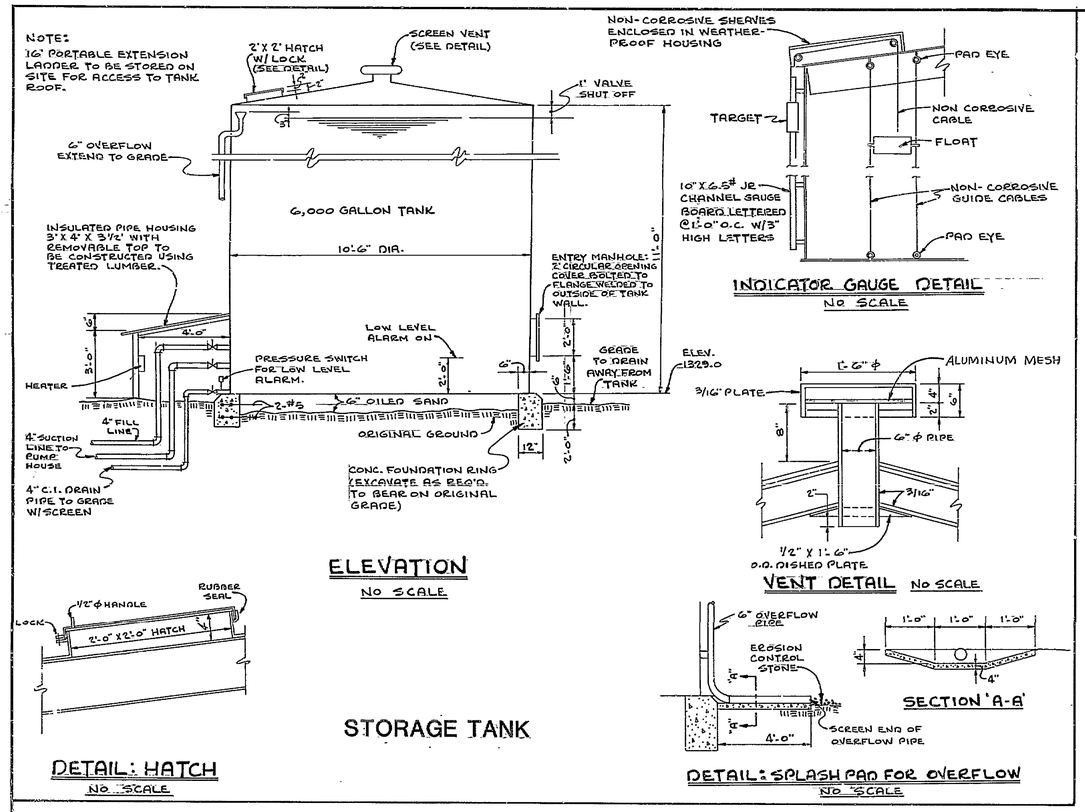



## DESIGN DATA AND SPECIFICATIONS

NOTE: THIS WATER SYSTEM IS A PRESSURE BOOSTER SYSTEM FOR ALL LOTS ABOVE ELEVATION 1300 AND IS TO BE ISOLATED BY CLOSED GATE VALVES (ONE IN SECTION 1 AND ONE IN THE FUTURE SECTION). THE ESTIMATED MAXIMUM STATIC PRESSURE AT ELEVATION 1300 IS 56 PSI. THE ESTIMATED RESIDUAL PRESSURE AT ELEVATION 1300 DURING PERIODS OF NORMAL PEAK DEMAND IS 30 PSI.

