

# HILL RIDGE HOMES CRANBERRY MARSH ESTATES TOWN OF COLLINGWOOD

## KEY PLAN



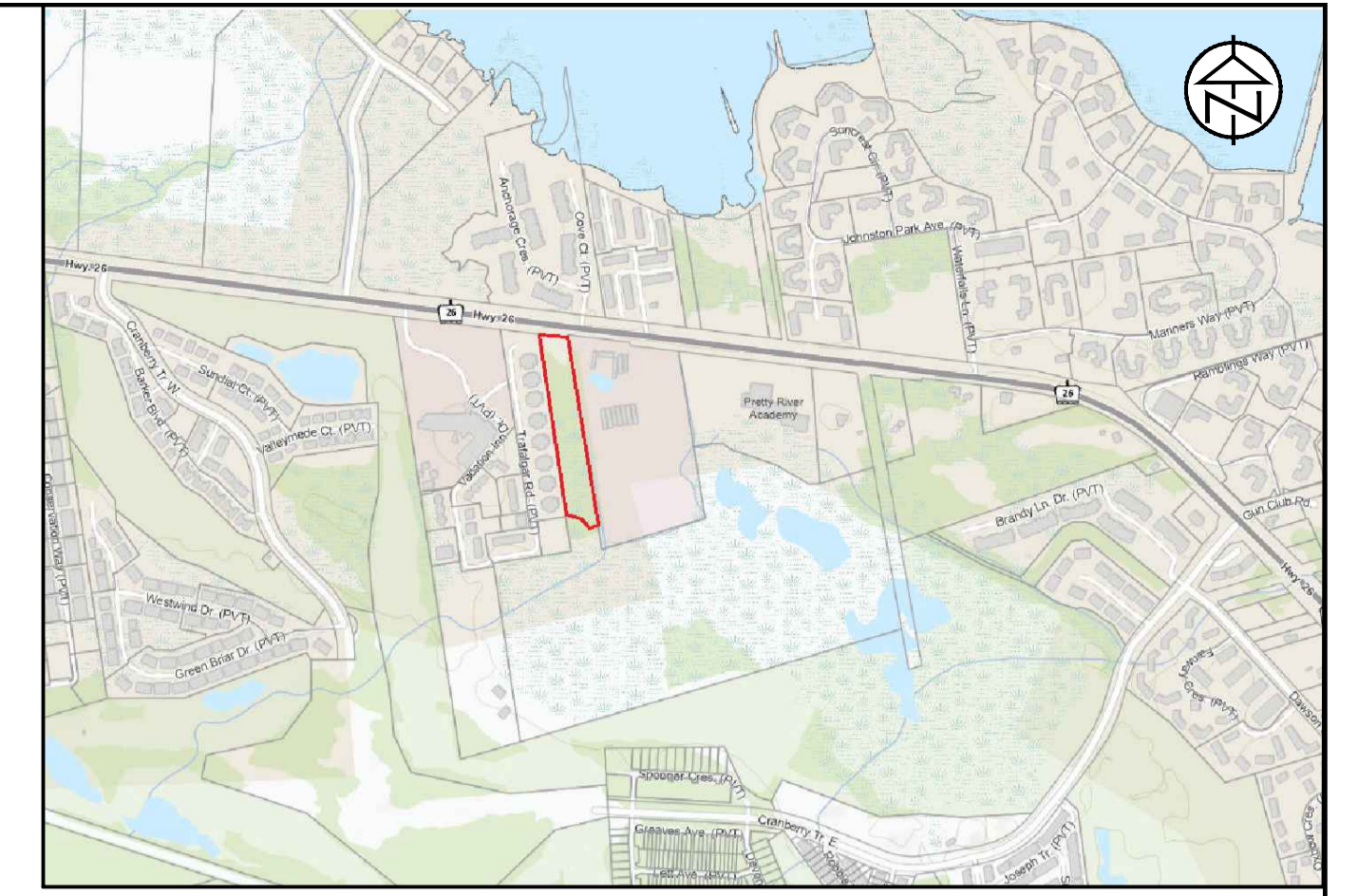
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DWG NO.	DESCRIPTION
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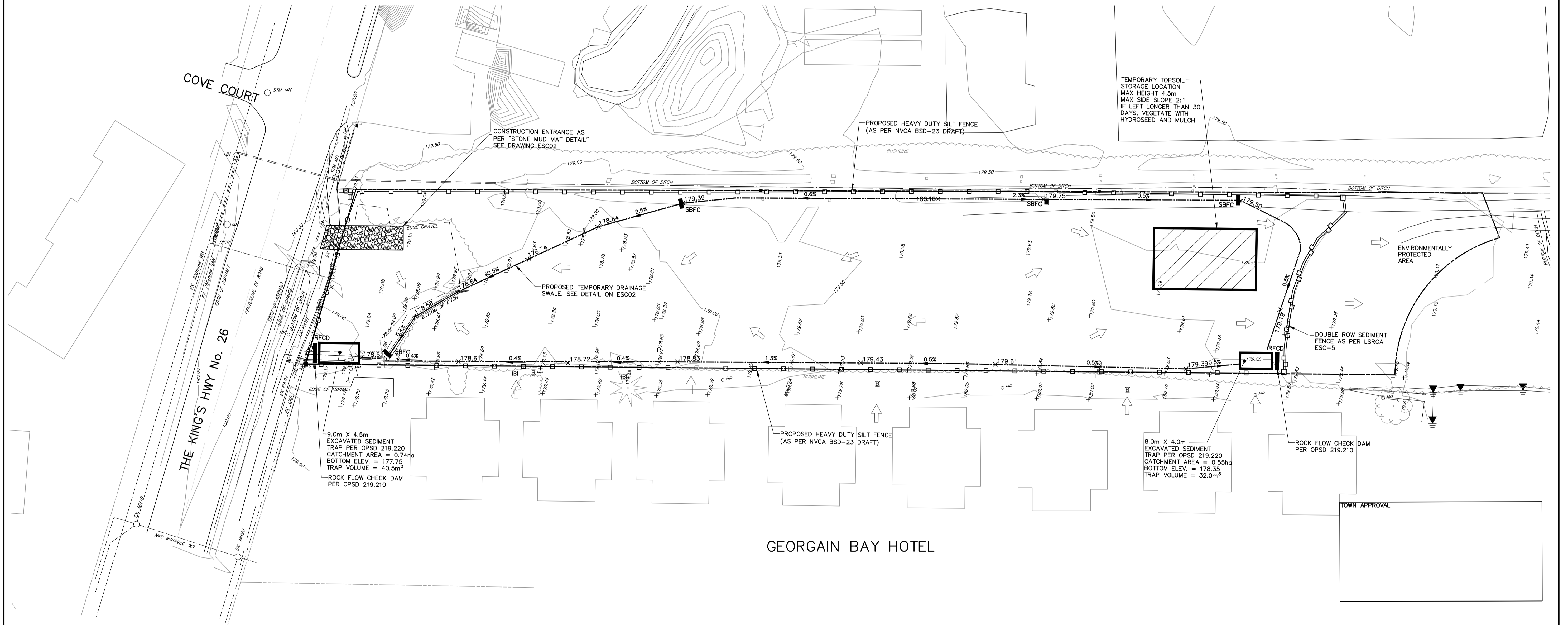
## LEGEND

PROPERTY LINE	---
EXISTING CENTERLINE	---
PROPOSED CENTERLINE	---
EXISTING EDGE OF ASPHALT	---
PROPOSED EDGE OF ASPHALT	---
EXISTING EDGE OF SHOULDER	---
PROPOSED EDGE OF SHOULDER	---
EXISTING DITCH/DIRECTION OF FLOW	--->
PROPOSED DITCH/DIRECTION OF FLOW	--->
EXISTING SANITARY SEWER/SIZE/DIRECTION OF FLOW	---> 200 <sub>0</sub> SAN
PROPOSED SANITARY SEWER/SIZE/DIRECTION OF FLOW	---> 200 <sub>0</sub> SAN
EXISTING SANITARY SERVICE	---
PROPOSED SANITARY SERVICE	---
EXISTING SANITARY FORCEMAIN/SIZE/DIRECTION OF FLOW	---> 200 <sub>0</sub> SAN F/M
PROPOSED SANITARY FORCEMAIN/SIZE/DIRECTION OF FLOW	---> 200 <sub>0</sub> SAN F/M
EXISTING WATERMAIN/SIZE	---> 150 <sub>0</sub> W/M
PROPOSED WATERMAIN/SIZE	---> 150 <sub>0</sub> W/M
EXISTING WATER SERVICE	---
PROPOSED WATER SERVICE	---
EXISTING STORM SEWER/SIZE/DIRECTION OF FLOW	---> 375 <sub>0</sub> STM
PROPOSED STORM SEWER/SIZE/DIRECTION OF FLOW	---> 375 <sub>0</sub> STM
EXISTING CULVERT	---
PROPOSED SWALE LOCATION	---
PROPOSED CULVERT	---
PROPOSED JOINT HYDRO, BELL AND ROGERS	---
EXISTING GAS MAIN	---
PROPOSED GAS MAIN	---
EXISTING FENCELINE	---
PROPOSED FENCELINE	---
EXISTING BUSHLINE	---
EXISTING CONTOUR	--- 179.00
EXISTING SPOT ELEVATION	x 179.00
PROPOSED SPOT ELEVATION	x 179.00
EXISTING GRADING DIRECTION	---
PROPOSED GRADING DIRECTION	---
PROPOSED SWALE LOCATION	---
EXISTING TEMPORARY BENCHMARK	• TBM
EXISTING STANDARD IRON BAR	• SIB
EXISTING BOREHOLE/NUMBER	◆ BH#
EXISTING GAS VALVE	◇ GAS
EXISTING HYDRO TRANSFORMER	⊠
EXISTING CABLE PEDESTAL	⊠
EXISTING BELL PEDESTAL	⊠
EXISTING BELL MAINTENANCE HOLE	○ BELL MH
EXISTING BELL POLE	○ BP
EXISTING HYDRO POLE	○ HP
EXISTING HYDRO GUY WIRE	---
PROPOSED LIGHT STANDARD	• LS
EXISTING DECIDUOUS TREE	⊗
EXISTING CONIFEROUS TREE	⊗
EXISTING SANITARY MAINTENANCE HOLE/NUMBER	○ SAN MH#
PROPOSED SANITARY MAINTENANCE HOLE/NUMBER	● SANMH#
EXISTING HYDRANT AND VALVE	◆ HYD & WV
PROPOSED HYDRANT AND VALVE	◆ HYD & WV
EXISTING WATER VALVE	◇ WV
PROPOSED WATER VALVE	◇ WV
PROPOSED CURB STOP VALVE	◇ CSV
EXISTING STORM MAINTENANCE HOLE	○ STM MH
EXISTING CATCH BASIN	□ CBMH #
TACTILE SURFACE INDICATORS	⊠
TRANSFORMER AND GROUNDING RODS	⊠
SWITCHGEAR	⊠
LIGHTING PEDESTAL	⊠
STOP SIGN	⊠

GREENTREE GARDENS  
& EMPORIUM



KEY PLAN



TOWN APPROVAL

LEGEND	
PROPOSED STRAW BALE FLOW CHECK (AS PER OPSD 219.210)	SBFC
PROPOSED ROCK FLOW CHECK (AS PER OPSD 219.180)	RFCD
PROPOSED HEAVY DUTY SILT FENCE (AS PER NVCA BSD-23 DRAFT)	□
PROPOSED SWALE / DITCH	0.5%
EXISTING OVERLAND FLOW	→

**DISCLAIMER AND COPYRIGHT**  
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**BENCHMARKS**  
ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM BENCH MARK No. 0011972U311 HAVING A PUBLISHED ELEVATION OF 181.032 METRES.

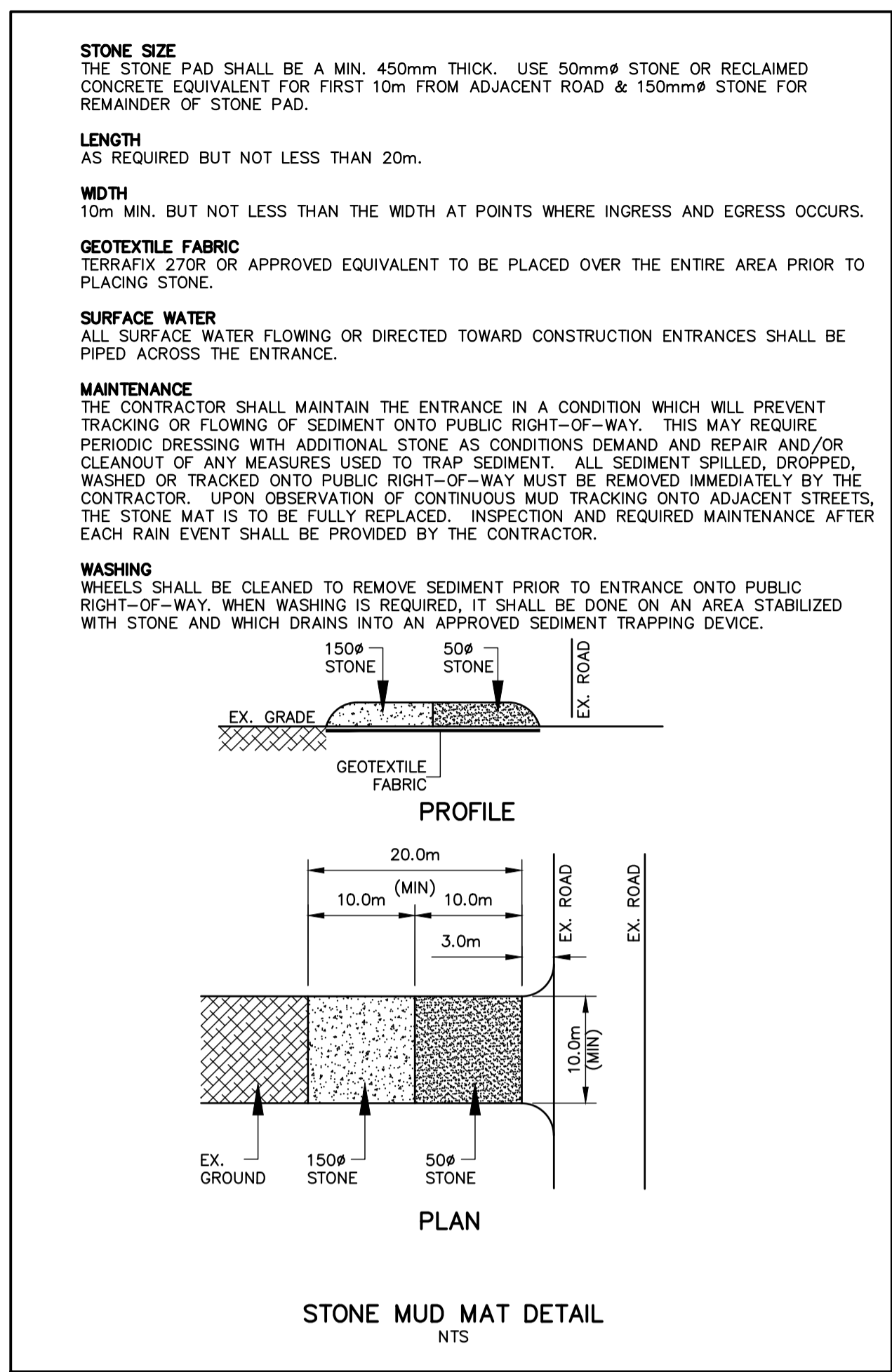
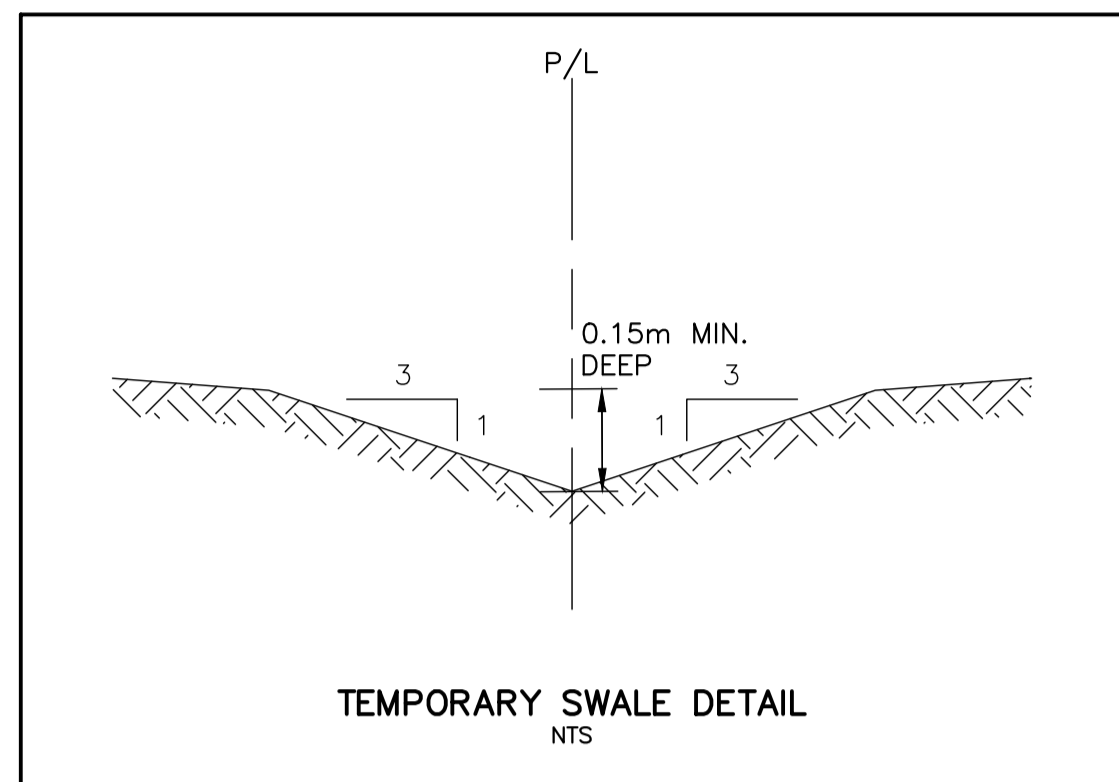
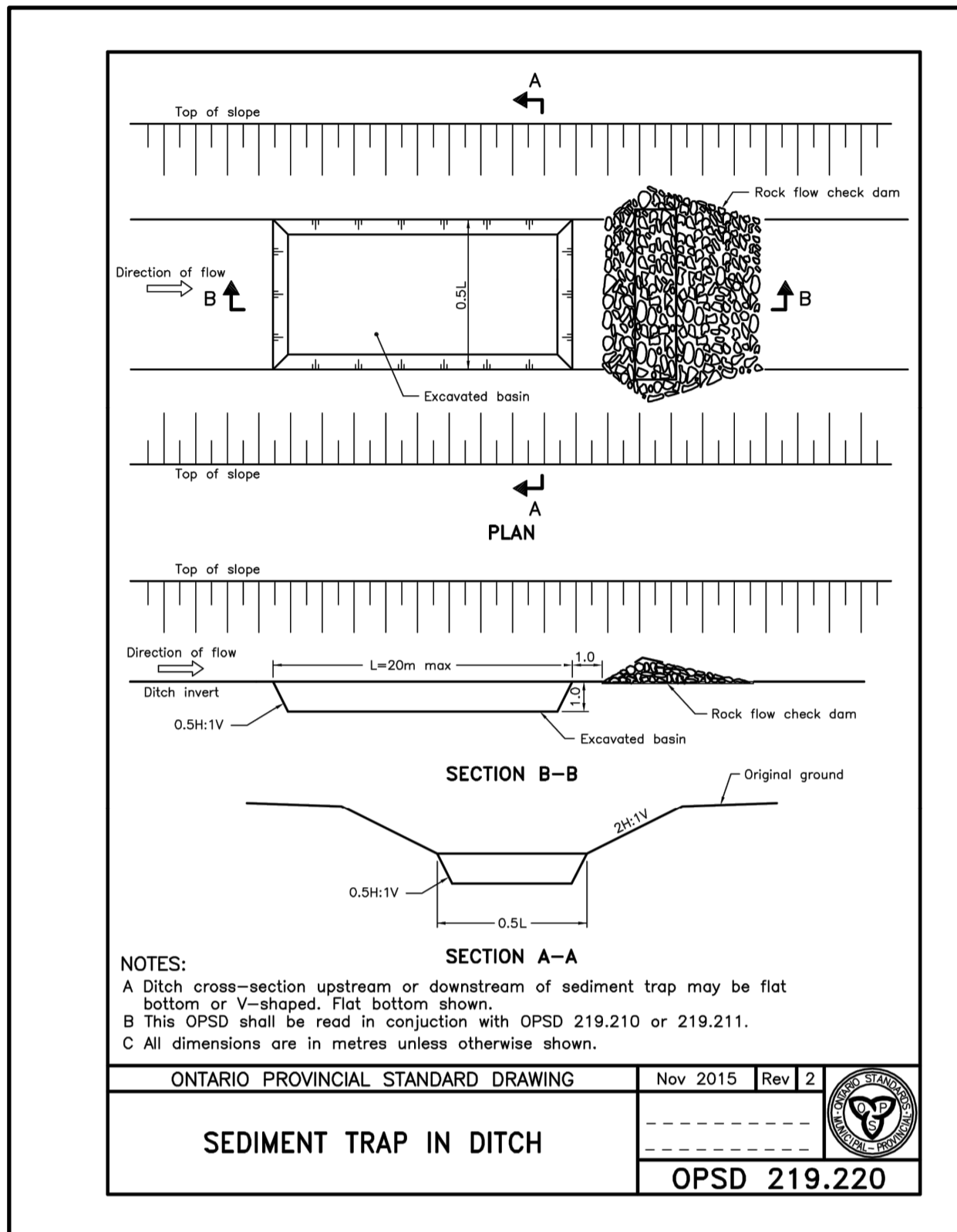
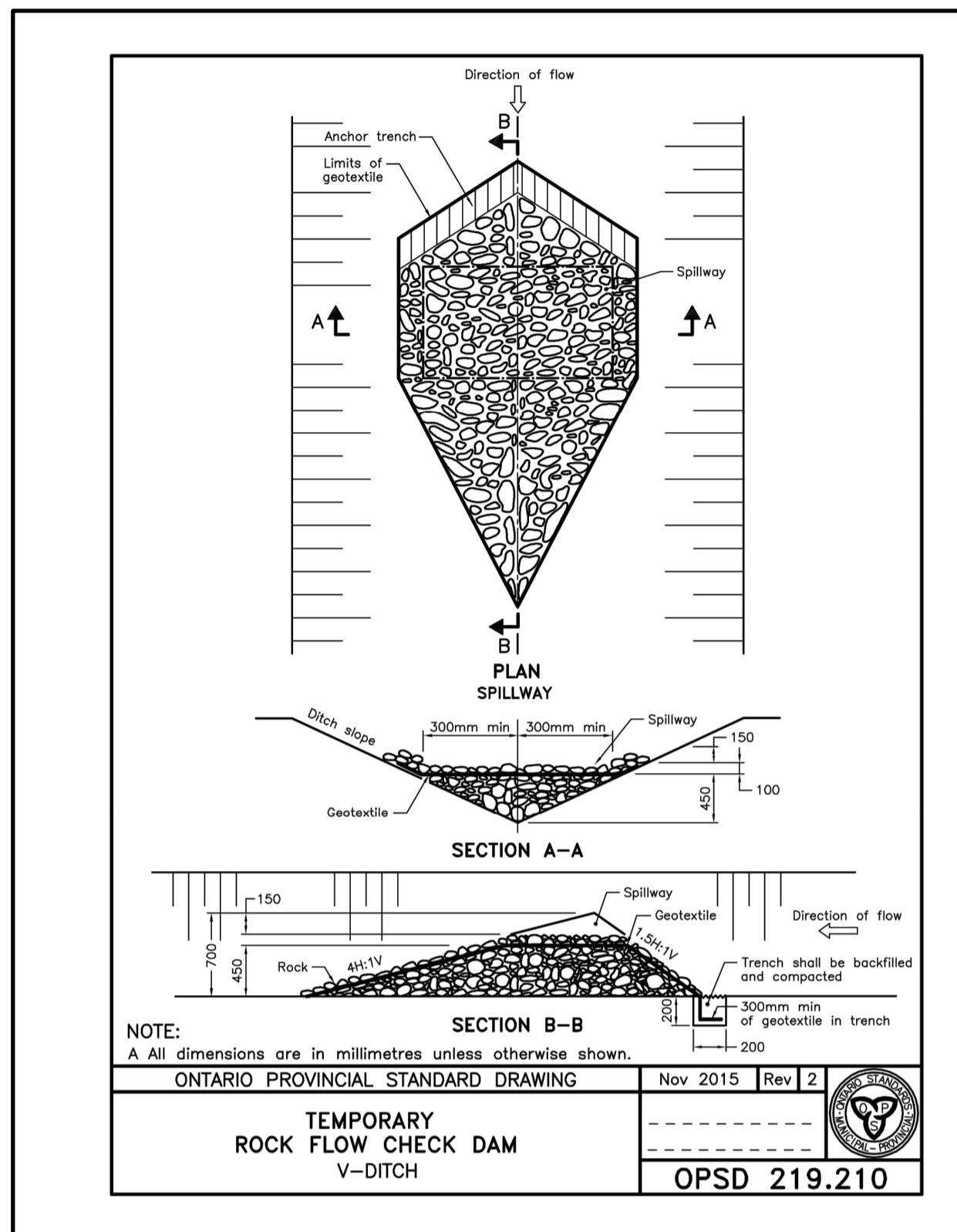
**NOTES**  
LEGAL SURVEY INFORMATION AND LOT DIMENSIONS SHOWN ON THIS PLAN ARE TAKEN FROM A SURVEY PLAN PREPARED BY PATTEN & THOMSEN LTD, DATED, JANUARY 2, 2012 JOB No. 66-170-6  
TOPOGRAPHIC SURVEY COMPLETED BY TATHAM ENGINEERING OCTOBER, 2022.

