

## Attachment J04

# Fort Jackson Wastewater System

---

## Table of Contents

J04 Fort Jackson Wastewater System.....	J04-1
J04.1 Fort Jackson Overview.....	J04-1
J04.2 Wastewater System Description .....	J04-1
J04.2.1 Wastewater System Fixed Equipment Inventory.....	J04-2
J04.2.2 Wastewater Collection System Non-Fixed Equipment and Specialized Tools Inventory .....	J04-4
J04.2.3 Wastewater System Manuals, Drawings, and Records Inventory .....	J04-6
J04.3 Current Service Arrangement .....	J04-6
J04.4 Secondary Metering .....	J04-6
J04.4.1 Existing Secondary Meters.....	J04-6
J04.5 Submittals .....	J04-7
J04.6 Energy Savings and Conservation Projects .....	J04-7
J04.7 Service Area.....	J04-7
J04.8 Off-Installation Sites .....	J04-7
J04.9 Specific Transition Requirements.....	J04-7

## List of Tables

1	Fixed Inventory, Wastewater System Area .....	J04-3
2	Spare Parts.....	J04-5
3	Specialized Equipment and Vehicles .....	J04-5
4	Manuals, Drawings, and Records .....	J04-6
5	Existing Secondary Meters .....	J04-6
6	Service Connections and Disconnections .....	J04-7
7	System Improvement Projects.....	J04-8

# **J04 Fort Jackson Wastewater System**

---

## **J04.1 Fort Jackson Overview**

The main mission of Fort Jackson is to support a military tradition of excellence established on June 2, 1917, a new Army training Center was established to answer America's call for trained fighting men in the early, ominous days of World War I. This installation would become the largest and most active of its kind in the world. First known as the Sixth National Cantonment, and later as Camp Jackson, Fort Jackson has always served as the Army's pioneer in the training environment. Named the Army's Community of Excellence in 1988, Fort Jackson has continued to earn awards for excellence year after year. The initial site of the cantonment area consisted of almost 1,200 acres. The citizens of Columbia donated the land to the federal government, thereby initiating the long tradition of respect, cooperation and friendship between the city and the installation. In fact, Fort Jackson was incorporated into the city in October 1968.

Named in honor of Major General Andrew Jackson, a native son of the Palmetto State and the seventh president of the United States, Camp Jackson was designated as one of 16 national cantonments constructed to support the war effort. These were years of growth; the pressure of World War I brought swift changes. Within 11 days of the signing of a contract to construct the camp, the 110-man camp guard arrived. By the end of the first month, the labor force had grown to more than 1,200 and the first two barracks were completed. Two months later, the force had grown to almost 10,000 men. Virtually overnight, Camp Jackson had grown from a sandy-soil, pine and scrub oak forest to a thriving Army training center, complete with a trolley line and hundreds of buildings. Three months after construction began; some 8,000 draftees arrived for training. The first military unit to be organized here was the 81st "Wildcat" Division, under the camp's first official commander, Major General Charles H. Barth. Members of the original guard, who had been the first to occupy the camp, were moved to Camp Sevier in Greenville, S.C., and incorporated into the 30th "Old Hickory" Division, named in honor of Jackson. More than 45,000 troops from these famed divisions went to France as part of the America Expeditionary Forces. The World War Years In less than eight months, construction of the vast camp was complete. But almost as suddenly as it began, the clamor subsided. With the signing of the Armistice in 1918, the famed 30th Division was inactivated. The 5th Infantry Division trained here until it was inactivated in 1921. Control of the camp reverted to the Cantonment Lands Commission, and from 1925 to 1939, the sleepy silence was broken only by the occasional reports of weapons fired by state National Guardsmen. In 1939, the demands of war brought the area again under federal control, and Fort Jackson was organized as infantry training center. Four firing ranges were constructed, and more than 100 miles of roads were hard surfaced and named for legendary Revolutionary War figures and heroes of the Civil War. During World War II, the "Old Hickory" Division was one of the first units to reappear on the scene, just as it had in 1917. More than 500,000 men received some phase of their training here. Other famed units to train at Fort Jackson during this period were the 4th, 6th, 8th, 26th, 77th, 87th, 100th and 106th. The 31st "Dixie" Division trained here during the Korean Conflict. 75 Years of Excellence Fort Jackson had grown over the years, but most of the buildings were temporary. Finally in 1964, construction began on permanent steel and concrete buildings to replace wooden barracks that had housed the Fort's troops since the early 1940's. In recognition of the Fort's 50th anniversary in 1967, the citizens of Columbia gave Fort Jackson the statue of Andrew Jackson that stands at Gate #1. With the establishment of the modern volunteer Army in 1970 and the need to promote the attractiveness of service life, construction peaked in an effort to modernize facilities and improve services. In June 1973, Fort Jackson was

