

**FAC 8122    Exterior Lighting, Pole**

RUC:                \$3,144.84 EA

Source:            Marshall & Swift 61/1 (Dec 07) adjusted for area and inflation using Marshall & Swift Section 99. Projected to FY-09 using Green Book Table 5-6 MCON  
In V12, Tri-Service and USACE PAX Newsletter values were updated while all other values were inflated only.

SUC:                \$47.23 EA

Source:            Inflated from V10 using ENR-based index applied through FY-08; projected to FY-09 using Green Book Table 5-6 (O&M less DHP).  
In V12, values were inflated only.

Original source: 2005 calculation as follows:

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## FAC 8122, Exterior Lighting

### 2005 Costs

Elements of Cost	Aluminum Pole Cost	Wood Pole Cost	Replacement Cost	Life (yr)	50 year Annualized
Excavate 1.27 CY x \$40.50 (30 in diameter)	\$51.44				
Excavate 0.2 CY x \$40.50 (12 inch diameter)		\$8.10			
Concrete in caisson 1.27 CY x \$595/CY	\$755.65				
Pole, 30 ft Al	\$1,760.00				
Pole, 40 ft treated wood		\$950.00			
Luminaire with bracket and ballast	\$1,040.00	\$1,040.00			
Ballast only			\$277.06	10	\$33.25
Lamp	\$91.00	\$91.00		10	\$10.92
Wiring - excavate with trenching machine	\$130.00	\$130.00			
Wiring - bedding	\$27.60	\$27.60			
Wiring - conduit	\$450.00	\$450.00			
Wiring - backfill	\$77.76	\$77.76			
Wiring - pull wire in conduit @ \$0.61/LF	\$122.00	\$122.00			
	\$4,505.45	\$2,896.46			
Distribution of metal versus wood poles	0.9	0.1			
Contribution	4054.9005	289.646			
Total CCF, 2005 Dollars	<b>\$4,344.55</b>				

Total SCF, 2005 Dollars

**\$44.17**

#### Notes:

Estimates are given for two types of standards: 30 ft aluminum mounted on a concrete foundation and 40 ft treated wood, buried 7 ft in normal soil. Luminaire mounting height is 30 ft and spaced 200 ft apart as recommended by Army TM 5-811-1 and Air Force AFJMAN 32-1080. Lamp is 250 w high pressure sodium.

Distribution of wood versus metal poles: The pole material is indeterminant from inventory records. Informal survey indicates wood poles are found in training areas (e.g mock prison compounds or engineer training area). Ten percent is believed to be a high estimate for the presence of wood poles. AFCESA has previously advised R&K that all exterior electrical runs on AF bases are in UG conduit.

Life Cycle: Conflicting data exists on the life cycle of wood and metal poles. Manufacturers and trade associations have claimed 80+ year expectancies for metal, but this has not been proven in practice as metal poles have not been available until relatively recently. Wood poles when properly maintained have had lives in excess of 80 years. As it is likely both types of poles will exceed the 50 year OSD planning period, replacement was not costed.

