FAC 1496 TACTICAL VEHICLE WASH FACILITY

SUC FY22: $2.54 SF

Source: Inflated from FY21 (v23) using ENR labor and material cost indices to measure actual inflation

Original Source: Calculated using R.S. Means CostWorks with 3rd Quarter 2019 component prices. FY20 FAC Redefined in SF, vice "EA".

ESL 35
Size 151125

FY20v22 SUC CostWorks 2019 Quarter 3 - FAC 1496 Tactical Vehicle Wash Facility

Qty	Description	Frequency	Crew	Unit	Total Incl. O&P	Release	Occurances in Life	Total for Assembly
105,100.000	Minor repairs to concrete floor unfinished	15	1 Cefi	S.F.	4,776,795.00	2019 Qtr 3	2	$ 9,553,590.00
160.000	Refinish metal hand rail	7	1 Pord	L.F.	384.00	2019 Qtr 3	5	$ 1,920.00
590.000	Metal floor grating repairs - (2% of grating)	10	1 Sswk	S.F.	21,688.40	2019 Qtr 3	3	$ 65,065.20
590.000	Replace metal floor grating	30	2 Sswk	S.F.	21,989.30	2019 Qtr 3	1	$ 21,989.30
24.800	Waterproof concrete block wall, 1st floor	10	1 Rofc	C.S.F.	5,973.08	2019 Qtr 3	3	$ 17,919.24
5.600	Point and refinish painted concrete block wall, 1st floor	25	1 Bric	C.S.F.	3,121.16	2019 Qtr 3	1	$ 3,121.16
1.000	Repair 3'-9" x 5'-5" steel frame window - 1st floor.	20	1 Carp	Ea.	385.60	2019 Qtr 3	1	$ 385.60
1.000	Repair steel, painted, door	14	1 Carp	Ea.	854.71	2019 Qtr 3	2	$ 1,709.42
0.330	Debris removal, by hand and visual inspection, metal panel roofi	1	2 Rofc	M.S.F.	9.40	2019 Qtr 3	35	$ 328.94
3.300	Minor metal roof finish repairs, 2% of roof area, metal panel roof	5	2 Rofc	S.F.	14.16	2019 Qtr 3	7	$ 99.10
6.600	Minor metal roof panel replacement, 2.5% of roof area	20	2 Rofc	S.F.	88.97	2019 Qtr 3	1	$ 88.97
4.000	Office painting, 10' x 12', 10' high walls	5	1 Pord	Ea.	1,136.56	2019 Qtr 3	7	$ 7,955.92
3.100	Refinish concrete floor finished	25	2 Cefi	C.S.F.	1,519.87	2019 Qtr 3	1	$ 1,519.87
10,445.000	Replace vinyl sheet flooring	18	1 Tilf	S.Y.	1,170,466.70	2019 Qtr 3	1	$ 1,170,466.70
850.000	Replace pipe, 6" pipe and fittings, PVC	30	2 Plum	L.F.	124,006.50	2019 Qtr 3	1	$ 124,006.50
460.000	Replace pipe, 8" pipe and fittings, PVC	30	2 Plum	L.F.	70,794.00	2019 Qtr 3	1	$ 70,794.00
12.000	Unclog floor drain	10	1 Plum	Ea.	4,701.48	2019 Qtr 3	3	$ 14,104.44
12.000	Clean out bucket floor drain with bucket	5	1 Plum	Ea.	4,099.68	2019 Qtr 3	7	$ 28,697.76
1.000	Repair 500 kva transformer, primary, liquid filled	10	1 Elec	Ea.	3,181.06	2019 Qtr 3	3	$ 9,543.18
4.000	Maintenance and repair motor starter, up to 600 V	5	1 Elec	Ea.	987.56	2019 Qtr 3	7	$ 6,912.92
4.000	Replace starter motor starter, up to 600 V	18	1 Elec	Ea.	3,220.64	2019 Qtr 3	1	$ 3,220.64
1.000	Maintenance and repair secondary transformer, dry	10	1 Elec	Ea.	192.52	2019 Qtr 3	3	$ 577.56
1.000	Maintenance and inspection secondary transformer, dry	0.5	1 Elec	Ea.	94.91	2019 Qtr 3	70	$ 6,643.70
1.000	Replace transformer 500 KVA	30	R3	Ea.	30,147.07	2019 Qtr 3	1	$ 30,147.07
1.000	Maintenance and inspection lighting panel, indoor	3	1 Elec	Ea.	47.71	2019 Qtr 3	11	$ 524.81
1.000	Maintenance and repair breaker, molded case, 480 V, 1 pole	20	1 Elec	Ea.	84.64	2019 Qtr 3	1	$ 84.64
4.000	Maintenance and repair breaker, enclosed, 240 V, 2 pole	25	1 Elec	Ea.	338.56	2019 Qtr 3	1	$ 338.56
10.000	Maintenance and repair breaker, enclosed, 240 V, 3 pole	25	1 Elec	Ea.	846.40	2019 Qtr 3	1	$ 846.40
2.000	Maintenance and repair safety switch, 3 pole safety switch, hea\	8	1 Elec	Ea.	95.42	2019 Qtr 3	4	$ 381.68
1.000	Maintenance and repair safety switch general, 2 pole	8	1 Elec	Ea.	47.71	2019 Qtr 3	4	$ 190.84
2.000	Replace receptacle/plug receptacles and plugs	20	1 Elec	Ea.	164.12	2019 Qtr 3	1	$ 164.12
2.000	Replace lamps (2 lamps), 4', 34 W energy saver	10	1 Elec	Ea.	100.06	2019 Qtr 3	3	$ 300.18
1.000	Maintenance and repair lightning ground rod	1	1 Elec	Ea.	106.72	2019 Qtr 3	35	$ 3,735.20
8.000	Remove and replace 50 HP pump motor	25	2 Elec	Ea.	50,150.72	2019 Qtr 3	1	$ 50,150.72
4.000	Minor chain link fence repairs, per 10 LF	1	2 Clab	Ea.	132.80	2019 Qtr 3	35	$ 4,648.00
2.000	Replace double swing gates, 6' high, 20' opening	5	2 Clab	Opng.	2,712.16	2019 Qtr 3	7	$ 18,985.12
2.000	Replace 6' x 18' cantilever slide gate	5	2 Clab	Opng.	7,496.92	2019 Qtr 3	7	$ 52,478.44
17.000	Remove and replace fire hydrant	25	B21	Ea.	124,729.34	2019 Qtr 3	1	$ 124,729.34
32.000	Replace 400W H.P.S. lamp, pole-mounted fixture	10	R26	Ea.	4,120.00	2019 Qtr 3	3	$ 12,360.00
12.000	Replace 400W H.P.S. ballast, pole-mounted fixture	10	R26	Ea.	9,315.84	2019 Qtr 3	3	$ 27,947.52
4.000	Replace light pole, 2 fixtures, concrete base not included	10	R3	Ea.	38,082.52	2019 Qtr 3	3	$ 114,247.56
17.000	Replace concrete base for parking lot light pole	20	B18	Ea.	65,006.47	2019 Qtr 3	1	$ 65,006.47
							Total M&R	$ 11,617,926.79
							M&R per Year	$ 331,940.77
							PM	$ 12,546.66
							Total per Year	$ 344,487.43
							SUC	$ 2.28
							Old Suc	$ 1.77

