

**FAC 2271      Electronic and Communication Production Plant**

RUC:            \$183.00 SF

Source:        Tri-Service FAC 5100 from *Tri-Service Facility Unit Costs for Military Construction* version prepared November 13, 2009

SUC:            \$1.86 SF

Source:        Cost Works model, inflated to FY-09 using Green Book Table 5-6 (O&M less DHP)  
In V12, values were inflated only.

Model follows:

Chart:        A chart showing relative annual sustainment requirements follows:

**FAC 2271-Electronic and Communication Production Plant**  
**CostWorks 2008 Quarter 2**

Design Life= 55  
Average S.F= 50,759

C.S.F=100 S.F; MSF=1000 S.F  
Sq=100 S.F; M.L.F=1000 L.F

This spreadsheet was  
exported from R.S Means  
CostWorks

Terminal Cutoff is the removal of a single task occurrence if that task occurs  
within 10% of the end of the design life and if the frequency of the task exceeds  
20% of the design life. This prevents scheduling major work near the end of the  
design life

Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences in Design Life	Adjusted Occurrences	Terminal Cutoff
Repair brick wall - 1st floor	25	1 Bric	1,323.300	S.F.	48,962.10	59,495.57	2008 Qtr 2	2	1	\$ 59,495.57
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	1 Carp	152.000	Ea.	17,473.92	20,702.40	2008 Qtr 2	2	2	\$ 41,404.80
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	1 Carp	152.000	Ea.	66,667.20	77,974.48	2008 Qtr 2	1	0	\$ -
Replace glass - 1st floor (1% of glass)	1	1 Carp	9.120	S.F.	82.54	96.85	2008 Qtr 2	55	55	\$ 5,326.99
Repair 3'-9" x 5'-5" steel frame window - 2nd flr.	20	1 Carp	175.000	Ea.	52,808.00	62,200.25	2008 Qtr 2	2	2	\$ 124,400.50
Refinish 3'-9" x 5'-5" steel frame window - 2nd flr.	5	1 Pord	175.000	Ea.	21,775.25	26,832.75	2008 Qtr 2	11	11	\$ 295,160.25
Replace 3'-9" x 5'-5" steel frame window - 2nd flr.	45	1 Carp	175.000	Ea.	277,508.00	319,849.25	2008 Qtr 2	1	1	\$ 319,849.25
Finish new 3'-9" x 5'-5" st. fr. window - 2nd flr.	45	1 Pord	175.000	Ea.	20,230.00	24,911.25	2008 Qtr 2	1	1	\$ 24,911.25
Replace glass - 2nd floor (1% of glass)	1	1 Carp	42.000	S.F.	2,107.98	2,572.08	2008 Qtr 2	55	55	\$ 141,464.40
Repair 12' x 12' steel roll-up door	10	1 Carp	4.000	Ea.	3,330.44	3,858.16	2008 Qtr 2	5	5	\$ 19,290.80
Refinish 12' x 12' steel roll-up door	5	1 Pord	4.000	Ea.	675.32	822.16	2008 Qtr 2	11	11	\$ 9,043.76
Replace 12' x 12' steel roll-up door	35	2 Carp	4.000	Ea.	13,301.08	15,398.20	2008 Qtr 2	1	1	\$ 15,398.20
Repair steel, painted, door	14	1 Carp	6.000	Ea.	3,494.64	4,118.16	2008 Qtr 2	3	3	\$ 12,354.48
Refinish 3'-0" x 7'-0" steel, painted, door	4	1 Pord	6.000	Ea.	197.46	241.86	2008 Qtr 2	13	13	\$ 3,144.18
Replace 3'-0" x 7'-0" steel, painted, door	45	1 Carp	6.000	Ea.	3,192.48	3,720.24	2008 Qtr 2	1	1	\$ 3,720.24
