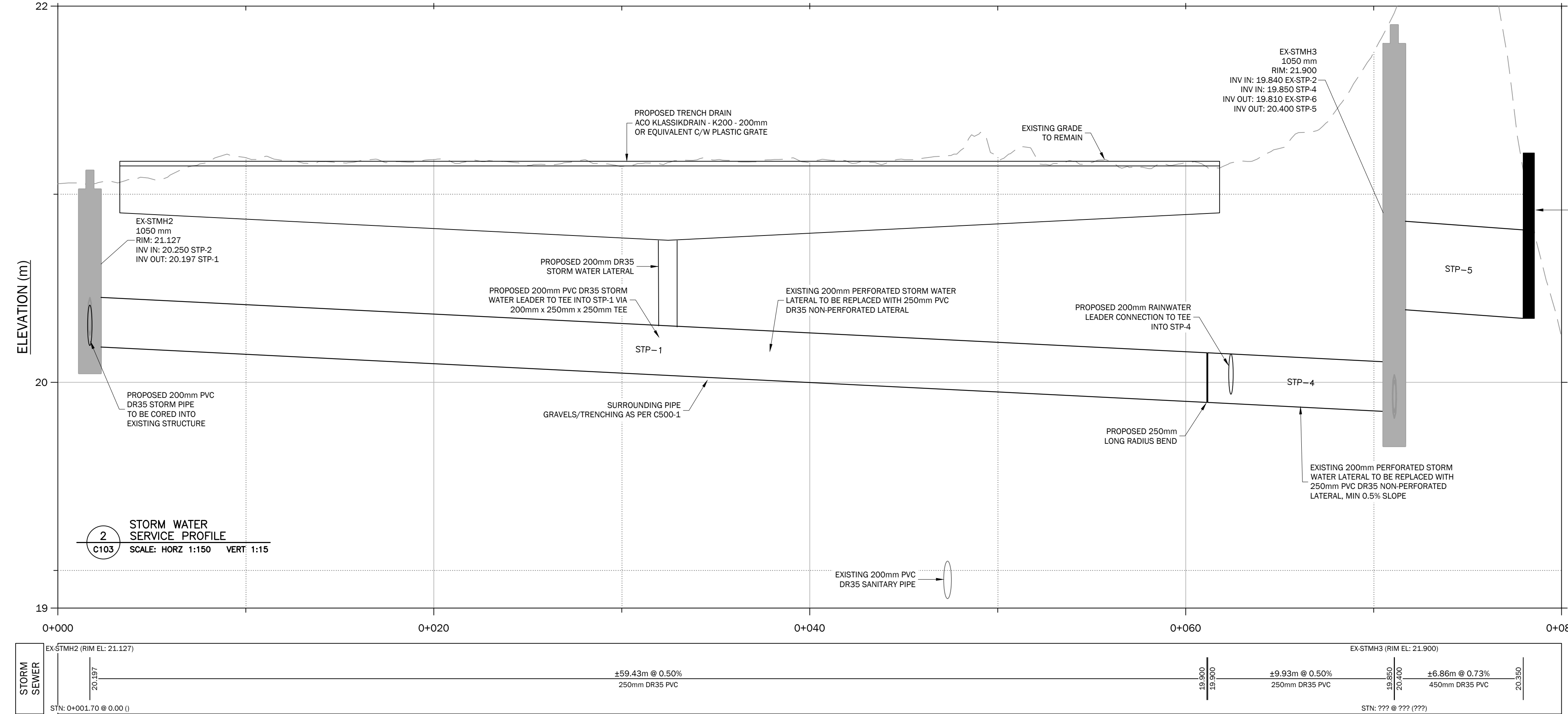
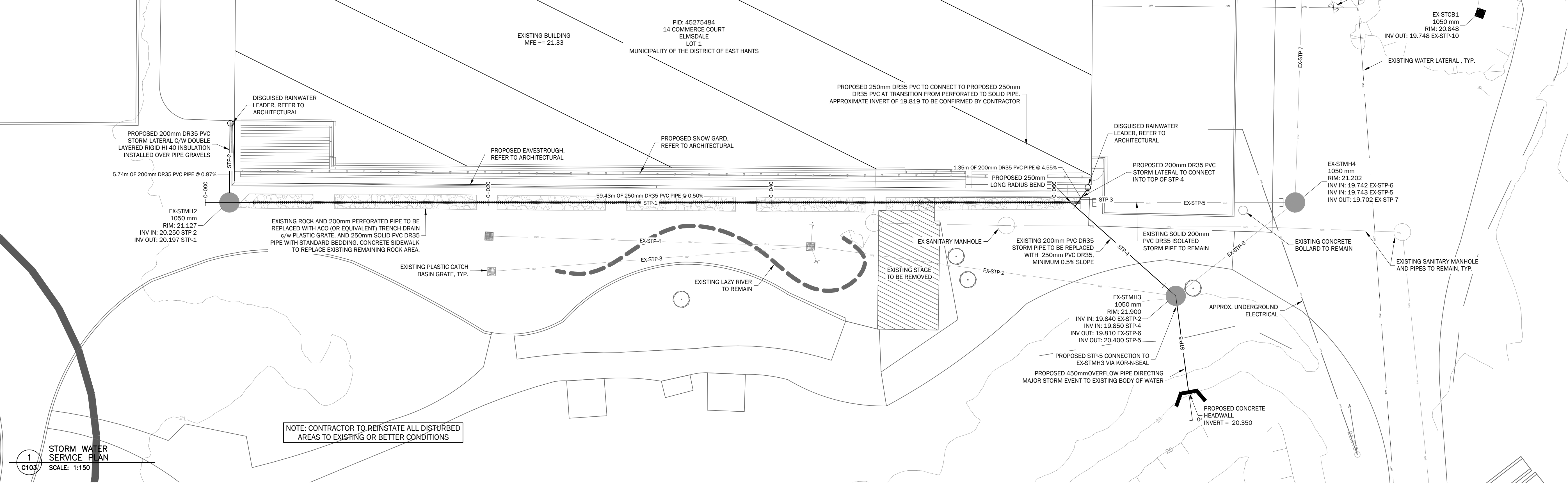


