

1 EXISTING CONDITIONS, REMOVALS, EROSION & SEDIMENT CONTROL

GENERAL NOTES

- THE ORIGINAL TOPOGRAPHY, GROUND ELEVATION AND SURVEY DATA SHOWN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY AND IMPLY NO GUARANTEE OF ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.
- THIS PLAN IS NOT A CADASTRAL SURVEY SHOWING LEGAL PROPERTY BOUNDARIES AND EASEMENTS. THE PROPERTY BOUNDARIES SHOWN HEREON HAVE BEEN DERIVED FROM INFORMATION SUPPLIED BY (OR SHOWN ON) ANNS, O'SULLIVAN, VOLLEBEK LTD. DRAWING 2308-22 AND CANNOT BE RELIED UPON TO BE ACCURATE OR COMPLETE. THE PRECISE LOCATION OF THE CURRENT PROPERTY BOUNDARIES AND EASEMENTS CAN ONLY BE DETERMINED BY AN UP-TO-DATE LAND TITLES SEARCH AND A SUBSEQUENT CADASTRAL SURVEY PERFORMED AND CERTIFIED BY AN ONTARIO LAND SURVEYOR.
- DATE: MUTM ZONE 9 (76°30' WEST LONGITUDE) NAD-83 (ORIGINAL)
- THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY BEFORE COMMENCING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
- THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME ALL RESPONSIBILITY FOR EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
- RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY AUTHORITIES.
- EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER AND THE CITY.
- TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN ALL AREAS AND TO ORIGINAL PROCTOR DENSITY.
- ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES THROUGHOUT THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS.
- DO NOT ALTER GRADING OF THE SITE WITHOUT PRIOR APPROVAL OF THE ENGINEER/CITY.
- ALL ROADWAY, PARKING LOT, AND GRADING WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS. THE CONTRACTOR IS TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.
- CONTACT THE CITY FOR INSPECTION OF ROUGH GRADING OF PARKING LOTS, ROADWAYS AND LANDSCAPED AREAS PRIOR TO PLACEMENT OF ASPHALT AND TOPSOIL. ALL DEFICIENCIES NOTED SHALL BE RECTIFIED TO THE CITY'S SATISFACTION PRIOR TO PLACEMENT OF ANY ASPHALT, TOPSOIL, SEED & MULCH AND/OR SOD.
- ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
- ELECTRICAL, GAS, TELEPHONE AND TELEVISION SERVICE LOCATIONS ARE SUBJECT TO THE INDIVIDUAL AGENCIES:
 - ELECTRICAL SERVICE - HYDRO ONE.
 - GAS SERVICE - ENBRIDGE.
 - TELEPHONE SERVICE - BELL CANADA.
 - TELEVISION SERVICE - ROGERS.
- INSTALLATION TO BE IN ACCORDANCE WITH CURRENT CODES AND STANDARDS OF APPLICABLE AGENCIES HYDRO ONE, BELL AND THE CITY.
- CONTRACTOR TO ENSURE ALL APPLICABLE OPS SPECIFICATIONS ARE FOLLOWED DURING CONSTRUCTION.
- ALL PROPOSED CURB TO BE CONCRETE BARRIER CURB UNLESS OTHERWISE SPECIFIED.
- THIS PLAN MUST BE READ IN CONJUNCTION WITH THE GEO TECHNICAL INVESTIGATION COMPLETED BY PATERSON GROUP, DATED AUGUST 22, 2022.

