Summary of North Sector Plan

BACKGROUND

Plans referred to as Sector Plans, serve as a development framework for future growth and are based on the policies contained in the Official Community Plan Bylaw No. 8769 and the strategic goals of The Strategic Plan 2013-2023. Sector Plans address general land uses, natural areas, major infrastructure and costs, and development phasing. Provincial legislation requires Sector Plans to be approved by City Council. Once a Sector Plan is approved, the more detailed Industrial Area Concept Plan applications that are consistent with the Sector Plan can be considered for approval by City Council.

NORTH SECTOR REPORT

Rationale

Saskatoon population growth in the past five years has resulted in a significant increase in the pace of development. Currently, Saskatoon has eight active residential neighbourhoods being developed in different stages across the city. Three of these residential neighbourhoods are nearly complete. To keep a balance of residential growth with employment growth in the City, it is necessary to initiate a new growth sector to expand the City's north employment area. With an industrial vacancy rate that fluctuates between 4% and 5%, strong demand for industrial lands has remained present in Saskatoon's Northern Industrial Area since 2010. According to the City's "Three-year Land Development Reports", the average industrial land sales and leases is approximately 24 hectares (60 acres) over the past six years. In order to maintain a consecutive two year supply of industrial land, the steady development of industrial lands is necessary.

Location

The North Sector is approximately 19.8 square kilometres (4,903 acres) north of the Marquis Industrial Area and Agriplace (north of 71st Street), east and south of the Perimeter Highway alignment, and west of the South Saskatchewan River. About 3,500 acres of the North Sector is part of the 2015 City boundary alteration.

Vision

The vision for the North Sector is in line with The Strategic Plan and the Growing Forward Employment Strategy. This report supports the strategic goals of Sustainable Growth, Moving Around and Environmental Leadership. The overall objective of the North Sector vision is to facilitate economic development opportunities by expanding the City's north employment area. The industrial area will generate employment opportunities, accommodate a wide range of industrial development, and provide goods and services not only for the City, but to the surrounding region. The North Sector will promote transportation options including walking, cycling and transit for employees, while still accommodating the automobile, the rail, the airport, and trucking industries for the movement of goods and services. Developments in the North Sector will be comprehensively designed while incorporating a conservation theme of preserving and integrating existing natural features. This will all be done with the City's broader responsibility of providing opportunities for growth in an efficient, economical and sustainable manner in mind.

Land Use

The North Sector will accommodate fully-serviced light and heavy industrial, four commercial nodes, recreation areas/facilities, and the incorporation of the wetland complex. The North Sector is 1,984 ha (4903 ac) in size and anticipated to employ 32,000 employees at full build out.

Infrastructure and Phasing

The North Sector Plan identifies the major water, sewer, and transportation infrastructure required to serve the sector. Initial servicing will be provided by extending the utilities from the Marquis Industrial Area into the North Sector. Phase 1 of the North Sector will be the lands adjacent to 71st Street and the Marquis Industrial Area. Development will commence from south to north / northwest.

Riel Industrial Sector Plan

City of
Saskatoon
Planning & Development Branch

North Sector Plan

Approved by City of Saskatoon City Council on November 23rd, 2015

Prepared by:

Long Range Planning Section
Planning and Development Division
City of Saskatoon

September 2015

File Number: PL 4134-3-1

Amendments

Contents

Tables

Figures

Attachments

1. Marquis and Silverwood Industrial Sector Plan Amendment, 2002
2. North/Northwest Natural Area Screening Study, 2012
3. Northwest Access Management Study, 2009
4. Canadian Standards Association – Accessible Design for the Built Environment, 2004
5. Commercial and Industrial Development Study – Development Trends and Best Practices - Section 15
6. North Sector Plan Heritage Review Overview
7. Proposed Saskatoon Environmental Industrial Park, 1994
8. Guidelines for New Development in Proximity to Railway Operations, 2013

1 Introduction

1.1 Purpose of this Plan

The North Sector Plan has three main purposes:

a) This plan implements the City of Saskatoon's (City) vision in Official Community Plan Bylaw No. 8769 (Official Community Plan) to provide Industrial Development;
b) This plan establishes a layout for the preparation of future and more detailed Industrial Area Concept Plans to ensure growth proceeds in a balanced, compact, contiguous manner; and
c) This plan identifies key land uses, transportation, and servicing components that will need to be addressed in detail during the Industrial Area Concept Plan process.

1.2 Plan Amendments and Time Frame

The North Sector Plan is a large-scale plan that provides a framework for urban development over several decades. Given its scale and long-range time frame, the North Sector Plan is anticipated to undergo periodic amendments to address issues that may have been unforeseen at the time the plan was created and to accommodate changing development patterns. For this reason, the North Sector Plan should be considered a "living document." Provision is made in this document for amendments to be listed ahead of the Table of Contents.

2 Sector Vision

The vision for the North Sector is in line with the City's Strategic Plan 2013 - 2023 and the Growing Forward Employment Strategy. This report supports the strategic goals of Sustainable Growth, Moving Around, and Environmental Leadership. The overall objective of the North Sector vision is to facilitate economic development opportunities by expanding the City's north employment area. The industrial area will generate employment opportunities, accommodate a wide range of industrial development, and provide goods and services not only for the City, but to the surrounding region. The North Sector will promote transportation options including walking, cycling, and transit for employees, while still accommodating the automobile, the rail, and trucking industries for the movement of goods and services. Developments in the North Sector will be comprehensively designed while incorporating a conservation theme of preserving and integrating existing natural features. This will all be done with the City's broader responsibility of providing opportunities for growth in an efficient, economical, and sustainable manner in mind.

2.1 Principles of the Growing Forward! Shaping Saskatoon Initiative

Smart Growth principles are embedded in the Official Community Plan and the Growing Forward initiative. Smart Growth is an approach to planning that advocates for the concentration of growth in compact, walkable environments that support a range of transportation modes including transit and cycling. Smart

Growth development is intended to achieve economic, social, and environmental sustainability objectives over the long term, ensuring that development remains viable for the foreseeable future.

Developers in the North Sector will be encouraged to incorporate Smart Growth principles as part of the Industrial Area Concept Plan process. The City's "Growing Forward! Shaping Saskatoon: A Bridging Document" provides references that can assist in incorporating sustainable design in new developments including:

a) creating a compact City form;
b) providing employment opportunities for industries that are not suitable downtown;
c) improving upon existing practices that support transportation options including walking, bicycling, and transit;
d) incorporating space for public gathering and activities, where appropriate;
e) promoting site design that enhances the streetscape and is respectful to existing natural elements;
f) promoting green energy and energy conservation options (for example, building orientation, photovoltaic [solar] panels, and passive solar heating); and
g) promoting certified sustainable building structures.

3 Background

3.1 Location

The Northern Industrial Area is bound by the Canadian National Railway (CN) rail line on the south; Warman Road, Wanuskewin Road, and the South Saskatchewan River (River) on the east; the Airport Management Area and Highway 16 on the west; and Highway 11 North on the north. The Northern Industrial Area comprises 89% of the City's industrial land. Approximately 19.8 square kilometres (4,903 acres) of the Northern Industrial Area is unserviced land awaiting development and is referred to as the North Sector in this report. The boundary for this area is illustrated on Figure 1.

3.1.1 Boundary Alteration

As part of the City's Future Growth Study, 1999, the North Sector was identified as an attractive location for further employment growth due to the proximity to the railways, highways, and other existing industrial uses. In 2010, the City adjusted its boundary to include the lands north of 71st Street and east of Idylwyld Drive. In 2015, the City adjusted its boundary again to include the entire North Sector study area, as shown on Figure 1. The 2010 and 2015 boundary alterations combined would provide the City with 1,984 hectares (4,903 acres) of land in the north for future employment growth.

3.2 Existing Policy

3.2.1 Official Community Plan Bylaw No. 8769

Sector Plans are required by the Official Community Plan. Clause 3.2.2 m) states:

> "Long range planning for industrial development areas and related infrastructure shall be organized within the context of industrial area concept plans and industrial area sector plans. The primary location for industrial development shall be the Northern Industrial Area; an area which encompasses a number of industrial areas stretching north from the Central Business District to the corporate limit of the City..."

4 Existing Features

4.1 Land Uses

Existing features of the North Sector include:

a) nine residential farmsteads;
b) one RV campground park;
c) fourteen existing industries;
d) City-operated snow storage area;
e) CN branch line;
f) Wetland Complex drainage channel;
g) Heritage homesteads (Caswell and Valley Crest);
h) Meewasin Valley Authority jurisdiction;
i) Saskatchewan Ministry of Highways and Infrastructure Improvement Parcel (drainage ditch);
j) Red Pheasant Cree Nation Reserve;
k) ERCO Worldwide Chemical Plant;
l) RM of Corman Park reclamation site;
m) SaskPower transmission line;
n) SaskWater pumping station;
o) SaskEnergy station;

4.2 Ownership

Ownership in the North Sector is comprised of public (City), and private land holdings. To date, 53% of the 19.8 square kilometres (4,903 acres) of unserviced land in the North Sector is owned by groups with land development interests.

4.3 City-Operated Snow Management Area

At present, the City has a seasonal snow management area located along Wanuskewin Road. The City has future plans to develop a permanent civic service facility with a snow management facility and Public Works satellite yard in the North Sector. When the new civic service facility is built, the snow storage area will be closed and prepared for new development.

4.4 Chemical Plants

There are two chemical plants east of Wanuskewin Road. ERCO Worldwide is located within the North Sector study area at the intersection of Wanuskewin Road and 71st Street. Akzo Nobel Chemicals Inc. is located outside the North Sector study area and is currently within City limits. Both of these plants store hazardous chemicals on site. The Saskatchewan Ministry of Environment regulates the storage of hazardous chemicals and has placed a buffer around these parcels. This is a precautionary buffer, separating the storage vessels from any place of public assembly or any residential area. As shown on Figure 2, the one kilometre buffer covers 124 hectares (306 acres) of the North Sector lands.

4.5 Reclamation Site

A 2.59 hectare (6.40 acre) parcel of land along the east edge of Wanuskewin Road, and surrounded by the ERCO Worldwide property, is owned privately (see Figure 2). In the past, this site was occupied by IPCO, an agricultural chemical company, which used the site as a chemical formulation facility to develop herbicides. Prior to 2005, IPCO moved their chemical facility to Winnipeg and the building on the site was demolished and capsulated in a solid waste mound on the south half of the property. Since then, the site has been remediated to an industrial standard and the mound was subdivided from the balance of the site. The RM of Corman Park retains ownership of the 0.25 hectare (0.62 acre) mound parcel.

4.6 Meewasin Valley Authority

The Meewasin Valley Authority (Meewasin) was formed in 1979 to act as an agent of the City, the University, and the Province of Saskatchewan to ensure a healthy and vibrant river valley, with a balance between human use and conservation. The Meewasin Valley Authority Act (MVA Act) establishes the mandate of Meewasin, its powers, and its jurisdiction, and the Conservation Zone. Meewasin's mandate can be summarized into three mandate areas: conservation, development, and education. As shown on Figure 2, the Meewasin Conservation Zone includes the Wanuskewin Heritage Park and a strip of Public Reserve along the River. These areas are outside the proposed City limits and North Sector study area.

4.6.1 Jurisdiction (Conservation Zone)

The Conservation Zone is based, in part, on lands that were owned by the Province (and University), the City, and private land that was located within Saskatoon's 1979 corporate limits. It consists of the riverbank and adjacent uplands, as well as other significant natural and cultural heritage sites, such as Wanuskewin Heritage Park. In the Conservation Zone, all improvements (i.e. new construction) must be approved by Meewasin, through its development review process, unless specifically exempted by the MVA Act or by a Meewasin Bylaw.

The City's corporate limits have expanded since 1979, and further boundary alterations will occur as Saskatoon grows. These boundary alterations have included land that may be of direct interest to Meewasin in meeting its mandate, such as land adjacent or connected to the River, and land that could have natural or cultural heritage features. The City will continue to work closely with Meewasin to review the Conservation Zone with the goal of adding land that is of direct interest to Meewasin in meeting its mandate.

4.6.2 Meewasin Conservation Easement

In 1986, Meewasin and the land owner of the chemical plant agreed to the protection of the riverbank area by establishing a Conservation Easement. According to the MVA Act, the Conservation Easement is outside the Meewasin

jurisdiction; however, Meewasin retains the rights to the riverbank area (land within 92 metres of the shoreline of the River or on any part of the slope leading down to said shoreline where the gradient is in excess of 20%, plus 10 metres, whichever extends the greatest distance measured horizontally from the shoreline).

The Conservation Easement is explained in the MVA Act as:

> **52.1** (a) all that portion of the north-west quarter of Section 23, in Township 37, in Range 5, west of the Third Meridian, lying to the left of the left bank of the South Saskatchewan River, containing 68 acres, more or less, Survey dated the 5th Day of May, 1884 described in Certificate of Title No. 75-S-07044; (b) the south half of Section 26, in Township 37, in Range 5, west of the Third Meridian.

In discussions with the chemical plant owners, no public access or river multi-use trails shall be constructed within the Conservation Easement due to the proximity of the chemical storage vessels in the unlikely event of a major accident involving the release of airborne chemicals.

4.7 Ministry of Highways and Infrastructure Improvement Parcel

A drainage canal was constructed to allow surface water to flow from Highway 16, across Highway 12, and drain into the Wetland Complex (see Figure 2). This canal will likely be used as a utility corridor for the installation of underground utility services to service the area.

4.8 Red Pheasant Cree Nation Reserve

Currently, the City and the RM of Corman Park have a Compatible Land Use Agreement with the Red Pheasant Cree Nation dating back to 1999. This agreement specifies their Reserve lands located on the east half of quarter section 30-37-5-W3 M. It states:

> "If at any time during the term of this Agreement the City's boundaries are expanded so that the Land is a Reserve within the boundaries of the City, then the City and the First Nation agree to negotiate and enter into a Municipal Services and Land Use Compatibility Agreement in accordance with Article 9 of the Saskatchewan Treaty Land Entitlement Framework Agreement dated September 22 1992, and this Agreement shall no longer be in force and effect."

