

**TOWN OF REDWATER**

**BYLAW NO. 807**

**BEING A BYLAW TO ADOPT THE  
STANDING STONE INDUSTRIAL PARK AREA STRUCTURE PLAN**

**WHEREAS** the Municipal Government Act, R.S.A 2000, as amended authorizes a municipality to adopt an Area Structure Plan; and

**WHEREAS** a new Area Structure Plan has been prepared for the Town of Redwater; and

**NOW THEREFORE** the Council of the Town of Redwater, Duly Assemble Enacts As Follows:


1. THAT the Standing Stone Industrial Park Area Structure Plan, being Schedule "A" attached hereto, is hereby adopted.

READ A FIRST TIME this 4<sup>th</sup> day of June, 2013.

READ A SECOND TIME this 2<sup>nd</sup> day of July, 2013

READ A THIRD TIME AND FINALLY PASSED this 2<sup>nd</sup> day of July, 2013.

  
MAYOR

  
MANAGER

Bylaw 807  
Schedule "A"

## **Standing Stone Industrial Park Area Structure Plan**

NE 20-57-21-4

Town of Redwater

**May 24, 2013**

**File # 1052-01**

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## 1 Introduction

The purpose of the **Standing Stone Industrial Park Area Structure Plan** (ASP) is to provide a general land use framework ensuring orderly development for future redistricting, subdivision, and development of the subject lands.

This ASP identifies the following:

- future land uses;
- natural site constraints;
- manmade site constraints;
- a general utility servicing concept;
- a roadway system for the plan area; and
- staging.

### 1.1 Plan Area Location and Ownership

The subject land, legally known as *N½ NE 20-57-21 W4M* (Certificate of Title number 082 190 972) and *Lot 1 Block 1 Plan 082-3542* is approximately 64.0 hectares (158.1 acres) in area and is owned by two private limited companies. The quarter section is located in the southeast corner of the Town of Redwater, southwest of the intersection of Highway 644 and Range Road 214 adjacent to lands in Sturgeon County. (Refer to Figure 1: Location Map)

## 2 Statutory Compliance

This Area Structure Plan is prepared in conformance with the Municipal Government Act, and the Town of Redwater Municipal Development Plan.

The Town of Redwater is located within the Alberta Capital Region, which represents the sixth largest Census Metropolitan Area (CMA) in Canada by population. Municipalities within the Capital Region are subject to the policies of the Capital Region Board (CRB) which aims to ensure long term economic prosperity and quality of life for all citizens of the region. This plan is in compliance with the Capital Region Growth Plan policies.

### 2.1 Municipal Government Act RSA 2000

This ASP has been prepared in accordance with Section 633 of the Municipal Government Act. An Area Structure Plan, as defined by the Act, must contain the sequence of development proposed for the area; the land uses proposed for the area; the density of population proposed for the area; the general location of major transportation routes and public utilities; and any other matters that Council considers necessary.



Town of Redwater



Standing Stone Industrial Park  
ASP Boundary

## FIGURE 1 LOCATION MAP

STANDING STONE INDUSTRIAL PARK

Lot 1 Block 1 Plan 082-3542 AND  
N 1/2 of NE 20-57-21-4  
all within NE 20-57-21-4  
Town of Redwater  
1:25,000  
January 28, 2013  
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## 2.2 Town of Redwater Municipal Development Plan, Bylaw No. 754

The *Town of Redwater Municipal Development Plan Bylaw No. 754*, (MDP) which was adopted in December 2009, is the overarching planning document that directs future growth and development within the Town of Redwater and guides all subsequent planning documents including this Area Structure Plan (ASP).

As per the MDP, the subject lands are designated as Highway Commercial in the north portion of the site, and Industrial for the balance of the lands. The ASP supports the policies and long term goals described by the MDP relative to industrial uses, commercial uses, and transportation and utilities.

Specific policies of the MDP that directly influence the proposed uses of this ASP are listed in *Table 1 – Municipal Development Plan Policies*.

*Table 1: Municipal Development Plan Policies*

Municipal Development Plan Policies	
6.1 INDUSTRIAL AREAS	
6.1.1	It is the policy of this Plan that the areas designated Industrial on the Future Land Use and Transportation Plan shall be developed in industrial uses, and that industrial development shall be directed to those lands designated Industrial.
6.1.2	An “industrial area” encompassing lands east of 44th Street will be reserved for industry. This area has safe and convenient access to major arterial roadways and rail facilities.
6.1.3	The Town will encourage concentrated industrial growth by directing future industrial development to the industrial area in order to minimize conflicts with neighbouring land uses, to facilitate the economical provision of municipal services, and to promote an efficient industrial land use pattern.
6.1.6	The Town will endeavor to ensure the most cost-effective development of land in the industrial area.
6.1.8	Future industrial development will demonstrate adequate fire flow capacities prior to development approval and after completion of construction to the satisfaction of the Town’s Fire Department.
6.1.9	Future industrial development within the Industrial Area will be connected to a paved road network in a manner that meets with the satisfaction of the Town’s Public Works Department and the Town’s engineer.

### 7.3 HIGHWAY COMMERCIAL AREAS

- 7.3.1 It is the policy of this Plan that the areas designated Highway Commercial on the Future Land Use shall be developed as commercial development which is specifically designed to focus on the needs of the traveling public, or commercial development that requires large land holdings that are not available in the Downtown Core area.”
- 7.3.2 The development of Highway Commercial areas will take careful cognizance of the need to buffer the potential negative impacts of such development from adjacent uses.
- 7.3.3 All Future highway commercial development will be serviced efficiently and be consistent with the Town’s Master Servicing Study.

### 2.3 Town of Redwater Land Use Bylaw, Bylaw No. 766

This ASP is consistent with the *Town of Redwater Land Use Bylaw No. 766*, adopted by Council on September 14, 2010, which designates the subject lands as Highway Commercial (C3) District in the north, and Industrial (M1) District in the south portion of the quarter section.



### 3 Background

#### 3.1 Land Use Context

The subject lands are located in a primarily undeveloped area in the southeast corner of the municipality. The ARC Resources Gas Plant is located in the center of the quarter section north of the site. The Town's existing industrial park is located northwest of the lands and within this park is the Newalta Redwater waste processing facility. The quarter section directly west, south and southwest is utilized for agriculture with oil/gas activity. In Sturgeon County, rural farmland with residences and oil/gas activity are on the quarter section to the north east, east and southeast of the site.

Within the quarter section, the Town of Redwater cemetery is located in the northeast corner on a separately titled lot. An existing residence is located in the northwest corner of the quarter section and the balance of the site is utilized for agricultural purposes, oil/gas extraction with access roads or left uncultivated.

#### 3.2 Topography

The plan area is generally flat to gently rolling with drainage trending towards the north east, ultimately to the Redwater River. The change in elevation is from 627.5m in southwest to 617.5m in the northeast corner. Figure 2: Natural Features depicts the current land use on the site including the location of identified wetlands.