No.	REVISION DESCRIPTION	DATE	ENGINEER STAMP
1.	1ST SUBMISSION	03/22	
2.	2ND SUBMISSION	12/22	

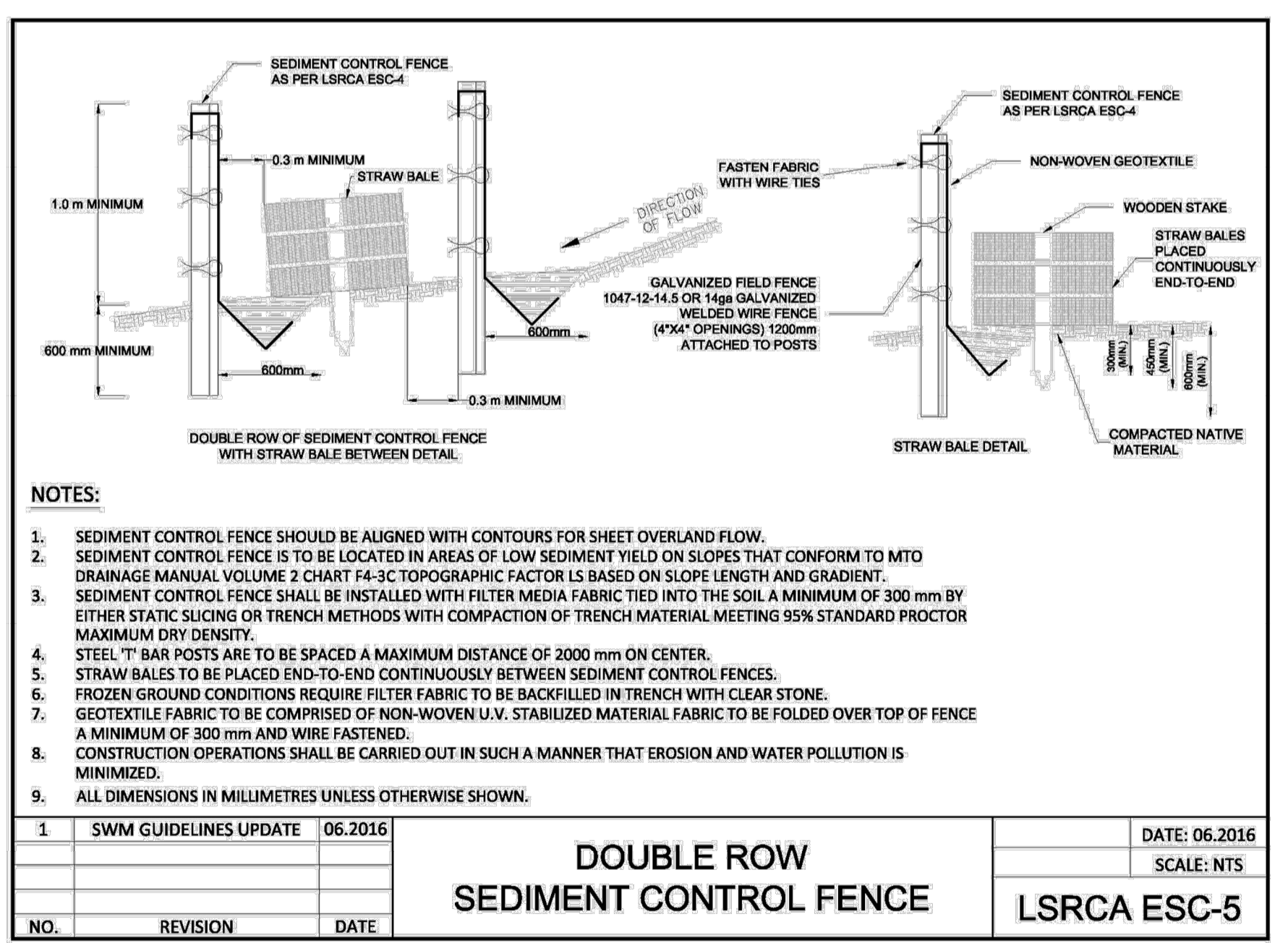
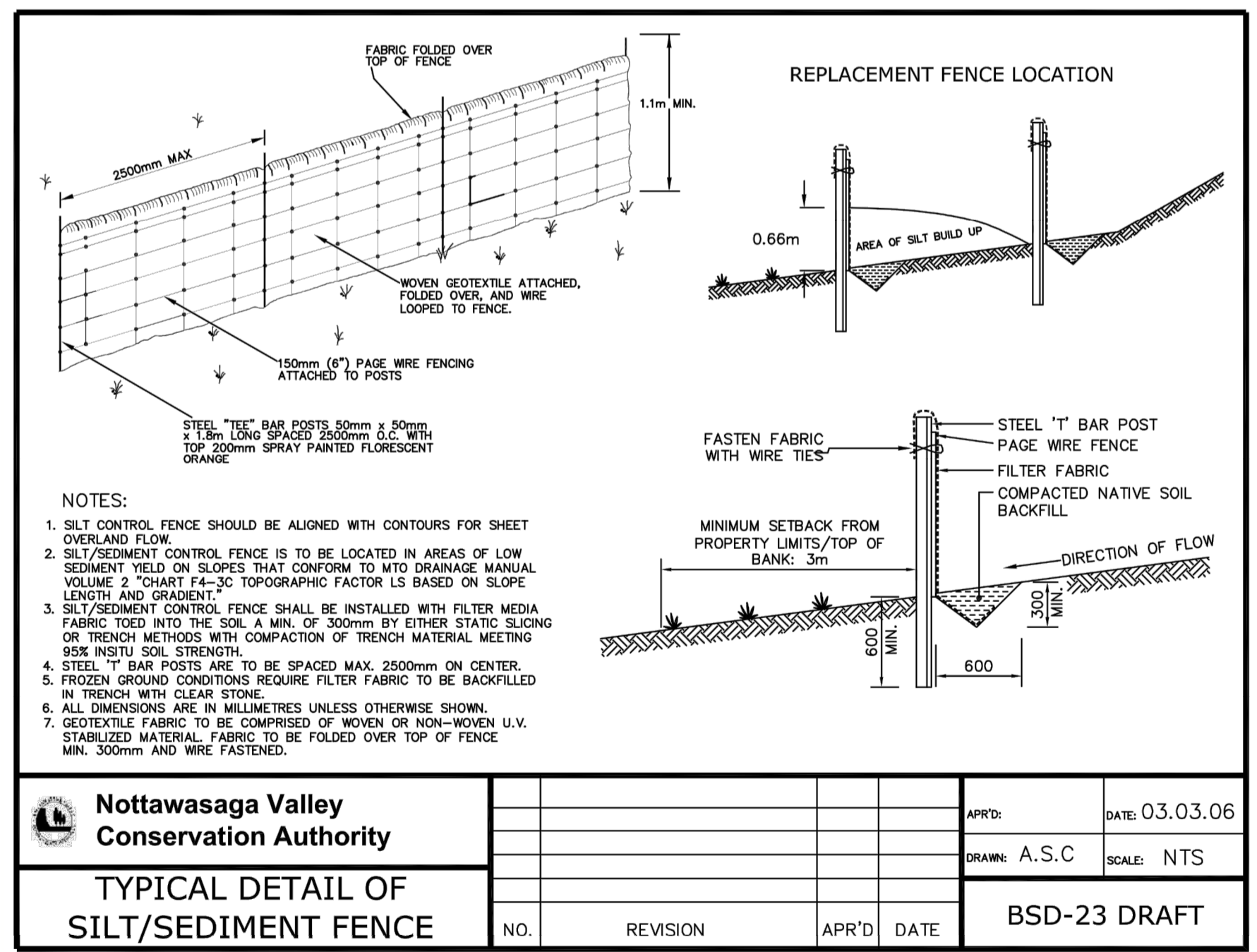
ENGINEER STAMP  
LICENSED PROFESSIONAL ENGINEER  
2022.12.01  
D. M. CASULLO  
PROVINCE OF ONTARIO

**CRANBERRY MARSH ESTATES**  
TOWN OF COLLINGWOOD  
**EROSION AND SEDIMENT CONTROL PLAN**

**TATHAM ENGINEERING**  
DESIGN: KG FILE: 120181 DWG:  
DRAWN: KB/SBU DATE: MAR 2022 **ESC-1**  
CHECK: DC SCALE: 1:500



- NOTES**
1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SEDIMENT AND EROSION CONTROL MEASURES THAT ARE DESIGNED TO CONTROL RUNOFF FROM SPECIFIC AREAS MUST BE INSTALLED PRIOR TO ANY DISTURBANCE OF THAT PART OF THE SITE. THE LOCATION OF ALL SILTATION AND EROSION CONTROL WORKS TO BE REVIEWED ON SITE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER.
  2. THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES. SUCH MEASURES MUST BE PRESENTED IN WRITING TO THE ENGINEER FOR APPROVAL OF THE TOWN AND NOTTAWASAGA VALLEY CONSERVATION AUTHORITY.
  3. THE CONTRACTOR SHALL HAVE MATERIALS AVAILABLE ON SITE TO REPAIR SEDIMENT AND EROSION CONTROL MEASURES IN THE EVENT OF UNFORESEEN CONDITIONS SUCH AS HIGH WATER, EXTREME RAINFALL EVENTS, ETC.
  4. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED, CLEANED AND MAINTAINED BY THE CONTRACTOR AFTER EACH STORM EVENT. ALL WORKS WILL BE INSPECTED BY THE ENGINEER BI-WEEKLY AND AFTER EACH MAJOR STORM EVENT.
  5. CONSTRUCTION OF ALL SILTATION AND EROSION CONTROL WORK IS TO BE IN ACCORDANCE WITH THE FOLLOWING STEPS:
    - 5.1. INSTALL NEW OR MAINTAIN EXISTING STONE MUD MAT AS PER DETAIL.
    - 5.2. INSTALL SILT FENCE AS PER NVCA STANDARDS (BSD-23).
    - 5.3. INSTALL TEMPORARY CATCH BASIN SEDIMENT TRAPS ON ALL NEW AND EXISTING CATCH BASINS. SEDIMENT TRAPS TO BE RECTANGULAR BY LAYFIELD OR APPROVED EQUAL. ALL CATCH BASINS TO REMAIN SCREENED UNTIL BASE COURSE ASPHALT IS PLACED AND LOT GRADING IS COMPLETE.
  6. ALL CONSTRUCTION VEHICLES TO ACCESS SITE USING THE DESIGNATED CONSTRUCTION ACCESS POINTS.
  7. EROSION AND SEDIMENT CONTROL MEASURES TO BE REMOVED BY THE CONTRACTOR ONCE GROUND COVER IS ESTABLISHED AND LANDSCAPING IS COMPLETE AND APPROVED BY THE ENGINEER.
  8. STOCKPILE LOCATIONS ARE TO BE APPROVED BY THE ENGINEER.
  9. PROVIDE FENCE OR APPROVED EQUAL ACROSS ALL CONSTRUCTION ACCESSES DURING PERIODS OF INACTIVITY.
  10. CONSTRUCTION AREAS THAT EXCEED 30 DAYS OF INACTIVITY SHALL BE STABILIZED BY SEEDING IN ACCORDANCE WITH THE NOTTAWASAGA VALLEY CONSERVATION AUTHORITY'S TECHNICAL DESIGN GUIDELINES, STANDARDS AND POLICIES FOR SILTATION AND EROSION CONTROL. CONSTRUCTION CONTROL REQUIREMENTS, NOTES 1, 2 AND 3 AND/OR AS DIRECTED BY THE TOWN. THIS IS TO INCLUDE STOCKPILES OF FILL AND TOPSOIL.



<b>Nottawasaga Valley Conservation Authority</b>		APR'D:	DATE: 03.03.06
TYPICAL DETAIL OF SILT/SEDIMENT FENCE		DRAWN: A.S.C	SCALE: NTS
NO.	REVISION	APR'D	DATE
			BSD-23 DRAFT

<b>DOUBLE ROW SEDIMENT CONTROL FENCE</b>		DATE: 06.2016
LRSRA ESC-5		SCALE: NTS
NO.	REVISION	DATE
1	SWM GUIDELINES UPDATE	06.2016

TOWN APPROVAL

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**BENCHMARKS**  
ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM BENCH MARK No. 0011972U311 HAVING A PUBLISHED ELEVATION OF 161.032 METRES.

**NOTES**  
LEGAL SURVEY INFORMATION AND LOT DIMENSIONS SHOWN ON THIS PLAN ARE TAKEN FROM A SURVEY PLAN PREPARED BY PATTEN & THOMSEN LTD, DATED, JANUARY 2, 2012 JOB No. 66-170-6  
TOPOGRAPHIC SURVEY COMPLETED BY TATHAM ENGINEERING OCTOBER, 2022.

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1.	1ST SUBMISSION	03/22	
2.	2ND SUBMISSION	12/22	

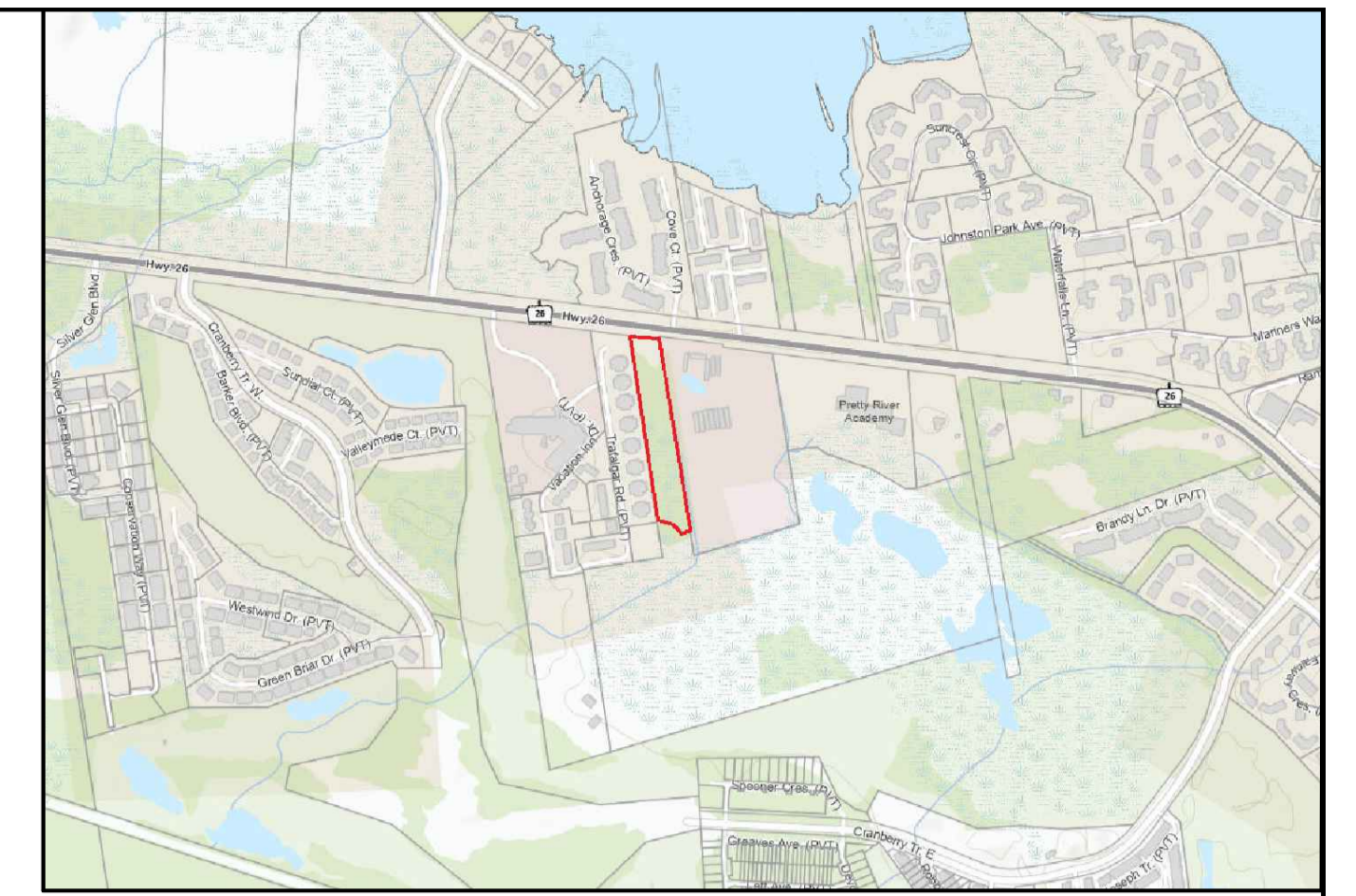
**CRANBERRY MARSH ESTATES**  
TOWN OF COLLINGWOOD

**EROSION AND SEDIMENT CONTROL DETAILS**

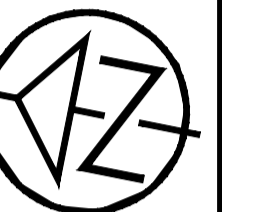
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DRAWN: KH/SBU  
DATE: MAR 2022  
CHECK: DC  
SCALE: N.T.S.

