Waverly Developments Ltd.
Morrison Subdivision
Neighborhood Plan
2017

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R7A 4G7

Contents

1.0 Background

This document is a Neighborhood Plan for the proposed Morrison Subdivision. There are many objectives and requirements for a Neighborhood Plan as defined in Section 6.3 of the Southwest Brandon Secondary Plan. In more specific terms as defined in the Secondary Plan the Neighborhood Plan and the development review process are to strive to achieve integrated and coordinated development.

Attached is Figure 1 from the Southwest Secondary Plan with the development location illustrated. This clearly illustrates that the land is within the boundaries of the Secondary Plan. Figure 2 illustrates the location of the development within the City of Brandon as a whole.

The information contained within this document is to meet the requirements for a Neighborhood Plan as listed in Section 6.3.6 of the Southwest Secondary Plan. The items noted are discussed throughout the document albeit not necessarily with a heading for each item.

2.0 Surrounding Area

Land usage in all directions from the Morrison Subdivision is either residential development or is proposed to be residential development.

To the north and east of the development is the Parkdale Subdivison. It is predominantly single family residential housing with small groups of side by side multi-family housing. Larger multi-family housing units are located nearer the major thoroughfares of Richmond Avenue and 26th Street.

To the west of the development is undeveloped land privately owned by two separate individuals. This land is zoned development reserve and is thus believed to be used in the future for residential development.

To the south of the development is the Bellafield Subdivision. This is a residential development owned and being developed by VBJ Developments Ltd. At the time of authoring Phase 1 of the Bellafield Subdivision has been constructed and is partially occupied. Further phases of this development will fill the entire 1/4 section to the south of the Morrison Subdivision. Virtually the entire Bellafield Subdivision is to be residential development.

3.0 Predevelopment Condition of Site

The site in its predevelopment condition is grass covered and largely left in an unmaintained state. The ground is relatively flat with a general grade towards the south. The water table in this region has been observed through construction on each side of the site. To the north of the site the groundwater table was observed to be approximately 2.5m below ground level. To the south of the site the groundwater table was observed to be in the range of 4m below ground level. However, it may vary seasonally and from year to year. Therefore confirmation of the water table elevation and the impact it may have on infrastructure and housing construction will need to be confirmed at the time of construction. However, it is evident that there is potential to have an impact upon construction activities.

Soils in the area will be predominately glacial tills down to a bedrock that is expected to be predominately shale. The bedrock is normally in excess of 30m and commonly in excess of 60m below ground level. Within the glacial till there is commonly small pockets of sand and gravel. The exact location of the sand and gravel pockets is very difficult to predict. Contractors performing excavation activities will need to be aware of this potential.

4.0 Layout of Site

4.1 Design

A proposed site plan is illustrated in Figure 3. The size of the overall development is 1.9 hectares. The site is comprised of 22 lots intended for a mixture of residential housing being both single family units and multi-family or side by side units. The site plan, as shown in this document, illustrates 17 single family residential units and 2 multi-family units with a total of 5 multi-family dwelling units.

The single family lots vary in gross area, width and depth. However, generally the single family residential lots are between 16m and 17.5m in width and 38.7m to 40.7m in depth. The multi-family lots are between 7.6m and 10.9m in width.

Along the south side of the development site, north of Maryland Avenue, a 9.1m wide buffer zone has been provided. This is an extension of the existing buffer zone along the north side of Maryland Avenue.

4.2 Zoning

The property within the Development will be zoned a mixture of RSD and RLD. See Figure 4 for the area of each zone.

4.3 Green Space

Green Space is provided within the buffer zone noted above. This area provides a total green space area of 0.1 Ha.

4.4 Transportation

Vehicular access to the development will be via a street within the site that will be an extension of Marquis Crescent. In the future it is expected that an additional access will be provided via a future extension of Maryland Avenue. The design of the street will be done in accordance with the standard requirements of the City of Brandon for a residential street.

City of Brandon transit services are available on 26th Street and Parkdale Drive. However, due to the expected development of a walkway from the development to 26th Street it is expected that this would be the normal connecting point with the transit system.

It is expected that a walking and bicycle path will be extended along Maryland Avenue in the proposed buffer. This path will provide access to the network of biking and walking paths that connect virtually the entire City of Brandon. The proposed development will have access to the walking path either via Marquis Crescent to the east or a future connector street to the west. A sidewalk located along the southside of Marquis will aid with providing pedestrian access to the walkway.

5.0 Shadow Plan

A shadow plan has been prepared that illustrates one option for the future development of undeveloped land to the west of this development. This land is owned by other private landowners . Therefore the method and layout of development may vary from the layout shown. However, this layout illustrates that it is reasonable to expect that the undeveloped land can be developed in a manner that is consistent with the character of the area. The shadow plan illustrates lots that are intended for single family residential development, however, this could be easily varied to accept other types of residential development. Also shown in the shadow plan is a water retention feature that coincides with a natural water collection area. See Figure 5 for an illustration of the Shadow Plan.

