

**FAC 1413 AIR CONTROL TOWER**

FY24 SUC: \$6.77 / SF  
Source: Calculated using R.S. Means CostWorks 2023 Qtr 4 component prices

FAC 1413 AIR CONTROL TOWER

Release 2023 Qtr 4  
Zip Code Prefix 222  
Type MR

UM SF  
Design Life 35  
Average Size 4193.091725

SUC \$6.77

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 faucets sink, service/utility	10	1.00 Ea.	\$195.47	\$235.12	3.5000	3	3	\$705.36	\$705.36
Unstop sink	2	1.00 Ea.	\$44.01	\$55.09	17.5000	17	17	\$936.60	\$936.60
Replace sink, P.E.C.I. service/utility	35	1.00 Ea.	\$1,674.37	\$1,957.84	1.0000	1	1	\$1,957.84	\$1,957.84
Check / minor repairs drinking fountain	1	1.00 Ea.	\$51.52	\$64.50	35.0000	35	35	\$2,257.50	\$2,257.50
Repair internal leaks drinking fountain	4	1.00 Ea.	\$47.77	\$59.80	8.7500	8	8	\$478.38	\$478.38
Correct water pressure drinking fountain	2	1.00 Ea.	\$44.01	\$55.09	17.5000	17	17	\$936.60	\$936.60
Replace refrigerant drinking fountain	2	1.00 Ea.	\$35.41	\$41.43	17.5000	17	17	\$704.31	\$704.31
Repair drain leak drinking fountain	4	1.00 Ea.	\$29.10	\$35.19	8.7500	8	7	\$281.51	\$246.33
Replace fountain drinking fountain	10	1.00 Ea.	\$1,620.81	\$1,904.30	3.5000	3	3	\$5,712.90	\$5,712.90
Overhaul water heater, gas / oil, 30 gallon	5	1.00 Ea.	\$123.53	\$154.64	7.0000	7	7	\$1,082.47	\$1,082.47
Clean and service water heater, gas / oil, 30 gallon	1	1.00 Ea.	\$206.10	\$258.00	35.0000	35	35	\$9,030.01	\$9,030.01
Replace water heater, gas / oil, 30 gallon	10	1.00 Ea.	\$2,957.73	\$3,432.65	3.5000	3	3	\$10,297.95	\$10,297.95
Inspect / check pump / motor operation, lubricate circulation pump, 1/12 HP	0.5	1.00 Ea.	\$8.44	\$10.56	70.0000	70	70	\$739.33	\$739.33
Replace pump / motor assembly circulation pump, 1/12 HP	10	1.00 Ea.	\$1,218.91	\$1,426.89	3.5000	3	3	\$4,280.68	\$4,280.68
Repair boiler, gas, 250 MBH	7	1.00 Ea.	\$2,758.88	\$3,222.41	5.0000	5	5	\$16,112.04	\$16,112.04
Replace boiler, gas, 250 MBH	30	1.00 Ea.	\$9,616.21	\$11,488.35	1.1667	1	1	\$11,488.35	\$11,488.35
Repair boiler blowoff system	10	1.00 Ea.	\$77.82	\$97.42	3.5000	3	3	\$292.27	\$292.27
Replace metal flue, all fuel SS, 6" diameter metal flue / chimney	15	18.00 L.F.	\$2,976.85	\$3,436.46	2.3333	2	2	\$6,872.91	\$6,872.91
Repair condenser, air cooled, 5 ton	10	1.00 Ea.	\$725.74	\$864.80	3.5000	3	3	\$2,594.41	\$2,594.41
Replace condenser, air cooled, 5 ton	15	1.00 Ea.	\$6,800.05	\$7,853.75	2.3333	2	2	\$15,707.50	\$15,707.50
Repair fan coil unit, 5 ton	10	1.00 Ea.	\$639.33	\$756.63	3.5000	3	2	\$2,269.90	\$1,513.26
Replace fan coil unit, 5 ton	15	1.00 Ea.	\$2,905.57	\$3,367.34	2.3333	2	2	\$6,734.69	\$6,734.69
Inspect sprinkler system	1	1.00 Ea.	\$36.17	\$45.28	35.0000	35	35	\$1,584.96	\$1,584.96
Replace sprinkler head	20	6.00 Ea.	\$525.89	\$648.91	1.7500	1	1	\$648.91	\$648.91
Replace fuse	25	14.00 Ea.	\$6,396.53	\$7,345.36	1.4000	1	1	\$7,345.36	\$7,345.36
Repair switchboard meter	10	1.00 Ea.	\$1,218.62	\$1,434.12	3.5000	3	3	\$4,302.37	\$4,302.37
Maintenance and repair motor starter, up to 600 V	5	2.00 Ea.	\$525.64	\$638.99	7.0000	7	7	\$4,472.92	\$4,472.92
Maintenance and repair motor starter, 600 V	3	1.00 Ea.	\$701.17	\$863.04	11.6667	11	11	\$9,493.46	\$9,493.46
Maintenance and inspection motor starter, 600 V	0.25	1.00 Ea.	\$56.88	\$71.26	140.0000	140	140	\$9,976.78	\$9,976.78
Replace starter motor starter, 600 V	18	1.00 Ea.	\$5,809.05	\$6,768.71	1.9444	1	1	\$6,768.71	\$6,768.71

