

ATTACHMENT J17

Laughlin AFB Water Distribution System

Table of Contents

LAUGHLIN AFB WATER DISTRIBUTION SYSTEM.....I

J17 LAUGHLIN AFB WATER DISTRIBUTION SYSTEMJ17-1

J17.1 LAUGHLIN AFB OVERVIEW..... J17-1

J17.2 LAUGHLIN AFB WATER DISTRIBUTION SYSTEM DESCRIPTION..... J17-2

J17.2.1 Water Distribution System Fixed Equipment Inventory..... J17-2

 J17.2.1.1 Description..... J17-2

 J17.2.1.2 Inventory J17-3

J17.2.2 Water Distribution System Non-Fixed Equipment and Specialized Tools..... J17-4

J17.2.3 Water Distribution System Manuals, Drawings, and Records J17-4

J17.3 SPECIFIC SERVICE REQUIREMENTS..... J17-4

J17.4 CURRENT SERVICE ARRANGEMENT..... J17-6

J17.5 SECONDARY METERING..... J17-6

J17.5.1 Existing Secondary Meters..... J17-6

J17.5.2 Required New Secondary Meters J17-7

J17.6 SUBMITTALS..... J17-7

J17.7 WATER CONSERVATION PROJECTS..... J17-8

J17.8 SERVICE AREA J17-8

J17.9 OFF-INSTALLATION SITES..... J17-9

J17.10 SPECIFIC TRANSITION REQUIREMENTS..... J17-9

J17.11 GOVERNMENT RECOGNIZED SYSTEM DEFICIENCIES..... J17-9

List of Tables

Fixed Inventory..... J17-3

Spare Parts J17-4

Specialized Vehicles and Tools..... J17-4

Manuals, Drawings, and Records..... J17-4

Existing Secondary Meters J17-7

New Secondary Meters..... J17-7

Service Connections and Disconnections..... J17-9

System Deficiencies..... J17-9

J17 Laughlin AFB Water Distribution System

J17.1 Laughlin AFB Overview

Laughlin AFB, located 7 miles east of Del Rio in Val Verde County, Texas, is an Air Education and Training Command (AETC) installation that functions primarily as a pilot training base. The host command is the 47th Flying Training Wing (47 FTW), which conducts Specialized Undergraduate Pilot Training (SUPT) for U.S. and international pilots. Laughlin AFB also hosts a number of tenant units, including:

- Base Commissary and Base Exchange
- American Red Cross
- Air Force Office of Special Investigations
- Defense Investigative Service
- Defense Reutilization and Marketing Office
- U.S. Army Corps of Engineers
- U.S. Postal Service

The Main Base occupies 4,516 acres and contains 528 buildings enclosing approximately 2.3 million square feet (sf).¹ Laughlin AFB has three parallel runways, and approximately 260 functional aircraft are assigned to the 47 FTW. Unincorporated Val Verde County to the east borders the Base, west, and south and by Interstate 90 and a Union Pacific Railroad line to the north. The Base has a total population of approximately 3,100, including military personnel and civilian employees. Laughlin AFB's annual payroll is approximately \$95 million (combined military and civilian) and the Base is estimated to contribute approximately \$20.5 million to the local economy through civilian employment, contracting, and purchases from local businesses.

The Base was established in 1942 as the Army Air Force Advanced Flying School. It was closed temporarily after the end of World War II, but reactivated as Laughlin AFB during the Korean Conflict. Laughlin AFB has been a SUPT installation since 1962. New facilities have been added or upgraded throughout the years to accommodate changing missions and new aircraft, and consolidation of SUPT activities due to BRAC is expected to increase the number of pilots training at Laughlin AFB. Current mission plans, however, do not call for expansion of the airfield or cantonment. Laughlin AFB's facilities and airfield cover just over half of the 4,500-acre Main Base, leaving more than 2,000 acres of recreational areas and open space.

