

A. GENERAL REQUIREMENTS

- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH TOWN OF COLLINGWOOD STANDARDS, OPSS AND OPSS. WHERE CONFLICT OCCURS, TOWN STANDARDS TO GOVERN.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DETAILED LAYOUT OF THE WORK.
- THE CONTRACTOR SHALL OBTAIN A ROAD OCCUPANCY PERMIT FROM PUBLIC WORKS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- TRAFFIC CONTROL AND SIGNAGE DURING CONSTRUCTION SHALL CONFORM TO MUNICIPAL REQUIREMENTS AND THE MOST CURRENT ONTARIO CONSTRUCTION REGULATIONS INCLUDING REGULATION NO. 213 UNDER OHSA AND REFERENCE TO MTO TEMPORARY CONDITIONS MANUAL BOOK NO. 7.
- ALL SIGNAGE MUST COMPLY WITH TOWN BYLAW 2012-110. A SIGN PERMIT SHALL BE OBTAINED FROM THE CBO WHERE APPLICABLE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF, AND FOR THE COST OF REPLACING, LAYOUT STAKES, BENCHMARKS AND SURVEY BARS, IF DISTURBED DURING CONSTRUCTION.
- ENGINEERED FILL COMPACTED TO 98% SPMDD TO BE USED AS FILL IN ALL AREAS WHERE PROPOSED GRADES ARE HIGHER THAN EXISTING GRADE, OR AS INSTRUCTED BY THE ENGINEER.
- ROCK EXCAVATION TO BE IN ACCORDANCE WITH OPSS 515. EXCAVATION AND GRADING TO BE IN ACCORDANCE WITH OPSS.MUNI 206 AND OPSS.MUNI 510.
- THE CONTRACTOR IS RESPONSIBLE FOR PRESERVATION OF ALL EXISTING FACILITIES AS WELL AS NOTIFYING ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND FOR OBTAINING INFORMATION IN REGARD TO EXACT LOCATION OF BURIED UTILITIES. THIS SHALL INCLUDE EXCAVATION OF INSPECTION HOLES IF NECESSARY. THE CONTRACTOR MUST EXERCISE NECESSARY CARE IN CONSTRUCTION OPERATIONS INCLUDING, IF NECESSARY, HAND DIGGING TO SAFEGUARD UTILITIES FROM DAMAGE. THE CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF UTILITY POLES AS MAY BE REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR IS LIABLE FOR ALL DAMAGE TO UTILITIES OCCURRING WITHIN OR OUTSIDE THE CONTRACT LIMITS CAUSED BY THEIR OPERATIONS.
- THE CONTRACTOR IS TO SUBMIT SAMPLES AND A GRADATION ANALYSIS OF THE PROPOSED GRANULAR MATERIALS FOR APPROVAL BY THE ENGINEER PRIOR TO COMMENCING WORK.
- COMPACTING TO OPSS.MUNI 501 (METHOD A).
- THE CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER AND/OR CALCIUM CHLORIDE AS REQUIRED FOR COMPACTION AND/OR DUST CONTROL.
- CLEAR, GRUB AND DISPOSE ALL SCRUB, BUSHES, AND TREES IN ACCORDANCE WITH OPSS.MUNI 180 AND OPSS 201 AS REQUIRED TO INSTALL WORKS. LIMITS TO BE APPROVED BY THE ENGINEER PRIOR TO PROCEEDING.
- STRIP AND DISPOSE ALL TOPSOIL WITHIN ROADWAY CONSTRUCTION IN ACCORDANCE WITH OPSS.MUNI 510.
- EXCESS OR UNSUITABLE MATERIALS TO BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH OPSS.MUNI 180 AT AN APPROVED LOCATION AS PART OF THE WORK.
