

**FAC 7416 LIBRARY, GENERAL USE**

FY22 SUC:	\$4.56 / SF
Source:	Calculated using R.S. Means CostWorks 2021 Qtr 3 component prices

FAC 7416 LIBRARY, GENERAL USE

Release 2021 Qtr 3  
Zip Code Prefix 222  
Type MR

UM SF  
Design Life 55  
Average Size 9699.0

SUC \$4.56

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	20.90 C.S.F.	\$9,818.34	\$12,117.93	2.2000	2	2	\$24,235.86	\$24,235.86
Point and refinish painted concrete block wall, 2nd floor	25	20.90 C.S.F.	\$11,501.00	\$14,202.76	2.2000	2	2	\$28,405.53	\$28,405.53
Replace glass - 1st floor (1% of glass) - alum. window fixed	1	4.30 S.F.	\$51.85	\$60.94	55.0000	55	55	\$3,351.59	\$3,351.59
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	60.00 Ea.	\$8,684.20	\$10,356.54	2.7500	2	2	\$20,713.07	\$20,713.07
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	60.00 Ea.	\$29,287.90	\$34,711.45	1.1000	1	1	\$34,711.45	\$34,711.45
Replace glass - 2nd floor (1% of glass) - alum. window fixed	1	3.60 S.F.	\$382.30	\$471.85	55.0000	55	55	\$25,951.97	\$25,951.97
Repair 2'-0" x 3'-0" aluminum window - 2nd floor	20	60.00 Ea.	\$11,479.17	\$13,827.35	2.7500	2	2	\$27,654.70	\$27,654.70
Replace 2'-0" x 3'-0" aluminum window - 2nd floor	50	60.00 Ea.	\$32,082.86	\$38,182.27	1.1000	1	1	\$38,182.27	\$38,182.27
Repair aluminum storefront door	12	1.00 Ea.	\$463.42	\$554.51	4.5833	4	4	\$2,218.06	\$2,218.06
Replace 3'-0" x 7'-0" aluminum storefront doors	50	1.00 Ea.	\$2,045.77	\$2,419.10	1.1000	1	1	\$2,419.10	\$2,419.10
Repair steel, painted, door	14	2.00 Ea.	\$1,250.15	\$1,488.01	3.9286	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	13.7500	13	13	\$1,322.52	\$1,322.52
Replace 3'-0" x 7'-0" steel, painted, door	45	2.00 Ea.	\$1,410.13	\$1,639.46	1.2222	1	1	\$1,639.46	\$1,639.46
Minor metal roof finish repairs, 2% of roof area, metal panel roofing	5	97.00 S.F.	\$338.83	\$406.52	11.0000	11	11	\$4,471.76	\$4,471.76
Metal roof flashing replacement, 2 SF/sq repaired, metal panel roofing	1	2.00 S.F.	\$36.60	\$44.34	55.0000	55	55	\$2,438.97	\$2,438.97
Minor metal roof panel replacement, 2.5% of roof area	20	121.00 S.F.	\$1,382.74	\$1,642.22	2.7500	2	2	\$3,284.44	\$3,284.44
Total metal roof panel replacement	30	48.50 Sq.	\$40,989.61	\$48,549.29	1.8333	1	1	\$48,549.29	\$48,549.29
Repair 8" concrete block wall - (2% of walls) painted	25	0.08 C.S.F.	\$87.17	\$104.67	2.2000	2	2	\$209.34	\$209.34
Refinish concrete block wall painted	4	4.30 C.S.F.	\$433.95	\$528.42	13.7500	13	13	\$6,869.45	\$6,869.45
Replace 8" concrete block wall painted	75	4.30 C.S.F.	\$4,981.40	\$5,992.54	0.7333	0	0	\$0.00	\$0.00
Repair solid core wood door, interior	11	26.00 Ea.	\$7,629.76	\$8,880.66	5.0000	5	5	\$44,403.32	\$44,403.32
Refinish 3'-0" x 7'-0" solid core wood door, interior	4	26.00 Ea.	\$1,127.48	\$1,384.49	13.7500	13	12	\$17,998.39	\$16,613.90
Replace 3'-0" x 7'-0" solid core wood door, interior	40	26.00 Ea.	\$12,725.11	\$14,711.06	1.3750	1	1	\$14,711.06	\$14,711.06
Repair masonry steps, painted	20	60.00 S.F.	\$1,109.33	\$1,341.38	2.7500	2	2	\$2,682.76	\$2,682.76
Replace masonry steps, painted	50	60.00 S.F.	\$13,161.59	\$16,112.08	1.1000	1	1	\$16,112.08	\$16,112.08
Refinish metal stair railing, interior	7	36.00 S.F.	\$52.61	\$64.87	7.8571	7	7	\$454.11	\$454.11
Replace metal stair railing, interior	45	36.00 L.F.	\$1,546.41	\$1,810.07	1.2222	1	1	\$1,810.07	\$1,810.07

