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REPORT

Trilogy Real Estate Group Inc.

The Piers Outline Plan



JUNE 2025



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Date: June 26, 2025

File No: OLP00016

PLANNING REVIEW TEAM - OUTLINE PLAN TECHNICAL ELEMENTS APPROVAL**RE: Country Meadows Outline Plan Amendment**

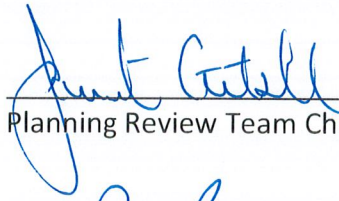
During the Regular Meeting of City Council held on Tuesday, July 23, 2024 in City Council Chambers item 4.3.1 Recommendation of Assets & Infrastructure Standing Policy Committee - The Piers Outline Plan-Land Use Concept Amendment was approved by the following resolution:

BE IT RESOLVED THAT City Council amend the Land Use Concept for the Piers Outline Plan as in attachment 2 to replace the Land Use Concept approved by Municipal Planning Commission on July 11, 2017.


Following the approval of the Land Use Concept by City Council, Planning Review Team voted on **June 26, 2025** to accept the accompanying Technical Elements.

Members present at the meeting were:

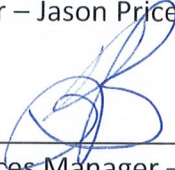
Adam St Amant (Transportation)	Mark Hilger (Lethbridge Electric Utility)
Andrew Sommerville (Parks)	Mark Molesky (Capital Planning and Engineering Services)
Byron Buzunis (Capital Planning and Engineering Services)	Matthew Harker (Capital Planning and Engineering Services)
Gareth Jones (Lethbridge Electric Utility)	Maureen Gaehring (GM Planning and Design)
Jeff Koshuta (GM Capital Planning and Engineering)	Muhammad Qasim (Transportation)
Janet Gutsell (Planning and Design)	Tyson Boylan (Planning and Design)



Planning Review Team Chair- Janet Gutsell



Planning Manager – Jason Price



Engineering Services Manager – Byron Buzunis. P. Eng.

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1 PURPOSE

1.1 Purpose

The purpose of The Piers Outline Plan (OLP) is to establish a framework for the future subdivision and development of lands within the NE ¼ 28-8-22-4 east of Chinook Trail and south of Garry Drive. The West Lethbridge Phase II Area Structure Plan (ASP) was approved by City Council on May 16, 2005. Based upon the planning principles and objectives within the ASP, this Outline Plan provides more detailed information on land uses and their intensity, the location of the elementary school sites, parks, open spaces, and pedestrian and vehicular circulation within The Piers Outline Plan Area.

The Piers Outline Plan Amendment was prepared to comply with requirements within the adopted West Lethbridge Phase II Area Structure Plan and is consistent with the City of Lethbridge Design Standards 2021 Edition. The purpose of this amendment was to relocate the stormwater management pond to a location that accommodates a natural drainage path and emergency overflow.

