

FAC 1721 Flight Simulator Building

RUC: \$176.18 SF

Source: USACE PAX Newsletter 3.2.2 dated 20 Mar 09
CC 17210
Deflated to FY-09 using Appendix C of newsletter
In V12, Tri-Service and USACE PAX Newsletter values were updated while all
other values were inflated only.

SUC: \$4.86 SF

Source: Cost Works model in \$FY-08, 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 1721 Flight Simulator Facility
CostWorks 2008 Quarter 2

Design Life= 50
Average S.F= 11,793

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

This worksheet 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 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	620.000	S.F.	22,940.00	27,875.20	2008 Qtr 2	2	1 \$	27,875.20
Replace aluminum siding - 2nd floor	35	1 Carp	88.000	C.S.F.	49,627.60	59,794.24	2008 Qtr 2	1	1 \$	59,794.24
Refinish aluminum siding - 2nd floor	20	1 Pord	88.000	C.S.F.	20,686.16	25,376.56	2008 Qtr 2	2	2 \$	50,753.12
Replace glass - 1st floor (1% of glass)	1	1 Carp	2.900	S.F.	26.25	30.80	2008 Qtr 2	50	50 \$	1,539.90
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	1 Carp	4.8	Ea.	551.81	653.76	2008 Qtr 2	2	2 \$	1,307.52
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	1 Carp	48.000	Ea.	21,052.80	24,623.52	2008 Qtr 2	1	0 \$	-
Repair aluminum storefront door	12	1 Carp	2.000	Ea.	827.88	981.36	2008 Qtr 2	4	3 \$	2,944.08
Replace 3'-0" x 7'-0" aluminum storefront doors	50	1 Carp	2.000	Ea.	3,362.52	3,948.16	2008 Qtr 2	1	0 \$	-
Repair 12' x 12' steel roll-up door	10	1 Carp	3.000	Ea.	2,497.83	2,893.62	2008 Qtr 2	5	5 \$	14,468.10
Refinish 12' x 12' steel roll-up door	5	1 Pord	3.000	Ea.	506.49	616.62	2008 Qtr 2	10	10 \$	6,166.20
Replace 12' x 12' steel roll-up door	35	2 Carp	3.000	Ea.	9,975.81	11,548.65	2008 Qtr 2	1	1 \$	11,548.65
Repair steel, painted, door	14	1 Carp	5.000	Ea.	2,912.20	3,431.80	2008 Qtr 2	3	3 \$	10,295.40
Refinish 3'-0" x 7'-0" steel, painted, door	12	1 Pord	5.000	Ea.	164.55	201.55	2008 Qtr 2	4	3 \$	604.65
Replace 3'-0" x 7'-0" steel, painted, door	45	1 Carp	5.000	Ea.	2,660.40	3,100.20	2008 Qtr 2	1	1 \$	3,100.20
Debris removal and visual inspection built-up roofing	0.5	2 Rofc	12.000	M.S.F.	352.08	424.20	2008 Qtr 2	100	100 \$	42,420.00
Non-destructive moisture inspection built-up roofing	5	2 Rofc	12.000	M.S.F.	1,089.36	1,317.60	2008 Qtr 2	10	10 \$	13,176.00
