



1. MOTOR STARTERS FOR TWO 60 HP AIR COMPRESSOR UNITS ARE INTEGRAL TO THE UNIT, WHICH SHALL BE FURNISHED BY MEMBRANE FILTRATION CONTRACTOR. PROVIDE 3Ø, 600V, 100A, 3P, NON-FUSIBLE DISCONNECT SWITCH, AND ALL POWER AND CONTROL CONDUCTORS AND CONDUIT FOR EACH AIR COMPRESSOR UNIT.
2. PROVIDE A REMOTE MONITORING PANEL IN THE CONTROL ROOM FOR MONITORING OF THE STATUS AND FUNCTIONS OF THE SYSTEM TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS) EQUIPMENT.
3. PROVIDE A CONTROL PANEL FOR EACH STRAINER MOTOR, \*801 AND \*802, WITH INTEGRAL MOTOR STARTER. PROVIDE ALL CONDUCTORS AND CONDUIT TO EACH CONTROL PANEL AS SHOWN.
4. MEMBRANE FILTRATION CONTRACTOR SHALL FURNISH A CIP SYSTEM PNEUMATIC CONTROL PANEL. INSTALL CONTROL PANEL AND PROVIDE ALL CONDUCTORS AND CONDUIT TO CIP PNEUMATIC CONTROL PANEL AS SHOWN.
5. PROVIDE COMBINATION MOTOR STARTERS, AS SHOWN, FOR PUMPS \*P601 AND \*P602. SEE DRAWING E-9 FOR LOCATION OF PUMPS.
6. MEMBRANE FILTRATION CONTRACTOR SHALL FURNISH TANK HEATERS FOR CAUSTIC AND ACID TANKS, AND A 3Ø, 600V, 200A, 6P FUSIBLE DISCONNECT SWITCH, FUSED AT 60A. INSTALL TANK HEATERS AND DISCONNECT SWITCH, AND PROVIDE ALL CONDUCTORS AND CONDUIT, AS SHOWN, INCLUDING CONDUCTORS AND CONDUIT BETWEEN THE FUSIBLE DISCONNECT SWITCH AND THE HEATING ELEMENTS.
7. PROVIDE A CONTROL PANEL FOR PUMPS \*P501 AND \*P502, WITH INTEGRAL MOTOR STARTERS. PROVIDE ALL CONDUCTORS AND CONDUIT, AS SHOWN. SEE DRAWING E-9 FOR LOCATION OF PUMPS.
8. SEE 'CONTROL DIAGRAM - CHLORINE ROOM LIGHTING, EXHAUST FAN EF-4 AND DAMPERS' ON DRAWING E-8 FOR OPERATION AND CONNECTIONS.
9. PROVIDE A PLC MONITORING SYSTEM. PROVIDE DATA SWITCH IN FILTRATION CONTRACTOR-PROVIDED PLC ENCLOSURE, IN CONTROL ROOM, AS SHOWN.
10. PROVIDE A SINGLE PLC MONITORING SYSTEM DATA PORT, AND MONITORING COMPUTER. CONDUIT DATA PORT SHALL BE CONSTRUCTED USING CATEGORY 5e RATED CABLE AND ACCESSORIES. SEE NOTE 9, THIS DRAWING, FOR LOCATION OF PLC MONITORING SYSTEM DATA SWITCH.
11. PROVIDE THREE pH SENSOR/TRANSMITTER UNITS, FOR EFFLUENT, ACID CONTROL, AND CAUSTIC CONTROL. EACH pH TRANSMITTER SHALL BE FOXBORO, MODEL 873-PH, WITH 2 ALARM DRY CONTACTS, 115 VØ POWERED. THE pH SENSOR SHALL BE FOXBORO, MODEL 871A. PROVIDE ALL POWER AND INSTRUMENTATION CONDUCTORS AND CONDUIT. COORDINATE INSTRUMENTATION WITH MEMBRANE FILTRATION CONTRACTOR. SEE DRAWING E-9 FOR LOCATION OF WASTE NEUTRALIZATION pH SENSOR.
12. PROVIDE TWO TURBIDITY METERS, FOR INFLUENT AND EFFLUENT. THE TURBIDITY METER SHALL BE HACH, MODEL 1720D, WITH TWO ALARM CONTACTS, 115 VØ POWERED. PROVIDE ALL POWER AND INSTRUMENTATION CONDUCTORS AND CONDUIT. COORDINATE INSTRUMENTATION WITH MEMBRANE FILTRATION CONTRACTOR, AS WELL AS EXACT LOCATION OF TURBIDITY METERS.
13. ADDED 2-HACH AQUATRND INTERFACE MODULES.



5' 0 5'

$\frac{1}{4}'' = 1'-0''$

RECORD DRAWING

DATE: MAY 1, 2003

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|                           |                        |                                                                                                      |                  |  |
|---------------------------|------------------------|------------------------------------------------------------------------------------------------------|------------------|--|
| DESIGNED<br>SAB           | DRAWN<br>HDB           | PROJECT<br><b>CRYSTAL SPRING<br/>WATER TREATMENT PLANT<br/>FOR THE<br/>CITY OF ROANOKE, VIRGINIA</b> |                  |  |
| CHECKED<br>PLG            | REVIEWED<br>MKJ        |                                                                                                      |                  |  |
| COMM. NO.<br>200171.01    |                        |                                                                                                      |                  |  |
| CADD NO.<br>200171e10.dgn |                        | TITLE<br><b>MAIN FLOOR PLAN - POWER</b>                                                              |                  |  |
| DATE<br>AUG 26, 2001      | DWG. NO.<br><b>E-7</b> | SHEET NO.<br><b>68 OF 72</b>                                                                         | REV.<br><b>0</b> |  |