

OPERATIONAL NARRATIVE**A. DESCRIPTION OF INCOMING WASTES STREAMS**

1. Sources, Types and the Weight/Volume of each Waste Stream to be Processed
The Facility will accept the following materials to the compost operation:
 a) Separated solids from domestic septic, including septic tank and holding tank material solely of sanitary sewage.
 b) Separated solids from portable toilet wastes and biological wastewater treatment plants.
 c) Separated solids from food establishments consisting of grease trap material, DAF skimmings and other biodegradable solids. See Acceptable Waste Types below for additional information on specific wastes.
 d) Wood trimmings, wood chips, other carbon materials that are biodegradable and compostable with the designed compost system and is compatible with the incoming waste stream.
 e) Composting Estimates

	Phase 1	Phase 2
a) Nitrogen Sources, including separated solids from domestic septic, portable toilet wastes, biological wastewater treatment plant biosolids, grease trap material and DAF skimmings.	1,425 cy/wk	1,660 cy/wk
b) Wood trimmings, wood chips, other carbon materials etc.	1,606 cy/wk	1,875 cy/wk

A Carbon to Nitrogen (C:N) Ratio will be maintained between 25-30.

Acceptable Waste Types

Waste Type 2 - All Waste Type 2 wastes will be processed/ dewatered in the Waste Receiving building and includes the Separated Solids from the following wastes: Pond Solids, Secondary Poultry Nutrients (SPN), Brewery Wastewater residuals, Brewery Process Water, Coffee Production Water, Soda Beverage Waste, Dissolved Air Flotation (DAF), Tea Production Water, Expired Beverage, Chewy Gum Process DAF, Dairy Process Water.

Waste Type 3 - All Waste Type 3 wastes will be processed/ dewatered in the Waste Receiving building and includes the Separated Solids from the following wastes: Pond Solids, SPN, Vibratory Separator (VSEP), Grease Trap Waste, Septage, DAF.

Waste Type 4 - Separated Solids from Filter Cake, Wood Boiler Ash, Pond Solids, Brewery Grain Screening, Food Waste, Green Waste, Grit, Hatchery Waste, Hay, High Starch Waste, Lift Station Cleanout, Lime, Dairy Bait Press Cake, Mulch, Municipal Brush, Organic Pond Residuals, Belt Press solids, Septage, Agricultural Mortalities, Raod Kill, Private Brush, Sucrose, Biological Press Sludge, Soybean Filter Cake, Coffee Production Solids, Tea Production Solids, Expired Foods Residuals, Bovine Paunch, Cereal Production Waste, Bakery Waste Solids, DAF, VSEP, SPN, Municipal Dewatered Biosolids.

2. Waste Acceptance Procedure
a) Only separated solids will be received for composting. Wastes that have not been separated may be further processed at the onsite Waste Processing Building before being received at the Compost Mixing Building.

b) Each waste "type" from a specific client and from a specific source will be documented on a Waste Acceptance Form. This form will be completed for all waste materials, not including wood trimmings, wood chips and other carbon material. The form will designate the Facility the material is received from, the source of the material at the Facility, general characterization of the waste material and the anticipated volume of material that may be received. The form will also document the following:

1) TCLP results, if applicable (See #4 below.)
2) Documented Paint Filter Test (See #3 below) for each Waste Approval Form
3) Waste Odor characterization, including a relative strength (objective test) and any specific precautions for this waste.

