

**FAC 7602 MONUMENT AND MEMORIAL**

SUC FY22: \$268.80 EA

Source: Commercial Sources, 2021

Calculations below:

**FAC 7602 MONUMENT AND MEMORIAL**

UM = EA

Design Qty 1

ESL = 60

Requirements	Unit	Qty	Unit Cost	Frequency (years)	Occurrences over Lifetime	Extended Cost
Plaque Reset	EA	1	\$400.00	4	15	\$6,000.00
Horizontal plaques	EA	1	\$165.00	4	15	\$2,475.00
Vertical plaques	EA	1	\$211.00	4	15	\$3,165.00
Statues/Sculptures	EA	1	\$2,300.00	4	15	\$34,500.00
Equipment Displays	EA	1	\$2,300.00	4	15	\$34,500.00
					Average	\$16,128.00
TOTAL						
PER UNIT (EA)						\$268.80

Reference:

2021 RPCS

2020 RPAD

## **FAC 7602 MONUMENTS AND MEMORIALS**

There are 2771 monuments and memorials in the inventory. This FAC is based on Army, Navy, Air Force CAC Codes which are titled 'monument and memorial' or 'outdoor monument and memorial'. This group includes "Items such as commemorative plaques, military equipment displays, statues, and the like." Assumption that all are free-standing outdoor facilities. (Note that this does not include facilities covered under FAC 7603 Cemeteries).

Size, material, age, components and level of required care vary widely within this category. Areas for cost research included specific maintenance costs for these items:

A. Commemorative plaque horizontal on ground or on a base ((Note that plaque and base may or may not be of the same material)

- Bronze/other metal
- Marble
- Composite
- Granite/other stone
- Glass/other material

B. Commemorative plaque vertical freestanding

- Bronze/other metal
- Marble
- Composite
- Granite/other stone
- Glass/other material

C. Statue/sculpture and base (Note that statue/sculpture and base may or may not be of the same material)

- Bronze/other metal
- Marble
- Composite
- Granite/other stone
- Masonry

D. Equipment display or other assembly of equipment which may be firefighters equipment, military equipment (planes, tanks, jeeps, etc.) or special equipment like Pentagon memorial benches and area, commemorative benches, shelter, etc. This usually includes informative plaques attached to equipment or free-standing.

### **ANNUAL MAINTENANCE PROGRAMS AND COST**

**For category A and B Commemorative/informative plaques flat and upright, small memorials or monuments (grave marker & tombstone as examples)**

For most accessible information, researched maintenance, cleaning and minor repair costs and schedule for gravestones, tombstones, plaques, etc. as the closest match to

items in this category A/B. (EG. Arlington cemetery in 2007 had funding to clean memorials every other year, versus the desired practice of cleaning annually.)

Maintenance includes cleaning with material-appropriate products, removal of encroaching vegetation, inspection and documentation of changes in surface, all as described for statue/sculpture below.

Maintenance may include repainting or touch-up of lettering as needed. Maintenance may include photography, videography or other documentation for record-keeping on item condition.

Maintenance may require realigning, straightening, or even resetting due to subsidence or other ground disturbance caused by water, frost, vandals, animals, etc. A full resetting involves removal, new concrete base, curing and resetting, plus cleanup of work area – time up to 8 man-hours plus materials. The Connecticut Gravestone Network (2009) estimated average of \$1000 per tombstone to reset. (UK price (2010) to refix was estimated at 235 -423 pounds (\$369-\$664)– new dowels, ground anchor, bearer and drilling/preparing ground). This could be a restoration cost rather than maintenance, depending on circumstances and extent of work.

Depending on geographic area, item requirements and available funding, maintenance cleaning and minor repair may occur at 6, 12, 24 or 36 month intervals. (eg. Arlington cemetery in 2007 stated the cleaning of each memorial took place every 2 years)

#### **Other Cost Sources:**

In general, memorial cleaners quote between \$60-\$200, depending on size and material (internet search of multiple sources)

UK surface clean lawn memorial = 82 pounds (\$128), for traditional memorial (upright) \$152 pounds (\$237).

Stone and bronze marker \$60; Taller than 6"monument/memorial \$75-\$90 per visit; will provide estimates for bronze plaques, etc. ( [www.memorialcleaners.com](http://www.memorialcleaners.com))

Bronze markers refinished so the lettering is bright and the background is restored to its original brown color, by shipping them back to the manufacturer, or contracting with monument companies. Cost will run \$150 to \$200 for a single 2x1 foot marker.

