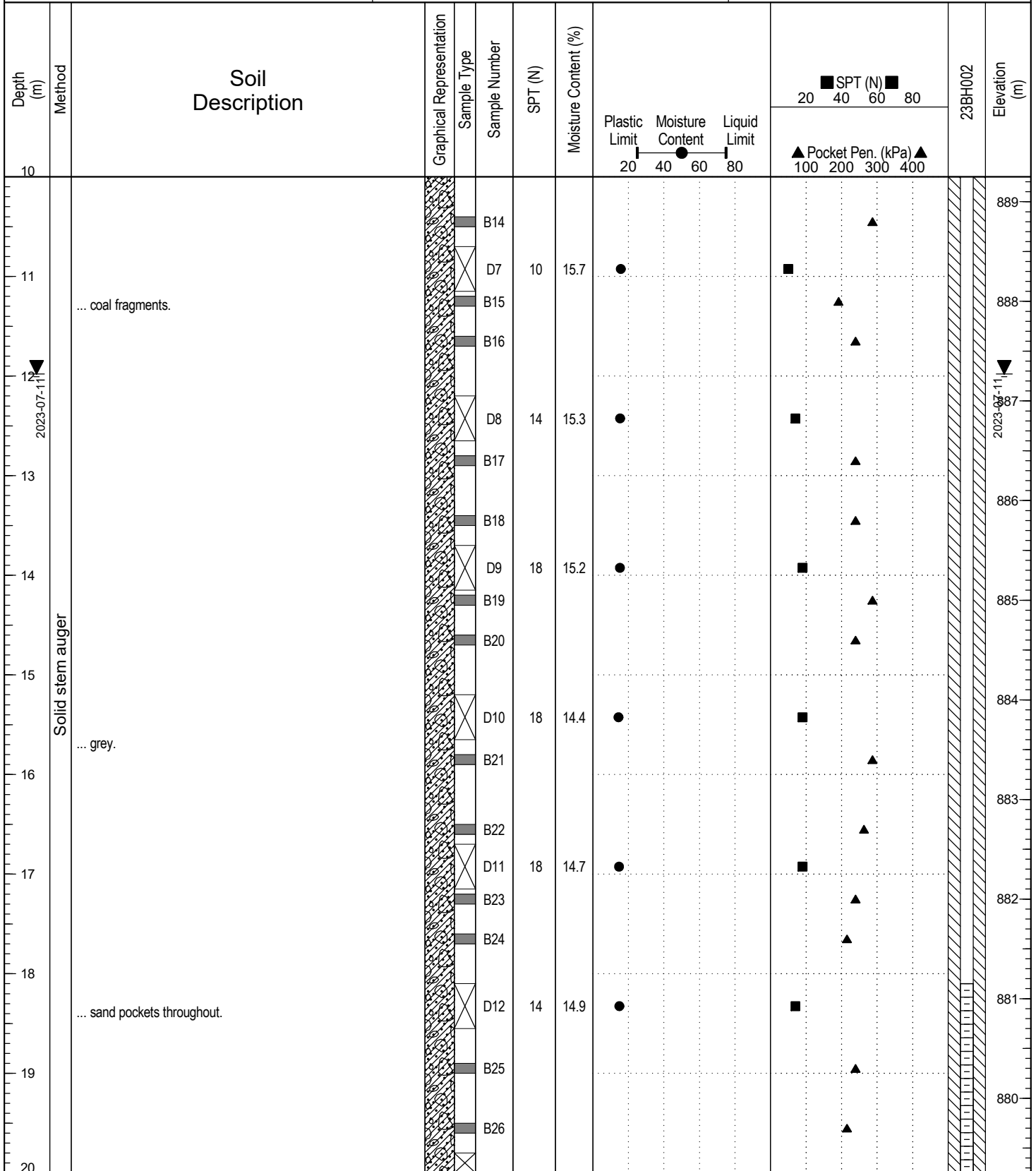
Completion Date: June 20, 2023

Reviewed By: JZ

Page 3 of 3



Contractor: CHILAKO DRILLING LTD.	Completion Depth: 24.8 m
Equipment Type: 150mm Solid Stem	Start Date: June 20, 2023
Logged By: DL	Completion Date: June 20, 2023
Reviewed By: JZ	Page 1 of 3



Contractor: CHILAKO DRILLING LTD.	Completion Depth: 24.8 m
Equipment Type: 150mm Solid Stem	Start Date: June 20, 2023
Logged By: DL	Completion Date: June 20, 2023
Reviewed By: JZ	Page 2 of 3

Depth (m)	Method	Soil Description	Graphical Representation	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	Plastic Limit Moisture Content Liquid Limit	SPT (N)	Pocket Pen. (kPa)	23BH002	Elevation (m)
20	Solid stem auger				D13 B27	17	16	●	■	▲		879
21					B28					▲		878
22					D14 B29	14	15	●	■	▲		877
23					B30					▲		876
24					D15 B31	16	15.4	●	■	▲		875
25					B32					▲		874
26				D16	14	15.4	●	■				873
27												872
28												871
29												870
30												

End of Borehole @ 24.8 m  
 No Seepage  
 No Sloughing  
 1" Slotted PVC Pipe Installed to 24.8 m  
 Water level measured DRY on June 20, 2023  
 Water level measured at 11.98 m below ground surface on July 11, 2023



Contractor: CHILAKO DRILLING LTD.

Completion Depth: 24.8 m

Equipment Type: 150mm Solid Stem

Start Date: June 20, 2023

Logged By: DL

Completion Date: June 20, 2023

Reviewed By: JZ

Page 3 of 3

Depth (m)	Method	Soil Description	Graphical Representation	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	Plastic Limit Moisture Content Liquid Limit	SPT (N)		Pocket Pen. (kPa)	Elevation (m)	
									20	40			60
0		TOPSOIL -clay, silty, sandy, damp, dark brown, trace rootlets and organics.										899.73	
0.5	Solid stem auger	CLAY - silty, some sand, damp, very stiff, medium plastic, light brown, white precipitates, organics.			B1		17.1					899	
1.0		CLAY (TILL)- silty, some sand, damp, very stiff, medium plastic, light brown with dark brown mottling, white precipitates, coal and oxide specks.			B2		14.3					898.5	
1.5		... moist, interbedded dark brown high plastic lenses 0.4 cm thick.			D1	15	20.6			45		898	
2.0		... coal fragments.			B3							897.5	
2.5		... coal fragments.			B4		19.3					897	
3.0		... damp to moist, gypsum crystals, interbedded silt lenses.			D2	19	15.2			45		896.5	
3.5					B5							896	
4.0					B6							895.5	
4.5			... brown with light brown mottling.			D3	15	15.4			45		895
5.0			... small light brown silt laminations.			B7							894.5
5.5					B8							894	
6.0					D4	13	18			45		893.5	
6.55		End of Borehole @ 6.55 m										893	
7.0		No Seepage No Sloughing 1" Slotted PVC Pipe Installed to 6.55 m Water level measured DRY on June 20, 2023 Water level measured DRY on July 11, 2023										892	
8.0												891	
9.0												890	
10.0												890	



Contractor: CHILAKO DRILLING LTD.

Completion Depth: 6.55 m

Equipment Type: 150mm Solid Stem

Start Date: June 20, 2023

Logged By: DL

Completion Date: June 20, 2023

Reviewed By: JZ

Page 1 of 1

Project: Picture Butte - Oak Pointe Development

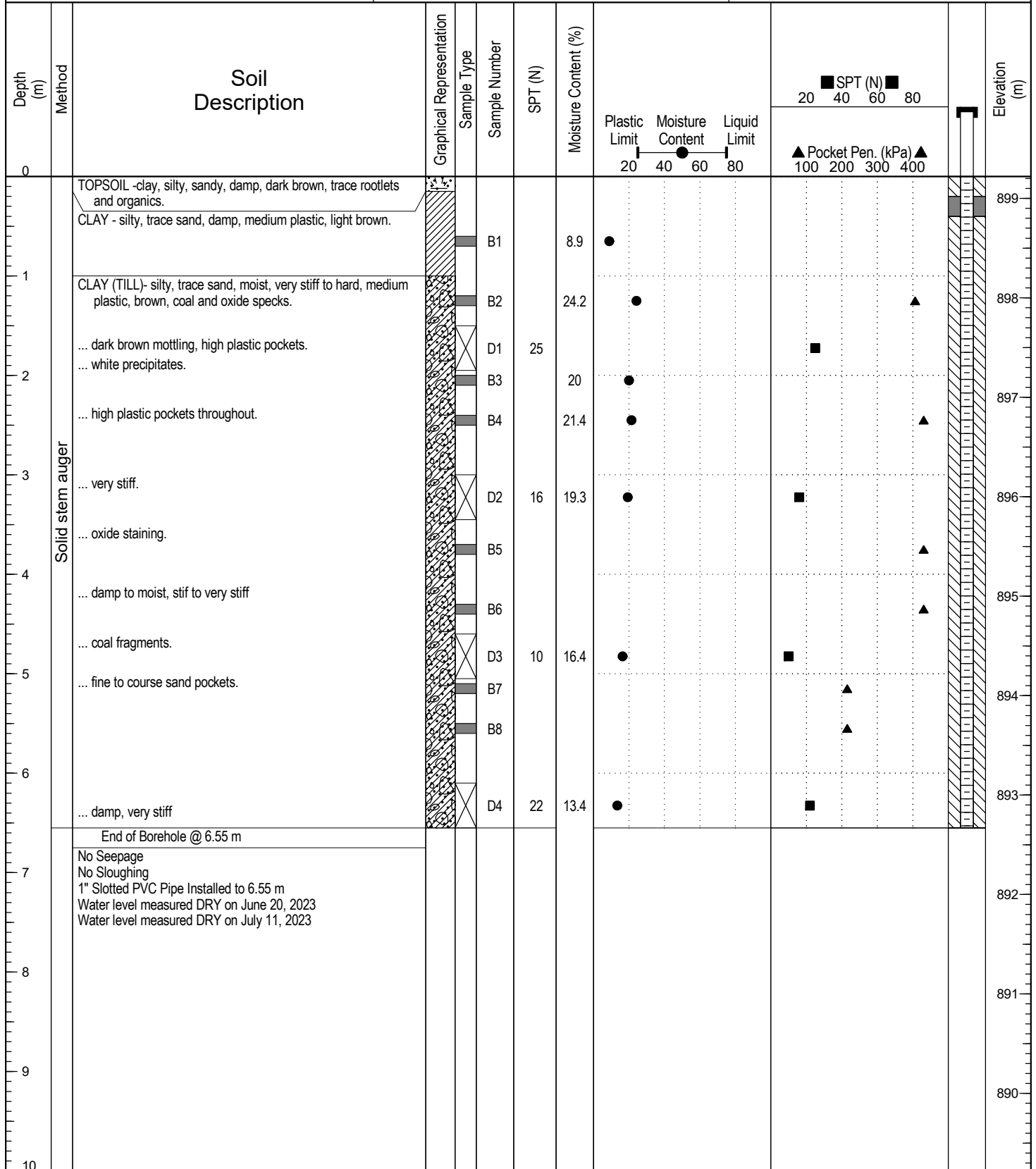
Project No: 704-ENG.LGEO04650-01

Location: Unit 230, 704 - 4 Avenue South

Ground Elev: 899.22 m

LETHBRIDGE, AB I N: 5525625 E: 372274

PROJECT ENGINEER: JACKSON MEADOWS



Contractor: CHILAKO DRILLING LTD.

Completion Depth: 6.55 m

Equipment Type: 150mm Solid Stem

Start Date: June 20, 2023

Logged By: DL

Completion Date: June 20, 2023

Reviewed By: JZ

Page 1 of 1

# APPENDIX C

## DESIGN AND CONSTRUCTION GUIDELINES

---





# CONSTRUCTION GUIDELINES

Revision No: 01 | Last Revised: March 31, 2016

## SHALLOW FOUNDATIONS

Design and construction of shallow foundations should comply with relevant Building Code requirements.

The term 'shallow foundations' includes strip and spread footings, mat slab, and raft foundations.

Minimum footing dimensions in plan should be in accordance with the applicable design code of the local jurisdiction.

No loose, disturbed or sloughed material should be allowed to remain in open foundation excavations. Hand cleaning should be undertaken to prepare an acceptable bearing surface.

Foundation excavations and bearing surfaces should be protected from rain, snow, freezing temperatures, excessive drying, and the ingress of free water before, during, and after footing construction.

Footing excavations should be carried down into the designated bearing stratum.

After the bearing surface is approved, a mud slab should be poured to protect the soil against inclement weather and provide a working surface for construction.

All constructed foundations should be placed on unfrozen soils, which should be at all times protected from frost penetration.

All foundation excavations and bearing surfaces should be inspected by a qualified geotechnical engineer to check that the recommendations contained in this report have been followed.

Where over-excavation has been carried out through a weak or unsuitable stratum to reach into a suitable bearing stratum or where a foundation pad is to be placed above stripped natural ground surface such over-excavation may be backfilled to subgrade elevation utilizing either structural fill or lean-mix concrete. These materials are defined below:

- "Structural engineered fill" should comprise clean, well-graded granular soils.
- "Lean-mix concrete" should be low strength concrete having a minimum 28-day compressive strength of 3.5 MPa.

# CONSTRUCTION GUIDELINES

Revision No: 00 | Last Revised: October 1, 2014

## CONSTRUCTION EXCAVATIONS

Construction should be in accordance with good practice and comply with the requirements of the responsible regulatory agencies.

All excavations greater than 1.5 m deep should be sloped or shored for worker protection.

Shallow excavations up to about 3 m depth may use temporary sideslopes of 1H:1V. A flatter slope of 2H:1V should be used if groundwater is encountered. Localized sloughing can be expected from these slopes.

Deep excavations or trenches may require temporary support if space limitations or economic considerations preclude the use of sloped excavations.

For excavations greater than 3 m depth, temporary support should be designed by a qualified geotechnical engineer. The design and proposed installation and construction procedures should be submitted to Tetra Tech for review.

The construction of a temporary support system should be monitored. Detailed records should be taken of installation methods, materials, in situ conditions and the movement of the system. If anchors are used, they should be load tested. Tetra Tech can provide further information on monitoring and testing procedures if required.

Attention should be paid to structures or buried service lines close to the excavation. For structures, a general guideline is that if a line projected down, at 45 degrees from the horizontal from the base of foundations of adjacent structures intersects the extent of the proposed excavation, these structures may require underpinning or special shoring techniques to avoid damaging earth movements. The need for any underpinning or special shoring techniques and the scope of monitoring required can be determined when details of the service ducts and vaults, foundation configuration of existing buildings and final design excavation levels are known.

No surface surcharges should be placed closer to the edge of the excavation than a distance equal to the depth of the excavation, unless the excavation support system has been designed to accommodate such surcharge.

# CONSTRUCTION GUIDELINES

Revision No: 02 | Last Revised: October 2, 2015

## BACKFILL MATERIALS AND COMPACTION (GENERAL)

### 1.0 DEFINITIONS

“Landscape fill” is typically used in areas such as berms and grassed areas where settlement of the fill and noticeable surface subsidence can be tolerated. “Landscape fill” may comprise soils without regard to engineering quality.

“General engineered fill” is typically used in areas where a moderate potential for subgrade movement is tolerable, such as asphalt (i.e., flexible) pavement areas. “General engineered fill” should comprise clean, granular or clay soils.

“Select engineered fill” is typically used below slabs-on-grade or where high volumetric stability is desired, such as within the footprint of a building. “Select engineered fill” should comprise clean, well-graded granular soils or inorganic low to medium plastic clay soils.

“Structural engineered fill” is used for supporting structural loads in conjunction with shallow foundations. “Structural engineered fill” should comprise clean, well-graded granular soils.

“Lean-mix concrete” is typically used to protect a subgrade from weather effects including excessive drying or wetting. “Lean-mix concrete” can also be used to provide a stable working platform over weak subgrades. “Lean-mix concrete” should be low strength concrete having a minimum 28-day compressive strength of 3.5 MPa.

Standard Proctor Density (SPD) as used herein means Standard Proctor Maximum Dry Density (ASTM Test Method D698). Optimum moisture content is defined in ASTM Test Method D698.

### 2.0 GENERAL BACKFILL AND COMPACTION RECOMMENDATIONS

Exterior backfill adjacent to abutment walls, basement walls, grade beams, pile caps and above footings, and below highway, street, or parking lot pavement sections should comprise “general engineered fill” materials as defined above.

Exterior backfill adjacent to footings, foundation walls, grade beams and pile caps and within 600 mm of final grade should comprise inorganic, cohesive “general engineered fill”. Such backfill should provide a relatively impervious surficial zone to reduce seepage into the subsoil against the structure.

Backfill should not be placed against a foundation structure until the structure has sufficient strength to withstand the earth pressures resulting from placement and compaction. During compaction, careful observation of the foundation wall for deflection should be carried out continuously. Where deflections are apparent, the compactive effort should be reduced accordingly.

In order to reduce potential compaction induced stresses, only hand-held compaction equipment should be used in the compaction of fill within 1 m of retaining walls or basement walls. If compacted fill is to be placed on both sides of the wall, they should be filled together so that the level on either side is within 0.5 m of each other.

All lumps of materials should be broken down during placement. Backfill materials should not be placed in a frozen state, or placed on a frozen subgrade.

Where the maximum-sized particles in any backfill material exceed 50% of the minimum dimension of the cross-section to be backfilled (e.g., lift thickness), such particles should be removed and placed at other more suitable locations on site or screened off prior to delivery to site.

Excavation and construction operations expose materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration of performance. Unless otherwise specifically indicated in this report, the walls and floors of excavations, and stockpiles, must be protected from the elements, particularly moisture, desiccation, frost, and construction activities. Should desiccation occur, bonding should be provided between backfill lifts. For fine-grained materials the previous lift should be scarified to the base of the desiccated layer, moisture-conditioned, and recompacted and bonded thoroughly to the succeeding lift. For granular materials, the surface of the previous lift should be scarified to about a 75 mm depth followed by proper moisture-conditioning and recompaction.

### 3.0 COMPACTION AND MOISTURE CONDITIONING

“Landscape fill” material should be placed in compacted lifts not exceeding 300 mm and compacted to a density of not less than 90% of SPD unless a higher percentage is specified by the jurisdiction.

“General engineered fill” and “select engineered fill” materials should be placed in layers of 150 mm compacted thickness and should be compacted to not less than 98% of SPD. Note that the contract may specify higher compaction levels within 300 mm of the design elevation. Cohesive materials placed as “general engineered fill” or “select engineered fill” should be compacted at 0 to 2% above the optimum moisture content. Note that there are some silty soils which can become quite unstable when compacted above optimum moisture content. Granular materials placed as “general engineered fill” or “select engineered fill” should be compacted at slightly below (0 to 2%) the optimum moisture content.

“Structural engineered fill” material should be placed in compacted lifts not exceeding 150 mm in thickness and compacted to not less than 100% of SPD at slightly below (0 to 2%) the optimum moisture content.

### 4.0 “GENERAL ENGINEERED FILL”

Cohesive or granular soils are considered acceptable for use as “general engineered fill,” providing the soils are inorganic and free of deleterious materials.

### 5.0 “SELECT ENGINEERED FILL”

Low to medium plastic clay with the following range of plasticity properties is generally considered suitable for use as “select engineered fill”:

Liquid Limit	= 20 to 40%
Plastic Limit	= 10 to 20%
Plasticity Index	= 10 to 30%

Test results should be considered on a case-by-case basis.

“Pit-run gravel” and “fill sand” are generally considered acceptable for use as “select engineered fill.” See exact project or jurisdiction for specifications.

The “pit-run gravel” should be free of any form of coating and any gravel or sand containing clay, loam or other deleterious materials should be rejected. No material oversize of the specified maximum sieve size should be tolerated. This material would typically have a fines content of less than 10%.

The materials above are also suitable for use as “general engineered fill.”

## 6.0 “STRUCTURAL ENGINEERED FILL”

Crushed gravel used as “structural engineered fill” should be hard, clean, well graded, crushed aggregate, free of organics, coal, clay lumps, coatings of clay, silt, and other deleterious materials. The aggregates should conform to the requirement when tested in accordance with ASTM C136 and C117. See exact project or jurisdiction for specifications. This material would typically have a fines content of less than 10%.

In addition to the above, further specification criteria identified below should be met:

### “Structural Engineered Fill” – Additional Material Properties

Material Type	Percentage of Material Retained on 5 mm Sieve having Two or More Fractured Faces	Plasticity Index (<400 µm)	L.A. Abrasion Loss (percent Mass)
Various sized Crushed Gravels	See exact project or jurisdiction for specifications	See exact project or jurisdiction for specifications	See exact project or jurisdiction for specifications

Materials that meet the grading limits and material property criteria are also suitable for use as “select engineered fill.”

## 7.0 DRAINAGE MATERIALS

“Coarse gravel” for drainage or weeping tile bedding should be free draining. Free-draining gravel or crushed rock generally containing no more than 5% fine-grained soil (particles passing No. 200 sieve) based on the fraction passing the 3/4-inch sieve or material with sand equivalent of at least 30.

“Coarse sand” for drainage should conform to the following grading limits:

### “Coarse Sand” Drainage Material – Percent Passing by Weight

Sieve Size	Coarse Sand*
10 mm	100
5 mm	95 – 100
2.5 mm	80 – 100
1.25 mm	50 – 90
630 µm	25 – 65
315 µm	10 – 35
160 µm	2 – 10
80 µm	0 – 3

\* From CSA A23.1-09, Table 10, “Grading Limits for Fine Aggregate”, Class FA1

Note that the “coarse sand” above is also suitable for use as pipe bedding material. See exact project or jurisdiction for specifications.

## 8.0 BEDDING MATERIALS

The “Coarse Sand” gradation presented above in Section 7.0 is suitable for use as pipe bedding and as backfill within the pipe embedment zone, however see exact project or jurisdiction for specifications.

# CONSTRUCTION GUIDELINES

Revision No: 02 | Last Revised: March 31, 2016

## FLOOR SLABS-ON-GRADE

All soft, loose or organic material should be removed from beneath slab areas. If any local 'hard spots' such as old basement walls or abandoned pile foundation are revealed beneath the slab area, these should be over-excavated and removed to not less than 0.9 m below underside of slab level. The exposed soil should be proof-rolled and the final grade restored by engineered fill placement. If proof-rolling reveals any soft or loose spots, these should be excavated and the desired grade restored by engineered fill placement. The subgrade should be compacted to a depth of not less than 0.3 m to a density of not less than 98 percent Standard Proctor Maximum Dry Density (ASTM Test Method D698).

If, for economic reasons, it is considered desirable to leave low quality material in-place, such as existing fills, beneath a slab-on-grade, special ground treatment procedures may be considered, Tetra Tech could provide additional advice on this aspect if required.

A levelling course of well graded granular fill (with maximum size of 20 mm), at least 150 mm in compacted thickness, is recommended directly beneath all slabs-on-grade. The type of granular fill should be selected based on the design floor loadings. Alternatively a minimum thickness of 150 mm of 80 mm pit-run gravel overlain by a minimum thickness of 50 mm of 20 mm crushed gravel may be used. Coarse gravel particles larger than 25 mm diameter should be avoided directly beneath the slab-on-grade to limit potential stress concentrations within the slab. All levelling courses directly under floor slabs should be compacted to 100 percent of Standard Proctor Maximum Dry Density (ASTM Test Method D698).

Engineered fill, pit-run gravel and crushed gravel are defined under the heading 'Backfill Materials and Compaction' elsewhere in this Appendix.

The excavated subgrade beneath slabs-on-grade should be protected at all times from rain, snow, freezing temperatures, excessive drying and the ingress of free water. This applies before, during, and after the construction period.

## Historical Resources Act Approval

Proponent: Oak Pointe Inc.  
Box 174, Diamond City, AB T0K 0T0

Contact: Josh Marti

Agent: Stantec Consulting Ltd.

