

**FAC 4414 CONTROLLED HUMIDITY STORAGE, DEPOT**

FY22 SUC:	\$2.37 / SF
Source:	Calculated using R.S. Means CostWorks 2021 Qtr 3 component prices

FAC 4414 CONTROLLED HUMIDITY STORAGE, DEPOT

SUC \$2.37

Release 2021 Qtr 3  
Zip Code Prefix 222  
Type MR

UM SF  
Design Life 45  
Average Size 19492.0

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
Repair 8" concrete block wall - (2% of walls) painted	25	4.30 C.S.F.	\$4,685.51	\$5,625.93	1.8000	1	1	\$5,625.93	\$5,625.93
Repair steel painted interior door	14	7.00 Ea.	\$2,054.17	\$2,390.95	3.2143	3	3	\$7,172.84	\$7,172.84
Refinish 3'-0" x 7'-0" steel painted interior door	4	7.00 Ea.	\$368.10	\$453.50	11.2500	11	11	\$4,988.55	\$4,988.55
Point and refinish painted concrete block wall, 1st floor	25	50.00 C.S.F.	\$23,488.85	\$28,990.26	1.8000	1	1	\$28,990.26	\$28,990.26
Replace faucet washer sink, iron enamel	2	2.00 Ea.	\$25.55	\$31.83	22.5000	22	22	\$700.30	\$700.30
Clean trap sink, iron enamel	3	2.00 Ea.	\$17.14	\$21.44	15.0000	15	15	\$321.56	\$321.56
Replace faucets sink, iron enamel	10	2.00 Ea.	\$363.45	\$437.51	4.5000	4	4	\$1,750.04	\$1,750.04
Unstop sink, iron enamel	2	2.00 Ea.	\$83.64	\$104.60	22.5000	22	22	\$2,301.30	\$2,301.30
Replace sink, P.E.C.I. sink, iron enamel kitchen	35	2.00 Ea.	\$1,273.40	\$1,515.02	1.2857	1	1	\$1,515.02	\$1,515.02
Check / minor repairs drinking fountain	1	4.00 Ea.	\$195.53	\$244.53	45.0000	45	45	\$11,003.87	\$11,003.87
Repair internal leaks drinking fountain	4	4.00 Ea.	\$180.32	\$225.51	11.2500	11	11	\$2,480.62	\$2,480.62
Correct water pressure drinking fountain	2	4.00 Ea.	\$167.29	\$209.21	22.5000	22	22	\$4,602.60	\$4,602.60
Replace refrigerant drinking fountain	2	4.00 Ea.	\$130.73	\$153.08	22.5000	22	22	\$3,367.69	\$3,367.69
Repair drain leak drinking fountain	4	4.00 Ea.	\$135.66	\$162.14	11.2500	11	9	\$1,783.52	\$1,459.25