### 4 Development Opportunities

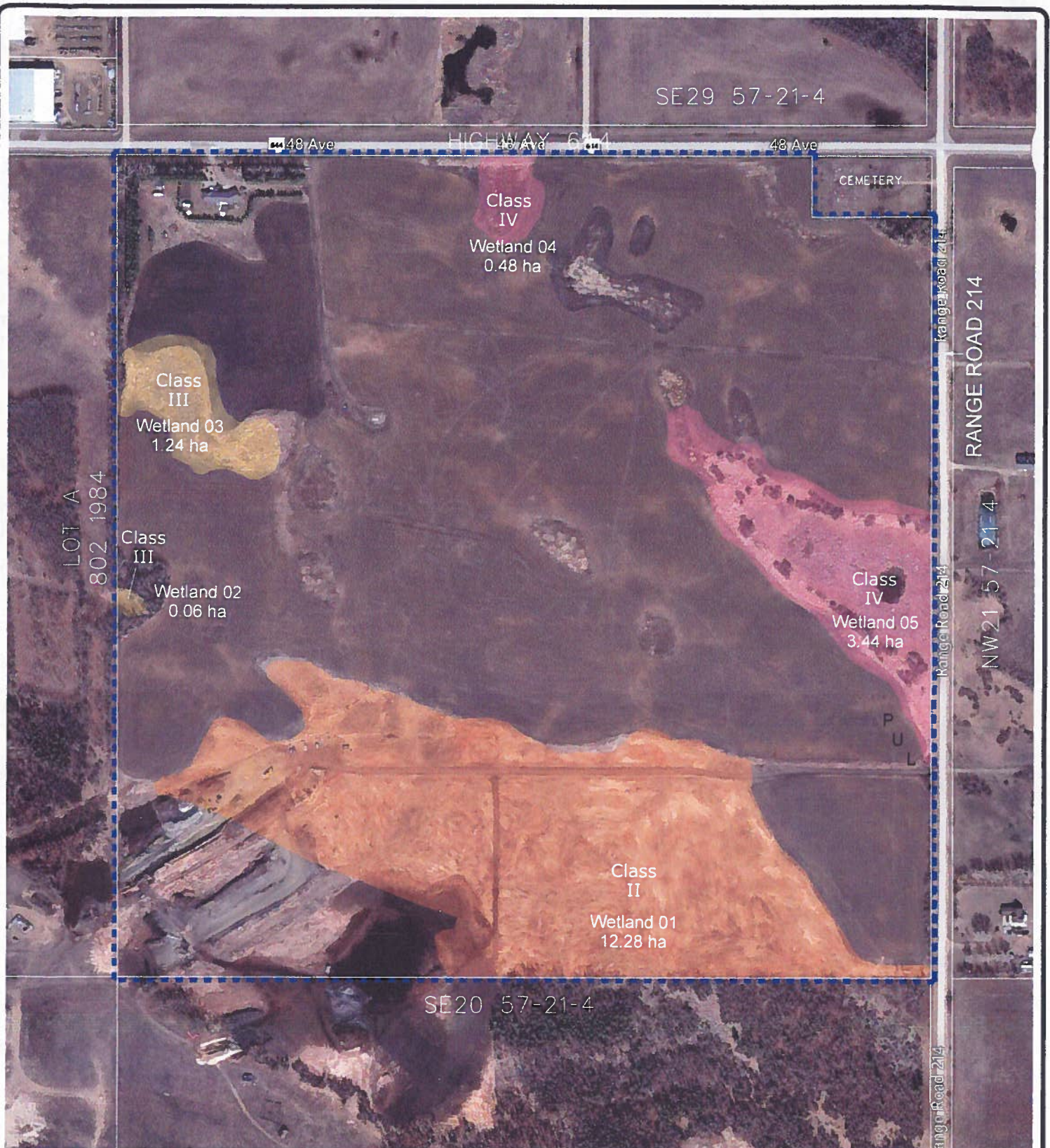
#### 4.1 Geotechnical Report

A geotechnical site investigation was conducted by Hagstrom Geotechnical Services Ltd. in March 2012. Based on the eighteen boreholes drilled across the site, the geotechnical conditions over a majority of the site indicate no adverse soil conditions in relation to the proposed development. The conditions are generally favourable for roadways, underground utilities and new industrial buildings. The groundwater table is moderately high across the site. A copy of the *Geotechnical Site Investigation: Proposed Industrial Subdivision* will be submitted under separate cover.

#### 4.2 Historical Resources Impact Assessment

*Historical Resources Act* clearance was granted to the subject area in January 2012 subject to Section 31 of the Resources Act stating that "a person who discovers a 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" (refer to Appendix A for a copy of the clearance document). The Clearance states that a chance discovery of historical resources on the subject land is to be reported to the Provincial department, *Alberta Culture*.





ASP Boundary

**FIGURE 2**  
**NATURAL FEATURES**

Lot 1 Block 1 Plan 082-3542 AND  
N 1/2 of NE 20-57-21-4  
all within NE 20-57-21-4  
Town of Redwater  
1:5000  
January 29, 2013  
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## 5 Development Constraints

### 5.1 Natural Features

The initial biophysical assessment was conducted by EBA, A Tetra Tech Company in November 2011 with a second site visit in May 2012. Vegetation on the site was identified as some native areas, some cultivated lands and numerous weed species. Five wetlands were identified in the plan area and were classified according to the Stewart and Kantrud classification system. Figure 2: Natural Features depicts the location and extent of each of the identified wetlands. There is one Class II temporary pond, two Class III seasonal pond wetlands, and two Class IV semi-permanent pond wetlands.

The Class IV wetland on the east central portion of the site is to be protected within an Environmental Reserve lot with a 6.0 metre buffer around the wetland. The other wetlands on the site are intended to be removed as development proceeds. Under the provincial Water Act, the compensation for removed wetlands is available on the basis of a 3:1 replacement ratio or as determined by Alberta Environment and Sustainable Resources Development (AESRD). Clearance from Public Lands for any bed and shore claims will be obtained and wetland compensation will be provided to the applicable receiving agency for affected wetlands prior to site work in the plan area.

The report *Biophysical Assessment for NE 20-057-21-W4M* prepared by EBA, A Tetra Tech Company dated January 2013 will be submitted under separate cover.

### 5.2 Manmade Constraints

#### 5.2.1 Pipelines

Figure 3 Manmade Constraints depicts the location of the linear constraints of registered rights of ways, licensed flowlines and the gas co-op line within the plan area. Table 2: Pipelines provides information on the respective owners, as well as pipeline substance data for all lines except for the Coronado Gas Co-op line which is providing gas service to the existing residence in the northwest corner of the site.

It is anticipated that no additional setbacks from the boundaries of the registered rights of ways are required for development according to provincial legislation. However, confirmation of such will be ascertained during the formal subdivision referral process. Crossing or Proximity Agreements will have to be in place by the developer with respect to construction and surface use above or adjacent to the rights of way with each licensee .

Flow lines will be relocated or removed as necessary by the applicable operator so as to not constrain on site development.

The Town of Redwater's MDP Policy 10.3.1 requires a 15.2 metre setback from the nearest edge of the pipeline right-of-way to any permanent *structure*.



**Table 2: Pipelines**

Well ID	Licensee Name	Code	Substance Category	Substance Included
178	Arc Resources Ltd.	OE	Oil Well Effluent	Multiphase Fluids
9420	Imperial Oil Resource	HV	HVP Products	Butane, Ethylene, Propane, Pentanes, Liquid Ethane
10078	Arc Resources Ltd.	OE	Oil Well Effluent	Multiphase Fluids
16832	Arc Resources Ltd.	HV	HVP Products	Butane, Ethylene, Propane, Pentanes, Liquid Ethane
19922	Atco Gas and Pipeline	NG	Natural Gas	Methane, Synthetic Natural Gas, Natural Gas with 10mol/kmol or less of H2S content
22786	Redwater Water Disposal	SW	Salt Water	Produced Water
36151	Arc Resources Ltd.	SW	Salt Water	Produced Water
37742	Alberta Oil Sands Pipeline Ltd.	CO	Crude Oil	Blended Crude Bitumen, Crude Oil, Sour Crude Oil, Synthetic Crude Oil
52	Atco Gas and Pipeline	NG	Natural Gas	Methane, Synthetic Natural Gas, Natural Gas with 10mol/kmol or less of H2S content

