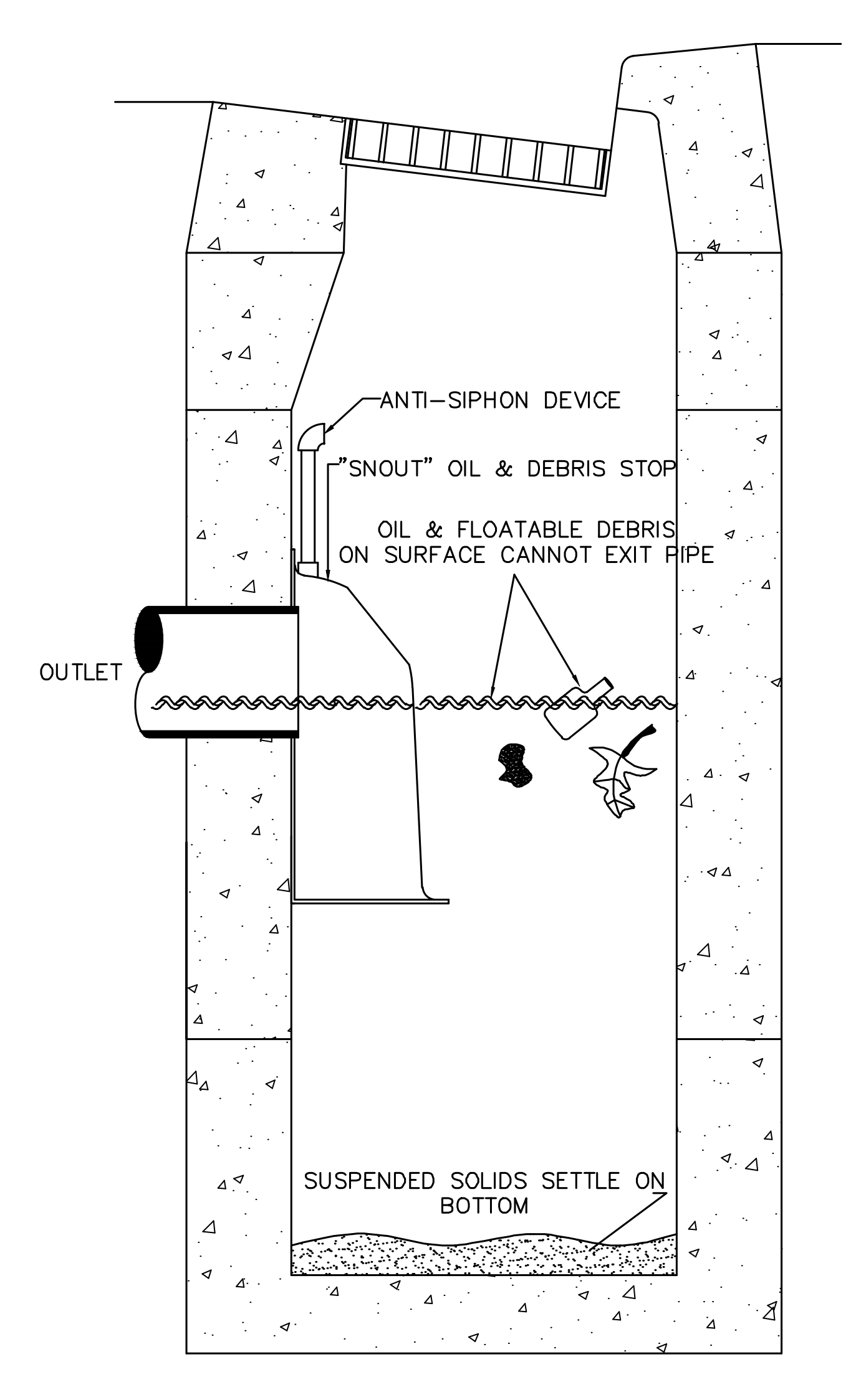

ANTI–SIPHON DEVICE
"SNOUT" OIL & DEBRIS STOP
OIL & FLOATABLE DEBRIS ON SURFACE CANNOT EXIT PIPE
OUTLET
SUSPENDED SOLIDS SETTLE ON BOTTOM

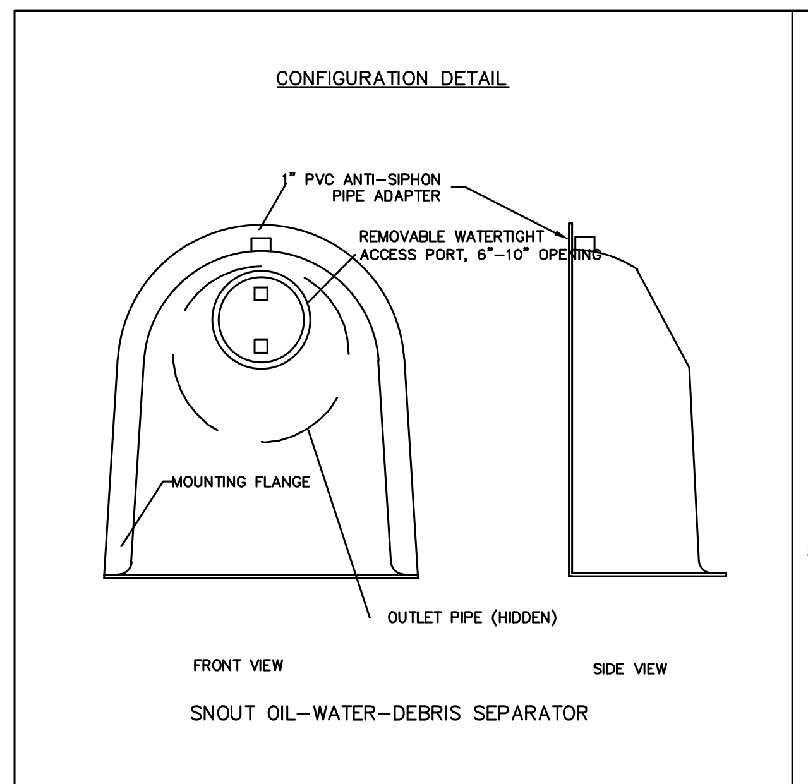
U.S.PATENT #6126817 ADDITIONAL PATENTS PENDING

LOCAL DISTRIBUTOR:
AQUA-SPEC Ltd.
LONDON, ONTARIO
Tel: 519-657-7504

BMP, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 504-8008 FAX: (860)434-3195

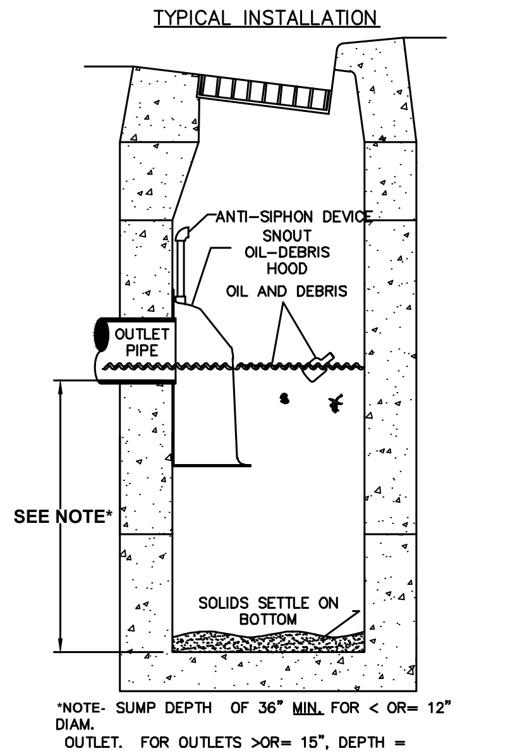
DESCRIPTION	DATE	SCALE
SNOUT CATCH BASIN INSTALLATION (TYPICAL)	09/17/99	NONE
	DRAWING NUMBER	
	SN–BAS	

CONFIGURATION DETAIL


1" PVC ANTI–SIPHON PIPE ADAPTER
REMOVABLE WATERTIGHT ACCESS PORT, 6"–10" OPENING
MOUNTING FLANGE
OUTLET PIPE (HIDDEN)
FRONT VIEW
SIDE VIEW

SNOUT OIL–WATER–DEBRIS SEPARATOR

TYPICAL INSTALLATION



*NOTE- SUMP DEPTH OF 36" MIN. FOR < OR= 12" DIAM. OUTLET. FOR OUTLETS >OR= 15", DEPTH = 2.5–3X DIAM.

