

BASEMENT PLUMBING

PLAN

570 DATE:

09/28/06

CONSTRUCTION DOCUMENTS

ARCHITECTS

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MANIFOLDS & MAINS

1) CLOSE MANIFOLD SUPPLY VALVES ON DOMESTIC COLD WATER SUPPLY MANIFOLDS: DCWM-1 AND DCWM-2. CLOSE ISOLATION VALVES ON THE DOMESTIC HOT WATER SUPPLY MAINS.

2) OPEN THE DRAIN VALVES ON THE DOMESTIC COLD WATER SUPPLY MANIFOLDS AND ON THE DOMESTIC HOT WATER SUPPLY MAINS.

DURING LONG UNOCCUPIED PERIODS, IT IS ADVISABLE TO PROTECT THE PLUMBING SYSTEM FROM DAMAGE ASSOCIATED WITH FREEZING. ACCORDINGLY, THE FOLLOWING STEPS SHALL BE TAKEN:

PLUMBING DRAINBACK PROCEDURE

FIXTURES:

1) OPEN ALL VALVES ON LAVATORIES, SHOWERS, AND KITCHEN SINK.

2) DISCONNECT AND DRAIN THE WATER IN THE DOMESTIC HOT WATER DEMAND PUMP, DMP-1.

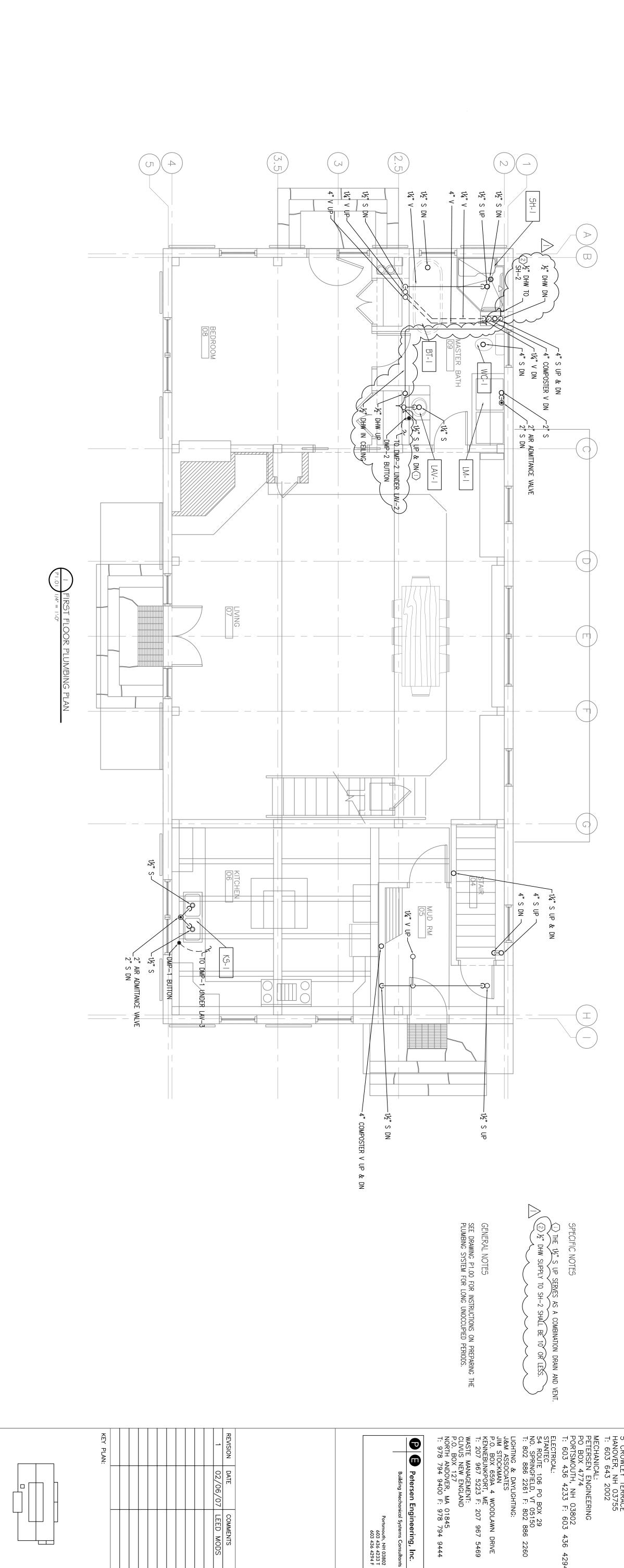
3) DISCONNECT SUPPLY HOSE FROM WATER CLOSETS (TO ALLOW DRAINBACK OF SUPPLY LINE).

