

**FAC 7431 AUDITORIUM AND THEATER FACILITY**

FY22 SUC:	\$2.63 / SF
Source:	Calculated using R.S. Means CostWorks 2021 Qtr 3 component prices

FAC 7431 AUDITORIUM AND THEATER FACILITY

Release 2021 Qtr 3  
Zip Code Prefix 222  
Type MR

UM SF  
Design Life 45  
Average Size 9672.0

SUC \$2.63

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
Refinish 3'-0" x 7'-0" steel, painted, door	4	7.00 Ea.	\$289.80	\$356.06	11.2500	11	11	\$3,916.70	\$3,916.70
Replace 3'-0" x 7'-0" steel, painted, door	45	7.00 Ea.	\$4,935.45	\$5,738.12	1.0000	1	1	\$5,738.12	\$5,738.12
Replace tempered glass - (3% of glass) steel painted door	1	4.41 S.F.	\$99.65	\$119.07	45.0000	45	45	\$5,358.32	\$5,358.32
BUR flashing repairs, 2 S.F. per sq. repaired	1	4.00 S.F.	\$14.00	\$17.00	45.0000	45	45	\$764.80	\$764.80
Minor BUR membrane replacement, 25% of roof area	15	24.20 Sq.	\$19,475.88	\$23,118.58	3.0000	3	3	\$69,355.75	\$69,355.75
Total BUR roof replacement	28	96.72 Sq.	\$75,407.75	\$89,174.14	1.6071	1	1	\$89,174.14	\$89,174.14
Repair hollow core wood door, interior	7	9.00 Ea.	\$2,641.07	\$3,074.08	6.4286	6	6	\$18,444.46	\$18,444.46
Refinish 3'-0" x 7'-0" hollow core wood door, interior	4	9.00 Ea.	\$390.28	\$479.25	11.2500	11	11	\$5,271.72	\$5,271.72
Replace 3'-0" x 7'-0" hollow core wood door, interior	30	9.00 Ea.	\$2,717.89	\$3,203.04	1.5000	1	1	\$3,203.04	\$3,203.04
Repair acoustical tile - (2% of walls)	25	0.07 C.S.F.	\$62.81	\$72.65	1.8000	1	1	\$72.65	\$72.65
Refinish acoustical tile	10	3.70 C.S.F.	\$644.15	\$782.60	4.5000	4	4	\$3,130.40	\$3,130.40
Replace vinyl tile flooring	18	80.00 S.Y.	\$3,952.28	\$4,853.60	2.5000	2	2	\$9,707.21	\$9,707.21
Ceramic tile floor repairs - (2% of floors)	15	0.07 C.S.F.	\$44.30	\$55.23	3.0000	3	3	\$165.69	\$165.69
Replace 2" x 2" thin set ceramic tile floor	50	3.50 C.S.F.	\$4,282.75	\$5,169.83	0.9000	0	0	\$0.00	\$0.00
Repair plaster ceiling - (2% of ceilings)	12	3.22 S.Y.	\$177.78	\$217.49	3.7500	3	3	\$652.46	\$652.46
Replace acoustic tile ceiling, fire-rated	20	3.50 C.S.F.	\$1,834.80	\$2,162.60	2.2500	2	2	\$4,325.20	\$4,325.20
Unplug clogged line flush-tank water closet	5	7.00 Ea.	\$1,528.77	\$1,911.89	9.0000	9	9	\$17,206.99	\$17,206.99
Replace washer / diaphragm in ball cock flush-tank water closet	5	7.00 Ea.	\$130.26	\$160.64	9.0000	9	9	\$1,445.72	\$1,445.72
Replace valve and ball cock assembly flush-tank water closet	15	7.00 Ea.	\$655.33	\$808.97	3.0000	3	3	\$2,426.92	\$2,426.92
Install gasket between tank and bowl flush-tank water closet	20	7.00 Ea.	\$291.45	\$361.92	2.2500	2	2	\$723.83	\$723.83
Replace two piece water closet flush-tank	35	7.00 Ea.	\$3,411.28	\$4,096.30	1.2857	1	1	\$4,096.30	\$4,096.30
Replace 8" concrete block wall, 1st floor	60	5.00 C.S.F.	\$5,929.27	\$7,165.64	0.7500	0	0	\$0.00	\$0.00
Repair painted clay brick wall, 1st floor	25	100.00 S.F.	\$4,367.32	\$5,358.44	1.8000	1	1	\$5,358.44	\$5,358.44
Replace glass - 1st floor. (1% of glass) - alum. window	1	0.21 S.F.	\$2.53	\$2.98	45.0000	45	45	\$133.92	\$133.92
Repair 3' x 4' aluminum window - 1st floor	20	1.00 Ea.	\$261.90	\$308.30	2.2500	2	2	\$616.60	\$616.60
Replace 3' x 4' aluminum window - 1st floor	50	1.00 Ea.	\$814.79	\$949.72	0.9000	0	0	\$0.00	\$0.00
Repair aluminum storefront door	12	3.00 Ea.	\$1,390.26	\$1,663.54	3.7500	3	3	\$4,990.63	\$4,990.63
Replace 3'-0" x 7'-0" aluminum storefront doors	50	3.00 Ea.	\$6,137.30	\$7,257.30	0.9000	0	0	\$0.00	\$0.00

