FUNCTIONAL SERVICING REPORT
591 LIVERPOOL ROAD
PICKERING HARBOUR COMPANY LIMITED
CITY OF PICKERING

Prepared By:	Sabourin Kimble & Associates Ltd.
Prepared For:	Pickering Harbour Company Limited
Project Number:	17:380:P
Date:	March 26, 2019

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LIST OF FIGURES

1.0 INTRODUCTION

Sabourin Kimble & Associates Ltd. has been retained by Pickering Harbour Company Limited to complete a Functional Servicing Report for the development of the property at 591 Liverpool Road in the City of Pickering.

This report includes the examination of water supply, storm and sanitary drainage, stormwater management controls, and a preliminary grading design for the proposed development at this site.

A previous report was prepared by Sabourin Kimble & Associates Ltd. in October 2012 for The Pickering Harbour Company Limited. The purpose of that report was to study the existing municipal sanitary sewers within the subject site to determine if any of the sewers could be relocated to provide a larger area for development. The recommendation from that study identified that relocation of the existing sanitary sewer was viable to allow for a larger area available for development. A copy of that report and related correspondence is included in Appendix A.

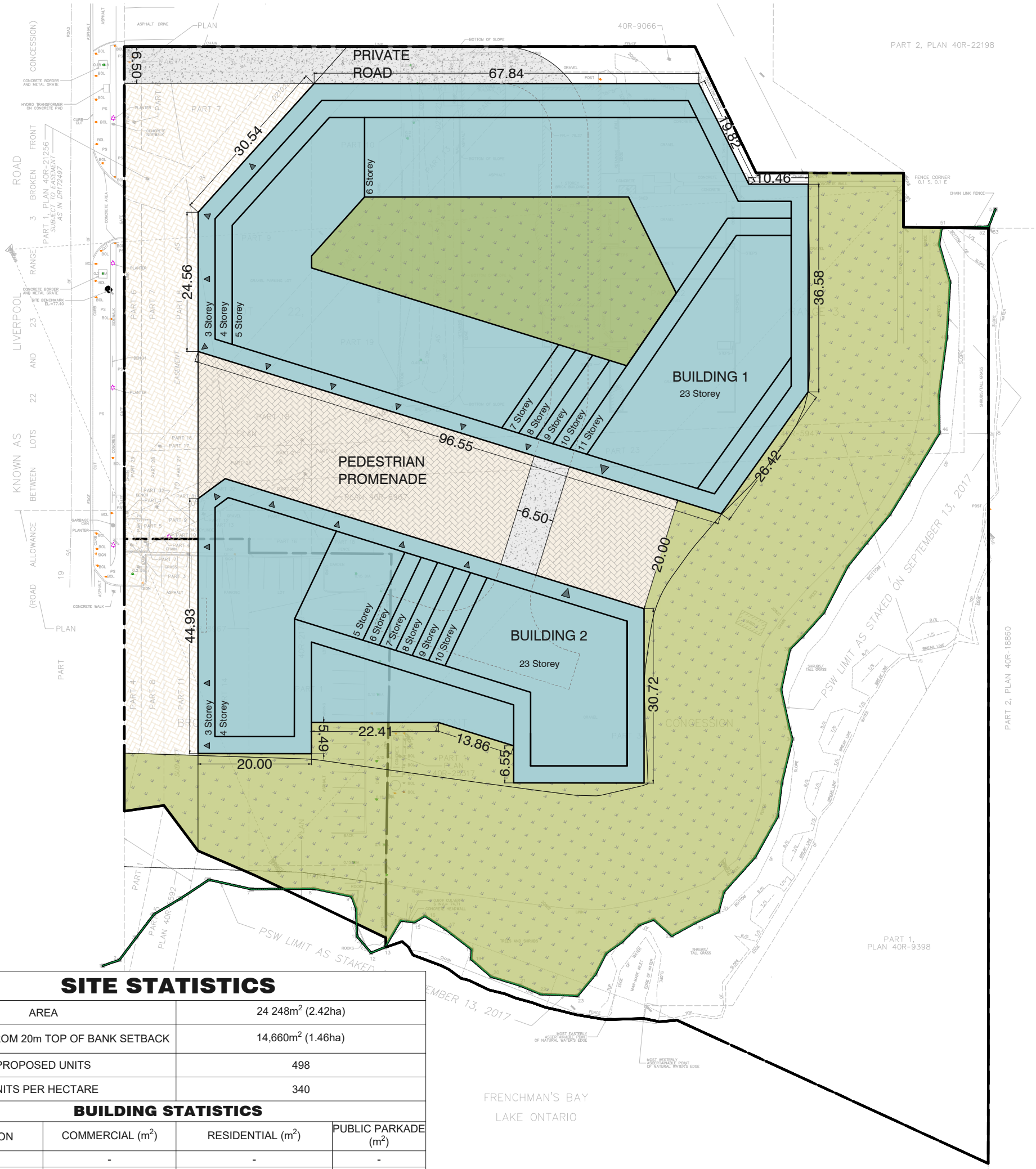
2.0 SITE DESCRIPTION

The subject site is located at the foot of Liverpool Road. The site is bounded by commercial and residential units and a Region of Durham sanitary pumping station to the north, Frenchman's Bay Marina and Liverpool Road to the west, and a wetland area and Krosno Creek to the east and to the south.

The site itself is approximately 2.5 hectares. Current use of the subject site includes a boat storage area, private parking with an office building, and a municipally owned public parking lot in the southwest quadrant.

3.0 DEVELOPMENT CONCEPT

The proposed development includes two multi-storey residential buildings with a section of green roof on one of the buildings. There is also a proposed underground parking structure as a single structure for both buildings and to provide public parking to replace the existing municipal parking lot. A proposed private road at the north limit of the site will serve as the vehicular access from Liverpool Road. A pedestrian promenade is proposed between the buildings with access from Liverpool Road, and a landscaping space is proposed adjacent to Krosno Creek. The existing municipal parking lot will be eliminated. The Concept Plan prepared by the Biglieri Group is shown in Figure 1.



