

10/17/2014 10:49:25 AM - P:\IER11740\200-11740-10003\CAD\SHEETFILES\TREATMENT PLANT\WTP-E-0001 ELECTRICAL LEGEND.DWG - CALZARETTA, TIMOTHY

BACKGROUND PLAN AND ONE LINE SYMBOLS

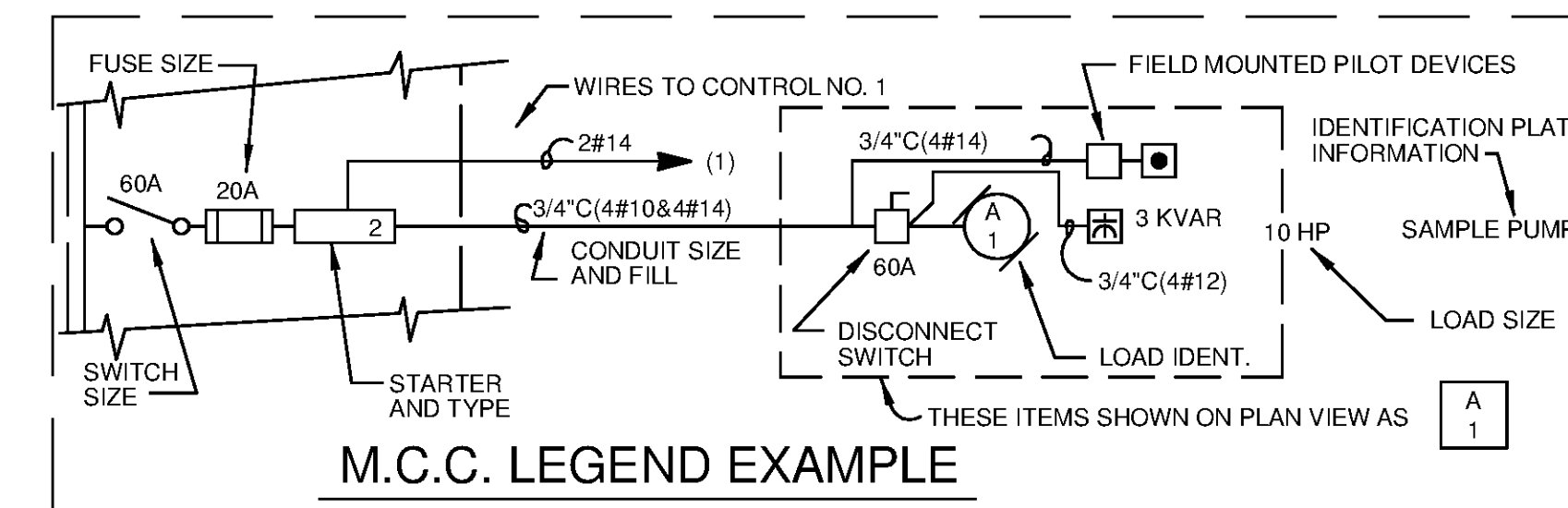
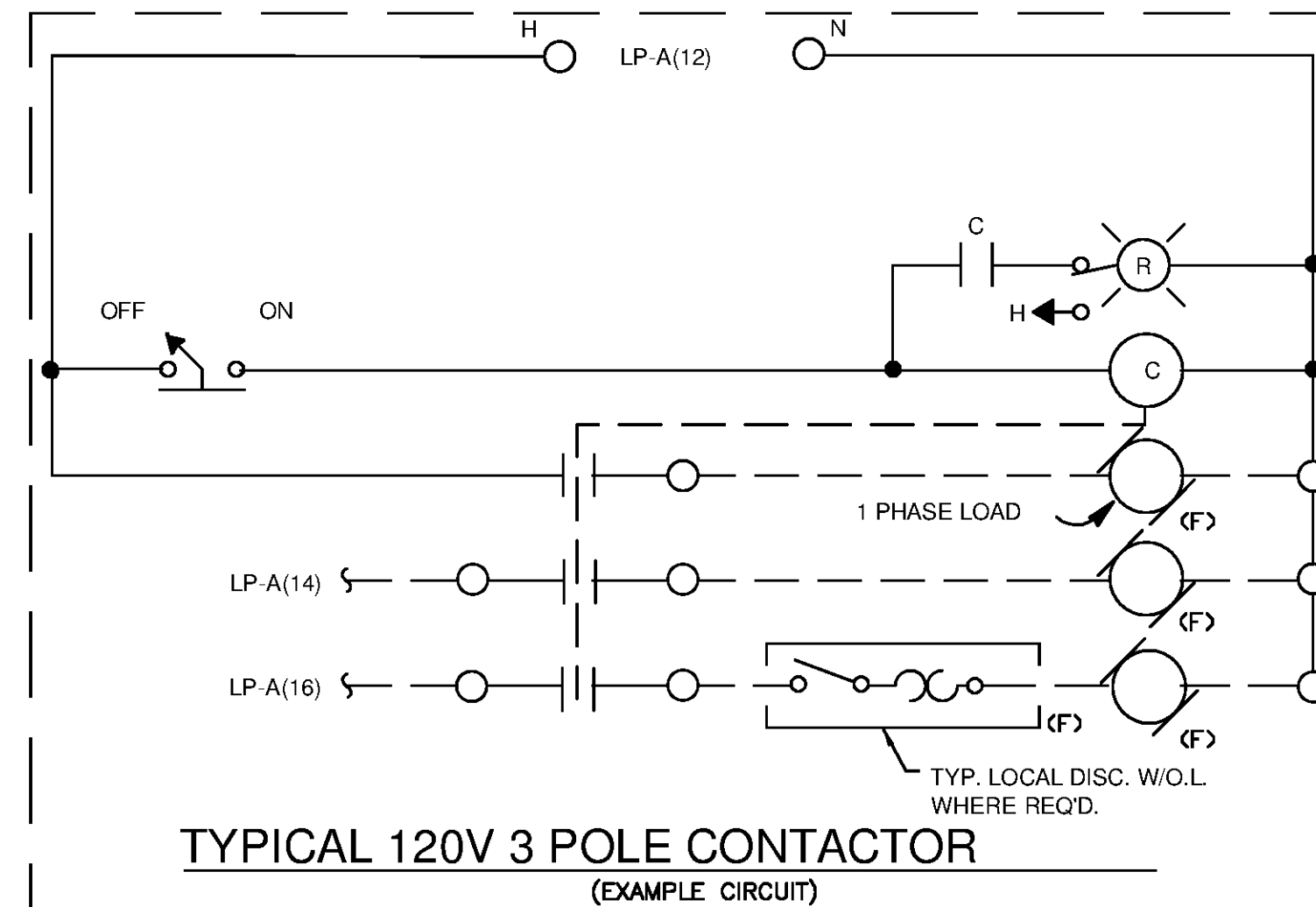
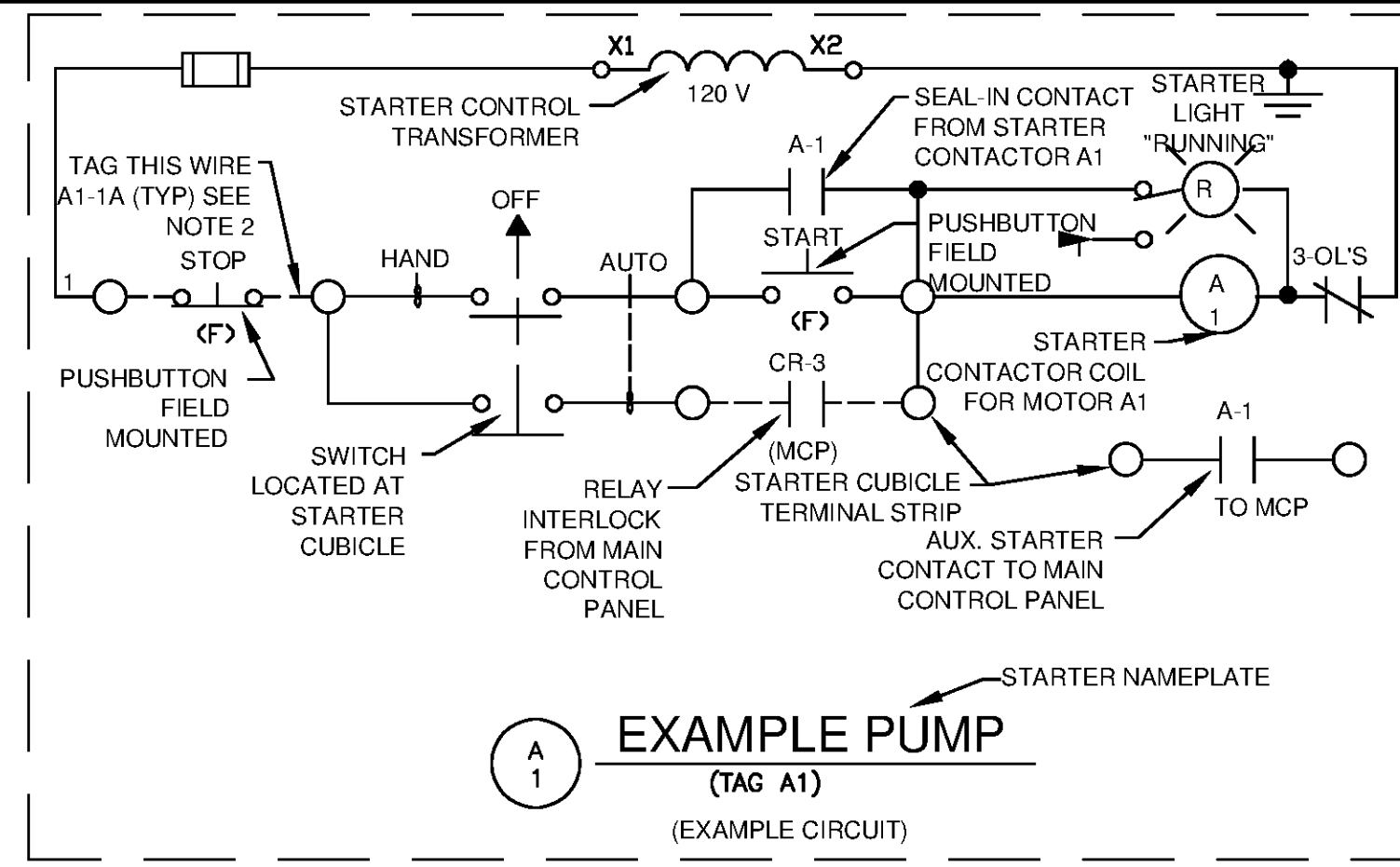
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CONTROL SWITCH (SEL. OR P.B.) SEE CIRCUITS FOR SPECIFIC TYPE		LOW VOLTAGE DISCONNECT SWITCH
	SEE CIRCUITS FOR SPECIFIC TYPE FLOAT SWITCH - FLOW SWITCH, FIRE ALARM PULL STATION		LOW VOLTAGE FUSE (BELOW 600V)
	TEMPERATURE - HUMIDISTAT SWITCH (SUBSCRIPT = NO. OF STAGES)		ALL STARTERS SHALL BE FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE INDICATED (FVR) FULL VOLTAGE REVERSING (RV) REDUCED VOLTAGE (2S,2W) TWO SPEED, TWO WINDING
	LIMIT - PRESSURE - VACUUM SWITCH		600V, 3 POLE MOLDED CASE CIRCUIT BREAKER, FRAME & RATING AS SHOWN
	ELECTRICAL OR MECHANICAL ALTERNATOR (SEE WIRING)		SINGLE PHASE, FRACTIONAL HP MOTOR TO LOCATION INDICATED (SEE GEN. NOTE 4)
	OVERLOAD SWITCH OR DEVICE		THREE PHASE LOAD WITH IDENTIFICATION AT MOTOR CONTROL CENTER OR SWITCHBOARD
