



**BUSINESS PARK  
AREA STRUCTURE PLAN  
Village of Marwayne**



**Adopted by Council August 20, 2024**

*This page is intentionally left blank.*

# TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION</b>	<b>1</b>
1.1	OVERVIEW	1
1.2	PURPOSE	2
1.3	PLAN AREA	2
1.4	POLICIES & RELEVANT PLANNING DOCUMENTS	3
1.5	INTERMUNICIPAL DEVELOPMENT PLAN	4
1.6	INTERMUNICIPAL COLLABORATION FRAMEWORK (2020)	5
1.7	STRATEGIC PLAN (2022)	5
1.8	MUNICIPAL DEVELOPMENT PLAN	5
1.9	LAND USE BYLAW	6
1.10	PLAN INTERPRETATION	7
<b>2</b>	<b>PLAN CONTEXT &amp; DEVELOPMENT CONSIDERATIONS</b>	<b>8</b>
2.1	SITE CONTEXT	8
2.2	ADJACENT LANDS & SURROUNDING DEVELOPMENT	9
2.3	ROADS	9
2.4	PUBLIC PARTICIPATION	9
<b>3</b>	<b>VISION</b>	<b>10</b>
3.1	VISION & LAND USE CONCEPT PLAN	10
<b>4</b>	<b>DEVELOPMENT CONCEPT</b>	<b>12</b>
4.1	COMMERCIAL & INDUSTRIAL DEVELOPMENT	12
4.2	TRAILS, OPEN SPACE & ENVIRONMENTAL RESERVE	12
4.3	ENVIRONMENTAL STEWARDSHIP & NATURAL ENVIRONMENT	13
4.4	TRANSPORTATION	13
<b>5</b>	<b>MUNICIPAL UTILITIES</b>	<b>14</b>
5.1	WATER & SANITARY SERVICING	15
5.2	STORMWATER MANAGEMENT	17
<b>6</b>	<b>PLAN IMPLEMENTATION</b>	<b>19</b>
6.1	PHASING & FUTURE DEVELOPMENT	19

## Appendix

Appendix A: Background Review (December 6, 2022)





# 1 INTRODUCTION

## 1.1 Overview

An Area Structure Plan (ASP) is a statutory document that aligns with the Village's Municipal Development Plan (MDP). In accordance with the Municipal Government Act, an ASP outlines the future development of an area with regard to land use, transportation, natural environment, proposed population density and utility service requirements. An ASP must also describe the sequence of development proposed for the area. It is approved by Council and adopted by bylaw.

Having an ASP reduces land use conflicts and ad hoc development that can have an impact on the natural environment, council's fiscal budget, existing roads, water and wastewater systems, and surrounding land owners. An ASP provides land owners and prospective developers with an idea of appropriate future land uses, and helps streamline rezoning and subdivision applications if they are in compliance with the ASP and any corresponding outline plans.

The Village of Marwayne sought to develop an ASP on lands currently owned by the Village to maximize the development potential for non-residential uses that will support the Village's tax base and attract people to live in and visit the community. This land is located on Highway 897 and feeds into Highway 45 that is a major corridor to the north towards Cold Lake where there is economic activity arising from farming, the oil and gas sector, and tourism. Marwayne is strategically located near the City of Lloydminster to the east making it an attractive community for those looking for a small-town lifestyle with the amenities of a larger urban centre nearby. It is a strong and resilient community that is full of pride for its history, achievements, and an excellent quality of life.

Figure 1 – Area Structure Plan Area



## 1.2 Purpose

The purpose of the Business Park Area Structure Plan is to guide the development of the Plan area in an orderly and phased manner while enabling commercial and industrial development to occur. The Plan is intended to drive development in Marwayne in a contiguous, compact manner.

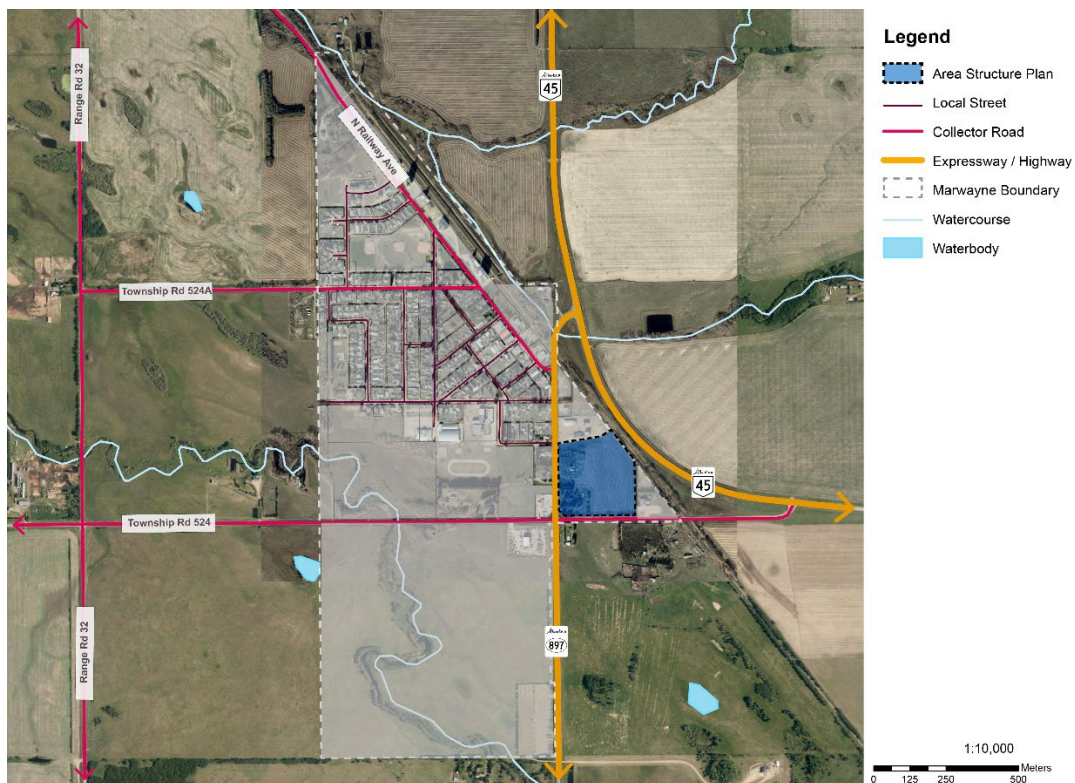
This Plan contains a vision statement, strategies, goals, objectives, and policies to guide council, approving authorities, review agencies and the public in directing and managing growth and change within the Plan area. The Plan describes:

- the sequence of development proposed for an area;
- the land uses proposed for the area, either generally or with respect to specific parts of the area;
- the density of population proposed for the area, either generally or with respect to specific parts of the area; and
- the general location of major transportation routes and public utilities.

## 1.3 Plan Area

The Plan area is located on the eastern edge of the Village boundaries, with access to the site off of Township Road 524 and Hwy 897. The Plan area is bordered by an existing industrial development to the north, and the east side runs close to an abandoned railroad.

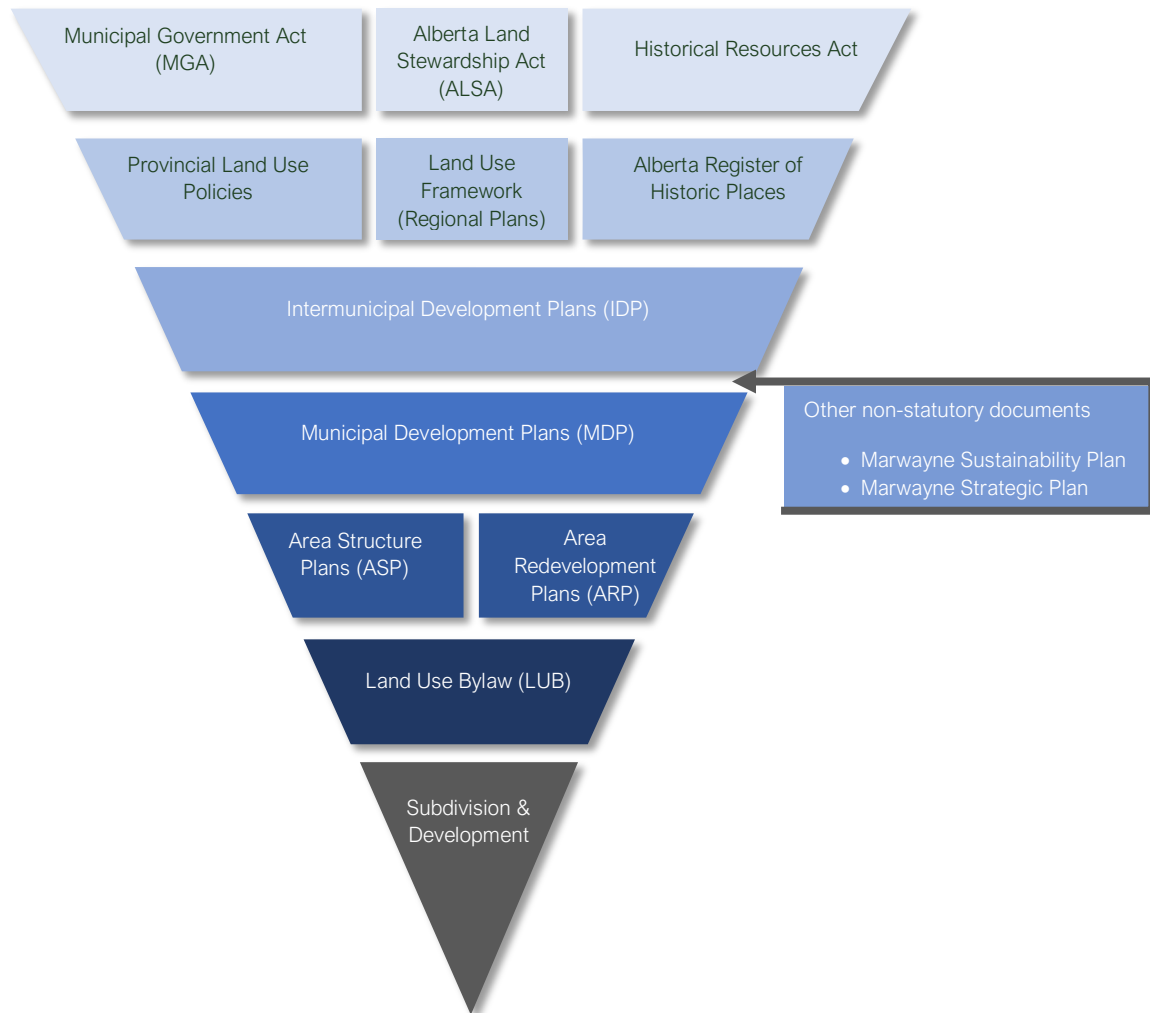
Figure 1 – Plan Context Map



## 1.4 Policies & Relevant Planning Documents

The following is a review of the statutory plans relevant to the Marwayne ASP. Figure 3 shows the Planning Hierarchy, or the level of each planning document and its interaction with other documents filtering down towards the development of an individual parcel.

**Figure 3** – Planning Hierarchy



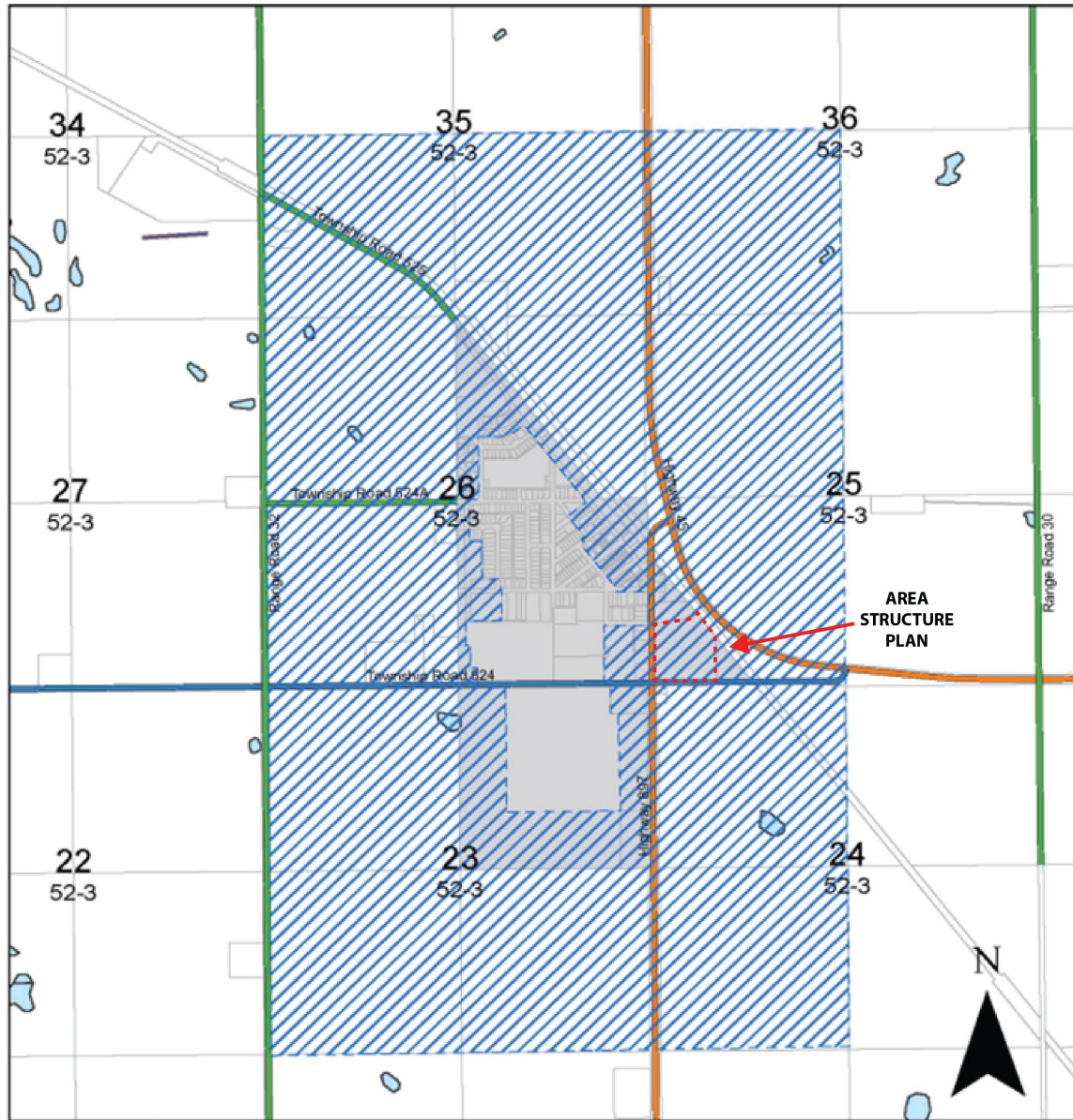
To achieve the community's vision, it is best that all the documents highlighted in Figure 3 – Planning Hierarchy complement and work with one another, with the municipality and the community holistically addressing the initiatives, policies, and strategies identified. The documents above the ASP in the Planning Hierarchy directly affect the ASP, while those below are directly affected by the ASP.



### 1.5 Intermunicipal Development Plan

Adopted in April 2021, the Village of Marwayne and the County of Vermilion River jointly prepared their Intermunicipal Development Plan (IDP). The IDP boundary area is included for reference below:

Figure 4 – Village of Marwayne and County of Vermilion River Intermunicipal Development Plan (IDP)





---

## 1.6 Intermunicipal Collaboration Framework (2020)

Adopted in March 2020, the Intermunicipal Collaboration Framework between the County of Vermillion River and the Village of Marwayne outlines integrated and strategic service delivery that seeks to achieve efficiencies and mutual benefits for residents within both municipalities.

The Planning and Development Services Sharing Agreement (April 9, 2019) may impact development of the proposed ASP. Developers should consult this document when preparing subdivision or development applications within the ASP area.

---

## 1.7 Strategic Plan (2022)

The Strategic Plan was adopted in 2022 and outlines Council's long-term priorities. A number of Priority Focus Areas are identified for the Village of Marwayne which will have the most impact on the long-term resilience and sustainability of the community. This ASP aligns with the Strategic Plan goals and objectives and core values, as shown in Figure 5 below. For a full analysis, please refer to Appendix A.

Figure 5 – Core Values Graphic from the Strategic Plan



### VALUE 1: INTEGRITY

The Village of Marwayne governs in an open, honest, and transparent manner by considering resident values and needs when making decisions.



### VALUE 2: RESPONSIBILITY

The Village of Marwayne provides quality, efficient, and effective service utilizing best practices and innovative “Marwayne-made” approaches to achieve constant improvement.



### VALUE 3: COOPERATION & COLLABORATION

The Village of Marwayne works well with regional neighbours and other levels of government, as well as empowers community volunteers and community groups to achieve the shared community vision.



### VALUE 4: COMMUNITY

The Village of Marwayne strives to be a safe, vibrant, active, and healthy community that supports families and fosters a strong sense of togetherness.

---

## 1.8 Municipal Development Plan

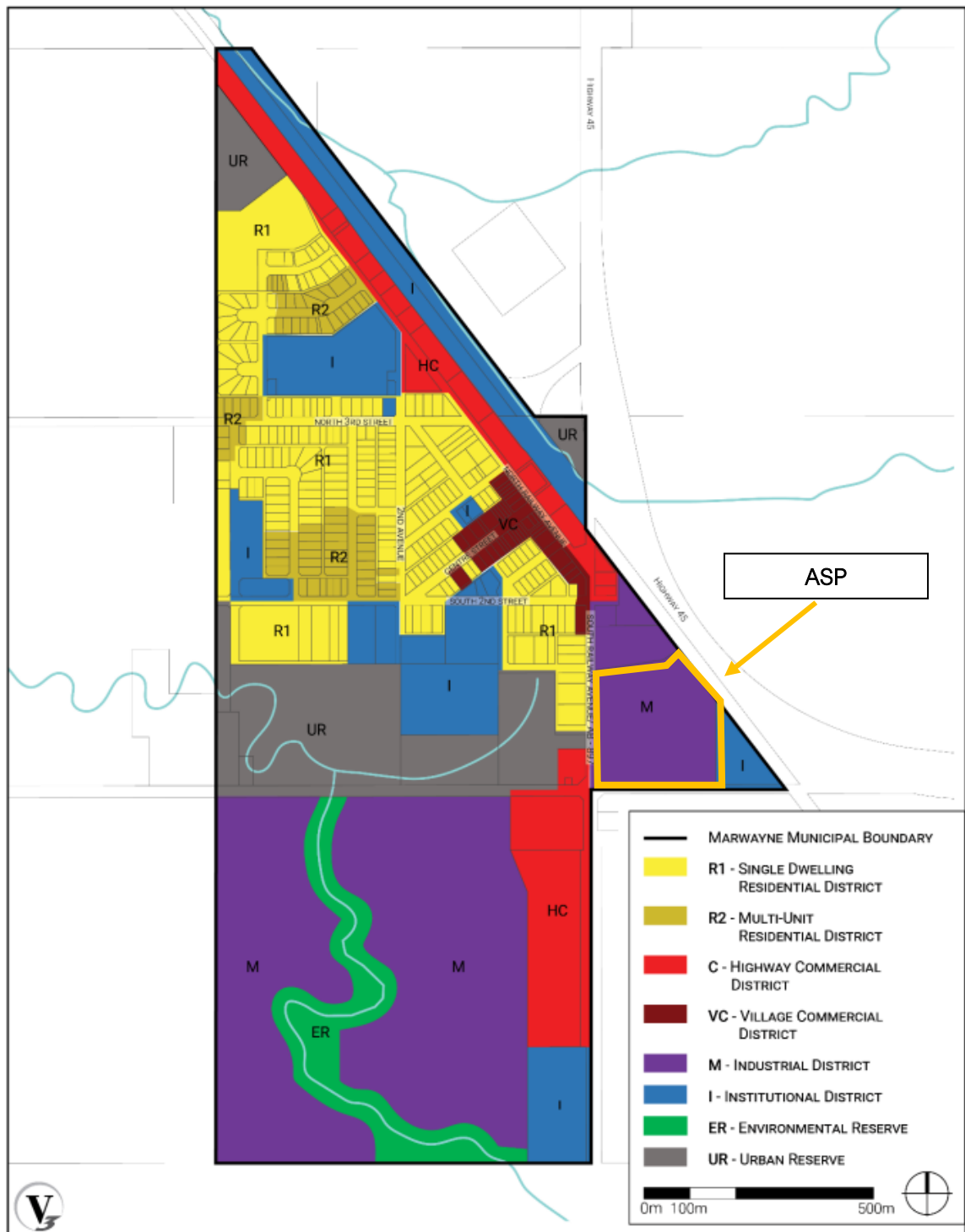
Adopted in June 2020, the Marwayne Municipal Development Plan (MDP) provides the Village a comprehensive, long-term land use policy framework for growth and development, while also guiding Council decisions related to the natural environment, investments in infrastructure and services, and characteristics of future development. This ASP aligns with the MDP goals and objectives. For a full analysis, please refer to Appendix A.

### 1.9 Land Use Bylaw

Adopted in 2019 and last amended in 2020, the Land Use Bylaw of the Village of Marwayne identifies the proposed ASP as M – Industrial District.

The Land use District Map is included below:

Figure 6 – Marwayne Land Use District Map Future Land Use Designation Map (LUB)



---

## 1.10 Plan Interpretation

Policies within this Area Structure Plan contain key operative terms such as “Shall”, “Should”, and “May”. The interpretation of these terms is as follows:

- **SHALL, REQUIRE, MUST, or WILL** - directive terms that indicate the actions outlined are mandatory and apply to all situations.
- **SHOULD** - a directive term that indicates a strongly preferred outcome or course of action but one that is not mandatory.
- **MAY** - a permissive and/or discretionary term that denotes a choice in applying the policy.

## 2 PLAN CONTEXT & DEVELOPMENT CONSIDERATIONS

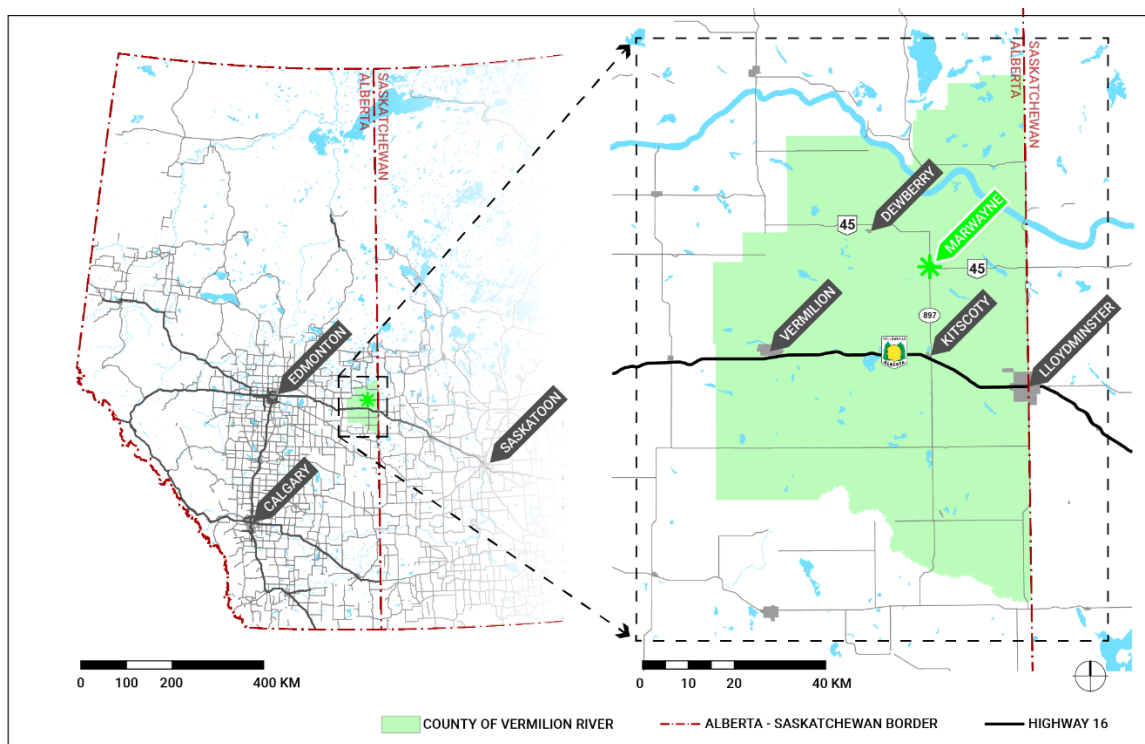
### 2.1 Site Context

The Village of Marwayne is located approximately 20 km north of TransCanada Hwy 16 along Hwy 897, approximately 20 km west of the Alberta/Saskatchewan border along Hwy 45 and is surrounded on all sides by the County of Vermilion River. Due to the proximity to the river, a biophysical assessment was completed and is available in Appendix A.

The site is located in the eastern corner of the Village of Marwayne directly adjacent to S 5 St (Township Rd 524) and Railway Ave S (Highway 897). It is in proximity to Hwy 45 located to the northeast across a decommissioned Canadian National (CN) rail right-of-way. Onion Lake Cree Nation reserve Makao 120 is located approximately 25 km to the northeast.

Nearby major settlements include the City of Lloydminster approximately 35 km to the southeast and the Town of Vermilion approximately 40 km to the southwest. Other settlements include the Village of Kitscoty approximately 20 km to the south and the Hamlet of Dewberry approximately 15 km to the northwest. Nearby airports include Lloydminster Municipal Airport (YLL) approximately 30 km to the southeast and Vermilion Airport approximately 40 km to the southwest. Marwayne Jubilee School, Community Park, and Community Arena are located to the west of the project site. Downtown Marwayne is located approximately 500 m to the northwest of the project site.

Figure 7 – Regional Context Map



Map created by V3 Companies of Canada Ltd using data from the following sources: Government of Alberta and Government of Canada



---

## 2.2 Adjacent Lands & Surrounding Development

The surrounding region is also referred to as “The Lakeland Region” due to its numerous lakes and rivers. Lea Park is a ten-minute drive north and Whitney Lakes Provincial Park is a half-hour drive north. The lakes and rivers provide the community with an opportunity to take on a larger role as a seasonal service provider for tourists in the region.

The area immediately adjacent to the project site to the north is designated for Industrial uses, the area immediately adjacent to the project site to the east is designated for Recreational uses in the MDP. Areas adjacent to the project site across Railway Ave S (Highway 897) are designated for Residential, Highway Commercial, and Future Growth in the MDP. The parcel immediately adjacent to the project site to the north is districted in the LUB as M – Industrial, has a total area of approximately 1.39 ha, and is currently used for Light Industrial uses.

The parcel immediately adjacent to the project site to the east is districted in the LUB as P – Community District and has a total area of approximately 1.34 ha where Marwayne Alliance Church is currently operating. Parcels adjacent to the project site to the northwest across Railway Ave S (Highway 897) are districted in the LUB as R1 – Single Dwelling Residential.

A parcel adjacent to the project site to the west across Railway Ave S (Highway 897) is districted in the LUB as UR – Urban Reserve.

---

## 2.3 Roads

The Plan area is served by Township Road 524 to the south, and Highway 897 to the west. The intersection of Railway Ave S (Highway 897) and S 3 St is located adjacent to the project site at the extreme northwest corner. The intersection of Railway Ave S (Highway 897) and S 5 St is located adjacent to the project site at the extreme southwest corner.

The project site is in proximity to Hwy 45 located to the northeast across a decommissioned rail right-of-way. A full Traffic Impact Assessment (TIA) has been completed and is available in Appendix A.

---

## 2.4 Public Participation

The Village of Marwayne used a variety of engagement methods in order to obtain feedback on the creation of this Area Structure Plan. This included open houses, and the information being posted on the Village’s website.

The public open house event was conducted on May 31, 2023 at the Village of Marwayne office from 4:00PM to 8:00PM. In total, four participants joined the event to learn more about the project, proposed policies, and proposed land use concept. No comments cards were filled out during the event, and no comments were emailed or called in to the Village after the event.

A second public open house event was conducted on February 12, 2024 at the Village of Marwayne office from 4:00PM to 6:00PM. In total, three participants joined the event to read the draft proposal and peruse the engagement materials. No comments cards were filled out during the event, and no comments were emailed or called in to the Village after the event.



The following land use table outlines the gross area and gross developable area for the site.

Land Uses	Area (ha)	Percentage (%)
<b>Gross Area</b>	<b>6.77</b>	<b>100%</b>
Public Utility Lot	0.62	9.1%
ROW (Existing Roads, etc.)	0.78	11.6%
Municipal Reserve	0.12	1.7%
Commercial	1.04	15.40
Light Industrial	4.22	62.23
<b>Total Area</b>	<b>6.77</b>	<b>100.0%</b>
Gross Developable Area	5.26	77.6%
Gross Non-developable Area	1.52	22.4%

## 4 DEVELOPMENT CONCEPT

### 4.1 Commercial & Industrial Development

Objective: *To facilitate diverse economic opportunities within the Plan area through responsible land use planning.*

#### POLICIES

The Village **will**:

1. Seek opportunities to work with existing businesses who wish to expand their operations and prospective new businesses to encourage them to locate in the Business Park ASP.
2. Utilize a transition of land uses and districting to support a buffer from the existing residential areas to the new business area.

### 4.2 Trails & Open Space

Objective: *To provide a safe trail network connecting existing development to the recreation space to the northeast of the Plan area that promotes active lifestyles.*

#### POLICIES

The Village **will**:

1. Require developers to establish a public trail along the north edge of the development to provide connectivity with existing developments and trail networks.

The Village **should**:

1. Encourage internal pedestrian movement by requiring appropriate provisions for pedestrians in all new commercial developments.
2. Incorporate a trail into the construction of new storm water management facility utilizing the County of Vermillion River's Engineering Design Standards.



### 4.3 Environmental Stewardship & Natural Environment

Objective: *To protect and enhance the natural landscape where appropriate and to mitigate adverse impacts to the natural environment as best as possible at all stages of development, including construction and operation of industrial and commercial land uses.*

#### POLICIES

The Village **will**:

1. Require developers to meet the goals and strategies of the Village of Marwayne's Sustainability Plan where applicable.
2. Require developers to protect the environment at all stages of development including construction, operation and site reclamation.
3. Require developers to manage all environmental nuisances including light, sound, dust and noise pollution within their developments.
4. Require developers to landscape the street facing frontage of their site.

The Village **should**:

5. Require on-site containment systems to be used by all developments in the Plan area to minimize seepage of oil, gas and other materials into the groundwater.

### 4.4 Transportation

Objective: *To create a safe, efficient, and functional road network within the Plan area.*

#### POLICIES

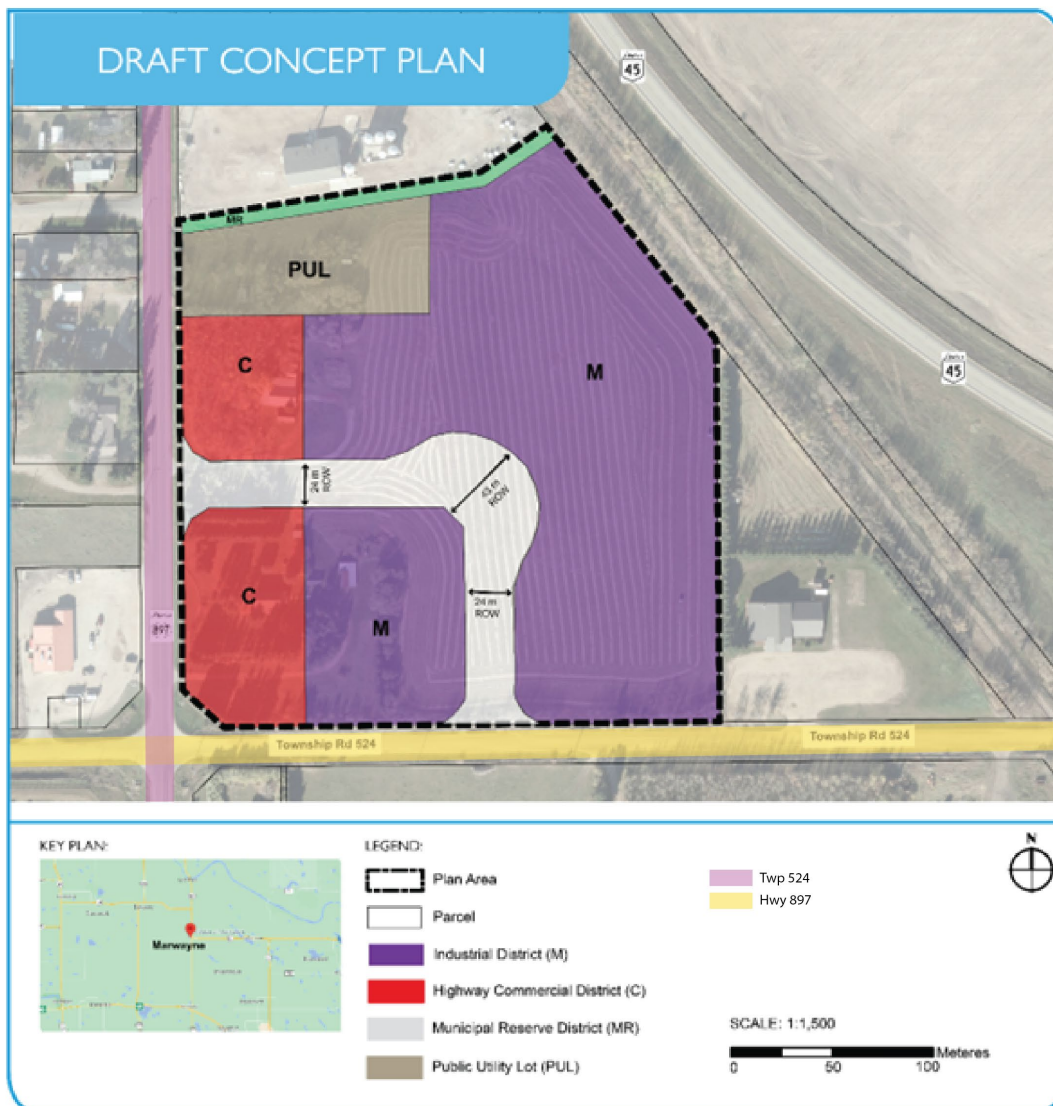
The Village **will**:

1. Require that access to the Plan area is from major roadways as shown in Figure 9: Transportation Network.
2. Require the construction of the internal roadway meets the Village's municipal engineering standards and is designed to minimize surface runoff from entering the stormwater system. Techniques such as landscaped ditches, bioswales and landscaped shoulders **may** be used to reduce surface runoff.
3. Consider the implementation of a modified southbound bypass lane at the new collector/Highway 897 intersection based on currently available spacing.

The Village **should**:

4. Work with Alberta Transportation to complete a corridor study for Highway 897 to determine potential upgrading options to address existing deficiencies as identified by TEC guidelines.
  - a. Pending the outcome of the corridor study, consider cost sharing options for the outcomes of the study and/or to develop the new collector/S 5 Street intersection to include a single travel lane on each approach.

Figure 9 – Transportation Network



## 5 MUNICIPAL UTILITIES

### 5.1 Water & Sanitary Servicing

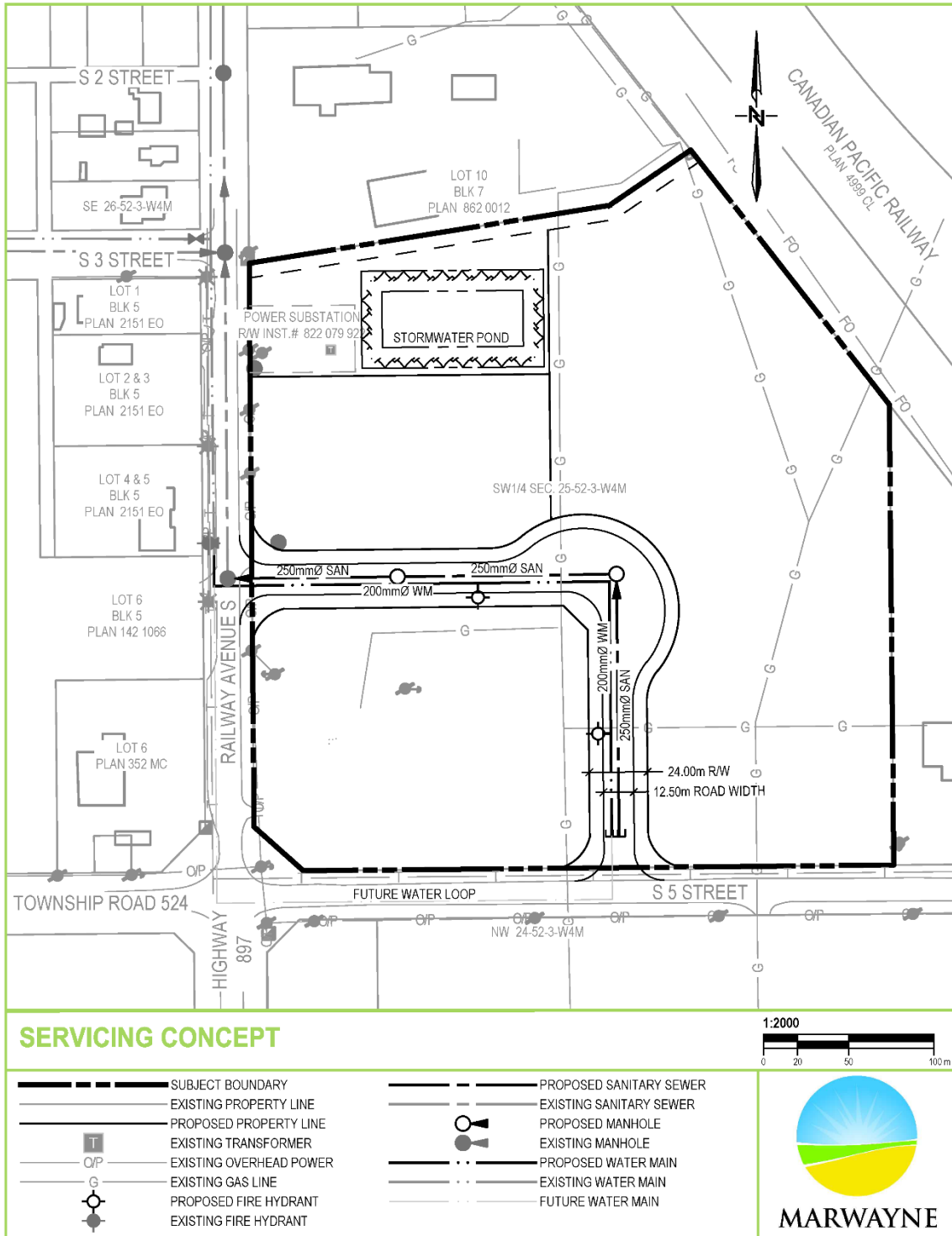
Objective: *To create and maintain an efficient, effective and economical utility system that meets the demands of future development.*

#### POLICIES

The Village **will**:

1. Provide water servicing to the Plan area as generally shown in Figure 10: Servicing Plan. If upgraded water servicing is required to service the future developments, the Village **should** explore opportunities for a cost contribution model, as identified in policy 6.1.2.
2. Provide sanitary services to the Plan area as generally shown in Figure 10: Servicing Plan. If upgraded sanitary servicing is required to service the future developments, the Village **should** explore opportunities for a cost contribution model, as identified in policy 6.1.2.
3. Require that the construction of new and the expansion of existing water and sanitary servicing systems comply with the policies and recommendations identified in the water and sanitary servicing studies within the Background Review (*December 2022*) for the Plan area.

Figure 10 – Servicing Concept





## 5.2 Stormwater Management

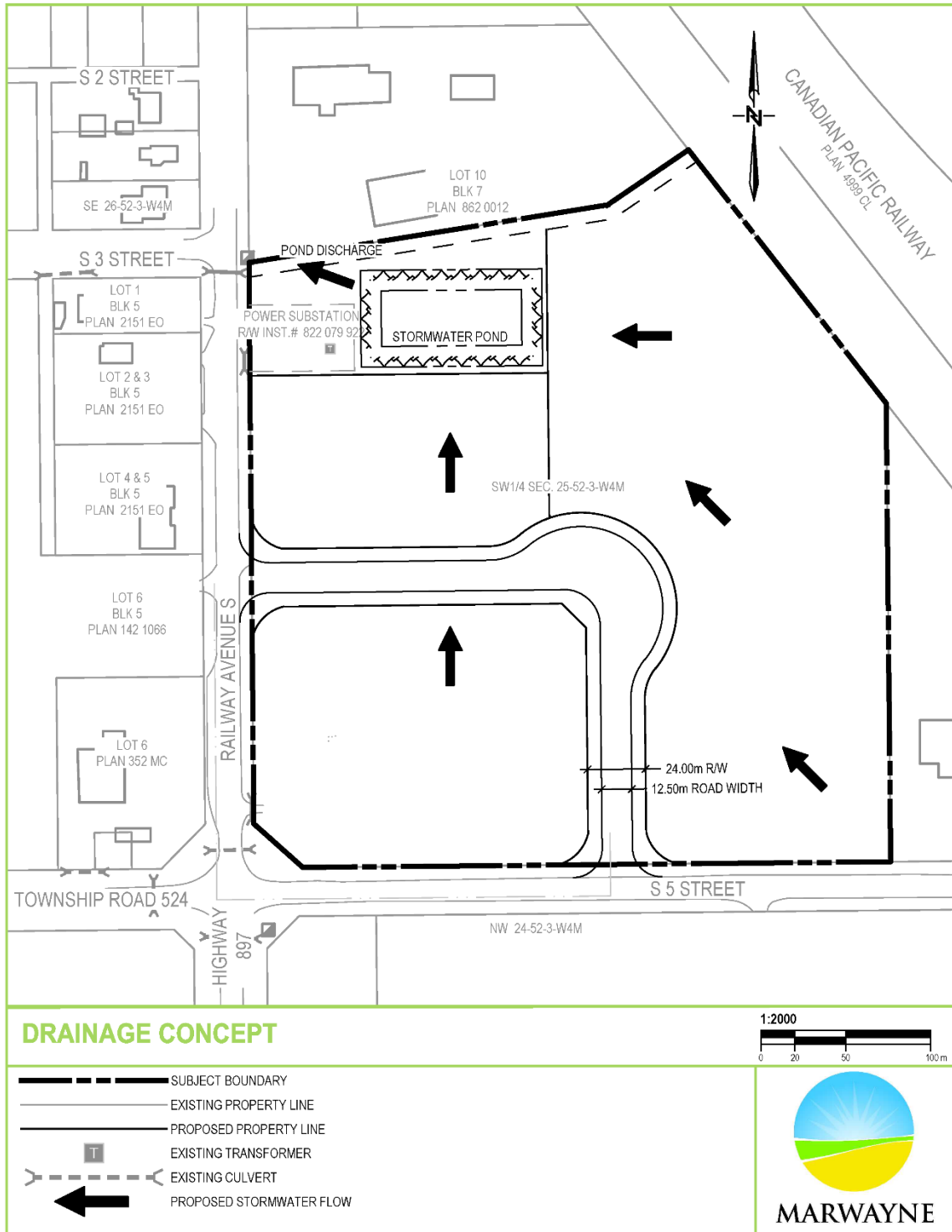
Objective: *To manage stormwater throughout the Plan area to avoid any increase in runoff resulting from development.*

### POLICIES

The Village **will**:

1. Require that the stormwater management facility within the Plan area is situated as shown in Figure 11: Stormwater Infrastructure Network.
2. Require that all on-site stormwater is managed to the Village's Engineering Design Standards and the recommendations outlined in the within the Background Review (*December 2022*).

Figure 11 – Stormwater Infrastructure Network.



## 6 PLAN IMPLEMENTATION

### 6.1 Phasing & Future Development

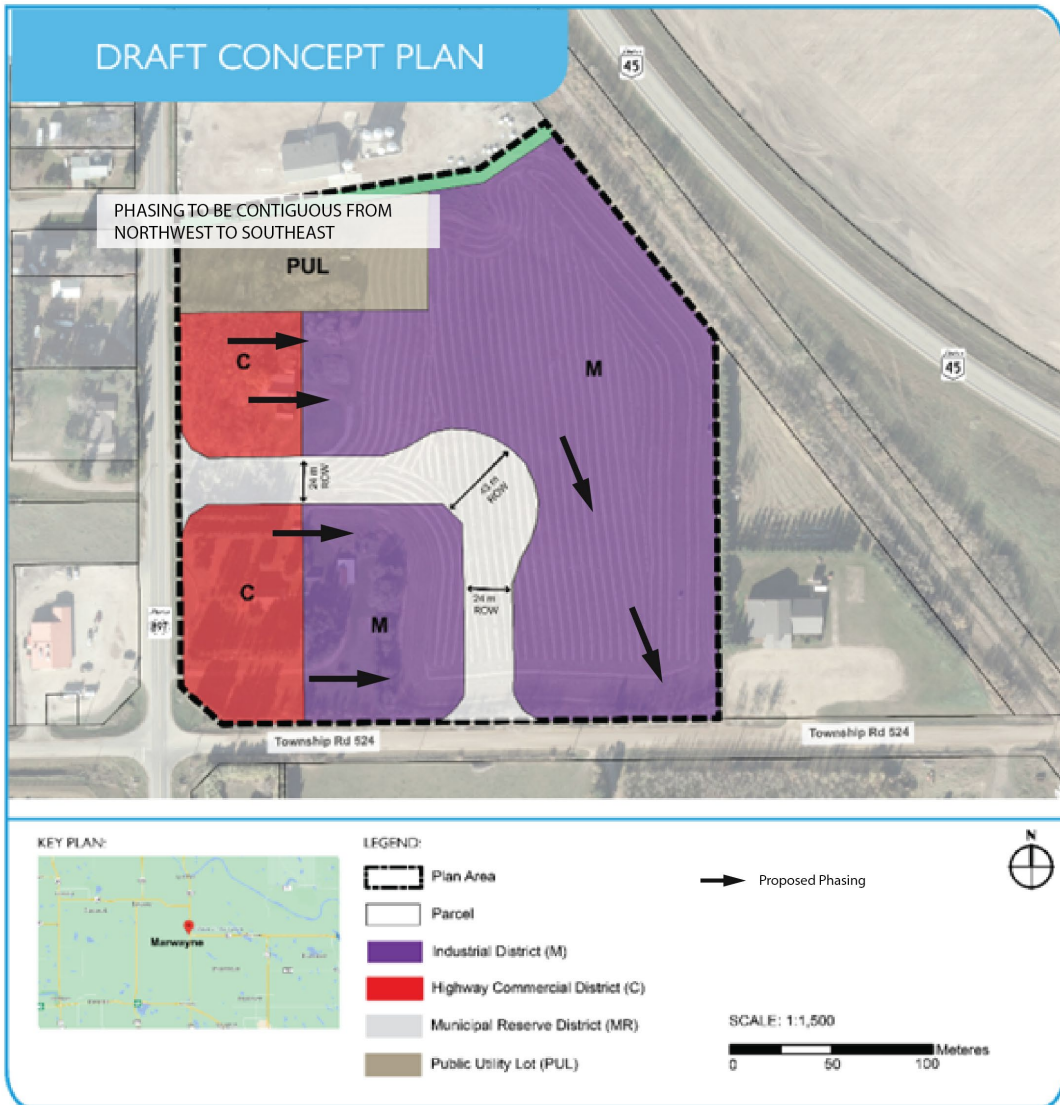
Objective: *To require compact, orderly and economical growth within the Plan area.*

#### POLICIES

The Village **will**:

1. Require development in the Plan area follows the general pattern of land uses and development phasing established in the Plan, as indicated in Figure 12 – Development Phasing.
2. Develop a business plan that will leverage a variety of cost recovery mechanisms and the phasing of development to encourage new businesses, employment opportunities, increased assessment and recover the land and servicing costs, and limit the Village's financial liabilities.
3. Explore all possible funding sources to offset roadway and infrastructure improvements, including but not limited to levies, federal and provincial grants, developer contributions, and public private partnerships.
4. Monitor the Plan annually to gauge the level and rate of build out along with identifying any societal changes, such as technology, market shift or environmental shifts that may justify reviewing and updating the Plan.
5. Any amendments to the Plan shall be in accordance with the requirements of the Municipal Government Act at the time of carrying out the amendments.

Figure 12 – Development Phasing



*This page is intentionally left blank.*





**BUSINESS PARK ASP**  
**Village of Marwayne**



Appendix A

**BACKGROUND REVIEW**

**December 2022**





**BACKGROUND REVIEW**  
**AREA STRUCTURE PLAN**

**Village of Marwayne**



**December 6, 2022**

*This page is intentionally left blank.*

# TABLE OF CONTENTS

<b>TABLE OF CONTENTS</b>		<b>I</b>
<b>1</b>	<b>CONTEXT</b>	<b>1</b>
1.1	THE PROJECT	1
1.2	THE PURPOSE	2
1.3	THE CONTEXT	2
1.4	HISTORICAL DEVELOPMENT	3
1.5	HISTORICAL AND PROJECTED POPULATION	4
<b>2</b>	<b>DOCUMENT REVIEW &amp; DATA COLLECTION</b>	<b>7</b>
2.1	HIERARCHY OF PLANNING DOCUMENTS	7
2.2	INTERMUNICIPAL DEVELOPMENT PLAN (2021)	8
2.3	INTERMUNICIPAL COLLABORATION FRAMEWORK (2020)	9
2.4	SUSTAINABILITY PLAN (2022)	10
2.5	STRATEGIC PLAN (2022)	10
2.6	MUNICIPAL DEVELOPMENT PLAN (2020)	10
2.7	LAND USE BYLAW (2019)	16
<b>3</b>	<b>SITE CONDITIONS &amp; CONSTRAINTS MAPPING</b>	<b>19</b>
3.1	REGIONAL CONTEXT MAP	20
3.2	VILLAGE CONTEXT MAP	22
3.3	LAND USE DESIGNATION MAP	24
3.4	STUDY AREA MAP	26
3.5	LAND USE DISTRICT MAP	28
3.6	CONTOUR MAP	30
3.7	EXISTING CONDITIONS MAP	31
<b>4</b>	<b>TOPOGRAPHICAL SURVEY</b>	<b>33</b>
4.1	EXISTING CONDITIONS PLAN	33
<b>5</b>	<b>ENVIRONMENTAL SITE ASSESSMENT – PHASE 1</b>	<b>35</b>
5.1	OVERVIEW	35
5.2	FINDINGS	35
5.3	NEXT STEPS	35
<b>6</b>	<b>BIOPHYSICAL ASSESSMENT</b>	<b>37</b>
6.1	OVERVIEW	37
6.2	FINDINGS	37
6.3	NEXT STEPS	38
<b>7</b>	<b>UTILITY REVIEW</b>	<b>39</b>
7.1	PRELIMINARY DESIGN RESULTS	39



7.2	SANITARY DESIGN	39
7.3	WATER DESIGN	40
7.4	STORMWATER DESIGN	40
7.5	EXISTING SERVICING INFRASTRUCTURE	42
7.6	RECOMMENDATIONS	42
7.7	REFERENCES	42
<b>8</b>	<b>ENVIRONMENTAL SCAN &amp; ECONOMIC BASE ANALYSIS</b>	<b>43</b>
8.1	ENVIRONMENTAL SCAN & ECONOMIC BASE ANALYSIS	43
8.2	LAND & INFRASTRUCTURE REVIEW	64
8.3	EXTERNAL TREND ANALYSIS	65
8.4	TARGET SECTOR IDENTIFICATION	73
8.5	OPPORTUNITY ANALYSIS	76
<b>9</b>	<b>SWOT ANALYSIS (STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS)</b>	<b>82</b>
9.1	A	82
9.2	B	82
9.3	C	82

# 1 CONTEXT

## 1.1 The Project

The Village of Marwayne seeks to develop an Area Structure Plan (ASP) on lands currently owned by the Village. The intent of the plan is to identify the requirements needed to service the land to accommodate development. Ultimately, the Village is seeking to determine the best way for developing non-residential uses that will support the Village's tax base and attract people to live in and visit the community. This land is located on Highway 897 and feeds into Highway 45 that is a major corridor to the north towards Cold Lake where there is economic activity arising from farming, the oil and gas sector, and tourism related to people heading north. Marwayne is strategically located near the City of Lloydminster to the east making it an attractive community for those looking for a small-town lifestyle with the amenities of a larger urban centre nearby. It is a strong and resilient community that is full of pride for its history, achievements, and an excellent quality of life.

Figure 1 – Marwayne Area Structure Plan Area.



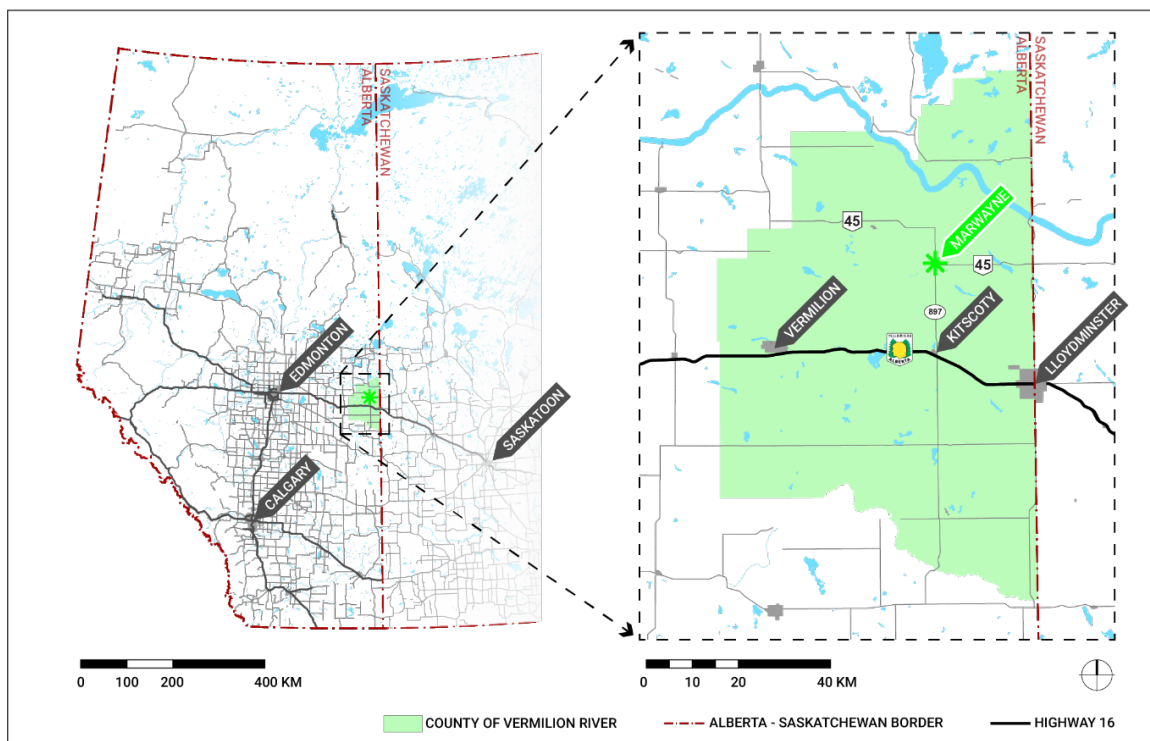
## 1.2 The Purpose

This document will serve to outline the baseline research that was undertaken to assist in the creation of the new ASP. Several data sources were taken into consideration, including but not limited to economic and population data and forecasts, environmental factors, existing intermunicipal agreements, and statutory/non-statutory plans currently in place. Finally, a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) was prepared using the compiled baseline information to understand the context of the community, its existing municipal services and assets, community assets and other key development and demographic trends. The report was formed using desktop research and analysis and includes a synopsis of information obtained through public record, previous studies and reports pertaining to the municipality, information provided by third parties (Government of Alberta, utilities, etc.), and the Village's administration, made available at the time of drafting the report. This document's purpose is to provide information to those involved in the development of the ASP, to guide discussions during the engagement, and to provide meaningful insight on the historic and current context of the Village.

## 1.3 The Context

The Village of Marwayne is located in the County of Vermilion River, approximately 44 km northwest of Lloydminster, and 240 km east of Edmonton (Figure 2 – Regional Context Map). The community is situated along the south side of a former Canadian Pacific Railway line and approximately 18 km north of the Yellowhead Trans-Canada Highway (Highway 16) which connects to Lloydminster, Edmonton, and beyond. Alberta Highway 45 connects Marwayne with the Saskatchewan border to the east, and Alberta Highway 897 connects Marwayne with the City of Cold Lake and the Cold Lake Oil Sands Deposit to the north and the Village of Kitscoty and Highway 16 to the south.

Figure 2 – Regional Context Map.



Map created by V3 Companies of Canada Ltd using data from the following sources: Government of Alberta and Government of Canada

Throughout most of the 20th century, agriculture was the economic base for many of the residents of the Village of Marwayne and this industry remains the economic backbone for the surrounding area. The past several decades witnessed significant economic diversification into the manufacturing and oil and gas sectors. Oil and gas exploration as well as pipeline development occur in the vicinity of the Village of Marwayne.

Situated on the direct corridor to Cold Lake (Highway 897), Marwayne is located just below the southern tip of the Cold Lake Oilsands area. During Alberta's boom years, and up until 2014, oil and gas drilling activity was very strong around Marwayne. Marwayne's major businesses are involved in providing services to the region's primary industries, such as agriculture, oil and gas and related products.

The surrounding region is also referred to as "The Lakeland Region" due to its numerous lakes and rivers. Lea Park is a ten-minute drive north and Whitney Lakes Provincial Park is a half-hour drive north. The lakes and rivers provide the community with an opportunity to take on a larger role as a seasonal service provider for tourists in the region.

---

## 1.4 Historical Development

Settlement in Western Canada occurred through a number of related processes. First, between 1871 and 1921 the Canadian government signed a series of treaty agreements with First Nations that gave the government rights to the land and opened up the West to agricultural settlement.<sup>1</sup> The second important factor was the completion of the Canadian Pacific Railway in 1885, which opened the Western passage for newcomers as well as facilitated grain exports. Further, technical innovations in dry land farming and agricultural machinery – in conjunction with a rise in wheat prices in the late 1890s – greatly increased the profitability of farming as a livelihood. Finally, the closing of the American frontier allowed Canada to attract thousands of new immigrants from the United States and abroad with greater ease.<sup>2</sup>

The origin of the Village of Marwayne can be traced back to the original settlement of the Marfleet family. Between 1896 and 1905 the government of Canada launched a campaign aimed at farmers from the United States, Britain and Central and Eastern Europe that advertised free or cheap land in the Canadian West. The Marfleet family emigrated from a village called Wainfleet in England. In 1906, at the request of the Government of Canada, the family opened a post office on their farm named Marwayne.

In 1926, the Canadian Pacific Railway constructed a line from Lloydminster to Edmonton. A village site was established after the construction of the railway, approximately a quarter mile from the original Marfleet farm. The Village took the name Marwayne, and the population grew to between two and three hundred residents within months.

---

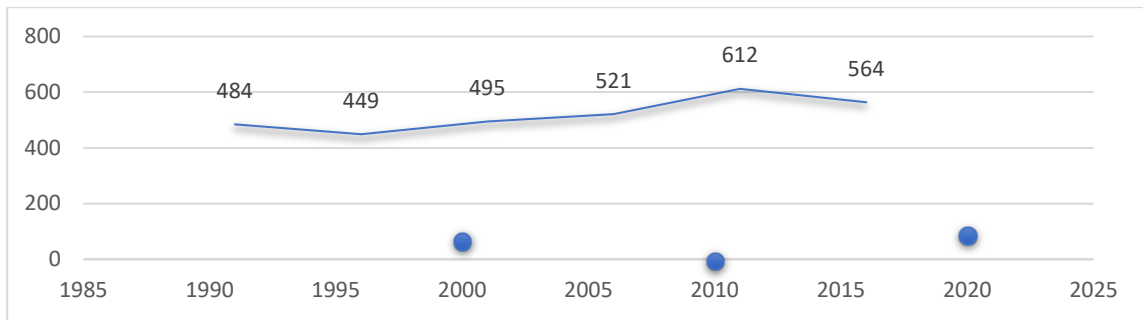
<sup>1</sup> The major treaties affecting Alberta are Treaties 6, 7 and 8 – signed in 1876, 1877 and 1899 respectively. Alberta: How the West was Young. (2008). Treaties – Overview. Retrieved January 23, 2008, from [http://www.abheritage.ca/alberta/fn\\_metis/treaties.html](http://www.abheritage.ca/alberta/fn_metis/treaties.html).

<sup>2</sup> The Applied History Research Group. (1997). The Peopling of Canada: 1891- 1921. Retrieved January 23, 2008, from [http://www.ucalgary.ca/applied\\_history/canada1891/ch4.html](http://www.ucalgary.ca/applied_history/canada1891/ch4.html).

## 1.5 Historical and Projected Population

Marwayne's population has fluctuated from 1991 to 2016. From 1996 to 2011, the population experienced a continuing increase from 449 to 612 according to Statistics Canada (Figure 3). Overall, Marwayne has experienced positive population growth at an average annual rate of 0.83% between 1991 and 2016.

**Figure 3** – Marwayne Population Change 1991 – 2016.



The population growth experienced between 1996 and 2011 did not continue into 2016. The greatest decline occurred in the 0 to 19 age group, which decreased from 205 to 160 people. The other decline occurred in the 40 to 64 age group, which decreased from 190 to 170 people, as shown in the tables below.

2011 Population by Age		
Age	Total	% of Village pop.
0-19	205	33%
20-39	160	26%
40-64	190	31%
65+	60	10%
<b>2011 total:</b>	<b>615</b>	

2016 Population by Age		
Age	Total	% of Village pop.
0-19	160	28%
20-39	160	28%
40-64	170	30%
65+	75	13%
<b>2016 total:</b>	<b>565</b>	

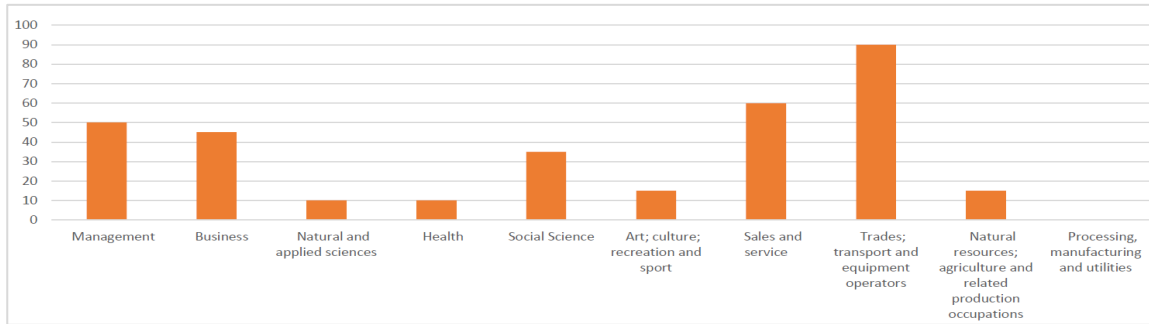
Rural residents between the ages of 20 and 39 often relocate to urban areas for education and employment opportunities. In contradiction to this trend, Marwayne's population at this age group stayed stable from 2011 to 2016, maintaining the same number of 160 people living and working in their home community.

Municipalities in Alberta are allowed to conduct their own censuses. According to the Village of Marwayne's municipal census, the Village's population peaked in the year 2013 with a population of 667, reflecting Alberta's oil and gas boom between 2010 and 2014. Since the method of conducting a municipal census in Alberta differs from Statistics Canada, the 2013 population data is not included in the analysis above.

Significant numbers of the Village's residents are involved in retail, trades, sales and service sectors while many others are employed in management, business and social science.

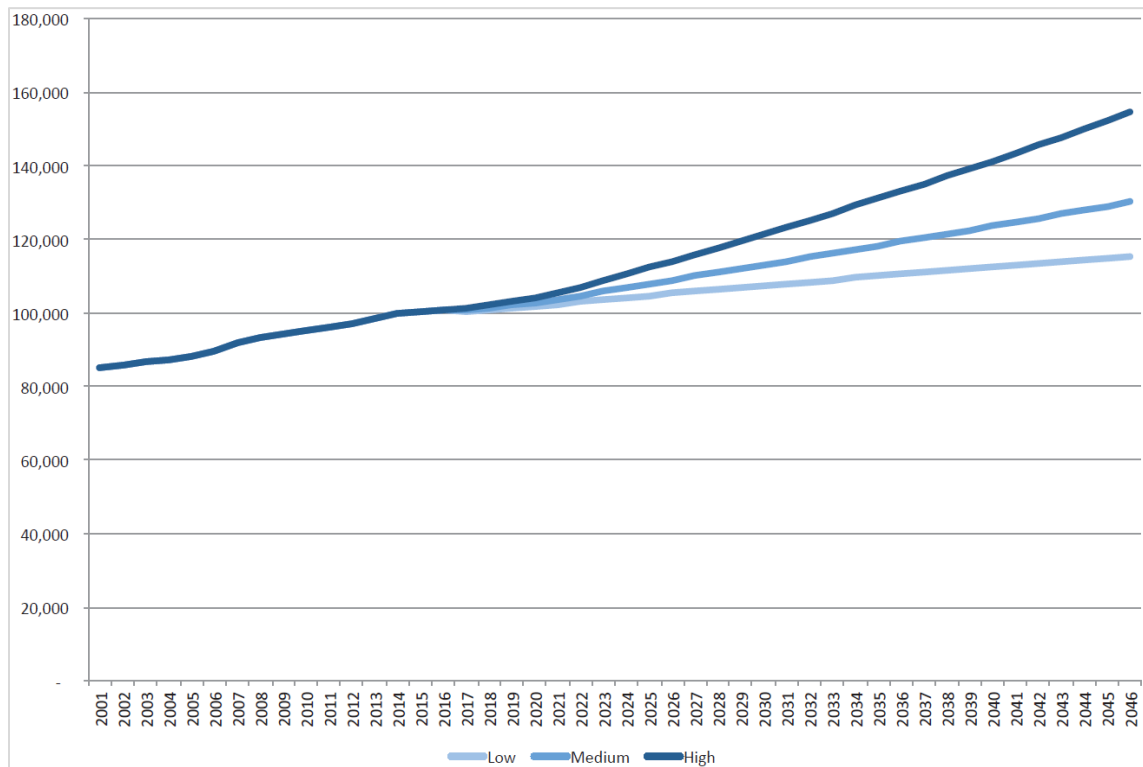


**Figure 4 – 2016 Marwayne’s Number of Individuals Employed per Industry, Age +15<sup>3</sup>.**



The Village of Marwayne is located within Alberta’s Census Division No.10. Based on population projections prepared by the Alberta Treasury Board and Finance, Census Division No. 10 is projected to continue to experience population growth at an average annual growth rate of between 0.5% and 1.4%.<sup>4</sup> Growth in the region is largely tied to oil sands development within the Cold Lake Oil Sands Area and Lloydminster.

**Figure 5 – Alberta Census Division No. 10 Population Projections<sup>5</sup>.**



Over the long term, it is expected that Marwayne will experience growth relative to the region. Until 2046, the Village’s total population could reach between 808 to 1,314. This represents an annual average growth rate ranging between -0.5% to 2%.

<sup>3</sup> Statistics Canada.

<sup>4</sup> Alberta Population Projections by Census Division, 2016-2041, Alberta Treasury Board and Finance Low, Medium and High Scenarios.

<sup>5</sup> Village of Dewberry, Village of Marwayne, Village of Kitscoty Population and Employment Growth Working Paper, Applications Management, September 29, 2016.