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Replace insulating glass - (3% of glass) aluminum storefront door	1	1.89 S.F.	\$98.08	\$114.72	45.0000	45	45	\$5,162.45	\$5,162.45
Repair steel, painted, door	14	7.00 Ea.	\$4,375.52	\$5,208.04	3.2143	3	3	\$15,624.12	\$15,624.12
Replace flush valve diaphragm for a urinal	7	2.00 Ea.	\$52.44	\$65.07	6.4286	6	6	\$390.43	\$390.43
Rebuild flush valve for a urinal	20	2.00 Ea.	\$360.87	\$434.91	2.2500	2	2	\$869.83	\$869.83
Unplug line urinal	5	2.00 Ea.	\$290.14	\$362.86	9.0000	9	9	\$3,265.70	\$3,265.70
Replace washer in spud connection lavatory, vitreous china	7	7.00 Ea.	\$115.24	\$140.56	6.4286	6	6	\$843.36	\$843.36
Replace washer in faucet lavatory, vitreous china	2	7.00 Ea.	\$90.19	\$112.36	22.5000	22	22	\$2,471.98	\$2,471.98
Replace faucets lavatory, vitreous china	10	7.00 Ea.	\$1,272.08	\$1,531.29	4.5000	4	4	\$6,125.15	\$6,125.15
Clean out strainer and P trap lavatory, vitreous china	2	7.00 Ea.	\$244.09	\$305.26	22.5000	22	22	\$6,715.62	\$6,715.62
Replace lavatory, vitreous china	35	7.00 Ea.	\$4,708.02	\$5,657.55	1.2857	1	1	\$5,657.55	\$5,657.55
Replace faucet washer sink, iron enamel	2	1.00 Ea.	\$12.78	\$15.92	22.5000	22	22	\$350.15	\$350.15
Clean trap sink, iron enamel	3	1.00 Ea.	\$8.57	\$10.72	15.0000	15	15	\$160.78	\$160.78
Replace faucets sink, iron enamel	10	1.00 Ea.	\$181.73	\$218.76	4.5000	4	4	\$875.02	\$875.02
Unstop sink, iron enamel	2	1.00 Ea.	\$41.82	\$52.30	22.5000	22	22	\$1,150.65	\$1,150.65
Replace sink, P.E.C.I. sink, iron enamel kitchen	35	1.00 Ea.	\$636.70	\$757.51	1.2857	1	1	\$757.51	\$757.51
Check / minor repairs drinking fountain	1	2.00 Ea.	\$97.76	\$122.27	45.0000	45	45	\$5,501.93	\$5,501.93
Repair internal leaks drinking fountain	4	2.00 Ea.	\$90.16	\$112.76	11.2500	11	11	\$1,240.31	\$1,240.31
Correct water pressure drinking fountain	2	2.00 Ea.	\$83.64	\$104.60	22.5000	22	22	\$2,301.30	\$2,301.30
Replace refrigerant drinking fountain	2	2.00 Ea.	\$65.37	\$76.54	22.5000	22	22	\$1,683.85	\$1,683.85
Repair drain leak drinking fountain	4	2.00 Ea.	\$67.83	\$81.07	11.2500	11	9	\$891.76	\$729.62
Replace fountain drinking fountain	10	2.00 Ea.	\$2,562.31	\$3,029.12	4.5000	4	4	\$12,116.47	\$12,116.47
Unclog main drain pipe & fittings, cast iron	10	1.00 Ea.	\$46.17	\$57.74	4.5000	4	4	\$230.95	\$230.95
Unclog floor drain, PVC	20	1.00 Ea.	\$47.80	\$59.77	2.2500	2	2	\$119.55	\$119.55
General maintenance & repair drain: roof, scupper, area	1	2.00 Ea.	\$73.98	\$92.51	45.0000	45	45	\$4,163.13	\$4,163.13
Replace drain: roof, scupper, area	40	2.00 Ea.	\$1,573.86	\$1,824.72	1.1250	1	1	\$1,824.72	\$1,824.72
Repair boiler, gas, 250 MBH	7	1.00 Ea.	\$2,031.05	\$2,390.45	6.4286	6	6	\$14,342.70	\$14,342.70
Replace boiler, gas, 250 MBH	30	1.00 Ea.	\$9,398.04	\$11,210.13	1.5000	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	4.5000	4	4	\$135,261.51	\$135,261.51
Replace chiller, air cooled, 50 ton	20	1.00 Ea.	\$64,270.84	\$74,812.79	2.2500	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	9.0000	9	6	\$1,041.58	\$694.39
Replace circulator pump, 1/12 - 3/4 H.P.	15	1.00 Ea.	\$3,822.30	\$4,402.23	3.0000	3	3	\$13,206.68	\$13,206.68
Repair terminal reheat, 18" x 24" coil	10	4.00 Ea.	\$414.96	\$518.95	4.5000	4	4	\$2,075.79	\$2,075.79
Replace terminal reheat, 18" x 24" coil	15	4.00 Ea.	\$8,036.02	\$9,249.48	3.0000	3	3	\$27,748.45	\$27,748.45

