

ATTACHMENT J7

Pittsburgh 171st ARW, PA ANG Water Distribution System

Table of Contents

PITTSBURGH 171ST ARW, PA ANG WATER DISTRIBUTION SYSTEM..... I

J7 PITTSBURGH 171ST ARW, PA ANG WATER DISTRIBUTION SYSTEM..... I

J7.1 PITTSBURGH 171ST ARW, PA ANG OVERVIEW 1

J7.2 WATER DISTRIBUTION SYSTEM DESCRIPTION..... 1

J7.2.1 Water Distribution System Fixed Equipment Inventory..... 1

 J7.2.1.1 Description..... 2

 J7.2.1.2 Inventory..... 3

J7.2.2 Water Distribution System Non-Fixed Equipment and Specialized Tools 4

J7.2.3 Water Distribution System Manuals, Drawings, and Records..... 4

J7.3 SPECIFIC SERVICE REQUIREMENTS..... 5

J7.4 CURRENT SERVICE ARRANGEMENT 6

J7.5 SECONDARY METERING 6

J7.5.1 Existing Secondary Meters..... 6

J7.5.2 Required New Secondary Meters 6

J7.6 MONTHLY SUBMITTALS 7

J7.7 WATER CONSERVATION PROJECTS..... 7

J7.8 SERVICE AREA 7

J7.9 OFF-INSTALLATION SITES 7

J7.10 SPECIFIC TRANSITION REQUIREMENTS..... 8

J7.11 GOVERNMENT RECOGNIZED SYSTEM DEFICIENCIES 8

List of Tables

Fixed Inventory..... 3

Spare Parts 4

Specialized Vehicles and Tools..... 4

Manuals, Drawings, and Records 4

Existing Secondary Meters 6

New Secondary Meters..... 6

Service Connections and Disconnections..... 8

System Deficiencies 8

J7 Pittsburgh 171st ARW, PA ANG Water Distribution System

J7.1 Pittsburgh 171st ARW, PA ANG Overview

The Pennsylvania Air National Guard (PA ANG) 171st Air Refueling Wing (ARW) is located at the Pittsburgh International Airport, approximately 16 miles northwest of downtown Pittsburgh in Allegheny County, Pennsylvania. The base is accessible from US Highway 60 at the McClaren Road exit. The 171st ARW mission is to provide aerial in-flight refueling and passenger/cargo transportation. The base currently has 20 KC-135 Air Refueling Tankers. The activities of the 171st ARW are estimated to have an economic impact of more than \$50 million on the Pittsburgh area.

The 171st ARW base employs 418 full-time personnel during regular weekday shifts. Of the 418 personnel, 293 are technicians, 116 are Active Guard Reserve full-time (AGR), and 9 are state employees. Traditional guardsmen add 1034 personnel that are on the installation during their respective Unit Training Assembly (UTA) weekend. The UTA weekend occurs one weekend each month for each unit.

The 171st ARW occupies 176 acres leased from the Allegheny County Department of Aviation. Construction of the base began in 1949 for the 112th Fighter Group. After several unit and mission changes at the PA ANG, the 171st moved to the current base in 1964. The 171st maintains approximately 52 buildings and structures with the breakdown being 40 industrial buildings and 12 administrative buildings. Major additions or deletions to the installation are not planned at this time..

J7.2 Water Distribution System Description

J7.2.1 Water Distribution System Fixed Equipment Inventory

The 171st ARW 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 Right of Way. 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 sold will be in the 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 its 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:

- Back flow preventers installed inside installation facilities.

J7.2.1.1 Description

The Pennsylvania ANG (171st ARW) has two separate water supply lines. The main water supply is provided by Moon Township Municipal Authority (MTMA). The backup water supply is provided by Findlay Township.

Water from the MTMA is supplied to the 171st ARW through a 10 inch diameter ductile iron supply line that starts near the entrance of the 911th (Airlift Wing) AW and passes beneath the main airport runway. The 10 inch line begins in a valve and meter vault located on the 911th Airlift Wing (AW) property. The 171st assumes ownership of the line on the downstream side of the master meter. The 171st main supply line runs from the vault to the south on 911th property before entering the Pittsburgh International Airport (Pittsburgh IAP) property where it passes under runway 32-14 before entering the 171st property. The 171st does not have an easement through the Allegheny County Airport Authority for line repairs or replacements on Pittsburgh IAP property. In the near future, arrangements must be made with the MTMA and the Allegheny County Airport Authority to abandon the existing line and construct a new line along an alternate route that is acceptable to all parties.

