

S:\21081\Working\Current\21081-Grading & Servicing Plan.dwg

NOTES TO CONTRACTOR:

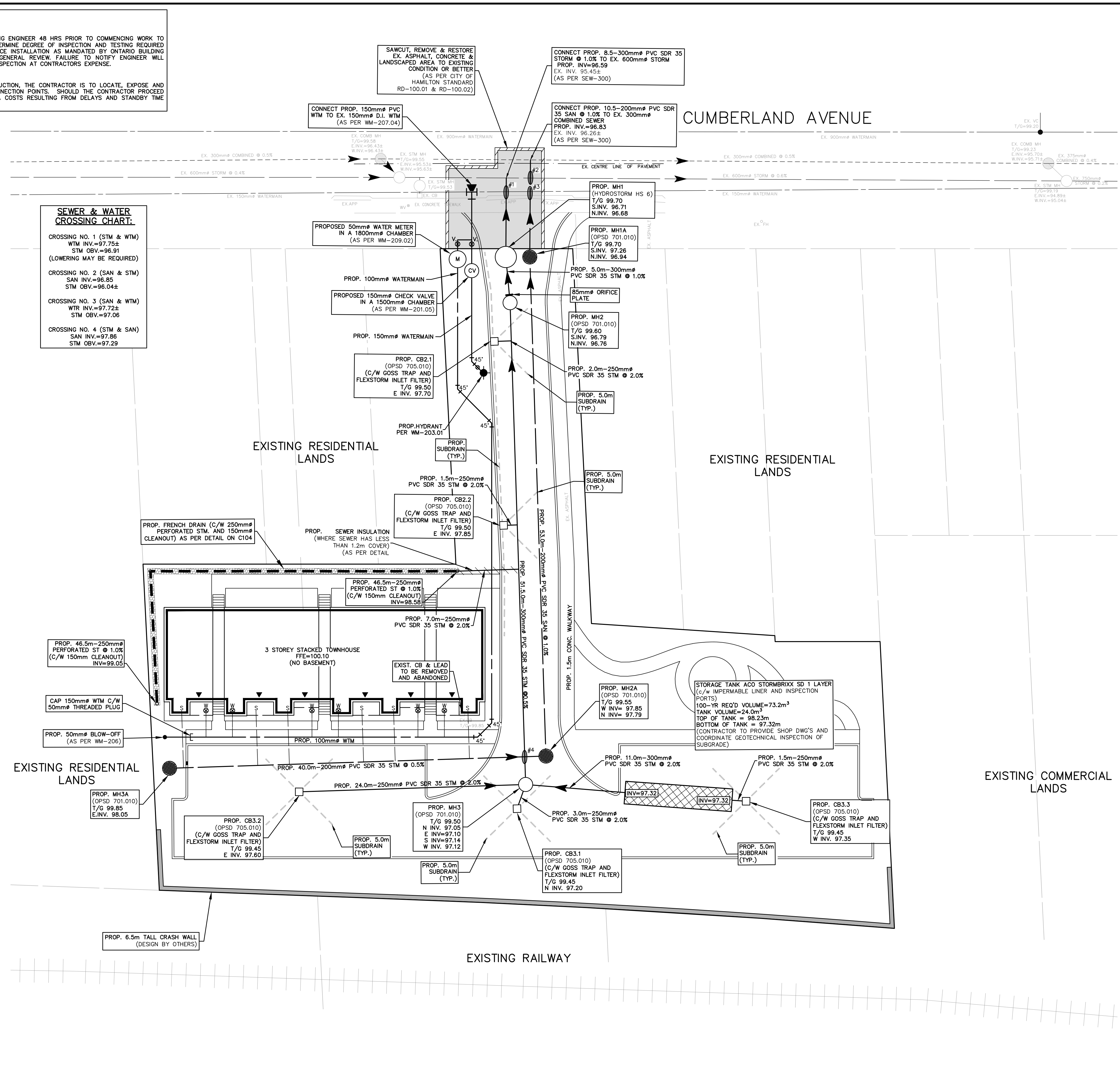
- INSPECTION**
CONTRACTOR IS RESPONSIBLE FOR CONTACTING ENGINEER 48 HRS PRIOR TO COMMENCING WORK TO ARRANGE FOR INSPECTION. ENGINEER TO DETERMINE DEGREE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION AS MANDATED BY ONTARIO BUILDING CODE DIVISION C, PART 1, SECTION 1.2.2. GENERAL REVIEW. FAILURE TO NOTIFY ENGINEER WILL RESULT IN EXTENSIVE POST CONSTRUCTION INSPECTION AT CONTRACTORS EXPENSE.
- CONFIRMATION OF EXISTING INVERTS**
72 HOURS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS TO LOCATE, EXPOSE AND VERIFY INVERTS OF EXISTING SEWERS AT CONNECTION POINTS. SHOULD THE CONTRACTOR PROCEED WITHOUT COMPLETING THESE LOCATES, EXTRA COSTS RESULTING FROM DELAYS AND STANDBY TIME WILL NOT BE CONSIDERED.

NOTE:
PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE ELEVATION OF ALL CONNECTION POINTS TO THE EXISTING SEWER AND WATERMAIN SYSTEMS AND REPORT ALL FINDINGS TO THE ENGINEER.

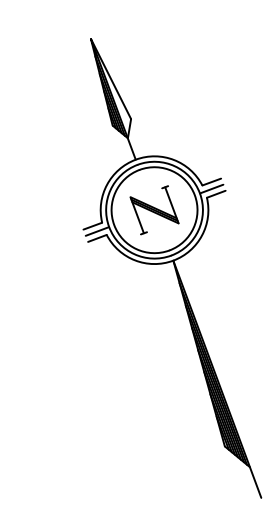
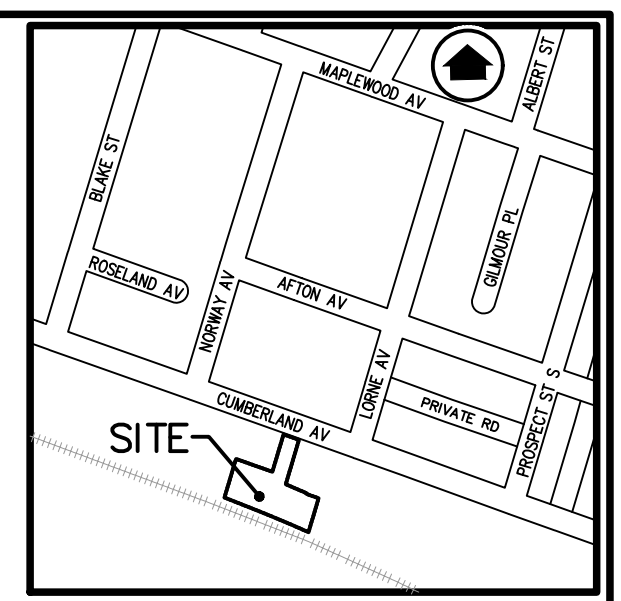
NOTE:
CONTRACTOR TO LOCATE EXISTING SERVICES TO SITE AND ABANDON/REMOVE PER CITY OF HAMILTON STANDARDS.

