

FAC 2271 ELECTRONIC AND COMMUNICATION PRODUCTION PLANT

FY22 SUC: \$2.36 / SF
Source: Calculated using R.S. Means CostWorks 2021 Qtr 3 component prices

FAC 2271 ELECTRONIC AND COMMUNICATION PRODUCTION PLANT **SUC \$2.36**

Release 2021 Qtr 3

UM SF

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.

Zip Code Prefix 222

Design Life 55

Type MR

Average Size 61124.0

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	9.12 S.F.	\$109.97	\$129.25	55.0000	55	55	\$7,108.48	\$7,108.48
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	152.00 Ea.	\$21,999.98	\$26,236.56	2.7500	2	2	\$52,473.12	\$52,473.12
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	152.00 Ea.	\$74,196.01	\$87,935.68	1.1000	1	1	\$87,935.68	\$87,935.68
Repair steel, painted, door	14	6.00 Ea.	\$3,750.45	\$4,464.03	3.9286	3	3	\$13,392.10	\$13,392.10
Refinish 3'-0" x 7'-0" steel, painted, door	4	6.00 Ea.	\$248.40	\$305.20	13.7500	13	13	\$3,967.57	\$3,967.57
Replace 3'-0" x 7'-0" steel, painted, door	45	6.00 Ea.	\$4,230.38	\$4,918.39	1.2222	1	1	\$4,918.39	\$4,918.39
Repair 12' x 12' steel roll-up door	10	4.00 Ea.	\$2,703.58	\$3,208.87	5.5000	5	5	\$16,044.34	\$16,044.34
Refinish 12' x 12' steel roll-up door	5	4.00 Ea.	\$813.79	\$996.76	11.0000	11	11	\$10,964.32	\$10,964.32
Replace 12' x 12' steel roll-up door	35	4.00 Ea.	\$10,814.33	\$12,835.47	1.5714	1	1	\$12,835.47	\$12,835.47
Debris removal and visual inspection of built-up roofing	0.5	30.60 M.S.F.	\$1,152.38	\$1,405.56	110.0000	110	110	\$154,612.13	\$154,612.13
Non-destructive moisture inspection of built-up roofing	5	30.60 M.S.F.	\$3,575.78	\$4,361.38	11.0000	11	11	\$47,975.23	\$47,975.23
Minor BUR membrane repairs, 2% of roof area	1	6.00 Sq.	\$2,904.82	\$3,447.06	55.0000	55	55	\$189,588.43	\$189,588.43
BUR flashing repairs, 2 S.F. per sq. repaired	1	12.00 S.F.	\$41.99	\$50.99	55.0000	55	55	\$2,804.28	\$2,804.28
Minor BUR membrane replacement, 25% of roof area	15	77.00 Sq.	\$61,968.70	\$73,559.13	3.6667	3	3	\$220,677.40	\$220,677.40
Total BUR roof replacement	28	306.00 Sq.	\$238,572.91	\$282,126.61	1.9643	1	1	\$282,126.61	\$282,126.61
Repair steel painted interior door	14	6.00 Ea.	\$1,760.71	\$2,049.38	3.9286	3	3	\$6,148.15	\$6,148.15
Refinish 3'-0" x 7'-0" steel painted interior door	4	6.00 Ea.	\$315.51	\$388.72	13.7500	13	13	\$5,053.33	\$5,053.33
Replace 3'-0" x 7'-0" steel painted interior door	60	6.00 Ea.	\$7,308.21	\$8,472.50	0.9167	0	0	\$0.00	\$0.00
