

ATTACHMENT J3

Fort Polk Potable Water Distribution System

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J3 Fort Polk Potable Water Distribution System

J3.1 Fort Polk Overview

J3.1.1 General Statistics

The Fort Polk Military Installation is located in Vernon Parish in west-central Louisiana. The Army owns approximately 100,009 acres of land at the Main Post and at the Peason Ridge Training Area, located about 15 miles north of the Main Post. The Installation also maintains a small site on the eastern shore of Toledo Bend Reservoir that is used as a recreation site for military personnel and their families. Additionally, the Army utilizes about 98,125 acres of land owned by the U.S. Forest Service (USFS). The Main Post has two distinct developed areas that contain buildings, motor pools, and other facilities. These areas are known as the North and South Fort Cantonment Areas or North Fort and South Fort.

Real Property records indicate there are 2,384 buildings on Fort Polk (1,679, permanent; 255 semi-permanent; and 450 temporary). These buildings enclose a total of 15,572,096 square feet (SF) of floor space. Included in these totals are 1,163 permanent family housing buildings containing 3,424 family dwelling units encompassing a total of 6,955,318 SF.

According to data published by Fort Polk on the World Wide Web, the Installation supports a total population of 139,279 categorized as follows:

TABLE 1
 Population
Water Distribution System, Fort Polk, Louisiana

Fort Polk Population	
Active Military Personnel	10,441
Military Family Members	16,912
Army Civilian Employees	5,956
Retired Military Personnel and Families	73,573
Reserve Component, ROTC	25,227
JRTC Rotations (Monthly Average)	5,170
Total	139,279

Annual total economic impact of Fort Polk, as reflected on their World Wide Web page, is estimated to be approximately \$970 million.

J3.1.2 History and Development

Fort Polk was established in 1941 and named in honor of the Right Reverend Leonidas Polk, the first Episcopal Bishop of the Diocese of Louisiana and a Confederate general. Since then Fort Polk has adapted to service during every U.S. military crisis.

Fort Polk was first developed as Camp Polk and was used for military training activities associated with World War II. Construction of Camp Polk began in January 1941. Camp Polk was used during the “Louisiana Maneuvers,” a series of large-scale, peacetime armored maneuvers conducted prior to the United States’ entry into World War II.

Following World War II, the Installation went through a series of temporary closings until the early 1960s. In 1960, Fort Polk was designated as an infantry-training center. Due to the dense, jungle-like vegetation that exists on portions of the Post, Fort Polk was used extensively for basic training of soldiers being deployed to Southeast Asia. For the 12 years following 1962, more soldiers shipped out to Vietnam from Fort Polk than any other U.S. Army training Installation.

The 5th Infantry Division (Mechanized) was permanently garrisoned at Fort Polk in 1974 as hostilities in Vietnam came to a close. Fort Polk underwent a tremendous amount of renovation and was rapidly transformed into one of the most modern Installations in the U.S. Army. Many of the buildings and other structures currently existing on Fort Polk were built at this time.

After the end of the Cold War in the early 1990s, the 5th Infantry Division (Mechanized) was relocated to Fort Hood, Texas beginning in 1992. This move was completed in early 1994. Following this move, Fort Polk was selected as the location of the Joint Readiness Training Center (JRTC). The basic mission of the JRTC is to train light infantry forces, Special Forces, Army Rangers, and units from other branches of the American Armed Forces.

Several other units were transferred back to the United States from Europe and were stationed at Fort Polk during this time. Most of these units, including the 2nd Armored Cavalry Regiment, the Warrior Brigade, and units affiliated with the XVIII Airborne Corps are currently garrisoned at the Installation and occupy and operate many of its motor pools and maintenance facilities.

Since Fort Polk was first developed by the U.S. Army, its land has been subject to a wide variety of uses including firing ranges, impact zones, industrial operations, military housing, and other operations that were necessary to support the Installation’s ever-changing missions.

The Installation headquarters are located at the South Fort cantonment area. Additionally, most of the motor pools, maintenance facilities, supply areas, and administrative offices operated by both military personnel and civilian employees of the Department of Defense are located on this portion of the Installation. South Fort Polk has relatively modern facilities compared to North Fort. The North Fort cantonment area is used primarily by rotational units training with the JRTC and by Louisiana National Guard and Army Reserve units. Buildings on North Fort Polk are primarily vintage World War II. Military housing areas are located in both cantonment areas and along the west side of Fort Polk.

The area of the Installation east of the cantonment areas is largely undeveloped and has been used for a variety of military training purposes including obstacle courses, firing ranges, impact areas, primitive airfields, drop zones, etc. (U.S. Army, 1995). The potential for the presence of unexploded ordnance exists over most of the Installation east of the cantonment areas. Landfills

used for disposal of wastes generated by military activities at Fort Polk were developed on property located between the North and South Fort cantonment areas.

J3.1.3 Satellite Locations

Peason Ridge is a 33,000 acre-plus Army-owned parcel situated approximately 15 miles north-northwest of Fort Polk proper at the extreme north side of Vernon Parish. It consists of live-fire training areas, firing ranges, and impact zones. Additionally, Peason Ridge has a relatively small “operations” area that includes barracks and supply and maintenance buildings.

Toledo Bend Recreation Facility, a relatively small parcel, is situated on the eastern shore of Toledo Bend Reservoir on the Louisiana-Texas border due west of Fort Polk. It contains boat docks, cabins, and other structures associated with recreational activities.