3. Special Environmental Pollution or Handling Problems associated with Waste Stream

a) All received wastes, other than wood trimmings and chips, will be received directly into the Mixing Building. The received wastes will be blended with wood chips and transported to the active composting pad. Received wastes will only be accepted during normal business hours to ensure the materials are properly received, blended, and transported to the compost pad. oversized screenings from the final compost may be added to the newly received material when it is delivered to the active compost pad.

b) All received wastes must be able to pass the Paint Filter Test before being accepted at the Compost Mixing Building. All new wastes will be tested for compliance with the Paint Filter Test on a weekly basis for 8 weeks to verify the waste characterization. Each waste will then be tested randomly on a quarterly basis to ensure compliance with the characterization. In addition, if loads visually appear that they would not pass the test, additional tests will be conducted. Received Wastes will be blended with wood trimmings or chips on a covered concrete pad in the Compost Mixing Building. The Mixing Building will be approx 40'x60' with 24' open height. The receiving building will be used for storage of incoming material, as needed. This will provide approximately 1,130 cy of storage for feed stock. This will provide over 5.5 days of storage for feed stock.

4. Verification that Incoming Waste is not Hazardous

All suppliers of waste products from industrial sources will have to have their waste analyzed for Toxicity Characteristics Leaching Procedure (TCLP) before the waste will be accepted. All loads received will be visually inspected at the mixing pad. Inappropriate waste for the composting process will be removed from the waste stream for proper disposal or recovery.

5. The U.S. EPA 503 Rule classifies biosolids as Class A or Class B with respect to pathogens. If pathogens are virtually below detectable levels, the biosolids meet Class A designation. Biosolids meet Class B if pathogens are detectable, but have been reduced to levels that do not pose a threat to public health and the environment as long as actions are taken to prevent exposure to biosolids after their use or disposal. Through the use of a composting process meeting the U.S. EPA 503 Class A pathogen reduction standards, the incoming waste streams will be converted to a final product meeting the specified criteria for Class A biosolids. The facility shall comply with all applicable federal regulations regarding sludge management at 40 CFR 503.

B. STORAGE AND CONTAINMENT

1. Storage Capacity of Facility (cubic yards)
 a) Receiving Area - Wood trimmings and chips 1.26 Acres
 b) Receiving and Mixing Area - Waste materials 8,200 Sq. Ft.
 c) Active Composting Pad 5.2 Acres.
 d) Curing 1.5 Acres
 e) Final Storage 0.8 Acres
 f) Residue Storage and Containers 20-40 Cu. Yds. (1 to 2 roll off containers with covers)

C. TRUCK TRAFFIC

The Facility expects to receive up to 30 to 40 truckloads of waste per weekday. The truck traffic generated by the Facility is within acceptable uses for the location.

D. PROCESSING OF WASTE

1. Site Equipment
The minimum equipment required to manage the compost operations will be onsite. It is anticipated that the following equipment or equivalent will be provided:

EQUIPMENT	QUANTITY
Front End Loader	2
Windrow Turner	1
Dump Truck	1
Power Screen	1

2. Preparation of Mixing Feedstock
a) Wood chips will be chipped offsite and received at the wood chip storage area. A wood chipper or tub grinder may be added in the future brought onsite for temporary use periodically throughout the year, as needed.

b) The incoming waste materials will be received at the waste mixing building and mixed with wood chips. The incoming waste materials will not be added directly to the windrows. The mixed waste will be transported to the compost pad.

c) The mixed material will be transported to the pad and formed into windrows. The new windrows will be blanketed with compost, reject chips, wood chips or other acceptable materials to help control potential odors, vectors and fugitive dust. The windrows will continue to be blanketed until the internal temperature of the windrow reaches 131°F.

d) Active compost windrows and curing windrows are anticipated to be constructed 6.5 feet high with a 16 foot base and 660 feet long.

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- a) Windrows are turned using a windrow turner to move material from the outside of the pile to the inside where it can decompose more readily. A second goal of turning windrows is to loosen the material so it will be more porous. This will increase the airflow through the pile and increase the oxygen concentration within the pile. Maintaining an adequate oxygen concentration is important for proper composting and to reduce odors.
 b) Windrows will be turned based on their temperature. During the fifteen consecutive day period when the compost is maintained at 55 degrees Celsius, the windrows will be turned a minimum of five times. We anticipate the windrows will be turned daily during the first 3 days, as needed.
 c) Materials will be moved by front end loader from the active compost windrows to the curing windrows after an average of 30 days, where they will be screened to produce the final product. Oversized materials will be reintroduced back into the active compost windrows.

