STORMWATER MANAGEMENT REPORT

For
3055 Richmond Road, Ottawa

Prepared by:

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Revision 0
July 2022

1. Project Description:

1.1. Introduction:

Property at 3055 Richmond Road is located close to intersection of Dumaurier Avenue and Richmond Road, Ottawa, Ontario. The property is about 0.10 Hectare severed from an existing lot which contain an existing one story building.
Property at 3055 Richmond Road is currently under light residential Zoning. Due to market demand for residential, the idea initiated to use the lot to build four-story dwelling that contains 16 units.
This report will address the servicing (water, sanitary) requirements associated with the proposed development located at 3055 Richmond Road within the City of Ottawa, Ontario. This report is prepared in response to the request from City of Ottawa Planning department.

1.2. Existing Conditions:

The existing site located at 3055 Richmond Road. The property measure a total area of approximately 0.10 Hectare. The site is fronting 406mm diameter CI water main and 225mm diameter Concrete sanitary main on Richmond Road.

1.3. Guidelines, Previous Studies, And Reports

The following studies were utilized in the preparation of this report:

- Ottawa Sewer Design Guidelines,
  City of Ottawa, SDG002, October 2012.
  (City Standards)
  - Technical Bulletin ISTB-2018-01
    City of Ottawa, March 21, 2018.
    (ISTB-2018-01)
  - Technical Bulletin ISTB-2019
    Technical Bulletin ISTB-2020
    City of Ottawa,

- Ottawa Design Guidelines Water Distribution
  City of Ottawa, July 2010.
  (Water Supply Guidelines)
  - Technical Bulletin ISD-2010-2
    City of Ottawa, December 15, 2010.
    (ISD-2010-2)
  - Technical Bulletin ISDTB-2014-02
    City of Ottawa, May 27, 2014.
    (ISDTB-2014-02)
  - Technical Bulletin ISTB-2018-02
    City of Ottawa, March 21, 2018.
    (ISTB-2018-02)
  - Technical Bulletin ISTB-2019
    Technical Bulletin ISTB-2020
    City of Ottawa,

- Design Guidelines for Sewage Works,
  Ministry of the Environment, 2008.
  (MOE Design Guidelines)

- Stormwater Planning and Design Manual,
  Ministry of the Environment, March 2003.
  (SWMP Design Manual)

- Geotechnical Investigation

2. Stormwater Management

2.1. Design Criteria and Objectives

Design of the storm sewer system was completed in conformance with the City of Ottawa Design Guidelines (November 2012). Specifically, Section 5 "Storm and Combined Sewer Design" for runoff coefficients and an inlet time were referenced in this design.

The allowable release rate for the site is calculated using a runoff coefficient of 0.40, the 5 year storm event, time of concentration of 10 min and store up to the 100 years storm event. As per direction from City of Ottawa Planning Department.

During all construction activities, erosion and sediment shall be controlled by techniques outlined in Section 5 of this report.

Minor System Design Criteria

1. The storm water management has been designed based on the rational formula and the Manning's Equation under free flow conditions for the 2-year storm using a 10-minute inlet time.
2. Inflow rates of the minor system are limited to the pre-development rates for up to the 2-year storm, and are based on a time of concentration of 10 minutes.

Major System Design Criteria

1. The major system has been designed to accommodate on-site detention with sufficient capacity to attenuate the 100-year design storm. Excess runoff above the 100 year event will flow to Richmond Road.
2. On site storage is provided and calculated for up to the 100-year design storm. Calculation of the required on-site storage volumes has been supported by calculations provided in appendixes.
3. Calculation of the required storage volumes has been prepared based on the Modified Rational Method as identified in Section 8.3.10.3 of the City's Sewer Guidelines. The depth and extent of surface storage will be illustrated on the applicable grading plan and storm drainage plan.

2.2. Runoff Coefficients

Runoff coefficients used for either pre-development or post-development conditions were based on actual areas measured in CAD. Runoff coefficients for impervious surfaces (roofs, asphalt, and concrete) were taken as 0.90,

The allowable predevelopment runoff coefficients for the overall site is calculated as below

Area ID	Area (ha)	Runoff 'C'	A x C
Existing Dwelling	0.01	0.9	0.009
Grage and Addition	0.01	0.9	0.009
Grass or Landscape	0.08	0.1	0.008
Total Site Area (ha)	0.1	---	0.026

C(avg) = 0.26

Therefore predevelopment runoff C=0.50 as per Sewer Design Guideline.

Pre-development Stormwater Conditions:

Stormwater runoff from the subject property is tributary to the City of Ottawa sewer system and is located within the Rideau River Conservation Authority. As such, approvals for proposed development within this area are under the approval authority of the City of Ottawa and the Rideau River Conservation Authority for quality control.

The site is currently occupied by an existing dwellings with grass and driveway asphalt. Pre-development conditions will be considered as directed by the City of Ottawa Infrastructure Department for runoff coefficient of 0.5 and time of concentration of 10 min and store up to the 100 years storm event as per the City of Ottawa Sewer Design Guideline.
The area for runoff coefficients used for either pre-development or post-development conditions were based on actual areas measured in CAD. Runoff coefficients for surfaces such as roofs, were taken as 0.90, for permeable landscape were taken as 0.50. Refer to appendixes for detail

It was assumed that the existing development contained no stormwater management controls for flow attenuation. The estimated combined pre-development peak flows for the 5 storm events are calculated below:

Allowable Release Rate:

- Time of Concentration = 10 minutes,
- Drainage Area = 0.10 ha

Q allow = 2.78 C I A

Where:

Q allow	=	Allowable release rate to storm sewer (L/sec)
C	=	Runoff Coefficient (dimensionless) =0.50
I	=	Average Rainfall Intensity for return period (mm/hr)
	=	732.951 / (TC + 6.199) 0.810 =76.81 mm/hr (2-year)
TC	=	Time of concentration (minutes) =10 min
A	=	Drainage Area (hectares) = 0.10

Q Allow = 10.68 L/sec (5-year)

Therefore the allowable release rate from the site is 10.68 L/sec

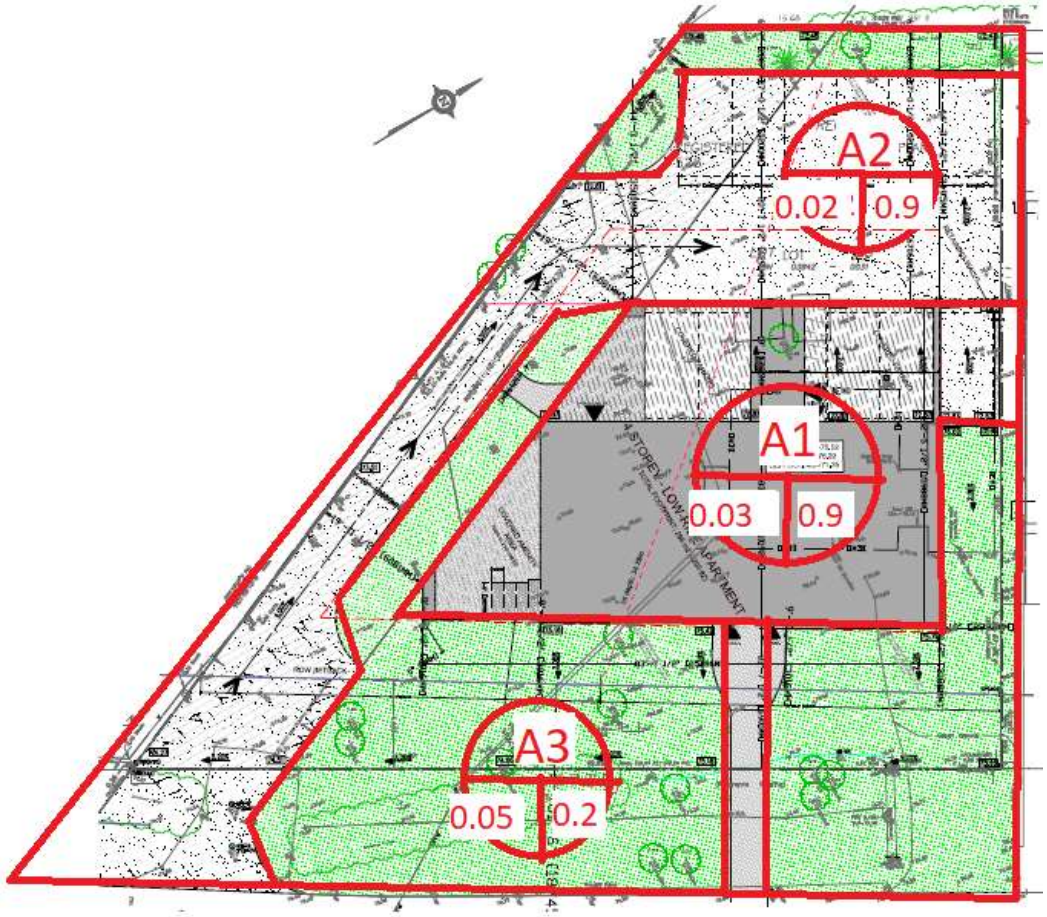
Post-development Stormwater Management Target:

Stormwater management requirements for the proposed development were reviewed with the City of Ottawa, generating the following requirements for the proposed development:

- Meet a total allowable release rate based on a Rational Method Coefficient of 0.50, employing the City of Ottawa IDF parameters for a 2-year storm with a time of concentration equal to or greater than 10 minutes
- Attenuate all storms up to and including the City of Ottawa 100-year design event on site. Post-development including 100-year storm event shall be controlled to the pre-development 5-year storm event.
- During all construction activities, erosion and sediment shall be controlled by techniques outlined in section 3 this report

Storm Drain Area :

The post development storm water management design, for this site has been divided to 3 general areas; Roof area, Grass area and asphalt parking area.



Post-development Stormwater Quantity Control:

Post development storm water management design for this site includes 3 general areas; Proposed roof of development, Parking area and Grass or landscape area.

- Grass or landscape area will sheet drain to the municipal street; Richmond Road
- Parking area are able to absorb most of rainfall since green paver is proposed for these areas. Green paver is meant to aid with run-off. For the purpose of being conservative in our stormwater calculation design, C value is considered as 0.9 for parking and garbage area.
- Roof proposed building: C value for roof is considered as 0.9. Storm runoff during 100yrs storm event will be stored on the roof. Overflow runoff beyond 100 year rain fall event would be going towards Richmond Road as per original design of this subdivision.

C(max equiv)	I (mm/h)	Area (ha)
0.5	76.8	0.100

Q(allow) 10.68 l/s

I (mm/h)	I (100yr) mm/h
76.8	179

Area ID	Area (ha)	C (5yr)	A x C	C (100yr) (Max of 1.0)	A x C	Type of Flow (Controlled/Uncontrolled)
A1: Proposed Building	0.030	0.9	0.03	1.00	0.03	
A2: Parking area	0.020	0.9	0.02	1.00	0.02	
A3: Grass area	0.050	0.2	0.01	0.25	0.01	
Total Site Area (ha)	0.1	---	0.06	---	0.06	Total

C(avg) 5-year = 0.55
C(avg) 100-year = 0.63

As mentioned, post development storm water management design for this site includes 3 general areas; Proposed roof of building, Parking area and Grass or landscape area.

- Grass or landscape area will sheet drain to front of the property as per natural drainage pattern. During 2 year and 100 year storm event, grass area generates 2.14 L/sec and 2.67 L/sec respectively.
- Parking area will sheet drain to rear of the property as per natural drainage pattern. the release rate during 2yr and 100yr storm event are 3.84 L/sec and 4.27 L/sec, respectively.
- Proposed roof of building: Storm runoff during 2yrs and 100yrs storm event will be stored on the roof. In order to ensure that the allowable release rate to the storm sewers is not exceeded, roof drain restrictors will be installed at the roof drains by limiting the rate at which storm runoff is release to the sewers, water will tend to pond upstream of the roof drain. As ponds generally form the shape of the roof, the extend and depth of ponding resulting from the 100-year storm was determined using the following equation;

$$V=1/3 \times A \times d$$

Where:

V	=	Storage volume (cu. m.)
A	=	surface area of pond (sq.m.)
D	=	pond depth at peak (m)

The pre-development allowable release is 10.68 L/sec, with presence of 100yr uncontrolled release of 2.14L/sec for landscape area and 3.84L/sec for parking area, the roof will be controlled to 4.70 L/sec.

The flow control will be done based on one roof drains at 4.70 L/sec based on the 2-year storm event.

Based on calculation, the maximum volume required for the roof at post development stage for 100yrs storm event would be 20.28m^3. Considering the roof area of 298m^2, the maximum ponding height on the roof will come up to be 200mm. The discharge rate from above connected structure will be controlled via 4 roof drain equipped with ICD's which is selected based on design head and available manufacturer database, (see appendix) Watts RD100 (fully exposed) roof drains with adjustable flow control weirs is selected.

3. Foundation/Footing Drain

Foundation drain is independently connected to storm main on Stewart Street. Please refer to Grading and Drainage plan.

4. Erosion and Sediment Control

Following methods will be unutilized to control erosion and sediment:

- Silt fence will be installed around the perimeter of the site and will be cleaned and maintained throughout construction. Silt fence will remain in place until the working areas have been stabilized and re-vegetated.
- Catch basins will have SILTSACKs or an approved equivalent installed under the grate during construction to protect from silt entering the storm sewer system.
- A mud mat will be installed at the construction access in order to prevent mud tracking onto adjacent roads.
- Erosion and sediment controls must be in place during construction. The following recommendations to the contractor will be included in contract documents:
    - Limit extent of exposed soils at any given time;
    - Re-vegetate exposed areas as soon as possible;
    - Minimize the area to be cleared and grubbed;
    - Protect exposed slopes with plastic or synthetic mulches;
    - Install silt fence to prevent sediment from entering existing ditches;
    - No refueling or cleaning of equipment near existing watercourses;
    - Provide sediment traps and basins during dewatering;

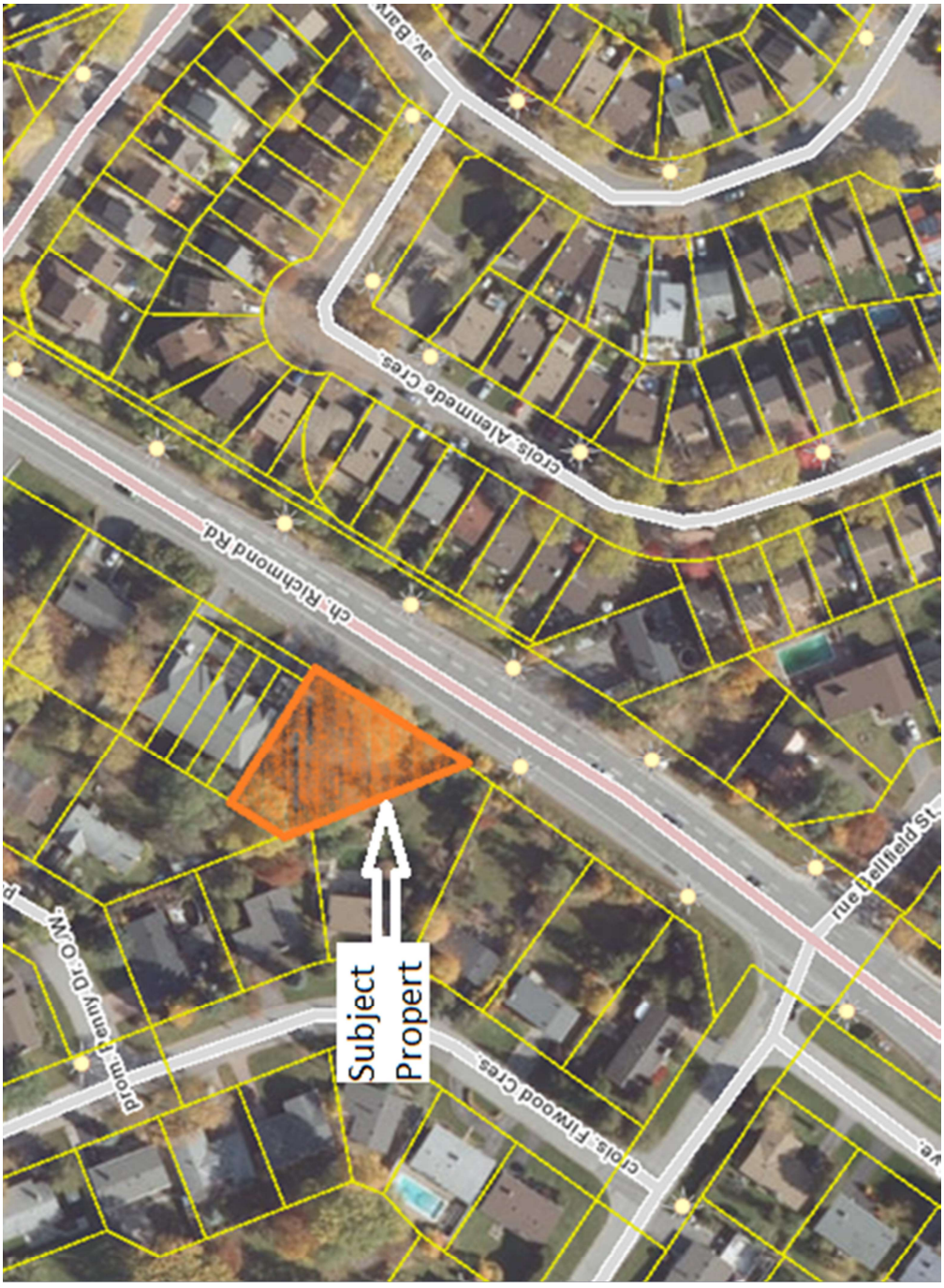
  - Install filter cloth between catch basins and frames;
  - Plan construction at proper time to avoid flooding;
  - Establish material stockpiles away from watercourses, so that barriers and filters may be installed.
- The contractor will, at every rainfall, complete inspections and guarantee proper performance. The inspection is to include:
  - Verification that water is not flowing under silt barriers;
  - Clean and change filter cloth at catch basins.
- Construction and maintenance requirements for erosion and sediment controls to comply with Ontario Provincial Standard Specification OPSS 577, and City of Ottawa specifications.
- A visual inspection shall be completed daily on sediment control barriers and any damage repaired immediately. Care will be taken to prevent damage during construction operations.