Minor membrane repairs - (2% of roof area) built-up roofing	1	G5	2.400	Sq.	826.85	976.90	2008 Qtr 2	50	50 \$	48,844.80
Flashing repairs - (2 S.F. per sq. repaired) built-up roofing	5	2 Rofc	4.800	S.F.	16.13	19.20	2008 Qtr 2	10	10 \$	192.00
Minor membrane replacement - (25% of roof area) built-up roofing	15	G5	30.000	Sq.	17,832.90	21,272.40	2008 Qtr 2	3	3 \$	63,817.20
Place new membrane over existing built-up roofing	20	G5	120.000	Sq.	41,324.40	48,844.80	2008 Qtr 2	2	2 \$	97,689.60
Total roof replacement built-up roofing	28	G1	0	Sq.	0.00	0.00	2008 Qtr 2	1	1 \$	-
Repair solid core wood door interior	11	1 Carp	1.000	Ea.	167.75	198.14	2008 Qtr 2	4	4 \$	792.56
Replace 3'-0" x 7'-0" solid core, w/ safety glass dr. interior	40	1 Carp	1.000	Ea.	445.76	515.12	2008 Qtr 2	1	1 \$	515.12
Refinish 3'-0" x 7'-0" solid core wood door interior	12	1 Pord	1.000	Ea.	42.22	51.98	2008 Qtr 2	4	3 \$	155.94
Repair solid core wood door interior	11	1 Carp	10.000	Ea.	1,677.50	1,981.40	2008 Qtr 2	4	4 \$	7,925.60
Replace 3'-0" x 7'-0" solid core wood door interior	40	1 Carp	10.000	Ea.	3,667.00	4,251.20	2008 Qtr 2	1	1 \$	4,251.20
Refinish 3'-0" x 7'-0" solid core wood door interior	12	1 Pord	10.000	Ea.	422.20	519.80	2008 Qtr 2	4	3 \$	1,559.40
Repair 8" concrete block wall - (2% of walls) painted	25	1 Bric	8.000	C.S.F.	8,089.68	9,712.16	2008 Qtr 2	2	1 \$	9,712.16
Refinish concrete block wall painted	12	1 Pord	400.000	C.S.F.	38,868.00	47,252.00	2008 Qtr 2	4	3 \$	141,756.00
Replace 8" concrete block wall painted	75	2 Bric	400.000	C.S.F.	431,124.00	518,476.00	2008 Qtr 2	0	0 \$	-
Refinish concrete block wall painted	12	1 Pord	500.000	C.S.F.	48,585.00	59,065.00	2008 Qtr 2	4	3 \$	177,195.00
Replace 8" concrete block wall painted	75	2 Bric	0	C.S.F.	0.00	0.00	2008 Qtr 2	0	0 \$	-
Repair 8" concrete block wall - (2% of walls) painted	25	1 Bric	0	C.S.F.	0.00	0.00	2008 Qtr 2	2	1 \$	-
Repair 5/8" drywall - (2% of walls)	20	1 Carp	51.200	S.F.	81.41	97.79	2008 Qtr 2	2	2 \$	195.58
Refinish drywall	12	1 Pord	2,560.000	S.F.	1,536.00	1,894.40	2008 Qtr 2	4	3 \$	5,683.20
Replace 5/8" drywall	75	2 Carp	2,560.000	S.F.	5,708.80	6,886.40	2008 Qtr 2	0	0 \$	-
Repair 5/8" drywall - (2% of walls)	20	1 Carp	14.000	S.F.	22.26	26.74	2008 Qtr 2	2	2 \$	53.48
Replace 5/8" drywall	75	2 Carp	700.000	S.F.	1,561.00	1,883.00	2008 Qtr 2	0	0 \$	-
Repair med. wt. vinyl wall covering - (2% of walls)	1	1 Pord	0.100	C.S.F.	22.22	26.72	2008 Qtr 2	50	50 \$	1,336.05