J3.1.4 U. S. Forest Service Lands

Fort Polk uses very large tracts of U.S. Forest Service lands for training. Some of this land is classified as Intensive Use Area (IUA) and some as Limited Use Area (LUA). In some areas there are Army-owned utility system components installed on these Forest Service lands. The Forest Service will not sell land, but will consider proposals to exchange land; Fort Polk is currently negotiating a land swap with the Forest Service that would place additional utility components on Forest Service land. A Special Use Permit (SUP) is the mechanism used to formalize an agreement for use of Forest Service land. The Army is currently in the process of finalizing a multi-year, multi-use SUP. For the Army, there are no fees associated with these SUPs. However, a “for-profit” entity should expect to negotiate a SUP fee; the Forest Service waives fees only for “non-profit” entities. This fee is currently projected to be \$43/acre/year for for-profit entities. For linear utility components, acreage requirements are calculated by multiplying linear feet of utility lines by the typical easement width (26 feet). Approximate quantities of Fort Polk utility components on Forest Service lands are as follows:

- Electric Distribution Lines	102,000 LF
- Natural Gas Lines	674 LF
- Water Lines	2,465 LF
- Sewer Lines	15,391 LF
- Wastewater Dispersion Lines	7,200 LF
- Oxidation Ponds	80 Acres

J3.1.5 Army Family Housing

Fort Polk has recently privatized Army Family Housing. This Residential Community Initiative (RCI) transfers ownership and maintenance responsibility for all of the housing units to a private contractor. Under this RCI the new owner will also remodel, renovate, demolish some structures and build new units in multiple phases over several years. The net effect will be an increase of dwelling units from the current 3,424 units to a total of 3,821 units. Fort Polk is in the process of transitioning from their existing Housing Maintenance Contract to the new RCI arrangement. It should be pointed out that this RCI initiative does not involve the transfer of land nor does it

include the utility mains and service lines. Utility mains and service lines have been retained by the Government and are therefore part of the UP package. It is important to recognize that the RCI process will result in some reconfiguration of the various neighborhoods with resultant changes in the utility systems serving those neighborhoods and the associated points of demarcation. The utility system owner should expect to be very much involved in these future changes.

J3.2 Potable Water Distribution System Description

J3.2.1 Potable Water Distribution System Fixed Equipment Inventory

The Fort Polk potable water system consists of all appurtenances physically connected to on-post wells, pumping stations, water treatment and distribution components, and for off-post sources--only the distribution system. The system may include, but is not limited to wells, pumps, water treatment components, pipelines, valves, fire hydrants, storage facilities/tanks (including obstruction lights), backflow prevention devices (BPDs), fire suppression storage tanks and booster pumps, and meters.

All water rights (pumping or purchased) will remain with the Government.

Specifically excluded from the water distribution system privatization package:

- Irrigation systems

The actual inventory of items sold will be conveyed to the Contractor using the Bill of Sale (sample shown at Attachment J42) at the time the system is transferred.

The following description and inventory is included to provide the Contractor with a general understanding of the size and configuration of the distribution system. The description and inventory were developed based on best available, yet imperfect, record data. When not specifically identified by system drawings, the type and size of the components were estimated, generally based on the size of the piping the component was fastened to. Additionally, when the year of construction was not known, it was estimated based on the age of adjacent piping or the approximate age of the facility served.

The Offeror shall base its proposal on site inspections, information in the technical library, and other pertinent information, as well as the following description and inventory. As described in Paragraph C11.1, if after award the Offeror identifies additional inventory not listed in Paragraph J3.2.1.3, the Offeror may submit to the Contracting Officer a request for an equitable adjustment. If the Offeror determines that the inventory listed in Paragraph J3.2.1.3 is overstated, the Offeror shall report the extent of the overstatement to the Contracting Officer, who will determine an equitable adjustment. The intent here is not to encourage piecemeal adjustments, but rather address significant bearing on capital replacement investment.

J3.2.1.1 System Description

Fort Polk's potable water system consists of water wells, treatment plants, pumping stations, water storage tanks (including obstruction lights), distribution pipes, valves and fire hydrants. There are three large independent water systems on the Fort Polk main cantonment areas, and multiple, small, stand-alone systems. They are listed as follows:

- North Fort Polk water system

- North Fort Army Family Housing water system
- South Fort Polk water system
- Numerous small independent non-potable water systems

There are also two small satellite location water systems (distribution only; water is purchased) located at:

- Peason Ridge
- Toledo Bend Recreation Facility.

NORTH FORT POLK WATER SYSTEM

Water is supplied to the North Fort Polk area from four active wells. These wells provide adequate water supply to meet Installation demand during normal and emergency operations. The table below summarizes the wells at North Fort Polk:

TABLE 2
 Wells – North Fort Polk
Water Distribution System, Fort Polk, Louisiana

Well No.	Pump Type	Construction / Rebuilt	Pump Depth (ft.)	Pipe Diameter (in.)	Pump (gpm)	Motor Size (hp)
2PD	Submersible	1997	1,211	8	500	100
7APS	Turbine	1983	1,055	10	750	125
6APS	Turbine	1983	598	8	500	100
6PD	Submersible	1991	1,288	10	500	125

Wells 2PD and 6APS have emergency diesel generators. The water produced by the wells is then pumped via 8-, 10- and 12-inch transmission lines to two 750,000-gallon steel surface storage reservoirs (Facility No. 7217 and 7218). Water quality is generally good. Historical records show that iron concentration ranges from 0.1 to 1.98 milligram per liter (mg/l) and manganese concentration ranges from 0.03 - 0.3 mg/l. The water is chlorinated and polyphosphate is added for corrosion control. Water is then pumped from surface storage by a booster pump station to the distribution system. The North Fort Polk Water Pumping Station (Facility No. 7216) contains two pumps, controls and chemical injection equipment. One of the pumps is a 100 horsepower (hp) 2,500 gallons per minute (gpm) pump and the other is a 125 hp 3,000 gpm pump. The plant/pumping station is operated 8 hours per day, 7 days a week.

The distribution system in North Fort Polk is comprised mainly of bell and spigot cast iron or ductile iron mains. Their sizes range from less than 2 inches in diameter to 14 inches in diameter. Most of the distribution system was installed in 1942, while the 4-inch pipes in the vicinity of the Trailer Park were installed in 1972. In the late 1990s, the majority of the main valves were replaced.

