Attachment J-2

Fort Riley Wastewater System

Table of Contents

List of Tables

J-2 Fort Riley Wastewater System

J-2.1 Fort Riley Overview

Fort Riley came into existence because of the conflict between migrating settlers and local Indians. The original reserve was established on May 5, 1855 and consisted of 24,000 acres of land. The cantonment area from that original Fort is the same as the present cantonment area. Many of the buildings still housing operations and headquarters were built during the first few years of the Installation's existence. At present there are over 100,000 acres owned or leased by Fort Riley. The Installation currently has an approximate military and civilian population of 18,000. Fort Riley's primary mission is the training, housing, and support of the 24th Infantry Division. In addition, it supports various non-divisional and tenant organizations such as the Reserve, the National Guard, and ROTC.

Fort Riley is located in Geary and Riley Counties of northeastern Kansas. The Installation is approximately 135 miles west of Kansas City and 130 miles northeast of Wichita. The Installation was established near where the Smoky Hill and Republican Rivers join to form part of the Kansas River. The Republican and Kansas Rivers form the Installation's southern boundary. These rivers separate the Installation from Junction City, which is the city closest to the Installation. Fort Riley extends to the north and northwest approximately 18 miles with an approximate width of 10 miles. The general character of the area surrounding the Installation is rural with small farm communities. Two flood control reservoirs flank the Installation, Tuttle Creek and Milford Reservoirs.

J-2.2 Wastewater System Description

There are four independent wastewater systems at Fort Riley, each with it own collection lines, lift stations, force mains, and wastewater treatment plant. The four systems are in four separate areas of Fort Riley and will be referred to in this report using the name of the area where the treatment plant is located. The four systems are: (1) Main Post, (2) Camp Forsyth, (3) Custer Hill and (4) the Multi-Purpose Range Complex (MPRC). The Main Post treatment plant treats wastewater from Camp Funston, Camp Whitside, Marshall Army Air Field (MAAF), as well as the Main Post. The Camp Forsyth treatment plant services both the Camp Forsyth area and the nearby family housing area. The Custer Hill treatment plant services Custer Hill Family Housing and Custer Hill Troop Housing areas. Figures 1, 2, 3, and 4 are maps showing the relationship of the various areas identified above.

J-2.2.1 Collection Lines

Main Post

Within the Main Post area of Fort Riley are the original facilities built near the turn of the 19th century. The wastewater generated in the Main Post and Camp Whitside areas flows by gravity to the wastewater treatment plant located near the eastern side of the Main Post area. The only lift station for these two areas is at Camp Whitside (softball complex and the NCO quarters) where the wastewater generated in this area flows by gravity to a lift station where it is pumped into a 10-inch force main originating at Camp

Funston. A large portion of the wastewater collection system was modified in the early 1940s as part of the project that constructed the Main Post treatment plant. Since the 1940s there has been very little upgrade to the collection system. In many of the housing areas the wastewater lines were slipped-lined in 2001 and the manholes on the gravity line from the terminus of the force main from Camp Funston to the treatment plant were replaced. The most common wastewater collection pipe is vitrified clay pipe and the manholes are combination of brick and concrete. Within the Main Post and Camp Whitside collection systems are asbestos cement, concrete and ductile iron pipes. In recent years any additions to the collection system have been with polyvinyl chloride (PVC) pipe.

The MAAF wastewater system in the area north of the runway was constructed in the 1980's, and the wastewater system south of the runway probably was built in the late 1950's. All the wastewater collected in the MAAF area flows by gravity to one of two lift stations. The wastewater generated on the south side of the runway flows to lift station SP008. Lift station SP008 pumps the wastewater to the north side of the runway where it enters a manhole and flows by gravity to SP762. The wastewater collected in the area north of the runway from the control tower, administration buildings, fire department and the housing area, flows northeast to lift station SP762 directly. Lift station SP762 finally pumps all the wastewater from MAAF to the Main Post area, and the force main is located under the Kansas River and the railroad. The force main enters the Main Post collection system and terminates in a manhole a short distance before the wastewater treatment plant. From thereon the wastewater flows by gravity to the plant. The most common type of pipe at MAAF is vitrified clay and the manholes are concrete.

