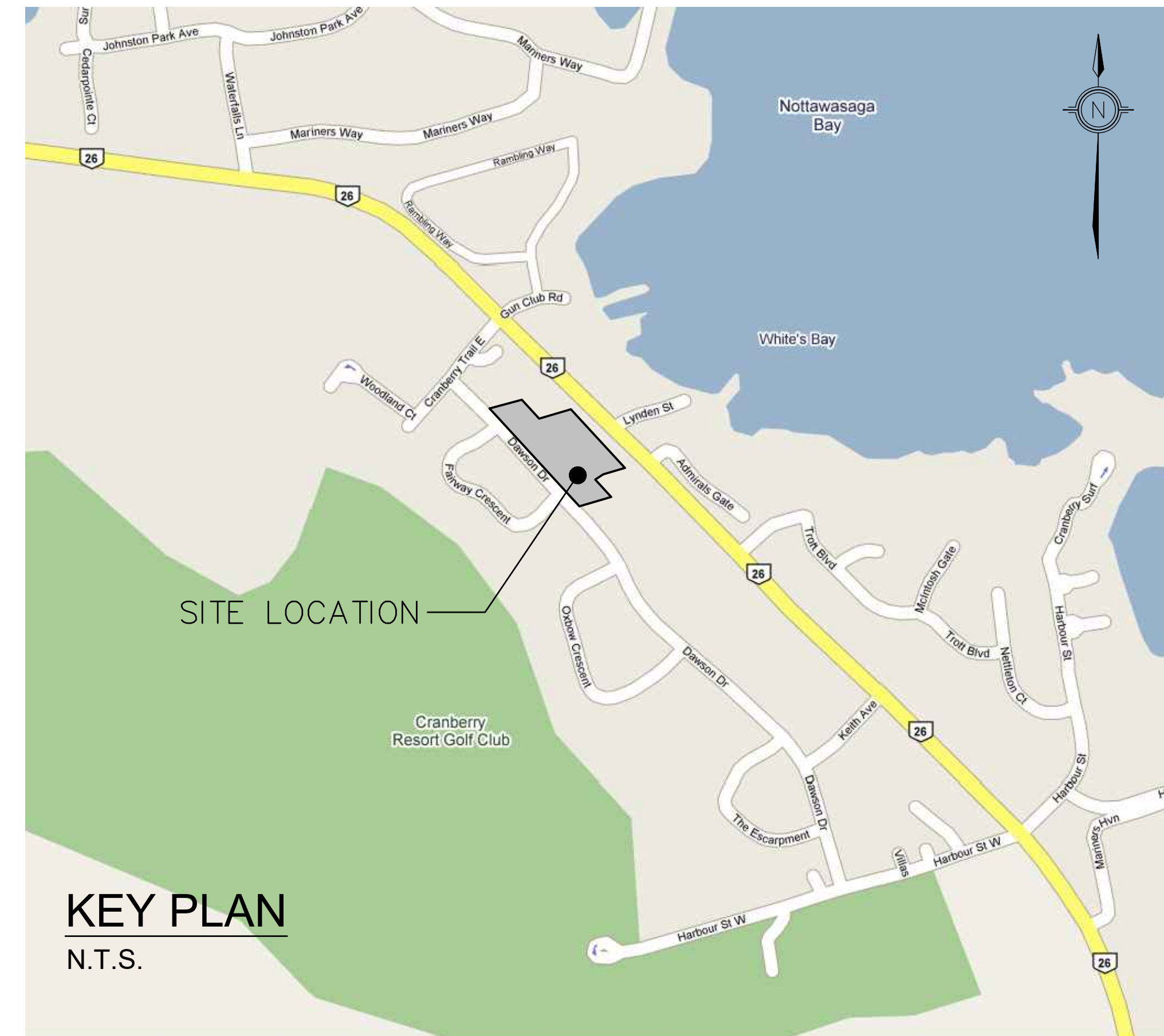


WATERSTONE DEVELOPMENT

TOWN OF COLLINGWOOD

COUNTY OF SIMCOE

<u>DRAWING No.</u>	<u>DRAWING TITLE</u>
100	SITE PLAN - LINTACK ARCHITECTS
101	GENERAL SERVICING PLAN
102	SANITARY DRAINAGE AND HYDRANT COVERAGE PLAN
103	STORM DRAINAGE & SEDIMENT EROSION CONTROL PLAN
104	OVERALL LOT GRADING PLAN
105	SECTIONS
106A	PLAN & PROFILE - DAWSON DRIVE (STA. 0+000 - 0+280)
106B	PLAN & PROFILE - STREET A (STA 0+000 - 0+240)
107	RETAINING WALL SECTION AND DETAILS
108	STANDARD DETAILS SHEET
E100	PHOTOMETRICS PLAN
E101	LIGHTING DETAILS AND SCHEDULES



KEY PLAN
N.T.S.

MUNICIPALITY

TOWN OF COLLINGWOOD
97 HURONTARIO ST., P.O. BOX 157
COLLINGWOOD, ON L9Y 3Z5

DEVELOPER

MATRIARCH DEVELOPMENT CORPORATION
1070 STONE CHURCH ROAD E, UNIT 41
HAMILTON, ON, L8W 3K8

DEVELOPER'S ENGINEER

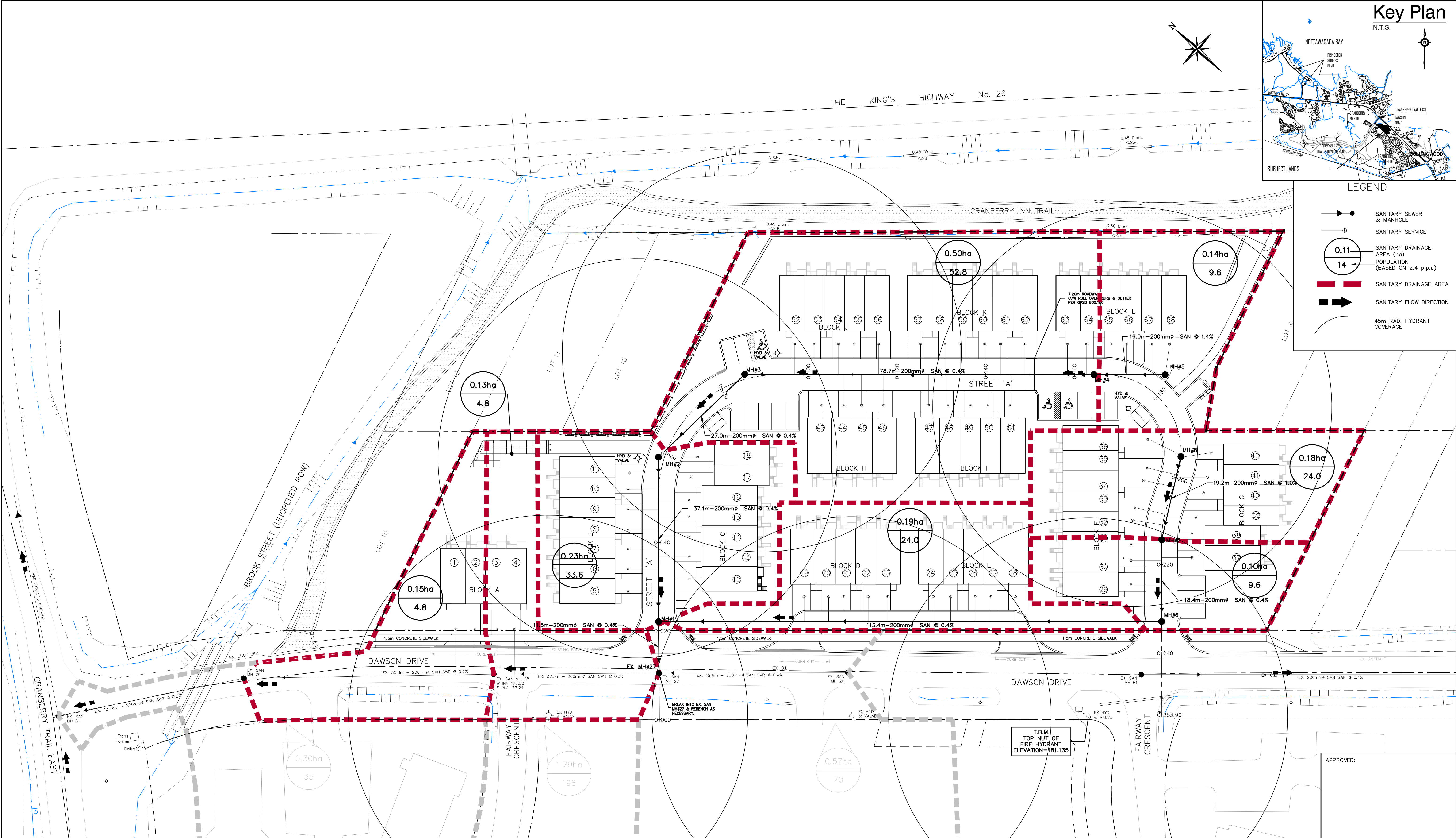


**CROZIER
& ASSOCIATES**
Consulting Engineers

THE HARBOUREDGE
BUILDING, 40 HURON
STREET, SUITE 301,
COLLINGWOOD, ON
L9Y 4R3

705-446-3510 T
705-446-3520 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

PROJECT No.: 209-2649
ISSUED FOR FOURTH SUBMISSION - JAN 22, 2021



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4. DO NOT SCALE THE DRAWINGS.

5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

GEODETIC BENCHMARKS.

BM#1—GEODETIC MONUMENT No. 72U—313 HAVING AN ELEVATION OF 179.650m

BM#2—GEODETIC MONUMENT No. 72U—311 HAVING AN ELEVATION OF 181.056m

TEMPORARY BENCHMARK.

TBM#1—TOP NUT OF FIRE HYDRANT LOCATED WEST SIDE OF DAWSON DRIVE (WEST OF PROPERTY) AT THE NORTH WEST CORNER OF FAIRWAY CRES. (SOUTHERN ENTRANCE) WITH AN ELEVATION OF 181.135m

Town

No.	Issue / Revision	Date: MM/DD/YYYY
1	REVISED SITE PLAN PER TOWN COMMENTS	3/18/2008
2	2ND SUBMISSION	10/27/2009
3	ISSUED FOR ENV. COMPLIANCE APPROVAL	04/23/2012
4	REVISED PER TOWN COMMENTS	08/22/2012
5	ISSUED FOR FINAL APPROVAL	11/14/2012
6	REVISED SITE PLAN	03/28/2019
7	RE-ISSUED FOR FINAL APPROVAL	09/23/2020
8	ISSUED FOR FOURTH SUBMISSION	01/22/2021

