

VBJ DEVELOPMENTS LTD.

SOUTH VILLAGE NEIGHBOURHOOD PLAN





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CITY OF BRANDON

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1 DEVELOPMENT OVERVIEW

The South Village Neighbourhood Plan (plan) has been prepared in accordance with the policies contained within the City of Brandon's City Plan By-law No. 7392 (City Plan) and the Southwest Brandon Secondary Plan By-law No. 7080 (Secondary Plan). The plan is for an approximately 68.27 hectare (168.71 acre) site located southwest of the Provincial Trunk Highway (PTH) 10 and Patricia Avenue intersection in the City of Brandon (see **Figure 1**). In accordance with City Plan and the Secondary Plan, a neighbourhood plan must be established for the plan area.

As the owner and land developer, VBJ Developments Ltd. (VBJ) was assigned the responsibility for preparing this neighbourhood plan by the City as a prerequisite for development.



Figure 1: Plan Area

City Plan provides high level policies for land use within the City. City Plan identifies the plan area as an emerging area of the City and designates it for general urban development as identified in **Figure 2**. City Plan also identifies that the Secondary Plan applies.

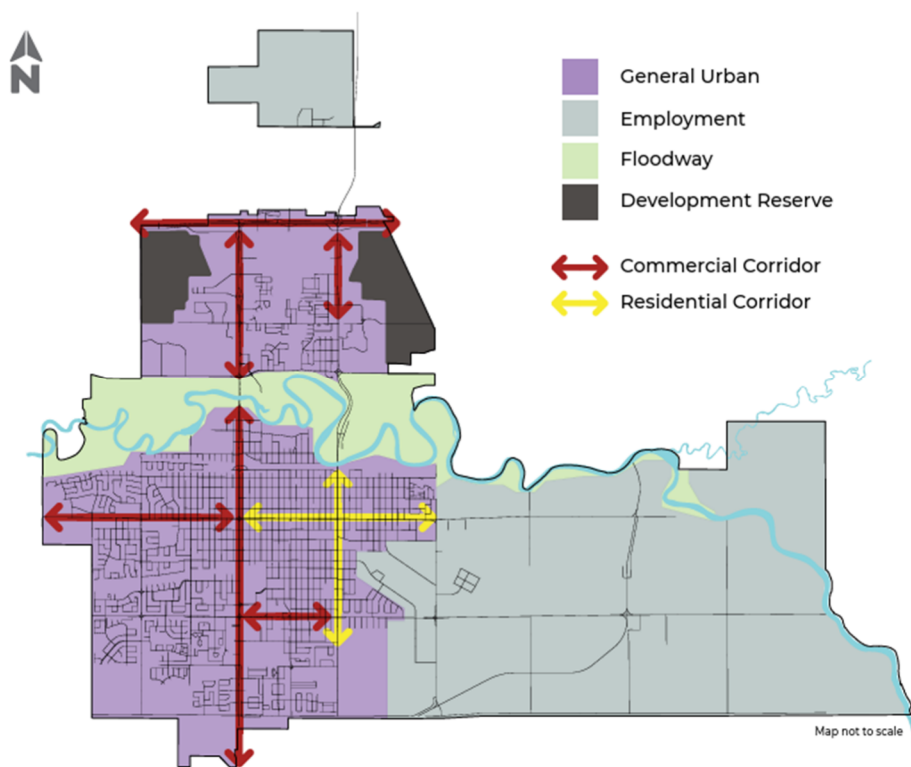


Figure 2: City Plan Urban Structure

The Secondary Plan identifies that plan area as a mix of designations, including Residential Low Density, Residential Moderate Density, Commercial, Development Reserve, greenspace, and space for a retention pond as identified in **Figure 3**.

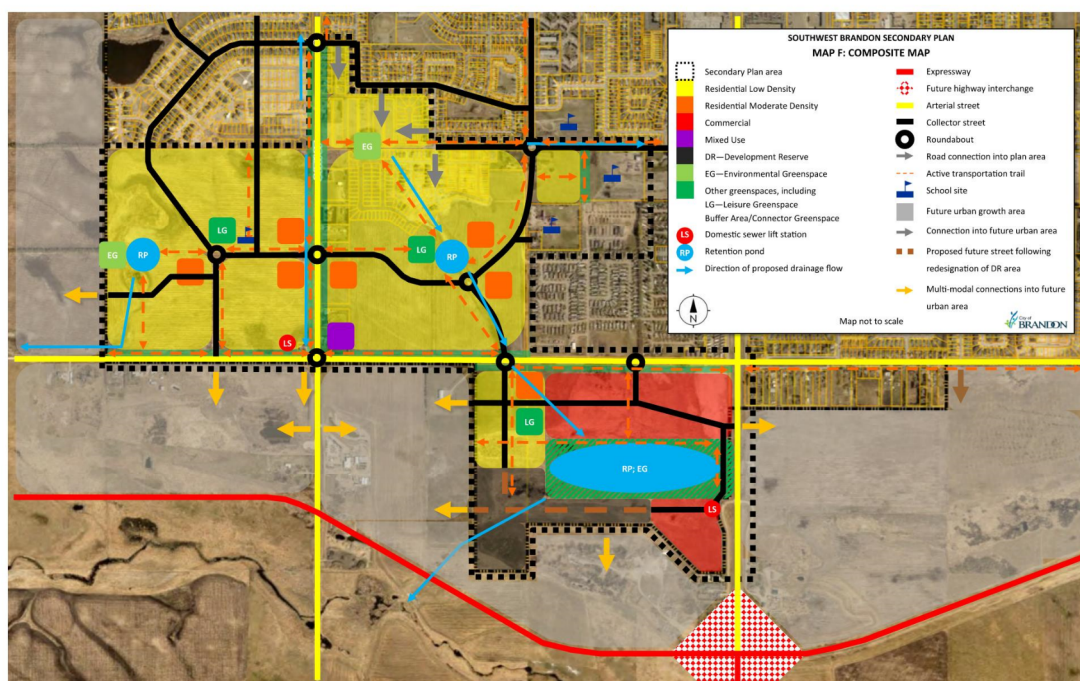


Figure 3: Secondary Plan Composite Map

In accordance with City Plan and the Secondary Plan, this plan is designed to create a walkable, mixed-use neighbourhood to include residential and commercial regional retail development, with good street and trail connections within and to adjacent neighbourhoods. A focal point of the neighbourhood is a land drainage lake, significant wetland and trail system that interconnects a variety of active and passive recreational facilities and links the neighbourhood to the surrounding area. The plan provides parcels for moderate density, multi-family residential development at strategic locations within the neighbourhood close to the arterial street system, trail system and transit routes. The plan supports large-scale regional commercial as well as smaller scale, neighbourhood commercial. The plan shows, conceptually, the location of local streets to facilitate development.