- FOR THE DURATION OF THE CONTRACT, MATERIAL THAT BECOMES CONTAMINATED DUE TO CONTRACTOR'S ACTIVITY SHALL BE REMOVED AND REPLACED AT NO EXTRA COST TO THE CONTRACT.
- DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS.MUNI 517 AND OPSS.MUNI 518 TO MAINTAIN ALL TRENCHES IN A DRY CONDITION.
- ALL ENGINE DRIVEN PUMPS TO BE ADEQUATELY SILENCED, SUITABLE FOR OPERATION IN A RESIDENTIAL AREA.
- ALL PIPE HANDLING AND INSTALLATION MUST BE IN STRICT COMPLIANCE WITH MANUFACTURERS INSTALLATION GUIDES. ALL PVC PIPE TO BE COVERED WHILE STORED ON SITE.
- PIPE DEFLECTIONS SHALL NOT EXCEED MANUFACTURER'S SPECIFICATIONS.
- RIGID PIPE BEDDING, COVER AND BACKFILL TO OPSS 802.030 OR OPSS 802.031 CLASS B WITH GRANULAR 'A' FOR BEDDING AND COVER MATERIAL. BACKFILL SHALL BE PLACED IN LIFTS, A MAXIMUM OF 200mm THICK.
- RIGID PIPE BEDDING, COVER AND BACKFILL AND FLEXIBLE PIPE EMBEDMENT AND BACKFILL MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD). MINIMUM BEDDING DEPTH 150mm, MINIMUM COVER 300mm.
- FLEXIBLE PIPE EMBEDMENT AND BACKFILL TO OPSS 802.010 WITH GRANULAR 'A' FOR EMBEDMENT MATERIAL.
- CLEAR STONE WRAPPED IN FILTER FABRIC MAY BE SUBSTITUTED FOR EMBEDMENT MATERIAL IF APPROVED BY THE ENGINEER.
- TRENCH BACKFILL TO BE SELECT NATIVE MATERIAL. WHERE NATIVE MATERIAL IS CONSIDERED BY THE ENGINEER TO BE UNSUITABLE, TRENCH BACKFILL SHALL BE IMPORTED SELECT SUBGRADE MATERIAL FROM A LICENSED PIT OR QUARRY.
- ALL IMPORTED FILL MATERIAL MUST MEET THE REQUIREMENTS IN TABLE 1 AND/OR TABLE 8 OF O.R.G. 153/04 (AMENDED JULY 2011) AND MUST BE CAPABLE OF PERFORMING AS ENGINEERED FILL.
- ALL DISTURBED AREAS TO BE REINSTATED TO PREVIOUS CONDITION OR BETTER.
- GENERAL INSTALLATION AND TESTING OF SEWERS, WATERMAIN AND APPURTENANCES TO BE IN ACCORDANCE WITH OPSS 407, OPSS 408, OPSS.MUNI 409, OPSS.MUNI 410, OPSS.MUNI 421, AND OPSS.MUNI 441 AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS.
- ALL STRUCTURES ARE 1200mm DIA. UNLESS OTHERWISE NOTED.
- FROST STRAPS SHALL BE INSTALLED ON ALL MAINTENANCE HOLES AS PER OPSS 701.100.
- STEPS IN ALL STRUCTURES TO OPSS 405.010.
- PIPE SUPPORT AT ALL STRUCTURES TO OPSS 708.020.
- THE CONTRACTOR SHALL MAKE THEIR OWN ARRANGEMENTS FOR THE SUPPLY OF TEMPORARY WATER AND POWER.
- WATER VALVE BOXES, MAINTENANCE HOLE AND CATCH BASIN FRAME AND GRATES TO BE SET TO BASE COURSE ASPHALT ELEVATION AND RAISED PRIOR TO THE PLACEMENT OF SURFACE COURSE ASPHALT.
- REMOVE AND DISPOSE ORGANIC MATERIAL WITHIN THE EXISTING RIGHT OF WAY AND/OR AS REQUIRED TO COMPLETE THE WORK.

