

FAC 1431 SHIP OPERATIONS BUILDING

FY22 SUC: \$4.33 / SF
Source: Calculated using R.S. Means CostWorks 2021 Qtr 3
component prices

FAC 1431 SHIP OPERATIONS BUILDING

SUC \$4.33

Release 2021 Qtr 3
Zip Code Prefix 222
Type MR

UM SF
Design Life 50
Average Size 9482.166000000001

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
Point and refinish painted concrete block wall, 1st floor	25	12.00 C.S.F.	\$5,637.32	\$6,957.66	2.0000	2	2	\$13,915.32	\$13,915.32
Point and refinish painted concrete block wall, 2nd floor	25	14.00 C.S.F.	\$7,704.02	\$9,513.81	2.0000	2	2	\$19,027.63	\$19,027.63
Replace glass - 1st floor (1% of glass) - alum. window fixed	1	2.00 S.F.	\$24.12	\$28.34	50.0000	50	50	\$1,417.16	\$1,417.16
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	20.00 Ea.	\$2,894.73	\$3,452.18	2.5000	2	2	\$6,904.36	\$6,904.36
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	20.00 Ea.	\$9,762.63	\$11,570.48	1.0000	1	1	\$11,570.48	\$11,570.48
Replace glass - 2nd floor (1% of glass) - alum. window fixed	1	2.00 S.F.	\$212.39	\$262.14	50.0000	50	50	\$13,107.06	\$13,107.06
Repair 2'-0" x 3'-0" aluminum window - 2nd floor	20	20.00 Ea.	\$3,826.39	\$4,609.12	2.5000	2	2	\$9,218.23	\$9,218.23
Replace 2'-0" x 3'-0" aluminum window - 2nd floor	50	20.00 Ea.	\$10,694.29	\$12,727.42	1.0000	1	1	\$12,727.42	\$12,727.42
Repair steel, painted, door	14	3.00 Ea.	\$1,875.22	\$2,232.02	3.5714	3	3	\$6,696.05	\$6,696.05
Refinish 3'-0" x 7'-0" steel, painted, door	4	2.00 Ea.	\$82.80	\$101.73	12.5000	12	12	\$1,220.79	\$1,220.79
Replace 3'-0" x 7'-0" steel, painted, door	45	2.00 Ea.	\$1,410.13	\$1,639.46	1.1111	1	1	\$1,639.46	\$1,639.46
Replace tempered glass - (3% of glass) steel painted door	1	3.00 S.F.	\$67.79	\$81.00	50.0000	50	50	\$4,050.13	\$4,050.13
Repair 12' x 12' steel roll-up door	10	1.00 Ea.	\$675.90	\$802.22	5.0000	5	5	\$4,011.08	\$4,011.08
Refinish 12' x 12' steel roll-up door	5	1.00 Ea.	\$203.45	\$249.19	10.0000	10	10	\$2,491.89	\$2,491.89
Replace 12' x 12' steel roll-up door	35	1.00 Ea.	\$2,703.58	\$3,208.87	1.4286	1	1	\$3,208.87	\$3,208.87
Total EPDM roof replacement	25	40.00 Sq.	\$24,178.20	\$28,679.77	2.0000	2	2	\$57,359.54	\$57,359.54
Repair steel painted interior door	14	2.00 Ea.	\$586.90	\$683.13	3.5714	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	12.5000	12	12	\$1,554.87	\$1,554.87
Replace 3'-0" x 7'-0" steel painted interior door	60	2.00 Ea.	\$2,436.07	\$2,824.17	0.8333	0	0	\$0.00	\$0.00
Safety glass replacement, (3% of glass) steel painted interior door	1	1.00 S.F.	\$18.02	\$21.48	50.0000	50	50	\$1,073.86	\$1,073.86
Repair solid core wood door, interior	11	20.00 Ea.	\$5,869.05	\$6,831.28	4.5455	4	4	\$27,325.12	\$27,325.12
Refinish 3'-0" x 7'-0" solid core wood door, interior	4	20.00 Ea.	\$867.29	\$1,064.99	12.5000	12	11	\$12,779.92	\$11,714.93
Replace 3'-0" x 7'-0" solid core wood door, interior	40	20.00 Ea.	\$9,788.55	\$11,316.20	1.2500	1	1	\$11,316.20	\$11,316.20
Repair concrete steps	15	2.60 S.F.	\$59.41	\$68.77	3.3333	3	3	\$206.32	\$206.32
Replace concrete steps	100	26.00 S.F.	\$1,389.93	\$1,695.00	0.5000	0	0	\$0.00	\$0.00
Replace metal stair railing, interior	45	16.00 L.F.	\$687.29	\$804.48	1.1111	1	1	\$804.48	\$804.48
Repair fabric wall finish fabric interior	9	150.00 S.Y.	\$4,556.43	\$5,464.51	5.5556	5	5	\$27,322.55	\$27,322.55
Replace fabric wall finish fabric interior	50	150.00 S.Y.	\$22,050.36	\$27,218.54	1.0000	1	1	\$27,218.54	\$27,218.54
Repair 5/8" drywall - (2% of walls)	20	135.00 S.F.	\$226.17	\$275.20	2.5000	2	2	\$550.39	\$550.39
Refinish drywall	4	2,200.00 S.F.	\$1,366.16	\$1,680.60	12.5000	12	12	\$20,167.23	\$20,167.23
Refinish concrete floor finished	25	25.00 C.S.F.	\$10,545.68	\$12,667.01	2.0000	2	2	\$25,334.01	\$25,334.01

