



NEIGHBOURHOOD AREA STRUCTURE PLAN



Prepared by:

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The City of Red Deer, Engineering Services Department
The City of Red Deer Recreation, Parks & culture Department

For:

The City of Red Deer Land & Economic Development Department

Bylaw No. 3217/2003
Adopted: August 11, 2003

JOHNSTONE CROSSING NEIGHBOURHOOD AREA STRUCTURE PLAN

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Amended May 17, 2004

Amended April 24, 2006

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SECTION 1: INTRODUCTION

1.1 Purpose

This Neighbourhood Area Structure Plan (NASP) establishes a framework for the subdivision, servicing and development of the Johnstone Crossing neighbourhood in the City of Red Deer. The NASP identifies:

- the alignment of collector and local roadways and lanes;
- the neighbourhood open space system of parks, pathways and public utility lots;
- the location and range of housing forms;
- the location of community facilities;
- servicing concepts for storm sewer, water and sanitary sewer; and
- the development staging sequence.

1.2 Plan Area and Location

Figure 1 shows the Plan area is located in the east half of Section 31-38-27-W4 in the northwest quadrant of the City of Red Deer, west of the Kentwood West neighbourhood and north of the Johnstone Park neighbourhood. It is bounded to the north and west by the Canadian Pacific Railway and Edgar Industrial Park, to the east by Taylor Drive and to the south by Johnstone Drive and 76 Street.

The NASP covers an area of approximately 59.86 hectares (\pm 146 acres) and is legally described as:

- Lot 1 Block 1 Plan 972 0461;
- Lot 2 Block 1 Plan 022 4553;
- Lot 1 Block 4 Plan 812 1569;
- Lot 2PUL Plan 862 2801; and
- Roadway Plan 822 0501

Lot 2 Block 1 Plan 022 4553 (3.87 hectare) is privately owned and is accessed via a temporary gravel road off the existing road right-of-way which intersects with Taylor Drive. The rest of the parcels in the Plan area are owned by the City of Red Deer. Except for utility rights-of-way in favour of the City of Red Deer on Lot 1 Block 1 Plan 972 046 and Lot 1 Block 4 Plan 812 1569, no other easements are held against the titles of the lands in the Plan area.

Previous road widening (Plan 952 4451) along the west boundary of the Taylor Drive right-of-way is excluded from the Plan area.

The land containing the berm along the east side of the railway line is a municipal reserve dedication (Lots 3MR and 4MR Block 4 Plan 902 0499) from previous subdivisions in the Edgar Industrial Park and is excluded from the Plan area.

Johnstone Crossing

Neighbourhood Area Structure Plan

not to scale

May 2003



Figure 1 - Location

 Johnstone Crossing NASP Area

SECTION 2: PLANNING FRAMEWORK

The NASP is consistent with the following statutory documents and City policies.

2.1 Enabling Legislation

The NASP is a statutory document adopted as an area structure plan under Part 17 of the *Municipal Government Act*. Part 17 of the *Act* requires that an area structure plan:

- Describe the land uses proposed for the area either generally or with respect to specific parts of the Plan area;
- Describe the density of population proposed for the area either generally or with respect to specific parts of the Plan area;
- Describe the general location of major transportation routes and public utilities;
- Describe the sequence of development proposed for the Plan area;
- Be consistent with the municipality's Municipal Development Plan; and
- Be consistent with the Provincial Land Use Policies.

2.2 Municipal Development Plan

The City's Municipal Development Plan (MDP) contains policies and references that, amongst other things, guide the preparation of Major and Neighbourhood Area Structure Plans and provide direction for related planning and development practices. The MDP identifies the Plan area as a residential neighbourhood. It promotes policies aimed at maintaining a high quality of life in the City by developing well-planned communities that contain a balanced and diversified range of social, education, health, leisure and cultural opportunities, by preserving and integrating unique natural features, and by providing safe, efficient and reliable utility and transportation systems. The MDP requires that the following objectives be pursued in the planning of new residential neighbourhoods:

- A variety of housing types;
- Infrastructure and design standards that support affordable housing while still resulting in high quality neighbourhoods;
- Innovation in neighbourhood design and housing; and
- A residential density range of 12.35 to 17.3 dwelling units per developable hectare.

2.3 Northwest Major Area Structure Plan

The Northwest Major Area Structure Plan was adopted by Council in 1998 and will be reviewed and updated in 2003. It establishes the arterial and collector roadway alignment, trunk services alignment, the location of social and leisure facilities and school sites, a regional trail system, and the allocation of broad land uses for the northwest quadrant of the City. It also incorporates and implements the City's Ecospace Management Plan, which identifies a wetland area in the west portion of the Plan area and a natural area consisting of a mature mixed species woodlot in the south portion. The current Northwest Major Area Structure Plan allows for diversified residential development in the Plan area at a density range of 12.35 to 17.3 dwelling units per developable hectare.

2.4 Neighbourhood Planning & Design Guidelines & Standards

In December 2002 the City updated the *'Neighbourhood Planning & Design Guidelines & Standards'*. These provide direction for area structure plan preparation and subdivision design to ensure the consistent review of practices, standards, community form, and public consultation procedures.

Significant standards include a residential density range of 12.35 to 17.30 dwelling units per hectare, a housing stock consisting of a minimum of 20% multi-family units and a minimum of 60% detached dwellings, and 10% municipal reserve land distributed in the form of playgrounds, parks and linear elements.

The NASP has been prepared to meet all of the requirements in the City's *'Neighbourhood Planning & Design Guidelines & Standards'*.

2.5 Design Guidelines - Engineering

The City requires that the design of all utility and transportation systems comply with the standards and requirements set out in the City of Red Deer *'Design Guidelines'*. The development and servicing concepts in the NASP were designed in accordance with these guidelines.

SECTION 3: SITE CONTEXT

3.1 Site Features

Figure 2 illustrates prominent site features, the natural drainage pattern and existing land uses. The topography of the Plan area is gently undulating and sloping from all directions toward the lowest point in the central west portion of the Plan area. In this location a permanent wetland occurs which is highly diverse, containing permanent aquatic and semi-aquatic vegetation such as cattails and willows and a variety of terrestrial and aquatic insect species. A woodlot of approximately 2.5 hectare in extent and consisting of mature, native aspen poplar trees with a variety of berry shrubs as underbrush, occurs in the central south portion of the Plan area. Several windbreaks of mixed poplar, with small shrubs as understory, occur along some of the existing internal parcel boundaries. The lands in the northernmost portion of the Plan area are disturbed but presently not cultivated, and natural succession of poplar growth occurs along the toe of the railway berm.

The highest natural point in the Plan area is in the extreme southwest portion, with a maximum grade change of 8 metres between this point and the lowest point. The average grade change from all other portions of the Plan area toward the lowest point is between 3 metres and 4 metres. The topography of the Plan area is suitable for subdivision and development.

3.2 Existing Land Uses

A large portion of the Plan area is leased for agricultural purposes and is actively cultivated. A moving and transportation business is operated from Lot 2 Block 1 Plan 022 4553. Access to this parcel is by a temporary road off the existing road right-of-way in the Plan area.

To the west and north lie the CP Railway lines and yards, and the various light industries and business services of Edgar Industrial Park. Toward the south are the industries and business services of the Golden West Industrial Park, and the residential neighbourhood of Johnstone Park. The Kentwood West and Glendale residential neighbourhoods are located to the east and the southeast.

An old farmyard is located adjacent to Taylor Drive in the southeast portion of the Plan area. This site has no noted historical significance.

3.3 Existing Transportation Network and Access

The locality of the Plan area offers convenient arterial roadway access to areas within the City as well as to Highway 11A and Highway 2 along Taylor Drive, 77 Street and (the future) Johnstone Drive.

A road right-of-way extends from the intersection of Taylor Drive and Kent Street westward into the Plan area for a length of approximately 600 metres. This right-of-way contains existing utility trunk lines to Edgar Industrial Park. It cannot be relocated and will be utilized as the collector roadway into the neighbourhood.

Johnstone Crossing

Neighbourhood Area Structure Plan

Scale 1:5,000

June 2003

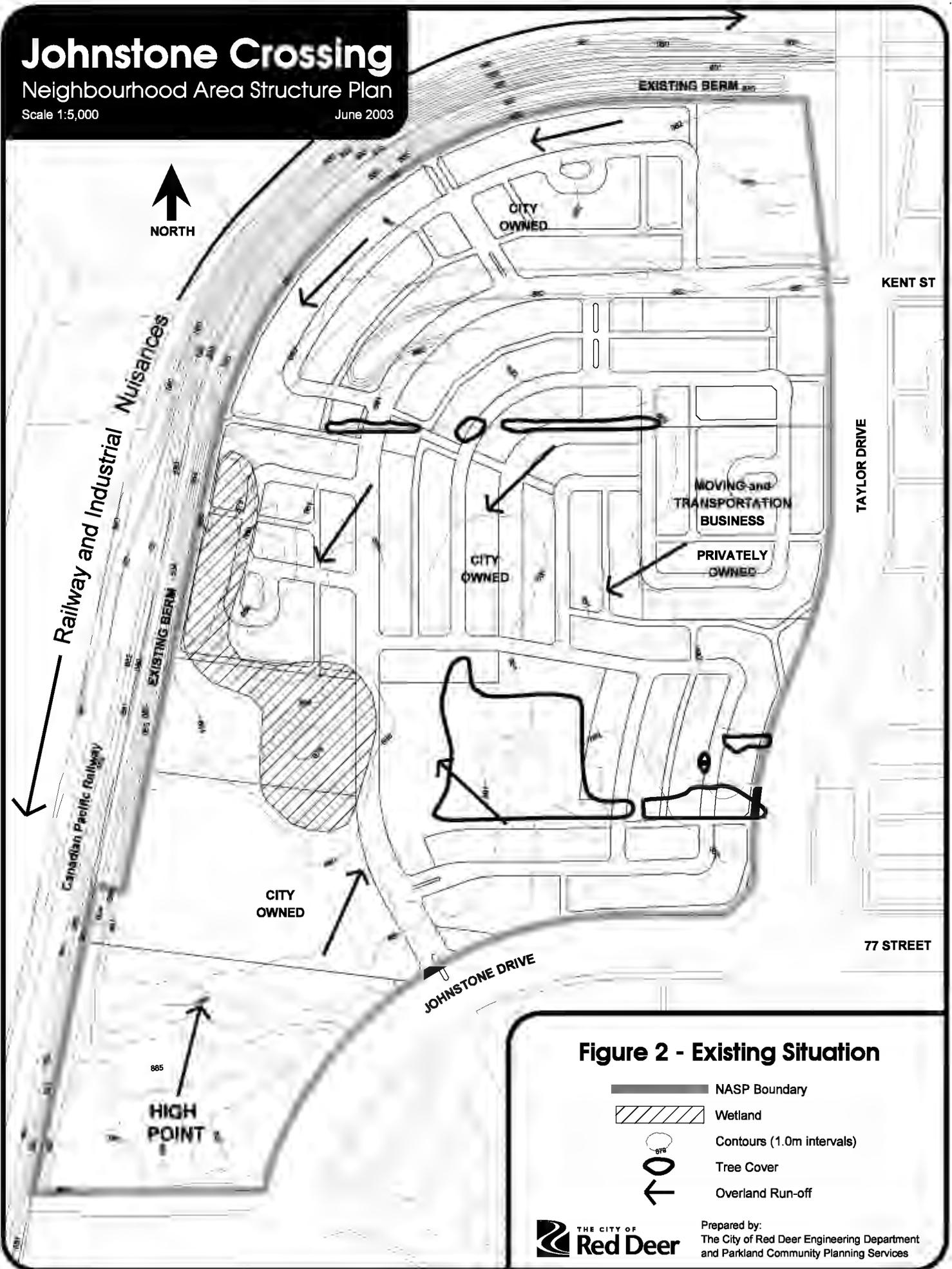


Figure 2 - Existing Situation

-  NASP Boundary
-  Wetland
-  Contours (1.0m intervals)
-  Tree Cover
-  Overland Run-off



Prepared by:
The City of Red Deer Engineering Department
and Parkland Community Planning Services

3.4 Existing Trunk Services

In addition to the trunk services located in the existing road right-of-way, two existing public utility lots accommodate trunk services to Edgar Industrial Park. One PUL is located in the south and extends from Johnstone Drive to the west Plan boundary. The other is located in the northwest portion of the Plan area and extends from the existing road right-of-way to the west Plan boundary.