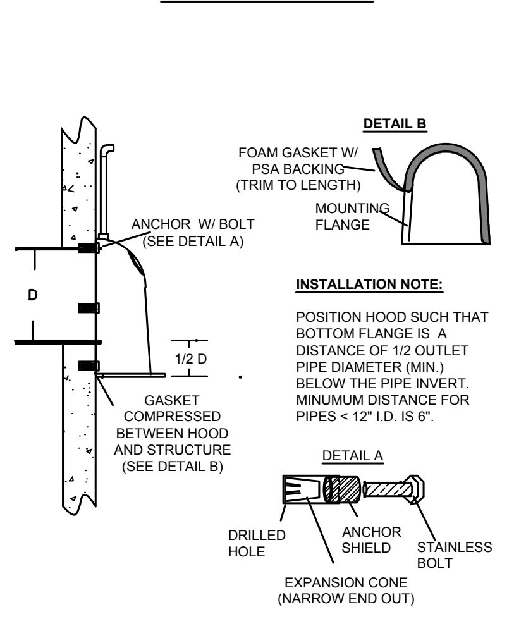
NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 354-7585
   WEB SITE: www.bestmp.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8' STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION KIT SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

US Patent # 6126817

LOCAL DISTRIBUTOR:
AQUA-SPEC Ltd.
LONDON, ONTARIO
Tel: 519-657-7504

INSTALLATION DETAIL

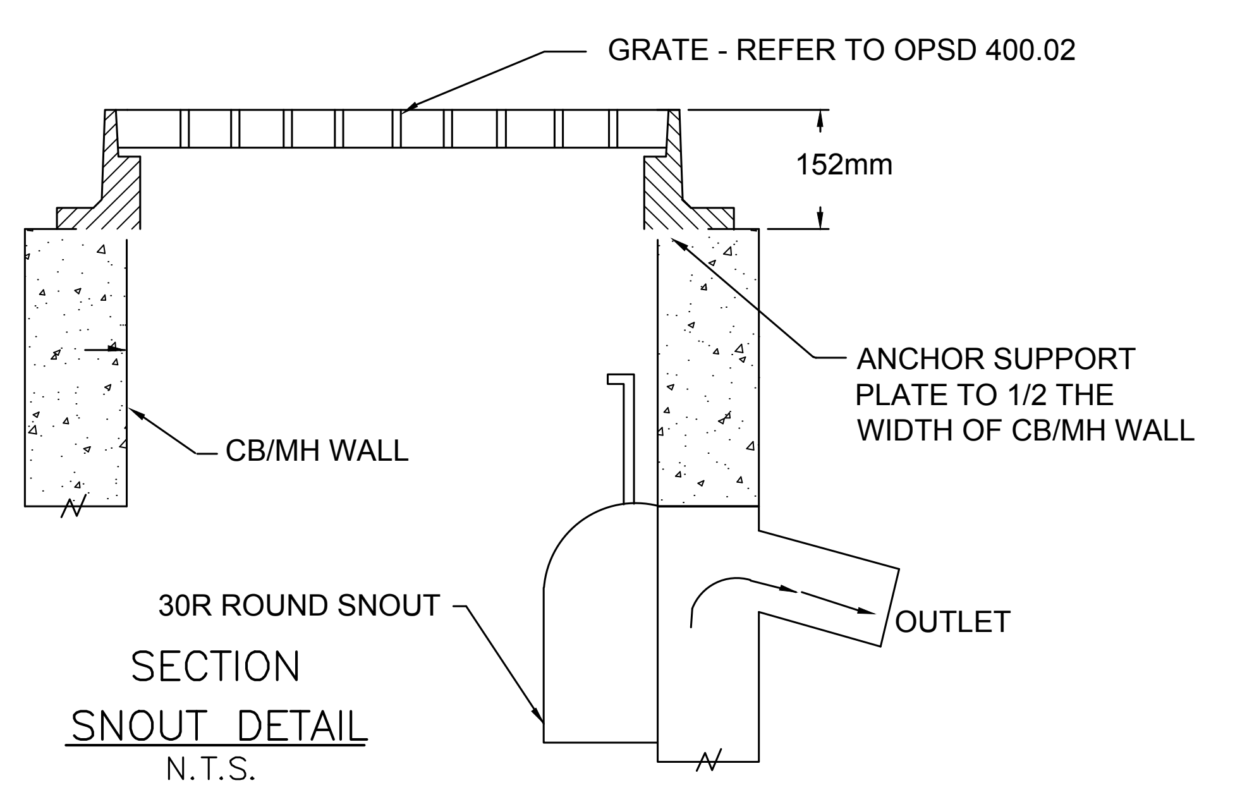

DETAIL B
FOAM GASKET W/ PSA BACKING (TRIM TO LENGTH)
MOUNTING FLANGE
ANCHOR W/ BOLT (SEE DETAIL A)
D
1/2 D
GASKET COMPRESSED BETWEEN HOOD AND STRUCTURE (SEE DETAIL B)
DETAIL A
DRILLED HOLE
ANCHOR SHIELD
STAINLESS BOLT
EXPANSION CONE (NARROW END OUT)

INSTALLATION NOTE:

POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINUMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

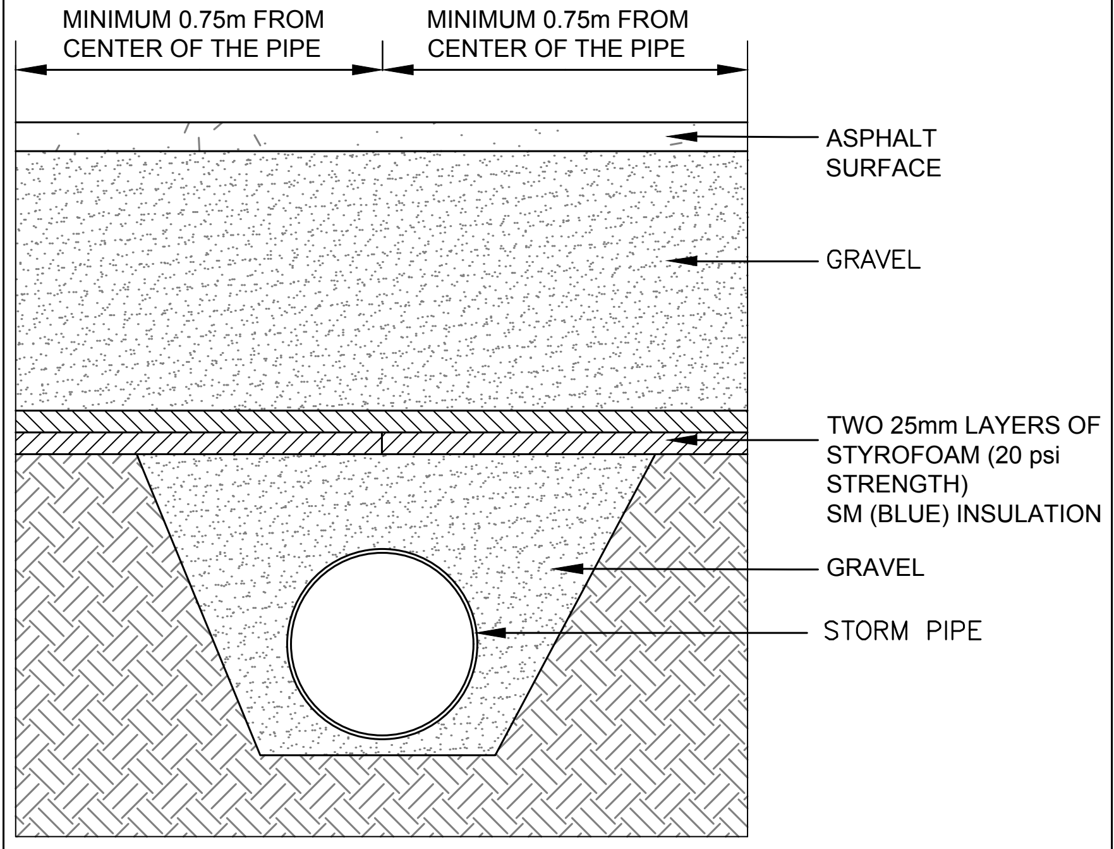
DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/00	NONE
	DRAWING NUMBER	
	SP-SN	


GRATE - REFER TO OPSD 400.02
152mm
ANCHOR SUPPORT PLATE TO 1/2 THE WIDTH OF CB/MH WALL
CB/MH WALL
30R ROUND SNOUT
OUTLET

SECTION

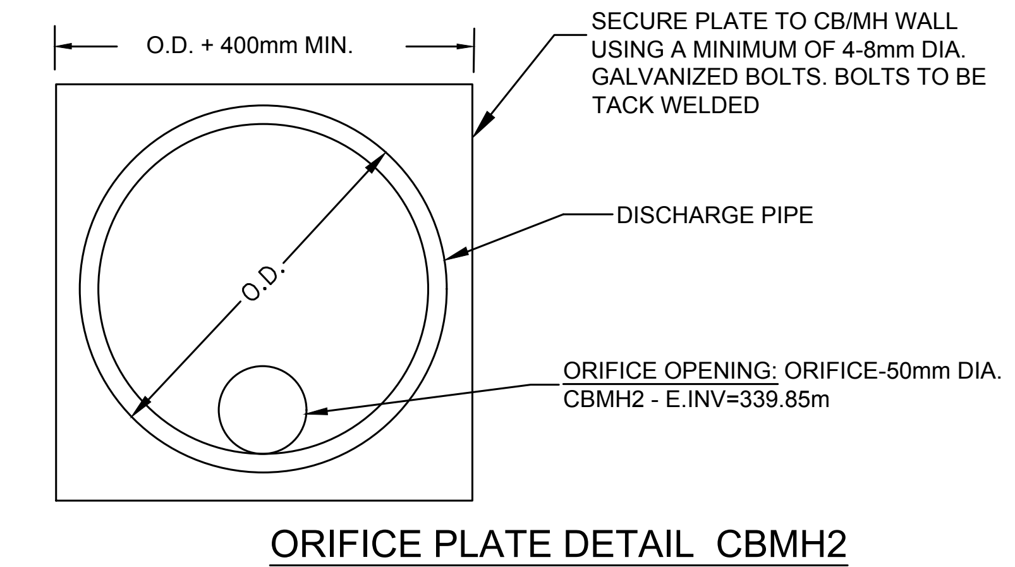
SNOUT DETAIL

N.T.S.