2 AREA CONTEXT

The plan area is bordered on the north by Patricia Avenue, which also marks the southerly extent of the Southwest Secondary Plan area. The section of Patricia Avenue immediately south of Brentwood Village Mobile Home Park is paved, but further west is gravel. Brentwood Village Mobile Home Park is the principal development bordering the north limit of the plan area.

A small portion of the lands adjacent to the plan area are included in the Bellafield Neighbourhood Plan Area (see **Figure 1**). This area is currently in development and planned for a range of residential densities and types. Residential land uses are predominantly lower and moderate-density housing types.

The Brookwood South Neighbourhood Plan Area (see **Figure 1**) is also north of the plan area and is intended to provide for a range of housing densities and types. Residential land uses are planned for predominantly low-density housing (6-16 units per acre) including single, two-, three-, and four-plex units, and three nodes of moderate-density housing (16.5-34.8 units per acre), including apartment buildings.

The Rural Municipality (RM) of Cornwallis is directly south of the plan area. These lands are predominantly agricultural in nature, but also contain several distinct features including a former quarry site used for Manitoba Transportation and Infrastructure storage, five (5) private residences and the Gun Club Coulee. Access to the Manitoba Transportation and Infrastructure storage site and the private residences is provided via a frontage road from PTH 10.

The plan area is bounded by PTH 10/18th Street to the east, which provides the main access into the City from the south. The quarter section to the east of the plan area is shared between the City and the RM of Cornwallis. Lands within the RM of Cornwallis are currently cultivated, but have been identified as a future growth area in City Plan, with regional retail anticipated along 18th Street. The lands within the City along Patricia Avenue contain 22 residential dwellings.

West of the plan area includes additional agricultural lands within the RM of Cornwallis, a landscaping contractor business and a single residential dwelling.

3 SITE DESCRIPTION

The plan area is currently undeveloped and agricultural in nature. Remnants of a farmstead exist toward the central-northern edge of the property amidst an oak-aspen grove. Fill has been added to a portion of the northeast corner of the site in anticipation of development. The site is generally split between cultivated agricultural lands and an existing wetland area. The plan area is held under a single title by VBJ Developments Ltd.

The plan area is generally flat with a gradual slope from north to south from a high elevation of 402 metres at the northern edge of the site along Patricia Avenue to a low elevation of 394 metres at the southwestern corner. There are also two narrow drainage channels stemming from existing drainage works (culverts) coming from the north side of the plan area.

The plan area contains soils associated with imperfectly drained wetlands (Sewell and Stockton series) and corresponding upland areas (Prosser and Purple series). The area of imperfectly drained soils is associated with the deep and shallow marsh areas of the site. A wetland generally bisects the plan area and has been integrated as part of the plan.

Access to the plan area is available from Patricia Avenue to the north and PTH 10 to the east.

4 NEIGHBOURHOOD PLAN

City Plan and the Secondary Plan set out the broad development parameters and guidelines for the plan in terms of land use, municipal servicing, land drainage, streets and trail connectivity, and parks and natural areas. The plan adheres to the spirit and intent of City Plan and the Secondary Plan and implements the essential elements as described in the following paragraphs.

4.1 LAND USES

In accordance with City Plan and the Secondary Plan, the plan provides for a range of housing densities and types as well as neighbourhood and regional commercial land uses. Areas designated in City Plan and the Secondary Plan as Development Reserve have been retained. A significant wetland within the plan area has been protected and surrounding it, the opportunity for some park and recreational land uses.

Figure 4 identifies these areas as Residential Low Density, Residential Moderate Density, Regional Commercial, Development Reserve and Parks and Natural Areas. With reference to the City of Brandon Zoning By-Law No. 7124 (Zoning By-law):

- Areas shown as **Residential Low Density** are generally intended for lower density residential development, including detached, semi-detached, and duplex dwellings, as well as row housing and multi-unit (up to four) dwellings under the Residential Low Density (RLD) zoning category.
- Areas shown as **Residential Moderate Density** are generally intended for moderate density residential development, including medium rise, moderate density buildings with multi-unit dwellings under the Residential Moderate Density (RMD) zoning category.
- Areas shown as **Regional Commercial** are generally intended to accommodate larger scale commercial development, including those businesses serving the needs of the larger city market and travelling public which require visibility and access from major thoroughfares under the Commercial Arterial (CAR) zoning category. Mixed use (commercial and multi-unit dwellings) or principal multi-unit dwellings may be permitted subject to the Zoning By-law (typically under the Residential High Density (RHD) zoning category).
- Areas shown as **Development Reserve** are generally reflective of that designation within City Plan and the Secondary Plan and signify the long-term development intent for this area and prevents the intrusion of uses which may jeopardize these long-term development prospects. It is likely that a continuation of residential land uses will follow within the Development Reserve areas; however, this area would be subject to amendment(s) at such time as development is ready to proceed. It is anticipated this area would be zoned as Development Reserve (DR).
- Areas shown as **Parks and Natural Areas** are generally intended to accommodate areas identified for parks and recreation purposes and for the conservation of the wetland area. This designation is a recognition of the natural features that are unique to the plan area and protect these natural features, but also areas surrounding the wetland that provide opportunity for park and recreation purposes and connecting to nature. Zoning within this designation is intended to be reflective of the Parks and Recreation (PR) zone and/or the Open Space (OS) zone.

The land use breakdown by area is included **Table 1**.

Table 1: Land Use Breakdown

NEIGHBOURHOOD PLAN DESIGNATION	APPROXIMATE AREA		
	HECTARES	ACRES	PERCENTAGE
RESIDENTIAL LOW DENSITY	4.45	11.0	7%
RESIDENTIAL MODERATE DENSITY	6.2	15.3	9%
REGIONAL COMMERCIAL	22.25	55.0	33%
DEVELOPMENT RESERVE	6.7	16.6	10%
PARKS AND NATURAL AREAS	22.3	55.1	33%
ROADS	6.4	15.8	9%

The Secondary Plan sets out target densities ranging from 15 to 40 units per hectare (6 to 16 units per acre) for RLD housing, and 41 to 86 units per hectare (16.5 to 34.8 units per acre) for RMD housing. At full build-out, the housing and population yields should generally fall within the ranges prescribed in the Secondary Plan. However, it is recognized that as housing affordability decreases, it may be necessary to provide greater options for housing and target densities may increase. The precise block or parcel zoning and resulting densities will be determined at the time of subdivision approval.

