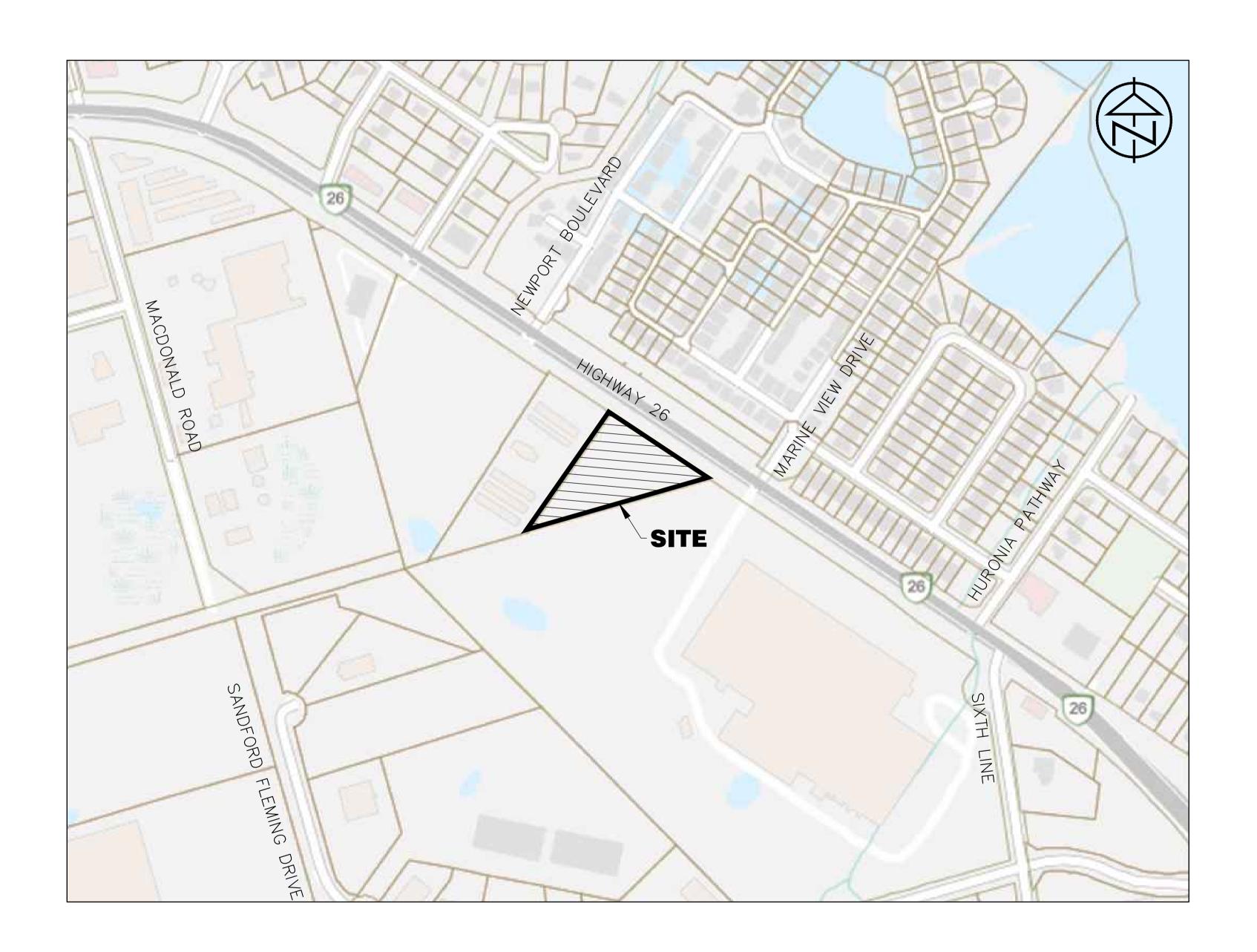
10045 HIGHWAY 26 COMMERCIAL DEVELOPMENT

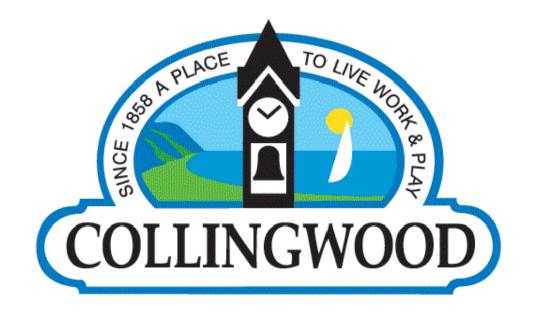
TOWN OF COLLINGWOOD







FINAL SUBMISSION FEBRUARY 13, 2025



INDEX

DRAWING **DESCRIPTION** TITLE PAGE INDEX SHEET IN1 SITE PLAN SP1

EROSION AND SEDIMENT CONTROL PLAN ESC1

SS1 SITE SERVICING PLAN SITE GRADING PLAN TRUCK TURNING TEMPLATE

EP-1 ELECTRICAL ILLUMINATION PHOTOMETRIC STUDY

EP-2 LUMINAIRE AND POLE SPECIFICATIONS

DE1 DETAILS AND NOTES

LEGEND

TEM PROPERTY LINE	EXISTING	PROPOSED
LOT LINE		
CENTERLINE		
EDGE OF ASPHALT		
CONCRETE CURB		
EDGE OF GRAVEL SHOULDER		
DITCH/DIRECTION OF FLOW		
DRAINAGE SWALE/DIRECTION OF FLOW		
WATERMAIN/SIZE	150ø_W/M	150ø W/M
WATER SERVICE		
FIRE HYDRANT	ф нyo	→ HYD
EXISTING WATER VALVE	Ψ MV	₩ WV
CURB STOP VALVE	₩ csv	₩V CSV
WATERMAIN PLUG AND THRUST BLOCK		– C3V
WATERMAIN PLOG AND THROST BLOCK WATERMAIN BLOWOFF	□ BLOWOFF	⊘ ^{BLOWOF}
		<u> </u>
WATERMAIN REDUCER		200ø_SAN
SANITARY SEWER/SIZE/DIRECTION OF FLOW	7	
SANITARY MAINTENANCE HOLE	○ SAN MH	SAN M
SANITARY SERVICE		
SANITARY FORCEMAIN		375ø STM
STORM SEWER/SIZE/DIRECTION OF FLOW	•	
STORM MAINTENANCE HOLE	○ STM MH	● STM MI
CATCH BASIN	□ <i>CB</i>	■ CB4
DOUBLE CATCH BASIN	DCB	■ DCB4
CATCH BASIN MAINTENANCE HOLE	© CBMH	● CBMH4
DOUBLE CATCH BASIN MAINTENANCE HOLE		• ОСВМН
DITCH INLET CATCH BASIN	□ DICB	■ DICB4
CULVERT		=
BELL UNDERGROUND	——— BU ———	——— BU ———
BELL AERIAL	——— ВА ———	——— ВА ———
CABLE UNDERGROUND	CU	cu
CABLE AERIAL	CA	
HYDRO UNDERGROUND	——— HU ———	——— ни ———
HYDRO AERIAL	——— НА ———	——— НА ———
GAS MAIN/SERVICE		GAS
FENCE	— x —— x —	— x —— x —
GUIDERAIL		
BUSHLINE/TREELINE	~~~~~	~~~~~
CONTOUR	179.00 —	179.00
SPOT ELEVATION	× 179.00	×179.00
GRADING DIRECTION/GRADE PERCENTAGE		1.9%
DRAINAGE FLOW		←
TRAFFIC SIGN	Þ SIGN	● SIGN
TRAFFIC POLE/TRAFFIC SIGNAL	0 <i>7LS</i>	• P1
LIGHT STANDARD	0 <i>LS</i>	• LS
HYDRO POLE	O HP	● HP
GUY WIRE	>—	—
BELL POLE	O BP	
BELL MAINTENANCE HOLE	○ BELL MH	
BELL PEDESTAL/VAULT	B	
, CABLE PEDESTAL/VAULT	C	
HYDRO TRANSFORMER/VAULT	oxdot	
GAS VALVE	☑ GAS VALVE	
GAS MARKER	⊕ GAS	
	₩ <u>M</u>	
MAILBOX		
CTANDARD IDOM DAD	- C/D	
STANDARD IRON BAR	- ‡ SIB	
RON BAR	■ <i>IB</i>	
	·	

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BENCHMARKS TBM1 - ELEVATION 181.10 NAIL IN HYDRO POLE LOCATED TO THE NORTHWEST OF THE NORTH CORNER OF THE SITE.

TOPOGRAPHIC SURVEY COMPILED BY TATHAM ENGINEERING LIMITED., DATED JANUARY 6, 2023. LEGAL INFORMATION COMPILED BY MEASEARTH INC., DATED AUGUST 13, 2024. SITE PLAN BASED ON CONCEPT SITE PLAN PREPARED BY GERRARD'S DESIGN & DRAFTING DATED DEC 11, 2023.

