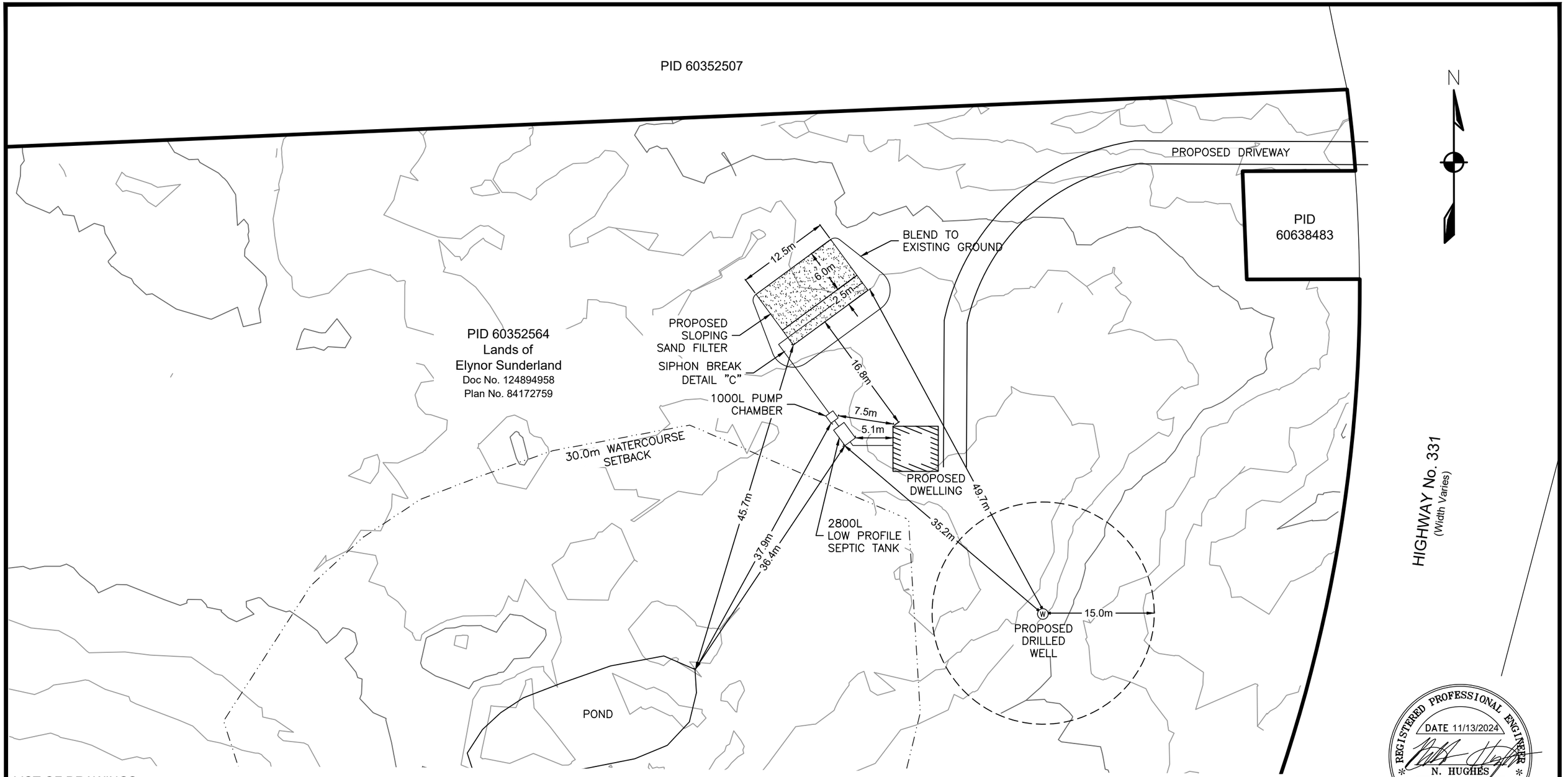


LIST OF DRAWINGS

C-100 - COVER SHEET & SITE PLAN
C-101 - SEPTIC SYSTEM PROFILE
C-102 - SEPTIC SYSTEM NOTES

NOTES:

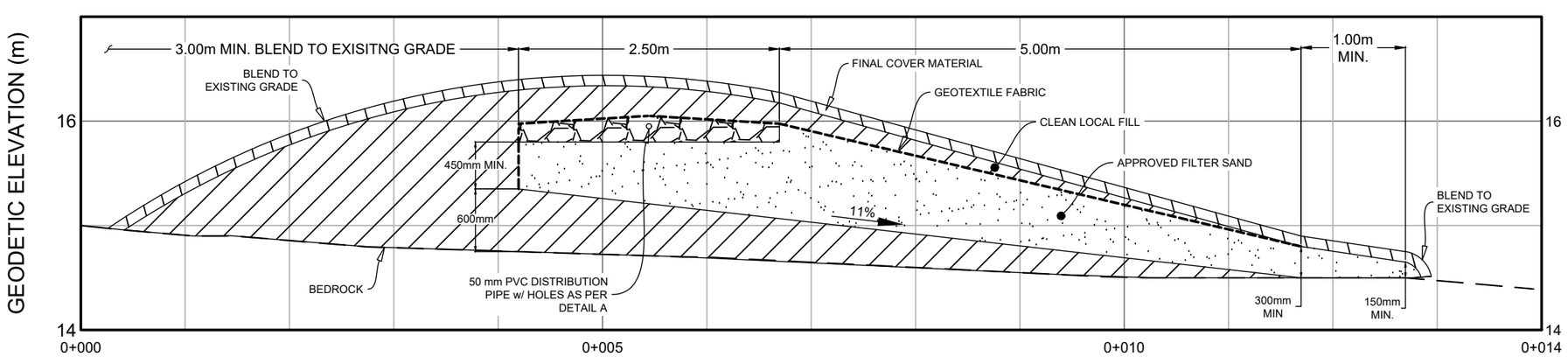
1. CONTOURS SHOWN AT 0.5 m INTERVALS AND ARE BASED ON NOVA SCOTIA PROVINCIAL LIDAR.

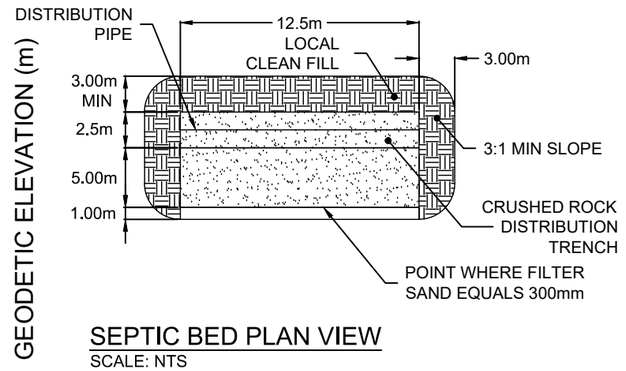
REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF NOVA SCOTIA
DATE 11/13/2024
N. HUGHES
12440

CONSULTANT	CLIENT	PROJECT DESCRIPTION	SHEET DESCRIPTION		
DESIGNPOINT engineering • surveying • solutions PHONE: 902.832.5597 www.designpoint.ca	ELYNOR SUNDERLAND	3828 HIGHWAY 331 DUBLIN SHORE, NOVA SCOTIA	COVER SHEET & SITE PLAN	Engineer NEH	Drawn AMH
				Scale 1:500	Date NOV. 13 2024
				Project No. 24-760	Drawing No. C-100
				Filename 24-760-SV-Septic	

\\DP-FS\Projects\2024\24-760 - J. Frank - 3838 Hwy 331 - LaHave\01 - Drawings\Survey\24-760-SV-S1.dwg, Plot Date: 2024-Nov-13, Plot Size: ANSI FULL BLEED B (11.00 X 17.00 INCHES)