3.5 Level 1 Environmental Assessment

A Phase 1 Environmental Site Assessment undertaken by Parkland Geotechnical on behalf of the City of Red Deer in January 2001 for the Edgar Industrial Park Central Expansion included the Johnstone Crossing Plan area. The assessment found that the site overall has a 'low' environmental risk rating and recommends no further site investigation. Although the assessment and recommendation excluded the then existing house on Lot 2 Block 1 Plan 022 4553 due to the fact that the house was not available for inspection at the time, no further investigation is required because the house has since been demolished.

3.6 Ecological Profile

3.6.1 Recommendations

An ecological profile was prepared for the Plan area in December 2002. The profile identifies natural features in five of seven ecological zones, and makes a number of recommendations with regard to preserving these features, including the following:

- the preservation of the woodlot in a natural state and incorporation into the development concept;
- the preservation of the wetland in its original state (at least the core portion of it) as a low-lying marsh landscape feature and functionally part of a storm water collection utility (detention pond);
- the preservation of several windbreaks and the establishment of an interlinking trail system following the windbreaks and the railway berm to connect the various natural features; and
- the preservation of a linear portion of the new poplar tree growth adjacent to the north Plan boundary.

3.6.2 Outcome and Implementation

Upon consideration by a project steering committee not all of the recommendations from the Ecological Profile proved to be practically feasible, for reasons related to cost or engineering considerations. Relevant details of the implementation of the Ecological Profile recommendations are as follow:

- A top priority was to retain and incorporate the woodlot as a prominent landscape feature in the neighbourhood design. This will be accomplished through dedication as municipal reserve.
- It was not feasible to preserve and incorporate the wetland, because its viability would be jeopardized by changes in surface drainage due to site grading, causing the volume of natural storm water runoff to decrease to an extent that would no longer sustain the riparian qualities of the wetland. While consideration

- was given to a constructed wetland alternative, the costs involved would be prohibitive and the final decision was to eliminate the wetland.
- Most of the windbreaks and the successive vegetation growth will be lost due to site grading requirements, except where these are accommodated within a park or public utility lot.
 - Due in part to the fact that various design considerations presented practical difficulties, and primarily due to the fact that most portions of the windbreaks will be lost to site grading requirements, it was not possible to align the trail as suggested in the Ecological Profile. In addition, the establishment of a pathway as a separate sidewalk along the collector roadway was preferred to a trail along the top of the railway berm, which is outside of the Plan area.

SECTION 4: PLANNING FACTORS, GOAL AND KEY PRINCIPLES

4.1 Planning Factors

There are a number of factors and issues that influence land use in the Plan area, which need to be considered in the design of the development concept. These include potential constraints on the ability to develop the area as well as potential opportunities that could contribute to an efficient development. Key planning factors affecting the Plan area include the following:

- The need to consider the presence of existing development within and adjacent to the Plan area, including business service / light industrial activities and residential land uses, the CPR yards and railway lines, and arterial roadways. In particular, the view of and nuisance factors potentially emanating from the industrial uses, the railway lines and the arterial traffic need to be carefully considered in designing the neighbourhood layout.
- The amenity value of the woodlot, and the opportunity to conserve and incorporate this feature into the neighbourhood open space and trail system as a link to the City-wide trail system along Taylor Drive and Johnstone Drive.
- The need to provide for an Emergency Services site within the Plan area.
- Existing utility trunk lines located in the existing road right-of-way and the two PUL's. The location, width and boundaries of the road right-of-way are fixed from the Taylor Drive intersection up to the public utility lot located at a point approximately 350 metres into the Plan area, and have to be accommodated in the development concept. The location and boundaries of the two existing PUL's will be accommodated into the development concept.
- The need to design a development concept which:
 - incorporates the boundaries of Lot 2 Block 1 Plan 022 4553 in a way that allows the continued operation of the moving and transportation business for an indefinite period of time, and at the same time allows the independent, staged subdivision of the Plan area;
 - can be phased in a way that allows the continuance of the temporary access to Lot 2 Block 1 Plan 022 4553; and
 - facilitates an integrated and complete community when the subdivision is fully built-out.

4.2 Goal

To provide a planning framework for the incremental rezoning and subdivision of the Plan area in a manner that is consistent with the City of Red Deer planning documents and polices, and incorporates the planning factors and key principles identified in this Plan.

4.3 Key Principles

The preparation of the Johnstone Crossing NASP was guided by the following key principles:

- Recognize the close proximity of the railway and attempt to incorporate aspects thereof into the community theme.
- Design for optimal land use compatibility with existing development adjacent to the Plan area. Where necessary provide mitigating measures such as screening

or berming to mitigate potential negative impacts. This is required to ensure that no subdivision and development decisions in the Plan area would prejudice the integrity of existing and proposed adjacent land uses.

- Plan for an attractive, well designed, compact and integrated residential neighbourhood. This can be achieved by considering ‘*smart growth*’ principles for community planning and development, including the following:
 - The establishment of a sense of identity and unique community character by creating one or more ‘*special places*’ and by incorporating a distinctive community theme, including for example a marketing logo;
 - Planning and providing for a variety of affordable lot sizes and housing forms in a mutually compatible land use pattern in order to meet the City’s density requirements and the minimum standards of housing mix;
 - Planning for and providing a minimum of 10% municipal reserve consisting of active and passive open space nodes appropriately distributed throughout the neighbourhood and linked by linear elements, including separate pathways and collector street sidewalks.
 - The establishment of an efficient and safe neighbourhood transportation system. This is achievable by integrating the planning of roadways, pathways and public transit from the onset, attempting to encourage walking for both leisurely pursuits and in order to promote the use of public transit. Where required this may involve making a special effort to design open spaces in order to provide appropriate and efficient bus stop locations, and to provide pedestrian shortcuts.
 - The preservation of conservation-worthy natural features to incorporate those as amenities into the neighbourhood open space system. A significant natural feature such as the woodlot offers such an opportunity.
- Balance the development aspirations of landowners in the Plan area with the planning factors and the interests of the community at-large. This will be pursued through landowner and public consultation and due statutory process.
- Accommodate the efficient provision of municipal water, sanitary sewer and storm water management services in support of the development concept.

SECTION 5: DEVELOPMENT CONCEPT

The development concept shown in Figure 3 incorporates the planning factors, goal and key principles identified in Section 4 of this Plan. It also reflects the input of the City of Red Deer departments of Engineering Services, Inspections & Licensing, Recreation, Parks & Culture, Social Planning, Land & Economic Development, and Community Planning, as well as other agencies, landowners and the public.

5.1 Community Theme and Neighbourhood Structure

As part of a conscious effort to recognize the existence of the railway, rather than trying to ignore and *'hide'* it as a negative aspect, the neighbourhood theme was designed to incorporate references to *'the railway'*. An example of this effort is the selected neighbourhood name, *'Johnstone Crossing'*. Other ways in which the *'railway theme'* could be incorporated into the character of the neighbourhood, where considered appropriate by the City, include the design of neighbourhood entrance feature signs with distinctive logo, pathway paving patterns, street name signs, the fire station architecture, playground equipment, a rail viewing platform on the berm, and the design of bus stop, street and park furniture. In promoting the *'railway theme'* as an integral feature of the neighbourhood it is hoped that some of the positive ambience of *'small town Central Alberta'* might be incorporated into a unique *'identity of place'*.

The development concept is designed to provide structure to the community. This is achieved by accommodating the woodlot as a neighbourhood park and *'extending'* it into a larger portion of the community by incorporating a linear-and-nodal park system. This design feature provides structure and establishes a *'special place'* unique to the neighbourhood.

Neighbourhood maps will be provided at the two entrances to the neighbourhood. At the north entrance the map will be provided within the collector road right-of-way adjacent to a pull-out area at the north multi-family site. This section of the collector roadway is sufficiently wide (i.e. 30 metres and more) to accommodate this design. At the south entrance the neighbourhood map will be located within the neighbourhood park site with the multi-purpose pad and parking lot.

The parking lot in the neighbourhood park is a potential location for a community mailbox cluster serving up to 39 single family dwellings (detached or semi-detached) in the first phase of subdivision. At each subsequent phase of subdivision consideration will be given to either:

- the addition of community mailboxes to this location to expand the community mailbox cluster into a mini-park, potentially serving from 39 to 304 single family homes (detached or semi-detached); or
- dispersing new community mailbox clusters throughout the subdivision to serve the additional homes in each phase.

Arrangements for mailboxes for multi-family sites are the responsibility of the individual builder.

Johnstone Crossing

Neighbourhood Area Structure Plan

Scale 1:5,000

December 2005

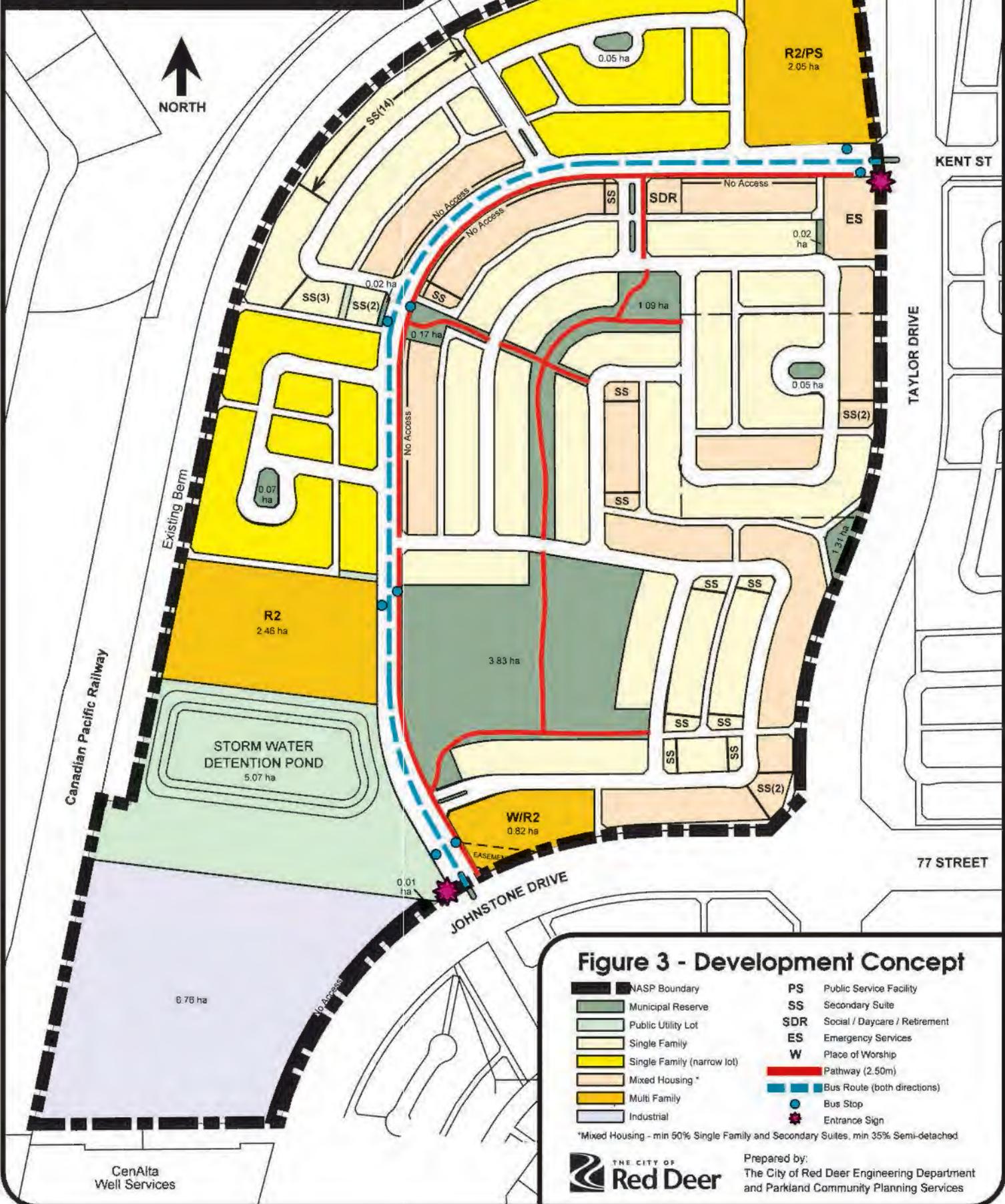


Figure 3 - Development Concept

- | | | | | |
|--|----------------------------|--|-----|-------------------------------|
| | NASP Boundary | | PS | Public Service Facility |
| | Municipal Reserve | | SS | Secondary Suite |
| | Public Utility Lot | | SDR | Social / Daycare / Retirement |
| | Single Family | | ES | Emergency Services |
| | Single Family (narrow lot) | | W | Place of Worship |
| | Mixed Housing * | | | Pathway (2.50m) |
| | Multi Family | | | Bus Route (both directions) |
| | Industrial | | | Bus Stop |
| | | | | Entrance Sign |