4) SIPHON WATER FROM TOILET TANK INTO BUCKET AND POUR DOWN SINK DRAIN.

5) FLUSH TOILET UNTIL ALL WATER IS REMOVED FROM TOILET.

6) DISCONNECT SUPPLY HOSE FROM LAUNDRY MACHINE.

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Petersen Engineering, Inc.

Building Mechanical Systems Consultan

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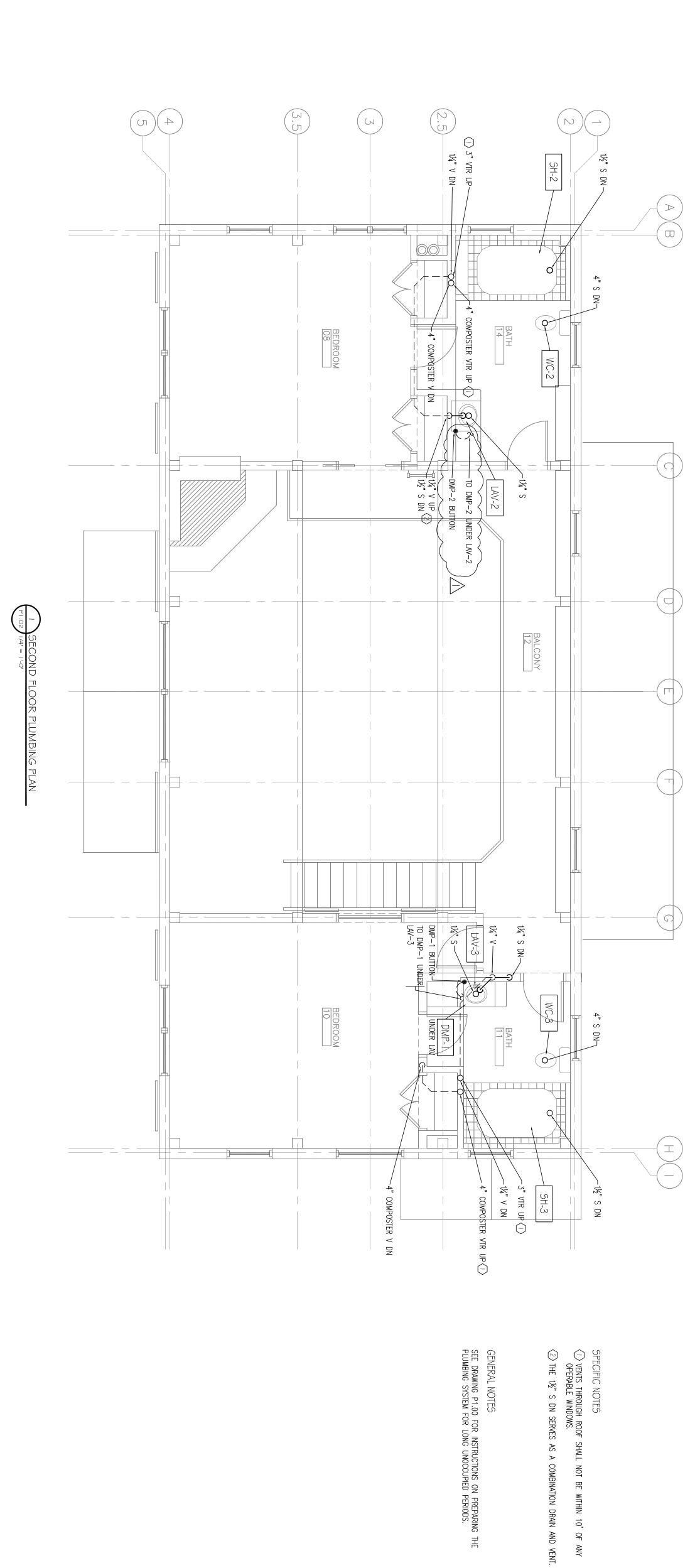
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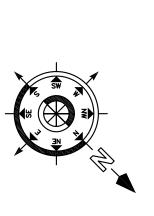
570 DATE: 09/28/06