Should you have any questions or comments, please feel free to contact undersigned.

Yours truly,
Wissam Elias
P. Eng

APPENDIX A:

GeoOttawa Map


Subject Propert
ch. Richmond Rd.
crois. Alexmede Cres.
crois. Elmwood Cres.

APPENDIX B:

Storm water Management Calculations

C(5 yr)	C(100 yrl)	Area (ha)
0.55	0.63	0.100

Q(restricted) l/s = **4.70** ← enter restricted release rate

t(c)min	I (mm/h)	Q(unrestricted) l/s	Q(restricted) l/s	Q(stored) l/s	V(stored) m³
5	103.6	15.84	4.70	11.14	3.34
10	76.8	11.74	4.70	7.05	4.23
15	61.8	9.44	4.70	4.75	4.27
20	52.0	7.96	4.70	3.26	3.91
25	45.2	6.91	4.70	2.21	3.31
30	40.0	6.12	4.70	1.43	2.57
35	36.1	5.51	4.70	0.82	1.71
40	32.9	5.02	4.70	0.33	0.79
45	30.2	4.62	4.70	-0.07	-0.20
50	28.0	4.29	4.70	-0.41	-1.23
55	26.2	4.00	4.70	-0.70	-2.30
60	24.6	3.75	4.70	-0.94	-3.39
65	23.2	3.54	4.70	-1.16	-4.51
70	21.9	3.35	4.70	-1.35	-5.66
75	20.8	3.18	4.70	-1.52	-6.82
80	19.8	3.03	4.70	-1.67	-7.99
85	18.9	2.90	4.70	-1.80	-9.18
90	18.1	2.77	4.70	-1.92	-10.39
95	17.4	2.66	4.70	-2.03	-11.60
100	16.7	2.56	4.70	-2.14	-12.82
105	16.1	2.47	4.70	-2.23	-14.05
110	15.6	2.38	4.70	-2.32	-15.29
Max Vol stored	**4.27**				

STORAGE TABLE (100 Yr Storm)

t(c)min	I(100yr) mm/h	Q(actual) l/s	Q(restricted) l/s	Q(stored) l/s	V(stored) m³
5	242.7	42.2	4.7	37.5	11.24
10	178.6	31.0	4.7	26.3	15.80
15	142.9	24.8	4.7	20.1	18.12
20	120.0	20.8	4.7	16.1	19.37
25	103.8	18.0	4.7	13.3	20.02
30	91.9	16.0	4.7	11.3	20.28
35	82.6	14.3	4.7	9.7	20.27
40	75.1	13.1	4.7	8.4	20.06
45	69.1	12.0	4.7	7.3	19.71
50	64.0	11.1	4.7	6.4	19.24
55	59.6	10.4	4.7	5.7	18.69
60	55.9	9.7	4.7	5.0	18.05
65	52.6	9.1	4.7	4.4	17.35
70	49.8	8.7	4.7	4.0	16.60
75	47.3	8.2	4.7	3.5	15.81
80	45.0	7.8	4.7	3.1	14.97
85	43.0	7.5	4.7	2.8	14.11
90	41.1	7.1	4.7	2.4	13.21
95	39.4	6.9	4.7	2.2	12.28
100	37.9	6.6	4.7	1.9	11.33
105	36.5	6.3	4.7	1.6	10.36
110	35.2	6.1	4.7	1.4	9.37

Max Vol stored **20.28**

APPENDIX C:

Engineering Data Sheet

& Drawings

RD-100-O

Tag: _____

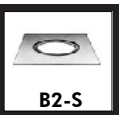
Combined Roof Drain & Secondary Overflow System

Components:


B2

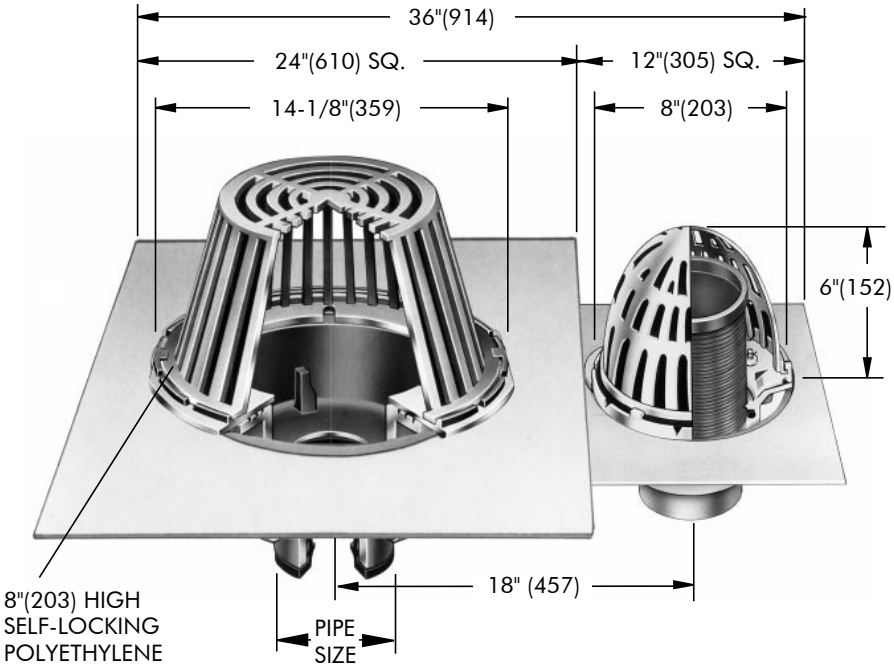

B2-FLG


W


B2-S


RD-200

SPECIFICATION: Watts Drainage Products RD-100-O combined roof drain and secondary overflow system, consisting of galvanized sump receivers; one large sump epoxy coated cast iron body, one small sump epoxy coated cast iron body, combined flashing rings and gravel stop, polyethyene dome strainers and one adjustable 4"(102) diameter ABS overflow standpipe.



Deck opening 10" (254) with sump receiver 13-1/4" (337)

Free Area Sq. In.
137

Deck opening 6-1/2"(165) with sump receiver 8"(203)

Order Code: RD-10☐☐-O-☐-☐

Ex. RD-102P-O-K

Pipe Sizing (Select One)

Suffix	Description	
2	2"(51) Pipe Size	☐
3	3"(76) Pipe Size	☐
4	4"(102) Pipe Size	☐
5	5"(127) Pipe Size	☐
6	6"(152) Pipe Size	☐
8	8"(203) Pipe Size	☐

Outlet Type (Select One)

Suffix	Description	
NH	No Hub (MJ)	☐
P	Push On	☐
T	Threaded Outlet	☐
X	Inside Caulk	☐

Options (Select One or More)

Suffix	Description	
-A	Accutrol weir (specify # 1-6 slots)	☐
-C	Secondary Membrane Clamp	☐
-D	Underdeck Clamp	☐
-E	Adjustable Extension	☐
-GSS	Stainless Steel Ballast Guard	☐
-H	Adj. to 6" IRMA Ballast Guard	☐
-K	Ductile Iron Dome	☐
-K80	Aluminum Dome	☐
-L	Vandal Proof Dome	☐
-R	2" High External Water Dam	☐
-SO	Side Outlet**	☐
-V	Fixed Extension (1-1/2",2",3",4")	☐
-W-1	Waterproofing Flange	☐
-Z	Extended Integral Wide Flange	☐
-5	Sediment Bucket	☐
-12	Galvanized Dome	☐
-13	All Galvanized	☐
-83	Mesh Covered Dome	☐
-113M	Special Epoxy from 3M Range	☐

Optional Body Material (NH Only)

Suffix	Description	
-60	PVC Body w/Socket Outlet	☐
-61	ABS Body w/Socket Outlet	☐

** Side Outlet (-SO) option only available in 2"(51), 3"(76), 4"(102) pipe sizes.
Underdeck Clamp (-BED and -D options) are not available when -SO is selected.

Job Name _____ Contractor _____

Job Location _____ Contractor's P.O. No. _____

Engineer _____ Representative _____

WATTS DRAINAGE
CANADA: 5435 North Service Road, Burlington, ON, L7L 5H7 TEL: 905-332-6718 TOLL-FREE: 1-888-208-8927 Website: www.wattsdrainage.ca
CANADA

WATTS® DRAINAGE

Adjustable Accutrol Weir

Tag: _____

Adjustable Flow Control for Roof Drains

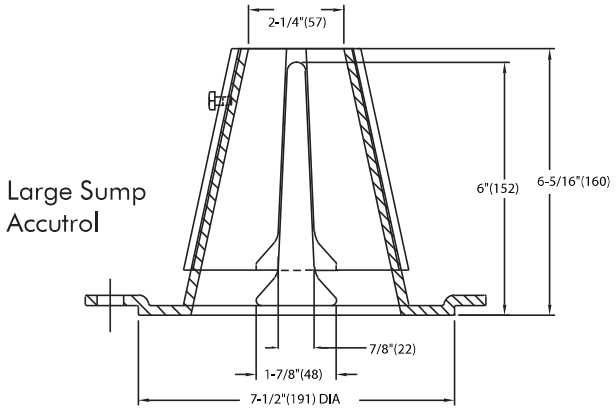
ADJUSTABLE ACCUTROL(for Large Sump Roof Drains only)

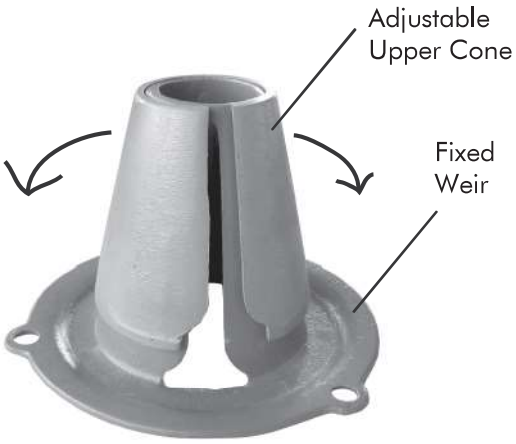
For more flexibility in controlling flow with heads deeper than 2", Watts Drainage offers the Adjustable Accutrol. The Adjustable Accutrol Weir is designed with a single parabolic opening that can be covered to restrict flow above 2" of head to less than 5 gpm per inch, up to 6" of head. To adjust the flow rate for depths over 2" of head, set the slot in the adjustable upper cone according to the flow rate required. Refer to Table 1 below.
Note: Flow rates are directly proportional to the amount of weir opening that is exposed.

EXAMPLE:

For example, if the adjustable upper cone is set to cover 1/2 of the weir opening, flow rates above 2" of head will be restricted to 2-1/2 gpm per inch of head.

Therefore, at 3" of head, the flow rate through the Accutrol Weir that has 1/2 the slot exposed will be:
[5 gpm(per inch of head) x 2 inches of head] + 2-1/2 gpm(for the third inch of head) = 12-1/2 gpm.





1/2 Weir Opening Exposed Shown Above

TABLE 1. Adjustable Accutrol Flow Rate Settings

Weir Opening Exposed	Head of Water					
	1"	2"	3"	4"	5"	6"
	Flow Rate (gallons per minute)					
Fully Exposed	5	10	15	20	25	30
3/4	5	10	13.75	17.5	21.25	25
1/2	5	10	12.5	15	17.5	20
1/4	5	10	11.25	12.5	13.75	15
Closed	5	10	10	10	10	10

Job Name _____ Contractor _____

Job Location _____ Contractor's P.O. No. _____

Engineer _____ Representative _____

WATTS® DRAINAGE
CANADA: 5435 North Service Road, Burlington, ON, L7L 5H7 TEL: 905-332-6718 TOLL-FREE: 1-888-208-8927 Website: www.wattsdrainage.ca
CANADA

SITE PLAN OF SURVEY PLAN PART 1 PLAN OF LOT 25 REGISTERED PLAN 523, CITY OF OTTAWA

ZONING: R1GG REZONED TO R4M

PROPOSED BUILDING TYPE: 4 STOREY, LOW RISE RENTAL BUILDING
16 RESIDENTIAL RENTAL UNITS

LOT DEPTH: 34.39m (112.834')

ADJACENT ZONING:
NORTH: R1GG
SOUTH: R1Y[522]
WEST SIDE: R1FF
EAST SIDE: R3N[1710]

SCHEDULE 1 AREA: AREA 'C'
SCHEDULE 1A AREA: AREA 'C'

LOT INFO - AFTER ZONING AMENDMENT - ALL MEASUREMENTS MADE TO ROW

P. STANDARD	3055 RICHMOND REQUIRED	3055 RICHMOND PROPOSED	EXISTING SINGLE	NOTES
LOT WIDTH:	18m	39.44m	42.85m	
LOT AREA:	540m2	894.88m2	1027.5m2	
HEIGHT:	14.5m	~14.5m	~6.0m	
FRONT YARD:	3.0m	3.01m	10.83m	
CORNER YARD:	n/a	n/a	n/a	
REAR YARD:	10.3m	13.50m	17.81m	
INTERIOR YARD:	3m	3.00m	0.34m	
AMENITY AREA:	168m2	203.9m2	n/a	
PARKING SPACES:	10 res.	11	1	
	4 visitor	0	0	
BIKE SPACES:	8	22	0	
M.L.C.:	NO MAX.			

BUILDING AREAS

BASEMENT FL. GFA:	-
FIRST FL. GFA:	-
SECOND FL. GFA:	-
THIRD FL. GFA:	-
FOURTH FL. GFA:	-
STORAGE:	-
GARAGE/CARPORT:	-
EXITS/CORR. (ALL FLOORS):	-
TOTAL GFA:	-
TOTAL ALL AREAS:	-

PROPOSED SITE DEVELOPMENT INFO

NEW GROSS FLOOR AREA:
EX. GROSS FLOOR AREA:
NUMBER OF UNITS:
PROPOSED STOREYS:

BUILDING COVERAGE:
SOFT LANDSCAPING CVG.:
HARD LANDSCAPING CVG.:
DECKS/PORCH/STEPS:
ASPHALT CVG.:
OTHER:

SURVEY INFO.