Preventive Maintenance

CostWorks 2019 Quarter 3 - FAC 1496 Tactical Vehicle Wash Facility

Qty	Description	Labor Hours	Total In-House	Total Incl. O&P
12.000	Valve, gate, above 4", annually	1.91	273.96	322.68
8.000	Valve, sediment strainer, above 4", annualized	2.50	204.40	249.52
6.000	Submersible, 1 H.P. and over, annualized	23.10	1,614.72	1,991.46
1.000	Backflow prevention device, up to 4", annualized	0.33	38.40	46.23
1.000	Transformer, dry type 500 KVA and over, annualized	0.77	74.70	91.37
4.000	Panelboard, 225 A and above, annualized	1.76	236.96	281.48
2.000	Manual swing gate, annualized	3.46	248.76	305.24
1.000	Water flow meter, turbine, annualized	0.59	56.48	67.24
2.000	Reservoir controls, annualized	17.72	1,197.72	1,473.00
17.000	Fire hydrant, annualized	10.81	1,131.52	1,360.68
9.000	Valve, post indicator, annualized	12.78	1,113.30	1,345.14
2.000	Ejector, sewage, annualized	1.91	265.40	314.40
4.000	Grit drive, annualized	4.35	710.44	835.48
1.000	Filter plant, annualized	17.46	1,174.67	1,465.98
2.000	Blower, aerator, annualized	20.62	1,983.52	2,396.76
			$10,324.95	**$12,546.66**

2 December 2019

FAC 1496: Tactical Vehicle Wash Facility

SUC Modeling Notes
UMA – SF
RPA Type Code – S
ESL – 35 Years

FAC Definition:
A facility for pre-wash mud removal and washing of tactical vehicles. Included are water recirculation, high- and low- pressure cleaning, water containment and drains, and sediment and sludge removal.

References:
UFC 4-214-03, 17 March 2018
Army Public Works Tech Bulletin 200-1-87, 3 March 2011
2018 RPAD
USACE HII Project data for Central Vehicle Wash Facility 2006 - 2015
USMC Record Cards for 29 Palms
FAC 1496 SUC 2010
2019 RPCS

Background:
The 2019 RPCS changed the unit of measure of FAC 1496 from EA to SF. This inspired a remodeling of the SUC to comply with this change. There are 89 assets in the 2018 RPAD, but there could be as many as 20 additional Navy/Marine facilities that meet the design and definition but were catalogued under FAC 2145. The Navy/Marine Corps real property communities hope to re-categorized these assets once the Navy establishes a CatCode under FAC 1496.

2018 RPAD:
89 Assets // 90 Asset Allocations

Components / Stages included in TVWF.
These facilities are sub-components of the TVWF, are required to make the facility complete and usable, and should not be inventories separately

- Preparation Area (Concrete Pavement)
- Wash Stations Area (Concrete Pavement)
- Pre-wash / Soak Station Area (Concrete Pavement)
- Assembly Area (Concrete Pavement)
- Primary Water Treatment – Basin with sediment and petroleum product separation
- Secondary Water Treatment - sand filter or lagoon type
- Equalization or water supply basin (Optional depending on design)
- Utilities/ancillary equipment
    - Fences
    - Gates
    - Lighting

Accountability Note: The control building is not included as a component of the Tactical Vehicle Wash Facility. The control building should be accounted for as a separate asset under FAC 1444/Miscellaneous Operational Support Building (RPA Type Code B). The components inside the control building that support the TVWF are to be considered components of the TVWF. The components that are integral to the building itself (door, window, lighting, switches, outlets, flooring, roofing) are components of the building asset.

