RAINWATER HARVESTING SYSTEM

YOUR - RAINWATER HARVESTING SYSTEM YOUR ADRESS

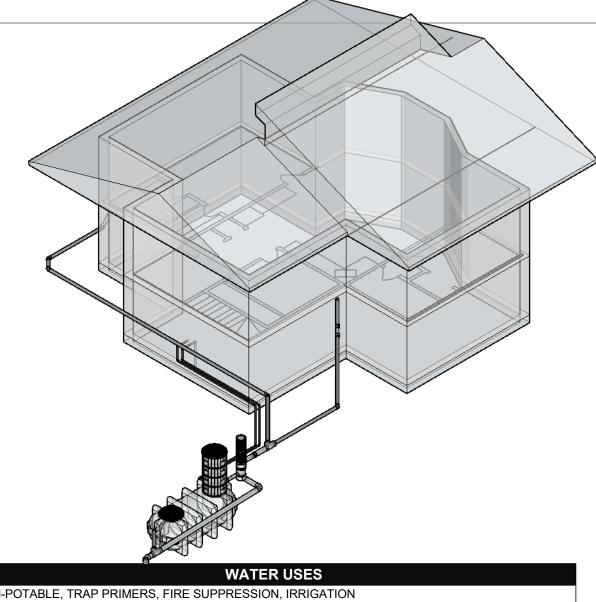
TAG	EQUIPMENT SCHEDULE	
RSM	RAINSEEKER MAXIMUS 1000 USG SYSTEM - UNDERGROUND	
PRF	- RAINWATER PREFILTER	
RPMP	RAINWATER PUMP	
UV	TRIPPLE FILTRATION AND UV SYSTEM	
SOL	UV SOLENOID SHUT-OFF	

TAG	PIPE AND WIRE SCHEDULE		
Α	GUTTER	5" Wide @ 1% SLOPE	
В	DOWNPIPE	3" X 2"	
С	UNDERGROUND 4" DIAMETER @ 1.5% SLOPE		
D	UNDERGROUND	6" DIAMETER @ 0.75% SLOPE (OPTIONALLY 4" DIA. @ 4% SLOPE)	
E	SUPPLY PIPE UNDERGROUND	1.25" DIAMETER (PVC, POLY OR COPPER)	
F	SUPPLY PIPE INTERIOR	1.25" DIAMETER (PVC, PEX, POLY OR COPPER)	
G	SENSOR WIRE	4 C - SHEILDED 16 AWG (4 CONDUCTOR)	

CLEAN FLO WATER TECHNOLOGIES DESIGNED THE SYSTEM TO MEET THE CSA B805 STANDARDS TO PROVIDE A POTABLE RAINWATER HARVESTING WATER SYSTEM.

IF THE INSTALLTION IS IN ACCORDENCE WITH CLEANFLO WRITTEN INSTRUCTION THIS SYSTEM WILL PROVIDE POTABLE WATER. IT IS THE OWNER / OPERATORS RESPONSIBLITY TO ENSURE THE RAINWATER HARVESTING SYSTEM IS INSTALLED AND OPERATING PROPERLY. INITIAL AND ONGOING MAINTENANCE AND MONITORING IS REQUIRED AND MUST BE PERFORMED BY THE OWNER OR UNDER THE OWNER'S DIRECTION.

IF INSTRUCTIONS ARE NOT FOLLWED OR MAINTIANCE IS NOT PERFORMED OR UNKOWN SUBSTANCES ARE INTRUDCED INTO THE RAINWATER SYSTEM THE SYSTEM MAY NOT BE SAFE AND THERFORE REGULAR WATER TESTING IS REQUIRED. CLEANFLO IS NOT RESPONSIBLE FOR THE WATER QUALITY THIS SYSTEM PRODUCES. USE WATER AT YOUR OWN RISK.



	TIERS	ERS WATER USES			
	R1 NON-POTABLE, TRAP PRIMERS, FIRE SUPPRESSION, IRRIGATION				
	R2	NON-POTABLE, TOILETS/URINALS, LAUNDRY MACHINE			
_	NON-POTABLE, HOSE BIBS, PRESSURE WASHING, VEHICLE WASHING				
POTABLE, HUMAN CONSUMPTION, ORAL CARE, FOOD PREPARATION, DISBATHING/SHOWERING, POOL/HOT TUBS		POTABLE, HUMAN CONSUMPTION, ORAL CARE, FOOD PREPARATION, DISHWASHING, BATHING/SHOWERING, POOL/HOT TUBS			

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5-9	DRAWINGS	DETAILED DRAWING OF RAINWATER SYSTEM
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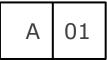


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DESCRIPTION

THIS SYSTEM IS DESIGN TO MEET CANADIAN PLUMBING CODES AND CSA STANDARDS FOR RAINWATER HARVESTING CSA B805.

THE OVERALL SYSTEM DESIGN EMPLOYS A MULTI BARRIER APPROACH TO WATER QUALITY. THE FIRST STEP IS THE PRE-FILTER. THE SECOND STEP IS THE RAINWATER TANK DESIGN. THE THIRD STEP IS THE WATER TREATMENT SYSTEM.

CLEAN FLO SYSTEMS ARE DESIGNED FROM "ROOF TO TAP"! WITH ATTENTION TO EVERY DETAIL OF YOUR RAINWATER HARVESTING SYSTEM. WHEN YOU PURCHASE THE COMPLETE SYSTEM FROM CLEAN FLO, IT IS PART OF A COMPLETE PACKAGE THAT WE WILL PROVIDE SUPPORT AND SERVICE FOR THE LIFE OF THE SYSTEM

THIS RAINWATER HARVESTING SYSTEM IS DESIGNED AS A PRIMARY SOURCE OF WATER FOR POTABLE PURPOSES, SUCH AS DRINNKING, COOKING, BATHING, TOILETS, LAUNDRY. WITH BACK-UP WATER SOURCE FROM HAULED BULK POTBALE WATER IF THE RAINWATER TANK IS EMPTY.

THE SYSTEM WILL PROVIDE WATER FOR WATER USES TIER: R4 - POTABLE DOMESTIC

ROOF

THE SYSTEM WILL BE HARVESTING RAIN FROM ONE BUILDING THE ROOF IS METAL.

