

FAC 1442 OPERATIONS SUPPORT LAB

FY22 SUC: \$4.51 / SF
Source: Calculated using R.S. Means CostWorks 2021 Qtr 3
 component prices

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 inspection safety switch, 2 pole	1	1.00 Ea.	\$40.64	\$50.92	55.0000	55	55	\$2,800.68	\$2,800.68
Replace safety switch, 240 V, 2 pole	25	1.00 Ea.	\$391.60	\$477.36	2.2000	2	2	\$954.72	\$954.72
Maintenance and repair receptacles and plugs	20	36.00 Ea.	\$1,520.76	\$1,898.59	2.7500	2	2	\$3,797.18	\$3,797.18
Maintenance and repair wiring devices, switches	10	16.00 Ea.	\$675.89	\$843.82	5.5000	5	5	\$4,219.09	\$4,219.09
Replace fluorescent light fixture ballast, 80 W	10	74.00 Ea.	\$9,225.46	\$11,191.56	5.5000	5	5	\$55,957.78	\$55,957.78
Replace lamps (2 lamps), 4', 34 W energy saver	10	74.00 Ea.	\$1,865.84	\$2,336.84	5.5000	5	5	\$11,684.21	\$11,684.21
Repair smoke detector	10	10.00 Ea.	\$563.88	\$697.14	5.5000	5	4	\$3,485.70	\$2,788.56
Check operation smoke detector	1	10.00 Ea.	\$161.94	\$202.89	55.0000	55	55	\$11,158.96	\$11,158.96
Replace smoke detector	15	10.00 Ea.	\$2,842.37	\$3,394.62	3.6667	3	3	\$10,183.86	\$10,183.86
Check and repair manual pull station	10	8.00 Ea.	\$701.57	\$862.64	5.5000	5	4	\$4,313.21	\$3,450.57
Replace manual pull station	15	8.00 Ea.	\$1,627.74	\$1,959.53	3.6667	3	3	\$5,878.59	\$5,878.59
Replace fire alarm bell, 6"	20	8.00 Ea.	\$1,559.70	\$1,882.20	2.7500	2	2	\$3,764.41	\$3,764.41
Maintenance and repair of general wiring lightning protection system	1	1.00 M.L.F.	\$96.72	\$119.83	55.0000	55	55	\$6,590.46	\$6,590.46
Replace lightning protection general wiring system	25	1.00 M.L.F.	\$11,009.12	\$13,095.99	2.2000	2	2	\$26,191.98	\$26,191.98
Maintenance and repair lightning ground rod	1	4.00 Ea.	\$351.56	\$439.15	55.0000	55	53	\$24,153.17	\$23,274.88