The Findlay Township backup water supply enters the 171st ARW below ground near the main gate from McClaren Road. The line passes through the Findlay Township master meter and backflow preventer located in the metering pit. In order to use the backup water source the Base must manually open the valve to allow Findlay water to enter the system. The backup water supply system is rarely used.

The 171st ARW's distribution system is made up of a combination of several loops and long dead-end branches. The system's dead ends do not appear to create excess maintenance, sediment, or brown water problems. Water lines are comprised of 2 to 10 inch diameter ductile iron and asbestos cement pipes which are located at a range of 3 to 20 feet below ground, although the actual depth of pipe may exceed this range. The average pressure supplied to the Base is 90 psig. The deeper burial depths relate to the delivery line that crosses beneath the airport runway. That line was installed and then fill was placed over it to construct the runway.

The water distribution system's age and configuration presents problems to be addressed. The first problem is the MTMA main line constructed in the 1960s running under the Pittsburgh IAP runway with no right-of-way for line repairs. This line has the possibility to damage the airport runway in the event of a pipe break. The second problem is the high percentage of older distribution lines located under the 171st airfield parking ramp and other pavement. These lines appear to be near the end of their useful life because they break, on average, once each winter. The system's valves are properly located for isolation purposes, but maintenance personnel estimate that less than half of them function properly.

J7.2.1.2 Inventory

Table 1 provides a general listing of the major water distribution system fixed assets for the 171st ARW water distribution system included in the sale.

TABLE 1
Fixed Inventory
Water Distribution System 171st ARW, PA ANG

| Item | Size (in.) | Quantity | Unit | Approximate Year of Construction |
|--|------------|----------|------|----------------------------------|
| <u>Main Base Piping</u> | | | | |
| Ductile Iron Pipe | 2.0 | 1,264 | LF | 1960 |
| Ductile Iron Pipe | 3.0 | 890 | LF | 1960 |
| Ductile Iron Pipe | 6.0 | 1,520 | LF | 1960 |
| Ductile Iron Pipe | 10.0 | 5,300 | LF | 1960 |
| Ductile Iron Pipe | 4.0 | 175 | LF | 1989 |
| Ductile Iron Pipe | 6.0 | 840 | LF | 1989 |
| Ductile Iron Pipe | 8.0 | 3,640 | LF | 1989 |
| Copper Pipe | 2.0 | 365 | LF | 1989 |
| Asbestos Cement Pipe | 4.0 | 505 | LF | 1955 |
| Asbestos Cement Pipe | 6.0 | 410 | LF | 1955 |
| Asbestos Cement Pipe | 8.0 | 610 | LF | 1955 |
| PVC Pipe | 6.0 | 160 | LF | 2003 |
| <u>Piping on 911th Property</u> | | | | |
| Ductile Iron Pipe | 10.0 | 2,000 | LF | 1960 |
| <u>Piping under Pittsburgh IAP</u> | | | | |
| Ductile Iron Pipe | 10.0 | 2,400 | LF | 1960 |
| <u>Valves</u> | | | | |
| Gate Valve | 2.0 | 2 | EA | 1960 |
| Gate Valve | 3.0 | 3 | EA | 1960 |
| Gate Valve | 4.0 | 2 | EA | 1960 |
| Gate Valve | 6.0 | 12 | EA | 1960 |
| Gate Valve | 6.0 | 1 | EA | 2003 |
| Gate Valve | 8.0 | 34 | EA | 1960 |

| Item | Size (in.) | Quantity | Unit | Approximate Year of Construction |
|----------------------------|------------|----------|------|----------------------------------|
| Gate Valve | 10.0 | 2 | EA | 1960 |
| 3 Way Fire Hydrants | | | | |
| Fire Hydrants | - | 16 | EA | 1960 |
| Fire Hydrants | - | 8 | EA | 1980 |
| Fire Hydrants | - | 4 | EA | 1989 |

Notes:

PVC = Polyvinyl chloride

EA = Each

GAL= Gallon

HP = Horsepower

LF = Linear Feet

J7.2.2 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 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 2

Spare Parts

Water Distribution System 171st ARW, PA ANG

| Qty | Item | Make/Model | Description | Remarks |
|------|------|------------|-------------|---------|
| None | | | | |

TABLE 3

Specialized Vehicles and Tools

Water Distribution System 171st ARW, PA ANG

| Description | Quantity | Location | Maker |
|-------------|----------|----------|-------|
| None | | | |

J7.2.3 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 171st ARW, PA ANG

| Qty | Item | Description | Remarks |
|-------|----------------------|--|---------|
| 1 Set | Water Utility System | Water Utility System Distribution Drawings | |

| Qty | Item | Description | Remarks |
|-----|----------|-------------|---------|
| | Drawings | | |

J7.3 Specific Service Requirements

The service requirements for the 171st ARW water distribution system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the 171st ARW 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.

