

FAC 4241 BATTERY STORAGE, WEAPON RELATED

FY22 SUC:	\$6.22 / SF
Source:	Calculated using R.S. Means CostWorks 2021 Qtr 3 component prices

FAC 4241 BATTERY STORAGE, WEAPON RELATED

SUC \$6.22

Release 2021 Qtr 3

UM SF

Zip Code Prefix 222

Design Life 45

Type MR

Average Size 2060.0

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
Replace metal floor grating	30	260.00 S.F.	\$10,258.01	\$11,782.61	1.5000	1	1	\$11,782.61	\$11,782.61
Repair 8" concrete block wall, 1st floor	25	200.00 S.F.	\$4,842.96	\$5,924.65	1.8000	1	1	\$5,924.65	\$5,924.65
Refinish steel louver, 1st floor	5	4.00 Ea.	\$388.15	\$481.62	9.0000	9	9	\$4,334.61	\$4,334.61
Replace glass - 1st floor (1% of glass) - alum. window fixed	1	0.10 S.F.	\$1.21	\$1.42	45.0000	45	45	\$63.77	\$63.77
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	2.00 Ea.	\$289.47	\$345.22	2.2500	2	2	\$690.44	\$690.44
Repair steel, painted, door	14	1.00 Ea.	\$625.07	\$744.01	3.2143	3	3	\$2,232.02	\$2,232.02
Refinish 3'-0" x 7'-0" steel, painted, door	4	1.00 Ea.	\$41.40	\$50.87	11.2500	11	11	\$559.53	\$559.53
Replace 3'-0" x 7'-0" steel, painted, door	45	1.00 Ea.	\$705.06	\$819.73	1.0000	1	1	\$819.73	\$819.73
Repair 12' x 12' steel roll-up door	10	1.00 Ea.	\$675.90	\$802.22	4.5000	4	4	\$3,208.87	\$3,208.87
Refinish 12' x 12' steel roll-up door	5	1.00 Ea.	\$203.45	\$249.19	9.0000	9	9	\$2,242.70	\$2,242.70
Replace 12' x 12' steel roll-up door	35	1.00 Ea.	\$2,703.58	\$3,208.87	1.2857	1	1	\$3,208.87	\$3,208.87
Repair 8" concrete block wall - (2% of walls) painted	25	1.10 C.S.F.	\$1,198.62	\$1,439.19	1.8000	1	1	\$1,439.19	\$1,439.19
Refinish concrete block wall painted	4	35.30 C.S.F.	\$3,562.43	\$4,337.95	11.2500	11	11	\$47,717.49	\$47,717.49
Repair steel painted interior door	14	2.00 Ea.	\$586.90	\$683.13	3.2143	3	3	\$2,049.38	\$2,049.38
Refinish 3'-0" x 7'-0" steel painted interior door	4	2.00 Ea.	\$105.17	\$129.57	11.2500	11	11	\$1,425.30	\$1,425.30
Replace 3'-0" x 7'-0" steel painted interior door	60	2.00 Ea.	\$2,436.07	\$2,824.17	0.7500	0	0	\$0.00	\$0.00
Repair metal steps	15	68.00 S.F.	\$6,265.26	\$7,283.28	3.0000	3	3	\$21,849.84	\$21,849.84
Refinish concrete floor finished	25	21.90 C.S.F.	\$9,238.02	\$11,096.30	1.8000	1	1	\$11,096.30	\$11,096.30
Replace vinyl tile flooring	18	10.30 S.Y.	\$508.86	\$624.90	2.5000	2	2	\$1,249.80	\$1,249.80
Replace rubber tile floor	18	34.00 S.Y.	\$6,596.86	\$7,784.86	2.5000	2	2	\$15,569.72	\$15,569.72
Replace flush valve diaphragm tankless water closet	10	2.00 Ea.	\$52.44	\$65.07	4.5000	4	4	\$260.29	\$260.29
Rebuild flush valve tankless water closet	20	2.00 Ea.	\$360.87	\$434.91	2.2500	2	2	\$869.83	\$869.83
Unplug clogged line tankless water closet	5	2.00 Ea.	\$436.79	\$546.25	9.0000	9	9	\$4,916.28	\$4,916.28
Replace tankless water closet	35	2.00 Ea.	\$2,572.44	\$2,976.99	1.2857	1	1	\$2,976.99	\$2,976.99
Replace tankless flush valve	25	2.00 Ea.	\$504.43	\$592.22	1.8000	1	1	\$592.22	\$592.22
Replace wax ring gasket for tankless water closet	5	2.00 Ea.	\$283.04	\$353.65	9.0000	9	9	\$3,182.88	\$3,182.88
Replace flush valve diaphragm for a urinal	7	1.00 Ea.	\$26.22	\$32.54	6.4286	6	6	\$195.22	\$195.22
Rebuild flush valve for a urinal	20	1.00 Ea.	\$180.43	\$217.46	2.2500	2	2	\$434.91	\$434.91
Unplug line urinal	5	1.00 Ea.	\$145.07	\$181.43	9.0000	9	9	\$1,632.85	\$1,632.85
Replace wall-hung urinal	35	1.00 Ea.	\$968.86	\$1,169.11	1.2857	1	1	\$1,169.11	\$1,169.11
Replace washer in spud connection lavatory, vitreous china	7	2.00 Ea.	\$32.93	\$40.16	6.4286	6	6	\$240.96	\$240.96
Replace washer in faucet lavatory, vitreous china	2	2.00 Ea.	\$25.77	\$32.10	22.5000	22	22	\$706.28	\$706.28
Replace faucets lavatory, vitreous china	10	2.00 Ea.	\$363.45	\$437.51	4.5000	4	4	\$1,750.04	\$1,750.04