Replace lightning ground rod	25	4.00 Ea.	\$904.36	\$1,121.16	2.2000	2	2	\$2,242.32	\$2,242.32
Maintenance and repair computer ground system	4	1.00 Ea.	\$21.59	\$27.05	13.7500	13	13	\$351.68	\$351.68
Replace computer ground system	50	1.00 M.L.F.	\$1,865.81	\$2,278.85	1.1000	1	1	\$2,278.85	\$2,278.85
Maintenance and inspection transfer switch	0.5	1.00 Ea.	\$40.64	\$50.92	110.0000	110	110	\$5,601.36	\$5,601.36
Replace lamp emergency lighting fixture	2	10.00 Ea.	\$546.89	\$658.76	27.5000	27	27	\$17,786.43	\$17,786.43
Maintenance and repair exit light	20	10.00 Ea.	\$372.02	\$460.03	2.7500	2	2	\$920.06	\$920.06
Replace lamp exit light	5	10.00 Ea.	\$168.47	\$199.63	11.0000	11	11	\$2,195.98	\$2,195.98
Replace vinyl tile flooring	18	80.00 S.Y.	\$3,952.28	\$4,853.60	3.0556	3	3	\$14,560.81	\$14,560.81
Refinish concrete floor finished	25	4.00 C.S.F.	\$1,687.31	\$2,026.72	2.2000	2	2	\$4,053.44	\$4,053.44
Replace acoustic tile ceiling, fire-rated	20	44.00 C.S.F.	\$23,066.06	\$27,186.99	2.7500	2	2	\$54,373.98	\$54,373.98
Non - destructive moisture inspection, thermosetting	5	1.00 M.S.F.	\$116.86	\$142.53	11.0000	11	11	\$1,567.82	\$1,567.82
Total EPDM roof replacement	25	90.00 Sq.	\$54,400.95	\$64,529.48	2.2000	2	2	\$129,058.96	\$129,058.96
Repair steel painted interior door	14	0.20 Ea.	\$58.69	\$68.31	3.9286	3	3	\$204.94	\$204.94
Refinish 3'-0" x 7'-0" steel painted interior door	4	2.00 Ea.	\$105.17	\$129.57	13.7500	13	13	\$1,684.44	\$1,684.44
Replace 3'-0" x 7'-0" steel painted interior door	60	2.00 Ea.	\$2,436.07	\$2,824.17	0.9167	0	0	\$0.00	\$0.00
Repair solid core wood door, interior	11	4.00 Ea.	\$1,173.81	\$1,366.26	5.0000	5	5	\$6,831.28	\$6,831.28
Refinish 3'-0" x 7'-0" solid core wood door, interior	4	15.00 Ea.	\$650.47	\$798.75	13.7500	13	12	\$10,383.69	\$9,584.94

