

**FAC 2152 WEAPON MAINTENANCE SHOP, DEPOT**

FY22 SUC: \$3.52 / SF  
Source: Calculated using R.S. Means CostWorks 2021 Qtr 3 component prices

FAC 2152 WEAPON MAINTENANCE SHOP, DEPOT

Release 2021 Qtr 3  
Zip Code Prefix 222  
Type MR

UM SF  
Design Life 50  
Average Size 13197.7

SUC \$3.52

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
Point and refinish painted concrete block wall, 1st floor	25	39.22 C.S.F.	\$18,423.24	\$22,738.22	2.0000	2	2	\$45,476.44	\$45,476.44
Replace aluminum siding, 2nd floor	35	32.80 C.S.F.	\$23,482.89	\$28,440.56	1.4286	1	1	\$28,440.56	\$28,440.56
Refinish aluminum siding, 2nd floor	20	32.80 C.S.F.	\$9,209.47	\$11,396.72	2.5000	2	2	\$22,793.44	\$22,793.44
Replace glass - 1st floor (1% of glass) - steel frame window	1	2.04 S.F.	\$24.60	\$28.91	50.0000	50	50	\$1,445.50	\$1,445.50
Repair 3'-9" x 5'-5" steel frame window - 1st floor.	20	8.00 Ea.	\$2,386.43	\$2,803.34	2.5000	2	2	\$5,606.69	\$5,606.69
Refinish 3'-9" x 5'-5" steel frame window - 1st floor.	5	8.00 Ea.	\$640.66	\$794.77	10.0000	10	10	\$7,947.74	\$7,947.74
Replace 3'-9" x 5'-5" steel frame window - 1st floor.	45	8.00 Ea.	\$13,254.87	\$15,262.17	1.1111	1	1	\$15,262.17	\$15,262.17
Finish new 3'-9" x 5'-5" steel frame window - 1st floor.	45	8.00 Ea.	\$555.86	\$689.32	1.1111	1	1	\$689.32	\$689.32
Repair steel, painted, door	14	2.00 Ea.	\$1,250.15	\$1,488.01	3.5714	3	3	\$4,464.03	\$4,464.03
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
Refinish 12' x 24' steel double roll-up door	5	2.00 Ea.	\$815.72	\$999.15	10.0000	10	10	\$9,991.53	\$9,991.53
Replace 12' x 24' steel double roll-up door	35	2.00 Ea.	\$10,814.33	\$12,835.47	1.4286	1	1	\$12,835.47	\$12,835.47
Debris removal, by hand and visual inspection, metal panel roofing	1	10.48 M.S.F.	\$238.69	\$291.13	50.0000	50	50	\$14,556.28	\$14,556.28
Minor metal roof finish repairs, 2% of roof area, metal panel roofing	5	370.58 S.F.	\$1,294.47	\$1,553.09	10.0000	10	10	\$15,530.87	\$15,530.87
Metal roof flashing replacement, 2 SF/sq repaired, metal panel roofing	1	9.40 S.F.	\$172.02	\$208.42	50.0000	50	50	\$10,421.06	\$10,421.06
Minor metal roof panel replacement, 2.5% of roof area	20	338.02 S.F.	\$3,862.76	\$4,587.63	2.5000	2	2	\$9,175.27	\$9,175.27
Total metal roof panel replacement	30	135.28 Sq.	\$114,331.43	\$135,417.48	1.6667	1	1	\$135,417.48	\$135,417.48
Replace aluminum gutter, enameled, 5" K type, .032 " thick	40	350.00 L.F.	\$3,553.31	\$4,279.10	1.2500	1	1	\$4,279.10	\$4,279.10
Replace aluminum downspout, 3" x 4", .024" thick	25	290.00 L.F.	\$2,296.13	\$2,779.85	2.0000	2	2	\$5,559.70	\$5,559.70
Repair fully glazed wood door	10	2.00 Ea.	\$586.90	\$683.13	5.0000	5	5	\$3,415.64	\$3,415.64
Refinish 3'-0" x 7'-0" fully glazed wood door	4	2.00 Ea.	\$140.71	\$174.38	12.5000	12	12	\$2,092.51	\$2,092.51
Replace 3'-0" x 7'-0" fully glazed wood door	40	2.00 Ea.	\$2,277.72	\$2,647.81	1.2500	1	1	\$2,647.81	\$2,647.81
Repair steel painted interior door	14	12.00 Ea.	\$3,521.43	\$4,098.77	3.5714	3	3	\$12,296.30	\$12,296.30
Refinish 3'-0" x 7'-0" steel painted interior door	4	12.00 Ea.	\$631.02	\$777.44	12.5000	12	12	\$9,329.23	\$9,329.23
Replace 3'-0" x 7'-0" steel painted interior door	60	12.00 Ea.	\$14,616.41	\$16,945.00	0.8333	0	0	\$0.00	\$0.00
Repair concrete steps	15	47.00 S.F.	\$1,073.95	\$1,243.18	3.3333	3	3	\$3,729.54	\$3,729.54