**TATHAM ENGINEERING**

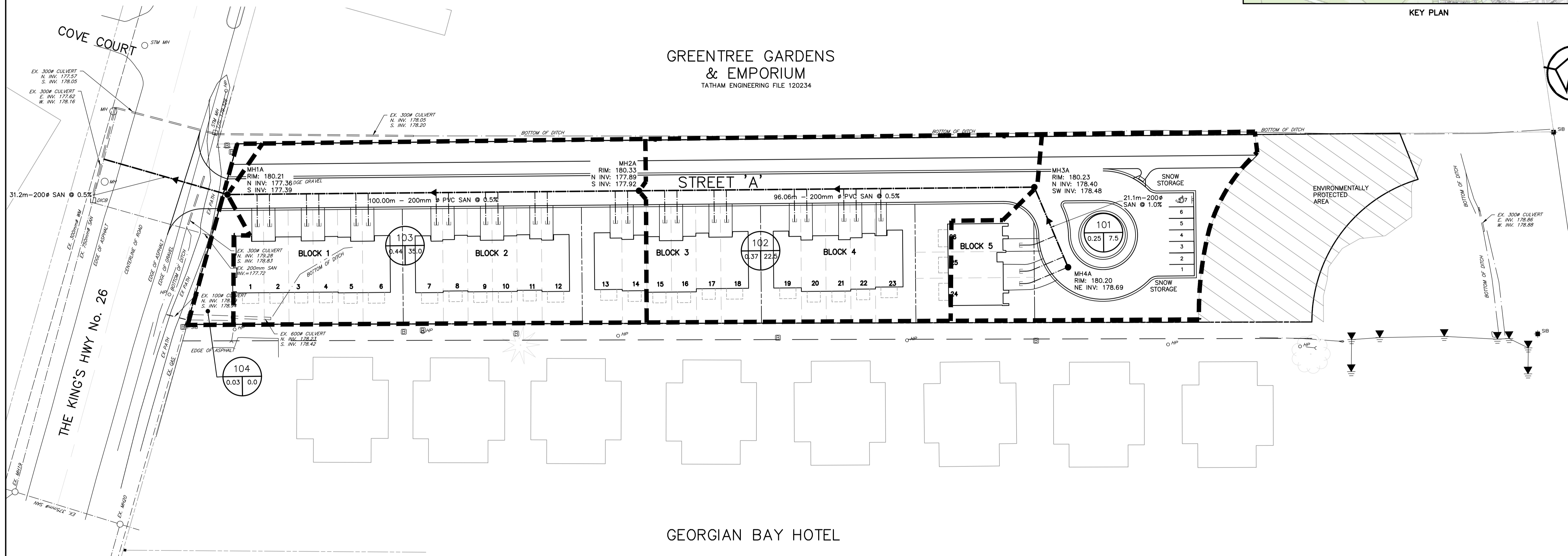
ESC-2



KEY PLAN



GREENTREE GARDENS  
& EMPORIUM  
TATHAM ENGINEERING FILE 120234



LEGEND	
SANITARY AREA BOUNDARY	-----
AREA IDENTIFICATION NUMBER	101
AREA IN HECTARES	0.25 7.2
POPULATION BASED ON 2.4 PERSONS PER UNIT	

TOWN APPROVAL

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2.	2ND SUBMISSION	12/22

ENGINEER STAMP

**CRANBERRY MARSH ESTATES**  
TOWN OF COLLINGWOOD  
  
SANITARY DRAINAGE PLAN

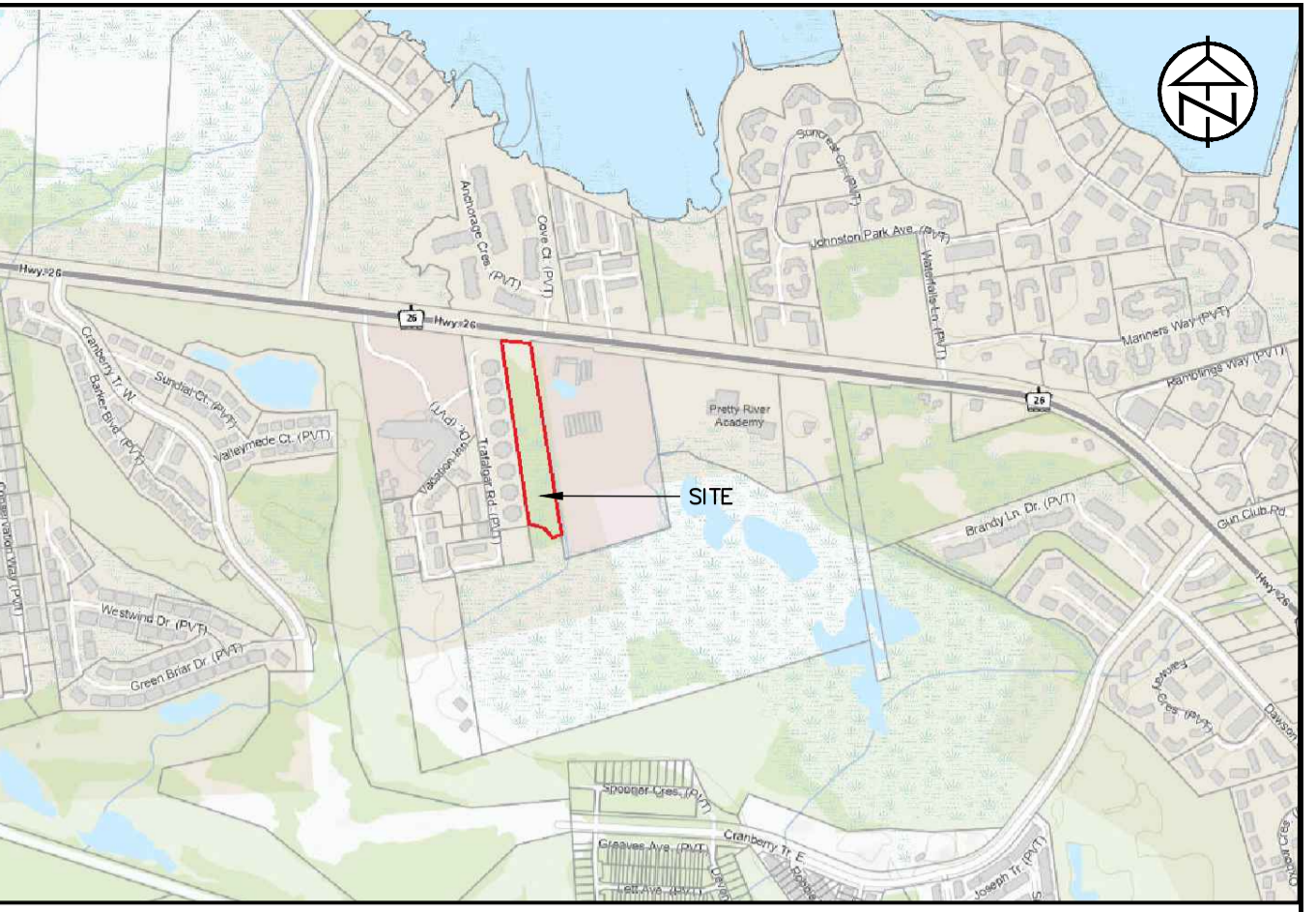
**TATHAM ENGINEERING**

DESIGN: KG	FILE: 120181	DWG: <b>SAN-1</b>
DRAWN: KH/SBU	DATE: NOV 2021	
CHECK: DC	SCALE: 1:500	

**LEGEND**

AREA BOUNDARY	
AREA IDENTIFICATION NUMBER	
AREA IN HECTARES	
RUNOFF COEFFICIENT	
EXISTING MAJOR OVERLAND FLOW DIRECTION	
EXISTING DITCH FLOW DIRECTION	

TOWN APPROVAL



KEY PLAN



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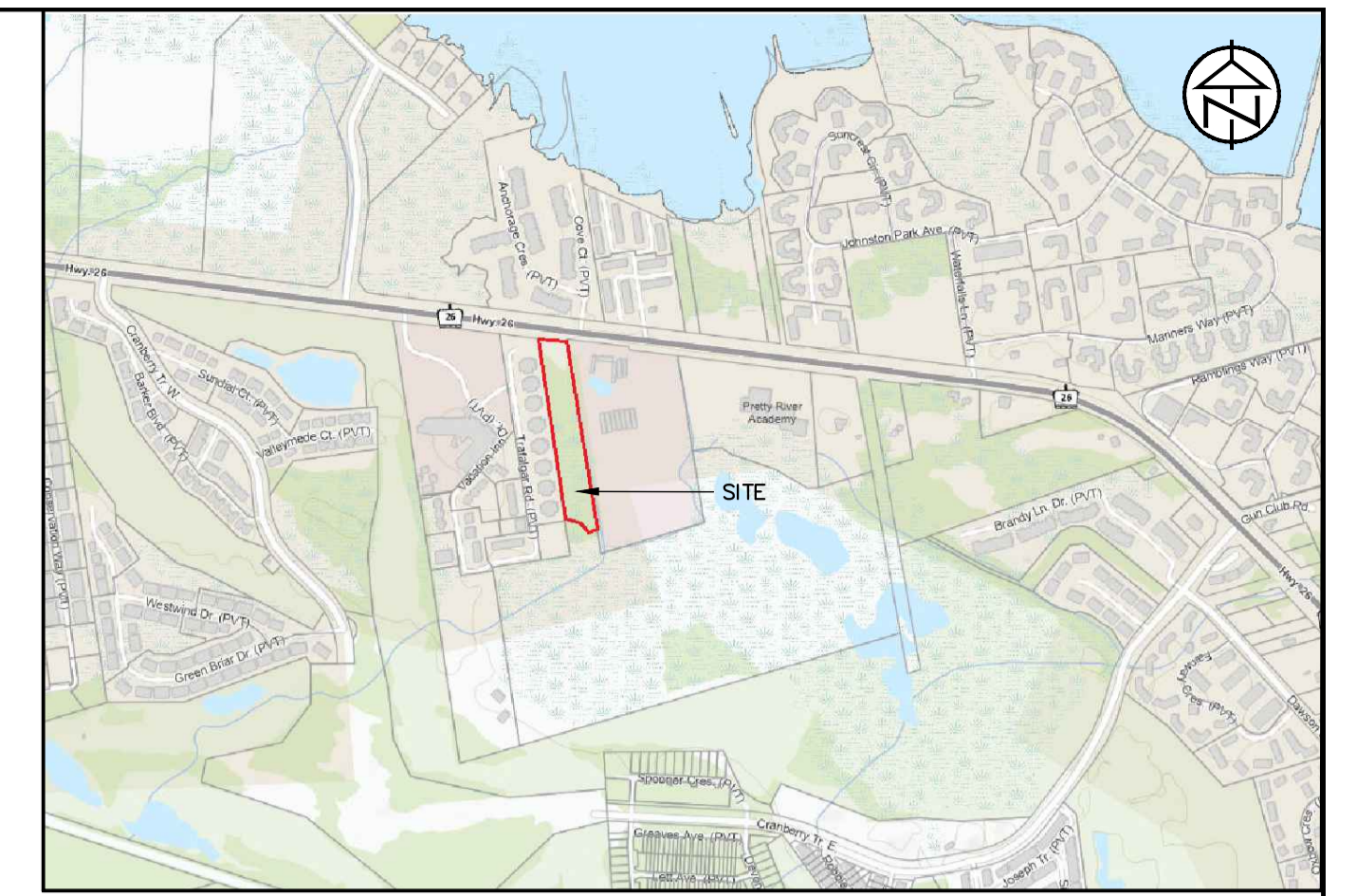
No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	03/22
2.	2ND SUBMISSION	12/22

ENGINEER STAMP

**CRANBERRY MARSH ESTATES**  
**TOWN OF COLLINGWOOD**  
**PRE-DEVELOPMENT DRAINAGE PLAN**

**TATHAM ENGINEERING**  
 DESIGN: KG  
 DRAWN: KH/SBU  
 CHECK: DC  
 FILE: 120181  
 DATE: DEC 2021  
 SCALE: 1:500  
 DWG: **DP-1**

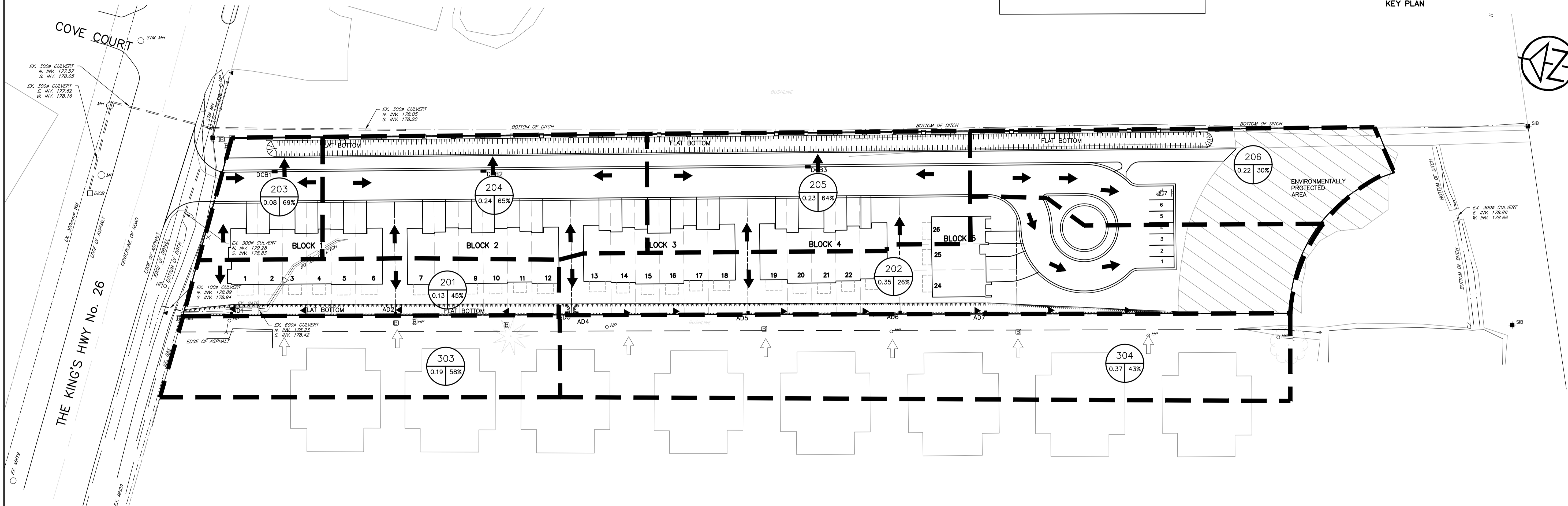
LEGEND	
AREA BOUNDARY	
AREA IDENTIFICATION NUMBER	201
AREA IN HECTARES	1.40 65%
CN VALUE/PERCENT IMPERVIOUS	
PROPOSED MAJOR OVERLAND FLOW DIRECTION	
EXISTING MAJOR OVERLAND FLOW DIRECTION	
PROPOSED FLOW DIRECTION	



KEY PLAN

## GREENTREE GARDENS & EMPORIUM

TOWN APPROVAL



## GEORGAIN BAY HOTEL

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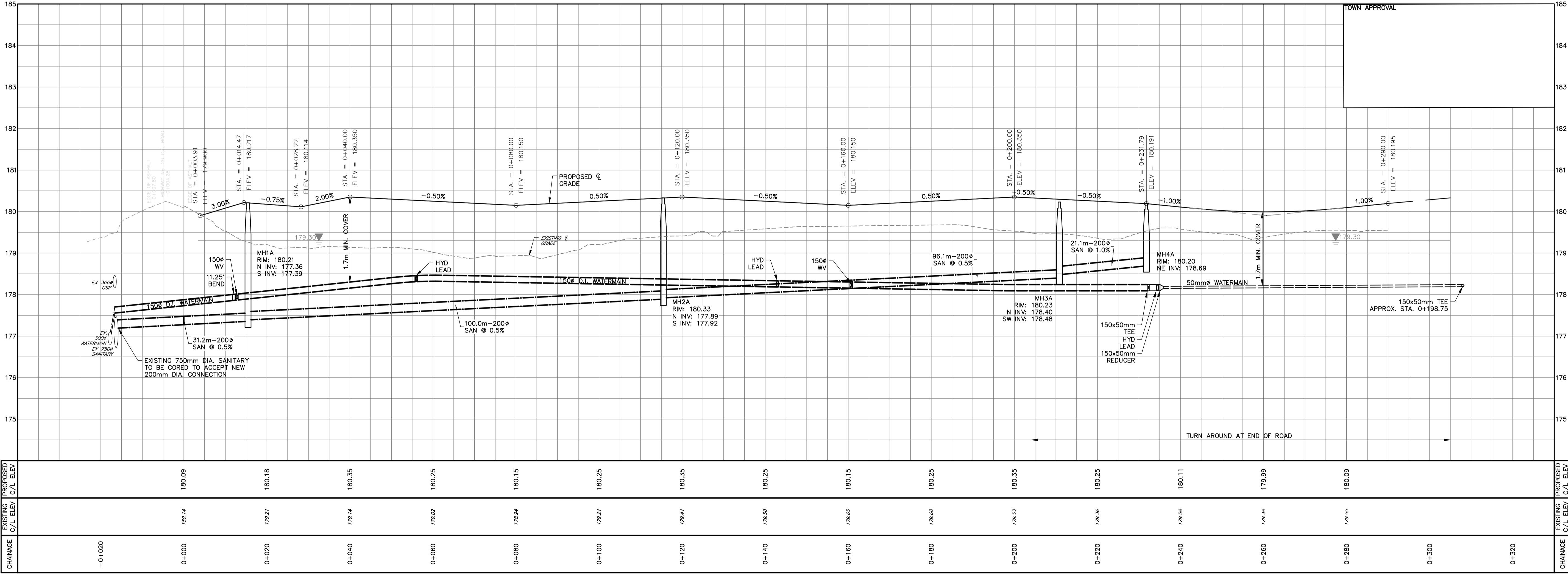
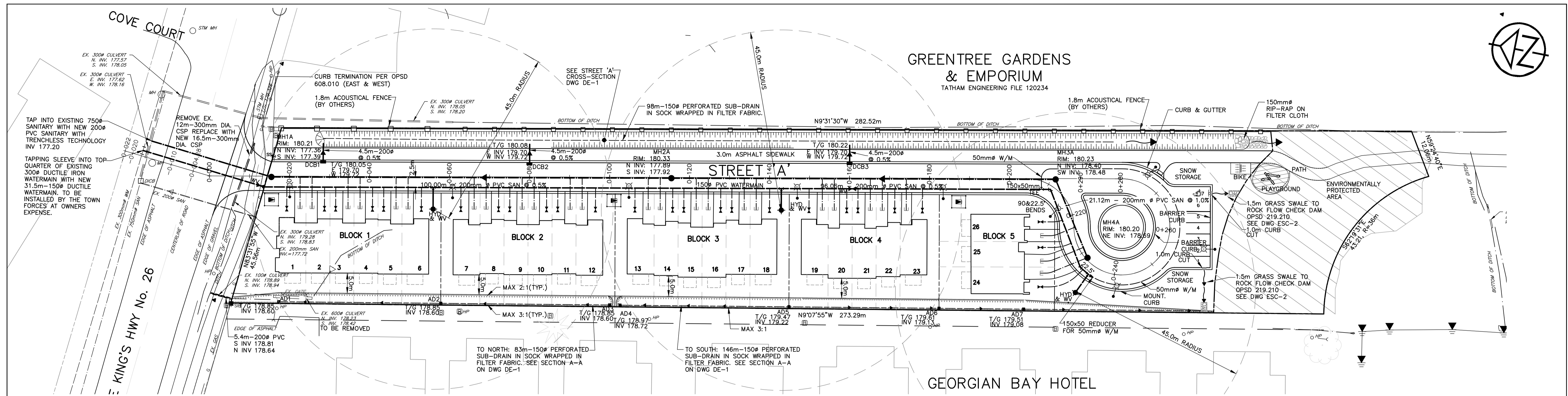
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1.	1ST SUBMISSION	03/22
2.	2ND SUBMISSION	12/22

