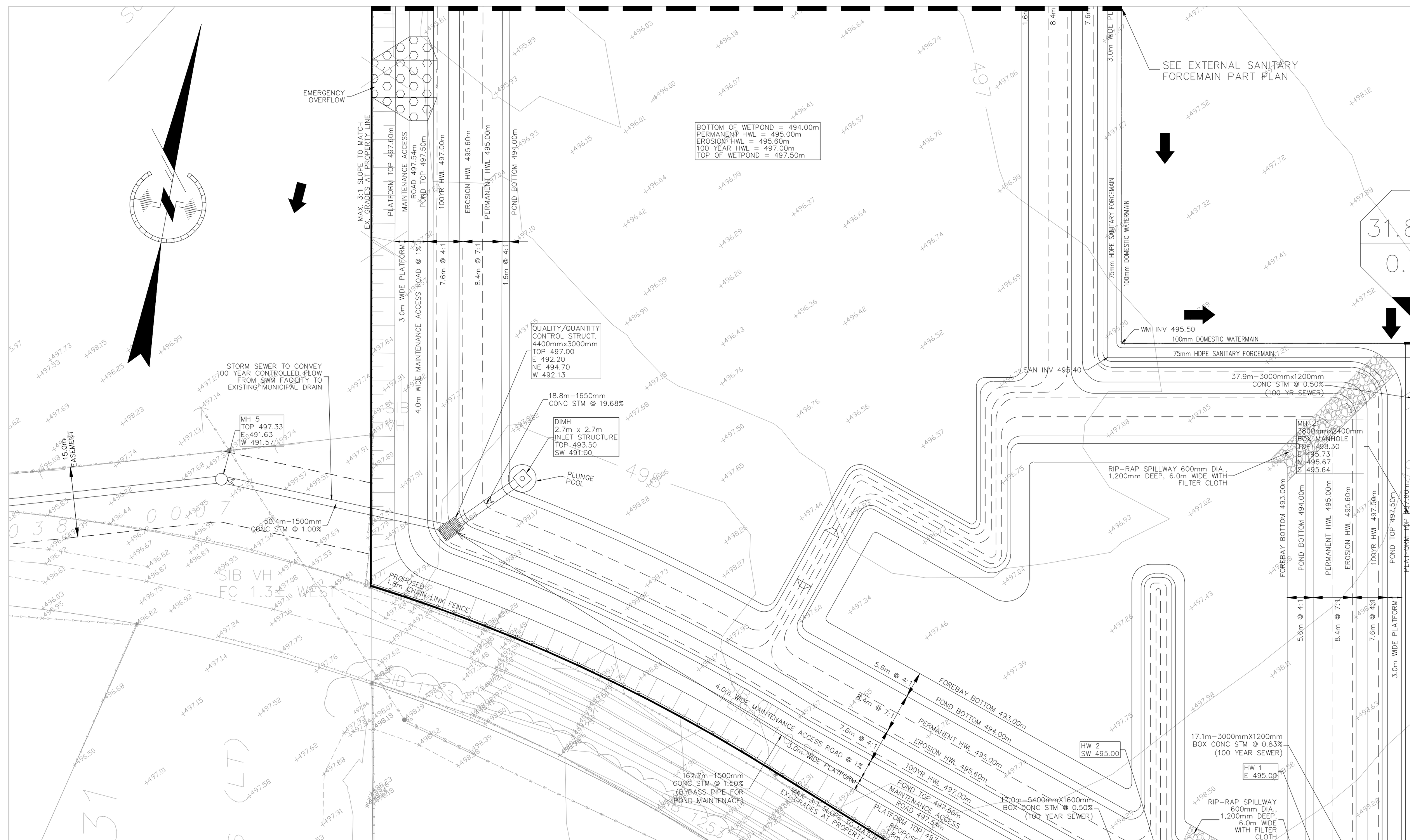
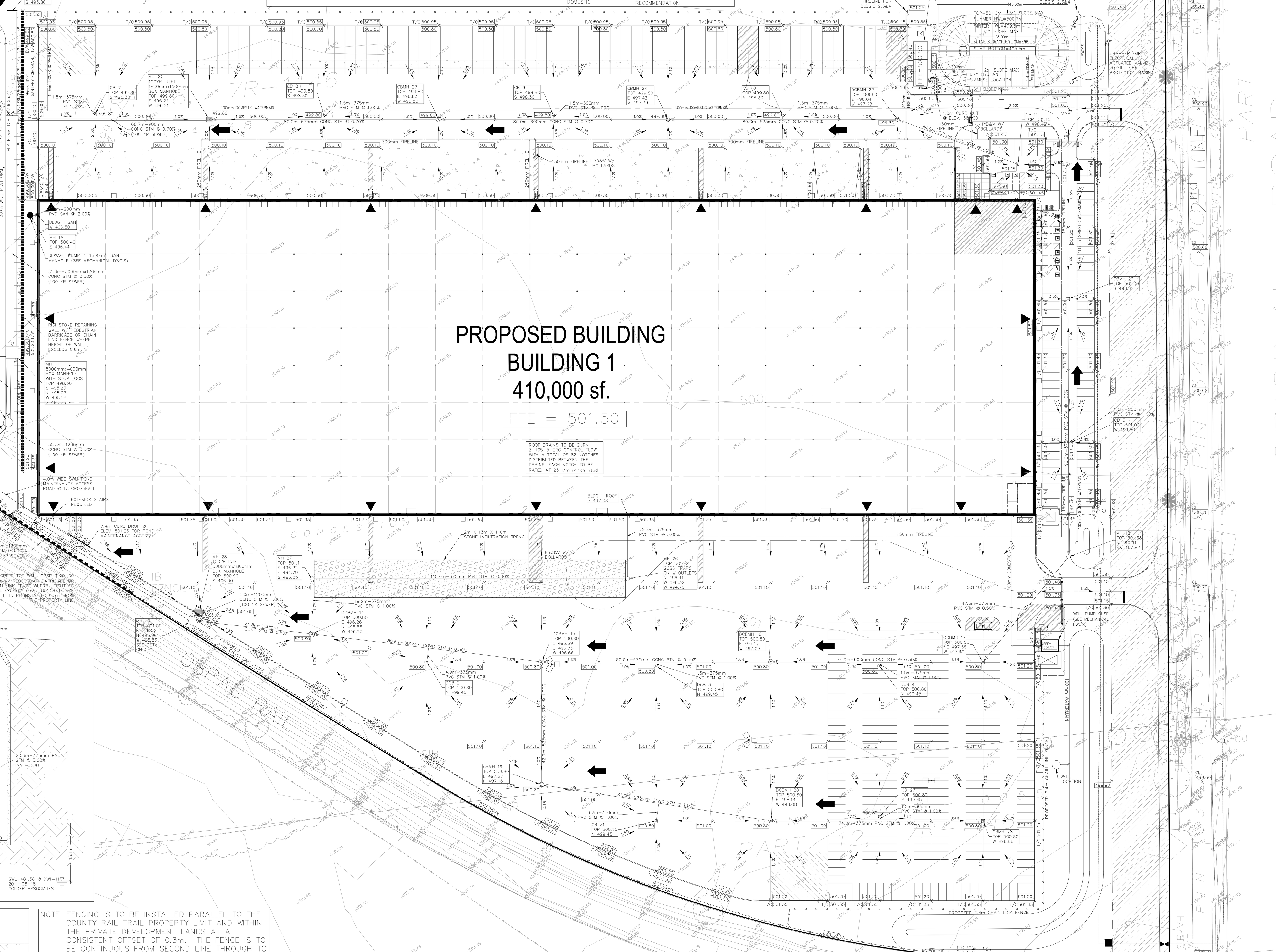




