



APPIN
BUSINESS PARK

Concept Plan

Appin Developments Inc.

September 2025

PREPARED AS REQUIRED BY THE PROVISIONS OF THE
MOUNTAIN VIEW COUNTY SOUTH CARSTAIRS AREA
STRUCTURE PLAN



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List of Acronyms

Measurements

ha	hectare
ac	acre
m	meter
m ²	square meter
m ³	cubic meter

Terms

TWP	Township Road
RGE RD	Range Road
ASP	South Carstairs Area Structure Plan No 11/18
MDP	Municipal Development Plan
LUB	Land Use Bylaw
Concept Plan	Appin Business Park Concept Plan
NE	North East
NW	North West
SE	South East
SW	South West
MR	Municipal Reserve
ER	Environment Reserve
PUL	Public Utility Lot
SWMP	Storm Water Management Plan
BIA	Biophysical Inventory Analysis

TIA	Traffic Impact Assessment
ABP	Appin Business Park
MVC	Mountain View County
QE2	Queen Elizabeth Highway 2
ESA	Environmental Site Assessment
AMT	Alberta Materials and Testing
HRA	Historical Resources Application
Metro	Metro Geotechnical Assessment
ROW	Right of Way
EPZ	Environmental Protection Zone
TAQA	TAQA North Ltd
AEPEA	Alberta Environmental Protection and Enhancement Act
AEP	Alberta Environment and Parks
PSTS	Private Sewage Treatment System
WATT	WATT Consulting Group
AADT	Adjusted Average Daily Traffic
VPD	Vehicles Per Day

1. Introduction and Purpose

The Appin Business Park Concept Plan (Concept Plan) is prepared in accordance with the requirements of the South Carstairs Area Structure Plan No. 11/18 (SCASP).

The land is located within a portion of North East (NE) 24-29-1-5 and has an area of approximately 63.03 hectares (ha) (155.87 acres (ac)). as shown on **Figure 1 Appin Plan Area Map**

The proposed development will be zoned as I-BP Business Park District to provide a range of commercial and industrial uses of various sizes. Lot sizes will be flexible as determined by the market and will be provided to meet purchaser requirements. The number of lots will not change in the approved phases without approval of the approving authority.

The Concept Plan has been prepared as per Section 5.2.3 including the following:

- Lot configurations
- Internal Road Systems
- Municipal Reserve (MR) and Open Space lands
- Infrastructure requirements (i.e. stormwater, water and waste water servicing, road surfaces)
- Water consumption/availability and impacts on adjacent users
- Multi-use pathway development
- Parcel sizes
- Landscape design, screening and buffering
- Transitional area(s) between adjacent uses
- Public consultation plan/approach
- Phasing
- Comprehensive in scope
- Plan covers all the affected Certificate of Title
- Internal subdivision roads are designed and will be constructed at developers expense according to MVC standards
- A minimum quarter section area is covered by the Concept Plan
- Provision of private water and wastewater systems to meet Mountain View County (MVC) and Provincial standards
- Provision of a Stormwater Management Plan (SWMP) to meet MVC and Provincial Standards
- Provision that all infrastructure is to be provided at no cost to MVC
- Identify how Municipal Reserve (MR) will be provided by cash-in -lieu or land dedication or a combination of the two

- Lot sizes will conform to the Land Use Bylaw (LUB)
- Architectural Design Controls, buffering, property line setbacks, landscaping, lighting, signage, parking, garbage and nuisance control expectations will be described in the Concept Plan to address the MVC goal for an “Entrance Way” to MVC.
- Identify by survey the un-named drainage course and determination of development setbacks from the drainage course.
- Determine ownership of the drainage course and its bed and shores.

2. Vision

Appin Business Park (ABP) will be a destination for clientele needing a variety of limited utilities service affordable land sites for commercial and industrial purposes with convenient access to existing local and regional transportation infrastructure.

The site has a natural intermittent drainage area that will be enhanced and protected as Environmental Reserve (ER).

Topography is suitable for land development with slopes to enhance stormwater management.

Buffering transitions will be provided by landscaping to reduce visual and noise impact to adjacent roads and residential land uses.

Adjacent regional road infrastructure upgraded to MVC and Rocky View County (RVC) standards subject to impact of site development as determined by Traffic Impact Assessments (TIA).

Creation of Environmental Reserve lands to protect the un-named drainage course that runs through the Concept Plan area.

3. Rationale

ABP will provide for long term local and regional demand for industrial and commercial land with access to major regional traffic infrastructure. Development of the land as a business park is based on the following:

- Development within the approved SCASP.
- Proximity to the Queen Elizabeth Highway 2 (QE 2) corridor and the existing interchanges at Township Road 292 (TWP RD 292) and Highway 581 (HWY 581).
- The ability to provide private water and wastewater solutions to purchasers.
- A land area with topography that is suitable for development of a variety of lot sizes to meet market demand on a phased basis.
- Opportunity to attract regional businesses, additional property tax base and employment to MVC.

4. Context

Figure 2: Regional Context, Figure 3: Inter-municipal Context and **Figure 4: Existing Land Use Context** show ABP to be located East of the QE2 Highway and Range Road (RR) 10A, south of TWP RD 294, and West of RR 10. The site will be accessed from QE2 at the highway interchanges located on TWP RD 292 or HWY 581.

The Town of Carstairs is approximately 2 miles west and 3 miles north of this land.

Land uses around the site are mainly agricultural operations. Some fragmentation has occurred with residential first parcel out sites. Land on the west side of QE2 has developed as business uses.

Within the Concept Plan Area, the majority of the existing land use designation for the subject lands is "Agricultural District".

Surrounding land uses are mostly designated "Agricultural District".

A small licensed gravel pit has operated on the subject land. It is nearing the end of its operation. The gravel pit is designated as "Aggregate Extraction/Processing District".

A 5 acre residential parcel (Lot 1-911 1208) exists in the quarter section and is not included in the Concept Plan Area.