	TERMINAL BOX		HIGH VOLTAGE FUSE (ABOVE 600 V)
	SOLENOID VALVE		TAG NO. (BALLOON) FOR DEVICE INDICATED
	PHOTOCELL LINE VOLTAGE		FOR POWER (SEE GEN. NOTE 4) 3/4" (2/C#18 SHLD.) CONDUIT AND WIRE RUN FROM DEVICE INDICATED TO LOCATION INDICATED
	ITEM NO. INTERCOM EQUIPMENT		CAPACITOR, 3 PHASE, SIZE AS INDICATED
	INTERCOMMUNICATION SYSTEM AMPLIFIER - WALL STATION - LINE BALANCE		DISCONNECT SWITCH (F = FUSED (C) = CIRCUIT BREAKER, POLE QUANTITY, RATING AND FUSING AS INDICATED)
	INTERCOMMUNICATION DESK SET		MAGNETIC STARTER (BACKGROUND DRAWINGS ONLY)
	INTERCOM. SPEAKER (CEILING LAY-IN)		COMBINATION MAGNETIC STARTER FUSED UNLESS NOTED (CIRCUIT BREAKER)
	TELEPHONE OUTLET OR JUNCTION BOX		COMBINATION LIGHTING CONTACTOR WITH HAND OFF-AUTO SWITCH
	WELDING RECEPTACLE - NEMA L9-50R 600V, 2P, 3W, SIMPLEX		MANUAL STARTER (R) = REVERSING, (M) = DIVISION 23 PROVIDED INTERLOCK AND DISCONNECT
	INTERCOM HANDSET - SURFACE MOUNTED WITH REMOTE SPEAKER AMPLIFIER		CONTROL PANEL
	INTERCOM VOLUME CONTROL		TEMPERATURE CONTROL PANEL
