



ABBREVIATIONS	
TPS	TWISTED PAIR SHIELDED
PA	ONE PA/INTERCOM CABLE
2PA	TWO PA/INTERCOM CABLES
FSS	FUSED SAFETY SWITCH
NFSS	NON-FUSED SAFETY SWITCH
SST	STAINLESS STEEL
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
RVSS	REDUCED VOLTAGE SOLID STATE
VFD	VARIABLE FREQUENCY DRIVE
L_O_R	LOCAL_OFF_REMOTE
H_O_A	HAND_OFF_AUTO
MOL	MOTOR OPERATED LOUVER
W.T.	WALK THRU
PCC	POINT OF COMMON COUPLING
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLC-R	REMOTE RACK (FOR PLC)
SP. C.	SPARE CONDUIT
GCP	GRINDER CONTROL PANEL
FCFPCP	FERRIC CHLORIDE FEED PUMP CONTROL PANEL
SHFPCP	SODIUM HYPOCHLORITE FEED PUMP CONTROL PANEL
SBFPCP	SODIUM BISULFITE FEED PUMP CONTROL PANEL
RTPCP	RECIRCULATION TRANSFER PUMP CONTROL PANEL
PBU	POLYMER BLENDING UNIT
LCS	LOCAL CONTROL STATION
TTS	TWISTED TRIAD SHIELDED
ATT	AUTO-TRANSFORMER TEMPERATURE SWITCH
LO	LOCK-OUT

EQUIPMENT/DEVICE LOCATION SYMBOLS

*	LOCATED AT MCC, COMBINATION STARTER, OR BYPASS STARTER
△	LOCATED IN FIELD
○	NOT USED
○ ₂	LOCATED AT EFFLUENT PUMP STATION WETWELL LEVEL RELAY PANEL
○ ₃	LOCATED AT FERRIC CHLORIDE TANK CONTROL PANEL
○ ₄	LOCATED AT HYPOCHLORITE TANK CONTROL PANEL
○ ₅	LOCATED AT SODIUM BISULFITE TANK CONTROL PANEL
□	LOCATED AT VFD

MISC PLAN VIEW SYMBOLS

ⓔ	EQUIPMENT CONNECTION
⊗	GROUND ROD
Ⓢ	CONCRETE ENCASED DUCT BANK IDENTIFIER. # DENOTES NUMBER. SEE DUCT BANK SCHEDULE.
Ⓢ	CONDUIT AND WIRE (SEE LEGEND)
□	INSTRUMENT TRANSMITTER

COMMUNICATIONS

▽	TELEPHONE OR NETWORK DROP
▽	PAGER RECEPTACLE
▼	HORN/LIGHT DEVICE

GENERAL NOTES:

- UNLESS SPECIFICALLY NOTED OTHERWISE, ALL UNDERGROUND CONCRETE ENCASED ELECTRICAL CONDUITS SHALL BE PER STANDARD DETAIL 1611801.
- THE INSTALLATION OF ALL CONCRETE ENCASED ELECTRICAL CONDUITS SHALL COMPLY WITH ACI 318, SECTION 6.3. CONTRACTOR SHALL SUPPLY EXPANSION JOINT FITTINGS AS REQUIRED FOR THERMAL EXPANSION AND DEFLECTION.
- BOND ALL NEW CONCRETE ENCASED GROUND CONDUCTORS TO EXISTING GROUND CONDUCTORS IN ALL MANHOLES, PULL BOXES, CABLE TRAYS, AND SIMILAR LOCATIONS WHERE APPLICABLE.
- UNLESS OTHERWISE SPECIFIED OR NOTED, ALL WALL MOUNTED ELECTRICAL PANELS, ENCLOSURES, AND SIMILAR EQUIPMENT SHALL BE MOUNTED 6'-6" (MAX) FROM THE TOP OF THE PANEL TO FINISHED FLOOR OR GRADE.
- UNLESS OTHERWISE NOTED, ALL LIGHTING SWITCHES, CONTROL SWITCHES, AND SIMILAR EQUIPMENT SHALL BE MOUNTED WITH THEIR CENTERLINE APPROXIMATELY 4'-0" ABOVE FINISHED FLOOR, SLAB, OR GRADE. THERMOSTATS SHALL BE MOUNTED 4'-4" ABOVE FINISHED FLOOR.
- A SEPARATE EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH CIRCUIT (SEPARATE CONDUCTOR IN THE CONDUIT). THE CONDUCTOR SHALL BE TERMINATED AT THE PROPER DEVICE, TERMINAL OR LUG AT THE POWER SOURCE (MCC GROUND BUS, PANELBOARD GROUND BUS, ETC.). GROUND CONDUCTOR SIZE SHALL BE PER THE LATEST EDITION OF THE NEC.
- ELECTRICAL SYSTEMS INSTALLED IN HAZARDOUS LOCATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 5, ART. 500 OF THE LATEST EDITION OF THE NEC. CONTRACTOR SHALL SEAL ALL CONDUITS LEAVING HAZARDOUS AREA. WALL AND FLOOR OPENINGS SHALL BE SEALED WITH FIREPROOF COMPOUND.
- ALL EQUIPMENT LOCATED IN HAZARDOUS AREAS SHALL BE SUITABLE FOR THE CLASS, DIVISION, AND GROUP RATING OF THE LOCATION.
- UNLESS SPECIFICALLY NOTED OTHERWISE, EXISTING PAVEMENT SHALL BE SAW CUT AND REMOVED TO ALLOW FOR THE INSTALLATION OF NEW ELECTRICAL DUCTBANKS. AFTER INSTALLATION, REPLACE PAVEMENT WITH NEW TO MATCH ORIGINAL CONDITIONS.

				DESIGNED	BRL
				DRAWN	BRL
				CHECKED	
	RECORD DRAWINGS	MAR 2008	RLT	PROJ. ENGR.	RLT
	CONSTRUCTION	MAR 2004	RLT		
	REGULATORY APPROVAL	NOV 2003	RLT		
	PRELIMINARY DESIGN	NOV 2002	RLT		
NO.	ISSUED FOR	DATE	BY	APPROVED	

THIS DOCUMENT ORIGINALLY ISSUED FOR CONSTRUCTION AND SEALED BY ROBERT S. DIFIORE, SEAL NO. 22769

RECORD DRAWING

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CITY OF ROANOKE
VIRGINIA
REGIONAL WATER POLLUTION CONTROL PLANT
WET WEATHER IMPROVEMENTS

ELECTRICAL
LEGEND AND GENERAL NOTES

THE SCALE BAR SHOWN BELOW MEASURES ONE INCH LONG ON THE ORIGINAL DRAWING.	DATE JULY 2003	H & S JOB NUMBER 30788A
	CONTRACT NUMBER A	DRAWING NUMBER E1