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Clean out strainer and P trap lavatory, vitreous china	2	2.00 Ea.	\$69.74	\$87.22	22.5000	22	22	\$1,918.75	\$1,918.75
Replace lavatory, vitreous china	35	2.00 Ea.	\$1,345.15	\$1,616.44	1.2857	1	1	\$1,616.44	\$1,616.44
Replace faucet washer sink, iron enamel	2	1.00 Ea.	\$12.78	\$15.92	22.5000	22	22	\$350.15	\$350.15
Clean trap sink, iron enamel	3	1.00 Ea.	\$8.57	\$10.72	15.0000	15	15	\$160.78	\$160.78
Replace faucets sink, iron enamel	10	1.00 Ea.	\$181.73	\$218.76	4.5000	4	4	\$875.02	\$875.02
Unstop sink, iron enamel	2	1.00 Ea.	\$41.82	\$52.30	22.5000	22	22	\$1,150.65	\$1,150.65
Replace sink, P.E.C.I. sink, iron enamel kitchen	10	1.00 Ea.	\$636.70	\$757.51	4.5000	4	4	\$3,030.04	\$3,030.04
Check / minor repairs drinking fountain	1	1.00 Ea.	\$48.88	\$61.13	45.0000	45	45	\$2,750.97	\$2,750.97
Repair internal leaks drinking fountain	4	1.00 Ea.	\$45.08	\$56.38	11.2500	11	11	\$620.16	\$620.16
Correct water pressure drinking fountain	2	1.00 Ea.	\$41.82	\$52.30	22.5000	22	22	\$1,150.65	\$1,150.65
Replace refrigerant drinking fountain	2	1.00 Ea.	\$32.68	\$38.27	22.5000	22	22	\$841.92	\$841.92
Repair drain leak drinking fountain	4	1.00 Ea.	\$33.92	\$40.53	11.2500	11	9	\$445.88	\$364.81
Replace fountain drinking fountain	10	1.00 Ea.	\$1,281.16	\$1,514.56	4.5000	4	4	\$6,058.24	\$6,058.24
Inspect and clean shower head emergency shower station	3	1.00 Ea.	\$49.39	\$61.77	15.0000	15	15	\$926.57	\$926.57
Replace shower emergency shower station	25	1.00 Ea.	\$941.97	\$1,129.12	1.8000	1	1	\$1,129.12	\$1,129.12
Inspect and clean spray heads, emergency eye wash	3	1.00 Ea.	\$49.39	\$61.77	15.0000	15	15	\$926.57	\$926.57
Replace eye wash station, emergency eye wash	25	1.00 Ea.	\$1,114.34	\$1,325.00	1.8000	1	1	\$1,325.00	\$1,325.00
Replace pipe and fittings, copper 3/4"	20	32.00 L.F.	\$833.73	\$1,004.24	2.2500	2	2	\$2,008.49	\$2,008.49
Unclog main drain pipe & fittings, cast iron	10	1.00 Ea.	\$46.17	\$57.74	4.5000	4	4	\$230.95	\$230.95
Unclog floor drain, PVC	20	1.00 Ea.	\$47.80	\$59.77	2.2500	2	2	\$119.55	\$119.55
General maintenance & repair drain: roof, scupper, area	1	1.00 Ea.	\$36.99	\$46.26	45.0000	45	45	\$2,081.56	\$2,081.56
Replace roof mounted exhaust fan, 800 CFM exhaust fan	20	2.00 Ea.	\$3,468.06	\$4,056.23	2.2500	2	2	\$8,112.45	\$8,112.45
Maintenance and repair explosionproof industrial heater	2	2.00 Ea.	\$405.39	\$473.69	22.5000	22	21	\$10,421.13	\$9,947.44
Replace heater explosionproof industrial heater	15	2.00 Ea.	\$9,087.06	\$10,400.19	3.0000	3	3	\$31,200.57	\$31,200.57
Repair single zone rooftop unit, 5 ton	10	1.00 Ea.	\$2,372.90	\$2,849.79	4.5000	4	4	\$11,399.16	\$11,399.16
Replace single zone rooftop unit, 5 ton	15	1.00 Ea.	\$8,500.58	\$10,094.10	3.0000	3	3	\$30,282.30	\$30,282.30
Inspect sprinkler system	1	1.00 Ea.	\$34.33	\$42.93	45.0000	45	45	\$1,931.79	\$1,931.79
Replace sprinkler head	20	17.00 Ea.	\$1,453.89	\$1,788.22	2.2500	2	2	\$3,576.44	\$3,576.44
Maintenance and inspection lighting panel, indoor	3	1.00 Ea.	\$40.64	\$50.92	15.0000	15	15	\$763.82	\$763.82
Replace incandescent lighting fixture lamp for explosion proof fixture	5	20.00 Ea.	\$388.63	\$474.53	9.0000	9	9	\$4,270.78	\$4,270.78
Replace incan. lighting fixture, explosion proof, ceiling mtd., 200 W	20	20.00 Ea.	\$45,002.48	\$51,691.57	2.2500	2	2	\$103,383.14	\$103,383.14