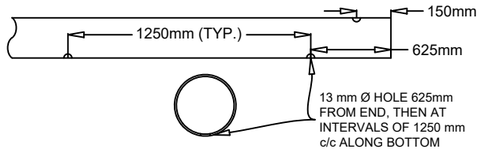
SEPTIC SYSTEM PROFILE





SEPTIC BED PLAN VIEW
SCALE: NTS

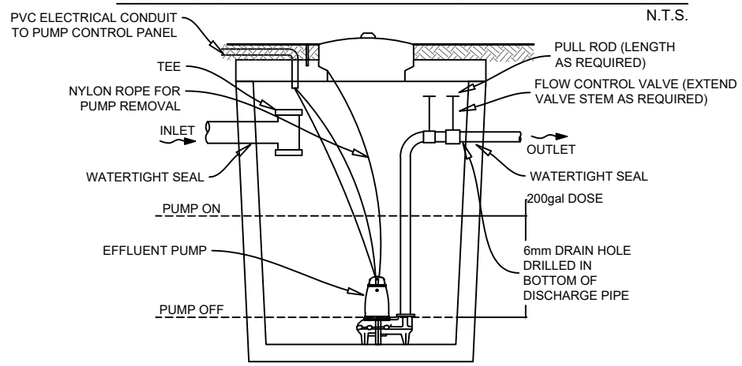
DETAIL A - PIPE DRILL HOLE SPACING
N.T.S.



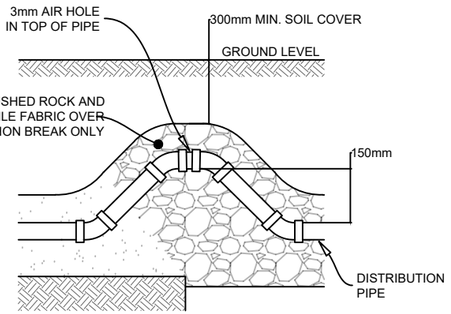
END VIEW

- PIPE DIAMETER 50mm MININUM
- PIPE MUST BE LEVEL @ DIST. TRENCH, w/ CONTINUOUS CLOPE TO DRAIN TOWARD PUMP CHAMBER WHEN TURNED OFF
- HOLE DIAMETER 13mm
- HOLE INTERVAL AT 30 DEGREES TO INVERT 1 METRE OR LESS.
- PIPE SHALL CONFORM TO CSA B182.1

DETAIL B - TYP. 400 IMP. GAL. PUMP CHAMBER
N.T.S.



DETAIL C - VACUUM/SIPHON BREAKER
N.T.S.



GEOTEXTILE FABRIC REQUIRED OVER CRUSHED ROCK AND FILTER SAND		
DISPOSAL FIELD REQUIREMENTS		
100	mm	FINAL COVER MATERIAL, SEED OR SOD
200 to 350	mm	CLEAN LOCAL PERMEABLE BACKFILL
75	mm	CRUSHED ROCK ABOVE PIPE
50	mm	DISTRIBUTION PIPE DIAMETER
12.5	m	DISTRIBUTION PIPE LENGTH
2.5	m	DISTRIBUTION TRENCH WIDTH
125	mm	CRUSHED ROCK BELOW PIPE
450	mm	FILTER SAND
		FILTER SAND PERMEABILITY: $2x10^{-4}$ (m/s) MINUTES AT 20°: 4 MINUTES

SELECTION CRITERIA			
FLOW (L/d)	1000	APPLICANT	NATHAN HUGHES
SLOPE	11%	NOTIFICATION OR APPROVAL NO.	2024-3638745-00
SOIL TYPE	BEDROCK	LOCATION	3828 HIGHWAY 331
SOIL DEPTH	0 m	ENGINEER	NATHAN E. HUGHES (P. ENG 12440)