Engineer

K. A. MORRIS

LICENCED PROFESSIONAL ENGINEER

PROVINCE OF ONTARIO

Engineer

B. ROBERTSON

LICENCED PROFESSIONAL ENGINEER

PROVINCE OF ONTARIO

Project

WATERSTONE DEVELOPMENT

TOWN of COLLINGWOOD

SANITARY DRAINAGE AND

HYDRANT COVERAGE PLAN

Drawing

CROZIER & ASSOCIATES

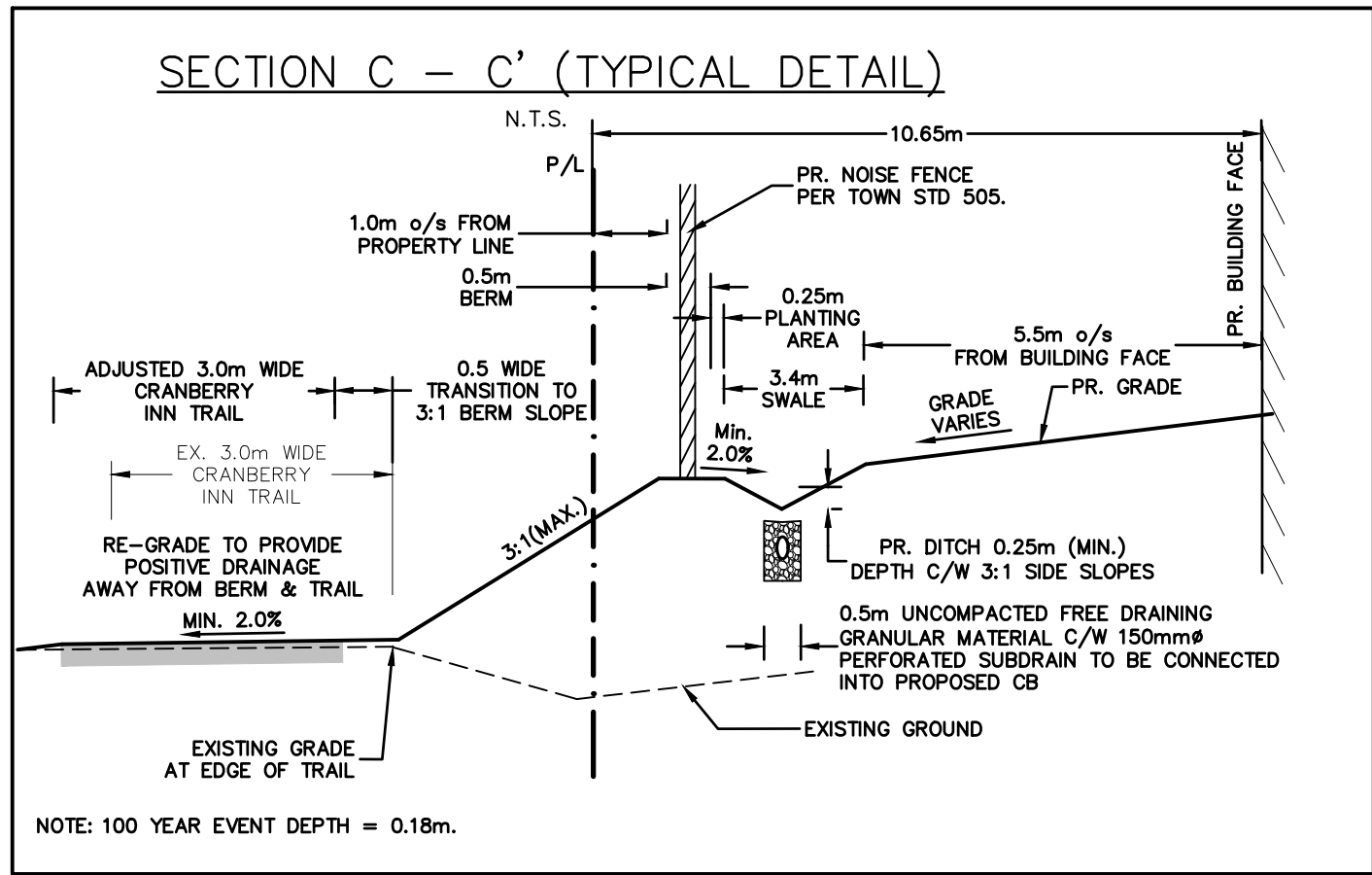
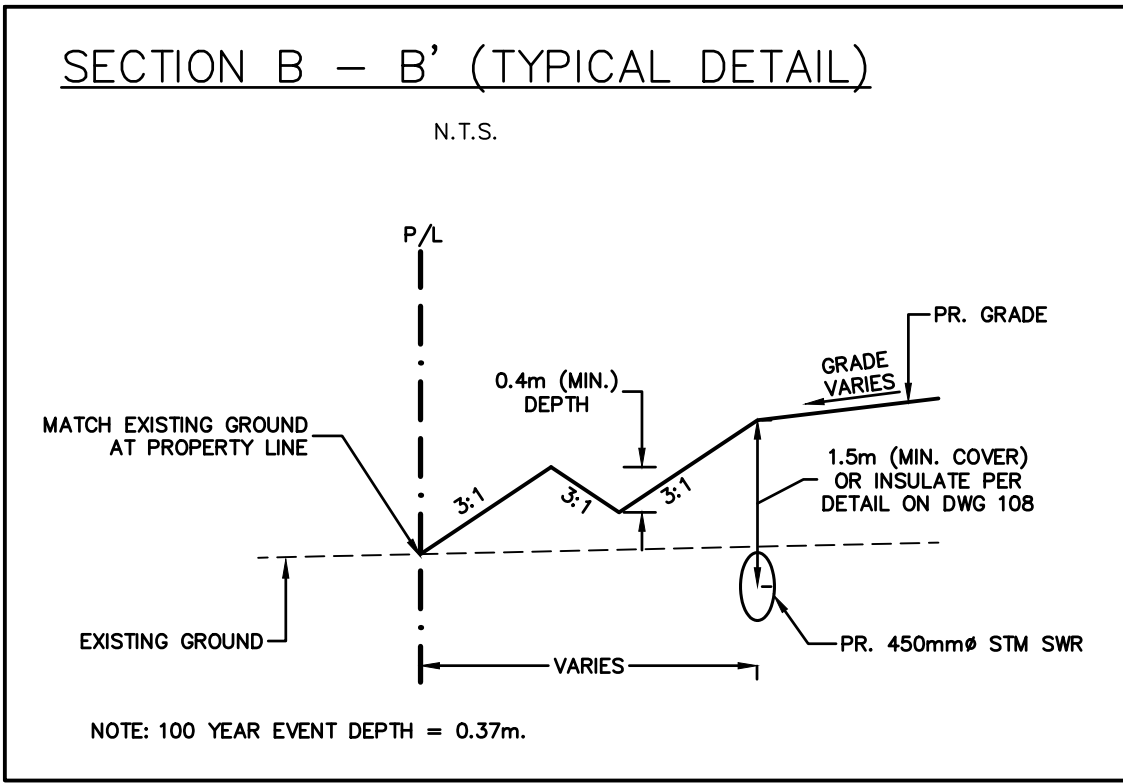
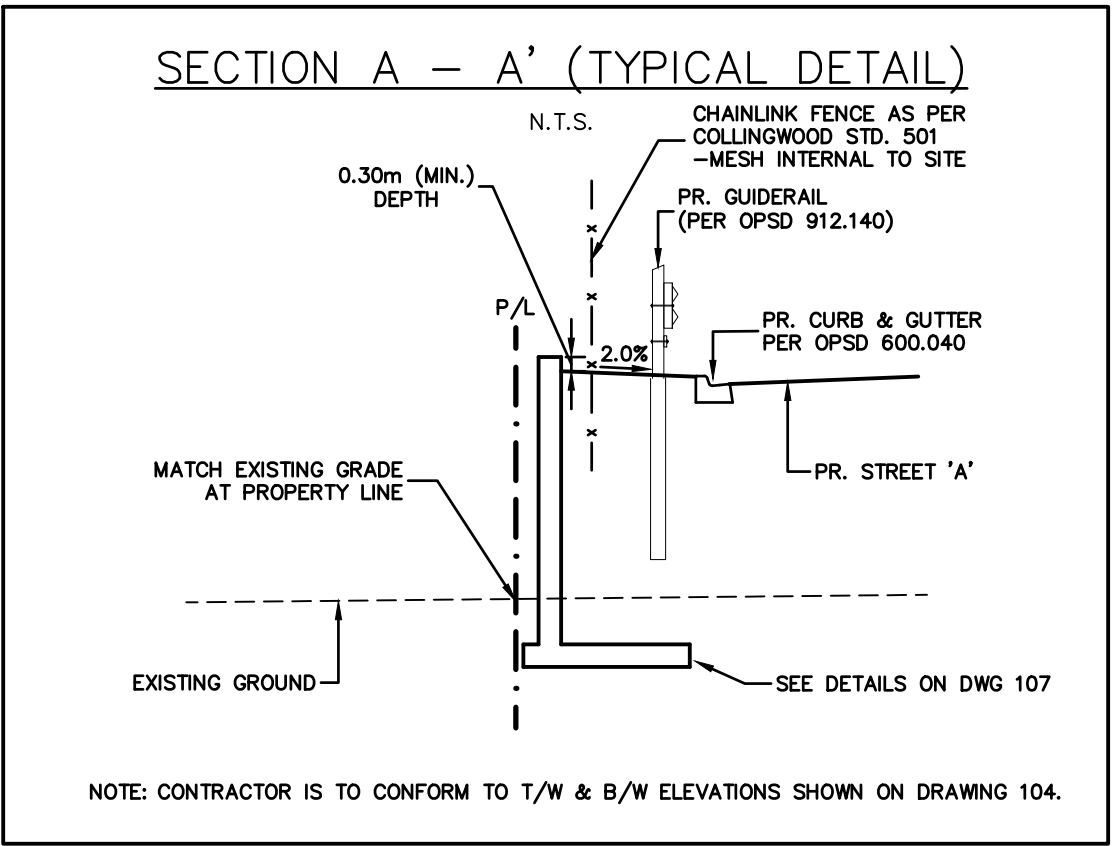
Consulting Engineers

