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PRELIMINARY SERVICING REPORT

Wellington Bay Estates Subdivision

Wellington, ON
Corporation of Prince Edward County

Ainley Group Project 16575-1

October 2017
Rev 01 June 2019
Rev 02 July 2020

Prepared for:

Wellington Bay Estates Ltd.
c/o 468 Brant Street,
Burlington, ON
L7R 2G4

Attn: Martin Mazierski

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Figures

Appendices

1.0 INTRODUCTION

Ainley Graham and Associates Ltd. (Ainley Group) has been retained by Wellington Bay Estates Ltd. to provide engineering services necessary to support the Plan of Subdivision proposed on the subject lands. The purpose of this report is to summarize the general servicing of the proposed development.

A Stormwater Management Report prepared by Ainley Group (Rev 02 updated July 2020) has been provided under separate cover. The following services have been considered in this Servicing Report.

- Roads;
- Lot Grading;
- Storm Sewers;
- Water Distribution System;
- Sanitary Sewer;
- Utilities

The proposed 14.2 ha residential development will be developed in multiple phases and is located north of Main Street and approximately 200 m east of Belleville Street in the Village of Wellington, Prince Edward County.

The development site, shown in **Figure 1** below, is bound by existing residential land to the south on Wellington Main Street, undeveloped lands to the west, agricultural lands to the east, and future development on lands owned by Wellington Bay Estates Ltd to the north.

1.1 Proposed Development

The proposed draft plan of subdivision, depicted in **Appendix A**, is to consist of the following overall development (total area in ha):

- Residential lots (8.57 ha / 176 units);
- Common Element Facility (1.16 ha);
- Pump Station (0.05 ha)
- Emergency access road (0.14)
- Stormwater management block (0.23 ha);
- Municipal road allowance and 0.3m reserves (4.04 ha);

Figure 1: Wellington Bay Estates Subdivision Limits

Various correspondence with Prince Edward County and Quinte Conservation related to development servicing is provided for reference is **Appendix B**.

1.2 Subdivision Phasing

Based on discussions with the applicant, it is understood that the subdivision development will be built-out with an estimated 30 lots / year. Based on the current draft plan of subdivision it is anticipated that the total number of units will be 176 built out over 6 years, with completion in 2028. Future road connections to Belleville Street (County Road 2) and First Avenue are to be considered for the ultimate horizon, as timing for these developments is unknown. It is noted that the ultimate connection to First Avenue is dependent on the timing for the future subdivision development to the west (known as Lakeside Estates). A preliminary phasing plan is provided in **Figure 1A**.

Based on consultation with the County, it is anticipated that approximately 100 units at the south end of the development, will not require connections to First Avenue and Belleville Street for sanitary servicing or watermain servicing. Based on the anticipated development phasing, these first 100 units would be completed in 2023-2024.

1.3 Overall Future Development Concept

The lands to the north of the proposed Draft Plan are owned by the client. In anticipation of future servicing of these lands, and for the purpose of the municipality's Master Servicing Study, an overall Development Concept has been prepared which is provided in **Appendix A,** and considered throughout this Report.

2.0 EXISTING SITE DESCRIPTION

2.1 Drainage and Topography

The site currently consists of lawn and row crops between wooded areas on vacant land.

Based on the existing site topography, a high point approximately 85 m from the northern property boundary divides the site into two drainage areas. The southern portion sheet drains in a southerly direction and ultimately conveys storm drainage under Main Street through three (3) culverts and discharges to West Lake. The northern portion drains towards the Millennium trail to the north in an undefined ditch.

2.2 Geotechnical Investigation

A Geotechnical Investigation Report for the site was completed by Ainley Group, dated June 22, 2017. The Geotechnical field investigations were completed on May 16th, 2017 (test pit program). The test pit location plan can be referenced in **Appendix C**.

The subsoil conditions encountered during the test pit study revealed that the site consists predominately of shallow soil overlying limestone bedrock. Generally, the site consists of surficial topsoil overlying stiff silty clay/ glacial till extending to the underlying bedrock surface. Limestone bedrock was encountered within all test pits, excluding test pit 8, at depths ranging from 0.35 m to 2.0 m below existing site grades. Bedrock quality was found to increase from poor to good quality with depth.

Groundwater infiltration was encountered in all test pits near the overburden soil and bedrock contact elevation. In test pit 8, where no bed rock was encountered, groundwater was not observed at the time of investigation.

Rock blasting will be subject to municipal by-laws.

3.0 MUNICIPAL SERVICES

3.1 Existing Municipal Services

The following existing watermains are within proximity to the site, and are summarized in **Figure 2**:

- A 150 mm dia watermain along Main St., to the south
- A 200 mm dia watermain along Belleville St.

The following existing sanitary sewers are within proximity to the site, and are summarized in **Figure 3A**:

- A 200mm dia sanitary sewer along Main St., to the south
- A 200mm dia sanitary sewer along Belleville St.

There is an existing storm sewer network with catch basins along Main St. which discharge to three (3) culverts conveying stormwater southerly toward West Lake. The existing storm sewer network is illustrated in **Figure 4B**.

3.2 Wellington Master Servicing Study

It is known that the existing capacity of the municipal water and wastewater infrastructure is limiting new developments. The County's Wellington Master Servicing Plan (MSP) is currently in the final stages of completion, including preferred options for municipal improvements. This Preliminary Servicing Report is based on the following information, based on our current discussions with the County at the time of writing. Excerpts from the Public Information Centre #2 Wellington Master Servicing Plan for Water, Wastewater and Stormwater Management is attached in **Appendix D** for reference.

Potable Water Supply and Distribution

It is our understanding that municipal Council has approved the budget for the Elevated Water Tank and Watermain along Millennium Trail, extending east of Belleville Street within close proximity to the Site. The County has advised that completion of the Elevated Tank and Watermain Trunk is anticipated in the year 2021-2022, assuming municipal approval to award a construction contract.

Wastewater Capacity and Sanitary Collection

Council has not yet approved budget for the Class EA for the Wellington Wastewater Treatment Plant expansion at this time. The municipality has advised that their next priority will be the Class EA and design of the WWTP followed by the Class EA and design for the WTP.

To meet the immediate needs of new developments within a short timeline, the County is reviewing interim options to increase the capacity of the WWTP based on an estimated growth of approximately 100 units / year. The interim improvements would be in place in two to three years (end of year 2022) assuming approval by Council in the next couple of months to proceed with implementation.

The County is also currently investigating the inflow and infiltration of the existing sewer system to identify possible sources which could be remediated to provide some relief to the existing system capacity.

Stormwater Management

The MSP identified the need for a centralized stormwater management facility to meet quality control requirements, while quantity control requires safe conveyance to West Lake.

4.0 ROAD DESIGN

A Traffic Study dated June 2019 prepared by Ainley Group has been submitted under separate cover, and has been considered in the proposed Draft Plan layout.

In accordance with the June 2019 Traffic Study and Memorandum dated March 6, 2020, the proposed roads are to be constructed to right-of-way widths of 18m, 20m and 24m, with an urban cross-section standard with curb and gutter. Preliminary road sections are included on **Figure 5A**. The proposed Road Corridor and Active Transportation is provided in **Appendix A**.

The street layout is presented in the proposed Draft Plan, in **Appendix A,** and has been designed in accordance with the TAC Guidelines with respect to Horizontal Alignments and Intersections.

The subdivision entrance will connect to Main Street with a three-way intersection. As requested by the County, a schematic of the proposed left turn lane on Main Street (recommended in the TIS) is provided on **SK-1** of this Report. An emergency access road will be constructed within Block 179, at a location approximately 75 m to the west (from the eastern property boundary) connecting to Main St. The preliminary layout of the emergency road can be referenced on **SK- 2** of this Report.

5.0 GRADING

The overall preliminary grading of the subdivision and future development to the north is presented in **Figures 5A and 5B**, and is designed with respect to the following factors:

- Consideration of the existing overland flow routes;
- Collection of the majority of the Municipal Drainage (minor and major flows) and re-directing to the Stormwater Management Block (See Stormwater Management report for more details);
- Stormwater outfall at the offsite pond location;
- Maintaining a minimum soil cover over the proposed services;
- Consideration of existing grades and surrounding lands.

Based on the preliminary grading design, the individual lots will be split-draining. Lot drainage will be conveyed to the storm sewer system by sheet drainage from the front and via rear lot catch basins at the rear.

It should be noted that preliminary grading of future development to the north (included in Figure 5B) was completed for the purpose of the municipality's Master Servicing Study currently being prepared by RVA and for consideration to the grading design of the Site. Furthermore, preliminary earthworks were completed, and are presented in **Figure 6A.**

6.0 WATER DISTRIBUTION SYSTEM

The preliminary watermain layout is provided in **Figure 2**. The development is proposed to be serviced by looping a proposed watermain within the site with two connections to the existing 150 mm diameter watermain on Main Street. Sizing of the proposed watermain will be in accordance

with the water distribution analysis to be prepared at the time of detailed design, based on the current municipal hydraulic model.

7.0 SANITARY COLLECTION SYSTEM

We have reviewed sanitary servicing options to service the Wellington Bay Estates (WBE) Subdivision, as well as the adjacent future subdivisions (known as Lakeside Estates, and Future development lands owned by the applicant), for the County's consideration of their MSP and subsequent implementation of recommended municipal improvements, and in support of the WBE Draft Plan application.

The preliminary sanitary servicing layout and drainage plan is provided in **Figures 3A and 3B,** and considers the summary from the MSP (Appendix D). The WBE subdivision is proposed to be serviced through the construction of gravity sanitary sewers draining southerly, following general site topography.

As illustrated in **Figures 3A and 3B**, a portion of the proposed development is proposed to convey flows southerly and connect to the existing sewer on Main St. Although all of the WBE development could be designed to drain by gravity sewers to Main Street, should the municipality require that the WBE Subdivision drain to the future municipal trunk at Millennium Trail, then construction of a pump station and a forcemain within the WBE Subdivision and a forcemain through the future development lands north of WBE Subdivision (owned by the applicant) will be required. Accordingly, a pumping station (Block 177) is provided on the WBE Draft Plan. The additional cost to construct the pumping station and forcemain versus possible offsite improvements to the existing municipal system downstream of the Main Street connection has not been considered with this document, and should be considered by the municipality.

It should be noted that based on our preliminary servicing and grading design, the future development lands north of WBE Subdivision may be serviced by a gravity sewer system with a connection to the future municipal trunk at the west end of the site and Millennium Trail at an invert of 82.50 m or lower. This would reduce costs associated with either a pumping station or possible improvements of the sanitary system downstream of the Main Street connection.

Preliminary sanitary sewer calculations for the proposed development is provided in **Appendix E,** including future development flows for lands to the north.

At the time of detailed design, the proposed sanitary sewers for the Subdivision will be designed in accordance with the current findings from the municipal Master Servicing Study.

8.0 STORM SEWERS AND STORMWATER MANAGEMENT

A Stormwater Management Report prepared by Ainley Group (updated July 2020) has been provided under separate cover. The report details how the subdivision will achieve quality control requirements and safe conveyance of major system flows to the offsite SWM Pond.

Stormwater will be conveyed via sheet drainage over manicured lawns and landscaping, and via curb and gutter and storm sewer to direct the flows in a southerly direction to the offsite stormwater management pond facility, ultimately discharging to West Lake.

The preliminary post-development drainage plan is provided in **Figures 4A,** and storm sewer layout in **Figures 4B and 4C**. Due to the Draft Plan layout constraints, it is anticipated that overland flows of the major system will need to be captured and piped to the offsite stormwater management pond via Block 180.

9.0 NATURAL GAS, ELECTRICAL AND TELECOMMUNICATION DISTRIBUTION

The natural gas, electrical and telecommunication for the proposed development will be designed and installed in accordance with the distributors' specifications. The natural gas, electrical and telecommunication services for the proposed development will be installed underground within a joint trench.

The results of the electrical and other wiring service designs will be included on the Utility Coordination Plan to be presented with the detailed engineering drawings at the time of submission for subdivision approvals.

10.0 CONCLUSIONS

- One hundred and seventy-six (176) residential lots are proposed within a subdivision area of approximately 14 ha. The subject lands are located north of Main Street and East of Belleville Street in Wellington, Ontario and will be accessed by connecting to existing municipal roads.
- It is anticipated that the subdivision development will be built-out with an estimated 30 lots per year, with the ultimate development completed in 2028. Future road connections to Belleville Street (County Road 2) and First Avenue are to be considered for the ultimate horizon, however timing of these offsite developments is unknown.
- In anticipation of future servicing needs for other lands to the north owned by the client, an overall Development Concept has been prepared for the purpose of the municipality's Master Servicing Study currently being finalised by RVA, and is considered in the preliminary servicing design for the Wellington Bay Estates Subdivision.
- A Traffic Study for the Subdivision prepared by Ainley Group was reviewed and considered with the proposed road design. The proposed municipal roads will be designed to Prince Edward County standards, complete with curb and gutter and storm sewers.
- A geotechnical investigation prepared by Ainley Group revealed that the site consists predominately of shallow soil and glacial till overlying limestone bedrock, encountered from 0.35 m to 2.0 m below.
- Proposed storm sewers will collect and direct 5 year internal land flows to a proposed stormwater management pond. The 100-yr internal land flows is anticipated to be

captured at the south end and piped to the offsite SWM Pond block. A Preliminary Stormwater Management Report for the Subdivision, prepared by Ainley Group, has been issued for review under a separate cover.

- The development will be serviced by looping watermains between the existing 150 mm diameter watermain on Main Street to the south via two connections. With the ultimate surrounding developments, looping is anticipated to connect to First Avenue via the future Lakeside Estates to the west and Belleville Street via the future development(s) to the north. At the time of detailed design, the proposed watermains for the Subdivision will be sized based on the current municipal hydraulic model.
- Gravity sanitary sewers will convey sanitary flows generated from the residential subdivision development. At the time of detailed design, the proposed sanitary sewer layout and drainage area to the existing Main Street sewer versus a new pump station and forcemain to Millennium Trail will be finalised based on the available capacity of the existing municipal sanitary system downstream of the Main Street connection. A Block has been provided on the WBE Draft Plan for a proposed pumping station.
- Hydro, natural gas and telecommunication distribution will be in accordance with the individual utility companies' specifications.

We trust the above information meets your needs at this time and should you have any questions or concerns, please do not hesitate to contact the undersigned.