STORMWATER DESIGN INFORMATION				
THE STORM WATER RUNOFF FOR THE 1:5, 1:10, 1:100 YEAR STORM EVENTS WAS ESTIMATED USING STORM & SANITARY ANALYSIS 2024 (SSA) FROM AUTOCAD CIVIL 3D. THE STORM WATER CALCULATIONS WERE BASED ON THE SOIL CONSERVATION SERVICE METHOD (SCS TR-55) RUNOFF METHOD. ONLY USING THE SYNTHETIC DESIGN STORM EVENT COMMONLY REFERRED TO AS THE CHICAGO STORM. THE RAINFALL AMOUNTS USED IN THE ANALYSIS & MODELING ARE AS FOLLOWS & WERE OBTAINED FROM ENVIRONMENT CANADA RAINFALL DATABASE.				
1:5 = 111.8MM OF RAIN FALL OVER 24HR PERIOD				
1:10 = 141.1MM OF RAIN FALL OVER 24HR PERIOD				
1:100 = 232.9MM OF RAIN FALL OVER 24HR PERIOD				
IA/S RATIO = 0.2				
ANTECEDENT MOISTURE CONDITION = 2 (AVERAGE (NORMAL) CONDITIONS)				
BOLD CELLS INDICATE PEAK FLOW EXCEEDS DESIGN CAPACITY.				
PIPE ID	PIPE PROPERTIES	1:5 YEAR PEAK FLOW RATE (L/S)	1:10 YEAR PEAK FLOW RATE (L/S)	1:100 YEAR PEAK FLOW RATE (L/S)
STP-1	59.43m 250mm PVC DR35 PIPE @ 0.5%	17.670	22.440	37.200
STP-2	5.74m 200mm PVC DR35 PIPE @ 0.9%	15.370	19.470	32.290
STP-3	1.35m 200mm PVC DR35 PIPE @ 4.6%	15.020	19.460	32.260
STP-4	9.93m 250mm PVC DR35 PIPE @ 0.5%	32.430	41.800	69.490
STP-5	6.86m 450mm PVC DR35 PIPE @ 0.7%	0.000	1.960	39.300
EX-STP-6	10.7m 200mm PVC DR35 PIPE @ 0.6%	47.510	59.660	64.750
EX-STP-7	20.43m 250mm PVC DR35 PIPE @ 0.4%	47.460	59.660	64.750
EX-STP-8	3.855m 250mm PVC DR35 PIPE @ 0.6%	60.090	72.270	84.740

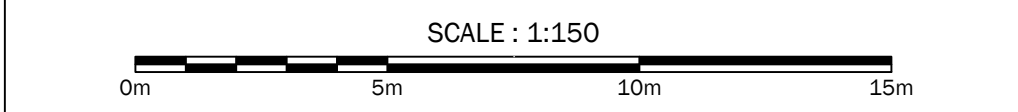
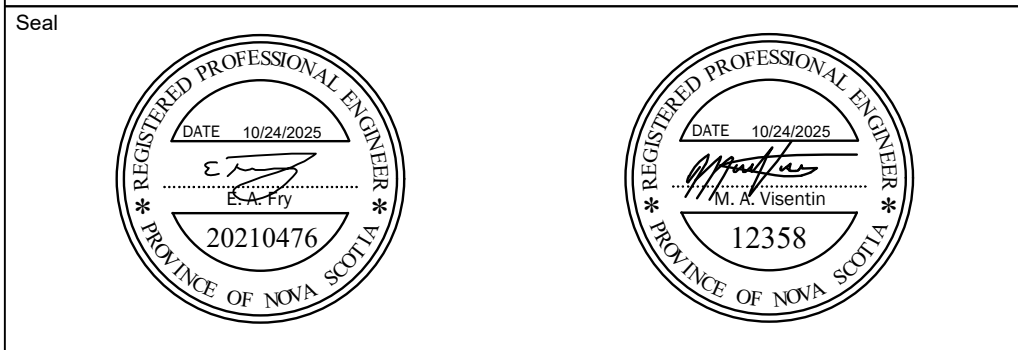


Pipe Table				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
STP-1	250 mm	59.4 m	0.50%	DR35 PVC
STP-2	200 mm	5.7 m	0.87%	DR35 PVC
STP-3	200 mm	1.4 m	4.55%	DR35 PVC
STP-4	250 mm	9.9 m	0.50%	DR35 PVC
STP-5	450 mm	6.9 m	0.73%	DR35 PVC

- NOTES:
- ALL MEASUREMENTS SHOWN ARE IN METRIC UNITS OF MEASURE.
 - THIS IS NOT A LEGAL BOUNDARY SURVEY, BOUNDARIES SHOWN HERE ARE APPROXIMATE, DERIVED FROM PROPERTY ONLINE MAPPING/PLAN OF SURVEY AND FIELD RECONNAISSANCE BY CIVIL ENGINEERING TECHNICIAN. BOUNDARIES ARE SUBJECT TO A LEGAL FIELD SURVEY BY A LICENSED NSLS, AND A LEGAL SURVEY MAY CAUSE OFFSETS AND BOUNDARIES TO DIFFER FROM WHAT IS SHOWN HEREIN.
 - ALL WORK MUST CONFORM TO LOCAL AND PROVINCIAL MUNICIPAL STANDARDS AND SPECIFICATIONS (LATEST EDITION).
 - SLOPES GREATER THAN 2:1 SHALL BE DESIGNED BY A GEOTECHNICAL ENGINEER.
 - EXISTING INFRASTRUCTURE RIMS AND INVERTS DISPLAYED ARE A COMBINATION OF FIELD VERIFIED MEASUREMENTS AND AS-BUILT INFORMATION FROM THE AS-BUILT PLAN PROVIDED.

NOTE:
THESE STORMWATER IMPROVEMENTS APPLY SPECIFICALLY TO THE EAST HANTS AQUATIC CENTRE PROPERTY. WHILE THE PROPOSED IMPROVEMENTS WILL ENHANCE STORMWATER MANAGEMENT WITHIN THE SITE, THEY WILL NOT PROTECT THE SITE FROM POTENTIAL HARMFUL DOWNSTREAM DRAINAGE ISSUES. IT IS RECOMMENDED THAT SUFFICIENT ANALYSIS IS COMPLETED TO CONFIRM THAT POOR DOWNSTREAM DRAINAGE CONDITIONS WILL NOT CONTRIBUTE TO POTENTIAL UPSTREAM DRAINAGE ISSUES INTO THE DEVELOPMENT PROPERTY

No.	MM/DD/YYYY	Revision Description	By
6	10/24/2025	REVISED - ISSUED FOR TENDER	EF
5	09/23/2025	REVISED TABLE	EF
4	09/09/2025	REVISED - ISSUED FOR TENDER	EF
3	08/29/2025	ISSUED FOR TENDER	EF
2	07/28/2025	ISSUED FOR REVIEW	EF
1	05/02/2025	PRELIMINARY - ISSUED FOR COORDINATION	EF

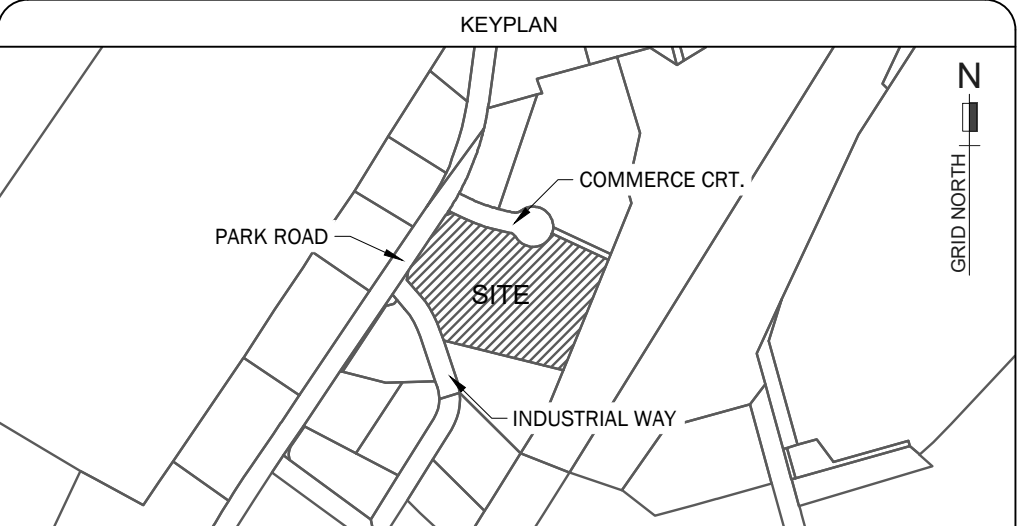


Horizontal	Vertical	Plot
1:150	1:15	ARCH D (24"x36")

EAST HANTS AQUATIC CENTRE
14 COMMERCE CT, ELMSDALE, NS
PID: 45275484

Title
**STORMWATER UPGRADES
WEST SIDE OF BUILDING**

Project No. 250117-46	Drawn C. LARSON	Sheet 1 of 3
Ref.	Engineer M. VISENTIN	Plan No.
Date 2025-03-31	Check E. FRY	C100



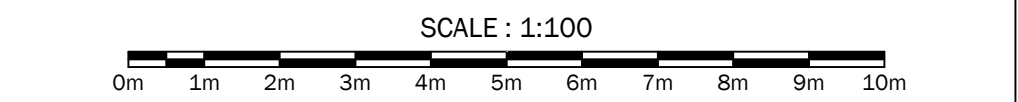
- NOTES:
1. TOPOGRAPHIC SURVEY DATA SHOWN HAS BEEN PRODUCED BY ABLE ENGINEERING ON 04/22/2025.
 2. THIS IS NOT A LEGAL BOUNDARY SURVEY. BOUNDARIES SHOWN HERE ARE APPROXIMATE, DERIVED FROM PROPERTY ONLINE MAPPING/PLAN OF SURVEY AND FIELD RECONNAISSANCE BY CIVIL ENGINEERING TECHNICIAN. BOUNDARIES ARE SUBJECT TO A LEGAL FIELD SURVEY BY A LICENSED NSLS, AND A LEGAL SURVEY MAY CAUSE OFFSETS AND BOUNDARIES TO DIFFER FROM WHAT IS SHOWN HEREIN.
 3. LANDSCAPING MUST BE PERFORMED IN SUCH A WAY TO ENSURE POSITIVE DRAINAGE OF STORM WATER FROM AROUND DWELLING. A MINIMUM SLOPE OF 10% AWAY FROM THE DWELLING IS REQUIRED FOR THE FIRST 1.5 METERS. ALL OTHER CONSTRUCTED GRADES ARE TO BE A MINIMUM OF 2% AND A MAXIMUM OF 2:1, EXCEPT FOR GARAGE ENTRANCES.
 4. MINIMUM VERTICAL DISTANCES FROM TOP OF FOUNDATION WALL TO FINISHED GRADE TO BE MINIMUM 0.2m, EXCEPT FOR GARAGE ENTRANCES.
 5. CONTRACTORS TO VERIFY FOUNDATION DIMENSIONS SHOWN WITH BUILDING PLANS PRIOR TO CONSTRUCTION.
 6. EXISTING CONTOURS ARE BASED ON TOPOGRAPHICAL SURVEY DATA WITH AN INTERVAL OF 1m & 5m.
 7. ALL DISTURBED AREAS TO BE PERMANENTLY STABILIZED AND FINISHED WITH EITHER GRAVEL, ASPHALT, AND/OR LANDSCAPING, UNLESS OTHERWISE INDICATED.
 8. IF UNUSUAL OR UNANTICIPATED SITE CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION, THE DESIGNER IS TO BE NOTIFIED IMMEDIATELY.
 9. ALL WORK TO BE IN ACCORDANCE WITH EAST HANTS MUNICIPAL STANDARDS AND SPECIFICATIONS.
 10. ALL MEASUREMENTS SHOWN ARE IN METRIC UNITS OF MEASURE.