THE HARBOUREDGE BUILDING, 40 HURON STREET, SUITE 301, COLLINGWOOD, ON L9Y 4R3

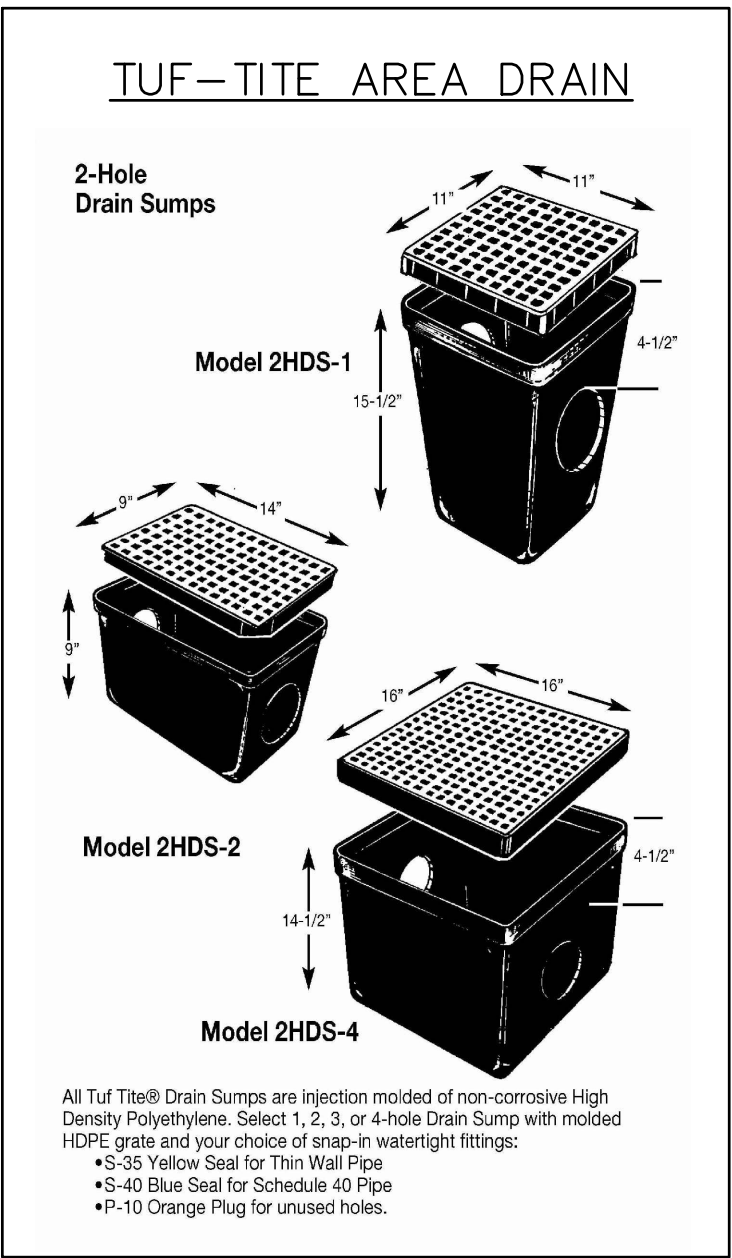
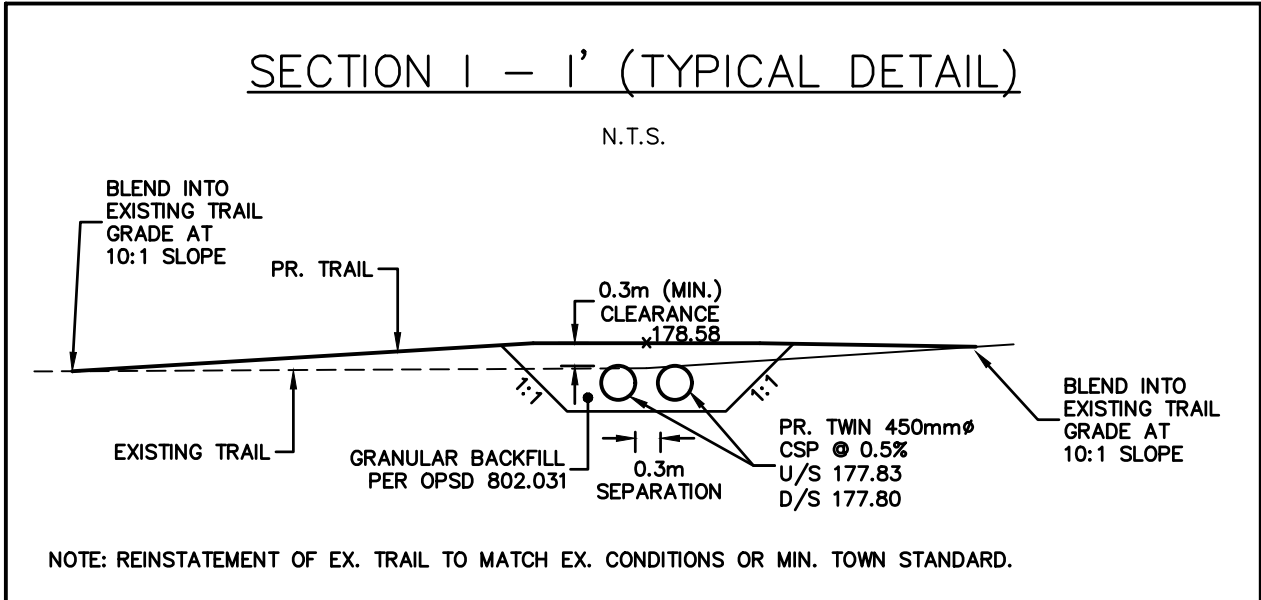
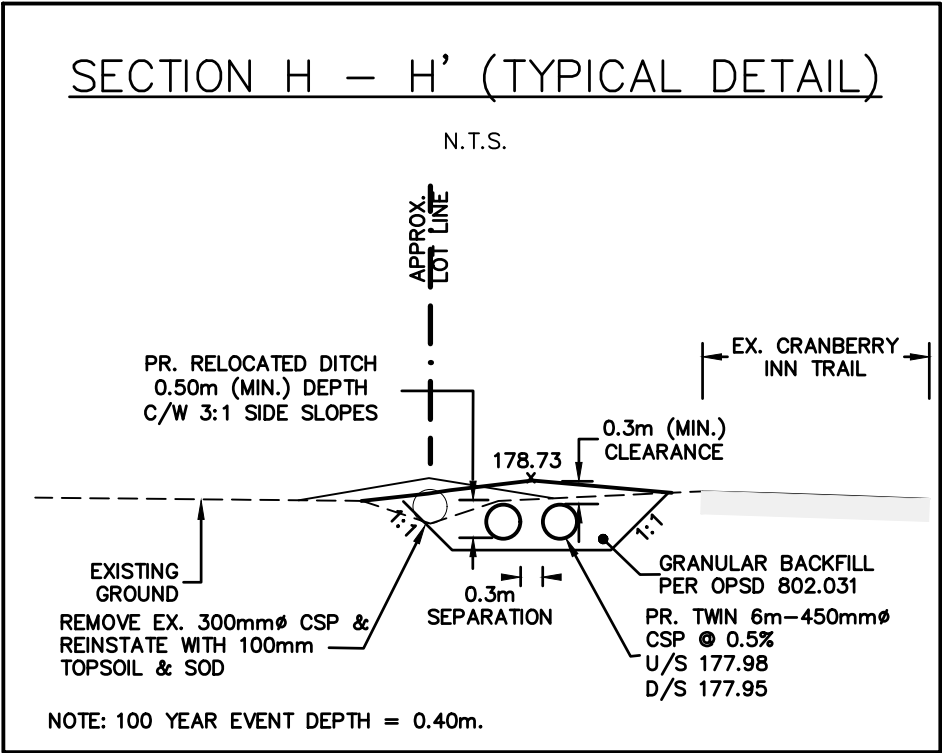
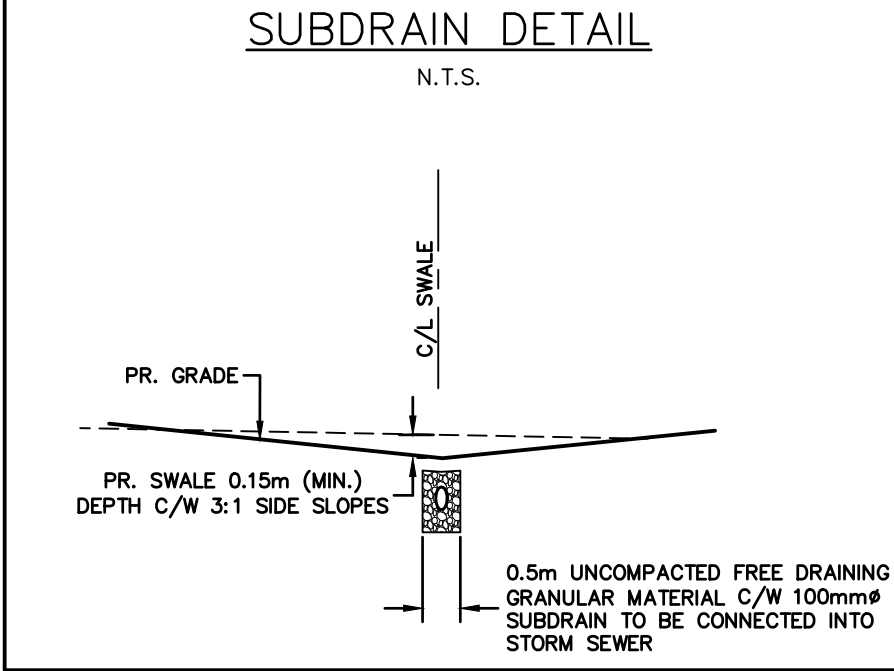
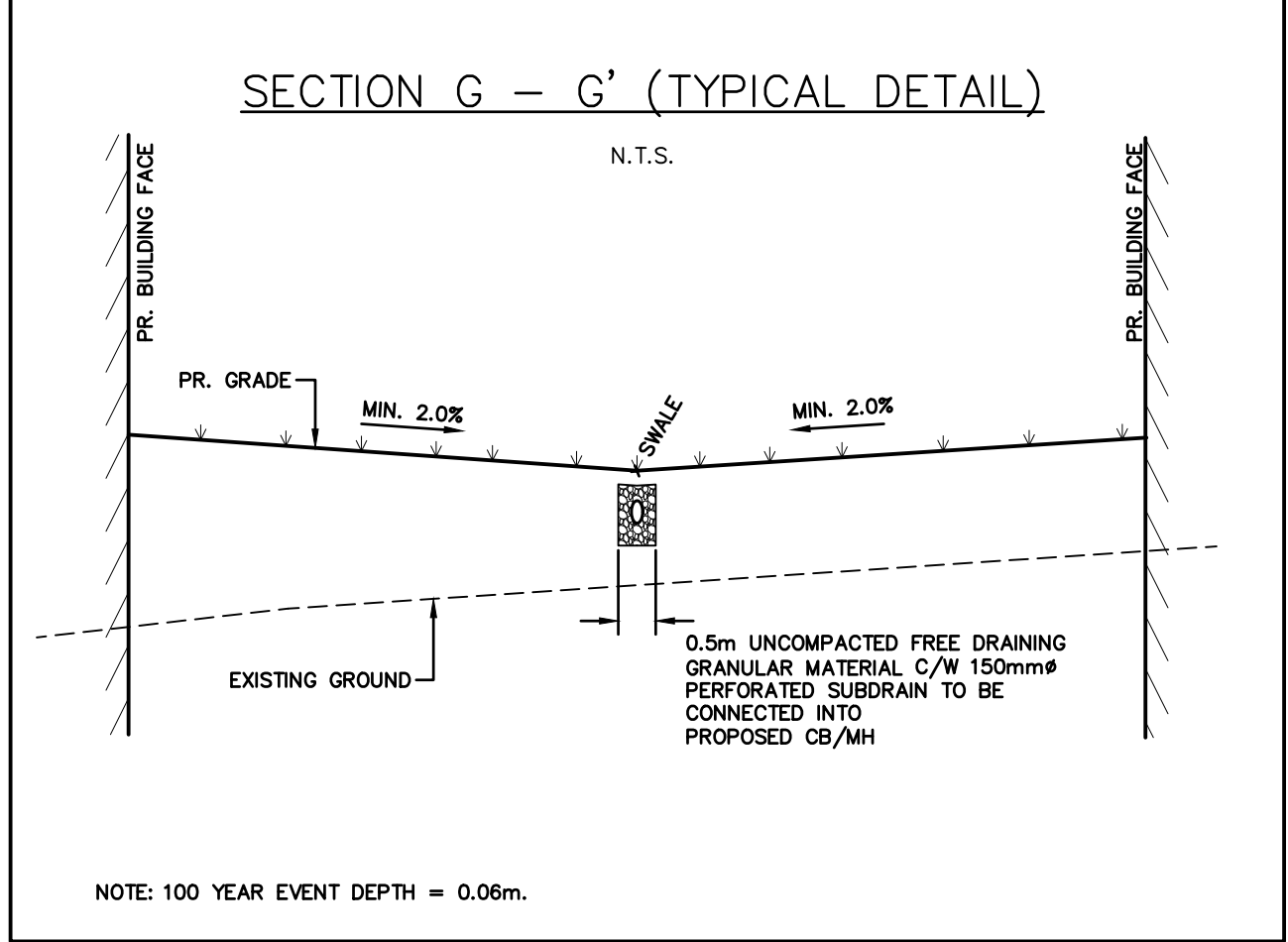
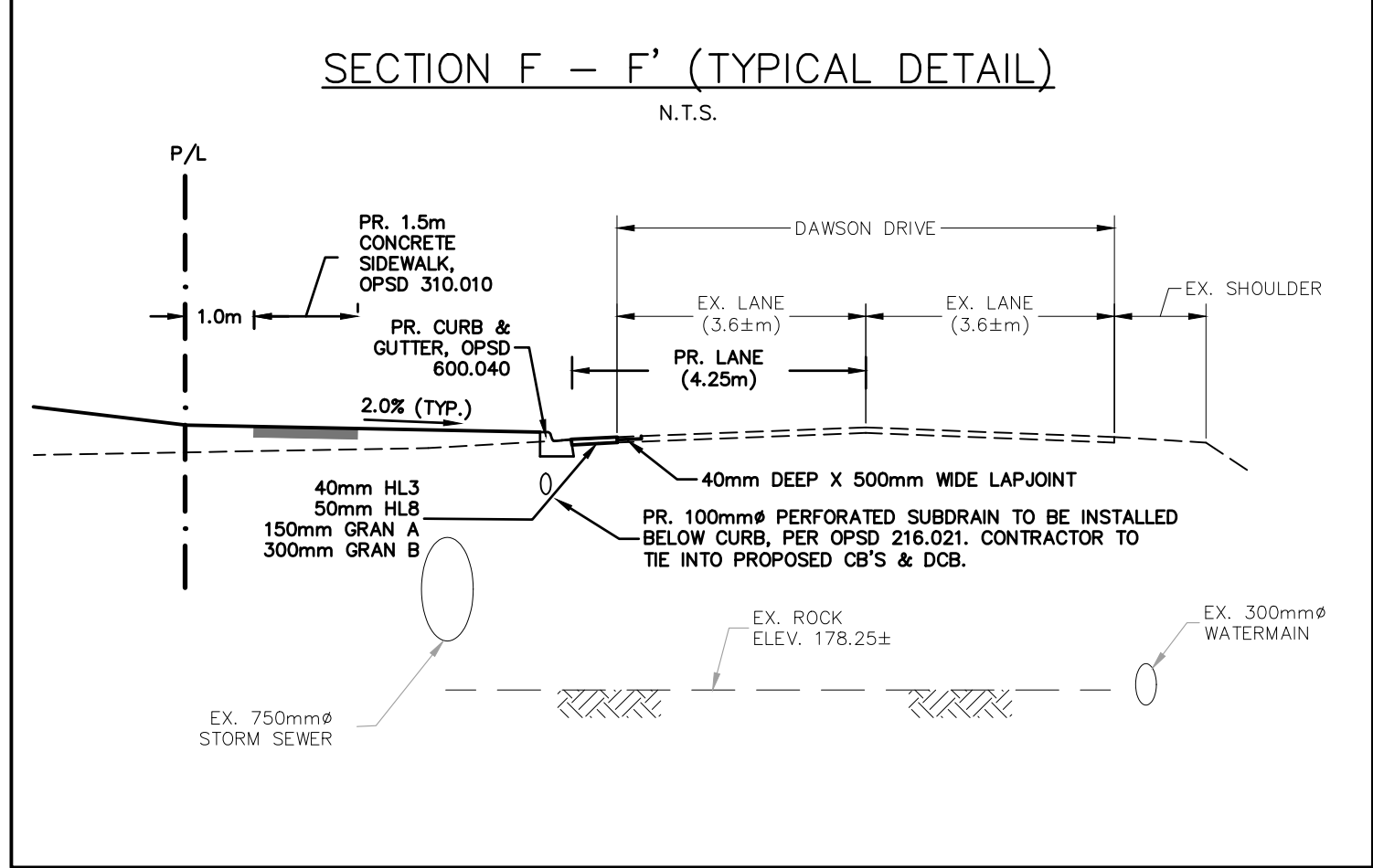
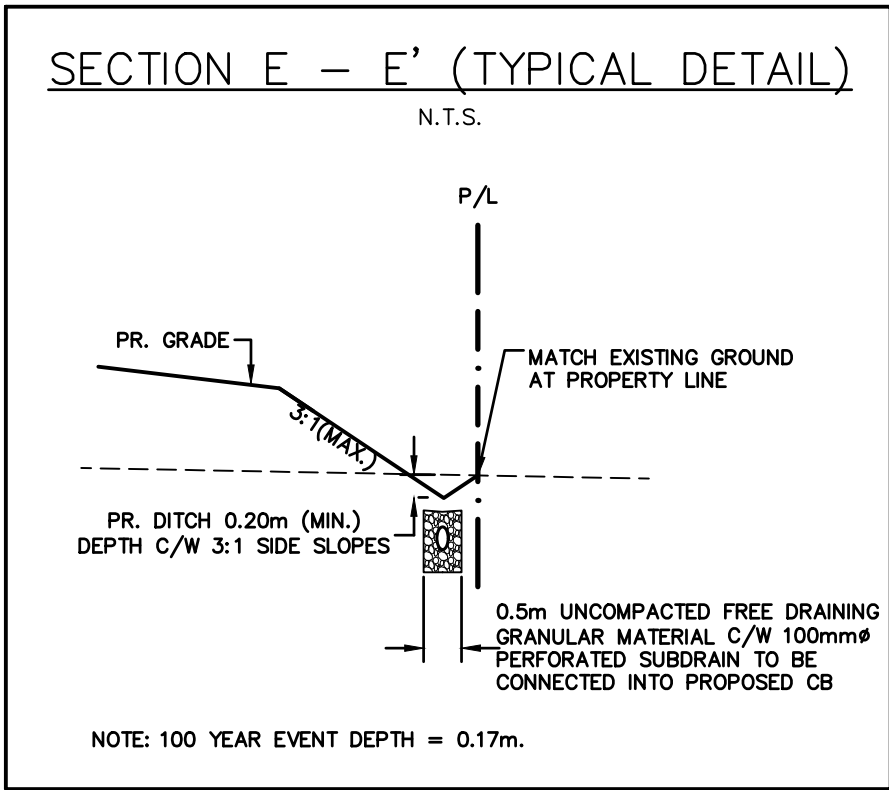
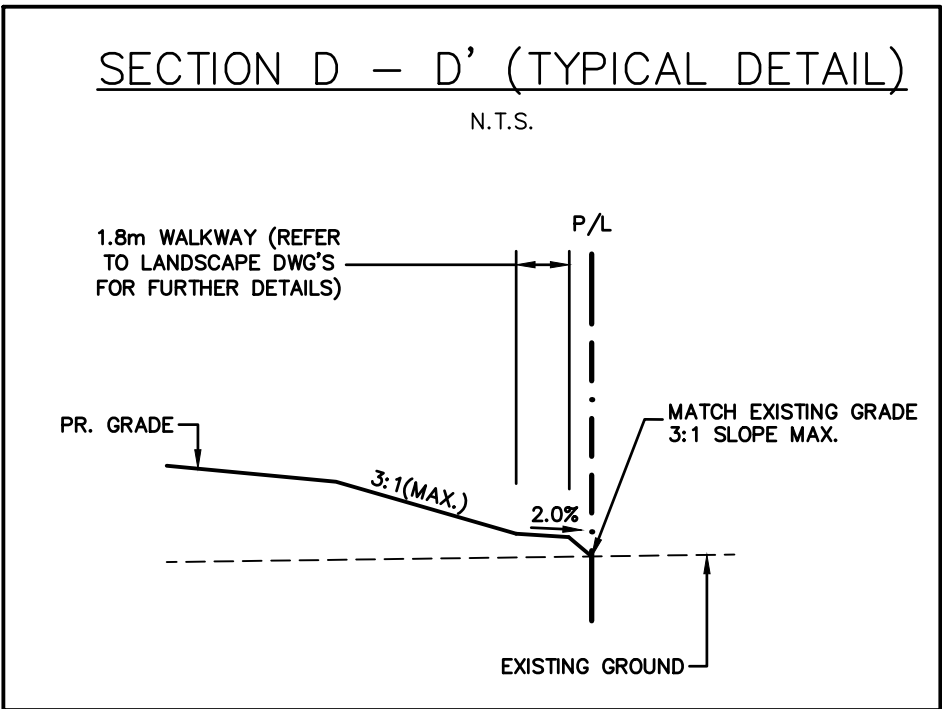
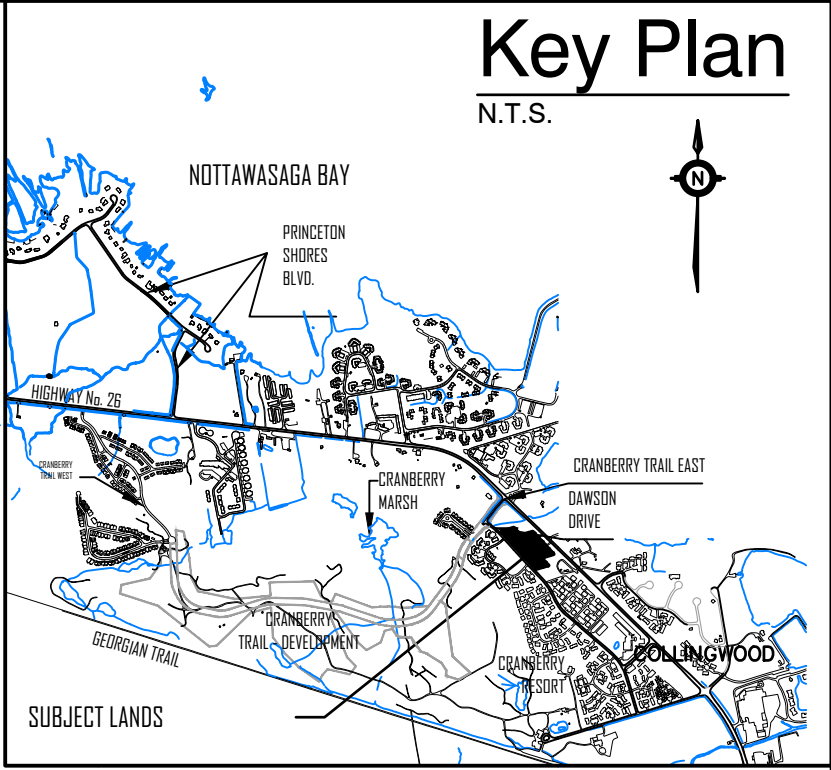
705-446-3510 T
705-446-3520 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

Drawn By	J.O.	Check By	B.R.	Project No.	209-2649
Scale	1:400	Date	10/03/2007	Drawing No.	102

APPROVED:



NOTE: SUBDRAIN INSTALLATION REQUIRED WHEN SWALE GRADE IS LESS THAN 2%. A 150mm# PERFORATED SUBDRAIN c/w FILTER SOCK IS TO BE INSTALLED IN UNCOMPACTED FREE DRAINING GRANULAR MATERIAL AT THE BASE OF THE SWALE. SUBDRAIN TO CONNECT TO STORM SEWER SYSTEM.