As part of the 2015 boundary alteration, civic Administration will be working with the Red Pheasant Cree Nation on a new Compatible Land Use Agreement which only includes the City and Red Pheasant Cree Nation.

4.9 Existing Utilities

As shown on Figure 3, a number of utilities have corridors servicing industries and adjacent land uses within and surrounding the North Sector.

SaskPower has a newly built 138-25kV substation south of the City of Martensville that will mainly service the North Sector lands. This Martensville substation will be available through the 138-25kV Saskatoon North Industrial (SNI) and 72-25kV Dundonald substations. Additionally, the Martensville switching station will also provide the 138kV transmission backup to the existing 138kV line (QE18) that crosses the River from the east and extends along 71st Street to feed the SNI substation.

SaskWater has a pumping station and pipelines along Wanuskewin Road. A City fill main provides water to this pumping station and SaskWater distributes the water to customers outside the City's jurisdiction.

SaskEnergy also has a station along Wanuskewin Road. Gas lines have minimal impact on the east quarter sections of the North Sector. Once leaving the station, the lines travel east and turn north along the east edge of quarter section NW 26-37-5-W3 M.

SaskTel has two antenna towers located outside the North Sector study area: one along Arthur Rose Avenue and one adjacent to SaskTel Centre.

4.10 Adjacent Lands between Highways 11 and 12

Approximately 230 hectares (568 acres) of land south of Perimeter Highway and between Highways 11 and 12 will remain under the RM of Corman Park jurisdiction. This decision was made during the 2010 boundary alteration negotiations between both Administrations. As future developments in this area are proposed, having a road network that aligns with future North Sector arterial roads would be beneficial in creating connectivity between the two jurisdictions. As shown on Figure 5, a conceptual road and multi-use trail alignment was illustrated to be considered by the RM of Corman Park and landowners in the area.

Access locations and crossings on the edge of the North Sector study area will require further discussion with the RM of Corman Park and the Saskatchewan Ministry of Highways and Infrastructure to determine the appropriate design as development increases in the area. All developments in the area should contribute to the agreed-upon infrastructure needs of the area.

5 Physical Characteristics

5.1 Topography

Surface elevations gradually decrease from northwest to east in the North Sector towards the River. The highest elevation point in the North Sector is 506 metres above sea level, adjacent to Highway 16.

In the North Sector, there is a prominent low-lying depression in the terrain that acts as a natural drainage course for surface water to flow eastward through Opimihaw Creek (Wanuskewin Heritage Park) and into the River.

5.2 Soil Capability

According to the Canada Land Inventory, the most desirable soil classes for crop production are Class 1 and Class 2. All of the soil in the North Sector is classified as Class 3 or Class 4. Class 3 and Class 4 soils have moderately severe limitations that restrict the range of crops or require special conservation practices.

The City's Future Growth Study, 1999, considered all soil classifications around Saskatoon and concluded that the North Sector was desirable for future urban growth.

5.3 Natural Areas Screening

As per Section 9.0 of the Official Community Plan, a Sector Plan requires growth areas to demonstrate Environmental Management. As part of an Industrial Area Concept Plan process, further site-specific natural areas screening, by a qualified consultant, could be required by civic Administration to identify and protect specific natural areas. As part of development, developers and landowners will be encouraged to do their due diligence to maintain natural areas and incorporate them seamlessly into the subdivided parcels of land. A number of natural areas of interest within the North Sector are shown on Figure 2. A reduction of the gross developable area could be required based on the findings of the site-specific natural areas screening process.

Upon request from civic Administration, the developer (or landowner) must arrange for a qualified consultant to determine the importance of the natural area on the site. If the natural area is deemed important, the developer must arrange for a legal survey to be completed during the growing season to determine the boundary of the area and the buffer around it. Prior to, and during development, the developer must observe best management practices (i.e. temporarily fencing the buffer perimeter) to ensure impacts to natural areas are minimized while construction occurs in the area.

As part of the North/Northwest Natural Area Screening Study, 2012, a number of parcels of land within the North Sector were not studied due to unsuccessfully obtaining permission to access the land from the landowner prior to the field

study occurring. The developer (landowner) proposing to develop one of these parcels will be required to provide a site-specific natural area screening study to civic Administration's satisfaction, as part of the Industrial Area Concept Plan process.

5.3.1 Vegetation and Wildlife

As explained in Attachment 2, the North Sector has been studied by a number of different sources dating back to 1992. From these studies, the Wetland Complex drainage channel prevailed as a prominent natural area of interest. As development bounds this natural area, developers will be required to further study the area and abide by the North Sector development guidelines, explained in Section 6.5.1 of this report, to maintain the natural quality of the area, while incorporating the natural area into the industrial development.

The remainder of the undeveloped land in the North Sector is part of the riverbank, has been cultivated in the past, or used for aggregate extraction and is not considered to include any additional important natural areas.

According to the Saskatchewan Conservation Data Centre database, there is no listed vegetation or wildlife identified in the North Sector. As part of a closer examination, the City completed the North/Northwest Natural Area Screening Study, 2012 (see Attachment 2), and the field study found a number of provincially listed rare plant species and threatened animal species. As part of the Industrial Area Concept Plan process, owners of lands where the field study found rare plants and animals will be required to complete a site-specific natural area screening study to confirm the data by revisiting the exact location that was visited in 2012.

5.3.2 Wetlands

Wetlands are land depressions where the water table is at, near, or just above the surface, and where the depressions are saturated with water long enough to promote wet-altered soils and water-tolerant vegetation. The North/Northwest Natural Area Screening Study, 2012 (see Attachment 2), used the Stewart and Kantrud Wetland Classification System to classify the permanence of wetlands in the North Sector and focused mainly on the Wetland Complex.

As per the City's Wetland Policy No. C09-041, a Wetland Mitigation Plan will be required for any developable lands that could impact wetlands identified by the City's Wetland Inventory.

5.3.2.1 Wetland Complex

Previous topographic mapping has shown this historical wetland complex to be a much greater swale that was a continuous water course that branched off from the River around the King George neighbourhood, travelled through the Westmont and Hudson Bay neighbourhoods, connecting through the Hudson Bay Industrial Area on its way north to Opimihaw Creek. The historical swale

has informally been referred to in the past as the Hudson Bay Swale or North Swale. Similar to the other areas of Saskatoon called Hudson Bay, the historical swale passed through or occupied lands previously owned by the Hudson Bay Company.

The remaining Wetland Complexes, studied as part of the North Sector, stretch from 71st Street to NW 1-38-5-W3 M, spilling into the Opimihaw Creek and eventually draining into the River. The remaining wetland complexes stretch six kilometers long and are the remnants of a long glacial drainage scar. Conceptually, the Wetland Complexes occupy 142 hectares (350 acres). The Wetland Complexes have long been regarded as a unique environment having unique ecological, hydrological, and hydrogeological characteristics. It contains remnants of native prairie, ecologically important wetlands, and is important for nesting and migrating waterfowl. It also provides constraints to development as it is a low-lying saturated drainage channel with gentle, sloping edges between 2% and 5%, causing flood prone areas surrounding it.

As mentioned above, the central wetlands of the complex (north half of quarter section NW 27-37-5-W3 M) were not studied due to unsuccessfully obtaining permission to access the parcel of land by the landowner. This portion of the Wetland Complex will require a site-specific natural area screening study at the landowner's expense, to civic Administration's satisfaction, prior to development occurring on the site or prior to preparing an Industrial Area Concept Plan for the parcel.

5.4 Flood Plain Areas

According to the Corman Park – Saskatoon Planning District Official Community Plan, the lands shown in Image 1 around the Wetland Complex are within a potential flood hazard area. Based on historical information, gently sloping wetland edges and increasing water levels have consumed adjacent lands during spring melts and major storm events. Prior to industrial development of buildings or storage facilities that could be damaged by flood waters, a qualified consultant must confirm that developable lands adjacent to the Wetland Complex can be used safely for the intended purpose.

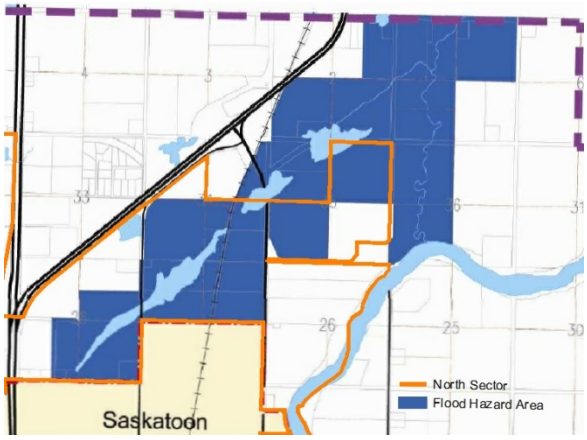


Image 1: Potential Flood Hazard Map
Source: Corman Park – Saskatoon OCP Appendix D

5.5 Historical Resources

The majority of the lands in the North Sector have been cultivated or used for industrial purposes for many years; as a result, there may be few historical findings. The uncultivated area of land along the River near the Wetland Complex could have a higher chance of historical artifacts. As shown on Figure 2, and explained further in Attachment 6, the Saskatchewan Ministry of Parks, Culture and Sport (PCS) has identified a number of quarter sections of land as having potential for heritage resources. Prior to development occurring, the developer should use the PCS Developers' Online Screening Tool to obtain heritage clearance for their project lands. If a parcel of land is determined heritage sensitive by the PCS Developers' Online Screening Tool, the development project must be submitted to PCS for a heritage review to determine if a Historical Resources Impact Assessment (HRIA) is required. HRIA studies must be carried out by a qualified consultant under an approved investigation permit issued by PCS at the developer's expense.

As the area develops, if historical artifacts are uncovered, they must be reported to PCS and further assessment and/or mitigation could be required.

5.5.1 Homesteads

As shown on Figure 2, there are two areas that have historical homestead remnants. These areas are explained in more detail on pages 6.3 and 6.4 of Attachment 2.

The Caswell Homestead site - is located within SW 28-37-5-W3 M and has been given the Borden Designation FbNq-8. The Caswell Homestead site was last visited as part of the North/Northwest Natural Area Screening Study, 2012. This field visit confirmed its existence, recorded it with the Heritage Conservation Branch and conducted basic site mapping. This is typically the first, or "reconnaissance," phase of archaeological evaluation. Prior to land development in the area, the next phase is to map the site in detail and conduct test excavations or (if desired) a geophysical survey to determine if there are significant intact archaeological remains associated with this homestead. If the results of this next phase study determine that there are no significant archaeological remains that would warrant further study through excavation, then no more work will be required on the site, and the detailed map will be considered an adequate mitigation of impact by development. Development would then be allowed to proceed in the area and there would be no setbacks required.

If significant archaeological materials were encountered, recommendations would be put forward to either complete a salvage excavation, provide interpretive data if desired, or establish buffers of avoidance for the site.

In the interim, development should avoid the main area of standing structures, including the tree rows west of the concrete foundation.

The Valley Crest Homestead site - is located on the east-west quarter section line starting in SW 23-37-5-W3 M and extending northward into NW 23-37-5W3 M (Harris Rebar property). This homestead site has high potential for precontact archaeological sites due to its proximity to the River. As part of the North/Northwest Natural Area Screening Study, 2012, field investigations found that there were two cellar depressions that were still visible at this homestead site. The previous owner of the south half of quarter section NW 23-37-5-W3 M (prior to Harris Rebar) since 1892, was the Temperance Colonization Society (Certificate of title No. 131.A.40).

An HRIA should be conducted to map the site in detail. A Saskatchewan Archaeological Resource Record Form should be submitted to the Heritage Conservation Branch to record the site in the Province's Inventory of Archaeological Sites to obtain a Borden Designation for the site. This affords the site some protection, in that it would then be flagged with the Heritage Conservation Branch.

The HRIA should include test excavations and a geophysical survey to determine if there are significant, intact archaeological remains associated with this homestead. In this instance, a geophysical survey is recommended; owing to the possibility of a small unmarked grave in the area. A geophysical survey is a non-intrusive way of determining if there are disturbed soils (such as a grave shaft) in the area. It should be noted, however, that an unmarked infant burial could be very difficult to pinpoint exactly within the total area of the site. For that reason, oral tradition may become the best evidence that can be obtained regarding the burial, and a general setback around the area should then be established.
If the results of the HRIA determine that there are no significant archaeological homestead remains that would warrant further study through test excavations, then no more work will be required from an archaeological perspective; with the exception of setbacks for the grave as discussed above. If significant archaeological materials were encountered, recommendations would be put forward to either complete a salvage excavation, provide interpretive data if desired, or establish buffers of avoidance for the site.

In the interim, development should avoid the area from the east fence of the Harris Rebar property to the edge of the river.

5.6 Site Contamination

As part of the Industrial Area Concept Plan process, developers must engage a qualified consultant to complete a Phase 1 Environmental Site Assessment. The Environmental Site Assessment will determine potential and existing environmental contamination liabilities in the area of proposed development; more specifically, around existing farmsteads, snow management facilities,

CN rail line, roadway right-of-ways, and industrial lands. If contamination is present, the developer (or landowner) is responsible for remediating the site and preparing the lands for its future use.