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Replace concrete steps	100	47.00 S.F.	\$2,512.56	\$3,064.03	0.5000	0	0	\$0.00	\$0.00
Replace metal stair railing, interior	45	26.00 L.F.	\$1,116.85	\$1,307.28	1.1111	1	1	\$1,307.28	\$1,307.28
Repair 5/8" drywall - (2% of walls)	20	84.00 S.F.	\$140.73	\$171.23	2.5000	2	2	\$342.47	\$342.47
Office painting, 10' x 15', 10' high walls	5	22.00 Ea.	\$5,526.42	\$6,778.76	10.0000	10	10	\$67,787.59	\$67,787.59
Replace flush valve diaphragm tankless water closet	10	6.00 Ea.	\$157.32	\$195.22	5.0000	5	5	\$976.08	\$976.08
Rebuild flush valve tankless water closet	20	6.00 Ea.	\$1,082.60	\$1,304.74	2.5000	2	2	\$2,609.49	\$2,609.49
Unplug clogged line tankless water closet	5	6.00 Ea.	\$1,310.37	\$1,638.76	10.0000	10	10	\$16,387.61	\$16,387.61
Replace tankless flush valve	25	6.00 Ea.	\$1,513.29	\$1,776.66	2.0000	2	2	\$3,553.33	\$3,553.33
Replace flush valve diaphragm for a urinal	7	4.00 Ea.	\$104.88	\$130.14	7.1429	7	7	\$911.00	\$911.00
Rebuild flush valve for a urinal	20	4.00 Ea.	\$721.74	\$869.83	2.5000	2	2	\$1,739.66	\$1,739.66
Unplug line urinal	5	4.00 Ea.	\$580.29	\$725.71	10.0000	10	10	\$7,257.12	\$7,257.12
Replace washer in spud connection lavatory, vitreous china	7	6.00 Ea.	\$98.78	\$120.48	7.1429	7	7	\$843.36	\$843.36
Replace washer in faucet lavatory, vitreous china	2	6.00 Ea.	\$77.31	\$96.31	25.0000	25	25	\$2,407.77	\$2,407.77
Replace faucets lavatory, vitreous china	10	6.00 Ea.	\$1,090.36	\$1,312.53	5.0000	5	5	\$6,562.66	\$6,562.66
Clean out strainer and P trap lavatory, vitreous china	2	6.00 Ea.	\$209.22	\$261.65	25.0000	25	25	\$6,541.19	\$6,541.19
Replace faucet washer sink, iron enamel	2	6.00 Ea.	\$76.66	\$95.50	25.0000	25	25	\$2,387.40	\$2,387.40
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
Inspect / clean shower head fiberglass	3	2.00 Ea.	\$98.79	\$123.54	16.6667	16	16	\$1,976.67	\$1,976.67
Replace mixing valve barrel shower, fiberglass	2	6.00 Ea.	\$1,695.54	\$1,993.92	25.0000	25	25	\$49,847.91	\$49,847.91
Replace mixing valve shower, fiberglass	10	6.00 Ea.	\$1,655.29	\$2,013.33	5.0000	5	5	\$10,066.66	\$10,066.66
Replace shower and fittings, fiberglass	20	6.00 Ea.	\$5,799.83	\$6,936.96	2.5000	2	2	\$13,873.92	\$13,873.92
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
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

