



OUTLINE PLAN

Prepared by



and



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MORGAN CREEK BUSINESS PARK
OUTLINE PLAN
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1.0 INTRODUCTION

1.1 Purpose

The purpose of this Outline Plan (the Plan) is to provide a framework to guide the future subdivision and development of the Morgan Creek Business Park site located within the boundaries of the Acheson Industrial Area, Zone 1. It is governed by the Acheson Industrial Area Structure Plan (ASP), a broad policy based document that requires the preparation of more detailed plans to consider land use, patterns of development, location of roads and municipal servicing at the subdivision level.

This Outline Plan is referred to as the Morgan Creek Business Park Outline Plan and has been prepared on behalf of CW Holdings Ltd. CW Holdings is the sole owner of the Plan area which comprises some +/- 123.6 hectares (305.4 acres). The Plan area location is shown on Map 1.

Because the Outline Plan proposes a conceptualized land use pattern, all boundaries and parcel sizes shown on the maps contained herein will need to be verified at the time of subdivision application. It is assumed that minor deviations to the land use concept will be permitted. Any major deviations to this Outline Plan will require an amendment.

1.2 Location and Legal Description

The Plan area is located in Parkland County's Acheson Industrial Area Zone 1 between Highway 16 (Yellowhead Highway) and Highway 16A. It is bounded to the south by the CN Rail mainline, to the north by the Osborne Acres residential subdivision, to the west by Osborne Acres and Spruce Valley Road (Range Road 265), and to the east by Range Road 264 (see Map 2).

The Morgan Creek Business Park area is legally described as part of the N ½ and S ½ of 5-53-26-W4M. As is noted above, the area comprises 123.6 hectares based on certificates of title #132 013 514 (NW ¼ - 51.9 hectares), #132 013 514 (NE ¼ - 59.7 hectares), and #142 325 919 (SE ¼ and SW ¼ - 12.0 hectares).

1.3 Summary of Community Consultation

Community consultation related to the development of Morgan Creek was initiated in late 2013 by the landowner. The consultation focused specifically on Osborne Acres residents through its community association. The discussion explored the possibility of utilizing some portion of the existing 200 metre wide area that is districted *AGR-Agriculture Restricted District* for industrial development in exchange for enhanced berming, plantings and walking trails. Some positive response was received and the Morgan Creek project team produced a number of landscape concepts for discussion purposes.

On October 20, 2014 an Osborne Acres landowner meeting was held at the Acheson Fire Hall to view and discuss the landscape concepts. All 41 landowners were sent an invitation to the meeting and some 40 persons attended. The landscape concepts were displayed and discussed. The concepts proposed that the 200 metre area be reduced to 30 metres and that a meandering trail complete with extensive landscaping and buffering be provided by the developer. As well, a structurally sound bridge crossing of Morgan Creek would be constructed.

Only a few residents found walking trails along the northern boundary of Morgan Creek to be of value and concern was expressed about security and safety within the reduced setback. The proposed reduction in the 200 metre wide area did not gain significant support.

Extensive tree planting was proposed by some as a way to reduce the visual impact of future industrial development and to allow for a reduction of the 200 metre wide area. This proposal was not supported by the majority of residents.

It was determined that the landowners preferred that the development concept retain the existing 200 metre wide agricultural area and no improvements to this area would be undertaken. Enhanced tree plantings and screening would not be warranted. The setback will remain districted AGR - *Agriculture Restricted District* and uses permitted in this District may be considered for future development.



Above: Meeting board showing the lots owned by those in attendance.

On August 24, 2016 the second and final required public event was held. It was an Open House style meeting with information panels showing the current development concept. Project representatives were available to discuss the project with residents. Approximately 30 residents from Osborne Acres attended, along with County staff and the landowner. All members of the public attending the meeting were from Osborne Acres and the Wagner Natural Area Society. The Open House took place between 5 -7 pm and a number of written responses and comment sheets were received. The site plan shown at the Open House maintained the 200 metre wide agricultural area adjacent to Osborne residents. Residents were pleased to see the agricultural area retained.

Key concerns included surface drainage, safety of wetlands, visual and noise screening, protection of the Wagner Natural Area, and transportation concerns. In response, the majority of concerns have all been addressed in this Outline Plan and will be further considered during detailed engineering of each stage. Residents generally understand this land has been slated for Business Industrial development and found the proposed site layout practical and acceptable. The development of Morgan Creek Business Park will be done in compliance with County standards and policy.

More detail regarding the public consultation including all community feedback can be found in the Public Engagement Report submitted under separate cover.

The primary concerns of the Osborne Acres Residential Association are:

- Concerns over Morgan Creek suitability as a storm water outlet and erosion potential.
- Wetland protection, replacement of natural features and compensation for removal.

- Stormwater impacts on Osborne Acres residents as a result of development and design of stormwater facilities.
- Location of berm – Prefer it to be placed to effectively block light and sound, and to be against the industrial properties so as to not impound water against residences. As well as timing of berm installation.
- Timing of the installation of the road from Range Road 264 to Range Road 265. The preference being the entire road being developed at one time so all industrial/commercial traffic can be taken off of Osborne Drive.
- Bridge crossing – Type of crossing, pathways, wildlife movement.

The primary concerns of the Wagner Natural Area Society (WNAS) are:

- Protection of areas within the development that overlap the Wagner Groundwater Recharge area.
- Protection of erosion in Morgan Creek.
- Concerns of potential invasive and non-native species of plants impacting Wagner Natural Area.
- Ensuring development setbacks from Morgan Creek are sufficient to protect the creek.
- Wetland removal and impacts of site grading on groundwater recharge.
- Creek crossing design and wildlife mobility.
- Do not want access from Range Road 265 to allow access to Wagner from the south.

In addition, WNAS has submitted a number of specific questions that have been considered relating to the above concerns which have been considered in detail.

In response to the concerns identified by residents and the WNAS a number of changes have been made to this Outline Plan. Specifically, Section 2.5 *Wagner Natural Area* has been added and other areas of the Outline Plan include additional discussion of the Wagner Area and how impacts to it will be managed during detailed design work. More discussion on the erosion management measures for Morgan Creek has been added. More discussion on transportation staging and wildlife mobility has also been included.

The remaining concerns shall be addressed during detailed engineering design. It shall be required that the developer demonstrate acceptable stormwater and servicing to County satisfaction prior to the commencement of development. Preliminary work completed in support of this Outline Plan has demonstrated that the proposed solutions will work. Preliminary engineering information can be found in the Morgan Creek Preliminary Servicing Report submitted under separate cover.

1.4 Policy Context & Compliance

The Outline Plan complies with the County's statutory plans. It also complies with the *Municipal Government Act* and principles and policies of the Capital Region Growth Plan.

Municipal Government Act (MGA)

Although Outline Plans are not specifically covered by MGA legislation, it should be noted that this Plan adheres to the principles of the Acheson Industrial ASP which is consistent with the requirements of the MGA.

The intent of the Outline Plan is similar to that of an ASP. Minimum requirements of ASPs are listed in the MGA and have been included in this Plan. The relevant minimum MGA ASP requirements include providing the sequence of development, the land uses proposed, and the general location of major transportation routes and public utilities.

Parkland County Municipal Development Plan (2007)

The Municipal Development Plan (MDP) adopted as Bylaw 37-2007 describes planning objectives and policies for land use within the County including industrial. Map 2 of the MDP - Land Use Concept Map describes the Outline Plan area as Industrial/Commercial. This Outline Plan is also consistent with MDP policies. This Plan supports the six MDP Guiding Principles (in bold) listed below:

Support Environmental Sustainability

This Plan protects the Morgan Creek natural area and retains as much natural tree cover as possible.

Support Fiscal Responsibility

Outline Plan construction will be paid for by the developer and utilizes existing infrastructure connections. The scale of proposed infrastructure has been balanced to provide high levels of service while remaining economically viable for long term maintenance.

Support Social Sustainability

By providing economic opportunity and respecting the 200 metre wide agricultural area along Osborne Acres, this Plan protects existing social dynamics in Acheson while expanding the opportunities available to sustain further employment in Parkland County.

Emphasize Economic Development

This Plan directly contributes to the logical expansion of economic opportunity within Acheson and Parkland County that is supported by the MDP including unique access to rail infrastructure and the linking of business districts through transportation network investment.

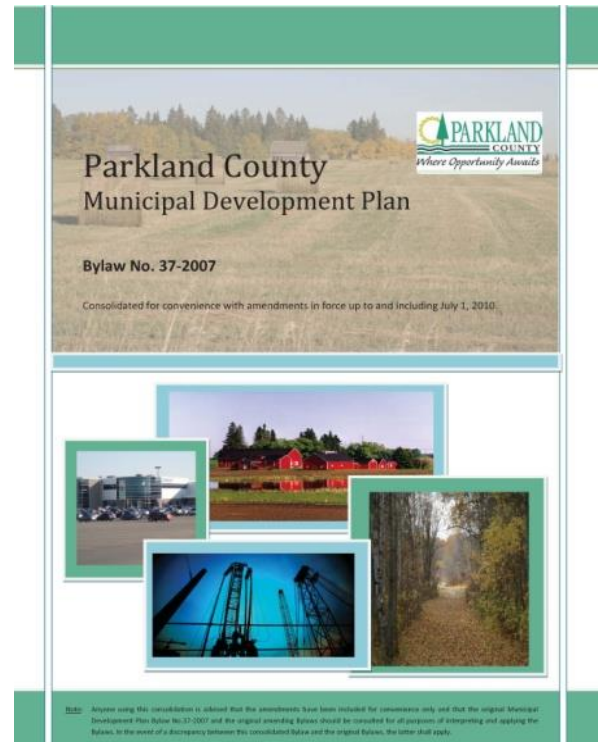
Respect Community Character

Morgan Creek Business Park is directly aligned with the character of Acheson as a business industrial node. The residential character of Osborne Acres is protected by keeping industrial traffic out of Osborne and respecting its 200 metre wide agricultural area.

Land Use Certainty

The Plan area has been designated as Industrial/Commercial in the MDP and as such is expected to develop to accommodate that range of land uses. This plan is consistent with the expectations described in various County policy documents.

Also of note are specific MDP policies. Policies 5.5 & 5.6 indicate that commercial and industrial lands are to be directed into serviced areas and that the County will encourage new development. Policy 7.7 notes that Municipal Reserve dedications may be used as buffers between different uses.



Parkland County Land Use Bylaw (LUB) 20-2009

Excepting a 200 metre wide agricultural area along the north and part of the west side of the Plan area, the site is currently districted *BI - Business Industrial District*. The purpose of this District is:

To accommodate a range of lower intensity industrial and commercial uses which may have outdoor storage or work activities, in fully serviced business and industrial parks and do not create any nuisance outside a building to ensure that the development is compatible with other non-industrial uses. For any development within this district, a high landscaping standard is required to improve the appearance of new industrial and commercial development.

The 200 metre wide area along Osborne Acres is districted *AGR-Agriculture Restricted District*. This area has been in place surrounding Osborne Acres since 1997 to act as a buffer from future business industrial development. The list of permitted uses is limited and are agricultural in nature.

As well, the LUB contains an Acheson Industrial Commercial Area Overlay (Section 10.1) that applies to the Morgan Creek Business Park lands.