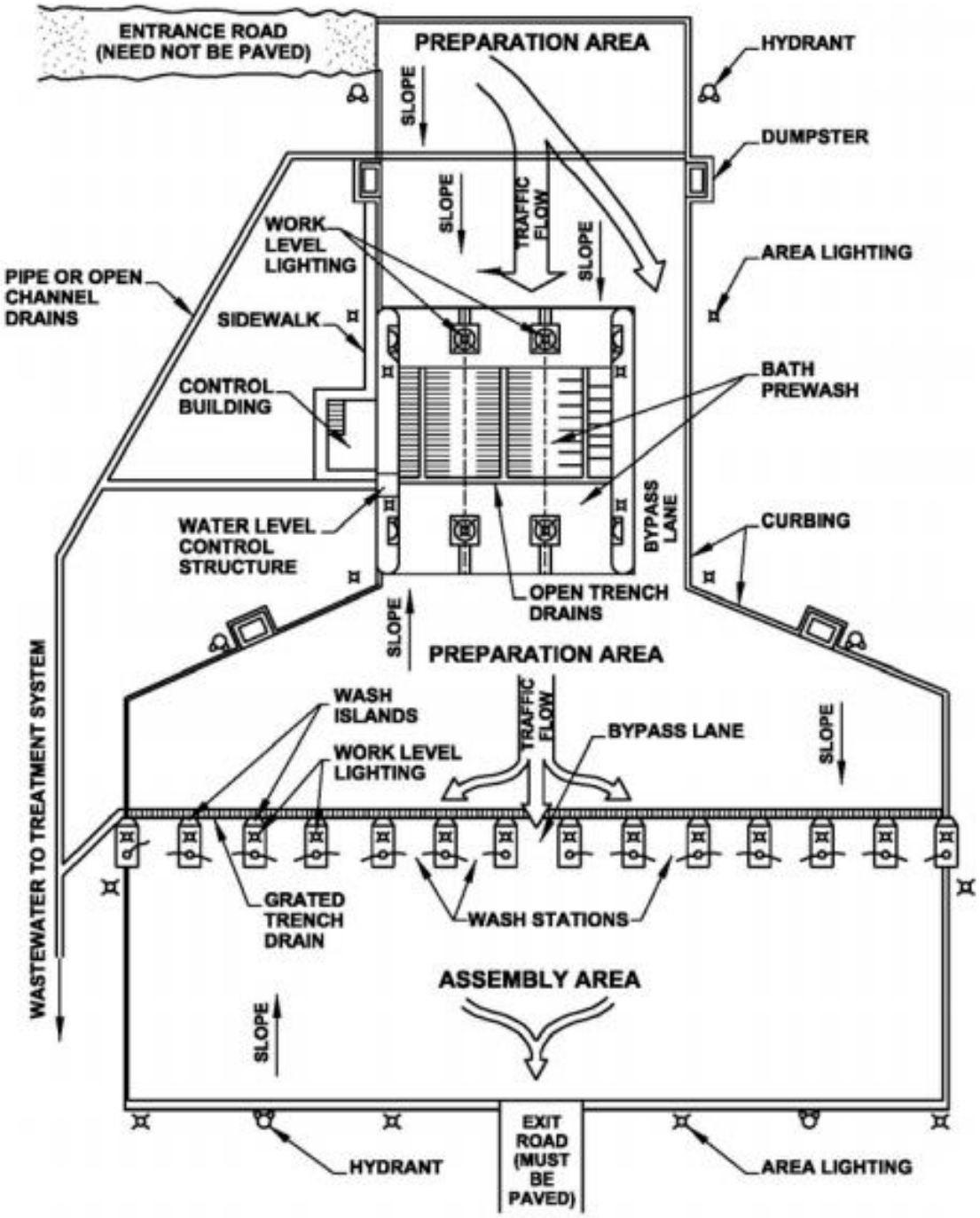