6.0 Public Consultation

For a development of this size it is proposed that the public consultation process associated with the re-zoning of the site be used also as the source of public consultation information for the Neighborhood Plan.

7.0 Construction

It is proposed that the entire development be constructed at one time. There is no phasing anticipated within the construction schedule for this site.

8.0 Population Projections and Density of Development

Table 1

Type of Lot	Number of Dwelling Units	Capita per Lot	Projected Population
Single Family Residential	17	3.05	43
Multi-family Residential	5	2.3	12
Total	22		55

Total Area of Lots 1.36 ha
Net Density of Development Area 16.2 units / ha

9.0 City of Brandon Infrastructure

9.1 Utilities

The projections shown for each utility is based on full buildout of the development and upon the population projections stated in Table 1. The peaking factors and per capita consumption are based on consumption/production rates previously provided by City of Brandon staff. These rates are generally the same rates utilized by the City of Winnipeg.

See Figure 6 for a layout of the water and wastewater sewer systems. All water and sewer piping would be supplied and installed in accordance with the latest version of the City of Brandon Standard Construction Specifications. Upon the completion of a warranty period that is generally two years, but will be defined in a development agreement for this site, all infrastructure will become the responsibility of the City of Brandon.

9.1.1 Water

The potable water and firefighting services will be received from the City of Brandon water distribution system. Pressure and flow within the water distribution system will be as provided by the existing City of Brandon water system.

The water system will be comprised of 218m of 150mm diameter watermain. The watermain will connect to the existing water system at the west end of Marquis Crescent. Fire hydrants will be provided at appropriate locations and for maintenance of the water system.

Table 2 - Water Consumption

Average Per Capita Consumption	270 L/day
Average Daily Consumption	0.17 L/s
Peak Hourly Flow Rate (peaking factor of 4.3)	0.7 L/s
Peak Daily Demand (peaking fact of 1.6)	28 L/s

9.1.2 Wastewater

The wastewater system is proposed to discharge from the developed land into the City of Brandon collection system at the west end of Marquis Crescent. The collection system will be comprised of approximately 200m of 200mm diameter PVC sewer. Shown below is the projected rate of wastewater production for this site.

Table 3 - Wastewater Production

Average Per Capita Consumption	270 L/day
Average Hourly Flow Rate	0.17 L/s
Peak Hourly Flow Rate (Harmon peaking factor of 4.3)	0.8 L/s
Extraneous Flow (12 L/min/manhole with 2 manholes)	0.4 L/s
Peak Sewer Flow	1.2 L/s

9.1.3 Stormwater

The stormwater collection system is designed to convey a storm with frequency of return of 100 years. The runoff from the site will be collected and conveyed by the concrete curbs along the proposed street. The flow will be directed south to the Maryland Street buffer zone. From this location water will be conveyed through the Bellafield Subdivision to a regional retention pond. As specified within the Southwest Brandon Secondary Plan and as directed by the City of Brandon staff stormwater retention is to be provided by a regional retention pond within the Bellafield Subdivision. Conveyance of stormwater to the Bellafield conveyance system will be dependent upon the final plan for the development of the walkway along Maryland Ave and Maryland Avenue itself. See the Southwest Secondary Plan for the overall concept of the stormwater system.

Should it be desired, there is potential for installing water gardens or similar public owned water retention facilities along the proposed walkway system on Maryland Avenue. These ponds are intended to be a low cost and minimal maintenance feature intended to minimize discharge from developments.

Based on Environment Canada rainfall data for a 100 year five minute storm it is projected that the runoff rate from the above development would be 0.65m^3/s. This has been calculated to be the maximum runoff rate from the development site. It must be noted that the design criteria for utilization of the Bellafield stormwater pond would need to be modeled likely using a Chicago style storm and the overall drainage basin of the Bellafield pond or potentially the Brandon South stormwater system. Models of this type are beyond the scope of work for a small development of this type. It would need to be modeled by the City of Brandon or others working on their behalf.