Many of the original buildings at Camp Funston have been removed in recent years. With the removal of the buildings, much of the wastewater collection system was abandoned in place. There still remains in Camp Funston approximately 15 buildings connected to the wastewater system. For the most part these buildings were constructed in the 1980s and 1996 with new wastewater lines connecting the buildings to the existing lines. The wastewater generated in the Camp Funston area gravity flows to the east to lift station SP019, (constructed in 1987) for transfer to the Main Post plant for treatment.

Camp Forsyth

Camp Forsyth was constructed in the early 1900s and many of the buildings have been removed with the wastewater collection system either abandoned in place or disconnected from the system. The areas still on the collection system are the family housing area, commissary, shopette, sports club, and outdoor recreation center. Also, a portion of the wastewater generated at Custer Hill family housing areas is pumped to the Camp Forsyth area for treatment. The wastewater generated in the eastern portion of the family housing on Pistol Range Road flows by gravity to a lift station, SP300, where it is pumped to a manhole to flow by gravity to the treatment plant. Similarly, the wastewater generated in the outdoor recreation center flows by gravity to a lift station, SP226, where it is pumped to a manhole to flow by gravity to the treatment plant. The wastewater generated in the remaining areas flow by gravity directly to the wastewater treatment plant. The most common pipe type in the Camp Forsyth area is vitrified clay with concrete manholes.

Custer Hill

Custer Hill area was first developed in the late 1950s and has continued to grow with new facilities added as late as 2002. There are very few areas within Custer Hill area where the wastewater generated flows by gravity directly to the wastewater treatment plant. However, most of the wastewater generated within Custer Hill flows by gravity to lift stations located throughout the area where it is pumped up to a trunk line to flow by gravity to the wastewater treatment plant. The most common type of pipe is vitrified clay pipe with concrete manholes.

MPRC

The MPRC wastewater system is a small independent system that serves seven buildings. The wastewater flows generated at MPRC flows by gravity to waste stabilization ponds for treatment. The system was constructed in the late 1980s with PVC pipe and concrete manholes.

J-2.2.2 Lift Stations and Force Mains

There are 26 wastewater lift stations within Fort Riley. All lift stations are duplex stations except for lift station SP620, which has four pumps. Each of the lift stations has local controls that operate based on the water level in the wet well. Some of the lift stations are vacuum priming pumps; others are wet well/dry well with the remainder submersibles. Only lift stations SP400, SP500 and SP620 have dedicated emergency generators. The remaining lift stations have a receptacle to allow connection to a mobile emergency generator to supply electrical power during power outages. All of the lift stations are connected to a monitoring system that transmits data indicating whether the pump is on or off and the motor amperes to the water plant.

Main Post

There are four lift stations within the area served by the Main Post treatment plant. One of the lift stations is located near the softball complex of Camp Whitside, three are within the MAAF area and one is located in Camp Funston. The following table provides information on the lift station and associated force main.

Facility Number	Location	Construction/ Upgrade Date	Type	Size	Length
SP006	Whitside-Softball	1975	Vacuum	4”	60
SP008	MAAF-Marshall Dr.	1987	Wet/Dry	8”	6,140
SP762	MAAF-Fire Station	1969	Wet/Dry	8”	4,180
SP019	Funston SE Corner	1987	Wet/Dry	8/10”	14,015/6,615

Camp Forsyth

There are two lift stations in the Camp Forsyth area. One lift station serves a family housing area and the other serves the outdoor recreation area. The following table provides information on the lift stations and associated force mains.

Facility Number	Location	Construction/ Upgrade Date	Type	Size	Length
SP226	1st & A Street	1994	Vacuum	4”	2,565
SP300	Pistol Range Road	1976	Vacuum	4”	480

Custer Hill

There are 20 lift stations within the Custer Hill area. Information on each of the lift stations is provided in the following table.