Replace fountain drinking fountain	10	4.00 Ea.	\$5,124.62	\$6,058.24	4.5000	4	4	\$24,232.94	\$24,232.94
Drain and flush water heater, electric, 120 gallon	7	1.00 Ea.	\$294.38	\$368.15	6.4286	6	6	\$2,208.92	\$2,208.92
Replace water heater, electric, 120 gallon	15	1.00 Ea.	\$14,632.58	\$16,736.89	3.0000	3	3	\$50,210.67	\$50,210.67
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	11.00 Ea.	\$406.86	\$508.83	45.0000	45	45	\$22,897.21	\$22,897.21
Replace drain: roof, scupper, area	40	11.00 Ea.	\$8,656.26	\$10,035.96	1.1250	1	1	\$10,035.96	\$10,035.96
Repair boiler, gas, 250 MBH	7	2.00 Ea.	\$4,062.11	\$4,780.90	6.4286	6	6	\$28,685.41	\$28,685.41
Replace boiler, gas, 250 MBH	30	2.00 Ea.	\$18,796.09	\$22,420.25	1.5000	1	1	\$22,420.25	\$22,420.25
Repair reciprocating chiller, air cooled, 50 ton	10	1.00 Ea.	\$57,771.66	\$67,630.76	4.5000	4	4	\$270,523.03	\$270,523.03
Replace chiller, air cooled, 50 ton	20	1.00 Ea.	\$64,270.84	\$74,812.79	2.2500	2	2	\$149,625.58	\$149,625.58
Replace roof mounted exhaust fan, 8500 CFM exhaust fan	20	2.00 Ea.	\$7,879.67	\$9,146.83	2.2500	2	2	\$18,293.66	\$18,293.66
Repair circulator pump, 1/12 - 3/4 H.P.	5	2.00 Ea.	\$196.27	\$231.46	9.0000	9	6	\$2,083.16	\$1,388.78
Replace circulator pump, 1/12 - 3/4 H.P.	15	2.00 Ea.	\$7,644.61	\$8,804.46	3.0000	3	3	\$26,413.37	\$26,413.37
Repair circulator pump, 1 H.P.	5	1.00 Ea.	\$98.36	\$116.02	9.0000	9	9	\$1,044.15	\$1,044.15
Maintenance and repair standard suspended heater	2	3.00 Ea.	\$328.64	\$387.83	22.5000	22	22	\$8,532.36	\$8,532.36
Maintenance and inspection standard suspended heater	0.5	3.00 Ea.	\$236.54	\$296.35	90.0000	90	90	\$26,671.89	\$26,671.89
Replace heater standard suspended heater	15	3.00 Ea.	\$1,864.43	\$2,166.80	3.0000	3	3	\$6,500.40	\$6,500.40