5.7 Development Buffers

Chemical Storage Buffer - The North Sector has two buffer areas imposed by provincial regulations on industries that store and handle hazardous materials on site. These buffers are precautionary measure to separate areas of public assembly and residential from chemical storage facilities, encase of a major accident involving the release of airborne chemicals. In 1977, the Regulations Respecting Anhydrous Ammonia were enforced on the development of the Silverwood Heights neighbourhood restricting residential development to occur within the one kilometre chemical storage buffer zone. Therefore, the City approved the development of the Silverwood Golf Course and Marquis Industrial Area to be built surrounding the two chemical storage facilities. In 2007, the Regulations Respecting Anhydrous Ammonia were repealed and replaced with the Provincial Boiler and Pressure Vessel Regulations. The Provincial Boiler and Pressure Vessel Regulations, speaks to restricting any place of public assembly or any residential area within an 800 metre radial buffer of the chemical storage vessel or combination of storage vessels. This is a 200 metre reduction based on the 1977 regulations. In conversations with the two chemical plants and Saskatoon Fire, civic Administration is not recommending a reduction to the buffer distance and will continue to restrict public assembly and residential uses within one kilometre of the chemical storage vessels. Best practices would also restrict any industrial or commercial applications that prepare food products within this buffer area. In addition, the Marquis and Silverwood Industrial Sector Plan Amendment, 2002 (see Attachment 1), suggests future subdivision of lands within the buffer are subdivided into larger lots to reduce the number of industries within the buffer.

As shown on Figure 2, a one kilometre radial buffer from the storage vessels on the properties surrounds the Akzo Nobel Chemicals Inc. and ERCO Worldwide chemical plants. A proposed one kilometre radial buffer is also shown around the remaining lands of the Environmental Industrial Park (EIP) site. This buffer will be enforced if an application to develop a site that needs to store and handle hazardous materials in Saskatoon is required.

Wanuskewin Heritage Park Visual Buffer - The Wanuskewin Heritage Park Sector Plan, 1992, initially addresses concerns with urban growth building toward the park and would be seen from inside the park. As per the study, park staff felt adjacent land uses would be inconsistent with the natural and historic qualities of the park. In conversations with Wanuskewin Heritage Park during the preparation of the University Heights Sector Plan, 2007, a 1.8 kilometre radial buffer around Wanuskewin Heritage Park was identified as an area of further study and would allow growth around the park to be managed. Further study and discussions must be held between the adjacent landowners and Wanuskewin

Heritage Park Administration to clarify the types of development that could be appropriate within the buffer, and any development standards, such as berms and landscaping, that might enable development in the vicinity of Wanuskewin Heritage Park while conserving the unique character of the park.

Saskatoon Airport Zoning Regulations Buffer - According to the Saskatoon Airport Zoning Regulations, no owner or occupier of lands within 3,200 metres of the airport reference point shall permit any part of those lands to be used as a sewage lagoon or for an open water storage reservoir. This regulation is under review to be changed to 4,000 metres. As shown on Figure 2, a portion of the lands north of Highway 16 lies inside the Saskatoon Airport draft zoning regulations' 4,000 metre buffer. All open water facilities within the draft 4,000 metre buffer, that have the potential to cause aircraft and bird hazard conflicts, will be required to seek approval by Transport Canada, Saskatoon Airport Authority, NavCanada, and other such agencies as may be appropriate, prior to a development permit being issued for the area. In addition, all applications for open water facilities within the Saskatoon Airport draft zoning regulations buffer must file a location plan with the Saskatoon Airport Authority and be approved by City Council. If open water facilities are needed within the draft 4,000 metre buffer (i.e. for protection of natural wetlands), measures must be implemented into the plan to detract large birds and flocks of birds from using the area.

5.8 Ground Water

As part of the Industrial Area Concept Plan process, the developer must engage a qualified consultant to complete a Hydro-geotechnical Analysis for the proposed development. The Hydro-geotechnical Analysis will provide a survey of soil and groundwater conditions and identify aquifers, high water tables, and site drainage issues.

5.9 Nuisance

Land uses in the North Sector, like all areas in the city, are subject to the nuisance requirements identified in the City's Property Maintenance and Nuisance Abatement Bylaw No. 8175. At the time the parcels are rezoned to an industrial district, nuisance restrictions, as explained in the City's Zoning Bylaw No. 8770 (Zoning Bylaw), will also apply. Best practices cluster land uses, buildings, and industrial processes that could be noxious or injurious, or constitute a nuisance beyond the boundaries of the subject site within and next to similar heavy industrial parcels, highways, railways, or airport runway corridors.

6 General Land Use

6.1 Land Use Plan

The Land Use Plan for the North Sector is shown on Figure 4. This plan is the broad framework through which the vision, explained in Section 2 of this report, will be achieved.

The purpose of this plan is to guide the development of industrial uses within the context of a fully-serviced urban industrial development. The Land Use Plan identifies:

a) future industrial lands for the City;
b) commercial nodes to service the industrial area;
c) recreation areas to service programming needs;
d) extensions to existing roadways;
e) the Red Pheasant Cree Nation Reserve;
f) the Environmental Industrial Park;
g) a riverbank area; and
h) existing natural areas.

To build on the Sector Plan vision, separate Industrial Area Concept Plans will be required prior to development to illustrate greater detail of the actual land uses proposed for the North Sector study area.

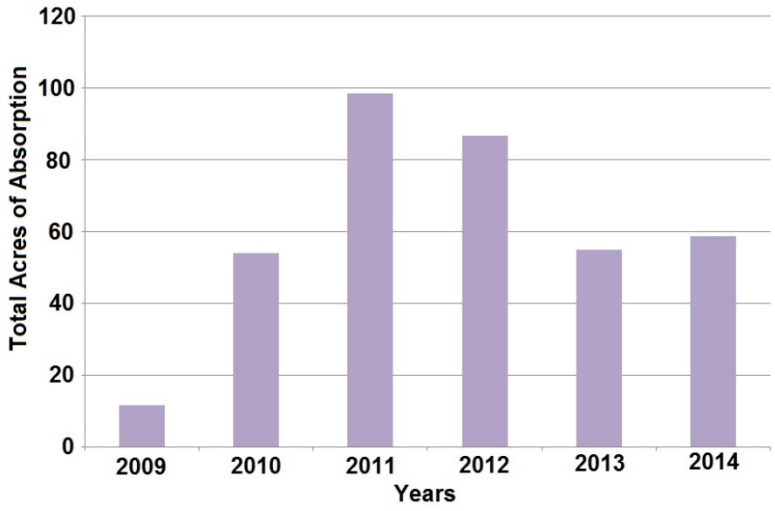
The North Sector will comply with the overall standards of the Zoning Bylaw regarding landscaping, building heights, and screening of storage.

The City shall support all legally established uses that have been previously approved by the RM of Corman Park within the North Sector as an interim land use, until the North Sector lands are provided a City zoning district and servicing commences in preparation of shaping the lands for industrial development.

6.1.1 Industrial Demand

With an industrial vacancy rate that fluctuates between 4% and 5%, strong demand for industrial lands has remained present in Saskatoon's Northern Industrial Area since 2010. According to the City's "Three-year Land Development Reports", the average for industrial land sales and leases is approximately 24 hectares (60 acres)[1] over the past six years. In order to maintain a consecutive two-year supply of industrial land, the steady development of industrial lands north of Agriplace and Marquis Industrial Area is necessary. With a net developable area of 1,286 hectares (3,178 acres), and if all the North Sector developable lands were to be serviced and subdivided, the North Sector could provide an estimated twenty million square feet of industrial inventory[2].

Table 1: Industrial Lands Absorption Rate from 2009 to 2014



The top sectors in the Northern Industrial Area are intended to be the leading industries in the North Sector. Trade (wholesale and retail), construction, and manufacturing are envisioned to make up the majority of the North Sector. The preference should be to retain a non-retail industrial area (other than the arterial commercial nodes proposed in Section 6.2 of this report that complement the industrial area) in order to ensure the success of the area as a significant industrial sector.

1 – The 24 ha (60 ac) was calculated by averaging the total Industrial Land Sales and Leases from the Land Development Program table from 2009 to 2014.
2 – The 17,000,000 sq.ft. was calculated by multiplying Heavy Industrial (303 ha) + Light Industrial (839 ha) + Urban Holding (97 ha) X 14,030.61 sq.ft.

6.1.2 Employment Forecast

The employment forecast in the North Sector is expected to be typical of industrial development in the North Industrial Area: approximately 25 jobs per hectare[3]. At full build-out, the North Sector area is expected to accommodate approximately 32,000 jobs[4].

Table 2: Projected Land Use Area and Employment

		Hectares	Acres	%	Potential Square Feet of Building Space	Jobs per Ha	Employment
East of Highway 12	**Existing**						
	Five Acre Industrial Parcels	10.31	25.48	1.06%			
	CN rail line	4.58	11.32	0.47%			
	Millar Avenue ROW	4.60	11.37	0.47%			
	71st Street ROW	3.99	9.86	0.41%			
	ERCO Worldwide (Developed Land)	10.10	24.96	1.04%			
	Harris Rebar	6.45	15.94	0.66%			
	Utility Parcels	0.72	1.78	0.07%			
	South Saskatchewan River	47.69	117.84	4.89%			
	Total Existing	88.44	218.54				
	Proposed						
	Industrial - Heavy	53.29	131.68	5.47%	747,691	25	1,332
	Industrial - Light	311.22	769.04	31.94%	4,366,606	25	7,781
	Arterial Commercial Nodes	8.00	19.77	0.82%	255,000	45	360
	Urban Holding Lands	16.34	40.38	1.68%	229,260	25	409
	Reclamation Site	2.59	6.40	0.27%	36,339	25	65
	ERCO Worldwide(Un-developed Land)	57.22	141.39	5.87%	802,832	25	1,431
	Net Developable Total	448.66	1,108.66				
	Natural Area (Wetland Complex)	141.66	350.05	14.54%			
	To Be Determined Lands	225.50	557.22	23.15%			
	Riverbank Area	9.77	24.14	1.00%			
	Urban Holding Road Infrastructure	28.98	71.61	2.97%			
	Perimeter Highway	31.28	77.29	3.21%			
	Total Proposed	885.85	2,188.98				
	North Sector East Total	974.29	2,407.52	100%	6,437,729		11,377
West of Highway 12	**Existing**						
	Saskatoon Co-op	8.08	19.97	0.80%			
	Redhead Holdings	18.34	45.32	1.82%			
	Quattro Properties	16.19	39.99	1.60%			
	Saskatoon 16 West RV Park	6.07	15.00	0.60%			
	Flaman Sales Ltd.	18.45	45.59	1.83%			
	Samco Holdings	3.86	9.54	0.38%			
	1767388 Alberta Ltd.	14.32	35.37	1.42%			
	Rosler Investments	1.62	4.00	0.16%			
	Cervus Equipment	5.67	14.00	0.56%			
	Highway 12	15.90	39.29	1.57%			
	71st Street ROW	5.52	13.64	0.55%			
	Total Existing	114.005	281.71				
	Proposed						
	Industrial - Heavy	157.47	389.12	15.59%	2,209,400	25	3,937
	Industrial - Heavy (EIP)	32.27	79.74	3.19%	452,768	25	807
	Industrial - Light	527.79	1304.20	52.25%	7,405,216	25	13,195
	Arterial Commercial Nodes	8.00	19.77	0.79%	112,245	45	360
	Urban Holding Lands	80.51	198.94	7.97%	1,129,604	25	2,013
	Red Pheasant Cree Nation Reserve	31.69	78.31	3.14%			
	Net Developable Total	837.73	2,070.08				
	Urban Holding Road Infrastructure	21.59	53.35	2.14%			
	Perimeter Highway	36.87	91.11	3.65%			
	Total Proposed	896.19	2,214.53				
	North Sector West Total	1,010.20	2,496.25	100%	11,309,233		20,311
	North Sector Plan Total	1,984.49	4,903.77		17,746,961		31,688

3 - 25 jobs per hectare is an average of the North Industrial, Hudson Bay Industrial and Airport Business Areas.
4 - The employment column assumes that all industrial land will be subdivided and built to their full potential; therefore, the total number of jobs could be less at full build-out of the North Sector.

6.2 Arterial Commercial

The vision for the Commercial nodes are to identify entry points for vibrant Arterial retail shopping areas that feature appropriate services and amenities to support the needs of the North Sector. As shown on Figure 4, four locations have geographically been selected and are envisioned to be developed at different phases as growth progresses. As Industrial Area Concept Plans are developed, and rezoning of the parcels occur, additional commercial areas may be considered based on site-specific design and access.

Possible uses include retail stores, restaurants, coffee shops, banks, and service stations. Currently, the nearest major commercial area is along 51st Street, three kilometres south of the North Sector, creating limited opportunities to access commercial areas from the North Sector other than by automobile.

The arterial commercial nodes, shown on Figure 4, are conceptual. The actual size and best building orientation for these arterial commercial areas will be determined by a retail market analysis completed by the landowner/developer as part of the Industrial Area Concept Plan process. This market analysis should show how the commercial amenities within these sites will service the needs of the North Sector and do not negatively influence other retail markets in the city.

The arterial commercial nodes are encouraged to have architectural controls to ensure the businesses that choose to locate in the area adhere to the overall attractiveness of the streetscape and industrial area, while also providing pleasant entry features at multiple gateways. When designing the arterial commercial nodes, best practices, outlined in Section 15 of the City's Commercial and Industrial Development Study – Development Trends and Best Practices should be pursued (see Attachment 5).

6.3 Red Pheasant Cree Nation Reserve

On the east half of quarter section SE 30-37-5-W3 M, the Red Pheasant Cree Nation has approximately 80 acres of Reserve land. These lands are governed by the Red Pheasant Cree Nation. As mentioned in Section 4.8 of this report, the City will be working with the Red Pheasant Cree Nation on a new Compatible Land Use Agreement. To be compatible with the proposed land uses in the North Sector, the development of non-residential land uses will be asked of the Red Pheasant Cree Nation on their Reserve lands. The best practices outlined in Section 15 of the City's Commercial and Industrial Development Study - Development Trends and Best Practices (see Attachment 5) will also be encouraged to provide a contiguous development with the adjacent lands.