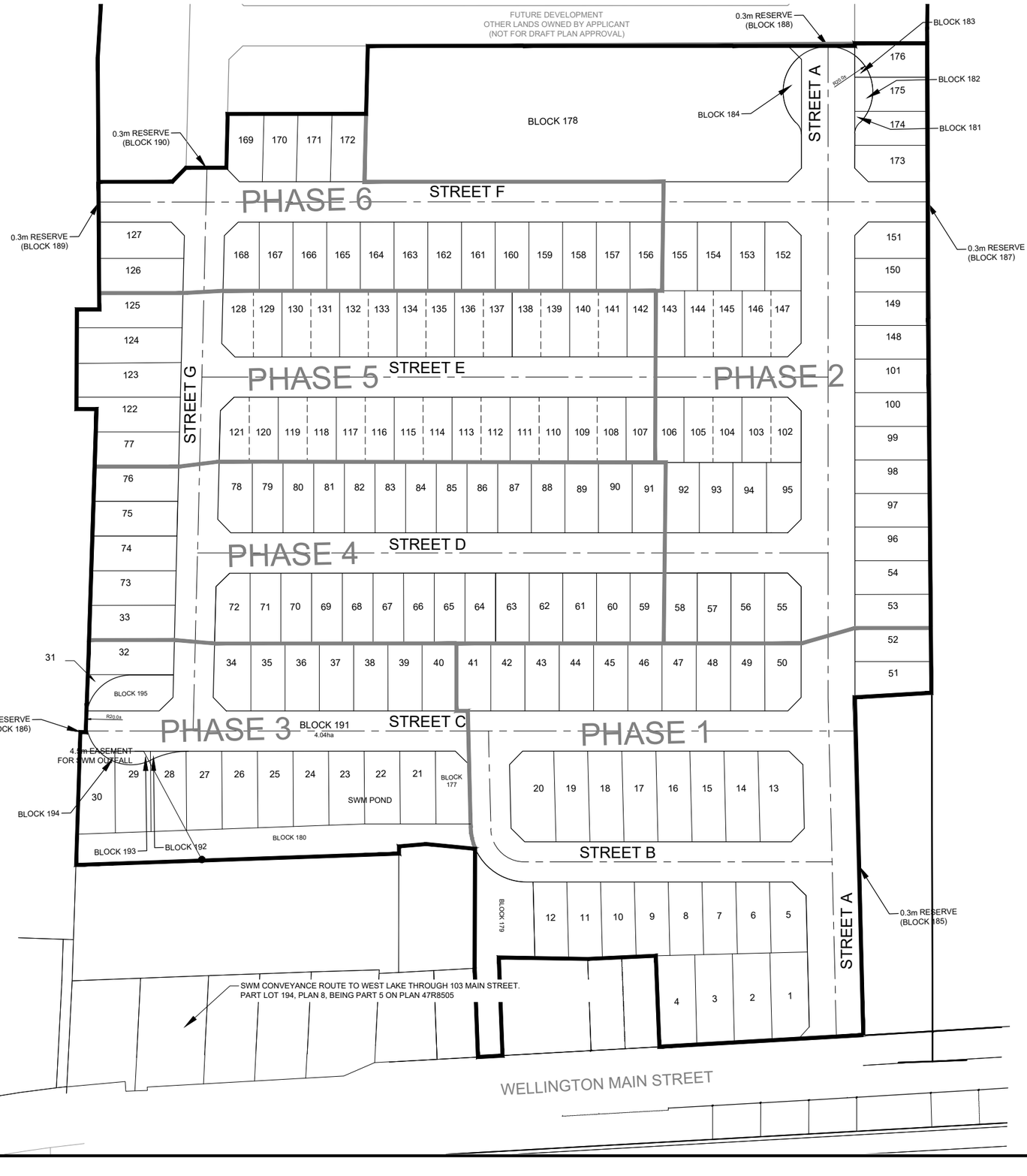
Yours very truly

AINLEY GRAHAM AND ASSOCIATES LIMITED

Prepared by:

Nancy Dionne, P. Eng.
Senior Engineer

Figures



KEY MAP

SCALE: N.T.S.

PHASE	LOTS
PHASE 1	32
PHASE 2	38
PHASE 3	19
PHASE 4	33
PHASE 5	35
PHASE 6	19
SITE TOTAL	176

FIGURE 1A

WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL

PRELIMINARY
PHASING PLAN

SCALE: 1:1500 (22X34) 1:3000 (11X17)

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CONTRACT No. 16575-1 | DATE: JULY 2020

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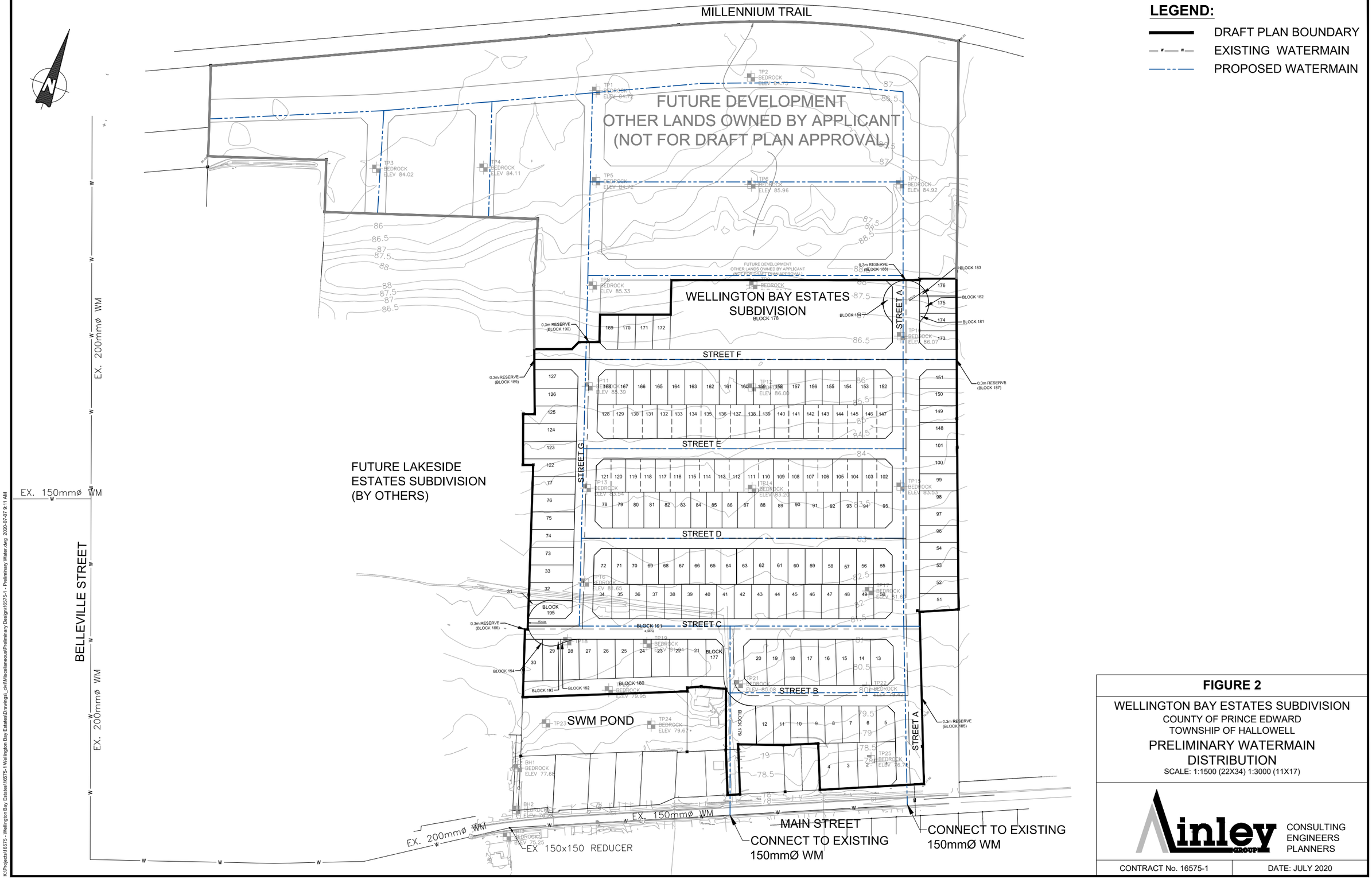

LEGEND:

- DRAFT PLAN BOUNDARY
- EXISTING WATERMAIN
- PROPOSED WATERMAIN

FIGURE 2

WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL

PRELIMINARY WATERMAIN DISTRIBUTION

SCALE: 1:1500 (22X34) 1:3000 (11X17)

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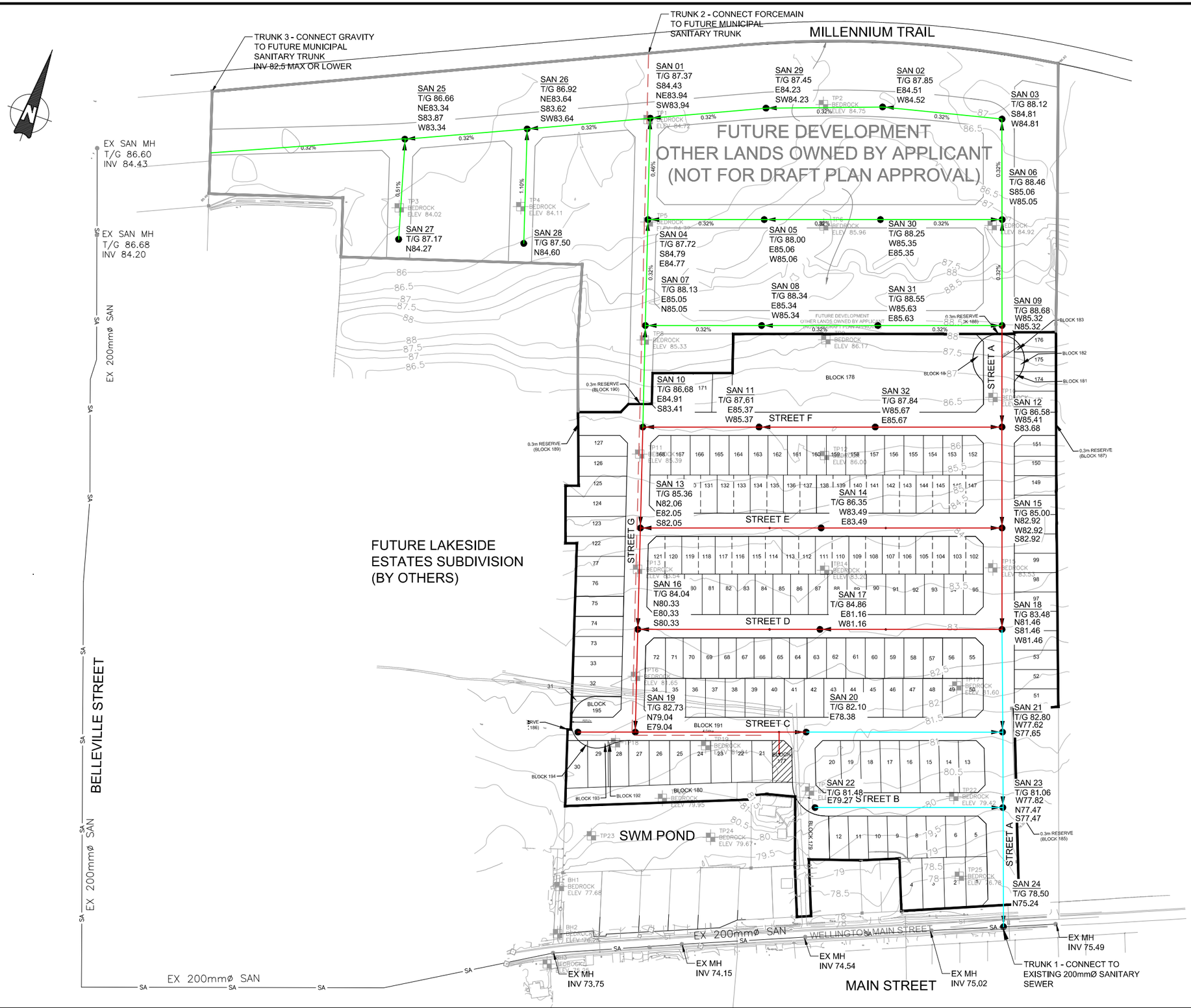

LEGEND:

- DRAFT PLAN BOUNDARY
- EXISTING SANITARY SEWER
- PROPOSED SANITARY MH (W/ PRELIMINARY T/G ELEVATIONS & INVERTS)
- PROPOSED SANITARY FORCEMAIN
- TRUNK 1 - TO MAIN ST
- TRUNK 2 -PUMP STATION AND FORCEMAIN TO MILLENIUM TRAIL
- TRUNK 3 - FUTURE LAND TO MILLENIUM TRAIL
- PUMP STATION

TRUNK 2 MAY CONNECT TO TRUNK 1 AND CONNECT TO EXISTING MAIN STREET SANITARY SEWER, TO ELIMINATE THE NEED FOR PUMP STATION AND FORCEMAIN. MUNICIPALITY TO CONFIRM.

EXISTING SANITARY INVERTS OBTAINED FROM MAIN STREET DRAWINGS BY GORE AND STORRIE LTD., DATED SEPTEMBER 1975.

FIGURE 3A

WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL

PRELIMINARY SANITARY SERVICING PLAN

SCALE: 1:3000

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CONTRACT No. 16575-1 | DATE: JULY 2020

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TRUNK 3 - CONNECT GRAVITY TO FUTURE MUNICIPAL SANITARY TRUNK INV 82.5 MAX OR LOWER

TRUNK 2 - CONNECT FORCEMAIN TO FUTURE MUNICIPAL SANITARY TRUNK

MILLENNIUM TRAIL

EX SAN MH T/G 86.60 INV 84.45±

EX SAN MH T/G 86.68 INV 84.20

EX 200mmø SAN

FUTURE DEVELOPMENT
OTHER LANDS OWNED BY APPLICANT
(NOT FOR DRAFT PLAN APPROVAL)

FUTURE LAKESIDE ESTATES SUBDIVISION (BY OTHERS)

BELLEVILLE STREET

EX 200mmø SAN

EX 200mmø SAN

STREET A

STREET B

STREET C

STREET D

STREET E

STREET F

STREET G

BLOCK 178

BLOCK 179

BLOCK 180

BLOCK 191

BLOCK 195

SWM POND

EX 200mmø SAN

EX MH INV 73.75

EX MH INV 74.15

EX MH INV 74.54

EX MH INV 75.02

EX MH INV 75.49

TRUNK 1 - CONNECT TO EXISTING 200mmØ SANITARY SEWER

MAIN STREET

LEGEND:

- DRAFT PLAN BOUNDARY
- EXISTING SANITARY SEWER
- DRAINAGE AREA
- PROPOSED SANITARY MH (W/ PRELIMINARY T/G ELEVATIONS & INVERTS)
- PROPOSED SANITARY FORCEMAIN
- TRUNK 1 - TO MAIN ST
- TRUNK 2 -PUMP STATION AND FORCEMAIN TO MILLENIUM TRAIL
- TRUNK 3 - FUTURE LAND TO MILLENIUM TRAIL
- ID / INFILTRATION AREA

TRUNK 2 MAY CONNECT TO TRUNK 1 AND CONNECT TO EXISTING MAIN STREET SANITARY SEWER, TO ELIMINATE THE NEED FOR PUMP STATION AND FORCEMAIN. MUNICIPALITY TO CONFIRM.

AREA ID	UNITS
1	34
2	143 BLOCK 179
3	TBC

EXISTING SANITARY INVERTS OBTAINED FROM MAIN STREET DRAWINGS BY GORE AND STORRIE LTD., DATED SEPTEMBER 1975.

