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# IRVINE

# AREA STRUCTURE PLAN

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CYPRESS COUNTY

BYLAW 2018/12

A Bylaw of Cypress County in the Province of Alberta to adopt the Seven Persons Area Structure Plan and Area.

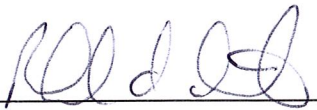
PURSUANT TO the provisions of the Municipal Government Act, being Chapter M-26 of the Revised Statutes of Alberta, 2000, and amendments thereto, the Council of Cypress County in the Province of Alberta, duly assembled, ENACTS AS FOLLOWS:


1. Having prepared an Area Structure Plan for the Hamlet of Irvine and area, which will serve as a guide for future development and growth within the Plan area boundary.
2. Having held a public hearing on the document, the Area Structure Plan is hereby adopted as the Irvine Area Structure Plan, as shown in the attached Schedule "A".
3. This bylaw shall take effect upon final passage thereof.

Read a first time this 3<sup>rd</sup> day of April, 2018.

Read a second time this 15<sup>th</sup> day of May, 2018.

Read a third time and finally passed this 15<sup>th</sup> day of May, 2018.

  
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Reeve

  
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Chief Administrative Officer

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## Introduction

In August 2017, Cypress County engaged Birch Consulting and MPE Engineering Ltd. to prepare an area structure plan for the Hamlet of Irvine and the land surrounding it (see Figure 1 - Study Area). Area structure plans are a type of statutory plan under Alberta's Municipal Government Act and the content they must contain is established by legislation. The general intent is that an area structure plan (ASP) contains goals and policy direction to guide future land use and development decisions within a defined geographic area.

Having an area structure plan in place for Irvine and the land surrounding it will benefit Cypress County and Irvine's residents even given Irvine's small size and slow growth. This benefit comes from the fact that the Irvine Area Structure Plan incorporates the opinions of local residents in establishing a vision for Irvine's future, thus helping decision makers when addressing infrastructure and development issues. In Irvine, these issues include such things as: the future of the 39-lot residential subdivision that has been largely idle for decades; land uses at the Hamlet's two accesses from the TransCanada Highway; the effects of changing retail and service shopping practices on the community; the Ross Creek flood risk; and opportunities for growth. Having an ASP also helps Cypress County with its long term infrastructure planning by evaluating Irvine's road, water, sewage and other municipal services in light of the broader community context.

The Irvine Area Structure Plan has been prepared with input from community members obtained through a workshop, a survey and an open house. It has been informed by an engineering assessment of Irvine's infrastructure situation. It has also benefited from the opinions of County administration, members of which have a good understanding of the community's recent history, and its land use and development issues. The Irvine Area Structure Plan has been adopted by Cypress County Council as an official planning tool for the community following a public hearing.

## Purpose of this Area Structure Plan

The requirements for area structure plans are prescribed in the Municipal Government Act, Revised Statutes of Alberta 2000, Chapter M-26 as amended (the MGA), and are as follows:

*“633 (1) For the purpose of providing a framework for subsequent subdivision and development of an area of land, a council may by bylaw adopt an area structure plan.*

*(2) An area structure plan*

*(a) must describe*

*(i) the sequence of development proposed for the area,*

*(ii) the land uses proposed for the area, either generally or with respect to specific parts of the area,*

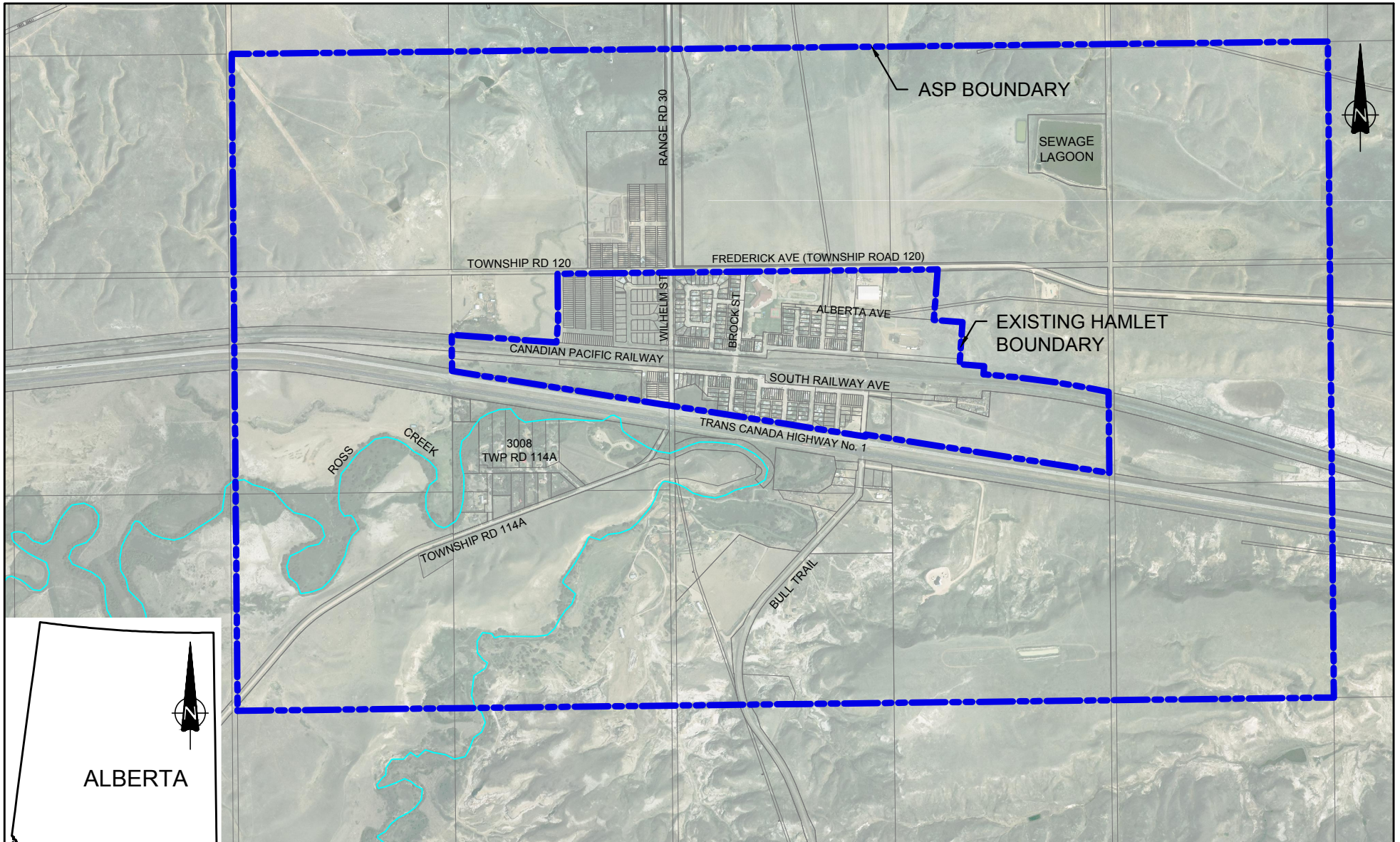
*(iii) the density of population proposed for the area either generally or with respect to specific parts of the area, and*

*iv) the general location of major transportation routes and public utilities,*  
*and*

*(b) may contain any other matters the council considers necessary.*

*(3) An area structure plan must be consistent with*

*(a) any intermunicipal development plan in respect of land that is identified in both the area*



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IRVINE AREA STRUCTURE PLAN  
STUDY AREA BOUNDARY

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FIGURE: 1

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*structure plan and the intermunicipal development plan, and  
(b) any municipal development plan."*

Council and administration of Cypress County will use the Irvine Area Structure Plan in making decisions on subdivision and development permit applications, and making amendments to the Land Use Bylaw. They will also use the ASP when working on municipal budgets, and determining infrastructure and other municipal service needs and priorities. Similarly, they will use it when evaluating requests from the Irvine community for facility and service provision, and associated funding.

Land owners, private developers, and existing residents and business owners will find the Irvine Area Structure Plan useful in that it lays out a vision for the community's future. The Plan then establishes goals and policies to help the community move towards that vision. While there may be other documents that are referenced in this regard, such as a strategic plan or recreation master plan, the Irvine Area Structure Plan sets on the broad direction for the future the community, for land use and for municipal infrastructure.

The Irvine Area Structure Plan is a long term planning document but should not be considered a static document. As the world in which we live evolves, the larger regional environment transforms, and Irvine's residents change, the ASP should be amended so that it continues to be relevant for community planning.

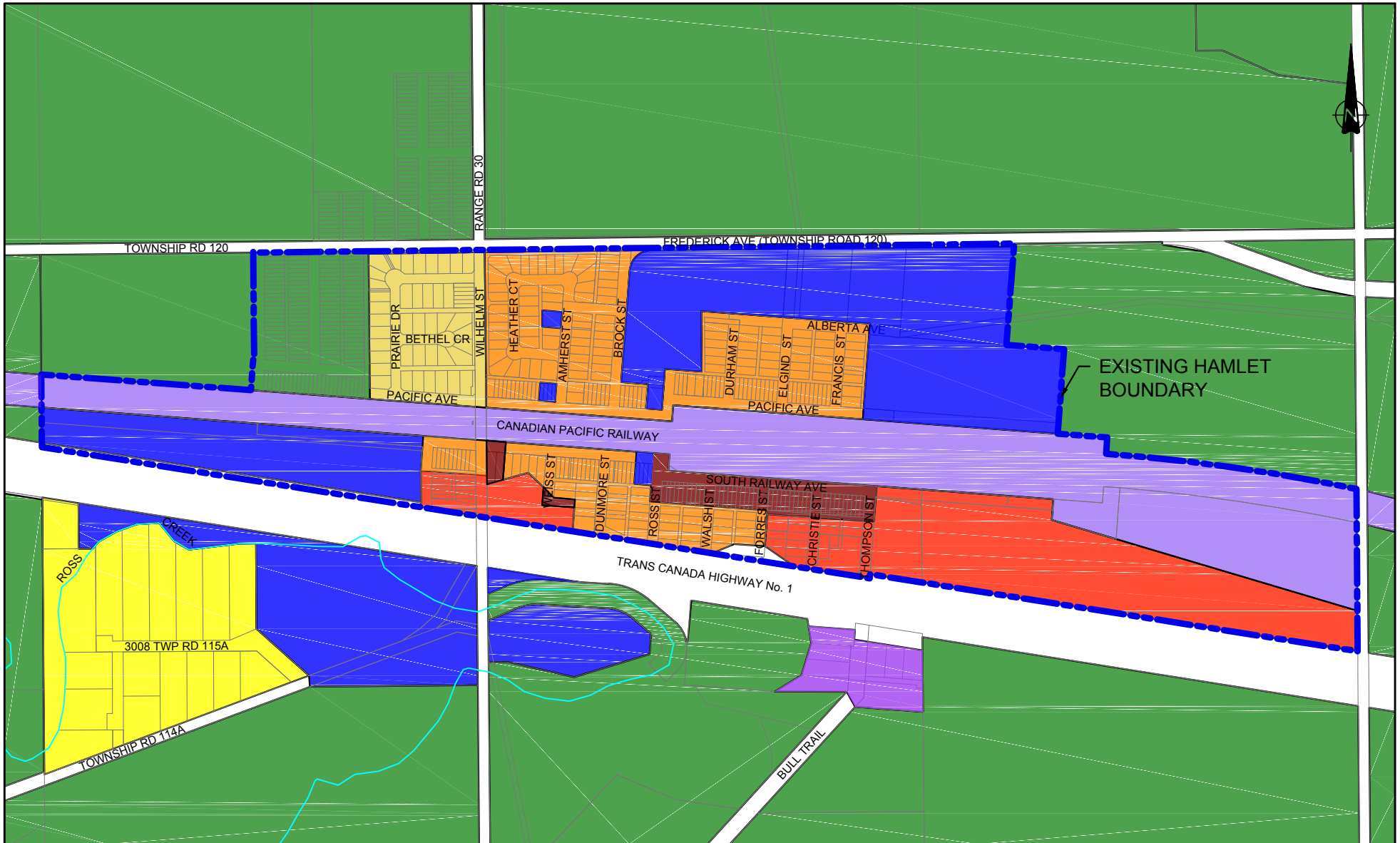
## Existing Land Use

In the absence of an existing area structure plan or area redevelopment plan for Irvine, land use activity has been governed by the Cypress County Land Use Bylaw. That Bylaw's land use districts (sometimes called zones) are illustrated in Figure 2. This information can be combined with the air photography of Figure 1 to generate an understanding of current land use in the Study Area. The existing land use serves as the base on which the Irvine Area Structure Plan is built.