Most of the planned capital improvement projects involve upgrades or repairs to the existing facilities. Key new projects planned for the Base are:

- Corrosion Control Facility
- Security Forces Squadron

¹ The nonresidential structures include offices, industrial maintenance and repair facilities, flight operations structures, and community service facilities (e.g., the clinic). Military housing units comprise 330 of the 540 on-base structures, and include single-family residences, dormitories, and Temporary Lodging Facilities (TLFs).

- JPATS Beddown
- Gas Station
- ERRC
- Gymnasium

These projects, if implemented, will increase the total square footage of buildings on base by approximately 4 percent.

J17.2 Laughlin AFB Water Distribution System Description

J17.2.1 Water Distribution System Fixed Equipment Inventory

The Laughlin AFB water distribution system consists of all appurtenances physically connected to the distribution system from the point in which the distribution system enters the Installation and Government ownership currently starts to the point of demarcation, defined by the real estate instruments (Exhibit B). The system may include, but is not limited to, pipelines, valves, fire hydrants, storage facilities, exterior backflow devices, pumps, and meters. The actual inventory of items to be transferred will be established via a bill of sale 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 Government makes no representation that the inventory is accurate. The Contractor shall base the proposal on site inspections, information in the technical library, other pertinent information, and to a lesser degree the following description and inventory. Under no circumstances shall the Contractor be entitled to any service charge adjustments based on the accuracy of the following description and inventory.

Specifically excluded from the water distribution system privatization are:

- Irrigation systems
- Water softeners
- Air conditioning water towers
- Facility 94/210 fire fighting water deluge system

J17.2.1.1 Description

The water distribution system at Laughlin AFB obtains potable water from San Felipe Springs in Del Rio. The springs have a flow rate that varies from 40 to 90 million gallons per day (mgd). This flow is sufficient to satisfy the requirements of both the Base and the City of Del Rio.

There are no active wells on the Installation. A pump station that is occupied by the City of Del Rio and the federal government pumps water from San Felipe Springs. This pump station pumps water 6.5 miles (approximately 34,300 feet) through a 16-inch transmission main to a new 1,000,000-gallon ground storage tank located on-Base on Arkansas Avenue. A pump station located next to the 1,000,000-gallon storage tank pumps water into two elevated storage tanks, with individual capacities of 100,000 and 300,000 gallons.

The two elevated storage tanks are located at Mitchell Boulevard and 6th Street, which is the highest location on the Base. They establish the service pressure plane that delivers water to

Base facilities at a pressure that ranges between 50 and 60 pounds per square inch (psi). Water is delivered to Base customers through approximately 311,000 linear feet (lf) of distribution main. A small 500,000-gallon deluge water tank is located near the flight line and provides water storage for emergency fire-fighting needs.

Pipe sizes range between 1-1/2-inch diameter for service lines and 20-inch diameter for transmission mains. The majority of this pipe is made from polyvinyl chloride (PVC), although some is made from asbestos cement (AC). The PVC pipe is relatively new. The AC pipe is found mostly in the military housing area and is approximately 20 years old.

The City of Del Rio disinfects the water supply at the San Felipe Springs pump station. However, the Base has a supplementary chlorination unit located at the Base pump station to provide additional disinfection in the event measured chlorine residual levels from the City are too low.

J17.2.1.2 Inventory

Table 1 provides a general listing of the major water distribution system fixed assets for the Laughlin AFB water distribution system included in the sale.

TABLE 1
Fixed Inventory
Water Distribution System, Laughlin AFB

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
<u>PVC Pipe</u>	1.5	30,000	lf	1994
	2	10,000	lf	1994
	4	4,900	lf	1994
	6	34,640	lf	1994
	8	48,000	lf	1994
	10	2,700	lf	1994
	12	470	lf	1994
	14	1,090	lf	1994
	16	1,740	lf	1994
<u>Asbestos Cement Pipe</u>	6	8,660	lf	1979
	8	12,000	lf	1979
<u>Cast Iron Gate Valves</u>	1.5	450	ea	1992
	4	1	ea	1992
	6	203	ea	1992
	8	157	ea	1992
	12	6	ea	1992
	14	1	ea	1992
	16	4	ea	1992
<u>Fire Hydrants (4.5-inch Valve Size)</u>		332	ea	1992
<u>Chlorination Facility</u>		1	ea	1994
<u>Above-Ground Storage Tanks (Total capacity in gal)</u>		1,000,000	gal	1994
<u>Elevated Storage Tanks (Total capacity in gal)</u>		400,000	gal	1961
<u>Cathodic Protection for 1M Tank and 2 Water Towers</u>		3	ea	1992/2000
<u>Generators</u>	600 Kw	1	ea	1992
<u>San Felipe</u>				