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Repair central station A.H.U., 16,000 CFM	10	1.00 Ea.	\$1,502.82	\$1,746.04	4.5000	4	3	\$6,984.14	\$5,238.11
Replace central station A.H.U., 16,000 CFM	15	1.00 Ea.	\$66,939.65	\$77,045.08	3.0000	3	3	\$231,135.23	\$231,135.23
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	60.00 Ea.	\$5,131.37	\$6,311.37	2.2500	2	2	\$12,622.74	\$12,622.74
Maintenance and repair motor starter, up to 600 V	5	3.00 Ea.	\$838.92	\$1,012.79	9.0000	9	9	\$9,115.15	\$9,115.15
Maintenance and inspection motor starter, up to 600 V	0.5	3.00 Ea.	\$161.94	\$202.89	90.0000	90	90	\$18,260.12	\$18,260.12
Replace starter motor starter, up to 600 V	18	3.00 Ea.	\$2,415.93	\$2,874.22	2.5000	2	2	\$5,748.45	\$5,748.45
Maintenance and inspection lighting panel, indoor	3	4.00 Ea.	\$162.58	\$203.69	15.0000	15	15	\$3,055.29	\$3,055.29
Maintenance and repair safety switch, 3 pole safety switch, heavy duty	8	2.00 Ea.	\$81.29	\$101.84	5.6250	5	5	\$509.21	\$509.21
Maintenance and inspection safety switch, 3 pole, heavy duty	1	2.00 Ea.	\$81.29	\$101.84	45.0000	45	45	\$4,582.93	\$4,582.93
Replace safety switch, heavy duty 30 A	25	2.00 Ea.	\$1,152.70	\$1,380.88	1.8000	1	1	\$1,380.88	\$1,380.88
Replace metal halide ballast, 400 W	10	44.00 Ea.	\$7,741.89	\$9,257.68	4.5000	4	4	\$37,030.73	\$37,030.73
Replace metal halide fixture lamp, 400 W	5	44.00 Ea.	\$2,921.10	\$3,511.48	9.0000	9	9	\$31,603.32	\$31,603.32
Repair smoke detector	10	48.00 Ea.	\$2,706.60	\$3,346.28	4.5000	4	3	\$13,385.10	\$10,038.83
Replace smoke detector	15	48.00 Ea.	\$13,643.39	\$16,294.17	3.0000	3	3	\$48,882.52	\$48,882.52
Check and repair manual pull station	10	10.00 Ea.	\$876.97	\$1,078.30	4.5000	4	3	\$4,313.21	\$3,234.91
Replace manual pull station	15	10.00 Ea.	\$2,034.68	\$2,449.41	3.0000	3	3	\$7,348.23	\$7,348.23
Minor repairs to fire alarm control panel	5	1.00 Ea.	\$149.71	\$182.27	9.0000	9	9	\$1,640.47	\$1,640.47
Maintenance and inspection fire alarm control panel	0.5	1.00 Ea.	\$43.18	\$54.10	90.0000	90	90	\$4,869.37	\$4,869.37
Replace fire alarm control panel	15	1.00 Ea.	\$1,953.46	\$2,391.92	3.0000	3	3	\$7,175.76	\$7,175.76
Replace fire alarm bell, 6"	20	6.00 Ea.	\$1,169.77	\$1,411.65	2.2500	2	2	\$2,823.31	\$2,823.31
Replace EMS, Three Phase, 5 Meters	15	1.00 Ea.	\$15,802.46	\$18,399.79	3.0000	3	3	\$55,199.37	\$55,199.37
Replace EMS, Mech, BTU, 3 Meters, 3 Duct Sensors, 3 Space Sensors	20	1.00 Ea.	\$17,137.72	\$20,030.68	2.2500	2	2	\$40,061.35	\$40,061.35
Point and refinish painted concrete block wall, 2nd floor	25	50.00 C.S.F.	\$27,514.35	\$33,977.91	1.8000	1	1	\$33,977.91	\$33,977.91
Replace glass - 1st floor (1% of glass) - alum. window fixed	1	0.70 S.F.	\$8.44	\$9.92	45.0000	45	45	\$446.41	\$446.41
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	12.00 Ea.	\$1,736.84	\$2,071.31	2.2500	2	2	\$4,142.61	\$4,142.61
Repair steel, painted, door	14	3.00 Ea.	\$1,875.22	\$2,232.02	3.2143	3	3	\$6,696.05	\$6,696.05
Refinish 3'-0" x 7'-0" steel, painted, door	4	3.00 Ea.	\$124.20	\$152.60	11.2500	11	11	\$1,678.59	\$1,678.59
Replace 3'-0" x 7'-0" steel, painted, door	45	3.00 Ea.	\$2,115.19	\$2,459.19	1.0000	1	1	\$2,459.19	\$2,459.19
Repair 12' x 12' steel roll-up door	10	4.00 Ea.	\$2,703.58	\$3,208.87	4.5000	4	4	\$12,835.47	\$12,835.47
Replace 12' x 12' steel roll-up door	35	4.00 Ea.	\$10,814.33	\$12,835.47	1.2857	1	1	\$12,835.47	\$12,835.47
Debris removal, by hand and visual inspection, metal panel roofing	1	19.00 M.S.F.	\$432.90	\$528.01	45.0000	45	45	\$23,760.25	\$23,760.25