## Demographic Information

Because of its relatively small size, detailed demographic information about Irvine is not readily available from Statistics Canada (Source: [www12.statcan.gc.ca](http://www12.statcan.gc.ca) and personal communication with staff at Statistics Canada). The County recognizes Irvine's 2016 population as being 307 people, making Irvine the third largest hamlet in Cypress County after Dunmore (1,097 people) and Desert Blume (586 people).

More detailed information from Statistics Canada is available for Cypress County as a whole and sheds some light on the demographic environment in which Irvine is situated. Cypress County had a 2016 population of 7,662 people, an increase of 6.2% from the 2011 census population count. This was considerably less than Alberta's 11.6% growth rate over that same period but above Canada's 5.0% national growth rate. Additionally, Cypress County's population is slightly younger than Alberta's as a whole, particularly having more people aged 0 - 14 years of age than does Alberta. Correspondingly, the portion of its other population age groups, including seniors, is lower than in Alberta as a whole (Source: [www12.statcan.gc.ca](http://www12.statcan.gc.ca)).



- COUNTRY RESIDENTIAL
- HAMLET RESIDENTIAL
- HAMLET SINGLE FAMILY RESIDENTIAL
- PUBLIC SERVICE
- HAMLET COMMERCIAL
- HAMLET INDUSTRIAL
- INDUSTRIAL
- HIGHWAY COMMERCIAL
- GENERAL AGRICULTURE

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EXISTING LAND USE DESIGNATION

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FIGURE: 2



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Anecdotal information obtained at the ASP workshop seems to confirm that Irvine is somewhat similar to Cypress County in terms of its demographics. When asked to describe the changes in Irvine’s population in recent years, the participants indicated that there have been more young families moving to Irvine than in the past. The workshop participants suggested that the parents of these families commute to work, mostly to Medicine Hat, while the children benefit from the Irvine kindergarten to Grade 9 school.

## Development Constraints

When considering future land use and development options, the physical and legislative environments must be recognized because they constrain development choices. In the Irvine ASP Study Area, there are six elements that have a major impact on planning decisions.

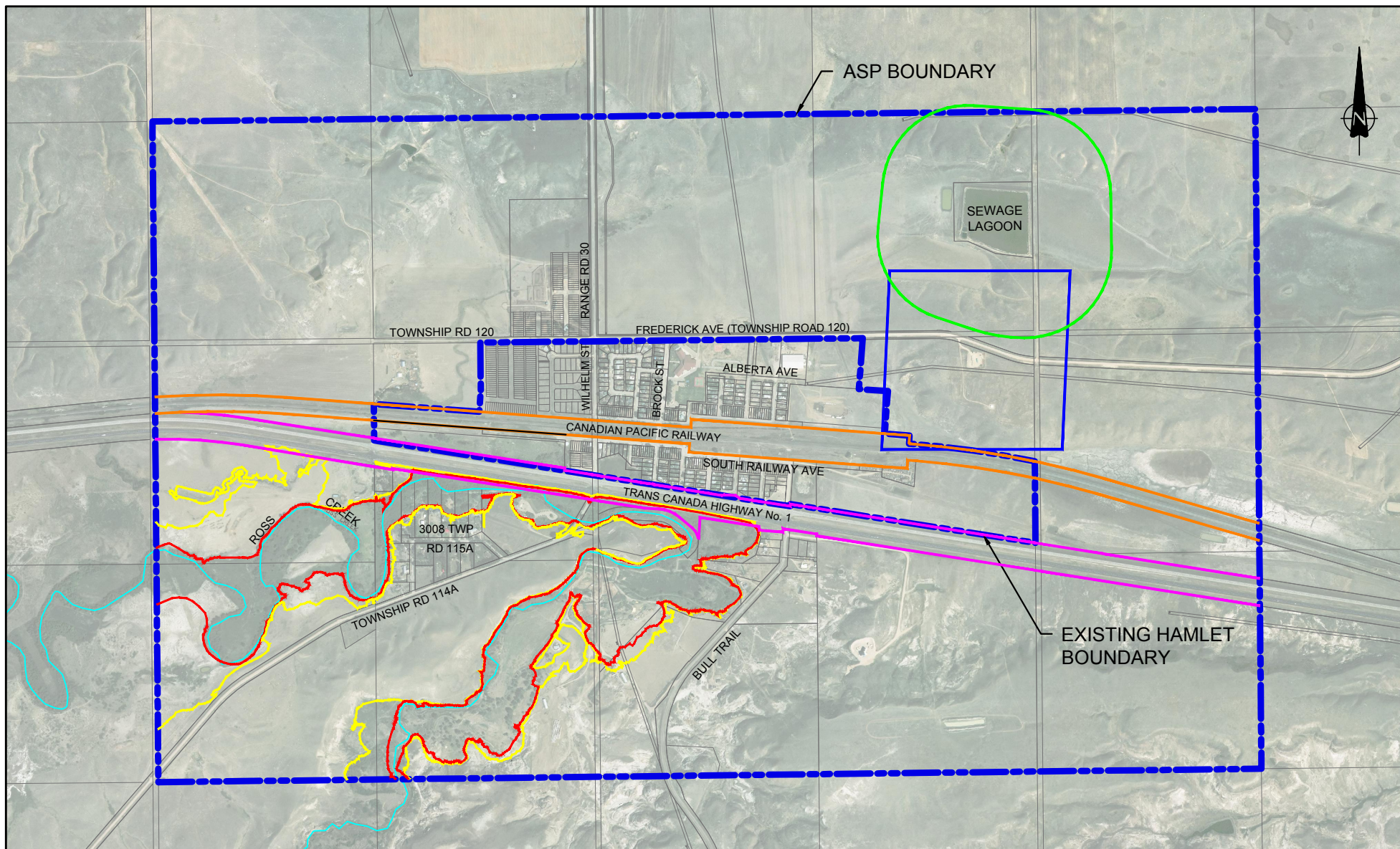
### Ross Creek Flooding

Ross Creek is a dominant topographic feature affecting the southwestern portion of the Study Area. Ross Creek is one of several water courses draining the northern slopes of the Cypress Hills and enters the Study Area in a relatively constrained channel, flowing in a northeasterly direction. Then, just before Bull Trail, the Creek turns abruptly around a height of land and flows westward along the south side of the Trans-Canada Highway, passing through the northern part of Mavista Acres. The Creek then meanders through a wider water channel until it flows under the Trans-Canada Highway about 4 km west of Irvine.

Ross Creek has a history of flooding, notably in 1955, 1994 and 2010 according to the “Cypress County Flood Hazard Identification Study - Ross Creek at Hamlet of Irvine” report prepared by Northwest Hydraulic Consultants Ltd. in 2012 for Alberta’s Department of Environment and Water. That report was done in response to the impact of the 2010 flood on residences in Mavista Acres, on the farm located west of Bull Trail along the Creek’s right bank, and the Hamlet of Irvine. That flood water came over the Trans-Canada Highway and flowed into the southern part of Irvine, being restrained by the CP track embankment.

The Northwest Hydraulic Consultants Ltd. study predicts the Ross Creek flood hazard based on the 100 year design flood. It estimates floodway and flood hazard (flood fringe) limits for such floods. The study suggests that new development not be allowed in the floodway and that only limited development be allowed in the flood fringe. The 100 year design floodway and flood hazard (fringe) limits determined by that study are shown in Figure 3, Development Constraints.

It is worth noting that the 2010 flood was estimated to be a 500 year event. Consequently, some areas that flooded in 2010 are not included in the floodway or flood hazard areas of Figure 3 and do not face development restrictions. This is because it is standard practice in Alberta to only establish such restrictions based on the estimated 100 year flood event. Persons thinking of developing near Ross Creek should read the full Northwest Hydraulic Consultants report (available from Cypress County or Alberta Environment) and recognize that 100 and 500 year flood events do not simply happen at that frequency. Instead, these 100 and 500 year ratings are better thought of as probabilities and, as such, these events could happen two or more years in a row; it is just not likely that they will occur that often. Looking



- FLOOD HAZARD LIMIT OF THE 100-YEAR DESIGN FLOOD\*
- FLOODWAY LIMIT OF THE 100-YEAR DESIGN FLOOD\*
- SEWAGE LAGOON SETBACK (300m)
- WASTE TRANSFER SITE SETBACK (300m)
- RAILWAY RIGHT-OF-WAY
- HIGHWAY RIGHT-OF-WAY

\* FLOOD BOUNDARY INFORMATION TAKEN FROM CYPRESS COUNTY FLOOD HAZARD IDENTIFICATION STUDY ROSS CREEK AT HAMLET OF IRVINE AS PREPARED BY NHC - NORTHWEST HYDRAULIC CONSULTANTS

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DEVELOPMENT CONSTRAINTS

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FIGURE: 3

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forward, climate change is making our weather systems less predictable and more severe, so forecasting will be more difficult and historic patterns may not be as relevant.

## Steep Slopes

Besides Ross Creek, the other natural topographic feature in the Study Area is sloping terrain. Irvine sits in a broad valley that runs in an east-west direction. Both the Canadian Pacific rail line and the Trans-Canada Highway take advantage of this relatively flat valley bottom for their alignment through this part of Alberta. The valley's slopes are not generally a constraint factor for future development in the Hamlet of Irvine or most of the adjacent area. The exception is in the southeastern part of the Study Area where the low hills are closer to the Highway and limit easy development and growth.

## Wastewater Treatment Facility Setbacks

Sanitary sewage is pumped from Irvine's collection system and treated in a lagoon located in the northeastern part of the Study Area. The Alberta Municipal Government Act's Subdivision and Development Regulation (Alberta Regulation 43/2002, as amended) requires a 300 m separation distance between the working area of sewage treatment facilities and schools, hospitals, food establishments and residences. Figure 3, Development Constraints, shows the 300 m separation distance.

## Solid Waste Storage Facility Setbacks

The solid waste storage and transfer site for Irvine and surrounding area is situated on the rise of land east of the Hamlet. The Subdivision and Development Regulation (Alberta Regulation 43/2002, as amended) requires that schools, hospitals, food establishments and residences be separated from waste storage facilities by a minimum distance of 300 m. Figure 3 illustrates that 300 m distance. (Note: this does not apply to recycled material collection centres.)

## CP Rail Line

Canadian Pacific's southern, main rail line across Canada bisects the Hamlet of Irvine and Study Area. As such, it impacts traffic movement and affects adjacent land uses. There are no senior government requirements for the setback of development from a rail line or its right-of-way but there are practical reasons for not developing too close to rail lines. Figure 3, Development Constraints, shows the Canadian Pacific (CP) rail line in the context of the Hamlet.