GUTTER, DOWNPIPES AND CONVEYANCE PIPING

THE GUTTERS, DOWNPIPES, AND CONVEYANCE PIPING IS SIZED BASED ON SPECIFICATIONS FROM THE DESIGNS.

PREFILTER

THE SYSTEM WILL REQUIRE ONE (1) PRE-FILTER. THESE PRE-FILTERS OPERATE AS BOTH A FIRST FLUSH DIVERTER AND PREFILTER, WITH A FILTER MESH SIZE OF 320 MICRONS. THE FULL CROSS-SECTION (PIPE DIAMETER) OF THE RAINWATER DRAINAGE SYSTEM REMAINS CONTINUOUSLY OPEN, AND THERE ARE NO REDUCTION IN THE CROSS-SECTION OF THIS APPLIANCE IN WHICH DIRT OR WATER CAN COLLECT.

RAINWATER TANK / CISTERN

THIS SYSTEM WILL PROVIDE A TOTAL OF 1000 USG OF RAINWATER STORAGE. WITH A TOTAL OF ONE (1) BELOW GROUND TANK(S), MADE OF POLYETHYLENE. THE TANK IS 1000 USG.

THE RAINWATER TANK IS DESIGNED TO PROVIDE SAFE STORAGE OR RAINWATER, WHICH IMPROVES WATER QUALITY BECAUSE OF IT'S DESIGN AND FUNCTION. THE CALMING INLET PREVENTS AGITATION OF SETTLED FINE DUST, THE SKIMMING OVERFLOW REMOVES FLOATING PARTICLES AND THE FLOATING FILTER ENSURES WATER IS DRAWN INTO THE PUMP FROM APPROXIMELY 150 mm (6.0") BELOW THE SURFACE OF THE WATER.

WATER PUMPING AND TREATMENT SYSTEM

CLEAN FLO DETERMINED THE WATER DEMAND TO BE 8 GPM @ ~60 PSI. THIS WILL BE PUMPED BY MULTI STAGE BOOSTER PUMP POWERED BY VFD. THE TREATMENT WILL BE THREE STAGES TO ENSURE WATER IS SAFE AND NO STAINING ON FIXTURES. STAGE ONE IS A SEDIMENT FILTER OF 5 MICRONS. STAGE TWO A 10 CARBON FILTER. STAGE THREE A 1 MICRON ABSOLUTE SEDIMENT FILTER. STAGE FOUR IS ULTRAVIOLET SANITATION SYSTEM NSF 55 CLASS A.

WATER QUALITY AND TREATMENT

CLEAN FLO DESIGNED THIS SYSTEM TO PRODUCE WATER THAT IS SAFE FOR CSA B805 R4 USES; NAMELY POTABLE DOMESTIC.



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WATER TESTING

DANGER!!

IF THERE ARE ANY NOTICEABLE CHANGES IN WATER QUALITY (IE. COLOUR, SMELL, TASTE, ETC.) STOP USING WATER AND PERFORM BOTH BACTERIOLOGICAL AND CHEMICAL TESTS IMMEDIATELY.

BACTERIOLOGICAL TEST

THIS TEST SHOULD BE PERFORMED AT A FREQUENCY OF SIX MONTHS AT A LOCAL ACCREDITED WATER TESTING LAB. BACTERIOLOGICAL SAMPLES WILL RAPIDLY BECOME UNREPRESENTATIVE OF THE WATER SUPPLY IF THE TEST IS NOT PERFORMED SOON AFTER TAKING THE SAMPLE

THESE TESTS INCLUDE BUT ARE NOT LIMITED TO: E.COLI, AND TOTAL COLIFORMS

CHEMICAL TEST

THIS TEST SHOULD BE PERFORMED AT A FREQUENCY OF ONE YEAR AT AN ACCREDITED WATER TESTING LAB. WHILE CHEMICAL TESTS ARE LESS TIME SENSITIVE, IT IS ADVISED TO DELIVER YOUR SAMPLE TO THE LAB WITHIN 24 HOURS OF TAKING THE SAMPLE

THESE TEST INCLUDE BUT ARE NOT LIMITED TO: HEAVY METALS, TOTAL ORGANIC CARBON, PH, TURBIDITY, TOTAL DISSOLVED SOLIDS, NITRATES, HARDNESS, AND CONDUCTIVITY.

POTENTIAL LOCAL TEST FACILITY

WHEN USING THE SERVICES OF A LOCAL TESTING FACILITY THEY WILL ENSURE THE TEST RESULTS AND TOLERANCES CONFORM TO LOCAL REGULATIONS ON WATER QUALITY.

WATER TEST RESULTS

PLEASE KEEP A LOG OF TEST RESULTS IN THE TABLE AT THE BACK OF THIS DOCUMENT. PLEASE FILE THE ORIGINAL WATER TEST RESULT DOCUMENTATION IN THE FOLDER AT THE BACK OF THESE DOCUMENTS.

WATER TESTING LOG

PERFORM A BACTERIOLOGICAL TEST ON THE WATER EVERY 6 MONTHS PERFORM A CHEMICAL TEST ON THE WATER EVERY YEAR

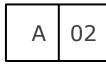
STORE THE ORIGINAL WATER QUALITY TEST RESULTS IN FOLDER AT BACK

THE FIRST WATER TEST SHOULD BE RECORED BELOW AS THE BASELINE WATER TEST.