In most cemeteries – the annual fee or maintenance fee covers site, and does NOT include maintenance of the tombstone (cleaning, minor repairs, etc) unless contracted as a separate charge thru memorial caretakers or cemetery. Assume maintenance for any monument or memorial in FAC 7602 is funded separately from site maintenance.

### **For Category C: Statues and Sculptures**

For statues and sculptures, recommended maintenance includes **annual** regular washing with dilute solution of detergent, water rinse, soft brushes or sponges; inspection and documentation of changes in surface patina, pitting, streaking, corrosion, blanching, structural problems or damage; removal of encroaching vegetation to discourage bird, animal, insect or vandal damage; clearing of weep holes for drainage; repointing or minor repair structural repair; and application of protective coating as appropriate (wax, resin, paint, sealer, etc).

For bronze/metal statues – recommend professional cleaning and relacquering on a five to ten-year cycle, which may require removal and reinstallation of parts. Geographic location, materials, condition, and prior maintenance will determine the schedule.

Maintenance of the memorial may include covering or enclosure, fencing, seating or sidewalks, landscaped area, fountain, etc. which are intrinsic part of memorial. (Williamstown Art Conservation Center Technical Bulletin, Woodlawn Cemetery Maintenance Plan, Minnesota Mall Maintenance Report). Reported cost range which agrees with other sources:

1. Savannah - **\$1500** annually quoted by city official for cleaning of monument
2. Charlotte Dept of Transportation Queens Table Monuments and Four Sites (connected): Annual costs projected by city for maintenance of monument **\$1200** per year
3. City of NY Parks and Recreation: Typical annual maintenance for figural bronze **\$1000 to \$2000**

### **For Category D. Equipment Grouping**

Complexity of maintenance within this group varies depending on components involved. Examples:

- Plaque plus several antique fire vehicles (DOD Firefighters Memorial, Goodfellow AFB)
- Plaque plus one or more tanks, planes, etc: Most military installations
- Individual benches and setting: pentagon memorial

**NOTE ON OUTSIDE ASSISTANCE.** Maintenance funding or actual maintenance MAY come from private sources, groups, individuals, or volunteers to supplement or even replace DOD O&M funding.

In private and local government practice, donors of a memorial **must guarantee** payment of future maintenance costs from endowment, trust fund, pre-payment, before the government agencies will accept donation of new or transferred existing property as memorials. This approach allows agencies to consider the overall public

benefit for taking the donation versus the long-term cost and budgeting capability to maintain the memorial/monument. This protects agencies from incurring unexpected and unjustifiable expenses over the expected life of the donation.

For new memorials proposals, expected maintenance costs are built into the overall project cost estimate, so that the full, rather than initial, cost to taxpayers is considered.

For existing or new DOD memorials, volunteers or interest groups with a strong vested interest in a monument/memorial have provided in-kind or financial support where DOD funding cannot offer the best level of care for the facility. Donations from these private sources, groups or individuals are NOT considered in determining the FAC 7602 SUC, but their participation can result in lower spending levels than DOD might otherwise incur.

*Ten Years of Sculpture and Monument Conservation on the Minnesota State Capitol Mall*, Paul Storch, Minnesota Historical Society, 2001

*Annual Maintenance Program for Outdoor Sculpture*, Williamstown Art Conservation Center, Technical Bulletin, 2009

*Caring for Outdoor Bronze Plaques*, National Park Service, 2005

*Cleaning Gravestones, Monuments and Stone Sculptures*, New England Cemetery Services, 2010

*Connecticut Gravestone Network Newsletter*, January 2009

*DOD Firefighters Memorial*, [www.firehouse.com](http://www.firehouse.com) News, 2008

*Monument Maintenance*, <http://www.findstone.com/awmon.htm>, 2010

*Gurnee Mayor Vetoes Veterans Memorial Deal*, Daily Herald, 2010

*Memorial Cleaners List of Services*, Missouri, 2010

*Guidelines for Donating Works of Art to City of New York/Parks and Recreation*, 2010

*Queen's Table Monuments, Presentation to Charlotte NC City Council*, 2009

*Lodge Brothers List of Services*, UK, 2010

*Woodlawn Lot Owner's Services*, NYC, 2010