

# Klarvatten Neighbourhood Structure Plan

**AMENDMENT**

**July 26, 2021**

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## 1 INTRODUCTION

The purpose of the *Klarvatten Neighbourhood Structure Plan* (NSP) Amendment is to increase the density and efficiency of the land use within the remaining 11.5 ha undeveloped land in the plan area. Our proposal has the intent to add in the order of 113 more units and 334 residents to the community while still maintaining the proposed open space concept of a passive and active open space linked with a linear park system.

The approved plan is shown in Figure 1 and the proposed amendment is shown in Figure 2.

## 2 POLICY CONTEXT

### 2.1 Municipal Development Plan

This neighbourhood structure plan amendment is in general conformity with the City of Edmonton's *City Plan*, which was approved December 7, 2020 (Bylaw No. 20,000).

### 2.2 Edmonton North (Lake District) Area Structure Plan

The *Edmonton North Area Structure Plan* was originally adopted by the City of Edmonton in August 1979, and most recently amended in April 28, 2020 (Bylaw 19260).

This proposed NSP amendment will not require an amendment to the *Edmonton North Area Structure Plan* as there will be no change in the development concept nor statistics in this higher order plan.

### 2.3 Klarvatten Neighbourhood Structure Plan

The *Klarvatten Neighbourhood Structure Plan* (NSP) was originally adopted as Bylaw 6368 in February, 1982. It has been amended numerous times since, with the most recent amendment being Bylaw 15426, approved by Council on April 26, 2010 which decreased the plan density from 54.91 to 50.7 persons/ha by redesignation of a subject area from MDR to LDR.

The amendment prior to the 2010 site redesignation was approved by Council on February 26, 2007 (Bylaw 14493) and was brought forward by *Scheffer Andrew Ltd.* on behalf of the same Landowner as this amendment. The 2007 amendment:

- reconfigured the areas designated for open space;

- reconfigured the area designated for a stormwater management facility;
- increased the plan density from 53.78 persons per hectare to 54.91 persons per hectare; and
- realigned the proposed collector road.

### **3 PROPOSED AMENDMENT**

The proposed Klarvatten Neighbourhood Structure Plan amendments include:

- Remove the curve in the collector road in the north east corner of the plan site to enable a more efficient grid like roadway network;
- Increase the density of the Medium Density Residential (MDR) area from Low Rise to Medium Rise Apartments;
- Revision to the location of the proposed storm water management facility (SWMF) and with the relocation, provide a more efficient design and footprint to retain the required storage volume while still providing the required additional space to provide a “dual use” facility (full size programable soccer pitch);
- Extend the linear walkway system with the shared use path system so as to continue to provide east west pedestrian connectivity between the two large open spaces in the north Klarvatten neighbourhood; and
- Remove the proposed walkway to the Transportation Utility Corridor (TUC)

The order of discussion of the following items is as presented in the approved *Klarvatten NSP*.

#### **3.1 Transportation**

The proposed amendment will change the collector road alignment in the northeast corner of the plan area to provide a right angle turn which will accommodate the relocated open space and stormwater management facility configuration to the south. As well, the majority of cul-de-sacs will be removed so that there will be a more efficient local road network.

With the current *Complete Streets Design and Construction Standards*, the proposed collector road cross sections will have a reduced pavement width and overall cross

section and be constructed with a boulevard walk on both sides to provide an enhanced streetscape while still providing the function of a collector road with public transit services, if required. The local road cross section is also proposed to be decreased in overall width of right of way and pavement width with monowalk on both sides of the road.

The amendment is removing the walkway to the TUC in the subject area. *Alberta Infrastructure* has provided formal response that this TUC connection is not warranted as there is an existing connection approximately 700 m to the west.

### **3.2 Utility Services**

The proposed amendment requires some revisions to the servicing concepts described in the approved Klarvatten NSP. These changes will be reflected in the text and updated servicing drawings which are in the NSP as Figures 5, 6, 7a and 7b. These figures are labelled 3, 4, 5 and 6 respectively in this document. The reconfiguration of the local transportation network along with the reconfiguration and relocation of the east Stormwater Management Facility (SWMF 3A-W) triggers the revisions to these figures in the northeast corner of the plan area NSP area.

It is noted that the *North Klarvatten Extension Neighbourhood Design Report* (NDR) was approved by the City in 2011 and includes the sanitary and storm water management servicing for approximately 27 ha of land in the north portion of the neighbourhood. The spatial layout of the NDR is not in conformance with the approved NSP however the areas of the respective land uses were not changed from the approved NSP. The west 15.5 ha of this area has been developed and the remaining 11.5 ha is the subject of this plan amendment. A supporting NDR Technical Memo will be submitted to support this proposed NSP amendment.

#### *3.1.1 Water Supply*

Figure 5 *Water Supply and Distribution* has been revised to reflect the new layout within the amendment boundary. The figure is labelled as Figure 3 in this document. Water looping and connectivity has been improved by the change in the local road network.

#### *3.1.3 Sanitary Sewers*

The configuration of the sanitary sewer layout has been revised to reflect the revised local road network. Figure 6 *Sanitary Sewer System* has been revised (labelled as Figure 4 in this document).

### 3.1.2 Storm Water Drainage

From the proposed location in the current NSP, the east storm water management facility (SWMF 3A-W) in the amendment area will be reconfigured and moved east and south adjacent to the north south collector road (85 Street). With the more detailed engineering, the footprint of the stormwater storage component of the SWMF in the proposed Public Utility Lot (PUL) has been decreased which will increase efficiency of land use.

Additional area has been added to the proposed Public Utility Lot to ensure that this storm water management facility will provide open space opportunities as a programmable soccer pitch as discussed in the Open Space section, while still performing their drainage function. Figure 7a *Minor Storm Basins* and Figure 7b *Minor Storm Sewer System* has been revised to reflect the revisions (Figures 5 and 6 in the document).