The quarter section north of the subject land was used by the Province of Alberta as a source of gravel. This pit is nearly depleted.

The land has an unnamed intermittent drainage course draining from South to North into the Carstairs Creek drainage channel.

The land is within the recently approved SCASP. The SCASP designates the land for Commercial and Business Park uses. All of the uses proposed for this land fit the SCASP intended uses for the land.

Environmental Conditions

In 2018 a Phase 1 Environmental Site Assessment (ESA) was prepared by GhostPine Environmental Services Ltd. to analyze environmental impacts to the land. The report identified 5 areas of potential environmental concern. The potential concerns were rated "low" and "low to moderate". GhostPine considers that no further investigation (i.e. Phase 2 ESA) is required. GhostPine recommended clean up work on the 5 small areas to remove contaminants.

Archeological Assessment

In 2019 Arrow Archeology provided a desktop historical resources review for the land. The Arrow application stated that there were no recorded historical resources on the land and indicated that the land had not been designated to have historical value.

The Historic Resources Application (HRA) to the province received a requirement from the regulator to conduct a field oriented HRIA.

The area of HRA concern is located along the unnamed drainage area running through the land. This area will be generally undisturbed with the exception of the construction of Road B and associated culvert work. Arrow Archeology indicates that additional field work is not required because the area will not be developed and will be dedicated as Environmental Reserve.

The developer will provide this updated report as required by the Schedule of Requirements prior to any development on the land subject to ongoing discussions with Alberta Culture.

Geotechnical Assessment

A geotechnical assessment of the land was prepared by Alberta Materials Testing and Engineering (AMT) April 19, 2021 and an additional assessment was conducted by Metro Testing and Engineering (Metro) May 21, 2021. These reports provide geotechnical engineering comments for site grading, installation of underground utilities, foundation design, roads and sidewalks construction, pavement design.

The Metro report is an update to the AMT assessment and as such will be used for this development application.

Twenty Three (23) boreholes were drilled by AMT in a 150 m grid pattern over the land. Additional holes were drilled by Metro in 2021.

The surficial geology consists of Ground Moraine till which is characteristically silty with a mix of sand, silt and clay. Topsoil ranged in thickness from 0.1 m to 0.2 m. Sandstone bedrock was found in seventeen boreholes at a depth 0.5 m below grade. All boreholes were found dry at the end of the investigation.

Site development will follow the recommendations made in the Metro geotechnical assessment. Additional site specific soils analysis will be required of lot purchasers to suit their development requirements.

Pipelines

Figure 6: Gas Pipelines identifies 3 gas lines to the West of the Appin land. A Alberta Energy Regulator (AER) review of the gas lines was conducted to determine the potential for setback impact from the pipelines to the Appin land. The pipelines are currently abandoned.

Two pipelines numbered 6574-214 and 6574-24 are licensed by TAQA North Ltd and was used to conduct Sour Natural Gas Category 1. One TAQA North pipeline numbered 6575-15 was used to conduct Sour Fuel Gas Category 1.

The potential impact for Category 1 Sour Gas requires a setback from the gasoline easement to habitable buildings of 0 to 100 meters depending on the volume of gas in the pipelines.

Written confirmation dated March 30, 2021 from the registered owner of the gas facilities TAQA (Cindy Saskiw) confirms that the gas lines have been discontinued and abandoned. They confirm that no setback other than the ROW itself is required and no Environmental Protection Zone (EPZ). Her written confirmation and a map showing ownership of the lines are attached with this submission.

Biophysical Existing Background

Most of the property is highly disturbed with 53.8 ha (85.3% of the property) either by cultivated fields (46.8%), anthropogenic areas (residential, gravel pits, roads etc.) (16.8%) or disturbed grasslands (21.7%). Small remnant areas of native prairie are in the Northwest portion of the property and in the riparian/wetland areas within the drainage course. There is extensive disturbance (particularly in the southern part of the drainage course) resulting from agricultural practices (livestock grazing, excavation of dugout) as well as previous gravel extraction and road construction.

Three man made wetlands and a riparian area/drainage course were identified and delineated by the historical review and several site visits. The man made wetlands occur on the property as a result of manmade damming caused by roads. These are ephemeral (1) and seasonal (2) wetlands in areas within cultivated fields.

A drainage course drains from South to North through the centre of the property. The banks of this drainage course have steep slopes for most stretches but some wider areas (predominantly in the Northern portion) have wetland vegetation and soil profiles consistent with Seasonal wetlands.

Biophysical Impacts Assessment

In the Stormwater Management Plan (SWMP) section of this Concept Plan, the proposed commercial/industrial development on the property includes constructing/enhancing wetlands in three different areas. The estimated impact for each of these are listed below:

Area 1: East portion of the property

There is currently a wetland in this area, however, based on historical aerial photography review, the wetland is man made and the wetland area has been a cultivated field for several decades.

- Impact: Assuming the constructed wet pond includes wetland enhancements, it is expected the impact is beneficial.

Area 2: Upland area East of the drainage course .

The area is currently highly disturbed (gravel pit)

- Impact: Assuming the constructed wet pond include wetland enhancements, the area will be naturalized, and it is expected the impact is beneficial.

Area 3: Existing dugout/reservoir within drainage course

There is currently a dugout in this area, and the reservoir is manmade.

- Impact: Assuming the enhanced wet pond include wetland enhancements, it is expected the impact is neutral/beneficial.

Easement 081036034

A 75 foot wide easement of a right of way parallel to the westerly boundary on NE 24-29-1-W5 was granted to the lands on SE 24-29-1-W5 for the purpose of road access for such length of time the road is required by the Grantee. The Grantee no longer requires the easement and it has been removed.

Phase 1 Groundwater Supply Assessment

Groundwater Resources Information Technologies prepared a Phase 1 Groundwater Assessment Dated Oct 20, 2021. The assessment was prepared to understand the quality and distribution of aquifer resources in the area as they relate to future development of the property and its water requirements.