	INTERCOM SPEAKER - SURFACE MOUNTED		UNIT HEATER, 1/8 HORSEPOWER
	INTERCOM HANDSET - FLUSH MOUNTED WITH REMOTE SPEAKER AMPLIFIER		600 VOLT FEEDER BUS DUCT (AMPERAGE AS INDICATED)
	AS NOTED (LIGHTING PANEL, CONTROL PANEL DISTRIBUTION PANEL ETC.) WALL MOUNTED		LIGHTNING ARRESTOR
	JUNCTION BOX		LOW VOLTAGE HOME RUNS 120/208 V (SEE GEN. NOTE 4)
	HEATER		WATERTIGHT
	HEATER		WATERTIGHT AND CORROSION PROOF
	TRANSFORMER		EXPLOSION PROOF - CLASS I, DIVISION I, GROUP D
	CONDUIT WITH CONDUIT SEAL FITTING		EXPLOSION PROOF - CLASS II, DIVISION 1
	CONDUIT EXPOSED		KEYLOCK
	CONDUIT CONCEALED		SMOKE DETECTOR
	DIRECT BURIED CONDUIT		LIGHT FIXTURE
	DIRECT BURIED CABLE		LIGHT FIXTURE BATTERY BACK-UP
	OVERHEAD LINE		LIGHT FIXTURE
	UNDERGROUND DUCT BANK		EXIT LIGHT
	CONCRETE ENCASED DUCT BANK, WITH CABLE LOCATIONS AND SPARE DUCTS AS INDICATED ON DRAWINGS		EMERGENCY BATTERY PACK/EXIT
	DUCT BANK CONDUIT WITH 2" 3-CELL MAXCELL FABRIC INNERDUCT		TELEPHONE / DATA JACK
	CABLE REEL		GROUND FRAME TO REBAR
	COMMUNICATION HANDHOLE		AIR TERMINAL / GROUND ROD
	ELECTRICAL HANDHOLE		
	POWER FACTOR CORRECTION CAPACITOR		