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Replace 3'-0" x 7'-0" solid core wood door, interior	40	15.00 Ea.	\$7,341.41	\$8,487.15	1.3750	1	1	\$8,487.15	\$8,487.15
Repair concrete steps	15	3.80 S.F.	\$86.83	\$100.51	3.6667	3	3	\$301.54	\$301.54
Replace concrete steps	100	38.00 S.F.	\$2,031.44	\$2,477.30	0.5500	0	0	\$0.00	\$0.00
Replace metal stair railing, interior	45	34.00 L.F.	\$1,460.49	\$1,709.52	1.2222	1	1	\$1,709.52	\$1,709.52
Office painting, 10' x 12', 10' high walls	5	4.00 Ea.	\$883.94	\$1,084.25	11.0000	11	11	\$11,926.78	\$11,926.78
Terrazzo floor repairs - (2% of floors)	15	14.32 S.F.	\$232.91	\$278.90	3.6667	3	3	\$836.69	\$836.69
Replace terrazzo floor	75	2.00 C.S.F.	\$3,112.10	\$3,716.02	0.7333	0	0	\$0.00	\$0.00
Replace carpet	8	53.00 S.Y.	\$2,915.87	\$3,367.46	6.8750	6	6	\$20,204.73	\$20,204.73
Replace flush valve diaphragm tankless water closet	10	10.00 Ea.	\$262.20	\$325.36	5.5000	5	5	\$1,626.79	\$1,626.79
Rebuild flush valve tankless water closet	20	10.00 Ea.	\$1,804.34	\$2,174.57	2.7500	2	2	\$4,349.14	\$4,349.14
Unplug clogged line tankless water closet	5	10.00 Ea.	\$2,183.95	\$2,731.27	11.0000	11	11	\$30,043.95	\$30,043.95
Replace tankless flush valve	25	10.00 Ea.	\$2,522.15	\$2,961.10	2.2000	2	2	\$5,922.21	\$5,922.21
Replace wax ring gasket for tankless water closet	5	10.00 Ea.	\$1,415.19	\$1,768.26	11.0000	11	11	\$19,450.91	\$19,450.91
Replace flush valve diaphragm for a urinal	7	3.00 Ea.	\$78.66	\$97.61	7.8571	7	7	\$683.25	\$683.25
Rebuild flush valve for a urinal	20	3.00 Ea.	\$541.30	\$652.37	2.7500	2	2	\$1,304.74	\$1,304.74
Unplug line urinal	5	3.00 Ea.	\$435.22	\$544.28	11.0000	11	11	\$5,987.12	\$5,987.12
Replace washer in spud connection lavatory, vitreous china	7	10.00 Ea.	\$164.63	\$200.80	7.8571	7	7	\$1,405.60	\$1,405.60
Replace washer in faucet lavatory, vitreous china	2	10.00 Ea.	\$128.85	\$160.52	27.5000	27	27	\$4,333.99	\$4,333.99
Replace faucets lavatory, vitreous china	10	10.00 Ea.	\$1,817.26	\$2,187.55	5.5000	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	27.5000	27	27	\$11,774.14	\$11,774.14
Replace faucet washer sink, iron enamel	2	1.00 Ea.	\$12.78	\$15.92	27.5000	27	27	\$429.73	\$429.73
Clean trap sink, iron enamel	3	1.00 Ea.	\$8.57	\$10.72	18.3333	18	18	\$192.93	\$192.93
Replace faucets sink, iron enamel	10	1.00 Ea.	\$181.73	\$218.76	5.5000	5	5	\$1,093.78	\$1,093.78
Unstop sink, iron enamel	2	1.00 Ea.	\$41.82	\$52.30	27.5000	27	27	\$1,412.16	\$1,412.16
Replace sink, P.E.C.I. sink, iron enamel kitchen	35	1.00 Ea.	\$636.70	\$757.51	1.5714	1	1	\$757.51	\$757.51
Check / minor repairs drinking fountain	1	2.00 Ea.	\$97.76	\$122.27	55.0000	55	55	\$6,724.58	\$6,724.58
Repair internal leaks drinking fountain	4	2.00 Ea.	\$90.16	\$112.76	13.7500	13	13	\$1,465.82	\$1,465.82
Correct water pressure drinking fountain	2	2.00 Ea.	\$83.64	\$104.60	27.5000	27	27	\$2,824.33	\$2,824.33
Replace refrigerant drinking fountain	2	2.00 Ea.	\$65.37	\$76.54	27.5000	27	27	\$2,066.54	\$2,066.54
Repair 8" concrete block wall, 1st floor	25	3.00 S.F.	\$72.64	\$88.87	2.2000	2	2	\$177.74	\$177.74
Waterproof concrete block wall, 1st floor	10	33.40 C.S.F.	\$7,581.88	\$9,018.28	5.5000	5	5	\$45,091.40	\$45,091.40
Repair clay brick wall, 1st floor	25	1.00 S.F.	\$42.98	\$52.74	2.2000	2	2	\$105.49	\$105.49
Waterproof clay brick wall, 1st floor	10	11.30 C.S.F.	\$2,565.13	\$3,051.09	5.5000	5	5	\$15,255.47	\$15,255.47