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Maintenance and repair secondary transformer, dry	10	1.00 Ea.	\$254.10	\$303.63	3.5000	3	3	\$910.88	\$910.88
Maintenance and inspection secondary transformer, dry	0.5	1.00 Ea.	\$85.32	\$106.89	70.0000	70	70	\$7,482.59	\$7,482.59
Maintenance and repair breaker, molded case, 480 V, 1 pole	20	1.00 Ea.	\$75.84	\$95.02	1.7500	1	1	\$95.02	\$95.02
Maintenance and repair breaker, molded case, 480 V, 2 pole	20	2.00 Ea.	\$151.68	\$190.03	1.7500	1	1	\$190.03	\$190.03
Maintenance and repair voice/data outlet	10	14.00 Ea.	\$760.52	\$949.78	3.5000	3	3	\$2,849.35	\$2,849.35
Replace voice/data outlet	20	14.00 Ea.	\$372.31	\$454.21	1.7500	1	1	\$454.21	\$454.21
Maintenance and inspection patch panel	0.5	1.00 Ea.	\$91.01	\$114.02	70.0000	70	70	\$7,981.42	\$7,981.42
Replace patch panel	15	1.00 Ea.	\$886.40	\$1,066.81	2.3333	2	2	\$2,133.61	\$2,133.61
Replace lavatory, vitreous china	35	2.00 Ea.	\$1,437.45	\$1,726.81	1.0000	1	1	\$1,726.81	\$1,726.81
Replace faucet washer sink, service/utility	2	1.00 Ea.	\$13.45	\$16.77	17.5000	17	17	\$285.08	\$285.08
Clean trap	3	1.00 Ea.	\$9.01	\$11.27	11.6667	11	11	\$124.01	\$124.01
Repair failed breaker, molded case, 600 V, 3 pole	10	1.00 Ea.	\$363.58	\$433.99	3.5000	3	3	\$1,301.97	\$1,301.97
Maintenance and inspection circuit breaker, molded case, 600 V, 3 pole	0.33	1.00 Ea.	\$34.13	\$42.76	106.0606	106	106	\$4,532.31	\$4,532.31
Maintenance and repair safety switch, 3 pole safety switch, heavy duty	8	1.00 Ea.	\$42.34	\$53.05	4.3750	4	4	\$212.20	\$212.20
Maintenance and repair receptacles and plugs	20	56.00 Ea.	\$2,466.42	\$3,078.98	1.7500	1	1	\$3,078.98	\$3,078.98
Maintenance and repair wiring devices, switches	10	31.00 Ea.	\$1,365.34	\$1,704.44	3.5000	3	3	\$5,113.31	\$5,113.31
Maintenance and repair incandescent lighting fixtures	10	4.00 Ea.	\$269.34	\$321.79	3.5000	3	2	\$965.37	\$643.58
Replace incandescent lighting fixture lamp	5	4.00 Ea.	\$51.36	\$61.81	7.0000	7	7	\$432.70	\$432.70
Replace incandescent lighting fixture	20	4.00 Ea.	\$558.85	\$677.84	1.7500	1	1	\$677.84	\$677.84
Replace fluorescent light fixture ballast, 80 W	10	13.00 Ea.	\$1,359.88	\$1,676.88	3.5000	3	3	\$5,030.64	\$5,030.64
Replace lamps (2 lamps), 4', 34 W energy saver	10	13.00 Ea.	\$344.31	\$431.20	3.5000	3	3	\$1,293.59	\$1,293.59
Replace metal halide ballast, 175 W	10	4.00 Ea.	\$667.55	\$799.06	3.5000	3	2	\$2,397.17	\$1,598.12
Replace metal halide fixture lamp, 175 W	5	4.00 Ea.	\$228.39	\$277.97	7.0000	7	7	\$1,945.76	\$1,945.76
Replace metal halide fixture, 175 W	20	4.00 Ea.	\$2,954.92	\$3,483.45	1.7500	1	1	\$3,483.45	\$3,483.45
Repair telephone cable, #22-4 conductor	8	1.20 M.L.F.	\$69.66	\$85.68	4.3750	4	4	\$342.72	\$342.72
Maintenance and repair TV cable outlet	10	16.00 Ea.	\$869.17	\$1,085.47	3.5000	3	3	\$3,256.40	\$3,256.40
Replace TV cable outlet	20	16.00 Ea.	\$1,191.13	\$1,483.01	1.7500	1	1	\$1,483.01	\$1,483.01
Replace intercom master station	15	1.00 Ea.	\$2,959.51	\$3,457.56	2.3333	2	2	\$6,915.13	\$6,915.13
Repair smoke detector	10	5.00 Ea.	\$290.05	\$359.16	3.5000	3	2	\$1,077.49	\$718.33
Clean out strainer and P trap lavatory, vitreous china	2	2.00 Ea.	\$73.64	\$92.18	17.5000	17	17	\$1,567.08	\$1,567.08
Check operation smoke detector	1	5.00 Ea.	\$85.00	\$106.50	35.0000	35	35	\$3,727.44	\$3,727.44
Replace smoke detector	15	5.00 Ea.	\$1,512.76	\$1,806.09	2.3333	2	2	\$3,612.18	\$3,612.18