9.2 Traffic

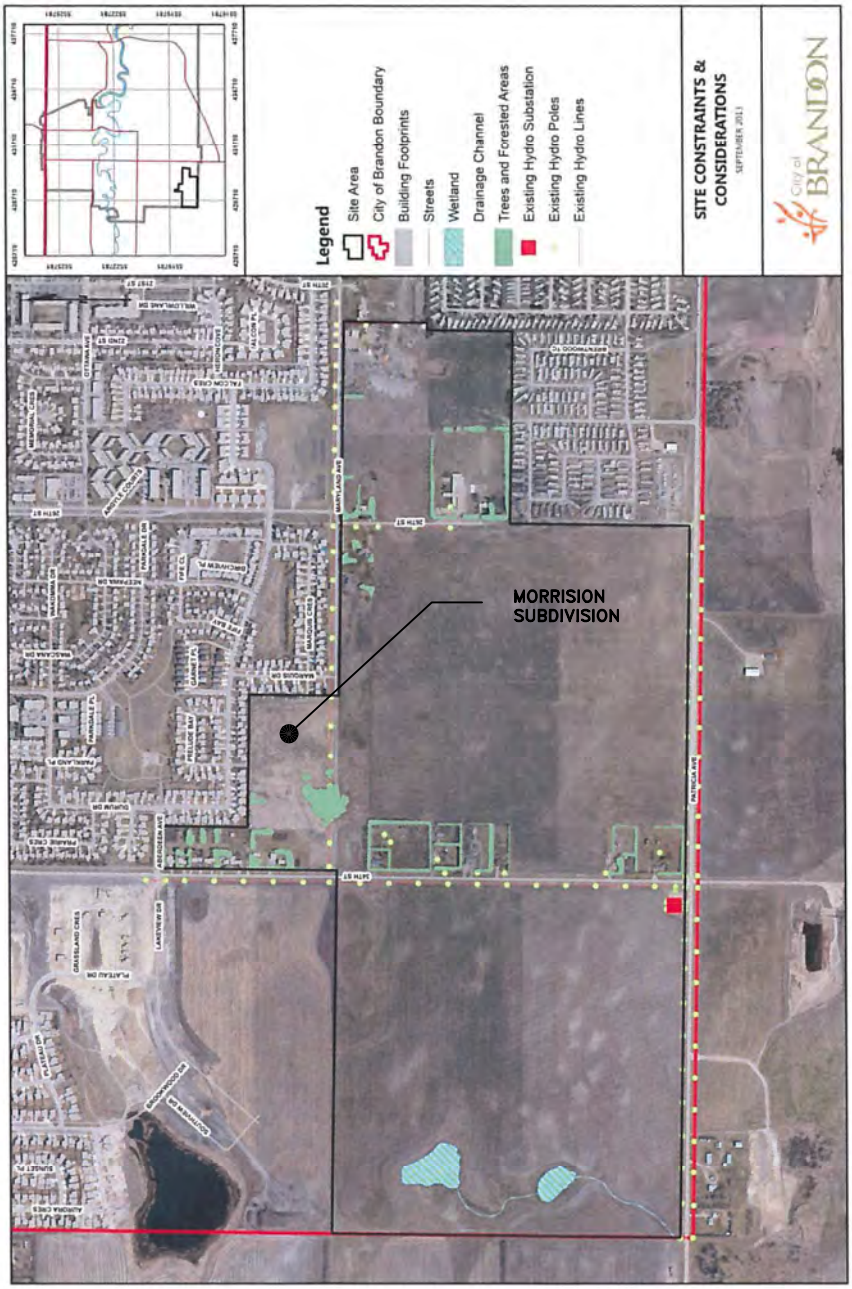
Within the above subdivision there is potential for the construction of 22 dwelling units. The traffic generated by these units will primarily use Maryland Avenue and 26th Street as the route for accessing the remainder of the City of Brandon.