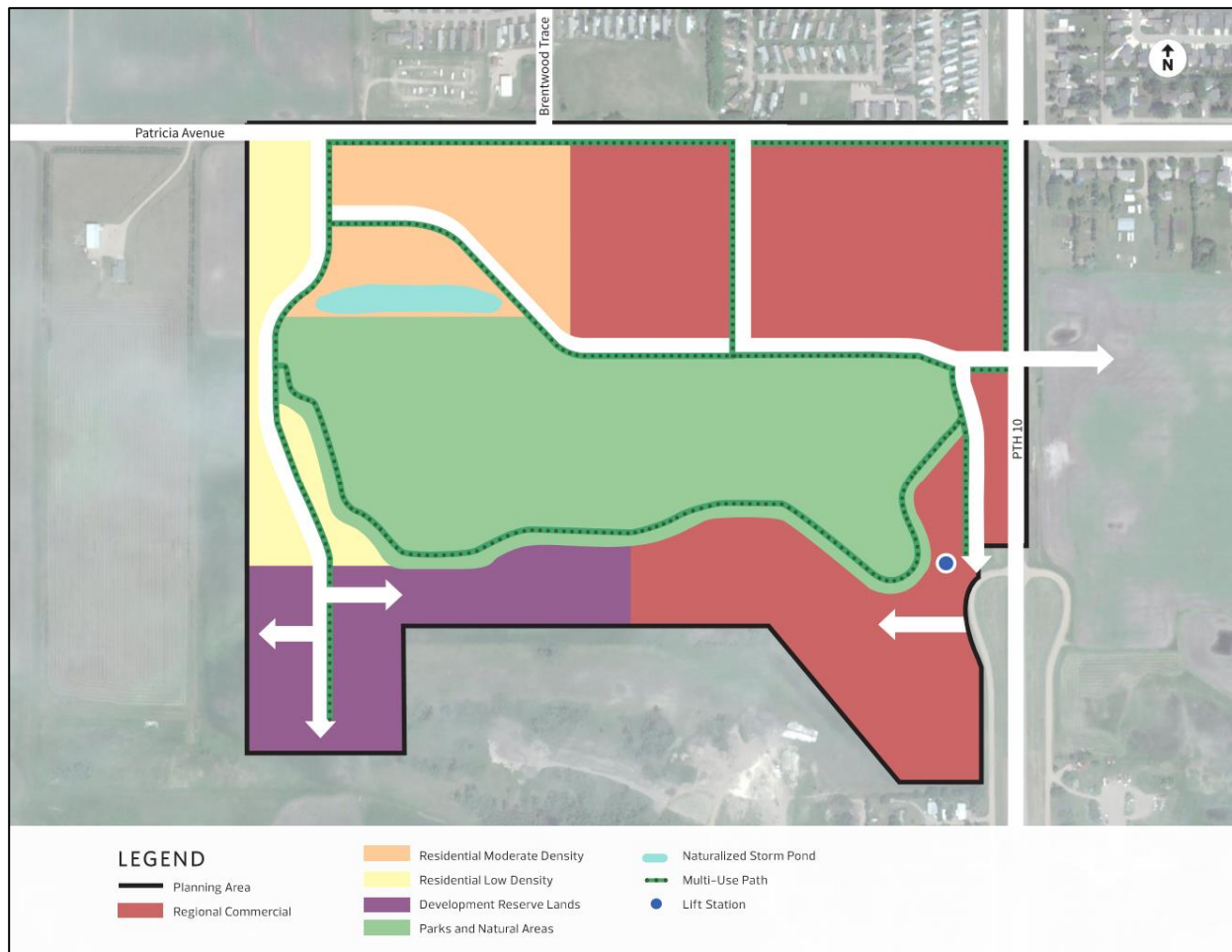


Figure 4: Neighbourhood Plan

4.1.1 RESIDENTIAL AREA ZONING

- Residential Low Density (RLD): Typical lots for detached dwellings will have widths ranging from 12.2 to 15.2 metres (40 to 50 feet) and depths ranging from 30.5 to 36.5 metres (100 to 120 feet). Semi-detached, duplex, row housing and multi-unit (up to four) dwellings will be integrated into the development on a block-by-block basis in response to market demand.
- Residential Moderate Density (RMD): Medium rise, moderate density buildings with multi-unit dwellings will be integrated into the development, particularly abutting the Mixed Use node and arterial and collector streets.

4.1.2 COMMERCIAL AREA ZONING

- Commercial Arterial (CAR): Identified for businesses serving the needs of the larger city market and travelling public which require visibility and access from major thoroughfares. Mixed use (commercial and residential) may be permitted subject to the Zoning By-law.
- Residential High Density (RHD): Provides for the development of principal use higher-rise, higher density buildings with multiple dwellings.

4.1.3 DEVELOPMENT RESERVE AREA ZONING

- Development Reserve (DR): Identified for the preservation of existing agricultural sites in an unfragmented state for future development consistent with City Plan and the Secondary Plan.

4.1.4 PARKS AND NATURAL AREAS ZONING

- Parks and Recreation (PR): Identified for public and private parks and recreation purposes. This includes indoor and outdoor natural and humanmade amenities, as well as undeveloped sites that contribute positively to the human and natural environment.
- Open Space (OS): Identified for the conservation of publicly owned sites with physical development limitations or scenic beauty to be retained in an undeveloped state, privately owned sites used for utility rights-of-way and other uses with an open space character, and sites servicing to buffer different types of uses.

4.2 TRANSPORTATION

4.2.1 ACCESS

- The plan area is serviced by a collector street system that loops through the neighbourhood to provide one collector road access to the east to PTH 10 and two collector road connections to the north to Patricia Avenue.
- In addition to the above collector street access points, potential future connections to the west as Brandon continues to develop over time have been shown conceptually on **Figure 4**.
- Roadways throughout the commercial areas may be a combination of private and/or public roads.