Debris removal and visual inspection built-up roofing	1	2 Rofc	50.759	M.S.F.	1,489.27	1,794.33	2008 Qtr 2	55	55	\$ 98,688.19
Non-destructive moisture inspection built-up roofing	5	2 Rofc	50.759	M.S.F.	4,607.90	5,573.34	2008 Qtr 2	11	11	\$ 61,306.72
Total roof replacement built-up roofing	28	G1	507.590	Sq.	289,722.22	343,105.46	2008 Qtr 2	1	1	\$ 343,105.46
Minor membrane repairs - (2% of roof area) built-up roofing	5	G5	10.150	Sq.	3,496.88	4,131.46	2008 Qtr 2	11	11	\$ 45,446.02
Flashing repairs - (2 S.F. per sq. repaired) built-up roofing	5	2 Rofc	20.300	S.F.	68.21	81.20	2008 Qtr 2	11	11	\$ 893.20
Minor membrane replacement - (25% of roof area) built-up roofing	20	G5	126.900	Sq.	75,433.17	89,982.25	2008 Qtr 2	2	2	\$ 179,964.50
Repair steel painted interior door	14	1 Carp	6.000	Ea.	1,006.50	1,188.84	2008 Qtr 2	3	3	\$ 3,566.52
Refinish 3'-0" x 7'-0" steel painted interior door	4	1 Pord	6.000	Ea.	296.40	364.92	2008 Qtr 2	13	13	\$ 4,743.96
Replace 3'-0" x 7'-0" steel painted interior door	60	1 Carp	6.000	Ea.	5,625.24	6,539.76	2008 Qtr 2	0	0	\$ -
Repair solid core wood door interior	11	1 Carp	13.000	Ea.	2,180.75	2,575.82	2008 Qtr 2	5	5	\$ 12,879.10
Refinish 3'-0" x 7'-0" solid core wood door interior	4	1 Pord	13.000	Ea.	548.86	675.74	2008 Qtr 2	13	13	\$ 8,784.62
Replace 3'-0" x 7'-0" solid core wood door interior	40	1 Carp	13.000	Ea.	4,767.10	5,526.56	2008 Qtr 2	1	1	\$ 5,526.56
Refinish drywall	8	1 Pord	3,466.000	S.F.	2,079.60	2,564.84	2008 Qtr 2	6	6	\$ 15,389.04
Replace 5/8" drywall	75	2 Carp	3,466.000	S.F.	7,729.18	9,323.54	2008 Qtr 2	0	0	\$ -
Repair 5/8" drywall - (2% of walls)	20	1 Carp	69.320	S.F.	110.22	132.40	2008 Qtr 2	2	2	\$ 264.80
Replace carpet	12	2 Tilf	501.300	S.Y.	22,623.67	26,137.78	2008 Qtr 2	4	4	\$ 104,551.13
Refinish concrete floor finished	25	2 Cefi	442.730	C.S.F.	154,707.57	186,252.08	2008 Qtr 2	2	1	\$ 186,252.08
Replace vinyl floor	18	1 Tilf	219.300	S.Y.	10,471.58	12,785.19	2008 Qtr 2	3	2	\$ 25,570.38
Replace acoustic tile ceiling, fire-rated	20	1 Carp	64.860	C.S.F.	26,148.31	31,067.94	2008 Qtr 2	2	2	\$ 62,135.88
Refinish sheetrock ceiling	20	1 Pord	33.840	C.S.F.	4,252.67	5,255.01	2008 Qtr 2	2	2	\$ 10,510.03
Replace sheetrock ceiling	40	2 Carp	33.840	C.S.F.	12,125.89	14,805.34	2008 Qtr 2	1	1	\$ 14,805.34

**FAC 2271-Electronic and Communication Production Plant**  
**CostWorks 2008 Quarter 2**

Design Life= 55  
Average S.F= 50,759

C.S.F=100 S.F; MSF=1000 S.F  
Sq=100 S.F; M.L.F=1000 L.F

This spreadsheet was  
exported from R.S Means  
CostWorks

Terminal Cutoff is the removal of a single task occurrence if that task occurs  
within 10% of the end of the design life and if the frequency of the task exceeds  
20% of the design life. This prevents scheduling major work near the end of the  
design life

Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences in Design Life	Adjusted Occurrences	Terminal Cutoff
Repair sheetrock ceiling - (2% of ceilings)	20	1 Carp	0.676	C.S.F.	236.09	288.16	2008 Qtr 2	2	2	\$ 576.32
Check / minor repairs drinking fountain	1	1 Plum	6.000	Ea.	225.48	284.04	2008 Qtr 2	55	55	\$ 15,622.20
Repair internal leaks drinking fountain	4	1 Plum	6.000	Ea.	210.84	260.58	2008 Qtr 2	13	13	\$ 3,387.54
Correct water pressure drinking fountain	2	1 Plum	6.000	Ea.	193.26	243.00	2008 Qtr 2	27	27	\$ 6,561.00
Replace refrigerant drinking fountain	2	1 Plum	6.000	Ea.	95.04	113.16	2008 Qtr 2	27	27	\$ 3,055.32
Repair drain leak drinking fountain	4	1 Plum	6.000	Ea.	135.78	162.18	2008 Qtr 2	13	13	\$ 2,108.34
Replace fountain drinking fountain	10	2 Plum	6.000	Ea.	6,035.04	7,161.42	2008 Qtr 2	5	5	\$ 35,807.10
Inspect and clean shower head emergency shower station	3	1 Plum	2.000	Ea.	75.60	94.88	2008 Qtr 2	18	18	\$ 1,707.84
Replace shower emergency shower station	25	2 Plum	2.000	Ea.	1,452.78	1,747.16	2008 Qtr 2	2	1	\$ 1,747.16
Inspect and clean spray heads, emergency eye wash	3	1 Plum	2.000	Ea.	75.60	94.88	2008 Qtr 2	18	18	\$ 1,707.84
Replace eye wash station, emergency eye wash	25	2 Plum	2.000	Ea.	1,147.84	1,391.76	2008 Qtr 2	2	1	\$ 1,391.76
Replace washer in spud connection lavatory, vitreous china	7	1 Plum	33.000	Ea.	792.33	934.89	2008 Qtr 2	7	7	\$ 6,544.23
Replace washer in faucet lavatory, vitreous china	2	1 Plum	33.000	Ea.	325.05	405.57	2008 Qtr 2	27	27	\$ 10,950.39
Replace faucets lavatory, vitreous china	10	1 Plum	33.000	Ea.	4,075.17	4,918.98	2008 Qtr 2	5	5	\$ 24,594.90
Clean out strainer and P trap lavatory, vitreous china	2	1 Plum	33.000	Ea.	892.32	1,107.81	2008 Qtr 2	27	27	\$ 29,910.87
Replace lavatory, vitreous china	35	2 Plum	33.000	Ea.	17,496.27	20,978.10	2008 Qtr 2	1	1	\$ 20,978.10
Replace faucet washer sink, iron enamel	2	1 Plum	3.000	Ea.	29.37	36.57	2008 Qtr 2	27	27	\$ 987.39
Clean trap sink, iron enamel	3	1 Plum	3.000	Ea.	19.80	24.75	2008 Qtr 2	18	18	\$ 445.50
Replace faucets sink, iron enamel	10	1 Plum	3.000	Ea.	370.47	447.18	2008 Qtr 2	5	5	\$ 2,235.90
Unstop sink sink, iron enamel	2	1 Plum	3.000	Ea.	96.63	121.50	2008 Qtr 2	27	27	\$ 3,280.50
Replace sink, P.E.C.I. sink, iron enamel	35	2 Plum	3.000	Ea.	1,658.16	1,973.07	2008 Qtr 2	1	1	\$ 1,973.07
Replace flush valve diaphragm tankless water closet	10	1 Plum	18.000	Ea.	1,273.32	1,495.08	2008 Qtr 2	5	5	\$ 7,475.40
Rebuild flush valve tankless water closet	20	1 Plum	18.000	Ea.	2,375.64	2,880.18	2008 Qtr 2	2	2	\$ 5,760.36
Unplug clogged line tankless water closet	5	1 Plum	18.000	Ea.	3,028.68	3,783.24	2008 Qtr 2	11	11	\$ 41,615.64
Replace tankless water closet	35	2 Plum	18.000	Ea.	9,864.00	11,670.48	2008 Qtr 2	1	1	\$ 11,670.48
Replace tankless flush valve	25	1 Plum	18.000	Ea.	3,771.00	4,416.66	2008 Qtr 2	2	1	\$ 4,416.66
Replace wax ring gasket tankless water closet	5	1 Plum	18.000	Ea.	1,972.26	2,469.60	2008 Qtr 2	11	11	\$ 27,165.60
Replace flush valve diaphragm urinal	7	1 Plum	7.000	Ea.	495.18	581.42	2008 Qtr 2	7	7	\$ 4,069.94
Rebuild flush valve urinal	20	1 Plum	7.000	Ea.	923.86	1,120.07	2008 Qtr 2	2	2	\$ 2,240.14
Unplug line urinal	5	1 Plum	7.000	Ea.	784.98	979.37	2008 Qtr 2	11	11	\$ 10,773.07
Replace wall-hung urinal	35	2 Plum	7.000	Ea.	5,891.41	7,045.99	2008 Qtr 2	1	1	\$ 7,045.99
Inspect / check pump / motor operation, lub. circulation pump, 1/12 HP	0.5	1 Plum	1.000	Ea.	6.19	7.72	2008 Qtr 2	110	110	\$ 849.20
Replace pump / motor assembly circulation pump, 1/12 HP	10	2 Plum	1.000	Ea.	736.33	863.29	2008 Qtr 2	5	5	\$ 4,316.45
Resolder joint pipe & fittings, copper	10	1 Plum	2.000	Ea.	65.70	80.90	2008 Qtr 2	5	5	\$ 404.50
Replace pipe and fittings, copper 3/4"	20	2 Plum	16.000	L.F.	283.52	343.68	2008 Qtr 2	2	2	\$ 687.36
Replace pipe and fittings, copper 2"	25	2 Plum	8.000	L.F.	326.48	392.88	2008 Qtr 2	2	1	\$ 392.88