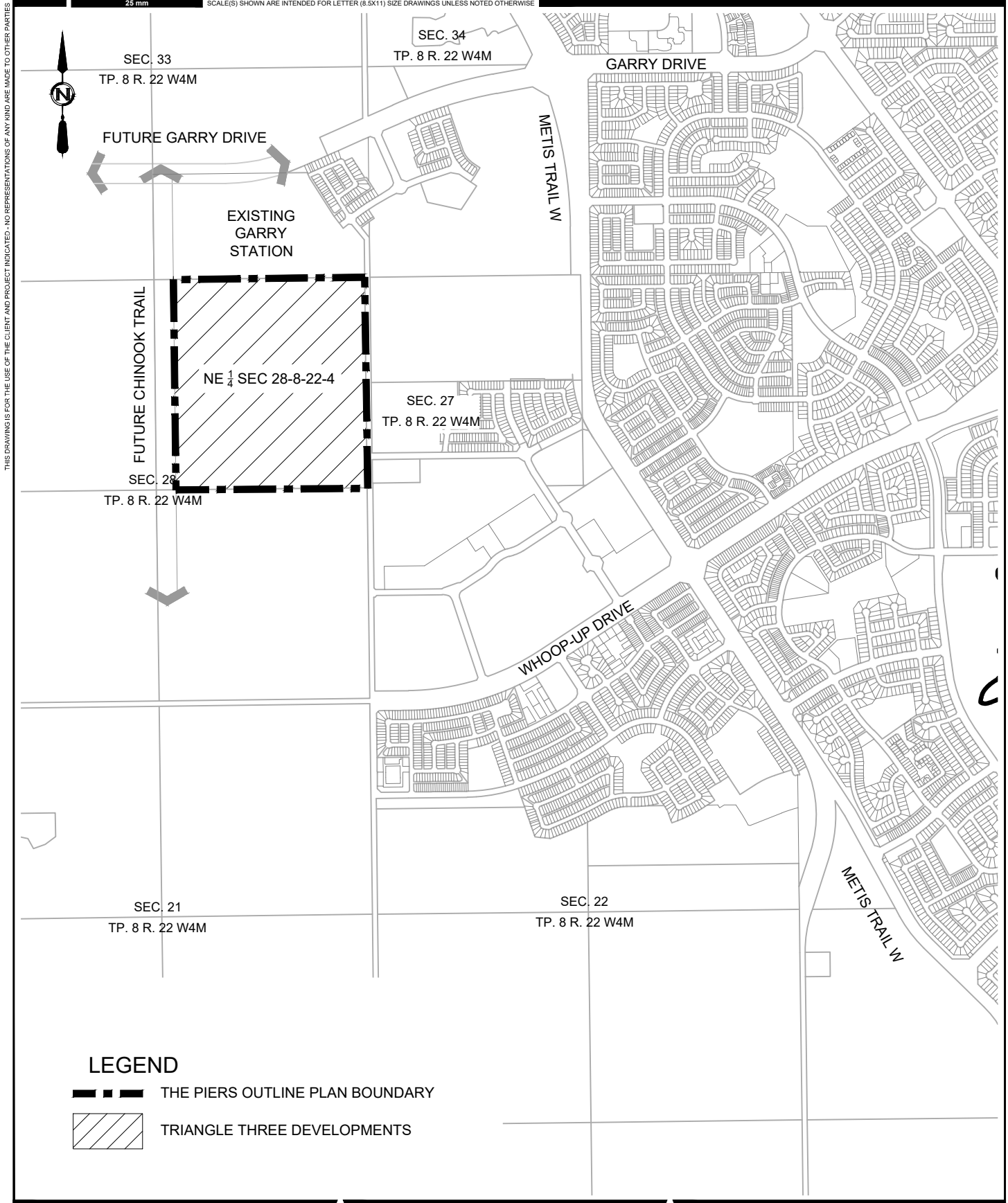
1.2 Location & Area

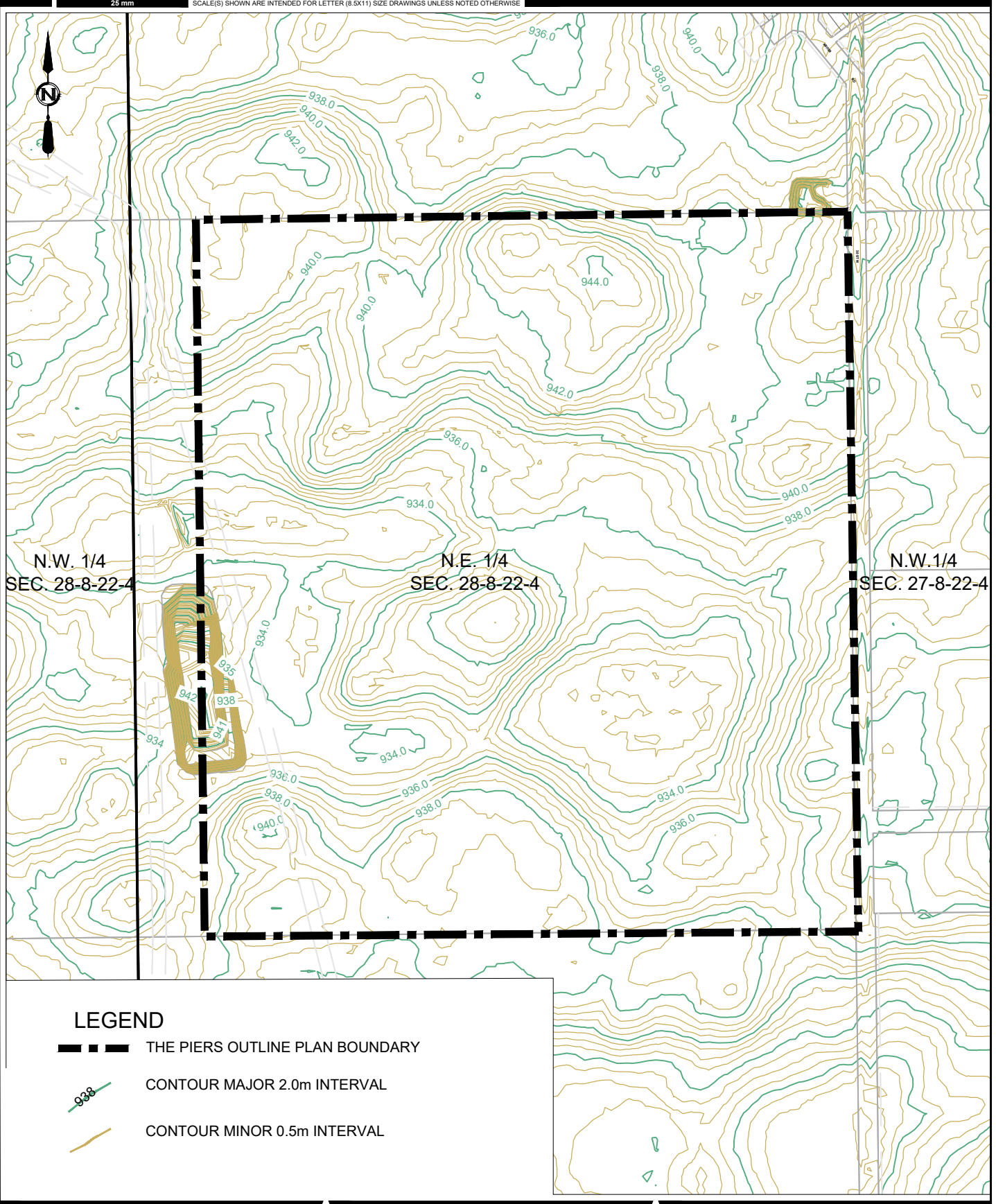
As shown in **Figure 1 – Location Plan** and **Figure 2 – Existing Site Topography**, the area is located west of the proposed residential neighbourhood of The Crossings and east of the proposed Chinook Trail. The Piers Outline Plan Area comprises approximately 59.87 ha (147.9 ac) of privately owned land. The land is currently under cultivation.