designated as an U.S. Army Training Center, where young men and women are taught to think, look and act as soldiers - always. Through the year, changes have been made to enhance training. Victory Tower, an apparatus designed to complement basic combat training, is used to reinforce the skills and confidence of the individual soldier. Field training exercises (FTX) were incorporated into advanced individual training (AIT) so soldiers would have an opportunity to practice MOS and common skills in a field environment. By 1988, initial entry training (IET) strategy was implemented. The standard unit of training was the platoon. Training focused on hands-on skill development rather than platoon instruction. Fort Jackson continues to win awards as we move toward our vision of the future. The goal is to make Fort Jackson the living, working and training environment it can be. "Victory Starts Here", as it has since 1917.

Major Activities/Tenants include:

- ?? Basic Combat Training (BCT)
- ?? Basic Training Tour
- ?? 1st Basic Combat Training Brigade
- ?? 1st Battalion, 28th Infantry Regiment
- ?? 2nd Battalion, 28th Infantry Regiment
- ?? 2nd Battalion, 13th Infantry Regiment
- ?? 3rd Battalion, 13th Infantry Regiment
- ?? 2nd Battalion, 60th Infantry Regiment
- ?? 4th Training Brigade
- ?? 1st Battalion, 61st Infantry Regiment
- ?? 2nd Battalion, 39th Infantry Regiment
- ?? 1st Battalion, 34th Infantry Regiment
- ?? Victory Brigade and Support of Basic Training
- ?? Advanced Individual Training (AIT)
- ?? Chaplain Center & School
- ?? Drill Sergeant School
- ?? Pre-Command Course
- ?? Soldier Support Institute
- ?? Adjutant General School
- ?? Finance School
- ?? NCO Academy
- ?? Recruiting and Retention School
- ?? Hospital
- ?? Other Military and Civilian Organizations

## **J04.2 Wastewater System Description**

### **J04.2.1 Wastewater Collection System Fixed Equipment Inventory**

The Fort Jackson wastewater collection system facilities consists of all appurtenances physically connected to the collection system from the point of demarcation defined by the real estate instruments to point in which the collection system exits the base and current Government ownership ends. Generally, the point of demarcation will be the building footprint. The system may include, but is not limited to, pipelines, lift station, and manholes. The following description and inventory is included to provide the Offeror with a general understanding of the size and configuration of the collection system. The Offeror shall base the proposal on site inspections, information in the bidder's

library, other pertinent information, and to a lesser degree the following description. Under no circumstances shall the successful Contractor be entitled to any rate adjustments based on the accuracy of the following description and inventory.

#### **J04.2.1.1 Description**

Fort Jackson has no treatment facilities but relies on the City of Columbia and its Metropolitan Wastewater Treatment Plant to treat all wastewater. Sewage from throughout the Installation exists near the southwest area of the Post (Main Gate) in a 30-inch line, that passes under Interstate-77, and is metered and recorded in an military owned and maintained flow metering station near the Installation boundary on south west side of Interstate-77. The average daily flow is approximately 3.2 million gallons per day.

Training ranges have no sanitary sewers; chemical toilets are commonly used and are serviced on a regular basis by service contract with the removed contents discharged into a convenient manhole.

The Collection System is described as follows: Three major drainage basins serve Fort Jackson. The west basin which generally parallels Intersate-77 on the west and bounded on the east by Jackson Boulevard in the southern reaches and Marion Avenue north of Imboden Street. The central basin east of Jackson Boulevard and generally bounded by Semmes Lake and Lee Road north of Hill Street. The east basin lying east of Semmes Lake and east of Lee Road.

Septic tanks with tile drainage fields serve isolated facilities not connected to the main collection system, however, these elements are not included in the privatized infrastructure and therefore have not been inventoried.

The existing collection system at Fort Jackson is generally constructed of two different types of materials – vitrified clay and cast iron pipe – with manholes at approximately 350-foot intervals. Terra cotta sewer pipes exists in older areas of the Installation. The pipe diameter of the system varies from a 4-inch force main (transite) to 12-incg gravity flow collection lines most of which were installed in the early 1940's. Initial construction piping that has deteriorated is currently being replaced with PVC pipe as failure occurs.

The wastewater collection system presently consists of approximately 324,270 linear feet of collection mains 6 inches and larger.