PROPOSED ELEVATION XX.XXX

EXISTING ELEVATION X XX.XXX

NOTE:
THESE STORMWATER IMPROVEMENTS APPLY SPECIFICALLY TO THE EAST HANTS AQUATIC CENTRE PROPERTY. WHILE THE PROPOSED IMPROVEMENTS WILL ENHANCE STORMWATER MANAGEMENT WITHIN THE SITE, THEY WILL NOT PROTECT THE SITE FROM POTENTIAL HARMFUL DOWNSTREAM DRAINAGE ISSUES. IT IS RECOMMENDED THAT SUFFICIENT ANALYSIS IS COMPLETED TO CONFIRM THAT POOR DOWNSTREAM DRAINAGE CONDITIONS WILL NOT CONTRIBUTE TO POTENTIAL UPSTREAM DRAINAGE ISSUES INTO THE DEVELOPMENT PROPERTY

No.	MM/DD/YYYY	Revision Description	By
5	10/24/2025	REVISED - ISSUED FOR TENDER	EF
4	09/09/2025	REVISED - ISSUED FOR TENDER	EF
3	08/29/2025	ISSUED FOR TENDER	EF
2	07/28/2025	ISSUED FOR REVIEW	EF
1	05/02/2025	PRELIMINARY - ISSUED FOR COORDINATION	EF



Horizontal	Vertical	Plot
1:100	N/A	ARCH D (24"x36")

Project
EAST HANTS AQUATIC CENTRE
PID: 45275484
ELMSDALE, NS

Title
**STORMWATER UPGRADES
SOUTH FACE OF BUILDING**

Project No. 250117-46	Drawn C. LARSON	Sheet 2 of 3
Ref.	Engineer M.VISENTIN	Plan No.
Date 2025-03-31	Check E.FRY	C101

PRINT PREPARED, CHECKED, AND APPROVED FOR ANALYSIS BY: JAMES L. LARSON

GENERAL:

1. ALL MEASUREMENTS SHOWN IN METRIC UNITS OF METERS UNLESS OTHERWISE SHOWN.
2. REFER TO LANDSCAPE OR GRADING PLAN FOR FINISHED GRADES.
3. THE CONTRACTOR SHALL CHECK AND VERIFY ALL PROPOSED DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION. ADJUSTMENTS WILL BE MADE BY THE ENGINEER AS NECESSARY.
4. THESE DRAWINGS ARE NOT AUTHORIZED FOR CONSTRUCTION UNLESS NOTED IN REVISION BLOCK.

EXISTING CONDITIONS:

5. EXISTING PROPERTY BOUNDARIES AND UNDERGROUND SERVICES AND UNDERGROUND UTILITY INFORMATION IS SHOWN AS APPROXIMATE ONLY AND HAVE BEEN TAKEN FROM SURVEY OR MUNICIPAL GIS DATA.
6. UTILITY INFORMATION SHOWN IS APPROXIMATE ONLY. CONTRACTOR SHALL DETERMINE IN THE FIELD, THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
7. WHERE EXISTING CONDITIONS ARE NOT NECESSARILY ACCURATE OR COMPLETE, THE CONTRACTOR SHALL CONFIRM ALL EXISTING DIMENSIONS, ELEVATIONS AND LOCATIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
8. WHEN CONNECTING TO EXISTING SERVICES, THE CONTRACTOR SHALL LOCATE AND CONFIRM ALL EXISTING HORIZONTAL LOCATIONS AND INVERT ELEVATIONS OF EXISTING CONNECTING INFRASTRUCTURE PRIOR TO CONSTRUCTING ANY NEW WORK ON THE SITE.
9. CONTRACTOR SHALL APPLY FOR AND OBTAIN APPROVAL FOR ALL REQUIRED PERMITS PRIOR TO START OF ANY CONSTRUCTION

SPECIFICATIONS:

10. ALL WORK PERFORMED AND MATERIALS SUPPLIED SHALL BE IN ACCORDANCE WITH THE FOLLOWING REGULATORY AGENCIES AND SPECIFICATIONS.
 - 10.1. EAST HANTS MUNICIPAL STANDARDS AND SPECIFICATIONS.
 - 10.2. THE NOVA SCOTIA STANDARD SPECIFICATIONS FOR MUNICIPAL SERVICES.
 - 10.3. NOVA SCOTIA ENVIRONMENT AND CLIMATE CHANGE.
 - 10.4. APPLICABLE PROVINCIAL AND FEDERAL SPECIFICATIONS AND REGULATIONS.
 - 10.5. PRODUCT SPECIFIC MANUFACTURERS INSTALLATION PROCEDURES AND SPECIFICATIONS.
11. PROJECT SPECIFIC WRITTEN SPECIFICATIONS MAY APPLY WHEN THEY FORM PART OF TENDER PACKAGE AND SHALL BE READ IN CONJUNCTION WITH THESE DESIGN PLANS.

ENVIRONMENTAL:

12. CONTRACTOR TO PROVIDE EROSION AND SEDIMENT CONTROL PLAN (SITE PLAN DRAWING AND WRITTEN DOCUMENTS) PRIOR TO COMMENCING WORK.
13. EROSION AND SEDIMENT TO BE CONTROLLED ACCORDING TO THE NOVA SCOTIA DEPARTMENT OF ENVIRONMENT – EROSION AND SEDIMENTATION MANUAL.
14. INSPECT AND MAINTAIN EROSION MEASURES DAILY TO ENSURE PROPER OPERATION. IMMEDIATELY CORRECT DAMAGED OR NON-FUNCTIONING DEVICES.
15. ALL EROSION CONTROL DEVICES AND CONSTRUCTION OF ALL SEDIMENT CONTROL BARRIERS TO CONFORM TO NSTIR STANDARD SPECIFICATION FOR CONSTRUCTION AND MAINTENANCE, LATEST EDITION.
16. WHERE APPLICABLE, ALL CULVERT INSTALLATION WORK MUST CONFORM TO THE NOVA SCOTIA WATERCOURSE ALTERATION SPECIFICATIONS (2006).