**FAC 2271-Electronic and Communication Production Plant**  
**CostWorks 2008 Quarter 2**

Design Life= 55  
Average S.F= 50,759

C.S.F=100 S.F; MSF=1000 S.F  
Sq=100 S.F; M.L.F=1000 L.F

This spreadsheet was  
exported from R.S Means  
CostWorks

Terminal Cutoff is the removal of a single task occurrence if that task occurs  
within 10% of the end of the design life and if the frequency of the task exceeds  
20% of the design life. This prevents scheduling major work near the end of the  
design life

Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences in Design Life	Adjusted Occurrences	Terminal Cutoff
Remove old insulation & replace with new, pipe 3/4", wall 1"	15	1 Plum	16.000	L.F.	112.16	136.64	2008 Qtr 2	3	3	\$ 409.92
Overhaul water heater, gas / oil, 70 gallon	5	1 Plum	1.000	Ea.	126.58	158.02	2008 Qtr 2	11	11	\$ 1,738.22
Clean & service water heater, gas / oil, 70 gallon	1	1 Plum	1.000	Ea.	151.28	188.37	2008 Qtr 2	55	55	\$ 10,360.35
Replace water heater, gas / oil, 70 gallon	12	2 Plum	1.000	Ea.	2,468.08	2,857.11	2008 Qtr 2	4	4	\$ 11,428.44
Unclog main drain pipe & fittings, cast iron	10	1 Plum	1.000	Ea.	35.62	44.41	2008 Qtr 2	5	5	\$ 222.05
Replace pipe & fittings, cast iron	40	2 Plum	8.000	L.F.	335.20	405.60	2008 Qtr 2	1	1	\$ 405.60
Replace pipe, 4" pipe and fittings, PVC	30	2 Plum	8.000	L.F.	473.60	585.52	2008 Qtr 2	1	1	\$ 585.52
Repair joint pipe and fittings, PVC	10	1 Plum	1.000	Ea.	115.94	144.14	2008 Qtr 2	5	5	\$ 720.70
Unclog floor drain, PVC	20	1 Plum	1.000	Ea.	37.09	45.87	2008 Qtr 2	2	2	\$ 91.74
General maintenance & repair drain: roof, scupper, area	1	1 Plum	16.000	Ea.	453.60	570.72	2008 Qtr 2	55	55	\$ 31,389.60
Replace drain: roof, scupper, area	40	1 Plum	16.000	Ea.	6,373.44	7,490.24	2008 Qtr 2	1	1	\$ 7,490.24
Resolder joint pipe & fittings, oxygen	12	1 Plum	1.000	Ea.	52.14	65.04	2008 Qtr 2	4	4	\$ 260.16
Replace pipe and fittings, oxygen	25	2 Plum	8.000	L.F.	141.04	171.12	2008 Qtr 2	2	1	\$ 171.12
Replace single zone rooftop unit, 25 ton	15	Q7	1.000	Ea.	34,098.40	39,677.60	2008 Qtr 2	3	3	\$ 119,032.80
Repair single zone rooftop unit, 25 ton	10	Q6	0.500	Ea.	12,910.55	14,961.45	2008 Qtr 2	5	5	\$ 74,807.23
Replace single zone rooftop unit, 60 ton	15	Q7	3.000	Ea.	212,430.00	248,677.80	2008 Qtr 2	3	3	\$ 746,033.40