*Mixed Housing - min 50% Single Family and Secondary Suites, min 35% Semi-detached

Johnstone Crossing

Neighbourhood Area Structure Plan

Scale 1:5,000

December 2005

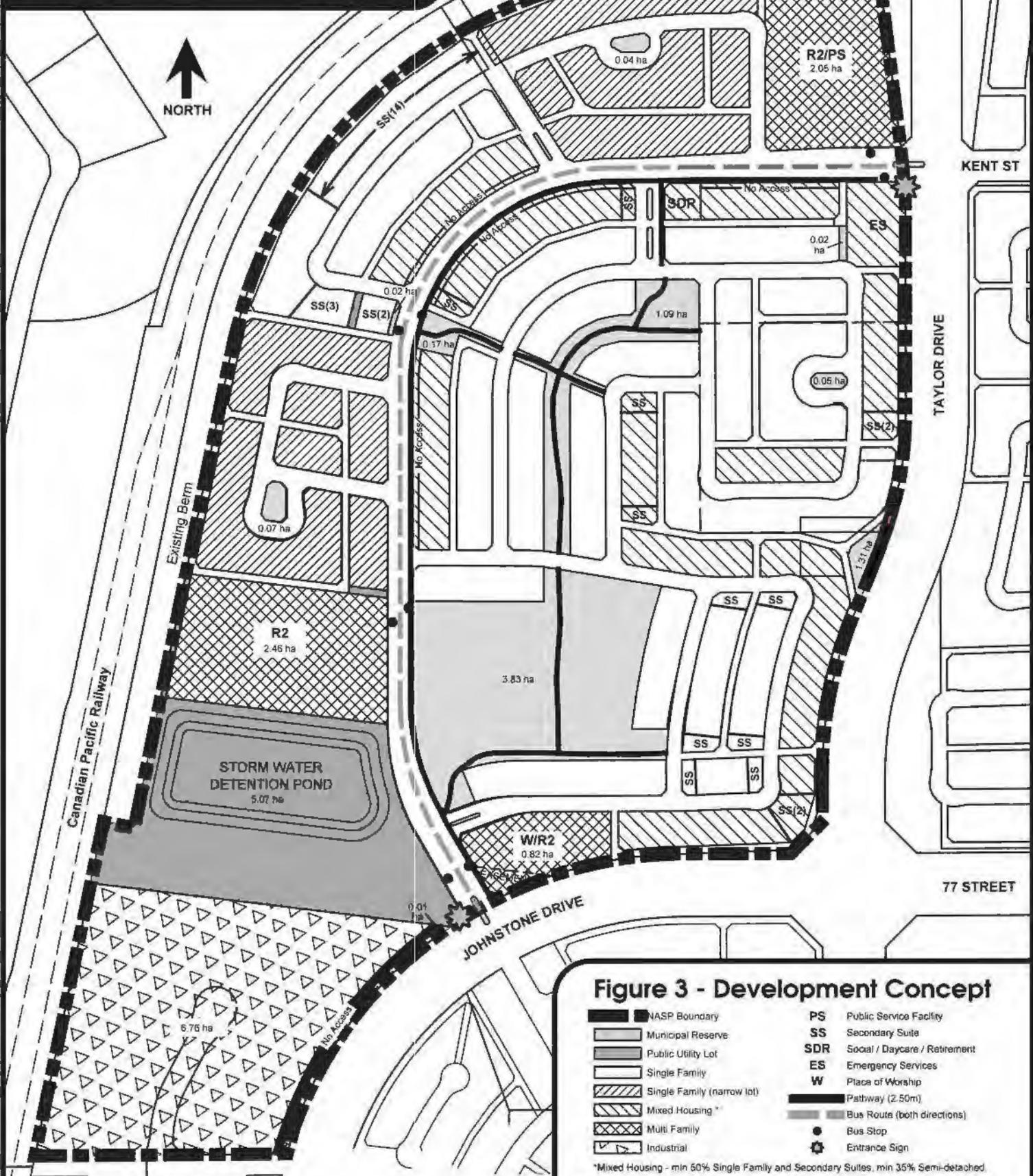


Figure 3 - Development Concept

- | | | | |
|--|----------------------------|------------|-------------------------------|
| | NASP Boundary | PS | Public Service Facility |
| | Municipal Reserve | SS | Secondary Suite |
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| | Mixed Housing * | | Pathway (2.50m) |
| | Multi Family | | Bus Routes (both directions) |
| | Industrial | | Bus Stop |
| | | | Entrance Sign |

*Mixed Housing - min 50% Single Family and Secondary Suites, min 35% Semi-detached.

5.2 Transportation

5.2.1 Arterial Roadways

The neighbourhood is served by Taylor Drive and (the future) Johnstone Drive for arterial roadway access, providing transportation to and from the neighbourhood on a City-wide basis. The rights-of-way of these arterial roads are outside of the Plan area, however their cross sections accommodate earthen berms along the Plan boundary for traffic noise attenuation to the benefit of the neighbourhood. The berm approaching the intersection of these two arterial roadways will be 2.5 metres high, which is in excess of the minimum standard in order to more effectively attenuate the higher noise levels associated with the stopping and proceeding of vehicles, and provide enhanced privacy to homes backing onto the arterial. In order to accommodate the higher berm road widening is required along Taylor Drive and (the future) Johnstone Drive.

The rights-of-way of both arterial roadways include a 3.0 metre pathway along the eastern and southern boulevards as part of the City-wide trail system. The neighbourhood trail will provide linkages to this pathway at the two intersections of the collector roadway with the two arterial roadways.

5.2.2 Collector Roadway

The general alignment of the collector roadway is pre-determined by the framework provided in the Northwest Major Area Structure Plan, and the fact that the locations of its intersections with Taylor Drive and Johnstone Drive are fixed.

At the two neighbourhood entrances the collector roadway widens into a *'feature street'* consisting of a 33 metres wide divided collector roadway with trees in the median. At the north entrance the median will not extend past the midpoint of the street frontage of the Emergency Services site, in order to allow free emergency vehicle access and egress in both directions. At the south entrance the median will not extend past the midpoint of the Place of Worship site, to allow access to this site off the collector road. The remainder of the collector roadway between the two *'feature street'* entrances tapers down to an undivided 24 metres wide collector roadway, or *'main street'*, with separate sidewalks and trees in the boulevard.

The pathway along the east side of the collector street will be a 2.5 m wide separate sidewalk, and along the west side of the collector street a 1.5 m wide separate sidewalk (see Figure 4). In order to improve the safety of pedestrians and cyclists using the pathway and to enhance the aesthetic characteristics of the roadway with consistent tree spacing, front driveways for residential lots, except multi-family sites, are not permitted along either side of the collector roadway [note: the R1N Residential (Narrow Lot) District does not allow front driveways].

5.2.3 Local Roadways and Lanes

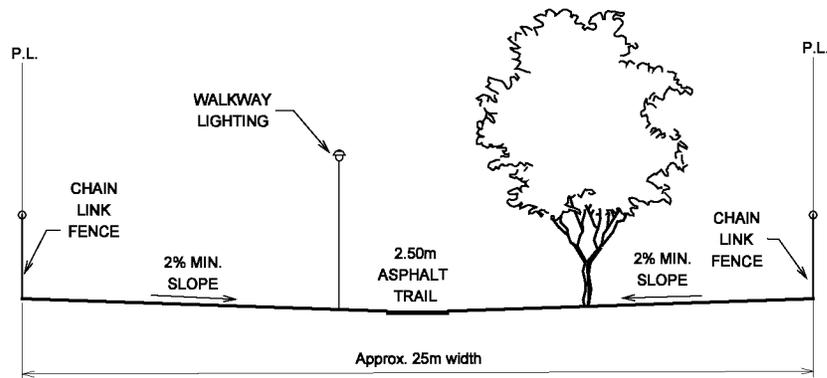
The local streets are based on the standard undivided local roadway cross section in the *'Design Guidelines'*, i.e. a 15 metres wide right-of-way with a 10 metres wide pavement and monolithic curb-side sidewalks. The crescent and *'keyhole'* serving the narrow lot area west of the collector road will be a 16 wide metres right-of-way with an 11 metres wide pavement.

Johnstone Crossing

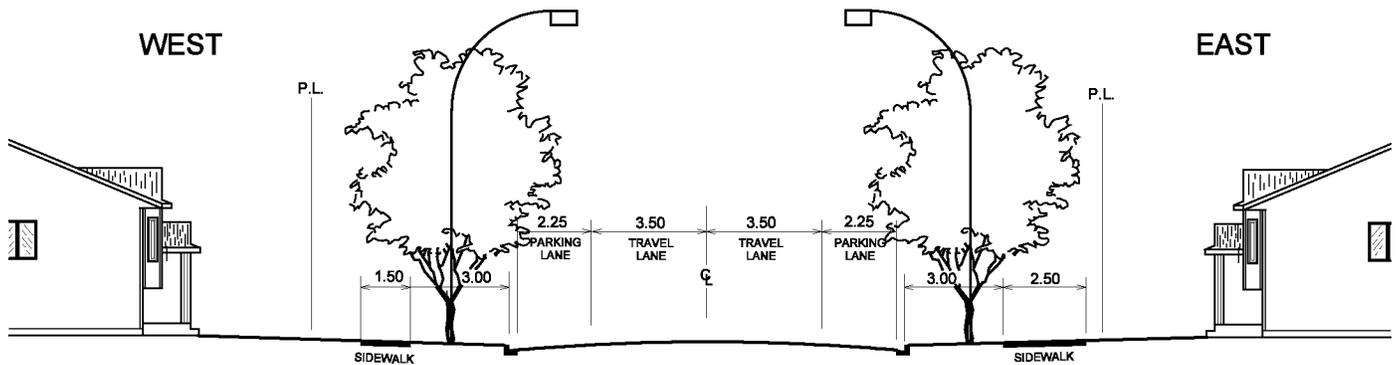
Neighbourhood Area Structure Plan

not to scale

May 2003



Typical Linear Park Cross Section



Typical Collector Road ("Main Street") Cross Section with Separate Sidewalk and Boulevard Planting

Figure 4 - Typical Cross Sections

The existing public utility lot in the northwest portion of the Plan area through which trunk lines connect to Edgar Industrial Park is accommodated in a 25 metres wide divided local roadway with trees in the median. The wider than standard roadway provides an opportunity to establish a *'feature street'* entrance to the housing clusters located north of the collector road.

A 27 metres wide divided local roadway is designed as a *'feature street'* entrance to the area south of the collector road. It enters onto the playground node at the north end of the linear park, which is a central attraction in this portion of the Plan area.

A third divided local roadway (25 metres width) or *'feature street'* entrance is provided at the Place of Worship site near the south entrance to the neighbourhood.

Rear lanes are provided to all lots except those backing onto parks. Lanes are 7 metres wide and are aligned to eliminate shortcuts between the local roads. Lanes not only provide vehicle access to individual lots but also accommodate storm sewers, sanitary sewers and water lines.

5.2.4 Pathways

The neighbourhood trail system is a key element of the development concept, consisting of pathways within open spaces and a separate sidewalk along the east side of the *'main street'*. At the *'main street'* entrances the neighbourhood trail system links with the City-wide trail system, which runs along the east side of the arterial roadways.

The linear park element accommodates a section of the pathway as a movement axis between the playground park node at its north end and the neighbourhood park with its woodlot site at its south end. This section of the separate pathway within the linear park will be illuminated with appropriate lighting. Residential lots backing onto the linear park and the central park will be chain-link-fenced by the developer to ensure consistency of appearance and to enhance safety. The typical cross section of the linear park, indicating the pathway, is illustrated in Figure 4.

Within the neighbourhood trail system pathways shall be directed to crosswalks at roadway intersections where practical. Where this is not possible a mid-block crossing will be provided, and in order to improve pedestrian safety at these locations, the crossing will be shortened by using narrower vehicle travel lanes on the roadway and extending the sidewalk into the street as an extension of the walkway. Proper illumination at mid-block crossings will significantly improve the level of night time pedestrian safety. Figure 5 illustrates the plan view of a typical mid-block pedestrian crossing. There are two locations in the development concept where a mid-block crossing will be provided. One location is where the pathway from the woodlot crosses the local roadway to continue through the linear park. The other location is where the pathway from the linear park crosses the local roadway to continue westward towards the central bus stop location.