FAC 1721 Flight Simulator Facility
CostWorks 2008 Quarter 2

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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
Replace medium weight vinyl wall covering	15	1 Pord	7.000	C.S.F.	2,021.95	2,445.73 2008 Qtr 2		3	3 \$	7,337.19
Refinish concrete floor finished	25	2 Cefi	76.000	C.S.F.	26,557.44	31,972.44 2008 Qtr 2		2	1 \$	31,972.44
Replace vinyl floor	18	1 Tilf	466.600	S.Y.	22,280.15	27,202.78 2008 Qtr 2		2	2 \$	54,405.56
Check / minor repairs drinking fountain	1	1 Plum	1.000	Ea.	37.58	47.34 2008 Qtr 2		50	50 \$	2,367.00
Repair internal leaks drinking fountain	4	1 Plum	1.000	Ea.	35.14	43.43 2008 Qtr 2		12	12 \$	521.16
Correct water pressure drinking fountain	2	1 Plum	1.000	Ea.	32.21	40.50 2008 Qtr 2		25	25 \$	1,012.50
Repair drain leak drinking fountain	4	1 Plum	1.000	Ea.	22.63	27.03 2008 Qtr 2		12	12 \$	324.36
Replace fountain drinking fountain	10	2 Plum	1.000	Ea.	1,005.84	1,193.57 2008 Qtr 2		5	5 \$	5,967.85
Unplug clogged line flush-tank water closet	5	1 Plum	3.000	Ea.	504.78	630.54 2008 Qtr 2		10	10 \$	6,305.40
Replace washer / diaphragm in ball cock flush-tank water closet	5	1 Plum	3.000	Ea.	42.21	52.20 2008 Qtr 2		10	10 \$	522.00
Replace valve and ball cock assembly flush-tank water closet	15	1 Plum	3.000	Ea.	224.82	278.04 2008 Qtr 2		3	3 \$	834.12
Install gasket between tank and bowl flush-tank water closet	20	1 Plum	3.000	Ea.	92.49	115.59 2008 Qtr 2		2	2 \$	231.18
Replace one piece water closet flush-tank	35	2 Plum	3.000	Ea.	1,983.39	2,312.19 2008 Qtr 2		1	1 \$	2,312.19
Replace washer in spud connection lavatory, vitreous china	7	1 Plum	3.000	Ea.	72.03	84.99 2008 Qtr 2		7	7 \$	594.93
Replace washer in faucet lavatory, vitreous china	2	1 Plum	3.000	Ea.	29.55	36.87 2008 Qtr 2		25	25 \$	921.75
Replace faucets lavatory, vitreous china	10	1 Plum	3.000	Ea.	370.47	447.18 2008 Qtr 2		5	5 \$	2,235.90
Clean out strainer and P trap lavatory, vitreous china	2	1 Plum	3.000	Ea.	81.12	100.71 2008 Qtr 2		25	25 \$	2,517.75
Replace lavatory, vitreous china	35	2 Plum	3.000	Ea.	1,590.57	1,907.10 2008 Qtr 2		1	1 \$	1,907.10
Replace faucet washer sink, stainless steel	2	1 Plum	1.000	Ea.	9.79	12.19 2008 Qtr 2		25	25 \$	304.75
Clean trap sink, stainless steel	3	1 Plum	1.000	Ea.	6.60	8.25 2008 Qtr 2		16	16 \$	132.00
Replace faucets sink, stainless steel	10	1 Plum	1.000	Ea.	123.49	149.06 2008 Qtr 2		5	5 \$	745.30
Unstop sink, stainless steel	2	1 Plum	1.000	Ea.	32.21	40.50 2008 Qtr 2		25	25 \$	1,012.50
Replace sink, stainless steel	40	2 Plum	1.000	Ea.	801.70	942.17 2008 Qtr 2		1	1 \$	942.17
Replace flush valve diaphragm urinal	7	1 Plum	2.000	Ea.	141.48	166.12 2008 Qtr 2		7	7 \$	1,162.84
Rebuild flush valve urinal	20	1 Plum	2.000	Ea.	263.96	320.02 2008 Qtr 2		2	2 \$	640.04
Unplug line urinal	5	1 Plum	2.000	Ea.	224.28	279.82 2008 Qtr 2		10	10 \$	2,798.20
Replace wall-hung urinal	35	2 Plum	2.000	Ea.	1,683.26	2,013.14 2008 Qtr 2		1	1 \$	2,013.14
Replace pipe and fittings, copper 3/4"	20	2 Plum	32.000	L.F.	567.04	687.36 2008 Qtr 2		2	2 \$	1,374.72
Replace pipe and fittings, copper 2"	25	2 Plum	16.000	L.F.	652.96	785.76 2008 Qtr 2		2	1 \$	785.76
Repair damaged pipe insulation, fiberglass 3/4"	5	Q14	4.000	Ea.	62.88	76.72 2008 Qtr 2		10	10 \$	767.20
Repair damaged pipe insulation, fiberglass 2"	5	Q14	2.000	Ea.	36.92	45.06 2008 Qtr 2		10	10 \$	450.60
Replace pipe insulation, fiberglass 3/4"	5	Q14	0.030	M.L.F.	188.67	229.84 2008 Qtr 2		10	10 \$	2,298.39
Replace pipe insulation, fiberglass 2"	5	Q14	0.010	M.L.F.	74.26	90.69 2008 Qtr 2		10	10 \$	906.91
Drain and flush water heater, electric, 120 gallon	7	1 Plum	1.000	Ea.	226.43	283.04 2008 Qtr 2		7	7 \$	1,981.28
Check operation water heater, electric, 120 gallon	3	1 Plum	1.000	Ea.	1.98	2.48 2008 Qtr 2		16	16 \$	39.68
Replace water heater, electric, 120 gallon	15	2 Plum	1.000	Ea.	9,192.45	10,543.79 2008 Qtr 2		3	3 \$	31,631.37
Unclog floor drain, PVC	20	1 Plum	1.000	Ea.	37.09	45.87 2008 Qtr 2		2	2 \$	91.74
Repair joint pipe and fittings, PVC	10	1 Plum	2.000	Ea.	231.88	288.28 2008 Qtr 2		5	5 \$	1,441.40