MINIMUM 0.75m FROM CENTER OF THE PIPE
MINIMUM 0.75m FROM CENTER OF THE PIPE
ASPHALT SURFACE
GRAVEL
TWO 25mm LAYERS OF STYROFOAM (20 psi STRENGTH) SM (BLUE) INSULATION
GRAVEL
STORM PIPE

PIPE INSULATION DETAIL

N.T.S.

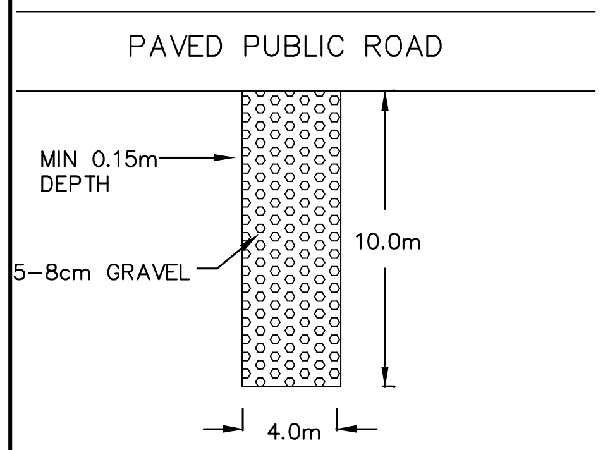

O.D. + 400mm MIN.
SECURE PLATE TO CB/MH WALL USING A MINIMUM OF 4-8mm DIA. GALVANIZED BOLTS. BOLTS TO BE TACK WELDED
O.D.
DISCHARGE PIPE
ORIFICE OPENING: ORIFICE-50mm DIA. CBMH2 - E.INV=339.85m

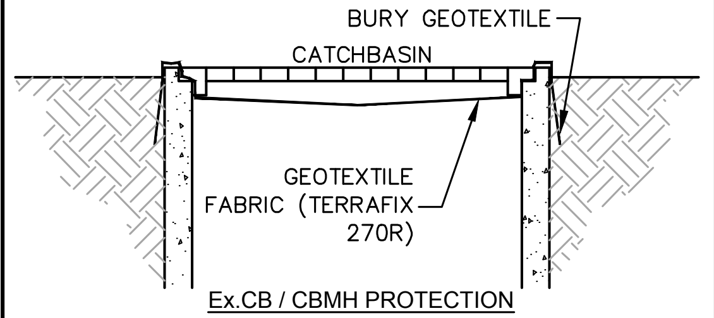
ORIFICE PLATE DETAIL CBMH2

N.T.S.

ENTRANCE PROTECTION

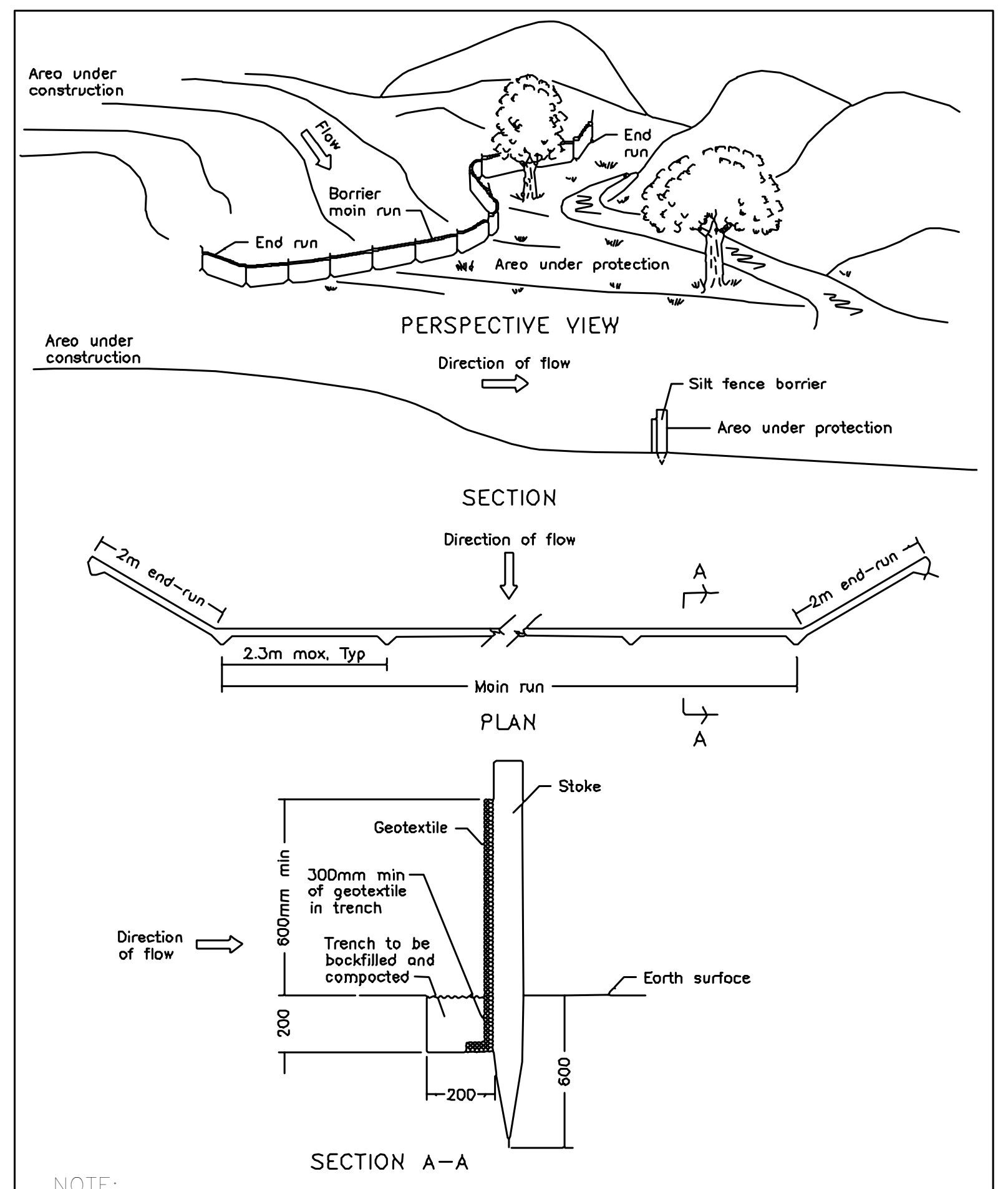
N.T.S.





Ex.CB / CBMH PROTECTION

REQUIRED DURING CONSTRUCTION ON THE SITE AND IN THE R-O-W DOWNSTREAM OF DEVELOPMENT



NOTE:
All dimensions are in millimetres or metres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2006	Rev 1
LIGHT DUTY SILT FENCE BARRIER	OPSD – 219.110	

CLIENT

Lester Sunview Development Inc.

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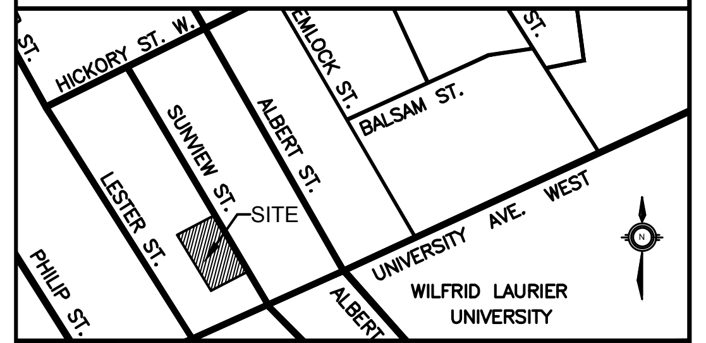
ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA - FIRST SUBMISS.	2022-10-27
2	ISSUED FOR ZBA-SECOND SUBMISS	2023-10-24
3	####	####
4	####	####
5	####	####

KEY PLAN



MAINTENANCE RECOMMENDATIONS FOR SNOUT, SWM QUALITY PRODUCT BY BMP®:

FIRST YEAR ONLY RECOMMENDATIONS:

- MONTHLY MONITORING OF A NEW INSTALLATION AFTER THE SITE HAS BEEN STABILIZED.
- MEASUREMENTS SHOULD BE TAKEN AFTER EACH RAIN EVENT OF 12.0 mm OR MORE, OR MONTHLY, AS DETERMINED BY LOCAL WEATHER CONDITIONS.
- CHECKING SEDIMENT DEPTH AND NOTING THE SURFACE POLLUTANTS IN THE STRUCTURE WILL BE HELPFUL IN PLANNING MAINTENANCE. RAINFALL VOLUME VS. SEDIMENT AND DEBRIS CAPTURE CAN THEN BE PLOTTED AS AN ACCURATE PREDICTOR OF SERVICE INTERVALS.

