

Storage Requirements

Surface Type	ID	Area (ha)	Percent of total Area	Required Storage 2 year	Required Storage 100 year	Max Allowed Drain Outflow l/s	Max Allowed Drain Outflow GPM
Roof	A1	0.0278	50.0%	8.75	23.42	0.07	1.16
Roof	A2	0.0278	50.0%	8.75	23.42	0.07	1.16
TOTAL		0.0555	100.0%	17.50	46.83	0.15	2.31

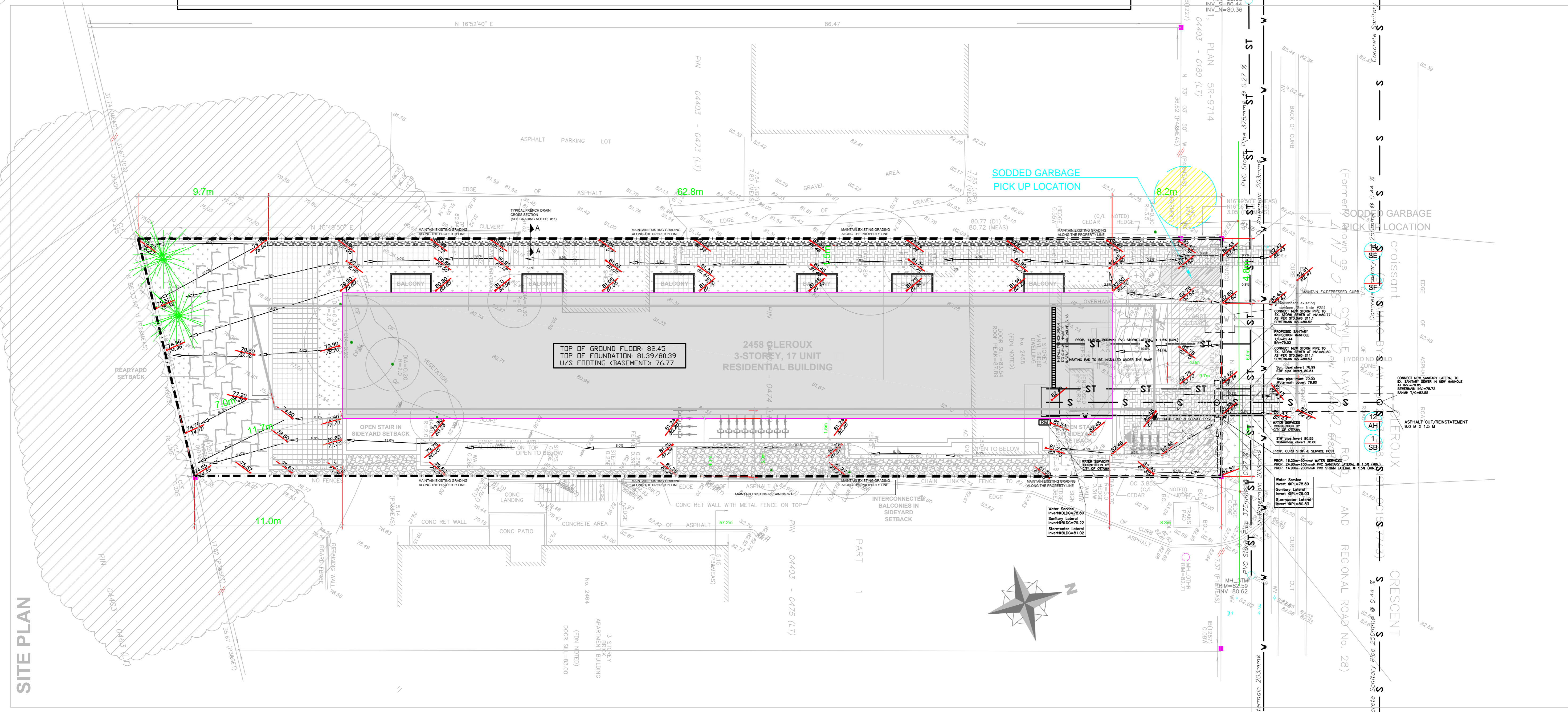
Legend:
data for 2-year event
data for 100-year event

