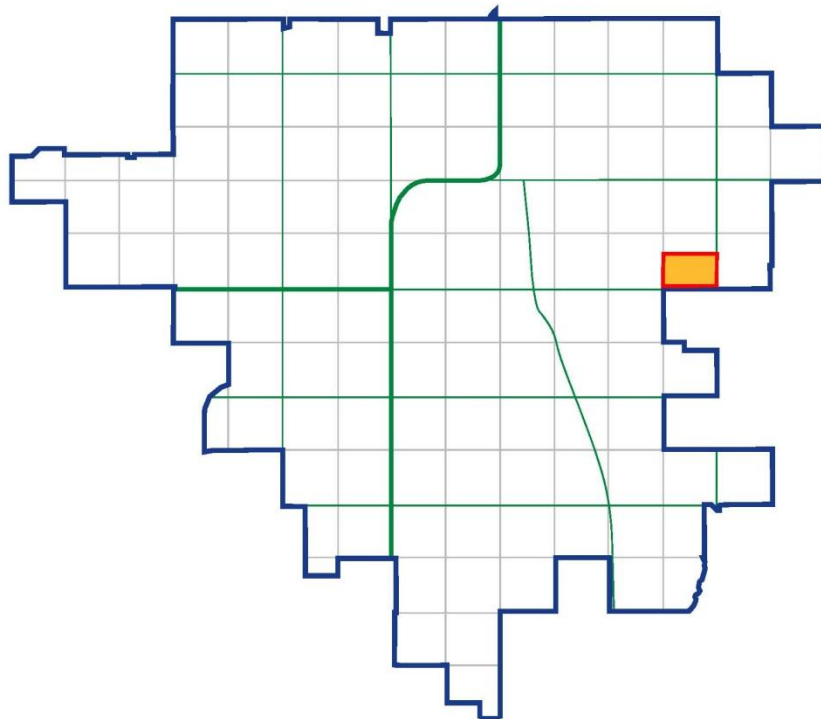


CRYSTAL LANDING OUTLINE PLAN

OP-05-01
Council Resolution July 20, 2005



Executive Summary

On behalf of Crystal Landing Corp., a wholly owned subsidiary of Daytona Land Corp., Focus is pleased to present an Outline Plan (OP) for the undeveloped lands of Crystal Landing within the Northeast Area Structure Plan (ASP). This plan was prepared in consultation with the City of Grande Prairie and Daytona Land Corporation. This OP details the opportunities and constraints of the area, community design, land uses, parks and open spaces, services, and staging of development to take place within the plan area. This plan addresses how these undeveloped lands can be developed into a healthy, vibrant residential neighbourhood that will complement surrounding neighbourhoods.

Specifically, the plan provides for the following:

- A system of neighbourhood parks with both passive and active features, and neighbourhood trails to connect all residents to the amenities provided.
- A variety of housing products, such as single family units and medium density sites, totalling approximately 715 units for an estimated 2091 people.
- A stormwater management system that addresses the needs of the site while providing an open space feature for public enjoyment.
- A general servicing scheme to complete the neighbourhood.
- An approximate staging plan for efficiently guiding development

This OP focuses upon providing a variety of lifestyles and housing types through the provision of a range of housing forms, as encouraged by the Northeast ASP. In addition, the stormwater management facility has been relocated in order to accommodate the topography within the OP area. Specific details of site design, minor circulation patterns and lot layout, particularly for the medium intensity land uses are also provided for in the concept design.

The plan is sensitive to the surrounding areas, has a prominent location along 100 Avenue and the attraction associated with the existing Ivy Lake Estates neighborhood to the west. The plan sets forth the key principles and intention for development of the area over the next five years and is intended to be flexible in its implementation.

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1.0 INTRODUCTION

1.1 Purpose

This document is an Outline Plan (OP) for the development of approximately forty hectares of land lying north of 100 Avenue, within the Northeast Area Structure Plan (ASP). The lands in question will be named Crystal Landing throughout the remainder of the document. The growth pressures and housing needs of residents within the Grande Prairie area have led to the preparation of this OP. The purpose is to provide a non-statutory framework that encourages attractive and economical development in a manner that is compatible and complementary to existing and proposed development in the area, and also provides greater detail than that which is provided for in the Northeast ASP. Specific objectives of the plan include:

- Identifying the future land uses;
- Identifying the potential constraints to development;
- Identifying the opportunities for traffic circulation;
- Determining the best method of servicing the area; and
- Identifying the staging of the proposed development.

1.2 Background

Demand for housing has been on a steady rise for several years, corresponding to the continual population growth experienced in the City of Grande Prairie. The goal of the proposed concept plan is to provide a residential community with a variety of housing options to address the diverse needs of new and existing Grande Prairie residents.

This OP provides a link between the general and broader based planning documents of the municipality and the more detailed plans of subdivision. More specifically, a link between the future land uses, parks and open space, transportation systems and servicing schemes in relation to environmental constraints and statutory documents.

1.3 Report Format

This report has been divided into nine sections. Sections one to three provide the relevant background information. Section four provides information about the proposed plan and land use concepts. Sections five and six identify the servicing and transportation schemes and Section seven details the proposed staging process. Sections eight and nine outline the development statistics and references.

2.0 DEVELOPMENT AREA

The plan area is well suited for urban development in terms of soils, slopes and the overall drainage conditions. The following outlines the physical opportunities and constraints that have been evaluated in the preparation of the Crystal Landing OP.

2.1 Location and Context

The subject parcel is situated on the northeast side of the City of Grande Prairie, adjacent to Ivy Lake (Figure 1). Crystal Landing is located on the east side of Bear Creek, approximately 2.5 km east of the existing downtown Grande Prairie.

Grande Prairie currently functions as the major urban services centre for Alberta residents in the northwest portion of the Province. The City has experienced considerable growth over the last decade and continues to grow. The anticipated expansion and development pressure necessitated the preparation of the Northeast ASP (ASP) as a means of providing a systematic and coordinated approach to planning in this area. The Northeast ASP serves as a general guide for the preparation of the Crystal Landing OP.

Crystal Landing is approximately forty hectares in size and is situated in the southeast quarter of Section 30-71-5-W6M, excluding the existing 88 Street road right of way adjacent to its boundary (Figure 2).

The plan area is defined by the following boundary limits:

- The City boundary and 84 Street defines the eastern boundary;
- 88 Street forms the western limit of the parcel;
- 100 Avenue acts as the southern boundary of the parcel; and
- The existing T&E Mobile home park forms the northern limit of the plan area.

2.2 Topography and Vegetation

The plan area is rectangular in shape and a large portion of the land is cultivated (Figure 3). An abandoned farmstead and accompanying agricultural building remains in the southeast corner of the site. There is a windbreak consisting of trees and bushes near the abandoned farmhouse site.

The southern portion of the parcel contains a thicket of bushes and trees surrounding a low lying area and wetland. This wetland collects all stormwater that originates from the plan area. The water is then drained to the natural course in the south through an existing culvert under 100 Avenue.

The topography is gently rolling, with elevation differences of eight metres from the higher northern portion of the site towards the low lying wetland area to the south.

2.3 Soils

Soils in the plan area have been evaluated using the soil survey of the Grande Prairie and Sturgeon Lake map sheets. The land is situated in the dark grey chernozemics region of Alberta. The soils are classified as relatively thin, slightly calcareous, and light to medium textured deposits that overlie heavier textured deposits. A portion of the area consists of Peoria soils which are characterized as moderately well drained, with underlying heavier textured material that may restrict drainage. The remainder consists of Codner soils, which are categorized as meadow with sandy loam to silt loam soils. They are slightly to moderately calcareous with fairly loose sand parent material. The area is considered to have good to very good arable soil.

2.4 Existing and Surrounding Land Uses

The land is presently being used for agricultural purposes. A part of the area is cultivated, with a small portion used as pasture land. There is an abandoned farmhouse and a corral situated on the southern portion of the plan area, in the vicinity of 100 Avenue (Figure 3).

The fully developed Ivy Lake Estates neighbourhood is located on the west side of 88 Street, adjacent to the plan area. The T & E Mobile Home park occupies the southern portion of the twenty four hectare parcel directly north of the plan area. The Swan City and Eldoe's Mobile Home parks are located directly south of Crystal Landing, in the County of Grande Prairie. Agricultural farm lands lie to the east of the plan area.

2.5 Land Ownership

The parcel of land is within the southeast quarter of Section 30, Township 71, Range 5, W6M and is presently owned by Crystal Landing Corporation (Figure 4).

3.0 POLICY FACTORS

A review of all relevant municipal policy documents and development requirements assisted in providing the framework for the development of this OP.

3.1 Municipal Development Plan (MDP)

The City of Grande Prairie's Municipal Development Plan (MDP) Bylaw No. C- 939 does not recognize the plan area in the future Land Use Plan. At the time of the MDP's adoption in 1995, the subject property was outside of the City boundary. In 2000, a major annexation took place in the northeast part of the City that extended developable residential areas to include the Crystal Landing area. The development proposed within this OP complies with the overall spirit and intent of the MDP. The following policy statements are of particular significance to the Crystal Landing OP:

Chapter 3: Housing

- 3.1.1 *To accommodate residential development in Grande Prairie that uses land infrastructure in an efficient manner.*
- 3.1.2 *To maintain and enhance the quality of existing and future residential developments in Grande Prairie.*
- 3.1.3 *To ascertain changes in housing needs and desires and respond to them in a responsible manner.*

Community and Development Policies

- 3.2.4 *New residential development should be contiguous to create an efficient land use pattern and prevent the premature loss of agricultural land.*

The Crystal Landing neighbourhood will provide a high quality residential development consisting of a blend of different housing styles and densities intermingled with parks and open spaces. Crystal Landing is contiguous to other development and can therefore access infrastructure systems, existing roadways, and existing park corridors efficiently.

Residential Development Policies

- 3.3.2 *The City should maintain an average gross density for new housing development between 40 to 50 persons per hectare (16 to 20 persons per acre).*
- 3.3.5 *The City shall encourage moderate increases in densities of existing and new neighborhoods by adopting programs to encourage innovative housing techniques and subdivision designs. Such programs shall consider concepts like planned unit developments, cluster housing and zero lot lines.*
- 3.3.7 *Where possible, higher density housing should be designed and located to provide transitional areas from single family residential areas. Area structure plans should be used to achieve this policy.*

While Crystal Landing's overall population density is slightly above the suggested average gross density, at 52.4 persons per hectare, it introduces this moderate increase in density without focusing on medium density residential forms. The residential density is achieved in Crystal Landing by using smaller park dedication with conventional single family lots and logical medium density sites served by open spaces. This reduction in open space dedication increases the land available for residential development, which summarily increases the density of the neighbourhood.