### 3.3 Land Use

The approved Klarvatten land use statistics are shown in *Table 1* and the amended statistics in *Table 2*.

The area of Medium Density Residential (low rise apartments) will be decreased by approximately 2.5 ha with 1.82 ha reallocated to Medium Density Residential (medium rise apartments) and the remaining 0.68 ha shifted to Low Density Residential Use. The area designated as Low Density Residential will increase by 0.85 ha from 84.47 ha to 85.32 ha with the additional area from the MDR and an additional 0.17 ha from the change in the open space.

The current statistics assume a total dedicated park (MR) area within the amendment area of 0.12 ha. The proposed amendment proposes park space of 0.32 ha. The SWMF/PUL has decreased in area by 0.37 ha.

### 3.4 Demography

The approved Klarvatten demographic statistics are also shown in *Table 1* and the amended statistics in *Table 2*. This amendment will result in an increase in neighbourhood residential density from 50.7 people per gross developable ha to 53.9 people per gross developable ha. The net effect is an additional 113 units and 334 residents. The overall number of dwelling units will increase from 2,226 to 2,339 and the population will increase from 7335 to 7669 residents in the community.

### 3.5 Open Space

The current approved plan states that:

*An area of active open space will be provided in the east portion of north Klarvatten with a passive open space in the west. A linear park of varying width will be constructed to link the two open space areas.*

The passive open space in the west portion of the North Klarvatten area has been developed along with a linear park to the east side of the collector road (89 Street.) We are proposing to continue the linear park to the east to connect to the proposed active open space adjacent to the 85 Street collector road as per the intent of the approved NSP. Similar to the currently registered linear park, the proposed east extension of the linear park is being provided for exclusively recreational function and is also sized to allow for the inclusion of an area for an outdoor fitness area in the expanded area just east of the existing Municipal Reserve lot. We have attached for reference a figure indicating the *Open Space and Connectivity* in North Klarvatten.

#### Linear Park System in North Klarvatten

Described from west to east, the existing North Klarvatten shared use path (SUP) system is an extension of the SUP system south in Lago Lindo. The SUP follows the north and west side of the dry pond, continues east thru the pocket park, crosses the local road (92 Street) and the collector (89 Street) and stops at the back of the existing developed block in linear MR lots of varying widths. There is another connection to the south midblock to provide access for residents in the south area of North Klarvatten.

Our proposed SUP within the linear MR connects with the existing SUP in 101MR and continues east, crosses the next local road and then connects to the SUP in the open space facility. The SUP continues within the south portion of the PUL and then ends at the sidewalk on the 85 Street collector. The first branch of the SUP in the PUL connects south to the walkway adjacent to the west boundary of the pocket park and the second branch to the north provides access to the soccer pitch.

#### Active Open Space

The stormwater management facility in the east portion of north Klarvatten will be designed to provide the "supplementary, local active recreation space" referred to in the approved neighbourhood structure plan. The proposed Public Utility Lot will be sized and the facility designed to allow for a drainage function along with the placement of a full sized programmable soccer pitch in the bottom of the facility. The oversizing of the PUL

area beyond its drainage function is in the range of 0.4 ha to facilitate the dual use and this, as per the current NSP, will be granted municipal reserve credit.

The pond is an on off line surge pond that is hydraulically connected to the SWMF 3W to the south. There will be no surcharging (no storage) until a 1:5 year, or greater, rainfall event occurs. The Klarvatten east pond will not accept minor system discharge. Beyond a 1:5 year event it had been calculated, there would not be any additional days of closure for programmable uses per year compared to the average number of closures of other soccer facilities due to weather events, due to the facility being utilized as a drainage facility.

The bottom of the facility, occupied by the soccer pitch, will be designed to drain to the perimeter, ensuring that the stormwater management function interferes as little as possible with recreation activities. Previous analysis of the implication of a dual use facility for drainage storage and a programable soccer pitch had no concerns during the 2007 plan amendment to provide this facility for the community.

The approved neighbourhood structure plan sets out five design requirements for this facility addressing:

- relationship with stormwater management facility;
- configuration;
- road frontage;
- visibility and safety; and
- linkages with other open space features.

This east dry, surcharge pond feature has been designed to satisfy these requirements.

South of this dual use area, there is a 0.12 ha pocket park proposed to provide an area for a playground. This park is located adjacent to the north-south and east-west SUP system to allow for ready access from all directions and provides sight lines and easy access to the active open space to the north. The area for municipal reserve dedication/credit between the pocket park and the adjoining soccer pitch is in the order of 0.5 ha, which as per the current *Urban Parks Management Plan (UMPM)* is the City's preferred pocket park size. It is noted that the area of the programable soccer pitch is approximately 0.8 ha and is available for community active uses year round as this is a dry pond.



### **3.6 Municipal Reserve**

It is anticipated that the north portion of Klarvatten will generate approximately 2.7 ha of municipal reserve obligation based on the maximum dedication specified in the Municipal Government Act.

This municipal reserve obligation has been provided as follows in west area:

- Existing registered linear park (12 MR at 0.452 ha & 101 MR at 0.044 ha) for a credit 0.50 ha
- Existing pocket park (1 MR) for a credit of 0.21 ha
- Total dedication is 0.71 ha

This municipal reserve obligation will be provided as follows in east area:

- Proposed linear park in two part (0.17 ha and 0.04 ha)
- Proposed pocket park of 0.12 ha
- The area by which the east storm water management facility has been expanded to serve open space functions (0.41 ha) will receive municipal reserve credit.
- Total proposed dedication/credit is 0.74 ha

The approximate remaining municipal reserve dedication of 1.25 ha (2.7 ha minus 1.45 ha) will be provided in the form of cash in lieu of land.

These figures and the exact boundaries of the linear park, playground facility, and storm water management facilities are subject to adjustment at the subdivision and plan endorsement stages.