Repair solid core wood door, interior	11	13.00 Ea.	\$3,814.88	\$4,440.33	5.0000	5	5	\$22,201.66	\$22,201.66
Refinish 3'-0" x 7'-0" solid core wood door, interior	4	13.00 Ea.	\$563.74	\$692.25	13.7500	13	12	\$8,999.19	\$8,306.95
Replace 3'-0" x 7'-0" solid core wood door, interior	40	13.00 Ea.	\$6,362.55	\$7,355.53	1.3750	1	1	\$7,355.53	\$7,355.53
Repair 5/8" drywall - (2% of walls)	20	69.32 S.F.	\$116.13	\$141.31	2.7500	2	2	\$282.62	\$282.62
Repair clay brick wall, 1st floor	25	1,323.30 S.F.	\$56,870.95	\$69,796.75	2.2000	2	2	\$139,593.50	\$139,593.50
Replace glass - 2nd floor (1% of glass) - steel frame window	1	42.00 S.F.	\$4,460.13	\$5,504.96	55.0000	55	55	\$302,773.04	\$302,773.04
Repair 3'-9" x 5'-5" steel frame window - 2nd floor.	20	175.00 Ea.	\$60,355.12	\$71,446.38	2.7500	2	2	\$142,892.75	\$142,892.75
Refinish 3'-9" x 5'-5" steel frame window - 2nd floor.	5	175.00 Ea.	\$25,937.39	\$32,212.03	11.0000	11	11	\$354,332.34	\$354,332.34
Replace 3'-9" x 5'-5" steel frame window - 2nd floor.	45	175.00 Ea.	\$298,102.16	\$343,983.09	1.2222	1	1	\$343,983.09	\$343,983.09
Finish new 3'-9" x 5'-5" steel frame window - 2nd floor.	45	175.00 Ea.	\$24,082.34	\$29,905.24	1.2222	1	1	\$29,905.24	\$29,905.24
Refinish drywall	4	3,400.00 S.F.	\$2,111.34	\$2,597.29	13.7500	13	13	\$33,764.83	\$33,764.83
Replace 5/8" drywall	75	3,400.00 S.F.	\$7,924.07	\$9,697.50	0.7333	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 carpet	8	500.00 S.Y.	\$27,508.17	\$31,768.45	6.8750	6	6	\$190,610.71	\$190,610.71
Repair gypsum board ceiling - (2% of ceilings)	20	0.68 C.S.F.	\$244.83	\$300.57	2.7500	2	2	\$601.13	\$601.13
Refinish gypsum board ceiling, up to 12' high	20	33.84 C.S.F.	\$4,368.55	\$5,400.30	2.7500	2	2	\$10,800.60	\$10,800.60
Replace acoustic tile ceiling, fire-rated	20	64.86 C.S.F.	\$34,001.47	\$40,076.09	2.7500	2	2	\$80,152.18	\$80,152.18
Replace flush valve diaphragm tankless water closet	10	12.00 Ea.	\$314.64	\$390.43	5.5000	5	5	\$1,952.15	\$1,952.15
Rebuild flush valve tankless water closet	20	12.00 Ea.	\$2,165.21	\$2,609.49	2.7500	2	2	\$5,218.97	\$5,218.97
Unplug clogged line tankless water closet	5	12.00 Ea.	\$2,620.74	\$3,277.52	11.0000	11	11	\$36,052.74	\$36,052.74
Replace tankless water closet	35	12.00 Ea.	\$15,434.65	\$17,861.94	1.5714	1	1	\$17,861.94	\$17,861.94
Replace tankless flush valve	25	12.00 Ea.	\$3,026.58	\$3,553.33	2.2000	2	2	\$7,106.65	\$7,106.65
Replace wax ring gasket for tankless water closet	5	12.00 Ea.	\$1,698.23	\$2,121.92	11.0000	11	11	\$23,341.09	\$23,341.09