Besides noise and safety issues, the CP rail line also creates a development constraint in that the right-of-way is a linear, privately owned property that divides the community in two and must be crossed. There is only one developed road-crossing of the rail line in the Hamlet of Irvine, at Dunmore Street/Brock Street, and this can sometimes serve as an obstacle to emergency vehicles, traffic or pedestrians when a train is passing through or if there is work at the crossing.

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There are also two undeveloped crossings of the CP rail line within the Study Area, both created by the original Dominion Land Survey of Alberta with its system of regular road allowances. One is at Wilhelm Street and the other is a mile east, at the Hamlet's eastern boundary. These road allowances belong to the Province of Alberta and fall under the care and control of Cypress County. Use of the road allowances for road construction or infrastructure (water or sewer lines) would require negotiations with CP prior to their use.

## Trans-Canada Highway

Figure 3 shows the Trans-Canada Highway relative to Irvine and area. While the Trans-Canada Highway (Highway 1) is outside the Hamlet of Irvine, demarcating the Hamlet's southern boundary, it nonetheless divides the community and Study Area.

This Provincial highway is operated under the authority of Alberta Transportation. Access points along the Trans-Canada Highway are tightly regulated to ensure the Highway's safe and efficient operation. The Subdivision and Development Regulation (Alberta Regulation 43/2002, as amended) gives Alberta Transportation the ability to prevent subdivision within 1.6 km of a highway centre line unless it has entered into an agreement or consented to an area structure plan with the local municipality.

Additionally, under the Highways Development and Protection Regulation (Alberta Regulation 326/2009, as amended) all proposed developments, including a change in use of existing development, that is proposed within 300 metres of a provincial highway right-of-way boundary or within 800 metres of the centre point of an intersection of a provincial highway with another public road require permits from Alberta Transportation. The general minimum setback requested by Alberta Transportation for all development is 70 metres from the highway centre-line and no closer than 40 metres from the highway right-of-way boundary except where these distances must be increased to allow for highway widening.

## Community Input

Community input was obtained at the start of the planning process in order to prepare a plan that reflects the objectives and interests of residents. This was done in two ways. First, a workshop was held at the Irvine and District Recreation Complex on September 19, 2017. Second, a survey was mailed to owners of all properties within the planning area boundary. The results of both were tabulated and are available from Cypress County in separate reports. Some key findings are summarized and discussed below.

### Workshop

Workshop participants were asked about Irvine's attractions and what they liked most about living in the community. The advantages they cited mainly had to do with living in a small rural town. These included such things as larger property sizes, lower housing costs, lower property taxes, and a better sense of community than in larger centres. Some special attributes of Irvine were also noted. These included the school (K - 9) and its large playground, the recreation complex, the museum and the library. The easy commute to Medicine Hat for work or shopping was also mentioned.

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The things that people would like as improvements were: a local store; more attractive entrances to the Hamlet from the Trans-Canada Highway, improvements in the care of some private properties within the community; construction of a campground (there was one in the past); and high-speed Internet service.

The workshop participants also discussed the desirability of advertising Irvine to encourage growth of its population and increase its visibility. They talked about attracting tourists to Irvine by promoting existing features, noting the recreation complex and the museum with its numerous historic buildings as current draws. They also suggested development of new ways to attract tourists, including: recognition of the dinosaur named after Irvine (*Chasmosaurus irvinensis*); building a campground; increasing recreational opportunities by building a BMX track, spray park or other facilities; and pointing out the unique character of the old cemetery. Another interesting idea put forward to attract tourists was to establish a wood carving showplace and art-based store at the Hamlet's western entrance on the Trans-Canada Highway. Also in terms of community promotion, the workshop participants suggested that more could be done to highlight the ease of the commute between Irvine and Medicine Hat. They said that Irvine is a logical 'bedroom community' for people working in Medicine Hat whom are looking for a more rural lifestyle where there is a school.

The workshop participants were strongly in support of growth. When asked about the type of future residential development most suited to Irvine, the workshop attendees suggested large lots and family-oriented housing. They said that there have been more families moving to Irvine in recent years, taking advantage of the local school. They also suggested there needs to be more new housing inventory rather than the older, existing structures and that there may be some interest in high density housing, potentially designed for rental or for seniors.

## Survey

To allow people unable to attend the workshop an opportunity for input, it was decided that there should also be a survey mailed to all properties in the study area, based on the list of landowners available to Cypress County. The survey asked questions similar to those covered in the workshop but by its nature allowed the responses to be grouped to illustrate the more frequent, or common, opinions. That said, there were many similarities to the opinions voiced at the workshop.

People responding to the survey suggested that the top six advantages to living in Irvine were its small-town atmosphere, relatively low property taxes, good level of municipal services, friendly nature, quiet and peaceful environment, and recreation complex. Other commonly cited advantages were its good highway access, proximity to Medicine Hat, the school and the playground. As for desired changes, most important to them would be: the addition of a gas or service station, a convenience store and a restaurant; more residential development to support local businesses; development of a campground; and construction of a water park, spray park or pool for young families.

In terms of land development, there was strong support for creation of additional residential lots in Irvine, with the suggestion that these lots should be larger in size to maintain the Hamlet's small-town characteristics. The survey also showed that there is support for industrial development. These opinions in part relate to a desire to have more people in

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Irvine to support local businesses. The survey respondents recognized that it is hard to keep viable businesses in the Hamlet given the competition of nearby Medicine Hat.

The survey illustrated a common belief that Irvine benefits from recreational and cultural facilities that are unusual for such a small community. The survey respondents were also generally very satisfied with the Hamlet's water, sanitary sewer, storm sewer and road infrastructure. In contrast, there was desire expressed for improved Internet connectivity and speed.

The survey also asked people to provide a vision of what Irvine should be like in ten to fifteen years. While there were many opinions about this future, there was a common theme evident. Many of the respondents expressed the desire to see an increase in population numbers, especially in terms of young families, while keeping the friendly, small-town characteristics Irvine currently has in its favour.

## Vision

When planning for the future it is often beneficial to have a vision of what that future might be like. A vision provides a target to strive for and allows the establishment of some of the goals that need to be accomplished in order to get there. The vision for Irvine is based on the community input received at the workshop and through the survey. It is:

*In 10 to 15 years, Irvine will be a young, family-oriented community of about 400 people that benefits from its proximity to Medicine Hat and from its friendly, small-town nature.*

## Goals

Based on the input obtained through public engagement, a set of goals has been developed to help the community achieve its future vision. Those goals are:

- To increase the population of Irvine at a moderate but constant rate in order to enhance its viability.
- To develop residential lots and encourage family-oriented housing construction.
- To boost awareness of the community's many attributes, including its small-town lifestyle, proximity to Medicine Hat and ease of commuting, lower housing costs, excellent recreational and cultural facilities, and local school.
- To work with the school district to ensure that the existing school remains in the Hamlet and is able to grow.
- To enlarge and maintain the municipal water and sewer systems as necessary ahead of growth so that they are not a constraint.
- To improve the visibility of the community from the Trans-Canada Highway, especially at the two Hamlet entrances.
- To support community initiatives to increase the tourism potential of Irvine, emphasizing existing facilities such as the recreation complex and the museum.
- To take advantage of Irvine's existing commercial and industrial land availability to generate more local employment.

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Following from these goals, the following sections of this Area Structure Plan establish policies to be followed by the County and other decision-makers when addressing land use planning and other development issues in Irvine. Policies are more topic-specific and action-directed than goals but align with the goals in pursuit of the larger vision.

## Economic Development

### Background

Over the past several decades, Irvine has become a bedroom community to Medicine Hat rather than a service centre to the surrounding rural area. There are a variety of reasons for this, with the vast improvements in automobile travel, changes in shopping habits, and the movement of employment to larger centres being dominant factors. The same thing has happened in most of Alberta's small rural communities.

The changes brought on by the Internet are relatively new but are also critical factors in shaping our modern economy. The Internet has reinforced the earlier changes in shopping habits and made it even more difficult for local stores to survive. On the other hand, the Internet has made it much easier for people to open home businesses and work from home, and this opens up new possibilities for small communities.

During the Area Structure Plan workshop, many people suggested a desire to counter this broad economic trend. They suggested several ways of trying to attract more tourists to visit Irvine, and stated an interest in having a small store and gas station. Similar sentiment appeared in the mail-in survey, and it was also noted that the Hamlet's historic downtown area has evolved into a mixed use commercial and light industrial area. There was support for more industrial development. With local community interest in promoting tourism, flexibility in land use and new opportunities afforded by the Internet, it is possible to envision a future where economic development activity increases in Irvine.

### Policies

- The County supports an increase in economic development in Irvine centred on:
  - home-based businesses;
  - allowing light industrial uses on the eastern side of the downtown core;
  - encouraging industrial development;
  - helping promote the community's tourism opportunities;
  - the possibility of building on Irvine's motorcycle culture; and
  - facilitating the installation of high speed Internet.
- Irvine and area residents are encouraged to establish a community association that would help the County coordinate growth and economic development activities, thereby allowing the benefits of local interest, knowledge and participation to build upon the County's larger marketing presence and organizational support.
- To avoid duplication, specific policies related to economic development are placed in the other sections of this Area Structure Plan where they apply, rather than being listed here.

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# Growth

## Background

In the discussion that occurred during the workshop it became apparent that there was some difference in opinion regarding the future rate of growth of Irvine, or whether or not it should grow at all. To obtain an idea of the consensus opinion, the workshop participants were asked to provide comments on this subject on index cards that were tabulated after the workshop. While there was a range of the opinions expressed, from rapid growth to no growth, it was clear that the majority opinion was for growth at a moderate level.

The comments supporting this opinion suggested the belief in a need for growth to keep the community viable and to allow for enhanced service provision. It was recognized that if there are more people living in Irvine, more services can be offered locally. The caution provided by the participants was that Irvine not grow so big or so fast that it loses the small-town community feel and attributes the residents currently enjoy.

## Policies

- Cypress County will promote Irvine as a small-town alternative to living in Medicine Hat or other large centres.
- The County will undertake efforts to develop additional residential lots in Irvine in order to facilitate population growth (see Residential Development section of this ASP).
- The County will work with the Prairie Rose School Division to ensure that the school continues to operate in Irvine and has sufficient land and service provision to expand because the presence of the school is important for the Hamlet's growth.

## Future Land Use and Development Phasing

### Background

Development phasing refers to the timing and sequence of bringing newly serviced land onto the market for sale. There are two primary factors to consider in this regard. First is the need for additional serviced land based on type (residential, commercial, industrial, etc.) given existing supply and demand. Second is the ease and cost of servicing additional land with water, sewer, road and similar infrastructure.

In Irvine, the need for more serviced residential land is the primary concern. There are a few vacant and under-utilized residential lots in the Hamlet currently, but these are not likely to attract the type of growth that the community desires because they are not marketed as a new development area. In contrast, there is an existing, partially serviced residential subdivision comprising thirty-nine vacant lots in the northwest portion of the Hamlet, west of Wilhelm Street, that can be marketed in a unified manner. This is the old Lansdowne Equity Ventures Ltd. subdivision, which was never completed and is now owned by Cypress County. Based on Irvine's historic population growth rate and assuming a successful effort to increase that rate, it is estimated that this subdivision would provide sufficient residential land for about ten years of growth if it was completed. Irvine's residential growth capacity



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increases to about fifteen years when the potential for in-fill development of the existing residential lots is included.

