

FAC 2144 Vehicle Maintenance Shop, Reserve

RUC: \$210.25 SF

Source: USACE PAX Newsletter 3.2.2 dated 20 Mar 09
CC 21410 Whl
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 \$3.69 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 2144-Vehicle Maintenance Shop, Reserve
CostWorks 2008 Quarter 2

Design Life= 50
Average S.F= 6,161

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 Design Life	Release Occurrences	Occurrences in Cutoff	Adjusted	Terminal
Point & refinish block wall - 1st floor	25	1 Bric	32.900	C.S.F.	12,222.02	15,005.69	2008 Qtr 2	2	1	\$ 15,005.69
Replace aluminum siding - 2nd floor	35	1 Carp	26.190	C.S.F.	14,769.85	17,795.58	2008 Qtr 2	1	1	\$ 17,795.58
Refinish aluminum siding - 2nd floor	20	1 Pord	26.190	C.S.F.	6,156.48	7,552.41	2008 Qtr 2	2	2	\$ 15,104.82
Repair 3'-9" x 5'-5" steel frame window - 2nd flr.	20	1 Carp	7.000	Ea.	2,112.32	2,488.01	2008 Qtr 2	2	2	\$ 4,976.02
Refinish 3'-9" x 5'-5" steel frame window - 2nd flr.	5	1 Pord	7.000	Ea.	871.01	1,073.31	2008 Qtr 2	10	10	\$ 10,733.10
Replace 3'-9" x 5'-5" steel frame window - 2nd flr.	45	1 Carp	7.000	Ea.	11,100.32	12,793.97	2008 Qtr 2	1	1	\$ 12,793.97
Finish new 3'-9" x 5'-5" st. fr. window - 2nd flr.	45	1 Pord	7.000	Ea.	809.20	996.45	2008 Qtr 2	1	1	\$ 996.45
Replace glass - 2nd floor (1% of glass)	1	1 Carp	1.800	S.F.	90.34	110.23	2008 Qtr 2	50	50	\$ 5,511.60
Refinish 12' x 24' steel double roll-up door	5	1 Pord	4.000	Ea.	1,354.12	1,648.08	2008 Qtr 2	10	10	\$ 16,480.80
Replace 12' x 24' steel double roll-up door	35	2 Carp	4.000	Ea.	26,605.60	30,882.56	2008 Qtr 2	1	1	\$ 30,882.56
Repair steel, painted, door	14	1 Carp	8.000	Ea.	4,659.52	5,490.88	2008 Qtr 2	3	3	\$ 16,472.64
Refinish 3'-0" x 7'-0" steel, painted, door	4	1 Pord	8.000	Ea.	263.28	322.48	2008 Qtr 2	12	12	\$ 3,869.76
Replace 3'-0" x 7'-0" steel, painted, door	45	1 Carp	8.000	Ea.	4,256.64	4,960.32	2008 Qtr 2	1	1	\$ 4,960.32
Replace tempered glass - (3% of glass)	1	1 Carp	5.040	S.F.	97.27	115.72	2008 Qtr 2	50	50	\$ 5,785.92
Total metal panel replacement metal steep roofing	30	2 Rofc	46.530	Sq.	30,818.21	36,642.84	2008 Qtr 2	1	1	\$ 36,642.84
Debris removal by hand & visual inspection metal steep roofing	1	2 Rofc	4.653	M.S.F.	82.59	99.57	2008 Qtr 2	50	50	\$ 4,978.71
Minor finish repairs - (2% of roof area) metal steep roofing	5	2 Rofc	93.060	S.F.	252.19	299.65	2008 Qtr 2	10	10	\$ 2,996.53
Minor replacement - (2.5% of roof area) metal steep roofing	20	2 Rofc	116.325	S.F.	1,039.95	1,235.37	2008 Qtr 2	2	2	\$ 2,470.74
Flashing replacement - (2 S.F. per sq. repaired) metal steep roofing	5	2 Rofc	1.860	S.F.	26.86	32.23	2008 Qtr 2	10	10	\$ 322.34
Repair steel painted interior door	14	1 Carp	10.000	Ea.	1,677.50	1,981.40	2008 Qtr 2	3	3	\$ 5,944.20
Refinish 3'-0" x 7'-0" steel painted interior door	4	1 Pord	10.000	Ea.	494.00	608.20	2008 Qtr 2	12	12	\$ 7,298.40
Replace 3'-0" x 7'-0" steel painted interior door	60	1 Carp	10.000	Ea.	9,375.40	10,899.60	2008 Qtr 2	0	0	\$ -
Safety glass repl., (3% of glass) steel painted interior door	1	1 Carp	6.300	S.F.	106.66	126.82	2008 Qtr 2	50	50	\$ 6,340.95
Repair fully glazed wood door	10	1 Carp	2.000	Ea.	335.50	396.28	2008 Qtr 2	5	5	\$ 1,981.40
Refinish 3'-0" x 7'-0" fully glazed wood door	4	1 Pord	2.000	Ea.	138.44	170.78	2008 Qtr 2	12	12	\$ 2,049.36
Replace 3'-0" x 7'-0" fully glazed wood door	40	1 Carp	2.000	Ea.	1,962.04	2,294.52	2008 Qtr 2	1	1	\$ 2,294.52
Replace insulating glass (3% of glass) fully glazed wooden doors	1	1 Carp	7.938	S.F.	360.23	422.46	2008 Qtr 2	50	50	\$ 21,123.02
Repair concrete steps	15	1 Cefi	33.000	S.F.	560.67	652.74	2008 Qtr 2	3	3	\$ 1,958.22
Replace concrete steps	100	2 Cefi	33.000	S.F.	1,633.83	1,982.97	2008 Qtr 2	0	0	\$ -
Replace metal stair railing interior	45	2 Sswk	22.000	L.F.	789.14	911.68	2008 Qtr 2	1	1	\$ 911.68
Refinish concrete floor finished	25	2 Cefi	59.970	C.S.F.	20,955.92	25,228.78	2008 Qtr 2	2	1	\$ 25,228.78
Replace acoustic tile ceiling, fire-rated	20	1 Carp	13.960	C.S.F.	5,627.97	6,686.84	2008 Qtr 2	2	2	\$ 13,373.68
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
Replace refrigerant drinking fountain	2	1 Plum	1.000	Ea.	15.84	18.86	2008 Qtr 2	25	25	\$ 471.50
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