Chapter 5: Open Space, Parks and Recreation Policies

- 5.3.2 *At the time of subdivision, ten percent of the developable land less that portion dedicated as environmental reserve shall be set aside as municipal, school, or municipal and school reserve.*
- 5.3.3 *Neighbourhood parks and open spaces in new ASP areas should be incorporated into a city-wide trail system.*
- 5.3.9 *Municipal Reserve allocation shall be taken as land unless it can be shown that acceptance of a cash equivalent or deferment of reserve would not hinder the provision of long term community recreation needs of the community or can be provided better elsewhere.*

The municipality has requested that the Crystal Landing neighborhood not dedicate its entire Municipal Reserve (MR) contribution in the form of land. Instead, MR will be dedicated through a combination of land and cash in place of land.

Chapter 6: Municipal Services

- 6.1.5 *To facilitate the maintenance and extension of municipal and public utilities.*

Transportation Policies

- 6.4.2 *The City shall utilize a hierarchy of roads consisting of the following: highways, arterials, collectors and local roads.*

All infrastructure systems and utilities will be extended into Crystal Landing and will be maintained to identified standards. A roadway hierarchy has been used in Crystal Landing to facilitate the efficient movement of vehicles and people.

3.2 Intermunicipal Development Plan (IDP)

The proposed development will conform to the Grande Prairie IDP, Bylaw #C-1043, currently in effect. The plan area lies within the referral area identified on Map 2 of the Grande Prairie IDP. The area has been established to ensure open communication is maintained between the City and the County. The IDP therefore requires that the outline plan be circulated to the County for review and comment and shall be responded to within 30 days of the date of referral.

3.3 Area Structure Plan (ASP)

In March of 2003 the City of Grande Prairie adopted the Northeast ASP, which covers 582 hectares of the annexed land of 2000. Demographic trends, market conditions and community needs were the

impetus for the development of that ASP. The proposed Crystal Landing OP is located in the most southerly portion of the Northeast ASP (Figure 5).

The OP conforms to the general intent of the ASP development concept in that it provides for the following aspects:

- Community amenities that support both passive and active recreational uses;
- The location of park sites and trails for recreational purposes; a variety of residential types, sizes and densities;
- A stormwater management system that addresses drainage issues for the Crystal Landing area and also doubles as an amenity feature; and
- A staging plan that establishes an efficient and effective direction and pattern of development.

The following is a brief summary of the relevant objectives of the 2003 ASP in relation to Crystal Landing.

2.0

- (3) *To create a community environment that promotes a high quality of life;*
- (4) *To develop residential neighborhoods that will provide for a variety of housing opportunities;*
- (5) *To identify locations for community service facilities including schools and major parks;*
- (7) *To identify a collector road system that facilitates access between neighbourhoods, emergency vehicle access and public transit; and*
- (8) *To provide for a servicing system based on the economical and efficient extension of municipal infrastructure and utilities.*

The ASP also states (due to the unique development constraints of Area 3) that a variety of residential forms and densities be integrated into future neighbourhood design. Developments such as cluster housing, fourplexes, triplexes, low density town housing and “gated” communities may occupy approximately 20% of the total Low Density Residential area, without requiring an amendment to the ASP Plan. The specific location of the above developments is to be identified within an OP and is measured by integration with, transition to, and compatibility with adjacent developments.

3.4 Land Use Bylaw (LUB)

According to the City of Grande Prairie’s LUB C-1100, the undeveloped lands that fall within the plan area are currently designated as Urban Reserve (UR). Subject land parcels will have to be re-designated to the appropriate land use districts at the subdivision stage. All residential and commercial development will be developed in accordance with the requirements of the City of Grande Prairie LUB.

The plan area is presently zoned Urban Reserve (UR) under the existing City of Grande Prairie LUB, however, the Northeast ASP designates the land for a mixture of low density and medium density

with a small neighbourhood commercial component, although the neighbourhood commercial component has now been removed. A redistricting application will be submitted concurrently with the first stage of development.

4.0 PLAN OBJECTIVES

The area is primarily residential with a portion of land set aside for parks and open space as well as a stormwater management facility. The recognition of the potential role of the development area as an important segment of the urban fabric of the City of Grande Prairie leads to the formulation of a number of objectives, which should guide the development of the area.

Overall Objectives:

- To develop a community that is consistent and compatible with itself;
- To provide services that meets the standards of the City of Grande Prairie;
- To provide planning flexibility and stimulate innovation in planning and design of residential areas through the use of development controls;
- To encourage energy efficiency in planning with the use of proper site orientation techniques and vegetation wherever possible; and
- To allow for economical phased development at the earliest practical date consistent with City policies.

Residential Objectives

- To create a unique, yet attractive, residential neighbourhood to accommodate approximately 2091 people; and
- To conform to neighborhood planning requirements utilizing quality urban design principles.

Open Space

- To meet the needs of future residents for passive parks;
- To recognize the existing open space opportunity for development of a naturalized stormwater management facility; and
- To fulfil the statutory requirements of the Municipal Government Act by providing up to 10% of the area for MR in the form of land for parks, or a combination of land and money in lieu of land.

Transportation

- To provide safe and convenient access for vehicles and pedestrians;
- To limit the short cutting of traffic through the residential areas from neighborhoods to the north and west; and
- To provide an efficient hierarchical circulation system for automobiles, pedestrians and bicycles within the neighborhood to connect to 100 Avenue and 84 Street arterials.

Utilities

- To provide an economical servicing system and phasing sequence based on extending municipal services and utilities; and
- To incorporate stormwater retention or detention facilities into the plan as amenity areas wherever practical.

5.0 DEVELOPMENT CONCEPT

5.1 Overview

The Crystal Landing OP has been developed in consultation with the area land owner having due regard for the physical realities of the site, market and servicing constraints. The plan indicates potential design concepts for local road patterns and residential distribution. The concept is provided to guide the future development of the site area. It is expected to remain flexible to allow for changes over time as a result of changing market conditions.

The proposed land uses for this parcel are consistent with the ASP plan objective to provide for a variety of housing choices. The housing options proposed for the plan area offer a series of styles and sizes in order to accommodate an assorted range of residents. Combinations of medium and low density residential uses have been proposed in the approved ASP, although the area has been designated for primarily low density residential development. There are three medium density residential sites located within the plan area. Three parks and connections to the Ivy Lake amenity area are provided for open/green space. One of the major amenities is the large stormwater management facility to be constructed along 100 Avenue, which will provide an entrance feature to the Crystal Landing neighbourhood. Refer to (Figure 6) throughout Section 4.0.

The plan will accommodate approximately 715 housing units. When fully developed there will be opportunities for approximately 2091 people to live in the area.

5.2 Residential

The residential principles of this plan are to provide a mix of housing alternatives ranging from a variety of low density housing types to medium density developments. The mix of housing types and densities is designed to meet current and future market conditions (Figure 6). The plan provides the following housing types:

- Low density residential – single detached and semi-detached;
- Medium density residential – town housing, fourplexes, triplexes, cluster housing, “gated” communities stacked eightplexes and apartment housing all to an estimated density of sixty five units per hectare.

5.2.1 Low Density

Low density residential development will take the form of conventional lot single family housing. In total, it is expected that a maximum of 403 low density housing units will be developed in Crystal Landing.

Single Family and Semi-Detached Development

Single family housing will be distributed throughout the plan area. Lots will range in size depending on whether the lot has rear access to a lane. All lot widths will conform to the regulations of the LUB.

Medium Density

There are three medium density housing sites proposed for Crystal Landing. The sites have been strategically located along the collector roadways to provide quick and convenient access to the collectors and arterials. The sites will each be between one and two hectares in size and will be developed to an estimated density of sixty five units per hectare, resulting in approximately 312 medium density dwelling units.

5.3 Bed and Breakfast

A small 0.14 ha site has been identified for development of a bed and breakfast. It is anticipated that the building's character will match the adjacent residential dwellings and provide off-street parking on site. As well, the facility could include a small boardwalk-style café oriented toward the stormwater management facility. The location adjacent to the pond and the entrance will provide an attractive opportunity for this type of use.

5.4 Municipal Reserve and Open Space

The plan provides for an efficient and functional system of interconnected open spaces and walkways. In combination with the street and pedestrian system, these will contribute significantly to the environmental quality and liveability of this new neighbourhood.

Public parks and open space are fundamental features of a liveable and enjoyable community. There are a number of key principles which underlie the design and distribution of the parks and open space within Crystal Landing. These include providing:

- Parks and open spaces that are highly accessible, functional, visible, and safe;
- Parks and open spaces that are located, sized and configured as a linked system that provides residents with an opportunity to develop an active lifestyle;
- Parks and open space that allow for a range of opportunities for social interaction and recreation activities to meet the needs of community residents of all ages, interests, and abilities;
- Parks and open space that are efficient to maintain; and

- Parks and open space that contribute to the overall quality of the community environment by creating a variety of built and natural forms.

Parks

The City's MDP policy of 30% of the park perimeter dedicated to street frontage has been accommodated in the majority of the available park spaces. There are three small parks, all of which are located to be accessible to easy pedestrian access from any residence in the plan area. In addition to the three parks, two small additional park spaces will be located in the western portion of the plan area, in order to facilitate a connection to the existing open space of Ivy Lake Estates. These small parks are distributed throughout the plan area to facilitate easy pedestrian access. Also, the existing government road allowance contiguous with the western boundary of the neighbourhood will also be retained as green space, which will further extend connections to Ivy Lake Estates, and provide a pedestrian corridor. A table describing the dedication of parks and municipal reserves follows.

Municipal Reserve and Total Open Space Allocation

	Hectares	GDA (%)
Gross Area	40.00	
Less		
Environmental Reserve	0.00	
84 Street and 100 Avenue	1.48	
Arterial Widening		
Gross Developable Area (GDA)	38.45	100.00

Municipal Reserve and Total Open Space Allocation

	MR Dedication		Other Open Space (Non MR)	
	Hectares	GDA (%)	Hectares	GDA %
East Park	0.16	0.42		
Central Park	0.37	0.96		
West Park	0.65	1.69		
Ivy Lake Estates Park Additions	0.19	0.49		
West PUL's			0.05	0.13
West SWMF			0.84	2.18
East SWMF			2.54	6.60
East PUL			0.04	0.10
Total	1.37	3.14	3.47	9.02
MR Required	4.00			
MR Dedicated	1.37			
MR Cash in Lieu	2.63			
Total Open Space Provision	4.84	12.61%		

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Pedestrian Linkage

There will be pedestrian linkages throughout the neighborhood to connect the smaller park spaces and the stormwater management system. Much of this linkage is achieved through efficient use of the sidewalk system. Pedestrian linkage may also be accommodated through the 88 Street government road allowance.

