

GENERAL NOTES AND CONSTRUCTION SPECIFICATIONS

1. GENERAL NOTES

1.1. THESE PLANS ARE NOT FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY ENGINEER AND APPROVED BY THE MUNICIPALITY OF BROCKTON.

1.2. ALL CONSTRUCTION WORK TO BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE (MOST RECENT) STANDARDS.

1.3. THE PLANS PREPARED BY GRIT ENGINEERING INC. ARE NOT TO BE USED FOR CONSTRUCTION UNTIL SIGNED BY THE ENGINEER AND ACCEPTED BY THE APPROVING AGENCY. THESE PLANS ARE NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE PERMISSION OF GRIT ENGINEERING INC.

1.4. CHANGES TO DRAWINGS ARE NOT PERMITTED UNTIL REVIEWED AND APPROVED BY THE ENGINEER AND ACCEPTED BY THE APPROVING AUTHORITY.

1.5. CONTRACTOR TO VERIFY THAT THE DRAWINGS BEING USED FOR THE CONSTRUCTION ARE THE MOST RECENT VERSION.

1.6. UTILITY LOCATES AND ALL APPLICABLE PERMITS ARE TO BE OBTAINED PRIOR TO THE START OF CONSTRUCTION AND INSPECTION BEING COMPLETED.

1.7. THE CONTRACTOR IS TO VERIFY THE EXISTING CONDITION OF THE SITE. THE VERIFICATION INCLUDES AND NOT LIMITED TO THE SERVICE LOCATION, SERVICE, ELEVATIONS, UTILITY CONFLICTS AND BENCHMARK ELEVATIONS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY AND PRIOR TO THE CONTINUATION OF CONSTRUCTION.

1.8. LEGAL INFORMATION TAKEN FROM PLAN PREPARED BY NA GEOMATICS, RECEIVED OCTOBER 15, 2021.

1.9. EXISTING TOPOGRAPHIC INFORMATION TAKEN FROM PLAN PREPARED BY NA GEOMATICS, RECEIVED OCTOBER 15, 2021.

1.10. THE CONTRACTOR IS TO OBTAIN CONSENT FROM THE NEIGHBOR IN THE FORM OF WRITTEN CORRESPONDENCE GRANTING PERMISSION TO ENTERING THE PROPERTY TO COMPLETE ANY CONSTRUCTION ACTIVITY. THE WRITTEN CONSENT IS TO BE PROVIDED TO THE APPROVING AUTHORITY PRIOR TO THE CONTINUATION OF WORK FOR APPROVAL. THE CONTRACTOR WILL ASSUME LIABILITY FOR ALL WORKS IF FAILURE TO COMPLY.

1.11. THIS DRAWING IS TO BE READ COMBINATION WITH THE FOLLOWING:
1.11.1. STORMWATER MANAGEMENT REPORT, NOVEMBER 22, 2021.

1.12. DURING THE CONSTRUCTION, THE CONTRACTOR ASSUMES ALL LIABILITY FOR DAMAGE TO ALL EXISTING FEATURES AND STRUCTURES. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL RESTORATION AND RESTORED TO EXISTING CONDITION OR BETTER.

1.13. THESE PLANS ARE TO BE USED FOR SERVICING AND GRADING ONLY; ANY OTHER INFORMATION SHOWN IS FOR ILLUSTRATION PURPOSES ONLY. THESE PLANS MUST NOT BE USED TO SITE THE PROPOSED BUILDING.

1.14. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO EXISTING WORKS. THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL DAMAGED AND/OR DISTURBED PROPERTY WITHIN THE MUNICIPAL RIGHT-OF-WAY TO THE MUNICIPALITY OF BROCKTON STANDARDS

1.15. ALL WORKS ON A MUNICIPAL RIGHT-OF-WAY WITH THE EXCEPTION OF WATERMAIN TAPPING, TO BE INSTALLED BY THE OWNER'S CONTRACTOR AT OWNER'S EXPENSE IN ACCORDANCE WITH THE MUNICIPALITY OF BROCKTON "PROCEDURE FOR OFF-SITE WORKS BY PRIVATE CONTRACTOR". THE OWNER AND CONTRACTOR ARE TO ENSURE OFF-SITE WORKS PERMIT IS IN PLACE PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL AFFECTED PROPERTY TO ORIGINAL CONDITION. ALL BOULEVARD AREAS SHALL BE RESTORED WITH 100mm TOPSOIL AND SOD.