4.2.2 STREET DESIGN

- Right-of way for streets within the plan area should range from 22-28 metres wide depending on the collector street centre median requirements and generally an 18.2 metre right-of-way for local streets (20 metre width where parking on both sides of the street is desired). Dimensions and cross sections shown in **Figure 5** and **Figure 6** are conceptual, and are subject to change based on City requirements, standards, and detailed design.
- Additional right-of-way may be needed to accommodate queuing lanes and/or roundabouts as well as multi-use pathways/sidewalks.
- Collector streets shall have a multi-use pathway on one side of the street and a sidewalk on the opposite side of the street.
- All local streets require a sidewalk on at least one side of the street.
- Each phase and stage of development will be provided with appropriate access to be determined in consultation with the Fire and Emergency Services Department.
- Potential future connections to Development Reserve lands and Regional Commercial areas in the southeast of the plan area have been shown conceptually on **Figure 4**. The north-south frontage road west adjacent to PTH 10 connecting the north Regional Commercial lands to the south Regional Commercial lands will tie into the existing service road.

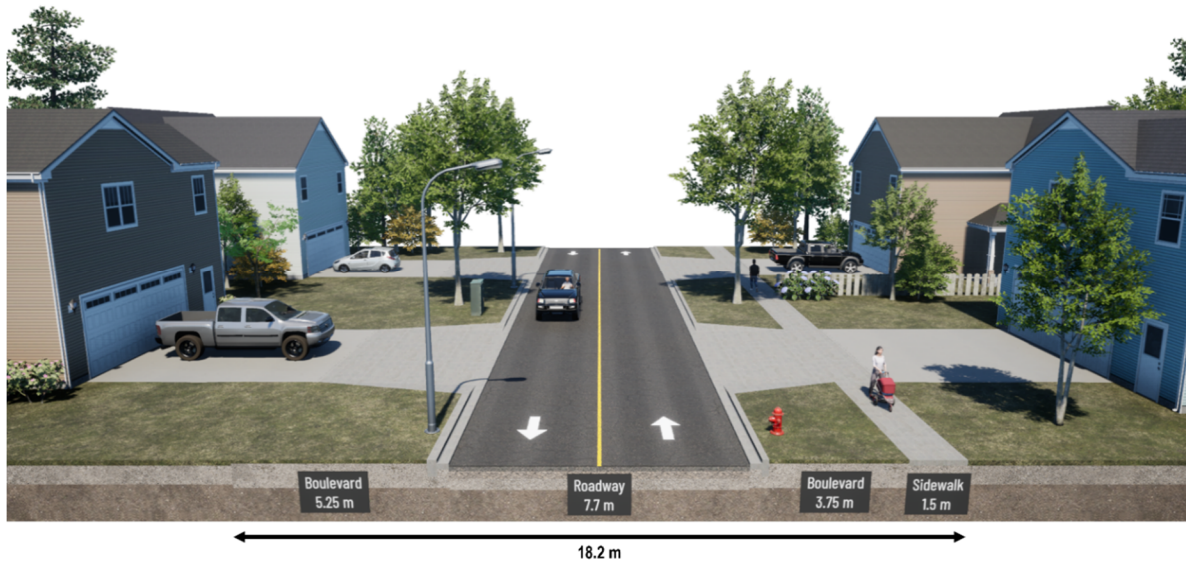


Figure 5: Conceptual Collector Road Cross Section

titles are
switched...this is local
below is collector

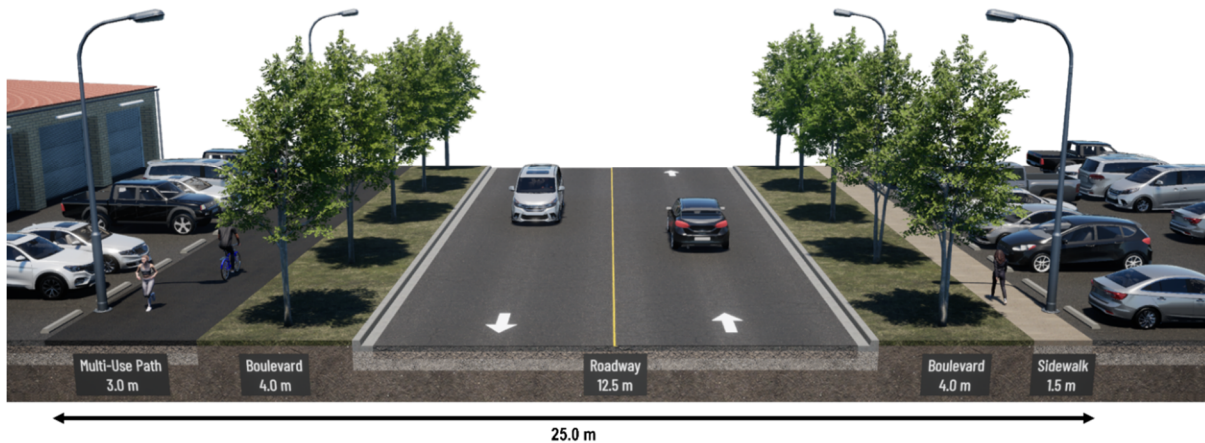


Figure 6: Conceptual Local Road Cross Section

4.2.3 MULTI-USE PATHWAY NETWORK

- As shown on **Figure 4**, the multi-use pathway network will focus on the wetland feature and provide connection points to the commercial area and future pathways along PTH 10/18th Street, 26th Street, 34th Street and Patricia Avenue.
- The pathway network will connect to the developing Bellafield Neighbourhood's primary trail across Patricia Avenue, near the northwest corner of the site, as well as along the south side of Patricia Avenue.
- The intent is that future pathway facilities would connect to the existing trail along 18th Street north of Maryland Avenue, the existing pathway along Patricia Avenue east of 18th Street, and the proposed Outer Ring Trail. The future pathway along Patricia Avenue would also connect the proposed development to the **future combined Celebration - Active Green Space located west of the intersection of Patricia Avenue and 34th Street.**

- The pathway system may be constructed within the collector right-of-ways or within Public Reserve areas.
- Pathways will be a minimum of 3.0 metres. Dimensions and cross section shown in **Figure 7** is conceptual, and are subject to change based on City requirements, standards, and detailed design.
- At intersections, traffic calming measures, along with pedestrian-safety measures like textured paving, will be employed.
- Light standards, signage, benches and waste receptacles will be placed so as not to obstruct pathway movement.
- Rest areas with benches will be located along the trail network and will incorporate different surfacing (e.g. compacted gravel or pavers) to indicate functional separation from the adjacent path.
- Wayfinding signage will be provided where required.



