

OPERATIONS & MAINTENANCE PLAN

Bldg. 40 Ground Water/LNAPL Collection and Pretreatment System & Abandoned Sewer Ground Water Collection System



**General Electric Company
Fort Edward, New York**

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O'BRIEN & GERE

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1. INTRODUCTION

1.1 General

This document presents the Operations and Maintenance (O&M) Plan for the Abandoned Sewer Ground Water Collection System and the Bldg.40 Ground Water/LNAPL Collection and Pretreatment System at the General Electric (GE) facility located in Fort Edward, New York. This plan provides a description of the site and the collection and treatment process as well as information regarding the ground water removal, collection, and treatment equipment. This plan also presents information regarding sampling and analysis, information management procedures and O&M.

1.2 Facility Background

The GE Fort Edward facility is located approximately 800 ft east of the Hudson River between the Villages of Hudson Falls to the north, and Fort Edward to the south (Figure 1-1). The facility is approximately 32 acres and is bounded on the east by Broadway, on the south by Park Avenue, and on the west by the Delaware & Hudson Railroad/Allen Street.

The Fort Edward plant has been in operation since 1942. Between 1942 and 1946 selsyn motors were manufactured for the U.S. Department of Defense; since 1946 the plant has produced small industrial capacitors. Operations related to capacitor production have included aluminum rolling, tin plating, capacitor recovery and salvage operations, polypropylene film manufacture, refining and blending of dielectric fluids, and quality control operations. Various cleaning operations to remove residues resulting from fabrication have also been conducted at the site. Among the products used in various operations were polychlorinated biphenyls (PCBs), organic solvents (chlorinated and non-chlorinated), and kerosene. PCB use as a dielectric fluid at the site was discontinued in 1977. The plant has eliminated its use of organic solvents in recent years by modifying processes, installing new state-of-the-art processes, and implementing waste minimization programs.

Present facilities on the Fort Edward plant site consist of several buildings, a 1.8 million-gallon concrete equalization basin located on the southwest corner of the property, a water treatment system, and parking areas. A plan of the Fort Edward plant site is included as Figure 1-2. The main manufacturing building, the largest building at the Fort Edward plant site, comprises several joined structures which were constructed over a span of 25 years. The second building, the former aluminum

rolling mill (Bldg. 40), has also been expanded several times since its original construction in 1960. Smaller buildings on the site include a pump house, maintenance building, and the wastewater treatment facility. Rolling mill operations were terminated in 1995 and assembly and testing operations from the Hudson Falls facility were moved to Building 40.

Since 1976, GE has initiated numerous site improvements, Remedial Investigations (RIs), Interim Remedial Measures (IRMs), RCRA Corrective Actions, and Remedial Actions (RAs) to control potential impacts of previous facility operations on the community and surrounding environment. Between 1995 and 1997, GE conducted an RI pursuant to Consent Order A5-0316-94-06. Subsequent to the RI, a Feasibility Study (FS) was performed and the FS report was submitted to New York State Department of Environmental Conservation (NYSDEC) in 1997. Based on the results of the RI and FS, a Proposed Remedial Action Plan (PRAP) was issued by NYSDEC in February 1999. Based on the PRAP, a Record of Decision (ROD) was issued by NYSDEC for the GE Fort Edward facility in January 2000.

The NYSDEC and GE entered into an Order on Consent (Index #D5-0001-2000-03) with an effective date of October 24, 2001 to perform a Remedial Design and associated construction in connection with Operable Unit 3 (OU-3), the main portion of GE's Fort Edward plant site.

The OU-3 remedy selected by the ROD included hydraulic control with ground water pretreatment. The major elements of the OU-3 remedy include:

- Continued operation of ongoing remedial programs for Operable Units 1 and 2 (OU-1, OU-2), and completion of other ongoing RAs.
- Evaluation of the capacity of the existing wastewater treatment plant (WWTP) to handle anticipated flows and achieve discharge criteria.
- Expansion of the existing ground water collection system with the addition of ground water recovery wells in the transition zone along with southeastern perimeter of the site.
- Installation of a collection trench near the Bldg.40 with ground water pretreatment.
- Recovery of ground water from the abandoned sewer.
- Dense non-aqueous phase liquid (DNAPL) recovery from the southeastern portion of the site.
- Removal and off-site disposal of contaminated soils excavated during construction activities.

In accordance with the requirements of the October 2001 Order on Consent a ground water/LNAPL collection trench and pretreatment system was constructed in the vicinity of Building 40 (former Foil Mill) between September and December 2002. In addition, during this same time period, a ground water collection system was installed in the abandoned 30-inch storm sewer located in the southwestern portion of the facility.