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Replace glass - 1st floor (1% of glass) - alum. window fixed	1	5.88 S.F.	\$70.90	\$83.33	55.0000	55	55	\$4,583.10	\$4,583.10
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	38.00 Ea.	\$5,499.99	\$6,559.14	2.7500	2	2	\$13,118.28	\$13,118.28
Repair steel, painted, door	14	0.30 Ea.	\$187.52	\$223.20	3.9286	3	3	\$669.61	\$669.61
Refinish 3'-0" x 7'-0" steel, painted, door	4	3.00 Ea.	\$124.20	\$152.60	13.7500	13	13	\$1,983.78	\$1,983.78
Replace 3'-0" x 7'-0" steel, painted, door	45	3.00 Ea.	\$2,115.19	\$2,459.19	1.2222	1	1	\$2,459.19	\$2,459.19
Replace tempered glass - (3% of glass) steel painted door	1	0.63 S.F.	\$14.24	\$17.01	55.0000	55	55	\$935.58	\$935.58
Prepare and refinish 3'-0" x 7'-0" steel painted. door	4	1.00 Ea.	\$80.08	\$99.00	13.7500	13	13	\$1,287.02	\$1,287.02
Replace 3'-0" x 7'-0" steel, with wire glass, door	45	1.00 Ea.	\$1,164.36	\$1,359.11	1.2222	1	1	\$1,359.11	\$1,359.11
Repair drain leak drinking fountain	4	2.00 Ea.	\$67.83	\$81.07	13.7500	13	11	\$1,053.90	\$891.76
Replace fountain drinking fountain	10	2.00 Ea.	\$2,562.31	\$3,029.12	5.5000	5	5	\$15,145.59	\$15,145.59
Overhaul water heater, gas / oil, 30 gallon	5	4.00 Ea.	\$467.53	\$584.70	11.0000	11	11	\$6,431.69	\$6,431.69
Clean and service water heater, gas / oil, 30 gallon	1	4.00 Ea.	\$786.46	\$983.56	55.0000	55	55	\$54,095.55	\$54,095.55
Replace water heater, gas / oil, 30 gallon	10	4.00 Ea.	\$12,246.86	\$14,185.27	5.5000	5	5	\$70,926.36	\$70,926.36
Insp./chk. pump/mtr. oper., lub., chk. align. circulation pump, 1/2 HP	1	1.00 Ea.	\$11.95	\$14.94	55.0000	55	55	\$821.89	\$821.89
Replace pump / motor assembly, partial circulation pump, 1/2 HP	20	1.00 Ea.	\$3,822.30	\$4,402.23	2.7500	2	2	\$8,804.46	\$8,804.46
Unclog main drain pipe & fittings, cast iron	10	1.00 Ea.	\$46.17	\$57.74	5.5000	5	5	\$288.68	\$288.68
Unclog floor drain, PVC	20	1.00 Ea.	\$47.80	\$59.77	2.7500	2	2	\$119.55	\$119.55
General maintenance & repair drain: roof, scupper, area	1	2.00 Ea.	\$73.98	\$92.51	55.0000	55	55	\$5,088.27	\$5,088.27
Replace drain: roof, scupper, area	40	2.00 Ea.	\$1,573.86	\$1,824.72	1.3750	1	1	\$1,824.72	\$1,824.72
Repair boiler, gas, 250 MBH	7	2.00 Ea.	\$4,062.11	\$4,780.90	7.8571	7	7	\$33,466.31	\$33,466.31
Replace boiler, gas, 250 MBH	30	2.00 Ea.	\$18,796.09	\$22,420.25	1.8333	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	3.6667	3	3	\$448.36	\$448.36
Replace fan & motor, propeller exhaust, 4700 CFM exhaust fan	15	1.00 Ea.	\$2,039.86	\$2,375.64	3.6667	3	3	\$7,126.93	\$7,126.93
Repair multi - zone rooftop unit, 25 ton	10	1.00 Ea.	\$47,434.89	\$54,670.42	5.5000	5	4	\$273,352.09	\$218,681.67
Replace multi-zone rooftop unit, 25 ton	15	1.00 Ea.	\$99,455.85	\$114,724.40	3.6667	3	3	\$344,173.21	\$344,173.21
Repair central station A.H.U., 16,000 CFM	10	1.00 Ea.	\$1,502.82	\$1,746.04	5.5000	5	4	\$8,730.18	\$6,984.14
Replace central station A.H.U., 16,000 CFM	15	1.00 Ea.	\$66,939.65	\$77,045.08	3.6667	3	3	\$231,135.23	\$231,135.23
Inspect sprinkler system	1	1.00 Ea.	\$34.33	\$42.93	55.0000	55	55	\$2,361.08	\$2,361.08
Replace sprinkler head	20	25.00 Ea.	\$2,138.07	\$2,629.74	2.7500	2	2	\$5,259.48	\$5,259.48
Rebuild double check 3" backflow preventer sprinkler system	1	1.00 Ea.	\$710.41	\$851.09	55.0000	55	55	\$46,810.15	\$46,810.15
Maintenance and repair motor starter, up to 600 V	5	3.00 Ea.	\$838.92	\$1,012.79	11.0000	11	11	\$11,140.74	\$11,140.74