Stormwater Management Facilities

The stormwater ponds will be connected by a culvert beneath the main road. This will provide a faux bridge entrance feature that will act as a signature focal point as one enters the neighborhood from 100 Avenue. The stormwater ponds will be landscaped and surrounded by trails according to the park development standards, and will be designated as public utility lots. The stormwater management facilities may be developed as either a conventional storm pond or a naturalized wetland area. The ultimate style of pond will be determined at the detailed design stage. The trail system within the plan area will facilitate recreational circulation within the neighborhood and link to the surrounding communities and trail systems.

6.0 SERVICING CONCEPT

6.1 General

The provision of municipal services to Crystal Landing is based on the staging of development, which is to proceed from southwest to the north and east in a cost effective and efficient manner. Stormwater management is a critical component of urban design and needs to be determined through a comprehensive design analysis.

There are a number of key principles which underlie the design and distribution of servicing within Crystal Landing. These include providing:

- Services to Crystal Landing that are of a level and standard satisfactory to the municipality, Alberta Environment and the utility companies;
- A drainage plan for the entire plan area and defining the extent and nature of stormwater to be detained on site and the inundation and performance levels of the proposed pond.

6.2 Sanitary Sewers

Sanitary sewer servicing is available for Crystal Landing from the existing 97 Street sanitary trunk sewer located on 100 Avenue west of the site. There is capacity set aside in this trunk to service the first fifty acres of residential development. The remainder of the lands may be serviced by this trunk in off-peak hours should capacity exist at the time of development.

The lands are generally falling from north to south. As a result, the servicing concept (Figure 7) is to collect the flows from the site to the southwest corner of the site. On an interim basis, the flows will be pumped into the existing 97 Street trunk sewer from the southwest corner of the site. In the future, the east trunk sewer will extend from Countryside South to this site and continue to the north to 132 Avenue (subject to the sanitary master plan being completed at the time of this writing). A section of the trunk will extend through this site, from the southwest corner to the northeast corner.

The trunk sewer through Crystal Landing will be designed for the expected flows from the upstream basin and grades will be set to allow the gravity connection to the future trunk to the south. Any over-sizing through this site will be eligible for cost recoveries.

Details on the sanitary servicing concept will be refined through the preparation of the sanitary design report.

6.3 Stormwater Management

The general location of the stormwater management facility (SWMF) is in accordance with the location designated in the Northeast ASP, preliminary analysis of the nature of drainage, topography and build-

out densities (Figure 8). Due to the topography, stormwater flows south into an existing wetland depression area within the plan area. The SWMF is proposed for the southern portion of the plan area, is approximately 3.88 hectares in size and will act as an amenity feature for all neighborhood residents.

The wetland will be sized to store the one hundred year post development runoff volume minus the five year pre-development flow volume (at 5 l/s/ha) from the site. The overflow control for the existing wetland is a culvert crossing 100 Avenue. The design of the improved wetland would be based on this control to ensure no negative effects on the downstream water courses. The outlet from the existing Ivy Lake will also be considered in the design of the storm system.

The details of the stormwater management plan will be refined through the preparation of the stormwater design report, which will also address any discrepancies between the stormwater master plan. Where possible, staging of the SWMF will be considered.

6.4 Water

Water servicing for the plan area will be supplied by connecting to the existing watermain located in the Ivy Lake development to the west (Figure 9). Two connections are contemplated, one to the Zone II system located adjacent to 88 Street south of 104 Avenue (in the northwest corner of the plan area) and the other to the Zone I system located west of Ivy Lake along 100 Avenue. In order to provide looping, connection to both zones is required. At the time of this writing, a water master plan is being completed. Subject to the recommendations of the master plan, the previous intention was for this site to be serviced from Zone III. In this scenario, the connection to Zone II will require a pressure reducing station to allow flow into the area without affecting the pressures in Zone I.

A water network analysis for Crystal Landing will be undertaken prior to detailed design.

6.5 Utilities

A main will be accommodated with the 100 Avenue right of way to provide gas service. All overhead power lines will be removed and replaced with underground power distribution.

Any required utility structures will be accommodated in park spaces or adjacent to the stormwater management facility.

7.0 TRANSPORTATION AND CIRCULATION

The transportation circulation pattern has been refined to accommodate connection to the existing developments to the north and west. Also, a road design network has been adopted that supports the concept of compact neighborhood modules as outlined in the Northeast ASP (Figure 10).

7.1 General

The roadway system is designed to facilitate safe and convenient movement of motorists, pedestrians and cyclists. The system provides multiple connections into the area, helping to integrate it to surrounding development, while limiting the potential for short cutting traffic.

There are a number of key principles that underlie the design and distribution of transportation and circulation within Crystal Landing. These include providing:

- A compact community that is pedestrian and transit supportive, placing housing and community amenities such as the central parks and stormwater management facilities within convenient walking distance of each residence;
- A safe and pedestrian friendly trail network that encourages walking, cycling and transit use as an alternative travel mode to the car;
- A design and alignment of the street system to discourage short cutting and reducing vehicle speed;
- A hierarchical transportation design that complements the location of medium density sites that is subject to higher traffic volumes;
- A pedestrian network that encourages access to surrounding services and facilities; and
- A transportation design that allows for the straight forward and strategic connection to future neighborhoods.

7.2 Transportation

A key component to the development area is access. The transportation network will be comprised of a series of hierarchical roadways that will direct traffic from local roads onto the collector roadways, and subsequently onto the major arterial and collector roadways bordering the plan area.

Both 100 Avenue and 84 Street are slated for future road widening, requiring the dedication of additional road right of way adjacent to 100 Avenue and 84 Street. This area will be dedicated along the eastern and southern boundaries of the Crystal Landing neighborhood.

All accesses onto arterial roadways will be developed to conform to the municipal standards for intersection separation distances.

7.3 Pedestrian and Bicycle Linkages

A pathway system will connect to adjacent community-wide trail systems and the existing government road allowance. The pedestrian system will connect residents to neighborhood and surrounding amenities, commercial and educational facilities to the west and north of the site.

7.4 Transit

Transit will be restricted to the collector roadways. A transit route along the north-south collector adjacent to the 88 Street right of way will be accommodated. An east-west connection may also be necessary should further development east of Crystal Landing occur.

8.0 IMPLEMENTATION

The initial phase of development will provide the opportunity for a variety of residential types to occur immediately.

8.1 Staging

The sequence of development is divided generally into three phases and will proceed in an efficient and sequential pattern (Figure 11).

Phasing is flexible and subsequent phasing will be determined by the landowner in response to the market demand of the various types of residential units.

8.2 Development Policies

The OP will be approved by resolution by the City of Grande Prairie. The approval of the plan is required prior to any LUB amendments or subdivisions. The plan is intended to provide general guidance with respect to development concepts and has a certain amount of flexibility built in to it. Major adjustments to the concepts provided herein will require an amendment to the plan.

The implementation process will consist of further planning approvals, including land use re-designation, subdivision plans, development permits and building permit applications.

9.0 DEVELOPMENT STATISTICS

Preliminary Development Statistics

	Hectares (ha)	%GDA
Gross Area	39.93	
Less:		
84 Street & 100 Avenue arterial widening	1.48	
Gross Developable Area	38.45	100.00
Less:		
Open Space /Parks	1.38	3.60
Stormwater Management Facilities	3.38	8.80
Roads (based on length & width)	9.33	23.50
Net Developable Area	24.36	64.10

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Net Land Uses	Ha	Units	Frontage (meters)	Population ¹
Low Density Residential (LDR) ²	20.28	412	5,036	1,277
Medium Density Residential (MDR) ³	4.08	265	-	715
Total	24.36	677	5,036	1,992

OP-05-01A January 13, 2014

Student Population ⁴	Public	Separate
Kindergarten – Grade 9	248	112
Grades 10-12	62	28
Total	310	140

OP-05-01A January 13, 2014

¹ 3.1 persons/unit for LDR, 2.7 persons/unit for MDR

² Unit total based on 12.2m lots/frontage

³ Unit total based on 65 units/net hectare

⁴ Student Generation:

22.6% of total population

Public 69% of students and Separate 31% of students

K-9 80% of students and grades 10-12 20% of students

10.0 REFERENCES

City of Grande Prairie Land Use Bylaw (LUB) C-1100

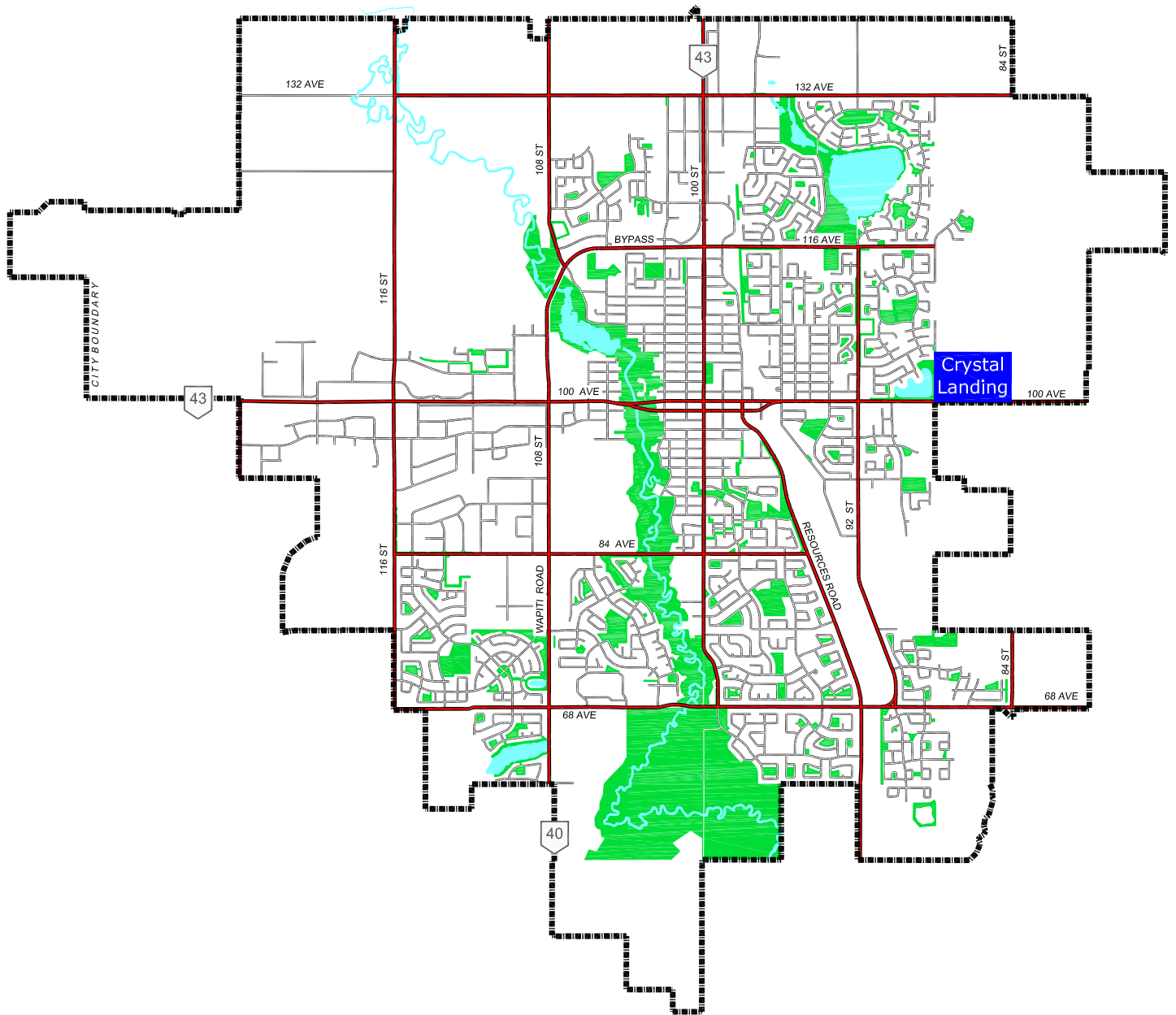
City of Grande Prairie North-east Area Structure Plan (ASP)