FAC 1721 Flight Simulator Facility
CostWorks 2008 Quarter 2

Design Life= 50		C.S.F=100 S.F; MSF=1000 S.F		This spreadsheet was exported		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.					
Average S.F= 11,793		Sq=100 S.F; M.L.F=1000 L.F		from R.S. Means CostWorks							
Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurrences	Terminal Cutoff	
Replace pipe, 4" pipe and fittings, PVC	30	2 Plum	300.000	L.F.	17,760.00	21,957.00 2008 Qtr 2		1	1 \$	21,957.00	
General maintenance & repair drain: roof, scupper, area	1	1 Plum	1.000	Ea.	28.35	35.67 2008 Qtr 2		50	50 \$	1,783.50	
Replace drain: roof, scupper, area	40	1 Plum	1.000	Ea.	398.34	468.14 2008 Qtr 2		1	1 \$	468.14	
Replace 1000 L.F. of hung 4" diam steel pipe natural gas	75	Q15	0.200	M.L.F.	13,019.67	15,747.83 2008 Qtr 2		0	0 \$	-	
Refill expansion tank	5	1 Stpi	1.000	Ea.	11.42	14.30 2008 Qtr 2		10	10 \$	143.00	
Replace expansion tank, 60 gal capacity	50	Q5	1.000	Ea.	1,534.86	1,778.25 2008 Qtr 2		1	0 \$	-	
Repair boiler, gas, 2000 MBH	7	Q5	1.000	Ea.	3,848.28	4,504.76 2008 Qtr 2		7	7 \$	31,533.32	
Replace boiler, gas, 2000 MBH	30	Q7	1.000	Ea.	27,492.80	32,374.20 2008 Qtr 2		1	1 \$	32,374.20	
Replace roof mounted exhaust fan, 2000 CFM exhaust fan	20	Q20	1.000	Ea.	1,154.75	1,360.26 2008 Qtr 2		2	2 \$	2,720.52	
Repair single zone rooftop unit, 60 ton	10	Q6	3.000	Ea.	119,010.51	140,857.05 2008 Qtr 2		5	5 \$	704,285.25	
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	
Minor repairs to fire alarm control panel	5	1 Elec	1.000	Ea.	107.84	130.97 2008 Qtr 2		10	10 \$	1,309.70	
Maintenance and inspection fire alarm control panel	0.5	1 Elec	1.000	Ea.	30.54	38.17 2008 Qtr 2		100	100 \$	3,817.00	
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	
Inspect sprinkler system	1	1 Plum	1.000	Ea.	26.55	32.89 2008 Qtr 2		50	50 \$	1,644.50	
Replace sprinkler head	20	1 Plum	157.000	Ea.	9,997.76	12,318.22 2008 Qtr 2		2	2 \$	24,636.44	
Repair failed breaker, 3 pole circuit breaker	4	1 Elec	2.000	Ea.	1,050.08	1,214.56 2008 Qtr 2		12	12 \$	14,574.72	
Maintenance and inspection C.B., 3 pole circuit breaker	0.33	1 Elec	2.000	Ea.	45.82	57.00 2008 Qtr 2		151	151 \$	8,607.00	
Replace C.B. enclosed, 600 V, 3 pole circuit breaker	12	1 Elec	2.000	Ea.	1,987.20	2,316.18 2008 Qtr 2		4	3 \$	6,948.54	
Repair switchgear 1200 A mainframe	5	1 Elec	1.000	Ea.	1,694.09	1,975.10 2008 Qtr 2		10	10 \$	19,751.00	
Maintenance and inspection switchgear, mainframe	1	1 Elec	1.000	Ea.	45.81	57.01 2008 Qtr 2		50	50 \$	2,850.50	
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	192.000	Ea.	19,119.36	23,055.36 2008 Qtr 2		5	5 \$	115,276.80	
Replace lamps (2 lamps) fluorescent lighting fixture, 80 W	10	1 Elec	192.000	Ea.	4,884.48	5,986.56 2008 Qtr 2		5	5 \$	29,932.80	
Maintenance and repair receptacles and plugs	20	1 Elec	70.000	Ea.	2,176.30	2,711.10 2008 Qtr 2		2	2 \$	5,422.20	
Replace receptacle/plug receptacles and plugs	20	1 Elec	70.000	Ea.	3,693.20	4,509.40 2008 Qtr 2		2	2 \$	9,018.80	
Maintenance and repair wiring devices, switches	10	1 Elec	35.000	Ea.	1,088.15	1,355.55 2008 Qtr 2		5	5 \$	6,777.75	
Replace switch wiring devices, switches	15	1 Elec	35.000	Ea.	1,792.35	2,182.25 2008 Qtr 2		3	3 \$	6,546.75	
Check and repair manual pull station	10	1 Elec	1.000	Ea.	69.21	84.87 2008 Qtr 2		5	5 \$	424.35	
Replace manual pull station	15	1 Elec	1.000	Ea.	125.74	151.89 2008 Qtr 2		3	3 \$	455.67	
Repair smoke detector	10	1 Elec	2.000	Ea.	76.38	94.00 2008 Qtr 2		5	5 \$	470.00	
Check operation smoke detector	1	1 Elec	2.000	Ea.	22.80	28.60 2008 Qtr 2		50	50 \$	1,430.00	
Replace smoke detector	15	1 Elec	2.000	Ea.	379.10	453.98 2008 Qtr 2		3	3 \$	1,361.94	
					\$1,264,568.16	\$1,511,162.38					
									MR Subtotal	\$	2,802,973.31
									MR Per Year	\$	56,059.47

