



**SACRAMENTO AREA
SEWER DISTRICT**

**REMOTE TELEMETRY UNIT (RTU)
BILL OF MATERIALS**

JUNE 21, 2018

Sacramento Area Sewer District
10060 Goethe Road
Sacramento CA 95827

Materials Shown in Standard Plans				
Item Drawing Number	Quantity	Description	Manufacturer	Part Number
1	1	48 inch x 36 inch x 12 inch enclosure	Hoffman or equivalent	C-SD486312
2	1	46 ¹³ / ₆₄ inch x 34 ¹³ / ₆₄ inch back pan	Hoffman or equivalent	C-P4836
3	1	45-inch x 33-inch swing pan	Hoffman or equivalent	A-48P36
4	1	NEMA swing out panel kit	Hoffman or equivalent	A-NADFK
5	1	Padlock handle	Hoffman or equivalent	C-WHPT0
6	1	Receptacle , Simplex	Phoenix Or equivalent	2963860
7	2	Stainless steel hinge pin	Hoffman or equivalent	64232-002
8	1	Fluorescent light	Hoffman or equivalent	A-LF16M18
9	2	Circuit breaker, 15 AMP	Westinghouse	QC1015
11	1	Surge protector	SOLA	STFE200-10N
12	8	2PDT relay, 24 VDC	IDEC	RH2B-UL-24VDC
13	8	Relay base	IDEC	SH2B-05
14	1	Power supply, 24 VDC	Newmar	SPS24-10
15	A/R	Fuse block	Allen Bradley	1492-H6
16	1	Fuse block, end section	Allen Bradley	1492-N37
17	4	End anchor	Allen Bradley	1492-EA35
18	11	Plug in, free hanging (plug), 10 terminals per plug	Phoenix	1757093
19	40	Coding profile (plug key), average of 5 per plug	Phoenix	1734634
20	40	Coding element (header key), average of 5 per header	Phoenix	1734401
21	A/R	Rail, NS15 (perforated)	Phoenix	1401682
22	10	End bracket	Phoenix	1401637

Materials Shown in Standard Plans				
Item Drawing Number	Quantity	Description	Manufacturer	Part Number
23	11	Plug-in connection (header), 10 terminals per header	Phoenix	1765030
24	A/R	Decade marker cards (25 decades per card)	Phoenix	1401213
25	A/R	Terminal Jumper Device (insertion Bridge)	Phoenix	2303132
26	2	Battery	Power Sonic	12180NB
27	1	Battery holder	Custom	----
28	1	SCADAPACK 357	Schneider Electric	TBUP357-1A20AB20
29	1	OIP	Maple Systems	OIT3185
31	1	Cellular Modem	Sierra Wireless	RV50 P/N 1102555
32	1	Cellular Antenna	Antenex	TRAB 806/17103P
34	1	Surge arrester	Altelicon	AL-NFNFB-2
37	1	Station Ready Lamp Assembly	ALLEN BRADLEY	800EP-PM300 Or equal
39	8	Transient Suppression Diodes	Generic	1N4004
40	1	Intrusion switch	Honeywell	1AC2
41	A/R	DIN rail	IBOCO	OMEGA 3A
43	A/R	Busbar (Type NLS-CU 3/10)	Phoenix	0402174
44	A/R	Support block (Type AB/SS)	Phoenix	0404428
45	A/R	Connecting terminal block (Type AK4)	Phoenix	0404017
48	A/R	Terminal Block	Sprecher + Schuh	V7-W4
49	A/R	Terminal Block End Cover	Sprecher + Schuh	V7-ED3
51	1	Electric heater	Hoffman	D-AH4001B
53	A/R	TIME DELAY FUSE	Bussmann	MDL-XXX
54	1	Alarm, sonalert	Mallory	SC628N
56	A/R	Radio	GE-MDS	SD09-MDCESNNSNN

Materials Shown in Standard Plans				
Item Drawing Number	Quantity	Description	Manufacturer	Part Number
57	A/R	Wireway	Panduit	Type "E"
58	A/R	Receptacle with plate and box (GFCI)	Phoenix	5600462
59	1	RFI Filter	Corcom	20VK6
60	1	Thermostat	Hoffman	A-Temno
61	A/R	Lightning Arrestor	Polyphaser	IS-50NX-C2
62	1	OIP Navigation Sign	Custom	
63	1	Station Ready Sign	Custom	

- A/R: As Required
 GFCI: Ground-Fault Circuit Interrupter
 NEMA: National Electrical Manufacturers Association
 OIP: Operator Interface Panel
 PDT: Pole Double-Throw
 RFI: Radio Frequency Interference
 RTU: Remote Telemetry Unit
 VDC: Volts Direct Current

Additional Materials not Shown in Standard Plans		
Description	Quantity	Comments
Ethernet cable	1(2)	One for PLC to cell modem. One for PLC to radio if used
Custom Ethernet cable	1	PLC to OIP
RJ45 to DB9 male	1	For radio if used
LMR195 with male N/SMA connectors	1	Cable to go between cell modem and surge suppressor
Superflex cable with male TNC/N connectors	1	Cable to go between radio and lightning arrestor if used

- PLC: Programmable Logic Controller
 OIP: Operator Interface