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Minor metal roof finish repairs, 2% of roof area, metal panel roofing	5	326.00 S.F.	\$1,138.75	\$1,366.25	9.0000	9	9	\$12,296.29	\$12,296.29
Metal roof flashing replacement, 2 SF/sq repaired, metal panel roofing	1	22.00 S.F.	\$402.60	\$487.79	45.0000	45	45	\$21,950.75	\$21,950.75
Minor metal roof panel replacement, 2.5% of roof area	20	487.00 S.F.	\$5,565.25	\$6,609.60	2.2500	2	2	\$13,219.21	\$13,219.21
Total metal roof panel replacement	30	195.00 Sq.	\$164,803.59	\$195,198.17	1.5000	1	1	\$195,198.17	\$195,198.17
Repair solid core wood door, interior	11	14.00 Ea.	\$4,108.33	\$4,781.90	4.0909	4	4	\$19,127.59	\$19,127.59
Refinish 3'-0" x 7'-0" solid core wood door, interior	4	14.00 Ea.	\$607.11	\$745.50	11.2500	11	10	\$8,200.45	\$7,454.95
Replace 3'-0" x 7'-0" solid core wood door, interior	40	14.00 Ea.	\$6,851.98	\$7,921.34	1.1250	1	1	\$7,921.34	\$7,921.34
Repair 5/8" drywall - (2% of walls)	20	89.30 S.F.	\$149.61	\$182.04	2.2500	2	2	\$364.07	\$364.07
Acoustic tile repairs - (2% of ceilings)	9	0.06 C.S.F.	\$54.46	\$63.30	5.0000	5	5	\$316.48	\$316.48
Replace acoustic tile ceiling, fire-rated	20	3.00 C.S.F.	\$1,572.69	\$1,853.66	2.2500	2	2	\$3,707.32	\$3,707.32
Replace flush valve diaphragm tankless water closet	10	8.00 Ea.	\$209.76	\$260.29	4.5000	4	4	\$1,041.15	\$1,041.15
Rebuild flush valve tankless water closet	20	8.00 Ea.	\$1,443.47	\$1,739.66	2.2500	2	2	\$3,479.31	\$3,479.31
Unplug clogged line tankless water closet	5	8.00 Ea.	\$1,747.16	\$2,185.01	9.0000	9	9	\$19,665.13	\$19,665.13
Replace tankless water closet	35	8.00 Ea.	\$10,289.77	\$11,907.96	1.2857	1	1	\$11,907.96	\$11,907.96
Replace tankless flush valve	25	8.00 Ea.	\$2,017.72	\$2,368.88	1.8000	1	1	\$2,368.88	\$2,368.88
Replace wax ring gasket for tankless water closet	5	8.00 Ea.	\$1,132.15	\$1,414.61	9.0000	9	9	\$12,731.50	\$12,731.50
Replace flush valve diaphragm for a urinal	7	5.00 Ea.	\$131.10	\$162.68	6.4286	6	6	\$976.08	\$976.08
Rebuild flush valve for a urinal	20	5.00 Ea.	\$902.17	\$1,087.29	2.2500	2	2	\$2,174.57	\$2,174.57
Unplug line urinal	5	5.00 Ea.	\$725.36	\$907.14	9.0000	9	9	\$8,164.26	\$8,164.26
Replace wall-hung urinal	35	5.00 Ea.	\$4,844.32	\$5,845.53	1.2857	1	1	\$5,845.53	\$5,845.53
Replace washer in spud connection lavatory, vitreous china	7	8.00 Ea.	\$131.70	\$160.64	6.4286	6	6	\$963.84	\$963.84
Replace washer in faucet lavatory, vitreous china	2	8.00 Ea.	\$103.08	\$128.41	22.5000	22	22	\$2,825.12	\$2,825.12
Replace faucets lavatory, vitreous china	10	8.00 Ea.	\$1,453.81	\$1,750.04	4.5000	4	4	\$7,000.17	\$7,000.17
Clean out strainer and P trap lavatory, vitreous china	2	8.00 Ea.	\$278.95	\$348.86	22.5000	22	22	\$7,674.99	\$7,674.99
Replace lavatory, vitreous china	35	8.00 Ea.	\$5,380.60	\$6,465.77	1.2857	1	1	\$6,465.77	\$6,465.77
			\$633,535.33	\$747,976.73				MR Subtotal	\$1,763,244.40
								MR Per Year	\$39,076.97
								PM Total	\$7,173.33
								Subtotal	\$46,250.30
								Total Per Unit	\$2.37