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Repair 5/8" drywall - (2% of walls)	20	266.60 S.F.	\$446.65	\$543.46	2.7500	2	2	\$1,086.92	\$1,086.92
Replace 5/8" drywall	75	13,330.00 S.F.	\$31,067.00	\$38,019.90	0.7333	0	0	\$0.00	\$0.00
Quarry tile floor repairs - (2% of floors)	15	31.80 S.F.	\$201.23	\$250.90	3.6667	3	3	\$752.71	\$752.71
Replace quarry tile floor	50	1,593.00 S.F.	\$19,492.63	\$23,530.10	1.1000	1	1	\$23,530.10	\$23,530.10
Replace carpet	8	1,000.00 S.Y.	\$55,016.34	\$63,536.90	6.8750	6	6	\$381,221.41	\$381,221.41
Acoustic tile repairs - (2% of ceilings)	9	1.50 C.S.F.	\$1,361.56	\$1,582.38	6.1111	6	6	\$9,494.29	\$9,494.29
Replace flush valve diaphragm tankless water closet	10	8.00 Ea.	\$209.76	\$260.29	5.5000	5	5	\$1,301.43	\$1,301.43
Rebuild flush valve tankless water closet	20	8.00 Ea.	\$1,443.47	\$1,739.66	2.7500	2	2	\$3,479.31	\$3,479.31
Unplug clogged line tankless water closet	5	8.00 Ea.	\$1,747.16	\$2,185.01	11.0000	11	11	\$24,035.16	\$24,035.16
Replace tankless water closet	35	8.00 Ea.	\$10,289.77	\$11,907.96	1.5714	1	1	\$11,907.96	\$11,907.96
Replace tankless flush valve	25	8.00 Ea.	\$2,017.72	\$2,368.88	2.2000	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	11.0000	11	11	\$15,560.73	\$15,560.73
Replace flush valve diaphragm for a urinal	7	1.00 Ea.	\$26.22	\$32.54	7.8571	7	7	\$227.75	\$227.75
Rebuild flush valve for a urinal	20	1.00 Ea.	\$180.43	\$217.46	2.7500	2	2	\$434.91	\$434.91
Unplug line urinal	5	1.00 Ea.	\$145.07	\$181.43	11.0000	11	11	\$1,995.71	\$1,995.71
Replace wall-hung urinal	35	1.00 Ea.	\$968.86	\$1,169.11	1.5714	1	1	\$1,169.11	\$1,169.11
Replace washer in spud connection lavatory, vitreous china	7	8.00 Ea.	\$131.70	\$160.64	7.8571	7	7	\$1,124.48	\$1,124.48
Replace washer in faucet lavatory, vitreous china	2	8.00 Ea.	\$103.08	\$128.41	27.5000	27	27	\$3,467.19	\$3,467.19
Replace faucets lavatory, vitreous china	10	8.00 Ea.	\$1,453.81	\$1,750.04	5.5000	5	5	\$8,750.22	\$8,750.22
Clean out strainer and P trap lavatory, vitreous china	2	8.00 Ea.	\$278.95	\$348.86	27.5000	27	27	\$9,419.31	\$9,419.31
Replace lavatory, vitreous china	35	8.00 Ea.	\$5,380.60	\$6,465.77	1.5714	1	1	\$6,465.77	\$6,465.77
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	4.00 Ea.	\$195.53	\$244.53	55.0000	55	55	\$13,449.17	\$13,449.17
Repair internal leaks drinking fountain	4	4.00 Ea.	\$180.32	\$225.51	13.7500	13	13	\$2,931.65	\$2,931.65
Correct water pressure drinking fountain	2	4.00 Ea.	\$167.29	\$209.21	27.5000	27	27	\$5,648.65	\$5,648.65
Replace refrigerant drinking fountain	2	4.00 Ea.	\$130.73	\$153.08	27.5000	27	27	\$4,133.08	\$4,133.08
Repair drain leak drinking fountain	4	4.00 Ea.	\$135.66	\$162.14	13.7500	13	11	\$2,107.80	\$1,783.52
Replace fountain drinking fountain	10	4.00 Ea.	\$5,124.62	\$6,058.24	5.5000	5	5	\$30,291.18	\$30,291.18
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	1.00 Ea.	\$2,031.05	\$2,390.45	7.8571	7	7	\$16,733.15	\$16,733.15