Stage Storage

Roof A1 (Drain 1)			Roof A2 (Drain 2)		
Depth	Area	Volume	Depth	Area	Volume
m	m ²	m ³	m	m ²	m ³
0.020	9.10	0.09	0.020	9.10	0.09
0.040	20.10	0.40	0.040	20.10	0.40
0.1	175.00	8.75	0.1	175.00	8.75
0.17	277.00	23.55	0.17	277.00	23.55

Notes:
Roof drains with controlled flow to be specified by manufacturer using the allowable flow rates presented in this chart

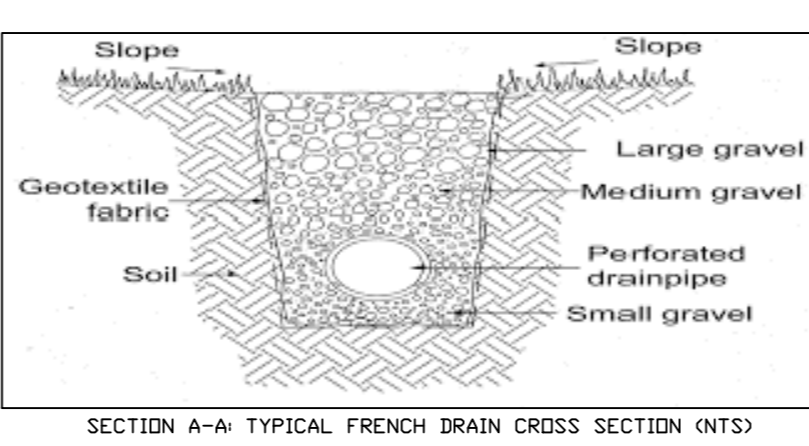
2458 CLEROUX CRESCENT: ROOF STORMWATER STORAGE PLAN



2458 Cleroux Cres: PROPOSED 100 mm WATERMAIN TABLE

STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	TOP OF MAIN	INVERT OF MAIN	DESCRIPTION	NOTE
0+0.00	82.44	79.2			BUILDING ACCESS/DIST	
0+12.90	82.44	79.2			PROPERTY LINE	
0+14.95	82.43	78.8		80.55	CROSSING STORMWATER PIPE	CROSSING UNDER STORMWATER PIPE
0+15.90	82.34	78.8			CONNECTION TO WATERMAIN 203 MM	