5.2.5 Public Transit

The design of public transit service is in accordance with the City of Red Deer *'Neighbourhood Planning and Design Guidelines & Standards'* and other transit planning

Johnstone Crossing

Neighbourhood Area Structure Plan

not to scale

May 2003

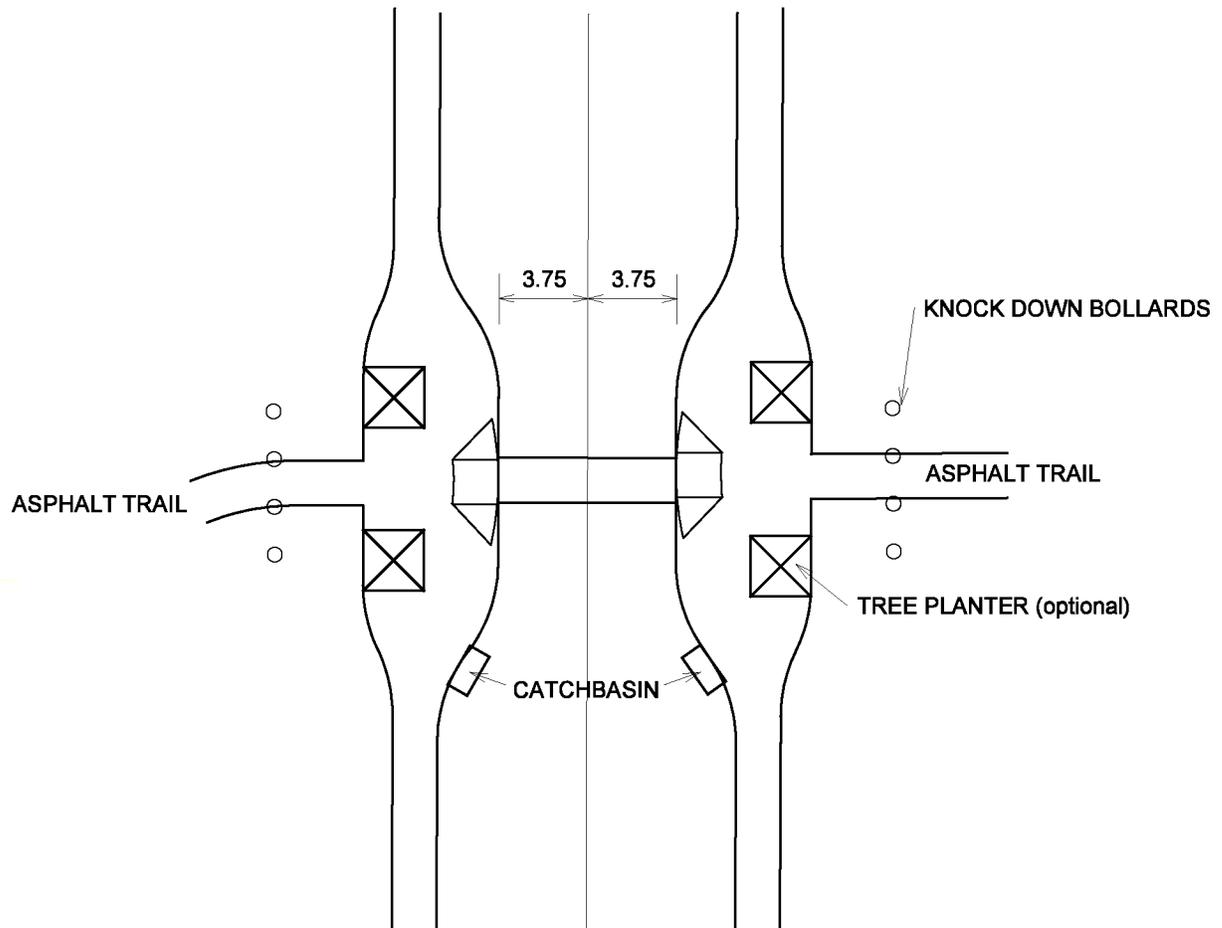


Figure 5 - Typical Mid Block Pedestrian Crossing

standards. Implementation of the public transit service is subject to funding as approved by Red Deer City Council and public demand for service.

Conventional public transit service will be provided using collector and arterial roads, not local roads. Four locations are identified along the collector roadway for bus stops on both sides, as indicated on the development concept (Figure 3). Where practical these are selected at open spaces, multi-family sites, and public institutional sites.

The pathway leading from the linear park to the collector street, and the “parkette” which fronts onto the east side of the collector street are provided to create a pedestrian linkage and open space for the location of the bus stop in the central portion of the Plan area. Another pathway is provided in a Municipal Reserve parcel located west of the Emergency Services site, providing a pedestrian shortcut to the transit stop. This walkway will link to a sidewalk along the short section of lane which leads northward to the collector street with its 2.5 metre separate sidewalk. These design features are incorporated for transit planning in order to secure future bus stop locations within a maximum of 400 m walking distance from all residential sectors of the Plan area.

Some bus stops may not be implemented at the proposed locations subject to considerations for development staging, walking patterns, necessity and/or passenger demand.

5.3 Residential Land Uses

5.3.1 Conventional Detached Dwellings

Lots for conventional detached dwellings are found predominantly in the area south and east of the ‘*main street*’ and also in the crescent between the two clusters of narrow lots on the north side of the collector street. Approximately 25 lots in these areas are designated for detached dwellings with secondary suites.

In addition, lots for conventional detached dwellings and lots for detached dwellings with secondary suites are provided in the mixed housing area (see Section 5.3.2 for details).

Lots allocated for conventional detached dwellings and detached dwellings with secondary suites will be designated into the R1 Residential (Low Density) District. These lots will be generally 35 metres deep, and will be subdivided at frontages of 13.25 metres on average. Minor variations to these averages may be made at the subdivision stage without requiring an amendment to the NASP.

In order to improve pedestrian and cyclist safety on the pathway and to enhance the aesthetic characteristics of the roadway by ensuring consistent tree spacing, those residential lots fronting along both sides of the ‘*main street*’ with its separate pathway and sidewalk will not be allowed front driveway access.

As discussed in Section 5.4.2 of this Plan, in order to mitigate the potential visual and noise effects of the railway and industrial area the developer will install an appropriate sound fence and associated landscaping along the top of the berm. Home builders in the area adjacent to the berm are encouraged to optimize site specific opportunities to provide further mitigation by providing rear garages and small front yards (i.e. move the houses further away from the railway).

5.3.2 *Mixed Housing*

Lots for conventional detached dwellings, lots for detached dwellings with secondary suites and lots for semi-detached dwellings are provided in the designated mixed housing areas. The principal criteria which influenced the location of the mixed housing areas were rear lane access and, in order to improve pedestrian and cyclist safety, the prohibition of front driveway access to lots fronting along both sides of the 'main street' with its separate pathway and sidewalk.

In order to achieve the objective of a balanced blend of mixed housing types, a minimum of 50% of the lots provided in the designated mixed housing areas shall be conventional single family detached dwellings and detached dwellings with secondary suites (the latter subject to the maximum of 10% in the Land Use Bylaw), while a minimum of 35% of the lots shall be designated as semi-detached dwellings (for this purpose counting a pair of semi-detached dwelling units as two separate lots). At subdivision, groups of semi-detached lots shall consist of not more than three adjacent semi-detached lots (six dwelling units), and such groups shall be separated by at least two adjacent lots for conventional detached dwellings or detached dwellings with secondary suites, or a municipal reserve lot, a PUL, a street or a lane.

Lots allocated for semi-detached dwellings will be designated into the R1A Residential (Semi-Detached Dwelling) District. These lots are 35 metres deep on average and their frontage will be between 15 and 19 metres (minimum of 7.6 metres per dwelling unit). Minor variations to these averages may be made at the subdivision stage without requiring an amendment to the NASP.

5.3.3 *Narrow Lots*

Detached dwellings on narrow lots are located in two clusters in the area north and west of the collector street, each cluster providing for approximately 65 dwellings. These lots will be designated into the R1N Residential (Narrow Lot) District. Narrow lots have 10.4 metres frontages on average, are generally deeper (a minimum depth of 36.6 metres) with a smaller front yard setback than conventional single family lots, and they have rear lane access and parking or rear detached garages (front access is prohibited).

As discussed in Section 5.4.2 of this Plan, in order to mitigate the potential visual and noise effects of the railway and industrial area the developer will install an appropriate sound fence and associated landscaping along the top of the berm. Home builders in the area adjacent to the berm are encouraged to optimize site specific opportunities to provide further mitigation by providing rear garages and small front yards (i.e. move the houses further away from the railway).

5.3.4 *Multi-Family Dwelling Units*

Three multi-family sites are provided in the development concept. One larger site is provided at the north entrance to the neighbourhood. Another larger multi-family site and a smaller multi-family site are provided near the south entrance.

The selection of these multi-family site locations was influenced by considerations for vehicular traffic, collector roadway access, proximity to bus stops and open spaces, or specific land use or site issues.

The smaller site at the south neighbourhood entrance may have access to either or both the collector roadway and the local street, while access to the two larger sites will be from the collector roadway only.

The walking distance from the north multi-family site to the park node at the north end of the linear park is approximately 200 metres. This is appropriate considering the fact that the separate pathway runs adjacent to this site, providing direct access to the neighbourhood park system, and also considering that the Land Use Bylaw requires the builder to provide on-site landscaped areas and open space.

The three multi-family sites will be designated in the R2 Residential (Medium Density) District and are intended for row houses, townhouses, other forms of multi-attached dwelling units and low rise apartment buildings. Semi-detached dwellings are allowed on the multi-family sites only if they are developed as a bareland condominium project and provided that the 1:3 or 25% maximum ratio between the total number of semi-detached dwelling units and detached dwelling units in the total neighbourhood housing stock is not exceeded.

The density range of the types of development envisioned for the multi-family sites is assumed to be between 35 to 70 dwelling units (53 dwelling units per hectare average).

Building design shall have due consideration for any applicable findings and recommendations from the noise study which will be undertaken as part of the neighbourhood servicing study.

As an alternate land use to the R2 residential development, the north multi-family site may provide for development as an institutional service facility. In this instance, the site will be designated within the PS Public Service District and will be excluded from the developable plan area for density calculations.

5.3.5 Facilitating Affordable Housing Options

Providing opportunities for affordable housing in the Johnstone Crossing subdivision is a primary consideration for the developer, and home builders are encouraged to make use of these opportunities.

Opportunities to provide affordable housing include keeping the average lot frontage in all single family residential land use districts near the applicable minimum standard provided for in the Land Use Bylaw, in order to create smaller lots and consequently achieve affordable lot prices.

Another opportunity to contribute to housing affordability is the incorporation of detached dwellings with secondary suites. This concept facilitates the supplementing of household income through the rental of the secondary suite, thereby making the mortgage payments for the principle home owner more affordable. At the same time affordable rental suites will be made available. Alternatively the secondary suite concept allows for aging parents to move into a self-contained unit in their children's home (i.e. the option of two-generational housing), or allows families to meet other similar unique housing needs.

Another opportunity for affordable housing is presented by either one or all three of the multi-family sites. Any one of these sites, or portions thereof, or a selected number of dwelling units in the overall development of these sites may be considered by any individual, public agency or corporate group for the purpose of 'co-operative housing'. More information on this concept is provided in Appendix A.

5.4 Parks and Open Space

5.4.1 Neighbourhood Park

A key design feature of the development concept is the open space system. It establishes a 'special place' consisting of the neighbourhood park, with associated leisure facilities and amenities, linked to a "parkette" with a play structure. The linkage is established by a paved pathway within a landscaped linear park. The linear element extends the neighbourhood park and leisure facilities into the neighbourhood. Figure 6 illustrates the open space system and neighbourhood park plan.

The woodlot site is the location of the neighbourhood park, which creates a 'special place' for active and passive leisure and recreation. A preschool playground structure will be provided in the clearing on the north side of the park, while an elementary playground structure will be located in the open area south west of the woodlot. An illuminated multi-purpose pad will be incorporated into the west side of the neighbourhood park, providing for a variety of activities such as tennis, basketball and ice skating. A snowbank rink will complement the main ice surface during winter months.

For the most part the woodlot will be retained in its natural state, but for public safety reasons sections of the woodlot will be cleared to enhance visibility from roadways and adjacent houses. In two locations trees at the perimeter of the woodlot will be removed in order to create a 10 metres wide clearing for the installation and maintenance of servicing at the back of the residential lots.