BASELINE TEST DATE (DD/MM/YYYY)	TEST COMPLETE DATE (DD/MM/YYYY)	TEST RESULT

TORONTO MAIN OFFICE 300 - 3660 Midland Avenue Toronto, ON M1V 0B0

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SYSTEM NAME: - RAINWATER HARVESTING SYSTEM

R4-POTABLE SYSTEM TYPE:

YOU OWNERS:

YOUR ADDRESS LOCATION:

EMERGENCY CONTACT

FIRST POINT - INSTALLERS OWNER INSTALLED

CLEANFLO WATER TECHNLOGIES, CANADA **SECOND POINT - DESIGNER**

1-877-306-2146

MAINTENANCE PERSONS OWNER

SCOPE OF SYSTEM SUPPLY

R4 POTBALE WATER USES TEIR: RAINWATER **PRIMARY WATER SOURCE:**

HAULED BULK WATER **SECONDARY WATER SOURCE:**

NUMBER OF PEOPLE SERVED: 2 / DAY

ANNUAL WATER DEMAND: ~123, 735 LITERS ~191, 637 LITERS **ANNUAL WATER HARVESTED:**

NUMBER OF FIXTURES

HOSE BIBS: YARD HYDRANT: **FAUCETS:** LAUNDRY: **TOILETS:** DISHWASHER: BATH/SHOWER: **MECH. EQUIPMENT:**

SECONDARY WATER SOURCE

FIRE SUPRESSION:

HAULED BULK POTABLE WATER TYPE:

AUTOMATIC BY-PASS SYSTEM NA

DESCRIPTION / COMMENTS: HAULED BULK WATER IS THE ONLY ALTERNITIVE SOURCE

SYSTEM DESIGN AND SPECS.

CLEANFLO WATER TECHNLOGIES, 1-877-306-2146 **DESIGNER:**

TBD, 2021 DATE COMPLETED:

RAIN SYSTEM SPECIFICATIONS

ROOF COLLECTION AREA: ~ 2000 SQFT

ROOF MATERIAL: METAL (NSF 61 OR NSF P151 COATING)

GUTTER MATERIAL: PAINTED STEEL (NSF 61 OR NSF P151 INTERIOR COATING)

ALUMINUM, PVC SDR 35, PVC DRAIN PIPE (NSF 61 OR DOWNSPOUT MATERIAL:

ALUMINUM, PVC SDR 35, PVC DRAIN PIPE (NSF 61 **CONVEYANCE PIPING MATERIAL:** ORNSF P151 INTERIOR COATING)

STORAGE TANK SPECIFICATIONS

TOTAL VOLUME: 1000 USG

NUMBER OF TANKS:

VOLUME OF EACH TANK: 1000 USG

TANK TYPE: BELOW GROUND TANK MATERIAL: POLYETHYLENE

TANK DIMENSIONS

LENGTH: 131" WIDTH: 60" 53 " HIEGHT: DIAMETER:

PRE-FILTER SPECIFICATIONS

TYPE OF PREFILTER: WISY VORTEX 150

NUMNER OF PRE-FILTERS:

PRE-FILTRATION MESH SIZE: 320 MICRONS

12 LITERS PER SECOND **MAXIMUIM INLET FLOW RATE:**

RAINPUMP SPECIFICATIONS

CLEANFLO VFD CONSTANT PRESSURE SYSTEM BRAND:

MODEL: DABS ESYBOX MINI3

DESIGN FLOW RATE: 8 USGPM MAXIMUN PSI @ 8 GPM: 70 PSI

POWER SPECIFICATIONS

HORSE POWER: 1.1 HP **VOLTAGE:** 115 VAC AMPS: ~ 7.5 A 850 W WATTS:

WATER TREATMENT SPECIFICATIONS

TYPE: **CLEANFLO** VIDA REUSE BRAND: RESR4 MODEL: AGE OF EQUIPMENT: NEW

7 MIN PEAK WATER DEMAND

FLOW RATE QUANTITY (LPM) RUN TIME 7 MIN PEAK 8.3 SHOWER OR BATH 7 MIN 116.6 L 5.3 0.5 MIN 5.3L 2.7 1 FLUSH PER TOILET 6.0L/FLUSH 18L 1.6 O.5 MIN

19

7.6

TOTAL 7 MIN PEAK 140L

100L/CYCLE

30L/CYCLE

LPM 20 US GPM 5.3

0

0

BASED ON THIS PEAK DEMAND CLEANFLO SPECIFIES A MAX FLOW RATE OF 8 US GPM.

0

RAIN TOTAL DYNAMIC HEAD

DESIGN FLOW RATE: 8 GPM

SUPPLY PIPE

FIXTURES

LAVATORY

KITCHEN SINK

DISHWASHER

WASHING MACHINE

1.1 PSI /2.54 FT HEAD 1.25" @ 70 FT (1.585 PSI LOSS/100FT) (NPSH MUST BE MET FOR BOOSTER PUMP)

TREATMENT SKID

10 PSI / 35 FT HEAD PSI LOSS VARIES AS WATER FILTERS BECOME

CLOGGED

DISTRIBUTION PIPE

8GPM - 0.75" @ 40FT (13.9 PSI LOSS/100FT) 3GPM - 0.5" @ 40FT (12.5 PSI LOSS/100FT) TOTAL 5.5 + 5.0 = 10.5

10.5 PSI / 24 FT HEAD

MINOR LOSSES: VALVES, FITTINGS ~ 20FT (13.9 PSI LOSS/100FT)

2.78 PSI / 6.4 FT HEAD

ELEAVTION HEAD

15FT (1.0 PSI LOSS/2.31FT)