1. NUMBER OF UNITS

SECTION 1

| | | |
|---|---|---|
| BLOCK 1 LOTS 16-18 | = | 3 |
| BLOCK 2 LOTS 9-13 | = | 5 |
| | | 8 |
| FUTURE SECTION | = | 22 |
| TOTAL | | 30 |

2. STORAGE TANK

6000 GALLON (10'6" DIAM. x 11' HIGH) GROUND LEVEL STEEL TANK (AWWA STANDARD).
4" INLET AND OUTLET CONNECTIONS.

A. INTERIOR PAINTING

MANUFACTURER - RUST OLEUM CORP.
APPLICATION 2 COATS
PRIMER - ZINC SELF 9334
INTERMEDIATE - 9391
FINISH - LIGHT GREEN 9331
THINNERS - 150 & 160

B. DISINFECTION: WATER CONTAINING 50 PPM CHLORINE SHALL BE PLACED IN THE TANK TO SUCH A DEPTH THAT WHEN THE TANK IS FILLED THE RESULTANT CHLORINE CONCENTRATION SHALL BE NO LESS THAN 2 PPM. THE WATER CONTAINING 50 PPM CHLORINE SHALL BE HELD IN THE TANK FOR 24 HOURS BEFORE THE TANK IS FILLED. THE FULL TANK, IN TURN, SHALL BE ALLOWED TO STAND FOR 24 HOURS AFTER WHICH THE TANK MAY BE PUT INTO SERVICE WITHOUT DRAINING THE WATER USED TO DISINFECT IT. TWO OR MORE SUCCESSIVE SAMPLES, TAKEN AT 24 HOUR INTERVALS, AND ANALYZED BY A CERTIFIED LABORATORY, SHALL INDICATE BACTERIOLOGICALLY SATISFACTORY WATER BEFORE THE FACILITY IS RELEASED FOR USE.

3. PUMPS

JACCUZZI LINE FLOW SUBMERSIBLE MODEL 3S4XP11-S2
II STAGE 3 HP 230 VOLT SINGLE PHASE - 2 REQUIRED.
50 GPM @ 160' TDH. MOTOR SUPPORT SPIDERS TO BE INCLUDED FOR HORIZONTAL INSTALLATION.

4. PRESSURE TANK

525 GALLON HYDRO-PNEUMATIC (AWWA STD.)
THE INTERIOR PAINTING OF THE PRESSURE TANK SHALL BE IN ACCORDANCE WITH PAINT MANUFACTURER'S RECOMMENDATIONS, FACTORY APPLIED. PRIME COAT TO BE MOBIL 78-D-7 VAL-CHEM TANK LINING HIGH BUILD EPOXY. FINISH COAT TO BE MOBIL 78-W-3 VAL-CHEM TANK LINING HIGH BUILD EPOXY. TANK TO BE BLAST-CLEANED BY THE MANUFACTURER BEFORE PAINTING. THE COMBINED DRY THICKNESS OF COATINGS TO BE APPROXIMATELY 10 MILS.

5. CONTROLS

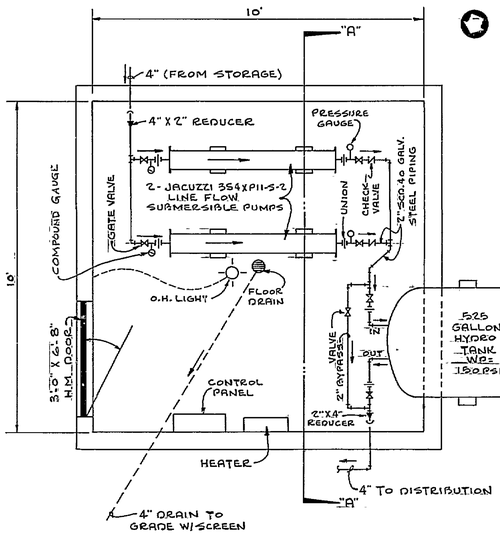
A. STORAGE TANK.
WATER LEVEL TO BE CONTROLLED BY ALTITUDE VALVE ON INLET PIPE. ALTITUDE VALVE TO BE 4" ROSS MODEL 30 AWR, INLET PRESSURE = 14-45 PSI, OUTLET PRESSURE = 5 PSI. VALVE TO BE INSTALLED IN FOUR FOOT DIAMETER MANHOLE WITH FRAME AND COVER. FLOOR DRAIN TO BE INCLUDED WITH FOUR INCH PIPE DRAINING TO GRADE. PRESSURE SWITCH CONTROL TO BE MOUNTED ON DRAIN PIPE FOR LOW LEVEL ALARM.