Figure 7: Conceptual Multi-Use Pathway Cross Section

4.2.4 TRANSIT

- Brandon Transit route number 17 currently operates near the northeast corner of the proposed Brandon South Village development and could connect the development to the downtown and the Downtown Bus Terminal. The closest existing transit stop to the development is on Currie Boulevard close to Patricia Avenue.
- The proposed higher order collector street servicing the Regional Commercial, Mixed Use, and Residential Moderate Density areas could provide a future transit connection to the developing Bellafield Neighbourhood.
- While there are no immediate plans to extend transit service through the plan area, the neighbourhood collector loop is shown with a 25 metre (82 foot) right-of-way in order to accommodate bus traffic and transit stops.

4.3 WETLAND, OPEN SPACE AND AMENITIES

In accordance with City Plan and the Secondary Plan, the plan provides for a variety of active and passive recreational activities, while enhancing and protecting the wetland. Key elements of the wetland, open space and amenities plan are described in the following sections and conceptually shown in **Figure 8**. The Development Reserve area also protects the long-term development intent for this site generally within the southwest of the plan area and is reflective of City Plan and the Secondary Plan designations.

Native vegetation associated with the wetland has been inundated with numerous weed species (including noxious weeds). The plan recognizes an opportunity to enhance the habitat and aesthetic qualities of the wetland. Development of the plan area will allow for establishment of interconnected, naturalized stormwater ponds, as well as implementation of a weed management plan, that will ensure the health of the wetland and offset any development-related impacts.

Proposed trails will provide the public with information related to the functions and benefits of wetlands and will help educate residents on wetland conservation.

- The plan area will contain elements of three types of greenspace according to the classification provided in the Greenspace Master Plan. The area around the wetland will contain both “leisure” and “environmental” greenspace depending upon the types of active and passive facilities developed. The plan also includes “connector” greenspace that connects the wetland to surrounding development. **Figure 8** conceptually illustrates the types of recreational amenities that are suitable for “leisure” and “environmental” greenspace including benches, play areas and interpretive wetland features.
- The greenspace design will follow CPTED guidelines in ensuring good visibility, controlled ingress and egress, proper lighting, and well-defined pedestrian spaces.
- All public spaces will provide barrier-free access.
- Amenities such as benches, receptacles and signs will be appropriately placed to allow for unobstructed passage.
- The neighbourhood-scale greenspace and recreational amenities will be readily accessible to residents in the surrounding areas by bicycle or on-foot via the trail network.
- In addition to providing land drainage and riparian habitat, the wetland serves as a focal point for both active and passive recreation. The open space that surrounds the wetland connects to the neighbourhood collector street at three locations providing view corridors to the wetland itself as well as highly visible sites for the proposed recreational facilities.
- Entryways will serve as features entering the greenspace and wetland area and may include hard-surfaced plazas, planting beds, signage and benches.
- Wetland areas may provide interpretive signage and educational opportunities related to the wetland for residents and visitors.
- The open spaces and greenway will be landscaped with trees and shrubs for shade and visual appeal.
- In addition to the public open space and amenities described above, it is anticipated that higher density multi-unit developments within the neighbourhood will incorporate outdoor activity areas and play spaces for residents within the boundaries of their private property. Developers are encouraged to plan these spaces so connections to the public spaces is available, where possible.
- Development Reserve areas shall be protected for future development. Lands in this area are subject to amendment(s) at such time as development is ready to proceed.



Figure 8: Neighbourhood Greenspace Concepts

5 RESIDENTIAL AND POPULATION

The population estimates for the development area shown in **Figure 4** were derived from the “minimum” and “maximum” housing yields provided in the Secondary Plan and summarized in **Table 2**. The table also includes “expected” density factors (shaded gray) that were subsequently used to estimate the housing yield by development phase. **Table 3** provides low and high housing and population estimates for the plan area based on the minimum and maximum housing yields from **Table 2**. The housing yields were obtained by applying the Secondary Plan minimum and maximum density targets from **Table 2** against the net development area for the three (3) major housing types: Residential Single Family (1.11 hectares), Residential Low Density Multiple Family (3.34 hectares), and Residential Moderate Density Multiple Family (6.2 hectares).

The calculations indicate that the development area could generate between 321 and 711 housing units accommodating between 806 and 1,785 people at full build-out based on an average household size of 2.51 people per unit (2021 Canada Census). As discussed in Section 6, “expected” density factors were used to estimate the housing and population estimates by development phase. Based on the expected density rates, the neighbourhood will generate in the order of 544 total housing units and a population of 1,365.

It is recognized that as housing affordability decreases, it may be necessary to provide greater options for housing and target densities may increase throughout the plan area, resulting in an increase in the number of housing units to be accommodated and an increase in population within the plan area. The precise densities will be determined at the time of subdivision approval.

Table 2: Residential Yield by Housing Type

NEIGHBOURHOOD PLAN DESIGNATION	HOUSING TYPE	ZONING LABEL	TYPICAL BUILT FORM	HOUSING DENSITY IN UNITS PER NET HECTARE (ROUNDED)			HOUSING DENSITY IN UNITS PER NET ACRE (ROUNDED)		
				MIN.	EXP.	MAX.	MIN.	EXP.	MAX.
RESIDENTIAL LOW DENSITY	RESIDENTIAL SINGLE FAMILY	RLD	SINGLE DETACHED DWELLING	15	24	40	6	10	16
	RESIDENTIAL LOW DENSITY MULTIPLE FAMILY	RLD	SEMI- DETACHED, DUPLEX, TRIPLEX, 4- PLEX, TOWNHOUSE	15	36	40	6	15	16
RESIDENTIAL MODERATE DENSITY	RESIDENTIAL MODERATE DENSITY MULTIPLE FAMILY	RMD	TOWNHOUSE, STACKED TOWNHOUSE, LOW-RISE APARTMENTS	41	64	86	17	26	35
*USED IN CALCULATING HOUSING ESTIMATES BY DEVELOPMENT PHASE									

Table 3: Housing and Population Estimates

ZONE	NET HECTARES	HOUSING AND POPULATION RANGE					
		MINIMUM		EXPECTED		MAXIMUM	
		DENSITY	HOUSING	DENSITY	HOUSING	DENSITY	HOUSING
RESIDENTIAL LOW DENSITY (BASED ON 4.45 NET HECTARES AND ASSUMING 25% RESIDENTIAL LOW DENSITY LARGELY SINGLE FAMILY and 75% RESIDENTIAL LOW DENSITY INCLUDING MULTIPLE FAMILY)							
RESIDENTIAL LOW DENSITY - RLD	1.11	15	17	24	27	40	45
RESIDENTIAL LOW DENSITY MULTIPLE FAMILY - RLD	3.34	15	50	36	120	40	134
RESIDENTIAL MODERATE DENSITY							
RESIDENTIAL MODERATE DENSITY MULTIPLE FAMILY - RMD	6.2	41	254	64	397	86	533
TOTAL HOUSING ESTIMATES		321		544		711	
POPULATION ESTIMATES AT 2.51 PERSONS PER UNIT (2021 CENSUS)		806		1,365		1,785	