4. Final Disposition of Compost

- a) Final product will be loaded in the final storage area using front end loaders onto trucks for transport to market in bulk.
 b) The volumes of final product will be tracked. The final product will typically be removed from the storage area within 30 days.

5. Stormwater Diversion, Collection, and Monitoring

- a) The compost pad is located at the top of a hill. Therefore, there is no off pad storm water to divert from the operation.
 b) Stormwater runoff from the compost pad will be collected by a stormwater collection pond located along the western edge of the pad. The collected runoff may be utilized to adjust the moisture content of the windrows and will only be used on piles in the beginning stages of the compost process. The collected runoff will be utilized by pumping with a portable gas powered pump to the windrow turner or water truck for application to the windrows. Excess collected runoff will be transferred to the onsite wastewater treatment system for proper treatment and disposal as required by the facility's NPDES permit.

- c) Additional water from the onsite wastewater treatment facility may be utilized, as needed, for moisture control. The reuse water from the wastewater treatment facility shall be clarified, filtered and disinfected and will be tested once per week to ensure it will meet the following limits:

1. TSS	40 mg/l
2. BOD	30 mg/l
3. NH3-N	17.4 mg/l
4. Oil & Grease	8 mg/l
5. pH	6-8.5 standard units
6. Chlorine (TRC)	<4.0 mg/l

d) Stormwater will be monitored during construction in accordance with NPDES storm water monitoring requirements and the Georgia General NPDES storm water construction permit GAR 100001.

6. Groundwater and Methane Monitoring

- a) See "Environmental Monitoring and Water Quality Monitoring Plan" attached.
 b) No methane monitoring is proposed.

7. Routine Monitoring of Compost Piles

- a) At least three (3) sample locations (or sections) will be designated along each active compost windrow.
 b) The temperature of the compost pile will be monitored and recorded daily (5 days per week) during the active composting stage. At least three (3) temperatures will be recorded daily from each sampling section. Copies of the temperature monitoring will be recorded and maintained in the operating record.
 c) Oxygen levels will be measured with an oxygen meter daily (5 days per week) during the active composting stage. Records of the oxygen levels will be recorded and maintained in the operating record.

8. Compost Sampling and Analysis

- a) Samples of finished product will be collected each calendar month and shipped to a contract laboratory for analysis.
 b) Compost sampling and handling protocols of the U.S. Composting Council (USCC) will be used to collect representative samples.

c) Chain of Custody forms and procedures will be used such that the compost can obtain the USCC Seal of Assurance. The US EPA 503 Regulations establishes the following acceptable ranges of constituents in domestic sewage sludge derived compost:

Parameter	Units	US EPA 503 RULE Pollutant Concentration Limits for Class A Biosolids
Arsenic	mg/kg	41
Cadmium	mg/kg	39
Copper	mg/kg	1,500
Lead	mg/kg	300
Mercury	mg/kg	17
Molybdenum	mg/kg	75
Nickel	mg/kg	420
Selenium	mg/kg	100
Zinc	mg/kg	2,800
Fecal Coliform	MPN/g	1,000
Salmonella	MPN/50g	37.5

e) Chapter 391-3-16(1)(b)(2)ii of Georgia's Rules for Solid Waste Management requires that the compost resulting from compost operations shall not be pathogenic, free of offensive odors, biologically and chemically stable, free of injurious components, and able to sustain plant growth.