Fort Jackson maintains seven sewage lift stations used for transferring wastewater from lower elevations to locations within the collection system where gravity flow conditions prevail.

Water Permit Limits. The seven Fort Jackson outfalls are permitted under the NPDES, South Carolina Department of Health and Environmental Control administered program. Permit Number SC0003786.

#### **J04.2.1.2 Inventory**

**Table 1** provides a general listing of the major collection system fixed assets for the Fort Jackson wastewater collection system included in the purchase. The system will be sold in a “as is, where is” condition without any warranty, representation, or obligation on the part of Government to make any alterations, repairs, or improvements. Ancillary equipment attached to, and necessary for, operating the system, though not specifically mentioned herein, is considered part of the purchased utility.

**TABLE 1**  
 Fixed Inventory  
 Wastewater Collection System facilities Inventory Fort Jackson

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
Vitrified Clay/Cast Iron Pipe/Terra Cotta Clay Pipe	4	4,905	lf	1964- 1978
	6	94,015	lf	1964
	8	138,633	lf	1964
	10	20,614	lf	1964
	12	11,220	lf	1964
	15	20,557	lf	1964
	18	15,187	lf	1964
	21	6,687	lf	1964
	24	5,541	lf	1964- 1990
	30	11,805	lf	1986- 1990

PVC = polyvinyl chloride

Lf = linear feet

Ea = each

Manholes	1,039	ea	
Treatment Plants	1	ea	1981
Lift Stations	7	ea	1990

### **J04.2.2 Wastewater Collection System Non-Fixed Equipment and Specialized Tools Inventory**

**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 and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment and tools. The successful Contractor shall provide any and all equipment, vehicles, and tools, whether included in the purchase or not, to maintain a fully operating system under the terms of this contract.

**TABLE 2**  
Spare Parts  
Wastewater System

<b>Qty</b>	<b>Item</b>	<b>Make/Model</b>	<b>Description</b>	<b>Remarks</b>
------------	-------------	-------------------	--------------------	----------------

See Note Immediately Below

**NOTE:** Fort Jackson maintains an inventory of spare parts for the wastewater collection system. Contents of this inventory vary as items are used and/or purchased. Availability of this inventory to the new owner will be negotiated before or during the transition period.

**TABLE 3**  
Specialized Equipment and Vehicles  
Wastewater System

<b>Description</b>	<b>Quantity</b>	<b>Location</b>	<b>Maker</b>
--------------------	-----------------	-----------------	--------------

None.

### J04.2.3 Wastewater System Manuals, Drawings, and Records Inventory

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

**TABLE 4**  
Manuals, Drawings, and Records  
Wastewater System

Qty	Item	Description	Remarks
See Note Immediately Below			

**NOTE:** Fort Jackson maintains a limited collection of technical manuals, drawings and records on the installed components of the wastewater collection system. This information will be transferred to the new owner during the transition period. System maps will be available in the bidders' library.

## J04.3 Current Service Arrangement

Fort Jackson has no treatment facilities but relies on the City of Columbia and its Metropolitan Wastewater Treatment Plant to treat all wastewater. Sewage from throughout the Installation exists near the southwest area of the Post (Main Gate) in a 30-inch line, passes under Interstate-77, and is metered and recorded in an military owned and maintained flow metering station near the Installation boundary. The average daily flow is approximately 3.2 million gallons per day.

## J04.4 Secondary Metering

There are currently no requirements for secondary metering of wastewater included in this contract. Any future wastewater secondary metering requested by the Government will be IAW C.3, Future Secondary Meters.

### J04.4.1 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 H.5 and J04.5 below.

**TABLE 5**  
Existing Secondary Meters  
Wastewater System

Meter Location	Meter Description
----------------	-------------------

There are no secondary meters in the Fort Jackson wastewater collection system that are maintained and read by Fort Jackson. If such meters are added in the future, information will be provided to the new owner of the Fort Jackson wastewater system for the performance of meter reading.

## J04.5 Submittals

In addition to the submittal requirements from Clause H.5, the Contractor shall provide the Government monthly submittals for:

1. Invoicing (IAW G.2) for the previous month's services. The Contractors invoice shall be prepared in a format proposed by the Contractor and accepted by the Contracting Officer.
2. Monthly Service Interruption Report for the previous month.
3. Meter Reading Report in support of internal billings, Wastewater usage management, and monitoring.
4. System Efficiency Report. If required by Clause C.3 the Contractors shall submit a system efficiency report in a format proposed by the Contractor and accepted by the Contracting Officer.
5. System malfunctions, discharges or overflows will be reported immediately to the Contracting Officer's designee. The Contractor, as the owner/operator of the system, must notify the State of Virginia of any discharges or overflows immediately.