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
Pumps	60/75 HP	3	ea	1988/1992
Pipe	16"	34,300 appro	lf	1988
Above-ground Storage Tanks (Total capacity in gal)		1,000,000		1992
Pumps	150 HP	3	ea	1992
Notes:	PVC = polyvinyl chloride ea = each	lf = linear feet gal = gallon		

J17.2.2 Water Distribution System Non-Fixed Equipment and Specialized Tools

Table 2 lists other ancillary equipment (spare parts) and **Table 3** lists specialized vehicles and tools included in the sale. 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 2
Spare Parts
Water Distribution System, Laughlin AFB

Qty	Item	Make/Model	Description	Remarks
1	Pump/motor assembly		For main water pumping facility.	

TABLE 3
Specialized Vehicles and Tools
Water System Laughlin AFB

Description	Quantity	Location	Maker
No specialized vehicles and tools are included in the privatization of this utility system.			

J17.2.3 Water Distribution System Manuals, Drawings, and Records

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

TABLE 4
Manuals, Drawings, and Records
Water Distribution System, Laughlin AFB

Qty	Item	Description	Remarks
1	CD	Utility System Drawings	Water Distribution System
	Records	Recurring Work Program Records	
	Records	TNRCC reports, books, and files	
	Records	Daily water testing reports for Base, San Felipe Springs, and Base Marina.	
	Records	Backflow preventer &PIV test records	
	Records	Meter reading record Book	
	Reports	Fire department water pressure reports	

J17.3 Specific Service Requirements

The service requirements for the Laughlin AFB water distribution system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Laughlin AFB water distribution system and are in addition to those found in Section C. If there is a conflict between requirements described below and Section C, the requirements listed below take precedence over those found in Section C.

- Daily testing of Base water system is required 7 days per week. TNRCC water testing reports are to be prepared and submitted monthly.
- Periodic water pressure testing of all fire hydrants.
- The Contractor shall provide monthly meter reading reports IAW Paragraph J17.6, and that meet the following requirements:

The Contractor shall keep meter books with monthly consumption and demand (if applicable) for each meter reading. Meter books shall also include building address or facility number, meter number, previous month readings, current month readings, multipliers for each meter, total monthly consumption, points of contact for meter questions, and procedure for converting meter reads into consumption (including multipliers). The Contractor shall coordinate with the Government to determine the format for the meter books to be delivered.
- The Contractor shall enter into a Memorandum of Understanding with the Laughlin Air Force Base Fire Department for fire protection of all facilities included in the purchase of the utility. The Contractor shall abide by Laughlin AFB fire protection requirements. The Contractor shall maintain the fire alarm system for all facilities included in the purchase of the utility. The Contractor shall permit Fire Department personnel access to their facilities to perform fire inspections and emergency response.
- IAW Paragraph C.9.8, Exercises and Crisis Situations Requiring Utility Support, the Contractor shall provide support as directed by the Laughlin Air Force Base Civil Engineer Control Center for exercises and crisis situations.
- The Contractor shall coordinate any change to the water distribution system that may affect fire protection with the Base Fire Department.
- The Contractor shall coordinate replacement or changes to fire hydrants with the Base Fire Department.
- The Contractor shall perform flow testing and maintenance of fire hydrants and water lines in accordance with National Fire Protection Agency standards. The government reserves the right to review flow test records.
- Daily readings of all San Felipe Spring meters are required.
- The Contractor shall own, maintain, and operate the cathodic protection system for the water system. The Contractor shall provide cathodic protection testing reports IAW Paragraph J17.6.
- The Contractor shall provide chlorination as part of the distribution service. Chlorination treatment shall be IAW Texas Administrative Code (TAC) 290.101 through 290.120, "Drinking Water Standards."
- The Contractor shall operate, maintain and test the Base water system IAW TNRCC regulations. The Contractor shall provide the Contracting Officer with any and all information and reports submitted to the TNRCC.
- The Contractor shall maintain Air Force marking on water tanks and shall coordinate with the Base Civil Engineer before painting any water tanks.