SURVEY INFO TAKEN FROM
SURVEYOR'S REAL PROPERTY REPORT
PART 1, PLAN OF LOT 25, REGISTERED PLAN 523, CITY OF OTTAWA
PREPARED BY:
ANNIS, O'SULLIVAN, VOLLEBEKK LTD
DEC. 20, 2021

SITE LEGEND

EX. TREE TO BE REMOVED
NEW CONIFEROUS TREE
DENOTES SOFT LANDSCAPING
DENOTES HARD LANDSCAPING
EXISTING BUILDING FOOTPRINT
PROPOSED RIVERSTONE
PROPOSED ASPHALT DRIVEWAY
PROPOSED WOOD DECKS/ BALCONIES
CAR PARKING SPACE (ASPHALT)
BYCYCLE PARKING (ASPAHLT)
WASTE COLLECTION AREA
SNOW STORAGE AREA
PROPOSED/EXISTING ENTRY/EXIT
PF TEMPORARY PROTECTION FENCE
U.P. EX. UTILITY POLE
EX. CHAINED LINK/BOARD FENCE
PROPERTY LINE
MOTION SENSING EXT. LIGHTS

WASTE COLLECTION LEGEND

GB 3YD + 2YD GARBAGE CONTAINERS
BB 2YD FIBRE CONTAINER
B 2YDY GML CONTAINER
G 240L ORGANICS
PRIVATE COLLECTION

SITE NOTES

NEW ROOF DOWN SPOUTS SHALL NOT BE DIRECTED TOWARDS THE ADJACENT PROPERTIES

EXCAVATED MATERIAL TO BE REMOVED FROM PROPERTY

ALL GRADE TO SLOPE 2% AWAY FROM FOUNDATION WALL

ALL MEASUREMENTS ARE METRIC (ACCOMPANYING IMPERIAL MEAS. MAY APPEAR)

EXISTING GRADING AND DRAINAGE PATTERNS NOT TO BE ALTERED UNLESS OTHERWISE NOTED BY THE CIVIL ENGINEER

SNOW ACCUMULATION TO BE REMOVED OFF SITE IMMEDIATELY AS NEEDED

EXISTING PLANTING MATERIAL

CODE	COMMON NAME	QTY.	SIZE (DIA.)	CONDITION/NOTES
DECIDOUS TREES				
CONIFEROUS TREES				
SHRUBS				

NEW PLANTING MATERIAL

CODE	COMMON NAME	QTY.	SIZE (DIA.)	CONDITION/NOTES
DECIDOUS TREES				
DT1	RED MAPLE	2	50mm Cal.	
CONIFEROUS TREES				
SHRUBS				

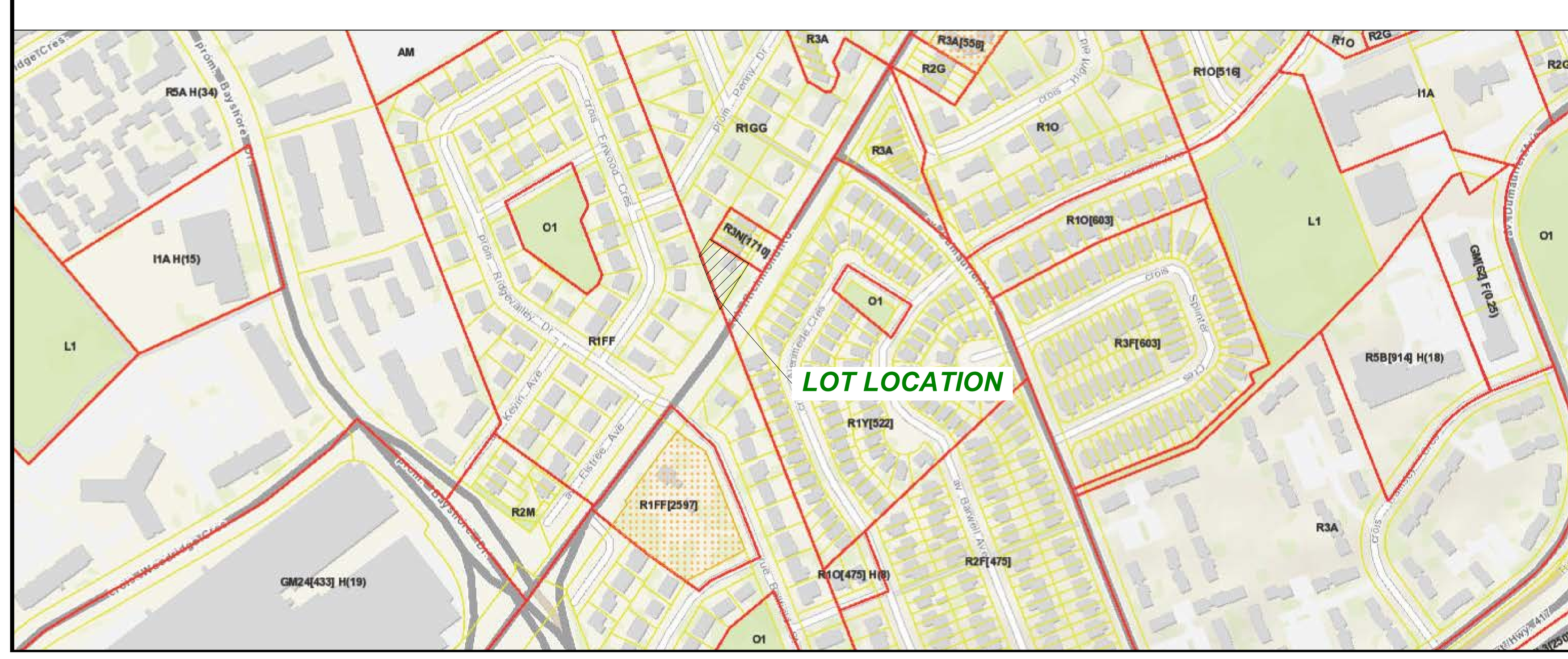
TREE CONSERVATION NOTES

1. ERECT A FENCE AT THE CRITICAL ROOT ZONE (CRZ1) OF TREES;
2. DO NOT PLACE ANY MATERIAL OR EQUIPMENT WITHIN THE CRZ OF THE TREE;
3. DO NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE;
4. DO NOT RAISE OR LOWER THE EXISTING GRADE WITHIN THE CRZ WITHOUT APPROVAL;
5. TUNNEL OR BORE WHEN DIGGING WITHIN THE CRZ OF A TREE;
6. DO NOT DAMAGE THE ROOT SYSTEM, TRUNK OR BRANCHES OF ANY TREE;
7. ENSURE THAT EXHAUST FUMES FROM ALL EQUIPMENT ARE NOT DIRECTED TOWARDS ANY TREE'S CANOPY.

* THE CRITICAL ROOT ZONE (CRZ) IS ESTABLISHED AS BEING 10 CENTIMETRES FROM THE TRUNK OF A TREE FOR EVERY CENTIMETRE OF TRUNK DIAMETER AT BREAST HEIGHT (DBH). THE CRZ IS CALCULATED AS DBH X 10 CM.
* TREE PROTECTION FENCE (PF) TO BE ERECTED BEFORE AND REMAIN UNTIL BUILDING CONSTRUCTION HAS COMPLETED AND TO CONSIST OF 1.8m HIGH PLYWOOD HOARDING (SEE DIAGRAM BELOW).

1 A1 SITE PLAN
SCALE 3/32" = 1'-0"

3 A1 KEY PLAN & CONTEXT
SCALE NO SCALE



UNPOISED ARCHITECTURE INC.
5-16 SWEETLAND AVE.
OTTAWA, ON. K1N-7T6

AZUL DESIGNS

OTTAWA, ON. K1H-7G2

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirements set out in the Ontario Building Code to be a designer.

RESPONSIBILITIES:

DO NOT SCALE DRAWINGS

ALL DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 2006

ALL CONTRACTORS MUST WORK IN ACCORDANCE WITH ALL LAWS, REGULATIONS AND BYLAWS HAVING JURISDICTION

IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ALL ERRORS AND OMISSIONS TO THE ARCHITECT/DESIGNER

GENERAL NOTES:

3055 RICHMOND ROAD

SCOPE OF WORK: NEW 4 STOREY LOW RISE RENTAL BUILDING - 16 UNITS

OWNER/DEVELOPER:
FARES ELSABBAGH
1886 MERIVALE RD.
OTTAWA, ON.
K2G 1E6

ARCHITECT/DESIGNER:
UNPOISED ARCHITECTURE INC./AZUL DESIGNS
5-16 SWEETLAND AVE.
OTTAWA, ON.
K1N-7T6

APPLICANT/PLANNER:
WSP CANADA INC.
2611 QUEENSVIEW DR. SUITE 300
OTTAWA, ON.
K2B-8K2

CIVIL ENGINEER:
W.ELIAS & ASSOCIATES
204 BOREALIS CRES.
OTTAWA, ON.
K1K-4V1

LANDSCAPING:
JOHN K. SZCZEPANIAK
P.O. Box 4207, Station 'E'
OTTAWA, ON.
K1S 5B2

SURVEYOR:
ANNIS, O'SULLIVAN, VOLLEBEKK LTD
14 CONCOURSE GATE • SUITE 500
OTTAWA, ON.
K2E-7S6

CONSULTANTS:

STRUCTURAL - TBD
MECHANICAL - TBD
ELECTRICAL - TBD

NO.	REVISION/ISSUE	DATE (M/D/Y)
4	REVISED SITE PLAN	00/00/00
3	REVISED SITE PLAN	00/00/00
2	REVISED SITE PLAN	05/17/22
1	PRELIMINARIES	04/12/22

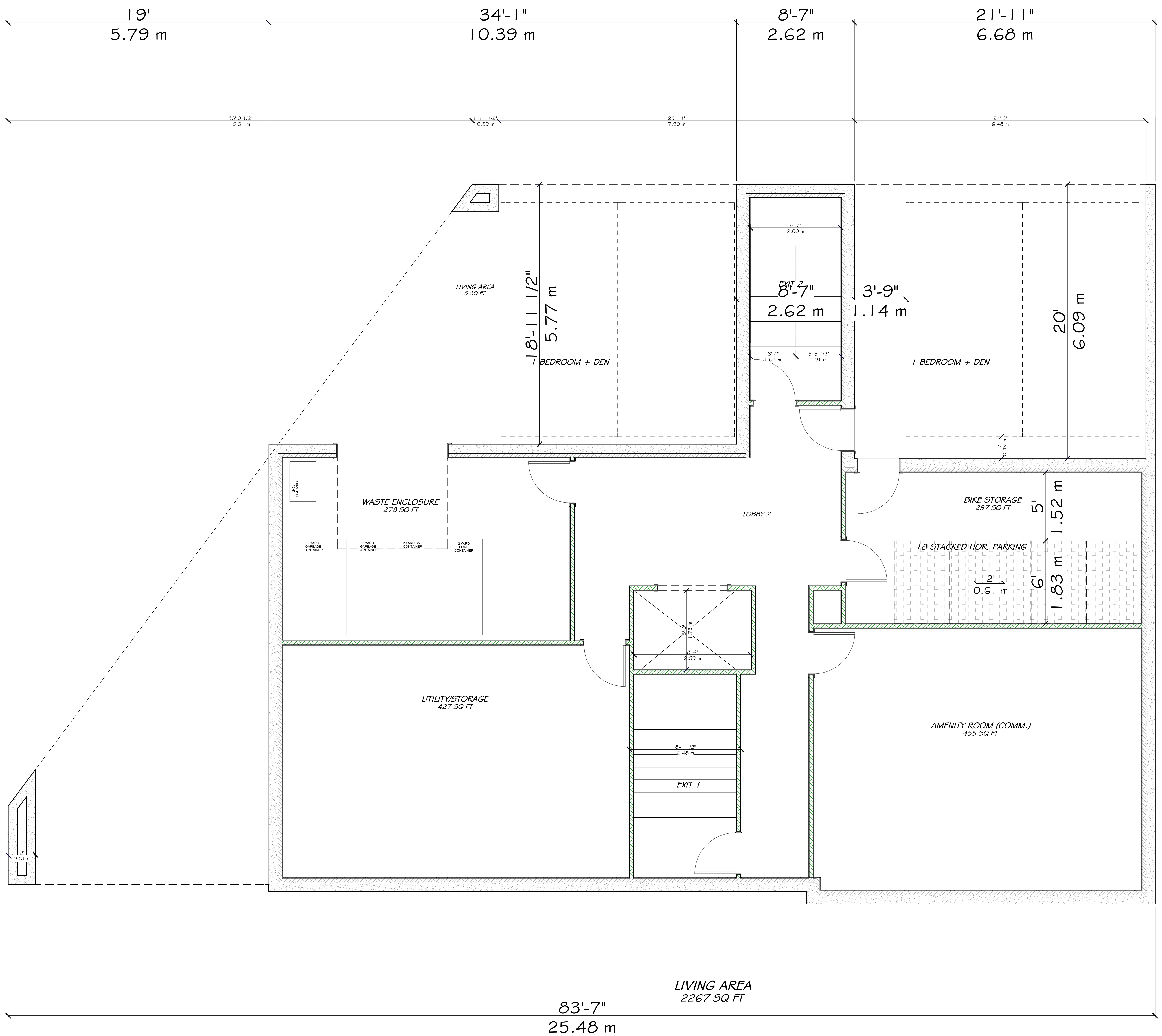
PROJECT: **3055 RICHMOND RD.**

3055 RICHMOND RD.
OTTAWA, ON K2B 6S6
613-000-0000

DRAWING NAME: SITE PLAN

DRAWN BY: ---
DATE: APRIL 12, 2022
SCALE: AS NOTED
SHEET: A1

FILE NUMBER: D00-00-00-0000



1 / A2 BASEMENT PLAN
SCALE 1/4" = 1'-0"

3055 RICHMOND ROAD

SCOPE OF WORK: NEW 4 STOREY LOW RISE RENTAL BUILDING - 16 UNITS

UNPOISED ARCHITECTURE INC.
5-16 SWEETLAND AVE.
OTTAWA, ON. K1N-7T6

AZUL DESIGNS

OTTAWA, ON. K1H-7G2

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RESPONSIBILITIES:

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GENERAL NOTES:

OWNER/DEVELOPER:
FARES ELSABBAGH
1886 MERIVALE RD.
OTTAWA, ON.
K2G 1E6

ARCHITECT/DESIGNER:
UNPOISED ARCHITECTURE INC./AZUL DESIGNS
5-16 SWEETLAND AVE.
OTTAWA, ON.
K1N-7T6

APPLICANT/PLANNER:
WSP CANADA INC.
2611 QUEENSVIEW DR. SUITE 300
OTTAWA, ON.
K2B-8K2

CIVIL ENGINEER:
W.ELIAS & ASSOCIATES
204 BOREALIS CRES.
OTTAWA, ON.
K1K-4V1

LANDSCAPING:
JOHN K. SZCZEPANIAK
P.O. Box 4207, Station 'E'
OTTAWA, ON.
K1S 5B2

SURVEYOR:
ANNIS, O'SULLIVAN, VOLLEBEKK LTD
14 CONCOURSE GATE • SUITE 500
OTTAWA, ON.
K2E-7S6

CONSULTANTS:

STRUCTURAL - TBD
MECHANICAL - TBD
ELECTRICAL - TBD

NO.	REVISION/ISSUE	DATE (M/D/Y)
4	REVISED SITE PLAN	00/00/00
3	REVISED SITE PLAN	00/00/00
2	REVISED SITE PLAN	05/17/22
1	PRELIMINARIES	04/12/22

PROJECT: **3055 RICHMOND RD.**

3055 RICHMOND RD.
OTTAWA, ON K2B 6S6
613-000-0000

DRAWING NAME: FLOOR PLANS

DRAWN BY: ---

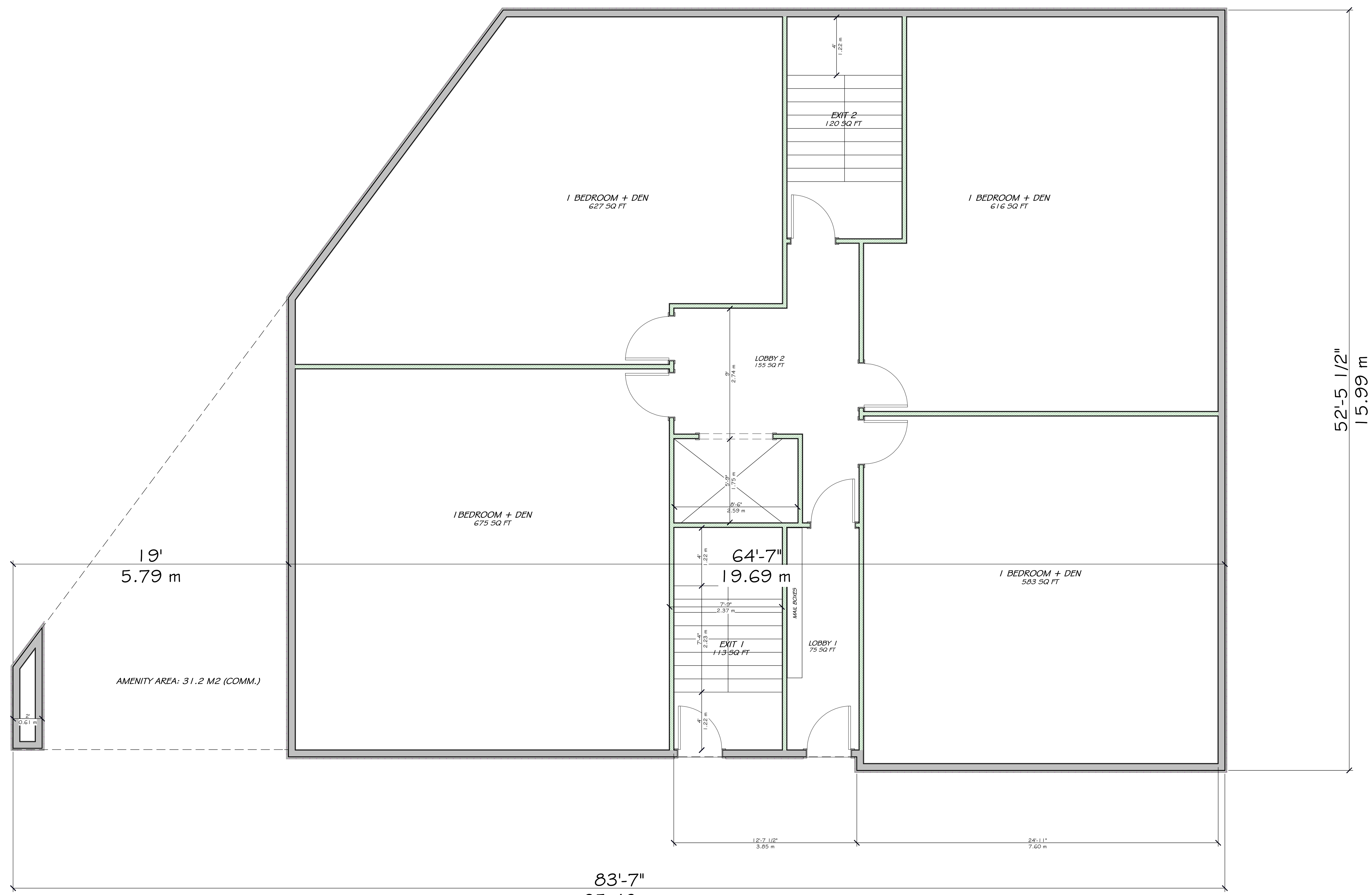
DATE: APRIL 12, 2022

SCALE: AS NOTED

SHEET: A2

FILE NUMBER: D00-00-00-0000

TOTAL 1ST FLOOR AREA: 297.6 M2 (3203.28 FT2)
G.F.A: 245.2 M2 (2639.54 FT2)



LIVING AREA
3204 SQ FT

2 / A3 FIRST FLOOR PLAN
SCALE 1/4" = 1'-0"

3055 RICHMOND ROAD
SCOPE OF WORK: NEW 4 STOREY LOW RISE RENTAL BUILDING - 16 UNITS

UNPOISED ARCHITECTURE INC.
5-16 SWEETLAND AVE.
OTTAWA, ON. K1N-7T6

AZUL DESIGNS

OTTAWA, ON. K1H-7G2

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirements set out in the Ontario Building Code to be a designer.