As part of the neighbourhood park concept a soccer field and sliding hill will be developed on a portion of the stormwater detention pond.

The linear park is designed to extend the open space system into the neighbourhood, enhancing the access to the neighbourhood park and leisure facilities. A play structure for young children will be provided in the "parkette" at the north end of the linear park. In addition to its practical function as a playground, this park also constitutes a prominent feature at the entrance to this part of the neighbourhood.

The municipal reserve lots or "parkettes" located in the 'keyhole' crescents will include natural landscaping features such as trees and shrubs, and will also incorporate park benches and community mailboxes within their boundaries, creating a 'special place' for each of the three housing clusters. No playground equipment will be installed in these "parkettes".

The "parkette" located adjacent to the east Plan area boundary at the back of the residential lots is created in order to divert the rear lane alignment to reduce traffic speed, and also to reduce the excessive depths of the adjacent residential lots. This "parkette" will include natural landscaping features such as low shrubs and trees with canopies at minimum ground clearances in order to protect sight lines. No playground

Johnstone Crossing

Neighbourhood Area Structure Plan

Scale 1:5,000

December 2005

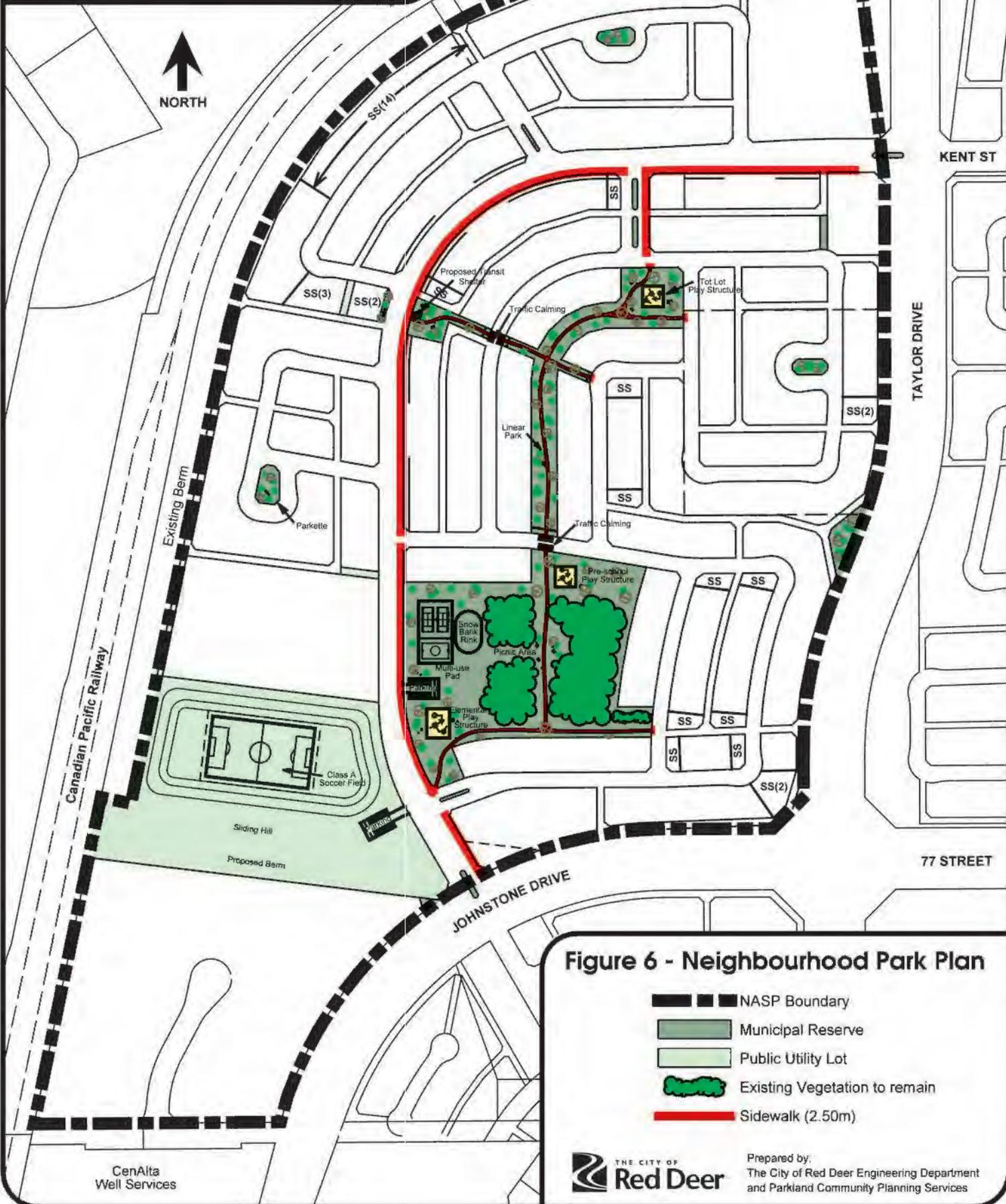


Figure 6 - Neighbourhood Park Plan

- NASP Boundary
- Municipal Reserve
- Public Utility Lot
- Existing Vegetation to remain
- Sidewalk (2.50m)

equipment or fences will be installed in this “parkette”. Parks maintenance of this “parkette” will not present difficulties because it is continuous with the adjacent arterial roadway berm which itself requires regular parks maintenance.

Walkways provide pedestrian shortcuts adjacent to the west boundary of the Emergency Services site and from the linear park to the central bus stop location.

The developer will install a chain link fence along the rear property lines of all lots backing onto the linear park and the central park. After installation the fence is to be maintained by each property owner.

The development of the neighbourhood park site will commence when approximately 65% of the neighbourhood has been subdivided and developed. The developer is responsible for bringing the neighbourhood park site to rough grade, as per City specifications. Once rough grade is completed, The City will be responsible for the final grading of the site and the Level 1 (grass), Level 2 (trees & shrubs), and Level 3 (sports fields, playgrounds, and hard surfaces & structures) landscaping. Normally, the development of the neighbourhood park site is completed over two warm weather seasons.

5.4.2 Municipal Reserve Dedication

The land areas required for “parkettes”, the linear park, walkways (pedestrian shortcuts), and the neighbourhood park will be dedicated as municipal reserve.

Municipal reserve in respect of the NE ¼ Section 31-38-27-W4 was dedicated previously as part of the subdivision of the Edgar Industrial Park. This reserve was dedicated in the form of the berm (i.e. Lots 3MR and 4MR Block 4 Plan 902 0499) adjacent to the railway tracks, and in the form of a municipal reserve transfer to the Kentwood West subdivision. Therefore, no further municipal reserve dedication is required for the remaining undeveloped portion of this quarter section, i.e. Lot 1 Block 4 Plan 812 1569 measuring 16.167 hectares and forming the north part of the Plan area. In the Plan area, therefore, municipal reserve is owed only on 43.193 hectares, which is the south part of the Plan area. The 5.41 hectares of municipal reserve dedicated in this subdivision (refer to Table 1) represents 9.04% of the total Plan area (i.e. 59.86 hectares), however, when the percentage of municipal reserve is calculated against that part of the Plan area in respect of which municipal reserve is owed (i.e. the 43.193 hectares), the actual percentage of municipal reserve being dedicated is 12.53%.

Although municipal reserve is technically not owed in respect of the NE ¼ Section 31-38-27-W4, the development concept does provide municipal reserve in that portion in order to ensure a balanced dispersion of parks throughout the Plan area.

Since the berm along the railway line is excluded from the Plan area, it shall not be regarded for the calculation of municipal reserve dedication. However this neighbourhood will benefit from the enhancement of the visual and noise attenuation characteristics of the berm by the addition of a sound fence and appropriate landscaping along the top of the berm. The design requirements of the sound fence will be determined through a noise study which will be undertaken as part of the neighbourhood servicing study.

The development concept allocates a “parkette” on Lot 2 Block 1 Plan 022 4553 (i.e. the privately owned parcel of 3.87 hectare) which will be dedicated as municipal reserve. Although overall municipal reserve dedication within the Plan area is 12.53%, the proportional amount of municipal reserve within Lot 2 Block 1 Plan 022 4553 (i.e. 0.047 hectares) does not add up to 10%, which would have been 0.387 hectares. The balance owing (i.e. 0.34 hectares) of the 10% requirement will be dedicated to the City of Red Deer in the form as cash in lieu of land in accordance with Sections 666 and 667 of the *Municipal Government Act*, or as may be otherwise determined by the City and the landowner by mutual agreement.

5.4.3 Public Utility Lots

Existing utility trunk lines are accommodated in the public utility lot in the south portion of the Plan area west of the collector roadway intersection with Johnstone Drive. East of the intersection the trunk lines are accommodated in an easement on the Place of Worship site. West of the intersection a 30 metre wide PUL will be created adjacent to the south of the PUL containing the utility trunk lines. This additional PUL will contain a landscaped berm to screen the industrial activities in the south portion of the Plan area.

The existing PUL in the northwest portion of the Plan area between the collector roadway and Edgar Industrial Park, also containing existing utility trunk lines, is partially accommodated in the road right-of-way. The remainder will be accommodated in easements on the residential lots.

The dry (detention) pond forming part of the storm water management system provides separation between residential lots and the industrial area. A 5.0 metre wide PUL is created east of the railway berm to provide drainage to the detention pond.

5.5 Community Facilities

5.5.1 Social Care / Day Care / Adult Day Care / Assisted Living / Retirement Home Site

A Social Care / Day Care / Adult Day Care / Assisted Living / Retirement Home site (SDR site) is provided in the north portion of the Plan area. This site has collector street access and is located on the bus route within close proximity to the open space system which offers convenient access to passive and active leisure opportunities and the neighbourhood pathway system / city-wide trail system. Section 5.5.4 of this Plan provides information on the residential conversion option for this site.

5.5.2 Place of Worship Site

A Place of Worship site is provided at the south entrance to the neighbourhood, where it enjoys visibility from Johnstone Drive and is easily accessible from within the neighbourhood either by walking or driving, as well as from other neighbourhoods. The south west corner of this site contains deep trench services and will be registered as an easement on the property title. Buildings, signs and other structures would not be allowed on this portion of the site, but parking lot development or landscaping will be allowed. Section 5.5.4 of this Plan provides information on the residential conversion option for this site.

5.5.3 *Emergency Services Site*

An Emergency Services (ES) site for the purpose of a fire station and is provided at the north entrance to the neighbourhood. Traffic associated with this site (i.e. emergency vehicles, visitors and staff vehicles) shall not be allowed access from the local roadway. Access for emergency vehicles will be from the collector street, and staff vehicles will enter from the lane off the collector street to a parking lot at the rear of the building. The site configuration allows for efficient fire station and site design.

The collector roadway in this location has a median which will not extend beyond the midpoint of the ES site street frontage, in order to allow free access and egress of emergency vehicles in both directions.

The temporary access to Lot 2 Block 1 Plan 022 4553 from the collector road right-of-way will be retained across the ES site until development of the adjacent phases allows for access along the neighbourhood roadways.

The entire Plan area will fall within the four-minute minimum response time upon completion of the station, which is expected by the end of May 2006.

5.5.4 *Residential Conversion Options*

Social Care / Day Care / Adult Day Care / Assisted Living / Retirement Home Site and Place of Worship Site

In the event that either one of the A Social Care / Day Care / Adult Day Care / Assisted Living / Retirement Home site (SDR site) or the Place of Worship site is not purchased for the proposed use within six months of advertisement through the City of Red Deer Social Planning Department, these lots may be converted to residential uses as follows:

- the SDR site to the designated mixed housing area, subject to the requirements stipulated in Section 5.3.2 of this Plan (note: residential lots will not be permitted to have access off the collector street); and
- the Place of Worship site to a multi-family site, subject to the requirements stipulated in Section 5.3.4 of this Plan.

Emergency Services Site

In the event that the Emergency Services site is no longer needed for its intended purpose, as will be determined by The City of Red Deer, that it may be converted to the designated mixed housing area, subject to the requirements stipulated in Section 5.3.2 of this Plan (note: residential lots will not be permitted to have access off the collector street). In such an event, the lane alignment will be changed and a section of lane will be converted to municipal reserve, as illustrated on Figure 7.