1.16. ALL UNDERGROUND SERVICES ARE TO BE CONSTRUCTED IN FULL COMPLIANCE WITH THE ONTARIO PROVINCIAL BUILDING CODE (PART 7, PLUMBING), THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS) AND THE REQUIREMENTS OF THE MUNICIPALITY OF WEST PERTH, WHICH CODES AND REGULATIONS SHALL SUPERSEDE ALL OTHERS.

1.17. SITE SERVICING CONTRACTOR TO TERMINATE ALL SERVICES 1 METRE FROM FOUNDATION WALL.

1.18. FILTER FABRIC TO BE TERRAFIX 270R OR APPROVED EQUAL.

1.19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD INCLUDING THE SUPPLY, INSTALLATION AND REMOVAL OF ALL NECESSARY SIGNALS, DELINEATORS, MARKERS AND BARRIERS. ALL SIGNS, ETC. SHALL CONFORM TO THE STANDARDS OF THE MUNICIPALITY OF BROCKTON AND THE MTO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

1.20. THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND 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 DAMAGE TO THEM.

1.21. FOLLOWING COMPLETION OF PROPOSED WORKS AND PRIOR TO OCCUPANCY INSPECTION, ALL STORM AND SANITARY SEWERS ARE TO BE FLUSHED, AND ALL CATCHBASIN AND CATCHBASIN MANHOLE SUMPS ARE TO BE CLEANED OF DEBRIS AND SILT.

2. INSPECTION AND CERTIFICATION

2.1. GRIT ENGINEERING INC. REQUIRES A MINIMUM OF 24 HOURS NOTICE PRIOR TO THE REQUIRED INSPECTION BE REQUESTED. INSPECTIONS ARE REQUIRED TO VERIFY: PIPE INSTALLATION (MATERIALS, SIZE, LOCATION AND ELEVATION), STRUCTURE PLACEMENT, SURFACE MATERIAL AND FINISHED GRADING.

2.1.1. CONSTRUCTION WORKS WITHIN THE PUBLIC RIGHT-OF-WAY REQUIRE FULL TIME INSPECTION.

2.1.2. CONSTRUCTION WORKS WITHIN PRIVATE LANDS ARE REQUIRED ON A PART TIME AND AS NEEDED BASIS.

2.2. FAILURE TO COMPLY WITH GRIT ENGINEERING INC. INSPECTION REQUIREMENTS, WILL RESULT IN ADDITIONAL CONSTRUCTION INSPECTION AND VERIFICATION AT THE EXPENSE OF THE CONTRACTOR.

3. STORM SEWERS AND SERVICING

3.1. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030, 802.031, OR 802.032. PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010. BEDDING MATERIAL AND COVER MATERIAL TO BE GRANULAR "A". TRENCH BACKFILL TO BE NATIVE MATERIAL REPLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.

3.2. STORM SEWERS 200mmØ TO 450mmØ SHALL BE POLYVINYL CHLORIDE (PVC) PIPE DR35 ASTM-D3034 OR RIBBED PVC SEWER PIPE CSA B182.4-M90 ASTM-F794 WITH INTEGRAL BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS. RIBBED PVC NOT TO BE USED WITHIN-RIGHT-OF-WAY.

3.3. MAINTENANCE HOLES AND MAINTENANCE HOLE CATCHBASINS TO BE 1200mmØ PRECAST WITH ALUMINIUM STEPS AT 300mm CENTRES AS PER OPSD 701.010 UNLESS OTHERWISE SPECIFIED.

3.4. MAINTENANCE HOLES TO BE BENCHED PER OPSD 701.021.

3.5. CATHBASIN STRUCTURES 600mmX600mm TO BE PER OPSD 705.010

3.6. DITCHINLET CATCHBASIN STRUCTURES 600mmX1200mm TO BE PER OPSD 705.040 (TYPE B)

3.7. CATCHBASIN MAINTENANCE HOLES, CATCHBASINS AND DITCH INLET CATCHBASINS TO HAVE A MINIMUM 600mm DEEP SUMP.

3.8. MAINTENANCE HOLE AND CATCHBASIN, FRAMES, GRATES, CASTINGS AND LIDS TO BE QUALITY GREY IRON ASTM A48 CLASS 30B.

3.9. STORM MAINTENANCE HOLE LIDS TO BE PER OPSD 401.010 - TYPE 'B' CATCHBASIN AND CATCHBASIN MAINTENANCE HOLE GRATES TO BE PER OPSD 400.100.