Replace flush valve diaphragm for a urinal	7	7.00 Ea.	\$183.54	\$227.75	7.8571	7	7	\$1,594.26	\$1,594.26
Rebuild flush valve for a urinal	20	7.00 Ea.	\$1,263.04	\$1,522.20	2.7500	2	2	\$3,044.40	\$3,044.40
Unplug line urinal	5	7.00 Ea.	\$1,015.50	\$1,270.00	11.0000	11	11	\$13,969.95	\$13,969.95
Replace wall-hung urinal	35	7.00 Ea.	\$6,782.04	\$8,183.74	1.5714	1	1	\$8,183.74	\$8,183.74
Replace washer in spud connection lavatory, vitreous china	7	12.00 Ea.	\$197.55	\$240.96	7.8571	7	7	\$1,686.72	\$1,686.72
Replace washer in faucet lavatory, vitreous china	2	12.00 Ea.	\$154.62	\$192.62	27.5000	27	27	\$5,200.79	\$5,200.79
Replace faucets lavatory, vitreous china	10	12.00 Ea.	\$2,180.71	\$2,625.06	5.5000	5	5	\$13,125.32	\$13,125.32
Clean out strainer and P trap lavatory, vitreous china	2	12.00 Ea.	\$418.43	\$523.29	27.5000	27	27	\$14,128.96	\$14,128.96
Replace lavatory, vitreous china	35	12.00 Ea.	\$8,070.89	\$9,698.65	1.5714	1	1	\$9,698.65	\$9,698.65
Replace faucet washer sink, iron enamel	2	3.00 Ea.	\$38.33	\$47.75	27.5000	27	27	\$1,289.19	\$1,289.19
Clean trap sink, iron enamel	3	3.00 Ea.	\$25.71	\$32.16	18.3333	18	18	\$578.80	\$578.80
Replace faucets sink, iron enamel	10	3.00 Ea.	\$545.18	\$656.27	5.5000	5	5	\$3,281.33	\$3,281.33
Unstop sink, iron enamel	2	3.00 Ea.	\$125.46	\$156.91	27.5000	27	27	\$4,236.49	\$4,236.49
Replace sink, P.E.C.I. sink, iron enamel kitchen	35	3.00 Ea.	\$1,910.10	\$2,272.53	1.5714	1	1	\$2,272.53	\$2,272.53
Check / minor repairs drinking fountain	1	6.00 Ea.	\$293.29	\$366.80	55.0000	55	55	\$20,173.75	\$20,173.75
Repair internal leaks drinking fountain	4	6.00 Ea.	\$270.48	\$338.27	13.7500	13	13	\$4,397.47	\$4,397.47
Correct water pressure drinking fountain	2	6.00 Ea.	\$250.93	\$313.81	27.5000	27	27	\$8,472.98	\$8,472.98
Replace refrigerant drinking fountain	2	6.00 Ea.	\$196.10	\$229.62	27.5000	27	27	\$6,199.62	\$6,199.62
Repair drain leak drinking fountain	4	6.00 Ea.	\$203.49	\$243.21	13.7500	13	11	\$3,161.70	\$2,675.29
Replace fountain drinking fountain	10	6.00 Ea.	\$7,686.94	\$9,087.35	5.5000	5	5	\$45,436.77	\$45,436.77
Inspect and clean shower head emergency shower station	3	2.00 Ea.	\$98.79	\$123.54	18.3333	18	18	\$2,223.76	\$2,223.76
Replace shower emergency shower station	25	2.00 Ea.	\$1,883.93	\$2,258.23	2.2000	2	2	\$4,516.46	\$4,516.46
Inspect and clean spray heads, emergency eye wash	3	2.00 Ea.	\$98.79	\$123.54	18.3333	18	18	\$2,223.76	\$2,223.76