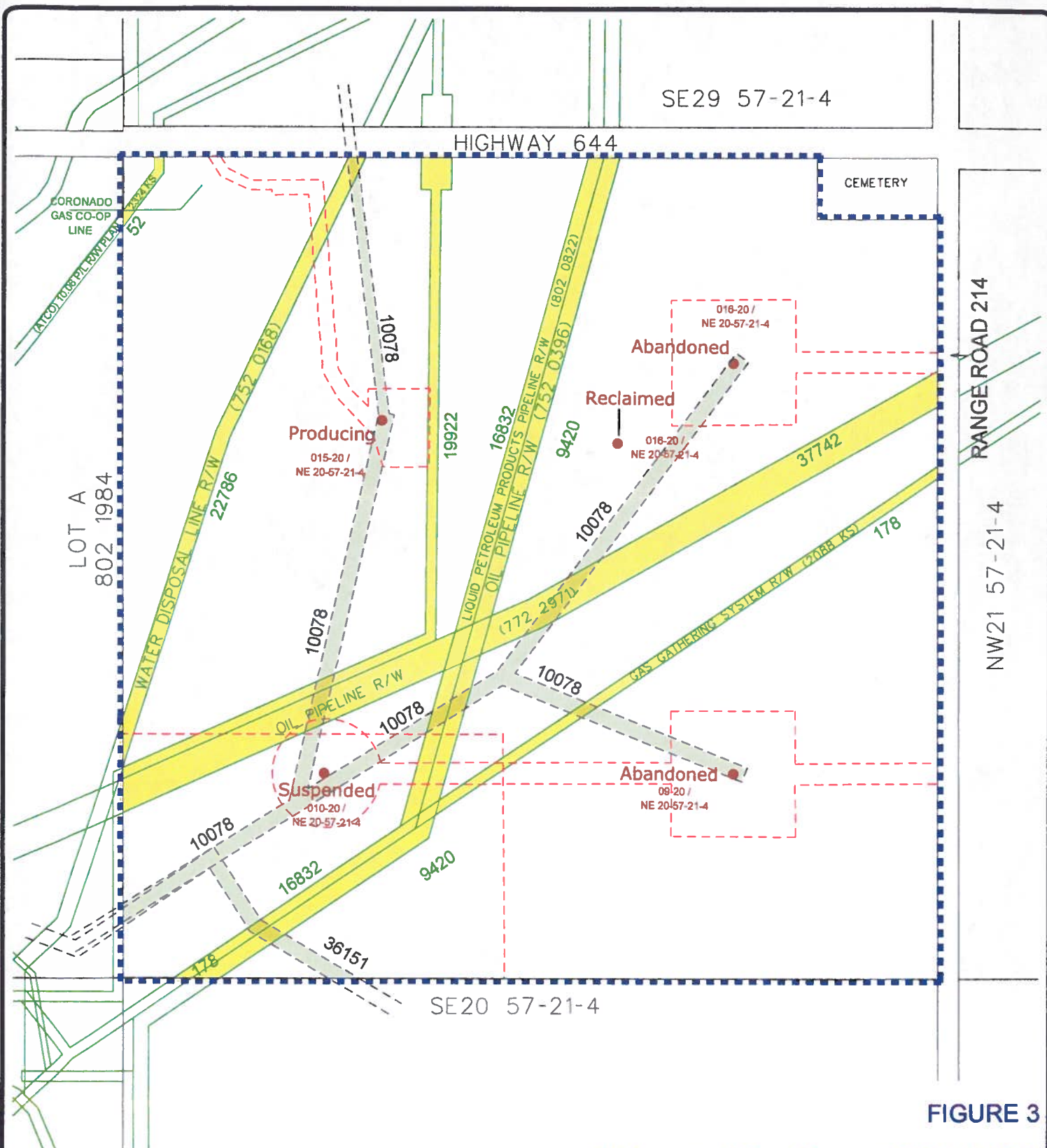


FIGURE 3

## MAN MADE CONSTRAINTS

### STANDING STONE INDUSTRIAL PARK

Lot 1 Block 1 Plan 082-3542 AND  
N 1/2 of NE 20-57-21-4  
all within NE 20-57-21-4  
Town of Redwater

1:5000

January 29, 2013

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### 5.2.2 Wells and Lease Areas

There are five lease areas and five wells constraining development on the subject lands as indicated on Figure 3: Manmade Constraints. Four of the wells and all the lease areas are controlled by Arc Resources Ltd. and the fifth well belongs to Conoco Phillips. Arc Resources Ltd. has indicated that they will cooperate with our timing of development with respect to coordination of timing of reclamation of their two abandoned wells, reduction and reconfiguration of lease areas and access roads, when possible, and relocation, removal and reclamation of flow lines as required.

Table 3: Active Wells indicates details with regards to the two wells on the west half of the subject site. The north well is active and the south well is suspended, with the potential of reactivation. Both of these wells have less than 4% sour gas and thus are classified as Level 1 setbacks with respect to the mandated setback in the provincial regulations. The lease areas surrounding the well head are to be maintained at their current size with the access road reconfigured to work with the on site development.

The two non-reclaimed wells on the east half of the parcel are slated for 2013 reclamation and certification by the operator. Lease areas will then be removed from title and a setback from the well head will then be provided to protect and provide access to the well head in perpetuity. The fifth well has been abandoned and reclaimed by Conoco Phillips and requires a minimum five metre radius setback area for future access. The Reclamation Certificate for this well is in Appendix B. Table 4 provides information regarding the abandoned wells.

The south west corner of the parcel is under lease by Arc Resources Ltd. and is under a long term reclamation program for salt water contamination. Thus, this area has been included as the stage 3 development of the ASP plan area.

**Table 3: Active Wells**

CPA ID	Licensee Code	Licensee Name	Status	H2S Comment
00/10-20-057-21W4/0	OG300	Arc Resources Ltd.	Suspended	4% - Level 1
00/15-20-057-21W4/0	OG300	Arc Resources Ltd.	Active	4% - Level 1

**Table 4: Abandoned Wells**

License Location Label	Surface	License Number	Licensee Name	Status	Fluid
09-20-057-21W4		0000146	Arc Resources Ltd.	Abandoned	Crude Oil
16-20-057-21W4		0000148	Arc Resources Ltd.	Abandoned	Crude Oil
16-20-057-21W4		0170575	ConocoPhillips Canada Resources Corp.	Reclamation Certificate issued	Not Applicable



### **5.2.3 Adjacent Land Uses**

The Arc Resources Ltd. plant is located in the quarter section north of the subject lands. This is a gas processing facility with sulphur recovery and is currently licensed to process up to 4% sour gas. Setback requirements for this plant are for a Level 1 facility according to the operator.

The Newalta Redwater waste processing facility is located in the industrial park northwest of the plan area. This facility consists of containment units and equipment for processing waste oil and byproducts of oil and gas production. Based on the separation distance of 180 metres from the plan area, it is not anticipated that development will be affected.

## **6 Development Concept**

The development objectives for the Standing Stone Industrial Park are as follows:

- Provide an efficient use of land and maximize synergies between uses;
- Provide an economical servicing concept;
- Ensure consistency with statutory plans, regulations and standards; and
- Provide a framework to incorporate design guidelines.