1.3 Description of Remedial Systems

1.3.1 Abandoned Sewer Ground Water Collection System

The abandoned sewer ground water collection system was installed in the abandoned 30-inch storm sewer located in the southwestern portion of the facility. The abandoned storm sewer acts as a collection pipe for overburden ground water infiltrating between MH-6 and MH-27, and MH-4 and MH-27. Former manhole MH-27 is utilized as a sump, and ground water entering the abandoned storm sewer is pumped from manhole MH-27 to the EQ basin via manhole MH-5, and is then further treated in the wastewater treatment plant. The abandoned sewer ground water collection system controls are located inside the adjacent wastewater treatment plant.

1.3.2 Bldg. 40 Ground Water Collection and Treatment System

The Bldg. 40 ground water/LNAPL collection and pretreatment system is designed to collect ground water and LNAPL along the down gradient (south and west) sides of Bldg. 40. As such, a ground water/LNAPL collection trench was installed along the western and southern perimeter of the Bldg.40. The trench is approximately 916 feet long and has an average depth of approximately 7 feet. Ground water and LNAPL is collected via a 6-inch HDPE perforated pipe located at the bottom of the trench, and flows under gravity to a collection manhole.

The collection manhole was designed using a steel baffle to divide the manhole into two compartments to facilitate the separation of LNAPL from ground water. Ground water and LNAPL from each leg of the trench flow in to the western side of the manhole where it is allowed to equalize. The manhole baffle allows the LNAPL to accumulate on the west side of the baffle while the ground water flows under the baffle to the east side of the manhole.

The LNAPL from the west side of the manhole is removed via a oil/water separator pump and is pumped to a 55-gallon steel drum located in the pre-treatment room of Building 40. The product recovered in the collection drum is characterized and disposed off site.

Ground water from the east side of the collection manhole is pumped from the collection manhole via a 1-inch HDPE force main to an air stripper pretreatment system using two submersible pumps prior to being discharged to the facility's wastewater treatment plant. The ground water is pretreated using a low profile air stripper to reduce VOCs in the ground water and subsequently discharged to the facility wastewater treatment plant equalization basin, and is then further treated in the wastewater treatment plant.

1.4 General Facility Standards

1.4.1 General

The Abandoned Sewer Ground Water Collection System and Bldg.40 Ground Water Collection System are operated and maintained by GE plant personnel and subcontracted operations specialists under the direction of the facility EHS Manager or authorized personnel. The collection and treatment systems are designed to operate in an unattended automatic mode which continuously monitors the system components for unsafe or abnormal conditions. If an abnormal or fault condition is sensed by the control system, the entire system or the affected portions of the system will be shut down and the EH&S Manager will be notified.

1.4.2 Site Security

Access to the remedial system components is limited to authorized personnel. In addition, the entire site perimeter is secured with chain link fencing and includes a comprehensive site surveillance camera system. that is monitored by a 24-hour contracted security service. .

1.4.3 Training

Before employees or contractors are allowed to operate, inspect, or maintain the remedial systems, they must undergo plant safety orientation and a on-the-job training program that includes walk-through inspection of the system, a description of treatment system components, a demonstration of operating and shutdown procedures, and a review of this O&M Plan, and project-specific Health and Safety Plan. In addition, any remedial contractor servicing the equipment is required to have the appropriate level of OSHA HAZWOPER training.

1.4.4 Sampling and Analysis

The Abandoned Sewer Ground Water Collection System and Bldg.40 Ground Water/LNAPL Collection and Pretreatment Systems will be

monitored in accordance with NYSDEC SPDES Permit No. NY 000 7048. The current facility SPDES permit requirements are:

ID - Outfall 04I – Bldg.40 Ground Water Collection Trench Discharge

PARAMETER	EFFLUENT LIMIT		PQL (ug/l)	UNITS	SAMPLING FREQUENCY	SAMPLE TYPE
	Daily Ave.	Daily Max				
Flow	Monitor	Monitor	N/A	gallons/day	Quarterly	Meter
Naphthalene	Monitor	Monitor	N/A	ug/l	Quarterly	Grab
PCB, Aroclor 1016	Monitor	Monitor	0.3	ug/l	Quarterly	Grab
PCB, Aroclor 1242	Monitor	Monitor	0.3	ug/l	Quarterly	Grab
Total Aggregate	Monitor	Monitor	N/A	mg/l	Quarterly	Calculated

ID - Outfall 04J – Flow from Abandoned Sewer Recovery System (MH-27)