Prior to development on the Reserve land, the City has asked for a concept plan showing how the site could be subdivided and serviced. All storm water surface drainage must be stored on the Reserve land.

6.4 Inclusion of Environmental Industrial Park

In 1994, City Council recommended the quarter section SE 29-37-5-W3 M be used as an Environmental Industrial Park (EIP) to facilitate economic development for the safe storage, handling, and processing of dangerous or hazardous products. Currently, there are two existing industrial operations previously approved by the RM of Corman Park occupying 17 hectares (42 acres) of the quarter section. Based on the 1994 recommendation, the EIP location was chosen after analyzing a number of criteria such as: aquifers, soil suitability, separation from the South Saskatchewan Flood Plain, emergency response time, sufficient separation from populations, and separation from the Saskatoon Airport. Based on these criteria, the EIP location is still suitable and the balance of the lands (32 hectares) should be held by the City for future industrial users that store, handle, and process dangerous or hazardous products. If an EIP compatible user were to locate on the parcel, the policies set out in Section 7.5 of the Official Community Plan must be followed. Depending on the nature of the EIP land use, a one kilometre buffer, similar to the buffer around Saskatoon's existing chemical facilities, should be implemented. Within the buffer surrounding the site, compatible industrial land uses that require larger parcels and have a limited number of on-site employees, such as warehouses and manufacturing plants, should interface with the EIP location. As parcels are developed, a gradual transition into smaller parcel industrial/office uses along the buffer edge can occur. This transition area would allow for fewer parcels adjacent to the EIP location, prohibit places of public assembly, and discourage slow-to-evacuate, large facilities preventing humans from being exposed to unacceptable levels of risk in the event of an emergency. Best practices would also restrict any industrial or commercial applications that prepare food products within this buffer. For any new EIP land uses, the buffer should be drawn as a radial using the location of where the hazardous product is being stored on the site as the centre point.

At the time an Industrial Area Concept Plan is being considered, which includes the EIP lands, if there are no applications made to the City requesting lands for the use of safe storage, handling, and processing of dangerous or hazardous products, the developer should make a recommendation to amend the Official Community Plan and this Sector Plan by relocating the EIP to the next phase of development in the Sector; however, still within the appropriate area identified in the EIP, 1994 study (see Attachment 7). For example, quarter sections NE 29-37-5-W3 M and NW 28-37-5-W3 M, in later phases, were identified as having similar locational characteristics that enhance public and environmental safety if an EIP land use was required. If the EIP is proposed to be relocated to either of the two alternative quarter sections, the RM of Corman Park should be consulted, as the locations would be in closer proximity to Auto Clearing Motor Speedway (a site of public assembly).

6.5 Inclusion of Wetland Complex

As part of the North/Northwest Natural Area Screening Study, 2012 (see Attachment 2), the Wetland Complex was studied in detail determining the ecological significance of each of the wetlands that make up the drainage channel. Based from the Minnesota Routine Assessment Methodology (mnRAM) for evaluating wetland function (as defined by the Minnesota Board of Water and Soil Resources), two wetlands were identified as Preserve (5060 and 5364), and two other wetlands within the Wetland Complex were identified as Manage 1 areas (5061 and 5360) (see Figure 2). Wetlands identified as Preserve are those that should be minimally impacted by development and preserved in (or improved to) their most pristine or highest functional capacity, while wetlands identified as Manage 1 areas are high-quality wetlands that should be protected from development, where appropriate. In the event that impacts to Manage 1 areas cannot be avoided, or have previously been modified, these wetlands could be altered further to be used for storm water management if pre-treatment methods are used.

As shown on Figure 2, wetland 5060 is the most significant intact ecosystem that remains within the drainage channel and should be treated as the landmark of the North Sector. Development in this wetland is not being proposed. Instead, this area will remain in its natural state as a natural drainage channel for the North Sector, while providing passive recreational opportunities for future employees, and supporting wildlife by providing a viable and sustainable natural habitat. The remaining wetlands (5061, 5360 and 5364) have all been subject to in-filling or an alteration due to adjacent land uses, which has degraded the ecological integrity of these areas. The remaining wetlands should remain connected as a drainage channel and recreational multi-use trail network for the area and be developed as an engineered wetland drainage channel. The drainage channel would provide a 142 hectare (350 acre)[1] storm water management area for the entire North Sector, while being incorporated into the design of the adjacent industrial parcels.

Natural Area Interface

Protection of riverbank lands and other significant natural areas, such as the Wetland Complex, is important to ensure that current residents and future generations can benefit from the presence of these significant natural features within the city. Where development is proposed adjacent to the Riverbank and Wetland Complex in the North Sector, an appropriate interface between them is critical. Development adjacent to and within natural features should, where possible:

a) provide an aesthetically pleasing user experience;
b) permit appropriate public access;
c) facilitate user accessibility and circulation;
d) ensure compatible land use, building scale, and design;
e) respect the ecological value and integrity of the resource; and

f) feature ecological protection that, in some cases, may include the use of a buffer area that provides a transition between the natural area and the built environment.

6.5.1 Development Guidelines for the Wetland Complex

The development guidelines listed below provide the framework for integrating natural areas into urban development areas. They recommend measures to minimize disturbance to the Wetland Complex, while also meeting transportation, utility, storm water management, and other community needs as the North Sector develops.

a) Development shall not interrupt the connectivity of the wetlands that make up the Wetland Complex as a connected drainage channel to the River.
   - Culverts will be designed to allow natural flow of the Wetland Complex and provide opportunities to be used by small mammals, reptiles, and amphibians. The culvert entry and exit should include rocks, small shrubs, and/or taller vegetation that provide cover for animals using the culverts. Regular inspection and debris removal by City staff will ensure an unimpeded flow of water in the culverts.

b) A minimum 20 metre riparian area buffer between the Wetland Complex boundary[1] and adjacent developments is required unless the site-specific natural area screening for the Industrial Area Concept Plan determines a reduced buffer width to the satisfaction of civic Administration.

c) The riparian area buffer should be dedicated as Municipal Buffer, Municipal Utility Parcel, and/or Environmental Reserve, depending on how it is designed into the development. These dedicated lands will become the responsibility of the City.

d) The disturbed lands within the riparian area buffer must be reseeded using species native to the area.

e) A multi-use trail will be considered along the Wetland Complex connecting to the Trans Canada Trail, where appropriate linkages can be provided. A four metre multi-use trail will be developed within the riparian area buffer, and adjacent developments should make provisions for connection paths to the Wetland Complex specifically around the “Preserve” wetlands. A one metre strip along both sides of the multi-use trail can be designated for mowing should the vegetation become too high and impede multi-use trail use. The multi-use trail surface will be determined by civic Administration at the Industrial Area Concept Plan stage.

f) Interpretive signage should be along the multi-use trail illustrating the ecological importance of wetlands (e.g. wildlife habitat, surface hydrology, etc.). These signs’ locations could also be at locations providing bird viewing opportunities.

g) Fencing must be provided for all adjacent land uses next to the Wetland Complex to reduce encroachment into the riparian area buffer by non-compatible activities (e.g. storage of materials, parking of vehicles, etc.).

h) Development in the Wetland Complex shall be restricted to recreation and storm water management. Crossings will be limited to those shown on Figure 6 and Figure 7.

i) Road crossings of the Wetland Complex, explained in Section 7.5 of this report, will be designed and built as level crossings.
   - During construction, no surface materials or stockpiles should be deposited within the Wetland Complex boundary[1]. All construction activities should be confined to the road right-of-way, unless determined by a site-specific natural area screening that the adjacent lands are disturbed.
   - Clearing activities should not be scheduled between May 1 and July 31, to avoid disturbance of nesting birds.

j) Monitoring changes to groundwater flows and quality, pertaining to unique and/or endangered species of Wetland Complex, should occur. Wetlands within the Wetland Complex have experienced significant water-level fluctuations as part of their normal cycle. The storm water management plans will consider the need to allow this fluctuation to continue, although also recognizing that the duration of peak flow, occasionally, may have a longer duration than currently experienced.

k) Storm water sediment forebays will be located outside the Wetland Complex boundary[1], especially if storm water management areas are required adjacent to "Preserve" wetlands.

l) Site reclamation activities should begin as soon as feasible following construction.

m) Dark Sky best practices should be considered for the Wetland Complex. Path lighting should be full cut-off light fixtures to preserve the ecological integrity of natural environments and to accommodate amphibians using the Wetland Complex at night. The full cut-off light fixture would minimize light pollution and glare, directing light to the surface, and restricting light from projecting over the Wetland Complex.

1 – The boundary for the Wetland Complex shown on the attached Figures was mapped using GPS during field studies to complete the North/Northwest Natural Area Screening Study, 2012. When Industrial Area Concept Plans are being proposed for lands adjacent to the Wetland Complex and if the applicant would like to alter the boundary, further site specific natural area screenings, stormwater management studies, and consultation with civic Administration will be required.

6.6 Urban Holding

As per Section 8 of the Official Community Plan, “lands that are within the City limits where the future use of the land or the timing of development is uncertain due to timing and/or availability of servicing, and a Concept Plan has not been completed, should be classified as Urban Holding”.

As shown on Figure 4, a number of areas have been identified as Urban Holding. These lands are important lands for the Perimeter Highway infrastructure or have been bisected by the Perimeter Highway. City servicing and access to these parcels would depend on the final design of the Perimeter Highway infrastructure.

The Official Community Plan Land Use Map will be amended to show all lands within the North Sector study area as Urban Holding until an Industrial Area Concept Plan is approved by City Council for a development area.

6.7 To Be Determined Lands

The lands within the North Sector study area, north of Perimeter Highway and east of Wanuskewin Road, have been shown as To Be Determined due to the future land use is under review by civic Administration. Conversations will continue with the landowners in this area and adjacent landowners to determine if development should occur in this area. A separate study will be created for this area and an amendment to this Sector Plan may be required.

7 Transportation

Roadways in industrial areas place highest priority on the efficient movement of goods and services by heavy trucks, but still accommodate all modes of travel. Industrial roadways typically have lower speed limits with a high percentage of truck volume. Within industrial areas, there can be local, collector, and arterial designated roadways. Industrial roads provide direct access to adjacent industrial and commercial properties. As industrial areas are served by transit to transport employees, sidewalks and transit stops shall be provided as part of the roadway design.

7.1 Roadway Classifications

This Sector Plan looks at the roadway network for the North Sector study area at a high level. The level of detail should illustrate roads that resemble a grid pattern, be comprehensively planned with existing industrial roads, and accommodate the safe and efficient movement of all modes of travel. At the Sector Plan level, it is difficult to determine the roadway function, such as parcel access, posted speed, and the number of travel lanes required, without knowing adjacent parcel sizes and land use types. Each Industrial Area Concept Plan will be required to complete a Traffic Impact Study (TIS) to complete the functional design of the roadway network.

Arterial: Roadways intended to provide for mobility through a Sector with direct land access in very limited circumstances. Connects to highways and freeways with interchanges. Connects to arterials with intersections.

Collector: Roadways intended to provide for mobility within a Sector with land access. Connects local roadways to arterials using intersections.

7.2 Transportation Principles

The roadway network in and around the North Sector shall be:

Connected: A road network highly connected within the study area and connected to lands beyond the study area in all directions.

Multi-modal: A road network designed to accommodate pedestrians, cyclists, transit services, passenger vehicles, delivery vehicles, and large and heavy combination trucks to the degree necessary, given the land use.

Hierarchical: A hierarchical road network that provides for both mobility and land access.

7.3 Roadway System Characteristics

The following characteristics apply to the identified roadways within the North Sector.

7.3.1 Freight

All roadways need to accommodate large and heavy loads. A high clearance and oversized corridor should be further studied and designed along arterial roadways through the area.

7.3.2 Passenger Vehicles and Light Trucks

Standard roadway design principles apply.

7.3.3 Transit

All roadway classifications should be available for transit services (i.e. flexible service). Arterial and collector roads should be designed with transit stop locations if part of a transit route. All transit stops should be accessible from a pedestrian facility (i.e. sidewalk, multi-use trail) so that transit users do not have to cross ditches, shoulders, medians, boulevards, or similar spaces.

A Transit Park-and-Ride place holder next to the existing Highway 11 and Highway 12 flyover has been shown on Figure 5 to align with the Growing Forward Commuter Service initiative the City is considering to accommodate regional traffic from surrounding municipalities.

7.3.4 Cycling

Cycling in shared traffic lanes is appropriate only on local and collector roads. Multi-use trails, cycle track, bike lanes, or shoulder bike lanes are required on all arterial roadways.

As shown on Figure 5, there are existing multi-use trail networks that will need to be extended into the North Sector. Currently, there is a west to east multi-use trail link along the north edge of Marquis Drive. Within the existing boulevard of Thatcher Avenue and Faithfull Avenue, multi-use trails should be constructed from Marquis Drive to 71st Street. Road markings should be added to Millar Avenue and 71st Street allowing for shoulder bike lanes. These multi-use trail and shoulder bike lane extensions would allow for active transportation on Marquis Drive to enter the North Sector providing opportunities for employees to walk, run, or cycle for commuting or recreational purposes. In the future, the Marquis Drive multi-use trail will connect to the North Commuter Parkway Bridge linking up with the east and west riverbank, Meewasin, and Trans Canada Trail networks.

At the time the Saskatchewan Ministry of Highways and Infrastructure begins the design of the Perimeter Highway river crossing, consideration should be provided to include a Trans Canada Trail underpass allowing for unrestricted trail movement along the riverbank. In addition, the Perimeter Highway Bridge should

include a multi-use trail along the north edge to allow access to the east riverbank and future river multi-use trails.

7.3.5 Pedestrians

Sidewalks should be provided on both sides of the road right-of-way for arterials and collectors. If only one side of the road right-of-way has a multi-use trail, the other side of the right-of-way should have a sidewalk. If any road classification is planned to have a transit route or stop, sidewalks are required.