1.3 Land Ownership

See **Appendix A**







LEGEND

- THE PIERS OUTLINE PLAN BOUNDARY
- CONTOUR MAJOR 2.0m INTERVAL
- CONTOUR MINOR 0.5m INTERVAL



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FIGURE 2

FIGURE 2

TRILOGY REAL ESTATE INC.
THE PIERS OUTLINE PLAN

EXISTING SITE TOPOGRAPHY



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2 TRANSPORTATION REQUIREMENTS

The plan area will be serviced on the north boundary by the westerly extension of Aquitania Blvd and the future construction of Chinook Trail on the west boundary. The extension of Garry Drive west of Metis Trail to Garry Station Port connects the North Village of the West Lethbridge Phase II ASP to the Garry Station neighbourhood and provides a connection between The Piers and the commercial amenities located in that development.

2.1 Roadways

The roadway connections from The Piers Outline Plan area to other developments in the adjacent developments will be provided by local streets and major/minor collector roadways.

The internal road network, as shown in **Figure 3 - Conceptual Road Classification**, is made up of local streets and minor collectors, which connect to a major collector. In addition, two collector roadways extend east from the plan area to the Crossings and Garry Station Subdivisions.

The Piers has a combination of laned and lane-less areas. Where applicable, 7.0 m lanes have been included in the plan area.

Detailed design will address driveway locations and fire truck access.

The existing Traffic Impact Assessment (TIA) for The Piers OLP area was updated for The Piers Outline Plan Amendment to determine required roadway classifications and intersection controls. (Appended separately).

The detailed intersection capacity and critical road link analysis, along with recommended traffic control for a full build-out planning horizon, are addressed in the TIA. Traffic calming will be considered along Major Collector Roadways, including Caledonia Boulevard, Aquitania Boulevard, and Bluenose Boulevard. Traffic calming measures such as curb extensions, bulb-outs, or raised crosswalks at key locations and intersections may be implemented to promote lower traffic speeds and to help enhance pedestrian safety. Key locations include intersections with high pedestrian crossing volumes or at multi-use pathway connections. Along the lower volume Local Roads and Minor Collector Roads, we do not anticipate that traffic calming measures will be required.

The Piers TIA Update presented that an additional south access will be required at full build-out to ensure the existing roundabout at Aquitania Boulevard W. and Caledonia Boulevard W. continues to operate at an acceptable LOS. As shown in the Buildout Forecast within the TIA Update, the development can progress to approximately 80% of full build-out (28 ha of the full 35.4 ha) at which point the Caledonia/ Aquitania roundabout may start seeing capacity exceeding LOS C. This analysis was based on the estimated trip distribution within The Piers TIA Update. Experience shows that once one intersection begins nearing capacity and has a lower LOS, traffic will naturally find alternate routes through other intersections and roadways with higher capacity and better LOS. We anticipate that as The Piers development reaches approximately 50% of full-build-out, they may need to be revisited to determine if and at what appropriate timeline would the south roadway connection be required. The Caledonia/Aquitania roundabout can also be checked to see if its capacity is in line with the projected capacities calculated in the TIA Update.





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2.2 Active Transportation Facilities

The proposed multi-use pathway system will provide the active transportation facilities within The Piers development for both pedestrian and bicycle connectivity from the residential areas to future arterials, regional pathways, neighbourhood parks, stormwater management facilities, and the High schools/library complex to the south (**Figure 3**). Caledonia Boulevard provides the east-west path connection, and the paths within The Piers connect to Chinook Trail for the north-south connection. Within The Piers, local roads have low traffic volumes and provide additional connections for on-street cycling. Sidewalks should be provided on both sides of all roads within The Piers for pedestrian movement.

Most major collector pathway crossings are located at roadway intersections to provide safe crossing locations. There are a few select locations where mid-block crossings may be required to connect with the proposed pathways, such as Olympia Chase and Kensington Way. At these crossing locations, curb extensions may be added for these pedestrian crossings to enhance conspicuity and to promote pedestrian visibility and safety.

