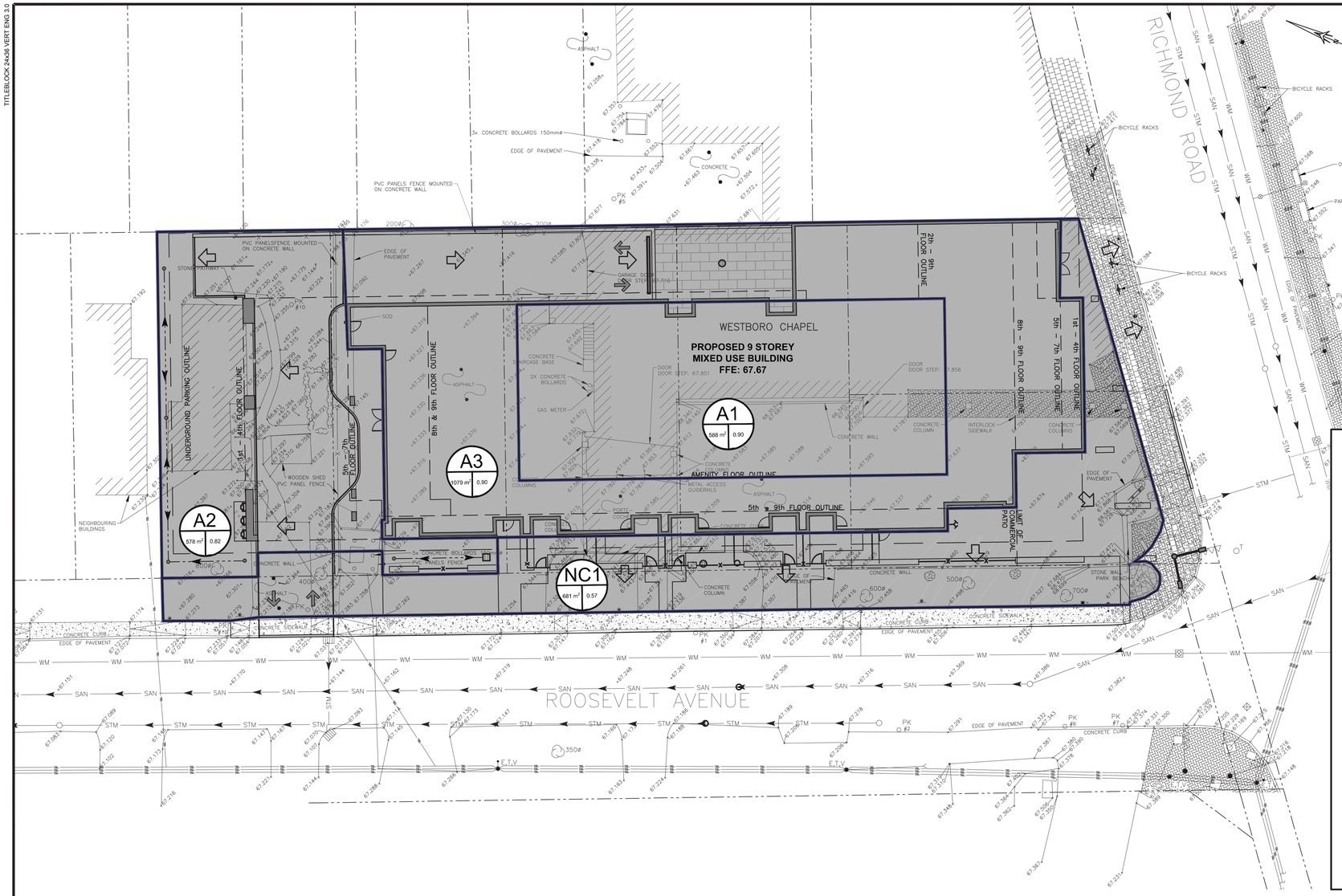


STORM WATER MANAGEMENT LEGEND

STORM DRAINAGE BOUNDARY

AREA ID — A1 — 588 m² | 0.90

AREA IN m2

RUNOFF COEFFICIENT

EXISTING	PROPOSED
WATERMAIN	
SANITARY SEWER	
STORM SEWER	
DRAIN	
GAS LINE (APPROX. LOC.)	
UNDERGROUND TELEPHONE (APPROX. LOC.)	
UNDERGROUND CABLE (APPROX. LOC.)	
FENCE	
UNDERGROUND ELECTRICITY (APPROX. LOC.)	
OVERHEAD WIRES	
LOT LINE	
RIGHT-OF-WAY LIMITS	
EASEMENT	
TOP OF SLOPE	
DITCH CENTER	
BOTTOM OF SLOPE	
WOOD AREA	
GRADE CROSSING	
FLAGPOLE	
CATCHBASIN	
MANHOLE/CATCHBASIN	
MANHOLE	
FIRE HYDRANT	
VALVE	
REDUCER	
TEE	
VALVE CHAMBER	
PRIVATE UTILITIES (WATERMAIN)	
EXTERIOR WATER FAUCET	
SLUICEWAY	
NATURAL GAS VALVE	
SIGN	
STOP SIGN	
TRAFFIC LIGHT	
ELECTRICITY POLE	
TELEPHONE POLE	
ELECT.-TEL.-STREET LIGHT POLE	
ELECT.-TEL.-TRANSFORMER POLE	
PRIVATE STREET LIGHT	
ELECTICITY MANHOLE	
TELEPHONE MANHOLE	
SURVEY STATION	
ELEVATION	
BOREHOLE (LOC. APPROX.)	
OVERLAND FLOW	
WORK LIMIT	

1:200
0 2 4 6 12m

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

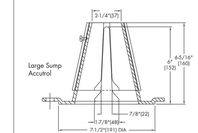
ADJUSTABLE ACCUTROL (for Large Sump Roof Drains only)

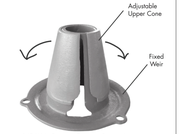
For more flexibility in controlling flow with heads deeper than 2", Watts Drainage offers the Adjustable Accutrol. The Adjustable Accutrol Weir is designed with a single parabolic opening that can be covered to restrict flow above 2" of head to less than 5 gpm per inch, up to 6" of head. To adjust the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

Job Name _____ Contractor _____
Job Location _____ Contractor's P.O. No. _____
Engineer _____ Representative _____