Contact: Meaghan Porter

**Project Name:** Picture Butte Residential Area Structure Plan in 13-34-10-21 W4M (revised)

Project Components: Area Structure Plan / Outline Plan  
Residential Development  
Access Road  
Electrical / Utility  
Water Supply Line  
Sewage Line

Application Purpose: Requesting HRA Approval / Requirements  
Amendment or Update to Project Submitted Previously

*Historical Resources Act* approval is granted for the activities described in this application and its attached plan(s)/sketch(es) subject to Section 31, "a person who discovers an historic resource in the course of making an excavation for a purpose other than for the purpose of seeking historic resources shall forthwith notify the Minister of the discovery." The chance discovery of historical resources is to be reported to the contacts identified within [Standard Requirements under the Historical Resources Act: Reporting the Discovery of Historic Resources](#).



Rebecca Traquair  
Regulatory Approvals Coordinator  
Alberta Arts, Culture, and Status  
of Women

Proposed Development Location:

MER	RGE	TWP	SEC	LSD List
4	21	10	34	13

Documents Attached:

Document Name	Document Type
Updated ASP drawing	Illustrative Material



**PHASE I ENVIRONMENTAL SITE ASSESSMENT**

**LOTS 1 AND 2, BLOCK 3, PLAN 2311035  
PICTURE BUTTE, ALBERTA**



*Serving Albertans for 23 years  
2000 - 2023*

**PROJECT NO. WA-23-101402**

**REPORT TO**

**OAK POINTE INC. GIDEON ACQUISITIONS LTD.  
CLAYTON KOSTER JOINT VENTURE  
ALSO KNOWN AS BUTTE LANDING**

**PHASE I  
ENVIRONMENTAL SITE ASSESSMENT  
LOTS 1 AND 2, BLOCK 3, PLAN 2311035  
PICTURE BUTTE, ALBERTA**



**WA Environmental Services Ltd.  
221 Riverpark Blvd., West  
Lethbridge  
Alberta T1K 0P6**

**Tel: (403) 381-8141  
Fax: (403) 328-8142  
[www.waenvironmental.ca](http://www.waenvironmental.ca)**

**October 17, 2023**

## EXECUTIVE SUMMARY

Between October 6 and October 17, 2023, WA Environmental Services Ltd. (WAES) conducted a Phase I Environmental Site Assessment of property located approximately 300 m south of Rogers Avenue South on the east side of Secondary Road 843 in the Town of Picture Butte, Alberta. The legal description for the site is Lot 1 and 2, Block 3, Plan 2311035. It is understood that the assessment is required due to a potential business transaction involving the property, with the intention to develop the site into multi-family four-plex residential units.

A summary of environmental concerns identified at the site is presented in Table 1.

The site remained undeveloped until the mid-1960s when a single family dwelling/acreage was constructed. This remains to the present day and does not form part of this assessment as the owner is elderly and has an arrangement with the purchasers to stay in place until she decides to move into a more convenient location.

A County of Lethbridge potable water truck station occupies the property to the north. The Netherlands Reformed Congregation (church) is located to the south. Adjacent land use to the east is agricultural. The Picture Butte Memorial Cemetery is located to the southeast of the site and the Maple Estate Mobile Home Park and the running track for the Picture Butte High School are located to the west across Secondary Road 843.

No hazardous building materials were observed at the time of the site reconnaissance. However, should there be an intention to demolish the residence located in the northwest corner of the site, a hazardous materials assessment should be carried out, so as not to expose any workers to harmful substances such as asbestos, lead based paint etc.

Information gathered and observations made during the Phase I Environmental Site Assessment have not revealed any evidence of environmental contamination associated with the site.

Based on our findings, no further environmental investigation of the site is recommended at this time.

**Table 1 - Summary of Findings and Recommendations**

Potential Source of Contamination	Level of Environmental Contamination	Findings	Recommended Action
Adjacent Properties	None	Adjacent land use is a mix of agricultural, residential and institutional.	None.
Historical Land Use	None	The site has been used for agricultural purposes until the mid-1960s when a single family dwelling/acreage was constructed in the northwest corner of the site.	None.
Underground Fuels and Chemicals	None	None observed or reported.	None.
Aboveground Fuels and Chemicals	None	None observed or reported.	None.
Waste Management	None	Presently no waste is generated at the site.	None.
Spill and Stain Areas	None	None observed or reported.	None.
Wastewater Discharges	None	Presently, no wastewater is generated at the site.	None.
Air Discharges	None	No concerns.	None.
Polychlorinated Biphenyls (PCBs)	None	None observed or reported.	None.
Asbestos	None	None observed or reported.	None.
UFFI	None	None observed or reported	None.
Ozone Depleting Substances (ODSs)	None	None observed or reported	None.
Lead	None	None observed or reported.	None.
Electromagnetic Frequencies	None	None observed or reported.	None.
Radon	None	See radon recommendations in report	None.
Hydraulic Hoists/Elevators	None	None observed or reported.	None.



Table 1 - Summary of Findings and Recommendations			
Potential Source of Contamination	Level of Environmental Contamination	Findings	Recommended Action
Mercury	None	None observed or reported.	None.
Mould	None	None observed or reported.	None.
Water Supply	None	The Town of Picture Butte has installed a potable water main to the property.	None.
Fill Areas	None	None observed or reported.	None.

**High** - Evidence of actual contamination, **Moderate** - Evidence of potential contamination (significant), **Low** - Evidence of potential contamination (minor), **None** - No evidence of contamination



## TABLE OF CONTENTS

1.0	INTRODUCTION .....	1
2.0	PHASE I SCOPE AND METHODOLOGY .....	1
2.1	Scope of Work .....	1
2.2	Methodology .....	2
2.2.1	Records Review .....	2
2.2.2	Interviews.....	2
2.2.3	Site Visit.....	2
3.0	REGULATORY FRAMEWORK .....	2
4.0	SITE DESCRIPTION .....	3
4.1	Property Description .....	3
4.2	Soil, Topography and Drainage .....	3
4.3	On-Site Buildings and Structures.....	4
5.0	ADJACENT PROPERTIES .....	5
6.0	REVIEW OF HISTORICAL LAND USE AND REGULATORY HISTORY .....	6
6.1	Historical Land Use .....	6
6.2	Regulatory History .....	7
7.0	SITE VISIT FINDINGS AND DISCUSSION.....	8
7.1	Fuel/Chemical Handling and Storage .....	8
7.2	Waste Management.....	8
7.3	Spill and Stain Areas.....	8
7.4	Wastewater Discharges .....	9
7.5	Air Discharges .....	9
7.6	Polychlorinated Biphenyls (PCBs) .....	9
7.7	Asbestos .....	9
7.8	Urea Formaldehyde Foam Insulation (UFFI) .....	9
7.9	Lead.....	9
7.10	Ozone Depleting Substances (ODSs) .....	10
7.11	Radon .....	11

7.12	Electromagnetic Frequencies (EMFs).....	11
7.13	Noise and Vibration . . . . .	11
7.14	Hydraulic Hoist & Elevators.....	11
7.15	Mercury.....	11
7.16	Mould.....	12
7.17	Water Supply.....	12
7.18	Fill Areas.....	12
8.0	CONCLUSIONS AND RECOMMENDATIONS .....	12
9.0	CLOSURE.....	13

**LIST OF APPENDICES, TABLES, AND DRAWINGS**

**APPENDICES**

- Appendix A - Site Plans
- Appendix B - Assessor Qualifications and Insurance Certificates
- Appendix C - Resource Information
- Appendix D - Regulations

**TABLES**

Table 1 - Summary of Findings and Recommendations.....	ii
Table 2 - Property Information .....	4
Table 3 - Adjacent Properties - Land Use.....	5
Table 4 - Historical Information for the Site .....	7
Table 5 - Historical Information for Adjoining Properties .....	7

**DRAWINGS**

Drawing 1	Site Location Plan .....	Appendix A
Drawing 2	Site Plan Showing Adjacent Land Use .....	Appendix A



## 1.0 INTRODUCTION

WA Environmental Services Ltd. (WAES) was retained by Oak Pointe Inc., Gideon Acquisitions Ltd. and Clayton Koster a Joint Venture, also known as Butte Landing, to conduct a Phase I Environmental Site Assessment of a property located approximately 300 m south of Rogers Avenue South on the east side of Secondary Road 843, in the Town of Picture Butte, Alberta. The legal description for the site is Lot 1 and 2, Block 3, Plan 2311035. It is understood that the assessment is required due to a potential business transaction involving the property, with the intention to develop the site into multi-family four-plexes.

The purpose of the Phase I ESA was to identify any actual or potential environmental contaminants associated with the site that exist as a result of current or past activities.

This report is presented in nine sections. Sections 1 and 2 present general information about the project, and describe the scope of work and the methodology used. Section 3 provides a summary of applicable legislation that may be referenced during the assessment. Sections 4 to 6 describe the present and historic conditions of the subject and adjacent properties. Section 7 presents the findings of the site visit. Environmental concerns are identified in this section. Significant environmental concerns and related recommendations are summarized in Section 8. Section 9 discusses the limitations of the assessment and its findings. Supporting information is provided in several appendices at the end of this report. Select photographs are included in the text of this report.

## 2.0 PHASE I SCOPE AND METHODOLOGY

### 2.1 Scope of Work

The Phase I ESA carried out by WAES on this property is based on the requirements of the Canadian Standards Association (CSA) Phase I Environmental Site Assessment Information Product, Z768-01, April 2013 (CSA protocol, reaffirmed in 2023) and consists of the following:

- records review;
- interviews with regulatory officials and personnel associated with the site and adjoining properties;
- a site visit; and
- evaluation of information and preparation of the report provided herein.

A Phase I ESA does not include sampling or testing of air, soil, groundwater, surface water or building materials. These activities would be carried out in a Phase II ESA, if required. No enhancements of this assessment were conducted. The professional qualifications of the project team and Insurance Certificates are provided in Appendix B. The contract between Oak Pointe Inc. Gideon Acquisitions Ltd. and Clayton Koster a Joint Venture, also known as Butte Landing and WAES to conduct the Phase I Environmental Site



Assessment is confidential and has not been included in this report.

## **2.2 Methodology**

### **2.2.1 Records Review**

The applicable search distance for the records review included properties immediately adjacent to the sites and other properties (as identified by aerial photographs, insurance records, etc.) where the potential for environmental contamination of the subject sites was apparent (e.g., petroleum products storage in the immediate area).

Previous Environmental Site Assessments were not provided for review. A list of records reviewed is included in **Appendix C**.

### **2.2.2 Interviews**

Interviews were carried out to obtain or confirm information on the environmental characteristics of this property. A summary of interviewees and contact information is presented in Appendix C.

### **2.2.3 Site Visit**

The subject property and readily visible and publicly accessible portions of adjacent sites were examined for the presence of actual or potential environmental contamination. All common areas of the property were accessible to WAES during the site visit on October 12, 2023. All areas of the site were available for assessment, with the exception of the residence located at the northwest corner of the site.

## **3.0 REGULATORY FRAMEWORK**

Applicable federal, provincial and municipal regulations were reviewed to identify and assess potential or actual environmental contamination at the sites and to develop appropriate recommendations. It should be noted, however, that this assessment did not include a review or audit of operational environmental compliance issues or of any environmental management system (EMS) that may exist for the property. Where required, the documents listed in Appendix D were used as reference material for the completion of the Phase I Assessment.

## 4.0 SITE DESCRIPTION

### 4.1 Property Description

The site is located at the south end of the town of Picture Butte, Alberta, approximately 300 m south of Rogers Avenue South. The site is zoned as Urban Reserve (U-R) with a plan area of approximately 0.41 ha. The legal description for the site is Lot 1 and 2, Block 3, Plan 2311035, Picture Butte, Alberta. (Drawing 2, Appendix A).



*Photograph 1: Looking northeast at the subject site from Secondary Road 843  
Note: Residence located in the northwest corner of the site (arrowed).*

### 4.2 Soil, Topography and Drainage

The site is generally flat. Surface water from the site appears to drain towards the coulee draw, east of the site. The site soils are typically silt and clay, overlying clay till up to 20 m thick.

Based on local topography, shallow groundwater flow is suspected to be eastward towards the coulee draw. The direction of regional (i.e., deep) groundwater flow is predicted to be southeast towards the Oldman River (Tokarsky, 1974<sup>1</sup>).

<sup>1</sup>Tokarsky, O. 1974. *Hydrogeology of the Lethbridge-Fernie Area*. Alberta Research Council

It should be noted that topography, geologic materials, development of land and soil disturbances influence localized variances in groundwater movement and pattern. In addition, groundwater levels will fluctuate seasonally and in response to climatic conditions.

No evidence of wells, pits, lagoons, stressed vegetation, or standing water was observed on the property.

### 4.3 On-Site Buildings and Structures

There is one single family dwelling located at the northwest corner of the site, that is not included as part of this assessment. A summary of the property information is presented in Table 2.

<b>Table 2 - Summary of Lot Information</b>	
<b>Property</b>	
Current Zoning	Urban Reserve (U-R)
Area	0.41 ha
Services: Sewer, Water, Electricity	The Town of Picture Butte has provided potable water to the property line. There is a catch basin located in close proximity to the north property line, however it is not connected to a storm sewer system at this time.
<b>Building</b>	
Number of Storeys	NA
Exterior Finish	NA
Interior Finish	NA
Roof	NA
Foundation	NA
Basement	NA
Insulation	NA
Lighting	NA
Heating, Ventilating, Air Conditioning	NA
Sumps, Floor Drains	NA
Underground and Aboveground Storage Tanks	NA



*Photograph 2 – Looking east along north property line. Note catch basin Previously installed in preparation for storm sewer connection (arrowed)*

## 5.0 ADJACENT PROPERTIES

Land use of the adjacent properties is identified on Drawing 2 in Appendix A. A summary of this land use is presented in Table 3.

Table 3 - Adjacent Properties - Land Use		
Boundary Side of Site	Current Activity	Potential Sources of Contamination
North	A County of Lethbridge potable water truck station occupies the property	None Identified
South	Institutional: The Netherlands Reformed Congregation (church)	None Identified
East	Agricultural and the Picture Butte Memorial Cemetery (southeast)	None identified

Table 3 - Adjacent Properties - Land Use		
West	Residential: The Maple Estate Mobile Home Park and the running track for the Picture Butte High School are located to the west across Secondary Road 843.	None identified

No evidence of actual or potential environmental impact from neighbouring properties was observed on the site during the site reconnaissance.



*Photograph 3 – Looking southwest at Maple Estate mobile home park across Secondary Road 843.*

## 6.0 REVIEW OF HISTORICAL LAND USE AND REGULATORY HISTORY

### 6.1 Historical Land Use

Historical information describing the site was obtained from a variety of sources as detailed in Appendix C of this report. Lists of historical land uses for the investigated site and adjacent properties are provided in Table 4 and 5, respectively.

Table 4 - Historical Information for the Site		
Period/Date	Land Use	Sources of Information
Prior to mid-1960s	Undeveloped/agricultural land.	Air photographs and interviews
Mid 1960s to the present day	The single family dwelling was constructed in the mid-1960s at the northwest corner of the site and remains to the present day	Air photographs and interviews

Based on information obtained during the historical review, it is unlikely that the presence of the above land use has adversely impacted the site.

Table 5 - Historical Information for Adjacent Properties		
Boundary Side of Site	Comments	Sources of Information
North	The site to the north remained vacant agricultural land until the mid-1960s when the County of Lethbridge potable water truck station was constructed and remains to the present-day.	Air photographs and interviews
South	The property to the south of the subject site, remained as vacant agricultural land until the early 2000s when the Netherlands Reformed Congregation commenced development and remains to the present-day.	Air photographs and interviews
East	The site to the east remains as undeveloped agricultural land and coulee draw.	Air photographs and interviews
West	The site to the west was undeveloped agricultural land until 1978 when development of the present day trailer park began and remains to the present-day.	Air photographs and interviews

Based on information obtained during the historical review of the adjacent properties, it is unlikely that the adjacent land use has adversely impacted the site.

## 6.2 Regulatory History

A summary of information obtained from interviews with and/or written requests from regulatory agencies is provided below:

- **Alberta Environment and Protected Areas, Regulatory Approvals Centre:** Information received from the Regulatory Approvals Centre indicates that they have no record of any approvals having been issued for the site.
- **Alberta Environment and Protected Areas, Environmental Site Assessment Repository:** Information received from the ESAR indicates that they have no records pertaining to the site.
- **Environmental Law Centre:** Information received from the Environmental Law Centre indicates that they have no record of Control Orders, Stop Orders, Prosecutions, or Tickets issued regarding the property owner.
- **Safety Codes Council of Alberta:** Written information received from the SCC states that they have no record of active or abandoned storage tanks registered at the site.
- **Town of Picture Butte Fire Department:** Verbal information received indicated that there are no records of violations (of the 2019 Alberta Fire Code) for the site.
- **Alberta Land Titles:** Written information from Alberta Land Titles indicated that previous ownership of the land has not revealed evidence of potential environmental contamination of the site.

## 7.0 SITE VISIT FINDINGS AND DISCUSSION

The site visit was carried out by Mr. Tim Waters, C.Tech on October 12, 2023.

### 7.1 Fuel/Chemical Handling and Storage

No aboveground fuel storage tanks or chemical handling, storage or disposal activities were observed at the site. No evidence of fill or vent pipes indicating the possible presence of underground storage tanks was observed on site.

### 7.2 Waste Materials

Presently, no waste is generated at the site.

### 7.3 Spill and Stain Areas

None observed at the time of the site reconnaissance.

## 7.4 Wastewater Discharges

No regulated wastewater or sewage is presently generated at the site. No oil/water separators were observed at the subject site.

## 7.5 Air Discharges

No sources of air emissions are presently generated at the site.

## 7.6 Polychlorinated Biphenyls (PCBs)

The past use of PCBs in electrical equipment such as transformers, fluorescent lamp ballasts, and capacitors was common. The federal *Environmental Contaminants Act*, 1976, prohibited the use of PCBs in heat transfer and electrical equipment installed after September 1, 1977, and in transformers and capacitors installed after July 1, 1980. In addition, storage and disposal of PCB waste materials is regulated. No PCB containing equipment was observed at the time of the site reconnaissance.

## 7.7 Asbestos

The common use of potential friable (breakable by hand) asbestos-containing materials (ACMs) (pipe/boiler insulation and fireproofing) in construction generally ceased voluntarily in the mid 1970s. None observed at the time of the site reconnaissance.

## 7.8 Urea Formaldehyde Foam Insulation (UFFI)

The sale and installation of UFFI as thermal insulation began in approximately 1970, and continued until December 1980 when it was banned under the federal *Hazardous Products Act*. UFFI was installed in both new and existing buildings during this period. Evidence of UFFI was not observed during the site reconnaissance, however, intrusive investigation of wall cavities and sampling is not within the scope of a Phase I ESA.

## 7.9 Lead

In 1976, the lead content in interior paint was limited to 0.5% by weight under the federal *Hazardous Products Act*. Lead is also associated with plumbing solder and old pipes as well as other lead based products such as wall shielding (x-ray rooms). If present, lead-based paint is typically concealed beneath multiple layers of paint applied over a period of years during renovation. Lead-based paint and plumbing equipment are not a direct health risk when concealed (under layer of non lead-based paint) and/or in good condition. Lead-based paint should be considered, however, when planning renovations or demolition, when particles could be released and/or ingested during the course of the work. No evidence of lead based



products was observed on-site during the site reconnaissance; however, intrusive sampling for lead and lead based paints is not within the scope of a Phase I ESA.

### 7.10 Ozone Depleting Substances (ODSs)

In 1994, the federal government filed the *Ozone-depleting Substances Regulations* to amend controls on production and consumption of (chlorofluorocarbons (CFCs), Halons, carbon, tetrachloride and methyl chloroform. ODSs may be associated with operations such as fire extinguishing systems, fumigant and pesticide application, foam manufacturing, prescription metered dose inhalers, refrigeration and air-condition units, solvent cleaning and degreasing facilities. No sources of ozone depleting substances (ODSs) were observed on-site.

### 7.11 Radon

Radon gas is a product of the decay series that begins with uranium. Radon is produced directly from radium, which can be commonly found in bedrock that contains black shale and/or granite. Radon gas can migrate through the ground and enter buildings through porous concrete or fractures. Radon tends to accumulate in poorly ventilated basements. Health Canada now recommends that all homeowners have their homes tested for radon. Methods that the builder can use to reduce entry routes in new home construction include:

- minimizing cracking of the basement floor slab by properly preparing the sub-slab area (i.e. replacing unstable soil, large stones, etc.) using higher strength concrete, and providing proper curing conditions,
- sealing the basement floor/foundation wall crack,
- sealing around all penetrations of the foundation walls and basement floors by objects such as utility lines (e.g. water, sewer, electrical, natural gas, fuel oil),
- installing a barrier of at least 0.15 mm (6 mil) polyethylene under the basement floor slab or on top of exposed soil in crawlspaces,
- installing special traps in floor drains that allow water to drain but prevent radon from entering the basement, and
- using a solid course of masonry units at the top and bottom of concrete block foundation walls.

Reducing the pressure difference between the home and soil may reduce the amount of radon drawn indoors. Options include:

- installing an insulated duct to provide outdoor air to a gas or oil furnace, boiler or water heater,
- for a forced-air service heating system, installing and insulated duct from the outdoors to the main return-air duct,
- equipping a wood or gas fireplace with glass doors that fit tightly and with a supply of outdoor air for combustion, and
- installing a balanced ventilation system such as a heat recovery ventilator (HRV).

### **7.12 Electromagnetic Frequencies (EMFs)**

No high-tension transmission lines were observed near the site. Electro-magnetic frequencies are not anticipated to impact the site.

### **7.13 Noise and Vibration**

There were no major sources of noise and vibration identified on or adjacent to the subject property during the site reconnaissance.

### **7.14 Hydraulic Hoists and Elevators**

There were no hydraulic hoists or elevators observed at the subject property during the site reconnaissance.

### **7.15 Mercury**

None observed at the time of the site reconnaissance.

### **7.16 Mould**

Mould can be found anywhere in a building, particularly if a flood or spill/leak has occurred and was not repaired immediately; and mould is usually associated with damp, enclosed areas. A mould assessment was not conducted for the subject site and mould was not observed at the time of the site reconnaissance.

### **7.17 Water Supply**

Potable water for the subject site is supplied to the property line by the Town of Picture Butte.

### **7.18 Fill Areas**

None observed at the time of the site reconnaissance.

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

The site remained undeveloped until the mid-1960s when a single family dwelling/acreage was constructed. This remains to the present day and does not form part of this assessment as the owner is elderly and has an arrangement with the purchasers to stay in place until she decides to move into a more convenient location.

A County of Lethbridge potable water truck station occupies the property to the north. The Netherlands Reformed Congregation (church) is located to the south. Adjacent land use to the east is agricultural. The Picture Butte Memorial Cemetery is located to the southeast of the site and the Maple Estate Mobile Home Park and the running track for the Picture Butte High School are located to the west across Secondary Road 843.

No hazardous building materials were observed at the time of the site reconnaissance. However, should there be an intention to demolish the residence located in the northwest corner of the site, a hazardous materials assessment should be carried out, so as not to expose any workers to harmful substances such as asbestos, lead based paint etc.

Information gathered and observations made during the Phase I Environmental Site Assessment have not revealed any evidence of environmental contamination associated with the site.

Based on our findings, no further environmental investigation of the site is recommended at this time.

## 9.0 CLOSURE

The American Society for Testing and Materials Standard of Practice notes that no environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of a standard environmental site assessment protocol is intended to reduce but not eliminate this uncertainty, given reasonable limits of cost and time.

This report has been prepared for the sole benefit of Oak Pointe Inc. Gideon Acquisitions Ltd. and Clayton Koster a Joint Venture, also known as Butte Landing. This report may not be relied upon by any third party or entity without the express written consent of WA Environmental Services Ltd. and Oak Pointe Inc. Gideon Acquisitions Ltd. and Clayton Koster a Joint Venture, also known as Butte Landing.