9. Odor Control Plan

- a) Odors from the compost operation will be primarily controlled by the proper control of the Carbon to Nitrogen Ratio and moisture content and maintaining sanitary conditions at the receiving areas.

b) Receiving and mixing will take place in the designated Compost Mixing Building on a concrete pad. The block walls of the mixing building will be sealed with hydraulic grout. This will prevent liquid accumulations or run off of raw materials. All raw material and mixed material shall be contained within the building before being transported to the windrows.

c) The interior of the Mixing Building will be inspected and cleaned on a weekly basis, at a minimum.

d) A odor control misting system will be installed at the Mixing Building and will be used to spray odor counteractants. This mixing system will include a fixed high pressure pump with a potable water line. All counteractants will be used in accordance with the specific manufacturer's recommendations. The products to be used include but are not limited to the following:

1. F8, EOSII II Company
2. SL 4000 Cherry, MCM Corporation
3. Prosweet 2533, GE Betz, Inc.
4. Airlutions, Ecolo Odor control Systems, Inc.
5. X10792 Concentrated Pine Deodorant, ZEP Manufacturing Co

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- e) All raw materials received, except wood trimmings or chips, will be promptly mixed with wood chips, transported to the compost pad and windrowed. All raw material will be windrowed on the day it is received. Incoming waste materials will not be received directly onto the pad in windrows.

f) If at any time during the operation of the compost operation, odors become problematic in the opinion of the Georgia Environmental Protection Division (EPD) or the operator, the following steps will be implemented, in order, to control the odors:

- a. All materials received will be inspected to determine if any sources of extremely malodorous material is being delivered. These materials will be rejected and the operator will contact the source of the materials to determine appropriate actions (such as more prompt deliveries) can be taken to reduce the raw material odors.
- b. The receiving area will be inspected and cleaned as needed.
- c. The existing compost windrows will be inspected to determine if specific areas of the windrows are not optimal for the compost operation (i.e. high moisture, low oxygen, low carbon material, etc.) These areas will be adjusted with additional carbon material, as needed and turned, as needed, to increase oxygen and reduce moisture.

Additional moisture will be added, as needed.

- d. The Compost Operation Stormwater Collection Pond will be inspected and will be cleaned out/ pumped out if it is determined to be a cause of the odors, if there is an environmental concern, or as otherwise required by Georgia EPD.

- e. Odor masking agents and odor neutralizers will be used as counteractants. These products will be deployed in accordance with manufacturers recommendations. This may include being added to moisture control make-up water or by use of temporary misters.

- i. Water based masking agents may be added to each load of water used for moisture control. The masking agent will be used according to the manufacturer's recommendations.

- ii. GE Betz odor control misting systems or similar misting systems may be placed near the compost pad boundary, as needed. The misting systems will be checked daily to verify correct operations.

- iii. Granular odor control materials may be applied to specific areas. These materials absorb ammonia and hydrogen sulfide and are used in localized areas.

E. DISPOSAL OF WASTE RESIDUE**1. Containment, Handling and Removal of Residue from Facility**

- a) The waste residue consists of all materials that will not compost or biologically degrade. This includes metals, plastics and other inert materials.

- b) These materials will be removed from the waste stream and stored in covered roll-off containers and disposed of in a timely manner to prevent odors and control vectors.

2. Treatment and Disposal of Wastewater

- a) All wastewater from the preprocessing operations and drainage from the compost site will be collected and treated in the onsite advanced biological wastewater treatment system. The Facility will produce a treated effluent that meets the NPDES permit discharge limits and/or the designated reuse limits specified in D.5.c. above.