Aquifers in the area consist of bedrock sandstones found at depths of up to 100 meters below ground. A wide variety of well capability was noted with rates between 1m³/day and 200m³/day. It is expected sufficient aquifer supplied water should exist for commercial operations that require water for sinks, toilets and small volumes for process needs.

A review of publicly available information showed low to moderate current utilization of the groundwater, including mostly domestic and licensed groundwater users. No adverse affects to existing groundwater users would be expected because of groundwater use at this development.

Level II Private Sewage Treatment System Assessment for Commercial Subdivision

Groundwater Resources Information Technologies Ltd. conducted a Level II Private Sewage Treatment System (PSTS) Assessment for this proposed commercial/ industrial development.

Twelve test holes were dug across the site quarter section to get a general assessment of the soils, log the soil, collect soil samples for grain size analysis and determine if any shallow water table or restrictive layers are present. Strata underlying the site consists of silt loam, clay loam, loam or silty clay loam soils with 5 - 40% gravel, cobbles, boulders, and weathered bedrock pieces.

Shallow bedrock at depths of less than 2 meters is a restricting layer and was encountered in 9 of the 12 test holes.

The soils overlying the shallow bedrock will support primary or secondary treated effluent disposal with a mounded septic field system.

The remaining three test hole locations encountered soil that would support conventional below grade treatment fields. There are no indications of a shallow water table and the water table is likely around 4 meters below surface based off previously completed geotechnical investigations.

The report provides calculations to determine approximate PSTS field areas. Lot owners will be required to refer to this report to determine site specific requirements for their PSTS design. Final siting of the PSTS's shall maintain the required setback distances from the treatment field to property lines, water wells, water courses, buildings and septic tanks as outlined in the Alberta Private Sewage Systems Standard of Practice 2015.

5. Existing Site Conditions

Legal Descriptions

Figure 5: Existing Site Conditions Map shows 2 parcels legally described as NE 24-29-1-W5M and Lot 1 Plan 911 1208.

Ownership of the two parcels is:

Lot 1, Plan 9111208. Susan L Strelloff and Jeffrey J Bobbie 1.67ha, (4.13 ac)

NE 24-29-1-W5M. Appin Developments Inc. 63.03ha, (155.87 ac)

Land Condition and Topography

Figure 5: Existing Site Conditions Map shows the land to be a combination of generally flat and rolling lands draining to an intermittent unnamed drainage course that flows into Carstairs Creek. There is an existing man made pond in the drainage course that was created over 40 years ago by a previous owner. The road crossing the drainage channel was constructed at a later date.

The lands within the drainage course are generally undisturbed. The majority of the land has been cultivated and used for agricultural purposes.

A licensed gravel pit is located on the land and operates under a development pit number DP-07-121 issued in 2007. This pit is currently operating but is nearing the end of operation.

A smaller gravel pit in the South portion of the site has not been operating for several years.

Existing buildings on the site include a mobile home, garage and storage shed. The buildings have an existing driveway that connects to RR 10. The buildings shall remain in place for use until the phase they are in is developed.

A domestic groundwater well and private sewage treatment facility is currently being used for the mobile home. The owner plans to keep the well and septic treatment facility for future use in the future subdivided lot if they are deemed to be usable within a new lot.

6. Development Concept and Phasing

Development Concept

The plan area consists of phased commercial and industrial business park that is comprehensively planned under the requirements of the SCASP.

The concept proposes four development phases as identified by **Figure 7: Appin Development Concept and Phasing**. Lots will be sized to meet market demand and user requirements to meet **I-BP Business Park District** regulations.

Layout of and access to the lots will respect topographic changes in the land.

An internal road network will be developed to MVC design requirements.

Environmental Reserve

A seasonal drainage channel drains from South to North through the plan area.

Figure 8 Appin Surveyed Drainage Channel and Setbacks is prepared from a drainage course survey conducted on Nov. 15, 2018 and Sep. 9, 2022 by Pat Maloney (Alberta Land Surveyor) to determine the centre line of the drainage course. This data was used by Omnia Ecological Services (Omnia) to prepare a Water Course Setback Determination report dated October 2022. The report identified the Riparian boundary and also the Riparian setback boundaries of the drainage course. The land within the Riparian setback area will be left in its natural state with the exception of Road B

and its culvert and will be classified as Environment Reserve.

The area of land of the Riparian setback area is approximately 8.48 ha (20.95 ac.)

Crown Ownership

The assessment, including historical aerial photographs, was submitted to the Water Boundaries Unit at Alberta Environment and Parks (AEP) on July 8th, 2022 to determine the potential for a Crown claim. The decision from AEP was received on the same day.

AEP did confirm an ownership claim to the bed and shore of the drainage course within the gully (not the entire gully) running through the property since it meets the criteria for Crown ownership.

As a result, the Crown in right of Alberta, asserted ownership of the bed and shore of the drainage course. They stated further that any flooded areas beyond its normal bed and shore which has occurred due to man-made activities are not considered to be part of the Crown-owned bed and shore.

Phases

Figure 10 Appin Phase Area Analysis Plan identifies the proposed phases in the concept plan area.

Phasing will occur in a logical and orderly sequence respecting changes in topography, to manage financial costs, market conditions and risks and to take advantage of staged internal road and stormwater pond construction. Phases and configurations of phases may change to meet market conditions and developer needs.

Phase One

Phase One contains approximately 14.96 ha (36.98 ac). Access to this phase is provided by public roads RR 10A, TWP RD 294, and internal roads A,B and C .

The West Storm pond will be developed in Phase One to collect, treat and store stormwater drainage.

Phase Two

Phase Two contains approximately 12.52 ha (30.94 ac). Access to this phase is from Roads A, E and TWP Rd 294.

An additional shared future access to RR 10A may be possible through the contiguous land to the west subject to agreement with the landowner and MVC when subdivision is approved on that parcel. **This potential access is shown on Figure 7 Appin Concept Site Plan.**

The land drains to the east into the Environmental Reserve.