EXTERNAL FLOW

EXTERNAL FLOW WILL BE BASED ON THE 100yr FLOW BASED ON FUTURE DEVELOPMENT WITH THE ROOFS CONTROLLED TO 42 l/s/ha. THE C VALUE FOR THE FUTURE DEVELOPMENT WILL BE 0.95m, HOWEVER THERE IS APPROXIMATELY 1.8ha OF UNDEVELOPED HYDRO LAND THAT IS ACCOMMODATED FOR WHICH PROVIDES A COMPOSITE C VALUE OF 0.90 FOR THE PAVED AND LANDSCAPE AREAS.

TOTAL EXTERNAL AREA = 31.83ha

ROOF FLOW

TOTAL ROOF AREA = 9.59ha

Q = 9.59ha X 42 l/s/ha

Q = 402.78l/s

PAVED AND LANDSCAPE FLOW

PAVED AND LANDSCAPE AREA = 31.83ha − 9.59ha = 22.24ha

Q = CAIN

$Q = \frac{0.90 \times 22.24ha \times 158.27 \times 2.778m}{1000}$

$Q = 8.80m^3/s + 0.40m^3/s$ (CONTROLLED ROOFS)

$Q = 9.20m^3/s$

ORANGEVILLE IDF

TIME OF CONCENTRATION (TC) = 15min

WHERE $I = A/(TC+B)^C$

$I = 2150/(15+5.7)^{0.861}$

$I = 158.27$

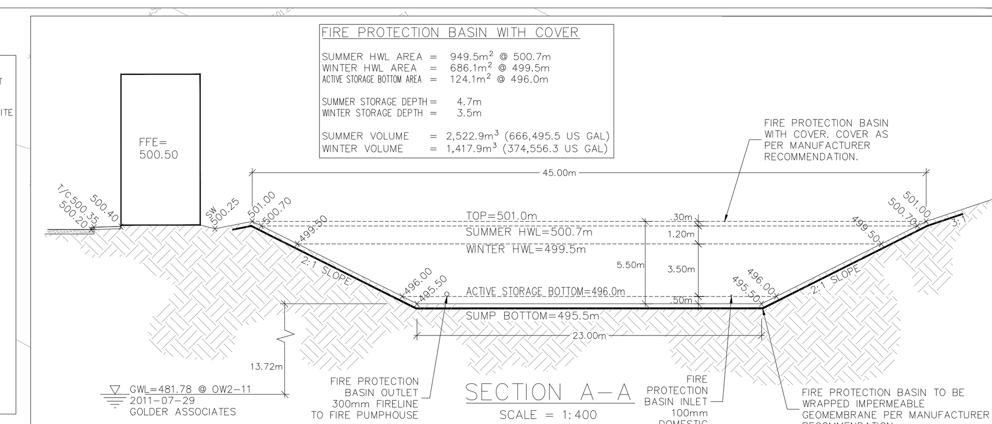
THEREFORE, THE TOTAL EXTERNAL FLOW IS: $Q = 9.20m^3/s$

FIRE PROTECTION BASIN WITH COVER

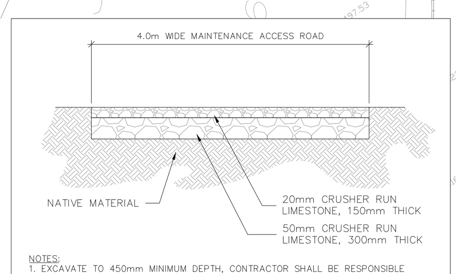
SUMMER HWL AREA = 949.5m² @ 500.7m
WINTER HWL AREA = 686.1m² @ 499.5m
ACTIVE STORAGE BOTTOM AREA = 124.1m² @ 496.0m

SUMMER STORAGE DEPTH = 4.7m
WINTER STORAGE DEPTH = 3.5m

SUMMER VOLUME = 2,522.9m³ (666,495.5 US GAL)
WINTER VOLUME = 1,417.9m³ (374,556.3 US GAL)



SECTION A–A
SCALE = 1:400



4.0m WIDE MAINTENANCE ACCESS ROAD DETAIL
SCALE = NTS

NOTES:
1. EXCAVATE TO 450mm MINIMUM DEPTH, CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL EXCAVATED MATERIAL.
2. SLOPE SUBGRADE PARALLEL TO FINISHED GRADE (MIN. 1% SLOPE TOWARDS POND).

