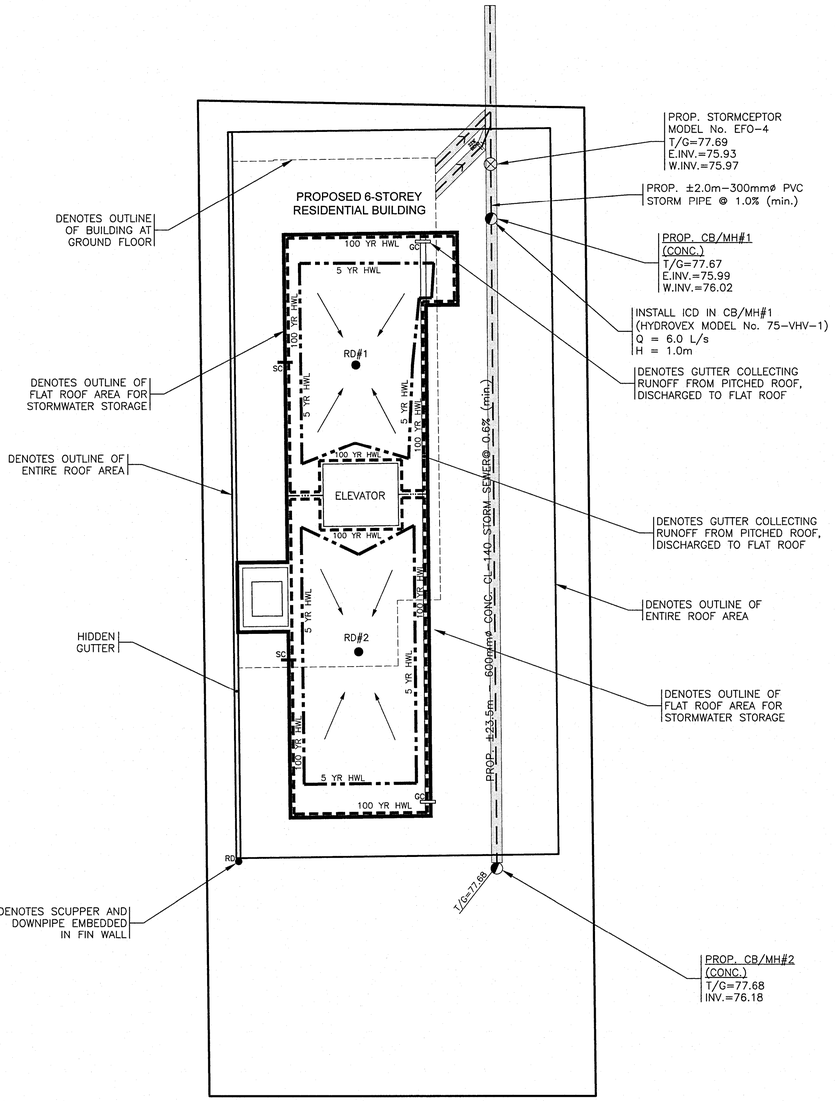
MERIVALE ROAD



LEGEND

- 100 YR HIGH WATER LEVEL
- 5 YR HIGH WATER LEVEL
- PROPOSED HIGH RIDGE LINE
- RD — PROPOSED ROOF DRAIN
- SC — PROPOSED OVERFLOW ROOF SCUPPER LOCATION
- PROPOSED GENERAL DIRECTION OF LOT GRADING AND SURFACE FLOW
- PROPOSED MAJOR OVERLAND FLOW ROUTE
- 0.002 / 0.9 — DRAINAGE AREA IN HECTARES; COEFFICIENT OF RUNOFF
- GC — DENOTES GUTTER COLLECTING RUNOFF FROM PITCHED ROOF, DISCHARGED TO FLAT ROOF

WATTS | **Adjustable Accutrol Weir** Tag: _____ | **Adjustable Flow Control for Roof Drains**