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Replace boiler, gas, 250 MBH	30	1.00 Ea.	\$9,398.04	\$11,210.13	1.8333	1	1	\$11,210.13	\$11,210.13
Repair reciprocating chiller, air cooled, 50 ton	10	0.50 Ea.	\$28,885.83	\$33,815.38	5.5000	5	5	\$169,076.89	\$169,076.89
Replace chiller, air cooled, 50 ton	20	1.00 Ea.	\$64,270.84	\$74,812.79	2.7500	2	2	\$149,625.58	\$149,625.58
Repair circulator pump, 1/12 - 3/4 H.P.	5	1.00 Ea.	\$98.13	\$115.73	11.0000	11	8	\$1,273.04	\$925.85
Replace circulator pump, 1/12 - 3/4 H.P.	15	1.00 Ea.	\$3,822.30	\$4,402.23	3.6667	3	3	\$13,206.68	\$13,206.68
Repair terminal reheat, 12" x 24" coil	10	2.00 Ea.	\$178.15	\$222.79	5.5000	5	4	\$1,113.97	\$891.18
Replace terminal reheat, 12" x 24" coil	15	2.00 Ea.	\$3,514.92	\$4,033.69	3.6667	3	3	\$12,101.07	\$12,101.07
Repair single zone rooftop unit, 25 ton	10	0.50 Ea.	\$23,698.71	\$27,311.77	5.5000	5	4	\$136,558.87	\$109,247.10
Replace single zone rooftop unit, 25 ton	15	1.00 Ea.	\$51,343.17	\$59,585.52	3.6667	3	3	\$178,756.56	\$178,756.56
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	47.00 Ea.	\$4,019.57	\$4,943.91	2.7500	2	2	\$9,887.81	\$9,887.81
Maintenance and inspection lighting panel, indoor	3	3.00 Ea.	\$121.93	\$152.76	18.3333	18	18	\$2,749.76	\$2,749.76
Replace fluorescent light fixture ballast, 80 W	10	120.00 Ea.	\$14,960.21	\$18,148.47	5.5000	5	3	\$90,742.34	\$54,445.41
Replace lamps (2 lamps), 4', 34 W energy saver	10	120.00 Ea.	\$3,025.68	\$3,789.47	5.5000	5	5	\$18,947.36	\$18,947.36
Replace fluorescent fixture, lay-in, recess mtd, 2' x 4', two 40 W	20	94.00 Ea.	\$21,379.08	\$26,077.02	2.7500	2	2	\$52,154.05	\$52,154.05
Repair smoke detector	10	16.00 Ea.	\$902.20	\$1,115.43	5.5000	5	4	\$5,577.13	\$4,461.70
Check operation smoke detector	1	16.00 Ea.	\$259.11	\$324.62	55.0000	55	55	\$17,854.34	\$17,854.34
Replace smoke detector	15	16.00 Ea.	\$4,547.80	\$5,431.39	3.6667	3	3	\$16,294.17	\$16,294.17
Check and repair manual pull station	10	4.00 Ea.	\$350.79	\$431.32	5.5000	5	4	\$2,156.61	\$1,725.28
Replace manual pull station	15	4.00 Ea.	\$813.87	\$979.76	3.6667	3	3	\$2,939.29	\$2,939.29
Minor repairs to fire alarm control panel	5	1.00 Ea.	\$149.71	\$182.27	11.0000	11	11	\$2,005.02	\$2,005.02
Maintenance and inspection fire alarm control panel	0.5	1.00 Ea.	\$43.18	\$54.10	110.0000	110	110	\$5,951.45	\$5,951.45
Replace fire alarm control panel	15	1.00 Ea.	\$1,953.46	\$2,391.92	3.6667	3	3	\$7,175.76	\$7,175.76
Replace fire alarm bell, 6"	20	2.00 Ea.	\$389.92	\$470.55	2.7500	2	2	\$941.10	\$941.10
Replace lamp emergency lighting fixture	2	26.00 Ea.	\$1,421.93	\$1,712.77	27.5000	27	27	\$46,244.71	\$46,244.71
Replace emergency lighting fixture	20	26.00 Ea.	\$15,661.57	\$18,453.80	2.7500	2	2	\$36,907.60	\$36,907.60
Maintenance and repair exit light	20	26.00 Ea.	\$967.24	\$1,196.08	2.7500	2	2	\$2,392.16	\$2,392.16
Replace lamp exit light	5	26.00 Ea.	\$438.01	\$519.05	11.0000	11	11	\$5,709.55	\$5,709.55
Replace lighting fixture exit light	20	26.00 Ea.	\$4,966.90	\$5,973.78	2.7500	2	2	\$11,947.56	\$11,947.56
			\$667,838.16	\$788,668.80				MR Subtotal	\$2,160,187.09
								MR Per Year	\$39,232.67
								PM Total	\$4,979.99
								Subtotal	\$44,212.66
								Total Per Unit	\$4.56