City of Grande Prairie Meadow View Area Structure Plan (ASP)

Grande Prairie and Sturgeon Lake Soil Survey Maps Sheets

City of Grande Prairie Municipal Development Plan (MDP) Bylaw No. C-939

City of Grande Prairie Intermunicipal Development Plan Bylaw #C-1043



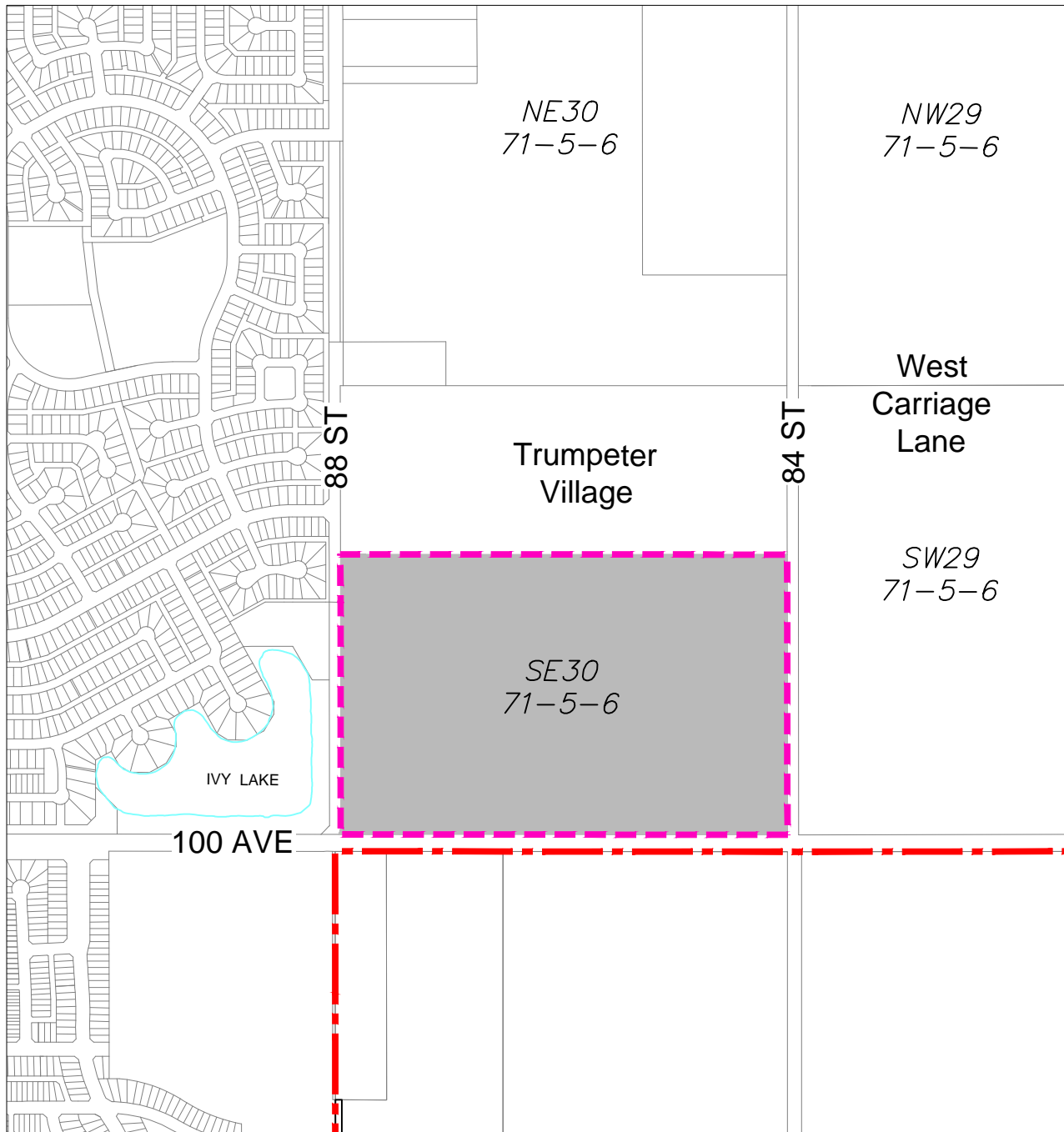
CRYSTAL LANDING OUTLINE PLAN

FIGURE 1:
LOCATION MAP
OP-05-01
July, 2005





SCALE 1:65,000

Crystal Landing Outline Plan



Legend

-  Outline Plan Boundary
-  City Boundary

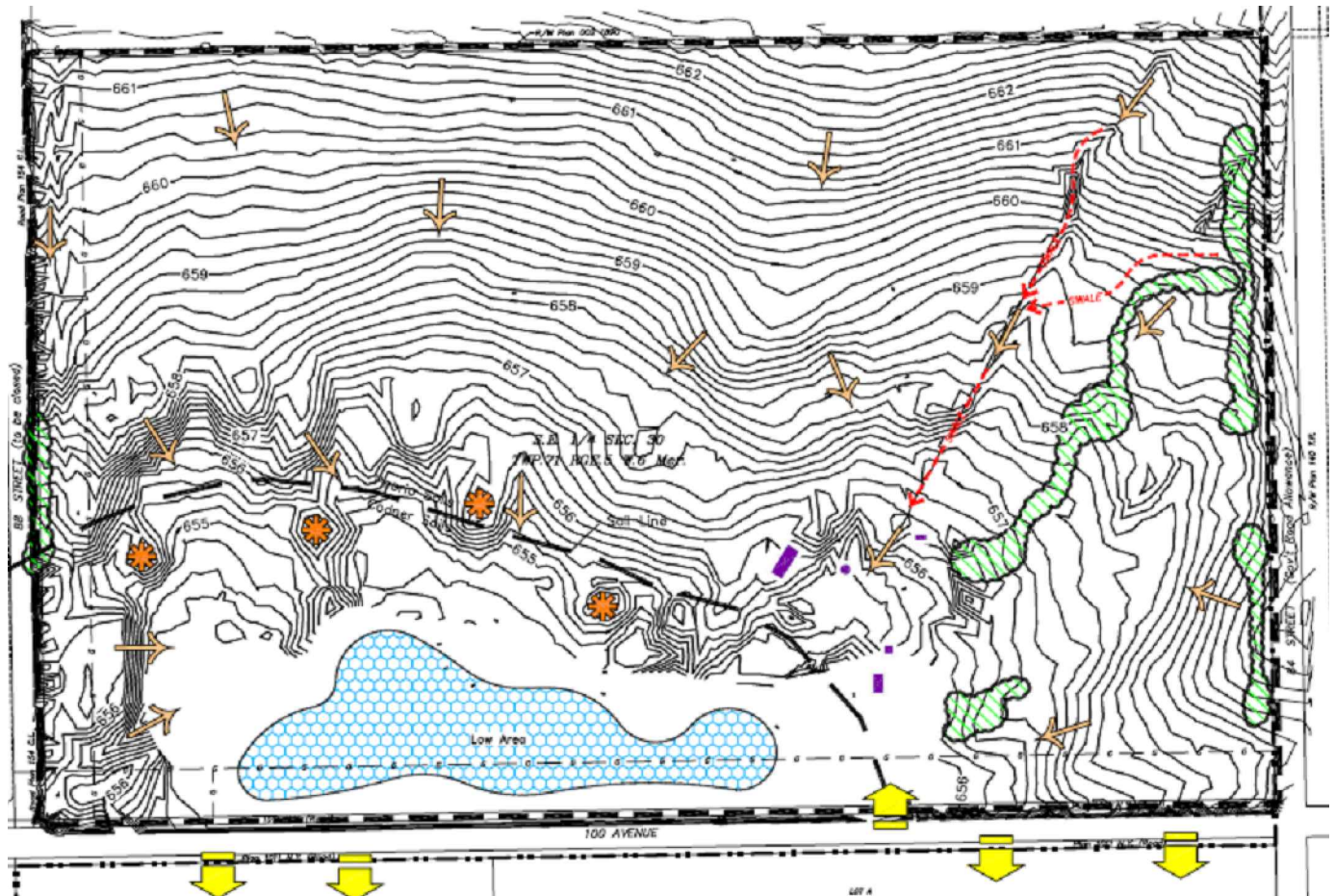


1:10,000 0 100 200 300 400 500

Figure 2: Local Context

OP-05-01
July, 2005

Crystal Landing Outline Plan



Legend

- | | |
|--------------------------------|----------------------|
| — — — Outline Plan Boundary | ★ High Spot |
| — · — · — City Boundary | Existing Tree Stand |
| ← Direction of Slope | Existing Building |
| ← - - - Natural Drainage Swale | Existing Access |
| Low Area | Soil Separation Line |
| | — G — Gas Line |