FOR ONGOING MAINTENANCE AFTER FIRST YEAR:

- THE POLLUTANTS COLLECTED IN SNOUT EQUIPPED STRUCTURES WILL CONSIST OF FLOATABLE DEBRIS, TRASH AND OILS ON THE SURFACE OF THE CAPTURED WATER, AND GRIT AND SEDIMENT ON THE BOTTOM OF THE STRUCTURE.
- IT IS BEST TO SCHEDULE MAINTENANCE BASED ON THE SOLIDS COLLECTED IN THE SUMP.
- OPTIMALLY, THE STRUCTURE SHOULD BE CLEANED WHEN THE SUMP IS HALF FULL (E.G. WHEN 2 FEET OF MATERIAL COLLECTS IN A 4 FOOT SUMP, CLEAN IT OUT).
- FOR FLOATABLES AND TRASH ONLY (WITH OR WITHOUT TRASH SCREEN), SERVICE WHEN 15cm OF FLOATING MATERIAL ACCUMULATES ON SURFACE ABOVE STATIC WATER LEVEL.
- STRUCTURES SHOULD ALSO BE CLEANED IF A SPILL OR OTHER INCIDENT CAUSES A LARGER THAN NORMAL ACCUMULATION OF POLLUTANTS IN A STRUCTURE.
- MAINTENANCE IS BEST DONE WITH A VACUUM TRUCK.
- IF BIO-SKIRTS ARE BEING USED IN THE STRUCTURE TO ENHANCE HYDROCARBON CAPTURE AND/OR BACTERIA REMOVALS, THEY SHOULD BE CHECKED ON A MONTHLY BASIS, AND SERVICED OR REPLACED WHEN MORE THAN 2/3 OF THE BOOM IS SUBMERGED, INDICATING A NEARLY SATURATED STATE. ASSUMING A TYPICAL POLLUTANT-LOADING ENVIRONMENT EXISTS, BIO-SKIRTS SHOULD BE SERVICED* OR REPLACED ANNUALLY.
- IN THE CASE OF AN OIL SPILL, THE STRUCTURE SHOULD BE SERVICED AND BIO-SKIRTS REPLACED (IF ANY) IMMEDIATELY
- ALL COLLECTED WASTES MUST BE HANDLED AND DISPOSED OF ACCORDING TO LOCAL ENVIRONMENTAL REQUIREMENTS.
- TO MAINTAIN THE SNOUT HOODS THEMSELVES, AN ANNUAL INSPECTION OF THE ANTI SIPHON VENT AND ACCESS HATCH ARE RECOMMENDED. A SIMPLE FLUSHING OF THE VENT, OR A GENTLE RODDING WITH A FLEXIBLE WIRE ARE ALL THAT'S TYPICALLY NEEDED TO MAINTAIN THE ANTI-SIPHON PROPERTIES. OPENING AND CLOSING THE ACCESS HATCH ONCE A YEAR ENSURES A LIFETIME OF TROUBLE-FREE SERVICE.
- TO MAINTAIN TRASH SCREEN, HOSE OFF DEBRIS FROM SCREEN (IF ANY) PRIOR TO REMOVAL OF POLLUTANTS BY VACUUM TRUCK.

*TO EXTEND THE SERVICE LIFE OF A BIO-SKIRT, THE UNIT MAY BE "WRUNG OUT" TO REMOVE ACCUMULATED OILS AND WASHED IN AN INDUSTRIAL WASHING MACHINE IN WARM WATER. THE BIO-SKIRT MAY THEN BE RE-DEPLOYED AS LONG THE MATERIAL MAINTAINS IT'S STRUCTURAL INTEGRITY.

NOTES

1. CONTRACTOR IS REQUIRED TO REFER THE APPROVED VEGETATION MANAGEMENT PLAN WITH RESPECT TO THE INFORMATION FOR TREE REMOVAL / TREE PROTECTION.
2. CONTRACTOR TO INFORM CITY'S PWS INSPECTOR PRIOR OF ALL SERVICE DISCONNECTIONS. CITY'S INSPECTOR TO BE ON SITE DURING SERVICE DISCONNECTIONS.
3. EXISTING WATER SERVICE TO BE REMOVED AND AT MAIN. DISCONNECTED PIPE MUST BE CAPPED OR BULK HEADED.
4. LEAD TEE JOINTS DRAINED, SUPER FLUSHED AND CHLORINATED WITH POSSIBLE MAIN SHUT DOWN.
5. EXISTING SANITARY SERVICE TO BE REMOVED AND CAPPED AT PROPERTY LINE.
6. IF EXISTING SANITARY SERVICE PIPE CONSIST OF BITUMINOUS FIBER PIPE, THE FULL SERVICE TO BE REMOVED AND CAPPED AT THE MAIN.
7. EXISTING VEGETATION NOT TO BE REMOVED UNTIL A BUILDING PERMIT HAS BEEN ISSUED OR UNTIL CONTROL MEASURES HAVE BEEN INSTALLED AND ACCEPTED BY CITY LANDSCAPE TECHNOLOGIST.
8. EXISTING CONCRETE SIDEWALK TO REMAIN UNTIL ALL CONSTRUCTION WORKS HAVE FINISHED.
9. CONCRETE WORKS (CURB AND GUTTER, SIDEWALKS) OF PAVING WILL NOT BE PERMITTED AFTER NOVEMBER 30th OF EACH YEAR UNLESS SPECIFICALLY APPROVED IN WRITING BY THE DIRECTOR OF ENGINEERING SERVICES.
10. ALL MUNICIPAL DRAIN INLETS, ON SITE CB AND MH's (UPON COMPLETION OF SERVICING), OR ANY OTHER CB INLETS IN THE AREA OF THE SITE AND ON HAUL ROUTES MUST BE PROTECTED WITH FILTER FABRIC, OR EQUIVALENT BARRIERS MEETING CRITERIA, STANDARDS AND SPECIFICATIONS ACCEPTABLE BY THE ENGINEERING AND CONSTRUCTION DIVISION.
11. EROSION AND SEDIMENT CONTROL AND CONCEPTUAL WORKSPACE MANAGEMENT PLAN MUST BE REVIEWED JOINTLY BY THE CONSULTANT, CONTRACTOR, SUPERINTENDENT AND THE CITY STAFF PRIOR TO COMMENCEMENT OF CONSTRUCTION, AND REVISIONS TO THE PLANS RESUBMITTED TO THE ENGINEERING AND CONSTRUCTION DIVISION, AS NECESSARY.
12. NO CONSTRUCTION WORK TO BE UNDERTAKEN ON THE SUBJECT PROPERTY WITHOUT FINAL ENGINEERING ACCEPTANCE AND A BUILDING PERMIT ISSUED BY THE CITY.
13. ALL WORK TO BE DONE IN ACCORDANCE WITH STANDARDS AND SPECIFICATION OF THE REGION OF WATERLOO (DGSSMS), CITY OF WATERLOO AND OPSD EXCEPT WHICHEVER ARE MORE STRINGENT.
14. NEW CURBS AND SOD TO BE REINSTATED AS REQUIRED. ANY AREAS IN RIGHT OF WAY DISTURBED THROUGH CONSTRUCTION TO BE REPLACED AT THE DEVELOPERS COST.
15. EXISTING CONC. SIDEWALK TO BE REMOVED AND REPLACED AT NEW ENTRANCE AS PER CITY STANDARD DWG. W-230. NEW SIDEWALK TO BE REPLACED AT THE DEVELOPERS' COST.
16. ALL SERVICE CONNECTIONS TO THE PROPERTY LINE MUST BE INSTALLED TO THE CITY'S SATISFACTION PRIOR TO ANY INTERNAL SERVICING WORKS AS PER CITY BY-LAW.
17. CITY OF WATERLOO, ENGINEERING SERVICES DEPARTMENT MUST BE NOTIFIED OF ANY SIGNIFICANT CHANGES TO THE APPROVED DESIGN THAT MAY OCCUR DURING CONSTRUCTION.
18. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL AFFECTED PROPERTY TO ORIGINAL CONDITION, AT THE OWNER'S EXPENSE.
19. CONTRACTOR TO REFER TO BY-LAW 08-077 'THE CITY OF WATERLOO TRAFFIC AND PARKING BY-LAW'
20. CONTRACTOR TO REFER TO BY-LAW 10-066 'THE CITY OF WATERLOO SITE ALTERATION BY-LAW'.
21. CONTRACTOR TO REFER TO BY-LAW 09-111 'THE CITY OF WATERLOO WORK PERMIT BY-LAW'.
22. THE ENGINEERING ACCEPTANCE OF THIS PLAN DOES NOT EXEMPT THE OWNER'S BONDED CONTRACTOR FROM THE REQUIREMENTS TO OBTAIN THE VARIOUS PERMITS AND ADDITIONAL APPROVALS REQUIRED TO COMPLETE CONSTRUCTION PROJECT.
23. 23.ALL SERVICE CONNECTIONS TO THE PROPERTY LINE MUST BE INSTALLED TO THE CITY'S SATISFACTION PRIOR TO ANY INTERNAL SERVICING WORKS AS PER CITY BY-LAW.
24. 24.WATER SYSTEMS 100mm Ø AND LARGER TO BE ISOLATED FROM THE MUNICIPAL WATER SUPPLY WITH THE CERTIFIED BACKFLOW PREVENTION DEVICE DURING CONSTRUCTION.
25. WATER SERVICE TESTING AND COMMISSIONING TO COMPLY WITH DGSSMS SECTION D.28 'COMMISSIONING'
26. #8 GAUGE TWU SOLID COPPER PLASTIC COATED TRACER WIRE TO BE ATTACHED TO EVERY NON-METALIC SERVICE TO INSIDE THE BUILDING AND ON FIRE SERVICE LEAD TO ENABLE THE PIPE TO BE LOCATED.
27. ANODES CONNECTED TO EACH METALLIC FITTINGS USING BRASS GROUNDING CLAMPS, SHALL NOT BE ATTACHED TO TRACER WIRES, AND TRACER WIRE SHALL NOT BE CONNECTED TO WATERMAIN FITTINGS.
28. ALL METALLIC WATERMAIN FITTINGS AND APPURTENANCES ARE TO BE WRAPPED WITH AN APPROVED PETROLATUM SYSTEM
29. ALL NEW MANHOLES MUST BE FITTED WITH SELF-ADJUSTING MANHOLE FRAMES AND COVERS FROM EAST JORDAN IRON WORKS (PRODUCT NO. 00302201) OR BIBBY-STE-CROIX (AUTOSTABLE C-50M-ONT).
30. ENGINEERING ACCEPTANCE OF THIS PLAN DOES NOT EXEMPT THE OWNERS BONDED CONTRACTOR FROM THE REQUIREMENT TO OBTAIN THE VARIOUS PERMITS AND ADDITIONAL APROVALS REQUIRED TO COMPLETE A CONSTRUCTION PROJECT