FIGURE 3B

WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL

PRELIMINARY SANITARY DRAINAGE PLAN

SCALE: 1:3000

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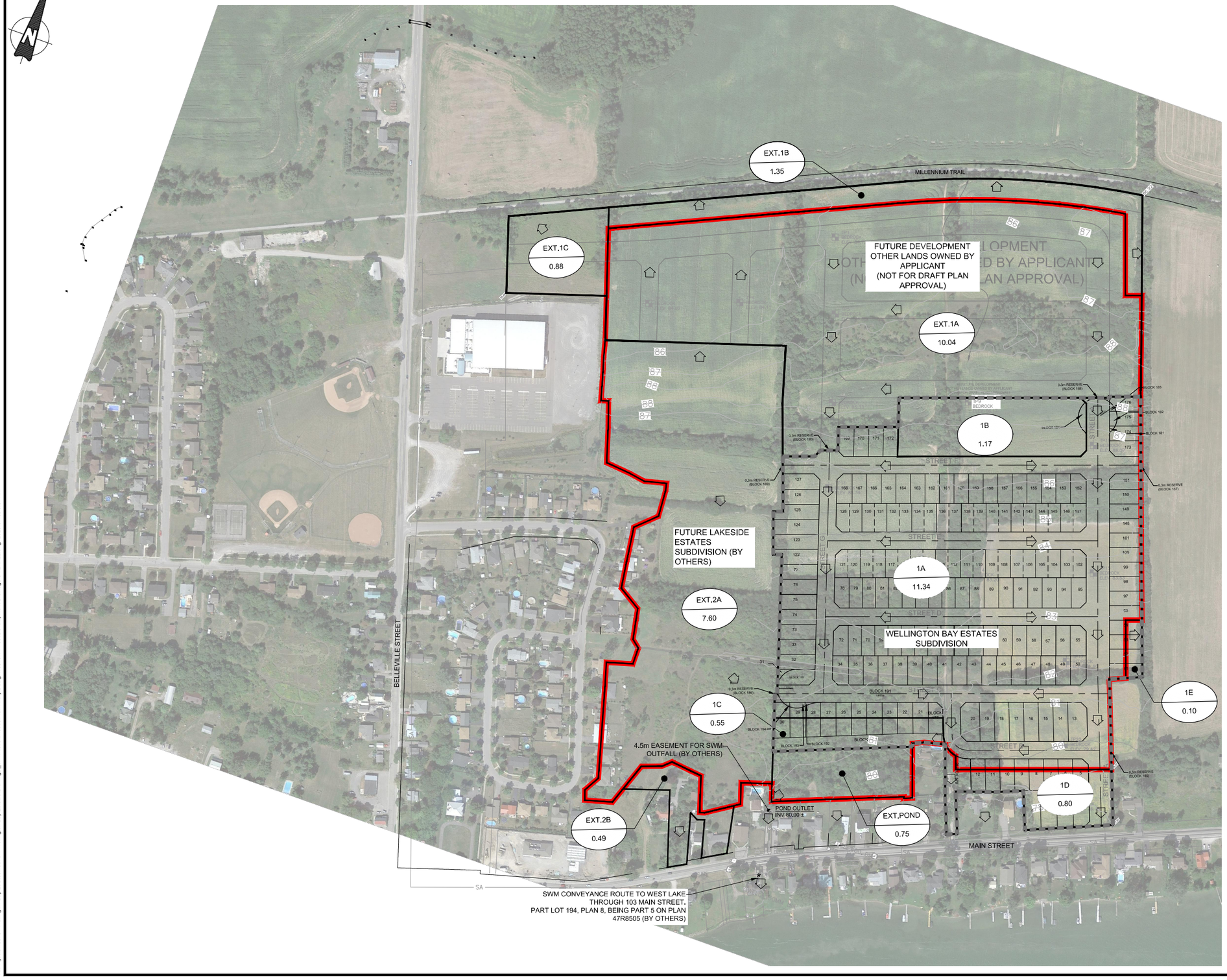

LEGEND:

- DRAFT PLAN BOUNDARY
- XX / XX — DRAINAGE AREA NAME / DRAINAGE AREA (ha)
- DRAINAGE BOUNDARY
- SOUTH POND DRAINAGE BOUNDARY
- OVERLAND FLOW DIRECTION
- 90 — EXISTING CONTOUR

FIGURE 4A

WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL
POST DEVELOPMENT DRAINAGE PLAN

SCALE: 1:4000 (11x17)

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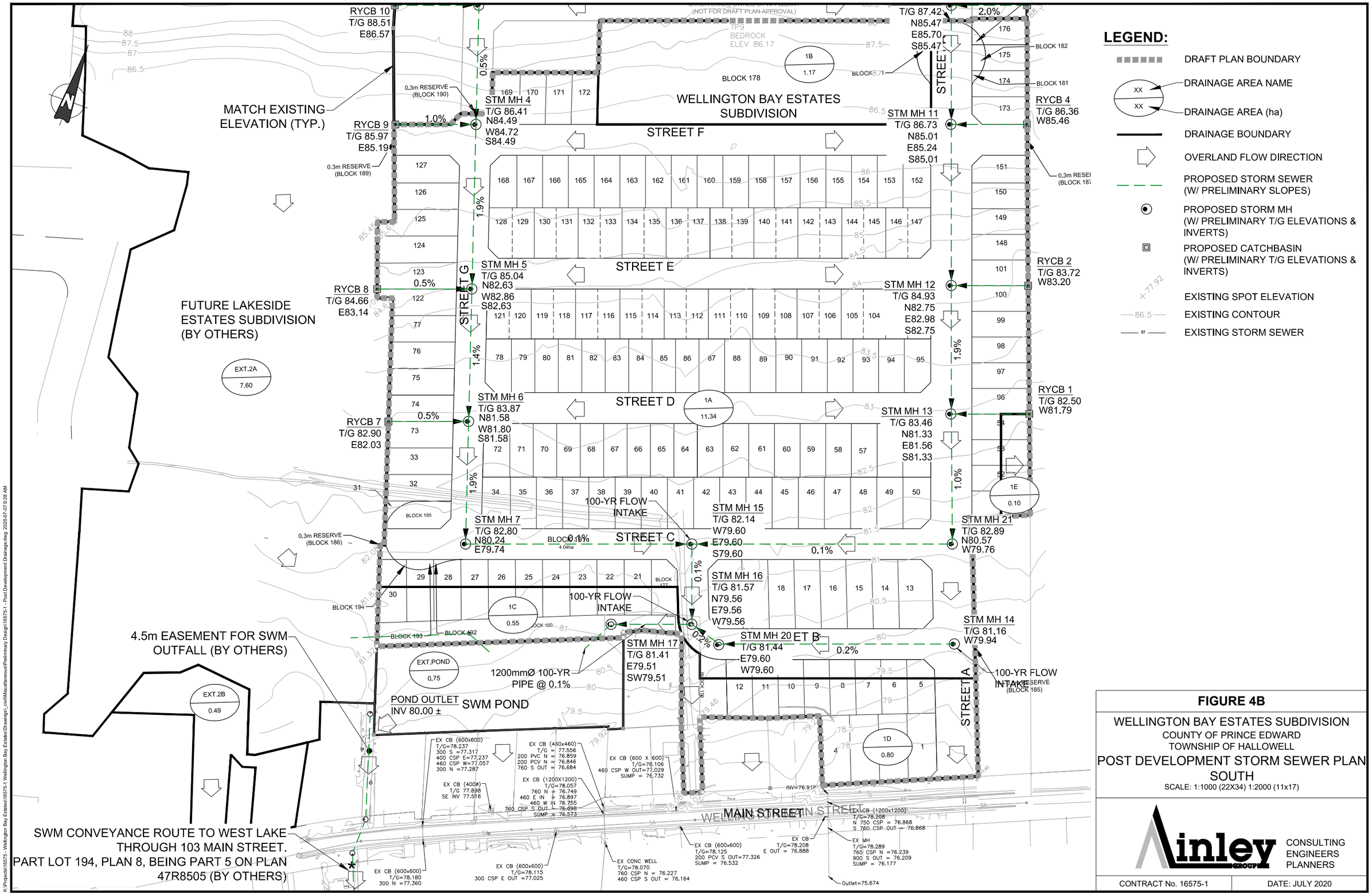

FIGURE 4B

WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL
POST DEVELOPMENT STORM SEWER PLAN SOUTH
SCALE: 1:1000 (22X34) 1:2000 (11x17)

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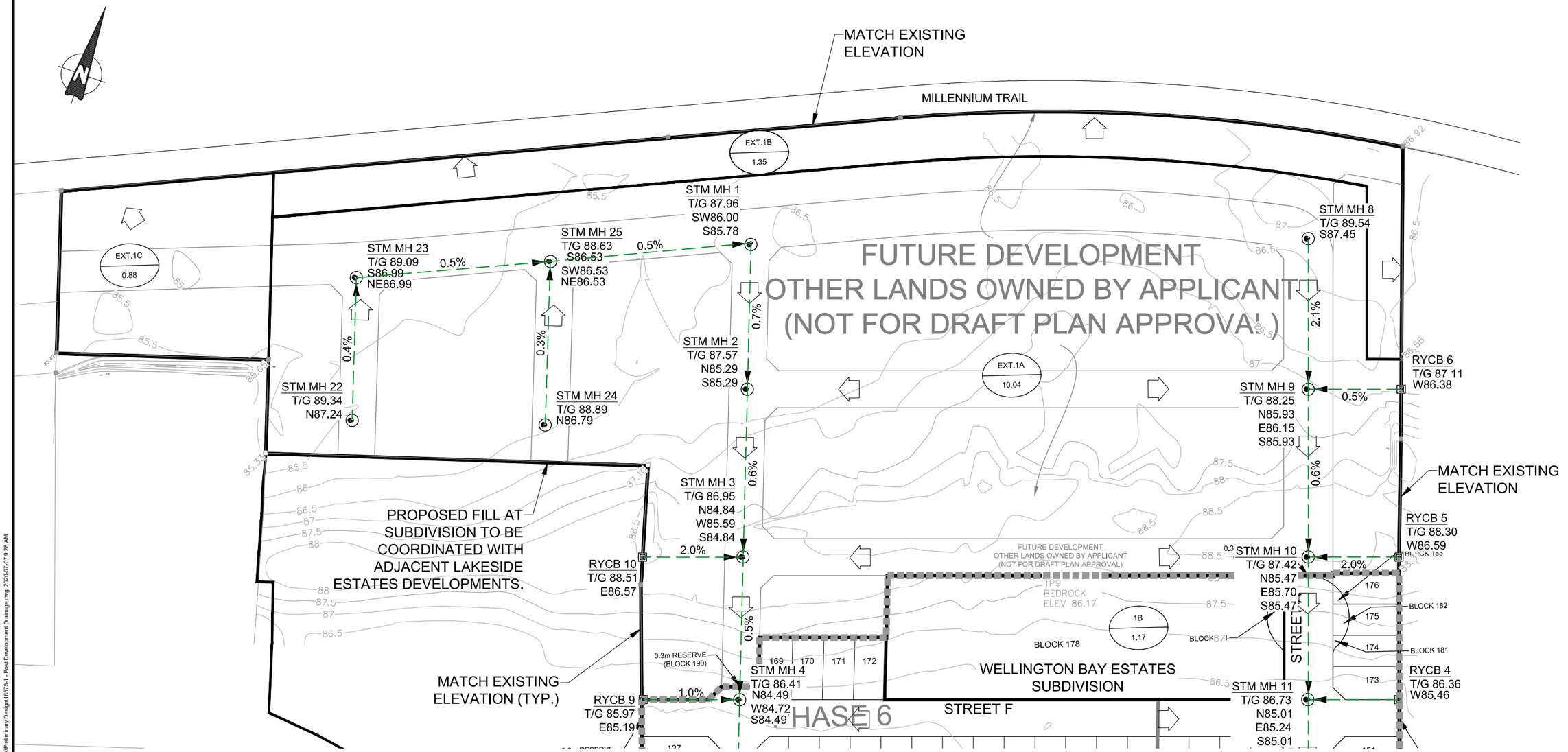

LEGEND:

- DRAFT PLAN BOUNDARY
- DRAINAGE AREA NAME
- DRAINAGE AREA (ha)
- DRAINAGE BOUNDARY
- OVERLAND FLOW DIRECTION
- PROPOSED STORM SEWER (W/ PRELIMINARY SLOPES)
- PROPOSED STORM MH (W/ PRELIMINARY T/G ELEVATIONS & INVERTS)
- PROPOSED CATCHBASIN (W/ PRELIMINARY T/G ELEVATIONS & INVERTS)
- EXISTING SPOT ELEVATION
- EXISTING CONTOUR

FIGURE 4C

WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL

POST DEVELOPMENT STORM SEWER PLAN
NORTH
SCALE: 1:1000 (22X34) 1:2000 (11x17)

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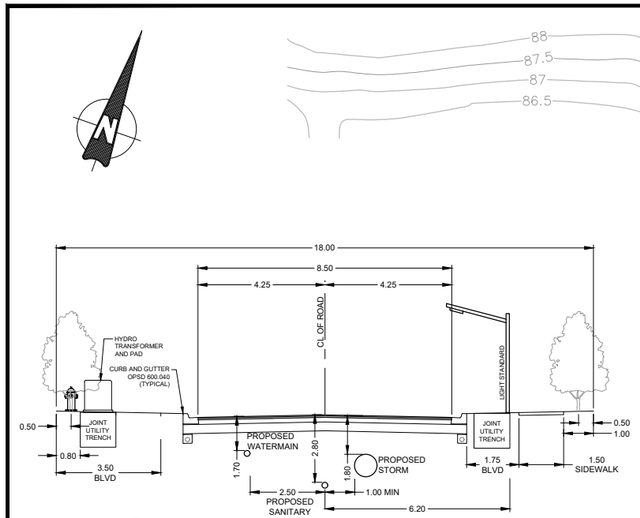
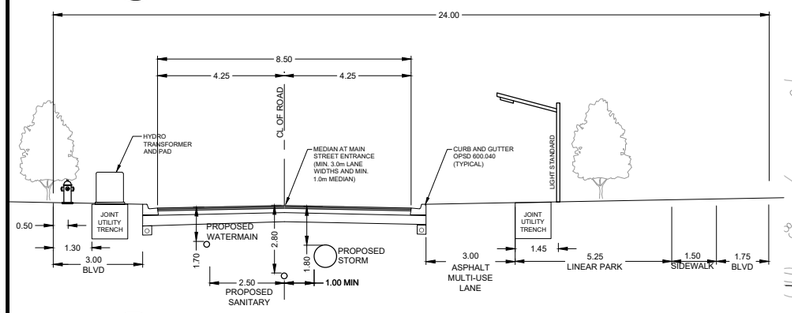


1 - LOCAL ROADS CROSS SECTION - 18m ROW
SCALE: N.T.S.



