

**PLAN - CIP EQUIPMENT**  
 SCALE: 3/8" = 1'-0"  
 1 0 1 3 5 7  
 SCALE: 3/8" = 1'

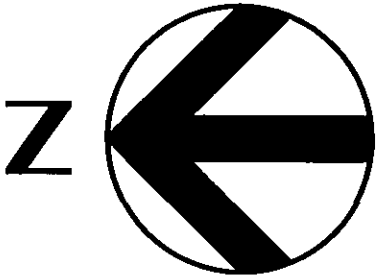
**GENERAL NOTES:**

- A. GRAY-SCALE EQUIPMENT PROVIDED BY US FILTER-MEMCOR INSTALLED BY THE GENERAL CONTRACTOR.
- B. COORINATE EQUIPMENT DELIVERY WITH US FILTER-MEMCOR AND CITY ENGINEER.

**SPECIFIC NOTES:**

- 1 HOLD DOWN LUGS, 4 LUGS PER TANK @ 90°.
- 2 LADDER AND SAFETY CAGE.
- 3 CONCRETE EQUIPMENT PAD. SEE DETAIL 4, SHEET P-23
- 4 24" FLANGED MANWAY.
- 5 CYLINDER ACTUATED BUTTERFLY VALVE
- 6 MANUAL BUTTERFLY / WAFER VALVE
- 7 CHECK VALVE
- 8 8 INCH SPOOL PIECE VENT.
- 9 STRAINER
- 10 PROVIDED BY US FILTER-MEMCOR, INSTALLED BY GENERAL CONTRACTOR
- 11 SOLENOID ACTUATED GATE VALVE
- 12 TO TANK T-301
- 13 TO TANK T-302
- 14 DOSING PUMP SET ON STAND PROVIDED BY US FILTER-MEMCOR
- 15 REDUCER
- 16 PIPE SUPPORT, SEE DETAIL 6 ON SHEET P-23.
- 17 TO WASTE NEUTRALIZATION TANK SEE SITE PIPING PLAN.
- 18 CIP CHEMICAL FEED FITTING
- 19 CHLORINE RESIDUAL ANALYZER. MOUNT TO WALL ROUTE DRAINAGE TO FLOOR DRAIN. COORDINATE FINAL LOCATION WITH FIELD ENGINEER.
- 20 PROVIDED BY US FILTER-MEMCOR, INSTALLED BY CONTRACTOR.
- 21 ROUTE AND SECURE DOSING PUMP AIR TUBING TO WALL
- 22 ROUTE AND SECURE CONTROL AIR TUBING TO VALVES ALONG FLOOR, PIPES AND/OR TRENCH
- 23 PROVIDE SPOOL PIECE EXTENDING 6" ABOVE BOTTOM OF TRENCH
- 24 6" VENT
- 25 3" FW FROM MAG METER / CHEMICAL INJECTION VAULT, SEE SITE PIPING PLAN FOR CONTINUATION
- 26 FLOOR PENETRATION SEE DETAIL 8 SHEET P-22.
- 27 WALL PENETRATION SEE DETAIL 7 SHEET P-22.
- 28 1 1/2" FLUORIDE TO CHEMICAL INJECTION VAULT. SEE SITE PIPING PLAN FOR CONTINUATION. LINE TO PENETRATE WALL AT 4" A.F.F.
- 29 1 1/2" CHLORINE SOLUTION TO CHEMICAL INJECTION VAULT. SEE SITE PIPING PLAN FOR CONTINUATION. LINE TO PENETRATE WALL AT 4" A.F.F.

**RECORD DRAWING**  
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0	8/27/2001				ISSUED FOR CONSTRUCTION
REV.	DATE	BY	APP.		DESCRIPTION

**RECORD DRAWING**  
**APRIL 28, 2003**

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IN ASSOCIATION WITH  
**HDR**  
 HDR Engineering, Inc.

DESIGNED ADE	DRAWN JMB	PROJECT CRYSTAL SPRING WATER TREATMENT PLANT FOR THE CITY OF ROANOKE, VIRGINIA
CHECKED PJD		REFERENCE PROCESS
COMM. NO.		TITLE PLAN - CIP EQUIPMENT
CADD NO.		DWG. NO. P-12
DATE AUGUST 27, 2001		SHEET NO.
		REV.