Any use a third party may make of this report, or any reliance on decisions made based on it, are the responsibility of such third parties. WA Environmental Services Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Some of the information presented in this report was provided through existing documents and interviews. Although attempts were made, whenever possible, to obtain a minimum of two confirmatory sources of information, WA Environmental Services Ltd. in certain instances, has been required to assume that the information provided is accurate.

The conclusions presented represent the best judgement of the assessor based on current environmental standards and on the site conditions observed on October 12<sup>th</sup>, 2023. Due to the nature of the investigation and the limited data available, the assessor cannot warrant against undiscovered environmental liabilities.

Should additional information become available WA Environmental Services Ltd. requests that this information be brought to our attention so that we may re-assess the conclusions presented herein.

Respectfully submitted,

**WA ENVIRONMENTAL SERVICES LTD.**



Tim Waters, C.Tech  
Project Manager




Beverly Waters, C.E.S.A.  
Senior Reviewer


**APPENDIX A**

**SITE PLANS**



	<b>Project:</b> Phase I Environmental Site Assessment	<b>Project No:</b> WA-23-101402	<b>Date:</b> October 17, 2023
	<b>Location:</b> Lots 1 & 2, Block 3, Plan 2311035 Picture Butte, Alberta	<b>Drawn By:</b> TGW <b>Reviewed By:</b> BFW	<b>Client:</b> Butte Landing
	<b>Drawing 1:</b> Site Location Plan		



	<p><b>Project:</b> Phase I Environmental Site Assessment</p> <p><b>Location:</b> Lots 1 &amp; 2, Block 3, Plan 2311035 Picture Butte, Alberta</p>	<p><b>Project:</b> WA-23-101402</p> <p><b>Drawn By:</b> TGW <b>Reviewed By:</b> BFW</p>	<p><b>Date:</b> October 17, 2023</p> <p><b>Client:</b> Butte Landing</p>
<p><b>Drawing 2: Site Location Plan: Site Plan Showing Adjacent Land Use</b></p>			

**APPENDIX B**

**ASSESSOR QUALIFICATIONS**

**INSURANCE CERTIFICATES**



# Associated Environmental Site Assessors of Canada



*This is to acknowledge that*

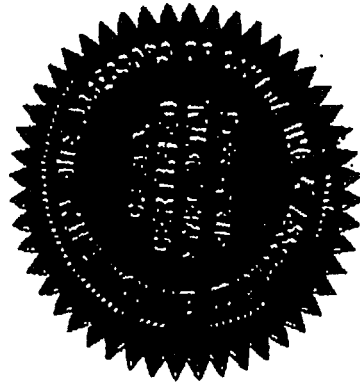
## **Beverly Waters**


*has been qualified for the Certified Environmental Site Assessment Designation*

**C.E.S.A.**

*Certified Environmental Site Assessor - Phase 1  
according to AESAC's National Certification Program*

*signed and sealed this day of October 16, 2004*



  
*Bruce Loyak, President*



**ARCHITECTS/ENGINEERS PROFESSIONAL LIABILITY INSURANCE**

Effected with certain Lloyd's Underwriters ("the Insurer") through Lloyd's Approved Coverholder ("the Coverholder")  
**SOUTH WESTERN INSURANCE GROUP LIMITED**  
 21 Four Seasons Place - Suite 105, Toronto, ON M9B 6J8

**ARCHITECTS AND ENGINEERS PROFESSIONAL LIABILITY, ARCHITECTS, ENGINEERS AND CONTRACTORS POLLUTION LIABILITY, TECHNOLOGY BASED SERVICES, TECHNOLOGY PRODUCTS, COMPUTER NETWORK SECURITY, AND MULTIMEDIA AND ADVERTISING LIABILITY INSURANCE**

**DECLARATIONS**  
**THIS IS A CLAIMS-MADE PROFESSIONAL LIABILITY INSURANCE POLICY**  
**PLEASE READ CAREFULLY**

**RENEWAL** This COVERAGE SUMMARY-DECLARATION, together with the Policy wordings and endorsements, if any issued to form a part thereof, completes the below numbered policy.

	<b>BROKER</b> Schwartz Reliance Insurance 300-10th Street South, LETHBRIDGE, AB, T1J 3Y5	<b>Policy No:</b> LAP980175
<b>1.</b>	<b>NAMED INSURED</b> WA Environmental Services Ltd.	
	<b>MAILING ADDRESS</b> 221 Riverpark Blvd West, Lethbridge, AB, T1K 0P6	
	<b>LOCATION ADDRESS</b> 221 Riverpark Blvd West, Lethbridge, AB T1K 0P6	
	<b>Description of Operations</b> Environmental / pollution 100%	
<b>2.</b>	<b>POLICY PERIOD</b> From June 8, 2023 to June 8, 2024	12:01 a.m. Standard Time at the Postal Address of the Named Insured as stated herein
<b>3.</b>	<b>LIMIT OF LIABILITY</b>	
	(a) \$2,000,000	Each Claim Limit – Includes Claims Expenses
	(b) \$2,000,000	Annual Aggregate Limit – Includes Claims Expenses
	The total Limit of Liability of the Insurer, including Damages and Claims Expenses, for all Claims first made against the Insured and reported in writing to the Insurer during the Policy Period shall not exceed in the Aggregate, the limit stated herein.	
<b>4.</b>	<b>DEDUCTIBLE</b>	
	(a) \$7,500	Includes Claims Expenses.
<b>5.</b>	<b>PREMIUM</b> Minimum Earned Premium:	\$16,810.00 30 % (\$5,043.00)
<b>6.</b>	<b>RETROACTIVE DATE</b>	June 08, 2000 - Primary \$1,000,000 Limit June 08, 2011 - \$1,000,000 excess of \$1,000,000 Limit
<b>7.</b>	<b>TECHNOLOGY BASED SERVICES, TECHNOLOGY PRODUCTS, COMPUTER NETWORK SECURITY, AND MULTIMEDIA AND ADVERTISING LIABILITY INSURANCE COVERAGE OPTION:</b>  Purchased <input checked="" type="checkbox"/> If this box is checked then Insuring Agreements C, D, E and F of this Policy shall apply. Not Purchased <input type="checkbox"/> If this box is checked then Insuring Agreements C, D, E and F of this Policy shall not apply.  If no box is checked, then Insuring Agreements C, D, E and F of this Policy shall not apply.	

**This policy contains a clause which may limit the amount payable**

For purposes of the Insurance Companies Act (Canada), this document was issued in the course of insurance business in Canada of the Insurer(s) participating on this policy.

8.	<b>OPTIONAL EXTENSION PERIOD:</b> 100% of premium set forth in Item 5 above.	
9.	<b>NOTICE OF CLAIM TO:</b>	South Western Insurance Group Ltd. 1.855.801.0299 swgclaims@scm.cas
10.	<b>NOTICE OF ELECTION:</b>	South Western Insurance Group Ltd. 21 Four Seasons Place - Suite 105, Toronto, ON M9B 6J8
11.	<b>SERVICE OF SUIT:</b>	See Identification of Insurer Section.
12.	<b>CHOICE OF LAW:</b>	Canada
13.	<b>FORMS AND ENDORSEMENTS ATTACHED HERETO:</b>	
	LYD-IRS2 Mandatory/Compulsory Attachments Clause STATSALL Statutory Conditions and General Conditions 623AFB0089 AFB Short Rate Cancellation Table Endorsement 623AFB0097 Warranted No Higher Limits Endorsement AMDEND Amendatory Endorsement L648B-20 Cyber Exclusion Endorsement LBA-041B Rain Screen Exclusion LSW-559 Retroactive Limitation Clause MIN-EARN1 Minimum Earned Premium Endorsement -- 30% NMA-1477 Radioactive Contamination Exclusion Clause - Liability - Direct NMA-2918 War and Terrorism Exclusion NMA-2962 Biological or Chemical Materials Exclusion AFB-AE - A&E Media Tech LBA-091 Supplementary Payments Amendment	
14.	This Policy has been issued based on the information contained in the Application signed and dated	

**IDENTIFICATION OF INSURER / ACTION AGAINST INSURER**

This insurance has been effected in accordance with the authorization granted to the Coverholder by the Underwriting Members of the Syndicates whose definitive numbers and proportions are shown in the Table attached to Agreement No. B1306C502782200 (Hereinafter referred to as "the Underwriters"). The Underwriters shall be liable hereunder each for his own part and not one for another in proportion to the several sums that each of them has subscribed to the said Agreement. In any action to enforce the obligations of the Underwriters they can be designated or named as "Lloyd's Underwriters" and such designation shall be binding on the Underwriters liable hereunder as if they had each been individually named as defendant. Service of such proceedings may validly be made upon the Attorney In Fact In Canada for Lloyd's Underwriters, whose address for such service is Royal Bank Plaza South Tower, 200 Bay Street, Suite 2930, P.O. Box 51 Toronto, Ontario M5J 2J2.

**NOTICE**

Any notice to the Underwriters may be validly given to the Coverholder.

In witness whereof this policy has been signed, as authorized by the Underwriters, by SOUTH WESTERN INSURANCE GROUP LIMITED.

Per



John A. Barclay, President & CEO

The Insured is requested to read this policy, and if incorrect, return it immediately for alteration. In the event of an occurrence likely to result in a claim under this Insurance, immediate notice should be given to the office designated above.

**This policy contains a clause which may limit the amount payable**

For purposes of the *Insurance Companies Act* (Canada), this document was issued in the course of insurance business in Canada of the Insurer(s) participating on this policy.

**General Liability**

Coverage	Form	Deductible \$	Limit of Insurance \$
Commercial General Liability Max	LR20-3		
Coverage A - Bodily Injury and Property Damage Liability - Each Occurrence			2,000,000
Coverage A - Liability for Abuse - Aggregate			2,000,000
Coverage A - Products-Completed Operations - Aggregate			2,000,000
Coverage A - Property Damage Deductible - Each Occurrence		1,000	
Coverage B - Personal Injury and Advertising Injury Liability - Per Person or Organization			2,000,000
Coverage C - Medical Payments - Each Person			50,000
Coverage D - Tenants' Legal Liability - Any One Premises		1,000	500,000
S.E.F. No. 96 - Contractual Liability Endorsement	L220-2		
Coverage Territory Amendment - Canada only	L407-2		
Crane and Hoist Operators' Liability Endorsement	L408-2	1,000	100,000
Employee benefit program liability	L410-2		
Aggregate			1,000,000
Each Employee		1,000	1,000,000
Forest and Prairie Fire Fighting Expense Endorsement - Oil and Gas	L416OG-2		
Limit of liability - Aggregate			1,000,000
Limit of liability - Each accident or "occurrence"		2,500	1,000,000
S.E.F. 94 Legal Liability for Damage to Hired Automobiles	L429-1		
Subsection 1 - All Perils		1,000	75,000
S.E.F. No. 99 Excluding Long term Leased Vehicle Endorsement	L431-1		
S.P.F. No. 6 - Standard Non-Owned Automobile Liability Policy	L432-2		
Section A - Third party Liability			2,000,000

**General Liability**

Coverage	Form	Deductible \$	Limit of Insurance \$
Absolute Pollution Exclusion Endorsement	L436-2		
Concrete Rip & Tear Liability Endorsement	L440-2		
Limit of Liability - Annual aggregate			50,000
Limit of Liability - Each claim			50,000
Reimbursement			1,000
Employers Liability Exclusion	L442-2		
Sub-contractor's Warranty Endorsement	L450-2		
Minimum Limit of Liability - Aggregate Limit			1,000,000
Minimum Limit of Liability - Per Accident or Occurrence			2,000,000
Amended Professional Services Exclusion Endorsement	L483-2		
Oil and Gas Limitation Endorsement	L508-2		
Deductible: land		5,000	
Deductible: pipelines		50,000	
Deductible: underground		1,000	
Deductible: water		25,000	

**Rating Information(s)**

**Premises, Property and Operations**

**Rating  
Base**

Environmental Consultants                      Flat premium  
 Environmental Consultants                      Flat premium

Amount of revenue (receipts) disclosed on file for pricing and coverage purposes\* \$506,000  
 \*Note – Only operation(s) where pricing is receipts based are included in the amount of revenues shown.

**Name:** Timothy G. Waters, C.Tech

**Position:** Senior Project Manager

**Education:** General Certificate of Education, Advanced Level  
(Geography/Geomorphology), University of London, England.

**Relevant Experience:**

- Lead assessor on 150 Phase I Environmental Site Assessments of residential, commercial, industrial and institutional properties throughout Alberta and B.C.
- Transport Canada, Lethbridge Airport Fire Training Area. Responsible for Phase III drilling program, sample collection and gathering field data.
- Transport Canada, Medicine Hat and Empress Non Directional Beacon Sites. Responsible for Phase II drilling program and subsequent field monitoring and sampling
- Transport Canada, Pincher Creek, Alberta: Responsible for data collection at three facilities at the Pincher Creek Airport and subsequent sampling of groundwater.
- Federal Business Development Bank, Blairmore, Alberta. Responsible for the safe removal of USTs.
- Alberta Transportation and Utilities, Kipp and Burmis, Alberta. Responsible for the safe removal of USTs.

**APPENDIX C**  
**RESOURCE INFORMATION**

**REGULATORY CONTACTS, PERSONS INTERVIEWED, AND  
HISTORICAL SOURCES**

SOURCE	INFORMATION/CONTACT/PHONE NUMBER
Alberta Environment and Protected Areas	Environmental Permits/Approvals Mr. Dennis Eriksen, Regulatory Approvals Centre (403) 427-6311
Aerial Photographs	1938, 1950, 1974, 1981, 1991, 2003, 2010, 2018, 2022
Fire Insurance Maps	Not available for this site
Historical City Directories	Not available for this site
Previous Environmental Reports	None
Other Sources	<p>Ms. Iris Djurfors, Environmental Law Centre, (403) 424-5099</p> <p>Mr. Gerry Letendre, SCC, (780) 413-0099</p> <p>Town of Picture Butte Planning Dept. (403) 732-4555 (Michelle)</p> <p>Town of Picture Butte, Volunteer Fire Dept, (403) 732-4100</p> <p>Schwartz Reliance Registry (Land Titles) (403) 320-1010</p> <p>Mr. Art Leusink, A.J. Excavating, Picture Butte (403) 308-8127</p> <p>Ms. Erin Mick, CBC contributor: <i>"Growing Up in a Trailer Park"</i></p> <p>Mr. Josh Marti, Avison Young Realtor: (403) 795-8484</p>



**APPENDIX D**  
**REGULATIONS**

## **Federal**

### **Legislation**

Canada Water Act

- Guidelines for Canadian Drinking Water Quality - 6th edition
- Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments

### **Canadian Environmental Protection Act**

- Chlorobiphenyls Regulations (SOR/91-152)
- Federal Aboveground Storage Tank Technical Guidelines
- Federal Underground Storage Tank Technical Guidelines
- Registration of Storage Tank Systems for Petroleum Products and Allied Petroleum
- Federal Lands Regulations
- Storage of PCB Material Regulations (SOR/92-507)

Fisheries Act

Transportation of Dangerous Goods Act/Regulations

Hazardous Products Act

### *Policies, Guidelines and Codes*

Canadian Council of Ministers of the Environment (CCME)

- Environmental Codes of Practice for Underground Storage Tanks Containing Petroleum Products and Allied Petroleum Products, March 1993
- Environmental Code of Practice for Aboveground Storage Tanks Containing Petroleum Products, 1993

Government of Canada Asbestos Abatement Guidelines, 1991-01-04

Code of Good Practice for Handling Solid Wastes at Federal Establishments (Environment Canada)

Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments (EPS-1-EC-76-1)

## **Provincial**

Alberta Fire Code (2019)

Environmental Protection and Enhancement Act (1993)

Ozone-Depleting Substances and Halocarbons Regulation (2000)

Occupational Health and Safety Act (1993)

Transportation of Dangerous Goods Control Act (1986)

## **Municipal**

Town of Picture Butte Unsightly/Untidy Premises By-law

Town of Picture Butte Refuse By-law

Town of Picture Butte Sewer Service By-law

Town of Picture Butte Noise Control By-law



## **Traffic Impact Assessment**

Picture Butte Multi-Family Residential

Prepared for:

Oak Pointe Inc.

Prepared by:

Stantec Consulting Ltd.  
230 – 704 4th Avenue South  
Lethbridge AB, T1J 0N8

# Sign-off Sheet

This document entitled Traffic Impact Assessment was prepared by Stantec Consulting Ltd. ("Stantec") for the account of Oak Pointe Inc. Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by: **Angela Forsyth, P.Eng.**

Reviewed by: **Lindsay Haskins, P.Eng.**

**Corporate Authorization**

# Table of Contents

- 1.0 INTRODUCTION.....1**
- 1.1 OBJECTIVES .....1
- 1.2 STUDY AREA .....2
- 2.0 EXISTING INFRASTRUCTURE.....5**
- 2.1 ROAD NETWORK.....5
- 2.2 LAND USE .....5
- 3.0 EXISTING CONDITIONS .....6**
- 3.1 TRAFFIC VOLUMES.....6
- 3.2 OPERATING CONDITIONS .....9
- 3.3 INTERSECTION ANALYSIS .....9
- 4.0 PROPOSED DEVELOPMENT .....11**
- 4.1 TRIP GENERATION.....12
- 4.2 TRIP DISTRIBUTION AND ASSIGNMENT .....12
- 5.0 TRANSPORTATION ASSESSMENT .....17**
- 5.1 INTERSECTION ANALYSIS .....17
- 5.1.1 2043 Horizon Full-Build Operating Conditions.....17
- 6.0 ATEC INTERSECTION TREATMENT WARRANTS.....18**
- 7.0 ILLUMINATION.....19**
- 8.0 ACCESS MANAGEMENT.....20**
- 9.0 RECOMMENDATIONS .....21**

## LIST OF TABLES

- Table 1: Level of Service Criteria .....9
- Table 2: Level of Service Summary for Background Operating Conditions.....10
- Table 3: Trip Generation Rate.....12
- Table 4: Peak Hour Trip Distribution .....12
- Table 5: Level of Service Summary for 2043 Horizon Full-Build Operating Conditions.....17
- Table 6: Estimated AADT.....18

## LIST OF FIGURES

- Figure 1: Site Location .....1
- Figure 2: Existing Intersections .....3
- Figure 3: Existing (2022) Background Traffic Volumes.....7
- Figure 4: Horizon 2043 Background Traffic Volumes .....8
- Figure 5: Site Plan .....11
- Figure 6: AM Peak Development Traffic.....13



Figure 7: PM Peak Development Traffic.....14  
Figure 8: AM Peak Post-Development Traffic.....15  
Figure 9: PM Peak Post-Development Traffic.....16

**LIST OF APPENDICES**

APPENDIX A .....Traffic Counts  
APPENDIX B ..... Synchro Outputs



# TRAFFIC IMPACT ASSESSMENT

## Introduction

### 1.0 INTRODUCTION

Stantec Consulting Ltd. (Stantec) is undertaking a Traffic Impact Assessment (TIA) for the proposed residential development by Oak Pointe Inc., in Picture Butte, Alberta. The subject area is located adjacent to Highway 843, approximately 350 metres south on the intersection of Highway 843 and Highway 519 (Rogers Avenue). **Figure 1** illustrates the location of the site within the town of Picture Butte.



Figure 1: Site Location

### 1.1 OBJECTIVES

The objectives of this TIA are as follows:

- Collect the historic traffic volumes from Alberta Transportation and Economic Corridors (ATEC) at the intersection of Hwy 843 and Hwy 519.





## TRAFFIC IMPACT ASSESSMENT

### Introduction

- Estimate the magnitude and characteristics of peak hour traffic generated by the proposed development.
- Evaluate the impacts of vehicular traffic generated by the proposed development on the existing intersections.
- Identify and recommend appropriate traffic operation and/or infrastructure improvements necessary to accommodate the anticipated traffic.

## 1.2 STUDY AREA

The study area includes the following existing intersections:

- Highway 843 and Highway 519
- Highway 843 and Maple Ridge Estates

**Figure 2** outlines these intersections.

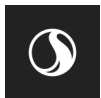


# TRAFFIC IMPACT ASSESSMENT

## Introduction



**Figure 2: Existing Intersections**





## TRAFFIC IMPACT ASSESSMENT

Existing Infrastructure

## 2.0 EXISTING INFRASTRUCTURE

### 2.1 ROAD NETWORK

The existing road network within the area is comprised of two-lane rural cross sections along Highway 519 and Highway 843. There are direct accesses to several residential properties, farm lands and subdivisions. Highway 843 in this area extends from Hwy 519 on the north limit, to a dead end approximately 3 kilometres to the south.

There are two intersections in the immediate area of the proposed development. A mobile home park (Maple Ridge Estates) on the west side of Hwy 843 accesses the highway from two dedicated access points, separated by approximately 80 metres.

### 2.2 LAND USE

There is an existing residence that will remain on the north end of the proposed development. There is also a water fill station to the north. Picture Butte High School sits to the northwest of this site, however there is no access to the school along Highway 843. To the south there are some residences, a church, a seniors centre, a feed lot and several farming operations.



## TRAFFIC IMPACT ASSESSMENT

Existing Conditions

### 3.0 EXISTING CONDITIONS

#### 3.1 TRAFFIC VOLUMES

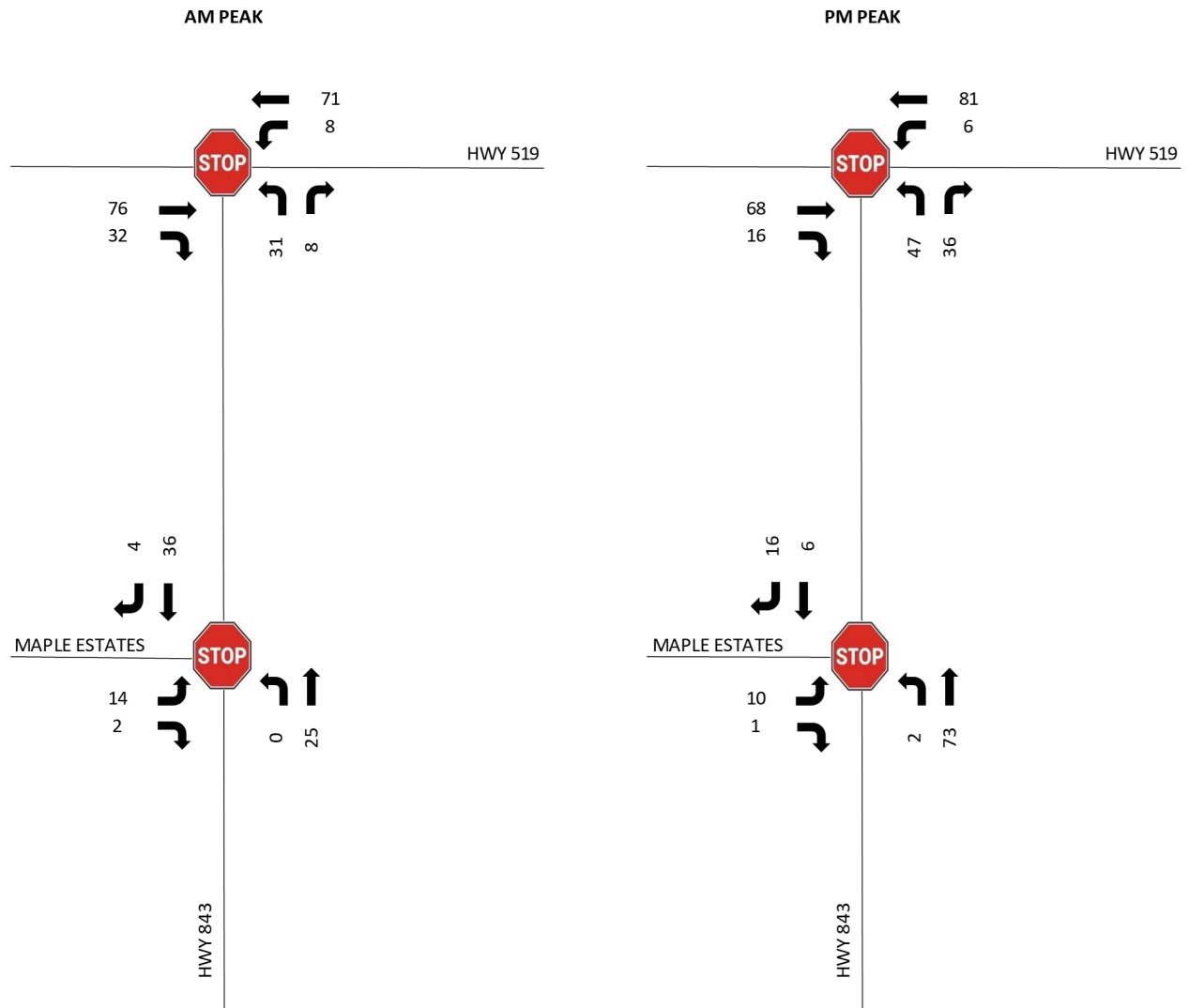
Background traffic volumes were obtained from ATEC's Traffic Volume Data Map, and estimated using the ITE Trip Generation Manual, 11<sup>th</sup> Edition for Maple Estates traffic. The two most recent traffic counts were completed in 2014, 2019. Pre-COVID-19 traffic growth suggests less than 1% traffic growth from the year 2014 to 2019. Post-COVID-19 traffic estimates suggest that traffic volumes have mostly recovered since 2019, but are not projecting any growth.

Although this traffic data in the area suggests very little growth, the background volumes were grown to 2043 using a 2% growth rate. Existing 2022 and Horizon 2043 background traffic volumes can be found in **Figure 3** and **Figure 4**, respectively.



**TRAFFIC IMPACT ASSESSMENT**

Existing Conditions

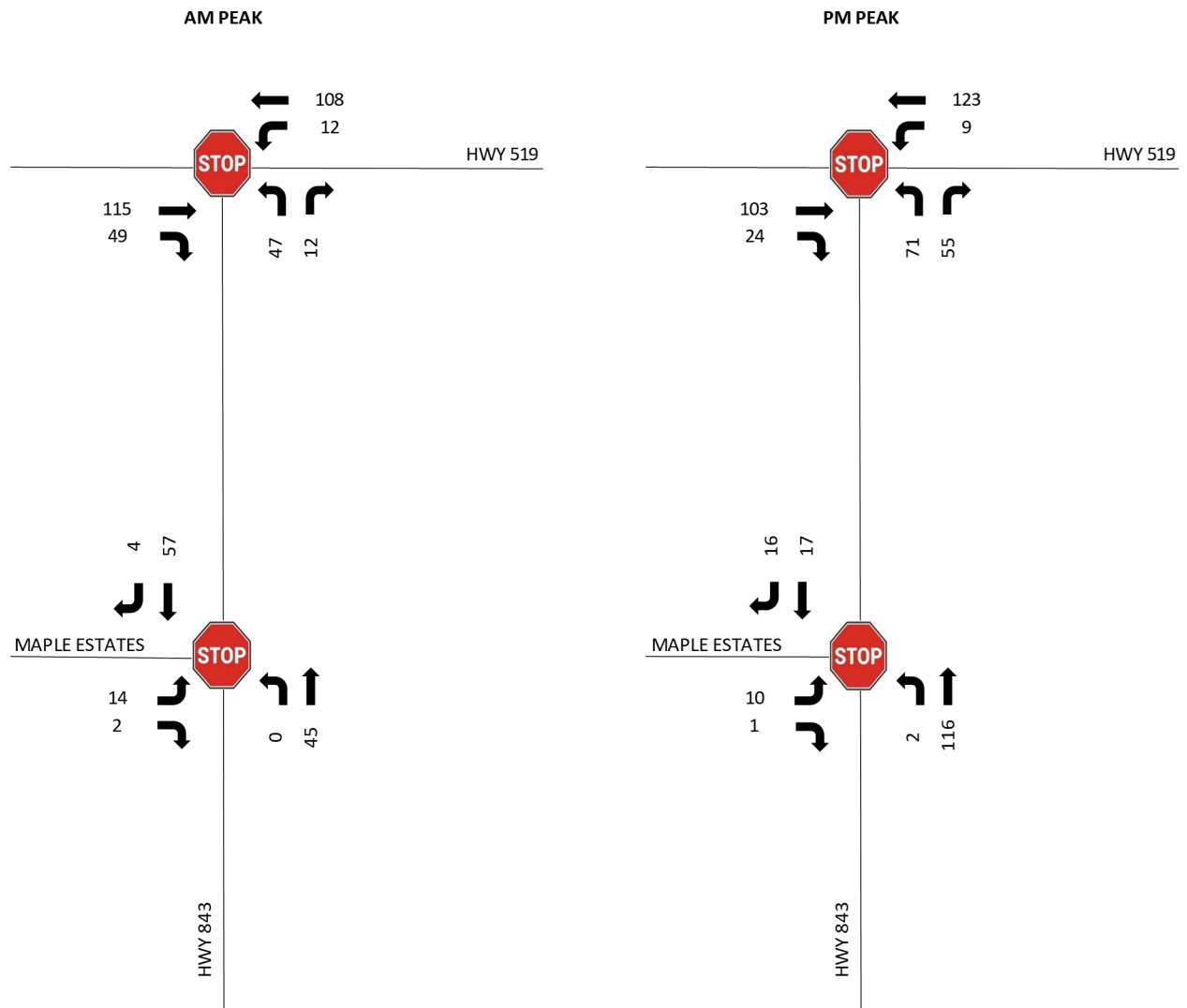


**Figure 3: Existing (2022) Background Traffic Volumes**



**TRAFFIC IMPACT ASSESSMENT**

Existing Conditions



**Figure 4: Horizon 2043 Background Traffic Volumes**



## TRAFFIC IMPACT ASSESSMENT

Existing Conditions

### 3.2 OPERATING CONDITIONS

Intersection analysis was completed using the Synchro 11 software package, supporting the Highway Capacity Manual. The methodology considers the intersection geometry, traffic volumes, posted speed limit, and intersection control for unsignalized intersections. For signalized intersections, the intersection geometry, traffic volumes, posted speed limit, traffic signal phasing/timing plan and pedestrian volumes are all considered. The level-of-service criteria is tabulated below in **Table 1** for both unsignalized and signalized intersections.

Level of Service	Average Control Delay (seconds per vehicle)		Comment
	Signalized Intersection	Unsignalized Intersection	
A	10.0 or less	10.0 or less	Very good operation
B	10.1 to 20.0	10.1 to 15.0	Good operation
C	20.1 to 35.0	15.1 to 25.0	Acceptable operation
D	35.1 to 55.0	25.1 to 35.0	Congestion
E	55.1 to 80.0	35.1 to 50.0	Significant congestion
F	More than 80.0	More than 50.0	Unacceptable operation

**Table 1: Level of Service Criteria**

The volume-to-capacity (v/c) ratio was also considered in the analyses. The v/c ratio represents the percentage of capacity the traffic volumes are consuming. If the v/c ratio is above 1.0, then the movement or intersection has exceeded capacity.

### 3.3 INTERSECTION ANALYSIS

Both intersections appear to operate acceptably under existing conditions. The background synchro analysis is shown in **Table 2**.





**TRAFFIC IMPACT ASSESSMENT**

Existing Conditions

Intersection	Intersection Control	Scenario	Measure	Eastbound			Westbound			Northbound			Southbound			Level of Service	
				Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right		
Highway 843 & Hwy 519	Two-Way Stop Control	AM Peak	Volumes (vph)		115	49				47		12					A
			Level of Service	A			A			B							
			V/C Ratio by Movement	0.1			0.01			0.09							
			95th Percentile Queue (m)	0			0.2			2.2							
		PM Peak	Volumes (vph)		103	24	9	123		71		55					A
			Level of Service	A			A			B							
			V/C Ratio by Movement	0.08			0.01			0.17							
		95th Percentile Queue (m)	0			0.2			4.8								
Highway 843 & Maple Estates	Two-Way Stop Control	AM Peak	Volumes (vph)	14		2				0	45			57	4	A	
			Level of Service	A			A			A							
			V/C Ratio by Movement	0.02						0			0.04				
			95th Percentile Queue (m)	0.4						0			0.04				
		PM Peak	Volumes (vph)	10		1				2	116			17	16	A	
			Level of Service	A			A			A							
			V/C Ratio by Movement	0.01						0			0.02				
		95th Percentile Queue (m)	0.3						0			0					

**Table 2: Level of Service Summary for Background Operating Conditions**



TRAFFIC IMPACT ASSESSMENT

Proposed Development

### 4.0 PROPOSED DEVELOPMENT

A site plan has been developed for the parcel, consisting of twenty, four-unit townhouse buildings, for a total of 80 residential units. The site is accessed by a single access lining up with the Maple Estates access to the west. The access point will service an internal loop accessing each residential building. A gated, graveled additional link will be provided for emergency access at an existing residential access point. The proposed site plan is shown in **Figure 5**.

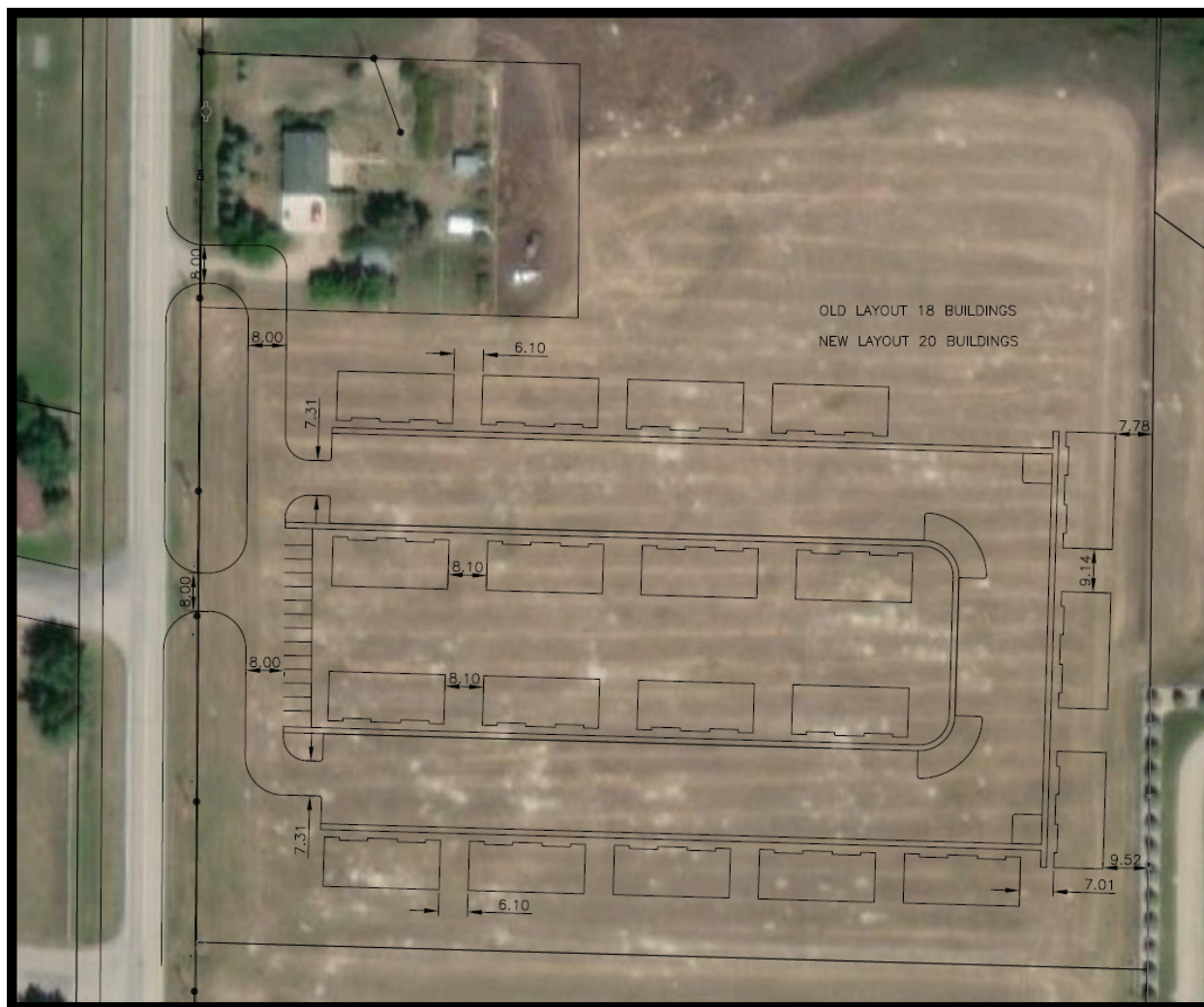


Figure 5: Site Plan



## TRAFFIC IMPACT ASSESSMENT

Proposed Development

### 4.1 TRIP GENERATION

The trip generation for the site was estimated using the ITE Trip Generation Manual, 11<sup>th</sup> Edition. **Table 3** summarizes the estimated site traffic rates generated by the proposed site plan.

Land Use	Variable	AM Peak			PM Peak		
		Trip Rate	% In	% Out	Trip Rate	% In	% Out
215 – Single-Family Attached	Units	0.48	25%	75%	0.57	59%	41%

**Table 3: Trip Generation Rate**

### 4.2 TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution patterns for the new primary trips were based on the existing land uses and trip distribution patterns in the area. There is very little development to the south, so 90% of the new trips were assigned to northbound Hwy 843, with the remaining 10% assigned to southbound. At the intersection of Hwy 843 and Hwy 519, the existing trip distribution was taken into consideration, as well as the nature of the new residential trips. Although the existing trip distribution at this intersection is two-thirds to the west, that percentage was increased to 75% for this development. Much of the existing traffic to the south is for farming purposes, with more commercial destinations. This residential traffic will likely be travelling to the more densely populated areas of Picture Butte or continuing to the City of Lethbridge. The trip distribution is summarized in **Table 4**.

Peak hour	Intensity (units)	Total Trips	In				Out			
			Total	West	East	South	Total	West	East	South
AM	80	38	10	7	2	1	29	20	6	3
PM	80	46	27	18	6	3	19	13	4	2

**Table 4: Peak Hour Trip Distribution**

Based on the trip distribution patterns, the AM and PM peak hour traffic generated from the development were then assigned to the subject intersections. The assignment for the generated AM and PM peak hour traffic is illustrated in **Figure 6** and **Figure 7**, respectively.

Adding the development volumes to the background volumes give the full-build traffic volumes distributed over the roadway network. The full-build AM and PM peak hour volumes are shown in **Figure 8** and **Figure 9**, respectively.



TRAFFIC IMPACT ASSESSMENT

Proposed Development

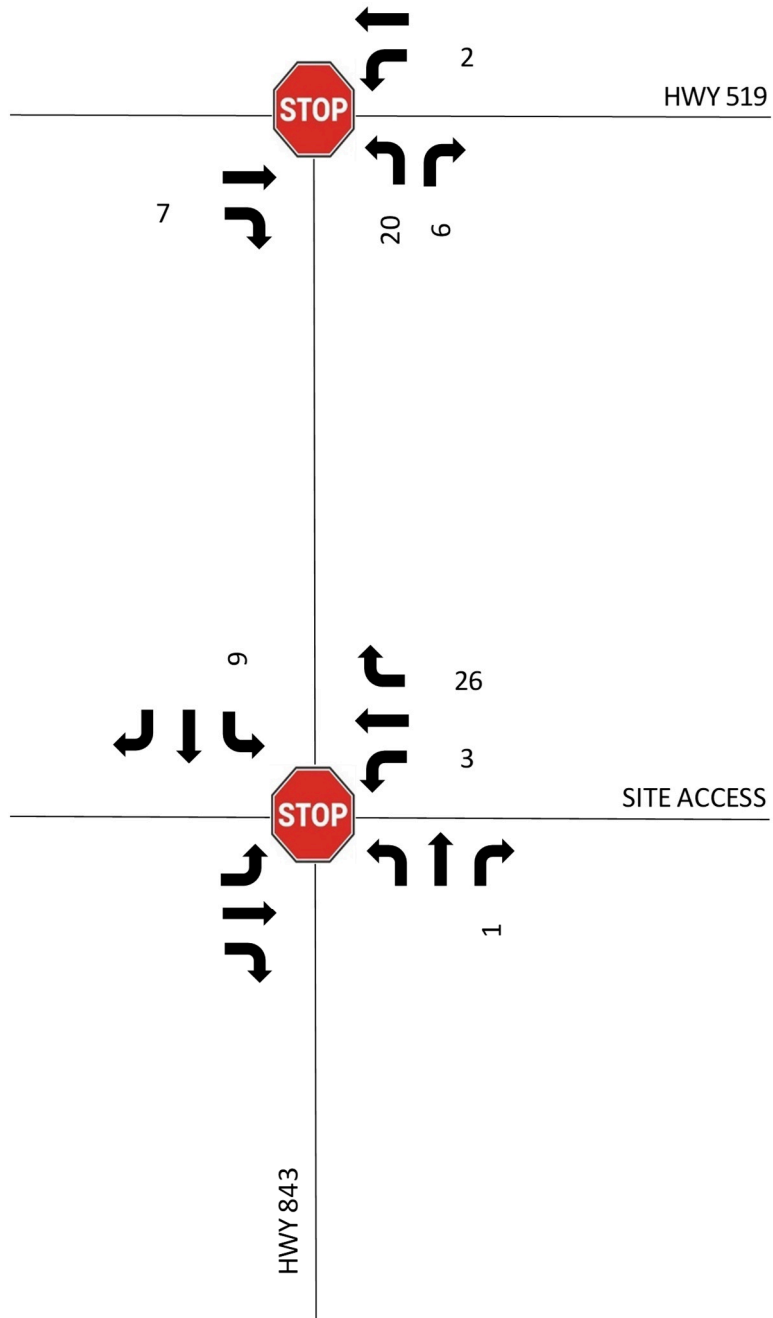


Figure 6: AM Peak Development Traffic



TRAFFIC IMPACT ASSESSMENT

Proposed Development

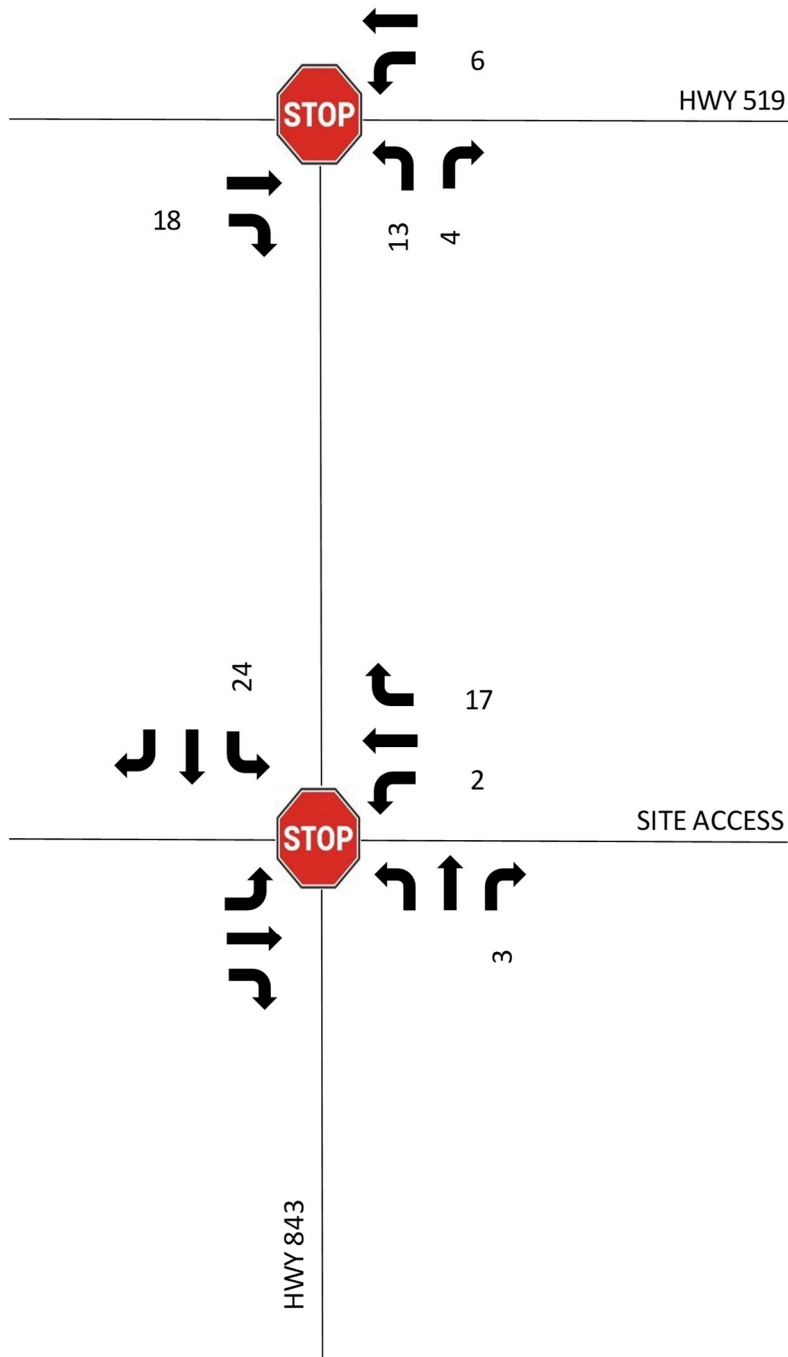
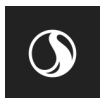


Figure 7: PM Peak Development Traffic



TRAFFIC IMPACT ASSESSMENT

Proposed Development

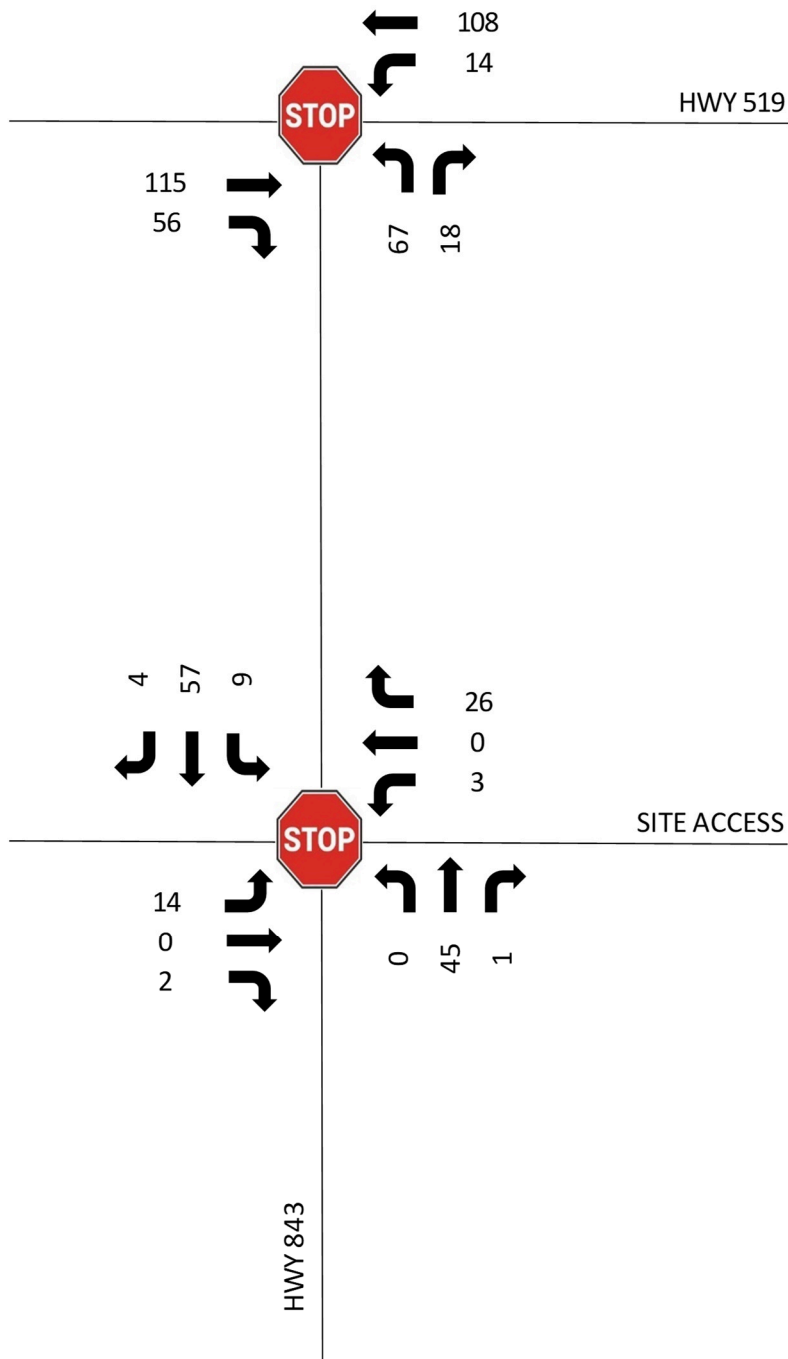
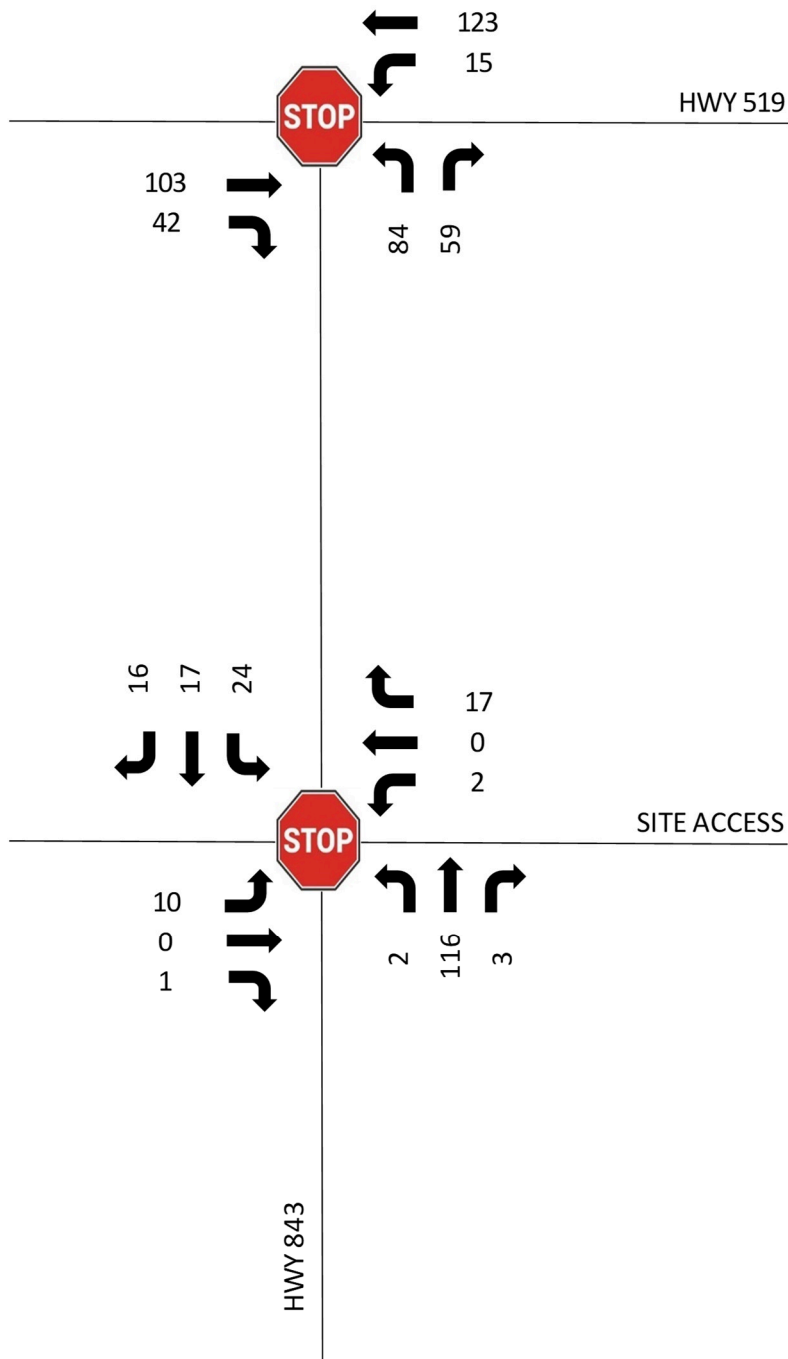


Figure 8: AM Peak Post-Development Traffic

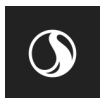


**TRAFFIC IMPACT ASSESSMENT**

Proposed Development



**Figure 9: PM Peak Post-Development Traffic**



## 5.0 TRANSPORTATION ASSESSMENT

### 5.1 INTERSECTION ANALYSIS

The intersection in the proposed site plan, as well as the intersection of Hwy 843 & Hwy 519, were analyzed for traffic operations. Traffic volumes were applied to the network and analyzed with existing geometrics and traffic control.

#### 5.1.1 2043 Horizon Full-Build Operating Conditions

The post-development full-build operating conditions for the subject intersections in the study area were reviewed based on the existing lane configurations. The results of the analysis are summarized in **Table 5**.

The results summarized in Table 8 indicate that traffic operations will be acceptable with existing lane configurations and traffic control.

Intersection	Intersection Control	Scenario	Measure	Eastbound			Westbound			Northbound			Southbound			Level of Service
				Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	
Highway 843 & Hwy 519	Tw o-Way Stop Control	AM Peak	Volumes (vph)		115	56	14	108		67		18				A
			Level of Service	A			A			B						
			V/C Ratio by Movement	0.11			0.01			0.13						
			95th Percentile Queue (m)	0			0.3			3.4						
		PM Peak	Volumes (vph)		103	42	15	123		84		59				A
			Level of Service	A			A			B						
			V/C Ratio by Movement	0.09			0.01			0.2						
			95th Percentile Queue (m)	0			0.3			5.8						
Highway 843 & Maple Estates	Tw o-Way Stop Control	AM Peak	Volumes (vph)	14	0	2	3	0	26	0	45	1	9	57	4	A
			Level of Service	A			A			A			A			
			V/C Ratio by Movement	0.02			0.03			0			0.01			
			95th Percentile Queue (m)	0.5			0.7			0			0.1			
		PM Peak	Volumes (vph)	10	0	1	2	0	17	2	116	3	24	17	16	A
			Level of Service	B			A			A			A			
			V/C Ratio by Movement	0.02			0.02			0			0.02			
			95th Percentile Queue (m)	0.4			0.5			0			0.4			

**Table 5: Level of Service Summary for 2043 Horizon Full-Build Operating Conditions**





**TRAFFIC IMPACT ASSESSMENT**

ATEC Intersection Treatment Warrants

## 6.0 ATEC INTERSECTION TREATMENT WARRANTS

Using 2022 ATEC turning movement diagrams, and a growth rate of 2%, horizon 2043 Annual Average Daily Traffic (AADT) was obtained. AADT was determined from the ITE Trip Generation Manual, 11<sup>th</sup> Edition. The resulting AADT values are provided in **Table 6**.

Roadway	AADT (2022 Background)	AADT (2043 Background)	AADT (2043 Post-Development)
Highway 519	2,140	3,244	3,631
Highway 843	780	1,182	1,698
Proposed Access	--	--	576

**Table 6: Estimated AADT**

As shown the table, the horizon 2043 post-development AADT for both highways is not significantly higher than the background horizon condition. Figure D-7.4 is not appropriate in this analysis, as the area is urban in nature, and the posted speed of all roadways in the study area is 50 km/h. With this low posted speed and urbanization, a Type I intersection would be appropriate at this access location. The AADT is relatively low, and coupled with the low volume of left turns, traffic is unlikely to be delayed by a left-turning vehicle. This is consistent with the adjacent access on the west side of Highway 843.



## TRAFFIC IMPACT ASSESSMENT

Illumination

### 7.0 ILLUMINATION

Both highways are currently illuminated with continuous overhead lighting.



## TRAFFIC IMPACT ASSESSMENT

Access Management

### 8.0 ACCESS MANAGEMENT

The residential site has been designed such that the primary access lines up with the existing access to Maple Estates. This will transform the existing 3-leg intersection into a 4-leg intersection at the current location and not create any additional access points to Highway 843.



## **9.0 RECOMMENDATIONS**

It is recommended that an additional leg be constructed aligning with the existing north access point to Maple Estates. This should continue to be a Type I intersection, given the low AADT, speeds and urbanization. No additional improvements are recommended to the existing infrastructure through horizon year 2043.



# APPENDIX A

## Traffic Counts



**Reference Number:**  
104090

**Intersection of:**  
519 & 843 AT PICTURE BUTTE

North On:	Vehicle Type	Volume	%
	A: Passenger Vehicle	0	###
	B: Recreational Vehicle	0	###
	C: Bus	0	###
	D: Single Unit Truck	0	###
	E: Tractor Trailer Unit	0	###
	<b>AADT</b>	<b>0</b>	
	<b>ASDT</b>	<b>0</b>	

2022 AADT / ASDT Estimates		
Leg AADT Volumes		
	0	
2,140		1,860
	780	
Total Entering Volume: <b>2,400</b>		

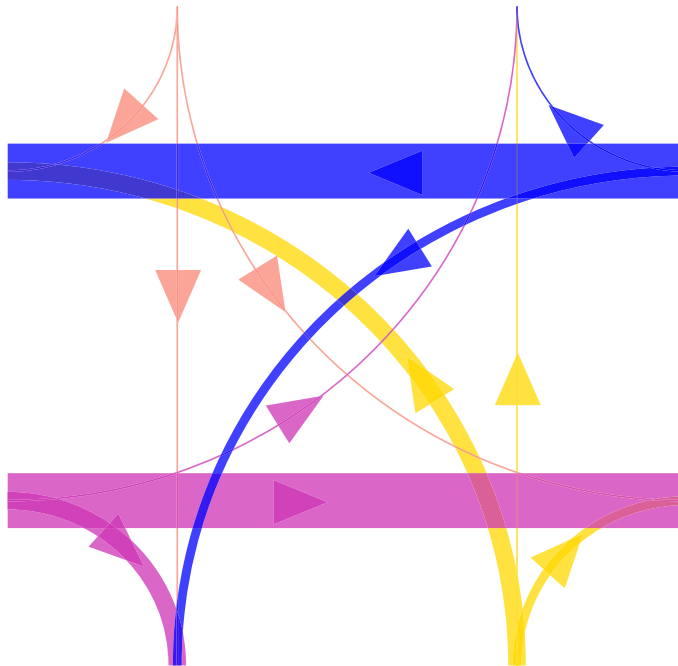
From North			
	Right	Thru	Left
	0	0	0
A	0	0	0
B	0	0	0
C	0	0	0
D	0	0	0
E	0	0	0

To North			
	Right	Thru	Left
	0	0	0
A	0	0	0
B	0	0	0
C	0	0	0
D	0	0	0
E	0	0	0

To West	
	Volume
	1,070
A	937
B	11
C	7
D	46
E	69

West On: 519	Vehicle Type	Volume	%
	A: Passenger Vehicle	1,862	87.0%
	B: Recreational Vehicle	19	0.9%
	C: Bus	15	0.7%
	D: Single Unit Truck	94	4.4%
	E: Tractor Trailer Unit	150	7.0%
	<b>AADT</b>	<b>2,140</b>	
	<b>ASDT</b>	<b>2,390</b>	

From West			
	Left	Thru	Right
	0	810	260
A	0	686	239
B	0	7	1
C	0	4	4
D	0	37	11
E	0	76	5



From East			
	Left	Thru	Right
	130	810	0
A	120	692	0
B	0	9	0
C	3	5	0
D	6	37	0
E	1	67	0

East On: 519	Vehicle Type	Volume	%
	A: Passenger Vehicle	1,614	85.9%
	B: Recreational Vehicle	17	0.9%
	C: Bus	16	0.9%
	D: Single Unit Truck	87	4.6%
	E: Tractor Trailer Unit	146	7.8%
	<b>AADT</b>	<b>1,860</b>	
	<b>ASDT</b>	<b>2,090</b>	

To East	
	Volume
	930
A	802
B	8
C	8
D	44
E	78

To South	
	Volume
	390
A	359
B	1
C	7
D	17
E	6

From South			
	Left	Thru	Right
	260	0	130
A	245	0	116
B	2	0	1
C	2	0	4
D	9	0	7
E	2	0	2

South On: 843	Vehicle Type	Volume	%
	A: Passenger Vehicle	720	92.3%
	B: Recreational Vehicle	4	0.5%
	C: Bus	13	1.7%
	D: Single Unit Truck	33	4.2%
	E: Tractor Trailer Unit	10	1.3%
	<b>AADT</b>	<b>780</b>	
	<b>ASDT</b>	<b>880</b>	

**ABBREVIATIONS:**

AADT: Annual Average Daily Traffic.  
Average daily traffic expressed as vehicles per day for the period from January 1 to December 31 (inclusive), 365 days.

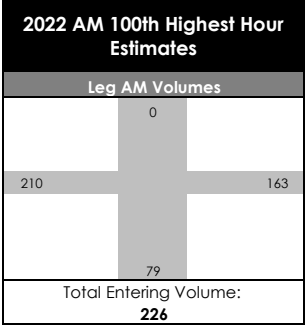
ASDT: Average Summer Daily Traffic.  
Average daily traffic expressed as vehicles per day for the period from May 1 to September 30 (inclusive), 153 days.

**NOTE:**  
Coloured line thickness corresponds to turning movement volume.

**Reference Number:**  
104090

**Intersection of:**  
519 & 843 AT PICTURE BUTTE

North On:	Vehicle Type	Volume	%
	A: Passenger Vehicle	0	####
	B: Recreational Vehicle	0	####
	C: Bus	0	####
	D: Single Unit Truck	0	####
	E: Tractor Trailer Unit	0	####
	<b>AM</b>	<b>0</b>	



From North			
	0		
	Right	Thru	Left
	<b>0</b>	<b>0</b>	<b>0</b>
A	0	0	0
B	0	0	0
C	0	0	0
D	0	0	0
E	0	0	0

To North			
	0		
A	0		
B	0		
C	0		
D	0		
E	0		

To West	
	102
A	78
B	2
C	2
D	10
E	10

From East			
	79		
	Left	Thru	Right
	<b>8</b>	<b>71</b>	<b>0</b>
A	7	56	0
B	0	2	0
C	0	1	0
D	0	4	0
E	1	8	0

West On: 519

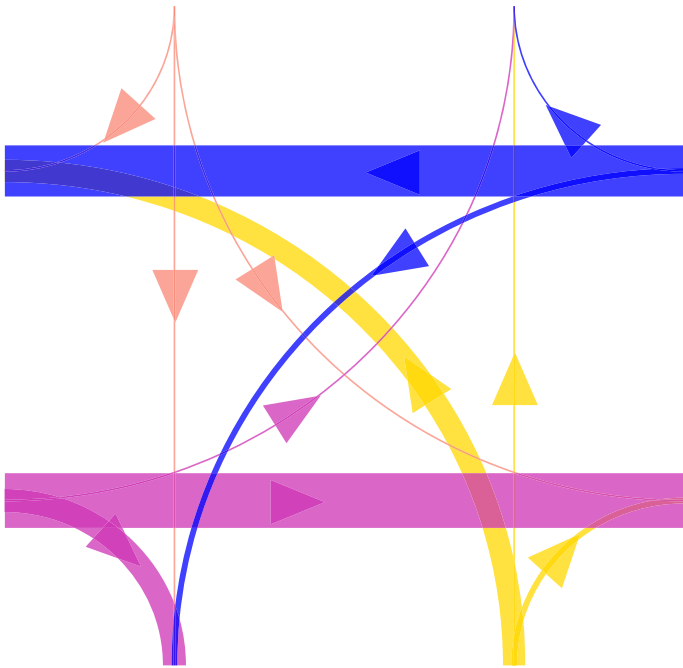
Volume	%
A	171 81.4%
B	3 1.4%
C	2 1.0%
D	19 9.0%
E	15 7.1%
<b>AM</b>	<b>210</b>

East On: 519

Vehicle Type	Volume	%
A	135	82.8%
B	3	1.8%
C	1	0.6%
D	10	6.1%
E	14	8.6%
<b>AM</b>	<b>163</b>	

From West			
	108		
	Left	Thru	Right
	<b>0</b>	<b>76</b>	<b>32</b>
A	0	65	28
B	0	1	0
C	0	0	0
D	0	5	4
E	0	5	0

To East	
	84
A	72
B	1
C	0
D	6
E	5



To South	
	40
A	35
B	0
C	0
D	4
E	1

From South			
	39		
	Left	Thru	Right
	<b>31</b>	<b>0</b>	<b>8</b>
A	22	0	7
B	0	0	0
C	1	0	0
D	6	0	1
E	2	0	0

South On: 843

Vehicle Type	Volume	%
A: Passenger Vehicle	64	81.0%
B: Recreational Vehicle	0	0.0%
C: Bus	1	1.3%
D: Single Unit Truck	11	13.9%
E: Tractor Trailer Unit	3	3.8%
<b>AM</b>	<b>79</b>	

**NOTE:**  
Coloured line thickness corresponds to turning movement volume.

**Reference Number:**  
104090

**Intersection of:**  
519 & 843 AT PICTURE BUTTE

North On:	Vehicle Type	Volume	%
	A: Passenger Vehicle	0	###
	B: Recreational Vehicle	0	###
	C: Bus	0	###
	D: Single Unit Truck	0	###
	E: Tractor Trailer Unit	0	###
	<b>PM</b>	<b>0</b>	

2022 PM 100th Highest Hour Estimates		
Leg PM Volumes		
	0	
212		191
	105	
Total Entering Volume: <b>254</b>		

From North			
	0		
	Right	Thru	Left
	0	0	0
A	0	0	0
B	0	0	0
C	0	0	0
D	0	0	0
E	0	0	0

To North			
	0		
A	0		
B	0		
C	0		
D	0		
E	0		

To West	
	128
A	113
B	2
C	0
D	2
E	11

West On: 519		
Vehicle Type	Volume	%
A	188	88.7%
B	3	1.4%
C	2	0.9%
D	3	1.4%
E	16	7.5%
<b>PM</b>	<b>212</b>	

From West			
	84		
	Left	Thru	Right
	0	68	16
A	0	60	15
B	0	1	0
C	0	1	1
D	0	1	0
E	0	5	0

From East			
	87		
	Left	Thru	Right
	6	81	0
A	6	66	0
B	0	2	0
C	0	0	0
D	0	2	0
E	0	11	0

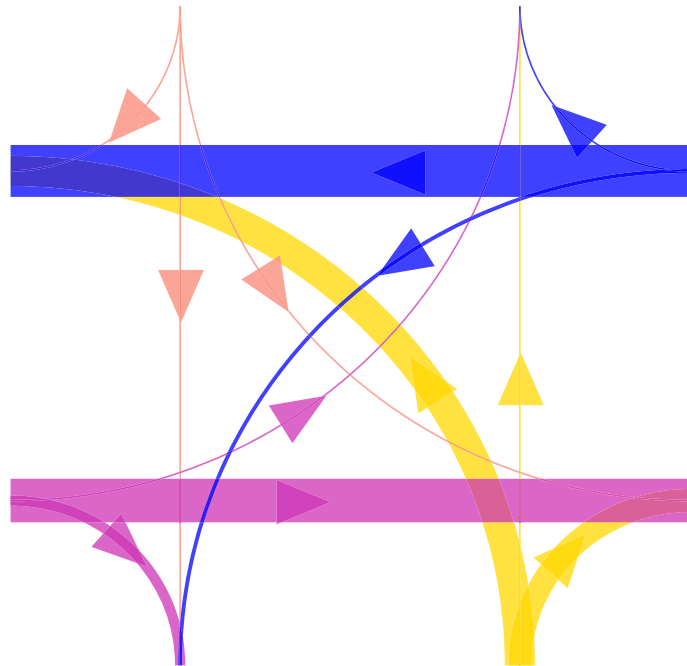
East On: 519		
Vehicle Type	Volume	%
A	166	86.9%
B	3	1.6%
C	2	1.0%
D	4	2.1%
E	16	8.4%
<b>PM</b>	<b>191</b>	

To East	
	104
A	94
B	1
C	2
D	2
E	5

To South	
	22
A	21
B	0
C	1
D	0
E	0

From South			
	83		
	Left	Thru	Right
	47	0	36
A	47	0	34
B	0	0	0
C	0	0	1
D	0	0	1
E	0	0	0

South On: 843	Vehicle Type	Volume	%
	A: Passenger Vehicle	102	97.1%
	B: Recreational Vehicle	0	0.0%
	C: Bus	2	1.9%
	D: Single Unit Truck	1	1.0%
	E: Tractor Trailer Unit	0	0.0%
	<b>PM</b>	<b>105</b>	



**NOTE:**  
Coloured line thickness corresponds to turning movement volume.



# APPENDIX B

## Synchro Output



Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	115	49	12	108	47	12
Future Vol, veh/h	115	49	12	108	47	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	4	4
Mvmt Flow	125	53	13	117	51	13

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	178	0	295
Stage 1	-	-	-	-	152
Stage 2	-	-	-	-	143
Critical Hdwy	-	-	4.18	-	6.44
Critical Hdwy Stg 1	-	-	-	-	5.44
Critical Hdwy Stg 2	-	-	-	-	5.44
Follow-up Hdwy	-	-	2.272	-	3.536
Pot Cap-1 Maneuver	-	-	1362	-	692
Stage 1	-	-	-	-	871
Stage 2	-	-	-	-	879
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1362	-	685
Mov Cap-2 Maneuver	-	-	-	-	685
Stage 1	-	-	-	-	871
Stage 2	-	-	-	-	870

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	719	-	-	1362	-
HCM Lane V/C Ratio	0.089	-	-	0.01	-
HCM Control Delay (s)	10.5	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	2	0	45	57	4
Future Vol, veh/h	14	2	0	45	57	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	15	2	0	49	62	4

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	113	64	66	0	-	0
Stage 1	64	-	-	-	-	-
Stage 2	49	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	884	1000	1536	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	884	1000	1536	-	-	-
Mov Cap-2 Maneuver	884	-	-	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1536	-	897	-	-
HCM Lane V/C Ratio	-	-	0.019	-	-
HCM Control Delay (s)	0	-	9.1	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	3.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	103	24	9	123	71	55
Future Vol, veh/h	103	24	9	123	71	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	4	4
Mvmt Flow	112	26	10	134	77	60

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	138	0	279
Stage 1	-	-	-	-	125
Stage 2	-	-	-	-	154
Critical Hdwy	-	-	4.18	-	6.44
Critical Hdwy Stg 1	-	-	-	-	5.44
Critical Hdwy Stg 2	-	-	-	-	5.44
Follow-up Hdwy	-	-	2.272	-	3.536
Pot Cap-1 Maneuver	-	-	1410	-	707
Stage 1	-	-	-	-	896
Stage 2	-	-	-	-	869
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1410	-	701
Mov Cap-2 Maneuver	-	-	-	-	701
Stage 1	-	-	-	-	896
Stage 2	-	-	-	-	862

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	782	-	-	1410	-
HCM Lane V/C Ratio	0.175	-	-	0.007	-
HCM Control Delay (s)	10.6	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	1	2	116	17	16
Future Vol, veh/h	10	1	2	116	17	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	11	1	2	126	18	17

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	157	27	35	0	0
Stage 1	27	-	-	-	-
Stage 2	130	-	-	-	-
Critical Hdwy	6.42	6.22	4.14	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.236	-	-
Pot Cap-1 Maneuver	834	1048	1563	-	-
Stage 1	996	-	-	-	-
Stage 2	896	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	833	1048	1563	-	-
Mov Cap-2 Maneuver	833	-	-	-	-
Stage 1	995	-	-	-	-
Stage 2	896	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1563	-	849	-	-
HCM Lane V/C Ratio	0.001	-	0.014	-	-
HCM Control Delay (s)	7.3	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	115	56	14	108	67	18
Future Vol, veh/h	115	56	14	108	67	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	4	4
Mvmt Flow	125	61	15	117	73	20

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	186	0	303
Stage 1	-	-	-	-	156
Stage 2	-	-	-	-	147
Critical Hdwy	-	-	4.18	-	6.44
Critical Hdwy Stg 1	-	-	-	-	5.44
Critical Hdwy Stg 2	-	-	-	-	5.44
Follow-up Hdwy	-	-	2.272	-	3.536
Pot Cap-1 Maneuver	-	-	1353	-	685
Stage 1	-	-	-	-	867
Stage 2	-	-	-	-	876
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1353	-	677
Mov Cap-2 Maneuver	-	-	-	-	677
Stage 1	-	-	-	-	867
Stage 2	-	-	-	-	865

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	712	-	-	1353	-
HCM Lane V/C Ratio	0.13	-	-	0.011	-
HCM Control Delay (s)	10.8	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	0	2	3	0	26	0	45	1	9	57	4
Future Vol, veh/h	14	0	2	3	0	26	0	45	1	9	57	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	4	4
Mvmt Flow	15	0	2	3	0	28	0	49	1	10	62	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	148	134	64	135	136	50	66	0	0	50	0	0
Stage 1	84	84	-	50	50	-	-	-	-	-	-	-
Stage 2	64	50	-	85	86	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	820	757	1000	836	755	1018	1536	-	-	1557	-	-
Stage 1	924	825	-	963	853	-	-	-	-	-	-	-
Stage 2	947	853	-	923	824	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	793	752	1000	829	750	1018	1536	-	-	1557	-	-
Mov Cap-2 Maneuver	793	752	-	829	750	-	-	-	-	-	-	-
Stage 1	924	819	-	963	853	-	-	-	-	-	-	-
Stage 2	921	853	-	915	818	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.5		8.7		0		0.9	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1536	-	-	814	995	1557	-	-
HCM Lane V/C Ratio	-	-	-	0.021	0.032	0.006	-	-
HCM Control Delay (s)	0	-	-	9.5	8.7	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

**Intersection**

Int Delay, s/veh 4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	103	42	15	123	84	59
Future Vol, veh/h	103	42	15	123	84	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	4	4
Mvmt Flow	112	46	16	134	91	64

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	158	0	301
Stage 1	-	-	-	-	135
Stage 2	-	-	-	-	166
Critical Hdwy	-	-	4.18	-	6.44
Critical Hdwy Stg 1	-	-	-	-	5.44
Critical Hdwy Stg 2	-	-	-	-	5.44
Follow-up Hdwy	-	-	2.272	-	3.536
Pot Cap-1 Maneuver	-	-	1386	-	686
Stage 1	-	-	-	-	886
Stage 2	-	-	-	-	859
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1386	-	678
Mov Cap-2 Maneuver	-	-	-	-	678
Stage 1	-	-	-	-	886
Stage 2	-	-	-	-	849

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	757	-	-	1386	-
HCM Lane V/C Ratio	0.205	-	-	0.012	-
HCM Control Delay (s)	11	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0	-



Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	0	1	2	0	17	2	116	3	24	17	16
Future Vol, veh/h	10	0	1	2	0	17	2	116	3	24	17	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	4	4	2	2	4	4
Mvmt Flow	11	0	1	2	0	18	2	126	3	26	18	17

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	220	212	27	211	219	128	35	0	0	129	0	0
Stage 1	79	79	-	132	132	-	-	-	-	-	-	-
Stage 2	141	133	-	79	87	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	736	685	1048	746	679	922	1563	-	-	1457	-	-
Stage 1	930	829	-	871	787	-	-	-	-	-	-	-
Stage 2	862	786	-	930	823	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	711	672	1048	734	666	922	1563	-	-	1457	-	-
Mov Cap-2 Maneuver	711	672	-	734	666	-	-	-	-	-	-	-
Stage 1	929	814	-	870	786	-	-	-	-	-	-	-
Stage 2	844	785	-	912	808	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10		9.1		0.1		3.2	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1563	-	-	732	898	1457	-	-
HCM Lane V/C Ratio	0.001	-	-	0.016	0.023	0.018	-	-
HCM Control Delay (s)	7.3	0	-	10	9.1	7.5	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.1	-	-

**MUNICIPAL BORROWING BYLAW**  
**For the Purpose Specified in Section 256 of the**  
**Municipal Government Act**  
**Bylaw No. 944-24**

**WHEREAS** the Council of the Town of Picture Butte (hereinafter called the "Corporation") in the Province of Alberta, considers it necessary to borrow certain sums of money for the purpose of:

**Revolving Credit for Operating Expenditures; \$400,000.00**  
**MasterCard credit for daily purchases; \$35,000.00**

**NOW THEREFORE** pursuant to the provisions of the Municipal Government Act, it is hereby enacted by the Council of the Corporation as a By-law that:

1. The Corporation borrow from Alberta Treasury Branches ("ATB") up to the principal sum of \$400,000.00 and \$35,000.00 respectively repayable upon demand at a rate of interest per annum from time to time established by ATB, and such interest will be calculated daily and due and payable monthly on the last day of each and every month.
2. The Chief Elected Officer and the Chief Administrative Officer are authorized for and on behalf of the Corporation:
  - (a) To apply to ATB for the aforesaid loan to the Corporation and to arrange with ATB the amount, terms and conditions of the loan and security or securities to be given to ATB;
  - (b) As security for any money borrowed from ATB
    - (i) To execute promissory notes and other negotiable instruments or evidences of debt for such loans and renewals of all such promissory notes and other negotiable instruments or evidences of debts;
    - (ii) To give or furnish to ATB all such securities and promises as ATB may require to secure repayment of such loans and interest thereon; and
    - (iii) To execute all security agreements, hypothecations, debentures, charges, pledges, conveyances, assignments and transfers to and in favour of ATB of all or any property, real or personal, moveable or immovable, now or hereafter owned by the Corporation or in which the Corporation may have any interest, and any other documents or contracts necessary to give or to furnish to ATB the security or securities required by it.
3. The source or sources of money to be used to repay the principal and interest owing under the borrowing from ATB are:

Taxes levied or to be levied and requisitions made or to be made by the Town of Picture Butte.
4. The amount to be borrowed and the term of the loan will not exceed any restrictions set forth in the Municipal Government Act.
5. In the event that the Municipal Government Act permits extension of the term of the loan and in the event the Council of the Corporation decides to extend the loan and ATB is prepared to extend the loan, any renewal or extension, bill, debenture, promissory note, or other obligation executed by the officers designated in paragraph 2 hereof and delivered to ATB will be valid and conclusive proof as against the Corporation of the decision of the Council to extend the loan in accordance with the terms of such renewal or extension, bill, debenture, promissory note, or other obligation, and ATB will not be bound to inquire into the authority of such officers to execute and deliver any such renewal, extension document or security.
6. This Bylaw comes into force February 12<sup>th</sup>, 2024 and rescinds Bylaw 934-23.

MOVED by XXXXXXXX to approve FIRST reading of Bylaw #944-24 this 12<sup>th</sup> day of February, 2024.  
CARRIED

MOVED by XXXXXXXX to approve SECOND reading of Bylaw #944-24 this 12<sup>th</sup> day of February, 2024.  
CARRIED

MOVED by XXXXXXXX that permission be granted to move to THIRD AND FINAL reading of Bylaw #944-24 this 12<sup>th</sup> day of February, 2024  
CARRIED UNANIMOUSLY

MOVED by XXXXXXXX to approve THIRD AND FINAL reading of Bylaw #944-24 this 12<sup>th</sup> day of February, 2024.  
CARRIED

### **Certificate**

**WE HEREBY CERTIFY** that the foregoing resolution was duly passed by the Council of the Corporation therein mentioned at a duly and regularly constituted meeting thereof held on the 12<sup>th</sup> day of February, 2024 at which a quorum was present, as entered in the Minutes of the said Council, and that the Bylaw has come into force and is still in full force and effect.

WITNESS our hands and the seal of the Corporation this 12<sup>th</sup> day of February, 2024.

Seal

---

Cathy Moore  
Chief Elected Official

---

Keith Davis  
Chief Administrative Officer



## Request for Decision

**Our Vision:** *Picture Butte is the Community of Choice to work, live and play in Lethbridge County*

**Our Mission:** *Picture Butte is a thriving community dedicated to serving our people through fiscal responsibility and transparency.*

Date: 8<sup>th</sup> February, 2024  
To: Mayor, Council  
From: CAO

### **Re: Bylaw No. 945-24 Health Professional Recruitment and Retention Committee bylaw**

#### **Background:**

In 2021 Council passed Bylaw No. 908-21 Health Professional Recruitment and Retention Committee bylaw. This bylaw outlined the terms of reference for this committee.

The committee is now meeting and has reviewed the bylaw. The committee would like to request some amendments to the existing bylaw.

I have outlined in red the additions with the deletions struck out. The recommended deletions and additions make sense and are good improvements to the bylaw. Instead of passing an amending bylaw I am presenting a new bylaw, with a new bylaw number.

#### **Recommendation:**

1. To conduct all three readings of bylaw number 945-24 Health Professional Recruitment and Retention Committee bylaw.

#### **Attachments:**

1. Bylaw No. 945-24 Health Professional Recruitment and Retention Committee bylaw.

**Submitted by:** Keith Davis, CAO

TOWN OF PICTURE BUTTE  
BYLAW NO. ~~908-21~~ 945-21

A BYLAW OF THE COUNCIL OF THE TOWN OF PICTURE BUTTE, IN THE PROVINCE OF ALBERTA, TO ESTABLISH A HEALTH PROFESSIONAL RECRUITMENT AND RETENTION IN THE TOWN OF PICTURE BUTTE

WHEREAS the Municipal Government Act, being Chapter M-26 of the Revised Statutes of Alberta 2000, and amendments thereto, provides that a Council may pass bylaws relating to the right to govern the Town in a manner that Council considers appropriate;

AND WHEREAS the Municipal Government Act also provides that a Council may pass bylaws in relation to the establishment and functions of Council committees, and the procedure and conduct of Council committees, and the conduct of Council committees established by the Council;

AND WHEREAS the Council of the Town of Picture Butte considers it expedient to establish a Health Professional Recruitment and Retention Committee to advise them on health professional recruitment and retention matters;

NOW THEREFORE, the Municipal Council of the Town of Picture Butte, hereby enacts as follows:

1. CITATION

- 1.1. This bylaw may be cited as the "Health Professional Recruitment and Retention Committee Bylaw".

2. DEFINITIONS

2.1. In this bylaw:

1. "CAO" means the Chief Administrative Officer of the Town of Picture Butte;
2. "Committee" means the Picture Butte Health Professional Recruitment and Retention Committee;
3. "Council" means the Town of Picture Butte Council;

3. HEALTH PROFESSIONAL RECRUITMENT AND RETENTION COMMITTEE

- 3.1. There is hereby established a Committee to be known as the Picture Butte Health Professional Recruitment and Retention Committee.

4. APPOINTMENTS/TERMS

- 4.1. The Committee shall consist of ~~at least five (5), to a maximum of nine (9) seven (7)~~ voting members appointed by Council. The said members shall consist of ~~at least:~~
1. Two (2) members of Town Council;
  2. ~~One (1) member of Lethbridge County Council;~~
  3. ~~Two (2) members living within the geographical area of Lethbridge County;~~
  4. ~~One (1) physician representative;~~
  5. ~~One (1) health professional representative;~~
  6. ~~Three (3) members living in the Town of Picture Butte;~~
- 4.2. The Committee shall also consist of three (3) non-voting members. The non-voting members shall consist of:
1. One (1) member of the Town of Picture Butte Administration team appointed by the CAO;
  2. One (1) member of the Rural Health Professions Action Plan;

3. One (1) Alberta Health Services representative.
- 4.3. All voting members shall be appointed by Council Resolution at the recommendation of the Committee.
- 4.4. Appointments shall be for four (4) years.
- 4.5. All members shall remain in office until their respective successors are appointed by Council.
- 4.6. By mutual consent, the Council and the Committee may with reason, request the resignation of any of the members, prior to the expiry date of the member's appointment.
- 4.7. Any member may resign at any time upon sending a written notice to the CAO.
- 4.8. A person is disqualified from remaining a member of the Committee if he/she fails to attend, without being authorized by a resolution of the Committee to do so, three (3) consecutive Committee meetings.
- 4.9. If a member of the Committee is disqualified from remaining a member under subsection 5.6., he/she is deemed to have resigned his/her seat on the Committee.

## 5. PROCEEDINGS

- 5.1. Annually, the Committee shall hold a meeting at which time a chairperson and vice-chairperson shall be selected for the ensuing year.
- 5.2. The secretary shall be a member of Town administration. The roll of the secretary is to:
  1. Prepare agendas, with the Chair, for the meeting;
  2. Keep minutes of the meetings and distribute them to the members.
- 5.3. Meetings of the Committee shall be held on a regular basis at a time to be set by resolution of the Committee, at least once every three (3) months, and at such other times as deemed necessary.
- 5.4. A majority of members of the Committee constitute a committee. Attendance via electronic means is considered acceptable for meeting quorum and attendance requirements.
- 5.5. Any decision of the Committee that is reached by a majority of quorum shall be deemed to be the decision of the Committee.
- 5.6. All minutes, resolutions and policies of the Committee shall be entered in books to be kept by it for that purpose and the books shall be signed by the Chair or Acting Chair.
- 5.7. A copy the minutes shall be distributed, via email, to Committee members within one week of the meeting whenever possible;
- 5.8. Remuneration of the members of the committee shall be established by resolution of Council.

### Closed Sessions

- 5.9. Any agenda items or reasons for going into a Closed Session must meet the criteria established within one of the exceptions to disclosure in Division 2 of Part 1 of the Freedom of Information and Protection of Privacy Act.
- 5.10. In accordance with the Municipal Government Act and Section 153 of the Freedom of Information and Protection of Privacy Act, all members of the Committee are required to keep in confidence all matters discussed in a Closed Session until the item is discussed at a meeting held in public.
- 5.11. A motion is required to go in a Closed Session and leave a Closed Session. The times the meeting is closed and is open are to be recorded in the minutes.
- 5.12. Members shall not pass resolutions or motions during a Closed session except to open the meeting to the public again.

## 6. DUTIES OF THE COMMITTEE

- 6.1. The purpose of the Committee is to build a sustainable system for health profession attraction and retention in collaboration with local health professionals which will ensure ongoing health-care provision to the community;
- 6.2. The Committee's objectives shall be to:
  1. Coordinate attraction and retention of needed health professions amongst the existing providers, Alberta Health Services (AHS), Covenant Health, and the community;
  2. To reduce the need for recruitment by focusing on retention efforts. Retention efforts focus on the following three areas;
    - a. Settling in and integration of health professionals;
    - b. Family integration into the community; and
    - c. Family quality of life interests.
  3. To facilitate community involvement in the attraction and retention process together with health professions and AHS;
- 6.3. Specific powers, duties and responsibilities of the Committee include:
  1. Serve as a liaison between Town Council and the community;
  2. In conjunction with Council and Town staff, facilitate health professional retention and recruitment activities for the Town;
  3. Work with stakeholders to retain and recruit health professionals to the Town;
  4. Provide review and comment on health profession retention and attraction efforts to Council;
  5. Make recommendations to Council regarding health profession retention and attraction issues, strategy development and implementation and other initiatives that can be undertaken by the Town to expand and strengthen its health professional's retention and attraction efforts; and
  6. To assist Council in finding funding sources for health professional retention and attraction initiatives.
- 6.4. The Committee Chairperson shall present an annual written report to Council in December of each year.

## 7. BUDGET

- 7.1. Annually, before the 30<sup>th</sup> of September, the Committee shall submit to the Council for ratification, a budget of estimated expenditures and revenues for the next year with respect to all matters over which or under the terms of this bylaw, it has jurisdiction.
- 7.2. Neither the Committee nor any member thereof shall have the power to pledge the credit of the Town in connection with any matter whatsoever; nor shall the said Committee or any member thereof have the power to authorize any expenditure to be charged against the Town.
- 7.3. In the event that there is any deviation of the ratified budget desired by the Committee, application for change from the ratified budget must be made to Council before the change is affected.

## 8. COMING INTO EFFECT

- 8.1. **Bylaw No. 908-21 Health Professional Recruitment and Retention bylaw, and any amendments to it, is hereby rescinded when this bylaw shall come into force.**
- 8.2. This Bylaw shall come into force and effect on the date of the third reading.

READ A FIRST TIME THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 202 . A.D.  
READ A SECOND TIME THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 202 . A.D.  
READ A THIRD TIME AND FINALLY PASSED THIS \_\_\_\_\_ DAY OF  
\_\_\_\_\_, 202 . A.D.

TOWN OF PICTURE BUTTE

\_\_\_\_\_  
Cathy Moore  
Mayor

\_\_\_\_\_  
Keith Davis  
CAO





## Request for Decision

**Our Vision:** *Picture Butte is the Community of Choice to work, live and play in Lethbridge County*

**Our Mission:** *Picture Butte is a thriving community dedicated to serving our people through fiscal responsibility and transparency.*

Date: 8<sup>th</sup> February, 2024

To: Mayor, Council

From: CAO

### **Re: Health Professional Recruitment and Retention Committee appointments**

#### **Background:**

Bylaw No. 945-21 Health Professional Recruitment and Retention Committee bylaw states that members must be appointed to the committee by Council. Administration would like to propose that the following individuals be appointed to the Health Professional Recruitment and Retention Committee:

Teresa Feist, Dave Fiest, Boyd Folden, Curtis Watson, Mattie Watson, Susan O'Donnell, and Gloria Elschuk

Council has already appointed Mayor Moore and Deputy Mayor Papworth to be council representatives to this committee at the 2023 Organisational meeting. Lethbridge County has appointed Councillor Lorne Hickey to serve on the committee.

With these appointments the committee membership is at it's maximum and we will not be able to accept any more voting members until a member resigns their position.

#### **Recommendation:**

1. To appoint Susan O'Donnell, Gloria Elschuk, Dave Feist, Teresa Feist. Boyd Folden, Curtis Watson and Mattie Watson to the Health Professional Recruitment and Retention Committee

**Attachments:** None

**Submitted by:** Keith Davis, CAO



# TOWN OF PICTURE BUTTE CORPORATE POLICY

Reference: PW-305

Council Motion Number: 194 180611

TITLE: **SNOW PLOWING & SANDING POLICY**

Approved by Council  
Revised by Council

Date: *June 11, 2018*  
Date: *November 14, 2022*

---

## PURPOSE OF POLICY

The Town of Picture Butte is committed to establishing a snow clearing and sanding policy to deliver high-quality, timely, safe services to residents. This policy further seeks to identify the snow plowing and sanding priorities and how operational objectives can ensure those priorities are consistent.

---

## POLICY STATEMENT

1. The Public Works Department ("Public Works") of the Town of Picture Butte is authorized to undertake snow plowing and sanding services on its streets by adhering to the Municipal Government Act and following procedures outlined in this Policy.
2. Notwithstanding anything contained within this Policy, the level, timing, and condition of services that can be delivered will be subject to the municipal budget, availability of equipment, safety, weather and street conditions.

## DEFINITIONS

3. For this policy, the following definitions shall apply:

**"Accumulation"** is measured from the roadway surface, referring to the total amount of snow that has fallen and remained on the roadway or lanes.

**"CAO"** refers to the Chief Administrative Officer for the Municipality or his/her designate.

**"Lanes"**, also known as the back alley, provides access to the back end of a property.

**"Pathway"** is a route used by pedestrians and other recreational users that typically has an asphalt surface.

**"Sanding"** is the application of an abrasive mixture that will promote vehicle traction and allow for traffic to move safely.

**"Snow plowing"** means pushing accumulated snow from the roadway's surface to either the roadway's sides or the centre to ensure that travel lanes, turn lanes, and ramps are passable to traffic.

**"Windrow"** also known as berms, is a ridge of snow created from snowplowing activity.

**"Weekday"** means any day other than a Sunday or holiday.



## TOWN OF PICTURE BUTTE CORPORATE POLICY

### CONDITION FOR SERVICE

4. Snow control operations will be initiated as follows:
  - 1) Public Works must use the appropriate equipment for Town-owned property, sidewalks, lanes and streets.
  - 2) The Town will be responsible for only doing their sidewalks, parking and entryways into their operated facilities. The resident is to do their best to promptly clear their sidewalks of snow and ice.
  - 3) Snow may be cleared off on streets and piled in suitable locations. The piles of snow will only be hauled away when Town employees determine to do so on availability.
  - 4) Snow plowing may result in windrows on one or both sides of the street. The clearing of windrows in front of driveways left by snow plowing equipment shall be the responsibility of the abutting property owner.
  - 5) Sanding must commence when streets and intersections become slippery caused of ice or packed snow or when road temperatures drop below -10C.
  - 6) Intersections will be cleared of windrows as soon as practically possible after the completion of plowing;
  - 7) The CAO or designate may engage in contractor services if additional support is necessary due to the size and extent of winter events. The call for contracted support is to be assessed on an as-needed event basis.
  - 8) No compensation will be given to individuals who perform snow removal services on any street surfaces without authorization by the CAO.
  - 9) The Provincial Government and their highway maintenance contractor are responsible for maintaining Rogers Avenue (Highway 519) and Highway Avenue (Highway 25). However, the Town may snow plow residential parking areas along the highway when required.

### SNOW PLOWING AND SANDING PRIORITIES

5. Snow plowing and sanding priorities will be carried out in priority order determined by Council and CAO, based on snow events, with the following applied:

**Priority 1:** Emergency routes. Snow plowing on Emergency Routes and Protective Services areas (Firehall, Police Station, Town Office, Senior Citizens). Regular weekdays or weekends of operations and on-call shifts of plowing/sanding. Accumulate around 100mm of fallen snow from a single storm or multiple events within 24 hours after the snowfall.

- 1) 6<sup>th</sup> Street South.
- 2) 4<sup>th</sup> Street North (from Crescent Ave to Rogers Ave (Highway 519)).
- 3) 7<sup>th</sup> Street North (from Northridge Ave N to Highway No. 25).
- 4) Watson Avenue.
- 5) Lane way (behind Piyami lodge from Rogers Ave (Highway 519) to Cowan Ave).

**Priority 2:** Bus route access, neighbourhood collectors and Central District. Regular weekdays of operations. The plowing and sanding will happen with an accumulation around 100mm of fallen snow from a single storm or multiple events within 48 hours of the end of the snowfall.

- 6) 6<sup>th</sup> Street North.
- 7) Crescent Avenue North.
- 8) 5<sup>th</sup> Street North.
- 9) 3<sup>rd</sup> Street North.
- 10) 2<sup>nd</sup> Street North.
- 11) Factory Drive.
- 12) Cowan Avenue South.
- 13) 5<sup>th</sup> Street South (from Rogers Ave (Hwy 519) to 4<sup>th</sup> Street South).



## TOWN OF PICTURE BUTTE CORPORATE POLICY

**Central District and Parking lot areas:** Pathways, sidewalks and entryways adjacent to Town owned properties (North County Recreational Complex Arena, Community Centre, Administrative Building, Lions Park, Firehall Bay access) shall be cleared concurrently within this priority level 2 while using specific equipment during a regular weekday. Parking lots such as Cor Van Raay & Community Aquatic Centre will be cleared, and snow will be pushed into piles once all other priorities have been completed or as time permits.