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost	
Repair smoke detector	10	5.00 Ea.	\$281.94	\$348.57	4.5000	4	4	\$1,394.28	\$1,394.28	
Check operation smoke detector	1	5.00 Ea.	\$80.97	\$101.45	45.0000	45	45	\$4,565.03	\$4,565.03	
Repair heat detector	10	20.00 Ea.	\$1,227.55	\$1,507.69	4.5000	4	4	\$6,030.77	\$6,030.77	
Check operation heat detector	1	20.00 Ea.	\$323.88	\$405.78	45.0000	45	45	\$18,260.12	\$18,260.12	
Replace heat detector	15	20.00 Ea.	\$3,419.28	\$4,180.82	3.0000	3	3	\$12,542.45	\$12,542.45	
Check and repair manual pull station	10	1.00 Ea.	\$87.70	\$107.83	4.5000	4	3	\$431.32	\$323.49	
Replace manual pull station	15	1.00 Ea.	\$203.47	\$244.94	3.0000	3	3	\$734.82	\$734.82	
Replace fire alarm bell, 6"	20	1.00 Ea.	\$194.96	\$235.28	2.2500	2	2	\$470.55	\$470.55	
Maintenance and repair building structure ground	7	1.00 M.L.F.	\$87.89	\$109.79	6.4286	6	6	\$658.72	\$658.72	
Replace building structure ground	50	1.00 M.L.F.	\$4,337.42	\$5,318.61	0.9000	0	0	\$0.00	\$0.00	
Maintenance and repair of general wiring lightning protection system	1	1.00 M.L.F.	\$96.72	\$119.83	45.0000	45	45	\$5,392.19	\$5,392.19	
Replace lightning protection general wiring system	25	1.00 M.L.F.	\$11,009.12	\$13,095.99	1.8000	1	1	\$13,095.99	\$13,095.99	
Maintenance and repair lightning ground rod	1	1.00 Ea.	\$87.89	\$109.79	45.0000	45	44	\$4,940.42	\$4,830.63	
Replace lightning ground rod	25	1.00 Ea.	\$226.09	\$280.29	1.8000	1	1	\$280.29	\$280.29	
Replace special ground system	50	0.40 M.L.F.	\$746.32	\$911.54	0.9000	0	0	\$0.00	\$0.00	
Maintenance and repair exit light	20	6.00 Ea.	\$223.21	\$276.02	2.2500	2	2	\$552.04	\$552.04	
Replace lamp exit light	5	6.00 Ea.	\$101.08	\$119.78	9.0000	9	9	\$1,078.03	\$1,078.03	
Replace lighting fixture exit light	20	6.00 Ea.	\$1,146.21	\$1,378.56	2.2500	2	2	\$2,757.13	\$2,757.13	
			\$158,720.65	\$186,735.56				MR Subtotal	\$463,863.47	
									MR Per Year	\$10,308.08
									PM Total	\$2,513.67
									Subtotal	\$12,821.75
									Total Per Unit	\$6.22