CONSTRUCTION DOCUMENTS

GREEN WOODLANDS BARN/HOUSE PROJECT

FIRST FLOOR PLUMBING PLAN





GREEN WOODLANDS BARN/HOUSE PROJECT

KEY PLAN:

DATE COMMENTS
02/06/07 LEED MODS

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ARCHITECTS

P1.02

570 DATE:

09/28/06

SECOND FLOOR
PLUMBING PLAN

CONSTRUCTION DOCUMENTS

PLUMBING SPECIFICATION:

2. COMPLETE SYSTEMS
IT IS NOT THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS THAT EVERY ITEM NECESSARY FOR COMPLETE
SYSTEMS BE SHOWN. THE CONTRACTOR'S WORK SHALL INCLUDE LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR A HIGH
QUALITY, COMPLETE INSTALLATION. OFFSETS AND/OR CHANGES IN ELEVATION OF PIPES AND DUCTS DUE TO UNFORESEEN
INTERFERENCES SHALL BE PROVIDED AT NO ADDITIONAL COST. 1. SUMMARY OF WORK
THESE DRAWINGS DEPICT THE INSTALLATION OF PLUMBING SYSTEMS TO SERVE THE STUDENT HOUSING. IT IS THE INTENT OF THESE DRAWINGS THAT ALL NECESSARY COMPONENTS BE INCLUDED FOR COMPLETE PLUMBING SYSTEMS AS SHOWN.

SHOP DRAWINGS SIX (6) SETS OF SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL FOR ALL EQUIPMENT AND MATERIALS.

PERMITS, FEES AND REGULATIONS
THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND CERTIFICATES.

5. OPERATION AND MAINTENANCE MANUALS AND INSTRUCTIONS
PRIOR TO SUBSTANTIAL COMPLETION, THE CONTRACTOR SHALL PROVIDE THREE (3) BOUND COPIES OF PRINTED
OPERATIONS INSTRUCTIONS AND MAINTENANCE INFORMATION FOR EQUIPMENT AND SYSTEMS PROVIDED UNDER THIS CONTRACT,
INCLUDING PREVENTATIVE MAINTENANCE PROCEDURES.

6. DRAWINGS
THE DRAWINGS SHOW APPROXIMATE LOCATION OF EQUIPMENT, DUCTS AND PIPES. THE EXACT LOCATION SHALL BE DETERMINED BASED ON FIELD CONDITIONS. EQUIPMENT, DUCT WORK AND PIPING SHALL FIT INTO THE SPACES SHOWN ON THE DRAWINGS ALLOWING FOR ACCEPTABLE CLEARANCES FOR INSTALLATION, REPLACEMENT AND MAINTENANCE. IT IS NOT INTENDED THAT THE DRAWINGS SHOW IN DETAIL EVERY FITTING, DEVICE, ETC. ALL MATERIAL NECESSARY TO SATISFY REGULATIONS, THE BEST PRACTICES OF THE TRADE AND TO THE COMPLETE SATISFACTION OF THE ENGINEER SHALL BE FURNISHED WITHOUT ADDITIONAL RECOMPENSE.

AUTOCAD RECORD DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR AT THE COMPLETION OF THE PROJECT SHOWING THE AS-BUILT ARRANGEMENT OF THE SYSTEMS. THE ENGINEER'S AUTOCAD FILES WILL BE PROVIDED AT NO COSTO THE CONTRACTOR.

7. STORAGE OF MATERIALS THE CONTRACTOR SHALL COORDINATE STORAGE OF HIS MATERIALS AND EQUIPMENT WITH THE GENERAL CONTRACTOR AND SHALL BE RESPONSIBLE FOR ALL LOSS AND DAMAGE.