Facility Number	Location	Construction/ Upgrade Date	Type	Size	Length
SP400	South of Ellis Heights	1959/-	Wet/Dry	6”	1,600
SP500	Peterson Heights	1962/-	Wet/Dry	6”	2,390
SP620	E. Hampton Pl.	1976/-	Wet/Dry	12” 8”	4,665 4,640
SP670	E. of McClelan Loop	1976/-	Wet/Dry	4”	1,445
SP690	NE of PX Complex	1987/-	Wet/Dry	4”	520
SP695	Near Aquatic Center	1977/-	Vacuum	4”	1,230
SP730	Near Facility 7305	1966/-	Vacuum	4”	720
SP760	Near Facility 7602	1969/2001	Vacuum	6”	790
SP765	Appenines Drive	1984/2001	Vacuum	4”	350
SP770	Appenines Drive	1984	Vacuum	4”	260
SP775	Facility 7753	1984/2001	Vacuum	4”	440
SP780	Appenines Drive	1971/2001	Wet/Dry	4”	430
SP790	South of Facility 7940	1971/2001	Wet/Dry	6”	775
SP830	Near facility 8300	1978/-	Wet/Dry	4”	1,570
SP835	Near Facility 8330	1987/-	Sub	4”	1,455
SP836	East of Facility 8360	1982/-	Wet/Dry	4”	2,650
SP837	In 8370 Compound	1987/-	Sub	4”	1,925
SP839	Near Facility 8390	1986/-	Sub	4”	1,315
SP845	Desert Storm Drive	1986/-	Sub	6”	1,830
SP888	Near Facility 8388	1996/-	Vacuum	4”	720

Lift station SP 620 is also called the Big Bertha Pump Station. This lift station presently pumps most of its collected wastewater to Custer Hill areas wastewater treatment plant, and a portion of the flow is sent to Camp Forsyth treatment plant to makeup for the reduced flow. The flow to Camp Forsyth treatment plant has reduced in the recent past as many of the buildings at Camp Forsyth were taken out of service.

MPRC

There are no lift stations in the MPRC area.

J-2.2.3 Wastewater Treatment Plant

There are presently four wastewater treatment systems in operation at Fort Riley as listed in the table below. MPRC uses stabilization ponds to treat the wastewater collected there.

Description	Facility Number	Other Information
Main Post Wastewater Treatment Plant	390	Located east side of Main Post along Dickman Ave near the Kansas River
Camp Forsyth Wastewater Treatment Plant	2592	Located east side of Camp Forsyth east of the Commissary Ave near the Republican River
Custer Hill Wastewater Treatment Plant	8130	Located east side of Custer Hill along 1st Division Road
MPRC Wastewater Treatment Plant	9317	Located westside of MPRC near entrance to area

In October 2004 all the three wastewater plants are schedule to be replaced with a new advanced wastewater treatment plant located adjacent to the existing Custer Hill wastewater treatment plant. Four new lift stations would transfer all the wastewater generated with in Fort Riley to the new plant. The existing plants at Main Post, Camp Forsyth and Custer Hill will be removed from service and demolished.

The current wastewater system, the new plant and the new lift stations are briefly described below.

Main Post, Camp Forsyth, and Custer Hill

Three wastewater treatment plants provide treatment for the Main Post, Camp Forsyth, and Custer Hill areas. Stabilization ponds are used for wastewater treatment at the MPRC.

Main Post – The Main Post wastewater treatment plant, Facility No. 390, was constructed in 1944 as a typical trickling filter plant with a rated flow of 1.5 million gallons per day (MGD). Within the plant are the following: 1) Parshall Flume, 2) two comminutors, 3) a triplex pump raw wastewater pumping station, 4) a 70-foot diameter primary clarifier, 5) two 75-foot diameter trickling filters, 5) a 825 gpm recirculation pump station, 6) 70-foot diameter final clarifier, 7) 50-foot diameter with 23 feet side water depth anaerobic digester, 8) six 33-foot by 75-foot sludge drying beds, and 8) a UV disinfection system.

Camp Forsyth - Camp Forsyth wastewater treatment plant was constructed in 1941 as a typical trickling filter plant with a rate capacity of 1.5 MGD. The plant consists of the following: 1) raw wastewater pumping station, 2) 55-foot diameter primary clarifier, 3) two 75-foot diameter trickling filters, 3) two 42-foot diameter final clarifiers, 4) 34-foot diameter primary anaerobic digester, 5) 38-foot diameter secondary anaerobic digester, and 6) twelve 44-foot by 24-foot sludge drying beds. In the late 1980s, the

raw wastewater pumping station, sludge beds and various piping was upgraded and a new emergency generator and building was added.

Custer Hill – Custer Hill wastewater treatment plant was constructed in 1956 as a typical trickling filter plant with a rated capacity of 1.5 MGD. The plant was upgrade in the late 1980s. The plant consists of the following: 1) Parshall flume and comminutor structure, 2) an aerated grit basin, 3) three primary clarifiers, 4) three trickling filters, 5) four secondary clarifiers, 6) recirculation pump structure, 7) five anaerobic digesters, and 8) ten sludge drying beds.