ENGINEER STAMP

**CRANBERRY MARSH ESTATES**  
**TOWN OF COLLINGWOOD**

POST-DEVELOPMENT  
DRAINAGE PLAN

DESIGN: KG	FILE: 120181
DRAWN: KH/SBU	DATE: FEB 2022
CHECK: DC	SCALE: 1:500
<b>DWG: DP-2</b>	



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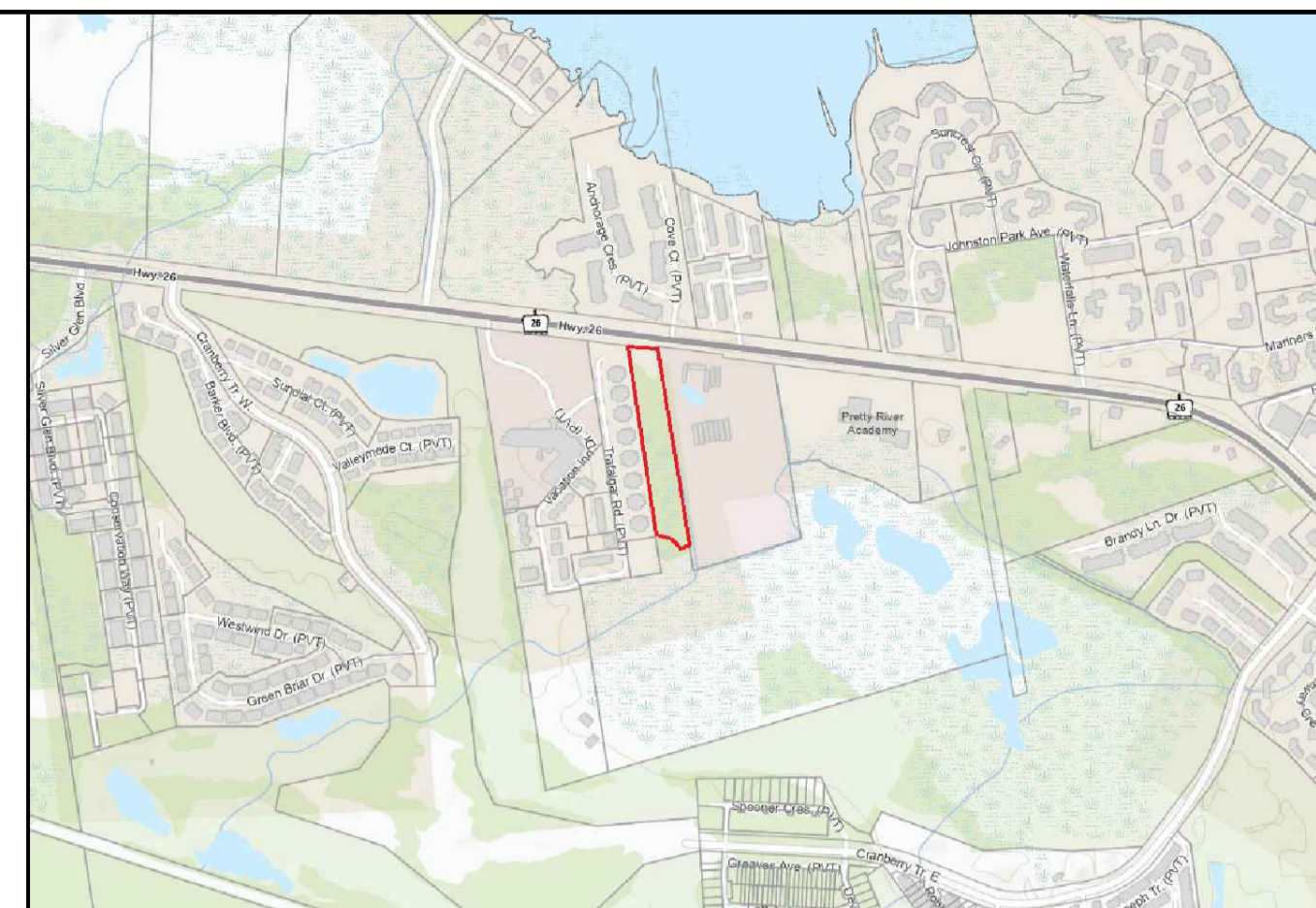
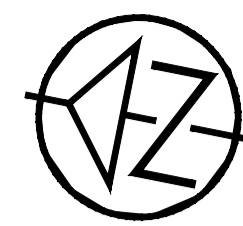
No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	03/22
2.	2ND SUBMISSION	12/22

**ENGINEER STAMP**  
 LICENSED PROFESSIONAL ENGINEER  
 2022.12.01  
 D. M. CASULLO  
 PROVINCE OF ONTARIO

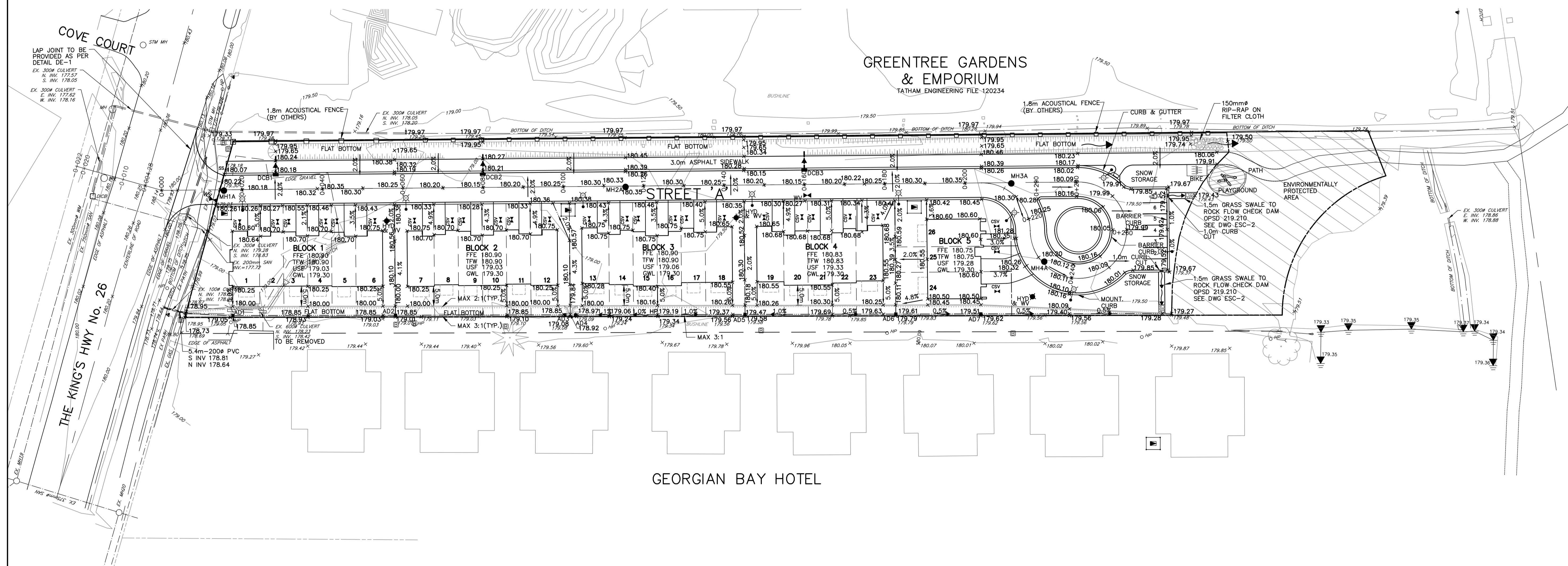
**CRANBERRY MARSH ESTATES**  
 TOWN OF COLLINGWOOD  
**SITE SERVICING**  
**PLAN AND PROFILE**

**TATHAM ENGINEERING**

DESIGN: KG	FILE: 120181	DWG:
DRAWN: KH/SBU	DATE: MAR 2022	<b>PP-1</b>
CHECK: DC	SCALE: H-1:500 V-1:50	



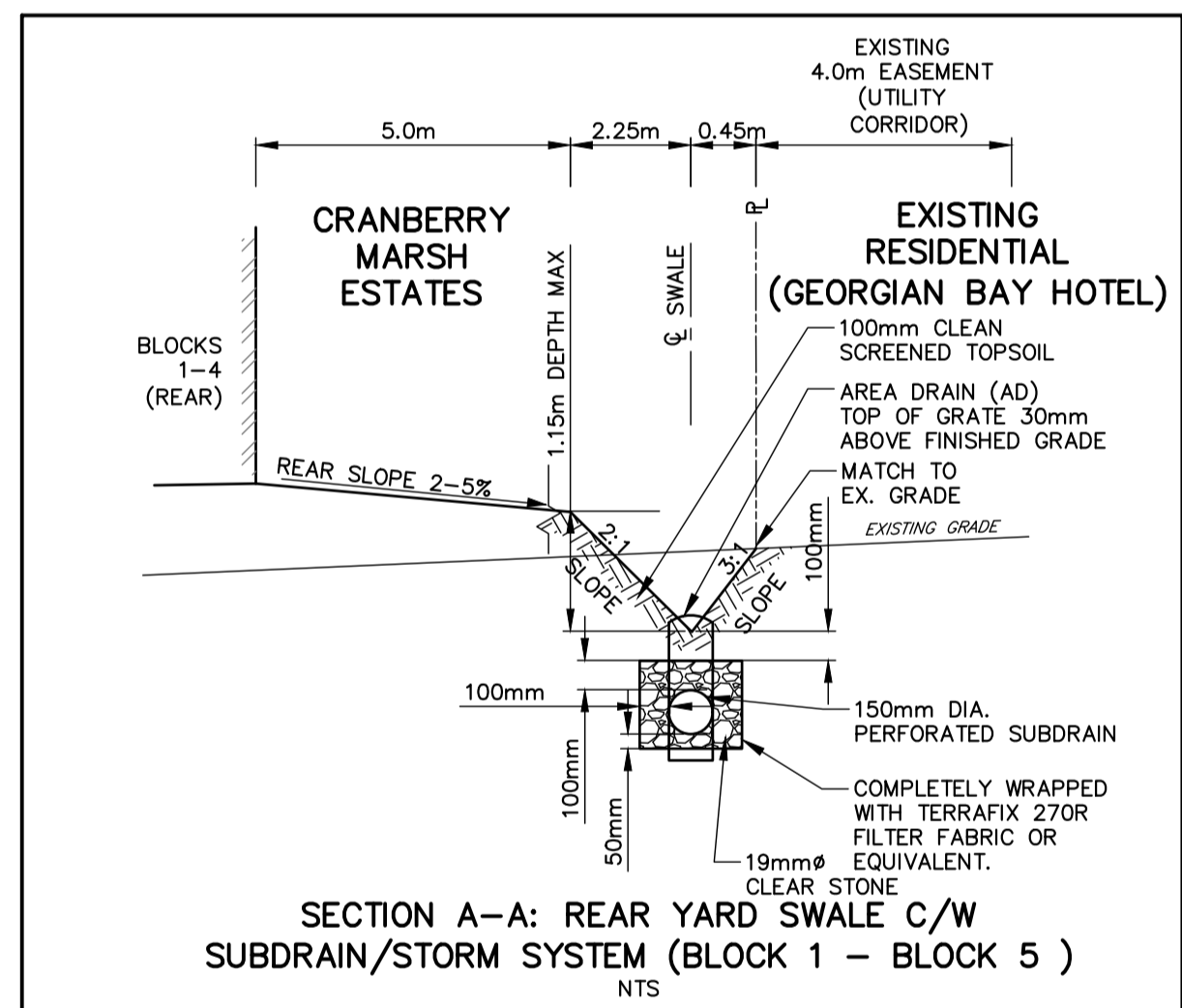
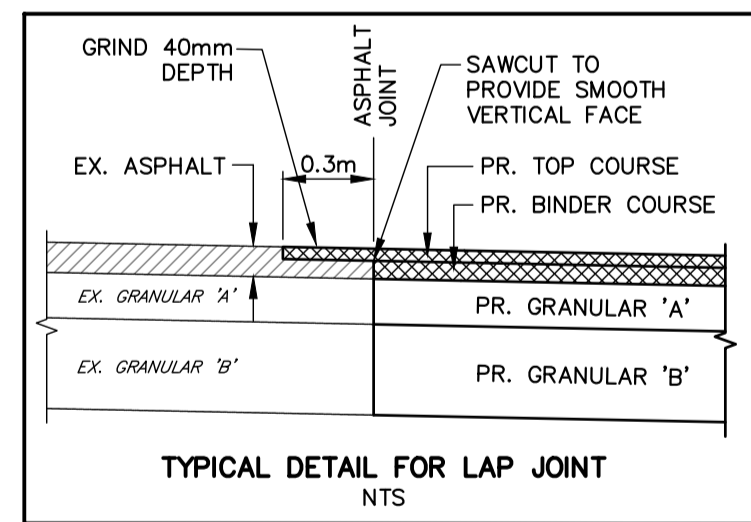
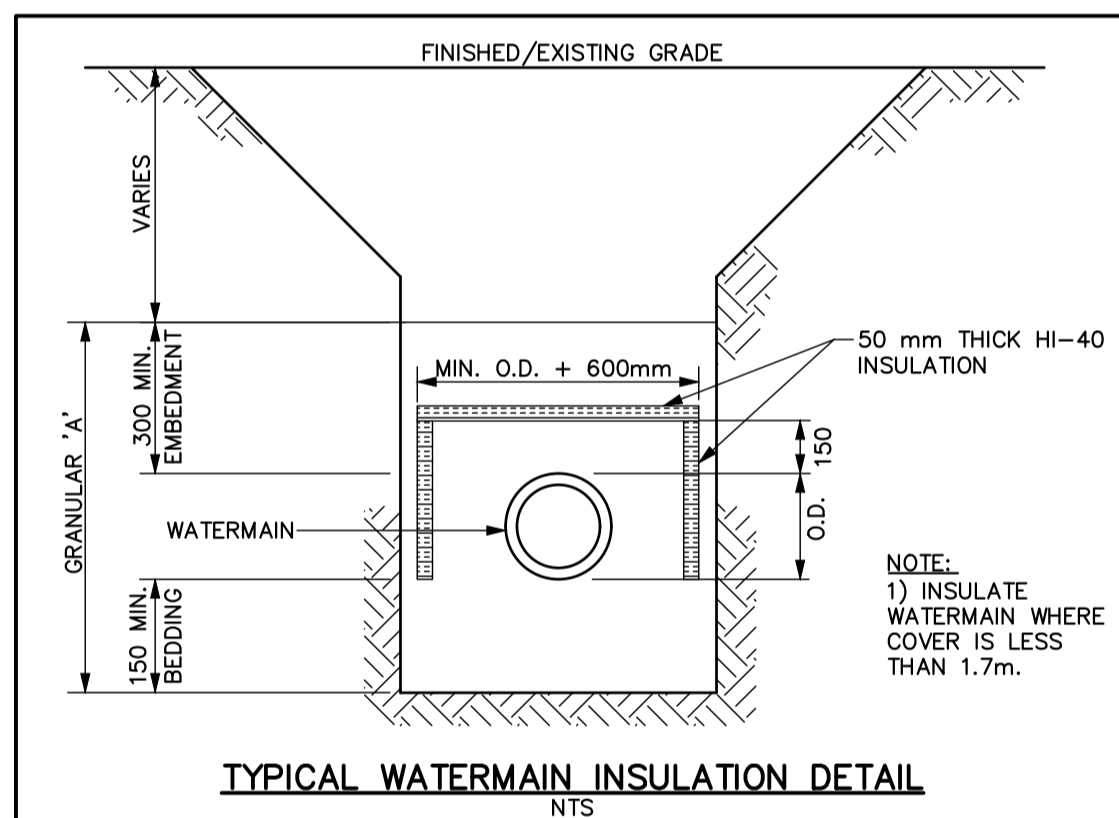
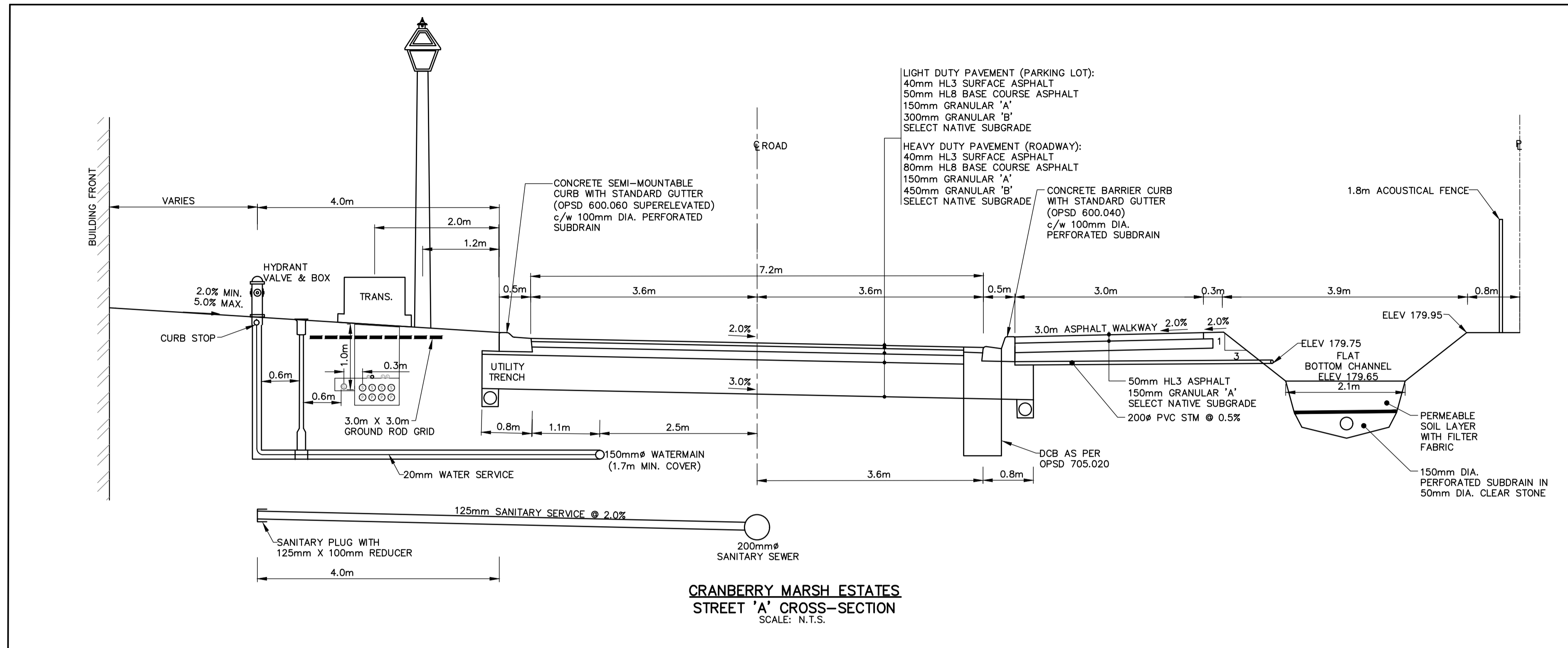
KEY PLAN



