

### DISINFECTION

## Storage Tanks

- The storage tank shall be cleaned and flushed with potable water from a supply approved by the Department of Health prior to disinfection.
- Disinfection shall not take place until tank sealant is fully cured (10 to 12 days at 73° F/50% RH).
- The water storage tank shall be disinfected in accordance with Chlorination Method 2 of AWWA Standard for the "Disinfection of Water Storage Facilities," ANSI/AWWA C652, latest edition.
- A solution of 200 mg/L available chlorine shall be applied to all interior surfaces using spray equipment. The equipment shall be new or previously used with potable water only The solution shall be applied to inlet, outlet and drain piping such that it will have available chlorine of not less than 10 mg/L when filled with water.
- Allow a minimum of 30 minutes contact time for the solution after which potable water shall be admitted. The drain piping shall be purged of the 10 mg/L chlorinated water and the storage facility shall then be filled to its overflow level. At least two bacteriological samples with no coliform contamination and acceptable aesthetic quality shall be collected at least 24 hours apart, prior to placing the tank in service.

- After pumping equipment is installed, the wells shall be chlorinated by treating the water in the well casing to provide a chlorine residual of approximately 50 mg/L.
- The wells shall be surged at least three times to mix and induce contact with the adjacent aquifer.
- After the chlorinated water has stood in the casing from 12 to 24 hours, the chlorinated water shall be pumped to waste.
- Pumping to waste shall continue 15 minutes after zero chlorine residual samples are obtained. Then the well shall be sampled for bacteriological evaluation.

4" OVERFLOW

45°BEND GCREENED

- The filter tank shall be cleaned and flushed with potable water from a supply approved by the Department of Health prior to disinfection.
- Following placement, the filter media shall be backwashed and prepared for service in accordance with AWWA B100-80.

HATCH

- The filter tank shall be disinfected in accordance with Section 5.2.1 of "Disinfection of Water Treatment Plants, ANSI/AWWA C653. latest edition.
- Inject sufficient chlorine into the backwash water to produce a free chlorine residual of at least 25 mg/L throughout the filter. The chlorinated water shall be allowed to stand in the filter for at least 12 hours. At the end of the contact time, the chlorinated water shall be tested to determine the free residual. If the free residual is less than 15 mg/L, the chlorination process shall be repeated. After satisfactory chlorine residuals are obtained, the filter shall be backwashed thoroughly to remove the highly chlorinated water.
- At least two bacteriological samples not less than 30 minutes apart shall be tested for the presence of coliform. If none of the samples show the presence of coliform, the unit may be placed in

# Water Pipe

Disinfection is to be in accordance with Section 5.1 AWWA C651 Application of 5 gram calcium hypochlorite tablet per joint of pipe and 0.5 ounce of hypochlorite granules per 500 feet of pipe; filling pipe at water flow rate of not greater than 1 ft/s. elimination of air pockets and 24 hour contact period; collection and testing of 2 water samples (Bacteriological Testing) at 24 hour intervals and a maximum spacing along waterline of 2,000 feet. All testing must be satisfactory or total testing repeated.

# STORAGE TANKS

### Excavation

All excavations under the tank for piping shall be backfilled with clean material in 6 inch layers and compacted to 95% density, standard proctor.

## Painting

- 1. The exterior of the tanks shall be sandblasted and primed with red chromate primer.
- The interior of the contact and hydropneumatic tanks shall be sandblasted and lined with Valspar 78-W-3 4-8 mils D.F.T. The interior of the storage tank shall be sandblasted and lined with NO-OX-ID "A" Special, to a thickness of 20-30 mils and shall be NSF approved.

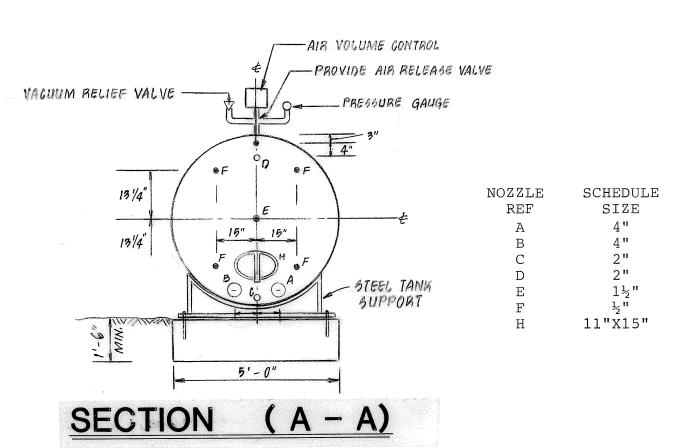
A portable ladder will be provided to enable access to the hatch on the storage tank.