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Replace vinyl tile flooring	18	600.00 S.Y.	\$29,642.09	\$36,402.03	2.7778	2	2	\$72,804.05	\$72,804.05
Replace acoustic tile ceiling, fire-rated	20	36.00 C.S.F.	\$18,872.23	\$22,243.90	2.5000	2	2	\$44,487.80	\$44,487.80
Replace flush valve diaphragm tankless water closet	10	8.00 Ea.	\$209.76	\$260.29	5.0000	5	5	\$1,301.43	\$1,301.43
Rebuild flush valve tankless water closet	20	8.00 Ea.	\$1,443.47	\$1,739.66	2.5000	2	2	\$3,479.31	\$3,479.31
Unplug clogged line tankless water closet	5	8.00 Ea.	\$1,747.16	\$2,185.01	10.0000	10	10	\$21,850.15	\$21,850.15
Replace tankless water closet	35	5.00 Ea.	\$6,431.11	\$7,442.48	1.4286	1	1	\$7,442.48	\$7,442.48
Replace tankless flush valve	25	8.00 Ea.	\$2,017.72	\$2,368.88	2.0000	2	2	\$4,737.77	\$4,737.77
Replace wax ring gasket for tankless water closet	5	8.00 Ea.	\$1,132.15	\$1,414.61	10.0000	10	10	\$14,146.12	\$14,146.12
Replace flush valve diaphragm for a urinal	7	3.00 Ea.	\$78.66	\$97.61	7.1429	7	7	\$683.25	\$683.25
Rebuild flush valve for a urinal	20	3.00 Ea.	\$541.30	\$652.37	2.5000	2	2	\$1,304.74	\$1,304.74
Unplug line urinal	5	3.00 Ea.	\$435.22	\$544.28	10.0000	10	10	\$5,442.84	\$5,442.84
Replace wall-hung urinal	35	3.00 Ea.	\$2,906.59	\$3,507.32	1.4286	1	1	\$3,507.32	\$3,507.32
Replace washer in spud connection lavatory, vitreous china	7	10.00 Ea.	\$164.63	\$200.80	7.1429	7	7	\$1,405.60	\$1,405.60
Replace washer in faucet lavatory, vitreous china	2	10.00 Ea.	\$128.85	\$160.52	25.0000	25	25	\$4,012.96	\$4,012.96
Replace faucets lavatory, vitreous china	10	10.00 Ea.	\$1,817.26	\$2,187.55	5.0000	5	5	\$10,937.77	\$10,937.77
Clean out strainer and P trap lavatory, vitreous china	2	10.00 Ea.	\$348.69	\$436.08	25.0000	25	25	\$10,901.98	\$10,901.98
Replace lavatory, vitreous china	35	10.00 Ea.	\$6,725.75	\$8,082.21	1.4286	1	1	\$8,082.21	\$8,082.21
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 kitchen	35	1.00 Ea.	\$636.70	\$757.51	1.4286	1	1	\$757.51	\$757.51
Check / minor repairs drinking fountain	1	2.00 Ea.	\$97.76	\$122.27	50.0000	50	50	\$6,113.26	\$6,113.26
Repair internal leaks drinking fountain	4	2.00 Ea.	\$90.16	\$112.76	12.5000	12	12	\$1,353.07	\$1,353.07
Correct water pressure drinking fountain	2	2.00 Ea.	\$83.64	\$104.60	25.0000	25	25	\$2,615.12	\$2,615.12
Replace refrigerant drinking fountain	2	2.00 Ea.	\$65.37	\$76.54	25.0000	25	25	\$1,913.46	\$1,913.46
Repair drain leak drinking fountain	4	2.00 Ea.	\$67.83	\$81.07	12.5000	12	10	\$972.83	\$810.69
Replace fountain drinking fountain	10	2.00 Ea.	\$2,562.31	\$3,029.12	5.0000	5	5	\$15,145.59	\$15,145.59
Drain and flush water heater, electric, 120 gallon	7	1.00 Ea.	\$294.38	\$368.15	7.1429	7	7	\$2,577.08	\$2,577.08
Check operation water heater, electric, 120 gallon	3	1.00 Ea.	\$2.59	\$3.23	16.6667	16	16	\$51.73	\$51.73
Replace water heater, electric, 120 gallon	15	1.00 Ea.	\$14,632.58	\$16,736.89	3.3333	3	3	\$50,210.67	\$50,210.67
Inspect / check pump / motor operation, lubricate circulation pump, 1/12 HP	0.5	1.00 Ea.	\$8.03	\$10.04	100.0000	100	100	\$1,003.93	\$1,003.93