SEWER & WATER CROSSING CHART:

CROSSING NO. 1 (STM & WTM)	WTM INV.=97.75± STM OB.V.=96.91 (LOWERING MAY BE REQUIRED)
CROSSING NO. 2 (SAN & STM)	SAN INV.=96.85 STM OB.V.=96.04±
CROSSING NO. 3 (SAN & WTM)	WTM INV.=97.72± STM OB.V.=97.06
CROSSING NO. 4 (STM & SAN)	SAN INV.=97.86 STM OB.V.=97.29



- LEGEND:**
- EXISTING CATCHBASIN
 - EXISTING STORM/SANITARY MANHOLE
 - PROPOSED CATCHBASIN
 - PROPOSED STORM/SANITARY MANHOLE
 - ⊕ PROPOSED CATCHBASIN MANHOLE
 - ⊗ PROPOSED CURB STOP/GATE VALVE
 - ▨ PROPOSED ROAD RESTORATION
 - # SEWER CROSSING
 - ▭ PROPOSED ASPHALT DRIVEWAY
 - 150mm# SANITARY SERVICE
 - 25mm# WATER SERVICE
 - - - PROPOSED SUBDRAIN
 - PROPOSED SEWER INSULATION



BENCH MARK NOTE:
MONUMENT 001963U3498
ADELAIDE HOODLESS SCHOOL ON THE NORTHWEST CORNER OF MAPLEWOOD AVENUE AND SPRINGER AVENUE, ONE BLOCK SOUTH OF MAIN STREET (HIGHWAY NO. 8), 2.9km EAST OF THE POST OFFICE, TABLET IN THE SOUTH CONCRETE FOUNDATION WALL OF THE MOST SOUTHEASTERLY OR NEWEST PORTION OF SCHOLL, 1.21m WEST OF THE SOUTHEAST CORNER AND 12cm BELOW RED BRICK SIDING.
ELEVATION: 94.135 metres CGVD-1928:1978

NO.	DATE	BY	REVISIONS
3.	JUL 14/25	JM	REVISED SITE PLAN.
2.	APR 26/23	YM	REVISED SITE PLAN.
1.	MAR 21/23	YM	REVISED PER CITY COMMENTS.

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- THE POSITIONS OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVER-GROUND UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS, WHERE SHOWN ON THE DRAWING, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
- ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REVISED, OR REVISED WITHOUT THE WRITTEN CONSENT OF S. LLEWELLYN AND ASSOCIATES LIMITED.

DESIGN	SN	CHK'D	SN	DATE
DRAWN	JM	CHK'D	SN	July 14, 2025

SCALE 1:200

APPROVALS

STAMP

NOT FOR CONSTRUCTION

S. LLEWELLYN & ASSOCIATES LIMITED
CONSULTING ENGINEERS

Tel. (905) 631-6978
Website: www.sla.on.ca
email: info@sla.on.ca

3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

CLIENT

B.I.Z. MECHANICAL INC.
338 CUMBERLAND AVE.
HAMILTON, ON

PROJECT NAME

338 & 338 1/2 CUMBERLAND AVE.
HAMILTON, ON

TITLE

PRELIMINARY SERVICING PLAN

PROJECT No.	21081	DRAWING No.	C102
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GENERAL NOTES

- 1. THIS/THESE PLAN(S) IS/ARE NOT TO BE USED FOR CONSTRUCTION UNTIL SEALED BY THE ENGINEER AND INDICATED ISSUED FOR CONSTRUCTION ON THE DRAWING.
2. THIS/THESE PLAN(S) IS/ARE NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF S. LLEWELLYN AND ASSOCIATES LIMITED.
3. INFORMATION REGARDING ANY EXISTING SERVICES AND/OR UTILITIES SHOWN ON THE APPROVED SET OF CONSTRUCTION DRAWINGS ARE FURNISHED AS THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL INTERPRET THIS INFORMATION AS HE SEES FIT WITH THE UNDERSTANDING THAT THE OWNER AND HIS AGENTS DISCLAIM ALL RESPONSIBILITY FOR ITS ACCURACY AND/OR SUFFICIENCY. THE CONTRACTOR SHALL ASSUME LIABILITY FOR ANY DAMAGE TO EXISTING WORKS.
4. EXISTING TOPOGRAPHIC AND LEGAL INFORMATION TAKEN FROM PLANS PREPARED BY A.T. MCLAREN, AUGUST 12, 2021.
5. THIS/THESE PLAN(S) TO BE READ IN CONJUNCTION WITH THE STORM WATER MANAGEMENT (SWM) REPORT PREPARED BY S. LLEWELLYN AND ASSOCIATES LIMITED.
6. THIS (THESE) PLAN(S) TO BE USED FOR SERVICING AND GRADING ONLY, FOR BUILDING LOCATION REFER TO THE SITE PLAN.
7. MUNICIPAL APPROVAL OF THESE DRAWINGS IS FOR MATERIAL AND COMPLIANCE WITH CITY OF HAMILTON AND PROVINCIAL SPECIFICATIONS AND STANDARDS ONLY. APPROVAL AND INSPECTION OF THE WORKS BY THE CITY OF HAMILTON STAFF DOES NOT CERTIFY THE LINE AND GRADE OF THE WORKS NOR RELIEVE THE CONTRACTOR OF CERTIFICATION OF ALL WORKS BY THE OWNER'S ENGINEER.
8. ALTERNATE MATERIALS MAY BE ACCEPTABLE PROVIDED WRITTEN APPROVAL HAS FIRST BEEN OBTAINED FROM THE CITY OF HAMILTON AND THE ENGINEER.
9. THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S BONDED CONTRACTOR FROM THE REQUIREMENTS TO OBTAIN THE VARIOUS PERMITS/APPROVALS NORMALLY REQUIRED TO COMPLETE A CONSTRUCTION PROJECT, SUCH AS, BUT NOT LIMITED TO THE FOLLOWING:
- ROAD CUT PERMITS
- SEWER PERMITS
- APPROACH APPROVAL PERMITS
- RELOCATION OF SERVICES
- COMMITTEE OF ADJUSTMENT
- ENCROACHMENT AGREEMENTS