BEFORE STARTING WORK

1. ANY CONSTRUCTION WORK WITHIN THE TRAVELED PORTION OF A ROADWAY IS PROHIBITED UNTIL FORMAL WRITTEN AUTHORIZATION FROM THE CITY'S PWS TRANSPORTATION DIVISION IS OBTAINED. A TRAFFIC CONTROL PLAN (INCLUDING SIGNAGE CONSIDERATIONS) WILL REQUIRE APPROVAL BY PWS STAFF. MAKE APPLICABLE TRAFFIC CONTROL ARRANGEMENTS WITH HELGA BOWMAN AT (519-886-2310 EXT:30270)
2. PER CITY BY-LAW 10-006 NO WORK SHALL BE COMPLETED ON THE SUBJECT PROPERTY WITHOUT A BUILDING PERMIT, INCLUDING PRE-GRADING OR TREE REMOVAL. SHOULD THE DEVELOPER OR CONTRACTOR WISH TO PREPARE THE SITE FOR CONSTRUCTION PRIOR TO ENGINEERING ACCEPTANCE OR ISSUANCE OF THE BUILDING PERMIT, AN APPLICATION FOR A SITE ALTERATION PERMIT SHALL BE SUBMITTED TO THE ENGINEERING AND CONSTRUCTION DIVISION FOR REVIEW AND APPROVAL. PLEASE REFER TO CITY BY-LAW 10-066 FOR ALL REQUIREMENTS OF THE PERMIT.
3. CONTRACTOR MUST HAVE THE SEDIMENT AND EROSION CONTROLS IN PLACE AND INSPECTION BY CITY FORCES PRIOR TO ANY WORK COMPLETED ON SITE.
4. THE CONTRACTOR SHALL NOTIFY THE CITY OF WATERLOO AND ARCADIS AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
5. THE POSITION OF THE POLE LINES, CONDUITS, WATERMAINS, SEWERS, AND OTHER UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED.
6. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ALL BENCHMARKS, ELEVATIONS, DIMENSIONS, AND GRADES MUST BE CHECKED BY THE CONTRACTOR AND ANY DISCREPANCIES REPORTED TO THE ENGINEER.
7. ALL EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE LOCATED, MARKED AND PROTECTED. ANY UTILITIES DAMAGED OR DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
8. ALL WORK WITHIN CITY RIGHT-OF-WAY TO BE DONE BY CITY FORCES OR APPROVED CONTRACTOR TO CITY/REGIONAL STANDARDS AT THE EXPENSE OF THE OWNER.
9. ALL MUDTRACKING/SEDIMENT LEAVING SITE IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CLEANED DAILY.
10. CONTRACTOR/OWNER IS RESPONSIBLE TO RESTORE ANY DOWNSTREAM STORMWATER DAMAGE CAUSED BY CONSTRUCTION AND/OR DISTURBED PROPERTY WITHIN THE MUNICIPAL RIGHT-OF-WAY TO REGION OF WATERLOO AND THE CITY OF WATERLOO STANDARDS.
11. PRIOR OF CONSTRUCTION OWNER OF THE SITE TO INSTALL A PROJECT SIGN CLEARLY VISIBLE TO THE PUBLIC INDICATING:
    a. THE NAME OF THE REGISTERED OWNER OR DEVELOPER;
    b. THE NAME OF THE CONSULTING ENGINEER
    c. THE NAME OF THE GENERAL CONTRACTOR

    A TELEPHONE CONTACT NUMBER FOR EACH OF THE ABOVE TO BE CLEARLY MARKED ON THE SIGN. AT LEAST ONE OF THE TELEPHONE NUMBERS TO BE DESIGNATED AS A 24 HOUR EMERGENCY CONTACT NUMBER. SIGN TO BE MAINTAINED IN GOOD ORDER UNTIL PROJECT IS COMPLETED
12. ALL HEALTH AND SAFETY RELATED SIGNAGE MUST BE POSTED AT THE SITE REQUIRED BY THE APPLICABLE LAW AND BEST MANAGEMENT PRACTICES.
13. CONTRACTOR TO ENSURE ALL CATCHBASINS ALONG ROADS BORDERING AND DOWNSTREAM OF CONSTRUCTION MUST BE PROTECTED WITH FILTER FABRIC;
14. EXISTING PROPERTY LINE MUST BE SURVEYED AND IDENTIFIED PRIOR TO CONSTRUCTION AND ALL FENCING MUST BE PLACED INSIDE THE PROPERTY LINE;
15. CONTRACTOR IS REQUIRED TO INSTALL FULL BOARD HOARDING BETWEEN CONSTRUCTION AND PUBLIC WALKWAYS WITHIN HIGH PEDESTRIAN TRAFFIC;
16. CONTRACTOR MUST NOTIFY ALL NEIGHBORING RESIDENCE PRIOR OF PROPOSED WORKS ON THE ROAD RIGHT-OF-WAY. CLEAR ACCESS TO ADJACENT PROPERTIES MUST BE MAINTAINED AT ALL TIMES;
17. CONTRACTOR TO PROVIDE LOCATION OF EMERGENCY ACCESS TO THE CITY FOR APPROVAL PRIOR OF CONSTRUCTION. EMERGENCY ENTRANCE TO HAVE CLEAR ACCESS AT ALL TIME FOR EMERGENCY.
18. GENERAL CONTRACTOR IS RESPONSIBLE TO SCHEDULE PRE-CONSTRUCTION MEETING WITH THE CITY OF WATERLOO ENGINEERING SERVICE REPRESENTATIVE AND ARCADIS PRIOR OF CONSTRUCTION.
19. THE DEVELOPER'S CONSULTING ENGINEER SHALL NOTIFY THE CITY'S ENGINEERING AND CONSTRUCTION PROJECT MANAGER AT LEAST ONE WEEK IN ADVANCE OF ALL PRE-CONSTRUCTION AND SITE MEETINGS. CONSTRUCTION CAN NOT PROCEED UNTIL A PRE-CONSTRUCTION MEETING INCLUDING THE DEVELOPER'S REPRESENTATIVE, THE CONTRACTOR AND ENGINEERING AND CONSTRUCTION STAFF HAS BEEN HELD.
20. TRAFFIC PLAN BASED ON ONTARIO TRAFFIC MANUAL (OTM) BOOK 7 IS REQUIRED AND MUST BE APPROVED BY THE CITY OF WATERLOO. CONTRACTOR TO PROVIDE THE TRAFFIC PLAN TO THE CITY PRIOR OF CONSTRUCTION. COPY OF TRAFFIC PLAN TO BE ON THE SITE AT ALL TIMES.
21. TRAFFIC CONTROL PLAN MUST BE BASED ON ONTARIO TRAFFIC MANUAL (OTM) BOOK 7.
22. CONTRACTOR TO INFORM PUBLIC WORKS SERVICES STAFF OF ALL DISCONNECTIONS. PWS STAFF TO COMPLETE AN INSPECTION DURING EXISTING SERVICE DISCONNECTIONS.
23. REPLACEMENT OF FULL SIDEWALK FRONTING PROPERTY IS REQUIRED AT A COST TO THE DEVELOPER.

CITY WORK PERMIT BY-LOW (No. 09-111)
DEVELOPER / GENERAL CONTRACTOR TO CONTACT CITY'S PUBLIC WORKS SERVICE DEPARTMENT FOR PERMIT FOR WORK ON ROADS WITHIN THE CITY OF WATERLOO. CONTACT HELGA BOWMAN AT 519-747-0217 FOR PERMIT INFORMATION.