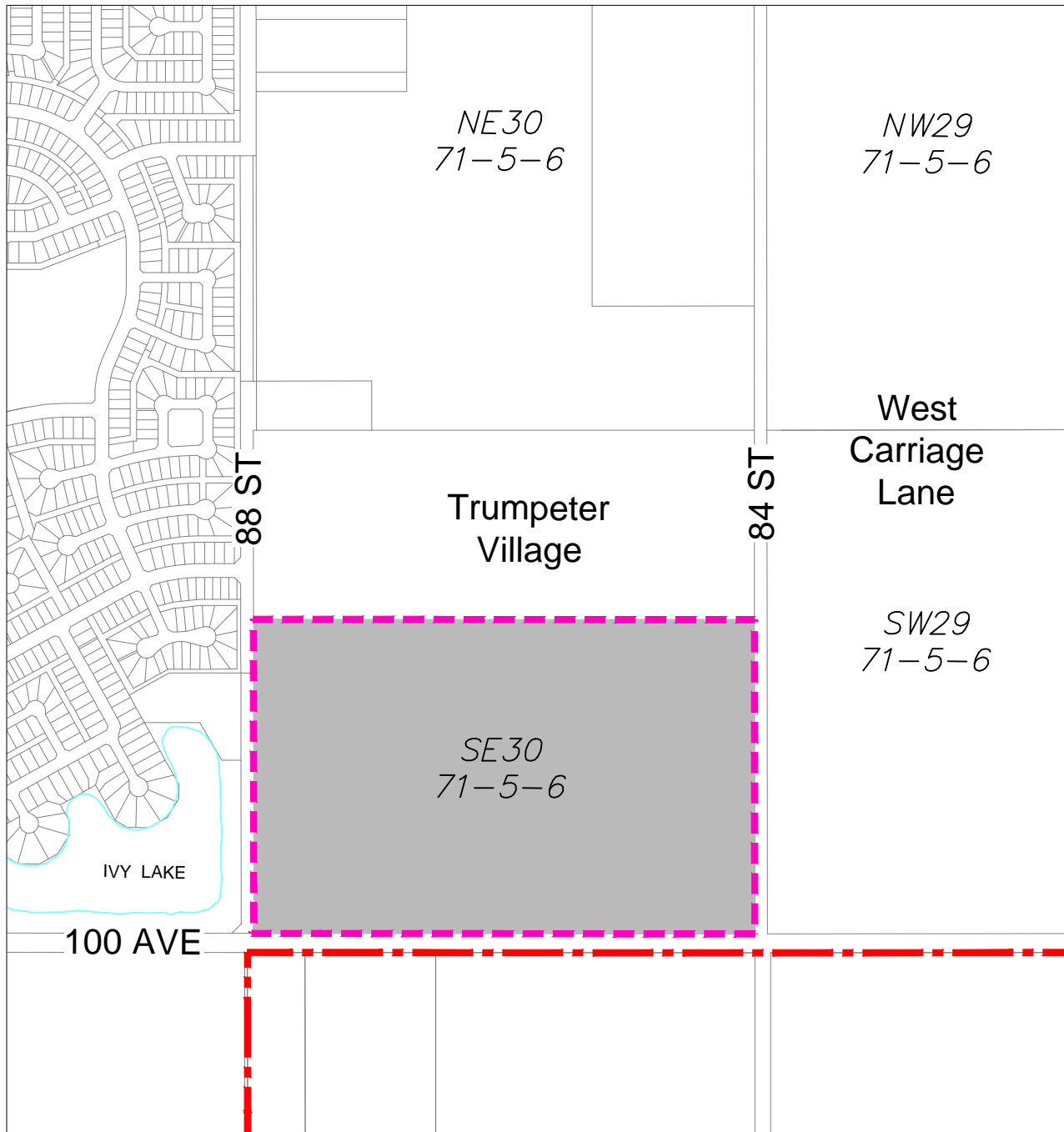
- Elevations shown are in metres.
- Contour Interval @ 0.25m.





Figure 3: Existing Conditions

OP-05-01
July, 2005

Crystal Landing Outline Plan



Legend

-  Outline Plan Boundary
-  City Boundary



1:10,000 0 100 200 300 400 500

Figure 4: Ownership Plan

OP-05-01
July, 2005

Crystal Landing Outline Plan

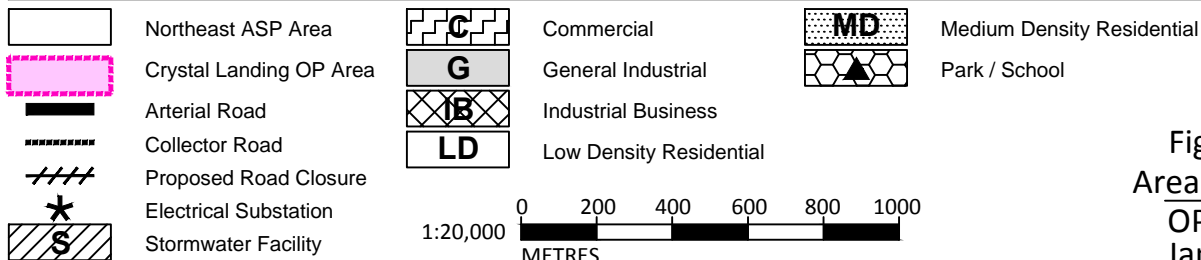
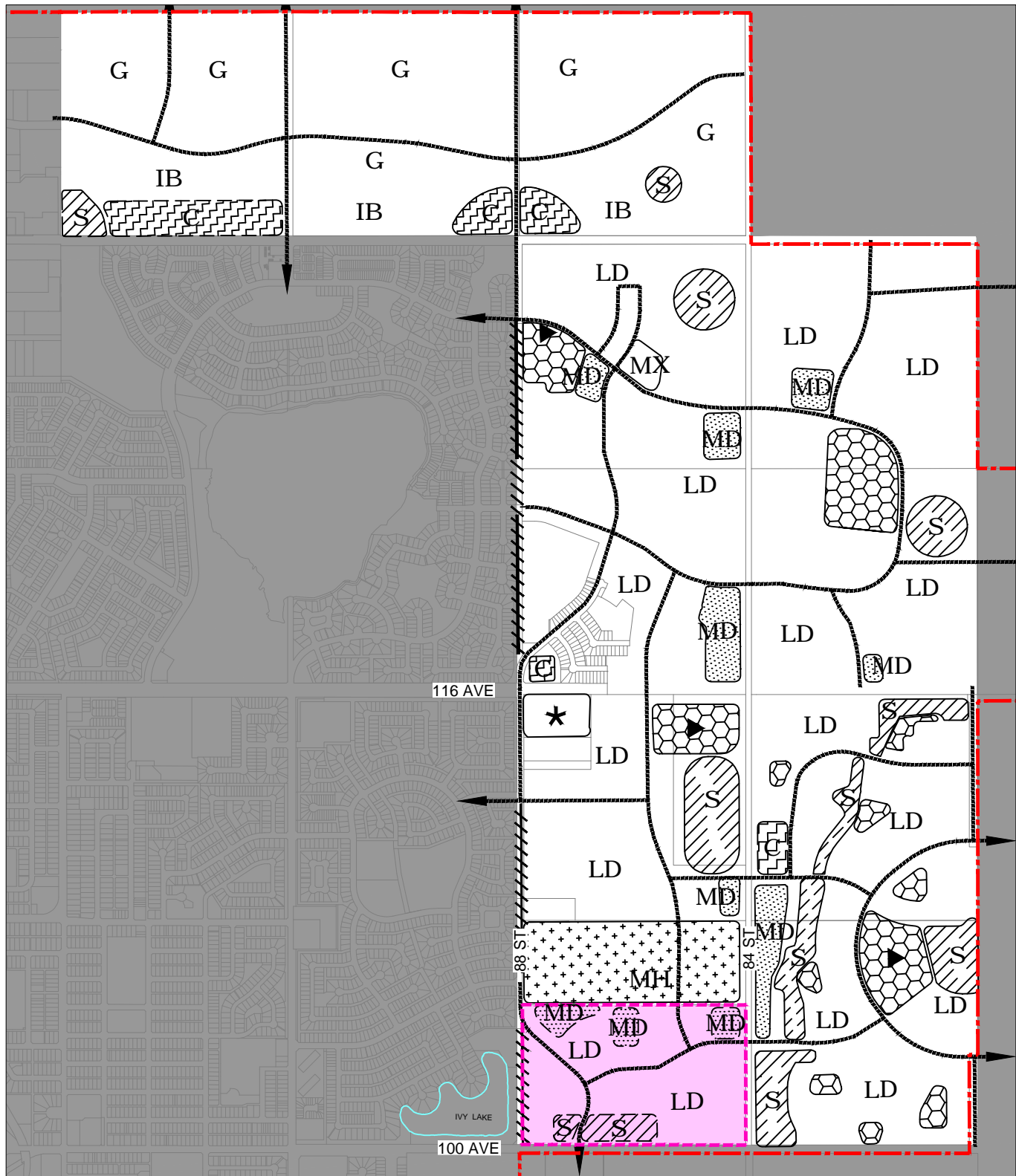
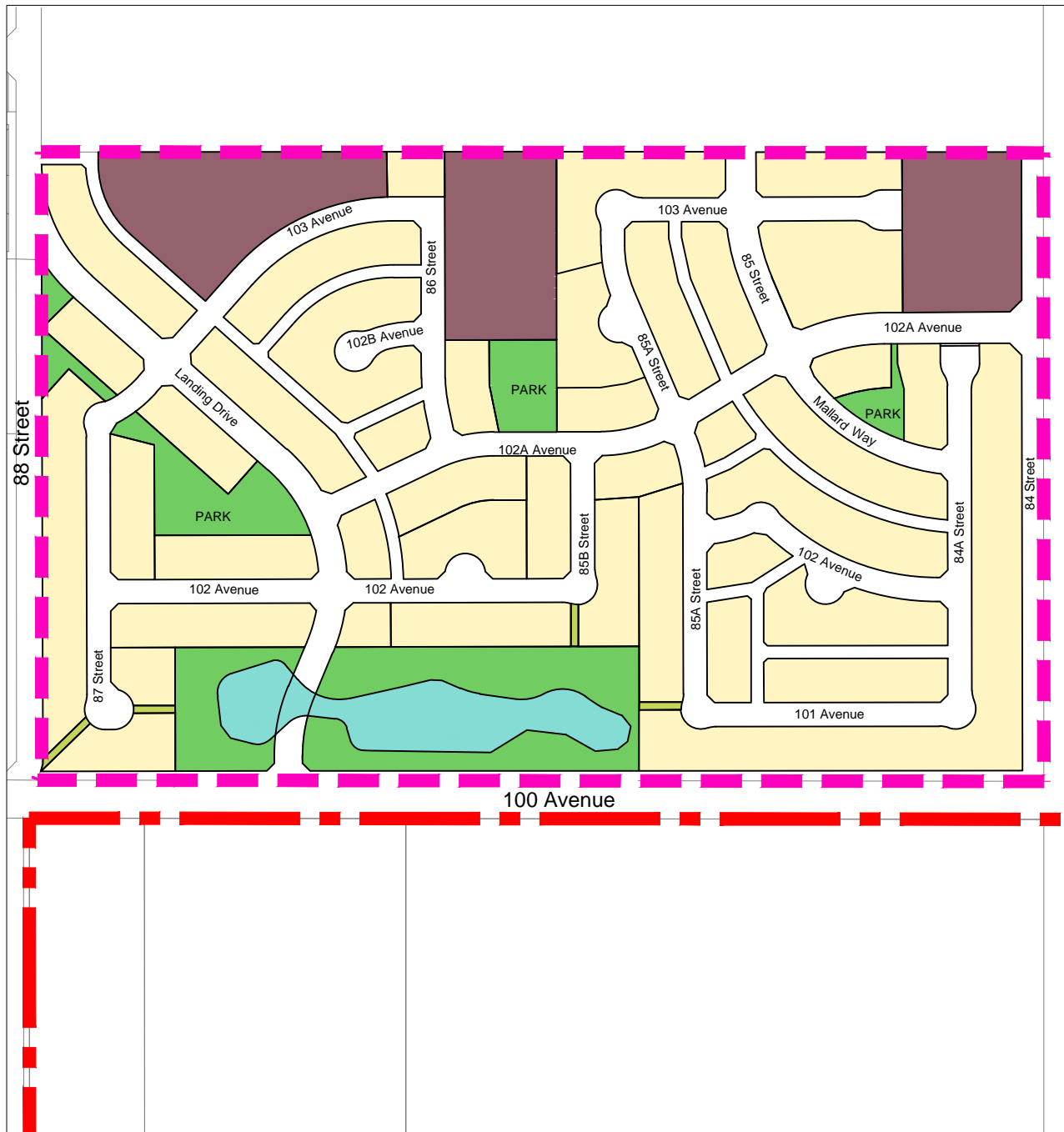