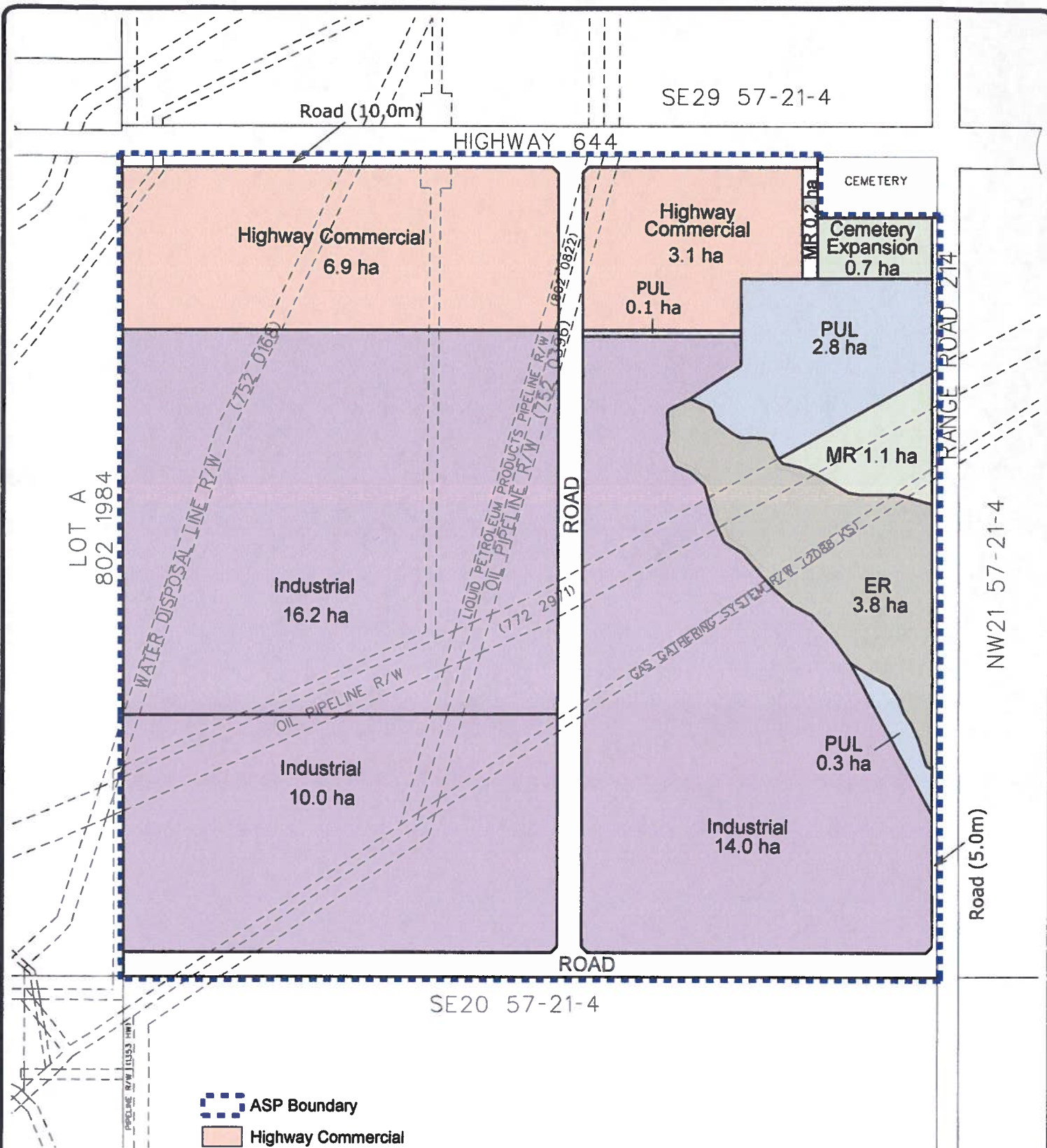
The initial development concept for the plan area is for block subdivisions to allow users with needs for larger tracts of industrial land to operate in the Town. As market conditions change and the surrounding lands develop as industrial use, it is anticipated that smaller industrial lots and highway commercial development will be required in the future. At that time, an amendment to the approved ASP will be proposed to the Town with the required road, lot and servicing concept to support the more intensive use of the plan area. Figure 4: Development Concept illustrates the proposed location for areas of development, municipal reserves, cemetery expansion, public utility lots for storm water management facilities and environmental reserve.

## 6.1 Land Use Concept

The Standing Stone Industrial Plan statistics for capacity projections for the land use concept are as follows:

Table 5: Land Use Statistics

Area (ha)		
Total Plan Area	64.0	
Environmental Reserve	(3.8)	
<b>Gross Developable Area (GDA)</b>	<b>60.2</b>	
Net Area (ha)		% GDA
Municipal Reserve	1.3	2.16%
Public Utility Lot	3.2	5.32%
Cemetery Expansion	0.7	1.16%
Circulation	4.8	7.97%
<b>Infrastructure / Parks Area</b>	<b>10.0</b>	
Highway Commercial	10.0	16.61%
Industrial	40.2	66.78%
<b>Other Developable Area</b>	<b>50.2</b>	
<b>TOTAL</b>	<b>60.2</b>	<b>100%</b>



- ASP Boundary
- Highway Commercial
- Industrial
- Environmental Reserve (ER)
- Municipal Reserve (MR)
- Public Utility Lot (PUL)

## FIGURE 4 DEVELOPMENT CONCEPT

### STANDING STONE INDUSTRIAL PARK

Lot 1 Block 1 Plan 082-3542 AND  
N 1/2 of NE 20-57-21-4  
all within NE 20-57-21-4  
Town of Redwater

1:5000  
April 26, 2013  
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#### **6.1.1 Highway Commercial**

The Town of Redwater Municipal Development Plan has designated the northern portion of the subject area, abutting Highway 644 as future Highway Commercial lands. This plan reflects this, with the land use concept (Figure 4), identifying two areas for future highway commercial purposes, totaling approximately 10.0 hectares (24.7 acres).

Though the lands are designated for Highway Commercial purposes, intended to “focus on the needs of the traveling public, or commercial development that requires large land holdings”, they are isolated from the more urban part of the community and are not located in close proximity to the more heavily trafficked Highway 28. As a result, the commercial development within this plan area will in fact primarily service the surrounding lands designated for industrial purposes and not the general travelling public. The lands within the MDP designated for Highway Commercial purposes on the west side of the downtown core will largely servicing the traveling public due to their close proximity to Highway 28. Access to the commercial site from the internal north south road should be a minimum of 60.0m from the intersection with Highway 644.

As the highway commercial lands within the plan area will primarily service the surrounding industrial lands, they are not expected to develop for commercial purposes until such time as the industrial lands are largely built out. In the interim these lands could be utilized for temporary industrial uses that do not involve constructing permanent structures, such as a parking lot, pipeline storage yard, modular unit construction yard, etc. in order to take advantage of the large scale industrial development occurring within Sturgeon County to the south.

#### **6.1.2 Industrial**

This plan encourages a variety of industrial uses and flexibility in the size of parcels in order to accommodate the space requirements of respective users, while maintaining compatibility with surrounding uses. The total area designated for Industrial use is approximately 40.2 hectares (99.3 acres). The industrial parcels are located and oriented along roadways to take advantage of high visibility and convenient access opportunities.

This identified area is designated as Industrial under the Town’s Land Use Bylaw. This designation permits uses such as light industrial, self-service storage facilities, business support services, and automotive / equipment repair shops. Discretionary uses include general industrial uses, outdoor storage and work camps.

This plan will provide a vision for an industrial park that supports the identification of economic and environmental opportunities within the planning process. Developments within this plan will support an eco-industrial vision while promoting environmental stewardship through practices that may include:

- Increasing land use efficiency;
- Providing innovative, green infrastructure;
- Utilizing alternative roadway standards that reduce impermeable surfaces;
- Providing naturalized storm water management facilities and groundwater recharge;
- Promoting indigenous landscaping; and
- Reducing environmental impacts during the building and construction process.

#### 6.1.3 Open Space

Open space will be a combination of municipal reserves and an environmental reserve. Municipal reserve will be provided as both land and cash-in-lieu. A total area of 1.3 hectares (3.2 acres) will be dedicated as municipal reserve in the northeast area of the site. A 15.0 metre wide linear strip of municipal reserve will buffer the existing cemetery from the commercial development west of the site. A 6.0 metre wide buffer is proposed to protect the perimeter of the wetland that is being retained in the east central portion of the plan area. Land has also been allocated for future expansion of the Town cemetery to the south of the current location.