EROSION AND SEDIMENT CONTROL

- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATER COURSE, DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, TEMPORARY SEDIMENT CONTROL (GEOGRID INSERTS WITH AN OVERFLOW UNDER GRATE OR COVER) TO BE IMPLEMENTED DURING CONSTRUCTION ON ALL PROPOSED ROAD CATCHBASINS, REAR YARD CATCHBASINS AND CATCHBASIN MANHOLES AND OTHER SEDIMENT TRAPS. NO RECYCLED GEOTEXTILE MATERIAL SHALL BE PERMITTED FOR USE ON SITE. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- AT THE DISCRETION OF THE PROJECT MANAGER OR MUNICIPAL STAFF, ADDITIONAL SILT CONTROL DEVICES SHALL BE INSTALLED AT DESIGNATED LOCATIONS.
- FOR SILT FENCE BARRIERS, USE OPSD 219.110 GEOTEXTILE FOR SILT FENCE AS PER OPSD 1860, TABLE 3.
- EXCEPT AS PROVIDED IN PARAGRAPHS 4.1, AND 4.2 BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED.
- WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE.
- WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS AFTER ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 21 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.
- SEDIMENT THAT IS ACCUMULATED BY THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS ESCAPE OF THE SEDIMENT TO THE RECEIVING WATER COURSE OF THE CONTROL MEASURE AND AVOIDS DAMAGE TO THE CONTROL MEASURE. SEDIMENT SHALL BE REMOVED TO THE LEVEL OF THE GRADE EXISTING AT THE TIME THE CONTROL MEASURE WAS CONSTRUCTED AND BE ACCORDING TO THE FOLLOWING:
 - FOR LIGHT DUTY SEDIMENT BARRIERS, ACCUMULATED SEDIMENT SHALL BE REMOVED ONCE IT REACHES THE LESSER OF THE FOLLOWING:
 - A DEPTH OF ONE-HALF THE EFFECTIVE HEIGHT OF THE CONTROL MEASURE.
 - A DEPTH OF 300 MM IMMEDIATELY
 - UPSTREAM OF THE CONTROL MEASURE, ACCUMULATED SEDIMENT SHALL BE REMOVED AS NECESSARY TO PREFORM MAINTENANCE REPAIRS.
 - ACCUMULATED SEDIMENT SHALL BE REMOVED PRIOR TO THE REMOVAL OF THE CONTROL MEASURE.
 - ACCUMULATED SEDIMENT IS TO BE REMOVED AND DISPOSED OF AS PER OPSD 186.
 - ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MONITORED TO ENSURE THEY ARE IN EFFECTIVE WORKING ORDER. THE CONDITION OF THE CONTROL MEASURES SHALL BE MONITORED PRIOR TO ANY FORECAST STORM EVENT AND FOLLOWING A STORM EVENT.
 - DUST CONTROL MEASURES SHOULD BE CONSIDERED PRIOR TO CLEARING AND GRADING. THE USE OF WATER, CALCIUM CHLORIDE FLAKES/SOLUTION OR MAGNESIUM CHLORIDE FLAKES/SOLUTION SHALL BE USED AS DUST SUPPRESSANTS AS PER OPSD 506. THIS IS TO LIMIT WIND EROSION OF SOILS WHICH MAY TRANSPORT SEDIMENTS OFFSITE, WHERE THEY MAY BE WASHED INTO THE RECEIVING WATER BY THE NEXT RAINSTORM.
 - ALL "GREEN AREAS" TO BE TREATED WITH 150mm TOPSOIL AND SOD AS SOON AS FEASIBLE, AS PER OPSD 570.
 - ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
 - STOCKPILED MATERIAL IS TO BE STORED AWAY FROM POTENTIAL RECEIVERS (E.G. STORM CATCHBASINS, MANHOLES), AND BE SURROUNDED BY EROSION CONTROL MEASURES WHERE MATERIAL IS LEFT IN PLACE IN EXCESS OF 14 DAYS.
 - IF REQUIRED, DEWATERING/SETTLING BASINS SHALL BE CONSTRUCTED AS PER OPSD 219.240 AND LOCATED ON FLAT GRADE UPSTREAM OF OTHER EXISTING MITIGATION MEASURES. WATER COURSES SHALL NOT BE DIVERTED, OR BLOCKED, AND TEMPORARY WATERCOURSES CROSSINGS SHALL NOT BE CONSTRUCTED OR UTILIZED, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. IF CLOSURE OF ANY PERMANENT WATER PASSAGE IS NECESSARY, THE CONTRACTOR SHALL RELEASE ANY STRANDED FISH TO THE OPEN PORTION OF THE WATERCOURSE WITHOUT HARM.
 - ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO OPSD 577.
 - WHERE DEWATERING IS REQUIRED, THE DISCHARGED WATER SHALL BE CONTROLLED IN ACCORDANCE WITH OPSD 518.
 - ALL SETTLING/FILTRATION BASINS SHALL BE EQUIPPED WITH WATERFALL 270R GEOTEXTILE OR EQUIVALENT EQUIVALENT) AND SHALL BE CLEANED AND REPAIRED AS REQUIRED.