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Check and repair manual pull station	10	1.00 Ea.	\$89.88	\$110.75	3.5000	3	2	\$332.24	\$221.49
Replace manual pull station	15	1.00 Ea.	\$208.76	\$251.76	2.3333	2	2	\$503.53	\$503.53
Minor repairs to annunciation panel	5	1.00 Ea.	\$149.42	\$182.60	7.0000	7	7	\$1,278.17	\$1,278.17
Maintenance and inspection annunciation panel	0.5	1.00 Ea.	\$45.50	\$57.01	70.0000	70	70	\$3,990.71	\$3,990.71
Replace fire alarm bell, 6"	20	1.00 Ea.	\$180.61	\$219.77	1.7500	1	1	\$219.77	\$219.77
Maintenance and repair building structure ground	7	0.80 M.L.F.	\$73.83	\$92.26	5.0000	5	5	\$461.29	\$461.29
Replace building structure ground	50	0.80 M.L.F.	\$4,309.30	\$5,224.88	0.7000	0	0	\$0.00	\$0.00
Maintenance and repair of general wiring lightning protection system	1	0.80 M.L.F.	\$87.60	\$107.91	35.0000	35	35	\$3,776.83	\$3,776.83
Replace lightning protection general wiring system	25	0.80 M.L.F.	\$10,038.69	\$11,900.34	1.4000	1	1	\$11,900.34	\$11,900.34
Replace lamp emergency lighting fixture	2	2.00 Ea.	\$108.99	\$131.71	17.5000	17	17	\$2,239.07	\$2,239.07
Replace emergency lighting fixture	20	2.00 Ea.	\$1,149.61	\$1,359.75	1.7500	1	1	\$1,359.75	\$1,359.75
Maintenance and inspection UPS battery	0.17	1.00 Ea.	\$68.26	\$85.52	205.8824	205	205	\$17,530.63	\$17,530.63
Replace motor generator UPS battery	15	1.00 Ea.	\$1,066.21	\$1,264.47	2.3333	2	2	\$2,528.94	\$2,528.94
Replace glass - 3rd floor (1% of glass) - steel frame window fixed	1	2.40 S.F.	\$64.84	\$78.41	35.0000	35	35	\$2,744.31	\$2,744.31
Replace glass - 1st floor (1% of glass) - alum. window fixed	1	4.20 S.F.	\$55.23	\$64.85	35.0000	35	35	\$2,269.75	\$2,269.75