There are three elevated water tanks and two ground storage tanks in North Fort Polk. The following table summarizes the tanks at North Fort Polk:

TABLE 3
 Storage Tanks – North Fort Polk
Water Distribution System, Fort Polk, Louisiana

Tank ID	Facility No.	Type	Construction / Rebuilt	Size (gallons)
1	7220	Elevated	1996	250,000
2	8517	Elevated	1996	250,000
3	7534	Elevated	1996	250,000
East Tank	7218	Ground Storage	1994	750,000
West Tank	7217	Ground Storage	1994	750,000

SOUTH FORT POLK WATER SYSTEM

Water is supplied to South Fort Polk by six active wells. Water quality is generally considered to be adequate with the same levels of iron and magnesium as in the North Fort Polk wells. The table below summarizes the wells at South Fort Polk:

TABLE 4
 Wells – South Fort Polk
Water Distribution System, Fort Polk, Louisiana

Well No.	Pump Type	Construction / Rebuilt	Pump Depth (ft.)	Pipe Diameter (in.)	Pump gpm	Motor Size (hp)
7B	Turbine	1991	900	8	440	75
8B	Submersible	1994	920	8	415	125
9A	Turbine	1994	885	10	500	100
11	Turbine	1986/2001	885	10	700	125
12	Turbine	1995/2004	877	10	600	100
14D	Submersible	1978	1,415	10	1,300	UNK

Wells 7B, 9A, 12 and 14D have emergency diesel generators. Well 14D has a separate distribution system link-up. Water from well 14D is pumped via a short 8-inch line to a 50,000-gallon steel ground storage tank. From the tank the water is pumped to the distribution system by the Family Housing Booster Pump Station located in the 6400 block of the Installation. Water from other wells is pumped via 8-inch and 12-inch transmission lines to two, one million-gallon steel ground storage tanks. Water is then pumped by the South Fort Polk Main Booster Pump Station (Facility No. 2902) from the ground storage tanks to the distribution system. The South Fort Polk Main Booster Pump contains four pumps (each 125 hp 3,000 gpm), controls and chemical injection equipment. Water is chlorinated prior to surface storage and polyphosphate is added for corrosion control. As with North Fort Polk, the plant/pumping station is operated 8 hours per day, 7 days a week.

The South Fort Polk potable water distribution system consists mainly of bell and spigot cast iron or ductile iron mains, and some PVC, ranging from 4 to 16 inches in diameter. Blocks 1 through 4600 were built in 1942. Blocks 4800 through 6900 (primarily in the family housing block) were built in 1976.

There are four elevated water tanks and three ground storage tanks in South Fort Polk. The table below summarizes the tanks at South Fort Polk:

TABLE 5
 Storage Tanks – South Fort Polk
Water Distribution System, Fort Polk, Louisiana

Tank ID	Facility No.	Type	Construction / Rebuilt	Size (gallons)
200 Block tank	208	Elevated	1976	1,000,000
2200 Block tank	2224	Elevated	1976	1,000,000
Trailer park tank	5299	Elevated	1977	300,000
Hospital tank	280	Elevated	1972	200,000
Well 14D tank	6488	Ground Storage	1980	50,000
PS South tank	2903	Ground Storage	1992	1,000,000
PS North Tank	2901	Ground Storage	1992	1,000,000

NORTH FORT ARMY FAMILY HOUSING WATER SYSTEM (NFAFH)

NFAFH area is the 1500 block housing area located in the northwest part of the Installation. There is an 8-inch polyvinyl chloride (PVC) main connecting NFAFH and the North Fort Polk water distribution systems. This line is normally kept dry as a standby supply from North Fort Polk water system to NFAFH. Normally, water is supplied to the NFAFH from two active wells. The following table summarizes these wells:

TABLE 6
 Wells – North Fort Army Family Housing
Water Distribution System, Fort Polk, Louisiana

Well No.	Pump Type	Construction / Rebuilt	Pump Depth (ft.)	Pipe Diameter (in.)	Pump gpm	Motor Size (hp)
15D	Submersible	2000	1,233	10	1,200	
16D	Submersible	2000	1,238	10	1,200	

Water from these wells is filtered in a green sand filter; chlorine and fluoride are added before entering the distribution system. The distribution system in NFAFH is comprised mainly of PVC mains. The mains are 8-inch or 12-inch pipes that were installed in the 1980s. There are two elevated storage tanks described in the following table.

TABLE 7
 Storage Tanks - North Fort Army Family Housing
 Water Distribution System, Fort Polk, Louisiana

Tank ID	Facility No.	Type	Construction / Rebuilt	Size (gallons)
South Tank	14900	Elevated	1989	400,000
North Tank	15052	Elevated	1989	350,000

INDEPENDENT WATER SYSTEMS

There are several independent non-potable water systems that include water wells, tanks and water pipes that are located throughout Fort Polk. Two of the independent systems are Centralized Vehicle Wash Facilities: Facility 9897 and Facility 9898. These systems include a well and a small 300-gallon water storage tank. The Geronimo Fire Station is a significant system with large holding tanks. Nearly all of the other systems, commonly referred to as range wells, are very simple wells that include a well point and casing with a small diameter air line running down through the well casing. When water for field use is required, a portable compressor is attached to the air line and the injected air bubbles lower the specific gravity of the air-water mixture in the casing. The static head of water in the well (outside the casing) then causes the lighter air-water mixture to rise and bubble out the top of the well casing. The non-potable water systems are tabulated below.