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

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ES-WD-RD-ACCUTROLADJ-CAN 1615

STORMWATER MANAGEMENT – PRELIMINARY RETENTION CALCULATIONS – 2 YEAR EVENT

Sub-Area	Total Area (m^2)	Available Storage Area (m^2)	Catchbasin/ Roof Drain Elevation (m)	Maximum Ponding Elevation (m)	Y_{max} (m)	V_{max} (m^3)	V_{rain} (m^3)	V_{acc} (m^3)	Y_{rain} (m)	$Elev_{rain}$ (m)	A_{rain} (m^2)	Q (L/s)	Drawdown Time (min)	Comments
A1	588	588	100.00	100.15	0.15	29.4	7.2	7.2	0.07	100.07	291	1.90	63	Controlled roof area
A2	578	-	-	-	-	22.2	1.2	1.2	-	-	-	9.59	2	Area to swale
A3	1079	-	-	-	-	22.0	3.5	3.5	-	-	-	16.25	4	Areas to Tank
NC1	681	-	-	-	-	-	-	-	-	-	-	0.00	-	Unattenuated Areas

DEFINITIONS OF ABBREVIATIONS USED IN CALCULATION TABLE:

NC = Area is not controlled (unattenuated)
Available Area = Area of water accumulated in sub-area at Max. Elev.
Catchbasin Elev = Elevation of catchbasin inlet (top of grate).
Max. Elev. = Maximum elevation of water that may be accumulated within sub-area.
Y_{max} = Maximum depth of water that may be accumulated within the sub-area.
V_{max} = Maximum volume of water (capacity) that may be accumulated within the sub-area.
V_{rain} = Volume of water generated by rainfall.
V_{acc} = Total volume of water accumulated within the sub-area in the event of a specific rainfall.
Y_{rain} = Depth of water generated by rainfall.
$Elev_{rain}$ = Elevation of water generated by rainfall.
A_{rain} = Area of water generated by rainfall.
Q = Release flow rate.
Drawdown Time = Time required for the total volume of water accumulated within sub-area to subside.