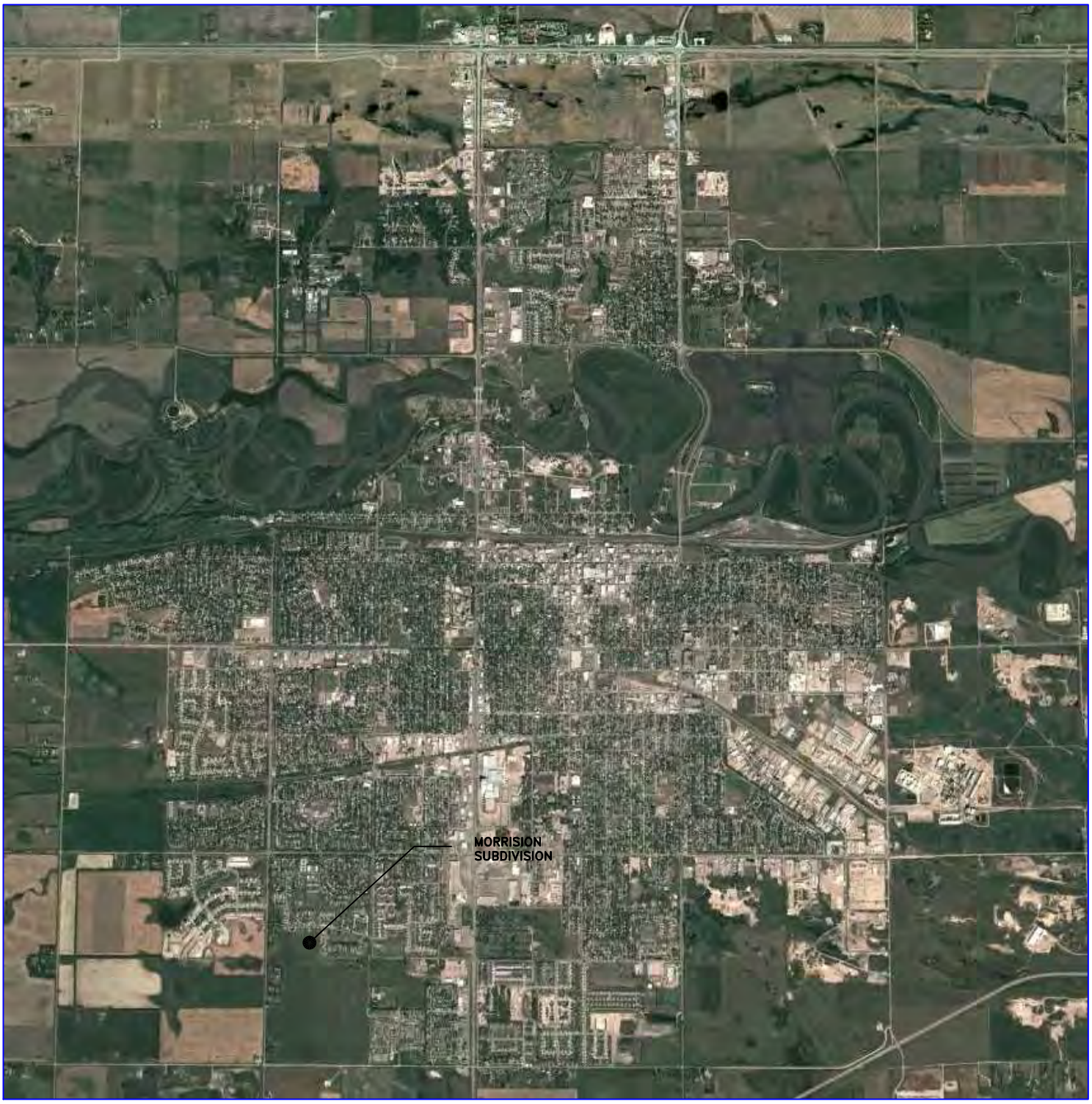
Maryland Avenue and 26th Street are primary routes used for traffic generated in the southwestern portion of Brandon. This would specifically include the area south of Richmond Avenue, east of 34th Street and north of Maryland Avenue. It will also be a primary access route for future lots developed within the Bellafield Subdivision to the south of Maryland Avenue.

It is the opinion of the author that the volume of traffic generated by this subdivision will not have an appreciable impact on the traffic capacity of these routes or arterial streets accessed by following these routes. The contribution of these lots towards a threshold where upgrading of these major access and egress routes from this area will only be contributed to in a minor manner by this subdivision.