Storm water will be directed to the West Storm Pond

Phase Three

Phase Three contains approximately 11.70 ha (28.92 ac). Access to this phase is from Roads A, B, and F.

This phase has land that gently slopes to the north east. Storm Water will be directed into the Central and East storm ponds.

Phase Four

Phase Four contains approximately 14.39 ha (35.56 ac). Access to Phase 4 is from roads A,B and E.

Part of this phase is located on a higher elevation of land that divides the phase into a higher and lower elevation for development. Phase Four will drain into the Central and East storm ponds.

7. Community Benefits

Economic Growth and Sustainability

MVC is a rural county that includes a number of towns and a village. The County is experiencing pressure for development that includes the need to develop commercial and business park properties.

Because of the identified need for commercial and business park opportunities, the County prepared the South Carstairs Area Structure Plan in 2018.

The QE II Highway corridor runs through the County and provides a significant flow of traffic. Development of Appin Business Park close to the Highway interchange at TWP Rd 292 will provide significant opportunities for diversification and business retention for many years through a new industrial/commercial business park.

The ABP will provide opportunities for employment, new business development, access to local trades for construction of the development and an additional commercial tax base to the County.

Environment

The drainage channel that runs through the development will be preserved and protected as a dedicated Environmental Reserve.

Impact to Neighbours

The ABP establishes site and building design requirements that mitigate impacts to neighbours through landscaping, and screening.

Site lighting is required to conform to “Dark Skies” policies.

MVC Commercial/Industrial Guidelines will be applied through the development permit process.

Gravel Pit

A gravel pit has operated under an approved Development Permit DP 07-121 since November 20, 2007.

The existing Class II Sand and Gravel licensed gravel pit will be reclaimed and developed as part of Phase One.

8. Gravel Pit Reclamation

8.01 Policy: Gravel Pit Reclamation

There are two gravel pits located on this land. The pit near the south boundary of the land is not in operation and has not been used for several months. A pit at the north portion of the land is currently active and is nearing the end of its operations.

Both gravel pits will be reclaimed to meet the regulations of MVC Bylaw No. 10/24, Section 10.11a for phased reclamation of the existing aggregate extraction/processing operation, to the satisfaction of the County and relevant government agencies or departments.

A formal application dated Jan 26, 2022 has been submitted to Alberta Environment and Parks (AEP) for a partial reclamation certificate.

The application documents are appended to this Concept Plan.

Alberta Environmental Protection (AEP) expectations for this specific reclamation certificate application and process include:

- The reclamation certificate application area will encompass both pits. The portion of the existing active pit is intended to contain a future storm drainage system in conjunction with the Appin development. The storm drainage system is proposed to reside within a Public Utility Lot (PUL). For reference, the attached **Figure 9: Gravel Pit Reclamation Plan** identifies the existing

pit area that is currently active but nearing completion, as well as proposed storm drainage system and PUL lot locations.

- As both the gravel operation and stormwater system are considered activities under Alberta's Environmental Protection and Enhancement Act (EPEA), a reclamation certificate will be required by AEP prior to issuing a Registration for the construction and operation of the proposed storm drainage system.
- Construction of the storm drainage system will require that the entirety of the proposed PUL lot be disturbed and re-graded; as such, typical contouring and revegetation reclamation certificate requirements will be waived for this application.
- The initial reclamation certificate application includes historical pit operation information, existing ground contours, proposed use details, rough grading concept and proposed storm water management report.

- Reclamation certificate application for the remaining Class II pit area will commence once the final development, roads, rough grading and landscaping have been completed. This application will be typical and include contouring and re-vegetation requirements.
- All costs for reclamation will be paid by the Developer.
- On Feb 14, 2024 Alberta Environment and Protected Areas provided written confirmation of a field based inspection at the gravel pit. The inspection noted no issues for the land to be used for industrial purposes. The inspection was based on “land capability” which means the ability to support a given land use. A Partial Reclamation Certificate will be issued when a land use change designation is issued. A copy of this communication is appended.

9. Transportation

Traffic Impact Assessment

Watt Consulting Group (WATT) prepared an initial TIA in 2021 that was updated in 2022.

WATT also prepared a new Traffic Impact Assessment in June 2024 to analyze the current development traffic impacts to the adjacent regional road network. This work included preparation of traffic counts in the neighbouring I-BP Rainbow Industrial Park development on the west side of QE2 to develop an accurate baseline for traffic volumes.

The 2024 TIA examines the existing conditions as well as the opening day (2030) background and post development conditions and the long-term (2040) conditions in order to provide a clear view of the development traffic impacts on the adjacent road network. Regional Road Access Route

Five intersections in the study are key in the analysis for the Appin development. These are identified in Figure 1 of the report as:

- TWP Rd. 292 / RR 10A;
- TWP Rd. 292 / RR 10;
- TWP Rd. 294 / RR 10A;
- TWP Rd. 294 / RR 10; and
- Highway 581 / RR 10A.

TWP Road 292 provides access to the interchange at the QE II Highway.

The analysis considered Existing Conditions, Background (without Appin),

Post Development (of Appin), and Ultimate Build Out Scenarios (NW24-29-1-5 and SW24-29-1-5) to 2030 and 2040.

Existing Road Network Conditions

Highway 581 is a paved two-lane secondary highway that runs east-west between Carstairs and Highway 791. Township Road 292 is a two-lane paved local road that runs east-west within the study area; Township Road 292 connects to Highway 2 at an interchange just west of Range Road 10A. Township Road 294 is a two-lane gravel local road running east-west within the study area. Range Road 10A is a two-lane gravel local road that runs parallel to and east of Hwy. 2 in the study area with the exception of a 1km section south of Highway 581, where Range Road 10A has recently been paved and widens to four lanes. Range Road 10 is a two-lane gravel local road that runs north-south in the study area. The intersection of Highway 581 and Range Road 10A has also recently been re-aligned to the east of the original location (Range Road 10A north of Highway 581 was not re-aligned).

