



RATIONAL FORMULA USED FOR OUTFLOW RATE		
$Q = KCA$	K	2.78
$T_c = 0 \text{ min}$	$C_{\text{ALLOWABLE}}$	0.6
$i_s = 1199/(\text{t}+8)^{0.828}$	i_s	214.3 mm/hr
	A	0.391 Ha
	$Q_{\text{ALLOWABLE}}$	0.058 m³/s

POST - DEVELOPMENT STORMWATER RUNOFF	
WEIGHTED RUNOFF COEFFICIENT, C (TABLE 1)	0.18
25 YEAR STORM INTENSITY, i_{25}	154.4 mm/hr
A_{SITE}	0.391 Ha
$Q_{GENERATED}$ 25-YEAR PEAK FLOW	0.1514 m³/s
USING ISOCHRONES METHOD, TOTAL ON-SITE STORAGE REQUIREMENT	63.83 m³

SURFACE	Area	C	C x A
BUILDING	12.90 m ²	0.001 Ha	0.90
GRASS	3619.50 m ²	0.362 Ha	0.15
GRAVEL	275.60 m ²	0.028 Ha	0.50
PAVED	0.00 m ²	0.000 Ha	0.90
CATCHMENT TOTAL	3900.00 m ²	0.391 Ha	0.18
WEIGHTED RUNOFF COEFFICIENT		0.18	

North of Spray Pad	
<i>AirPervious</i>	0.001 Ha
<i>AirPervious</i>	0.255 Ha
USING BERNOULLI EQUATION FOR RESTRICTED FLOW	
RESTRICTION INVERT	232.05 m
HWL FOR 25 YEAR PONDING LIMIT	232.50 m
INPUT HEAD FOR BERNOULLI	0.425 m
RESTRICTED OUTFLOW THROUGH LDS USING 188mm CONCRETE PIPE FOR ORFICE	0.0412 m³/s
STORAGE REQUIREMENT BASED ON RESTRICTED ORFICE OUTFLOW	40.2 m³
North of Spray Pad STORAGE VOLUME	30.2 m³

SURFACE	Area	C	C x A
BUILDING	0.0 m ²	0.000 Ha	0.90
GRASS	1306.9 m ²	0.131 Ha	0.15
GRAVEL	39.3 m ²	0.004 Ha	0.50
PAVED	0.0 m ²	0.000 Ha	0.90
CATCHMENT TOTAL	1346.2 m ²	0.135 Ha	0.16
WEIGHTED RUNOFF COEFFICIENT		0.16	

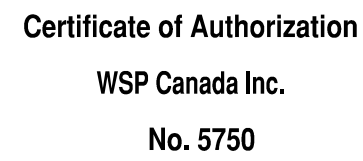
	<div>ISSUED FOR REVIEW</div> <div> TEMPORARY BENCHMARK (T.B.M.) ELEVATION = 233.07 2 TOP NUT OF HYDRANT LOCATED AT THE INTERSECTION OF SILVERSTONE AVE & AURORA ST </div>
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WATERMAIN:

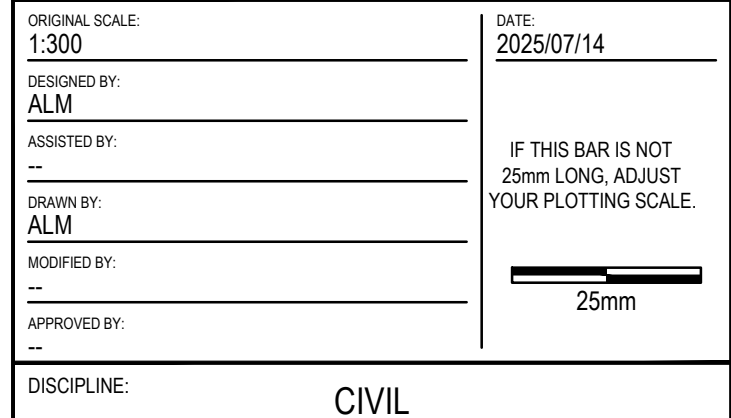
1. WATERMAIN SHALL BE POLYVINYL CHLORIDE (PVC) CLASS 150 PIPE (DR18) MANUFACTURED TO AWWA C-900 WITH GASKET BELL END.
2. ALL WATERMAIN SHALL BE INSTALLED TO A MINIMUM DEPTH OF 2.7m TO CROWN OF PIPE.
3. WATER SERVICES TO THE BUILDINGS TO BE PLUGGED 1.0m OFF THE FACE OF THE BUILDING.
4. WATERMAINS MUST HAVE A MINIMUM VERTICAL CLEARANCE OF 0.3m OVER, AND 0.5m UNDER SEWER AND ALL OTHER UTILITIES WHEN CROSSING.
5. SERVICE CONNECTIONS TO BUILDINGS TO HAVE ALL JOINTS RESTRAINED FROM THE PLUG BACK.
6. ALL WATERMAINS SHALL BE BACTERIOLOGICALLY TESTED. ALL CHLORINATED WATER TO BE DISCHARGED AND PRETREATED TO ACCEPTABLE LEVELS PRIOR TO DISCHARGE. ALL DISCHARGED WATER MUST BE CONTROLLED AND TREATED SO AS TO NOT ADVERSELY EFFECT THE ENVIRONMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MUNICIPAL AND/OR PROVINCIAL REQUIREMENTS ARE FOLLOWED.
7. ACTUAL SERVICE LOCATIONS TO SPRAY PAD TO BE COORDINATED WITH GENERAL CONTRACTOR.

1. ALL WASTEWATER SEWER PIPE SHALL BE PVC SDR-35.
2. SERVICES TO THE BUILDINGS SHALL BE COORDINATED WITH GENERAL CONTRACTOR AND ARE TO BE TERMINATED 1.0m FROM THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. STORM SEWER SHALL BE CONCRETE C76 CLASS 4 OR PVC.
4. LAND DRAINAGE AND WASTEWATER PIPE BEDDING TO BE TYPE B.
5. ALL MANHOLE AND CATCHBASIN EXCAVATIONS TO BE BACKFILLED WITH APPROVED GRANULAR MATERIAL COMPACTED TO 98% SPMD.
6. CBS AND CBMS SHALL HAVE GRATED OPENINGS (AP-006 OR AP-008 AS REQUIRED). MANHOLES SHALL BE AP-005.
7. ALL CATCHBASINS AND MANHOLES TO BE PRECAST.
8. THE CONTRACTOR IS TO PROVIDE CCTV CAMERA INSPECTIONS OF ALL SANITARY AND STORM SEWERS INCLUDING PICTORIAL REPORT, TWO (2) VIDEO TAPES AND COPY IN A FORMAT TO THE SATISFACTION OF THE ENGINEER. ALL SEWERS ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION.
9. ALL CATCH BASINS (CB) TO BE ADS DRAIN BASIN (PART #2816A) OR APPROVED EQUIVALENT PRODUCT C/W GRATE (PART #1899CGS).
10. DRAIN 01 & 02 TO DRAIN EFFLUENT FROM POOL DISCHARGE. EXACT BASINS AND COVERS TO BE SPECIFIED BY PROPONENT DESIGN.

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



TEMPORARY BENCHMARK (T.B.M.)
ELEVATION = 233.07
2 TOP NUT OF HYDRANT LOCATED AT THE
INTERSECTION OF SILVERSTONE AVE & AURORA ST



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PROJECT NUMBER: CA0051966.1097

CLIENT:



CLIENT REF. #: --

PROJECT:

SWCC RICHMOND SPRAY PAD

TITLE:

SITE SERVICING AND
STORMWATER MANAGEMENT

DRAWING NUMBER: C101

REV.
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