REVISION DESCRIPTION DATE SECOND ENGINEERING SUBMISSION SEP 2024 TOWN COMMENTS OCT 2024 NOV 2024 FINAL SUBMISSION FINAL SUBMISSION UPDATE TO ADDRESS TOWN COMMENTS DEC 2024 CURB ADDED TO ADDRESS TOWN COMMENTS FEB 2025

ENGINEER STAMP



10045 HIGHWAY 26 **DEVELOPMENT**

TOWNSHIP OF COLLINGWOOD

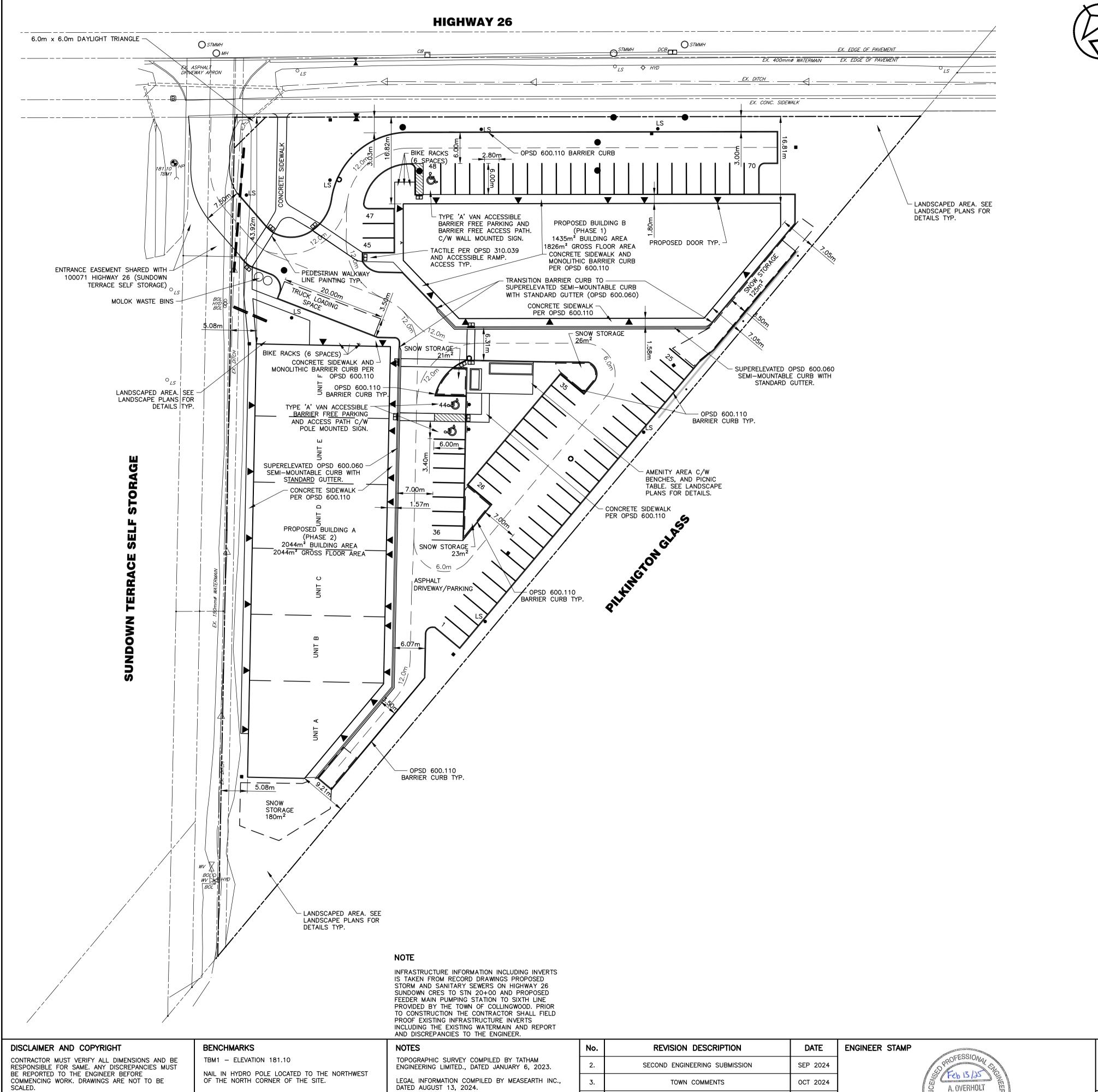
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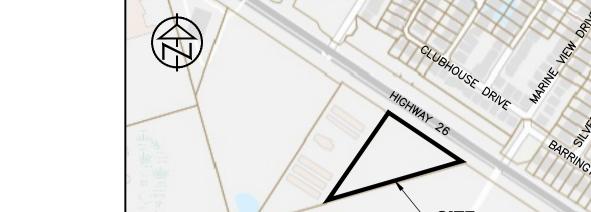
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INDEX PLAN

IN-1 DRAWN: KRL DATE: MAR 2024

SCALE: NTS





KEY PLAN

ZONING STATISTICS M1 ZONE PROVIDED REQUIRED MINIMUM LOT AREA 10,810m² MINIMUM LOT FRONTAGE 132.97m MINIMUM FRONT YARD 16.81m MINIMUM INTERIOR SIDE YARD (WEST) 4.5m 5.08m MINIMUM INTERIOR SIDE YARD (EAST) 4.5m 7.05m MINIMUM REAR YARD N/A MAXIMUM LOT COVERAGE 32% 19% 80m² MINIMUM LANDSCAPED OPEN SPACE AMENITY AREA ≤15m 3,479m² MAX. BUILDING HEIGHT 15m BUILDING AREA GROSS FLOOR AREA (GFA) 3,870m² PARKING: BUILDING A WAREHOUSE / MANUF. BUILDING B OTHER USES (PERCENTAGE OF TOTAL GROSS BUILDING AREA ON SITE)

76 SPACES REQUIRED OF WHICH 3 ARE TO BE ACCESSIBLE.

WAREHOUSE

OTHER USE

70 SPACES PROVIDED INCLUDING 3 ACCESSIBLE (VARIANCE REQUIRED).

1 SPACE $/ 100m^2 \times 2044m^2 = 20.4$

 $3 \text{ SPACES} / 100\text{m}^2 \times 1826\text{m}^2 = 54.8$

1 REQUIRED 1 PROVIDED LOADING SPACE BIKE PARKING 10% OF PARKING 7 REQUIRED 12 PROVIDED

SHOULD SNOW EXCEED THE CAPACITY OF THE DESIGNATED SNOW STORAGE AREAS, EXCESS SNOW TO BE REMOVED FROM SITE.



RB-93 SIGN NTS



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SITE PLAN BASED ON CONCEPT SITE PLAN PREPARED

BY GERRARD'S DESIGN & DRAFTING DATED DEC 11, 2023.