CONSULTANT	CLIENT	PROJECT DESCRIPTION	SHEET DESCRIPTION		
DESIGNPOINT engineering • surveying • solutions PHONE: 902.832.5597 www.designpoint.ca	ELYNOR SUNDERLAND	3828 HIGHWAY 331 DUBLIN SHORE, NOVA SCOTIA	SEPTIC SYSTEM PROFILE	Engineer NEH	Drawn AMH
				Scale 1:50	Date NOV. 13 2024
				Project No. 24-760	Drawing No. C-101
				Filename 24-760-SV-Septic	

\\DP-FS\Projects\2024\24-760 - J. Frank - 3838 Hwy 331 - LaHave\01 - Drawings\Survey\24-760-SV-S1.dwg, Plot Date: 2024-Nov-13, Plot Size: ANSI FULL BLEED B (11.00 X 17.00 INCHES)

GENERAL SPECIFICATIONS:

- ALL CONSTRUCTION WORK AND INSTALLATION METHODS AND PRACTICES SHALL BE IN ACCORDANCE WITH ALL MANUFACTURES INSTRUCTIONS, AND THE NSE ON-SITE SEWAGE STANDARD OR AS DIRECTED BY THE ENGINEER.
- ALL ELECTRICAL WORK SHALL BE INSTALLED ACCORDING TO ALL APPLICABLE ELECTRICAL CODES AND CARRIED OUT AND CERTIFIED IN WRITING BY A LICENSED ELECTRICIAN.
- PROPERTY BOUNDARIES SHOWN ARE ONLY APPROXIMATE AND SHALL BE VERIFIED ON SITE BY THE CONTRACTOR AS REQUIRED PRIOR TO CONSTRUCTION.
- ANY ERRORS OR OMISSIONS FOUND IN THESE PLANS AND SPECIFICATION SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
- UNSUITABLE SOIL CONDITIONS ENCOUNTERED DURING CONSTRUCTION MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ADDITIONAL GRAVEL BEDDING MAY BE REQUIRED.
- ALL STRUCTURES, TANKS, PIPES, MATERIALS AND DEVICES SHALL BE INSTALLED OR AS SHOWN ON THESE PLANS OR AS PER THE ON-SITE SEWAGE DISPOSAL TECHNICAL GUIDELINES OR AS DIRECTED BY THE ENGINEER.

PIPING:

- ALL BUILDING SEWER GRAVITY PIPE TO BE 100MM DIAMETER PVC SDR 35 (CSA B137.0-02 OR CSA B-182.1) WITH MINIMUM 2% SLOPE.
- ALL GRAVITY DISTRIBUTION PIPES SHALL HAVE A MINIMUM SLOPE OF 50-100MM PER 30 METERS OF LENGTH, AND CONFORM TO CSA B-182.1 WITH HOLES SPACING AS SHOWN IN DIAGRAM 3D OF NSE ON-SITE SEWAGE DISPOSAL SYSTEMS TECHNICAL GUIDELINES.
- ALL PRESSURIZED DISTRIBUTION PIPE SHALL HAVE NO SLOPE AND IS TO BE 50MM SOLID PIPE WITH FIELD DRILLED HOLES AS SPECIFIED HEREIN.
- PRESSURIZED DISTRIBUTION PIPES HOLES SHALL BE FIELD DRILLED 11MM DIAMETER AND SPACED AT 1.0M OVER THE LENGTH OF THE PIPE OR AS PROVIDED BY THE ENGINEER.
- ALL PUMP SYSTEMS SHALL BE CONNECTED TO THE DISPOSAL FIELD BY A "SIPHON BREAKER".
- ALL SYSTEMS USING AN "EVENDOSE-LOW PRESSURE MICRO DOSING SYSTEM" SHALL HAVE THE DISTRIBUTION PIPE SLOPE, HOLES SIZES AND SPACING SET AS PER THE MANUFACTURES INSTRUCTIONS OR AS DIRECTED BY THE ENGINEER.
- ALL PIPE TO PIPE TO STRUCTURE CONNECTIONS TO BE SECURELY FITTED OR GLUED TO PROVIDE A WATERTIGHT SEAL.