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost	
Repair central station A.H.U., 8000 CFM	10	1.00 Ea.	\$1,302.07	\$1,515.31	4.5000	4	4	\$6,061.23	\$6,061.23	
Inspect sprinkler system	1	1.00 Ea.	\$34.33	\$42.93	45.0000	45	45	\$1,931.79	\$1,931.79	
Replace sprinkler head	20	46.00 Ea.	\$3,934.05	\$4,838.72	2.2500	2	2	\$9,677.43	\$9,677.43	
Rebuild double check 3" backflow preventer sprinkler system	1	1.00 Ea.	\$710.41	\$851.09	45.0000	45	45	\$38,299.22	\$38,299.22	
Maintenance and repair breaker, molded case, 480 V, 1 pole	20	21.00 Ea.	\$1,507.02	\$1,888.07	2.2500	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	0.9000	0	0	\$0.00	\$0.00	
Maintenance and repair breaker, molded case, 480 V, 2 pole	20	4.00 Ea.	\$287.05	\$359.63	2.2500	2	2	\$719.27	\$719.27	
Replace circuit breaker molded case, 480 V, 2 pole circuit breaker	50	4.00 Ea.	\$5,045.09	\$5,818.74	0.9000	0	0	\$0.00	\$0.00	
Maintenance and repair safety switch general, 2 pole	8	1.00 Ea.	\$40.64	\$50.92	5.6250	5	5	\$254.61	\$254.61	
Maintenance and inspection safety switch, 2 pole	1	1.00 Ea.	\$40.64	\$50.92	45.0000	45	45	\$2,291.47	\$2,291.47	
Replace safety switch, 240 V, 2 pole	25	1.00 Ea.	\$391.60	\$477.36	1.8000	1	1	\$477.36	\$477.36	
Maintenance and repair incandescent lighting fixtures	10	25.00 Ea.	\$1,721.64	\$2,049.63	4.5000	4	4	\$8,198.50	\$8,198.50	
Replace incandescent lighting fixture lamp	5	25.00 Ea.	\$287.06	\$346.69	9.0000	9	9	\$3,120.23	\$3,120.23	
Replace fluorescent light fixture ballast, 80 W	10	28.00 Ea.	\$3,490.72	\$4,234.64	4.5000	4	4	\$16,938.57	\$16,938.57	
Replace lamps (2 lamps), 4', 34 W energy saver	10	28.00 Ea.	\$705.99	\$884.21	4.5000	4	4	\$3,536.84	\$3,536.84	
Repair smoke detector	10	20.00 Ea.	\$1,127.75	\$1,394.28	4.5000	4	3	\$5,577.13	\$4,182.84	
Check operation smoke detector	1	20.00 Ea.	\$323.88	\$405.78	45.0000	45	45	\$18,260.12	\$18,260.12	
Replace smoke detector	15	20.00 Ea.	\$5,684.75	\$6,789.24	3.0000	3	3	\$20,367.72	\$20,367.72	
Check and repair manual pull station	10	4.00 Ea.	\$350.79	\$431.32	4.5000	4	3	\$1,725.28	\$1,293.96	
Replace manual pull station	15	4.00 Ea.	\$813.87	\$979.76	3.0000	3	3	\$2,939.29	\$2,939.29	
Minor repairs to fire alarm control panel	5	1.00 Ea.	\$149.71	\$182.27	9.0000	9	9	\$1,640.47	\$1,640.47	
Maintenance and inspection fire alarm control panel	0.5	1.00 Ea.	\$43.18	\$54.10	90.0000	90	90	\$4,869.37	\$4,869.37	
Replace fire alarm control panel	15	1.00 Ea.	\$1,953.46	\$2,391.92	3.0000	3	3	\$7,175.76	\$7,175.76	
Replace fire alarm bell, 6"	20	8.00 Ea.	\$1,559.70	\$1,882.20	2.2500	2	2	\$3,764.41	\$3,764.41	
Maintenance and repair exit light	20	25.00 Ea.	\$930.04	\$1,150.08	2.2500	2	2	\$2,300.16	\$2,300.16	
Replace lamp exit light	5	25.00 Ea.	\$421.16	\$499.09	9.0000	9	9	\$4,491.78	\$4,491.78	
			\$320,416.08	\$378,684.75				MR Subtotal	\$857,345.95	
									MR Per Year	\$18,999.01
									PM Total	\$6,416.94
									Subtotal	\$25,415.95
									Total Per Unit	\$2.63