FINAL SUBMISSION NOV 2024 FINAL SUBMISSION UPDATE TO ADDRESS TOWN DEC 2024 CURB ADDED TO ADDRESS TOWN COMMENTS FEB 2025



10045 HIGHWAY 26 DEVELOPMENT TOWNSHIP OF COLLINGWOOD

SITE PLAN

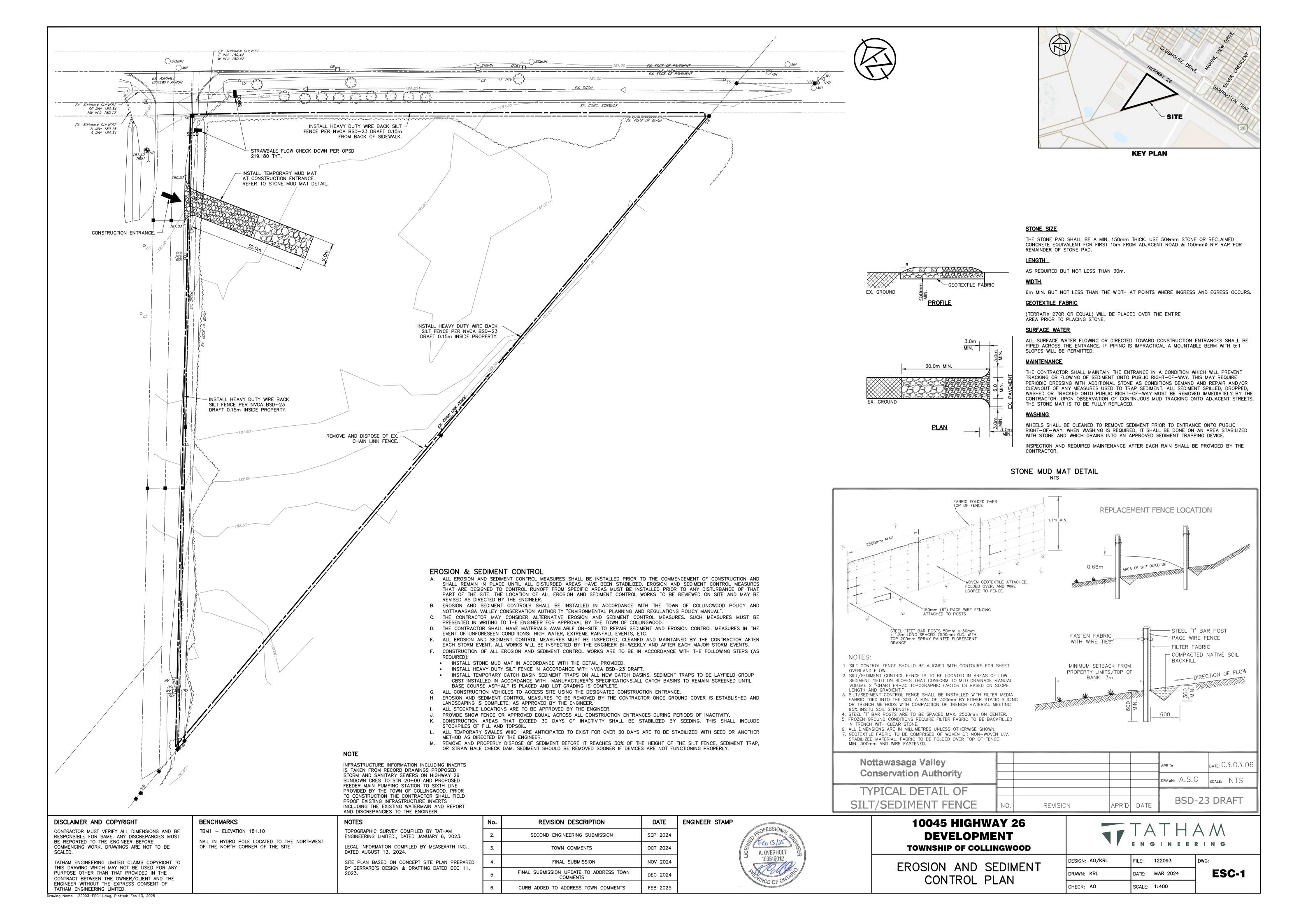
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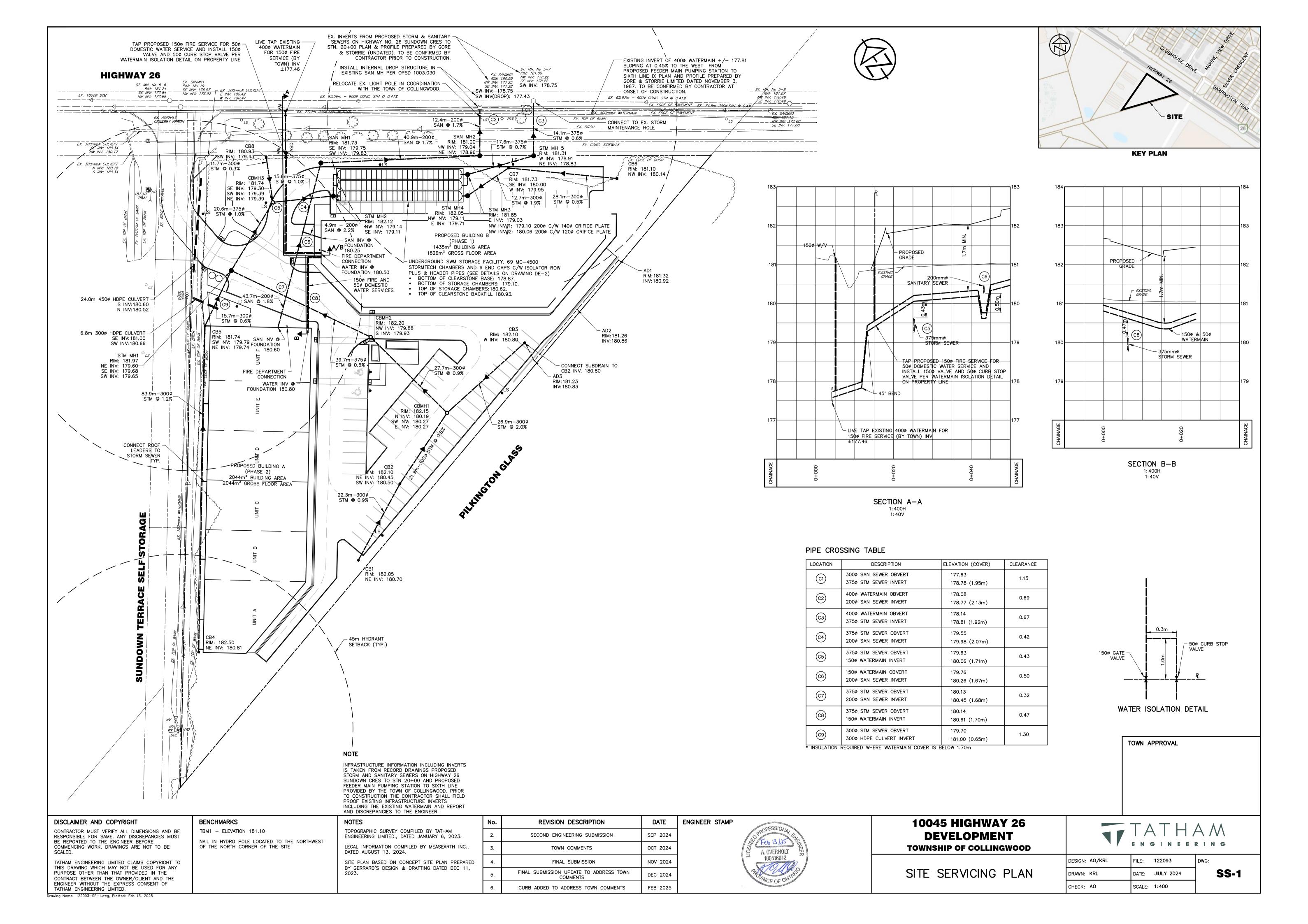
SP-1