TABLE 8
 Wells – Independent Water Systems
 Water Distribution System, Fort Polk, Louisiana

Well ID	Well Depth (ft.)	Pipe Diameter (in.)	Notes
Centralized Vehicle Wash Facility (9897)	950	6	125 hp turbine pump, 300 gallon tank
Centralized Vehicle Wash Facility (9898)	950	6	125 hp turbine pump, 300 gallon tank
Geronimo Fire Station	150	2	Two 25,000 gallon tanks
Jeter Town	150	2	Bubbler type
Monteith #1	150	2	Bubbler type
Monteith #2	150	2	Bubbler type
Smith Village	150	2	Bubbler type
McGovern Village	150	2	Bubbler type
Self Village #1	150	2	Bubbler type
Self Village #2	150	2	Bubbler type
Jeanne Junction	150	2	Bubbler type
Huffman #1	150	2	Bubbler type

Well ID	Well Depth (ft.)	Pipe Diameter (in.)	Notes
Demi #1	150	2	Bubbler type
MPRC	150	2	Bubbler type

SATELLITE LOCATION WATER SYSTEMS

Peason Ridge is served with potable water by East Central Vernon Water Works. The service is metered and there is a small distribution system serving a few buildings. Beginning point of demarcation is the downstream side of the water provider’s meter.

Toledo Bend Recreation Facility is served with potable water by Pirates Cove Water Works. This service is also metered and has a small distribution system serving a few buildings. Beginning point of demarcation is the downstream side of the water provider’s meter.

J3.2.1.2 Points of Demarcation

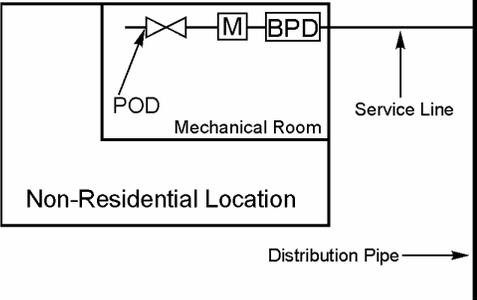
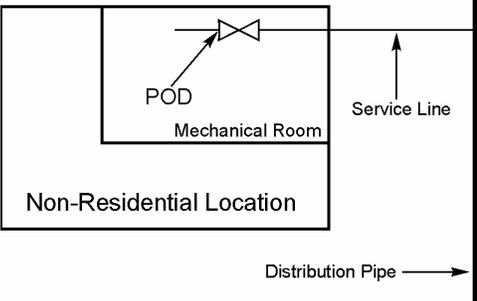
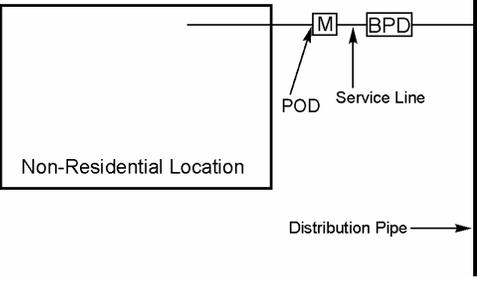
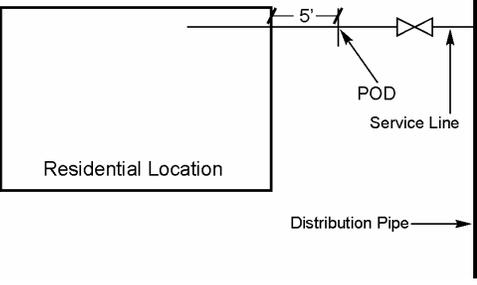
The Fort Polk main cantonment area potable water systems being privatized consist of all components from the water source (wells) to the point where water is supplied to end-users. The beginning point of demarcation for the water systems at Peason Ridge and Toledo Bend Recreation Facility is the downstream side of the water provider’s meter.

The downstream point of demarcation at each end-user is defined as the point or component on the distribution system where ownership changes from the utility owner to the building owner. In most cases the point of demarcation is the first upstream component (i.e., meter, backflow prevention device, valve, regulator, etc.) of the system located near the perimeter (either inside or outside) of the facility footprint. In situations where the point of demarcation is located within the facility (usually a mechanical room with external access), the Contractor will be required to coordinate his work with the facility occupants; access will be accommodated.

Table 9 identifies the type of service and general location of the point of demarcation with respect to each building served by the distribution system.

TABLE 9
 Points of Demarcation
Water Distribution System, Fort Polk, Louisiana

Point of Demarcation	Applicable Scenario	Sketch
Point of demarcation is the downstream side of the first valve inside the mechanical room.	Non-residential service line or dedicated fire line enters a mechanical room. A water meter [M] and/or a backflow prevention device [BPD] is located exterior to structure.	

Point of Demarcation	Applicable Scenario	Sketch
<p>Point of demarcation is the downstream side of the first water valve located downstream of [M] and/or [BPD].</p>	<p>Non-residential service line or dedicated fire line enters a mechanical room and a water meter and/or a backflow prevention device is located in the mechanical room.</p>	
<p>Point of demarcation is the downstream side of the first valve inside the mechanical room.</p>	<p>Non-residential service line or dedicated fire line enters a mechanical room and there is no [M] and/or [BPD] located in the service line.</p>	
<p>Point of demarcation is the downstream side of the [M] and/or [BPD] that is within 25 ft. of building exterior.</p>	<p>Non-residential service line or dedicated fire line enters the building and there is no mechanical room.</p>	
<p>POD is the five-foot line exterior to building footprint. <i>Note: Service valve may be installed at or within 5 feet of the structure at any time. Downstream side of service valve would then become the point of demarcation.</i></p>	<p>Residential service, no shutoff valve exists within five-foot line exterior to building footprint.</p>	

J3.2.1.2 Condition Assessment

Several components in the Fort Polk water distribution systems have either exceeded or are approaching the end of their useful lives. The control system for the water system in place at Fort Polk is no longer functional and is not being used.