After that, servicing additional residential land becomes more difficult and costly. As can be seen from the infrastructure-related sections of this ASP, there is no obvious, less expensive direction in which to expand the community given the need for sewage lift stations to pump sewage up to existing sanitary sewer mains. All directions are more or less equal from a servicing cost perspective. Considering the desire to stay away from the existing confined feeding operations and the designated industrial area, it makes sense to build the Hamlet's next residential areas to the north. Proximity to the school and the Recreation Complex create locational advantages.

Regarding commercial land, there is sufficient land in Irvine to meet the community's needs for the foreseeable future. Commercial land is available both in the central business district and along the highway at the community entrances. There is no need to develop more at the present time.

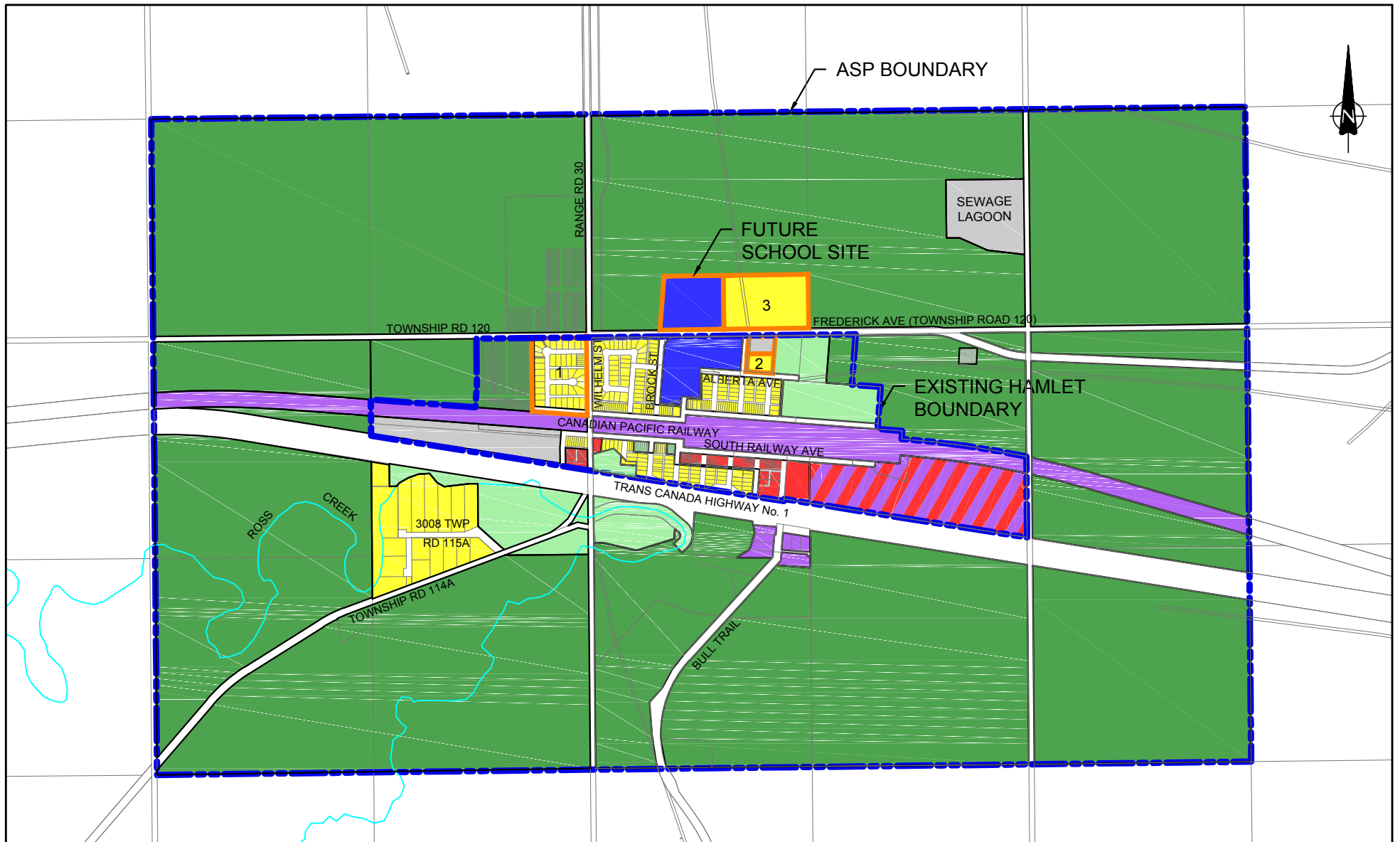
There is an unserviced industrial subdivision on the south side of the Trans-Canada Highway that still has some vacant lots. Additionally, there are serviced lots available for light industrial uses on the east side of the central business district. Thus, the only potential need for development of new industrial land is to accommodate an industry that would not fit into either of these existing areas. Fortunately, there is vacant land on the east side of the Hamlet that could meet this need, and municipal servicing could be extended into this area as necessary.

Irvine has sufficient land for its recreational growth as well. It makes sense to concentrate most recreational facilities into one area in order to create a focal point and recreational hub, and land is available for this near the Irvine and District Recreation Complex. There is no anticipated need for additional land for cultural facilities at this time but, if needed, there are vacant or under-utilized lands and building in the central business area that could be used for such purposes. Again, the concentration of cultural facilities in one area makes sense from the perspective of creating a focus of activity.

The school is an important part of the community, as noted elsewhere in this document. There is room for some expansion of the school facilities on the existing school grounds and eastward along Frederick Avenue. If a larger amount of additional land is needed for school purposes, it makes sense to expand onto the adjacent private land north of the existing school site, on the other side of Frederick Avenue.

## Policies

- Figure 4 shows the future land use and development phasing for Irvine and area.
- Commencing as soon as possible, depending on municipal budget capacity, Cypress County will complete development of the former Lansdowne Equity Ventures Ltd. subdivision, thus bringing thirty-nine serviced lots onto the market as the Phase 1 development area.
- In addition to development of the new residential lots referenced above, Cypress County considers the increased use of existing but vacant residential lots in the Hamlet - sometimes called in-fill development - to be a Phase 1 development area.



- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- SCHOOLS, COMMUNITY FACILITIES
- PARKS, RECREATION, ARTS, LEISURE
- PUBLIC UTILITIES
- AGRICULTURE OR UNDEVELOPED

1  2  3 RESIDENTIAL PHASING

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CYPRESS COUNTY

IRVINE AREA STRUCTURE PLAN  
FUTURE LAND USE

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FIGURE: 4

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- When land is subdivided for residential development in the future, a population density of approximately 22 persons per hectare (9 persons per acre) should be the objective.

## Residential Development

### Background

For Irvine to achieve its Vision and associated growth objectives, there needs to be an adequate supply of vacant residential land available to accommodate new housing construction. Fortunately, Irvine has several options in this regard. These include use of the several existing vacant lots in the Hamlet, completing the former Lansdowne Equity Ventures Ltd. subdivision, and creation of new residential lots on land that may not be thought of as residential but is easily serviced. In the longer term, agricultural land at the Hamlet's northern edge can be developed for residential use.

There is also the potential to develop higher density housing in Irvine. This does not mean multi-unit buildings, such as an apartment, although that would be acceptable. Instead, it could mean development of one or two duplex buildings, these being allowed in all residential areas under the current Land Use Bylaw.

In considering future residential land use in Irvine, it is also important to keep in mind the opinions of residents as expressed in the workshop and survey. That community input is summarized earlier in this ASP and presented in greater detail in separate documents available from Cypress County.

### Policies

- Cypress County will encourage development of existing, vacant residential lots (in-fill development) in Irvine in order to take advantage of already serviced areas to accommodate growth.
- Cypress County will refurbish the water and sewer infrastructure in the former Lansdowne Equity Ventures Ltd. subdivision and construct the internal roads as soon as practical, and then sell the existing lots for new housing.
- New housing in Irvine should be designed primarily for young families.
- Residential lots in the Hamlet of Irvine should generally be at least (5,000 sq. ft.) in size in order to maintain the rural nature of the Hamlet.
- Land south of the new water reservoir and pump house, east of Elgin Street (portion Subdivision Plan 6752 AC), will be used for residential development because it is easily serviced, while the northern part of the property will be retained for future water supply facilities or other public work's needs.
- The County will consult Alberta Transportation to investigate the potential to use the small triangle of land at the south end of Forres Street that is in the Trans-Canada Highway right-of-way for development of additional residential land given that land's potential to be easily serviced and its unlikely need for highway purposes.
- The County will review the Land Use Bylaw and the need for Highway Commercial District (HWY-C District) land along the east side of Forres Street and on Christie Street with the intention of redistricting that land for residential purposes.

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- To recognize the historic yard setbacks allowed in Irvine in contrast to current Land Use Bylaw setback requirements, and to increase the flexibility of development options, Cypress County Development Authorities are encouraged to be generous when considering development permit applications that require relaxations to residential yard setbacks.
  - To facilitate development of small-scale tourism in Irvine, the County will undertake the process of amending the Land Use Bylaw to allow bed and breakfast development as a Discretionary Use in the Hamlet's residential districts.

## Mavista Acres and Country Residential Development

### Background

Mavista Acres comprises 16 country residential lots situated south of the Trans-Canada Highway on Township Roads 114A and 115A. It was subdivided and developed in the late 1970s. Mavista Acres is outside of the Hamlet of Irvine boundary but is connected to the municipal water supply. The 16 lots rely on private treatment systems for disposal of sewage.

An adjacent country residential lot sits north of the Mavista subdivision, between Ross Creek and the Trans-Canada Highway. This property is accessed directly from the Trans-Canada Highway and is connected to Irvine's water system by a water line extension from Mavista Acres.

Several of Mavista Acres' country residential lots abut Ross Creek (the Creek flows through Lot 9, Plan 7710685). Ross Creek also flows next to the individual, country residential property to the north of Mavista Acres. While this provides an attractive amenity feature, it also means that the lots are susceptible to flooding. This was most clearly demonstrated in 2010 when most of the lots in the subdivision were affected by flooding of Ross Creek, with damage to several buildings.

### Policies

- Because of both the risk of flooding and the reliance on private sewage treatment systems, further subdivision of the Mavista Acres lots and the country residential lot to the north into smaller properties shall not be allowed.
- For the same reasons as above, these country residential lots shall not be allowed to have more than one residence per lot.
- Within the Mavista Acres subdivision and on the country residential lot to the north, there shall be no development within the Ross Creek floodway or flood fringe as identified in the Northwest Hydraulic Consultants Ltd., March 2012 report: "Cypress County Flood Hazard Identification Study - Ross Creek at Hamlet of Irvine" (or any subsequent update).
- No additional country residential subdivision shall be contemplated within the Study Area boundary without amendment of this Area Structure Plan.

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## Commercial Development

### Background

Over the past fifty years or so, there has been a slow but constant decline in business activity in Irvine, negatively affecting the downtown area (also called the central business district). This has been the case with most smaller urban centres in North America. As discussed earlier in the Economic Development section, this decline is a consequence of increased vehicle-based mobility and changing shopping habits. The result is that many older commercial buildings in Irvine, some of them with historic beauty, are vacant or under-utilized. Similarly, there are several vacant commercial lots.

Irvine's central business district is located along South Railway Avenue, between Ross and Christie Street. Unless there are dramatic changes to reverse ever-evolving shopping trends, Irvine has more commercial property in its central business district than can be utilized. This generates questions about the future use of this land, especially in that it is clear that the Irvine and area residents who attended the ASP workshop and responded to the survey value the convenience of having some local stores. A solution is to allow more flexibility in use of this land while still maintaining commercial activity as the preferred use for the area.