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Resolder joint pipe & fittings, copper	10	2.00 Ea.	\$89.19	\$110.56	5.0000	5	5	\$552.79	\$552.79
Replace pipe and fittings, copper 3/4"	20	16.00 L.F.	\$416.86	\$502.12	2.5000	2	2	\$1,004.24	\$1,004.24
Replace pipe and fittings, copper 2"	25	8.00 L.F.	\$491.88	\$585.16	2.0000	2	2	\$1,170.32	\$1,170.32
Remove old insulation & replace with new, pipe 3/4", wall 1"	15	16.00 L.F.	\$133.73	\$165.15	3.3333	3	3	\$495.46	\$495.46
Minor repairs, adjustments water heater, gas / oil, 1150 GPH	2	1.00 Ea.	\$98.31	\$122.94	25.0000	25	25	\$3,073.61	\$3,073.61
Clean & service water heater, gas / oil, 1150 GPH	2	1.00 Ea.	\$586.59	\$733.59	25.0000	25	25	\$18,339.78	\$18,339.78
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	8.00 L.F.	\$535.58	\$642.86	1.2500	1	1	\$642.86	\$642.86
Unclog floor drain, PVC	20	1.00 Ea.	\$47.80	\$59.77	2.5000	2	2	\$119.55	\$119.55
Repair joint pipe and fittings, PVC	10	1.00 Ea.	\$151.29	\$188.00	5.0000	5	5	\$940.00	\$940.00
Replace pipe, 4" pipe and fittings, PVC	30	8.00 L.F.	\$652.71	\$803.07	1.6667	1	1	\$803.07	\$803.07
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
Resolder joint pipe & fittings, oxygen	12	1.00 Ea.	\$72.11	\$89.21	4.1667	4	4	\$356.83	\$356.83
Replace pipe and fittings, oxygen	25	8.00 L.F.	\$207.39	\$249.76	2.0000	2	2	\$499.51	\$499.51
Check and adjust 2 H.P. compressor	1	1.00 Ea.	\$84.66	\$105.88	50.0000	50	50	\$5,294.08	\$5,294.08
Replace 2 H.P. compressor	25	1.00 Ea.	\$4,236.17	\$4,919.82	2.0000	2	2	\$9,839.63	\$9,839.63
Repair boiler, gas, 2000 MBH	7	1.00 Ea.	\$5,785.82	\$6,733.75	7.1429	7	7	\$47,136.22	\$47,136.22
Replace boiler, gas, 2000 MBH	30	1.00 Ea.	\$39,838.14	\$46,620.21	1.6667	1	1	\$46,620.21	\$46,620.21
Repair circulator pump, 1 H.P.	5	1.00 Ea.	\$98.36	\$116.02	10.0000	10	7	\$1,160.17	\$812.12
Replace circulator. pump, 1 H.P.	15	1.00 Ea.	\$5,768.48	\$6,613.79	3.3333	3	3	\$19,841.37	\$19,841.37
Repair terminal reheat, 36" x 36" coil	10	4.00 Ea.	\$651.76	\$815.10	5.0000	5	5	\$4,075.51	\$4,075.51
Replace terminal reheat, 36" x 36" coil	15	4.00 Ea.	\$13,769.87	\$16,001.01	3.3333	3	3	\$48,003.04	\$48,003.04
Repair single zone rooftop unit, 60 ton	10	1.00 Ea.	\$69,970.36	\$81,893.33	5.0000	5	4	\$409,466.65	\$327,573.32
Replace single zone rooftop unit, 60 ton	15	1.00 Ea.	\$93,908.65	\$109,692.80	3.3333	3	3	\$329,078.39	\$329,078.39
Repair central station A.H.U., 8000 CFM	10	1.00 Ea.	\$1,302.07	\$1,515.31	5.0000	5	4	\$7,576.53	\$6,061.23
Replace central station A.H.U., 8000 CFM	15	1.00 Ea.	\$36,431.80	\$42,017.17	3.3333	3	3	\$126,051.52	\$126,051.52
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	100.00 Ea.	\$8,552.28	\$10,518.95	2.5000	2	2	\$21,037.90	\$21,037.90
Rebuild double check 3" backflow preventer sprinkler system	1	1.00 Ea.	\$710.41	\$851.09	50.0000	50	50	\$42,554.69	\$42,554.69
Maintenance and repair motor starter, up to 600 V	5	3.00 Ea.	\$838.92	\$1,012.79	10.0000	10	10	\$10,127.94	\$10,127.94
Maintenance and inspection motor starter, up to 600 V	0.5	3.00 Ea.	\$161.94	\$202.89	100.0000	100	100	\$20,289.02	\$20,289.02
Replace starter motor starter, up to 600 V	18	3.00 Ea.	\$2,415.93	\$2,874.22	2.7778	2	2	\$5,748.45	\$5,748.45
Maintenance and inspection lighting panel, indoor	3	2.00 Ea.	\$81.29	\$101.84	16.6667	16	16	\$1,629.49	\$1,629.49