CONTROL CIRCUIT & PILOT DEVICE LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	PRESS. ACTUATED SWITCH		SELECTOR SWITCH OPERATOR WITH FUNCTION SHOWN
	FLOAT ACTUATED SWITCH		MOMENTARY PUSHBUTTON OPERATOR NORMALLY OPEN
	FLOW ACTUATED SWITCH		MOMENTARY PUSHBUTTON OPERATOR-NORMALLY CLOSED
	TEMP. ACTUATED SWITCH		PUSHBUTTON OPERATOR WITH MUSHROOM HEAD
	LIMIT SWITCH-NORMALLY OPEN		FIELD LOCATED STOP BUTTON
	LIMIT SWITCH-NORMALLY CLOSED		MAINTAINED PUSH-PULL OPERATOR
	LIMIT SWITCH-NORMALLY CLOSED-HELD OPEN		MAINTAINED STOP-START PUSHBUTTON OPERATOR
	LIMIT SWITCH-NORMALLY OPEN-HELD CLOSED		SOLENOID OR CLUTCH
	LATCHING CABLE SWITCH		PUSH-TO-TEST INDICATING LIGHT
	TIME-DELAY FUSE		MAINTAINED STOP-MOMENTARY START PUSHBUTTON (JOG)
	CONTROL RELAY COIL		ZERO SPEED OR ANTI-PLUGGING SWITCH
	CONTROL RELAY CONTACT-NORMALLY OPEN		LOCAL TERMINALS WITH EXTERNAL WIRING
	CONTROL RELAY CONTACT-NORMALLY CLOSED		ELAPSED TIME INDICATOR
	TWO COIL LATCHING RELAY		TIMING RELAY INSTANTANEOUS CONTACTS
	TIMING RELAY COIL		
	TIMED CLOSED CONTACT ON ENERGIZATION		
	TIMED OPEN CONTACT ON ENERGIZATION		
	TIMED CLOSED CONTACT ON DE-ENERGIZATION		
	TIMED OPEN CONTACT ON DE-ENERGIZATION		
	120 VAC TRANSFORMER		