APPROVED:

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GEODETTIC BENCHMARKS

BM#1 – GEODETTIC MONUMENT No. 72U-313 HAVING AN ELEVATION OF 179.650m

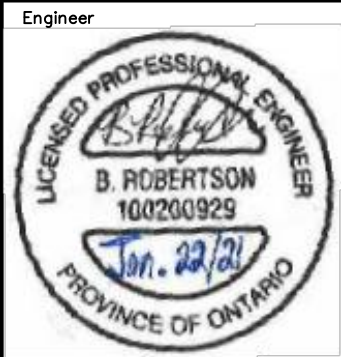
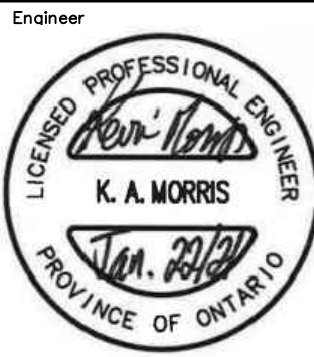
BM#2 – GEODETTIC MONUMENT No. 72U-311 HAVING AN ELEVATION OF 181.056m

TEMPORARY BENCHMARK

TBM#1 – TOP NUT OF FIRE HYDRANT LOCATED WEST SIDE OF DAWSON DRIVE (WEST OF PROPERTY) AT THE NORTH WEST CORNER OF FAIRWAY CRES. (SOUTHERN ENTRANCE) WITH AN ELEVATION OF 181.135m

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8	ISSUED FOR FOURTH SUBMISSION	01/22/2021

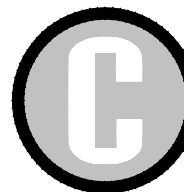


Project

WATERSTONE DEVELOPMENT
TOWN of COLLINGWOOD

Drawing

SECTIONS

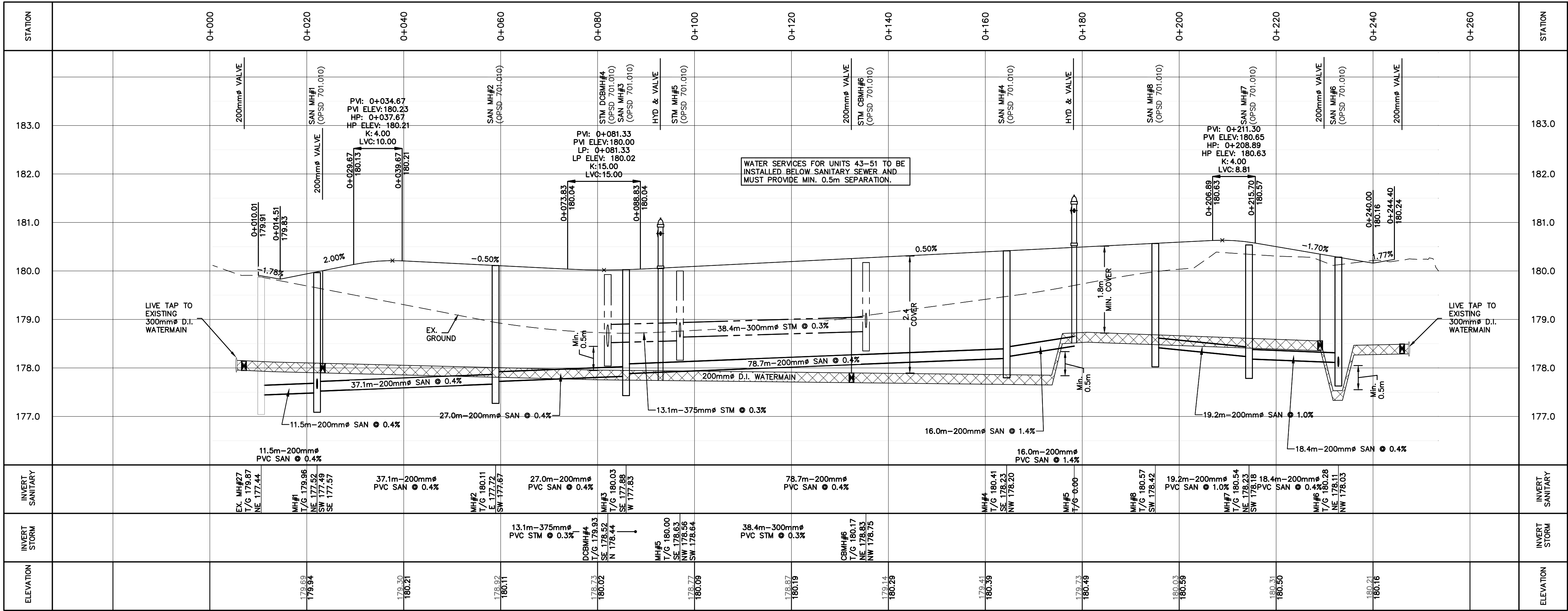
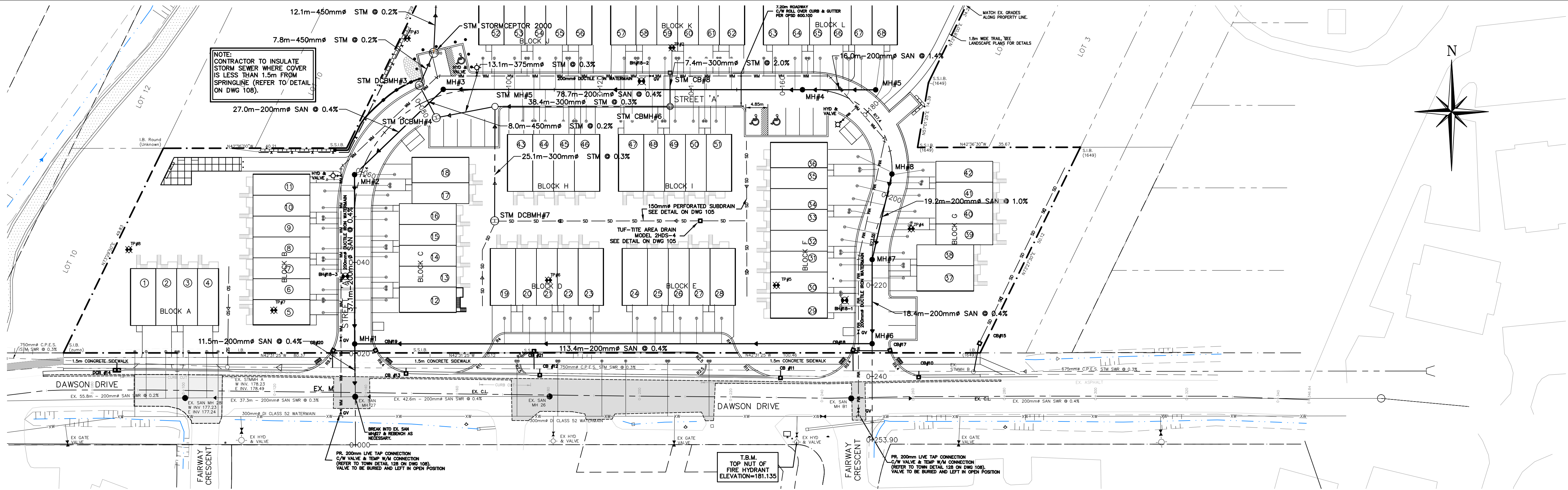


CROZIER & ASSOCIATES
Consulting Engineers

THE HARBOUREDGE
BUILDING, 40 HURON
STREET, SUITE 301,
COLLINGWOOD, ON
N4Y 4R3

705-446-3510 T
705-446-3520 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

Drawn By	J.O.	Check By	B.R.	Project No.	209-2649
Scale	AS NOTED	Date	10/03/2007	Drawing No.	105



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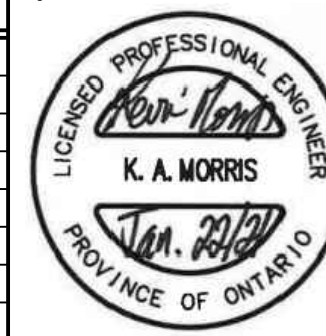
GEODEIC BENCHMARKS
BM#1—GEODEIC MONUMENT No. 72U—313 HAVING AN ELEVATION OF 179.65m
BM#2—GEODEIC MONUMENT No. 72U—311 HAVING AN ELEVATION OF 181.056m

TEMPORARY BENCHMARK
TBM#1—TOP NUT OF FIRE HYDRANT LOCATED WEST SIDE OF DAWSON DRIVE (WEST OF PROPERTY) AT THE NORTH WEST CORNER OF FAIRWAY CRES. (SOUTHERN ENTRANCE) WITH AN ELEVATION OF 181.135m

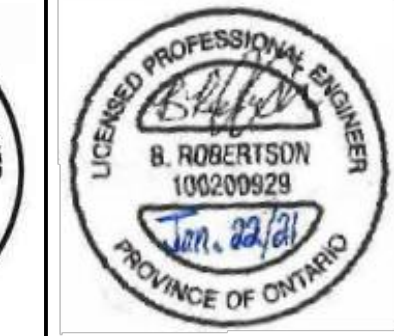
Town

No.	ISSUE	DATE: MM/DD/YYYY
1	REVISED SITE PLAN	03/28/2019
2	RE-ISSUED FOR FINAL APPROVAL	09/23/2020
3	ISSUED FOR FOURTH SUBMISSION	01/22/2021

Engineer



Engineer



Project

WATERSTONE DEVELOPMENT
TOWN OF COLLINGWOOD

Drawing

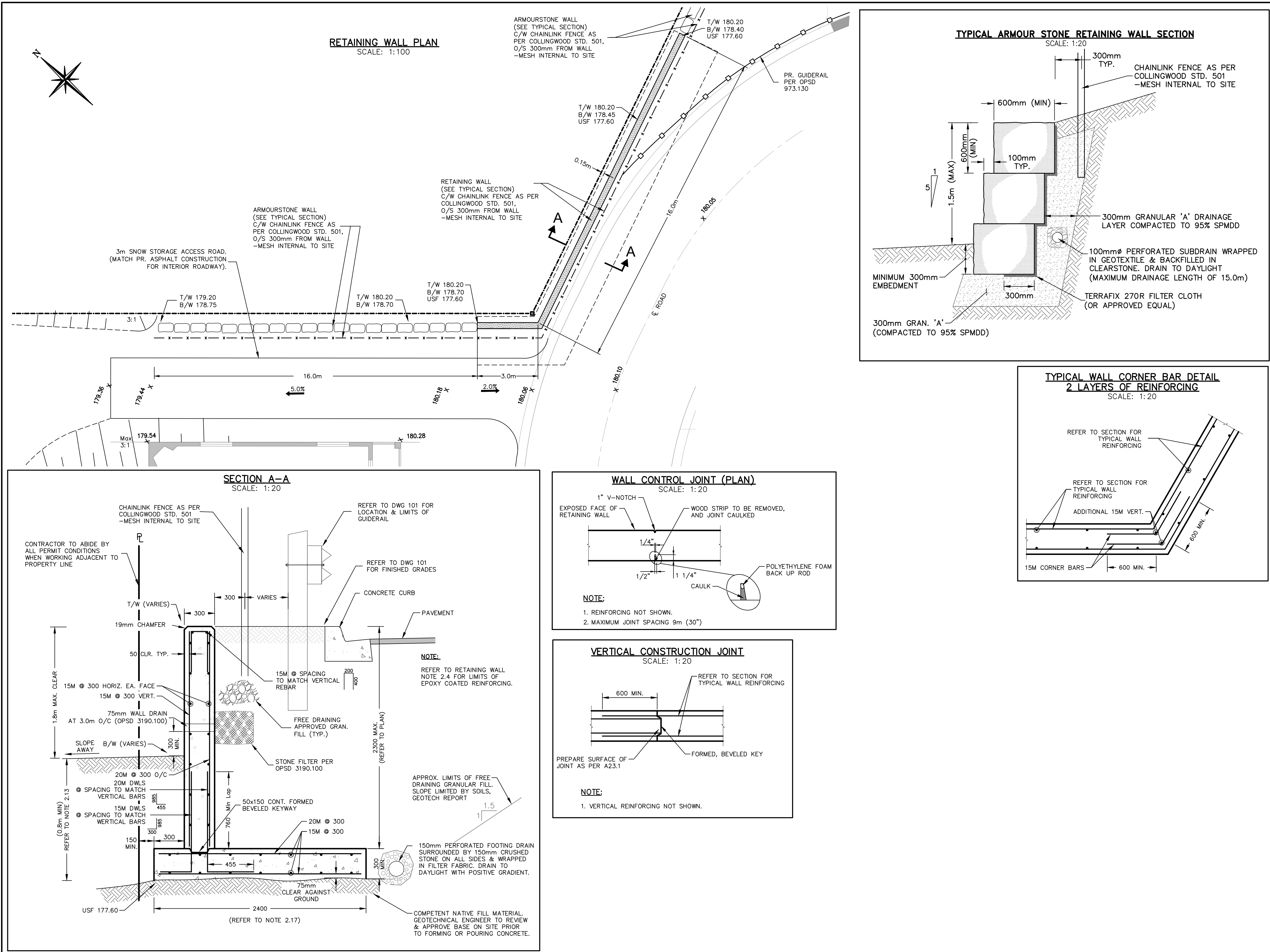
PLAN & PROFILE
STREET 'A' (STA 0+000 - 0+240)

APPROVED:



THE HARBOUREDGE BUILDING,
40 HURON STREET, SUITE 301,
COLLINGWOOD, ON L9Y 4R3
705 446-3510 T
705 446-3520 F
WWW.CF-CROZIER.CA
INFO@CF-CROZIER.CA

Drawn By	J.O.	Design By	J.O.	Project	209-2649
Check By	B.R.	Check By	K.M.	Scale	V=1:50 H=1:500
				Drawing	106B