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 safety switch general, 2 pole	8	1.00 Ea.	\$40.64	\$50.92	6.2500	6	6	\$305.53	\$305.53	
Maintenance and inspection safety switch, 2 pole	1	1.00 Ea.	\$40.64	\$50.92	50.0000	50	50	\$2,546.07	\$2,546.07	
Replace safety switch, 240 V, 2 pole	25	1.00 Ea.	\$391.60	\$477.36	2.0000	2	2	\$954.72	\$954.72	
Replace fluorescent light fixture ballast, 80 W	10	20.00 Ea.	\$2,493.37	\$3,024.74	5.0000	5	5	\$15,123.72	\$15,123.72	
Replace lamps (2 lamps), 4', 34 W energy saver	10	20.00 Ea.	\$504.28	\$631.58	5.0000	5	5	\$3,157.89	\$3,157.89	
Replace metal halide ballast, 175 W	10	20.00 Ea.	\$2,969.69	\$3,566.02	5.0000	5	5	\$17,830.10	\$17,830.10	
Replace metal halide fixture lamp, 175 W	5	20.00 Ea.	\$999.74	\$1,223.07	10.0000	10	10	\$12,230.73	\$12,230.73	
Check and repair manual pull station	10	3.00 Ea.	\$263.09	\$323.49	5.0000	5	4	\$1,617.45	\$1,293.96	
Replace manual pull station	15	3.00 Ea.	\$610.40	\$734.82	3.3333	3	3	\$2,204.47	\$2,204.47	
Minor repairs to fire alarm control panel	5	1.00 Ea.	\$149.71	\$182.27	10.0000	10	10	\$1,822.75	\$1,822.75	
Maintenance and inspection fire alarm control panel	0.5	1.00 Ea.	\$43.18	\$54.10	100.0000	100	100	\$5,410.41	\$5,410.41	
Replace fire alarm control panel	15	1.00 Ea.	\$1,953.46	\$2,391.92	3.3333	3	3	\$7,175.76	\$7,175.76	
Replace fire alarm bell, 6"	20	15.00 Ea.	\$2,924.43	\$3,529.13	2.5000	2	2	\$7,058.26	\$7,058.26	
Replace lamp emergency lighting fixture	2	30.00 Ea.	\$1,640.68	\$1,976.27	25.0000	25	25	\$49,406.74	\$49,406.74	
Maintenance and repair exit light	20	30.00 Ea.	\$1,116.05	\$1,380.09	2.5000	2	2	\$2,760.19	\$2,760.19	
Replace lamp exit light	5	30.00 Ea.	\$505.40	\$598.90	10.0000	10	10	\$5,989.04	\$5,989.04	
			\$567,981.62	\$670,844.94				MR Subtotal	\$1,862,490.99	
									MR Per Year	\$37,115.14
									PM Total	\$9,348.67
									Subtotal	\$46,463.81
									Total Per Unit	\$3.52