10.0 Figures

Figure 3: Map of Constraints and Considerations in the Secondary Plan Area





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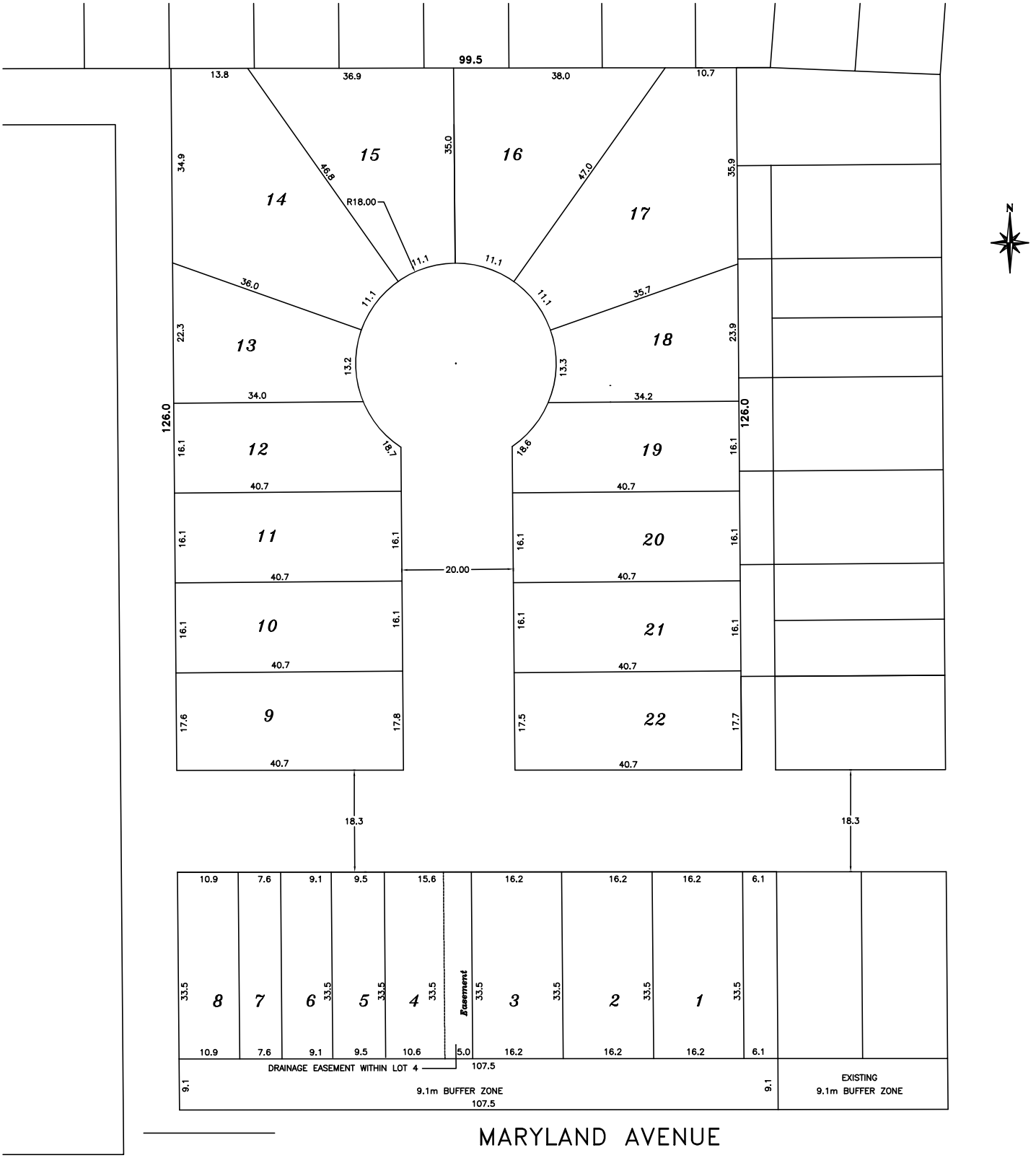
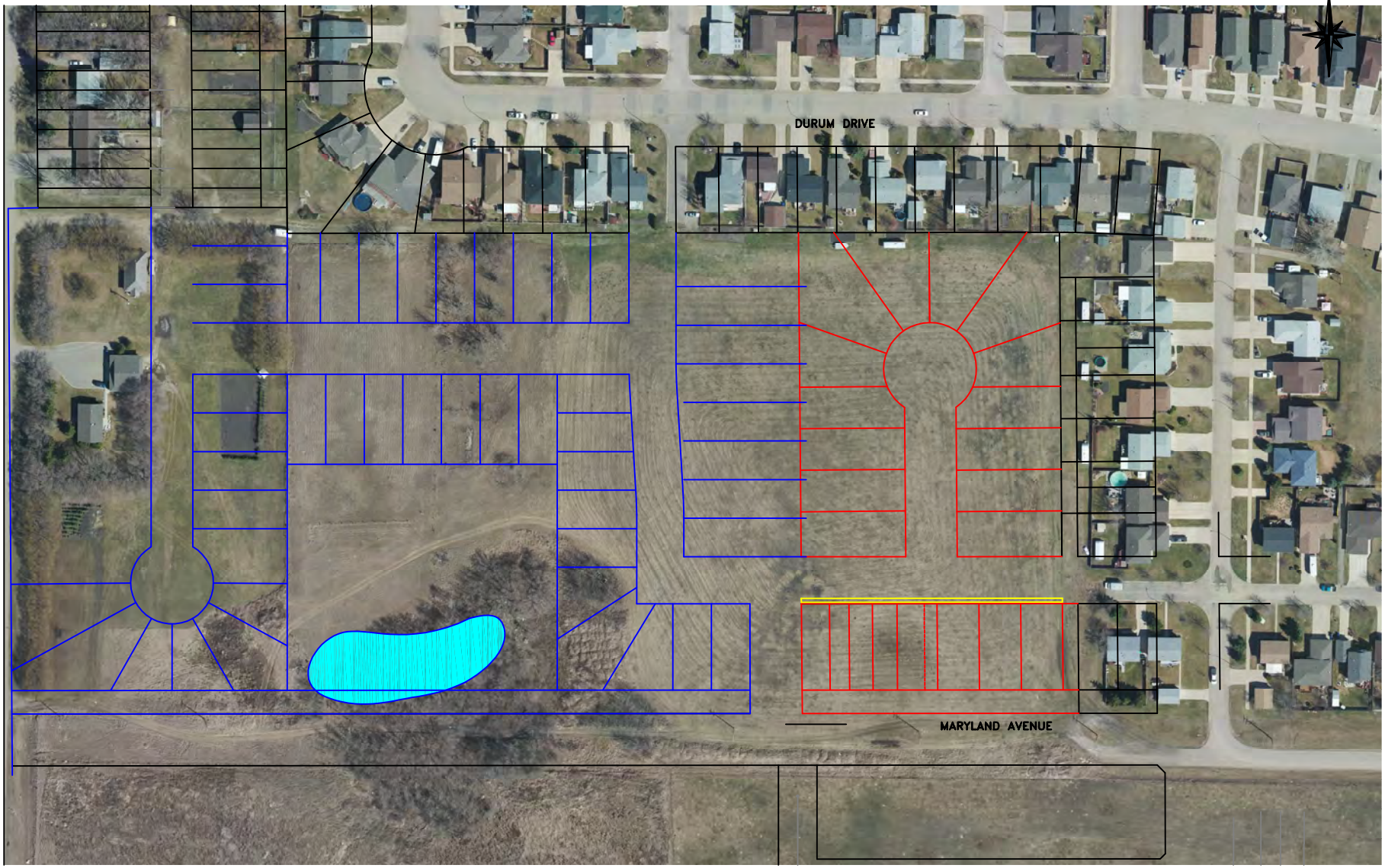
WAVERLY DEVELOPMENTS LTD
MORRISON SUBDIVISION
NEIGHBORHOOD PLAN
FIGURE 2 –LOCATION OF
MORRISON SUBDIVISION