PARAMETER	EFFLUENT LIMIT		PQL (ug/l)	UNITS	SAMPLING FREQUENCY	SAMPLE TYPE
	Daily Ave.	Daily Max				
Flow	Monitor	Monitor	N/A	gallons/day	Quarterly	Meter
PCB, Aroclor 1016	Monitor	Monitor	0.3	ug/l	Quarterly	Grab
PCB, Aroclor 1242	Monitor	Monitor	0.3	ug/l	Quarterly	Grab
Total Aggregate	Monitor	Monitor	N/A	mg/l	Quarterly	Calculated

1.4.5 Inspection and Reporting Requirements

Regular activities which are routinely performed by operations personnel to evaluate the condition of the systems include: checking the level of product in the collection system drum; checking instantaneous flow rates of pumping systems; checking flow meter totalizer values; and checking air stripper performance.

GE and/or remedial contractors will perform regular inspections of the remedial systems to confirm that the equipment are in good condition and functioning properly. Routine maintenance and repairs will be documented in a operations log book which will be maintained at the facility.

A summary of the remedial system operations will be detailed in an Annual Ground Water Monitoring and Remedial Systems Operation Report (Annual Report) that will be submitted to NYSDEC on an annual basis.

2.0 ABANDONED SEWER GROUND WATER COLLECTION SYSTEM

2.1 System Components

Ground water collected from the abandoned storm sewer is pumped from MH-27 via a 2-inch PVC Sch 80 pipe through the MH-27 wall, underground (approx. 4 ½ ft. below grade) through the MH-5 wall, where the pipe is allowed to drain into the manhole. The water collected in MH-5 drains by gravity through the storm sewer into the equalization basin located approximately 60 feet southwest of MH-5.

The components of the abandoned sewer ground water collection system are described in detail in the following sections. Equipment specifications, operating instructions, and cut sheets are included in this document.

2.1.1 Sump Pump

The sump pump installed in MH-27 is a Grundfos Model SE-50-2-A-20. The sump pump is rated for flow rates from 0-170 gpm and head from 0-47.5 TDH. The pump is a ½-horsepower, constant speed pump with a float switch mounted in Manhole MH-27 which turns the pump on when the switch is activated and off when deactivated. The pump is provided with a “Hand-Off-Auto” switch at the pump control panel located along the east wall inside the treatment building. Under normal operations, the pump control is set to “Auto”. The pump should not operate more than 8 continuous hours over a 24-hour period, and should not have more than 20 starts per hour. The pump can handle solids up to 2 inches in diameter

2.1.2 Magnetic Flow Meter and Flow Recorder

A magnetic flow tube (1 ½-inch diameter, Krohne EcoFlux Model IFS 1000F) mounted on the MH-27 pump discharge line is used to measure instantaneous and total flow discharged from MH-27. The flow tube includes stainless steel grounding rings and has Teflon-lined measuring section and Hastelloy electrodes.

The flow tube sends a signal to the signal converter located inside the treatment building via remote cable (Krohne Part No. 5076480000). The flow tube is calibrated for a flow range of 0-100 gpm, although the tube is designed with a flow capacity up to 220 gpm.

Krohne Part No. V312C831311000 signal converter and Krohne Model IFC020 remote display unit are installed inside the treatment plant adjacent to the sump pump control panel. The signal converter operates off 115V power. The remote display unit has been set up to display

instantaneous flow rate in gallons per minute (gpm) as well as totalized flow. . The remote display unit has been installed to send a 4-20mA signal to the paperless chart recorder located inside the treatment building.

A Honeywell eZtrend V5 paperless chart recorder is also installed along the east wall of the treatment building. The recorder has two analog inputs, a totalizer, Ethernet communications connection, 90-240V power supply, and 1.44MB floppy drive. The recorder screen has been setup to display the instantaneous flow, totalized flow, and the flow trending. The flow data history can be downloaded on to a floppy disk and retrieved using TrendManager Pro Software which allows for importing the data into other Windows compliant software.

2.1.3 Level Switch

A mercury level switch controller (Buskirk & Owens Model 1900-15, normally open) is installed in MH-27 and is designed to turn the sump pump on based on the water level in the manhole. Once the switch is activated (at approx. 4' above the manhole invert), a relay in the control panel is engaged to start the sump pump. When the float switch drops to approximately 6 inches above the manhole invert, the pump is signaled to turn off. A dedicated control panel is located in the wastewater treatment building which starts the pump based on the level switch signal.

2.2 Control System

The sump pump installed in MH-27 is controlled via a new dedicated control panel located inside the wastewater treatment building. This panel will either start the pump based on a level signal transmitted from the float switch located in the manhole, or manually via the panel mounted HOA switch. When the pump motor is operating, a run indication lamp located on the face of the control panel is illuminated.