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 inspection motor starter, up to 600 V	0.5	3.00 Ea.	\$161.94	\$202.89	110.0000	110	110	\$22,317.93	\$22,317.93	
Replace starter motor starter, up to 600 V	18	3.00 Ea.	\$2,415.93	\$2,874.22	3.0556	3	3	\$8,622.67	\$8,622.67	
Maintenance and inspection lighting panel, indoor	3	3.00 Ea.	\$121.93	\$152.76	18.3333	18	18	\$2,749.76	\$2,749.76	
Maintenance and repair breaker, enclosed, 240 V, 3 pole	25	6.00 Ea.	\$430.58	\$539.45	2.2000	2	2	\$1,078.90	\$1,078.90	
Maintenance and repair safety switch general, 2 pole	8	1.00 Ea.	\$40.64	\$50.92	6.8750	6	6	\$305.53	\$305.53	
			\$443,667.46	\$519,856.31				MR Subtotal	\$1,800,793.25	
									MR Per Year	\$32,654.77
									PM Total	\$7,394.80
									Subtotal	\$40,049.57
									Total Per Unit	\$4.51

FAC 1442 OPERATIONS SUPPORT LAB

Release 2021 Qtr 3

Zip Code Prefix 222

Type PM

UM SF

Design Life 55

Average Size 8884.0

SUC \$4.51

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
Fire doors, swinging, annualized	2.00	0.78	\$28.64	\$29.12	\$0.00	\$57.76	\$69.36	\$82.39
Urinals, annualized	3.00	0.68	\$18.96	\$34.36	\$0.00	\$53.32	\$65.52	\$78.67
Toilet (vacuum breaker type), annualized	10.00	1.77	\$84.42	\$88.98	\$0.00	\$173.40	\$208.54	\$247.89
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	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	2.00	25.78	\$182.99	\$1,550.56	\$0.00	\$1,733.55	\$2,217.02	\$2,709.63
VAV Boxes, annually	6.00	2.80	\$28.87	\$169.15	\$0.00	\$198.03	\$251.66	\$306.74
Fan, axial, up to 5,000 CFM, annualized	1.00	1.24	\$11.73	\$62.55	\$0.00	\$74.28	\$94.22	\$114.74
Hood and blower, annualized	1.00	2.32	\$54.09	\$116.29	\$0.00	\$170.38	\$210.68	\$253.68
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
Motor control center, over 400 A, annualized	1.00	0.39	\$23.20	\$25.90	\$0.00	\$49.10	\$59.19	\$70.44
						\$4,786.10	\$6,071.67	\$7,394.80

FAC 1442 OPERATIONS SUPPORT LAB

Modeled Component List

CostWorks Release 2021 Qtr 3

D50 Electrical

Safety Switch, General Duty, 240 V, 2 pole	1.0 Ea.
Smoke Detector	10.0 Ea.
Manual Pull Station	8.0 Ea.
Fire Alarm Bell	8.0 Ea.
Lightning Protection System	1.0 M.L.F.
Lightning Ground Rod	4.0 Ea.
Computer Ground System	1.0 M.L.F.
Motor Starter, Up To 600 V	3.0 Ea.
Load Center, 100 A, maintenance & inspection	3.0 Ea.

C30 Interior Finishes

Vinyl	80.0 S.Y.
Concrete, Finished	4.0 C.S.F.
Acoustic Tile, fire-rated	44.0 C.S.F.
Terrazzo	2.0 C.S.F.
Carpet	53.0 S.Y.

B30 Roofing

EPDM Roof	90.0 Sq.
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C10 Interior Construction

Steel Painted Interior Doors	2.0 Ea.
Solid Core Interior Doors	15.0 Ea.
Fire Doors, Swinging, annualized	2.0 Each

C20 Stairs

Concrete Steps	38.0 S.F.
Metal Interior Stair Railing	34.0 L.F.

D20 Plumbing

Sink, Iron Enamel	1.0 Ea.
Drinking Fountain	2.0 Ea.
Water Heater, Gas / Oil, 30 Gallon	4.0 Ea.
Circulation Pump, 1/2 HP	1.0 Ea.
Drain: Roof, Scupper, Area	2.0 Ea.

B20 Exterior Enclosure

Clay Brick, 1st floor	11.3 C.S.F.
Steel, Painted	3.0 Ea.
Steel, Painted, w/ wire glass	1.0 Ea.