GEORGIAN BAY HOTEL

TOWN APPROVAL

<p><b>DISCLAIMER AND COPYRIGHT</b></p> <p>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.</p> <p>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.</p>	<p><b>BENCHMARKS</b></p> <p>ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM BENCH MARK No. 00119720311 HAVING A PUBLISHED ELEVATION OF 181.032 METRES.</p>	<p><b>NOTES</b></p> <p>LEGAL SURVEY INFORMATION AND LOT DIMENSIONS SHOWN ON THIS PLAN ARE TAKEN FROM A SURVEY PLAN PREPARED BY PATTEN &amp; THOMSEN LTD, DATED, JANUARY 2, 2012 JOB No. 56-170-6</p> <p>TOPOGRAPHIC SURVEY COMPLETED BY TATHAM ENGINEERING OCTOBER, 2022.</p>	<p>No.</p> <p>1.</p>	<p>REVISION DESCRIPTION</p> <p>1ST SUBMISSION</p>	<p>DATE</p> <p>03/22</p>	<p>ENGINEER STAMP</p>	<p><b>CRANBERRY MARSH ESTATES</b> TOWN OF COLLINGWOOD</p>	<p><b>TATHAM ENGINEERING</b></p>	<p>DESIGN: KH</p>	<p>FILE: 120181</p>	<p>DWG:</p>
			<p>2.</p>	<p>2ND SUBMISSION</p>	<p>12/22</p>				<p><b>SITE GRADING PLAN</b></p>	<p>DRAWN: KH/SBU</p>	<p>DATE: OCT 2021</p>
								<p>CHECK: DC</p>	<p>SCALE: 1:500</p>		



**GENERAL - CONSTRUCTION**

- A) ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH TOWN OF COLLINGWOOD STANDARDS, O.P.S.D. AND O.P.S.S. WHERE CONFLICT OCCURS, TOWN OF COLLINGWOOD STANDARD TO GOVERN.
- B) TRENCH BACKFILL TO OPSD 802.010 TO BE SELECT NATIVE MATERIAL OR IMPORTED SELECT SUBGRADE TO OPSS 1010. BACKFILL TO BE PLACED IN MAXIMUM 200 mm THICK LIFTS AND COMPACTED TO 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
- C) PIPE BEDDING TO BE GRANULAR 'A' PIPE COVER TO BE GRANULAR 'B' MAX. AGGREGATE SIZE 25mm FOR RIGID PIPE AND GRANULAR 'A' FOR FLEXIBLE PIPE. (MINIMUM BEDDING DEPTH 150 mm, MINIMUM COVER 300mm, COMPACTED TO A MINIMUM 95% SPMDD).
- D) CLEAR STONE WRAPPED IN FILTER FABRIC CAN BE SUBSTITUTED FOR EMBEDMENT MATERIAL IF APPROVED BY THE ENGINEER.
- E) ALL TOPSOIL AND EARTH EXCAVATION TO BE STOCK PILED OR REMOVED TO OPSS 180. MANAGEMENT AND DISPOSAL OF EXCESS MATERIAL TO AN APPROVED SITE AS DIRECTED BY ENGINEER.
- F) THE OWNER'S ENGINEER SHALL PROVIDE BENCH MARK ELEVATIONS AND HORIZONTAL ALIGNMENT REFERENCE FOR THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT OF THE WORK.
- G) ALL PROPERTY BARS TO BE PRESERVED AND REPLACED BY O.L.S. AT CONTRACTOR'S EXPENSE IF REMOVED DURING CONSTRUCTION.
- H) ALL MAINTENANCE HOLE AND CATCHBASIN FRAMES AND COVERS TO BE SET TO BASE COURSE HL3 ASPHALT ELEVATION AND RAISED PRIOR TO PLACEMENT OF FINAL COURSE HL3 ASPHALT.
- I) THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR THE SUPPLY OF TEMPORARY WATER AND POWER.
- J) DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS-517 AND 518 TO MAINTAIN ALL TRENCHES IN A DRY CONDITION.
- K) ALL ENGINE DRIVEN PUMPS TO BE ADEQUATELY SILENCED, SUITABLE FOR OPERATION IN A RESIDENTIAL DISTRICT.
- L) ALL DISTURBED AREAS TO BE REINSTATED TO PREVIOUS CONDITION OR BETTER.
- M) THE CONTRACTOR IS RESPONSIBLE FOR PRESERVATION OF ALL EXISTING FACILITIES AS WELL AS NOTIFYING ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND CO-ORDINATE CONSTRUCTION ACCORDINGLY.
- N) ALL SIGNAGE TO BE LAWFULLY ERECTED AND MAINTAINED IN ACCORDANCE TO THE TOWN SIGN BY-LAW.
- O) CLEARING, GRUBBING AND REMOVAL OF SURFACE BOULDERS TO OPSS 201.
- P) GRADING TO OPSS 206.
- Q) COMPACTING TO OPSS 501.
- R) DUST SUPPRESSANT TO OPSS 506.
- S) TREE REMOVALS AND/OR TRANSPLANTS TO BE COMPLETED OUTSIDE OF MIGRATORY BIRDS NESTING SEASON FROM APRIL 1<sup>ST</sup> TO AUGUST 31<sup>ST</sup>. REMOVALS MAY TAKE PLACE DURING THIS RESTRICTED TIME ONLY IF THE REQUIREMENTS OF MIGRATING BIRDS CONVENTION ACT ARE MET AND NESTING ACTIVITY IS ROUTINELY MONITORED BY QUALIFIED INDIVIDUALS (I.E. WILDLIFE BIOLOGIST).

**SANITARY SEWERS**

- A) MAINTENANCE HOLES TO OPSD 701.010 AND 701.030.
- B) BENCHING TO OPSD - 701.021.
- C) STEPS TO OPSD - 405.010.
- D) FROST STRAPS SHALL BE INSTALLED ON ALL MAINTENANCE HOLE AS PER OPSD - 701.100.
- E) FRAMES AND COVERS TO OPSD - 401.030 (WATER TIGHT COVER).
- F) PIPE SUPPORT AT MAINTENANCE HOLES AS PER OPSD 708.020.
- G) ALL MAINTENANCE HOLES, UNLESS EXPRESSLY IDENTIFIED ARE 1200 mm DIAMETER WITH WATER TIGHT INSERTS.
- H) GENERAL INSTALLATION AND TESTING OF SEWERS AND APPURTENANCES TO BE IN ACCORDANCE WITH O.P.S.S. 407, 408, 409 (CCVT), 410, 421 AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS.
- I) SERVICE CONNECTIONS TO BE 125 mm DIA., TERMINATED WHERE SPECIFIED ON THE DRAWING COMPLETE WITH PLUG AND MARKED WITH A 38mm X 89mm POST PAINTED GREEN FROM THE INVERT OF THE SERVICE TO 600 mm ABOVE GRADE.
- J) SERVICE CONNECTION TO OPSD 1006.020, GRANULAR 'A' BEDDING AND EMBEDMENT.
- K) RIGID BOARD INSULATION (HI-40) REQUIRED FOR FROST PROTECTION OF SEWER WITH LESS THAN 1.2 m MINIMUM COVER. INSULATION TO BE MINIMUM 50 mm THICK AND HAVE A MINIMUM WIDTH OF 1.2m.

**WATER MAINS**

- A) THRUST BLOCKS TO OPSD-1103.010 AND 1103.020 WHERE SUITABLE SOILS ARE ENCOUNTERED.
- B) MINIMUM COVER ON WATER MAIN AND SERVICES TO BE 1.7 m.
- C) GATE VALVES, BENDS AND FITTINGS TO BE CONNECTED WITH ROMAC GRIP RING RESTRAINING CLAMP.
- D) CLEARANCE BETWEEN WATER MAINS AND SEWERS TO BE A MINIMUM OF 0.5m VERTICAL WHERE WATER MAIN IS BELOW SEWER OR 2.5m MINIMUM HORIZONTAL SEPARATION. WHERE WATER MAIN IS ABOVE SEWER, THE MINIMUM SEPARATION TO BE 150 mm (BEDDING MATERIAL).
- E) GENERAL INSTALLATION AND TESTING OF WATER MAIN AND APPURTENANCES TO BE IN ACCORDANCE WITH O.P.S.S. 701 AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS.
- F) ALL WORK ON TOWN PROPERTY AND ON TOWN OF COLLINGWOOD WATER DEPARTMENT (TCWD) WATER MAINS MUST BE UNDERTAKEN BY TCWD OR AN APPROVED CONTRACTOR WITH TCWD INSPECTION, ALL AT DEVELOPER'S COST.
- G) SERVICE CONNECTIONS TO OPSD-1104.010, 100 mm GRANULAR 'A' EMBEDMENT AND COVER OVER PIPE. TERMINATE WHERE SPECIFIED ON DRAWING C/W CURB STOP AND BOX, TESTING TAIL TO SURFACE ATTACHED TO A 38mm x 89mm MARKER POST PAINTED BLUE FROM THE INVERT OF THE SERVICE TO 600 mm ABOVE GRADE. I) ALL SERVICES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH TOWN STANDARDS.
- J) WATER MAIN SERVICES - 20mm TYPE K COPPER MAIN STOPS TO 201-A3H3, 3/4", BALL STYLE. AWWA THREAD BY COMPRESSION CAMBRIDGE BRASS. CURB STOPS TO 203-H3H3, 3/4" BALL STYLE WITH DRAIN, COMPRESSION JOINT CAMBRIDGE BRASS. SERVICE BOXES TO NUMBER 7, D-1 CLOW OR MUELLER WITH 24" BLACK RODS STRAIGHT OR OTHERWISE NOTED ON DRAWINGS.
- K) ALL WATER TESTING AND WATER MAIN CHLORINATION WILL BE CONDUCTED BY TCWD AT THE DEVELOPER'S COST. WATER MAINS ARE NOT TO BE CONNECTED TO THE EXISTING WATER MAINS UNTIL BACTERIOLOGICAL TESTING HAS BEEN SUCCESSFULLY COMPLETED. NEW WATER MAINS CAN NOT BE CONNECTED TO EXISTING MAINS UNTIL THEY HAVE PASSED BACTERIOLOGICAL TESTING AND AS SUCH A TEMPORARY BACKFLOW PREVENTOR WILL NEED TO BE INSTALLED BETWEEN THE LIVE TAP AND THE NEW SERVICE TO FACILITATE ADEQUATE PROTECTION OF THE EXISTING WATER MAIN. IT SHOULD BE NOTED THAT THIS TESTING TAKES APPROXIMATELY A WEEK TO COMPLETE AND MUST BE CONDUCTED BY TCWD. A WORK PLAN FOR THIS WORK MUST BE SUBMITTED TO TCWD FOR APPROVAL.
- L) AS A GENERAL PRINCIPLE EACH PROPERTY SHALL HAVE ONE SERVICE AND ONE METER. M) NO WATER VALVES ARE TO BE OPERATED WITHOUT TCWD APPROVAL.

**STORM SEWERS**

- A) CATCH BASINS AND DOUBLE CATCH BASINS TO OPSD 705.010 AND 705.020 C/W 600 mm SUMP. REAR LOT CATCH BASINS AND DITCH INLET CATCH BASINS TO OPSD 705.010 WITHOUT SUMP.
- B) CATCH BASINS AND DOUBLE CATCH BASINS FRAMES AND GRATES TO OPSD 400.020. REAR LOT CATCH BASIN FRAMES AND GRATES TO OPSD 400.120.
- C) CATCH BASIN LEADS - 250 mm DIA. SINGLE AND 300 mm DIA. DOUBLE. CATCH BASIN CONNECTIONS TO OPSD 708.010 AND OPSD 708.030.
- D) PIPE SUPPORT AT OB'S TO OPSD 708.020. CATCH BASINS AND INLET STRUCTURES FITTED WITH SEDIMENT TRAPS DURING CONSTRUCTION ACTIVITIES, AND CLEANED OUT AS REQUIRED PRIOR TO ASSUMPTION OF THE WORK.
- E) HEADWALLS TO BE INSTALLED IN ACCORDANCE WITH OPSD 804.030 (PIPE LESS THAN 900 mm DIA.) AND OPSD 804.040 (AS SPECIFIED), C/W GRATING IN ACCORDANCE WITH OPSD 804.050.

**ROAD AND PARKING**

- A) SUBGRADE AND ALL GRANULAR 'A' 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'.
- B) GRANULAR 'A' AND 'B' BASE TO BE COMPACTED TO 100% OF THE MATERIAL'S RESPECTIVE SPMDD.
- C) LIGHT DUTY PAVEMENT TWO LIFTS TOTAL 90mm (50mm HL3 AND 40mm HL3), 150mm GRANULAR 'A', 300mm GRANULAR 'B'. HEAVY DUTY PAVEMENT TWO LIFTS TOTAL 120mm (80mm HL3 AND 40mm HL3), 150 mm GRANULAR 'A', 450mm GRANULAR 'B', ALL SUBDRAINS TO BE CONSTRUCTED IN ACCORDANCE WITH OPSS 405.
- D) CONCRETE SEMI-MOUNTABLE CURB WITH STANDARD GUTTER TO OPSD 600.060 INCLUDING SUPERELEVATED. CONCRETE BARRIER CURB WITH STANDARD GUTTER TO OPSD 600.040. CONCRETE BARRIER CURB TO OPSD 600.110.
- E) SELECT SUBGRADE MATERIAL OR IMPORTED GRANULAR MATERIAL APPROVED BY THE ENGINEER, COMPACTED TO 98% S.P.M.D.D. TO BE USED AS FILL IN ALL AREAS WHERE PROPOSED PIPE INVERTS ARE HIGHER THAN EXISTING GRADE OR AS INSTRUCTED BY THE ENGINEER.
- F) ALL GRANULARS AND ASPHALT MATERIALS AND PLACEMENT TO BE IN ACCORDANCE WITH OPSS 314 AND OPSS 310.
- G) JOINTS WITH EXISTING ASPHALT TO BE SAW CUT STRAIGHT PRIOR TO PLACING NEW ASPHALT AND TACK COAT APPLIED TO EXISTING ASPHALT. ASPHALT JOINT WITH HIGHWAY No. 26 TO BE COMPLETE WITH LAP JOINT, SEE DETAIL THIS PAGE.
- H) REINSTATEMENT OF ALL DISTURBED BOULEVARDS TO INCLUDE REGRADING, MINIMUM 150mm TOPSOIL AND SOD TO OPSS.MUNI 802 AND 803.
- I) ALL FIRE ROLL SIGNAGE TO BE AS PER TOWN OF COLLINGWOOD BY-LAW 96-37.
- J) ENTRANCE AS PER OPSD 350.010, SIDEWALKS TO OPSD 310.050 AND 310.010.

**MATERIALS**

- A) SANITARY SEWER SDR-35 PVC, SANITARY SERVICES - SDR 28 PVC
- B) WATER MAIN - DUCTILE IRON CLASS 52, OR PRESSURE CLASS 350 CEMENT LINED. CONDUCTIVITY CONNECTORS TO BE USED ON ALL JOINTS.
- C) WATER SERVICE CONNECTIONS TO BE TYPE 'K' COPPER PIPE.
- D) VALVES - RESILIENT SEATED, RSGV, MECHANICAL JOINT, OPEN LEFT CLOW OR MUELLER WITH 5 SL-48 SLIDING VALVE BOX, TO AWWA C504.
- E) MECHANICAL JOINT DUCTILE FITTINGS - AWWA/ANSI C153/A21.53.
- F) RESTRAINER - ROMAC GRIPPER RING FOR PIPE SIZES UP TO 300 mm AND SIGMA ONE-LOCK FOR PIPE SIZES GREATER THAN 300 mm.
- G) LIVE TAP SADDLES - EPOXY COATED C/W STAINLESS STEEL BOLTS.
- H) LIVE TAP VALVE - RESILIENT SEATED RSGV, LIVE TAPE VALVE, OPEN LE.
- I) FILTER FABRIC - TERRAFIX 270R OR APPROVED EQUAL.
- J) PERFORATED SUBDRAINS - 100mm DIA. BIG 'O' WITH GEOTEXTILE FILTER SOCK OR APPROVED EQUAL UNLESS NOTED OTHERWISE.
- K) ALL SPECIFIED AGGREGATES TO OPSD 1010.
- L) INSULATION - STYROFOAM HI-40.

TOWN APPROVAL

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**BENCHMARKS**

ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM BENCH MARK No. 0011972U311 HAVING A PUBLISHED ELEVATION OF 181.032 METRES.

**NOTES**

LEGAL SURVEY INFORMATION AND LOT DIMENSIONS SHOWN ON THIS PLAN ARE TAKEN FROM A SURVEY PLAN PREPARED BY PATTEN & THOMSEN LTD, DATED, JANUARY 2, 2012 JOB No. 66-170-6 TOPOGRAPHIC SURVEY COMPLETED BY TATHAM ENGINEERING OCTOBER, 2022.