RESPONSIBILITIES:

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GENERAL NOTES:

OWNER/DEVELOPER:
FARES ELSABBAGH
1886 MERIVALE RD.
OTTAWA, ON.
K2G 1E6

ARCHITECT/DESIGNER:
UNPOISED ARCHITECTURE INC./AZUL DESIGNS
5-16 SWEETLAND AVE.
OTTAWA, ON.
K1N-7T6

APPLICANT/PLANNER:
WSP CANADA INC.
2611 QUEENSVIEW DR. SUITE 300
OTTAWA, ON.
K2B-8K2

CIVIL ENGINEER:
W.ELIAS & ASSOCIATES
204 BOREALIS CRES.
OTTAWA, ON.
K1K-4V1

LANDSCAPING:
JOHN K. SZCZEPANIAK
P.O. Box 4207, Station 'E'
OTTAWA, ON.
K1S 5B2

SURVEYOR:
ANNIS, O'SULLIVAN, VOLLEBEKK LTD
14 CONCOURSE GATE • SUITE 500
OTTAWA, ON.
K2E-7S6

CONSULTANTS:

STRUCTURAL - TBD
MECHANICAL - TBD
ELECTRICAL - TBD

NO.	REVISION/ISSUE	DATE (M/D/Y)
4	REVISED SITE PLAN	00/00/00
3	REVISED SITE PLAN	00/00/00
2	REVISED SITE PLAN	05/17/22
1	PRELIMINARIES	04/12/22

PROJECT: **3055 RICHMOND RD.**

3055 RICHMOND RD.
OTTAWA, ON K2B 6S6
613-000-0000

DRAWING NAME: FLOOR PLANS

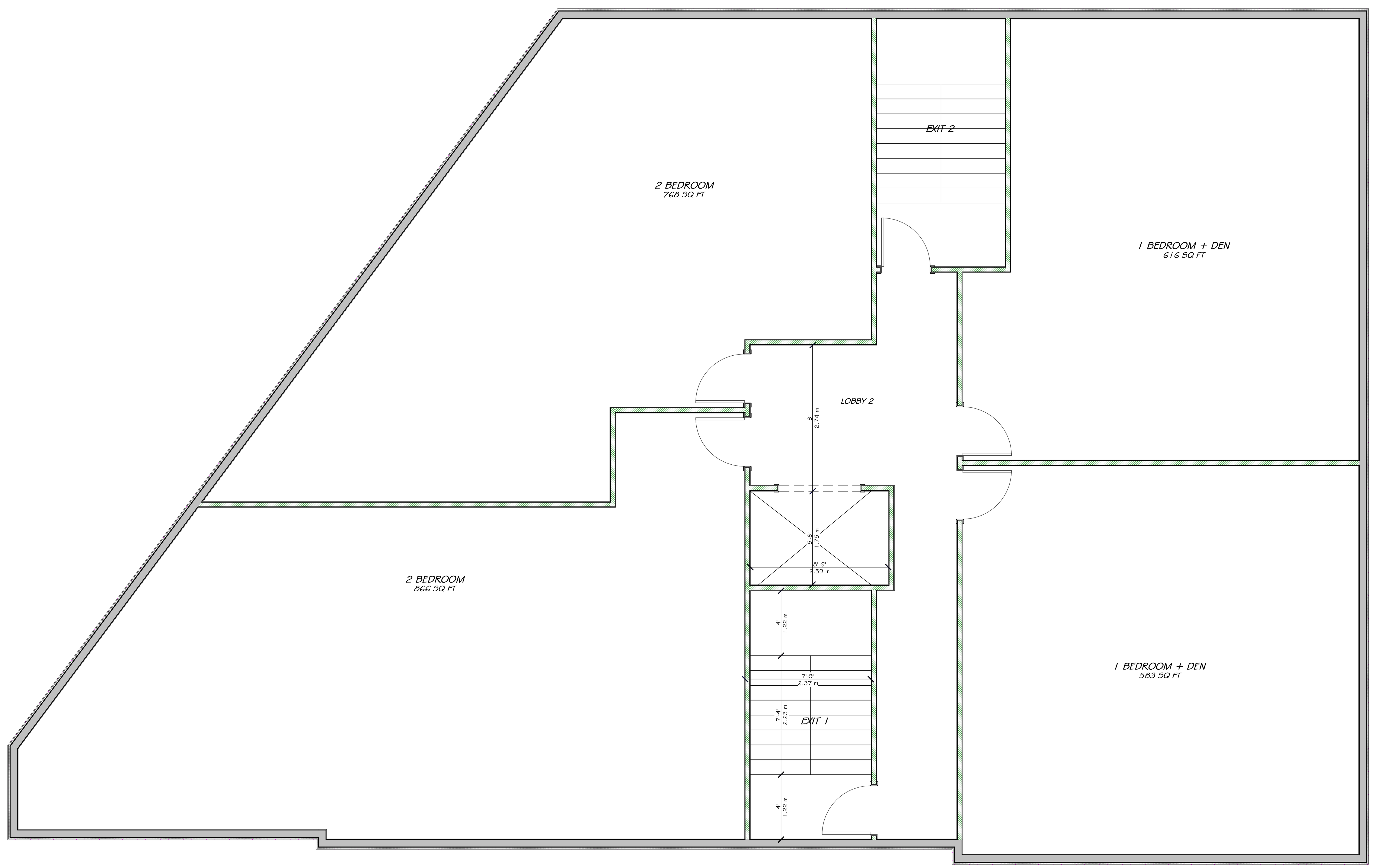
DRAWN BY: ---

DATE: APRIL 12, 2022

SCALE: AS NOTED

SHEET: A3

FILE NUMBER: D00-00-00-0000



LIVING AREA
3553 SQ FT

1
A4
SECOND FLOOR PLAN
SCALE 1/4" = 1'-0"

UNPOISED ARCHITECTURE INC.
5-16 SWEETLAND AVE.
OTTAWA, ON. K1N-7T6

AZUL DESIGNS

OTTAWA, ON. K1H-7G2

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirements set out in the Ontario Building Code to be a designer.

RESPONSIBILITIES:

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GENERAL NOTES:

3055 RICHMOND ROAD
SCOPE OF WORK: NEW 4 STOREY LOW RISE RENTAL BUILDING - 16 UNITS

OWNER/DEVELOPER:
FARES ELSABBAGH
1886 MERIVALE RD.
OTTAWA, ON.
K2G 1E6

ARCHITECT/DESIGNER:
UNPOISED ARCHITECTURE INC./AZUL DESIGNS
5-16 SWEETLAND AVE.
OTTAWA, ON.
K1N-7T6

APPLICANT/PLANNER:
WSP CANADA INC.
2611 QUEENSVIEW DR. SUITE 300
OTTAWA, ON.
K2B-8K2

CIVIL ENGINEER:
W.ELIAS & ASSOCIATES
204 BOREALIS CRES.
OTTAWA, ON.
K1K-4V1

LANDSCAPING:
JOHN K. SZCZEPANIAK
P.O. Box 4207, Station 'E'
OTTAWA, ON.
K1S 5B2

SURVEYOR:
ANNIS, O'SULLIVAN, VOLLEBEKK LTD
14 CONCOURSE GATE • SUITE 500
OTTAWA, ON.
K2E-7S6

CONSULTANTS:

STRUCTURAL - TBD
MECHANICAL - TBD
ELECTRICAL - TBD

M/D/Y

NO.	REVISION/ISSUE	DATE
4	REVISED SITE PLAN	00/00/00
3	REVISED SITE PLAN	00/00/00
2	REVISED SITE PLAN	05/17/22
1	PRELIMINARIES	04/12/22

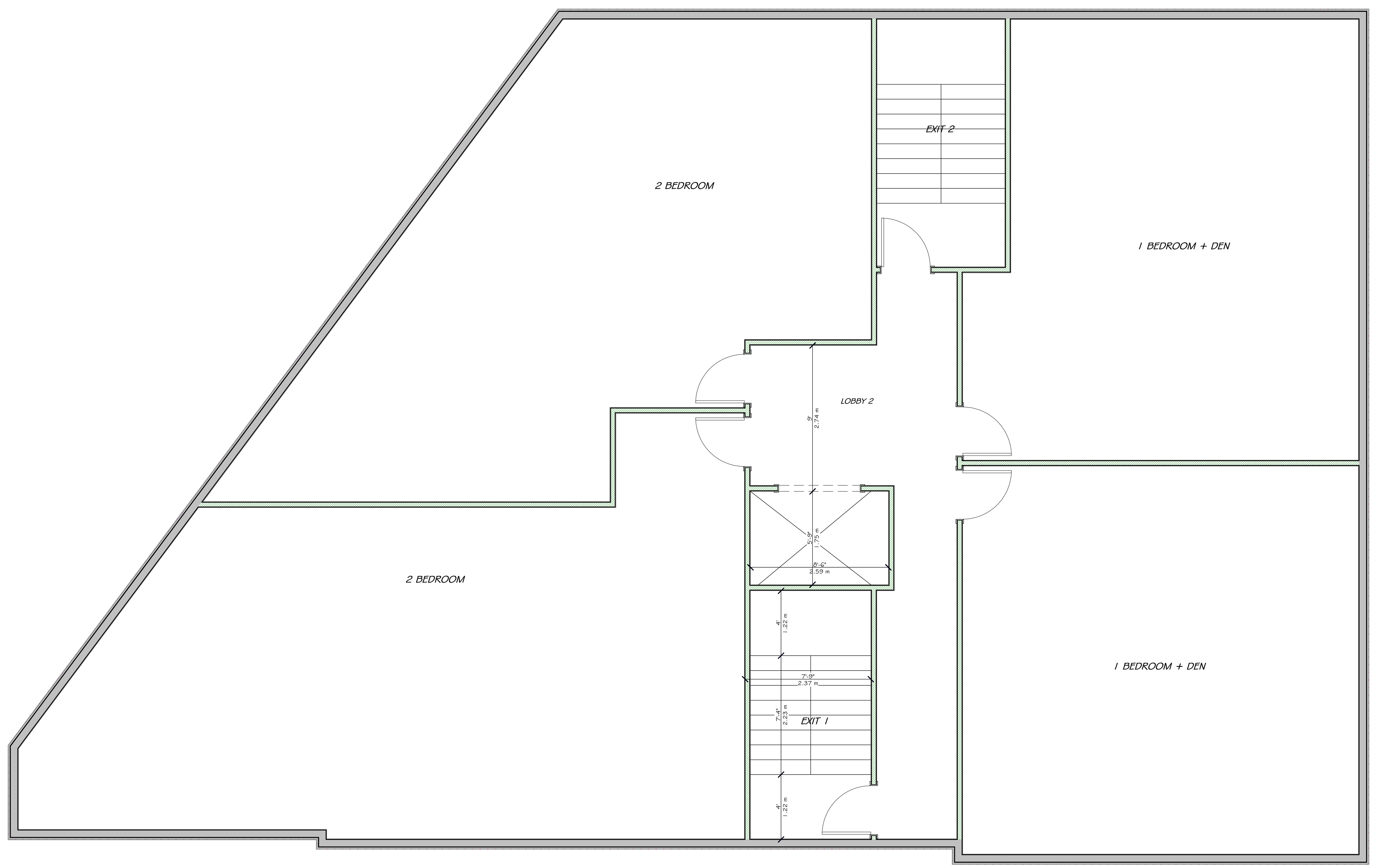
PROJECT: **3055 RICHMOND RD.**

3055 RICHMOND RD.
OTTAWA, ON K2B 6S6
613-000-0000

DRAWING NAME:
PLANS

DRAWN BY: ---
DATE: APRIL 12, 2022
SCALE: AS NOTED
SHEET: A4

FILE NUMBER: D00-00-00-0000



LIVING AREA
3553 SQ FT

1 / A5 THIRD FLOOR PLAN
SCALE 1/4" = 1'-0"

UNPOISED ARCHITECTURE INC.
5-16 SWEETLAND AVE.
OTTAWA, ON. K1N-7T6

AZUL DESIGNS

OTTAWA, ON. K1H-7G2

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RESPONSIBILITIES:

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GENERAL NOTES:

3055 RICHMOND ROAD
SCOPE OF WORK: NEW 4 STOREY LOW RISE RENTAL BUILDING - 16 UNITS

OWNER/DEVELOPER:
FARES ELSABBAGH
1886 MERIVALE RD.
OTTAWA, ON.
K2G 1E6

ARCHITECT/DESIGNER:
UNPOISED ARCHITECTURE INC./AZUL DESIGNS
5-16 SWEETLAND AVE.
OTTAWA, ON.
K1N-7T6

APPLICANT/PLANNER:
WSP CANADA INC.
2611 QUEENSVIEW DR. SUITE 300
OTTAWA, ON.
K2B-8K2

CIVIL ENGINEER:
W.ELIAS & ASSOCIATES
204 BOREALIS CRES.
OTTAWA, ON.
K1K-4V1

LANDSCAPING:
JOHN K. SZCZEPANIAK
P.O. Box 4207, Station 'E'
OTTAWA, ON.
K1S 5B2

SURVEYOR:
ANNIS, O'SULLIVAN, VOLLEBEKK LTD
14 CONCOURSE GATE • SUITE 500
OTTAWA, ON.
K2E-7S6

CONSULTANTS:

STRUCTURAL - TBD
MECHANICAL - TBD
ELECTRICAL - TBD

M/D/Y

NO.	REVISION/ISSUE	DATE
4	REVISED SITE PLAN	00/00/00
3	REVISED SITE PLAN	00/00/00
2	REVISED SITE PLAN	05/17/22
1	PRELIMINARIES	04/12/22