6.49 PSI / 15 FT HEAD

STATIC PSI 30 PSI

30 PSI / 69.3 FT HEAD

TOTAL 60. 9 PSI/141 FT HEAD

WATER TECHNOLOGIES

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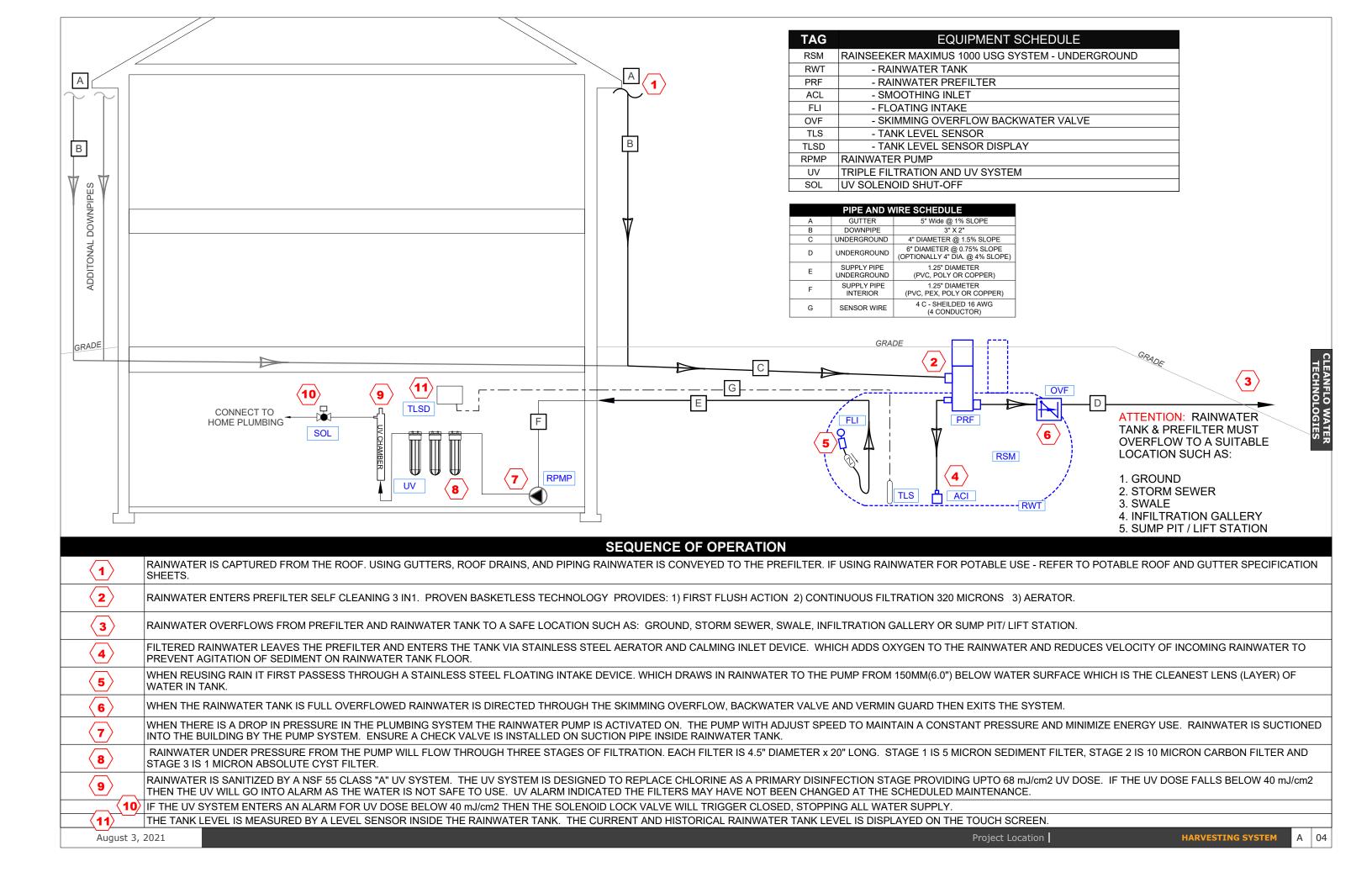
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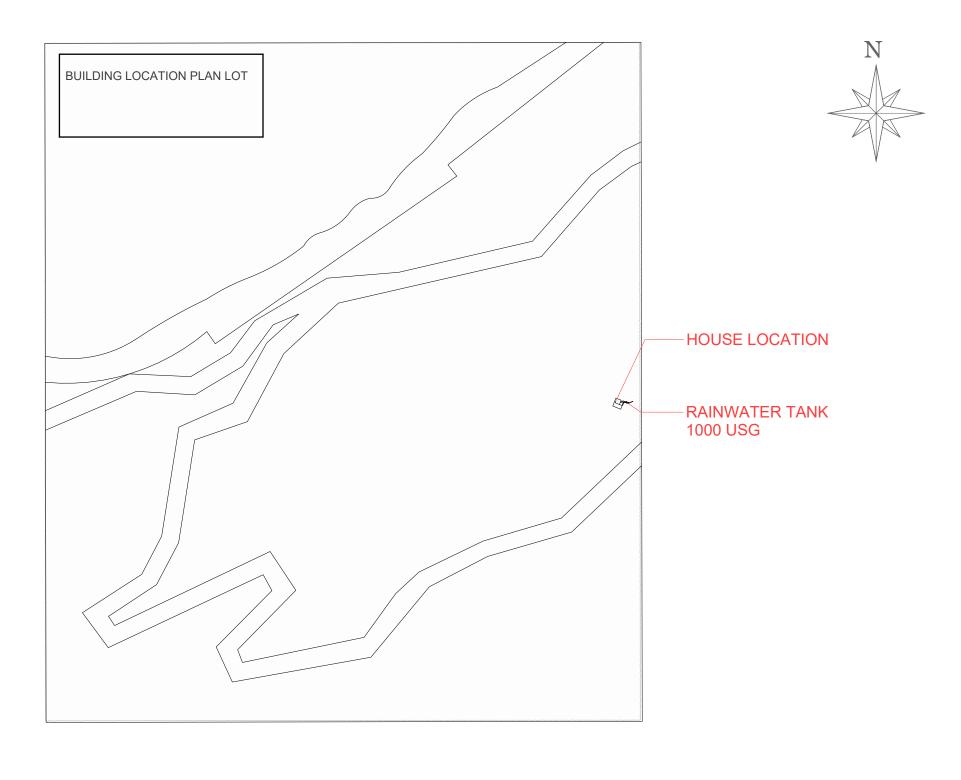
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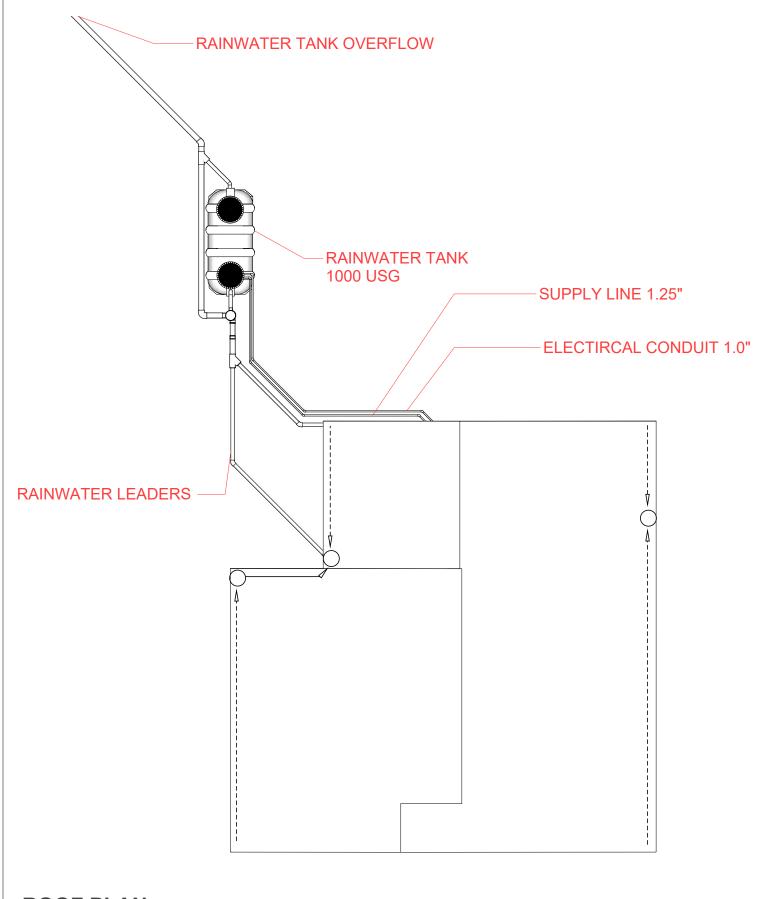