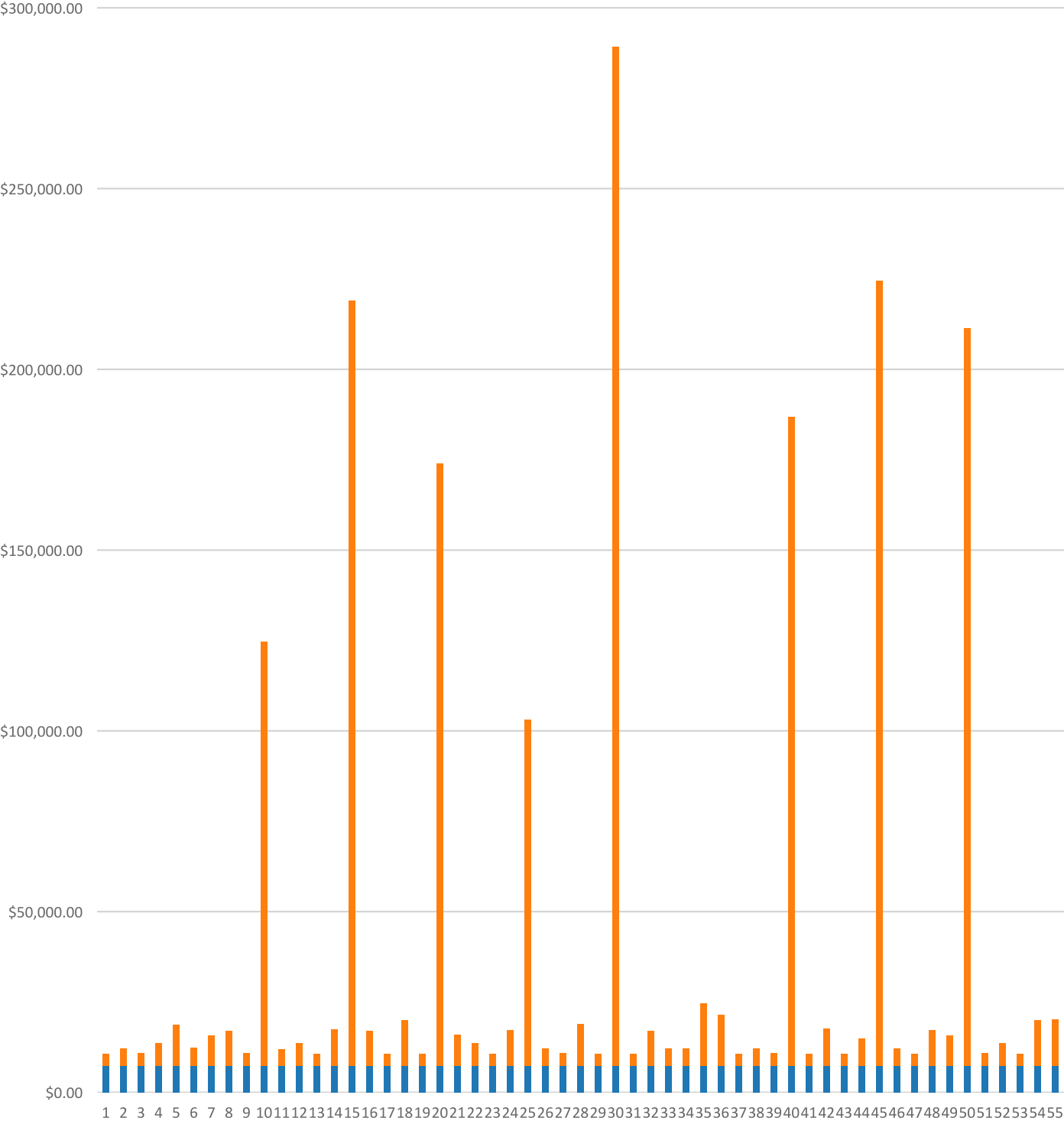
D30 HVAC

Boiler, Gas, 250 MBH	2.0 Ea.
Metal Flue / Chimney, 6" diameter	1.0 L.F.
Exhaust Fan, propeller exh., 4700 CFM	1.0 Ea.
Rooftop Unit, Multi-Zone, 25 ton	1.0 Ea.
Central Station Air Conditioning Air Handling Unit, 16,000 CFM	1.0 Ea.

D40 Fire Protection

Sprinkler System, Fire Suppression, sprinkler head	25.0 Ea.
Sprinkler System, Fire Suppression, 3" backflow preventer	1.0 Ea.

FAC 1442 OPERATIONS SUPPORT LAB
Sustainment by Year
CostWorks Release 2021 Qtr 3



PM Cost
MR Cost