

FAC 2192 FACILITY ENGINEER MAINTENANCE FACILITY

FY22 SUC: \$11,239.97 / EA
Source: Calculated using R.S. Means CostWorks 2021 Qtr 3
component prices

FAC 2192 FACILITY ENGINEER MAINTENANCE FACILITY

Release 2021 Qtr 3
Zip Code Prefix 222
Type MR

UM EA
Design Life 50
Average Size 1.0

SUC \$11,239.97

Adjusted Occurrences 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 12' x 12' steel roll-up door	10	3.00 Ea.	\$2,027.69	\$2,406.65	5.0000	5	5	\$12,033.25	\$12,033.25
Replace 12' x 12' steel roll-up door	35	3.00 Ea.	\$8,110.75	\$9,626.60	1.4286	1	1	\$9,626.60	\$9,626.60
Debris removal by hand & visual inspection,modified bitum/thermoplastc	1	1.50 M.S.F.	\$56.49	\$68.90	50.0000	50	50	\$3,445.01	\$3,445.01
Minor thermoplastic membrane repairs, 2% of roof area	1	0.15 Sq.	\$48.67	\$57.91	50.0000	50	50	\$2,895.36	\$2,895.36
Membrane replacement-(25% of roof area),modified bitum/thermoplastic	20	4.00 Sq.	\$3,134.27	\$3,742.83	2.5000	2	2	\$7,485.65	\$7,485.65
Total roof replacement, modified bituminous / thermoplastic	25	15.00 Sq.	\$9,505.93	\$11,281.04	2.0000	2	2	\$22,562.09	\$22,562.09
Replace vinyl box gutter, 5" wide	20	160.00 L.F.	\$1,272.79	\$1,546.53	2.5000	2	2	\$3,093.06	\$3,093.06
Replace copper downspouts, 2" x 3", 16 oz.	40	80.00 L.F.	\$1,266.16	\$1,477.28	1.2500	1	1	\$1,477.28	\$1,477.28
Replace skylight and structure, double glazed, 30 to 65 S.F.	40	6.00 S.F.	\$320.34	\$368.22	1.2500	1	1	\$368.22	\$368.22
Repair solid core wood door, interior	11	2.00 Ea.	\$586.90	\$683.13	4.5455	4	4	\$2,732.51	\$2,732.51
Refinish 3'-0" x 7'-0" solid core wood door, interior	4	2.00 Ea.	\$86.73	\$106.50	12.5000	12	12	\$1,277.99	\$1,277.99
Replace faucet washer sink, iron enamel	2	1.00 Ea.	\$12.78	\$15.92	25.0000	25	25	\$397.90	\$397.90
Clean trap sink, iron enamel	3	1.00 Ea.	\$8.57	\$10.72	16.6667	16	16	\$171.50	\$171.50
Replace faucets sink, iron enamel	10	1.00 Ea.	\$181.73	\$218.76	5.0000	5	5	\$1,093.78	\$1,093.78
Unstop sink, iron enamel	2	1.00 Ea.	\$41.82	\$52.30	25.0000	25	25	\$1,307.56	\$1,307.56
Replace sink, P.E.C.I. sink, iron enamel laundry	35	1.00 Ea.	\$973.02	\$1,138.09	1.4286	1	1	\$1,138.09	\$1,138.09
Inspect and clean shower head emergency shower station	3	1.00 Ea.	\$49.39	\$61.77	16.6667	16	16	\$988.34	\$988.34
Replace shower emergency shower station	25	1.00 Ea.	\$941.97	\$1,129.12	2.0000	2	2	\$2,258.23	\$2,258.23
Inspect and clean spray heads, emergency eye wash	3	1.00 Ea.	\$49.39	\$61.77	16.6667	16	16	\$988.34	\$988.34
Replace eye wash station, emergency eye wash	25	1.00 Ea.	\$1,114.34	\$1,325.00	2.0000	2	2	\$2,649.99	\$2,649.99
Overhaul water heater, gas / oil, 30 gallon	5	1.00 Ea.	\$116.88	\$146.17	10.0000	10	10	\$1,461.75	\$1,461.75
Clean and service water heater, gas / oil, 30 gallon	1	1.00 Ea.	\$196.62	\$245.89	50.0000	50	50	\$12,294.44	\$12,294.44
Replace water heater, gas / oil, 30 gallon	10	1.00 Ea.	\$3,061.72	\$3,546.32	5.0000	5	5	\$17,731.59	\$17,731.59
Replace old valve with new hose bibb	10	1.00 Ea.	\$62.31	\$76.28	5.0000	5	5	\$381.40	\$381.40
Clean floor drain w/o bucket	4	2.00 Ea.	\$234.63	\$293.44	12.5000	12	12	\$3,521.24	\$3,521.24
Replace floor drain w/o bucket	40	2.00 Ea.	\$4,321.43	\$4,959.73	1.2500	1	1	\$4,959.73	\$4,959.73
Replace axial flow fan, 6400 CFM exhaust fan	10	2.00 Ea.	\$6,274.28	\$7,335.88	5.0000	5	5	\$36,679.39	\$36,679.39
Maintenance and repair explosionproof industrial heater	2	2.00 Ea.	\$405.39	\$473.69	25.0000	25	25	\$11,842.20	\$11,842.20
Maintenance and inspection explosionproof industrial heater	0.5	2.00 Ea.	\$157.70	\$197.57	100.0000	100	100	\$19,756.95	\$19,756.95