The purpose of this Overlay is to *establish guidelines for development for the purpose of ensuring that the integrity of Osborne Acres residential subdivision is maintained by meeting the intent and goals of the Acheson Industrial Area Structure Plan.*

This Outline Plan recognizes the requirements of the applicable land use districts as established by the County's LUB. Upon registration of subdivided lots, Administration may re-district new lots to appropriate land use districts, for example: Reserve, Agricultural, and Public Utility lots.

Acheson Industrial Area Structure Plan (ASP) (Bylaw 2014-29)

The Acheson ASP was approved on March 24, 2015. The Acheson ASP provides a land use framework for the long range development of the Acheson industrial area. The Morgan Creek Business Park falls entirely within the Acheson ASP boundary (See Map 1).

The ASP establishes specific goals and policies to guide the development of Acheson in an orderly and predictable fashion. The ASP seeks to balance the social, environmental and economic needs of residents and businesses located in and/or considering locating in Acheson. The ASP was created with strong focus on public engagement and consideration for adjacent plans to minimize future land use conflicts.

Of specific note are the overall objectives outlined in the ASP Section 1.1 as follows:

- Establish as orderly and efficient approach to planning for the Acheson area that balances existing and future land uses.
- Capitalize on the strategic location of Acheson in the Capital Region to support the regional economy and prosperity.
- Establish policies that support future industrial and commercial “serviced” development in Acheson that are sensitive to non-industrial uses that currently exist within the area.
- Recognize and protect Wagner Natural Area Environmentally Significant Area and Recharge Zone.
- Enhance open space opportunities by maximizing the use of Municipal and Environmental Reserve areas for community recreational uses, and new trail networks.
- Recognize the importance of existing and future transportation and servicing plans, and the need to phase development in a systematic manner.

It is important to note that a small portion in the southwest corner of the Plan area is located in the Wagner Natural Area recharge zone according to the maps contained in the Acheson ASP.

This area will be carefully considered in terms of possible impacts to the recharge zone at the time of its development. The AECOM Acheson Big Lake Master Drainage Plan (2012) notes that any future developments located within the Wagner Natural Area groundwater recharge zone must be diligent to maintain the surface and groundwater conditions that exist today. The portion of the Plan area that falls within the Wagner groundwater recharge zone is shown on Map 3 – Environmental Features. Policies in the Acheson Area Structure Plan which relate to the protection of the Wagner Natural Area include:

- 6.3.2.8.** Ensure that all new developments in the Wagner Natural Area Recharge Zone do not damage the Recharge Zone, or alter natural drainage channels when installing new underground infrastructure.
- 6.6.1.4.** Prohibit development in the Wagner Natural Area and protect the Recharge Zone from impacts which may include disruptions to the natural surface and sub-surface water balance.
- 6.6.2.9.** Ensure that, at site construction stages (including site clearing, stripping and grading) developers have installed techniques and controls to minimize erosion and silt depositing into existing water courses and drainage systems.
- 6.6.2.13.** Require developers within the ASP area to identify all environmentally significant areas (Wagner Natural Area), kettle depressions, drainage courses, wetlands, and recharge zones at the Outline Plan stage. Developers shall identify how the natural habitat, vegetation, soil, and water (quality and quantity) of these areas will be protected and impacts minimized. Existing wetlands shall be identified and classified by a qualified aquatic biologist.
- 6.6.2.16.** Require stormwater, for developments in the Wagner Recharge Zone, to be retained on-site with post-development release rates not exceeding that of pre-development flow rates.
- 6.6.2.18.** May require a biophysical assessment for any new subdivision or development which falls within 0.8km of the Wagner Natural Area as defined by this ASP. Work and costs of the biophysical assessment shall be borne by the developer.
- 6.6.2.21.** Require a hydrological or hydrogeological assessment for any subdivision, development, or expansion to an existing development in the Wagner Recharge Zone that is deemed significant by the Development Authority.
- 6.6.2.25.** Ensure that any future development in the Wagner Natural Area Recharge Zone does not remove water from the subsurface drainage system, or alter subsurface water drainage channels during construction, operation, or reclamation.
- 6.6.2.26.** Require that any future development in the Wagner Recharge Zone is designed to promote groundwater infiltration. Developments in these areas shall consider maximizing landscaping, using permeable surface and paving materials, and using green technologies where applicable.
- 6.6.2.27** Require developers and landowners in the ASP area to comply with Alberta Environment and Parks exploration restrictions for Restricted Area No. 89 (protection of Wagner Natural Area and Recharge Zone). Restricted areas are identified in Section 5.7 of [the] ASP.

Section 5 of the ASP highlights the need for Acheson to leverage its extensive transportation network and indicates the need for piped water & sanitary sewers, as well as adequate storm water

management to ensure high quality, modern development is pursued. Section 5.3 clearly describes the 200 metre agricultural area along Osborne Acres. This setback area is shown on Map 2 – Outline Plan Context. The 200 meter setback area shown on Map 2 is illustrative and is subject to variation as noted in the Land Use Bylaw Rules of Interpretation, Section 1.10.8. The actual ultimate setback is governed by the text description and actual development within Parkland County may deviate from the illustrative mapping in any case where text and maps are in conflict. Any proposed development concept shall provide a minimum 200 meter setback from all residential uses.

Finally, the Morgan Creek Business Park Outline Plan is consistent with the industrial and commercial objectives listed in Section 6.1 of the ASP being to:

- 6.1.1.1.** Support economical and orderly expansion of the ASP area for business industrial and medium industrial development.
- 6.1.1.2.** Support local service commercial development at strategic commercial nodes in the ASP area to provide local services to employees and residents.
- 6.1.1.3.** Ensure that all future development in the ASP area is fully serviced as defined within the policies of this Area Structure Plan.
- 6.1.1.4.** Ensure development in the ASP area aligns with the Capital Region Growth Plan.
- 6.1.1.5.** Ensure industrial and service commercial developments are compatible with other land uses as prescribed in ASP Figure 6 – Future Land Use Concept.
- 6.1.1.6.** Ensure development in the ASP area is compatible with future transportation infrastructure.
- 6.1.1.7.** Promote environmentally sensitive and aesthetic development in the ASP area.

The ASP policies are statutory and approved by Parkland County. ASP policies shall be adhered to throughout the development of the Outline Plan area.

Capital Region Growth Plan (CRGP)

Compliance with the CRGP is a provincially mandated requirement through the Municipal Government Act. *A fundamental principle of the Capital Region Plan is the requirement to intensify development in order to minimize the development footprint and utilize existing and future infrastructure as efficiently as possible.*

The Plan area is contained within Priority Growth Area “A” of the CRGP. The intent of the Capital Region Growth Plan (CRGP) is that growth be directed to Priority Growth Areas and that land use and infrastructure investment decisions be integrated. Specifically, the CRGP requires that new development:

- Promote an integrated and strategic approach to planning for future growth;
- Make key infrastructure investments that best complement existing infrastructure, services and land uses in the Capital Region; and,
- Co-ordinate decisions to sustain economic growth.

This Outline Plan recognizes the requirements of the CRGP by promoting a strategic approach to planning, investing in key infrastructure that complements existing infrastructure, and by encouraging economic growth.

Parkland County Integrated Community Sustainability Plan (ICSP)

The ICSP takes a balanced approach when planning for the future by incorporating its economic goals with its social, governance, and environmental goals to integrate a quadruple bottom line based on these four pillars into its planning regime. The ICSP seeks to protect the long term success of the

County. This Outline Plan addresses all four pillars and is consistent with sustainable long term development and planning within the County.

Economic goals outlined within this Plan support the expansion of employment and revenue for the County and residents. The social goals are protected through the separation of residential uses from business with agricultural uses. Social cohesion is also strengthened by the robust economy being developed in Acheson. Governance and the application of guiding plans have informed this Plan throughout the process and this Plan is consistent with long-term County goals. Finally, environmentally sensitive areas are protected by the proposed design.

Parkland County Transportation System Bylaw No. 2015-31

The Transportation System Bylaw Schedule A indicates the east-west road through the Plan area is to be a Major Collector Road. Current County engineering standards indicate this will require a 40 metre road right of way to be dedicated. All other internal roads are to be designated as local roads. The right-of way width for local roads is 30 metres. Road surface width and right-of-way dedications will be determined based on County engineering standards at the time of subdivision and development.

2.0 ENVIRONMENT

The Environmental Assessment prepared by Enviromak, as well as the Geotechnical report prepared by Shelby Engineering have been submitted under separate cover in support of this plan. Key findings of these studies are summarized below.

2.1 Physical Description and Environmental Constraints

As is shown on Map 3, the subject site includes numerous wetlands and watercourses, agricultural land, and some forested corridors. Mixed-wood forests are located on the north and west portions of the Plan area. Morgan Creek bisects the property north to south and two unnamed creeks are located on the northeast edge and northwest corner of the agricultural lands.



The property is located in the Aspen Parkland Ecoregion. It is within the Thick Black Soil Zone of central Alberta. The landscape is generally undulating moraine. An in-depth geotechnical study has been completed by Shelby Engineering in 2013 and is described in section 2.4. Canada Land Inventory Soil Capability in the area is classified as Class 3 indicating the soils have moderately severe limitations for crop farming.

2.2 Environmental Assessments

Approximately 80.9 hectares of the 112 hectares of developable land is cultivated for agricultural crop production. Boreal mixed wood forests cover approximately 11.48 hectares of the site and provide an important wildlife corridor which extends north of the property, eventually connecting to the Wagner Natural Area located north-west of the subject site and beyond the residential area of Osborne Acres.

The mixed-wood forests consist mainly of trembling aspen, balsam poplar, white birch, white spruce, black spruce and other various species. Two tree stands are located within the 200 metre wide agricultural area. Noxious weeds, Canada Thistle, and Perennial Sow Thistle were present within the site.

The site has been identified as being the potential habitat of the Cape May warbler, Short-eared Owl, northern Goshawk and boreal Toad, as well as Sharp-tailed Grouse. The Short-eared Owl is a species that “may be at risk” and is a “special concern.” Boreal/Western Toads are listed as “sensitive” and a “special concern.” The Sharp-tailed Grouse is also listed as “sensitive.” Various other birds were identified at this location and forested areas appear to be important migratory locations. Two animal dens – likely coyote – were located within the Morgan Creek riparian zone.

The Alberta Conservation Information Management System (ACMIS) does not identify any environmentally significant areas within the subject site. No rare or endangered species were encountered at this location during the site assessment.

2.3 Wetland Assessment

Morgan Creek is a Class C watercourse and provides important habitat for beavers and other animal species. Construction of crossings of Morgan Creek will cause direct impacts to the creek. Limited timber values are present on site. The Creek does provide habitat and water quality considered suitable for fish. No fish were caught or observed.

EnviroMak has completed a Riparian Setback Model Matrix (RSMM) assessment for Morgan Creek. The findings of the assessment are discussed in Section 3.3. Enviromak has determined the development setback from Morgan Creek based on the RSMM model which is shown on Map 4A – Land Use Concept A.

The wetland network consists of 36 wetlands including 17 class I wetlands, 9 class II, 9 class III and 1 Class IV wetland (see Map 3). Several of these wetlands have been tilled in previous years and contain limited wetland vegetation or riparian zones. The wetlands located within the forested areas, as well as the class IV wetland and several others have intact and healthy riparian buffer zones.

Some historical evidence is evident to support the existence of two ephemeral stream channels within the project zone, both of which have been protected as Environmental Reserve in this plan. Wetlands make up approximately 1.87% of the project area. Compensation will be required to remove or alter wetlands during construction.