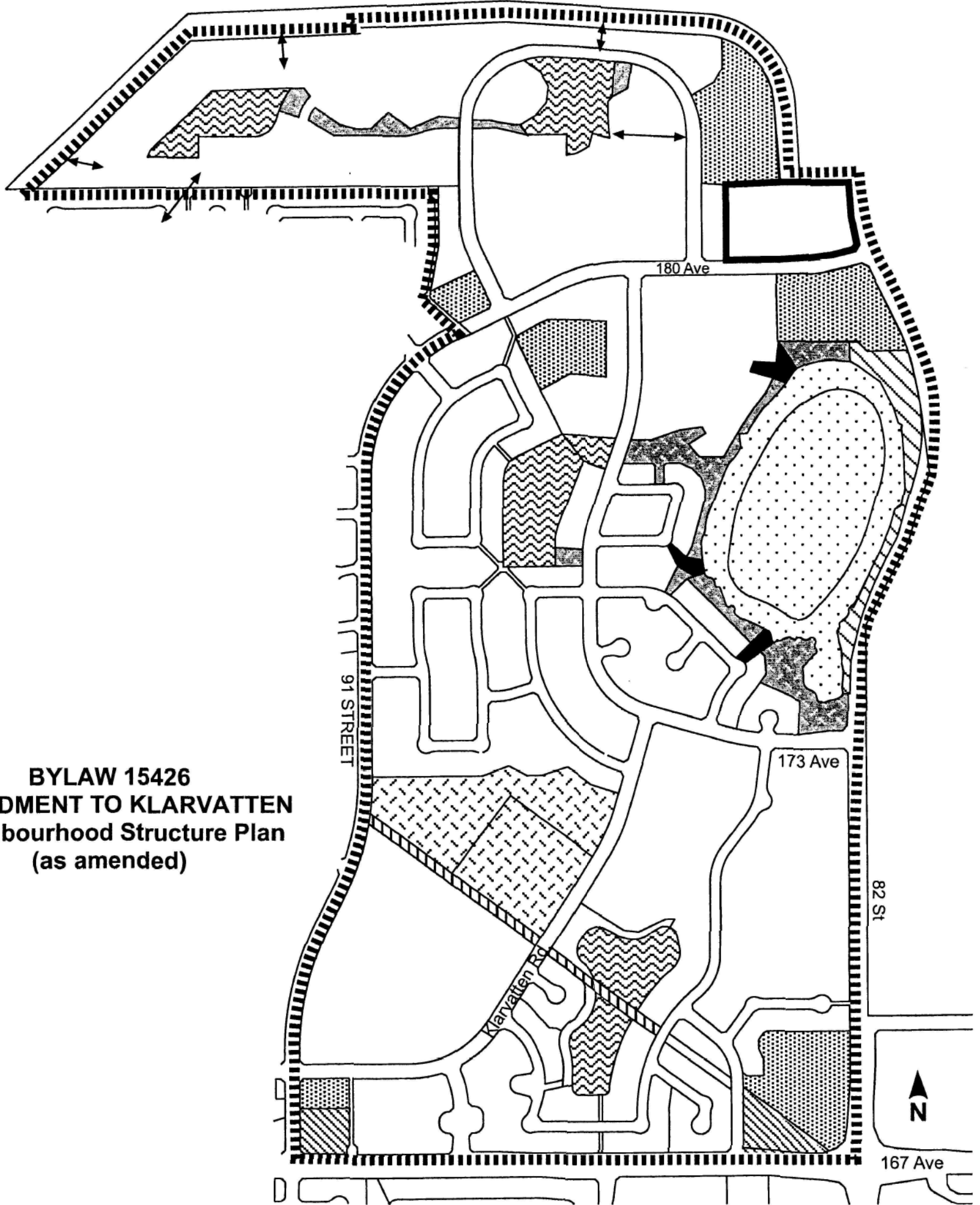
## **4 RATIONALE**

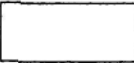


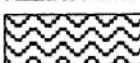
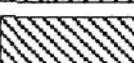
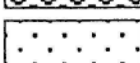

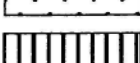
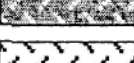
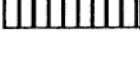
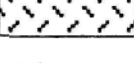


The proposed amendment provides additional detail with respect to the efficiency and intensification of land use in the remaining 11.5 ha of undeveloped land in the Klarvatten NSP. This is achieved via the increase of density in the proposed MDR sites, reduction in the width of the road rights of way and by reconfiguration and relocation of the storm water management to decrease the area of land required for the drainage function while still providing additional area for the dual use (soccer pitch).

The use of storm water management facilities for open space uses ensures that the City, and the residents of the Klarvatten neighbourhood, are provided with adequate passive

and active open space with linear park linkages between the spaces to respond to the recreation needs identified in the approved NSP. At the same time, the City will maximize the proportion of cash in lieu of land it will receive, and the land in north Klarvatten will be used as efficiently as possible.