2 - STREET A ROAD CROSS SECTION - 24m ROW
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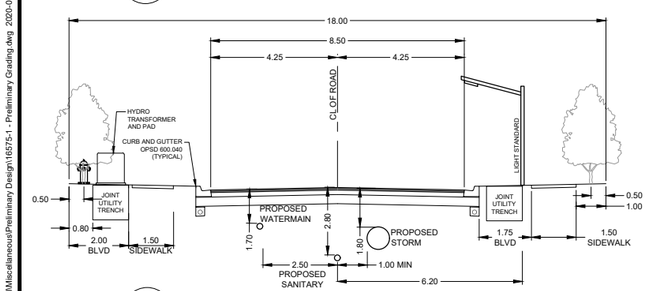

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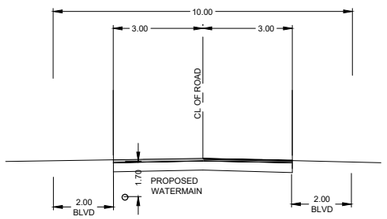

4 - EMERGENCY ROAD CROSS SECTION - 10m ROW
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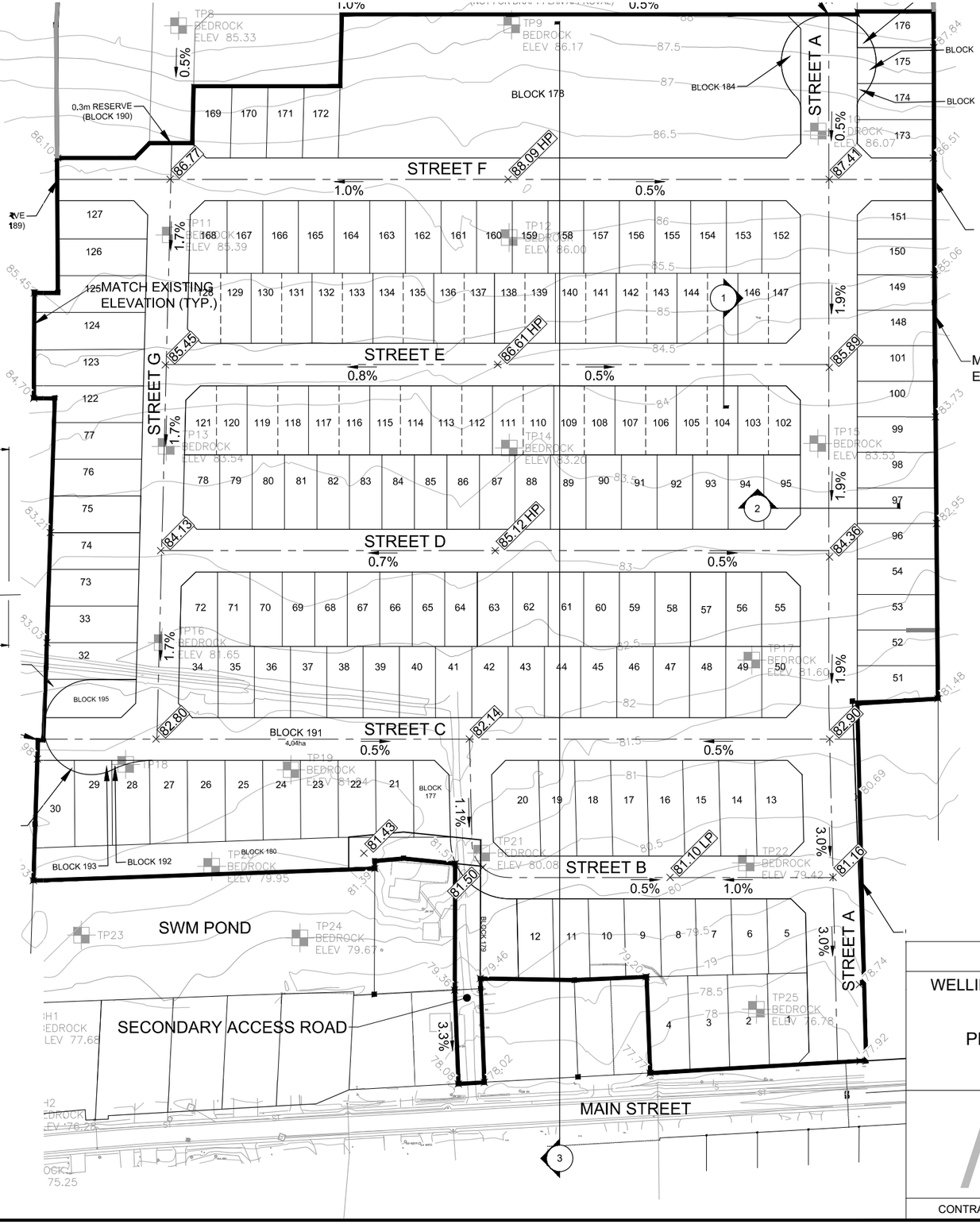

LEGEND:

- DRAFT PLAN BOUNDARY
- +77.92 EXISTING SPOT ELEVATION
- 86.5 EXISTING CONTOUR
- +86.11 PROPOSED SPOT ELEVATION
- 1.4% PROPOSED ROAD GRADE

FIGURE 5A

WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL
PRELIMINARY GRADING PLAN
SOUTH
SCALE: 1:1000 (22X34) 1:2000 (11X17)

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CONTRACT No. 16575-1 | DATE: JULY 2020

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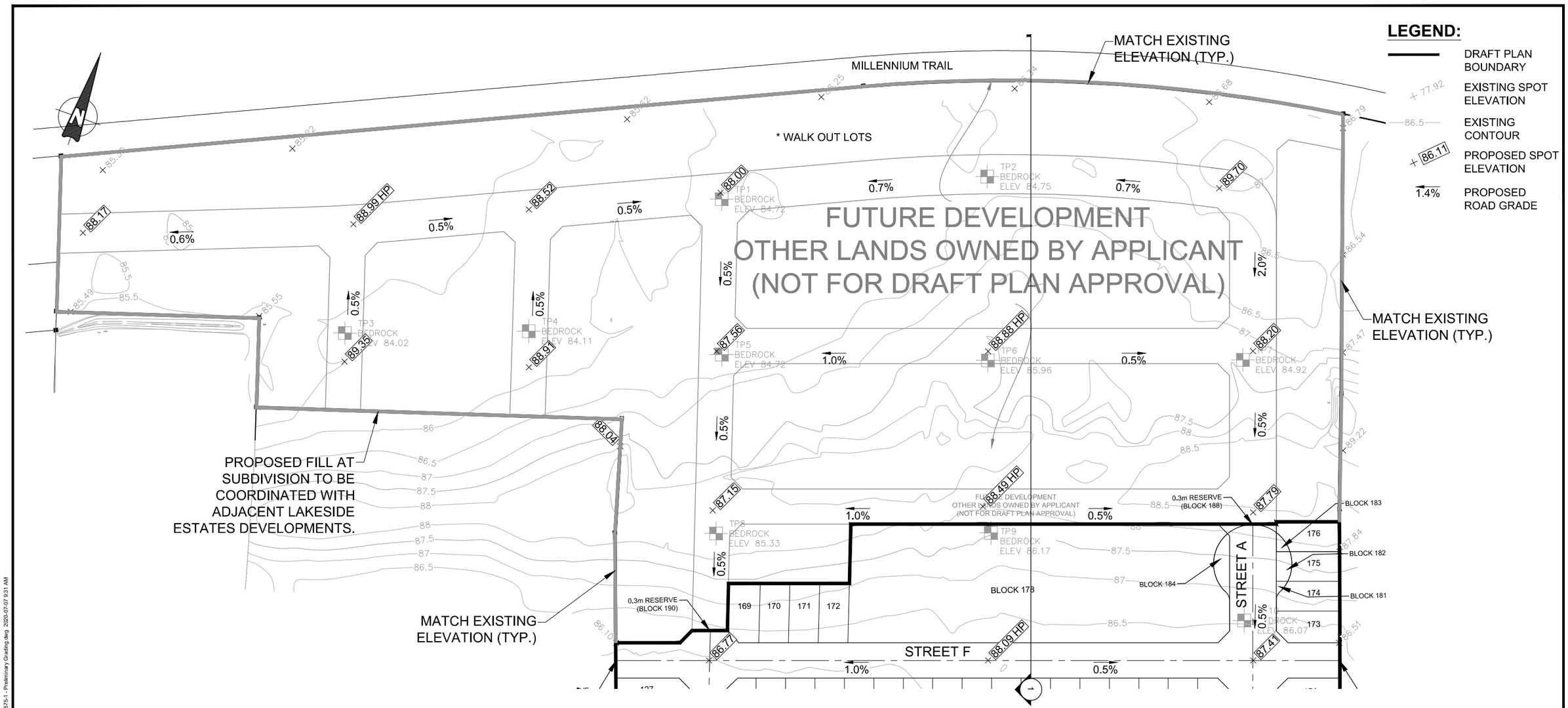

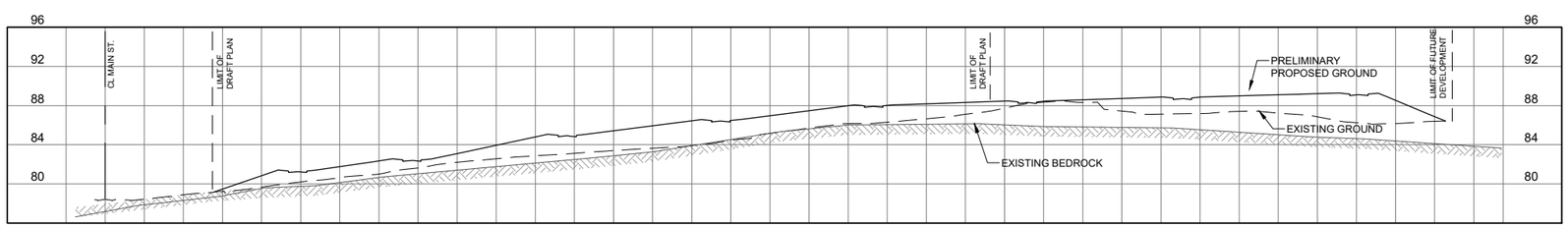

3 SECTION
SCALE: 1:3000

FIGURE 5B

WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL
PRELIMINARY GRADING PLAN
NORTH
SCALE: 1:1000 (22X34) 1:2000 (11X17)

Ainley GROUP
CONSULTING ENGINEERS PLANNERS

CONTRACT No. 16575-1 | DATE: JULY 2020

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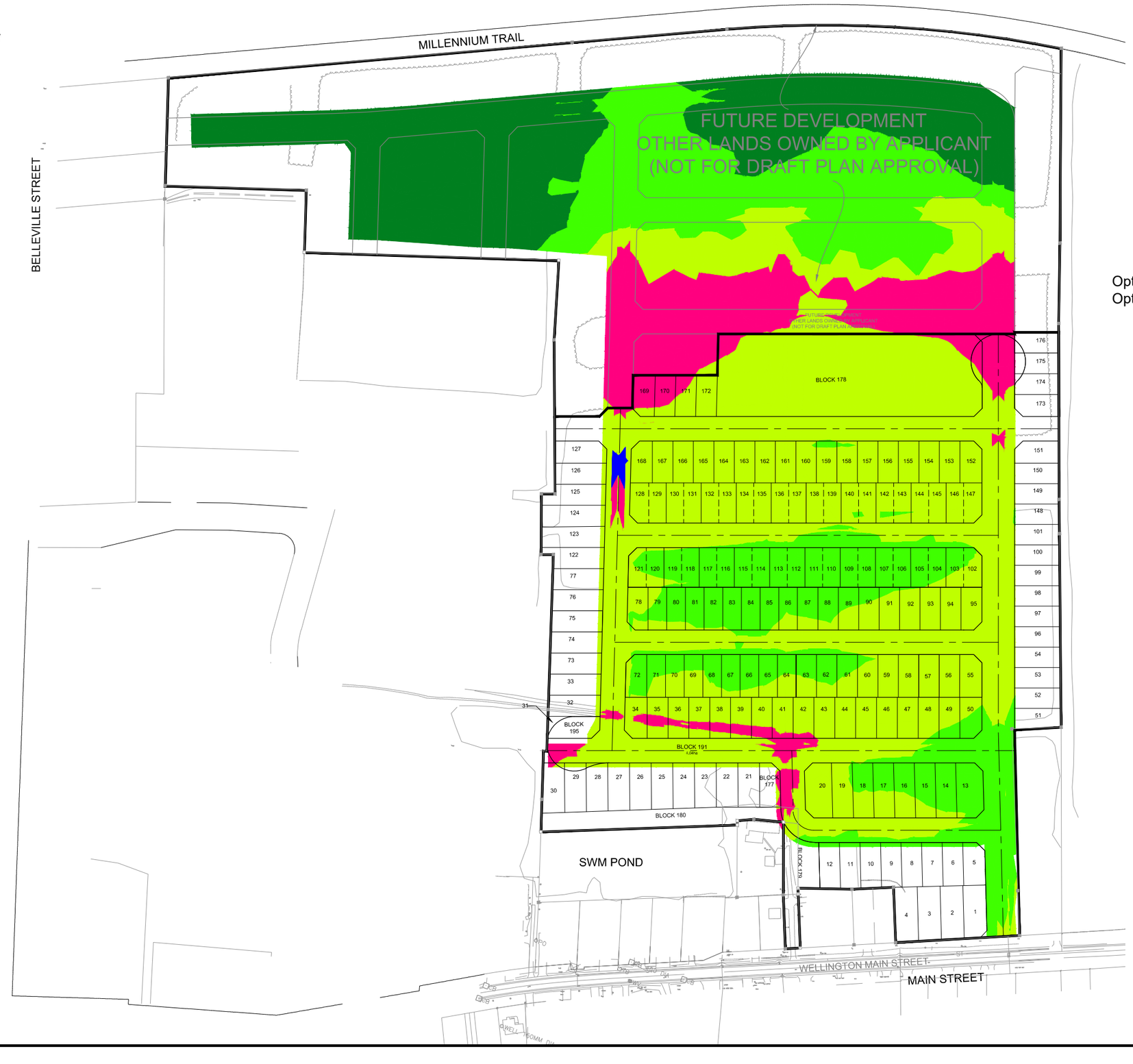
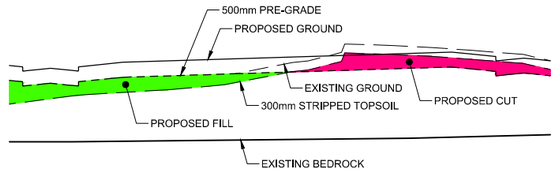


LEGEND:

- DRAFT PLAN BOUNDARY
- PROPOSED FILL (2m - 3.9m)
- PROPOSED FILL (1m - 2m)
- PROPOSED FILL (0m - 1m)
- PROPOSED CUT (-1.8m - 0m)
- BEDROCK ENCOUNTERED

	Cut (m³)	Fill (m³)
Option 1 - WBE	1095.47	78352.71
Option 1 - Future Phase	9989.71	134260.73



ASSUMPTIONS
EXISTING TOPSOIL STRIPPING - 300mm
ROAD & LOT PRE-GRADE - 500mm
RESULTING EARTHWORK - NO BULKING

FIGURE 6A

WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL
PRELIMINARY EARTHWORK
- OPTION 1
SCALE: 1:3000 (11x17)