B. ROADS

- DRIVEWAY AND PARKING LOT TO BE CONSTRUCTED OF MIN. 400mm GRANULAR B, 150mm GRANULAR A, 50mm HL8 AND 40mm HL3, OR AS SPECIFIED BY A GEOTECHNICAL ENGINEER.
- GENERAL AGGREGATES TO OPSS.MUNI 1001 AND OPSS.MUNI 1010.
- SUBGRADE AND BOULEVARD MATERIAL TO BE COMPACTED TO A MINIMUM DRY DENSITY OF 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD). SUBGRADE TO BE PROOF ROLLED, INSPECTED AND CERTIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACING GRANULAR 'B'.
- ALL GRANULARS AND ASPHALT MATERIALS AND PLACEMENT TO BE IN ACCORDANCE WITH OPSS.MUNI 310, OPSS.PROV 313 AND OPSS.MUNI 314.
- ANY SUBDRAIN DISTURBED DURING CONSTRUCTION SHALL BE REPLACED, CONSTRUCTED IN ACCORDANCE WITH OPSS 405 AND OPSS 216.021, UN-WRAPPED GRANULAR 'A' EMBEDMENT.
- GRANULAR 'A' AND 'B' TO BE COMPACTED TO 100% OF EACH MATERIAL'S SPMDD.
- ASPHALT TO BE COMPACTED TO A MINIMUM OF 92% OF THE MATERIAL'S MAXIMUM RELATIVE DENSITY.
- CONCRETE BARRIER CURB ON PRIVATE PROPERTY TO OPSS 600.110 AND OPSS.MUNI 353.
- CURB DEPRESSIONS AT DRIVEWAY IN ACCORDANCE WITH OPSS 350.010.
- CURB TERMINATIONS IN ACCORDANCE WITH OPSS 608.010.
- SIDEWALKS TO OPSS 310.020 AND OPSS 351. SUBBASE TO CONSIST OF 150mm GRANULAR 'A'.
- SIDEWALKS SHALL BE CONSTRUCTED ON 150mm GRANULAR 'A' AND 125mm GRANULAR 'B' WITH SUBDRAIN CONNECTION TO STORM SEWER OR PROPERLY INSULATED WITH 75mm STYROFOAM OR EQUIVALENT.
- JOINTS WITH EXISTING ASPHALT TO BE SAW CUT STRAIGHT AS DIRECTED BY ENGINEER PRIOR TO PLACING NEW ASPHALT AND TACK COAT APPLIED TO EXISTING ASPHALT. WHERE EXISTING ASPHALT IS THICKER THAN 75mm, A 350mm WIDE BY 40mm DEEP LAP JOINT SHALL BE GROUND INTO EXISTING ASPHALT, OTHERWISE A BUTT JOINT SHALL BE USED.
- TACK COAT TO BE APPLIED TO ENTIRE SURFACE OF BASE COURSE ASPHALT AT THE TIME OF PLACEMENT OF SURFACE COURSE ASPHALT. APPLICATION RATE SHALL BE 0.35 kg/m².
- IF ASPHALT SURFACES SETTLE IN EXCESS OF 20mm OR DIFFERENTIALLY DURING THE WARRANTY PERIOD, THE ENGINEER SHALL ORDER THE AREA CUT OUT AND REPLACED AT NO EXTRA COST TO THE CONTRACT.
- REINSTATEMENT OF DISTURBED AREAS WITHIN BOULEVARDS TO INCLUDE A MINIMUM OF 150mm OF SCREENED TOPSOIL AND NO. 1 NURSERY SOD IN ACCORDANCE WITH OPSS 802 AND OPSS.MUNI 803.
- REINSTATEMENT OF SIDEWALK ON ST. PAUL STREET, ADJACENT TO CURB SHALL INCLUDE 150mm GRANULAR 'A' BASE AND 200mm THICK CONCRETE.
- REINSTATEMENT OF CURB ON ST. PAUL STREET TO OPSS 600.040.
- FIRE ROUTE AND ALL SIGNAGE TO COMPLY WITH THE TOWN OF COLLINGWOOD FIRE ROUTE BY-LAW NO. 96-23.

C. PAVEMENT MARKINGS

- PAVEMENT MARKINGS REQUIRE 2 APPLICATIONS OF PAINT FOR NEW ASPHALT. THE SECOND APPLICATION SHALL NOT BE APPLIED UNTIL THE FIRST IS TACK FREE.
- PAVEMENT MARKINGS SHALL ONLY BE APPLIED WHEN TEMPERATURE IS ABOVE 10 DEGREES CELSIUS, THE PAVEMENT IS PERFECTLY DRY AND UPON THE AUTHORIZATION OF THE ENGINEER.
- WORK TO BE IN ACCORDANCE WITH OPSS 532, OPSS 1712, OPSS 1713 AND OPSS 1714 AND THE ONTARIO TRAFFIC MANUAL BOOK 11, MINISTRY OF TRANSPORTATION OF ONTARIO.
- PARKING SPACES ARE TO BE PAINTED WITH ORGANIC SOLVENT BASED TRAFFIC PAINT (YELLOW).

D. STORM SEWER

- PRECAST MAINTENANCE HOLES SHALL BE IN ACCORDANCE WITH OPSS 701.010, OPSS 701.012, C/W BENCHING TO OPSS 701.021. FRAMES AND GRATES TO OPSS 401.010 (TYPE B), OPEN COVER.
- NEW STORM SEWER LATERALS TO TEE INTO EXISTING 900mmØ MAIN AT SPRINGLINE.
- CATCH BASIN TO BE 600mm SQUARE PRECAST CONCRETE TO OPSS 705.010. FRAME AND GRATE TO OPSS 400.020 AND OPSS 400.120 (GRASSED AREAS).
- SUMP PUMP FOR BUILDING (IF REQUIRED) SHALL OUTLET ABOVE GRADE TO REAR OF BUILDING.
- ROOF LEADERS TO OUTLET TO FRONT AND REAR OF BUILDING.
- TESTING OF STORM SEWERS SHALL INCLUDE:
 - FLUSHING AND CLEANING;
 - CCTV VIDEO INSPECTION;
 - DEFLECTION TESTING.