FAC 7431 AUDITORIUM AND THEATER FACILITY

SUC \$2.63

Release 2021 Qtr 3

UM SF

Zip Code Prefix 222

Design Life 45

Type PM

Average Size 9672.0

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
Urinals, annualized	2.00	0.46	\$12.64	\$22.91	\$0.00	\$35.54	\$43.68	\$52.45
Toilet (tank type), annualized	7.00	2.72	\$53.43	\$135.67	\$0.00	\$189.11	\$235.15	\$283.87
Lavatories, annualized	7.00	2.44	\$41.75	\$144.92	\$0.00	\$186.68	\$234.33	\$284.07
Showers, annualized	1.00	0.23	\$12.89	\$13.61	\$0.00	\$26.50	\$31.87	\$37.89
Drink fountain, annualized	2.00	1.24	\$41.45	\$62.55	\$0.00	\$104.00	\$126.91	\$151.90
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
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, 3 thru 24 tons, annualized	1.00	2.06	\$224.44	\$103.96	\$0.00	\$328.40	\$382.03	\$446.89
Light, emergency, hardwired system, annualized	25.00	6.25	\$193.31	\$369.08	\$0.00	\$562.39	\$692.44	\$832.16
						\$4,205.01	\$5,288.76	\$6,416.94



# FAC 7431 AUDITORIUM AND THEATER FACILITY

## Modeled Component List CostWorks Release 2021 Qtr 3

B20 Exterior Enclosure	
Steel, Painted	7.0 Ea.
Concrete Block, 1st floor	5.0 C.S.F.
Aluminum Window, Operating, 1st floor	1.0 Ea.
Glazed Aluminum	3.0 Ea.
B30 Roofing	
Built-Up Roofing	96.72 Sq.
C10 Interior Construction	
Hollow Core Interior Doors	9.0 Ea.
C30 Interior Finishes	
Vinyl	80.0 S.Y.
Acoustic Tile, fire-rated	3.5 C.S.F.
D20 Plumbing	
Flush-Tank Water Closet	7.0 Ea.
Lavatory, Vitreous China	7.0 Ea.
Sink, Iron Enamel	1.0 Ea.
Drinking Fountain	2.0 Ea.
Drain: Roof, Scupper, Area	2.0 Ea.
D30 HVAC	
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, 18" x 24"	4.0 Ea.
D40 Fire Protection	
Sprinkler System, Fire Supression, sprinkler head	46.0 Ea.
Sprinkler System, Fire Supression , 3" backflow preventer	1.0 Ea.
D50 Electrical	
Circuit Breaker, molded case, 480 V, 1 pole	21.0 Ea.
Safety Switch, General Duty, 240 V, 2 pole	1.0 Ea.
Smoke Detector	20.0 Ea.
Manual Pull Station	4.0 Ea.
Fire Alarm Control Panel	1.0 Ea.
Fire Alarm Bell	8.0 Ea.

FAC 7431 AUDITORIUM AND THEATER FACILITY  
Sustainment by Year  
CostWorks Release 2021 Qtr 3