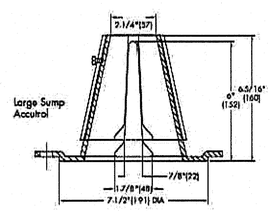
ADJUSTABLE ACCUTROL (for Large Sump Roof Drains only)

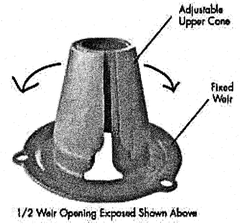
For more flexibility in controlling flow with heads deeper than 2", Watts Drainage offers the Adjustable Accutrol. The Adjustable Accutrol Weir is designed with a single parabolic opening that can be covered to restrict flow above 2" of head to less than 5 gpm per inch, up to 6" of head. To adjust the 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.

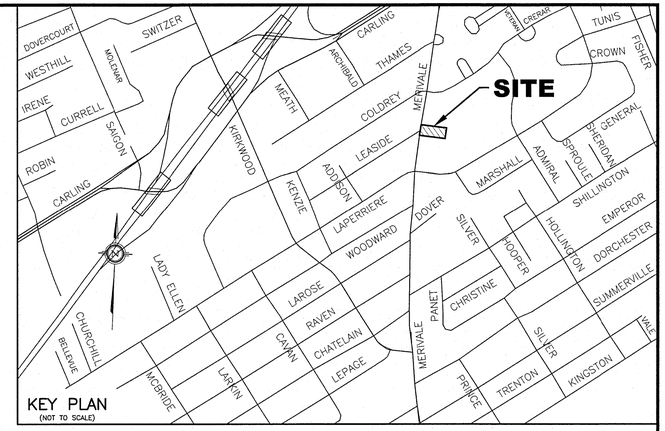




1/2 Weir Opening Exposed Shown Above

TABLE 1. Adjustable Accutrol Flow Rate Settings

Weir Opening Exposed	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	5	5	5	5	5



NOTES

1. STORMWATER MANAGEMENT NOTES

ROOF DRAIN DETAILS

MODEL TYPE: WATTS MODEL "ADJUSTABLE ACCUTROL WEIR" (MODEL No. RD-100A-ADJ), WEIR OPENING EXPOSED TO BE SPECIFIED AS FOLLOWS:

DEPTH AND VOLUME:

ROOF AREA ID & DRAINAGE AREA (ha)	NUMBER OF ROOF DRAINS	WATTS ROOF DRAIN MODEL ID (WEIR OPENING)	CONTROLLED FLOW PER DRAIN (L/s)		APPROXIMATE PONDING DEPTH ABOVE DRAINS (m)		STORAGE VOLUME REQUIRED (m³)		MAX. STORAGE AVAILABLE (m³)
			5 YR	100 YR	5 YR	100 YR	5 YR	100 YR	
No. 1 (0.0113 ha)	1	RD-100-A-ADJ (1/2 OPENING EXPOSED)	1.10	1.26	0.12	0.15	0.72	2.02	2.35
No. 2 (0.0088 ha)	1	RD-100-A-ADJ (3/4 OPENING EXPOSED)	1.34	1.58	0.12	0.15	0.97	2.63	2.69
TOTAL ROOF (0.0201 ha)	2	———	2.44	2.84	–	–	1.69	4.65	5.04

NUMBER OF CONTROL DEVICES: 1 CONTROLLED ROOF DRAINS PER DESIGNATED FLAT ROOF AREA FOR SWM ATTENUATION

TOTAL FLOW FROM FLAT ROOFTOP OF BUILDING AT MAXIMUM HEAD OF 150mm PER DRAIN AT THE (2) PROPOSED DRAINS = 2.84 L/s

SCUPPER LOCATION: AS SHOWN ON THIS DRAWING

5 YEAR ELEVATION: 120mm ABOVE THE ROOF DRAIN FOR ROOF AREA #1 AND #2

100 YEAR ELEVATION: 150mm ABOVE THE ROOF DRAIN FOR ROOF AREA #1 AND #2

– EACH ROOF DRAIN SHALL BE SIZED FOR A (MAXIMUM) RELEASE RATE AS SPECIFIED ABOVE UNDER A HEAD OF 150mm. THE OWNER'S MECHANICAL ENGINEER SHALL SPECIFY THE REQUIRED ROOF DRAIN TYPE AND MODEL No. AND PROVIDE THE NECESSARY INFORMATION TO THE CITY OF OTTAWA FOR THEIR RECORDS TO ENSURE PROPER RELEASE RATE FOR STORMWATER MANAGEMENT COMPLIANCE.