7.3.5.1 Barrier-free

The North Sector is intended to be barrier-free. All site designs and infrastructure shall be accessible to all persons, regardless of their age or physical abilities. All roads, driveway access points, sidewalks, and multi-use trails shall include wheelchair accessible curb cuts. The Canadian Standards Association – Accessible Design for the Built Environment (see Attachment 4) should be applied as a recommended tool during design of the North Sector.

7.4 Roadway Crossings

There are three grade-separated crossings proposed to accommodate growth of the North Sector: Marquis Drive and Idylwyld Drive, Marquis Drive and Highway 16, and 71st Street West and Highway 16. The timing for construction of the grade-separated crossings will be determined based on the transportation demand and timing of growth in the North Sector. The five grade-separated highway crossings, shown on Figure 5, would only be required at the time the Perimeter Highway is being designed and built. The Saskatchewan Ministry of Highways and Infrastructure has not indicated any precise timing or budget for the design and construction of the Perimeter Highway at this time.

As shown on Figure 5, control circles mark highway crossing locations, which were determined as part of the Northwest Access Management Study (see Attachment 3). At highway/highway crossings, a system interchange control circle with an 800 metre radius was used, and at highway/arterial crossings, a service interchange control circle with a 500 metre radius was used. These control circles are to provide property protection in rural areas at all interchange locations until the land use and functional plans are completed for the highway network.

There are two right-in-right-out intersections proposed on Figure 5. At the crossing of 71st Street and Idylwyld Drive, the existing median will be closed and turning movements will be restricted to right turns only. To allow for additional access to the lands west of Highway 12, a right-in-right-out intersection is proposed at Collector Road and Idylwyld Drive.

7.5 Road Crossings of Wetland Complex

Two roadway crossings are being shown on Figure 5 as being desirable crossing locations that would effectively minimize adverse environmental effects on the

Wetland Complex. Roadway crossings will be built as level crossings and construction should be confined to the road right-of-way unless the site-specific natural area screening determines otherwise.

Crossing No. 1 – Millar Avenue extension to Highway 11 North will be re-constructed along the existing Range Road 3053 road allowance using previously disturbed roadway.

Crossing No. 2 – A new industrial road is proposed to be built to connect Millar Avenue with Arthur Rose Avenue, providing a continuation of the one mile (1.6 kilometre) east to west roadway grid design, crossing the Wetland Complex around the Manage 1 area shown on Figure 7.

If appropriate, the above transportation crossings should be shared with utility crossings to reduce the construction disturbance duration with the Wetland Complex crossing corridors.

7.6 Perimeter Highway and Arterial Crossings

Perimeter Highway, which is proposed provincial infrastructure, will be a high-speed corridor to move provincial highway traffic around Saskatoon. The Perimeter Highway alignment and river crossing location, has been endorsed by the City, the RM of Corman Park, and the Saskatchewan Ministry of Highways and Infrastructure, as shown on Figure 5.

Obtaining urban access and crossing of Perimeter Highway, as the North Sector develops, is a priority and will require City input as part of the Saskatchewan Ministry of Highways and Infrastructure's functional transportation plans for the Perimeter Highway. At Bill Hunter Avenue and Perimeter Highway, and Wanuskewin Road and Perimeter Highway, grade-separated crossings are being proposed. Understanding additional crossings would make this segment of highway unconventional based on the system interchange spacing requirements; full access connecting urban infrastructure to Perimeter Highway would be desired at these two locations. Final design of these two crossings will be determined as per City input on the Saskatchewan Ministry of Highways and Infrastructure's functional plans for Perimeter Highway.

As part of the Perimeter Highway planning and design, Highway 11, within Perimeter Highway, should be re-designed as an arterial road with reduced posted speed limits, to allow for multiple at-grade crossing locations, with traffic signals connecting to urban arterial and collector roads. Further study and consideration of this by Saskatchewan Ministry of Highways and Infrastructure and the civic Administration is required.

7.7 North Commuter Parkway Bridge

As shown on Figure 5, the North Commuter Parkway is proposed to be connected to Marquis Drive crossing the River with a multi-modal bridge. This

bridge crossing will be Saskatoon's fifth river crossing, connecting the City's northeast residential growth area to the north employment area.

7.8 Truck Routes

Currently, there are two types of truck routes in Saskatoon: long-haul truck routes, and pick-up and delivery truck routes. The long-haul truck route, servicing the North Sector, would be Highway 16, Idylwyld Drive (Highway 12), and Highway 11 North. The current pick-up and delivery truck routes in the area are Marquis Drive and Wanuskewin Road. As new roadways are developed, all roads must be designed for the movement of goods and services in the North Sector; however, trucks accessing or leaving the area must remain on the collector and arterial roads until they get close to their destination. As shown on Figure 5, a pick-up and delivery truck route loop for the North Sector is proposed.

7.8.1 Dangerous Goods

The City's Transportation of Dangerous Goods Bylaw No. 8153 prescribes routes for the transportation of dangerous goods in Saskatoon. All trucks transporting dangerous goods must use Idylwyld Drive to access and egress the North Sector.

The Transportation of Dangerous Goods Bylaw No. 8153 states:

> "No carrier shall enter, leave or travel within the City other than on a dangerous goods route, except that a carrier, for the purpose of collecting dangerous goods from or delivering dangerous goods to a location off a dangerous goods route or going to or from a permitted storage location, may travel, subject to the truck route provisions of The Traffic Bylaw No. 7200, on a combination of streets forming the most accessible connection between the delivery point, collection point or permitted storage location, and a dangerous goods route".

7.8.2 High Clearance and Oversized Load Corridors

A high clearance and oversized load corridor should be further studied prior to designing and approving utility installations for all arterial roadways in the North Sector. This corridor along arterial roads will restrict overhead and width encumbrances that may occur when moving large freight.

7.9 Rail Line

The CN rail line travels through the North Sector, as shown on Figure 5. This rail line is the Warman branch line that connects the CN main line south of Saskatoon with the CN main line that passes through the City of Warman. This branch line is typically not a heavily used corridor other than for the collection of goods in Saskatoon and distributing them to the main line switching yards.

Currently, the lands east of the CN branch line are heavy industrial uses (chemical plants and metal fabrication) with a spur line accessing the ERCO Worldwide and Akzo Nobel Chemicals Inc. properties. The lands east of the CN branch line have been shown on Figure 4 as heavy industrial and could be designed to allow for additional spur lines, if required.

As growth commences north of 71st Street, potentially five rail crossings could be needed. Two of these rail crossings extend Arthur Rose Avenue and Brodsky Avenue north across the spur line (as per the Marquis Industrial Sector Plan). The existing CN branch line along 71st Street shall be reviewed as part of the roadway upgrade of 71st Street to a collector road. Lastly, a rail crossing would be needed for the new road connecting Millar Avenue to Wanuskewin Road crossing the CN branch line.

7.9.1 Rail Line Setbacks

There is no rail line setback for the development of industrial parcels adjacent to the CN rail line. However, the adjacent property owner should install and maintain a chain-link fence (minimum 1.83 metres high) along the mutual property line to deter trespassing and encroachment on the CN right-of-way. How land uses interface with the rail line will require a CPTED review during the Industrial Area Concept Plan stage, and should use best practice examples from the FCM – RAC Guidelines for New Development in Proximity to Railway Operations, 2013.

8 Reserve Dedications

8.1 Environmental Reserve

As noted in Section 5.3 in this report, developers are encouraged to integrate and enhance natural features by incorporating them into the development. For example, leaving wetlands in their natural state is environmentally responsible and aesthetically pleasing to users. Wetlands can provide education and exploration opportunities, while sustaining wildlife habitats and reducing carbon dioxide in the atmosphere. Furthermore, these areas can be used in conjunction with storm water retention and conveyance, reducing the need for costly engineered storm water management solutions.

Lands within the North Sector will be surveyed by a qualified consultant for historical and/or ecological significance during the Industrial Area Concept Plan process. Lands identified as either shall be provided to the City as Environmental Reserve, without compensation. When land is dedicated as Environmental Reserve, it is subtracted from the gross developable area in the Industrial Area Concept Plan. Municipal Reserve is then calculated based on the remaining lands. Upon transfer of these lands to the City, City Council shall classify these lands, appropriately, as open space areas and protect them under Section 9.2 (Conservation of Natural Areas and Archaeological Sites) of the Official Community Plan. These open space areas will conserve the biodiversity of both plant and animal life for the enjoyment of present and future generations.

Therefore, when calculating the Municipal Reserve dedication for the North Sector in Table 3, the conceptual boundary for the Wetland Complex and riverbank area was considered exempt to reduce the amount of Municipal Reserve open space to be allocated at full build-out of the North Sector. Future environmental studies shall be required prior to approval of Industrial Area Concept Plan applications for lands adjacent to the Wetland Complex to determine a Wetland Complex boundary and a gross non-developable area including a final development setback buffer, if required.

8.1.1 Riverbank Area

During the design of the Industrial Area Concept Plan for the parcels of land adjacent to the river, the developer shall make provisions to provide a riverbank area as per the requirements in Section 9.1 (Riverbank Stewardship) of the Official Community Plan. At the appropriate time, Meewasin should engage with these private landowners, between ERCO Worldwide and the Silverwood Golf Course, about obtaining a conservation easement for the protection of the remaining undisturbed areas and riverbank area similar to the conservation easement explained in Section 4.6.2 of this report.

8.2 Municipal Reserve Analysis

When land is subdivided, *The Planning and Development Act, 2007*, requires part of it to be set aside for public recreation or similar purposes, or for money to be paid in lieu of land. The Municipal Reserve dedication requirement is 5% of gross land area for non-residential land. The City may take money in lieu of land in areas where the dedication of land is not desirable.

Two place holders for potential recreation areas have been shown on Figure 4. Table 3 has broken down the estimated dedication requirement, assuming all industrial parcels will be subdivided, and based on the assumed Environmental Reserve dedication in the North Sector. The two place holder locations were strategically chosen based on development sequence (see Figure 8) and the inclusion of existing vegetation in the area. Appropriate Municipal Reserve parcels are rectangular in shape, flat, and have good soil quality. The final Municipal Reserve parcel locations, size, and the number of parcels required totalling the amount of required dedication, is subject to evaluation by civic Administration, based on programming needs at the time the Industrial Area Concept Plan is being designed.

Table 3 provides a breakdown of the total amount of Reserve dedication required in the North Sector.

Table 3: Natural Areas and Open Space Dedication Analysis

			Reserve Dedications		
	Hectares	Acres	%	Hectares	Acres
Proposed					
Industrial - Heavy	302.84	748.33			
Industrial - Light	839.01	2073.24			
Arterial Commercial Nodes	16.00	39.54			
Urban Holding Lands	96.85	239.32			
To Be Determined Lands	225.50	557.22			
Urban Holding Road Infrastructure	50.57	124.96			
Perimeter Highway	68.15	168.40			
Total Proposed	1598.92	3,951.02	5% MR[2]	79.95	197.55
Natural Area (Wetland Complex)	141.66	350.05	ER[1]	141.66	350.05
Riverbank Area	9.77	24.14	ER[1]	9.77	24.14

1 - Environmental Reserve (ER) area may be adjusted based on site-specific Natural Area Screening for each Industrial Area Concept Plan application that is received.

2 - Total Reserve Dedications were determined based on the assumption that all industrial lands will be subdivided. Municipal Reserve (MR) potential recreation area place holders are shown on Figure 4.

9 Servicing

The current servicing for the North Sector will remain until future development commences. As part of the Industrial Area Concept Plan process, the developer is encouraged to provide innovative approaches to facilitate a reduction in overall infrastructure investment where possible. At the time new City services are provided to the area, all existing parcels will be connected to the new servicing system and a servicing agreement between the developer (or landowner) and the City will be required. City-funded interim servicing models shall not be supported; however, the City may consider developer- (or landowner-) funded interim servicing to accommodate development(s) on lands in later phases if they otherwise comply with the surrounding Industrial Area Concept Plan and North Sector Plan vision.

As shown on Figure 7, an east/west municipal utility corridor has been identified through the centre of quarter sections 27, 28, 29, and 30. All utilities should consider using this corridor for major services needing to connect the lands west of Highway 12 with the lands east of Highway 12.

9.1 Water Mains

The North Sector will be serviced by a primary water main extending from 71st Street along the CN rail line, and from Marquis Drive along Faithfull Avenue (see Figure 7). For industrial growth west of Highway 12, a new water reservoir and a new fill main from the water treatment plant along Idylwyld Drive will be required. This future water reservoir will provide additional water main capacity to the North Sector.

9.2 Sanitary Sewer

The North Sector will be serviced by two separate gravity trunks; one extending along Arthur Rose Avenue, and the other crossing at 71st Street near Faithfull Avenue (see Figure 7). To complete the sanitary trunk system for the Marquis Industrial Area, the sanitary trunk will cross 71st Street into quarter section SE 27-37-5-W3 M. At the north end of this quarter section, the sanitary trunk will turn west to service the developable lands west of the CN rail line and lands west of Highway 12. The sanitary trunk crossing at 71st Street, near Faithfull Avenue, will service the existing industrial uses along Highway 16 and new development adjacent to 71st Street.

The sanitary capacity for the North Sector was calculated based on 15% wet industrial, 15% commercial and 70% dry industrial.

9.3 Storm Sewer

The North Sector will have a number of connected wet and dry storm water ponds, connected with a conventional underground storm sewer design, in combination with overland drainage, utilizing the pre-treatment storm water sediment forebay adjacent to the Wetland Complex Preserve area (see Figure 7).

The storm water management system will be designed to minimize impacts on natural areas in the North Sector and will trap pollutants and sediments, while maintaining the storm water flow, protecting the value of the Wetland Complex drainage channel, Opimihaw Creek, and the River.