GRADING NOTES

- A. ALONG ADJOINING PROPERTIES GRADE TO MEET EXISTING OR PROPOSED ELEVATIONS WITH SODDED SLOPES (MIN. 3% TO 1V) AND/OR RETAINING WALLS AS SPECIFIED.
B. ALL RETAINING WALLS, WALKWAYS, CURBS, ETC., SHALL BE PLACED A MIN. OF 0.45m FROM THE PROPERTY LINE. ALL WALLS 1.0m OR HIGHER SHALL BE DESIGNED BY A P.E.N.G.
C. SHOULD A RETAINING WALL BE REQUIRED, THE TOP OF WALL ELEVATIONS SHALL BE SET 150mm ABOVE THE PROPOSED SIDE YARD SWALES.
D. RETAINING WALLS 0.6m IN HEIGHT OR GREATER REQUIRE CONSTRUCTION OF A FENCE OR GUARD RAIL AT THE TOP OF THE REAR OF THE WALL. GUARDS FOR RETAINING WALLS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF EXTERIOR GUARDS AS CONTAINED IN THE ONTARIO BUILDING CODE.
E. TOP OF FOUNDATION WALLS FOR BUILDINGS SHALL BE 150mm (MIN) ABOVE FINISHED GRADE.
F. DRIVEWAY SLOPES SHALL NOT BE LESS THAN 2% AND NOT MORE THAN 7.0% REVERSED SLOPED DRIVEWAYS IN NEW DEVELOPMENTS ARE NOT PERMITTED.
G. IF GRADING IS REQUIRED ON LANDS ADJACENT TO THE DEVELOPMENT WHICH ARE NOT OWNED BY THE DEVELOPER, THEN THE DEVELOPER MUST OBTAIN WRITTEN PERMISSION FROM THE ADJACENT PROPERTY OWNER TO ALLOW THE DEVELOPER TO GRADE ON THE ADJACENT LANDS, OTHERWISE RETAINING WALLS MUST BE USED.
H. THE WRITTEN PERMISSION REQUIRED FROM THE ADJACENT LANDOWNER SHALL BE OBTAINED PRIOR TO ENTERING THE LANDS. SHOULD PERMISSION NOT BE OBTAINED OR IS WITHDRAWN PRIOR TO COMMENCING THE WORK, THEN THE DEVELOPER SHALL LIMIT HIS ACTIVITIES TO THE LIMITS OF THE DEVELOPMENT SITE.
I. DRIVEWAY AND DRIVEWAY APPROACHES SHALL BE LOCATED SUCH THAT HYDRO VAULTS AND OTHER STREET FURNITURE ARE A MIN. OF 1.2m FROM THE PROJECTIONS OF THE OUTSIDE GARAGE WALLS.
J. ANY CHANGES IN GRADES AND CATCH BASINS REQUIRE THE APPROVAL OF THE CITY'S MANAGER OF DEVELOPMENT ENGINEER.

WATERMANS AND WATER SERVICES

- 1. WATERMANS
B. CONSTRUCTION OF WATERMANS & PRIVATE SERVICES SHALL BE IN ACCORDANCE WITH CITY STANDARDS & SPECIFICATIONS (LATEST EDITION) AND MINISTRY OF ENVIRONMENT (MOE) GUIDELINES (LATEST EDITION).
C. ALL WATER SERVICES TO BE INSTALLED WITH A MINIMUM OF 1.6m COVER.
D. WATER SERVICE AND WATERMAIN BEDDING AND COVER MATERIAL TO BE INSTALLED AS PER WM-200.01 WITH GRANULAR 'A' FOR BOTH BEDDING AND COVER.
E. PVC PIPE IN SIZES 100mm THROUGH 300mm SHALL BE CLASS 150 DR18 CONFORMING TO AWWA C900.
F. TRACER WIRE SHALL BE INSTALLED WITH PVC PIPE IN ACCORDANCE WITH FORM 400. IT SHALL BE 12 GAUGE TW75, TW175 OR RW50XPLC COATED COPPER AND SHALL BE POSITIONED ALONG THE TOP OF THE PIPE AND FASTENED AT 6 METRE INTERVALS. THE WIRE IS TO BE INSTALLED BETWEEN EACH VALVE AND/OR THE END OF THE NEW PVC WATERMAIN JOINTS IN THE WIRE BETWEEN VALVES ARE NOT PERMITTED. AT EACH GATE VALVE A LOOP WIRE IS TO BE BROUGHT UP INSIDE THE VALVE BOX TO THE CAP. THE TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT THE SECONDARY VALVE ON ALL FIRE HYDRANTS. THE TRACER WIRE SHALL ALSO BE CONNECTED TO THE CATHODIC PROTECTION SYSTEM AS REQUIRED.
G. MOLDED PVC FITTINGS FOR PIPE SIZES 100mm TO 300mm SHALL CONFORM TO AWWA C900 AND CERTIFIED TO CSA B137.2.
H. FABRICATED FITTINGS 250mm AND 300mm SHALL BE MANUFACTURED FROM SEGMENTS OF AWWA C900, CLASS 150 (DR18) PVC PIPE, BONDED TOGETHER AND OVER-WRAPPED WITH FIBREGLASS-REINFORCED POLYESTER TO MEET THE REQUIREMENTS OF CSA B137.3.
I. WHERE METAL FITTINGS ARE TO BE USED ON PVC MAINS SUFFICIENT CATHODIC PROTECTION AS PER FORM 400 AND MUST BE PROVIDED AS PER THE FOLLOWING REQUIREMENTS:
a. ONE (1) 11 kg ZINC ANODE WILL BE PROVIDED FOR EVERY 1000 m TRACER WIRE.
ii. ONE (1) 11 kg ZINC ANODE IS TO BE INSTALLED ON ALL COPPER SERVICE CONNECTIONS, BY MEANS OF A SERVICE GROUND CLAMP, COATED WITH T.C. MASTIC OR WRAPPED WITH 'SCOTCHFIL' ELECTRICAL PUTTY OR APPROVED EQUAL. THE ANODE IS TO BE PLACED AT LEAST 1.0 m AWAY FROM THE WATER SERVICE AND AS DEEP AS THE SERVICE AND WITHIN 1.0 m OF THE CURB STOP.
iii. ONE (1) 11 kg ZINC ANODE IS TO BE INSTALLED ON EACH HYDRANT. IF PVC PIPE IS USED BETWEEN THE HYDRANT TEE OR ANCHOR TEE AND THE HYDRANT BOOT, TWO (2) 11 kg ZINC ANODES SHALL BE USED.
iv. ONE (1) 11 kg ZINC ANODE IS TO BE INSTALLED ON EVERY VALVE, AND EVERY METALLIC FITTING CONNECTED TO A PVC WATERMAIN. FITTINGS INCLUDE BENDS, TEES, CROSSES, SLEEVES, REDUCERS, PLUGS, CAPS, JOINT RESTRAINERS AND COUPLERS.