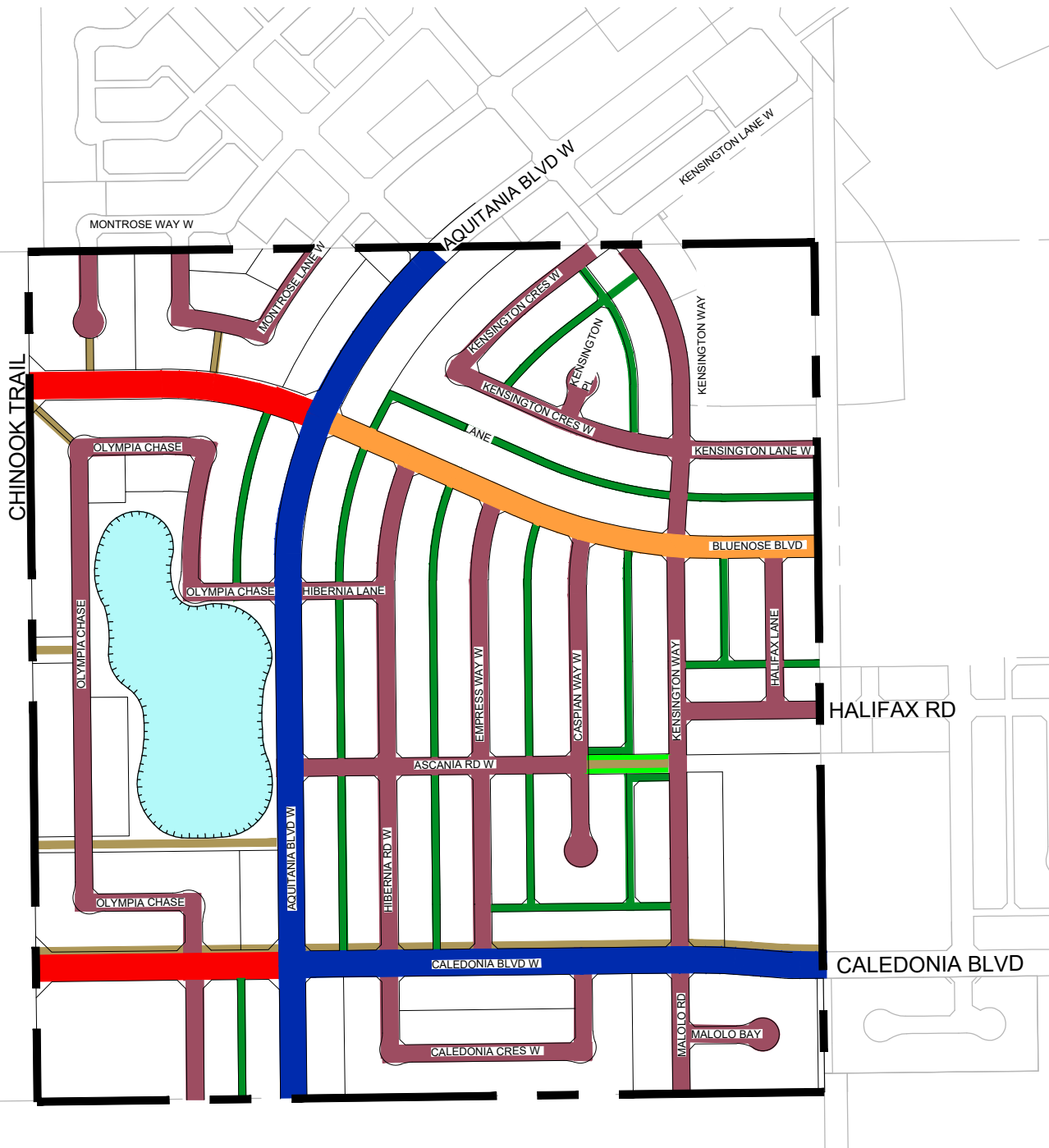
There are also two pathway crossings of lanes along Caledonia Boulevard W within the pathway network. At these locations, design details will be developed prior to subdivision, and corner cuts will be provided along with appropriate safety measures to promote visibility of pathway users. This will ensure that the intersection points between the multi-use pathway at lane crossings can operate safely.

2.3 Gas Line & Future Land Recapture

It is understood that the existing Tamarack Gas Line located within the future Chinook Trail right-of-way (ROW) is expected to be abandoned and realigned (or removed) in the future. This future realignment/removal and additional infrastructure planning, including deep and shallow utilities, may reduce the Chinook Trail right-of-way requirements. If the realignment of the Tamarack Gas Line and other utility requirements leads to a reduced utility easement requirement for Chinook Trail, The Piers would be able to recapture the additional land and plan for it as a part of the development area.



THIS DRAWING IS FOR THE USE OF THE CLIENT AND PROJECT INDICATED - NO REPRESENTATIONS OF ANY KIND ARE MADE TO OTHER PARTIES



LEGEND

--- The Piers Outline Plan Boundary



Community Entrance
Major Collector Roadway
Minor Collector Roadway
Local Roadway 16.5



Local Roadway 19.5
Lanes
Walkways & Pathways
Municipal Reserve



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FIGURE 3

FIGURE 3

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THE PIERS OUTLINE PLAN

CONCEPTUAL ROAD CLASSIFICATION



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3 WATER DISTRIBUTION

The existing water distribution network adjacent to The Piers Outline Plan Area consists of a 300 mm diameter watermain along Caledonia Blvd W in The Crossings Subdivision and a 400 mm diameter watermain along Aquitania Blvd in the Garry Station Subdivision.

The proposed water distribution network in The Piers Outline Plan Area is shown in **Figure 4 – Water Servicing Concept**. The network will be sized to satisfy the following City of Lethbridge level of service objectives:

- Minimum acceptable pressures to be no less than 310 kPa during peak hour demand.
- Minimum acceptable pressures to be no less than 345 kPa during maximum day demand.
- Maximum delivered pressures to be no greater than 620 kPa.
- An additional service objective is for the minimum fire flow to be no less than 75 L/s in residential areas, with a minimum residual pressure of 150 kPa during maximum day demand.

The majority of the watermains within The Piers Outline Plan Area will consist of 200 mm diameter pipe. In accordance with the West Lethbridge Phase II Area Structure Plan (Associated Engineering, 2005), a 400 mm diameter watermain will extend along the north-south major collector roadway. A 300 mm diameter pipe will be installed along the extension of Caledonia Blvd W to its intersection with the major collector roadway. A 250 mm diameter pipe will be installed along the east-west minor collector roadway into the Garry Station Development. Low and medium-density residential lots will be serviced from the 200 mm, 250 mm, 300 mm, and 400 mm watermains.