In addition to the pump run light, a timing relay is energized when the pump motor starts. If after 2 minutes no flow has been detected by the flow meter, a local alarm buzzer will sound and a pump failure indication lamp will be illuminated. The audible alarm can be silenced, while the pump failure lamp continues to stay illuminated until the alarm has been cleared by establishing flow or switching the pump off. This no flow alarm will also be transmitted to the existing Johnson Controls Metasys[®] DX-9100 plant monitoring system.

The control panel monitors incoming power and a contact will be provided to send an alarm signal to the DX-9011 plant monitoring system. Below is a summary of the system alarms:

Description	Signal Type	Local Action	Remote Action
Low Power	Dry Contact	None	Alarm to DS-9011
Low Flow	Dry Contact	Audible/Visual Alarm	Alarm to DS-9011

3.0 BLDG.40 GROUND WATER COLLECTION AND TREATMENT SYSTEM

3.1 System Components

Ground water and LNAPL collected in the collection manhole is conveyed to the pretreatment room located in Building 40. As discussed above, the ground water is pretreated using a low profile air stripper to reduce VOCs in the ground water and subsequently discharged to the facility waste water treatment plant equalization basin. The LNAPL is containerized in a 55-gallon steel drum for subsequent characterization and off-site disposal at a permitted facility.

The components of the abandoned sewer ground water and LNAPL collection systems are described in detail in the following sections. Equipment specifications, operating instructions, and cut sheets are included at the end of this document.

3.1.1 Submersible Pumps

There are two, 4-inch, stainless steel, Grundfos Model 10E5 submersible ground water recovery pumps installed in the Bldg.40 collection manhole. Each pump is equipped with ½-hp, 460V, three phase Franklin environmental motors. The pump motors are constant speed pumps powered from the pump control panel inside the pretreatment room located inside Building 40. The pump panel has a “Hand-Off-Auto” switch for each pump, with the pumps normally being operated in the “Auto” position. The pumps have an operating range of 5-14 gpm with a maximum operating head of 220 psi. The pumps operate based on the level switches installed inside the collection system manhole. The pumps operate as described below:

Description	Level Switch Elevation
Pumps Off	248.83
Lead Pump On	249.83
Lag Pump On	249.33
High Alarm	250.33

The pumps switch from lead to lag on a daily basis, i.e. the pump which is the lead pump one day is the lag the next day and vice versa.

3.1.2 Level Switches

There are four (4) mercury switch level controllers (Buskirk & Owens Model 1900-15, normally open) which, when activated, send a signal to the control panel which relays a signal to the collection pumps and/or alarms.

3.1.3 Magnetic Flow Meter and Flow Recorder

A Krohne Model IFS-1000, ½-inch flow tube with stainless steel grounding rings is installed on the pump effluent line inside the west wall of the pretreatment room. The flow tube has Teflon-lined measuring section and Hastelloy electrodes. The flow tube sends a signal to a signal converter via remote cable (Krohne Part No. 5076480000). The flow tube is calibrated to read a flow range of 0-20 gpm.

Krohne Part No. V312C831311000 signal converter and Krohne Model IFC020 remote display unit are installed inside the treatment plant adjacent to the sump pump control panel. The signal converter operates off 115V power. The remote display unit has been set up to display instantaneous flow rate and totalized flow in gallons per minute (gpm). The remote display unit has been installed to send a 4-20mA signal to the paperless chart recorder located inside the treatment building.

A Honeywell eZtrend V5 paperless chart recorder is also installed along the east wall of the treatment building. The recorder has two analog inputs, a totalizer, Ethernet communications connection, 90-240V power supply, and 1.44MB floppy drive. The recorder screen has been setup to display the instantaneous flow, totalized flow, and the flow trending. The flow data history can be downloaded on to a floppy disk and retrieved using TrendManager Pro Software which allows for importing the data into other Windows compliant software

3.1.4 Oil/Water Separator Pump System

A QED Model FPR10 Ferret free product recovery system is installed inside the influent chamber of the collection manhole. The recovery system includes a 4-inch diameter, air operated, Ferret separator pump (QED Ferret Model HIWSFI12) which is designed to recover free floating product from the water collected within the influent chamber. The product recovery pump is installed so the pump inlet is approximately at the same elevation of the influent pipe(s) invert. A C100 controller is designed to control the product pump cycle time (fill/discharge) by signaling a solenoid valve to open/close, and allow air to be fed the product pump. The controller is installed inside the pretreatment room in

Building 40. The operator can program the controller refill/discharge cycle times, setting the times to maximize product recovery.