9.3.1 Natural and Engineered Water Bodies

Best practices in storm water management include incorporating the use of natural wetlands, and storm water ponds, to manage storm water runoff. This practice has begun in developing residential areas in Saskatoon and should become more common throughout all developments in the City. In preparation for Industrial Area Concept Plans adjacent to the Wetland Complex, the developer (or landowner) will be encouraged to have a qualified environmental specialist work with a storm water engineer to develop a storm water model, identifying the natural boundary of the Wetland Complex, the significance of the wetlands in the drainage channel, and the best location for the pre-treatment storm water sediment forebay.

As explained in Section 5.7 of this report, all open water facilities within the draft 4,000 metre buffer, that have the potential to cause aircraft and bird hazard conflicts may be required to seek approval by Transport Canada, Saskatoon Airport Authority, NavCanada, and such other agencies as may be appropriate, prior to a development permit being issued for the area. As part of any modifications to the Wetland Complex, the design should consider restricting large flocks of birds using the natural water bodies.

9.4 Permanent Civic Service Facility

Development of the North Sector will require the relocation of the City's snow management area on Wanuskewin Road, and civic Administration has found a suitable new location. A permanent location for a civic services facility, which includes a snow management facility and Public Works satellite yard, will be located on lands the City owns west of Highway 12. A conceptual place holder has been shown on Figure 7.

A location for a snow management facility and Public Works satellite yard typically requires:

a) 36.4 hectares (90 acres);
b) suitable road access, but not directly adjacent to a highway;
c) access to the existing storm water management system;
d) adequate separation from significant wetlands; and
e) adequate separation from residential development, and is best situated in an area designated strictly for industrial purposes.

9.5 Shallow-Buried Utilities

As part of the Industrial Area Concept Plan process, the developer must arrange for the respective service providers to install shallow-buried services such as electricity, natural gas, street and park lighting, telephone, and cable to the area.

At the time of subdividing the area, past industrial subdivisions have consolidated and reshaped lots causing utility easements to be relocated; therefore, utility companies may request front-street servicing within the boulevard, or may request a separate easement.

9.6 Antenna Towers

As mentioned in Section 4.9 of this report, there are two existing antenna towers outside the North Sector study area. If additional antenna towers are required, preferred locations for these types of facilities would be behind commercial or industrial developments. Antenna tower applications will be subject to the Antenna Systems Policy No. C09-037.

9.7 Emergency Response

Industrial developments offer unique safety-related issues, including: the movement of hazardous and volatile materials, chemical spills, fire, crime prevention, and security. Safety shall be promoted through site design measures, emergency response resources (i.e. Notify Now), and traffic regulations. The City's emergency response strategy shall be expanded into the entire North Sector area.

The closest fire halls to the North Sector are Fire Halls No. 4 and No. 7. Fire Hall No. 4 is located at 2106 Faithfull Avenue. The travel time service area for Fire Hall No. 4 begins to be exceeded at the Idylwyld Drive North and Highway 16 interchange. Fire Hall No. 7 is located west of the Silverwood Golf Course at 3550 Wanuskewin Road. The travel time service area for Fire Hall No. 7 begins to be exceeded at the 71st Street and Millar Avenue intersection. Lands within the North Sector will be outside existing response capabilities to achieve a four-minute travel time to emergencies. A proposed fire hall place holder, west of Idylwyld Drive, is shown on Figure 4. Further study will be needed to determine the actual location and travel time service area for this proposed fire hall.

10 Phasing

10.1 Development Sequence

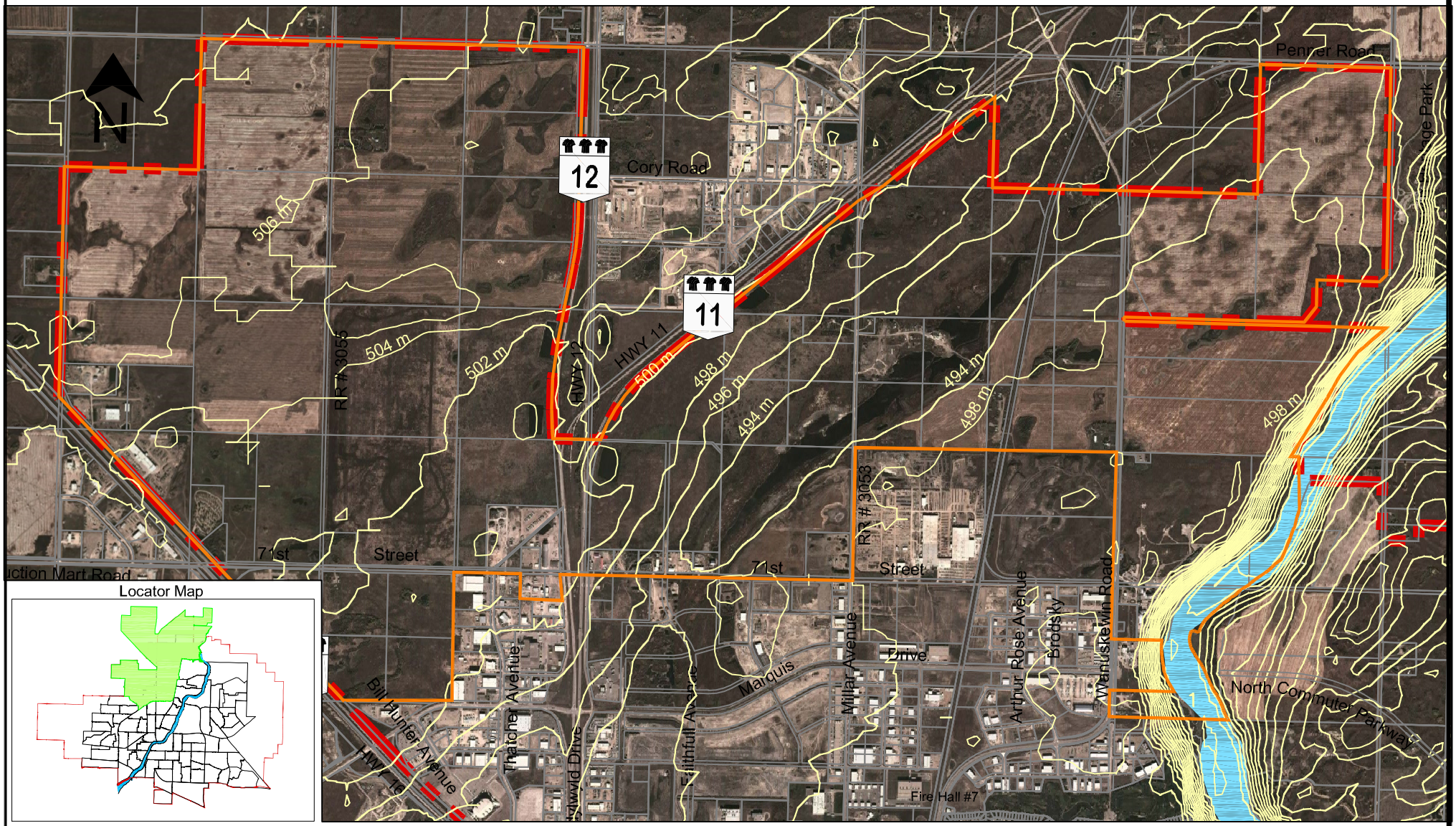
The development sequence for the North Sector is shown on Figure 8 – Phasing Plan and will develop in a south to north direction. Based on the development sequence, development areas have been shown to cluster adjacent parcels, providing the opportunity for one Industrial Area Concept Plan Study per ownership group. As shown on Figure 8, the development area boundaries are conceptual and should be used a guide. The development area boundary lines can be expanded or reduced based on the landowners'/developers' desire to develop their lands, and the need for infrastructure to be extended. The development sequence shown on Figure 8 is proposed to be consistent with the servicing scheme described in Section 15, but is meant to be interpreted flexibly, rather than rigidly, and may not require the exact development sequence based on Industrial Area Concept Plan applications.

11 Funding

The role of the North Sector Plan is to provide a framework within which development of the North Sector can take place, and the vision to shape the development reflects the values of the City. Data on detailed costing and funding are not available at the Sector Plan stage due to the very large scale of such plans, their long-term and conceptual nature, and numerous uncertainties regarding timing of development and specific elements required for development to occur. Sector Plans do enable civic Administration to begin more detailed infrastructure analysis, and to address this infrastructure in operating budgets, capital budgets, and capital plans. It is important to acknowledge that the costs for development of new growth sectors are funded in a fiscally sustainable manner, ensuring that growth is paid for by those who benefit from it.

Figure 1 - Study Area

North Sector Plan



Legend

- Proposed City Limits
- North Sector study area
- Northern Industrial Area
- Contours

Scale: N.T.S.

City of Saskatoon
Community Services
Planning & Development Division

NOTE: The information contained on this map is for reference only and not to be used for legal purposes.

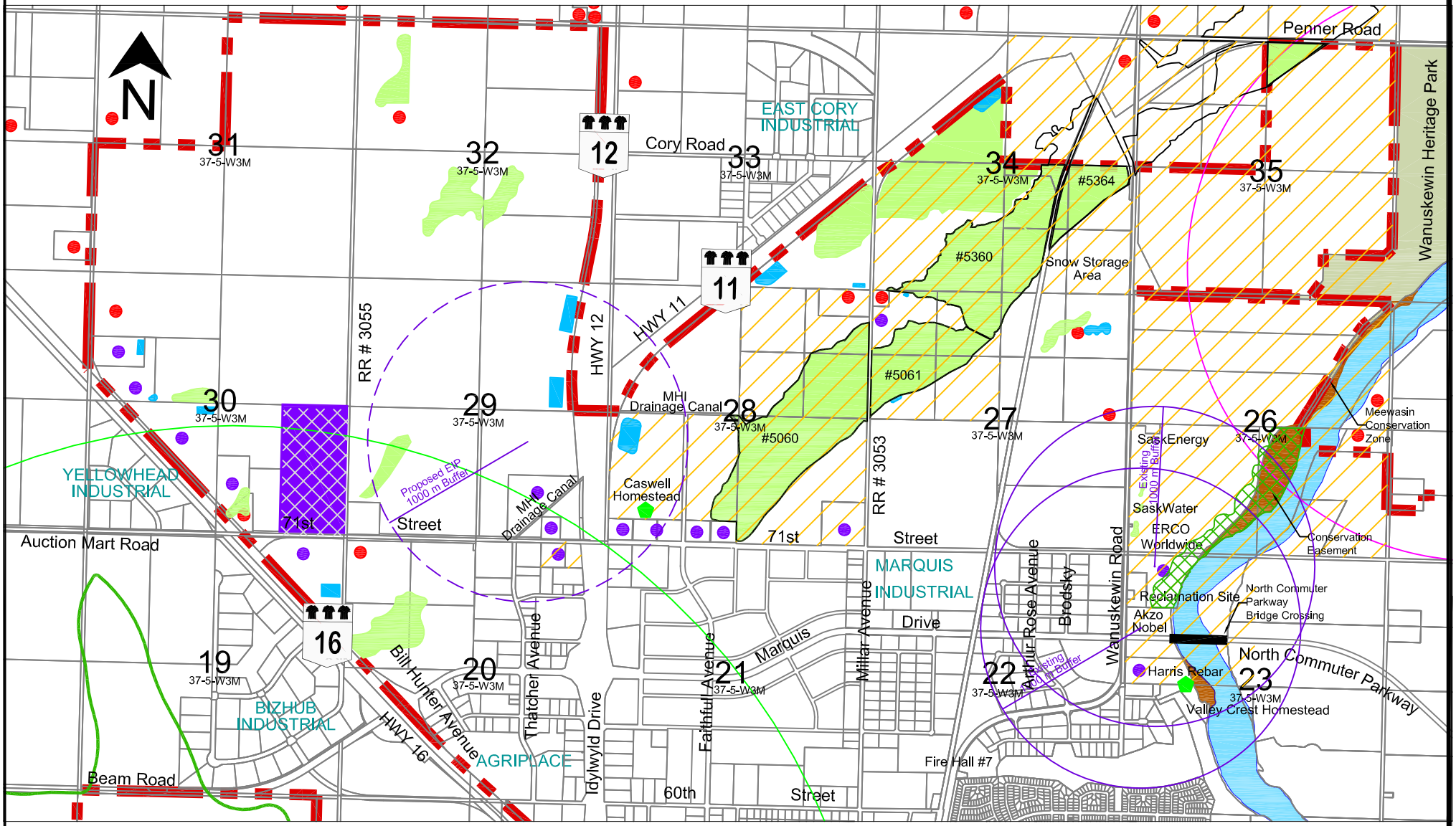
September, 2015

File No: 4134 - 3 - 1

S:\Baskets\PL\Cityplan\Future Growth\Sector Plans\North Sector\North Sector Report

Figure 2 - Existing Features

North Sector Plan



Legend

- Proposed City Limits
- Red Pheasant Cree Nation Reserve
- # xxxx — Natural Areas & Wetlands
- Riverbank and River
- MVA Conservation Zone
- Heritage Sensitive Areas
- 1000m Chemical Buffers
- Wanuskewin Visual Buffer
- Airport 30 NEF Contour
- Draft Airport AZR 4,000 m Buffer
- Existing Lagoons
- Homesteads
- Residence
- Existing Industry

Scale: N.T.S.

City of Saskatoon
Community Services
Planning & Development Division

NOTE: The information contained on this map is for reference only and not to be used for legal purposes.