Ultimately, the water distribution network in The Piers Outline Plan Area will connect to the City's network at fourteen locations, as shown in **Figure 4 – Water Servicing Concept**. Initially, two connections will be made to the existing network within The Crossings Subdivision. In the future, the water distribution network in The Piers Outline Plan Area will connect to water distribution networks of adjacent developments and arterial roads



CHINOOK TRAIL

AQUITANIA BLVD

CONNECTION
TO 200 mm WAT

CONNECTION
TO 400 mm WAT







CONNECTION
TO 300 mm WAT

HALIFAX RD

CONNECTION TO
300 mm WAT

CALEDONIA BLVD

LEGEND

-  The Piers Outline Plan Boundary
-  Proposed 400Ø Watermain
-  Proposed 300Ø Watermain
-  Proposed 250Ø Watermain
-  Proposed 200Ø Watermain
-  Future Watermain Connections



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FIGURE 4

FIGURE 4

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THE PIERS OUTLINE PLAN

WATER SERVICING CONCEPT



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Table 3-1 Water Demands in The Piers Outline Plan Area

Demand Scenario	Full Development MLD (L/s)	
Average Day Demand (415L/cap/day)	1.29	(14.91)
Maximum Day Demand (2.2 x ADD)	2.83	(32.80)
Peak Hour Demand (3.5 x ADD)	4.50	(52.18)
Population Equivalent for Design	3,104	



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4 SANITARY COLLECTION

The existing sanitary collection system near The Piers Outline Plan Area consists of:

- A 300 mm diameter sewer along Caledonia Blvd W in The Crossings Subdivision. This sewer conveys flows to the 450 mm diameter sewer along Aquitania Blvd West, then to the existing trunk sewer in Metis Trail.
- A 200 mm diameter sewer along Aquitania Blvd W in the Garry Station Subdivision.
- A 450 mm diameter sewer along Garry Drive West.

The 2006 Outline Plan for the Crossings Subdivision identified that an off-site area of 76 ha to the west of the Crossings Subdivision would contribute a peak sanitary flow of 79 L/s into the sanitary sewer along Britannia Blvd. W. The 2006 Outline Plan for The Crossings Subdivision did not identify any off-site area contributing sanitary flow to the sanitary sewer along Caledonia Blvd. W. In 2007, the sanitary sewer system in The Crossings was redesigned to convey an off-site area of 25 ha into the sanitary sewer along Caledonia Blvd. W.

The proposed sanitary sewer system in The Piers Outline Plan Area is shown in **Figure 5 - Sanitary Servicing**. The network will be sized to satisfy the following City of Lethbridge level of service objectives:

- Meet the dry weather demand with appropriate allowances made for wet weather inflows
- Provide sanitary sewer capacity so that surcharging does not occur for the design peak flows

The majority of the sanitary sewers within The Piers Outline Plan Area will consist of 200 mm diameter pipe. There will be three sanitary catchment areas in The Piers Outline Plan Area.

- Area A – will connect via gravity to the existing 300 mm diameter sewer along Caledonia Blvd W in the Crossings Subdivision.
- Area B – will connect via gravity to the existing 250 mm diameter sewer along Aquitania Blvd W and to the existing 200 mm sewers at Montrose Way and Kensington Road in the Garry Station Subdivision, as shown in **Figure 5**.
- Area C – The catchment outlined in the sanitary servicing figure shows a lift station and forcemain with a discharge to the existing sewer in Garry Station. The final discharge point will be refined and the connection point finalized in consultation with the City Administration during detailed design

Area A: The southeast catchment area will convey the sanitary flows from approximately 14.07 ha of residential development in The Piers Outline Plan Area. The 14.07 ha is comprised of 12.97 ha of low-density residential and 1.11 ha of medium-density residential development. The south school site will be serviced within Area A. Hence, the proposed area contributing sanitary flows into the Crossings Subdivision along Caledonia Blvd W is less than the maximum allowed (i.e. 25 ha).

Area B: The north catchment area will convey the sanitary flows from approximately 5.48 ha of residential development in The Piers Outline Plan Area. The 5.48 ha is comprised of 4.55 ha of low-density residential and 0.93





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ha of medium density residential development. The north school site will be serviced by the existing Garry Station sanitary sewer system.

Area C: The west catchment area will convey the sanitary flows from approximately 16.62 ha of residential development in The Piers Outline Plan Area. The 16.62 ha is comprised of 11.77 ha of low-density residential and 4.85 ha of medium-density residential development.