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Replace eye wash station, emergency eye wash	25	2.00 Ea.	\$2,228.68	\$2,649.99	2.2000	2	2	\$5,299.99	\$5,299.99
Overhaul water heater, gas / oil, 70 gallon	5	1.00 Ea.	\$163.70	\$204.73	11.0000	11	11	\$2,251.99	\$2,251.99
Clean & service water heater, gas / oil, 70 gallon	1	1.00 Ea.	\$196.62	\$245.89	55.0000	55	55	\$13,523.89	\$13,523.89
Replace water heater, gas / oil, 70 gallon	12	1.00 Ea.	\$3,315.17	\$3,847.40	4.5833	4	4	\$15,389.62	\$15,389.62
Inspect for leaks steam converter, domestic hot water	1	1.00 Ea.	\$6.77	\$8.46	55.0000	55	55	\$465.49	\$465.49
Replace steam converter, domestic hot water	20	1.00 Ea.	\$3,500.15	\$4,018.40	2.7500	2	2	\$8,036.80	\$8,036.80
Inspect / check pump / motor operation, lubricate circulation pump, 1/12 HP	0.5	1.00 Ea.	\$8.03	\$10.04	110.0000	110	110	\$1,104.33	\$1,104.33
Replace pump / motor assembly circulation pump, 1/12 HP	10	1.00 Ea.	\$1,100.58	\$1,290.00	5.5000	5	5	\$6,449.98	\$6,449.98
General maintenance & repair drain: roof, scupper, area	1	16.00 Ea.	\$591.80	\$740.11	55.0000	55	55	\$40,706.15	\$40,706.15
Replace drain: roof, scupper, area	40	16.00 Ea.	\$12,590.92	\$14,597.76	1.3750	1	1	\$14,597.76	\$14,597.76
Resolder joint pipe & fittings, oxygen	12	1.00 Ea.	\$72.11	\$89.21	4.5833	4	4	\$356.83	\$356.83
Replace pipe and fittings, oxygen	25	8.00 L.F.	\$207.39	\$249.76	2.2000	2	2	\$499.51	\$499.51
Repair boiler, gas, 2000 MBH	7	1.00 Ea.	\$5,785.82	\$6,733.75	7.8571	7	7	\$47,136.22	\$47,136.22
Replace boiler, gas, 2000 MBH	30	1.00 Ea.	\$39,838.14	\$46,620.21	1.8333	1	1	\$46,620.21	\$46,620.21
Repair single zone rooftop unit, 60 ton	10	3.00 Ea.	\$209,911.08	\$245,679.99	5.5000	5	4	\$1,228,399.94	\$982,719.95
Replace single zone rooftop unit, 60 ton	15	3.00 Ea.	\$281,725.96	\$329,078.39	3.6667	3	3	\$987,235.18	\$987,235.18
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	125.00 Ea.	\$10,690.35	\$13,148.69	2.7500	2	2	\$26,297.38	\$26,297.38
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
Replace fire pump / electric motor assembly 100 H.P.	25	2.00 Ea.	\$88,278.17	\$101,820.68	2.2000	2	2	\$203,641.36	\$203,641.36
Maintenance and repair safety switch general, 2 pole	8	9.00 Ea.	\$365.80	\$458.29	6.8750	6	6	\$2,749.76	\$2,749.76
Maintenance and inspection safety switch, 2 pole	1	9.00 Ea.	\$365.80	\$458.29	55.0000	55	55	\$25,206.13	\$25,206.13
Replace safety switch, 240 V, 2 pole	25	9.00 Ea.	\$3,524.44	\$4,296.23	2.2000	2	2	\$8,592.47	\$8,592.47
Replace fluorescent light fixture ballast, 80 W	10	450.00 Ea.	\$56,100.80	\$68,056.76	5.5000	5	5	\$340,283.78	\$340,283.78
Replace lamps (2 lamps), 4', 34 W energy saver	10	450.00 Ea.	\$11,346.31	\$14,210.52	5.5000	5	5	\$71,052.60	\$71,052.60
Repair smoke detector	10	125.00 Ea.	\$7,048.45	\$8,714.26	5.5000	5	4	\$43,571.29	\$34,857.03
Replace smoke detector	15	125.00 Ea.	\$35,529.67	\$42,432.74	3.6667	3	3	\$127,298.22	\$127,298.22
Check and repair manual pull station	10	10.00 Ea.	\$876.97	\$1,078.30	5.5000	5	4	\$5,391.51	\$4,313.21
Replace manual pull station	15	10.00 Ea.	\$2,034.68	\$2,449.41	3.6667	3	3	\$7,348.23	\$7,348.23
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	51.00 Ea.	\$9,943.06	\$11,999.05	2.7500	2	2	\$23,998.10	\$23,998.10
			\$1,842,684.11	\$2,171,468.13				MR Subtotal	\$6,168,661.38