Figure 5: Existing
Area Structure Plan
OP-05-01A
January 13, 2014

Crystal Landing Outline Plan



Legend

- | | |
|--------------------------------|----------------------------|
| Outline Plan Boundary | Public Utility Lot |
| City Boundary | Low Density Residential |
| Park | Medium Density Residential |
| Stormwater Management Facility | |

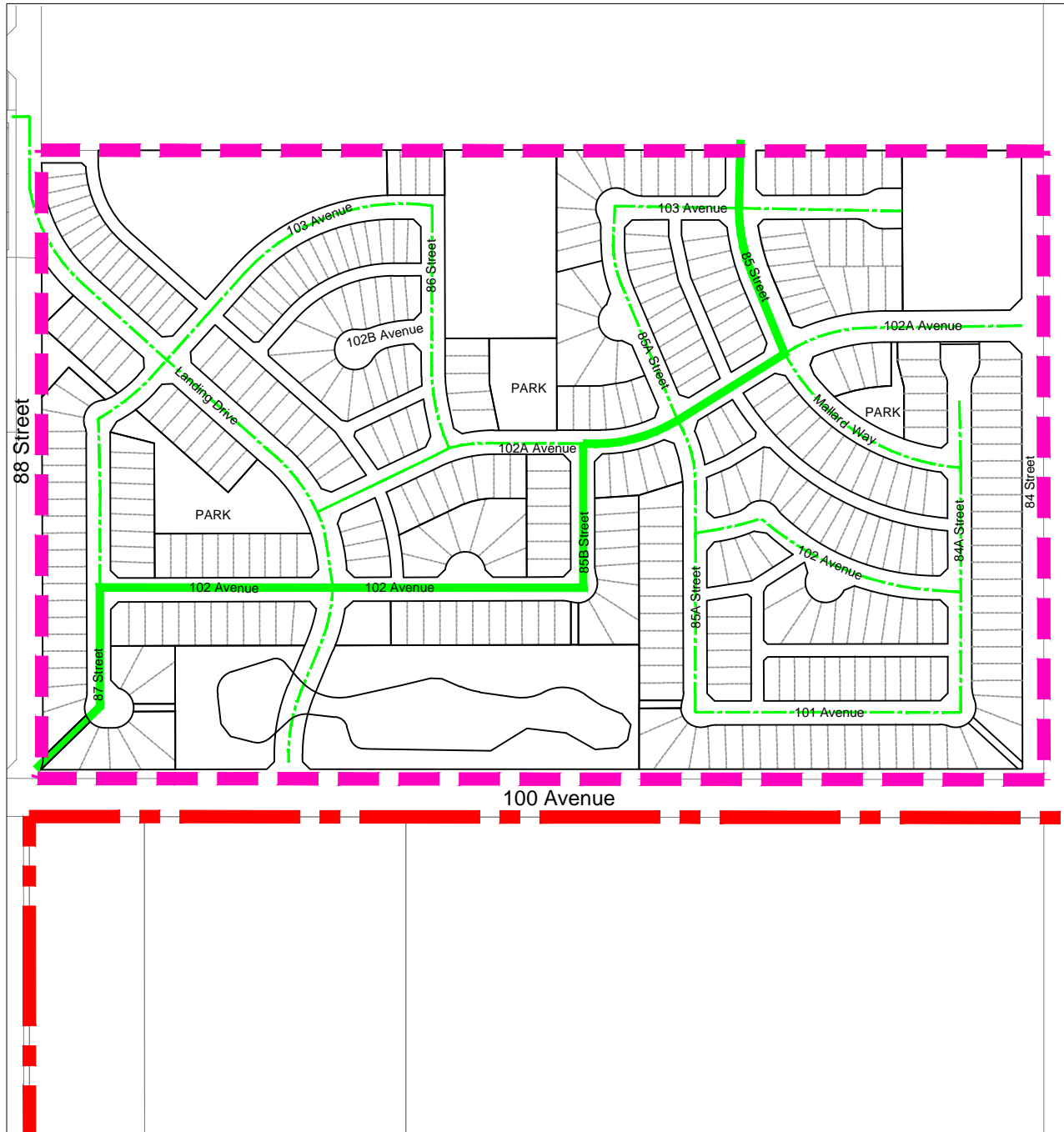


1:5,000
0 50 100 150 200 250

Figure 6: Development Concept

OP-05-01A
January 13, 2014

Crystal Landing Outline Plan



Legend

- Outline Plan Boundary
- City Boundary
- Sanitary Trunk
- Proposed Sewer Lines

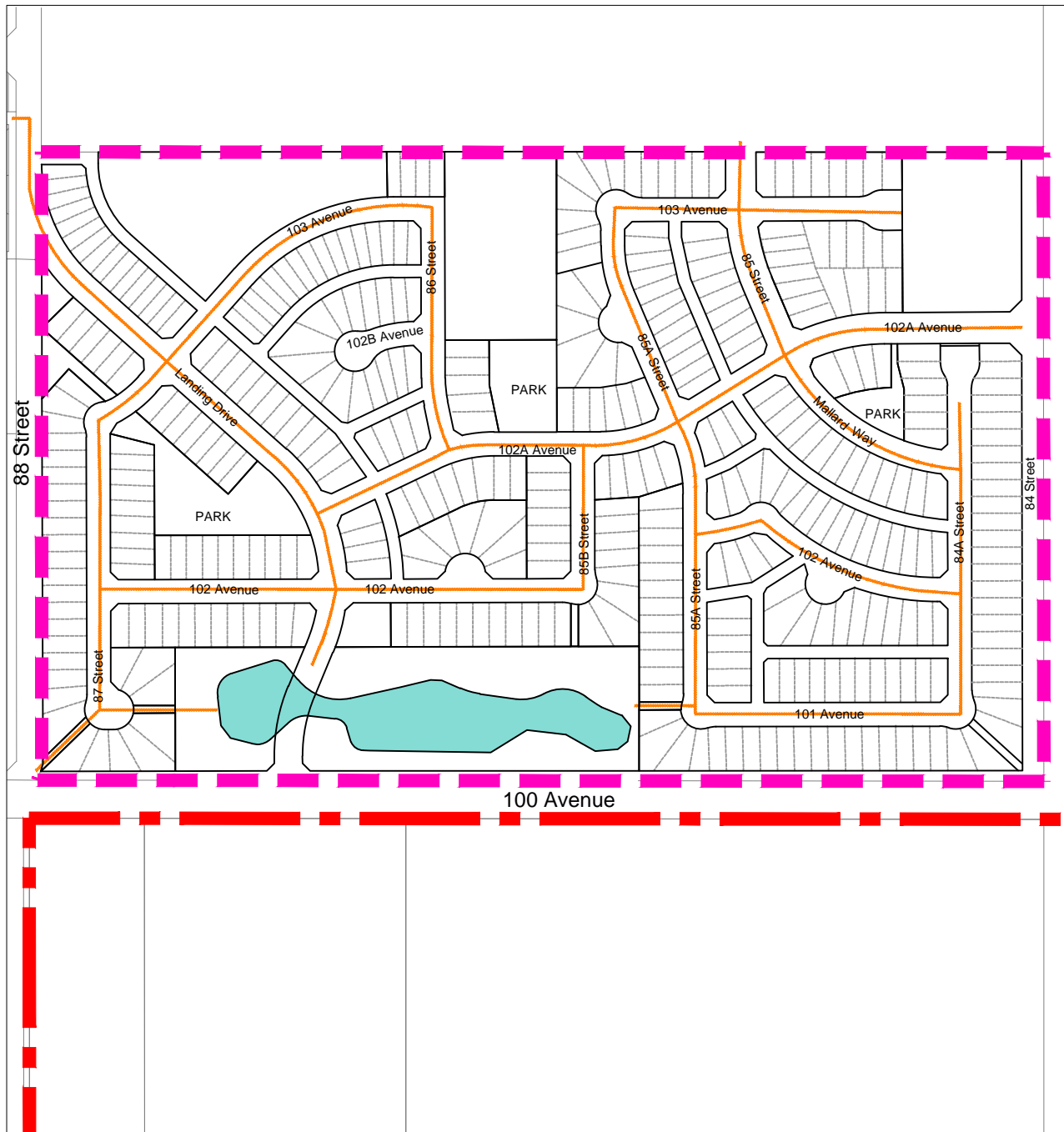


Figure 7: Sanitary Servicing Plan

OP-05-01A
January 13, 2014

1:5,000 0 50 100 150 200 250

Crystal Landing Outline Plan



Legend

- Outline Plan Boundary
- City Boundary
- Proposed Storm Lines
- Stormwater Management Facility (SWMF)