All of the study intersections are un-signalized with free movement on the east-west roads (Highway 581, Township Road 292, and Township Road 294) and stop-control on the north-south approaches (Range Road 10A and Range Road 10), with the exception of the Township Road 294 / Range Road 10A intersection which has stop-control on the east leg of the T-intersection. The posted speed is 80 km/h on all roads within the study area.

Trip Distribution and Assignment

The primary site access will be via Township Road 294 and will be located at the northwest corner of the development site (the Road A access shown on **Figure 9** in the WATT TIA). An emergency access (labelled B on **Figure 9**) will be located on Range Road 10 but will be for emergency use only. **Figure 11 Appin Regional Transportation Map** shows context.

The site trip assignment is based on existing trip distributions. The majority of site trips are expected to access the site via Range Road 10A, as this is the shortest route to Township Road 292 and to Highway 581.

The existing turning percentages at the key intersections were used to determine the directional splits. Trip distributions are shown in Figure 6 which shows the percentage distribution at the study intersections.

Road Link Analysis

A road link analysis was conducted on Range Road 10A to determine if modifications / upgrades are required to accommodate post development volumes after each phase of the development.

Based on the Rocky View County Servicing Standards, Range Road 10A is currently a Regional Moderate Volume roadway, with a gravel surface and a specified capacity of 500 vehicles per day (vpd).

To support the link analysis, 24-hour traffic counts was conducted on Range Road 10A north of Township Road 292 between February 21 and February 25, 2024. The counts determined an average weekday AADT of 40 vpd and are summarized in Table 8 of the WATT TIA.

The study intersections will be operating at LOS A/B in the AM and PM peak hour for all analyzed years.

- Based on Rocky View County Servicing Standards, a Regional Moderate Volume is 500 vehicles per day vpd while a Regional Transitional Paved Road is appropriate for volumes from 200 vpd to 1000 vpd.

Based on these standards, the existing road classifications are appropriate for 2030 background conditions as well as post-Phase 1, 2, and 3 volumes. With the addition of Phase 4 traffic, the volumes on Range Road 10A south of Township Road 294 exceed the 500 vpd threshold for upgrading to a Regional Transitional Paved road standard prior to construction of Phase 4.

As the post development volumes are an estimation, it is recommended to regularly monitor the volumes on Range Road 10A south of Township Road 294 and to upgrade the road to Regional Transitional Paved standard when volumes exceed 500 vpd.

Site Distances

Due to the existing grades on Township Road 294, as part of the TIA, WATT looked at the feasibility of the proposed site access. A site visit was conducted on September 12, 2020 reviewed potential access locations on Township Road 294 and on Range Road 10. From the site visit and review of access locations, the primary site access (Access A) is considered feasible from a grade and sight distance perspective regardless of the design speed.

9.01.1 Policy: Local Development Roads

All internal roads within the Development Plan area will be designed and constructed and paid for by the developer to meet MVC servicing standards for industrial/commercial development.

When internal roads are completed, inspected and accepted they will be turned over to the County as public roads.

9.01.2 Policy: Regional Roads

The main regional road access to the Appin development will be via RR 10A south of TWP RD 294 connecting to TWP RD 292 and the QE 2 interchange. Upgrades to RR 10A will be required including paving when traffic counts meet or exceed those recommended in the WATT TIA dated June 2024. Traffic count analysis by a qualified professional traffic consultant will be conducted at the completion of each phase to determine the amount of traffic produced from the Appin development and other regional transportation contributions.

If Appin is the first project to develop in the ASP area, Appin will be responsible to pay as a condition of subdivision required for regional road upgrades to a paving standard and will enter into endeavour to assist cost recovery agreements with MVC and RVC (if possible) to recover an equitable portion of the initial costs paid by

Appin for the benefit of future land development.

The requirement to upgrade the regional road (10A) will occur in the phase that creates the threshold number of a regional moderate volume of 500 vpd identified in the WATT TIA.

Discussion re: provision of financial security for road paving. (LOC or Bond)

10. Utility Servicing

Utility Options

The South Carstairs ASP area states that water and wastewater services within the plan area will be provided by private systems. It further states that all developments shall provide evidence of sufficient water supply to support the development.

One existing groundwater well is used to provide water to a mobile home on the site. Other neighbouring country residential developments are likely to have domestic groundwater wells for their water supply.

Potable Water

The development will be serviced on each development site with potable water by a commercial tanked water provider trucked to water cisterns on developed lots.

Individual lot owners have the option to explore possibilities to drill licensed groundwater wells subject to requirements of Alberta Environment permits and evaluation. This will include completion of a Phase 1 Groundwater Evaluation prior to well drilling.

Wastewater Management System

Waste water will be managed on each development site by sewage holding tanks and offsite removal by licensed trucking operations. Sewage will be transported to an approved wastewater treatment and disposal facility.

Lot owners may also choose to dispose of sewage onsite with all onsite private septic sewage treatment system subject to confirmation of a PSTS Level 3 analysis and report prepared by a licensed professional.

Irrigation

Irrigation water to maintain development landscaping may be supplied from stormwater ponds (PUL's) subject to approval from AEP and MVC.

Emergency Services and Fire Fighting

Regional emergency and fire fighting services are available from Crossfield, Carstairs, and Airdrie for fire protection to this development.

10.01 Policy

10.01.1 All required potable water, wastewater, irrigation services will be constructed and paid for by the developer or individual lot purchasers without financial contribution by the County.