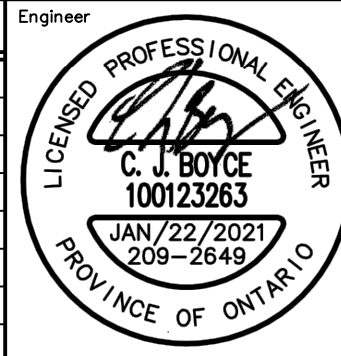


- 1.0 GENERAL NOTES:**
- THIS DRAWING HAS BEEN PREPARED AS SITE SPECIFIC CONSTRUCTION DOCUMENTS FOR BOTH CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL AND ARMOUR STONE RETAINING WALL. RETAINING WALL LIMITS AND TOP AND BOTTOM OF WALL ELEVATIONS ARE SHOWN ON THE DWG 104.
 - A PRELIMINARY SUBSURFACE GEOTECHNICAL INVESTIGATION WAS PREPARED BY PETO MACALLUM, DATED FEB. 2006. BASED ON RECOMMENDATIONS PRESENTED IN THIS REPORT, RETAINING WALL FOOTINGS SHALL BEAR ON COMPETENT TILL HAVING A MINIMUM BEARING PRESSURE OF 150 KPa. UNCOVERED TILL SHALL BE INSPECTED BY A GEOTECHNICAL REPRESENTATIVE PRIOR TO FORMING AND PLACING CONCRETE.
 - ALL MATERIALS, WORKMANSHIP, AND DETAILS SHALL CONFORM TO THE LATEST EDITION OF THE ONTARIO BUILDING CODE AND THE REFERENCE STANDARDS INCLUDED THEREIN THAT ARE APPLICABLE TO THIS PROJECT, AND ALL LOCAL AND JURISDICTIONAL PERMITS AND REGULATIONS.
 - THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SITE DRAWINGS AND SPECIFICATIONS. VERIFY AND COORDINATE ALL DIMENSIONS RELATED TO THIS PROJECT.
 - SHOP DRAWINGS FOR REINFORCING STEEL AND GUARD RAIL (INCLUDING ALL ACCESSORIES) SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION AND/OR INSTALLATION.
 - TESTING AND INSPECTION SERVICES SHALL BE PROVIDED BY AN INDEPENDENT AGENCY IN ACCORDANCE WITH APPLICABLE REFERENCE STANDARDS AND THE PROJECT CONTRACT DOCUMENTS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SHORING AND/OR TEMPORARY BRACING REQUIRED TO COMPLETE THE WORK OF THIS CONTRACT.
- 2.0 RETAINING WALL NOTES:**
- ALL CONCRETE WORK SHALL CONFORM TO LATEST EDITION OF CSA STANDARD "DESIGN OF CONCRETE STRUCTURES" (CSA A23.4), "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION/METHODS OF TEST AND STANDARD PRACTICE FOR CONCRETE" (CSA A23.1 AND A23.2), AND STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING (AC 306.1).
 - CONCRETE SHALL BE PROPORTIONED IN ACCORDANCE WITH CSA A23.1. THE CONCRETE SUPPLIER SHALL ASSUME RESPONSIBILITY FOR THE CONCRETE AS DELIVERED TO THE SITE.
FOOTINGS: $f'_c = 30\text{MPa}$ AT 28 DAYS, EXPOSURE CLASS N
STEM WALL: $f'_c = 30\text{MPa}$ AT 28 DAYS, EXPOSURE CLASS C1
 - ABSOLUTELY NO CALCIUM CHLORIDE MAY BE USED IN ANY CONCRETE.
 - TYPICAL REINFORCING SHALL BE DEFORMED BILLET STEEL BARS CONFORMING TO CSA STANDARD G30.18, GRADE 40R. VERTICAL & HORIZONTAL STEM WALL REINFORCING AND TOP U-BARS SHALL BE EPOXY COATED.
 - DETAILING, FABRICATION, AND ERECTION OF REINFORCEMENT SHALL CONFORM TO RSIC REINFORCING STEEL MANUAL OF STANDARD PRACTICE.
 - PLACE CONCRETE BY APPROVED METHODS OF CSA A23.1 AND A23.2. CONSOLIDATE CONCRETE BY MECHANICAL VIBRATION. DO NOT USE VIBRATORS FOR MOVING CONCRETE IN FORMS.
 - PLACE AND SECURE REINFORCING USING STANDARD BAR SUPPORTS OR ANY OTHER APPROVED DEVICES OR ACCESSORIES REQUIRED TO PROVIDE PROPER CLEARANCE AND PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.
 - MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE 50mm (2") UNLESS NOTED OTHERWISE.
 - INSTALLATION OF REINFORCEMENT SHALL BE COMPLETED AT LEAST 24 HOURS PRIOR TO SCHEDULED CONCRETE PLACEMENT. NOTIFY ENGINEER AT LEAST 48 HOURS PRIOR TO SCHEDULED CONCRETE PLACEMENT TO ALLOW TIME FOR INSPECTION.
 - ALL CONCRETE SHALL BE WET CURED FOR A MINIMUM OF 7 DAYS. CONTRACTOR SHALL CONTINUOUSLY SPRINKLE OR FLOOD ALL EXPOSED CONCRETE SURFACES FOR THE ENTIRE SPECIFIED CURING PERIOD. COLD WEATHER CONCRETE WORK SHALL CONFORM TO AC 306.1.
 - RETAINING WALL FOOTINGS SHALL BEAR ON COMPETENT MATERIAL, WHICH IS TO BE INSPECTED AND APPROVED BY SITE GEOTECHNICAL ENGINEER.
 - BACKFILL WITH APPROVED GRANULAR MATERIAL PLACED IN 300mm (12") LAYERS AND COMPACTED TO 95% DENSITY AT OPTIMUM MOISTURE CONTENT.
 - PROVIDE 1.22m MINIMUM COVER FROM UNDERSIDE OF FOOTING TO FINISHED GRADE. WHERE THIS IS NOT FEASIBLE 50mm THICK LAYER OF RIGID EPS INSULATION PLACED HORIZONTALLY ABOVE TOP OF FOOTING MAY BE USED TO MEET THIS MINIMUM DEPTH OF COVER. RIGID INSULATION MUST EXTEND A MIN. DISTANCE OF 0.6m FROM THE FACE OF THE FOOTING. OVERBURDEN ABOVE USF AT BASE OF WALL TO BE MIN. 0.8m.
 - REFER TO SECTION A-A FOR THE TYPICAL RETAINING WALL NOTES.
 - PROVIDE VERTICAL WALL CONTROL JOINTS ON EXPOSED FACE OF RETAINING WALL, AS PER DETAIL ON 403.
 - FOOTING WIDTH CAN BE REDUCED TO 1.5m WHEN THE EXPOSED HEIGHT OF THE RETAINING WALL (T/W - B/W) IS LESS THAN 1.0m.
 - ARMOUR STONE DENSITY TO BE A MINIMUM OF 26kN/m³. STONES ARE TO BE COMPETENT AND FREE OF FISSURES.

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Town

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0	ISSUED FOR REVIEW	08/22/2012	
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3	ISSUED FOR 4TH SUBMISSION	01/22/2021	



Engineer

Project

WATERSTONE DEVELOPMENT
TOWN of COLLINGWOOD

Drawing

RETAINING WALL
PLAN, SECTION, & TYPICAL NOTES



CROZIER & ASSOCIATES
Consulting Engineers

THE HARBOUREDGE
BUILDING, 40 HURON
STREET, SUITE 301,
COLLINGWOOD, ON
L9Y 4R3

705-446-3510 T
705-446-3520 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

Drawn By

J.O.

Check By

C.J.B.

Project No.

209-2649

Scale

AS NOTED

Date

04/04/2012

Drawing No.

107

CONSTRUCTION NOTES:

A) GENERAL — CONSTRUCTION

1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH TOWN OF COLLINGWOOD STANDARDS, OPSD AND OPSS. WHERE CONFLICT OCCURS, TOWN OF COLLINGWOOD STANDARDS TO GOVERN.
2. TRENCH BACKFILL (OPSD 802.010 & 802.013) TO BE SELECT NATIVE MATERIAL OR IMPORTED SELECT SUBGRADE TO OPSS 1010. BACKFILL TO BE PLACED IN MAXIMUM 200mm THICK LIFTS AND COMPACTED TO 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
3. PIPE COVER AND BEDDING TO BE GRANULAR 'A' (MINIMUM 150mm DEPTH, COMPACTED TO A MINIMUM 95%SPMDD).
4. ALL TOPSOIL AND EARTH EXCAVATION TO BE STOCK PILED OR REMOVED TO AN APPROVED SITE AS DIRECTED BY ENGINEER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT OF THE WORK. THE DEVELOPER'S ENGINEER WILL CONFIRM ALL BENCH MARK ELEVATIONS AND HORIZONTAL ALIGNMENT FOR THE CONTRACTOR.
6. ALL PROPERTY BARS TO BE PRESERVED AND REPLACED BY O.L.S. AT CONTRACTOR'S EXPENSE IF REMOVED DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR THE SUPPLY OF TEMPORARY WATER AND POWER.
8. DETERAERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS-517 AND 518 TO MAINTAIN ALL TRENCHES IN A DRY CONDITION. OWNER RESPONSIBLE FOR OBTAINING M.O.E. PERMIT IF REQUIRED.
9. ALL ENGINE DRIVEN PUMPS TO BE ADEQUATELY SILENCED, SUITABLE FOR OPERATION IN A RESIDENTIAL DISTRICT.
10. DISTURBED AREAS OUTSIDE THE DEVELOPABLE LANDS TO BE REINSTATED TO PREVIOUS CONDITION OR BETTER.
11. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND CO-ORDINATE CONSTRUCTION AND LOCATES ACCORDINGLY.
12. ALL ROCK EXCAVATION PER OPSS-206W.
13. ALL EXCAVATION MUST BE CARRIED OUT IN FULL COMPLIANCE WITH MOST RECENT GUIDELINES OF OHSA. NATIVE SOILS ARE CLASSIFIED AS TYPE 3 SOIL.

B) ROADS

1. SUBGRADE AND BOULEVARD MATERIAL TO BE COMPACTED TO A MINIMUM DRY DENSITY OF AT LEAST 95% SPMDD. SUBGRADE TO BE PROOF ROLLED AND CERTIFIED PRIOR TO PLACING GRANULAR 'B'.
2. GRANULAR 'A' AND 'B' ROAD BASE TO BE COMPACTED TO 100% OF THE MATERIAL'S RESPECTIVE SPMDD AND PLACED IN MAX. 150mm LIFTS. REFER TO GEOTECHNICAL REPORT FOR FURTHER DETAILS.
3. ROADWAYS TO BE CONSTRUCTED WITH MINIMUM 300mm GRANULAR 'B' TYPE 1, 150mm GRANULAR 'A', 50mm HL8 BASE COURSE ASPHALT, & 40mm HL3 SURFACE COURSE ASPHALT.
4. SELECT SUBGRADE MATERIAL, OR IMPORTED GRANULAR MATERIAL APPROVED BY THE ENGINEER, COMPACTED TO 98% SPMDD TO BE USED AS FILL IN ALL AREAS WHERE PROPOSED PIPE INVERTS ARE HIGHER THAN EXISTING GRADE OR AS INSTRUCTED BY THE ENGINEER.
5. ALL GRANULARS AND ASPHALT MATERIALS AND PLACEMENT TO BE IN ACCORDANCE WITH OPSS 314 AND OPSS 310.
6. JOINTS WITH EXISTING ASPHALT TO BE SAW CUT STRAIGHT WITH MIN. 0.5m LAP JOINT PRIOR TO PLACING NEW ASPHALT AND TACK COAT APPLIED TO EXISTING ASPHALT.
7. STOP SIGNS AND STREET SIGNS TO TOWN STANDARDS.
8. REINSTATEMENT OF ALL DISTURBED BOULEVARDES TO INCLUDE REGRADING, 150mm TOPSOIL AND SOD TO OPSS 802 AND 803.
9. 100mm Ø PIPE SUBDRAINS SHALL BE PROVIDED UNDER EDGE OF CURB ON BOTH SIDES OF THE ROAD PER OPSD 216.021.
10. ALL SUBDRAINS TO BE CONSTRUCTED IN ACCORDANCE WITH OPSS 405. SUBDRAIN TO BE INSTALLED IN GRANULAR 'A' TRENCH AND CONNECTED TO EACH CB OR CDMH.
11. SUBDRAINS TO BE PERFORATED OTHER THAN THE 2m SECTION IMMEDIATELY UPSTREAM OF ALL STRUCTURES WHICH SHALL BE NON-PERFORATED.