**BYLAW 15426  
AMENDMENT TO KLARVATTEN  
Neighbourhood Structure Plan  
(as amended)**



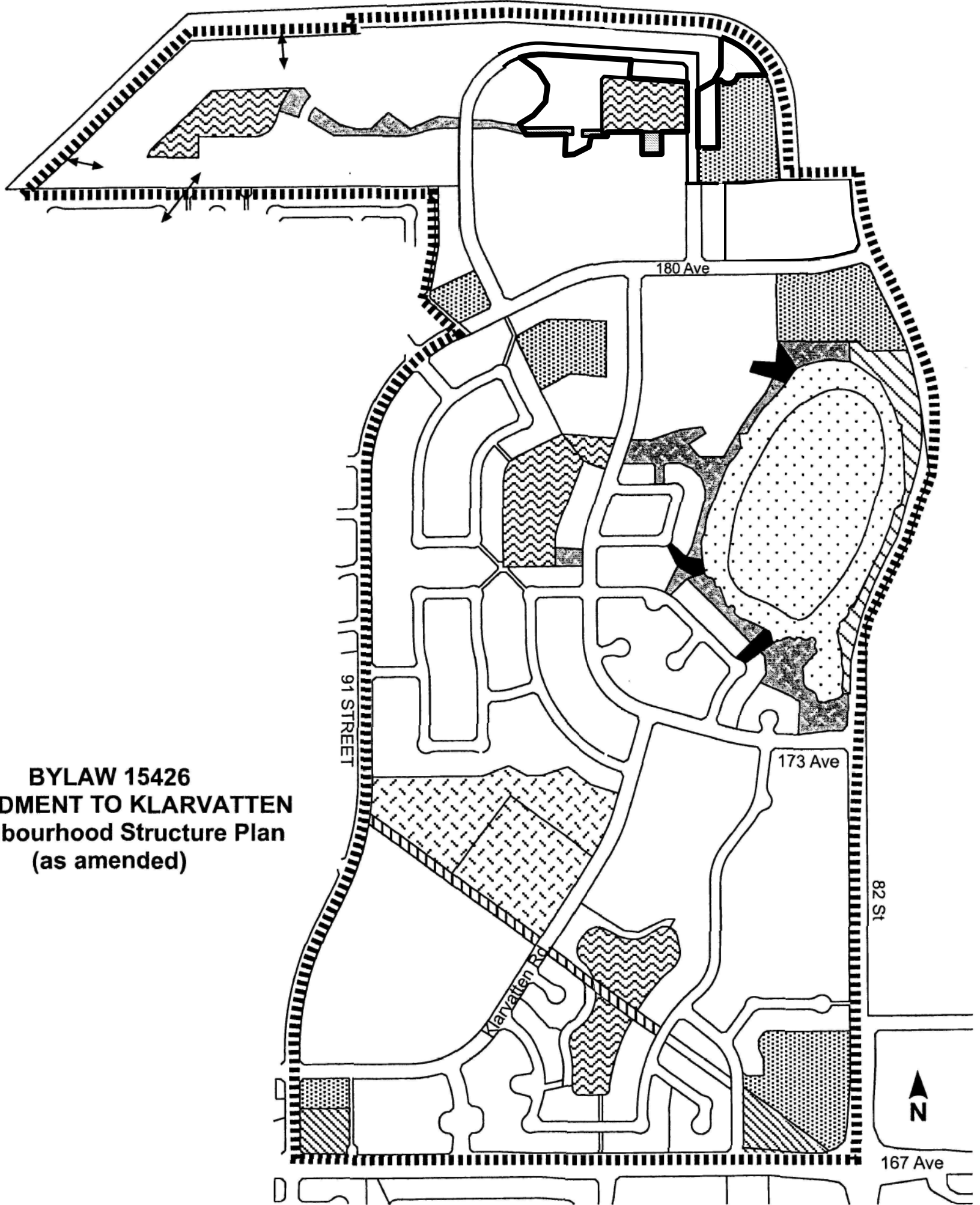
- |   |                            |   |                                |
|---|----------------------------|---|--------------------------------|
|  | Low Density Residential    |  | Public Utility Lot             |
|  | Medium Density Residential |  | Stormwater Management Facility |
|  | Neighbourhood Commercial   |  | Stormwater Influenced Wetland  |
|  | Park / Open Space          |  | Pipeline R/W                   |
|  | School / Park              |  | Boundary of Klarvatten N.S.P.  |
|  | Connectivity               |  | Boundary of Amendment          |
|  | Wetland Buffer             |   |                                |






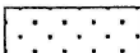


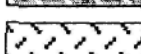
**PROPOSED NEIGHBOURHOOD  
STRUCTURE PLAN AMENDMENT  
KLARVATTEN**

**FIGURE 1  
Approved Plan**

Block A Plan 823MC & Lot 1 Block B Plan 1870MC  
CITY OF EDMONTON

**BYLAW 15426  
AMENDMENT TO KLARVATTEN  
Neighbourhood Structure Plan  
(as amended)**



- |   |                            |   |                                |
|---|----------------------------|---|--------------------------------|
|  | Low Density Residential    |  | Public Utility Lot             |
|  | Medium Density Residential |  | Stormwater Management Facility |
|  | Neighbourhood Commercial   |  | Stormwater Influenced Wetland  |
|  | Park / Open Space          |  | Pipeline R/W                   |
|  | School / Park              |  | Boundary of Klarvatten N.S.P.  |
|  | Connectivity               |  | Boundary of Amendment          |
|  | Wetland Buffer             |   |                                |

**PROPOSED NEIGHBOURHOOD  
STRUCTURE PLAN AMENDMENT  
KLARVATTEN**

**FIGURE 2  
Proposed Plan**

Block A Plan 823MC & Lot 1 Block B Plan 1870MC  
CITY OF EDMONTON

**Table 1 Approved Statistics**

Land Use	Area (ha)	% GDA	Dwellings	%	Population	%
<b>Gross Area</b>	<b>166.64</b>					
167 Ave & 82 St	1.91					
Pipeline r/w	1.06					
Poplar Lake	13.23					
Transportatin Utility Corridor	5.78					
<b>Gross Developable Area</b>	<b>144.66</b>	<b>100.00%</b>				
School/Park/MR	11.22	7.76%				
SWMF/PUL	8.77	6.06%				
Circulation	28.93	20.00%				
Commercial	1.95	1.35%				
<b>Subtotal</b>	<b>50.87</b>	<b>35.17%</b>		<b>LDR/MDR</b>		
<b>Residential</b>				<b>RATIO</b>		
<i>Low Density Residential</i>	84.47	58.39%	1605	72.1%	5553	75.7%
<i>Medium Density Residential Total</i>	9.25	6.39%	621	27.9%	1782	24.3%
Medium Density Residential (planned as row housing)	6.45	4.46%	271	12.2%	777	10.6%
Medium Density Residential (planned as medium density multiple family)	0	0.00%	0	0.0%	0	0.0%
Medium Density Residential (planned as low rise apartments)	2.8	1.94%	350	15.7%	1,005	13.7%
<b>Total Residential</b>	<b>93.72</b>	<b>64.79%</b>	<b>2,226</b>	<b>100.0%</b>	<b>7,335</b>	<b>100.0%</b>