### Policies

- Retail and service businesses that are characteristic of traditional central business districts and downtown areas will continue to be encouraged to locate on properties along South Railway Avenue between Ross Street and Christie Street.
- Retail and service uses not necessarily traditional to a central business district, such as automotive or motorcycle repair and similar light industrial businesses, will be considered to be discretionary uses in this area and allowed based on their individual merit.
- Mixed use buildings, combining commercial uses on the main level and residential uses above, will be allowed.
- Higher density residential uses, such as a fourplex or small apartment building, especially one designed for seniors, will be allowed provided the building design fits in with that of the existing buildings.
- Conversion of properties in this area to low density residential uses, such as single family dwellings or duplexes, will not be allowed.
- Cypress County will support the interests of landowners who may wish to have their old brick buildings designated as historic resources, thus opening the possibility for Provincial or Federal Government funding to help sustain Irvine's historic buildings.

## Hamlet Entrances and Highway Development

### Background

In the same way that changing shopping habits have had a negative impact on Irvine's downtown, changing travel habits and improved automobile technology have changed the need for motels, gasoline stations, and vehicle repair businesses. This has resulted in vacant

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properties at both highway entrances to Irvine, along Wilhelm Street and along Thompson Street.

One of the effects of having this vacant land at the Hamlet's entrances is that there is nothing to visually attract highway travellers into the community. This was cited as an issue by people attending the ASP workshop and completing the survey. They suggested the possibility of erecting wood carvings or celebrating the finding of *Chasmosaurus irvinensis* on one or more properties at the Hamlet's entrances. They also noted that there were few signs on the highway to draw attention to Irvine and asked that an effort be made to change this.

## Policies

- The amount of land currently reserved for highway commercial development will be reduced to better reflect commercial realities.
- As an alternative to the present land use districting (zoning) that reserves land east of Christie Street and along Thompson Street for highway commercial use only, light industrial activities will also be considered.
- The County will allow development of the large land area east of Thomson Street for highway-related uses and/or light or heavy industrial uses, thus creating flexibility and increasing the potential for development in this area.
- Cypress County will work with the community and Alberta Transportation to increase signage along the Trans-Canada Highway that is designed to advertise Irvine's attractions, such as the museum, recreation complex and existing businesses, to travellers. (Note the Tourism Highway Signage Program of Alberta Transportation, with information available through [www.signupalberta.com](http://www.signupalberta.com) and Alberta Transportation's Lethbridge District Office.)
- If an interested local group, such as the one suggested in the Economic Development policies above, is willing to lead development of an information or interpretive site to attract highway travellers into the community, Cypress County is willing to partner in such development: it will allow use of a strip of land in the northwestern corner of Lot A, Plan 8375A for such purpose. This area is part of a low-lying, County-owned parcel situated east of Wilhelm Street that has good highway visibility and, with some limited use of fill material, could be used to create an area for displays and vehicle parking next to an electrical supply.
- The County will work with Alberta Transportation on an ongoing basis to ensure that the deceleration lanes and lighting at the community entrances on the Trans-Canada Highway meet current standards.

## Industrial Development

### Background

There are three areas in which industrial development can currently be accommodated in the Study Area. The first is a small, light industrial subdivision on the south side of the Trans-Canada Highway and adjacent to Bull Trail. The second is the expanse of land east of Thompson Street, extending all of the way to the Hamlet's eastern boundary. Third is the CP rail line right-of-way, although only where the right-of-way widens in the middle of Irvine is there enough land to allow development additional to the rail tracks.

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These three areas provide businesses contemplating development in Irvine with several location options. In particular, the land east of Thompson Street between the CP rail line and the Trans-Canada highway is attractive. It offers both national rail line and highway access, good visibility from the highway, and can be easily connected to municipal water and sewer services. Development of a second access to the Trans-Canada Highway may also be possible at the eastern end of this property, at the road allowance at the Hamlet's eastern boundary, although it should be recognized that Alberta Transportation limits access to major highways to protect their viability.

## Policies

- There is sufficient land available in Irvine to accommodate future industrial development and the County does not intend to allocate more land to this use within the Study Area for the foreseeable future.
- Cypress County will consider approval of a wide range of business types in the area east of Thompson Street, ranging from highway commercial through light industrial to heavy industrial uses.
- The County will consider extension of its municipal water and sanitary sewage lines into the area east of Thompson Street as necessary to facilitate business development.
- Development undertaken by CP for railway purposes within its right-of-way are exempt from municipal government approval under the Canadian Railway Act but municipal approval will be required for any development in that right-of-way that is not directly related to the operation of the railway.

## Recreation Facilities

### Background

For a small community, Irvine has excellent recreation facilities. These include the hockey arena and curling rink in the Irvine and District Recreation Complex, a rodeo grounds, and a playground at the Woodward Memorial Park. Facilities at the Irvine School include a large new playground, tennis courts, a running track and sports fields. The County also has a small park on the south side of the Trans-Canada Highway next to Ross Creek which is leased to a motorcycle group.

During the public input phases of the ASP preparation process it was apparent that community members recognize that Irvine's recreation facilities are an asset that can be utilized in terms of tourism and in attracting more people to live in the Hamlet. They suggested trying to expand the hours of use of the Recreation Complex through advertising and diversifying activities. They noted the lack of signage directing visitors to the Hamlet's recreation facilities and lack of pedestrian linkages connecting those facilities. They also suggested developing additional recreation facilities in Irvine to build upon the existing recreational advantage. There is certainly available County-owned land on which to do this if there is local project leadership.

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## Policies

- If a community association is established to work on economic development (see Economic Development Policies above), the County suggests that the same association, or an affiliated group, work on expanding and promoting the Hamlet's recreational attractions.
- Cypress County will work with local community and recreation associations in an effort to generate more use and activity at the Irvine and District Recreation Complex.
- If there is strong community support, the County will investigate the feasibility of developing a campground or other recreational facilities in Irvine.
- If a campground or other recreational facility is developed in Irvine, a robust site selection process will be followed; however, a location next to the Recreation Complex shall be considered as one of the site options given the benefits of focusing recreation activity in a common area in order to obtain synergies and because of easier servicing capability.
- Cypress County will install and maintain additional directional signage for the community's recreation facilities, especially in locations that will benefit visitors.
- The County will consider how best it might design and build, over a period of time, a system of inter-connected sidewalks, paths and trails that will link the community's recreation, school and cultural facilities, and also extend into residential areas.
- Cypress County will investigate the potential to use solar power to generate electricity for the Irvine and District Recreation Complex, using funding programs available through senior governments and associated organizations such as the Alberta Municipal Climate Change Action Centre (MCCAC).
- The low-lying lot east of Wilhelm Street and north of the Trans-Canada Highway (Lot A, Plan 8375A) will be reserved for use in the longer term for parks, recreation, arts and leisure purposes, especially related to attracting highway travellers into the community, but will continue to be used for agricultural purposes in the interim.
- Because of the potential for flood damage from Ross Creek, future development within the park situated south of the Trans-Canada Highway and west of Township Road 114A will be minimized, and restricted to structures and infrastructure that is either flood-proofed or easily repaired and replaced.
- With the exception of the aforementioned park, land containing or adjacent to Ross Creek that is owned by Cypress County and susceptible to flooding shall be maintained in its natural, undeveloped state.

## Educational and Cultural Facilities

### Background

Irvine clearly benefits from having a successful school (kindergarten to Grade 9) located in the community. It attracts young families, and provides employment opportunities and recreational facilities. Communication with Prairie Rose School Division No. 8 indicates that the School Division is satisfied with the school's current size and operation, and that there is sufficient land available within the existing property for any near-term expansion if necessary.

For cultural facilities, Irvine benefits from the Prairie Memories Museum. Situated at the corner of South Railway Avenue and Dunmore Street, the museum occupies several lots and preserves buildings and artifacts from the early days of the area's settlement. This includes



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recognition of the important role Irvine played as a reception centre for people arriving from Eastern Canada and Europe in the late 1800s and early 1900s. The museum is operated by a volunteer group whose members live throughout the area, including Medicine Hat.

Irvine also has a library that offers books and other programs to Irvine and area residents. The library sits within the South Railway Avenue road plan but there is no urgency in relocating it given the width of the road plan at that location.

## Policies

- Cypress County will continue to provide the Irvine School with road, potable water, sanitary sewer and other municipal services as necessary to support the school's continued operation and, as necessary, future expansion.
- For long term planning purposes, a site for a potential future school (elementary, middle or high school) has been identified north of the current Irvine School site, allowing opportunities to share facilities and focus transportation routes (see Figure 4).
- Cypress County will continue its support for the Prairie Memories Museum and will endeavour to increase advertising of this unique rural attraction, including signage.
- The County will review its Land Use Bylaw as it applies to the Prairie Memories Museum properties with the intention of re-districting those properties from Hamlet Residential (HR) District to Public and Semi-Public (PS) District to better reflect actual use.
- The library may continue to operate from its current location in the existing building despite it being located in a road.
- If the library moves, it should continue to operate from a central business district (downtown) location in order to encourage traffic and activity in this area.

## Agricultural Land Use and Urban Reserve

### Background

Most of the land outside the Hamlet of Irvine is used for agricultural purposes. This includes three farms that overwinter a significant number of livestock, two west and north of the Hamlet and one south of the Trans-Canada Highway next to Ross Creek. These are long-standing family farms and there is no interest in moving them away from the community despite their proximity. Their operations are protected under Alberta's Agricultural Operation Practices Act provided they follow normal farm practices.

Of interest from a land development perspective are old subdivision plans that still exist on two of the nearby farm properties (in NE-36-11-3-W4M and SE-1-12-3-W4M). These subdivision plans date back to the early days of Irvine's history but have never been developed. The landowners are interested in continuing to farm these subdivided lands and there is no need to develop them. There are other lands, further away from the confined feeding operations, onto which Irvine can expand as necessary.

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## Policies

- Cypress County supports the continued operation of the farms located near the Hamlet of Irvine as long as their agricultural operations follow normal farm practices.
- If the landowners with old, undeveloped subdivision plans in NE-36-11-3-W4M and SE-1-12-3-W4M wish to cancel those plans, the County will support those cancellations.