ALL SACRIFICIAL ZINC ANODES SHALL CONFORM TO ASTM B-418 TYPE II AND SHALL BE MADE OF HIGH GRADE ELECTROLYTIC ZINC, 99.99% PURE. MAGNESIUM ANODES SHALL CONFORM TO ASTM B-107-TYPE M1. FOR ALL ANODES CONNECTED TO NEW PIPE, FITTINGS OR TO EXISTING METALLIC WATERMANS, A CADWELDER AND CA-15 OR EQUIVALENT CARTRIDGE SHALL BE USED. ALL THERMITE WELD CONNECTIONS TO BE COATED WITH T.C. MASTIC (TAPECOAT OF CANADA), ROYBOND 747 PRIMER AND ROYSTON HANDY CAP OR APPROVED EQUAL.

- H. BEDDING AND BACKFILL AS PER WM-200.01 AND WM-200.02 GRANULAR 'A' MATERIAL FOR MAINS AND SERVICES GREATER THAN 50mm.
I. MINIMUM HORIZONTAL SEPARATION BETWEEN WATER SERVICES/MAINS AND SEWER DRAINS AND MUNICIPAL SEWER MAINS SHALL BE 2.5m MEASURED FROM THE CLOSEST PIPE EDGE TO THE CLOSEST PIPE EDGE. VERTICAL SEPARATION WHERE WATER SERVICE/MAIN PASSES OVER A SEWER DRAIN OR MUNICIPAL SEWER MAIN MUST BE A MINIMUM OF 0.25m UNLESS GREATER SEPARATION IS REQUIRED TO PROVIDE FOR PROPER BEDDING AND STRUCTURAL SUPPORT. WATER SERVICES/MAINS PASSING UNDER SEWER DRAINS OR MUNICIPAL SEWER MAINS MUST HAVE A SEPARATION OF 0.5m BETWEEN THE INVERT OF THE SEWER MAIN/DRAIN AND THE CROWN OF THE WATER SERVICE/MAIN.
J. WATERMAIN OR WATER SERVICE LOWERINGS, 100 TO 300mm PIPE, TO BE AS PER WM-204.13. WATER SERVICE DEFLECTIONS, WHERE FEASIBLE, SHOULD BE LESS THAN OR EQUAL TO 50% OF THE VALUES RECOMMENDED BY THE MANUFACTURER, AS PER CITY FORM 400.
K. PVC WATER SERVICE/MAIN MATERIAL, CATHODIC PROTECTION, TRACER WIRE ETC. MUST BE AS PER FORM 400.
L. ALL BACKFLOW PREVENTION DEVICES MUST BE SELECTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CITY OF HAMILTON'S BACKFLOW PREVENTION BY-LAW #10-103. INCLUDING THE MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION ETC., AND GUIDELINES SET OUT IN THE MOST RECENT VERSIONS OF THE AWWA CANADIAN CROSS CONNECTION CONTROL MANUAL AND THE 'CSA 864-10/07/864.10-07 STANDARDS'. IN SELECTING A BACKFLOW DEVICE FOR A PROPERTY, CONSIDERATION MUST BE GIVEN TO FUTURE POSSIBLE USES OF THE SITE WHICH COULD RESULT IN A HIGHER RISK TO THE MUNICIPAL DRINKING WATER SYSTEM, THUS MAKING THE DEVICE INITIALLY CHOSEN INADEQUATE FOR THE NEW PURPOSE AND REQUIRE FUTURE CHANGE OUT AT THE OWNER'S EXPENSE.
M. ALL EXISTING WATER METERS ON SYSTEMS TO BE ABANDONED MUST BE REMOVED AND SALVAGED BY THE CITY OF HAMILTON. THE SERVICING CONTRACTOR SHOULD CONTACT THE WATER AND WASTEWATER SECTION, PUBLIC WORKS DEPARTMENT AT 905 546-4426 TO ARRANGE FOR THE WORK.
N. WATERMAIN DEFLECTION FOR PVC PIPE:
i. MAXIMUM ALLOWABLE DEFLECTION OF 1.5 DEGREES PER JOINT UP TO 250mm DIAMETER (160mm PER 6.1m PIPE LENGTH) AND 1.2 DEGREES FOR 300mm DIAMETER (128mm PER 6.1m PIPE LENGTH) SHALL NOT BE EXCEEDED.
ii. ALL JOINTS SHALL BE DEFLECTED AN EQUAL AMOUNT.
2. FLUSHING, SWABING AND TESTING
A. ALL NEW WATERMANS ARE TO BE SWABBED IN ACCORDANCE WITH CITY SPECIFICATIONS.
B. A REDUCED PRESSURE ZONE BACKFLOW PREVENTER (WATTS SERIES 909 OR APPROVED EQUAL) IS REQUIRED ON THE TEMPORARY SUPPLY LINES USED FOR FILLING AND FLUSHING OR SWABBING OF WATERMANS.
C. UPON COMPLETION OF INSTALLATION, THE CONTRACTOR SHALL PERFORM A PRESSURE TEST ON THE WATERMAIN AS PER FORM 400. WATERMAIN IS TO BE TESTED PRIOR TO CONNECTION TO EXISTING WATERMANS USING TEMPORARY CAPS OR PLUGS. PIPE CLOSURES WHERE REQUIRED, ARE TO BE SUPPLIED BY THE CONTRACTOR. THE CONTRACTOR WILL ALSO SUPPLY AND INSTALL ALL ADAPTOR PIECES IN ORDER TO CONNECT TO EXISTING WATERMANS.
3. VALVES & VALVE BOXES
A. ALL VALVE BOXES TO BE SET TO PROPOSED GRADES.
B. 100mm TO 300mm GATE VALVE & VALVE BOXES AS PER WM-202.
4. ANCHOR BLOCKS
A. FOR 100mm TO 300mm WATERMANS STANDARD CONCRETE ANCHOR BLOCKS AS PER WM-204.01.
5. WATERMAIN SHUTDOWN
A. MAXIMUM 4-HOUR SHUTDOWN OF EXISTING MAIN AT A TIME CONVENIENT TO THE CITY OF HAMILTON AND ADJUTING USERS.
B. CONTRACTOR TO GIVE 48-HOUR PRIOR NOTIFICATION USING THE 'CITY OF HAMILTON NOTICE OF SHUTDOWN' FOR ALL AFFECTED AREAS.
C. IN THE EVENT A SCHEDULED SHUTDOWN IS CANCELLED BY THE CITY OF HAMILTON, THE CONTRACTOR SHALL HAVE NO CLAIMS AGAINST THE CITY.

WATERMANS AND WATER SERVICES (CON'T)

- 6. HYDRANTS
A. TO BE INSTALLED WITH SECONDARY VALVES AS PER WM-203.01 OR WM-203.02 AS DETAILED. THEY SHALL OPEN COUNTER-CLOCKWISE (LEFT) AND HAVE A 'L' PAINTED ON THE BARREL SECTION. THE 100mm PUMPER 'STORZ' CONNECTION SHALL FACE THE ROADWAY AND BE PAINTED BLACK.
B. ALL FIRE HYDRANTS SHALL CONFORM TO THE CITY OF HAMILTON (MUNICIPALITY) FIRE DEPARTMENT'S REQUIREMENTS AND SHALL BE OF SAME MANUFACTURE.
C. ANCHOR OR TRUST BLOCKS ARE TO BE INSTALLED AT ALL WATER SERVICE ELBOWS, TEES, PLUGS etc. FOR 300mm DIAMETER WATER SERVICES AND SMALLER, ANCHOR BLOCKS ARE TO BE AS PER WM-204.01.