Repair single zone rooftop unit, 60 ton	10	Q6	1.500	Ea.	59,505.26	70,428.53	2008 Qtr 2	5	5	\$ 352,142.63
Minor repairs to fire alarm control panel	5	1 Elec	1.000	Ea.	107.84	130.97	2008 Qtr 2	11	11	\$ 1,440.67
Maintenance and inspection fire alarm control panel	0.5	1 Elec	1.000	Ea.	30.54	38.17	2008 Qtr 2	110	110	\$ 4,198.70
Replace fire alarm control panel	15	1 Elec	1.000	Ea.	2,615.62	3,107.84	2008 Qtr 2	3	3	\$ 9,323.52
Replace sprinkler head	20	1 Plum	297.000	Ea.	18,912.96	23,302.62	2008 Qtr 2	2	2	\$ 46,605.24
Rebuild double check 3" backflow preventer sprinkler system	5	1 Plum	1.000	Ea.	598.06	715.83	2008 Qtr 2	11	11	\$ 7,874.13
Inspect sprinkler system	1	1 Plum	1.000	Ea.	26.55	32.89	2008 Qtr 2	55	55	\$ 1,808.95
Replace fire alarm bell, 6"	20	1 Elec	51.000	Ea.	7,256.28	8,747.01	2008 Qtr 2	2	2	\$ 17,494.02
Maintenance and repair safety switch gen., 2 pole	8	1 Elec	9.000	Ea.	256.50	320.67	2008 Qtr 2	6	6	\$ 1,924.02
Maintenance and inspection safety switch, 2 pole	1	1 Elec	9.000	Ea.	256.50	320.67	2008 Qtr 2	55	55	\$ 17,636.85
Replace safety switch 240 V, 2 pole	25	2 Elec	9.000	Ea.	3,185.82	3,792.42	2008 Qtr 2	2	1	\$ 3,792.42
Repair switchgear 1200 A mainframe	5	1 Elec	1.000	Ea.	1,694.09	1,975.10	2008 Qtr 2	11	11	\$ 21,726.10
Maintenance and inspection switchgear, mainframe	1	1 Elec	1.000	Ea.	45.81	57.01	2008 Qtr 2	55	55	\$ 3,135.55
Replace switchgear 1200 A mainframe	20	3 Elec	1.000	Ea.	4,052.28	4,808.24	2008 Qtr 2	2	2	\$ 9,616.48
Replace fluor. ballast for fluorescent lighting fixture, 80 W	10	1 Elec	677.000	Ea.	67,415.66	81,294.16	2008 Qtr 2	5	5	\$ 406,470.80
Replace lamps (2 lamps) fluorescent lighting fixture, 80 W	10	1 Elec	677.000	Ea.	17,222.88	21,108.86	2008 Qtr 2	5	5	\$ 105,544.30
Maintenance and repair receptacles and plugs	20	1 Elec	255.000	Ea.	7,927.95	9,876.15	2008 Qtr 2	2	2	\$ 19,752.30
Replace receptacle/plug receptacles and plugs	20	1 Elec	255.000	Ea.	13,453.80	16,427.10	2008 Qtr 2	2	2	\$ 32,854.20
Maintenance and repair wiring devices, switches	10	1 Elec	64.000	Ea.	1,989.76	2,478.72	2008 Qtr 2	5	5	\$ 12,393.60
Replace switch wiring devices, switches	15	1 Elec	64.000	Ea.	3,277.44	3,990.40	2008 Qtr 2	3	3	\$ 11,971.20