CITY WORK PERMIT BY-LOW (No. 09-111)
DEVELOPMENT WILL BE SUBJECT TO ALL INSPECTION REQUIREMENTS OF THE CITY. NOTE CITY INSPECTOR'S INFORMATION ON THE SERVICING PLAN I.E. ROB NOLAN AT 519-747-8517

ARCADIS INSPECTOR MUST BE ON SITE DURING THE COMPLETION OF SERVICING CONSTRUCTION, GRADING AND OTHER RELEVANT ACTIVITIES. IF CONSULTANT'S INSPECTOR IS NOT ON SITE TO VERIFY AS-RECORDED MEASUREMENTS, THE CONTRACTOR RUNS THE RISK OF HAVING TO RECONSTRUCT THE SUBJECT WORKS UNDER WATCH OF A CITY INSPECTOR

BENCHMARK - ELEVATION
WA-15 TOPO 68-U-518 1
ELEVATION=324.760m
SOUTHEAST CORNER OF KING STREET NORTH AND UNIVERSITY AVENUE, TABLET IN FACE OF NORTH CONCRETE FOUNDATION WALL OF ROYAL BANK OF CANADA BUILDING (FACING UNIVERSITY AVENUE), 44cm EAST FROM NW CORNER OF BUILDING AND 10cm BELOW STONE FACING.
LOCAL BENCHMARK:
NAIL IN HYDRO POLE AT SOUTHEAST CORNER OF THE SITE
ELEVATION = 327.219m

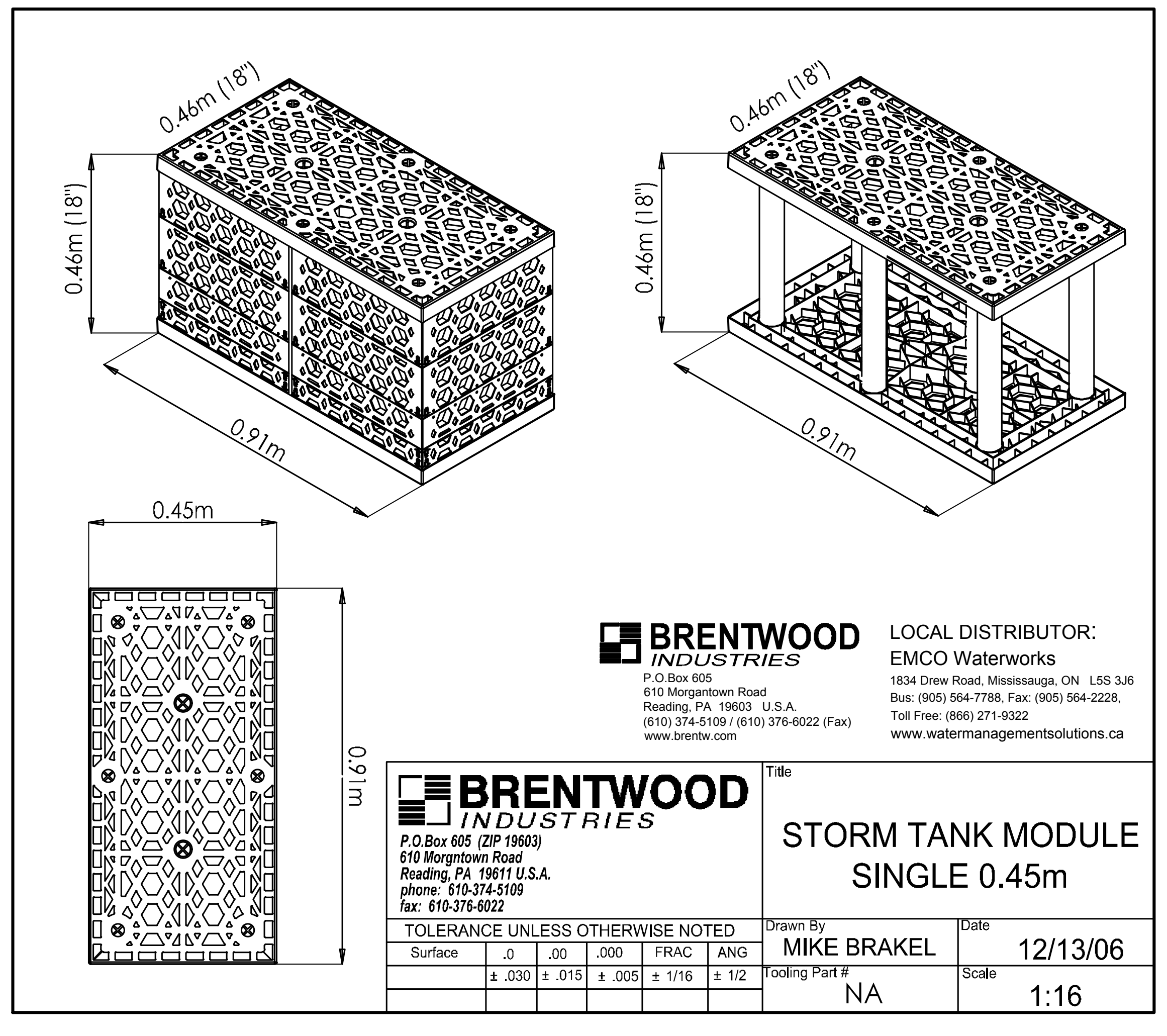
LEGAL DESCRIPTION
PLAN SHOWING PART OF LOTS 20, 21 AND 22
REG. PLAN No. 856, CITY OF WATERLOO
LEGAL INFORMATION AND TOPOGRAPHIC SURVEY PROVIDED BY METZ & LORENTZ Ltd., DATED SEP. 2, 2015.

THIS PLAN TO BE READ IN CONJUNCTION WITH THE GRADING PLAN, SERVICING PLAN, TREE PRESERVATION PLAN, DETAILS AND NOTES PLAN AND THE STORM WATER MANAGEMENT REPORT PREPARED BY IBI GROUP.

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO THEM.

OCT.24, 2023
EMIR CERIC
Nº 826841
E. Ceric

2023-10-24



BRENTWOOD *INDUSTRIES*
P.O.Box 605
610 Morgantown Road
Reading, PA 19603 U.S.A.
(610) 374-5109 / (610) 376-6022 (Fax)
www.brentw.com

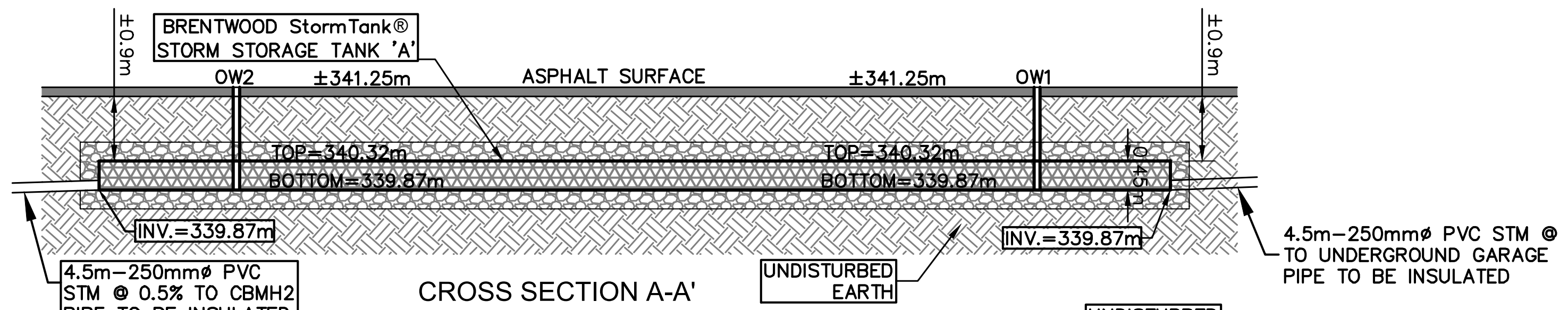
LOCAL DISTRIBUTOR:
EMCO Waterworks
1834 Drew Road, Mississauga, ON L5S 3J6
Bus: (905) 564-7788, Fax: (905) 564-2228,
Toll Free: (866) 271-9322
www.watermanagementsolutions.ca

BRENTWOOD *INDUSTRIES*
P.O.Box 605 (ZIP 19603)
610 Morgntown Road
Reading, PA 19611 U.S.A.
phone: 610-374-5109
fax: 610-376-6022