3. Method for Ensuring Solid Wastes Pass the Paint Filter Test

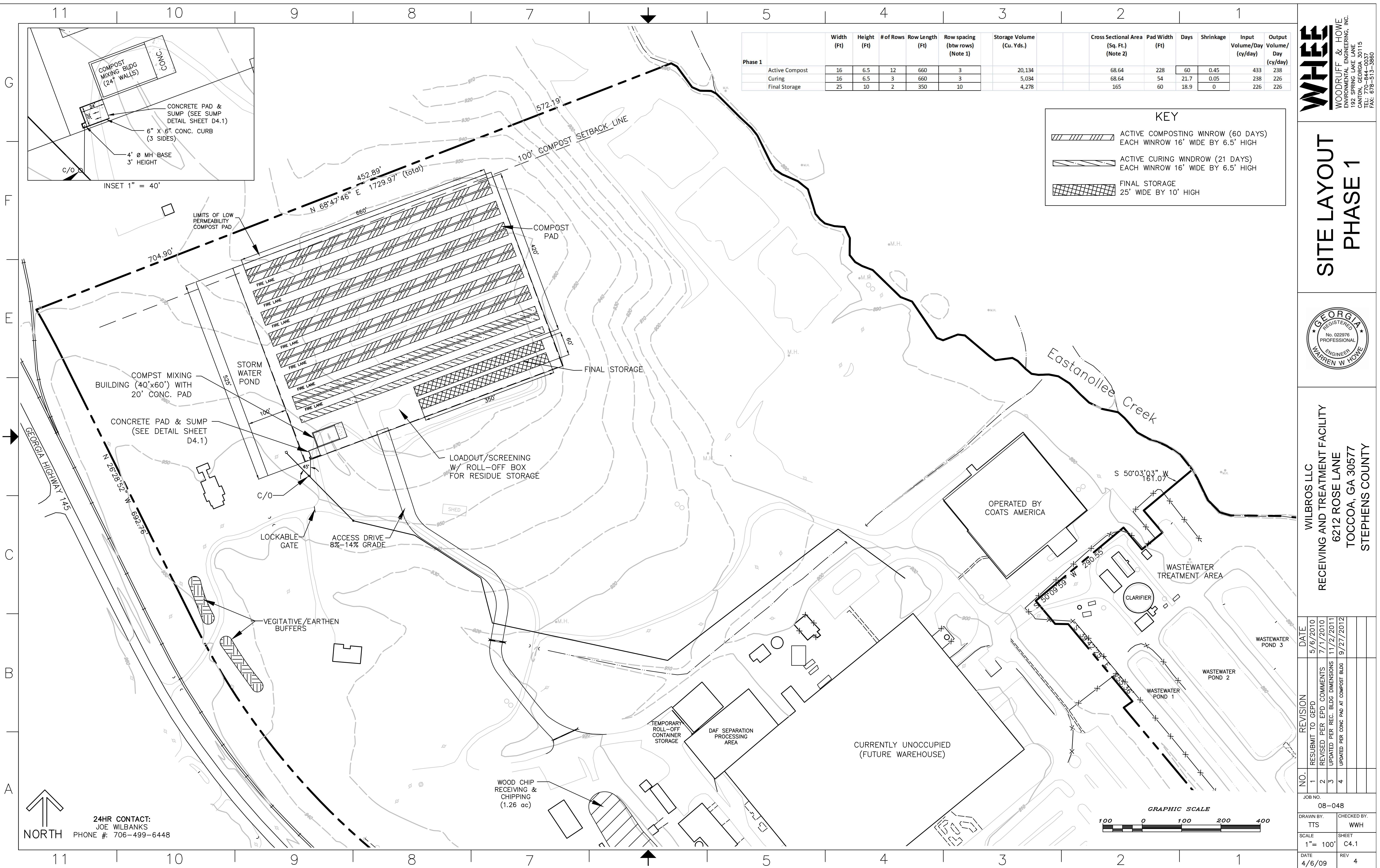
- a) All waste materials will be characterized on the Waste Acceptance Form. All new wastes will be tested for the Paint Filter Test on a weekly basis for 8 weeks to ensure the material meets the Paint Filter test requirement. In addition, each waste will be randomly tested on a quarterly basis to ensure compliance.

4. Transport of Waste Residue to Disposal Facility

- a) The roll-off containers will be covered, as required and will be hauled in a timely manner to minimize odors and control vectors.