A comprehensive water tank inspection was completed in 2004 and identified many deficiencies. The “*Water Tank Inspection Report*,” prepared for the Directorate of Public Works, Engineering Planning and Services Division JRTC and Fort Polk, dated 1 March 2004, details the identified deficiencies in the tanks. The report recommends repairs in all tanks except the North Fort Polk Elevated Storage Tank No. 1. Five tanks were reported to have excessive amount of lead in the exterior coating. Several tanks need new roofs, structural repairs, and new protective coatings. The recommendation is that the tank at Well 14D be replaced. The recommendation is that the cathodic protection systems installed in the tanks be removed and replaced or implement another means of protection. (Report will be included in the bidders’ Technical Library.)

J3.2.1.3 Inventory

Table 10 identifies the approximate inventory (based on best available data) of all the Fort Polk potable water distribution systems. When not specifically identified by system drawings, the size and type of system components were estimated, generally based on the size of the piping the component was connected to. Additionally, when the year of construction was not known, it was estimated based on the age of the piping or the age of the facility served.

TABLE 10
 Fixed Inventory
Water Distribution System, Fort Polk, Louisiana

Component	Size	Quantity	Unit	Approximate Year of Construction
SOUTH FORT POLK, NORTH FORT POLK AND NORTH FORT ARMY FAMILY HOUSING SYSTEMS				
<i>Pipe</i>	<2” – 2”	14,160	LF	1940
	<2” – 2”	680	LF	1971
	<2” – 2”	2,040	LF	1980
	2½”	960	LF	1940
	3”	3,360	LF	1940
	3”	240	LF	1950
	4”	20,705	LF	1940
	4”	2,200	LF	1971
	4”	3,080	LF	1980
	6”	127,440	LF	1940
	6”	1,000	LF	1950
	6”	14,000	LF	1971
	6”	24,160	LF	1980
	8”	97,400	LF	1940

Component	Size	Quantity	Unit	Approximate Year of Construction
<i>Valves</i>	8"	1,560	LF	1950
	8"	2,640	LF	1971
	8"	74,040	LF	1980
	8"	5,998	LF	2000
	10"	30,880	LF	1940
	10"	360	LF	1950
	10"	4,160	LF	1971
	10"	2,880	LF	1980
	12"	75,120	LF	1940
	12"	2,840	LF	1950
	12"	6,400	LF	1971
	12"	16,040	LF	1980
	14"	1,560	LF	1940
	14"	2,040	LF	1950
	<2" – 2"	27	EA	1940
	<2" – 2"	1	EA	1971
	<2" – 2"	3	EA	1980
	2½"	5	EA	1940
	3"	22	EA	1940
	3"	6	EA	1980
	4"	45	EA	1940
	4"	9	EA	1971
	4"	4	EA	1980
	6"	153	EA	1940
	6"	5	EA	1950
	6"	50	EA	1971
	6"	42	EA	1980
	8"	13	EA	1940
	8"	4	EA	1950
	8"	13	EA	1971
	8"	74	EA	1980
	8"	65	EA	1999
	10"	4	EA	1940
	10"	4	EA	1971
10"	5	EA	1980	
10"	15	EA	1999	
12"	26	EA	1940	

Component	Size	Quantity	Unit	Approximate Year of Construction
	12"	4	EA	1950
	12"	10	EA	1971
	12"	32	EA	1980
	14"	2	EA	1940
	14"	3	EA	1950
<i>Post Indicator Valves</i>		13	EA	1940
		8	EA	1971
<i>Fire Hydrants</i>		524	EA	1940
		7	EA	1950
		36	EA	1971
		155	EA	1980
<i>Meters</i>		1	EA	1980
<i>Elevated Storage Tanks</i>				
<i>North Fort Polk</i>				
Tank 1	250,000 gal	1	EA	1996
Tank 2	250,000 gal	1	EA	1996
Tank 3	250,000 gal	1	EA	1996
<i>South Fort Polk</i>				
200	1,000,000 gal	1	EA	1976
2200	1,000,000 gal	1	EA	1976
Trailer Park	300,000 gal	1	EA	1977
Hospital	200,000 gal	1	EA	1972
<i>North Fort Army Family Housing</i>				
South	400,000 gal	1	EA	1989
North	350,000 gal	1	EA	1989
<i>Ground Storage Tanks</i>				
<i>North Fort Polk</i>				
East	750,000 gal	1	EA	1994
West	750,000 gal	1	EA	1994
<i>South Fort Polk</i>				
Well 14D	50,000 gal	1	EA	1980
PS South	1,000,000 gal	1	EA	1992
PS North	1,000,000 gal	1	EA	1992
<i>Wells</i>				
<i>North Fort Polk</i>				
2PD	500 gpm	1	EA	1997

Component	Size	Quantity	Unit	Approximate Year of Construction
4APS	750 gpm	1	EA	1983
6APS	500 gpm	1	EA	1983
6PD	500 gpm	1	EA	1991
<i>South Fort Polk</i>				
7B	440 gpm	1	EA	1991
8B	415 gpm	1	EA	1994
9A	500 gpm	1	EA	1994
11	700 gpm	1	EA	1986/2001
12	600 gpm	1	EA	1995/2004
14D	1,300 gpm	1	EA	1978
<i>Independent Systems</i>				
Central. Vehicle. Wash Facility (9897)	300 gpm	1	EA	1986
Centralized Vehicle Wash Facility (9898)	300 gpm	1	EA	1987
Geronimo Fire Station	Small	1	EA	1994
Jeter Town	Small	1	EA	1994
Monteith #1	Small	1	EA	1994
Monteith #2	Small	1	EA	1994
Smith Village	Small	1	EA	1994
McGovern Village	Small	1	EA	1994
Self Village #1	Small	1	EA	1994
Self Village #2	Small	1	EA	1994
Jeanne Junction	Small	1	EA	1994
Huffman #1	Small	1	EA	1994
Demi #1	Small	1	EA	1994
MPRC	Small	1	EA	1994
<i>Emergency Diesel Generators</i>				
Well 2PD		1	EA	1997
Well 6APS		1	EA	1983
Well 7B		1	EA	1978
Well 9A		1	EA	1994
Well 12		1	EA	1995
Well 14D		1	EA	1991