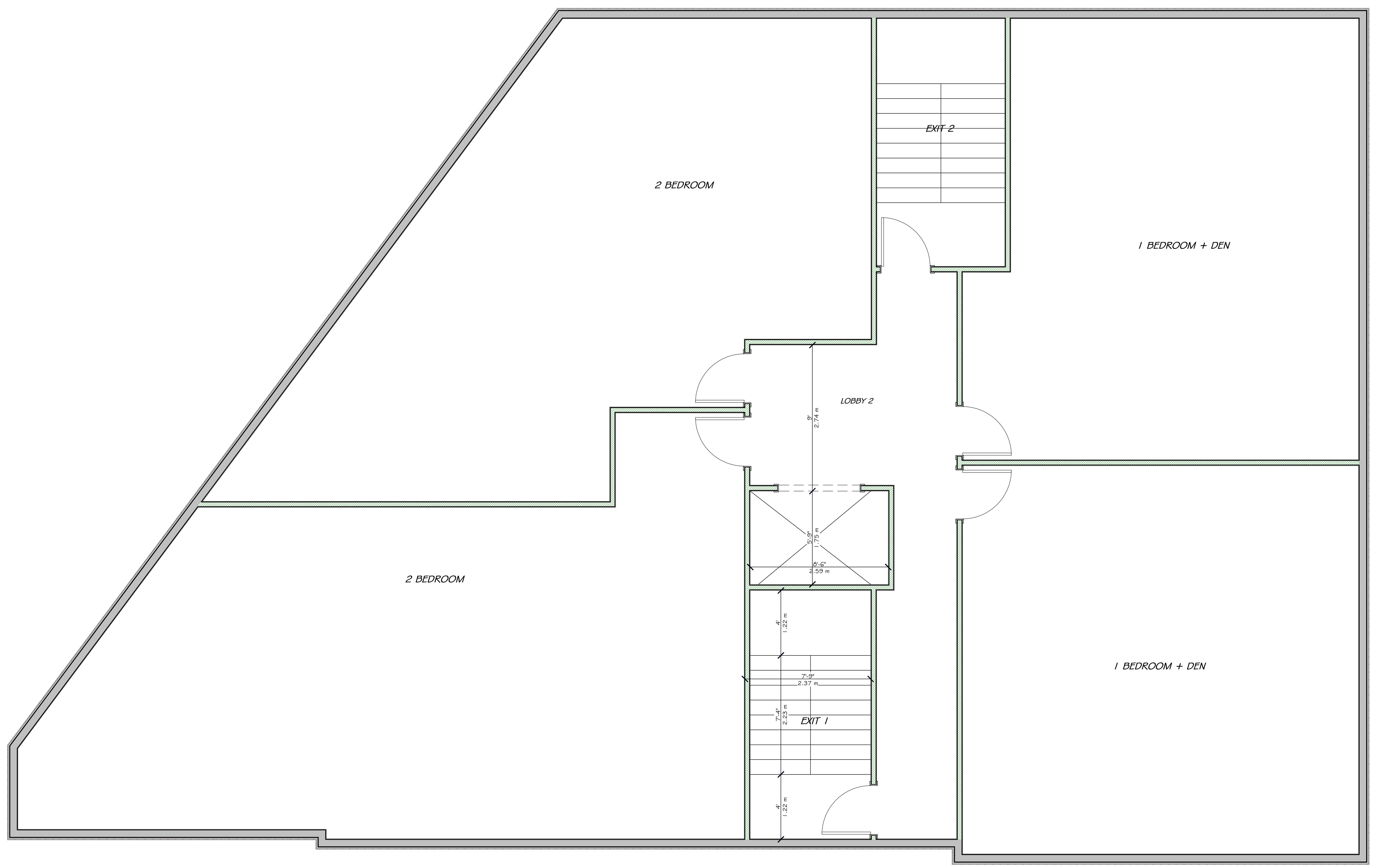
PROJECT: **3055 RICHMOND RD.**

3055 RICHMOND RD.
OTTAWA, ON K2B 6S6
613-000-0000

DRAWING NAME:
ELEVATIONS

DRAWN BY: ---
DATE: APRIL 12, 2022
SCALE: AS NOTED
SHEET: A5

FILE NUMBER: D00-00-00-0000



LIVING AREA
3553 SQ FT

1 / A6 FOURTH FLOOR PLAN
SCALE 1/4" = 1'-0"

UNPOISED ARCHITECTURE INC.
5-16 SWEETLAND AVE.
OTTAWA, ON. K1N-7T6

AZUL DESIGNS

OTTAWA, ON. K1H-7G2

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GENERAL NOTES:

3055 RICHMOND ROAD

SCOPE OF WORK: NEW 4 STOREY LOW RISE RENTAL BUILDING - 16 UNITS

OWNER/DEVELOPER:
FARES ELSABBAGH
1886 MERIVALE RD.
OTTAWA, ON.
K2G 1E6

ARCHITECT/DESIGNER:
UNPOISED ARCHITECTURE INC./AZUL DESIGNS
5-16 SWEETLAND AVE.
OTTAWA, ON.
K1N-7T6

APPLICANT/PLANNER:
WSP CANADA INC.
2611 QUEENSVIEW DR. SUITE 300
OTTAWA, ON.
K2B-8K2

CIVIL ENGINEER:
W.ELIAS & ASSOCIATES
204 BOREALIS CRES.
OTTAWA, ON.
K1K-4V1

LANDSCAPING:
JOHN K. SZCZEPANIAK
P.O. Box 4207, Station 'E'
OTTAWA, ON.
K1S 5B2

SURVEYOR:
ANNIS, O'SULLIVAN, VOLLEBEKK LTD
14 CONCOURSE GATE • SUITE 500
OTTAWA, ON.
K2E-7S6

CONSULTANTS:

STRUCTURAL - TBD
MECHANICAL - TBD
ELECTRICAL - TBD

NO.	REVISION/ISSUE	DATE (M/D/Y)
4	REVISED SITE PLAN	00/00/00
3	REVISED SITE PLAN	00/00/00
2	REVISED SITE PLAN	05/17/22
1	PRELIMINARIES	04/12/22

PROJECT: **3055 RICHMOND RD.**

3055 RICHMOND RD.
OTTAWA, ON K2B 6S6
613-000-0000

DRAWING NAME:
DETAILS & SECTIONS

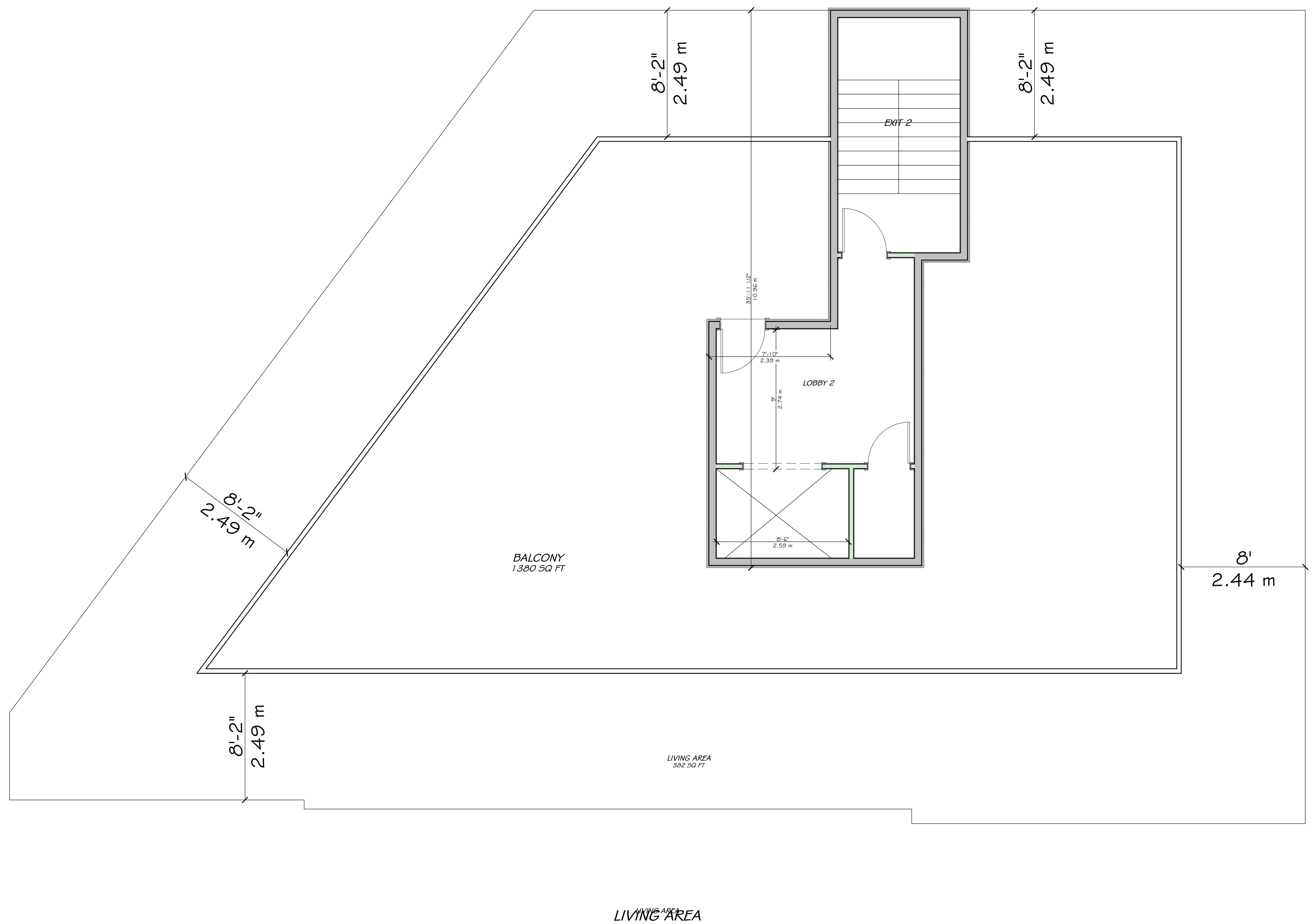
DRAWN BY: ---

DATE: APRIL 12, 2022

SCALE: AS NOTED

SHEET: A6

FILE NUMBER: D00-00-00-0000



1 ROOF PLAN
A7 SCALE 1/4" = 1'-0"

3055 RICHMOND ROAD

SCOPE OF WORK: NEW 4 STOREY LOW RISE
RENTAL BUILDING - 16 UNITS

UNPOISED ARCHITECTURE INC.
5-16 SWEETLAND AVE.
OTTAWA, ON. K1N-7T6

AZUL DESIGNS

OTTAWA, ON. K1H-7G2

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GENERAL NOTES:

OWNER/DEVELOPER:
FARES ELSABBAGH
1886 MERIVALE RD.
OTTAWA, ON.
K2G 1E6

ARCHITECT/DESIGNER:
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OTTAWA, ON.
K1N-7T6

APPLICANT/PLANNER:
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K2B-8K2

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OTTAWA, ON.
K1K-4V1

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SURVEYOR:
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14 CONCOURSE GATE • SUITE 500
OTTAWA, ON.
K2E-7S6

CONSULTANTS:

STRUCTURAL - TBD
MECHANICAL - TBD
ELECTRICAL - TBD

		M/D/Y
4	REVISED SITE PLAN	00/00/00
3	REVISED SITE PLAN	00/00/00
2	REVISED SITE PLAN	05/17/22
1	PRELIMINARIES	04/12/22
NO.	REVISION/ISSUE	DATE

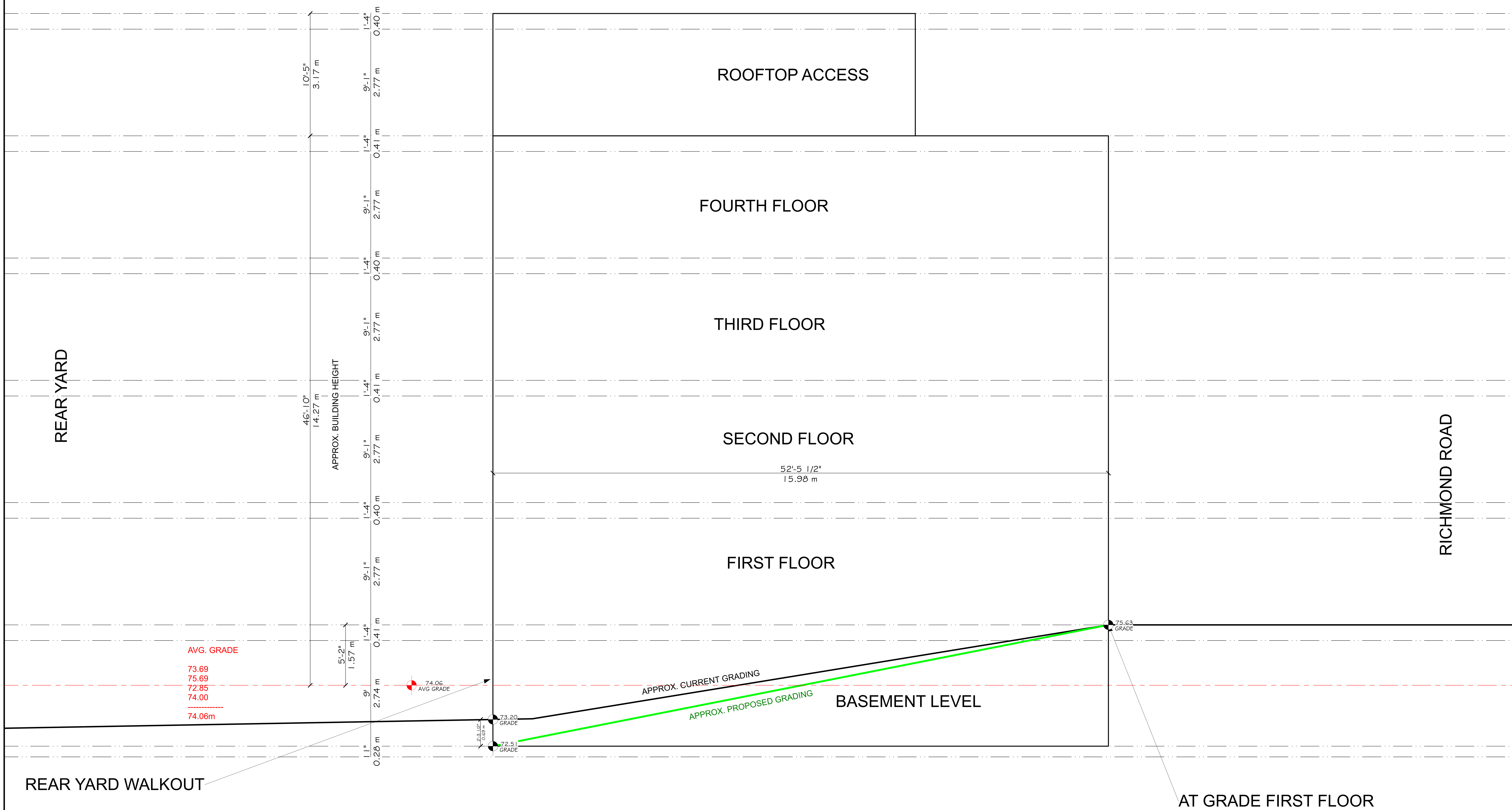
PROJECT: **3055 RICHMOND RD.**

3055 RICHMOND RD.
OTTAWA, ON K2B 6S6
613-000-0000

DRAWING NAME:
FLOOR PLANS

DRAWN BY: ---
SHEET: A7
DATE: APRIL 12, 2022
SCALE: AS NOTED

FILE NUMBER: D00-00-00-0000



3055 RICHMOND ROAD

SCOPE OF WORK: NEW 4 STOREY LOW RISE RENTAL BUILDING - 16 UNITS

UNPOISED ARCHITECTURE INC.
5-16 SWEETLAND AVE.
OTTAWA, ON. K1N-7T6

AZUL DESIGNS

OTTAWA, ON. K1H-7G2

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GENERAL NOTES:

OWNER/DEVELOPER:
FARES ELSABBAGH
1886 MERIVALE RD.
OTTAWA, ON.
K2G 1E6

ARCHITECT/DESIGNER:
UNPOISED ARCHITECTURE INC./AZUL DESIGNS
5-16 SWEETLAND AVE.
OTTAWA, ON.
K1N-7T6

APPLICANT/PLANNER:
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K2B-8K2

CIVIL ENGINEER:
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SURVEYOR:
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OTTAWA, ON.
K2E-7S6

CONSULTANTS:

STRUCTURAL - TBD
MECHANICAL - TBD
ELECTRICAL - TBD

NO.	REVISION/ISSUE	DATE (M/D/Y)
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2	REVISED SITE PLAN	05/17/22
1	PRELIMINARIES	04/12/22