COMPACTION REQUIREMENTS

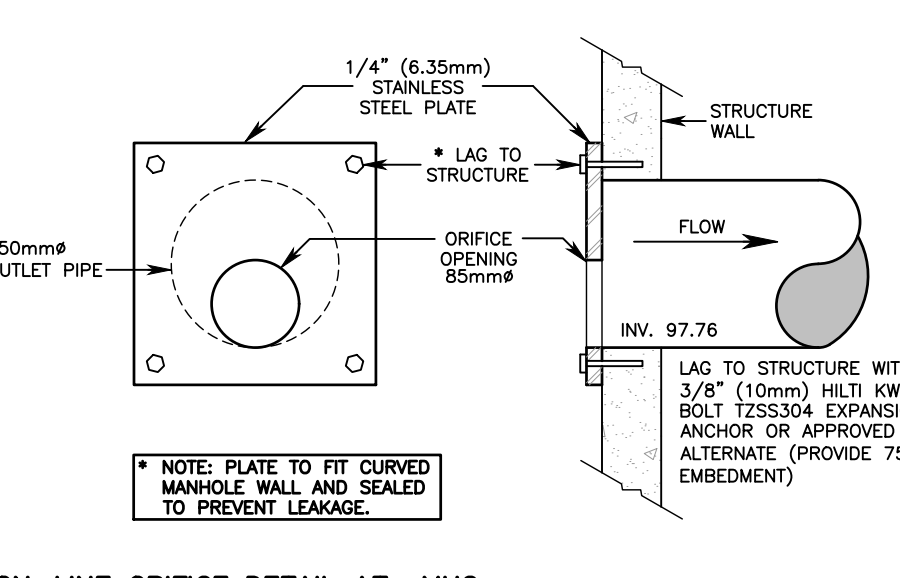
- UNLESS OTHERWISE NOTED OR DIRECTED BY THE GEOTECHNICAL CONSULTANT, THE FOLLOWING SHALL APPLY:
A. ALL BEDDING AND BACKFILL MATERIAL, ROAD SUB-GRADES AND GENERALLY ALL MATERIAL USED FOR LOT GRADING AND FILL SECTIONS, ETC., SHALL BE COMPACTED TO MIN. 98% SPD. ALL MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING 300mm LIFTS.
B. ALL GRANULAR ROAD BASE MATERIALS SHALL BE COMPACTED TO 98% SPD.
C. FOR ALL SEWERS AND WATERMANS IN FILL SECTIONS, THE COMPACTION SHALL BE CERTIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO LAYING OF PIPE.

SILTATION AND EROSION CONTROL

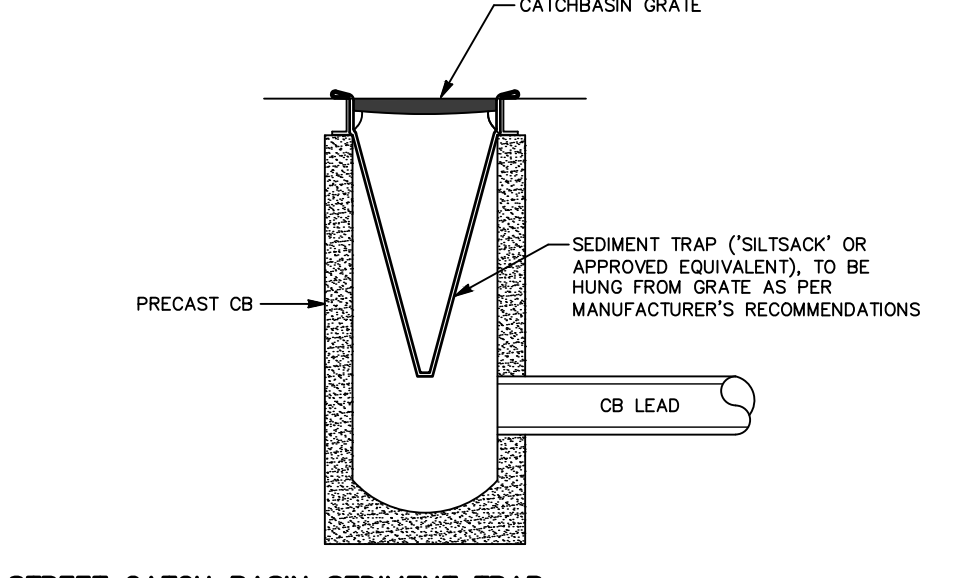
- A. SILTATION CONTROL BARRIERS SHALL BE PLACED AS DETAILED.
B. ALL SILTATION CONTROL MEASURES SHALL BE CLEANED AND MAINTAINED AFTER EACH RAINFALL AS DIRECTED AND TO THE SATISFACTION OF THE CITY OF HAMILTON AND/OR THE HAMILTON CONSERVATION AUTHORITY.
C. ADDITIONAL SILT CONTROL LOCATIONS MAY BE REQUIRED AS DETERMINED BY THE ENGINEER, THE CITY OF HAMILTON AND/OR THE HAMILTON CONSERVATION AUTHORITY.
D. ALL EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO DEVELOPMENT AND MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS, UNTIL ALL DISTURBED AREAS HAVE BEEN RE-ESTABLISHED.
E. ALL EROSION AND SEDIMENT CONTROL DEVICES SHOULD BE INSPECTED MINIMUM WEEKLY, AFTER EVERY RAINFALL AND MAINTAINED AND CLEANED AS REQUIRED.
F. THE OWNER IS RESPONSIBLE FOR THE REMOVAL OF ALL MUD AND DEBRIS THAT ARE TRACKED ONTO THE ROADWAYS FROM VEHICLES ENTERING AND LEAVING THE CONSTRUCTION SITE. THE OWNER SHALL, UPON VERBAL AND/OR REQUEST BY THE CITY, IMMEDIATELY PROCEED WITH THE CLEANUP OPERATION AT THEIR EXPENSE. SHOULD THE OWNER FAIL TO MAINTAIN THE ROAD AS DIRECTED, THE CITY WILL HAVE THE CLEANING CARRIED OUT, AND DRAW ON THE SECURITY FOR COSTS AND/OR LAY CHARGES.