NOTE: CONTRACTOR TO CONFIRM BY EXCAVATING



- NOTES:
- EXISTING SERVICES AND UTILITIES SHOWN ON THIS DRAWING WERE TAKEN FROM THE BEST AVAILABLE RECORDS. CONTRACTOR IS REQUESTED TO CHECK IN THE FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH AUTHORITIES AND UTILITIES TO HIS SATISFACTION BEFORE DIGGING.
 - CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS AS DEEMED NECESSARY.
 - PROPOSED SITING DETAILS FOR THIS PROPOSED BUILDING WERE TAKEN FROM THE SITE PLAN PREPARED BY "P2 Concepts".
 - EXISTING HORIZONTAL AND VERTICAL SURVEY DATA SHOWN ON THIS PLAN INCLUDING SITE BENCHMARK, ROAD ELEVATION, SEWER INVERT ELEVATIONS AND THE TOPOGRAPHICAL INFORMATION OF THE LOT SHOWN WERE PROVIDED BY "ANNIS/D'SULLIVAN & J.D. Barnes Ltd." AND ARCH-NOVA DESIGN INC. IS NOT RESPONSIBLE FOR THE SURVEY PROVIDED.
 - ALL GRADING SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA.
 - ALL GRADES SHOWN ARE METRIC. EXISTING AND PROPOSED GRADES SHOWN ON THIS DRAWING ARE BASED ON A GEODETIC BENCHMARK PROVIDED BY "J.D. Barnes Ltd." AS SHOWN ON THEIR SITE PLAN.
 - ALL WILL BE CONSTRUCTED TO CITY OF OTTAWA'S LATEST REVISED STANDARDS ON APPROVAL BY THE CITY. USE SADDLE CONNECTIONS WITH CORP STOPS FOR THE 19 MM WATER SERVICES.
 - CONSTRUCT ALL SANITARY PIPES IN ACCORDANCE WITH CITY OF OTTAWA'S LATEST REVISED STANDARDS OTHERWISE AS PER DPSS AND DPSP SPECIFICATIONS.
 - ALL WORKS CONSTRUCTED BY THE CONTRACTOR SHALL MEET CITY OF OTTAWA'S CURRENT ENGINEERS' STANDARDS AND PER CITY'S REQUIREMENTS.
 - THE CONTRACTOR SHALL CONSTRUCT AND ENSURE THAT THE 50 mm WATER SERVICES ON THIS LOT SHALL HAVE A MINIMUM OF 24h OF GROUND COVER, OTHERWISE THERMAL INSULATION IS REQUIRED AS PER CITY SPECIFICATIONS V 25, W 25 AND W 23. THE WATER SERVICE INSTALLATION SHALL BE STEEL PIPE AND CONSTRUCTED IN ACCORDANCE WITH STD DWG W26.
 - IF WATER SERVICE IS LESS THAN 2.4m FROM SEWER, MANHOLE OR CATCH BASIN, CONTRACTOR IS REQUESTED TO INSULATE BETWEEN THEM WITH 5/8" RIGID INSULATION (AS PER CITY DETAIL W-25).
 - ALL WATERMAIN SERVICE AND FITTINGS SHALL CONFORM TO APPROVED AWWA AND OR CSA STANDARDS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS TO COMPLETE THE WORKS.
 - WATER SERVICES CONNECTION ON CONCORD STREET SOUTH SHALL BE DONE BY THE CITY. EXCAVATION, BACKFILLING AND REINSTATEMENTS BY CONTRACTOR.
 - THE OWNER AND/OR HIS CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES REGARDING REGULATION REQUIREMENTS FOR THE EXISTING OVERHEAD UTILITY PILES.
 - WATER SERVICE AND WATERMAIN TRENCH DETAILS AS PER CITY W-17 DETAIL.
 - SANITARY SERVICES LATERAL PROPOSED SHALL BE PVC-SDR28 OR EQUIVALENT AND CONNECTION TO THE EXISTING SEWER SHALL BE AS PER CITY OF OTTAWA DWG S11 SEWER TRENCH DETAILS AS PER STD DWG S6 & S7. CONNECT TO CITY SEWER PIPES USING SADDLE SEWER TRENCH DETAILS AS PER STD DWG S6 & S7. SADDLE CONNECTIONS OMAX 300 MM, MANUFACTURED 1" CONNECTIONS OR FOR LARGE DIAMETERS SEWER MANHOLES.
 - SANITARY AND STORM SEWER SERVICES BENDS AND RISERS USED MUST BE CONSTRUCTED TO THE CITY'S SATISFACTION.
