

**FAC 8132 ELECTRICAL POWER SWITCHING STATION**

FY24 SUC:	\$0.85 / KV
Source:	Calculated using R.S. Means CostWorks 2023 Qtr 4 component prices

FAC 8132 ELECTRICAL POWER SWITCHING STATION

Release 2023 Qtr 4

Zip Code Prefix 222

Type MR

UM KV

Design Life 45

Average Size 32515.361656

SUC \$0.85

Adjusted Occurences are the occurrences remaining after subtracting Repair/Replacement Overlaps. Overlap reduction removes a repair when it occurs the same year as a replacement.

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost	
Repair switchgear 1200 A mainframe	5	10.00 Ea.	\$18,035.53	\$21,157.52	9.0000	9	7	\$190,417.70	\$148,102.65	
Maintenance and inspection switchgear, mainframe	1	8.00 Ea.	\$546.05	\$684.12	45.0000	45	45	\$30,785.50	\$30,785.50	
Replace switchgear 1200 A mainframe	20	10.00 Ea.	\$42,509.27	\$51,272.99	2.2500	2	2	\$102,545.97	\$102,545.97	
Replace fuse	25	22.00 Ea.	\$10,051.69	\$11,542.71	1.8000	1	1	\$11,542.71	\$11,542.71	
Maintenance and repair rectifier, up to 600 V	2	1.00 Ea.	\$670.93	\$802.03	22.5000	22	22	\$17,644.66	\$17,644.66	
Maintenance and repair contactors and relays	3	8.00 Ea.	\$2,090.76	\$2,582.60	15.0000	15	15	\$38,738.95	\$38,738.95	
Maintenance and inspection contactors and relays	0.5	8.00 Ea.	\$170.39	\$213.47	90.0000	90	90	\$19,212.43	\$19,212.43	
Replace contactor and relays	18	8.00 Ea.	\$7,459.81	\$8,766.10	2.5000	2	2	\$17,532.20	\$17,532.20	
Maintenance and repair of general wiring lightning protection system	1	4.40 M.L.F.	\$481.80	\$593.50	45.0000	45	45	\$26,707.57	\$26,707.57	
Replace lightning protection general wiring system	25	6.00 M.L.F.	\$75,290.15	\$89,252.56	1.8000	1	1	\$89,252.56	\$89,252.56	
Maintenance and repair lightning ground rod	1	4.00 Ea.	\$369.13	\$461.29	45.0000	45	44	\$20,757.88	\$20,296.59	
Replace lightning ground rod	25	8.00 Ea.	\$1,964.84	\$2,429.37	1.8000	1	1	\$2,429.37	\$2,429.37	
Minor chain link fence repairs, per 10 LF	1	12.00 Ea.	\$342.57	\$421.87	45.0000	45	45	\$18,984.27	\$18,984.27	
Replace double swing gates, 6' high, 20' opening	5	4.00 Opng.	\$7,544.61	\$8,688.73	9.0000	9	9	\$78,198.53	\$78,198.53	
Cable inspection overhead service, splice	5	8.20 M.L.F.	\$382.27	\$478.93	9.0000	9	9	\$4,310.39	\$4,310.39	
Replace 400W H.P.S. lamp, pole-mounted fixture	10	12.00 Ea.	\$1,611.92	\$1,909.11	4.5000	4	4	\$7,636.42	\$7,636.42	
Maintenance and repair voice/data outlet	10	4.00 Ea.	\$217.29	\$271.37	4.5000	4	4	\$1,085.47	\$1,085.47	
Replace voice/data outlet	20	4.00 Ea.	\$106.38	\$129.77	2.2500	2	2	\$259.55	\$259.55	
Maintenance and inspection patch panel	0.5	2.00 Ea.	\$182.02	\$228.04	90.0000	90	90	\$20,523.66	\$20,523.66	
Replace patch panel	15	2.00 Ea.	\$1,772.80	\$2,133.61	3.0000	3	3	\$6,400.84	\$6,400.84	
Maintenance and inspection UPS battery	0.17	4.00 Ea.	\$273.03	\$342.06	264.7059	264	264	\$90,304.12	\$90,304.12	
Maintenance and repair transfer switch	5	2.00 Ea.	\$713.85	\$864.20	9.0000	9	9	\$7,777.77	\$7,777.77	
Maintenance and inspection transfer switch	0.5	2.00 Ea.	\$84.69	\$106.10	90.0000	90	90	\$9,549.20	\$9,549.20	
			\$172,871.77	\$205,332.06				MR Subtotal	\$769,821.41	
									MR Per Year	\$17,107.14
									PM Total	\$10,486.74
									Subtotal	\$27,593.88
									Total Per Unit	\$0.85

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Design Life 45

Type PM

Average Size 32515.361656

Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Circuit breaker, high voltage oil, annualized	12.00	10.26	\$178.88	\$711.39	\$0.00	\$890.27	\$1,121.58	\$1,361.83
Switch, selector, high voltage, oil, annualized	8.00	3.60	\$119.25	\$251.56	\$0.00	\$370.82	\$458.21	\$551.57
Switch, automatic transfer, annualized	4.00	21.26	\$55.32	\$1,484.64	\$0.00	\$1,539.96	\$1,990.88	\$2,444.57
Power stablizer, annualized	1.00	0.62	\$9.16	\$39.69	\$0.00	\$48.85	\$61.68	\$74.96
Light, emergency, hardwired system, annualized	1.00	0.25	\$8.98	\$15.77	\$0.00	\$24.75	\$30.38	\$36.46
Light, emergency, dry cell, annually	4.00	0.74	\$156.25	\$46.81	\$0.00	\$203.06	\$232.73	\$270.21
Manual swing gate, annually	1.00	0.87	\$5.15	\$44.78	\$0.00	\$49.93	\$63.88	\$78.09
Manual slide gate, annually	1.00	0.76	\$5.15	\$39.29	\$0.00	\$44.44	\$56.74	\$69.30
Uninterrupted power system, up to 200 KVA, annualized	1.00	22.92	\$217.32	\$1,443.40	\$0.00	\$1,660.72	\$2,115.47	\$2,581.09
Switchboard, with air circuit breaker and tie switch, annualized	2.00	26.72	\$39.51	\$1,855.80	\$0.00	\$1,895.31	\$2,456.00	\$3,018.67
						\$6,728.11	\$8,587.55	\$10,486.74



# **FAC 8132 ELECTRICAL POWER SWITCHING STATION**

## **Modeled Component List**

### **CostWorks Release 2023 Qtr 4**

#### **D50 Electrical**

Switchgear, Mainframe	10.0 Ea.
Lightning Protection System	6.0 M.L.F.
Lightning Ground Rod	8.0 Ea.
UPS Battery, maintenance & inspection	4.0 Ea.
UPS, up to 200 KVA, annualized	1.0 Each

#### **G40 Site Electrical Utilities**

Pole-Mounted Lamp 400W H.P.S.	12.0 Ea.
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Sustainment by Year  
CostWorks Release 2023 Qtr 4