SEWER/WATER ABANDONMENT

- 1. ALL EXISTING UNUSED SEWERS MUST BE PROPERLY ABANDONED BY DISCONNECTING SEWER AT THE MAIN AND GROUTING EITHER END OF THE SEWER WITH A MINIMUM 300mm OF CONCRETE.
2. UNUSED MAINTENANCE HOLES AND CATCHBASINS MUST BE COMPLETELY REMOVED.
3. OPENINGS IN MAINTENANCE HOLES AND CATCHBASINS WHERE SERVICES WERE REMOVED OR ABANDONED MUST BE BRICKED AND PARGED.
4. ALL EXISTING UNUSED WATER SERVICES MUST BE PROPERLY ABANDONED AS FOLLOWS:
4.1. FOR COPPER SERVICES: REMOVE CURB STOP, SHUT OFF MAIN STOP, CUT & CRIMP WATER SERVICE AT THE MAIN.
4.2. FOR PVC SERVICES: REMOVE GATE VALVE, REMOVE TEE AND REPLACE WITH SLEEVE. IF A TAPPING VALVE WAS USED, CONTACT THE CITY OF HAMILTON FOR FURTHER DIRECTION.



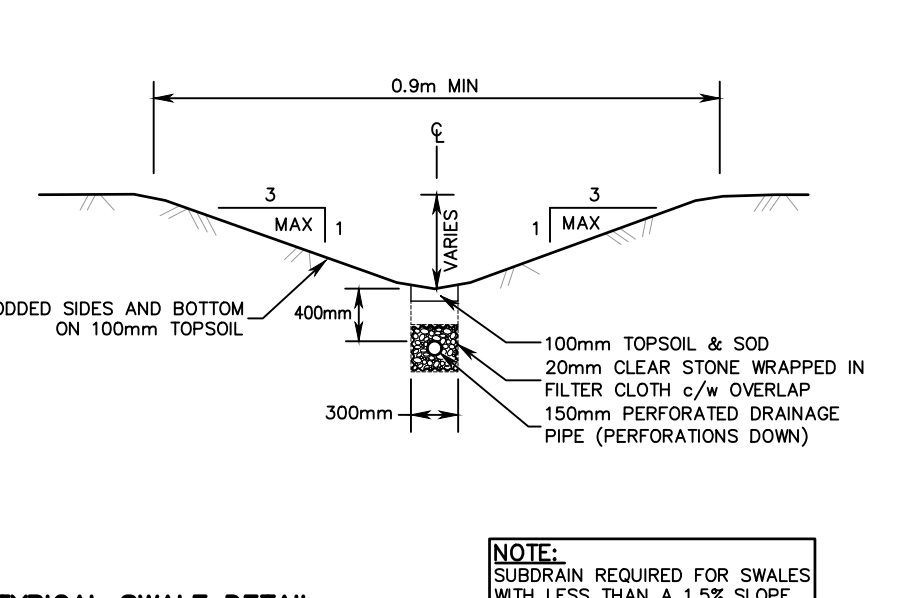
ON-LINE ORIFICE DETAIL AT MH2
SCALE: N.T.S.



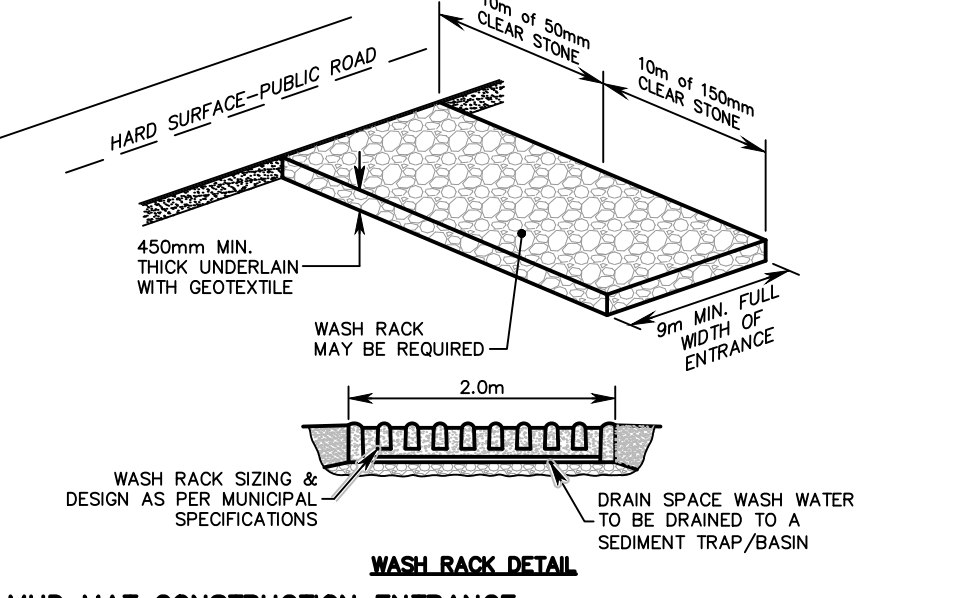
STREET CATCH BASIN SEDIMENT TRAP
SCALE: N.T.S.



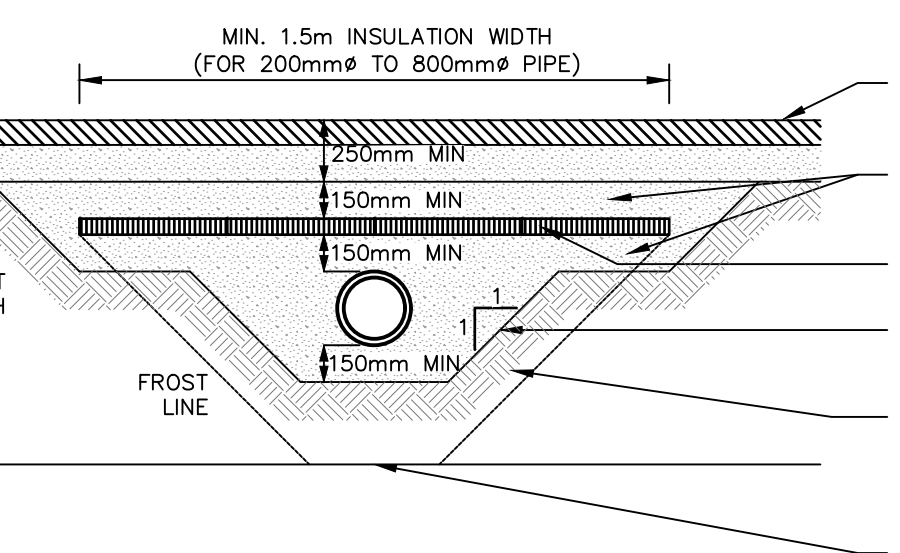
KEY MAP
N.T.S.



TYPICAL SWALE DETAIL
SCALE: N.T.S.



MUD MAT CONSTRUCTION ENTRANCE
SCALE: N.T.S.



*FOR SEWER PIPES HAVING LESS THAN 1200mm COVER AND MINIMUM 615mm COVER

SEWER PIPE INSULATION DETAIL
SCALE: N.T.S.