During the refill cycle, the water and product are allowed to enter the pump chamber where there is a check ball that separates the oil and water in the chamber. The check ball is designed, based on specific gravity, to allow water to continuously discharge from the pump while maintaining the free product in the pump. When the refill cycle is completed, and the discharge cycle begins, the controller signals the solenoid to open, thereby allowing air to be fed to the product pump via a ½-inch nylon tube. The product accumulated within the pump is then discharged via a 3/8-inch nylon tube to a collection drum staged inside the treatment room.

The product collection drum is equipped with level/tank full alarm switches to prevent operation of the product recovery system when the collection drum is full. The WE Anderson Model F7-MLK Multi-level switch kit is equipped with two stainless steel floats which are set at 85% and 95% capacities in the drum. When the liquid level in the drum engages the 85% full switch, a signal is sent from the switch to the control panel and an alarm is signaled at the panel. When the 95% switch is engaged, the signal will result in shutting down the product recovery system until the drum is emptied and the system is reset.

3.1.5 Low Profile Air Stripper

A low-profile air stripper (Northeast Environmental Products Model 2331) equipped with a 5 hp, 600 standard cubic feet per minute (cfm) blower is installed inside the Bldg. 40 pretreatment room to treat the volatile organics in the ground water pumped from the collection manhole. The recovered ground water is pumped from the collection manhole via a 1-inch diameter force main into the top of the air stripper. The exposed (all pipe up to 4 ft. below grade) ground water influent line from the collection manhole is heat traced at the building wall. The water drains through the stripper trays and discharges by gravity via a 3-inch diameter Schedule-80 PVC pipe into MH-15 located northwest of the pretreatment room. Off gas from the air stripper discharges through an 8-inch Schedule 80 exhaust stack, outside the pretreatment room, extending to approximately 35 feet above grade.

3.2 Control System

The collection system pump control panel (Record Drawing E-5) is installed on the Bldg. 40 pretreatment room west wall. The pump control panel provides the necessary controls, relays, and interlocks to run the ground water collection system components. As indicated on Record Drawings E-1, E-3, and E-5, the pump control panel provides power and control wiring for the pumps in the collection manhole; provides the

control wiring for the collection manhole floats provides control wiring for the flow transmitter on the air stripper influent line; and provides power and run interlock for the air stripper.

As described earlier, the "pump off" float (el. 248.83) shuts both pumps off and allows the manhole to recharge. The "lead pump on" float (el. 249.33) energizes the lead pump to begin pumping water through the force main to the pretreatment system. The lead pump continues to run until the water elevation in the manhole lowers to the "pump off" elevation. While the lead pump is running, if the water elevation in the collection manhole activates the "lag pump on" float (el. 249.83) the second pump in the manhole is energized and both pumps discharge into the force main. If the "high level alarm" float (el. 250.33) is activated, the "high-high" alarm light is displayed on the pump panel. The pumps continue to run under high alarm conditions. When the "pump off" float is energized, the lead pump becomes the lag pump and vice versa.

The flow recorder panel includes a paperless chart recorder (Honeywell eZtrend V5) which was installed as part of a modification to the pretreatment system design. This included the installation of a ½-inch magmeter (Krohne Model IFS 1000F, flow range 0-20 gpm) and associated transmitter to measure influent ground water flow to the air stripper. The chart recorder provides digital displays of flow trends and instantaneous flows, and is equipped with a PC to allow historical data to be downloaded on to a floppy disk. The data then can be transferred via a Windows-based software program to archive data and develop reports.

The Ferret oil/water separator system is controlled by the LNAPL collection drum control panel. The pump control panel operates the Ferret oil/water separator pump in the collection manhole and is interlocked with the two level switches (W.E. Anderson Model F7-MLK) located inside the collection drum. When the level switch indicating the oil level in the drum is at 85% of the drum's capacity, an alarm light on the drum control panel is activated as is the beacon located immediately outside the east wall of the pretreatment room. When the normally closed level switch in the oil collection drum reaches 95% capacity, the switch is activated, the light for 95% level alarm on the drum control panel is lit, the alarm beacon outside the room is activated and a signal is sent to the C100 controller which does not allow the oil/water separator to pump.

The heat trace controller operates the self regulating heat trace installed on the ground water force main located at the west wall of the pretreatment room. The heat trace is installed on the pipe from the building wall to approximately 4 feet below grade.

4.0. ALARMS

Below is a summary of the pretreatment system and oil/water collection system alarms:

Alarm Condition	System Response
Oil collection drum – 85%	Light on drum panel activated; alarm beacon activated.
Oil collection drum – 95%	Light on drum panel activated; alarm beacon activated; Ferret pump shut off.
Air stripper blower off	Manhole pumps shut off
Collection manhole high level	Display at Collection Manhole Pump Control Panel.