### 6.2 Design Guidelines

The MDP provides that architectural controls may be used to ensure major developments create an aesthetically pleasing result. It also requires that site planning techniques be used to reduce the effects of major roadways and to provide visual privacy. Pursuant to these policies, the Town's Land Use Bylaw requires exterior building finishes be of a character and quality satisfactory to the Development Authority. The design, character, and appearance of all buildings will:

- be compatible with other buildings in the vicinity, unless it is setting a new standard for the district;
- be suited to the purpose of the district within which it is located; and
- comply with the provision of any statutory plan applicable to the design, character, and appearance of the building.

### 6.3 Public Input

#### 6.3.1 Notice of ASP Preparation Letters

Notice of ASP preparation letters were sent out to the following individuals/organizations to solicit feedback regarding the proposed Area Structure Plan development concept:



- Town of Redwater Fire Department,
- Town of Redwater RCMP,
- Redwater School,
- Ochre Park School, and
- Sturgeon County.

The following concern was voiced from the Senior Development Officer of Sturgeon County:

*"I note that there is a residence in the County directly east of this draft ASP. The ASP contemplates Industrial Land directly across RR214 from the residence. This should be brought to the applicants attention, and be reflected in the drafting of the ASP, or at least a dialogue with the landowner needs to occur."*

As a result, letters were sent to adjacent landowners, inviting them to attend a public open house or to provide us with written comments by fax, mail or email.

We received the following response from the Town of Redwater Fire Department:

*"With any such development from a [Fire Department] point of view the concern usually lies with water supply and what type of businesses will be placed into the industrial areas and that all construction meets requirements of AB Fire Code. The other item would be proper access routes (width) for our apparatus, from what you have provided a lot of these questions probably cannot be answered at this time. Currently I do not see any issues."*

ARC Resources Ltd., operator of the majority of wells and pipelines in the plan area and adjacent area provided feedback regarding timing of reclamation of their two abandoned wells, status of operating wells including sour gas content and setback requirements (lease area extent), willingness to relocate flow lines as required, setback requirements from their gas plant to the north (level I) and status of reclamation of the southwest lease area.

All other adjacent landowners and agencies responded with no comments/concerns.

### 6.3.2 Public Open House

A public open house was held on December 12, 2012 at Pembina Place, in the Town of Redwater. Notifications were sent to adjacent landowners and the Town administration, and it was also advertised in *The Review* for two weeks prior to the open house date. A total of thirteen (13) individuals attended the open house.

The open house included a series of presentation boards which displayed information about the location, site constraints, development concept, servicing (water servicing, wastewater servicing, and storm water management), and staging. Exit surveys were also provided, which the participants were encouraged to complete. A total of three (3) exit surveys were submitted (refer to Appendix C for consolidated comments). Participants showed support for the overall draft Area Structure Plan concepts.



## 7 Transportation

The *Town of Redwater's August 2010 Master Services Plan Update* prepared by Associated Engineering proposes a north-south arterial road through the center of the plan area and an east west major collector in the center of the south half of the quarter section. Our proposed road network has the east west collector road shifted to the south boundary of the quarter section in order to avoid the physical constraints of a wetland in its originally proposed location. This relocation of the collector road will allow the quarter section south of our plan area to readily tie into the Town's road system. The proposed east-west major collector road west of the plan area will realign north to the original proposed alignment in the Master Services Plan Update part way thru the quarter section. An emergency access will be provided with the first stage of development via the internal road system south and east to Range Road 214 (proposed stage 2). Figure 5 indicates the Transportation Network in the ASP versus what was proposed by the engineering study.

A *Traffic Impact Assessment* (TIA) dated January 24, 2013 was prepared by Scheffer Andrew Ltd. to support development of the plan area. The document will be submitted under separate cover. The TIA recommends an upgrade to Highway 644 at the intersection of the plan's north south road with right and left turn lanes and intersection lighting. Alberta Transportation indicated in their correspondence dated April 19, 2013 that they have no suggestions for change in their review of the documents and support subdivision proposals that conform to this plan.

## 8 Utility Servicing

The Standing Stone Industrial Park will be serviced with the proposed sanitary sewer system, water distribution system and storm water management as recommended in the *Town of Redwater's August 2010 Master Services Plan Update* prepared by Associated Engineering. The servicing concept plan is described below:

### 8.1 Water Servicing Concept

The ASP area will be serviced according to the water servicing concept as shown in Figure 6. The Standing Stone Industrial Park water system will be connected to the existing 300mm water main located at 46 Street East north of Highway 644. The proposed water network consists of a 250mm and 300mm water main in a looped system to service the proposed industrial and future highway commercial development. The proposed water distribution conforms to the Town servicing master plan.

The existing reservoir at 51A Avenue and 44 Street will provide the necessary water supply to the proposed development area. An interim hydraulic network analysis is required at the detailed engineering design stage to confirm when onsite looping is required.

### 8.2 Sanitary Servicing Concept

The Standing Stone industrial and commercial development will be serviced in accordance with the servicing concept proposed in the August 2010 Master Services Plan Update. The development will be required to construct approximately 3.2km of the proposed Future East

Trunk Sewer and upgrade the existing lift station that pumps sewage to the existing aerated lagoon. The sanitary trunk size varies from 375 to 900mm in diameter. The lift station is located in 44 Street (Range Road 215) and Township Road 575A.

The Future East Trunk Sewer system will be oversized to accommodate future developments to the north and south of the Standing Stone industrial and commercial site. The downstream portion of the trunk, mainly the 900mm trunk, will also be oversized to service the entire south west area south of the Highway 644 between Range Road 221 and 214. The horizontal alignment of the sanitary trunk which is based on the Master Servicing Plan is conceptual in nature and therefore may need to be adjusted at time of detailed design in order to avoid multiple pipeline crossings, to avoid areas of excessive depth and to promote efficient constructability. The sanitary servicing concept is shown in Figure 7.

### **8.3 Storm Water Management Concept**

#### **8.3.1 Major System**

One storm water management facility and a sedimentation pond in conjunction with the existing wetland, along with onsite storage are proposed to control the post-development storm runoff from the Standing Stone development. A wet pond is to be located south of the existing cemetery, southwest of Range Road 214 and Highway 644. The other is a proposed sedimentation pond located south of the existing wetland west of Range Road 214. The two facilities will be kept separate by a berm. The wet pond will provide storm water runoff control and water quality improvement for most of development area. The sedimentation pond will provide water quality improvement from surface runoff from the roads, mainly in Stage 2 and 3, prior to discharge into the existing wetland. A 6.0m wide public utility lot is proposed from the internal north south road to the stormwater management facility to provide access for maintenance by the municipality.

Further to the soil investigation, it has been concluded that there will not be any negative impact resulting from the location of the SWMF adjacent to the existing cemetery, but further investigation is required in conjunction with detailed design. A Letter prepared by Hagstrom Geotechnical Services Ltd. dated May 24, 2013 referencing this is submitted under separate cover.

These facilities along with the onsite storage requirements have been sized to store storm runoff resulting from major rainfall events, including the 1 in 100 year return period. A storm water management plan will be submitted to Alberta Environment and Sustainable Resources Development (AESRD) for approval during detailed design engineering.

#### **8.3.2 Minor System**

The minor system consists of a combination of ditches, underground sewer and catch basins. It is designed to convey storm runoff for up to the 1:5 year storm rainfall. The ditches will also be designed to convey the 1:100 year flow.