## Potable Water Service

### Background

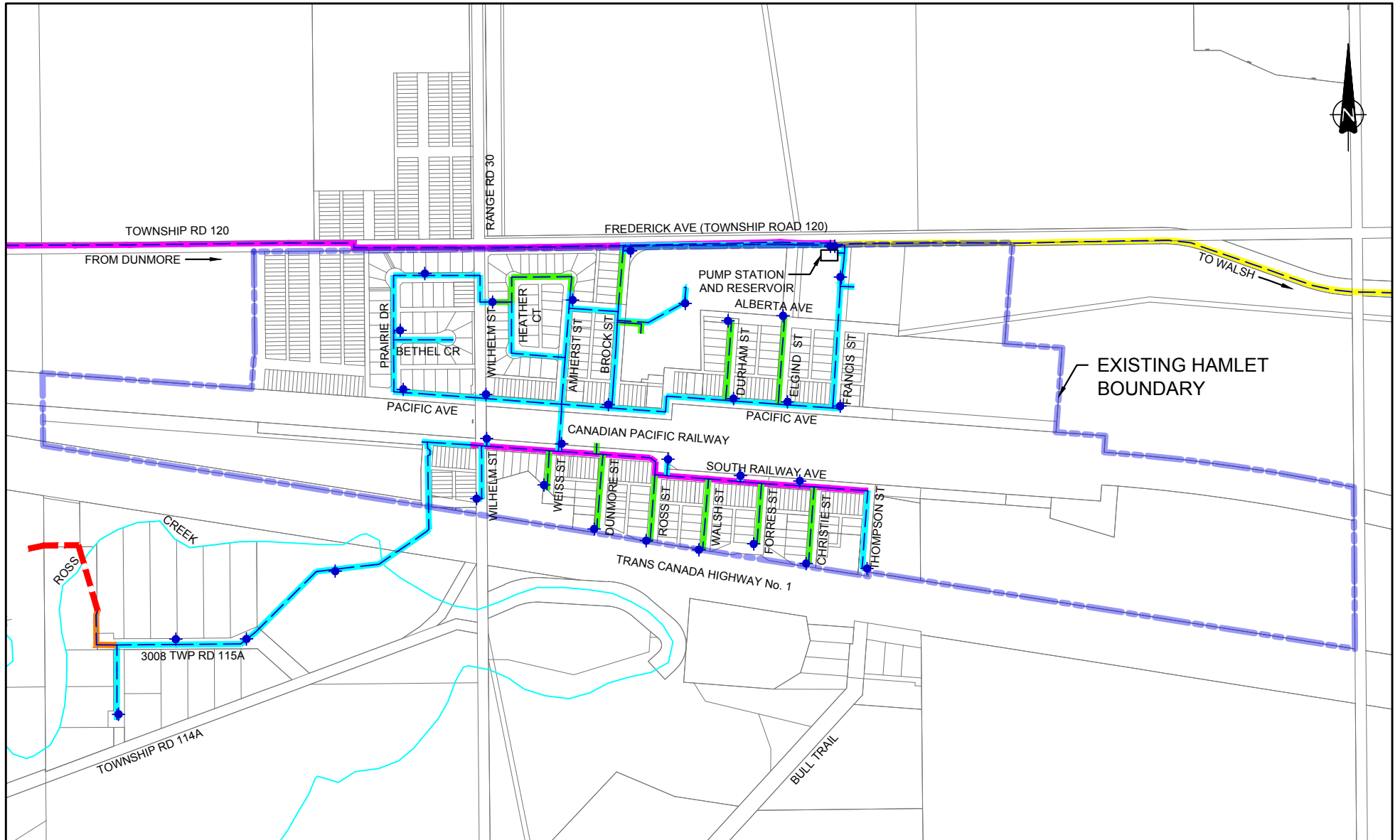
Since 2015, the Hamlet of Irvine has received its treated water supply from the City of Medicine Hat. Raw water is sourced from the South Saskatchewan River under licences that the County acquired and transferred to the City. The water is treated at the City of Medicine Hat's Water Treatment Plant and pumped from Dunmore to Irvine in a new water line, eventually supplying a below-ground reservoir located on Frederick Avenue. Potable water is stored in the Frederick Avenue reservoir and pumped out through the local distribution system to consumers.

As shown in Figure 5, the existing water distribution system consists of a pump station and reservoir, and 200 mm, 150 mm, and 100 mm diameter water mains. Cypress County replaced all of the water mains south of the rail line and north of the Trans-Canada Highway in 2017.

The new (2015) water infrastructure was designed for a future population of over 600 people. The Irvine Regional Water Supply Pipeline allows for up to 1080 m<sup>3</sup> /day (12.5 l/s) for the Hamlet of Irvine. Current water usage in Irvine averages approximately 450 m<sup>3</sup> /day. Thus, there is ample water supply and distribution pumping available to supply residential, commercial and most types of industrial growth in the Hamlet. There is also sufficient supply for additional recreational facilities, such as a spray park.

The serviceable area of a water distribution system should provide a minimum pressure of 40 psi anywhere in the system at peak-hour demand flows. For planning purposes, the existing system can provide this minimum pressure up to a ground elevation of 768 m without additional pumping. The developable area immediately around Irvine is generally flat, ranging in elevation between 658 m and 765 m. Therefore, there should be no issues providing water pressure in the proposed developable areas identified in Figure 4 or anywhere in the areas immediately surrounding the Hamlet.

The current provincial Licence to Divert Water allows Cypress County to divert up to 81,111 m<sup>3</sup> of water annually for municipal purposes from the City of Medicine Hat to the Hamlets of Dunmore, Irvine, and Walsh. The agreement does not break out Irvine separately. As growth continues in these Hamlets, the County's Licence to Divert will have to be increased accordingly to meet the larger water demand. Alternatively, policies can be put in place to encourage increased water conservation in these communities.



- UNKNOWN SIZE AND ALIGNMENT
- 75mm WATER MAIN
- 100mm WATER MAIN
- 125mm WATER MAIN
- 150mm WATER MAIN
- 200mm WATER MAIN
- ◆ FIRE HYDRANT

\* WATERMAIN SIZE AND LOCATIONS PROVIDED BY CYPRESS COUNTY

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CYPRESS COUNTY

IRVINE AREA STRUCTURE PLAN  
WATER SYSTEM

SCALE: 1:10 000

DATE: MARCH 2018

JOB: 3730-040-00

FIGURE: 5

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A target supply of 75 l/s for fire flows is being pursued by Cypress County. Currently, fire flows do not meet this standard in some parts of the Hamlet due to the limiting size of existing water mains in those areas. However, the recent water system upgrades, including the new pump station and reservoir, and the 2017 distribution main upgrades south of the CP tracks, are a step towards meeting the County's fire flow target at all of the hydrants in Irvine. The proposed 2018 water main loop across the CP tracks will also assist in this effort.

## Policies

- Cypress County will continue to pursue and purchase additional Licences to Divert Water from the South Saskatchewan River Basin to support long-term development of Irvine and other hamlets.
- At the County's discretion and in order to help address the long-term water needs associated with new development, persons developing land in the Study Area may be required to provide and transfer to Cypress County a Licence to Divert Water.
- Cypress County will install a second water line under the CP tracks to create a water line loop in the area south of the tracks as soon as the municipal budget allows.
- Any new land development shall have water main sizes designed by a professional engineer to accommodate fire flows of at least 75 l/s at each hydrant.

## Sanitary Sewage

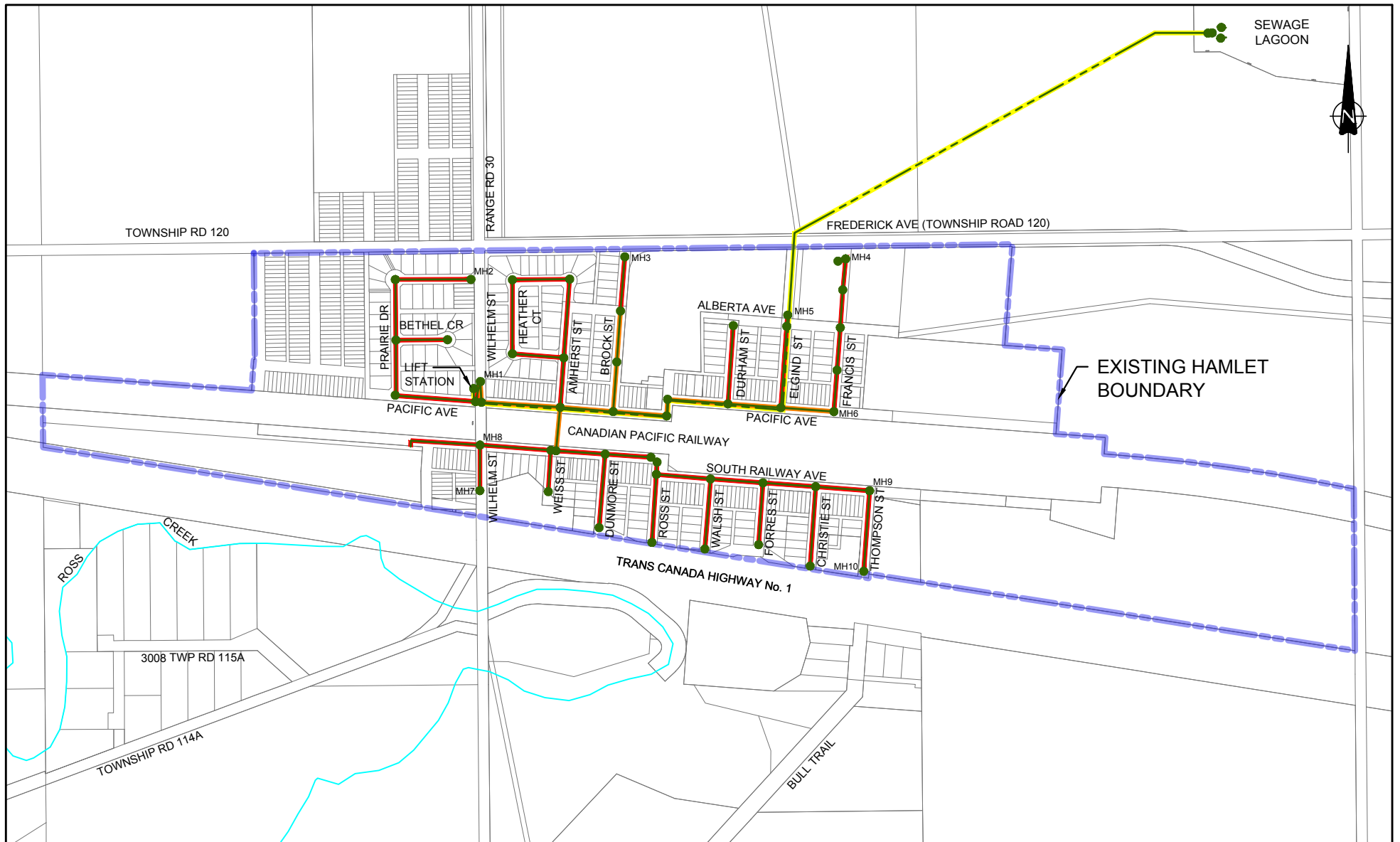
### Background

The sanitary sewer system in Irvine, illustrated in Figure 6, consists of 200 mm and 250 mm diameter gravity sewer mains which flow to a sewer lift station on Wilhelm street. From there, the sewage is pumped to a wastewater lagoon for treatment. Cypress County staff, as well as the residents attending the public workshop and responding to the community survey, have not indicated any major issues with the sanitary sewer system.

The sewage lagoon is located northeast of the Hamlet as shown in Figure 6. Based on Cypress County record drawings, the lagoon is sized for a population of 500. The lagoon is expected to service the Hamlet for the foreseeable future.

Table 1 summarizes the depth of cover at the outer-edge manholes in Irvine. It shows that the existing sewer mains at the manholes located on the furthest edges of the collection system are generally too shallow to meet Alberta Environment's requirements for adequate frost protection. Even though Irvine's sewer mains do not freeze, the system does not meet the required 2.5 m depth in some areas. Gravity sewer lines get higher in elevation as they become more distant from the main sewer lines. This means that future developments may require extensive earth fill, insulation of mains and service laterals, or limits to the depth of basements if they are tied into the existing system by gravity mains. The alternative will be to require sewage lift stations in new development areas.

Residential Phasing Areas 2 and 3 as shown in Figure 4 will most likely require significant effort to achieve adequate frost protection of the sanitary sewer mains or require the installation of a lift station.