8. GUARANTEE
THE CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF ONE (1) YEAR AFTER SUBSTANTIAL COMPLETION
THE CONTRACTOR SHALL REPAIR OR CORRECT THE WORK WITHIN TEN (10) DAYS OF WRITTEN NOTIFICATION. IF THE
CONTRACTOR DOES NOT COMPLY, THE OWNER MAY HAVE THE WORK CORRECTED AND CHARGE ALL SUCH TO THE
CONTRACTOR.

ANY MATERIAL OR OPERATION SPECIFICD BY REFERENCE TO PUBLISHED SPECIFICATIONS OF A MANUFACTURER, SOCIETY, ASSOCIATION, CODE OR OTHER PUBLISHED STANDARD, SHALL COMPLY WITH REQUIREMENTS OF THE LISTED DOCUMENT. ALL WORK SHALL COMPLY WITH THE LATEST EDITION OF STATE, LOCAL AND OTHER CODES WHICH APPLY TO THIS PROJECT OR HAVE JURISDICTION.

2000 INTERNATIONAL MECHANICAL CODE (IMC).

2000 INTERNATIONAL PLUMBING CODE (IPC).

2002 NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA).

AMERICAN SOCIETY OF TESTING MATERIALS (ASTM).

NATIONAL ELECTRICAL CODE (NEC).

ASSOCIATED AIR BALANCE COUNCIL (AABC).

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).

SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA).

10. WORKMANSHIP ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER, BY EXPERIENCED MECHANICS OF THE TRADE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND THE MOST MODERN TRADE PRACTICE AND SHALL PRESENT A NEAT APPEARANCE.

11. SITE INSPECTION
BEFORE BEGINNING WORK, THE CONTRACTOR SHALL INSPECT THE SITE AND SURVEY THE CONDITIONS TO BE ENCOUNTERED IN THE PERFORMANCE OF THE WORK. FAILURE TO FAMILIARIZE HIMSELF WITH THE CONDITIONS SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR FULL COMPLETION OF THE WORK IN ACCORDANCE WITH THESE DOCUMENTS.

12. COORDINATION
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THEIR WORK WITH ALL OTHER TRADES SUCH THAT ALL BUILDING SYSTEMS AND COMPONENTS CAN BE ASSEMBLED WITHOUT CONFLICT AND IN CONFORMANCE WITH ALL CONSTRUCTION DOCUMENTATION, INCLUDING THOSE OF OTHER TRADES.

13. DISCREPANCIES AND CLARIFICATIONS
IN THE EVENT OF A DISCOVERED DISCREPANCY OR AMBIGUITY, IT SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION
IN WRITING AND IN A TIMELY FASHION. THE CONTRACTOR SHALL NOT PROCEED WITH RELATED WORK WITHOUT A WRITTEN
RESOLUTION CLARIFICATION FROM THE ARCHITECT.

14. ON-SITE SUPERVISION
THE CONTRACTOR SHALL MAINTAIN ON-SITE SUPERVISION OF HIS OWN WORK FORCE AND HIS SUB-SUBCONTRACTORS

15. PLUMBING

DOMESTIC COLD AND HOT WATER PIPING SHALL BE ASTM B 88, TYPE L, DRAWN TEMPER COPPER WITH ASTM B 32 LEAD-FREE-ALLOY SOLDER JOINTS OR PEX TUBING, ASTM F 876 AND F 877. DOMESTIC COLD WATER MANIFOLDS WILL BE LOCATED IN THE MECHANICAL ROOM AND UTILITY 01 WITH PEX TUBING TO INDIVIDUAL FIXTURES. DOMESTIC HOT WATER MAINS WILL BE LOCATED IN THE MECHANICAL ROOM AND UTILITY 01 WITH PEX TUBING TO INDIVIDUAL FIXTURES. ABOVEGROUND AND UNDERGROUND WASTE AND VENT AND LEP PIPING SHALL BE SCH 40 ABS, ASTM F 628 OR ASTM D 2661. ALTERNATE MATERIAL IS CAST IRON.