**Priority 3:** Residential Street routes. After priority 2 routes have been completed during regular work weekdays.

- 14) Northridge Street & Northridge Avenue North.
- 15) Inlet Avenue & Piron Place North.
- 16) Willow Place 9<sup>th</sup> Street & Willow Avenue North.
- 17) Rosewood Avenue North.
- 18) Sunset Place & 9<sup>th</sup> Street North.
- 19) 8<sup>th</sup> Street North.
- 20) Gibbons Avenue North.
- 21) 7A Street North.
- 22) Centennial Avenue South.
- 23) Maple Drive South.
- 24) Maple Crescent South.
- 25) Maple Place South.
- 26) 5A Street South.
- 27) 3<sup>rd</sup> Street South.
- 28) 2<sup>nd</sup> Street South & Railway Avenue South.
- 29) Kaliska Drive.

**Lanes (Back alleys) behind residential streets:** These should be completed during the regular workdays before regular garbage pick up.

- 29) Lane behind Highway 25 Alley (from 7<sup>th</sup> Street North to 2<sup>nd</sup> Street North).
- 30) Lane behind Highway 25 (from Northridge Ave N to Highway No. 25).

**Priority 4:** Parking areas and remaining lanes after priority 3 routes have been completed during regular work weekdays.

### POLICY REVIEW

6. This policy is subject to periodic review and may be updated as requirements change.

Attachments: Snow Plowing Priority Map Appendix A  
Sanding Priority Map Appendix B

Cathy Moore  
Mayor

Keith Davis  
Chief Administrative Officer

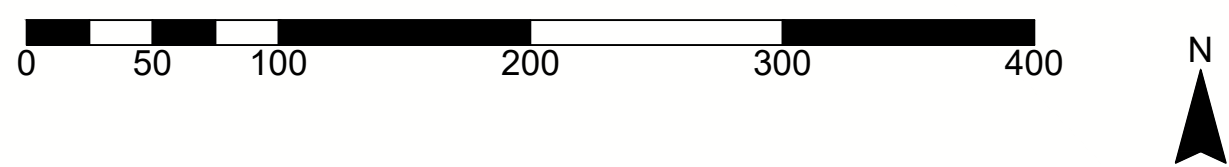
# Snow Plowing Priority Map Appendix A

**Legend:**

- █ **First Priority:**  
*Emergency Routes.*
- █ **Second Priority:**  
*Bus route access, neighborhood collectors and Central District.*
- █ **Third Priority:**  
*Residential Street not identified in priority 1 or 2.*
- █ **Lanes Priority:**  
*Lanes for garbage pick up.*
- █ **Fourth Priority:**  
*Parking areas and remaining lanes after priority 3*



Town of Picture Butte

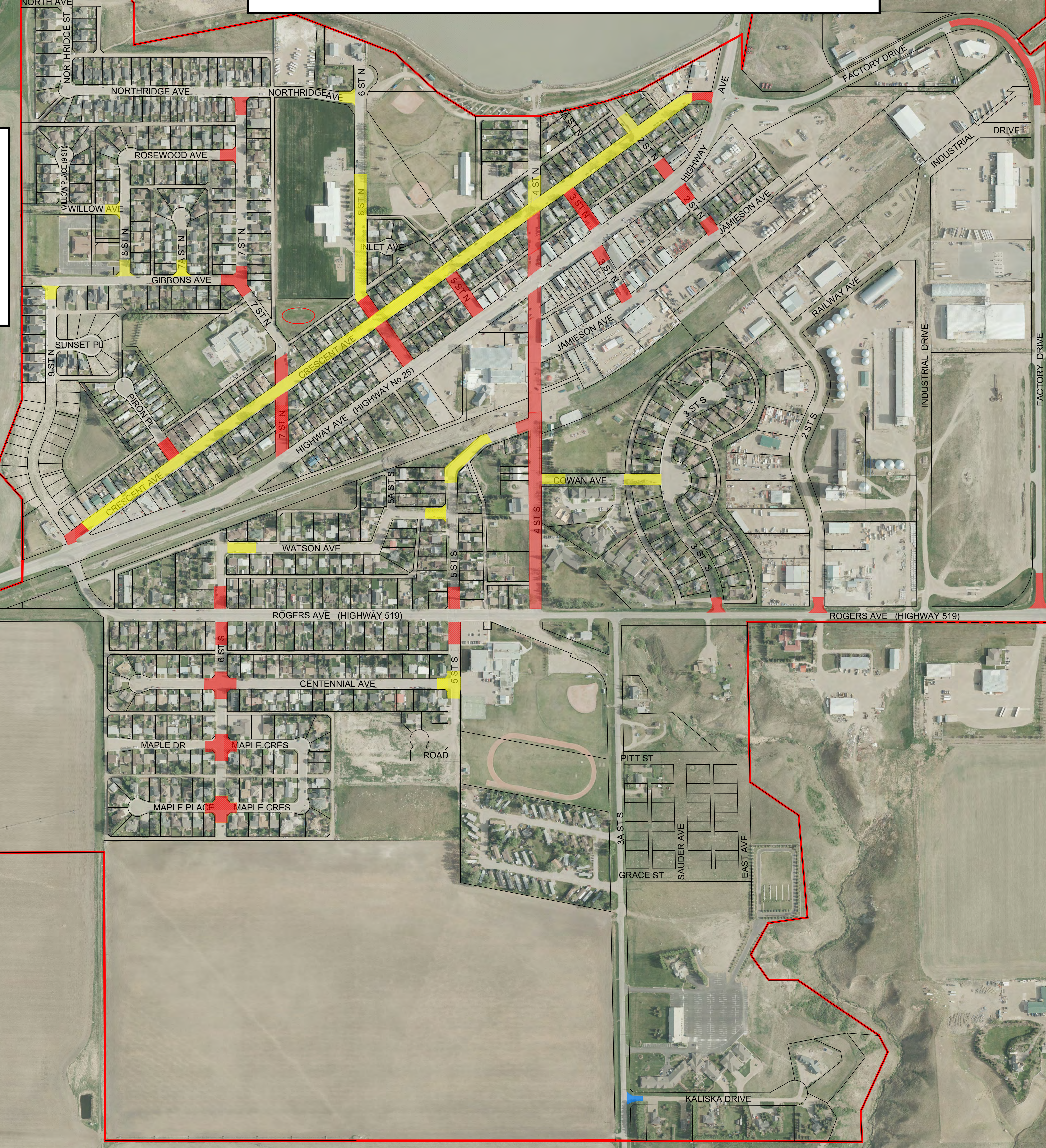


Print Date: July 14, 2022  
Photo Date: May 19, 2021

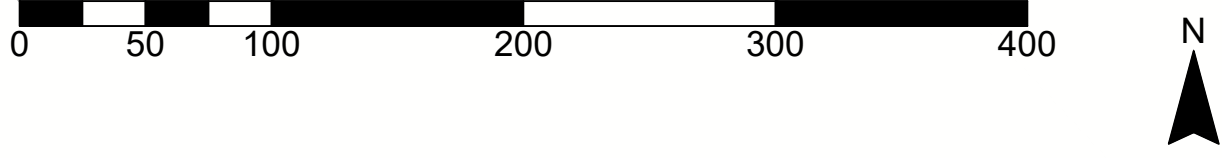
# Sanding Priority Map Appendix B

**Legend:**

-  First Priority
-  Second Priority



Town of Picture Butte



Print Date: July 14, 2022  
Photo Date: May 19, 2021



## Request for Decision

**Our Vision:** *Picture Butte is the Community of Choice to work, live and play in Lethbridge County*

**Our Mission:** *Picture Butte is a thriving community dedicated to serving our people through fiscal responsibility and transparency.*

Date: 9<sup>th</sup> February, 2024

To: Mayor, Council

From: CAO

### Re: Informational sign installs

#### Background:

Yves LeClair has been working on getting informational signs donated and created to be installed on 4<sup>th</sup> Street in between trees and on the sidewalk. Below are images of the proposed informational sign as well as what the sign will be displayed on.



#### Recommendation:

1. To authorize Administration to approve the installation of informative signs in appropriate locations on 4<sup>th</sup> Street sidewalk.

**Attachments:**

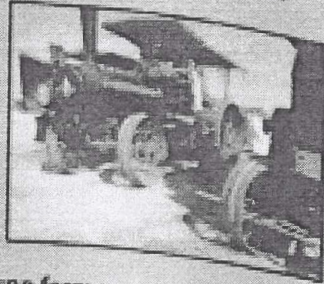
1. Proposed informational sign about the Prairie Tractor and Engine museum.

**Submitted by:** Keith Davis, CAO

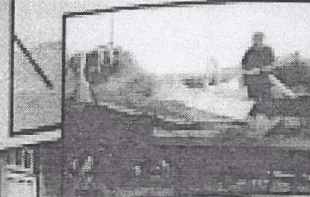
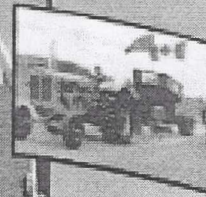
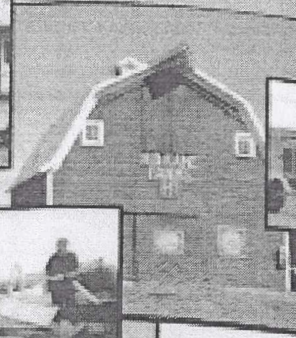
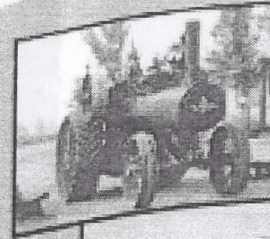
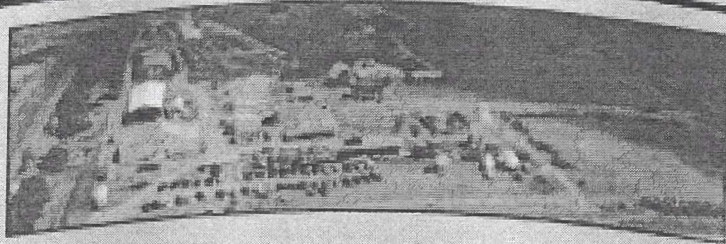


# PRAIRIE TRACTOR & ENGINE MUSEUM

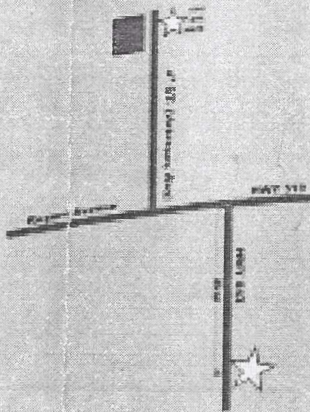
Nestled in the outskirts of Picture Butte, Alberta, the Prairie Tractor Engine & Museum stands as a testament to the region's rich agricultural heritage. What began in the early 1980's as a modest display



of early farm equipment on the Dunn farm near Turin, has since evolved onto a sprawling historical site at Coyote Flats that not only showcases the machinery of yesteryear, but now also incorporates an early pioneer village. This living history museum invites visitors to step back in time and imagine the life as it was for our early settlers of Southern Alberta.



**Coyote Flats** PIONEER VILLAGE



**MORE INFO**  
[www.coyoteflats.org](http://www.coyoteflats.org)  
 403.732.8451  
 Follow us on Facebook!  
 Become a member today

By Corliss Pink 31 x 23



## CAO Report

**Our Vision:** *Picture Butte is the Community of Choice to work, live and play in Lethbridge County*

**Our Mission:** *Picture Butte is a thriving community dedicated to serving our people through fiscal responsibility and transparency*

Date: 9<sup>th</sup> February, 2024

To: Mayor, Council

From: CAO

### **North County Recreation Complex study**

This is getting revised according to the feedback we provided to the consultants.

### **Wastewater Project**

WSP are working on final design details, and utility right of ways. Aaron and I have regular meetings with WSP regarding this work and Phase 3 of the sanitary main upgrade.

### **Sunset Park Phase 2**

There have been some difficulties with Fortis completing the underground power connection. Aaron and I have a meeting on the 22<sup>nd</sup> with Fortis to resolve their concerns.

### **Electric Ice Resurfacer**

Our electric ice resurfacer has finally been delivered to Big Hill Services in Cochrane. They are planning on delivering it next week. I have been working with two donors to get payment and their logos so that we can get a design that will be put on the new Olympia. We are also working out the details of when we will be using the new Olympia.

### **Miscellaneous**

- I have provided the quote I received for an Environmental Site Assessment to the owners of Tax Roll No. 424000. They are working on approvals for the possible cost sharing of this cost.
- I have contacted Fortis to have more street lighting installed on 4<sup>th</sup> Street in front of the arena. Fortis provided some options and I am waiting on the proposed costs for these upgrades. Once I have them they will be presented to Council.
- We have reenforced the requirement for our staff to be in the arena during public skate time and have directed them to remove any participants that are acting inappropriately. We also scheduled an earlier time for a parents and tots skate so that they have an opportunity to skate in a safer environment.
- I have attended two Dr. Recruitment Committee meetings and have prepared the agenda and minutes for these meetings.
- I attended a Picture Butte Interagency meeting with FCSS representatives and were informed of initiatives that they are working on in Picture Butte and area.
- Another deposit was taken for a lot in Sunset Park Phase 2. That is 3 deposits for 3 lots.
- I had a couple of days of sick time in the week beginning the 5<sup>th</sup> of February.
- Preparing for budget presentations has also been occurring.

### **HOLIDAY STATUS**

Days in lieu used 15 hrs out of 70 hrs

Accrued Holidays 28 days

### **Submitted by:**

Keith Davis, CAO



## Town of Picture Butte

**Our Vision:** Providing sustainable growth that results in a safe, vibrant and inclusive community while embracing our heritage.  
**Our Mission:** By serving Picture Butte, Town Council will continually strive to ensure a thriving and vibrant community that improves the lives of Town Residents

# Director of Operations Monthly Report

February 1 – February 8, 2024

## Current Public Works Activity

- **Weekly PW staff operations meeting** – February 6, 2024.
- **Maintain Equipment** – The Telehandler is being serviced and will be back in operation next week.
  - The garbage truck is fixed, as it had to be serviced due to a broken part to accommodate the cart dump on February 2, 2024. No disruption to operations happened.
- **Winter maintenance is happening** – Throughout the week of February 5.
- **Radar Speed** – We ordered and are waiting for a mounting bracket with a key to remove it and relocate it to different locations around the Town. – TBD on the exact date.
- **Lift Station** – A new level sensor has been ordered as the current one isn't working and will be installed by a contractor. 3-4 weeks lead time on the part.
- **Lift Station** – 4 new floats and hangers are installed in the lift station.
- **Staff** – Our Water operator will write his exam to obtain the Wastewater Collection Level II exam on February 9, 2024.
  - Staff will retake their First Aid courses as they expire in March 2024.
  - Incident Command System (ICS) courses by Emergency Service are being reviewed so staff can take them. The exact date is TBD.
- **North County Recreation Complex** – The last tournament occurred from February 2 to 4.
  - The new Olympia arrived in Red Deer on February 8, 2024. We require getting the logos, staff trained, and the unveiling date as of February 8, 2024.
  - Working with stakeholders who want to do a cost share to upgrade the new sound system. I have 2 stakeholders interested in adding money to support the latest sound system.
  - Minor repairs to the roof happened where small leaks were found on February 2, 2024.
- **North County Recreation Complex Exit Stair Structural Review** – A structural engineer assessed the exit stairwell's condition leading into the Curling Rink. The engineer's findings indicated the stairs (riser/tread portion) are in moderate condition, and the safety concern at this time is the lower (2) steps (footing and lowest step to the sidewalk), which PW has already painted. These are the elements that pose tripping hazards.
  - Recommendations are to continue monitoring the stairs' cracks for the next 2-5 years and eventually look at replacement in the future.
- **Administration Building** – The power outage to the IT and telephone services were out on February 6<sup>th</sup>.
- PW is receiving pricing for a new power outlet based on IT recommendations for the server room, which may be the concern.
- **Community Centre** – Cleaning and maintaining the site for renters is happening.
  - Pest control will be on-site to bait traps to ensure we have no concerns with mice.
- **Outdoor Arena** – Flooding the ice happened on February 7<sup>th</sup> and 8<sup>th</sup>, 2024.
  - Weather conditions will impact the quality of the ice when it becomes warmer.
- **Sewer Lines** – The backup of Sewer lines on 4<sup>th</sup> Street by 2 residents has happened. Operations have confirmed that 1 line will need to be replaced by both the owner and the Town. We are currently reviewing the camera footage of the other line.
  - **Update 1:** The sewer line was camera again where they flushed the line. PW has reviewed the camera footage where we met with the owner on February 8, 2024. The discussion was that the line is in good condition based on how old it is, but further cleaning is required where the calcium buildup has happened, and

- The other resident will pay for the sewer line, where PW will be responsible for only 1/3 of the line due to the poor condition. The work is to be done by a contractor in the springtime.

**RECOMMENDATION:**

That Council receives, for information, the Director of Operations report for February 1, 2023 – February 8, 2024

Prepared by: Aaron Benson  
Respectfully presented to Council

Date: February 8, 2024  
Date: February 12, 2024



February 1, 2024

Keith Davis, CAO  
Town of Picture Butte  
Box 670  
Picture Butte, Alberta TOK IVO

Via email: [keith@picturebutte.ca](mailto:keith@picturebutte.ca)

Dear Keith,

Re: Health Professional Recruitment and Retention Committee Appointment

I am pleased to inform you that Councillor Lorne Hickey has been appointed by the Lethbridge County Council to serve on the Health Professional Recruitment and Retention Committee. Councillor Hickey is eager to contribute his expertise and dedication to support the committee's mission, especially in ensuring a seamless transition in medical service providers that will not adversely affect the services available to the residents of our respective communities.

Councillor Hickey looks forward to collaborating with the Town of Picture Butte and other stakeholders to address the challenges and concerns that may arise during this transitional period. His appointment reflects our commitment to fostering strong inter-municipal relationships and working collaboratively to enhance the overall well-being of our residents.

We recognize the importance of attracting quality healthcare services, and Councillor Hickey is dedicated to representing the interests of both Lethbridge County and the Town of Picture Butte in discussions and decisions related to health professional recruitment and retention.

Councillor Hickey can be reached at [lhickey@lethcounty.ca](mailto:lhickey@lethcounty.ca) or 403-315-3880.

Sincerely,

Cole Beck  
Chief Administrative Officer

## Keith Davis

---

**From:** Tyler Gandam <president@abmunis.ca>  
**Sent:** Wednesday, January 31, 2024 12:06 PM  
**To:** Keith Davis  
**Subject:** Submit a resolution for debate at ABmunis 2024 Convention – Due by May 31

Dear Mayors, Councillors, and CAOs:

Is there a municipal issue that you think requires advocacy by Alberta Municipalities (ABmunis) to the provincial or federal governments? Sponsoring a resolution for debate at ABmunis' 2024 Convention is an excellent way to bring attention to an issue and empower ABmunis to take action if your resolution is supported by the majority of ABmunis' members.

Alberta Municipalities' members are now invited to submit resolutions that will be debated at our 2024 Convention in Red Deer on September 25-27, 2024. If your municipal council is interested in sponsoring a resolution, please visit our [Resolutions page](#) to access all the details including our Resolution Tips sheet, Resolution Template, and Resolutions Policy.

### Change for 2024

Beginning this year, the mover municipality and the seconder municipality must represent at least two of the following population categories:

- Less than 2,500 population
- 2,500 to 10,000 population
- Greater than 10,000 population

For example, if the moving municipality has a population of 7,000, then the seconder municipality must be less than 2,500 population or greater than 10,000 population. The purpose of this change is to increase the likelihood that each resolution is applicable to most municipalities.

### Deadline for 2024 Resolutions

This year, the deadline for submitting a resolution is May 31, 2024. Don't delay because the councils for the moving and seconding municipality must approve the resolution by the May 31 deadline.

### Have a more urgent issue?

If your municipality has a pressing issue that cannot wait until the resolution session at our September Convention, then your municipality can present a request for decision (RFD) for consideration at ABmunis' Spring Municipal Leaders Caucus on March 14-15, 2024. The deadline to [submit an RFD](#) is February 23, 2024.

If you have questions about resolutions or RFDs, please contact our Policy & Advocacy team at [advocacy@abmunis.ca](mailto:advocacy@abmunis.ca). Also, make sure that you are registered to attend our [Spring Municipal Leaders Caucus](#) to discuss the resolutions process, action on adopted resolutions from recent years, and connect with municipalities that may be interested in co-sponsoring a resolution with you.

Thank you,

**Tyler Gandam | President**

---

E: [president@abmunis.ca](mailto:president@abmunis.ca)  
300-8616 51 Ave Edmonton, AB T6E 6E6  
Toll Free: 310-MUNI | 877-421-6644 | [www.abmunis.ca](http://www.abmunis.ca)



## Keith Davis

---

**From:** Peter Casurella <peter.casurella@southgrow.com>  
**Sent:** Tuesday, January 23, 2024 10:11 AM  
**To:** Peter Casurella  
**Subject:** Southern Alberta Economic Summit 2024 - Professional Development for your staff and councils

Dear CAOs,

Tickets are live for the 2024 **Southern Alberta Economic Summit on March 21st** featuring Keynote Speaker Zachary Spicer, and covering a host of issues that matter to US here in southern Alberta.

This year's event is a partnership project together with SouthGrow, Alberta SouthWest, Economic Development Lethbridge, Tourism Lethbridge, Blood Tribe Economic Development and Community Futures Southwest and Community Futures Lethbridge and Region.

We've been working together to bring you an awesome lineup and a great experience for municipal and business leaders from across southern Alberta.

We invite you and your colleagues to join us for a day of networking, learning, and **professional development**.

**Tickets can be reserved here:** <https://www.eventbrite.ca/e/southern-alberta-economic-summit-2024-tickets-799022747547?aff=oddtcreator>

See you there!


Sincerely,



**Peter Casurella**

Executive Director  
SouthGrow Regional Initiative  
Creating Opportunity in Southern Alberta

---

 [1-403-394-0615](tel:1-403-394-0615)

 [peter.casurella@southgrow.com](mailto:peter.casurella@southgrow.com)

 [southgrow.com](https://southgrow.com)

## Keith Davis

---

**From:** MA Engagement Team <ma.engagement@gov.ab.ca>  
**Sent:** Monday, January 22, 2024 1:59 PM  
**To:** MA Engagement Team  
**Subject:** Meeting request with Minister McIver – ABmunis Spring Municipal Leaders Caucus 2024

Dear Chief Administrative Officer:

I am writing to inform you of a potential opportunity for municipal councils to meet with the Honourable Ric McIver, Minister of Municipal Affairs, at the 2024 Alberta Municipalities (ABmunis) Spring Municipal Leaders Caucus (SMLC), scheduled to take place at The Westin Edmonton (10135 100 Street NW, Edmonton AB T5J0N7) from March 14-15, 2024. These meetings will be in person at the Westin Edmonton, as scheduling permits.

Should your council wish to meet with Minister McIver during the SMLC, please submit a request by email with potential topics for discussion to [ma.engagement@gov.ab.ca](mailto:ma.engagement@gov.ab.ca) no later than February 5, 2024.

We generally receive more requests than can be reasonably accommodated over the course of the SMLC. Requests which meet the following criteria will be given priority for meetings during the SMLC:

- Municipalities that identify up to three discussion topics related to policies or issues directly relevant to the Minister of Municipal Affairs and the department.
  - It is highly recommended to provide details on the discussion topics.
- Municipalities located within the Capital Region can be more easily accommodated throughout the year, so priority will be given to requests from municipalities at a distance from Edmonton and to municipalities with whom Minister McIver has not yet had an opportunity to meet.
- Meeting requests received after the deadline will not be considered for the SMLC.