Title: STORM TANK MODULE SINGLE 0.45m

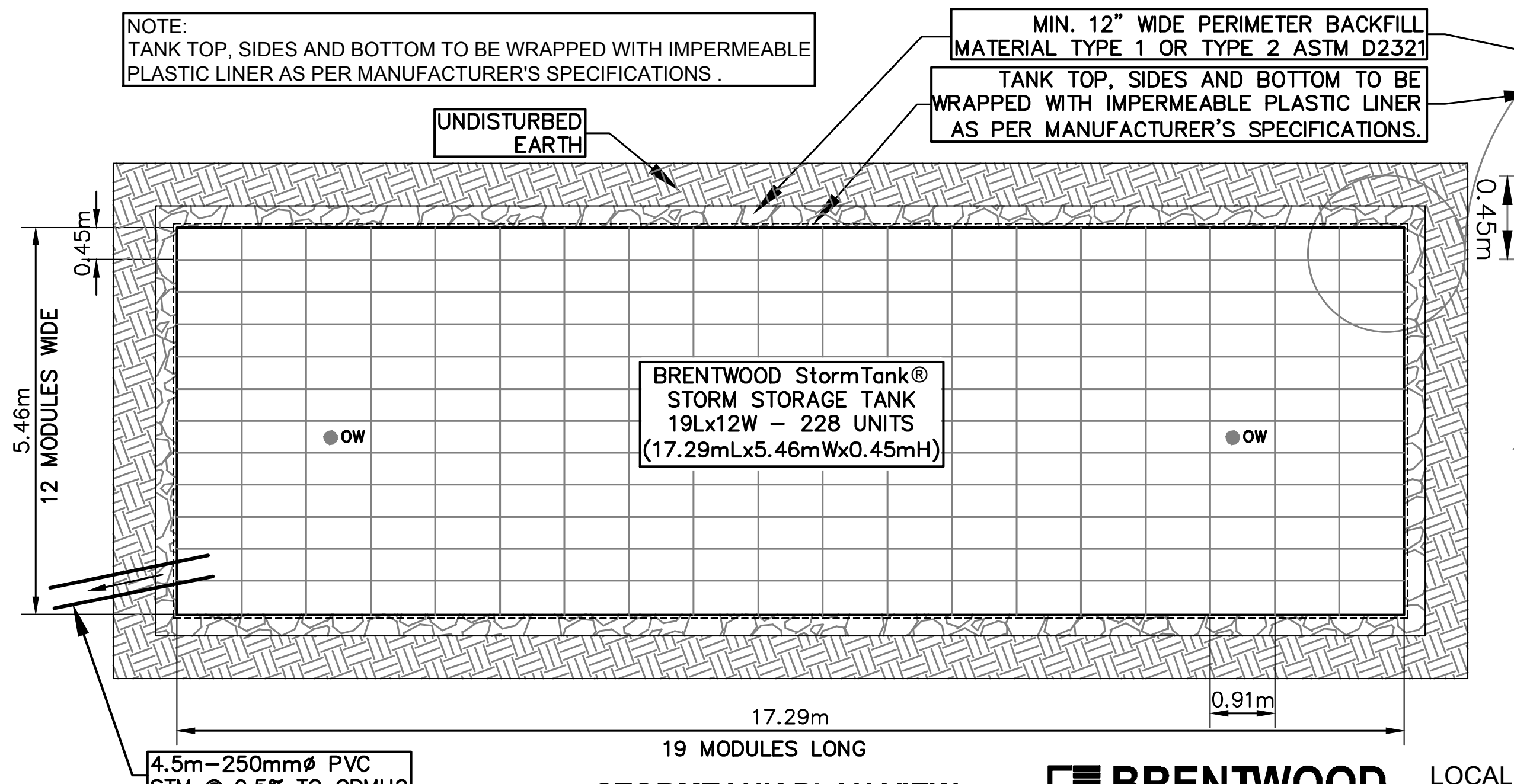
TOLERANCE UNLESS OTHERWISE NOTED					
Surface	.0	.00	.000	FRAC	ANG
	± .030	± .015	± .005	± 1/16	± 1/2

Drawn By	Date
MIKE BRAKEL	12/13/06
Tooling Part #	Scale
NA	1:16

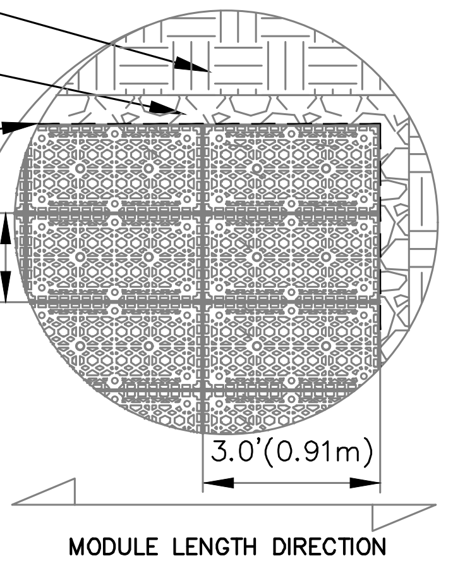

±0.9m
BRENTWOOD StormTank® STORM STORAGE TANK 'A'
OW2
±341.25m
ASPHALT SURFACE
±341.25m
OW1
±0.9m
TOP=340.32m
BOTTOM=339.87m
TOP=340.32m
BOTTOM=339.87m
0.45m
INV.=339.87m
INV.=339.87m
4.5m–250mmø PVC STM @ 0.5% TO CBMH2 PIPE TO BE INSULATED
UNDISTURBED EARTH
4.5m–250mmø PVC STM @ 0.5% TO UNDERGROUND GARAGE PIPE TO BE INSULATED

CROSS SECTION A-A'
SCALE 1:100

NOTE:
TANK TOP, SIDES AND BOTTOM TO BE WRAPPED WITH IMPERMEABLE PLASTIC LINER AS PER MANUFACTURER'S SPECIFICATIONS .


UNDISTURBED EARTH
MIN. 12" WIDE PERIMETER BACKFILL MATERIAL TYPE 1 OR TYPE 2 ASTM D2321
TANK TOP, SIDES AND BOTTOM TO BE WRAPPED WITH IMPERMEABLE PLASTIC LINER AS PER MANUFACTURER'S SPECIFICATIONS.
0.45m
5.46m
12 MODULES WIDE
BRENTWOOD StormTank® STORM STORAGE TANK 19Lx12W – 228 UNITS (17.29mLx5.46mWx0.45mH)
OW
OW
0.91m
17.29m
19 MODULES LONG
4.5m–250mmø PVC STM @ 0.5% TO CBMH2

STORMTANK PLAN VIEW
SCALE 1:100



MODULE LENGTH DIRECTION RUNS W/ BASIN LENGTH

MODULE ORIENTATION
DETAIL: NTS

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SITE ALTERATION BY-LAW NOTE:
PER THE CITY'S SITE ALTERNATION BY-LAW 2010-066 NO FILLING, PRE-GRADING OR TREE REMOVAL SHALL OCCUR, IN ADVANCE OF FINAL SITE PLAN ENGINEERING ACCEPTANCE, WITHOUT A PERMIT. SHOULD THE DEVELOPER OR CONTRACTOR WISH TO PREPARE THE SITE FOR CONSTRUCTION PRIOR TO ENGINEERING ACCEPTANCE, AN APPLICATION FOR THE SITE ALTERATION PERMIT MUST BE SUBMITTED TO THE ENGINEERING AND CONSTRUCTION DIVISION FOR REVIEW AND ACCEPTANCE.

IBI SITE INSPECTION NOTES

1. IBI SITE INSPECTOR MUST BE ON SITE AT THE TIME PROPOSED SERVICES ARE BEING INSTALLED;
2. IBI SITE INSPECTOR MUST BE ON SITE DURING WATERMAIN TESTING, COMMISSIONING AND FINAL CONNECTION;
3. IBI SITE INSPECTOR MUST BE ON SITE DURING GRADING WITH RESPECT TO STORMWATER MANAGEMENT STORAGE VOLUME TO BE ABLE TO COLLECT AS-BUILT DETAILS;
4. CONTRACTOR IS RESPONSIBLE TO CALL IBI INSPECTOR MINIMUM 24 HOURS PRIOR OF WORK NOTED ABOVE;

NOTES

- CONTRACTOR IS REQUIRED TO REFER THE APPROVED VEGETATION MANAGEMENT PLAN WITH RESPECT TO THE INFORMATION FOR TREE REMOVAL / TREE PROTECTION.
- CONTRACTOR TO INFORM CITY'S PWS INSPECTOR PRIOR OF ALL SERVICE DISCONNECTIONS. CITY'S INSPECTOR TO BE ON SITE DURING SERVICE DISCONNECTIONS.
- IF EXISTING SANITARY SERVICE PIPE CONSIST OF BITUMINOUS FIBER PIPE, THE FULL SERVICE TO BE REMOVED AND CAPPED AT THE MAIN.
- EXISTING VEGETATION NOT TO BE REMOVED UNTIL A BUILDING PERMIT HAS BEEN ISSUED OR UNTIL CONTROL MEASURES HAVE BEEN INSTALLED AND INSPECTED BY CITY LANDSCAPE TECHNOLOGIST.
- EXISTING CONCRETE SIDEWALK TO REMAIN UNTIL ALL CONSTRUCTION WORKS HAVE FINISHED.