SITE PLAN (SCALE 1:6000)

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A 07

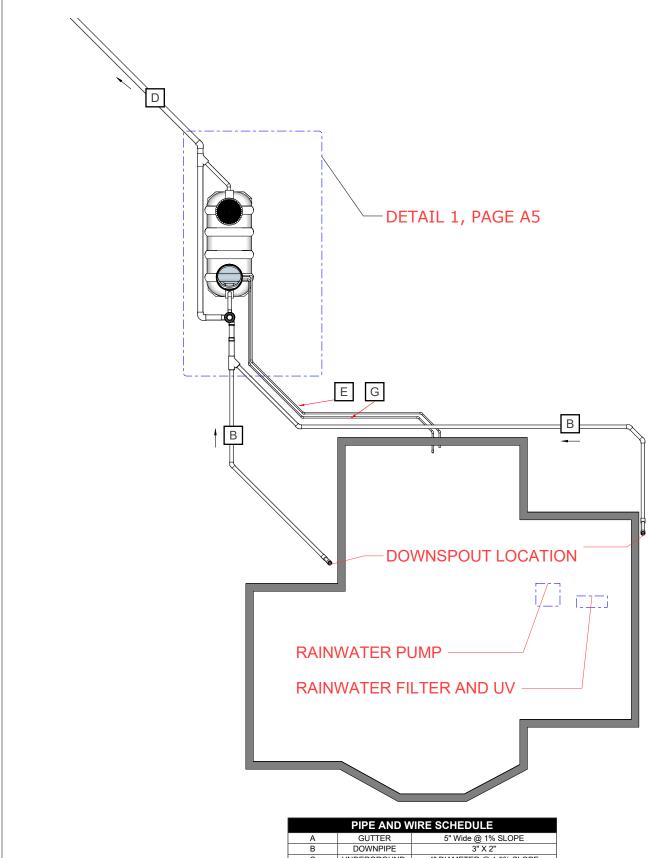


ROOF PLAN (SCALE 1:120)

August 3, 2021

HARVESTING SYSTEM

Project Location



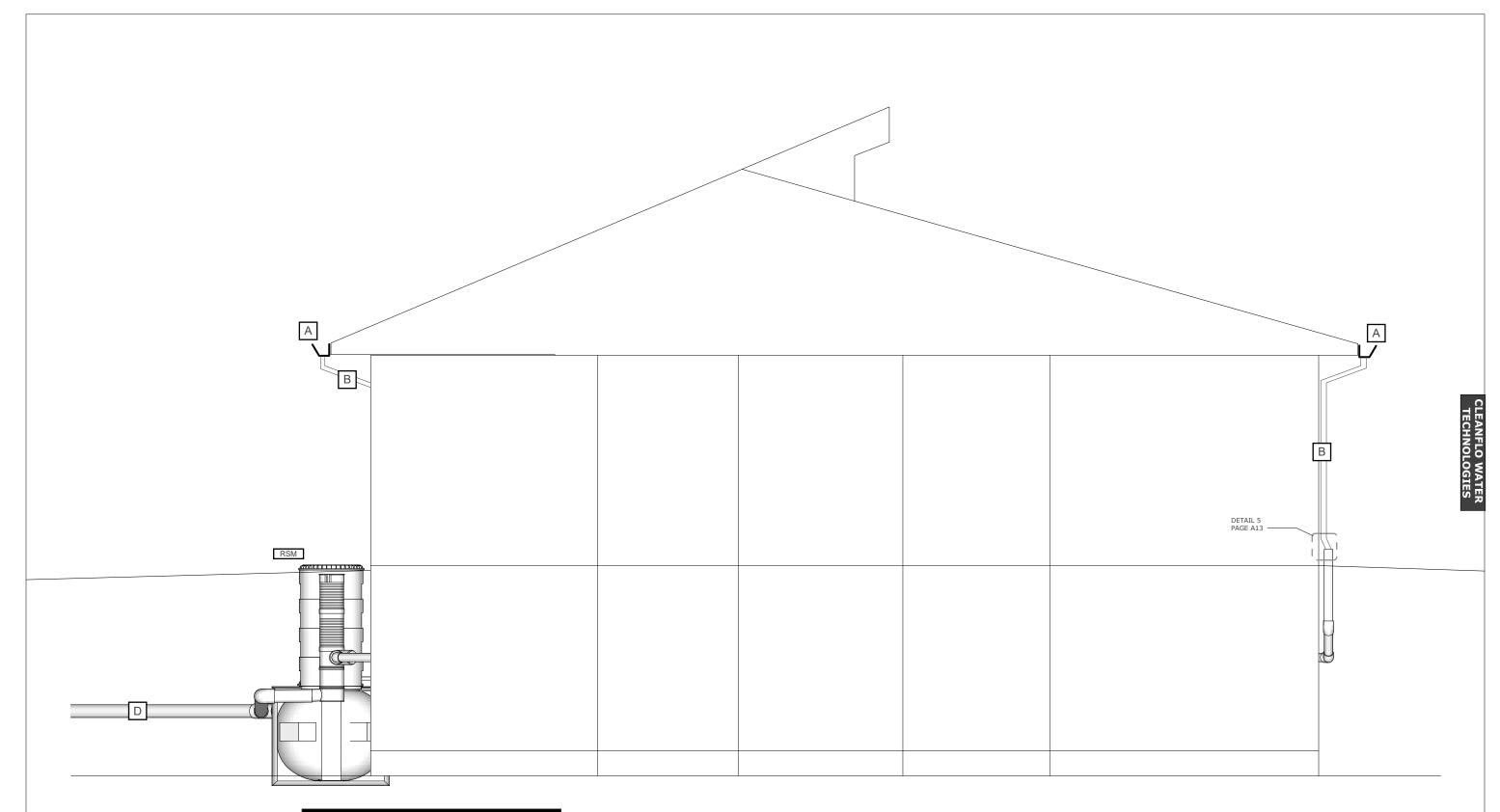
PIPE AND WIRE SCHEDULE		
Α	GUTTER	5" Wide @ 1% SLOPE
В	DOWNPIPE	3" X 2"
С	UNDERGROUND	4" DIAMETER @ 1.5% SLOPE
D	UNDERGROUND	6" DIAMETER @ 0.75% SLOPE (OPTIONALLY 4" DIA. @ 4% SLOPE)
Е	SUPPLY PIPE UNDERGROUND	1.25" DIAMETER (PVC, POLY OR COPPER)
F	SUPPLY PIPE INTERIOR	1.25" DIAMETER (PVC, PEX, POLY OR COPPER)
G	SENSOR WIRE	4 C - SHEILDED 16 AWG (4 CONDUCTOR)
	B C D E F	A GUTTER B DOWNPIPE C UNDERGROUND D UNDERGROUND E SUPPLY PIPE UNDERGROUND F SUPPLY PIPE INTERIOR