5.0. MAINTENANCE AND SPARE PARTS

5.1. Maintenance

5.1.1. Inspection

GE will perform regular inspection of the abandoned sewer and Bldg.40 groundwater collection systems. Inspection reports will be maintained on site.

5.1.2. Maintenance

GE will perform maintenance activities, as needed, for the treatment systems. Regular maintenance activities may include:

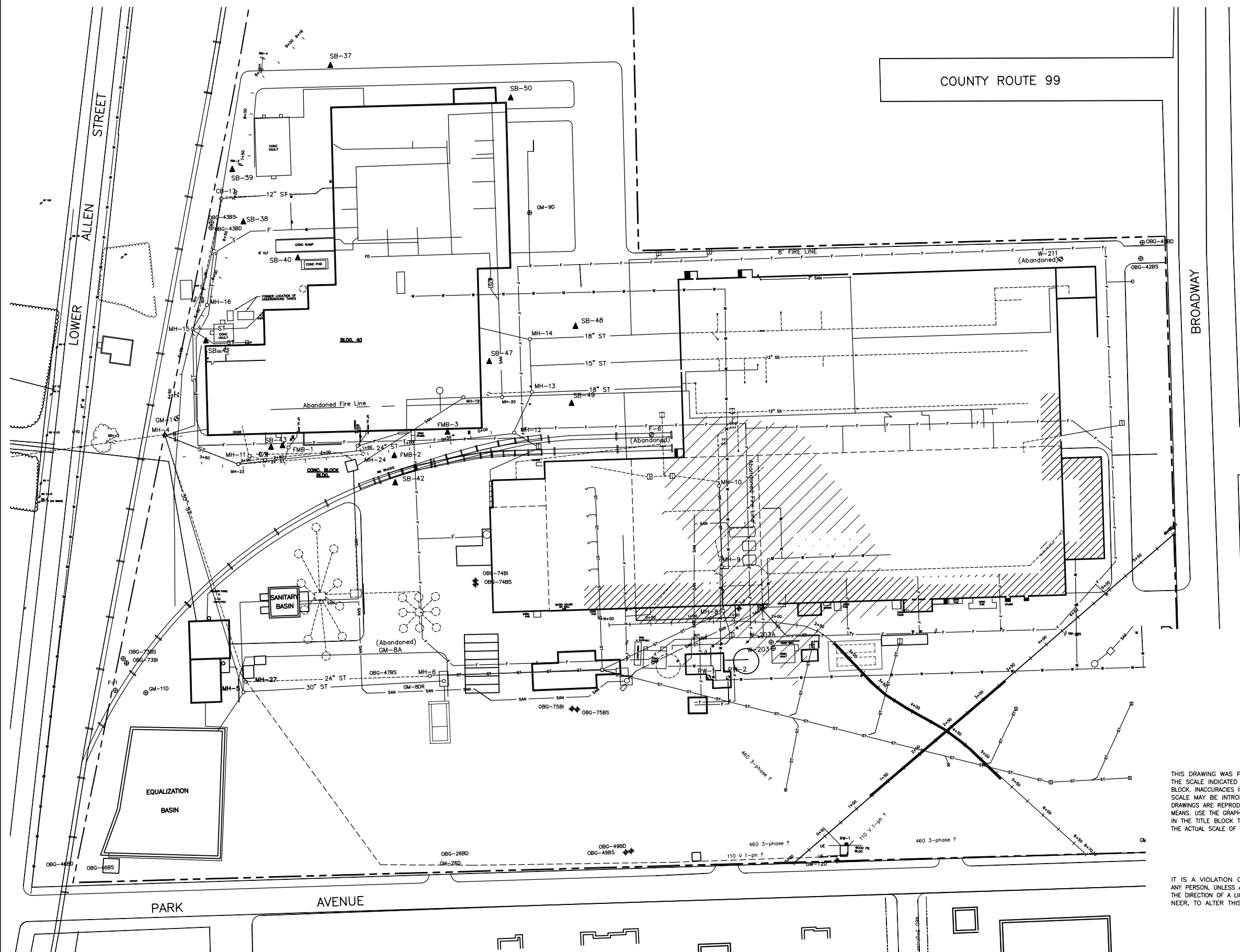
- Removal of sediment from MH-27, MH-5, and the Bldg.40 collection trench manhole. Personnel who are required to enter the manholes must adhere to the GE Ft. Edward confined space entry and OSHA HAZWOPER requirements. The manhole pumps should also be inspected and any sediment flushed from the intake and/or impeller.
- Replacement of the collection drum when full. During regular inspection, if the product collection system flow rate appears to be decreasing, the air feed and product recovery lines should be inspected to determine if residues are accumulating and the tubing requires replacement. The product recovery pump should also be inspected to determine if there is something clogging the inlet, outlet, or collection lines.
- Cleaning of the air stripper trays to remove scaling and residues. Once the air stripper pressure gauges indicate an increased pressure, the viewing ports on the air stripper should be removed and the trays inspected. The stripper trays can be cleaned in place or removed, using a pressure washer and/or cleaning agent to remove the scale. Refer to the NEEP Systems Installation, Operation & Maintenance Manual for recommended cleaning procedures.
- Inspecting the ground water force main into the pretreatment room to determine if scale has accumulated on the pipe interior. The pipe may be cleaned with absorbent pads or cleaning agent. The magnetic flow cleaners should also be inspected and manually cleaned if there is evidence of scale accumulation.