No.	REVISION DESCRIPTION	DATE	ENGINEER STAMP
1.	1ST SUBMISSION	03/22	
2.	2ND SUBMISSION	12/22	

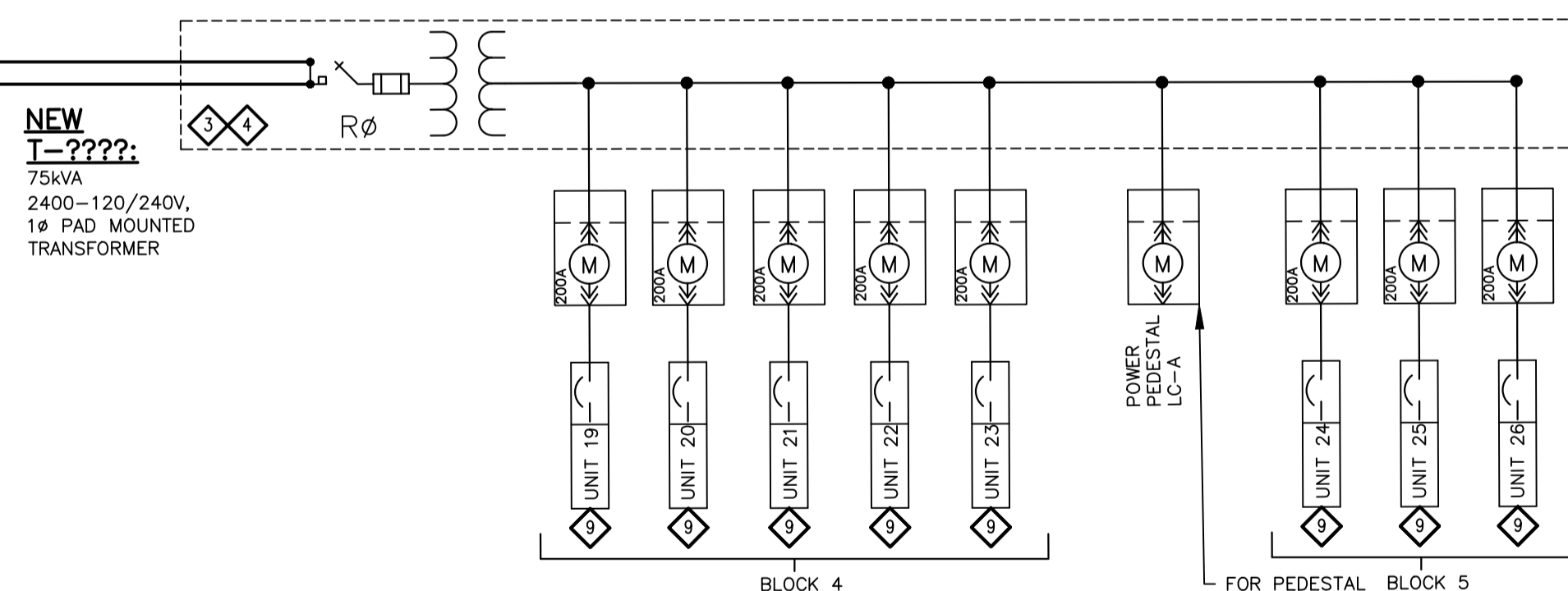
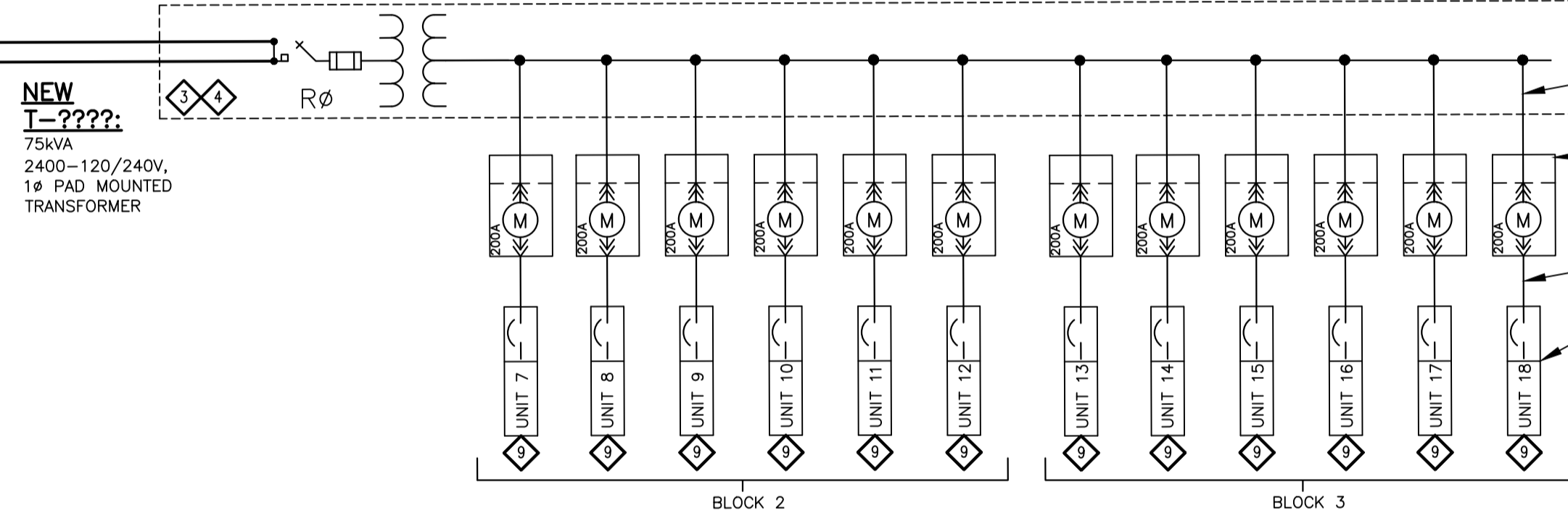
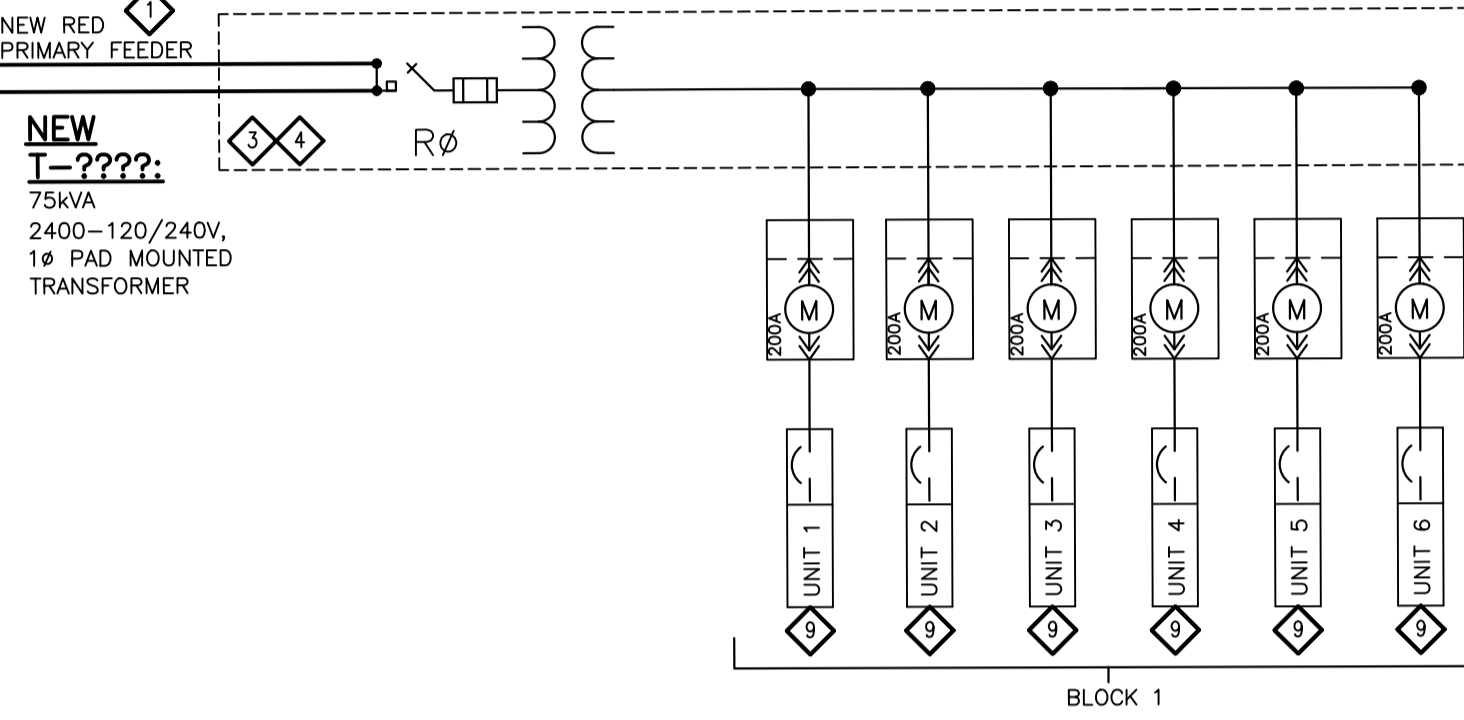
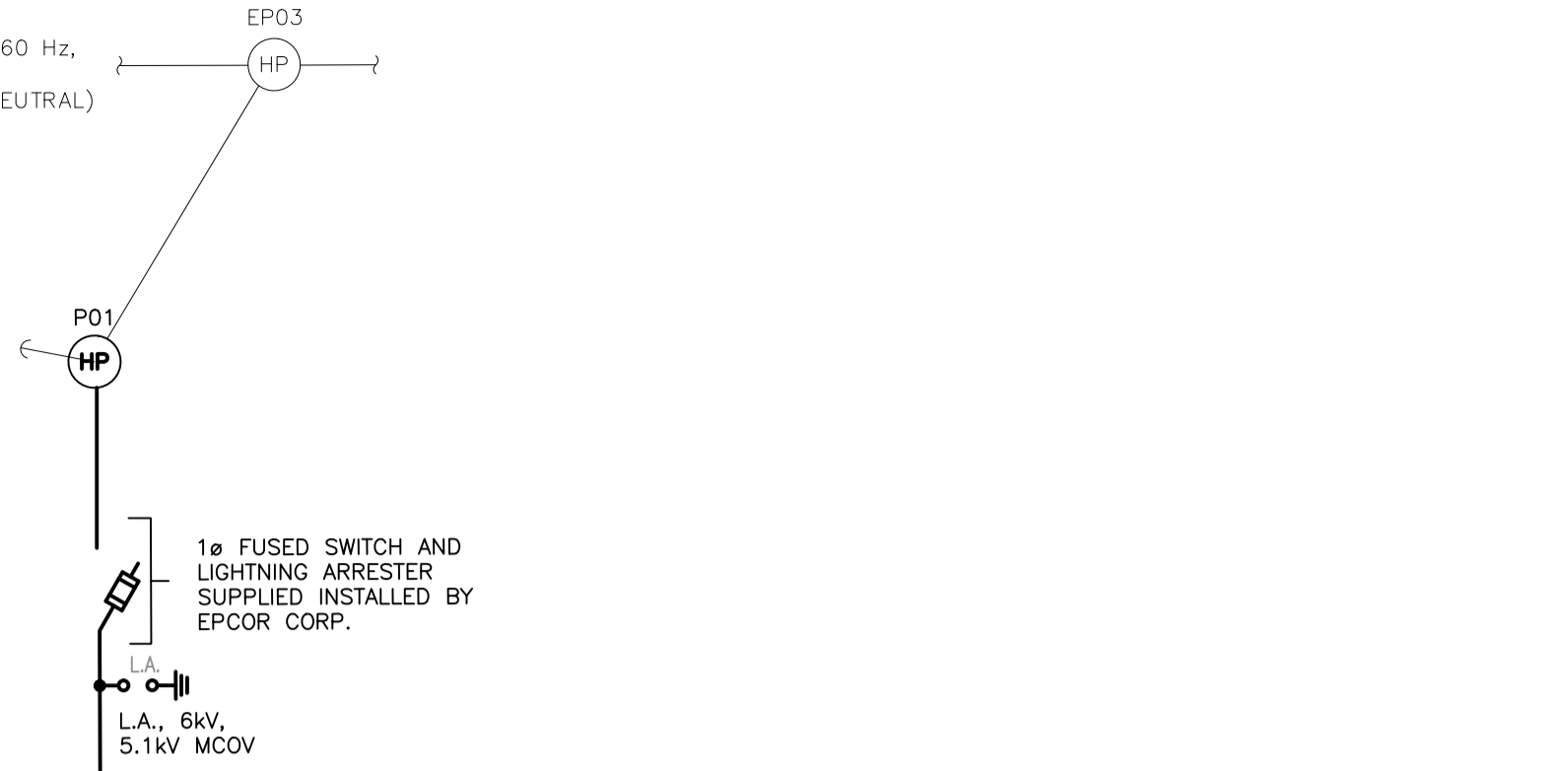
**CRANBERRY MARSH ESTATES**  
TOWN OF COLLINGWOOD

**TATHAM**  
ENGINEERING

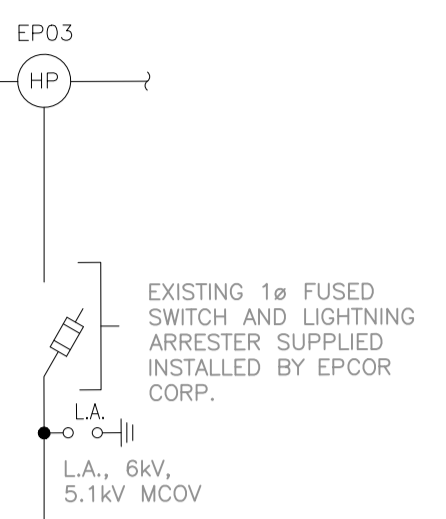
**DETAILS & NOTES**

DESIGN: KG/SBU	FILE: 120181	DWG:
DRAWN: KH/SBU	DATE: NOV 2021	<b>DE-1</b>
CHECK: DC	SCALE: 1:500	

EXISTING 2400V 3ø, 60 Hz, OVERHEAD LINE (MULTI-GROUNDED NEUTRAL) ALONG 26 HWY.



EXISTING 2400V 3ø, 60 Hz, OVERHEAD LINE (MULTI-GROUNDED NEUTRAL) WITH IN EASEMENT THROUGH GEORGIAN HOTEL PROPERTY.



- SINGLE LINE DIAGRAM NOTES:**
- 1 PRIMARY LOOP FEEDER CABLE: 1C#1/0AWG IN 103mmø PVC DUCT. REFER TO EPCOR'S "GENERAL CONTRACTOR REQUIREMENTS AND MATERIAL SPECIFICATIONS" FOR PRIMARY CABLE SPECIFICATIONS.
  - 2 1-POSITION 200A RATED METER BASE: HYDEL ENTERPRISES EK400R0 SERIES, THOMAS AND BETTS MICROELECTRIC BS2-TCV, EATON CUTLER-HAMMER LM2 120 AMP, LINE/LOAD CABLES UP TO 250MCM CU/AL, WEATHERPROOF RATED (EEMAC 3R). REFER TO EPCOR'S "GENERAL CONTRACTOR REQUIREMENTS AND MATERIAL SPECIFICATIONS".
  - 3 EPCOR TO SUPPLY AND INSTALL NEW TRANSFORMER. CONTRACTOR TO PROVIDE CONCRETE VAULT AND GROUNDING GRID. PER EPCOR STANDARDS.
  - 4 ALL PRIMARY AND SECONDARY CABLE TERMINATIONS INSIDE EACH TRANSFORMER AND AT HYDRO POLES WILL BE PERFORMED BY EPCOR.
  - 5 EXPOSED SECTIONS OF CONDUIT (ABOVE GRADE) FOR SECONDARY FEEDER CABLES MUST BE RIGID PVC.
  - 6 SECONDARY SERVICE CABLES FOR 1-POSITION 200A METER BASES: 3C#4/0AWG AL USE#90. REFER TO EPCOR'S "GENERAL CONTRACTOR REQUIREMENTS AND MATERIAL SPECIFICATIONS" FOR SECONDARY CABLE SPECIFICATIONS.
  - 7 TYPICAL FOR TOWNHOUSE UNITS WITH 200A SERVICE
  - 8 MAXIMUM ELECTRICAL SERVICES TO EACH UNIT: 200AMP MAX., 120/240VAC, 1-PHASE, 60HZ. SERVICE CABLES TO ENTER UNIT (VIA UNDERGROUND) BY OTHERS DURING THIS CONTRACT. CONTRACTOR TO COORDINATE LOCATION OF METERS WITH CONTRACTOR INSTALLING UNIT PANELBOARDS PRIOR TO INSTALLING SERVICE CABLES TO METER BASES.

- 1 RIGID TYPE PVC FOR SECONDARY SERVICE CABLES, TYP.
- 2 SECONDARY TO 1-POS METER BASE - TYP SERVICE CABLES (SEC)
- 3 UNIT SERVICE CABLES AND PANELBOARDS TO BE SUPPLIED BY OTHERS, TYP.

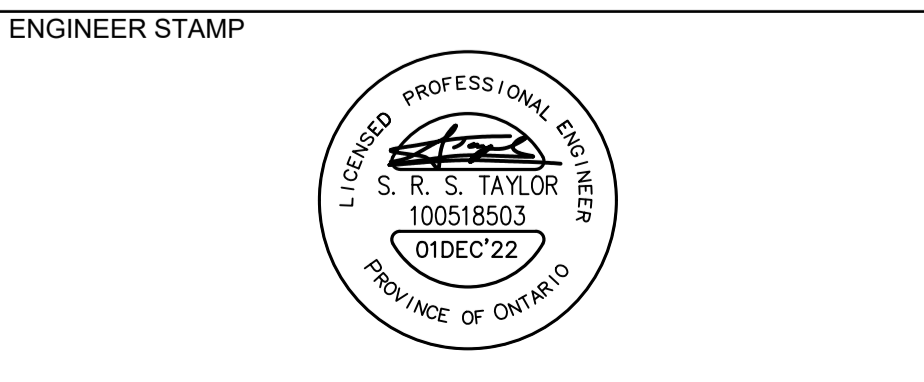
**1 SINGLE LINE DIAGRAM - 2400V**  
 - EXCEPT FOR STREETLIGHT SYSTEM, ALL ELECTRICAL EQUIPMENT AND CABLES TO BE OWNED AND OPERATED BY EPCOR.

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**ACCEPTED FOR CONSTRUCTION EPCOR**  
 per .....  
 Date: .....



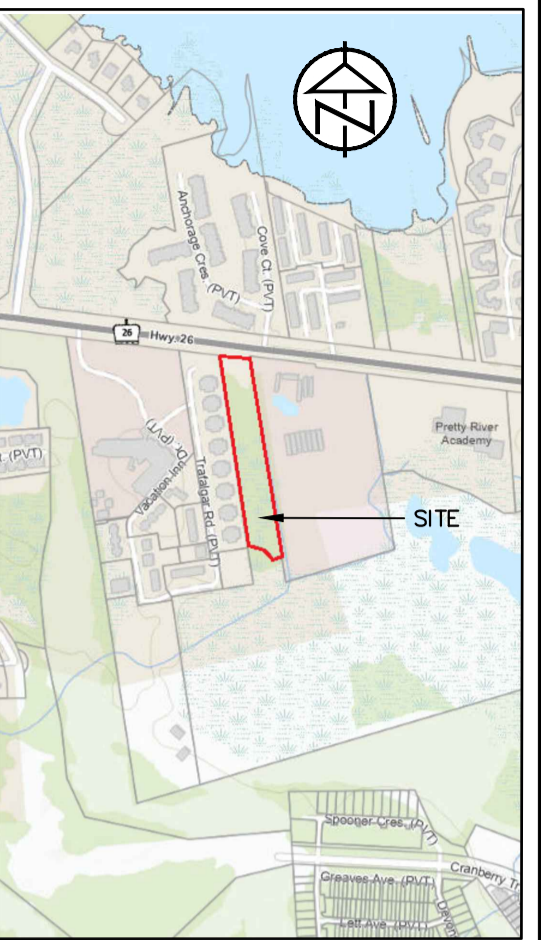
No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 2022



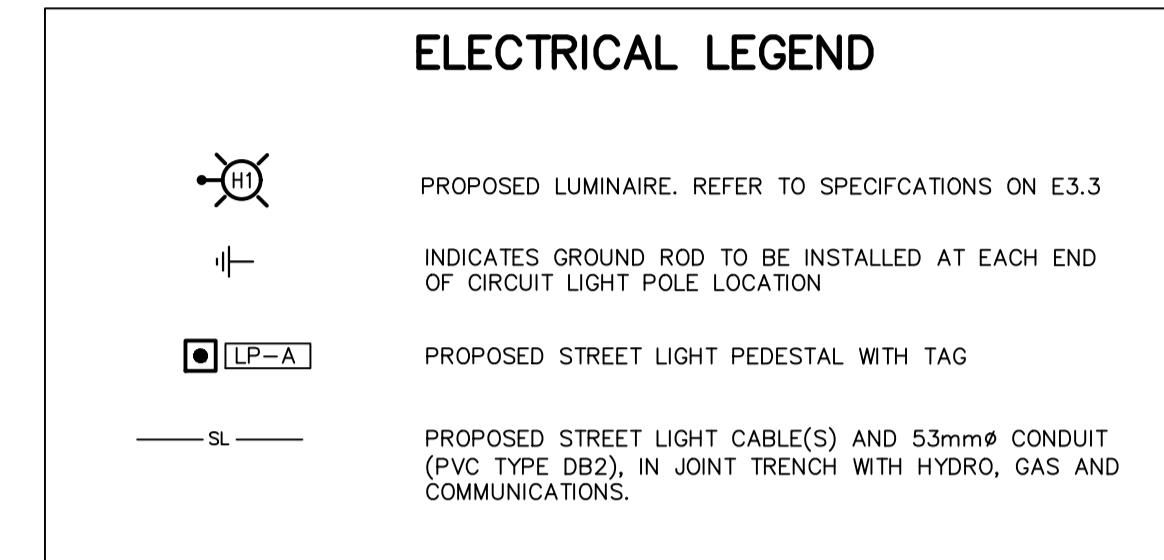
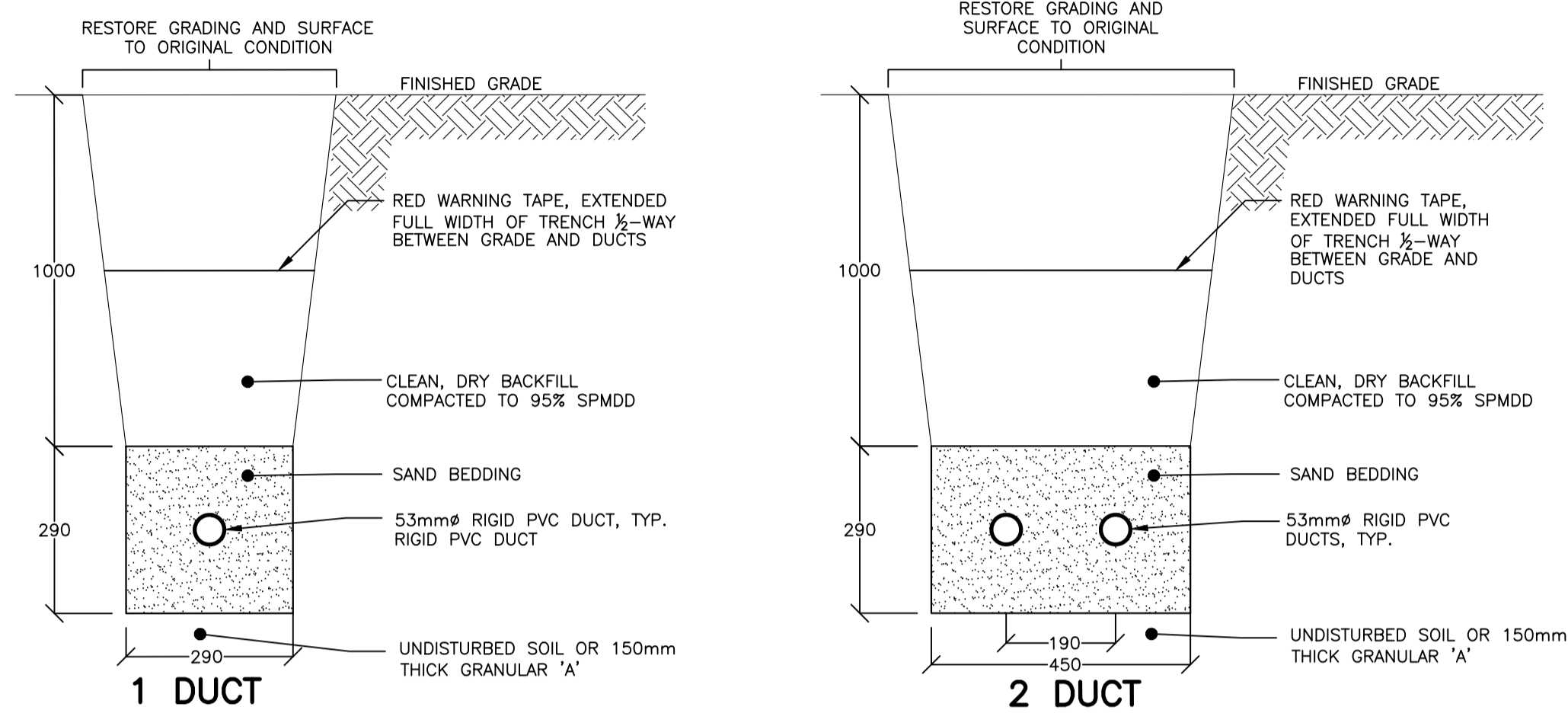
**CRANBERRY MARSH ESTATES**  
**TOWN OF COLLINGWOOD**  
 SINGLE LINE DIAGRAM