NOTES:

1. ARCADIS IBI GROUP TO NOTIFY THE CITY'S ENGINEERING AND CONSTRUCTION PROJECT MANAGER AT LEAST ONE WEEK IN ADVANCE OF ALL PRE-CONSTRUCTION AND SITE MEETINGS. CONSTRUCTION CANNOT PROCEED UNTIL A PRE-CONSTRUCTION MEETING INCLUDING THE DEVELOPER'¯S REPRESENTATIVE, THE CONTRACTOR, ENGINEERING, AND TRAFFIC STAFF HAS BEEN HELD.
2. DEVELOPER / GENERAL CONTRACTOR TO ENSURE STREET SWEEPING AND DUST CONTROL TO BE CONDUCTED DAILY.
3. DEVELOPER / GENERAL CONTRACTOR TO PREPARE TRAFFIC PLAN. TRAFFIC PLAN BASED ON ONTARIO TRAFFIC MANUAL (OTM) BOOK 7 IS REQUIRED AND MUST BE APPROVED BY CITY'S PUBLIC WORKS SERVICE DEPARTMENT AND A COPY IS TO BE ON SITE AT ALL TIMES.
4. DEVELOPER / GENERAL CONTRACTOR TO INSTAL SIGNAGE ON THE SITE. SIGNAGE MUST BE PROVIDED FOR THE SITE IDENTIFYING THE OWNER, CONSULTANT AND ENGINEER COMPLETE WITH 24 HOUR CONTACT INFORMATION

EROSION CONTROL NOTES

1. NO ALTERNATIVE METHODS OF EROSION CONTROL PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY IBI GROUP AND THE CITY OF WATERLOO'S INTEGRATED PLANNING AND PUBLIC WORKS - ENGINEERING SERVICES.
2. SILT FENCING TO BE PER OPSD 219.110 AND REQUIRED TO BE INSTALLED AROUND FULL CONSTRUCTION AREA.
3. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MUST BE PUT INTO PLACE AT THE CITY'S REQUEST.
4. STOCKPILE LOCATIONS TO BE MINIMUM 2.50m FROM PROPERTY LINE. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE DEVELOPMENT PROGRESSES.
5. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL FEATURES TO PREVENT SEDIMENT FROM LEAVING THE SITE.
6. SEDIMENTS TO BE REMOVED WHEN ACCUMULATIONS REACH A MAXIMUM OF 1/3 THE HEIGHT OF THE STRUCTURE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING SEDIMENTS FROM THE MUNICIPAL ROADWAY AND SIDEWALKS AT THE END OF EACH WORK DAY.
8. ALL EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RE-STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
9. CONTRACTOR TO MONITOR THE SITE DEVELOPMENT TO ENSURE ALL EROSION CONTROLS ARE INSTALLED AND MAINTAINED TO CITY REQUIREMENTS AND ANY DAMAGE REPAIRED IMMEDIATELY.
10. CONTRACTOR TO COMPLY WITH THE ENGINEER'S INSTRUCTIONS TO INSTALL, MODIFY OR MAINTAIN EROSION CONTROL WORKS.
11. MUNICIPAL ROAD RIGHT-OF-WAY TO BE MAINTAINED FREE OF DEBRIS THROUGHOUT CONSTRUCTION. STREET SWEEPING AND DUST CONTROL SHALL BE COMPLETED DAILY, IF APPLICABLE.

GROUNDWATER MANAGEMENT NOTES:

1. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION CONTRACTOR TO PROVIDE PROPOSED METHOD OF DEWATERING TO THE CITY.
2. IF THE CITY STORM SEWER WILL BE USED FOR THE DISCHARGE OF THE GROUNDWATER THE FOLLOWING CONDITIONS WILL APPLY:
   a. PRIOR TO ANY DISCHARGE THE CITY OF WATERLOO IS PROVIDED WITH A CLEARANCE LETTER FROM THE REGIONAL MUNICIPALITY OF WATERLOO STATING THAT THE PROPOSED DISCHARGE MEETS THE REQUIREMENTS OF REGIONAL SEWER-USE BY-LAW 1-90;
   b. IF THE VOLUME OF GROUNDWATER TO BE PUMPED EXCEEDS 50,000 l/day, A VALID SITE-SPECIFIC CERTIFICATE OF APPROVAL FOR THE PROPOSED DISCHARGE ISSUED BY THE ONTARIO MINISTRY OF THE ENVIRONMENT (MOE) IS REQUIRED PRIOR TO PUMPING.
3. THE LOCATION AND METHOD OF CONNECTION TO THE CITY'S STORM SEWER MUST BE APPROVED BY THE DIRECTOR OF THE CITY'S WATER SERVICES DIVISION WATERLOO'S PUBLIC WORKS SERVICES DEPARTMENT.
4. AT NO TIME SHOULD THE DISCHARGE OF WATER FROM THE SITE IS TO CAUSE PONDING, FLOODING, OR THE FORMATION OF ICE ON ANY ROAD SURFACES, SIDEWALKS, OR LANDS ADJACENT TO THE DEWATERING ACTIVITIES.
5. THE CITY OF WATERLOO MAY TERMINATE OR TEMPORARILY SUSPEND, WITHOUT NOTICE OR COST TO THE CITY, THE AUTHORIZATION FOR THIS STORM SEWER USE SHOULD IT BE DEEMED NECESSARY FOR ANY REASON BY THE GENERAL MANAGER OF PUBLIC WORKS SERVICES OR HIS DESIGNATE.
6. THE NAME AND CONTACT INFORMATION OF THE DEWATERING CONTRACTOR MUST BE PROVIDED TO THE CITY.

GENERAL SERVICING NOTES

1. SANITARY SEWER SYSTEM:
   A. PVC PIPE SDR 28 - BACK FILLED WITH APPROVED MATERIAL (95% SPD MIN.) OR EQUIVALENT. PER OPSD 802.010
   B. CLASS "B" BEDDING
   C. MINIMUM PIPE COVER 2.0m.
   D. KOR-N-SEAL BOOT OR APPROVED EQUAL IS REQUIRED WHERE PIPE PASS THROUGH MANEHOLE WALLS. BENCHING IS REQUIRED INSIDE THE MANHOLE PER OPSD 701.021.
   E. MANHOLES - OPSD 701.010, BACKFILLED WITH GRAN. 'B' (100% SPD MIN.)
   F. 2.0m MINIMUM COVER.
   G. SERVICES:
      G.1. 150mmDIA PVC SDR 28
      G.2. SERVICE MARKER PAINTED RED
2. STORM SEWER SYSTEM:
   A. PVC PIPE SDR 28 - BACK FILLED WITH APPROVED MATERIAL (95% SPD MIN.) OR EQUIVALENT. PER OPSD 802.010
   B. CLASS "B" BEDDING.
   C. 1.5m MINIMUM COVER.
   D. CB FRAME AND GRATE PER OPSD 400.100.
   E. SINGLE CATCH BASINS - OPSD 705.010.
   F. STORM PIPE PVC SDR 35
   G. MANHOLE - 701.010.
   H. SERVICE MARKER PAINTED GREEN
5. WATERMAIN SYSTEM:
   A. PVC PIPE SDR 28 - BACK FILLED WITH APPROVED MATERIAL (95% SPD MIN.) OR EQUIVALENT. PER OPSD 802.010
   B. CLASS "B" BEDDING.
   C. 150mmØ (IPEX-BLUE BRUTE B1373) DR18 PVC PIPE
   D. 2.0m MINIMUM COVER.
   E. MIN. VERTICAL CLEARANCE BETWEEN WATER MAIN AND OTHER SERVICES = 0.5m.
   F. MIN. HORIZ. CLEARANCE BETWEEN WATER MAIN AND OTHER SERVICES = 2.5m.
   G. HYDRANTS ON WATER MAINS LESS THAN 300mm, 2-65mm NOZZLES, 150mm MECHANICAL JOINT INLET.
   H. FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH OPSD 1105.010
      H.1. <300mm DIAMETER, HYDRANT SHALL HAVE 1-100M DIAMETER NOZZLE WITH STORZ CONNECTION, 2-65mm DIAMETER NOZZLES, AND 150mm MECHANICAL JOINT OUTLET
      H.2. DRAIN PLUGS SHALL BE UNPLUGGED.
   I. SERVICE MARKER PAINTED BLUE
   J. 8 GAUGE TRACER WIRE TO BE INSTALLED ALONG THE LENGTH OF THE WATER SERVICE
   K. ALL NEW PRIVATE FIRE SERVICE MAINS TO BE TESTED HYDROSTATICALLY AT NOT LESS THAN 200psi PRESSURE FOR TWO HOURS PER BUILDING CODE.
   L. CONCRETE THRUST BLOCK TO BE INSTALLED ON ALL BENDS.
   M. EXISTING SERVICES TO BE REMOVED AND CAPPED AT MAIN.

EXISTING CONC. SIDEWALK TO BE REMOVED AND REPLACED AT NEW ENTRANCE AS PER CITY STANDARD DWG. W-230. NEW SIDEWALK TO BE REPLACED AT THE DEVELOPERS' COST.

NEW CURBS AND SOD TO BE REINSTATED AS REQUIRED. ANY AREAS IN RIGHT OF WAY DISTURBED THROUGH CONSTRUCTION TO BE REPLACED AT THE DEVELOPERS COST.

ARCADIS
Arcadis Professional Services (Canada) Inc.
Suite 101 - 410 Albert Street Waterloo ON N2L 3V3
Canada. tel 519 585 2255 **arcadis.com**

PROJECT

249 SUNVIEW STREET APARTMENT BUILDING

CITY OF WATERLOO

PROJECT NO:	SCALE:
139419	AS NOTED
DRAWN BY:	CHECKED BY:
E. CERIC	E. CERIC
PROJECT MGR:	APPROVED BY:
Tim McCormick	K. COBBE

SHEET TITLE

DETAILS AND NOTES

SHEET NUMBER	ISSUE
5	2

SCALE CHECK 1 in 10mm

File Location: J:\139419_249_Sunview_\7.0_Production\7.03_Design\04_Civil\139419C.dwg Last Saved: October 20, 2023, by emir.ceric Plotted: Thursday, October 26, 2023 3:50:28 PM by Emir Ceric