G.D. NEWTON AND ASSOCIATES INC. 727A 10TH STREET BRANDON, MANITOBA R7A 4G7	Attachment C - 12	WAVERLY DEVELOPMENTS LTD MORRISON SUBDIVISION NEIGHBORHOOD PLAN FIGURE 3 – SITE PLAN



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WAVERLY DEVELOPMENTS LTD
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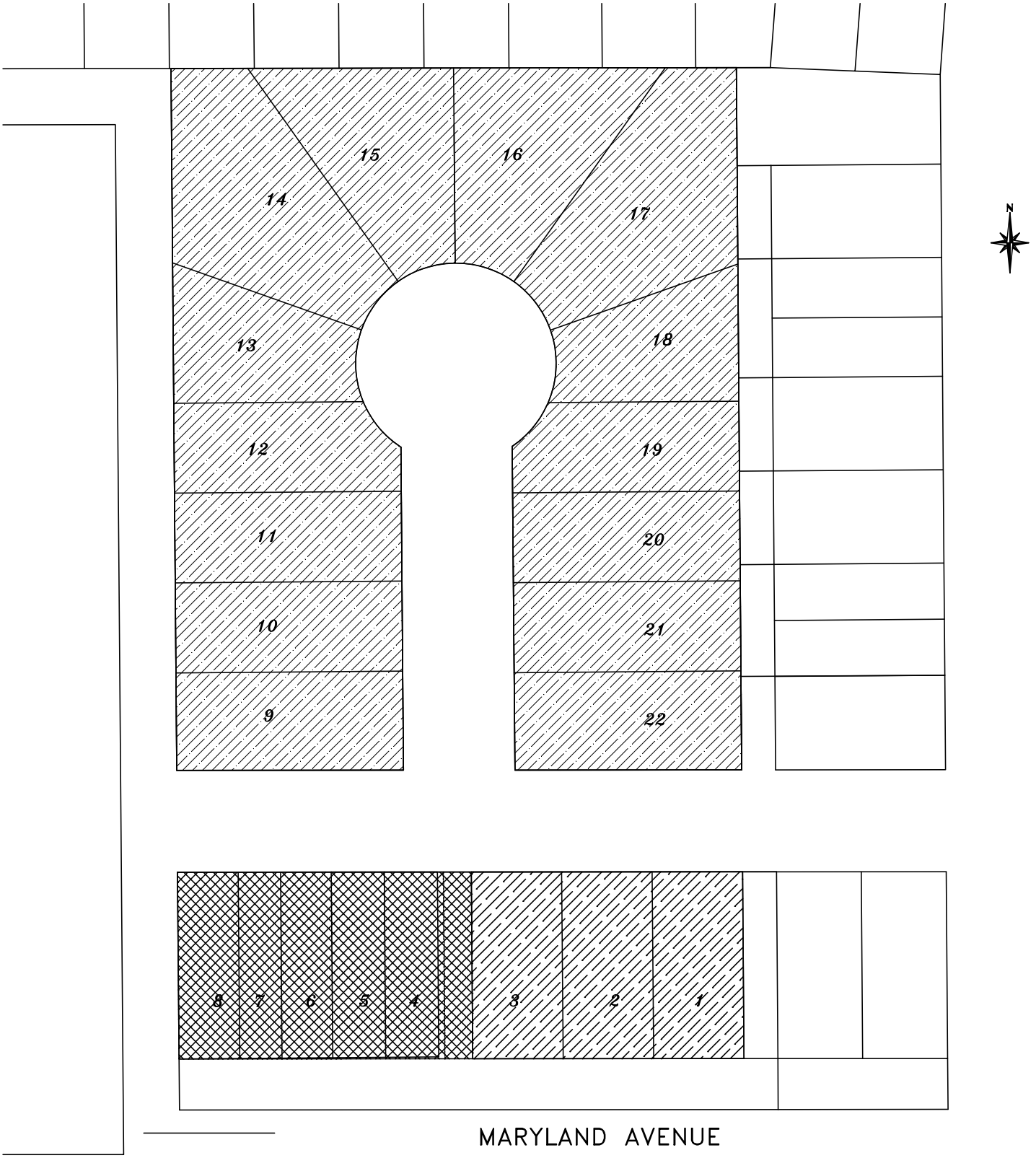
NEIGHBORHOOD PLAN
FIGURE 4 – SHADOW PLAN