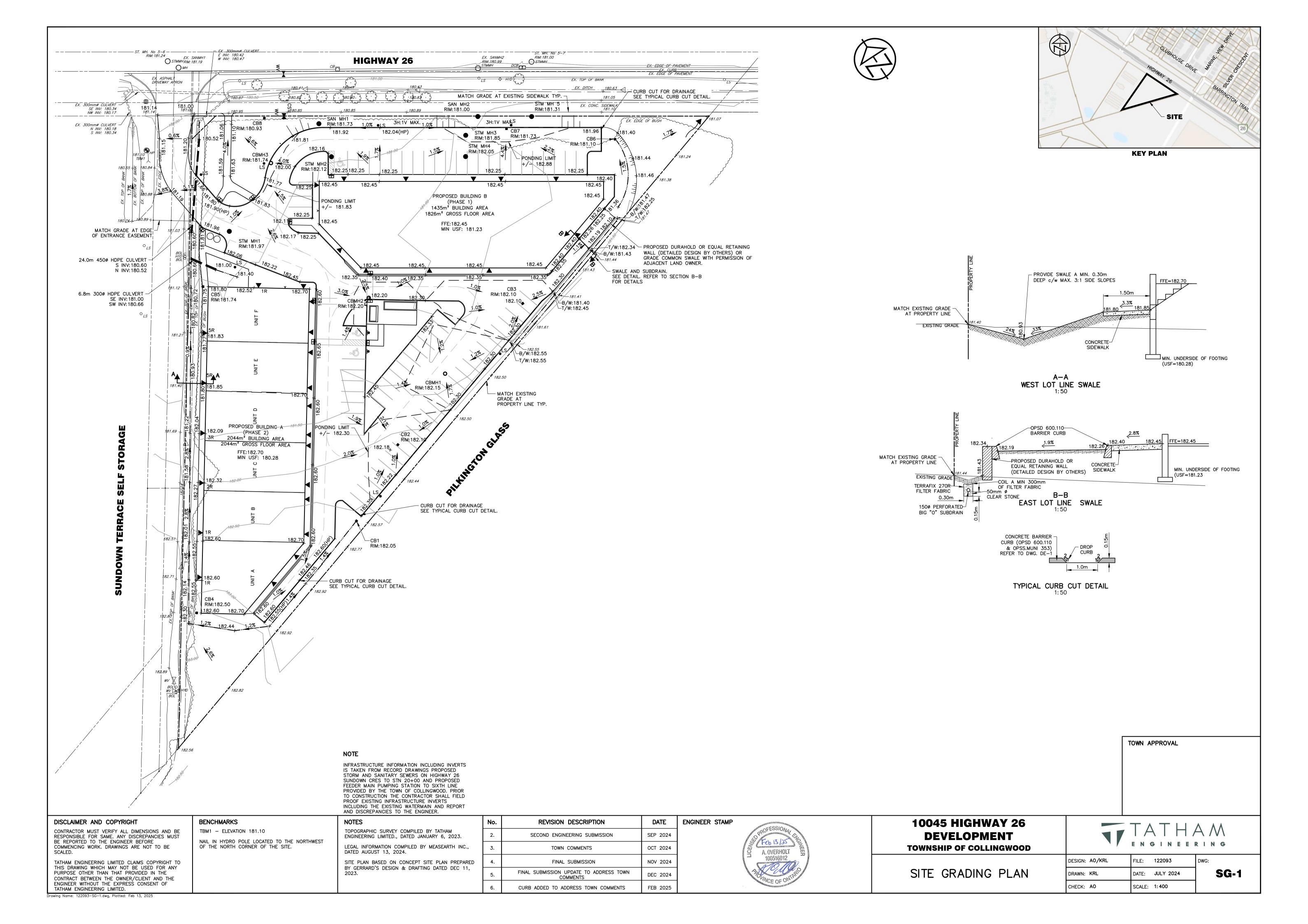
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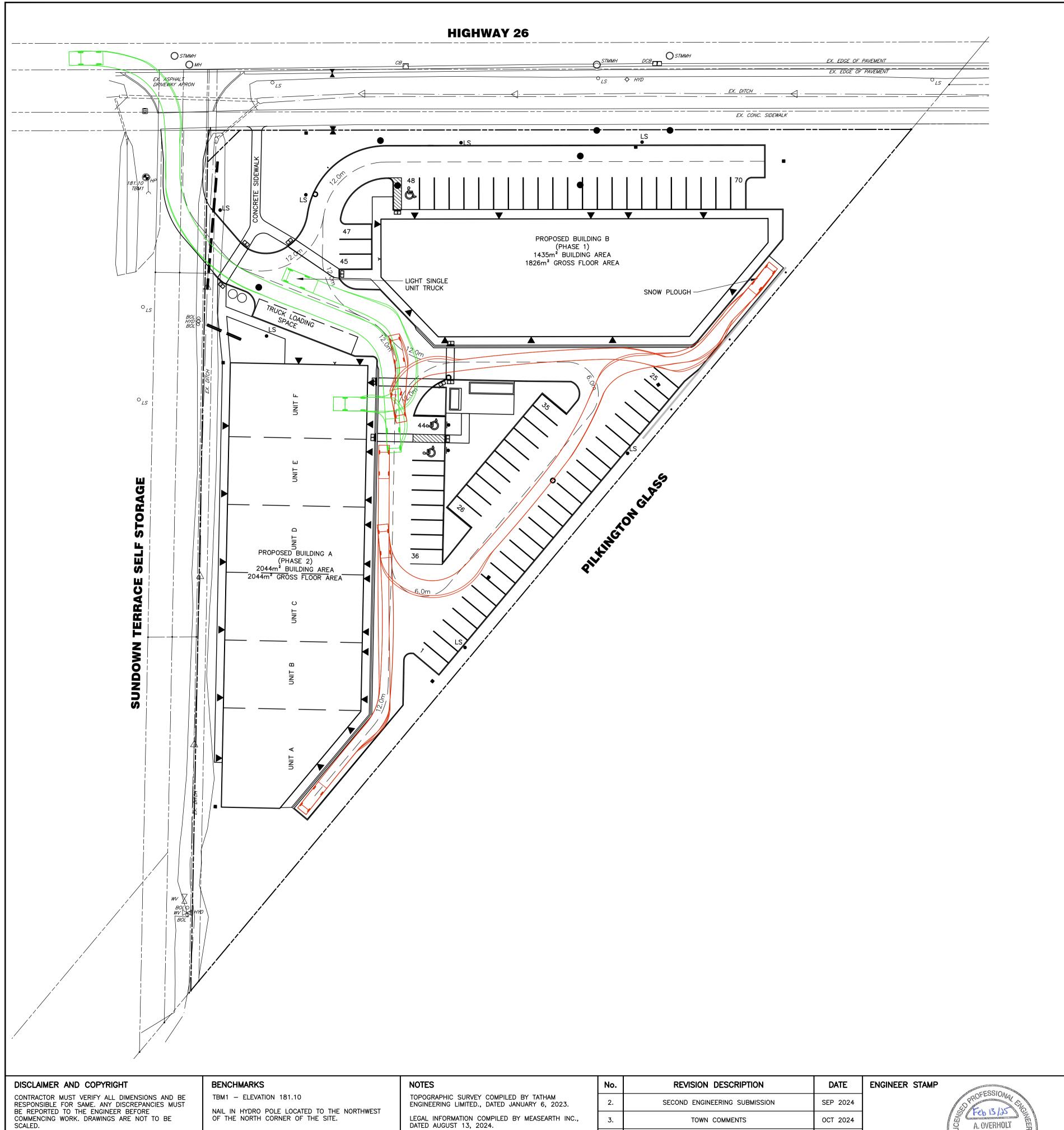
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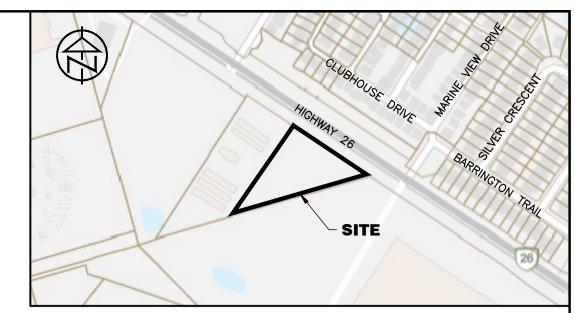












KEY PLAN

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NOTES	No.	REVISION DESCRIPTION	DATE
TOPOGRAPHIC SURVEY COMPILED BY TATHAM ENGINEERING LIMITED., DATED JANUARY 6, 2023.	2.	SECOND ENGINEERING SUBMISSION	SEP 2024
LEGAL INFORMATION COMPILED BY MEASEARTH INC., DATED AUGUST 13, 2024.	3.	TOWN COMMENTS	OCT 2024
SITE PLAN BASED ON CONCEPT SITE PLAN PREPARED	4.	FINAL SUBMISSION	NOV 2024
BY GERRARD'S DESIGN & DRAFTING DATED DEC 11, 2023.	5.	FINAL SUBMISSION UPDATE TO ADDRESS TOWN COMMENTS	DEC 2024
	6.	CURB ADDED TO ADDRESS TOWN COMMENTS	FEB 2025



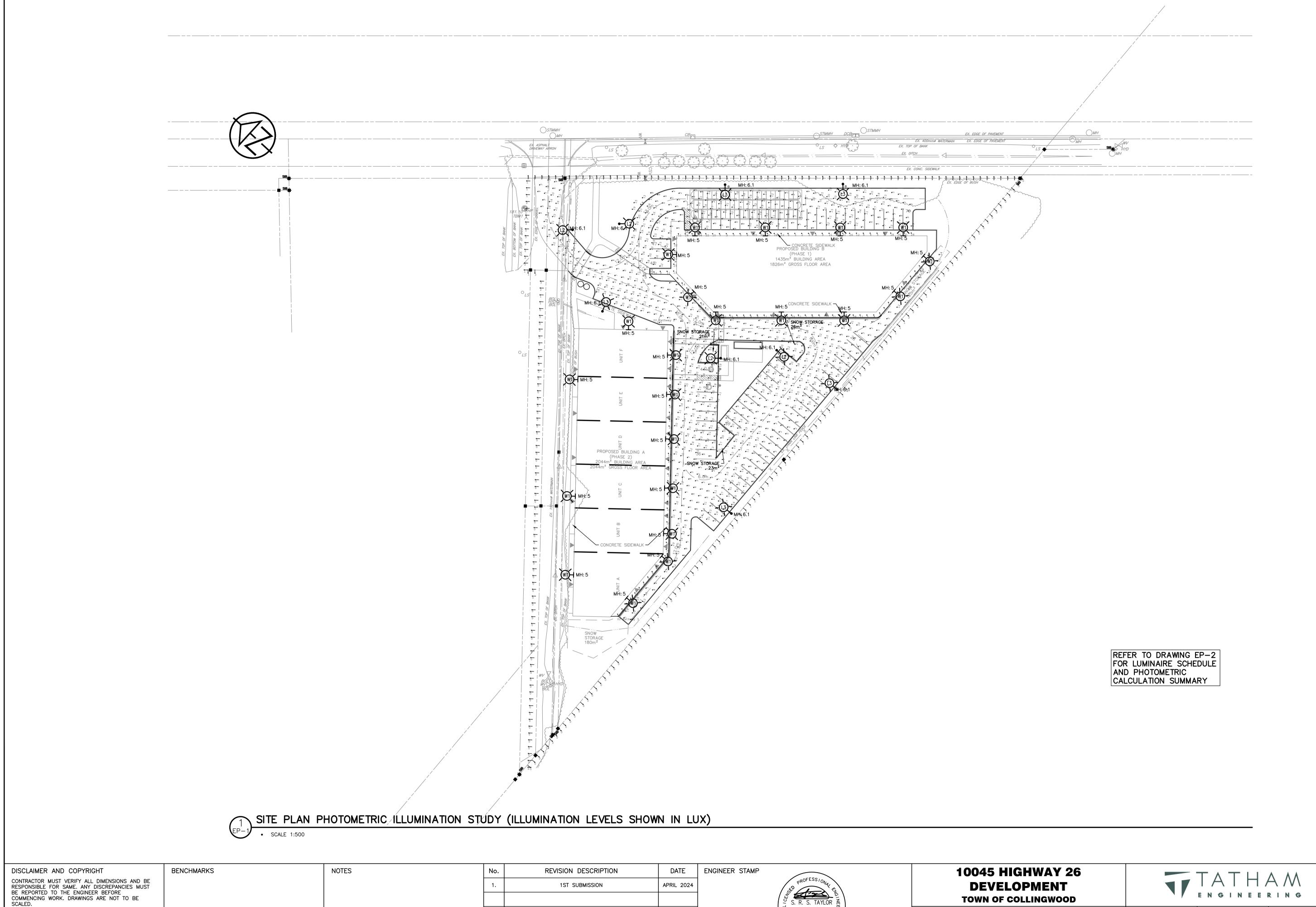
10045 HIGHWAY 26 DEVELOPMENT TOWNSHIP OF COLLINGWOOD

