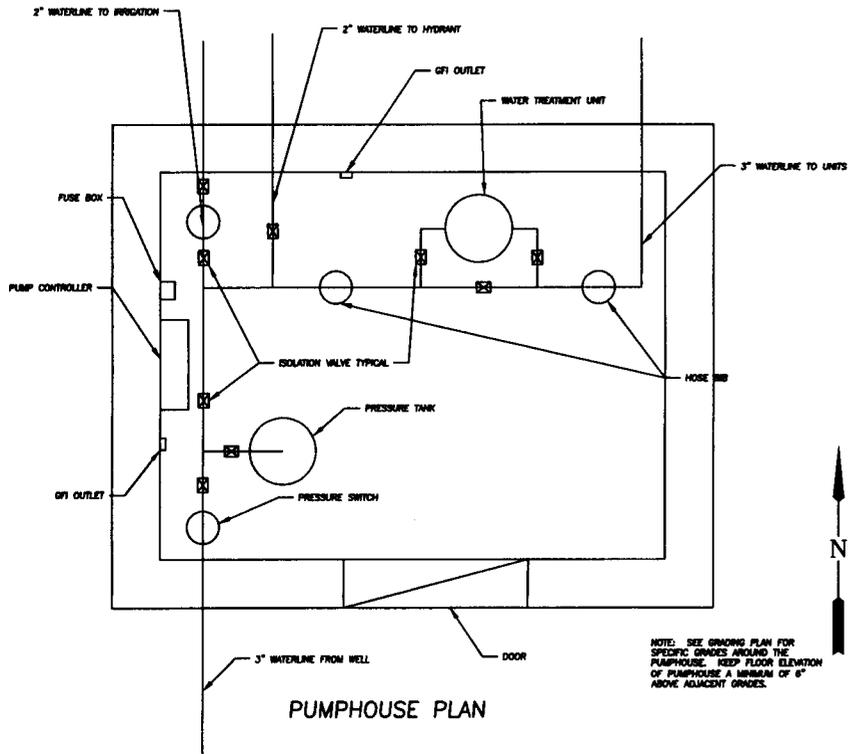


CHALLENGER PRESSURE TANK

1. PUMP SHALL BE SIZED FOR 107 GPM. MINIMUM OPERATING PRESSURE SHALL BE 40 PSI WITH THE SHUTOFF AT 60 PSI. USE A GRUNDFOS IQPUMP1000 INTELLIGENT PUMP CONTROLLER WITH A GRUNDFOS PUMP VARIABLE SPEED DRIVE.
2. PUMP HOUSE SIZE 8' X 10'. MINIMUM INSULATION RATINGS FOR THE PUMP HOUSE SHALL BE R-35 FOR THE CEILING AND R-19 FOR THE WALLS. PUMP HOUSE SHALL HAVE FROST FOOTINGS AND BE HEATED AND HAVE ELECTRICAL LIGHTING. MINIMUM SIZE HEATER SHALL BE 500W, 120V, 1700 BTUH. BUILDING PROVIDED BY DEVELOPER.
3. WELL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MINNESOTA DEPARTMENT OF HEALTH MANDATORY WATER WELL CODE REQUIREMENTS. PERMITS AND WELL LOGS SHALL BE FILED WITH THE MINNESOTA DEPARTMENT OF HEALTH AND THE OWNER.
4. OWNER SHALL PROVIDE CULLIGAN WATER TREATMENT SYSTEM AS REQUIRED AFTER WATER SAMPLES OF NEW WELL ARE OBTAINED.
5. PIPING SHALL BE CPVC SCHEDULE 80 OR COPPER. FITTINGS SHALL BE CPVC 160 PSI OR BRASS.



NOTE: SEE GRADING PLAN FOR SPECIFIC GRADES AROUND THE PUMPHOUSE. KEEP FLOOR ELEVATION OF PUMPHOUSE A MINIMUM OF 6" ABOVE ADJACENT GRADES.

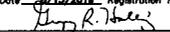
PUMPHOUSE PLAN

ALL WATERMAIN CONSTRUCTION OUTSIDE THE PUMPHOUSE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA, 2018 EDITION. ALL WATERMAIN SHALL BE INSTALLED AT A MINIMUM DEPTH OF 9'. ALL WATERMAIN SHALL BE 2" PE 160PSI PIPE EXCEPT AS NOTED. THE WATER SERVICES SHALL BE 1". WHEREVER THE SEWER MAINS OR SERVICES CROSS THE WATERMAIN LINES, THE PVC SEWER SHALL HAVE NO JOINTS WITHIN 10' OF THE WATER LINES AND BE SCHEDULE 40 PVC. THERE ARE 15 THREE BEDROOM UNITS. THE PROJECTED WATER USE FOR THE DEVELOPMENT IS 45 BEDROOMS TIMES 100 GALLONS PER BEDROOM FOR A DAILY FLOW OF 4,500 GPD. THIS FLOW WOULD BE SPREAD OUT OVER 12 HOURS A DAY WITH A PEAK FLOW PROJECTED AT THIS DAILY FLOW TIMES FOUR OR 375 GALLONS PER HOUR TIMES FOUR = 1500 GALLONS PER HOUR = 25 GPM. IRRIGATION IS NOT INCLUDED. THE FIXTURE COUNT IS 29.5 FOR A 3 BEDROOM UNIT AND THE TOTAL NUMBER OF FIXTURES FOR THE 15 UNITS IS 443. THIS EQUATES TO A DESIGN FLOW OF 107 GPM. THIS NUMBER INCLUDES 15 SPRINKLER HEADS IN A ZONE. IRRIGATION WILL BE CONTROLLED BY THE HOA RATHER THAN INDIVIDUALS SO ONLY A SINGLE ZONE OF 15 HEADS OR LESS WILL BE OPERATED AT A TIME.

THE SPECIFICATIONS FOR THE WELL CONSTRUCTION MUST MEET THE WELL CODE REQUIREMENTS FOR A COMMUNITY PUBLIC WATER SUPPLY WELL; MN RULES 4725. THE WELL MUST MEET THE ADDITIONAL REQUIREMENTS OF SECTION 4725.5850. PLEASE NOTE THAT ISOLATION DISTANCES FROM CERTAIN CONTAMINATION SOURCES MUST BE INCREASED FOR A COMMUNITY PUBLIC WATER SUPPLY WELL. ALL WATERMAIN CONSTRUCTION WITHIN THE PUMPHOUSE MUST MEET MN PLUMBING CODE.

THESE PLANS WILL NEED TO BE REVIEWED AND APPROVED BY THE MINNESOTA DEPARTMENT OF HEALTH PRIOR TO ANY CONSTRUCTION OF THE SANITARY SEWER OR WATER SYSTEM. SEE SEPARATE PLANS FOR THE WATER DISTRIBUTION AND ONSITE SEWER SYSTEM.

FOR REVIEW ONLY
NOT FOR CONSTRUCTION

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Engineer under the laws of the State of Minnesota. Date <u>8/15/2018</u> Registration No. <u>12783</u> 	Issued GRI REVIEW <u>8/15/18</u>	REVIEWED BY GRI	Halling Engineering, Inc. CIVIL ENGINEERS 3727 EAST 255TH STREET WEBSTER MINNESOTA 55088 Phone 952.440.1680 • Fax 952.461.3308	PUMPHOUSE PLAN THE RANGE PEQUOT LAKES, MN SHEET 5 OF 5
	DRAWN BY GRI	PROJECT NO.: 420.01 DRAWING FILE: 42001BASE		