MPRC - The wastewater treatment system at MPRC consists of three lined waste stabilization ponds. The wastewater to the ponds is diverted into one of two primary cells where primary treatment takes place. After passing through the primary cell, the wastewater is transferred to a lower secondary cell for final treatment. Each of the primary cells has a bottom area that is approximately 193-feet by 215-feet. The secondary cell bottom is approximately 250-feet by 250-feet. After passing through each of the primary and secondary cells, wastewater that is not evaporated then passes through a discharge structure and a measurement weir and is discharged into a nearby drainage course.

J-2.2.4 New Construction Project

A project is underway where all the wastewater generated in the Main Post, Camp Funston, and Custer Hill areas will be transferred to a new wastewater treatment plant. This project is currently under construction and includes a new advanced wastewater treatment plant and four new lift stations. The new wastewater treatment plant will be located near the existing plant in the Custer Hill area. When completed in October 2004, the new wastewater treatment plant will treat all wastewater generated at Fort Riley. After the new wastewater treatment plant is on line, the three existing wastewater plants in these areas will be demolished. The MPRC area will not be affected by this project.

The new advance wastewater treatment plant's capacity is 2.35 million gallons per day (MGD). All of the pumped wastewater as well as flow from the Septage Receiving Station is measured through a Parshall Flume prior to screening though one or two mechanically cleaned fine screens to remove rags, plastics, and medium and large debris from the influent stream. A manually cleaned bar screen is available for use during bypass or emergency conditions. Manually operated slide gates control flow to the screening channels. Screenings are conveyed to screenings bins for storage and are then hauled to a disposal site. Screenings are removed to prevent clogging of pumps and piping. The wastewater is automatically sampled from the channel immediately after screening.

Grit is removed from the wastewater flow following screening. Manually operated slide gates control flow to the grit chamber or allow bypassing. Grit generally consists of inorganic and non-putrescible particles with high settling velocities such as seeds, coffee grounds, sand, and gravel. Grit is removed to prevent excessive abrasive wear to pumps and other treatment plant equipment and clogging or silting of basins, channels and pipes in areas of low flow velocities. A vortex-type grit removal apparatus is used at the plant. Grit removed from the vortex chamber is dewatered in the Grit Hydrocyclone and in the Grit Classifier. The excess water is returned to the incoming flow to the vortex grit chamber. Grit is discharged form the Classifier to the Grit Bin for storage and ultimate disposal. Sodium hydroxide

(NaOH), or caustic soda, is added to the wastewater flow following the grit chamber to add alkalinity to support nitrification in the secondary/tertiary treatment process.

Following grit removal, the wastewater flows to the secondary/tertiary process. This process consists of a continuous loop reactor (CLR). The CLR is also known as an oxidation ditch and is an activated sludge process in which wastewater and mixed liquor continuously recirculated through a closed-loop aeration channel. At Ft. Riley the CLR is designed to remove nitrogen through nitrification and denitrification. Flow from the CLR goes to two secondary clarifiers to separate the activated sludge form the liquid phase. The liquid overflows from the secondary clarifiers and the sludge is removed from the bottom.

Liquid effluent from the secondary clarifiers goes to one of two ultraviolet (UV) reactors for disinfection prior to discharge to Forsyth Creek. The effluent from the UV reactors is automatically sampled to monitor the efficiency of the treatment plant compared with the samples of the plant influent. The plant effluent discharged to Forsyth Creek flows to Three Mile Creek, which then flows to the Kansas River.

The sludge is sent to the RAS/WAS Pump Station (RAS – Return Activated Sludge, and WAS – Waste Activated Sludge). RAS is returned to the CLR to support the biological process and the WAS is sent to the WAS Holding Tank. Also, sodium hypochlorite (NaOCl) is added to the RAS line to control filamentous organisms in the secondary process. The WAS Holding Tank is aerated to prevent septic conditions that results in odors. The WAS is pumped from the holding tank to the Gravity Belt Thickener prior to being sent to one of three aerobic digesters for stabilization. Filtrate from the Gravity Belt Thickener is returned to the CLR for treatment.