Ainley GROUP
CONSULTING
ENGINEERS
PLANNERS

CONTRACT No. 16575-1 | DWG. 16575-SP1

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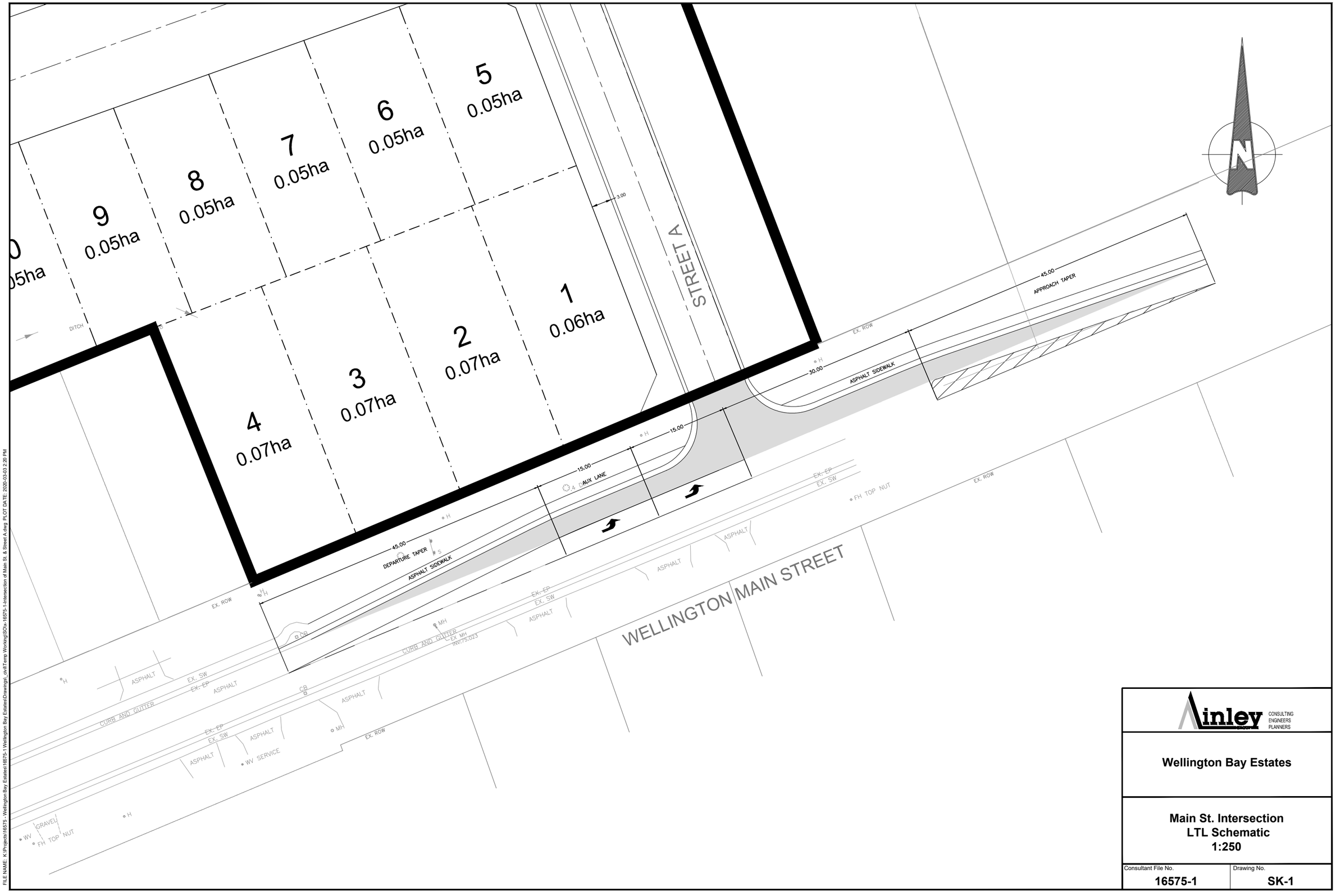


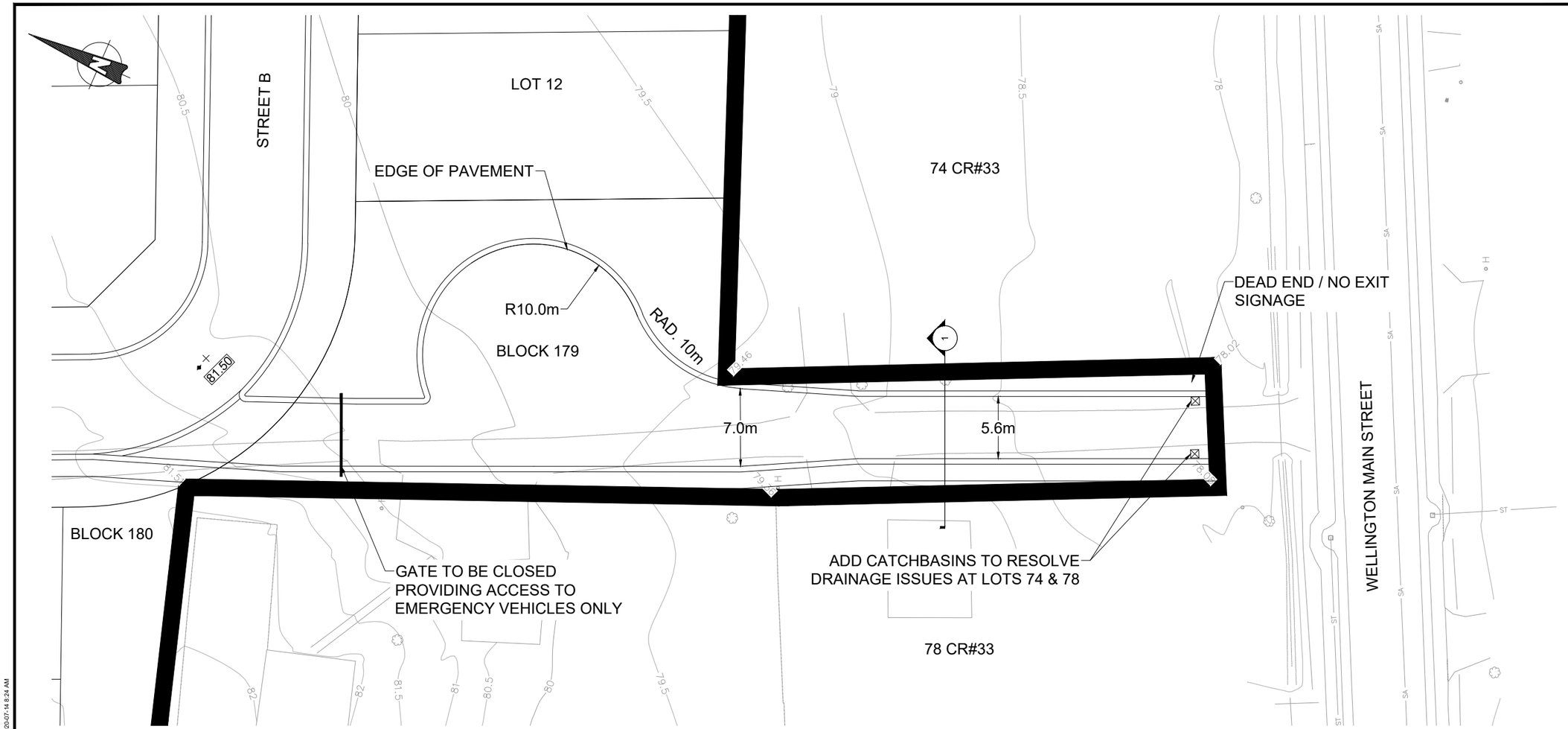
FILE NAME: K:\Projects\16575 - Wellington Bay Estates\16575-1 Wellington Bay Estates\Drawings_cwkTemp Working\SO's-16575-1-Intersection of Main St. & Street A.dwg PLOT DATE: 2020-03-03 2:20 PM

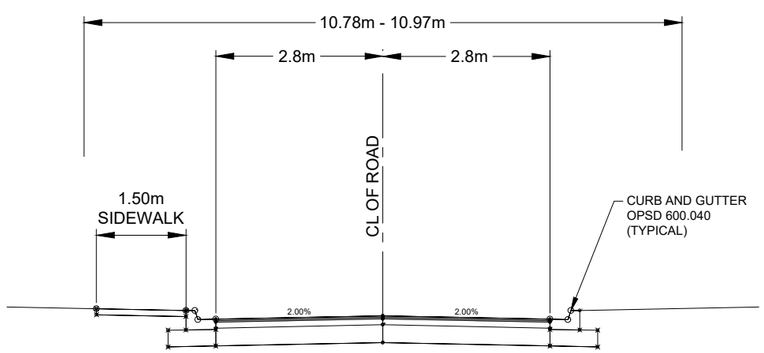
Ainley CONSULTING ENGINEERS PLANNERS

Wellington Bay Estates

Main St. Intersection
LTL Schematic
1:250

Consultant File No.	Drawing No.
16575-1	**SK-1**





1 / - EMERGENCY ROAD CROSS SECTION - 10m ROW

SCALE: 1:50

SK-2

WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL
BLOCK 179
EMERGENCY ACCESS
SCALE: 1:200 (22X34) 1:400 (11X17)

Ainley GROUP
CONSULTING ENGINEERS PLANNERS

CONTRACT No. 16575-1 | DATE: JULY 2020

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Appendix A

Draft Plan of Subdivision

Overall Concept Plan

Road Corridor and Active Transportation

MILLENNIUM TRAIL

FUTURE DEVELOPMENT
OTHER LANDS OWNED BY APPLICANT
(NOT FOR DRAFT PLAN APPROVAL)

0.3m RESERVE (BLOCK 188)
BLOCK 183
BLOCK 182
BLOCK 181
BLOCK 184
BLOCK 178
STREET A
176
175
174
173
169 170 171 172
0.3m RESERVE (BLOCK 190)
STREET F
0.3m RESERVE (BLOCK 189)
0.3m RESERVE (BLOCK 187)
127 126 125 124 123 122 77 76 75 74 73 33 32
168 167 166 165 164 163 162 161 160 159 158 157 156 155 154 153 152
128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147
151 150 149 148 101 100 99 98 97 96 54 53 52 51
STREET E
STREET G
121 120 119 118 117 116 115 114 113 112 111 110 109 108 107 106 105 104 103 102
78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95
STREET D
72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
31
BLOCK 195
R20.0m
0.3m RESERVE (BLOCK 186)
BLOCK 191
4.04ha
STREET C
29 28 27 26 25 24 23 22 21
BLOCK 177
20 19 18 17 16 15 14 13
30
BLOCK 194
BLOCK 193
BLOCK 192
BLOCK 180
STREET B
SWM POND
(BY OTHERS)
BLOCK 179
12 11 10 9 8 7 6 5
4 3 2 1
STREET A
0.3m RESERVE (BLOCK 185)
WELLINGTON MAIN STREET

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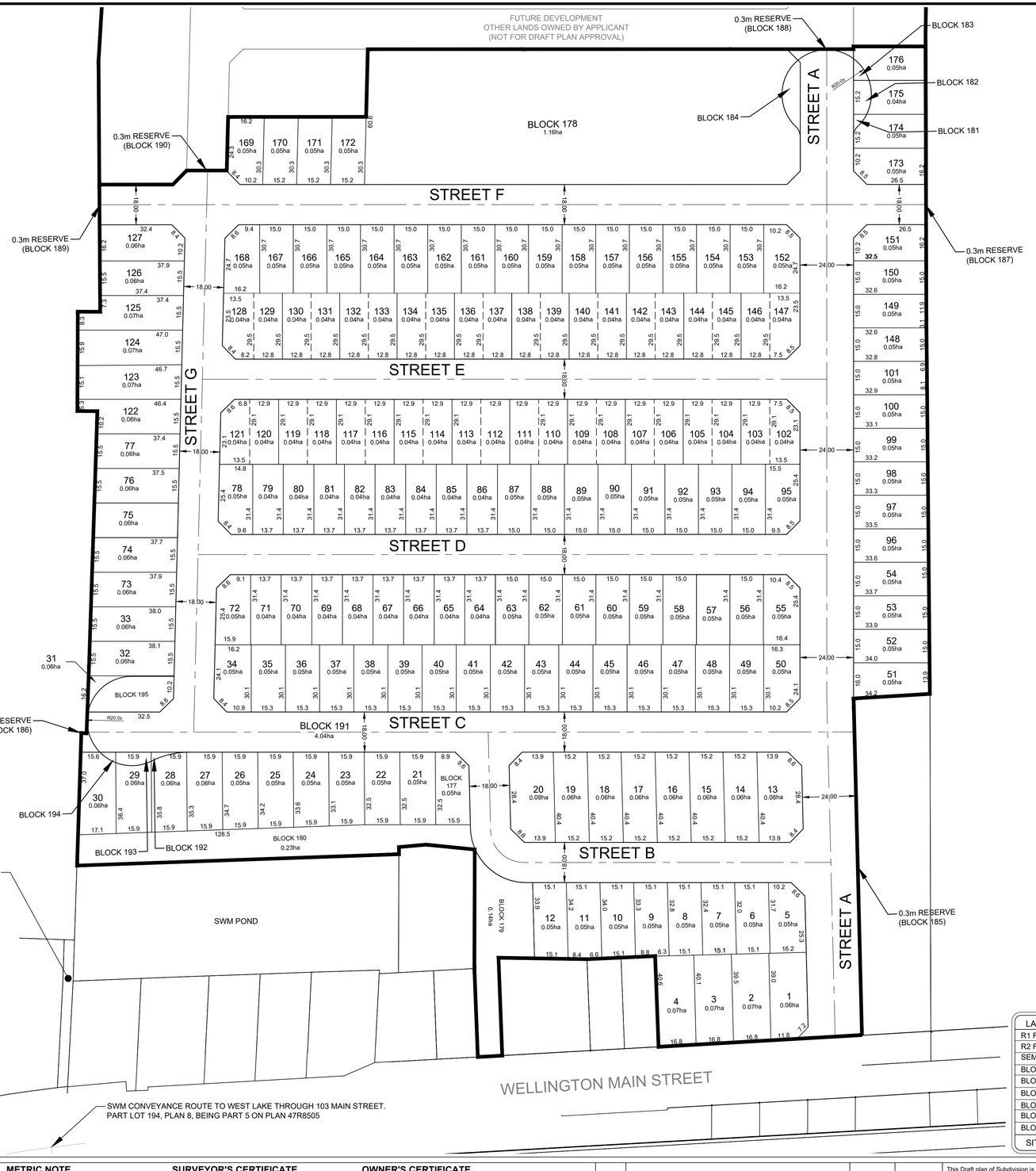
WELLINGTON BAY ESTATES SUBDIVISION
COUNTY OF PRINCE EDWARD
TOWNSHIP OF HALLOWELL

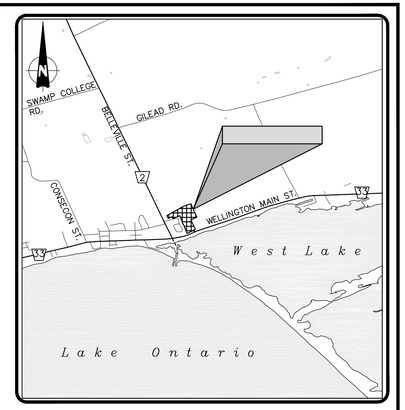
ULTIMATE DEVELOPMENT CONCEPT PLAN

SCALE: 1:1500

Ainley GROUP
CONSULTING
ENGINEERS
PLANNERS

CONTRACT No. 16575-1	DATE: JULY 2020





KEY MAP
SCALE: N.T.S.

DRAFT PLAN OF SUBDIVISION
WELLINGTON BAY ESTATES SUBDIVISION

PART OF LOTS:
1,6,33,34,35,36,51,52,61,62,63,64,65,66,67,68 AND 69

ALL OF LOTS:
2,3,4,5,8,9,10,11,12,13,14,15,16,20,21,22,23,
24,25,26,27,28,29,30,37,38,39,40,41,42,43,44,45,
46,53,54,55,56,57,58,59 AND 60

REGISTRAR'S COMPILED PLAN No. 15
PART OF LOT 193 REGISTERED PLAN 8
VILLAGE OF WELLINGTON NOW IN THE MUNICIPALITY
OF THE COUNTY OF PRINCE EDWARD

LAND USE SCHEDULE	AREA(ha)	AREA%	UNITS
R1 FREEHOLD SINGLE DETACHED LOTS (LOTS 1-63, 73-77, 87-101, 122-127, 148-176)	6.23	43.87	118
R2 FREEHOLD SINGLE DETACHED LOTS (13.7m) (BLOCKS 64-72, 78-86)	0.74	5.21	18
SEMI-DETACHED LOTS (BLOCKS 102-121, 128-147)	1.60	11.27	40
BLOCK 177 - PUMPING STATION	0.05	0.35	
BLOCK 178 - COMMON ELEMENT	1.16	8.16	
BLOCK 179 - EMERGENCY ROAD	0.14	0.99	
BLOCK 180 - STORMWATER	0.23	1.62	
BLOCKS 185-190 - 0.3m RESERVE	0.01	0.07	
BLOCK 191 - MUNICIPAL ROAD ALLOWANCE	4.04	28.46	
SITE TOTAL	14.20 ha	100.0%	176

ADDITIONAL INFORMATION UNDER SECTION 51 (17) OF THE PLANNING ACT

a. SEE SURVEYORS CERTIFICATE.
b. AS SHOWN ON DRAFT PLAN.
c. AS SHOWN ON DRAFT PLAN.
d. SEE LAND USE SUMMARY
e. SEE KEY PLAN.
f. AS SHOWN ON DRAFT PLAN.
g. AS SHOWN ON DRAFT PLAN.
h. INDIVIDUAL WELLS & SUB-SURFACE SEWAGE DISPOSAL SYSTEMS
i. GRANULAR, MEDIUM POROSITY, GOOD DRAINAGE
j. AS SHOWN ON DRAFT PLAN.
k. GARBAGE COLLECTION, FIRE PROTECTION, ROAD MAINTENANCE, SCHOOL BUSES, ETC.
l. AS SHOWN ON DRAFT PLAN.

METRIC NOTE
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LAND TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE CORRECTLY SHOWN.

SIGNATURE _____ DATE _____

OWNER'S CERTIFICATE
I AUTHORIZE THE AINLEY GROUP TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE COUNTY OF PRINCE EDWARD.

SIGNATURE _____ DATE _____

REV.#	REVISIONS	DATE	INITIAL
01	SUBMISSION TO PEC	2020-08-07	ND

This Draft plan of Subdivision is hereby Draft Plan Approved according to Section 51(3) of the Planning Act, R.S.O. 1990.

_____ DATE _____
MINISTRY OF MUNICIPAL AFFAIRS AND HOUSING

Not Valid Unless Signed and Dated

SCALE: 1:1000
DESIGN: NMD
DRAWN: EJV
CHECKED: NMD
DATE: FEB 2020

Ainley GROUP CONSULTING ENGINEERS PLANNERS

CONTRACT No. 16575-1 | DWG DP-1

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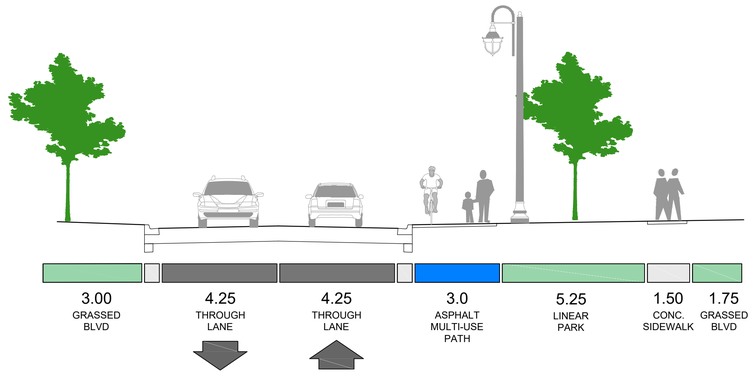
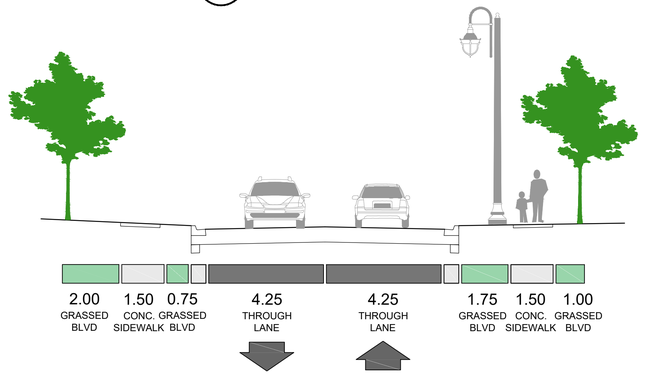
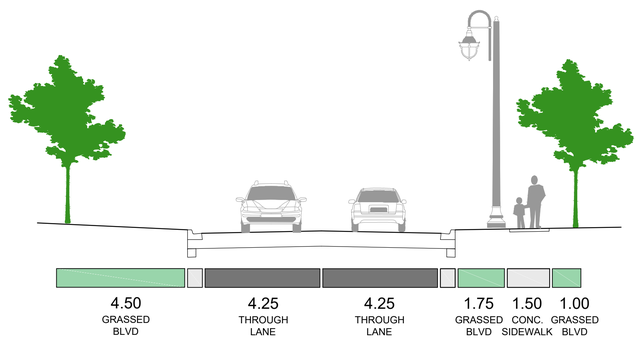


A - 1:100 STREET A - 24m RIGHT OF WAY
COLLECTOR ROAD (60km/hr DESIGN SPEED)



B - 1:100 STREET C & F - 18m RIGHT OF WAY
LOW VOLUME COLLECTOR ROAD (60km/hr DESIGN SPEED)



C - 1:100 OTHER ROADS - 18m RIGHT OF WAY
LOCAL ROAD (60km/hr DESIGN SPEED)

WELLINGTON BAY ESTATES
YOUR FOREVER HOME

COUNTY OF PRINCE EDWARD
WELLINGTON BAY ESTATES SUBDIVISION

ROAD CORRIDOR & ACTIVE TRANSPORTATION

DATE: NOV 4/2019

K:\Projects\16575 - Wellington Bay Estates\16575-1 Wellington Bay Estates\Drawings_cw\Miscellaneous\PIC\Site Plan and Cross Section REV 1104.dwg

Appendix B

Meeting minutes and email correspondence with

Prince Edward County and Quinte Conservation

Nancy Dionne

From: Christine McClure <CMcClure@quinteconservation.ca>
Sent: September-11-17 10:47 AM
To: Nancy Dionne; Peter Moyer
Cc: 'Neil Carbone'; jfsabourin@jfsa.com; 'Brendan O'Connor'; 'Todd Davis'; 'Darcel Berkhout'; Paul Walsh; Paul McCoy; Tim Trustham
Subject: RE: Phase 3 Developments Subdivision - Wellington Bay Estates - Storm drainage

Hello Nancy,

Quantity control is not required for the subject development if safe conveyance from the subject development to West Lake can be demonstrated. Demonstration of safe conveyance shall include, but is not limited to, conveyance of the 1:100 year development flows, major overland flow routes, consideration of other contributing drainage to the safe conveyance route, and easements over the safe conveyance route plus a 6 metre access corridor where the conveyance route is over private land holdings.

Let me know if you have any questions.

Christine McClure, P.Eng.
Water Resources Manager
Quinte Conservation
cmcclure@quinteconservation.ca

Quinte CONSERVATION
70 Years of Conservation
1947-2017

Click here to sign up for one of Quinte Conservation's e-newsletters!

www.QuinteConservation.ca
www.QuinteSourceWater.ca

RR#2, 2061 Old Hwy #2, Belleville, ON K8N 4Z2
Phone: (613) 968-3434 or (613) 354-3312 ext 130

From: Nancy Dionne [mailto:dionne@ainleygroup.com]
Sent: September-08-17 4:45 PM
To: Christine McClure; Peter Moyer
Cc: 'Neil Carbone'; jfsabourin@jfsa.com; 'Brendan O'Connor'; 'Todd Davis'; 'Darcel Berkhout'; Paul Walsh
Subject: RE: Phase 3 Developments Subdivision - Wellington Bay Estates - Storm drainage
Importance: High

Hi Christine and Peter,

Can you please advise on the items requested following our meeting of August 22, so that we can proceed with our engineering works without further delay:

Christine: Item 1.3

Christine McClure (CM) advised that not providing quantity control is not a concern for the receiving West Lake. **Quinte Conservation will reconfirm in writing.** CM advised that safe conveyance of uncontrolled flows will be required from the pond to West Lake.

Peter: Item 2.2

ND advised that a hydrant flow testing company will be retained to obtain data required for the water model. Coordination of the field work shall be coordinated with Paul. **ND requests that the County confirm that the water model shall consider two (2) scenarios; 1) no water connection to Belleville Street based on a first phase of development and 2) water connection to Belleville Street with ultimate development.**

Nancy Dionne, P.Eng.
Senior Engineer

Ainley Graham & Associates Limited
1-50 Grant Timmins Drive
Kingston, Ontario, K7M 8N2
Tel: (343) 266-0002 ext. 202
Cell: (613) 449-7092
Fax: (343) 266-0028
dionne@ainleygroup.com

From: Nancy Dionne [mailto:dionne@ainleygroup.com]
Sent: August-29-17 2:31 PM
To: 'Brendan O'Connor' <oconnorplanning@gmail.com>; 'Christine McClure' <CMcClure@quinteconservation.ca>; Peter Moyer (pmoyer@pecounty.on.ca) <pmoyer@pecounty.on.ca>; 'Darcel Berkhout' <phasethreedevelopments@gmail.com>; Paul Walsh <pwalsh@pecounty.on.ca>; 'Todd Davis' <tdavis@pecounty.on.ca>
Cc: 'Neil Carbone' <ncarbone@pecounty.on.ca>; jfsabourin@jfsa.com
Subject: RE: Phase 3 Developments Subdivision - Wellington Bay Estates - Storm drainage

Hi everyone,

Please find attached our meeting minutes from our discussions last Tuesday, along with storm drainage and servicing figures for reference.

Christine and Peter:

Please note your action items. We would appreciate your response on these at the earliest opportunity.

Thanks!

Nancy Dionne, P.Eng.
Senior Engineer

Ainley Graham & Associates Limited
1-50 Grant Timmins Drive
Kingston, Ontario, K7M 8N2
Tel: (343) 266-0002 ext. 202
Cell: (613) 449-7092
Fax: (343) 266-0028
dionne@ainleygroup.com

From: Nancy Dionne [mailto:dionne@ainleygroup.com]
Sent: July-27-17 8:19 PM
To: Peter Moyer (pmoyer@pecounty.on.ca) <pmoyer@pecounty.on.ca>; Christine McClure (cmcclure@quinteconservation.ca) <cmcclure@quinteconservation.ca>
Cc: Brendan O'Connor <oconnorplanning@gmail.com>; 'Darcel Berkhout' <darbyberkhout@icloud.com>; Paul Walsh <pwalsh@pecounty.on.ca>
Subject: Phase 3 Developments Subdivision - Wellington Bay Estates - Storm drainage

Hi Peter and Christine,

We would like to review the stormwater management strategy for the Wellington Bay Estates subdivision so that preliminary engineering reports can be submitted to the satisfaction of the County and Quinte Conservation.

As you will note on the attached figures, the entire subdivision (as well as the future Lakeside Estates) is intended to drain to the SWM pond.

In order to size the swm pond, we need to confirm the release rates. As you will note from your review of the attached, the challenge here is the existing lands (both subdivisions) drain to 4 different conveyance systems, while the proposed pond is intended to outlet to a single system (ie existing 760mm culvert).

In summary:

Pre-Development Drainage:
Based on our assessment, the existing lands to be developed drain towards three (3) separate outlets crossing Main Street through culverts, which ultimately discharge to the Lake.

Post-Development Drainage - 3 scenarios:

1. The SWM Pond discharges to the existing municipal 460mm dia storm sewer before ultimately discharging to the Lake via the existing 760mm culvert. **Matching 2-100 yr pre-development flows of the "Central" area** would require an overcontrolled pond of large size. The existing 460mm dia municipal pipe along the north side of Main Street would likely need to be upsized, and the conveyance capacity of the existing 760mm culvert would need to be verified.

2. The SWM Pond is relocated (via land swap) towards the east, to a location where it could discharge towards both the 760mm culvert and the 1000mm culvert. **Matching 2-100 yr pre-development flows of the "Central" and "East" areas** would require an overcontrolled pond of large size and two outfalls. The conveyance capacity of the existing municipal sewers and culverts would need to be verified.

3. The pond would provide quality control, with some quantity control to release at a higher rate to a single road crossing. The existing municipal sewer system including the existing 760mm pipe would be upsized and safe conveyance to the Lake would be provided.

We would like to review these options, including the status of the existing municipal system including the ditches, storm sewers, culverts and outfalls towards the Lake. Does the County have any easements from Main Street to the Lake?

Please advise on your availability to meet during the week of August 8th. I will be away next week, and will respond to emails upon my return.

Thank you in advance for your time.

Nancy Dionne, P.Eng.
Senior Engineer

Ainley Graham & Associates Limited
1-50 Grant Timmins Drive
Kingston, Ontario, K7M 8N2
Tel: (343) 266-0002 ext. 202
Cell: (613) 449-7092
Fax: (343) 266-0028
dionne@ainleygroup.com

From: Nancy Dionne [mailto:dionne@ainleygroup.com]
Sent: January-26-17 4:43 PM
To: Christine McClure (cmcclure@quinteconservation.ca) <cmcclure@quinteconservation.ca>; Paul McCoy <PMcCoy@quinteconservation.ca>
Cc: 'Darcel Berkhout' <phasethreedevelopments@gmail.com>; Peter Moyer (pmoyer@pecounty.on.ca) <pmoyer@pecounty.on.ca>
Subject: Phase 3 Developments Subdivision - Wellington

Christine and Paul,

We are commencing preliminary engineering in support of Draft Plan approval for the Phase 3 Developments Subdivision in Wellington, and would like to meet for pre-consultation with Quinte Conservation.

I've attached some background documents, as well as a preliminary concept for the proposed subdivision.

The developer will be in the area next Thursday, February 2nd. We would greatly appreciate the opportunity to meet with you during a time of your convenience that day. Kindly advise.

Nancy Dionne, P.Eng.
Senior Engineer

Ainley Graham & Associates Limited
1-50 Grant Timmins Drive
Kingston, Ontario, K7M 8N2
Tel: (343) 266-0002 ext. 202

Ainley GROUP CONSULTING ENGINEERS PLANNERS

MINUTES

Ainley Graham & Associates Limited
1-50 Grant Timmins Drive, Kingston, ON K7M 8N2
Tel: (343) 266-0002 • Fax: (343) 266-0028
Email: kingston@ainleygroup.com

MINUTES OF ENGINEERING MEETING

PROJECT:	Wellington Bay Estates Subdivision Ainley Group Contract No. 16575-1
DATE:	August 22, 2017
TIME:	12:00pm
LOCATION:	Prince Edward County, 280 Main Street, Picton.
PRESENT:	Nancy Dionne, Ainley Group, Brendan O'Connor, Community Planning Consultant, Christine McClure, Quinte Conservation, Peter Moyer, Prince Edward County, Darby Berkhout, Phase Three Developments, Paul Walsh, Prince Edward County, Todd Davis, Prince Edward County
DISTRIBUTION:	All Present + Neil Carbone, Prince Edward County, J.F. Sabourin and Associates

1. Stormwater Management

1.1. Nancy Dionne (ND) advised that the current pond block (owned by the County) can accommodate the neighbouring Lakeside Estates future development, with 2000 cu.m. of pond storage, based on a release rate of 86 l/s. It appears this release rate was based on the County's municipal infrastructure capacity, as noted in the 2009 SWM Report for Lakeside Estates.