FAC 1721 Flight Simulator Facility
CostWorks 2008 Quarter 2

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Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurrences	Terminal Cutoff
								PM Per Year	\$	2,983.59
								Subtotal	\$	59,043.06
								Total Per Unit	\$	5.01

CostWorks 2009 Quarter 1 - FAC 1721 Flight Simulator Facility

Qty	Assembly Number	Description	Total In-House	Total Incl. O&P	Zip Code Prefix	Type	Release
7.000	B2035 225 1950	Door, emergency egress, swinging, annualized	346.57	402.57	200	FMR	2008 Qtr 2
3.000	B2035 400 1950	Door, overhead, manual, up to 24' high x 25' wide,	404.22	487.65	200	FMR	2008 Qtr 2
11.000	C1025 110 1950	Fire doors, swinging, annualized	273.79	328.46	200	FMR	2008 Qtr 2
2.000	D2015 100 1950	Urinals, annualized	25.86	32.30	200	FMR	2008 Qtr 2
3.000	D2015 100 4950	Lavatories, annualized	74.04	90.24	200	FMR	2008 Qtr 2
3.000	D2015 100 3950	Toilet (tank type), annualized	65.88	81.99	200	FMR	2008 Qtr 2
1.000	D2015 800 1950	Drink fountain, annualized	49.50	59.36	200	FMR	2008 Qtr 2
1.000	D3025 130 3950	Boiler, hot water, oil, gas, or comb. fired, 500 -1000	1,102.11	1,371.08	200	FMR	2008 Qtr 2
2.000	D5015 220 1950	Circuit breaker, high voltage air, annualized	53.96	67.18	200	FMR	2008 Qtr 2
1.000	G3015 108 2950	Storage tank, ground level, annualized	52.65	62.76	200	FMR	2008 Qtr 2
			\$2,448.58	\$2,983.59			

FAC 1721 Sustainment by Year - Terminal Cutoff Applied