Replace glass - 2nd floor (1% of glass) - alum. window fixed	1	2.40 S.F.	\$271.94	\$335.71	35.0000	35	35	\$11,749.77	\$11,749.77
Repair 2'-0" x 3'-0" aluminum window - 2nd floor	20	3.90 Ea.	\$804.94	\$969.11	1.7500	1	1	\$969.11	\$969.11
Replace 2'-0" x 3'-0" aluminum window - 2nd floor	50	3.90 Ea.	\$2,837.72	\$3,344.34	0.7000	0	0	\$0.00	\$0.00
Repair steel, painted, door	14	2.00 Ea.	\$1,404.67	\$1,668.39	2.5000	2	2	\$3,336.77	\$3,336.77
Refinish 3'-0" x 7'-0" steel, painted, door	4	2.00 Ea.	\$92.11	\$112.79	8.7500	8	8	\$902.34	\$902.34
Replace 3'-0" x 7'-0" steel, painted, door	45	2.00 Ea.	\$1,834.22	\$2,123.85	0.7778	0	0	\$0.00	\$0.00
Total EPDM roof replacement	25	13.18 Sq.	\$9,632.02	\$11,374.72	1.4000	1	1	\$11,374.72	\$11,374.72
Repair 8" concrete block wall - (2% of walls) painted	25	0.16 C.S.F.	\$183.19	\$220.33	1.4000	1	1	\$220.33	\$220.33
Refinish concrete block wall painted	4	8.00 C.S.F.	\$949.52	\$1,147.95	8.7500	8	8	\$9,183.56	\$9,183.56
Safety glass replacement, (3% of glass) steel painted interior door	1	12.00 S.F.	\$299.35	\$352.90	35.0000	35	35	\$12,351.48	\$12,351.48
Refinish, 3'-0" x 7'-0" steel w/ safety glass door	4	2.00 Ea.	\$115.30	\$141.75	8.7500	8	8	\$1,134.04	\$1,134.04
Replace 3'-0" x 7'-0" steel door w/ vision lite, & frame	60	2.00 Ea.	\$3,089.41	\$3,573.53	0.5833	0	0	\$0.00	\$0.00
Repair concrete steps	15	32.00 S.F.	\$1,000.78	\$1,153.60	2.3333	2	2	\$2,307.20	\$2,307.20
Replace concrete steps	100	32.00 S.F.	\$1,830.10	\$2,232.26	0.3500	0	0	\$0.00	\$0.00
Refinish metal stair railing, interior	7	54.00 S.F.	\$86.01	\$105.86	5.0000	5	5	\$529.31	\$529.31
Replace metal stair railing, interior	45	54.00 L.F.	\$2,518.62	\$2,947.35	0.7778	0	0	\$0.00	\$0.00
Repair 5/8" drywall - (2% of walls)	20	48.00 S.F.	\$80.20	\$98.02	1.7500	1	1	\$98.02	\$98.02