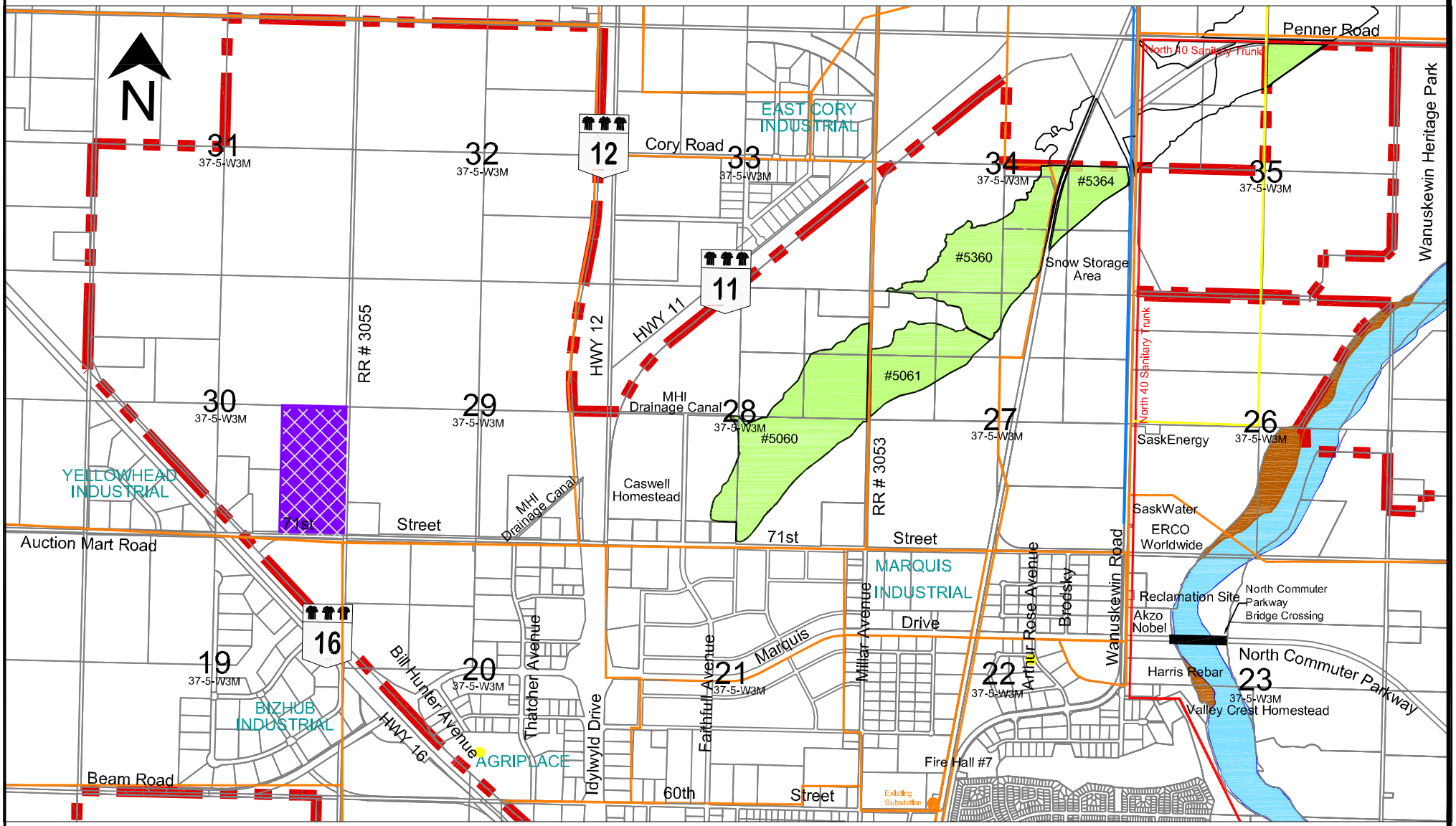
September, 2015

File No: 4134 - 3 - 1

S:\Baskets\PL\Cityplan\Future Growth\Sector Plans\North Sector\North Sector Report

Figure 3 - Existing Utilities

North Sector Plan



Legend

- Proposed City Limits
- SaskPower Overhead Lines
- SaskEnergy Underground Lines
- SaskWater Line
- North 40 Sanitary Trunk
- Antenna Towers
- Red Pheasant Cree Nation Reserve
- # xxxx Natural Areas & Wetlands
- Riverbank and River

Scale: N.T.S.

City of Saskatoon
Community Services
Planning & Development Division

NOTE: The information contained on this map is for reference only and not to be used for legal purposes.

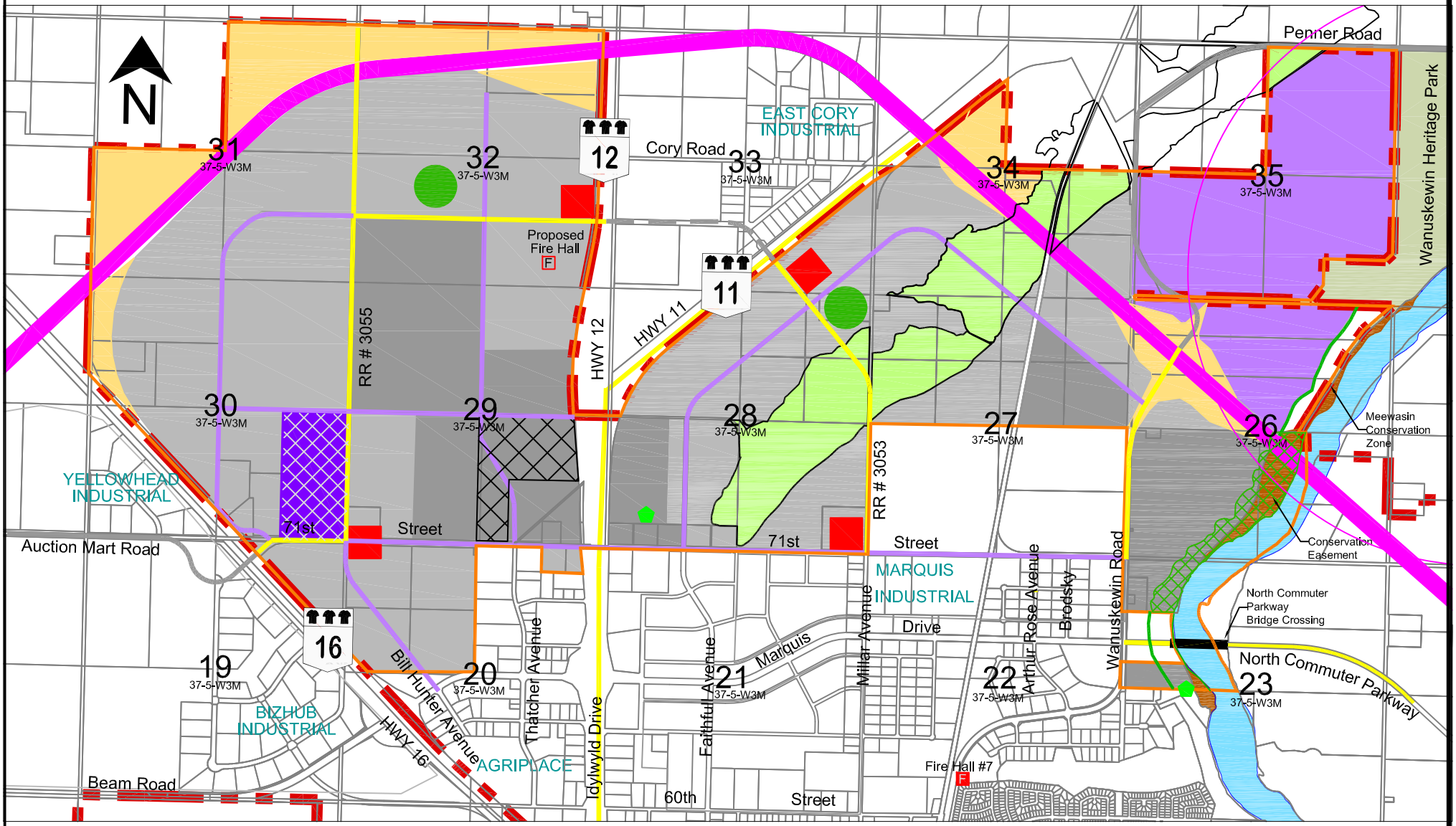
September, 2015

File No: 4134 - 3 - 1

S:\Baskets\PL\Cityplan\Future Growth\Sector Plans\North Sector\North Sector Report

Figure 4 - Land Use Plan

North Sector Plan



Legend

- Proposed City Limits
- North Sector
- Perimeter Highway
- Proposed Arterial Roads
- Proposed Collector Roads
- Industrial - Light
- Industrial - Heavy
- Industrial - Heavy (EIP)
- Arterial Commercial Nodes
- Urban Holding Lands
- Potential Recreation Area (MR)
- Homesteads
- Land Use To Be Determined
- Red Pheasant Cree Nation Reserve
- Wanuskewin Visual Buffer
- Conservation Easement
- MVA Conservation Zone
- Riverbank and River
- Riverbank Area
- Wetland Complex

Scale: N.T.S.

City of Saskatoon
Community Services
Planning & Development Division

NOTE: The information contained on this map is for reference only and not to be used for legal purposes.

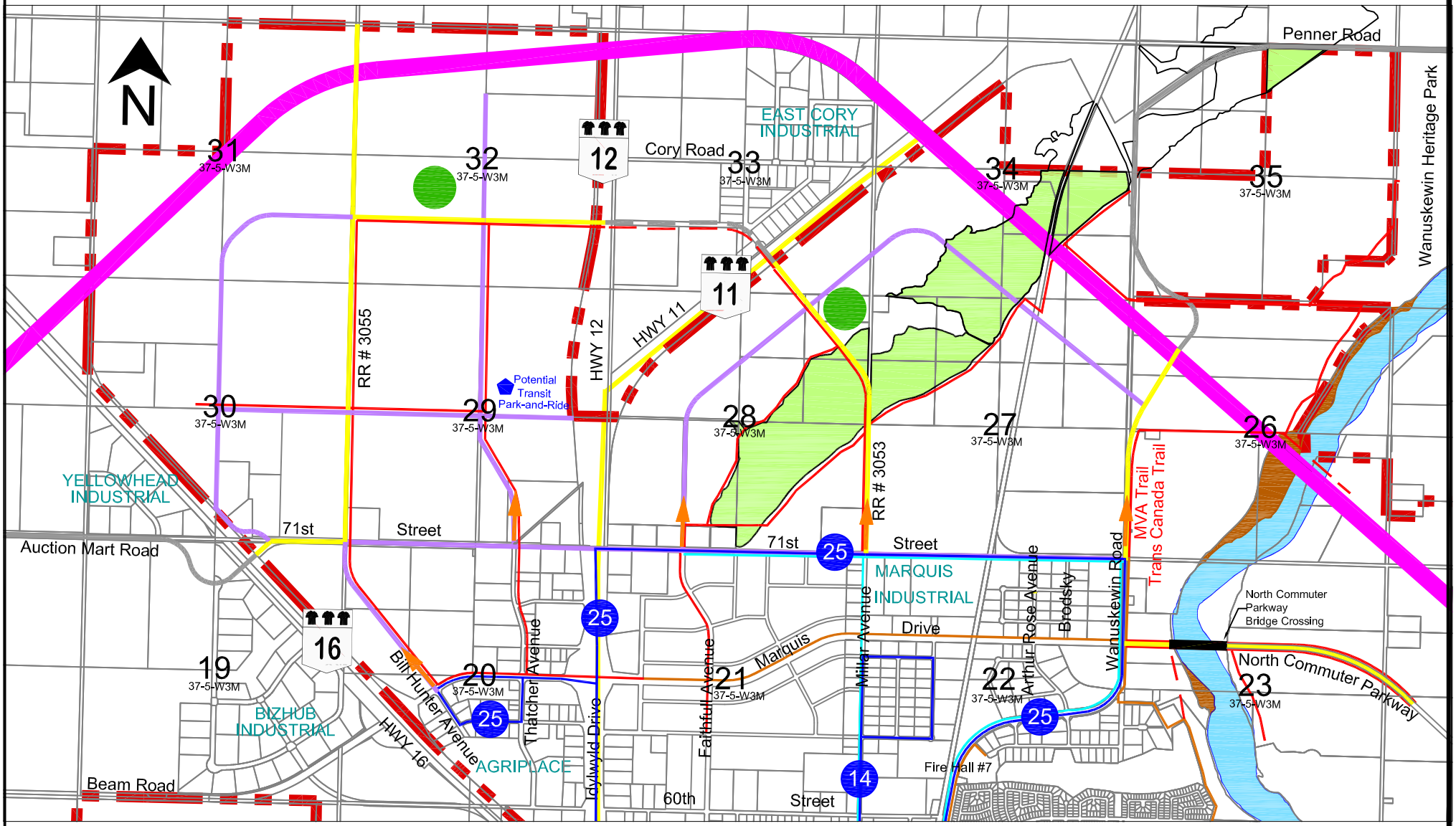
September, 2015

File No: 4134 - 3 - 1

S:\Baskets\PL\Cityplan\Future Growth\Sector Plans\North Sector\North Sector Report

Figure 5 - Walking, Cycling, and Transit Plan

North Sector Plan



Legend

- Proposed City Limits
- Existing Transit Routes
- Possible Transit Route Linkage
- Potential Transit Park-and-Ride
- Existing Multi-use Trails
- Proposed Multi-use Trails
- Proposed Arterial Roads
- Proposed Collector Roads
- Potential Recreation Area (MR)
- Wetland Complex
- Riverbank and River
- On Road Cycling
- Perimeter Highway

Scale: N.T.S.

City of Saskatoon
Community Services
Planning & Development Division

NOTE: The information contained on this map is for reference only and not to be used for legal purposes.