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CostWorks 2008 Quarter 2

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Terminal Cutoff is the removal of a single task occurrence if that task occurs
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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 Design Life	Total Incl. O&P Occurrences	Release Cutoff	Occurrences in	Adjusted	Terminal
Inspect and clean spray heads, emergency eye wash	3	1 Plum	1.000	Ea.	37.80	47.44	2008 Qtr 2	16	16	\$ 759.04
Replace eye wash station, emergency eye wash	25	2 Plum	1.000	Ea.	573.92	695.88	2008 Qtr 2	2	1	\$ 695.88
Replace washer in spud connection lavatory, vitreous china	7	1 Plum	4.000	Ea.	96.04	113.32	2008 Qtr 2	7	7	\$ 793.24
Replace washer in faucet lavatory, vitreous china	2	1 Plum	4.000	Ea.	39.40	49.16	2008 Qtr 2	25	25	\$ 1,229.00
Replace faucets lavatory, vitreous china	10	1 Plum	4.000	Ea.	493.96	596.24	2008 Qtr 2	5	5	\$ 2,981.20
Clean out strainer and P trap lavatory, vitreous china	2	1 Plum	4.000	Ea.	108.16	134.28	2008 Qtr 2	25	25	\$ 3,357.00
Replace lavatory, vitreous china	35	2 Plum	4.000	Ea.	2,120.76	2,542.80	2008 Qtr 2	1	1	\$ 2,542.80
Replace faucet washer sink, iron enamel	2	1 Plum	1.000	Ea.	9.79	12.19	2008 Qtr 2	25	25	\$ 304.75
Clean trap sink, iron enamel	3	1 Plum	1.000	Ea.	6.60	8.25	2008 Qtr 2	16	16	\$ 132.00
Replace faucets sink, iron enamel	10	1 Plum	1.000	Ea.	123.49	149.06	2008 Qtr 2	5	5	\$ 745.30
Unstop sink sink, iron enamel	2	1 Plum	1.000	Ea.	32.21	40.50	2008 Qtr 2	25	25	\$ 1,012.50
Replace sink, P.E.C.I. sink, iron enamel	35	2 Plum	1.000	Ea.	552.72	657.69	2008 Qtr 2	1	1	\$ 657.69
Inspect / clean shower head fiberglass	3	1 Plum	2.000	Ea.	75.60	94.88	2008 Qtr 2	16	16	\$ 1,518.08
Replace mixing valve barrel shower, fiberglass	2	1 Plum	2.000	Ea.	296.30	352.64	2008 Qtr 2	25	25	\$ 8,816.00
Replace mixing valve shower, fiberglass	10	1 Plum	2.000	Ea.	549.36	658.00	2008 Qtr 2	5	5	\$ 3,290.00
Replace shower and fittings, fiberglass	20	2 Plum	2.000	Ea.	1,953.30	2,303.16	2008 Qtr 2	2	2	\$ 4,606.32
Replace flush valve diaphragm tankless water closet	10	1 Plum	4.000	Ea.	282.96	332.24	2008 Qtr 2	5	5	\$ 1,661.20
Rebuild flush valve tankless water closet	20	1 Plum	4.000	Ea.	527.92	640.04	2008 Qtr 2	2	2	\$ 1,280.08
Unplug clogged line tankless water closet	5	1 Plum	4.000	Ea.	673.04	840.72	2008 Qtr 2	10	10	\$ 8,407.20
Replace tankless water closet	35	2 Plum	4.000	Ea.	2,192.00	2,593.44	2008 Qtr 2	1	1	\$ 2,593.44
Replace tankless flush valve	25	1 Plum	4.000	Ea.	838.00	981.48	2008 Qtr 2	2	1	\$ 981.48
Replace wax ring gasket tankless water closet	5	1 Plum	4.000	Ea.	438.28	548.80	2008 Qtr 2	10	10	\$ 5,488.00
Replace flush valve diaphragm urinal	7	1 Plum	1.000	Ea.	70.74	83.06	2008 Qtr 2	7	7	\$ 581.42
Rebuild flush valve urinal	20	1 Plum	1.000	Ea.	131.98	160.01	2008 Qtr 2	2	2	\$ 320.02
Unplug line urinal	5	1 Plum	1.000	Ea.	112.14	139.91	2008 Qtr 2	10	10	\$ 1,399.10
Replace wall-hung urinal	35	2 Plum	1.000	Ea.	841.63	1,006.57	2008 Qtr 2	1	1	\$ 1,006.57
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	16.000	L.F.	652.96	785.76	2008 Qtr 2	2	1	\$ 785.76
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
Remove old insulation & replace with new, pipe 1-1/2", wall 1"	15	1 Plum	16.000	L.F.	123.36	150.08	2008 Qtr 2	3	3	\$ 450.24
Overhaul water heater, gas / oil, 70 gallon	5	1 Plum	1.000	Ea.	126.58	158.02	2008 Qtr 2	10	10	\$ 1,580.20
Clean & service water heater, gas / oil, 70 gallon	1	1 Plum	1.000	Ea.	151.28	188.37	2008 Qtr 2	50	50	\$ 9,418.50
Replace water heater, gas / oil, 70 gallon	12	2 Plum	1.000	Ea.	2,468.08	2,857.11	2008 Qtr 2	4	3	\$ 8,571.33
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	16.000	L.F.	670.40	811.20	2008 Qtr 2	1	1	\$ 811.20
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	1.000	Ea.	115.94	144.14	2008 Qtr 2	5	5	\$ 720.70