		DESIGN: RJW	FILE: 120181	DWG:
		DRAWN: RJW	DATE: OCT 2021	
		CHECK: SRT	SCALE: AS SHOWN	<b>E1.1</b>



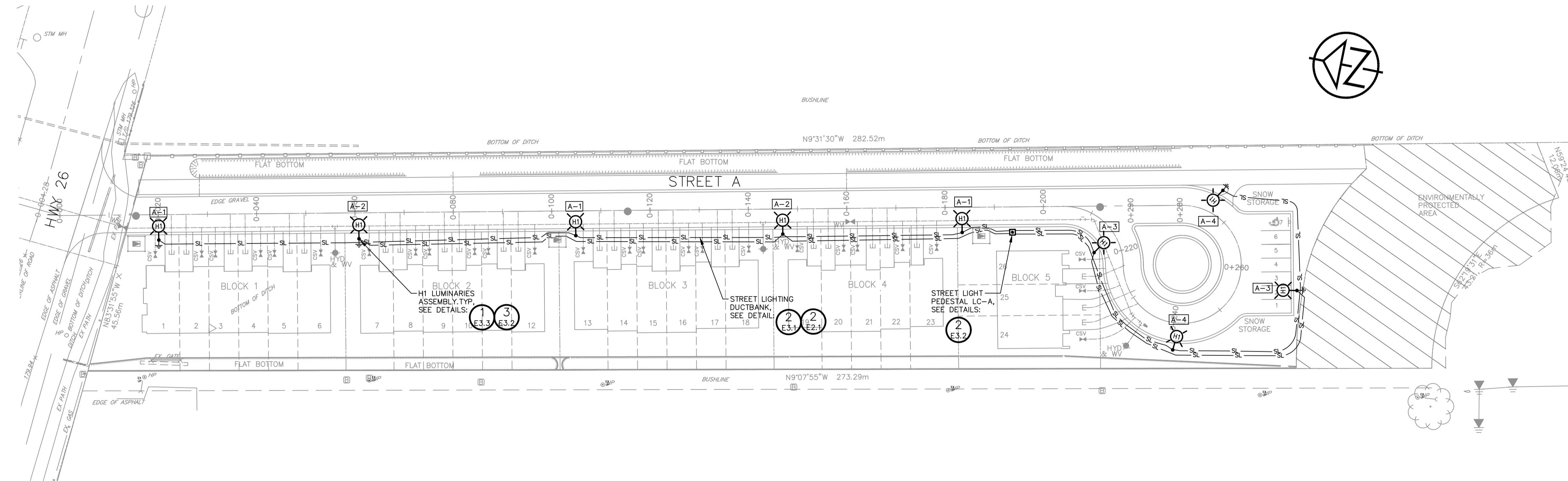


KEY PLAN



**2 LIGHTING DUCTBANK**

- E3.1 - NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm). DUCTBANK NOTES:
- PROVIDE FISH ROPE IN EACH SPARE (S) DUCT
  - GLUE ALL PVC JOINTS



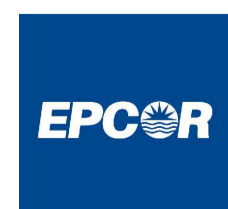
**1 ELECTRICAL SITE PLAN - LIGHTING LAYOUT**

E3.1 - SCALE 1:500

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**ACCEPTED FOR CONSTRUCTION**  
**EPCOR**

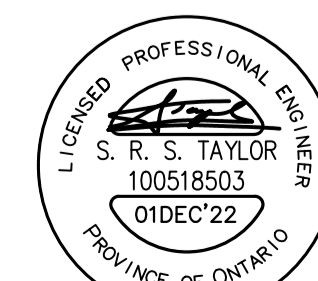
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43 Stewart Road,  
Collingwood, Ontario  
L9Y 3Z5

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 2022

ENGINEER STAMP

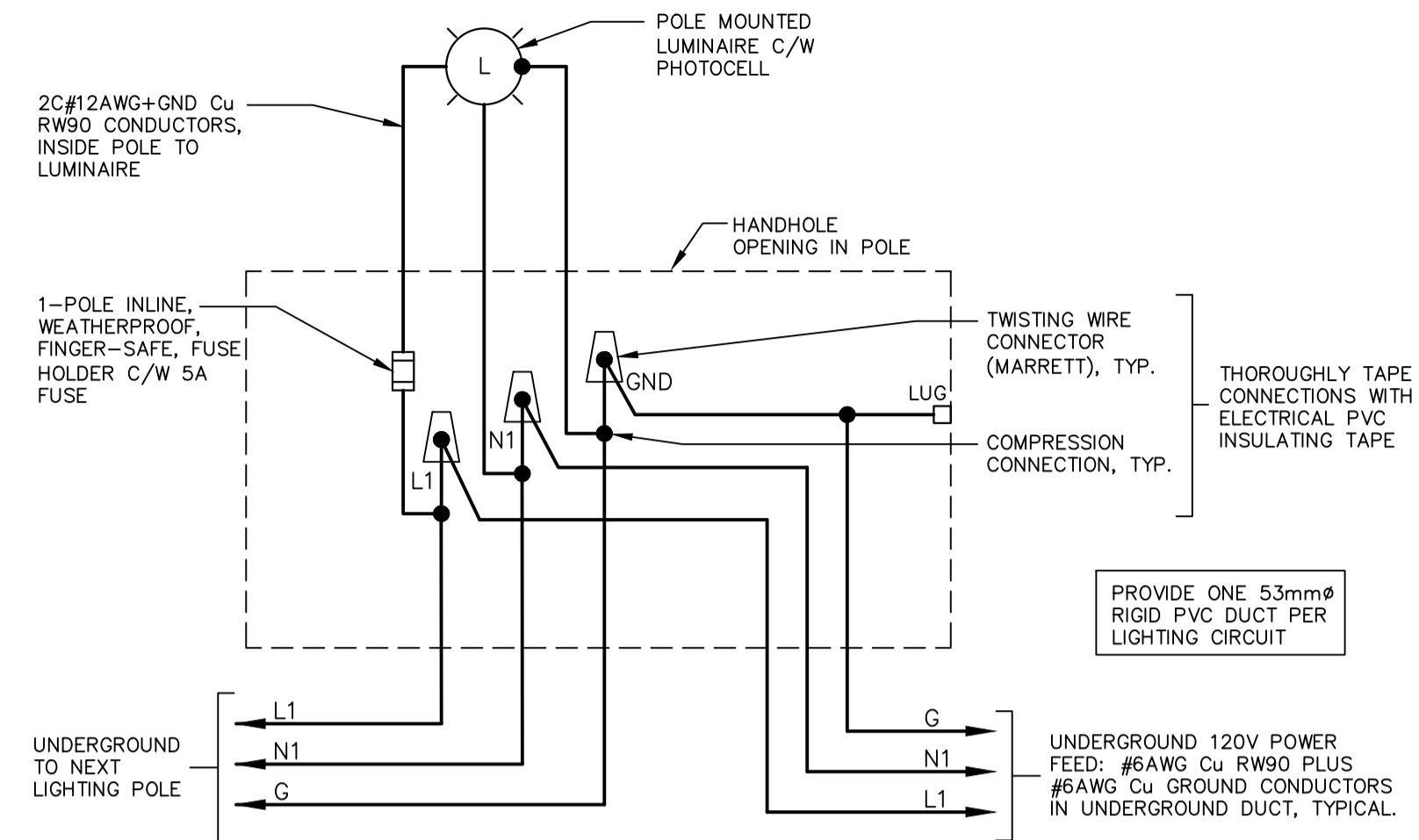


**CRANBERRY MARSH ESTATES**  
**TOWN OF COLLINGWOOD**

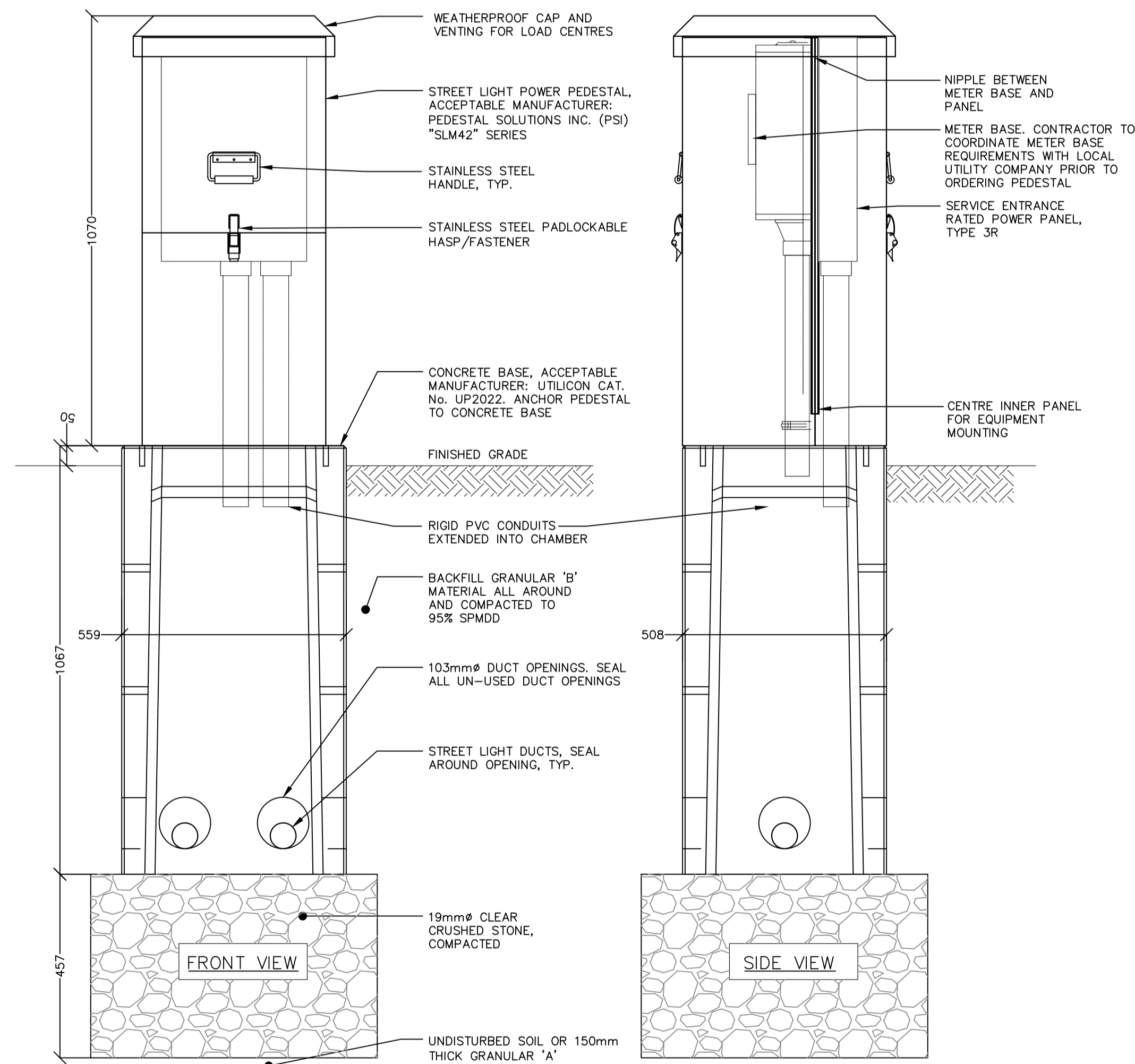
SITE PLAN - LIGHTING LAYOUT



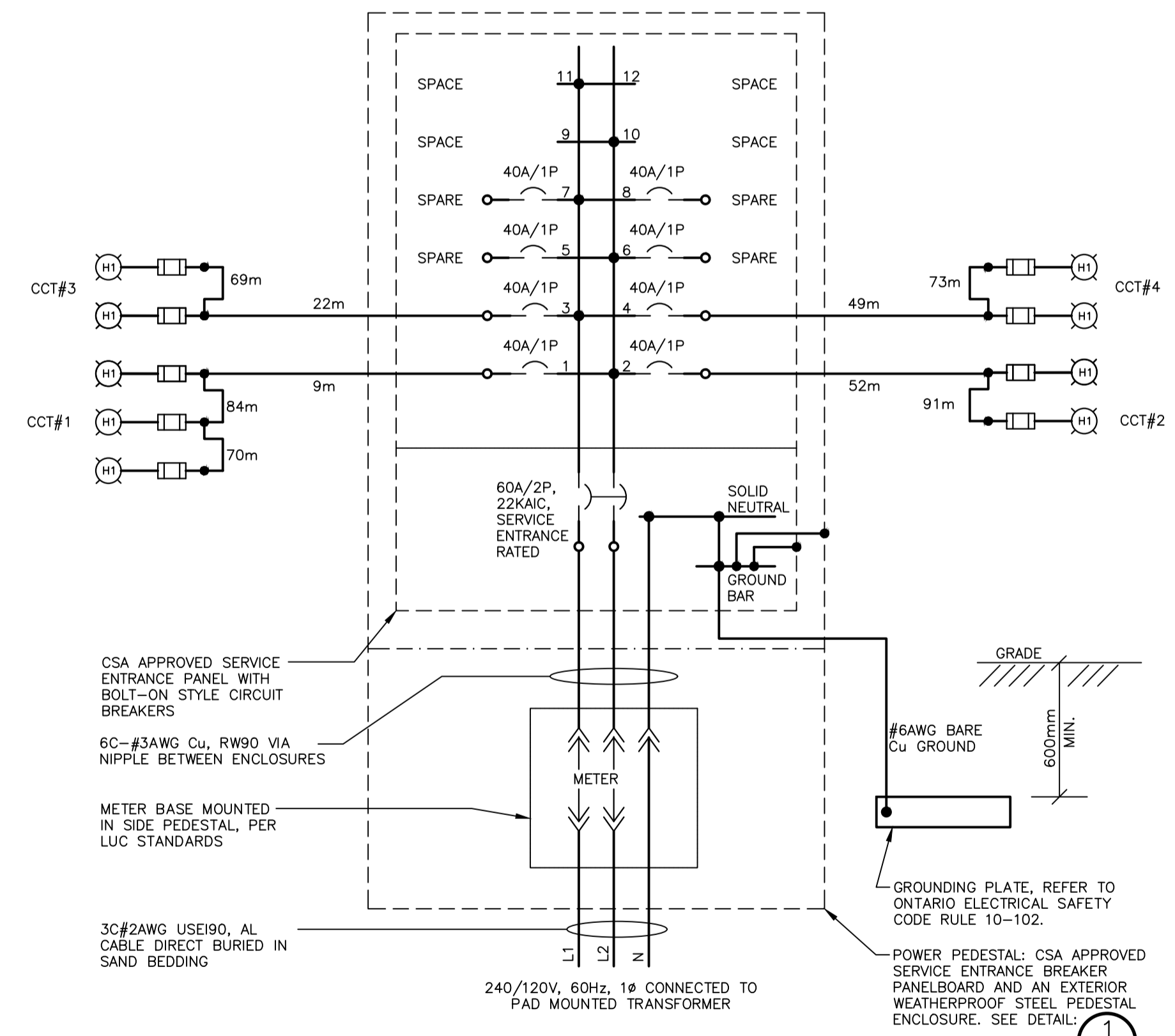
DESIGN: RJW	FILE: 120181	DWG:
DRAWN: RJW	DATE: OCT 2021	<b>E3.1</b>
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**3** TYPICAL WIRING DETAIL FOR STREET LIGHT  
E3.2 - NTS



**1** "LC-A" SERVICE ENTRANCE POWER PANEL PEDESTAL INSTALLATION DETAIL  
E3.2 - NTS, DIMENSIONS SHOWN IN MILLIMETERS (mm)



**2** "LC-A" METERED PEDESTAL WIRING DIAGRAM  
E3.2 - NTS, DIMENSIONS SHOWN IN MILLIMETERS (mm)

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per .....  
Date: .....



No.	REVISION DESCRIPTION	DATE	ENGINEER STAMP
1.	1ST SUBMISSION	DEC 2022	



**CRANBERRY MARSH ESTATES**  
TOWN OF COLLINGWOOD  
LIGHTING DETAILS - SHEET 1

<b>TATHAM ENGINEERING</b>		DESIGN: RJW	FILE: 120181	DWG:
		DRAWN: RJW	DATE: OCT 2021	<b>E3.2</b>
		CHECK: SRT	SCALE: AS SHOWN	

Please Note: Fabrication will begin with the drawings approved and stamped by the Engineer.

APPROVED  
 APPROVED AS NOTED  
 REJECTED  
 REVISE AND RESUBMIT  
 By \_\_\_\_\_  
 Date \_\_\_\_\_

### H1 Pole

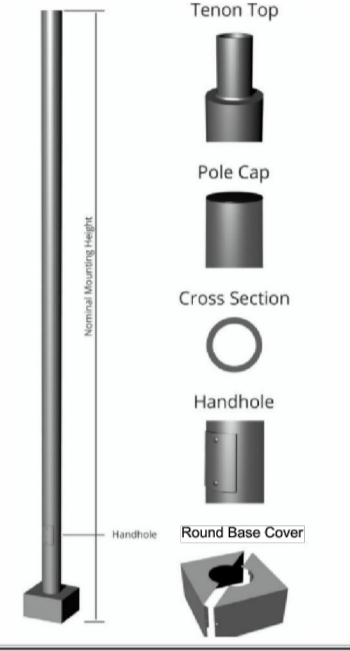
**Pole Material:** 05" O.D. x .226 wall extruded aluminum welded to aluminum base plate.

**Base Cover:** Two piece square cast aluminum base cover attached to pole with stainless steel screws.

**Anchor Bolts:** 4 galvanized 1/8" (34") x 609 6mm (24") long Anchorbolts and template are supplied by HCI. (B.C. 8.5")

**Finish:** Electrostatically applied, thermoset polyester powder-coat finish.

**Colour:** Black RAL9011.



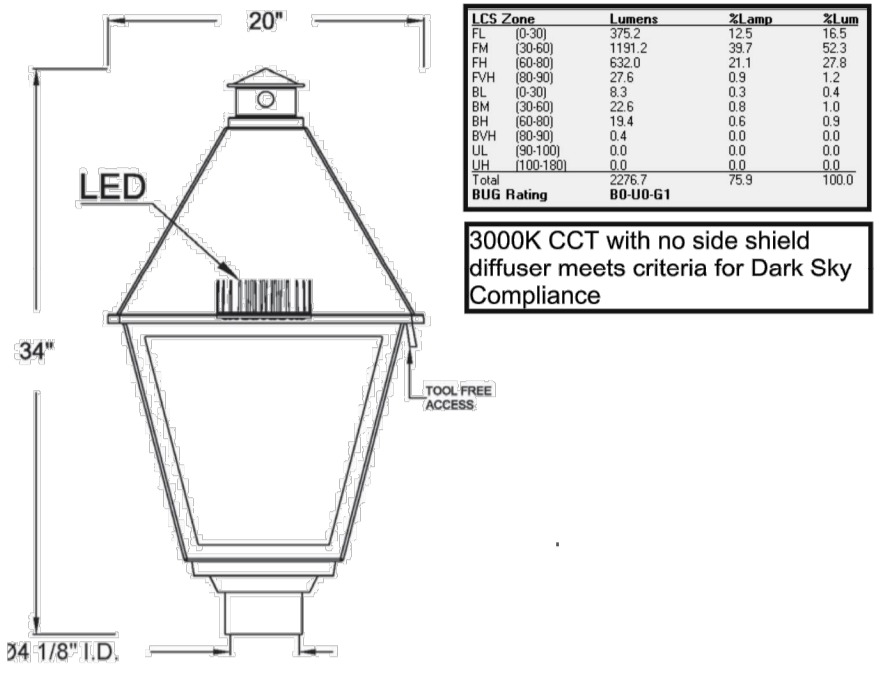
Sales: KIM Designer: HOWARD  
 Date: NOV 2022 Drawing No: 13225-V1  
 Model: P424-2-5PC-24-RAL9011  
 Project: Hill Ridge Homes

Please Note: Fabrication will not begin until this drawing is approved, signed and stamped by the Engineer.