HANDLE-

HASP & -

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# BACKWASH HOLDING TANKS

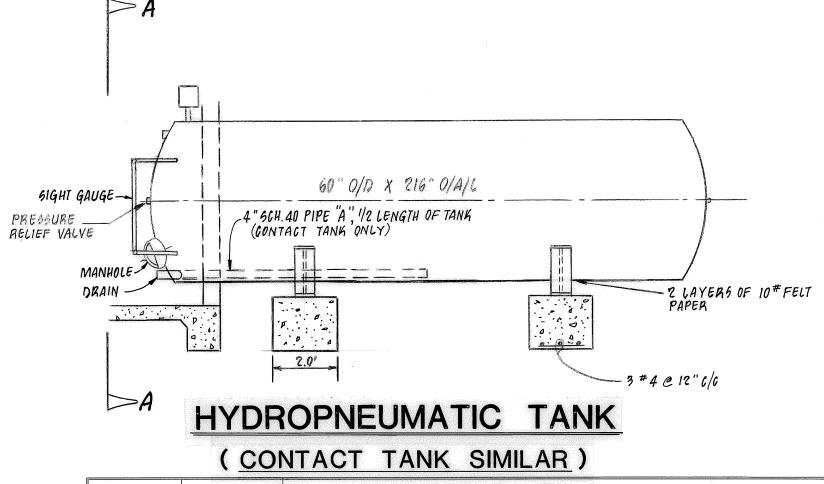


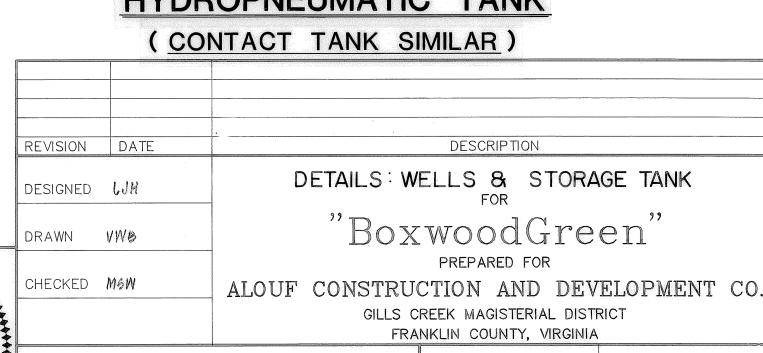
LUMSDEN ASSOCIATES,

ENGINEERS-SURVEYORS-PLANNERS

ROANOKE, VIRGINIA

10-26-94





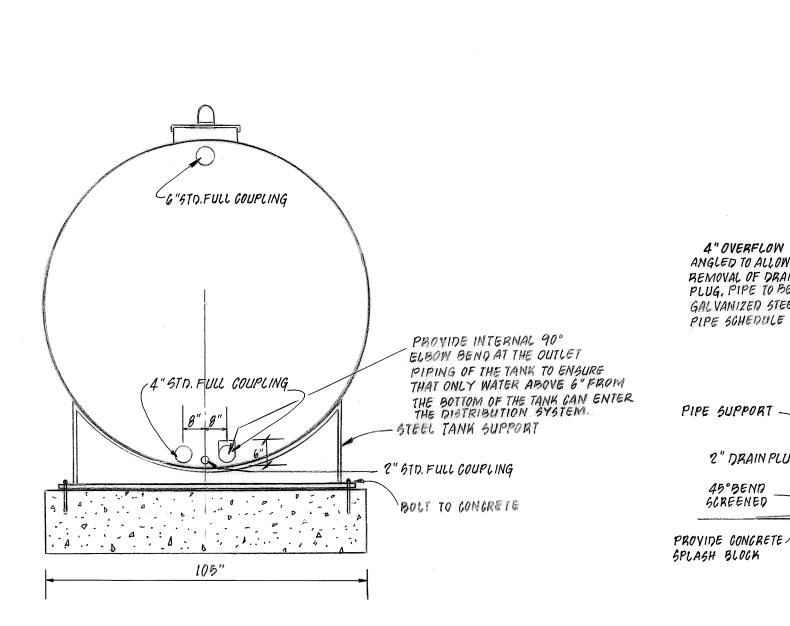
SCALE: NONE

DATE: 1 FEB. 1995

COMM: 94-48

SHEET 3 of 4

STORAGE TANK



SECTION THROUGH WELLS 3 & 5

SECTION B - B