## J04.6 Infiltration and Inflow (I&I) Projects

IAW C.3, Utility Service Requirement, the following projects have been implemented by the Government for managing and monitoring I&I.

None

## J04.7 Service Area

IAW Clause C.4, Service Area, the service area is defined as all areas within the Fort Jackson and Charles Wood Area boundaries.

## J04.8 Off-Installation Sites

There are no off-installation sites associated with this scope.

## J04.9 Specific Transition Requirements

IAW Clause C.17, Transition Plan, **Table 6** lists service connections and disconnections required upon transfer, and **Table 7** lists the improvement projects required upon transfer of the Fort Jackson & Charles Wood wastewater collection system.

**TABLE 6**  
Service Connections and Disconnections  
Wastewater System

---

**Description**

---

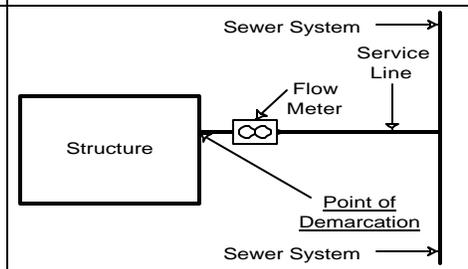
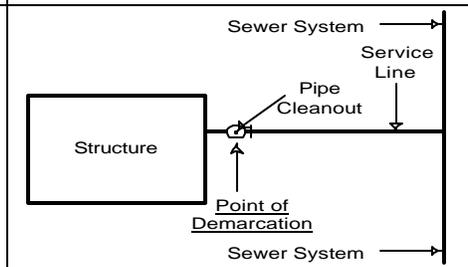
**NOTE:** None identified as of the beginning of FY01. Required service connections and disconnections will be provided to the Contractor as the requirements become known.

**TABLE 7**  
System Improvement Projects  
Wastewater System

Project Location	Project Description
New Main Sewer Metering Facility	Replace the existing main wastewater flow meter on the west side of Interstate-77 with a new metering station. The installation shall include a manhole on 30' Concrete Pipe, an integral flume, flow meter, facility for housing the metering electronics and telephone service for remote reading. The meter shall measure and log flow and cumulative installation wastewater and be located on the east side of Interstate-77. Metering station shall be complete with integral electronics capable storing logging flow and integrated flow and reporting them to a remotely located computer with telephone modem. The software and any special equipment for remotely obtaining wastewater flow data from the meter via telephone shall be provided to the City of Columbia as well as to the government.

## J04.10 Wastewater System Points of Demarcation

The point of demarcation is defined as the point on the wastewater collection pipe where ownership changes from the Grantee to the building owner. The table below identifies the general locations of these points with respect to the building for each scenario. During the operation and maintenance transition period, concurrence on specific demarcation points will be documented during the joint inventory of facilities.

Point of Demarcation	Applicable Scenario	Sketch
Point where the service line enters the structure	Sewer system flow meter is located on the service line entering the structure.	 <p>The sketch shows a rectangular box labeled 'Structure' on the left. A horizontal line representing the 'Service Line' enters the structure from the right. On this line, there is a circular symbol with a vertical line through it, labeled 'Flow Meter'. An arrow points to this symbol with the label 'Point of Demarcation'. To the right of the structure, the line continues and is labeled 'Sewer System' with an arrow pointing right. Another arrow labeled 'Service Line' points down to the line between the structure and the flow meter.</p>
Point of demarcation is the cleanout device if it is within 10' of the building perimeter	No flow meter exists and a sewer system cleanout is located within 10 feet of the building perimeter on the service line.	 <p>The sketch shows a rectangular box labeled 'Structure' on the left. A horizontal line representing the 'Service Line' enters the structure from the right. On this line, there is a circular symbol with a vertical line through it, labeled 'Pipe Cleanout'. An arrow points to this symbol with the label 'Point of Demarcation'. To the right of the structure, the line continues and is labeled 'Sewer System' with an arrow pointing right. Another arrow labeled 'Service Line' points down to the line between the structure and the pipe cleanout.</p>

Point of Demarcation	Applicable Scenario	Sketch
Point where the service line enters the structure  <i>Note: A new cleanout device should be installed within 10' of building during any stoppage or maintenance action. This will then become the new point of demarcation.</i>	No flow meter or cleanout (within 10 feet of the building) exists on the service line entering the structure.	

## Unique Points of Demarcation

The following table lists anomalous points of demarcation that do not fit any of the above categories.

Building No.	Point of Demarcation Description
None	