5. Name, Location, and Permit Number of Facility Disposing of Waste Residue

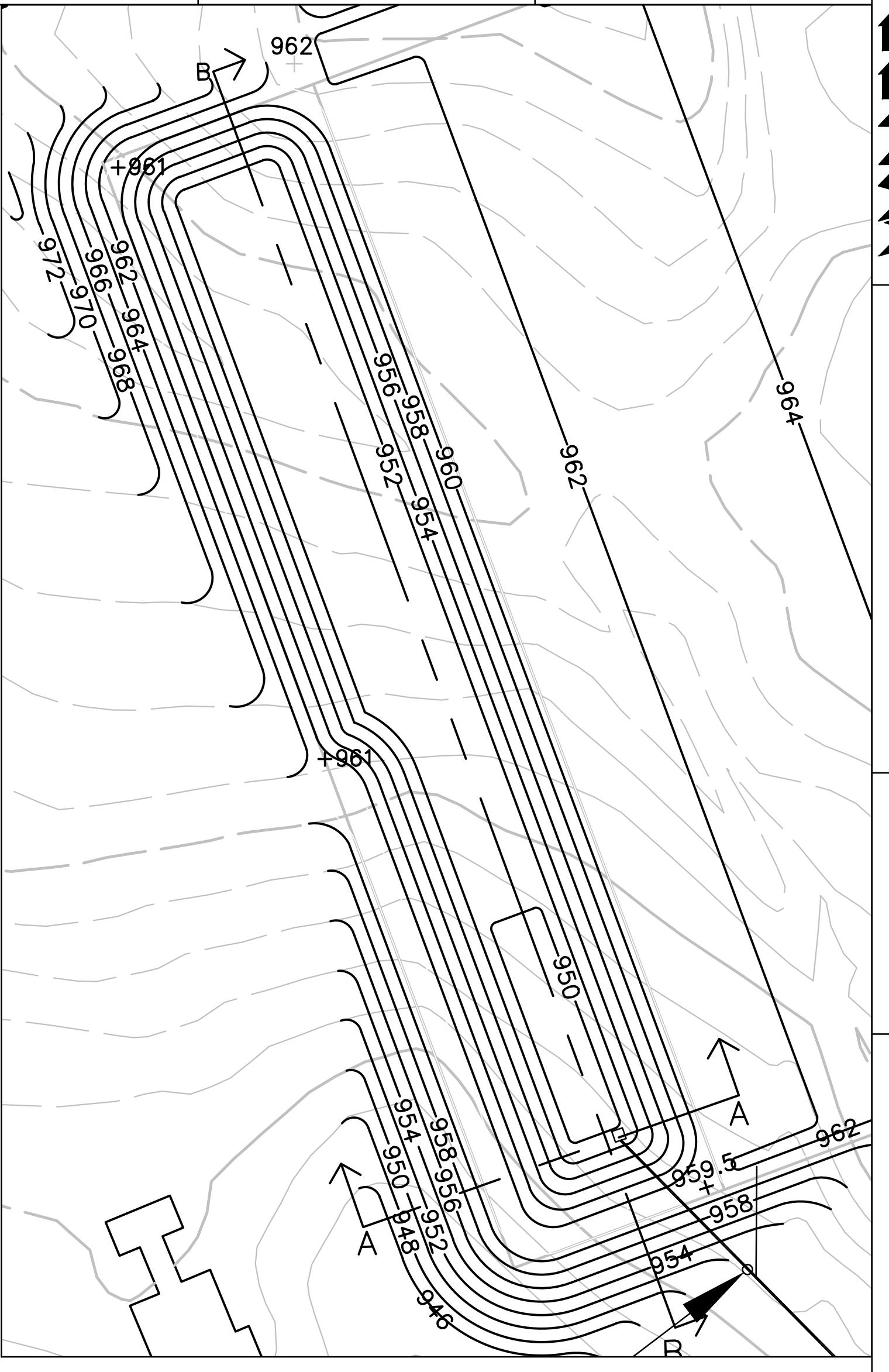
SITE LAYOUT PHASE 1