SEWAGE LAGOON



- 100mm SANITARY FORCEMAIN
- 200mm SANITARY MAIN
- 250mm SANITARY MAIN
- SANITARY MANHOLE

\* SANITARY MAIN SIZE AND LOCATIONS PROVIDED BY CYPRESS COUNTY

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CYPRESS COUNTY

IRVINE AREA STRUCTURE PLAN  
SANITARY SYSTEM

SCALE: 1:10 000

DATE: MARCH 2018

JOB: 3730-040-00

FIGURE: 6

**Table 1: Sanitary Sewer System Depth of Cover**

Manhole Number (See Figure 6)	Rim Elev.	Depth of Cover (m)
1	762.46	5.99
2	762.05	2.68
3	762.70	2.51
4	762.53	1.34
5	763.14	2.45
6	763.29	2.94
7	762.44	2.28
8	762.74	2.95
9	764.14	2.57
10	765.63	3.45

## Policies

- Due to the shallow sanitary sewer mains at the outside edges of the system, future development that will tie into the sanitary sewer system with gravity main extensions will require the design of a professional engineer to provide adequate frost protection of the mains in order to meet Alberta Environment and Parks (AEP) Standards and Guidelines, and Cypress County’s Design and Construction Standards.
- As an alternative to frost protection, the County will accept the use of sewage lift stations in new subdivisions.
- AEP Standards require a minimum 300 m setback from the wastewater lagoon to a building site for school, hospital, food establishment or residential use (see Figure 3).

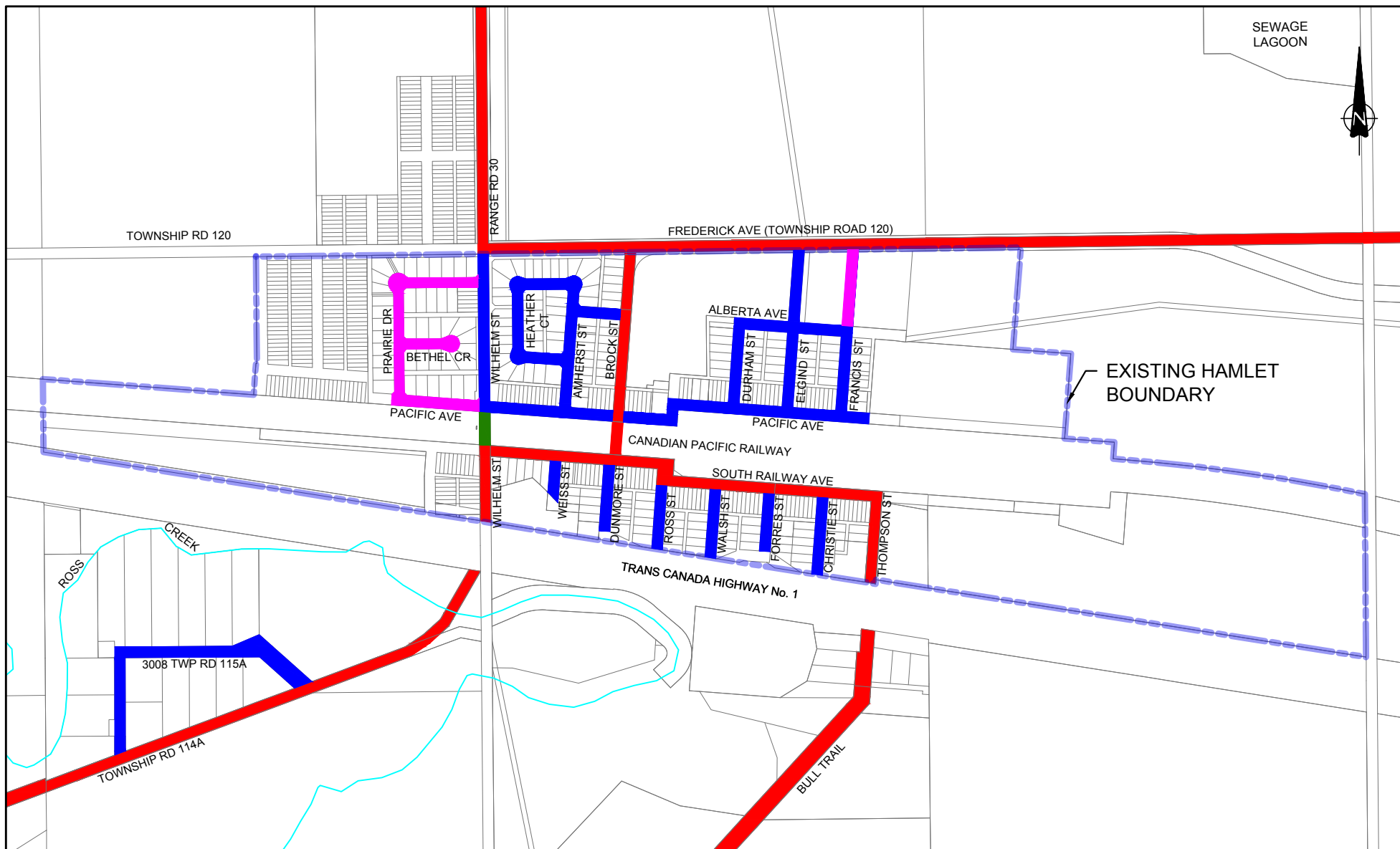
## Transportation





### Local Road System

#### Background

The Hamlet of Irvine’s local road system (see Figure 7) generally follows the north - south and east - west grid pattern evident in most Alberta communities. Streets generally run north - south and avenues run east - west. The Hamlet roads are a mix of hot mix and cold mix asphalt surfacing. Most of the local roads in Irvine have urban cross sections (curb and gutter and concrete sidewalks) although there are some roads with no curb and gutter and no sidewalks. Most properties have rear laneways.

The main collector roads in the Hamlet are South Railway Avenue, Brock Street, and Frederick Avenue (Township Road 120).



-  EXISTING TRUCK ROUTE ROADWAY
-  EXISTING ROADWAY
-  FUTURE LOCAL ROADWAY
-  POTENTIAL CANADIAN PACIFIC RAILWAY CROSSING

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CYPRESS COUNTY

IRVINE AREA STRUCTURE PLAN  
ROAD NETWORK PLAN

SCALE: 1:10 000

DATE: MARCH 2018

JOB: 3730-040-00

FIGURE: 7

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Two County rural roads connect to the Hamlet on the north – Range Road 30 and Township Road 120. Range Road 30 heads north from Irvine and Township Road 120 heads east from Irvine to the Hamlet of Walsh. Both rural roads are cold mix asphalt surface within the Hamlet boundary and are gravel surfaced outside the Hamlet boundary.

Two County rural roads connect to the Hamlet on the south – Bull Trail and Township Road 115A. Bull Trail heads south from Irvine to the Cypress Hills. Township Road 115A heads southwest from Irvine past Mavista Acres and eventually intersects Highway 41. Both rural roads are cold mix asphalt surface within and near the Hamlet boundary, and are gravel surfaced further outside the Hamlet boundary.

The designated heavy truck route is South Railway Avenue, Brock Street and Frederick Avenue. It was initially thought that the heavy truck route could be a safety or noise concern for residents and the School District as the truck route is directly in front of the Irvine School. However, no concerns were raised by residents or the Prairie Rose School Division regarding the truck route. This is likely because truck traffic is periodic and not overly high in volume.

The Hamlet is divided in two by CP's main line track. There is one at-grade road crossing within the Hamlet at Dunmore Street/Brock Street. This crossing has visual and audible warning signals, and a gate arm. The next nearest public CP rail line crossing is 8.5 km east at Range Road 21. Having a second rail crossing was an issue identified at the public workshop by residents citing concerns of inconvenience and emergency services response time (safety) of residents north of the tracks if the current access was out of commission (i.e. closed for construction).

A second road crossing of CP's tracks is likely unwarranted at this time. Grade crossings fall under the jurisdiction of Transport Canada and the Railway Safety Act. Transport Canada and CP wish to reduce the number of at-grade crossings in Canada in order to increase public safety. Unless there is a strong case proving that two at-grade crossings are safer than having the one existing at-grade crossing, a second crossing is likely going to be deemed unwarranted by Transport Canada.

The 2017 infrastructure replacement program south of the CP tracks, which resulted in resurfacing of all roads in the area to hot mix asphalt, was identified by people attending the workshop as one of Irvine's recent achievements.

## Policies

- With any future residential, commercial or industrial subdivision in Irvine, the developer will be required to dedicate road rights-of-way and construct the roads to Cypress County requirements.
- In new subdivisions, local streets shall be designed by an engineer, shall have curb and gutter for drainage, and shall be surfaced with hot mix asphalt.
- In order to provide for phased subdivisions, only those portions of roads that are required to serve each development phase need to be constructed, provided that a temporary turn-around bulb is constructed to Cypress County standards at the end of any terminated road.
- If further study deems that a second at-grade crossing of the CP rail line is warranted, this could be proposed at Wilhelm Street. The second at-grade crossing could serve as the new designated truck route, moving the existing route away from the school.



- 
- Cypress County will continue with infrastructure replacements within the Hamlet, including the sidewalk replacement program and upgrading the road surfaces to hot mix asphalt pavement north of the tracks, contingent on project priorities throughout Cypress County and capital budgets.
  - Francis Street will be extended by plan of survey between Alberta Avenue and Frederick Avenue, officially recognizing this existing paved surface as a roadway and preparing the way for future development on the road's west side, across from the Recreation Complex.

## Trans-Canada Highway

### Background

There are currently two access points from the Trans-Canada Highway (Highway 1), to the Hamlet. These are at Wilhelm Street/Township Road 115A and Thompson Street/Bull Trail. Highway 1 is a four-lane divided highway and the posted speed limit within the Study Area is 110 km/h. Both access points to the Trans-Canada Highway are four-leg, at-grade intersections with no traffic signals. There are turning lanes into Irvine at both intersections and in both directions. Both intersections are illuminated at night.

Ultimate long-term plans for Highway 1 are to upgrade it to freeway designation consistent with the National Highway Standard for Inter-Provincial travel. These plans involve eliminating direct at-grade access to the highway in favour of interchanges. Highway 1 is under the jurisdiction of Alberta Transportation. At this juncture, no Functional Planning Study exists that would indicate a plan by Alberta Transportation to build an interchange within the Study Area anytime in the foreseeable future.

### Policies

- Persons proposing subdivision or development near the Trans-Canada Highway should be aware of the potential need to consult Alberta Transportation for approval (see Constraints section above).
- The County will not consider subdivision or development applications that require further direct access to the Trans-Canada Highway unless the developer has first obtained the approval for a new highway access from Alberta Transportation.
- When Alberta Transportation completes a Functional Planning Study to formally identify a need and location for an interchange in the Irvine area, Cypress County will take that into account when making planning and land use decisions within the Study Area, but until such time will assume the status quo for highway access.

## Canadian Pacific Railway

### Background

CP's main rail line passes through the Hamlet. CP is not in favour of residential uses adjacent to its right-of-way as this land use is not compatible with railway operations. CP states the health, safety and welfare of future residents could be adversely affected by railway activities.

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CP requests that future developments follow the Federation of Canadian Municipalities and the Railway Association of Canada's (FCM-RAC) "Guidelines for New Development in Proximity to Railway Operations", May 2013. This document contains guidelines on setbacks, noise mitigation, vibration mitigation, fencing, and other issues. The guideline suggests a 30 m setback for new residential development in proximity to a principal main line.

It is important to note that these are just guidelines published by the rail industry. CP does not have jurisdiction to impose setbacks or other restrictions outside of its railway operation. The guidelines are meant to assist municipal governments and railways in reviewing and determining general planning policies when developing on lands in proximity to railway facilities.

## Policies

- For health and safety reasons, any new residential types of development will be required to be setback from the railway right of ways to the satisfaction of Cypress County; the FCM-RAC Guideline will be used as a reference only.

# Stormwater Drainage

## Background

Stormwater management systems are based on the dual drainage concept to provide collection, conveyance, storage, and treatment of stormwater runoff. Dual drainage systems are comprised of both minor and major collection systems. The minor system includes but is not limited to: roof leaders; roof gutters; lot drainage; roads and gutters; and underground pipe infrastructure. It is designed to collect and convey stormwater runoff during minor rainfall events. The major system includes: overland conveyance systems; roads and gutters, drainage ditches/swales; trapped lows and end-of-pipe stormwater management facilities; dry ponds; wet ponds; evaporation ponds; and constructed wetlands. The major system is designed to convey, store, treat and discharge stormwater runoff collected during major rainfall events in excess of the minor system.