SITE STATISTICS

AREA	24 248m^2 (2.42ha)
TOTAL AREA FROM 20m TOP OF BANK SETBACK	14,660m^2 (1.46ha)
PROPOSED UNITS	498
UNITS PER HECTARE	340

BUILDING STATISTICS

DESCRIPTION	COMMERCIAL (m^2)	RESIDENTIAL (m^2)	PUBLIC PARKADE (m^2)
BUILDING 1	-	-	-
FLOOR 1	1000	-	2016
FLOOR 2-16	-	35,163	-
BUILDING 2	-	-	-
FLOOR 1	900	-	5171
FLOOR 2-16	-	21,138	-
TOTAL	**1900**	56,274	7187

PARKING STATISTICS

DESCRIPTION	REQUIRED	PROPOSED UNDERGROUND (2 LEVELS)	PROPOSED ABOVEGROUND (1 LEVEL)
PUBLIC PARKING	200	58	142
PRIVATE PARKING	539	539	-
TOTAL PARKING	739	739	
PRIVATE PARKING BY USE			
RESIDENTIAL @ 0.95 SPACES PER UNIT	473		
COMMERCIAL @ 3 SPACES PER 100m^2	66		
TOTAL	539		

PREPARED FOR: PICKERING HARBOUR COMPANY LIMITED

Pickering Harbour Concept Plan

ADDRESS:
Pickering Harbour

Project No:
15360

March 22, 2019

Designed By:
VG+JS

THE BIGLIERI GROUP LTD.
Planning | Development | Project Management

4.0 STORM DRAINAGE

4.1 Existing Site Drainage

Currently the site slopes gradually from north to south. There are two existing catchbasins in the boat storage area that collect overland drainage from a portion of the site and outlet south to a headwall that discharges into Krosno Creek. The boat storage area is mostly paved, with very little grassed area. Limited topographic survey information is available for the existing public parking lot located at the southwest corner of the site, but it appears to drain to a single catchbasin near the north driveway. This catchbasin outlets to the storm sewers on Liverpool Road, and into Frenchman's Bay. The remainder of the site sheet drains to the wetland area adjacent to Krosno Creek.

A previous Stormwater Management Report was completed by Sabourin Kimble & Associates Ltd. for The Pickering Harbour Company Limited in 2002. The study area of the report included the east side of Liverpool Road, where the current proposed development is situated. That report included an analysis of floodplain impact for the lands between Krosno Creek and Liverpool Road. Under the direction of the Toronto and Region Conservation Authority, the floodplain hydraulics for Frenchman's Bay and Krosno Creek had been updated by Clarifica Consulting. The floodplain hydraulics indicated that the Regional Floodline elevation east of the Liverpool Road Bridge is 76.26m.

At the time, the floodplain limit from Krosno Creek was shown to inundate as backwater over the Pickering Harbour Lands east of Liverpool Road, and the area had poor conveyance of the Regional Storm flow. It was recommended to flood-proof the area and improve the Regional Storm flow by utilizing a balanced cut and fill of the existing land. A permit was issued by Toronto and Region Conservation Authority to fill a central portion of the site and expand the existing wetland along Krosno Creek in order to realign the floodline toward the outer edge of the property. The earthworks activity maintained the existing floodline at an elevation of 76.26m, which now extends along the east and south limits of the site, adjacent to Krosno Creek.