**FAC 2152 WEAPON MAINTENANCE SHOP, DEPOT**

SUC \$3.52

Release 2021 Qtr 3

UM SF

Zip Code Prefix 222

Design Life 50

Type PM

Average Size 13197.7

Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Door, emergency egress, swinging, annualized	2.00	0.52	\$29.18	\$21.50	\$0.00	\$50.68	\$60.05	\$70.88
Door, overhead, electric, roll up, to 24' high x 25' wide, annualized	2.00	8.14	\$81.92	\$337.62	\$0.00	\$419.54	\$529.02	\$642.60
Urinals, annualized	4.00	0.91	\$25.27	\$45.81	\$0.00	\$71.09	\$87.36	\$104.89
Toilet (vacuum breaker type), annualized	6.00	1.06	\$50.65	\$53.39	\$0.00	\$104.04	\$125.12	\$148.74
Lavatories, annualized	6.00	2.09	\$35.79	\$124.22	\$0.00	\$160.01	\$200.86	\$243.49
Showers, annualized	6.00	1.37	\$77.34	\$81.67	\$0.00	\$159.01	\$191.24	\$227.35
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	1.00	15.88	\$77.34	\$947.08	\$0.00	\$1,024.42	\$1,316.27	\$1,612.00
Chiller, recip., air cooled, over 25 tons, annualized	1.00	12.89	\$91.50	\$775.28	\$0.00	\$866.78	\$1,108.51	\$1,354.82
Air handling unit, 25 thru 50 tons, annualized	1.00	1.94	\$379.12	\$97.79	\$0.00	\$476.92	\$544.17	\$630.37
Air filter, electrostatic, annualized	1.00	7.60	\$10.16	\$383.24	\$0.00	\$393.40	\$509.38	\$625.88
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
Extinguishing system, FM200, annualized	1.00	9.26	\$611.65	\$462.52	\$0.00	\$1,074.18	\$1,274.10	\$1,504.61
Panelboard, 225 A and above, annualized	2.00	0.88	\$46.39	\$58.02	\$0.00	\$104.41	\$126.46	\$150.82
Motor control center, over 400 A, annualized	4.00	1.56	\$92.79	\$103.60	\$0.00	\$196.39	\$236.75	\$281.75
Crane, electric bridge, up to 5 ton, annualized	1.00	2.92	\$171.90	\$102.86	\$0.00	\$274.76	\$322.80	\$379.44
						\$6,259.45	\$7,756.46	\$9,348.67



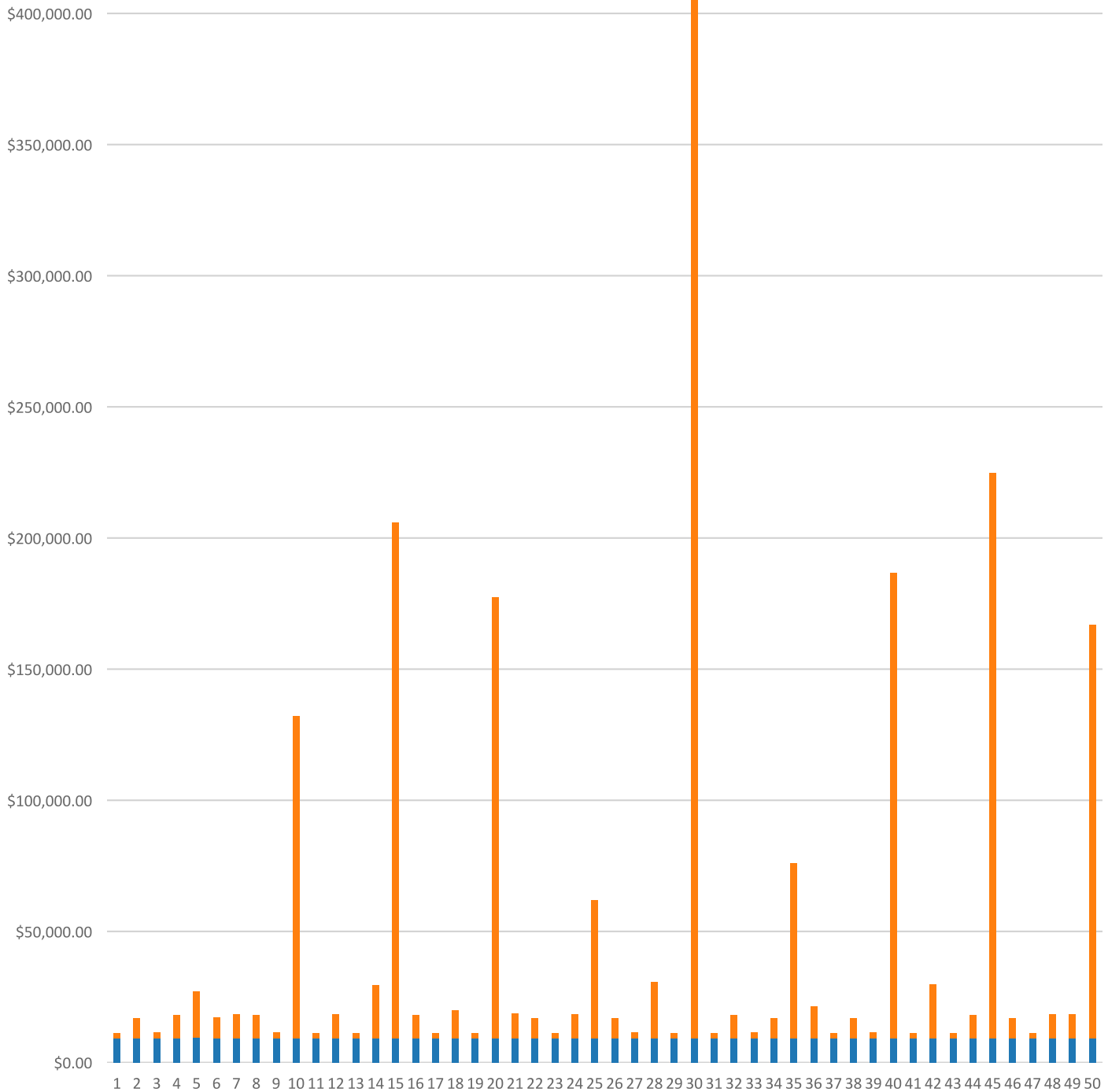
# FAC 2152 WEAPON MAINTENANCE SHOP, DEPOT