5.6 Light Industrial Development

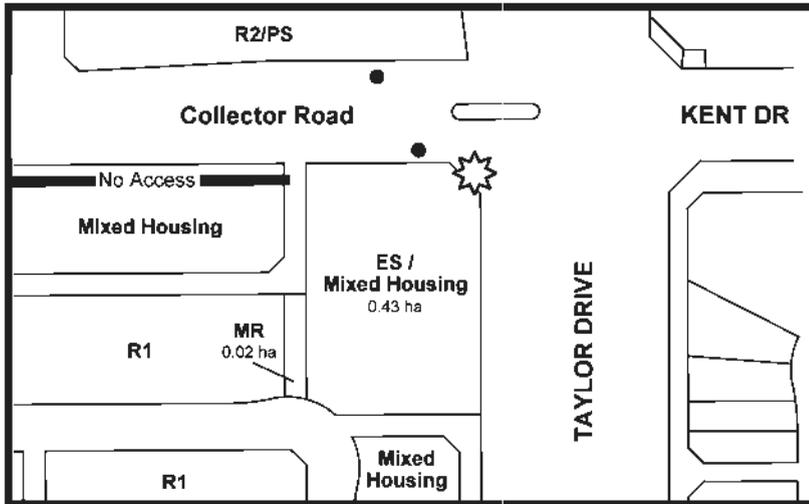
An area for light industrial uses is provided to match the existing development in the Golden West industrial area south of 76 Street adjacent to the railway line. Access to this development will be from 76 Street and no direct site access will be allowed from Johnstone Drive. The intention is that this area will be developed as a business service

Johnstone Crossing

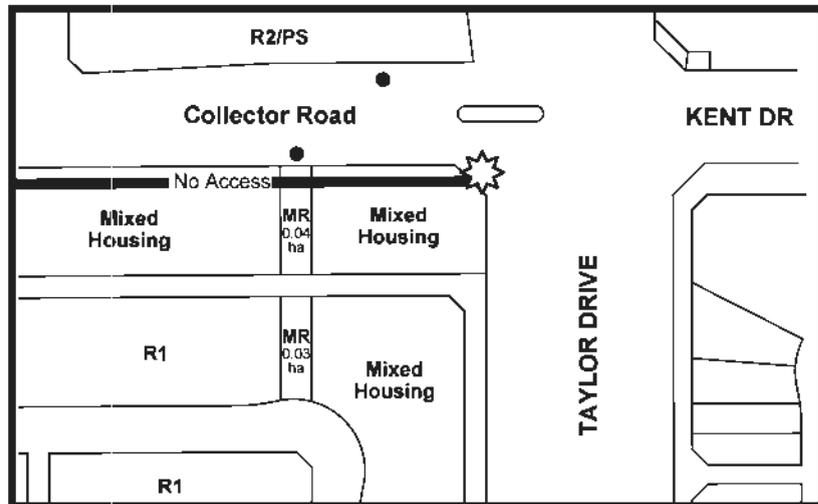
Neighbourhood Area Structure Plan

not to scale

December 2005



PROPOSED



CONVERSION

Figure 7 - Emergency Services Site Conversion to Residential

- Bus Stop
- ✱ Entrance Sign

and light industrial park. Through various tools at their disposal the developer in co-operation with the City will ensure that industrial buildings are designed to front-orientate onto Johnstone Drive or, alternatively, to pay special attention to elevation treatment and landscaping of rear yards along Johnstone Drive.

5.7 Land Use Statistics

At build-out capacity the development concept yields a total number of housing units ranging between 752 and 892 dwelling units, depending on the development of the SDR, Place of Worship and ES sites. The final numbers will also be influenced by the actual densities being achieved on the multi-family sites. Refer to Table 1.

Table 1: Land Use Allocation (see Note 1)

LAND USE CATEGORY/COMPONENT	AREA (ha)	% OF PLAN AREA	NUMBER OF DWELLING UNITS
Plan Area	59.86	100%	-
Emergency Services Site	0.45	0.75%	-
Business Service / Light Industrial	6.76	11.29%	-
Arterial Road widening for berm	0.03	0.05%	-
Developable Plan Area (see Note 2)	52.62	-	-
Institutional Service Facility Site (see Scenario D)	2.06	3.58%	-
Scenario A (see Note 3): Total net residential area - SDR, Place of Worship, and ES sites developed for intended use	27.87	46.56%	832
Scenario B: Total net residential area - SDR and Place of Worship sites developed for residential use	28.81	48.13%	883
Scenario C: Total net residential area - SDR, Place of Worship and ES sites developed for residential use – developable plan area of 53.07 ha includes the ES site	29.26	48.88%	892
Scenario D: Total net residential area – SDR and ES sites developed for intended use as in Scenario A with the west R2 site and the Place of Worship site developed for R2 residential use, but with the north R2 site developed for PS use (institutional service facility) and thus being excluded from the developable area calculation (i.e. new area = 50.48 ha)	27.19	45.42%	752
The total housing stock in the base scenario is made up as follows:			
• Conventional Detached Dwellings	10.16	16.97%	217
▪ Detached dwellings with secondary suites	1.47	2.46%	37 (25 lots)
• Narrow Lot Detached Dwellings	5.64	9.42%	130
• Mixed housing (refer to Section 5.3.2 of this Plan for details of the required mix ratio)	6.08	10.16%	160 (156 lots)
– Conventional Detached Dwellings	-	-	84
– Detached dwellings with secondary suites	-	-	12 (8 lots)
– Semi-detached Dwellings	-	-	64 (32 pairs of lots)
• Multi-Family Dwelling Units on north and west R2 sites and the Place of Worship site developed as PS	4.52	7.55%	288
• Option 1: Multi-Family Dwelling Units on north and west R2 sites and the Place of Worship site developed for R2 residential use	5.34	8.92%	336

LAND USE CATEGORY/COMPONENT	AREA (ha)	% OF PLAN AREA	NUMBER OF DWELLING UNITS
<ul style="list-style-type: none"> Option 2: Multi-family Dwelling Units on west R2 site, the Place of Worship site developed for R2 residential use and the north R2 site developed as PS (see Scenario D) 	3.28	5.48%	208
Social Care / Day Care / Adult Day Care / Assisted Living / Retirement Home site (SDR site)	0.12	0.20%	-
Place of Worship Site	0.82	1.37%	-
Open Space	10.59	17.69%	-
<ul style="list-style-type: none"> Municipal reserve (see Note 4) 	5.41	9.04% (12.53)	-
<ul style="list-style-type: none"> Public Utility Lots 	5.18	8.65%	-
Transportation	13.22	22.09%	-
<ul style="list-style-type: none"> Collector roadway 	3.60	6.01%	-
<ul style="list-style-type: none"> Local roadways 	6.12	10.23%	-
<ul style="list-style-type: none"> Rear lanes 	3.50	5.85%	-

Notes

- 1) The numbers are approximate and subject to more detailed calculations at the time of subdivision.
- 2) The Developable Plan Area is used for the density calculation. This area equals the Plan area minus any Environmental Reserve (none in this case), and minus any City-wide land uses, such as in this case the Emergency Services site, the industrial land, the arterial road widening and a potential institutional services facility. This developable plan area applies to Scenarios A and B. For Scenario C the developable plan area is 53.07 ha. For scenario D the developable plan area is 50.48 ha.
- 3) Scenario A represents the base scenario. All subsequent calculations are based on the base scenario, unless otherwise indicated.
- 4) Refer to the discussion under Section 5.4.2 of this Plan.

With regard to minimum standards for neighbourhood density and housing mix, the City's requirements in the 'Neighbourhood Planning and Design Guidelines and Standards' are as follows:

- A minimum residential density within the range of 12.35 to 17.3 dwelling units per hectare of developable plan area. The maximum neighbourhood density will ultimately be determined by efficiencies of providing appropriate infrastructure capacities (mainly sewer trunk lines).
- A housing mix of low density dwelling types at a minimum of 60% of the total dwelling unit stock, and multi-family dwelling unit types (i.e. three or more units) at a minimum of 20%.
- A maximum ratio of 1:3 (25%) for semi-detached dwellings to detached dwellings in the total housing unit stock.
- A maximum of 33% of the net residential land area allocated to narrow lot housing.
- A maximum of 10% of the total number of lots in the R1 Residential (Low Density) District pre-designated for permitted use secondary suites.
- A minimum of 10% municipal reserve.

Table 2: Density and Housing Mix

Density (du/ha) (see Notes 1 – 3)	Scenario A	15.81
	Scenario B	16.78
	Scenario C	16.81
	Scenario D	14.90
Housing Mix (see Note 4)	Low density dwellings as a % of the total housing stock (see Note 5)	65 %
	Multi-family dwelling units as % of the total housing stock (see Note 6)	35 %
	Ratio of semi-detached dwelling units to detached dwellings (see Note 7)	1:5.2
	Narrow lot land area as a % of the total net residential land area	20%
	Lots for detached dwelling with secondary suite as a % of the total number of R1 lots	10%
	Lots for conventional detached dwelling and detached dwellings with secondary suites as a % of the total number of lots in the mixed housing area (see Section 5.3.2 and Note 8)	59%
	Lots for semi-detached dwellings as a percentage of lots in the mixed housing area (see Section 5.3.2 and Note 8)	41%
Municipal reserve dedication (see Note 9)		12.53%

Notes

- 1) Density is measured in the number of dwelling units per hectare (du/ha).
- 2) Refer to Table 1 for an explanation of the four scenarios.
- 3) Assumptions for dwelling unit density projections (intended as general guidelines):
 - Lots for conventional detached dwellings and detached dwellings with secondary suites are assumed to be on average 464 m² with frontages of 13.25 metres and lot depths of 35 metres.
 - Lots for narrow lot detached dwellings are assumed to be on average 381 m² with frontages of 10.40 metres and lot depths of 36.6 metres.
 - Lots for semi-detached dwellings are assumed to be on average 595 m² with frontages of 16.00 to 19.00 metres (minimum of 7.6 metres per unit) and lot depths of 35 metres.
 - Low rise multi-family site density is assumed to be generally 35 dwelling units per hectare. The actual density is not prescribed in the Land Use Bylaw and is determined by the Development Authority at the time of development permit approval. Depending on the actual densities achieved on the multi-family sites the neighbourhood density may vary slightly from the calculated densities.
- 4) These calculations are based on Scenario A.
- 5) For the purpose of this calculation 'Low density dwellings' includes conventional detached dwellings, detached dwellings with secondary suites (calculated at a rate of 1.5), semi-detached dwellings, and narrow lot dwellings.
- 6) Multi-family dwelling units' means three or more attached dwelling units.
- 7) For the purpose of this calculation 'detached dwellings' includes conventional detached dwellings and the lots for detached dwellings with secondary suites (in other words, the secondary suites themselves and the detached dwellings on narrow lots are excluded from this calculation).
- 8) Counting one pair of semi-detached dwelling units as two lots, and each lot for a detached dwelling with a secondary suite as one lot.
- 9) Refer to Table 1 and Note 4 of that table.

SECTION 6: MUNICIPAL SERVICING CONCEPTS

6.1 Storm Water Management

One large storm water detention pond is required to service the neighbourhood. The pond will be located in the southwest portion of the neighbourhood. The exact volume of storm water required will be determined as part of the Servicing Study. There are two existing storm trunk systems within the Plan area:

- The 1050 diameter storm sewer servicing Edgar North Industrial area; and
- The 750 diameter storm sewer servicing the industrial lands west of the development.

Due to capacity limitation in the north system, the 1050 diameter storm sewer and the minor and major storm water drainage will be directed to the south system as much as possible. Major Storm Drainage system is presented in Figure 8 and Overall Storm Servicing system is presented in Figure 9.

6.2 Sanitary Sewer System

The sanitary sewer system required to service this neighbourhood would be an extension of the following two systems:

- The 450 diameter sanitary sewer servicing the north Edgar Industrial lands from the Kentwood West subdivision; and
- The 375 diameter sanitary sewer located on the south side of the neighbourhood adjacent Johnstone Drive servicing the industrial lands west of this development.

The Overall Sanitary Servicing system is presented in Figure 10.

6.3 Water Distribution

The water distribution system required to service the neighbourhood would be an extension of the following lines:

- The existing 250 diameter line servicing the north Edgar Industrial lands; and
- A future 250 diameter line adjacent the south boundary servicing the neighbourhood of Johnstone Park.

As part of the proposed water distribution system required for this neighbourhood, a 300-diameter water main link will be extended from the south collector and Johnstone Drive intersection to an existing crossing of the CPR rail lines. This link will service the industrial lands to the west of this development. The Overall Water Servicing system is presented in Figure 11.