NOTE: GRATES FOR INLET STRUCTURES (MH28 & MH22) TO BE GALVANIZED HONEY COMB GRATING AS PER OPSD 403.010 & TO BE RATED FOR H20 LOADING

100yr INLET CAPACITY FOR MH 22

TOTAL 100yr FLOW TO INLET
$Q_{100YR} = 1.226m^3/s$

INLET CAPACITY @ MH 22

$Q = CA\sqrt{2GH}$

WHERE,

C=0.63
A=1.5m x 1.8m=2.7m²
$A_{NET}=2.7m^2 \times 0.75 = 2.03m^3$
(75% NET OPENING; ASSUME 25% STEEL INLET GRADING)
H=0.35m

$Q=0.63 \times 2.03m^2\sqrt{2 \times 9.81 \times 0.35m}$
$Q_{ORIFICE}=3.351m^3 \times 50\%$ BLOCKAGE
$Q_{INLET}=1.676m^3/s > 1.226m^3/s$ (100yr STORM FLOW)

100yr INLET CAPACITY FOR MH 28

TOTAL 100yr FLOW TO INLET
$Q_{100YR} = 2.072m^3/s$

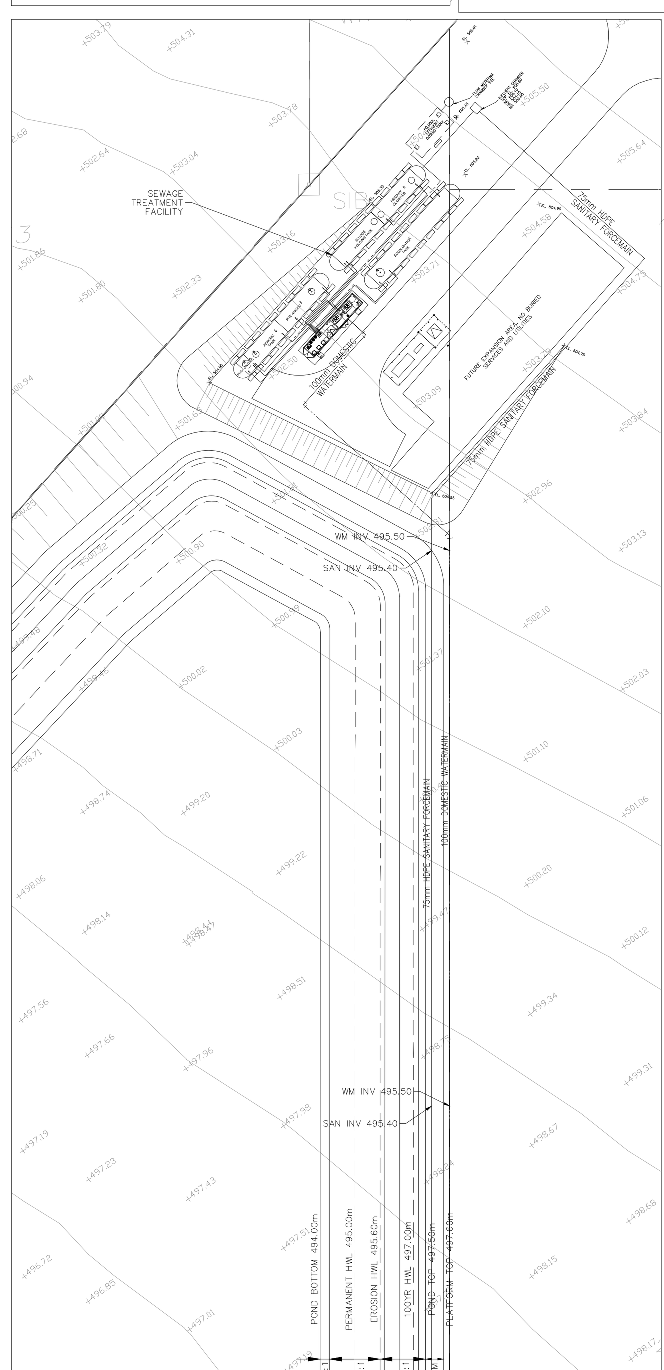
INLET CAPACITY @ MH 28

$Q = CA\sqrt{2GH}$

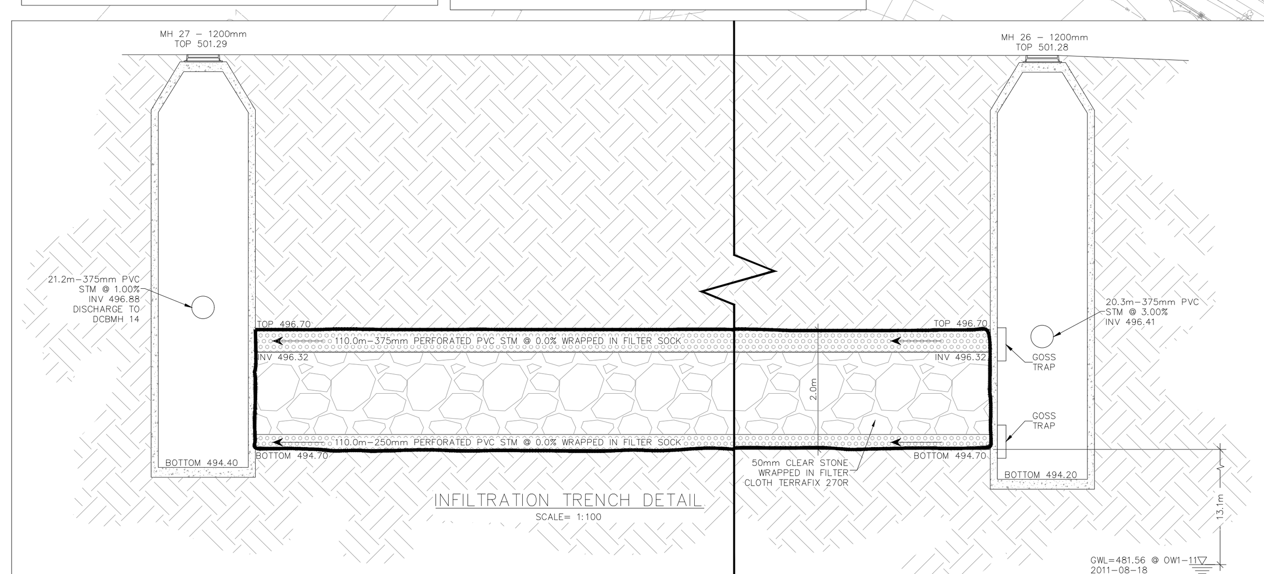
WHERE,

C=0.63
A=1.8m x 3.0m = 5.4m²
$A_{NET}=5.4m^2 \times 0.75 = 4.05m^3$
(75% NET OPENING; ASSUME 25% STEEL INLET GRADING)
H=0.35m

$Q=0.63 \times 4.05m^2\sqrt{2 \times 9.81 \times 0.35m}$
$Q_{ORIFICE}=6.69m^3 \times 50\%$ BLOCKAGE