Component	Size	Quantity	Unit	Approximate Year of Construction
<i>Water Treatment and Pumping Stations</i>				
North Fort Polk Station	2 Pumps	1	EA	1940
South Fort Polk Station	4 Pumps	1	EA	1940
<i>Backflow Preventers</i>				
	1"	10	EA	2002
	2"	4	EA	2002
	2½"	2	EA	2002
	4"	1	EA	2002
TOLEDO BEND				
<i>Pipe</i>	<2" – 2"	200	LF	1996
	3"	1,787	LF	1996
<i>Valves</i>	<2"	2	EA	1996
	3"	10	EA	1996
PEASON RIDGE				
<i>Pipe</i>	<2" – 2"	325	LF	1996
<i>Valves</i>	<2"	3	EA	1996

J3.2.2 Water Distribution System Non-Fixed Equipment and Specialized Tools

Table 11 lists other ancillary equipment (spare parts), and **Table 12** lists specialized vehicles and tools included in the purchase. Offerors shall field verify all equipment, vehicles, and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment, vehicles, and tools.

TABLE 11
 Spare Parts
Water Distribution System, Fort Polk, Louisiana

Quantity	Item	Make/Model	Description	Remarks
No spare parts are included with the Fort Polk Water Distribution System				

TABLE 12
 Specialized Vehicles and Tools
Water Distribution System, Fort Polk, Louisiana

Quantity	Item	Make/Model	Description	Remarks
No specialized vehicles or tools are included with the Fort Polk Water Distribution System				

J3.2.3 Water Distribution System Manuals, Drawings, and Records

Table 13 lists the manuals, drawings, and records of the potable water system that will be transferred with the system.

TABLE 13
 Manuals, Drawings, and Records
Water Distribution System, Fort Polk, Louisiana

Quantity	Item	Description	Remarks
1	Drawings	CAD Drawings	Hard Copy
1	Electronic	CAD Drawings	Electronic Copy
1	Electronic Database	GIS Database	Electronic Copy
1	Inspection Reports	Water Tank Inspection Report, March 1, 2004	Hard Copy

Note: Available manuals, drawings, records, and reports pertaining to the Fort Polk Water System are included in the Bidders' Library

J3.3 Specific Service Requirements

The service requirements for the Fort Polk water distribution systems are as defined in Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Fort Polk Water distribution system and are in addition to those found in Section C; if there is an apparent conflict, the requirements listed below take precedence over those found in Section C.

J3.3.1 Excavation Marking/Digging Process

J3.3.1.1 Contractor Participation in Digging Permit Process

Contractor shall subscribe to the regional process (**Louisiana 1 Call** is the one-call dispatch center) for notification and marking of underground utilities. The Contractor shall mark all utilities in the time windows defined by this process. In some cases, where non-metallic lines do not have tracer wires, it may take longer to locate the lines. In these cases, the Contractor will make necessary notifications about a possible delay in the marking process. Contractor shall be responsible for all repairs, costs, and damages due to excavations by others for which he did not properly mark his utilities as part of the utility marking process. Generally, utility lines will be marked with pin flags or spray paint.

J3.3.1.2 Contractor Excavation Requirements

Contractor shall notify the regional one-call dispatch center of his digging requirement. The Contractor shall also obtain digging permits from Fort Polk in accordance with the AECOM process (see the AECOM Form below) before any drilling, digging, or excavation is undertaken. Permits will identify all underground utilities within five feet of the designated area. Since utility marking is an inherently imprecise process, excavation within five feet of the marked utilities will be done by hand. Contractor shall be responsible for all repairs, costs, and damages due to his

excavations that fail to comply with the DPW digging permit process and the requirements listed herein; this includes excavations extending beyond areas that have been cleared for excavation.

AECOM Government Services

FORT POLK UTILITY LOCATION AND DIG PERMIT REQUEST

Location: _____ **Date:** _____

DIRECTIONS:

1. Mark area to be excavated in white.

2. Louisiana Law requires you to contact **Louisiana 1 Call**, representing all private and public utility companies. Dial 1-800-272-3020 two - seven days in advance and have digging location information available at time of call. Any company with utilities in the area will mark the respective utility. Ticket # _____

3. For Telephone, Data Lines and Fiber Optic line utility locations on Fort Polk:
 - Contact DOIM/ATS Contractor (GSTek) at 531-4019
 - Request location services seven days prior to digging. Service Order _____
 - DOIM/ATS Contractor (GSTek) will issue dig Permit. _____

4. Sprint/ADSS 537-4711 Service Order #: _____

5. For CEG (CE Polk) well locations on Fort Polk, contact DPW Housing at 537-0508 and request a Service Order be generated for locating CEG wells. A two-day notice is required before digging. Co-energy contractor will mark well locations. If this excavation is NOT in Housing, proceed to Para 6.

6. **Water, Sewer, Gas and Exterior Electric.** When you have completed I - 5 above, hand carry this form along with a sketch of the area to be excavated to the Utility Office in Building 3304, Room 3. The Utility Office will initiate service orders to locate water, sewer, gas and exterior electric. Allow 48 hours, after which you may pick up the approved dig permit, and proceed to excavate.
 - Natural Gas Service Order #: _____
 - Exterior Plumbing Service Order #: _____
 - Exterior Electric Service Order # _____
 - Thermal Wells: _____

7. Permit to dig on Fort Polk is approved on _____ (date).

Utility Supervisor
AECOM Public Works

J3.3.2 Inspection and Maintenance Program

J3.3.2.1 Water Storage Tanks

The Contractor shall allow the Government access to operate and maintain any communication equipment, emergency warning equipment, public address equipment, and other Government equipment on water storage tanks being privatized. The Contractor shall develop a procedure for granting the Government access. This procedure shall be submitted to the Contracting Officer for approval.