B. PUMPS TO BE CONTROLLED BY HEAVY DUTY PRESSURE SWITCHES MOUNTED ON DISCHARGE PIPING OF HYDRO-PNEUMATIC TANK, SET TO OPERATE THE PUMPS ALTERNATELY AT 50/70 PSI AND BOTH PUMPS SIMULTANEOUSLY WHEN PRESSURE DROPS BELOW 40 PSI. CONTROLS TO BE WIRED TO CUT OFF PUMPS WHEN STORAGE TANK LOW LEVEL ALARM ACTIVATED.

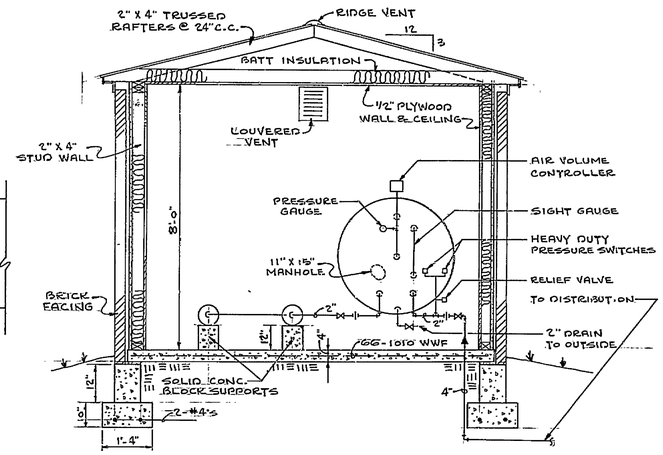
C. AIR VOLUME CONTROLLER ON PRESSURE TANK TO BE AIR RITE MODEL 610.

6. SCREEN FOR OUTLET ENDS OF OVERFLOW AND DRAIN PIPES SHALL BE ½" X ½" MESH, MINIMUM 17 GAUGE, GALVANIZED HARDWARE CLOTH. THE HARDWARE CLOTH SHALL BE CRIMPED AROUND END OF PIPE AND SECURED WITH GALVANIZED STEEL WIRE.

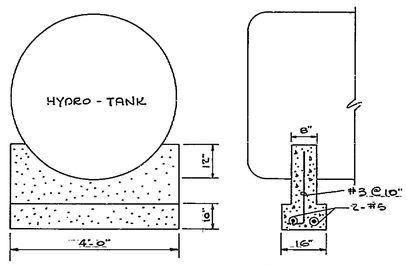
7. DISINFECTION OF DISTRIBUTION SYSTEM SHALL BE IN ACCORDANCE WITH THE CURRENT ROANOKE COUNTY CONSTRUCTION SPECIFICATIONS.




PLAN
NO SCALE




SECTION 'A-A'
NO SCALE




END ELEVATION




PARTIAL SIDE ELEVATION
NOTE: 2 REQUIRED 1 EACH @ 1/4 POINTS

DETAIL TANK SUPPORT
NO SCALE

PUMP HOUSE

COMMONWEALTH OF VIRGINIA
GUY W. BUFORD
No. 01573
PROFESSIONAL ENGINEER

WATER SYSTEM DETAILS
FOR
SECTION No. 1
BRANDERWOOD
ROANOKE COUNTY, VIRGINIA
PROPERTY OF :
LOBO INVESTORS

SCALE : AS SHOWN DATE : 25 MARCH 1985

BUFORD T. LUMSDEN & ASSOCIATES, P.C.
ENGINEERS – SURVEYORS
ROANOKE, VIRGINIA