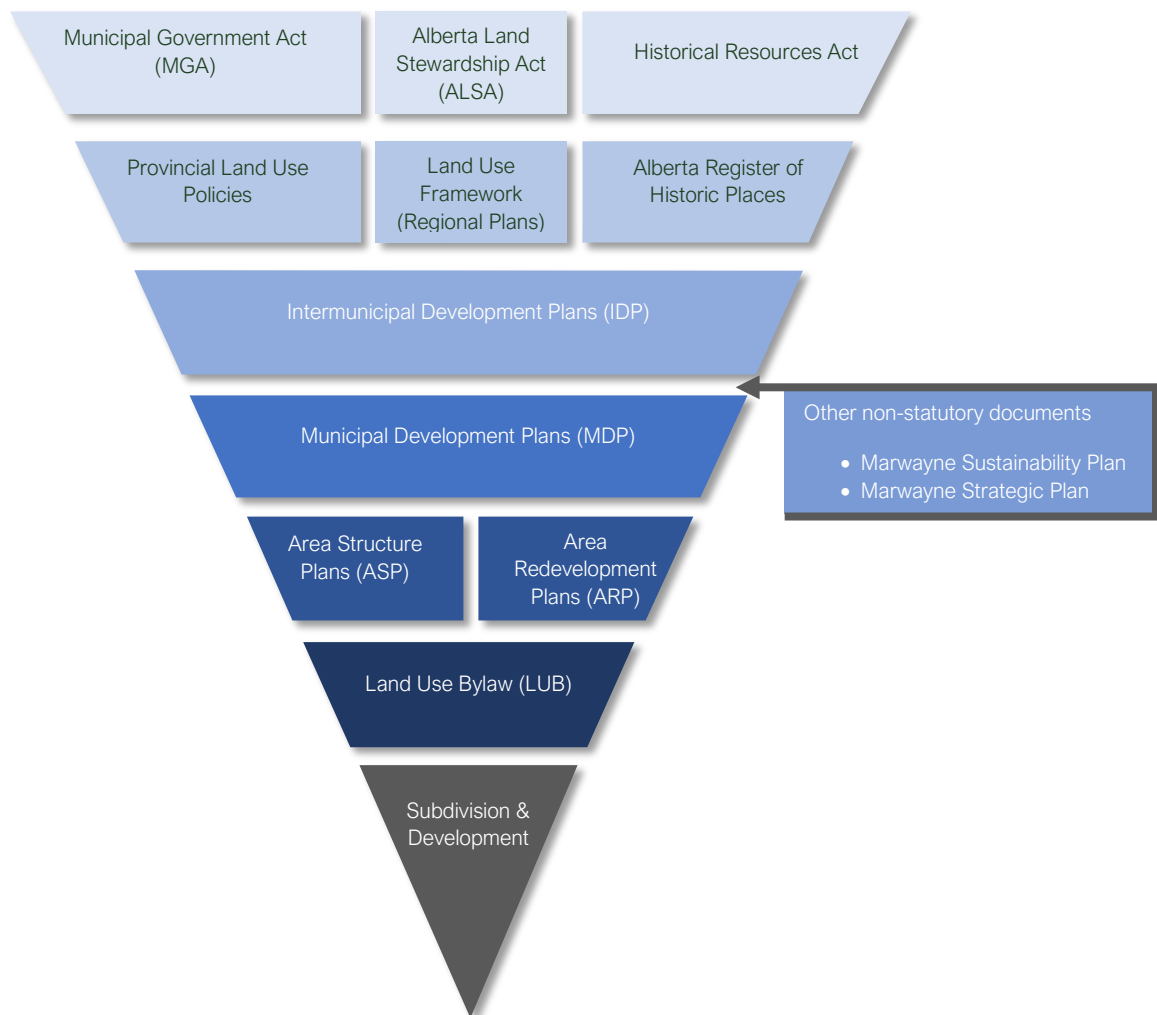
*This page is intentionally left blank.*

## 2 DOCUMENT REVIEW & DATA COLLECTION

### 2.1 Hierarchy of Planning Documents

The following is a review of the statutory plans relevant to the Marwayne ASP. Figure 6 below shows the Planning Hierarchy, or the level of each planning document and its interaction with other documents filtering down towards the development of an individual parcel. The figure also shows where Concept Plans, Conceptual Schemes, and Outline Plans fit within the Planning Hierarchy. This plan acknowledges that the Area Structure Plan is not considered a statutory plan as defined under the Municipal Government Act, however, the plan forms an important bridge between the existing Sustainability and Strategic Plans adopted by Council and approving future subdivision plans and development permits.

**Figure 6** – Planning Hierarchy.

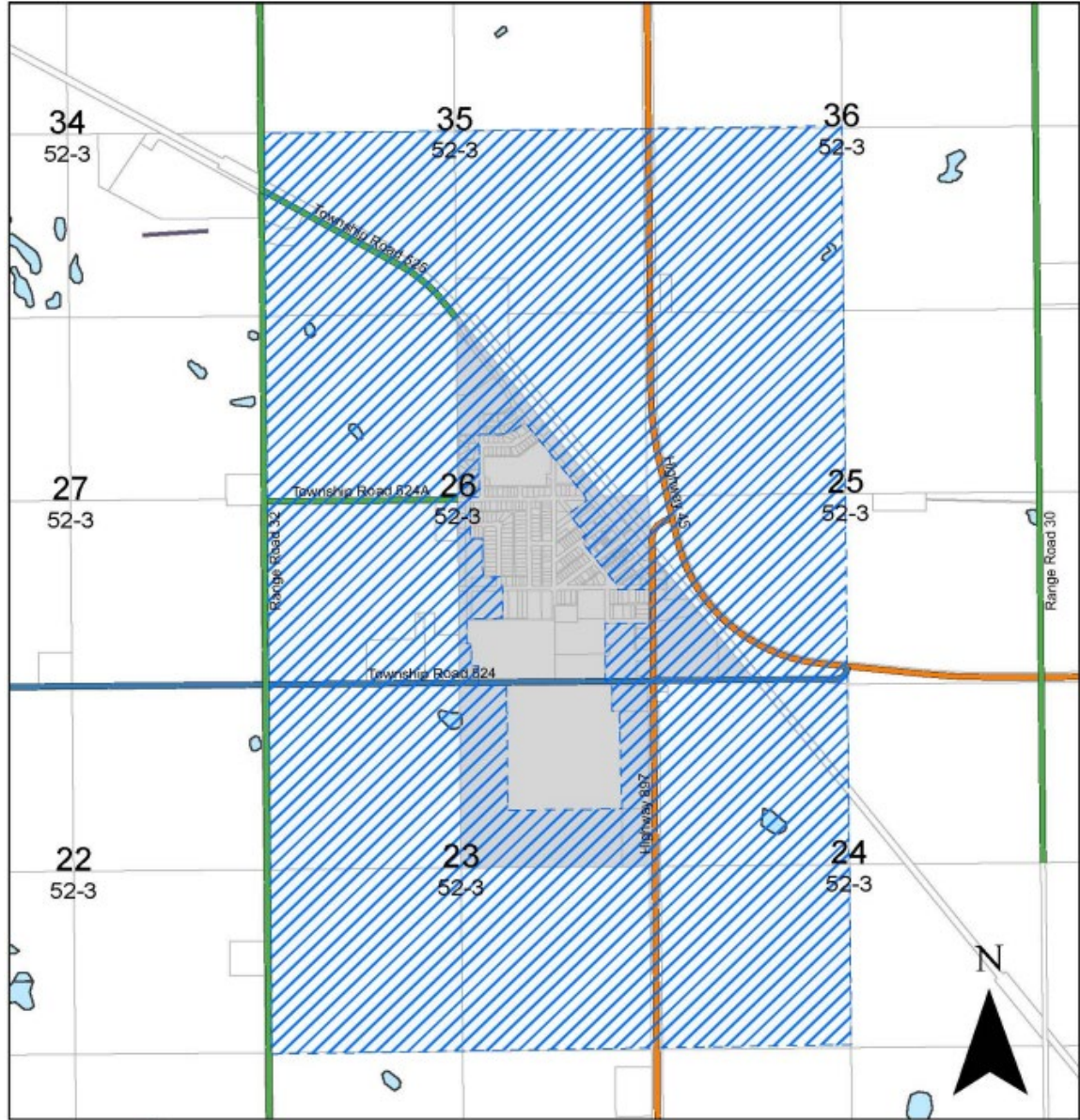


To achieve the community's vision, it is best that all the documents highlighted in Figure 6 – Planning Hierarchy complement and work with one another, with the municipality and the community holistically addressing the initiatives, policies, and strategies identified. The documents above the ASP in the Planning Hierarchy directly affect the ASP, while those below are directly affected by the ASP.

## 2.2 Intermunicipal Development Plan (2021)

Adopted in April 2021, the Village of Marwayne and the County of Vermilion River jointly prepared their Intermunicipal Development Plan (IDP). The IDP boundary area is included for reference below:

Figure 7 – Village of Marwayne and County of Vermilion River Intermunicipal Development Plan (IDP)



**Village of Marwayne IDP Area**

County of VERMILION RIVER

IDP Boundary	Upgraded Local Road (1)
Provincial Highway	Parcels
Upgraded Local Road (2)	Water Bodies
Marwayne	

0 0.25 0.5 1 Kilometers  
0 0.15 0.3 0.6 Miles

Identified key policies within the IDP that may influence the ASP include:

- 4.1.1 (bullet #4) - Subdivision and development for lands located in the IDP area and within 800 m of a highway right of way shall first be approved by Alberta Transportation.
- 4.1.1 (bullet #5) - The serviced business/commercial areas are designated to allow for mixed-use business/commercial development that is compatible with surrounding land uses.
- 4.1.3 (bullet #4) - Applications for redesignation, subdivision, or development should consider incorporating design requirements that ensure a high-quality form of development, servicing and encompass the necessary growth, storm water and transportation management plans.
- 4.2.1 (bullet #4) - Land use, subdivision and development within the IDP area north of Highway 45 and east of Highway 897 shall accommodate un-serviced development while land use, subdivision and development south of Highway 45 and west of the Village boundary shall accommodate serviced development. Land use, subdivision and development along Highway 897 shall accommodate serviced development, whenever possible.
- 4.2.8 (bullet #2) - The Village and the County shall collaborate in finding the most efficient means of providing municipal services to developments requiring such services.
- 4.2.8 (bullet #3) - The means by which municipal servicing can be extended to proposed or existing development in the IDP area, including front end capital and operating costs, will be assessed on its merits on a case-by-case basis, consistent with the County's and the Village's ICF.
- 4.2.8 (bullet #6) - Serviced Business/Commercial development must be planned such that appropriate buffers and/or transitional uses are provided for on any adjacent residential development.

---

### **2.3 Intermunicipal Collaboration Framework (2020)**

Adopted in March 2020, the Intermunicipal Collaboration Framework between the County of Vermillion River and the Village of Marwayne outlines integrated and strategic service delivery that seeks to achieve efficiencies and mutual benefits for residents within both municipalities.

The Planning and Development Services Sharing Agreement (April 9, 2019) may impact development of the proposed ASP.



---

## 2.4 Sustainability Plan (2022)

A Sustainability Plan is a community's roadmap for the future and outlines the long-term vision for the community including clear initiatives, strategies, and key performance indicators to measure and monitor actions taken to achieve the vision. The Sustainability Plan reflects and considers community consultation, capitalizes on its unique opportunities, and supports other statutory documents adopted by Council.

Identified key objectives of the Sustainability Plan from the that may influence the ASP include:

- Attract and retain a diverse range of businesses to meet the needs of the community and the surrounding region.
- Promote coordination and collaboration efforts with other municipalities and regional economic development agencies to enhance business attraction and retention.

---

## 2.5 Strategic Plan (2022)

The Strategic Plan was adopted in 2022 and outlines Councils long-term priorities. A number of Priority Focus Areas are identified for the Village of Marwayne which will have the most impact on the long-term resilience and sustainability of the community.

Identified goals of the Strategic Plan that may influence the ASP include:

- Attract and retain a diverse range of businesses to meet the needs of the community and the surrounding region.
- Promote coordination and collaboration efforts with other municipalities and regional economic development agencies in efforts to enhance business attraction and retention.

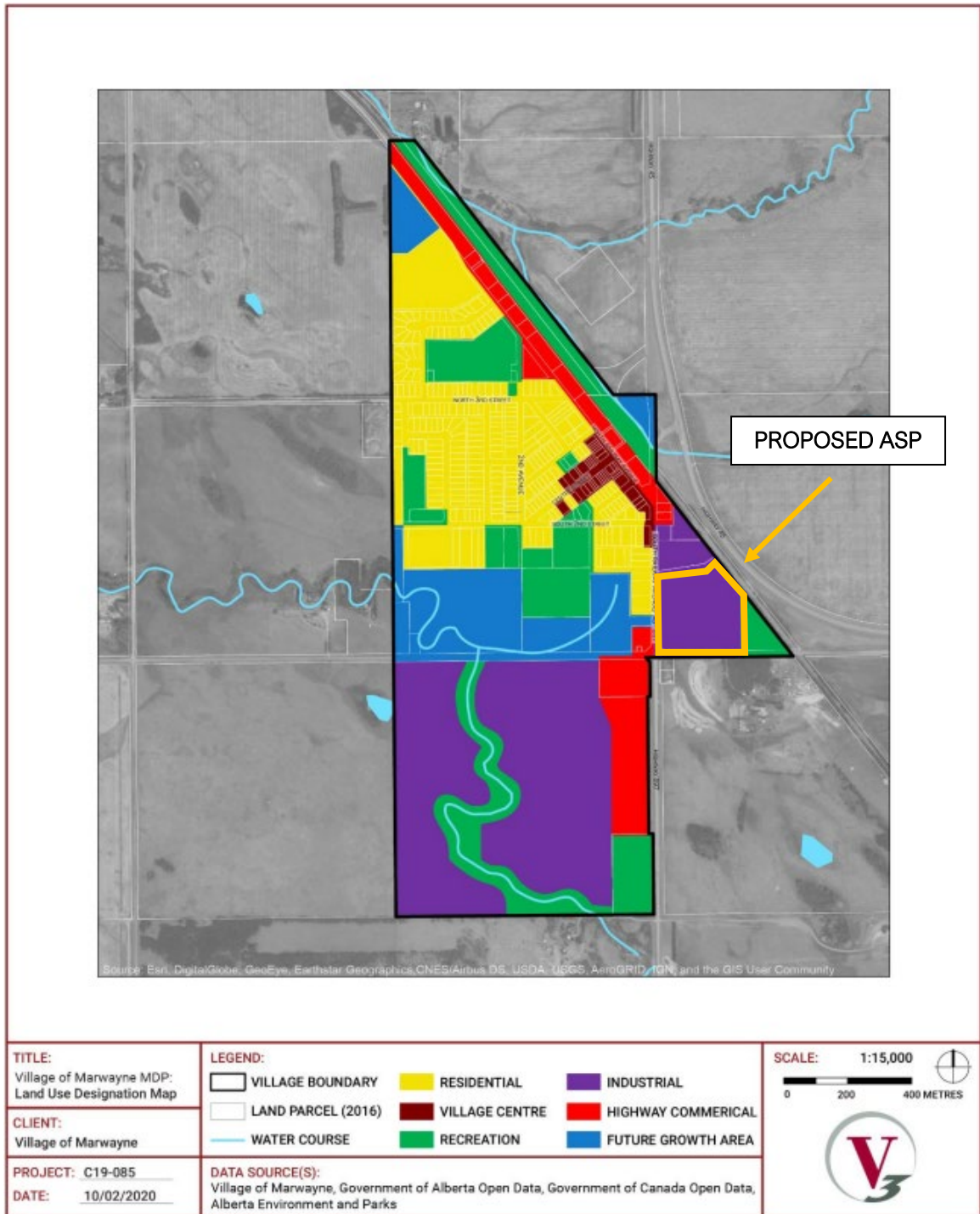
---

## 2.6 Municipal Development Plan (2020)

Adopted in June 2020, the Marwayne Municipal Development Plan (MDP) provides the Village a comprehensive, long-term land use policy framework for growth and development, while also guiding Council decisions related to the natural environment, investments in infrastructure and services, and characteristics of future development. Given the policy framework provided for within the MDP, it will be important to ensure that the policies contained within it align with the strategies identified within the ASP.

Figure 8 – Future Land Use Designation Map of the MDP is included below and identifies the future land use designation of the proposed ASP as Industrial:

Figure 8 – Future Land Use Designation Map (MDP).



Identified key policies within the MDP that may influence the ASP include:

- Policy 4.1.1.1 - The Village shall continue working with municipalities in the region to promote economic development.
- Policy 4.1.2.3 - The Village may work with landowners and developers to seek opportunities to finance and/or recover the capital costs of providing servicing resulting from the new development.
- Policy 4.1.2.4 - The Village shall require all new subdivisions to provide either 10% of the land for municipal reserve, or cash-in-lieu, or a combination there-of, in compliance with the provisions in the MGA.
- Policy 4.4.1.1 - The Village should enable adequate land for transportation-oriented business along the Highway 897 corridor and industrial areas as shown in Figure 4: Future Land Use Designation Map.
- Policy 4.4.1.2 - The Village shall work with developers to provide necessary infrastructure and amenities for the properties in the designated areas.
- Policy 4.4.1.3 - The Village shall seek opportunities, such as Provincial and Federal programs and incentives, to assist industrial development.
- Policy 4.4.3.1 - The Village should ensure that vehicular and pedestrian circulation patterns and facilities, landscaping, waste collection, and other aspects of individual industrial and commercial developments in proximity to one another are coordinated.
- Policy 4.4.3.2 - The Village should examine applications for Highway Commercial development in respect to access, circulation, parking and signage.
- Policy 4.4.3.3 - The Village should require that Industrial Subdivision Plans contain lot sizes and configurations appropriate to anticipated industry demand.
- Policy 4.4.3.4 - The Village should encourage Low Impact Development (LID) suitable for cold climates.
- Policy 4.4.3.5 - The Village may require additional buffering where industrial parcels abut roadways, municipal reserves, and non-industrial lands.
- Policy 4.4.3.6 - The Village should work with Alberta Transportation to maintain safe access points along Highway 897 and 45.
- Policy 4.4.3.7 - The Village shall direct all subdivision and development permit applications to Alberta Transportation.
- Policy 5.1.3.1 - When reviewing and dealing with Area Structure Plans, Outline Plans and proposed tentative subdivision plans, the Village should ensure there is adequate provision for future road linkages with adjacent undeveloped quarter sections.
- Policy 6.1.1.1 - The Village shall encourage new development to be located in the existing serviced area.
- Policy 6.1.1.2 - The Village shall enable the continued expansion of utility services as required by development.

- Policy 6.1.1.3 - The Village should avoid development that requires the installation of a lift station that would have to be absorbed of the Village.
- Policy 6.1.1.4 - The Village may allow alternative sustainable onsite servicing solutions when a development requires a lift station.
- Policy 6.1.1.5 - The Village should require planning of all future development to consider the direction of prevailing winds and stormwater drainage flow.
- Policy 7.1.1.2 - The Village should pursue diversification of industrial and commercial development.

Figure 9 – Water Distribution Map of the MDP is included below and identifies a water main in proximity of the proposed ASP to the northwest:

**Figure 9** – Water Distribution Map (MDP).

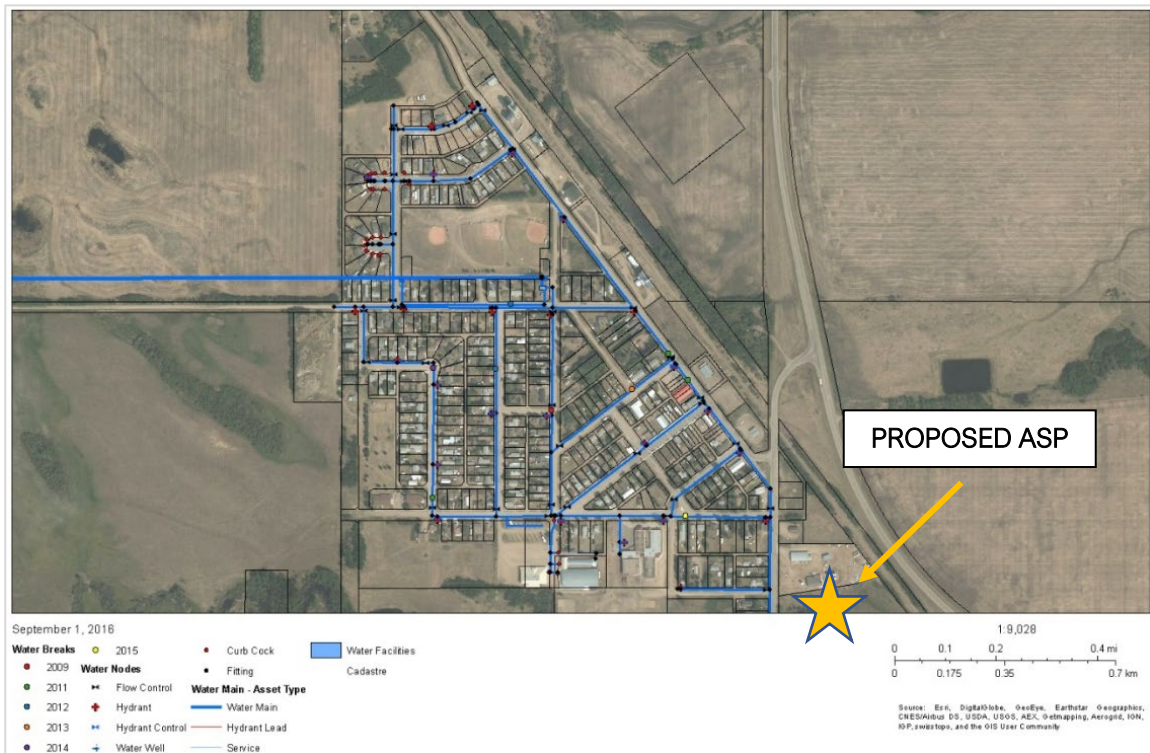




Figure 10 – Wastewater System of the MDP is included below and identifies a gravity main in proximity of the proposed ASP to the west:

Figure 10 – Water Distribution Map (MDP).

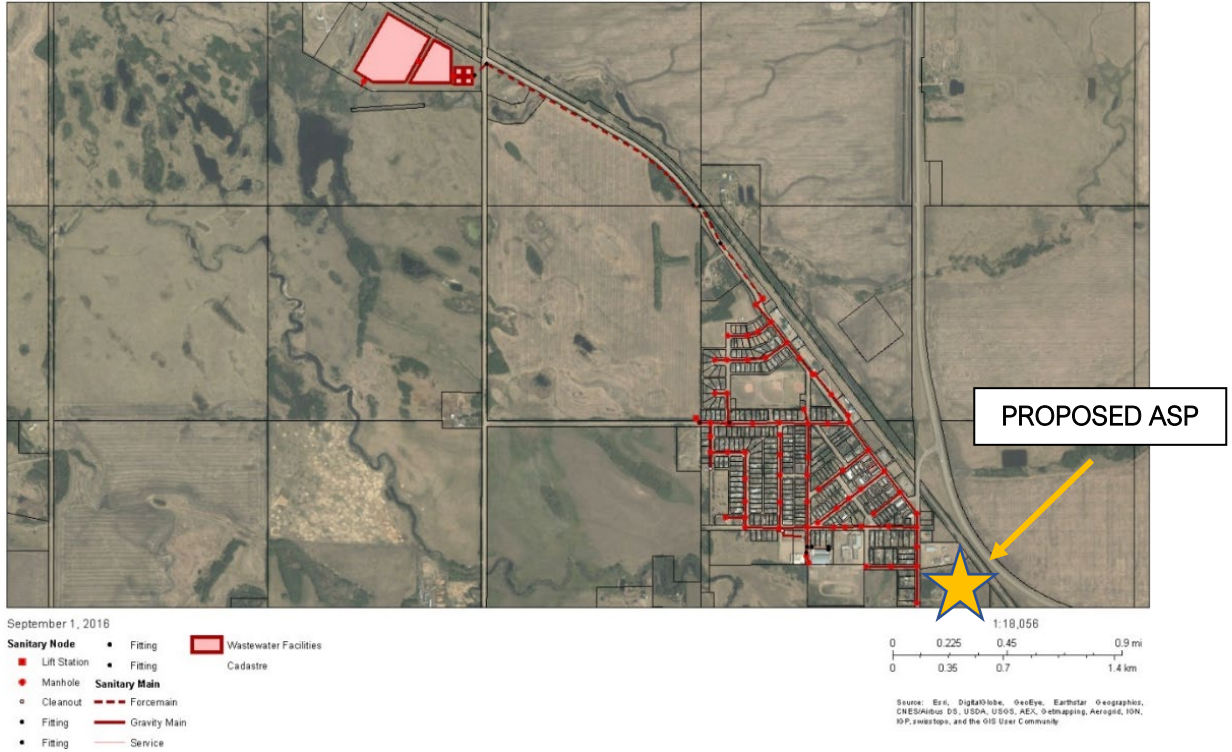
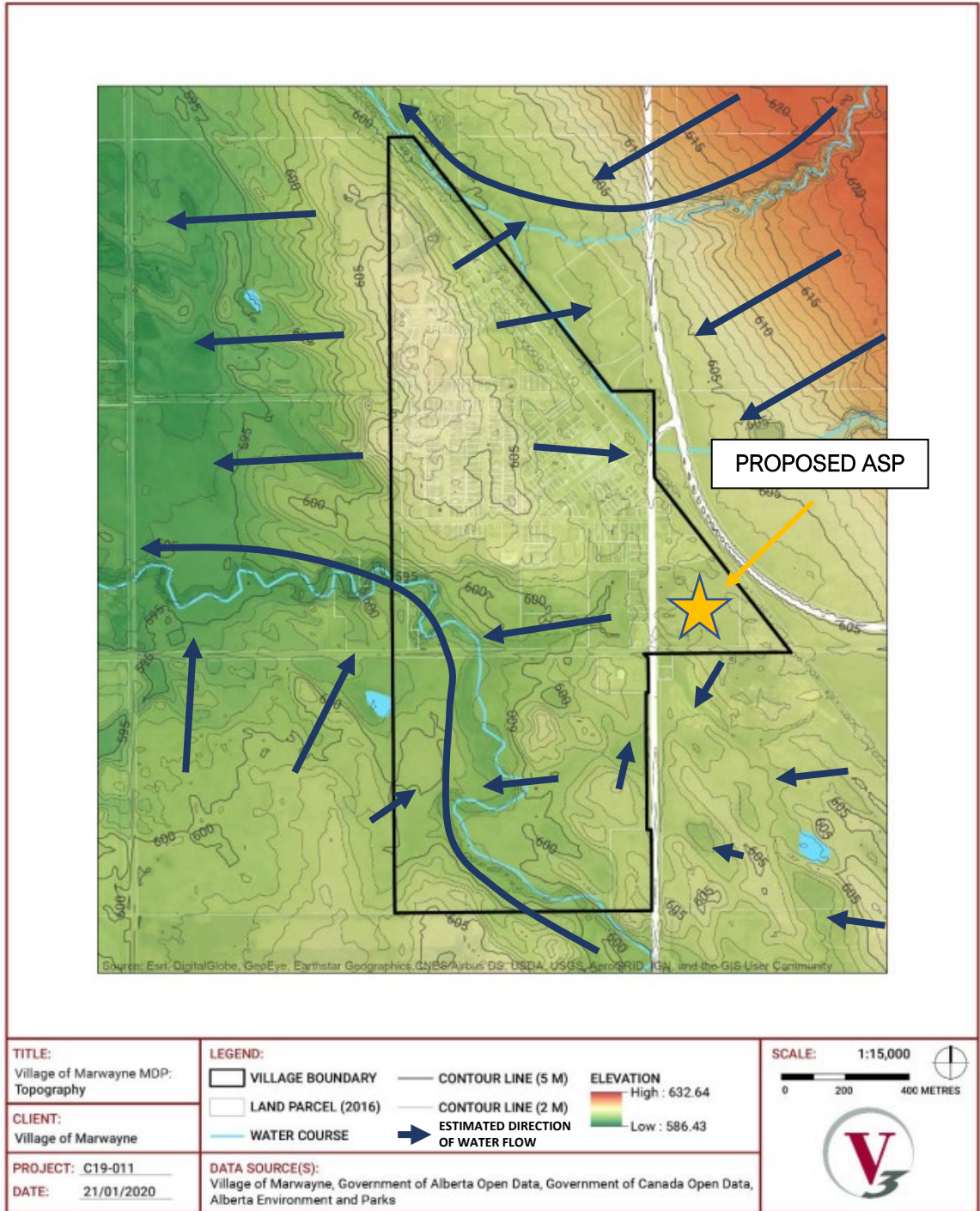




Figure 11 – Stormwater Map of the MDP is included below and identifies a decrease in slope from the proposed ASP towards Marwayne Creek to the west:

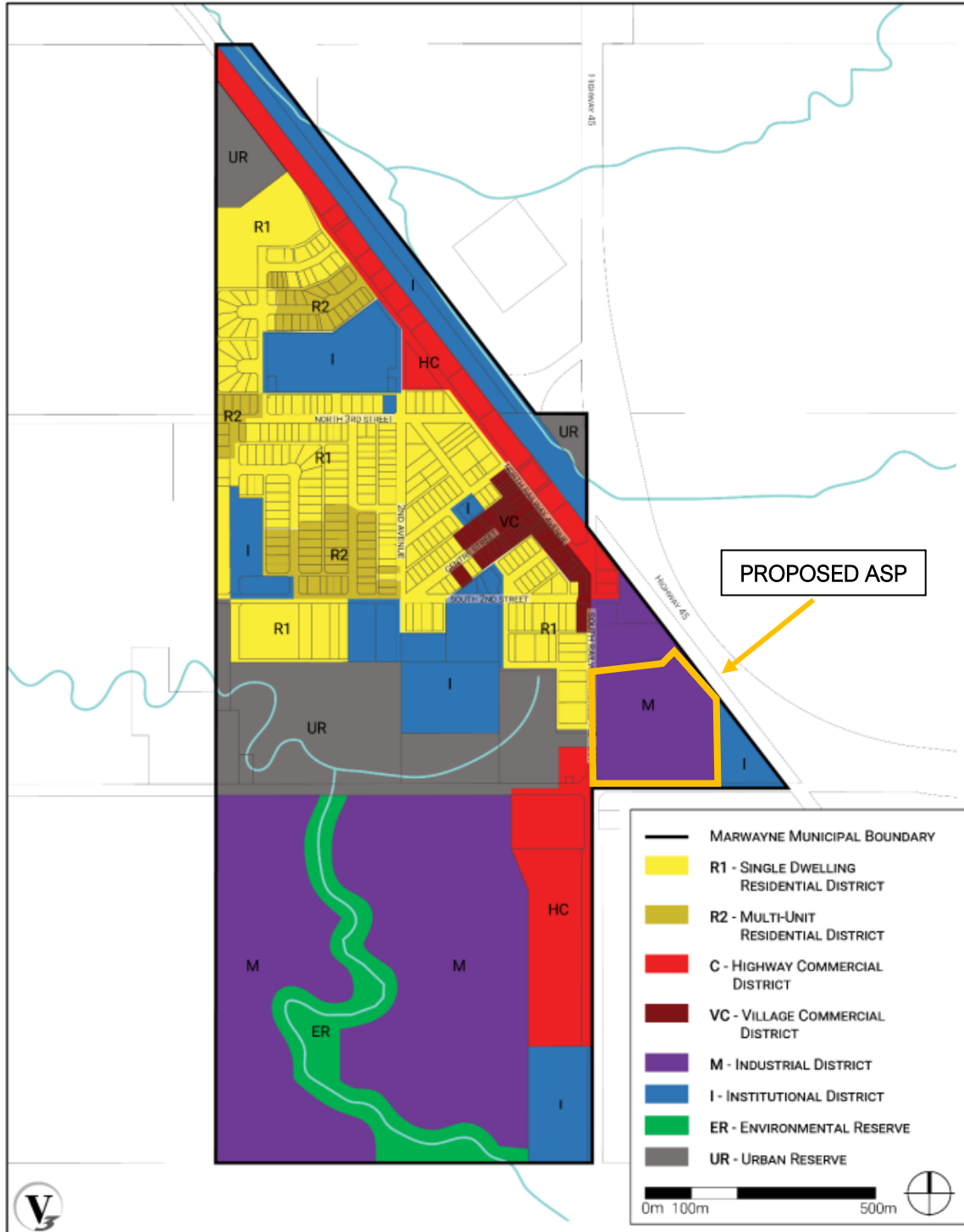
Figure 11 – Stormwater Map (MDP).



### 2.7 Land Use Bylaw (2019)

Adopted in 2019 and last amended in 2020, the Land Use Bylaw of the Village of Marwayne identifies the proposed ASP as M – Industrial District. The Land use District Map is included below:

Figure 12 – Marwayne Land Use District Map Future Land Use Designation Map (LUB).



The general purpose of the M – Industrial District is to provide for manufacturing, processing, assembly, distribution, service, and repair uses. Any industrial use that may produce excessive nuisances (noise, vibration, smoke, dust, odour, toxins, radiation, fire and explosive hazards) will be discretionary, and the development authority has the ability to prescribe development regulations around discretionary industrial uses.

Permitted and discretionary uses of the M – Industrial District include:

Permitted Uses	Discretionary Uses
(a) All uses listed as permitted or discretionary uses in the C District	(a) Animal breeding and boarding
(b) Cannabis production and distribution	(b) Cannabis retail sales
(c) Light industrial uses	(c) Heavier industrial uses that may produce nuisances such as noise, odour, dust, smoke, gas, toxins, etc., that in the opinion of the development authority are compatible with the proposed industrial site
(d) Servicing establishments	(d) Municipal uses that are not restrictive and are compatible with an industrial area
	(e) Other uses which, in the opinion of the development authority, are similar to the above mentioned permitted and discretionary uses

Examples of permitted and discretionary uses in the C – Highway Commercial District include:

- Automobile, light truck, and recreational vehicle sales;
- Hotels;
- Service stations and bars;
- Bowling alleys;
- Clinics;
- Restaurants;
- Retail store; and,
- Wholesale warehouses.

Appendix “A” contains the complete regulations of the M – Industrial District.

*This page is intentionally left blank.*

### 3 SITE CONDITIONS & CONSTRAINTS MAPPING

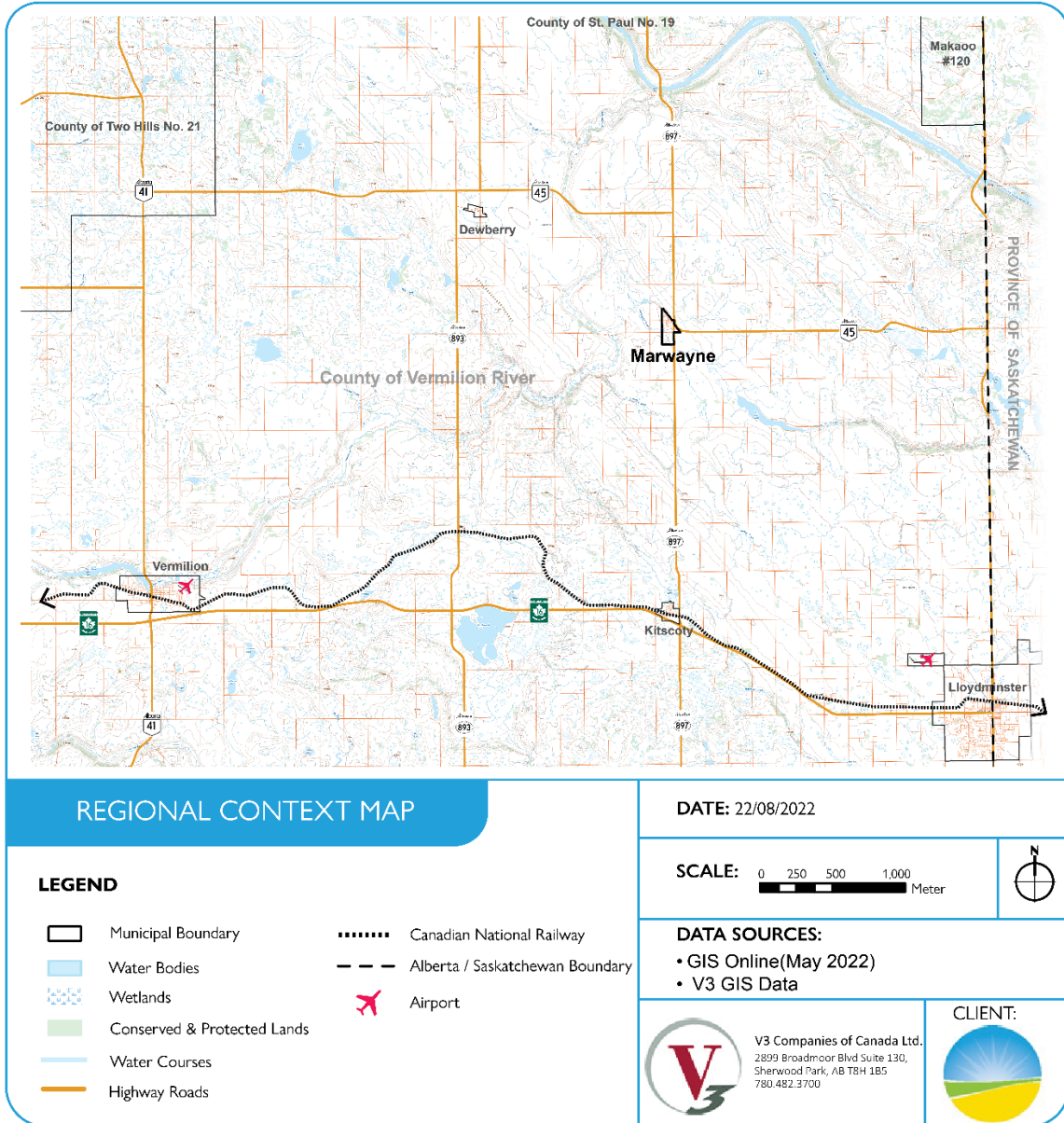
Mapping of potential site conditions and constraints is an important task prior to the engagement process. Using the Village of Marwayne’s existing GIS datasets, the project team developed maps outlining existing land uses, natural features, and topographical conditions of the Village.

A series of mapping studies were completed to better understand development patterns within and around the Village of Marwayne. The purpose of this study is to understand the current and future spatial distribution of land uses, community infrastructure, and site conditions that may directly influence the future development potential of the site.



### 3.1 Regional Context Map

Figure 13 – Regional Context Map.

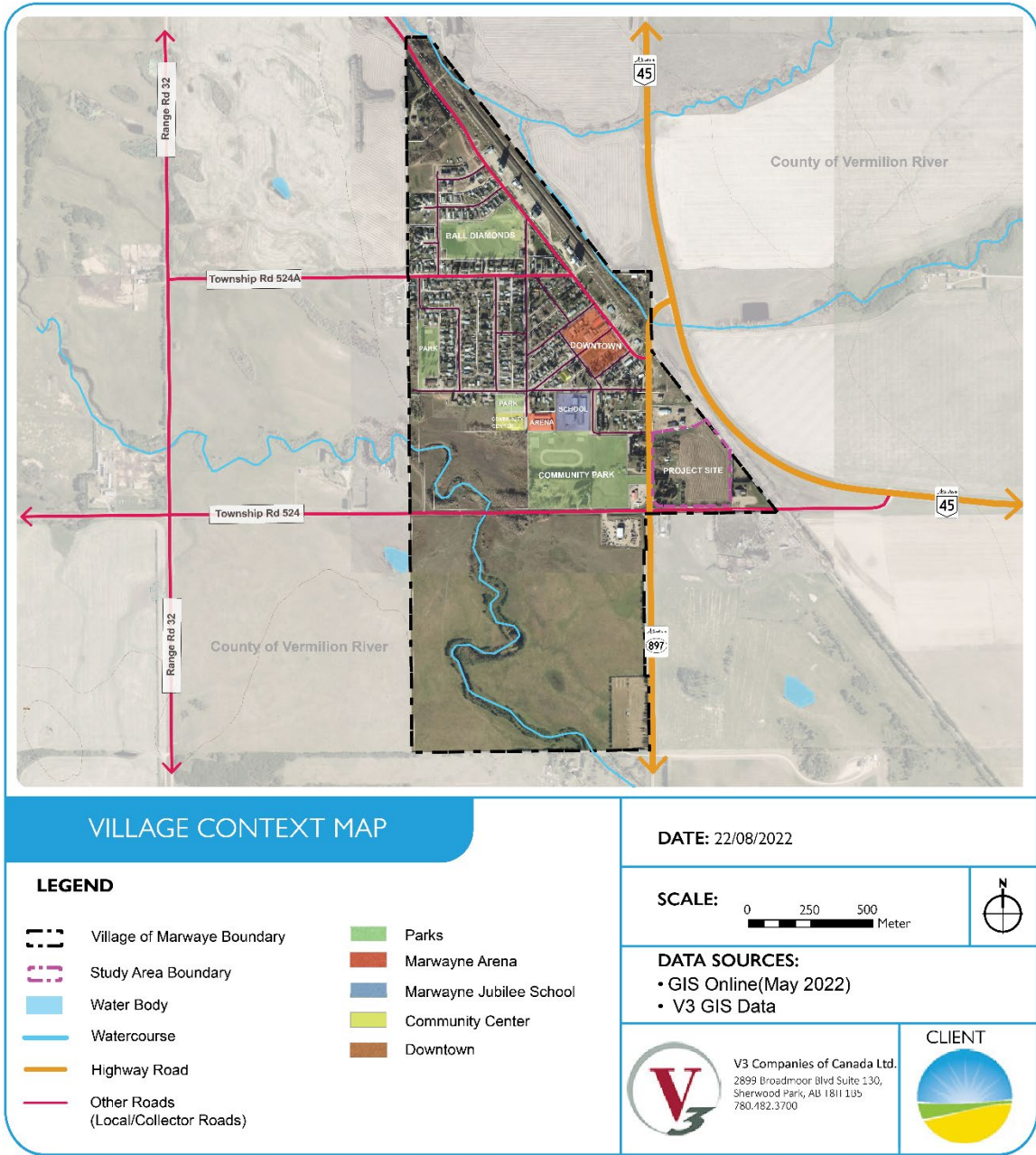


### Key Findings

- The Village of Marwayne is located approximately 20 km north of TransCanada Hwy 16 along Hwy 897, approximately 20 km west of the Alberta/Saskatchewan border along Hwy 45 and is surrounded on all sides by the County of Vermilion River.
- The Canadian National (CN) Rail mainline comes within approximately 17 km of the Village to the southwest.
- Onion Lake Cree Nation reserve Makaoo 120 is located approximately 25 km to the northeast.
- Nearby major settlements include the City of Lloydminster approximately 35 km to the southeast and the Town of Vermilion approximately 40 km to the southwest.
- Other settlements include the Village of Kitscoty approximately 20 km to the south and the Hamlet of Dewberry approximately 15 km to the northwest.
- Nearby airports include Lloydminster Municipal Airport (YLL) approximately 30 km to the southeast and Vermilion Airport approximately 40 km to the southwest.

### 3.2 Village Context Map

Figure 14 – Village Context Map.



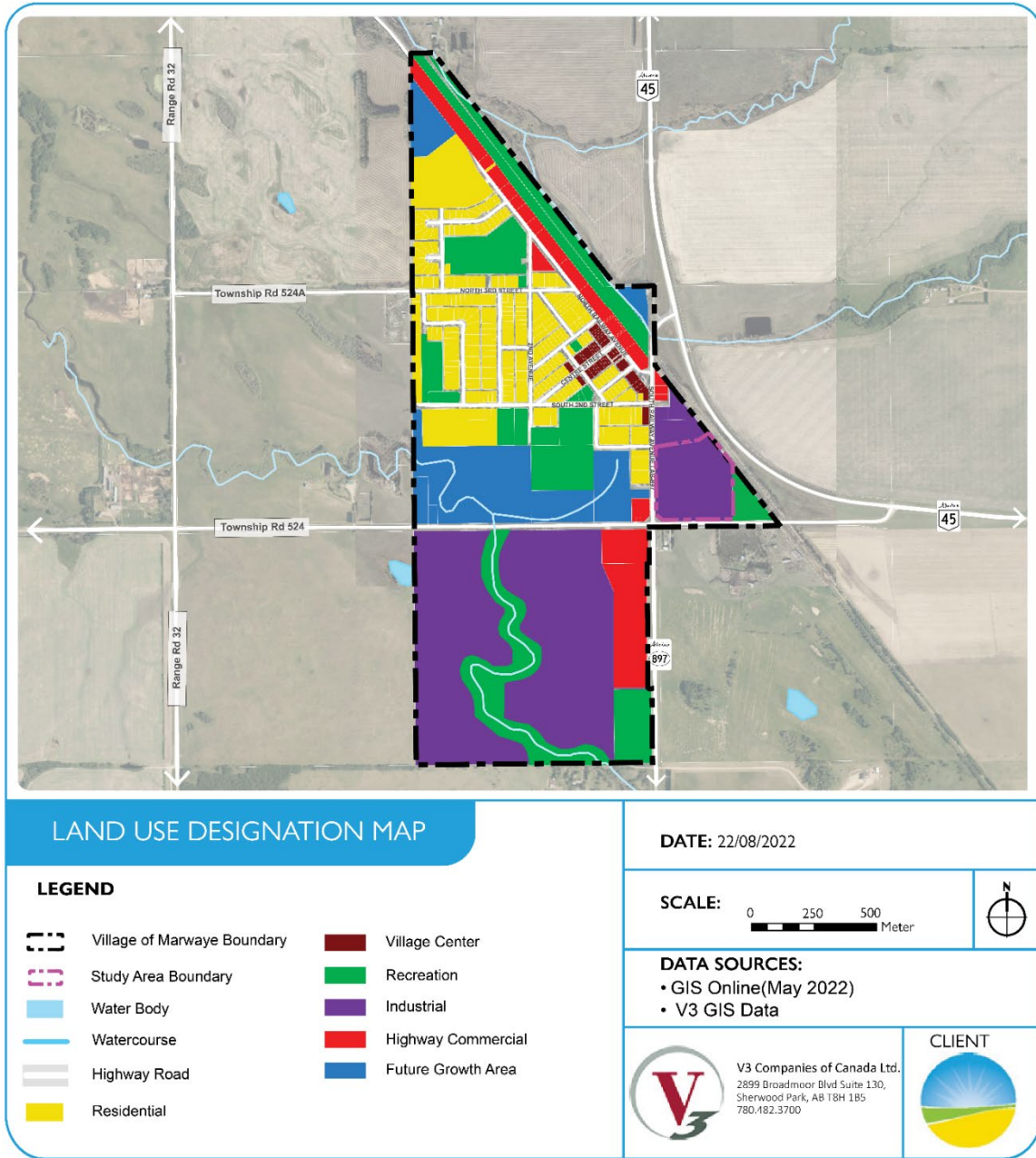
### Key Findings

- The project site is located in the eastern corner of the Village of Marwayne directly adjacent to S 5 St (Township Rd 524) and Railway Ave S (Highway 897).
- The project site is in proximity to Hwy 45 located to the northeast across a decommissioned Canadian National (CN) rail right-of-way.
- Marwayne Jubilee School, Community Park, and Community Arena are located to the west of the project site.
- Downtown Marwayne is located approximately 500 m to the northwest of the project site.
- Marwayne Alliance Church is located directly adjacent to the project site to the east.
- An operating Industrial business is located directly adjacent to the project site to the north.
- An operating Highway Commercial business is located adjacent to the project site across Railway Ave S (Highway 897).
- Trees/forests are interspersed with a large open field dominating the eastern two thirds of the project site.



### 3.3 Land Use Designation Map

Figure 15 – Land Use Designation Map.



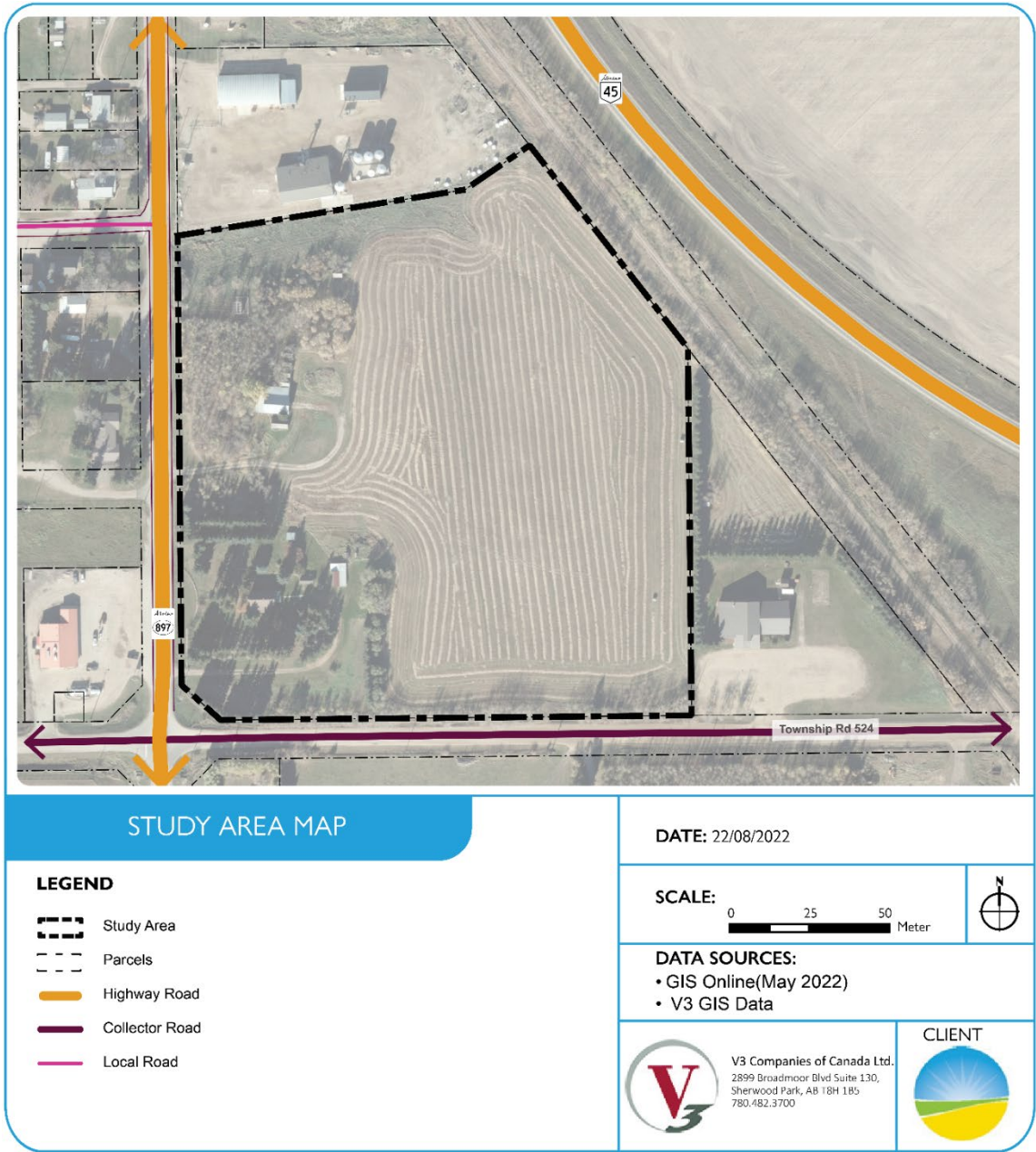


### Key Findings

- The project site is designated for Industrial uses.
- The area immediately adjacent to the project site to the north is designated for Industrial uses.
- The area immediately adjacent to the project site to the east is designated for Recreational uses.
- Areas adjacent to the project site across Railway Ave S (Highway 897) are designated for Residential, Highway Commercial, and Future Growth.

### 3.4 Study Area Map

Figure 16 – Study Area Map.

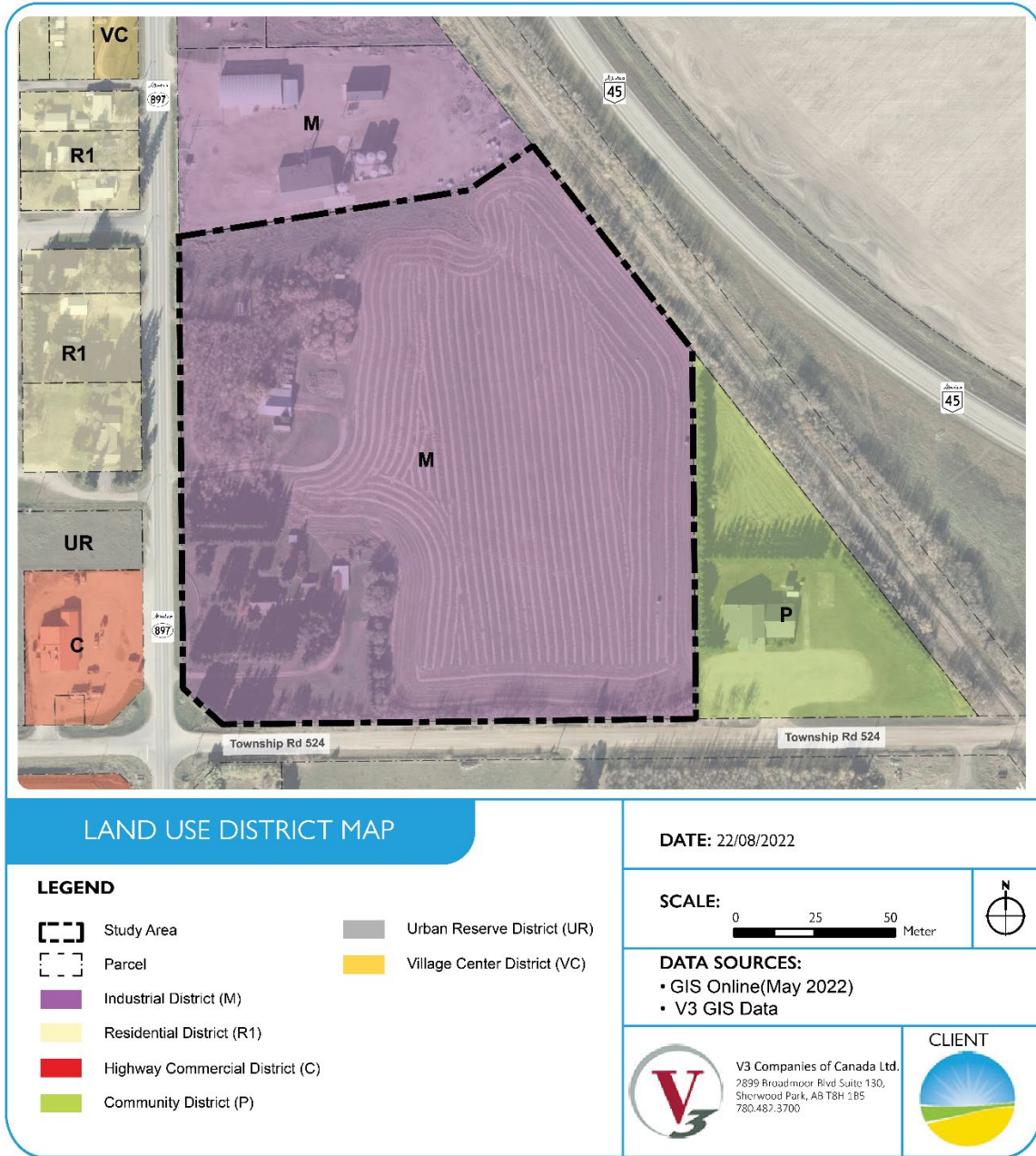


### Key Findings

- The project site is located in the eastern corner of the Village of Marwayne directly adjacent to S 5 St (Township Rd 524) and Railway Ave S (Highway 897).
- The project site is in proximity to Hwy 45 located to the northeast across a decommissioned rail right-of-way.
- Marwayne Alliance Church is located directly adjacent to the project site to the east.
- An operating business is located directly adjacent to the project site to the north.
- An operating Highway Commercial business is located adjacent to the project site across Railway Ave S (Highway 897).
- Trees/forests are interspersed with a large open field dominating the eastern two thirds of the project site.

### 3.5 Land Use District Map

Figure 17 – Land Use District Map.



### Key Findings

- There are eight (8) active land use districts in the Village of Marwayne
  - R1 – Single Dwelling Residential District;
  - R2 – Multi-Unit Residential District;
  - C – Commercial District;
  - VC – Village Centre District;
  - M – Industrial District;
  - I – Institutional District;
  - UR – Urban Reserve District; and,
  - ER – Environmental Reserve District.
- The project site is districted M – Industrial.
- The parcel immediately adjacent to the project site to the north is districted M – Industrial, has a total area of approx. 1.39 ha, and appears to be used for Light Industrial Uses.
- The parcel immediately adjacent to the project site to the east is districted P – Community District has a total area of approx. 1.34 ha and appears to be used as for religious assembly.
- Parcels adjacent to the project site to the northwest across Railway Ave S (Highway 897) are districted R1 – Single Dwelling Residential.
- A parcel adjacent to the project site to the west across Railway Ave S (Highway 897) is districted UR – Urban Reserve.
- A parcel adjacent to the project site to the southwest across Railway Ave S (Highway 897) is districted C – Commercial.



### 3.6 Contour Map

Figure 18 – Contour Map

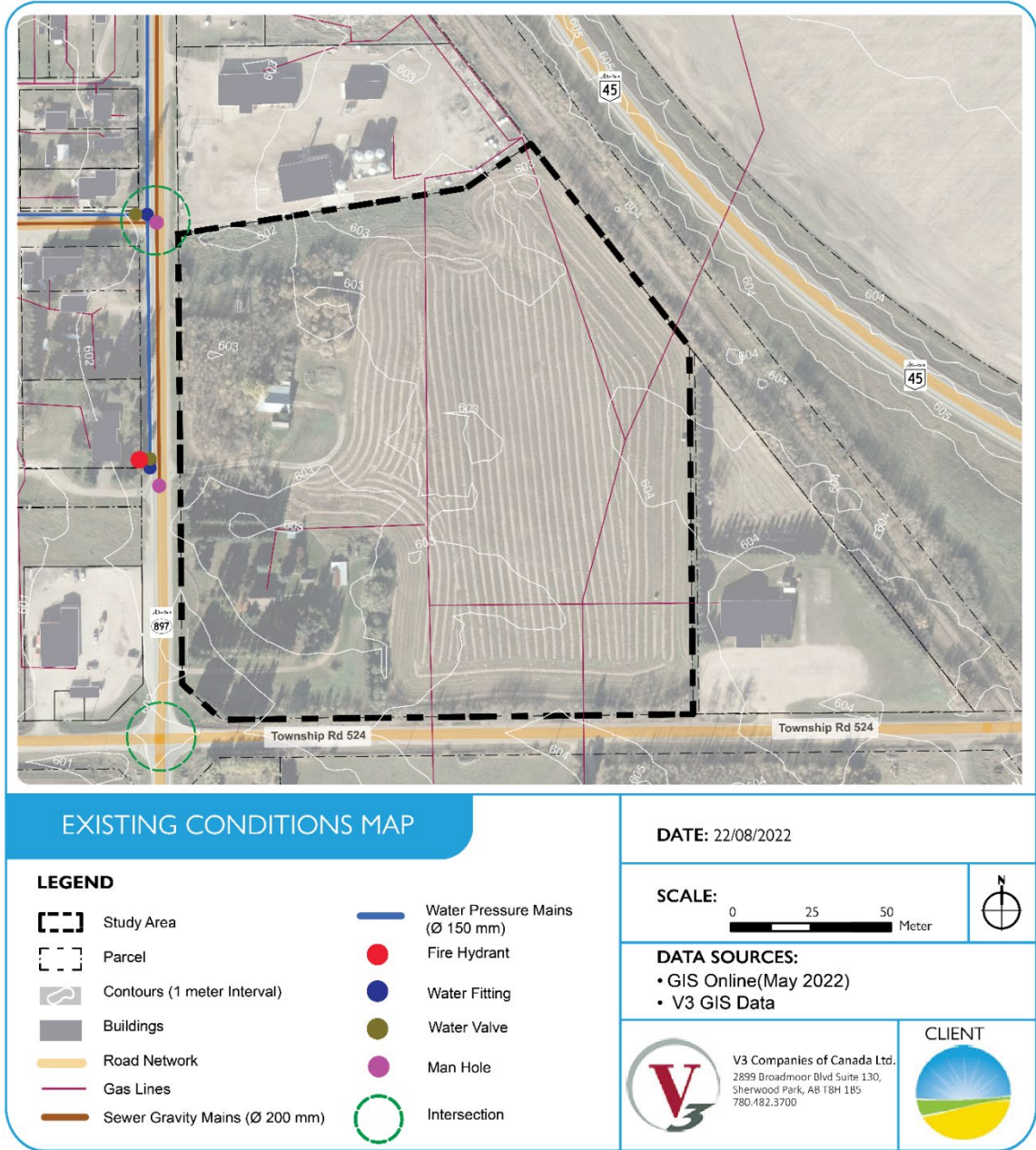


#### Key Findings

- The project site is generally flat with minor changes in elevation
- The project site gently slopes from a low point in the extreme northwest of the parcel (602 m) to a high point along the eastern edge of the parcel (604 m).

### 3.7 Existing Conditions Map

Figure 19 – Existing Conditions Map.



### Key Findings

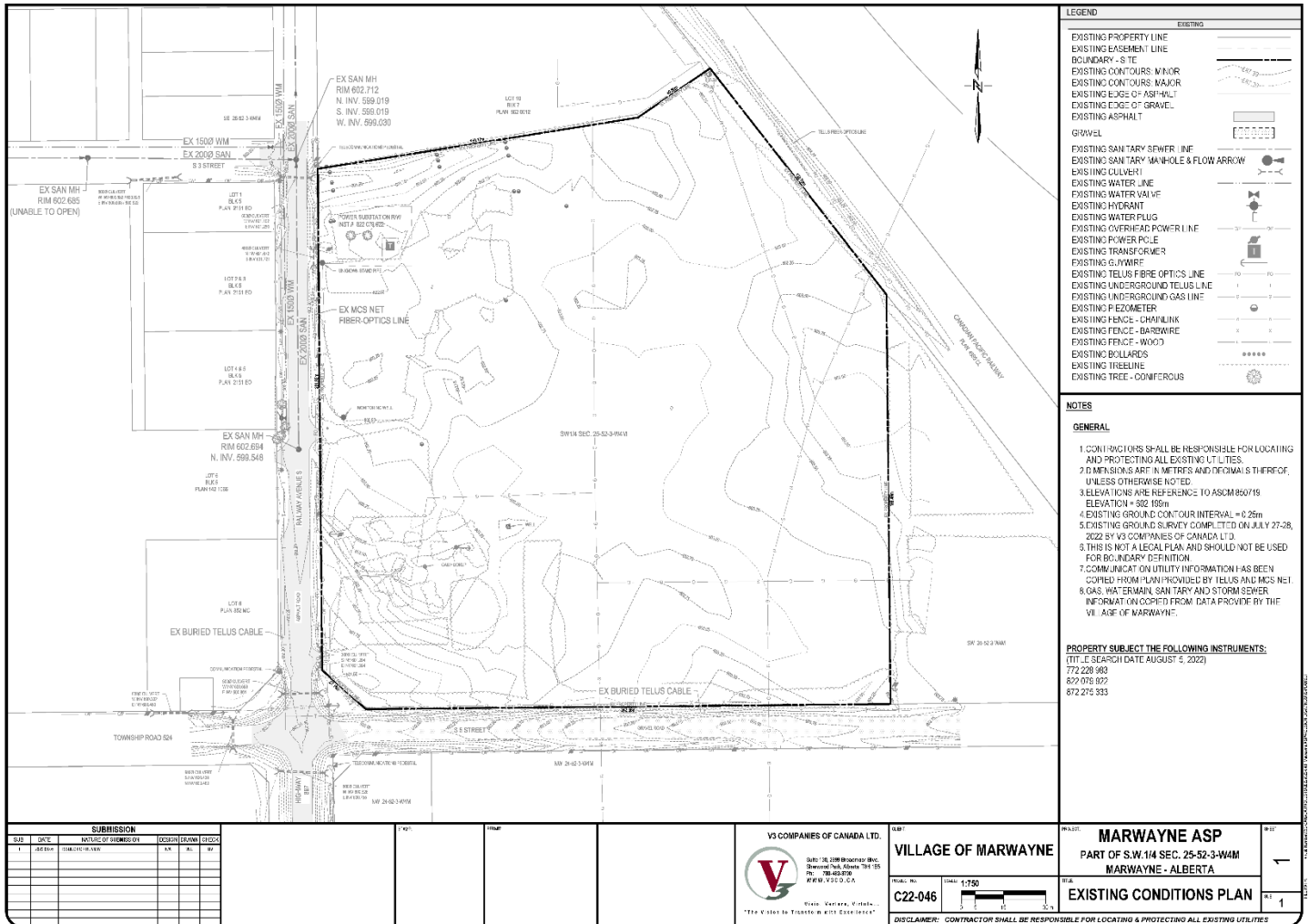
- A number of buildings of various uses, sizes, and locations are found on all parcels in proximity of the project site.
- Gas lines cross the project site at multiple locations and connect to the buildings currently existing on site and points beyond in all directions.
- A 200 mm sewer gravity main runs underneath Railway Ave S (Highway 897) ending at a manhole adjacent to the approximate middle of the project site.
- A 150 mm water pressure main runs underneath Railway Ave S (Highway 897) ending at a water fitting/water valve adjacent to the approximate middle of the project site.
- A fire hydrant is located on a residential property across Railway Ave S (Highway 897) and is located adjacent to the approximate middle of the project site.
- The intersection of Railway Ave S (Highway 897) and S 3 St is located adjacent to the project site at the extreme northwest corner.
- The intersection of Railway Ave S (Highway 897) and S 5 St is located adjacent to the project site at the extreme southwest corner.



# 4 TOPOGRAPHICAL SURVEY

## 4.1 Existing Conditions Plan

Figure 20 – Existing Conditions Plan.



A full-size version of Figure 20 – Existing Conditions Plan is in Appendix “B”.

*This page is intentionally left blank.*



## 5 ENVIRONMENTAL SITE ASSESSMENT – PHASE 1

---

### 5.1 Overview

Shelby Engineering Ltd. was retained by V3 Companies of Canada Ltd. to complete a Phase I Environmental Site Assessment (ESA) for a portion of SW-25-52-3-W4 located in The Village of Marwayne, Alberta. The complete Phase I ESA is in Appendix “C”.

The Phase I ESA included a visual inspection of the subject lands and surrounding properties; a historical records review including the review of land title documents, numerical directories, fire insurance maps and aerial photographs; and interviews with regulatory agencies and onsite personnel.

---

### 5.2 Findings

Low risk sources of possible onsite impact included a localized area of abandoned vehicles where visibility was limited by overgrown vegetation onsite. Subsurface investigation is not specifically recommended however additional observation following removal of the vehicles, for any visual indication that the abandoned vehicle storage area could have isolated areas of impact (staining).

Possible offsite sources of environmental concern noted in the surrounding area include the former rail line to the northeast, an ongoing gas station to the west, as well as fertilizer handling and storage operations with known instances of elevated nutrient levels to the north.

---

### 5.3 Next Steps

The Phase I ESA has not identified any high-risk environmental concerns on or offsite. Further investigation in the form of a Phase II ESA is not specifically recommended.

As the overall practical environmental related risk to the subject site from these sources is being managed or considered low at this time, further investigation is not specifically recommended but, if confirmation of the current onsite conditions is desired to confirm whether possible impact would be of concern to any specific land uses, further investigation would be necessary.

*This page is intentionally left blank.*

## 6 BIOPHYSICAL ASSESSMENT

---

### 6.1 Overview

Spencer Environmental Management Services Ltd. (Spencer Environmental) was retained by V3 Companies of Canada Ltd. to complete the environmental report and wetland assessment in support of the Area Structure Plan (ASP), known as a Biophysical Assessment. The complete Biophysical Assessment is located in Appendix “D”.

The Biophysical Assessment identifies and describes all existing natural features within the ASP subject parcel and outlines conservation recommendations. The Biophysical Assessment included the delineation of an appropriate study area; review of planning documents relevant to the study area; review of recent and historical aerial imagery and, as a supplement, publicly available imagery from Google; review of provincial databases; field investigations on August 10<sup>th</sup> 2022 to inform site characterization and assess the potential presence of wetlands; identification of conservation recommendations and related land use planning considerations; and description of potential regulatory approvals that may be required for development and associated construction activities to proceed.