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Replace pump / motor assembly circulation pump, 1/12 HP	10	1.00 Ea.	\$1,100.58	\$1,290.00	5.0000	5	5	\$6,449.98	\$6,449.98
Unclog main drain pipe & fittings, cast iron	10	1.00 Ea.	\$46.17	\$57.74	5.0000	5	5	\$288.68	\$288.68
Replace pipe & fittings, cast iron, 4"	40	16.00 L.F.	\$1,071.15	\$1,285.72	1.2500	1	1	\$1,285.72	\$1,285.72
Unclog floor drain, PVC	20	1.00 Ea.	\$47.80	\$59.77	2.5000	2	2	\$119.55	\$119.55
General maintenance & repair drain: roof, scupper, area	1	2.00 Ea.	\$73.98	\$92.51	50.0000	50	50	\$4,625.70	\$4,625.70
Replace drain: roof, scupper, area	40	2.00 Ea.	\$1,573.86	\$1,824.72	1.2500	1	1	\$1,824.72	\$1,824.72
Repair boiler, gas, 250 MBH	7	2.00 Ea.	\$4,062.11	\$4,780.90	7.1429	7	7	\$33,466.31	\$33,466.31
Replace boiler, gas, 250 MBH	30	2.00 Ea.	\$18,796.09	\$22,420.25	1.6667	1	1	\$22,420.25	\$22,420.25
Replace metal flue, all fuel SS, 6" diameter metal flue / chimney	15	1.00 L.F.	\$129.05	\$149.45	3.3333	3	3	\$448.36	\$448.36
Repair reciprocating chiller, air cooled, 50 ton	10	0.33 Ea.	\$19,064.65	\$22,318.15	5.0000	5	5	\$111,590.75	\$111,590.75
Replace chiller, air cooled, 50 ton	20	0.50 Ea.	\$32,135.42	\$37,406.40	2.5000	2	2	\$74,812.79	\$74,812.79
Repair fan coil unit, 20 ton	10	2.00 Ea.	\$2,559.61	\$2,974.92	5.0000	5	4	\$14,874.58	\$11,899.66
Replace fan coil unit, 20 ton	15	2.00 Ea.	\$17,068.96	\$20,057.01	3.3333	3	3	\$60,171.03	\$60,171.03
Replace fan & motor, propeller exhaust, 4700 CFM exhaust fan	15	0.50 Ea.	\$1,019.93	\$1,187.82	3.3333	3	3	\$3,563.47	\$3,563.47
Repair central station A.H.U., 8000 CFM	10	0.50 Ea.	\$651.04	\$757.65	5.0000	5	4	\$3,788.27	\$3,030.61
Replace central station A.H.U., 8000 CFM	15	0.50 Ea.	\$18,215.90	\$21,008.59	3.3333	3	3	\$63,025.76	\$63,025.76
Inspect sprinkler system	1	0.90 Ea.	\$30.89	\$38.64	50.0000	50	50	\$1,931.79	\$1,931.79
Replace sprinkler head	20	40.00 Ea.	\$3,420.91	\$4,207.58	2.5000	2	2	\$8,415.16	\$8,415.16
Rebuild double check 3" backflow preventer sprinkler system	1	0.90 Ea.	\$639.37	\$765.98	50.0000	50	50	\$38,299.22	\$38,299.22
Replace fire pump / electric motor assembly 100 H.P.	25	0.90 Ea.	\$39,725.17	\$45,819.31	2.0000	2	2	\$91,638.61	\$91,638.61
Maintenance and repair motor starter, up to 600 V	5	1.00 Ea.	\$279.64	\$337.60	10.0000	10	10	\$3,375.98	\$3,375.98
Maintenance and inspection motor starter, up to 600 V	0.5	1.00 Ea.	\$53.98	\$67.63	100.0000	100	100	\$6,763.01	\$6,763.01
Replace starter motor starter, up to 600 V	18	1.00 Ea.	\$805.31	\$958.07	2.7778	2	2	\$1,916.15	\$1,916.15
Maintenance and inspection lighting panel, indoor	3	1.50 Ea.	\$60.97	\$76.38	16.6667	16	16	\$1,222.12	\$1,222.12
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
Replace circuit breaker molded case, 480 V, 1 pole circuit breaker	50	21.00 Ea.	\$11,514.06	\$13,412.81	1.0000	1	1	\$13,412.81	\$13,412.81
Maintenance and repair incandescent lighting fixtures	10	3.00 Ea.	\$206.60	\$245.96	5.0000	5	5	\$1,229.78	\$1,229.78
Replace incandescent lighting fixture lamp	5	3.00 Ea.	\$34.45	\$41.60	10.0000	10	10	\$416.03	\$416.03
Replace fluorescent light fixture ballast, 80 W	10	35.00 Ea.	\$4,363.40	\$5,293.30	5.0000	5	5	\$26,466.52	\$26,466.52
Replace lamps (2 lamps), 4', 34 W energy saver	10	35.00 Ea.	\$882.49	\$1,105.26	5.0000	5	5	\$5,526.31	\$5,526.31
Replace metal halide ballast, 400 W	10	19.00 Ea.	\$3,343.09	\$3,997.64	5.0000	5	5	\$19,988.18	\$19,988.18
Replace metal halide fixture lamp, 400 W	5	19.00 Ea.	\$1,261.38	\$1,516.32	10.0000	10	10	\$15,163.21	\$15,163.21
Repair smoke detector	10	9.00 Ea.	\$507.49	\$627.43	5.0000	5	4	\$3,137.13	\$2,509.71
Check operation smoke detector	1	9.00 Ea.	\$145.75	\$182.60	50.0000	50	50	\$9,130.06	\$9,130.06