The contractor shall own, operate, and maintain obstruction lights mounted on water tanks.

The Contractor shall adhere to Fort Polk Design Guides for all painting and markings on water storage tanks.

J3.3.2.2 Water System Sampling/Testing

The Contractor shall perform flow testing of fire hydrants IAW National Fire Protection Association standards/recommended practices. The Government reserves the right to review the Contractor's flow test records. (Marking of fire hydrants shall comply with the Installation Design Guide.)

The Contractor shall perform water sampling IAW Federal, state, and local laws and regulations. (Contractor shall perform special tests as requested by the Government and authorized by the Contracting Officer.) The Contractor shall operate, maintain, and test the Post water system IAW Louisiana Department of Health and Hospitals (LDHH) instructions. The Contractor shall provide the Contracting Officer with a copy of any and all testing information and reports submitted to the LDEQ.

The Contractor shall coordinate all changes to the water distribution system with DPW and Fort Polk Fire Department.

J3.3.2.3 Cathodic Protection System Maintenance

The Contractor shall own, operate, and maintain the water distribution system cathodic protection systems (or approved alternative measures) for carbon steel piping and tanks IAW applicable standards. The Contractor shall determine what is required and shall implement protective measures as necessary to comply with applicable rules and regulations. The Government reserves the right to review the Contractor's protection system records.

J3.3.2.4 Hydraulic Study

The Contractor, immediately after assuming ownership of the water system, shall complete a comprehensive hydraulic study of the entire water system.

J3.3.2.5 Backflow Prevention Devices (BPDs)

Fort Polk's backflow prevention program is not mature. The Installation has begun a multi-phase program of installing BPDs and would continue to expand the program as funding permits. The Installation desires that the Contractor own the backflow prevention program to include the assessment, planning, installation, and maintenance of all reduced pressure zone BPDs, whether inside or outside the facilities. A listing of installed BPDs will be included in the Bidders' Technical Library.

J3.3.3 Control System

The control system for the water system in place at Fort Polk is no longer functional and is not being used. The Contractor shall replace the non-functional control system with a system that would allow him to economically operate the system.

J3.3.4 Emergency Response

Because of the critical nature of many Fort Polk mission requirements, response to utility emergencies must be immediate. The Contractor will respond with a knowledgeable individual to emergency utility problems within 20 minutes of notification during duty hours and within one hour during non-duty hours. Additionally, repair crews must be on scene within one hour during duty hours and within two hours during non-duty hours.

J3.3.5 Fire Control and Safety

The utility system purchased by the Contractor may include facilities and the Contractor may elect to construct additional facilities on Post to support his operation. In all cases, the Contractor shall abide by Fort Polk fire protection requirements. Existing facilities may or may not include fire alarm systems. Where required by federal, state or local regulation, the Contractor shall maintain the fire alarm system for all facilities owned and operated by the Contractor. The Contractor shall permit Fire Department personnel access to their facilities to perform fire inspections and emergency response.

J3.3.6 Restricted Access

The Contractor shall coordinate with and obtain approval from Fort Polk for restricted area access. The ranges on the Installation are in constant use. Currently the Range Control coordinates and schedules the use of these areas. Any utility work that needs to be done on the ranges has to be coordinated and scheduled with the Range Control to avoid conflicts with the Installation's mission.

J3.3.7 Crisis Situations

IAW Paragraph C.9.8, *Exercises and Crisis Situations Requiring Utility Support*, the Contractor shall provide support as directed by Fort Polk DPW or equivalent agency for exercises and crisis situations. Contractor shall submit Emergency Response Plans for approval by the Government for all exercise and crisis situations IAW C.9.8.

J3.3.8 Cost of Supporting Utilities

The Contractor may consume reasonable quantities of supporting utilities at no charge. However, Contractor shall fully cooperate with the Government with respect to energy/water conservation measures as described in Section C.3.4.

J3.4 Current Service Arrangement

Fort Polk produces water from wells on the Installation. Peason Ridge is served with potable water by East Central Vernon Water Works. Toledo Bend Recreation Facility is served with potable water by Pirates Cove Water Works. Both services are metered.

J3.5 Secondary Metering

Between the points of delivery and the end-user points of demarcation, the Contractor shall own the existing meters, and shall install additional meters at new and upgraded locations as directed by the Contracting Officer. Contractor shall install, or cause to have installed, utility meters as requested by the Contracting Officer.

J3.5.1 Existing Meters

Table 14 lists the existing (at the time of contract award) meters that will be transferred to the Contractor.

The Contractor shall provide meter readings for all secondary meters IAW Paragraph C.3.3, *Metering*, and J3.6, *Monthly Submittals*.

TABLE 14
 Existing Secondary Meters
Water Distribution System, Fort Polk, Louisiana

Facility	Building No.
PX Main Service	840

J3.5.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 15**. New secondary meters shall be installed IAW Paragraphs C.3.3.1, *Future Meters*, C.13, *Operational Transition Plan*, and the Post’s Installation Design Guide. After installation, the Contractor shall maintain and read these meters IAW Paragraphs C.3.3, *Metering*, and J3.6 below.