**FAC 2271-Electronic and Communication Production Plant**  
**CostWorks 2008 Quarter 2**

Design Life= 55  
Average S.F= 50,759

C.S.F=100 S.F; MSF=1000 S.F  
Sq=100 S.F; M.L.F=1000 L.F

This spreadsheet was  
exported from R.S Means  
CostWorks

Terminal Cutoff is the removal of a single task occurrence if that task occurs  
within 10% of the end of the design life and if the frequency of the task exceeds  
20% of the design life. This prevents scheduling major work near the end of the  
design life

Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences in Design Life	Adjusted Occurrences	Terminal Cutoff
Check and repair manual pull station	10	1 Elec	2.000	Ea.	138.42	169.74	2008 Qtr 2	5	5	\$ 848.70
Replace manual pull station	15	1 Elec	2.000	Ea.	251.48	303.78	2008 Qtr 2	3	3	\$ 911.34
Repair smoke detector	10	1 Elec	180.000	Ea.	6,874.20	8,460.00	2008 Qtr 2	5	5	\$ 42,300.00
Check operation smoke detector	1	1 Elec	180.000	Ea.	2,052.00	2,574.00	2008 Qtr 2	55	55	\$ 141,570.00
Replace smoke detector	15	1 Elec	180.000	Ea.	34,119.00	40,858.20	2008 Qtr 2	3	3	\$ 122,574.60
					<b>\$1,752,316.47</b>	<b>\$2,075,076.39</b>				
									MR Subtotal	\$ 4,964,862.53
									MR Per Year	\$ 90,270.23
									PM Per Year	\$ 7,788.62
									Subtotal	\$ 98,058.85
									Total Per Unit	\$ 1.93

**CostWorks 2009 Quarter 1 - FAC 2271-Electronic and Communication Production Plant**

Qty	Assembly Number	Description	Total In-House	Total Incl. O&P	Zip Code Prefix	Type	Release
4.000	B2035 410 1950	Door, overhead, electric, roll up, to 24' high x 25' w	960.64	1,160.48	200	FMR	2008 Qtr 2
19.000	B2035 225 1950	Door, emergency egress, swinging, annualized	940.69	1,092.69	200	FMR	2008 Qtr 2
6.000	C1025 110 1950	Fire doors, swinging, annualized	149.34	179.16	200	FMR	2008 Qtr 2
6.000	D2015 800 1950	Drink fountain, annualized	297.00	356.16	200	FMR	2008 Qtr 2
7.000	D2015 100 1950	Urinals, annualized	90.51	113.05	200	FMR	2008 Qtr 2
18.000	D2015 100 2950	Toilet (vacuum breaker type), annualized	232.74	290.70	200	FMR	2008 Qtr 2
33.000	D2015 100 4950	Lavatories, annualized	814.44	992.64	200	FMR	2008 Qtr 2
1.000	D2025 260 1950	Water heater, gas, to 120 gal., annualized	156.50	189.02	200	FMR	2008 Qtr 2
10.000	D3045 160 1950	VAV Boxes, annualized	613.10	760.00	200	FMR	2008 Qtr 2
1.000	D3055 210 1950	Package unit, air cooled, 3 thru 24 ton, annualized	207.71	251.03	200	FMR	2008 Qtr 2
3.000	D3055 210 2950	Package unit, air cooled, 25 thru 50 ton, annualized	854.82	1,023.30	200	FMR	2008 Qtr 2
1.000	D4015 100 1950	Backflow prevention device, up to 4", annualized	18.89	23.42	200	FMR	2008 Qtr 2
1.000	D4015 150 1950	Extinguishing system, wet pipe, annualized	806.79	983.35	200	FMR	2008 Qtr 2
2.000	E1095 122 1950	Crane, electric bridge, up to 5 ton, annualized	305.84	373.62	200	FMR	2008 Qtr 2
			<b>\$6,449.01</b>	<b>\$7,788.62</b>			

FAC 2271 Sustainment by Year - Terminal Cutoff Applied