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost	
Replace smoke detector	15	9.00 Ea.	\$2,558.14	\$3,055.16	3.3333	3	3	\$9,165.47	\$9,165.47	
Check and repair manual pull station	10	2.00 Ea.	\$175.39	\$215.66	5.0000	5	4	\$1,078.30	\$862.64	
Replace manual pull station	15	2.00 Ea.	\$406.94	\$489.88	3.3333	3	3	\$1,469.65	\$1,469.65	
Minor repairs to fire alarm control panel	5	0.90 Ea.	\$134.74	\$164.05	10.0000	10	10	\$1,640.47	\$1,640.47	
Maintenance and inspection fire alarm control panel	0.5	0.90 Ea.	\$38.87	\$48.69	100.0000	100	100	\$4,869.37	\$4,869.37	
Replace fire alarm control panel	15	0.90 Ea.	\$1,758.12	\$2,152.73	3.3333	3	3	\$6,458.19	\$6,458.19	
Replace fire alarm bell, 6"	20	2.00 Ea.	\$389.92	\$470.55	2.5000	2	2	\$941.10	\$941.10	
			\$417,794.67	\$495,336.32				MR Subtotal	\$1,302,864.99	
									MR Per Year	\$25,961.68
									PM Total	\$15,103.73
									Subtotal	\$41,065.41
									Total Per Unit	\$4.33