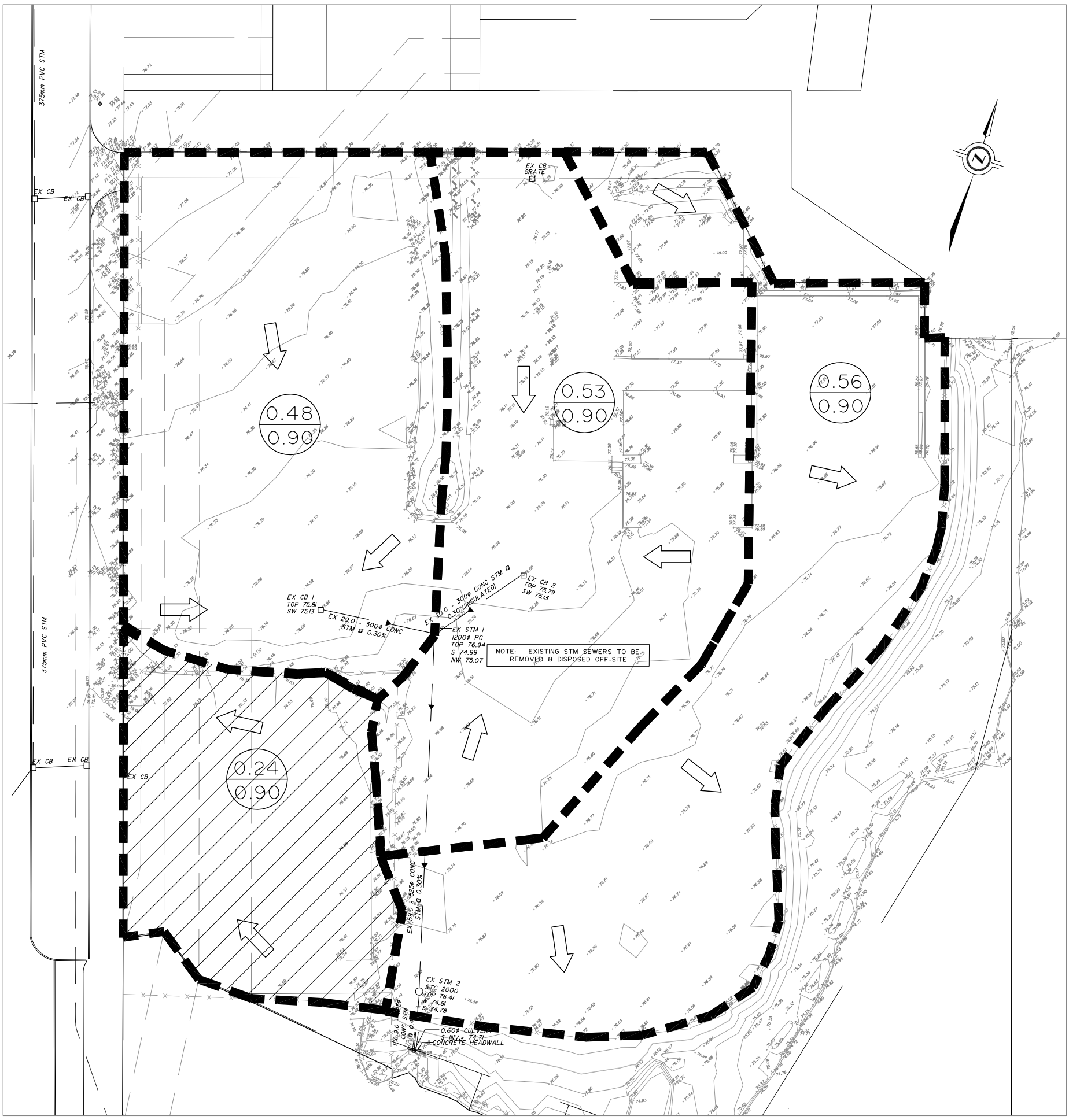
4.1.1 Pre-Development Storm Drainage

Currently, the boat storage area is mostly paved with small patches of grass near the property boundary. As mentioned in the previous section there are two existing catchbasins in the boat storage area capturing drainage. A portion of the boat storage along the southerly and easterly portion of the site, sheet drains towards the wetland (See Figure 2 – Pre-Development Drainage Plan). Drainage from the paved municipal parking lot appears to be directed to the storm sewers on Liverpool Road.

As shown in Table 1.0 below, the Cumulative Area x Runoff Coefficient (AxR) under pre-development conditions that drains to Krosno Creek is 1.41 and the AxR to the Liverpool Road sewers is 0.22. Therefore, the total pre-development AxR for the subject site is 1.63. Runoff Coefficients are based on the City of Pickering design criteria.

Table 1. Pre-Development Land Use Areas

Land Use	AxR
Existing West Catchbasin **0.48 ha.** (C = 0.90)	0.43
Existing East Catchbasin **0.53 ha**. (C = 0.90)	0.48
Overland to existing wetland **0.56 ha**. (C = 0.90)	0.50
Total to Krosno Creek	**1.41**
Total to Liverpool Road Sewer System **0.24 ha.** (C = 0.90)	0.22
Total AR	**1.63**



LEGEND

EXISTING DRAINAGE BOUNDARY

DRAINAGE TO LIVERPOOL ROAD

OVERLAND FLOW

AREA (ha.)
RUN-OFF COEFFICIENT — 0.48 / 0.90

1:750

PRE - DEVELOPMENT DRAINAGE PLAN

SABOURIN KIMBLE & ASSOCIATES LTD.
CONSULTING ENGINEERS

PROJECT NUMBER	FIGURE NO.
17:380	2

CAD FILE: P:\17\380\Drawing Files\Phase I\Figures\380 Fig 283 Drainage Plan.dwg

4.2 Post Development Storm Drainage

As described in Section 5.1, the City of Pickering has advised that no quantity controls controlling post-development flows to pre-development conditions will be required if the site is discharging directly to Frenchman's Bay. If the site is draining to Krosno Creek, post-development flows must be controlled to pre-development levels for the 2 through 100-year storms.

Under post-development conditions, drainage from the roofs and hardscaped areas (pedestrian promenade and internal road) will be collected in a storm sewer system and discharged south to Krosno Creek via an existing headwall. Overland flow from the landscape/amenity area behind the proposed buildings will be captured in a bioretention swale that will overflow into the wetland as described in Section 5.2. A small portion of the site fronting on Liverpool Road will drain overland and be collected by the existing catchbasins on Liverpool Road. A preliminary storm sewer design is shown on the Preliminary Site Servicing Plan. Table 2 below shows the AxR breakdown of the site under post-development conditions.

Table 2. Post Development Land Use

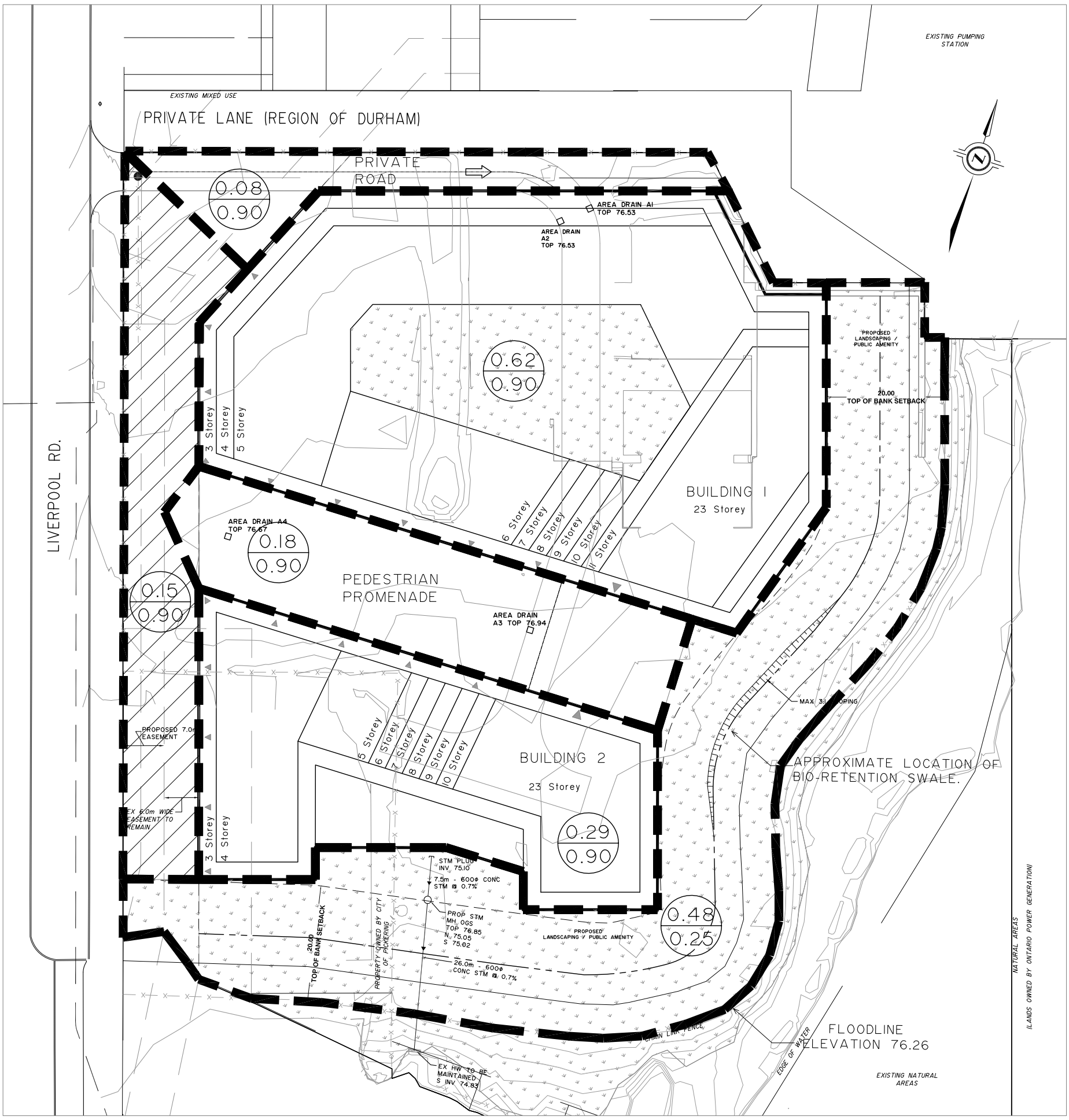
Land Use	AxR
Building Roof **0.91 ha.** (C = 0.90)	0.82
Pedestrian Promenade & Access Road **0.26 ha.** (C = 0.90)	0.23
Overland to existing wetland **0.48 ha.** (C = 0.25)	0.12
Total to Krosno Creek	**1.17**
Total to Liverpool Road sewer system **0.15 ha.** (C = 0.90)	0.14
Total AR	**1.31**