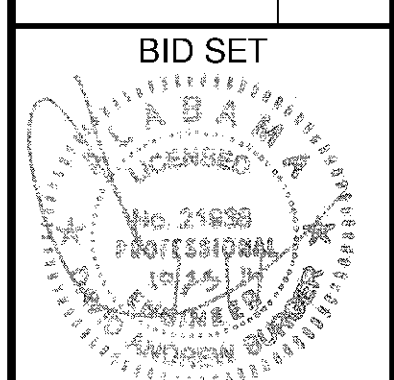
FIRE ALARM AND SECURITY:

FIRE ALARM AND SECURITY SYSTEMS WILL BE PROVIDED BY UTILITIES DESIGNATED CONTRACTOR. THIS CONTRACT IS RESPONSIBLE FOR COORDINATION WITH FIRE ALARM AND SECURITY CONTRACTOR AND FOR PROVIDING COMPLETE RACEWAY SYSTEMS AND DEVICE BOXES. ALL 120 VOLT POWER CIRCUITS ARE TO BE PROVIDED COMPLETE, INCLUDING TERMINATIONS AT BOTH ENDS, BY THIS CONTRACT.



WIRING DEVICE SCHEDULE

SYMBOL	DESCRIPTION	NEMA TYPE
	125V, 2P, SIMPLEX, CLOCK HANGER	1-15 R
	125V, 2P, SIMPLEX, 3W	5-20 R
	125V, 2P, DUPLX, 3W	5-20 R
	125/250V, 3P, SIMPLEX, 3W, RANGE TYPE	10-50 R
	20A, 120/277 V SWITCH	SPST
	20A, 120/277 V SWITCH	2PDT
	20A, 120/277 V SWITCH	3 WAY
	20A, 120/277 V SWITCH	4 WAY
	20A, 120/277 V DIMMER SWITCH	
	20A, 120/277 V WEATHERPROOF SWITCH	
	250V, 2P, SIMPLEX, 3W, 50A	6-50R
	125V, 2P, MULTI-RECEPTACLE	5-15R
	250V, 2P, SIMPLEX, 3W, 20A	6-20R
	600V, 2P, 3W, SIMPLEX WELDING	L9-50R
	208V, 3P, SIMPLEX, 4W, LOCKING	L14-20R
	277V, 2P, DUPLX, 3W	7-15R



MARK	DATE	DESCRIPTION

HUNTSVILLE UTILITIES
SOUTHEAST WATER TREATMENT PLANT
ELECTRICAL LEGEND

Project No.: 200-11740-10003
Designed By: DAB
Drawn By: AJK
Checked By: DAB

E-0001