BACKFILL MATERIAL AND PROCEDURES:

- NO BACKFILL MATERIAL SHALL BE PLACED ON SITE WITHOUT APPROVAL BY THE ENGINEER.
- CONTRACTOR SHALL PROVIDE THE SOURCE OF THE BACKFILL MATERIAL IN WRITING PRIOR TO INSTALLING ON SITE.
- STRUCTURAL BACKFILL MATERIAL SHALL BE COMPACTED IN LAYERS OF THICKNESS SPECIFIED BY THE ENGINEER.

PUMP AND EFFLUENT FORCE MAIN SPECIFICATIONS (WHERE INCLUDED IN SYSTEM DESIGN):

- ALL FORCE MAIN PIPE TO BE CONTINUOUS LENGTH.
- ALL FORCE MAIN PIPE TO HAVE MINIMUM 100MM SAND BEDDING.
- ALL PIPE SHALL HAVE A MINIMUM GROUND COVER OF 450MM.
- PUMP CHAMBER SHALL BE FITTED WITH EFFLUENT PUMP (AS SPECIFIED HEREIN).
- PUMP SHALL BE SET TO PROVIDE DOSING VOLUME OF 675 LITERS OR AS DIRECTED BY THE ENGINEER.
- PUMP SHALL BE EQUIPPED WITH A HIGH LEVEL ALARM PROVIDING AUDIBLE AND VISUAL ALERT WITHIN THE FACILITY.
- EFFLUENT PUMP IS TO MEET OR EXCEED FLOW SPECIFICATIONS WITH HIGH LEVEL ALARM AS APPROVED BY THE ENGINEER.
- PUMP ELECTRICAL PANEL TO BE RATED FOR THIS APPLICATION AS APPROVED BY THE ENGINEER.
- ELECTRICAL PANEL TO BE RATED FOR THIS APPLICATION AS APPROVED BY THE ENGINEER.
- ELECTRICAL JUNCTION BOX TO BE WATERPROOF AND LOCATED 1.0 ABOVE GROUND, MOUNTED ON 4X4 PT WOOD POST.
- ALL ELECTRICAL WRING TO BE CONTAINED IN WATERPROOF CONDUIT.
- FORCE MAIN PIPING BURIED UNDER ROADWAYS SHALL BE PROTECTED BY SECONDARY ENCLOSURE TO PREVENT CRUSHING.

SUB-DRAIN AND INTERCEPTOR TRENCH SPECIFICATIONS:

- SWALE DITCH SHALL HAVE MINIMUM 2% SLOPE AND BE CONSTRUCTED TO CREATE POSITIVE DRAINAGE AWAY FORM THE DISPOSAL FIELD.
- SUB-DRAIN PIPE TO BE FLEXIBLE PLASTIC 4" PERFORATED BIG-O OR EQUIVALENT.
- SUB-DRAIN TRENCH DEPTH TO BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION.
- SUB-DRAIN TO HAVE MINIMUM 2% POSITIVE SLOPE.
- SUB-DRAIN TRENCH TO BE FILLED WITH Ø25MM CLEAR STONE.
- SUB-DRAIN TRENCH TO BE COVERED WITH GEOTEXTILE FABRIC AND EXTENDED DOWN EACH SIDE OF TRENCH TO MIN 300MM DEPTH.

EXISTING DISPOSAL FIELD: (IF APPLICABLE)

- ALL EXISTING DISPOSAL FIELD MATERIAL SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER.
- EXISTING GROUND MATERIAL SHALL BE EXCAVATED TO A DEPTH AS DIRECTED BY THE ENGINEER.
- ALL EXISTING DISPOSAL AREA BED MATERIAL SHALL BE REPLACED WITH BACKFILL MATERIAL SPECIFIED HEREIN OR AS APPROVED BY THE ENGINEER.

LAUNDRY FACILITY SPECIFICATIONS:

- IT IS RECOMMENDED THAT ALL WASHING MACHINES HAVE A LINT FILTER ATTACHED TO THE OUTLET PIPE AS SPECIFIED HEREIN.
- LINT FILTER SHALL BE SUPPLIED BY ROZTEK LTD. TIMMINS, ONTARIO. FILTER SHALL BE "THE SEPTIC PROTECTOR" MODEL COMPLETE WITH 160-MICRON FILTER. FILTER UNIT SHALL BE INSTALLED AS PER MANUFACTURES INSTRUCTIONS DIRECTLY TO EACH WASHING MACHINE. EQUIVALENT UNITS WILL BE ACCEPTED UPON REVIEW BY THE ENGINEER.

IMPORTED FILTER SAND SPECIFICATIONS:

- CONTRACTOR SHALL PROVIDE THE SOURCE OF IMPORTED FILTER SAND AND RECENT PERTINENT PERMEABILITY TEST RESULTS IN WRITING TO THE ENGINEER PRIOR TO SHIPPING ANY MATERIAL.
- THE ENGINEER RESERVES THE RIGHT TO TEST ALL IMPORTED SAND PRIOR TO INSTALLATION.
- THE ENGINEER RESERVES THE RIGHT TO TEST ALL IMPORTED SAND AFTER SAND INSTALLATION AND PRIOR TO ANY OTHER WORK. APPROVAL OF IMPORTED SAND WILL BE BASE ON IN-PLACE FIELD TESTS TAKEN AFTER INSTALLATION.
- ANY SAND INSTALLED WITH PRIOR APPROVAL BY THE ENGINEER MAY NOT BE ACCEPTED AND MAY BE REQUIRED TO BE REMOVED.

SEPTIC TANK / PUMP CHAMBER:

- SEPTIC AND HOLDING TANKS MUST CONFORM TO A STANDARD CAN/CSA-B66-10.
- ACCEPTABLE MATERIALS ARE REINFORCED CONCRETE, FIBERGLASS OR POLYETHYLENE.
- CONCRETE MINIMUM STRENGTH: 4000 PSI (28 MPA) AT 28 DAYS.
- AIR ENTRAINING: 5-7%, STRUCTURAL FIBER REINFORCEMENT.
- CONSTRUCTION JOINTS TO BE SEALED WITH BUTYL ROPE OR EQUIVALENT.
- MAXIMUM BURY: 5 FEET (1.5 METERS).
- ALL TANKS, RISERS, AND COVERS MUST BE WATERTIGHT.
- ALL TANKS MUST BE ASSEMBLED AND INSTALLED AS PER MANUFACTURES INSTRUCTIONS.
- ALL TANKS MUST INCLUDE A WATERTIGHT ACCESS FOR MAINTENANCE, INSPECTION AND PUMP OUT.
- EFFLUENT FILTERS MUST BE INSTALLED AT EXIT T-HOUSING OF ALL SEPTIC TANKS.
- ALL RISERS MUST BE INSTALLED AT OR ABOVE FINISHED GRADE.
- ALL TANK STRUCTURES TO HAVE MINIMUM 150MM COMPACTED DEPTH OF 25MM DIA. CRUSHED RUN GRAVEL OR 25MM DIA. CLEAR CRUSHED STONE BEDDING.
- HOLDING TANKS MUST BE EQUIPPED WITH AN AUDIBLE OR VISIBLE ALARM THAT INDICATES 75% STORAGE VOLUME HAS BEEN USED.

TOPSOIL, SEED AND SOD:

- ALL DISTURBED GROUND TO BE COVERED WITH TOPSOIL AND SEEDED OR COVERED WITH SOD.
- SHOULD SEASONAL CONDITIONS PROHIBIT THE PLACEMENT OF SEED OR SOD, ALL DISTURBED GROUND SHALL BE COVERED WITH STRAW OR MULCH OR OTHER MATERIAL TO PREVENT EROSION UNTIL SUCH A TIME THAT SEEDING OR SOD MAY BE PLACED.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLETE SEEDING OR SODDING WHEN SEASONAL CONDITIONS PERMIT.
- IT IS RECOMMENDED THAT MULCH OR STRAW BE PLACED AFTER SEEDING TO PROMOTE GROWTH.