Density: 50.71 persons per hectare

**Notes:**

1. Residential Density:
  - Low Density Residential: 19 units / ha
  - Medium Density Residential: 42 units / ha
  - Medium Density Residential: 80 units / ha
  - Low Rise Apartments: 125 units / ha
2. Population Density:
  - Low Density Residential: 3.46 persons/unit
  - Medium Density Residential: 2.87 persons/unit

**Table 2 Amended Statistics**

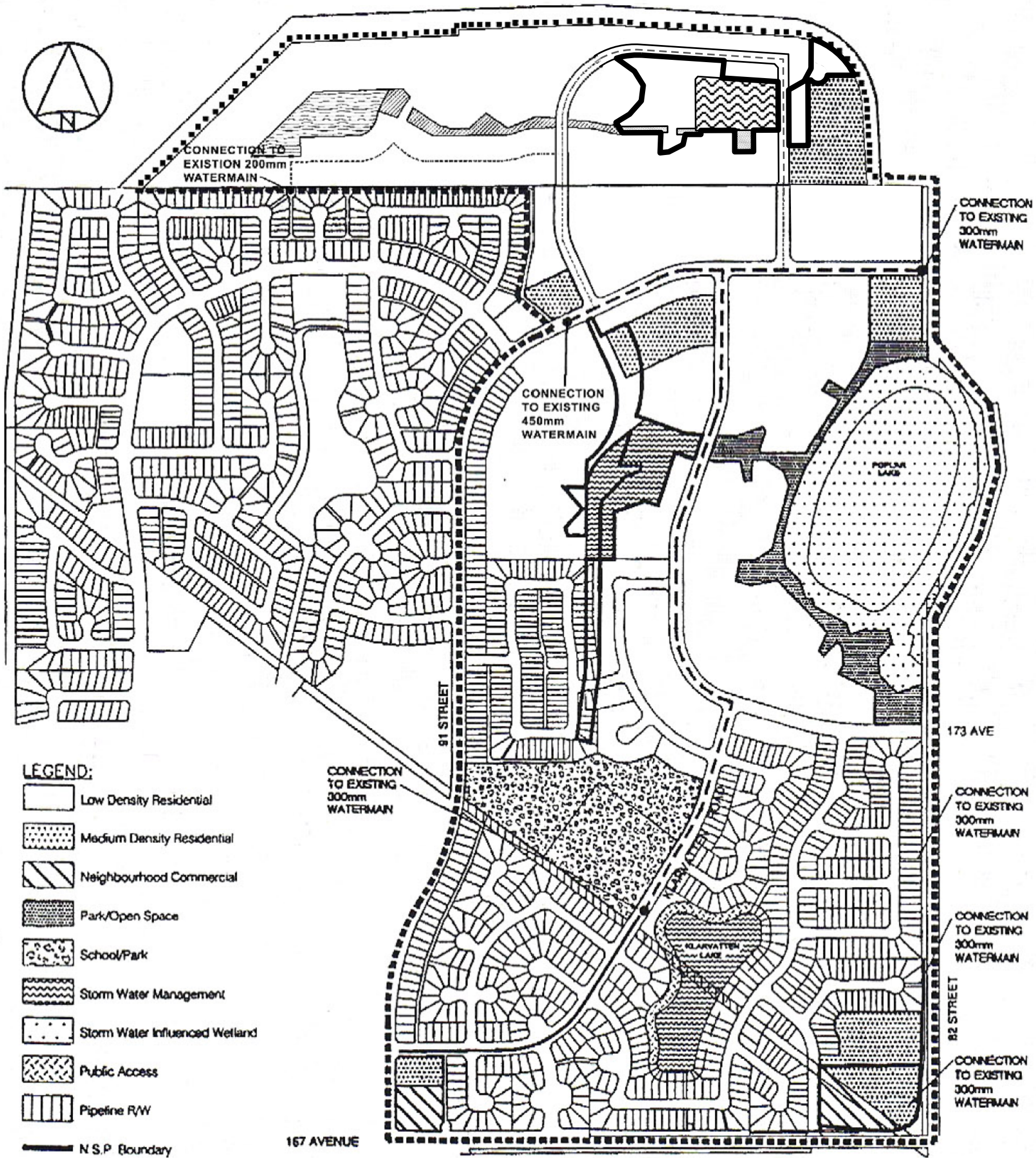
Land Use	Area (ha)	% GDA	Dwellings	%	Population	%
<b>Gross Area</b>	<b>166.64</b>					
167 Ave & 82 St	1.91					
Pipeline r/w	1.06					
Poplar Lake	13.23					
Transportation Utility Corridor	5.78					
<b>Gross Developable Area</b>	<b>144.66</b>	<b>100.00%</b>				
School/Park/MR	11.42	7.89%				
SWMF/PUL	8.4	5.81%				
Circulation	29.00	20.04%				
Commercial	1.95	1.35%				
<b>Subtotal</b>	<b>50.77</b>	<b>35.09%</b>				
<b>Residential</b>				<b>LDR/MDR RATIO</b>		
<i>Low Density Residential</i>	85.32	58.98%	1621	69.3%	5609	73.1%
<i>Medium Density Residential Total</i>	8.57	5.92%	718	30.7%	2060	26.9%
Medium Density Residential (planned as row housing)	6.45	4.46%	271	11.6%	777	10.1%
Medium Density Residential (planned as medium density multiple family)	0	0.00%	0	0.0%	0	0.0%
Medium Density Residential (planned as low rise apartments)	0.3	0.21%	38	1.6%	108	1.4%
Medium Density Residential (planned as medium rise apartments)	1.82	1.26%	410	17.5%	1,175	15.3%
<b>Total Residential</b>	<b>93.89</b>	<b>64.90%</b>	<b>2,339</b>	<b>100.0%</b>	<b>7,669</b>	<b>100.0%</b>