TRUCK TURNING TEMPLATE

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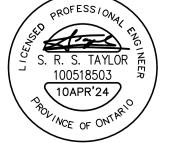
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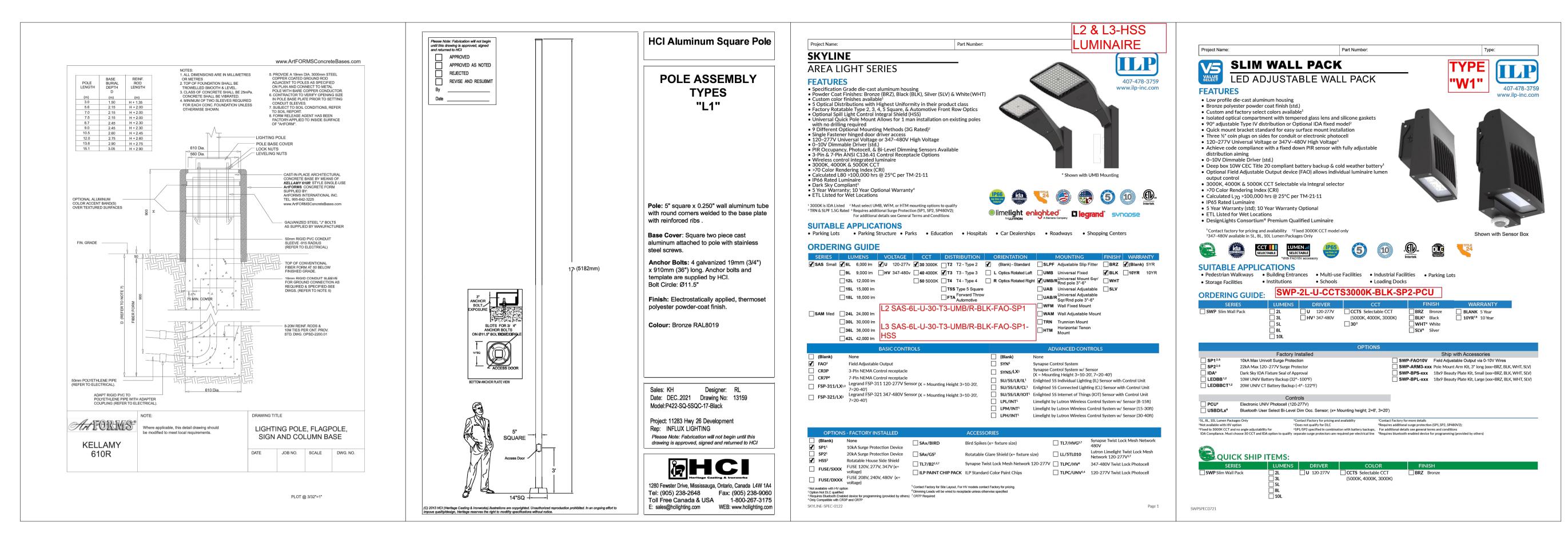
TOWN OF COLLINGWOOD

ELECTRICAL ILLUMINATION PHOTOMETRIC STUDY

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EP-1



POLE, POLE BASE AND LUMINAIRE SPECIFICATIONS (ALL LUMINAIRES IDA DARK SKY COMPLIANT)

• N.T.S.

Lumıı	naire Schedule				
Qty	Label	Description	LLF	Luminaire Lumens	Luminaire Watts
22	W1 HW1	SWP-2L-U-40-BRZ	0.950	2649	19
5	L2 • L2	SAS-6L-U-30-T3	0.950	6302	45.8
5	L3-HSS • L3	SAS-6L-U-30-T3-HSS	0.950	4311	45.8

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
01 Parking	Illuminance	Lux	12.9	35	1	N.A.	35.0
02 Pathway 1	Illuminance	Lux	4.0	6	1	4.0	N.A.
02 Pathway 2	Illuminance	Lux	19.3	47	2	9.6	N.A.
02 Pathway 3	Illuminance	Lux	24.7	47	5	5.0	N.A.
02 Pathway 4	Illuminance	Lux	11.2	22	2	5.6	N.A.
Property Vertical Spill Light	Illuminance	Lux	0.5	3	0	N.A.	N.A.

LUMINAIRE SCHEDULE AND CALCULATION SUMMARY

2 • N.T.S

ANSI/IES RP-8 Recommendations

Table 17-2 Minimum Illuminance Criteria for Parking Areas

Minimum Horizontal: 2 Lux

Uniformity Ratio Max. (Max / Min): 20:1

Table 4-2 Recommended Maximum Vertical Illuminace Spill Light

Lighting Zone LZ-2

Maximum Vertical Illuminance: 3 Lux



IES RP8 RECOMMENDED TARGET ILLUMINATION CRITERIA

• N.T.S

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	BENCHMARKS	NOTES	No.	REVISION DESCRIPTION	DATE
BE UST			1.	1ST SUBMISSION	APRIL 2024
TO					
NY E					



ENGINEER STAMP

10045 HIGHWAY 26 DEVELOPMENT TOWN OF COLLINGWOOD

LUMINAIRE AND POLE SPECIFICATIONS

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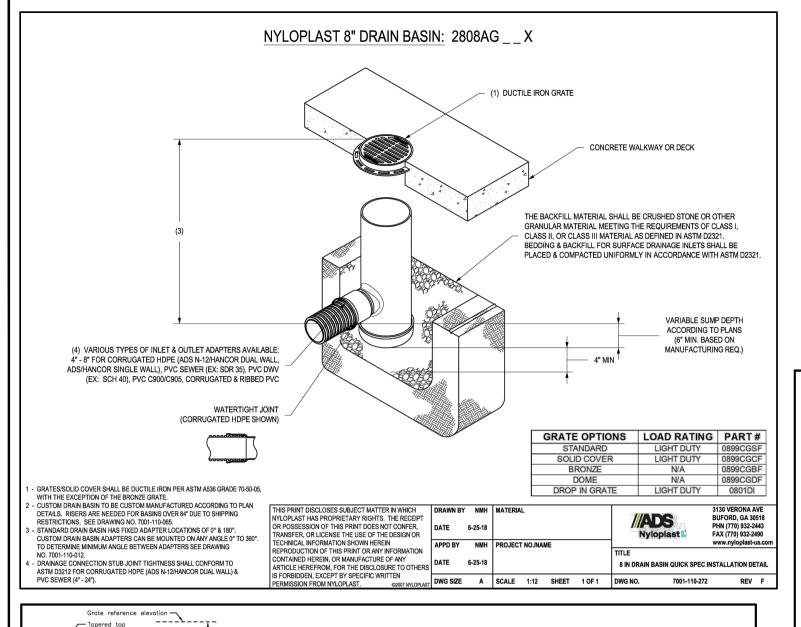
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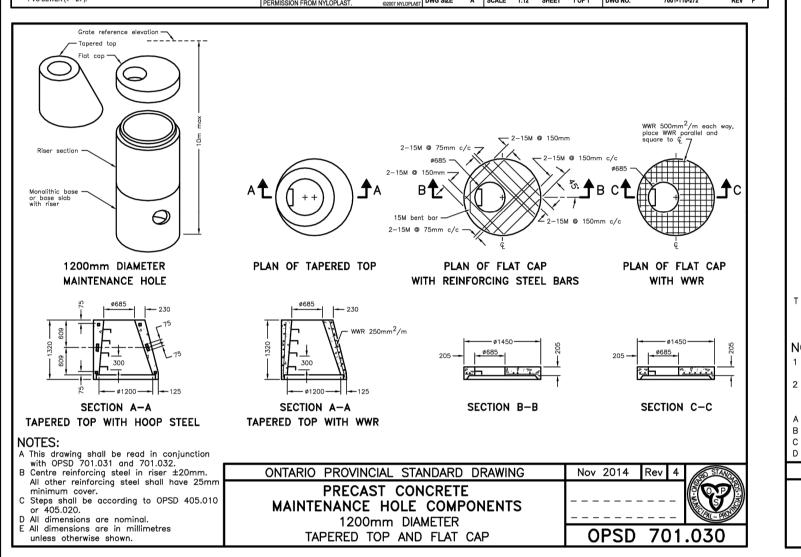
EP-2