### 6.2 Findings

The Biophysical Assessment completed by Spencer Environmental outlines four key biophysical considerations to ensure consistency with Village of Marwayne policies and to assist in maintaining some of the study area’s ecological value post-development:

1. Retention of the patch of trembling aspen forest community within the northwest portion of the study area. Retention of this forest patch, in whole or in part, would help maintain some localized ecological value within the study area and would align with the importance and benefits of urban tree cover recognized by the Village.
2. Retention or integration of the wetland habitat provided by the seasonal graminoid marsh. The existing marsh could be considered as Environmental Reserve (ER) and be retained by the Village as a natural feature, or it could be integrated as part of a naturalized overland drainage system or naturalized stormwater management facility. In either scenario, planting of additional native wetland plant species would increase habitat value.
3. Incorporation of planted trees and shrubs in accordance with the MDP. This could include retaining planted trees already present within the anthropogenic – wooded/exotic community. Some of the larger more mature trees could provide localized wildlife values (e.g., nesting sites) while providing aesthetic and visual buffering functionality.
4. Maintenance of wildlife permeability along the northeast edge of the subject parcel, adjacent the railway. Any proposed land development within the study area should not result in adverse impacts to the wooded vegetation within the railway right-of-way.

---

### 6.3 Next Steps

Several provincial and federal statutes prohibiting harm to select resources are relevant to project construction. Addressing these statutes may be required as part of the development of the ASP:

- *Water Act; Alberta Wetland Policy*
- *Historical Resources Act*
- *Wildlife Act*
- *Weed Control Act*
- *Migratory Birds Convention Act*
- *Species At Risk Act.*

## 7 UTILITY REVIEW

### 7.1 Preliminary Design Results

The Village of Marwayne does not have its own municipal servicing standards but resides within the County of Vermilion River. As such, the *County of Vermilion River General Municipal Servicing Standards* were referenced for this analysis.

The sanitary demands were determined by calculating daily demand and peaking factors expected from the site to determine the Total Flow ( $Q_{TOTAL}$ ). The average daily demand set by the *County of Vermilion River General Municipal Servicing Standards* includes infiltration, so no further inflow and infiltration flow was applied.

The water demands were determined by calculating the Average Daily Demand (ADD) of the site and applying peaking factors coincident with the *County of Vermilion River General Municipal Servicing Standards* to establish both a Maximum Daily Demand (MDD) and a Peak Hour Demand (PHD).

The predevelopment and post development stormwater runoff rates were calculated using the rational method. The required onsite storage was then determined using the modified rational method.

### 7.2 Sanitary Design

The guidelines for calculating the sanitary flow generation are outlined in Section E – Sanitary Sewer System of the *County of Vermilion River General Municipal Servicing Standards*. The commercial, industrial, and institutional (i.e., non-residential) flow generation was based on an average flow generation per gross hectare. The County of Vermilion River sanitary flow generation factors used in this report are:

- Average Sewage Generation for Non-Residential (including infiltration) 6170 L/ha/day
- Peaking Factor for Non-Residential (PF) 3.0
- Peak Sewage Flow Average Flow x PF

The total average commercial/industrial/institutional flow and peaking factor for the current land use of the site is 0.48 L/s and 3.00, respectively. Using these values, the total peak flow is 1.45 L/s.

Table 1 is a summary of the current sanitary flow generation of the site.

**Table 1:** Sanitary Flow Generation of the Site.

	INDUSTRIAL		TOTAL
Area (ha)	$Q_{AVE}$ (L/s)	$P_F$	$Q_{Total}$ (L/s)
6.77	0.48	3.0	1.45



### 7.3 Water Design

The guidelines for calculating the water demand are outlined in Section D – Water Distribution System of the *County of Vermilion River Municipal Servicing Standards*. For the site, the industrial water demands were calculated based on a per person water demand for the Average Daily Demand (ADD), the Maximum Daily Demand (MDD), and the Peak Hourly Demand (PHD). The ADD was determined on the basis of equivalent population. The County of Vermilion River standards does not provide equivalent populations and therefore the City of Lloydminster equivalent populations were used in this report. The maximum daily demand and peak hourly demand multipliers were then applied to the ADD. The County of Vermilion River and the City of Lloydminster factors used in this report are:

- Average Daily Demand (ADD) 320 L/person/day
- Industrial equivalent population 30 equivalent people/ha
- Maximum Daily Demand (MDD) 2 x ADD
- Peak Hourly Demand (PHD) 4 x ADD
- Industrial fire flow 227 L/s

As previously mentioned, the quantity of people in each hectare was determined on a basis of equivalent population. To determine the number of people that require water servicing for the site, the total area and equivalent population per hectare were multiplied together. This population can be found in Table 2. The ADD, MDD and PHD for the site are 0.75 L/s, 1.50 L/s, and 3.00 L/s, respectively.

Table 2 is a summary of the water demand calculated for the Village.

**Table 2:** Water Demands of the Village’s Various Zones.

Area (ha)	Equivalent Population	INDUSTRIAL			TOTAL
		People	ADD (L/s)	MDD (L/s)	PHD (L/s)
6.77	30	203	0.75	1.50	3.00

### 7.4 Stormwater Design

The guidelines for calculating the stormwater runoff are outlined in Section F – Stormwater Management System of the *County of Vermilion River Municipal Servicing Standards*. The rainfall intensities were based on the IDF data provided in the City of Lloydminster municipal standards. The modified rational method was then used to estimate the required storage during storm events up to a 24-hour duration. The County of Vermilion River storm water management design values used in this report are summarized below:

- Release Rate pre-development runoff rate
- Runoff Coefficient “C” for Industrial 0.6
- Runoff Coefficient “C” for Undeveloped 0.1
- Time of Concentration 10 minutes

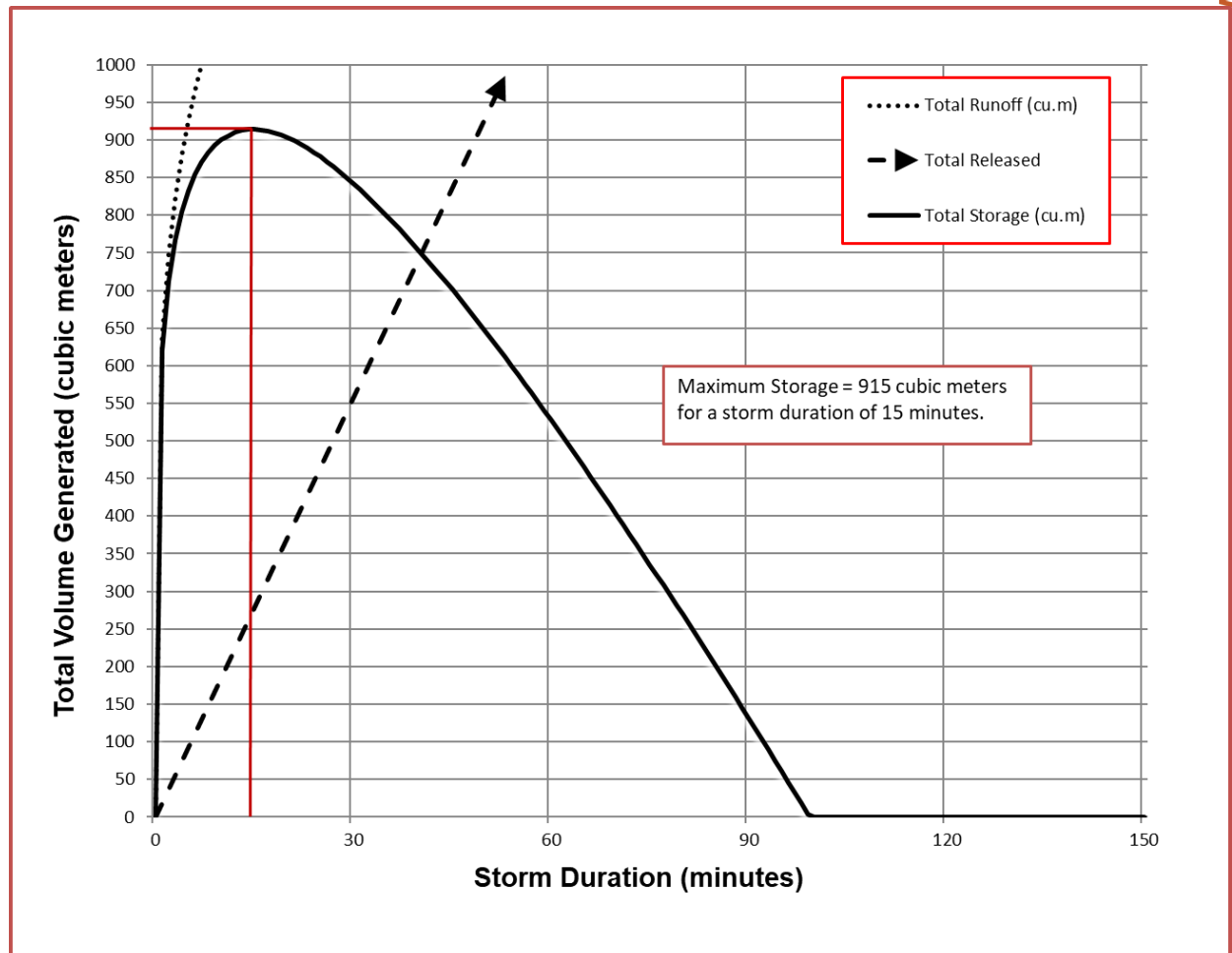
Using the design criteria above the predevelopment rate was calculated for the subject property. The results are summarized in Table 3 below.

**Table 3:** Predevelopment Stormwater.

	INDUSTRIAL		TOTAL
Area (ha)	Runoff "C"	Intensity (mm/hr)	Peak Flow (L/s)
6.77	0.1	165.03	310.35

Based on the design criteria outlined above, the critical storm duration and required storage was found for the subject property. The pre-development runoff rate of 310 L/s was used as the release rate. A storm duration of 15 minutes produced the greatest required storage volume of approximately 915 cubic meters. See **Chart 1** for a summary of the calculated storage requirements.

**Chart 1:** Calculated Storage Requirements.



---

## 7.5 Existing Servicing Infrastructure

The Marwayne ASP states that the existing sanitary servicing in the Village has adequate capacity to serve a population of approximately 1,100 people. The existing servicing is provided by sewer pipes varying in diameter that transfers the waste to a nearby sewage lagoon. The ASP also states that the existing water servicing in the Village is provided by a regional water main and can provide service for approximately 1,000 people. The proposed site servicing will consist of sanitary and water services connecting to the existing Village networks.

The existing sanitary sewer main within Railway Ave S is 200 mm and has a capacity of 20.48 L/s. The anticipated sewage generation for the subject property is 1.45 L/s or ~7.1% of the existing pipe capacity. It should be noted that in the County of Vermilion River servicing standards, the minimum recommended pipe size for Industrial is 250 mm. The existing sanitary sewer main does not currently meet the minimum recommended pipe size.

The existing water main within Railway Ave S is 150 mm. It should be noted that in the County of Vermilion River servicing standards, the minimum recommended pipe size for a distribution main shall be 200 mm for industrial areas. The existing water main does not currently meet the minimum recommended pipe size.

There is currently no existing stormwater servicing for the study area. The stormwater runoff for the proposed development will be stored onsite and released at a controlled rate that matches the pre-development release rate. It is proposed that the released stormwater runoff for the development area be directed to the S 5th Street roadway ditches.

---

## 7.6 Recommendations

Based on the demand calculations carried out for the subject property, V3 Companies of Canada makes the following recommendations:

- Village of Marwayne to assess the impact of the increased demand this proposed development will have on the existing sanitary and water networks.
- All underground designs and installations to be done in accordance with the latest County of Vermilion River Servicing Standards.

---

## 7.7 References

**Municipal Development Standards**, City of Lloydminster, March 2014

**General Municipal Servicing Standards**, County of Vermilion River, 2012

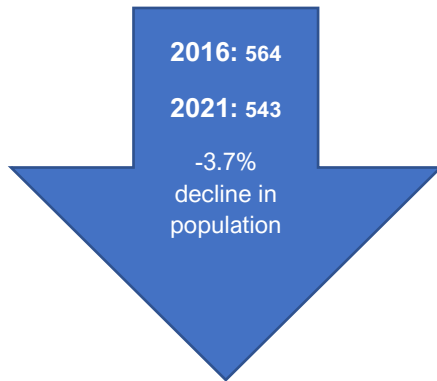
**Marwayne Area Structure Plan**, County of Vermilion River, June 2007

# 8 ENVIRONMENTAL SCAN & ECONOMIC BASE ANALYSIS

## 8.1 Environmental Scan & Economic Base Analysis

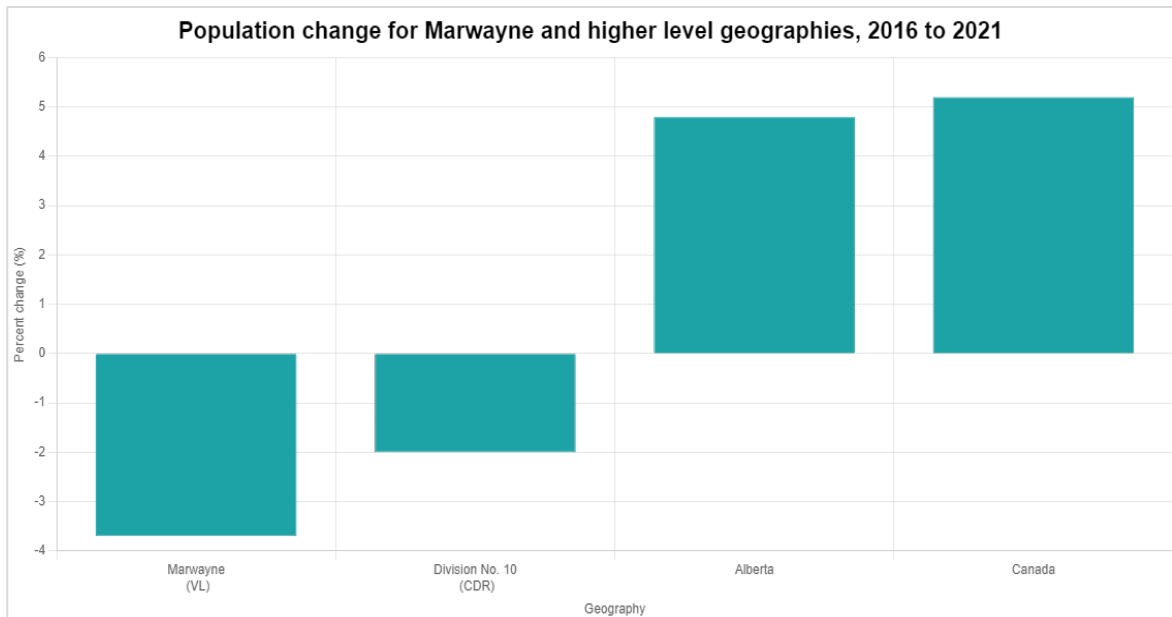
### DEMOGRAPHIC TRENDS

#### Population Growth



The population of Marwayne declined by 3.7%, from 564 to 543, while the population of Division No. 10 declined by 2%. In contrast, Alberta’s population grew by 4.8%, behind the national average at just over 5%, as shown in Figure 22 below.

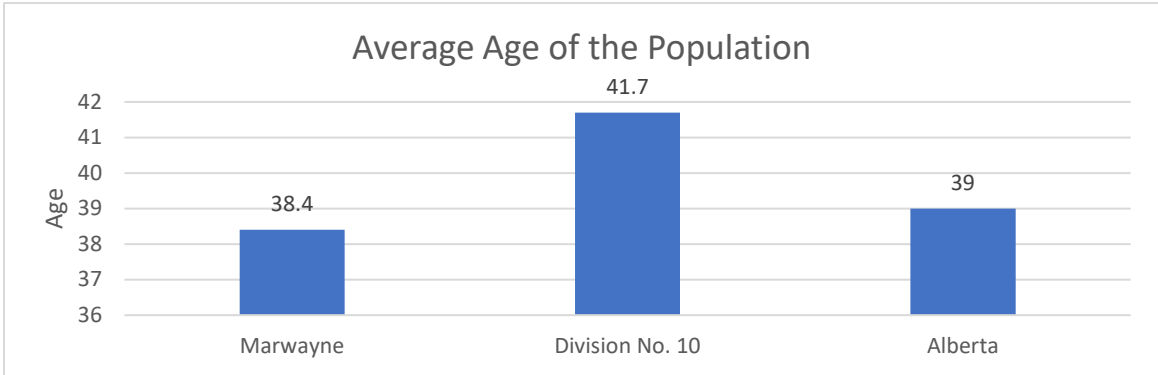
Figure 21 - Population Change for Marwayne and Higher-Level Geographies 2016-2021.



Source: Statistics Canada, Census of Population, 2016, 2021

Population Age Profile

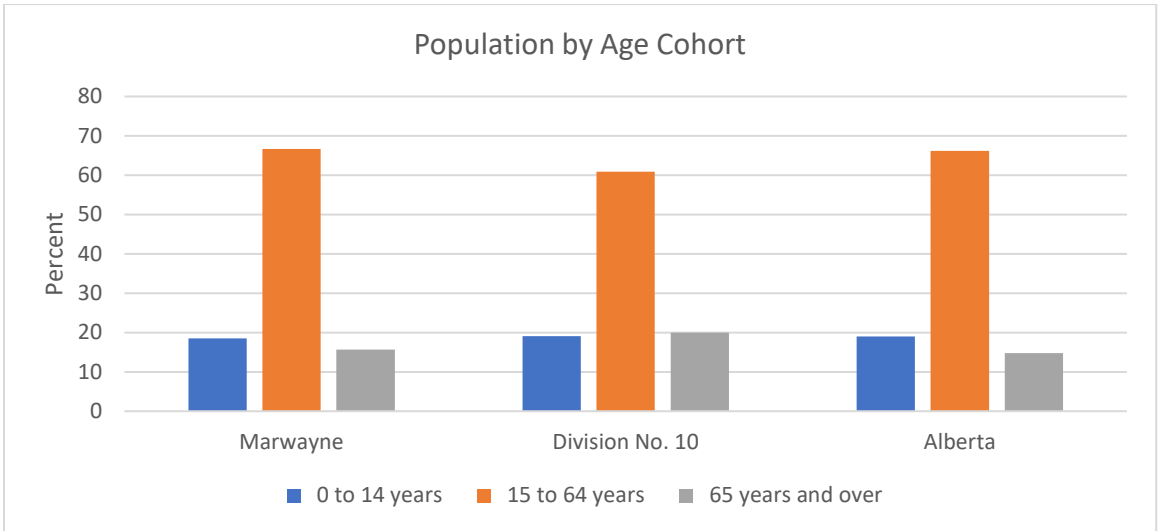
Figure 22 - Comparative Average Age of Marwayne's Population.



Source: Statistics Canada, Census of Population, 2021

In 2021, the average age of residents in Marwayne was 38.4 years, slightly less than the Province at 39 years and more advantageous than Division No. 10, where the population is, on average, over three years older (Figure 23).

Figure 23 - Comparative Age Distribution of Marwayne's Population.

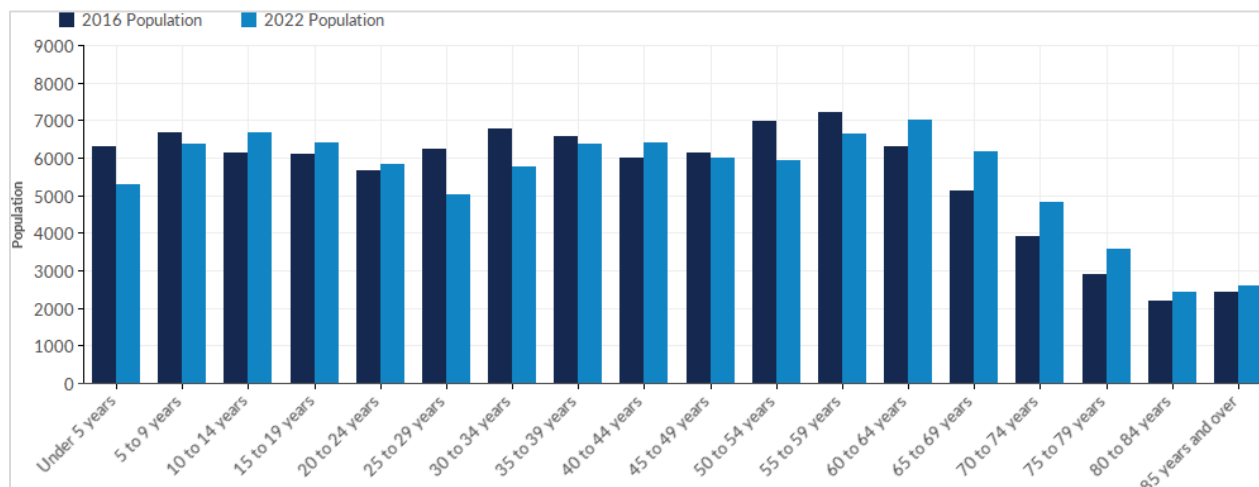


Source: Statistics Canada, Census of Population, 2021.

Marwayne has a greater proportion of individuals within the peak working age range 15-64 with 66.7% of the population as shown in Figure 24 compared to 60.7% of Division No. 10's population falls into this range. The proportion of under 15s exceeds that of over 65 years in Marwayne and the Province. However, in Division No. 10, the situation is reversed with slightly more seniors than children and youth.



**Figure 24** - Population by Detailed Age Cohort – Division No. 10.



Source: Statistics Canada, Census of Population, 2016, 2021

Since Marwayne’s population is small, Division No. 10 is an important potential labour pool for the Village. Trends in this geographical area will impact labour supply. Figure 25 shows that population growth is occurring in the older age cohorts, increasing in all age groups over 60. In contrast, the most notable population declines were found in under 5-year-olds (-16%), suggesting the need for more young families to ensure the future of the region, and among those in the peak working age group of 25 to 29 years (-20%) and 30 to 34 years (-15%). All of which underlines the importance of investment and talent attraction to the region.

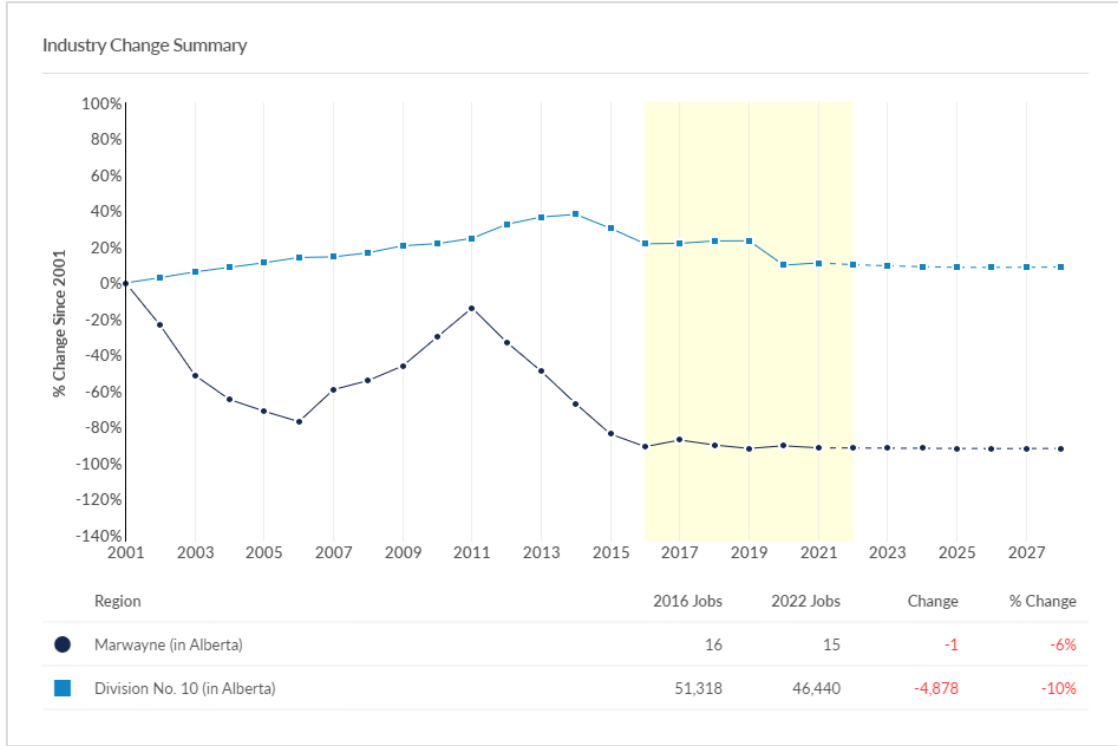
## INDUSTRY AND EMPLOYMENT

### Employment Trends

Marwayne has a minimal number of jobs falling from 16 to 15 between 2016 and 2022, which is expected to remain flat until 2027, according to Lightcast’s modelling forecasts. Overall, the Village experienced a sharp fall in employment in the early 2000s, with a short-lived spike in 2011.

Division No. 10 had steady employment growth until 2014 when it began to decrease. There was also a dip in 2020, likely attributable to COVID-19, and is reflected by the decline in jobs from 51,318 in 2016 to 46,400 in 2022. These numbers are anticipated to remain flat until 2027, according to Lightcast’s modelling forecasts.

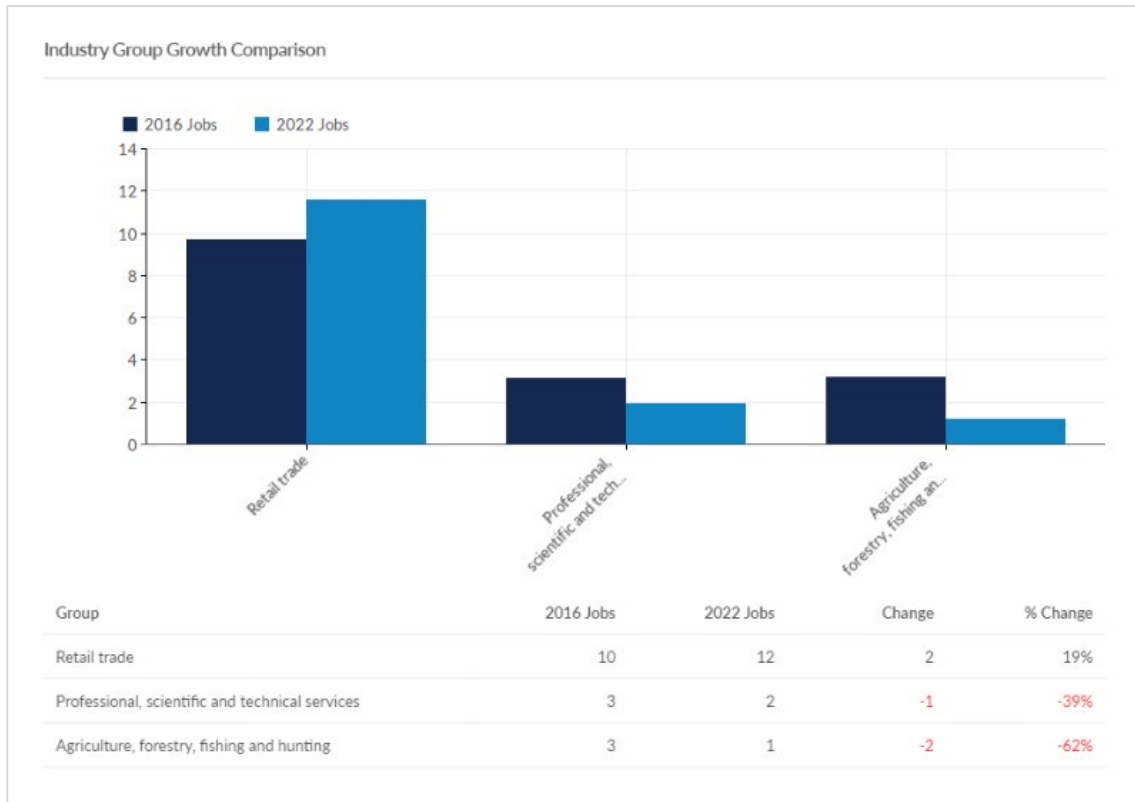
Figure 25 - Employment Trends in Marwayne and Division No 10, 2016-2022.



Source: Lightcast (formerly EMSI Analyst), 2022.

## Employment Trends by Sector

Figure 26 - Industry Growth by Sector in Marwayne.

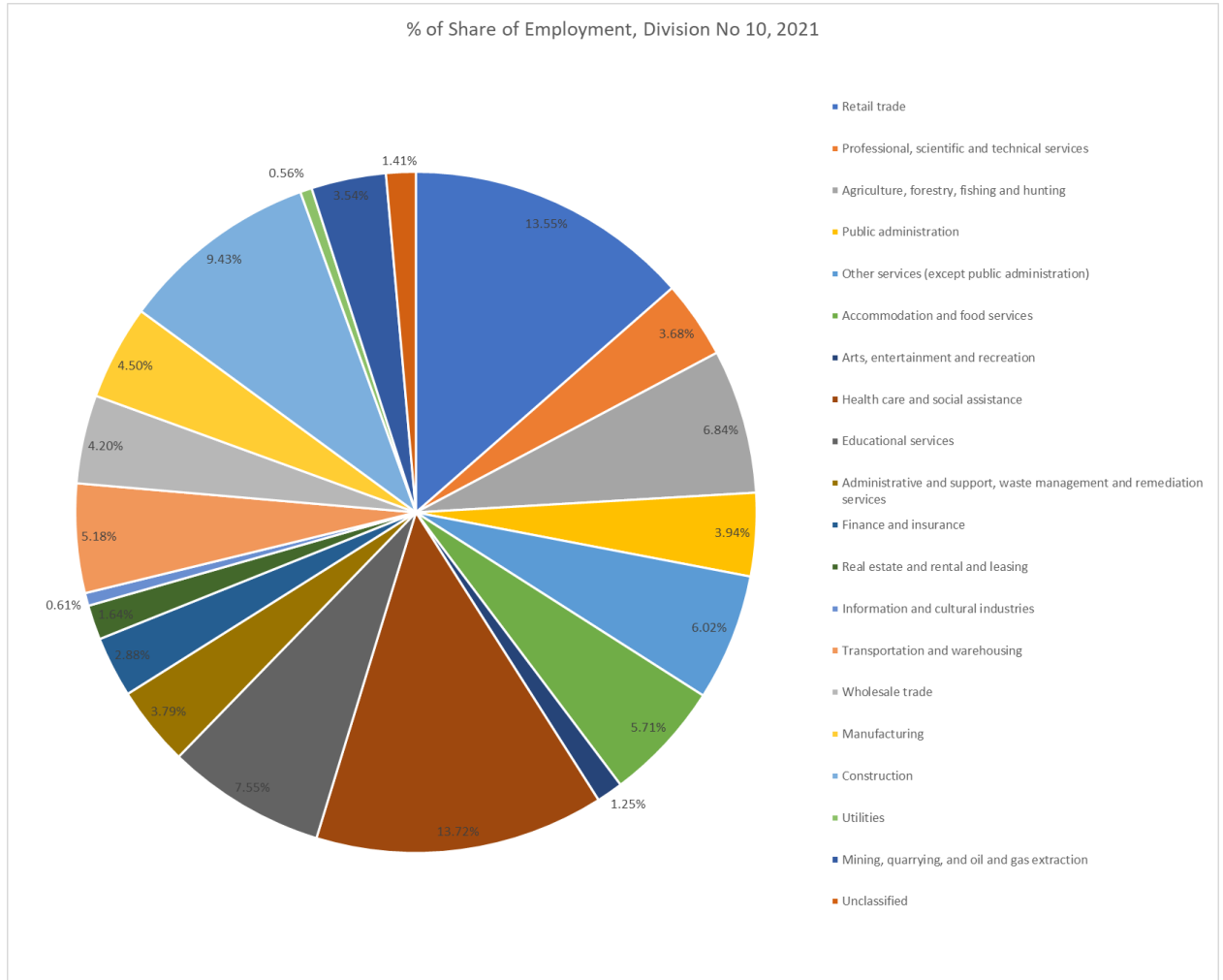


Source: Lightcast (formerly EMSI Analyst), 2016, 2022.

The retail trade employs the most people, with just a handful in professional, scientific, technical services, agriculture, forestry, and fishing. The retail trade added two jobs between 2016 and 2022, with losses in professional, scientific, technical services (1), agriculture, forestry, and fishing (2), as shown in Figure 27.

Figure 28 shows the percent share of employment in Division No. 10. The leading employer sectors are health care and social assistance (13.8%, 6,371 jobs), followed by retail (13.5%, 6,292 jobs), and construction (9.4%, 4,379 jobs). Notable sectors include agriculture, forestry, and fishing (6.8%, 3,178 jobs), manufacturing (4.5%, 2,089 jobs), transportation & warehousing (5.1%, 2,404 jobs), mining, quarrying, and oil and gas extraction (3.5%, 1,654 jobs), and other services (except public administration).

Figure 27 - Percent Share of Employment by Sector in Division No 10.