$Q_{INLET}=3.343m^3/s > 2.072m^3/s$ (100yr STORM FLOW)



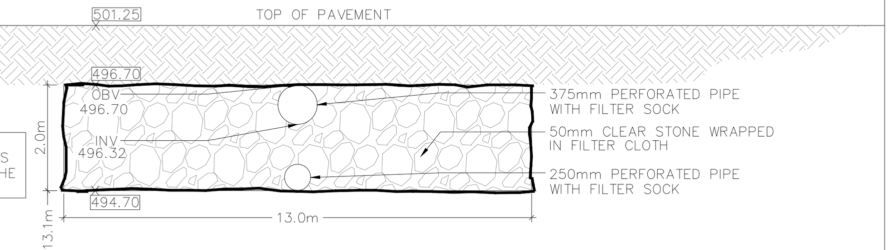
EXTERNAL SANITARY FORCEMAIN PART PLAN
SCALE = 1:1000



INFILTRATION TRENCH DETAIL
SCALE= 1:100

NOTE: FENCING IS TO BE INSTALLED PARALLEL TO THE COUNTY RAIL TRAIL PROPERTY LIMIT AND WITHIN THE PRIVATE DEVELOPMENT LANDS AT A CONSISTENT OFFSET OF 0.3m. THE FENCE IS TO BE CONTINUOUS FROM SECOND LINE THROUGH TO THE WEST LIMIT OF THE DEVELOPMENT LANDS ADJACENT TO THE PROPOSED SWM POND.

INFILTRATION TRENCH DESIGN



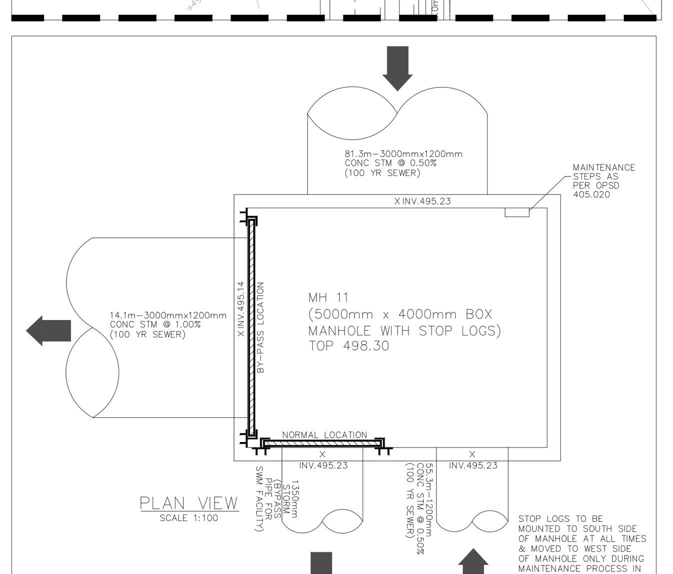
NOTE: STORMWATER QUALITY AND QUANTITY CONTROLS WILL BE PROVIDED BY THE POND.

GWL=481.56 @ OW1-11
2011-08-18
GOLDER ASSOCIATES

TRENCH AREA 2m X 13m = 26m²
TRENCH LENGTH = 110m
TRENCH STORAGE VOLUME = 2,860m³ x 0.4 = 1,144.0m³
50mm CLEAR STONE @ 40% VOID RATIO

REQUIRED INFILTRATION TRENCH VOLUME = 100m³/ha (10mm)
SITE AREA : 10.64 ha
INFILTRATION TRENCH VOLUME REQUIRED :10.64 ha X 100m³/ha = 1,064.0m³