1.2. ND advised that based on the topographic survey along Main Street completed this year, the proposed Wellington Bay Estates (WBE) and the neighbouring future Lakeside Estates subdivisions drain to four (4) different locations, generally divided into four (4) areas – north, west, central and east. Based on matching up to 100-yr post development flows, preliminary pond sizing has been calculated. Based on matching to pre-development flows of the central and east areas, preliminary pond sizing would require approximately 10,000 cu.m. with a release rate of 800 l/s. Without quantity control, a quality pond could fit within the County's SWM pond block, with a 100-yr release rate of approximately 7500 l/s.

1.3. Christine McClure (CM) advised that not providing quantity control is not a concern for the receiving West Lake. **Quinte Conservation will reconfirm in writing.** CM advised that safe conveyance of uncontrolled flows will be required from the pond to West Lake.

- **Action By: Quinte Conservation**

1.4. Peter Moyer (PM) advised that the Draft Plan application shall be made without the land ownership or easement in place for conveyance of the storm drainage from Main Street to West Lake. PM advised that the developer would need to lead negotiations required for conveyance of municipal drainage across private property, and that the County would support the developer.

1.5. PM advised that the County intends on creating a DC by-law for cost-sharing of the stormwater management for development of the Wellington Bay Estates subdivision and the future Lakeside Estates Subdivision. PM advised that the County requires associated costs (for construction and engineering) by October 2017 for creation of the by-law in March 2018. **Ainley Group is to provide these costs to the County based on the preliminary stormwater management report for the draft plan application of WBE.**

- **Action By: Ainley Group**

2. Sanitary and Water Servicing

2.1. PM advised that the proposed sanitary flows from the subdivision are to be provided in the preliminary servicing report, illustration the proposed connection to the existing sanitary sewer main on Main Street, and that a draft plan condition will require the developer to demonstrate that the municipal system has capacity. PM advised that the County has plans to prepare a study of the municipal infrastructure, which will be required for subdivision registration.

2.2. ND advised that a hydrant flow testing company will be retained to obtain data required for the water model. Coordination of the field work shall be coordinated with Paul. **ND requests that the County confirm that the water model shall consider two (2) scenarios; 1) no water connection to Belleville Street based on a first phase of development and 2) water connection to Belleville Street with ultimate development.**

- **Action By: Prince Edward County**

Any errors and/or omissions from these Minutes should be reported to the undersigned as soon as possible.

Minutes prepared by:

Nancy Dionne, P.Eng.
Ainley Graham & Associates Limited
blc

Nancy Dionne

From: Paul Walsh <pwalsh@pecounty.on.ca>
Sent: May-29-17 12:34 PM
To: Nancy Dionne
Cc: Brendan O'Connor; Darby Berkhout; 'Lilly Chen'; Peter Moyer
Subject: RE: Traffic Impact Study - Wellington Bay Estates

Good Afternoon Nancy,

A phased TIS is an acceptable approach. As a first step, please present some mapping showing proposed phases and stages of construction. This may assist in putting into context some of the points below prior to doing detailed analysis. However, in general terms:

- 100 units is a somewhat heavy-loaded single roadway, I am historically accustomed to a 40-unit max., depending on density/type of development and length of roadway.
- Please show a sample of the First Phase registrations to determine relative proximity of First Ave to the terminations of the latter registrations.
- Whether signalization is required at the Main Street intersection or at what point of development is not clear and should be justified in keeping with MTO warrants analysis.
- To receive full draft approval subject to phasing is an available option, provided extensions to standard lapsing periods (3-years) is requested by the applicant and given by the County prior to lapsing.
- A TIS for the full subdivision can be completed at a broad scale assuming density figures of residential uses for the development and justification of origin-destination patterns and timing. This stage of TIS should identify roadways based on anticipated volumes and speeds and the respective right-of-way widths. Detailed TIS can be done at appropriate stages to address signalization, turning lanes, sight triangles, setbacks, intersection improvements or other site-specific traffic issues.
- Your suggestion of an updated TIS per phase sounds reasonable.

If you have any questions, comments or requests for clarifications, please feel free to contact me.
Thank you and have a great day.

From: Nancy Dionne [mailto:dionne@ainleygroup.com]
Sent: Thursday, April 20, 2017 2:24 PM
To: Paul Walsh
Cc: Brendan O'Connor; Darby Berkhout; 'Lilly Chen'
Subject: Traffic Impact Study - Wellington Bay Estates

Hi Paul,

Our client has advised me of the County requesting that the TIS consider an ultimate road connection to Belleville Street. We understand that the TIS will be consistent with the County's Official Plan and Wellington Urban Centre Secondary Plan which indicate that access via 1st Avenue and the new access via Belleville Street.

Prior to proceeding with the TIS, we would like to confirm the assumptions and parameters for the Traffic Impact Study to be completed in support of draft plan approval for the entire development (approximately 375 lots).

Development timing (as per the developer):

- Approximately 30 units / year, built-out over 12 years, with a completion in 2031
- Completion of first phase (30 units) estimated in 2019

TIS parameters:

The number of future horizons: four (4) total:

1. maximum development with single access to Main Street which wouldn't need signalisation (potentially 100 units, including 3-4 phases)
2. full build out year (2031), including connections to First Avenue and Belleville Street
3. full buildout + 5
4. full buildout + 10 years

As timing for the road connections to First Avenue and Belleville Street is unknown, we wish to receive confirmation from the County that the developer may be draft plan approved for the entire development (subdivision registration would follow) based on the TIS parameters outlined above.

It is our understanding that prior to construction exceeding the maximum number of units identified in the first horizon (no signalisation on Main Street), an updated TIS would be required based on the known available road connections to First Ave and Belleville Street.

Your review and response would be greatly appreciated so that we can proceed with the TIS to the County's satisfaction for Draft Plan approval.

Nancy Dionne, P.Eng.
Senior Engineer

Ainley Graham & Associates Limited
1-50 Grant Timmins Drive
Kingston, Ontario, K7M 8N2
Tel: (343) 266-0002 ext. 202
Cell: (613) 449-7092
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dionne@ainleygroup.com

CONSULTING
ENGINEERS
PLANNERS

MINUTES

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Email: kingston@ainleygroup.com

MINUTES OF ENGINEERING PRE-CONSULTATION MEETING

PROJECT: Wellington Bay Estates Subdivision
Ainley Group Contract No. 16575-1

DATE: February 22, 2017

TIME: 3:30 pm

LOCATION: Prince Edward County, 280 Main Street, Picton.

PRESENT: Nancy Dionne, Ainley Group

Corporation of Prince Edward County:
Paul Walsh, Manager of Planning
Peter Moyer, Director of Development Services
Garrett Osborne, Development Coordinator

DISTRIBUTION: All Present +
Darby Berkhout, Phase Three Developments
Brendan O'Connor, Community Planning Consultant
Lilly Chen, Ainley Group

Traffic Impact Study (email dated February 9 2017)

1.1. The County advised that the County's OP zoning by-law to change the zoning of the lands northwest of the Wellington Bay Estates Subdivision (possibly enabling a road access to Belleville Street) from industrial to residential has been appealed by the landowner. It is anticipated that a decision will take approximately 6 months.

1.2. N.Dionne advised that the developer has been in contact with the adjacent landowners to discuss possible road connections. Paul Walsh requested that Darby Berkhout contact him to discuss outcome of these discussions.

- **Action By: Darby Berkhout**

1.3. The County advised that the Lakeside Subdivision (west of Wellington Bay Estates) is proceeding to development.

1.4. The County advised that the TIS should be based on a) no road connection to Belleville Street through the adjacent industrial lands to the northwest and b) road connections through the adjacent proposed residential subdivision to the west (known as Lakeside Estates).

1.5. It was confirmed that the developer would be responsible for revision to the Traffic Impact Study triggered by a change in the road network, should a connection to Belleville Street be advanced through the industrial lands to the northwest.

1.6. N.Dionne requested that the County provide the time limit of responsibility beyond full buildout which the developer will be financially obligated for required road and traffic improvements. N.Dionne advised that MTO corridor control policy is 5-years.

- **Action By: The County (Peter Moyer or Paul Walsh)**

1.7. Paul Walsh advised that the road hierarchy be defined within the proposed draft plan, i.e. which road would be collector.

- **Action By: Brendan O'Connor**

1.8. Paul Walsh noted that passive solar design guidelines may be considered for the draft plan layout.

- **Action By: Brendan O'Connor**

2. Stormwater Management (email dated February 13 2017)

2.1. P.Moyer advised that the County's would need to confirm the possibility of expanding the existing stormwater management pond in the community centre site plan with the Community Centre.

2.2. P.Moyer confirmed that the stormwater management objectives for the development will be as per the objectives provided Quinte Conservation, matching 2 to 100-year post to pre-development flows.

2.3. P.Moyer advised that there are no known flooding or erosion issues along the storm sewer system on Main Street downstream of the development. P.Moyer advised that the consultant shall illustrate that the new connection from the proposed swm pond to Main Street storm sewer will not have any adverse impact on the existing municipal storm sewer system downstream. N. Dionne requested that the County confirm what assessment is required, and that the County provided any available information on the system. The County noted that their capital works group may have a stormwater report in support of the Belleville Street improvements soon going to construction.

- **Action By: The County (Peter Moyer)**

3. Sanitary and Water (email dated February 14 2017)

3.1. P.Moyer advised that there are water pressure concerns in the area, and that hydrant testing required for water modeling is to be completed with the plant in different modes. P.Moyer advised that water flow testing should be coordinated through Garrett Osborne.

3.2. N.Dionne requested that mapping of the County's water system in the area be provided, including watermain sizes and fire hydrant locations / numbers.

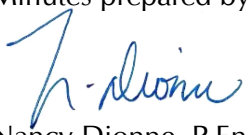
- **Action By: The County (Garrett Osborne)**
-

3.3. P. Moyer advised that there are no known capacity issues with the waste water treatment plant. N.Dionne requested that the County provide mapping of the existing sanitary system downstream of the development to the treatment plan, including any pumping stations and associated capacities.

- **Action By: The County (Garrett Osborne)**

Any errors and/or omissions from these Minutes should be reported to the undersigned as soon as possible.

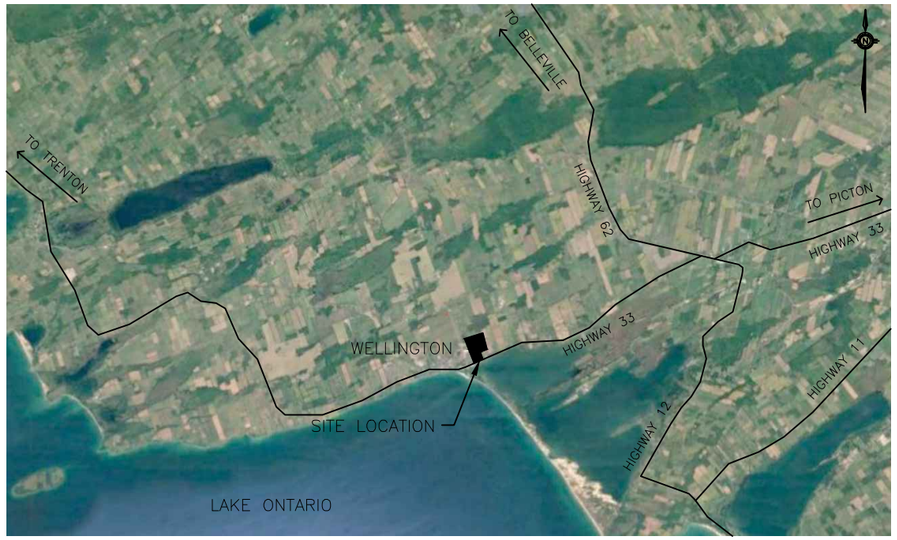
Minutes prepared by:



Nancy Dionne, P.Eng.
Ainley Graham & Associates Limited

Appendix C

Test pit location plan from Geotechnical Report by Ainley Group dated June 2017



BOREHOLE DATA			
ID	**TOP OF GRADE ELEVATION (masl)**	**BEDROCK ELEVATION (masl)**	**ENCOUNTERED GROUNDWATER ELEVATION (masl)**
TP1	86.32	84.72	84.72
TP2	86.25	84.75	85.05
TP3	85.52	84.02	84.12
TP4	85.71	84.11	NE
TP5	86.07	84.72	84.72
TP6	87.76	85.96	NE
TP7	86.92	84.92	85.12
TP8	88.33	NE	NE
TP9	88.07	86.17	NE
TP10	86.52	86.07	NE
TP11	85.29	85.57	NE
TP12	86.40	86.00	NE
TP13	83.89	83.52	NE
TP14	83.70	83.20	NE
TP15	83.93	83.53	NE
TP16	82.45	81.65	NE
TP17	82.20	81.60	NE
TP18	UNABLE TO COMPLETED DUE TO TREE COVERAGE		
TP19	81.64	81.04	NE
TP20	80.95	79.95	NE
TP21	81.68	80.08	NE
TP22	80.02	79.42	NE
TP23	UNABLE TO COMPLETED DUE TO TREE COVERAGE		
TP24	80.57	79.67	NE
TP25	80.12	NE	NE