2.4 Geotechnical Conditions

Soil and near surface groundwater conditions were investigated by Shelby Engineering in 2013. Shelby Engineering conducted a 30 test hole program and has provided a geotechnical report and recommendations for development including design of underground utilities, industrial building foundations, and development setback requirements to Morgan Creek.

The site is covered with a topsoil layer ranging from 150 millimetres to 525 millimetres with an average depth of 325 millimetres. Glaciolacustrine deposits of clay and silt were encountered that extend to the maximum depth of investigation. Sand was encountered below five metres in depth at 10 borehole locations.

Groundwater appears to be closest to grade in the northern portions of the site and deepest in the southern portion- relative to current grades. Due to a perched groundwater table along the northern portions of the site, dry stormwater ponds are likely not feasible. It is recommended that no part of any water retention structure be located within a 30 metre distance of the crest of Morgan Creek valley slopes. Recommended general building and development setbacks are noted and range from 4.0 metres to 8.0 metres (development setback) and 7.0 metres to 11.0 metres (building setback) from the top-of-bank/crest of slope. Shelby Engineering's recommended development setback from Morgan Creek is shown on Map 4. The ultimate development setbacks used will be determined with County staff prior to subdivision and will be based on the professional opinions above and legal surveyor input.

Shallow foundations (footings) are generally feasible for use within the study area but would likely only be feasible for relatively lightly loaded developments. Deep foundation options could include cast in place concrete skin friction piles, driven steel piles or compacto piles.

Generally the site is considered feasible for commercial/industrial development, though special considerations in design and construction may be necessary.

2.5 Wagner Natural Area (WNA)

The Wagner Natural Area is identified and protected through policies in the Parkland County Municipal Development Plan (MDP), Parkland County Environmental Conservation Master Plan (ECMP), AECOM Acheson/Big Lake Master Drainage Plan, Acheson Area Structure Plan (ASP), and the Biophysical Environmental Assessment and Riparian Setback Evaluation prepared by Enviromak (2016) in support of the Outline Plan. The development of this Outline Plan will adhere to the policies and recommendations in these documents.

Of specific concerns are the groundwater and surface drainage impacts of development, as well as the integrity of the plant life ecosystem found in the Wagner Area which is very unique and highly prized locally and regionally.

The Wagner Natural Area is a provincially significant Environmentally Significant Area (ESA). Recommendations of the ECMP include ensuring appropriate measures must be in place to prevent the surrounding industrial development from compromising the ecological integrity of the WNA. Increasing surface runoff should be avoided as much as possible. Any development within the Wagner Recharge Zone must be diligent in maintaining historic surface and groundwater conditions. The Master Drainage Plan has been developed to minimize any impacts on the area's water systems including the recharge zone underlying the WNA. The Master Drainage Plan is the guiding document for the design of the stormwater systems proposed in the Morgan Creek Business Park.

Many policies have been included in the Acheson ASP to protect the WNA. These policies have been outlined in Section 1.4 of this Outline Plan and shall be adhered to throughout the development and operation of the Outline Plan area.

The Enviromak report specifically notes recommendations for protection of the WNA (Recommendation 5, p.66). Because the Morgan Creek riparian corridor and mixed-wood forests provide important wildlife links to and from the WNA, these features are to be maintained where possible. Furthermore, due to the proximity to WNA and Recharge Area site specific erosion and sediment control plans should be developed to reduce the potential of release toward the WNA. Additionally, to reduce the risk of influencing the Recharge Zone, a pre and post-development hydrotechnical report may be beneficial for areas within the Recharge Zone (ie. certain areas west of Morgan Creek, indicated on Map 3) to demonstrate that surface and groundwater flows towards the WNA will not be greatly influenced.

Erosion and sediment control plans shall be developed prior to the development of any areas adjoining Morgan Creek. A weed management plan will also be required at the time of subdivision to ensure the Wagner Natural Area is protected from invasive species via the Morgan Creek Business Park development.

3.0 LAND USE

3.1 Adjacent Land Uses

The Plan area is surrounded by a combination of industrial, residential and agricultural uses.

To the south, the CN Rail mainline runs east/west along the entire south side of Morgan Creek Business Park. Over 35 trains a day use this mainline. Developed industrial lands are located south of the CN line. Highway 16A to the south can be accessed from Range Road 265 and an interchange at Highway 60/Highway 16A. Highway 60 is located one half mile (800 metres) east of the Plan area.

To the west, Range Road 265 bounds the edge of the Plan area. The agricultural land west of the Range Road is districted *AGG-Agriculture General District*. This land is contained within the Acheson ASP and is designated as Agricultural Area A. As per Acheson Industrial ASP Policy 6.9.5.1, an ecological assessment of this area will determine an appropriate buffer and transition of land uses from the Wagner Natural Area that is located directly northwest of the Plan area. This assessment has not yet been completed. A portion of Osborne Acres and the 200 metre setback are located along the north westerly side of the Plan area.

To the north, Osborne Acres extends along the entire boundary of the Morgan Creek Plan area. This mature community is comprised of 41 county residential lots and two Municipal Reserve lots. It is buffered from industrial uses by a 200 metre wide restricted agricultural area. The 200 metre wide agricultural area is wholly contained within the Morgan Creek site.

To the east, Range Road 264 bounds the site. The lands east of the Range Road 264 are recently developed industrial parcels. All display a high standard of landscaping and architectural finishing features appropriate to a business park environment.



3.2 Existing Features

The Plan area is currently being cultivated for agricultural purposes. CW Manufacturing has recently constructed its facility on the east side of the area on a 4.16 hectare site. Morgan Creek traverses the centre of the Plan area from south to north. The creek effectively bisects the Plan area into two subareas. Two mature healthy tree stands extend into the north portion of the area from Osborne Acres. A majority of these stands will be designated as Environmental Reserve. Some small wetlands and patches of vegetation exist throughout the site but are not significant.

A Historical Resources Overview was undertaken on the site and Alberta Culture has issued a Historical Resources Act clearance based on this overview. The clearance letter is attached in Appendix B.

3.3 Land Use Concept and Development Statistics

Three development concepts are shown on Maps 4A-4C. Development Statistics are shown on Tables 1-3 for Land Use Concepts A-C. Parcel sizes shown on Maps 4A-4C may vary at the time of subdivision. The alternative road alignments and lot sizes shown demonstrate opportunities for consolidation and further subdivision thereby maximizing development flexibility to meet variations in market demand. Lot configurations and sizes are shown for illustrative purposes only.

Alternative Land Use Concepts:

Multiple Land Use Concepts are included for illustrative purposes. All three concepts maintain the east-west Major Collector Road; the difference between the three concepts is the alternative road networks in the southeast quadrant of the Plan area. Depending on market conditions and demand, the three Concepts allow for a wide range of lots to be developed. All concepts function effectively from an engineering standpoint. No major infrastructure changes are required to accommodate the three Land Use Concept alternatives. The three concepts for the southeast area are: Concept A - internally looping road (Map 4A), Concept B - a cul-de-sac of up to 170m in length (Map 4B), and Concept C - no local road required (Map 4C). The remaining two cul-de-sacs in the northeast and northwest quadrants are also subject to change at the time of detailed design and subdivision, however, as per agreement with Parkland County these cul-de-sacs are not to exceed 170m and 335m in length respectively.

Two Storm Water Management Facilities (SWMF) are proposed in the north portion of the Plan area, one on either side of Morgan Creek. The exact size and configuration of these facilities will be determined at the time of detailed subdivision design. These SWMFs will be managed/constructed wetlands. Preliminary designs have been included in the supporting Engineering Design Brief. Both SWMFs will be located within the 200 metre wide Agricultural Restricted District. SWMF is a permitted use within this District as per the County's LUB. The areas of the SWMFs will be approximately 3.72 hectares (east) and 5.94 hectares (west). These facilities will be dedicated to the County as Public Utility Lots. Final areas shall be determined at the time of subdivision.

A Major Collector roadway is proposed to extend east/west through the Plan area. The right-of-way dedication width and pavement width will be determined at the time of subdivision based on County Engineering Design standards for Major Collector Roads at the time of development. To the east the collector intersects with Range Road 264. This intersection is constructed and provides access to the existing CW Manufacturing operation.

At the west end the collector will intersect with Range Road 265, which is classified as an arterial road. The intersection will be constructed just within the 200 metre agricultural area. Roads are a

permitted use in the *AGR - Agricultural Restricted District*. Locating the westernmost portion of the road within the setback allows for the most efficient use of the developable business industrial land.

One creek crossing is proposed to link the two subareas to the regional roadway system and to limit disturbance of Morgan Creek. This crossing is proposed to be a tall arch culvert which will allow wildlife passage along the Morgan Creek corridor. Transportation design work has indicated that the constrained nature of the site resulting from the 200 metre setback requires cul-de-sacs for efficient subdivision, lot geometry, and a viable road network.

Municipal Reserve lands shall be dedicated as 10% of the developable area (Gross Area less Environmental Reserve). The MR dedications are to be located within the 200m residential setback area. The potential for Municipal Reserve swaps for developments in other areas of Acheson and Parkland County for additional lands creates the possibility of additional Municipal Reserve dedications occurring in the residential setback area and may be considered in the future.

Two seasonal creeks and some of the adjacent tree stands surrounding the creeks located within the *AGR - Agricultural Restricted District* will be dedicated as Environmental Reserve. Protection of these tree stands is consistent with the Acheson ASP and will further buffer residences in Osborne Acres backing onto the Business Park. Most lots backing onto the Plan area are well treed.

Morgan Creek and its ravine to the top of the bank of the creek is proposed to be dedicated as Environmental Reserve. As is noted in Section 2, the setback width has been assessed by geotechnical and environmental consultants. The geotechnical assessment by Shelby Engineering recommends an average 6.0 metre development setback width from the top of bank which complies with the recommendation of Alberta Environment and Parks for small creeks. From a geotechnical perspective, this setback will provide for building pockets that do not risk being compromised through erosion or other slope stability considerations.

Enviromak has completed setback calculations based on the Riparian Setback Matrix Model (RSMM) as outlined by Parkland County policy. The results of the RSMM are shown on Map 4 and generally protect more land than required for geotechnical requirements alone.

Enviromak's RSMM determines setbacks from the edge of riparian vegetation, rather than top of bank and is therefore not directly comparable with the setback recommended by Shelby. The RSMM setbacks from riparian vegetation vary from 25.3 metres to 54.9 metres in width. The edge of the water course to the edge of the riparian buffer ranges from approximately 15 metres to 45 metres.

Both recommended setbacks are shown on Map 4. Due to the variation in setback distances and the other considerations that must be addressed such as beaver ponding, flood and non-flood conditions, efficient use of land, stability of building foundations, the actual development setbacks will be determined on-site at the time of subdivision with Parkland County staff and a surveyor.

The Acheson ASP contains employment projections that assume a range of 6.0 to 10.5 employees per net hectare. Table 1 – Development Statistics indicate that the Plan area will contain 59.9 net hectares of business industrial land. This translates into a future employment range of between 359 and 629 jobs. The CRB employment projection (high scenario) for Parkland County is 14,600 jobs. The jobs resulting from the Morgan Creek development can be accommodated within the CRB projection.