1:5,000

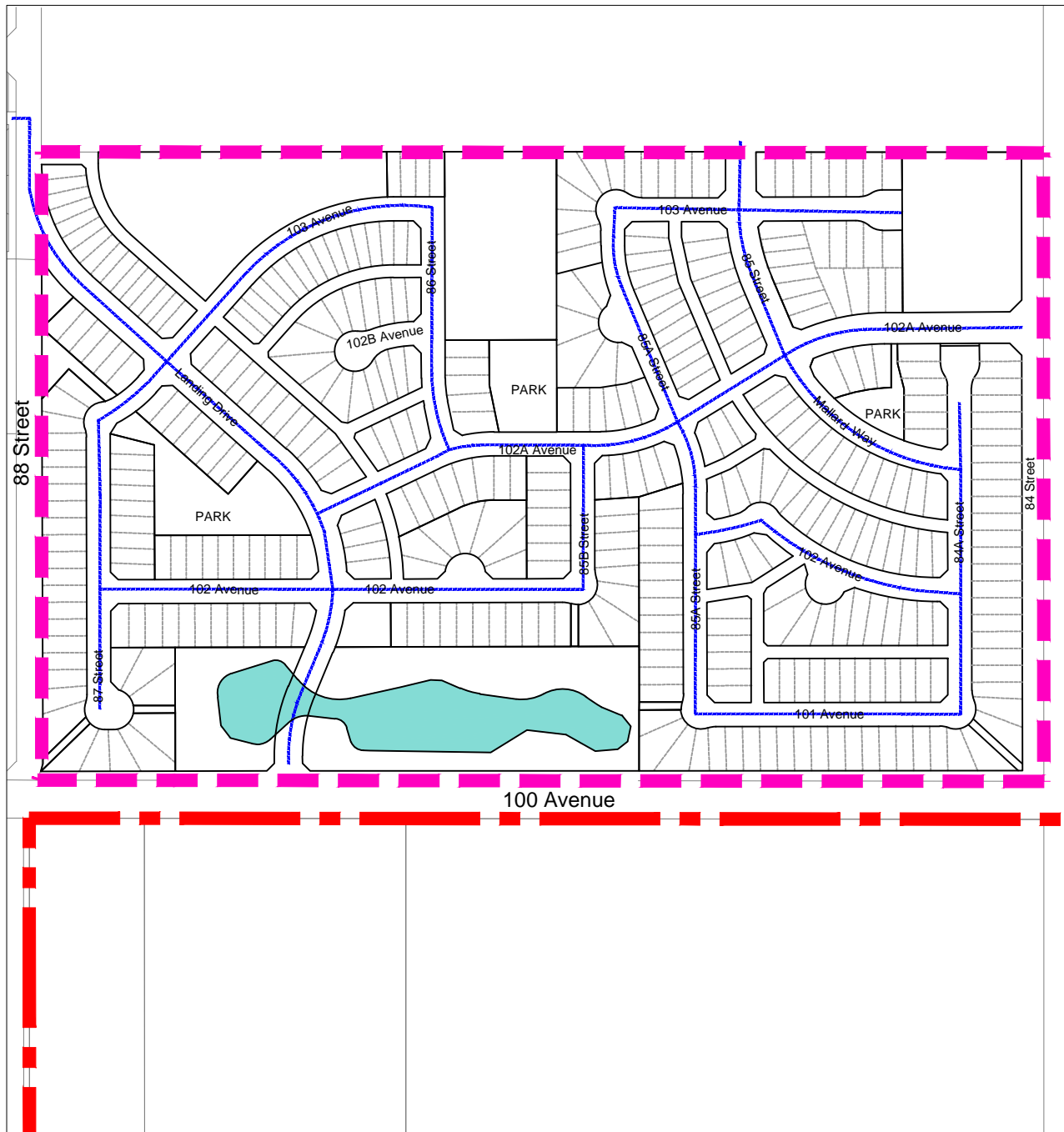
0 50 100 150 200 250



Figure 8: Storm Water Servicing Plan

OP-05-01A
January 13, 2014

Crystal Landing Outline Plan



Legend

- Outline Plan Boundary
- City Boundary
- Proposed Water Lines

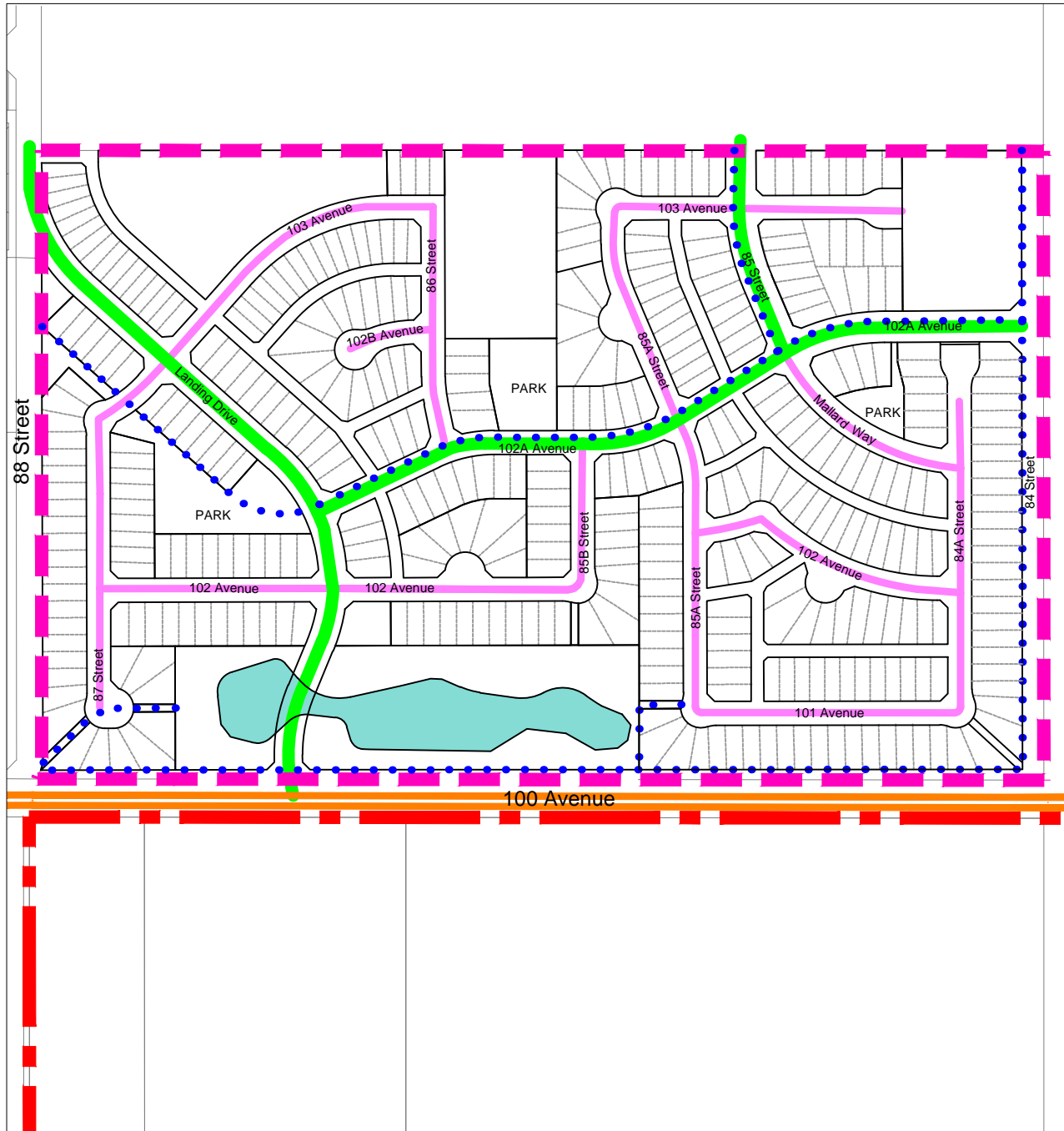


1:5,000
0 50 100 150 200 250

Figure 9: Water Servicing Plan

OP-05-01A
January 13, 2014

Crystal Landing Outline Plan



Legend

- Outline Plan Boundary
- City Boundary
- Arterial Road
- Collector Road (Transit Route)
- Local Road
- Pedestrian Connection