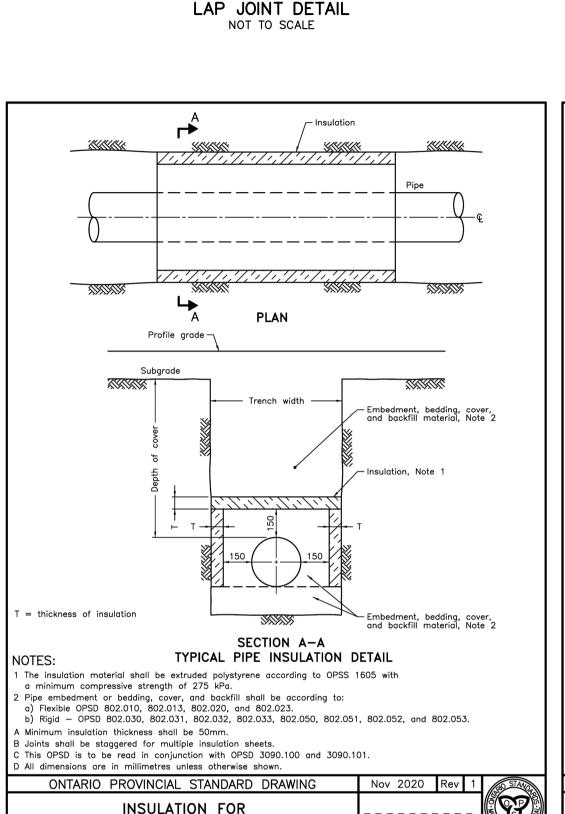
TATHAM ENGINEERING LIMITED.

Drawing Name: 122093 - Photometrics.dwg, Plotted: Feb 13, 20

ENGINEER WITHOUT THE EXPRESS CONSENT OF







INSULATION FOR

SEWERS AND WATERMAINS

IN SHALLOW TRENCHES

Dropped curb

at entrances

Thickness of

sidewalk

SAWCUT TO PROVIDE -

EX. ASPHALT

EX. GRANULAR

EX. GRANULAR 'B

SMOOTH VERTICAL FACE

PR. SURFACE COURSE ASPHALT

OPSD 1109.030

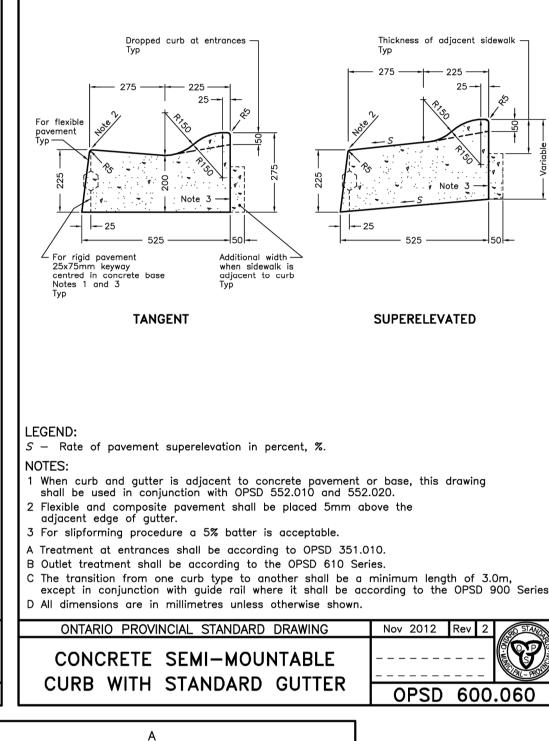
FIRST ENGINEERING SUBMISSION

SECOND ENGINEERING SUBMISSION

PR. BASE COURSE ASPHALT

PR. GRANULAR 'A'

PR. GRANULAR 'B'



40mm HL3 SURFACE COURSE ASPHALT

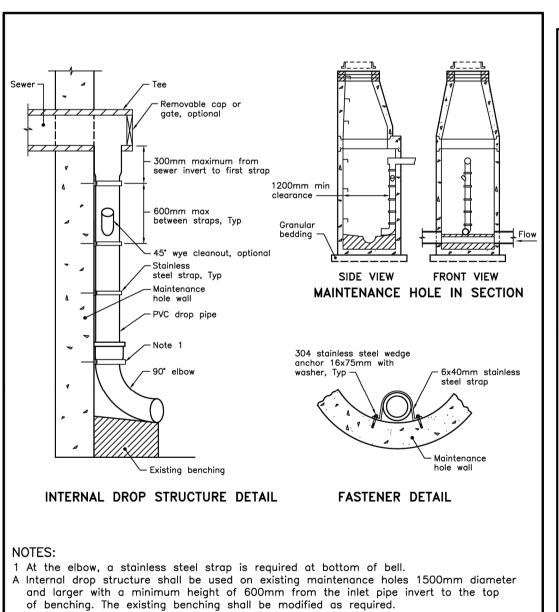
50mm HL4 BASE COURSE ASPHALT

300mm GRANULAR 'B' (TYPE I OR II)

150mm GRANULAR 'A'

ASPHALT PARKING LOT PAVEMENT STRUCTURE

NOT TO SCALE



3 Drop pipe shall be one size smaller than the incoming sewer with a minimum 150mm

_ _ _ _ _ _ _ _

BENCHMARKS

OPSD 1003.030

TBM1 - ELEVATION 181.10

OF THE NORTH CORNER OF THE SITE.

NAIL IN HYDRO POLE LOCATED TO THE NORTHWEST

diameter and maximum of 375mm diameter. A maximum of 300mm diameter for

Straps shall not be placed within 150mm of any maintenance hole section joint.

D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING

INTERNAL DROP STRUCTURE

FOR EXISTING MAINTENANCE HOLES

WITH OPTIONAL SIDE CLEANOUT

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE

COMMENCING WORK. DRAWINGS ARE NOT TO BE

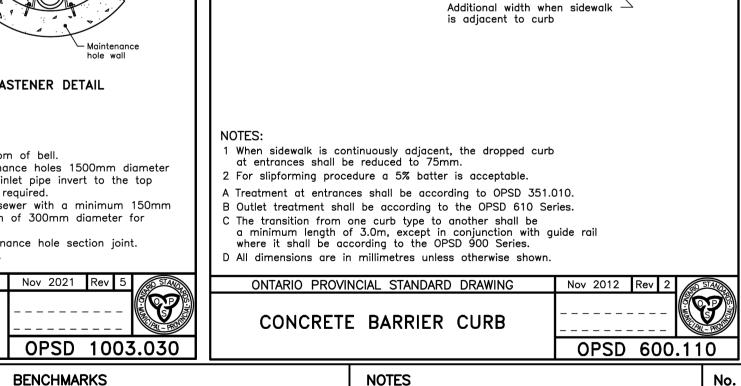
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TOPOGRAPHIC SURVEY COMPILED BY TATHAM

13, 2024.

DECEMBER 11, 2023

ENGINEERING LIMITED DATED JANUARY 6, 2023.

LEGAL SURVEY BY MEASEARTH INC., DATED AUGUST

SITE PLAN BASED ON CONCEPT SITE PLAN PREPARED

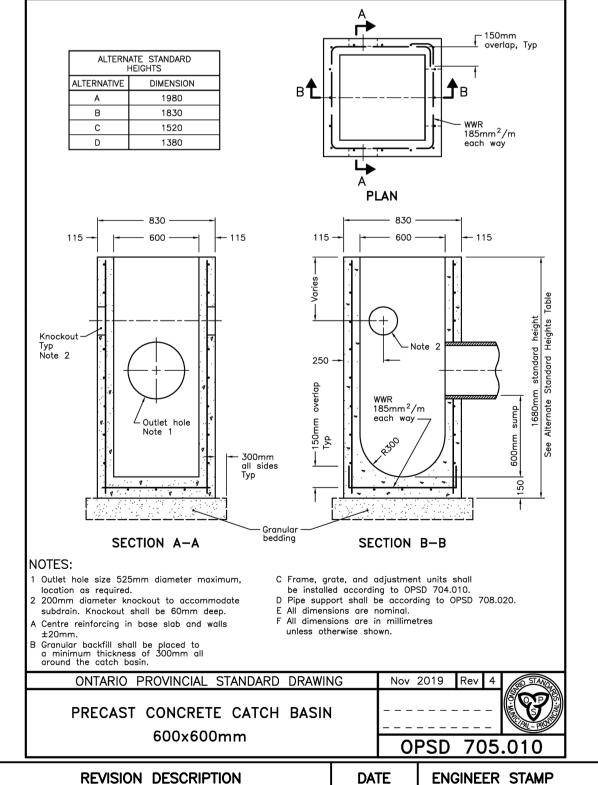
BY GERRARD'S DESIGN AND DRAFTING INC. DATED