11. Stormwater Management

South Carstairs ASP Policies

The ASP policies for stormwater management include the following:

1. A Stormwater Management Plan shall be required for all future multi-lot Business Park subdivisions and may be required for development applications. The Plan shall demonstrate that surface drainage is controlled and does not impact any existing development on site and adjacent lands. The Plan shall address provisions for the management of stormwater to ensure that run-off does not exceed pre-development rates and detrimentally affect County road infrastructure and adjacent lands. The Study shall be prepared by a qualified Professional Engineer.
2. Where possible storm drainage should be handled through natural means such as swales and landscaped areas. Infrastructure such as curbs, gutters, and subsurface storm drainage systems should be avoided.
3. Stormwater facilities should be designed to integrate natural and mechanical treatment systems such as constructed wetlands, swales, vegetated filters, and open channels to treat stormwater runoff. On-site infiltration shall be encouraged as much as possible on each site, rather than diverting water to a storm drainage system or to an adjacent site.
4. Development within the Plan Area shall control surface runoff using best management practices, both during construction as well as in the long term.

Proposed Stormwater Management Plan

(Revised April 2023)

The proposed subdivision is located south of Township Road 294 and west of Range Road 10 in Mountain View County, approximately 8.5 km southeast of the Town of Carstairs. The subject parcel is 24.6 ha.

The subject parcels are located on either side of an unnamed drainage course. This drainage course drains approximately 2,671 ha upstream of Township Road 294—on both sides of Highway 2. Approximately 1 km north of Twp. Rd. 294, the unnamed drainage course meets Carstairs Creek. Carstairs Creek is tributary to the Rosebud River and is part of the Red Deer River Basin.

Flow in the drainage course is controlled by an existing single-barrel, 1600-mm diameter corrugated steel pipe (CSP) culvert under TWP RD 294. Given the height of the road surface above the culvert, it is unlikely that this has overtopped. Based on modelling, the estimated peak flow in a 100-year design storm event is 3.168 m³/s which is a predevelopment unit release rate of 1.2 L/s/ha. Design of storm drainage works will provide flow control to manage peak runoff and water quality as follows:

- No net increase in peak flow downstream;
- Sedimentation to ensure removal of 85% or particles larger than 75 µm

Pond Design

The proposed storm ponds are described as follows:

East Pond:

The East Pond is to be located immediately west of Range Road 10 south of the proposed Road A. It is to be a hybrid wet-pond with wetland enhancements and is to provide runoff attenuation and water quality enhancement for the easterly portion of the proposed subdivision. This area has no effective drainage eastward. As such, this facility will be drained by a storm sewer to the coulee.

North Pond:

The North Pond is to be located immediately east of the east coulee slope and north of the proposed Road A. It is intended to be a hybrid wet pond with wetland enhancements and is to provide water quality enhancement for the east central portion of the proposed subdivision. This pond will discharge directly to the coulee via a spillway or culvert and spillway.

West Pond:

The Northwest Pond is to be located west of the west coulee slope and north of the proposed east west subdivision road. It is intended to be a hybrid wet pond with wetland enhancements and is to provide water quality enhancement for the east central portion of the proposed subdivision. This pond will discharge directly to the coulee via a spillway or culvert and spillway.

Emergency Overland Escape

East Pond: Emergency overflow for this pond will be east over Range Road 10.

The remainder of the site overflows north through the coulee.

11.01 Appin Stormwater Management Policies

11.01.1 Stormwater management facilities type and configuration as conceptually shown on **Figure 11: Appin Concept Site Plan** is subject to change and will be confirmed at the detail design application at the Development Permit and or the subdivision phase.

11.01.2 Site Implementation Drainage Plans will be prepared at each Development Permit and or subdivision stage.

11.01.3 Utility rights of way and associated easement agreements for overland stormwater conveyance will be registered by the Developer to the satisfaction of Mountain View County.

11.01.4 Stormwater usage for irrigation will be allowed within the plan area.

11.01.5 Stormwater underground drainage facilities within the Plan Area will be designated as a public utility. Stormwater pond lots will be zoned as PUL and will be owned, operated and maintained by Mountain View County.

11.01.6 All impacts to wetlands in the Plan area require authorizations from Alberta Environment.

11.01.7 Design and construction of stormwater management facilities will be paid for by the developer without financial contribution by the County.

11.01.08 Completed and approved stormwater management facilities will be turned over to MVC for ownership and maintenance.

12. Architectural / Landscape Guidelines

Architectural and Site Design

Development of the Appin Business Park will incorporate a variety of business uses with requirements for different building forms including no buildings for open storage sites, large scale industrial buildings, and small scale commercial and light manufacturing buildings.

Exposure of development on sites adjacent to neighbouring existing development will require consideration for buffering to reduce negative impacts.

Mountain View County Commercial and Industrial Guidelines.

Mountain View County Commercial and Industrial Design Guidelines will be important to consider as owners and designers prepare site and building designs. Development Permit applications will include a design review process conducted by Mountain View County. Specific form and architectural treatments will be addressed at the Development Permit stage.

Building Setbacks

Building setbacks will conform to Mountain View County Land Use Bylaw regulations.

Building Form and Character

Exterior design of buildings will incorporate devices to minimize the mass of buildings on elevations exposed to

street frontages or offsite residential development. These devices may include articulation of roof lines and wall massing, incorporation of glass walls at public entry and office space building components, canopy's, variety of colours and wall finishes.

Planting of appropriate trees and shrubs along these elevations will be an important consideration.

Energy saving technologies to enhance energy use efficiencies for buildings will be implemented.

Recycling of building and site construction waste will be implemented using metal containers provided and managed by licensed recycling companies.

Building Height

Maximum building height is 18.0 meters.

Site Coverage for Principal and All Accessory Buildings

Maximum of 60% of the parcel area provided provision has been made for off-road parking, loading, storage, waste disposal and landscaping to the satisfaction of the approving authority.

Lighting

Street lighting and site development lighting systems will incorporate "Dark Skies" principals as governed by Mountain View County Policies and considering International Dark Sky Association Guidelines. Particular consideration will be required at areas of exposure to adjacent properties.

Detailed site lighting plans will be required at the Development Permit stage.

Signage

The developer will provide site signage guidelines for development throughout the plan area.

Signage will be coordinated and will be consistent so as to be well designed, clear, and informative for all types of transportation.

Signage will be provided at regional road entrances (A and E), each development site entry, buildings, and way finding elements.