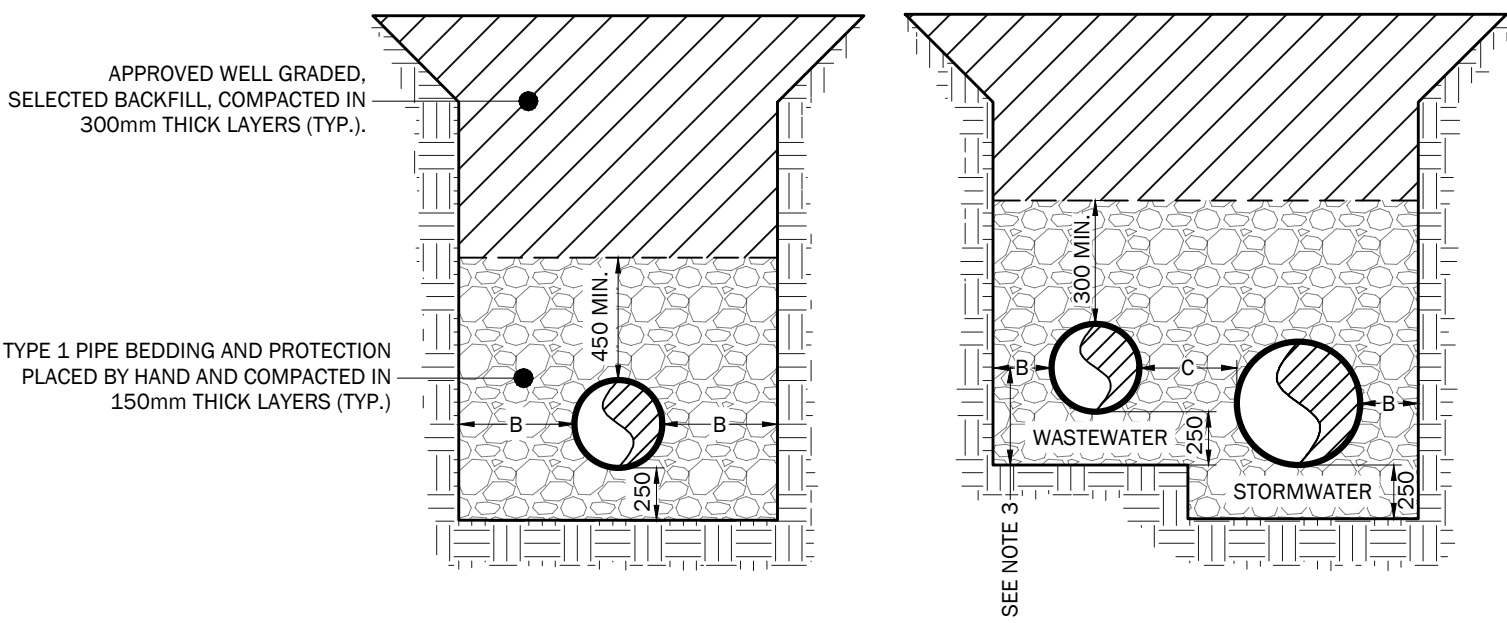
CONSTRUCTION:

17. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH LANDSCAPE, ARCHITECTURAL, MECHANICAL, STRUCTURAL, AND ELECTRICAL DRAWINGS. ANY DISCREPANCIES MUST BE BROUGHT TO THE ENGINEERS' ATTENTION IMMEDIATELY.
18. CONTRACTOR IS RESPONSIBLE FOR SETTING GRADES AND LAYOUT CONTROL.
19. IF UNUSUAL OR UNANTICIPATED SITE CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL STOP RELATED WORK AND ADVISE THE ENGINEER IMMEDIATELY.
20. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER AT LEAST 48HRS PRIOR TO STARTING ANY CONSTRUCTION RELATED TO UNDERGROUND SERVICES.
21. THE CONTRACTOR SHALL NOT INSTALL ANY UNDERGROUND SERVICES WITHOUT NOTIFYING THE ENGINEER PRIOR TO START OF CONSTRUCTION AND WITHOUT THE ENGINEERS INSPECTOR REPRESENTATIVE PRESENT.
22. ALL UNDERGROUND SERVICES PIPING AND RELATED STRUCTURES ARE NOT BE COVERED OVER OR BACKFILLED WITHOUT AUTHORIZATION FROM THE ENGINEERS INSPECTOR REPRESENTATIVE. PIPING COVERED OVER AND BACKFILLS WITHOUT THE DESIGN ENGINEERS AUTHORIZATION WILL BE EXCAVATED AND RE-INSPECTED AT THE CONTRACTORS EXPENSE.
23. CONDUCT WORK IN ACCORDANCE WITH OCCUPATIONAL HEALTH AND SAFETY REGULATIONS AND GUIDELINES.

PROJECT SPECIFIC NOTES:

24. ALL SLOPES STEEPER THAN 2H:1V TO BE CERTIFIED BY GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
25. PIPE MATERIAL.
 - 25.1. STORM PIPES – PVC DR35

DESIGN NOTES



PIPE SIZE NOM. DIA.	DIMENSIONS	
	B	C
UP TO 375	300	250
376 TO 500	300	300
501 TO 750	400	300
751 TO 1200	400	400
OVER 1200	SEE PROJECT DRAWINGS	

BEDDING REQUIREMENTS SHALL BE 250 mm AS PER SECTIONS.

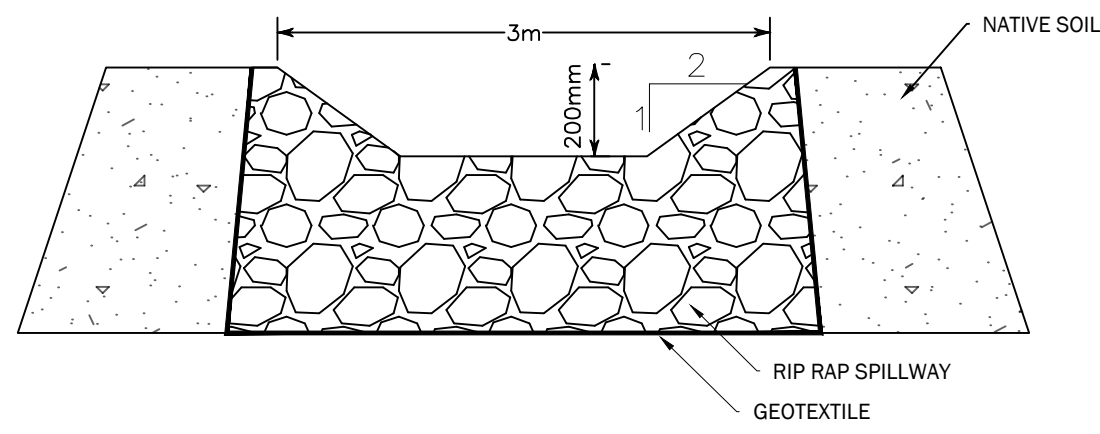
LEGEND

- UNDISTURBED NATIVE SOIL
- TYPE 1 GRAVEL (SEE NOTE ABOVE)
- SELECTED SITE MATERIALS (SEE NOTE ABOVE)