INSPECTIONS:

- THE ENGINEER MAY INSPECT ALL PHASES OF THE WORK INCLUDING THE FOLLOWING:
- EXISTING SITE PRIOR TO START OF ANY CONSTRUCTION TO VERIFY LOCATION OF DISPOSAL FIELD.
- PRIOR TO PLACEMENT OF SAND FILL. AFTER SITE PREPARATION AND GRUBBING.
- PRIOR TO COVERING DISTRIBUTION PIPE WITH GRAVEL.
- PUMPED SYSTEMS MUST BE PRESSURE TESTED WITH WATER PRIOR TO COVERING DISPOSAL FIELD.
- AFTER TOPSOIL INSTALLED.
- AFTER INTERIM SOIL STABILIZATION.
- AFTER GRASS HAS ROOTED.
- FINAL APPROVAL; WILL NOT BE GRANTED UNTIL FINISHED GRADE SURFACE HAS BEEN GRADED ACCORDING TO DESIGN AND ALL DISTRIBUTED SOIL STABILIZED WITH GRASS.

SPECIAL NOTES:

- BACKFILL AGAINST FOUNDATION TO BE GRADED TO SLOPE AWAY FORM DISPOSAL FIELD.
- ALL ROOF DRAINS TO DISCHARGE AWAY FROM DISPOSAL FIELD.
- PROPOSED DRIVEWAYS SHOWN ARE FOR REFERENCE ONLY. ACTUAL DRIVEWAY LOCATION IS BY OTHERS, RECEIVING APPROVAL FROM NSTIR AND IN ACCORDANCE WITH ANY AND ALL APPLICABLE PROVINCIAL, MUNICIPAL AND LOCAL BYLAWS.

GENERAL NOTES:

1. ON-SITE DISPOSAL CRITERIA AND DESIGN HAS BEEN PREPARED BASED ON SOIL CONDITIONS AND PROFILE ENCOUNTERED AT THE TEST PIT LOCATIONS (SOIL PROFILE NOTED IN DISPOSAL FIELD PROFILE). DISPOSAL BEDS HAVE BEEN SELECTED IN ACCORDANCE WITH THE "ON-SITE SEWAGE DISPOSAL SYSTEM STANDARD" PUBLISHED BY NOVA SCOTIA ENVIRONMENT.
2. IT IS RECOMMENDED THAT ALL SEPTIC TANKS AND PUMP CHAMBERS BE VACUUM TESTED FOR LEAKS.
3. CONTRACTOR TO NOTIFY ENGINEER 1 WEEK PRIOR TO CONSTRUCTION. WORK MUST NOT BE COVERED UNTIL INSPECTED BY THE ENGINEER.
4. ALL WORK MUST BE COMPLETED IN ACCORDANCE WITH THE NOVA SCOTIA ON-SITE SEWAGE DISPOSAL SYSTEM STANDARD AND CONDITIONS OF NOVA SCOTIA ENVIRONMENTS APPROVAL TO CONSTRUCT.

REGISTERED PROFESSIONAL ENGINEER
DATE 11/13/2024
N. HUGHES
12440
PROVINCE OF NOVA SCOTIA

CONSULTANT	CLIENT	PROJECT DESCRIPTION	SHEET DESCRIPTION		
DESIGNPOINT engineering • surveying • solutions PHONE: 902.832.5597 www.designpoint.ca	ELYNOR SUNDERLAND	3828 HIGHWAY 331 DUBLIN SHORE, NOVA SCOTIA	SEPTIC SYSTEM NOTES	Engineer NEH	Drawn AMH
				Scale N/A	Date NOV. 13 2024
				Project No. 24-760	Drawing No. C-102
				Filename 24-760-SV-Septic	