RAINSEEKER **MAXIMUS** SYSTEM OVERFLOW -RSM NOTE: RAINSEEKER **MAXIMUS OVERFLOW RSM SYSTEM** HIGH LEVEL OVERFLOW TO ADEQUATE OVERFLOW **LOCATION SUCH AS:** GRADE OR INFILTRATION GALLERY — PREFILTER OVERFLOW / **BY-PASS** PRF **RAINWATER** PREFILTER 1 TO 2 METERS OF SETTLING PIPE 1% SLOPE MAX -**TRANSITION** 4" TO 6" PIPE **DETAIL 1** (SCALE 1:48)

RSM

FOUNDATION F

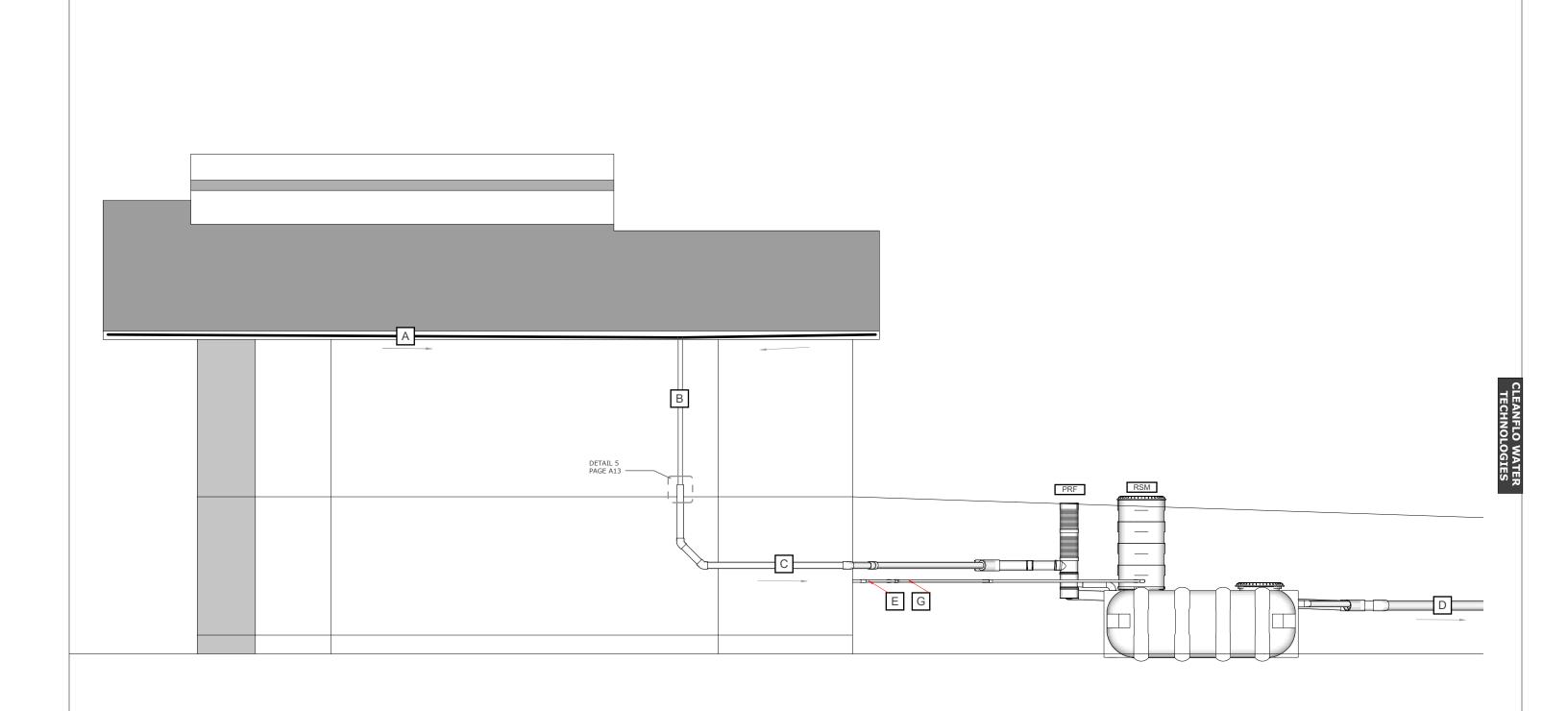
(SCALE 1:120)