6 PHASING PLAN

Figure 9 identifies the preliminary phasing plan, and is summarized as follows:

- Phase 1 encompasses approximately 22.25 hectares (55 acres) of land in total for commercial development.
- Phase 1 commercial lands will be serviced from water connections along Patricia Avenue and by gravity sewer to the lift station in the plan area.
- Traffic access for Phase 1 commercial lands north of the wetland will be via two new collector road connections: one to PTH 10 and one to Patricia Avenue. Lands south of the wetland are expected to be accessed via a lower order collector road connecting to the main east-west collector servicing the northern commercial lands.
- Continued construction of the collector road west with an additional connection to Patricia Avenue, would be completed in Phase 2. This phase includes predominantly residential development in Residential Low Density and Residential Moderate Density areas.
- The Development Reserve lands are identified as Phase 3 and would be subject to amendment(s) at such time as development is ready to proceed.

Beyond Phase 1 it is intended that the phasing plan be considered conceptual and is subject to modifications, dependent on market conditions and the demand for housing typologies.

It is expected that Phase 1 will be initiated in 2026. The timing of subsequent phases will also depend upon market conditions, but a conservative estimate points to a full development build-out by 2035.

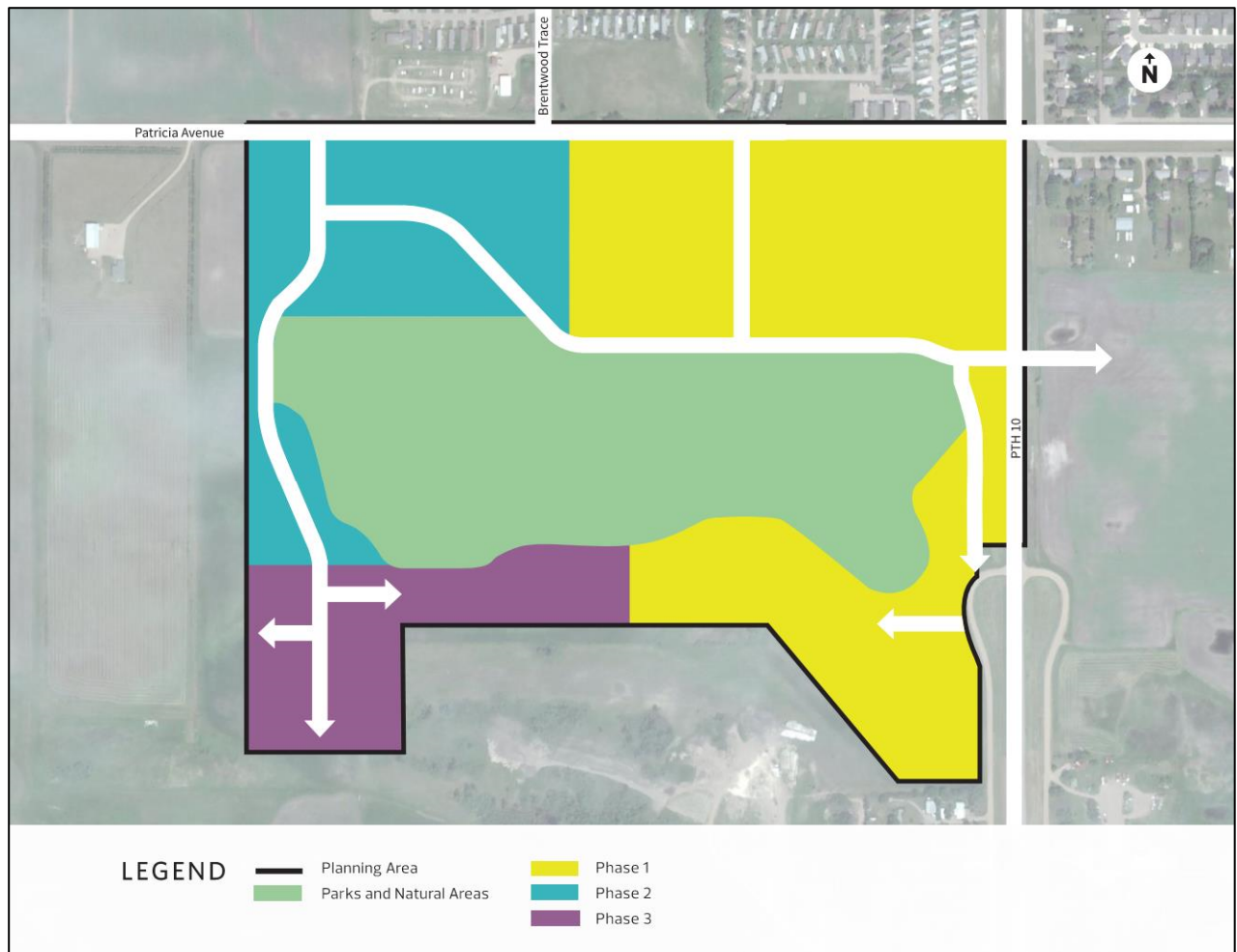


Figure 9: Phasing Plan

7 URBAN DESIGN CONSIDERATIONS

The planning and urban design vision for the neighbourhood intends an inclusive community that melds a varied and attractively designed built environment with pedestrian-friendly and attractive commercial areas, well-appointed parks and open spaces to create an appealing and highly marketable residential development. The development will incorporate a regional commercial centre and a variety of housing types at different price points targeting people and families across all sectors of the residential market including renters, first-time home buyers, families in the move-up market and retirees.

7.1.1 URBAN DESIGN OBJECTIVES

- To develop pedestrian friendly neighbourhood with a sense of place.
- To create a mix of land uses to support the development of a complete community.
- To ensure a compact urban form that uses land responsibly and efficiently.
- To encourage an active interface between the built form and public spaces.
- To provide a range of transportation options.
- To respect the natural topography of the area and integrate the natural features into new development.
- To incorporate urban design elements which maximize the benefits of winter.

7.1.2 URBAN DESIGN POLICIES

- Neighbourhoods shall include a mix of uses such as residential, commercial, parks, and open spaces.
- Neighbourhood commercial, and recreational uses should be integrated into residential areas.
- Multi-family residential development should be located near commercial uses, recreation facilities, park areas, or transit facilities.
- Focal points and amenity areas shall be connected with the pedestrian network.