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost	
Repair air conditioner, thru-the-wall, 2 ton	8	1.00 Ea.	\$107.09	\$131.33	6.2500	6	6	\$787.96	\$787.96	
Replace air conditioner, thru-the-wall, 2 ton	10	1.00 Ea.	\$1,442.60	\$1,684.17	5.0000	5	5	\$8,420.87	\$8,420.87	
Rebuild 4" diameter reduced pressure backflow preventer	10	1.00 Ea.	\$664.67	\$779.78	5.0000	5	5	\$3,898.92	\$3,898.92	
Inspect sprinkler system	1	1.00 Ea.	\$34.33	\$42.93	50.0000	50	50	\$2,146.43	\$2,146.43	
Replace sprinkler head	20	8.00 Ea.	\$684.18	\$841.52	2.5000	2	2	\$1,683.03	\$1,683.03	
Maintenance and repair rectifier, up to 600 V	2	1.00 Ea.	\$686.80	\$818.18	25.0000	25	23	\$20,454.51	\$18,818.15	
Replace rectifier, up to 600 V	20	1.00 Ea.	\$1,270.28	\$1,463.32	2.5000	2	2	\$2,926.64	\$2,926.64	
Maintenance and repair secondary transformer, dry	10	2.00 Ea.	\$464.88	\$556.53	5.0000	5	5	\$2,782.66	\$2,782.66	
Replace transformer 15 KVA	30	2.00 Ea.	\$6,741.77	\$8,017.10	1.6667	1	1	\$8,017.10	\$8,017.10	
Maintenance and inspection lighting panel, indoor	3	1.00 Ea.	\$40.64	\$50.92	16.6667	16	16	\$814.74	\$814.74	
Maintenance and repair breaker, molded case, 480 V, 1 pole	20	21.00 Ea.	\$1,507.02	\$1,888.07	2.5000	2	2	\$3,776.15	\$3,776.15	
Maintenance and repair breaker, molded case, 480 V, 2 pole	20	10.00 Ea.	\$717.63	\$899.08	2.5000	2	2	\$1,798.16	\$1,798.16	
Maintenance and repair safety switch general, 2 pole	8	1.00 Ea.	\$40.64	\$50.92	6.2500	6	6	\$305.53	\$305.53	
Replace metal halide ballast, 175 W	10	10.00 Ea.	\$1,484.85	\$1,783.01	5.0000	5	5	\$8,915.05	\$8,915.05	
Replace metal halide fixture lamp, 175 W	5	10.00 Ea.	\$499.87	\$611.54	10.0000	10	10	\$6,115.37	\$6,115.37	
Repair smoke detector	10	2.00 Ea.	\$112.78	\$139.43	5.0000	5	5	\$697.14	\$697.14	
Check operation smoke detector	1	2.00 Ea.	\$32.39	\$40.58	50.0000	50	50	\$2,028.90	\$2,028.90	
Repair heat detector	10	2.00 Ea.	\$122.76	\$150.77	5.0000	5	5	\$753.85	\$753.85	
Check operation heat detector	1	2.00 Ea.	\$32.39	\$40.58	50.0000	50	50	\$2,028.90	\$2,028.90	
Check and repair manual pull station	10	2.00 Ea.	\$175.39	\$215.66	5.0000	5	5	\$1,078.30	\$1,078.30	
Replace fire alarm bell, 6"	20	4.00 Ea.	\$779.85	\$941.10	2.5000	2	2	\$1,882.20	\$1,882.20	
Maintenance and repair building structure ground	7	1.00 M.L.F.	\$87.89	\$109.79	7.1429	7	7	\$768.51	\$768.51	
			\$62,351.35	\$73,910.30				MR Subtotal	\$267,064.01	
									MR Per Year	\$5,341.28
									PM Total	\$5,898.69
									Subtotal	\$11,239.97
									Total Per Unit	\$11,239.97