16. INSULATION

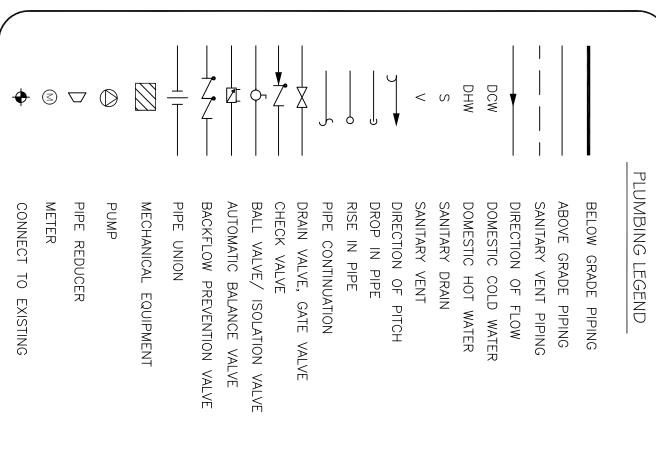
16. INSULATION

DCW AND DHW (BOTH COPPER AND PEX) PIPING, AS WELL AS SANITARY DRAINS FROM SHOWERS TO AND INCLUDING DRAIN WATER HEAT RECOVERY UNIT, SHALL BE INSULATED WITH 1" TYPE I, PREFORMED FIBERGLASS INSULATION WITH ALL SERVICE JACKET, SIMILAR TO JOHNS MANVILLE MICRO—LOK AP—T PLUS. INSULATION SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS AS TESTED IN ACCORDANCE WITH ASTM E 84.

CAREFULLY SEAL ALL JOINTS VAPOR TIGHT ON DCW PIPING.

17. EQUIPMENT SCHEDULED EQUIPMENT IS BASIS OF DESIGN. (AS DETERMINED BY PETERSEN ENGINEERING). ALTERNATE MANUFACTURERS 먪 CONSIDERED, BUT MUST BE EQUAL

18. FIRESTOPPING PROVIDE FIRESTOPPING AT ALL PENETRATIONS



PLUMBING BASIS OF DESIGN

DOMESTIC HOT WATER LOAD

ASSUMED OCCUPANCY: 4 PEOPLE.

SHOWERS THE SHOWERS WILL BENEFIT MOST DEMAND & RECOVERY.
ASSUME:

-7.5 MINUTE SHOWERS (PER 2003 ASHRAE APPLICATIONS HANDBOOK, 49.14)
-ONE SHOWER PER PERSON PER DAY
-FINAL MIXED TEMPERATURE OF 110'F OUT OF SHOWERHEAD
-95'F DRAIN WATER TEMPERATURE
-1.5 GPM SHOWERHEADS
-45% DHR-1 EFFICIENCY
-40'F DCW TEMPERATURE FROM WELL

FIRST CALCULATE THE BTUH GOING DOWN THE DRAIN: $(1.5~\text{GAL/MIN})(8.33~\text{LBS/GAL})(60~\text{MIN/HR})(95^{\circ}F~-~40^{\circ}F) = 41,235~\text{BTUH}$

APPLYING THE DHR-1 EFFICIENCY: (41,235 BTUH)(45% EFFICIENCY) = 18,555 BTUH RECOVERED.APPLYING THIS TO THE ENTERING WATER TEMPERATURE: 18,555 BTUH = (1.5 GAL/MIN)(8.33 LBS/GAL)(60 MIN/HR)(T - 40°F)T = 65°F

(4 SHOWERS/DAY)(1.5 GAL/MIN)(7.5 MIN/SHOWER)(0.818 RATIO OF 120°F TO 65°F) = 37 GAL/DAY OF 120°F WATER (4 SHOWERS/DAY)(1.5 GAL/MIN)(7.5 MIN/SHOWER)(0.818 RATIO OF 120°F TO 65°F) = 37 GAL/DAY OF 120°F WATER (4 SHOWERS/DAY)(1.5 GAL/MIN)(7.5 MIN/SHOWER)(0.818 RATIO OF 120°F TO 65°F) = 37 GAL/DAY OF 120°F WATER (4 SHOWERS/DAY)(1.5 GAL/MIN)(7.5 MIN/SHOWER)(0.818 RATIO OF 120°F TO 65°F) = 37 GAL/DAY OF 120°F WATER (4 SHOWERS/DAY)(1.5 GAL/DAY) OF 120°F WATER (4 SHOWERS/DAY) OF