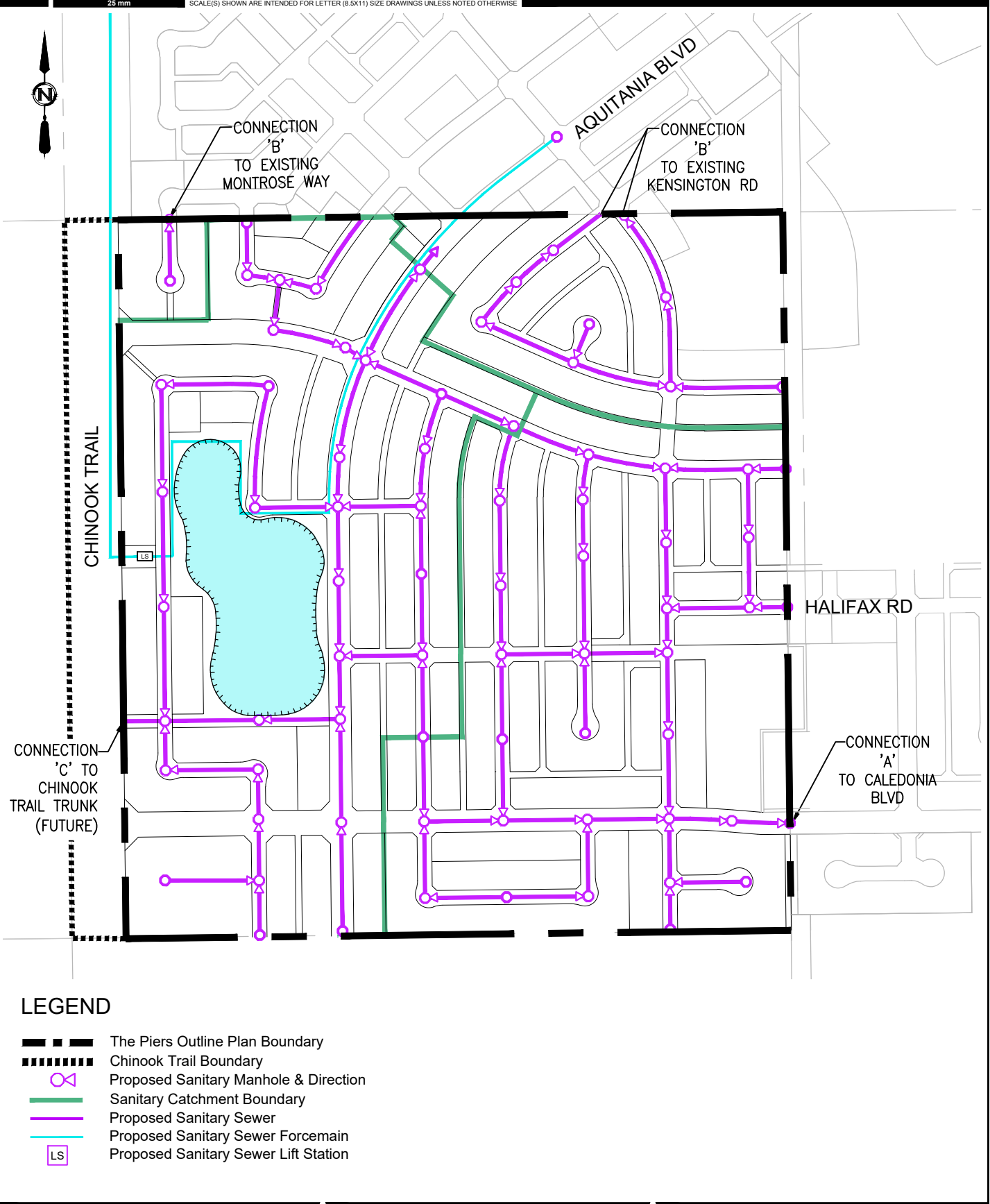
No off-site areas will contribute sanitary flows to The Piers Outline Plan Area.

Peak sanitary flows for The Piers Outline Plan Area are summarized in **Table 4-1**. These flows were developed using sewage generation rates presented in the City of Lethbridge Design Standards (2021).

Table 4-1 Sanitary Flows

	Area A m ³ /d (L/s)		Area B m ³ /d (L/s)		Area C m ³ /d (L/s)		Total m ³ /d (L/s)	
Population	1,098		462		1,544		3,104	
Dry Weather Flow	439	(5.08)	185	(2.14)	618	(7.15)	1,242	(14.37)
Peaking Factor	3.77		3.99		3.67		3.43	
Peak Dry Weather Flow	1,657	(19.18)	738	(8.54)	2,267	(26.24)	4,662	(53.96)
Wet Weather Flow	549	(6.35)	231	(2.67)	772	(8.94)	1,552	(17.96)
Infiltration	165	(1.91)	69.30	(0.80)	232	(2.68)	466	(5.39)
Peak Wet Weather Flow	2,371	(27.44)	1,038	(12.01)	3,270	(37.85)	6,679	(77.31)

The peak sanitary flow from The Piers Outline Plan Area into The Crossings Subdivision (Area A) is 27.44 L/s.





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5 STORMWATER MANAGEMENT

Catchment boundaries have been defined by the proposed elevations of the Chinook Trail ROW to the east, the existing development boundaries to the North and East, as well as the south property boundary on the south side of the development area. The development catchment boundary includes approximately 3.0 ha from the future Chinook Trail arterial right of way.

The stormwater runoff boundary along the north boundary of The Piers development has been revised. An area of 2.07 ha along the north boundary of The Piers development has been added to the Garry Station development and will now be accommodated in the existing pond 'D.'

The remainder of the site will drain to a stormwater management facility in the western portion of the planning area. Due to downstream constraints, a stormwater pump station will be required to discharge the proposed stormwater management facility to the existing conveyance system within The Crossing neighbourhood.

As a piped emergency escape route can not be provided due to the grading constraints, the proposed pond's active storage capacity will be analyzed to accommodate peak flows in the event that the stormwater management facility is unable to discharge as designed.

The proposed pond could connect to the future trunk storm sewer in the Chinook Trail ROW west of The Piers Subdivision for emergency discharge once the trunk is constructed. Design criteria that will be used for the stormwater management system include:

- Controlled peak flow discharge of 2.5 L/s/ha via stormwater pump station.
- 54,400 m³ of active storage for stormwater management facilities.
- 200 l/s/ha for major system flows.
- 90 l/s/ha for minor system flows.

The proposed stormwater management facility will generally be designed to meet the following criteria:

- Type: Wet Pond
- Upstream Drainage Area: 59.42 ha
- Permanent Pool:
 - Volume: 33,540 m³
 - Depth: 2.0 m (minimum)
- Active Storage:
 - Volume: 54,400 m³
 - Depth: 2.0 m (maximum)
- Approximate HWL: 934.89 m