FRONT VIEW (SCALE 1:96)

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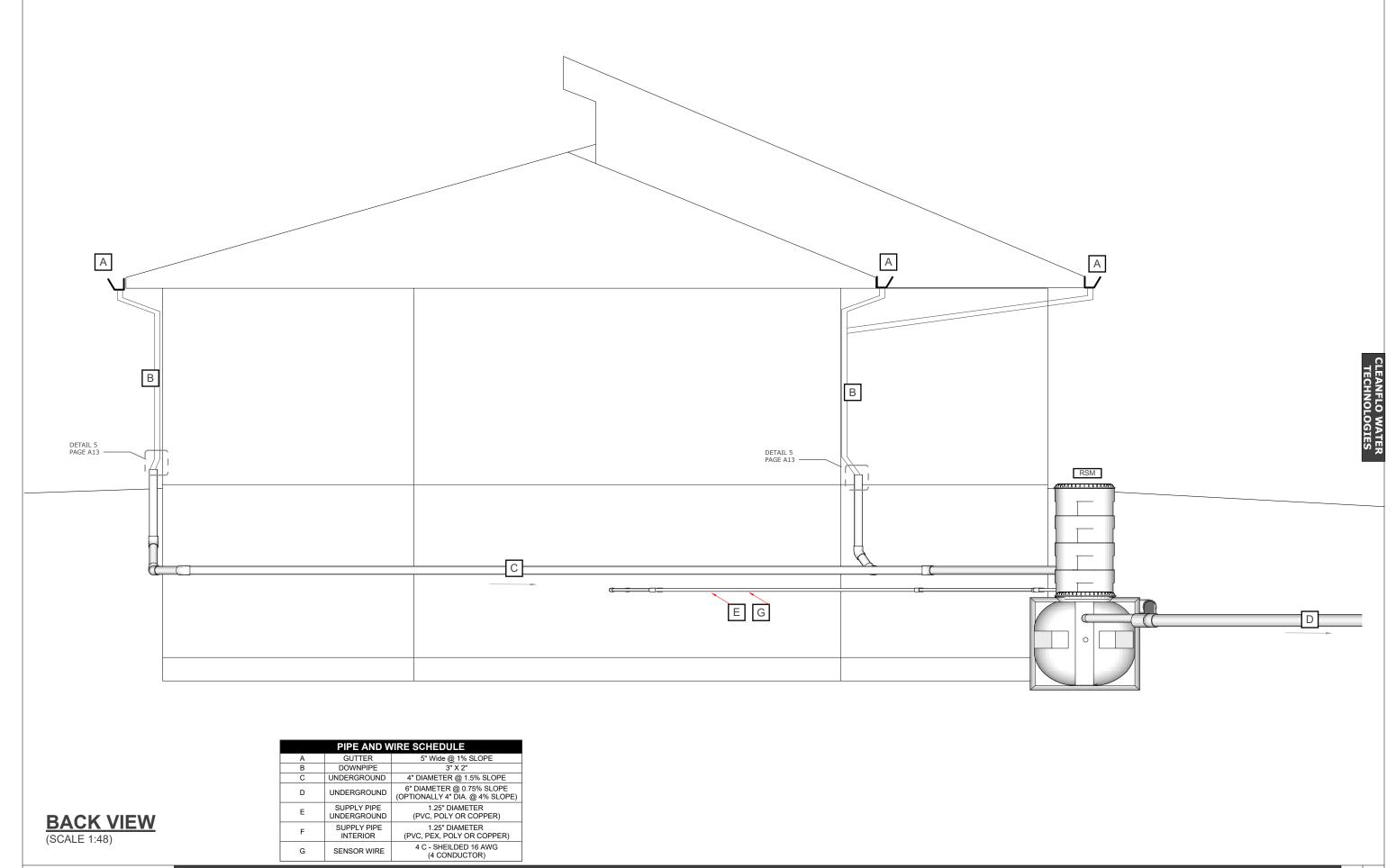
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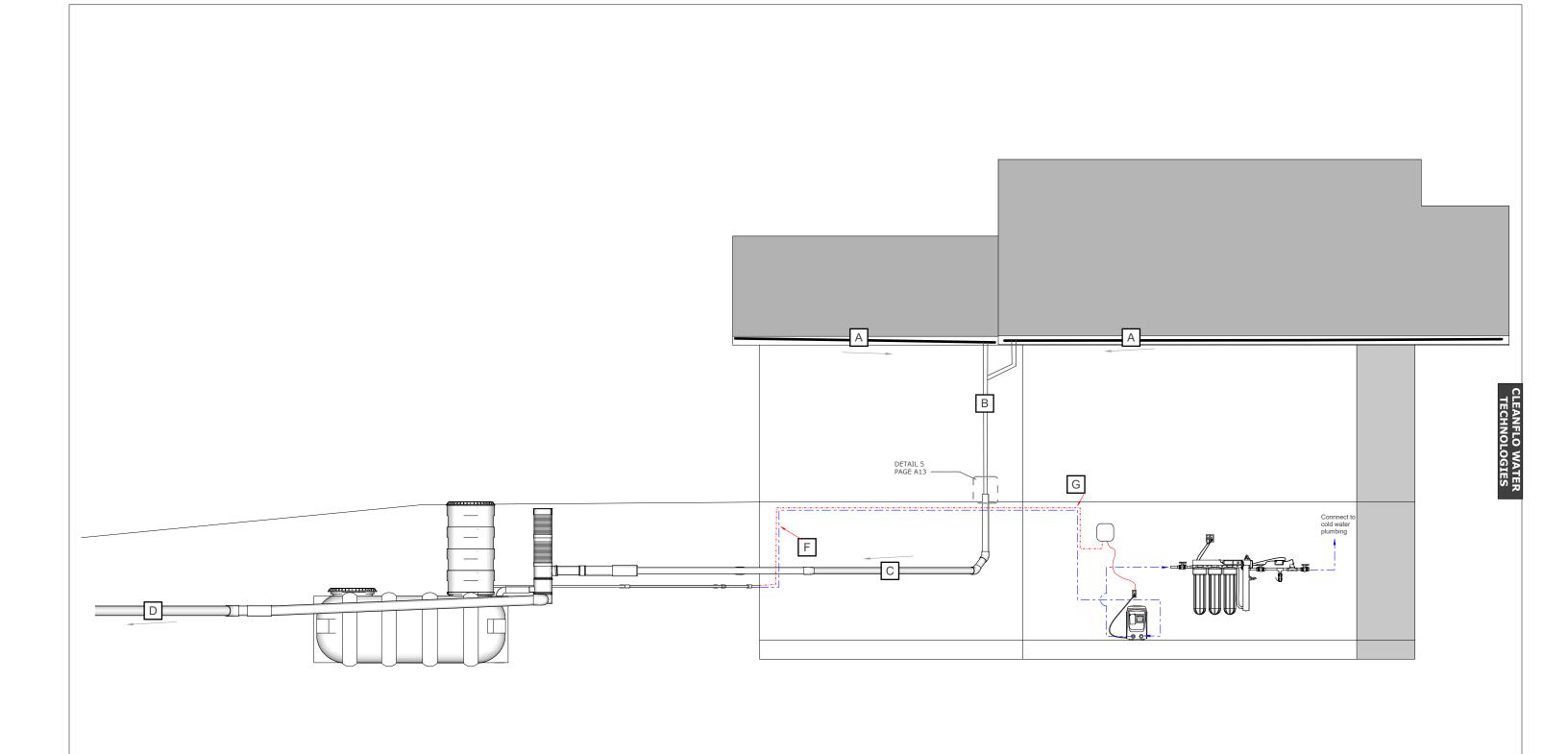
HARVESTING SYSTEM August 3, 2021 A 10 Project Location