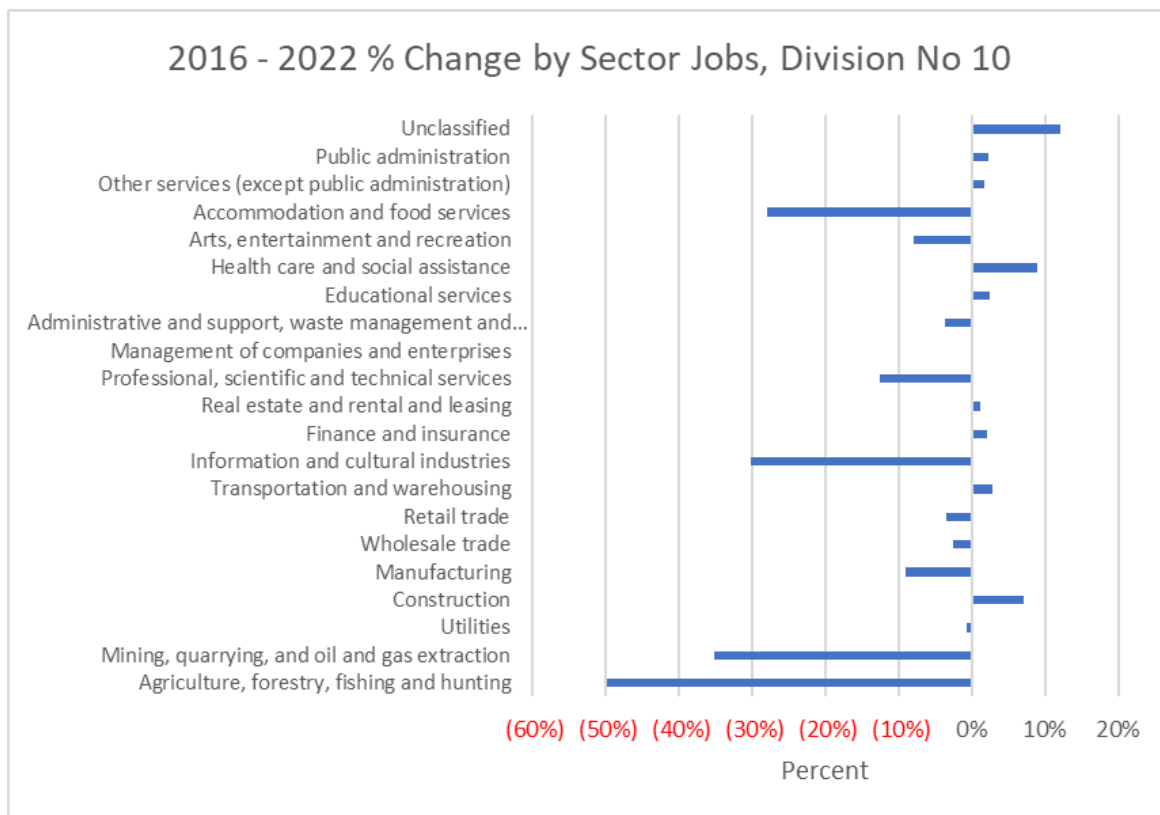
Source: Lightcast (formerly EMSI Analyst), 2022.

Figure 29 below shows the percentage change between 2016 and 2022 by sector, with Figure 30 showing changes at the 4-digit North American Industry Classification System (NAICS) level. The number of jobs declined in 11 of the 21 2-digit NAICS industries. Several important sectors suffered heavy job losses –agriculture, forestry, fishing and hunting with a 50% decline, as did farming jobs. Mining, quarrying, and oil and gas extraction with a 35% decline and support activities for mining as shown in Figure 29 below, and oil and gas extraction fell by 39%, which was exacerbated by COVID-19 as seen in Figure 29 below. Information and cultural industries declined by 30%, accommodation and food services decreased by 28%, with jobs in full-service restaurants and limited service eating places falling by 31% and traveller accommodation declining by 29%, both of which could be attributable to COVID-19 (Figure 30, Figure 31 below).

Other notable sectors also declined, albeit by smaller margins, including manufacturing showing a 9% decline, and professional, scientific and technical services falling by 13%. Increases in employment were insufficient to offset the declines. An increase in the number of jobs was seen in building finishing contractors at 20.66% and building equipment contractors at 18.46%. In relation to the spikes experienced during COVID-19, unclassified at 12%, and health care & social assistance at 9% as

shown in Figure 29 and with jobs in community care facilities for the elderly increasing by 47% as shown in Figure 30. The remaining job increases were small. Notable trends in the 4-digit NAICs sub-sectors (Figure 30) were in commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance, where jobs declined by 19.76%, while jobs in automotive repair and maintenance increased by 14.35%. Grocery store jobs increased by 13.53%.

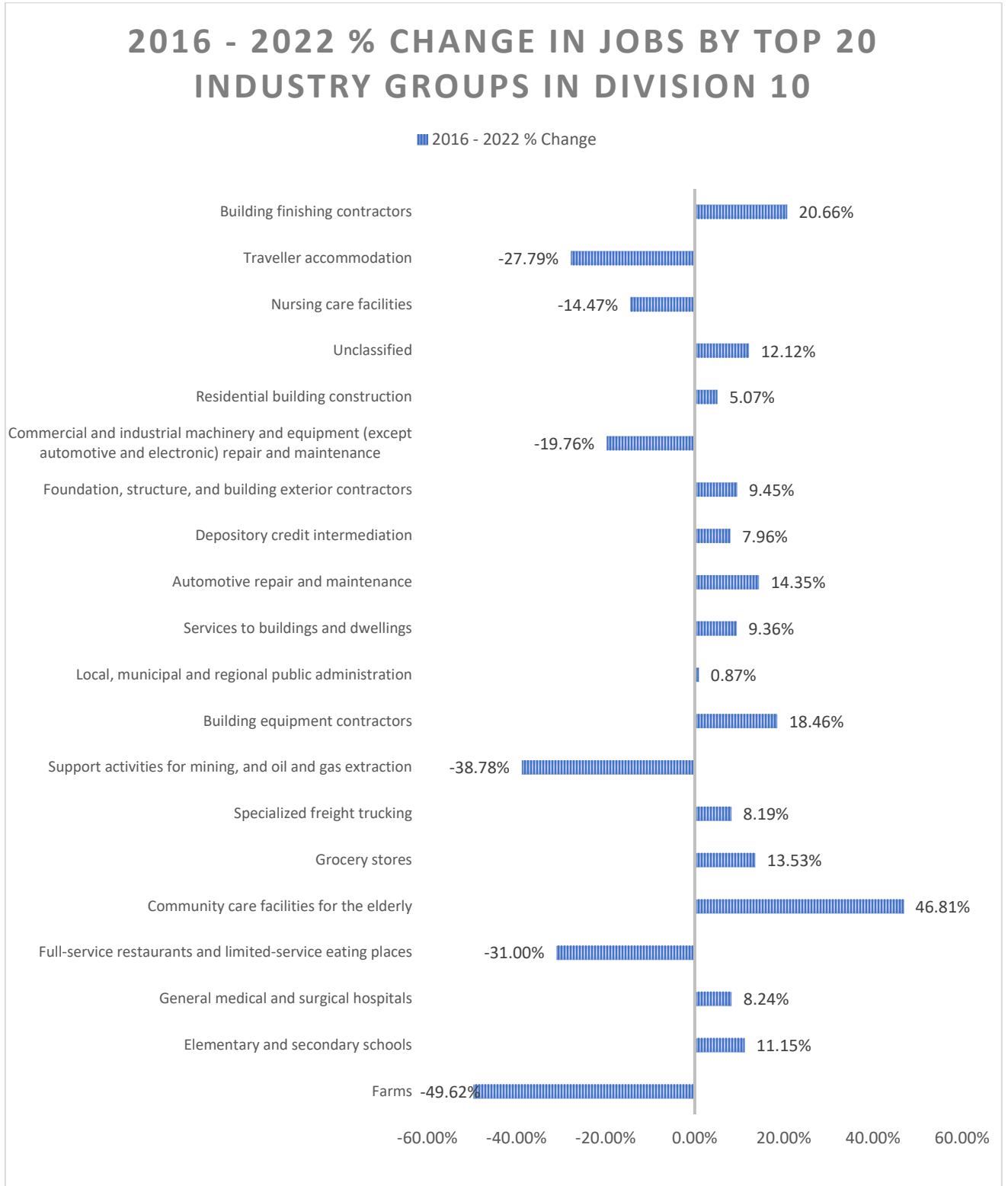
Figure 28 - Percent Change in Jobs by Sectors - 2016-2022.



Source: Lightcast (formerly EMSI Analyst), 2016, 2022.

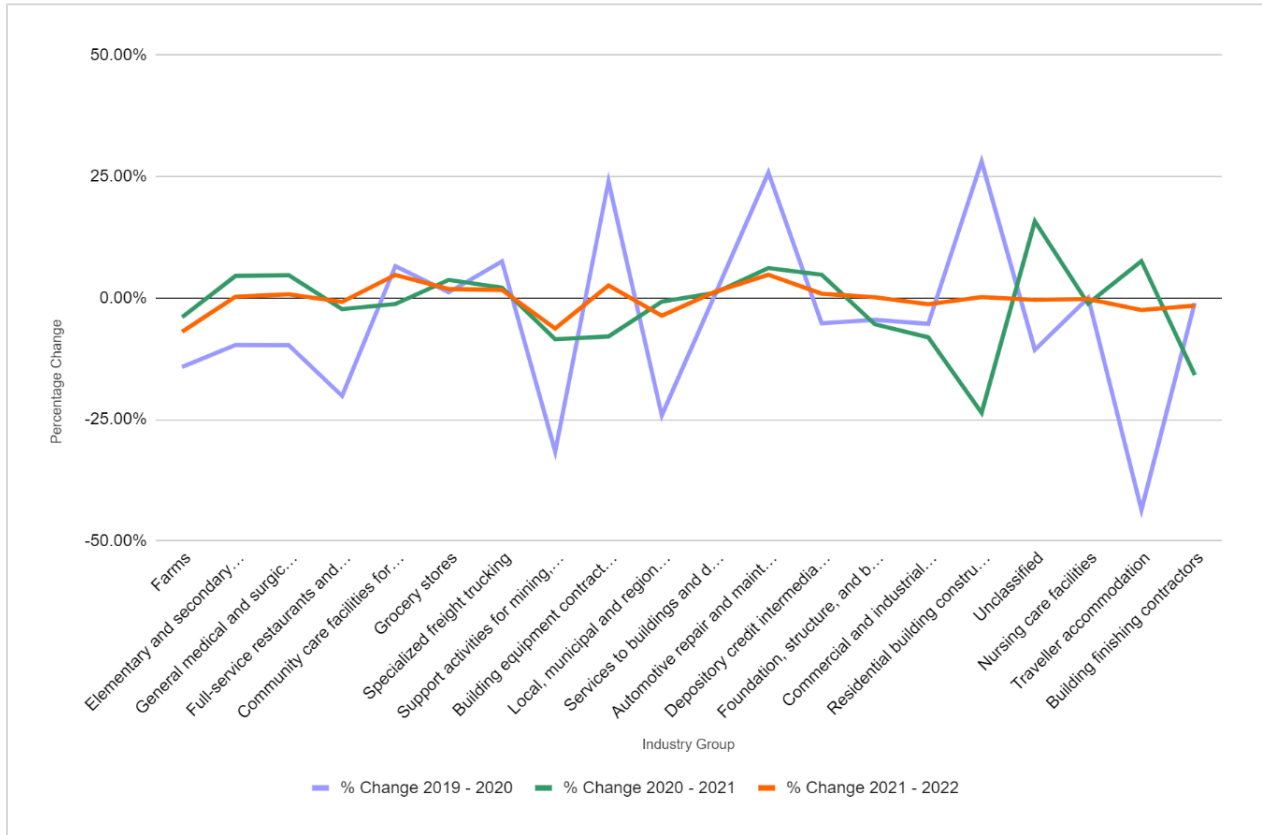


Figure 29 - 2016-2022 Percent Change in Jobs by Top 20 Industry Groups in Division 10.



Source: Lightcast (formerly EMSI Analyst), 2016, 2022.

Figure 30 - Year on Year Growth by Top Industries 2019 – 2022.



Source: Lightcast (formerly EMSI Analyst), 2019 – 2022.

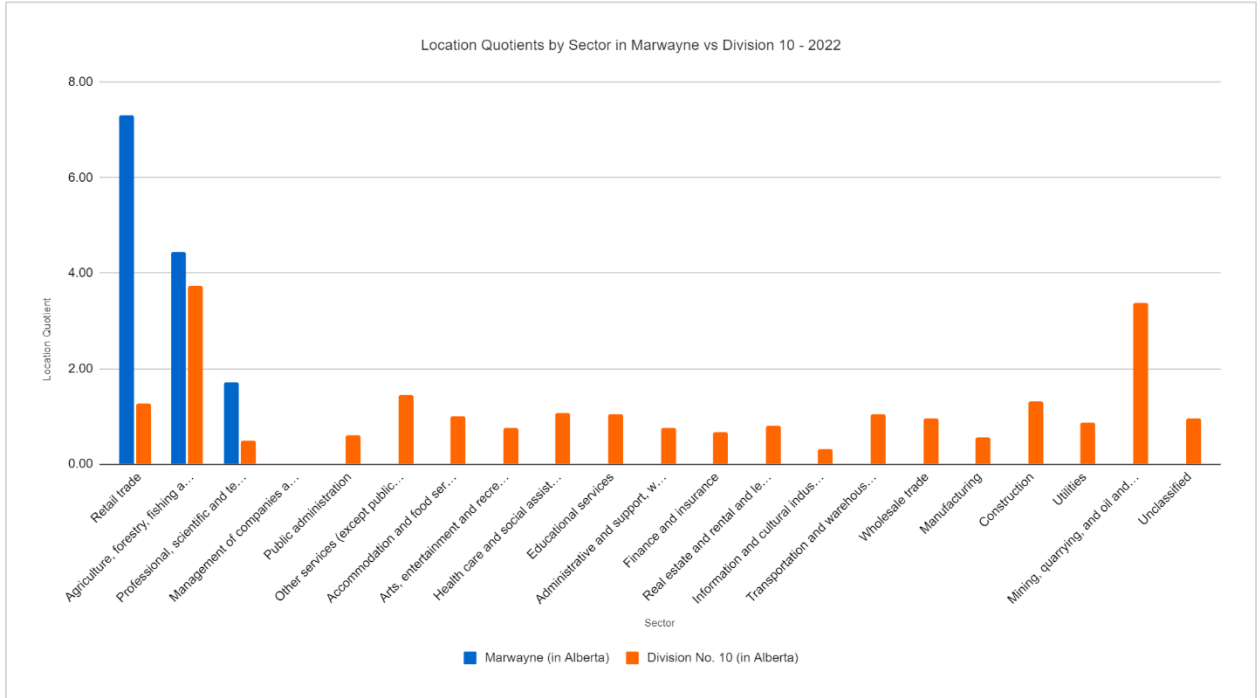
### Industry Concentration

Marwayne’s most prevalent industries in employment concentration or location quotient (LQ) in relation to the nation are led by retail trade (7.31), followed by agriculture, forestry, fishing and hunting (4.45) and professional, scientific and technical services (1.71) (Figure 32).

Division No 10 also has a relatively high concentration in agriculture, forestry, fishing and hunting (3.74), along with mining, quarrying and oil & gas (3.38). Otherwise, Division No. 10 has a relatively diversified economy with employment concentration comparable to the national average (LQ of around 1) in six sectors and slightly below the national average in seven industries. Other services (except public administration) include transportation and warehousing, construction, and accommodation and food services, which is important to tourism (Figure 32).

However, in Division No. 10 there is low concentration in some knowledge industries - Information and cultural industries (0.33), which includes design and software, and professional, scientific, and technical services (0.55). The same is true of manufacturing (0.55) (Figure 32).

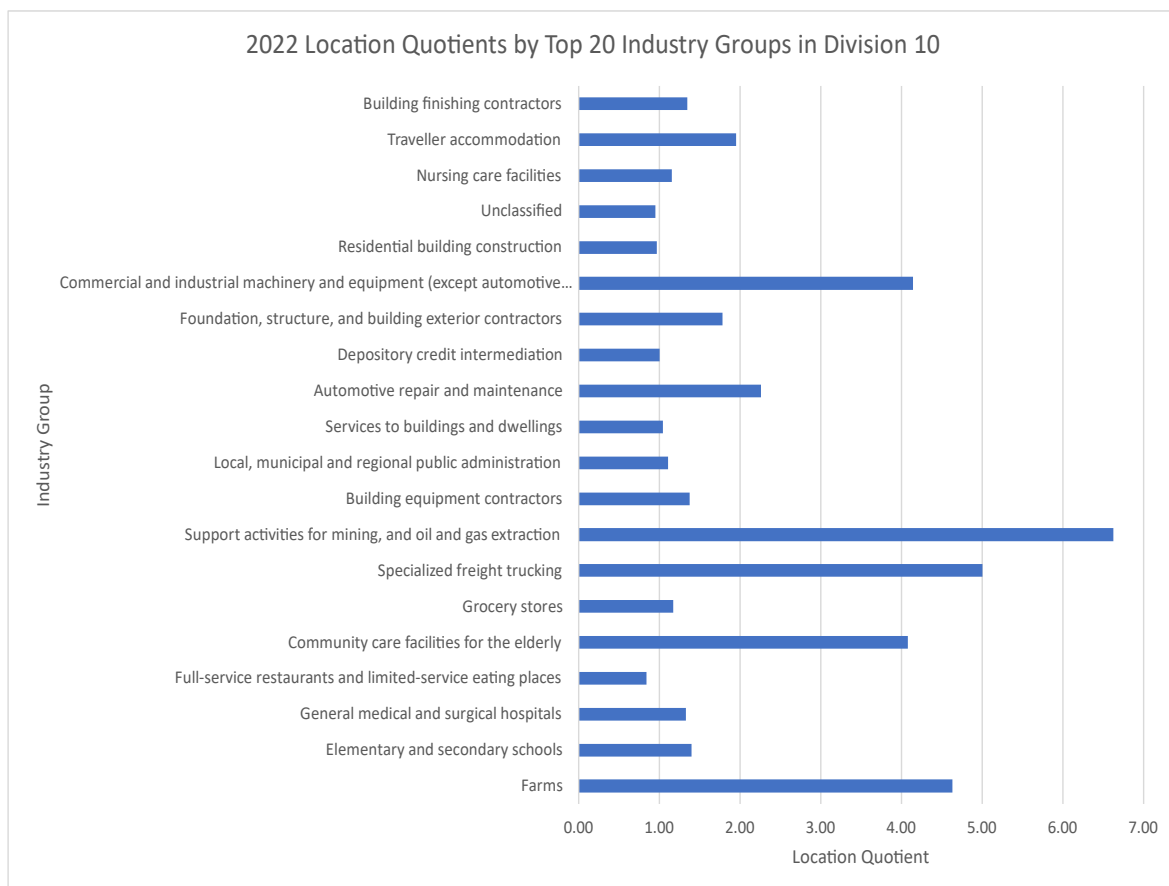
Figure 31 - Location Quotient Marwayne vs. Division No. 10, 2022.



Source: Lightcast (formerly EMSI Analyst), 2022.

A deeper dive at the 4-digit NAICS level sheds more light on the nature of industry concentration in Division No. 10 (Figure 33).

**Figure 32** - Location Quotient Top 20 Sectors Division No. 10, 2022.



Source: Lightcast (formerly EMSI Analyst), 2022.

**Business Establishments**

Figure 34 below shows the establishment size distribution by employment in Marwayne. The data collection in Canadian Business Counts includes all businesses that

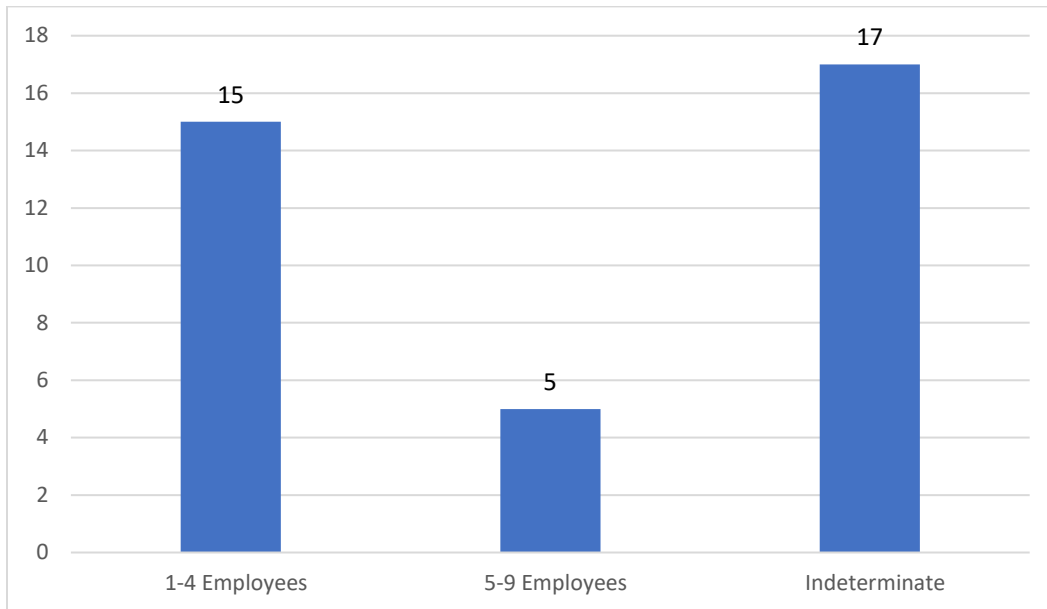
- Have a minimum of \$30,000 in annual revenue; or
- Are incorporated under a federal or provincial act and have filed a federal corporate income tax form within the past three years.

Statistics Canada defines two categories of businesses - employer businesses and indeterminate:

- Employer businesses are defined as having an employee workforce for which they submit payroll remittances to the Canadian Revenue Agency (CRA)
- Indeterminate businesses are defined as having no employees so far as they do not submit payroll remittances to CRA. These businesses may still have a workforce of contracted workers, family members or business owners, and can include solopreneurs and gig economy workers, a growing category of workers

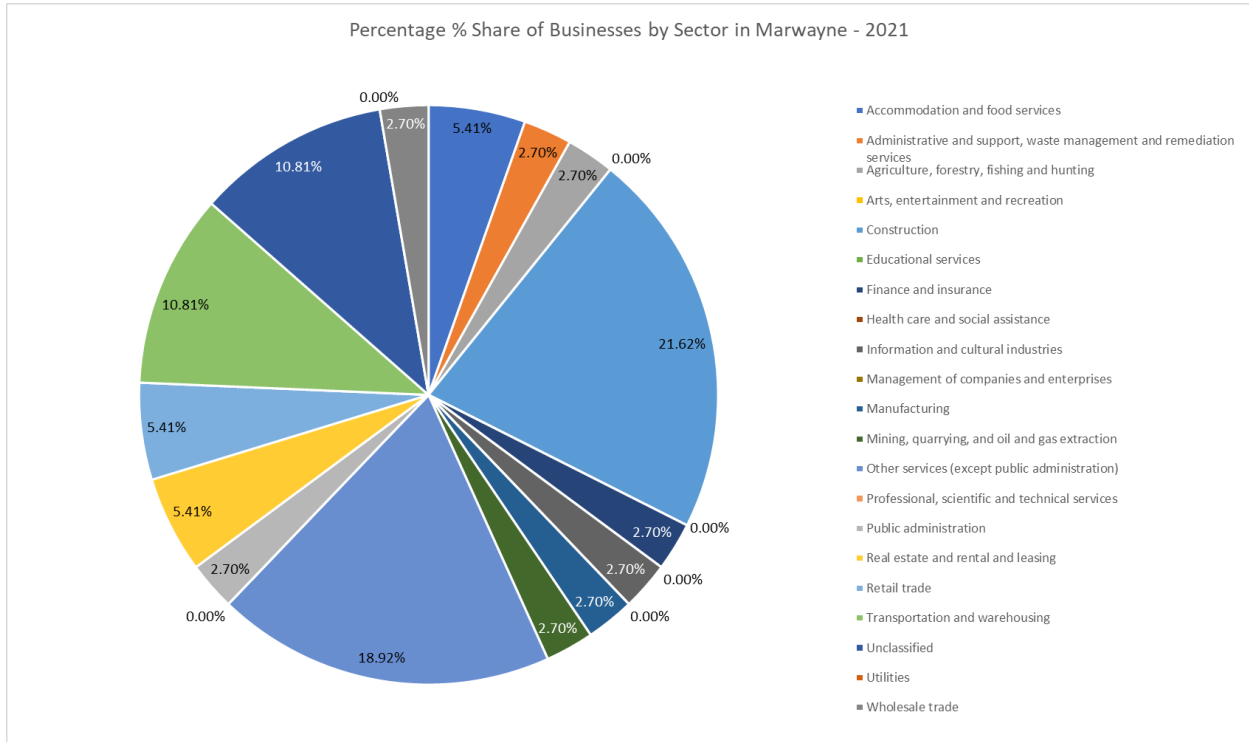
Marwayne is a village of small businesses, all of the 37 are either indeterminate (no employees), have 1-4 employees, or 5-9 employees.

**Figure 33** - Size of Business by Employee in Marwayne, 2021.



Source: Lightcast (formerly EMSI Analyst), 2021

**Figure 34 - Percentage Share of Businesses by Sector.**



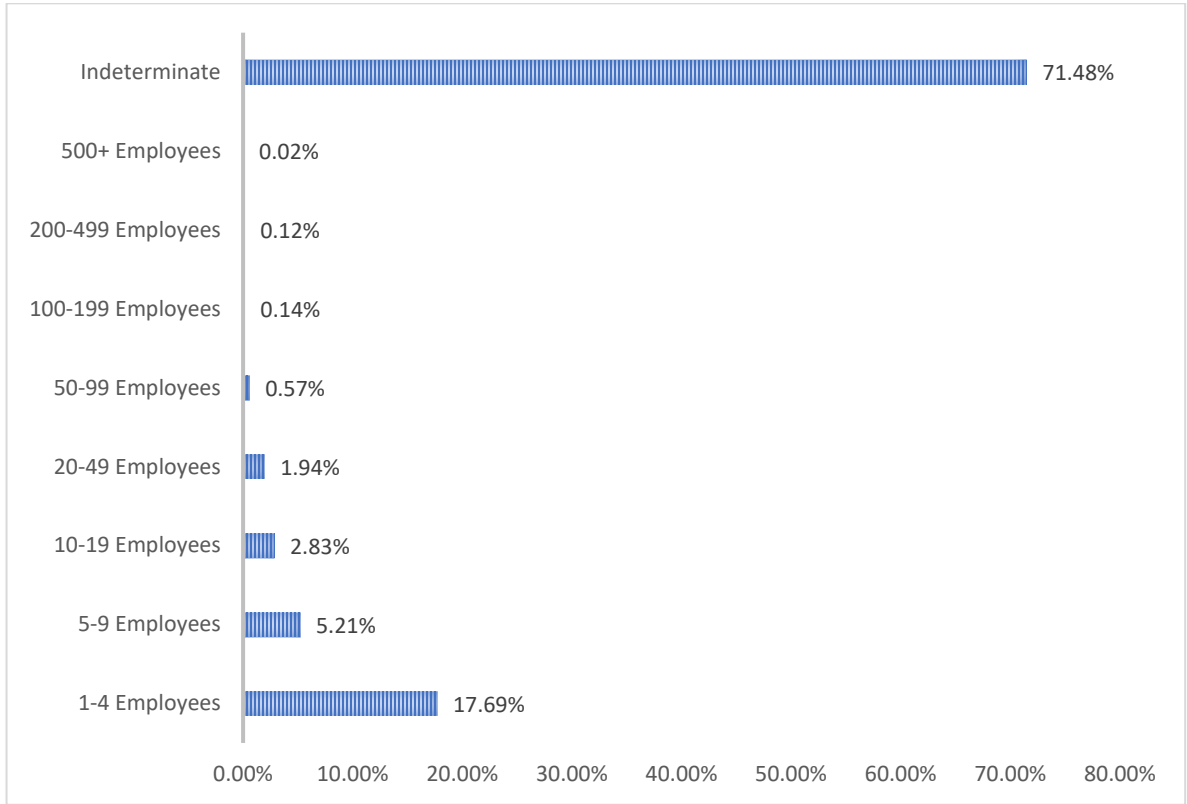
Source: Lightcast (formerly EMSI Analyst), 2021

### Division No. 10

Figure 36 below shows the distribution of businesses by the number of employees. The importance of small businesses in Division No. 10 is demonstrated by 15,011 of the 15,095 establishments, or 93.4% of the businesses are indeterminate (no employees) or have 1-4 employees, followed by 5-9 employees. 44 businesses employ over 100 employees, representing 0.28% of the total, showing the area's ability to sustain large employers.



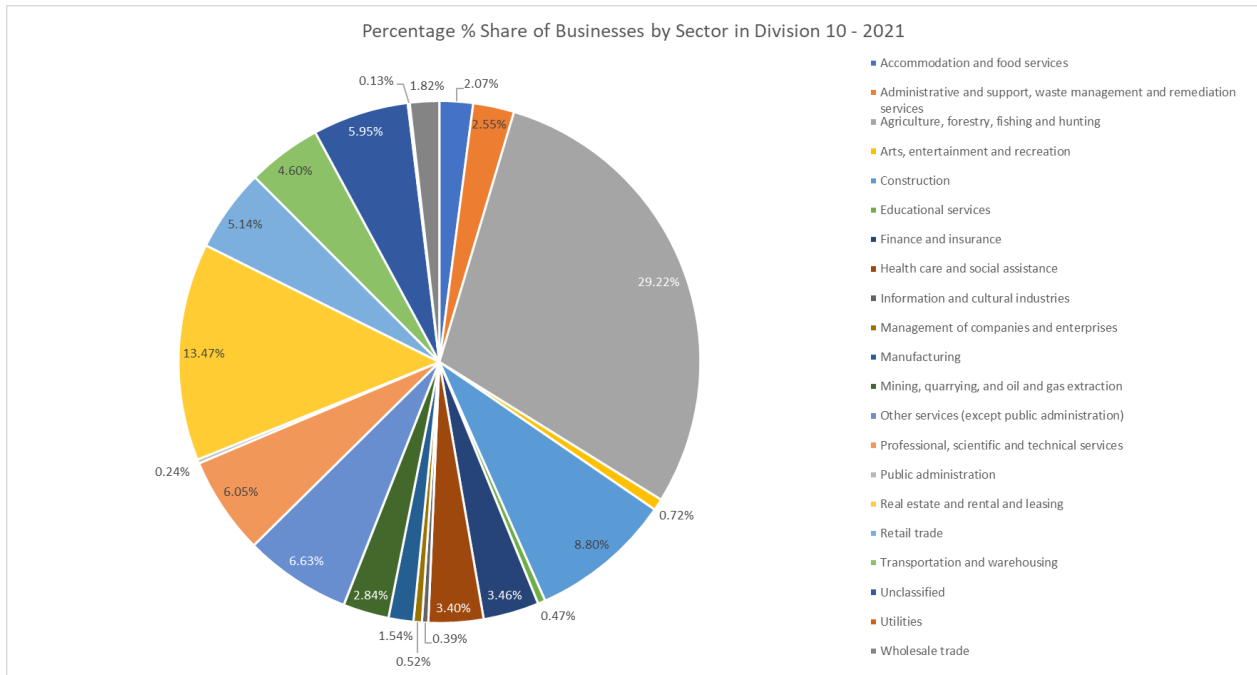
Figure 35 - Size of Business by Employees in Division No 10, 2021.



Source: Lightcast (formerly EMSI Analyst), 2021

Figure 37 below shows the share of businesses by sector in Division No. 10. Agriculture, forestry, fishing, and hunting has by far the largest share of establishments at 29% or 4,648 businesses, followed by real estate and rental and leasing at 13%, and construction at 9%. Other sectors to note are other services (except public administration) at 7%, professional, scientific and technical services with 6%, and transportation and warehousing at 5%.

Figure 36 - Percentage Share of Businesses by Sector.



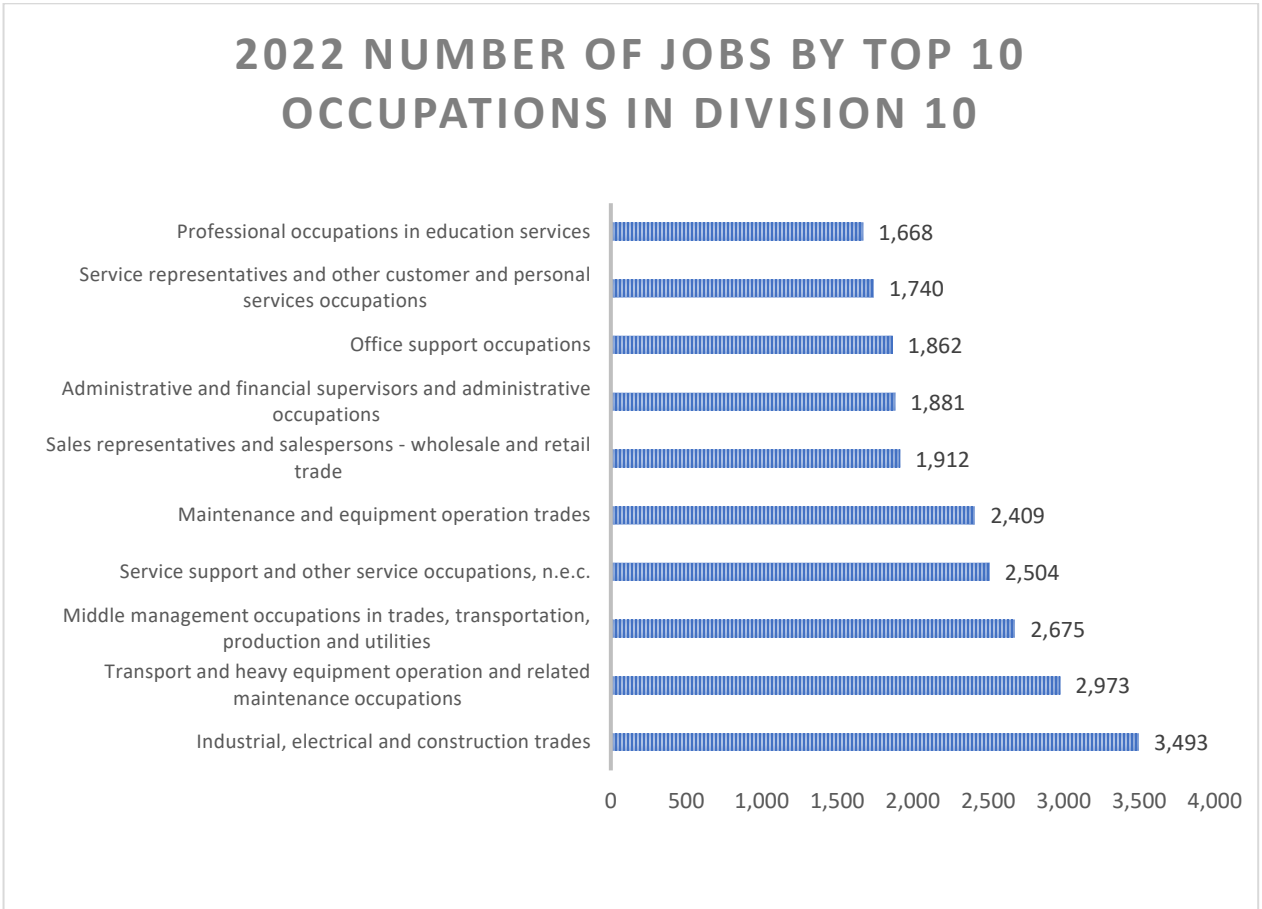
Source: Lightcast (formerly EMSI Analyst), 2021

### Occupations

Retail and wholesale trade managers, store shelf stackers, cashiers, general farm workers and retail salespersons are the most prevalent occupations in Marwayne’s businesses, each represented by less than 10 employees. However, Division No 10 will be an important catchment for new companies in Marwayne. Figure 38 below shows the number of jobs by top ten occupations in Division No. 10.