From the aerobic digesters the sludge is temporarily stored in the Digested Sludge Holding Tank from where it is pumped to the Belt Filter Press or existing Drying Beds for dewatering. Sludge from the Belt Filter Press is conveyed to a truck to haul to ultimate disposal along with sludge from the Drying Beds. Filtrate form the belt press and from the drying beds is returned to the CLR for treatment.

As a part of and in addition to a new wastewater treatment plant, four new lift stations are to be constructed to transfer the wastewater generated in the Main Post and Camp Forsyth areas to the new plant. There will be two new lift stations in the Main Post area.

One of the new lift stations in the Main Post area will be in the Historic District and is an underground package lift station with an adjacent precast concrete wetwell. The lift station will receive flows from the gravity sewer system serving the Historic District. It will lift the wastewater over a high point in the system and discharge into an existing manhole where it will flow by gravity to the Main Post Pump Station. The new Historic District pump station is a duplex pump station designed to pump 570 gpm at 65-foot total dynamic head under normal conditions. At maximum flow the lift station will transfer 700 gpm at 59-foot total dynamic head. The pumps are constant speed pumps and under normal conditions one pump is in a standby mode. An emergency power generator is provided to provide electrical power under emergency conditions. The station alarm system includes alarms for lower explosive limit for gas in wet well, high water alarm, flooded wet well, and loss of normal electrical power.

The new Main Post lift station is a triplex underground package lift station that receives wastewater from the Historic District Lift Station in addition to the other wastewater from the Main Post area that drains to it. In addition, flows from MAAF, Camp Funston, hospital, and softball area will be routed to the new Main Post lift station. The lift station will be located near the existing Main Post wastewater treatment plant. The Main Post lift station is designed to pump 1,260 gpm under normal operating conditions. Under maximum conditions the pump rate will be 1,600 gpm. All three pumps are constant speed pumps with two of the pumps for normal operation with the third in standby mode. At a preset water level, one normal mode pump will start. If the wetwell continues to rise to a higher preset level the second normal mode pump will start. The second pump will stop when the water level in the wet well is lowered to a preset level. The Main Post lift station includes an emergency generator to supply electrical power to the station under normal power outage conditions. The lift station transfers wastewater to an intermediate booster pump station that will pump the fluid to the new wastewater treatment plant. The station alarm include lower explosive limit for gas in the wetwell, ventilation air flow failure, high wet well level, flooded drywell, loss of normal electrical power and emergency generator failed to start. At the Main Post pump station is a Ferrous Chloride Building. To the incoming wastewater at a manhole just upstream of the pump station ferrous chloride is added to control odors in the pump station wetwell. The ferrous chloride is stored in a day tank and pumped by transfer pumps to the manhole.

In addition to the two new Main Post lift stations will be a Main Post Intermediate Pump Station. This facility is a triplex package lift station that receives wastewater from the Main Post lift station and boosts the pressure to allow flow to the new wastewater treatment plant at Custer Hill. The station is designed to pump a maximum rate of 1,290 gpm using two constant speed pumps under normal conditions. Under maximum conditions the flow can be increased to 1,600 gpm. The pump station includes an emergency generator to supply emergency electrical power during a power outage. The station includes alarms for ventilation airflow failure, flooded drywell, loss of normal power, and failure of emergency to start.

The new Camp Forsyth lift station will be located in a wetwell/drywell pump station that presently pumps raw wastewater into the Camp Forsyth wastewater treatment plant. The new lift station will transfer Camp Forsyth wastewater to refurbished lift station SP620. The new lift station will be a duplex system sized to pump 1,115 gpm at a total dynamic head of 298 feet with one pump in operation. A 125 horsepower motor with speed controlled by an adjustable frequency drives each pump. The station also has a duplex sump pump to remove water from the drywell. The station alarm system includes; lower explosive limit for gas in wet well, ventilation air flow failure, high wet well level, flooded dry well, high wastewater in wet well, standby emergency generator failure, high liquid level in ferrous chloride storage tank, high liquid level in ferrous chloride day tank, and pumping system failure. The station also includes a ferrous chloride building that houses ferrous chloride day tank and transfer pump and feed pump. An emergency generator is available to provide electrical power during a power outage.