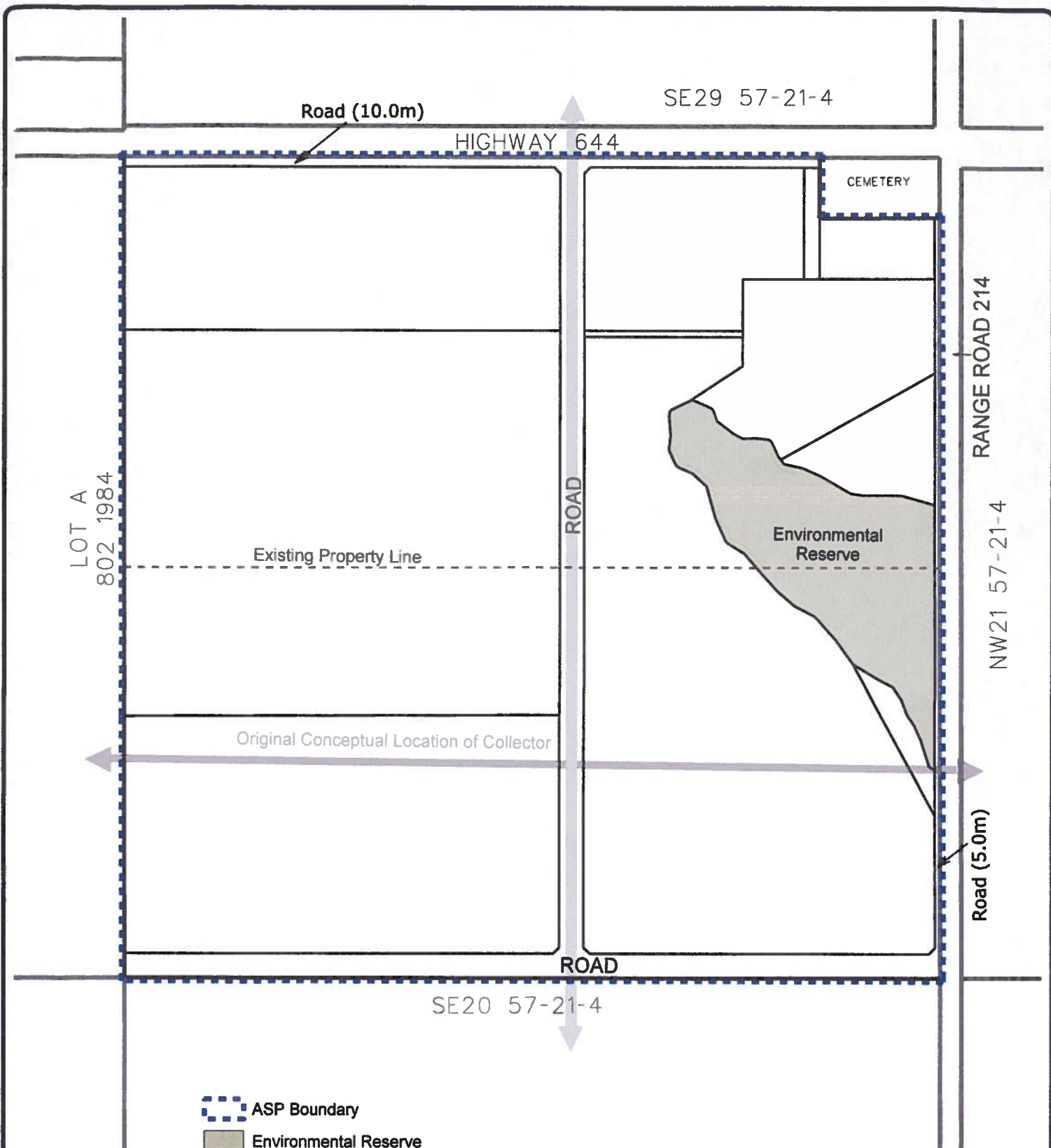
The storm water runoff from the road right-of-way in Stage 1 will be collected by the proposed roadway ditches and underground sewer that discharge directly into the proposed wet pond.





The storm water runoff from the roadways in Stage 2 and 3 will be collected by the road side ditches that discharge into the proposed sedimentation pond.

The storm water runoff from the industrial lots will be collected by catch-basin manholes and underground pipes that discharge into an onsite storage facility. The onsite storage facility will be required to control its discharge rate into the minor system at 5.4 L/s/ha.

The commercial lots will be required to control the minor flow into the underground pipe system at a rate of 35 L/s/ha during the minor event up to including the 1:5 year storm. The major storm runoff from the commercial site will be routed to the pond via roadway ditches and drainage swale. The pipeline will be located within the municipal reserve.

The storm water management concept for the Standing Stone subdivision is shown in Figure 8. The proposed storm water management servicing plan generally conforms to the Town's servicing master plan.



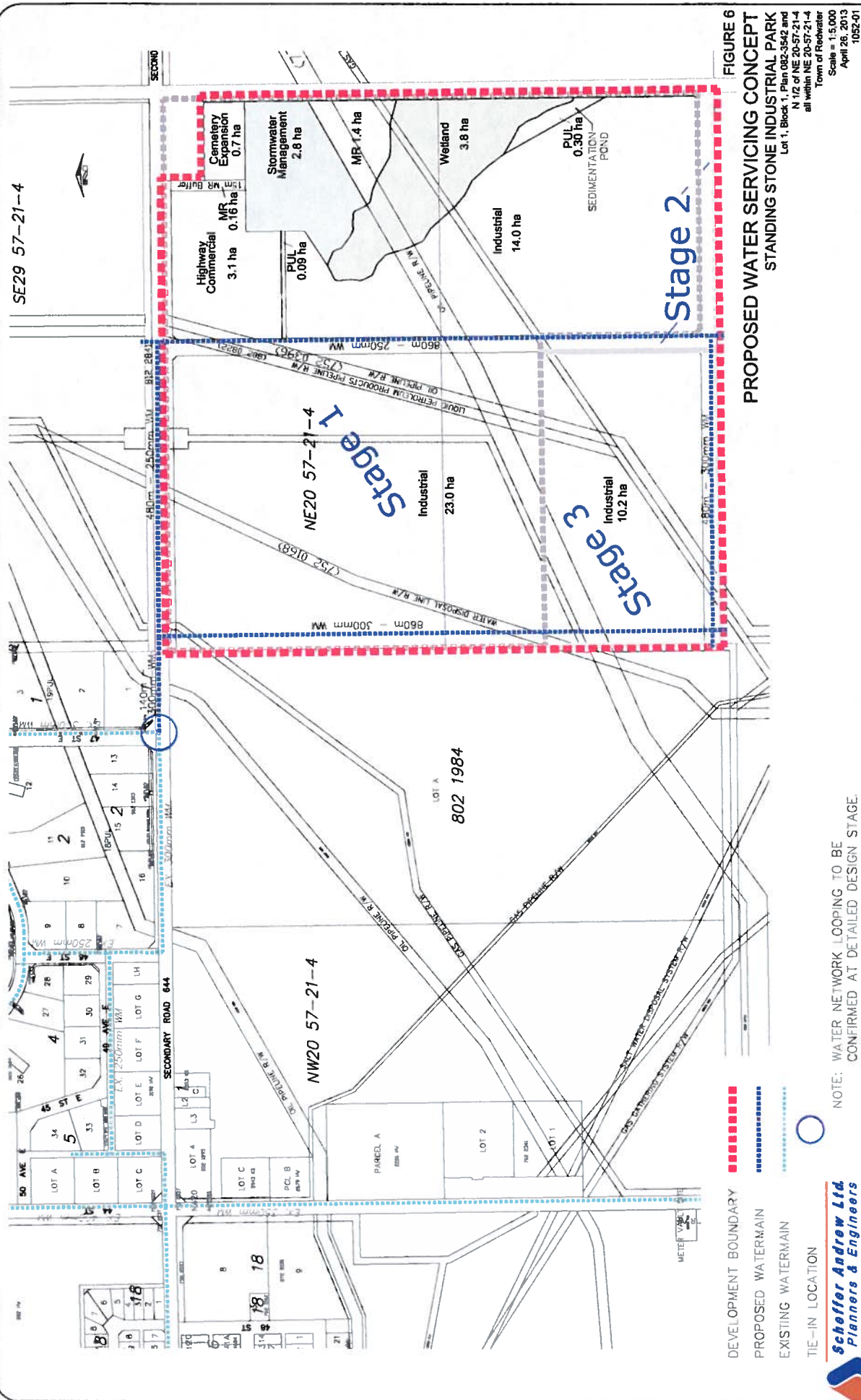
-  ASP Boundary
-  Environmental Reserve
-  Collector Road
-  Arterial Road