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Description	Frequency	Crew	Qty	Unit	Total In-House Design Life	Total Incl. O&P Occurrences	Release Occurrences	Occurrences in Cutoff	Adjusted	Terminal
Replace pipe, 4" pipe and fittings, PVC	30	2 Plum	16.000	L.F.	947.20	1,171.04	2008 Qtr 2	1	1	\$ 1,171.04
General maintenance & repair drain: roof, scupper, area	1	1 Plum	2.000	Ea.	56.70	71.34	2008 Qtr 2	50	50	\$ 3,567.00
Replace drain: roof, scupper, area	40	1 Plum	2.000	Ea.	796.68	936.28	2008 Qtr 2	1	1	\$ 936.28
Check and adjust 10 H.P. compressor	1	1 Plum	1.000	Ea.	65.25	81.53	2008 Qtr 2	50	50	\$ 4,076.50
Replace 10 H.P. compressor	25	2 Plum	1.000	Ea.	8,414.14	9,845.45	2008 Qtr 2	2	1	\$ 9,845.45
Resolder joint pipe & fittings, oxygen	12	1 Plum	1.000	Ea.	52.14	65.04	2008 Qtr 2	4	3	\$ 195.12
Replace pipe and fittings, oxygen	25	2 Plum	16.000	L.F.	282.08	342.24	2008 Qtr 2	2	1	\$ 342.24
Replace fan & motor, propeller exh., 4700 CFM exhaust fan	15	Q20	3.000	Ea.	4,180.89	4,879.05	2008 Qtr 2	3	3	\$ 14,637.15
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, 25 ton	15	Q7	1.000	Ea.	34,098.40	39,677.60	2008 Qtr 2	3	3	\$ 119,032.80
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
Replace sprinkler head	20	1 Plum	20.000	Ea.	1,273.60	1,569.20	2008 Qtr 2	2	2	\$ 3,138.40
Inspect sprinkler system	1	1 Plum	1.000	Ea.	26.55	32.89	2008 Qtr 2	50	50	\$ 1,644.50
Rebuild double check 3" backflow preventer sprinkler system	1	1 Plum	1.000	Ea.	598.06	715.83	2008 Qtr 2	50	50	\$ 35,791.50
Replace fire alarm bell, 6"	20	1 Elec	2.000	Ea.	284.56	343.02	2008 Qtr 2	2	2	\$ 686.04
Maintenance and inspection lighting panel, indoor	3	1 Elec	2.000	Ea.	57.00	71.26	2008 Qtr 2	16	16	\$ 1,140.16
Maintenance and repair safety switch gen., 2 pole	8	1 Elec	1.000	Ea.	28.50	35.63	2008 Qtr 2	6	6	\$ 213.78
Maintenance and inspection safety switch, 2 pole	1	1 Elec	1.000	Ea.	28.50	35.63	2008 Qtr 2	50	50	\$ 1,781.50
Maintenance and repair motor starter, up to 600 V	5	1 Elec	5.000	Ea.	853.75	1,037.50	2008 Qtr 2	10	10	\$ 10,375.00
Maintenance and inspection motor starter, up to 600 V	0.5	1 Elec	5.000	Ea.	190.85	239.25	2008 Qtr 2	100	100	\$ 23,925.00
Replace starter motor starter, up to 600 V	18	1 Elec	5.000	Ea.	2,640.90	3,152.05	2008 Qtr 2	2	2	\$ 6,304.10
Replace fluor. ballast for fluorescent lighting fixture, 80 W	10	1 Elec	49.000	Ea.	4,879.42	5,883.92	2008 Qtr 2	5	5	\$ 29,419.60
Replace lamps (2 lamps) fluorescent lighting fixture, 80 W	10	1 Elec	49.000	Ea.	1,246.56	1,527.82	2008 Qtr 2	5	5	\$ 7,639.10
Replace M.H. ballast mercury halide fixture, 175 W	10	1 Elec	7.000	Ea.	1,337.00	1,567.23	2008 Qtr 2	5	5	\$ 7,836.15
Replace lamp mercury halide fixture, 175 W	5	1 Elec	7.000	Ea.	517.93	612.29	2008 Qtr 2	10	10	\$ 6,122.90
Maintenance and repair receptacles and plugs	20	1 Elec	55.000	Ea.	1,709.95	2,130.15	2008 Qtr 2	2	2	\$ 4,260.30
Replace receptacle/plug receptacles and plugs	20	1 Elec	55.000	Ea.	2,901.80	3,543.10	2008 Qtr 2	2	2	\$ 7,086.20
Maintenance and repair wiring devices, switches	10	1 Elec	21.000	Ea.	652.89	813.33	2008 Qtr 2	5	5	\$ 4,066.65
Replace switch wiring devices, switches	15	1 Elec	21.000	Ea.	1,075.41	1,309.35	2008 Qtr 2	3	3	\$ 3,928.05
Check and repair manual pull station	10	1 Elec	3.000	Ea.	207.63	254.61	2008 Qtr 2	5	5	\$ 1,273.05
Replace manual pull station	15	1 Elec	3.000	Ea.	377.22	455.67	2008 Qtr 2	3	3	\$ 1,367.01
					\$266,221.21	\$315,444.83				
									MR Subtotal	\$ 790,321.80
									MR Per Year	\$ 15,806.44