There is a significant representation in occupations around skilled trades with industrial, electrical, and construction trades (3,493 jobs), maintenance and equipment operation trades (2,409 jobs), transport and equipment operation and related maintenance operations (2,973 jobs) and representation at the middle management in trades, transportation, production, and utilities (2,675 jobs). Also significant are service support and other related occupations (2,504 jobs), office support (1,862 jobs), and administrative and financial supervisors and administrative occupations, all of which are a factor in back-office operations.

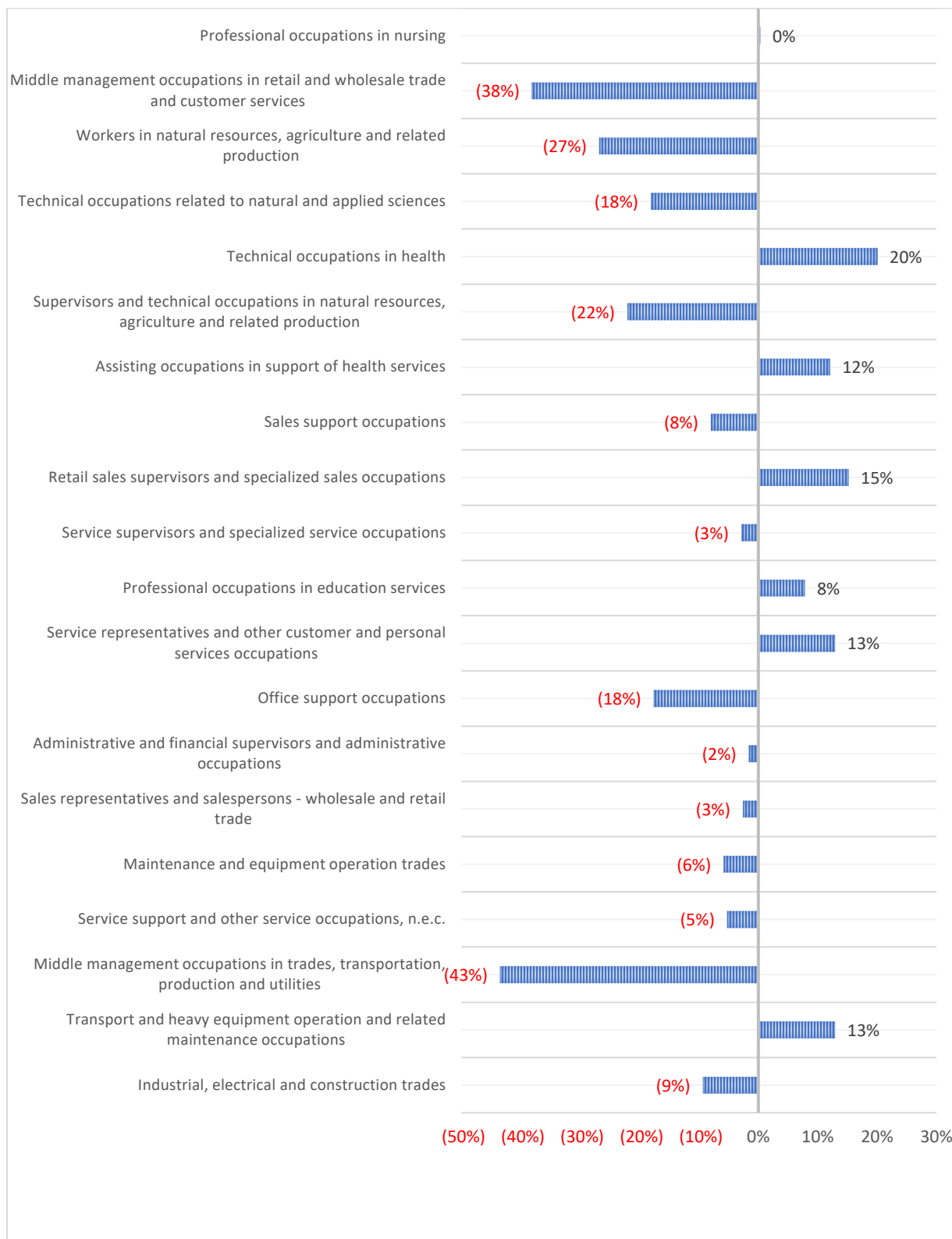
Figure 37 - 2022 Number of Jobs by Top 10 Occupations in Division 10.



Source: Lightcast (formerly EMSI Analyst), 2022 Between 2016 – 2022, occupational growth showed mixed results, as shown in Figure 39 below. Only six of the top occupations in terms of job numbers grew. The most significant growth was seen around health care with technical occupations in health (20%) and assisting occupations in support of health services (12%). Other gains were associated with sales with retail sales supervisors and specialized sales occupations (15%), service representatives and other customer and personal services occupations (13%). Transport and heavy equipment operation and related maintenance occupations (13%) also registered an increase.

However, heavy losses were sustained in managerial positions - middle management occupations in trades, transportation, production, and utilities (43%), middle management occupations in retail and wholesale trade and customer services (38%), and to a lesser extent, supervisors and technical occupations in natural resources, agriculture and related production (22%), retail sales supervisors and specialized sales occupations (15%) indicating possible labour availability in these areas. Office support occupations were added to these losses in office operations (18%). Workers in natural resources, agriculture and related production occupations (27%) also suffered heavy losses reflecting the significant decline in agricultural employment as indicated in the industry employment analysis above.

Figure 38 - 2022 % Change in Top 20 Jobs in Division 10.



Source: Lightcast (formerly EMSI Analyst), 2022

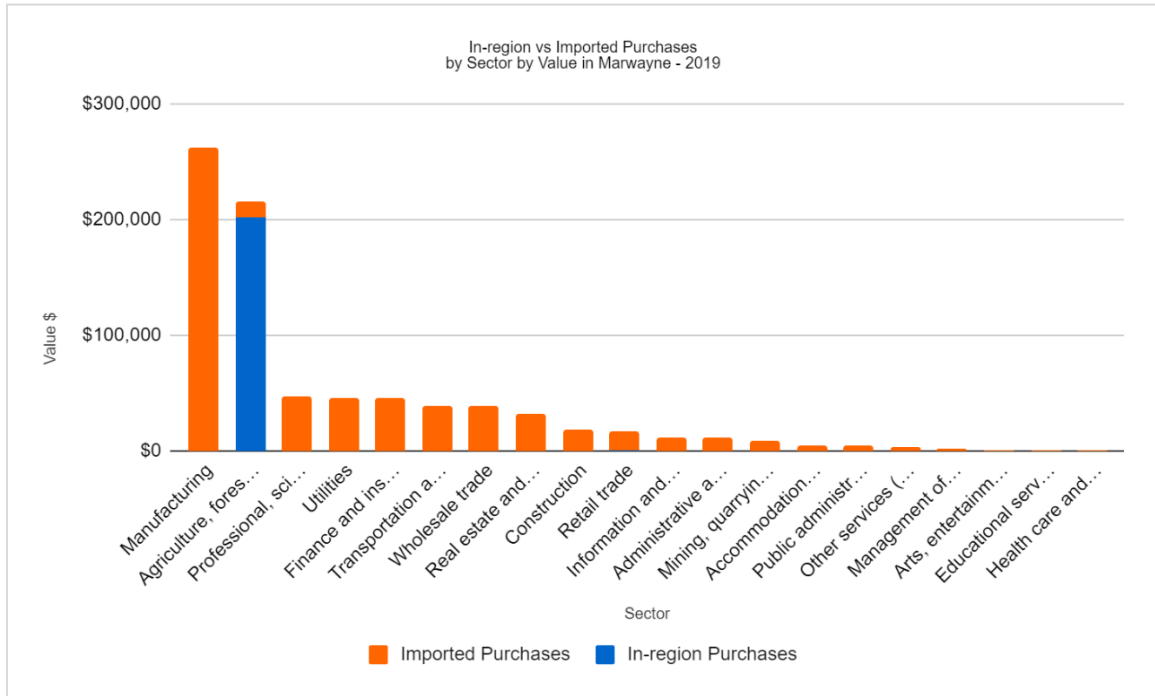


# ENVIRONMENTAL SCAN AND ECONOMIC BASE ANALYSIS

### Industry Supply Chain Activity

Agriculture, forestry, fishing, and hunting industries is the only sector with in-region purchases at \$215,544. The highest expenditure was on manufacturing-related purchases (\$262,868). The remaining sectors were below \$50,000 (Figure 40 below)

**Figure 39** - In Region vs Imported Purchases by Sector by Value in Marwayne – 2019.



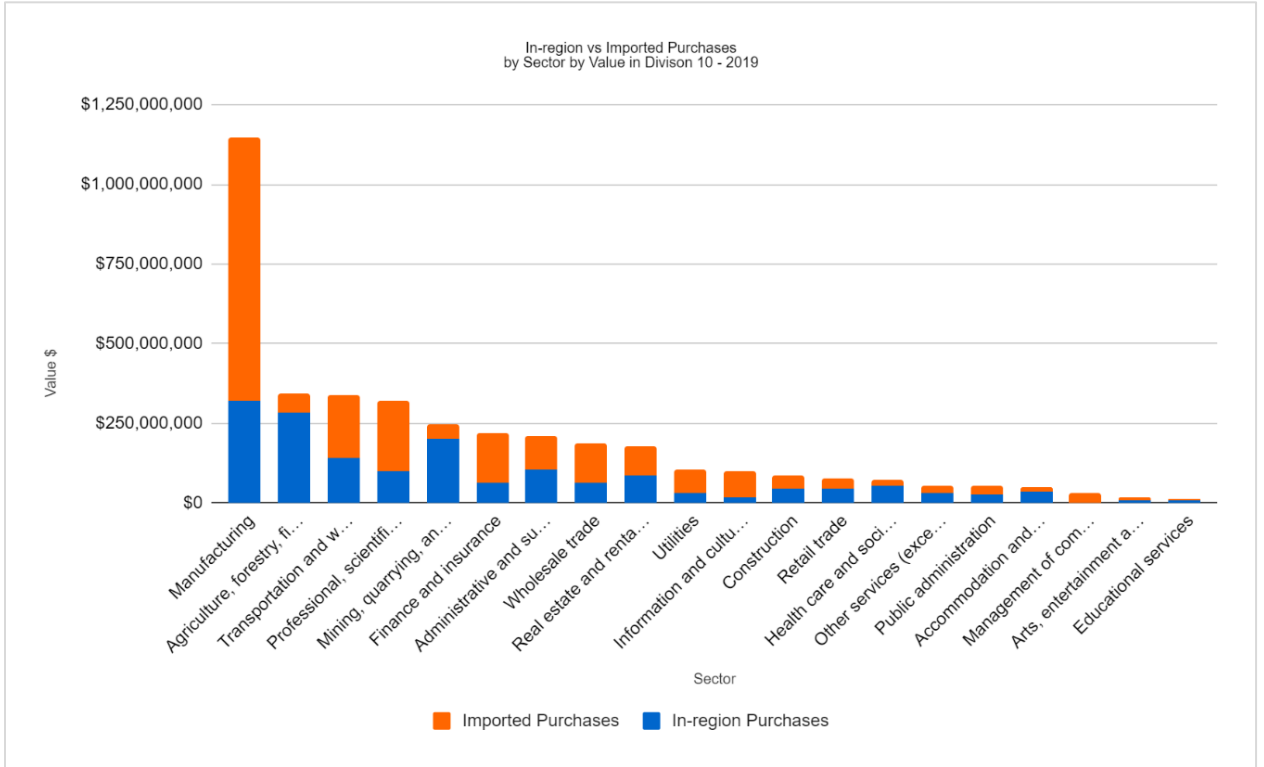
Source: Lightcast (formerly EMSI Analyst), 2019

### Division 10

Agriculture, forestry, fishing and hunting and mining, quarrying, and oil and gas extraction had the leading percentage of purchases by a sector in-region, both at 82%, followed by health care and social assistance at 74%, retail trade (59%) and construction (54%). The leading purchasing sectors by value were manufacturing at \$1.15 billion, with agriculture, forestry, fishing and hunting a distant second at \$345,279,383, transportation and warehousing at \$337,610,394, and professional, scientific and technical services at \$318,332,290. The leading sectors by percentage of purchases imported were management of companies and enterprises at 98%, information and cultural industries (81%), utilities (72%), finance and insurance (71%) (Figures 41, 42 below).

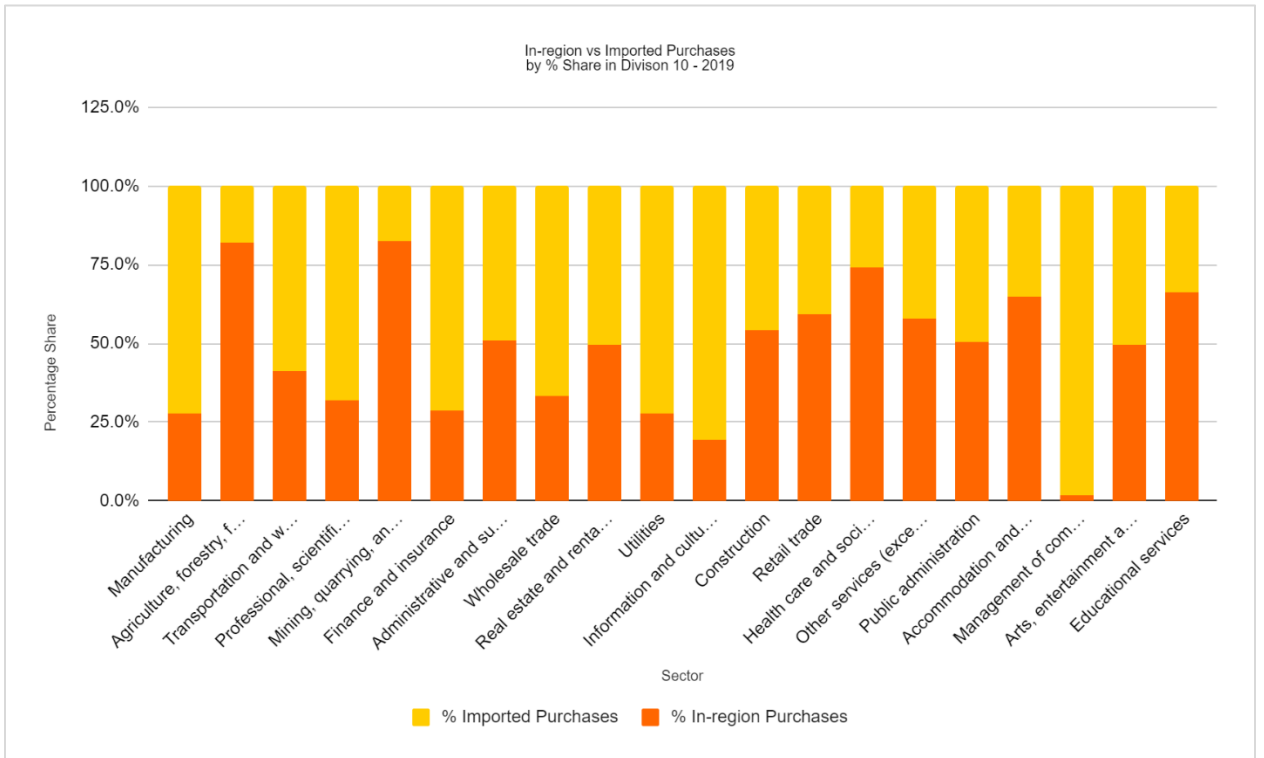


Figure 40 - In Region vs Imported Purchases by Sector by Value in Division No. 10- 2019.



Source: Lightcast (formerly EMSI Analyst), 2019

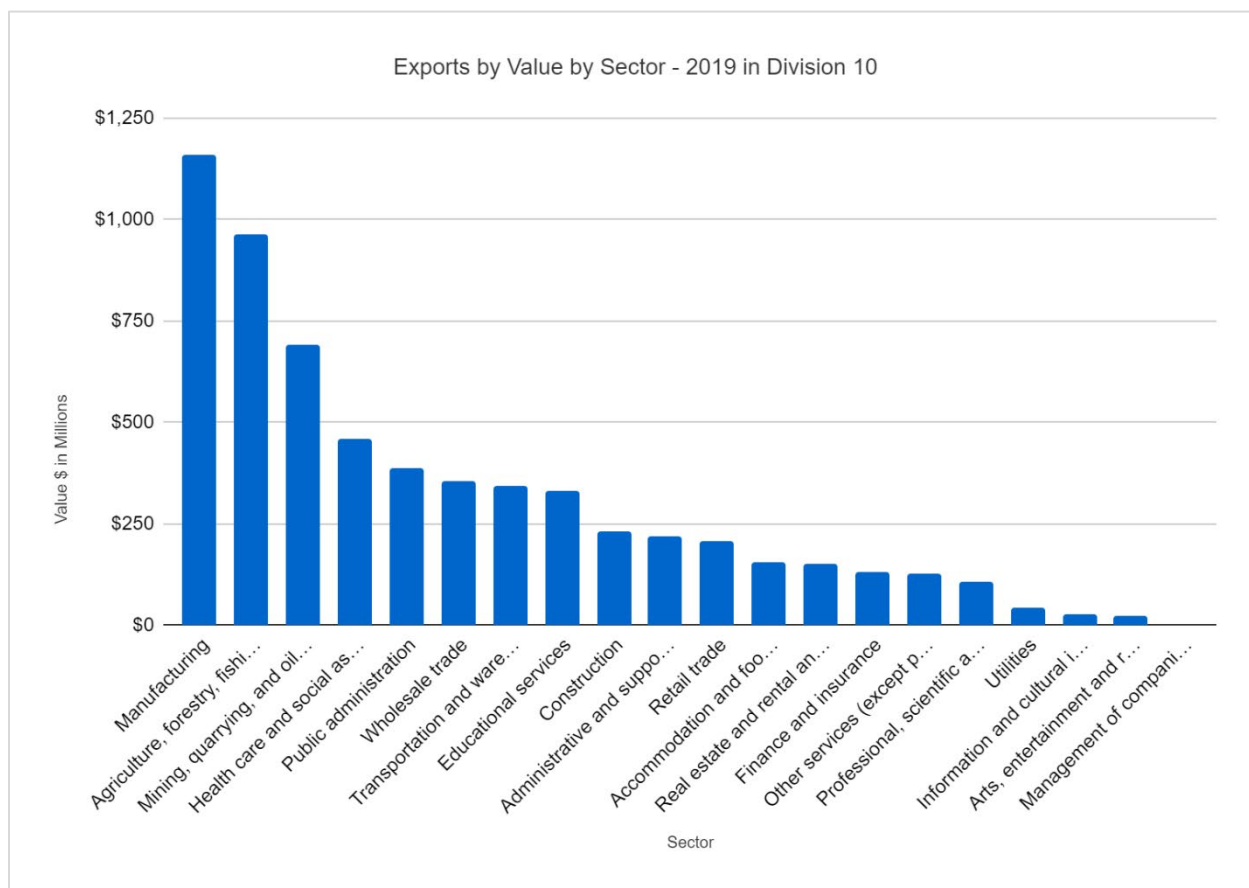
Figure 41 - In Region vs Imported Purchases by Sector by Percent Share in Division No. 10 – 2019.



Source: Lightcast (formerly EMSI Analyst), 2019

Figure 43 shows the exports by sector and value in Division No. 10 in 2019. The manufacturing sector is the leading exporter, valued at \$1,16 billion, followed by agriculture, forestry, fishing and hunting at \$965,101,226 and mining, quarrying, and oil and gas extraction at \$690,825,700. Also of note are Wholesale trade with \$356,174,316, transportation and warehousing at \$343,639,083, and construction at \$229,481,528. Exports in these sectors denote strength that should be built on in future development efforts.

Figure 42 - Exports by Sector and Value in Division No. 10 – 2019.



Source: Lightcast (formerly EMSI Analyst), 2019

8.2 Land & Infrastructure Review

Element	Description	Comments
<b>Transportation</b>		
Road	Yellowhead Trans-Canada Highway (Highway 16)	Approximately 18 km north. Connects to Lloydminster, Edmonton, and beyond.
	Alberta Highway 45	Connects Marwayne with the Saskatchewan border to the east
	Alberta Highway 897	Connects Marwayne with the City of Cold Lake and the Cold Lake Oil Sands Deposit to the north and the Village of Kitscoty and Highway 16 to the south. (MDP)
Rail	CP/CN Intermodal terminal Transload facilities	Edmonton Lloydminster
Air	Edmonton International Airport Regional airport - Lloydminster	214 km west 29 km - WestJet flights to Calgary Border town AB/SK
Port	Connections through CP to Vancouver CN to Vancouver, Prince George, Prince Rupert	Trade corridor
<b>Broadband</b>		
Connectivity	Strategic Plan Goal to Improve Village broadband connectivity Broadband does not appear to be available	MSC Net specialist rural provider – GigAir, Fibre Optic being implemented in select communities Alberta Broadband Strategy
<b>Utilities</b>		
Water		
Energy	Just Energy - electricity and natural gas ATCO – natural gas	Deregulated energy market – range of providers
<b>Land &amp; Buildings</b>		
Land	7 Commercial lots in the downtown core	\$10K - \$15K
Buildings	Multi -Use property Currently Car Wash/Takeout/Convenience Store	\$350,000

## 8.3 External Trend Analysis

### Methodology

As Marwayne had no observable Foreign Direct Investment, or FDI, in the last 3 years, it has not had an opportunity to potentially diversify its sectors. We opted to revise the FDI inflows of the entire Province of Alberta to account for sector activity that may be further away but more relevant to Marwayne.

Due to Marwayne's proximity to the Saskatchewan border, we also analyzed the FDI inflows of Saskatchewan to account for sector activity that, while also possibly further away, would be relevant to Marwayne.

Given that the provincial FDI flow analysis included several FDI recipient cities/towns, i.e., 11 regions in Alberta (note: 1 was not specified) and 5 regions in Saskatchewan, we narrowed the radius to 7 nearby regions to increase the relevance of our analysis. Consequently, we isolated FDI destination locations within 3 hours or less from Marwayne and analyzed their FDI inflows.

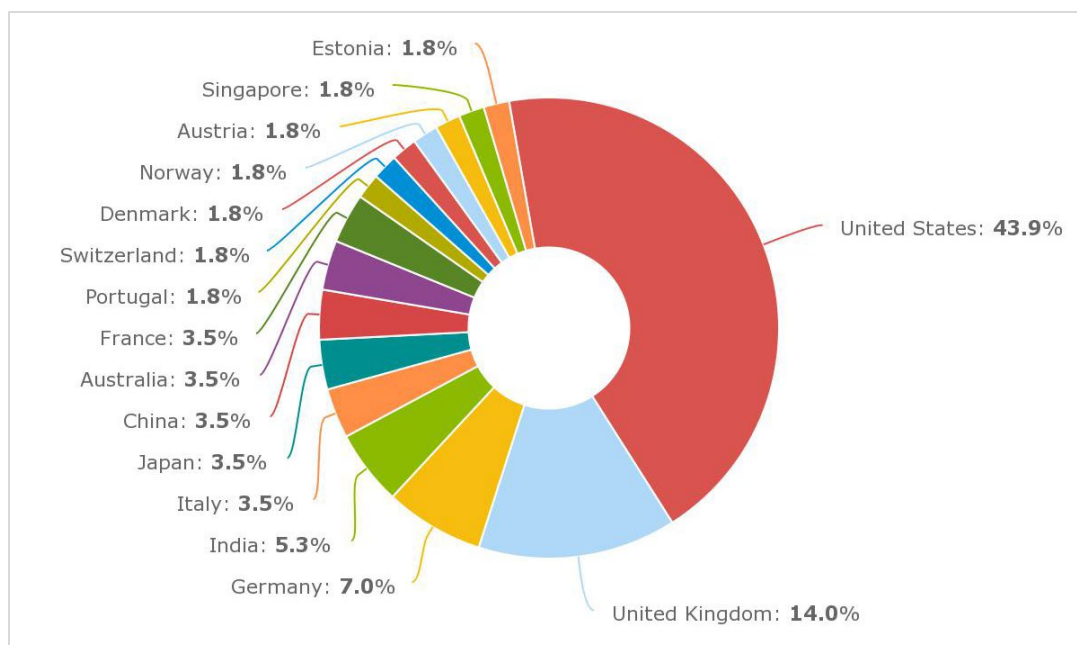
The list of nearby regions includes 4 regions from Alberta (Acheson, Edmonton, Leduc, and Hardisty) and 3 regions from Saskatchewan (Maidstone, Biggar and Saskatoon).

### FDI Flows into Alberta

Over the last 3 years, there were 57 FDI projects into Alberta, of which nearly 44% originated from the U.S. In 2022 alone, the U.S. accounted for 50% of FDI into Alberta.

Western Europe accounts for approximately 37% of FDI into Alberta, while Asia-Pacific represents 17.5%.

**Figure 43** - FDI into Alberta by Percentage Share of Projects by Source Country - June 2019 – 2022.

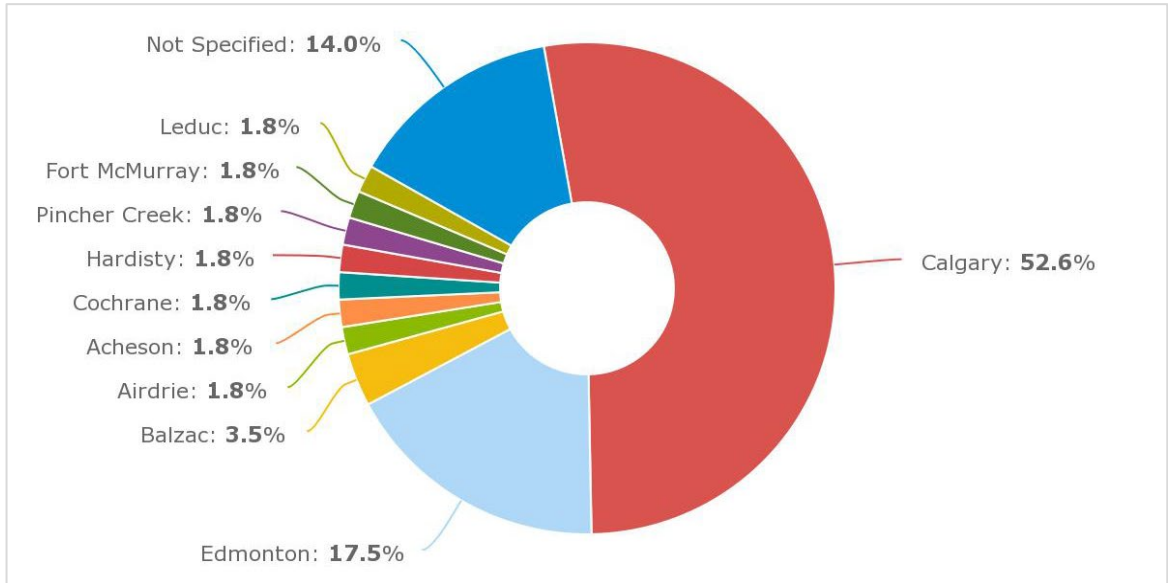


Source: [www.fdimarkets.com](http://www.fdimarkets.com) 2022.

Over the past 3 years, Calgary has been the dominant recipient region for FDI in Alberta; combined with Edmonton; they account for 70% of inbound FDI.

In 2022, Calgary and Edmonton represented 40%, and 30%, respectively, of all FDI received in the Province, with Edmonton gaining more market share and narrowing the gap.

Figure 44 - FDI into Alberta by Percentage Share of Projects by Destination City - June 2019 – 2022.

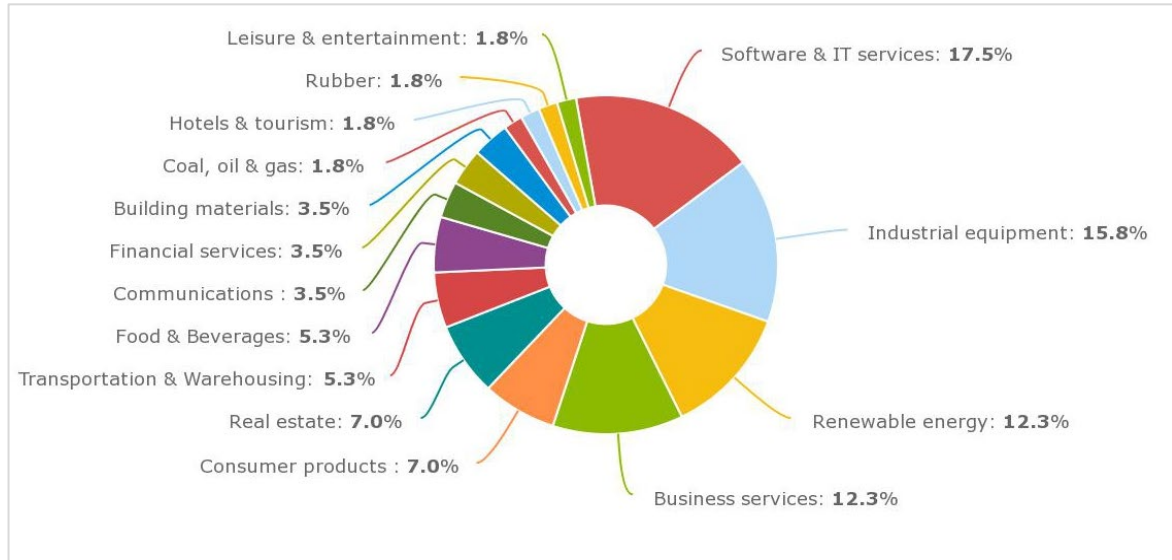


Source: [www.fdimarkets.com](http://www.fdimarkets.com) 2022.

In 2021, Software & IT services, Industrial equipment, Renewable Energy and Business services each accounted for 14.3% of the share of investment projects, which combined represented nearly 60% of all FDI projects into the Province.

Over the last 3 years, Software & IT services has been the leading sector for FDI into Alberta, slightly outpacing Industrial equipment. While Renewable energy and Business services were tied for the third largest sector in terms of inbound FDI over the last 3 years. Consequently, there appears to be a slight demand shift towards Software & IT and Industrial equipment.

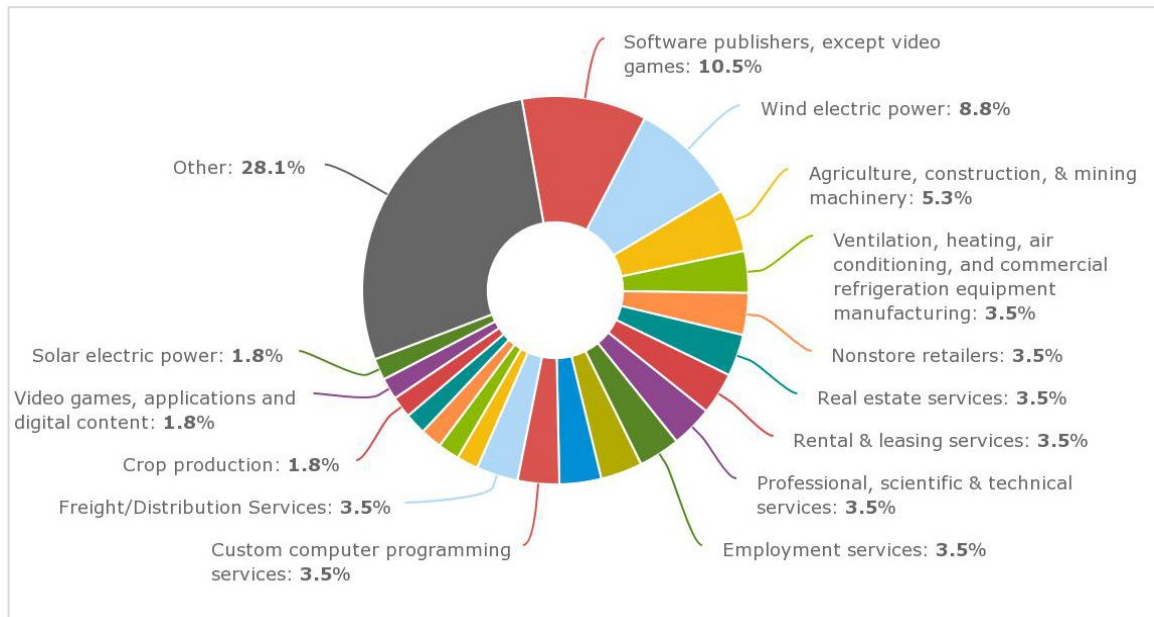
**Figure 45** - FDI into Alberta by Percentage Share of Projects by Sector - June 2019 – 2022.



Source: [www.fdimarkets.com](http://www.fdimarkets.com) 2022

There is a relatively even distribution in terms of the subsector composition of FDI flows into Alberta. However, the leading 3 sectors, represented nearly a quarter of the share of FDI over the last 3 years, with Software publishers (except video games) as the leading sector, followed by Wind electric power and Agriculture, construction, & mining machinery in second and third place respectively.