C) SANITARY SEWERS

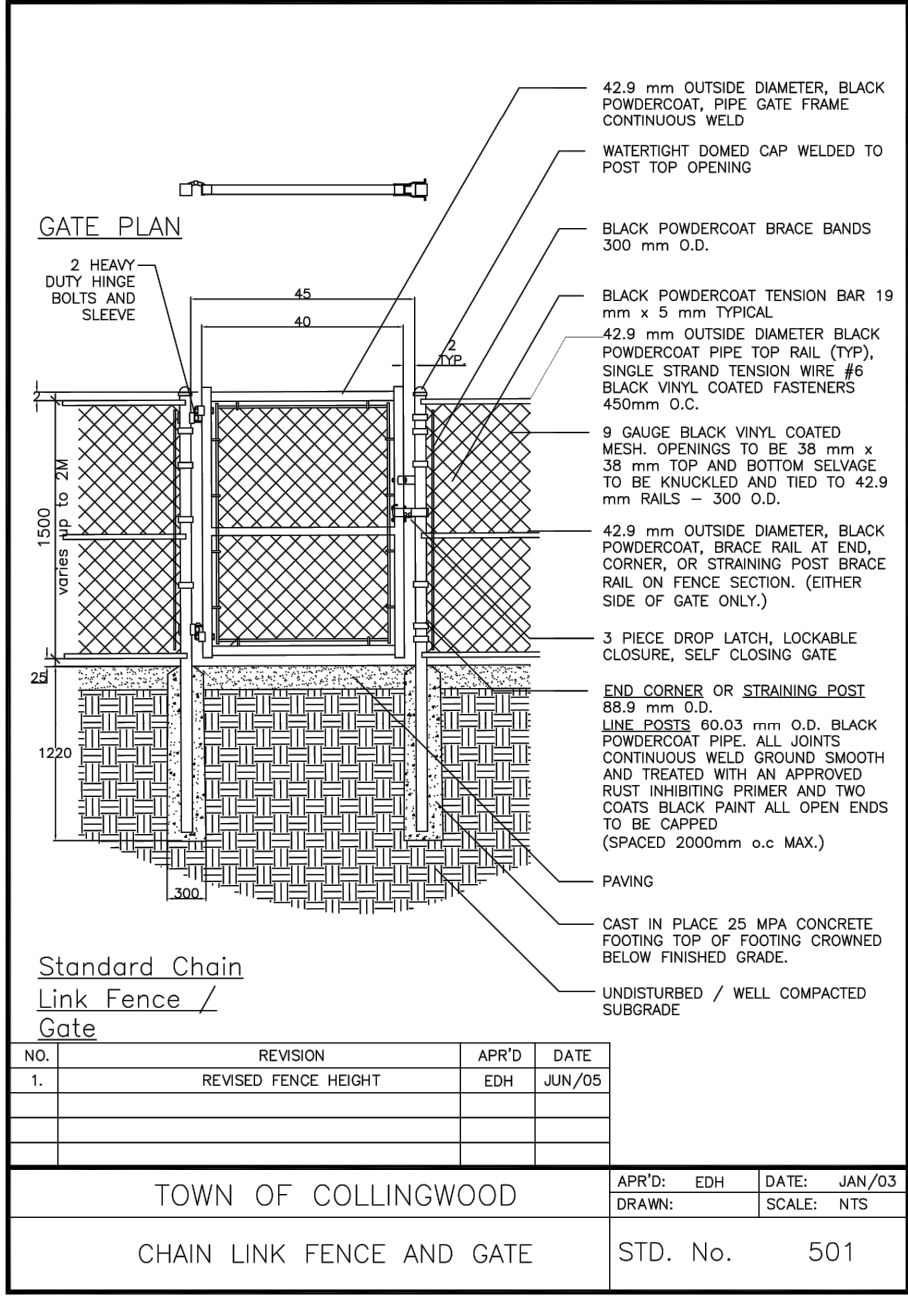
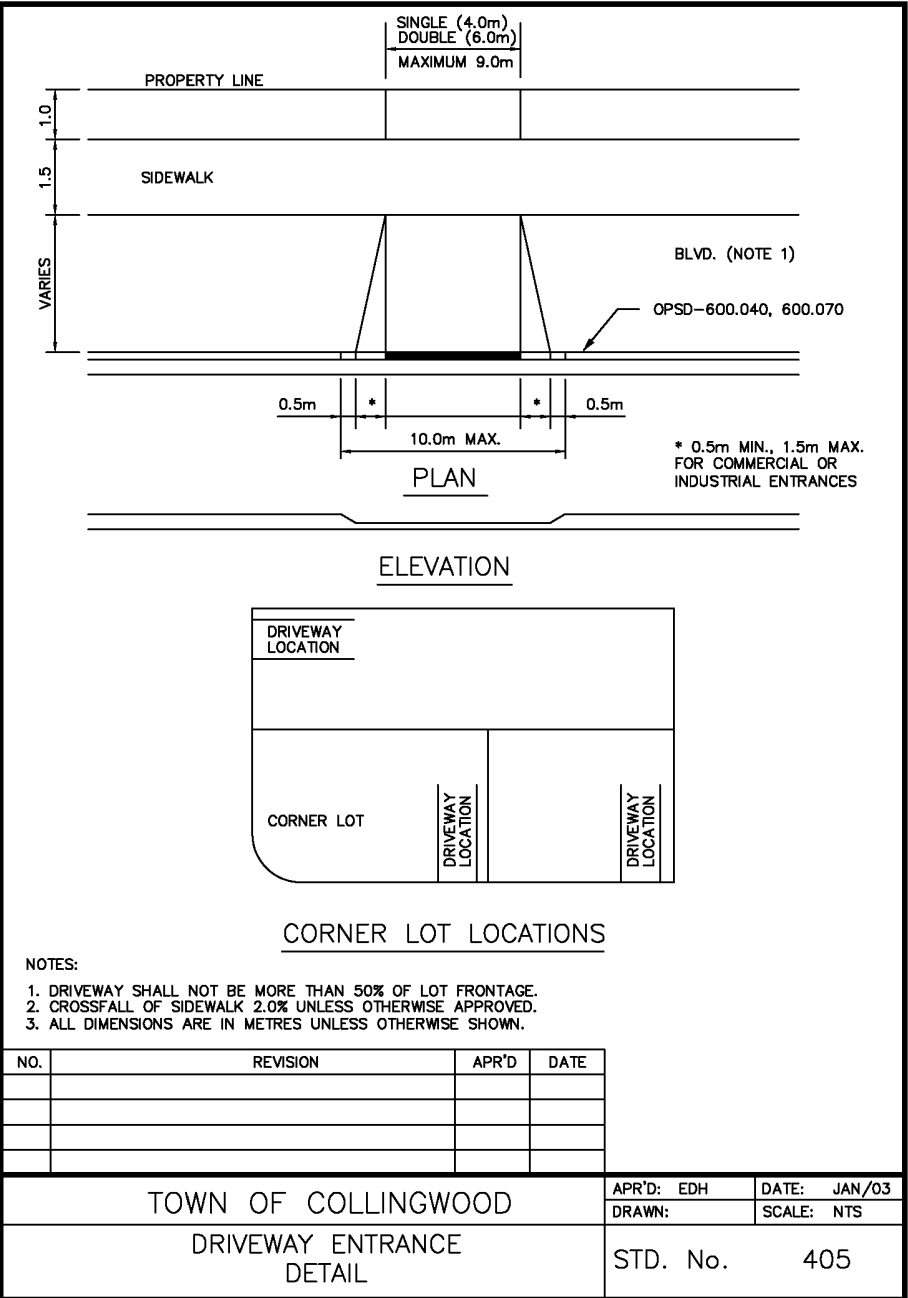
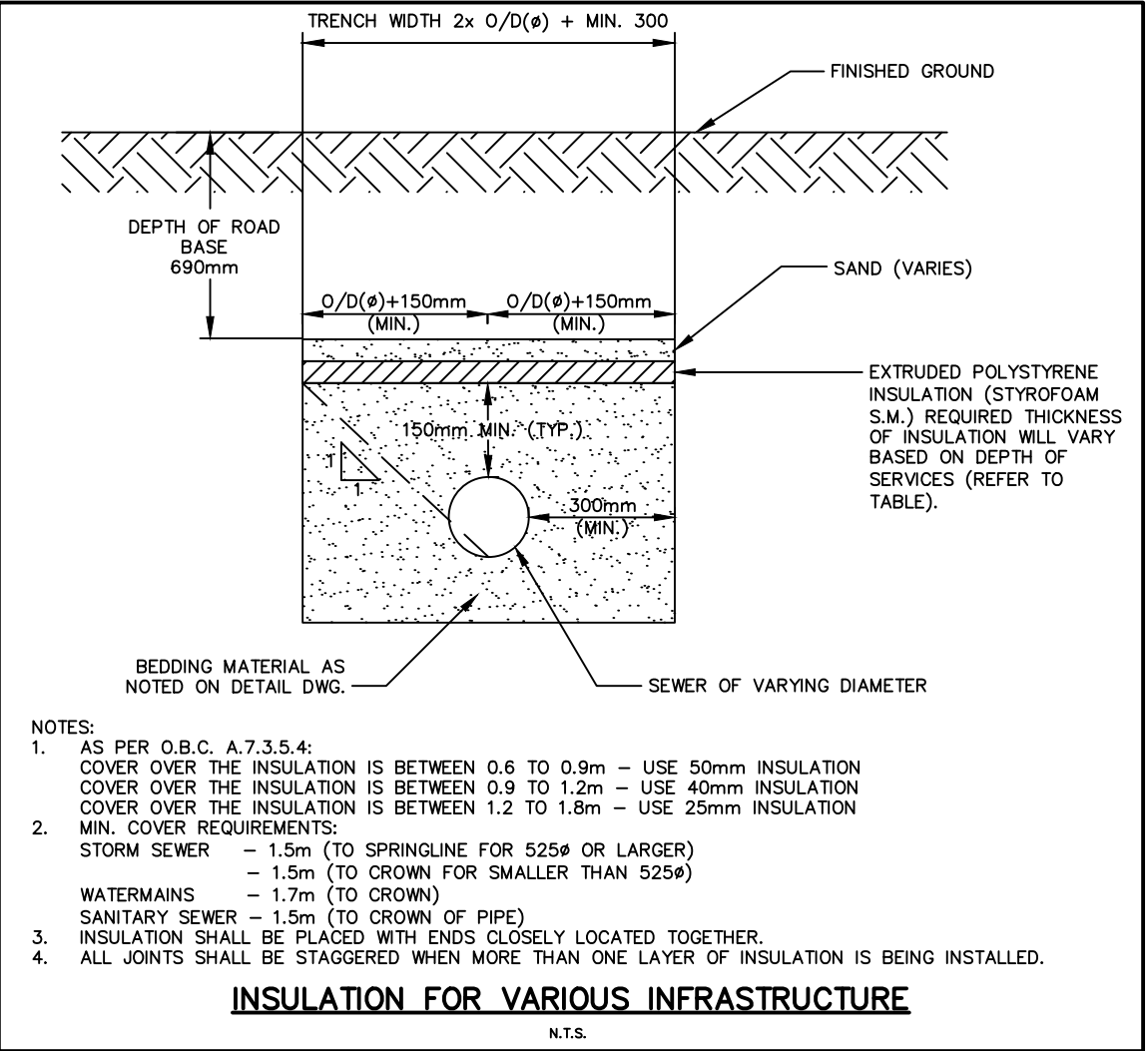
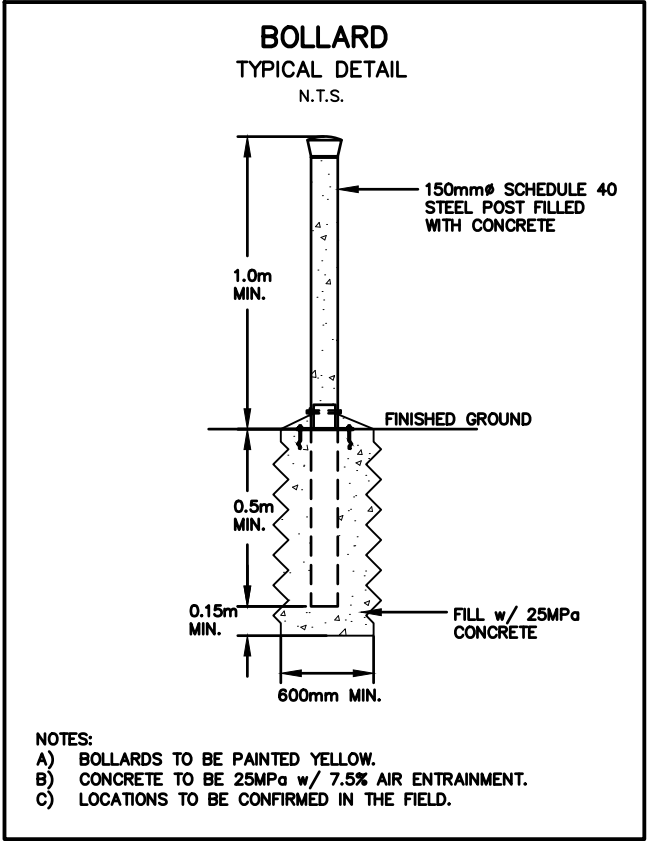
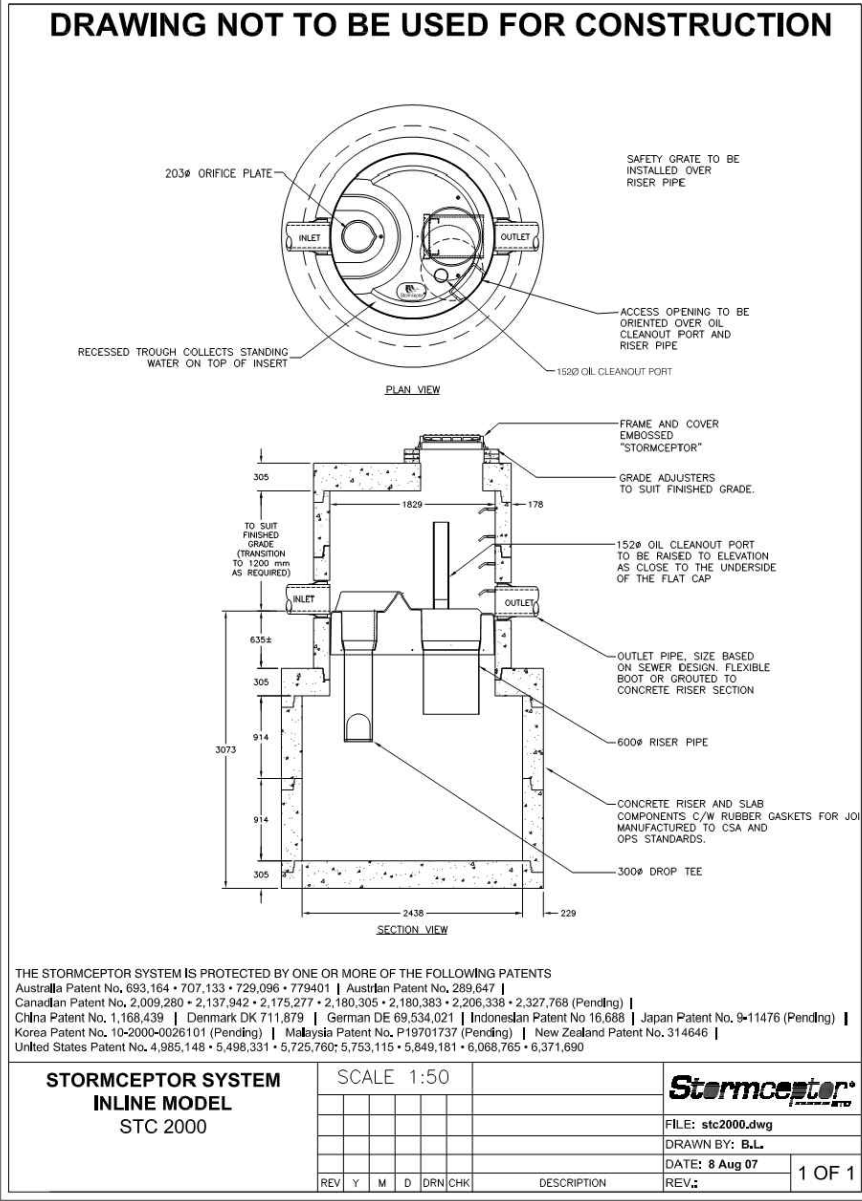
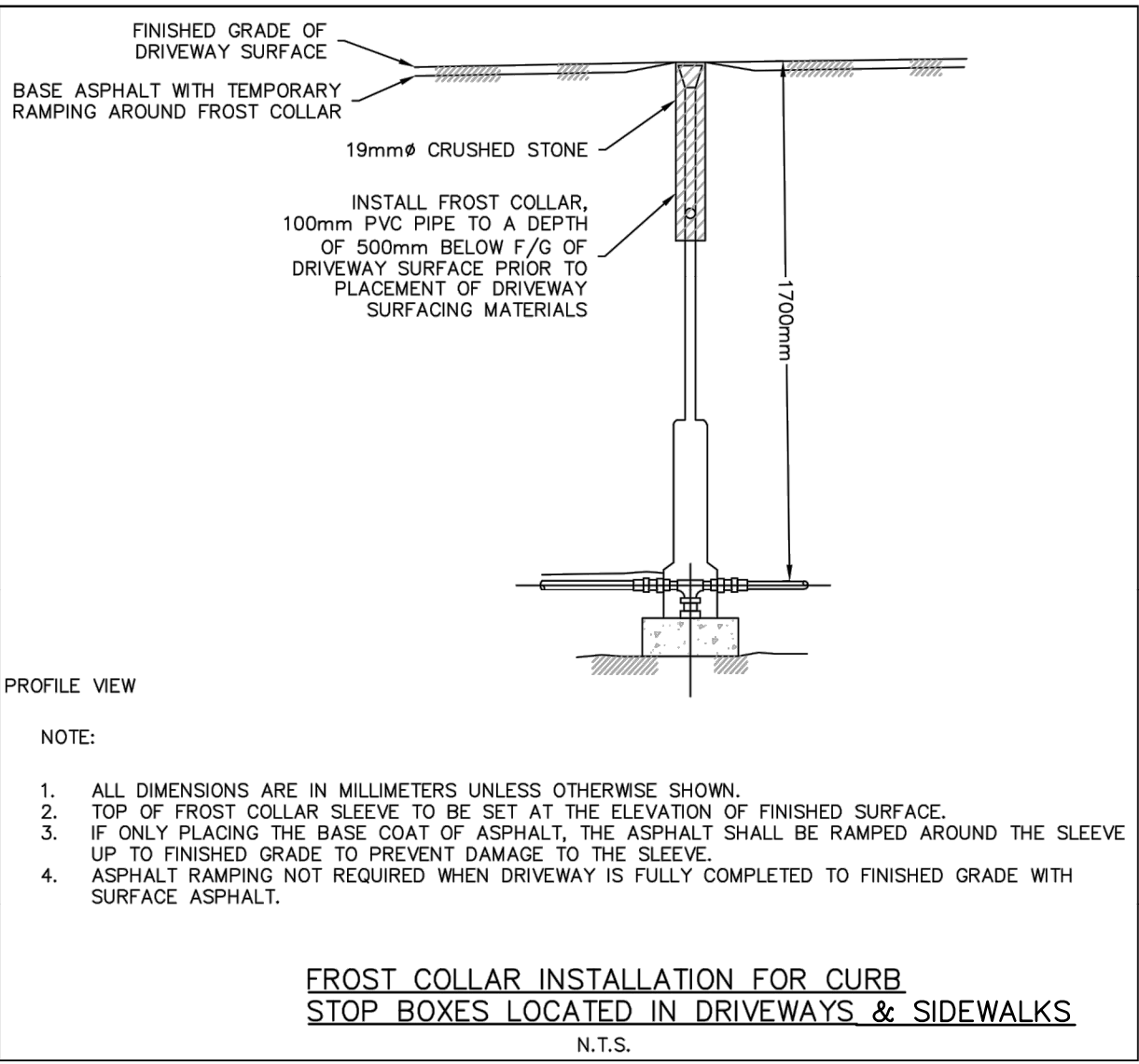
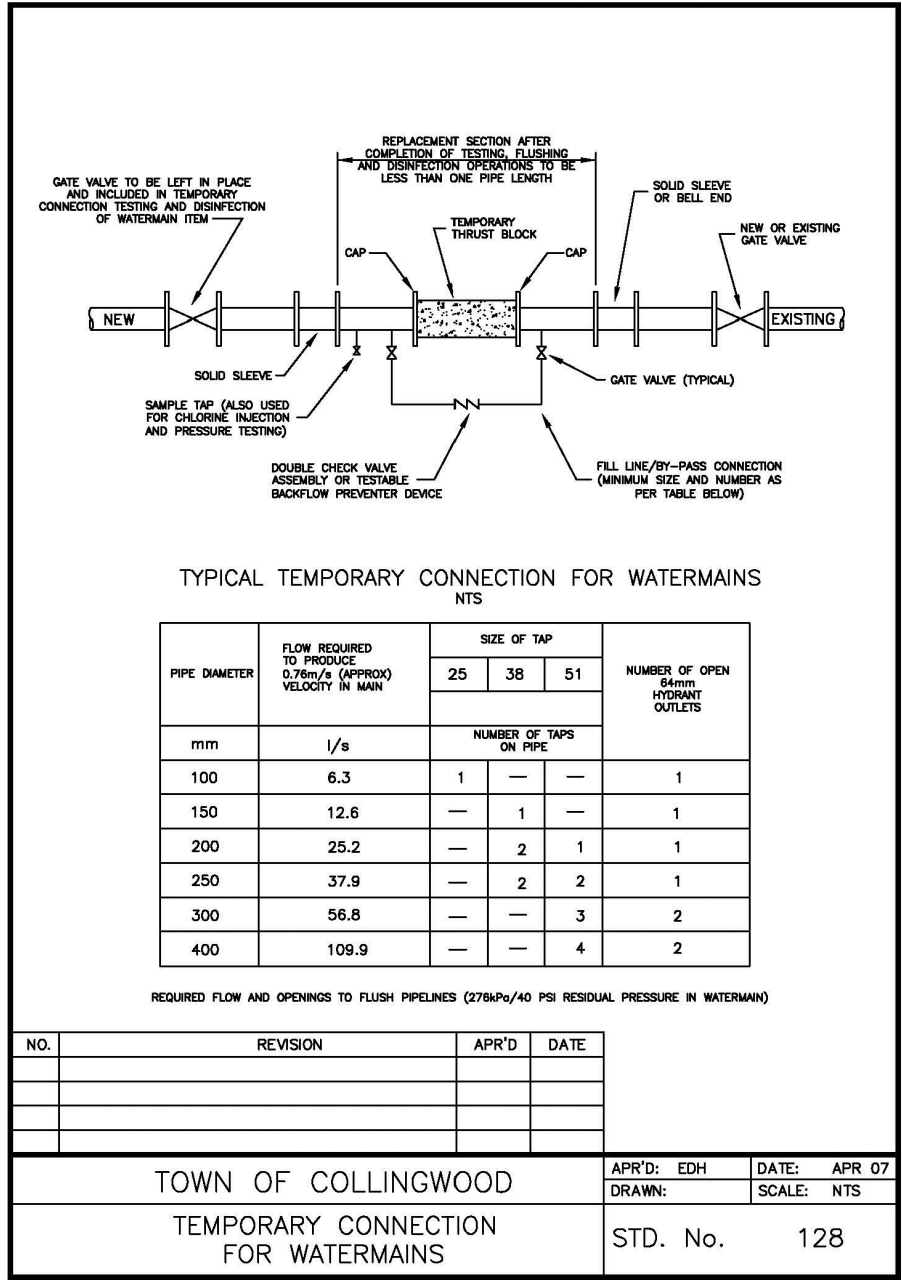
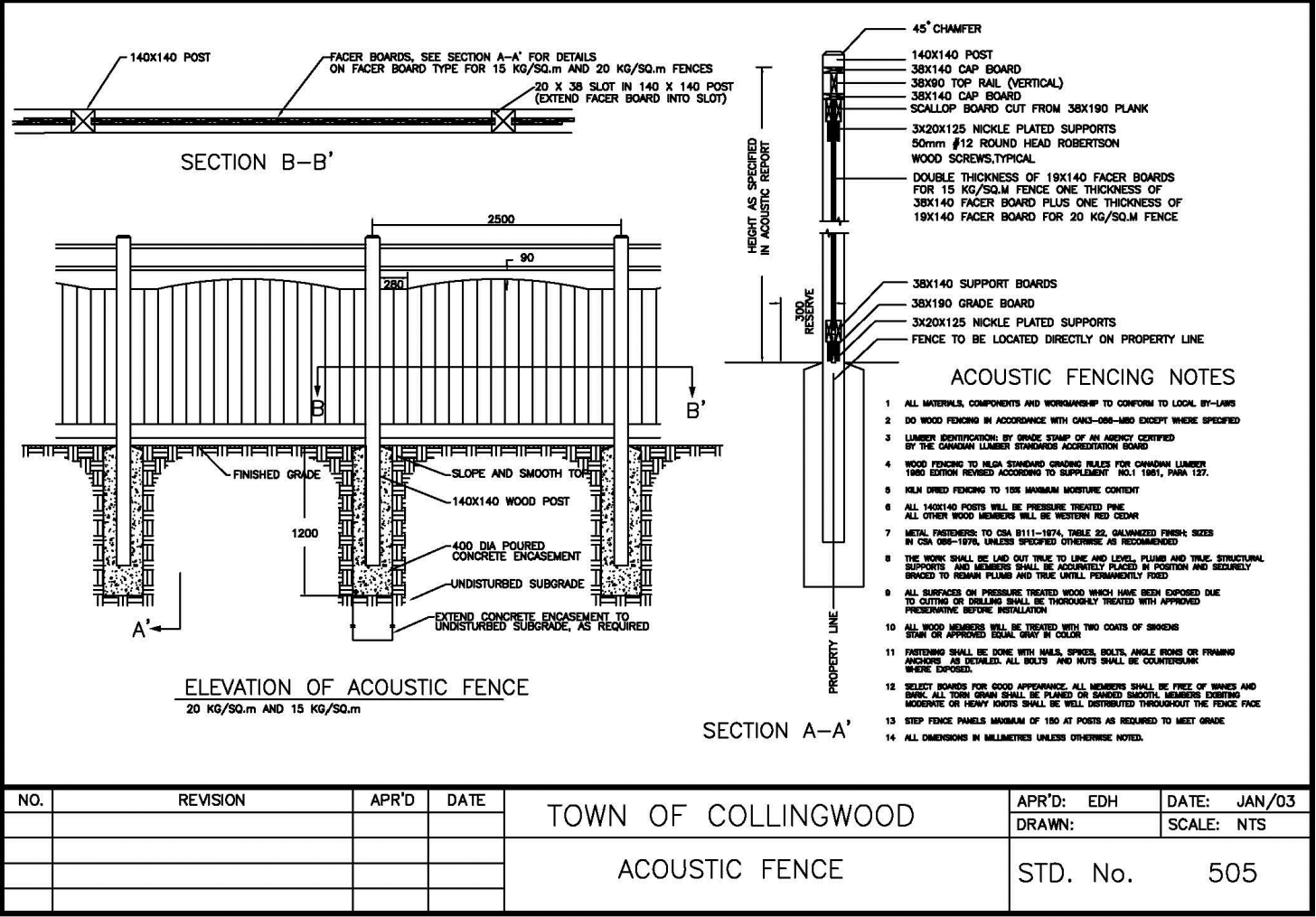
1. M.H.'S TO OPSD — 701.010, 701.030, & 704.010.
2. BENCHING TO OPSD — 701.021.
3. STEPS TO OPSD — 405.010.
4. BACKFILL AND EMBEDMENT TO OPSD — 802.010 CLASS 'B', GRANULAR 'A' BEDDING.
5. TRENCH BACKFILL TO BE SELECT NATIVE MATERIAL AS APPROVED BY ENGINEER OR IMPORTED GRANULAR MATERIAL.
6. FRAMES AND COVERS TO OPSD — 401.01 TYPE 'A' (CLOSED COVER).
7. SERVICE CONNECTIONS TO OPSD — 1006.020 (125mm), GRANULAR 'A' BEDDING.
8. TEST FITTING, 125 x 100 REDUCER, PLUG AND 2x4 MARKER POST PAINTED GREEN. MINIMUM GRADE TO BE 2.0%.
9. RADIUS BENDS TO BE USED ON SANITARY SEWER CONNECTIONS WHERE THE ANGLE OF CONNECTION BETWEEN THE SERVICE AND SEWER EXCEEDS 90°.
10. BACKFILL AND EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
11. MANHOLES FRAMES TO BE SET TO BASE COURSE ASPHALT ELEVATION AND RAISED PRIOR TO PLACING SURFACE COURSE ASPHALT.
12. PIPE SUPPORT AT MAINTENANCE HOLES AS PER OPSD 708.020.
13. ALL MAINTENANCE HOLES, UNLESS EXPRESSLY IDENTIFIED ARE 1200mm Ø.
14. GENERAL INSTALLATION AND TESTING OF SEWERS AND APPURTENANCES TO BE IN ACCORDANCE WITH OPSS 407, 408, 409 (CCTV), 410, 421 AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS.
15. SANITARY SERVICE — SDR 35 PVC.
16. SANITARY SERVICE — SDR 28 PVC — 125mm PER OPSD 1006.020 SEWER SERVICE CONNECTION FOR FLEXIBLE PIPE.
17. FROST STRAPS PER OPSD 701.100.