- IAW the Right of Way, the Contractor shall allow the Government access to operate and maintain any communication equipment, obstruction lights, and other Government equipment on water tanks.
- The Contractor shall maintain the pumps and motors at the San Felipe water plant. To include an estimated 34,300 lf of 16 inch pipe line from the Springs to LAFB and all valves and underground water valve/bypass vaults at the Springs and on the 16 inch line. The outside emergency pump motor and ancillary fixed equipment is also included. The electrical gear starts at the weather head to the disconnect and any electrical to run the emergency pump.
- All electrical equipment and other ancillary fixed equipment at San Felipe pump station from the outside weather head to the motor and to include the motor shall be the responsibility of the contractor. This also includes the Johnson controls for the motors and any equipment required to support the control.
- Facilities 2027 and 2028, including the structure, equipment, 600 kw standby generator unit and fuel tank, ancillary fixed equipment, and all utilities up to the secondary terminal spade of the Pad mount transformer is included in the purchase of the utility. The contractor shall own, maintain, and operate these facilities.
- The Contractor shall own, maintain, and operate all electrical/electronic controls at the water plant and water tanks, including mechanical level indicators. The buried fiber optics cable and any control means that provide the current to control the water pumps from the control panel to the water pumps is included. This requirement is for both the base water system and San Felipe Springs pump station.

J17.4 Current Service Arrangement

Currently, the City of Del Rio and the federal government occupy the San Felipe Springs pump station. The government has their equipment installed at the station. The station is city owned. This station provides water to Laughlin AFB. Laughlin AFB currently has a peak water demand of 65 million gallons (MG) per month. This peak normally occurs in the summer. Base average water usage during the summer varies from 1.5 to 2.0 mgd. Winter average water usage varies from 0.48 to 0.56 mgd.

As noted in Section J17.1, key projects planned for the Base may increase the total square footage of buildings on Base by about 4 percent.

J17.5 Secondary Metering

The Installation may require secondary meters for internal billings of their reimbursable customers, utility usage management, and conservation monitoring. The Contractor shall assume full ownership and responsibility for existing and future secondary meters IAW Paragraph C.3.

J17.5.1 Existing Secondary Meters

Table 5 provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings once a month for all secondary meters IAW Paragraph C.3 and J17.6 below.

TABLE 5
Existing Secondary Meters
Water Distribution System, Laughlin AFB

Building No.	Meter Location	Meter Description
100	Base Civil Engineer	Water Meter
246	Mission Support Squadron	Water Meter
352	Commissary	Water Meter
284	Club XL – Enlisted Annex	Water Meter
357	Cactus Lanes Bowling Center	Water Meter
399	Friendship Pool	Water Meter
472	Club XL	Water Meter
476	Child Development Center	Water Meter
427	Liberty Pool	Water Meter
494	Golf Course	Water Meter
510	Wood Hobby Shop	Water Meter
525	Auto Hobby Shop	Water Meter
526	Car Wash	Water Meter
540	Base Exchange	Water Meter
Lake Amistad	Marina	Water Meter
2027	San Felipe Meter Station (Base Water)	Water Meter
Base Sewage	Base Sewage	Water Meter

J17.5.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 6**. New secondary meters shall be installed IAW Paragraph C.13, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Paragraphs C.3 and J17.6 below.