Lift Station SP620, commonly referred locally as Big Bertha, is a refurbished underground package lift station. With the demolition of the Camp Forsyth wastewater treatment plant, the Camp Forsyth lift station will transfer the wastewater generated at Camp Forsyth to Big Bertha. This wastewater is combined with that generated in the Custer Hill family housing and is pumped to the Custer Hill

wastewater treatment plant. This increase in flow required Big Bertha to be upgraded. The lift station pumps through a 12-inch force main to a manhole on gravity line located in the golf course where it flows by gravity to the wastewater treatment plant. Big Bertha is a triplex lift station that can pump 1,175 gpm at a total dynamic head of 126 feet with one pump operation. Two of the three pumps are normal duty pumps with the third pump as a standby. A 125-horsepower motor drives each pump, with motor speed controlled through an adjustable frequency drive. With one pump in operation the pump is driven at a constant speed and starts and stops based on water level in the wet well. If the water level continues to rise with one pump operation, a second pump will start and both pumps will be operated at an adjustable speed to keep the wet well level from continuing to rise. Even though the normal duty pump will operate at constant speed, the adjustable frequency drive will ramp up to speed to operating level to minimize current in rush and hydraulic surge. The station is equipped with an emergency generator to supply emergency electrical power during a power outage. The station alarm system includes lower explosive limit for gas in the wet well, ventilation air flow failure, high wet well level, flooded dry well, lost of normal power and standby generator failure.

J-2.2.5 Fixed Inventory

Table 1 provides a general listing of the major wastewater system fixed assets for the Fort Riley wastewater 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 – Fort Riley
Wastewater Collection System

Description	Unit	Quantity	Avg Age (yrs)
PVC Pipe			
6"	LF	1,105	29
8"	LF	25,830	15
10"	LF	3,150	15
12"	LF	4,715	23
18"	LF	395	7
VC Pipe			
4"	LF	1,985	42
6"	LF	26,677	51
8"	LF	173,680	36
10"	LF	21,260	42
12"	LF	20,519	40
15"	LF	8,325	56
16"	LF	2,405	7

Description	Unit	Quantity	Avg Age (yrs)
18"	LF	2,990	57
21"	LF	4,620	60
24"	LF	9,880	56
AC Pipe			
6"	LF	225	61
8"	LF	15,455	45
10"	LF	670	61
CI Pipe			
8"	LF	1,645	61
10"	LF	1,740	61
BCCM Pipe			
15"	LF	1,165	61
18"	LF	3,210	61
DI Pipe			
8"	LF	365	53
Service Laterals			
4"	LF	25,080	45
6"	LF	6,075	41
8"	LF	3,090	33
Service			
Non-Residential	EA	486	40

J-2.3 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 Collection System – Fort Riley

Quantity	Item	Make/Model	Description	Remarks
None identified.				

TABLE 3
Specialized Equipment and Vehicles
Wastewater Collection System – Fort Riley

Description	Quantity	Location	Maker
None identified.			

J-2.3.1 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 Collection System – Fort Riley

Quantity	Item	Description	Remarks
Fort Riley 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. Information on the construction and operation and maintenance manuals of the new wastewater treatment plants and lift station will also be available.			

J-2.4 Current Service Arrangement

Presently, all the wastewater generated at Fort Riley is transported to one of the Fort Riley wastewater treatment plants for treatment and disposal. The wastewater generated at MPRC is treated at the stabilization ponds at MPRC.

J-2.5 Secondary Metering

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

J-2.5.1 Existing Secondary Meters

TABLE 5
Existing Secondary Meters
Wastewater Collection System – Fort Riley

Meter Location	Meter Description
None identified	

J-2.5.2 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 Clause C.17, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Clauses C.3, H.5, and J04.5 below.

TABLE 6
New Secondary Meters
Wastewater Collection System – Fort Riley

Meter Location	Meter Description
None identified	

J-2.6 Monthly Submittal

The Contractor shall provide the Government monthly submittals for the following: 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 the Contracting Officer's designee. (This information will be provided upon award.)

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 the Contracting Officer's designee. (This information will be provided upon award.)

System Efficiency Report. If required by Paragraph C.3, the Contractor shall submit a system efficiency report in a format proposed by the Contractor and accepted by the Contracting Officer. System efficiency reports shall be submitted by the 25th of each month for the previous month. System efficiency reports shall be submitted to the Contracting Officer's designee. (This information will be provided upon award.)

J-2.7 Energy Savings and Conservation Projects

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

- None.