Density: 53.02 persons per hectare

**Notes:**

1. Residential Density:
  - Low Density Residential: 19 units / ha
  - Medium Density Residential: 42 units / ha
  - Medium Density Residential: 80 units / ha
  - Low Rise Apartments: 125 units / ha
  - Medium Rise Apartments: 225 units/ha
2. Population Density:
  - Low Density Residential: 3.46 persons/unit
  - Medium Density Residential: 2.87 persons/unit

TRANSPORTATION UTILITY CORRIDOR



**LEGEND:**

- Low Density Residential
- Medium Density Residential
- Neighbourhood Commercial
- Park/Open Space
- School/Park
- Storm Water Management
- Storm Water Influenced Wetland
- Public Access
- Pipeline R/W
- N.S.P. Boundary

**LEGEND:**

- Future Connection Point
- Watermain
- Existing Watermain

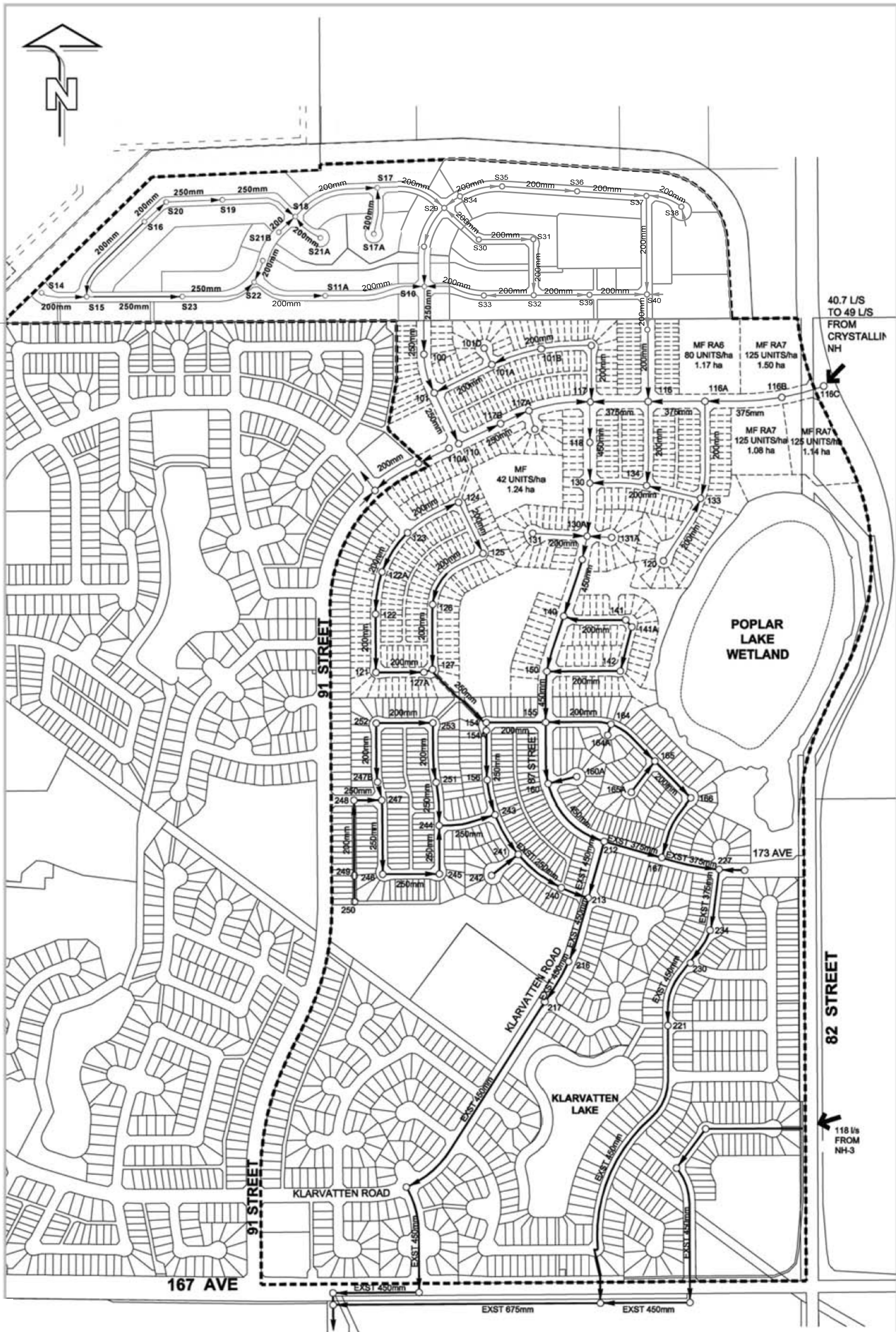


**PROPOSED NEIGHBOURHOOD  
STRUCTURE PLAN AMENDMENT  
KLARVATTEN**

**FIGURE 3**  
Water Supply and Distribution

Block A Plan 823MC & Lot 1 Block B Plan 1870MC  
CITY OF EDMONTON





**LEGEND**

- NEIGHBOURHOOD BOUNDARY
- EXISTING SANITARY SEWER
- - - PROPOSED SANITARY SEWER



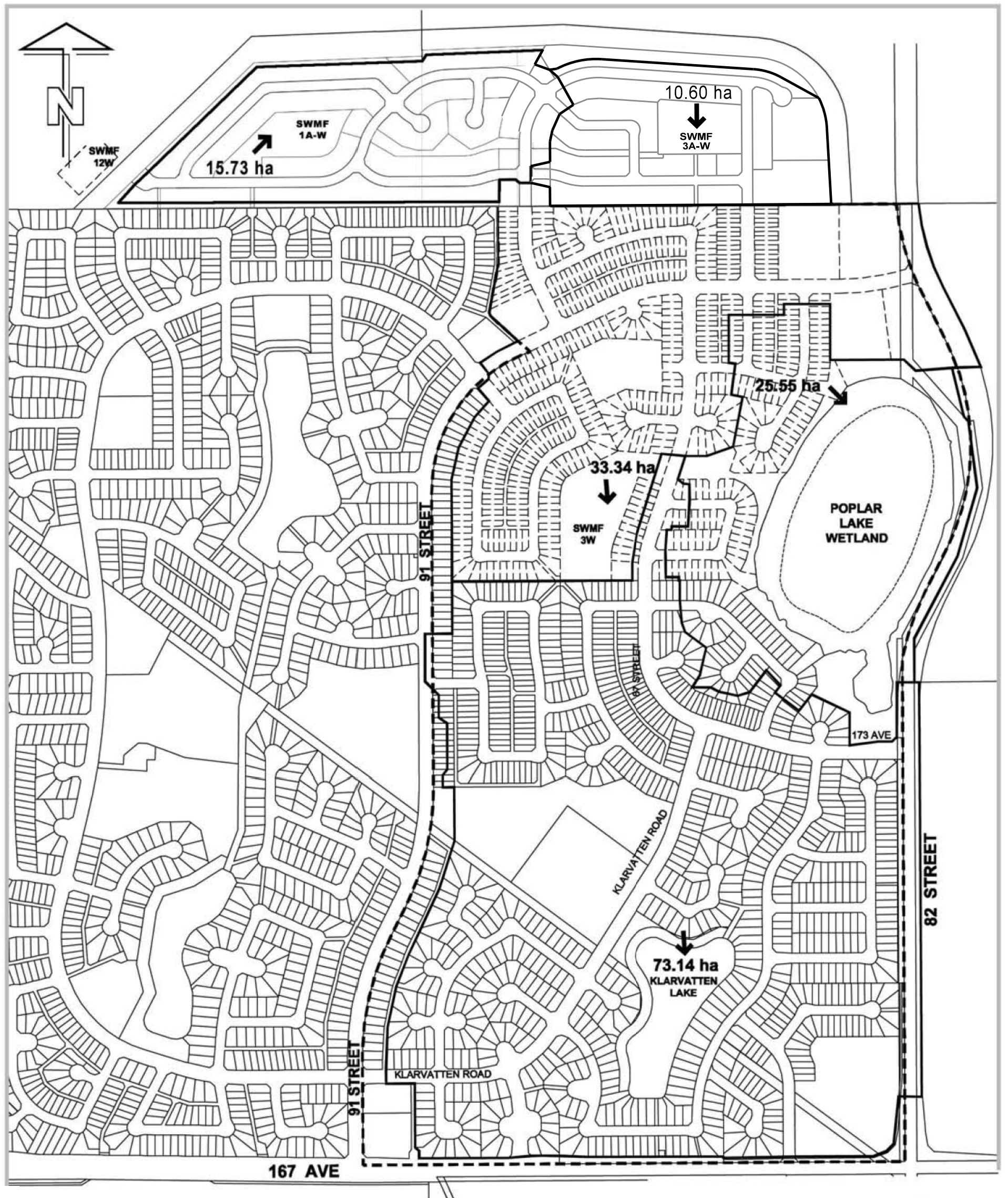
**PROPOSED NEIGHBOURHOOD  
STRUCTURE PLAN AMENDMENT  
KLARVATTEN**

**FIGURE 4  
Sanitary Sewer System**

Block A Plan 823MC & Lot 1 Block B Plan 1870MC  
CITY OF EDMONTON

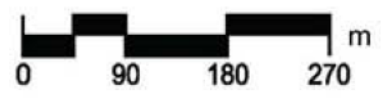






**LEGEND**

- NEIGHBOURHOOD BOUNDARY
- MINOR STORM BASINS