Meeting times with the Minister are scheduled for approximately 15 minutes. This allows the Minister to engage with as many councils as possible. All municipalities that submit meeting requests will be notified at least two weeks prior to the SMLC as to the status of their request.

Municipal Affairs will make every effort to find alternative opportunities throughout the remainder of the year for municipalities the Minister is unable to accommodate during the SMLC.

Engagement Team  
Municipal Services Division  
Municipal Affairs

The logo for Alberta Municipal Affairs, featuring the word "Alberta" in a stylized script font followed by a small blue square icon and the words "Municipal Affairs" in a sans-serif font.

This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the system manager. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail.

Classification: Protected A



## Keith Davis

---

**From:** Picture Butte Info  
**Sent:** Thursday, February 08, 2024 3:48 PM  
**To:** Keith Davis  
**Subject:** FW: Budget 2024 Update from the National Police Federation  
**Attachments:** NPF - 2024 Pre-Budget Submission.pdf; SAMPLE Support For ABRCMP Funding Letter.docx

---

**From:** Maryanne King <mking@npf-fpn.com>  
**Sent:** February 8, 2024 8:38 AM  
**To:** Cathy Moore <cmoore@picturebutte.ca>  
**Cc:** Picture Butte Info <info@picturebutte.ca>  
**Subject:** Budget 2024 Update from the National Police Federation

Hello Mayor Moore,

I hope that your 2024 is off to a pleasant start.

Over the past few years, the NPF has been advocating for a needed increase into Alberta RCMP resources. Since 2017, the provincial investments to the RCMP have been minimal, forcing the provincial service to have to cut its budget and run under resourced. Starting in 2021, the province changed the Police Funding Model, so that every municipality would have to pay a portion for policing. Since then, millions have been collected that are supposed to be reinvested in policing, with a priority on increasing core policing.

However, recent policing investments have gone to municipal policing services in Edmonton and Calgary, or the Alberta Sheriffs who do not typically perform policing duties in rural environments like the Alberta RCMP does.

The NPF has submitted to the Government of Alberta our 2024 2024 Pre-Budget Recommendations, which address the issue of needed funding for the AB RCMP. To keep pace with population growth of 10% since 2017, the province needs to fund 400 more RCMP positions to keep pace with current and future needs. I have attached our full 2024 Pre-Budget submission for your review and consideration.

We invite you to consider supporting this crucial ask by writing to the Government in support of hiring additional RCMP officers in your community and across the province. To aid in this endeavour, we have included a template letter that you can use in whole or in part.

If you have any questions on our 2024 Budget submission or should you like to meet to discuss, I welcome inquiries at your convenience.

Thank you in advance for your consideration.

Kind regards,

**Maryanne King**  
Policy Advisor | Conseiller Politique

## National Police Federation | Fédération de la Police Nationale

(587) 672-0695

[npf-fpn.com](http://npf-fpn.com)



NATIONAL  
POLICE  
FEDERATION

FÉDÉRATION  
DE LA POLICE  
NATIONALE™



@NPFFPN



NPF FPN



nationalpolicefederation



National Police Federation

The mission of the National Police Federation is to provide strong, professional, fair and progressive representation to promote and enhance the rights of RCMP Members. La mission de la Fédération de la police nationale est de fournir une représentation forte, professionnelle, juste et progressive afin de promouvoir et faire avancer les droits des Membres de la GRC.

This email may contain PRIVILEGED AND/OR CONFIDENTIAL INFORMATION intended only for the use of the addressee. If you are not the addressee or the person responsible for delivering it to the person to whom it was addressed, you may not copy or deliver this to anyone else. If you receive this email by mistake, please immediately notify us.

Ce courriel peut contenir des informations CONFIDENTIELLES ET/OU PRIVILÉGIÉES exclusivement restreintes à l'usage du/de la destinataire. Si vous n'êtes ni le/la destinataire, ni la personne responsable pour la livraison au/à la destinataire, il ne vous est pas permis de copier ou d'acheminer ceci à toute autre personne. Si vous avez reçu ce courriel par erreur, nous vous serions reconnaissants de bien vouloir nous faire part par téléphone ou courriel immédiatement.

Dear Premier Smith,

The government's renewed interest in supporting public safety across the province is appreciated by my community and others. To ensure that every community across our province has the resources they need to continue to keep the public safe, I'm writing to ask you to include the Alberta RCMP in Budget 2024.

As you know, the Commissioner of the RCMP establishes a minimum level of policing in consultation with the Provincial Minister, who then decides if that standard will be met or exceeded per Article 6 of the Provincial Police Service Agreement (PPSA). The number of officers is reviewed annually by the Provincial Minister as part of planning for each upcoming fiscal year. The Provincial Minister can increase the number of Members in the service through Article 5 of the PPSA.

We are asking the Government of Alberta to invest \$80 million in our Alberta RCMP in pursuit of hiring an additional 400 new RCMP officers across the province. Our community could specifically benefit from an additional ## officers from these new positions. The government can utilize the PPSA as described above to request additional personnel that will bolster the safety of Albertans across the province, and we invite you to act on this function.

Over the past few years, the provincial investments to the RCMP have been minimal, forcing the provincial service to have to cut its budget and run under-resourced. Starting in 2021, the province changed the Police Funding Model, so that every municipality would have to pay a portion for policing. Since then, millions have been collected that are supposed to go towards reinvestment in policing, with a priority on increasing core policing.

We need your reassurance that communities served by the RCMP are just as crucial to your government's public safety plans as others. We know that the impact of crime and the number of Albertans needing help aren't limited to the boundaries of Calgary and Edmonton, which is why we are asking you to equitably invest in the Alberta RCMP.

Sincerely,



NATIONAL  
POLICE  
FEDERATION

FÉDÉRATION  
DE LA POLICE  
NATIONALE™

# 2024 PRE-BUDGET SUBMISSION

TO THE GOVERNMENT OF ALBERTA

JANUARY 2024



**NPF Contact:**

Sarah Nolan | Director, Government Relations & Policy | [snolan@npf-fpn.com](mailto:snolan@npf-fpn.com)

## INTRODUCTION

The National Police Federation (NPF) represents ~20,000 RCMP Members serving across Canada and internationally. We are the largest police union in Canada. The NPF is focused on improving public safety for all Canadians, including our Members by advocating for much-needed investment in the public safety continuum. This includes investments in police resourcing and modern equipment, as well as social programs including health, addiction, and housing supports to enhance safety and livability in the many communities we serve, large and small, across Canada.

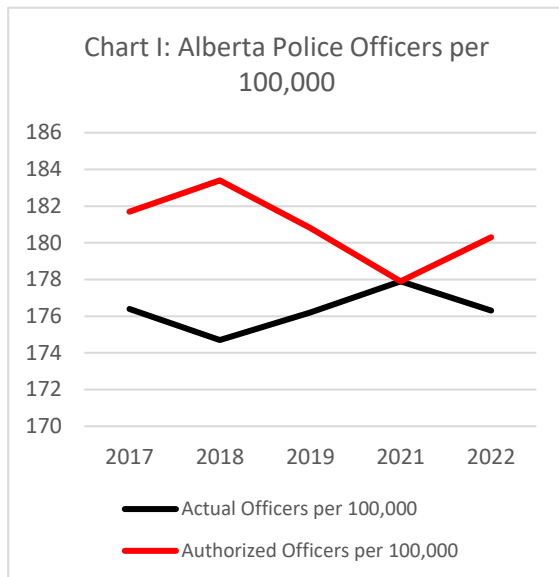
In 2019, the Government of Alberta announced a commitment of \$286m over five years to fund improvements to public safety. This funding would include an additional 300 officer positions across RCMP detachments in Alberta with the support of an additional 200 civilian staff. Under this investment plan, the Alberta RCMP would have increased from the 1,600 officers recorded in 2019 to approximately 1,900 by 2024.<sup>i</sup> While this announcement was welcomed, the province had been critically underfunding the Alberta RCMP to this point. This announcement was made concurrently with modifications to the Police Funding Model (PFM) that would result in every Alberta municipality beginning to pay for their policing services. While the province had stated that the revenue from the new police funding model would be reinvested into policing, both promises of additional personnel and increased resources for public safety across rural communities have not been kept.

Today, rather than invest in areas that could support the rural communities our Members are proud to serve and call home, Budget 2023 saw investments in the Alberta Sheriffs and other programs that largely benefitted Edmonton and Calgary. Polling conducted by the NPF with Pollara Strategic Insights quantifies that half of Albertans agree that the province should focus funding for public safety on existing fully-trained police officers. Additionally, 4-in-5 Albertans in RCMP-served areas are satisfied with the RCMP's policing. The NPF, the Alberta RCMP, many Alberta Mayors and Councils, and Indigenous communities have reiterated to the provincial province that equitable investments must be made across police services in Alberta. Investing in the Alberta RCMP is crucial to demonstrating that the Government of Alberta both understands and is committed to addressing public safety challenges equitably across communities. For Budget 2024, the public safety of all Albertans – both urban and rural – must be upheld by the province through renewed investments from the Government of Alberta toward the Alberta RCMP.

## NPF RECOMMENDATIONS

1. **Invest \$80m over three years to hire 400 RCMP officers to meet population growth and future demand**

From 2017-2022, Alberta's population increased by 9.5%. Over the same period, total police personnel increased by 7%. Actual police personnel in 2022 consisted of 8,007 officers, but the authorized strength had been 8,190 personnel total – thereby leaving Albertans short 183 officers across the province.<sup>ii</sup> For years, the Government of Alberta has not been ensuring that officer strength has been met and made little investments in ensuring it. Investments must match the needs



of 2024 and beyond to ensure that future needs can continue to be met as the province encourages and promotes Alberta’s population growth. By the province’s stated ideal personnel strength of 180 police personnel per 100,000 population, 400 more officer personnel are needed, constituting a 5% increase in the current amount of police personnel.

Further, while the Alberta Crime Severity Index has decreased by 9.5%, demonstrating the outstanding work of our Members, calls for service continue to rise. Between 2017 and 2021, calls for service increased by 8%, from 650,080 in 2017 to 701,126 in 2021.<sup>iii</sup> All of these factors indicate that a fully resourced Alberta RCMP continues to be necessary for maintaining this effective response across communities.

Polling conducted by the NPF with Pollara Strategic Insights from September 2023 demonstrated that increasing resources for policing was the top public safety priority for Albertans. Increased resources for policing outranked priorities such as increased response times, increased resources for addressing petty crimes, and increased local autonomy in policing. Continued and sustained investment in the Alberta RCMP is necessary to meet current and future demands.

## 2. \$4m in grant funding to support the implementation of policing committees

Policing committees are a critical function in delivering community-based needs and priorities to those that contract the RCMP as their municipal police service. Through a policing committee, municipal leadership can represent the interests of Council to the officer in charge of the contracted detachment.

Recent changes to the *Police Act* in 2022 have now made it mandatory for municipalities policed by the RCMP to establish their own policing committees, giving them a role in setting policing priorities. Before this, these committees were not mandatory and many communities never established them, creating a disconnect between the RCMP and the community. These committees are another function of local governance and would require that the municipality put yearly funding towards the success of the committee. Many chose not to establish these committees as a way to save money.

The *Police Act* changes establish that communities served by the RCMP with populations over 15,000 must now create their own policing committee. Additionally, communities with populations under 15,000 can choose to be represented by a regional governance body that will make recommendations on policing priorities in the region, or establish their own local policing committee.

While this function should be considered a core component of ensuring municipalities are best able to provide community-based public safety priorities through the RCMP, these committees do not currently receive any investment from the Government of Alberta to support their implementation. The province should fund the creation of these committees for communities over and under

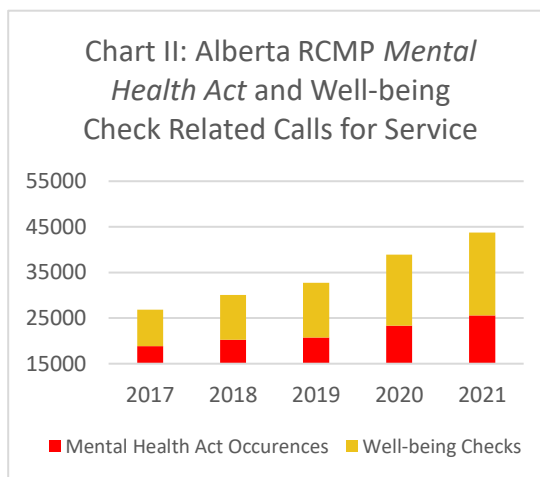
populations of 15,000 who wish to create their own police committee, separate from the regional governance bodies, by providing a commensurate financial investment into these communities.

The Government of Alberta should support the implementation of greater community involvement in their policing services by investing \$4m toward the establishment of policing committees. By investing in municipalities through assisting their launch of these committees, the province can fulsomely demonstrate its commitment to all Albertans having access to policing services that best support their individualized needs.

### **3. \$4m to expand the Regional Police and Crisis Teams in partnership with Alberta Health Services**

The Alberta RCMP have been increasingly called on to fill gaps resulting from significantly decreased funding for mental health and social services. Albertans and our Members want to see more funding for frontline services that help alleviate pressures on vulnerable Canadians and, by extension, the police.

A clear example of this pressure is present in both the increase of mental health calls and well-being checks being done by our Members. In Alberta, from 2017 to 2021, the number of *Mental Health Act* calls and well-being checks have increased by 63% (see Chart II), from a combined total of 26,855 occurrences in 2017 to 43,761 in 2021.<sup>iv</sup> This means that our Members are spending more time responding to those in mental health crises and less time on core policing duties.



Police calls responding to someone in crisis are not always routine and can vary in complexity. The Alberta RCMP has implemented and expanded the Regional Police and Crisis Teams (RPACT) units across Alberta to address a rising number of calls for service associated with the *Mental Health Act*. RPACT is a collaboration between the Alberta RCMP and Alberta Health Services, pairing Members with mental health professionals to provide a fulsome response to *Mental Health Act* related calls. From its launch in 2011, RPACT has since expanded to various detachments across Alberta, inclusive of Red Deer, Grande Prairie, and Airdrie. Recently, the Alberta RCMP announced that RPACT would be expanding to serve Hinton, Athabasca, Gleichen, Wainwright, and High level in addition to Sundre, Rocky Mountain House, Innisfail, Blackfalds, Rimbey, Sylvan Lake, Drayton Valley, Lake Louise, Banff, Canmore, Cochrane, Airdrie rural, Disbury, Olds, Drumheller, Chestermere, Strathmore, St. Paul, and Coaldale.<sup>v</sup>

However, calls for service related to those in crisis are continuing to increase at an alarming rate and more investment into these successful RPACT programs are needed. These investments should be evidence-based and be established in communities who frequently see *Mental Health Act* related calls. Through a total investment of \$4m to expand the RPACTs in Alberta, the province can demonstrate its commitment to providing all Albertans with accessible assistance when they need it.

---

<sup>i</sup> December 2019. Municipalities will pay up as Alberta adds 300 RCMP officers to combat rural crime. Available at: <https://www.cbc.ca/news/canada/edmonton/alberta-rcmp-rural-crime-schweitzer-1.5383062>

<sup>ii</sup> Statistics Canada. Police personnel and selected crime statistics. Available at: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3510007601&pickMembers%5B0%5D=1.10&cubeTimeFrame.startYear=2018&cubeTimeFrame.endYear=2022&referencePeriods=20180101%2C20220101>

<sup>iii</sup> Royal Canadian Mounted Police. RCMP Occurrence Report – 2021. Available at: <https://www.rcmp-grc.gc.ca/transparenc/police-info-policieres/calls-appels/occurence-incident/2021/index-eng.htm>

<sup>iv</sup> Royal Canadian Mounted Police. RCMP Occurrence Report – 2021. Available at: <https://www.rcmp-grc.gc.ca/transparenc/police-info-policieres/calls-appels/occurence-incident/2021/index-eng.htm>

<sup>v</sup> March 2023. RCMP's Regional Police and Crisis Teams expanding. Available at: <https://www.mountainviewtoday.ca/sundre-news/rcmps-regional-police-and-crisis-teams-expanding-6589661>



# Healthier Together Resource Fair



For newcomers and  
Spanish-speaking families

What is a resource fair?

An opportunity to connect with local service providers and agencies who can support you and your family!

FREE  
Event!

Childcare  
Available!

Snacks, Games,  
and Prizes!

**March 1st, 2024 from 6:00-7:30 pm**

Picture Butte Community Centre



[www.fcss.ca](http://www.fcss.ca)



403-915-8803

# Feria de Servicios y Recursos Comunitarios



Dirigido a las personas recién llegadas a Canadá y a las familias que hablan Español

¿Qué es una feria de servicios y recursos comunitarios?

¡Una oportunidad para informarse y conectar con proveedores de servicios y agencias locales que pueden apoyarlo a usted y a su familia!

!Evento gratuito!

!Servicio de guardería!

!Botanas!, juegos, y premios!

**Marzo 1, 2024. De 6:00 a 7:30 pm**

**Te esperamos en: Picture Butte Community Centre**



[www.fcss.ca](http://www.fcss.ca)



403-915-8803

# RECEIVED

FEB 05 2024

TOWN OF  
PICTURE BUTTE



ALBERTA

ENVIRONMENT AND PROTECTED AREAS

*Office of the Minister*

Dear Water License Holder,

As you know, our province is currently in a drought. Unfortunately, we have received little precipitation so far this winter. These conditions mean there is potential for the drought to worsen this year, and we must be prepared.

Our province is taking action in accordance with Alberta's water shortage management plan. This plan ranges from Stage 1, which is a minor drought, to Stage 5, which can lead to a declaration of an emergency. We are currently in Stage 4.

Alberta has stood up a Drought Command Team, and a first draft of a 2024 Drought Emergency Plan has been completed and is being refined. We have also initiated drought modelling work that will help us predict and maximize the province's water supply.

The province is also bringing together an external advisory panel of leaders from various sectors to provide advice on drought preparations and to advise on how Alberta can make water more available over the long term.

**Finally, and most importantly, starting February 1<sup>st</sup>, 2024, the Drought Command Team will be bringing together major water licence holders to negotiate water sharing agreements.**

Water license holders will be asked to voluntarily take less water in order to ensure that there is water available for as many users as possible. These negotiations will be the largest water-sharing effort that has ever been initiated in Alberta and the first since 2001.

In Alberta, there are 25,000 water licence holders that hold licences for 9.5 billion cubic metres of water. The Drought Command Team will select and prioritize negotiations with Alberta's largest water licence holders in an effort to secure significant and timely reductions in water use.

However, even if you are not identified as a major water licence holder, your support is still needed to help fully prepare Alberta for a severe drought. All Albertans will need to use less water to ensure that water is available to as many users as possible.

That is why I am writing to all water licence holders to ask that the following action be undertaken in the coming months:

1. Review and understand the conditions of your licence(s).
2. Review and understand how much water your business or organization uses and identify ways to reduce your use of water.
3. Take immediate action by investing in water conservation technologies that will help your business or organization reduce water use.
4. Develop drought plans now in case they are needed in the spring or summer.
5. Enter your licence onto Alberta's Digital Regulatory Assurance System (DRAS). DRAS is a secure online platform which will help licence holders compile and view all parts of their license(s) for greater transparency, completeness, accuracy and timeliness when managing their water licences and water use.
6. Monitoring water availability in your area using [rivers.alberta.ca](http://rivers.alberta.ca) and take action to reduce your water use if your area is under a water shortage advisory.

If you have any questions or require any additional information, please call us toll free at: 310-3773 (in Alberta), or email: [epa.drought@gov.ab.ca](mailto:epa.drought@gov.ab.ca).

Alberta has successfully navigated droughts before and has a long, proud history of coming together during tough times. I know we can count on you and all of Alberta's other water licence holders to take the actions necessary to get through these challenging times.

Sincerely,

A handwritten signature in black ink that reads "Rebecca Schulz". The signature is written in a cursive, flowing style.

Rebecca Schulz,  
Minister of Environment and Protected Areas

**MINUTES**  
OF THE  
**HEALTH PROFESSIONAL RECRUITMENT & RETENTION**  
**COMMITTEE MEETING**  
HELD AT  
PICTURE BUTTE TOWN OFFICE  
**Tuesday, January 23<sup>rd</sup>, 2024 AT 6:30 PM**

**PRESENT:** Mayor Cathy Moore, Deputy Mayor Cynthia Papworth, Councillor Teresa Feist, Boyd Folden, Dave Feist, Curtis Watson, Mattie Watson, Susan O'Donnell, Gloria Elashuk

**ALSO PRESENT:** Keith Davis, Town Administration  
Lynsey Robinson, RhPAP Consultant

**1.0 CALL TO ORDER**

Mayor Moore called the meeting to order at 6:30 p.m.

**2.0 ADOPTION OF THE AGENDA**

The agenda was accepted as presented

**3.0 DISCUSSION ITEMS**

3.1 Physician Resource Planner Update – AHS representative

3.1.1 Dr. Recruitment and Health Clinic Update

The AHS representative did not attend the meeting. No update was provided to the committee regarding these discussion points. The committee discussed questions that they would like answered by an AHS representative such as:

- Who hires staff to work for the new doctor?
- Who will provide the equipment needed to run the doctor's clinic?
- Is it true that doctors are struggling to be financially viable in Lethbridge and surrounding areas?
- Is there data from the doctors' clinics that demonstrates where people live that are accessing the services in Picture Butte.
- How the doctor will make money during his Supervised Practice Assessment (SPA)

3.2 Doctor Recruitment Update

Mayor Moore reported that she had been in communication with Dr. Edgebe and that there were some misunderstandings around when he would be coming to Picture Butte. It was reported that he would be starting his three-month SPA in March. Once he completes this assessment, he will be a stand-alone doctor serving the Picture Butte area.

Mayor Moore also reported that she had been in communication with Dr. Stover. It was reported that if the Town owned Dr. Leishman's office AHS could quite easily fill the clinic with two to three doctors. It was also reported that Dr. Stover had some interest from a female doctor who wanted to work in Picture Butte but at the time the conditions at the Piyami clinic and at Dr. Leishman's office were not favourable for her to start here.

It was reported that Dr. Mohamed stated on Facebook that he will be closing his practice in April, 2024. With Dr. Mohamed leaving the AHS building, Dr. Stover stated that there is enough room for two doctors to operate from that space.

3.3 Committee Structure

The following were appointed to the executive of the committee:

Chairperson: Boyd Folden  
Vice Chairperson: Curtis Watson  
Secretary: Keith Davis  
Treasurer: Susan O'Donnell

The committee reviewed Bylaw No. 908-21 Health Professional Recruitment and Retention Committee bylaw and made the following recommendations:

- Section 4:
  - Reassess number of voting members and possible include a member of Lethbridge County Council and Town of Nobleford Council.

- Redefine members living in Picture Butte to be inclusive of residents within the boundaries of Lethbridge County
- Remove the physician representative as a voting member
- To add a confidentiality clause and to add that a member may be disqualified from the committee for breaching confidentiality.

It was discussed that other people, who could add value to the committee, such as a school representative, physician and realtor could be invited on an as needed basis.

### 3.4 Retention and Attraction Activities

The committee discussed how we could welcome the new doctor into our community. Mattie had a great list of ideas and will begin working on creating a welcoming package for the new doctor. This effort will be discussed at future committee meetings.

The committee also discussed how we could show the communities appreciation for the service that Dr. Mohmad has given to the community prior to his retirement. This will also be discussed at future committee meetings.

### 3.5 Communications

Communications between committee members was discussed. If committee members want something added to an agenda, they should email the chairperson and secretary. The secretary will email committee members meeting reminders and other correspondence. Committee members should reply directly to the chairperson and secretary and avoid using the reply all option.

3.6

## 4.0 NEXT MEETING DATE & ADJOURNMENT

The next committee meeting is scheduled for the 5<sup>th</sup> of February, 2024 beginning at 6:30 p.m.

The meeting was adjourned at 7:55 p.m.

---

Boyd Folden  
Chairperson

---

Keith Davis  
Secretary