FAC 4241 BATTERY STORAGE, WEAPON RELATED

SUC \$6.22

Release 2021 Qtr 3

UM SF

Zip Code Prefix 222

Design Life 45

Type PM

Average Size 2060.0

Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Door, emergency egress, swinging, annualized	1.00	0.26	\$14.59	\$10.75	\$0.00	\$25.34	\$30.03	\$35.44
Door, overhead, electric, roll up, to 24' high x 25' wide, annualized	1.00	4.07	\$40.96	\$168.81	\$0.00	\$209.77	\$264.51	\$321.30
Urinals, annualized	1.00	0.23	\$6.32	\$11.45	\$0.00	\$17.77	\$21.84	\$26.22
Toilet (vacuum breaker type), annualized	2.00	0.35	\$16.88	\$17.80	\$0.00	\$34.68	\$41.71	\$49.58
Lavatories, annualized	2.00	0.70	\$11.93	\$41.41	\$0.00	\$53.34	\$66.95	\$81.16
Drink fountain, annualized	1.00	0.62	\$20.73	\$31.28	\$0.00	\$52.00	\$63.46	\$75.95
Package unit, air cooled, 3 thru 24 ton, annualized	1.00	2.40	\$176.92	\$144.48	\$0.00	\$321.41	\$382.45	\$452.33
Extinguishing system, deluge / preaction, annualized	1.00	11.59	\$68.24	\$691.59	\$0.00	\$759.83	\$974.13	\$1,191.84
Panelboard, 225 A and above, annualized	1.00	0.44	\$23.20	\$29.01	\$0.00	\$52.21	\$63.23	\$75.41
VAV Boxes, annualized	2.00	1.87	\$19.21	\$112.77	\$0.00	\$131.98	\$167.73	\$204.44
						\$1,658.32	\$2,076.02	\$2,513.67

FAC 4241 BATTERY STORAGE, WEAPON RELATED

Modeled Component List CostWorks Release 2021 Qtr 3

B20 Exterior Enclosure	
Steel, Painted	1.0 Ea.
Steel Single, Roll-Up	1.0 Ea.
C10 Interior Construction	
Concrete Block, Painted	35.3 C.S.F.
Steel Painted Interior Doors	2.0 Ea.
C30 Interior Finishes	
Concrete, Finished	21.9 C.S.F.
Vinyl	10.3 S.Y.
Rubber Tile	34.0 S.Y.
D20 Plumbing	
Tankless Water Closet	2.0 Ea.
Urinal	1.0 Ea.
Lavatory, Vitreous China	2.0 Ea.
Sink, Iron Enamel	1.0 Ea.
Drinking Fountain	1.0 Ea.
Emergency Shower Station	1.0 Ea.
Emergency Eye Wash	1.0 Ea.
D30 HVAC	
Exhaust Fan, roof mounted exhaust fan, 800 CFM exhaust	2.0 Ea.
Explosionproof Industrial Heater	2.0 Ea.
Single Zone Air Conditioner, 5 ton	1.0 Ea.
VAV Box	2.0 Each
D40 Fire Protection	
Sprinkler System, Fire Suppression, sprinkler head	17.0 Ea.
D50 Electrical	
Load Center, 100 A, maintenance & inspection	1.0 Ea.
Explosion-Proof Fixture	20.0 Ea.
Heat Detector	20.0 Ea.
Manual Pull Station	1.0 Ea.
Fire Alarm Bell	1.0 Ea.
Building Structure Ground	1.0 M.L.F.
Lightning Protection System	1.0 M.L.F.
Lightning Ground Rod	1.0 Ea.
Special Ground System	0.4 M.L.F.
Exit Light	6.0 Ea.

FAC 4241 BATTERY STORAGE, WEAPON RELATED
Sustainment by Year
CostWorks Release 2021 Qtr 3