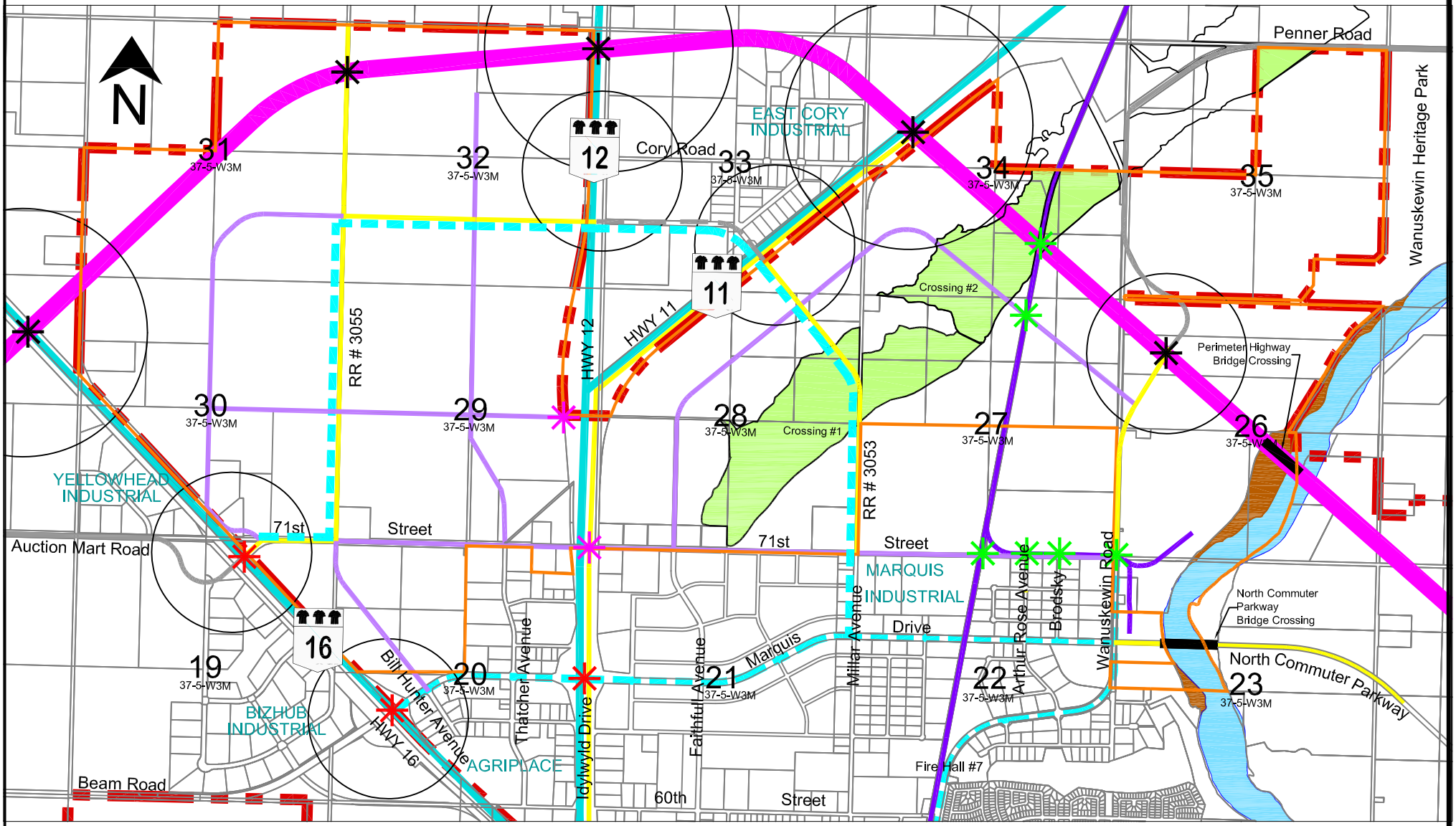
September, 2015

File No: 4134 - 3 - 1

S:\Baskets\PL\Cityplan\Future Growth\Sector Plans\North Sector\North Sector Report

Figure 6 - Roadways Plan

North Sector Plan



Legend

- Proposed City Limits
- North Sector
- CN Rail Line
- Perimeter Highway
- Proposed Arterial Roads
- Proposed Collector Roads
- Proposed Rural Road Connections
- Dangerous Goods and Long Haul Truck Routes
- Pick Up and Delivery Truck Routes

Scale: N.T.S.

- Grade Separated
- At Grade Rail Crossing
- At Grade Right-in/Right-out
- Grade Separated Highway
- NW Access Management Highway Control Circles
- Wetland Complex

City of Saskatoon
Community Services
Planning & Development Division

NOTE: The information contained on this map is for reference only and not to be used for legal purposes.

September, 2015

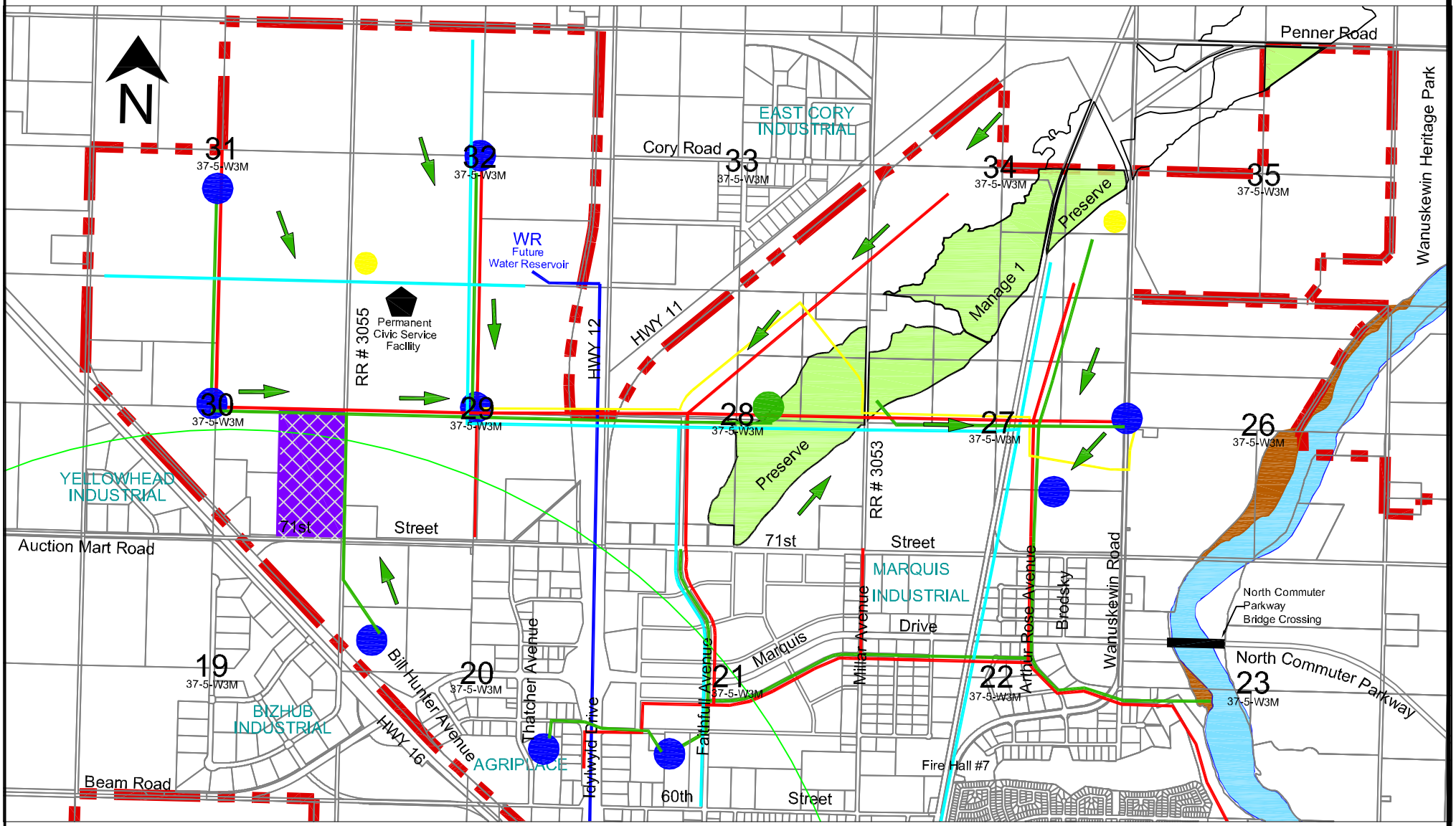
File No: 4134 - 3 - 1

S:\Baskets\PL\Cityplan\Future Growth\Sector Plans\North Sector\North Sector Report

Figure 7 - Servicing Plan

North Sector Plan

Disclaimer: All servicing alignments are conceptual. Final servicing alignments will be determined during detailed design for each development.



Legend

- Proposed City Limits
- Wetland Complex
- Riverbank and River
- Red Pheasant Cree Nation Reserve
- Sanitary Gravity Trunk
- Storm Trunk
- Watermain
- Water Fill Main
- Proposed Gas Line
- Stormwater Direction of Flow
- Stormwater Pond (Dry or Wet)
- Stormwater Pre-treatment Forebay
- Proposed Antenna Towers
- Proposed Airport AZR 4,000 m Buffer
- Permanent Civic Service Facility
- WR Future Water Reservoir

Scale: N.T.S.

City of Saskatoon
Community Services
Planning & Development Division

NOTE: The information contained on this map is for reference only and not to be used for legal purposes.

September, 2015

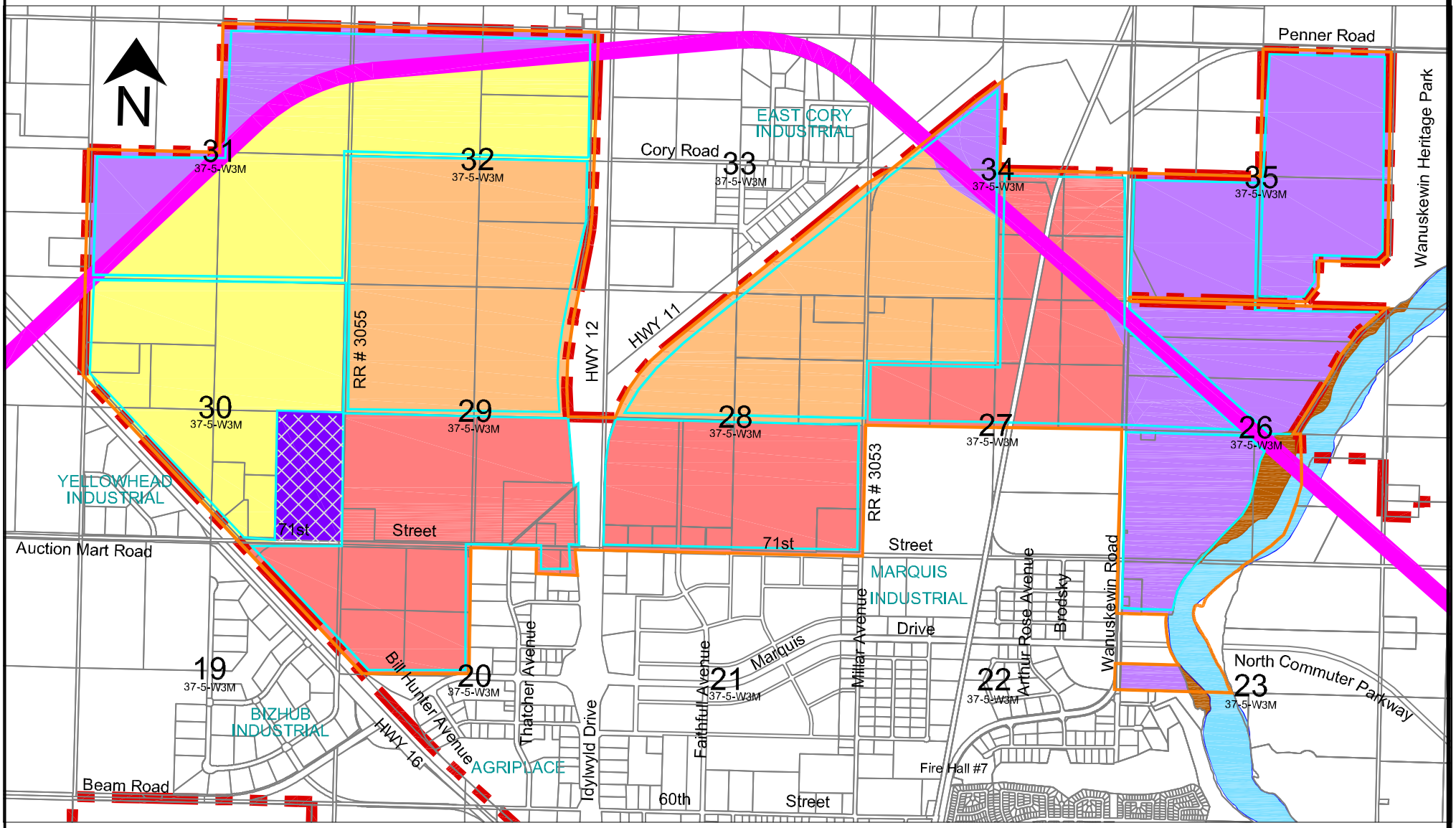
File No: 4134 - 3 - 1

S:\Baskets\PL\Cityplan\Future Growth\Sector Plans\North Sector\North Sector Report

Figure 8 - Phasing Plan

North Sector Plan

Disclaimer: Phasing sequence and development areas may change.



Legend

- Proposed City Limits
- Perimeter Highway
- North Sector
- Riverbank and River
- Phase 1
- Phase 2
- Phase 3
- Phase TBD
- Red Pheasant Cree Nation Reserve
- Industrial Area Concept Plan Development Areas

Scale: N.T.S.

City of Saskatoon
Community Services
Planning & Development Division

NOTE: The information contained on this map is for reference only and not to be used for legal purposes.

September, 2015

File No: 4134 - 3 - 1

S:\Baskets\PL\Cityplan\Future Growth\Sector Plans\North Sector\North Sector Report