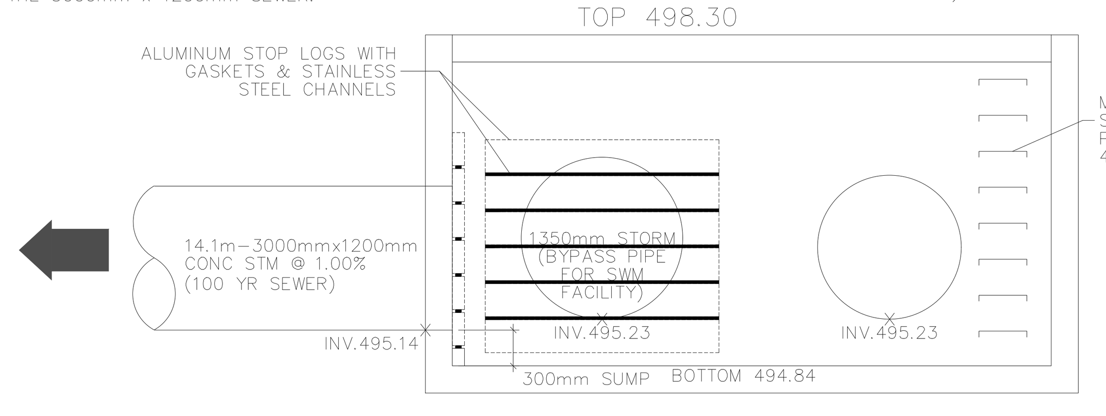
SOUTH AREA INFILTRATION TRENCH DETAIL
SCALE= NTS



PLAN VIEW
SCALE 1:100

NOTE:
STOP LOGS AT NORMAL LOCATION TO COMPLETELY COVER 1350mm STORM BYPASS PIPE. DURING MAINTENANCE PROCESS STOP LOGS ARE TO COMPLETELY COVER THE 3000mm x 1200mm SEWER.

MH 11
(5000mm x 4000mm BOX MANHOLE WITH STOP LOGS)
TOP 498.30



SECTION VIEW
SCALE 1:50

WATERMAINS

1. CLASS OF PIPE TO BE AS FOLLOWS:
   300mm DIA. AND LESS PVC PIPE, AWWA C-900, CL 150, SDR18 WITH PUSH ON TYPE JOINTS.
2. 12 GAUGE STRANDED COPPER TRACER WIRE WITH PLASTIC COATING IS TO BE SECURED AT EACH FITTING AND AT 3 METRE SPACING. TRACER WIRE SHALL BE COOPED INSIDE EACH VALVE BOX.
3. DEPTH OF COVER ON ALL WATERMAINS SHALL BE 1.8 METRES.
4. WATERMAINS TO HAVE 2.5m MINIMUM HORIZONTAL CLEARANCE FROM SEWERS.
   WATER SERVICES TO HAVE 1.2m MINIMUM HORIZONTAL CLEARANCE FROM ALL OTHER UTILITIES.
   WHERE WATERMAINS PASS OVER SEWERS A MINIMUM CLEARANCE OF 150mm IS REQUIRED.
   WHERE WATERMAINS PASS UNDER SEWERS A MINIMUM CLEARANCE OF 500mm IS REQUIRED.
5. WATERMAIN PASSING UNDER A SEWER SHALL BE PROTECTED BY PROVIDING:
   A) ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER TO PREVENT DEFLECTION OF JOINTS AND SETTLING.
   B) THAT THE LENGTH OF WATERMAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
6. WATERMAINS IN FILL AREAS:
   A) FILL TO BE PLACED TO A MINIMUM OF 600mm ABOVE THE TOP OF THE WATERMAIN GRADE AND TO A MINIMUM OF 3.0m EACH SIDE OF THE WATERMAIN AND COMPACTED TO A MINIMUM DENSITY OF 100% STANDARD PROCTOR DENSITY IN MAXIMUM LIFTS OF 300mm.
   B) TESTS SHALL BE TAKEN ALONG THE CENTERLINE AND 1.5m EACH SIDE OF THE WATERMAIN AT MAXIMUM INTERVALS OF 30m AND AT EACH 300mm LIFT.
   C) WATERMAIN CONSTRUCTION SHALL NOT PROCEED UNTIL THE DENSITY TEST REPORTS HAVE BEEN APPROVED BY THE ENGINEER.
   D) ALL FITTINGS, VALVES AND HYDRANTS IN FILL AREAS SHALL HAVE S.S TIE RODS AND BE MECHANICALLY RESTRAINED ONLY. ALL T-BOLTS TO BE STAINLESS STEEL.
7. ALL HYDRANTS SHALL BE CANADA VALVE LTD. "DARLING" CENTURY HYDRANT WITH STORZ PUMPER NOZZLE (C.C.O.) AND UNLESS OTHERWISE SPECIFIED, HYDRANTS SHALL BE SELF DRAINING. CAP IS TO BE PAINTED BLACK AND THE HYDRANT RED WITH APPROVED HYDRANT PAINT. ANCHOR TEES ARE REQUIRED FOR ALL HYDRANTS.
8. VALVES SHALL BE "CANADA VALVE DARLING LINE" GATE RESILIENT SEAT VALVES.
9. WATERMAIN BEDDING TO BE AS PER O.P.S.D. 802.010 WITH GRANULAR 'A' OR LIMESTONE SCREENINGS USED FOR EMBEDMENT.
10. CATHODIC PROTECTION OF WATERMAINS AS FOLLOWS:
   A) SACRIFICIAL NUTS AND WASHERS ON ALL WATERMAIN FITTINGS.
   B) STAINLESS STEEL ROD AND COTTER PIN TO BE USED ON CURB STOP.
   C) SACRIFICIAL COLLARS ON ALL COPPER WATER SERVICES.
   – DOUBLE SERVICES 25mm. COLLARS LOCATED WITHIN 300mm OF Y AND 19mm COLLARS LOCATED WITHIN 300mm OF CURB STOP.
   – SINGLE SERVICES 19mm. COLLARS LOCATED WITHIN 300mm. OF CURB STOP ON STREET SIDE AND ON PROPERTY SIDE.
11. THE TOWN OF MONO RESERVES THE RIGHT TO REVIEW THE REQUIREMENTS FOR, AND REQUEST ADDITIONAL WATERMAIN VALVES WHICH MAY BE REQUIRED AS A RESULT OF CONSTRUCTION PHASING.
12. GENERAL INSTALLATION AND TESTING OF WATERMAIN AND APPURTENANCES TO BE IN ACCORDANCE WITH OPSS 701, 702 AND ALL SPECIFICATIONS REFERENCED ON THESE DRAWINGS.