TABLE 6
New Secondary Meters
Water Distribution System, Laughlin AFB

Meter Location	Meter Description
Building 115	Water Meter
All Trailer Park Units (54 Units)	Water Meter
Building 511 Outdoor Rec.	Water Meter
Building 470 Billeting	Water Meter
TLF Area (1 meter)	Water Meter
Credit Union	Water Meter
Building 390 Youth Center	Water Meter
Building 357 Bowling Alley	Water Meter
Building 235 Fiesta Center	Water Meter
Building 209 T-38 Wash Rack	Water Meter
Building 506 T-37 Wash Rack	Water Meter

J17.6 Submittals

The Contractor shall provide the Government submittals for the following:

1. Invoice (IAW G.2). The Contractor's monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Invoices shall be submitted by the 25th of each month for the previous month. Invoices shall be submitted to:

Name: 47th Ces/CEOE

Address: 251 Fourth Street, Laughlin AFB, TX 78843

Phone number: (830) 298-5960

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 include the following information for Scheduled and Unscheduled outages:

Scheduled: Requestor, date, time, duration, facilities affected, feedback provided during outage, outage notification form number, and digging clearance number.

Unscheduled: Include date, time and duration, facilities affected, response time after notification, completion times, feedback provided at time of outage, specific item failure, probability of future failure, long term fix, and emergency digging clearance number.

Outage reports shall be submitted by the 25th of each month for the previous month. Outage reports shall be submitted to:

Name: 47th CES/CEOE

Address: 251 Fourth Street, Laughlin AFB, TX 78843

Phone number: (830) 298-5960

3. Meter Reading Report. The monthly meter reading report shall show the current and previous month 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 first of each month for the previous month. Meter reading reports shall be submitted to:

Name: 47th CES/CEOE

Address: 251 Fourth Street, Laughlin AFB, TX 78843

Phone number: (830) 298-5960

4. Cathodic Protection Report. The Contractor's cathodic protection report shall be submitted in a format coordinated with the Government using the latest version of Microsoft Word or Excel. Testing of the cathodic protection system shall be reported monthly or yearly as required by HQ AETC. Reports shall be submitted by the 25th of the month for the previous month or year as requested. Reports shall be submitted to:

Name: 47th CES/CEOE

Address: 251 Fourth Street, Laughlin AFB, TX 78843

Phone number: (830) 298-5960

J17.7 Water Conservation Projects

IAW Paragraph C.3, Utility Service Requirement, the following projects have been implemented by the Government for conservation purposes.

- None

J17.8 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Laughlin AFB boundaries.

J17.9 Off-Installation Sites

The Spofford Auxiliary Airfield (AAF) is south of Brackettville, Texas and approximately 45 miles from Laughlin AFB. It consists of three building structures and an airfield runway. The Non-potable water system at Spofford AAF is included under this contract.

Non-potable water is delivered to the Spofford AAF via privately owned tanker truck, which fills a single storage tank. There is no potable water service delivered to the AAF. The following inventory² represents the water system owned by the Government:

- 1 –8000 gal storage tank with diesel pump
- 160 linear feet of 1 ½ inch piping
- 1 – 1 ½ inch valve
- 1 – 1 ½ inch flow meter

J17.10 Specific Transition Requirements

IAW Paragraph C.13, Transition Plan, **Table 7** provides a listing of service connections and disconnections required upon transfer.

TABLE 7
Service Connections and Disconnections
Water Distribution System, Laughlin AFB

Location	Description
	The Government does not require any connection or disconnections during the transition period.

J17.11 Government Recognized System Deficiencies

Table 8 provides a listing of system improvements that the Government has planned. The Government recognizes these improvement projects as representing current deficiencies associated with the Laughlin AFB water distribution system. If the water distribution system is sold, the Government will not accomplish these planned improvements. The Contractor shall make a determination as to its actual need to accomplish and the timing of any and all proposed projects. Capital upgrade projects shall be proposed through the Capital Upgrades and Renewal and Replacement Plan process and will be recovered through Schedule L-3. Renewal and Replacement projects will be recovered through Sub-CLIN AB.

TABLE 8
System Deficiencies
Water Distribution System Laughlin AFB

Project Location	Project Description
Work Order K1300	Presently the Base Clinic is deficient in backflow preventers on the main water supply system. In the 1998 5-year water system cross-connection survey, 97 locations assigned as hazardous ranked by base BEE did not have backflow preventers (BFPs) installed.

² Inventory is not included in the inventory of the main base shown in Table 1