BENCH MARK NOTE:
MONUMENT 00196313498
ADELAIDE HOODESS SCHOOL ON THE NORTHWEST CORNER OF MAPLEWOOD AVENUE AND SPRINGER AVENUE, ONE BLOCK SOUTH OF MAIN STREET (HIGHWAY NO. 8). 2.9km EAST OF THE POST OFFICE, TABLET IN THE SOUTH CONCRETE FOUNDATION WALL OF THE MOST SOUTHEASTERLY OR NEWEST PORTION OF SCHOLL, 1.21m WEST OF THE SOUTHEAST CORNER AND 12cm BELOW RED BRICK SIDING.
ELEVATION: 94.135 metres CGVD-1928:1978

Table with 4 columns: NO., DATE, BY, REVISIONS. It lists three revisions: 1. MAR 21/23 JM REVISED PER CITY COMMENTS, 2. APR 26/23 YM REVISED SITE PLAN, 3. JUL 14/25 JM REVISED SITE PLAN.

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Table with 4 columns: DESIGN, SN, CHK'D, DATE. It shows design by JM, checked by JM, and dated July 14, 2025.



APPROVALS

NOT FOR CONSTRUCTION

S. LLEWELLYN & ASSOCIATES LIMITED CONSULTING ENGINEERS. Tel: (905) 631-6978. Website: www.sla.on.ca. email: info@sla.on.ca. 3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

B.I.Z. MECHANICAL INC. 338 CUMBERLAND AVE. HAMILTON, ON

PROJECT NAME

338 & 338 1/2 CUMBERLAND AVE. HAMILTON, ON

TITLE

PRELIMINARY GENERAL NOTES & DETAILS PLAN

Table with 2 columns: PROJECT No. (21081) and DRAWING No. (C103)

CONCRETE BARRIER CURB

City of Hamilton
Public Works Department

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2012 Rev 2
CONCRETE BARRIER CURB
OPSD 600.110

NOTES:
1 When sidewalk is continuously adjacent, the dropped curb at entrances shall be reduced to 75mm.
2 For slipforming procedure a 5% batter is acceptable.
A Treatment at entrances shall be according to the OPSD 351.010.
B Outlet treatment shall be according to the OPSD 610 Series.
C The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.
D All dimensions are in millimetres unless otherwise shown.

CALIFORNIA STYLE APPROACH

City of Hamilton
Public Works Department

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2012 Rev 2
CALIFORNIA STYLE APPROACH
OPSD 600.110

NOTES:
1 PRECAST CHAMBERS AND SECTIONS SHALL BE MANUFACTURED TO ASTM C-478, CSA, MEET A-8 (8) LOADING REQUIREMENTS AND IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST.
2 ALL JOINTS AND FITTING HOLES SHALL BE 15mm THICK WITH 1:3 NON-SHrink MORTAR/MA.
3 ALL ADJUSTMENTS TO CHAMBER AND KEY COVERS SHALL BE MADE WITH POURED CONCRETE.
4 ALL CONCRETE TO BE 28 MPa, TYPE 60 CEMENT.
5 FASTEN INSULATION TO CHAMBER WITH 30mm DIA. WADERS GALVANIZED & 6mm DIA. TAPCON CONCRETE ANCHORS @ 400mm CENTRES.
6 DOGHOUSE OPENING TO BE CUT OUT MIN. 50mm LARGER THAN D.O. OF PROPOSED WATERMAIN.
7 ALL FLANGES TO BE IN ACCORDANCE WITH ANSI W886.
8 PIPE TO BE WAPPED WITH 30mm THICK OF PLAST MASTIC MATERIAL, REMAINING CAVITY TO BE GROUTED.
9 ALL METAL COMPONENTS IN VALVE CHAMBERS INCLUDING STAINLESS STEEL NUTS AND BOLTS SHALL HAVE A PROTECTIVE COATING TO BE OBTAINED FROM CLASS 4.
10 WATERPROOF MEMBRANE SHALL BE APPLIED TO ALL CHAMBER WALLS PRIOR TO BACKFILLING.
11 APPROVED RESTRAINED COUPLINGS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST.

CHECK VALVE AND CHAMBER
150mm DIA. TO 300mm DIA. WATERMANS

City of Hamilton
Public Works Department

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2012 Rev 2
CHECK VALVE AND CHAMBER
150mm DIA. TO 300mm DIA. WATERMANS
OPSD 201.05

NOTES:
1 PRECAST CHAMBERS AND SECTIONS SHALL BE MANUFACTURED TO ASTM C-478, CSA, MEET A-8 (8) LOADING REQUIREMENTS AND IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST.
2 ALL JOINTS AND FITTING HOLES SHALL BE 15mm THICK WITH 1:3 NON-SHrink MORTAR/MA.
3 ALL ADJUSTMENTS TO CHAMBER AND KEY COVERS SHALL BE MADE WITH POURED CONCRETE.
4 ALL CONCRETE TO BE 28 MPa, TYPE 60 CEMENT.
5 FASTEN INSULATION TO CHAMBER WITH 30mm DIA. WADERS GALVANIZED & 6mm DIA. TAPCON CONCRETE ANCHORS @ 400mm CENTRES.
6 DOGHOUSE OPENING TO BE CUT OUT MIN. 50mm LARGER THAN D.O. OF PROPOSED WATERMAIN.
7 ALL FLANGES TO BE IN ACCORDANCE WITH ANSI W886.
8 PIPE TO BE WAPPED WITH 30mm THICK OF PLAST MASTIC MATERIAL, REMAINING CAVITY TO BE GROUTED.
9 ALL METAL COMPONENTS IN VALVE CHAMBERS INCLUDING STAINLESS STEEL NUTS AND BOLTS SHALL HAVE A PROTECTIVE COATING TO BE OBTAINED FROM CLASS 4.
10 WATERPROOF MEMBRANE SHALL BE APPLIED TO ALL CHAMBER WALLS PRIOR TO BACKFILLING.
11 APPROVED RESTRAINED COUPLINGS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST.

FRENCH DRAIN DETAIL
SCALE: N.T.S.