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Zip Code Prefix 222

Type PM

UM SF

Design Life 55

Average Size 9699.0

SUC \$4.56

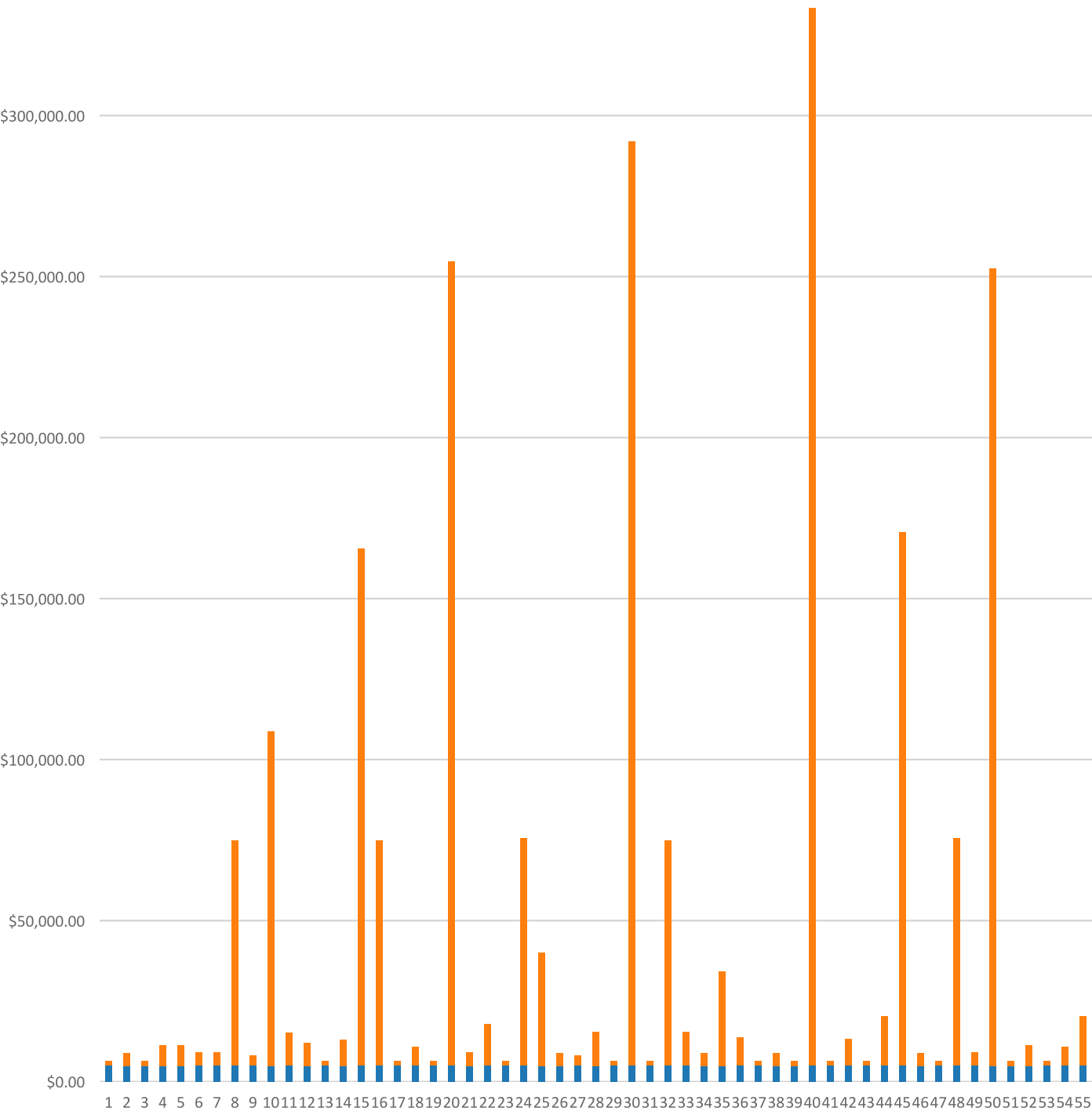
Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Fire doors, swinging, annualized	2.00	0.78	\$28.64	\$29.12	\$0.00	\$57.76	\$69.36	\$82.39
Urinals, annualized	1.00	0.23	\$6.32	\$11.45	\$0.00	\$17.77	\$21.84	\$26.22
Toilet (vacuum breaker type), annualized	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, up to 120 MBH, annualized	1.00	12.53	\$77.34	\$753.25	\$0.00	\$830.60	\$1,064.31	\$1,301.88
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
VAV Boxes, annualized	7.00	6.54	\$67.23	\$394.69	\$0.00	\$461.92	\$587.05	\$715.54
Circuit breaker, high voltage air, annualized	1.00	0.47	\$15.16	\$31.08	\$0.00	\$46.24	\$57.08	\$68.67
Light, emergency, hardwired system, annualized	8.00	2.00	\$61.86	\$118.10	\$0.00	\$179.96	\$221.58	\$266.29
						\$3,316.68	\$4,125.00	\$4,979.99