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost	
Refinish drywall	4	240.00 S.F.	\$162.63	\$199.79	8.7500	8	8	\$1,598.36	\$1,598.36	
Office painting, 10' x 15', 10' high walls	5	5.00 Ea.	\$1,386.28	\$1,697.40	7.0000	7	7	\$11,881.79	\$11,881.79	
Replace vinyl tile flooring	18	6.56 S.Y.	\$335.15	\$412.44	1.9444	1	1	\$412.44	\$412.44	
Ceramic tile floor repairs - (2% of floors)	15	0.06 C.S.F.	\$43.14	\$53.79	2.3333	2	2	\$107.58	\$107.58	
Replace 2" x 2" thin set ceramic tile floor	50	3.20 C.S.F.	\$4,273.76	\$5,151.31	0.7000	0	0	\$0.00	\$0.00	
Replace flush valve diaphragm tankless water closet	10	3.00 Ea.	\$81.79	\$101.57	3.5000	3	3	\$304.70	\$304.70	
Rebuild flush valve tankless water closet	20	3.00 Ea.	\$575.64	\$693.81	1.7500	1	1	\$693.81	\$693.81	
Unplug clogged line tankless water closet	5	3.00 Ea.	\$689.79	\$863.50	7.0000	7	7	\$6,044.47	\$6,044.47	
Replace tankless water closet	35	3.00 Ea.	\$4,249.66	\$4,914.96	1.0000	1	1	\$4,914.96	\$4,914.96	
Replace tankless flush valve	25	3.00 Ea.	\$810.73	\$951.65	1.4000	1	1	\$951.65	\$951.65	
Replace wax ring gasket for tankless water closet	5	3.00 Ea.	\$447.49	\$559.66	7.0000	7	7	\$3,917.62	\$3,917.62	
Replace flush valve diaphragm for a urinal	7	1.00 Ea.	\$27.26	\$33.86	5.0000	5	5	\$169.28	\$169.28	
Rebuild flush valve for a urinal	20	1.00 Ea.	\$191.88	\$231.27	1.7500	1	1	\$231.27	\$231.27	
Unplug line urinal	5	1.00 Ea.	\$152.64	\$191.08	7.0000	7	7	\$1,337.57	\$1,337.57	
Replace wall-hung urinal	35	1.00 Ea.	\$1,087.52	\$1,308.05	1.0000	1	1	\$1,308.05	\$1,308.05	
Replace washer in spud connection lavatory, vitreous china	7	2.00 Ea.	\$34.64	\$42.28	5.0000	5	5	\$211.41	\$211.41	
Replace washer in faucet lavatory, vitreous china	2	2.00 Ea.	\$27.13	\$33.83	17.5000	17	17	\$575.18	\$575.18	
Replace faucets lavatory, vitreous china	10	2.00 Ea.	\$390.94	\$470.24	3.5000	3	3	\$1,410.73	\$1,410.73	
			\$131,616.94	\$156,093.01				MR Subtotal	\$361,727.05	
									MR Per Year	\$10,242.99
									PM Total	\$18,160.04
									Subtotal	\$28,403.03
									Total Per Unit	\$6.77