CATCHBASINS

1. PRECAST CATCHBASINS TO BE AS FOLLOWS:
   SINGLE – O.P.S.D. 705.010
   DOUBLE – O.P.S.D. 705.020
   DITCH INLET – O.P.S.D. 705.030 OR 705.040, UNLESS OTHERWISE NOTED.
   REAR LOT CB. – O.P.S.D. 705.010 (SUMPLESS)
2. CATCHBASIN FRAMES AND GRATES TO BE AS FOLLOWS:
   ROADWAYS – O.P.S.D. 400.100.
   DITCH INLET – O.P.S.D. 403.010.
   REAR LOT CB. – O.P.S.D. 400.120
3. CATCHBASIN CONNECTION TO MAIN SEWER, SIZE AS FOLLOWS:
   SINGLE CATCHBASINS – 250mm DIA. (MINIMUM)
   DOUBLE CATCHBASINS – 300mm DIA. (MINIMUM)
   DITCH INLETS – AS NOTED ON THE DRAWINGS
4. ALL CATCHBASIN FRAMES AND GRATES TO BE SET SQUARELY ON STRUCTURE WITH NO OVERHANG INTO ROAD BASE OR BOULEVARD.
5. REAR LOT CATCHBASINS TO BE WITHOUT SUMP. REAR LOT CB. LEADS ARE TO BE CONCRETE AND CONCRETE ENCASED ALONG BUILDING ENVELOPE.
6. CATCHBASINS ARE NOT TO BE LOCATED WITHIN DRIVEWAY ENTRANCES.

GENERAL

UNLESS OTHERWISE NOTED ON DRAWINGS THE FOLLOWING REQUIREMENTS SHALL APPLY TO THE WORKS:

1. TOWNSHIP OF AMARANTH/TOWN OF MONO AND ONTARIO PROVINCIAL STANDARD DRAWINGS TO BE CONSTITUTED AS PART OF THIS CONTRACT.
2. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON SITE AND ANY DISCREPANCIES REPORTED TO THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. ANY UTILITY RELOCATIONS REQUIRED DUE TO THE DEVELOPMENT OF THE SUBJECT LANDS TO BE UNDERTAKEN BY THE CONCERNED UTILITY AT THE EXPENSE OF THE DEVELOPER.
4. BLASTING WILL NOT BE PERMITTED WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE TOWNSHIP OF AMARANTH PUBLIC WORKS DEPARTMENT.
5. THE LOCATION OF EXISTING POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND OR ABOVEGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE 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 LOCATIONS OF ALL SUCH UTILITIES AND STRUCTURES, AND HE SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
6. ALL DISTURBED AREAS SHALL BE RESTORED TO SAME AS OR BETTER CONDITION.
7. ALL ROADS SHALL BE KEPT CLEAR FOR THE FREE FLOW OF TRAFFIC FOR EMERGENCY VEHICLES AND THE GENERAL PUBLIC.
8. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL TRAFFIC CONTROL AND CONSTRUCTION SIGNAGE INCLUDING FLAG PERSONS, AS REQUIRED, IN ACCORDANCE WITH THE ONTARIO TRAFFIC CONTROL MANUAL (OTM BOOK 7) AND AS DIRECTED BY THE ENGINEER AND/OR THE TOWNSHIP OF AMARANTH.
9. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND COORDINATE CONSTRUCTION ACCORDINGLY.
10. ALL CONSTRUCTION TRAFFIC SHALL ACCESS THE SITE BY USING THE WEST SIDE OF 2nd LINE.
11. THE CONTRACTOR SHALL DEVELOP AND MAINTAIN A STREET FLUSHING PROGRAM TO THE SATISFACTION OF THE TOWN. AT MINIMUM ABUTTING AND EXISTING MUNICIPAL STREETS SHALL BE FLUSHED AND SWEPT DAILY.
12. ALL SILT CONTROL AND EROSION PROTECTION DEVICES ARE TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE TOWNSHIP'S ENGINEER.