150 ---

Note 2

– 250 – –l 50 l-

Finished road -



APR 2024

SEP 2024

Feb 13/25

A. OVERHOLT

100516012

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT

GENERAL

- TOWN OF COLLINGWOOD DEVELOPMENT STANDARDS, OPSS AND OPSD. WHERE INCONSISTENCY OCCURS, TOWN STANDARDS TO GOVERN. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AN ENTRANCE PERMIT
- FROM THE TOWN PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE OWNER'S ENGINEER SHALL PROVIDE BENCHMARK ELEVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT OF THE
- ALL PROPERTY BARS SHALL BE PRESERVED AND REPLACED BY AN OLS AT THE CONTRACTOR'S EXPENSE IF REMOVED DURING CONSTRUCTION. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE SUPPLY OF
- TEMPORARY WATER AND POWER DEWATERING SHALL BE CARRIED OUT IN ACCORDANCE WITH OPSS.MUNI 517 AND OPSS.MUNI 518. ALL TRENCHES SHALL BE MAINTAINED IN A
- DRY CONDITION. AN MECP PERMIT TO TAKE WATER (PTTW) HAS NOT BEEN OBTAINED FOR THIS PROJECT ALL ENGINE DRIVEN PUMPS SHALL BE ADEQUATELY SILENCED, SUITABLE
- FOR OPERATION IN A RESIDENTIAL DISTRICT. GENERAL INSTALLATION AND TESTING OF SEWERS, WATERMAIN AND APPURTENANCES SHALL BE IN ACCORDANCE WITH TOWN STANDARDS AND FURTHER SUPPORTED AS NECESSARY BY OPSS 407, 408, 409 (CCTV), OPSS MUNI.410, OPSS.MUNI 421, AND OPSS.MUNI 441 AND ALL
- SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS. MINIMUM VERTICAL SEPARATION BETWEEN SEWERS AND WATERMAIN AT CROSSINGS SHALL BE 0.50 m. MINIMUM VERTICAL SEPARATION BETWEEN SEWERS AT CROSSINGS SHALL BE 0.15 m
- ALL MAINTENANCE HOLES ARE 1,200 mm DIAMETER, UNLESS OTHERWISE SPECIFIED. DOUBLE CATCH BASIN MAINTENANCE HOLES ARE 1,500 mm DIAMETER, UNLESS OTHERWISE SPECIFIED. PIPE SUPPORT AT ALL STRUCTURES SHALL BE IN ACCORDANCE WITH
- OPSD 708.020. M. ALL SANITARY AND STORM MAINTENANCE HOLES SHALL BE PROVIDED WITH FROST STRAPS.
- ALL MAINTENANCE HOLE AND CATCH BASIN FRAME AND GRATES SHALL BE SET TO BASE COURSE ASPHALT ELEVATION IN ACCORDANCE WITH OPSD 704.010. FRAME AND GRATES SHALL BE RAISED TO FINISHED GRADE PRIOR TO THE PLACEMENT OF SURFACE COURSE ASPHALT USING CONCRETE ADJUSTMENT UNITS. MAXIMUM COMBINED HEIGHT OF ADJUSTMENT UNITS SHALL BE 300 mm.
- TRENCH BACKFILL SHALL BE SELECT NATIVE MATERIAL AS APPROVED BY GEOTECHNICAL ENGINEER OR IMPORTED SELECT SUBGRADE MATERIAL TO OPSS 1010. BACKFILL TO BE PLACED IN MAXIMUM 200 mm THICK LIFTS (OR AS OTHERWISE DIRECTED BY THE GEOTECHNICAL CONSULTANT) AND COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
- PIPE EMBEDMENT SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMDD. BACKFILL AND EMBEDMENT TO OPSD 802.010 (FLEXIBLE PIPE), GRANULAR 'A' EMBEDMENT OR OPSD 802.031 (RIGID PIPE) CLASS "B". GRANULAR 'A' BEDDING, GRANULAR 'B' COVER (MAX. AGGREGATE SIZE 25 mm). MINIMUM BEDDING DEPTH 150 mm, MINIMUM COVER DEPTH 300 mm ON ALL PIPES. WHERE EXCESSIVELY WET OR POOR SUBGRADE IS ENCOUNTERED AT THE INVERT LEVEL, IT MAY BE NECESSARY TO INCREASE THE BEDDING TYPE OR THICKNESS. BACKFILL AND EMBEDMENT SHALL BE IN ACCORDANCE WITH
- THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND OPERATIONS SHALL BE MONITORED BY A GEOTECHNICAL TECHNICIAN. CLEAR STONE COMPLETELY WRAPPED IN FILTER FABRIC MAY BE
- SUBSTITUTED FOR EMBEDMENT MATERIAL IF APPROVED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR THE ENVIRONMENTAL QUALITY OF IMPORTED FILL AND SHALL PROVIDE A DOCUMENT TO CERTIFY THE MATERIAL IS FREE OF HAZARDOUS CONTAMINANTS. ALL MATERIALS SHALL
- ADHERE TO O. REG. 406/19. DISTURBED AREAS SHALL BE REINSTATED TO PREVIOUS CONDITION OR
- REINSTATEMENT OF ALL BOULEVARDS AND DITCHES SHALL INCLUDE FINE GRADING, PLACEMENT OF MINIMUM 150 mm TOPSOIL AND NURSERY SOD IN ACCORDANCE WITH OPSS 802, OPSS 803 AND OPSS.MUNI 804. SOD
- SHALL BE STAKED WHERE NECESSARY TO AVOID MOVEMENT. TRAFFIC MARKERS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE MTO TRAFFIC CONTROL MANUAL BOOK 7. LOCATIONS OF EXISTING UTILITIES ARE NOT GUARANTEED. UNDERGROUND
- UTILITIES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ALL EXISTING INFRASTRUCTURE/ FACILITIES AS WELL AS NOTIFYING ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND COORDINATE CONSTRUCTION ACCORDINGLY.
- ALL ON-SITE MATERIAL SHALL BE PROPERLY STORED, SECURED, MONITORED AND COVERED AS REQUIRED. SPECIFICALLY, ALL PVC PIPE SHALL BE COVERED WHILE STORED ON-SITE.

PARKING LOT

- A. SUBGRADE MATERIAL SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 98% OF THE MATERIAL'S SPMDD. SUBGRADE SHALL BE PROOF ROLLED AND CERTIFIED BY THE GEOTECHNICAL CONSULTANT PRIOR TO PLACEMENT OF GRANULAR 'B'.
- B. GRANULAR 'A' AND 'B' SHALL BE COMPACTED TO A DRY DENSITY OF 100% OF THE MATERIAL'S RESPECTIVE SPMDD. ASPHALT SHALL BE COMPACTED TO A MINIMUM OF 97% OF THE
- MARSHALL BULK DENSITY. JOINTS WITH EXISTING ASPHALT SHALL BE SAW CUT STRAIGHT PRIOR TO PLACING NEW ASPHALT. WHERE EXISTING ASPHALT IS THICKER THAN 75 mm, A 500 mm WIDE BY 40 mm DEEP LAP JOINT SHALL BE GROUND INTO EXISTING ASPHALT PRIOR TO THE PLACEMENT OF SURFACE COURSE
- ASPHALT (SEE DETAIL). ALL GRANULAR AND ASPHALT MATERIAL SHALL BE PLACED IN ACCORDANCE WITH OPSS.MUNI 310 AND OPSS.MUNI 314.
- TACK COAT SHALL BE APPLIED AT THE DIRECTION OF THE ENGINEER PRIOR TO THE PLACEMENT OF SURFACE COURSE ASPHALT CONCRETE CURB SHALL BE IN ACCORDANCE WITH OPSD 600.110 AND
- OPSS.MUNI 353. SUBDRAIN TO BE INSTALLED PER OPSD 216.021. CURB DEPRESSIONS AT SIDEWALK CROSSINGS SHALL BE IN ACCORDANCE WITH OPSD 310.033. H. CONCRETE CURB TERMINATIONS SHALL BE CONSTRUCTED IN ACCORDANCE
- CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH OPSD 310.010 AND OPSS 351. SUBBASE TO CONSIST OF 150 mm DEPTH GRANULAR 'A'. SIDEWALK RAMPS TO BE CONSTRUCTED IN ACCORDANCE WITH OPSD 310.033 AND TACTILE WALKING SURFACE INDICATORS WHERE SPECIFIED IN
- ACCORDANCE WITH OPSD 310.039. J. ENTRANCE TO BE CONSTRUCTED IN ACCORDANCE WITH OPSD 350.010.