D) WATERMAINS

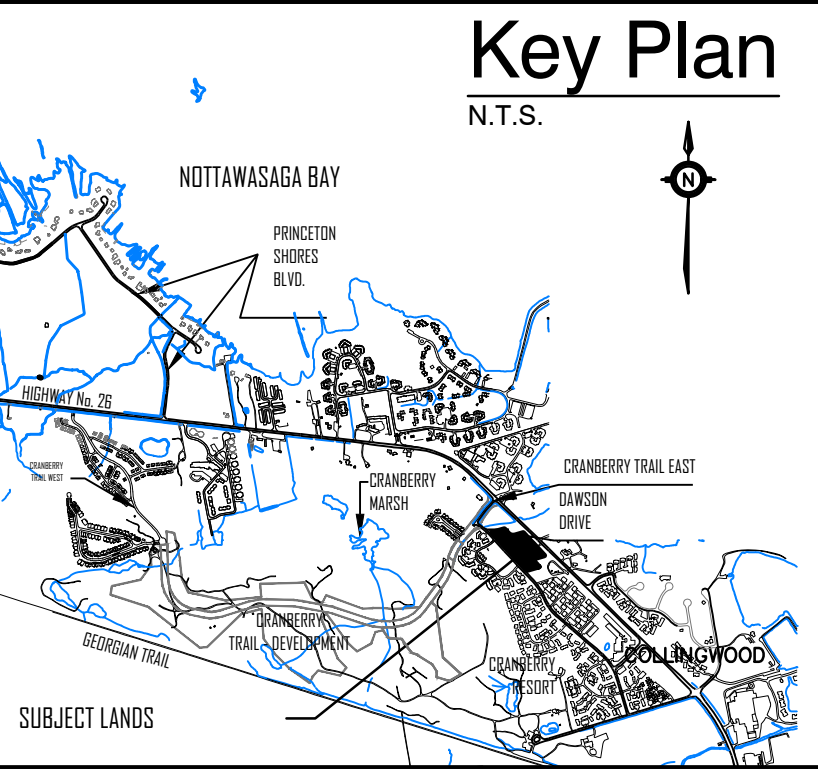
1. BACKFILL AND EMBEDMENT TO OPSD — 802.010 CLASS 'B', GRANULAR 'A' EMBEDMENT.
2. TRENCH BACKFILL TO BE SELECT NATIVE MATERIAL AS APPROVED BY ENGINEER OR IMPORTED GRANULAR MATERIAL.
3. THRUST BLOCKS TO OPSD — 1103.010 AND 1103.020 WHERE SUITABLE SOILS ARE ENCOUNTERED.
4. SERVICE CONNECTIONS TO OPSD — 1104.010, 100mm GRANULAR 'A' EMBEDMENT AND COVER OVER PIPE. TERMINATE AS NOTED C/W CURB STOP AND BOX.
5. HYDRANTS TO OPSD — 1105.010 DRAIN PLUGS SHALL BE INSTALLED WHERE HIGH WATER TABLE IS ENCOUNTERED.
6. BACKFILL AND EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
7. MINIMUM COVER ON WATERMAIN AND SERVICES TO BE 1.7m.
8. GATE VALVES, BENDS AND HYDRANT LEADS AND FITTINGS TO BE CONNECTED WITH ROLMAC GRIPPER RING RESTRAINING GLANDS. CLEARANCE BETWEEN WATERMAINS AND SEWERS TO BE AS PER MOE GUIDELINES, MINIMUM 0.5m VERTICAL SEPARATION WHERE SEWER IS ABOVE WATERMAIN & 2.5m MINIMUM HORIZONTAL SEPARATION.
9. ALL SERVICES TO BE DIRECT TAPPED.
10. FOLLOWING TESTING, CONTRACTOR SHALL OPERATE EACH WATER SERVICE TO VERIFY FULL FLOW AND PRESSURE AT THE CURB STOP TO THE SATISFACTION OF THE ENGINEER.
11. GENERAL INSTALLATION AND TESTING OF WATERMAIN AND APPURTENANCES TO BE IN ACCORDANCE WITH OPSS 701 AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS. COMPLETE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH REQUIREMENTS OF AWWA SH-95. REFER TO "DETAILS ON DW" 106 FOR TYPICAL TEMPORARY CONNECTION. ALL WATERMAIN TESTING & CHLORINATION WILL BE CONDUCTED BY TOWN OF COLLINGWOOD WATER DEPARTMENT AT CONTRACTORS COST.
12. WATERMAINS ARE NOT TO BE CONNECTED TO EXISTING WATERMAINS UNTIL BACTERIOLOGICAL TESTING HAS BEEN SUCCESSFULLY COMPLETED & CERTIFIED BY TOWN.
13. COMPLETE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH REQUIREMENTS OF O. REG. 459/00 & SATISFACTION OF TOWN.
14. WATERMAIN — CLASS 52 OR PRESSURE CLASS 350 CEMENT LINED DUCTILE IRON. CONDUCTIVITY CONNECTORS TO BE USED ON ALL JOINTS.
15. WATERMAIN SERVICES — 20mm Ø TYPE 'K' SOFT COPPER PIPE.
16. MAIN STOPS TO 301-A3H3, ¾" BALL STYLE, AWWA THREAD BY COMPRESSION CAMBRIDGE BRASS.
17. CURB STOPS TO 203-A3H3, ¾" BALL STYLE WITH DRAIN, COMPRESSION JOINT BY CAMBRIDGE BRASS.
18. A CURB STOP & EXTENSION SERVICE BOX & MAIN STOP MUST BE INSTALLED ON EACH SERVICE USING COMPRESSION JOINT FITTINGS.
19. ALL CURB STOPS FOR SERVICES WITHIN ASPHALT TO BE LOCATED IN VALVE BOXES INSTALLED FLUSH TO FINISHED GRADE OF ASPHALT. CAP FOR VALVE BOX TO BE MARKED WITH 'W' & PAINTED BLUE.
20. SERVICE BOXES TO NUMBER 7, D-I CLOW OR MUELLER, 24" BLACK ROAD STRAIGHT, 36" STAINLESS STEEL RODS STRAIGHT C/W CAP PAINTED BLUE.
21. ALL SERVICES SHALL BE METERED. METERS TO BE COMPLETE WITH REMOTE READOUT OR RADIO READ AS DETERMINED BY THE TOWN.
22. HYDRANTS — CENTURY NUMBER 1, OPEN LEFT (O/L), 2 HOSE, 338 PLUMBER PORT. 6" MJ BASE, SELF-DRAINING YELLOW BASE WITH SILVER BONNET AND PORTS.
23. VALVES — RESILIENT SEATED, RSCV MECHANICAL JOINT, OPEN LEFT CLOW OR MUELLER WITH 5-SL-48 SLIDING VALVE BOX C/W CAP PAINTED BLUE.
24. MECHANICAL JOINT DUCTILE FITTINGS — AWWA/ANSI C153/A21.53.
25. HYDRANTS TO BE INSTALLED C/W HYDRANT MARKER STAKES PER TOWN & CPU STANDARD "FLEX STAKE HYDRANT MARKER MODEL FHVB04, 48" LONG, COLOUR YELLOW WITH REFLECTIVE HYDRANT GRAPHIC ON BOTH SIDES". MARKER TO BE POSITIONED ON THE RIGHT PORT AS VIEWED FROM STREET.
26. 50mmØ WATERMAIN LOOP— TYPE 'K' COPPER.
27. ALL VALVES TO BE OPERATED BY THE COLLINGWOOD WATER DEPARTMENT OR TOWN. CONTRACTOR TO PROVIDE MIN. 48hr NOTIFICATION FOR REQUEST.
28. HYDRANTS ARE TO BE 1.67m LONG. MAKE-UP PIECES, IF REQUIRED, ARE TO BE INSTALLED IMMEDIATELY ABOVE THE BEND.
29. ALL FITTINGS ARE TO BE LEAD FREE.
30. TRACER WIRE SHALL BE INSTALLED IF CONTINUITY OF PIPE IS BROKEN. TRACER WIRE MUST BE 12 AWG THW SOLID PLASTIC COVERED, TW4 75% 600V OR APPROVED EQUIVALENT, A CONTINUITY TEST MUST ALSO BE COMPLETED AND ACCEPTED.
31. THE GEOTECHNICAL REPORT SHALL TEST THE NATIVE MATERIAL TO DETERMINE SOIL CORROSION AND COMMENT ON THE REQUIREMENT FOR CORROSION RESISTANCE MEASURES.