PROJECT: **3055 RICHMOND RD.**
3055 RICHMOND RD.
OTTAWA, ON K2B 6S6
613-000-0000

DRAWING NAME: FLOOR PLANS

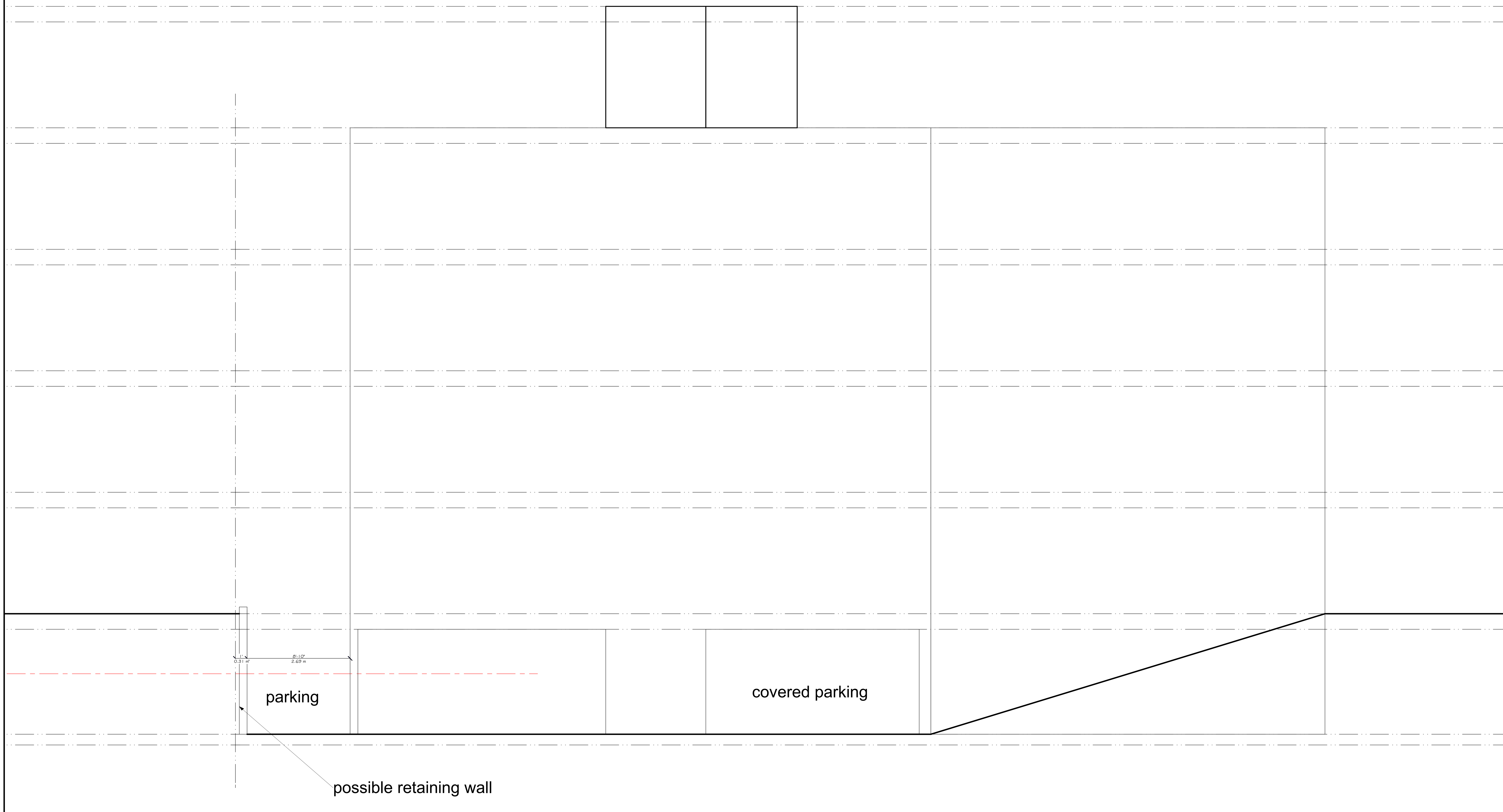
DRAWN BY: ---

DATE: APRIL 12, 2022

SCALE: AS NOTED

SHEET: A8

FILE NUMBER: D00-00-00-0000



REAR WALL MASSING

1 / A1 BUILDING LOCATION PLAN
SCALE 1/8" = 1'-0"

UNPOISED ARCHITECTURE INC.
5-16 SWEETLAND AVE.
OTTAWA, ON. K1N-7T6

AZUL DESIGNS

OTTAWA, ON. K1H-7G2

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RESPONSIBILITIES:

DO NOT SCALE DRAWINGS

ALL DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 2006

ALL CONTRACTORS MUST WORK IN ACCORDANCE WITH ALL LAWS, REGULATIONS AND BYLAWS HAVING JURISDICTION

IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ALL ERRORS AND OMISSIONS TO THE ARCHITECT/DESIGNER

GENERAL NOTES:

3055 RICHMOND ROAD

SCOPE OF WORK: NEW 4 STOREY LOW RISE RENTAL BUILDING - 16 UNITS

OWNER/DEVELOPER:
FARES ELSABBAGH
1886 MERIVALE RD.
OTTAWA, ON.
K2G 1E6

ARCHITECT/DESIGNER:
UNPOISED ARCHITECTURE INC./AZUL DESIGNS
5-16 SWEETLAND AVE.
OTTAWA, ON.
K1N-7T6

APPLICANT/PLANNER:
WSP CANADA INC.
2611 QUEENSVIEW DR. SUITE 300
OTTAWA, ON.
K2B-8K2

CIVIL ENGINEER:
W.ELIAS & ASSOCIATES
204 BOREALIS CRES.
OTTAWA, ON.
K1K-4V1

LANDSCAPING:
JOHN K. SZCZEPANIAK
P.O. Box 4207, Station 'E'
OTTAWA, ON.
K1S 5B2

SURVEYOR:
ANNIS, O'SULLIVAN, VOLLEBEKK LTD
14 CONCOURSE GATE • SUITE 500
OTTAWA, ON.
K2E-7S6

CONSULTANTS:

STRUCTURAL - TBD
MECHANICAL - TBD
ELECTRICAL - TBD

NO.	REVISION/ISSUE	DATE (M/D/Y)
4	REVISED SITE PLAN	00/00/00
3	REVISED SITE PLAN	00/00/00
2	REVISED SITE PLAN	05/17/22
1	PRELIMINARIES	04/12/22

PROJECT: **3055 RICHMOND RD.**
3055 RICHMOND RD.
OTTAWA, ON K2B 6S6
613-000-0000

DRAWING NAME: SITE PLAN AND NOTES

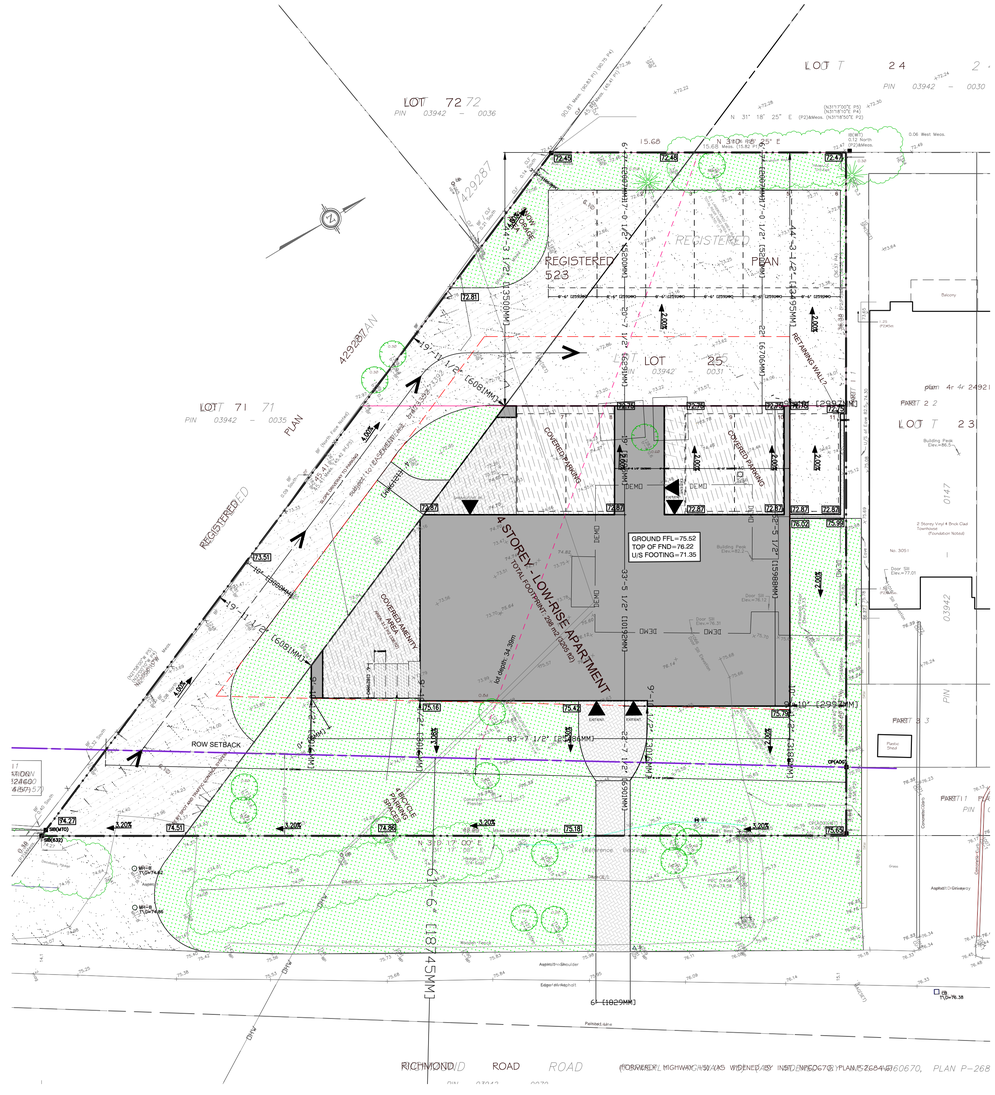
DRAWN BY: ---
DATE: APRIL 12, 2022
SCALE: AS NOTED
SHEET: A1 A9

FILE NUMBER: D00-00-00-0000

PROVIDE FROST PROTECTION FOR FOOTING ABOVE 1.5m BELOW THE SURROUNDING GRADE

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES.
THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

CONTRACTOR IS RESPONSIBLE TO KEEP THE ROADS FREE AND CLEAN FROM MUD OR DEBRIS.



GENERAL NOTES FOR SERVICING

1. ALL SERVICES, MATERIALS, CONSTRUCTION METHODS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND REGULATIONS OF THE CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS, ONTARIO PROVINCIAL SPECIFICATION STANDARD SPECIFICATION (OPSS) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD), UNLESS OTHERWISE SPECIFIED, TO THE SATISFACTION OF THE CITY AND THE CONSULTANT.
2. THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMAINS SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES, STRUCTURES AND APPURTENANCES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SATISFY HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM DURING THE COURSE OF CONSTRUCTION. ANY RELOCATION OF EXISTING UTILITIES REQUIRED BY THE DEVELOPMENT OF SUBJECT LANDS IS TO BE UNDERTAKEN AT CONTRACTOR'S EXPENSE.
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11. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT. PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 500mm WIDTH MINIMUM
12. ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS AND CONDITIONS UNLESS OTHERWISE SPECIFIED. ALL RESTORATION SHALL BE COMPLETED WITH THE GEOTECHNICAL REQUIREMENTS FOR BACKFILL AND COMPACTION.
13. ALL MATERIAL SUPPLIED AND PLACED FOR PARKING LOT AND ACCESS ROAD CONSTRUCTION SHALL BE TO OPSS STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED. CONSTRUCTION TO OPSS 206, 310 & 314. MATERIALS TO OPSS 1001, 1003 & 1010.
14. ABUTTING PROPERTY GRADES TO BE MATCHED.
15. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION.
16. MINIMIZE DISTURBANCE TO EXISTING VEGETATION DURING THE EXECUTION OF ALL WORKS.
17. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM THE ENGINEER. EXCAVATE AND REMOVE ALL ORGANIC MATERIAL AND DEBRIS LOCATED WITHIN THE PROPOSED BUILDING, PARKING AND ROADWAY LOCATIONS.
18. AT PROPOSED UTILITIES CONNECTION POINTS AND CROSSINGS (I.E. STORM SEWER, SANITARY SEWER, WATER, ETC.) THE CONTRACTOR SHALL DETERMINE THE PRECISE LOCATION AND DEPTH OF EXISTING UTILITIES AND REPORT ANY DISCREPANCIES OR CONFLICTS TO THE ENGINEER BEFORE COMMENCING WORK.
19. SERVICE TRENCHES ON MUNICIPAL RIGHT OF WAY TO BE REINSTATED AS PER CITY OF OTTAWA DETAIL R10.
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FOR ANY SOILS RELATED INFORMATION, REFER TO THE GEOTECHNICAL INVESTIGATION REPORT BY EXP Services

24. o) PAVEMENT STRUCTURE SHALL CONSIST OF FOR CAR ONLY PARKING AREAS:
65 mm ASPHALTIC CONCRETE (PG 58-34), 92% to 97 % MRD
150 mm GRANULAR A BASE (OPSS 1010) (CRUSHED LIMESTONE), 100% SPMDD
300 mm GRANULAR B TYPE II SUB-BASE (OPSS 1010), 100% SPMDD
SUBGRADE- APPROVED EXISTING FILL, SUBGRADE AND IMPORTED GRANULAR FILL (COMPACTED TO 95% SPMDD)

25. CONTRACTOR TO REINSTATE PAVER STONES IN CITY ROW.

NOTES WATERMAIN

24. ALL WATERMAIN AND WATERMAIN APPURTENANCES, MATERIALS, CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.

25. ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLY VINYL CHLORIDE (PVC) CLASS 150 DR 18 MEETING AWWA SPECIFICATION C900. STANDARD LATERAL MATERIAL SERVICES UP TO 50MM IS COPPER TYPE 'K'.

26. ALL WATER MAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMAINS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m CLEARANCE FROM UTILITIES OBVERT SHALL BE MAINTAINED; WHERE WATERMAINS CROSS UNDER OTHER UTILITIES, A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED. WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED. THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2. WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTIAWA STANDARD W22.

27. WATER MAIN BEDDING TO BE AS PER CITY OF OTTAWA STANDARD W17.

28. VALVE BOX TO BE AS PER CITY OF OTIAWA STANDARD W24.

29. CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, REDUCERS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 &: W25.4.

30. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 &: W42.

31. FIRE HYDRANTS TO BE A5 PER CITY OF OTTAWA STANDARD W19. (NOT REQUIRED)

32. IF WATER MAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.

*TYPICAL WATER SERVICE LINE AS PER W26(FOR 19MM & 25MM DIA. WATER SERVICES). AND TO BE INSTALLED AT 1 M FROM THE FOUNDATION WALLS

NOTES: SANITARY SEWER AND MANHOLES

34. ALL SANITARY SEWER, SANITARY SEWER APPURTENANCE AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

36. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.

37. ALL WORK SHALL BE PERFORMED, AS APPLICABLE IN ACCORDANCE WITH OPSS 407, AND 410.

38. ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTIAWA STANDARD S25 AND 524. (NOT APPLICABLE)

39. SANITARY BACKWATER VALVES TO BE PROVIDED FOR EACH BUILDING CLOSE TO THE FOUNDATION WALL NEAR SERVICES ENTRY AS PER CITY OF OTTAWA STD S14.1 OR S14.2

40. STORM BACKWATER VALVES TO BE PROVIDED FOR EACH BUILDING CLOSE TO THE FOUNDATION WALL NEAR SERVICES ENTRY AS PER CITY OF OTTAWA STD S14