STORM SEWER

- A. STORM MAINTENANCE HOLES AND CATCH BASIN MAINTENANCE HOLES SHALL BE IN ACCORDANCE WITH OPSD 701.010, 701.011, 701.012,
- 701.013, 701.014, AND 701.015, MAINTENANCE HOLES SHALL BE BENCHED IN ACCORDANCE WITH OPSD 701.021. MINIMUM BENCHING WIDTH SHALL BE 300 mm. CATCH BASIN MAINTENANCE HOLES SHALL HAVE A SUMP PER OPSD 701.010.
- MAINTENANCE HOLE AND CATCH BASIN MAINTENANCE HOLE STEPS SHALL BE IN ACCORDANCE WITH OPSD 405.010. MAINTENANCE HOLE FRAMES AND GRATES SHALL BE IN ACCORDANCE
- WITH OPSD 401.010, TYPE 'A' OPEN COVER. CATCH BASINS AND DOUBLE CATCH BASINS SHALL BE IN ACCORDANCE
- WITH OPSD 705 010 AND 705 020 C/W 600 mm SUMP. CATCH BASINS AND DOUBLE CATCH BASINS FRAMES AND GRATES SHALL
- BE IN ACCORDANCE WITH OPSD 400.020. CATCH BASIN LEADS - 250 mm WITH MINIMUM 0.7% SLOPE. DOUBLE
- CATCH BASIN LEADS 300 mm MINIMUM 0.7% SLOPE. FROST STRAPS SHALL BE INSTALLED ON ALL MAINTENANCE HOLES IN
- ACCORDANCE WITH OPSD 701.100 WITH 'QUICK ANCHORED' BOLTS. DROP STRUCTURES AT MAINTENANCE HOLES SHALL BE PROVIDED IN

ACCORDANCE WITH OPSD 1003.010.

SANITARY SEWERS

- SANITARY MAINTENANCE HOLES SHALL BE IN ACCORDANCE WITH OPSD
- SANITARY MAINTENANCE HOLES SHALL BE BENCHED IN ACCORDANCE
 - WITH OPSD 701.021 ALL CONNECTIONS TO MAINTENANCE HOLES SHALL INCLUDE A KOR-N-SEAL RUBBER BOOT PIPE CONNECTION. FROST STRAPS SHALL BE INSTALLED ON ALL MAINTENANCE HOLES IN ACCORDANCE WITH OPSD 701.100 WITH 'QUICK ANCHORED' BOLTS.
- MAINTENANCE HOLE STEPS SHALL BE IN ACCORDANCE WITH OPSD
- MAINTENANCE HOLE FRAME AND COVER SHALL BE IN ACCORDANCE WITH OPSD 401.010, TYPE 'A' CLOSED COVER.
- MAINTENANCE HOLE STRUCTURES EXCEEDING 5.0m IN DEPTH SHALL INCLUDE SAFETY PLATFORM IN ACCORDANCE WITH OPSD 404.020. DROP STRUCTURES AT MAINTENANCE HOLES SHALL BE PROVIDED IN
- RADIUS BENDS SHALL BE USED ON ALL SEWER CONNECTIONS WHERE THE ANGLE OF CONNECTION BETWEEN THE SERVICE AND SEWER EXCEEDS 90°. SANITARY SEWER TESTING SHALL INCLUDE INFILTRATION, EXFILITRATION

WATERMAIN

MANDREL, AND CCTV.

ALL MATERIALS SHALL SHALL BE CSA CERTIFIED.

ACCORDANCE WITH OPSD 1003.020.

- MINIMUM COVER OVER WATERMAIN, SERVICE LATERALS AND HYDRANT LEADS SHALL BE 1.7 m AT ALL POINTS. WHERE MINIMUM COVER CAN NOT BE ACHIEVED FROST PROTECTION WITH INSULATION SHALL BE PROVIDED PER DETAIL (INSET) AND AS PER MANUFACTURERS
- SPECIFICATIONS. SEPARATION BETWEEN WATERMAINS AND SEWERS SHALL BE A MINIMUM
- THRUST PROTECTION SHALL BE PROVIDED BY THE USE OF MECHANICAL JOINT FITTINGS AND RESTRAINERS. RESTRAINT SYSTEM TO BE INSTALLED
- IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL WATERMAIN INSTALLED WITHIN ENGINEERED FILL SHALL BE
- ALL PVC WATERMAIN AND PE RESIDENTIAL SERVICES SHALL BE INSTALLED WITH 10 GAUGE, MULTI-STRAND TRACER WIRE BETWEEN HYDRANTS AND OTHER CONDUCTING APPURTENANCES. TRACER WIRE CONTINUITY MUST BE TESTED AND CERTIFIED BY THE CONTRACTOR. ALL CONNECTIONS SHALL BE MADE WITH "DRYCONN WATERPROOF CONNECTORS" OR APPROVED
- EQUIVALENT. CATHODIC PROTECTION (S-12 ZINC ANODES @ 30 m SPACING) SHALL BE PROVIDED IN ACCORDANCE WITH OPSS.MUNI 442.
- GENERAL INSTALLATION AND TESTING OF WATERMAIN SHALL BE IN ACCORDANCE WITH OPSS.MUNI 421, OPSS.MUNI 701 AND MUNICIPAL SPECIFICATIONS.
- DISINFECTION OF THE WATERMAINS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C651 SPECIFICATIONS. THE COMPLETE WATER SYSTEM, INCLUDING SERVICE CONNECTIONS TO THE PROPERTY LINE AND HYDRANTS SHALL BE TESTED IN ACCORDANCE WITH THE TOWN'S WATERMAIN TESTING PROTOCOL. CONNECTIONS TO EXISTING
- WATERMAINS SHALL NOT BE MADE UNTIL WRITTEN AUTHORIZATION IS PROVIDED BY THE ENGINEER AND THE TOWN. TOWN STAFF SHALL CONDUCT BACTERIOLOGICAL SAMPLING ON NEWLY
- INSTALLED WATERMAIN. FOLLOWING SATISFACTORY WATER SAMPLING, CONTRACTOR SHALL TIE-IN
- WATER SERVICES AT THE DISCRETION OF MUNICIPAL STAFF.

- ALL MATERIALS SHALL BE CSA CERTIFIED AND IN ACCORDANCE WITH OPSS AND WITH THE TOWN DEVELOPMENT STANDARDS. STORM SEWER - PVC SDR 35 OR CONCRETE ES OR CLASS III. ALL SEWER TO BE JOINED WITH A GASKETED BALL AND SPIGOT SYSTEM.
- REINFORCED CONCRETE PIPE 450 mm DIAMETER OR GREATER FOR SANITARY SEWER - PVC SDR 35 WITH RUBBER GASKET JOINTS, MINIMUM
- 200 mm DIAMETER. SANITARY SERVICES - PVC SDR 28 ALL WATERMAIN MATERIALS SHALL BE IN ACCORDANCE WITH NSF60 AND
- WATERMAIN C900 CLASS 150/DR 18 RATED PVC WITH RUBBER GASKET JOINT FITTINGS.
- PIPE RESTRAINERS SIGMA C-900. LIVE TAP SADDLES TO BE EPOXY COATED COMPLETE WITH STAINLESS
- MECHANICAL JOINT DUCTILE FITTINGS TO AWWA/ANSI C153/A21.53
- INCLUDING PROTECTO-CAPS, CATALOGUE NO. 175P190 OR APPROVED **EQUIVALENT** ISOLATION VALVES TO BE RESILIENT SEAT GATE VALVES WITH MECHANICAL JOINTS, OPEN LEFT, CLOW OR MUELLER, VALVE BOXES TO BE 5-SL-48
- SLIDING OR MUELLER MVB COMPOSITE COMPLETE WITH GUIDE PLATE AND DUCTILE ADJUSTABLE TOP AND LID OR APPROVED EQUAL. CAPS TO BE PAINTED BLUE.
- ALL SPECIFIED AGGREGATES SHALL BE IN ACCORDANCE WITH OPSS.MUNI1010. FILTER FABRIC - TERRAFIX 270R OR APPROVED EQUIVALENT. PERFORATED SUBDRAINS - 150 mm BIG 'O' WITH GEOTEXTILE FILTER
- SOCK OR APPROVED EQUIVALENT AREA DRAINS TO BE NYOPLAST 8" DRAIN BASIN WITH DUCTILE IRON
- GRATE APPROVED OR EQUAL. RIGID INSULATION TO BE 50mm THICK HL-40 STYROFOAM.

TOWN APPROVAL

10045 HIGHWAY 26 COMMERCIAL DEVELOPMENT TOWNSHIP OF COLLINGWOOD

DE-1

DESIGN: AO/KRL FILE: 122093 DRAWN: KRL DATE: FEB 2024 SCALE: 1: 400

DETAILS AND NOTES CHECK: AO

TATHAM ENGINEERING LIMITED. Drawing Name: 122093—DE—1.dwg, Plotted: Feb 13, 2025

BE REPORTED TO THE ENGINEER BEFORE

1500mm maintenance holes.

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