## Modeled Component List CostWorks Release 2021 Qtr 3

B20 Exterior Enclosure	
Aluminum Siding, 2nd floor	32.8 C.S.F.
Steel Frame, Operating, 1st floor	8.0 Ea.
Steel, Painted	2.0 Ea.
Steel Double, Roll-Up	2.0 Ea.
B30 Roofing	
Metal Steep Roofing	135.28 Sq.
C10 Interior Construction	
Fully Glazed Wooden Doors	2.0 Ea.
Steel Painted Interior Doors	12.0 Ea.
C20 Stairs	
Concrete Steps	47.0 S.F.
Metal Interior Stair Railing	26.0 L.F.
D20 Plumbing	
Sink, Iron Enamel	1.0 Ea.
Shower, Fiberglass	6.0 Ea.
Drinking Fountain	2.0 Ea.
Emergency Eye Wash	1.0 Ea.
Drain: Roof, Scupper, Area	2.0 Ea.
Compressed Air Systems, Compressors, 2 H.P.	1.0 Ea.
D30 HVAC	
Boiler, Gas, 2000 MBH	1.0 Ea.
Circulator Pump, 1 H.P.	1.0 Ea.
Terminal Reheat Coil, 36" x 36"	4.0 Ea.
Single Zone Air Conditioner, 60 ton	1.0 Ea.
Central Station Air Conditioning Air Handling Unit, 8000 CFM	1.0 Ea.
D40 Fire Protection	
Sprinkler System, Fire Suppression, sprinkler head	100.0 Ea.
Sprinkler System, Fire Suppression, 3" backflow preventer	1.0 Ea.
Extinguishing system, FM200	1.0 Each
D50 Electrical	
Motor Starter, Up To 600 V	3.0 Ea.
Load Center, 100 A, maintenance & inspection	2.0 Ea.
Safety Switch, General Duty, 240 V, 2 pole	1.0 Ea.
Manual Pull Station	3.0 Ea.
Fire Alarm Control Panel	1.0 Ea.
Fire Alarm Bell	15.0 Ea.
E10 Equipment	
Crane, Electric, up to 5 ton, annualized	1.0 Each



FAC 2152 WEAPON MAINTENANCE SHOP, DEPOT  
Sustainment by Year  
CostWorks Release 2021 Qtr 3



PM Cost  
MR Cost