Currently the Hamlet's stormwater management system is comprised of roads and gutters, grass lined ditches and culverts. Surface runoff from lots located north of the CP Railway tracks is largely collected in the roadway curb and gutter system, and is directed to roadside ditches along the perimeter of the Hamlet. However, there are a few areas without curbs, gutters or ditches that experience drainage issues. Properties located south of the CP Railway tracks do not have any engineered means to collect, direct or control stormwater runoff, and will most likely experience flooding issues during some minor and all major rainfall events. Runoff collected in roadside ditches is conveyed in a westerly direction and discharged uncontrolled to privately owned agricultural land and undeveloped areas near the CP rail line.

There have been minimal complaints regarding the function of the current stormwater management system, and this was only identified as an issue of concern by a couple of

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people during the public input phases of the planning process. Standing water within the Hamlet has been observed, though, and indicates possible drainage issues. Ponding water on roadways causes immediate safety issues and over time can degrade the road structure and increase maintenance costs.

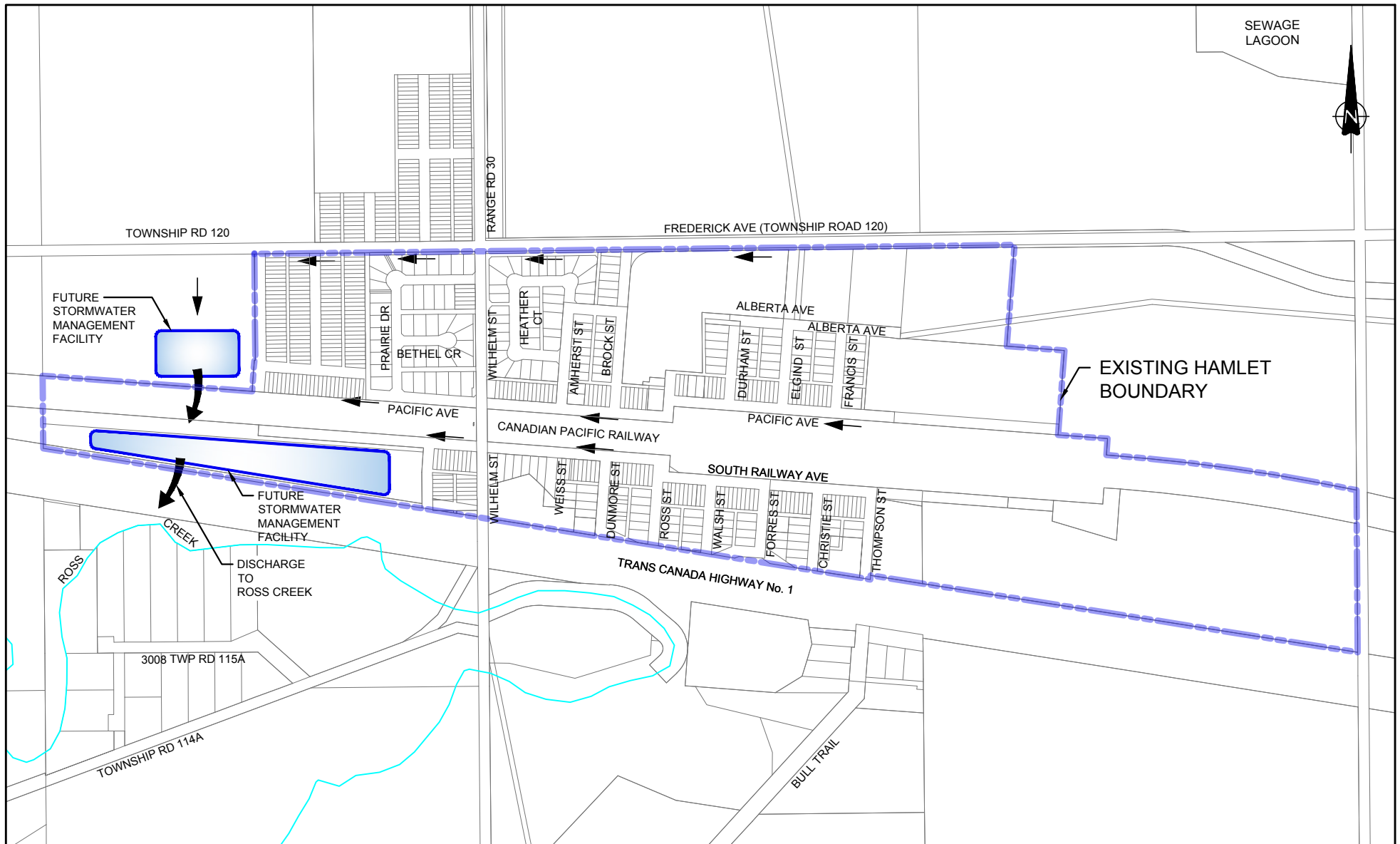
Although the Hamlet's existing stormwater system functions adequately during most rainfall events, it does not provide storage nor treatment of stormwater runoff during major rainfall events. Future land development will increase the Hamlet's total impervious area and therefore increase peak flows to the current system and its receiving areas. It will also increase contaminate concentrations in the runoff. Consequently, the County should consider improving its stormwater management plan for Irvine in anticipation of growth and the need to accommodate more stormwater runoff. Better stormwater planning will likely also be necessary to deal with climate change.

Stormwater management facility options to consider for the Hamlet would be a wet/dry pond discharging to Ross Creek, if suitable, or an evaporation pond with zero discharge. Each has its pros and cons. The optimal location of the stormwater management facility would be land between the CP rail line and Trans-Canada Highway, and immediately west of the Hamlet (see Figure 8). The County would have to acquire this land as it is currently privately owned.

Stormwater runoff is not considered to be an issue at the current time in Mavista Acres or in the rest of the Study Area. This is because of the pervious nature of the soil and the low density of development in the Study Area outside of the developed Hamlet area.

## Policies

- Cypress County will ensure that it has appropriate agreements in place with the land owners currently accepting the Hamlet's stormwater runoff and have those agreements registered on property titles.
- The County will endeavour to undertake a stormwater management analysis of the Hamlet's current stormwater system to determine the system's adequacy, identify any immediate issues, establish the capacity of downstream receiving areas, and develop stormwater management requirements for future subdivision and development.
- In the absence of an analysis of the current stormwater management system, new industrial, commercial and residential development within the Hamlet will be required to maintain current flow patterns, provide on-site storage and treatment, and not increase release rates to the existing system above pre-development flow rates in order to reduce flooding potential, reduce erosion downstream and promote settlement of contaminants.
- Any future subdivision applications within the Hamlet should include a stormwater management plan prepared by a professional engineer.
- Stormwater management plans will need to meet the requirements of Alberta Environment and Parks, and Alberta Transportation, as well as require endorsement of both departments.
- When landowners identify localized stormwater drainage issues, especially where surface water flows from roads or other public land onto adjacent private property, the County will attempt to remedy the drainage problem as soon as practical through its capital projects program.



\* STORMWATER SYSTEM IS ALL OVERLAND DRAINAGE WITH A MIX OF CURB & GUTTER, DITCHES AND CULVERTS .

**BIRCH CONSULTING**  
Municipal Planning and Management



CYPRESS COUNTY

IRVINE AREA STRUCTURE PLAN  
STORMWATER DRAINAGE

SCALE: 1:10 000

DATE: MARCH 2018

JOB: 3730-040-00

FIGURE: 8

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- As necessary, the County will begin planning for the purchase of land on which it will develop stormwater catchment basins in the future (see Figure 8).

## Waste Management and Recycling

### Background

Hamlet of Irvine residents and businesses receive door-to-door garbage pickup once per week. Additionally, Cypress County has built a waste transfer and recycling facility on the valley ridge northeast of Irvine. This facility serves as a collection, storage and transfer station for the Hamlet and surrounding rural area. Besides being able to dispose of municipal solid waste (commonly referred to as garbage), area residents, farmers and business owners can recycle cardboard, paper, plastic, metal, wire, tree branches and clean wood, batteries, e-waste, used oil and oil filters, tires, household appliances, and empty pesticide containers. While the Irvine Waste Transfer Site currently operates well, it is nearing capacity and will need to be expanded in the future.

Cypress County has partnered with the Town of Redcliff to operate a regional landfill for disposal of the municipal solid waste delivered directly from pick-up and from waste transfer stations. The landfill is located west of Redcliff, and is owned and operated by Redcliff/Cypress Regional Waste Management Authority. The landfill site has sufficient capacity to accept municipal solid waste for the foreseeable future.

### Policies

- Cypress County will review the size and operation of the Irvine Waste Transfer Site on a regular basis to ensure that it is sufficiently sized to meet area needs.

## Other Public Utilities and Infrastructure

### Background

Private sector companies provide the other, non-municipal, public infrastructure in the Study Area. Natural gas is provided by AltaGas Utilities Inc. Electricity is provided by Fortis Alberta. Telus Corporation provides traditional (land line) telephone service as well as Internet and television services.

The only recognized shortfall in these infrastructure areas is with Internet bandwidth, which is too low. The need for an upgrade to the Internet system was noted during the public workshop and through the survey, and is necessary if the community is going to achieve its growth ambitions. People expect high bandwidth Internet service these days. The solution – at least with current technology – is fibre optic cable. Fortunately, Irvine already has fibre optic cable extended into the Irvine School, which will greatly reduce the cost of extending it into the rest of the community. This fibre optic cable was installed by the Province as part of Alberta's SuperNet system. The SuperNet system is presently operated by Axia NetMedia Corporation. Cypress County is interested in improving high speed Internet access in the

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municipality, and Irvine has been identified as a potential target community for such improvement.

## Policies

- The community is encouraged to discuss, and make the business case for, the installation of fibre optic cable throughout the community by Axia NetMedia Corporation or another service provider, such as Telus Corporation or Shaw Communications Inc.
- The County will work with any local community group or initiative to enable the installation of fibre optic cable throughout the community by ensuring the easy use of municipally controlled roads and other rights-of-way.
- Additionally, Cypress County will investigate other methods of providing fibre optic cable in Irvine.
- When the former Lansdowne Equity Ventures Ltd. subdivision is re-developed by the County, fibre optic cable will be installed in the roads and to the front property line of each residential lot in anticipation of future connection to a fibre optic service.

## Implementation and Review

Implementation of the Irvine Area Structure Plan will typically occur in four ways:

- through amendments of the Cypress County Land Use Bylaw as necessary to bring the Land Use Bylaw into conformity with the ASP (the Land Use Bylaw is the day-to-day regulatory tool used by the County to make subdivision and development decisions);
- through use of the Irvine ASP as a policy guide when the County makes decisions on subdivision and development permit applications;
- through consultation of the ASP's policy direction when County Council and administration are making capital and operating decisions as part of the annual budgetary process; and
- through use of the ASP's policy direction when dealing with requests for action or support from community members, groups and associations.

Of course, the policies established in this document to help guide the community into the future will gradually become outdated. Irvine will continue to evolve and the interests of its community members will change. The ASP will also become outdated as the policies are implemented and some of them are no longer needed. Consequently, Cypress County will review this document on a regular basis to evaluate its on-going applicability. Small changes can easily be made through the bylaw amendment process as necessary. Periodically, every five to ten years, the County will undertake a larger, more comprehensive review of the Irvine ASP to formally update the entire document.

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