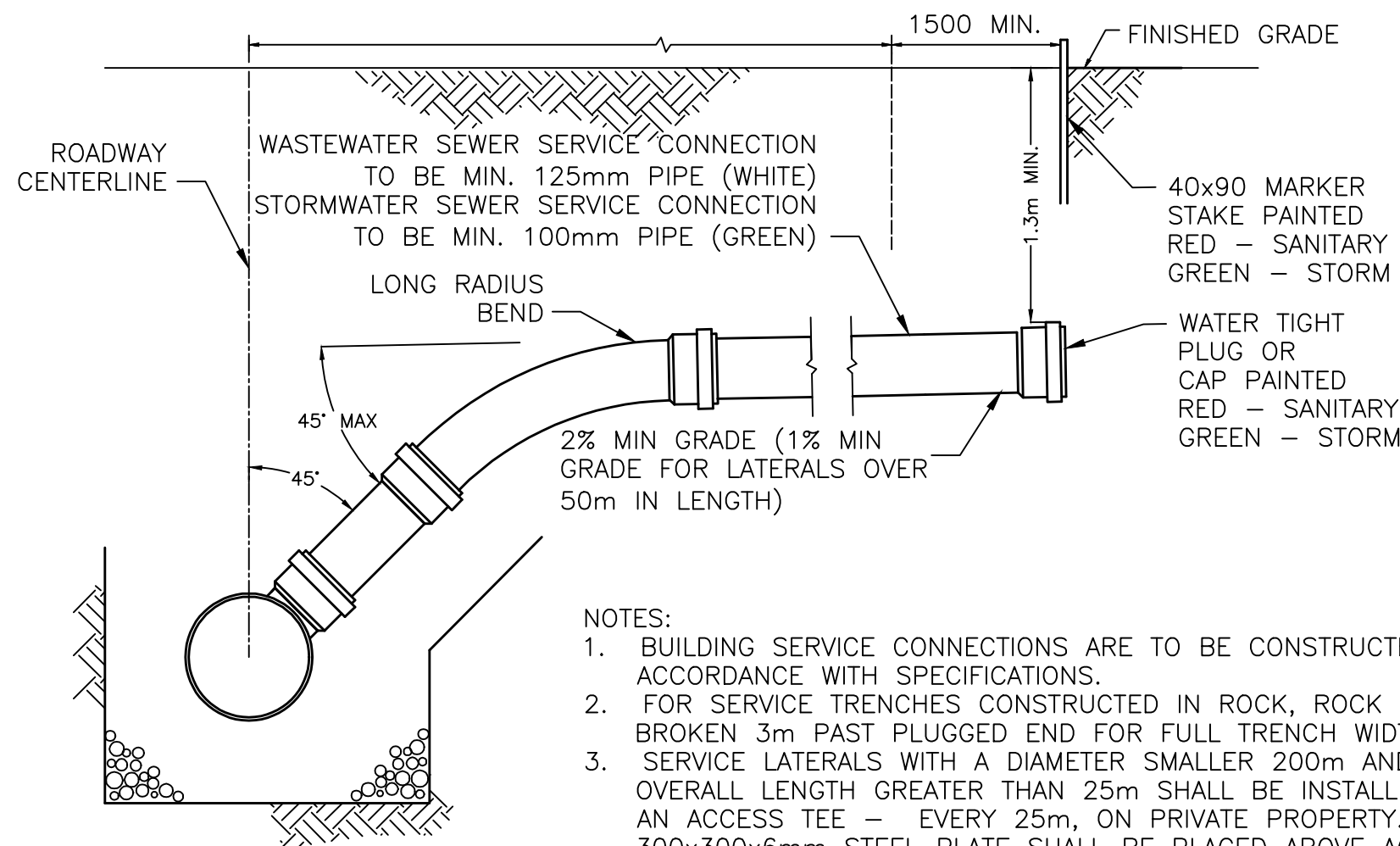
NOTES:

1. DIMENSION "C" IS GOVERNED BY THE LARGER PIPE DIAMETER.
2. SIDES OF TRENCHES TO REQUIREMENTS OF DEPARTMENT OF LABOUR.
3. IF CROWNS OF STORMWATER AND WASTEWATER PIPE ARE NOT MATCHED, THE INVERT OF THE STORMWATER PIPE MUST BE AT LEAST 100 mm BELOW THE INVERT OF THE WASTEWATER PIPE.
4. MINIMUM GRAVEL COVER OVER WASTEWATER AND STORMWATER PIPES IS TO BE 300 mm.