Tables 1-3 below provides Development Statistics for the Plan area Land Use Concepts

Table 1 - Development Statistics – Concept A

	Area (ha)	Total % of GA	Total % of DA
Gross Area (GA)	124.9	100.0%	
Environmental Reserve	17.0	13.6%	
Developable Area (DA)	107.9	86.4%	100.0%
PUL/Stormwater Management Facilities	11.6	9.3%	10.8%
Public Roads	11.0	8.8%	10.2%
Industrial Lots	60.7	48.5%	56.1%
Agricultural	13.9	11.1%	12.9%
Municipal Reserve	10.8	8.7%	10.0%

Table 2 - Development Statistics – Concept B

	Area (ha)	Total % of GA	Total % of DA
Gross Area (GA)	124.9	100.0%	
Environmental Reserve	17.0	13.6%	
Developable Area (DA)	107.9	86.4%	100.0%
PUL/Stormwater Management Facilities	11.6	9.3%	10.8%
Public Roads	9.5	7.6%	8.8%
Industrial Lots	62.1	49.7%	57.5%
Agricultural	13.9	11.1%	12.9%
Municipal Reserve	10.8	8.7%	10.0%

Table 3 - Development Statistics – Concept C

	Area (ha)	Total % of GA	Total % of DA
Gross Area (GA)	124.9	100.0%	
Environmental Reserve	17.0	13.6%	
Developable Area (DA)	107.9	86.4%	100.00%
PUL/Stormwater Management Facilities	11.6	9.3%	10.8%
Public Roads	8.9	7.1%	8.2%
Industrial Lots	62.7	50.2%	58.1%
Agricultural	13.9	11.1%	12.9%
Municipal Reserve	10.8	8.7%	10.0%

Note: The above areas have been identified using CAD as per Land Use Concepts A, B, and C (Maps 4A, 4B, and 4C). These values differ somewhat from the titled area. Exact areas will be determined at the time of survey.

3.4 Compatibility with Adjacent Land Uses

The proposed development concept is highly compatible with existing long-range plans for the area and existing land uses. It complies with the County's LUB and the Acheson ASP. Proximity to the CN Rail mainline is a very advantageous aspect of this development and compliments the proposed industrial uses. All development in proximity to the CN Railway line shall be in compliance with CN's Guidelines for Non-Residential Development Adjacent to the Railway Right-of-Way (Main Lines).

Adjacent roadways are appropriately sized for industrial traffic and are compatible with the projected uses within Morgan Creek. Business industrial uses are located to the east and industrial development exists south of the CN line

The 200 metre wide agricultural strip is an effective buffer from Osborne Acres. Retention of this significant area combined with the protection of the majority of two tree stands as Environmental Reserve, the dedication of Municipal Reserve parcels, and the designation of two Public Utility Lots further enhances the buffer afforded the residential community. Minimal if any conflict should occur between Morgan Creek and Osborne Acres.

Because the Plan area is affected by the *Acheson Industrial Commercial Overlay* regulations as per the LUB, on-site visual buffering of the edge of industrial properties adjacent Osborne Acres in the form of fencing, plant materials and berming will be incorporated where possible into the properties further encouraging compatibility, and to direct light and sound pollution away from Osborne Acres.

3.5 Summary of Long Range Outcomes

The long range outcomes that will result from the development of the Morgan Creek Business Park are as follows:

- Realization of policies and future land use concept as per the Acheson ASP
- Off-site contribution to surrounding road system
- Extension and utilization of municipal servicing infrastructure
- Increased local employment
- Increased non-residential tax base
- Protection of environmentally sensitive Morgan Creek through environmental reserve dedication to the County

4.0 TRANSPORTATION AND ACCESS

A Transportation Brief has been prepared by AI-Terra Engineering and submitted under separate cover which investigates the transportation network in detail. The findings of the Transportation Brief are outlined below. Three road network options are proposed in this Outline Plan to maintain flexibility for lot sizes and to demonstrate the viability of multiple roadway alignment concepts. These alternatives are included in Maps 4A-4C for illustrative purposes and all effectively provide required services to the development. ***The ultimate development concept constructed in Morgan Creek shall demonstrate proper functionality at the detailed engineering design stage and may be comprised of one of the included alternatives, or a variation thereof.***

4.1 Existing Transportation Network

Primary access to Acheson and Morgan Creek Business Park is provided at interchanges located on Highway 16 / Highway 44, Highway 16 / Highway 60, and Highway 16A / Highway 60. An existing at-grade intersection at Highway 16A and Range Road 265 serves the western portion of Acheson, specifically residents of Osbourne Acres and the western portion of the Plan area. Access into Acheson is also provided via Township Road 531A, east of Acheson. Currently traffic can utilize the intersection of Township Road 531 (Northview Road) and Highway 60 in order to access the site. Future upgrades to Highway 60 include the closure of the access and all traffic entering from the east will have to utilize the Highway 60 / Township Road 531A intersection.

The Outline Plan area is bounded on the east and west by existing roadways. To the west is Range Road 265. This road is paved and currently extends from north of Osbourne Drive south linking to Highway 16A and beyond. Bounding the site to the east is Range Road 264. This road extends north beyond Township Road 531 providing access to Osbourne Acres and south to the existing entrance of Morgan Creek Business Park (Range Road 263A). Range Road 264 is gravel between Township Road 531 and Range Road 263A. There are no plans to extend this road further south or to cross the CN rail line. All industrial traffic is expected to access the first stage of Morgan Creek Business Park via Range Road 263A via Township Road 531A. (See Map 2 for more detail).

Currently no roadways extend into the Plan area from the west, however farm equipment accesses allow construction and equipment access to the western portion of the Plan area off Range Road 265.

4.2 Proposed Accesses & Local Road Network

The east portion of the Plan will be accessible via Range Road 263A. The development of the west portion of the Plan area will require the construction of a new access in Stage 3 (see Map 9 – Staging) that will be linked by a crossing of Morgan Creek to the first stages of development (see Map 5).

The internal local road network consists of one Major Collector roadway that bisects the site from east to west. The remaining portions of the business park are to be serviced by local roads which access onto the major collector or shall provide access directly onto the Collector. All local road intersections within the Plan area shall be signage controlled with signage placed as per the Manual on Uniform Traffic Control Devices (MUTCD) standards. Future upgrades to Range Road 265/Highway 16A intersection will ultimately require future signalization as shown on Map 5. The local roads proposed in Maps 4A, 4B, & 4C show likely development scenarios that may occur. Due to the uncertain nature of the users of the Outline Plan area, local road network and lot size flexibility is essential to providing a viable location for a wide range of businesses. Minor deviations to the local road networks shown on Maps 4A-4C may be required at the time of subdivision and detailed design.

However, any changes to the Major Collector roadway concept would require an Outline Plan Amendment.

The businesses which will be using the cul-de-sacs have only a limited potential for growth and no on-street parking will be allowed on the roads. The possibility of emergency access being prevented is highly unlikely.

The traffic calming effects of cul-de-sacs and the positioning of business accesses directly opposed on either side of the local roads allows for extra opportunities for emergency turnarounds.

During the development of Stages 1 & 2, prior to the crossing of Morgan Creek being completed, a paved turnaround will be required to be provided. This turnaround may be temporary in nature or utilize the proposed short cul-de-sac north of the major collector. The turnaround shall be to the satisfaction of the County and Emergency Services and will be determined at the time of subdivision and development engineering review.

4.3 Transportation Analysis Summary

As per previous traffic studies in Acheson, a traffic generation rate of 3.0 trips per acre has been applied to the traffic models of the intersection analysed in the Transportation Brief. The intersection of Highway 60 and Township Road 531A will handle a majority of site generated traffic during the development of the first phase (east half) of the Plan area. At the time of the traffic study, this intersection was being upgraded and was modelled in the geometry established in 2016. This intersection should function acceptably with the first stages of Morgan Creek Business Park development.

When the west half of the site is developed, traffic will be able to access Highway 16A via Range Road 265. This will alleviate some effects of site traffic on the greater Acheson road network. The second scenario analysed is the intersection of Highway 16A and Range Road 265 at full build-out of the Morgan Creek Business Park. A minimum 10 metre road right-of-way dedication will be required for Range Road 265. This ultimate dedication required will be determined at the time of subdivision.

The opening of site traffic to this intersection will require the construction of a creek crossing, as well as a southbound left turn lane on Range Road 265 at the Highway 16A intersection. The Highway 16A intersection will need to be signalized even without additional traffic from the Morgan Creek Business Park. Traffic modelling indicated that with signalization, this intersection will function acceptably during AM and PM peak hours, however some congestion is noted and some turning movements from Highway 16A experience significant delays during the peak times investigated. Highway 16A shows significant delays with or without Morgan Creek Business Park traffic and will ultimately be required to be three lanes in each direction.

Subsequent to the completion and submission of the Transportation Brief, Parkland County requested further analysis of the intersection of Range Road 263A and Township Road 531A. Within the Transportation Brief Addendum (August 2016) Synchro analysis indicates that at full build-out of Acheson Zone 1 this intersection will function acceptably. It is noted that left turning vehicles could be accommodated with a wider pavement structure and/or extra lanes on Township Road 531A. However, these enhancements are not required for acceptable operations at this intersection.

4.4 Cul-de-Sac Discussion

The proposed internal road network required to service industrial lots on the subject property is composed primarily of cul-de-sacs. This is required due to the highly constrained nature of the site, the environmentally sensitive lands that are to be protected, and the Morgan Creek crossings being

limited to one. Being that traffic which will be using these cul-de-sacs has only a limited potential for growth, and that no on street parking will be allowed on the roads, the possibility of emergency access being prevented is highly limited. The positioning of business accesses directly opposed on either side of the local roads wherever possible allows for extra opportunities for emergency turnarounds. The bulbs proposed accommodate the WB-21 truck turning movement and are sufficient for the types of large vehicles that will be using the site.

The cul-de-sacs in the northwest and northeast quadrants are to be a maximum of 335m and 170m, respectively. The development option 'B' includes a cul-de-sac servicing the SE quadrant of the development. If this option is constructed, the length of the cul-de-sac shall not exceed 170m.

A turnaround location for the Major Collector will be required at time of development of the lands east of the Morgan Creek ravine, prior to the construction of the ravine crossing. A temporary turnaround may be constructed. The ultimate turnaround design shall be determined at the time of subdivision and be subject to Parkland County approval.

5.0 UTILITIES AND SERVICING

Further detail regarding the utility and servicing concepts described below can be found in the Preliminary Servicing Report by Al-Terra Engineering Ltd. submitted under separate cover in support of this Outline Plan.

5.1 Water

Water service will be extended from the east and carried through the site to provide servicing for the subdivision (see Map 6). Water mains will follow the internal roadways of the Plan area and are shown on Map 6. Preliminary designs, as per the water model and report provided via the County from AECOM, indicates that all mains will be 300mm diameter. Exact size and location of service connections to the water main network shall be determined at the time of detailed engineering design.

Watermain looping will be provided for each stage of development. For the lands east of Morgan Creek, two watermain connections will parallel each other along the major collector. For the west portion of the plan area, the watermain connection is located along Range Road 265 and extends south of the CN Rail line to an existing watermain on Acheson Road (Zone 3). This connection shall be required when the west portion of the Plan area is developed. This watermain design is consistent with the County water model provided by AECOM (March 2017) and provides adequate peak pressure, water main looping, and fire flow to the development at all stages.