WATERMAIN NOTES

- CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH OPSD STANDARDS AND SPECIFICATIONS, AS WELL AS CITY STANDARDS.
- WATERMANS AND/OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 2.4m. OTHERWISE THERMAL INSULATION IS REQUIRED AS PER CITY STANDARDS (IF AVAILABLE) OR OPSD 1109.030.
- IF THE WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS EQUAL TO OR LESS THAN THAT WHICH IS RECOMMENDED BY THE MANUFACTURER.
- THERMAL INSULATION OF WATERMANS AT OPEN STRUCTURES AS PER CITY STANDARDS (IF AVAILABLE) OR OPSD 1109.030.
- VALVES TO BE OPERATED BY CITY STAFF ONLY.
- NO CONNECTION TO EXISTING WATER NETWORK SHALL BE COMPLETED UNTIL A WATER PERMIT IS OBTAINED FROM THE CITY. CITY TO BE PRESENT FOR WATERMAIN CONNECTION, CONNECTION, EXCAVATION, BACKFILLING AND REINSTATEMENT TO BE COMPLETED BY CONTRACTOR.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ANY WATERMAIN CONNECTIONS REQUIRED. THIS SHALL BE COMPLETED IN THE PRESENCE OF A DESIGNATED MUNICIPAL WATER OPERATOR AND THE SELECTED CONTRACTOR SHALL PROVE TO THE SATISFACTION OF THE CITY THAT THEY ARE COMPETENT TO PERFORM THE WORKS PRIOR TO OBTAINING CONSTRUCTION.
- CONCRETE THRUST BLOCKS TO CONFORM TO OPSD 1103.010 AND OPSD 1103.020.
- ALL WATERMAIN TO BE CLASS 150 DR-18 OR APPROVED EQUIVALENT.
- ALL WATERMAIN TO BE EQUIPPED WITH TRACER WIRE.

SEWER NOTES:

- CONSTRUCT ALL SEWERS, CATCH BASINS, MANHOLES AND APPURTENANCES IN ACCORDANCE WITH OPSD STANDARDS AND SPECIFICATIONS, AS WELL AS CITY.
- SEWER TRENCHING AND BEDDING SHALL CONFORM TO OPSD 802.010 AND 802.013 UNLESS NOTED OTHERWISE.
 - BEDDING SHALL BE A MINIMUM 150mm OF GRANULAR "A" COMPACTED TO MINIMUM 95% STANDARD PROCTOR DRY DENSITY. CLEAR STONE BEDDING SHALL NOT BE PERMITTED.
 - SUB-BEDDING, IF REQUIRED SHALL CONSIST OF 450mm OF COMPACTED GRANULAR "B" TYPE 1.
 - BACKFILL TO AT LEAST 300mm ABOVE TOP OF PIPE WITH GRANULAR "A" OR GRANULAR "B" TYPE 1.
 - TO MINIMIZE DIFFERENTIAL FROST HEAVING, TRENCH BACKFILL (FROM PAVEMENT SUBGRADE TO 2.0 METRES BELOW FINISHED GRADE) SHALL MATCH EXISTING SOIL CONDITIONS.
- SANITARY SEWERS AND CONNECTIONS 150mmØ AND SMALLER TO BE PVC DR-28.
- SEWERS AND CONNECTIONS 200mmØ AND LARGER TO BE PVC SDR-35. BEDDING TO BE TYPE "B" EXCEPT AT RISERS, UNLESS NOTED OTHERWISE BY CONTRACTOR.
- INSULATE ALL STORM AND SANITARY SEWERS/SERVICES THAT HAVE LESS THAN 2.0m OF COVER WITH THERMAL INSULATION AS PER OPSD 1109.030.
- SEWER CONNECTIONS ARE TO BE MADE ABOVE THE SPRINGLINE OF THE SEWERMAIN AS PER CITY OF OTTAWA STANDARD DRAWING 511.511.1 & 511.2.
- SUPPLY AND INSTALL ALL PIPING AND APPURTENANCES AS SHOWN AND DETAILLED TO WITHIN 1.0m OF BUILDING. ALL ENDS OF SERVICES TO BE PROPERLY CAPPED AND LOCATED WITH 2.4x76" LONG MARKER.
- CONTRACTOR TO TELEVISION (CCTV) ALL PROPOSED SEWERS ON SITE. OUTLET CONNECTION TO THE MAIN AND PIPES 150mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
- DYE TESTING IS TO BE COMPLETED ON SANITARY SEWER TO CONFIRM PROPER CONNECTION TO SANITARY SEWER MAIN.

WATER COVER TABLE

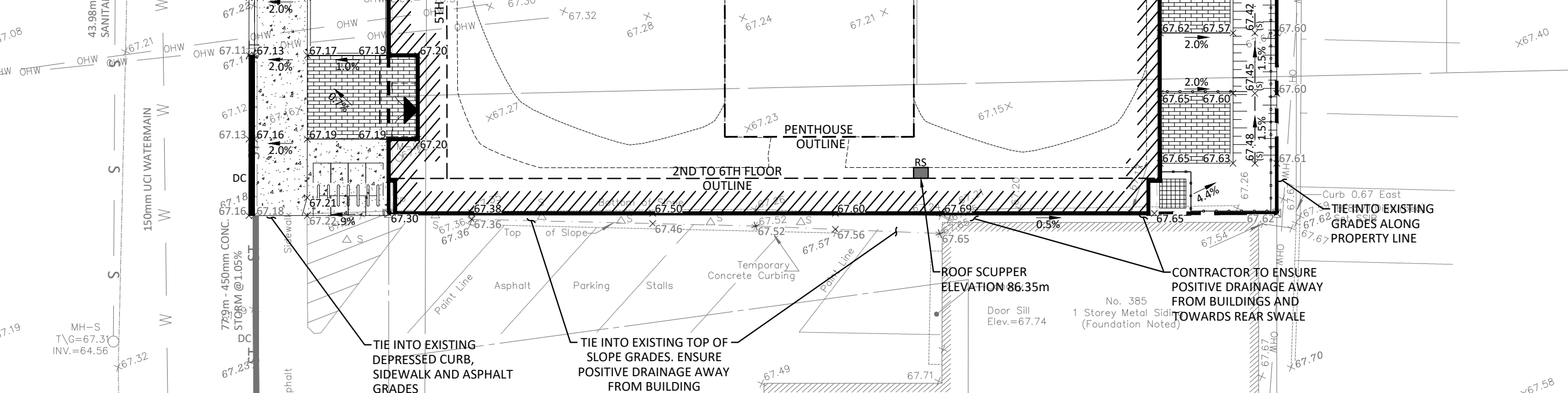
LOCATION	STATION	FINISHED GRADE	TOP OF PIPE	COVER
A - 200 X 150 TEE	0+100.00	66.98	64.58	2.40
STORM CROSSING	0+103.65	66.97	64.27	2.70
VALVE	0+107.02	67.07	64.67	2.40
BUILDING	0+108.02	67.10	64.70	2.40