FAC 2192 FACILITY ENGINEER MAINTENANCE FACILITY

SUC \$11,239.97

Release 2021 Qtr 3

UM EA

Zip Code Prefix 222

Design Life 50

Type PM

Average Size 1.0

Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Door, overhead, electric, roll up, to 24' high x 25' wide, annualized	3.00	12.21	\$122.88	\$506.43	\$0.00	\$629.31	\$793.53	\$963.89
Fan, axial, up to 5,000 CFM, annualized	4.00	4.98	\$46.91	\$250.20	\$0.00	\$297.11	\$376.87	\$458.96
Hood and blower, annualized	1.00	2.32	\$54.09	\$116.29	\$0.00	\$170.38	\$210.68	\$253.68
Unit heater, gas infrared, annualized	6.00	9.03	\$433.72	\$454.60	\$0.00	\$888.31	\$1,068.07	\$1,269.50
Air compressor, centrifugal, to 40 H.P., annualized	1.00	3.41	\$61.67	\$206.15	\$0.00	\$267.82	\$335.84	\$406.94
Backflow prevention device, up to 4", annualized	1.00	0.33	\$13.40	\$19.82	\$0.00	\$33.22	\$40.50	\$48.46
Extinguishing system, wet pipe, annualized	1.00	11.34	\$68.24	\$678.37	\$0.00	\$746.61	\$956.95	\$1,170.70
Crane, electric bridge, up to 5 ton, annualized	1.00	2.92	\$171.90	\$102.86	\$0.00	\$274.76	\$322.80	\$379.44
Transformer, dry type 500 KVA and over, annualized	1.00	0.77	\$15.16	\$50.76	\$0.00	\$65.92	\$82.66	\$100.17
Panelboard, 225 A and above, annualized	1.00	0.44	\$23.20	\$29.01	\$0.00	\$52.21	\$63.23	\$75.41
Light, emergency, dry cell, annualized	10.00	3.56	\$345.38	\$212.38	\$0.00	\$557.76	\$656.02	\$771.54
						\$3,983.42	\$4,907.14	\$5,898.69

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Modeled Component List CostWorks Release 2021 Qtr 3

B20 Exterior Enclosure	
Steel Single, Roll-Up	3.0 Ea.
B30 Roofing	
Modified Bituminous / Thermoplastic	15.0 Sq.
Vinyl Downspout, gutter, 5" wide	160.0 L.F.
D20 Plumbing	
Emergency Shower Station	1.0 Ea.
Emergency Eye Wash	1.0 Ea.
Water Heater, Gas / Oil, 30 Gallon	1.0 Ea.
Hose Bibb	1.0 Ea.
Floor Drain W/O Bucket	2.0 Ea.
D30 HVAC	
Exhaust Fan, axial flow, 6400 CFM	2.0 Ea.
Air Conditioner, Thru-the-Wall	1.0 Ea.
D40 Fire Protection	
Backflow Preventer	1.0 Ea.
Sprinkler System, Fire Supression, sprinkler head	8.0 Ea.
D50 Electrical	
Rectifier, Up To 600 V	1.0 Ea.
Secondary Transformer, Dry, 15 KVA	2.0 Ea.
Load Center, 100 A, maintenance & inspection	1.0 Ea.
Fire Alarm Bell	4.0 Ea.
E10 Equipment	
Crane, Electric, up to 5 ton, annualized	1.0 Each

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Sustainment by Year
CostWorks Release 2021 Qtr 3