Based on the new land use from the proposed development, the total contributing AxR to Krosno Creek is 1.17. As shown in Table 1, the pre-development AxR to Krosno Creek is 1.36. Since the post-development contributing drainage is less than the pre-development, the storm drainage can be discharged to Krosno Creek and no on-site quantity controls are required.

Additionally, as shown in Table 2, the contributing area draining to Liverpool Road has been reduced from pre-development area of 0.24 ha. to post-development area of 0.15

ha. Based on this, the existing storm sewer should have capacity for the portion of the site draining overland to Liverpool Road.

Stormwater management controls are discussed in Section 5.



LEGEND

PROPOSED DRAINAGE BOUNDARY

DRAINAGE TO LIVERPOOL ROAD

AREA (ha.)
RUN-OFF COEFFICIENT — 0.18 / 0.90

1:750

POST - DEVELOPMENT DRAINAGE PLAN

SABOURIN KIMBLE & ASSOCIATES LTD.
CONSULTING ENGINEERS

PROJECT NUMBER	FIGURE NO.
17:380	3

CAD FILE: P:\17\380\Drawing Files\Phase I\Figures\380 Fig 283 Drainage Plan.dwg

5.0 STORMWATER MANAGEMENT

5.1 Stormwater Management Criteria

The TRCA has advised of the following stormwater management control criteria for the subject lands:

- Enhanced fisheries protection, as per MOE guidelines, is to be provided for quality control. This is 80% total suspended solids (TSS) removal from stormwater effluent.
- For local erosion control and to meet the requirement for a treatment train approach, the first 5mm of rainfall should be retained on site using low impact development measures.
- If the site is discharging directly to Frenchman's Bay, no quantity controls are required. If the site is draining to Krosno Creek, post-development flows must be controlled to pre-development levels for the 2 through 100-year storms.

5.2 Quality Control and Low Impact Development Measures

Stormwater quality control will be provided by conveying drainage through an Oil and Grit Separator (OGS) system. Although the OGS application may be sufficient, the TRCA has adopted the City of Toronto Guidelines where OGS devices are considered capable of achieving a Total Suspended Solids (TSS) removal efficiency of 50%. Therefore additional low impact development measures will be implemented to provide a treatment train approach.

Low impact development measures will include a green roof for at least a portion of the buildings. A bioretention swale with plantings is proposed within the landscaped area in an effort to retain some runoff and promote uptake of stormwater runoff by vegetation. This swale will capture drainage from the amenity area and overflow to the existing wetland area adjacent to Krosno Creek in order to maintain some drainage to the wetland.

Given the proximity of the site to the lake, it is expected that the water table will be too high to allow for infiltration galleries.

5.3 Stormwater Quantity Control

As discussed in Section 4.2, based on the proposed land-use, the post-development contributing drainage area to Krosno Creek is less than the pre-development drainage area. Therefore, on-site quantity controls will not be required.

6.0 SANITARY DRAINAGE

6.1 Existing Sanitary Sewers

There are several sanitary sewers located within the subject site. A 900mm diameter trunk sewer is located within the western portion of the site and conveys flows north to the pumping station. This sewer is on a 6.0 metre wide easement. At the northwest corner of the site, a 450mm diameter sewer on Liverpool Road connects to this 900mm sewer.

An existing 750mm diameter emergency overflow sewer extends from the pumping station south, into a 900mm diameter sewer that crosses the site just south of the existing office building. The 900mm diameter sewer continues south, beside the Liverpool Road right-of-way. This overflow sewer is also on a 6.0m wide easement.

6.2 Proposed Sanitary Sewers

In order for the proposed buildings to be constructed, the emergency overflow sewer is to be relocated. A previous study prepared by Sabourin & Kimble Associates in 2012 concluded that a 6.0m wide easement should be provided for the 750mm overflow sewer along the north limits of the property and a 7.0m wide easement for the 900mm overflow sewer along the west limit of the property. The existing 900mm trunk sewer will remain and the 900mm overflow sewer will run parallel within a combined easement width of 13.0 metres. The 2012 study and related correspondence are included in Appendix A.

Sanitary drainage for the proposed buildings will be internal to the structures. A single proposed sanitary stub is provided at existing MH 13-97 to service the entire site. Area drains are proposed and will collect drainage from the access road and the pedestrian promenade. The area drains will be conveyed to the sanitary sewers through the building's mechanical system. Region of Durham staff have indicated that there is sufficient capacity with the existing 900mm diameter sewer for the subject lands.

Existing and proposed sanitary sewers are illustrated on the Preliminary Site Servicing Plan.

7.0 WATER SUPPLY

7.1 Existing Water Supply Infrastructure

There is an existing 200mm PVC watermain located on the east side of Liverpool Road adjacent to the subject lands. An existing hydrant is located in the boulevard directly adjacent to Building 1 and another at the south limit of the subject lands.

7.2 Proposed Water System

Fire and domestic watermains will be provided internal to the site plan, and connected to the existing 200mm watermain on Liverpool Road.

The water meter for the domestic line and the backflow preventer for the fire line will be located in a mechanical room internal to the building. Individual water service connections will be provided to each of the dwelling units through an internal system designed by the mechanical consultant.

A fire hydrant will be provided internal to the site, above the parking structure.

8.0 SITE GRADING

The proposed grading for this site has been designed to meet the City of Pickering grading criteria, while matching existing grades at the site boundaries and development limits.

Existing Liverpool Road boulevard elevations will be matched along the west property line. A curb/concrete toe wall is proposed along the north side of the access road so that existing elevations can be matched at the north property limit. Existing elevations will be matched at the limit of the wetland adjacent to Krosno Creek.

Internal grading will consist of slopes ranging from 0.5% to 5.0% on hard surfaces, and 2.0% to 5.0% in landscaped amenity areas. The grading on the site was designed to maintain the same finished floor elevation for both proposed buildings. The proposed grading promotes drainage away from the access driveways for the underground parking, and maintains drainage onsite using catchbasins in localized low-points.

The preliminary grading design is illustrated in the Preliminary Site Grading Plan.

9.0 SEDIMENT AND EROSION CONTROL

Prior to construction of any portion of the Study Area, adequate erosion and sedimentation controls must be implemented. In support of the detailed design for any development proposal, a comprehensive erosion and sedimentation control plan should be prepared in accordance with the Erosion and Sediment Control Guideline for Urban Construction 2006. This plan should detail the works proposed to control erosion on-site and sediment transport from the site to match or exceed current Municipal and Provincial standards. Works such as sediment shields, temporary sediment ponding areas, undisturbed buffers, and catchbasin/storm sewer sediment traps should be implemented.

Sedimentation control practices will be implemented for all construction activities within the Study Area, including during tree removal, topsoil stripping, underground sewer construction, road construction and building construction. Sedimentation control measures are to be installed and operational prior to any construction activity, and are to remain in place until such time as the buildings are constructed and the landscaping complete with established sod.

10.0 CONSTRUCTION MANAGEMENT

During the site plan stage, a detailed construction management plan will be required, including details on specific sediment control measures, construction storage and staging areas, and access and egress from the sites. For the purposes of this report, the following is a general guideline on construction management.

Construction of this site is expected to be executed in one phase. Construction traffic will enter and exit the site via Liverpool Road.

Prior to any work being completed, erosion and sediment control (ESC) measures outlined in Section 9.0 will be implemented. These may consist of sediment fences, interceptor swales, rock check dams, catchbasin silt traps, mud mats, and possibly temporary sediment ponds. The ESC measures must be inspected regularly, and repaired, replaced or cleaned when damaged or no longer effective.

Any existing trees that are to be preserved should be protected with hoarding and any other protective measures described in the Tree Preservation Report.

Once the ESC and tree protection measures are in place, topsoil stripping may begin. Topsoil required for landscaping purposes may be stockpiled on site, and the remainder will be disposed off-site. Topsoil stockpile locations will be detailed at the site plan stage for each phase, but in general, stockpiles should not be located directly adjacent to any natural heritage features. Stockpiles should be surrounded by sediment fence and seeded.

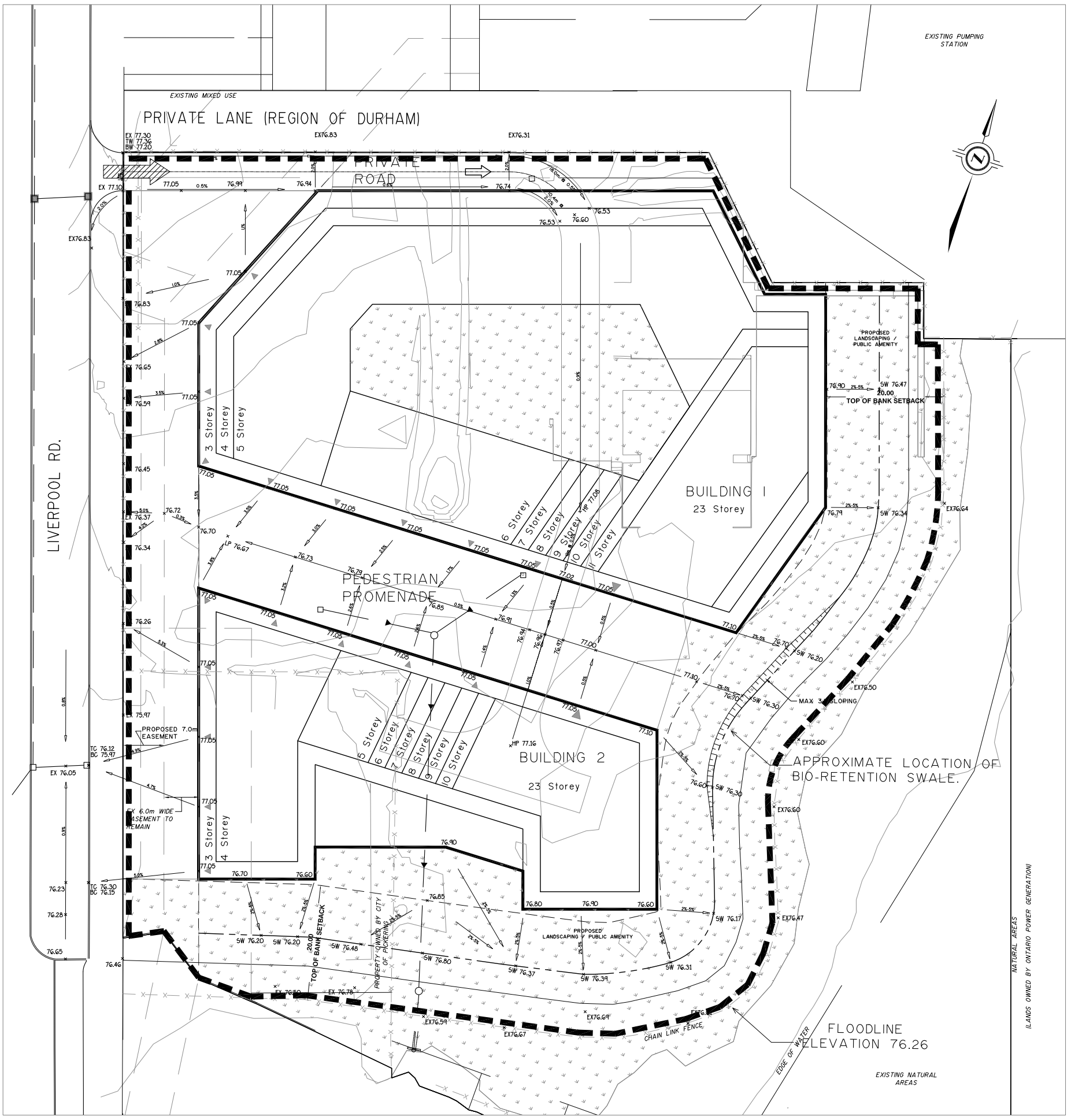
Upon completion of topsoil stripping, the site may be rough graded, however it is expected that little grading will be required given the extent of the underground parking structure. The new sanitary sewer by-pass pipe will then be constructed along the west side of the site, after which the existing pipe in the centre of the site can be decommissioned and removed.