- The Contractor shall abide by current and future 171st ARW fire protection requirements. (Current fire protection requirements are presented in the 171st ARW Technical Library) The utility system purchased by the Contractor may include facilities that may or may not include fire alarm systems. The Contractor shall permit Fire Department personnel access to their facilities to perform fire inspections and emergency response.
- The Contractor shall coordinate changes to the water distribution system (including fire hydrants) that may affect water supply and fire protection with the Base Fire Department and Contracting Officer's designated representative. Contractor shall submit a written request with engineering plans to the Contracting Officer's designated representative describing proposed changes, and shall not start work until the BCE has approved changes in writing.
- The Contractor shall acquire and maintain system identification numbers, and approvals required by the Pennsylvania Environmental Protection Agency (Pennsylvania DEP) to own and operate the water distribution system. Provide licensed system operators as required by Pennsylvania DEP.
- The Contractor shall perform all water distribution system testing as required by applicable standards, regulations, rules, codes, and permits. In addition, the Contractor shall, when requested, provide the Contracting Officer's designated representative with a copy of water distribution system testing information and reports submitted to any regulatory agencies.
- The Contractor shall use Air Force Form 332, Base Civil Engineer Work Request, to coordinate work on the water distribution system with the Contracting Officer's designated representative.
- The Contractor shall provide an ample amount of pressure and flow for general water supply, fire protection, and other emergencies. Provide the Air Force sufficient information for review of the possible changes in system performance as part of the package proposing a pressure change. Allow the Contracting Officer's designated representative, a minimum of ten days to review the proposed change. Any proposed change in the pressure of water must be approved by the Installation Commander before the change is implemented.

- The Contractor shall conform to the base spill plan (copy located in the Technical Library) and provide a copy of their EPCRA report(s) to the base on request.
- The Contractor shall perform EIAP or NEPA reviews and reporting as required for additions or modifications to the water system.
- Provide marks on the ground to show locations of water distribution lines on an as needed basis as other entities request. Mark utilities in the field to show location and depth.

J7.4 Current Service Arrangement

The Moon Township Municipal Authority (MTMA) is the primary provider of the water commodity to the 171st ARW. The Findlay Township Water Authority provides a secondary water source. The FY 2002 annual water usage was 6,400 kgal. The average monthly usage was 533 kgal with a maximum occurring in January with 947 kgal and the minimum occurring in November with 367 kgal.

J7.5 Secondary Metering

J7.5.1 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 for all secondary meters IAW Paragraph C.3 and J7.6 below.

TABLE 5
Existing Secondary Meters
Water Distribution System 171st ARW, PA ANG

| Meter Location | Meter Description (Type) |
|--------------------|--------------------------|
| No exterior meters | |

J7.5.2 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 J7.6 below.

TABLE 6
New Secondary Meters
Water Distribution System 171st ARW, PA ANG

| Meter Location | Meter Description |
|------------------------|-------------------|
| No new exterior meters | |

J7.6 Monthly Submittals

The Contractor shall provide the Government monthly 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:

Department of Military Affairs
State Armory Board
Federal Service Contracts
Building O-47
Annville, PA 17003-5002
717-772-7002

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:

171st ARW/CES
Base civil Engineer
300 Tanker Road #4217
Coraopolis, PA 15108-4217
412-474-7614

J7.7 Water Conservation Projects

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

- There are no conservation projects identified by the 171st ARW.

J7.8 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the 171st ARW boundaries, plus the line that extends from beneath the water tower at the 911th to the 171st property.

J7.9 Off-Installation Sites

The 10 inch diameter ductile iron line that delivers water from the meter and connection to the MTMA distribution system on the 911th is off the installation property. This line crosses airport property.

J7.10 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 171st ARW, PA ANG

| Location | Description |
|----------|---|
| None | New connections are not anticipated at the time of transition |

J7.11 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 171st ARW water distribution system. If the utility 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 such planned improvements. 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 AC](#).

TABLE 8
System Deficiencies
Water Distribution System 171st ARW, PA ANG

| Project Location | Project Description |
|--|---|
| Water line from 911 th to 171 st passing beneath Pittsburgh IAP runways. | There is a project known but not programmed to relocate the main water line that passes under the runway on the Allegheny County Airport Authority property. The airport authority will not grant access to the water line for repair because of the proximity to the runways. A replacement line needs to be installed connecting the Moon Township tap to the 171 st going around the end of the runway. It is expected that this new line will be approximately 1 ½ to 2 miles long with pipe size to be determined.. |