Representative commercial style development, housing types and style concepts are pictured in **Figure 10** and **Figure 11**.

7.2 COMMERCIAL AREAS

The planning and design of commercial areas shall be pedestrian oriented and connected to the wetland feature, wherever possible. Consideration should be made within the commercial areas for well-designed public spaces, and variety in building design and appearance. Architectural design considerations shall include façade and entry-way treatments, window placement, exterior cladding type, texture and colour, roof lines, etc. Site planning shall ensure safe and convenient site access and circulation for drivers and pedestrians, appropriate lighting levels in parking lots, and landscaping.



Figure 10: Commercial Development Concepts

7.3 RESIDENTIAL AREAS

The planning and design of residential neighbourhoods and the dwellings they contain is evolving in response to changing consumer tastes and preferences. Today's renters and buyers place a high value on "selling features" that extend beyond the dwellings themselves to include neighbourhood "feel" and appearance, recreational amenities, accessible and well-designed public spaces, and variety in building design and appearance.

The developer's team of in-house building and interior designers collaborate from the ground up to create marketable housing products. Key architectural design considerations emphasize variety in terms of façade and entry-way treatments, window placement, exterior cladding type, texture and colour, roof lines, etc. Through the lot sale process, home builders will be provided direction on the use of building materials, colours and architectural features on street-facing facades in order to create a varied and attractive streetscape.

The site plans and architectural designs of multi-family and townhouse product will be prepared on a project-specific basis, but will conform to the standard requirements and guidelines as identified in the Secondary Plan and The City of Brandon Urban & Landscape Design Standards Manual.

Important site planning and urban design considerations will include building orientation and spacing to provide for natural light and privacy, safe and convenient site access and circulation for drivers and pedestrians, appropriate lighting levels in parking lots and along walkways, adequate buffering of adjacent developments, the incorporation of outdoor play and gathering areas, and the consideration of environmental design guidelines in the selection of plant materials for the landscaping of yards and parking lots and the design of storm-water management systems.



Figure 11: Residential Development Concepts

8 TRAFFIC IMPACT STUDY SUMMARY

A Traffic Impact Study (TIS) was prepared for the plan under conditions of full development. The purpose of the TIS was to investigate the potential transportation impacts related to the proposed development on the adjacent street network. The analysis included an investigation of various access configurations on PTH 10/18th Street south of Patricia Avenue and on Patricia Avenue west of PTH 10/18th Street. The study also considered other future residential and commercial developments in southwest Brandon. The analysis included an investigation of access configurations on PTH 10/18th Street south of Patricia Avenue and on Patricia Avenue west of PTH 10/18th Street. Six access configurations on PTH 10/18th Street were initially investigated, and were reduced to three access configurations (1, 2 and 6 (bolded)) after the initial review:

- **Access Scenario 1: Signalized access on PTH 10/18th Street south of Patricia Avenue;**
- **Access Scenario 2: Roundabout access on PTH 10/18th Street south of Patricia Avenue;**
- Access Scenario 3: Unsignalized right-in/right-out/left-in access on PTH 10/18th Street south of Patricia Avenue;
- Access Scenario 4: Unsignalized right-in/right-out access on PTH 10/18th Street south of Patricia Avenue;
- Access Scenario 5: No access on PTH 10/18th Street south of Patricia Avenue; and
- **Access Scenario 6: Patricia Avenue realigned south at PTH 10/18th Street (existing intersection location on PTH 10/18th Street would be closed).**

Based on proposed land uses, the development is forecast to generate 1,176 new vehicle trips (606 entering and 570 exiting) during the weekday a.m. peak hour, 1,100 new vehicle trips (594 entering and 506 exiting) during the weekday p.m. peak hour, and 2,028 new vehicle trips (1,028 entering and 1,000 exiting) during the Saturday peak hour.

Additional residential and commercial developments near the proposed development that are anticipated to impact the study area intersections were included in the traffic analysis for the plan area.

8.1 TRAFFIC ANALYSIS

The traffic analysis for the proposed development was undertaken using Synchro 10.0 traffic analysis software and SimTraffic simulation software. The weekday a.m. and p.m. peak hours and the Saturday peak hour were selected for analysis for this development as these are the most critical times for traffic in the area, and are also typically busy periods for the proposed land uses included in the development. The analysis was conducted for the full build-out (year 2030) and full build-out plus ten years (year 2040) horizons. The results of the traffic analysis indicate that:

- The PTH 10 and PTH 110 intersection and the 34th Street and Patricia Avenue intersections are forecast to perform well for all future scenarios and no improvements are necessary.
- The performance of intersections along PTH 10/18th Street at Richmond Avenue, Aberdeen Avenue and Maryland Avenue is forecast to worsen as background traffic volumes increase. The development traffic adds a moderate amount of additional delay to the overall intersection for each peak hour and horizon year analyzed. The different development access scenarios had minimal to no impact on the intersection performance. Intersection

improvements may be necessary along PTH 10/18th Street once traffic volumes reach the forecasted 2040 levels.

- The proposed commercial access on Patricia Avenue is forecast to operate at acceptable levels of service for all access scenarios and horizon years as a signalized intersection with additional turn lanes, and the proposed residential access on Patricia Avenue is forecast to operate at acceptable levels of service for all access scenarios and horizon years as an unsignalized intersection with single approach lanes in all directions.
- The PTH 10/18th Street and Patricia Avenue intersection is forecast to operate at acceptable levels of service for all access scenarios and horizon years as a signalized intersection with additional traffic lanes. The lane requirements at the intersection depend on the different development access scenarios; however, without a separate development access on PTH 10/18th Street (Access Scenario 6) all traffic coming to and from the development off 18th Street must turn at Patricia Avenue, and double turning lanes will be required for multiple intersection approaches as compared to single turning lanes for the other scenarios (Access Scenarios 1 and 2).
- The proposed access on PTH 10/18th Street (Access Scenarios 1 and 2) is forecast to operate at acceptable levels of service for all horizon years. In addition to providing access to the proposed South Brandon Village development, the PTH 10/18th Street approach would also provide access to the land east of PTH 10/18th Street and south of Patricia Avenue. Access to this land is limited as there are existing single-family residential homes located on the south side of Patricia Avenue and access from PTH 110 is not possible. Access Scenario 6 (realignment of Patricia Avenue) could also provide access to the land east of PTH 10/18th in the long-term; however, in the short-term the existing Patricia Avenue east of PTH 10/18th Street would have to remain connected to PTH 10/18th Street as the land east of PTH 10/18th Street is not currently part of the City of Brandon and there are no plans to annex from the RM of Cornwallis. Relocation of Patricia Avenue (Access Scenario 6) would be more complicated and expensive to implement than the addition of an access on PTH 10/18th Street (Access Scenarios 1 and 2).
- A separate development access on PTH 10/18th Street will spread out traffic entering and exiting the development and alleviate pressure at the PTH 10/18th Street and Patricia Avenue intersection. A PTH 10/18th Street approach will also allow for future access to the land east of PTH 10/18th Street and south of Patricia Avenue to facilitate development of this area in the future. A traffic signal (Access Scenario 1) is most consistent with intersections along PTH 10/18th Street, including at the immediately adjacent intersections with Patricia Avenue to the north and PTH 110 to the south.