5.2 Sanitary Sewer Service

Map 7 shows the proposed Sanitary Sewer network for the Plan area. The development will primarily utilize conventional gravity sewers that will connect to the Acheson Trunk Sewer Main located along Range Road 264. Lots west of Morgan Creek will require low pressure sanitary sewer system, due to site topography. Sufficient cover is not available to allow for all lots to be serviced by gravity sewer alone. The low pressure forcemain will reside within the road right-of-way, while the storage tank and pumping systems will be on private land and privately maintained.

5.3 Storm Water Management Plan Summary

The development will convey surface drainage via ditches to two stormwater management facilities (SWMFs) located on each side of Morgan Creek on the north boundary of the Plan area. Morgan Creek is the primary dividing line between the two storm basins feeding these SWMFs. The general drainage pattern established by the natural topography of the site is from south to north. The major drainage routes are shown on Map 8. Due to the challenging topography of the site, some overland drainage will be directed north along the rear of lots located on the west portion of the site to the SWMF via a bioswale or other environmentally controlled conveyance system constructed within a dedicated Public Utility Lot. Drainage from the CN line will be routed in open channel, under the collector roadway in a culvert and connect to its existing drainage outlet at the north property line of the development (see Map 8).

Both SWMFs will be developed as naturalized constructed wetlands. Preliminary designs for each of the proposed wetlands, including the release rates, have been included in the Preliminary Servicing Report. These facilities will be constructed to County standards and will accommodate all on-site stormwater with controlled release to location as required by Parkland County and described in the Acheson/Big Lake Area Master Plan - Amendment. During construction silt and runoff will be managed to minimize impacts on Morgan Creek water quality. An Erosion and Sediment Control (ESC) plan will be required to be submitted prior to development.

The existing drainage patterns for Range Road 264 and 265 will be maintained. Runoff currently flows from south to north. Drainage from Range Road 263A east of the site flows to the east, and Range Road 264 acts as the drainage divide. The intention is to keep the drainage in the existing rights-of-way and not divert the flows into the development. In addition, the existing drainage patterns from the CNR will be maintained, which includes discharge of runoff directly into Morgan Creek and the proposed open channel west of Morgan Creek.

5.4 Shallow Utilities

Shallow utilities (gas, power and telecommunications) will be designed and installed in cooperation with utility providers. These will be installed by the developer on a stage-by-stage basis under agreements with Fortis, Shaw, Telus, ATCO Gas, and other providers. There are no known capacity issues for these utilities. An existing telecommunication right-of-way along the north boundary of the property will be considered in the design of detailed servicing plans.

6.0 IMPLEMENTATION AND STAGING

6.1 Plan Implementation

This plan will be designed and implemented as per Parkland County engineering standards and the County's LUB. Any non-standard design requirements will be assessed in concert with County administration to ensure acceptable long term results and operation/maintenance.

6.2 Staging

The Morgan Creek Business Park will be developed in four stages. The first and second stages will be the eastern portion, accessed via Range Road 263A as shown on Map 9. These stages are expected to take approximately five years to reach full build-out. The Morgan Creek ravine Environmental Reserve and creek crossing right-of-way will be dedicated with Stage 1. The creek crossing will not be constructed until the development of Stage 3.

Staging plans are dependent on the ultimate Land Use Concept that is constructed, however, Map 9 – Staging lays out the anticipated general staging pattern for the development. Minor variations to this staging plan are expected as part of the normal development process and do not require any Outline Plan amendment to implement.

Prior to the construction of the creek crossing a temporary paved turnaround shall be provided for site traffic in Stage 1. The ultimate turnaround solution will be subject to County and Emergency Services approval at the time of subdivision and detailed engineering design.

Preliminary designs for the creek crossing will be submitted with the first phase of development engineering to ensure the roadway alignment (vertical and horizontal curves) are satisfactory and the land dedication in Stage 1 is sufficient to build the roadway and creek crossing in the future. Detailed design of the creek crossing shall be submitted at the time of development of Stage 3.

Stages 3 and 4 contain all lands west of the creek and include the upgrading of access to Highway 16A via Range Road 265. The creek crossing will be required to allow for the development of Stage 3. The construction of Stages 3 and 4 is expected to take approximately five years and will be driven primarily by market demand.

Subdivision applications will be submitted to Parkland County for review and approval by the Subdivision Authority.