CROSSING CONFLICT TABLE

LOCATION	DESCRIPTION	SEPARATION
1	150mmØ SAN SERVICE INV 65.49	0.91
2	150mmØ WATER SERVICE INV 65.56	0.50
3	300mmØ STORM SEWER OVB 65.06	0.50
	300mmØ STW SEWER INV 64.77	
	150mmØ WATER SEWER TOP 64.77	0.50

*PROVIDE VERTICAL BENDS AS REQUIRED TO MEET MINIMUM SEPARATION

2 SERVICING, SITE GRADING AND DRAINAGE



ROOF DRAIN (B1A)

TYPE OF CONTROL DEVICE	WATTS DRAINAGE RD-100-A-ADJ (± OPEN)
NUMBER OF ROOF DRAINS	1
MAXIMUM DEPTH (m)	0.150
MAXIMUM STORAGE (m³)	7.62
ROOFTOP STORAGE (m³)	5-YEAR 2.43 100-YR 5.82
DEPTH OF FLOW (m)	0.105 0.140
FLOW PER ROOF DRAIN (L/s)	0.80 0.91
TOTAL FLOW	0.80 0.91

ROOF DRAIN (B1C)

TYPE OF CONTROL DEVICE	WATTS DRAINAGE RD-100-A-ADJ (FULLY OPEN)
NUMBER OF ROOF DRAINS	1
MAXIMUM DEPTH (m)	0.150
MAXIMUM STORAGE (m³)	6.91
ROOFTOP STORAGE (m³)	5-YEAR 3.51 100-YR 6.91
DEPTH OF FLOW (m)	0.115 0.150
FLOW PER ROOF DRAIN (L/s)	1.45 1.89
TOTAL FLOW	1.45 1.89

ROOF DRAIN (B1B)

TYPE OF CONTROL DEVICE	WATTS DRAINAGE RD-100-A-ADJ (CLOSED)
NUMBER OF ROOF DRAINS	1
MAXIMUM DEPTH (m)	0.150
MAXIMUM STORAGE (m³)	7.02
ROOFTOP STORAGE (m³)	5-YEAR 3.00 100-YR 6.92
DEPTH OF FLOW (m)	0.110 0.150
FLOW PER ROOF DRAIN (L/s)	0.32 0.32
TOTAL FLOW	0.32 0.32

ROOF DRAIN (B1D)

TYPE OF CONTROL DEVICE	WATTS DRAINAGE RD-100-A-ADJ (± OPEN)
NUMBER OF ROOF DRAINS	1
MAXIMUM DEPTH (m)	0.150
MAXIMUM STORAGE (m³)	7.64
ROOFTOP STORAGE (m³)	5-YEAR 2.40 100-YR 6.18
DEPTH OF FLOW (m)	0.100 0.140
FLOW PER ROOF DRAIN (L/s)	0.79 0.90
TOTAL FLOW	0.79 0.90