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
								MR Per Year	\$112,035.05
								PM Total	\$31,985.74
								Subtotal	\$144,020.79
								Total Per Unit	\$2.36

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Release 2021 Qtr 3

UM SF

Zip Code Prefix 222

Design Life 55

Type PM

Average Size 61124.0

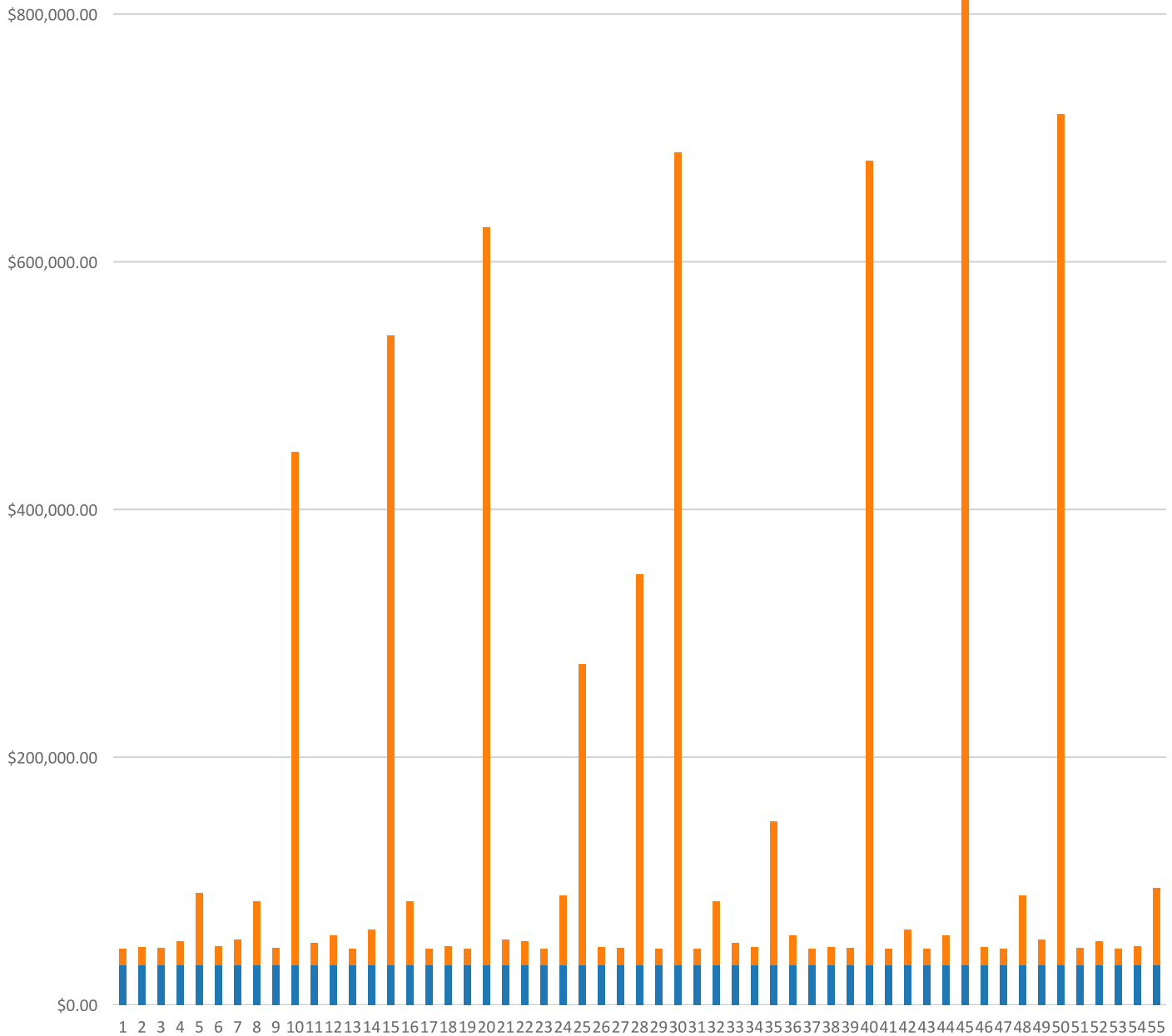
Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Door, emergency egress, swinging, annualized	4.00	1.04	\$58.37	\$43.00	\$0.00	\$101.37	\$120.10	\$141.76
Door, overhead, electric, roll up, to 24' high x 25' wide, annualized	2.00	8.14	\$81.92	\$337.62	\$0.00	\$419.54	\$529.02	\$642.60
Fire doors, swinging, annualized	6.00	2.35	\$85.93	\$87.34	\$0.00	\$173.27	\$208.07	\$247.16
Elevator, hydraulic, passenger / freight, annualized	4.00	40.90	\$5,959.20	\$3,452.10	\$0.00	\$9,411.30	\$11,042.85	\$12,972.36
Urinals, annualized	7.00	1.60	\$44.23	\$80.17	\$0.00	\$124.40	\$152.88	\$183.56
Toilet (vacuum breaker type), annualized	12.00	2.12	\$101.30	\$106.78	\$0.00	\$208.08	\$250.24	\$297.47
Lavatories, annualized	12.00	4.18	\$71.58	\$248.44	\$0.00	\$320.02	\$401.71	\$486.98
Drink fountain, annualized	6.00	3.72	\$124.35	\$187.65	\$0.00	\$312.01	\$380.74	\$455.69
Boiler, hot water, oil, gas, or comb. fired, over 1000 MBH, annualized	1.00	19.70	\$77.34	\$1,189.35	\$0.00	\$1,266.69	\$1,631.23	\$1,999.64
Air handling unit, 25 thru 50 tons, annualized	2.00	3.88	\$758.25	\$195.58	\$0.00	\$953.83	\$1,088.33	\$1,260.74
Air filter, electrostatic, annualized	2.00	15.20	\$20.32	\$766.47	\$0.00	\$786.79	\$1,018.76	\$1,251.75
Package unit, air cooled, 25 thru 50 ton, annualized	3.00	9.75	\$530.77	\$586.75	\$0.00	\$1,117.52	\$1,346.62	\$1,602.26
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
Fire pump, electric motor driven, annualized	2.00	95.50	\$106.15	\$5,682.45	\$0.00	\$5,788.60	\$7,503.96	\$9,224.61
						\$21,763.26	\$26,671.97	\$31,985.74