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									PM Per Year	\$ 7,686.82
									Subtotal	\$ 23,493.26
									Total Per Unit	\$ 3.81

CostWorks 2009 Quarter 1 - FAC 2144-Vehicle Maintenance Shop, Reserve

Qty	Assembly Number	Description	Total In-House	Total Incl. O&P	Zip Code Prefix	Type	Release
2.000	E1095 122 3950	Crane, electric bridge, over 15 tons, annualized	819.08	1,004.00	200	FMR	2008 Qtr 2
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
8.000	B2035 225 1950	Door, emergency egress, swinging, annualized	396.08	460.08	200	FMR	2008 Qtr 2
12.000	C1025 110 1950	Fire doors, swinging, annualized	298.68	358.32	200	FMR	2008 Qtr 2
1.000	D2015 100 1950	Urinals, annualized	12.93	16.15	200	FMR	2008 Qtr 2
4.000	D2015 100 2950	Toilet (vacuum breaker type), annualized	51.72	64.60	200	FMR	2008 Qtr 2
4.000	D2015 100 4950	Lavatories, annualized	98.72	120.32	200	FMR	2008 Qtr 2
2.000	D2015 100 5950	Showers, annualized	39.70	47.60	200	FMR	2008 Qtr 2
1.000	D2015 800 1950	Drink fountain, annualized	49.50	59.36	200	FMR	2008 Qtr 2
4.000	D3045 160 1950	VAV Boxes, annualized	245.24	304.00	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
1.000	D3095 110 1950	Air compressor, gas engine powered, annualized	1,180.53	1,474.60	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
1.000	D5015 280 1950	Motor control center, over 400 A, annualized	53.91	64.15	200	FMR	2008 Qtr 2
6.000	D3065 100 1950	Controls, central system, electro/pneumatic, annua	911.70	1,106.34	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
			\$6,308.32	\$7,686.82			

FAC 2144 Sustainment by Year - Terminal Cutoff Applied