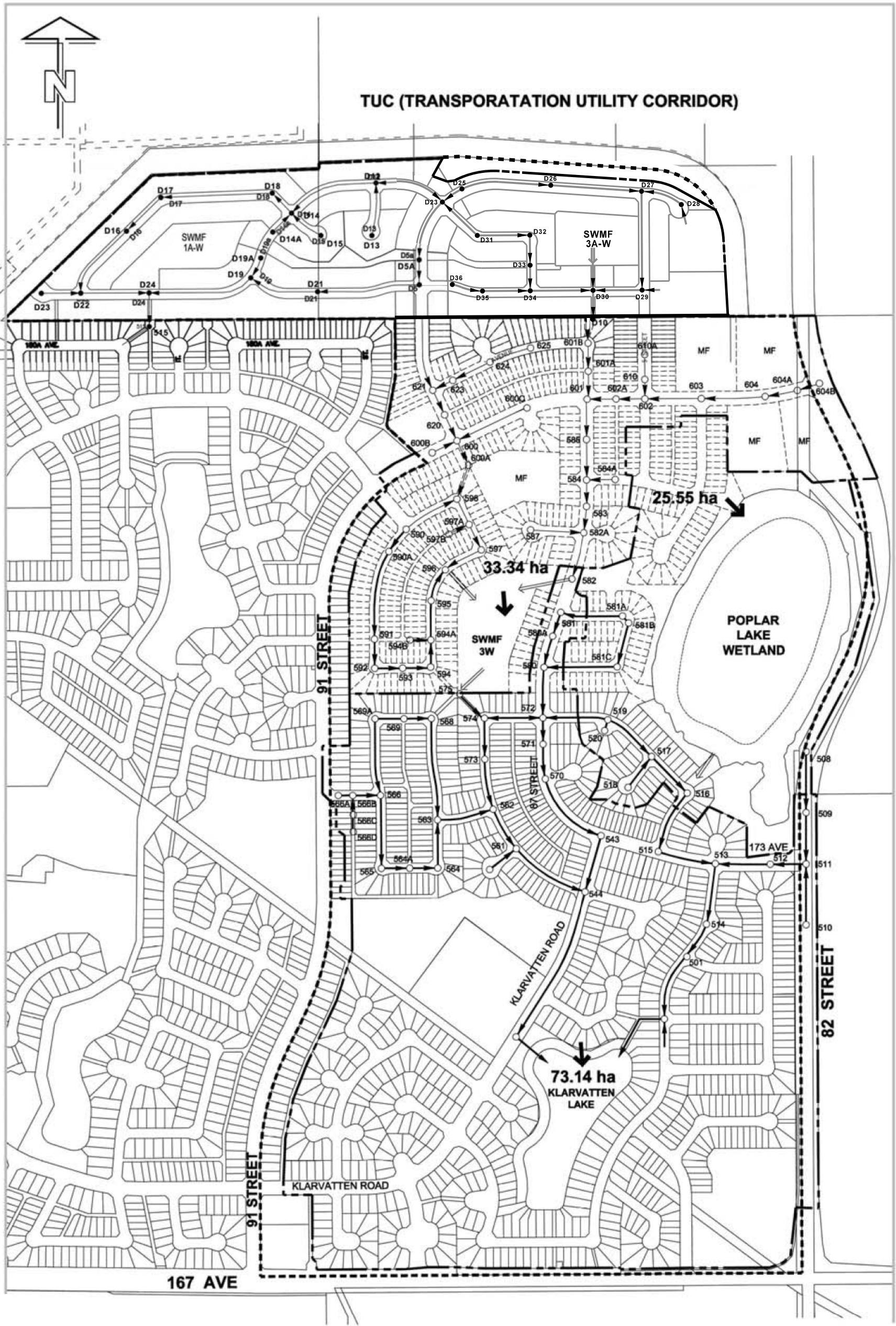


**PROPOSED NEIGHBOURHOOD  
STRUCTURE PLAN AMENDMENT  
KLARVATTEN**

**FIGURE 5  
Minor Storm Basins**

Block A Plan 823MC & Lot 1 Block B Plan 1870MC  
CITY OF EDMONTON





**LEGEND**

- NEIGHBOURHOOD BOUNDARY
- EXISTING STORM SEWER
- - - - - PROPOSED STORM SEWER
- MINOR STORM BASIN BOUNDARY
- SWMF INLET

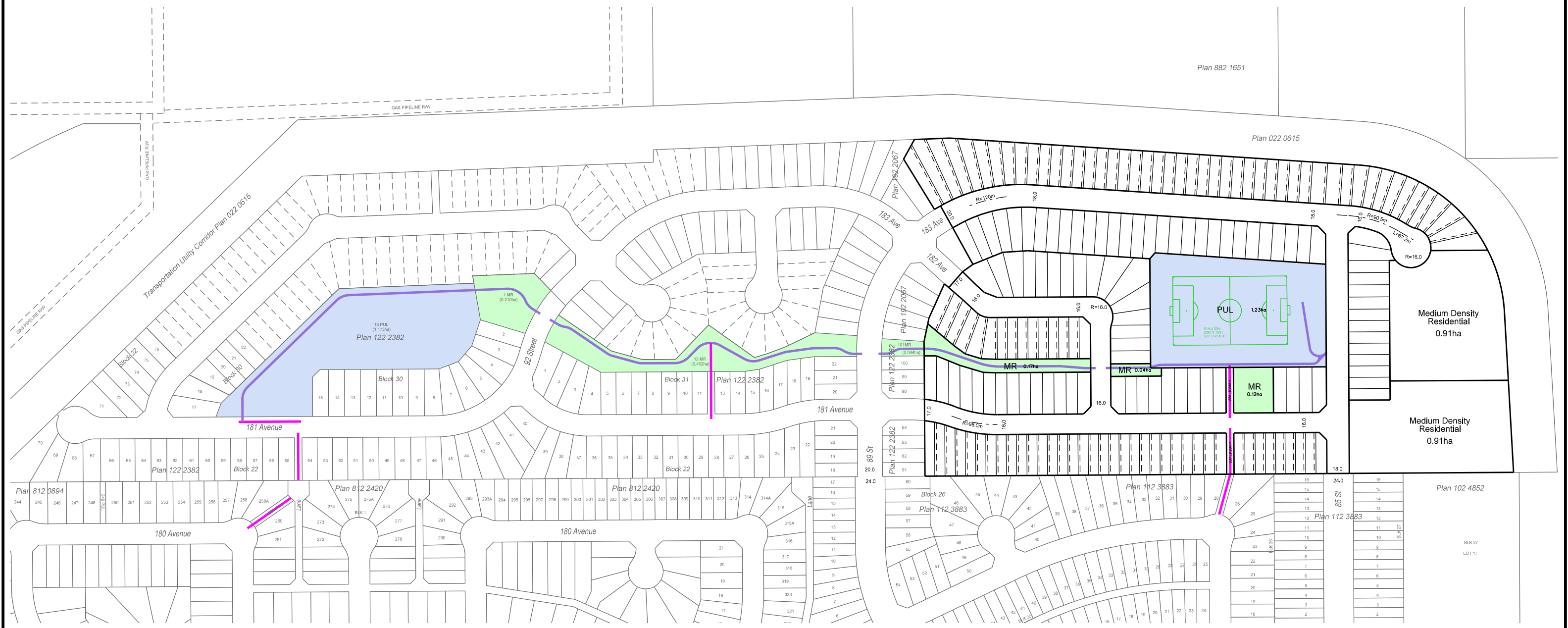


**PROPOSED NEIGHBOURHOOD  
STRUCTURE PLAN AMENDMENT  
KLARVATTEN**

**FIGURE 6**  
Minor Storm Sewer System

Block A Plan 823MC & Lot 1 Block B Plan 1870MC  
CITY OF EDMONTON





**Legend**

- Shared Use Path
- Sidewalk

**OPEN SPACE AND CONNECTIVITY  
KLARVATTEN EAST**

CITY OF EDMONTON