 - DETAILS OF THE EXISTING SEWERS AND WATERMAIN SHOWN ON CONCORD AVENUE FROM THE CITY MAY NOT BE CURRENT. THE CONTRACTOR SHALL REFER TO THE CITY'S SEWER AND WATERMAIN DRAWINGS FOR DETAILS. THE CONTRACTOR IS ADVISED TO EXCAVATE AND INVESTIGATE THE SEWER ELEVATIONS IN FRONT OF THIS PROPERTY FIRST TO ENSURE THAT 15% MIN PIPE SLOPE OF THE SANITARY LATERAL CAN BE ACHIEVED USING THE PROPOSED UNDERSIDE OF CONCRETE FOOTINGS ELEVATIONS. IF 15% MIN PIPE SLOPE IS NOT POSSIBLE FROM THE HOUSE TO THE SEWER THEN THE CONTRACTOR SHOULD INFORM THE OWNER'S PROJECT MANAGER AND THE CITY ACCORDINGLY FOR FURTHER DIRECTION.
 - FOR DEVELOPMENT OF THIS LOT, THE CONTRACTOR MUST CONSTRUCT THE UNDERGROUND SANITARY AND WATER SERVICES FROM SEWER AND WATERMAIN TO THE PROPERTY FIRSTLY, PRIOR TO HOUSE CONCRETE FOUNDATION POURING.
 - IF THE DEPTH FROM UNDERSIDE OF HOUSE CONCRETE FOOTING TO PROPOSED FINISHED GROUND ELEVATION IS LESS THAN 150 mm IT IS RECOMMENDED THAT INSULATION (500 mm THICK) MINIMUM BE INSTALLED AT THE BUILDING FOOTING AND FOUNDATION OF THE HOUSE TO PROVIDE SUFFICIENT FRONT COVER FOR THE FOUNDATION STRUCTURES. THE FOOTINGS WILL NEED TO BE REVIEWED FOR INSULATION BY THE OWNER'S SOILS ENGINEER. EXACT INSULATION REQUIREMENTS SHALL BE AS PER ARCHITECT'S INSULATION DETAILS AS SHOWN ON THEIR ARCHITECTURAL DRAWINGS AND CONFIRMED BY THE OWNER'S SITE SOILS ENGINEER.
 - CONCRETE BARRIER CURB AND DEPRESSIONED CURB DETAILS AS PER CITY OF OTTAWA STANDARDS (DWG W SC-1.1 REV MARCH 2014). CONCRETE CURB AND CONCRETE SIDEWALK CONSTRUCTION AND REINSTATEMENT SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA, AND IN ACCORDANCE WITH THE LATEST REVISED CITY ENGINEERING STANDARDS.
 - WATER SERVICE LINES AS PER STD DWG W6.
 - WATER SERVICE INSTALLATION AND CROSSINGS AS PER STD DWG W 25 AND W 25.2.
 - BLANK WATER SERVICES AT CITY WATERMAIN BY CITY FEES.
 - EXISTING SEWERS TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF CITY'S SEWER OPERATIONS.
 - BACKWATER VALVES WILL BE USED ON SERVICES PER SC14, SC14.1 AND SC14.2.
 - ASPHALT AND GRAVEL SURFACES TO BE CLEARED AND REPLACED WITH LANDSCAPING AS SHOWN ON ARCHITECTURAL AND LANDSCAPING PLANS.
 - ALL SERVICE LATERALS UNDER THE BUILDING FOOTINGS TO BE SLEEVED IF THE PIPE IS LESS THAN 0.3 m BELOW THE FOOTING.
 - INSTALL TRENCH DRAIN AT BOTTOM OF THE GARAGE RAMP. CONNECT TO STORWATER LATERAL. GRADING NOTES:

LEGEND

- PROPOSED ELEVATION
- EXISTING ELEVATION (INTERPOLATED)
- EXISTING ELEVATION (SURVEY)
- PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION
- PROPOSED WATER SERVICES COPPER TYPE "C"
- PROPOSED PVC SANITARY LATERAL SERVICES
- PROPOSED PVC STORM SEWER
- PROPOSED FOUNDATION DRAIN (WEEPING TILES)
- EXISTING CATCH BASIN
- NEW CATCH BASIN
- EXISTING STORM MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING UTILITY HOLE
- PROPOSED CURB STOP & SERVICE POST
- PROPOSED METER & REMOTE METER
- ROOF DRAIN
- PROPERTY LINE
- OVERLAND FLOW DIRECTION

2458 Cleroux Cres: KEY MAP

SCALE: 1:100

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Services & Grading Plan

Drawn by	Checked by	Approved by	Date	Description
Z.M.	Z.M.	Z.M.	May 2023	City comments
			May 2023	Final

Location: 2458 Cleroux Cres.
Owner: Minor Group
Project No: CW-01-21
Date: May 2023
Drawing No: W-01
Scale: 1:100