August 3, 2021

Project Location

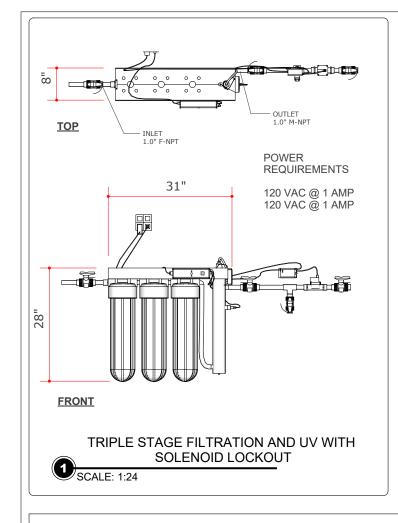
HARVESTING SYSTEM

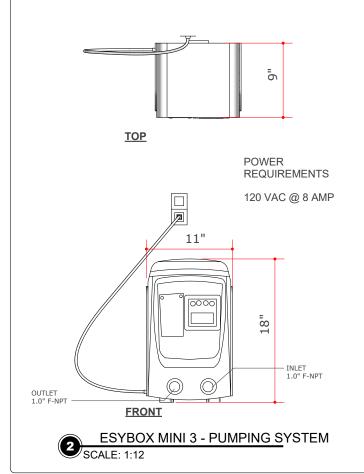


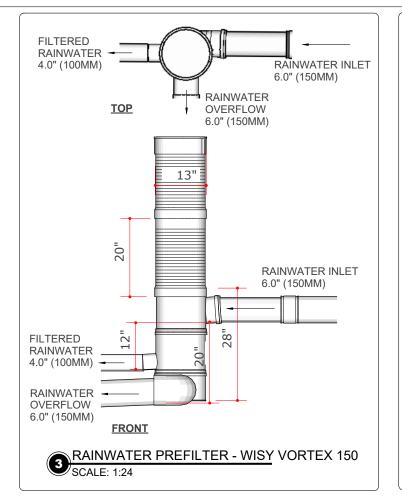
LEFT VIEW (SCALE 1:64)

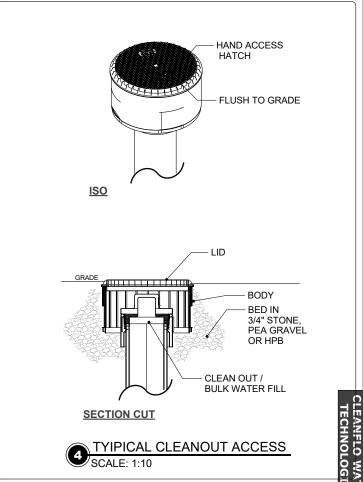
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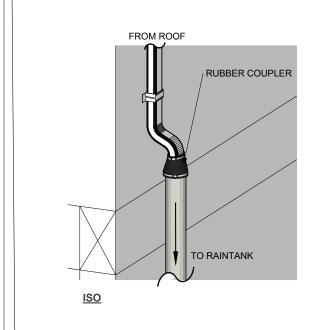
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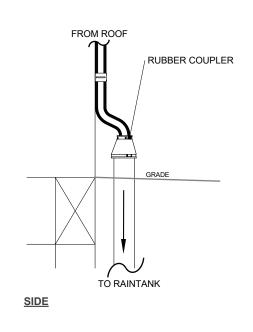


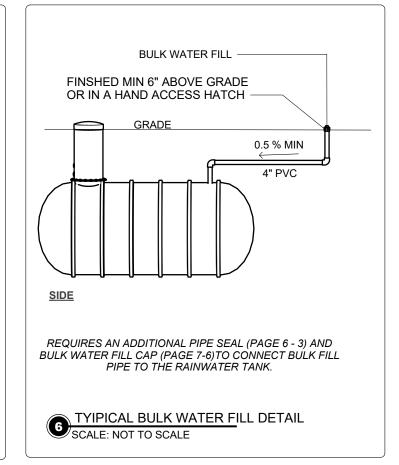


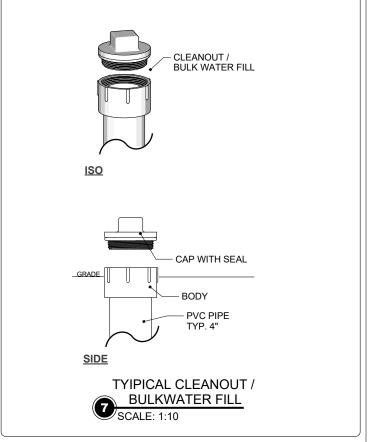














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