– ROOF PITCH IS ASSUMED TO HAVE 2.0% (MIN.) SLOPE.

– OVERFLOW ROOF SCUPPERS ARE RECOMMENDED TO BE INSTALLED 0mm ABOVE EDGE OF ROOFTOP ELEVATION FOR EMERGENCY OVERFLOW PURPOSES AT ROOF AREA #1 AND #2 AT PERIMETER OF FLAT BUILDING ROOFTOP.

– SEE LATEST REVISED STORM DRAINAGE REPORT No. R-823-102 DATED AUGUST 2024 FOR DETAILS ALSO.

2. PROPOSED ROOF DRAINS AND SCUPPER LOCATIONS SHOWN ON THIS PLAN SHALL BE REVIEWED BY THE OWNER AND OWNER'S BUILDING DESIGNER FOR APPROVAL.

3. THE OWNER'S BUILDING DESIGNER AND STRUCTURAL ENGINEER SHALL ENSURE THAT THE ADDITIONAL STORMWATER STORAGE VOLUME FROM STORMWATER MANAGEMENT MEASURES ARE ACCOUNTED FOR IN THE STRUCTURAL DESIGN OF AND WATERPROOFING OF ROOF AREA No. 1 AND ROOF AREA No. 2 AND ANY OF THE SUPPORTING STRUCTURES THAT MAY BE AFFECTED BY THE STORED WATER.

4. ROOF DRAIN #1 AND #2 SHALL OUTLET INTO THE DESIGNATED 150mmø PVC STORMWATER PIPE AS SHOWN ON THE PROPOSED GRADING AND SERVICING PLAN (DWG No. 823-102, G-1).

5. SITE STORAGE VOLUME FROM PROPOSED OVERSIZED UNDERGROUND DRAINAGE PIPES AND STRUCTURES:

EVENT	NON-ROOF AREA ESTIMATED HWL ON-SITE	CALCULATED MINIMUM VOLUME (m³)	AVAILABLE SITE STORAGE VOLUME (m³) (FROM OVERSIZED STORM PIPES)
5 YR	76.48m	3.57	4.0
100 YR	77.18m	8.72	8.90

6. FOR GRADING AND SERVICING DETAILS OF THIS SITE, REFER TO DWG. No. 823-102, G-1.

7. ESTIMATED 5-YEAR HWL FOR THE SITE EXCLUDING THE AVAILABLE FLAT ROOF TOP AREA = 76.48m AND THE 100-YEAR HWL = 77.18m ON-SITE (ALL CONFINED WITHIN PROPOSED UNDERGROUND DRAINAGE SYSTEM).

No.	REVISION	DATE	BY

LICENSED PROFESSIONAL ENGINEER — TONY L. MAK — 08/10/24 — PROVINCE OF ONTARIO

SCALE: 0 1 3 5m — 1:100 HORIZONTAL — VERTICAL

DESIGN	T.L.M.
CHECKED	T.L.M.
DRAWN BY	P.M.
CHECKED	T.L.M.
APPROVED	T.L.M.

PROJECT: 917 MERIVALE ROAD, LOT 1, REGISTERED PLAN 268160, CITY OF OTTAWA

DRAWING TITLE: PROPOSED STORMWATER MANAGEMENT PLAN

T.L. MAK ENGINEERING CONSULTANTS LTD.
CONSULTING ENGINEERS

PROJECT No.	DATE	DRAWING No.
823-102	JULY 2024	SWM-1