APPENDIX A: MAPS

Map 1 Location

Map 2 Outline Plan Context

Map 3 Environmental Features

Map 4A Land Use Concept A

Map 4B Land Use Concept B

Map 4C Land Use Concept C

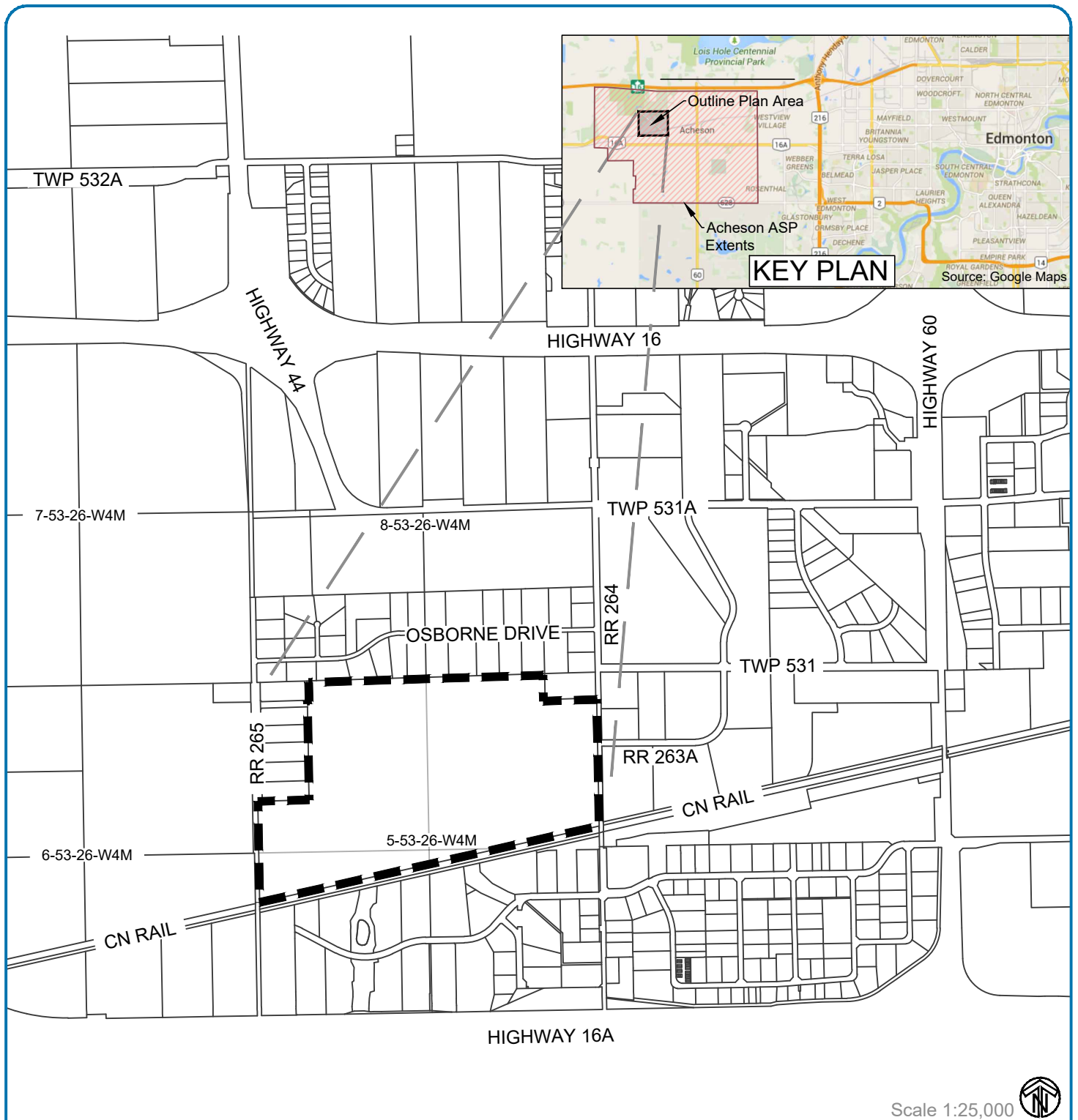
Map 5 Transportation Network

Map 6 Water Network

Map 7 Sanitary Sewer

Map 8 Storm Water Management Plan

Map 9 Staging



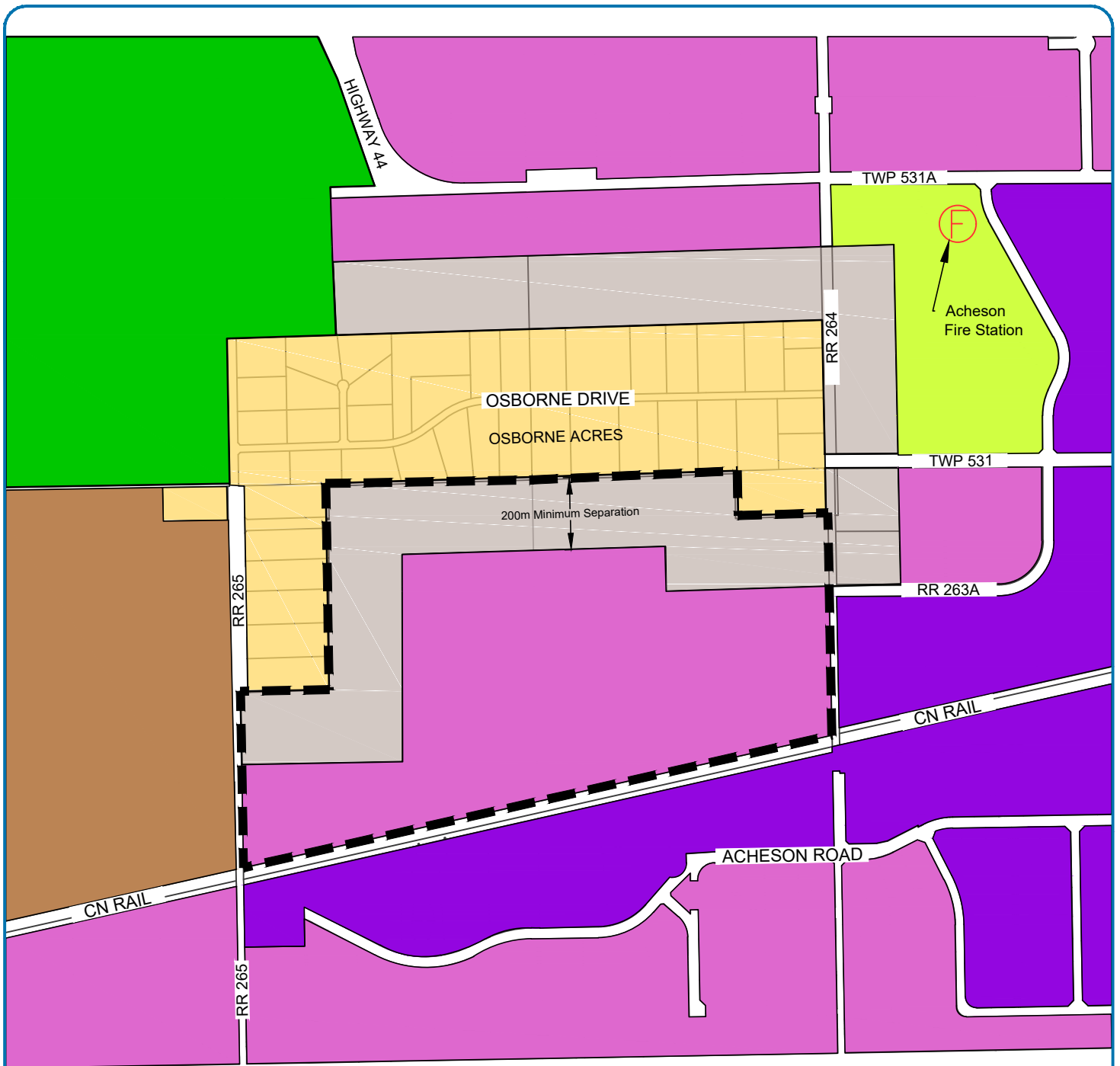
Legend


— Outline Plan Area

Map 1 - Location











OUTLINE PLAN



Scale 1:15,000 

Legend

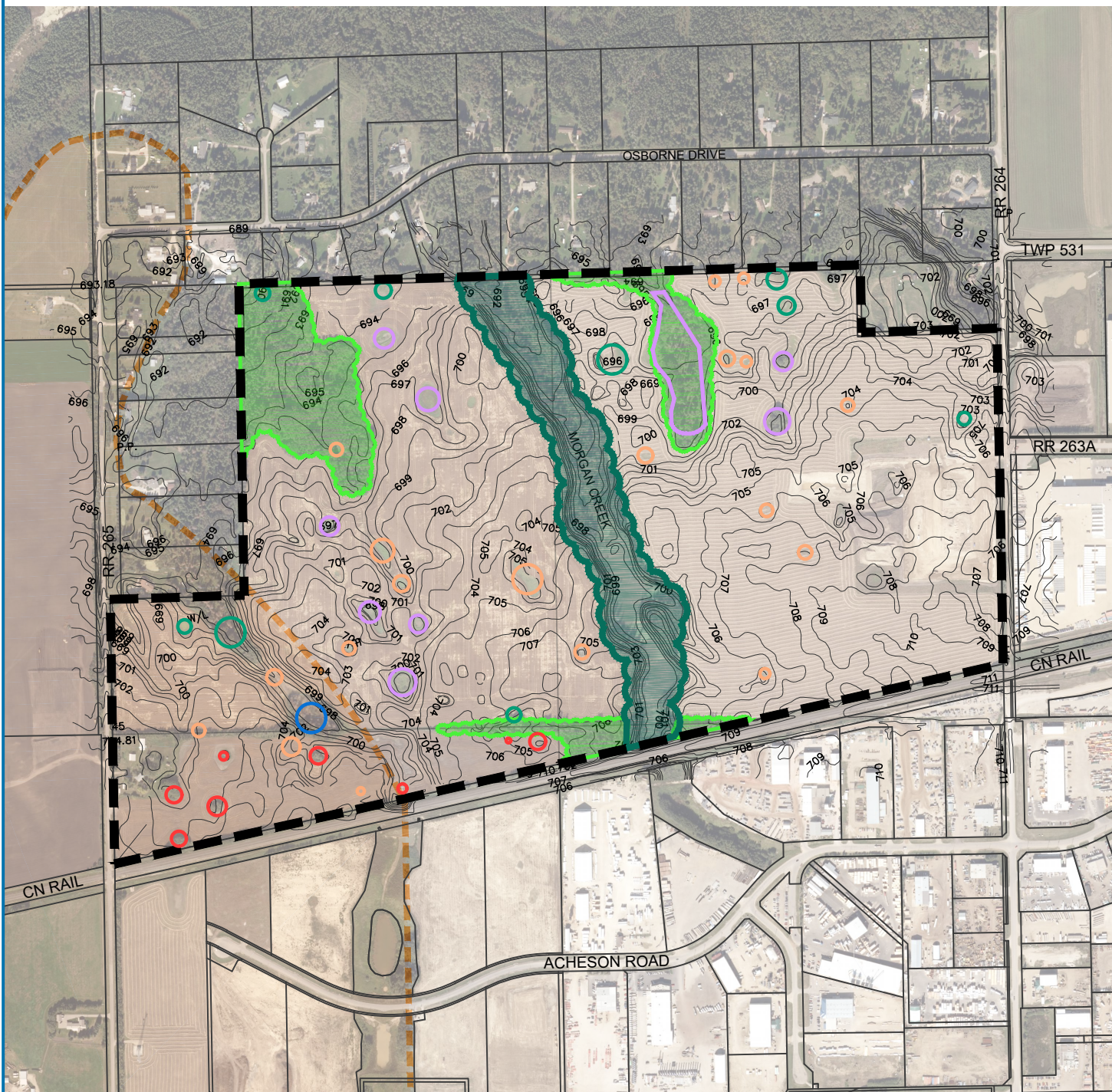
Map 2 - Outline Plan Context

- | | |
|---|---|
|  Outline Plan Area |  Agriculture Restricted Area |
|  Medium Industrial |  Wagner Natural Area |
|  Business Industrial |  Agricultural |
|  Residential |  Recreational |

Source: Parkland County Land Use Bylaw



OUTLINE PLAN



Scale 1:10,000



Legend

- Outline Plan Area
- Mixed Wood Forest (MWF)
- Morgan Creek Ravine
- 709 ✓ Elevation Contour (1m Interval)
- Wagner Natural Area
- Groundwater Recharge Zone

Map 3 - Environmental Features

- Class I Wetland
- Class II Wetland
- Class III Wetland
- Class IV Wetland
- 2015 Assessed Wetlands

*Feature locations shown are approximate.
Please refer to Enviromark Report dated Sept 24, 2015



OUTLINE PLAN



Scale 1:10,000

Legend

- Outline Plan Area
- Property Line
- Business Industrial
- Stormwater Facility/PUL
- Municipal Reserve

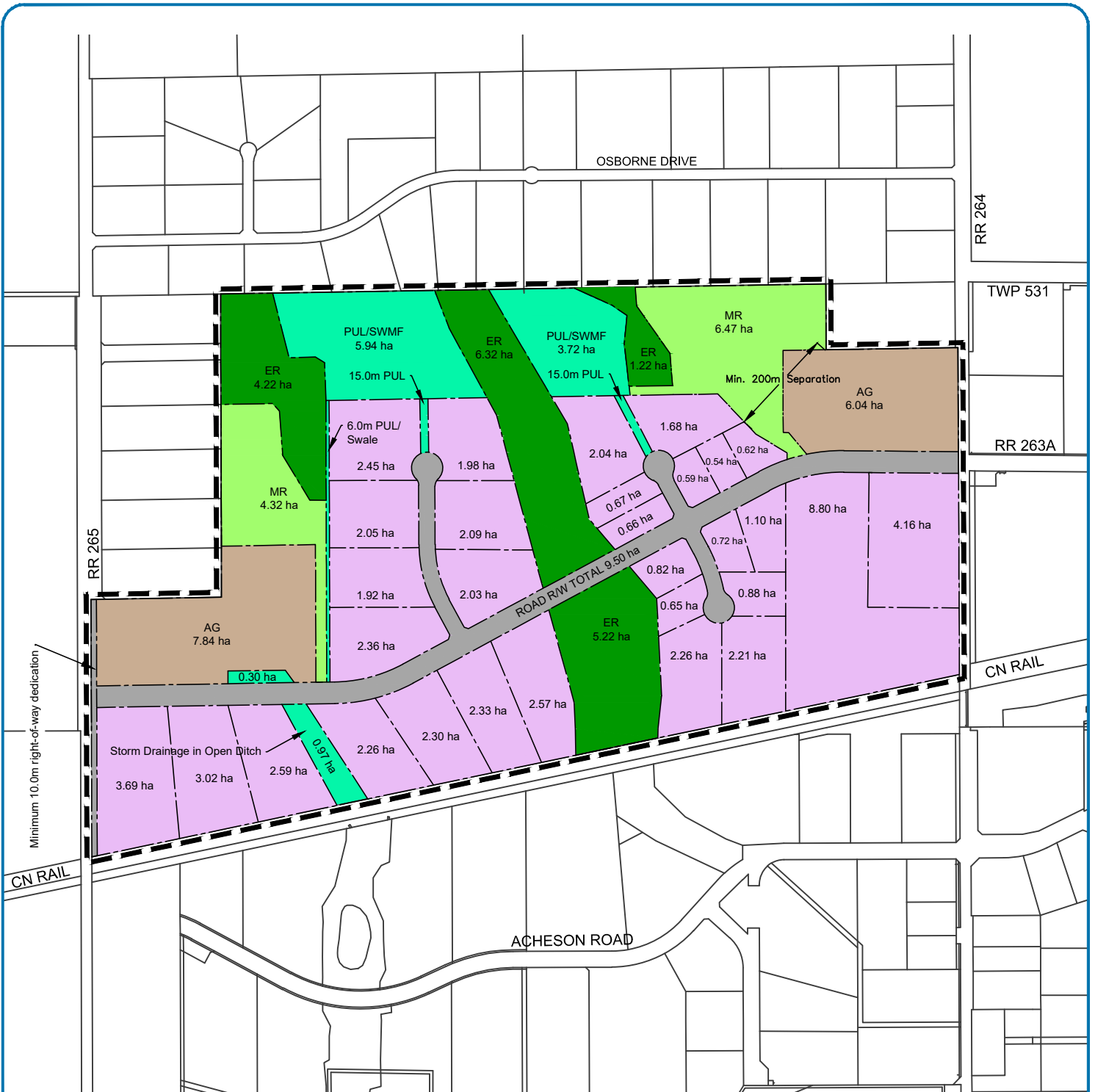
Map 4A - Land Use Concept A

- Environmental Reserve
- Agriculture
- Road

Note: All parcels and boundaries shown are conceptual and subject to change at time of subdivision. All areas are to be confirmed by legal survey prior to registration.



OUTLINE PLAN



Scale 1:10,000



Legend

- Outline Plan Area
- Property Line
- Business Industrial
- Stormwater Facility/PUL
- Municipal Reserve

Map 4B - Land Use Concept B

- Environmental Reserve
- Agriculture
- Road

Note: All parcels and boundaries shown are conceptual and subject to change at time of subdivision. All areas are to be confirmed by legal survey prior to registration.