Bioretention swales will be constructed only when construction of all other services, laneways, and buildings are nearing completion to ensure that they do not become full of sediment during construction.

During construction, dust control measures and a road cleaning program are to be implemented. Mud mats are to be constructed at each access location.

The location of construction staging and storage areas, site trailers, parking areas for construction workers, and temporary washroom facilities will be determined at the site plan stage. All construction waste is to be disposed off-site. Working hours are to be in accordance with City by-laws.

Refer to Figure CMP-1 for Construction Management Plan.



LEGEND

SEDIMENT CONTROL

CONSTRUCTION ACCESS (MUDMAT LOCATION)

CATCHBASIN SILTATION TRAP

1:750

NOTES:

1. ACCESS FOR CONSTRUCTION TO BE FROM LIVERPOOL ROAD AT THE NORTH END OF THE SITE.
2. MUDMATS TO BE CONSTRUCTION AT ALL ACCESS LOCATIONS.
3. DUST CONTROL MEASURES AND ROAD CLEANING PROGRAM TO BE IMPLEMENTED PERIODICALLY DURING CONSTRUCTION.
4. TOPSOIL STOCKPILE LOCATIONS, SITE TRAILERS AND CONSTRUCTION STAGING AREAS TO BE DETERMINED AT SITE PLAN STAGE. FENCING AND HOARDING TO BE ERECTED BEFORE CONSTRUCTION.

CONSTRUCTION MANAGEMENT PLAN

SABOURIN KIMBLE & ASSOCIATES LTD.
CONSULTING ENGINEERS

PROJECT NUMBER	FIGURE NO.
17:380	CMP-1

CAD FILE: P:\17\380\Drawing Files\Phase I\Figures\380 Fig 283 Drainage Plan.dwg

11.0 CONCLUSIONS

Based on the analysis carried out as part of this preliminary design investigation, it was concluded that municipal servicing and stormwater management of the subject lands is readily achievable as follows:

- Storm drainage from the site will be collected in a storm sewer system and conveyed south, discharging to Krosno Creek via the existing headwall.
- Overland flow from the landscape/amenity area behind the proposed buildings will sheet drain to the existing wetland adjacent to Krosno Creek.
- Stormwater quantity control will not be necessary since the post-development contributing area is less than the pre-development contributing area.
- Stormwater quality control will be provided by conveying drainage through an Oil and Grit Separator (OGS) system.
- Low impact development measures will be implemented to retain 5mm of runoff and to provide a treatment train approach. These measures will include a green roof for at least a portion of the buildings and a bioretention swale with plantings within the landscape/amenity.
- Relocation of the existing overflow sanitary sewer will be required for the proposed development.
- Existing downstream sanitary sewers have sufficient capacity to convey sanitary drainage from the subject site.
- Existing watermains are available to service the site.
- The site can be graded in accordance with City of Pickering criteria.
- Adequate sedimentation control measures should be provided during the construction program.

Based on the above conclusions, we recommend that the subject lands be graded and serviced in accordance with the details included in this report.

Yours truly,

SABOURIN KIMBLE & ASSOCIATES LTD.

Gary Tran

APPENDIX A

SANITARY SERVICING STUDY
591 LIVERPOOL ROAD
THE PICKERING HARBOUR COMPANY LTD.

Prepared by: Sabourin Kimble & Associates Ltd.

Prepared for: The Pickering Harbour Company Ltd.

Project No.: 91:625:D

Date: October 24, 2012

1.0 Introduction

In May 2012, The Pickering Harbour Company Ltd. commissioned Martindale Planning Services to research the status of various easements on the subject site at 591 Liverpool Road in Pickering. Martindale Planning Services prepared an analysis report on the easements, which is appended to this document. As described in Martindale's report, some of the easements are in favour of the Region of Durham for various sanitary sewers that exist within the site. Sabourin Kimble & Associates Ltd. was retained by The Pickering Harbour Company Ltd. in August 2012 to research the existing municipal sanitary sewers within the subject site to determine if any of the sewers can be relocated to provide a larger area for development of the site.

2.0 Site Description

The subject site is located at the foot of Liverpool Road, bounded by Liverpool Road to the west and Lake Ontario to the south. It was previously the location of a sewage treatment plant, but the plant has been decommissioned; the Liverpool Road Pumping Station is located directly north of the site. The site currently acts as a boat storage area, with an office building.

3.0 Existing and Proposed Sanitary Sewers

There are several sanitary sewers located with the subject site.

A 900mm diameter trunk sewer is located within the western portion of the site and conveys flows northerly to the pumping station. This sewer is on a 6.0 metre wide easement. Within the northwest corner of the site, a 450mm diameter sewer on Liverpool Road connects to this 900mm sewer.