PER 2003 ASHRAE APPLICATIONS HANDBOOK, 49.9, TABLE 3, HAND DISHWASHING REQUIRES 4 GALLONS PER TASK OF 140°F WATER, WHILE AUTOMATIC DISHWASHING REQUIRES 15 GALLONS. HOWEVER, DISHWASHERS ARE READILY AVAILABLE THAT ONLY USE 4 GALLONS PER TASK AND PER AN ARTICLE IN HOME ENERGY MAGAZINE MAY/JUNE 2004, ENTITLED "IS A MACHINE MORE EFFICIENT THAN THE HAND?", HAND DISHWASHING CONSUMES, ON AVERAGE, MUCH MORE THAN AUTOMATIC DISHWASHERS.

LAUNDRY (4 GALLONS/LOAD)(2 LOADS/DAY) = 8 GAL/DAY OF 120°F WATER ASSUME 3 LOADS OF LAUNDRY PER WEEK AND A LAUNDRY MACHINE THAT USES 21 GALLONS PER LOAD. THE TOTAL "LAUNDRY" GALLONS OF 120°F WATER IS 9 GALLONS PER DAY.

COOKING • (3 LOADS/WEEK)(1 WEEK/7 DAYS)(21 GAL/LOAD) = 9 GAL/DAY OF 120°F WATER ASSUME AN AVERAGE OF TWO MEALS PER DAY REQUIRING HOT WATER FOR PREPARATION. PER 2003 ASHRAE APPLICATIONS HANDBOOK, 49.9, TABLE 3, EACH MEAL PREPARATION REQUIRES 3 GALLONS OF HOT WATER, FOR A TOTAL OF 6 GALLONS PER DAY.

 $(3 \text{ GAL/MEAL})(2 \text{ MEALS/DAY}) = 6 \text{ GAL/DAY} \text{ OF } 120^{\circ}\text{F} \text{ WATER}$ WASH HIS OR HER FACE AND HANDS ON AVERAGE SIX TIMES PER DAY FOR

MISCELLANEOUS

• ASSUME THAT EACH PERSON WILL
30 SECONDS WITH HOT WATER. (4 PPL)(6 WASHS/PPL/DAY)(0.5 MIN/WASH)(0.5 GAL/MIN) = 6 GAL/DAY OF 120°F WATER

THE PROBABLE MAXIMUM HOURLY DEMAND CAN (TOTAL OF $66~\mathrm{GAL/DAY})$ BY A DEMAND FACTOR DOMESTIC HOT WATER DEMAND PUMP BE ESTIMATED BY MULTIPLYING THE AGGREGATE DAILY HOT WATER USAGE OF 0.3 TO GET 20 GALLONS PER HOUR.

SUMP PUMP SUMP PUMP WILL BE LOCATED IN THE MECHANICAL ROOM FOR PROTECTION AGAINST FLOODING FROM A BROKEN WATER PE, A LEAK IN THE STORAGE TANK, OR ANY OTHER LEAKS.

IN ORDER TO AVOID THE WASTED ENERGY ASSOCIATED WITH A RECIRCULATION PUMP, AND TO AVOID WASTING WATER AND TIME WAITING FOR HOT WATER AT THE MOST REMOTE FIXTURES (LAV-3, SH-3, AND KS-1), A DOMESTIC HOT WATER DEMAND PUMP WILL BE UTILIZED. THIS PUMP IS LOCATED IN THE CABINET BENEATH LAV-3 AND IS ACTIVATED WITH A MOMENTARY PUSH BUTTON AT LAV-3 OR THE KITCHEN SINK. THE DEMAND PUMP FLUSHES THE COOLED WATER IN THE DOMESTIC HOT WATER LINE BACK INTO THE COLD WATER SUPPLY LINE. IT ELIMINATES HAVING TO WAIT FOR HOT WATER AT THESE FIXTURES.