1280 Fewster Drive, Mississauga, Ontario, Canada L4W 1A4  
 Tel: (905) 238-2648 Fax: (905) 238-9060  
 Toll Free Canada & USA 1-800-267-3175  
 E: sales@hclighting.com WEB: www.hclighting.com

**HCI LIGHTING**  
 HERITAGE CASTING & IRONWORKS LTD.  
 1280 Fewster Drive  
 Mississauga, ON L4W 1A4 Canada



3000K CCT with no side shield diffuser meets criteria for Dark Sky Compliance

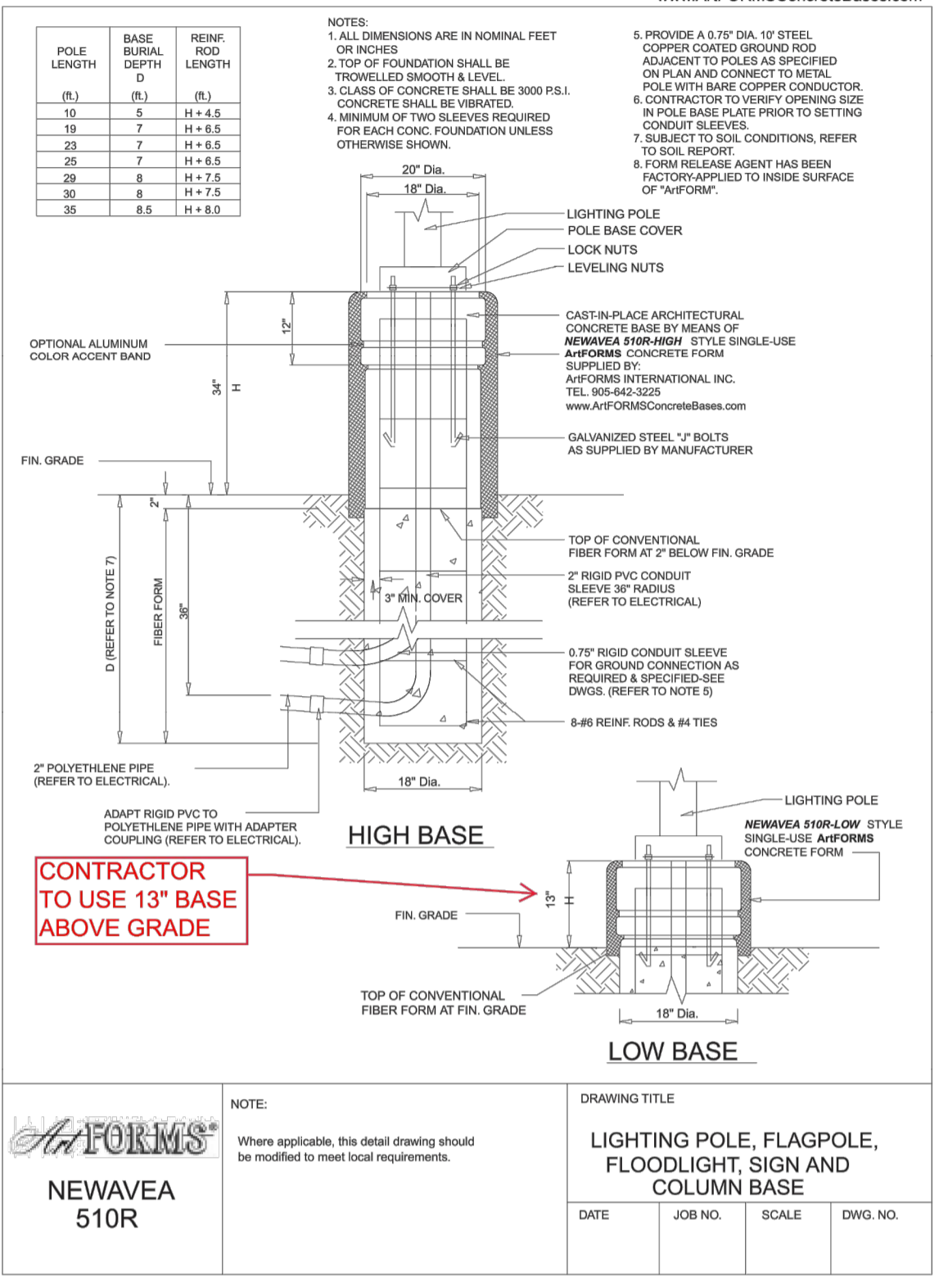


SL20-2500L-3000K-120V-IES III (3)-DIM-HSS-PEC-FI-FTG(TOP)-9011 BLACK

PRODUCT	LUMENS	CCT	VOLTAGE	OPTICS	OPTIONS	FITTER	FINIALS
SL20	Max 23,000 LUMENS	3000K 4000K 5000K 6000K	120v-277v Step down transformer 347V 480V	IES TYPE II (2) III (3) IV (4) V (5)	DIM Dimming control HSS House side shield PEC Integrated locking photocell	N/A	FI FJ

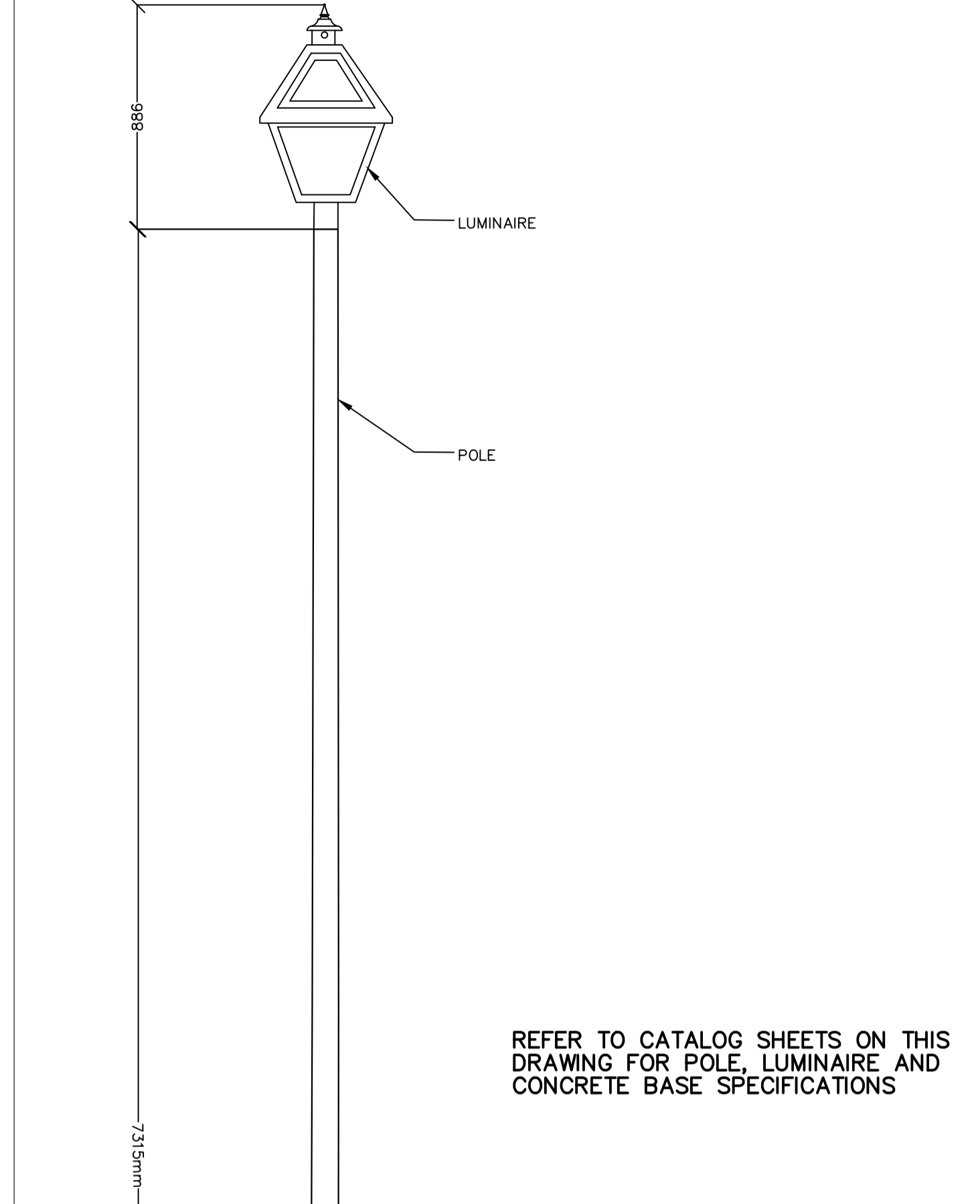
**DIFFUSER TYPE**  
 CAC Clear acrylic  
 FAC Frosted acrylic  
 WAC White acrylic  
 CPC Clear polycarbonate  
 WPC White polycarbonate  
 CTG Clear tempered glass  
 FTG Flat tempered glass

**Color**  
 Standard RAL  
 6005 Green  
 7012 Grey  
 8019 Bronze  
 9011 Black/Txt  
 9016 White  
 Custom RAL

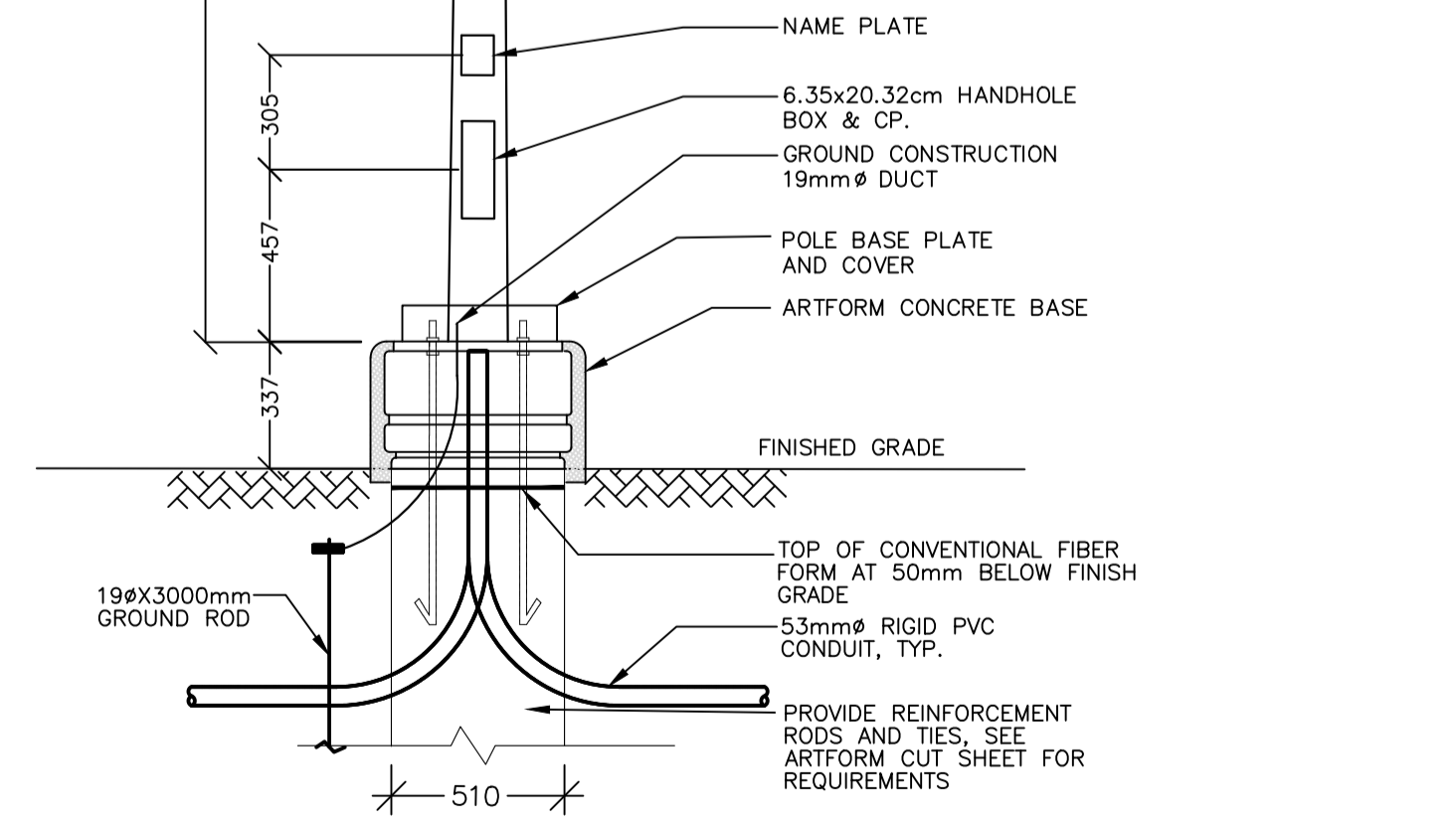


CONTRACTOR TO USE 13" BASE ABOVE GRADE

DATE	JOB NO.	SCALE	DWG. NO.



REFER TO CATALOG SHEETS ON THIS DRAWING FOR POLE, LUMINAIRE AND CONCRETE BASE SPECIFICATIONS



2 E3.3 LUMINAIRE TYPE H1 INSTALLATION DETAIL -NTS

1 E3.3 H1 POLE, LUMINAIRE AND CONCRETE CATALOG SPECIFICATION SHEETS -NTS

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**ACCEPTED FOR CONSTRUCTION EPCOR**  
 per .....  
 Date: .....

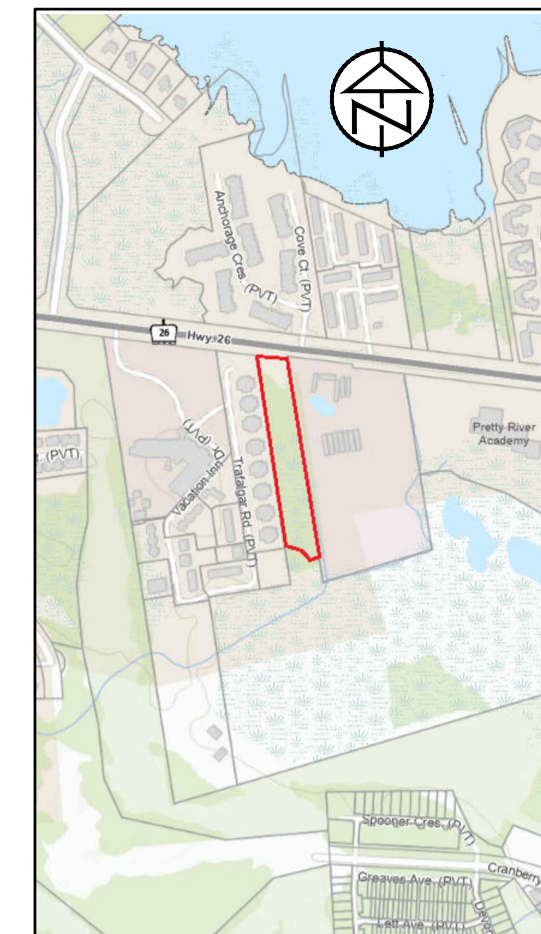
**EPCOR**  
 43 Stewart Road,  
 Collingwood, Ontario  
 L9Y 3Z5

No.	REVISION DESCRIPTION	DATE	ENGINEER STAMP
1.	1ST SUBMISSION	DEC 2022	

**PROFESSIONAL ENGINEER**  
 R. S. TAYLOR  
 100518503  
 01DEC'22  
 PROVINCE OF ONTARIO

**CRANBERRY MARSH ESTATES**  
 TOWN OF COLLINGWOOD  
 LIGHTING DETAILS - SHEET 2

**TATHAM ENGINEERING**  
 DESIGN: RJW FILE: 120181 DWG:  
 DRAWN: RJW DATE: OCT 2021  
 CHECK: SRT SCALE: AS SHOWN **E3.3**



KEY PLAN

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts
	9	H1	Single	HCI-SL20 Series	0.950	2500	20

**1 PHOTOMETRIC LUMINAIRE SCHEDULE**

E4.1 -NTS  
REFER TO DRAWING E3.3 FOR DETAILED POLE AND LUMINAIRE SPECIFICATIONS

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	
01-RW-Roadway	illumination	Lux	5.03	15.3	0.9	5.59	
06-PL-Parking	illumination	LUX	7.36	14.4	2.0	3.68	
07-PA-Pathway	illumination	Lux	2.07	8.3	1.1	1.88	
08-CU-Culdesac	illumination	Lux	6.87	14.8	0.8	8.59	
09-TP-Property Line	illumination	Lux	0.17	1.7	0.0	N.A.	

**2 ILLUMINATION SUMMARY (LUX)**

E4.1 -NTS

Table 11-1: Lighting Design Criteria for Streets

Road:	Local
Pedestrian Conflict Area:	Low
Pavement Classification:	R3
Average Luminance Values:	0.3 cd/sq. m
Average Illuminance Values:	4.5 Lux
Uniformity Ratio Max (Avg/Min):	6.0:1 (MAX.)

Table 11-2: Recommended Design Criteria for Walkways Within Road Right of Way

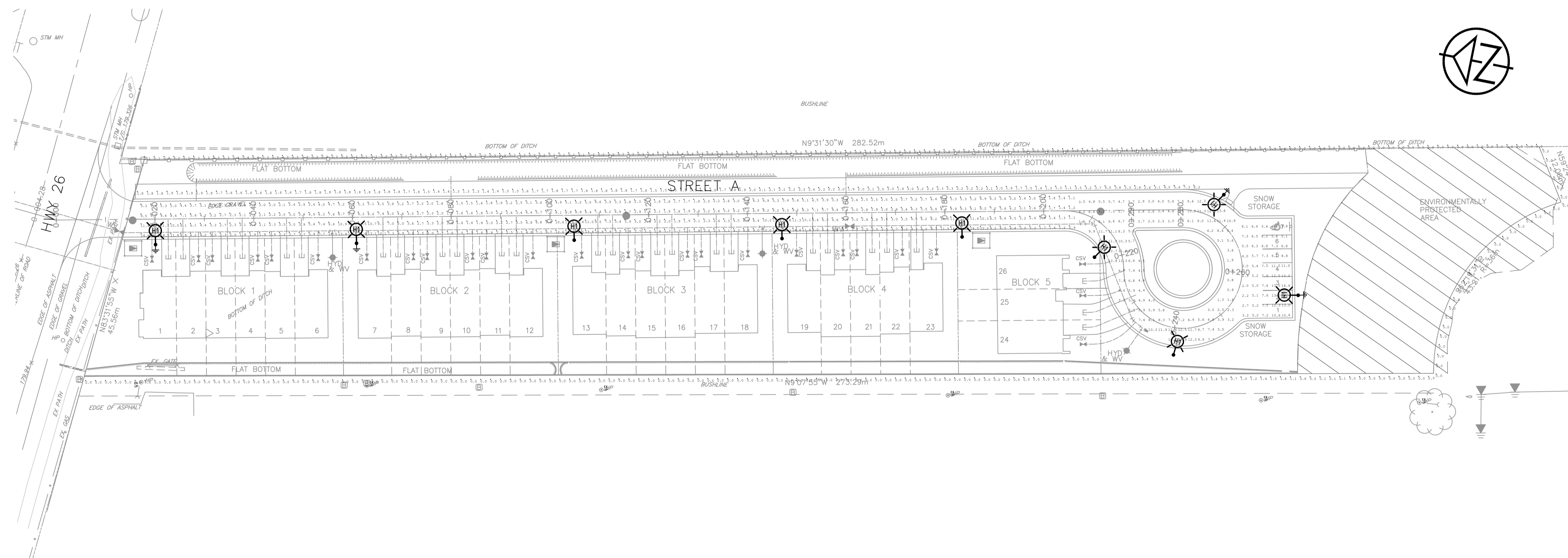
Condition:	Low Pedestrian Activity
Average Illuminance Values:	2.0 Lux
Uniformity Ratio Max (Avg/Min):	5.0:1

Table 17-2: Recommended Maintained Illuminance Values for Parking Lots (basic requirements; not for security lighting)

Minimum Illuminance Values:	2.0 Lux
Uniformity Ratio Max (Max/Min):	20.0:1

**3 IES RP8-21 TARGET VALUES**

E4.1 -NTS



**3 ELECTRICAL SITE PLAN - PHOTOMETRIC LAYOUT (UNITS SHOWN IN LUX)**

E4.1 - SCALE 1:500

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**ACCEPTED FOR CONSTRUCTION EPCOR**

per .....  
Date: .....



43 Stewart Road,  
Collingwood, Ontario  
L9Y 3Z5

No.	REVISION DESCRIPTION	DATE	ENGINEER STAMP
1.	1ST SUBMISSION	DEC 2022	

**CRANBERRY MARSH ESTATES  
TOWN OF COLLINGWOOD**

SITE PLAN - PHOTOMETRIC LAYOUT



DESIGN: RJW	FILE: 120181	DWG:
DRAWN: RJW	DATE: OCT 2021	<b>E4.1</b>
CHECK: SRT	SCALE: AS SHOWN	