City of Hamilton
Public Works Department

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2012 Rev 2
FRENCH DRAIN DETAIL
SCALE: N.T.S.
OPSD 600.110

NOTES:
1 PRECAST CHAMBERS AND SECTIONS SHALL BE MANUFACTURED TO ASTM C-478, CSA, MEET A-8 (8) LOADING REQUIREMENTS AND IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST.
2 ALL JOINTS AND FITTING HOLES SHALL BE 15mm THICK WITH 1:3 NON-SHrink MORTAR/MA.
3 ALL ADJUSTMENTS TO CHAMBER AND KEY COVERS SHALL BE MADE WITH POURED CONCRETE.
4 ALL CONCRETE TO BE 28 MPa, TYPE 60 CEMENT.
5 FASTEN INSULATION TO CHAMBER WITH 30mm DIA. WADERS GALVANIZED & 6mm DIA. TAPCON CONCRETE ANCHORS @ 400mm CENTRES.
6 DOGHOUSE OPENING TO BE CUT OUT MIN. 50mm LARGER THAN D.O. OF PROPOSED WATERMAIN.
7 ALL FLANGES TO BE IN ACCORDANCE WITH ANSI W886.
8 PIPE TO BE WAPPED WITH 30mm THICK OF PLAST MASTIC MATERIAL, REMAINING CAVITY TO BE GROUTED.
9 ALL METAL COMPONENTS IN VALVE CHAMBERS INCLUDING STAINLESS STEEL NUTS AND BOLTS SHALL HAVE A PROTECTIVE COATING TO BE OBTAINED FROM CLASS 4.
10 WATERPROOF MEMBRANE SHALL BE APPLIED TO ALL CHAMBER WALLS PRIOR TO BACKFILLING.
11 APPROVED RESTRAINED COUPLINGS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST.

BENCH MARK NOTE:
MONUMENT 0313633498
ADELAIDE HOODESS SCHOOL ON THE NORTHWEST CORNER OF MAPLEWOOD AVENUE AND SPRINGER AVENUE, ONE BLOCK SOUTH OF MAIN STREET (HIGHWAY NO. 8), 2.9km EAST OF THE POST OFFICE, TABLET IN THE SOUTH CONCRETE FOUNDATION WALL OF THE MOST SOUTHEASTERLY OR NEWEST PORTION OF SCHOLL, 1.21m WEST OF THE SOUTHEAST CORNER AND 12cm BELOW RED BRICK SIDING.
ELEVATION: 94.135 metres CGVD-1928:1978

NO.	DATE	BY	REVISIONS
3.	JUL 14/25	JM	REVISED SITE PLAN.
2.	APR 26/23	YM	REVISED SITE PLAN.
1.	MAR 21/23	YM	REVISED PER CITY COMMENTS.

HYDRANT INSTALLATION

City of Hamilton
Public Works Department

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2015 Rev 0
HYDRANT INSTALLATION
OPSD 203.01

NOTES:
1 HYDRANT TO BE INSTALLED WITH A MIN. 1200mm PIPES LEVEL AREA TO MATCH HYDRANT SURROUND JAC.
2 BEDDING & BACKFILL FOR HYDRANT CONNECTIONS (MIN. 300mm x 600mm).
3 COVER STONES WITH FILTER FABRIC, TERRAFIX 270R OR APPROVED EQUAL.
4 DENOTES UNDISTURBED GROUND.
5 DENOTES BACKFILL.

50mm DIA. DEAD END BLOW-OFF

City of Hamilton
Public Works Department

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2015 Rev 0
50mm DIA. DEAD END BLOW-OFF
OPSD 206

NOTES:
1 ALL FITTINGS TO CONFORM TO CIP STANDARDS.
2 BEDDING FOR 50mm BLOW-OFF (MIN. 200mm).
3 APPROVED PPE JOINT COMPOUND TO BE USED ON ALL THREADED JOINTS.
4 COVER STONES WITH FILTER FABRIC, TERRAFIX 270R, NON-WOVEN OR EQUIVALENT.

PIPING AND CHAMBER FOR MULTI-UNIT RESIDENTIAL (3 STOREYS AND ABOVE) OR ICI MODERATE HAZARD 10mm TO 50mm DIA. METER INSTALLATION

City of Hamilton
Public Works Department

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2015 Rev 0
PIPING AND CHAMBER FOR MULTI-UNIT RESIDENTIAL (3 STOREYS AND ABOVE) OR ICI MODERATE HAZARD 10mm TO 50mm DIA. METER INSTALLATION
OPSD 209.02

NOTES:
1 CHAMBER FRAME AND COVER (OPSD 400.010).
2 PRECAST CONCRETE SECTIONS TO CONFORM TO A.S.T.M. C478.
3 ALL CONCRETE TO BE 28MPa, 38 DAY STRENGTH, TYPE 60 CEMENT.
4 ALL ADJUSTMENTS TO CHAMBER COVERS SHALL BE MADE WITH POURED CONCRETE.
5 METER SURFACE AND METALLED BY CITY.
6 METER TO BE PLACED MIN. 50mm FROM CHAMBER FLOOR.
7 CHAMBER TO BE LOCATED IN PRIVATE PROPERTY AT THE PROPERTY LINE.
8 APPLICABLE BACKFLOW PREVENTION ASSESSMENT (B.P.A.) TO BE PLACED NO MORE THAN 1.5m FROM THE METER PASS ASSESSMENT.
9 WHERE UNABLE TO CONNECT TO STORM SEWER PLACE DOUBLE CHECK VALVE INSTEAD OF SINGLE CHECK VALVE AS PER W886.020.
10 ALL VALVES TO BE GATE VALVES.
11 METER COUPLINGS TO BE 1" FT. TO C.P.
12 COMPONENT PARTS FOR 80mm METER ONLY.

HEAVY-DUTY WIRE-BACKED SILT FENCE BARRIER

City of Hamilton
Public Works Department

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2015 Rev 0
HEAVY-DUTY WIRE-BACKED SILT FENCE BARRIER
OPSD 219.131

NOTES:
A All dimensions are in millimetres unless otherwise shown.

NOTES TO CONTRACTOR:
1. CONTRACTORS AND SUBCONTRACTORS SHALL NOT SCALE FROM THIS DRAWING.
2. ANY INCONSISTENCIES AND OMISSIONS FOUND ON THE DRAWINGS MUST BE REPORTED TO THE ENGINEER FOR CLARIFICATION BEFORE COMMENCING THE WORK.
3. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS AND REPORT ALL FINDINGS TO THE ENGINEER. ONCE CONSTRUCTION HAS COMMENCED, THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS.
4. THE POSITIONS OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVER-GROUND UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS. WHERE SHOWN ON THE DRAWINGS, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
5. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REUSED, OR REVISED WITHOUT THE WRITTEN CONSENT OF S. LLEWELLYN AND ASSOCIATES LIMITED.

DESIGN	SN	CHK'D	SN	DATE
DRAWN	JM	CHK'D	SN	July 14, 2025

SCALE 1:200

APPROVALS

STAMP

NOT FOR CONSTRUCTION

S. LLEWELLYN & ASSOCIATES LIMITED
CONSULTING ENGINEERS

Tel. (905) 631-6978
Website: www.sla.on.ca
email: info@sla.on.ca

3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

B.I.Z. MECHANICAL INC.
338 CUMBERLAND AVE.
HAMILTON, ON

PROJECT NAME
**338 & 338 1/2 CUMBERLAND AVE.
HAMILTON, ON**

TITLE
PRELIMINARY DETAILS PLAN

PROJECT No. 21081 DRAWING No. C104