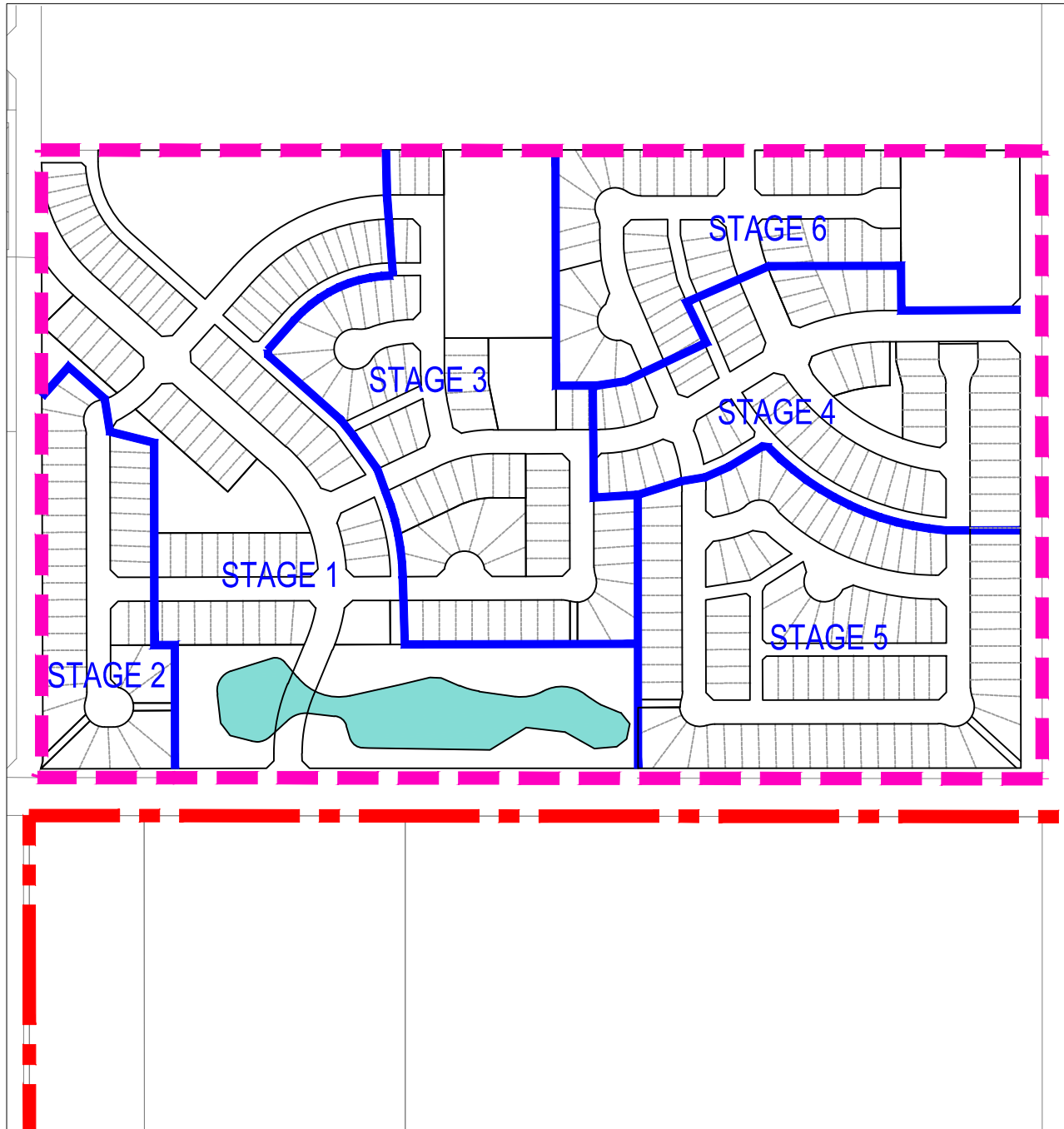


1:5,000 0 50 100 150 200 250




Figure 10: Transportation Plan

OP-05-01A
January 13, 2014

Crystal Landing Outline Plan



Legend

-  Outline Plan Boundary
-  City Boundary
-  Staging Boundary

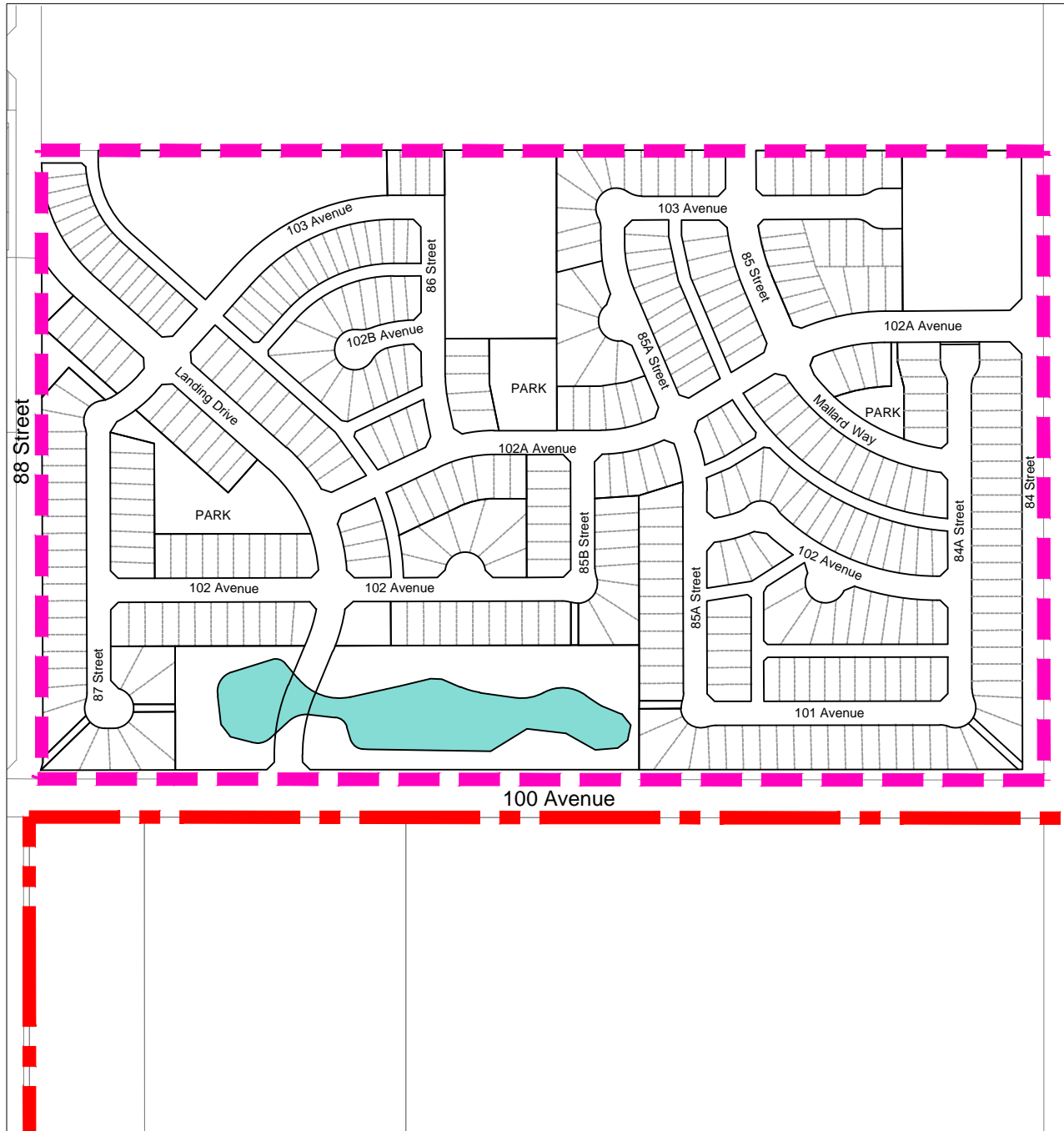
1:5,000
0 50 100 150 200 250



Figure 11: Development
Staging Plan

OP-05-01A
January 13, 2014

Crystal Landing Outline Plan



Legend

- Outline Plan Boundary
- City Boundary

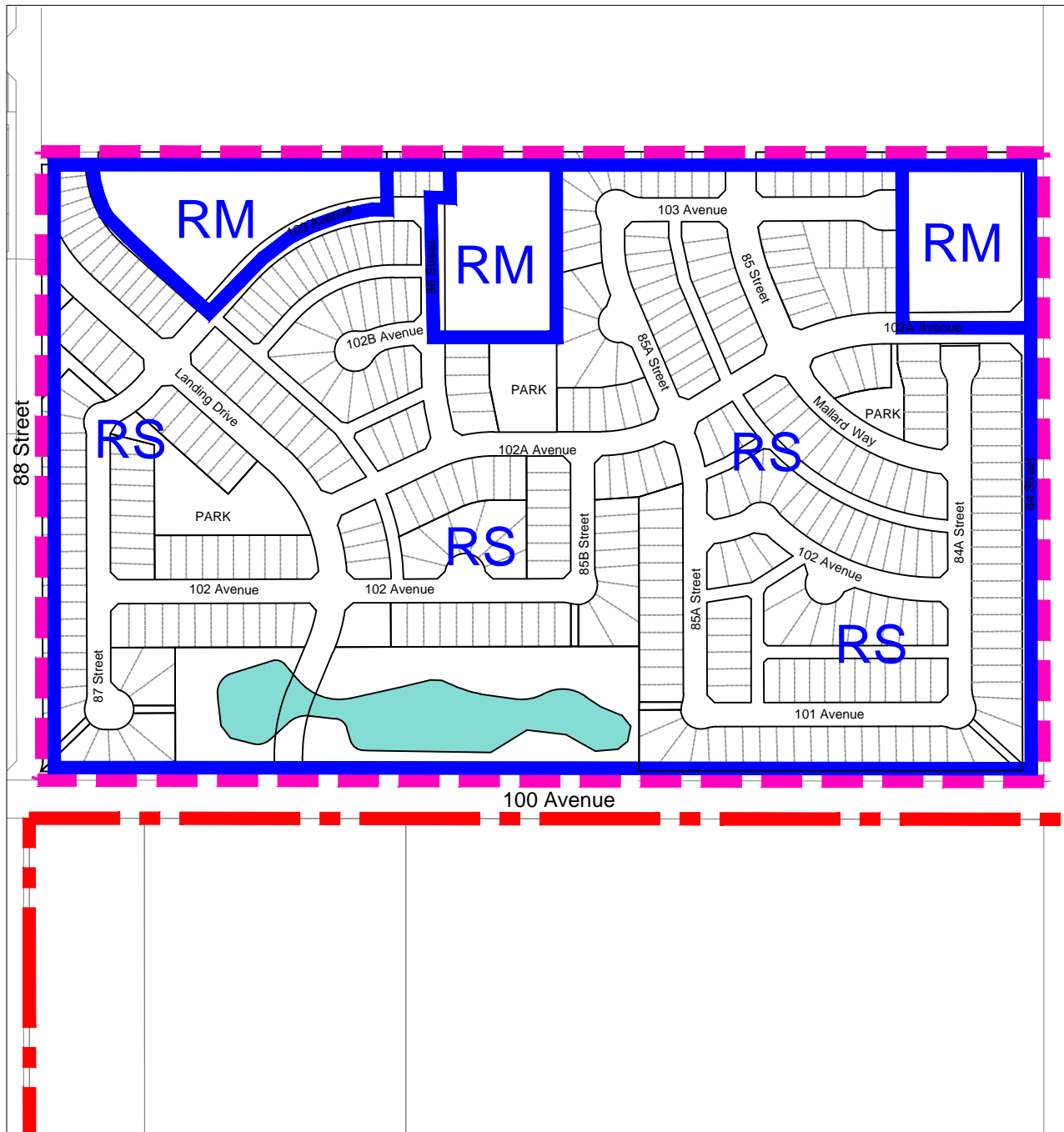
1:5,000 0 50 100 150 200 250



Figure 12: Proposed Lotting
Concept & Street Names

OP-05-01A
January 13, 2014

Crystal Landing Outline Plan



Legend

- Outline Plan Boundary
- City Boundary
- RS Small Lot Residential
- RM Medium Density Residential



1:5,000
0 50 100 150 200 250

Figure 13: Proposed Zoning

OP-05-01A
January 13, 2014