8.2 MULTI-MODAL ANALYSIS

8.2.1 TRANSIT

Brandon Transit route number 17 currently operates near the northeast corner of the proposed Brandon South Village development and could connect the development to the downtown and the Downtown Bus Terminal. The closest existing transit stop to the development is on Currie Boulevard close to Patricia Avenue. Transit service in the area could be expanded in the future to service the proposed Brandon South Village development as well as other planned developments in the area like the Brookwood and Bellafield neighbourhoods.

8.2.2 PEDESTRIAN AND CYCLISTS

There are no existing walking or cycling facilities adjacent to the proposed development; however, according to the Brandon Greenspace Master Plan future facilities are planned along PTH 10/18th Street, 26th Street, 34th Street, and Patricia Avenue. These future facilities would connect to the existing trail along 18th Street north of Maryland Avenue, the existing trail along Patricia Avenue east of 18th Street, and the proposed Outer Ring Trail. The future trail along Patricia Avenue would also connect the proposed development to the future combined Celebration - Active Green Space located west of the intersection of Patricia Avenue and 34th Street.

The plan has included appropriate internal pedestrian and cycling facilities to allow users to safely travel within the neighbourhood. Connections to future pedestrian and cycling facilities in the adjacent area have also been identified.

8.3 CONCLUSIONS

The following conclusions were made within the TIS for the plan:

- The performance of the PTH 10/18th Street and Patricia Avenue intersection and the access intersections on Patricia Avenue and PTH 10/18th Street were acceptable for all access scenarios; however, additional infrastructure (signals, lanes, channelization, etc.) will be required in order to achieve an acceptable performance level.
- A separate development access on PTH 10/18th Street (Access Scenarios 1 and 2) will spread out traffic entering and exiting the development and alleviate pressure at the PTH 10/18th Street and Patricia Avenue intersection, as opposed to realignment of Patricia Avenue (Access Scenario 6) which results in all traffic from PTH 10/18th Street travelling through a single intersection. Access Scenarios 1 and 2 provide multiple ways to enter the site from PTH 10/18th Street if the road is blocked, while Access Scenario 6 would require re-routing all the way to 34th Street to access the site from Patricia Avenue in the event of a road blockage.
- A PTH 10/18th Street approach (Access Scenarios 1 and 2) will also allow for future access to the land east of PTH 10/18th Street and south of Patricia Avenue. Access to this land is limited as there are existing single-family residential homes located on the south side of Patricia Avenue and access from PTH 110 is not possible. Access Scenario 6 (realignment of Patricia Avenue) could also provide access to the land east of PTH 10/18th in the long-term; however, in the short-term the existing Patricia Avenue east of PTH 10 / 18th Street would have to remain connected to PTH 10/18th Street as the land east of PTH 10/18th Street is not currently part of the City of Brandon and there are no plans to annex from the RM of Cornwallis. Relocation of Patricia Avenue (Access Scenario 6) would be more complicated and expensive to implement than the addition of an access on PTH 10/18th Street (Access Scenarios 1 and 2).

8.4 RECOMMENDATION

A separate development access on PTH 10/18th Street will spread out traffic entering and exiting the development and alleviate pressure at the PTH 10/18th Street and Patricia Avenue intersection. A PTH 10/18th Street approach will also allow for future access to the land east of PTH 10/18th Street and south of Patricia Avenue to facilitate development of this area in the future. A traffic signal for the development access (Access Scenario 1) is most consistent with existing intersections along PTH 10/18th Street, including at the immediately adjacent

intersections with Patricia Avenue to the north and PTH 110 to the south. This recommendation has been reflected in the plan.

9 MUNICIPAL SERVICING SUMMARY

A municipal servicing overview has been prepared in support of the plan and submitted to the City for review. This section provides a summary of proposed servicing.

9.1 WATER DISTRIBUTION SYSTEM

The plan area will be serviced via a water line along the north side of Patricia Avenue with connections at collector road accesses off Patricia Avenue. There is no existing or planned water infrastructure along PTH 10.

Extension of water distribution will be determined in conjunction with phasing of development.

Prior to applicable zoning or subdivision of the site, all improvements to municipal infrastructure will be determined by technical studies (e.g. site servicing analysis).

9.2 WASTEWATER SEWER SYSTEM

A lift station is being installed, with its location generally identified in **Figure 4**. Wastewater servicing will extend north from the lift station through the development and connect into the existing system at Patricia Avenue. A force main and gravity sewer would be extended from the lift station along the west side of the PTH 10 right-of-way north to Patricia Avenue.

The City's current alignments for sewer infrastructure are down the middle of the collector roads for servicing internal to the development.

9.3 DRAINAGE

The existing wetland is an important feature for local drainage and stormwater management, and the proposed drainage plan preserves this wetland.

A naturalized stormwater pond to accommodate stormwater from the plan area and improve the water quality of runoff before draining into the wetland is proposed and conceptually shown in **Figure 4**. The exact location and size of the stormwater pond will be determined during detailed design.

The naturalized stormwater pond will provide similar water quality functions as the wetland and will be designed in accordance with the City of Brandon's Naturalized Stormwater Pond Guidelines.

An engineered drainage outlet to manage the runoff from the overall drainage boundary will also be required. This outlet would be to the Gun Club Coulee south of the plan area, via a piped outlet to the southwest corner of the plan area where the current wetland drains when it overflows.

The wetland and naturalized stormwater pond are an integral part of the plan. In addition to being the primary components of the drainage and stormwater management plan, they also form the basis for the open space and amenities plan, providing recreation opportunities for neighbourhood residents.

Drainage for individual sites must conform with City of Brandon requirements.