FAC 4414 CONTROLLED HUMIDITY STORAGE, DEPOT

SUC \$2.37

Release 2021 Qtr 3

UM SF

Zip Code Prefix 222

Design Life 45

Type PM

Average Size 19492.0

Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Door, emergency egress, swinging, annualized	3.00	0.78	\$43.78	\$32.25	\$0.00	\$76.02	\$90.08	\$106.32
Door, overhead, manual, up to 24' high x 25' wide, annualized	4.00	8.78	\$47.51	\$363.36	\$0.00	\$410.87	\$524.63	\$640.77
Fire doors, swinging, annualized	4.00	1.57	\$57.28	\$58.23	\$0.00	\$115.52	\$138.71	\$164.77
Urinals, annualized	5.00	1.14	\$31.59	\$57.27	\$0.00	\$88.86	\$109.20	\$131.12
Toilet (vacuum breaker type), annualized	8.00	1.42	\$67.53	\$71.18	\$0.00	\$138.72	\$166.83	\$198.31
Lavatories, annualized	8.00	2.78	\$47.72	\$165.63	\$0.00	\$213.35	\$267.81	\$324.65
Drink fountain, annualized	4.00	2.48	\$82.90	\$125.10	\$0.00	\$208.00	\$253.82	\$303.79
Boiler, hot water, oil, gas, or comb. fired, 120 - 500 MBH, annualized	1.00	15.88	\$77.34	\$947.08	\$0.00	\$1,024.42	\$1,316.27	\$1,612.00
Chiller, recip., water cooled, over 50 tons, annualized	1.00	10.91	\$17.79	\$656.35	\$0.00	\$674.14	\$872.82	\$1,072.39
Controls, central system, electro/pneumatic, annualized	2.00	3.84	\$141.54	\$230.82	\$0.00	\$372.36	\$455.76	\$546.24
Steam humidification system, annualized	2.00	5.08	\$51.56	\$304.83	\$0.00	\$356.39	\$452.99	\$552.17
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
Panelboard, 225 A and above, annualized	4.00	1.76	\$92.79	\$116.03	\$0.00	\$208.82	\$252.91	\$301.64
						\$4,667.30	\$5,899.29	\$7,173.33



# FAC 4414 CONTROLLED HUMIDITY STORAGE, DEPOT

## Modeled Component List CostWorks Release 2021 Qtr 3

### D20 Plumbing

Sink, Iron Enamel	2.0 Ea.
Drinking Fountain	4.0 Ea.
Water Heater, Electric, 120 Gallon	1.0 Ea.
Drain: Roof, Scupper, Area	11.0 Ea.
Tankless Water Closet	8.0 Ea.
Urinal	5.0 Ea.
Lavatory, Vitreous China	8.0 Ea.

### D30 HVAC

Boiler, Gas, 250 MBH	2.0 Ea.
Chiller, Air Cooled, Reciprocating, 50 ton	1.0 Ea.
Exhaust Fan, roof mounted exhaust fan, 8500 CFM exhaust	2.0 Ea.
Circulator Pump, 1/12 - 3/4 H.P.	2.0 Ea.
Standard Suspended Heater	3.0 Ea.
Central Station Air Conditioning Air Handling Unit, 16,000 CFM	1.0 Ea.

### D40 Fire Protection

Sprinkler System, Fire Supression, sprinkler head	60.0 Ea.
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### D50 Electrical

Motor Starter, Up To 600 V	3.0 Ea.
Load Center, 100 A, maintenance & inspection	4.0 Ea.
Safety Switch, Heavy Duty	2.0 Ea.
Smoke Detector	48.0 Ea.
Manual Pull Station	10.0 Ea.
Fire Alarm Control Panel	1.0 Ea.
Fire Alarm Bell	6.0 Ea.

### B20 Exterior Enclosure

Steel, Painted	3.0 Ea.
Steel Single, Roll-Up	4.0 Ea.

### B30 Roofing

Metal Steep Roofing	195.0 Sq.
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### C10 Interior Construction

Solid Core Interior Doors	14.0 Ea.
Fire Doors, Swinging, annualized	4.0 Each

### C30 Interior Finishes

Acoustic Tile, fire-rated	3.0 C.S.F.
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FAC 4414 CONTROLLED HUMIDITY STORAGE, DEPOT  
Sustainment by Year  
CostWorks Release 2021 Qtr 3