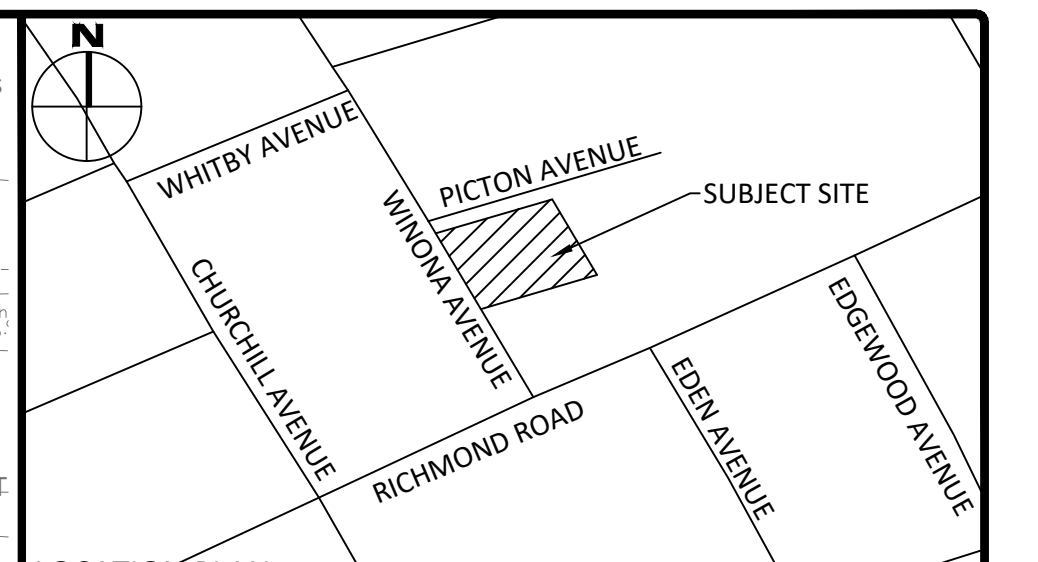
WATER COVER TABLE

LOCATION	STATION	FINISHED GRADE	TOP OF PIPE	COVER
A - 200 X 150 TEE	0+100.00	66.98	64.58	2.40
STORM CROSSING	0+103.65	66.97	64.27	2.70
VALVE	0+107.02	67.07	64.67	2.40
BUILDING	0+108.02	67.10	64.70	2.40

CROSSING CONFLICT TABLE

LOCATION	DESCRIPTION	SEPARATION
1	150mmØ SAN SERVICE INV 65.49	0.91
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	300mmØ STW SEWER INV 64.77	
	150mmØ WATER SEWER TOP 64.77	0.50

*PROVIDE VERTICAL BENDS AS REQUIRED TO MEET MINIMUM SEPARATION



LEGEND

- CONCRETE BARRIER CURB
- CONCRETE ASPHALT
- PROPOSED WALKWAY
- LSCBH LANDSCAPING CATCHBASIN
- CBMH/CATCHBASIN MANHOLE
- CBH/CATCHBASIN
- MHHA/SANITARY SEWER MANHOLE
- HYD/FIRE HYDRANT
- WATER VALVE
- WATER METER
- REMOTE WATER METER
- 5-YEAR PONDING LEVEL
- 100-YEAR PONDING LEVEL
- LIMIT OF CONSTRUCTION
- DRAINAGE SWALE
- DRAINAGE DITCH
- SLOPING AT 3:1 UNLESS SPECIFIED
- 95.50 SURFACE ELEVATION
- 95.50 SWALE ELEVATION
- X/1W 95.50 b/w 94.25 TOP OF WALL ELEVATION BOTTOM OF WALL ELEVATION
- OVERLAND FLOW ROUTE
- SILT FENCE BARRIER
- STRAW BALE CHECK DAM
- MUD MAT
- THRUST BLOCK

FOR REVIEW ONLY
NOT FOR CONSTRUCTION

No.	Revisions	Date
3	REVISED PER CITY COMMENTS	FEB. 15, 2023
2	ISSUED FOR COORDINATION	FEB. 10, 2023
1	ISSUED FOR REVIEW	OCT. 13, 2022

Check and verify all dimensions before proceeding with the work. Do not scale drawings.

SCALE 1:150

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintoshperry.com

Stamp:
LICENSED PROFESSIONAL ENGINEER
N. B. VACHON
100529170
2023.02.15
PROVINCE OF ONTARIO

Client:
CSV ARCHITECTS
190 O'CONNOR STREET, SUITE 100
OTTAWA, ON K2P 2R3

Project:
MIXED USE BUILDING
377/381 WINONA AVENUE

Drawing Title:
EXISTING CONDITIONS, REMOVALS, LOT GRADING, DRAINAGE, SERVICING, EROSION & SEDIMENT CONTROL PLAN

Scale: 1:150 Project Number:
Drawn By: FV CCO-23-1238
Checked By: CIM Drawing Number:
Designed By: NV

C101