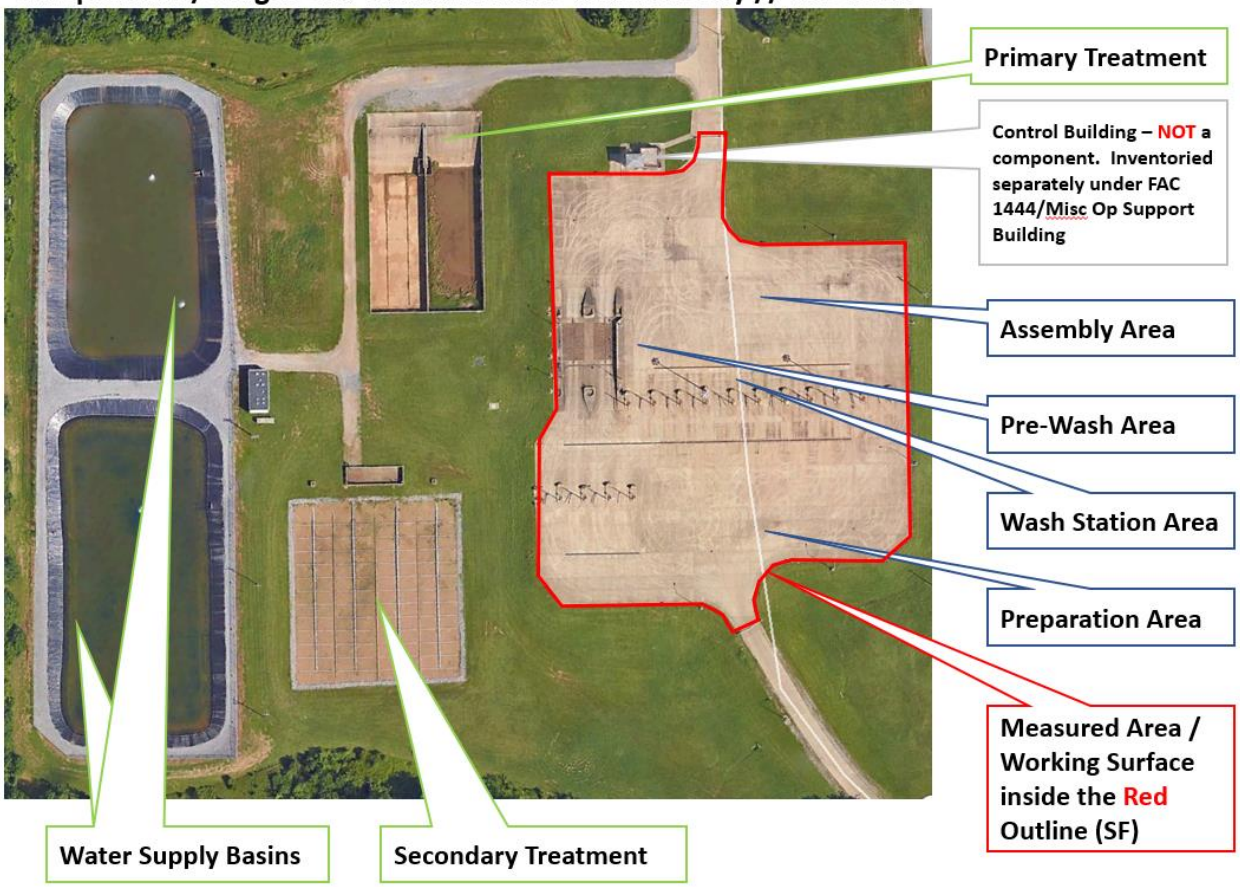