ALL AS PER OPSS.MUNI 409 AND 410. FLUSHING, CLEANING AND CCTV VIDEO INSPECTIONS SHALL BE COMPLETED UPON COMPLETION OF THE WORK AND AT THE END OF THE MAINTENANCE PERIOD. TWO COPIES OF THE VIDEO INSPECTIONS SHALL BE PROVIDED TO THE CONTRACT ADMINISTRATOR FOR REVIEW AND APPROVAL.

G. MATERIALS

- AREA DRAIN SERVICE - 150mm PVC STORM SEWER.
- TRACER WIRE - SOLID CORE, 12 GAUGE.
- FILTER FABRIC - TERRAFIX 270R OR APPROVED EQUAL.
- AREA DRAINS - TUF-TITE AD1 AREA DRAIN WITH ADA GRATE OR APPROVED EQUIVALENT.
- SUBDRAINS - PERFORATED BIG 'O' SUBDRAIN WITH GEOTEXTILE FILTER SOCK OR APPROVED EQUAL.
- STORM SEWER - HDPE OPEN PROFILE BELL & SPIGOT (BOSS 2000 AND MIN. PIPE STIFFNESS = 320 kPa).
- GRADE ADJUSTMENT RINGS - HIGH DENSITY POLYETHYLENE (HDPE) TO OPSS 704.011.
- ALL SPECIFIED AGGREGATES TO OPSS.MUNI. 1010.
- INSULATION - STYROFOAM HIGHLOAD 40 EXTRUDED POLYSTYRENE FOAM INSULATION, 50mm THICK SHEETS.

TUF-TITE CONSTRUCTION PRODUCTS

AD1 Area Drain with ADA Grate

Screw Holes

Grate complies with Americans with Disabilities Act. Safe, square 1/2" x 1/2" openings. Molded of specially formulated thermoplastic polymer. Can easily be anchored with four corner screws.

5"

11"

- Rugged, Non-Corrosive
Molded of gray High-Density Polypropylene. Ribbed bottom provides exceptional compression strength.

- Steady Flow
The contoured bottom directs all water to the drain. Standing water is eliminated.

- Easily Installed - Anywhere!
Only 5" deep. Lightweight, easy to handle, and useable with 3", 4", or 6" pipe. No pipe fittings needed.

- Comes Complete
Price includes a heavy duty ADA compliant grate. No extras required.

Choice of 3 drain pipe sizes. Three bottom drains are molded in. The AD1 can be drained with 3" Schedule 40, 4" SUR35, and 6" ASTM3034 pipe.

Installs easily inside and out.

TUF-TITE Tuf-Tite®, Inc. 1200 Flex Court, Lake Zurich, IL 60047
www.tuf-tite.com 800.382.7009

TOWN APPROVAL

DISCLAIMER AND COPYRIGHT
CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED.
TATHAM ENGINEERING LIMITED CLAIMS COPYRIGHT TO THIS DRAWING WHICH MAY NOT BE USED FOR ANY PURPOSE OTHER THAN THAT PROVIDED IN THE CONTRACT BETWEEN THE OWNER/CLIENT AND THE ENGINEER WITHOUT THE EXPRESS CONSENT OF TATHAM ENGINEERING LIMITED.

BENCHMARKS
TBM1 - ELEVATION 179.99m
NAIL SPIKE IN HYDROPOLE ON EAST PROPERTY CORNER
SURVEY GEODETIC; COORDINATES ARE NAD83 UTM17N; ELEVATIONS ARE CGVD28 LOCALIZED TO VCM 0011926U1669

NOTES
LEGAL SURVEY AND LOT DIMENSIONS DONE BY ZUBEC, EMO AND PATTEN LTD, DATED OCT 27, 1980 WHICH MAY NOT BE FINAL AND ARE NOT GUARANTEED. THE FINAL REGISTERED PLAN OF SUBDIVISION SHALL BE REFERRED TO FOR CONFIRMATION OF THE DATA.
TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN FROM SURVEY PREPARED BY TATHAM ENGINEERING DATED JAN 19, 2023.

No.	REVISION DESCRIPTION	DATE	ENGINEER STAMP
1.	1ST SUBMISSION	MAY 16/23	

58 ST PAUL STREET
TOWN OF COLLINGWOOD

DETAILS AND NOTES

DESIGN: AP/MM FILE: 123014 DWG:
DRAWN: AP/MM DATE: JAN 2023
CHECK: JPA/RS SCALE: AS NOTED

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