TABLE 15
 New Secondary Meters
Water Distribution System, Fort Polk, Louisiana

Facility	Building No.
122nd Arcom	
Bldg 7503	7503
Bldg 7504	7504
Bldg 7505	7505
Bldg 7506	7506
Bldg 7507	7507
Bldg 7515	7515
Bldg 7516	7516
Bldg 7517	7517
Bldg 7518	7518
Bldg 7524	7524

Facility	Building No.
Bldg 7526	7526
Bldg 8610	8610
Bayou Theater	930
Service Station	1725
Laundrymat	8251
Carlson Travel	1830
Defense Accounting Office	2524
Desert Storm (Lockheed)	
Bldg 4531	4531
Bldg 4568	4568
Bldg W4508	W4508
Bldg 7727	7727
Bldg 7728	7728
Bldg 7903	7903
Bldg 7906	7906
Defense Printing Service	317
Greyhound Bus	1021
National Guard	8505
Laundry	2375
Meddac	
Bldg 285 (Hospital)	285
Bldg 287 (Cooling Tower)	287
Bldg 289 Power Plant	289
Bldg 665	665
Bldg 1561	1561
Bldg 2157	2157
Bldg 8235	8235
Bldg 293 Co Admin	293
Bldg 667	667
Bldg 4364	4364
Bldg 4372	4372
Bldg 4379	4379
MWR	
Bldg 1457	1457
Sports America	1454
19th Hole	323
Property Disposal Office	4050

Facility	Building No.
Sabine Bank	
Bldg 1815	1815
Bldg 1901	1901
PX / Phone	2380
PX / Hot Dog	8022
Defense Investigative Service	415
Bldg 8553 (National Guard)	8553
STA Office	1725A
Burger King	3224
CATV	900 Blk
Commissary	830
COE	4740
Fort Polk Elementary School	
Bldg 8521 (National Guard)	8521
Meddac Bldg 285 (Hospital)	285
Meddac Bldg 3504	3504
Officer Club	352

J3.6 Monthly Submittals

The Contractor shall provide the Government monthly submittals for the following:

1. **Invoice.** (IAW Paragraph G.2, *Submission and Payment of Invoices*). The Contractor’s monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. The Contractor shall provide sufficient supporting documentation with each monthly invoice to substantiate all costs included in the invoice for each CLIN as approved by the Contracting officer. The proposed system of accounts shall be made available in electronic format as directed by the Contracting Officer. Invoices shall be submitted by the 25th of each month for the previous month. Invoices shall be submitted to:

Name: DIRECTORATE OF PUBLIC WORKS
 ATTN (Mr. Roy Bethel)
Address: 2271 Louisiana Ave, Bldg 3304
 Fort Polk, LA 71459-5440
Phone number: (337) 531-4508

2. **Outage Report.** The Contractor’s monthly outage report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall be submitted by the 25th of each month for the previous month. Outage reports shall be submitted to:

Name: DIRECTORATE OF PUBLIC WORKS
ATTN (Mr. Roy Bethel)
Address: 2271 Louisiana Ave, Bldg 3304
Fort Polk, LA 71459-5440
Phone number: (337) 531-4508

3. **Meter Reading Report.** The monthly meter reading report shall show the current and previous month's readings for all secondary meters. The Contractor's monthly meter reading report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Meter reading reports shall be submitted by the 15th of each month for the previous month. Meter reading reports shall be submitted to:

Name: DIRECTORATE OF PUBLIC WORKS
ATTN (Mr. Roy Bethel)
Address: 2271 Louisiana Ave, Bldg 3304
Fort Polk, LA 71459-5440
Phone number: (337) 531-4508

J3.7 Energy Saving Projects

In keeping with Paragraph C.3.4, *Energy and Water Efficiency and Conservation*, any projects that should be implemented or continued would be listed here.

- Though there are no projects identified at this time, the Contractor should generally plan to replace pumps with high efficiency equipment.

J3.8 Service Area

IAW Paragraph C.4, *Service Area*, the service area is defined as all areas within the Fort Polk boundaries including the North Fort Polk and South Fort Polk areas. Service area also includes off-installation sites in the following paragraph.

J3.9 Off-Installation Sites

The off-installation site service areas included in the privatization of the Fort Polk water distribution system are:

- Peason Ridge
- Toledo Bend Recreation Facility.

J3.10 Specific Transition Requirements

IAW Paragraph C.13, *Operational Transition Plan*, service connections and disconnections required upon transfer would be included in **Table 16** below. As reflected in **Table 16**, there are no known required service connections or disconnections.

TABLE 16
 Service Connections and Disconnections
Water Distribution System, Fort Polk, Louisiana

Location	Description
	<p>There are no known service connections or disconnections required upon transfer of the Fort Polk water distribution system.</p> <p>A significant transition requirement pertains to obtaining Special Use Permit Agreements (SUPAs) from the U.S. Forrest Service for utility components installed on Forrest Service lands. As suggested in Paragraph J3.1.4 above, the Contractor should expect a recurring fee associated with these SUPAs.</p>

J3.11 Government Recognized System Deficiencies

Table 17 provides a list of Government recognized deficiencies. The deficiencies listed may be physical deficiencies, functional deficiencies, or operational in nature. If the utility system is sold, the Government will not accomplish a remedy for the recognized deficiencies listed. The Offeror shall make a determination as to its actual need to accomplish and the timing of any and all such deficiency remedies.

Physical and functional deficiencies may require capital to be invested in the system. If any deficiency remedy requires a capital upgrade project, the capital upgrade project shall be proposed according to the following:

- Capital upgrade projects required to bring the system to standard shall be proposed under Schedule 3 – Initial Capital Upgrade(s)/Connection Charge(s).
- Capital upgrade projects required to replace system components shall be proposed in the first years of Schedule 2 – Renewals and Replacements – 50-Year Schedule, and the cost factored into Schedule 1 – Fixed Monthly Charge, for Renewals and Replacements as part of CLIN AA.
- Transition costs shall be proposed as a one-time cost and shall be treated similar to a capital project and included in Schedule 3 – Initial Capital Upgrade(s)/Connection Charge(s).
- Improvements proposed in the operational component of the work shall be included in Schedule 1 – Fixed Monthly Charge as part of CLIN AA.

TABLE 17
 System Deficiencies
Water Distribution System, Fort Polk, Louisiana

System Component	Deficiency Description	To Be Accomplished
Water Tanks	Structural/roof repairs, protective coating, cathodic protection.	Year 1 & 2
Water System	Control system requires complete overhaul.	Year 1 & 2
Entire Water System	A comprehensive hydraulic study should be accomplished in the near term.	Year 1 & 2