**FAC 7416 LIBRARY, GENERAL USE**  
**Modeled Component List**  
**CostWorks Release 2021 Qtr 3**

<b>B20 Exterior Enclosure</b>		
Aluminum Window, Fixed, 1st floor		60.0 Ea.
Aluminum Window, Fixed, 2nd floor		60.0 Ea.
Glazed Aluminum		1.0 Ea.
Steel, Painted		2.0 Ea.
<b>B30 Roofing</b>		
Metal Steep Roofing		48.5 Sq.
<b>C10 Interior Construction</b>		
Concrete Block, Painted		4.3 C.S.F.
Solid Core Interior Doors		26.0 Ea.
Fire Doors, Swinging, annualized		2.0 Each
<b>C20 Stairs</b>		
Masonry Steps, Painted		60.0 S.F.
Metal Interior Stair Railing		36.0 L.F.
<b>C30 Interior Finishes</b>		
Drywall		13330.0 S.F.
Quarry Tile		1593.0 S.F.
Carpet		1000.0 S.Y.
<b>D20 Plumbing</b>		
Tankless Water Closet		8.0 Ea.
Urinal		1.0 Ea.
Lavatory, Vitreous China		8.0 Ea.
Sink, Iron Enamel		1.0 Ea.
Drinking Fountain		4.0 Ea.
Drain: Roof, Scupper, Area		2.0 Ea.
<b>D30 HVAC</b>		
Boiler, Gas, 250 MBH		1.0 Ea.
Chiller, Air Cooled, Reciprocating, 50 ton		1.0 Ea.
Circulator Pump, 1/12 - 3/4 H.P.		1.0 Ea.
Terminal Reheat Coil, 12" x 24"		2.0 Ea.
Single Zone Air Conditioner, 25 ton		1.0 Ea.
Central Station Air Conditioning Air Handling Unit, 16,000 CFM		1.0 Ea.
VAV Box		7.0 Each
<b>D40 Fire Protection</b>		
Sprinkler System, Fire Suppression, sprinkler head		47.0 Ea.
<b>D50 Electrical</b>		
Load Center, 100 A, maintenance & inspection		3.0 Ea.
Fluorescent Lighting Fixture		94.0 Ea.
Smoke Detector		16.0 Ea.
Manual Pull Station		4.0 Ea.
Fire Alarm Control Panel		1.0 Ea.
Fire Alarm Bell		2.0 Ea.
Emergency Lighting Fixture		26.0 Ea.
Exit Light		26.0 Ea.

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Sustainment by Year  
CostWorks Release 2021 Qtr 3



PM Cost  
MR Cost