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Attachment C - 14

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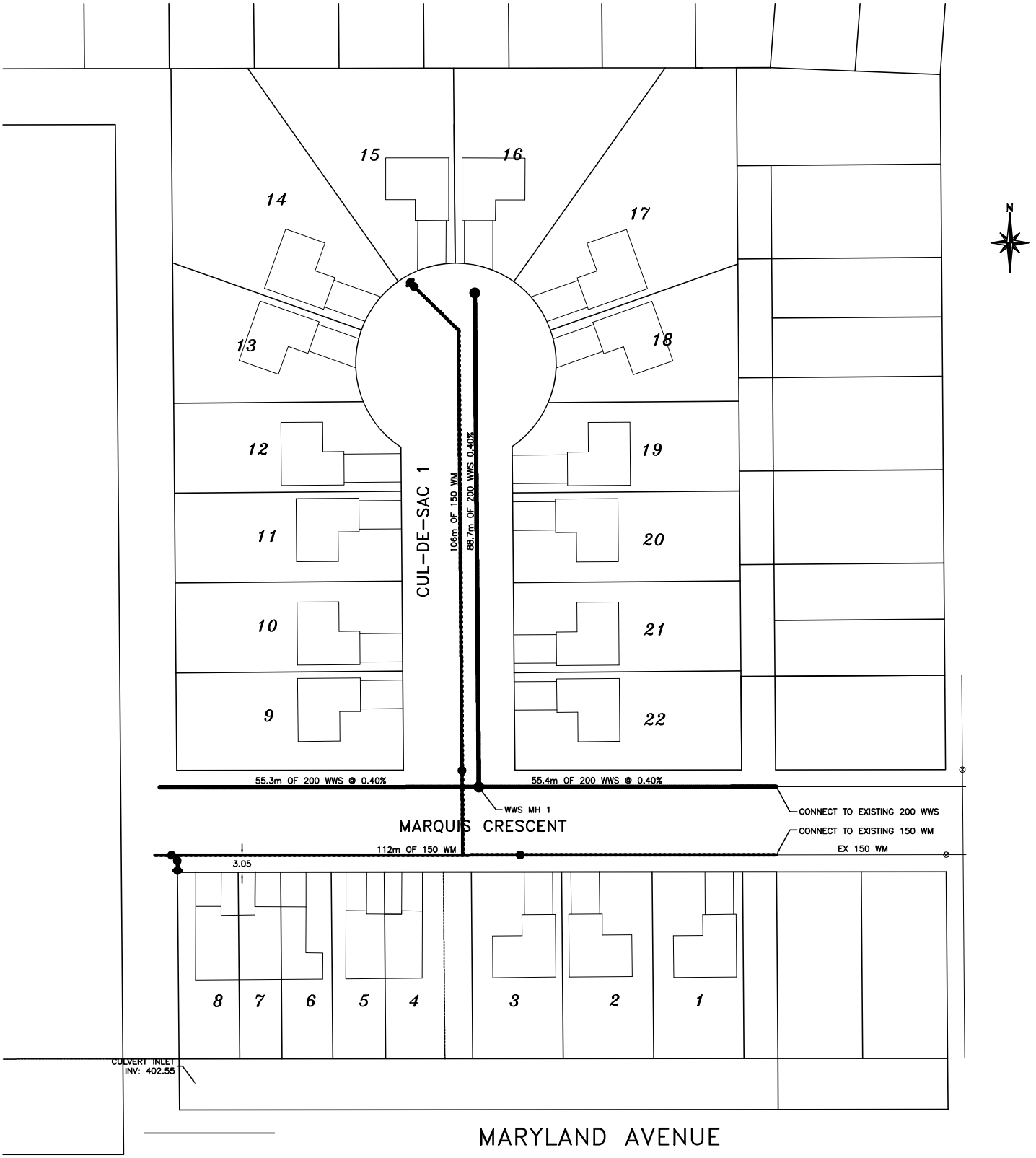
NEIGHBORHOOD PLAN
FIGURE 5 – ZONING