Figure 1: Working Surface of a TVWF UFC 4-214-03

Wash Rack Measurements

As the FAC unit of measure changed from "Each" to "Square Feet", the facility size will be determined by measuring the working paved surface of the TVWF.

Components / Stages of a Tactical Vehicle Wash Facility // FAC 1496



Sample of Typical TVWF across DoD

Location	Service	Name / RPUID	Size	Number of Wash Stations	Number of Pre-wash Stations
29 Palms	M	Wash Rack South RPUID 46556	66,598 SF	8	1
29 Palms	M	Wash Rack North	75,638 SF	8	0
Dix / JBMDL	F	TVWF 585420	139,679 SF	23	1
Ft Hood	A	Central Wash 1	65,493 SF	9	0
Ft Hood	A	Central Wash 2	175,560 SF	11	5
Ft Hood	A	Central Wash 3	209,266 SF	30	5
Ft Bliss	A	Central Vehicle WR	381,339 SF	16	3
Ft Carson	A	Central Vehicle WR	193,453 SF	22	4
Hohenfels	A	Albertshof	85,182 SF	32	2
Ft Campbell	A	Wash Rack North	155,617 SF	16	2
FLW, MO	A	Wash Rack	114,549 SF	13	1
		Average	**151,125 SF**	**17.1**	**2.2**