3.10. STORM SEWERS AND SERVICES TO HAVE MINIMUM 1.2m COVER TO TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL INSTALL SHALLOW BURIED SEWER PIPE PER DETAIL THIS SHEET OR OTHER ENGINEER-APPROVED EQUIVALENT.

4. WATERMAINS AND WATER SERVICING

4.1. ALL WATER DISTRIBUTION SYSTEM INSTALLATION SHALL BE IN ACCORDANCE WITH CURRENT MUNICIPALITY OF BROCKTON STANDARD WATERMAIN SPECIFICATIONS, THE PLUMBING CODE, AND THE AWWA.

4.2. SERVICE CONNECTION TO BE 25mmØ PEX CERTIFIED TO ASTM F 876, F 877, F2023, CSA B137.5, NSF 14, AND 61 WITH TRACER WIRE CONNECTED TO MAIN STOP AND CURB STOP AS PER WEST PERTH STANDARD WATERMAIN SPECIFICATIONS, SINGLE LENGTH FROM MAIN TO CURB STOP AT PROPERTY LINE.

4.3. SERVICE SADDLE SHALL BE A WIDE BAND DOUBLE BOLT STAINLESS STEEL SERVICE SADDLE MINIMUM 18 GAUGE FORD FS-303, CAMBRIDGE BRASS 403, OR ROBAR INDUSTRIAL MODEL NO. 2616, OR APPROVED EQUIVALENT.

4.4. CURB STOPS SHALL BE A FULL PORT BALL VALVE CURB STOP COMPRESSION #110 OR EQUIVALENT CONNECTION, PER MUELLER H-15209 OR FORD B44-444, OR APPROVED EQUIVALENT. SCREW CONNECTION TO BE PROVIDED FOR ATTACHMENTS OF ANODE WIRE.

4.5. WATER CONNECTIONS MAY BE PLACED IN THE SAME TRENCH WITH A STORM OR SANITARY CONNECTION ONLY IF A MINIMUM VERTICAL SEPARATION OF 500mm IS MAINTAINED BETWEEN THE WATER SERVICE AND ANY OTHER PIPE.

4.6. ALL WATERMAINS AND SERVICES TO HAVE MINIMUM 1.2m COVER. WHERE COVER OVER SERVICES IS DEFICIENT, THE CONTRACTOR SHALL INSULATE WATERMAIN AND SERVICES AS PER DETAIL THIS SHEET.

5. SANITARY SEWERS SANITARY SERVICING

5.1. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030, PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010. BEDDING MATERIAL AND COVER MATERIAL TO BE GRANULAR "A". TRENCH BACKFILL TO BE NATIVE MATERIAL REPLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.

5.2. SANITARY SEWERS 150mmØ AND SMALLER SHALL BE POLYVINYL CHLORIDE (PVC) PIPE SDR28 ASTM-D3034 WITH INTEGRAL BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS.

5.3. FACTORY FABRICATED WYES SHALL BE USED FOR ALL SERVICE CONNECTIONS.

5.4. SANITARY SEWERS AND SERVICES TO HAVE MINIMUM 2.5m COVER ON TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL CONTACT DESIGN ENGINEER FOR INSULATION REQUIREMENTS.

5.5. CONTRACTOR RESPONSIBLE FOR TESTING OF SANITARY SEWERS IN ACCORDANCE WITH OPSS 410.

6. EROSION AND SEDIMENT CONTROL

6.1. PRIOR TO THE START OF ANY CONSTRUCTION THE CONTRACTOR IS TO INSTALL THE EROSION AND SEDIMENT CONTROLS IN ACCORDANCE TO THE APPROVED PLAN.

6.2. NO ALTERNATE EROSION AND SEDIMENT CONTROLS ARE PERMITTED WITHOUT APPROVAL FROM THE ENGINEER AND APPROVING AUTHORITY.