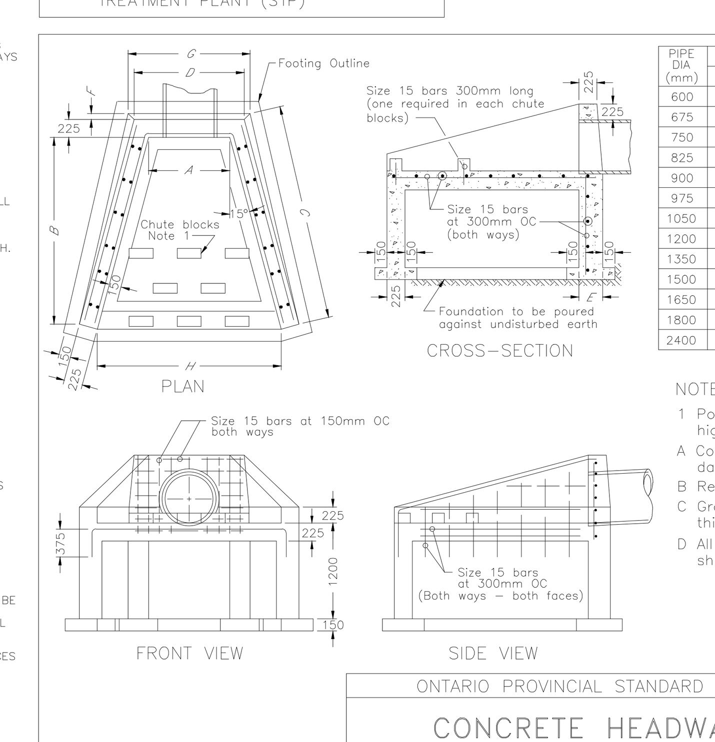
SERVICE CONNECTIONS

1. SANITARY SERVICES:
   TO BE 150mm DIA. SINGLE OR DOUBLE P.V.C. SDR.28 (GREEN) TO BE INSTALLED TO A DEPTH OF 2.6 m AT STREET LINE. A PVC OR EQUAL TEST FITTING (STRAIGHT OR BOOTJACK TYPE) TO BE INSTALLED AT STREET LINE AND SERVICE EXTENDED 3.0m PAST THE STREET LINE.
2. WATER SERVICES:
   UNLESS OTHERWISE NOTED ON THE DRAWINGS WATER SERVICES TO BE 19mm. DIA. TYPE "K" SOFT COPPER TUBING, O.P.S.D. 1104.010 & 1104.020 CURB STOP TO BE LOCATED AT STREET LINE. ALL CURB STOPS TO HAVE STAINLESS STEEL OPERATING RODS. CURB STOPS ARE NOT TO BE LOCATED WITHIN DRIVEWAYS OR WALKWAYS TO PROPOSED UNITS AND SHALL BE OFFSET A MINIMUM OF 1.0 m FROM DRIVEWAYS.
3. A GEOTECHNICAL ENGINEER MUST BE CONSULTED DURING THE CONSTRUCTION OF THE UNDERGROUND SERVICES TO DETERMINE THE BEDDING AND BACKFILL REQUIREMENTS.

SEWERS

1. SEWER BEDDING, UNLESS OTHERWISE NOTED ON THE DRAWINGS, SHALL BE AS FOLLOWS:
   CONCRETE STORM SEWERS: GRANULAR 'A' BEDDING WITH SAND COVER IN ACCORDANCE WITH OPSD 802.030 CLASS 'B' IN EARTH.
   SANITARY SEWERS: GRANULAR 'A' EMBEDMENT IN ACCORDANCE WITH O.P.S.D. 802.010.
2. STANDARD RUBBER GASKETS TO BE USED THROUGHOUT THE STORM SEWER SYSTEM AND PREMIUM RUBBER GASKETS THROUGHOUT THE SANITARY SEWER SYSTEM.
3. PIPE CLASSES SHALL BE AS FOLLOWS:
   CONCRETE PIPE 375mm DIA. AND LESS: A257.1–CLASS 3, OR OTHERWISE SPECIFIED. PIPES 450mm AND GREATER TO BE CONCRETE.
   CONCRETE PIPE GREATER THAN 375mm DIA.: A257.2–CLASS 65-D, UNLESS OTHERWISE NOTED.
   PVC PIPES: CLASS DR-35, AS PER ASTM D-3034, LATEST REVISION.
4. STORM SEWER MAINTENANCE HOLES TO HAVE CLOSED COVER UNLESS OTHERWISE NOTED ON THE DRAWINGS (O.P.S.D. 401.010, TYPE A).
5. CONCRETE SEWER PIPE TO BE ENCASED IN 20MPa CONCRETE FROM EACH MAINTENANCE HOLE TO THE FIRST JOINT OUTSIDE THE MAINTENANCE HOLE. ENCASEMENT TO EXTEND FROM UNDISTURBED GROUND TO A MINIMUM OF 300mm. ABOVE THE TOP OF PIPE.
6. SEWERS TO HAVE PREFABRICATED 'T' CONNECTION.
7. ALL MAINTENANCE HOLE AND CATCHBASIN FRAMES AND COVERS TO BE SET TO BASE COURSE HL8 ASPHALT ELEVATION AND RAISED BY ADDING MODULOC ADJUSTMENT UNITS PRIOR TO PLACEMENT OF FINAL COURSE HL3 ASPHALT.
8. GENERAL INSTALLATION AND TESTING OF SEWERS AND APPURTENANCES TO BE IN ACCORDANCE WITH OPSS 407, 408, 409 (CCTV), 410 AND 421.
9. ALL MAINTENANCE HOLE CONNECTIONS TO USE KOR'N'SEAL RUBBER BOOTS.
10. MAINTENANCE HOLE STEPS IN ACCORDANCE WITH 405.020.
11. PRECAST MAINTENANCE HOLES GREATER THAN 5 METRES DEEP SHALL BE OPSD 701.011 (1500mm DIAMETER) WITH SAFETY GRATE PLATFORM IN ACCORDANCE WITH OPSD 404.020.

NOTE: SEE ARCHITECTURAL DWG A.1 FOR TEMPORARY ACCESS ROAD TO SANITARY TREATMENT PLANT (STP)



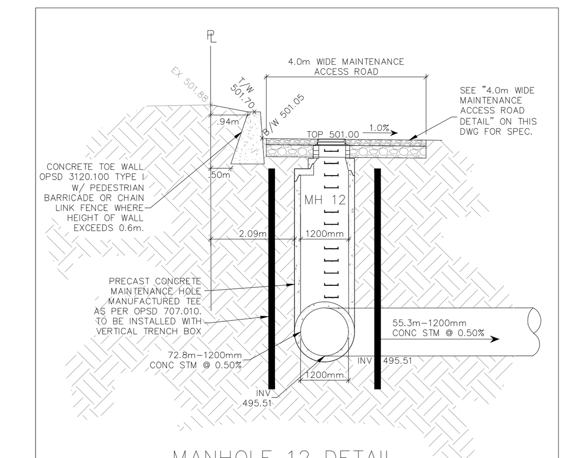
PIPE DIA (mm)	A	B	C	D	E	F	G	H
	ENDWALL DIMENSIONS							
600	1050	2400	2725	1400	300	75	1525	2350
675	1125	2400	2725	1475	300	75	1600	2425
750	1200	2400	2725	1550	300	75	1675	2500
825	1275	2400	2725	1625	300	75	1755	2575
900	1350	2400	2725	1700	300	75	1825	2650
975	1425	2400	2725	1775	375	150	1975	2725
1050	1500	3000	3400	1850	375	150	2050	3100
1200	1650	3000	3400	2000	375	150	2200	3250
1350	1800	3000	3400	2150	375	150	2350	3400
1500	1950	3000	3400	2300	375	150	2500	3550
1650	2100	3000	3400	2450	375	150	2650	3700
1800	2250	3000	3400	2600	375	150	2800	3850
2400	3000	3000	3400	3350	375	150	3550	4600