FAC 1413 AIR CONTROL TOWER

SUC \$6.77

Release 2023 Qtr 4

UM SF

Zip Code Prefix 222

Design Life 35

Type PM

Average Size 4193.091725

Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Urinals, annualized	1.00	0.23	\$6.63	\$12.16	\$0.00	\$18.79	\$23.11	\$27.75
Toilet (vacuum breaker type), annualized	3.00	0.53	\$26.57	\$28.38	\$0.00	\$54.95	\$66.12	\$78.62
Lavatories, annualized	2.00	0.70	\$15.58	\$43.60	\$0.00	\$59.18	\$73.82	\$89.24
Drink fountain, annualized	1.00	0.62	\$37.44	\$33.14	\$0.00	\$70.58	\$84.27	\$99.82
Backflow prevention device, up to 4", annualized	1.00	0.33	\$14.02	\$20.93	\$0.00	\$34.94	\$42.62	\$51.01
Light, emergency, hardwired system, annualized	8.00	2.00	\$71.84	\$126.19	\$0.00	\$198.03	\$243.08	\$291.71
Fan coil unit, annualized	2.00	6.68	\$163.94	\$357.52	\$0.00	\$521.46	\$645.11	\$776.96
Extinguishing system, wet pipe, annualized	1.00	11.34	\$49.59	\$710.68	\$0.00	\$760.27	\$978.43	\$1,199.07
Elevator, cable, electric, passenger / freight, annualized	1.00	47.90	\$3,349.95	\$4,278.12	\$0.00	\$7,628.07	\$9,246.51	\$11,032.44
Switchboard, with air circuit breaker, annualized	1.00	13.32	\$15.98	\$927.90	\$0.00	\$943.88	\$1,223.85	\$1,504.62
Circuit breaker, high voltage air, annualized	1.00	0.47	\$13.83	\$32.48	\$0.00	\$46.31	\$57.43	\$69.25
Transformer, dry type 500 KVA and over, annualized	2.00	1.54	\$27.66	\$107.22	\$0.00	\$134.88	\$169.82	\$206.13
Panelboard, 225 A and above, annualized	2.00	0.88	\$44.00	\$60.83	\$0.00	\$104.83	\$127.48	\$152.33
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
						\$12,236.91	\$15,097.11	\$18,160.04



# FAC 1413 AIR CONTROL TOWER

## Modeled Component List

### CostWorks Release 2023 Qtr 4

#### D20 Plumbing

Service/Utility Sink	1.0 Ea.
Drinking Fountain	1.0 Ea.
Water Heater, Gas / Oil, 30 Gallon	1.0 Ea.
Circulation Pump, 1/12 HP	1.0 Ea.
Lavatory, Vitreous China	2.0 Ea.
Tankless Water Closet	3.0 Ea.
Urinal	1.0 Ea.

#### D30 HVAC

Boiler, Gas, 250 MBH	1.0 Ea.
Metal Flue / Chimney, 6" diameter	18.0 L.F.
Air Cooled Condenser, 5 ton	1.0 Ea.
Fan Coil, 5 ton	1.0 Ea.

#### D40 Fire Protection

Sprinkler System, Fire Suppression, sprinkler head	6.0 Ea.
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#### D50 Electrical

Motor Starter, 600 V	1.0 Ea.
Incandescent Lighting Fixtures	4.0 Ea.
Metal Halide Fixture	4.0 Ea.
TV Cable Outlet	16.0 Ea.
Smoke Detector	5.0 Ea.
Manual Pull Station	1.0 Ea.
Fire Alarm Bell	1.0 Ea.
Building Structure Ground	0.8 M.L.F.
Lightning Protection System	0.8 M.L.F.
Emergency Lighting Fixture	2.0 Ea.
UPS Battery, maintenance & inspection	1.0 Ea.
UPS Battery, replace motor	1.0 Ea.
UPS, up to 200 KVA, annualized	1.0 Each

#### B20 Exterior Enclosure

Aluminum Window, Fixed, 2nd floor	3.9 Ea.
Steel, Painted	2.0 Ea.

#### B30 Roofing

EPDM Roof	13.175 Sq.
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#### C10 Interior Construction

Concrete Block, Painted	8.0 C.S.F.
Steel Painted Interior Doors, vision lite	2.0 Ea.

#### C20 Stairs

Concrete Steps	32.0 S.F.
Metal Interior Stair Railing	54.0 L.F.

#### C30 Interior Finishes

Vinyl	6.56 S.Y.
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#### D10 Conveying

Elevator, cable annualized	1.0 Each
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FAC 1413 AIR CONTROL TOWER  
Sustainment by Year  
CostWorks Release 2023 Qtr 4