A 750mm diameter emergency overflow sewer extends from the pumping station southerly, bisecting the subject site. This sewer connects to a 900mm diameter sewer that crosses the

site just south of the existing office building, which in turn drains into a 900mm diameter sewer located just east of the Liverpool Road right-of-way. The overflow sewer is also on a 6.0 metre wide easement.

If the emergency overflow sewer were relocated closer to the north and west limits of the subject site, a larger area would be available for development. This could be achieved as shown on Figure 1 enclosed. The proposed sewer would connect to existing sanitary manhole 3A at the north end of the site, and to existing manhole 2 adjacent to Liverpool Road. Because connection would be made at manholes, it would be possible to construct the proposed sewer and decommission the existing sewer without disruption to the availability of the emergency overflow pipe, and without disruption to the pumping station.

According to the design drawings, the existing 750mm overflow pipe within the site is very flat (less than 0.1%). In relocating the pipe, the slope of the pipe could be improved for positive drainage.

4.0 Easements

In a letter dated May 10, 2012, the Region of Durham requested that an additional 3.0 metre wide easement be provided for the 900mm diameter trunk sewer at the west portion of the site. If the emergency overflow sewer is relocated, a 7.0 metre wide easement could be provided between the existing easement and the Liverpool Road right-of-way. This would result in a total easement width of 13.0 metres for the two sewers. A 6.0 metre wide easement should be provided for the relocated sewer at the north limit of the property. The existing 6.0 metre wide easement for the existing overflow sewer could be released when the sewer is decommissioned.

5.0 Recommendations

It is recommended that the 750mm diameter and 900mm diameter emergency overflow sewers that bisect the site be relocated to the north and west limits of the site. A 6.0 metre wide easement should be provided for the relocated sewer at the north limit of the property. A 7.0 metre wide easement should be provided for the relocated sewer along the west limit of the property, between the existing trunk sewer easement and the Liverpool Road right-of-way, providing for 13.0 metres of total easement for two sewers. The existing overflow sewers could then be decommissioned and the existing easement released.

Yours truly,
SABOURIN KIMBLE & ASSOCIATES LTD.

Krista Boyce, P. Eng.

NOTE: EXISTING SEWER GRADES AND INVERTS ARE FROM DRAWINGS PROVIDED BY REGION OF DURHAM (MOE PROJECT NO. 1-0106-84, DWG. NO. 2A, AND MOE PROJECT NO. 1-0106-82, DWG. NO. 824-G3).

SCALE 1:400

PICKERING HARBOUR COMPANY
591 LIVERPOOL ROAD
SANITARY SERVICING STUDY

SABOURIN KIMBLE & ASSOCIATES LTD.
CONSULTING ENGINEERS

PROJECT NUMBER	FIGURE NUMBER
91.625	FIG 1

PLOT DATE: 3/26/2019 5:30 PM CAD FILE: P:\91\625\Drawing Files\Phase 3\Figures\625 BASE.dwg

EX SAN MH 3
(MOE PROJ. No. I-0106-82
DWG No. 824-G3)
E 75.06
SW 75.06

EX SAN MH 3
(MOE PROJ. No. I-0106-84 DWG No. 2A)
E 68.76
SW 68.81

EX 750ϕ CONC SAN (EMERGENCY OVERFLOW) TO REMAIN

EX 900ϕ CONC SAN @ 0.10% TO REMAIN

EXISTING PUMPING STATION

EX SAN MH 2
(MOE PROJ. No. I-0106-84 DWG No. 2A)
E 68.71
SW 68.66

375mm PVC STM

EXISTING MIXED USE

PRIVATE LANE (REGION OF DURHAM)

EX SAN MH 3A
(MOE PROJ. No. I-0106-82
DWG No. 824-G3)
E 75.06
SW 75.06

PREVIOUSLY ABANDONED 750ϕ CONC SAN

PREVIOUSLY ABANDONED 350ϕ AC SAN

PROP 50.5 - 750ϕ CONC EMERGENCY OVERFLOW SAN @ 0.60%

PRIVATE ROAD

EX CB GRATE

PREVIOUSLY ABANDONED 350ϕ AC SAN

EX SAN MH (DECOMMISSIONED)

EX CB

EX CB

PROP SAN MH A
E 74.75
S 74.69

EX 900ϕ CONC TRUNK SAN @ 0.168% TO REMAIN

AREA DRAIN A1
TOP 76.53

AREA DRAIN
A2
TOP 76.53

EX SAN MH I3-97
TOP 76.50
W 71.81
W DROP 69.70
S 68.96
NE 68.90
SE 69.95

EX SAN MH I3-108
TOP 76.87
E 72.02
SW 71.88

CORE INTO EX MH I3-97 AT INV 69.95 AND ADJUST BENCHING AS PER OPSD 701.021

EX 450ϕ CONC SAN @ 0.37%

1.5m - 200ϕ PVC SAN @ 2.00%

EX SAN MH (DECOMMISSIONED)

SAN PLUG INV 70.00

DOM. WM

FIRE WM

WM PLUG (DOM)
WM PLUG (FIRE)

PROPOSED LANDSCAPING / PUBLIC AMENITY

20.00
TOP OF BANK SETBACK

WV

WV

WVHYD

EX 750ϕ CONC EMERGENCY OVERFLOW SAN @ 0.07% TO BE DECOMMISSIONED

3 Storey
4 Storey
5 Storey
6 Storey
7 Storey
8 Storey
9 Storey
10 Storey
11 Storey

BUILDING 1
23 Storey

EX SAN MH 4
(MOE PROJ. NO. I-0106-82
DWG. NO. 224-G3)
N 75.02

LIVERPOOL RD.