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Modeled Component List CostWorks Release 2021 Qtr 3

B20 Exterior Enclosure	
Aluminum Window, Fixed, 1st floor	152.0 Ea.
Steel, Painted	6.0 Ea.
Steel Single, Roll-Up	4.0 Ea.
Steel Frame, Operating, 2nd floor	175.0 Ea.
B30 Roofing	
Built-Up Roofing	306.0 Sq.
C10 Interior Construction	
Steel Painted Interior Doors	6.0 Ea.
Solid Core Interior Doors	13.0 Ea.
Fire Doors, Swinging, annualized	6.0 Each
C30 Interior Finishes	
Drywall	3400.0 S.F.
Carpet	500.0 S.Y.
Acoustic Tile, fire-rated	64.86 C.S.F.
D20 Plumbing	
Tankless Water Closet	12.0 Ea.
Urinal	7.0 Ea.
Lavatory, Vitreous China	12.0 Ea.
Sink, Iron Enamel	3.0 Ea.
Drinking Fountain	6.0 Ea.
Emergency Shower Station	2.0 Ea.
Emergency Eye Wash	2.0 Ea.
Water Heater, Gas / Oil, 70 Gallon	1.0 Ea.
Steam Converter, Domestic Hot Water	1.0 Ea.
Circulation Pump, 1/12 HP	1.0 Ea.
Drain: Roof, Scupper, Area	16.0 Ea.
D30 HVAC	
Boiler, Gas, 2000 MBH	1.0 Ea.
Single Zone Air Conditioner, 60 ton	3.0 Ea.
D40 Fire Protection	
Sprinkler System, Fire Supression, sprinkler head	125.0 Ea.
Sprinkler System, Fire Supression , 3" backflow preventer	1.0 Ea.
Fire Pump Electric Motor	2.0 Ea.
Fire Pump, Electric, annualized	2.0 Each
D50 Electrical	
Safety Switch, General Duty, 240 V, 2 pole	9.0 Ea.
Smoke Detector	125.0 Ea.
Manual Pull Station	10.0 Ea.
Fire Alarm Control Panel	1.0 Ea.
Fire Alarm Bell	51.0 Ea.
D10 Conveying	
Elevator, hydraulic annualized	4.0 Each

FAC 2271 ELECTRONIC AND COMMUNICATION PRODUCTION PLANT
Sustainment by Year
CostWorks Release 2021 Qtr 3



PM Cost
MR Cost