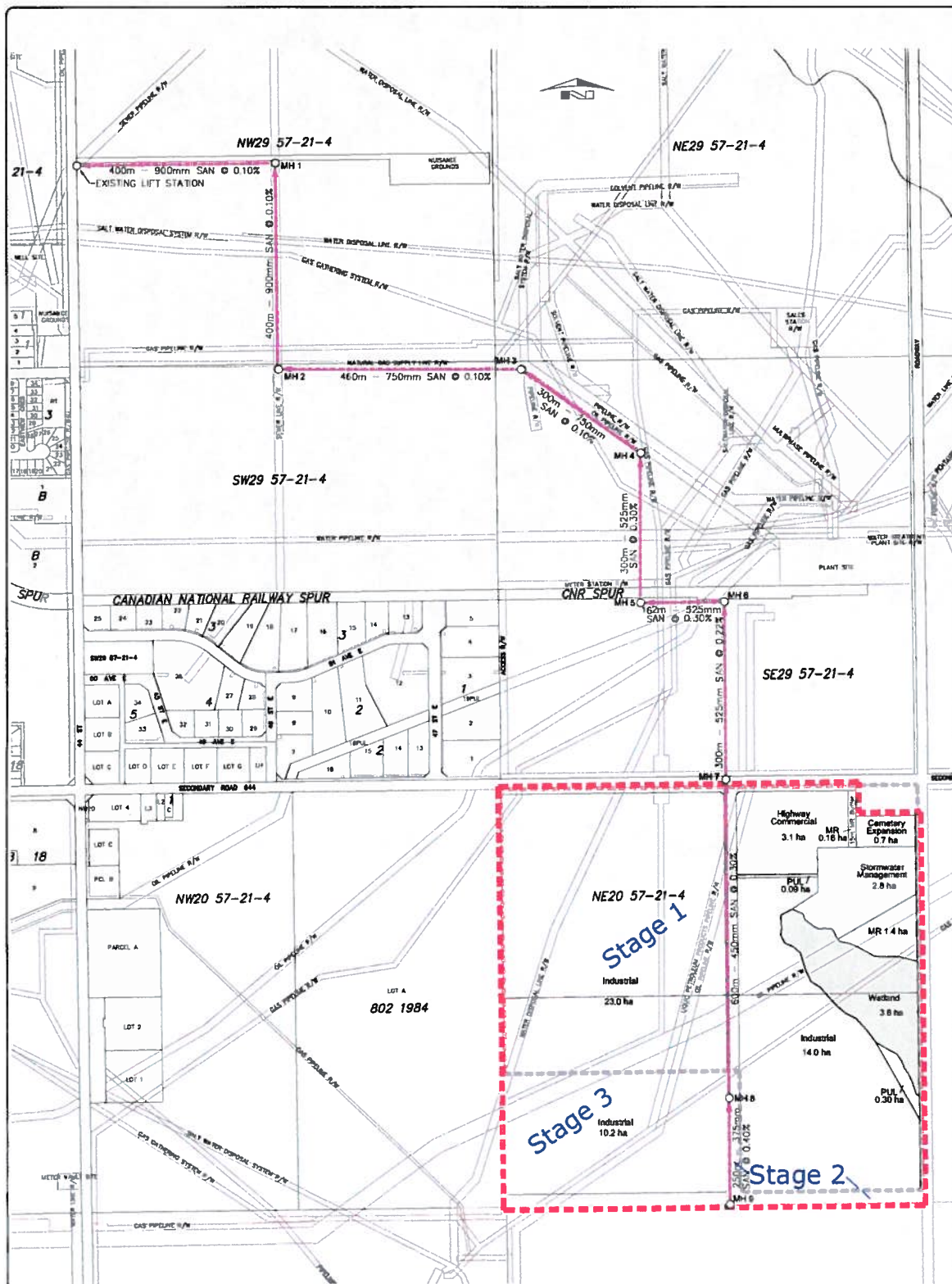
## FIGURE 5 TRANSPORTATION NETWORK

STANDING STONE INDUSTRIAL PARK

Lot 1 Block 1 Plan 082-3542 AND  
N 1/2 of NE 20-57-21-4  
all within NE 20-57-21-4  
Town of Redwater  
1:5000  
April 26, 2013  
10520100b19.dgn