PROP 81.0m - 900ϕ CONC EMERGENCY OVERFLOW SAN @ 0.6%

EX 900ϕ CONC TRUNK SAN @ 0.154% TO REMAIN

AREA DRAIN A4
TOP 76.67

EX 900ϕ CONC EMERGENCY OVERFLOW SAN @ 1.19% TO BE DECOMMISSIONED

PEDESTRIAN PROMENADE

EX CB 1
TOP 75.81
SW 75.13

EX 20.0 - 300ϕ CONC STM @ 0.30%

EX 20.0 - 300ϕ CONC STM @ 0.30%(INSULATED)

EX CB 2
TOP 75.79
SW 75.13

AREA DRAIN
A3 TOP 76.94

EX STM 1
1200ϕ PC
TOP 76.94
S 74.99
NW 75.07

NOTE: EXISTING STM SEWERS TO BE REMOVED & DISPOSED OFF-SITE

EX SAN MH 2
NE 74.19
S 74.16

EXISTING 200ϕ WM

375mm PVC STM

PROPOSED 7.0m EASEMENT

EX CB

EX CB

EX CB

EX 6.0m WIDE EASEMENT TO REMAIN

EX SAN MH
(FROM DWG FROM SRM ENGINEERING)
S 69.71
N 69.11

3 Storey
4 Storey
5 Storey
6 Storey
7 Storey
8 Storey
9 Storey
10 Storey

BUILDING 2
23 Storey

STM PLUG
INV 75.10

7.5m - 600ϕ CONC STM @ 0.7%

EX 59.5 - 525ϕ CONC STM @ 0.30%

PROP STM MH OGS
TOP 76.85
N 75.05
S 75.02

PROPOSED LANDSCAPING / PUBLIC AMENITY

20.00
TOP OF BANK SETBACK

PROPERTY OWNED BY CITY OF PICKERING

26.0m - 600ϕ CONC STM @ 0.7%

EX STM 2
STC 2000
TOP 76.41
N 74.81
S 74.78

EX 9.0 - 525ϕ CONC STM @ 0.40%

0.60ϕ CULVERT
S INV.- 74.71
CONCRETE HEADWALL

EX HW TO BE MAINTAINED
S INV 74.83

CHAIN LINK FENCE

EDGE OF WATER

MAX 3:1 SLOPING

APPROXIMATE LOCATION OF BIO-RETENTION SWALE.

FLOODLINE ELEVATION 76.26

EXISTING NATURAL AREAS

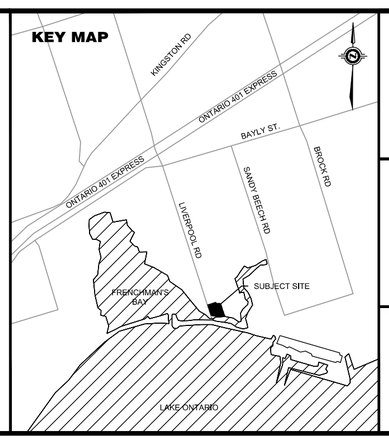
EX 900ϕ CONC SAN @ 0.88%

KROSNO CREEK

NATURAL AREAS
(LANDS OWNED BY ONTARIO POWER GENERATION)

LEGEND

KEY MAP



591 LIVERPOOL RD., PICKERING, ONTARIO

PART 1 - PLAN SHOWING TOPOGRAPHY OF PART OF LOT 22 RANGE 3,
BROKEN FRONT CONCESSION
(GEOGRAPHIC TOWNSHIP OF PICKERING)
NOW IN THE CITY OF PICKERING REGIONAL MUNICIPALITY OF DURHAM

PRELIMINARY SITE SERVICING PLAN

SERVICE AND GRADING DESIGNED BY:

SABOURIN KIMBLE & ASSOCIATES LTD.
CONSULTING ENGINEERS

REVISIONS

No.	Description	Date	Int.
8			
7			
6			
5			
4			
3			
2			
1			

PROJECT No.: 17:380
DATE: February 27, 2019
DESIGNED BY: GT
SCALE: 1:300

BUILDING YOUR IDEAS - INTO BIG PLANS
THE BIGLIERI GROUP LTD.
Planning | Development | Project Management
20 Leslie Street, Suite 121, Toronto, Ontario M4M 3L4
Office: (416) 693-9155 Fax: (416) 693-9133
tbg@thebiglierigroup.com

DRAWING No.: **SS-1**

EX SAN MH 3
(MOE PROJ. No. I-0106-82
DWG No. 824-G3)

EX SAN MH 3
(MOE PROJ. No. I-0106-84 DWG No. 2A)

EXISTING PUMPING STATION

EX SAN MH 2
(MOE PROJ. No. I-0106-84 DWG No. 2A)

EXISTING MIXED USE

PRIVATE LANE (REGION OF DURHAM)

EX SAN MH 3A
(MOE PROJ. No. I-0106-82
DWG No. 824-G3)

EX 77.30
TW 77.36
BW 77.20

EX76.83
TW76.97
BW76.82

EX76.31
TW76.77
BW76.62

PRIVATE ROAD

EX SAN MH
(DECOMMISSIONED)

EX SAN MH 13-97

EX SAN MH 13-108

EX SAN MH
(DECOMMISSIONED)

EX SAN MH 4
(MOE PROJ. NO. I-0106-82
DWG. NO. 224-G3)

HP 77.08

HP 77.16

BUILDING 1
23 Storey

BUILDING 2
23 Storey

3 Storey
4 Storey
5 Storey
6 Storey
7 Storey
8 Storey
9 Storey
10 Storey
11 Storey

PEDESTRIAN PROMENADE

PROPOSED LANDSCAPING / PUBLIC AMENITY

TOP OF BANK SETBACK

20.00

PROPERTY OWNED BY CITY OF PICKERING

LIVERPOOL RD.

EXISTING 200ø WM

PROPOSED 7.0m EASEMENT

EX 6.0m WIDE EASEMENT TO REMAIN

EX SAN MH
(FROM DWG FROM
SRM ENGINEERING)

CHAIN LINK FENCE

EDGE OF WATER

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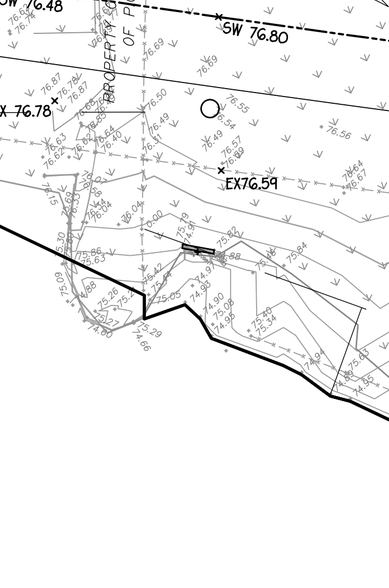

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