E) STORM SEWERS

1. MH TO OPSD 701.010 AND DCBMH TO OPSD — 701.011, 701.012, C/W SUMP UNLESS NOTED OTHERWISE.
2. STEPS TO OPSD 405.010.
3. M.H. FRAMES AND GRATES TO OPSD — 401.010 OPEN COVER.
4. DCB'S TO OPSD — 705.030, 705.040.
5. DCBMH FRAMES AND GRATES TO OPSD — 400.020.
6. PIPE SUPPORT AT DCBMH'S TO OPSD — 708.020.
7. DCB LEADS — 300mm Ø DOUBLE TO OPSD — 708.010, 708.030.
8. PROTECTION DURING CONSTRUCTION TO OPSD — 708.010.
9. BACKFILL AND EMBEDMENT TO OPSD — 802.010 (FLEXIBLE PIPE) CLASS 'B'.
10. GRANULAR 'A' EMBEDMENT OR OPSD — 802.030, 802.031 AND 802.032 (RIGID PIPE) GRANULAR 'A' EMBEDMENT.
11. BACKFILL AND EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMDD.
12. MAIN SEWERS SHALL BE PVC PIPE (OPSS 410), MIN. PIPE STIFFNESS SHALL BE 320 kPa. ALL PIPE TO BE JOINED WITH A GASKETED BELL AND SPIGOT SYSTEM.
13. FROST STRAPS PER OPSD 701.100.



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2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.			1	REVISED SITE PLAN PER TOWN COMMENTS	3/18/2008	K. A. MORRIS	B. ROBERTSON	Drawing	
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.			2	2ND SUBMISSION	10/27/2009				
4. Do not scale the drawings.			3	ISSUED FOR ENV. COMPLIANCE APPROVAL	04/23/2012				
5. All existing underground utilities to be verified in the field by the contractor prior to construction.			4	REVISED PER TOWN COMMENTS	08/22/2012				
			5	ISSUED FOR FINAL APPROVAL	11/14/2012				
			6	REVISED SITE PLAN	03/28/2019				
			7	RE-ISSUED FOR FINAL APPROVAL	09/23/2020				
			8	ISSUED FOR FOURTH SUBMISSION	01/22/2021				



ELECTRICAL LEGEND	
LIGHTING	
	POLE MOUNTED LIGHT FIXTURE
LINETYPES	
	PROPERTY LINE

SITE PLAN – PHOTOMETRIC
SCALE: 1:400

APPROVED:

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3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.
4. DO NOT SCALE THE DRAWINGS.
5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

Town

No.	Issue / Revision	Date: MM/DD/YYYY	Engineer
4	*NOT ISSUED FOR THIS SUBMISSION*	08/22/2012	
5	*NOT ISSUED FOR THIS SUBMISSION*	11/14/2012	
6	REVISED SITE PLAN	03/28/2019	
7	ISSUED FOR APPROVAL	04/12/2019	
8	ISSUED FOR REVIEW	04/17/2019	
9	ISSUED FOR REVIEW	05/16/2019	
10	ISSUED FOR CONSTRUCTION	06/18/2019	
11	ISSUED FOR 4TH SUBMISSION	01/19/2021	



Project

WATERSTONE DEVELOPMENT
TOWN of COLLINGWOOD

Drawing

SITE PLAN – PHOTOMETRIC

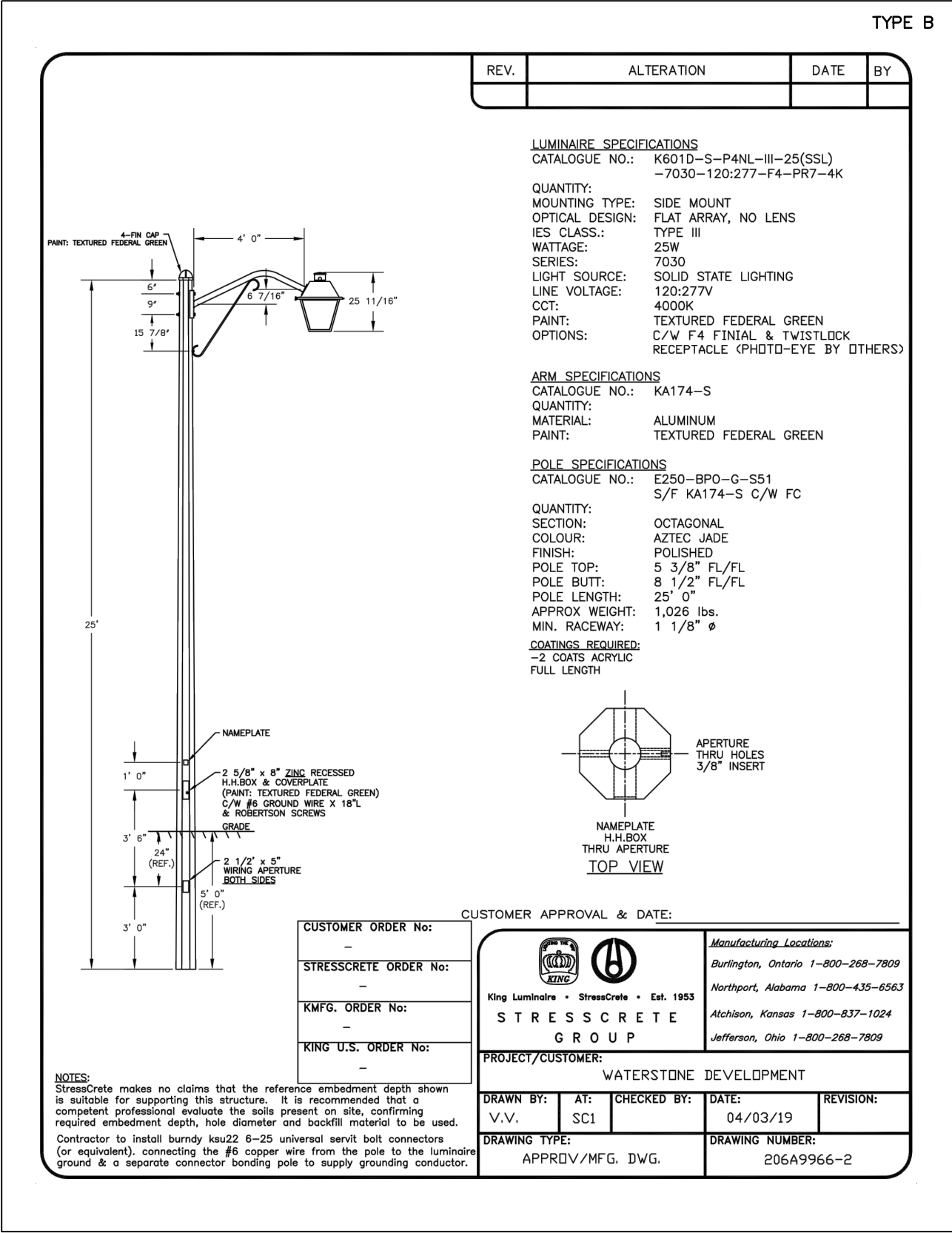
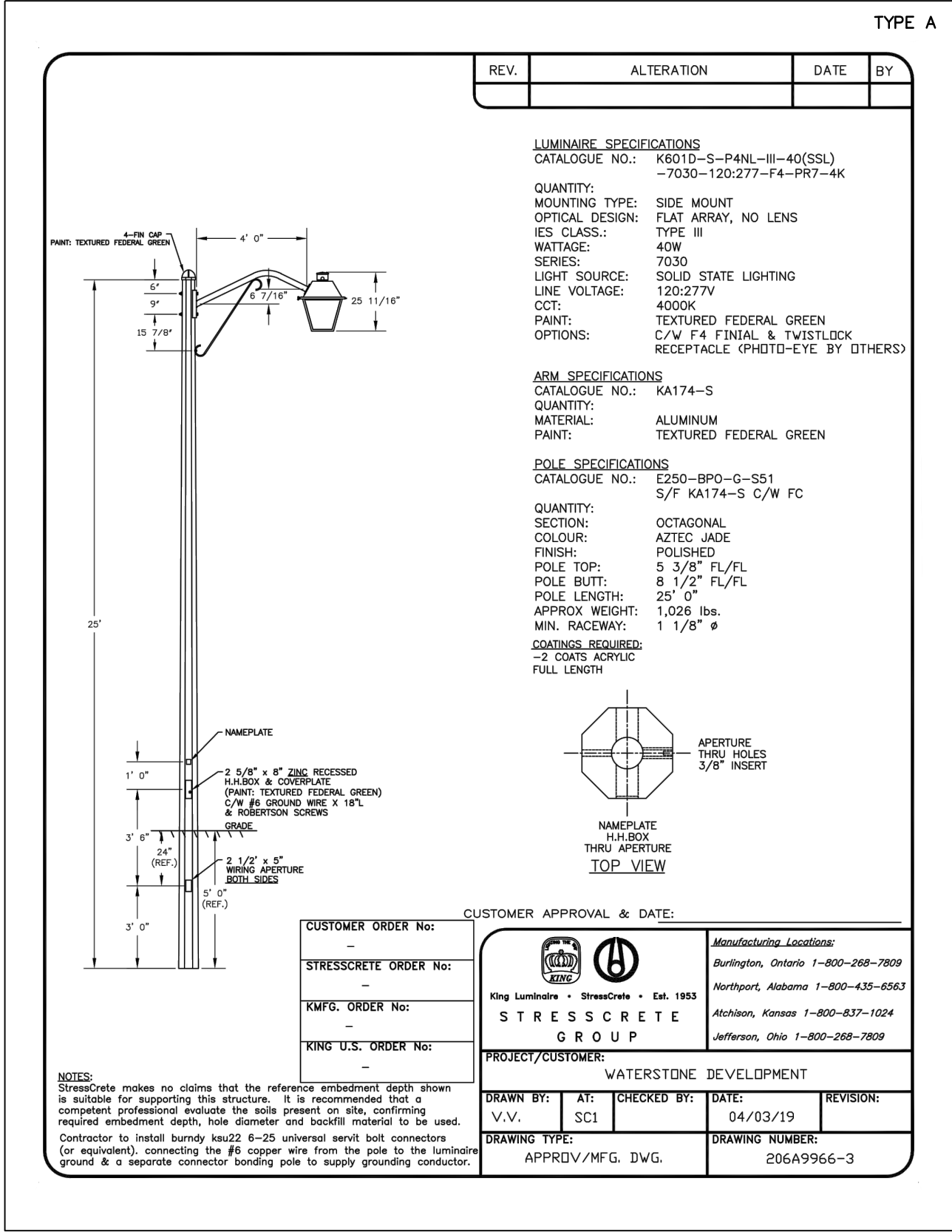


CROZIER & ASSOCIATES
Consulting Engineers

THE HARBOUREDGE
BUILDING, 40 HURON
STREET, SUITE 301,
COLLINGWOOD, ON
L9Y 4R3

705-446-3510 T
705-446-3520 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

Drawn By	J.R.B.	Check By	N.J.M./M.S.	Project No.	209-2649
Scale	1:400	Date	01/24/2019	Drawing No.	E100



LUMINAIRE SCHEDULE							
SYMBOL	LABEL	MANUFACTURER	CATALOG NUMBER	LIGHT LOSS FACTOR	MOUNTING HEIGHT	WATTAGE	DESCRIPTION
○—○	A	KING	601DPP4NL304040	0.8	MOUNTED ON 20' POLE AT 19' HEIGHT	40W	K601D-P-P4NL-III-40(SSL)-7030-19' L.C
○—○	B	KING	601DSP4NL302540	0.8	MOUNTED ON 20' POLE AT 19' HEIGHT	25W	K601D-S-P4NL-III-25(SSL)-7030-19' L.C

THE FOLLOWING NOTATIONS APPLY TO ALL LUMINAIRES IN SCHEDULE, UNLESS OTHERWISE NOTED:

- ALL LUMINAIRES SHALL UTILIZE HIGH POWER FACTOR.
- ALL LED LUMINAIRES SHALL HAVE AT LEAST 50,000 HOURS WARRANTY INCLUDING DRIVERS. ALL LUMINAIRES COLOUR TEMPERATURE SHALL BE 4000K, UNLESS OTHERWISE NOTED.

STATISTICS SCHEDULE					
DESCRIPTION	SYMBOL	AVG	MAX	MIN	AVG/MIN
STREET A	×	3.8 lux	22.9 lux	0.0 lux	N/A
STREET B	✱	3.2 lux	10.5 lux	0.2 lux	16.1:1
UPPER NORTH PARKING	+	0.9 lux	1.6 lux	0.3 lux	2.9:1
LOWER NORTH PARKING	+	0.7 lux	2.8 lux	0.1 lux	7.2:1
UPPER EAST PARKING	+	0.0 lux	0.0 lux	0.0 lux	N/A
LOWER EAST PARKING	+	0.9 lux	1.8 lux	0.1 lux	8.9:1
SOUTH PARKING	+	11.1 lux	13.0 lux	8.1 lux	1.4:1

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Town

No. Issue / Revision

Date: MM/DD/YYYY

Engineer

Engineer



Project

WATERSTONE DEVELOPMENT
TOWN of COLLINGWOOD

Drawing

LIGHTING DETAILS AND SCHEDULES



CROZIER & ASSOCIATES
Consulting Engineers

THE HARBOUREDGE
BUILDING, 40 HURON
STREET, SUITE 301,
COLLINGWOOD, ON
L9Y 4R3

705-446-3510 T
705-446-3520 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

Drawn By J.R.B.

Check By N.J.M./M.S.

Project No.

209-2649

Scale N.T.S.

Date 01/24/2019

Drawing No.

E101