CAPABILITY

THE SYSTEM IS DESIGNED REFER TO DRAWING P1.00 WELL TANK AND PUMP) TO ALLOW FOR 0 FOR DETAILS. LE DRAINING OF THE PLUMBING SYSTEM FOR EXTENDED UNOCCUPIED PERIODS

THE WELL TANK AND PUMP SYSTEM IS DESIGNED TO OPERATE AT CONSTANT PRESSURE. THE PUMP USES A VFD TO LOWER ELECTRICAL CONSUMPTION AND PROVIDE PRESSURE AND FLOW "AS NEEDED." THIS SYSTEM REQUIRES LESS STORAGE, AND THUS, A SMALLER WELL TANK. THE MAXIMUM FLOW FROM THE WELL IS 5 GPM.

FROM THE DRAIN HEAT RECOVERY (DHR-1) BECAUSE OF THE SIMULTANEOUS 1" DCW-NFWH-2-½" DCW TO DCWM-1-DRAIN VALVE PRESSURE SWITCH DCW TO DCW TO DHW 1" DCW CONNECTION / TO WELL TANK 34" DCW TO HB-1-DCWM-DCWM-, 2<u>7</u>,

DCW	LAV-3 KS-1 WC-3 SH-3	1/2" PEX	3/4" CU	DCWM-2
DCW	SH-1 SH-2 LAV-1 LAV-2 BT-1 LM-1 WC-1 WC-2 NFWH-1 NFWH-2	1/2" PEX	1" CU	DCWM-1
DHW	SH-1 SH-2 LAV-1 LAV-2 BT-1 LM-1	1/2" PEX	1" CU	DHWM-1
SERVICE NOTES	FIXTURES SERVED	FIXTURE SUPPLY	MANIFOLD SUPPLY	TAG
	DOMESTIC WATER MANIFOLD SCHEDULE			

HB-1	NFWH-2	NFWH-1	WC-3	WC-2	WC-1	KS-1	LM-1	BT-1	LAV-3	LAV-2	LAV-1	SH-3	SH-2	SH-1		DMP-2	DMP-1	DHR-1	B-1	WST-1	TAG	
HOSE BIBB	NFWH-2 WALL HYDRANT	NFWH-1 WALL HYDRANT	FOAM FLUSH TOILET	FOAM FLUSH TOILET	FOAM FLUSH TOILET	KITCHEN	LAUNDRY MACHINE	BATHTUB	LAVATORY	LAVATORY	LAVATORY	SHOWER	SHOWER	SHOWER	THERMOSTATIC	DHW DEMAND	DHW DEMAND	DRAIN HEAT RECOVERY	BOILER	WATER STORAGE TANK	DESC.	
ZURN Z1345	ZURN Z1346-PX	ZURN Z1346-PX	NEPON FOAM FLUSH	NEPON FOAM FLUSH	NEPON FOAM FLUSH	BY ARCHITECT	BY ARCHITECT	BY OWNER	BY ARCHITECT	BY ARCHITECT	BY ARCHITECT	BY ARCHITECT	BY ARCHITECT	BY ARCHITECT	SYMMONS 5-140	TACO D'MAND 006-DM-PK	TACO D'MAND	GFX S3-40	SEE DWG H2.01	E SEE DWG H2.01	MANUFACTURER MODEL	
I	1	1	4,"	4"	4,"	2"	2"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/2"	1-1/2"	1-1/2"		I	\\	3"	ı	I	SOIL	
1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"	3/4"	I	ı	PIPE CONNECTIONS IL DCW DHW TRAP	
I	_	I	ı	1	ı	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"	ı	I	1	NECTION DHW	
ı	ı	ı	ı	I	ı	1-1/2"	2"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/2"	1-1/2"	1-1/2"	1	1		ı	I	I	IS TRAP	PLUI
			3	3	3		21									KIT ÎNCLUDES ONLY ONE STÂRTER BÛTTON (TWO ARE REQUIRED). "PK" KIT "VINCLUDES TWO 1/2" TEES AND TWO 1/2" FLEX LINES FOR EASE OF INSTALLATION.	KIT INCLUDES ONLY ONE STARTER BUTTON (TWO ARE REQUIRED). "PK" KIT INCLUDES TWO 1/2" TEES AND TWO 1/2" FLEX LINES FOR EASE OF THISTALLATION.				FITTINGS/ACCESSORIES	PLUMBING FIXTURE SCHEDULE
I	1	1	OZ/FLUSH	OZ/FLUSH	OZ/FLUSH	1.0 GPM	GAL/LOAD	1.5 GPM	0.5 GPM	0.5 GPM	0.5 GPM	1.5 GPM	1.5 GPM	1.5 GPM			I	I	l	I	WATER NOTES	