OUTLINE PLAN



Scale 1:10,000

Legend

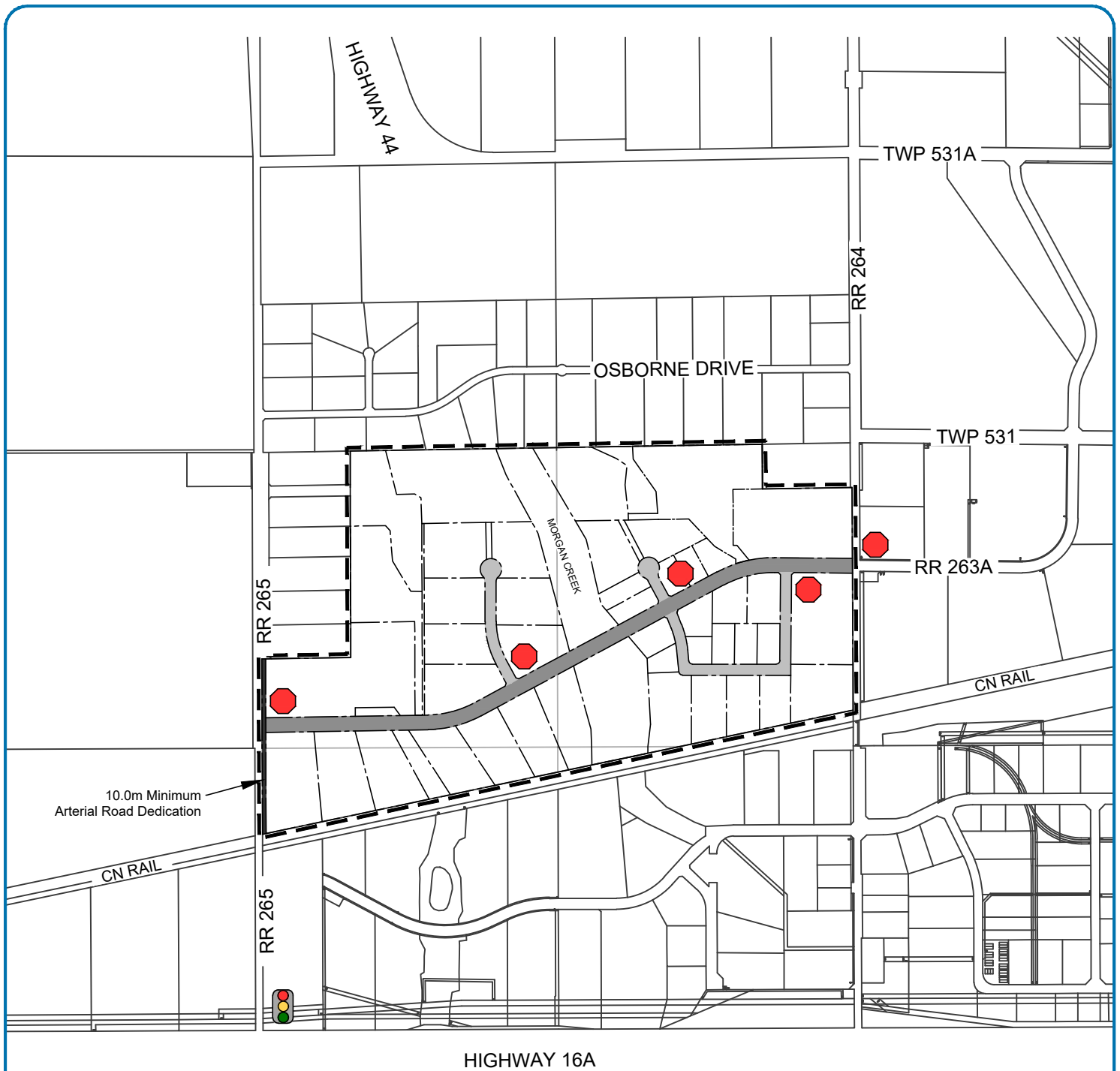
- Outline Plan Area
- Property Line
- Business Industrial
- Stormwater Facility/PUL
- Municipal Reserve

Map 4C - Land Use Concept C

- Environmental Reserve
- Agriculture
- Road

Note: All parcels and boundaries shown are conceptual and subject to change at time of subdivision. All areas are to be confirmed by legal survey prior to registration.





Scale 1:15,000



Legend

- Outline Plan Area
- Property Line
- Arterial Road Dedication
- Major Collector Road
- Local Road

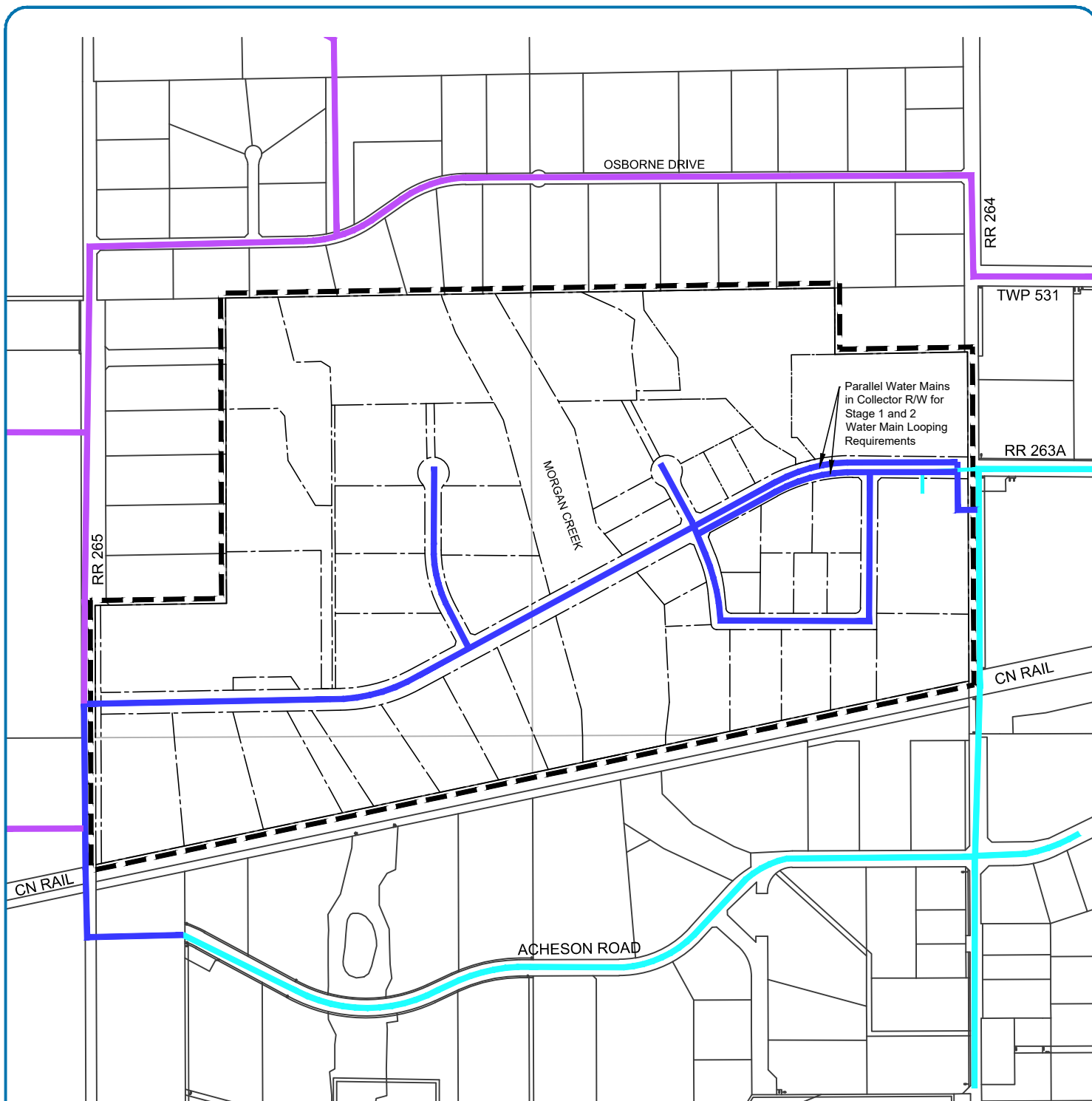
Map 5 - Transportation Network

- Signage Controlled Intersection (RA-1 As Per MUTCD)
- Signalized Intersection (Future)

Note: Road network shown is conceptual and subject to variation at subdivision and detailed design.



OUTLINE PLAN



Scale 1:10,000



Legend

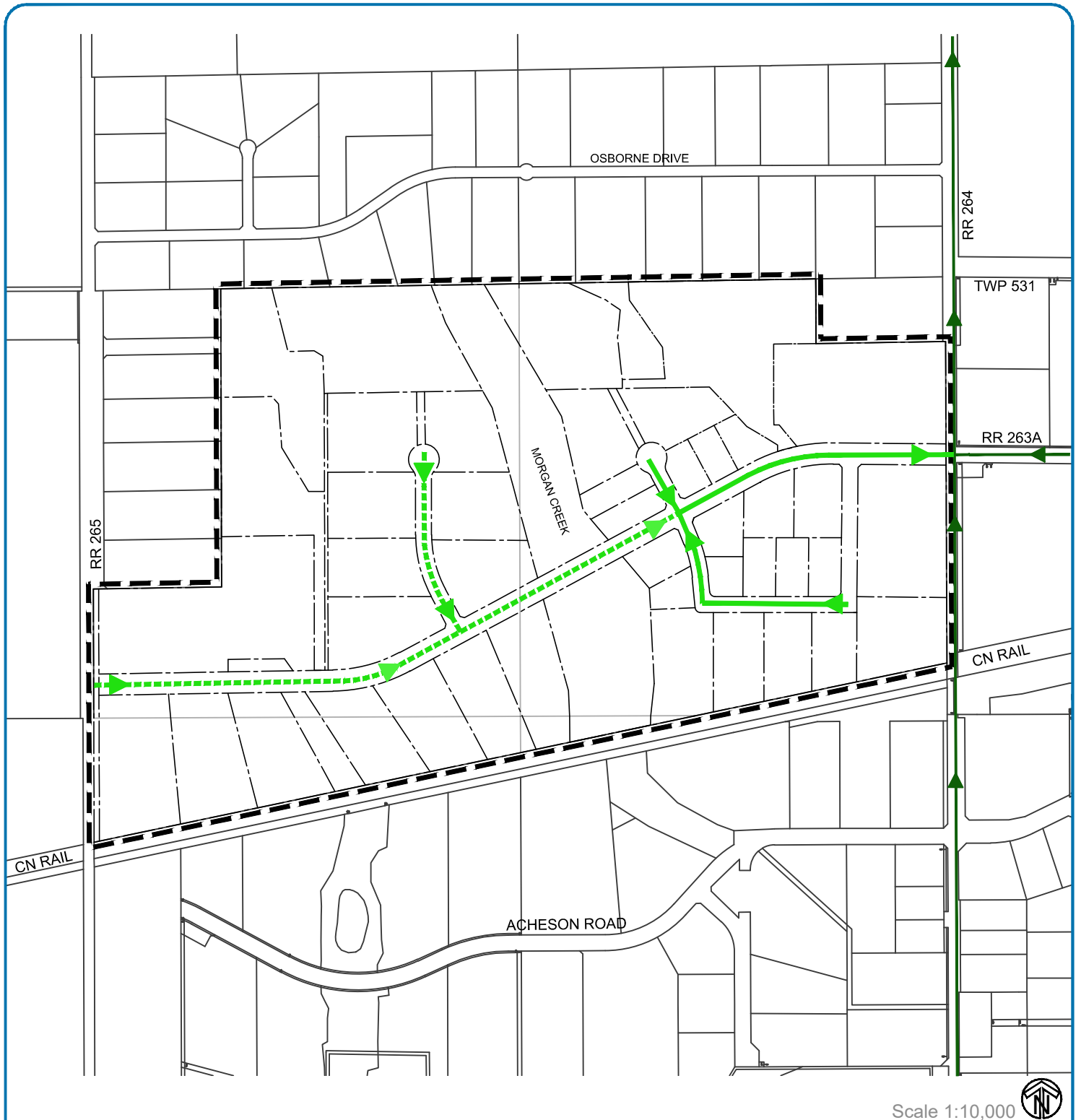
- Outline Plan Area
- Property Line
- Existing Watermain
- Future Watermain (2014 ASP)
- Proposed Watermain

*Pipe locations are approximate. Refer to final engineering design for further detail.
Ultimate pipe networks shall be based on the Land Use Concept at time of detailed engineering design.