LEGEND

= TEST PIT LOCATION

NE = FEATURE NOT ENCOUNTERED

Ainley Group CONSULTING ENGINEERS PLANNERS

FIGURE NO. 1

SITE AND TEST PIT LOCATION PLAN

Appendix D

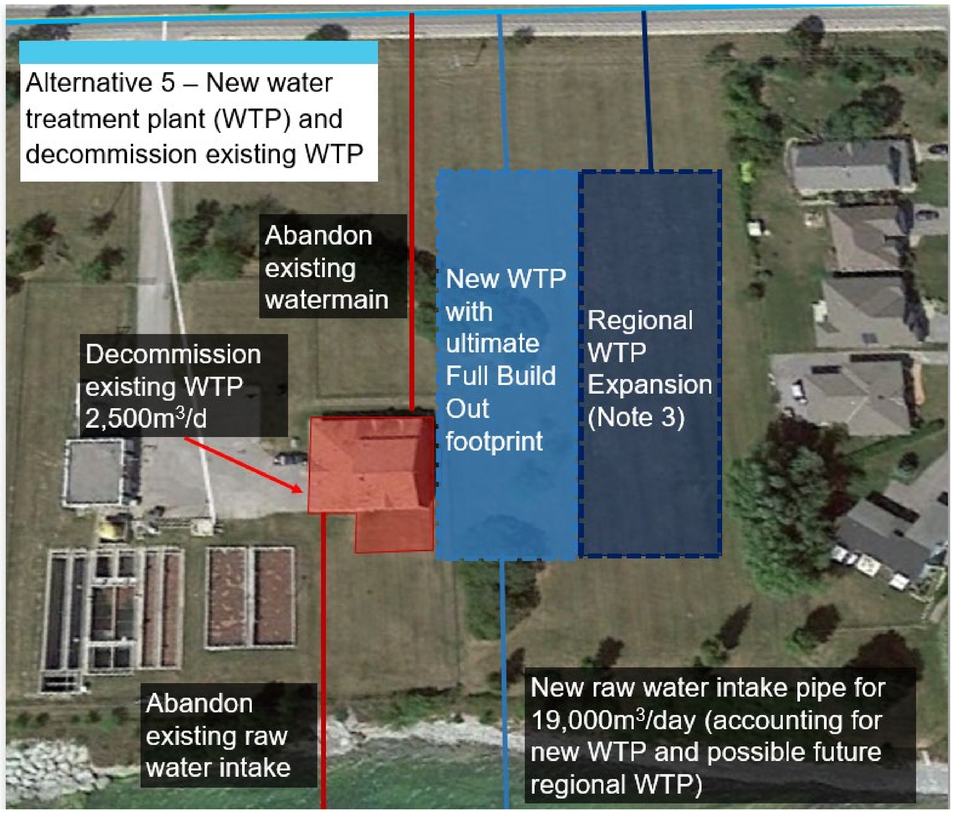
Excerpts from the Public Information Centre #2 of the Wellington Master Servicing Plan

for Water, Wastewater and Stormwater Management

Summary of Water Supply and Storage for Wellington

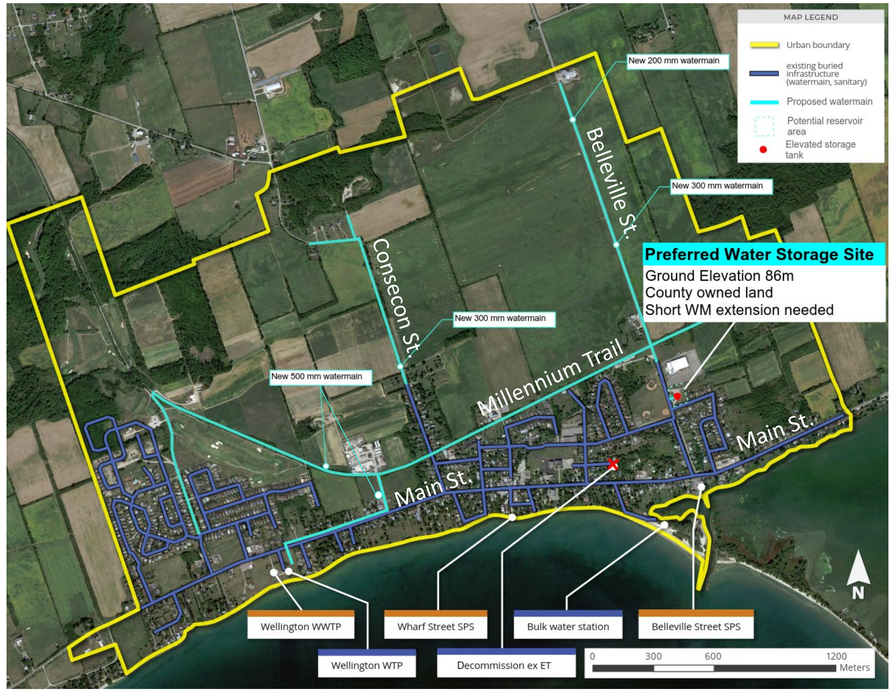
Water Supply

- Expand existing WTP to 8,500m^3/day rated capacity
- Modular treatment package upgrades as required
- Sufficient space for future regional WTP



Water Storage & Watermain Routing

- New elevated tank by Wellington & District Community Centre and decommission existing elevated tank (with a future reservoir location to be determined later)
- Minor equipment upgrades at the WTP
- Improved pressure and fire flows in distribution system via new larger watermain from WTP to Millennium Trail
- Watermain extensions through distribution system will be undertaken as development progresses



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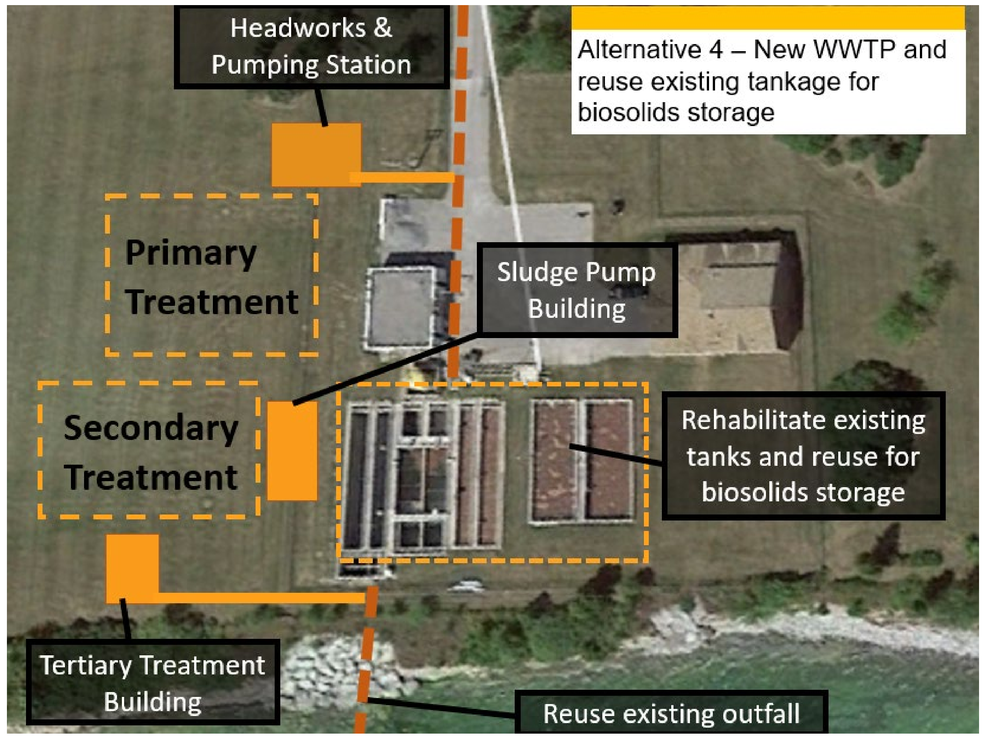
Summary of Wastewater Capacity and Sanitary Collection for Wellington

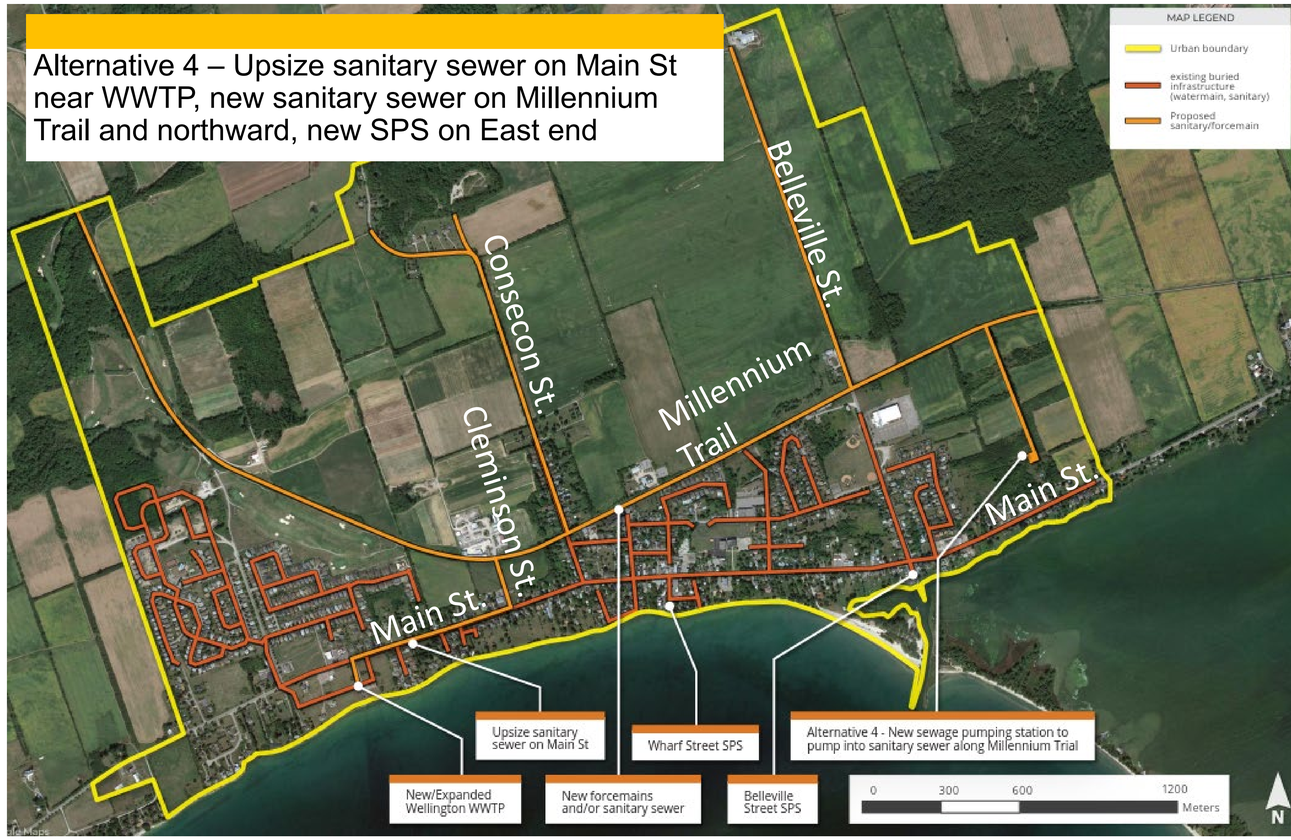
Wastewater Treatment

- Expand existing WWTP capacity (with reuse of existing tankage) to 3,900m^3/day average day and 16,300m^3/day peak day
- Improved treatment for odour control and to meet future effluent criteria objectives/limits
- Modular treatment package upgrades as required



Sanitary Collection

- Expand sanitary collection system in phases, to accommodate forecasted development.
- New sewage pumping station for eastern development



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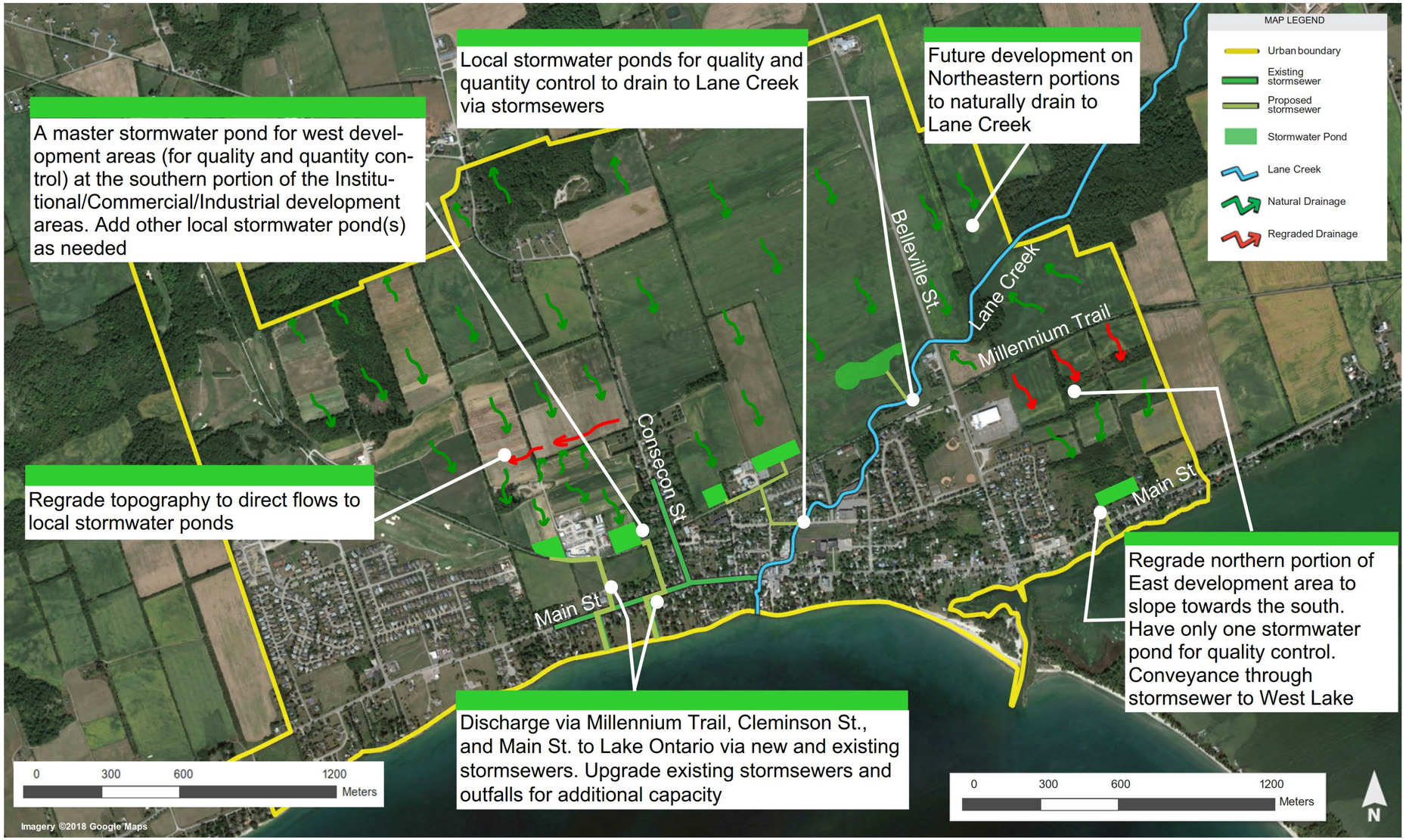
Summary of Stormwater Management Alternatives

- Stormwater management ponds for quality (i.e. 80% TSS removal) and/or quantity control
- Control of pre and post development flows
- Safe conveyance of stormwater to West Lake and Lake Ontario
- Upgrades to existing stormwater infrastructure (storm sewers, outfalls etc.)
- Stormwater pond design and construction is subject to further consideration



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Appendix E

Preliminary Sanitary Flow Calculations

SANITARY SEWER DESIGN SHEET

WELLINGTON BAY ESTATES

Wellington - Prince Edward County

Project: 16575-1

Revised: October 5, 2017

Prepared: EB
Checked: ND

RATIONAL METHOD Qt = Qp + Qi
Where: Qp = peak population flow (L/s)
= PqM / 86.4 (L/s)
where M = Harmon's Peak Factor
Qi = peak extraneous flow (L/s)
= i * A (L/s)

HARMON FORMULA
M = 1 + 14
4 + P 1/2
where P population in 1000's

Residential Population : 3.00 Persons/unit
AND:
Design Flow Rates
Residential (q) : 350 Lpcd
Extraneous (i) : 0.28 L/s/ha
N-value = 0.013

LOCATION			DESIGN FLOWS									SEWER DATA						
			INDIVIDUAL			ACCUMULATIVE		PEAKING	FLOWS			PIPE DIAMETER						Q/Qcap
STREET	FROM MH	TO MH	# of UNITS	POP (persons)	AREA (ha)	POP (persons)	AREA (ha)	FACTOR (M)	RES Qp (L/s)	EXTRAN Qi (L/s)	TOTAL Qt (L/s)	NOMINAL (mm)	INNER (mm)	SLOPE (%)	LENGTH (m)	CAPACITY (l/s)	VELOCITY (m/s)	
Connection to Main Street	Subdivision	Main Street	286.0	858.0	27.01	858.0	27.01	3.84	13.4	7.6	20.9	200	203.2					