A detailed signage plan will be required at the Development Permit stage.

Landscaping

Landscaping will be required for internal development of individual sites, and at entries accessing regional roads. All landscaped areas are anticipated to be owned and maintained by Lot owners.

Fencing

Fencing should generally be limited to enclose storage, loading and security areas. In areas where it is exposed to public view it will be designed to be attractive.

Fencing types will consider methods to conceal unsightly outdoor storage areas, to control wind blown debris and provide site security.

Loading

Loading areas shall be oriented at the rear or side of buildings where possible.

13. Environmental Reserve (ER)

Figure 8: Appin Surveyed Drainage Channel, Setbacks and Environmental Reserve Map shows the area of land that contains the natural drainage area that runs through the site. This area will be dedicated as Environmental Reserve (ER). The area includes the riparian area of the drainage channel and setbacks as determined by Omnia Ecological.

The ER will be kept in its natural state. The total area of the ER is approximately 8.64 ha (21.35 ac.)

14. Municipal Policy Summary

The SCASP Section 6.1.3 identifies the following roads policies that apply to the proposed Appin development.

"c. Each proposed subdivision or development must demonstrate that the subdivision of development complies with the County's road network and policies.

d. In approving a subdivision application or a development application, the conditions of approval shall include:

I. The local roads to be created meet County standards;

II. All accesses, including existing accesses, to meet County standards;

III. If required, turning lanes be provided;

IV. Any required road widening be provided;

v. The cost of construction and improvements to the County road network or the provincial highways be borne by the developer;

vi. The cost of the design and construction of local subdivision or development roads be borne by the developer; and

vii. Demonstrate connectivity to adjacent parcels."

The County's MDP identifies:

"5.3.14. Internal roads within new commercial and industrial business parks shall be designed, built and paved at the developers expense. The paved road standard and access management shall be in accordance with approved County Policy.

9.3.1 The County's long-term road management strategy shall be referenced in all future development plans and applications."

MVC County Collector Network identifies the road type hierarchy in the County. It shows the relationship of the QE2 and 581 highways, RR 10 collector and other local roads network. RR 10A shows as a local regional road.

15. Implementation

Policy 5.2.3 of the South Carstairs ASP states that Concept Plans shall be prepared as part of redesignation applications that may include multiple phases. The policy describes generally matters required to be addressed regarding the intended development.

Mountain View County requires the Concept Plan, an application for Land Use Amendment and an application for Subdivision to be examined concurrently prior to any development approvals for the land.

Land Use Redesignation

An application will be submitted to change the existing land use for Phase 1 within the quarter section to I-BP Business Park District.

Subdivision

An application will be submitted for subdivision of Phase 1. This application will be supported by the required technical documents necessary for the application to be considered.

Municipal Reserve Dedication

The developer will discuss options to either provide a cash in lieu payment or dedication of the green space or a combination of the two for MR dedication.

Development Agreement

A development agreement will be necessary to deal with development of public roads, storm water facilities and off site infrastructure requirements. This agreement will be implemented through the subdivision review process.

Development Phases

Development is anticipated to include four (4) phases as identified on **Figure 7: Development Concept and Phasing.**

The phasing proposed by this plan is subject to change and may be modified in the future.

Phase One covers approximately 14.96 ha (36.98 ac). It will include:

- Seven (7) industrial or commercial lots. Minimum lot size for commercial will be 1.01 ha (2.5 ac). Minimum lot size for industrial will be 2.02 ha (5.0 ac).
- A portion of Road A approximately 350 m long.
- Road B approximately 130 m long.
- Storm pond and storm water facilities within Phase 1.
- **Emergency Response Plan** to identify a plan to provide appropriate emergency response, private security and policing for the plan area.
- Other considerations that may be required by Mountain View Count

Development Permit

15.01.1 Policy

The provisions identified in the Concept Plan will be implemented through Development Permit applications. The following criteria will be considered for approval of the Development Permits.

The approval of a development permit is the jurisdiction of Mountain View County. Permits will be reviewed with the studies submitted in support of the Concept Plan.

- **Phase 1 Environmental Assessment** to identify site contamination status and recommend remedial action if contaminants exist.
- **Geotechnical Evaluation** to identify subsurface site conditions and provide recommendations for road, stormwater infrastructure and site development.
- **Historical Impact Assessment** in accordance with Alberta Culture under the Historical Resource Act
- **Traffic Impact Assessment** to identify site development offsite impacts to regional road systems and recommend improvements.
- **Biophysical Impact Assessment** to identify existing conditions including wetlands and flora and fauna on the land and recommend measures to protect or improve conditions.
- **Stormwater Management Plan** to determine solutions to manage storm water storage facilities design, construction, treatment and discharge.
- **Architectural Design Control Plans:** to identify site development layout, buildings, building elevations, road linkages, storm water on-site management, parking/loading areas, fencing, buffering, screening, signage, lighting, landscaping and other requirements to establish form and character of the site development.
- **Signage Plan** to identify design, location type and extent of all signage elements in the plan area. Naming of the Business Park will be considered after the approval of re-designation. A sign for the Business Park with County branding will form part of the Development Agreement that will be a subdivision condition of Phase 1.
- **Lighting Plan** to identify design, location type and extent of all lighting elements in the plan area.
- **Landscaping Plan** to identify design, location type and extent of all landscaping elements in the plan area.
- **Erosion and Sediment Control Plan** to identify methods to control negative erosion and sedimentation impacts on the environment.
- **Solid Waste Management Plan** to identify requirements for solid waste storage, and disposal at an approved waste management facility.
- **Construction Management Plan** to manage construction issues including: staging, weed, dust, noise and stormwater during construction.

16. Land Use Redesignation

Figure 12: Appin Phase 1 Land Use Districts identifies the area of land to be zoned in Phase 1

The following spreadsheet identifies areas within the Phase 1.