G.D. NEWTON AND ASSOCIATES INC. 727A 10TH STREET BRANDON, MANITOBA R7A 4G7	Attachment C - 15	WAVERLY DEVELOPMENTS LTD MORRISON SUBDIVISION NEIGHBORHOOD PLAN FIGURE 6 – WATER AND SEWER

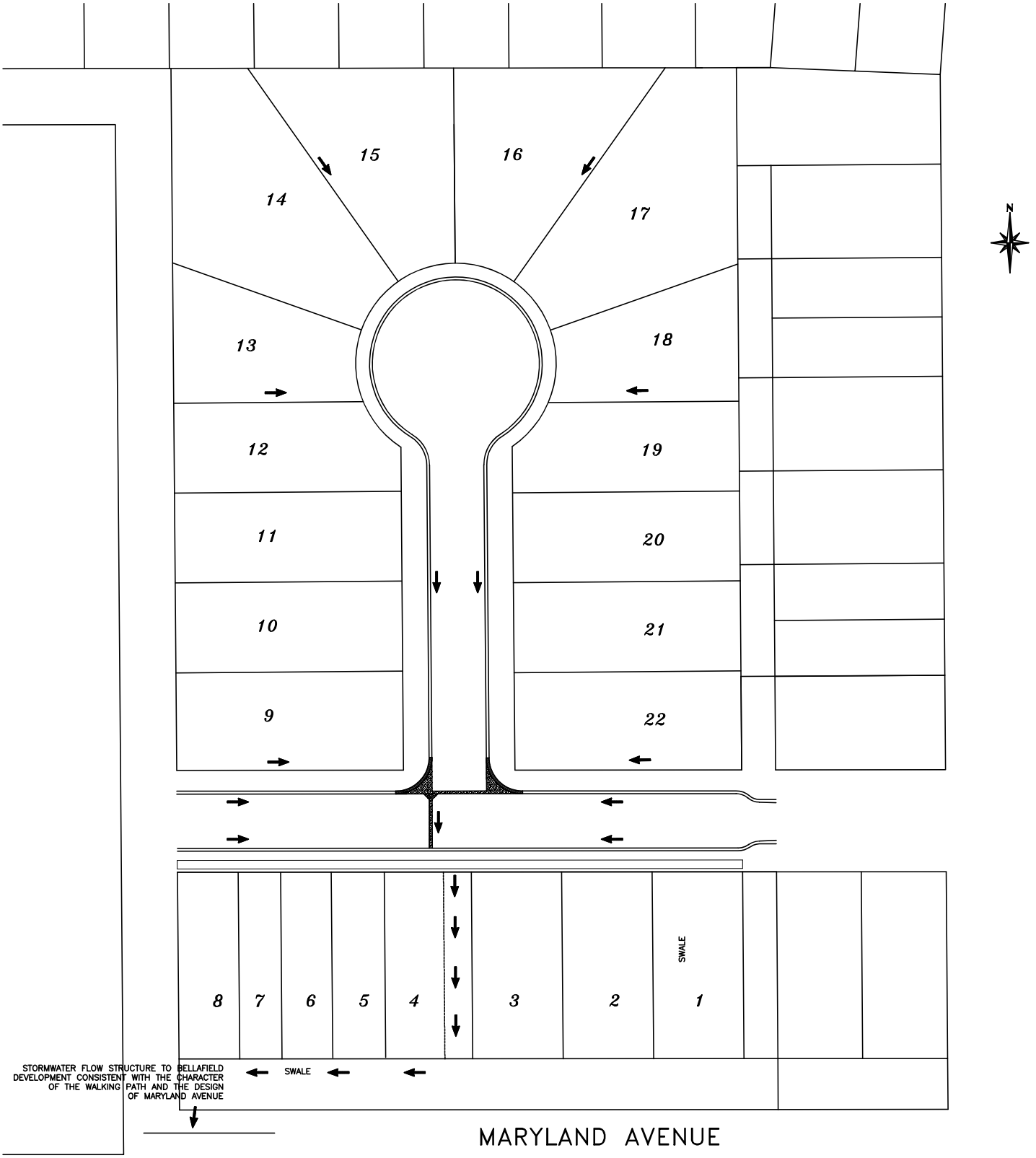


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FIGURE 7 – LAND DRAINAGE