5.2. Spare Parts

Information regarding specific spare parts for the equipment installed in the Abandoned Sewer Collection System and the Bldg.40 Collection and

Pretreatment System are included in the individual equipment operations and maintenance documents. In general, the following spare parts and equipment that cannot otherwise be obtained from vendors within 24 – 48 hours is recommended for the systems operations and maintenance:

- Spill containment pads and collection containers for oil spills;
- One spare pump motor for each type of manhole pump;
- Spare level switch;
- Spare manual valves and fittings.

**GENERAL NOTES:**

1. PLAN LAYOUTS WERE PREPARED BASED UPON INFORMATION PROVIDED BY GENERAL ELECTRIC COMPANY, FORT EDWARD, NEW YORK. AN INSTRUMENT SURVEY WAS NOT USED TO PROVIDE THE INFORMATION SHOWN.
2. EXACT DIMENSIONS AND LOCATIONS OF ALL STRUCTURES AND UTILITIES ARE CONSIDERED APPROXIMATE ONLY AND SHALL BE VERIFIED AS REQUIRED IN THE FIELD BY THE CONTRACTOR.
3. OTHER UNDERGROUND UTILITIES MAY EXIST, THE LOCATIONS, DEPTHS AND EXTENT OF WHICH ARE UNKNOWN. THE CONTRACTOR SHALL DETERMINE THE LOCATION AND ELEVATION OF ALL UTILITIES IN THE FIELD AHEAD OF CONSTRUCTION.
4. ROADWAYS ARE TO REMAIN OPEN AT ALL TIMES.
5. CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE CHANNELS AT ALL TIMES. PROPER EROSION CONTROL TECHNIQUES (INCLUDING SILT FENCES AND STRAW BALE DIKES) SHALL BE IMPLEMENTED AS REQUIRED AND IN ACCORDANCE WITH THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN.
6. ALL WORK TO BE PERFORMED SHALL BE DONE IN ACCORDANCE WITH GENERAL ELECTRIC'S FT EDWARD, NY UNIVERSAL SAFETY GUIDE DATED JANUARY 2000 UNLESS A NEWER VERSION IS AVAILABLE.

LEGEND

- ⊕ MONITORING WELL
- ▲ SOIL BORING
- ▭ RAILROAD
- TREES
- - - PROPERTY BOUNDARY
- X- FENCE
- UTILITY POLE
- SAN- SANITARY SEWER
- ST- STORM SEWER
- F- FIRE LINE
- W- WATER LINE
- MH MANHOLE
- CB CATCH BASIN
- - - ABANDONED SEWERS

NO.	DATE	REVISION	INIT.

1"=60'



GENERAL ELECTRIC COMPANY
FORT EDWARD FACILITY FORT EDWARD, NY
OU-3 REMEDIAL DESIGN
- FOIL MILL GROUND WATER COLLECTION
- ABANDONED SEWER GROUND WATER COLLECTION