17. Proposed Phase One Subdivision

Figure 13: Appin Phase One Subdivision Plan identifies a proposed lotting layout for the Phase One subdivision plan. Lot sizes and number of lots are subject to change depending on market demand.

The following spreadsheet identifies areas of the various components within the Phase 1 Subdivision area.

18. Community Consultation

****THIS PAGE WILL BE UPDATED WITH NEW PUBLIC CONSULTATION INFORMATION

Community consultation is identified in the ASP as an important requirement to inform the public of the proposed development.

The developer has engaged with adjacent landowners, and other stakeholders impacted by the proposed development. The restrictions imposed by the Covid pandemic have created challenges that limit traditional methods for public consultation.

The following goals influenced the public consultation process:

- Identify stakeholders impacted by the development using resources provided by Mountain View County;
- Establish the most effective and safe way to solicit two way communication in the current Covid environment;
- Seek to inform stakeholders and receive input and concerns with an effort to address issues to incorporate into the plan;
- Provide an open and respectful communication process.

Methods for consultation included:

Information Package: A digital power point information package was prepared for presentation. The power point presentation included a comprehensive graphic and written review of the proposed project, proposed land use and subdivision

plan for Phase One, a review of the technical studies prepared for the Concept Scheme and a review of statutory Area Structure Plan approvals and policies of Mountain View County as they apply to this project.

Meetings: Because of Covid it was decided not to have face to face meetings with members of the public

Advertising: Two consecutive public notices were advertised through **The Albertan Newspaper** on Sep 28 and Oct 5, 2021. In addition over 50 letters of invitation were mailed to members of the public within a 4 mile radius of the land.

Open House: One public open House was held on Oct 14, 2021 via Zoom to inform interested members of the public regarding the proposed Concept Plan and the process required by the County for the formal application. Two members of Mountain View County Planning staff also attended.

Members of the public had an opportunity to ask questions, seek clarification and express their concerns and submit written comments.

Information received from the public consultation has been assembled, summarized and attached to the Concept Plan. This information forms part of the application to the County.

Concerns expressed by the public were considered and modifications were made to the Concept Plan to address those concerns where feasible.

12 members of the public attended the open house which lasted approximately 1.5 hours. Written comment sheets were provided by five members of the public.

Public Open House Written Comments received include the following:

- *"This is a poor location for a business park, Creek bottom plus RR 10 is not good for heavy truck traffic."*
- *"I oppose this development."*
- *"Until all environmental and road compaction/dust/traffic concerns are addressed we oppose this proposed development."*
- From Alberta Transportation: *"Based on the location we don't foresee negative impact to the interchange ramps and do not require a Traffic Impact Study, however we are requesting the County circulate the Area Structure Plan for AT for review and comment as it falls within the 1.6 km referral distance."*
- *"I am in agreement to diversification of the Business and Industry but first must know the scope and magnitude of the*

proposed project to see if it impedes current operations."

As a result of concerns expressed by the public we have prepared a new Traffic Impact Assessment (Jan 2022) and have relocated one of the project access points from RR 10 to TWP RD 294.

This access relocation has required a review of site line distance on TWP RD 294 to determine the viability of the new access location. It is determined that the new access location can be safely used with some changes to grades on TWP RD 294.

The new TIA also provides for a distribution of traffic from the QE II onto RR 10A and RR 10. This will reduce the impact of traffic on RR 10.

This page is for additional public consultation info

This page is for additional public consultation info

19. Project Team

OWNER:	APPIN DEVELOPMENTS INC
PLANNING:	ERW CONSULTING INC
CIVIL:	BADKE CONSULTING INC
TRANSPORTATION:	WATT CONSULTING
ENVIRONMENTAL:	GHOSTPINE ENVIRONMENTAL SERVICES LTD
BIA/WETLAND:	OMNIA ECOLOGICAL SERVICES
STORMWATER:	OSPREY ENGINEERING INC
HISTORICAL:	ARROW ARCHAEOLOGY LIMITED
GEOTECHNICAL:	ALBERTA MATERIALS TESTING and METRO TESTING ENGINEERING
GROUNDWATER:	GROUNDWATER RESOURCES INFORMATION TECH.
PSTS:	GROUNDWATER RESOURCES INFORMATION TECH.

20. Supporting Technical Studies

The following is a list of technical studies, applications and letters appended to the Appin Conceptual Scheme for review.

1. **Phase One Environmental Assessment**, GhostPine Environmental Services, December 2018
2. **Geotechnical Assessment**, Alberta Materials Testing February 2019 and Metro Testing and Engineering, May 25, 2021
3. **Biophysical Impact Assessment**, Omnia Ecological Services, June 2021
4. **Water Course Setback Determination**, Omnia Ecological Services, October 2022
5. **Stormwater Management Plan (Revised)**, Osprey Engineering Inc, April 2023
6. **Letter to Reanne Pohl, Mountain View County**, Osprey Engineering Inc. October 2023
7. **HRA Application and HRA Requirements**, Arrow Archeology Limited, August 2019
8. **Traffic Impact Assessment**, Watt Consulting Group, June 2024
9. **Development Permit DP 07-121** for gravel pit development and use, Nov 20, 2007
10. **Gravel Permit Reclamation Certificate Application to Alberta Environment and Parks**, January 2022 from Badke Consulting.
11. **Gravel Pit Inspection NE-24-29-1-W5M, Partial Reclamation Certificate**, from Randy Sweeney, Alberta Environment and Protected Areas Feb 14, 2024.
12. **TAQA Letter**, March 30, 2021 from Cindy Saskiw.
13. **TAQA Map**, identifying ownership of neighbouring gas pipeline and well facilities
14. **Boundary Survey Plan**, Blackstone Geomatics
15. **Groundwater Supply Assessment**, Groundwater Resources Information Technologies Oct 20, 2021.
16. **Level II Private Sewage Treatment System**, Groundwater Resources Information Technologies, Nov 2021
17. **Notice of advertisement** for Public Information Session

18. **Letters from the Public** from attending the Public Open House.