6.3. ADDITIONAL EROSION AND SEDIMENT CONTROLS MAY BE REQUIRED AS THE CONSTRUCTION PROGRESSES. THE CONTRACTOR TO INSTALL ADDITIONAL MEASURES AS REQUIRED BY THE ENGINEER AND APPROVING AUTHORITY.

6.4. THE CONTRACTOR IS TO PERFORM REGULAR MAINTENANCE, REPAIRS AND REPLACEMENT ON ALL CONTROLS TO ENSURE PROPER FUNCTIONING UNTIL PROJECT IS COMPLETE.

6.5. EROSION CONTROL FENCING TO BE INSTALLED AROUND BASE OF ALL STOCKPILES. ALL STOCKPILES TO BE KEPT 2.5m MINIMUM FROM PROPERTY LINE.

6.6. EROSION PROTECTION TO BE PROVIDED AROUND ALL STORM AND SANITARY MHs AND CBs.

6.7. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE DEVELOPMENT PROGRESSES. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL STRUCTURES.

6.8. CONTRACTOR TO CLEAN ROADWAY AND SIDEWALKS OF SEDIMENTS RESULTING FROM CONSTRUCTION TRAFFIC FROM THE SITE EACH DAY.

6.9. THE CONTRACTOR IS TO REMOVE ALL EROSION AND SEDIMENT CONTROLS UNTIL DEVELOPMENT IS COMPLETE AND VEGETATION PROPOSED FINISHED HARD SURFACE MATERIALS ARE INSTALLED AND VEGETATION IS STABILIZED WITH MATURE GROWTH.

7. MAINTENANCE RECOMMENDATIONS

7.1. EROSION CONTROL STRUCTURES TO BE MONITORED REGULARLY AND ANY DAMAGE REPAIRED IMMEDIATELY. SEDIMENTS TO BE REMOVED WHEN ACCUMULATIONS REACH A MAXIMUM OF 1/3 THE HEIGHT OF THE FENCE.

7.2. OWNERS REPRESENTATIVE TO MONITOR EROSION CONTROL STRUCTURES TO ENSURE FENCING IS INSTALLED AND MAINTENANCE IS PERFORMED TO MUNICIPALITY REQUIREMENTS.

EAST RIDGE ROAD RESTORATION

N.T.S.

ASPHALT

GRANULAR "A"

GRANULAR "B"

SUBGRADE SLOPED

PAVEMENT RESTORATION:
-40mm HLS TOP COAT
-50mm H-4 BASE COAT
-150mm GRANULAR "A"
-400mm GRANULAR "B"

BOULEVARD RESTORATION:
-100mm TOPSOIL
-TYPE 1 NURSERY SOD

ONLINE ORIFICE DETAIL

N.T.S.

HOT DIPPED GALVANIZED STEEL PLATE OR APPROVED EQUIVALENT

LAG TO STRUCTURE WITH (4) 10mmØ x 38mm 304L SS BOLTS

105mmØ ORIFICE OPENING

296.84 INVERT ELEV.

STRUCTURE WALL

FLOW

OUTLET PIPE 375mmØ

GRAVEL STRUCTURE

N.T.S.

SLOPED

GRANULAR "A"

GRANULAR "B"

SUBGRADE SLOPED

PAVEMENT RESTORATION:
-150mm GRANULAR "A"
-400mm GRANULAR "B"

NOTE: ROAD STRUCTURE PER MUNICIPALITY OF BROCKTON DESIGN GUIDELINES. ROAD STRUCTURE TO BE VERIFIED ONSITE BY A QUALIFIED GEOTECHNICAL ENGINEER

TEMPORARY SILTSACK

SILTATION CONTROL IN CB

N.T.S.

RUNOFF

FINISHED GRADE

PRECAST CB OR CBMH

OUTLET PIPE

600mm

C.B. FRAME & GRATE HOLDS SILTSACK IN PLACE

REMOVAL STRAPS AND DUMPING STRAPS

ADJUSTMENT UNITS

EXPANSION RESTRAINT

SILTSACK OR APPROVED EQUIVALENT WOVEN POLYPROPELENE FILTER FABRIC BAG

MAINTENANCE SCHEDULE

-INSPECT AFTER EVERY MAJOR RAIN EVENT.