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PLAN

	4.4 GAL.	4.4		1" MALE NPT	- *	Ġ	14.5	Ĭ	16"øx26"H		WM-4	WELLMATE	WI	WT-1
NOTES	SYSTEM DRAWDOWN (@ 30/50 PSI)	SYSTEM ((@ 3C	(0)	SYSTEM CONNECTION	CO	OLUME L.)	TOTAL VOLUME (GAL.)	SNC	DIMENSIONS		MODEL	MAKE	_	TAG
						1EDULE	WELL TANK SCHEDULE	WELI						
					MPS.	-PHASE PUN	R FOR SINGLE	CONTROLLE	PRESSURE	E, CONSTANT	C MONODRIV	(2) CONTROLS: FRANKLIN ELECTRIC MONODRIVE, CONSTANT PRESSURE CONTROLLER FOR SINGLE-PHASE PUMPS.	ONTROLS: FRA	
PRESSURE.	TANK, 10' OF FRICTION LOSS BETWEEN PUMP & TANK, 60 PSI MAX TANK PRESSURE.	TANK, 60	3 AWD.	S BETWEEN F	RICTION LOS	K, 10' OF FF		BETWEEN	F 1" PIPING	EVEL, 300' OF	MIC WATER L	ASSUMPTIONS: 25' MAX DYNAMIC WATER LEVEL, 300' OF 1" PIPING BETWEEN PUMP $\&$	SSUMPTIONS:	<u> </u>
115	1/4 11	675	8.5	1-1/2" NPT 8.5	Ι	12	12	13	WATER	SUMP WATER	SUMP PUMP	SU 252	SP-1 GRUNDFOS	SP-1
1/2 230/115 (1)(2)	1/2 230,	- 3	4.9/9.8	1" NPT 4.9/9.8	I	180	165	5.0	WATER	POTABLE WATER	WELL PUMP	5SQ05-180	WP-1 GRUNDFOS	WP-1
TAGE NOTES	PUMP SUCTION DISCHARGE AMPS WATTS MOTOR VOLTAGE NOTES EAD (FT.) (IN.) (IN.)	WATTS	E AMPS	DISCHARGI (IN.)	SUCTION (IN.)	PUMP HEAD (FT.)	CALC. PUMP SUCTION HEAD (FT.) HEAD (FT.)	FLOW (GPM)	FLUID	SYSTEM	TYPE	MODEL	MAKE	TAG
))))))		_						

DOMESTIC WATER I	WT-I GRAY WATER FILTER (BY OTHERS) TOW VALVED AND CAPPED. SEE BOILER DHW COIL NOTES ON INPLUMBING FLOW SCHEMATIC	<u> </u>	DHW TO DCWM-1 LAV-I BT-I BT-I BT-I CAPPED. SEE NOTES UTILITY Q2. NO DIPS OR LOW TO DCWM-2 WAS DOWN TO DCWM-2 WAS DCW TO DCW TO DCWM-2 WAS DCW TO DCWM-2 WAS DCW TO DCW TO DCWM-2 WAS DCW TO DCW TO DC	LAV-3
	DRAIN VALVE 1" DCW TO WELL TANK DRAIN VALVE AT LOW POINT OF DW ENTRANCE	大" DHW 基 业 业 业 业 业 业 和 和 DRAIN VALVE	½" DCW TO DCWM-2 DMP-1 BUTTON KS-1 ½" DCW TO DCWM-2	SH-3 WC-3 WC-3 Y" DCW TO DCWM-2

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228

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				1 02/06	REVISION DATE
				3/07 LEED MODS	COMMENTS
					/06/07 LEED

PLUMBING SCHEDULES, FLOW SCHEMATIC, & SPECIFICATIONS GREEN WOODLANDS BARN/HOUSE PROJECT CONSTRUCTION DOCUMENTS 570 DATE: 09/28/06

PROJECT NO: