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Mr. Andrew Wallace
Planner
Norfolk County
50 Colborne Street South
Simcoe, ON N3Y 4H3

Date: October 10, 2024
Our Ref: 139459
Subject: Site Plan Approval – 200 Main Street, Port Dover - 1000033566 Ontario Inc.

Dear Mr. Wallace,

On behalf of our client, 1000033566 Ontario Inc., please accept this letter and the following materials as part of our complete submission of a Site Plan Application ("SPA") for the lands municipally known as 200 Main St., 21 Clinton St., 21 St. Andrews St. and 25 St Andrews St. (collectively the "Subject Lands"):

- One (1) copy of the Architectural Package prepared by VanGroll & Associates Inc.
- One (1) copy of the Traffic Impact Study and Parking Assessment prepared by Paradigm Transportation Solutions Ltd.
- One (1) copy of the Planning Justification Brief prepared by Arcadis Professional Services (Canada) Inc.
- One (1) copy of Storm Water Management Design Report prepared by Arcadis Professional Services (Canada) Inc.
- One (1) copy of the Grading Plan prepared by Arcadis Professional Services (Canada) Inc.
- One (1) copy of the Erosion and Sediment Control Plan prepared by Arcadis Professional Services (Canada) Inc.
- One (1) copy of the Utility Plan prepared by Algal Engineering Ltd.
- One (1) copy of the Photometrics Plan prepared by Algal Engineering Ltd.
- One (1) copy of the Landscape Plan prepared by O'Brian & Associates Ltd.
- One (1) copy of the Comment Response Matrix

Our client is seeking an SPA on the subject lands for the development of a six-storey (6) mixed use building that will contain commercial uses on the ground floor level fronting onto Main Street, with a total of 138 residential units on the upper levels. The proposed development would also include 181 parking spaces contained within the podium and 2 levels of underground parking areas. Concurrent with the proposed development will be the construction of a public parking lot located on St. Andrews Street which will be submitted via a separate Site Plan application. The intent of the new parking area is to replace the existing Clinton Street lot that is proposed to be incorporated into the subject lands.

A Pre-Consultation meeting was held on March 13, 2024 between the applicant and the County staff to discuss the proposed development. A finalized Record of Consultation containing the County's comments was provided on May 31, 2024. A Response Matrix indicating how those comments have been addressed has been included as part of this submission.

Mr. Andrew Wallace
Norfolk County
October 10, 2024

We trust that the attached materials provide you with sufficient information for the processing of this application. Should you have any further questions or require anything more for the processing of this file, please do not hesitate to contact the undersigned.

Sincerely,
Arcadis Professional Services (Canada) Inc.

Carmen Jandu, MCIP RPP
Planner – Senior Associate

Ritika Nair
Planner

Planning Department Development Application Form

Complete Application

A complete development application consists of the following:

1. A completed, signed, and notarized application form
2. Supporting information adequate to illustrate your proposal as indicated in **Section H** of this application form
3. Written authorization from the registered owner of the subject lands where the applicant is not the owner as per Section N
4. Cash, debit, credit or cheque payable to Norfolk County in the amount set out in the user fees By-Law that will be accepted and deposited once the application has been deemed complete.

Pre-Submission Consultation:

Norfolk County requires a Pre-Consultation Meeting for all applications; however, minor applications may be exempted depending on the nature of the proposal. The purpose of a Pre-Consultation Meeting is to provide the applicant with an opportunity to present the proposed application, discuss potential issues, and for the Norfolk County and Agency staff to identify the application requirements. Application requirements, as detailed in the Pre-Consultation Meeting Comments, are valid for one year after the meeting date.

Development Application Process

Once an application has been deemed complete by a Planner, Norfolk County staff will circulate the application to adjacent landowners, public agencies, and internal departments for comment. The time involved in application processing varies depending on its complexity, acceptability to the other agencies, and statutory Planning Act decision time-frames.

Payment is required once your application is deemed complete. Pre-payments will not be accepted.

Norfolk County collects personal information submitted through this form under the Municipal Freedom of Information and Protection Act's authority. Norfolk County will use this information for the purposes indicated or implied by this form. You can direct questions about collecting personal information to Norfolk GIS Services at NorfolkGIS@norfolkcounty.ca.

Additional studies required for the complete application shall be at the applicant's sole expense. Sometimes, peer reviews may be necessary to review particular studies at the applicant's expense. In these caseds, Norfolk County staff will select the company to complete the peer review.

Norfolk County will refund the original fee if applicants withdraw their applications before circulation. If Norfolk County must recirculate your drawings, there will be an additional fee. If Norfolk County must do more than three reviews of engineering drawings due to revisions by the owner or failure to revise engineering drawings as requested, Norfolk County will charge an additional fee. Full refunds are only available before Norfolk County has circulated the application.

Notification Sign Requirements

For public notification, Norfolk County will provide you with a sign to indicate the intent and purpose of your development application. It is your responsibility to:

1. Post one sign per frontage in a conspicuous location on the subject lands.
2. Ensure one sign is posted at the front of the subject lands at least three feet above ground level and not on a tree.
3. Notify the Planner when the sign is in place.
4. Maintain the sign until the development application is finalized and, after that, remove it.

Contact Us

For additional information or assistance completing this application, please contact a Planner at 519-426-5870 or 519-875-4485 extension 1842 or planning@norfolkcounty.ca. Please submit the completed application and fees to the attention of the Planning Department at 185 Robinson Street, Suite 200, Simcoe, ON N3Y 5L6.

For Office Use Only:

File Number	_____	Public Notice Sign	_____
Related File Number	_____	Application Fee	_____
Pre-consultation Meeting	_____	Conservation Authority Fee	_____
Application Submitted	_____	Well & Septic Info Provided	_____
Complete Application	_____	Planner	_____

Check the type of planning application(s) you are submitting.

- ☐ Official Plan Amendment
- ☐ Zoning By-Law Amendment
- ☐ Temporary Use By-law
- ☐ Draft Plan of Subdivision/Vacant Land Condominium
- ☐ Condominium Exemption
- ☐ Site Plan Application
- ☐ Extension of a Temporary Use By-law
- ☐ Part Lot Control
- ☐ Cash-in-Lieu of Parking
- ☐ Renewable Energy Project or Radio Communication Tower

Please summarize the desired result of this application (for example, a special zoning provision on the subject lands to include additional use(s), changing the zone or official plan designation of the subject lands, creating a certain number of lots, or similar)

Please see attached Covering letter and Justification Brief.

Property Assessment Roll Number: 33401051200; 33401050900; 33401051100; 33401051000

A. Applicant Information

Name of Owner 1000033566 Ontario Inc.

Address 1150 Vittoria Road

Town and Postal Code Vittoria, ON N0E 1W0

Phone Number

Cell Number

Email

Name of Applicant See above

Address

Town and Postal Code

Phone Number

Cell Number

Email

Name of Agent Arcadis Professional Services (Canada) Inc. (c/o Carmen Jandu)

Address 360 James Street North - Suite 200

Town and Postal Code Hamilton, ON L8L 1H5

Phone Number

Cell Number

Email carmen.jandu@arcadis.com

Unless otherwise directed, Norfolk County will forward all correspondence and notices regarding this application to both owner and agent noted above.

☐ Owner ◙ Agent ☐ Applicant

Names and addresses of any holder of any mortgagees, charges or other encumbrances on the subject lands:

B. Location, Legal Description and Property Information

1. Legal Description (include Geographic Township, Concession Number, Lot Number, Block Number and Urban Area or Hamlet):
   Lots 31, 32, 33 & 34, Block 50, Registered Plan 207; Norfolk County (formerly Town of Port Dover)

   Municipal Civic Address: 200 Main St., 21 Clinton St., 21 St. Andrews St. and 25 St Andrews St.

   Present Official Plan Designation(s): Downtown

   Present Zoning: Central Business District

2. Is there a special provision or site specific zone on the subject lands?

   ☐ Yes ▣ No If yes, please specify corresponding number:

3. Present use of the subject lands:
   Vacant.

4. Please describe **all existing** buildings or structures on the subject lands and whether they will be retained, demolished or removed. If retaining the buildings or structures, please describe the type of buildings or structures, and illustrate the setback, in metric units, from the front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application:
   Please see attached Justification Brief.

5. If an addition to an existing building is being proposed, please explain what it will be used for (for example: bedroom, kitchen, or bathroom). If new fixtures are proposed, please describe.
   N/A

6. Please describe **all proposed** buildings or structures/additions on the subject lands. Describe the type of buildings or structures/additions, and illustrate the setback, in metric units, from front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application:
   Please see attached Justification Brief.

7. Are any existing buildings on the subject lands designated under the *Ontario Heritage Act* as being architecturally and/or historically significant? Yes ☐ No ▣

   If yes, identify and provide details of the building:

   Site of the former Norfolk Tavern. Please see attached Justification Brief for further detail.

8. If known, the length of time the existing uses have continued on the subject lands:

9. Existing use of abutting properties:
   Please see attached Justification Brief.

10. Are there any easements or restrictive covenants affecting the subject lands?

    ☐ Yes ▣ No If yes, describe the easement or restrictive covenant and its effect:

C. Purpose of Development Application

Note: Please complete all that apply.

1. Please explain what you propose to do on the subject lands/premises which makes this development application necessary:
   Requested SPA to permit the development of a six-storey mixed-use building with residential and commercial uses. Please see attached Covering letter and Justification Brief.

2. Please explain why it is not possible to comply with the provision(s) of the Zoning By-law/and or Official Plan:
   N/A. There are no changes proposed to the ZBL or OP.

3. Does the requested amendment alter all or any part of the boundary of an area of settlement in the municipality or implement a new area of settlement in the municipality? ☐ Yes ▣ No If yes, describe its effect:

4. Does the requested amendment remove the subject land from an area of employment? ☐ Yes ▣ No If yes, describe its effect:

5. Does the requested amendment alter, replace, or delete a policy of the Official Plan? ☐ Yes ☒ No If yes, identify the policy, and also include a proposed text of the policy amendment (if additional space is required, please attach a separate sheet):

   _____

   _____

   _____

6. Description of land intended to be severed in metric units:
   Frontage: _____
   Depth: _____
   Width: _____
   Lot Area: _____
   Present Use: _____
   Proposed Use: _____
   Proposed final lot size (if boundary adjustment): _____
   If a boundary adjustment, identify the assessment roll number and property owner of the lands to which the parcel will be added: _____

   _____

   Description of land intended to be retained in metric units:
   Frontage: _____
   Depth: _____
   Width: _____
   Lot Area: _____
   Present Use: _____
   Proposed Use: _____
   Buildings on retained land: _____
7. Description of proposed right-of-way/easement:
   Frontage: _____
   Depth: _____
   Width: _____
   Area: _____
   Proposed use: _____
8. Name of person(s), if known, to whom lands or interest in lands to be transferred, leased or charged (if known):

   _____

9. **Site Information**	**Zoning**	**Proposed**
Please indicate unit of measurement, for example: m, m^2 or %		
Lot frontage	N/A	41.4 m
Lot depth	N/A	100.7
Lot width	N/A	41.4 m
Lot area	N/A	4,070 sq.m
Lot coverage	80% (max)	73%
Front yard	0 m	0.55 m
Rear yard	0 m	1.59 m
Left Interior side yard	0 m	2.61 m
Right Interior side yard	N/A	N/A
Exterior side yard (corner lot)	0 m	5.85 m
Landscaped open space	N/A	27%
Entrance access width	N/A	3.65 m
Exit access width	N/A	3.65 m
Size of fencing or screening	N/A	N/A
Type of fencing	N/A	N/A

10. Building Size

Number of storeys	6	6
Building height	N/A	23.5 m
Total ground floor area	N/A	2,911 sq.m.
Total gross floor area	N/A	227,957 sq.m.
Total useable floor area	N/A	

11. Off Street Parking and Loading Facilities

Number of off street parking spaces	N/A	181
Number of visitor parking spaces	N/A	
Number of accessible parking spaces	N/A	7
Number of off street loading facilities	N/A	1

12. Residential (if applicable)

Number of buildings existing: 0

Number of buildings proposed: 1

Is this a conversion or addition to an existing building? ☐ Yes ▣ No

If yes, describe: _____

Type	Number of Units	Floor Area per Unit in m2
Single Detached		
Semi-Detached		
Duplex		
Triplex		
Four-plex		
Street Townhouse		
Stacked Townhouse		
Apartment - Bachelor		
Apartment - One bedroom	98	Range: 43m² to 62m²
Apartment - Two bedroom	40	Range: 71m² to 96m²
Apartment - Three bedroom		

Other facilities provided (for example: play facilities, underground parking, games room, or swimming pool):

13. Commercial/Industrial Uses (if applicable)

Number of buildings existing: 0

Number of buildings proposed: 0

Is this a conversion or addition to an existing building? ☐ Yes ▣ No

If yes, describe:

Indicate the gross floor area by the type of use (for example: office, retail, or storage):

Commercial GFA: 431 sq.m.

Residential GFA: 11,190 sq.m.

Please see attached Justification Brief and Architectural Package

Seating Capacity (for assembly halls or similar): _____

Total number of fixed seats: _____

Describe the type of business(es) proposed: _____

Total number of staff proposed initially: _____

Total number of staff proposed in five years: _____

Maximum number of staff on the largest shift: _____

Is open storage required: ☐ Yes ☐ No

Is a residential use proposed as part of, or accessory to commercial/industrial use?

☐ Yes ☒ No If yes please describe:

_____

_____

14. Institutional (if applicable)

Describe the type of use proposed: _____

Seating capacity (if applicable): _____

Number of beds (if applicable): _____

Total number of staff proposed initially: _____

Total number of staff proposed in five years: _____

Maximum number of staff on the largest shift: _____

Indicate the gross floor area by the type of use (for example: office, retail, or storage):

_____

_____

_____

15. Describe Recreational or Other Use(s) (if applicable)

Amenity spaces have been provided on the first floor with landscaped open areas planned on site. Please see attached Justification Brief.

_____

_____

_____

_____

_____

D. Previous Use of the Property

1. Has there been an industrial or commercial use on the subject lands or adjacent lands? ☐ Yes ▣ No ☐ Unknown
   If yes, specify the uses (for example: gas station or petroleum storage):
   Norfolk Tavern
2. Is there reason to believe the subject lands may have been contaminated by former uses on the site or adjacent sites?☐ Yes ☐ No ▣ Unknown
3. Provide the information you used to determine the answers to the above questions:
4. If you answered yes to any of the above questions in Section D, a previous use inventory showing all known former uses of the subject lands, or if appropriate, the adjacent lands, is needed. Is the previous use inventory attached? ☐ Yes ▣ No

E. Provincial Policy

1. Is the requested amendment consistent with the provincial policy statements issued under subsection 3(1) of the *Planning Act, R.S.O. 1990, c. P. 13*? ☐ Yes ☐ No

   If no, please explain:

   This application is consistent with the applicable provincial policies. Please see the attached Justification Brief.
2. It is owner's responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals, including the Endangered Species Act, 2007. Have the subject lands been screened to ensure that development or site alteration will not have any impact on the habitat for endangered or threatened species further to the provincial policy statement subsection 2.1.7? ☐ Yes ▣ No

   If no, please explain:

   Lands were previously developed. Please see attached Justification Brief for further detail.

3. Have the subject lands been screened to ensure that development or site alteration will not have any impact on source water protection? ☒ Yes ☐ No
   If no, please explain:

   _____

   _____

   Note: If in an area of source water Wellhead Protection Area (WHPA) A, B or C please attach relevant information and approved mitigation measures from the Risk Manager Official.

4. Are any of the following uses or features on the subject lands or within 500 metres of the subject lands, unless otherwise specified? Please check boxes, if applicable. **N/A**

   Livestock facility or stockyard (submit MDS Calculation with application)

   ☐ On the subject lands or ☐ within 500 meters – distance _____
   Wooded area
   ☐ On the subject lands or ☐ within 500 meters – distance _____ **Municipal Landfill**
   ☐ On the subject lands or ☐ within 500 meters – distance _____
   Sewage treatment plant or waste stabilization plant
   ☐ On the subject lands or ☐ within 500 meters – distance _____
   Provincially significant wetland (class 1, 2 or 3) or other environmental feature
   ☐ On the subject lands or ☐ within 500 meters – distance _____
   Floodplain
   ☐ On the subject lands or ☐ within 500 meters – distance _____
   Rehabilitated mine site
   ☐ On the subject lands or ☐ within 500 meters – distance _____
   Non-operating mine site within one kilometre
   ☐ On the subject lands or ☐ within 500 meters – distance _____
   Active mine site within one kilometre
   ☐ On the subject lands or ☐ within 500 meters – distance _____ **Industrial or commercial use (specify the use(s))**
   ☐ On the subject lands or ☐ within 500 meters – distance _____
   Active railway line
   ☐ On the subject lands or ☐ within 500 meters – distance _____ **Seasonal wetness of lands**
   ☐ On the subject lands or ☐ within 500 meters – distance _____
   Erosion
   ☐ On the subject lands or ☐ within 500 meters – distance _____
   Abandoned gas wells
   ☐ On the subject lands or ☐ within 500 meters – distance _____

F. Servicing and Access

1. Indicate what services are available or proposed:
   Water Supply
   - ☒ Municipal piped water
   - ☐ Individual wells
   - ☐ Communal wells
   - ☐ Other (describe below)

   _____

   Sewage Treatment
   - ☒ Municipal sewers
   - ☐ Septic tank and tile bed in good working order
   - ☐ Communal system
   - ☐ Other (describe below)

   _____

   Storm Drainage
   - ☒ Storm sewers
   - ☐ Other (describe below)
   - ☐ Open ditches

   _____

2. Existing or proposed access to subject lands:
   - ☒ Municipal road
   - ☐ Unopened road
   - ☐ Provincial highway
   - ☐ Other (describe below)

   Name of road/street: _____

G. Other Information

1. Does the application involve a local business? ☐ Yes ☒ No
   If yes, how many people are employed on the subject lands?
   _____
2. Is there any other information that you think may be useful in the review of this application? If so, explain below or attach on a separate page.
   _____
   _____
   _____
   _____

H. Supporting Material to be submitted by Applicant

In order for your application to be considered complete, **folded** hard copies (number of paper copies as directed by the planner) and an **electronic version (PDF) of the properly named site plan drawings, additional plans, studies and reports** will be required, including but not limited to the following details:

1. Concept/Layout Plan
2. All measurements in metric
3. Key map
4. Scale, legend and north arrow
5. Legal description and municipal address
6. Development name
7. Drawing title, number, original date and revision dates
8. Owner's name, address and telephone number
9. Engineer's name, address and telephone number
10. Professional engineer's stamp
11. Existing and proposed easements and right of ways
12. Zoning compliance table – required versus proposed
13. Parking space totals – required and proposed
14. All entrances to parking areas marked with directional arrows
15. Loading spaces, facilities and routes (for commercial developments)
16. All dimensions of the subject lands
17. Dimensions and setbacks of all buildings and structures
18. Location and setbacks of septic system and well from all existing and proposed lot lines, and all existing and proposed structures
19. Gross, ground and useable floor area
20. Lot coverage
21. Floor area ratio
22. Building entrances, building type, height, grades and extent of overhangs
23. Names, dimensions and location of adjacent streets including daylighting triangles
24. Driveways, curbs, drop curbs, pavement markings, widths, radii and traffic directional signs
25. All exterior stairways and ramps with dimensions and setbacks
26. Retaining walls including materials proposed
27. Fire access and routes
28. Location, dimensions and number of parking spaces (including visitor and accessible) and drive aisles
29. Location of mechanical room, and other building services (e.g. A/C, HRV)
30. Refuse disposal and storage areas including any related screening (if indoors, need notation on site plan)
31. Winter snow storage location

32. Landscape areas with dimensions
33. Natural features, watercourses and trees
34. Fire hydrants and utilities location
35. Fencing, screening and buffering – size, type and location
36. All hard surface materials
37. Light standards and wall mounted lights (plus a note on the site plan that all outdoor lighting is to be dark sky compliant)
38. Business signs (make sure they are not in sight lines)
39. Sidewalks and walkways with dimensions
40. Pedestrian access routes into site and around site
41. Bicycle parking
42. Architectural elevations of all building sides
43. All other requirements as per the pre-consultation meeting

In addition, the following additional plans, studies and reports, including but not limited to, **may** also be required as part of the complete application submission:

☐ Zoning Deficiency Form

☐ On-Site Sewage Disposal System Evaluation Form (to verify location and condition)

▣ Architectural Plan

▣ Buildings Elevation Plan

☐ Cut and Fill Plan

▣ Erosion and Sediment Control Plan

▣ Grading and Drainage Control Plan (around perimeter and within site) (existing and proposed)

▣ Landscape Plan

▣ Photometric (Lighting) Plan

☐ Plan and Profile Drawings

▣ Site Servicing Plan

▣ Storm water Management Plan

☐ Street Sign and Traffic Plan

☐ Street Tree Planting Plan

☐ Tree Preservation Plan

☐ Archaeological Assessment

☐ Environmental Impact Study

- ☒ Functional Servicing Report
- ☐ Geotechnical Study / Hydrogeological Review
- ☐ Minimum Distance Separation Schedule
- ☐ Noise or Vibration Study
- ☐ Record of Site Condition
- ☒ Storm water Management Report
- ☒ Traffic Impact Study – please contact the Planner to verify the scope required

Site Plan applications will require the following supporting materials:

1. Two (2) complete sets of the site plan drawings folded to 8½ x 11 and an electronic version in PDF format
2. Letter requesting that the Holding be removed (if applicable)
3. A cost estimate prepared by the applicant's engineer
4. An estimate for Parkland dedication by a certified land appraiser
5. Property Identification Number (PIN) printout

Standard condominium exemptions will require the following supporting materials:

- ☐ Plan of standard condominium (2 paper copies and 1 electronic copy)
- ☐ Draft condominium declaration
- ☐ Property Identification Number (PIN) printout

Your development approval might also be dependent on other relevant federal or provincial legislation, municipal by-laws or other agency approvals.

All final plans must include the owner's signature as well as the engineer's signature and seal.

I. Development Agreements

A development agreement may be required prior to site plan approval, subdivision and condominium applications. Should this be necessary for your development, you will be contacted by the agreement administrator with further details of the requirements including but not limited to insurance coverage, professional liability for your engineer, additional fees and securities.

J. Transfers, Easements and Postponement of Interest

The owner acknowledges and agrees that if required, it is their solicitor's responsibility on behalf of the owner, to disclose the registration of all transfer(s) of land and/or easement in favour of the County and/or utilities. Also, the owner further acknowledges and agrees that it is their solicitor's responsibility on behalf of the owner for the registration of postponements of any charges in favour of the County.

K. Permission to Enter Subject Lands

Permission is hereby granted to Norfolk County officers, employees or agents, to enter the premises subject to this application for the purposes of making inspections associated with this application, during normal and reasonable working hours.

L. Freedom of Information

For the purposes of the *Municipal Freedom of Information and Protection of Privacy Act*, I authorize and consent to the use by or the disclosure to any person or public body any information that is collected under the authority of the *Planning Act, R.S.O. 1990, c. P. 13* for the purposes of processing this application.

B. [illegible] — October 7, 2024

Owner/Applicant Signature — Date

M. Owner's Authorization

If the applicant/agent is not the registered owner of the lands that is the subject of this application, the owner(s) must complete the authorization set out below.

I/We 1000033566 Ontario Inc. am/are the registered owner(s) of the lands that is the subject of this application.

I/We authorize Arcadis Professional Services (Canada) Inc. (c/o Carmen Jandu) to make this application on my/our behalf and to provide any of my/our personal information necessary for the processing of this application. Moreover, this shall be your good and sufficient authorization for so doing.

B. [illegible] — October 7, 2024.

Owner — Date

Owner — Date

N. Declaration

I, CARMEN JANDU (AGENT) of TOWN OF OAKVILLE

solemnly declare that:

all of the above statements and the statements contained in all of the exhibits transmitted herewith are true and I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of *The Canada Evidence Act*.

Declared before me at:

City of Hamilton

Owner/Applicant Signature

In Province of Ontario

This 4th day of October

A.D., 2024

A Commissioner, etc.

Jared Vail Marcus, a Commissioner, etc
Province of Ontario,
for Arcadis Professional Services(Canada) Inc.
Expires June 16, 2026

2672516 Ontario Ltd.

200 Main Street, Port Dover, Norfolk County

Functional Servicing Report (FSR)

October 9th, 2024

200 Main Street, Port Dover, Norfolk County

Functional Servicing Report (FSR)

October 9th, 2024

Prepared By:
Arcadis Professional Services (Canada) Inc.
Suite 200, East Wing – 360 James Street North
Hamilton, ON, L8L 1H5
Canada
www.arcadis.com

Prepared For:
2672516 Ontario Ltd.

Our Ref:
#139459

_____

Imad Qneibi, P.Eng.
Senior Project Manager
Land Engineering

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Version Control

Issue	Rev. No.	Date Issued	Description	Reviewed By
FSR/SWM	**1**	**October 9th, 2024**	**Issued for SPA**	**JJ**

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1 Introduction

1.1 Background

Arcadis Professional Services (Canada) Inc. (Arcadis) has been retained by 2672516 Ontario Ltd. (the "Owner") to prepare a Functional Servicing Report in support of the Site Plan Application (SPA) process for a proposed residential development located at 200 Main Street, Town of Port Dover, in the County of Norfolk (County). The purpose of this report is to provide site-specific information for the County's review with respect to infrastructure required to support the proposed development regarding storm and sanitary discharge, and water supply.

More specifically, the report will present the following:

- Identify storm servicing opportunities and constraints;
- Identify sanitary servicing opportunities and constraints and evaluate the capacity of the receiving municipal sewer; and
- Identify water servicing opportunities and constraints, calculate the proposed domestic water and firefighting supply needs; and evaluate the capacity of the municipal infrastructure.
-

The following documents have been obtained from various sources:

- Norfolk County As-Built drawings for Main Street, Clinton Street and St. Andrews Street;
- Topographic Survey prepared by MacAulay, White and Muir Ltd., dated September 2022;
- Geotechnical Investigation Report, MTE Consultants Inc., June 2024; and,
- Architectural plans and site statistics prepared by van Groll and Associates Inc., dated July 2024.

1.2 Existing Site Description

Located at 200 Main Street, in Port Dover, Norfolk County, the 4070 m^2 (0.41 ha) subject site is bounded by the Main Street to the south, Clinton Street to the east, St. Andrews Street to the north, and by a single commercial unit to the south-west and a single detached house to the north-west. The postal code of the site is N0A 1N0. Please refer to **Figure 1** in **Appendix A** for an aerial view of the site.

The existing site was previously host to a single detached two-storey residential house, a boutique shop along St. Andrews St, a two-storey tavern at the intersection of Main St and Clinton St, and a public/County-owned parking lot with access from Clinton St. Under current conditions the mentioned structures have been demolished and/or removed, and the site is now vacant with patches of gravel, asphalt and grassed areas.

The site slopes towards the north from Main Street and south from St Andrews Street to the center of the site, from where it drains east to Clinton Street. Overland flow from the site is being picked up by municipal catchbasins on Clinton St. Site surface elevations range from 179.51 m to 182.63 m. Lands to the south-west and west are higher than the site. However, the south-west section is separated by an existing retaining wall, and the north-west section is lower than the site. Therefore, only a small external area from the mid-west of the property is draining into the site.

1.3 Site Proposal

The proposed development consists of a 6-storey mixed-use building with penthouse/rooftop amenities. The proposed 6-storey high-rise building will consist of both residential and retail space. Two (2) underground levels (P1&P2) are proposed which will contain parking, storage, and the utility rooms. The total height of the building is 20 m. The ground floor will have a raised ceiling, while the top three (3) floors are staggered while reducing floor space. The development will consist of landscaped areas on ground elevations as well as green terraces on the upper levels.

The Architectural Site Plan (VG&A, July 2024) is located in **Appendix A** for reference.

1.4 Service Connections

As per the County's as-built information, under pre-development conditions the site is being serviced by multiple connections for storm, sanitary and water due to previous developments on-site as mentioned in **Section 2**. As only one building is proposed, a single set of connections will be provided. Furthermore, the Ontario Building Code (OBC) requires two fire service connections separated by an isolation value for any building above 84 m in height. As the proposed building will not exceed this limit, one fire service connection will be provided. Specific site servicing details will be further discussed in subsequent sections.

2 Terms of Reference and Methodology

2.1 Terms of Reference

The following documents and mapping information has been reviewed in the preparation of this report:

- The terms of reference used for the scope of this report have been based on Norfolk County's Design Criteria for Sewers and Watermains, dated January 2021.
- Existing Infrastructure Plan and Profile Drawings from Norfolk County.
- Topographic Survey (MacAulay, White and Muir Ltd., dated September 2nd, 2022).

2.2 Methodology: Sanitary Discharge

In accordance with the Norfolk County design criteria, pre- and post-development peak sewer flows will be calculated as shown below in **Table 2-1**.

Table 2-1 Sanitary Design Parameters

Design Flows		Population Densities	
Residential Flow	450 L/c/day		
Commercial Flow	0.46 L/s/ha	Residential	2.75 people/unit
Infiltration Allowance	0.28 L/s/ha	Commercial	90 persons/ha
Peaking Factor	Harmon Equation		

Based on the calculated peak flows, the adequacy of the existing infrastructure to support the proposed development will be discussed in **Section 4**.

All sanitary sewers shall be sized to handle the theoretical daily peak flow per the City's requirement, the sanitary sewage flows have been estimated using the following formula:

$$Q = 1 + \frac{14}{4 + p0.5}$$

Based on the calculated peak flows, the adequacy of the existing infrastructure to support the proposed development will be discussed.

2.3 Methodology: Water Supply

The domestic water usage will be calculated based on the following County and Ontario Building Code design criteria as shown below in **Table 2-2**:

Table 2-2 Water Design Parameters

Average Day Consumption		Peaking Factors		
		Land Use	Peak Hour	Max Day
Residential	450 L/c/day	Residential	4	2.25
Commercial	0.46 L/s/ha	Commercial	2	2.25

Pressure and flow testing to determine the adequacy of the existing watermain to support the development with fire suppression in accordance with the Fire Underwriters Survey (FUS) Guidelines will be discussed further in **Section 5**.

3 Stormwater Management

Please see the **Stormwater Management Report**, prepared by Arcadis Professional Services (Canada) Inc. separately, dated October 10th, 2024.

4 Sanitary Drainage System

4.1 Existing Sanitary Services

Based on the infrastructure plan and profile drawings provided by Norfolk County, there is an existing 200 mm sanitary sewer within St. Andrew Street, an existing 525 mm sanitary sewer within Clinton Street, and an existing 450 mm sanitary sewer within Main Street.

Existing sanitary infrastructure is shown on the Site Servicing Plan **(SS-01)**, attached separately.

4.2 Pre-Development Sanitary Design Flow

As previously mentioned, the subject site in the existing condition is composed of an existing residential development and commercial area. Therefore, the pre-development peak sanitary flow has been calculated as follows:

$$Q_{\text{Pre-Dev.}} = \left(\frac{450\ \text{L/c·d} \cdot 6\ \text{pp} \cdot 3_{\text{P.F.}}}{86400\ \text{s / day}}\right) + \left(\frac{0.46\ \text{L/s/ha} \cdot 9\ \text{pp} \cdot 3_{\text{P.F.}}}{86400\ \text{s / day}}\right) + (0.28\ \text{L/s ha} \cdot 0.41\text{ha}) = \mathbf{0.60\ L/s}$$

Refer to **Appendix C** for the detailed sanitary design sheet.

4.3 Post-Development Sanitary Design Flow

Based on the criteria set in **Section 2.2** and the site plan and statistics provided by the architect, the corresponding post-development sanitary flow is calculated as follows:

$Q_{\text{Post-Dev.}} = (Q_{\text{Residential}}) \times \text{P.F.} + \text{I/I}$

Using the aforementioned criteria, the post-development sanitary design flow is calculated as follows:

$$Q_{\text{Post-Dev}} = \left(\frac{(450\ \text{L/c·d} \cdot 380\ \text{pers} \cdot 3_{\text{P.F.}}}{86400\ \text{s / day}}\right) + \left(\frac{0.46\ \text{L/s/ha} \cdot 8\ \text{pp} \cdot 2_{\text{P.F.}}}{86400\ \text{s / day}}\right) + (0.28\ \text{L/s·ha} \cdot 0.41\ \text{ha}) = \mathbf{3.40\ L/s}$$

Therefore, the subject site represents an increase in flow of (3.40 L/s – 0.60 L/s) = **2.80 L/s**. Norfolk County to advise as to whether the receiving municipal sanitary system can accommodate the proposed development.

The following **Table 4.1** summarizes the post-development sanitary flows for the subject lands.

Table 4.1 Post-Development Sanitary Flows

Land Use	Population Density	Area	Peaking Factor	Design Flow (L/s)	Infiltration (L/s)	Total Sanitary Flow (L/s)
Residential	2.75 (pp/unit)	0.30	2	3.16		3.16
Commercial	90 (pp/ha)	0.09	3	0.13		0.13
Infiltration		0.41			0.11	0.11
Total						**3.40**

4.4 Sanitary Service Connection

It is proposed that a new 150 mm sanitary service at a 2.0 % slope be installed from a new control manhole at the property line and connect to the existing 525 mm sanitary sewer within Clinton Street. The following table illustrates the peak flow and corresponding capacity of the proposed sanitary service:

Table 4.2 Sanitary Service Performance

From	To	Pipe Size (mm)	Pipe Slope	Peak Flow (L/S)	Capacity (L/s)	Percent Of Full Flow
Control MH	Municipal MH	150	2.0 %	3.40	22.5	15.1 %

As shown above, the proposed sanitary service will easily convey the post-development peak sanitary flow while operating at a maximum of 15.1 % of full flow capacity.

Refer to the detailed sanitary design sheet which can be found in **Appendix C** and the Site Servicing Plan **(SS-01)**, attached separately.

5 Water Supply System

5.1 Existing Water Infrastructure

Based on the infrastructure plan and profile drawings provided by Norfolk County, there is an existing 250 mm PVC watermain within Main Street, and an existing municipal fire hydrant fronting the site.

Hydrant flow testing was performed by Arcadis Professional Services (Canada) Inc. at existing fire hydrants along Main Street and Clinton Street, near 21-13 Clinton Street to confirm the available water supply's flow-pressure response curve. These tests were performed at 10:25am on August 8th, 2024, and were conducted in accordance with NFPA 291. The results are summarized as follows:

Table 5.1 Hydrant Response Curve (H2024-035) @ 200 Main St N.

Flow (gpm)	Flow (L/s)	Pressure (psi)	Pressure (kPa)
0	0	70	483
1,126	71.0	62	427
1,501	94.7	58	400

As shown above, static pressure within the system is expected to be approximately 70 psi.

A copy of the hydrant flow test can be found in **Appendix D** for reference.

5.2 Domestic Water Supply Demands

Using the criteria set in **Section 2.3** and the site statistics provided by the Architect, the Average Day Demand (ADD), Peak Hour Demand (PHD), and Max Day Demand (MDD) have been calculated, and are summarized as follows:

Table 5.2 Domestic Water Demands

Building	Population Density	Units/Area	ADD (L/s)	PHD (L/s)	MDD (L/s)
Residential	2.75 (pp/unit)	138 units	3.3	9.9	6.9
Commercial	90 (pp/ha)	865 m^2	0.04	0.05	0.04
Total			**3.3**	**9.9**	**6.9**

The domestic supply line for each building will be designed based on PHD while maintaining a minimum available pressure of 40 psi (275 kPa) at the face of the building.

Refer to **Appendix D** for the detailed calculations.

5.3 System Pressure Under Normal Operation

As previously mentioned, the domestic service shall be sized to convey domestic demands under normal system operating conditions (PHD) while maintaining a minimum available pressure of 40 psi (275 kPa). The residual pressure at the building is calculated by first interpolating the PHD residual pressure within the existing watermain, and then subtracting head losses within the system using the Hazen-Williams formula. The following table summarizes the residual pressure for the proposed domestic service:

Table 5.2 Residual Pressure Under PHD Conditions

Flow Conditions	PHD (L/S)	Domestic Service (mm)	Residual Pressure @ Main		Residual Pressure @ Bldg	
			(psi)	(kPa)	(psi)	(kPa)
PHD	7.9	100	70.0	482	69.8	481

As shown above, there is no appreciable head loss within the system, and the residual pressure at the building face is above the minimum acceptable pressure of 40 psi (275 kPa) under PHD conditions.

Refer to **Appendix D** for the detailed design calculations.

5.4 System Pressure Under Fire Flow

The available fire flow within the municipal water supply system is determined by interpolating the response curve established by the hydrant flow test. The fire flow was calculated in accordance with the Fire Underwriters Survey (FUS) to be **133.3 L/s**.

Table 5.3 Residual Pressure Under Fire + MDD Conditions

Flow Conditions	FF + MDD (L/S)	Fire Service (mm)	Residual Pressure @ Main		Residual Pressure @ Bldg	
			(psi)	(kPa)	(psi)	(kPa)
FF + MDD	37.8	150	46.0	317	39.7	273

As shown above, the residual pressure within the municipal watermain is above the minimum acceptable pressure of 20 psi (140 kPa) under fire demand conditions (Fire + MDD).

Refer to **Appendix D** for the detailed design calculations.

5.5 Water Service Connections

To service the mixed-use development, it is proposed to connect to the existing 250 mm watermain within Main Street with a 150 mm fire service, and a 100 mm domestic service. All required valve and boxes, as well as a meter and backflow preventers, shall be installed within the mechanical room of the P1 level.

Refer to the Site Servicing Plan **(SS-01)**, attached separately, for the location of existing and proposed water infrastructure.

5.6 Hydrant Coverage

There is an existing municipal fire hydrant at the intersection of Clinton Street and Main Street near 21-13 Clinton Street, fronting the subject site (200 Main Street North) within the northern boulevard of Clinton Street.

Since the OBC requirement of a Siamese Connection within 45 m of a fire hydrant is required, no additional hydrants are required. Refer to the Site Servicing plan, **SS-01**, attached separately, for the location of existing fire hydrant.

6 Summary

Stormwater Management
Please see the Stormwater Management Report, prepared by Arcadis Professional Services (Canada) Inc. separately, dated October 10th, 2024.

Sanitary Sewers

The proposed development represents a minor increase in wastewater flow such that it is not expected to have a significant impact on the receiving downstream sanitary sewer system. Norfolk County to advise as to whether the receiving municipal sanitary system can accommodate the proposed development.

Water Supply
The existing 250 mm watermain within Main Street has sufficient capacity to support the proposed fire and domestic water demands for the proposed development without improvements to the municipal water supply network.

Summary
In summary, it can be concluded that the Site Plan Amendment (SPA) can be supported from a municipal site servicing perspective pending input from Norfolk County.

Appendix A

Background Information

Aerial Plan (Subject Site)

Conceptual Site Plan and Statistics (Arcadis Professional Services (Canada) Inc.)

Topographic Surveys (A.J Clarke and Associates Ltd.)

Plan and Profile Drawings (Halton Region)

CLIENT: NORFOLK DEVELOPMENT	PROJECT NAME: 200 Main Street, Port Dover, N0A 1N0, ON	ARCADIS **Arcadis Professional Services (Canada) Inc.** Suite 200 - 360 James Street North Hamilton ON L8L 1H5 Canada **Arcadis.com**	
	SCALE: NTS / DATE: 2024-10-01	FIGURE NAME: AERIAL PLAN	FIGURE NO.: FIG.1 / REVISION: 1
	PROJECT ENG: IQ / DRAWN BY: SK		
	CHECKED BY: IQ / APPROVED BY: IQ		
	PROJECT NO: 139459		

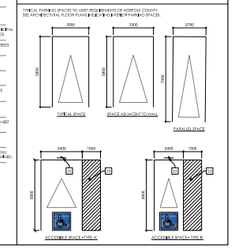
File Location: H:\139459_Norfolk_Tave\7.0_Production\7.03_Design\04_CivilSheets\Figures\139459 - Figure 1 (Aerial Plan).dwg Last Saved: October 1, 2024, by mitko.zdravevski Plotted: Tuesday, October 1, 2024 3:01:36 PM by Mitko Zdravevski

SCALE CHECK 10mm 1 in

SITE PLAN NOTES

- PROPERTY LINE (UNLESS OTHERWISE SHOWN) AND INDICATES EXISTING PROPERTY LINE. SEE ALSO SURVEY.
- ASPHALT PAVED AREA WITH HEAVY BOUNDARY LINE INDICATES ASPHALT PAVING OF PROPOSED BUILDING FOOTPRINT AT GRADE. SEE ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR CONSTRUCTION INFORMATION.
- HEAVY DASHED LINE INDICATES OUTLINE OF BUILDING PROJECTION ABOVE. SEE ARCHITECTURAL PLANS AND ELEVATIONS.
- CROSS-HATCH PATTERN WITHIN HEAVY SOLID MATCHED AREAS INDICATE AREA OF GROUND FLOOR LEVEL WITH LIMITED OTHER FLOOR SPACE BELOW AS NOTED. SEE ALSO ARCHITECTURAL DRAWINGS.
- INSTALL NEW STREET CURB TO MEET NORFOLK COUNTY AMETEK STANDARDS. SEE ALSO CIVIL DRAWINGS FOR SPECIFICATIONS. MATCH AND BLEND WITH EXISTING CURBS WHERE ADJOINING.
- INSTALL NEW 1.0 m WIDE POURED CONCRETE SIDEWALK TO MEET NORFOLK COUNTY AMETEK STANDARDS. SEE ALSO CIVIL DRAWINGS FOR SPECIFICATIONS. MATCH AND BLEND WITH EXISTING SIDEWALK WHERE ADJOINING.
- INSTALL AND CONTINUE HIGH 1.0 m WIDE POURED CONCRETE SIDEWALK THROUGH DRIVEWAY AS INDICATED. ASPHALT TO MATCH SIDEWALK ELEVATION. SEE ALSO CIVIL DRAWINGS.
- MATCHED AREA INDICATES NEW BOULEVARD, SOFT LANDSCAPED AREA. FOR OTHER LANDSCAPING, SEE LANDSCAPING DRAWINGS.
- PATTERNED MATCHED AREA WITH MULTIPLE INDICATIVE HARD SURFACE MATERIALS AND SOFTSCAPE LANDSCAPING INCLUDING WALKWAYS AND PATIOS. SEE LANDSCAPING DRAWINGS FOR DETAILS AND SPECIFICATIONS.
- APPROXIMATE LOCATION OF NEW WIRE DISTRIBUTION PEDESTAL CONNECTION.
- EXISTING TREE TO REMAIN.
- MAIN BUILDING FIRE DEPARTMENT ENTRANCE.
- BUILDING BARRIER FREE PEDESTRIAN ENTRANCE.
- ENSURE WALKWAYS MEETS OBC PATH OF TRAVEL REQUIREMENTS OF 1:20 MAXIMUM SLOPE.
- NEW POURED CONCRETE PEDESTRIAN CONNECTION WALKWAY TO NEW PARKING LOT ON ADJACENT LOT.
- SHADED AREA INDICATES ENTIRETY OF PARKING LEVEL BELOW GRADE. SEE ALSO ARCHITECTURAL DRAWINGS.
- SOLID HATCHED BOUNDARY INDICATES RETAINING WALL OR LANDSCAPED WALL SEPARATING BUILDING (BEYOND FROM EXTERIOR AT PARKING LEVEL). SEE ALSO ARCHITECTURAL DRAWINGS.
- INSTALL DEPRESSED CURB (TOP OF WALL WHERE GRADE DIFFERENCE ON ADJACENT SURFACES EXCEEDS 600mm) AT ENTRY. CONFIRM TO MEET OBC REQUIREMENTS.
- INSTALL EXTERIOR POURED CONCRETE RAMP/CURB TO MEET OBC REQUIREMENTS. SEE ARCHITECTURAL DRAWINGS FOR FURTHER DETAILS.
- HEAVY DASHED LINE INDICATES OUTLINE OF FLOOR LEVELS ABOVE MAIN FLOOR.
- INSTALL ASPHALT PAVING AT VEHICLE LOADING AND OVERHEAD AREAS. SEE ALSO CIVIL DRAWINGS.
- INSTALL NEW ACCESSIBLE PARKING SPACE SIGN AT ALL BARRIER FREE PARKING SPACES TO MEET REQUIREMENTS OF NORFOLK COUNTY.
- INSTALL PAINTED CROSS HATCH PATTERN AT NEW ACCESSIBLE PARKING SPACE TRANSFER AREA TO MEET REQUIREMENTS OF NORFOLK COUNTY.
- SHADED LINE AT MAIN ENTRANCE INDICATES CANOPY ABOVE. SEE ARCHITECTURAL DRAWINGS.
- CROSS HATCHED AREA IN BLUE FOR PROPOSED MECHANICAL DUCT SHAFT TO PARK BUILDING. BEING CONCEALED STEEL GRATE AT TOP OF SHAFT. LEVEL WITH GRADE. EXACT SIZE OF SHAFT TO BE DESIGNED

TYPICAL PARKING SPACES TO MEET REQUIREMENTS OF NORFOLK COUNTY. SEE ARCHITECTURAL FLOOR PLANS FOR EXACT LOCATION OF INTERIOR PARKING SPACES.



SURVEY DATA

SURVEY DATA FOR THIS SITE WAS TAKEN FROM:

SURVEYOR'S REAL PROPERTY REPORT

PLAN OF SURVEY WITH TOPOGRAPHY OF

LOTS 31, 32, 33 & 34, BLOCK 50, REGISTERED PLAN 207
NORFOLK COUNTY (FORMERLY TOWN OF PORT DOVER)

TOWN OF PORT DOVER, NORFOLK COUNTY
DATED SEPTEMBER 6, 2016.

MacKAY, WHITE & MUIR LTD.,
SURVEYORS - LAND
443 HARDY ROAD, UNIT 2, BRANTFORD,
PHONE: 519) 752-0040 FAX: (519) 752-0087
E-MAIL: mwmsurvey@bellnet.ca

SYMBOLS LEGEND

SITE LIGHT FIXTURES. SEE EXTERIOR LIGHTING LAYOUT DRAWING BY J + B ENGINEERING INC.:

WALL PACK | LIGHT STANDARD | LIGHT STANDARD

- SEE TRAFFIC DIRECTION ARROW
- BUILDING VEHICLE ENTRANCE/EXIT (LARGE SYMBOL WITH 'V')
- BUILDING PEDESTRIAN ENTRANCE/EXIT (SMALL SYMBOL)
- PRIMARY PEDESTRIAN ENTRANCE/EXIT
- FIRE DEPARTMENT SIAMESE CONNECTION
- SEE SIGNS (IE: ACCESSIBLE, FIRE ROUTE)
- BIKE RACK
- FIRE HYDRANT

2.0 OWNER:	ARCHITECT: VAN GROLL & ASSOCIATES INC., 2 ST. CLAIR AVE. W., FLT 18 Toronto, Ontario M4V 1L5 ATTN: Ilka Von Grll TEL 9059439611 EXT 228
2.1 PROJECT LOCATION:	200 MAIN STREET, PORT DOVER, ONTARIO, CANADA
1.1 LEGAL DESCRIPTION:	LOTS 31, 32, 33 & 34, BLOCK 50, REGISTERED PLAN 207 NORFOLK COUNTY (FORMERLY TOWN OF PORT DOVER)
4.2 ZONING CATEGORY:	-
1.0 PROPOSED USE:	MIXED USE COMMERCIAL & RESIDENTIAL BUILDING

2.2 LOT AREA	METRIC (SQ.M)	IMPERIAL (SQ.FT)
EXISTING LOT AREA	4,070	43,803

1.0 PROPOSED COVERAGE	METRIC (SQ.M)	IMPERIAL (SQ.FT)
BUILDING AREA TO BE DEMOLISHED (Includes Bell Link)	734	7,897
PROPOSED NEW BELOW GRADE BUILDING AREA	3,808	40,987
PROPOSED NEW BUILDING FOOTPRINT	2,808	30,221
PROPOSED NEW BUILDING AREA (Bell Link, Pedestrian Walkway)	2,852	31,775
PERCENTAGE LOT COVERAGE	70%	(2,852 / 4070)

3.0 BUILDING CLASSIFICATION:	
3.2.2.43. GROUP C, UP TO 6 STOREYS, SPRINKLERED, NONCOMBUSTIBLE CONSTRUCTION	

4.0 BUILDING CONSTRUCTION:	
NON COMBUSTIBLE	

10.0 WAITING FOR ASSEMBLIES:	
SEE WALL FLOOR AND CEILING/ROOF WALLS (INCLUDING FIRE RATED WALLS) DRAWINGS	

11.0 GROSS FLOOR AREAS	METRIC (SQ.M)	IMPERIAL (SQ.FT)
PARKING LEVEL (P2)	3,035	32,535
PARKING LEVEL (P1)	3,806	40,967
GROUND LEVEL	2,911	31,336
SECOND LEVEL	2,270	25,510
THIRD LEVEL	2,270	25,510
FOURTH LEVEL	2,150	23,142
FIFTH LEVEL	2,150	23,142
SIXTH LEVEL	2,150	23,142
MECHANICAL PENTHOUSE LEVEL	248	2,668
TOTAL GROSS FLOOR AREA (SUM)	21,177	227,991

12.0 AREA OF MECHANICAL PENTHOUSE	METRIC (SQ.M)	IMPERIAL (SQ.FT)
ROOF OF ADDITION	2,470	26,586
MECHANICAL PENTHOUSE LEVEL GFA	248	2,668
PERCENTAGE ROOF COVERAGE	10.00%	(248 / 2,470)

12.1 BASIC FLOOR AREA USE BREAKDOWN (EXCL. CIRCULATION, MECHANICAL, ETC):

	PARKING (# OF SPACES)	COMMERCIAL (# OF SPACES)	RESIDENTIAL (NO. STORAGE)	MECHANICAL (# OF SPACES)	DWELLING UNITS
PARKING LEVEL (P2)	88 SPACES		399m²	93m²	
PARKING LEVEL (P1)	101 SPACES		256m²	266m²	
P1 LEVEL (STREET)	12 SPACES				
GROUND LEVEL	113 SPACES	537m²	467m²	57m²	
SECOND LEVEL					29 UNITS
THIRD LEVEL					29 UNITS
FOURTH LEVEL					27 UNITS
FIFTH LEVEL					27 UNITS
SIXTH LEVEL					27 UNITS
MECHANICAL PENTHOUSE				166m²	

12.2 PARKING CALCULATION:

PARKING NOT REQUIRED

PARKING BE PROVIDED AT 1 PARKING SPACE PER DWELLING UNIT PLUS ASSIGNMENT PARKING TO BE SOLD TO DWELLING UNIT OWNERS OR SUBLEASED AS VISITORS PARKING SPACES.

PARKING PROVIDED

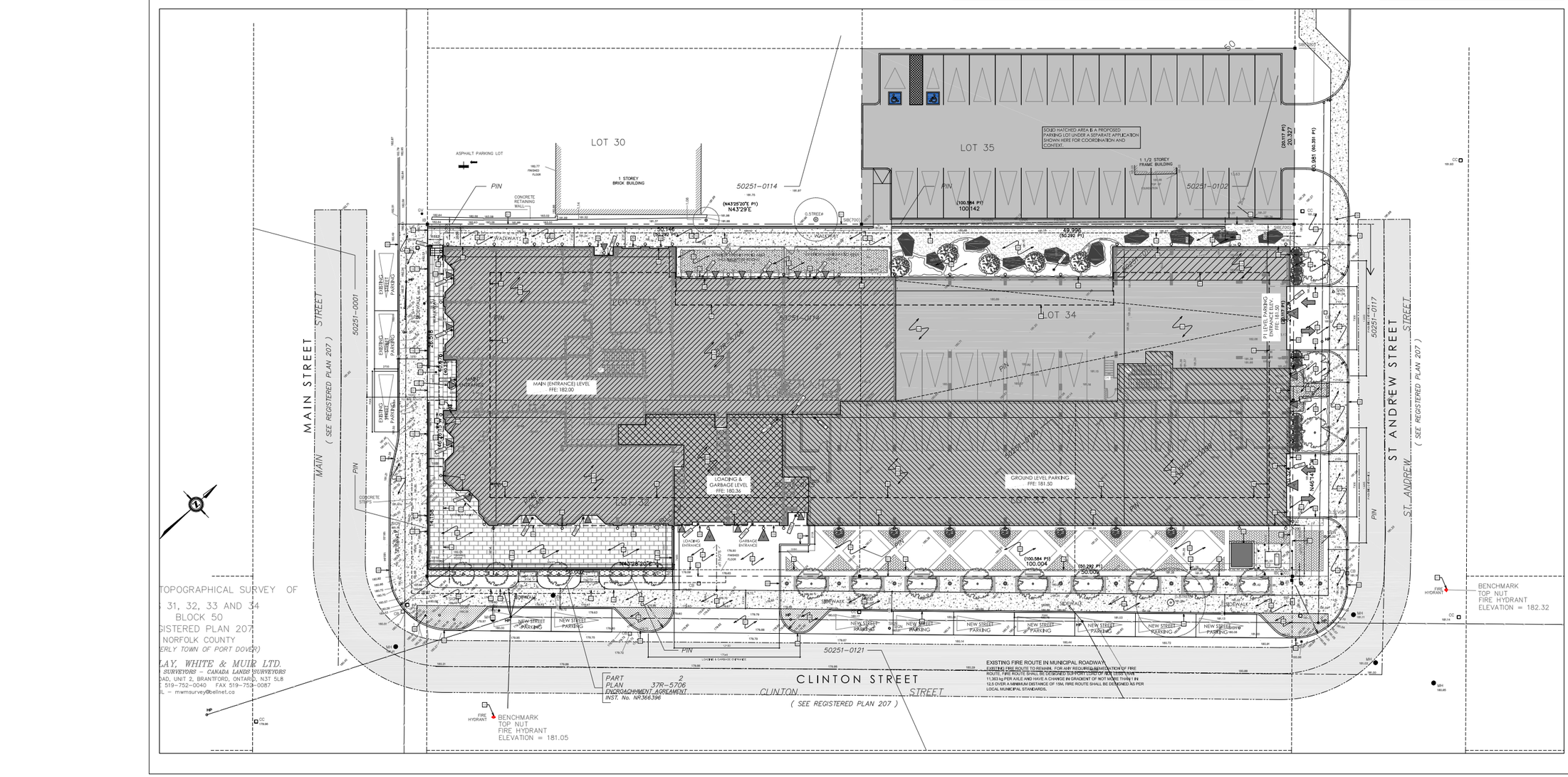
ON-SITE: 181 SPACES
- Ground: 13 spaces
- P1 Ramp: 25 spaces
- P1 Mid: 50 spaces
- P1 Low: 56 spaces
- P2 Bot: 44 spaces

STREET PARKING (EXISTING AND NEW STREET PARKING SPACES): 3 SPACES
NEW PARKING SPACES ADDED (NEW STREET PARKING SPACES): 9 SPACES
TOTAL PARKING SPACES: 193 SPACES

BARRIER FREE PARKING SPACES (INCLUDED IN PROVIDED PARKING): 7 SPACES (3 TYPE 'A' + 4 TYPE 'B')

DRAWINGS MUST **NOT** BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS, SPECIFICATIONS AND DRAWINGS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH ANY OF THE WORK.

STAMP | PROJECT NORTH | TRUE NORTH



NO.	DESCRIPTION	BY	DATE
01	ISSUED FOR	CH	

van Groll & Associates Inc.
2 St. Clair Avenue W., Flr 18
Toronto, ON, M4V 1L5
905 339 2811
vangr@associates.com

CLIENT:

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: 200 MAIN STREET
PORT DOVER, ON
N0A 1N0

DRAWING TITLE:
SITE PLAN & SITE STATISTICS

DATE: 24.06.18 | SCALE: 1 : 150
DRAWN: CH | SHEET NUMBER:
JOB NUMBER: 171-037 | A1.1

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

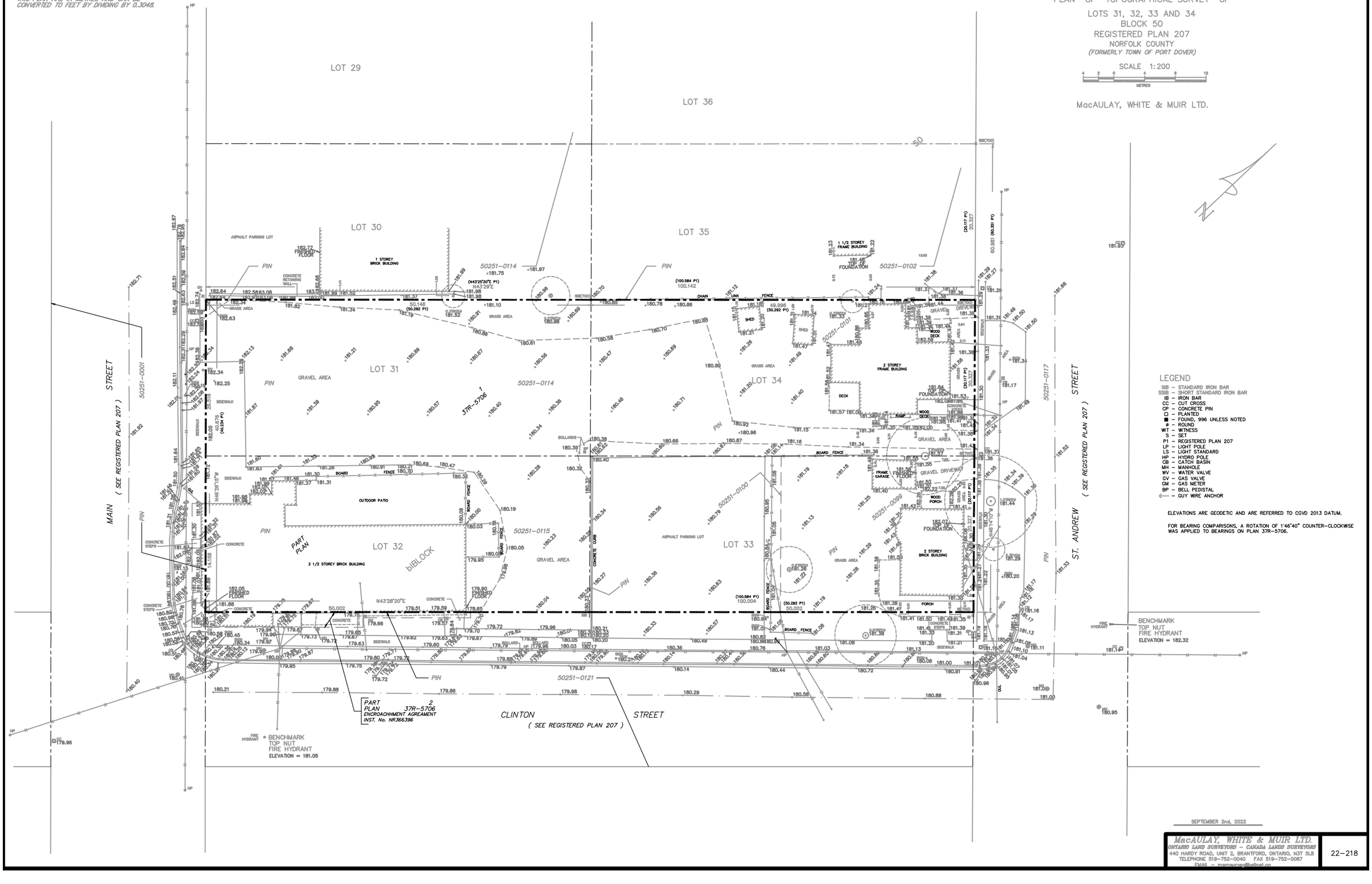
PLAN OF TOPOGRAPHICAL SURVEY OF

LOTS 31, 32, 33 AND 34
BLOCK 50
REGISTERED PLAN 207
NORFOLK COUNTY
(FORMERLY TOWN OF PORT DOVER)

SCALE 1:200

4 2 0 4 8 12
METRES

MacAULAY, WHITE & MUIR LTD.



LEGEND

- SIB – STANDARD IRON BAR
- SSIB – SHORT STANDARD IRON BAR
- IB – IRON BAR
- CC – CUT CROSS
- CP – CONCRETE PIN
- □ – PLANTED
- ■ – FOUND, 996 UNLESS NOTED
- ● – ROUND
- WIT – WITNESS
- S – SET
- P1 – REGISTERED PLAN 207
- LP – LIGHT POLE
- LS – LIGHT STANDARD
- HP – HYDRO POLE
- CB – CATCH BASIN
- MH – MANHOLE
- WV – WATER VALVE
- GV – GAS VALVE
- GM – GAS METER
- BP – BELL PEDISTAL
- ⟵ – GUY WIRE ANCHOR

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO CGVD 2013 DATUM.

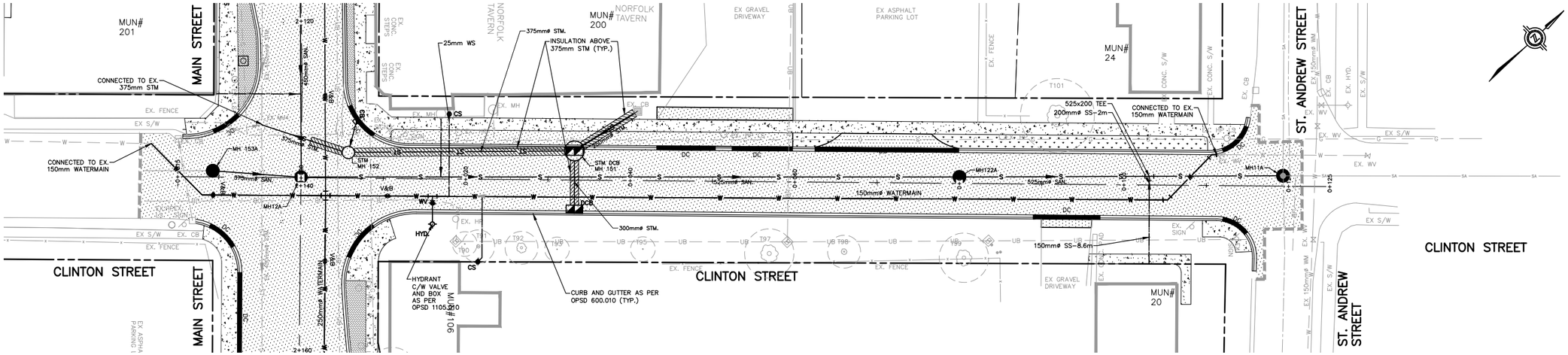
FOR BEARING COMPARISONS, A ROTATION OF 1°46'40" COUNTER-CLOCKWISE WAS APPLIED TO BEARINGS ON PLAN 37R-5706.

SEPTEMBER 2nd, 2022

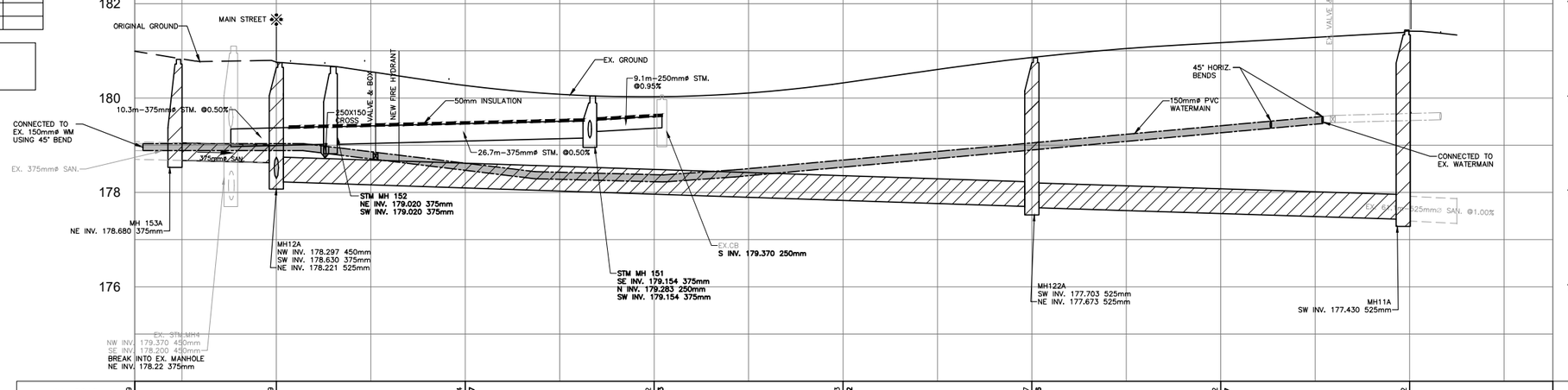
MacAULAY, WHITE & MUIR LTD.
ONTARIO LAND SURVEYORS – CANADA LANDS SURVEYORS
440 HARDY ROAD, UNIT 2, BRANTFORD, ONTARIO, N3T 5L8
TELEPHONE 519-752-0040 FAX 519-752-0087
EMAIL – mwmsurvey@bellnet.ca

22-218

FOR CONTINUATION SEE PP-15



FOR CONTINUATION SEE PP-15



C.L. ROAD ELEVATION	180.99		180.79		180.34	180.27	180.12	180.03	180.43	180.32	180.97	180.86	181.32	181.17	181.42			C.L. ROAD ELEVATION
TOP OF WATERMAIN			179.04		178.62		178.38		178.69		179.06		179.43		179.68			TOP OF WATERMAIN
SANITARY SEWER		178.68		178.63	178.32	10.0m-375mmø SAN. @ 0.50% PVC SDR35 CLASS 'B' BEDDING		78.5m-525mmø SAN. @ 0.66% PVC SDR35 CLASS 'B' BEDDING			177.70	177.67	38.6m-525mmø SAN. @ 0.63% PVC SDR35 CLASS 'B' BEDDING		177.43			SANITARY SEWER
C.L. STATION	−0+015		0+000		0+020		0+040		0+060		0+080		0+100		0+120		0+135.17	C.L. STATION

SCHEDULE OF CATCHBASINS					
CB No.	STATION	TOP OF GRATE	INVERT	LEAD SIZE	CB SIZE
P2-19	0+033.24	179.49	178.64	375	TWIN INLET 600X1450

NOTE:

1. SERVICES ARE THE FOLLOWING SIZES UNLESS OTHERWISE NOTED: 19mm WS, 125mm SAN, 150mm STM

LEGEND

ST	EX. STORM SEWER
ST	PROPOSED STORM SEWER
S	EX. SANITARY SEWER
S	PROPOSED SANITARY SEWER
W	PROPOSED WATERMAIN
W	EX. WATERMAIN
W	PROPOSED WATERVALVE
W	EX. WATERVALVE
G	EX. BURIED GAS LINE
UB	EX. BURIED BELL LINE
CATV	EX. BURIED CABLE LINE
UH	EX. UNDERGROUND HYDRO LINE
x	EX. FENCE
	PROPOSED MANHOLE
	EX. MANHOLE
	PROPOSED CATCHBASIN
	PROPOSED TWIN INLET CATCHBASIN
	PROPOSED CATCHBASIN MANHOLE
	EX. CATCHBASIN
	PROPOSED SANITARY MANHOLE
	EX. SANITARY MANHOLE
	PROPOSED FIRE HYDRANT
	EX. FIRE HYDRANT
	EX. CONC. CURB TO REMAIN
DC	PROPOSED CURB AND GUTTER
	PROPOSED DEPRESSED CURB
CS	WATER SERVICE (WS)/ CURB STOP
	SANITARY SERVICE (SS)
EX. OHP	EX. HYDRO POLE
EX. SIGN	EX. SIGN
	PROPERTY LINE
	NEW ROAD CENTRELINE
	EX. ROAD CENTRELINE
BH8A	BOREHOLE LOCATION
	EX. TRAFFIC LIGHT POLE
	NEW ASPHALT
	NEW CONC.SIDEWALK
	NEW COLOURED CONC. BOULEVARD
	NEW NURSERY SOD
	EX. TREE
	NEW TREE C/W GRATE

No.	REVISIONS	Date	By	App.
10	RE-ISSUED FOR AS-BUILT	2018-11-29	J.G.	A.B.
9	AS-BUILT	2016-12-07	Y.X.	
8	ROAD WIDTH AND CL REVISED	2016-04-14	Y.X.	
7	BELL AND WATERMAIN REVISED	2016-03-03	Y.X.	
6	ISSUED FOR CONSTRUCTION	2016-01-19	Y.X.	

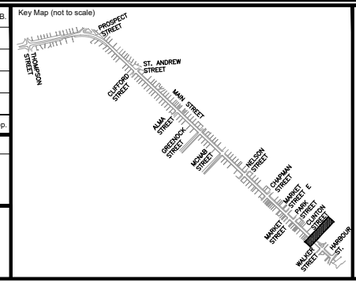
SUBMISSIONS

6th. ✓	Date 2016-01-19	9th. ____	Date ____
7th. ____	Date ____	Interim ____	Date ____
8th. ____	Date ____	Final ____	Date ____

BENCH MARKS

REFER TO DWG N-01 FOR DETAILS

Key Map (not to scale)



exp Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

Owner/Client: Norfolk County

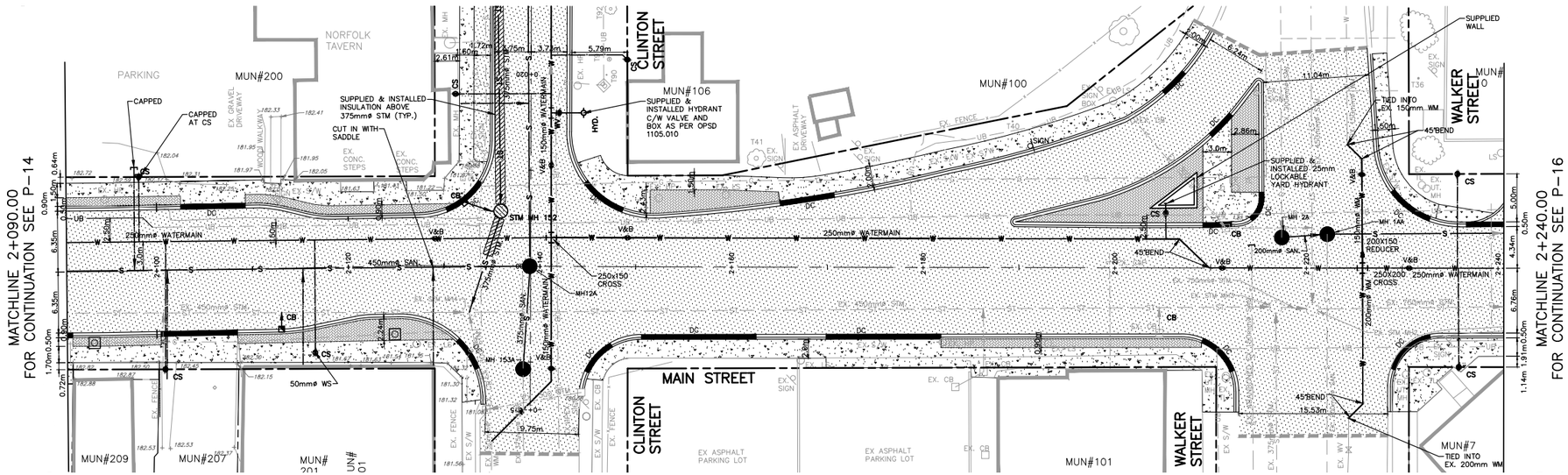
Location: PORT DOVER MAIN STREET RECONSTRUCTION

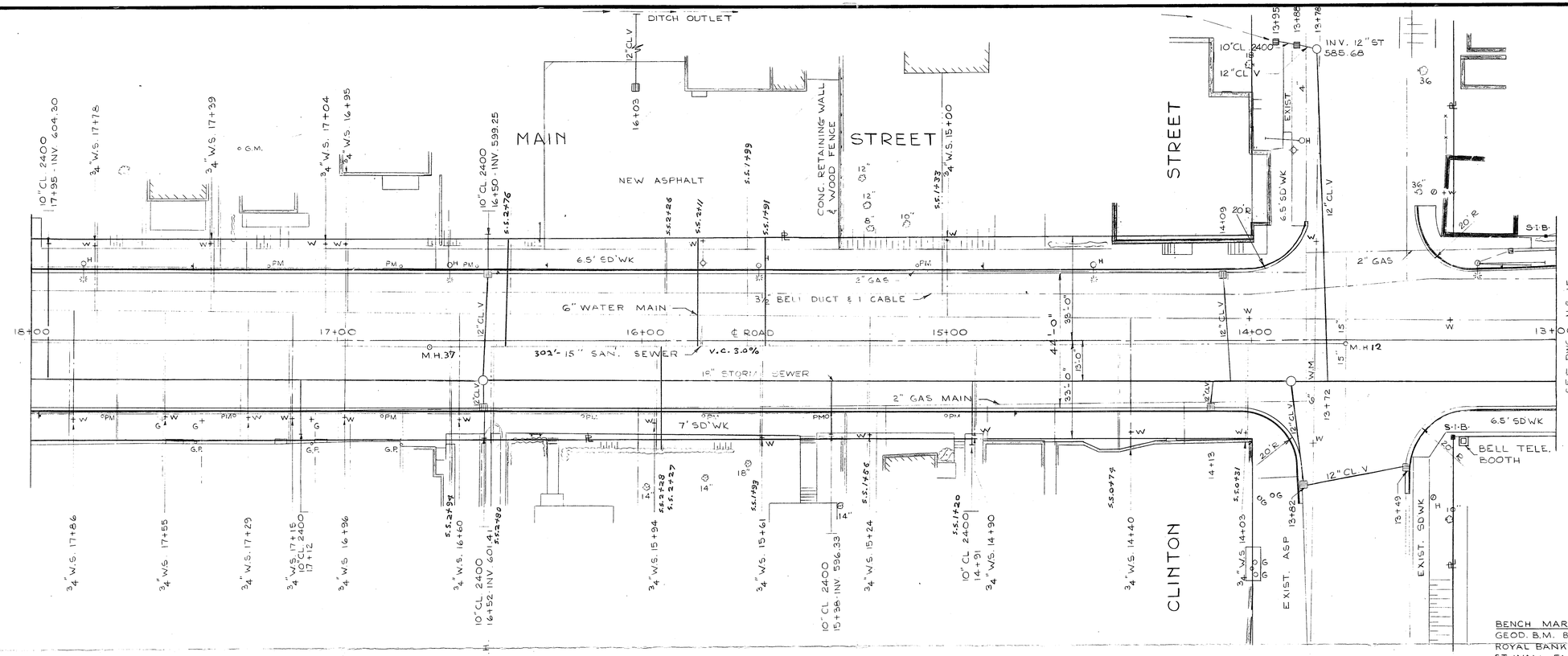
Title: CLINTON STREET 0+000 TO 0+120

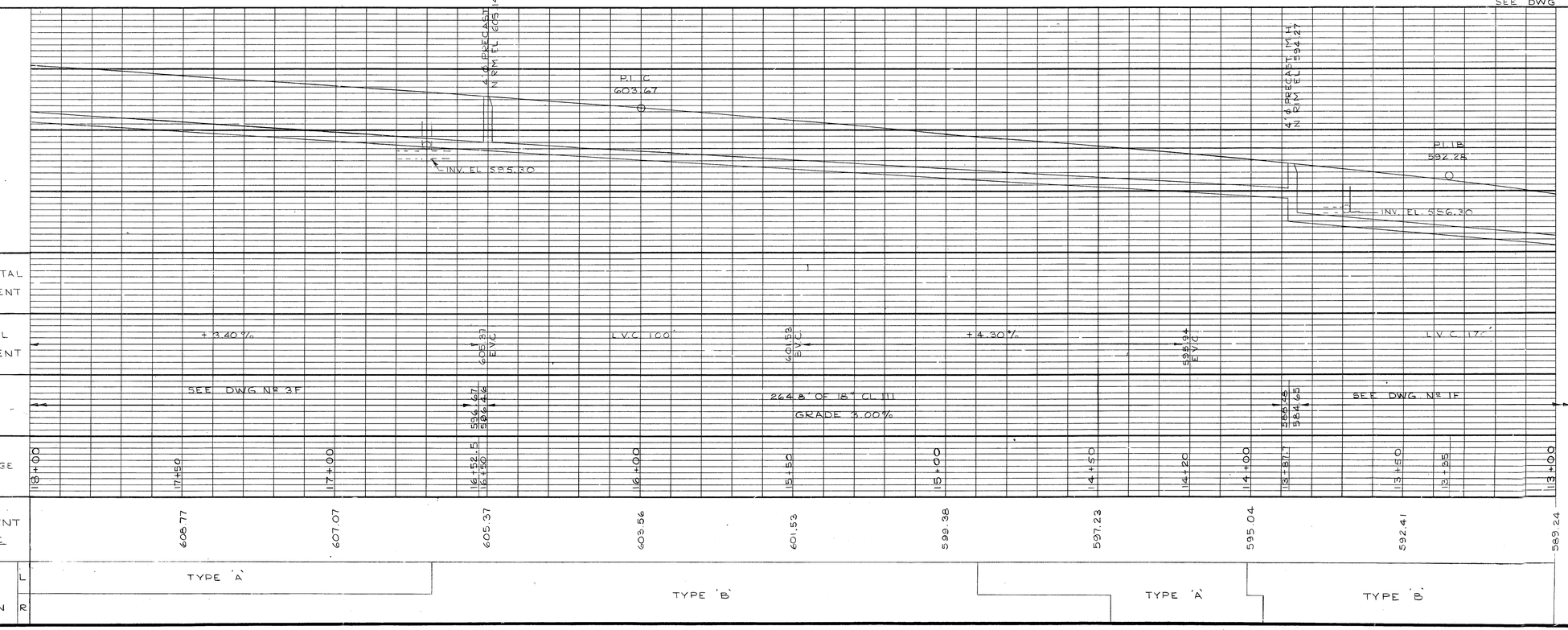
Designed By: A.B.	Drawn By: B.C. / Y.X.	Checked By: D.M.	
Scale: HORIZONTAL: 1:250 VERTICAL: 1:50	Date: FEB. 2, 2015	Drawing No.: PP-19	
Project No.: PW-E-16-60 (exp No. BRM00605307a)			

NPD-0592

FOR CONTINUATION SEE PP–19


MATCHLINE 2+090.00
FOR CONTINUATION SEE P–14
MATCHLINE 2+240.00
FOR CONTINUATION SEE P–16
NORFOLK TAVERN
PARKING
MUN#200
MUN#106
MUN#100
MUN#209
MUN#207
MUN#201
MUN#101
MUN#7
CLINTON STREET
MAIN STREET
WALKER STREET
CAPPED
CAPPED AT CS
SUPPLIED & INSTALLED INSULATION ABOVE 375mmø STM (TYP.)
CUT IN WITH SADDLE
SUPPLIED & INSTALLED HYDRANT C/W VALVE AND BOX AS PER OPSD 1105.010
SUPPLIED & INSTALLED 25mm LOCKABLE YARD HYDRANT
SUPPLIED WALL
TIED INTO EX. 150mm WM
TIED INTO EX. 200mm WM
45°BEND
45°BEND 15.53m
200x150 REDUCER
250x200 CROSS
250x150 CROSS
STM MH 152
MH12A
MH 1AA
MH 2A
50mmø WS
200mmø SAN.
250mmø WATERMAIN
450mmø SAN.
375mmø STM
EX. ASPHALT PARKING LOT
EX. ASPHALT DRIVEWAY
EX. GRAVEL DRIVEWAY
EX. CONC. STEPS
EX. FENCE
EX. S/W
EX. CB
EX. SIGN
EX. HYD.
EX. UB
EX. MH
EX. WM
EX. 375mmø STM
EX. 450mmø STM
EX. 600mmø STM
EX. 750mmø STM
EX. 200mmø WM
EX. 250mmø WM
EX. 300mmø WM
EX. 375mmø WM
EX. 450mmø WM
EX. 600mmø WM
EX. 750mmø WM
EX. 900mmø WM
EX. 1050mmø WM
EX. 1200mmø WM
EX. 1350mmø WM
EX. 1500mmø WM
EX. 1650mmø WM
EX. 1800mmø WM
EX. 2100mmø WM
EX. 2400mmø WM
EX. 2700mmø WM
EX. 3000mmø WM
EX. 3300mmø WM
EX. 3600mmø WM
EX. 3900mmø WM
EX. 4200mmø WM
EX. 4500mmø WM
EX. 4800mmø WM
EX. 5100mmø WM
EX. 5400mmø WM
EX.





NO.	REVISIONS	DATE
F	AS CONSTRUCTED	APRIL 1968

DESIGNED K.I.R
CHECKED
DRAWN S.P.C.
CHECKED W.B. D.H.
APPROVED
P.B. 47 TOR.
F.M. F.B. 226, 270, 265 & 238

PROFESSIONAL ENGINEERS PROVINCE OF ONTARIO KEITH I. REEKIE

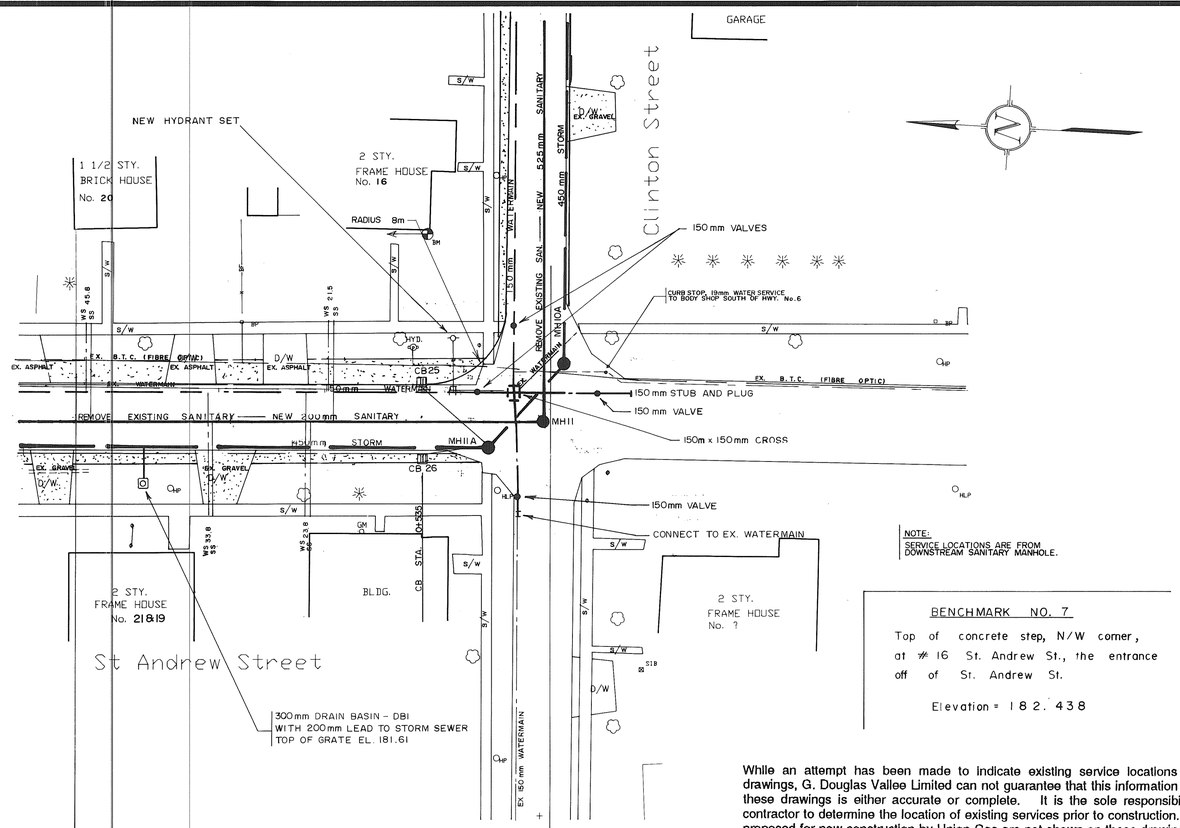
PHILIPS & ROBERTS LTD.
CONSULTING ENGINEERS
BURLINGTON — ONTARIO

TOWN OF PORT DOVER

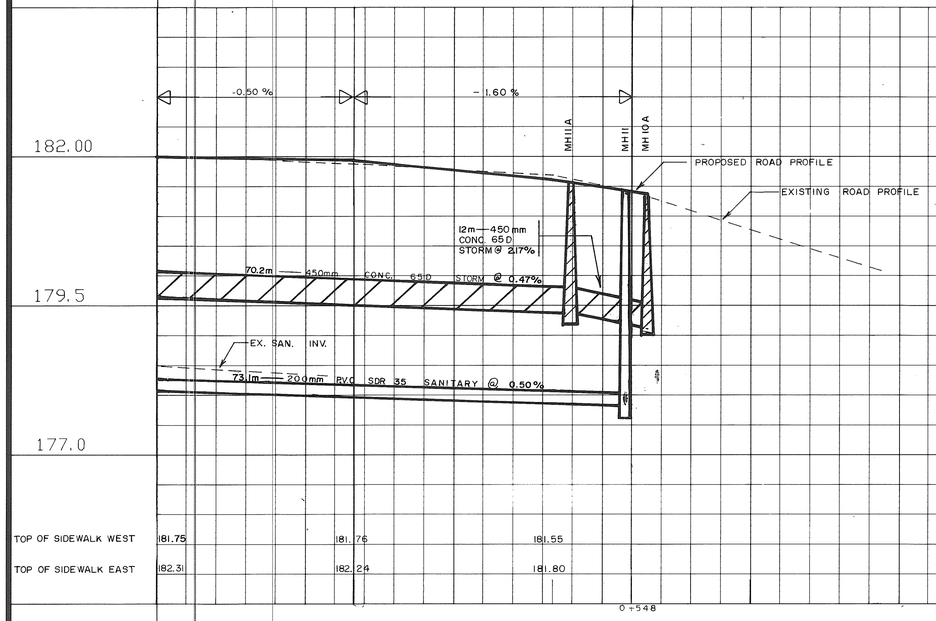
WIDENING AND RECONSTRUCTION
MAIN STREET
STA 13+00 TO STA 18+00

DATE	SCALE	DRAWING NO.
JULY 68	HOR. 1"=20' VERT. 1"=10'	665-2F

NPD-163



While an attempt has been made to indicate existing service locations on these drawings, G. Douglas Vallee Limited can not guarantee that this information shown on these drawings is either accurate or complete. It is the sole responsibility of the contractor to determine the location of existing services prior to construction. Services proposed for new construction by Union Gas are not shown on these drawings.



TOP OF SIDEWALK WEST	181.75		181.76		181.55	
TOP OF SIDEWALK EAST	182.31		182.24		181.80	
CHAINAGE	0+500		0+520	0+540	0+560	0+580	0+600
PROPOSED CENTER LINE OF ROAD	182.02		181.92	181.60	181.47		
SANITARY INVERT				178.31W 178.25E	177.78 N 177.68W 177.45E		
STORM INVERT				179.36 N 179.33 SE	178.07 N 178.02 E		

0+548

Scales Horizontal 1:300
Vertical 1:50

REGIONAL MUNICIPALITY OF HALDIMAND NORFOLK

CITY OF NANTICOKE

PORT DOVER

SEWER SEPARATION PROJECT

ST. ANDREWS STREET

Schedule Of Revisions

Date	No.	Description	Aprvd
NOV.23/95	1	AS CONSTRUCTED	G.R.B.

REGISTERED PROFESSIONAL ENGINEER — CIVIL — G. D. VALLEE — PROVINCE OF ONTARIO

G.DOUGLAS VALLEE LTD.
CONSULTING ENGINEERS AND ARCHITECT
51 PARK ROAD
R.R. 1, SIMCOE, ONTARIO N3Y 4J9
(519)426-6270

DRAWN BY: C.G.K.	DATE: JUNE 1/95		FILE No. 95-006
DESIGNED BY: G.D.V.	HORIZONTAL SCALE 1:300		DRAWING No. 8
PROJECT MANAGER J.D.V.	VERTICAL SCALE 1:50		

NPD 260

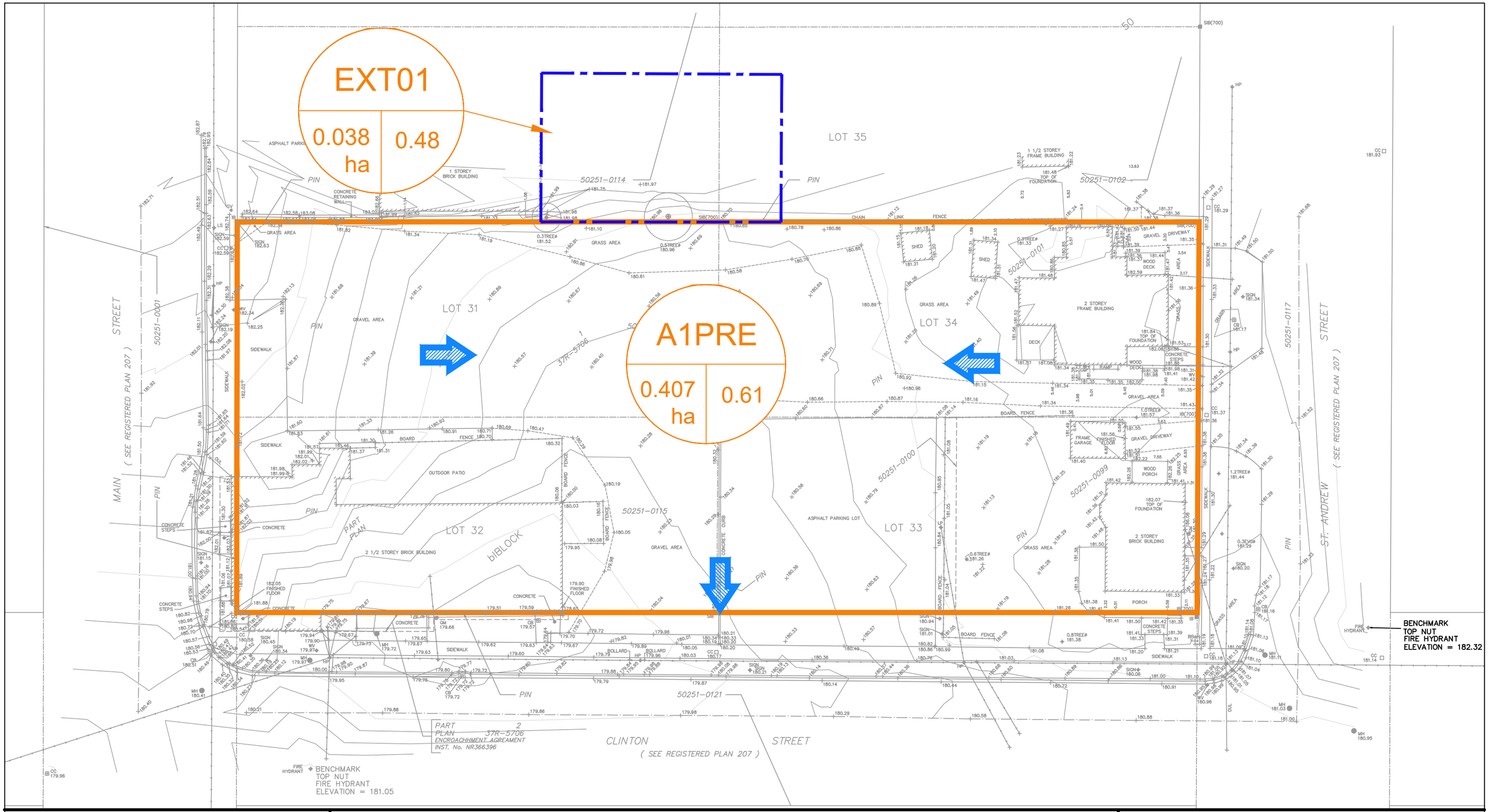
Appendix B

Storm Drainage Analysis

Storm Design Calculations

Pre-Development Drainage Area Plan

Post-Development Drainage Area Plan



ARCADIS

LEGEND

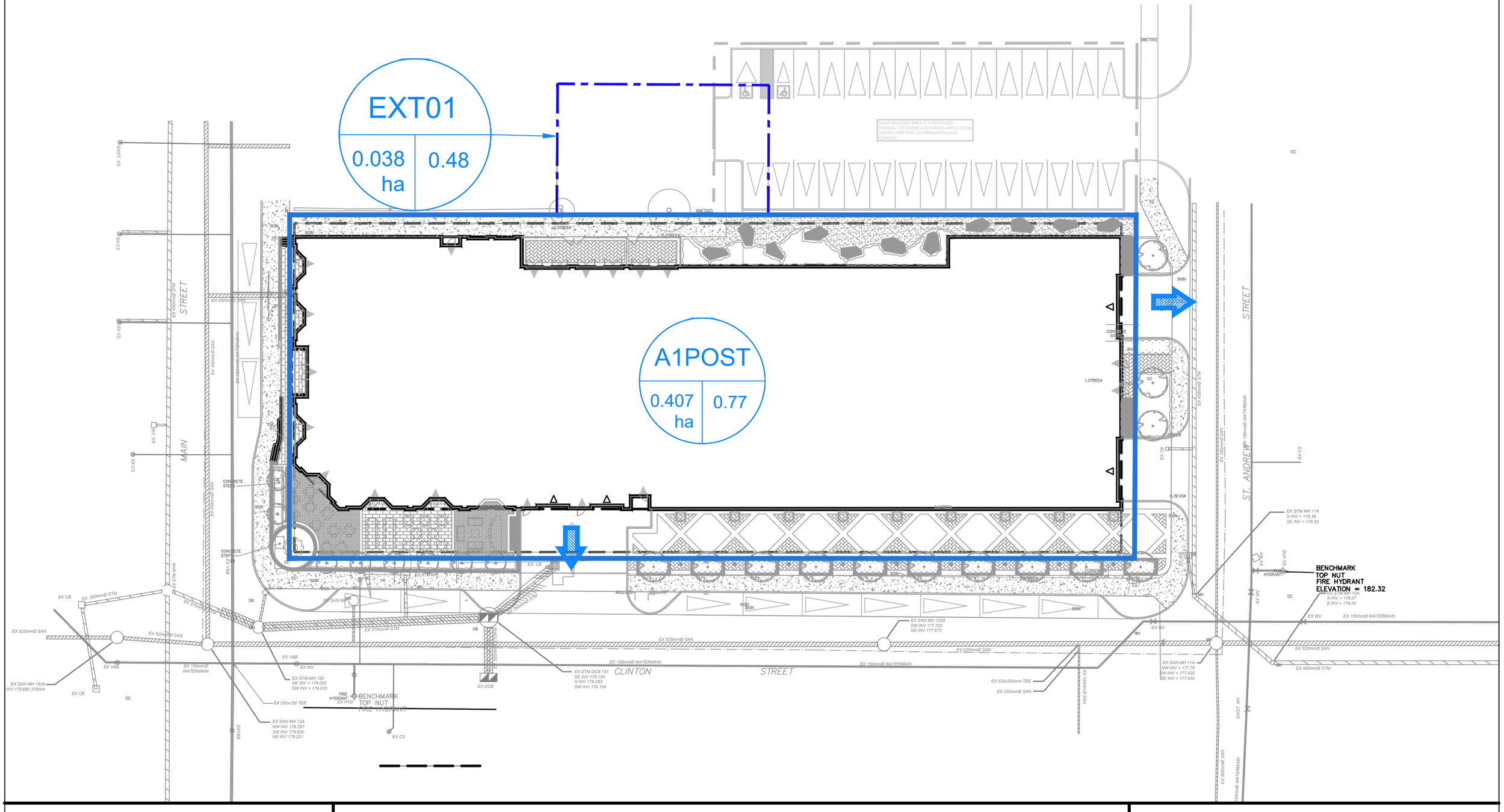
- EXTERNAL DRAINAGE AREA BOUNDARY
- DRAINAGE AREA BOUNDARY
- MAJOR SYSTEM DIRECTION

DRAINAGE AREA IN HECTARES — A1PRE (0.083 ha | 0.50) — STORM DRAINAGE AREA NUMBER / RUNOFF COEFFICIENT

PRE-DEVELOPMENT DRAINAGE AREA PLAN

200 MAIN STREET, PORT DOVER
NORFOLK COUNTY, ON

DATE:	SEPTEMBER 2024	PROJECT No.:	139459
SCALE:	N.T.S	FIGURE No.:	DAP-01



ARCADIS

LEGEND

- EXTERNAL DRAINAGE AREA BOUNDARY
- DRAINAGE AREA BOUNDARY
- MAJOR SYSTEM DIRECTION
- DRAINAGE AREA IN HECTARES (A1POST: 0.083 ha)
- STORM DRAINAGE AREA NUMBER (A1POST)
- RUNOFF COEFFICIENT (0.50)

POST-DEVELOPMENT DRAINAGE AREA PLAN

200 MAIN STREET, PORT DOVER
NORFOLK COUNTY, ON

DATE:	SEPTEMBER 2024	PROJECT No.:	139459
SCALE:	N.T.S	FIGURE No.:	DAP-02

Appendix C

Sanitary Analysis

Sanitary Design Calculations

200 Main Street, Port Dover

2672516 Ontario Ltd.

ARCADIS

Sanitary Sewer Design Sheet

As per Section 9 of Design Standards and Criteria, August 2017

Extraneous Flow =	0.28 L/s/ha	Mannings =	0.013
Residential Avg. Daily Flow =	450 L/c/d	Minimum flow velocity =	0.75 m/s
Commercial Flow =	0.46 L/s/ha	Maximum flow velocity =	4.60 m/s

Project Number: 139459
Date: 03-Oct-24
Designed By: Sadia Kamil, B.Eng

	DESIGN FLOW CALCULATIONS								SEWER DESIGN & ANALYSIS							
	Area (ha)	Density	Population	Peaking Factor	Residential Peak Flow (L/s) *(1)*	Commercial Flow (L/s) *(2)*	Extraneous Flow (L/s) *(3)*	Total Flow, Qd (L/s)	Nominal Diameter (mm)	Pipe Slope (%)	Pipe Length (m)	Full Flow Capacity, Qf (L/s)	Full Flow Velocity (m/s)	Actual Velocity V (m/s)	Percent of Full Flow (%)	Notes
Pre-Development																
Residential	0.02	2.75 pp/unit	6	3	0.09			0.09								
Commercial	0.10	90.0 pp/ha	9	3		0.40		0.40								
Extraneous	0.41						0.11	0.11								
Post-Development																
Residential	0.30	2.75 pp/unit	380	2	3.16			3.16								
Commercial	0.09	90.0 pp/ha	8	3		0.13		0.13								
Extraneous	0.41						0.11	0.11								
		Total	**380**				**Total**	**3.40**	150	2.00%	4.8	22.5	1.23	0.89	**15.1%**	

Residential Units	**138**

Appendix D

Water Analysis

Water Demand Calculations

Hydrant Flow Test

200 Main Street, Port Dover
Residential Development

DOMESTIC WATER DEMAND CALCULATIONS

Project Name: 200 Main Street, Port Dover
Project Number: 139459
Date: 2024-10-03
Designed By: Sadia Kamil, B.Eng

Based on the Norfolk County Design Standards and Criteria

Landuse Factors		
Residential Density	2.75	Persons/Unit (PPU)
Commercial Density	90	Persons/ha
Residential Average Day Consumption	450	L/Cap/Day
Commercial Average Day Consumption	0.46	L/s/ha

Peaking Factors		
Land Use	Peak Hour	Maximum Day
Residential	4.00	2.25
Commercial	2.00	2.25

					(ADDxP.F.)	*(ADDxP.F.)*
	Units / Area	Density	Population	ADD (L/s)	PHD (L/s)	MDD (L/s)
Residential	138 units	2.75 pp/unit	380	2.0	7.9	4.4
Commercial	865 sqm	0.46 /ha	8	0.04	0.08	0.09
		Totals	**380**	**2.0**	**7.9**	**4.4**

200 Main Street, Port Dover
Residential Development

FIRE FLOW DEMAND CALCULATIONS

Project Name: 200 Main Street, Port Dover
Project Number: 139459
Date: 2024-10-03
Designed By: Sadia Kamil, B.Eng

Based on the Water Supply for Public Fire Protecetion Manual, 2020 by the Fire Underwriters Survey

Step 1: Calculate Fire Flow (based on Type of Construction and Area)

C1 = Construction Coefficient =	0.6	
Largest Floor Area =	2,911	m^2
Floor Above =	2,370	m^2
Floor Below =	2,370	m^2
Area =	4,096	m^2
Fire Flow (F) =	**8,000**	L/min

$$F1 = 220C\sqrt{A}$$

F1 = required fire flow (L/min)
C1 = coefficient related to type of construction
- 0.6 for fire resistive (fully protected, 2-hr ratings)
- 0.8 for non combustable (i.e. unprotected metal buildings)
- 1.0 for ordinary construction
- 1.5 for wood frame construction

A = total floor area excluding basements 50% below grade

** If vertical openings are inadequately protected, consider two largest two largest adjoining floors plus 50% of each of any floors above up to eight floors.*

** If vertical openings are adequately protected (one hour rating), consider largest floor area + 25% of two immediately floors.*

Step 2: Adjust F1 for Building Occupancy (shall not be less than 2000 L/s)

F2 = F1 * C2

C2 = Occupancy Adjustment =	-0.15	
F2 = Fire Flow x Adjustment =	**6,800**	L/min

Non-Combust.	-25%	Free Burning	15%
Limited Comb.	-15%	Rapid Burning	25%
Combustable	No change		

Step 3: Adjust F2 for Fire Supression System

F3 = F2 * C3

C3 = Sprinkler Adjustment =	30%	
F3 = F2 x Adjustment =	**2,040**	L/min

Automatic Sprinklers (monitored)	-50%
Adequatly Designed System	-30%
No Sprinkler System	0%

Step 4: Adjust F4 for Exposure / Proximity (shall not exceed 75%)

F4 = F3 * C4

C4 = Proximity Adjustment =	45%	(max 75%)
F4 = F3 x Factor =	**3,060**	L/min
	=5%+10%+10%+20%	

Separation	Adjustment	Separation	Adjustment
0m to 3m	25%	20.1m to 30m	10%
3.1m to 10m	20%	30.1m+	5%
10.1m to 20m	15%		

Step 5: Calculate Adjusted Fire Flow (shall not be less than 2000 L/min or greater than 45,000 L/min)

F_1 =	6,800	L/min
- F_2 =	2,040	L/min
+ F3 =	3,060	L/min
Fire Flow =	8,000	L/min
Fire Flow =	**133.3**	L/s
al Demand (Fire Flow + MDD) =	**137.8**	L/s

$$\text{Fire Flow } F = F1 - F2 + F3$$

Checks:
Fire Flow greater than 2000 L/min
Fire Flow less than 45,000 L/min

200 Main Street, Port Dover
Residential Development

HEAD LOSS CALCULATIONS

Project Name: 200 Main Street, Port Dover
Project Number: 139459
Date: 2024-10-03
Designed By: Sadia Kamil, B.Eng

Hydrant Flow Test (H2024-035)

Flow (gpm)	Flow (L/s)	Flow (L/min)	Pressure (psi)	Pressure (kPa)
0	0.0	0	70	**483**
1,126	71.0	4,262	62	**427**
1,501	94.7	5,682	58	**400**

Residual Pressure at Main

Source: Walski, Thomas M. (2007): Advanced Water Distribution Modeling and Management

$$Q_R = Q_F \times \frac{hr^{0.54}}{hf^{0.54}}$$

where: Q_R = flow predicted at desired residual pressure
Q_F = total flow measured during test
h_r = pressure drop to desired residual pressure
h_f = pressure drop to measured during test

	Flow (gpm)	Flow (L/s)	Flow (L/min)	Residual Pressure @ Main (psi)	Residual Pressure @ Main (kPa)	
Domestic (PHD)	125	7.9	474	**70**	**482**	
Fire Flow (Fire+MDD)	2,184	137.8	8,267	**46**	**317**	Projecting Curve to Fire Flow
	3,244	204.7	12,280	**20**	**138**	Projecting Curve to 20 psi

Residual Pressure at Building

$$h_L = \frac{10.675 * L * Q^{1.85}}{C^{1.85} * D^{4.8655}}$$

where: h_L = Pressure Drop (m)
L = Length of Service (m)
Q = Flow Rate (m^3/s)
D = Pipe Diameter (m)
C = Roughness Coefficient

PHD Conditions

	Domestic	
L=	6.0	m
Q=	0.008	m^3/s
D=	100	mm
C=	100	
h_L=	**0.1**	m
h_L=	**4.8**	in
h_L=	**0.2**	psi
h_L=	**1.2**	kPa

Fire + MDD Conditions

	Fire Service	
L=	8.0	m
Q=	0.138	m^3/s
D=	150	mm
C=	100	
h_L=	**4.4**	m
h_L=	**174.9**	in
h_L=	**6.3**	psi
h_L=	**43.6**	kPa

	Flow (gpm)	Flow (L/s)	Flow (L/min)	Residual Pressure @ Bldg. (psi)	Residual Pressure @ Bldg. (kPa)
Domestic *	125	7.9	474	**69.8**	**481**
Fire **	2,184	137.8	8,267	**39.7**	**273**

** Residual Pressure (DOMESTIC) at building is greater than 40 psi (275 kPa).*
*** Residual Pressure (FIRE) at building is greater than 20 psi (140 kPa).*

Hydrant Flow Testing

NOTE: Hydrants tested according to NFPA 291: Recommended Practice for Fire Flow Testing and Marking of Hydrants

GENERAL INFORMATION

General Information

Date of Testing	8-Aug-2024
Project Number:	139459
TestIDPlain	H2024-035
Site Location / Address:	200 Main St N, Port Dover Norfolk County
Region / Municipality	Norfolk
Hydrants Opened By:	Norfolk
Tested by:	Daniel S

HYDRANT TEST LOCATION - RESIDUAL HYDRANT=R, FLOW HYDRANT=F (NORTH AT TOP)

Hydrant Test Location - Residual Hydrant=R, Flow Hydrant=F (North at Top)

.

Test Data

Time of Test	10:24 AM
Pipe Size (mm)	-
Flow Hydrant Test Location (description)	Main St and Clinton St
Residual Hydrant Test Location (description)	Near 21-13 Clinton St
Static Pressure (PSIG)	70

Q1 Test Data (1 Orifice)

# OUTLETS	ORIFICE SIZE(IN)	PITOT PRESSURE(PSIG)	FLOW(USGPM)	RESIDUAL PRESSURE(PSIG)
1	2.5	45	1126	62

QT Test Data (2 Orifices)

# OUTLETS	ORIFICE SIZE(IN)	PITOT PRESSURE(PSIG)	FLOW(USGPM)	RESIDUAL PRESSURE(PSIG)
2	2.5	20	1501	58

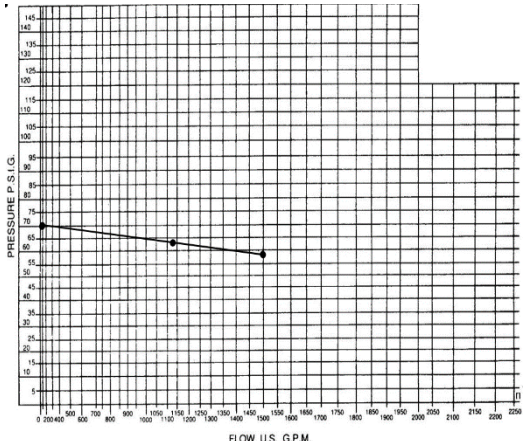
Calculations

FORMULA: Q= 29.83 cd^2√p.....Where: c- coefficient of discharge (1 in smooth pipe)
..... d- pipe diameter (inches)
.....p- pitot reading (psig)

Q1 - 1 Orifice(s)	Q1= (29.83)(0.9)(2.5)^2 √45=1126
QT - 2 Orifice(s)	QT= 2(29.83)(0.9)(2.5)^2 √20=1501
Static Pressure (PSIG)	70

Test Results - Plot

Test Results Plot



Arcadis Professional Services (Canada) Inc.
Suite 200, East Wing – 360 James Street North
Hamilton, ON, L8L 1H5
Canada
Phone: 1 905 546 1010
www.arcadis.com

NORFOLK DEVELOPMENT - 200 MAIN STREET

VGA ARCHITECTURE
van Groll & Associates Inc.
595 Robinson Street, Suite 300
Oakville, ON, L6J 1G7
vangrollassociates.com

2	ARCHITECTURAL DRAWING LIST
3	STRUCTURAL DRAWING LIST
4	MECHANICAL DRAWING LIST
5	ELECTRICAL DRAWING LIST
6	LANDSCAPE DRAWING LIST
7	CIVIL DRAWING LIST

STRUCTURAL DRAWINGS (MTE)

MECHANICAL DRAWINGS

ELECTRICAL DRAWINGS

LANDSCAPE DRAWINGS

CIVIL DRAWINGS

DRAWINGS MUST **NOT** BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS, SPECIFICATIONS AND DRAWINGS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH ANY OF THE WORK.

STAMP: ONTARIO ASSOCIATION OF ARCHITECTS — EVERY VAN GROLL LICENCE 4707

PROJECT NORTH: | TRUE NORTH:

No.	DESCRIPTION	BY	DATE
1	ISSUED FOR SITE PLAN APPROVAL	CH	24.10.04

van Groll & Associates Inc.
2 St. Clair Avenue W., F18,
Toronto, ON, M4V 1L5
905-339-2811
vangrollassociates.com

CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
COVER PAGE AND DRAWINGS LIST

DATE: 24.10.04 | SCALE:
DRAWN: Author | SHEET NUMBER: A0.0
JOB NUMBER: 171-037

SURVEY DATA

SURVEY DATA FOR THIS SITE WAS TAKEN FROM:

SURVEYOR'S REAL PROPERTY REPORT

PLAN OF SURVEY WITH TOPOGRAPHY OF

LOTS 31, 32, 33 & 34, BLOCK 50, REGISTERED PLAN 207
NORFOLK COUNTY (FORMERLY TOWN OF PORT DOVER)

TOWN OF PORT DOVER, NORFOLK COUNTY
DATED SEPTEMBER 2, 2022.

MacAULAY, WHITE & MUIR LTD.
ONTARIO LAND SURVEYORS
440 HARDY ROAD, UNIT 2, BRANTFORD,
ONTARIO N3T 5L8
TEL: (519) 752-0040 FAX: (519) 752-0087
E-MAIL: mwmsurvey@bellnet.ca

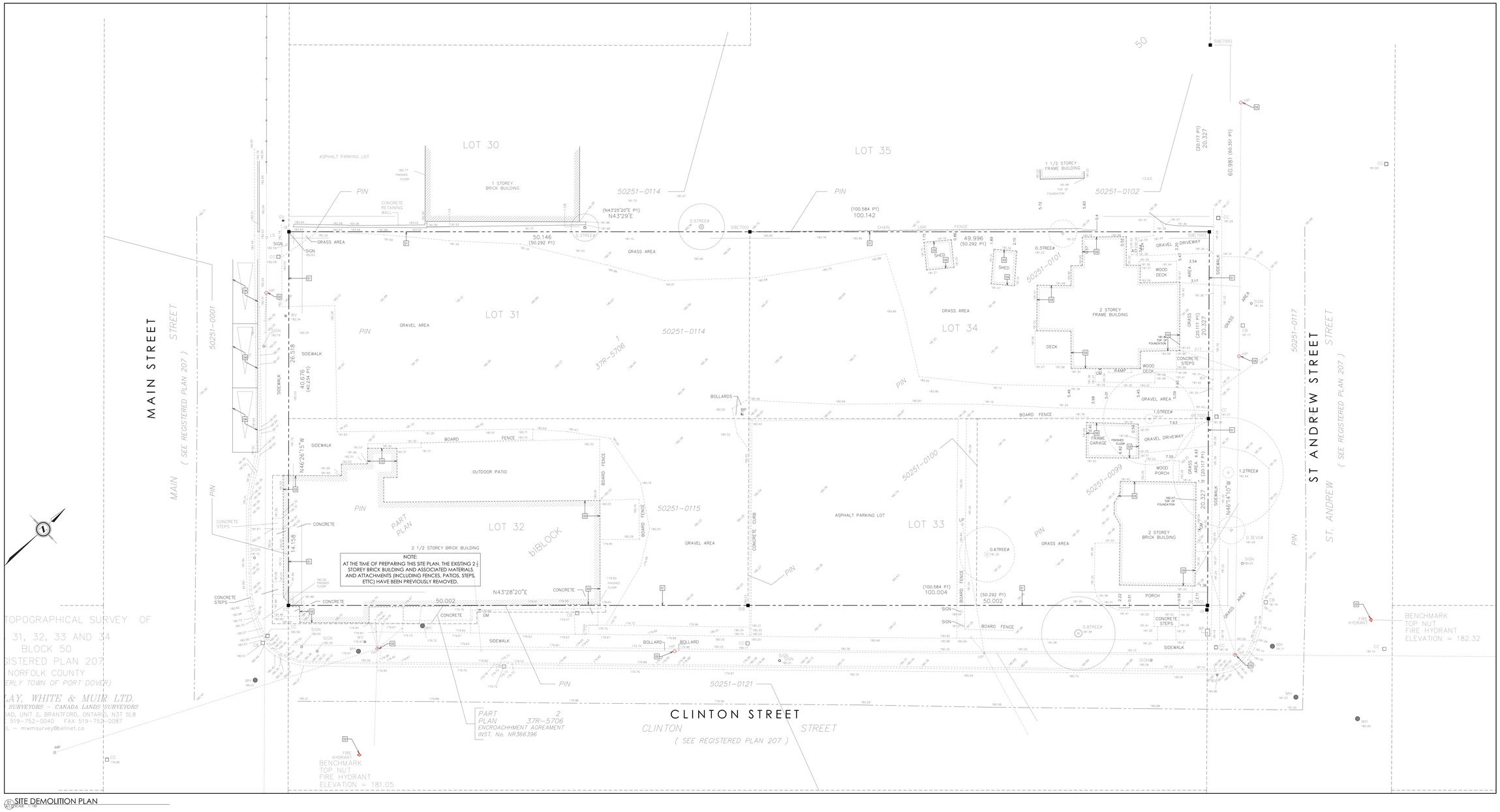
SITE PLAN NOTES

GENERAL NOTES FOR DEMOLITION PLAN:

DASHED - DOT STYLE LINETYPE THROUGHOUT THE DRAWING INDICATES EXISTING MATERIALS TO BE REMOVED. THIS DRAWING MAY NOT REPRESENT ALL MATERIALS TO BE REMOVED. SITE VERIFY EXISTING SITE CONDITIONS. REMOVE ALL MATERIALS AS REQUIRED TO DO WORK IDENTIFIED ON ALL SETS OF DRAWINGS.

THIS DRAWING IS GENERATED FROM THE SITE SURVEY NOTED WITHIN. SEE SITE SURVEY FOR ALL EXISTING MATERIALS AND STRUCTURES.

SD1	HEAVY LONG SHORT DASHED LINE INDICATES EXISTING PROPERTY LINE. SEE ALSO SURVEY.	
SD2	EXISTING MUNICIPAL FIRE HYDRANT TO REMAIN.	
SD3	OUTLINE OF EXISTING BUILDING ON SITE TO BE REMOVED. CAP AND PRESERVE EXISTING SERVICES FOR REUSE OR ABANDON OR REMOVE AS PER SITE SERVICING DRAWINGS.	
SD4	EXISTING MUNICIPAL STREET PARKING SPACES TO REMAIN OR BE REINSTATED.	
SD5	RED DASHED CIRCLE INDICATES EXISTING HYDRO POLE TO BE REMOVED AND REPLACED. EXISTING HYDRO LINES TO BE REVISED, RELOCATED TO NEW POLE LOCATIONS, OR BURIED UNDERGROUND. SEE ELECTRICAL DRAWINGS FOR FULL EXTENT OF REMOVALS AND REPLACEMENT.	



SITE DEMOLITION PLAN
SCALE: 1:150

DRAWINGS MUST **NOT** BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS, SPECIFICATIONS AND DRAWINGS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH ANY OF THE WORK.

STAMP: ONTARIO ASSOCIATION OF ARCHITECTS — EURYY VAN GROLL — LICENCE 4707

PROJECT NORTH: N

TRUE NORTH: N

No.	DESCRIPTION	BY	DATE
01	ISSUED FOR SITE PLAN APPROVAL	CH	24.10.04

van Groll & Associates Inc.
21 St. Clair Avenue W., F18
Toronto, ON, M4V 1L5
905 339 2811
vangrollassociates.com

CLIENT:

PROJECT:

NORFOLK DEVELOPMENT

ADDRESS: 200 MAIN STREET
PORT DOVER, ON
N0A 1N0

DRAWING TITLE:

SITE DEMOLITION PLAN

DATE: 24.10.04
SCALE: 1 : 150
DRAWN: CH
SHEET NUMBER:
JOB NUMBER: 171-037

A1.0

Unit Mix Design

	1 Bed A	1 Bed B	1 Bed A	1 Bed C	1 Bed + Den A	1 Bed + Den B	1 Bed + Den C	1 Bed + Den D	1 Bed + Den E	2 Bed A	2 Bed B	2 Bed C	2 Bed + Den A	2 Bed + Den B	2 Bed + Den C	Total
Second Floor	2	3	1	1	10	1	1	1	1	1	1		1	1		4	30
Third Floor	2	3	1	1	10	1	1	1	1	1	1		1	1		4	30
Fourth Floor	2	2		1	10	1	1	1			1		1	1	1	4	26
Fifth Floor	2	2		1	10	1	1	1			1		1	1	1	4	26
Sixth Floor	2	2	1		10	1	1	1			1		1	1	1	4	26
Total	10	12	2	5	50	5	5	5	2	2	3	2	2	3	3	20	**138**
Parking to be Provided	10	12	2	5	50	5	5	5	2	4	6	4	4	6	6	40	178
General Unit Type Qty	22		9		67					14				26			
Percentage of Unit Types	16%		7%		49%					10%				19%			
Precentage of Bedroom Types	71%									29%							

GFAs

	Sqm	Sqft
Parking P2	3023	32539
Parking P1	3806	40967
Ground Level	2911	31334
Second Level	2370	25510
Third Level	2370	25510
Fourth Level	2150	23142
Fifth Level	2150	23142
Sixth Level	2150	23142
Roof	248	2668
Total	21177.5	227957

Useable floor areas

	Sqm	Sqft
Parking P2	0	0
Parking P1	0	0
Ground Level	439	4725
Second Level	1990	21420
Third Level	1990	21420
Fourth Level	1837	19773
Fifth Level	1837	19773
Sixth Level	1847	19881
Roof	0	0
Total	9940	106993

Other Stats

	Sqm	Sqft
Lot Area	4015	43209
Building Footprint	2952	31775
Lot Coverage	73%	
Roof Area	2479	26684
Penthouse Area	248	2668
Penthouse Coverage	10.00%	
On Site Parking	181	
Street Parking	13	

NORFOLK COUNTY ZONING BY-LAW 1 CENTRAL BUSINESS DISTRICT 'CBD' ZONE

	REQUIRED	PROVIDED
PERMITTED USES	i) dwelling, apartment subject to the requirements of Subsection 6.1.4 * ii) dwelling units in any permitted commercial building subject to the requirements of Subsection 6.1.4 * iii) retail store	Dwelling units and retail stores
Minimum Front Yard	0m	1.852m
Minimum Exterior Side Yard	0m	5.85m
Minimum Interior Side Yard	0 metres except abutting any residential Zone in which case the minimum interior side yard shall be 3.0 metres	2.61m
Minimum Rear Yard	0 metres except abutting any residential Zone in which case the minimum rear yard shall be 6 metres	0.29m
Maximum Building Height	six (6) storeys.	6 Storeys
Maximum Front Yard Setback	3m but does not permit parking	1.852m
Maximum Lot Coverage:	80%	73%
6.1.3 Zone Provisions for Dwellings	Notwithstanding the provisions in Subsection 6.1.2, all single detached, semi-detached, duplex, tri-plex or four-plex dwellings shall conform to the Urban Residential Type 3 (R3) Zone provisions in Subsection 5.3.	Zero dwellings on first storey. All first storey spaces are retail, amenity and service uses.
6.1.4 Location and Use of First Storey	Any dwelling units in the CBD Zone shall not occupy more than 50 percent of the usable floor area of the first storey, and the frontages of the first storey shall be dedicated to retail, office or service uses.	
6.1.5 Step Back of Upper Floors	The front wall of each floor located above four (4) storeys shall be stepped back 2 metres from the front wall of the fourth storey.	Front wall step back walls above of 4th floor varies between 2.3m and 5.3m
6.1.6 Angular Plane	Where an apartment dwelling in a CBD Zone abuts an Urban Residential Type 1 Zone (R1-A), (R1-B) or Urban Residential Type 2 Zone (R2), no portion of an apartment dwelling shall exceed the height of a 45 degree angular plane originating at the lot line of the nearest Urban Residential Type 1 Zone (R1-A), (R1-B) or Urban Residential Type 2 Zone (R2).	There are no R3 A, R1-B or R2 zones abutting the property.
6.1.7 Zone Provision for Convenience Sto	The usable floor area of a convenience store shall not exceed 280m²	There is not convenience store proposed. All proposed areas for commercial use are under 280sqm.
6.1.8 Zone Provision for a Drive Through	A Drive Through shall not be permitted within the Central Business District Zone (CBD).	There is no proposed drive thru.

SITE PLAN NOTES

01 HEAVY LONG/SHORT DASHED LINE INDICATES EXISTING PROPERTY LINE. SEE ALSO SURVEY.

02 LIGHT SOLID HATCHED AREA WITH HEAVY BOUNDARY LINE INDICATES FOOTPRINT OF PROPOSED BUILDING FOOTPRINT AT GRADE. SEE ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR CONSTRUCTION INFORMATION.

03 HEAVY DASHED LINE INDICATES OUTLINE OF BUILDING PROJECTION ABOVE. SEE ALSO BUILDING PLANS AND ELEVATIONS.

04 CROSS HATCH PATTERN WITHIN LIGHT SOLID HATCHED AREAS INDICATE AREA OF OUTDOOR AMENITY SPACE (AT GRADE OR AT DIFFERENT FINISHED FLOOR ELEVATIONS (AS NOTED). SEE ALSO ARCHITECTURAL DRAWINGS.

05 INSTALL NEW STREET CURBS TO MEET NORFOLK COUNTY MUNICIPAL STANDARDS. SEE ALSO CIVIL DRAWINGS FOR SPECIFICATIONS. MATCH AND BLEND WITH EXISTING CURBS WHERE ADJOINING.

06 INSTALL NEW 2.1m WIDE POURED CONCRETE SIDEWALK TO MEET NORFOLK COUNTY MUNICIPAL STANDARDS. SEE ALSO CIVIL DRAWINGS FOR SPECIFICATIONS. MATCH AND BLEND WITH EXISTING SIDEWALK WHERE ADJOINING.

07 INSTALL AND CONTINUE NEW 2.1m WIDE POURED CONCRETE SIDEWALK THROUGH SITE ENTRANCE AS INDICATED. ASPHALT TO MATCH SIDEWALK ELEVATION ON EACH SIDE. SEE ALSO CIVIL DRAWINGS.

08 HATCHED AREA INDICATES NEW BOULEVARD. SOFT LANDSCAPED AREA. FOR OTHER LANDSCAPING, SEE LANDSCAPING DRAWINGS.

09 PATTERNED HATCHED AREAS (VARIOUS TYPES) INDICATE PAVED HARDSCAPE AND SOFTSCAPE LANDSCAPING INCLUDING WALKWAYS AND PATIOS. SEE LANDSCAPING DRAWINGS FOR DETAILS AND SPECIFICATIONS.

10 APPROXIMATE LOCATION OF NEW FIRE DEPARTMENT PEDESTAL CONNECTION

11 EXISTING FIRE HYDRANT TO REMAIN.

12 MAIN BUILDING FIRE DEPARTMENT ENTRANCE.

13 BUILDING BARRIER FREE PEDESTRIAN ENTRANCE.

14 ENSURE WALKWAYS MEETS OBC PATH OF TRAVEL REQUIREMENTS OF 1:20 MAXIMUM SLOPE.

15 NEW POURED CONCRETE PEDESTRIAN CONNECTION WALKWAY TO NEW PARKING LOT ON ADJACENT SITE.

16 DASHED LINE INDICATES EXTENT OF PARKING LEVEL BELOW GRADE. SEE ALSO ARCHITECTURAL DRAWINGS.

17 SOLID MATCHED BOUNDARY INDICATES RETAINING WALL OR LANDSCAPED WALL SEPARATING MUNICIPAL SIDEWALK FROM SITE WALKWAY OR PATIO. SEE ALSO LANDSCAPE DRAWINGS AND CIVIL DRAWINGS.

18 INSTALL NEW GUARDS ON TOP OF WALL WHERE GRADE DIFFERENCE ON ADJACENT SURFACES EXCEEDS 600mm IN HEIGHT. GUARDS TO MEET OBC REQUIREMENTS.

19 INSTALL EXTERIOR POURED CONCRETE STAIRS C/W RAILINGS TO MEET OBC REQUIREMENTS. SEE ARCHITECTURAL DRAWINGS FOR STAIR DRAWINGS.

20 HEAVY DASHED LINE INDICATES OUTLINE OF FLOOR LEVELS ABOVE 3rd FLOOR.

21 INSTALL ASPHALT PAVING AT VEHICLE LOADING AND DRIVEWAY AREAS. SEE ALSO CIVIL DRAWINGS.

22 INSTALL NEW ACCESSIBLE PARKING SPACE SIGN AT ALL BARRIER FREE PARKING SPACES TO MEET REQUIREMENTS OF NORFOLK COUNTY.

23 INSTALL PAINTED CROSS HATCH PATTERN AT NEW ACCESSIBLE PARKING SPACE TRANSFER AREA TO MEET REQUIREMENTS OF NORFOLK COUNTY.

24 DASHED LINE AT MAIN ENTRANCE INDICATES CANOPY ABOVE. SEE ARCHITECTURAL DRAWINGS.

25 CROSS HATCHED AREA INDICATES PROPOSED MECHANICAL DUCT SHAFT TO PARKING LEVELS. INSTALL SEALED STEEL GRATE AT TOP OF SHAFT. LEVEL WITH GRADE. EXACT SIZE OF SHAFT TO BE DETERMINED.

26 RED DASHED CIRCLE INDICATES EXISTING HYDRO POLE TO BE REMOVED AND REPLACED. EXISTING HYDRO LINES TO BE REVISED, RELOCATED TO NEW POLE LOCATIONS, OR BURIED UNDERGROUND. SEE ELECTRICAL DRAWINGS FOR FULL EXTENT OF REMOVALS AND REPLACEMENT.

27 BLUE CIRCLE INDICATES PROPOSED LOCATION FOR NEW HYDRO POLE. LOCATION TO BE COORDINATED WITH LOCAL HYDRO UTILITY PROVIDER. SEE ELECTRICAL DRAWINGS FOR FULL EXTENT OF REMOVALS AND REPLACEMENT.

TYPICAL PARKING SPACES TO MEET REQUIREMENTS OF NORFOLK COUNTY. SEE ARCHITECTURAL FLOOR PLANS INDICATING INTERIOR PARKING SPACES.

KEYPLAN
AT SCALE: N.T.S.

SURVEY DATA

SURVEY DATA FOR THIS SITE WAS TAKEN FROM:

SURVEYOR'S REAL PROPERTY REPORT

PLAN OF SURVEY WITH TOPOGRAPHY OF

LOTS 31, 32, 33 & 34, BLOCK 50, REGISTERED PLAN 207
NORFOLK COUNTY (FORMERLY TOWN OF PORT DOVER)

TOWN OF PORT DOVER, NORFOLK COUNTY
DATED SEPTEMBER 2, 2022.

MacKALLAY, WHITE & MUIR LTD.
ONTARIO LAND SURVEYORS
440 HARDY ROAD, UNIT 2, BRANTFORD,
ONTARIO N3T 5L8
TEL: (519) 752-0040 FAX: (519) 752-0087
E-MAIL: mwmsurvey@bellnet.ca

TRUE NORTH

SYMBOLES LEGEND

SITE LIGHT FIXTURES. SEE EXTERIOR LIGHTING LAYOUT DRAWING BY 'J + B ENGINEERING INC'.

WALL PACK | LIGHT STANDARD | LIGHT STANDARD

- SITE TRAFFIC DIRECTION ARROW
- BUILDING VEHICLE ENTRANCE/EXIT (LARGE SYMBOL WITH 'V')
- BUILDING PEDESTRIAN ENTRANCE/EXIT (SMALL SYMBOL)
- PRIMARY PEDESTRIAN ENTRANCE/EXIT
- FIRE DEPARTMENT SIAMESE CONNECTION
- SITE SIGNS (IE: ACCESSIBLE, FIRE ROUTE)
- BIKE RACK
- FIRE HYDRANT

1.0	OWNER	ARCHITECT:
	-	VAN GROLL & ASSOCIATES INC. 2 ST CLAIR AVE. W., F18 Toronto, Ontario M4V 1L5 ATTN: Elroy Van Groll Tel: 905-339-2811 EXT 228
2.0	PROJECT LOCATION	
	200 MAIN STREET, PORT DOVER, ONTARIO, N0A 1N0	
3.0	LEGAL DESCRIPTION	
	LOTS 31, 32, 33 & 34, BLOCK 50, REGISTERED PLAN 207 NORFOLK COUNTY (FORMERLY TOWN OF PORT DOVER)	
4.0	ZONING CATEGORY	
	-	
5.0	PROPOSED USE	
	MIXED USE COMMERCIAL & RESIDENTIAL BUILDING	
6.0	LOT AREA	METRIC (SQ.M). / IMPERIAL (SQ.F.)
	EXISTING LOT AREA	4,070 / 43,809
7.0	PROPOSED COVERAGE	METRIC (SQ.M). / IMPERIAL (SQ.F.)
	BUILDING AREA TO BE DEMOLISHED (FOR BOTH ON ALL LOTS)	-734 / -7,901
	PROPOSED NEW BUILDING FOOTPRINT AREA	3,806 / 40,967
	PROPOSED NEW BUILDING FOOTPRINT	2,908 / 31,301
	PROPOSED NEW BUILDING AREA (INCL. PROJECTIONS)	2,952 / 31,775
	PERCENTAGE LOT COVERAGE	73% (2,952 / 4070)
	FLOOR AREA RATIO (USEABLE FLOOR AREA ILOT AREA)	244% (9,940 / 4070)
8.0	BUILDING CLASSIFICATION:	
	3.2.2.43. GROUP C, UP TO 6 STOREYS, SPRINKLERED, NONCOMBUSTIBLE CONSTRUCTION	
9.0	BUILDING CONSTRUCTION:	
	NON COMBUSTIBLE	
10.0	RATING FOR ASSEMBLIES:	
	60 MIN. FOR FLOORS AND LOADBEARING WALLS AND ARCHIES.	
11.0	GROSS FLOOR AREAS	METRIC (SQ.M). / IMPERIAL (SQ.F.)
	PARKING LEVEL (P2)	3,023 / 32,539
	PARKING LEVEL (P1)	3,806 / 40,967
	GROUND LEVEL	2,911 / 31,334
	SECOND LEVEL	2,370 / 25,510
	THIRD LEVEL	2,370 / 25,510
	FOURTH LEVEL	2,150 / 23,142
	FIFTH LEVEL	2,150 / 23,142
	SIXTH LEVEL	2,150 / 23,142
	MECHANICAL PENTHOUSE LEVEL	248 / 2,668
	TOTAL GROSS FLOOR AREA (G.F.A)	21,177 / 227,957
12.0	AREA OF MECHANICAL PENTHOUSE	METRIC (SQ.M). / IMPERIAL (SQ.F.)
	ROOFTOP FOOTPRINT	2,479 / 26,684
	MECHANICAL PENTHOUSE LEVEL GFA	248 / 2,668
	PERCENTAGE ROOF COVERAGE	10.00% (248 / 2,479)

12.0 BASIC FLOOR AREA USE BREAKDOWN (EXCL. CIRCULATION, MECHANICAL, ETC)

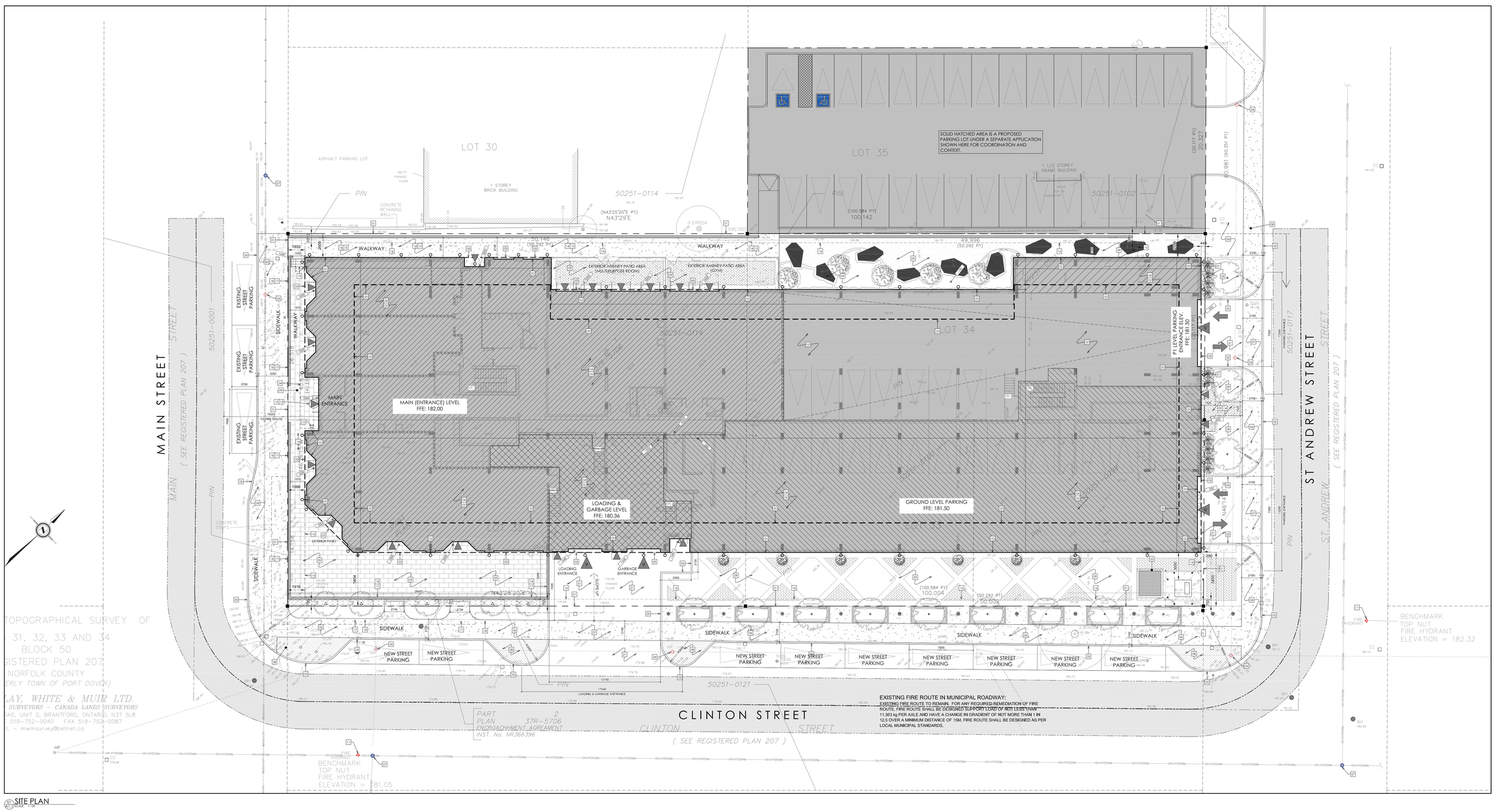
	COMMERCIAL SPACES	AMENITY SPACES (INCL. STORAGE)	MECHANICAL SPACES	DWELLING UNITS
PARKING LEVEL (P2)		349m²	90m²	
PARKING LEVEL (P1)			26m²	
SITE LEVEL (STREET)		296m²		
GROUND LEVEL	439m²	364m²	67m²	
SECOND LEVEL				30 UNITS
THIRD LEVEL				30 UNITS
FOURTH LEVEL				26 UNITS
FIFTH LEVEL				26 UNITS
SIX LEVEL				26 UNITS
MECHANICAL PENTHOUSE			162m²	

13.0	PARKING CALCULATION	
	*PARKING NOT REQUIRED PER ZONING BYLAW. PARKING IS BEING PROVIDED AS APPROPRIATE FOR THE INTENDED USE.	
	PARKING IS PROVIDED AT 1 PARKING SPACE PER DWELLING UNIT PLUS ADDITIONAL PARKING TO BE SOLD TO DWELLING UNIT OWNERS OR DELINEATED AS VISITORS PARKING SPACES.	
	PARKING PROVIDED	
	ON - SITE:	**181 SPACES**
		Ground: 13 spaces
		P1 Ramp: 55 spaces
		P1 Flat: 55 spaces
		P2 Ramp: 42 spaces
		P2 Flat: 46 spaces
	STREET PARKING (EXISTING MAIN STREET PARKING SPACES):	3 SPACES
	STREET PARKING (NEW CLINTON STREET PARKING SPACES):	9 SPACES
	TOTAL PARKING SPACES:	193 SPACES
	BARRIER FREE PARKING SPACES (INCLUDED IN COUNT):	7 SPACES (3 TYPE 'A' + 4 TYPE 'B')

DRAWINGS MUST **NOT** BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS, SPECIFICATIONS AND DRAWINGS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH ANY OF THE WORK.

STAMP: ONTARIO ASSOCIATION OF ARCHITECTS — ELROY VAN GROLL LICENCE 4707

PROJECT NORTH: | TRUE NORTH:



SITE PLAN
A1.1 SCALE: 1:150

No.	DESCRIPTION	BY	DATE
01	ISSUED FOR SITE PLAN APPROVAL	CH	24.10.04

van Groll & Associates Inc.
2 St. Clair Avenue W., F18
Toronto, ON, M4V 1L5
905 339 2811
vangrollassociates.com

CLIENT:

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: 200 MAIN STREET
PORT DOVER, ON
N0A 1N0

DRAWING TITLE:
SITE PLAN & SITE STATISTICS

DATE: 24.10.04 | SCALE: 1 : 150
DRAWN: CH | SHEET NUMBER:
JOB NUMBER: 171-037 | A1.1

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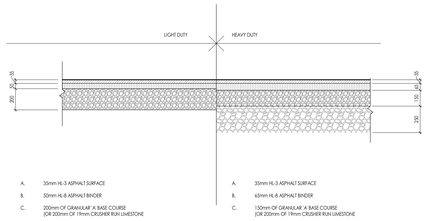
STAMP: ONTARIO ASSOCIATION OF ARCHITECTS — ELROY VAN GROLL LICENCE 4707 | PROJECT NORTH: | TRUE NORTH:

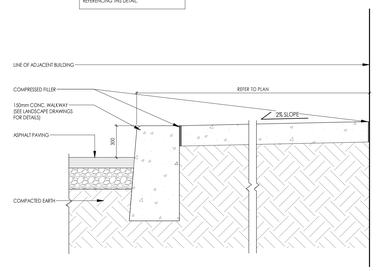
NOTE: REFER TO CIVIL DRAWINGS FOR ALL EXTERIOR ROADWAY AND CONCRETE CURB/WALKWAY/SLAB DESIGNS PRIOR TO REFERENCING THIS DETAIL.



A. 35mm HL-3 ASPHALT SURFACE
B. 50mm HL-8 ASPHALT BINDER
C. 200mm OF GRANULAR 'A' BASE COURSE (OR 200mm OF 19mm CRUSHER RUN LIMESTONE

A. 35mm HL-3 ASPHALT SURFACE
B. 65mm HL-8 ASPHALT BINDER
C. 150mm OF GRANULAR 'A' BASE COURSE (OR 200mm OF 19mm CRUSHER RUN LIMESTONE
D. 250mm OF GRANULAR 'B' SUB-BASE (OR 200mm OF 19mm CRUSHER LIMESTONE

NOTE: REFER TO CIVIL DRAWINGS FOR ALL EXTERIOR ROADWAY AND CONCRETE CURB/WALKWAY/SLAB DESIGNS PRIOR TO REFERENCING THIS DETAIL.



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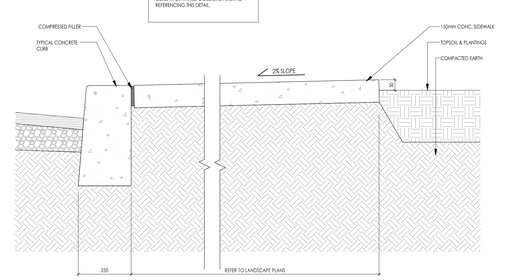
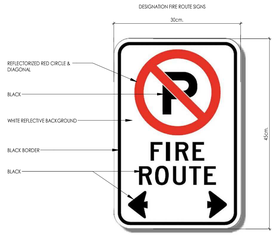


DESIGNATION FIRE ROUTE SIGNS



ALL SIGNS WILL BE PRINTED ON A 300x99 BY 450x99 SIGN BLANK AND WILL DISPLAY TO FORMAT AS ILLUSTRATED ABOVE.

SIGNS WILL BE PLACED AT EACH LIMIT OF A DESIGNATED FIRE ROUTE AND WILL DISPLAY SINGLE HEADED ARROWS POINTING IN THE DIRECTION OF SUCH DESIGNATED FIRE ROUTE. SIGNS DISPLAYING DOUBLE HEADED ARROWS WILL BE PLACED AT INTERMEDIATE POINTS ALONG A DESIGNATED FIRE ROUTE NO FURTHER THAN 30m APART.

SIGNS WILL BE ERECTED ON A POST ANCHORED SECURELY TO THE GROUND OR ON A PLATFORM CAPABLE OF HOLDING THE SIGN ERECT DURING ALL WEATHER CONDITIONS. THE MINIMUM HEIGHT OF SIGNS WILL BE NO LESS THAN 2.0m ABOVE THE WEARING SURFACE OF THE DESIGNATED FIRE ROUTE.

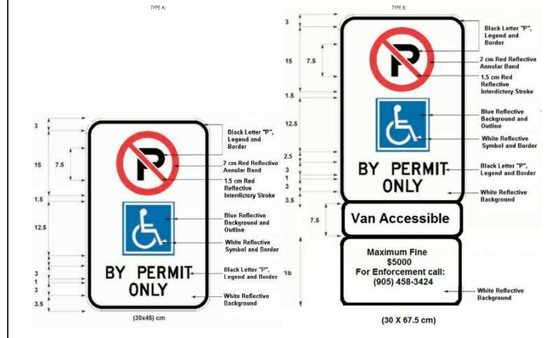
SIGNS WILL BE ERECTED ON THE BOULEVARD OF A DESIGNATED FIRE ROUTE SO THAT NO PART OF THE SIGN IS CLOSER THAN 30cm TO THE ADJACENT CURB, NOR FURTHER THAN 3.0m FROM THE CURB. WHERE THERE ARE NO CURBS, NO PART OF THE SIGN WILL BE CLOSER THAN 1.0m NOR FURTHER THAN 3.0m FROM THE EDGE OF THE ADJACENT PAVEMENT OR TRAVELED ROAD.

CITY OF BRAMPTON TRAFFIC BY-LAW 93-93 ACCESSIBLE PARKING SIGN

TYPE A:

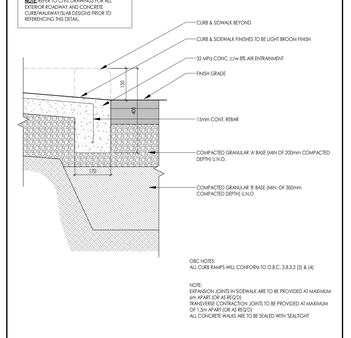
CITY OF BRAMPTON TRAFFIC BY-LAW 93-93 ACCESSIBLE PARKING SIGN

TYPE B:



NOTE: ACCESSIBLE PARKING SIGNS SHALL BE INSTALLED TO MEET THE REQUIREMENTS SET OUT IN THE COUNTY OF NORFOLK ACCESSIBLE PARKING REQUIREMENTS

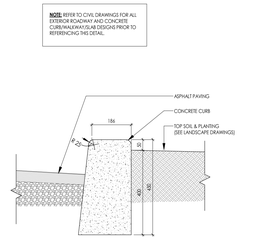
NOTE: REFER TO CIVIL DRAWINGS FOR ALL EXTERIOR ROADWAY AND CONCRETE CURB/WALKWAY/SLAB DESIGNS PRIOR TO REFERENCING THIS DETAIL.

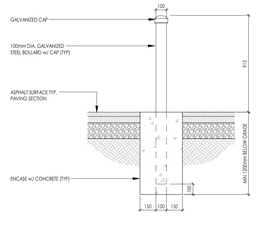


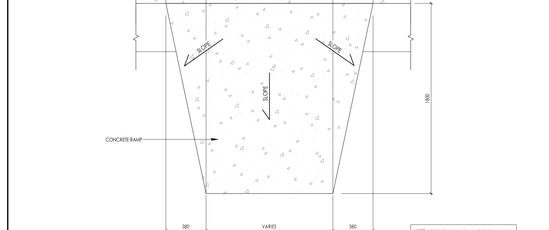
OBC NOTES:
ALL CURB RAMPS WILL CONFORM TO O.B.C. 3.8.3.2 (3) & (4)

NOTE:
EXPANSION JOINTS IN SIDEWALK ARE TO BE PROVIDED AT MAXIMUM 6m APART (OR AS REQ'D)
TRANSVERSE CONTRACTION JOINTS TO BE PROVIDED AT MAXIMUM OF 1.5m APART (OR AS REQ'D)
ALL CONCRETE WALKS ARE TO BE SEALED WITH 'SEALTIGHT'

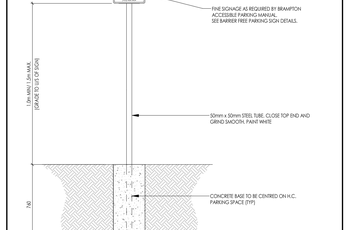
NOTE: REFER TO CIVIL DRAWINGS FOR ALL EXTERIOR ROADWAY AND CONCRETE CURB/WALKWAY/SLAB DESIGNS PRIOR TO REFERENCING THIS DETAIL.



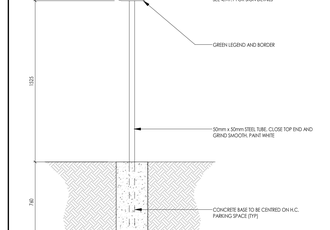




NOTE: REFER TO CIVIL DRAWINGS FOR ALL EXTERIOR ROADWAY AND CONCRETE CURB/WALKWAY/SLAB DESIGNS PRIOR TO REFERENCING THIS DETAIL.



NOTE:
SIGNAGE WILL COMPLY WITH MUNICIPAL GUIDELINES & JURISDICTIONS HAVING AUTHORITIES



NOTE:
SIGNAGE WILL COMPLY WITH MUNICIPAL GUIDELINES & JURISDICTIONS HAVING AUTHORITIES

No.	DESCRIPTION	BY	DATE
1	ISSUED FOR SITE PLAN APPROVAL	CH	24.10.04

van Groll & Associates Inc.
2 St. Clair Avenue W., F18,
Toronto, ON, M4V 1L5
905-339-2811
vangrollassociates.com

CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
SITE PLAN DETAILS

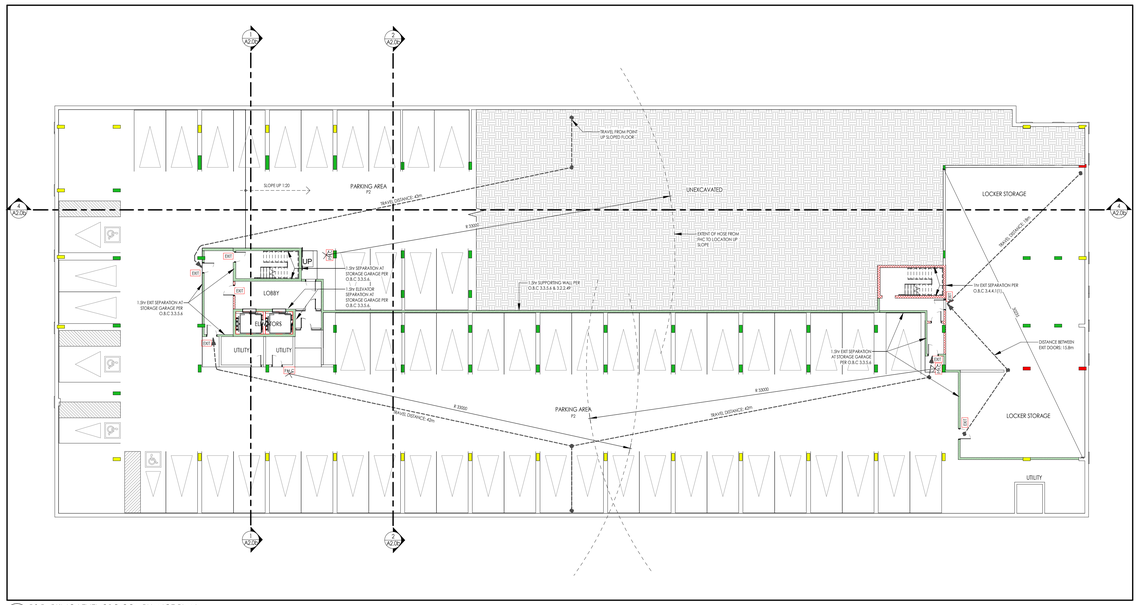
DATE: 24.10.04 SCALE: As indicated
DRAWN: CH SHEET NUMBER:
JOB NUMBER: 171-037 A1.3

Autodesk Docs://171-037 Norfolk Towers/171-037 Norfolk Development Model.rvt

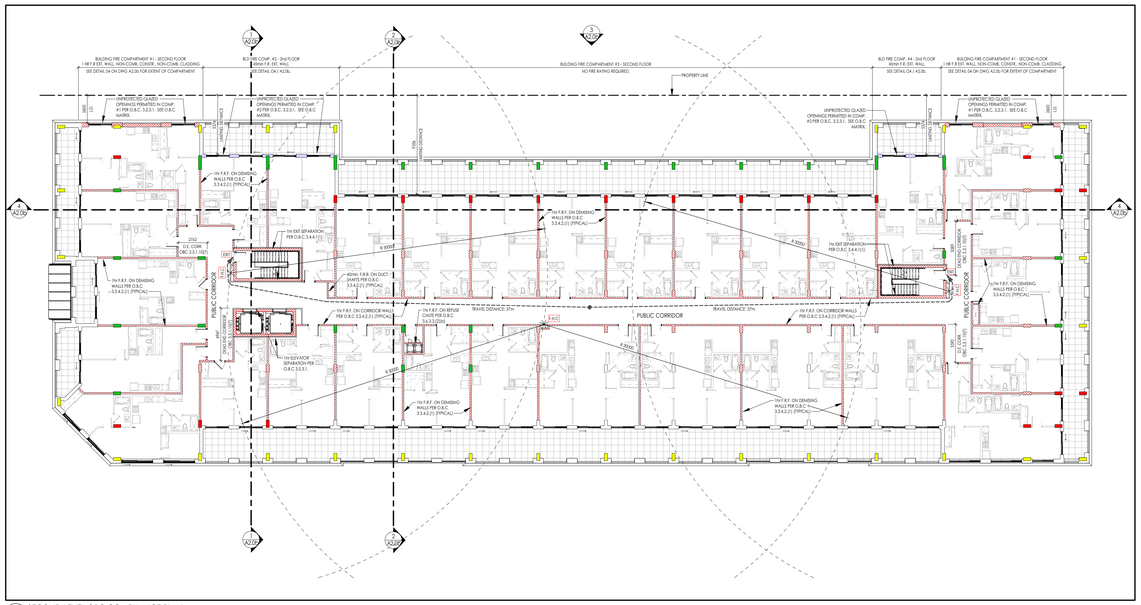
DRAWINGS MUST **NOT** BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS, SPECIFICATIONS AND DRAWINGS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH ANY OF THE WORK.

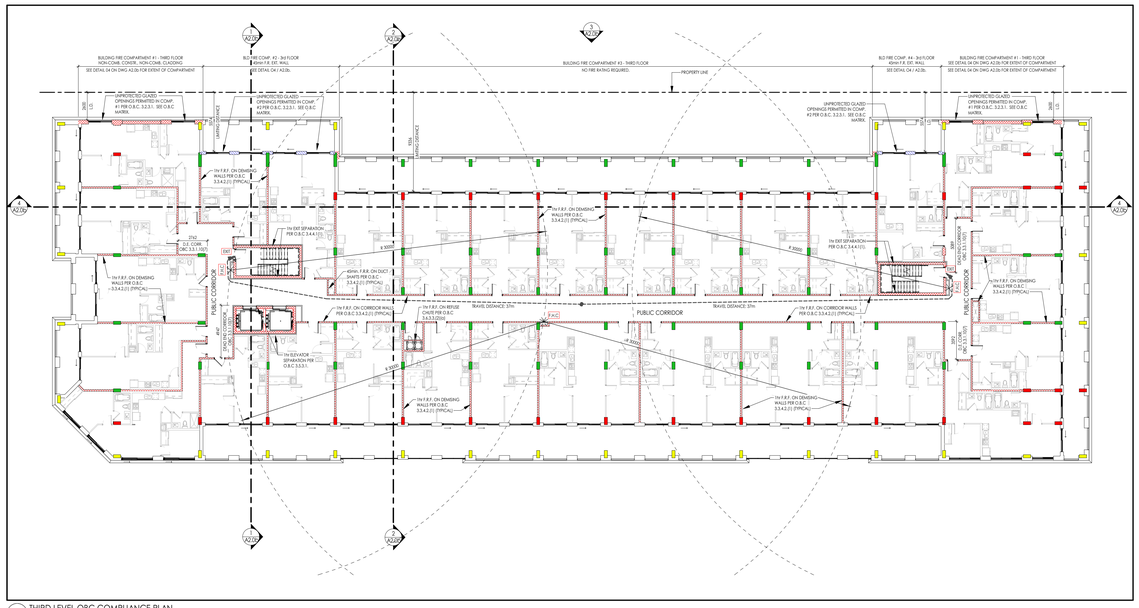
STAMP: ONTARIO ASSOCIATION OF ARCHITECTS — ELROY VAN GROLL LICENCE 4707

PROJECT NORTH: | TRUE NORTH:



1 P2 PARKING LEVEL OBC COMPLIANCE PLAN
1 : 200

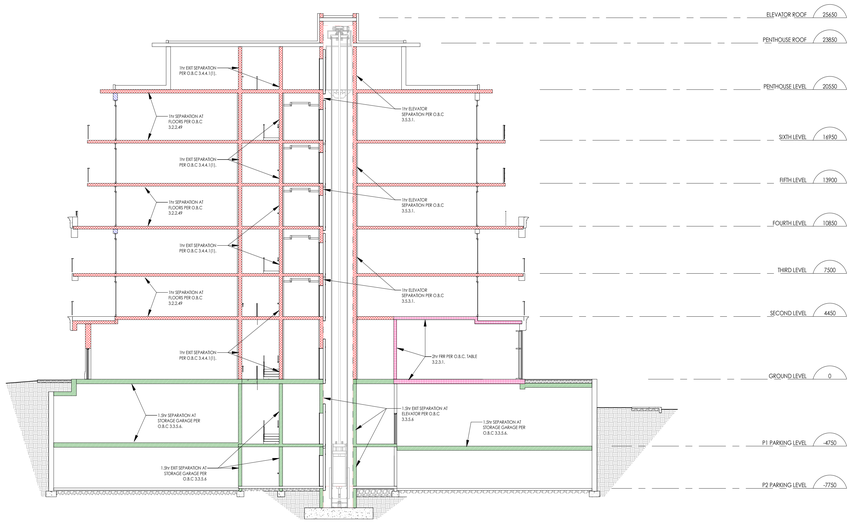

A2.00
BUILDING FIRE COMPARTMENT #1 - SECOND FLOOR
1 HR F.R.R.(FF, W.A.L), NON-COMB. CONSTR., NON-COMB. CLADDING
SEE DETAIL S4 ON DWG A2.00b FOR EXTENT OF COMPARTMENT
BLD. FIRE COMP. #2 - 2nd/FLOOR
45min F.R.R.(FF, W.A.L.)
SEE DETAIL D4 / A2.00c
BUILDING FIRE COMPARTMENT #3 - SECOND FLOOR
NO FIRE RATING REQUIRED.
PROPERTY LINE
BLD. FIRE COMP. #4 - 2nd FLOOR
45min F.R.R.(FF, W.A.L.)
SEE DETAIL D4 / A2.00c
BUILDING FIRE COMPARTMENT #1 - SECOND FLOOR
1 HR F.R.R.(FF, W.A.L), NON-COMB. CONSTR., NON-COMB. CLADDING
SEE DETAIL S4 ON DWG A2.00b FOR EXTENT OF COMPARTMENT
UNPROTECTED GLAZED OPENINGS PERMITTED IN COMP. #1 PER O.B.C. 3.2.3.1. SEE O.B.C MATRIX.
UNPROTECTED GLAZED OPENINGS PERMITTED IN COMP. #2 PER O.B.C. 3.2.3.1. SEE O.B.C MATRIX.
UNPROTECTED GLAZED OPENINGS PERMITTED IN COMP. #3 PER O.B.C. 3.2.3.1. SEE O.B.C MATRIX.
UNPROTECTED GLAZED OPENINGS PERMITTED IN COMP. #4 PER O.B.C. 3.2.3.1. SEE O.B.C MATRIX.
1H F.R.T. ON DEMISING WALLS PER O.B.C 3.3.4.2.(1) (TYPICAL)
1H EXIT SEPARATION PER O.B.C 3.4.4.1(1)
1H F.R.T. ON CORRIDOR WALLS PER O.B.C 3.3.4.2.(1) (TYPICAL)
1H F.R.T. ON DEMISING WALLS PER O.B.C 3.3.4.2.(1) (TYPICAL)
1H F.R.T. ON CORRIDOR WALLS PER O.B.C 3.3.4.2.(1) (TYPICAL)
1H F.R.T. ON DEMISING


BUILDING FIRE COMPARTMENT #1 - THIRD FLOOR
NO FIRE RATING REQUIRED
PROPERTY LINE
BLD FIRE COMP. #2 - 3rd FLOOR
45min F.R.ER. EXT. WALL
SEE DETAIL D4 / A23b.
BLD FIRE COMP. #4 - 3rd FLOOR
45min F.R. EXT. WALL
SEE DETAIL D4 / A23b.
BUILDING FIRE COMPARTMENT #1 - THIRD FLOOR
SEE DETAIL D4 ON DWG A23b FOR EXTENT OF COMPARTMENT
(UNPROTECTED GLAZED OPENINGS PERMITTED IN COMP. #1 PER O.B.C. 3.2.3.1. SEE O.B.C MATRIX.
(UNPROTECTED GLAZED OPENINGS PERMITTED IN COMP. #2 PER O.B.C. 3.2.3.1. SEE O.B.C MATRIX.
(UNPROTECTED GLAZED OPENINGS PERMITTED IN COMP. #1 PER O.B.C. 3.2.3.1. SEE O.B.C MATRIX.
1hr F.R.T. ON DEMISING WALLS PER O.B.C. 3.3.4.2.(1) (TYPICAL)
1hr EXIT SEPARATION PER O.B.C.3.4.4.1(1).
45min. F.R.R. ON DUCT SHAFTS PER O.B.C. 3.5.4.2.(1) (TYPICAL)
1hr F.R.R. ON CORRIDOR WALL PER O.B.C.3.3.4.2.(1) (TYPICAL)
1hr F.R.R. ON REFUSE CHUTE PER O.B.C. 3.6.3.2(6b)
1hr ELEVATOR SEPARATION PER O.B.C 3.3.3.1.
TRAVEL DISTANCE: 37m
TRAVEL DISTANCE: 32m
PUBLIC CORRIDOR
DIRECTLY CONNECTED CORRIDOR
DIRECTLY CONNECTED CORRIDOR
EXIT
EXIT
EXIT

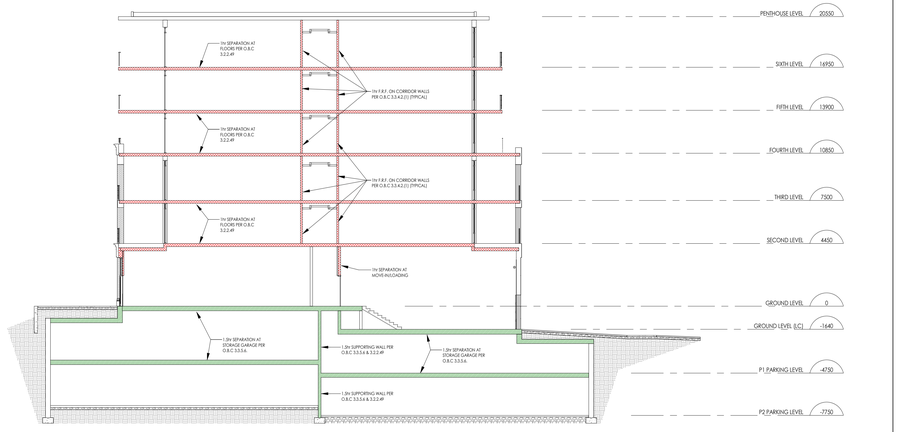
DRAWINGS MUST **NOT** BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS, SPECIFICATIONS AND DRAWINGS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH ANY OF THE WORK.

STAMP: ONTARIO ASSOCIATION OF ARCHITECTS — ELROY VAN GROLL LICENCE 4707

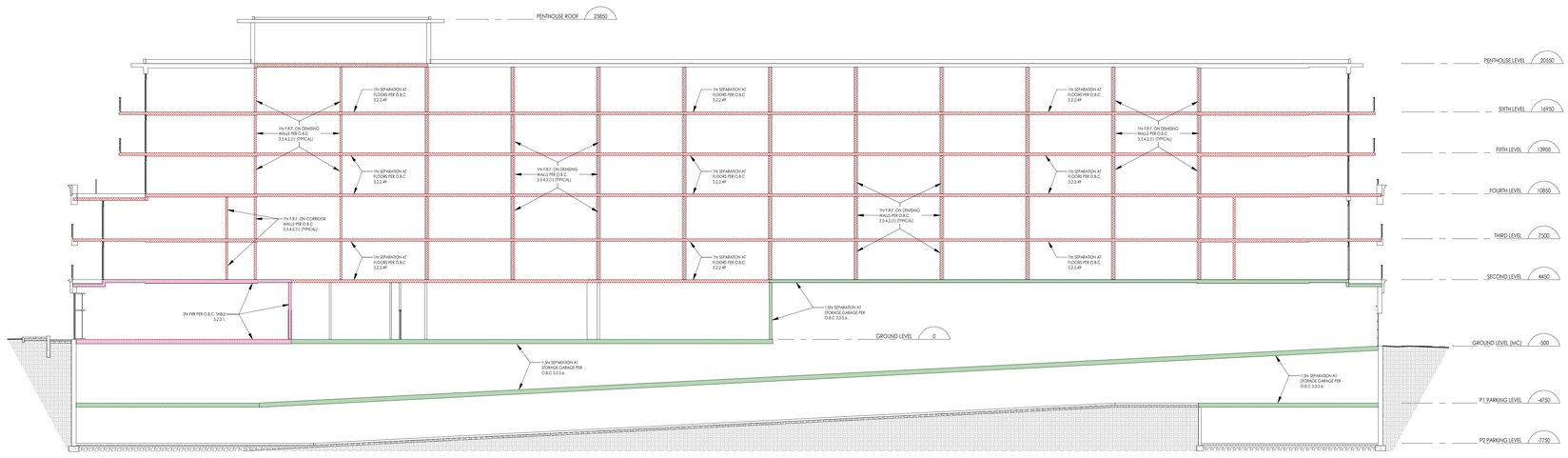
PROJECT NORTH: | TRUE NORTH:



1 OBC SECTION 'A'
1 : 150



2 OBC SECTION 'B'
1 : 150



4 OBC SECTION 'C'
1 : 150

3 NORTH ELEVATION - SPATIAL SEPARATION CALCULATION
1 : 150

	LINE DENOTES OUTLINE OF EXPOSING BUILDING FACE FIRE COMPARTMENT FOR THE PURPOSES OF SPATIAL SEPARATION CALCULATION AS PER OBC 3.2.3.1
	LINE DENOTES OUTLINE OF UNPROTECTED OPENINGS IN EXPOSING BUILDING FACE FIRE COMPARTMENT
	LIGHT SOLID HATCH DENOTES EXPOSING BUILDING FACES OF A DEFINED FIRE COMPARTMENT AT VARIOUS LIMINTING DISTANCES. SEE ALSO PLANS FOR EXTENTS OF COMPARTMENTS AND ASSOCIATED LIMITING DISTANCES.
	DARK SOLID HATCH DENOTES UNPROTECTED OPENINGS IN EXPOSING BUILDING FACE. A GROUP OF HATCHES DENOTES MULTIPLE AREAS OF UNPROTECTED OPENINGS IN A DEFINED FIRE COMPARTMENT.
	45 MINUTES FIRE RESISTANCE RATING
	60 MINUTES FIRE RESISTANCE RATING
	90 MINUTES FIRE RESISTANCE RATING
	120 MINUTES FIRE RESISTANCE RATING

5 OBC ELEVATIONS & SECTIONS GRAPHICS LEGEND

No.	DESCRIPTION	BY	DATE

van Groll & Associates Inc.
2 St. Clair Avenue W., F18,
Toronto, ON, M4V 1L5
905-339-2811
vangrollassociates.com

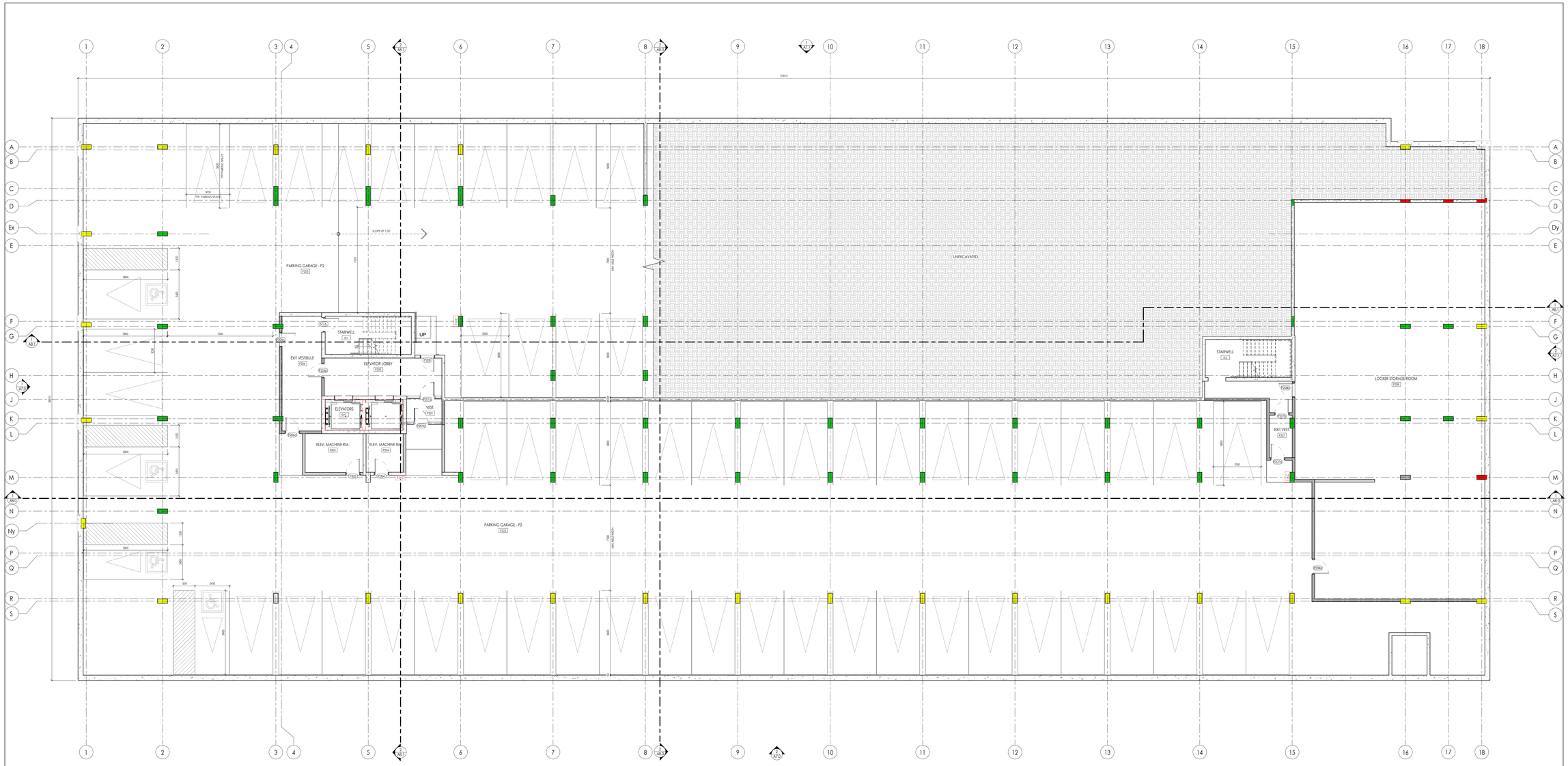
CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
O.B.C. COMPLIANCE SECTIONS & ELEVATIONS

DATE: 24.10.04 | SCALE: As indicated
DRAWN: Author | SHEET NUMBER: A2.0b
JOB NUMBER: 171-037



1 P2 PARKING LEVEL FLOOR PLAN
1 : 100

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PROJECT NORTH: N

TRUE NORTH:

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van Groll & Associates Inc.
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CLIENT:
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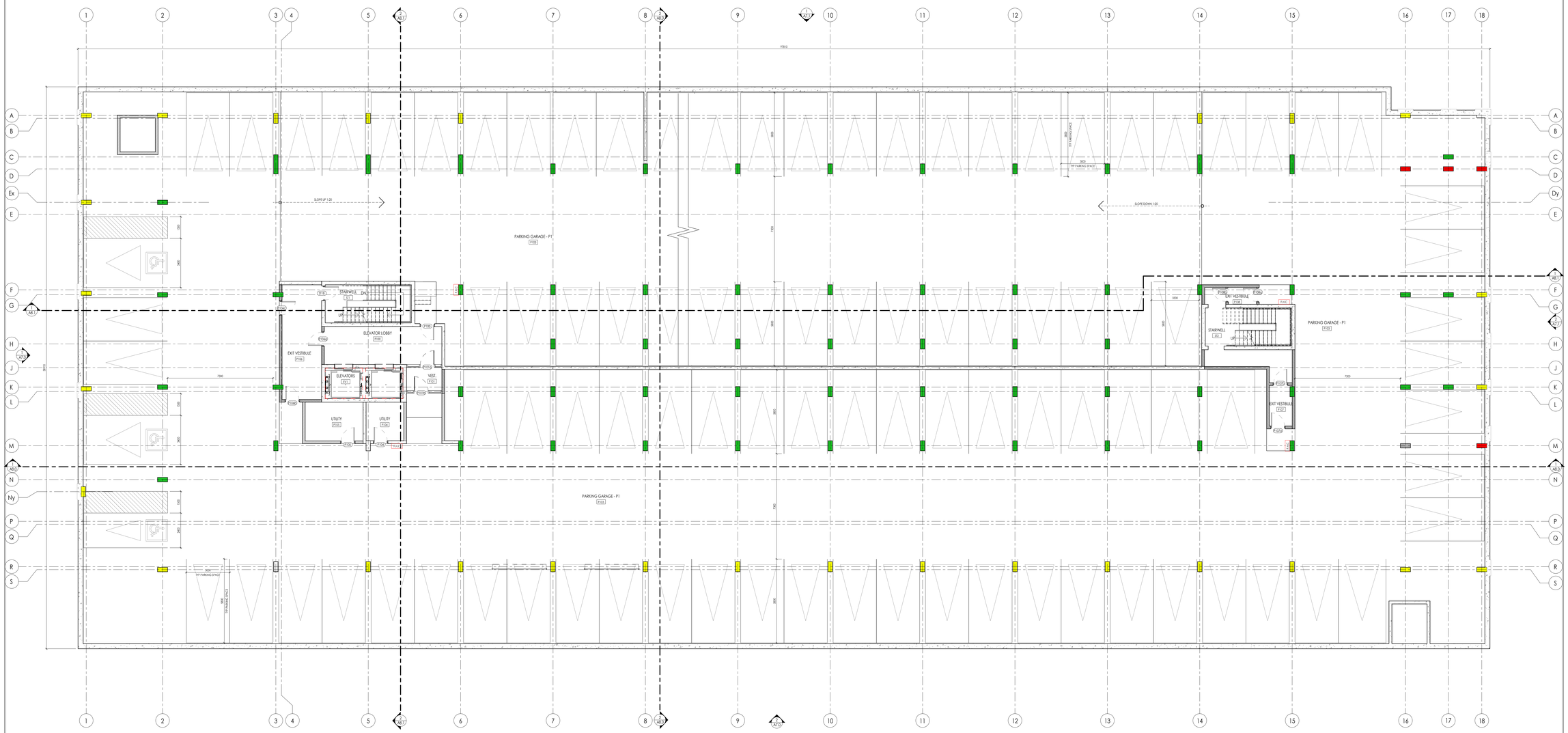
PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
P2 PARKING LEVEL FLOOR PLAN

DATE: 24.10.04 SCALE: 1 : 100
DRAWN: CH SHEET NUMBER:
JOB NUMBER: 171-037

A3.0


PARKING GARAGE - P1
P101
SLOPE UP 1:20
SLOPE DOWN 1:20
STAIRWELL
ST1
ELEVATOR LOBBY
P102
EXIT VESTIBULE
P106
ELEVATORS
P111
VEST.
P103
UTILITY
P105
UTILITY
P104
EXIT VESTIBULE
P108
EXIT VESTIBULE
P107
STAIRWELL
ST2
EXIT VESTIBULE
P109
3000
TYP PARKING SPACE
2400
TYP PARKING SPACE
97810
7700
3800
7300
3800
7300
3800
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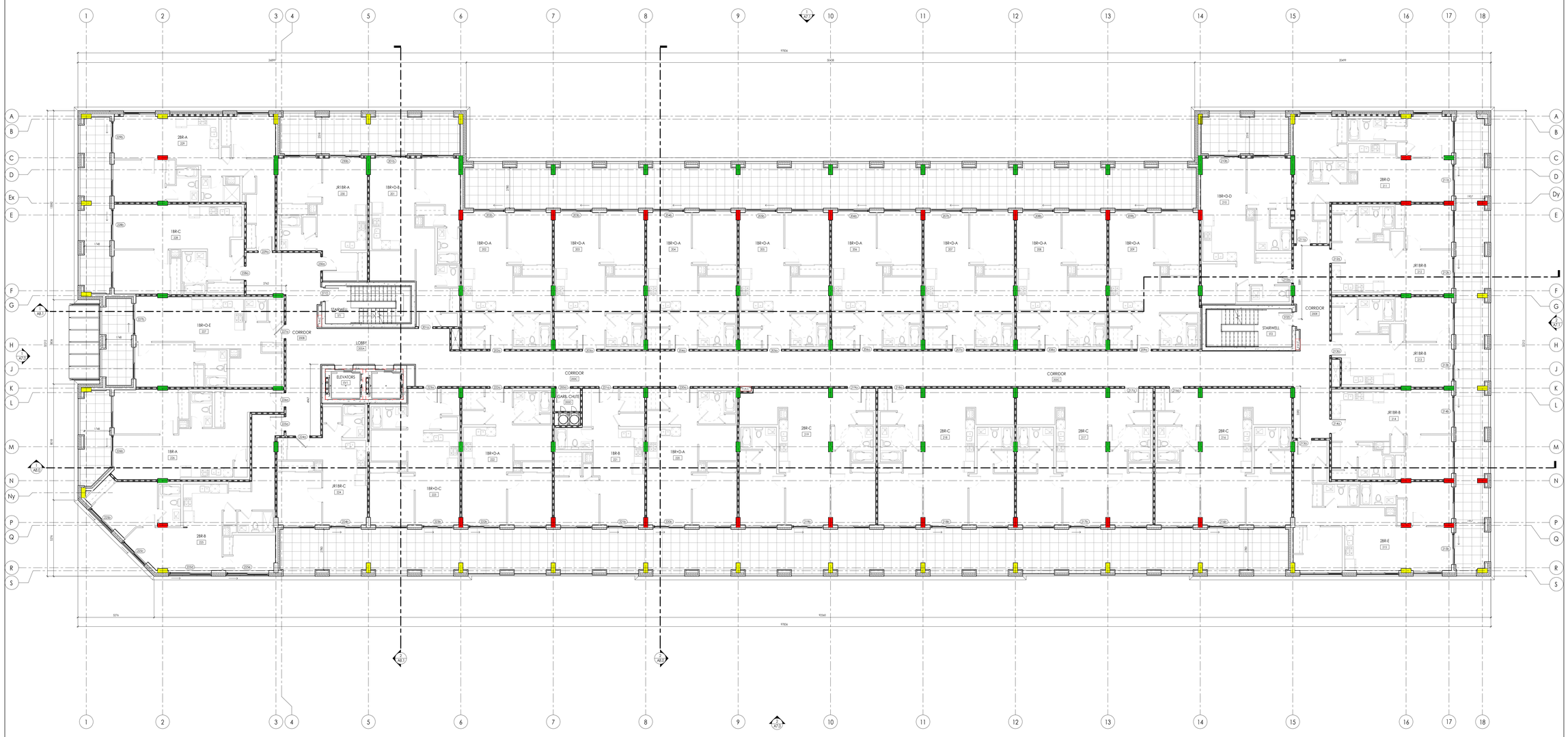
3000
1500
1500
1500



1 SECOND LEVEL FLOOR PLAN
1 : 100

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PROJECT NORTH: N

TRUE NORTH: N

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van Groll & Associates Inc.
2 St. Clair Avenue W., F18,
Toronto, ON, M4V 1L5
905-339-2811
vangrollassociates.com

CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
SECOND LEVEL FLOOR PLAN

DATE: 24.10.04
SCALE: 1 : 100
DRAWN: CH
SHEET NUMBER: A3.2
JOB NUMBER: 171-037

ELEVATION CONSTRUCTION NOTES

01 HEAVY LINE BOARDERING EARTH HATCHING INDICATES LINE OF GRADE CUT NEAR FACE OF BUILDING. SEE ALSO SITE PLAN, CIVIL AND LANDSCAPE DRAWINGS. SEE PLANS AND SECTIONS FOR BELOW-GRADE CONDITIONS.

02 PRECAST PLINTH BLOCK C/W NATURAL FINISH (TYP). EXTEND OUT FOUNDATION TO CARRY DEPTH OF PLINTH BLOCK.

03 STOREFRONT GLAZING C/W BLACK ALUMINUM FRAMEING AT GROUND FLOOR. (TYP). SEE ALSO FLOOR PLANS.

04 LIGHT GREY CROSS HATCH IN STOREFRONT GLAZING INDICATES SPANDREL PANEL, C/W FIRE RATED PARTITION PROTECTION ON INTERIOR ON EXTERIOR WALLS REQUIRED TO BE FIRE RATED. SEE ALSO O.B.C COMPLIANCE DRAWINGS.

05 BRICK PATTERN HATCH PATTERN INDICATES BRICK VENEER (TYP.)

06 LIGHT GREY HATCH AS NOTED INDICATES DARK COLOUR ACM PANELS (TYP). SEE ALSO FLOOR PLANS AND BUILDING SECTIONS.

07 WHITE ACM PANELS(TYP). SEE ALSO FLOOR PLANS AND BUILDING SECTIONS.

08 LARGE BRICK PATTERN INDICATES LARGE ARCHITECTURAL BLOCK VENEER (TYP.)

09 LOCATION OF PROPOSED MECHANICAL INTAKE/EXHAUST LOUVRE (TBD).

10 CONTINUOUS PRECAST DECORATIVE BAND C/W NATURAL FINISH.

11 WHITE MARBEL VENEER AT MAIN ENTRANCE EXTERIOR WALL.

12 PAINTED STEEL ENTRY CANOPY C/W SLOPED GLASS TOP IN ALUMINUM FRAME.

13 GLASS GUARDS ON STEEL POSTS WITH STEEL TOP RAIL (TYP.). MANUFACTURE AND INSTALL GUARDS TO BE O.B.C REQUIREMENTS FOR HEIGHT AND LOADS ON GUARDS. SUBMIT TO CONSULTANT FOR REVIEW. SEE ALSO FLOOR PLANS AND SECTIONS. STEEL FINISH TO MATCH ALUMINUM WINDOW FRAMES ON SAME FLOOR LEVEL.

14 STEEL GUARDS C/W HORIZONTAL BARS ON STEEL POSTS WITH STEEL TOP RAIL (TYP.). MANUFACTURE AND INSTALL GUARDS TO BE O.B.C REQUIREMENTS FOR HEIGHT AND LOADS ON GUARDS. SUBMIT TO CONSULTANT FOR REVIEW. SEE ALSO FLOOR PLANS AND SECTIONS. STEEL FINISH TO MATCH ALUMINUM WINDOW FRAMES ON SAME FLOOR LEVEL

15 ALUMINUM FRAMED DWELLING UNIT GLAZING UNIT C/W SLIDING DOORS OR AWNING WINDOW IN FIXED FRAME. FINISH TO MATCH ADJACENT ACM PANELS (TYP). SEE ALSO FLOOR PLANS. ALL DWELLING GLAZING UNITS TO INCLUDE HORIZONTAL LOUVRES TO BE CONNECTED TO UNIT HVAC SYSTEMS. SEE ALSO MECHANICAL DRAWINGS. LOUVRE TO MATCH FRAME FINSH.

16 EXPOSED CONCRETE BALCONY OR ROOF EDGE. SEE ALSO FLOOR PLANS, SECTION AND STRUCTURAL DRAWINGS. SLOPE TOP SURFACE OF CONCRETE AWAY FROM BUILDING FACE.

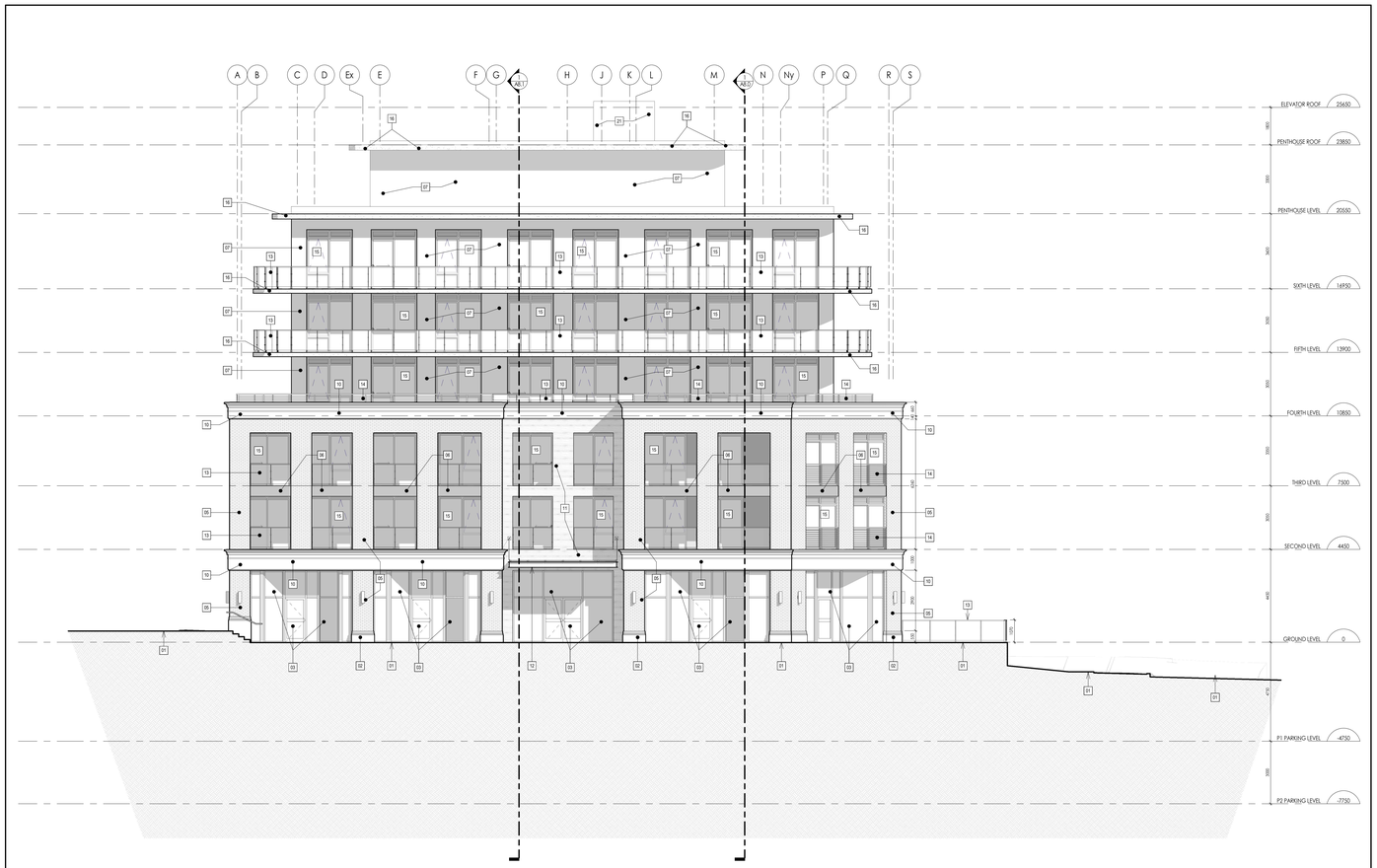
17 MOTORIZED OVERHEAD VEHICLE ENTRY DOOR C/W GLAZED AND SOLID INSULATED PANELS.

18 PAINTED METAL PEDESTRIAN DOOR.

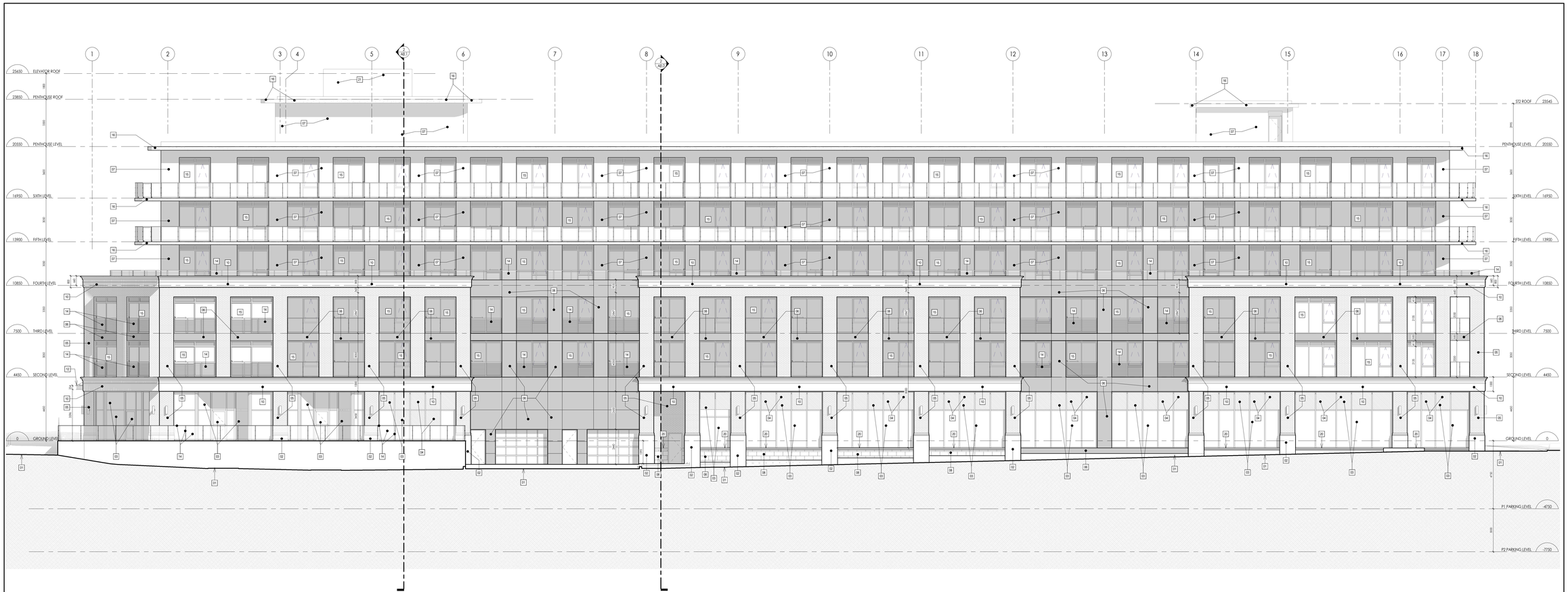
19 EXPOSED POURED CONCRETE EXTERIOR COLUMNS.

20 PRECAST STONE SILL. SLOPE TOP SURFACE DOWN AND AWAY FROM BUILDING FACE.

21 WALL OF ELEVATOR EXTENSTION ABOVE PENTHOUSE ROOF LEVEL. ELEVATOR WALLS TO BE CLAD WITH WHITE ACM PANELS TO MATCH MECHANICAL PENTHOUSE.



1 WEST ELEVATION (MAIN STREET)
1 : 100



2 SOUTH ELEVATION (CARLTON STREET)
1 : 100

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STAMP: ONTARIO ASSOCIATION OF ARCHITECTS — EVERY VAN GROLL LICENCE 4707

PROJECT NORTH: TRUE NORTH:

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1	ISSUED FOR SITE PLAN APPROVAL	CH	24.10.04

van Groll & Associates Inc.
2 St. Clair Avenue W., F18,
Toronto, ON, M4V 1L5
905-339-2811
vangrollassociates.com

CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

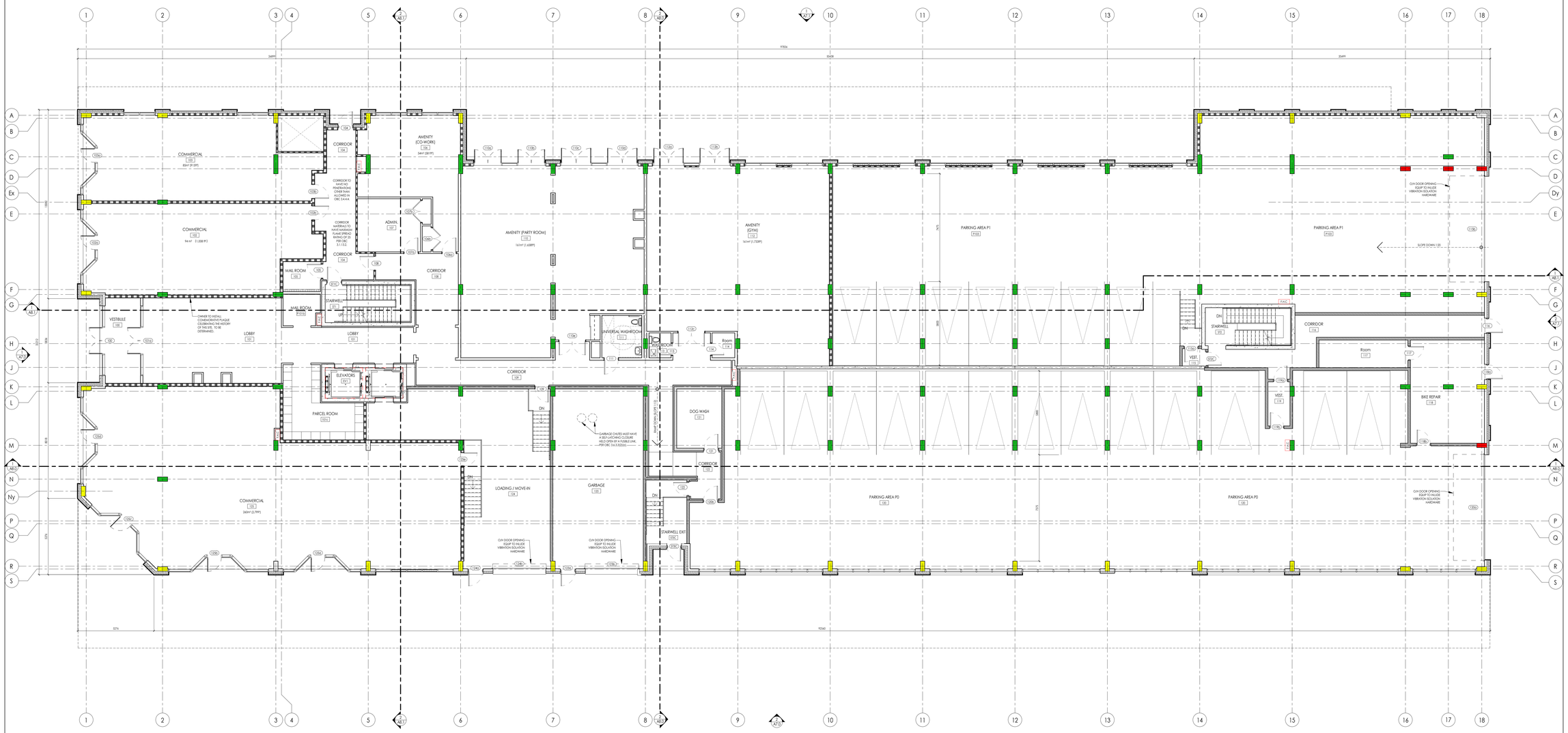
ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
BUILDING ELEVATIONS

DATE:	24.10.04	SCALE:	As indicated
DRAWN:	CH	SHEET NUMBER:	

JOB NUMBER: 171-037

A7.0


COMMERCIAL 101 80m² (1 SP)
COMMERCIAL 102 94 m² (1,008 ft²)
COMMERCIAL 103 260m² (2,799²)
CORRIDOR 104
AMENITY (CO-WORK) 106 164m² (28 PP)
CORRIDOR TO HAVE NO LESS THAN 1.5HR CRWR THAN ALLOWED IN OBC 3.4.4.4.
CORRIDOR MATERIALS TO HAVE MAXIMUM FLAME SPREAD RATING OF 25 PER OBC 3.1.13.2.
ADMIN. 107
CORRIDOR 104
AMENITY (PARTY ROOM) 110 161m² (1,638ft²)
MAIL ROOM 109
MAIL ROOM P105
CORRIDOR 108
STAIRWELL 113
LOBBY 101
VESTIBULE 100
OWNER TO INSTALL COMMEMORATIVE PLAQUE CELEBRATING THE HISTORY OF THIS SITE. TO BE DETERMINED.
ELEVATORS 127
PARCEL ROOM 122
CORRIDOR 109
UNIVERSAL WASHROOM 111
CORRIDOR 112, 113
Room 114
AMENITY (GYM) 112 161m² (1,733ft²)
PARKING AREA P1 P102
PARKING AREA P1 P102
SLOPE DOWN 1:20
O/H DOOR OPENING — EQUIP TO MUDE VIBRATION ISOLATION HARDWARE
F.H.C.
DN
STAIRWELL 123
CORRIDOR 116
VEST. 115
Room 117
VEST. 118
BIKE REPAIR 119
DOG WASH 121
RAMP DOWN SLOPE 1:10
GARBAGE CHUTES MUST HAVE A SELF-LATCHING CLOSURE HELD OPEN BY A FUSIBLE LINK, PER OBC 3.6.5.5(2)(c)
CORRIDOR 120
LOADING / MOVE-IN 124
GARBAGE 123
DN
STAIRWELL EXIT 125
PARKING AREA P0 120
PARKING AREA P0 120
O/H DOOR OPENING — EQUIP TO MUDE VIBRATION ISOLATION HARDWARE
O/H DOOR OPENING — EQUIP TO MUDE VIBRATION ISOLATION HARDWARE
O/H DOOR OPENING — EQUIP TO MUDE VIBRATION ISOLATION HARDWARE
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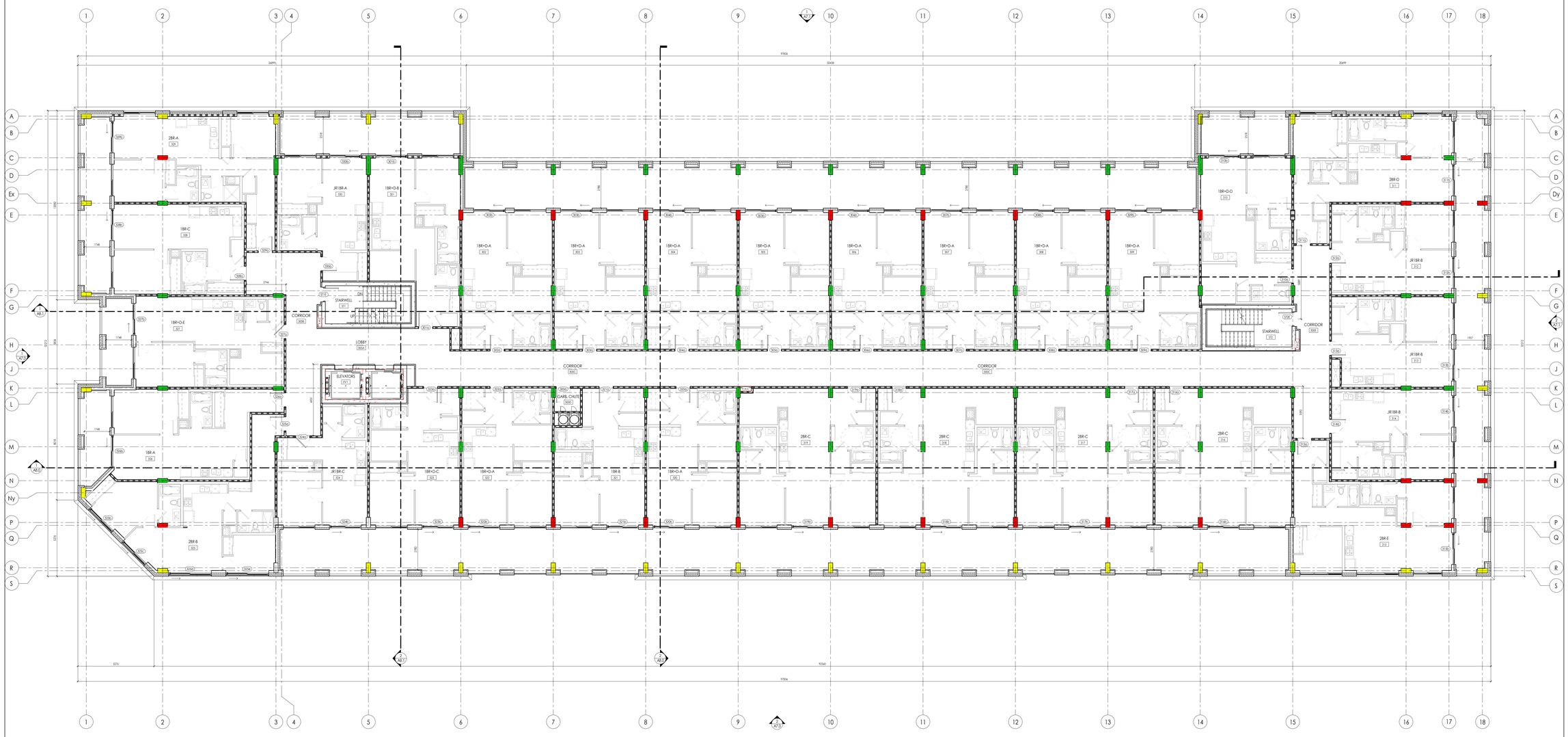
91560
3274
3048
3048
3048



1 THIRD LEVEL FLOOR PLAN
1 : 100

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PROJECT NORTH: N

TRUE NORTH: N

No.	DESCRIPTION	BY	DATE
1	ISSUED FOR SITE PLAN APPROVAL	CH	24.10.04

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2 St. Clair Avenue W., F18,
Toronto, ON, M4V 1L5
905-339-2811
vangrollassociates.com

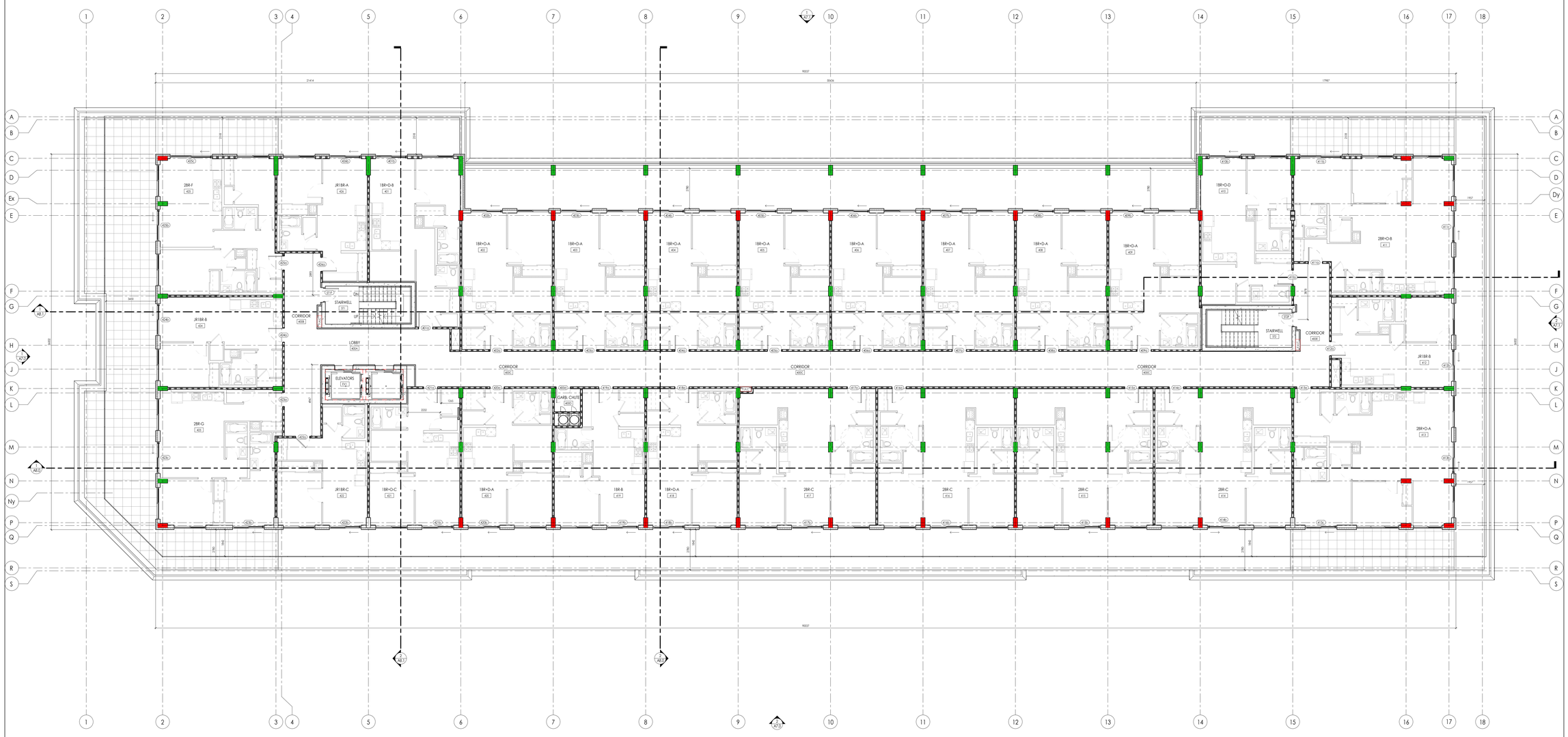
CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
THIRD LEVEL FLOOR PLAN

DATE: 24.10.04 SCALE: 1 : 100
DRAWN: CH SHEET NUMBER:
JOB NUMBER: 171-037 A3.3



1 FOURTH LEVEL FLOOR PLAN
1 : 100

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TRUE NORTH:

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Toronto, ON, M4V 1L5
905-339-2811
vangrollassociates.com

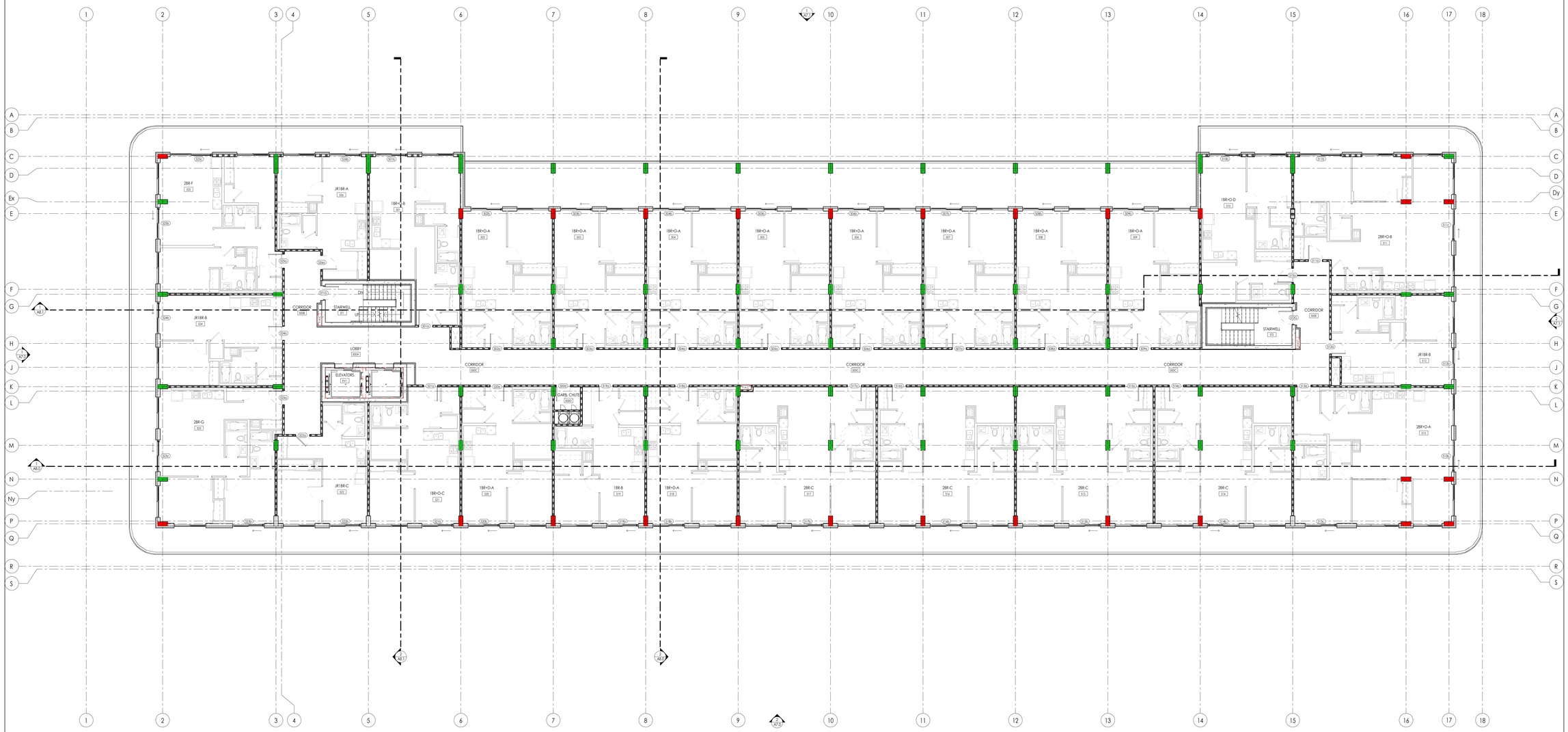
CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
FOURTH LEVEL FLOOR PLAN

DATE: 24.10.04
SCALE: 1 : 100
DRAWN: CH
SHEET NUMBER: A3.4
JOB NUMBER: 171-037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1BR+A-R
102
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103
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104
1BR+D-A
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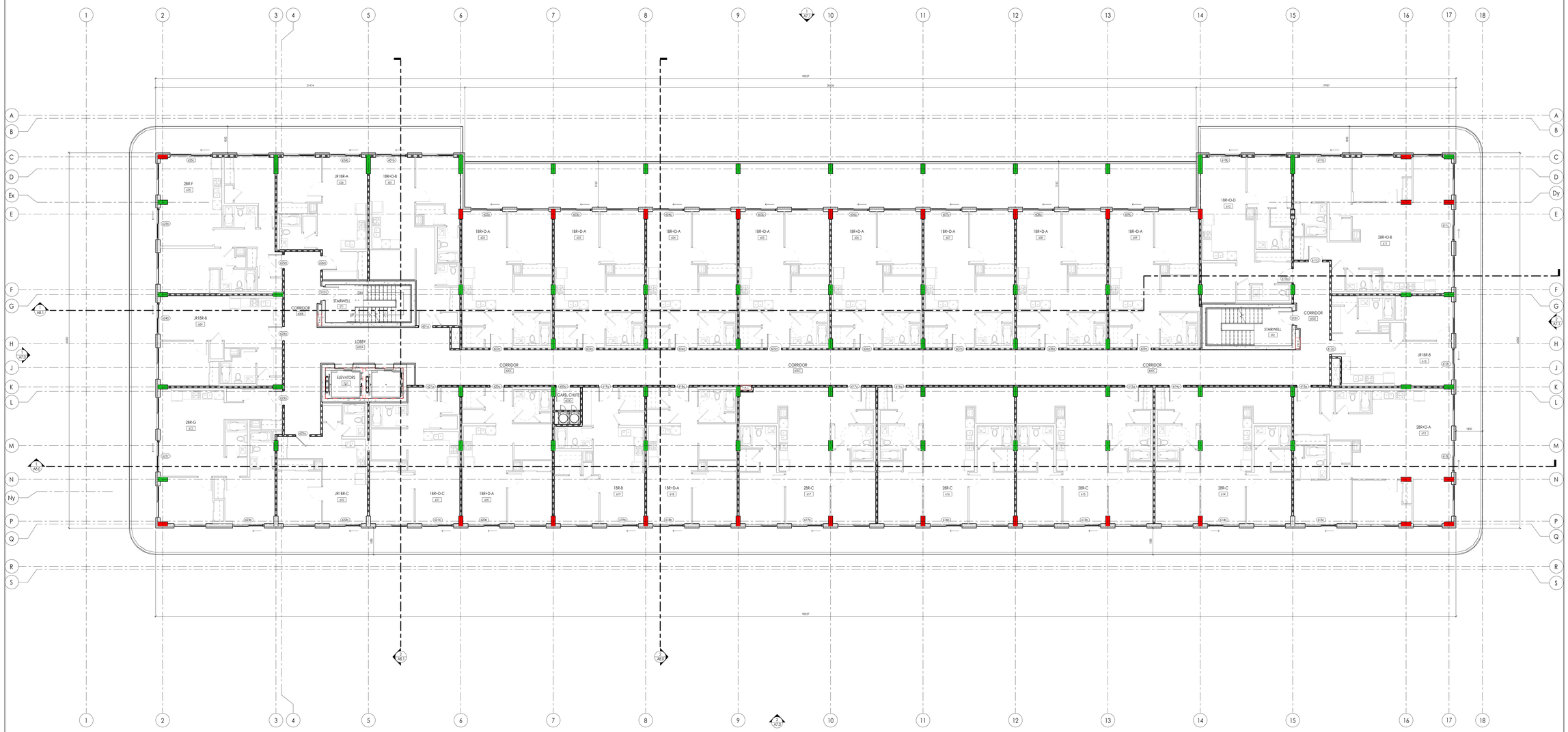

1 SIXTH LEVEL FLOOR PLAN
1 : 100

DRAWINGS MUST **NOT** BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS, SPECIFICATIONS AND DRAWINGS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH ANY OF THE WORK.

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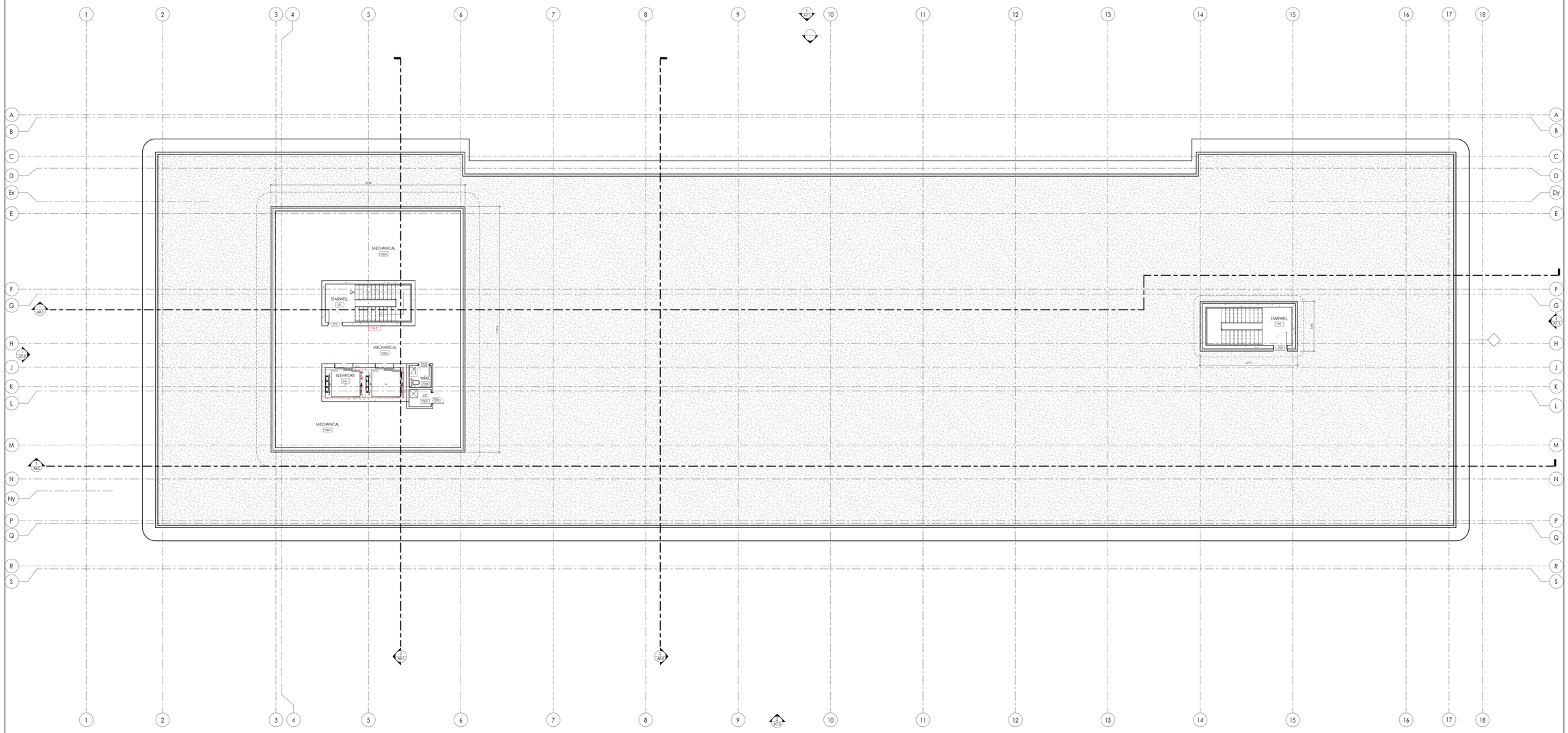
CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
SIXTH LEVEL FLOOR PLAN

DATE: 24.10.04 SCALE: 1 : 100
DRAWN: CH SHEET NUMBER:
JOB NUMBER: 171-037 A3.6



1 PENTHOUSE LEVEL FLOOR PLAN
1 : 100

DRAWINGS MUST **NOT** BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS, SPECIFICATIONS AND DRAWINGS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH ANY OF THE WORK.

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TRUE NORTH: N

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905-339-2811
vangrollassociates.com

CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

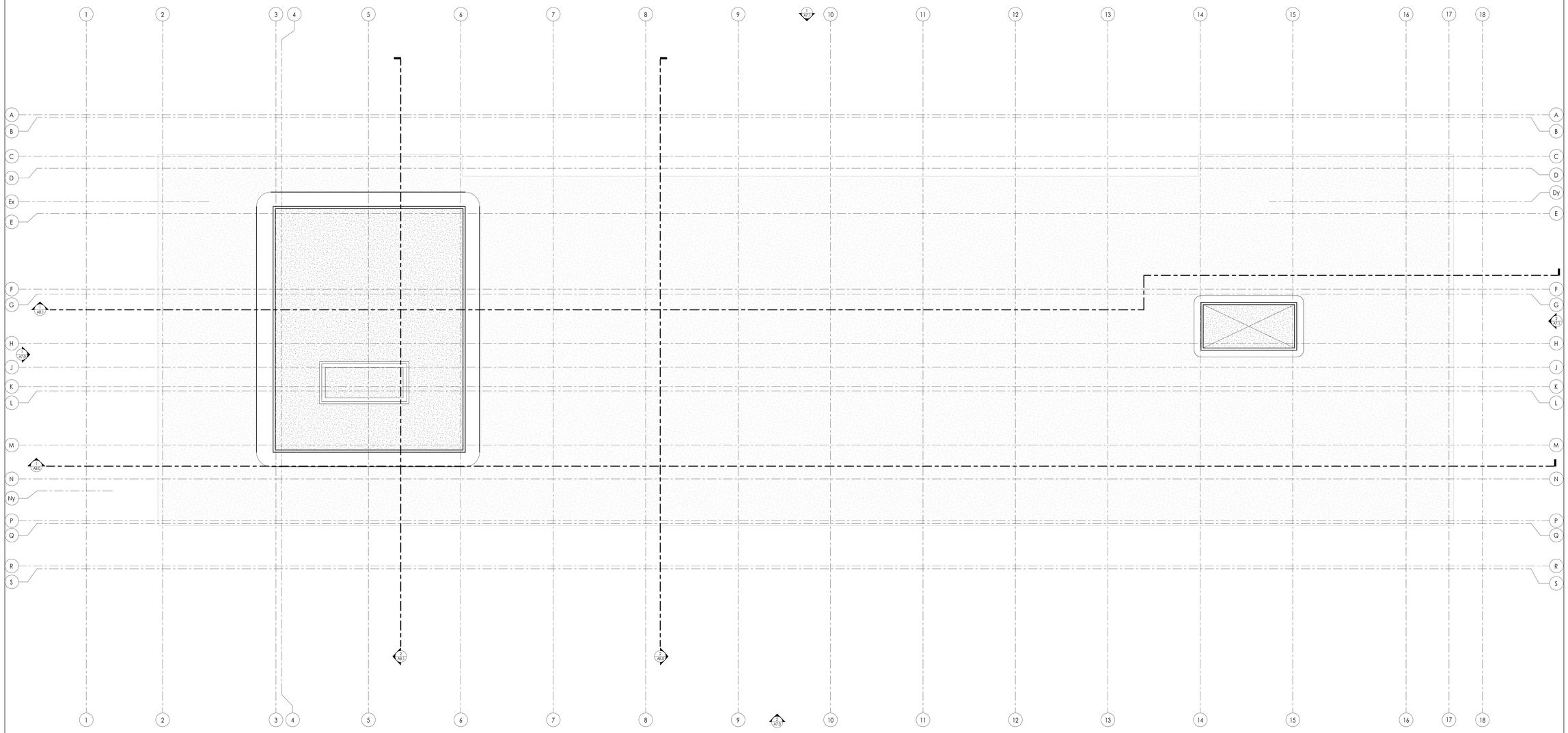
ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
PENTHOUSE LEVEL FLOOR PLAN

DATE:	24.10.04	SCALE:	1 : 100
DRAWN:	CH	SHEET NUMBER:	

JOB NUMBER: 171-037

A3.7



1 PENTHOUSE ROOF PLAN
1 : 100

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905-329-2811
vangrollassociates.com

CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
PENTHOUSE ROOF LEVEL PLAN

DATE:	24.10.04	SCALE:	1 : 100
DRAWN:	CH	SHEET NUMBER:	

JOB NUMBER:
171-037

A3.8

ELEVATION CONSTRUCTION NOTES

01 HEAVY LINE BOARDERING EARTH HATCHING INDICATES LINE OF GRADE CUT NEAR FACE OF BUILDING. SEE ALSO SITE PLAN, CIVIL AND LANDSCAPE DRAWINGS. SEE PLANS AND SECTIONS FOR BELOW-GRADE CONDITIONS.

02 PRECAST PLINTH BLOCK C/W NATURAL FINISH (TYP). EXTEND OUT FOUNDATION TO CARRY DEPTH OF PLINTH BLOCK.

03 STOREFRONT GLAZING C/W BLACK ALUMINUM FRAMEING AT GROUND FLOOR. (TYP). SEE ALSO FLOOR PLANS.

04 LIGHT GREY CROSS HATCH IN STOREFRONT GLAZING INDICATES SPANDREL PANEL, C/W FIRE RATED PARTITION PROTECTION ON INTERIOR ON EXTERIOR WALLS REQUIRED TO BE FIRE RATED. SEE ALSO O.B.C COMPLIANCE DRAWINGS.

05 BRICK PATTERN HATCH PATTERN INDICATES BRICK VENEER (TYP.)

06 LIGHT GREY HATCH AS NOTED INDICATES DARK COLOUR ACM PANELS (TYP). SEE ALSO FLOOR PLANS AND BUILDING SECTIONS.

07 WHITE ACM PANELS(TYP). SEE ALSO FLOOR PLANS AND BUILDING SECTIONS.

08 LARGE BRICK PATTERN INDICATES LARGE ARCHITECTURAL BLOCK VENEER (TYP.)

09 LOCATION OF PROPOSED MECHANICAL INTAKE/EXHAUST LOUVRE (TBD).

10 CONTINUOUS PRECAST DECORATIVE BAND C/W NATURAL FINISH.

11 WHITE MARBEL VENEER AT MAIN ENTRANCE EXTERIOR WALL.

12 PAINTED STEEL ENTRY CANOPY C/W SLOPED GLASS TOP IN ALUMINUM FRAME.

13 GLASS GUARDS ON STEEL POSTS WITH STEEL TOP RAIL (TYP.). MANUFACTURE AND INSTALL GUARDS TO BE O.B.C REQUIREMENTS FOR HEIGHT AND LOADS ON GUARDS. SUBMIT TO CONSULTANT FOR REVIEW. SEE ALSO FLOOR PLANS AND SECTIONS. STEEL FINISH TO MATCH ALUMINUM WINDOW FRAMES ON SAME FLOOR LEVEL.

14 STEEL GUARDS C/W HORIZONTAL BARS ON STEEL POSTS WITH STEEL TOP RAIL (TYP.). MANUFACTURE AND INSTALL GUARDS TO BE O.B.C REQUIREMENTS FOR HEIGHT AND LOADS ON GUARDS. SUBMIT TO CONSULTANT FOR REVIEW. SEE ALSO FLOOR PLANS AND SECTIONS. STEEL FINISH TO MATCH ALUMINUM WINDOW FRAMES ON SAME FLOOR LEVEL

15 ALUMINUM FRAMED DWELLING UNIT GLAZING UNIT C/W SLIDING DOORS OR AWNING WINDOW IN FIXED FRAME. FINISH TO MATCH ADJACENT ACM PANELS (TYP). SEE ALSO FLOOR PLANS. ALL DWELLING GLAZING UNITS TO INCLUDE HORIZONTAL LOUVRES TO BE CONNECTED TO UNIT HVAC SYSTEMS. SEE ALSO MECHANICAL DRAWINGS. LOUVRE TO MATCH FRAME FINSH.

16 EXPOSED CONCRETE BALCONY OR ROOF EDGE. SEE ALSO FLOOR PLANS, SECTION AND STRUCTURAL DRAWINGS. SLOPE TOP SURFACE OF CONCRETE AWAY FROM BUILDING FACE.

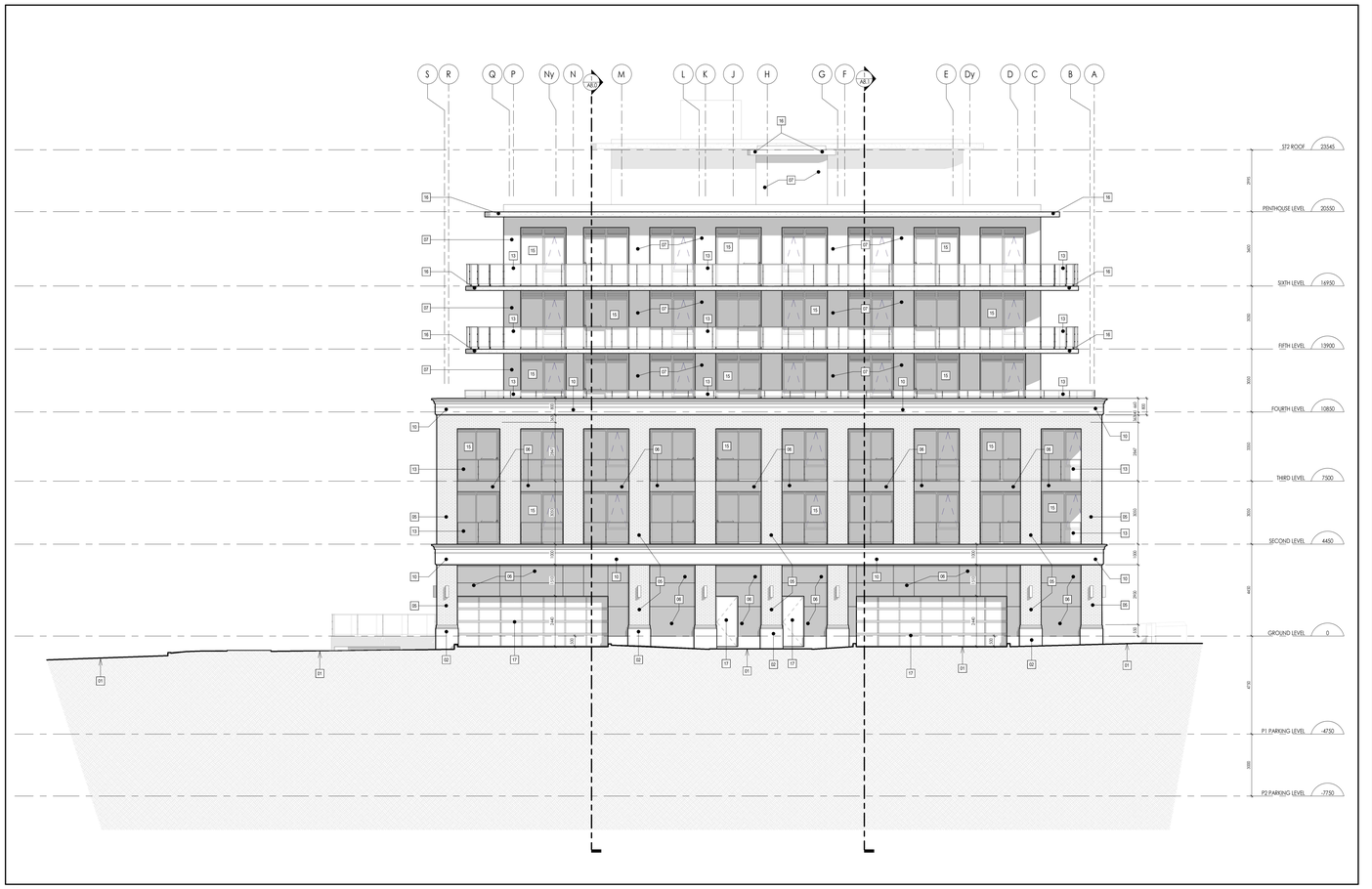
17 MOTORIZED OVERHEAD VEHICLE ENTRY DOOR C/W GLAZED AND SOLID INSULATED PANELS.

18 PAINTED METAL PEDESTRIAN DOOR.

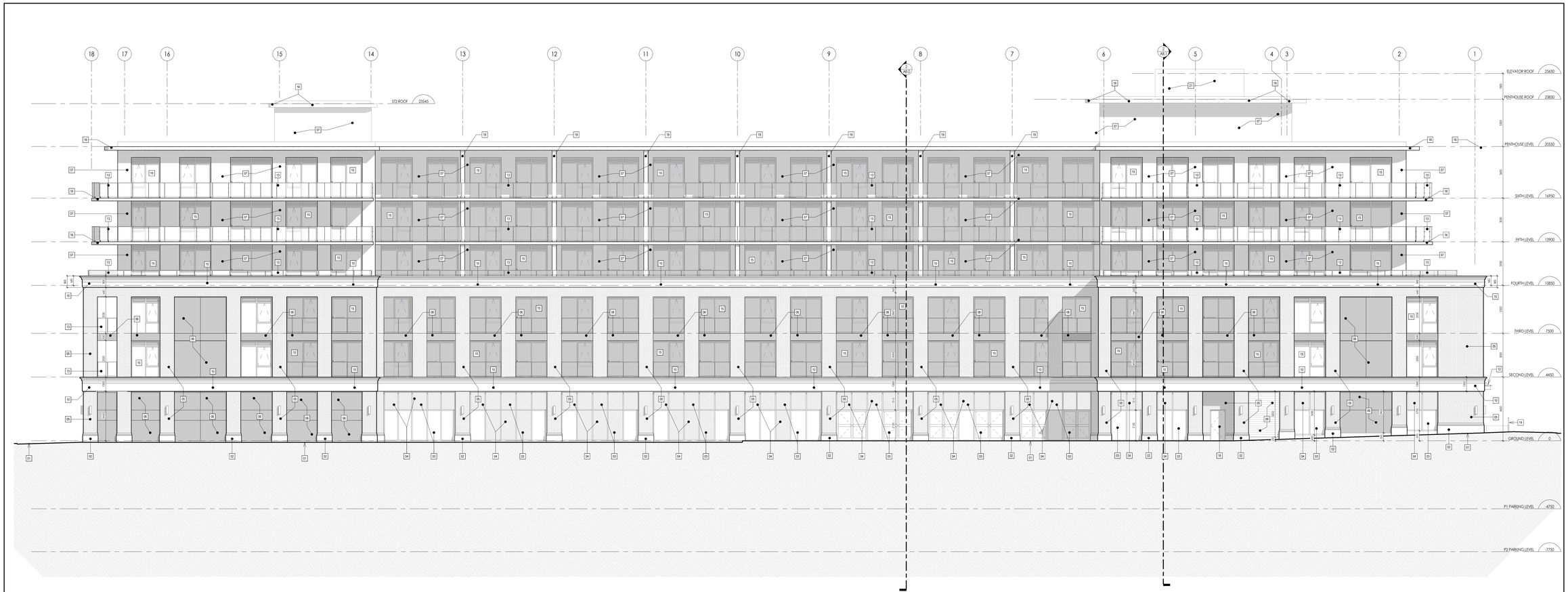
19 EXPOSED POURED CONCRETE EXTERIOR COLUMNS.

20 PRECAST STONE SILL. SLOPE TOP SURFACE DOWN AND AWAY FROM BUILDING FACE.

21 WALL OF ELEVATOR EXTENSTION ABOVE PENTHOUSE ROOF LEVEL. ELEVATOR WALLS TO BE CLAD WITH WHITE ACM PANELS TO MATCH MECHANICAL PENTHOUSE.



2 EAST ELEVATION (ST ANDREW STREET)
1 : 100



1 NORTH ELEVATION
1 : 100

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PROJECT NORTH: TRUE NORTH:

No.	DESCRIPTION	BY	DATE
1	ISSUED FOR SITE PLAN APPROVAL	CH	24.10.04

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2 St. Clair Avenue W., F18,
Toronto, ON, M4V 1L5
905-329-2811
vangrollassociates.com

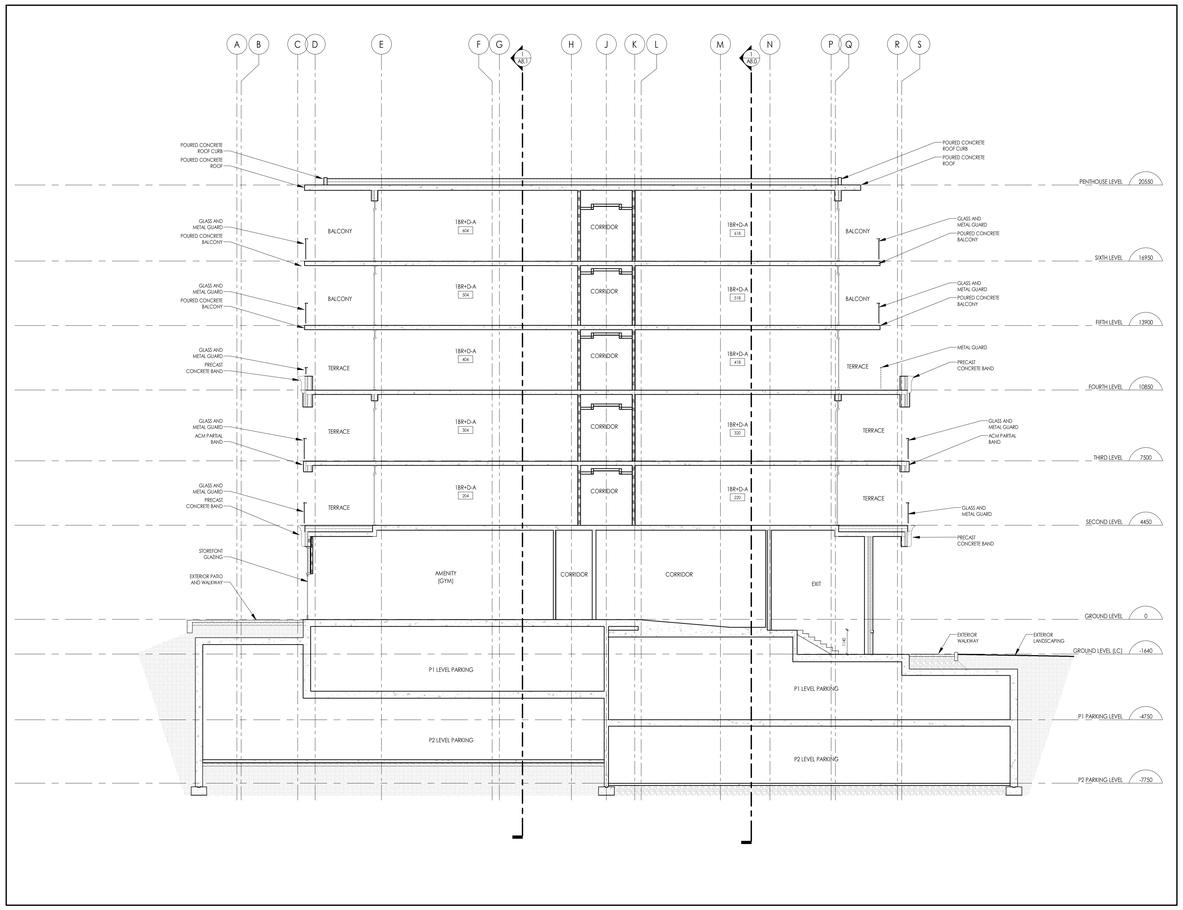
CLIENT: Owner

PROJECT: NORFOLK DEVELOPMENT

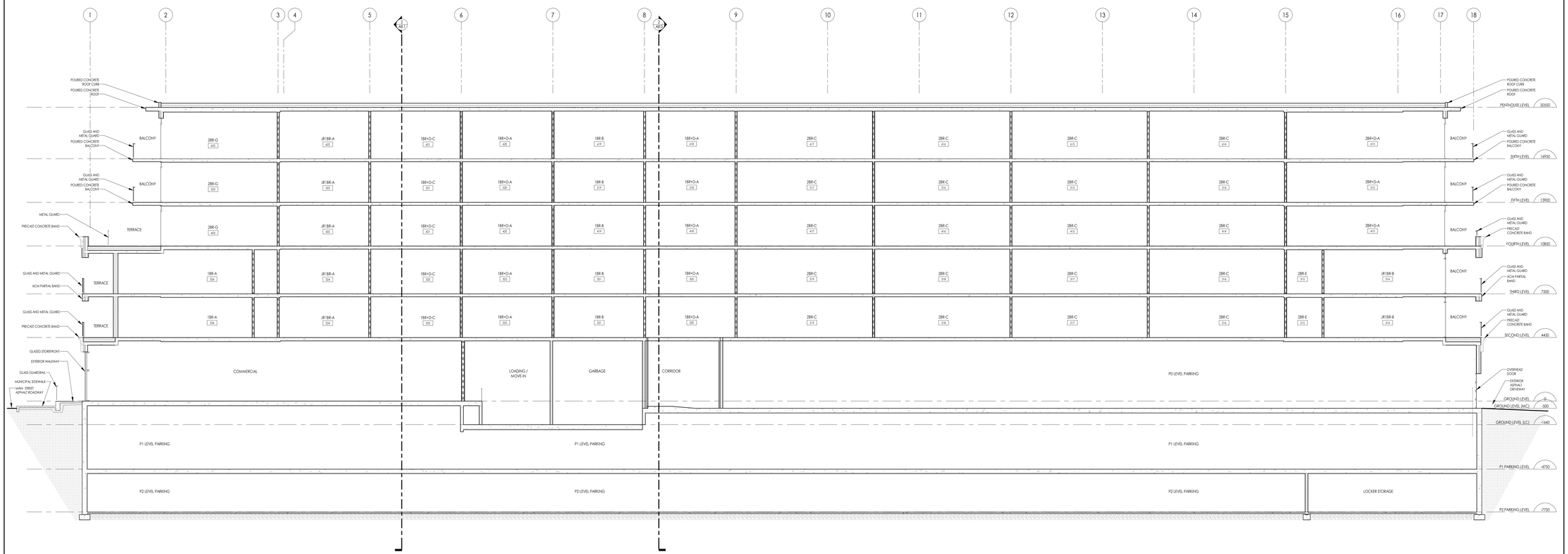
ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE: BUILDING ELEVATIONS

DATE: 24.10.04 SCALE: As indicated
DRAWN: CH SHEET NUMBER:
JOB NUMBER: 171-037 A7.1



2 BUILDING SECTION 4
1 : 100



1 BUILDING SECTION 3
1 : 100

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ONTARIO ASSOCIATION OF ARCHITECTS — ELROY VAN GROLL LICENCE 4707		

No.	DESCRIPTION	BY	DATE
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vangrollassociates.com

CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
BUILDING SECTIONS

DATE:	24.10.04	SCALE:	1 : 100
DRAWN:	CH	SHEET NUMBER:	
JOB NUMBER: 171-037			A8.0

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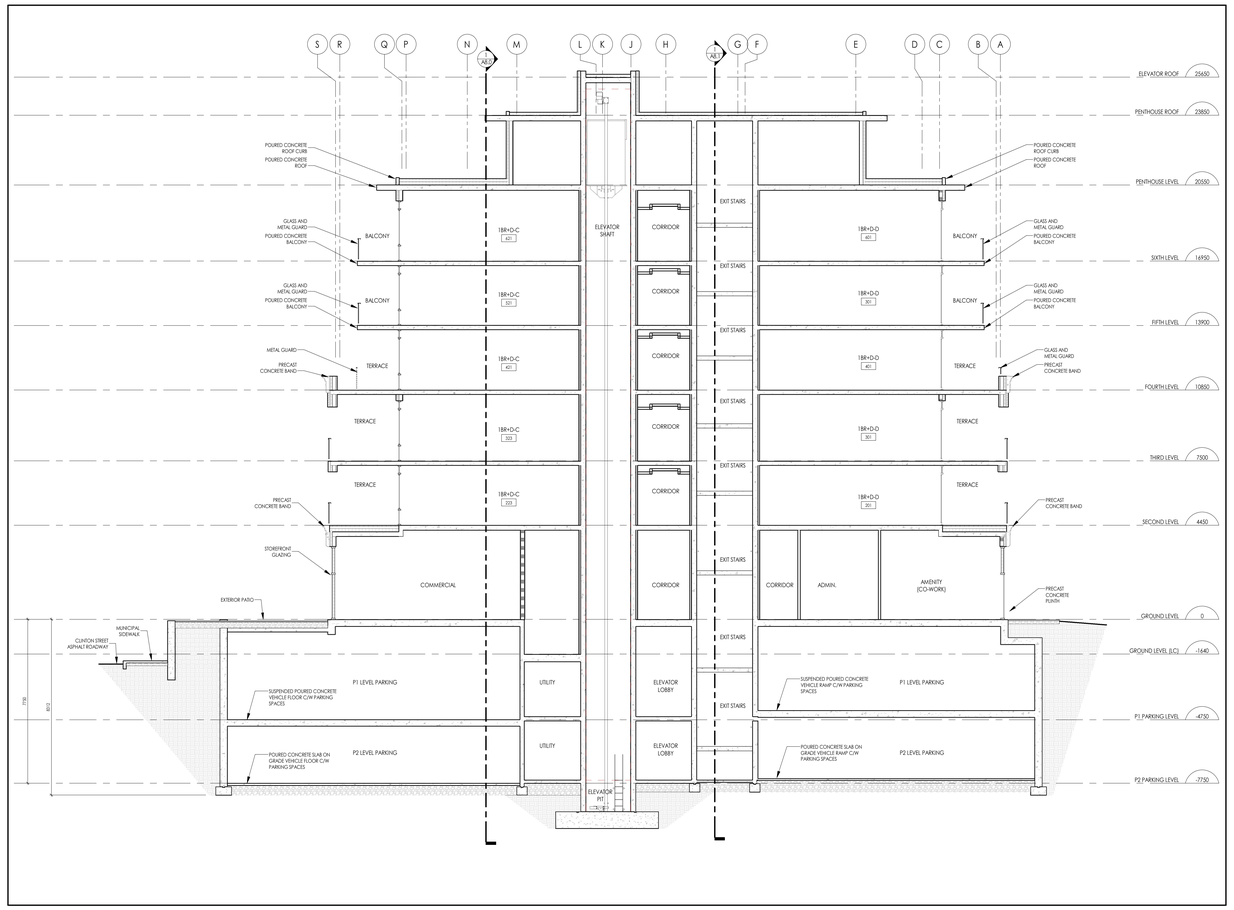
PROJECT NORTH:	TRUE NORTH:



2 BUILDING SECTION 2
1 : 100

1 BUILDING SECTION 1
1 : 100

No.	DESCRIPTION	BY	DATE
1	ISSUED FOR SITE PLAN APPROVAL	CH	24.10.04

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vangrollassociates.com

CLIENT:
Owner

PROJECT:
NORFOLK DEVELOPMENT

ADDRESS: NORFOLK DEVELOPMENT

DRAWING TITLE:
BUILDING SECTIONS

DATE:	24.10.04	SCALE:	1 : 100
DRAWN:	CH	SHEET NUMBER:	

JOB NUMBER:
171-037

A8.1

STANPRO

Project : _____ Type : _____

Drawn by : _____ Catalogue # : _____ Date : _____

Series Spec Sheet

UNIVERSAL COMMERCIAL - CDU GEN 2

ALL-IN-ONE DIMMABLE LED DOWNLIGHT

3 CCT and 3 Power selectable

The Universal Commercial downlight series is an all-in-one luminaire with multiple configurations. With 3 color temperature and 3 power selectable, this luminaire is high versatility, glare-free design, and dimmable. This downlight is perfect for both new construction and retrofit solution. It is the ideal solution for replacing CFL, HID or incandescent lamps with a high performance LED recessed.

FEATURES AND SPECIFICATIONS

- **Construction**

  Physical Characteristics
  - White Aluminum or Alzak finish
  - Smooth recessed baffle
  - Available in round 4", 6" and 8"
  - 80 to 88° beam angle
  - Frosted polycarbonate lens
  - CCT and power switches are directly placed on the back of the LED module

  Mounting
  - Easy installation with torsion spring mounting clips
  - Retrofit and new construction installations
  - Junction box not included

- **Performance data**
  - Available in 3 000/3 500/4 000 K selectable color temperature
  - 3 power selectable
  - 80+ CRI
  - 120-347 V
  - Estimated life of over 50 000 hours to L70
  - 0-10 V dimming standard
  - Operating temperature: -30 °C to 40 °C (-22 °F to 104 °F)

- **Compliances**
  - cETLus listed for wet locations
  - cETLus listed and classified
  - Energy Star
  - Meets requirements of ICES-005 issue 5 class B for use in residential and commercial applications
  - IC rated for direct contact with insulation

OVERVIEW

Light source	LED
Watts (W)	7/9/12 12/16/20 15/20/25
Lumen output (lm)	722 - 2 880
Efficacy (lm/W)	98 - 124
Color temperature (K)	3 000/3 500/4 000
CRI	80+

3 CCT TCC
3 000/3 500/4 000 K

power *selectable*

5 yrs warranty

quick *ship*

LED *fixture*

dimmable

wet *location*

IC *rated*

ICES *005*

Intertek

ENERGY STAR

2233 rue de l'Aviation, Dorval, QC H9P 2X6
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STANPRO

QUICK SHIP AND TECHNICAL SPECIFICATION TABLE [1]

Order code	Model number	Watts (W)	Volts (VAC)	Color temp. (K)[1]	Lumen output (lm)[2, 3]	Efficacy (lm/W)	CRI	Life L70 (hrs)[4]	Beam angle (°)	Shape	Finish	Power factor	THD (%)	Master case qty
4"														
69093	CDU4R-G2-PS3Q/3CWH	7/9/12	120-347	3 000/3 500/4 000	595/765/1 000	85	80+	50 000	80	Round	White	>0.9	<20	8
69657	CDU4R-G2-PS3Q/3CWH AZ	7/9/12	120-347	3 000/3 500/4 000	595/765/1 000	85	80+	50 000	80	Round	Alzak	>0.9	<20	8
6"														
69094	CDU6R-G2-PS3Q/3CWH	12/16/20	120-347	3 000/3 500/4 000	1 080/1 440/2 000	90	80+	50 000	88	Round	White	>0.9	<20	8
69658	CDU6R-G2-PS3Q/3CWH AZ	12/16/20	120-347	3 000/3 500/4 000	1 080/1 440/2 000	90	80+	50 000	88	Round	Alzak	>0.9	<20	8
8"														
69095	CDU8R-G2-PS3Q/3CWH	15/20/25	120-347	3 000/3 500/4 000	1 800/2 200/2 900	110	80+	50 000	83	Round	White	>0.9	<20	8
69659	CDU8R-G2-PS3Q/3CWH AZ	15/20/25	120-347	3 000/3 500/4 000	1 800/2 200/2 900	110	80+	50 000	83	Round	Alzak	>0.9	<20	8

[1] **QUICK SHIP:** Product availability is subject to change without notice. Please contact your Stanpro customer service representative to confirm inventory levels at time of order.
[2] Typical color temperature range: +/- 5 %.
[3] Lumen values are derived from Energy Star reported data. Initial lumens range: +/- 10 %.
[4] Life hours are derived from IESNA LM-80-08 testing report and projected per IESNA TM-21-11 extrapolations.

LUMEN SPECIFICATION TABLE

Order code	Model number	Watts (W)	3 000 K		3 500 K		4 000 K	
			Lumen output (lm)	Efficacy (lm/W)	Lumen output (lm)	Efficacy (lm/W)	Lumen output (lm)	Efficacy (lm/W)
69093	CDU4R-G2-PS3Q/3CWH	7	723	103	754	108	752	107
		9	914	102	966	107	962	107
		12	1 176	98	1 250	104	1 234	103
69657	CDU4R-G2-PS3Q/3CWH AZ	7	723	103	754	108	752	107
		9	914	102	966	107	962	107
		12	1 176	98	1 250	104	1 234	103
69094	CDU6R-G2-PS3Q/3CWH	12	1 384	115	1 470	123	1 471	123
		16	1 864	116	1 986	124	1 968	123
		20	2 252	113	2 414	121	2 373	119
69658	CDU6R-G2-PS3Q/3CWH AZ	12	1 384	115	1 470	123	1 471	123
		16	1 864	116	1 986	124	1 968	123
		20	2 252	113	2 414	121	2 373	119
69095	CDU8R-G2-PS3Q/3CWH	15	1 634	109	1 739	116	1 753	117
		20	2 125	106	2 265	113	2 262	113
		25	2 669	107	2 881	115	2 845	114
69659	CDU8R-G2-PS3Q/3CWH AZ	15	1 634	109	1 739	116	1 753	117
		20	2 125	106	2 265	113	2 262	113
		25	2 669	107	2 881	115	2 845	114

DEFAULT PROGRAMMING
69093: 12 W / 3 000 K
69657: 12 W / 3 000 K
69094: 20 W / 3 000 K
69658: 20 W / 3 000 K
69095: 25 W / 3 000 K
69659: 25 W / 3 000 K

ACCESSORIES (order separately)

Order code	Model number	Type	Inner Diameter (in)	Outer diameter (in)	Master case qty
62772[1,2]	ACC/MPLATE/4.625IN/HANG.BARS/STD	Mounting plate with hanger bars	4 5/8	-	20
66817[1,2]	ACC/MPLATE/VELOCE6/HANG.BARS/STD	Mounting plate with hanger bars	6	-	8
66818[1,2]	ACC/MPLATE/VELOCE8/HANG.BARS/STD	Mounting plate with hanger bars	8	-	8
68614	GOOF RING-4.75IN	Goof ring	4 7/8	7 1/2	24
68615	GOOF RING-6.75IN	Goof ring	6 3/4	9 1/4	24
68616	GOOF RING-8IN	Goof ring	8 1/4	11 1/2	24

[1] Includes brackets and screws.
[2] Junction box not included.

Data is based upon tests performed in a controlled environment. Actual performance can vary depending on operating conditions. All products are subject to change or may be discontinued any time without notice. Please contact your Stanpro customer service representative to confirm inventory levels at time of order.

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COMPATIBLE DIMMERS[2]

	4"	6"	8"
Brand	**Model**		
Legrand	RH4FBL3PTC, WS4FBL3P	RH4FBL3PTC, WS4FBL3P	RH4FBL3PTC, WS4FBL3P
Leviton	DS-710	AWSMT-7DW[1], DS-710	DS-710
Lutron	DVSTV, NTSTV-DV	DVSTV, NTSTV-DV	DVSTV, NTSTV-DV

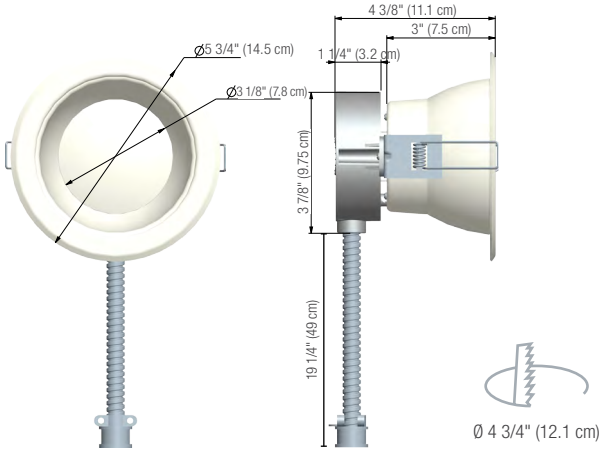
Dimming range: 5%-100%

[1] **Dimming range:** 10%-100%

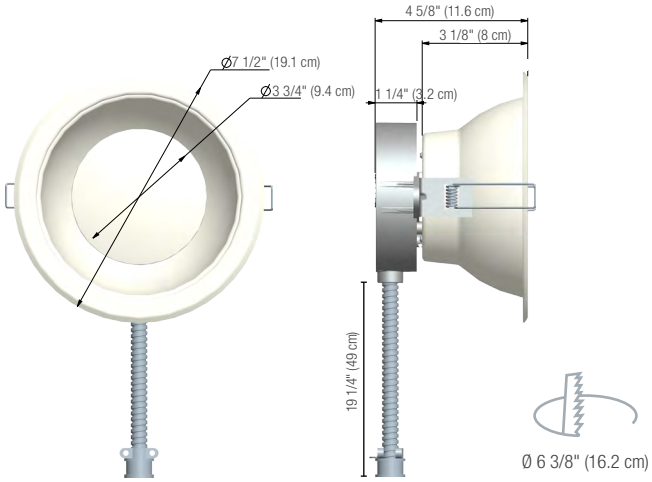
[2] This table shows dimmers that have been tested and have demonstrated proper operation under normal conditions. Each installation being unique, various factors such as load, common neutrals or other electrical products on the circuit can, in certain instances, cause variance in system performance. Read and comply to the dimmer installation instructions. Consult dimming system manufacturer for additional support in operation. Some dimmers may require more than one product for stable operation. Stanpro recommends to use dimmers designed to work with LED products. Older dimmers designed for incandescent products may cause erratic operation.

DIMENSIONS AND WEIGHTS

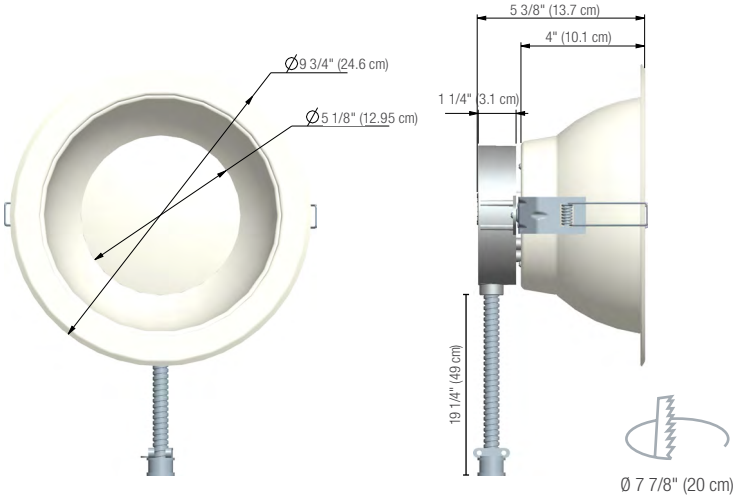
4"



6"



8"



	4"	6"	8"
Net weight (lbs)	1.32	1.76	2.09

Data is based upon tests performed in a controlled environment. Actual performance can vary depending on operating conditions. All products are subject to change or may be discontinued any time without notice. Please contact your Stanpro customer service representative to confirm inventory levels at time of order.

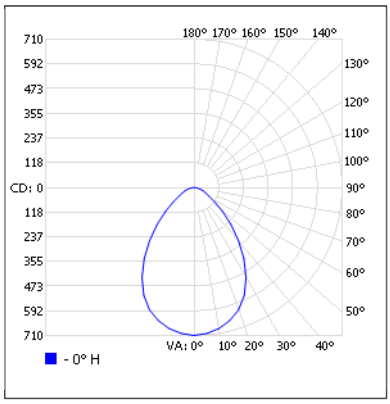
2233 rue de l'Aviation, Dorval, QC H9P 2X6

514.342.1199, 1.800.361.6965 • 514.807.3011 • www.standardpro.com

PHOTOMETRIC DATA[1]

69093 • CDU4R-G2-PS3Q/3CWH • 12 W • 3 000 K • 1176.3 lm

Polar candela distribution



Zonal lumen summary

Zone	Lumens	% Fixture
0-30	511.4	43.5 %
0-40	769.9	65.5 %
0-60	1 075.4	91.4 %
60-90	100.9	8.6 %
0-90	1 176.3	100 %

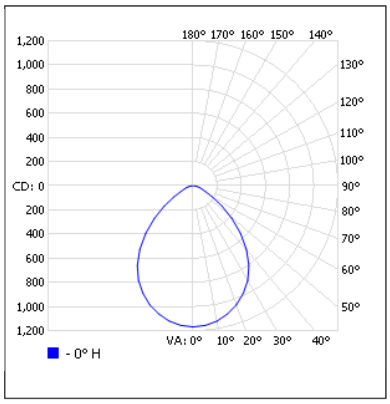
Illuminance at a distance

	Center beam fc	Beam width
1.7'	245	2.7'
3.3'	65.1	5.3'
5.0'	28.4	8.0'
6.7'	15.8	10.7'
8.3'	10.3	13.3'
10.0'	7.09	16.0'

Beam spread : 77.2°

69094 • CDU6R-G2-PS3Q/3CWH • 20 W • 3 000 K • 2252.1 lm

Polar candela distribution



Zonal lumen summary

Zone	Lumens	% Fixture
0-30	870.1	38.6 %
0-40	1 370.0	60.8 %
0-60	2 057.7	91.4 %
60-90	194.4	8.6 %
0-90	2 252.1	100 %

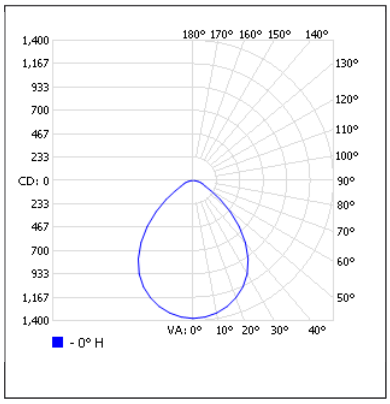
Illuminance at a distance

	Center beam fc	Beam width
1.7'	404	3.3'
3.3'	107	6.3'
5.0'	46.7	9.6'
6.7'	26.0	12.9'
8.3'	17.0	15.9'
10.0'	11.7	19.2'

Beam spread : 87.7°

69095 • CDU8R-G2-PS3Q/3CWH • 25 W • 3 000 K • 2669 lm

Polar candela distribution



Zonal lumen summary

Zone	Lumens	% Fixture
0-30	1 033.9	38.7 %
0-40	1 626.4	60.9 %
0-60	2 423.1	90.8 %
60-90	245.8	9.2 %
0-90	2 669.0	100 %

Illuminance at a distance

	Center beam fc	Beam width
1.7'	477	3.3'
3.3'	127	6.3'
5.0'	55.1	9.6'
6.7'	30.7	12.8'
8.3'	20.0	15.9'
10.0'	13.8	19.1'

Beam spread : 87.5°

[1] Complete IES files available on our website.

Data is based upon tests performed in a controlled environment. Actual performance can vary depending on operating conditions. All products are subject to change or may be discontinued any time without notice. Please contact your Stanpro customer service representative to confirm inventory levels at time of order.

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NORFOLK DEVELOPMENT

200 MAIN STREET, PORT DOVER, ONTARIO

Note:

The following PRELIMINARY landscape breakdown is based on the following and is an order of magnitude costing that will be refined at the completion of the full landscape construction drawing stage.

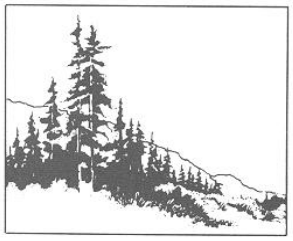
Drawing: *Landscape Concept Plans*
Project #: *2024-08*
Drawing #: *L1 - L2*
Date: *Sept 2024*
Plot Date: *07/10/24*

No.	Item	Estimated Units		Unit Cost		TOTAL COST	
1.1	Concrete Walkway Paving	192.20	m2	$200.00	/m2	$	38,440.00
1.2	Precast Concrete Paving	555.70	m2	$370.00	/m2	$	205,609.00
1.3	Riverstone	99.80	m2	$180.00	/m2	$	17,964.00
1.4	Artificial Turf	115.50	m2	$120.00	/m2	$	13,860.00
1.5	Raised Concrete Planter Curbs	178.70	Lm	$100.00	/Lm	$	17,870.00
1.6	Granite Rockery Boulders	10.00		Allowance		$	5,000.00
1.7	Ikonik Privacy Screens	24.00	ea	$1,000.00	/ea	$	24,000.00
1.8	Illuminated Bollards	12.00	ea	$3,000.00	/ea	$	36,000.00
1.9	Garden Benches	6.00	ea	$1,000.00	/ea	$	6,000.00
1.10	Prefabricated Planters	7.00	ea	$600.00	/ea	$	4,200.00
1.11	Sodded Area (to include fine grading and 200mm topsoil per planting notes):	99.30	m2	$15.00	/m2	$	1,489.50
1.12	Planting Mix (194.7m2 x0.3m)	58.41	m3	$140.00	/m3	$	8,177.40
1.13	Planting Mulch (194.7m2 x0.1m)	19.47	m3	$140.00	/m3	$	2,725.80
1.14	Irrigation (To Be Determined)			Allowance		$	3,000.00
1.15	Nightlighting (LED)			Allowance		$	13,500.00
				Subtotal (Items 1.1-1.15):		$	397,835.70

No.	Item	Estimated Units	Unit Cost	TOTAL COST
2.1	Planting:			
	Steetkeeper Honey Locust	14.00	$1,800.00 /ea	$ 25,200.00
	Pyramidal Beech	3.00	$1,800.00 /ea	$ 5,400.00
	Little Giant Cedar	10.00	$70.00 /ea	$ 700.00
	Pagoda Dogwood	5.00	$1,000.00 /ea	$ 5,000.00
	Blue Cadet Hosta	60.00	$40.00 /ea	$ 2,400.00
	Sweet Woodruff	150.00	$15.00 /ea	$ 2,250.00
	Pink Friesland Sage	60.00	$40.00 /ea	$ 2,400.00
	Japanese Painted Fern	60.00	$40.00 /ea	$ 2,400.00
	Feather Reed Grass	132.00	$60.00 /ea	$ 7,920.00
			Subtotal (Items 2.1):	$ 53,670.00

LANDSCAPE COST ESTIMATE SUMMARY:

Overall Area (Items 1.1 thru 1.15):		$ 397,835.70
Planting (Items 2.1):		$ 53,670.00
	Total:	$ 451,505.70



Daniel J. O'Brien
ASSOCIATES LTD.
LANDSCAPE ARCHITECTS

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Daniel J. O'Brien & Associates Ltd.
Landscape Architects

798 Bessborough Drive, Oshawa, Ontario, L1G 4H2
Tel: (905) 985-4466 Web: www.obrienassociates.ca
Email: danielobrienassociates@bellnet.ca

PROPOSED EXTERIOR AMENITY/GYM PATIO TO BE PRECAST CONCRETE PAVERS (HERRINGBONE @ 45 DEGREES) (SEE DETAIL)

PROPOSED MAIN ENTRY LANDING/ WALKWAY TO BE PORCEA PAVERS (SEE DETAIL)

PROPOSED CONCRETE PEDESTRIAN WALKWAY (SEE DETAIL)

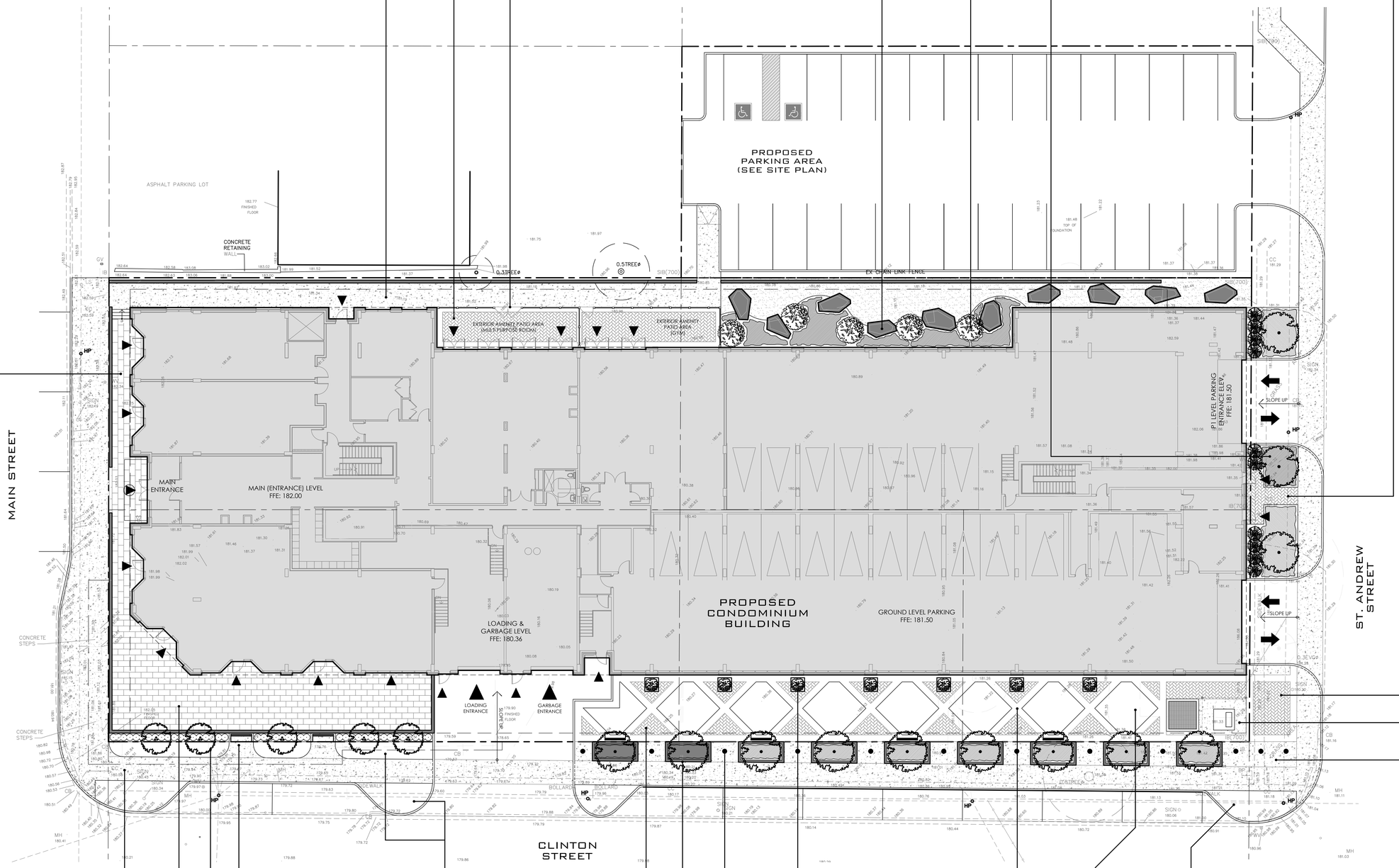
PROPOSED LONG, FLAT, IRREGULAR GRANITE BOULDERS (240cm LENGTH x120cm WIDTH x60cm HEIGHT) w/ RIVERSTONE (2-3" DIA.) AND FILTER FABRIC)

PROPOSED METAL PRIVACY SCREENS BY IKONIK (SEE DETAIL)

PROPOSED LANDSCAPE GARDENS OF (5) PAGODA DOGWOOD AND MASS PLANTED HOSTA, FERNS AND SWEET WOODRUFF

PROPOSED LANDSCAPE GARDENS OF ROHANNI PYRAMIDAL BEECH (3), LITTLE GIANT CEDARS (10) AND PINK FRIESLAND SAGE

PROPOSED SECONDARY ENTRY WALKWAY TO BE PRECAST CONCRETE PAVERS (HERRINGBONE @ 45 DEGREES) (SEE DETAIL)



PROPOSED SODDED BOULEVARD (TYPCIAL) (SEE PLANTING NOTES)

PROPOSED STREETSIDE CONCRETE LANDINGS (SEE DETAIL) w/ PEDESTRIAN BENCHES

PROPOSED LANDSCAPE GARDENS (2'-6" WIDTH) w/ (5) STREETKEEPER HONEYLOCUST, (42) FEATHER REED GRASS, AND CLIMBING BOSTON IVY

PROPOSED UPPER LEVEL OUTDOOR TERRACE TO BE PORCEA PAVERS (1'-4"x4'-0" SLABS)(SEE DETAIL) w/ RETAINING WALL (SEE ARCH. DWGS.)

PROPOSED MUNICIPAL PEDESTRIAN SIDEWALK

PROPOSED PREFABRICATED PLANTERS (7)

PROPOSED ILLUMINATED BOLLARDS (12)

PROPOSED RAISED CONCRETE PLANTERS (10) (4.0m LENGTH x VARYING WIDTH)(SEE DETAIL)) w/ (1) STREETKEEPER DECIDUOUS TREE AND (10) ORNAMENTAL GRASSES (PER PLANTER)

PROPOSED PRECAST PAVER INFILL (HERRINGBONE @ 45 DEGREES) (SEE DETAIL)

PROPOSED SODDED BOULEVARD (TYPICAL) (SEE PLANTING NOTES)

PROPOSED CONRETE INFILL AREAS (MATCH SIDEWALK)(SEE DETAIL)

PROPOSED ARTIFICIAL TURF DIAMONDS

PROPOSED PRECAST CONCRETE PAVER INFILL (HERRINGBONE @ 45 DEGREES)

PROPOSED PORCEA PAVER SOLDIER COURSE/BANDING (SEE DETAIL)

PLANTING NOTES:

ALL AREAS NOTED AS SODDED TO HAVE #1 NURSERY GROWN SOD w/ 200mm DEPTH (MINIMUM) TOPSOIL (TYPICAL)(SEE DETAIL)

ALL PLANTED AREAS TO HAVE 300mm DEPTH (MINIMUM) OF PLANTING MIX, AND 100mm DEPTH (MINIMUM) OF BLACK COMPOSTED BARK MULCH BY GRO-BARK LIMITED (NOTE: MULCH LEVEL TO BE FLUSH WITH SOD LEVEL)

REVISIONS:

DATE	NO.	ITEM	BY
07/10/24	01	S.P.A. SUBMISSION	DDB

PLOT DATE: OCT 7/2024

ASSOCIATION OF LANDSCAPE ARCHITECTS ONTARIO — DANIEL J. O'BRIEN — 07/10/24 — OALA — MEMBER

LANDSCAPE ARCHITECTS
LANDSCAPE DESIGN, CONSULTATION & PROJECT MANAGEMENT

DANIEL J. O'BRIEN
& associates ltd.

798 BESSBOROUGH DRIVE
OSHAWA, ONTARIO
L1G 4H2

TEL: 905-985-4466
WEB: www.obrien associates.ca
EMAIL: danielobrien associates @ bellnet.ca

PROJECT:

NORFOLK DEVELOPMENT

200 MAIN STREET

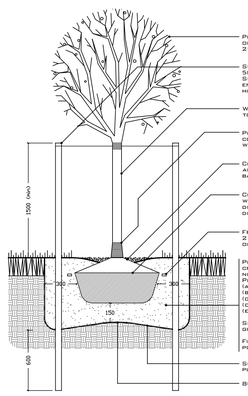
PORT DOVER, ONTARIO

DRAWING:

OVERALL LANDSCAPE CONCEPT PLAN w/ NOTES

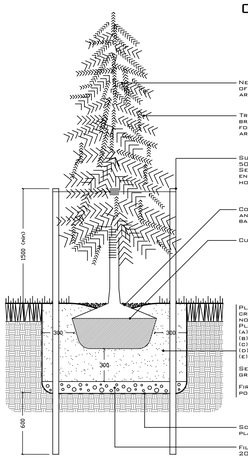
DATE:	OCT 2024	PROJECT NO:	
DESIGNED:	DDB		2024-08
DRAWN:	RPR		
CHECKED:	DDB	DRAWING NO:	
			L1 OF 2
SCALE:	1:150		

DECIDUOUS TREE X-SECTION N.T.S.



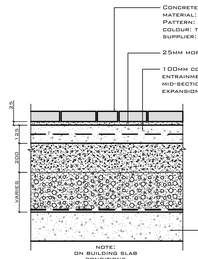
- PRUNE BRANCHES SO AS TO RETAIN NATURAL FORM OF TREE. NEVER CUT LEADER. PAINT ALL CUTS OVER 25MM DIAMETER WITH APPROVED TREE PAINT.
- SUPPORT TREE WITH TWO (2) STEEL T-BARS, 50x50x6MM, AND MINIMUM 2438MM LONG. SECURE TRUNK WITH NO. 11 GALVANIZED WIRE ENCASED IN 10MM DIAMETER NEW BLACK RUBBER HOSE (REMOVE AT END OF WARRANTY PERIOD).
- WRAP TREE STEM WITH APPROVED TREE WRAP FROM TOP OF BALL TO 300MM ABOVE FIRST BRANCH.
- PLACE A 100MM DIAMETER PLASTIC FLEXIPIPE COLLAR 300MM LONG AFTER TREE HAS BEEN WRAPPED.
- CONSTRUCT 100MM TOPSOIL SAUCER AT TREE BASE AND MULCH WITH 100MM OF FINE SHREDDED PINE BARK BY GRO-BARK LTD.
- CUT AND REMOVE BURLAP FROM TOP 1/3 OF BALL. WIRE BASKET TO BE CUT RANDOMLY (75MM DIAMETER MINIMUM ROOT BALL W/ DEPTH = 2/3 DIAMETER.
- FERTILIZER CAPSULES-AGRIFORM-ANALYSIS 20-15-5 21 GRAM TABLETS WILL BE DEPOSITED AT THE RATE OF 1 CAPSULE/CM OF TRUNK DIAMETER.
- PLANTING SOIL MIXTURE AS PER MUNICIPAL DESIGN CRITERIA. EXISTING SOIL TO BE REMOVED FROM SITE, NOT TO BE USED IN PLANTING PROCESS.
  PLANTING SOIL MIXTURE:
  (A) 5 PARTS DARK LOAM
  (B) 2 PARTS COMPOSTED COW MANURE
  (C) 1 PART PEAT MOSS
  (D) 1 PART BEACH WASHED SAND
  (E) 0.58 KILOS BONEMEAL 2-22-0/M3
- SET TREE 50MM HIGHER THAN ADJACENT FINISHED GRADE TO ALLOW FOR SETTLEMENT.
- FIRMLY COMPACT BACKFILLED SOIL TO PREVENT AIR POCKETS.
- SCARIFY SURFACE OF COMPACTED SUBSOIL PRIOR TO PLANTING.
- 80MM MOUND.

CONIFEROUS TREE X-SECTION N.T.S.



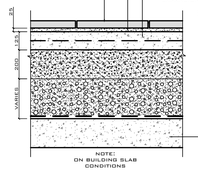
- NEVER CUT EVERGREEN LEADER AND PRUNE BALANCE OF TREE ONLY IF APPROVED BY LANDSCAPE ARCHITECT.
- TREE MUST BE DENSE AND FULL WITH COMPLETE BRANCH DEVELOPMENT, VIGOROUS FOLIAGE AND A FORM WHICH IS SATISFACTORY TO THE LANDSCAPE ARCHITECT.
- SUPPORT TREE WITH THREE (3) STEEL T-BARS, 50x50x6MM, AND MINIMUM 2438MM LONG. SECURE TRUNK WITH NO. 11 GALVANIZED WIRE ENCASED IN 25MM DIAMETER NEW BLACK RUBBER HOSE (REMOVE AT END OF WARRANTY PERIOD).
- CONSTRUCT 100MM TOPSOIL SAUCER AT TREE BASE AND MULCH WITH 75MM OF FINE SHREDDED PINE BARK BY GRO-BARK LTD.
- CUT AND REMOVE BURLAP FROM TOP 1/3 OF BALL.
- PLANTING SOIL MIXTURE AS PER MUNICIPAL DESIGN CRITERIA. EXISTING SOIL TO BE REMOVED FROM SITE, NOT TO BE USED IN PLANTING PROCESS.
  PLANTING SOIL MIXTURE:
  (A) 5 PARTS DARK LOAM
  (B) 2 PARTS COMPOSTED COW MANURE
  (C) 1 PART PEAT MOSS
  (D) 1 PART BEACH WASHED SAND
  (E) 0.58 KILOS BONEMEAL 2-22-0/M3
- SET TREE 50MM HIGHER THAN ADJACENT FINISHED GRADE TO ALLOW FOR SETTLEMENT.
- FIRMLY COMPACT BACKFILLED SOIL TO PREVENT AIR POCKETS.
- SCARIFY SURFACE OF COMPACTED SUBSOIL PRIOR TO PLANTING.
- FILL BOTTOM OF TREE PIT WITH 150MM MINIMUM OF 20MM CLEAR CRUSHED STONE.

PRECAST CONCRETE PAVER X-SECTION N.T.S.



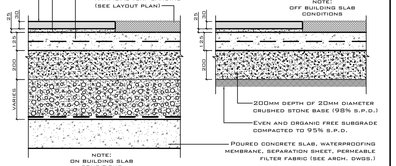
- CONCRETE PRECAST PAVER
  MATERIAL: TO BE DETERMINED
  PATTERN: HERRINGBONE (SEE LAYOUT)
  COLOUR: TO BE DETERMINED
  SUPPLIER: UNILOCK
- 25MM MORTAR BED (TYPICAL)
- 100MM CONCRETE BASE TO BE 32MPA AT 28 DAYS W/ 6-8% AIR ENTRAINMENT AND 150x150MM GRID OF WIRE MESH RAISED TO MID-SECTION OF CONCRETE (CONTROL JOINTS @ 1800MM O.C., EXPANSION JOINTS @ 5400MM O.C.)(OR AS SPECIFIED)
- 200MM DEPTH OF 20MM DIAMETER CRUSHED STONE BASE (98% S.P.D.)
- EVEN AND ORGANIC FREE SUBGRADE COMPACTED TO 95% S.P.D.
- POURED CONCRETE SLAB, WATERPROOFING MEMBRANE, SEPARATION SHEET, PERMEABLE FILTER FABRIC (SEE ARCH. DWGS.)

PORCEA PAVER X-SECTION N.T.S.



- MATERIAL: PORCEA (30MM THICK)
  SIZE: 16"x48"
  PATTERN: RUNNING BOND
  SUPPLIER (OR APPROVED EQUAL):
  GLOBAL ARCH INC.
  12393 COLERAINE DRIVE
  BOLTON, ONTARIO, L7E 3B4
  (TEL) 905-857-6600
- 25MM MORTAR BED (TYPICAL)
- 100MM CONCRETE BASE TO BE 32MPA AT 28 DAYS W/ 6-8% AIR ENTRAINMENT AND 150x150MM GRID OF WIRE MESH RAISED TO MID-SECTION OF CONCRETE (CONTROL JOINTS @ 1800MM O.C., EXPANSION JOINTS @ 5400MM O.C.)(OR AS SPECIFIED)
- 200MM DEPTH OF 20MM DIAMETER CRUSHED STONE BASE (98% S.P.D.)
- EVEN AND ORGANIC FREE SUBGRADE COMPACTED TO 95% S.P.D.
- POURED CONCRETE SLAB, WATERPROOFING MEMBRANE, SEPARATION SHEET, PERMEABLE FILTER FABRIC (SEE ARCH. DWGS.)

PORCEA PAVER SOLDIER COURSE/ BANDING w/ ARTIFICIAL TURF INFILL X-SECTION N.T.S.



- MATERIAL: PORCEA (30MM THICK)
  SIZE: 24"x24"
  PATTERN: SOLDIER COURSE/BANDING
  (NOTE: EXACT PATTERN LAYOUT TO BE CO-ORDINATED W/ CLIENT, LANDSCAPE CONTRACTOR AND LANDSCAPE ARCHITECT W/ SHOP DRAWING)
  SUPPLIER (OR APPROVED EQUAL):
  GLOBAL ARCH INC.
  12393 COLERAINE DRIVE
  BOLTON, ONTARIO, L7E 3B4
  (TEL) 905-857-6600
- 25MM MORTAR BED
- 100MM CONCRETE BASE TO BE 32MPA AT 28 DAYS W/ 6-8% AIR ENTRAINMENT AND 150x150MM GRID OF WIRE MESH RAISED TO MID-SECTION OF CONCRETE (CONTROL JOINTS @ 1800MM O.C., EXPANSION JOINTS @ 5400MM O.C.)(OR AS SPECIFIED)
- ARTIFICIAL TURF BANDING (SEE LAYOUT PLAN)
- 200MM DEPTH OF 20MM DIAMETER CRUSHED STONE BASE (98% S.P.D.)
- EVEN AND ORGANIC FREE SUBGRADE COMPACTED TO 95% S.P.D.
- POURED CONCRETE SLAB, WATERPROOFING MEMBRANE, SEPARATION SHEET, PERMEABLE FILTER FABRIC (SEE ARCH. DWGS.)

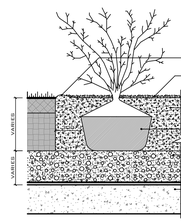
MODEL: TO BE DETERMINED (88 SERIES)
COLOUR: BLACK

NOTE: OR APPROVED EQUAL

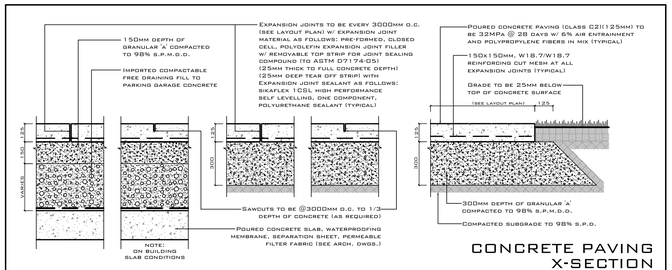
MANUFACTURER:
IKONIK INCOPORATED
(TEL) 866-819-6308
(WEB) IKONIKSTYLE.CA

METAL PRIVACY PANELS N.T.S.

SHRUB/ON BUILDING SLAB X-SECTION N.T.S.



- MAINTAIN ORIGINAL GRADE OF SHRUB BASE AFTER PLANTING.
- 100MM SAUCER WITH 100MM OF FINE SHREDDED PINE BARK BY GRO-BARK LTD.
- PREPARED PLANTING SOIL MIXTURE AS SPECIFIED.
- REMOVE BURLAP FROM TOP THIRD OF BALL.
- IMPORTED COMPACTABLE FREE DRAINING FILL TO PARKING GARAGE CONCRETE SLAB (DEPTH VARIES)
- POURED CONCRETE SLAB, WATERPROOFING MEMBRANE, SEPARATION SHEET, PERMEABLE FILTER FABRIC (SEE ARCH. DWGS.)



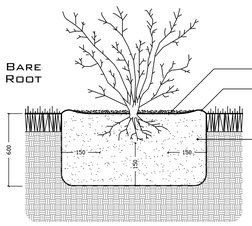
- 150MM DEPTH OF GRANULAR 'A' COMPACTED TO 98% S.P.M.D.D.
- IMPORTED COMPACTABLE FREE DRAINING FILL TO PARKING GARAGE CONCRETE
- EXPANSION JOINTS TO BE EVERY 3000MM O.C. (SEE LAYOUT PLAN) W/ EXPANSION JOINT MATERIAL AS FOLLOWS: PRE-FORMED, CLOSED CELL, POLYOLEFIN EXPANSION JOINT FILLER W/ REMOVABLE TOP STRIP FOR JOINT SEALING COMPOUND (TO ASTM D7174-05) (25MM THICK TO FULL CONCRETE DEPTH) (25MM DEEP TEAR OFF STRIP) WITH EXPANSION JOINT SEALANT AS FOLLOWS: SIKAFLEX 1CSL HIGH PERFORMANCE SELF LEVELLING, ONE COMPONENT, POLYURETHANE SEALANT (TYPICAL)
- POURED CONCRETE SLAB, WATERPROOFING MEMBRANE, SEPARATION SHEET, PERMEABLE FILTER FABRIC (SEE ARCH. DWGS.)

- POURED CONCRETE PAVING (CLASS C2(±125MM) TO BE 32MPA @ 28 DAYS W/ 6% AIR ENTRAINMENT AND POLYPROPYLENE FIBERS IN MIX (TYPICAL)
- 150x150MM, W18.7/W18.7 REINFORCING CUT MESH AT ALL EXPANSION JOINTS (TYPICAL)
- GRADE TO BE 25MM BELOW TOP OF CONCRETE SURFACE
- 300MM DEPTH OF GRANULAR 'A' COMPACTED TO 98% S.P.M.D.D.
- COMPACTED SUBGRADE TO 98% S.P.D.

CONCRETE PAVING X-SECTION N.T.S.

SHRUBS X-SECTION N.T.S.

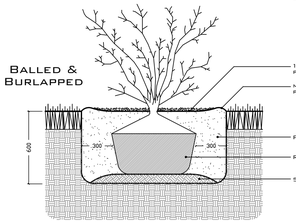
BARE ROOT



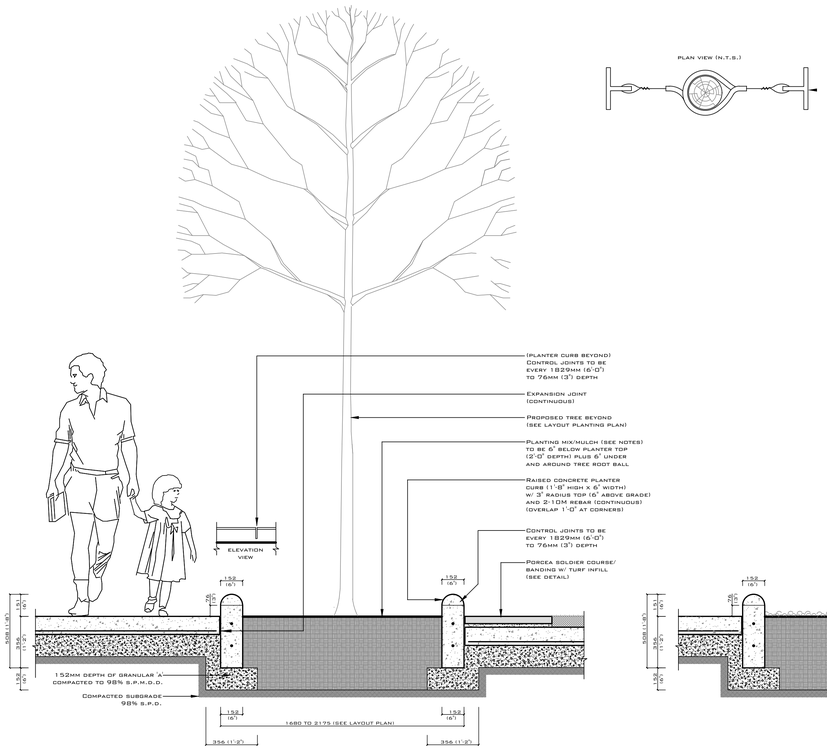
- 100MM SAUCER WITH 100MM OF FINE SHREDDED PINE BARK BY GRO-BARK LTD.
- MAINTAIN ORIGINAL GRADE OF SHRUB BASE AFTER PLANTING.
- PREPARED PLANTING SOIL MIXTURE AS SPECIFIED.

NOTES:
1. ALL ROOT BALLS REMOVED FROM CONTAINERS TO BE SCARIFIED PRIOR TO SETTING IN GROUND.
2. REMOVE ALL BROKEN, DISEASED OR WEAK BRANCHES.
3. TRIM BRANCHES AND TWIGS BY 1/3 RETAINING NORMAL SHRUB SHAPE.
4. PRUNE SO AS TO LEAVE AS LITTLE STUBS AS POSSIBLE.

BALLED & BURLAPPED

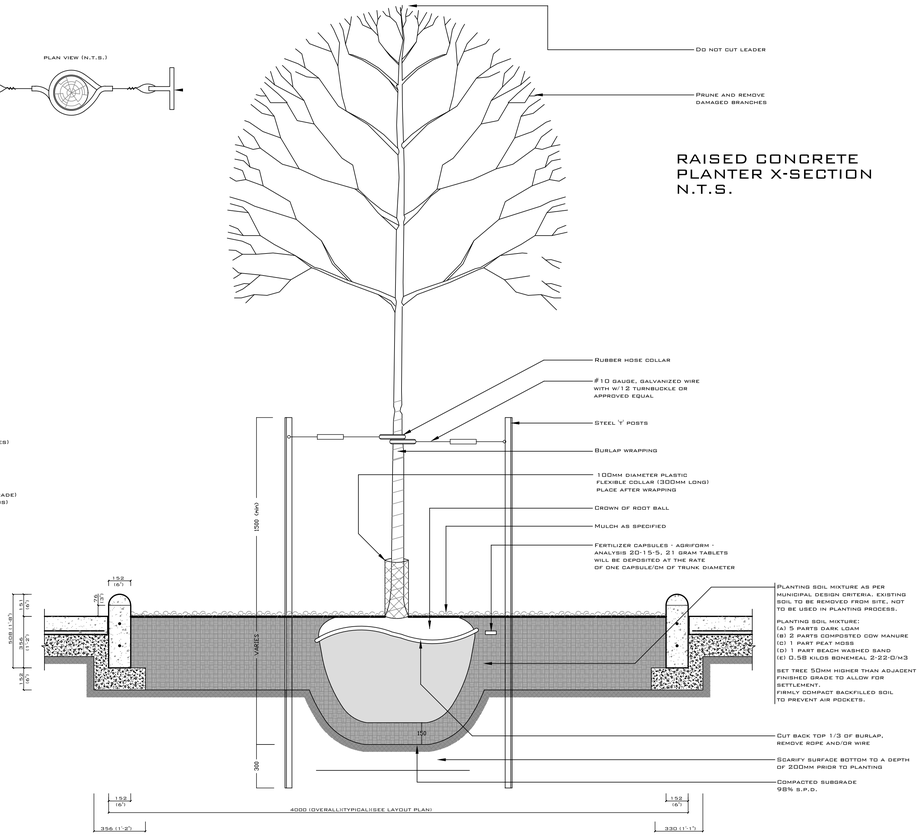


- 100MM SAUCER WITH 100MM OF FINE SHREDDED PINE BARK BY GRO-BARK LTD.
- MAINTAIN ORIGINAL GRADE OF SHRUB BASE AFTER PLANTING.
- PREPARED PLANTING SOIL MIXTURE AS SPECIFIED.
- REMOVE BURLAP FROM TOP THIRD OF BALL.
- 50MM TOP SOIL TAMPED TO PREVENT SETTLEMENT.



- (PLANTER CURB BEYOND) CONTROL JOINTS TO BE EVERY 1829MM (6'-0") TO 76MM (3") DEPTH
- EXPANSION JOINT (CONTINUOUS)
- PROPOSED TREE BEYOND (SEE LAYOUT PLANTING PLAN)
- PLANTING MIX/MULCH (SEE NOTES) TO BE 6" BELOW PLANTER TOP (2'-0" DEPTH) PLUS 6" UNDER AND AROUND TREE ROOT BALL
- RAISED CONCRETE PLANTER CURB (1'-8" HIGH x 6" WIDTH) W/ 3" RADIUS TOP (6" ABOVE GRADE) AND 2-10M REBAR (CONTINUOUS) (OVERLAP 1'-0" AT CORNERS)
- CONTROL JOINTS TO BE EVERY 1829MM (6'-0") TO 76MM (3") DEPTH
- PORCEA SOLDIER COURSE/ BANDING W/ TURF INFILL (SEE DETAIL)

RAISED CONCRETE PLANTER X-SECTION N.T.S.



- DO NOT CUT LEADER
- PRUNE AND REMOVE DAMAGED BRANCHES
- RUBBER HOSE COLLAR
- #10 GAUGE, GALVANIZED WIRE WITH W/ 12 TURNBUCKLE OR APPROVED EQUAL
- STEEL 'Y' POSTS
- BURLAP WRAPPING
- 100MM DIAMETER PLASTIC FLEXIBLE COLLAR (300MM LONG) PLACE AFTER WRAPPING
- CROWN OF ROOT BALL
- MULCH AS SPECIFIED
- FERTILIZER CAPSULES - AGRIFORM - ANALYSIS 20-15-5, 21 GRAM TABLETS WILL BE DEPOSITED AT THE RATE OF ONE CAPSULE/CM OF TRUNK DIAMETER
- PLANTING SOIL MIXTURE AS PER MUNICIPAL DESIGN CRITERIA. EXISTING SOIL TO BE REMOVED FROM SITE, NOT TO BE USED IN PLANTING PROCESS.
  PLANTING SOIL MIXTURE:
  (A) 5 PARTS DARK LOAM
  (B) 2 PARTS COMPOSTED COW MANURE
  (C) 1 PART PEAT MOSS
  (D) 1 PART BEACH WASHED SAND
  (E) 0.58 KILOS BONEMEAL 2-22-0/M3
  SET TREE 50MM HIGHER THAN ADJACENT FINISHED GRADE TO ALLOW FOR SETTLEMENT. FIRMLY COMPACT BACKFILLED SOIL TO PREVENT AIR POCKETS.
- CUT BACK TOP 1/3 OF BURLAP, REMOVE ROPE AND/OR WIRE
- SCARIFY SURFACE BOTTOM TO A DEPTH OF 200MM PRIOR TO PLANTING
- COMPACTED SUBGRADE 98% S.P.D.

REVISIONS:

DATE	NO.	ITEM	BY
07/10/24	01	S.P.A. SUBMISSION	DDB

PLOT DATE: OCT 7/2024

ASSOCIATION OF LANDSCAPE ARCHITECTS ONTARIO — DANIEL J. O'BRIEN — 07/10/24 — OALA — MEMBER

LANDSCAPE ARCHITECTS
LANDSCAPE DESIGN, CONSULTATION & PROJECT MANAGEMENT

DANIEL J. O'BRIEN
& associates ltd.

TEL: 905-985-4466
WEB: www.obrien associates.ca
EMAIL: danielobrien associates @ bellnet.ca

798 BESSBOROUGH DRIVE
OSHAWA, ONTARIO
L1G 4H2

PROJECT:
NORFOLK DEVELOPMENT
200 MAIN STREET
PORT DOVER, ONTARIO

DRAWING:
LANDSCAPE CONSTRUCTION DETAILS

DATE: SEPT 2024	PROJECT NO: 2024-08
DESIGNED: DDB	
DRAWN: RPR	
CHECKED: DDB	DRAWING NO: L2 OF 2
SCALE: AS SHOWN	

STANPRO

STANDARD PRODUCTS INC.

Lighting Calculation study

2233 Rue de l'Aviation, Dorval, QC H9P 2X6 ,CANADA
tel.: 1-866-280-2332, 514-739-9984

DISCLAIMER: Calculations have been performed according to IESNA & CIE standards and goodpractice. Some differences between measured values and calculated results may occur due to tolerances in calculation methods, testing procedures, component performance, measurement techniques and field conditions such as voltage and temperature variations. Input data used to generate the attached calculations such as room dimensions, reflectances, furniture and architectural elements significantly affect the lightingcalculations. If the real environment conditions do not match the input data, differences will occur between measured values and calculated values.

Project name : 200 Main Street Port Dover

Prepared for: Michael Balanca

Filename: 200 Main Street Port Dover.AGI

By : Anne Côté

Date:9/25/2024

AGi32® Version 21.5.1

Total Time (Hrs.): 1.52

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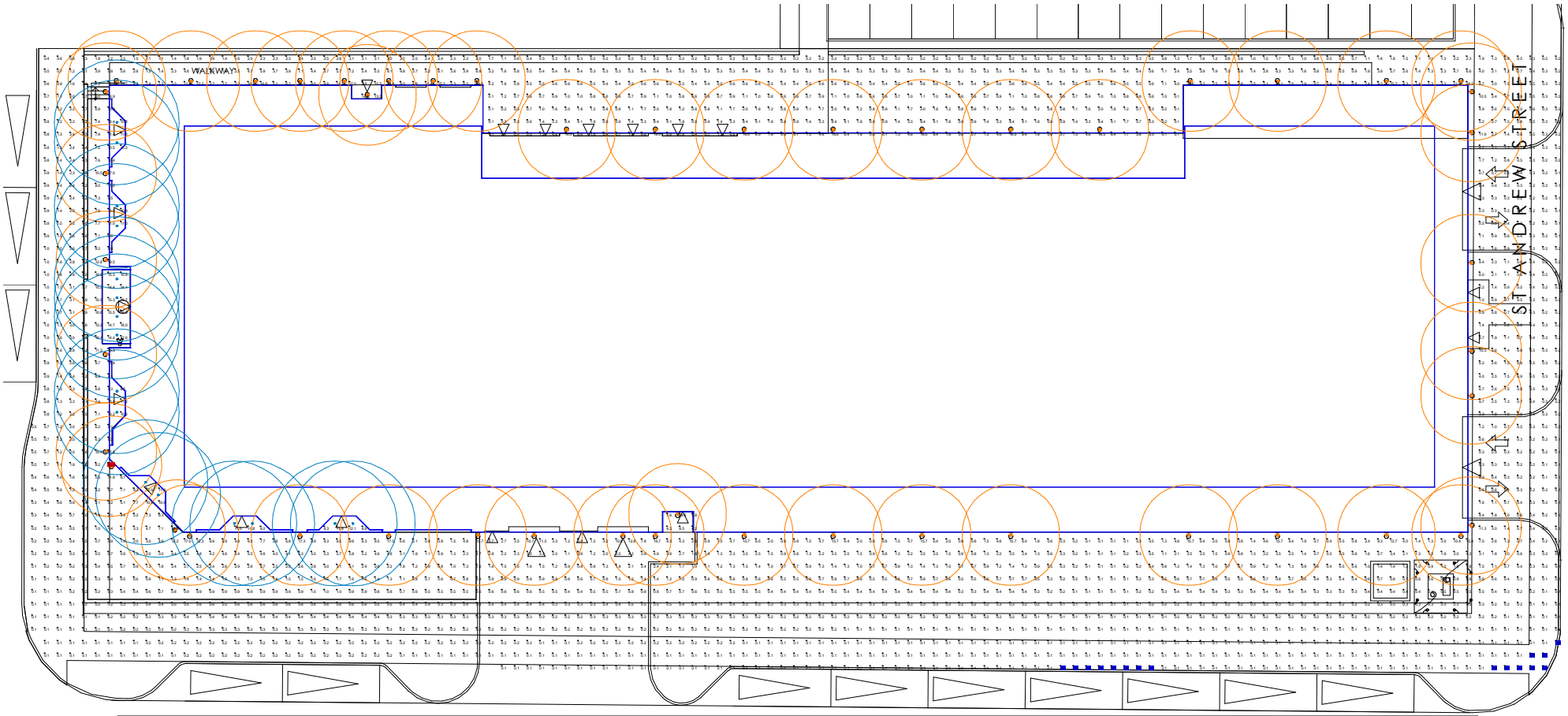

Luminaire Schedule								
Symbol	Qty	Label	Description	Lum. Lumens	Lum. Watts	LLF	Filename	Mounting Height
	16	CDU4R-G2-PS3Q-3CWH-12W-40K-69	CDU4R-G2-PS3Q-3CWH-12W-40K-69093	1237	11.5	0.900	CDU4R-G2-PS3Q-3CWH-12W-40K-69093.IES	11
	49	WCY-4LS1-Q-3C-XX-P-40K-40d-UD	WCY-4LS1-Q-3C-XX-P-40K-40d-UD-69150-69432	1818	20.0524	0.900	WCY-4LS1-Q-3C-XX-P-40K-40d-UD-69150-69432.IES	7

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Fc	1.82	20.5	0.0	N.A.	N.A.

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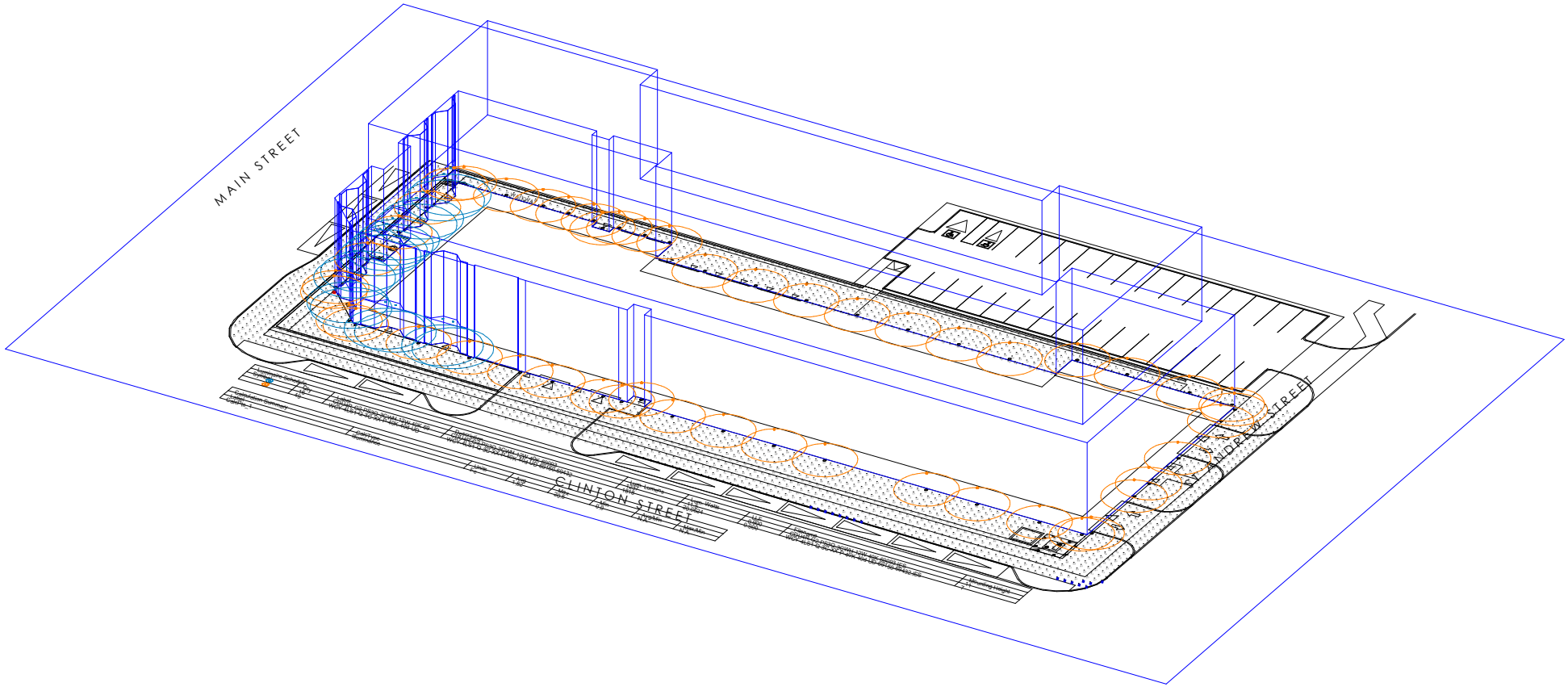

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Results summary

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	49	WCY-4LS1-Q-3C-XX-P-40K-40d-UD	WCY-4LS1-Q-3C-XX-P-40K-40d-UD-69150-69432	20.0524	1818	0.900	WCY-4LS1-Q-3C-XX-P-40K-40d-UD-69150-69432.IES	7

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
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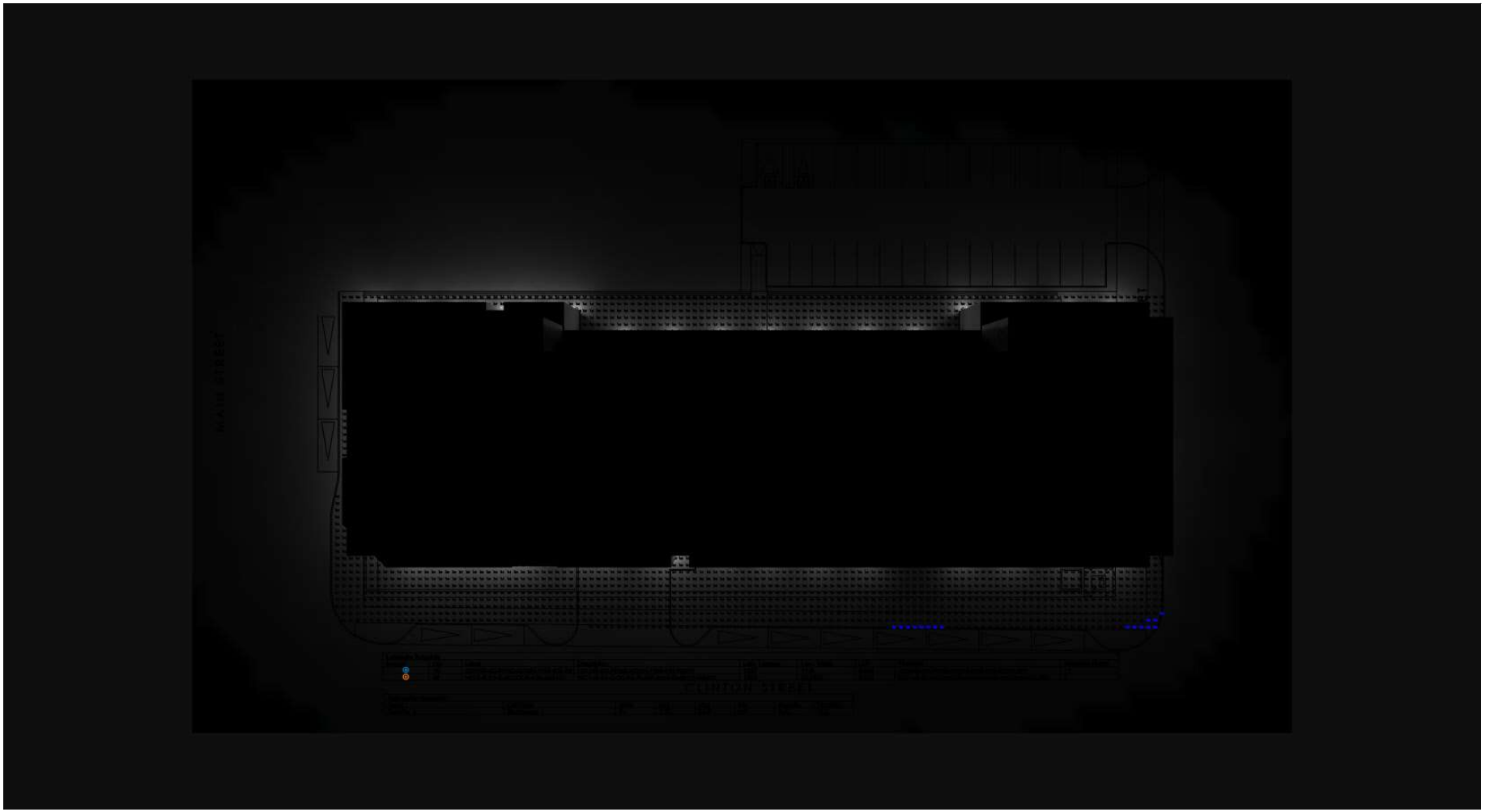

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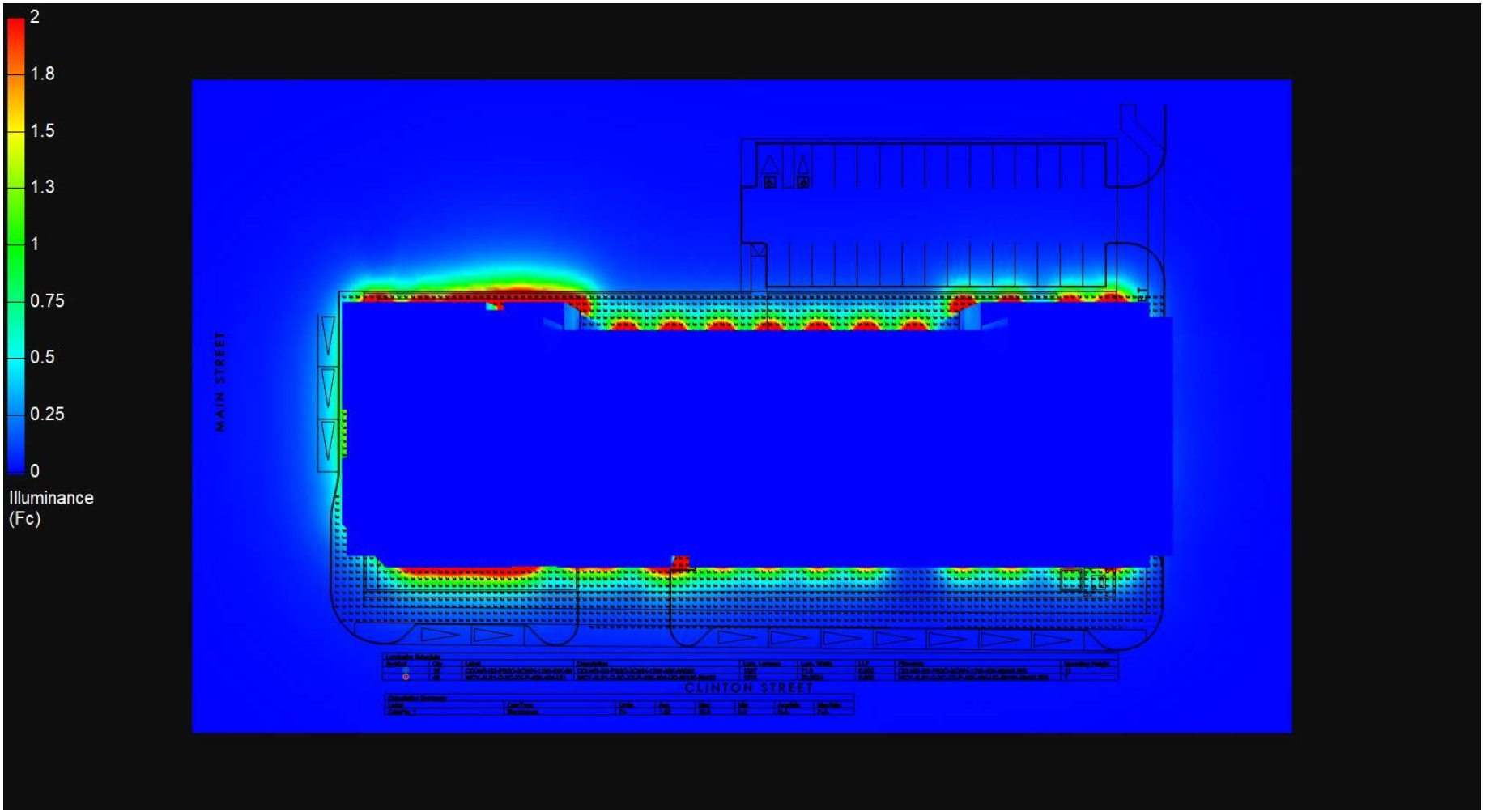

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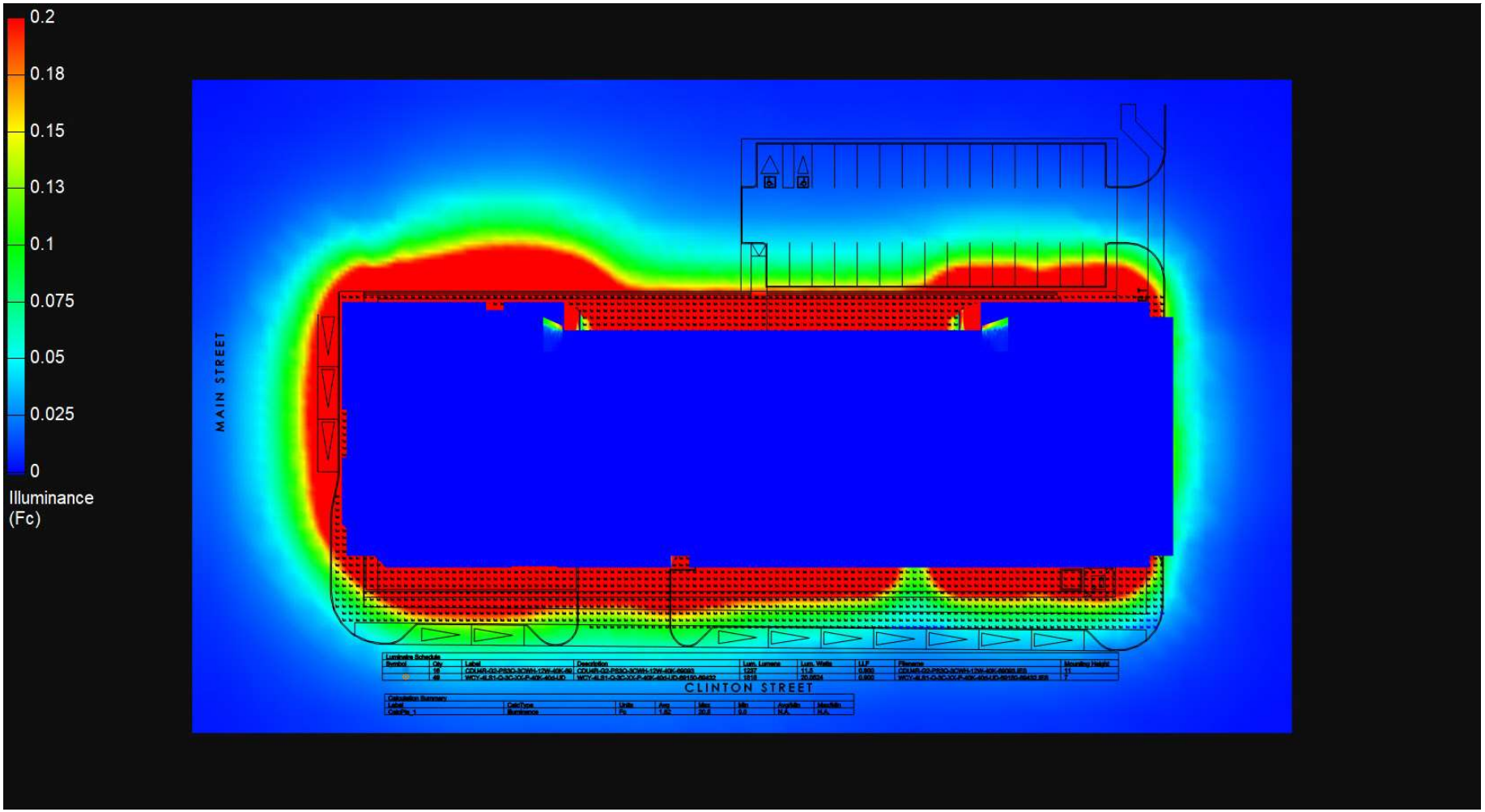

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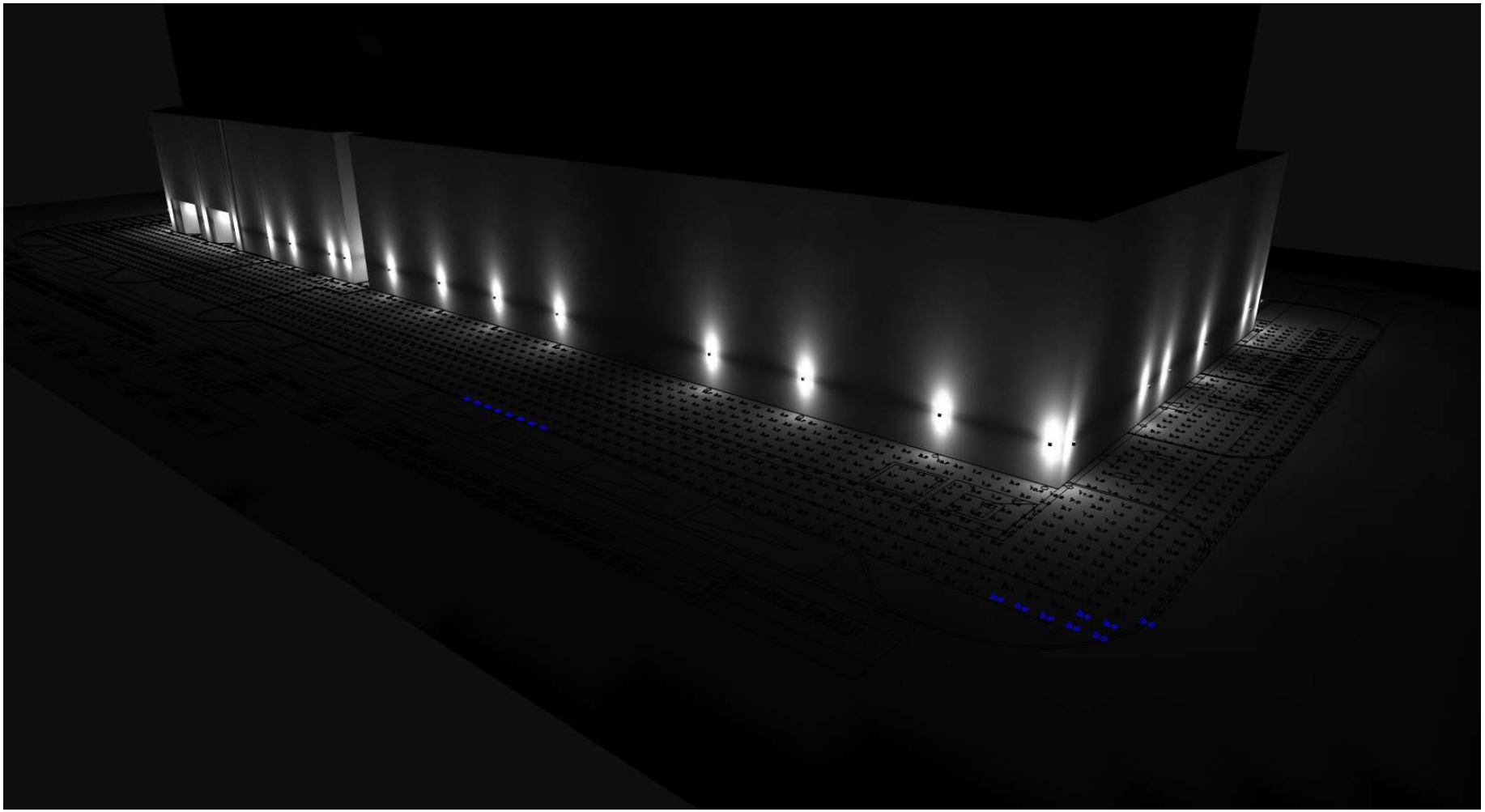

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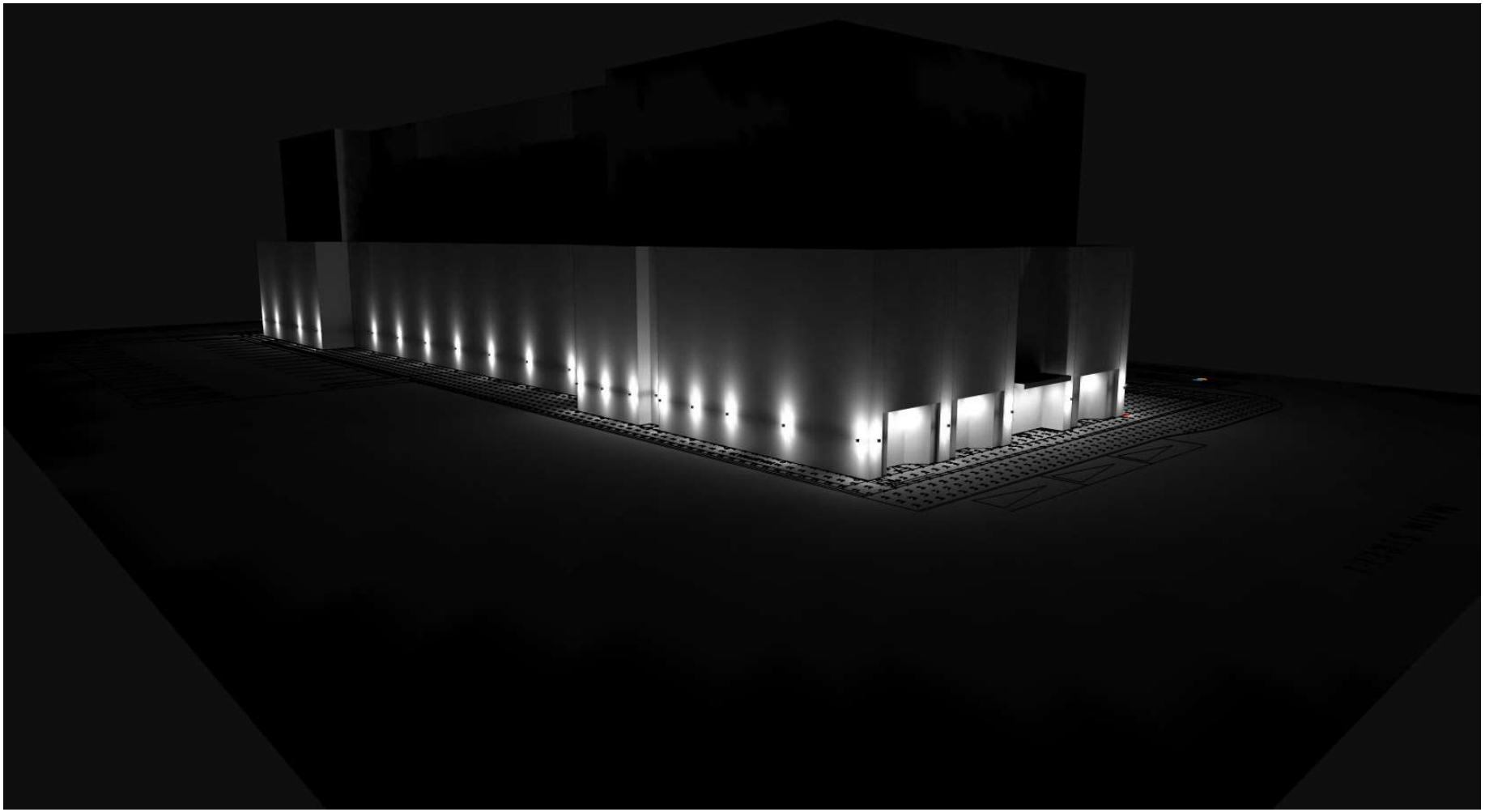

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1000033566 Ontario Inc.

Planning Justification Brief

The Norfolk

October 10, 2024

Planning Justification Brief

The Norfolk

October 10, 2024

Prepared By:
Arcadis Professional Services (Canada) Inc.
360 James St. N., Suite 200
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Canada
Phone: 905 546 1010

Prepared For:
1000033566 Ontario Inc.

Our Ref:
139459

_____

Carmen Jandu, MCIP RPP
Planner – Senior Associate

_____

Ritika Nair
Planner

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Contents

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2 Site Context & Surrounding Areas 1
3 Proposed Development 2
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Figures

Figure 1-1 Aerial Image of Subject Lands 1

1 Introduction

On behalf of, 1000033566 Ontario Inc., the following Planning Justification Brief (the “PJB”) has been prepared in support of an application for Site Plan Approval for the collection of lands municipally known as 200 Main Street, 21 Clinton Street, 21 St. Andrews Street and 25 St. Andrews Street, and the Clinton Street Municipal Parking Lot (the “Subject Lands”) in the Port Dover urban area. The subject lands are legally described as Lots 31, 32, 33 & 34, Block 50, Registered Plan 207; Norfolk County (formerly Town of Port Dover). The Owner is proposing to develop the lands with a six-storey mixed-use development as the gateway into the Downtown Area of Port Dover.

The following sections of this PJB will provide a brief overview of the lands and their surrounding context, the proposed development, a description of the technical studies submitted in support of this application, as well as a brief Planning Analysis of the proposed development and its conformity with the applicable policies of the Norfolk County Official Plan and Zoning By-law No. 1-Z-2014.

2 Site Context & Surrounding Areas

The subject lands are located east of Main Street, north of Clinton Street, and west of St. Andrews Street in downtown Port Dover. The lands have an area of 4,070 square metres (43, 809 square feet) and lot frontages of approximately 41.4 metres (135.8 feet) on Main Street and St. Andrews Street, as well as a frontage of 100 metres (329 feet) on Clinton Street. The subject lands were previously developed with the former Norfolk Tavern and two detached residential dwellings, prior to their demolition.

Figure 1: Aerial View of Subject Lands (Retrieved from: Norfolk County – Community Web Map)

The surrounding downtown areas have an existing mix of uses including commercial, retail, recreational and residential uses as follows:

- To the north: A mix of retail and commercial uses such as the Dover Dairy Bar, Dover Hairport, Shadfly Antiques, etc.
- To the east: single family and multi-family residential
- To the south: Arbortown Mini-golf with the waterfront area beyond
- To the west: A mix of retail and commercial uses including Southside Louie's, Nouveau Orie Women's Boutique, 211 Main, etc. with single family residential beyond.

3 Proposed Development

The proposed development is a six-storey (6) mixed use development that will contain commercial uses on the ground floor level, with a total of 138 residential units on the upper levels serviced with 181 parking located within the podium and within two (2) below grade parking levels.

The proposed development incorporates a parcel of land known as the Clinton Street Municipal Parking lot. Through the proposed development, the existing municipal parking lot will be replaced with a new municipal parking lot located on St. Andrews Street. The proposed municipal parking lot is subject to a separate site plan application process, however for the purposes of this application, the preliminary lot design has been depicted to illustrate connectivity and parking allocation to service the Port Dover community. In addition to the future St. Andrews municipal parking lot the proposed Site Plan also includes opportunities for additional layby street parking spaces along the Clinton Street and Main Street frontages within the municipal right-of-way that would add an additional nine (9) and three (3) public parking spaces which will further improve the availability of public parking in the downtown area.

The main entrance to the residential component of the building is proposed via lobby fronting onto Main Street, whereas the vehicular access to the proposed internal parking area will be provided via St. Andrews Street. Individual storefront access to the proposed commercial units are proposed along the Main Street and Clinton Street frontages. The Main Street and Clinton Street interfaces include a paved patio and walkway extension along Main Street, and landscaped areas and tree plantings along Clinton Street. A pedestrian walkway connecting Main Street to the proposed future public parking lot has been included as part of the proposed development.

4 Supporting Studies

4.1 Traffic Impact Study

A Traffic Impact Study was conducted by Paradigm Transportation Solutions Ltd. dated October 10, 2024. A scope of work was established through communication with County and Ministry of Transportation staff. Based on the findings of this study it is concluded that:

- Redevelopment of the subject site is forecast to have a negligible impact on traffic operations at the study area intersections;
- At Main Street and Clinton Street, the proposed development's building setback and daylight triangle provide the opportunity for sufficient sight distance to the north. However, the existing structure on the southeast corner of this intersection (unrelated to the development proposal at 200 Main Street, and on

private property) restricts sight distance to the south. Sufficient sight distance in both directions is necessary to support westbound left-turn and through movements at this intersection. Sufficient sight distance to the south is necessary to support westbound right-turn movements at this intersection.

- The location of both site driveways, and the new driveway connection to the municipal parking lot satisfy the minimum stopping sight distances and intersection sight distances published by the Transportation Association of Canada (TAC); and
- Remedial measures are not warranted or required to support the redevelopment.

As a result, it is recommended that the proposed redevelopment be considered for approval with no requirements for off-site transportation related improvements

It is also recommended Norfolk County and the Ontario Ministry of Transportation monitor traffic volumes at St. Andrew Street and Walker Road to determine if and when traffic control improvements are warranted.

Independent of the proposed development of 200 Main Street it is also recommended Norfolk County undertake a detailed sight distance assessment study at Clinton Street and Main Street to identify appropriate measures to address the existing sight distance deficiencies.

4.2 Functional Servicing Report

A Functional Servicing Report was prepared by Arcadis Professional Services (Canada) Inc. dated October 9, 2024.

This report analyzed the capacity of the existing infrastructure, particularly the existing watermain and sanitary sewers to evaluate its ability to accommodate the proposed development. The conclusions of this report are as follows:

- The proposed development represents a minor increase in wastewater flow such that it is not expected to have a significant impact on the receiving downstream sanitary sewer system. Norfolk County to advise as to whether the receiving municipal sanitary system can accommodate the proposed development.
- The existing 250 mm watermain within Main Street has sufficient capacity to support the proposed fore and domestic water demands for the proposed development without improvements to the municipal water supply network.
- In summary, it can be concluded that the Site Plan Amendment (SPA) can be supported from a municipal site servicing perspective pending input from Norfolk County.

4.3 Storm Water Management Report

A Storm Water Management Report was prepared by Arcadis Professional Services (Canada) Inc. dated October 9, 2024

The report analyzed the proposed development in terms of drainage and stormwater management. The following findings and recommendations have been derived based on the detailed hydrological assessments, PCSWMM modelling, and relevant design criteria:

- The existing site consists of mixed commercial, residential, and paved areas, with native soils identified as clayey silt and silt. Groundwater levels range between elevations of 174.6 to 178 masl.

- The proposed redevelopment will feature a seven-storey mixed-use building with two levels of underground parking. Most stormwater will be captured on the roof, with flow directed to a storage chamber located in the underground parking area (P2).
- PCSWMM modelling indicates that 31.5 m³ of storage is required to control the peak 100-year storm, which is higher than the 22.4 m³ required for runoff volume control. A release rate of 0.05 m³/s ensures the controlled peak flow does not exceed existing flow for the 2 to 100-year storm events.
- Water quality treatment will be addressed through a Stormceptor EFO4 Oil Grit Separator (OGS), which meets Norfolk County's requirement of 80% Total Suspended Solids (TSS) removal. Regular maintenance of the OGS is recommended to ensure ongoing compliance with water quality standards.
- Additional considerations should be given to managing stormwater runoff from the future proposed parking lot northwest of the site, as it was not included in the current OGS sizing.
- Continuous monitoring during construction is recommended to manage groundwater levels and ensure proper performance of the underground parking and stormwater system.

5 Land Use Planning Framework

The requested planning application would be subject to the policies of the Provincial Policy Statement 2020 (the "PPS 2020") which will be replaced on October 20, 2024 by the the Provincial Planning Statement 2024 (the "PPS 2024"), the Norfolk County Official Plan and the Norfolk County Zoning By-law 1-Z-2014.

The proposed development is located within the Port Dover Urban Area and proposes the redevelopment of infill lands within an urban area as encouraged by the policies of the PPS 2020 Section 1.1.1 regarding the efficient development of settlement areas. The type of infill redevelopment proposed through this application would permit the future mixed-use development to benefit from existing connections to public services and amenities including, but not limited to, public water and wastewater services, transportation and municipal road connections, community infrastructure and public amenity spaces as directed by Policy 1.1.3.2. regarding the efficient use of lands. The proposed application complies with all applicable standards of the in-effect zoning of the subject lands, thereby complying with Policy 1.1.3.4 regarding appropriate development standards for residential intensification.

The PPS 2024 will come into force and effect on October 20, 2024 and will provide the updated Provincial policy direction regarding development in Ontario. Similar to the policies discussed in the foregoing section, the new PPS 2024 encourages the development of lands within settlement areas, particularly in Sections 2.3.1.1, 2.3.1.2. and 2.3.1.6. These policies emphasize the direction for development to occur where infrastructure and public service facilities are planned or available as is the case in the Port Dover settlement area.

Based on a review of the applicable PPS 2020 and PPS 2024 policies guiding the use and development of urban settlement areas, it is our professional opinion that the proposed development will be in keeping with Provincial policy.

5.1 Norfolk County Official Plan

The Norfolk County Official Plan 2023 provides the policy framework guiding land use and development within the County. The subject lands are designated as being within the Downtown area of the Official Plan as per Schedule B-16 – Land Use.

The proposed development would be consistent with the land use policies pertaining to the Downtown designation as per Section 7.8 of the Plan. In conformity with policy 7.8.1 (b) of the Plan, the proposed multiple-residential building would include street front commercial uses at the ground floor level with residential units contained within the upper floors of the building. The proposed building itself is oriented to a pedestrian scale along the Main St. and Clinton St. Street fronts with the use of building step backs above the third floor. The planned lower floor facades will include multiple entrances to the commercial retail spaces as well as large-scale windows that mirror the historical downtown streetscape and foster an engaging street-level interface as encouraged in policies 7.8.2 (c) and (e) respectively. While the proposed development would result in the replacement of an existing public parking lot, for a new peripheral municipal lot located at 25 St. Andrews Street which will enhance the public parking complement within the downtown area that addresses policy direction found under 7.8.2 (l) of the Official Plan.

Section 6.4.1 of the Official Plan further describes the County's vision for the Downtown areas and emphasizes the intent for these lands to have a wide range of uses including retail, commercial and residential uses, among others. The proposed development would be in line with the planned function of a Downtown area given the mixed-use development proposed. Furthermore, Policy 6.4.1 (e) specifically speaks to the intent to protect and enhance the historic architectural character of the Downtown Areas. The proposed development, which is the former site of the historic Norfolk Tavern would include a plaque to commemorate the history of the site that could read as follows:

> *THE NORFOLK TAVERN*
>
> *The original name of the hotel was the Royal Exchange. The back section of the hotel dated back to 1812 and the front was built between 1835 and 1840.*
>
> *During the Wm. Lyon Mackenzie Rebellion of 1837, the hotel served as the headquarters for volunteers and for the crew of the 200 ton gunboat, Britomart that was berthed in Port Dover during the Wm. Lyon Mackenzie Rebellion in 1837.*
>
> *In the basement, now called The Brig, were cells used to imprison American renegades taking part in the Fenian raids in 1866 and 1870-71.*

Further refinement to the historical plaque will be discussed with the County's historical society as required.

Similarly, Policy 6.4.1 (g) encourages the residential intensification of the Downtown lands, which would be achieved through the upper floors of the proposed development while still maintaining an active façade on the lower floors through the inclusion of commercial and retail uses as per the direction of this section.

Based on a review of the policies pertaining the Downtown area, it is our opinion that the proposed development is in conformity with the applicable policies and would make a beneficial and appropriate addition to the downtown area of Port Dover.

5.2 Zoning

The subject lands are zoned as ‘Central Business District’ or CBD lands as per the Norfolk County Zoning By-law. This zoning would permit apartment dwellings and commercial uses as proposed through this Site Plan application

As part of the proposed Site Plan Approval application, a Zoning Review has been undertaken by the applicant. Following this review, it has been determined that there are no zoning variances or deficiencies to be addressed. The following table summarized the results of this review:

NORFOLK COUNTY ZONING BY-LAW | CENTRAL BUSINESS DISTRICT 'CBD' ZONE			
	REQUIRED	**PROVIDED**	**VARIANCE**
PERMITTED USES	z) dwelling, apartment subject to the requirements of Subsection 6.1.4 * aa) dwelling units in any permitted commercial building subject to the requirements of Subsection 6.1.4 * iii) retail store	Dwelling units and retail stores	N/A
Minimum Front Yard	0m	1.85m	N/A
Minimum Exterior Side Yard	0m	5.85m	N/A
Minimum Interior Side Yard	0 metres except abutting any residential Zone in which case the minimum interior side yard shall be 1.2 metres	2.61m	N/A
Minimum Rear Yard	0 metres except abutting any residential Zone in which case the minimum rear yard shall be 6 metres	0.29m	N/A
Maximum Building Height	six (6) storeys	6 Storeys	N/A
Maximum Front Yard Setback	3m but does not permit parking	1.85m	N/A
Maximum Lot Coverage	80%	73%	N/A
6.1.3 Zone Provisions for Dwellings	Notwithstanding the provisions in Subsection 6.1.2, all single detached, semi-detached, duplex, tri-plex or four-plex dwellings shall conform to the Urban Residential Type 3 (R3) Zone provisions in Subsection 5.3.	Zero dwellings on first storey. All first storey spaces are retail, amenity and service uses.	N/A
6.1.4 Location and Use of First Storey	Any dwelling units in the CBD Zone shall not occupy more than 50 percent of the usable floor area of the first storey, and the frontages of		

	the first storey shall be dedicated to retail, office or service uses.		
6.1.5 Step Back of Upper Floors	The front wall of each floor located above four (4) storeys shall be stepped back 2 metres from the front wall of the fourth storey.	Front wall step back walls above of 4th floor varies between 2.3m and 5.3m	N/A
6.1.6 Angular Plane	Where an apartment dwelling in a CBD Zone abuts an Urban Residential Type 1 Zone (R1-A), (R1-B) or Urban Residential Type 2 Zone (R2), no portion of an apartment dwelling shall exceed the height of a 45 degree angular plane originating at the lot line of the nearest Urban Residential Type 1 Zone (R1-A), (R1-B) or Urban Residential Type 2 Zone (R2)	There are no R1-A, R1-B or R2 zones abutting the property.	N/A
6.1.7 Zone Provision for Convenience Store	The usable floor area of a convenience store shall not exceed 280m²	There is no convenience store proposed. All proposed areas for commercial use are under 280sqm.	N/A
6.1.8 Zone Provision for a Drive Through	A Drive Through shall not be permitted within the Central Business District Zone (CBD).	There is no proposed drive thru.	N/A

Table 1: Zoning Review Table

6 Conclusions

Our client is seeking to develop the subject lands with a six-storey (6) mixed use development that will contain commercial uses on the ground floor level, with a total of 138 residential units on the upper levels. This Brief provides an overview of the lands themselves, the proposed development, and the technical studies undertaken to determine the suitability of the proposed development on the subject lands.

This PJB further provides a brief analysis of the applicable planning policy framework for the lands. Based on a review of the Provincial and County policies, it is our professional opinion that the requested Site Plan Approval is consistent with and conforms to the applicable policy framework.

Based on the analysis provided in this Brief, it is our professional opinion that the submitted application for Site Plan Approval would constitute good planning and is in the public interest.

Sincerely,

ARCADIS PROFESSIONAL SERVICES (CANADA) INC.

Carmen Jandu, MCIP RPP
Planner – Senior Associate

Ritika Nair
Planner

GENERAL NOTES:

1. PRIOR TO STARTING ANY WORKS, THE CONTRACTOR MUST ENSURE THAT ALL NECESSARY APPROVALS ARE IN PLACE FROM THE CORPORATION OF NORFOLK COUNTY AND OTHER EXTERNAL AGENCIES, AS REQUIRED.
2. ALL WORK SHALL BE CARRIED OUT IN COMPLIANCE WITH THE APPLICABLE HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
3. ALL WORK AND MATERIALS TO CONFORM WITH THE CURRENT PROVINCIAL BUILDING CODE, MINISTRY OF THE ENVIRONMENT OF ONTARIO, NORFOLK COUNTY, AND ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS. LOCAL UTILITY STANDARDS AND MINISTRY OF TRANSPORTATION STANDARDS WILL APPLY WHERE REQUIRED.
4. FOR ALL CONSTRUCTION DETAILS NOT SHOWN ON THE DRAWINGS, REFERENCE SHALL BE MADE TO THE DESIGN STANDARDS OF THE CORPORATION OF NORFOLK COUNTY.
5. THE CONTRACTOR IS ADVISED THAT WORKS BY OTHERS MAY BE ONGOING DURING THE PERIOD OF THIS CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH ALL OTHER CONTRACTORS AND PREVENT CONSTRUCTION CONFLICTS.
6. THE INFORMATION SHOWN FOR EXISTING UTILITIES WAS PROVIDED BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES DURING CONSTRUCTION. ALL EXISTING UTILITIES MUST BE LOCATED AND VERIFIED BY EACH PROVIDER PRIOR TO COMMENCEMENT OF WORK. ANY VARIANCE IS TO BE REPORTED TO THE ENGINEER 48 HRS PRIOR TO CONSTRUCTION. LOST TIME AND/OR ANY ADDITIONAL WORKS DUE TO FAILURE OF THE CONTRACTOR TO CONFIRM UTILITY LOCATIONS AND NOTIFY THE ENGINEER OF ANY CONFLICTS 48 HRS PRIOR TO CONSTRUCTION WILL BE AT THE CONTRACTORS EXPENSE.
7. THE CONTRACTOR MUST INSTALL ALL SEDIMENT CONTROL DEVICES PRIOR TO THE COMMENCEMENT OF SITE GRADING WORKS. SILT LADEN WATER MUST NOT BE PERMITTED TO ENTER INTO ANY EXISTING CATCH BASINS, INLETTING STRUCTURES, OR WATERCOURSES. ADDITIONAL CONTROLS AS DEEMED REQUIRED BY THE AUTHORITIES AND/OR THE ENGINEER DURING CONSTRUCTION ACTIVITIES SHALL BE PROVIDED BY THE CONTRACTOR. THE CONTRACTOR MUST INSPECT SEDIMENT CONTROLS ON A REGULAR BASIS AND AFTER EVERY RAINFALL EVENT. REPAIRS MUST BE DONE IN A TIMELY MANNER TO PREVENT SEDIMENT FROM ENTERING ANY WATER SYSTEMS. ADDITIONAL SILT FENCING MUST BE AVAILABLE IN CASE IMMEDIATE REPAIR IS REQUIRED.
8. ALL DIMENSIONS, ELEVATIONS AND OTHER INFORMATION SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR 72 HOURS PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES FOUND MUST BE REPORTED IMMEDIATELY TO THE ENGINEER.
9. THE CONTRACTOR IS TO PROVIDE A TOTAL OF TWO CCTV CAMERA INSPECTIONS OF ALL SANITARY AND STORM SEWERS, INCLUDING PICTORIAL REPORT. TWO CD COPIES AND ONE VIDEO TAPE IN A FORMAT SATISFACTORY TO THE ENGINEER. ALL SEWERS ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION.
10. LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.
11. ALL PVC SANITARY SEWERS TO BE MANDREL AND AIR TESTED.
12. ALL PVC STORM SEWERS TO BE MANDREL TESTED. AIR TEST ONLY ON RECOMMENDATION BY SOIL CONSULTANT.

CONSTRUCTION NOTES:

1. AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION FOR SERVICES ON ANY EXISTING ROAD ALLOWANCE AND EXISTING SERVICES WITHIN AN EXISTING EASEMENT MAINTAINED BY NORFOLK COUNTY IN PORT DOVER ONTARIO, THE SUBDIVIDER / DEVELOPER IS TO OBTAIN A PERMIT OF APPROVED WORK FROM NORFOLK COUNTY AND PORT DOVER ONTARIO.
2. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY MEASURES TO CONTROL SILT ENTERING THE STORM DRAINAGE SYSTEM TO THE SPECIFICATIONS OUTLINED IN THE GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES PREPARED BY THE MINISTRY OF NATURAL RESOURCES. THESE MEASURES ARE TO BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION FOR THIS PROJECT, AND ARE TO REMAIN IN PLACE UNTIL CONSTRUCTION HAS BEEN COMPLETED TO THE SPECIFICATIONS OF THE TOWN ENGINEER.
3. ALL WORK SHALL MEET THE MINIMUM STANDARDS AND SPECIFICATIONS OF NORFOLK COUNTY AND PORT DOVER ONTARIO OR ONTARIO PROVINCIAL STANDARDS.
4. NO FOUNDATION DRAIN CONNECTIONS WILL BE PERMITTED. SUMP PUMPS SHALL BE DISCHARGED TO THE OUTSIDE GROUND SURFACE DRAINING AWAY FROM THE BUILDING. REQUIRED TO CONFORM WITH OBC, DIV.B.9.14.
5. THE SUBDIVIDER / DEVELOPER IS TO NOTIFY NORFOLK COUNTY AND PORT DOVER ONTARIO AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION. PERMITS ARE REQUIRED PRIOR TO COMMENCEMENT OF WORK AND 48 HOURS IS REQUIRED PRIOR TO INSPECTION REQUESTS.
6. THE SUBDIVIDER / DEVELOPER IS TO MEET ALL REQUIREMENTSOF THE OWNERS OF THE UTILITIES ON THIS PLAN, AND MUST MAKE SATISFACTORY ARRANGEMENTS WITH THE UTILITY COMPANIES FOR CROSSING THEIR INSTALLATIONS AND FOR PROVIDING ADEQUATE PROTECTION DURING CONSTRUCTION.
7. IF COMMON TRENCH CONSTRUCTION IS TO BE USED FOR THE INSTALLATION OF STORM AND SANITARY SEWERS ON ANY STREET WITHIN THIS SUBDIVISION / DEVELOPMENT / PROJECT, THE PDC'S ARE TO BE CONSTRUCTED AT LEAST 2 METERS BEHIND THE CURB LINE ON THAT STREET, AT THE SAME TIME AS INSTALLATION OF THE SEWERS.
8. ALL ORGANIC, UNSTABLE OR UNSUITABLE MATERIALS BENEATH THE ROAD ALLOWANCES OR HOUSE FOUNDATIONS MUST BE REMOVED AND THESE AREAS BACKFILLED WITH AN APPROVED FILL MATERIAL, ALL TO THE SATISFACTION OF A GEOTHECHNICAL ENGINEER.

GRADING:

1. PRIOR TO COMMENCEMENT OF GRADING WORKS ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND OPERATIONAL. THE CONTRACTOR SHALL MAINTAIN ALL WORKS UNTIL SERVICING CONSTRUCTION IS COMPLETED TO THE SATISFACTION OF THE ENGINEER AND THE CORPORATION OF NORFOLK COUNTY.
2. ALL GRANULAR BASE AND SUB-BASE COURSE MATERIALS SHALL BE COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.
3. PAVEMENT STRUCTURE TO BE CONSTRUCTED AS RECOMMENDED BY THE GEOTECHNICAL REPORT.
4. CONCRETE CURBS SHALL BE AS PER OPSD 600.060 AND OPSD 600.110.
5. INSPECTIONS: ALL WORK ON THE MUNICIPAL RIGHT-OF-WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR TO BACKFILLING. ALL WORK RELATING TO WATERMAINS AND SEWERS TO BE INSPECTED BY THE MUNICIPALITY WHEN REQUIRED BY THE MUNICIPALITY.
6. CONTRACTOR TO OBTAIN A ROAD OCCUPANCY PERMIT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE IF REQUIRED BY THE MUNICIPALITY OR THE REGION.
7. EMBANKMENTS TO BE SLOPED AT MAX. 3:1, UNLESS OTHERWISE SPECIFIED.
8. SEDIMENT CONTROL TO BE PROVIDED AT CATCH BASINS AND CATCH BASIN MANHOLES UPON INSTALLATION OF STRUCTURES AS PER DETAIL PROVIDED.
9. CONTRACTOR WILL BE RESPONSIBLE FOR ALL REMOVALS AS REQUIRED TO FACILITATE NEW CONSTRUCTION. ALL EXISTING STRUCTURES, VALVES, ETC. ARE TO BE ADJUSTED TO PROPOSED ELEVATIONS.
10. EXISTING ELEVATIONS AT MATCH POINTS, AS SHOWN ON PLANS, ARE TO BE CONFIRMED BY THE CONTRACTOR 72 HOURS PRIOR TO MOBILIZATION OF FORCES. LOST TIME AND/OR ANY ADDITIONAL WORKS DUE TO FAILURE OF THE CONTRACTOR TO CONFIRM EXISTING ELEVATIONS AND NOTIFY THE ENGINEER OF POSSIBLE CONFLICTS 72 HOURS PRIOR TO MOBILIZATION WILL BE AT THE EXPENSE OF THE CONTRACTOR.

MANHOLES AND CATCHBASINS:

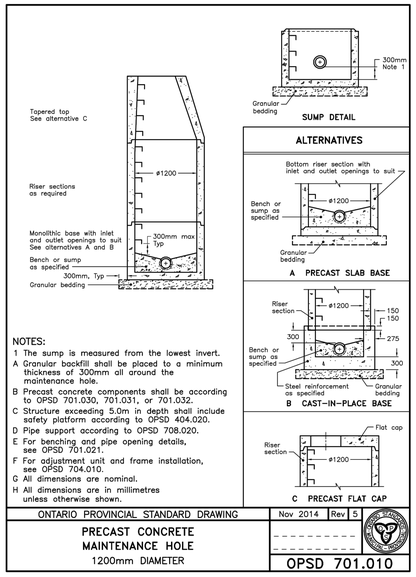
1. ALL PRECAST CONCRETE MANHOLES TO MEET M.O.E. SPECIFICATIONS AND CONFORM TO OPSD STANDARDS 701.010 AND 701.011.
2. MANHOLE COVERS TO BE AS PER OPSD 401.010, TYPE 'A' FOR SANITARY AND TYPE 'B' FOR STORM.
3. MANHOLE AND CATCHBASIN ADJUSTERS SHALL BE AS PER OPSD 704.010.
4. MANHOLE STEPS SHALL BE RECTANGULAR STAINLESS STEEL AS PER OPSD 405.010.
5. SAFETY PLATFORMS SHALL BE PROVIDED, AS PER OPSD 404.020, FOR MANHOLES WITH DEPTH EXCEEDING 5.0m.
6. BENCHING TO BE PROVIDED AT ALL MANHOLES UNLESS OTHERWISE STATED IN ACCORDANCE WITH OPSD 701.021
7. ALL SINGLE AND DOUBLE CATCH BASINS SHALL BE PRECAST AS PER OPSD 705.010 AND 705.020 RESPECTIVELY.
8. CATCHBASIN LEADS SHALL BE PVC SDR 35 INSTALLED AT A MINIMUM OF 1.0% SLOPE AND WITH MINIMUM COVER OF 1.2m. SIZES ARE AS FOLLOWS: SINGLE CB- 250mm DIA., DOUBLE CB- 300mm DIA., REAR LOT CB- 300mm DIA. (UNLESS OTHERWISE NOTED)
9. CATCHBASIN SUMP TO BE 0.60m DEEP FOR 600x600, AND 0.30m DEEP FOR 1200x1200.
10. ALL CATCH BASIN FRAMES AND COVERS SHALL BE AS PER OPSD 400.110.
11. DURING CONSTRUCTION ALL CATCH BASINS SHALL BE EQUIPPED WITH A TEMPORARY SEDIMENT CONTROL DEVICE.
12. ALL MANHOLE AND CATCH BASIN EXCAVATIONS SHALL BE BACKFILLED WITH GRANULAR 'B' COMPACTED TO 98% SPMDD AND BE PLACED IN ACCORDANCE WITH THE LATEST REVISION OF THE GEOTECHNICAL REPORT.

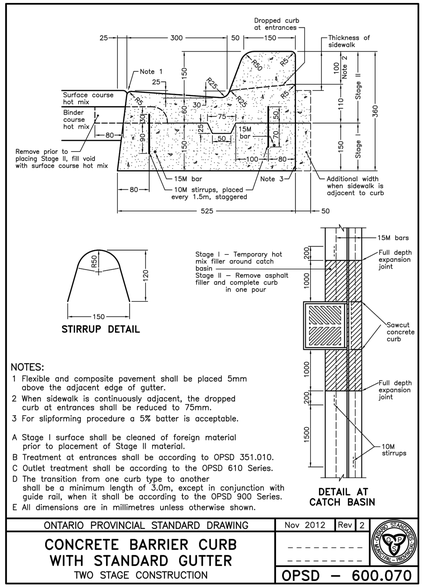
STORM AND SANITARY SEWERS:

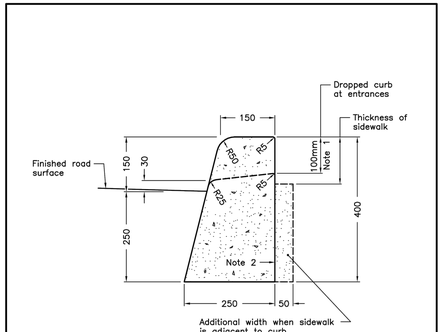
1. SANITARY SEWERS SHALL BE GREEN PVC SDR 35 (UNLESS OTHERWISE NOTED) INSTALLED IN ACCORD. W/ OPSD 802.01 (NOV. 2010, REV. 2) SANITARY SERVICES SHALL BE GREEN 150mm DIA. PVC SDR 28 INSTALLED IN ACCORD. W/ OPS 1006.020 (NOV. 2005, REV. 1). MIN. 2% SLOPE INSTALLED 2.0m PAST CURB LINE. BEDDING AND COVER MATERIAL FOR SANITARY SEWERS SERVICE CONNECTIONS SHALL BE GRANULAR 'A' COMPACTED TO 98% STANDARD PROCTOR DENSITY.
2. ALL SANITARY SEWERS TO BE INSTALLED AS PER COUNTY OF NORFOLK DESIGN GUIDELINES AND SPECIFICATIONS
3. STORM SEWERS SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):
   300mm DIA. - PVC SDR-35
   525mm DIA. AND GREATER - 65-D CONCRETE
4. CONCRETE STORM SEWERS SHALL BE INSTALLED IN ACCORDANCE WITH OPSD 802.03 (2010) CLASS B. BEDDING MATERIAL SHALL BE GRANULAR 'A' COMPACTED TO 98% S.P.D. COVER MATERIAL SHALL BE SAND COMPACTED TO 98% S.P.D.
5. PVC STORM SEWERS SHALL BE INSTALLED IN ACCORDANCE WITH OPSD 802.01 (2010). BEDDING AND COVER MATERIAL SHALL BE GRANULAR 'A' COMPACTED 98% S.P.D.
6. SUB-GRADE TO BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF GRANULAR 'B' TO CONFIRM GRANULAR 'B' THICKNESS REQUIRED.

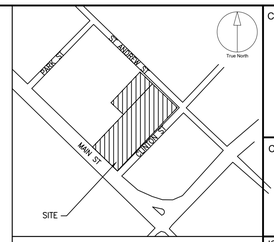
WATERMAINS:

1. ALL WATERMAINS AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT NORFOLK COUNTY DRAWINGS, M.O.E. GUIDELINES, OPSD STANDARDS AND SPECIFICATIONS AND AWWASTANDARDS AND SPECIFICATIONS.
2. WATERMAIN SHALL BE BLUE AWWA C-9-- PVC DR 18 CLASS 150 UNLESS OTHERWISE NOTED) INSTALLED IN ACCORDANCE WITH OPSD 1103.010 (NOV. 2006, REV. 1) AND 1103.020 (NOV. 2006, REV. 2). WATERMAIN SHALL HAVE TWELVE GAUGE TRACER WIRE FASTENED AT NO GREATER THAN 6.0m INTERVALS ANO BROUGHT UP TO FINISHED GRADE AT WATER VALVE BOXES
3. WATER SERVICES TO BE 20mm DIA. TYPE 'K' COPPER PIPE, POLYETHYLENE OR MUNICIPEX (OR APPROVED EQUAL), IN ACCORDANCE WITH OPSD 1104.010 (NOV 2006, REV. 2) INSTALLED TO 3.0m PAST CURB LINE.
4. ALL WATERMAIN AND SANITARY SEWERS TO BE INSTALLED AS PER COUNTY OF NORFOLK DESIGN GUIDELINES AND SPECIFICATIONS.
5. BEDDING AND COVER MATERIAL FOR WATERMAIN AND SERVICE CONNECTIONS SHALL BE GRANULAR "A" COMPACTED TO 100% S.P.D. AS PER OPSD 802.010
6. WHERE WATERMAINS OR WATER SERVICES CONFLICT WITH SEWERS, THEY SHALL BE DEFLECTED BELOW THE SEWER TO PROVIDE A MINIMUM SEPARATION DISTANCE OF 0.50m VERTICALLY AND INSULATED.
7. VALVES SHALL BE RESILIENT SEAT EPOXY COATED GATE VALVES COMPLYING TO LATEST AWWA CSOO SPECIFICATIONS, VALVE BOXES AS SUPPLIED BY 'MUELER LIMITED' OR 'CANADA VALVE' INSTALLED IN ACCORDANCE WITH OPSD 1101.030 AND OPSD 1100.020.
8. HYDRANTS TO COMPLY TO AWWA C502. 'CANADA VALVE' (DARLING), 'CENTURY', 'MACIVITY M67' ARE ACCEPTED. MUST HAVE BRASS TO BRASS SEAT, OPEN COUNTER CLOCKWISE AND BE COATED WITH HIGH QUALITY YELLOW PAINT (OPSD 1105.02) (NOV.2006, REV. 1). ALL EQUIPPED WITH 100mm STORZ CONNECTION (CAP PAINTED BLACK).
9. SUB-GRADE TO BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF GRANULAR 'B' TO CONFIRM GRANULAR 'B' THICKNESS REQUIRED.
10. MINIMUM 1.7m COVER FOR WATERMAIN AND WATER SERVICES.
11. THE OWNER SHALL GRANT THE NECESSARY EASEMENT(S) TO NORFOLK COUNTY AND PORT DOVER ONTARIO TO ENABLE MAINTENANCE OF THE WATER SERVICES ON SITE AND TO INCLUDE A REQUIREMENT FOR A FIRE HYDRANT MAINTENANCE AGREEMENT FOR THE SITE.
12. THE FIRE FLOW DEMAND FOR THE SITE AND WATERMAIN DESIGN SHALL BE CALCULATED IN ACCORDANCE WITH THE SECTION 10.1.1 OF NORFOLK COUNTY DESIGN CRITERIA DATED AUGUST, 2017.









CLIENT

2662516 Ontario Ltd.

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ISSUES

No.	DESCRIPTION	DATE
1.	ISSUED FOR SPA SUBMISSION	OCT- 08 - 2024

LEGEND

Norfolk COUNTY

ACCEPTED TO BE IN ACCORDANCE WITH THE NORFOLK COUNTY STANDARDS. THIS ACCEPTANCE IS NOT TO BE CONSTRUED AS VERIFICATION OF ENGINEERING CONTENT.

MANAGER, DEVELOPMENT ENGINEERING DATE

ARCADIS
8133 Warden Ave, Unit 300 |
Markham, ON | L6G 1B3 | Canada
www.arcadis.com

PROJECT

200 MAIN STREET
NORFOLK COUNTY

LIST OF DRAWINGS
SG-01 SITE GRADING PLAN
SS-01 SERVICING PLAN
EC-01 EROSION CONTROL PLAN
DD-01 NOTES AND DETAILS

PROJECT NO: 139459	
DRAWN BY: MZ	CHECKED BY: NG
PROJECT MGR: IQ	APPROVED BY: IQ

SITE PLAN INFORMATION
VAN GROLL & ASSOCIATES INC.
2 ST CLAIRE AVE. W. F18
TORONTO, ONTARIO M4V 1L5
PHONE: (905) 339-2811 EXT 228

SURVEY INFORMATION
MacAULAY, WHITE & MUIR LTD.
ONTARIO LAND SURVEYORS
440 HARDY ROAD, UNIT 2, BRANTFORD, ONTARIO N3T 5L8
PHONE: (519) 752-0040 FAX: (519) 752-0087
EMAIL: mwmsurvey@bellnet.ca

BENCHMARK INFORMATION:
ELEVATIONS ARE GEODETIC AND ARE DERIVED FROM CITY OF TORONTO BENCHMARK No. XXXX, HAVING AN ELEVATION = 182.32 METRES.

SCALE: NOT TO SCALE

SHEET TITLE

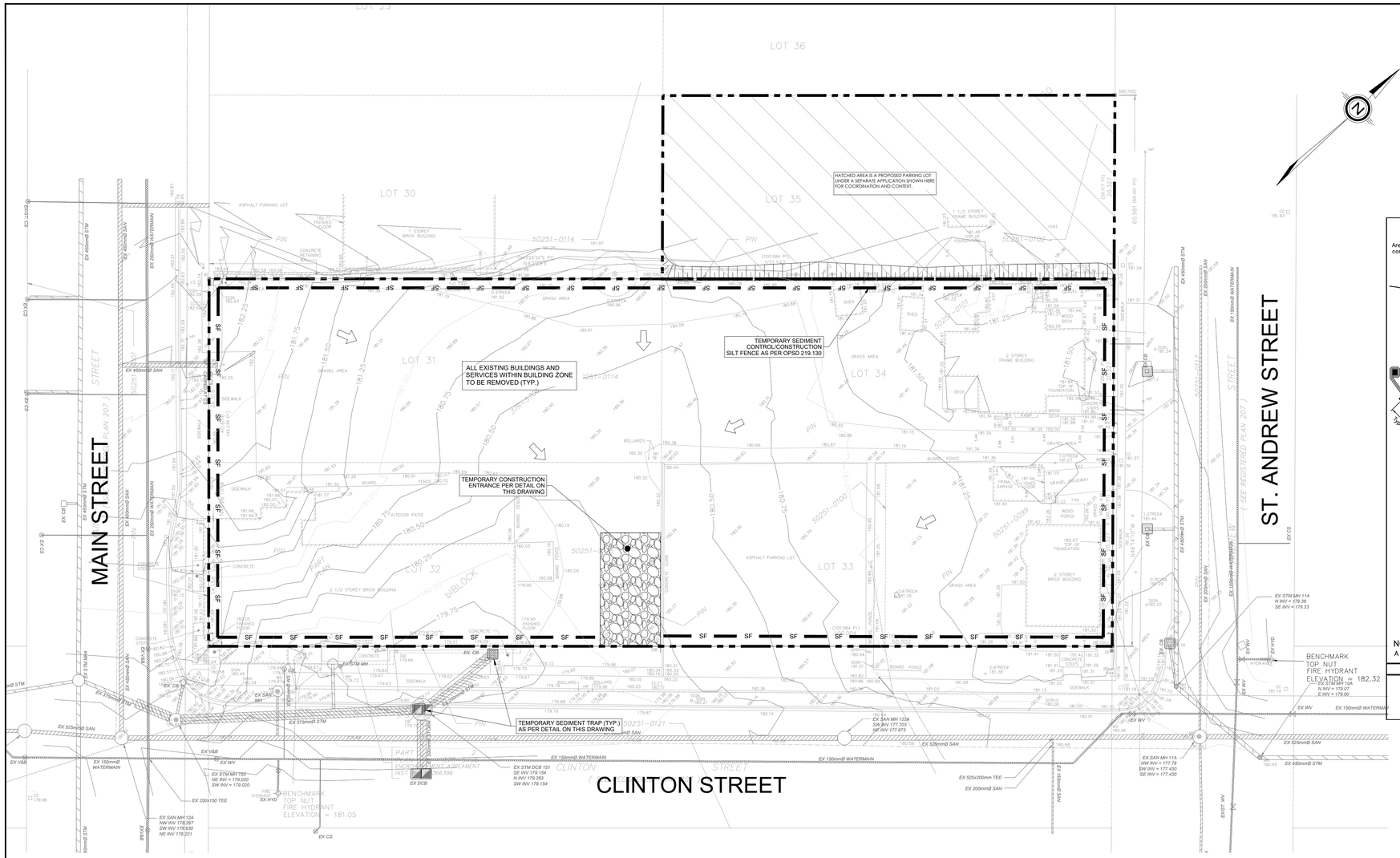
GENERAL NOTES AND DETAILS

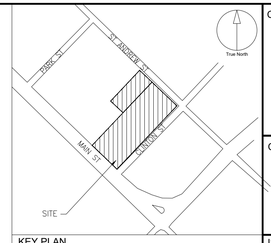
SHEET NUMBER DD-01

ISSUE 01

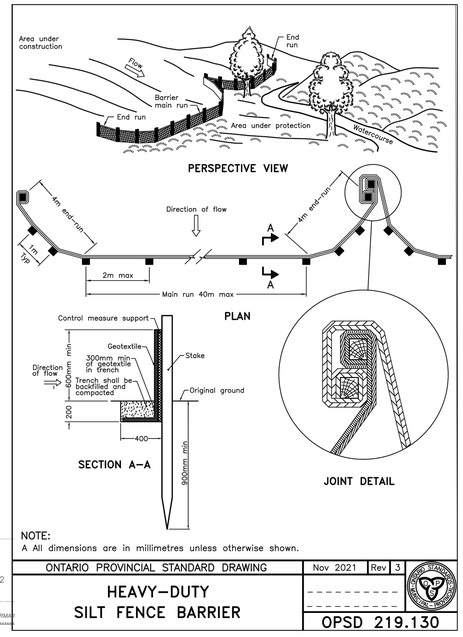
SCALE CHECK: 10mm 1 in

File Location: H:\139459_Norfolk_Tawe\7.0_Production\7.03_Design\04_Civil\Sheets\139459-SHEET-DETL-DD-01.dwg Last Saved: October 8, 2024, by zdravevm8223 Plotted: Tuesday, October 8, 2024 5:18:19 PM by Mitko Zdravevski





KEY PLAN

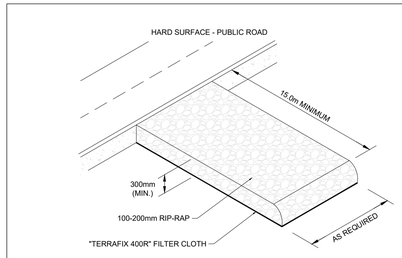


NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2021	Rev	3
HEAVY–DUTY SILT FENCE BARRIER			
	OPSD 219.130		

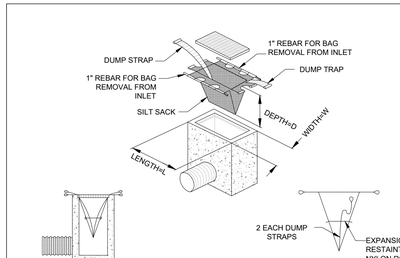
EROSION AND SEDIMENT CONTROL / GENERAL NOTES:

1. SEDIMENT BARRIER AND TEMPORARY CONSTRUCTION ACCESS TO BE INSTALLED PRIOR TO THE BEGINNING OF THE CONSTRUCTION.
2. ALL SEDIMENT CONTROL DEVICES TO BE ROUTINELY INSPECTED AND MAINTAINED IN PROPER WORKING ORDER UNTIL THE AREA IS STABILIZED.
3. IF NECESSARY, TRUCKS WILL BE WASHED DOWN BEFORE LEAVING THE SITE.
4. THE SITE WILL BE WET DOWN IF NECESSARY TO CONTROL DUST.
5. ALL CONSTRUCTION EQUIPMENT MUST BE PARKED ON-SITE.
6. WILL COMPLY WITH CITY OF PORT DOVER NOISE BY-LAW.
7. SEDIMENT CONTROL FENCE TO BE AS PER OPSD 219.130.
8. ALL CONSTRUCTION VEHICLES TO ENTER AND EXIT SITE FROM TEMPORARY CONSTRUCTION ACCESS.
9. ALL TOPSOIL STOCKPILES TO BE SURROUNDED WITH SEDIMENT CONTROL FENCING.
10. FILTER FABRIC TO BE PLACED UNDER GRATES ON ALL CATCHBASINS AND AREA DRAINS TO TRAP SEDIMENT. SILT TRAPS ARE TO BE CLEANED REGULARLY AND ARE NOT TO BE REMOVED UNTIL SUCH TIME AS THE CURBS ARE CONSTRUCTED AND THE BOULEVARDS ARE SODDED OR BACKYARDS GRADED AND SODDED. FILTER FABRIC FOR SILT CONTROL TO BE TERRAFIX 270R OR APPROVED EQUIVALENT.
11. FILTER CLOTH WILL BE PLACED ON THE CATCHBASINS ON (PUBLIC STREET) ACROSS THE PROPERTY'S FRONTAGE.
12. IN THE CASE OF ANY CONFLICT WITH ANOTHER PLAN, THIS PLAN PREVAILS ONLY IN RESPECT TO CONSTRUCTION MEASURES AND ACTIVITIES SUCH AS THE CONSTRUCTION ACCESS, SILT FENCE, SECURITY FENCE, SEDIMENT CONTROL AND MUD MATS
13. STREET SWEEPING, CATCH BASIN CLEANING AND DUST CONTROL ARE THE RESPONSIBILITY OF THE DEVELOPER AND MUST BE KEPT UNDER CONTROL ON ALL ROADWAYS TO THE SATISFACTION OF THE CITY.



NOTE:
UPON OBSERVATION OF CONTINUOUS MUD TRACKING OCCURING ONTO ADJACENT STREET, THE STONE MAT IS TO BE FULLY REPLACED.

TEMPORARY GRAVEL ACCESS PAD — N.T.S.



TEMPORARY SEDIMENT TRAP (TYPE 2) — N.T.S.

NOTE:
CONTRACTOR TO VERIFY THE LOCATION AND INVERTS OF ALL EXISTING SERVICES AND UTILITIES ON SITE, INCLUDING INVERT ELEVATIONS AT CROSSING LOCATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION

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LEGEND

PROPERTY LINE
TEMPORARY SILT FENCE — SF
PROPOSED SEDIMENT TRAP
TEMPORARY GRAVEL MUD MAT
EXISTING OVERLAND FLOW ROUTE

Norfolk COUNTY

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PROJECT

200 MAIN STREET
NORFOLK COUNTY

LIST OF DRAWINGS
SG-01 SITE GRADING PLAN
SS-01 SERVICING PLAN
EC-01 EROSION CONTROL PLAN
DD-01 NOTES AND DETAILS

PROJECT NO: 139459	
DRAWN BY: MZ	CHECKED BY: NG
PROJECT MGR: IQ	APPROVED BY: IQ

SITE PLAN INFORMATION
VAN GROLL & ASSOCIATES INC.
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1:250

SHEET TITLE

EROSION AND SEDIMENT CONTROL PLAN

SHEET NUMBER: ESC-01
ISSUE: 01

SCALE CHECK: 10mm / 1 in

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ROADWAY / DRIVEWAY / PARKING AISLES PAVEMENT STRUCTURE DESIGN

PAVEMENT COMPONENT	LIGHT DUTY	HEAVY DUTY
ASPHALT HOT MIX HL3	40mm	50mm
ASPHALT HOT MIX HL8	50mm	70mm
OPSS 1010 GRANULAR 'A'	150mm	150mm
OPSS 1010 GRANULAR 'B' TYPE III	450mm	600mm

REFER TO GEOTECHNICAL ASSESSMENT REPORT
PREPARED BY
MTE CONSULTANTS DATED JUN. 06, 2024 ,
MTE FILE No.: 54639-200

FOR AREA DRAINS DETAILS, REFER TO DWG. SS-01

NOTE:
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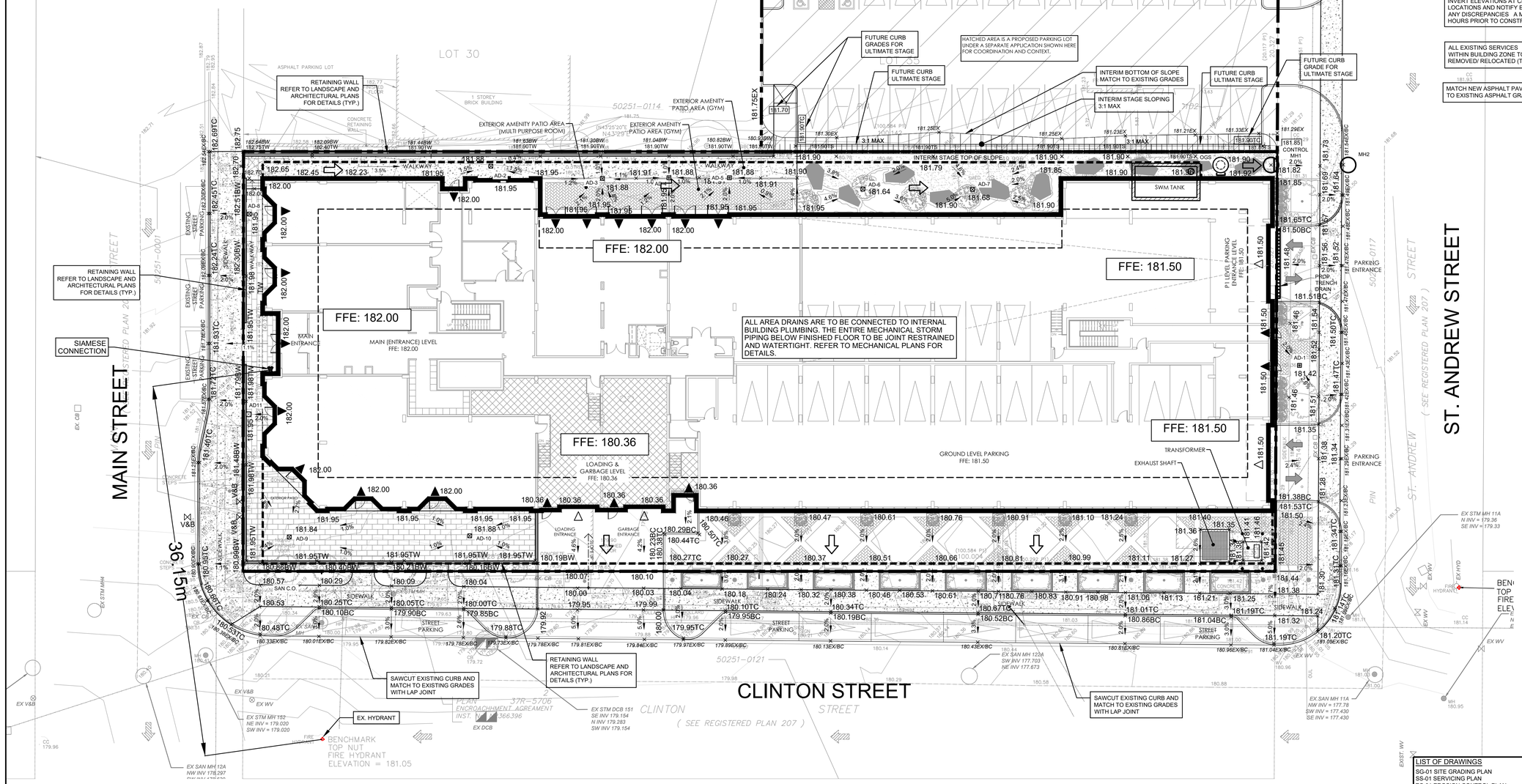
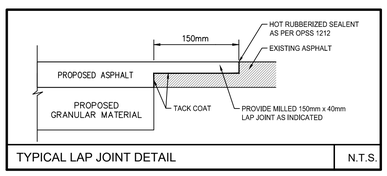
ALL EXISTING SERVICES WITHIN BUILDING ZONE TO BE REMOVED/ RELOCATED (TYP.)

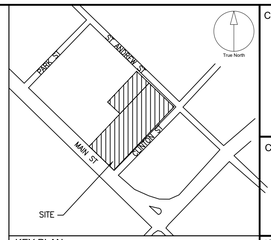
MATCH NEW ASPHALT PAVING GRADES TO EXISTING ASPHALT GRADES (TYP.)

ALL AREA DRAINS ARE TO BE CONNECTED TO INTERNAL BUILDING PLUMBING. THE ENTIRE MECHANICAL STORM PIPING BELOW FINISHED FLOOR TO BE JOINT RESTRAINED AND WATERTIGHT. REFER TO MECHANICAL PLANS FOR DETAILS.





TYPICAL LAP JOINT DETAIL — N.T.S.



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LEGEND

- PROPERTY LINE
- PROPOSED GRADE ×149.50
- EXISTING GRADE ×149.33EX
- PROPOSED TOP OF SLOPE ×149.50TS
- PROPOSED TOP OF WALL ×149.50TW
- PROPOSED BOTTOM OF WALL ×149.50BW
- PROPOSED OGS (OIL& GRIT SEPARATOR)
- PROPOSED MANHOLE
- PROPOSED CATCH BASIN ⊠ AD
- PROPOSED AREA DRAIN □
- HIGH POINT RIDGE
- PROPOSED SANITARY MANHOLE
- PROPOSED VALVE AND BOX ⋈ V&B
- PROPOSED SIAMESE CONNECTION
- EXISTING STORM MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING CATCH BASIN
- EXISTING FIRE HYDRANT EX.FH
- EMERGENCY OVERLAND FLOW ROUTE
- EXISTING OVERLAND FLOW ROUTE
- FFE (FINISHED FLOOR ELEVATION) **FFE=104.50**

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PROJECT

200 MAIN STREET
NORFOLK COUNTY

LIST OF DRAWINGS
SG-01 SITE GRADING PLAN
SS-01 SERVICING PLAN
EC-01 EROSION CONTROL PLAN
DD-01 NOTES AND DETAILS

PROJECT NO: 139459	
DRAWN BY: MZ	CHECKED BY: NG
PROJECT MGR: IQ	APPROVED BY: IQ

SITE PLAN INFORMATION
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SHEET TITLE

SITE GRADING PLAN

SHEET NUMBER SG-01 | ISSUE 01

I. K. QNEIBI
100067339
Oct. 09, 2024
PROVINCE OF ONTARIO
LICENSED PROFESSIONAL ENGINEER

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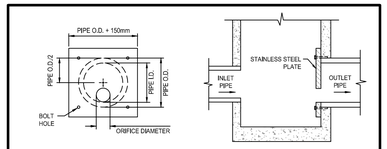


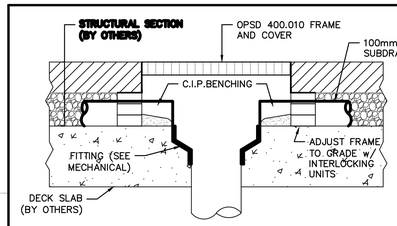
ORIFICE PLATE DETAIL

MANHOLE

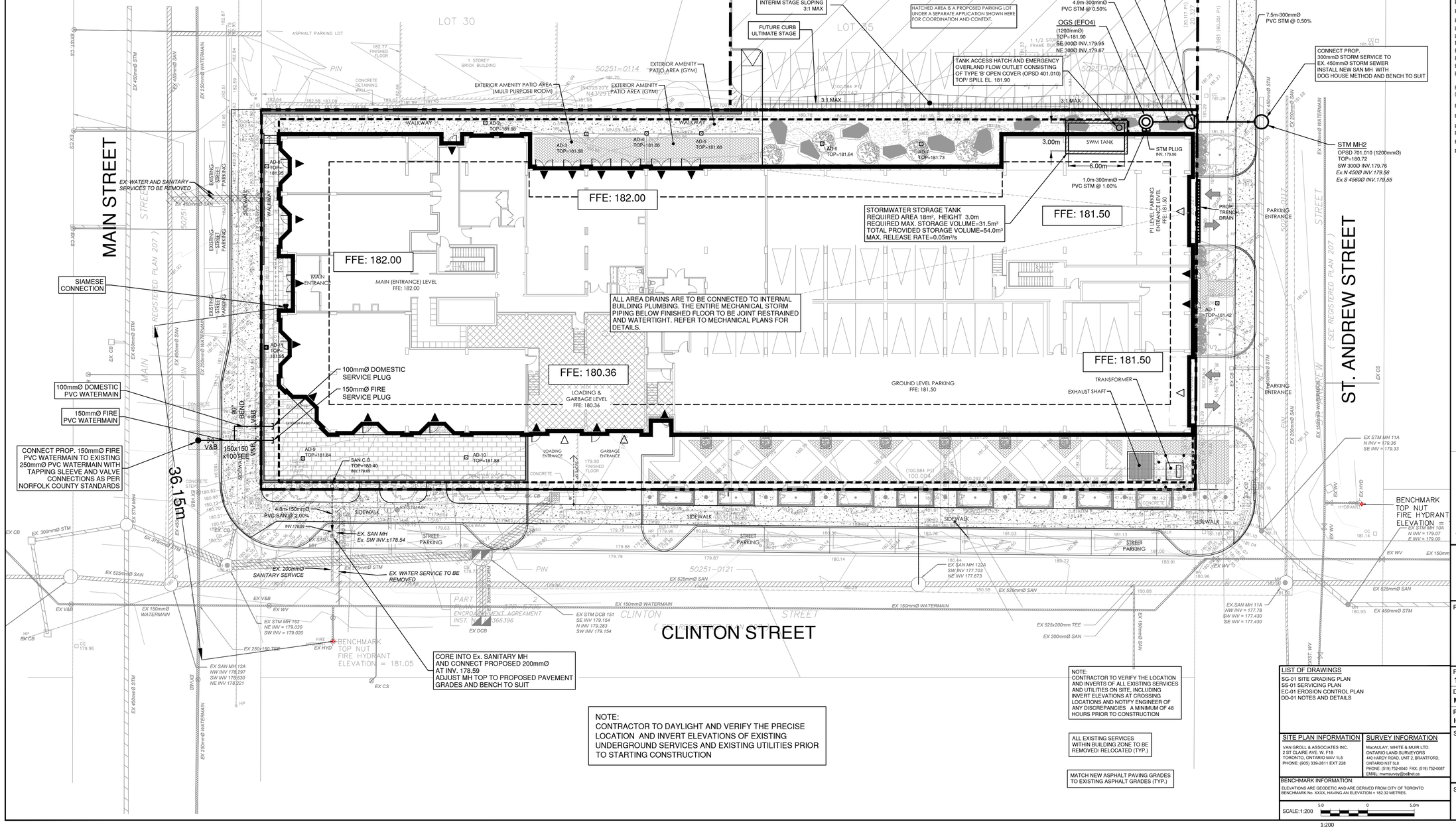
NOTES:

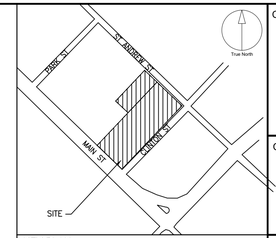
1. THE ORIFICE SHALL CONSIST OF A CIRCULAR HOLE CUT IN THE CENTRE OF A 12.5mm THICK STEEL PLATE.
2. THE PLATE SHALL BE BOLTED SECURELY OVER THE OUTLET PIPE SUCH THAT THE ORIFICE IS CENTERED ON THE PIPE AND THE PLATE EXTENDS A MINIMUM OF 75mm BEYOND THE OUTSIDE DIAMETER OF THE PIPE.
3. BOLTS TO BE 12mm S.S. WITH S.S. WASHERS AND CONCRETE ANCHORS.
4. BOLT HOLES TO BE 50mm MINIMUM FROM THE EDGE OF THE PLATE.
5. THE PLATE MAY HAVE ROUNDED CORNERS.
6. NO BENCHING

TYPICAL ORIFICE PLATE DETAIL | N.T.S.



TYPICAL AREA DRAIN OVER STRUCTURE | N.T.S.





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LEGEND

- PROPERTY LINE
- PROPOSED STORM
- PROPOSED SANITARY
- PROPOSED WATER
- LIMIT OF BUILDING ABOVE GROUND
- LIMIT OF RESTORATION
- EXISTING STORM
- EXISTING SANITARY
- EXISTING WATERMAIN
- EXISTING BELL LINE
- EXISTING CONDUIT
- PROPOSED OGS (OIL& GRIT SEPARATOR)
- PROPOSED STORM MANHOLE
- PROPOSED SANITARY MANHOLE
- PROPOSED AREA DRAN
- PROPOSED CATCH BASIN
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE AND BOX

I. K. QNEIBI 100067339 Oct. 09, 2024 LICENSED PROFESSIONAL ENGINEER PROVINCE OF ONTARIO

Norfolk COUNTY

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PROJECT

200 MAIN STREET
NORFOLK COUNTY

LIST OF DRAWINGS

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SS-01 SERVICING PLAN
EC-01 EROSION CONTROL PLAN
DD-01 NOTES AND DETAILS

PROJECT NO: 139459	
DRAWN BY: MZ	CHECKED BY: NG
PROJECT MGR: IQ	APPROVED BY: IQ

SITE PLAN INFORMATION
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SHEET TITLE

SITE SERVICING PLAN

SHEET NUMBER	ISSUE
SS-01	01

SCALE CHECK 10mm | 1 in

1:200

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NORFOLK COUNTY

Drainage and Stormwater Management Report

200 Main Street, Port Dover, Norfolk County, ON

October 10, 2024

Drainage and Stormwater Management Report

200 Main Street, Port Dover, Norfolk County, ON

October 10, 2024

Prepared By:
Arcadis Professional Services (Canada) Inc.
175 Galaxy Boulevard, Unit 100
Toronto West, Ontario M9W 0C9
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Phone: 416 679 1930

Arcadis Ref:
139459

Rakesh Pandey
Associate Principal – Practice Lead, Municipal Engineering

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Version Control

Issue	Rev. No.	Date Issued	Page No.	Description	Reviewed By
SWM	00	10 October 2024		Drainage and SWM Report	Imad Qneibi

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1.2 PCSWMM Modelling 2
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3.3 Water Quality 5
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Figure 1 Site Location

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Appendix A - Pre-Development Drainage Area Plan
Appendix B - Post-Development Drainage Area Plan
Appendix C - Proposed Site Servicing Plan
Appendix D - Stormwater Calculations
Appendix E - PCSWMM Parameters
Appendix F – Storage Tank Specifications
Appendix G - Stormceptor Imbrium Model Specifications

1 Introduction

Arcadis has been retained by the County of Norfolk to prepare a Drainage and Stormwater Management Report for the proposed redevelopment at 200 Main Street in Port Dover, Norfolk County, Ontario, hereafter referred to as "the Site." The Site is located under the jurisdiction of the Long Point Region Conservation Authority, within the Lynn-Black Creek and Dedrick-Young Creek subwatersheds. Main Street bounds the study area to the west, Clinton Street to the south, St. Andrew Street to the east, and residential and commercial properties to the north. Refer to Figure 1 in the Appendix for the site location. The Site is 0.407 ha and has an external drainage area of 0.039 ha to the northwest.

The existing Site consists of a former commercial property, paved and gravel parking lots, two residential properties with grassed yards, and a grass-covered residential area to the north of the site. Groundwater was encountered at elevations ranging from 174.6 to 178 masl, and the native soil was identified as clayey silt and silt as per the 200 Main Street, Port Dover Geotechnical Investigation Report prepared by MTE Consultants Inc.

The proposed redevelopment will include a six-storey (with a mechanical penthouse) mixed-use residential building with two underground parking levels and a grassed walkway. Under a separate application, a parking lot is proposed to be located adjacent to the northwest of the site. The drainage design for the proposed external catchment and the municipal parking lot will be addressed under a separate application.

The objective of this Drainage and Stormwater Management Report is to verify and summarize recommended drainage and stormwater management strategy while identifying opportunities for improvements that exist within the study limits to mitigate the possible impacts of the proposed redevelopment to the receiving drainage systems. A PCSWMM model was developed to support the findings of this report.

1.1 Background Information and Design Criteria

In preparation for this report, the following relevant documents were reviewed:

- 200 Main Street, Port Dover Geotechnical Investigation Report prepared by MTE Consultants Inc., June 2024.
- Norfolk County Official Plan, January 2021.
- The Corporation of Norfolk County Design Criteria, February 2019.
- Ministry of Environment, Conservation and Parks (MECP) Design Criteria for Sanitary Sewers, Storm Sewers and Forcemains for Alterations Authorized under an Environmental Compliance Approval, May 2023.
- Ministry of Environment, Conservation and Parks (MECP) Stormwater Management Planning and Design Manual, March 2003.

In compliance with Norfolk County's current policies and guidelines, the following design criteria have been applied in developing the drainage and stormwater management strategies for this project:

Water Quality

- Water quality treatment shall conform to MECP requirement for Enhanced Level of Protection (Level 1), i.e., removal of 80% of Total Suspended Solids (TSS) from runoff prior to discharge into the receiving water body.

Water Quantity / Peak Flow Control

- According to the County's guidelines, peak flows discharged from the site shall not increase as a result of the proposed development for the 2-year to the 100-year storm events. All stormwater management measures must meet the "Enhanced" level of protection as per the MECP Stormwater Management Planning and Design Manual.

IDF Curves

- Norfolk County IDF curves are to be used for all hydrological analyses.

It should be noted the Site is not located in the Dingle Creek subwatershed and is therefore not subject to the special policy water management objectives outlined in the Norfolk Design Criteria.

1.2 PCSWMM Modelling

A high-level PCSWMM model was used to evaluate the existing and post-development conditions. Conservative assumptions were made regarding soil characteristics, such as modelling the native site soil as Silty Clay. Various soil parameters were sourced from PCSWMM, and a 25 mm, 4-hour storm hyetograph from a comparable area in southern Ontario (City of Pickering) was applied. A conservative assumption was made in the proposed condition, that flow was collected from the roof and directly enters the storage tank and a flow length was assumed. See Appendix E for additional information.

2 Existing Conditions

2.1 Existing Drainage Patterns

The study area, including 200 Main Street, is predominantly urban-residential. Drainage is influenced by topography, land cover, and grade variations around the Site. The primary drainage infrastructure, including curbs, gutters, storm drains, and municipal storm sewers, is located outside the study area. This includes a 250 mm to 375 mm to 450 mm storm sewer running from Clinton Street to Main Street and a 450 mm storm sewer running along St. Andrew Street. Refer to Appendix C Site Servicing Plan for additional existing stormwater infrastructure. Overland flow from the southwest and northeast converges towards the center of the Site, ultimately discharging eastward to a catch basin on Clinton Street. Additionally, an external subcatchment drains southeasterly towards the Site. See Appendix A for the pre-development drainage area plan.

3 Proposed Conditions

3.1 Proposed Drainage Patterns

The proposed redevelopment primarily includes a six-storey building (with a mechanical penthouse), with most stormwater captured on the roof. The flow will be conveyed to a storage chamber located on the second level of the underground parking, where then it will be treated using a Stormceptor Oil Grit Separator (OGS) and controlled before discharging into the municipal stormwater system on St. Andrew Street. The external subcatchment area overland flow will be captured northeast of the Site along with the future proposed municipal parking lot flow (under a separate application). See Appendix B and C for the Post-development Drainage Area Plan and Site Servicing Plan for additional details.

3.2 Water Quantity / Peak Flow Control

The Norfolk County Design Criteria provided IDF curves and runoff coefficient guidelines. Peak flows were calculated for each subcatchment, and the external subcatchment (EXT01) was assumed to contribute its flow toward the site for A1Pre. Therefore, the A1Pre subcatchment represents the total contributing runoff. The table below shows the PCSWMM model results for peak flows for the 2-year to 100-year storm events under existing and proposed conditions. See Appendix D for further information regarding the IDF curve and runoff coefficient data.

Table 1: Analysis and Peak Flow Calculations

Catchment ID	Total Area (ha)	Percent Imperv. (%)	Runoff Coeff.	Peak Flow (m^3/sec)				
				2-Year	5-Year	10-Year	25-Year	100-Year
Existing								
A1Pre	0.407	54.92	0.61	0.06	0.09	0.10	0.13	0.17
EXT01	0.039	34.62	0.48	0.01	0.01	0.01	0.01	0.02
Proposed Uncontrolled								
A1Post	0.407	79.93	0.77	0.07	0.10	0.12	0.14	0.18
EXT01	0.039	34.62	0.48	0.01	0.01	0.01	0.01	0.02

Per Norfolk County guidelines, the proposed runoff volume must not exceed existing conditions. The table below highlights the existing and uncontrolled proposed runoff volumes and the required storage volume for design storms from 25 mm to 100-year events. To control for the 100-year runoff volume the proposed site must retain 22.4 m^3 of runoff volume per the County's criteria.

Table 2: Analysis and Uncontrolled Proposed Runoff Volume Calculations

Outlet	Runoff Volume (m^3)					
	25 mm	2-Year	5-Year	10-Year	25-Year	100-Year
Existing						
OF1	71.36	116.1	175.1	214	264.1	342.1
Uncontrolled Proposed						
OF1	89.66	135.2	195.8	235.2	285.9	364.5
Exceeded Uncontrolled Proposed Runoff Volume						
	18.3	19.1	20.7	21.2	21.8	22.4

Following MECP requirements from the Stormwater Management Planning and Design Manual, the peak flows from the proposed redevelopment must not exceed the peak flows from the existing development. Since storage is the primary variable controlling the proposed peak flow, the PCSWMM model was used to estimate the required storage to maintain peak flows at existing levels. The model calculated that 31.5 m^3 of storage is needed to control the peak flow, as shown in Table 3 below. This required storage to control the proposed peak flow is greater than the storage needed to match the existing and proposed runoff volumes (31.5 m^3 vs. 22.4 m^3); therefore, the larger storage volume will be used. The actual storage volume for the concrete tank dimensions along with the controlled proposed runoff volume parameters are shown in the table below.

Table 3: Analysis and Controlled Proposed Runoff Volume Calculations

Outlet	Required Storage to Control Peak 100-Year Storm (m^3)	Storage from Tank Dimensions (m^3)	Existing 100-year Peak Flow (m^3/s)	Uncontrolled 100-year Peak Flow (m^3/s)	Controlled 100-year Peak Flow (m^3/s)
Flow entering Stormceptor (OGS)	31.5	54.0	0.17	0.18	0.06

A concrete storage chamber was sized to provide the necessary storage to control the peak 100-year storm, shown in the table below. The storage chamber specifications are in the table below with additional information in Appendix F.

Table 4: Storage Tank Parameters

Storage	Required Area (m^2)	Height (m)	Required Max. Storage Volume (m^3)	Total Storage Volume Provided (m^3)	Max. Release Rate Storage Volume (m^3/s)
Stormwater Storage Tank	18.00	3.0	31.5	56.87	0.06

The orifice plate in the control manhole was sized at a diameter of 4 inches (0.097 m) to ensure the controlled peak flow did not exceed the existing peak flow for the 2-year to 100-year storm events while not surcharging the municipal sewer storm connection.

Table 5: Existing and Controlled Proposed Peak Flows

Outlet	Peak Flow (m^3/s)					
	25 mm	**2-Year**	**5-Year**	**10-Year**	**25-Year**	**100-Year**
Existing						
OF1	0.03	0.06	0.09	0.10	0.13	0.17
Uncontrolled Proposed						
OF1	0.04	0.07	0.10	0.12	0.14	0.18
Controlled Proposed to Storm Service Connection						
OF1	0.02	0.03	0.04	0.06	0.06	0.06

3.3 Water Quality

An Oil Grit Separator (OGS) was sized for the site to meet the 80% TSS removal requirement as per County Criteria. Specifications for the Stormceptor Imbrium EFO4 Model are outlined in Appendix G. It should be noted that the OGS unit was not sized to account for runoff from the future proposed parking lot located northwest of the study area.

3.4 Storm Service Connection

Per Norfolk County's guidelines, an orifice plate outlet control has been sized for discharging to the municipal sewer. The controlled peak flow does not exceed the existing peak flow for the 5-year storm event while not surcharging the storm service connection. The table below shows the summary of the storm service connection. For additional details see the Proposed Site Servicing Plan in Appendix C and calculations in Appendix D.

Table 6: Storm Service Connection Summary

From	To	Pipe Diameter (mm)	Slope (%)	Peak Flow (L/s)	Capacity (L/s)	Percent Full (%)
Control Manhole	Municipal Storm Sewer	300	0.53	58	70.6	82.4

4 Conclusions

The proposed redevelopment of 200 Main Street in Port Dover has been thoroughly analyzed in terms of drainage and stormwater management. The following findings and recommendations have been derived based on the detailed hydrological assessments, PCSWMM modelling, and relevant design criteria:

- The existing site consists of mixed commercial, residential, and paved areas, with native soils identified as clayey silt and silt. Groundwater levels range between elevations of 174.6 to 178 masl.
- The proposed redevelopment will feature a six-storey (with a mechanical penthouse) mixed-use building with two levels of underground parking. Most stormwater will be captured on the roof, with flow directed to a storage chamber located in the underground parking area (P2).
- PCSWMM modelling indicates that 31.5 m^3 of storage is required to control the peak 100-year storm, which is higher than the 22.4 m^3 required for runoff volume control. A storage chamber was sized to provide 54 m^3 exceeding this necessary storage volume, with a release rate of 0.06 m^3/s ensuring the controlled peak flow does not exceed existing peak flow conditions.
- Water quality treatment will be addressed through a Stormceptor EFO4 Oil Grit Separator (OGS), which meets Norfolk County's requirement of 80% Total Suspended Solids (TSS) removal. Regular maintenance of the OGS is recommended to ensure ongoing compliance with water quality standards.
- The storm service connection has been controlled and sized to ensure the capacity for the required release rate.
- If deemed necessary by the county, a downstream storm sewer analysis will be reviewed and submitted to the county at a later date.
- Additional considerations shall be given in a separate application to managing stormwater runoff from the proposed external drainage area and future proposed parking lot northwest of the site, as it was not included in this analysis.
- Continuous monitoring during construction is recommended to manage groundwater levels and ensure proper performance of the underground parking and stormwater system.

Respectfully submitted

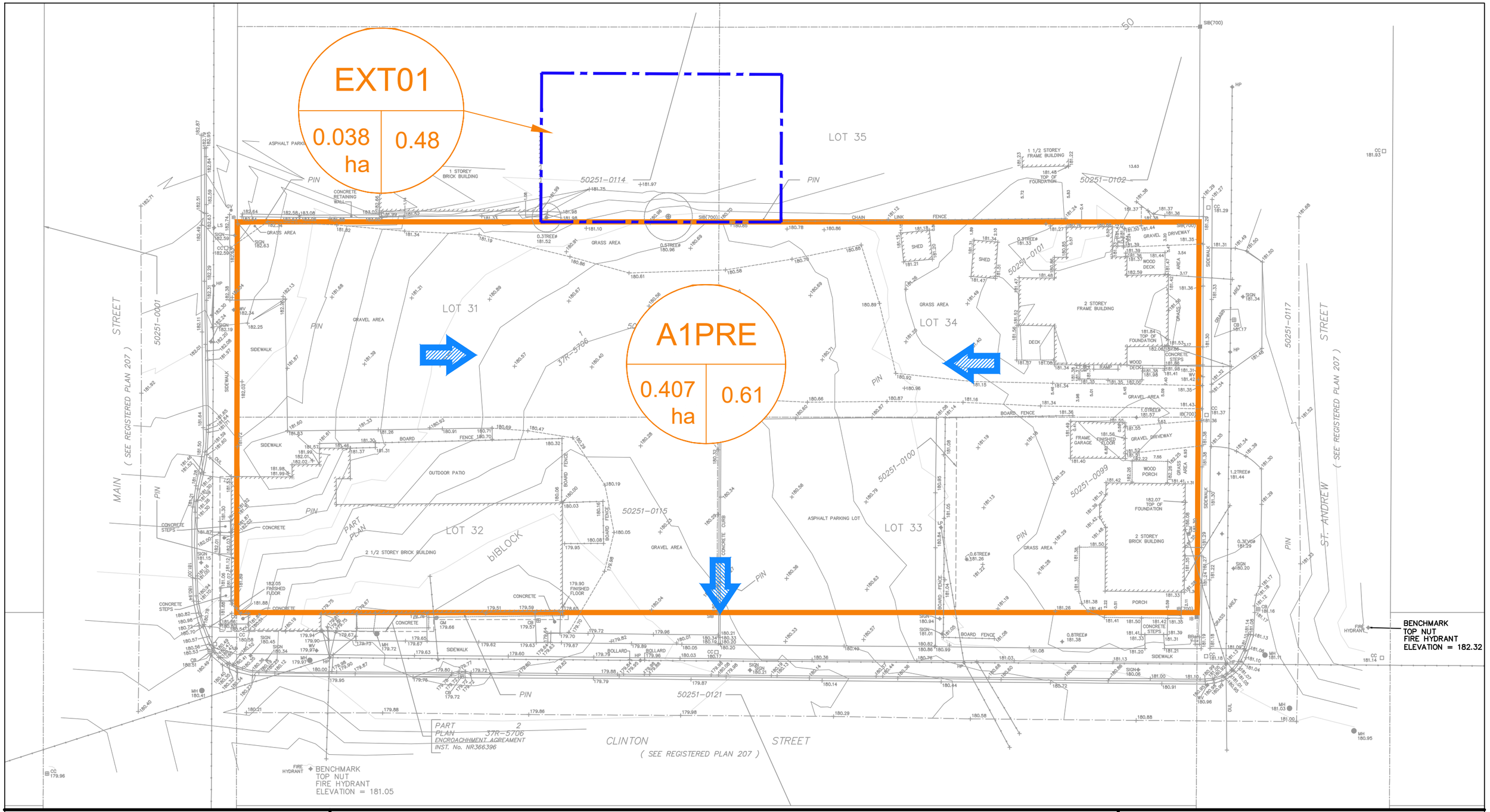
Rakesh Pandey Ph.D. P.Eng.

Figure 1

Site Location

Appendix A

Pre-Development Drainage Area Plan



ARCADIS

LEGEND

- EXTERNAL DRAINAGE AREA BOUNDARY
- DRAINAGE AREA BOUNDARY
- MAJOR SYSTEM DIRECTION

DRAINAGE AREA IN HECTARES — A1PRE (0.083 ha | 0.50) — STORM DRAINAGE AREA NUMBER / RUNOFF COEFFICIENT

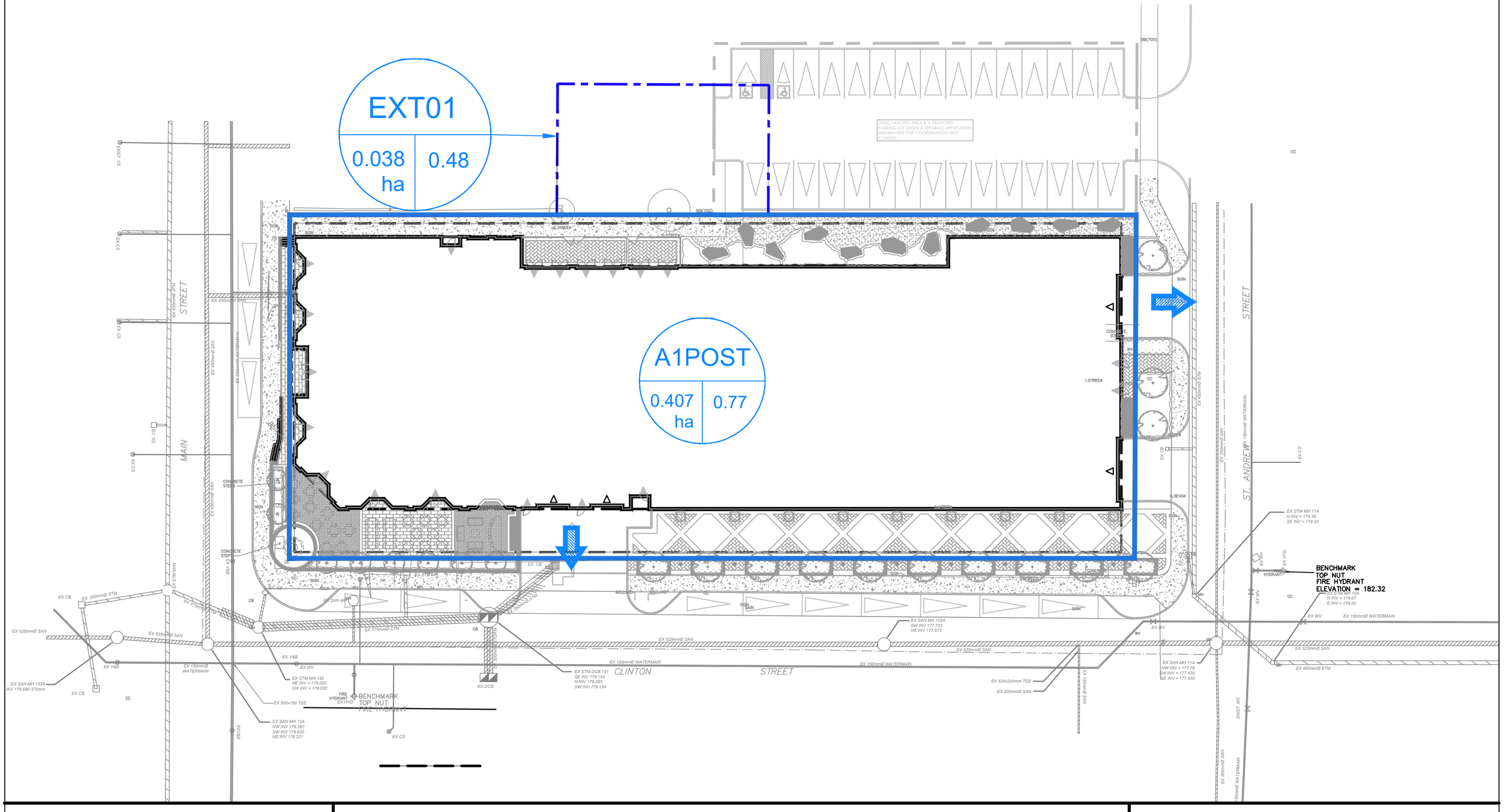
PRE-DEVELOPMENT DRAINAGE AREA PLAN

200 MAIN STREET, PORT DOVER
NORFOLK COUNTY, ON

DATE:	SEPTEMBER 2024	PROJECT No.:	139459
SCALE:	N.T.S	FIGURE No.:	DAP-01

Appendix B

Post-Development Drainage Area Plan



ARCADIS

LEGEND

- EXTERNAL DRAINAGE AREA BOUNDARY
- DRAINAGE AREA BOUNDARY
- MAJOR SYSTEM DIRECTION
- DRAINAGE AREA IN HECTARES (A1POST: 0.083 ha)
- STORM DRAINAGE AREA NUMBER (A1POST)
- RUNOFF COEFFICIENT (0.50)

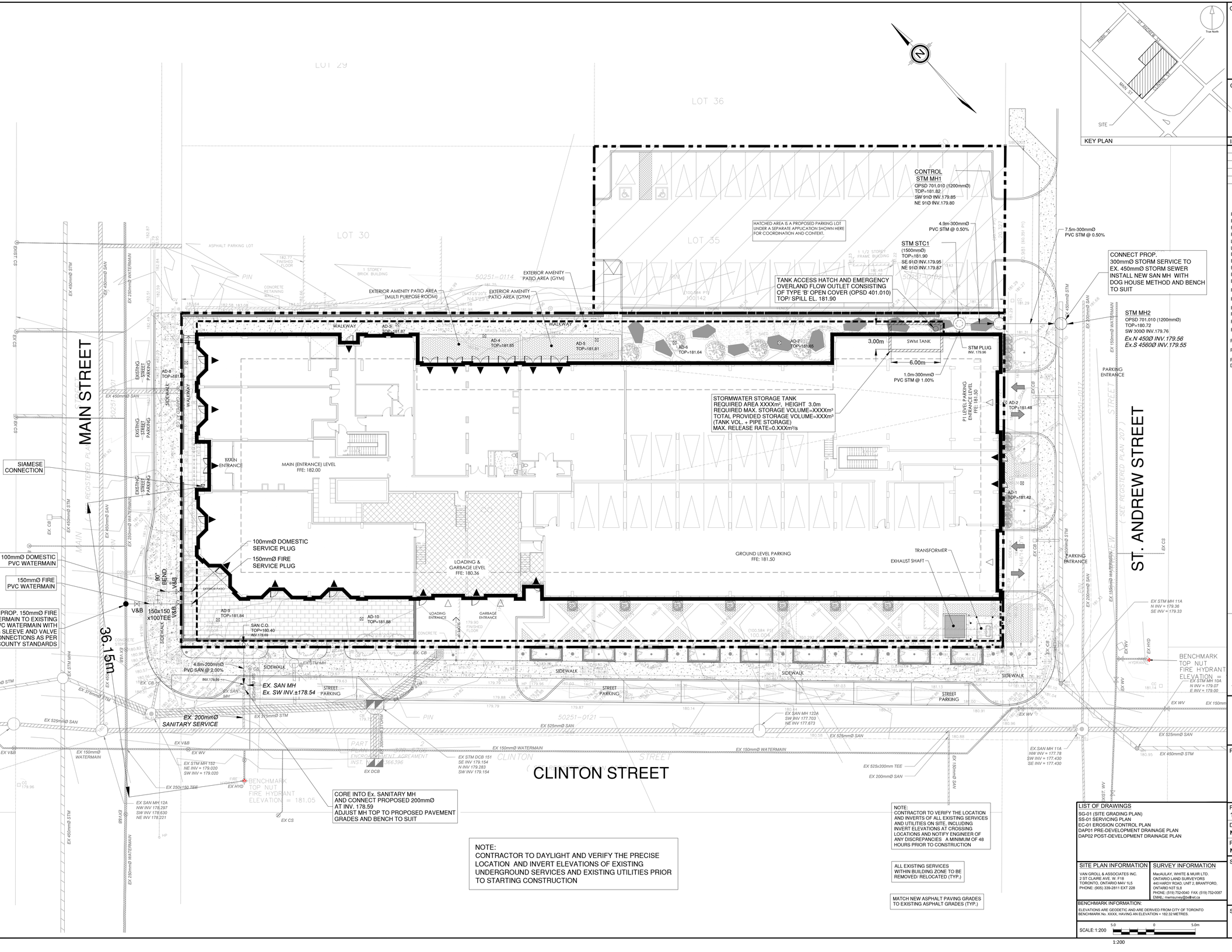
POST-DEVELOPMENT DRAINAGE AREA PLAN

200 MAIN STREET, PORT DOVER
NORFOLK COUNTY, ON

DATE:	SEPTEMBER 2024	PROJECT No.:	139459
SCALE:	N.T.S	FIGURE No.:	DAP-02

Appendix C

Proposed Site Servicing Plan



CLIENT

XXXXXX
XXXXXXXXXXXXXX
PHONE:

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ARCADIS PROFESSIONAL SERVICES (CANADA) INC.
is a member of ARCADIS Group of companies

ISSUES

No.	DESCRIPTION	DATE
-	-	-

LEGEND

- PROPERTY LINE
- PROPOSED STORM
- PROPOSED SANITARY
- PROPOSED WATER
- LIMIT OF BUILDING ABOVE GROUND
- LIMIT OF RESTORATION
- EXISTING STORM
- EXISTING SANITARY
- EXISTING WATERMAIN
- EXISTING BELL LINE
- EXISTING CONDUIT
- PROPOSED STORM MANHOLE
- PROPOSED SANITARY MANHOLE
- PROPOSED AREA DRAN
- PROPOSED CATCH BASIN
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE AND BOX
- PROPOSED DOMESTIC WATER METER (M)
- PROPOSED BACKFLOW PREVENTER (B)
- PROPOSED DOUBLE CHECK DETECTOR ASSEMBLY (D)

Norfolk COUNTY

ACCEPTED TO BE IN ACCORDANCE WITH THE NORFOLK COUNTY STANDARDS. THIS ACCEPTANCE IS NOT TO BE CONSTRUED AS VERIFICATION OF ENGINEERING CONTENT.

MANAGER, DEVELOPMENT ENGINEERING DATE

ARCADIS
8133 Warden Ave, Unit 300 |
Markham, ON | L6G 1B3 | Canada
www.arcadis.com

PROJECT

200 MAIN STREET
NORFOLK COUNTY

LIST OF DRAWINGS

SG-01 (SITE GRADING PLAN)
SS-01 SERVICING PLAN
EC-01 EROSION CONTROL PLAN
DAP01 PRE-DEVELOPMENT DRAINAGE PLAN
DAP02 POST-DEVELOPMENT DRAINAGE PLAN

PROJECT NO: 139459	
DRAWN BY: NG	CHECKED BY: AB
PROJECT MGR: NG	APPROVED BY: NG

SITE PLAN INFORMATION
VAN GROLL & ASSOCIATES INC.
2 ST CLAIRE AVE. W. F18
TORONTO, ONTARIO M4V 1L5
PHONE: (905) 339-2811 EXT 228

SURVEY INFORMATION
MacAULAY, WHITE & MUIR LTD.
ONTARIO LAND SURVEYORS
440 HARDY ROAD, UNIT 2, BRANTFORD, ONTARIO N3T 5L8
PHONE: (519) 752-0040 FAX: (519) 752-0087
EMAIL: mwmsurvey@bellnet.ca

BENCHMARK INFORMATION:
ELEVATIONS ARE GEODETIC AND ARE DERIVED FROM CITY OF TORONTO BENCHMARK No. XXXX, HAVING AN ELEVATION = 182.32 METRES.

SHEET TITLE

SITE SERVICING PLAN

SCALE: 1:200 (5.0 0 5.0m)

SHEET NUMBER SS-01

ISSUE 01

SCALE CHECK 10cm 1 in

1:200

File Location: H:\139459_Norfolk_Tanvir\7.0_Production\7.03_Design\04_Civil\Sheets\139459-SHEET-SERV-SS-01.dwg Last Saved: October 3, 2024 by milko.zdravevski Plotted: Thursday, October 3, 2024 10:11:12 AM by Milko Zdravevski

Appendix D

Stormwater Calculations

Appendix D

IDF Curve Data

Return Period	A	B	C
Norfolk County			
2	529.711	4.501	0.745
5	583.017	3.007	0.703
10	670.324	3.007	0.698
25	721.533	2.253	0.679
50	766.038	1.898	0.668
100	801.041	1.501	0.657

Appendix D

City of Pickering Chicago 25 mm 4 hr Design Storm		
Time		Intensity (mm/hr)
		25mm
0	0:00	0
10	0:10	2.17
20	0:20	2.38
30	0:30	2.66
40	0:40	3.03
50	0:50	3.58
60	1:00	4.47
70	1:10	6.2
80	1:20	12.18
90	1:30	41.67
100	1:40	15.28
110	1:50	9.22
120	2:00	6.88
130	2:10	5.62
140	2:20	4.8
150	2:30	4.21
160	2:40	3.78
170	2:50	3.45
180	3:00	3.18
190	3:10	2.95
200	3:20	2.76
210	3:30	2.62
220	3:40	2.47
230	3:50	2.35
240	4:00	2.23

Appendix D

ARCADIS

Prepared by: SN

Pre-Development Composite Runoff Coefficient

200 Main Street, Port Dover

139459

September 2024

A1Pre

	(ha)		
Total Area:	0.407		
ConcreteAsphalt:	0.060	**Coefficient:**	0.95
Building:	0.093	**Coefficient:**	0.60
Gravel:	0.158	**Coefficient:**	0.70
Landscape:	0.097	**Coefficient:**	0.25
Composite C:	**0.61**		

EXT01

	(ha)		
Total Area:	0.039		
Gravel:	0.019	**Coefficient:**	0.70
Landscape:	0.019	**Coefficient:**	0.25
Composite C:	**0.48**		

Appendix D

ARCADIS

Prepared by: SN

Post Development Composite Runoff Coefficient

200 Main Street, Port Dover

139459

September 2024

A1Post

	(ha)		
Total Area:	0.407		
ConcreteAsphalt:	0.094	**Coefficient:**	0.95
Building:	0.291	**Coefficient:**	0.75
Gravel:	0.000	**Coefficient:**	0.70
Landscape:	0.022	**Coefficient:**	0.25
Composite C:	**0.77**		

EXT01

	(ha)		
Total Area:	0.039		
Gravel:	0.019	**Coefficient:**	0.70
Landscape:	0.019	**Coefficient:**	0.25
Composite C:	**0.48**		

Appendix D

Storm Service Connection Sewer Characteristics							
Length (m)	Pipe Dia (inch)	Pipe Dia (mm)	Pipe Type	n	Slope %	Cap full Q (L/s)	Vel. V (m/s)
7.50	-	300	PVC	0.013	0.53	70.4	1.00

Orifice Plate DIA. (m)	Peak Flow (L/s)	Percent Full (%)
0.097	58	82.4

Appendix E

PCSWMM Parameters

Appendix E

PCSWMM SOIL PARAMETERS

Soil Texture Class [1]	Hydraulic Conductivity (mm/hr)	Suction Head (mm)	Porosity	Field Capacity	Wilting Point	Initial Deficit
Silty Clay	0.51	290.07	0.479	0.371	0.251	0.228

[1] Using the Conservative estimate of Silty Clay, as MTI Consultants Inc. Geotechnical Report native soils were predominantly clayey silt and silt overlying silt, clay and clayey silt made up the composition of the glacial till deposits.

PCSWMM PARAMETERS

EXISTING					
1	2	3	4	7	8
CA ID #	TOTAL AREA (ha)	R.C. (-)	% IMPERV.	FLOW LENGTH (m)	SLOPE (%)
A1PRE	0.407	0.61	54.92	79.14	3.69
EX1	0.039	0.48	34.62	18.86	6.73

PROPOSED					
1	2	3	4	7	8
CA ID #	TOTAL AREA (ha)	R.C. (-)	% IMPERV.	FLOW LENGTH (m)	SLOPE (%)
A1POST	0.407	0.77	79.93	107.66	1.63
EX1	0.039	0.48	34.62	18.86	6.73

Appendix F

Storage Tank Specifications

Appendix F

Storage Dimensions		
	Inner (m)	[(1)]Approximate Outer (m)
Length	6	6.775
Width	3	3.775
Height	3	3.775
Total Required Max Volume (m^3)	31.5	-
Total Provided Volume (m^3)	54	-
Total Footprint Area (m^2)	18	25.58
[(1)] Based off DECAST dimensions and volumes specification sheet.		

Access MH (401.010) Area (m^2)	0.35
Depth from Top to P2 (top of tank) (m)	4.25
OGS to Control MH1 Pipe (m3)	1.38
Access MH Additonal Volume (m^3)	1.49
Total Provided Storage (Tank Vol. + Pipe Storage) (m^3)	**56.87**

Appendix G

Stormceptor Imbrium Model Specifications

Stormceptor®

Rinker MATERIALS™

Stormceptor® EF Sizing Report

Imbrium® Systems
ESTIMATED NET ANNUAL SEDIMENT (TSS) LOAD REDUCTION

09/30/2024

Province:	Ontario
City:	Port Dover
Nearest Rainfall Station:	BRANTFORD MOE
Climate Station Id:	6140954
Years of Rainfall Data:	41

Site Name:	Norfolk Tavern

Drainage Area (ha):	0.41
Runoff Coefficient 'c':	0.90

Particle Size Distribution:	Fine
Target TSS Removal (%):	80.0

Required Water Quality Runoff Volume Capture (%):	90.00
Estimated Water Quality Flow Rate (L/s):	13.43
Oil / Fuel Spill Risk Site?	Yes
Upstream Flow Control?	No
Peak Conveyance (maximum) Flow Rate (L/s):	
Influent TSS Concentration (mg/L):	200
Estimated Average Annual Sediment Load (kg/yr):	489
Estimated Average Annual Sediment Volume (L/yr):	397

Project Name:	Norfolk Tavern
Project Number:	139459
Designer Name:	Apurva Patel
Designer Company:	IBI GROUP
Designer Email:	apurva.patel@ibigroup.com
Designer Phone:	416-509-3202
EOR Name:	
EOR Company:	
EOR Email:	
EOR Phone:	

Net Annual Sediment (TSS) Load Reduction Sizing Summary

Stormceptor Model	TSS Removal Provided (%)
EFO4	86
EFO6	94
EFO8	97
EFO10	99
EFO12	99

Recommended Stormceptor EFO Model: EFO4

Estimated Net Annual Sediment (TSS) Load Reduction (%): 86

Water Quality Runoff Volume Capture (%): > 90

imbrium

THIRD-PARTY TESTING AND VERIFICATION

►**Stormceptor® EF and Stormceptor® EFO** are the latest evolutions in the Stormceptor® oil-grit separator (OGS) technology series, and are designed to remove a wide variety of pollutants from stormwater and snowmelt runoff. These technologies have been third-party tested in accordance with the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators** and performance has been third-party verified in accordance with the **ISO 14034 Environmental Technology Verification (ETV)** protocol.

PERFORMANCE

►**Stormceptor® EF and EFO** remove stormwater pollutants through gravity separation and floatation, and feature a patent-pending design that generates positive removal of total suspended solids (TSS) throughout each storm event, including high-intensity storms. Captured pollutants include sediment, free oils, and sediment-bound pollutants such as nutrients, heavy metals, and petroleum hydrocarbons. Stormceptor is sized to remove a high level of TSS from the frequent rainfall events that contribute the vast majority of annual runoff volume and pollutant load. The technology incorporates an internal bypass to convey excessive stormwater flows from high-intensity storms through the device without resuspension and washout (scour) of previously captured pollutants. Proper routine maintenance ensures high pollutant removal performance and protection of downstream waterwavs.

PARTICLE SIZE DISTRIBUTION (PSD)

►The **Canadian ETV PSD** shown in the table below was used, or in part, for this sizing. This is the identical PSD that is referenced in the Canadian ETV ***Procedure for Laboratory Testing of Oil-Grit Separators*** for both sediment removal testing and scour testing. The Canadian ETV PSD contains a wide range of particle sizes in the sand and silt fractions, and is considered reasonably representative of the particle size fractions found in typical urban stormwater runoff.

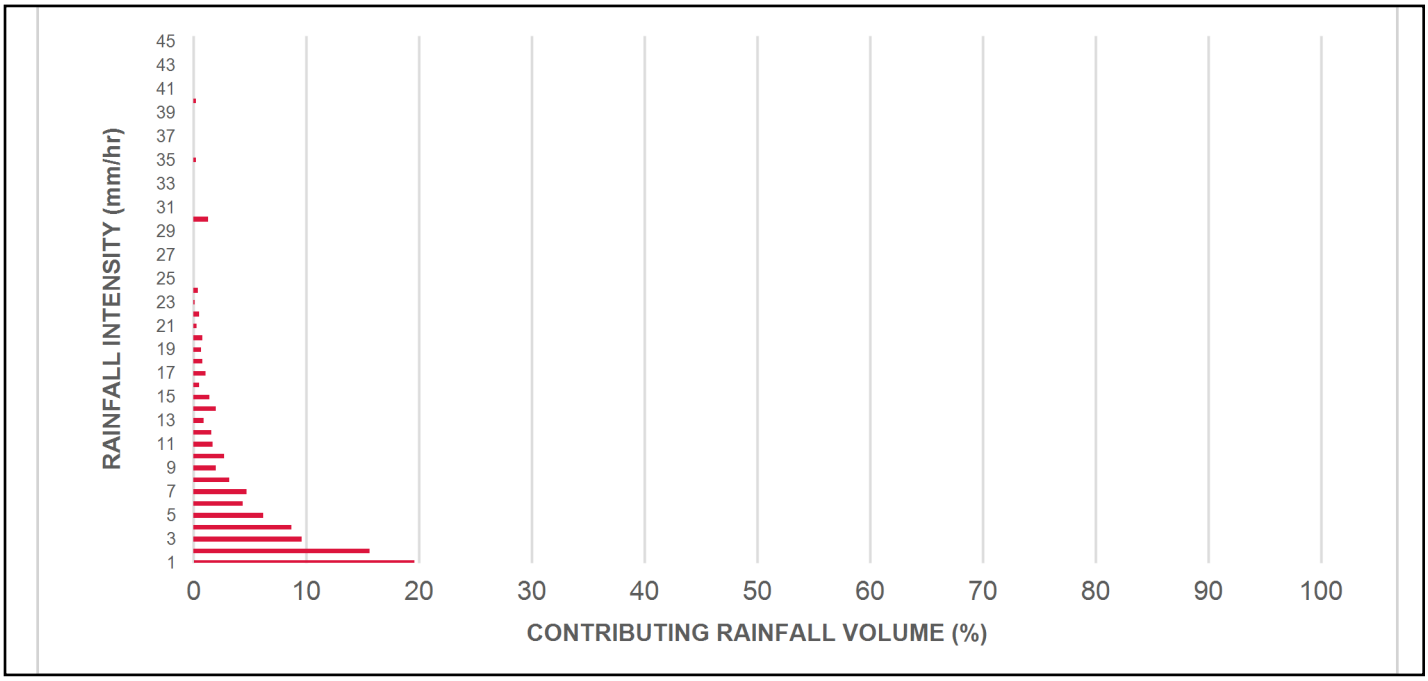
Particle Size (µm)	Percent Less Than	Particle Size Fraction (µm)	Percent
1000	100	500-1000	5
500	95	250-500	5
250	90	150-250	15
150	75	100-150	15
100	60	75-100	10
75	50	50-75	5
50	45	20-50	10
20	35	8-20	15
8	20	5-8	10
5	10	2-5	5
2	5	<2	5

Stormceptor® EF Sizing Report

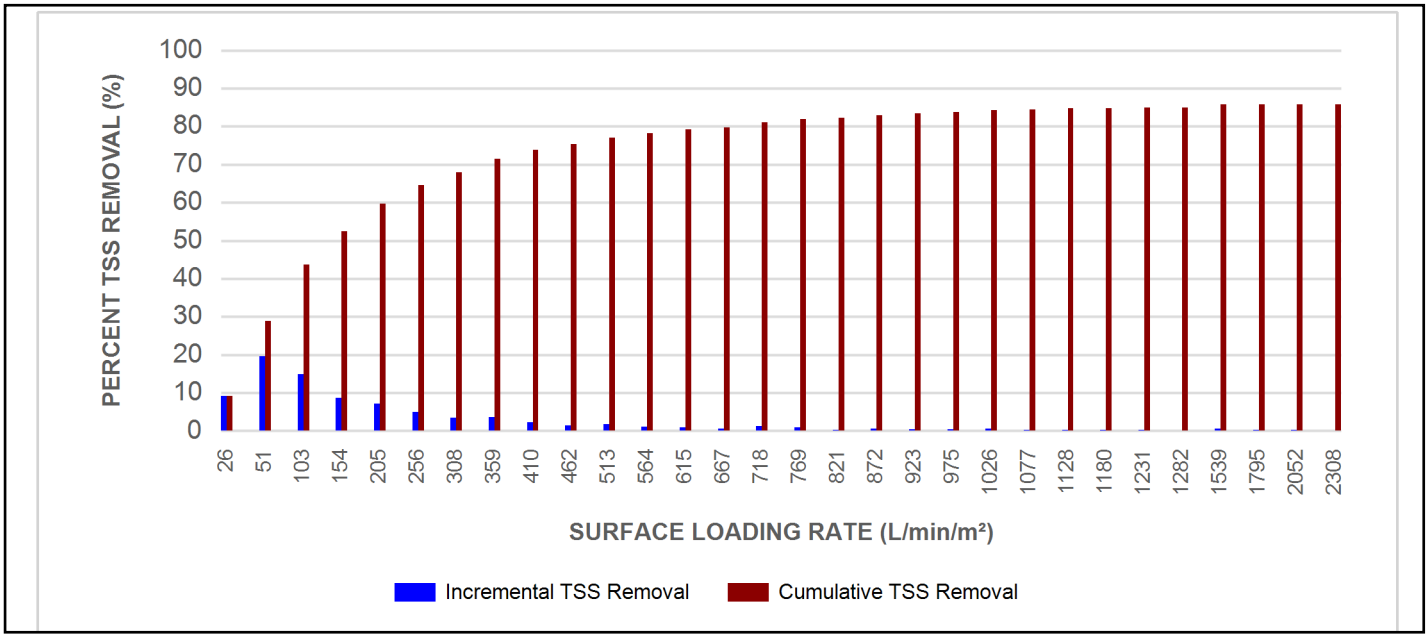
Rainfall Intensity (mm / hr)	Percent Rainfall Volume (%)	Cumulative Rainfall Volume (%)	Flow Rate (L/s)	Flow Rate (L/min)	Surface Loading Rate (L/min/m²)	Removal Efficiency (%)	Incremental Removal (%)	Cumulative Removal (%)
0.50	9.1	9.1	0.51	31.0	26.0	100	9.1	9.1
1.00	19.6	28.8	1.03	62.0	51.0	100	19.6	28.8
2.00	15.6	44.4	2.05	123.0	103.0	96	15.0	43.7
3.00	9.6	54.0	3.08	185.0	154.0	89	8.6	52.4
4.00	8.7	62.7	4.10	246.0	205.0	83	7.2	59.6
5.00	6.2	68.9	5.13	308.0	256.0	81	5.0	64.5
6.00	4.4	73.3	6.15	369.0	308.0	78	3.5	68.0
7.00	4.7	77.9	7.18	431.0	359.0	76	3.5	71.5
8.00	3.2	81.1	8.21	492.0	410.0	73	2.3	73.9
9.00	2.0	83.1	9.23	554.0	462.0	71	1.4	75.3
10.00	2.7	85.7	10.26	615.0	513.0	69	1.8	77.1
11.00	1.7	87.4	11.28	677.0	564.0	66	1.1	78.2
12.00	1.6	89.0	12.31	739.0	615.0	65	1.0	79.2
13.00	0.9	89.8	13.34	800.0	667.0	64	0.6	79.8
14.00	2.0	91.8	14.36	862.0	718.0	64	1.3	81.0
15.00	1.4	93.2	15.39	923.0	769.0	63	0.9	81.9
16.00	0.5	93.7	16.41	985.0	821.0	63	0.3	82.2
17.00	1.1	94.8	17.44	1046.0	872.0	63	0.7	82.9
18.00	0.8	95.5	18.46	1108.0	923.0	62	0.5	83.4
19.00	0.7	96.2	19.49	1169.0	975.0	62	0.4	83.8
20.00	0.8	97.0	20.52	1231.0	1026.0	61	0.5	84.3
21.00	0.3	97.4	21.54	1293.0	1077.0	60	0.2	84.5
22.00	0.5	97.8	22.57	1354.0	1128.0	59	0.3	84.8
23.00	0.1	97.9	23.59	1416.0	1180.0	57	0.1	84.8
24.00	0.4	98.3	24.62	1477.0	1231.0	56	0.2	85.0
25.00	0.0	98.3	25.65	1539.0	1282.0	55	0.0	85.0
30.00	1.3	99.6	30.77	1846.0	1539.0	48	0.6	85.7
35.00	0.2	99.8	35.90	2154.0	1795.0	41	0.1	85.7
40.00	0.2	100.0	41.03	2462.0	2052.0	36	0.1	85.8
45.00	0.0	100.0	46.16	2770.0	2308.0	32	0.0	85.8
Estimated Net Annual Sediment (TSS) Load Reduction =								**86 %**

Climate Station ID: 6140954 *Years of Rainfall Data*: 41

RAINFALL DATA FROM BRANTFORD MOE RAINFALL STATION



INCREMENTAL AND CUMULATIVE TSS REMOVAL FOR THE RECOMMENDED STORMCEPTOR® MODEL



Maximum Pipe Diameter / Peak Conveyance

Stormceptor EF / EFO	Model Diameter		Min Angle Inlet / Outlet Pipes	Max Inlet Pipe Diameter		Max Outlet Pipe Diameter		Peak Conveyance Flow Rate	
	(m)	(ft)		(mm)	(in)	(mm)	(in)	(L/s)	(cfs)
EF4 / EFO4	1.2	4	90	609	24	609	24	425	15
EF6 / EFO6	1.8	6	90	914	36	914	36	990	35
EF8 / EFO8	2.4	8	90	1219	48	1219	48	1700	60
EF10 / EFO10	3.0	10	90	1828	72	1828	72	2830	100
EF12 / EFO12	3.6	12	90	1828	72	1828	72	2830	100

SCOUR PREVENTION AND ONLINE CONFIGURATION

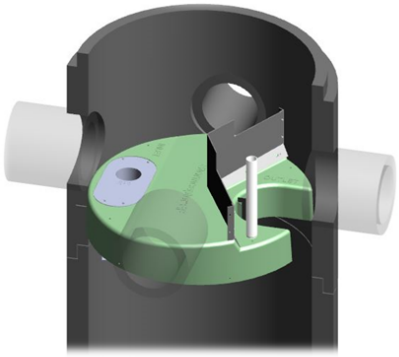
►**Stormceptor® EF and EFO** feature an internal bypass and superior scour prevention technology that have been demonstrated in third-party testing according to the scour testing provisions of the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators**, and the exceptional scour test performance has been third-party verified in accordance with the ISO 14034 ETV protocol. As a result, Stormceptor EF and EFO are approved for online installation, eliminating the need for costly additional bypass structures, piping, and installation expense.

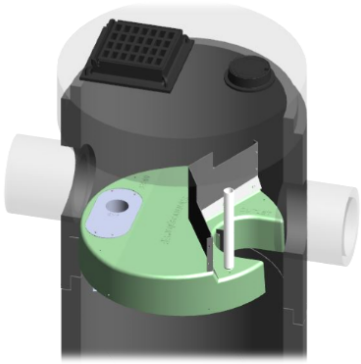
DESIGN FLEXIBILITY

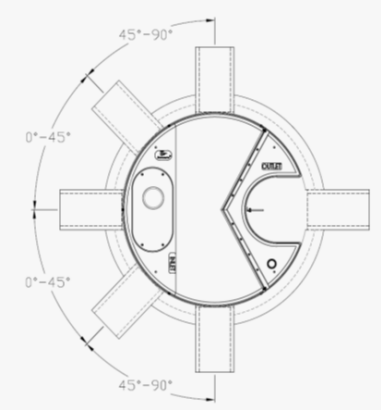
►**Stormceptor® EF** and **EFO** offers design flexibility in one simplified platform, accepting stormwater flow from a single inlet pipe or multiple inlet pipes, and/or surface runoff through an inlet grate. The device can also serve as a junction structure, accommodate a 90-degree inlet-to-outlet bend angle, and can be modified to ensure performance in submerged conditions.

OIL CAPTURE AND RETENTION

►While Stormceptor® EF will capture and retain oil from dry weather spills and low intensity runoff, **Stormceptor® EFO** has demonstrated superior oil capture and greater than 99% oil retention in third-party testing according to the light liquid re-entrainment testing provisions of the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators**. Stormceptor EFO is recommended for sites where oil capture and retention is a requirement.







INLET-TO-OUTLET DROP

Elevation differential between inlet and outlet pipe inverts is dictated by the angle at which the inlet pipe(s) enters the unit.
0° - 45° : The inlet pipe is 1-inch (25mm) higher than the outlet pipe.
45° - 90° : The inlet pipe is 2-inches (50mm) higher than the outlet pipe.

HEAD LOSS

The head loss through Stormceptor EF is similar to that of a 60-degree bend structure. The applicable K value for calculating minor losses through the unit is 1.1. For submerged conditions the applicable K value is 3.0.

Pollutant Capacity

Stormceptor EF / EFO	Model Diameter		Depth (Outlet Pipe Invert to Sump Floor)		Oil Volume		Recommended Sediment Maintenance Depth *		Maximum Sediment Volume *		Maximum Sediment Mass **	
	(m)	(ft)	(m)	(ft)	(L)	(Gal)	(mm)	(in)	(L)	(ft^3)	(kg)	(lb)
EF4 / EFO4	1.2	4	1.52	5.0	265	70	203	8	1190	42	1904	5250
EF6 / EFO6	1.8	6	1.93	6.3	610	160	305	12	3470	123	5552	15375
EF8 / EFO8	2.4	8	2.59	8.5	1070	280	610	24	8780	310	14048	38750
EF10 / EFO10	3.0	10	3.25	10.7	1670	440	610	24	17790	628	28464	78500
EF12 / EFO12	3.6	12	3.89	12.8	2475	655	610	24	31220	1103	49952	137875

*Increased sump depth may be added to increase sediment storage capacity
** Average density of wet packed sediment in sump = 1.6 kg/L (100 lb/ft^3)

Feature	Benefit	Feature Appeals To
Patent-pending enhanced flow treatment and scour prevention technology	Superior, verified third-party performance	Regulator, Specifying & Design Engineer
Third-party verified light liquid capture and retention for EFO version	Proven performance for fuel/oil hotspot locations	Regulator, Specifying & Design Engineer, Site Owner
Functions as bend, junction or inlet structure	Design flexibility	Specifying & Design Engineer
Minimal drop between inlet and outlet	Site installation ease	Contractor
Large diameter outlet riser for inspection and maintenance	Easy maintenance access from grade	Maintenance Contractor & Site Owner

STANDARD STORMCEPTOR EF/EFO DRAWINGS

For standard details, please visit http://www.imbriumsystems.com/stormwater-treatment-solutions/stormceptor-ef

STANDARD STORMCEPTOR EF/EFO SPECIFICATION

For specifications, please visit http://www.imbriumsystems.com/stormwater-treatment-solutions/stormceptor-ef

STANDARD PERFORMANCE SPECIFICATION FOR "OIL GRIT SEPARATOR" (OGS) STORMWATER QUALITY TREATMENT DEVICE

PART 1 – GENERAL

1.1 WORK INCLUDED

This section specifies requirements for selecting, sizing, and designing an underground Oil Grit Separator (OGS) device for stormwater quality treatment, with third-party testing results and a Statement of Verification in accordance with ISO 14034 Environmental Management – Environmental Technology Verification (ETV).

1.2 REFERENCE STANDARDS & PROCEDURES

ISO 14034:2016 Environmental management – Environmental technology verification (ETV)

Canadian Environmental Technology Verification (ETV) Program's **Procedure for Laboratory Testing of Oil-Grit** S**eparators**

1.3 SUBMITTALS

1.3.1 All submittals, including sizing reports & shop drawings, shall be submitted upon request with each order to the contractor then forwarded to the Engineer of Record for review and acceptance. Shop drawings shall detail all OGS components, elevations, and sequence of construction.

1.3.2 Alternative devices shall have features identical to or greater than the specified device, including: treatment chamber diameter, treatment chamber wet volume, sediment storage volume, and oil storage volume.

1.3.3 Unless directed otherwise by the Engineer of Record, OGS stormwater quality treatment product substitutions or alternatives submitted within ten days prior to project bid shall not be accepted. All alternatives or substitutions submitted shall be signed and sealed by a local registered Professional Engineer, based on the exact same criteria detailed in Section 3, in entirety, subject to review and approval by the Engineer of Record.

PART 2 – PRODUCTS

2.1 OGS POLLUTANT STORAGE

The OGS device shall include a sump for sediment storage, and a protected volume for the capture and storage of petroleum hydrocarbons and buoyant gross pollutants. The minimum sediment & petroleum hydrocarbon storage capacity shall be as follows:

2.1.1	4 ft (1219 mm) Diameter OGS Units:	1.19 m^3 sediment / 265 L oil
	6 ft (1829 mm) Diameter OGS Units:	3.48 m^3 sediment / 609 L oil
	8 ft (2438 mm) Diameter OGS Units:	8.78 m^3 sediment / 1,071 L oil
	10 ft (3048 mm) Diameter OGS Units:	17.78 m^3 sediment / 1,673 L oil
	12 ft (3657 mm) Diameter OGS Units:	31.23 m^3 sediment / 2,476 L oil

PART 3 – PERFORMANCE & DESIGN

3.1 GENERAL

The OGS stormwater quality treatment device shall be verified in accordance with ISO 14034:2016 Environmental management – Environmental technology verification (ETV). The OGS stormwater quality treatment device shall

remove oil, sediment and gross pollutants from stormwater runoff during frequent wet weather events, and retain these pollutants during less frequent high flow wet weather events below the insert within the OGS for later removal during maintenance. The Manufacturer shall have at least ten (10) years of local experience, history and success in engineering design, manufacturing and production and supply of OGS stormwater quality treatment device systems, acceptable to the Engineer of Record.

3.2 SIZING METHODOLOGY

The OGS device shall be engineered, designed and sized to provide stormwater quality treatment based on treating a minimum of 90 percent of the average annual runoff volume and a minimum removal of an annual average 60% of the sediment (TSS) load based on the Particle Size Distribution (PSD) specified in the sizing report for the specified device. Sizing of the OGS shall be determined by use of a minimum ten (10) years of local historical rainfall data provided by Environment Canada. Sizing shall also be determined by use of the sediment removal performance data derived from the ISO 14034 ETV third-party verified laboratory testing data from testing conducted in accordance with the Canadian ETV protocol Procedure for Laboratory Testing of Oil-Grit Separators, as follows:

3.2.1 Sediment removal efficiency for a given surface loading rate and its associated flow rate shall be based on sediment removal efficiency demonstrated at the seven (7) tested surface loading rates specified in the protocol, ranging 40 L/min/m^2 to 1400 L/min/m^2, and as stated in the ISO 14034 ETV Verification Statement for the OGS device.

3.2.2 Sediment removal efficiency for surface loading rates between 40 L/min/m^2 and 1400 L/min/m^2 shall be based on linear interpolation of data between consecutive tested surface loading rates.

3.2.3 Sediment removal efficiency for surface loading rates less than the lowest tested surface loading rate of 40 L/min/m^2 shall be assumed to be identical to the sediment removal efficiency at 40 L/min/m^2. No extrapolation shall be allowed that results in a sediment removal efficiency that is greater than that demonstrated at 40 L/min/m^2.

3.2.4 Sediment removal efficiency for surface loading rates greater than the highest tested surface loading rate of 1400 L/min/m^2 shall assume zero sediment removal for the portion of flow that exceeds 1400 L/min/m^2, and shall be calculated using a simple proportioning formula, with 1400 L/min/m^2 in the numerator and the higher surface loading rate in the denominator, and multiplying the resulting fraction times the sediment removal efficiency at 1400 L/min/m^2.

The OGS device shall also have sufficient annual sediment storage capacity as specified and calculated in Section 2.1.

3.3 CANADIAN ETV or ISO 14034 ETV VERIFICATION OF SCOUR TESTING

The OGS device shall have Canadian ETV or ISO 14034 ETV Verification of third-party scour testing conducted in accordance with the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators.**

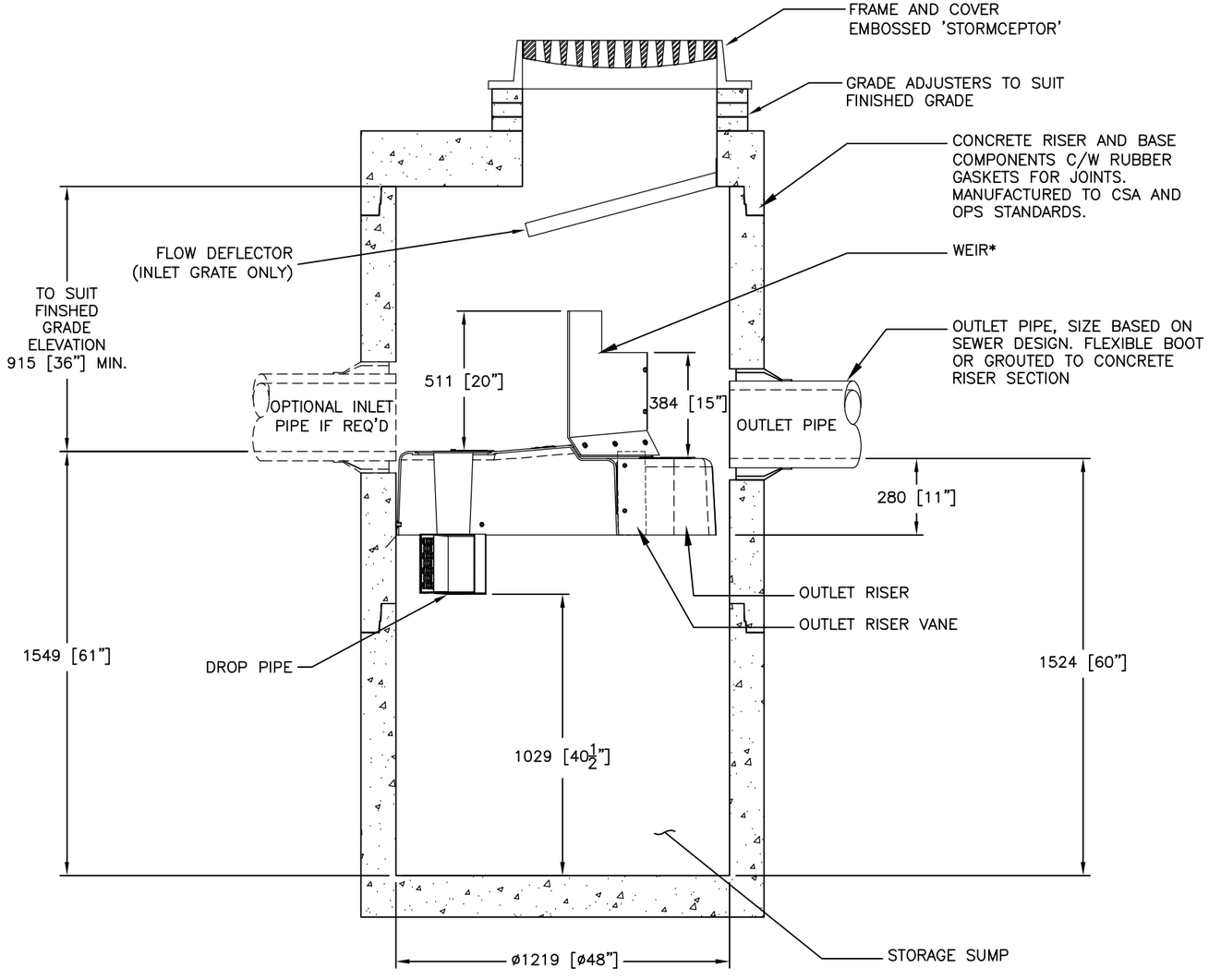
3.3.1 To be acceptable for on-line installation, the OGS device must demonstrate an average scour test effluent concentration less than 10 mg/L at each surface loading rate tested, up to and including 2600 L/min/m^2.

3.4 LIGHT LIQUID RE-ENTRAINMENT SIMULATION TESTING

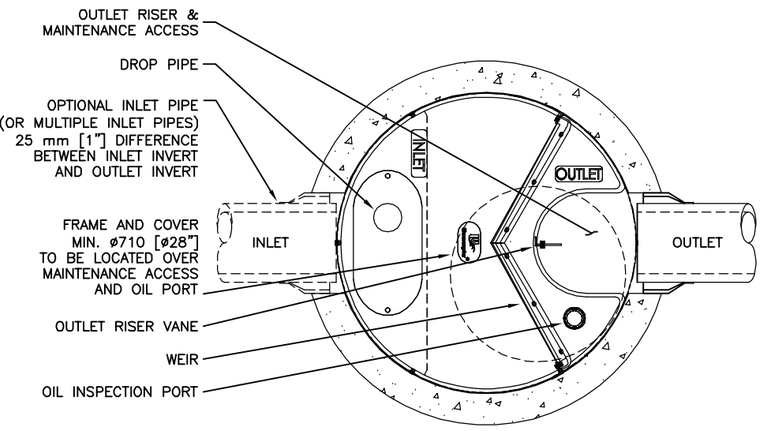
The OGS device shall have Canadian ETV or ISO 14034 ETV Verification of completed third-party Light Liquid Re-entrainment Simulation Testing in accordance with the Canadian ETV **Program's Procedure for Laboratory Testing of Oil-Grit Separators,** with results reported within the Canadian ETV or ISO 14034 ETV verification. This re-entrainment testing is conducted with the device pre-loaded with low density polyethylene (LDPE) plastic beads as a surrogate for light liquids such as oil and fuel. Testing is conducted on the same OGS unit tested for sediment removal to

assess whether light liquids captured after a spill are effectively retained at high flow rates.

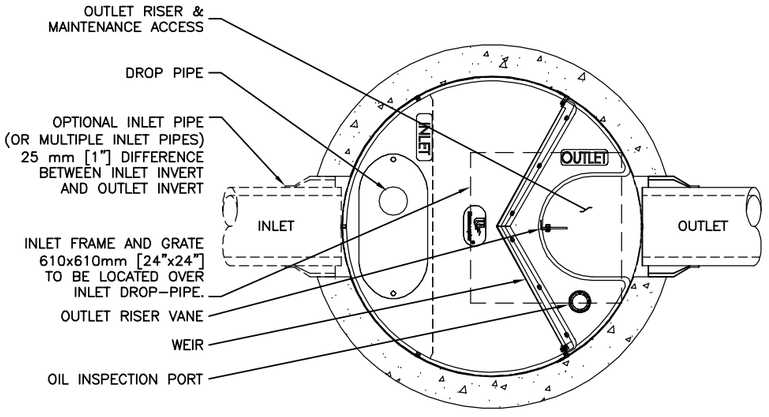
3.4.1 For an OGS device to be an acceptable stormwater treatment device on a site where vehicular traffic occurs and the potential for an oil or fuel spill exists, the OGS device must have reported verified performance results of greater than 99% cumulative retention of LDPE plastic beads for the five specified surface loading rates (ranging 200 L/min/m^2 to 2600 L/min/m^2) in accordance with the Light Liquid Re-entrainment Simulation Testing within the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators.** However, an OGS device shall not be allowed if the Light Liquid Re-entrainment Simulation Testing was performed with screening components within the OGS device that are effective at retaining the LDPE plastic beads, but would not be expected to retain light liquids such as oil and fuel.



SECTION VIEW



PLAN VIEW (STANDARD)



PLAN VIEW (INLET TOP)

FOR SITE SPECIFIC DRAWINGS PLEASE CONTACT YOUR LOCAL STORMCEPTOR REPRESENTATIVE. SITE SPECIFIC DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME. SOME FIELD REVISIONS TO THE SYSTEM LOCATION OR CONNECTION PIPING MAY BE NECESSARY BASED ON AVAILABLE SPACE OR SITE CONFIGURATION REVISIONS. ELEVATIONS SHOULD BE MAINTAINED EXCEPT WHERE NOTED ON BYPASS STRUCTURE (IF REQUIRED).

GENERAL NOTES:

* MAXIMUM SURFACE LOADING RATE (SLR) INTO LOWER CHAMBER THROUGH DROP PIPE IS 1135 L/min/m^2 (27.9 gpm/ft^2) FOR STORMCEPTOR EF4 AND 535 L/min/m^2 (13.1 gpm/ft^2) FOR STORMCEPTOR EF04 (OIL CAPTURE CONFIGURATION). WEIR HEIGHT IS 150 mm (6 INCH) FOR EF04.

1. ALL DIMENSIONS INDICATED ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SPECIFIED.
2. STORMCEPTOR STRUCTURE INLET AND OUTLET PIPE SIZE AND ORIENTATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.
3. UNLESS OTHERWISE NOTED, BYPASS INFRASTRUCTURE, SUCH AS ALL UPSTREAM DIVERSION STRUCTURES, CONNECTING STRUCTURES, OR PIPE CONDUITS CONNECTING TO COMPLETE THE STORMCEPTOR SYSTEM SHALL BE PROVIDED AND ADDRESSED SEPARATELY.
4. DRAWING FOR INFORMATION PURPOSES ONLY. REFER TO ENGINEER'S SITE/UTILITY PLAN FOR STRUCTURE ORIENTATION.
5. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED)
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT)
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT THE DEVICE FROM CONSTRUCTION-RELATED EROSION RUNOFF.
E. DEVICE ACTIVATION, BY CONTRACTOR, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE STORMCEPTOR UNIT IS CLEAN AND FREE OF DEBRIS.

STANDARD DETAIL
NOT FOR CONSTRUCTION

SITE SPECIFIC DATA REQUIREMENTS

STORMCEPTOR MODEL	EF4
STRUCTURE ID	*
WATER QUALITY FLOW RATE (L/s)	*
PEAK FLOW RATE (L/s)	*
RETURN PERIOD OF PEAK FLOW (yrs)	*
DRAINAGE AREA (HA)	*
DRAINAGE AREA IMPERVIOUSNESS (%)	*

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	*	*	*	*	*
INLET #2	*	*	*	*	*
OUTLET	*	*	*	*	*

* PER ENGINEER OF RECORD

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MARK	DATE	REVISION DESCRIPTION	BY
1	6/8/18	UPDATES	JSK
0	5/26/17	INITIAL RELEASE	JSK

Stormceptor® EF

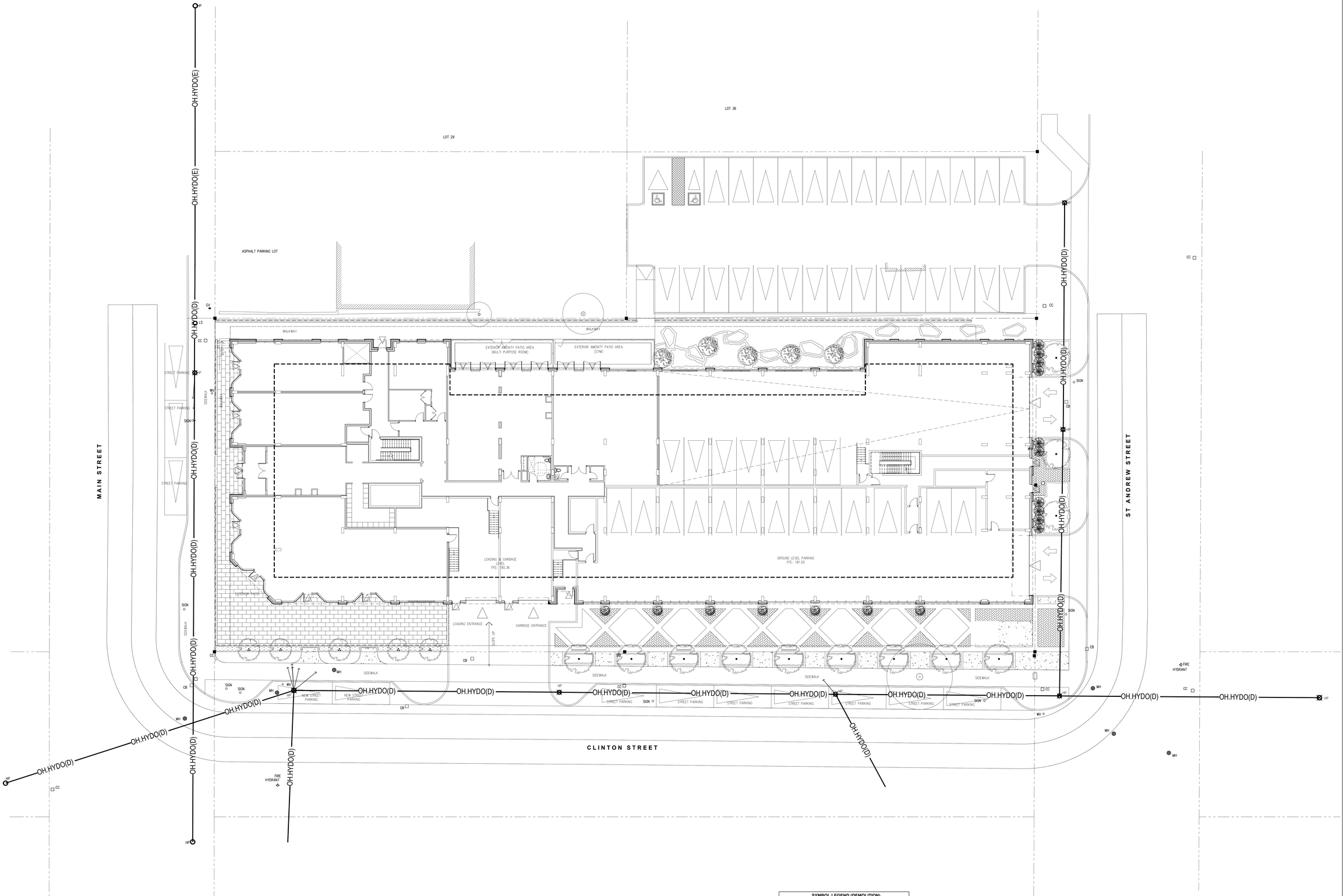
SCALE = NTS

imbrium®
7007 RIDGE ROAD, SUITE 550, HANOVER, MD 21076
USA: 888-279-9828 CA: 800-388-4601 INTL: +1-416-960-9900

DATE: 5/26/2017

DESIGNED:	DRAWN:
JSK	JSK
CHECKED:	APPROVED:
BSF	SP
PROJECT No.:	SEQUENCE No.:
EF4	*

SHEET: 1 OF 1



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STAMP:	PROJECT NORTH:	TRUE NORTH:

LICENSED PROFESSIONAL ENGINEER
M.R.IULESCU
100050242
OCT. 04, 2024
PROVINCE OF ONTARIO

SYMBOL LEGEND (DEMOLITION)

SYMBOL	DESCRIPTION
HP	EXISTING POWER POLE TO REMAIN
LS	EXISTING LIGHTING POLE TO REMAIN
HP	EXISTING POWER POLE TO BE REMOVED
	EXISTING ANCHOR TO BE REMOVED

CONDUCTOR LEGEND

OH.HYDO(E)	EXISTING OVERHEAD POWER LINE
OH.HYDO(D)	EXISTING HYDRO LINE TO BE DEMOLISHED

van Groll & Associates Inc.
2 St. Clair Avenue W., Fl8
Toronto, ON, M4V 1L5
905 339 2811
vangrollassociates.com

ALGAL ENGINEERING LTD.
CONSULTING ENGINEERS
515 Consumers Road, Suite 100
Toronto, Ontario, M2J 4Z2
T:416.484.0707 | F:416.849.0148 | E:algal@algal.ca

No	Date	Issued For	Check	By
R00	2024-10-02	ISSUED FOR SITE PLAN APPROVAL	M.R.	A.E.

Issues

The Contractor shall check and verify all dimensions and report all errors and omissions to the Owner's/MBS Designee (as applicable) for his/her written direction before proceeding with the Work.

A Detail No
B Sheet No where detailed

Client: VAN GROLL & ASSOCIATES INC.

Project: NORFOLK DEVELOPMENT

Location: 200 MAIN STREET
PORT DOVER, ONTARIO N0A 1N0

Drawing Title: DEMOLITION SITE PLAN

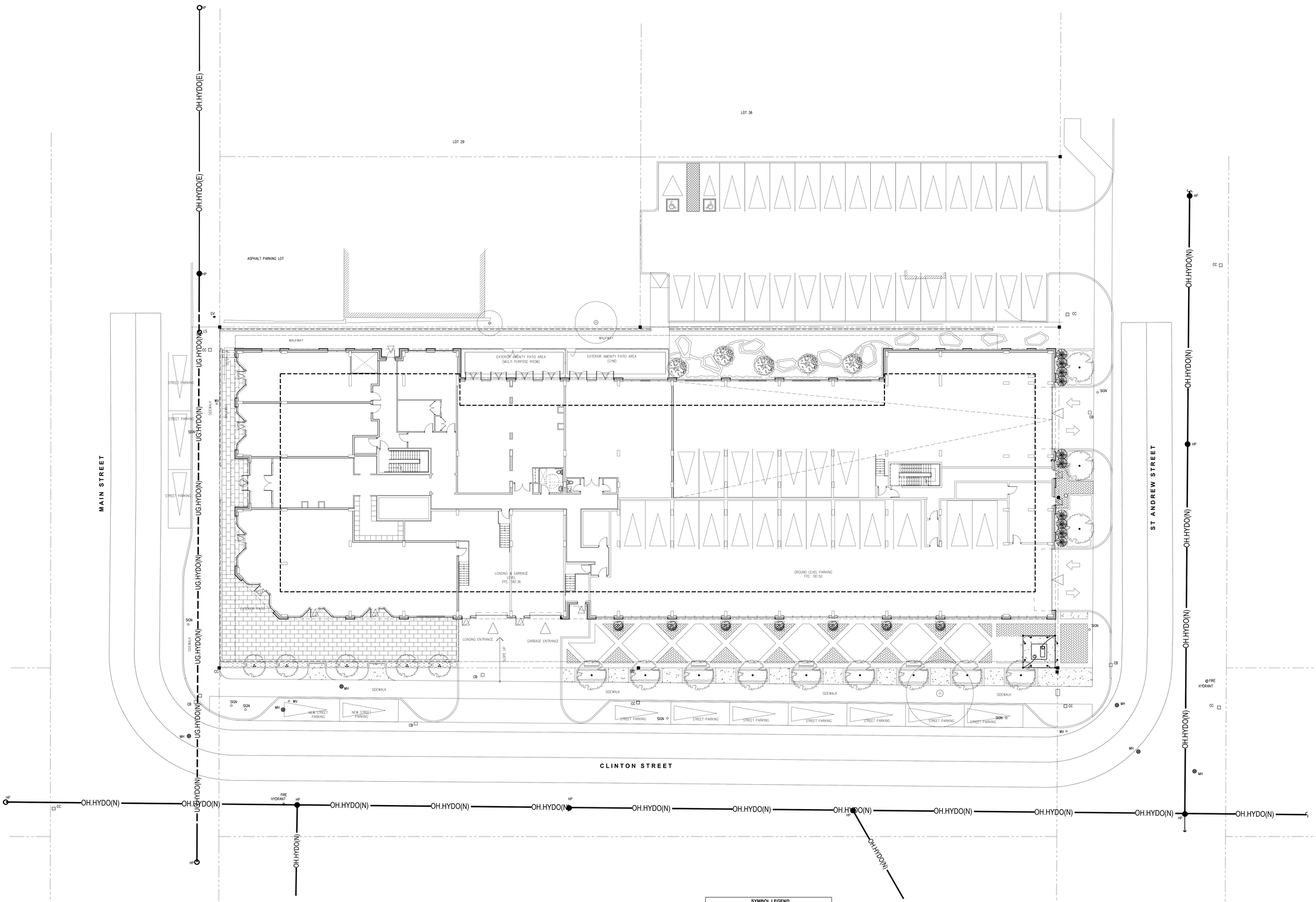
Drawn by	Designed by	Approved by
B.W.	A.E.	M.R.

Date (MM.DD.YY):	Scale
10.02.2024	1:150

Drawing No: AE-24099-DRAW-E001-RP1

CADD File NAME	Revision No:
AE-24099-DRAW-E001-E003	R00

914x1219mm


LOT 29
LOT 36
ASPHALT PARKING LOT
WALKWAY
WALKWAY
EXTERIOR AMENITY PATIO AREA (MULTI PURPOSE ROOM)
EXTERIOR AMENITY PATIO AREA (GYM)
LOADING & GARBAGE LEVEL FFE: 180.36
GROUND LEVEL PARKING FFE: 181.50
EXTERIOR STAIR
LOADING ENTRANCE
RAMP UP
GARBAGE ENTRANCE
SIDEWALK
SIDEWALK
SIDEWALK
SIDEWALK
SIDEWALK
NEW STREET PARKING
NEW STREET PARKING
STREET PARKING
STREET PARKING
STREET PARKING
STREET PARKING
STREET PARKING
STREET PARKING
STREET PARKING
MAIN STREET
ST ANDREW STREET
CLINTON STREET
OH.HYDO(E)
OH.HYDO(E)
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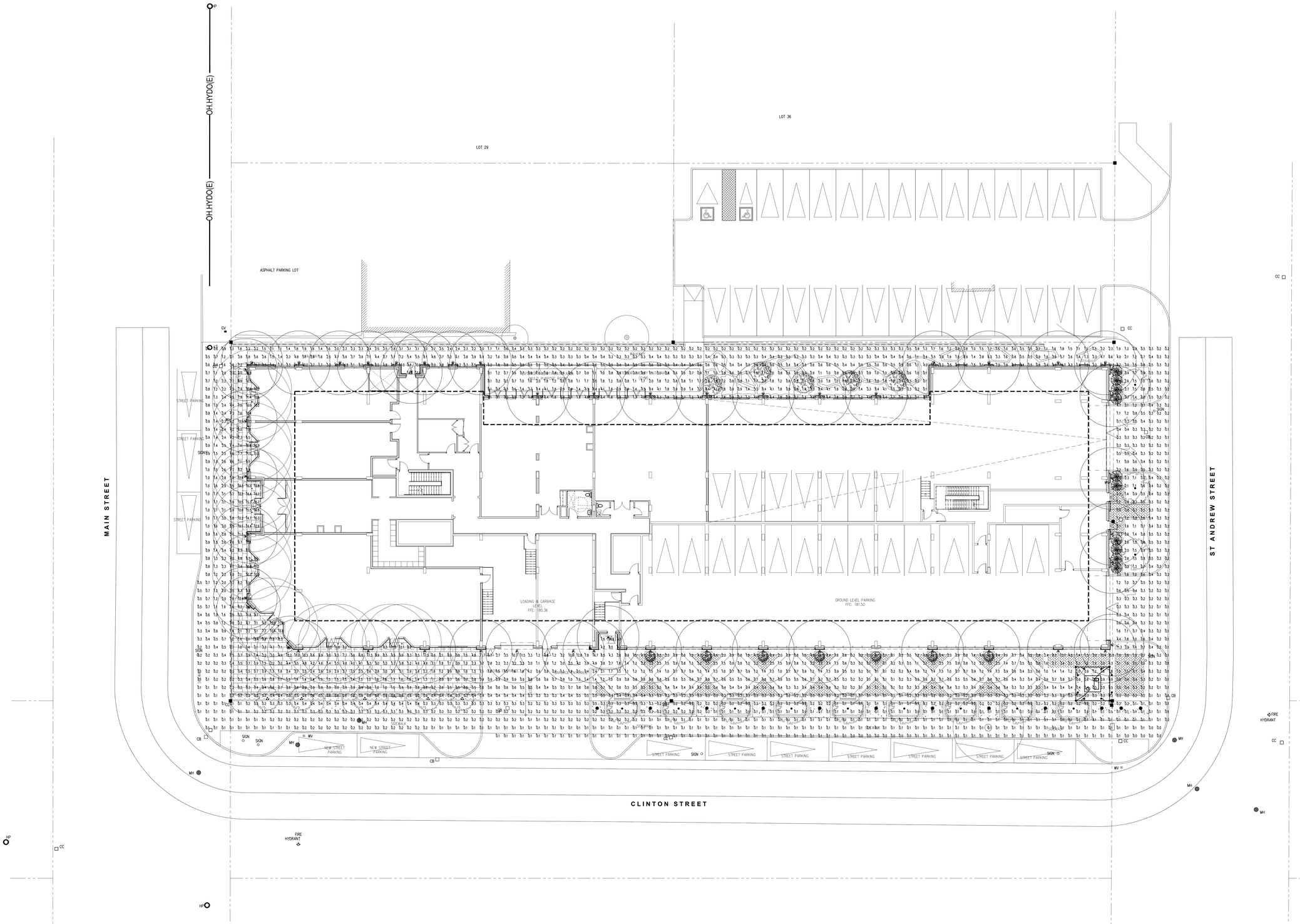
OH.HYDO(N)
OH



Luminaire Schedule								
Symbol	Qty	Label	Description	Lum. Lumens	Lum. Watts	LLF	Filename	Mounting Height
⊕	16	CDU4R-G2-PS3Q-3CWH-12W-40K-69	CDU4R-G2-PS3Q-3CWH-12W-40K-69093	1237	11.5	0.900	CDU4R-G2-PS3Q-3CWH-12W-40K-69093.IES	11
⊕	49	WCY-4LS1-Q-3C-XX-P-40K-40d-UD	WCY-4LS1-Q-3C-XX-P-40K-40d-UD-69150-69432	1818	20.0524	0.900	WCY-4LS1-Q-3C-XX-P-40K-40d-UD-69150-69432.IES	7

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Fc	1.82	20.5	0.0	N.A.	N.A.

914x1219mm

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STAMP: LICENSED PROFESSIONAL ENGINEER — M.RUULESCU — 100050242 — OCT. 04, 2024 — PROVINCE OF ONTARIO

PROJECT NORTH: N

TRUE NORTH:

van Groll & Associates Inc.
2 St. Clair Avenue W., Fl 8
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No	Date	Issued For	Check	By
R00	2024-10-02	ISSUED FOR SITE PLAN APPROVAL	M.R.	A.E.

Issues

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A — Detail No
B — Sheet No where detailed

Client: VAN GROLL & ASSOCIATES INC.

Project: NORFOLK DEVELOPMENT

Location: 200 MAIN STREET
PORT DOVER, ONTARIO N0A 1N0

Drawing Title: PHOTOMETRIC DETAIL

Drawn by	Designed by	Approved by
B.W.	A.E.	M.R.

Date (MM.DD.YY): 10.02.2024

Scale: 1:150

Drawing No: AE-24099-DRAW-E003-RP1

CADD File NAME: AE-24099-DRAW-E001-E003

Revision No: R00

STANPRO

Project : _____ Type : _____

Drawn by : _____ Catalogue # : _____ Date : _____

Series Spec Sheet

WCY

LED CYLINDER WALL MOUNT UPLIGHT, DOWNLIGHT OR UPLIGHT/DOWNLIGHT

3 CCT Selectable and Integrated Photocell

The WCY is a highly efficient and versatile decorative LED wall cylinder designed to provide any commercial building with security and accent lighting. This fixture allows the direction of the light to be field adjustable to offer uplight, downlight or uplight/downlight. It comes with a 20 degree beam angle and can be easily changed to a 40 degree or 80 degree angle with the optics included with the fixture. Additionally these luminaires offer the ability to adjust the color temperature and control the functionality of the photocell making it a great all-in-one solution.

FEATURES AND SPECIFICATIONS

- **Construction**

  Physical Characteristics
  - This luminaire is made out of aluminum die cast and comes in a black or bronze powder coat finish
  - Two housing sizes: 4'' and 6''
  - Includes an integrated 120-347 V photocell that can be easily disabled
  - Easy access to color temperature, photocell and light direction switch

  Mounting
  - Wall and surface mount to a junction box

  Lens
  - Glass lens
  - The standard beam angle is 20 degree and can be easily interchanged to a 40 degree and/or 80 degree with the additional optics included.
  - 40 degree frosted and 80 degree optics included for wider distribution needs.

- **Performance data**
  - Selectable color temperature 3 000/4 000/5 000 K, default programming at 4 000 K
  - 80+ CRI
  - Electrical ratings: 120-347 V
  - Estimated life of over 50 000 hours to L70
  - Dimmable 0-10V
  - 4 kV surge protection
  - Operating temperature: -40 °C to 40 °C (-40 °F to 104 °F)

- **Compliances**
  - cETLus, Wet Location
  - Meets requirements of ICES-005 issue 5 class B for use in residential applications
  - IP65
  - IK06

OVERVIEW

Light source	LED
Watts (W)	20, 36
Lumen output (lm)	825-4 340
Efficacy (lm/W)	80-131
Color temperature (K)	3 000/4 000/5 000
CRI	80+

4"

6"

3 CCT TCC

3 000/4 000/5 000 K

5 yrs warranty

quick ship

LED fixture

dimmable

wet location

IP 65

IK06

ICES 005

Intertek

2233 rue de l'Aviation, Dorval, QC H9P 2X6

514.342.1199, 1.800.361.6965 • 514.807.3011 • www.standardpro.com

STANPRO

QUICK SHIP AND TECHNICAL SPECIFICATION TABLE

Order code	Model number	Watts (W)	Volts (VAC)	Color temp. (K)[1]	Lumen output (lm)[2, 3]	Efficacy (lm/W)	CRI	Life L70 (hrs)[4]	Beam angle (°)	Finish	Photocell (Yes/No)	Dimming (Yes/No)	Power factor	THD (%)	Traditional equivalent (W) MH	Traditional equivalent (W) HPS	Master case qty
CCT Selectable with Integrated Photocell[5]																	
4"																	
69150	WCY-4LS1-Q-3C-BK-P	20	120-347	3 000/4 000/5 000	2 445	122	80+	50 000	20	Black	Yes	Yes	≥0.90	≤20	70	70	5
69432	WCY-4LS1-Q-3C-BR-P	20	120-347	3 000/4 000/5 000	2 445	122	80+	50 000	20	Bronze	Yes	Yes	≥0.90	≤20	70	70	5
6"																	
69151	WCY-6LS2-Q-3C-BK-P	36	120-347	3 000/4 000/5 000	4 254	118	80+	50 000	20	Black	Yes	Yes	≥0.90	≤20	150	100-150	4
69433	WCY-6LS2-Q-3C-BR-P	36	120-347	3 000/4 000/5 000	4 254	118	80+	50 000	20	Bronze	Yes	Yes	≥0.90	≤20	150	100-150	4

[1] Typical color temperature range: +/- 5 %.
[2] Lumen values are derived from photometric testing. Initial lumens range: +/- 10 %.
[3] Lumen values are based on 4 000 K default programming. Please refer to the LUMEN SPECIFICATION TABLE for more details on other color temperatures.
[4] Life hours are derived from IESNA LM-80-08 testing report and projected per IESNA TM-21-11 extrapolations
[5] Integrated ON/OFF photocell that can be easily disabled.

LUMEN SPECIFICATION TABLE

Single Direction (values)

Watts (W)	Beam angle (°)	Volts (V)	Fixture Current (A)	3 000 K Lumen output (lm)	3 000 K Efficacy (lm/W)	4 000 K Lumen output (lm)	4 000 K Efficacy (lm/W)	5 000 K Lumen output (lm)	5 000 K Efficacy (lm/W)
4"									
10	20	120-347	0.095-0.046	1 228	122.8	1 311	131.1	1 221	122
	40		0.095-0.046	825	82.5	940	94	849	85
	80		0.095-0.046	1 013	101.3	1 155	116	1 043	104
6"									
18	20	120-347	0.168-0.083	2 182	218	2 356	236	2 312	231
	40		0.168-0.083	1 627	163	1 675	168	1 854	185
	80		0.168-0.083	1 952	195	2 225	223	2 011	201

DEFAULT PROGRAMMING
69150/69432: 20 W/4 000 K

Both Directions (combined values)

Watts (W)	Beam angle (°)	Volts (V)	Fixture Current (A)	3 000 K Lumen output (lm)	3 000 K Efficacy (lm/W)	4 000 K Lumen output (lm)	4 000 K Efficacy (lm/W)	5 000 K Lumen output (lm)	5 000 K Efficacy (lm/W)
4"									
20	20	120-347	0.18-0.07	2 248	112.4	2 445	122.25	2 337	117
	40		0.18-0.07	1 593	79.65	1 816	91	1 641	82
	80		0.18-0.07	2 118	105.9	2 415	121	2 182	109
6"									
36	20	120-347	0.33-0.12	4 022	112	4 254	118	4 102	114
	40		0.33-0.12	3 223	90	3 674	102	3 320	92
	80		0.33-0.12	3 806	106	4 339	121	3 920	109

DEFAULT PROGRAMMING
69151/69433: 36 W/4 000 K

Data is based upon tests performed in a controlled environment. Actual performance can vary depending on operating conditions. All products are subject to change or may be discontinued any time without notice. Please contact your Stanpro customer service representative to confirm inventory levels at time of order.

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Optics (two per box)

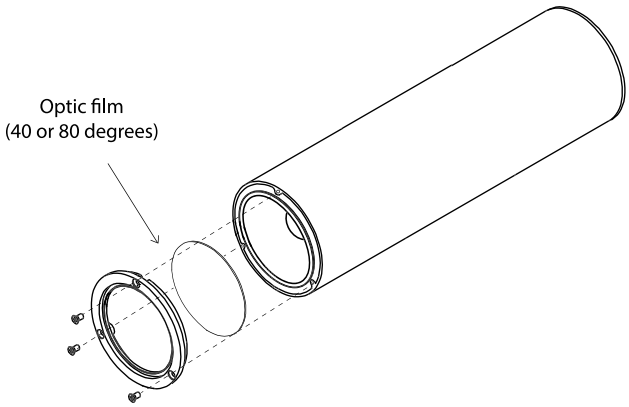
Front side of optic

Back side of optic

20° (Standard)

40° (Optics included)

80°



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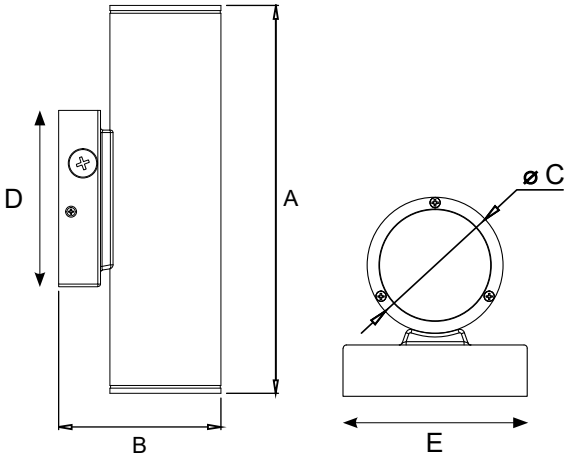
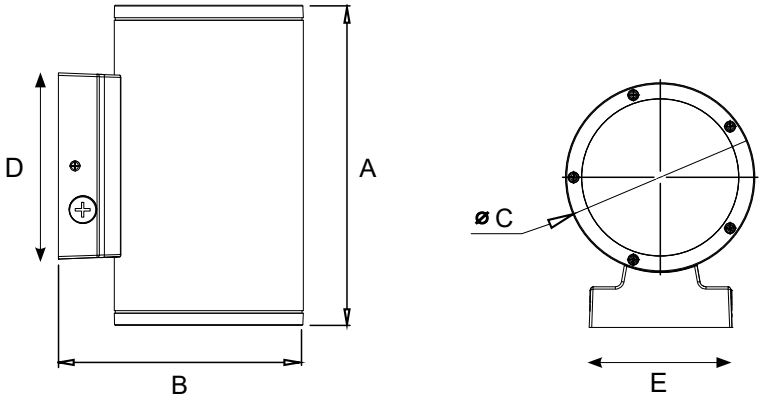
DIMENSIONS AND WEIGHTS

4"



6"



	20 W	36 W
A in. (cm)	11 3/4 (29.7)	10.20 (25)
B in. (cm)	4 7/8 (12.5)	7.80 (19.8)
C in. (cm)	3 3/8 (8.5)	6 (15.3)
B in. (cm)	4 1/2 (11.5)	4 1/2 (11.5)
C in. (cm)	4 1/2 (11.5)	4 1/2 (11.5)
Net weight (lbs)	2.9	5.3

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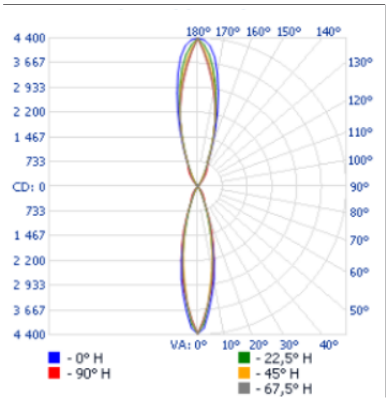
PHOTOMETRIC DATA[1]

69150_69432 • WCY-4LS1-Q-3C-XX-P • 20 W • 4 000 K • 20d • 2 445 lm

Polar candela distribution



Zonal lumen summary

Zone	Lumens	% Fixture
0-30	938.2	38.4
0-40	1 013.1	41.4
0-60	1 053.6	43.1
60-90	14.7	0.6
70-100	7.3	0.3
90-120	18.6	0.8
0-90	1 068.2	43.7
90-180	1 376.5	56.3
0-180	2 444.7	100

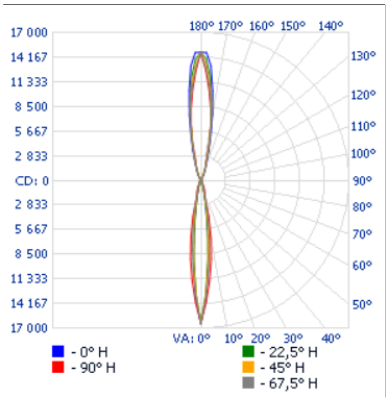
Illuminance at a distance

	Center beam fc	Beam width
17.0'	15.1	8.2'
34.0'	3.78	16.5'
51.0'	1.68	24.7'
68.0'	0.95	33.0'
85.0'	0.60	41.2'
102.0'	0.42	49.5'

Horiz. spread : 27.3°

69151_69433 • WCY-6LS2-Q-3C-XX-P • 36 W • 4 000 K • 20d • 4 254 lm

Polar candela distribution



Zonal lumen summary

Zone	Lumens	% Fixture
0-30	1 468.5	34.5
0-40	1 611.6	37.9
0-60	1 784.7	42
60-90	73.1	1.7
70-100	28.5	0.7
90-120	48.0	1.1
0-90	1 857.8	43.7
90-180	2 395.9	56.3
0-180	4 253.7	100

Illuminance at a distance

	Center beam fc	Beam width	
17.0'	57.1	3.6'	5.0'
34.0'	14.3	7.2'	10.0'
51.0'	6.35	10.8'	15.0'
68.0'	3.57	14.4'	20.1'
85.0'	2.28	18.0'	25.1'
102.0'	1.59	21.6'	30.1'

Vert. spread : 12.1°
Horiz. spread : 16.8°

[1] Complete IES files available on our website.

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Submission Requirements

Pre-Con Requirement	Subconsultant Engaged	Responsible for Coordination	Requirements	Compliance
Archaeological Assessment (OPA/ZBA)	N/A		This submission requirement was confirmed as being no longer required following the updated Pre-Consultation Record dated May 31, 2024 and via email from Andrew Wallace, Planner on May 24, 2024	
Elevation Plan, Floor Plans and Sections	Van Groll & Associates			Included in the submission package
Heritage Impact Study (OPA/ZBA)	N/A		This submission requirement was confirmed as being no longer required following the updated Pre-Consultation Record dated May 31, 2024 and via email from Andrew Wallace, Planner on May 24, 2024	
Parking Assessment	Paradigm	Arcadis	Was not required under the approved Terms of Reference for the Traffic Impact Assessment	
Planning Justification Brief	Arcadis	Arcadis		Included in the submission package.
Application Fee and Cover Letter	Arcadis	Arcadis		
Lighting Plan	Algal			
Site Plan/Drawing	Van Groll & Associates			
Development Agreement			At later stage.	
Parkland Dedication / Cash-inLieu	Arcadis		Noted. To be coordinated with County.	
Concept Plan	Van Groll & Associates			DWG A1.0 of the Architectural Design Set
Lot Grading Plan	Arcadis (Engineering)		12. Lot Grading Plan, Siltation and Erosion Control Plan, and General Plan of Services drawing can be shown on one engineering plan as long as it's legible for review. a. Please note that property line grades must be maintained. On Streetview I see retaining walls along the Dairy Bar property. Part of the wall closest to Main St appears to be a crumbling Mason Block wall.	Noted, provided. Refer to civil drawings.
Erosion Control Plan	Arcadis (Engineering)		12. Lot Grading Plan, Siltation and Erosion Control Plan, and General Plan of Services drawing can be shown on one engineering plan as long as it's legible for review. a. Please note that property line grades must be maintained. On Streetview I see retaining walls along the Dairy Bar property. Part of the wall closest to Main St appears to be a crumbling Mason Block wall.	Noted, provided. Refer to civil drawings.
Utility Plan	Algal	Van Groll	13. A Utility Plan is required as per Section 4.4.07 of Norfolk County Design Criteria for all utilities to be installed in the Municipal ROW. An Electrical Services Plan as per Section 16.4.05 and 16.5.05 shall also be included with the Utility Plan	Provided. See Electrical Drawings
FSR	Arcadis (Engineering)		complete the modelling and any recommendations from reports are to be implemented into the design at the applicant's expense. The following information will be required to receive a quote and complete the modelling. a. General Plan of Services Norfolk County recommends additional discussions with Engineering prior to completing the General Plan of Services. At the time of Pre con there was not enough information to provide any guidance on appropriate connection points, Main St vs Clinton St. As-Built drawings are available upon request. b. Functional Servicing Report; i. Total Wastewater Design Flows; ii. Total Domestic Water and Fire Flows as per Norfolk County Design Criteria Section 10.1.1 The Functional Servicing Report must include water /sanitary servicing and fire flow calculations. Fire Flow calculations are to be completed in accordance with "Water Supply for Public Fire Protection 2020" by Fire Underwriters Survey. Once the quote has been received, approval from the applicant will be required before proceeding. For developments such as this proposal where it will go straight to Site Plan, it is the recommendation of Development Engineering to see the modeling process start prior to submission of Site Plan. The typical timeline for return of Modelling reports exceeds the legislative timelines for Site review. For more information, please reach out to Development Engineering. 14. Disconnection of all existing water services will be required prior to installation of a new water service. This must include the disconnection of all water services on the 3 streets that border this development. It should be assumed that disconnection will probably be required earlier at the Demolition stage. 15. Depending on eventual design of proposed water service and the proposed usage within the development a Backflow Preventer (RPZ) may be required. Approval from the Manager of Environmental Services must be obtained as per Norfolk County Design criteria. A Testable DCVA Backflow device may be required in a watertight chamber at property line. 16. Confirmation of the size and condition of existing Sanitary laterals will be required if any are proposed to be used in the future. Removal of all existing Sanitary laterals to the main is required for all laterals to be abandoned. Permits are required prior to any work being completed. It should be assumed that disconnection will probably be required earlier at the Demolition stage. 17. The minimum size of Sanitary lateral for a proposal such as this is 150mm as per NCDC Section 9.7.1 See above	Provided. See FSR and SWM Reports. Water modelling will be touched on in the next submission.
Water Modelling + Peer Review	Arcadis Inc			
SWM Design Report (drainage plan, design sheet, anticipated flow analysis	Arcadis Inc		19. Stormwater Management Report is to be completed as per Section 7.0 and Section 8.0 in Norfolk County Design Criteria and Section 4.0 of Norfolk County's Integrated Sustainable Master Plan (ISMP). 20. A Storm Drainage area plan will be required as per Norfolk County Design Criteria and must identify any external overland flows tributary to this site. 21. Confirm Legal and Adequate outlet. In a review of the storm sewers in this area it is not clear whether all the amalgamated properties were tributary to the same Storm outlet. The new site will be permitted one connection to the Storm sewer and confirmation that the proposed discharge will be appropriate for the existing infrastructure will be required. 22. The developer will be responsible to confirm anticipated flow to the existing storm system and ensure adequate capacity exists to accept the proposed development.	Noted. Stormwater capacity analysis will be provided in the next submission.
Traffic Impact Study	Paradigm	Arcadis	23. As per Norfolk County's Integrated Sustainable Master Plan (ISMP) Appendix J – Traffic Impact Study (TIS) Guidelines, a full Traffic Impact Study will be required. As there was no submission of Traffic information in the original submission, Development Engineering has assumed this development will generate more than 75 trips from the site daily. In order to assist the consultant with a scope for the TIS we offer the following information. a. Total impact of each entrance/exit from the site. b. Impact of proposed on street parking on site lines for ingress and egress from the site. c. The intersection of Main St and Clinton St to be reviewed for traffic volume and sight lines. d. The intersection of St Andrew's and Walker/ Hamilton Plank Road to be reviewed for volume and site lines. e. The County is also interested in an assessment of the most efficient travel route for site traffic traveling north of this site? Will St Andrew's St to Chapman become the preferred route? Prior to beginning the TIS the consultant is to reach out to Development Engineering to confirm the exact scope	
Mechanical Design	Van Groll & Associates			
Landscape Plan	Van Groll & Associates	Burke & Associates		
			24. All existing driveway cuts that are not required in the future are to be replaced with full barrier curb and matching new Sidewalks.	Noted.
			All Site Plan submissions are to comply with Section 16 of the Norfolk County Design Criteria. 9. Any recommendations/upgrades from the modelling reports must be implemented at the time of Site Plan submission. Upgrades, if any, are to be completed at the Developer's expense. 10. The following reports/studies will be required at time of Site Plan Submission: a. Concept Plan; b. Functional Servicing Report (as per Norfolk County Design Criteria); c. Water / Sanitary Modelling; d. Storm Water Management Report; e. Traffic Impact Study (as per ISMP Appendix J – TIS Guidelines);	
GENERAL COMMENTS			25. At the time of Site Plan submission Norfolk County will require a detailed Engineering plan for the replacement Parking lot on St Andrew's Street.	

200 Main St., Port Dover - Comment Response Matrix

Comment	Deliverable	Subconsultant	Response	Notes
Development Agreement - Annette Helmig - Agreement and Development Coordinator				
Performance securities will be required by the County to secure any internal and external development works, and a recommended condition for your planning application approval will be to enter into a development agreement with the County. The agreement will be registered on title to the subject lands, at the owner's expense. The additional requirements for an agreement could include, but are not limited to the following: - Engineering drawing review - Engineer's schedule of costs for the works - Clearance letter and supporting documentation to support condition clearance - User fees and performance securities - Current property identification number (PIN printout) - Owner's commercial general liability insurance certificate - Professional liability insurance certificate - Postponement of interest - Transfers and / or transfer easements along with registered reference plan All the best with your development.	Development Agreement		Noted.	
Building Department - Roxanne Lambrecht - Zoning Administrator				
200 Main Street – Zoned CBD and under site plan control Proposed commercial uses on the main floor, and also a restaurant tavern, and residential all permitted uses in the zone. 137 residential units, commercial ground floor, consolidation of several parcels, including a parking lot, proposing 1.5 parking spaces for each unit.		Arcadis	Minor adjustments following Pre-Consultation meeting. The application now proposes a six storey mixed use building with providing 438 m2 of ground floor commercial within 3 proposed retail spaces, 138 residential apartment units, 742m2 of amenity spaces and 181 off street parking spaces.	
All frontages of the first storey are to be dedicated to retail, office or service uses, see section 6.1.4. Therefore, the streets of Clinton and Main are your frontages		Arcadis	The Main St. and a portion of the Clinton St. frontages are dedicated to commercial and retail uses. The remainder of the Clinton St. frontage is dedicated to service uses including the parking structure within the podium.	
Section 6.1.5 step back of floors above the fourth story to be setback 2m.		Arcadis	2m setback has been provided above level 3. See DWG A2.0b of the architectural set	
max height is 6 stories, this proposal is for main floor plus additional 6 floors for a total of 7 stories.		Arcadis	The proposal has been modified to show a total of six stories as seen in the submitted Architectural Package	
refer to CBD zone provisions section 6.1.2 for lot coverage, and setbacks.		Arcadis	Noted.	
If providing parking refer to section 4.1.3 of the parking bylaw and aisle requirements as per section 4.1.4 of the parking bylaw, for guidelines on typical Norfolk County bylaw parking spaces		Arcadis	Noted.	
A zoning table will be required to be on the site plan to ensure compliance with the zoning of the CBD zone		Arcadis	Please see zoning matrix on Site Plan DWG A1.1 of the architectural set.	
Building Department - Jonathan Weir - Building Inspector				
The proposed construction is considered a Residential group C for the dwelling units, A2 Assembly type occupancy for the restaurant, E Mercantile occupancy for the retail areas and F3 Industrial type occupancy for the parking garage as defined by the Ontario Building Code (OBC). You will need to retain the services of an Architect and a Professional Engineer to complete the design documentation for this 7 storey building application.		Arcadis/Van Groll	Noted.	
The Designer will need to provide a Part 3 Building Code matrix. This matrix represents selected elements from your detailed code analysis and presents a quick overview to the municipal building official of the key OBC factors concerning your design. The matrix will identify OBC review items such as occupant loads, fire separations, project description, building size, building classification, fire alarms, type of construction, barrier freerequirements, plumbing fixture requirements and spatial separations.		Van Groll	An OBC Matrix is provided on submitted drawings.	
The Designer will need to focus on OBC Sections 3.2. Building Fire Safety/Building Height, 3.3. Safety Within Floor Areas, 3.4. Exits and 3.8. Barrier Free requirements.		Van Groll	Noted.	
The Designer will also need to review OBC Subsection 3.1.19. Above Ground Electrical Conductors, depending on the voltage, the clearances to the building will vary and determine if OBC Section 3.2.6. applies for requirements of high buildings.		Van Groll	Electrical consultant has reviewed existing power infrastructure with the Hydro provider on site and has proposed moving existing power infrastructure below grade or relocate hydro poles to locations accross streets. The Hyrdro provider has expressed agreement with this. See submitted electrical drawings.	
Signs proposed due to development will require a permit as part of Norfolk's Sign Bylaw and may need a Building Permit according to the OBC.		Van Groll	Noted.	
No Ontario Building Code review has been completed at this time and will be done at permit application stage.		Van Groll	Noted.	
MULTI LEVEL ROOFS AND SNOW LOADS A letter signed by a Professional Engineer licensed in the Province of Ontario regarding multilevel roof drifting snow load maybe required. Provide calculations as required by Ontario Building Code Part 4 Subsections 4.1.6.5. – 4.1.6.15. If additional snow load is calculated to fall on neighboring structures, an engineered analysis of the neighboring is required. Completion of compensating construction to the neighboring structure may also be required. Separate building permit required for compensating construction.		Arcadis		
RESTUARANTS Regarding the commercial kitchen, the Designer will need to review OBC Part 3 Sentence 3.6.3.5.(1) Grease Duct Enclosures and OBC Part 6 Sentence 6.2.2.6. Commercial Cooking Equipment for ventilation and fire protection.		Van Groll	Noted.	

MORE THAN 2 DWELLINGS-PLUMBING The Ontario Building Code (OBC) 7.6.3.4 requires a review of water service connection size at the time of application for projects connected to a water system with more than one dwelling unit.	Arcadis	
Items for Site Plan Site plan drawings need to have enough detail, to determine compliance with the code references listed. 1) Indicate location of access route and access route design [OBC 3.2.5.4 to 3.2.5.6] 2) Adequate water supply and calculations. [OBC 3.2.5.7] 3) Indicate location of existing and new fire department connections. Dimensions between hydrants and building entrances is required. [OBC 3.2.5.16] 4) Location and specifications of exterior lighting. Lighting to be included in SB-10 report – energy efficiency 5) Indicate barrier free path of travel from parking area to building entrance. Construction of curb cuts and location of tactile attention indicators is required. [OBC 3.8.1.3, & 3.8.3.2] 6) Provide building elevations and cross section, showing building massing, location of proposed entrances and exits, barrier free controls, exterior lighting locations, and exterior signage. [Planning Act 41(4).2]	Van Groll/Arcadis/Algal	1) - Access route is provide by the existing municipal streets. See Site plan. 2) - See Civil drawings for water supply calculations. 3) - Existing fire hydrants are indicted on the site plan and survey. Proposed fire department connection is indicated on the site plan. 4) - Photometric drawing is provided. - SB-10 to be provided for a building permit submission. 5) - Barrier free parking is provided within the interior parking garage. See architectural drawings. 6) - See building elevations, building sections and Cover Page drawings for building massing. See site plan for entrances and exits. See electrical drawings for photometric and site lighting. 3D Model images are provided on the Architectural Cover Page drawing.
Items for Building Permit		
Items for Building Permit "-Industrial Commercial Institutional (ICI)" & "Applicable Law Checklist" Step by Step Guide Building Permit Package has been attached to the minutes herein, this contains information on drawing requirements, designers, forms, contact information for Building Department etc.	Van Groll	Noted.
Corporate Support Services - Alisha O'Brien - Realty Services		
The County will require a postponement of any Charge(s)/Mortgage(s) on title to the County's Site Plan/Development Agreement. We recommend that you connect with your lender(s) and/or solicitor as early in the process to avoid any delays.	Owner	Noted.
Heritage and Culture - Melissa Collver - Director		
I would hope to see a proposal at some point which shows that the history of the site be integrated in some way onsite.	Arcadis/Van Groll	The wording on the proposed heritage plaque is provided within the Planning Justification Brief
Corporate Support Services - Sam McFarlane - Accessibility		
No comments from Accessibility at this stage of the development		
Fire Department - Katie Ballantyne - Community Safety Officer		
Norfolk County Fire Department has the following comments for this proposal: - Ensure primary entrance is determined for fire response - Ensure there is adequate water supply to accommodate any required fire protection systems	Engineering	Noted.
Norfolk Health and Social Services - Alex Dobias - Health Promoter		
Built Environment & Active Transportation: The Health Unit encourages developments that make it easier for people to choose active forms of transportation (walking, cycling and wheeling) for short trips. Walkability, a measure of how easy, safe, and enjoyable it is to walk in a neighbourhood, can have a large impact on walking behaviour and willingness to use walking for transport and recreation. Key factors that influence walkability include access to amenities and destinations, residential density, positive walking experiences, street and sidewalk connectivity, and safety. Walkable communities encourage walking by investing in appropriate and safe infrastructure, which increases comfort and convenience of a route while also reducing the risk of collisions. A walkable community offers a safe and enjoyable walking experience for citizens of all ages and abilities.		Noted.
Specific to this development: • This development adds residential density to the area - a key feature of a walkable community. • Offering bicycle parking for residents is encouraged to facilitate opportunities for active transportation. Here is a link to the essentials of bicycle parking: EssentialsofBikeParking_FINA.pdf (apbp.org) • The health unit encourages multi-unit dwellings which are 100% smoke-free. A no-smoking policy in the declaration prior to selling or renting any units is the simplest way forward. HNHU is able to support the applicant if interested. Learn more at Home - Smoke Free Housing Ontario		Short term bicycle parking spaces can be provided within the paved amenity area on Clinton Street. While long term bicycle parking can be accomodated for iwthin the locker storage area proposed within the parking garage levels.
Housing Services - Stephanie Rice - Director		
There is an acute need for affordable rental housing and affordable homeownership in Norfolk County. Provided the proposed development meets the intent and purpose of applicable policy, bylaws, codes and servicing capacity, Housing Services is supportive of the establishment of new affordable rental and homeownership opportunities in the community.		Noted.
MTO - Michael Kilgone - Project Manager		
Thank you for providing the MTO with the opportunity to review and provide comments. The proposed work within Norfolk County is not located adjacent to a provincial highway or within MTO's Permit Control Area, and as such, does not require MTO review, approval or permits. As a result of this, please be advised that I will not be in attendance for the pre-con meeting being held on March 13, 2024. If you have any question or concerns, please feel free to contact me.		Noted.