GENERAL

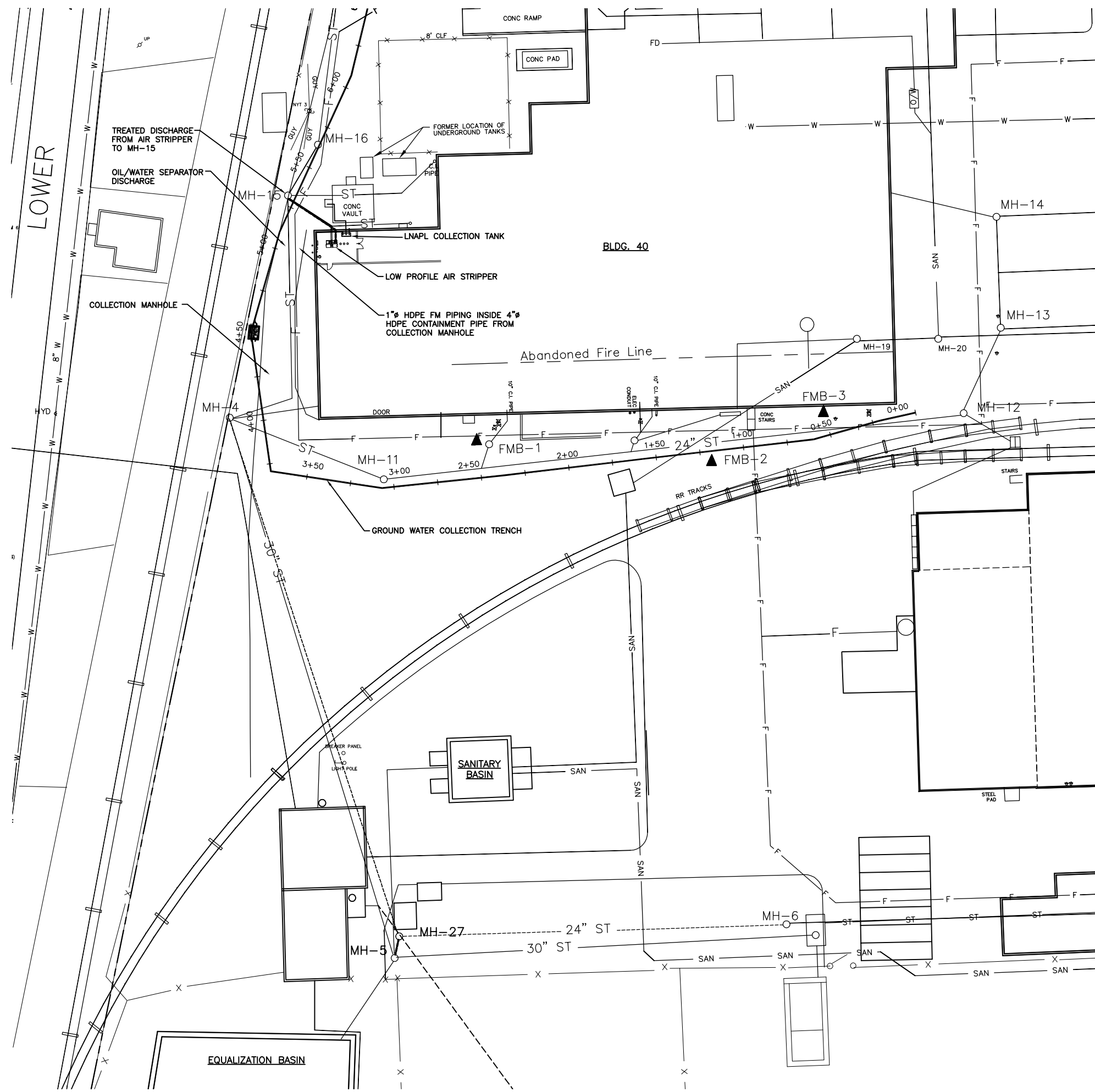
SITE PLAN

IN CHARGE OF _____	FILE NO. 5731.30137.	FIG1
DESIGNED BY _____ CHECKED BY _____	DATE FEB. 2008	
DRAWN BY _____		

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

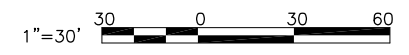
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.

I:\DIV71\PROJECTS\5731\30137\DWG\FIGURES\FIG2.DWG



- LEGEND**
- 1+00 GROUND WATER COLLECTION TRENCH
 - C.O. CLEANOUT
 - RAILROAD
 - TREES
 - PROPERTY BOUNDARY
 - FENCE
 - UTILITY POLE
 - SAN SANITARY SEWER
 - ST STORM SEWER
 - F FIRE LINE
 - W WATER LINE
 - MH MANHOLE
 - CB CATCH BASIN

NO.	DATE	REVISION	INIT.



GENERAL ELECTRIC COMPANY
FORT EDWARD FACILITY FORT EDWARD, NY
OU-3 REMEDIAL DESIGN
- FOIL MILL GROUND WATER COLLECTION
- ABANDONED SEWER GROUND WATER COLLECTION

MECHANICAL

GROUND WATER COLLECTION & PRETREATMENT SYSTEM PLAN

IN CHARGE OF _____	FILE NO. 5731.30137.	FIG2
DESIGNED BY _____ CHECKED BY _____	DATE FEB. 2008	
DRAWN BY _____		

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