-INSPECT EVERY 3 WEEKS MINIMUM.

-SILTSACK SHOULD NEVER BE OVER HALF FULL.

-FULL BAG CAN BE REMOVED, DUMPED, CLEANED AND REUSED (TO REMOVE INSERT 25mm REBAR INTO REMOVAL FLAP POCKETS)

(TO DUMP INSERT 25mm REBAR INTO BOTH DUMPING STRAPS)

BOLLARD DETAIL

N.T.S.

0.05m ROUNDDING

0.20mØ SCHEDULE 40 STEEL PIPE CASING FILLED WITH 15 MPa CONCRETE c/w YELLOW HOPE BOLLARD COVER W/ TWO RED REFLECTIVE STRIPES BY POST GUARD (OR APPROVED EQUIVALENT)

1.20m

0.15m

0.45m

0.15m

15 MPa CONCRETE 6% AIR ENTRAINED

SEWER PIPE INSULATION DETAIL

N.T.S.

MINIMUM 2400mm INSULATION WIDTH

250mm MIN

150mm MIN

150-300mm

150mm MIN

FROST DEPTH

FROST LINE

NOTE: FOR STORM SEWERS HAVING LESS THAN 1500mm COVER AND MINIMUM 680mm COVER

PAVEMENT STRUCTURE (ASPHALT AND/OR GRANULAR) OR SELECT NATIVE MATERIAL AND TOPSOIL, AS SPECIFIED ON DRAWINGS

GRANULAR "A" BEDDING & BACK FILL BELOW AND ABOVE PIPE AND INSULATION BOARD, COMPACTED TO MINIMUM 95% SPMD

RIGID EPS-INSULATION BOARD PER SPECIFICATION NOTES (MINIMUM R20-THICKNESS, TYPICALLY 100-130mm, MINIMUM 2 LAYERS INSULATION BOERD OVERLAPPED MINIMUM 300mm AT ALL JOINTS)

NOTE: TRENCH SIDE-SLOPES IN AREAS OF PIPE INSULATION TO BE MAXIMUM 1:1 SLOPE. NO VERTICAL SECTIONS ALLOWED UNLESS INDICATED IN DETAIL

NATIVE SOILS - WHERE NATIVE SOIL IS SOFT AND/OR OF ORGANIC CONTENT, REMOVE TO DEPTH OF SUITABLE SOILS AND REPLACE WITH GRANULAR-B2 MATERIAL, COMPACTED TO 95% SPMD, OR CONSTRUCT IN ACCORDANCE WITH WRITTEN DIRECTION FROM GEOTECHNICAL CONSULTANT

FROST DEPTH - PROTECT SOIL ZONE UNDER PIPE FROM FREEZING REFER TO OPSD 3400.011 FOR SPECIFIC LOCAL FROST DEPTH

KEY PLAN
N.T.S.

TOWN OF
WALKERTON

CONTRACTOR NOTES:

CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY ERRORS TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.

ALL DRAWINGS SHALL REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REUSED WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

DRAWING SHOULD NOT BE SCALED FOR DIMENSIONS PURPOSES.

BENCHMARK
BENCHMARK IS DESCRIBED AS THE TOP NUT OF THE EXISTING FIRE HYDRANT ON THE NORTH SIDE OF EASTRIDGE ROAD AS LOCATED ON GRIT DRAWING C300.

ELEVATION: 297.98m

No.	ISSUED DESCRIPTION	DATE
1	ISSUED FOR SITE PLAN APPROVAL	2021-11-05
2	ISSUED FOR REVISED GRAVEL & CONSTRUCTION	2021-11-22
3		
4		
5		

GRIT
ENGINEERING INC.

RMP COMMERCIAL
BUILDING DEVELOPMENT

PROJECT INFORMATION: EASTRIDGE ROAD, WALKERTON, ONTARIO

JOHN ERNEWEIN LIMITED

CLIENT INFORMATION: 18 INDUSTRIAL ROAD, WALKERTON, ONTARIO

DRAWING NAME:
GENERAL NOTES AND
DETAILS

PROJECT No:
GE031-21

SCALE:

DRAWING No:

C500

SHEET SET No: 3 of 3