1 TYPICAL TRENCH DETAIL
SCALE: NTS



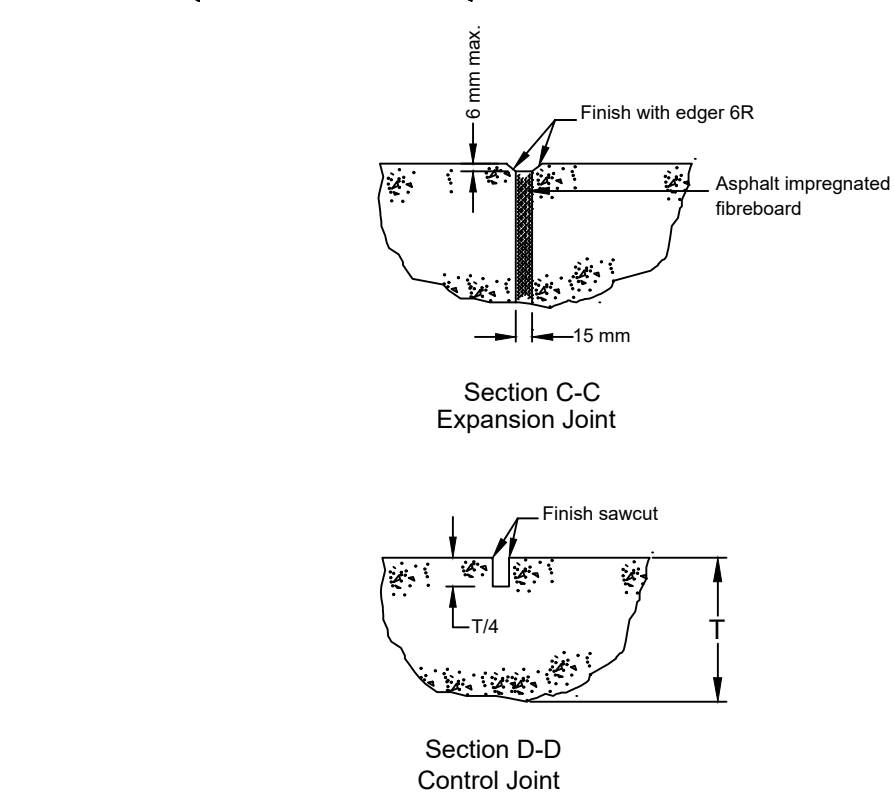
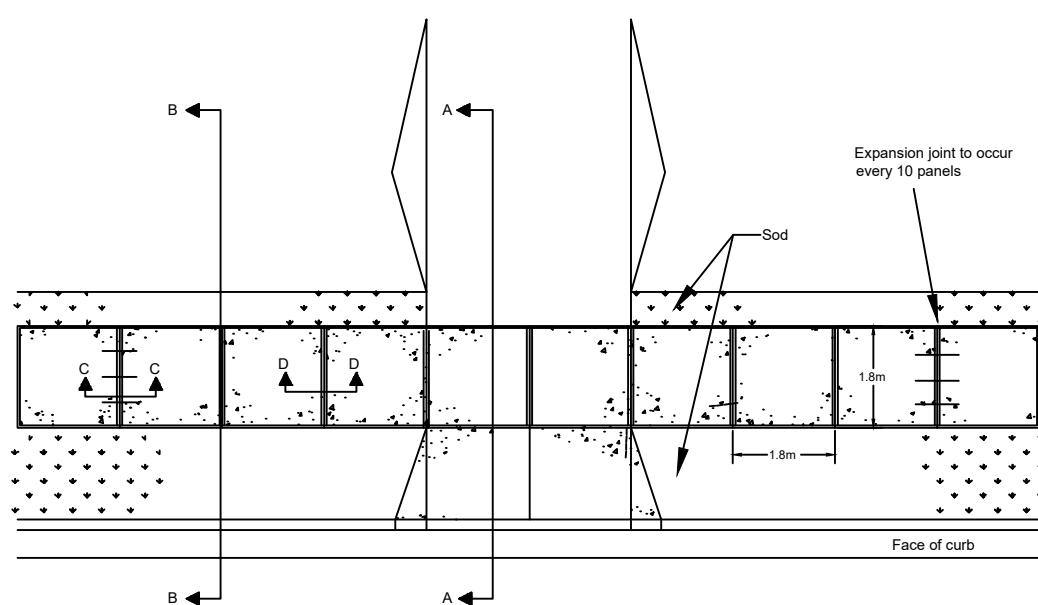
2 ARMORED SPILLWAY
SCALE: NTS



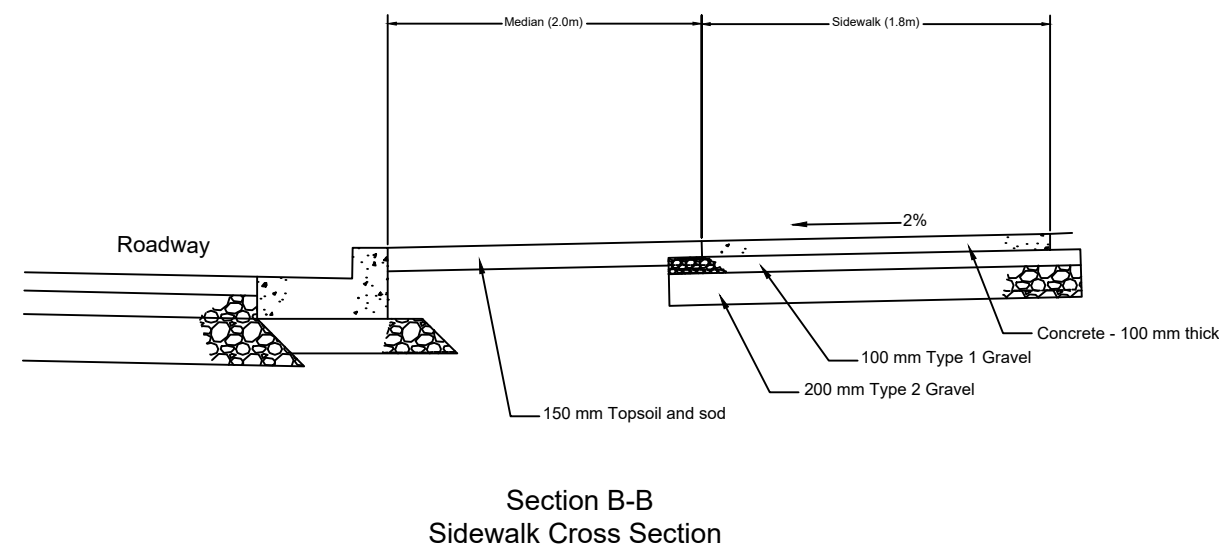
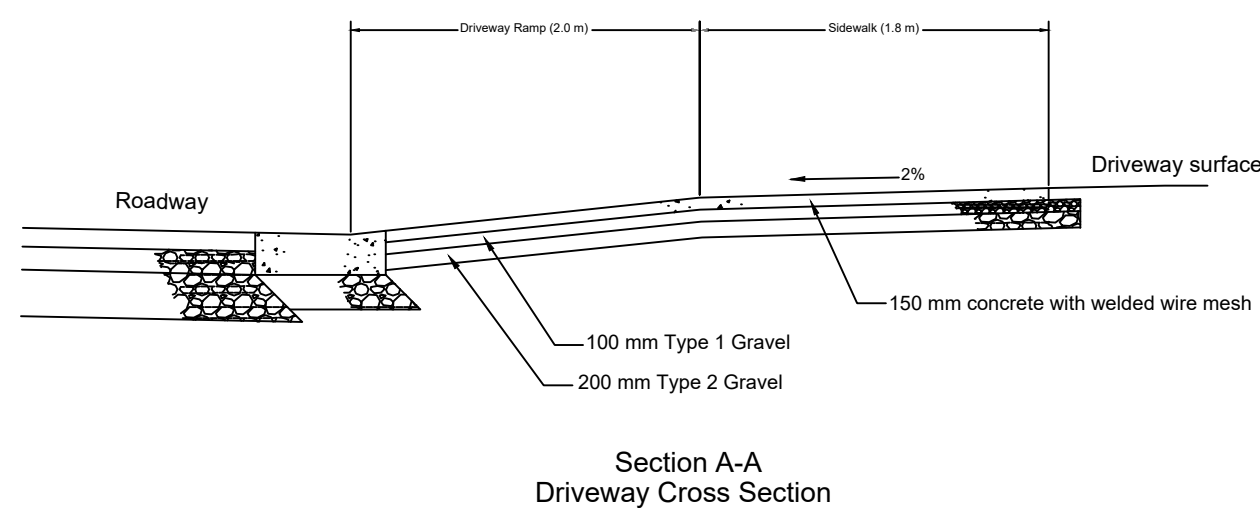
NOTES:

1. BUILDING SERVICE CONNECTIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS.
2. FOR SERVICE TRENCHES CONSTRUCTED IN ROCK, ROCK SHALL BE BROKEN 3m PAST PLUGGED END FOR FULL TRENCH WIDTH.
3. SERVICE LATERALS WITH A DIAMETER SMALLER 200m AND WITH AN OVERALL LENGTH GREATER THAN 25m SHALL BE INSTALLED WITH AN ACCESS TEE – EVERY 25m, ON PRIVATE PROPERTY. A 300x300x6mm STEEL PLATE SHALL BE PLACED ABOVE ACCESS TEE BUT 150mm BELOW THE GROUND SURFACE TO ALLOW FOR DETECTION BY A METAL DETECTOR.
4. LATERALS GREATER THAN 200mm IN DIAMETER ARE TO BE CONNECTED TO A MANHOLE.

3 BUILDING SERVICE CONNECTION PROFILE
SCALE: NTS

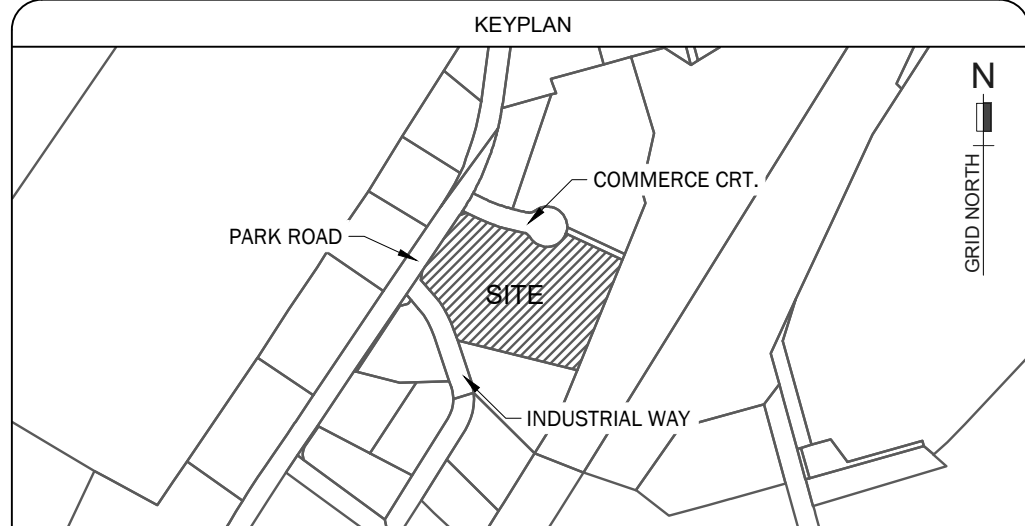


4 TYPICAL SIDEWALK
SCALE: NTS

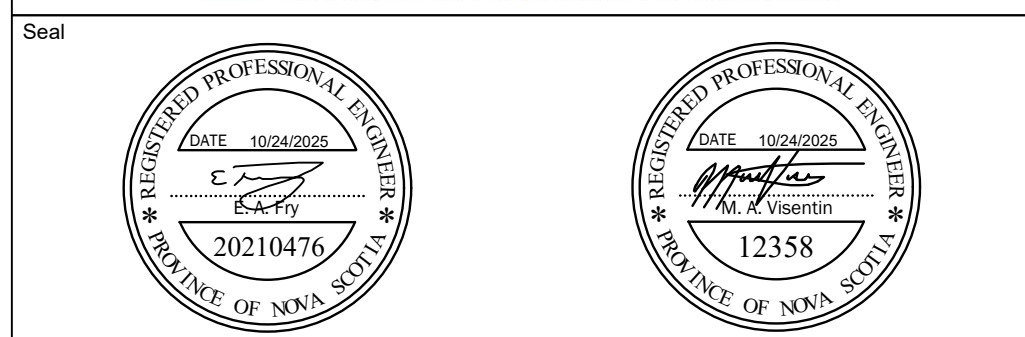


NOTES:

1. Pedestrian and driveway ramps and adjacent sidewalk to be 150 mm with welded wire mesh (152 x 152 MW9.1/9.1).
2. Gravel base to extend 150 mm beyond edge of sidewalk structure.
3. Control joints are to be saw cut.
4. Pedestrian ramps to have Tactile Walking Surface Indicators.
5. During consecutive placements, the end of each placement is to occur at an expansion joint. Where this is not practical, an additional expansion joint is to be installed.
6. Gravel depths are minimum, to be increased if recommended by geotechnical report.



3	10/24/2025	REVISED - ISSUED FOR TENDER	EF
2	08/29/2025	ISSUED FOR TENDER	EF
1	07/28/2025	ISSUED FOR REVIEW	EF
No.	MM/DD/YYYY	Revision Description	By



Horizontal	Vertical	Plot
N/A	N/A	ARCH D (24"x36")

Project		
EAST HANTS AQUATIC CENTRE		
PID: 45275484 ELMSDALE, NS		

Title		
STORMWATER UPGRADES DETAILS		

Project No.	Drawn	Sheet
250117-46	L. LORLOVA	3 of 3
Ref.	Engineer	Plan No.
	M. VISENTIN	
Date	Check	
2025-07-28	E. FRY	

C500