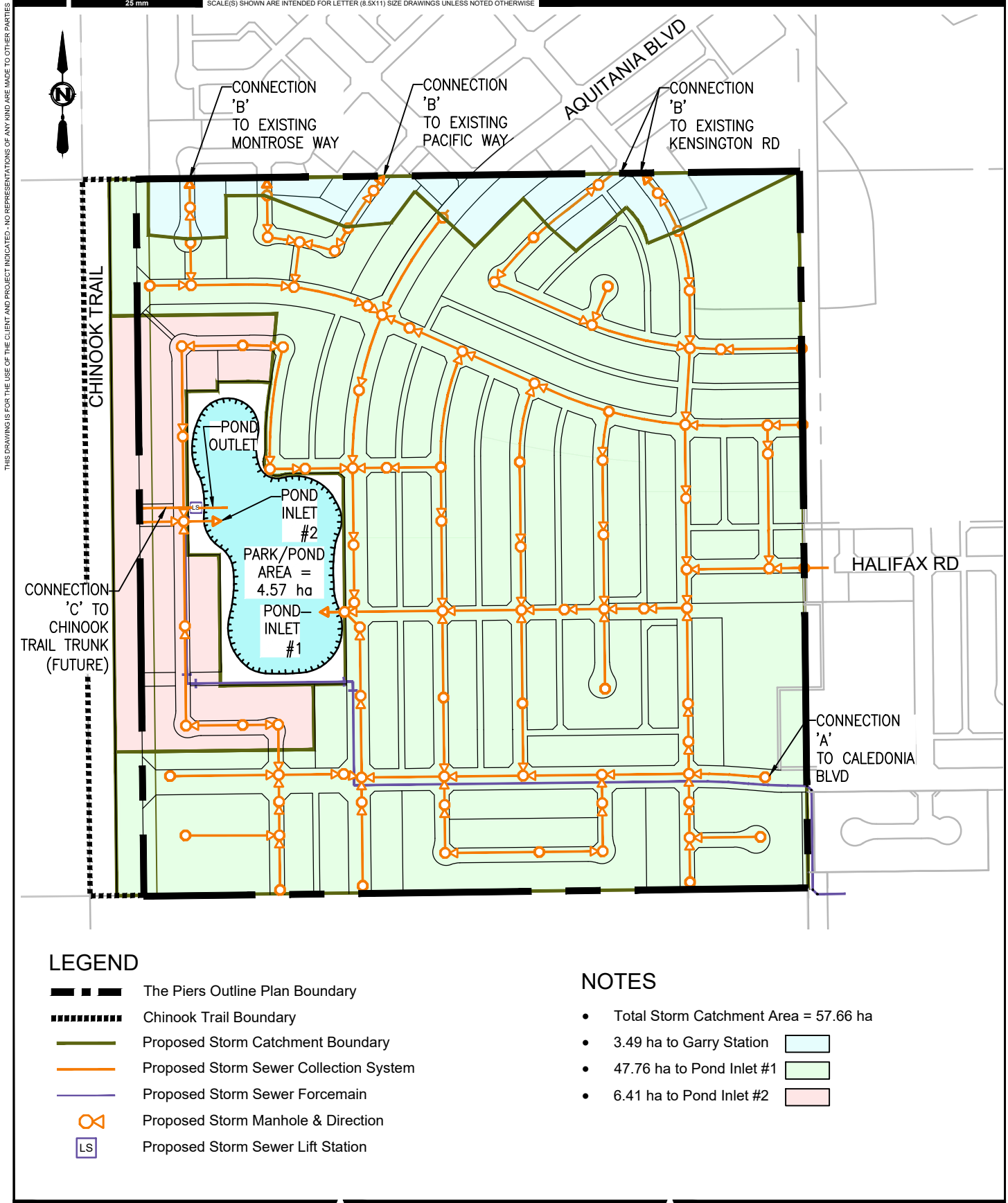


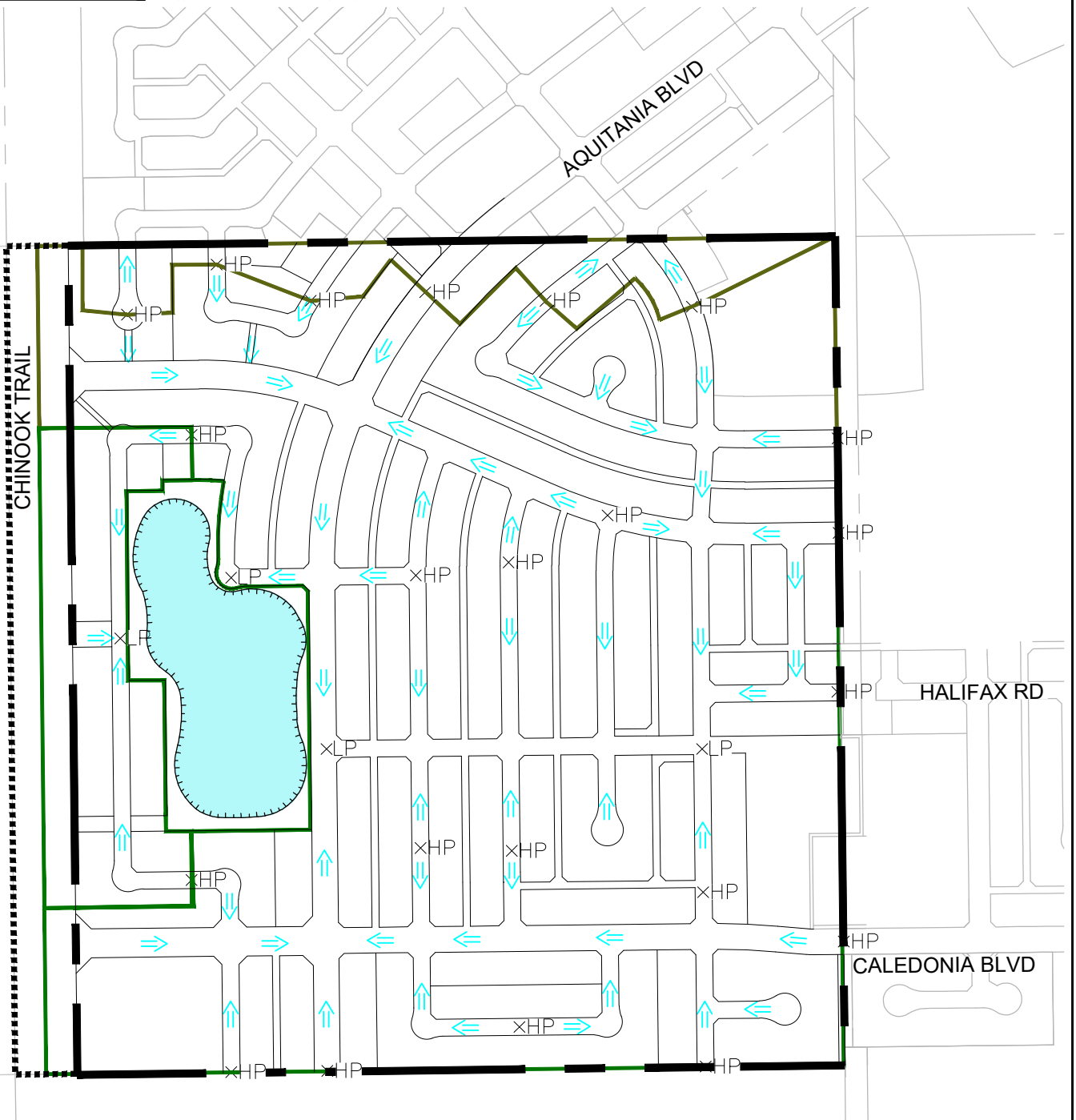
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The above proposed wet pond analysis considers Climate Change parameters derived from using the IDF_CC Tool 5.0 web-based application. The Intensity-Duration-Frequency (IDF) application generates IDF curve information and incorporates potential impacts due to climate change.