FAC 1431 SHIP OPERATIONS BUILDING

SUC \$4.33

Release 2021 Qtr 3

UM SF

Zip Code Prefix 222

Design Life 50

Type PM

Average Size 9482.166000000001

Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Door, emergency egress, swinging, annualized	4.00	1.04	\$58.37	\$43.00	\$0.00	\$101.37	\$120.10	\$141.76
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
Fire doors, swinging, annualized	3.00	1.18	\$42.96	\$43.67	\$0.00	\$86.64	\$104.03	\$123.58
Urinals, annualized	3.00	0.68	\$18.96	\$34.36	\$0.00	\$53.32	\$65.52	\$78.67
Toilet (vacuum breaker type), annualized	8.00	1.42	\$67.53	\$71.18	\$0.00	\$138.72	\$166.83	\$198.31
Lavatories, annualized	10.00	3.48	\$59.65	\$207.04	\$0.00	\$266.68	\$334.76	\$405.82
Drink fountain, annualized	2.00	1.24	\$41.45	\$62.55	\$0.00	\$104.00	\$126.91	\$151.90
Boiler, hot water, oil, gas, or comb. fired, 120 - 500 MBH, annualized	2.00	31.76	\$154.68	\$1,894.15	\$0.00	\$2,048.83	\$2,632.55	\$3,223.99
Chiller, recip., air cooled, up to 25 tons, annualized	1.00	9.72	\$99.58	\$585.87	\$0.00	\$685.45	\$871.17	\$1,061.86
Air handling unit, 25 thru 50 tons, annualized	1.00	1.94	\$379.12	\$97.79	\$0.00	\$476.92	\$544.17	\$630.37
Fan coil unit, annualized	4.00	13.35	\$452.93	\$673.08	\$0.00	\$1,126.01	\$1,373.23	\$1,643.09
Fan, axial, up to 5,000 CFM, annualized	1.00	1.24	\$11.73	\$62.55	\$0.00	\$74.28	\$94.22	\$114.74
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
Fire pump, electric motor driven, annualized	1.00	47.75	\$53.08	\$2,841.22	\$0.00	\$2,894.30	\$3,751.98	\$4,612.31
Panelboard, 225 A and above, annualized	1.00	0.44	\$23.20	\$29.01	\$0.00	\$52.21	\$63.23	\$75.41
Motor control center, over 400 A, annualized	2.00	0.78	\$46.39	\$51.80	\$0.00	\$98.19	\$118.37	\$140.87
Crane, electric bridge, 5 to 15 ton, annualized	1.00	7.67	\$424.02	\$269.10	\$0.00	\$693.12	\$816.25	\$960.58
						\$9,889.64	\$12,445.27	\$15,103.73

FAC 1431 SHIP OPERATIONS BUILDING

Modeled Component List

CostWorks Release 2021 Qtr 3

B20 Exterior Enclosure	
Aluminum Window, Fixed, 1st floor	20.0 Ea.
Aluminum Window, Fixed, 2nd floor	20.0 Ea.
Steel, Painted	2.0 Ea.
Steel Single, Roll-Up	1.0 Ea.
B30 Roofing	
EPDM Roof	40.0 Sq.
C10 Interior Construction	
Steel Painted Interior Doors	2.0 Ea.
Solid Core Interior Doors	20.0 Ea.
Fire Doors, Swinging, annualized	3.0 Each
C20 Stairs	
Concrete Steps	26.0 S.F.
Metal Interior Stair Railing	16.0 L.F.
C30 Interior Finishes	
Fabric Interior Wall Finish	150.0 S.Y.
Concrete, Finished	25.0 C.S.F.
Vinyl	600.0 S.Y.
Acoustic Tile, fire-rated	36.0 C.S.F.
D20 Plumbing	
Tankless Water Closet	5.0 Ea.
Urinal	3.0 Ea.
Lavatory, Vitreous China	10.0 Ea.
Sink, Iron Enamel	1.0 Ea.
Drinking Fountain	2.0 Ea.
Water Heater, Electric, 120 Gallon	1.0 Ea.
Circulation Pump, 1/12 HP	1.0 Ea.
Drain: Roof, Scupper, Area	2.0 Ea.
D30 HVAC	
Boiler, Gas, 250 MBH	2.0 Ea.
Metal Flue / Chimney, 6" diameter	1.0 L.F.
Chiller, Air Cooled, Reciprocating, 50 ton	0.5 Ea.
Fan Coil, 20 ton	2.0 Ea.
Exhaust Fan, propeller exh., 4700 CFM	0.5 Ea.
Central Station Air Conditioning Air Handling Unit, 8000 CFM	0.5 Ea.
D40 Fire Protection	
Sprinkler System, Fire Supression, sprinkler head	40.0 Ea.
Sprinkler System, Fire Supression , 3" backflow preventer	0.9 Ea.
Fire Pump Electric Motor	0.9 Ea.
Fire Pump, Electric, annualized	1.0 Each
D50 Electrical	
Motor Starter, Up To 600 V	1.0 Ea.
Load Center, 100 A, maintenance & inspection	1.5 Ea.
Circuit Breaker, molded case, 480 V, 1 pole	21.0 Ea.
Smoke Detector	9.0 Ea.
Manual Pull Station	2.0 Ea.
Fire Alarm Control Panel	0.9 Ea.
Fire Alarm Bell	2.0 Ea.
E10 Equipment	
Crane, Electric, 5 to 15 ton, annualized	1.0 Each

FAC 1431 SHIP OPERATIONS BUILDING
Sustainment by Year
CostWorks Release 2021 Qtr 3