**Figure 46** - FDI into Alberta by Percentage Share of Projects by Subsector - June 2019 – 2022.



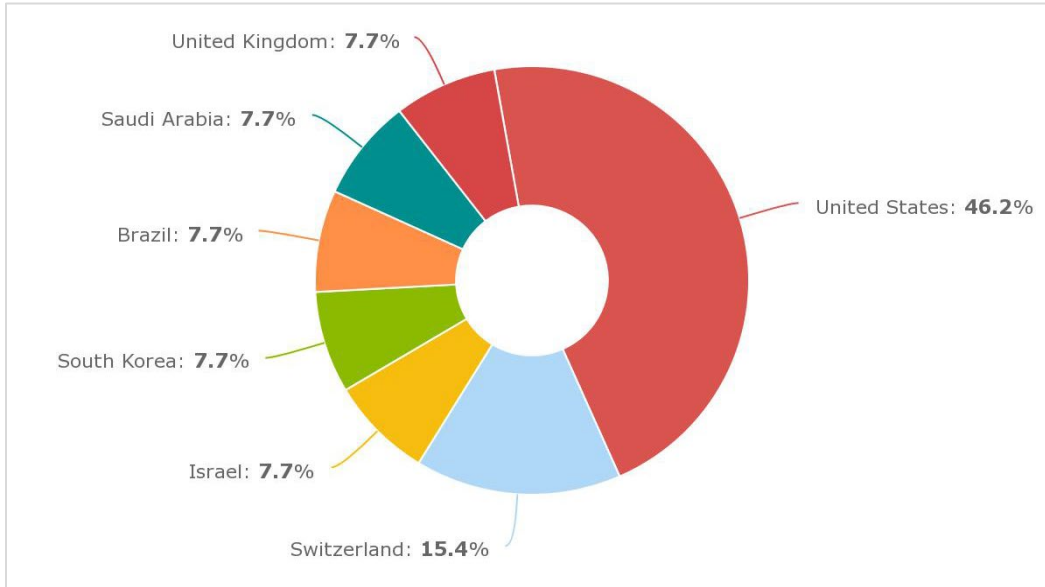
Source: [www.fdimarkets.com](http://www.fdimarkets.com) 2022



**FDI Flows Saskatchewan**

In the last 3 years, there were 13 recorded FDI projects into Saskatchewan. Over 60% of the FDI into the Province originated from the U.S. and Switzerland, with the U.S. accounting for 46% of FDI by source market share.

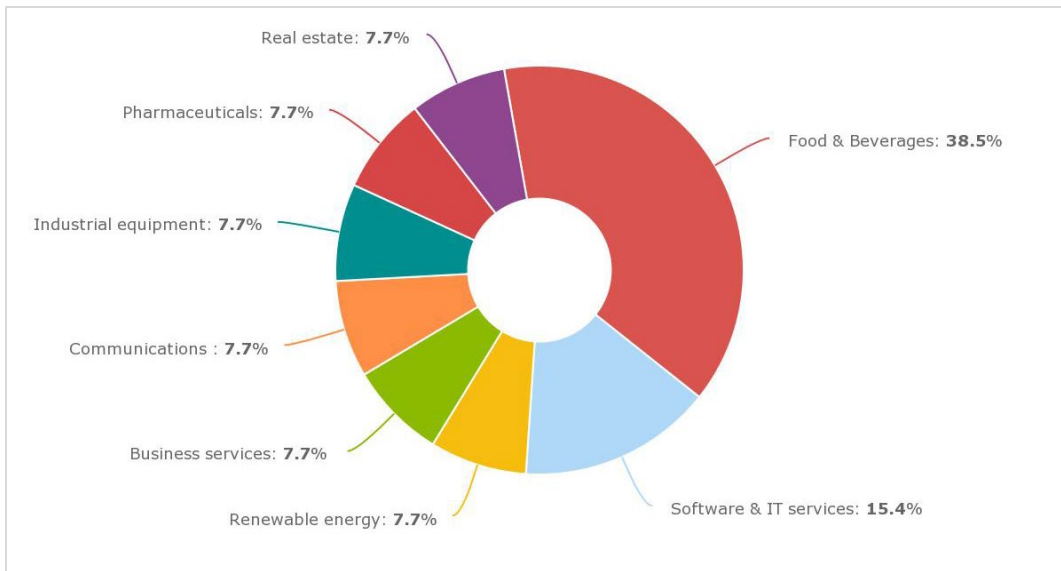
**Figure 47** - FDI into Saskatchewan by Percentage Share of Projects by Source Country - June 2019 – 2022.



Source: [www.fdimarkets.com](http://www.fdimarkets.com) 2022

The leading sector to receive FDI into Saskatchewan was Food & Beverage; the second leading sector was Software & IT, which received well less than half the amount of the Food & Beverage sector.

**Figure 48** - FDI into Saskatchewan by Percentage Share of Projects by Sector - June 2019 – 2022.

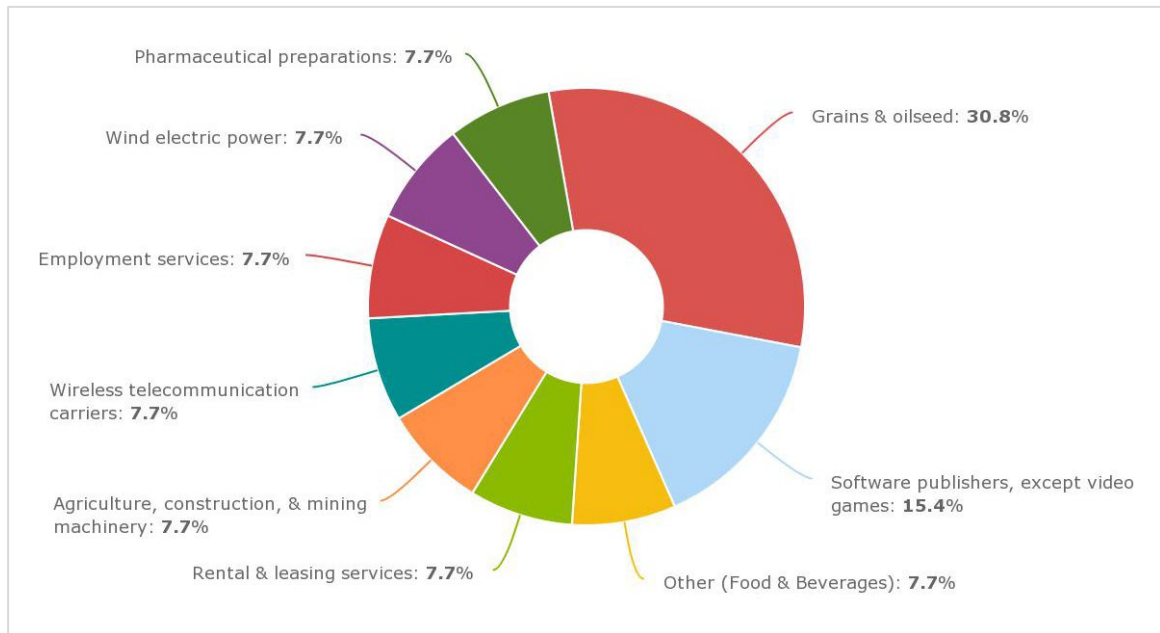


Source: [www.fdimarkets.com](http://www.fdimarkets.com) 2022

The leading subsector received FDI into Saskatchewan are Grains & oilseed with a dominant lead, receiving twice as much FDI as the second leading subsector, i.e., Software publishers, except video games.

From a cluster perspective, Agribusiness received 50% of the FDI over the last 3 years in addition to 50% of the FDI in 2022, along with Professional Services.

**Figure 49** - FDI into Saskatchewan by Percentage Share of Projects by Subsector - June 2019 – 2022.



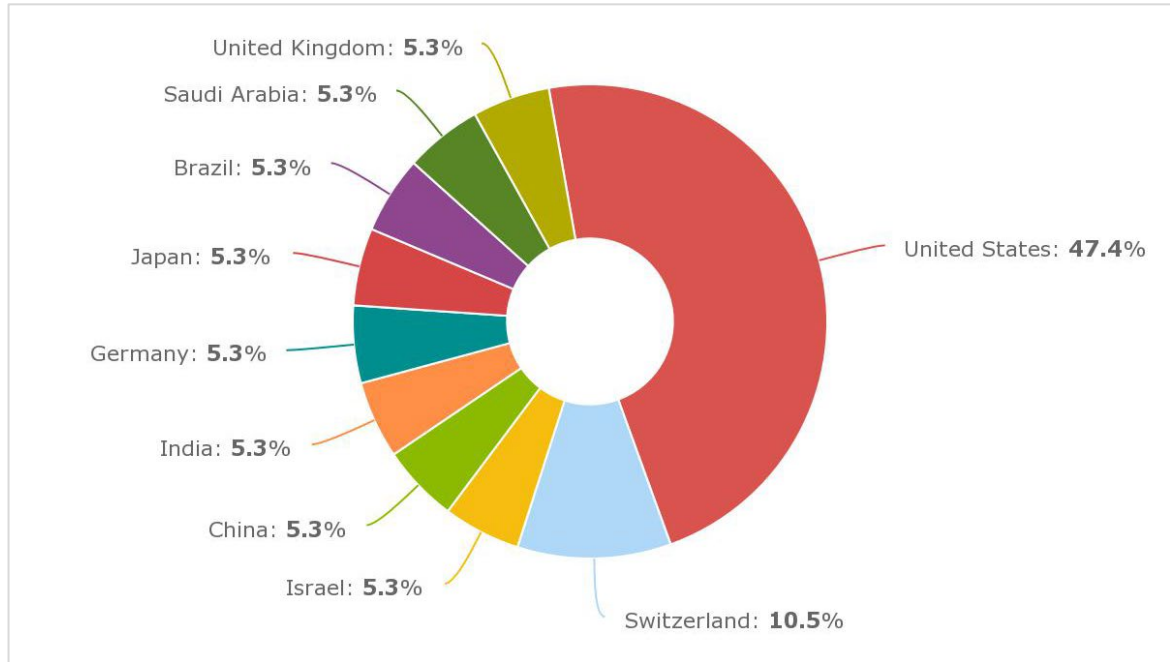
Source: [www.fdimarkets.com](http://www.fdimarkets.com) 2022

### FDI Flows into Nearby Regions

Nearby regions (those within a 3-hour drive of Marwayne) include Acheson, AB; Edmonton, AB; Leduc, AB; Hardisty, AB; Maidstone, SK; Biggar, SK; and Saskatoon, SK.

Nearly 50% of the 19 FDI projects into the nearby regions originated from the U.S, with roughly 20% coming from Western Europe and approximately 15% coming from Asia-Pacific.

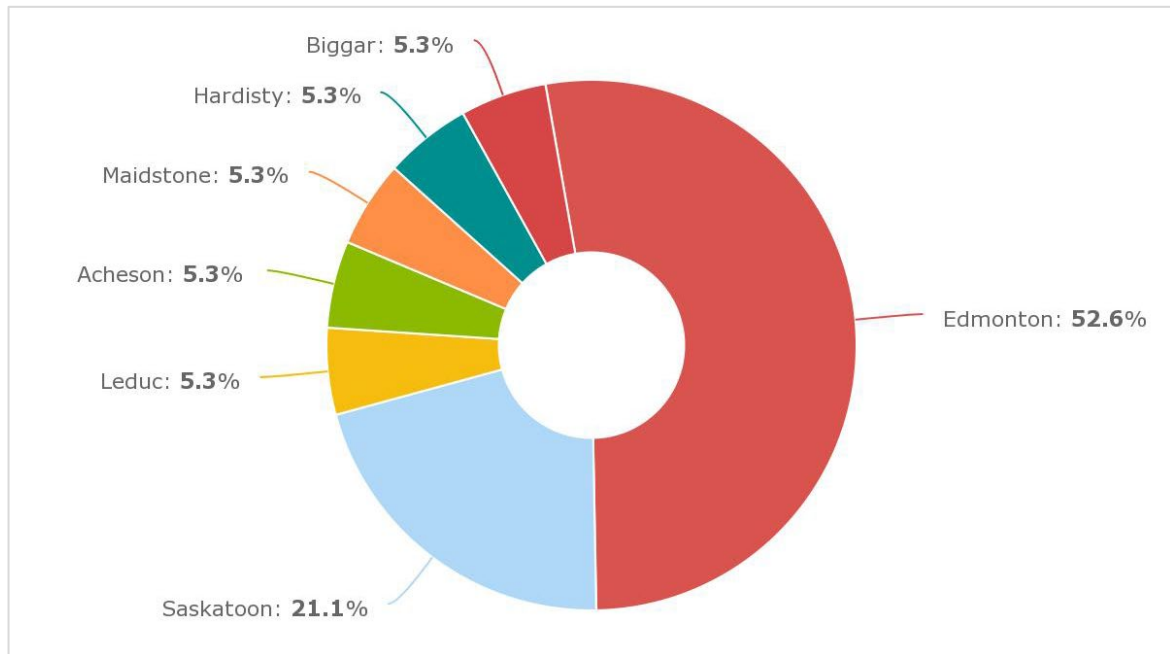
Figure 50 - FDI into Nearby Regions by Percentage Share of Projects by Source Country - June 2019 – 2022.



Source: www.fdimarkets.com 2022

Edmonton received slightly over half of the FDI inflows into the nearby regions. Comparatively, nearly 70% of the FDI into the nearby regions landed in Alberta, making it the more popular destination.

Figure 51 - FDI into Nearby Regions by Percentage Share of Projects by Destination City - June 2019 – 2022.

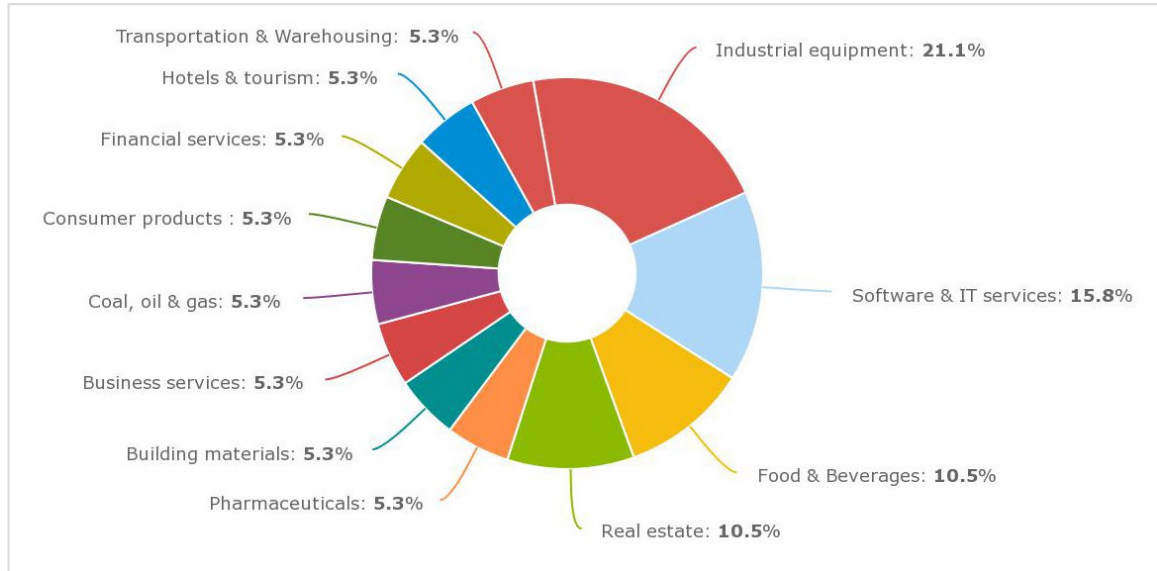


Source: www.fdimarkets.com 2022.

In 2022, there have been so far only 4 recorded FDI projects in Industrial equipment, Real estate, Financial Services, and Transportation & Warehousing.

Also worth noting is that the Real estate sector project is also a Business Services project; the company is a workspace and office provider that is opening a new business center.

**Figure 52** - FDI into Nearby Regions by Percentage Share of Projects by Sector - June 2019 – 2022.



Source: [www.fdimarkets.com](http://www.fdimarkets.com) 2022.

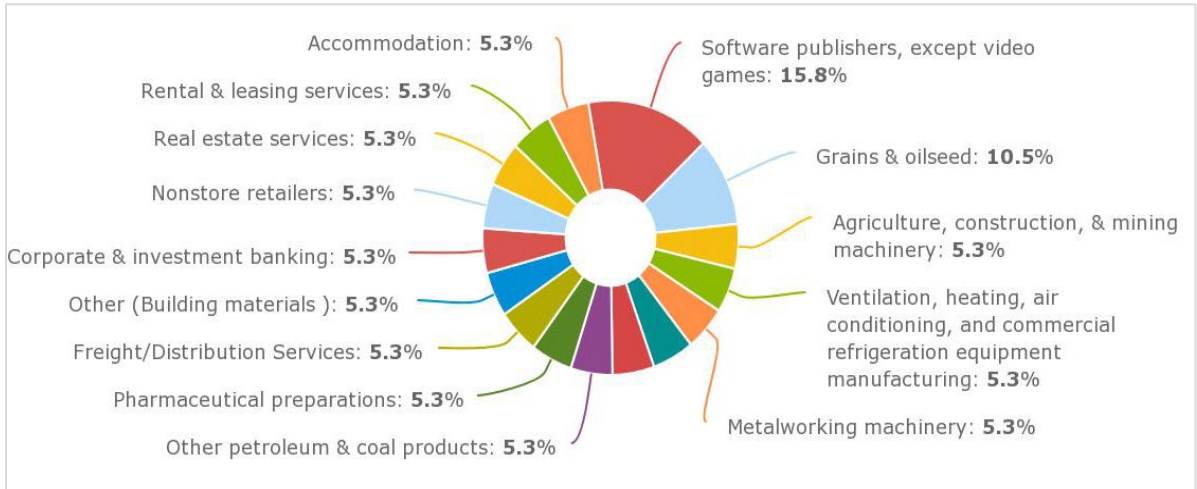
While Software publishers are the leading subsector, an aggregated view shows that Agribusiness accounts for over a quarter of all projects, while Industrial and Professional Services represent slightly over 30% of the FDI projects received within the nearby regions.

Note Agribusiness includes some Software/IT companies; for example, Solinftec, a Brazil-based digital agriculture company, has established operations in Saskatoon, SK.

Food & Beverage also falls into this space; for example, Viterra, a grain handling business and subsidiary of Switzerland-based Glencore, established a new grain elevator in Biggar, Canada.

Also worth noting that Industrial equipment is also part of the Agribusiness cluster; for example, China-based Sinoinnovo Technology, operating as Plant Box, is a producer of LED lighting systems for indoor plant growth, opened a manufacturing and distribution centre in Edmonton.

Figure 53 - FDI into Nearby Regions by Percentage Share of Projects by Subsector - June 2019 – 2022.



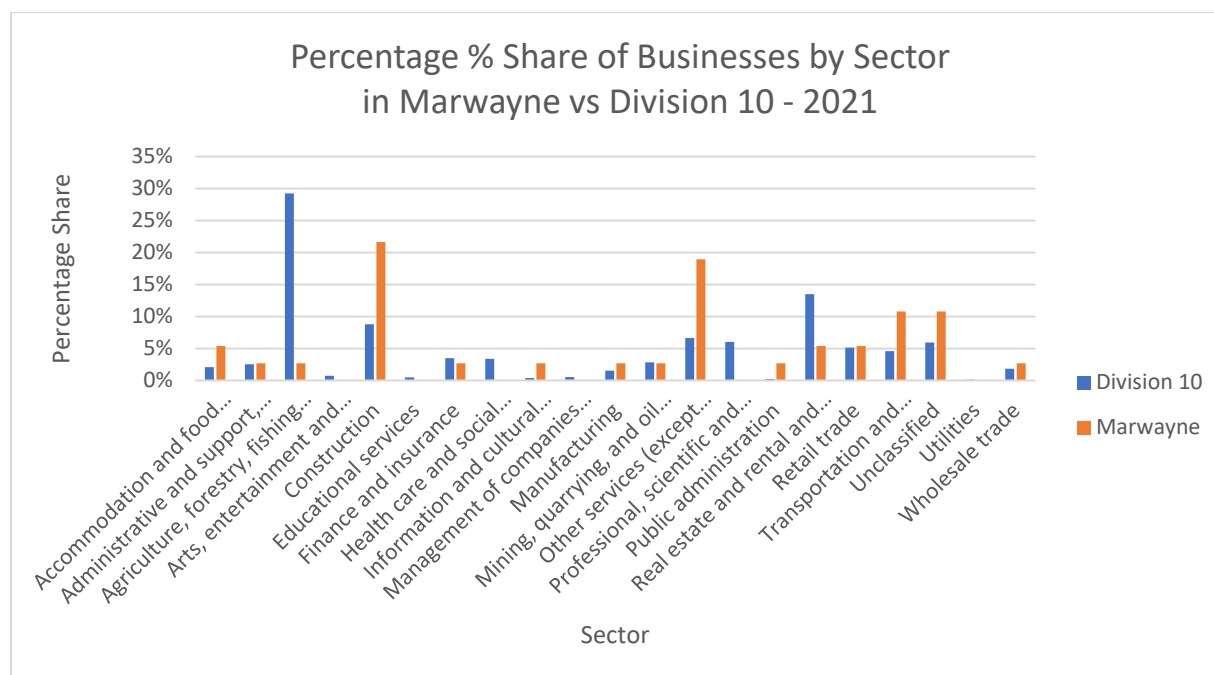
Source: [www.fdimarkets.com](http://www.fdimarkets.com) 2022

## 8.4 Target Sector Identification

### Target Sectors Identification

Both Marwayne and Division 10 share synergies by way of their percentage share of businesses across several sectors such as Accommodation and food services; Administrative and support, waste management and remediation services; Agriculture, forestry, fishing and hunting; Construction; Mining, quarrying, and oil and gas extraction; Finance and insurance; Manufacturing; Other services (except public administration); Real estate and rental and leasing; Retail trade; Transportation and warehousing; and Wholesale trade.

Figure 54 - Percentage Share of Businesses by Sector in Marwayne vs Division 10 – 2021.



Source: Lightcast (formerly EMSI Analyst), 2021.

Of the above-mentioned sectors, the most viable for investment attraction include:

- Administrative and support, waste management and remediation services;
- Agriculture, forestry, fishing and hunting;
- Mining, quarrying, and oil and gas extraction;
- Finance and insurance;
- Manufacturing;
- Other services (except public administration);
- Transportation and warehousing;



However, Marwayne has the opportunity to draw on the strengths, assets and resources of Division 10, there are sectors that are not active or with low activity in Marwayne and/or Division that would also be suitable for investment attraction. Those include:

- Professional, scientific and technical services
- Information and cultural industries

Supply Chain factors:

- Agriculture, forestry, fishing, and hunting industry is the only sector with in-region purchases in Marwayne
- Marwayne's largest imported purchases are in the Manufacturing sector and its second largest imported purchase is in the agriculture, forestry, fishing, and hunting sector
- Agriculture, forestry, fishing and hunting and mining, quarrying and Oil and gas extraction had the leading percentage of purchases by a sector in-region in Division 10
- The leading imported purchase sectors by value was manufacturing at \$1.15 billion, with Agriculture, forestry, fishing and hunting in second place but at roughly ¼ the value
- While at a much lower value, the third and fourth leading import purchase sectors were Transportation & Warehousing and Professional, scientific and technical services but with a combined value at well over \$500 million
- The manufacturing sector is Division 10's leading exporter valued at \$1.16 billion
- The next leading export sectors in Division 10 are Agriculture, forestry, fishing and hunting at \$965K and mining, quarrying, and oil and gas extraction at \$690K

Labour force competitive advantages:

- Agriculture, forestry, fishing and hunting LQ (location quotients) of 4.45 and 3.74 in Marwayne and Division 10, respectively
- Professional, scientific and technical services LQ of 1.71 in Marwayne
- Other services (except public administration) LQ of 1.44 in Division 10
- Transportation and warehousing LQ of 1.06 in Division 10
- Mining, quarrying, and oil and gas extraction LQ of 3.38 in Division 10

External trends:

- Over the last 3 years, over a quarter of the FDI into nearby regions fell within Agribusiness

- During the same period, slightly over 30% of the FDI was split evenly between Industrial and Professional Services projects
- In terms of business activity, during the last 3 years 26.3% of projects were Logistics, Distribution & Transportation sector, 15% of projects fell into Business Services / Professional Services while 10% of projects were Manufacturing related

Given the above-mentioned factors and trends, the ideal target sectors for prioritization are as follows:

- Agriculture, forestry, fishing and hunting;
- Mining, quarrying, and oil and gas extraction;
- Professional, scientific and technical services
- Transportation and warehousing;
- Manufacturing;
- Other services (except public administration).

---

## 8.5 Opportunity Analysis

### Introduction

As part of strengthening economic resiliency, the Village of Marwayne's goals includes increasing the community's economic activity, building and diversifying the assessment/tax base and creating local employment opportunities. In doing so, the Village wants to attract and retain a diverse range of businesses to meet the needs of the community and the surrounding region. The following sets out a range of opportunities to accomplish this goal.

The preceding analysis identified primary and secondary target sectors as follows:

#### Primary Target Sectors

1. Agriculture, forestry, fishing and hunting;
2. Mining, quarrying, and oil and gas extraction;
3. Professional, scientific and technical services
4. Transportation and warehousing;

#### Secondary Target Sectors

5. Manufacturing;
6. Other services (except public administration).

These sectors are intended to support the primary sectors, with applicable opportunities set out in their respective tables.

Note, other services, in this case, would include Automotive repair and maintenance, Electronic and precision equipment repair and maintenance, and Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance.

## OPPORTUNITY ASSESSMENT &amp; PRIORITIZATION

## Agriculture forestry, fishing and hunting

Agriculture – Sector/Subsector Opportunities			
Opportunity Name	Opportunity Description	Key Supporting Factors	Time Frame
Value-Added Agriculture	<ul style="list-style-type: none"> <li>Agri-Related Supply Chain Businesses</li> <li>Value-added Processing</li> </ul>	<ul style="list-style-type: none"> <li>High LQ/employment concentration agriculture, forestry, fishing and hunting: Marwayne (3.74) and Division 10 (4.45) respectively</li> <li>Other services (except public administration) LQ of 1.44 in Division 10</li> </ul>	Short term
Service and supply to agriculture	<ul style="list-style-type: none"> <li>Crop Science</li> <li>Agri-tech</li> <li>Machinery sales, servicing, and repair</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture, forestry, fishing, and hunting industry:               <ul style="list-style-type: none"> <li>Only sector with in-region purchases in Marwayne</li> <li>Marwayne's second largest imported purchase</li> <li>Leading percentage of purchases by a sector in-region in Division 10</li> <li>Last 3 years, Agribusiness represented over a quarter of FDI into nearby regions</li> <li>Proximity to Saskatchewan - more than 40% of Canada's farmable land</li> <li>Increasing global demand for food, feed and fuel</li> <li>Cargill, Parrish &amp; Heimbecker in Marwayne</li> </ul> </li> </ul>	
Green economy manufacturing	<ul style="list-style-type: none"> <li>Biomaterials</li> <li>Synergy with agribusiness</li> </ul>	<ul style="list-style-type: none"> <li>'Greenovation'</li> <li>Growing prominence of bioplastics</li> <li>Supply of raw materials</li> </ul>	Short/medium term
Complimentary manufacturing sector development	<ul style="list-style-type: none"> <li>Build out manufacturing sector, leverage sector strengths in agribusiness</li> </ul>	<ul style="list-style-type: none"> <li>Division 10:               <ul style="list-style-type: none"> <li>Manufacturing leading imported purchase sector at \$1.15 billion</li> <li>Manufacturing leading exporter valued at \$1.16 billion</li> <li>10% of FDI projects over last 3 years in nearby regions were manufacturing related</li> </ul> </li> </ul>	Medium-term
Vertical Farming	<ul style="list-style-type: none"> <li>Uptick in vertical farming in Canada</li> <li>Potential to offer hybrid solutions, especially for crops that cannot be grown locally</li> </ul>	<ul style="list-style-type: none"> <li>Greenovation</li> <li>Agricultural expertise in region</li> <li>GoodLeaf Farms investment biggest indoor farm in Calgary with a \$2.73-million grant from Province</li> </ul>	Medium/long-term

Mining, quarrying, and oil and gas extraction

Mining, quarrying, and oil and gas extraction Sector/Subsector Opportunities			
Opportunity Name	Opportunity Description	Key Supporting Factors	Time Frame
Support activities for oil & gas industries	<ul style="list-style-type: none"> <li>Build on existing strengths in the area</li> <li>Machinery sales, servicing, and repair</li> <li>Professional services around carbon reduction</li> </ul>	<ul style="list-style-type: none"> <li>Mining, quarrying, and oil and gas extraction:               <ul style="list-style-type: none"> <li>LQ of 3.38 in Division 10</li> <li>Leading percentage of purchases by a sector in-region in Division 10</li> <li>Other services (except public administration) LQ of 1.44 in Division 10</li> <li>Direct corridor to Cold Lake (Highway 897), and Cold Lake Oilsands area</li> <li>Drives to reduce carbon footprint in the oil &amp; gas industry</li> </ul> </li> <li>Other services (except public administration) LQ of 1.44 in Division 10 – this includes Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance</li> </ul>	Short term
Support activities for Saskatchewan mining sector	<ul style="list-style-type: none"> <li>Rising global demand for critical minerals</li> <li>Saskatchewan is a major producer of critical minerals and Marwayne sits at its border</li> <li>Support activities could range from material handling, processing, equipment repair and servicing</li> </ul>	<ul style="list-style-type: none"> <li>Saskatchewan possesses various high demand minerals, including potash and uranium, and home to the largest potash industry <sup>6</sup> and the largest potash company - Nutrien <sup>7</sup></li> <li>Saskatchewan is home to roughly 1/3 of global production per year with almost half of the world's known reserves. <sup>6</sup></li> <li>Development of Rare Earth Processing Facility in Saskatchewan - first-of-its-kind in Canada - Rare Earth Element (REE) supply chain</li> <li>Other services (except public administration) LQ of 1.44 in Division 10 – this includes</li> </ul>	Short/medium term

<sup>6</sup> [Saskatchewan.ca](http://Saskatchewan.ca)

<sup>7</sup> [Investingnews.com](http://Investingnews.com)

Mining, quarrying, and oil and gas extraction Sector/Subsector Opportunities			
		Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance	
Downstream manufacturing for Saskatchewan mining sector	<ul style="list-style-type: none"> <li>Leverage proximity to Saskatchewan</li> <li>Downstream manufacturing of minerals from Saskatchewan for distribution into Alberta market or export markets</li> </ul>	<ul style="list-style-type: none"> <li>Downstream manufacturing for mineral sector valued at \$21.2 Billion in 2020</li> <li>Demand for minerals increasing, will put pressure on Saskatchewan companies to meet demands <sup>8</sup></li> <li>10% of FDI projects over last 3 years in nearby regions were manufacturing related</li> <li>The manufacturing sector is Division 10's leading exporter valued at \$1.16 billion</li> </ul>	Short/medium term
Cross-sector manufacturing	<ul style="list-style-type: none"> <li>Leverage expertise across oil &amp; gas and mining sector to support dual sector manufacturing production</li> </ul>	<ul style="list-style-type: none"> <li>10% of FDI projects over last 3 years in nearby regions were manufacturing related</li> <li>The manufacturing sector is Division 10's leading exporter valued at \$1.16 billion</li> <li>Mining, quarrying, and oil and gas extraction LQ of 3.38 in Division 10 Example – in 2020 US-based DeZURIK, which manufactures industrial valves and actuators for municipal and industrial markets including water, waster water, power, mining, paper, chemical, petroleum and petrochemical applications, opened a fulfilment and service centre in Leduc <sup>9</sup></li> </ul>	Short/medium term

<sup>8</sup> [Nature Resources Canada](#)

<sup>9</sup> [Fdimarkets.com](#)



Professional, scientific and technical services

Professional, scientific and technical services Sector/Subsector Opportunities			
Opportunity Name	Opportunity Description	Key Supporting Factors	Time Frame
Front end (project initiation and assessment etc.) professional services for large capital projects	<ul style="list-style-type: none"> <li>Capitalize on <a href="#">Alberta's Major Projects Program</a></li> </ul>	<ul style="list-style-type: none"> <li>Professional, scientific and technical services LQ of 1.71 in Marwayne</li> <li>Alberta's Recovery Plan (capital projects and diversification)</li> <li>Alberta supporting the deployment of small modular reactors (SMRs)</li> </ul>	Short term
Commercial and servicing hub	<ul style="list-style-type: none"> <li>Professional and technical services for in-region support</li> </ul>	<ul style="list-style-type: none"> <li>Last 3 years: 15% of FDI projects were in Business Services / Professional Services</li> <li>Division No 10 has a diversified economy</li> </ul>	Short/medium term

Transportation and warehousing

Transportation and warehousing Sector/Subsector Opportunities			
Opportunity Name	Opportunity Description	Key Supporting Factors	Time Frame
Storage/warehousing	<ul style="list-style-type: none"> <li>Manufacturing supply chain strength</li> </ul>	<ul style="list-style-type: none"> <li>Last 3 years 26.3% of FDI/DDI projects were Logistics, Distribution &amp; Transportation sector</li> <li>Transportation and warehousing LQ of 1.06 in Division 10</li> </ul>	Short term
Local Distribution	<ul style="list-style-type: none"> <li>Logistics/distribution companies moving towards local distribution</li> </ul>		Medium term
Disruptive transportation models	<ul style="list-style-type: none"> <li>Work with logistics companies for pilots</li> <li>Possible alignment with pilot logistics campaign</li> </ul>		Medium/long term

*This page is intentionally left blank.*

## 9 SWOT ANALYSIS (STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS)

---

9.1 A

9.2 B

9.3 C

## SWOT ANALYSIS (STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS)

## SWOT ANALYSIS (STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS)

*This page is intentionally left blank.*

*This page is intentionally left blank.*







## **BACKGROUND REVIEW – AREA STRUCTURE PLAN**

### **Village of Marwayne**