NOTES:
1 Poured concrete chute blocks 300x200x100mm high or as specified. (optional)
A Concrete to be 25MPa compressive strength at 28 days with 5% to 7% air entrainment.
B Reinforcing bars to have 75mm cover.
C Granular backfill to be placed to 300mm min thickness on all sides.
D All dimensions are in millimetres unless otherwise shown.

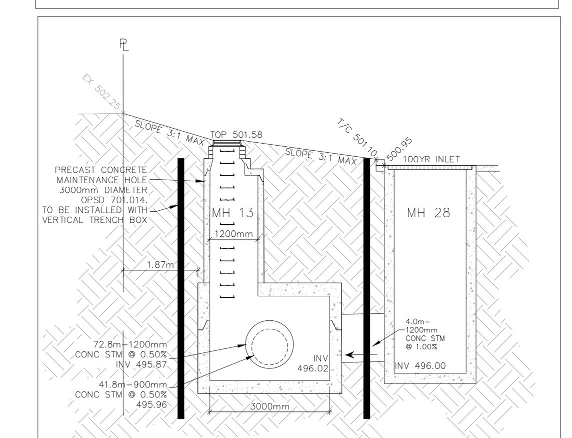
ONTARIO PROVINCIAL STANDARD DRAWING	Date 1990 09 14	Rev 1
CONCRETE HEADWALL FOR SEWER OR CULVERT PIPE	Date ______	OPSD – 804.04

LEGEND

- CATCHBASIN
- DOUBLE CATCHBASIN
- CATCHBASIN MANHOLE
- DOUBLE CATCHBASIN MANHOLE
- STORM MANHOLE
- BOX MANHOLE
- SANITARY MANHOLE
- VALVE AND BOX
- HYDRANT AND VALVE
- 510.50 PROPOSED ELEVATION
- 511.00 TW PROPOSED TOP OF RET. WALL
- 509.00 BW PROPOSED BOTTOM OF RET. WALL
- PROPOSED RETAINING WALL
- 512.0 EXISTING CONTOUR
- MAJOR OVERLAND FLOW ROUTE
- INFILTRATION TRENCH



MANHOLE 12 DETAIL
SCALE = 1:150



MANHOLE 13 DETAIL
SCALE = 1:150

CONTRACTOR TO BE RESPONSIBLE FOR VERIFYING THE LOCATIONS OF ALL EXISTING UNDERGROUND AND ABOVE UTILITIES AND SERVICES. THE CONTRACTOR SHALL ADVISE THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION. VARIOUS UTILITIES CONCERNED TO BE GIVEN REQUIRED ADVANCED NOTICE PRIOR TO ANY DIGGING, FOR STAKE OUT.
A.M. CANDARAS ASSOCIATES INC. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF EXISTING UTILITIES AS INDICATED ON THIS DRAWING.

PAVEMENT STRUCTURE DESIGN DETAILS, SPECIFICATIONS AND SUBDRAINAGE DESIGN, IS NOT UNDER THE CIVIL DESIGN SCOPE. CONTRACTOR IS TO REFER TO GEOTECHNICAL REPORT RELATED SPECIFICATIONS. CONTRACTOR IS TO COORDINATE PAVEMENT MAKEUP AND SUBDRAINAGE INSPECTION WITH GEOTECHNICAL CONSULTANT.
A.M. CANDARAS ASSOCIATES INC. ASSUMES NO RESPONSIBILITY RELATING TO CONSTRUCTION AND INSPECTION OF THE PAVEMENT STRUCTURE.

No.	Date	By	REVISIONS
8	MAY 16/24	R.P.A.	REVISED SITEPLAN
7	JAN 12/24	R.P.A.	COORDINATION WITH TRAFFIC
6	JULY 24/23	R.P.A.	REVISED AS PER TOWNSHIP COMMENTS – 6th SPA SUBMISSION
5	APR 04/23	R.P.A.	REVISED AS PER TOWNSHIP COMMENTS – 5th SPA SUBMISSION
4	DEC 02/22	R.P.A.	REVISED AS PER TOWNSHIP COMMENTS – 4th SPA SUBMISSION
3	SEPT 30/22	R.P.A.	REVISED AS PER TOWNSHIP COMMENTS – 3rd SPA SUBMISSION
2	JULY 15/22	R.P.A.	REVISED AS PER TOWNSHIP COMMENTS – 2nd SPA SUBMISSION

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905–850–8020 Fax 905–850–8099
Email: civil@amcai.com

BLACKWOODS AMARANTH

TOWNSHIP OF AMARANTH
COUNTY OF DUFFERIN

SITE SERVICING, GRADING & STORMWATER MANAGEMENT PLAN

SCALE: 1:1000	DATE: MARCH 2022	PROJ No. 1132
DRAWN: R.P.A.	CHK'D: A.M.C.	PLAN No. G–1
DESIGNED: A.M.C.	SHEET 1 OF 1	

FILENAME: O:\1132\KAL TIRE\1132-mast.dwg
PLOTDATE: May 16, 2024 - 9:28am
PLOTTED BY: ryan