J-2.8 Service Area

IAW Clause C.4, Service Area, the service area is defined as all areas within the Fort Riley boundaries.

J-2.9 Off-Installation Sites

There are no off-Installation sites.

J-2.10 Specific Transition Requirements

IAW Clause C.17, Transition Plan, **Table 7** lists service connections and disconnections required upon transfer, and **Table 8** lists the improvement projects required upon transfer of the Fort Riley wastewater system.

TABLE 7
Service Connections and Disconnections
Wastewater Collection System – Fort Riley

Location	Description
Future non-DOD entities will negotiate directly with successful bidder.	

TABLE 8
System Improvement Projects
Wastewater Collection System – Fort Riley

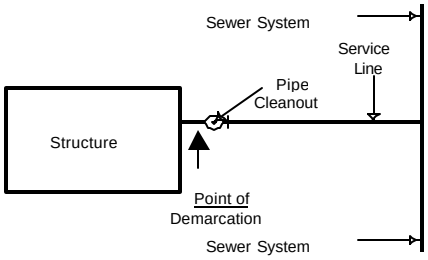
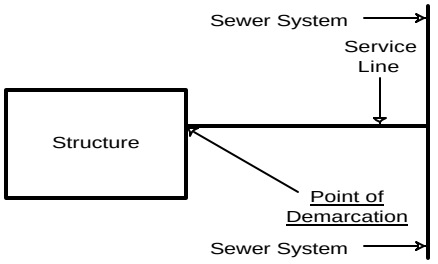
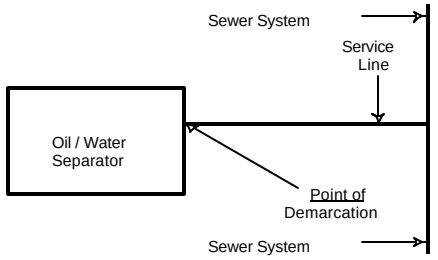
Project Location	Project Description
None identified	

The Government will retain the ownership of the advanced wastewater treatment plant during the warranty period. The Contractor shall operate the new plant during the warranty period along with the rest of the wastewater system at Fort Riley. At the end of the warranty period the ownership of the advanced wastewater treatment plant shall be transferred to the Contractor.

J-2.11 Wastewater Collection System Points of Demarcation

The point of demarcation is defined as the point on the piping system 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 served.

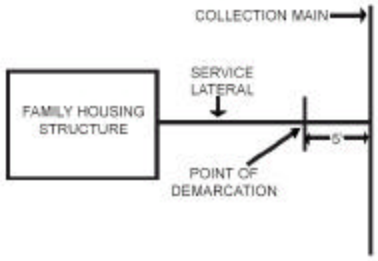
TABLE 9
Points of Demarcation
Wastewater Collection System – Fort Riley

Point of Demarcation	Applicable Scenario	Sketch
Point of demarcation is the cleanout device, if within five feet of the non-housing building perimeter.	No flow meter exists and a sewer system cleanout is located within 5 feet of the building perimeter on the service line.	
Point where the service line enters the non-housing structure. Note: A new cleanout device should be installed within five feet of building during any stoppage or maintenance action. This will then become the new point of demarcation.	No flow meter or cleanout exists on the service line entering the structure.	
Point of demarcation is the outfall of the oil/water separator.	Any oil/water separator on the service line.	
Point of Demarcation is the outlet side of the Grease Trap, Oil Water Separator, or Pretreatment System.	Grease Trap, Oil Water Separator, and Pretreatment System connected to the wastewater collection system.	None

J-2.11.1 Unique Points of Demarcation

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

TABLE 10
Unique Points of Demarcation
Wastewater Collection System – Fort Riley

Point of Demarcation	Applicable Scenario	Sketch
The POD will be the point on service lateral five feet from the collection main.	.	

At Facility 7958, the upstream boundary point is 5-feet outside the outmost security fence. The service line from this point to the building will remain under the operation and maintenance of Fort Riley. Fort Riley needs to provide direction and other information as necessary.

J-2.12 Unique Service Requirement

Union Pacific Railroad tracks runs through Fort Riley. The wastewater system pipes crosses the railway tracks at various locations. The Contractor shall coordinate with Union Pacific Railroad for all work that is within the railroad right of way and the work shall be performed in accordance with Union Pacific Railroad standards.