STORMWATER MANAGEMENT – PRELIMINARY RETENTION CALCULATIONS – 100 YEAR EVENT

Sub-Area	Total Area (m^2)	Available Storage Area (m^2)	Catchbasin/ Roof Drain Elevation (m)	Maximum Ponding Elevation (m)	Y_{max} (m)	V_{max} (m^3)	V_{rain} (m^3)	V_{acc} (m^3)	Y_{rain} (m)	$Elev_{rain}$ (m)	A_{rain} (m^2)	Q (L/s)	Drawdown Time (min)	Comments
A1	588	588	100.00	100.15	0.15	29.4	24.5	24.5	0.14	100.14	537	1.90	215	Controlled roof area
A2	578	-	-	-	-	22.2	11.0	11.0	-	-	-	9.59	19	Area to swale
A3	1079	-	-	-	-	22.0	22.0	22.0	-	-	-	16.25	23	Areas to Tank
NC1	681	-	-	-	-	-	-	-	-	-	-	0.00	-	Unattenuated Areas

DEFINITIONS OF ABBREVIATIONS USED IN CALCULATION TABLE:

NC = Area is not controlled (unattenuated)
Available Area = Area of water accumulated in sub-area at Max. Elev.
Catchbasin Elev = Elevation of catchbasin inlet (top of grate).
Max. Elev. = Maximum elevation of water that may be accumulated within sub-area.
Y_{max} = Maximum depth of water that may be accumulated within the sub-area.
V_{max} = Maximum volume of water (capacity) that may be accumulated within the sub-area.
V_{rain} = Volume of water generated by rainfall.
V_{acc} = Total volume of water accumulated within the sub-area in the event of a specific rainfall.
Y_{rain} = Depth of water generated by rainfall.
$Elev_{rain}$ = Elevation of water generated by rainfall.
A_{rain} = Area of water generated by rainfall.
Q = Release flow rate.
Drawdown Time = Time required for the total volume of water accumulated within sub-area to subside.

NOTE OF CAUTION

THE GEODETIC COORDINATES OF EVERY ITEM INCLUDED AS PART OF THIS DOCUMENT ARE IN **NAD83 - ORIGINAL / MTM -** REFERENCE SYSTEM AND HAVE NO LEGAL VALUE. THE SITE LAYOUT MUST BE COMPLETED USING THE OFFICIAL BENCHMARKS OF AN ACCREDITED LAND SURVEYOR IN THE **NAD83 - ORIGINAL / MTM -** REFERENCE SYSTEM.

THE UNDERGROUND FEATURES AND INFORMATION THAT APPEAR ON THE DRAWINGS WERE OBTAINED FROM THE PUBLIC UTILITY COMPANIES AND/OR FROM THE CITY' EACH RESPECTIVELY.

ALL INFORMATION UNDER THE LEGEND 'EXISTING' IS FOR INFORMATION ONLY. COMPLETE OR EXACT LOCATION AND ELEVATION OF UNDERGROUND SERVICES ARE NOT GUARANTEED.

CERTAIN UNDERGROUND FEATURES ON PRIVATE PROPERTY ARE NOT SHOWN ON THE CURRENT DRAWING.

ANYONE WHO PROCEEDS WITH EXCAVATION WORK SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND FEATURES, BY EXPLORATORY EXCAVATIONS, AND SHALL ASSUME FULL RESPONSIBILITY IF THERE IS ANY DAMAGE THAT OCCURS DURING WORK.

THE CONTRACTOR WILL HAVE THE RESPONSIBILITY AND THE OBLIGATION TO VALIDATE, BY EXPLORATORY EXCAVATION, THE SIZE OF THE PUBLIC UTILITIES UNDERGROUND SERVICES AND TO WARN THE ENGINEER OF ANY CONFLICT WITH THE PROJECTED WORK.

No.	Date	Description	By
1	2022-04-07	ISSUED FOR SITE PLAN CONTROL	T.K

STAMPS:

LICENSED PROFESSIONAL ENGINEER — T. G. KENNEDY — 100173201 — April 8, 2022 — PROVINCE OF ONTARIO

DESIGNED BY — APPROVED BY

ENGINEER: CIMA+

CLIENT: The Hazelton Westboro

PROJECT NAME:
403 RICHMOND ROAD &
389 ROOSEVELT AVENUE

SHEET TITLE:
STORM WATER MANAGEMENT PLAN

DISCIPLINE: CIVIL

DRAFTER: S.C. POGGIOLI	SCALE:
DESIGNER: J. ADAMS	DATE: 2022/04/07
APPROVER: T. KENNEDY	APPROVER: T. KENNEDY
PROJECT No: A001046	DRAWING No: C007
SHEET No: 7 of 12	