NOTES: STORM SEWERS AND STRUCTURES

41. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

NOTES: EROSION AND SEDIMENT CONTROL

42. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

LEGEND

- 250mmø SAN — EXISTING MAIN SANITARY SEWER
- 300mmø STM — EXISTING MAIN STORM SEWER
- 203mmø WM — EXISTING MAIN WATERMAIN
- G — G — EXISTING MAIN GAS LINE
- EXISTING CENTRE OF ROAD
- EXISTING SANITARY LATERAL
- EXISTING WATER LATERAL
- EXISTING STORM LATERAL
- B — B — EXISTING BURIED TELEPHONE
- T — EXISTING OVERHEAD TELEPHONE
- EXISTING OVERHEAD HYDRO
- EXISTING UNDERGROUND HYDRO
- BUILDING FOUNDATION
- BUILDING ROOF
- PROPERTY LINE
- SETBACK LINE
- RIGHT OF WAY
- EXISTING WOOD FENCE
- EXISTING CHAIN LINK FENCE
- EXISTING SIDEWALK
- EXISTING DEPRESSED CURB
- EXISTING CONCRETE CURB
- BENCHMARK RIM SANITARY MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING CATCHBASIN
- EXISTING VALVE AND VALVE CHAMBER
- EXISTING VALVE AND VALVE BOX
- EXISTING FIRE HYDRANT
- GM — EXISTING GAS METER
- UP — EXISTING HYDRO POLE
- CP — EXISTING CORNER POST
- × 58.14 — EXISTING GRADE ELEVATION
- AC — EXISTING AIR CONDITIONNER
- 525mmø S — PROPOSED SANITARY LATERAL SEWER
- 375mmø ST — PROPOSED STORM LATERAL SEWER
- 152mmø W — PROPOSED WATERMAIN LATERAL
- PROPOSED DEMOLITION
- PROPOSED SILT FENCING
- PROPOSED SEVERANCE
- PROPOSED SWALE
- PROPOSED DEPRESSED CURB
- SANMH — PROPOSED SANITARY MANHOLE
- STMMH — PROPOSED STORM MANHOLE
- CBMH — PROPOSED CATCH BASIN
- RM — PROPOSED WATER REMOTE METER
- M — PROPOSED WATER METER
- PROPOSED CURB STOP
- FFL — FINISHED FLOOR LEVEL ELEVATION
- BFL — BASEMENT FLOOR LEVEL ELEVATION
- U.S.F — UNDERSIDE OF THE FOOTING
- F.D — FLOOR DRAIN
- BUILDING ENTRY
- DOWNSPOUTS LOCATION W/ SPLASH PAD
- WP — WATER POST
- 58.20 — PROPOSED ELEVATION
- 2.00% — PROPOSED GRADING SLOPE BETWEEN2–7%, GRADING OVER 7% MUST BE TERRACED TO A MAXIMUM SLOPE OF 3H:1
- GRASS
- EXISTING INTERLOCK
- LIGHT DUTY (PARKING) 50mm HL3 150mm GRANULAR 'A' 300mm GRANULAR 'B' TYPE II sub grade in situ soil,compacted fill or opss granular B placed over in situ soil or compacted materials
- PROPOSED CONCRETE
- PROPOSED STREET ASPHALT OVERLAY
- EXTENT OF EXCAVATION FOR SERVICES
- ROOF DRAIN RESTRICTOR TO L/S
- 5 YEAR FLOOD PONDING LIMITS
- 10 YEAR FLOOD PONDING LIMITS
- LEVEL AREA
- PROPOSED SCUPPERS
- WATER SAMPLING CHAMBER
- SP — SUMP PUMP FOR FOUNDATION DRAINAGE
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING TREES TO BE REMOVED
- PROPOSED TREE
- PROPOSED SHRUBS
- PROPOSED ANNUAL GRASSES
- A1 0.38 0.90 — STORM DRAINAGE AREA NUMBER, STORM DRAINAGE AREA IN HECTARES, RUN-OFF COEFFICIENT

W. Elias & Associates
CONSULTING ENGINEERS
204 BOREALIS CR.
OTTAWA, ON K1K 4V1
TEL 613-762-7800
WISSAMELIAS@GMAIL.COM
CIVIL
STRUCTURE
ELECTRICAL
MECHANICAL

CONSULTANT:

SEAL:

CLIENT:

OTTAWA ONTARIO

PROJECT:

4 STOREY LOW-RISE APARTMENT BUILDING
3055 RICHMOND ROAD
OTTAWA, ON K2B 6S6

KEY PLAN:

ISSUED FOR – REVISION:

NO	RE	DATE	DESCRIPTION
1		06/10/2022	ISSUED FOR REVIEW

PROJECT NO: 2022-120
DATE: 2022-06-10
ORIGINAL SCALE: 1:100
DESIGNED BY: R.E
DRAWN BY: R.E
CHECKED BY: W.E
IF THIS BAR IS NOT 1" LONG, ADJUST YOUR PLOTTING SCALE.
1"

DISCIPLINE:

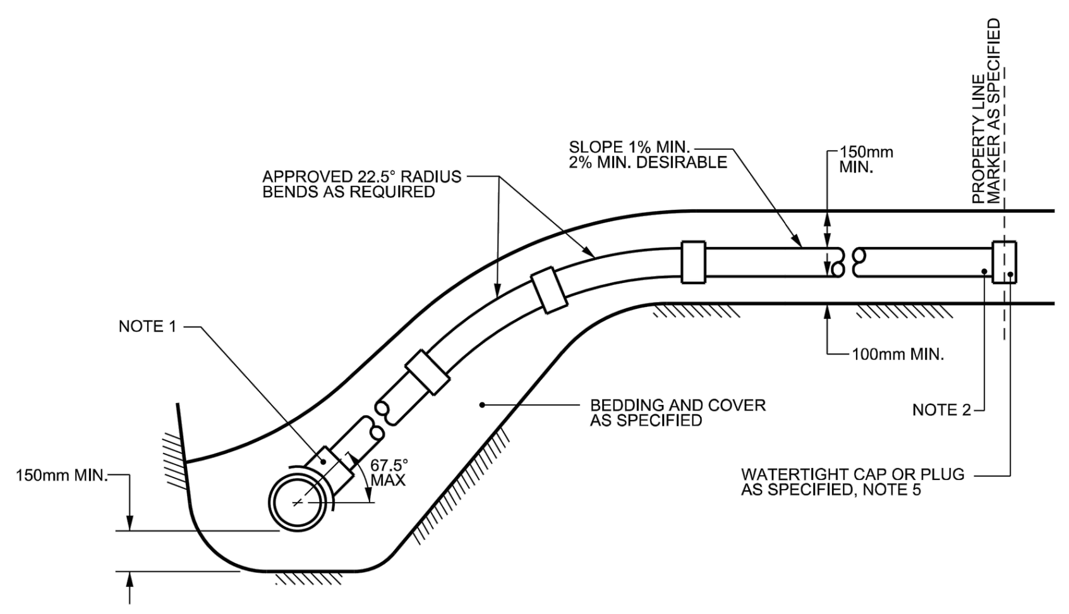
TITLE:

GRADING PLAN

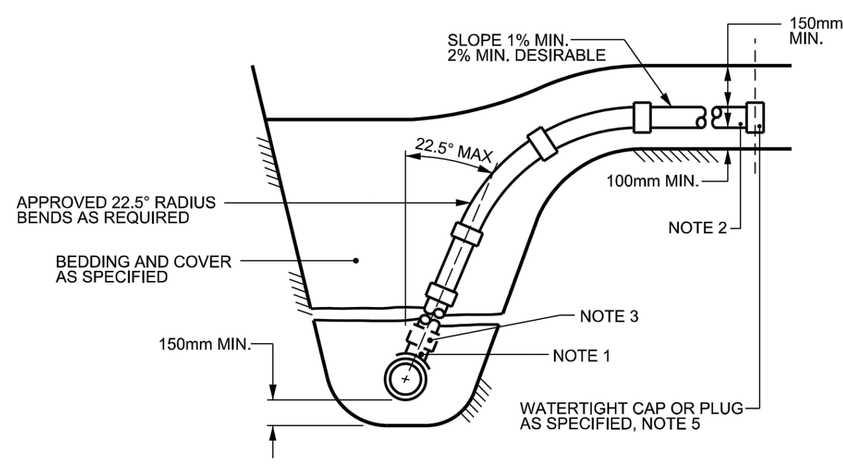
SHEET NUMBER: G1
SHEET #: OF

ISSUE: ISSUED FOR REVIEW
DATE OF: 2022-06-10
REV #: –

STAMP



CONNECTION WITHOUT VERTICAL RISER



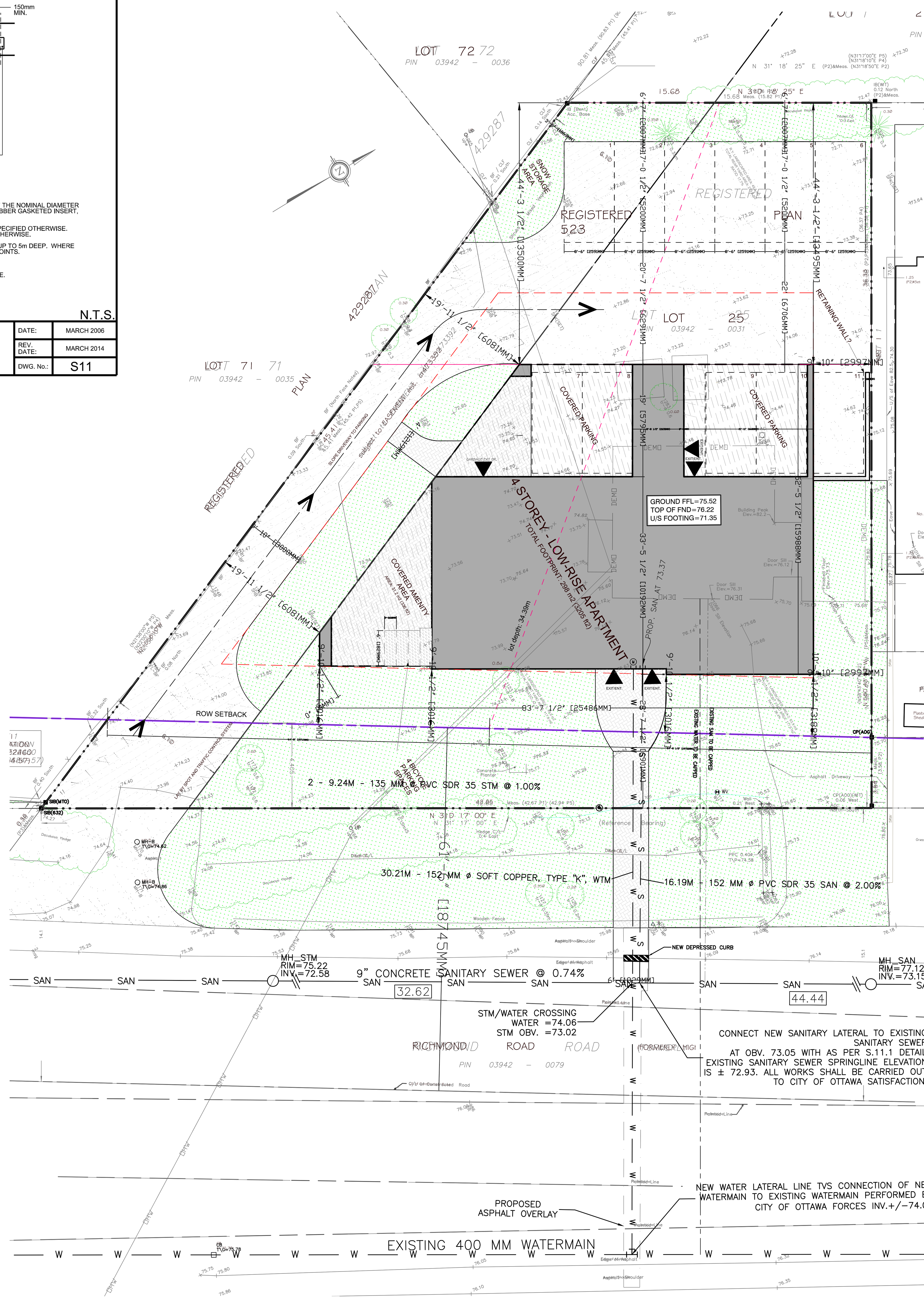
VERTICAL RISER

NOTES:

1. ALL DIAMETERES OF SERVICE CONNECTIONS THAT HAVE NOMINAL DIAMETERS NO GREATER THAN 50% OF THE NOMINAL DIAMETER OF THE RIGID SEWER PIPE SHALL BE MADE USING A BELL END INSERT AS PER S11.2 OR AN APPROVED RUBBER GASKETED INSERT, INSTALLED ABOVE THE SPRING LINE.
2. SANITARY SERVICES TO BE 135mm AND STORM SERVICES TO BE 100mm FOR NEW RESIDENCES UNLESS SPECIFIED OTHERWISE. SERVICE PIPE AND RADIUS BENDS TO BE APPROVED CSA B182.2, SDR28 PRODUCTS UNLESS SPECIFIED OTHERWISE.
3. APPROVED CONTROLLED SETTLEMENT JOINTS OPTIONAL FOR SERVICE CONNECTIONS TO MAIN SEWERS UP TO 5m DEEP. WHERE APPROVED, CONNECTIONS TO SEWERS OVER 5m DEEP REQUIRE APPROVED CONTROLLED SETTLEMENT JOINTS.
4. VERTICAL RISER SHALL BE SAME AS SERVICE PIPE UNLESS OTHERWISE SPECIFIED.
5. CAP OR PLUG AT THE PROPERTY LINE SHALL BE ADEQUATELY BRACED TO WITHSTAND TESTING PRESSURE.
6. FOR NEW CONSTRUCTION, INSERTS MUST BE INSTALLED ON THE MAIN PIPE BEFORE THAT PIPE IS LAID. FOR SERVICES/BRANCHES 375mm DIA. OR LESS, APPROVED "CORED TEES" MAY BE USED.
7. APPROVED CUT-IN TOOL MUST BE USED FOR FIELD MADE CONNECTIONS.
8. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

N.T.S.

Ottawa	SEWER SERVICE CONNECTIONS FOR RIGID MAIN SEWER PIPE (MODIFIED OPSD-1006.010)	DATE:	MARCH 2006
		REV. DATE:	MARCH 2014
		DWG. No.:	S11



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29. CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, REDUCERS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 &: W25.4.

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31. FIRE HYDRANTS TO BE A5 PER CITY OF OTTAWA STANDARD W19. (NOT REQUIRED)

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"TYPICAL WATER SERVICE LINE AS PER W26(FOR 19MM & 25MM DIA. WATER SERVICES). AND TO BE INSTALLED AT 1 M FROM THE FOUNDATION WALLS

NOTES: SANITARY SEWER AND MANHOLES

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36. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.

37. ALL WORK SHALL BE PERFORMED, AS APPLICABLE IN ACCORDANCE WITH OPSS 407, AND 410.

38. ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTIAWA STANDARD S25 AND 524. (NOT APPLICABLE)

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40. STORM BACKWATER VALVES TO BE PROVIDED FOR EACH BUILDING CLOSE TO THE FOUNDATION WALL NEAR SERVICES ENTRY AS PER CITY OF OTTAWA STD S14

NOTES: STORM SEWERS AND STRUCTURES

41. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

NOTES: EROSION AND SEDIMENT CONTROL

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LEGEND

Symbol	Description
250mmø SAN	EXISTING MAIN SANITARY SEWER
300mmø STM	EXISTING MAIN STORM SEWER
203mmø WTM	EXISTING MAIN WATERMAIN
G	EXISTING MAIN GAS LINE
	EXISTING CENTRE OF ROAD
	EXISTING SANITARY LATERAL
	EXISTING WATER LATERAL
	EXISTING STORM LATERAL
B	EXISTING BURIED TELEPHONE
T	EXISTING OVERHEAD TELEPHONE
	EXISTING OVERHEAD HYDRO
	EXISTING UNDERGROUND HYDRO
	BUILDING FOUNDATION
	BUILDING ROOF
	PROPERTY LINE
	SETBACK LINE
	RIGHT OF WAY
	EXISTING WOOD FENCE
	EXISTING CHAIN LINK FENCE
	EXISTING SIDEWALK
	EXISTING DEPRESSED CURB
	EXISTING CONCRETE CURB
	BENCHMARK RIM SANITARY MANHOLE
	EXISTING SANITARY MANHOLE
	EXISTING STORM MANHOLE
	EXISTING CATCHBASIN
	EXISTING VALVE AND VALVE CHAMBER
	EXISTING VALVE AND VALVE BOX
FH	EXISTING FIRE HYDRANT
GM	EXISTING GAS METER
UP	EXISTING HYDRO POLE
CP	EXISTING CORNER POST
× 58.14	EXISTING GRADE ELEVATION
AC	EXISTING AIR CONDITIONNER
135mmø S	PROPOSED SANITARY LATERAL SEWER
135mmø ST	PROPOSED STORM LATERAL SEWER
152mmø W	PROPOSED WATERMAIN LATERAL
	PROPOSED DEMOLITION
	PROPOSED SILT FENCING
	PROPOSED SEVERANCE
	PROPOSED SWALE
	PROPOSED DEPRESSED CURB
SANMH	PROPOSED SANITARY MANHOLE
STMMH	PROPOSED STORM MANHOLE
CBMH	PROPOSED CATCH BASIN
RM	PROPOSED WATER REMOTE METER
M	PROPOSED WATER METER
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	DOWNSPOUTS LOCATION W/ SPLASH PAD
WP	WATER POST
58.20	PROPOSED ELEVATION
2.00%	PROPOSED GRADING SLOPE BETWEEN2-7%, GRADING OVER 7% MUST BE TERRACED TO A MAXIMUM SLOPE OF 3H:1
	GRASS
	EXISTING INTERLOCK
	LIGHT DUTY (PARKING) 50mm HL3 150mm GRANULAR 'A' 300mm GRANULAR 'B' TYPE II sub grade in situ soil,compacted fill or opss granular B placed over in situ soil or compacted materials
	PROPOSED CONCRETE
	PROPOSED STREET ASPHALT OVERLAY
	EXTENT OF EXCAVATION FOR SERVICES
	ROOF DRAIN RESTRICTOR TO L/S
	5 YEAR FLOOD PONDING LIMITS
	10 YEAR FLOOD PONDING LIMITS
	LEVEL AREA
	PROPOSED SCUPPERS
	WATER SAMPLING CHAMBER
SP	SUMP PUMP FOR FOUNDATION DRAINAGE
	EXISTING DECIDUOUS TREE
	EXISTING CONIFEROUS TREE
	EXISTING TREES TO BE REMOVED
	PROPOSED TREE
	PROPOSED SHRUBS
	PROPOSED ANNUAL GRASSES
A1 0.39 0.90	STORM DRAINAGE AREA NUMBER STORM DRAINAGE AREA IN HECTARES RUN-OFF COEFFICIENT