Map 6 - Water Network



OUTLINE PLAN



Scale 1:10,000



Legend

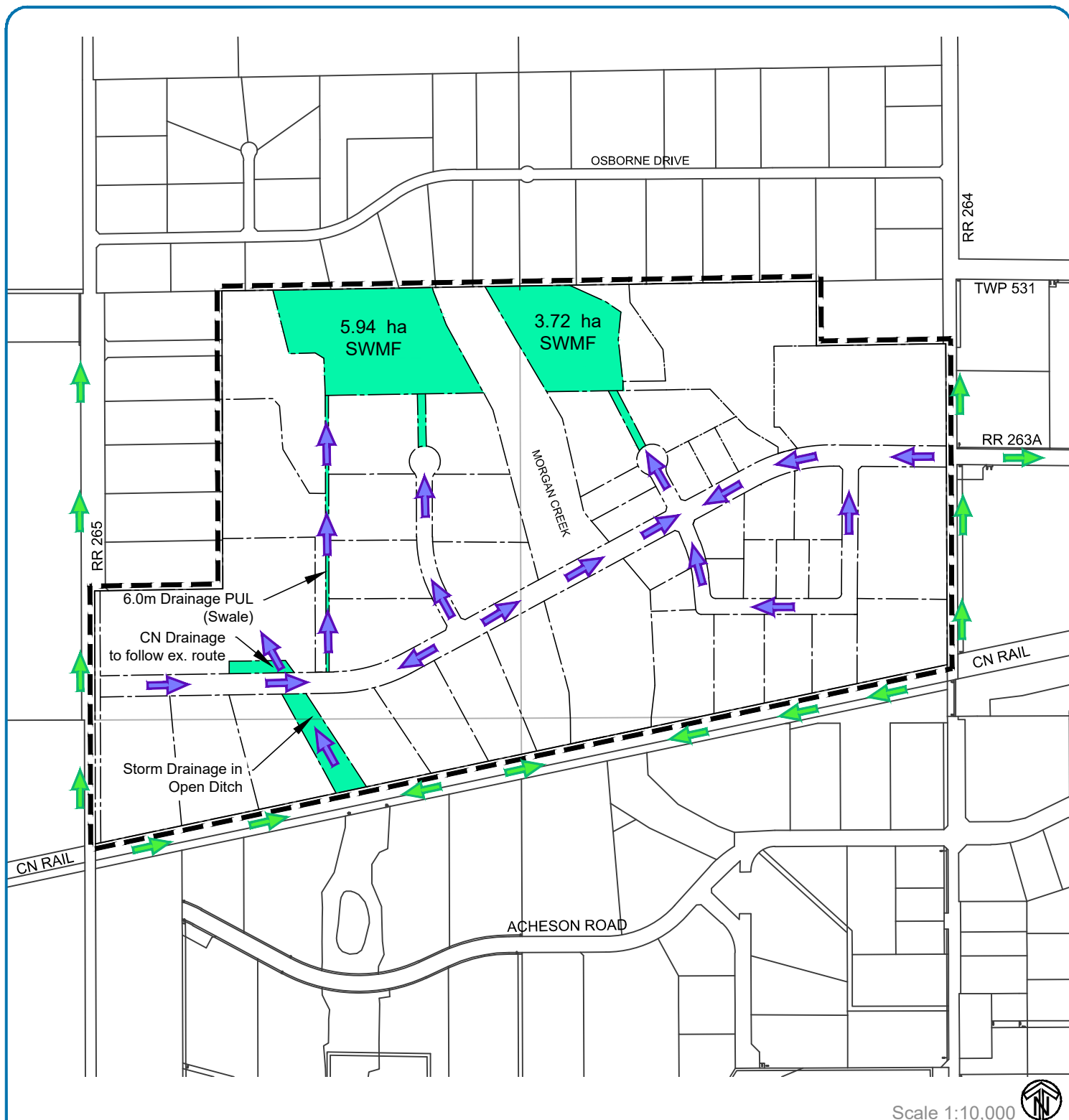
- Outline Plan Area
- Property Line
- Existing Sanitary Sewer (Acheson Trunk)
- Proposed Gravity Sanitary Sewer
- Proposed Low Pressure Forcemain

*Pipe locations are approximate. Refer to final engineering design for further detail.
Ultimate pipe networks shall be based on the Land Use Concept at time of detailed engineering design.

Map 7 - Sanitary Sewer



OUTLINE PLAN



Scale 1:10,000

Legend

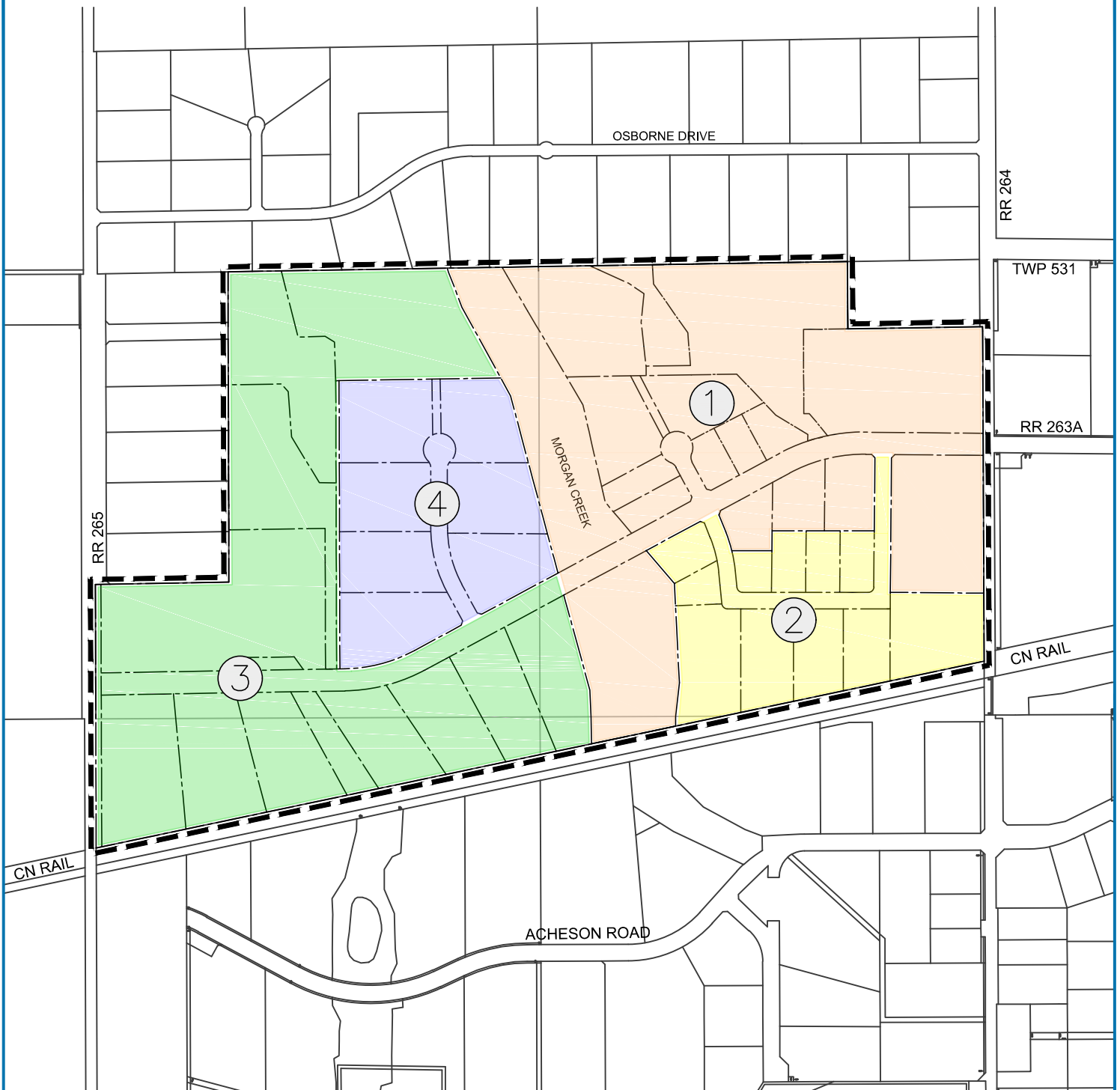
- Outline Plan Area
- Property Line
- PUL / Stormwater Management Facility
- Existing Drainage Route
- Proposed Overland Major Drainage Route

*Storm water network is conceptual and subject to variation. Refer to final engineering design for further detail.

Map 8 - Storm Water Management



OUTLINE PLAN



Scale 1:10,000



Legend

- Outline Plan Area
- Property Line
- Stage 1
- Stage 2
- Stage 3
- Stage 4

Note: Creek crossing to be dedicated with Stage 1 and constructed with Stage 3.
 Stage areas are conceptual and stage boundaries are subject to variation at time of subdivision and development.
 Ultimate stage boundaries shall be determined based on the ultimate Land Use Concept selected for development.

Map 9 - Staging



OUTLINE PLAN



APPENDIX B: ALBERTA CULTURE CLEARANCE LETTER

Application for *Historical Resources Act* Clearance

Activity Administration

Date Received: December 06, 2013

HRM File: 4835-13-0100

Purpose of Application: ☒ All New Lands ☐ Additional Lands ☐ No New Lands

Project Category: Subdivisions (4835)

Project Type: ☒ Residential Subdivision ☒ Commercial Subdivision ☒ Industrial Subdivision

ESRI Shapefiles are attached (yes/no) No

Approximate Project Area (ha) 120

Project Identifier: Subdivision of part of the north half of Section 5-53-25-W4M

Additional Identifier(s):

Key Contact: Mr. Walt A Kowal
 Address: 2526 Bell Court SW Walt
 Postal Code: T6W 1J8
 E-mail: w.kowal@shaw.ca

Affiliation: The Archaeology Group
 City / Province: Edmonton, AB
 Phone: (780) 438-4262
 Fax: (780) 439-4285
 Your File Number: 780 438-4262

Is the Proponent the same as the Key Contact? ☐ Yes ☒ No If no, complete the following:

Proponent: Maple Reinders
 Address: #201, 1921-91 Street SW
 Postal Code: T6X 0W8
 E-mail: AlexB@maple.ca

Contact Name: Alex Burgess
 City / Province: Edmonton, AB
 Phone: (780) 465-5980
 Fax: (780) 465-8927

Proposed Development Area					Land Ownership			
MER	RGE	TWP	SEC	LSD List	FRH	SA	CU	CT
4	26	53	5	9-16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Historical Resources Impact Assessment:

For archaeological resources:

Has a HRIA been conducted?

☐

Yes

☒

No

Permit Number (if applicable):

For palaeontological resource:

Has a HRIA been conducted?

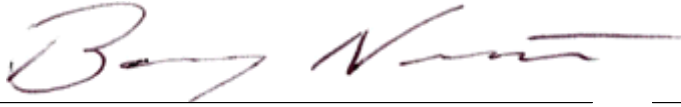
☐

Yes

☒

No

Historical Resources Act clearance is granted subject to Section 31 of the Resources Act, "a person who discovers an historic resource in the course of making an excavation for a purpose other than for the purpose of seeking historic resources shall forthwith notify the minister of the discovery". The chance discovery of historical resources is to be reported to the contacts identified within the listing.



January 06, 2014

Date