6.4 Shallow Utilities

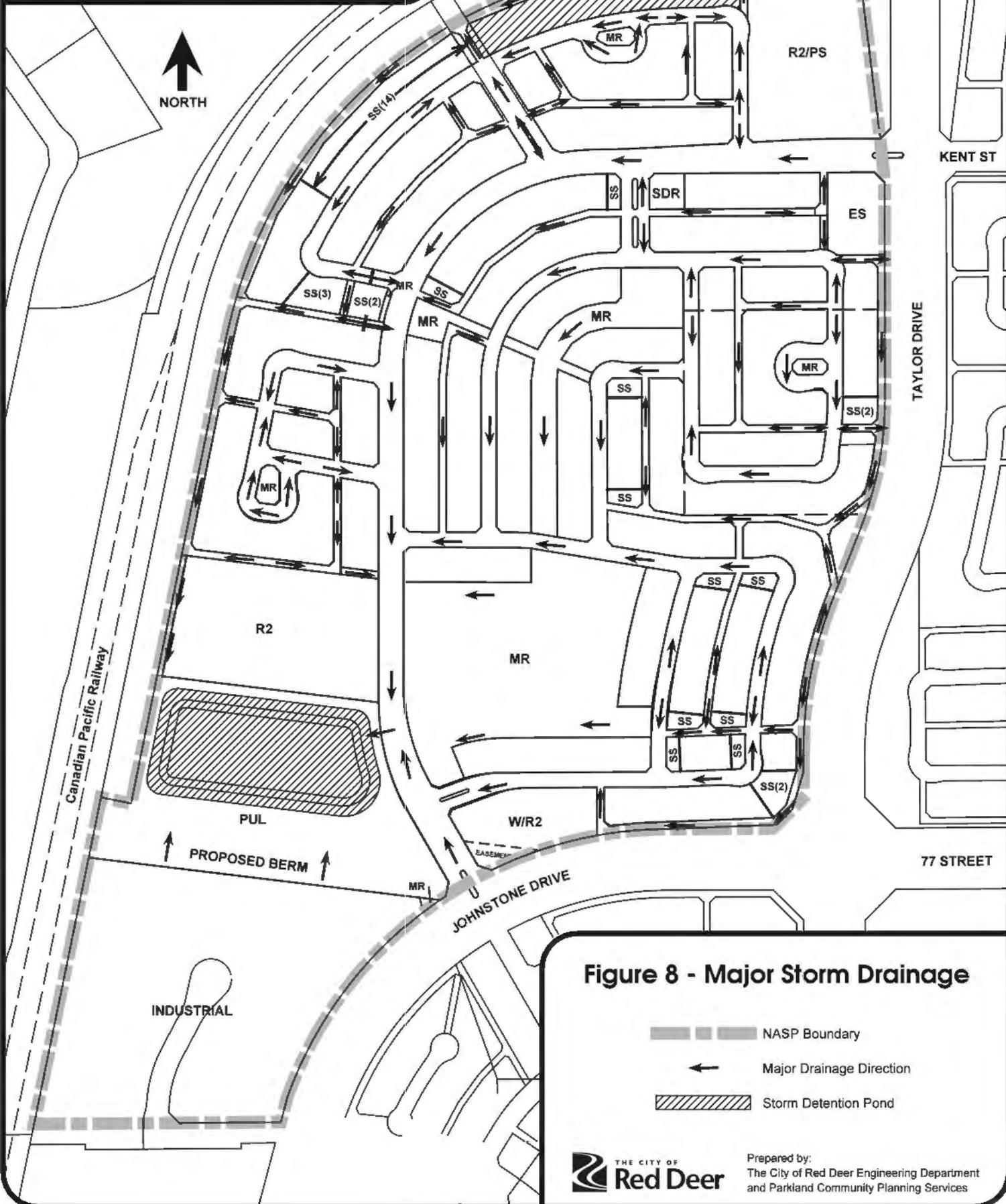
Shallow utility providers, namely the City's Electric Light and Power Department, Telus, Shaw Cable and ATCO Gas have been contacted regarding servicing this neighbourhood. The utility companies will be reviewing and addressing the service alternatives in more detail during the circulation and review of the Neighbourhood Area Structure Plan and Servicing Study.

Johnstone Crossing

Neighbourhood Area Structure Plan

Scale 1:5,000

December 2005



Johnstone Crossing

Neighbourhood Area Structure Plan

Scale 1:5,000

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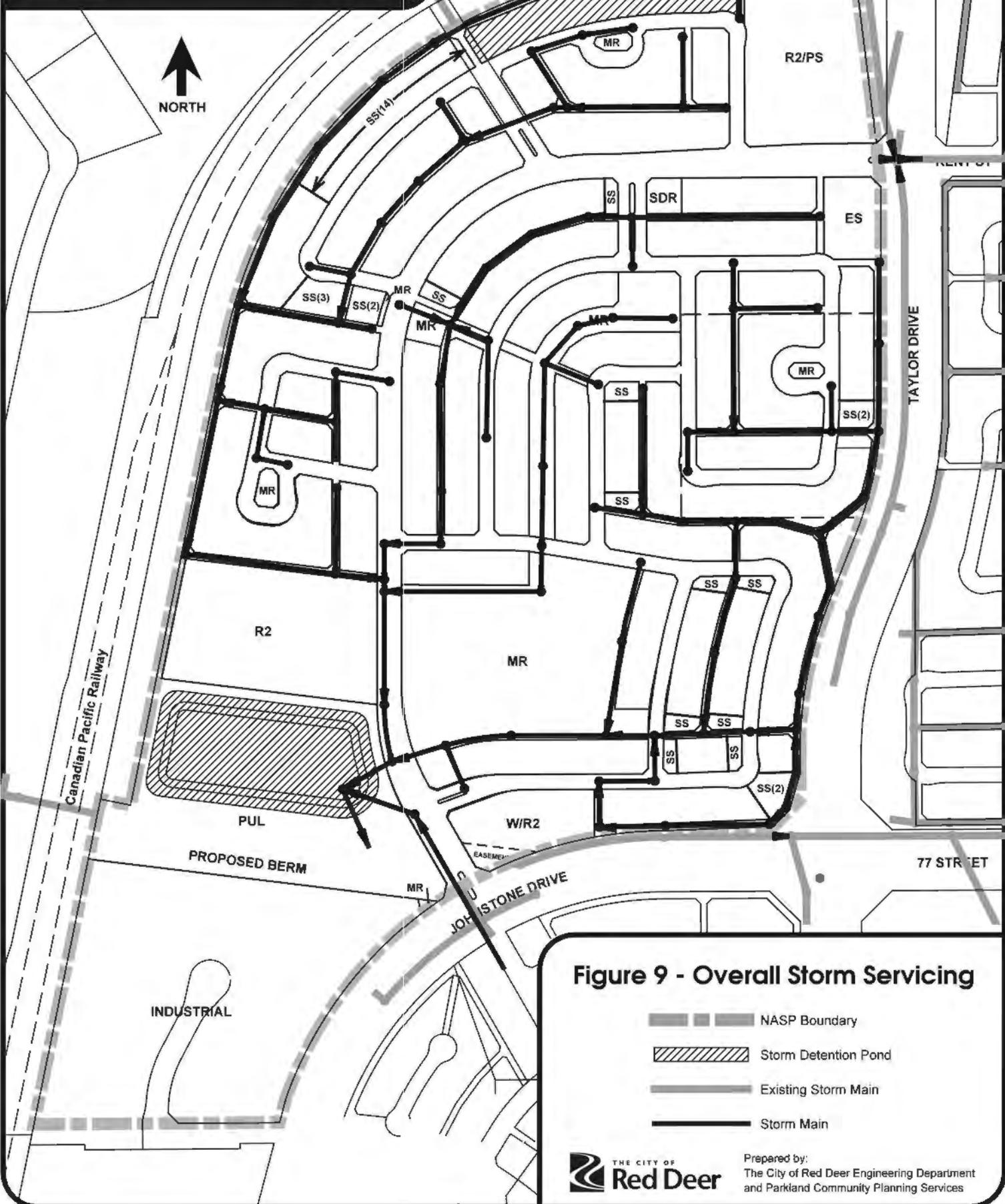