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204 BOREALIS CR.
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WISSAMELIAS@GMAIL.COM

CIVIL
STRUCTURE
ELECTRICAL
MECHANICAL

CONSULTANT:

SEAL:

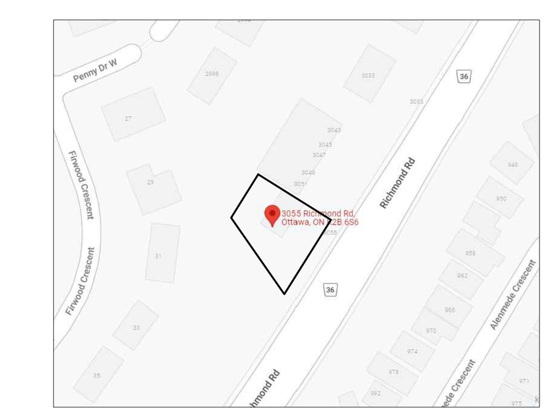
CLIENT:

OTTAWA ONTARIO

PROJECT:

4 STOREY LOW-RISE APARTMENT BUILDING
3055 RICHMOND ROAD
OTTAWA, ON K2B 6S6

KEY PLAN:



ISSUED FOR - REVISION:

IS	RE	DATE	DESCRIPTION
1		06/10/2022	ISSUED FOR REVIEW

PROJECT NO: 2022-120	DATE: 2022-06-10
ORIGINAL SCALE: 1:100	IF THIS BAR IS NOT 1" LONG, ADJUST YOUR PLOTTING SCALE.
DESIGNED BY: R.E	
DRAWN BY: R.E	
CHECKED BY: W.E	1"

DISCIPLINE:

TITLE:

SERVICING PLAN

SHEET NUMBER: S1

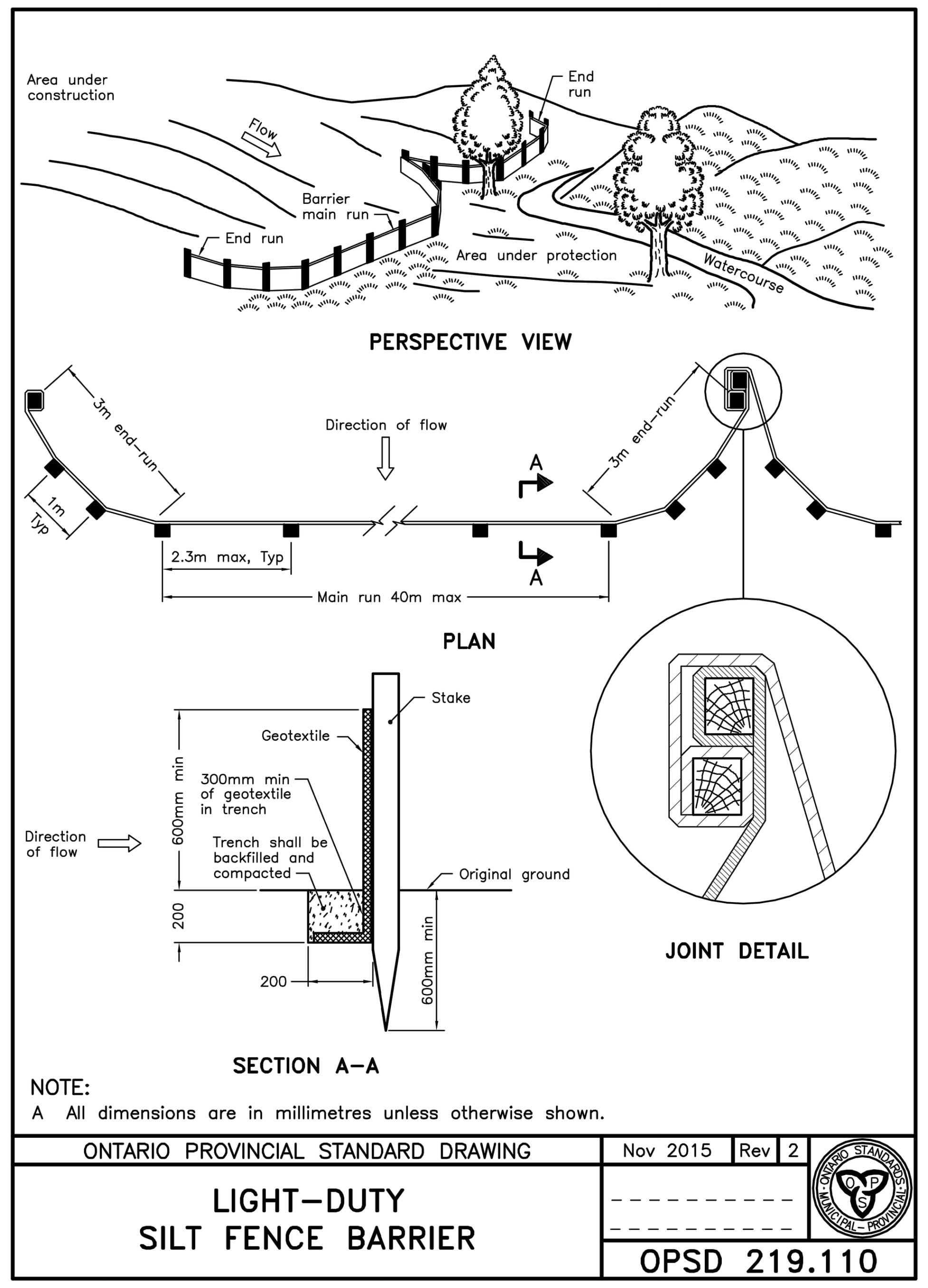
SHEET #: OF

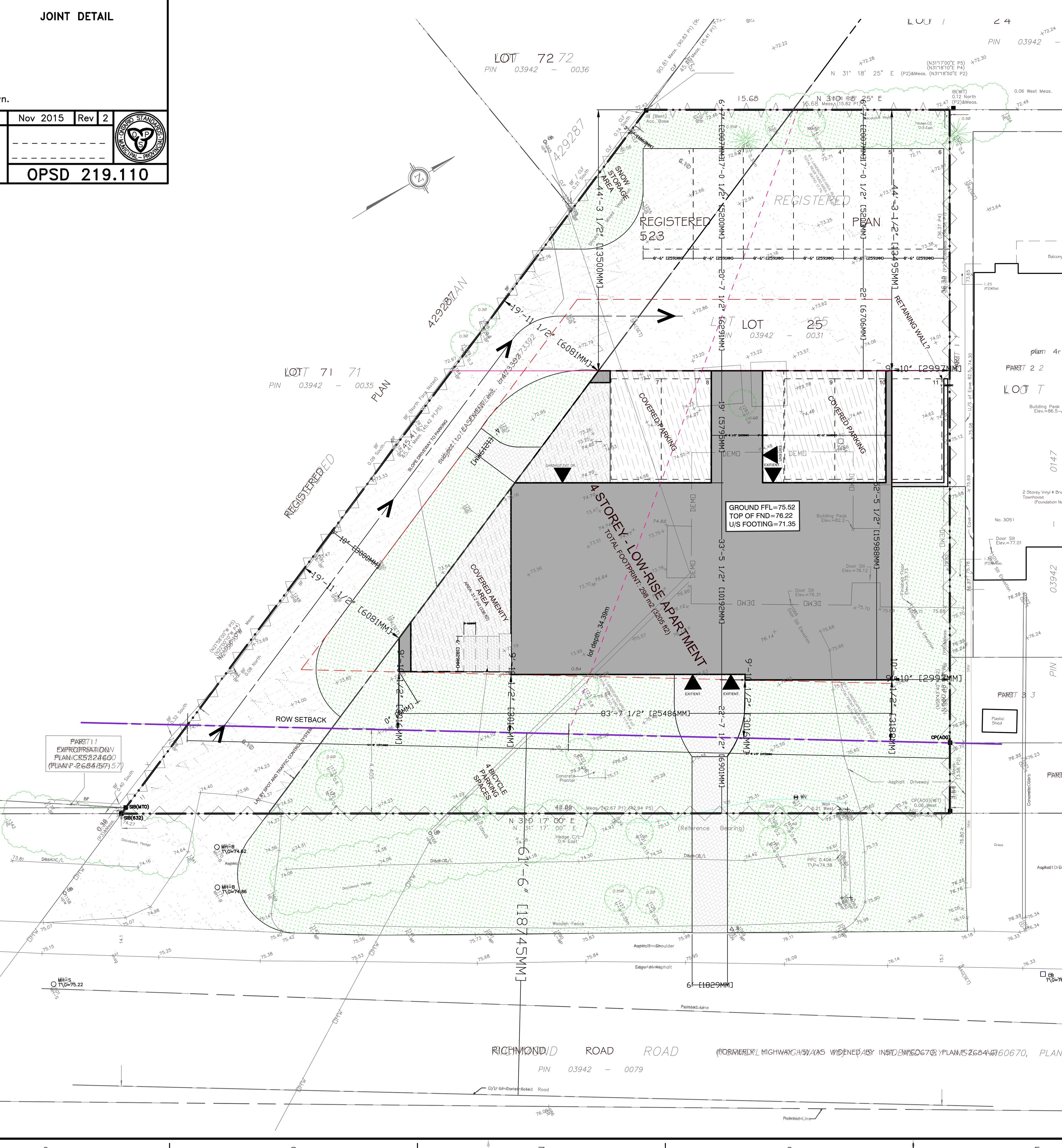
ISSUE: ISSUED FOR REVIEW

REV #: –

DATE OF: 2022-06-10

STAMP





NOTE:

PROVIDE FROST PROTECTION FOR FOOTING ABOVE 1.5m BELOW THE SURROUNDING GRADE

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES.

THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

GENERAL NOTES FOR SERVICING

1. ALL SERVICES, MATERIALS, CONSTRUCTION METHODS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND REGULATIONS OF THE CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS, ONTARIO PROVINCIAL SPECIFICATION STANDARD SPECIFICATION (OPSS) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD), UNLESS OTHERWISE SPECIFIED, TO THE SATISFACTION OF THE CITY AND THE CONSULTANT.
2. THE POSITION OF EXISTING POLE LINES. CONDUITS. WATERMAINS SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES, STRUCTURES AND APPURTENANCES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SATISFY HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM DURING THE COURSE OF CONSTRUCTION. ANY RELOCATION OF EXISTING UTILITIES REQUIRED BY THE DEVELOPMENT OF SUBJECT LANDS IS TO BE UNDERTAKEN AT CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR MUST NOTIFY ALL EXISTING UTILITY COMPANY OFFICIALS FIVE (5) BUSINESS DAYS PRIOR TO START OF CONSTRUCTION AND HAVE ALL EXISTING UTILITIES AND SERVICES LOCATED IN THE FIELD OR EXPOSED PRIOR TO THE START OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO HYDRO, BELL, CABLE TV, AND CONSUMERS GAS LINES.
4. ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
5. REFER TO ARCHITECTS PLANS FOR BUILDING DIMENSIONS LAYOUT AND REMOVALS. REFER TO LANDSCAPE PLAN FOR LANDSCAPED DETAILS AND OTHER RELEVANT INFORMATION. AU. INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. TOPOGRAPHIC SURVEY COMPLETED ON 17TH DAY OF NOVEMBER 2021 AND PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. CONTRACTOR TO VERIFY IN THE FIELD PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
7. THE LOCATION OF UNDERGROUND SERVICES ARE BASED ON THE SURVEY PROVIDED WITH THE INFORMATION FROM THE CITY OF OTTAWA DRAWINGS "P&P2 – RICHMOND ROAD SANITARY SEWER", DATED NOVEMBER 7TH, 1962. HOWEVER, CONTRACTOR MUST ENSURE THAT THIS INFORMATION IS VERIFIED PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
8. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
9. JOB BENCH MARK AS INDICATED ON THE DRAWINGS
10. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED.
11. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT. PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 500mm WIDTH MINIMIUM
12. ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS AND CONDITIONS UNLESS OTHERWISE SPECIFIED. ALL RESTORATION SHALL BE COMPLETED WITH THE GEOTECHNICAL REQUIREMENTS FOR BACKFILL AND COMPACTION.
13. ALL MATERIAL SUPPLIED AND PLACED FOR PARKING LOT AND ACCESS ROAD CONSTRUCTION SHALL BE TO OPSS STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED. CONSTRUCTION TO OPSS 206, 310 & 314. MATERIALS TO OPSS 1001, 1003 & 1010.
14. ABUTTING PROPERTY GRADES TO BE MATCHED.
15. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION.
16. MINIMIZE DISTURBANCE TO EXISTING VEGETATION DURING THE EXECUTION OF ALL WORKS.
17. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM THE ENGINEER. EXCAVATE AND REMOVE ALL ORGANIC MATERIAL AND DEBRIS LOCATED WITHIN THE PROPOSED BUILDING, PARKING AND ROADWAY LOCATIONS.
18. AT PROPOSED UTILITIES CONNECTION POINTS AND CROSSINGS (I.E. STORM SEWER. SANITARY SEWER, WATER, ETC.) THE CONTRACTOR SHALL DETERMINE THE PRECISE LOCATION AND DEPTH OF' EXISTING UTILITIES AND REPORT ANY DISCREPANCIES OR CONFLICTS TO THE ENGINEER BEFORE COMMENCING WORK.
19. SERVICE TRENCHES ON MUNICIPAL RIGHT OF WAY TO BE REINSTATED AS PER CITY OF OTIAWA DETAIL R10.
20. PRIOR TO CONSTRUCTION, A GEOTECHNICAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO IS TO INSPECT ALL SUB–SURFACES FOR FOOTINGS, SERVICES AND PAVEMENT STRUCTURES.

FOR ANY SOILS RELATED INFORMATION, REFER TO THE GEOTECHNICAL INVESTIGATION REPORT BY EXP Services

24. a) PAVEMENT STRUCTURE SHALL CONSIST OF FOR CAR ONLY PARKING AREAS:
    - 65 mm ASPHALTIC CONCRETE (PG 58–34), 92% to 97 % MRD
    - 150 mm GRANULAR A BASE (OPSS 1010) (CRUSHED LIMESTONE), 100% SPMDD
    - 300 mm GRANULAR B TYPE II SUB–BASE (OPSS 1010), 100% SPMDD
    - SUBGRADE– APPROVED EXISTING FILL, SUBGRADE AND IMPORTED GRANULAR FILL (COMPACTED TO 95% SPMDD)

25. CONTRACTOR TO REINSTATE PAVER STONES IN CITY ROW.

NOTES WATERMAIN

24. ALL WATERMAIN AND WATERMAIN APPURTENANCES, MATERIALS, CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.

25. ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLY VINYL CHLORIDE (PVC) CLASS 150 DR 1B MEETING AWWA SPECIFICATION C900. STANDARD LATERAL MATERIAL SERVICES UP TO 50MM IS COPPER TYPE 'K'.

26. ALL WATER MAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMAINS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m CLEARANCE FROM UTILITIES OBVERT SHALL BE MAINTAINED; WHERE WATERMAINS CROSS UNDER OTHER UTILITIES, A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED. WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED. THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2. WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTIAWA STANDARD W22.

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28. VALVE BOX TO BE AS PER CITY OF OTIAWA STANDARD W24.

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PROJECT:

4 STOREY LOW–RISE APARTMENT BUILDING
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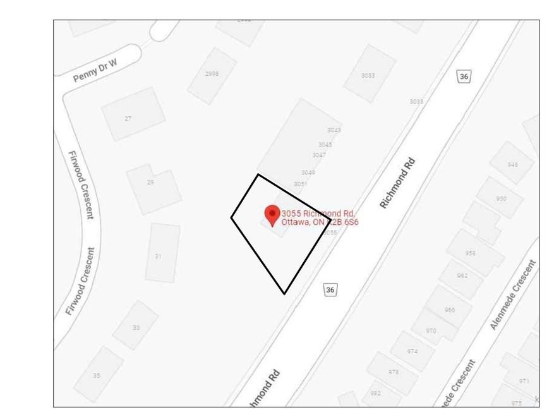
KEY PLAN:



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IS	RE	DATE	DESCRIPTION
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DESIGNED BY: R.E	
DRAWN BY: R.E	
CHECKED BY: W.E	1"

DISCIPLINE:

TITLE:

EROSION PLAN

SHEET NUMBER: E1

SHEET #: OF

ISSUE: ISSUED FOR REVIEW

REV #: –

DATE OF: 2022–06–10