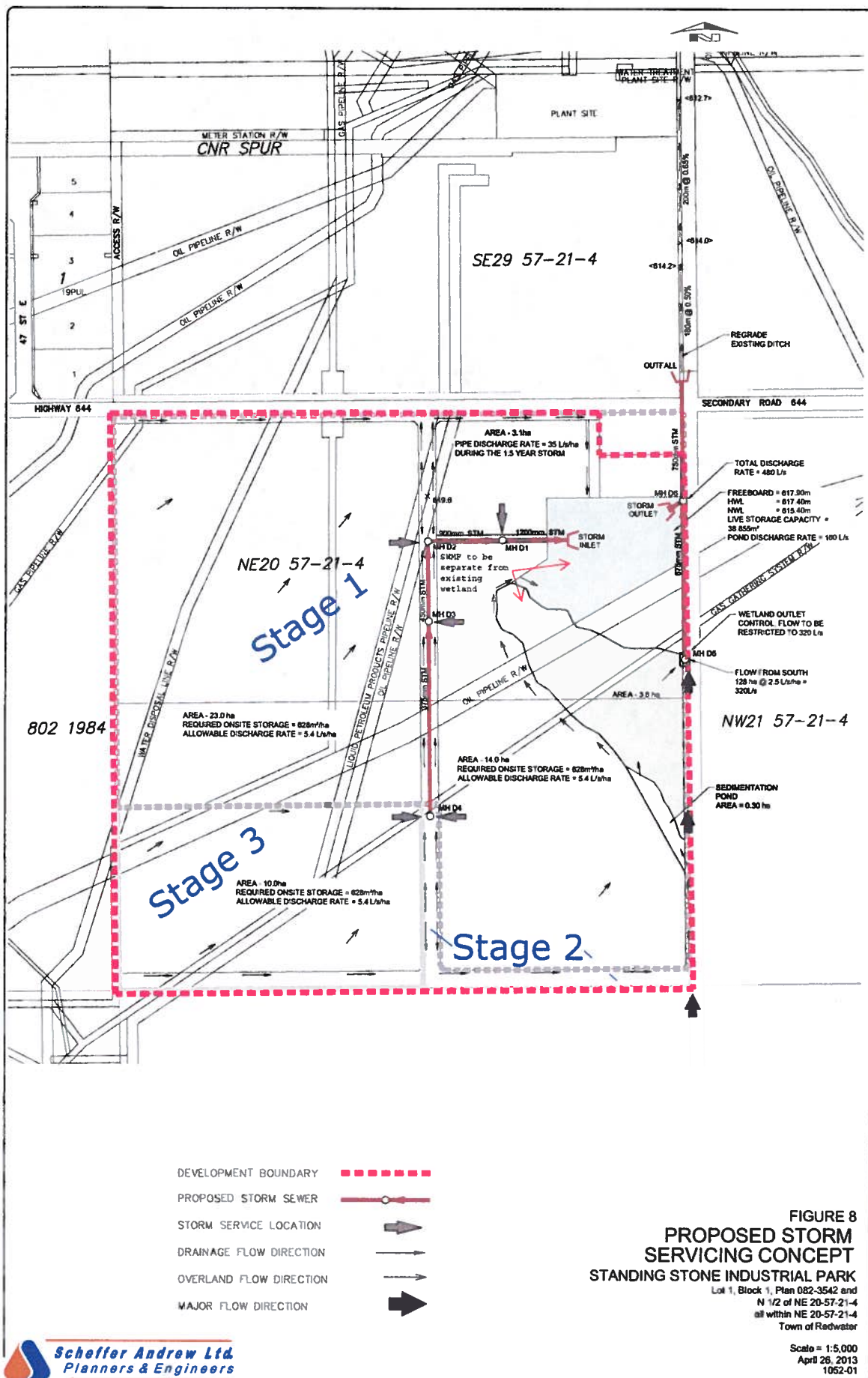
DEVELOPMENT BOUNDARY ----

PROPOSED SANITARY —○—

**FIGURE 7**  
**PROPOSED SANITARY**  
**SERVICING CONCEPT**  
**STANDING STONE INDUSTRIAL PARK**

Lot 1, Block 1, Plan 082-3542 and  
 N 1/2 of NE 20-57-21-4  
 all within NE 20-57-21-4  
 Town of Redwater  
 Scale = 1:7,500  
 April 26, 2013  
 1052-01





## **9 Staging**

Staging of the development is necessary to ensure that the development occurs in a safe, efficient and economical fashion. The development sequence of the subject property is illustrated in Figure 9: Proposed Staging. Modification in the staging boundaries and number of stages is subject to market conditions, logical extension of servicing and remediation of land.

SE29 57-21-4

HIGHWAY 644

CEMETERY

RANGE ROAD 214

NW21 57-21-4

LOT A  
802 1984

Stage 1

Existing Property Line

Stage 3

Stage 2

SE20 57-21-4

-  Highway Commercial
-  Industrial
-  Environmental Reserve
-  Municipal Reserve
-  Stormwater Management Facility

## FIGURE 9 STAGING

### STANDING STONE INDUSTRIAL PARK

Lot 1 Block 1 Plan 082-3542 AND  
N 1/2 of NE 20-57-21-4  
all within NE 20-57-21-4  
Town of Redwater  
1:5000  
April 26, 2013  
10520100b19.dgn

The background of the page features a faded map. In the upper left, a rectangular area is shaded with a stippled pattern. To its right, a street is labeled 'FOUR STREET'. Below this, another street is labeled '100 AVENUE'. Further to the right, the text 'STAGE B' is visible. In the lower left, the text 'STAGE 1' is present. The map also shows various lot lines and other street layouts.

STAGE 1

## Appendix A

### Historical Resources Act Clearance

## Application for *Historical Resources Act* Clearance

### Activity Administration

Date Received: January 12, 2012

HRM File: 4835-12-0009

Purpose of Application:

☒ All New Lands

☐ Additional Lands

☐ No New Lands

Project Category: Subdivisions (4835)

Project Type:

- ☐ Residential Subdivision  
☐ Commercial Subdivision  
☒ Industrial Subdivision  
☒ Area Structure Plan /  
Outline Plan  
☐ Access Road  
☐ Electrical / Utility  
☐ Water Supply Line  
☐ Sewage Line  
☐ Other

ESRI Shapefiles are attached no  
(yes/no)

Approximate Project Area (ha) 64  
Lot, Block, Plan

Other Reference Number NE 20-57-21-4

Project Identifier: 10520100 Redwater Industrial

Additional Identifier(s):

Key Contact: Aime Stewart

Address: 12204-145 Street

Postal Code: T5L 4V7

E-mail: a.stewart@schefferandrew.com

Affiliation: Scheffer Andrew Ltd.

City / Province: Edmonton, AB

Phone: (780) 732-7779

Fax: (780) 732-7878

Your File Number:

Is the Proponent the same as the Key Contact?

☐ Yes

☒ No

If no, complete the following:

Proponent: Standing Stone Redwater Ltd. Partnership

Address: 1920,10020-101A Avenue

Postal Code: T5J 3G2

E-mail: casey@standingstonedevelopments.com

Contact Name: Casey O'Byrne

City / Province: Edmonton, AB

Phone: (780) 421-0058

Fax: (780) 421-0069

#### Proposed Development Area

MER	RGE	TWP	SEC	LSD List	FRH	SA	CU	CT
4	21	57	20	9,10,15,16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### Listed Lands Affected

MER	RGE	TWP	SEC	LSD	HRV	Category
4	21	57	20	16	5	a

Comments:

**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 27, 2012

Date





STAGE 1

## Appendix B

Reclamation Certificate for 16 - 20



Environmental Service

4th Floor, Oxbridge Place  
9820 - 106 Street  
Edmonton, Alberta  
Canada T5K 2J6

Telephone (780) 427-5883  
Fax (780) 422-4192

**RECLAMATION CERTIFICATE NO. 39302**  
**Well License Number 170575**

This reclamation certificate is issued pursuant to section 123 of the Environmental Protection and Enhancement Act, following an inquiry on

Oct 18/99 (Date)

This certifies that the surface of the land held by Renaissance Energy Ltd.  
within NE Sec. 20 Tp. 57 Rge. 21 W4M

in connection with or incidental to Renaissance Redwater 16-20-57-21 well, as shown outlined in yellow on the attached plan, complies with the conservation and reclamation requirements of Part 5 of the Act.

Issued this 18<sup>th</sup> day of October, 19 99

Ryan P. Puhman  
Inspector (s)

Operator/Agent:

Renaissance Energy Ltd.  
PO BOX 1120 STN M  
CALGARY, AB  
T2P 2K9

Owners/Occupants:

Anne Key  
Delcy Walker  
Thomas Walker

Section 84 of the Environmental Protection and Enhancement Act may provide a right of appeal against this decision to the Chair, Environmental Appeal Board. There may be a strict time limit for filing such an appeal. For further information, contact the Board Secretary of the Environmental Appeal Board at 6400, Alberta Treasury Branches Plaza, 8925 109 Street, Edmonton, Alberta T5K 2J8, telephone (780) 427-6207; fax (780) 427-4653.

ADDENDUM ATTACHED ☐ YES ☐ NO





STAGE 1

## Appendix C

### Public Open House Survey Comments



## STANDING STONE INDUSTRIAL PARK AREA STRUCTURE PLAN

Open House – December 12, 2012

### Summary of Comments and Responses

Number of persons in attendance (according to the sign-in sheet): 13

Number of exit surveys submitted: 3

1) The Development Concept shows an appropriate and desirable future land use scenario:

Agree 2	Neither Agree Nor Disagree	Disagree 0
------------	----------------------------	---------------

2) The Plan recognizes, respects and compliments the existing character of the community at large.

Agree 2	Neither Agree Nor Disagree	Disagree 0
------------	----------------------------	---------------

3) The Plan recognizes the value of open space and recreational areas.

Agree 1	Neither Agree Nor Disagree 0	Disagree 1
------------	---------------------------------	---------------

4) The Plan provides appropriate measures to meet the transportation and servicing needs of the area.

Agree 1	Neither Agree Nor Disagree 0	Disagree
------------	---------------------------------	----------

5) Do you support the draft Area Structure Plan Concepts?

Agree 3	Neither Agree Nor Disagree 0	Disagree
------------	---------------------------------	----------

#### Additional comments regarding the concept

I'm in fairly strong agreement with the concept. It provides a badly needed residential area for workers as well as adding another industrial sector to the municipality. Both are positives for the Town. It would be beneficial if other recreational concessions were provided in other Town areas. Certainly this area isn't conducive to this.

Increases local tax base.

Loss of wetland and property value to adjacent property owner.



Alberta  
Low Impact Development  
**ALIDP**  
Partnership