Figure 9 - Overall Storm Servicing

-  NASP Boundary
-  Storm Detention Pond
-  Existing Storm Main
-  Storm Main

Johnstone Crossing

Neighbourhood Area Structure Plan

Scale 1:5,000

December 2005

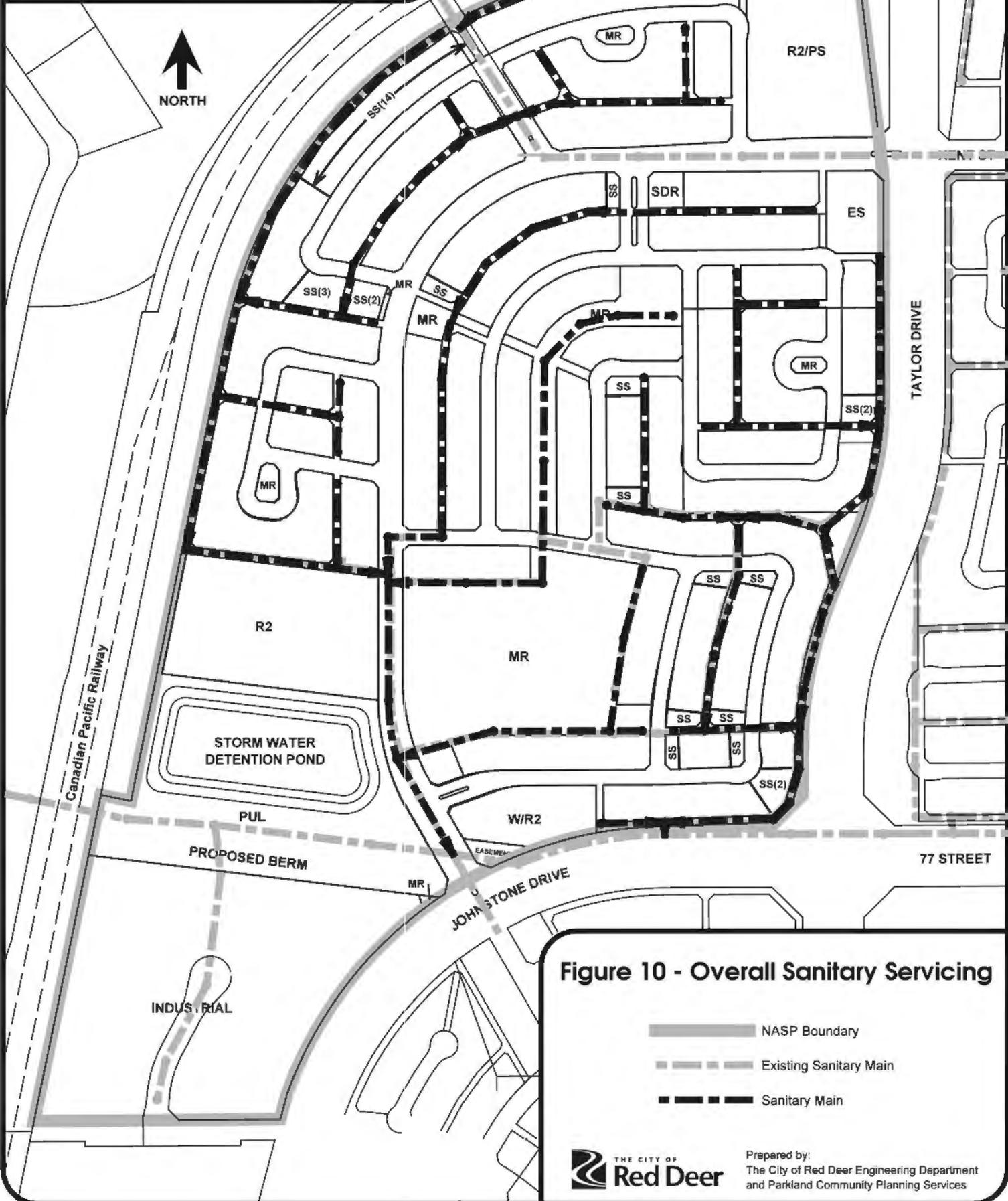


Figure 10 - Overall Sanitary Servicing

- NASP Boundary
- - - Existing Sanitary Main
- - - Sanitary Main

Johnstone Crossing

Neighbourhood Area Structure Plan

Scale 1:5,000

December 2005

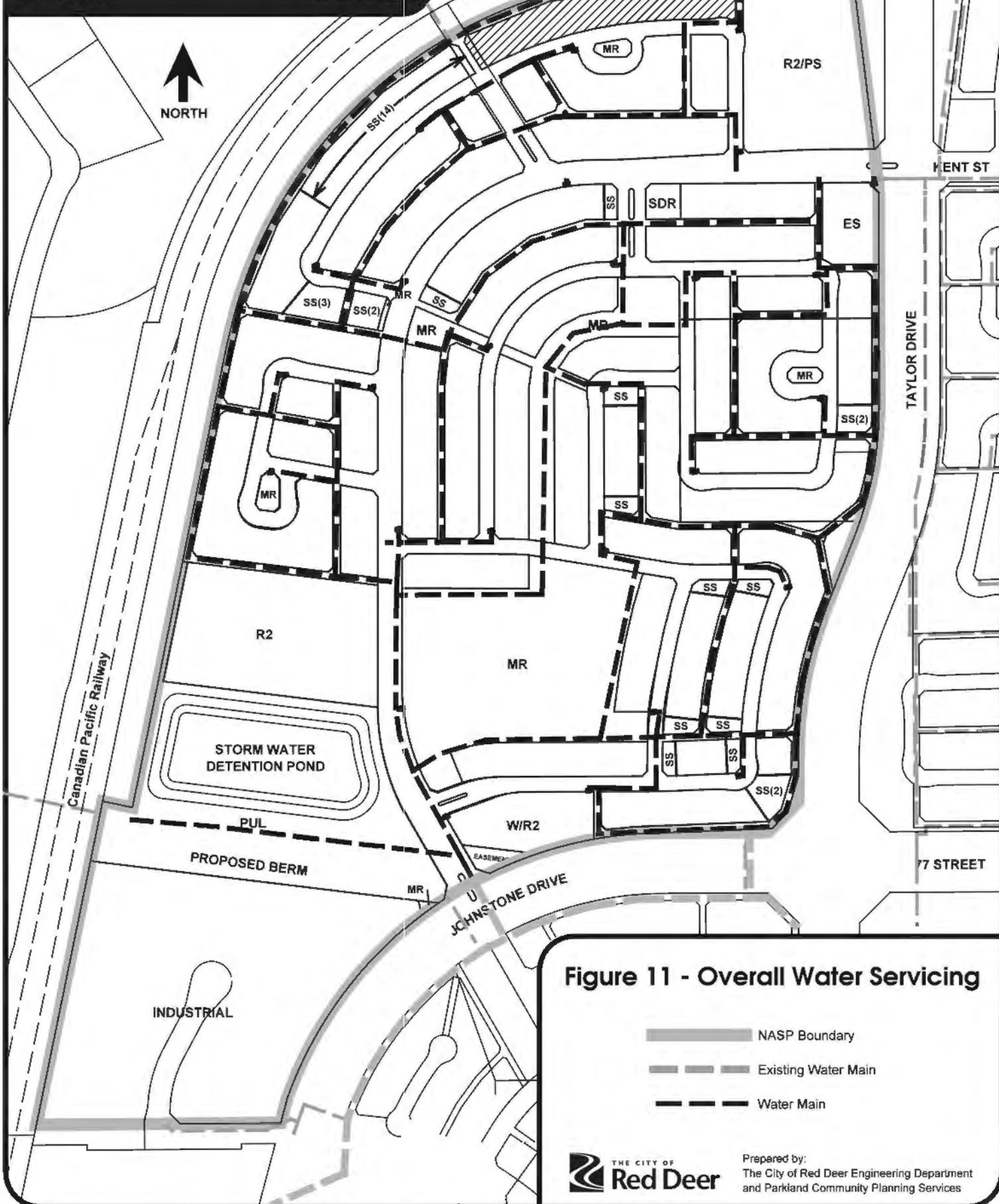


Figure 11 - Overall Water Servicing

-  NASP Boundary
-  Existing Water Main
-  Water Main

SECTION 7: DEVELOPMENT STAGING AND IMPLEMENTATION

7.1 Staging

Figure 12 displays the anticipated development staging of the subdivision. The location of the utilities, current market conditions and requirements of the Emergency Services Department will dictate the order of the final phasing. Figure 12 also displays the proposed location of the temporary topsoil stockpile.

7.2 Implementation

7.2.1 Rezoning and Subdivision

The rezoning and subdivision of the Plan area shall occur in accordance with the development concept in Figure 3. The Plan area is designated A1 Future Urban Development District, and therefore in order to implement the NASP, and prior to subdivision and development approvals, amendments to the Land Use Bylaw are required to rezone the land in each development phase to those Districts that allow the relevant land uses allocated in the development concept and described in more detail in Section 5 of this Plan.

7.2.2 Plan Amendment

An amendment to the NASP is required for any changes in the plans such as:

- a change in proposed land uses (such as from single family to narrow lot housing or multi-family housing, or vice-versa);
- the elimination or addition of any public road or lane or reclassification of a road unless the road or lane is self-contained within a multi-family site;
- to reflect a change in other documents affecting planning and land use in the area (such as an amendment to a Major Area Structure Plan); or
- to meet the current content standards for Neighbourhood Area Structure Plans (Note: a Neighbourhood Area Structure Plan is not required to be updated if over 50% of the area is already developed)

Notwithstanding the above, a neighbourhood meeting is not required where the amendment consists of:

- Self-contained local roads or lanes;
- Minor road, lane or public utility lot deletions and/or additions;
- Addition or deletion of lots with walkout basements;
- The redesignation of lots from higher density designations to the R1 Residential (Low Density) District; or
- Amendments necessary to make the plan conform to a Major Area Structure Plan;

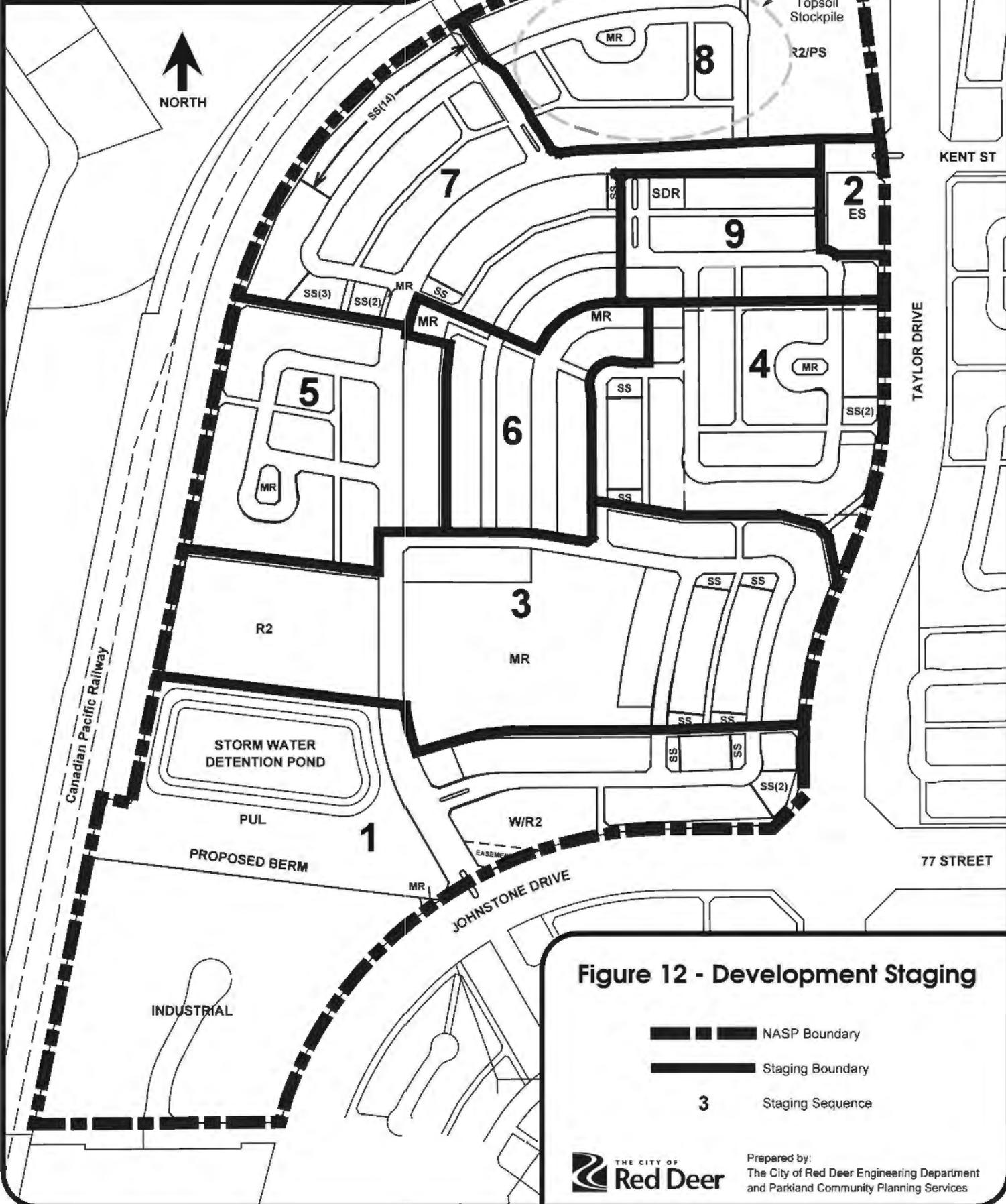
provided that, in the opinion of the planning staff, these changes do not impact existing development and/or a lot, which has been sold or optioned. As an alternative to a neighbourhood meeting a door to door notice will be circulated.

Johnstone Crossing

Neighbourhood Area Structure Plan

Scale 1:5,000

December 2005



APPENDIX A: DEFINITIONS

- *'Smart Growth Principles'* refers to community planning and engineering efforts in which special consideration is given to aspects such as the efficient use of land, the establishment of 'complete neighbourhoods', the provision of opportunities for social interaction, the encouragement of walking, cycling and public transit riding, or the application of environmentally aware planning and engineering practices. This may be pursued by, for example, the location of a variety of housing forms within walking distances to employment zones, schools, and commercial areas, or promoting the use of public transit in a variety of ways, or ensuring more 'environmentally conscious' development and the application of 'best practices' in areas such as storm water management, solid waste management, water quality standards, and the efficient use of open space (e.g. requiring less 'playing fields' and more 'soft' or passive amenities such as storm water ponds and constructed wetlands as benefits for land ownership). Many of these principles are embodied in movements such as New Urbanism, Neo-traditional Development, and 'Livable Communities'.
- *'Special Place'* means a physical area consisting of indoor or outdoor spaces designed and located to encourage social interaction in a neighbourhood by bringing people together and offering opportunities for active or passive participation. An example of a *'special place'* may be a playground, a passive open space or a plaza with a bus stop adjacent to a convenience store site.
- *'Feature Street'* refers to those collector and local roadway entrances where features such as a median with trees or other landscaping and boulevard planting are provided for the first 30 to 50 metres of the roadway from its intersection with another roadway, in order to create an identifiable and prominent *'entrance'* to a neighbourhood or a specific portion of a neighbourhood.
- *'Main Street'* refers to the collector road as being the primary roadway of the neighbourhood, along which most vehicle traffic have to travel in order to enter or exit the neighbourhood, and along which the primary pedestrian and bicycle pathway is provided. The wider roadway, separate sidewalks and boulevard planting along the *'main street'* distinguishes it from the local roadways in the neighbourhood.
- *'Keyhole'* refers to a small *'crescent'* which is designed to create lots grouped around a landscaped median, or which is designed to ensure that lot depths are within acceptable tolerances.
- *'Co-operative Housing'* or a *'housing co-op'* is a legal association formed for the purpose of providing homes to its members on a continuing basis and in a manner committed to co-operative principles. Across Canada housing co-ops are home to about a quarter of a million people in 2003 (the Co-operative Housing Federation of Canada). From the outside a housing co-op looks like the other homes in a neighbourhood. It can be a new apartment building, a row of townhouses or any other housing form. What makes it different is not the physical design, but the way residents share the responsibilities and control of their homes. As an alternative to renting, a housing co-op offers ownership, not rental, of a secure and affordable home in a community setting. In a typical Canadian co-op, from one-quarter to three-quarters of households pay a reduced monthly charge, based on their income. The

others pay the full monthly charge set when the members approve the co-op's yearly operating budget. Housing co-ops operate as close to cost as possible. For more information on the advantages of co-operative housing and how to start a co-op, contact the Co-operative Housing Federation of Canada in Manitoba at 162-2025 Corydon Ave., Suite 192, Winnipeg, MB, Canada R3P 0N5, Phone: (204) 989-5963, Toll-Free: 1-888-591-3301; or in British Columbia at 5550 Fraser Street, Suite 204, Vancouver BC, Canada V5W 2Z4, Phone: (604) 879-4116, Toll-Free: 1-877-533-2667.