Figure 6 provides an overall servicing strategy for the minor stormwater management system, including the outlet main to the existing Crossings stormwater management system.

Figure 7 provides an overall servicing strategy for the major stormwater management system, including the conceptual grading for the development.





LEGEND

- The Piers Outline Plan Boundary
- Chinook Trail Boundary
- Stormwater Catchment Boundary
- Overland Flow Direction
- Point of Vertical Intersection



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FIGURE 7

FIGURE 7

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THE PIERS OUTLINE PLAN

MAJOR STORMWATER MANAGEMENT CONCEPT



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6 STAGING AND IMPLEMENTATION

6.1 Tentative Staging

The Tentative Staging plan was developed based on the logical sequence of service connections. The table below summarizes the proposed staging plan, illustrating the logical extension of services as each phase of development progresses:

Phase	Staging Plan
Initial Phase	<p>The initial phase of the development involves constructing the key critical infrastructures. These include:</p> <ul style="list-style-type: none">- The Stormwater Management Facility (Wet Pond) in the western portion of the planning area and the storm sewer collection system from the southeast corner—Connection 'A' - to Caledonia Blvd., as shown in Figure 6—Minor Stormwater Management Concept.- Storm trunks along Caledonia Blvd. W., and Aquitania Blvd. W.- Storm pond control structures, including an outlet and two inlets along the stormwater management facility, as shown in Figure 6—Minor Stormwater Management Concept.- Additionally, a temporary pump station will need to be established before the development of future phases, subject to agreements with the City of Lethbridge. <p>The Sanitary collection and Water distribution systems will follow the layout shown in Figure 4—Water Servicing Concept and Figure 5—Sanitary Servicing Concept, with boundaries from the southeast corner - Connection 'A' - to Caledonia Blvd. Based on the completion of the stormwater management facility, they will be developed using the most logical sequencing of service connections.</p>
Future Phases	<p>Future phases may be developed in smaller stages, as illustrated in Figure 5—Sanitary Servicing Concept and Figure 6—Minor Stormwater Management Concept Areas A, B, and C, as determined during detailed design.</p> <p>The servicing extensions will continue to develop as follows:</p> <ul style="list-style-type: none">- Area A: Along Caledonia Blvd. W. in the Crossings Subdivision.- Area B: Along Aquitania Blvd. W., Montrose Way, and Kensington Road in the Garry Station Subdivision.- Area C: The catchment area illustrated in Figure 5—Sanitary Servicing Concept, which includes a lift station and Forcemain connected to the existing sewer in Garry Station.- Refer to the unit threshold from Section 2.1.1. or the requirement for access connections to the south.



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Each phase will require stripping and area grading to conform to the drainage design for the development shown in Figure 7—Major Stormwater Management Concept.

6.2 Redistricting and Subdivision

Following the adoption of the Outline Plan, implementation of the plan will be on stage-by-stage basis achieved through the City's redistricting and subdivision process. Application for appropriate redistricting shall be consistent with the land use designations and descriptions provided within The Piers Outline Plan and West Lethbridge Phase II ASP, in addition to the City of Lethbridge Land Use Bylaw (Bylaw No. 4100). Redistricting and subdivision applications will be advanced for specific stages in response to market demand and infrastructure availability.

6.3 Amending the Plan

The Piers Outline Plan is intended to provide a detailed description and illustration of development, such as land use, circulation, parks, open space and pathways development. However, the plan remains conceptual and is subject to alterations and adjustments as a result of market conditions, new standards and consumer demand at the time of development. It is therefore important to create a flexible plan that still provides certainty to the City of Lethbridge, neighbourhoods and their residents.

CLOSURE

This report was prepared for the City of Lethbridge to focus on the Technical Elements that have been updated as part of the OLP amendment.

The services provided by Associated Engineering Alberta Ltd. in the preparation of this report were conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practising under similar conditions. No other warranty expressed or implied is made.

Respectfully submitted,

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