STORMWATER POND DETAILS

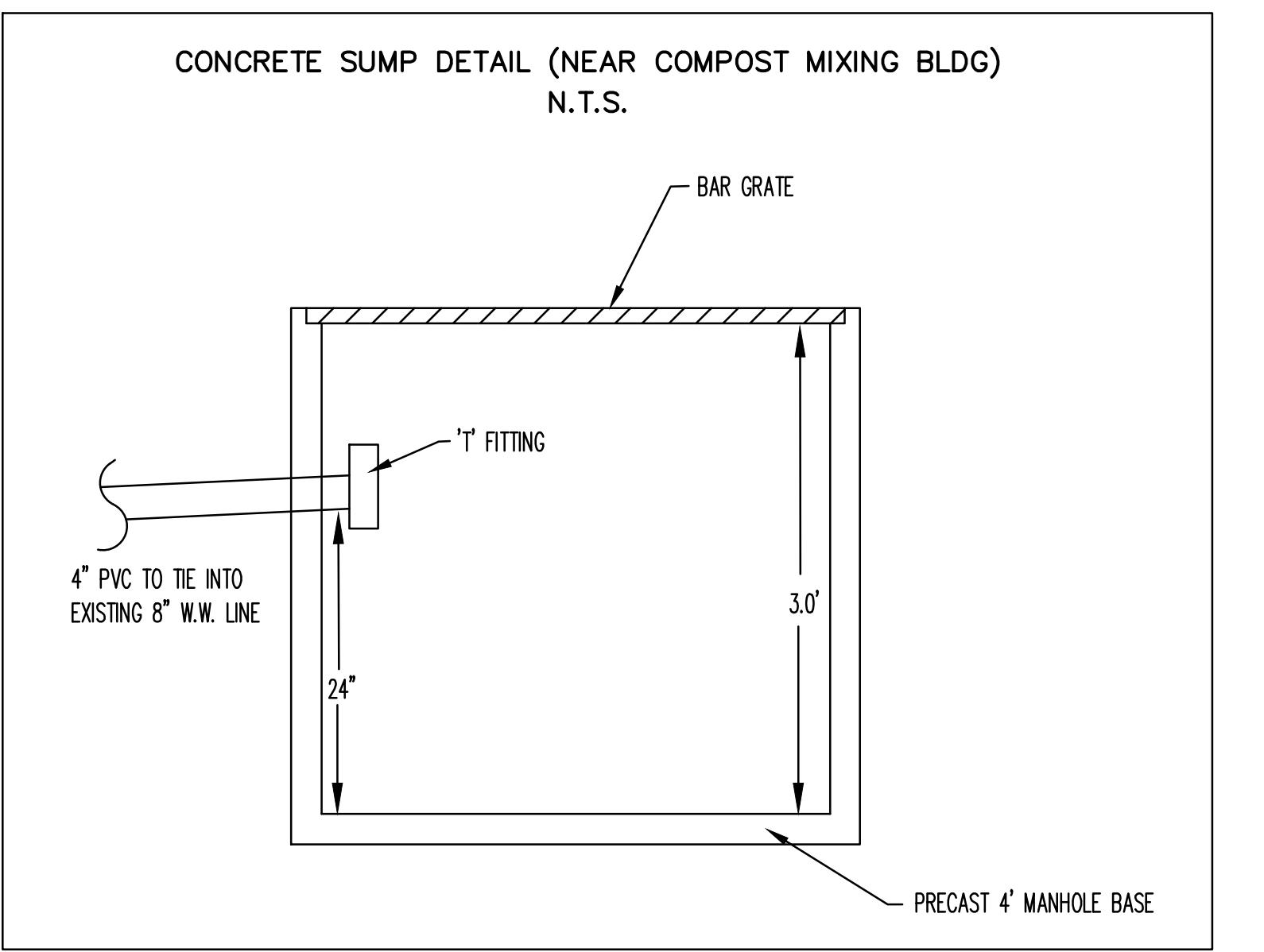


WILBROS LLC
RECEIVING AND TREATMENT FACILITY
6212 ROSE LANE
TOCCOA, GA 30577
STEPHENS COUNTY

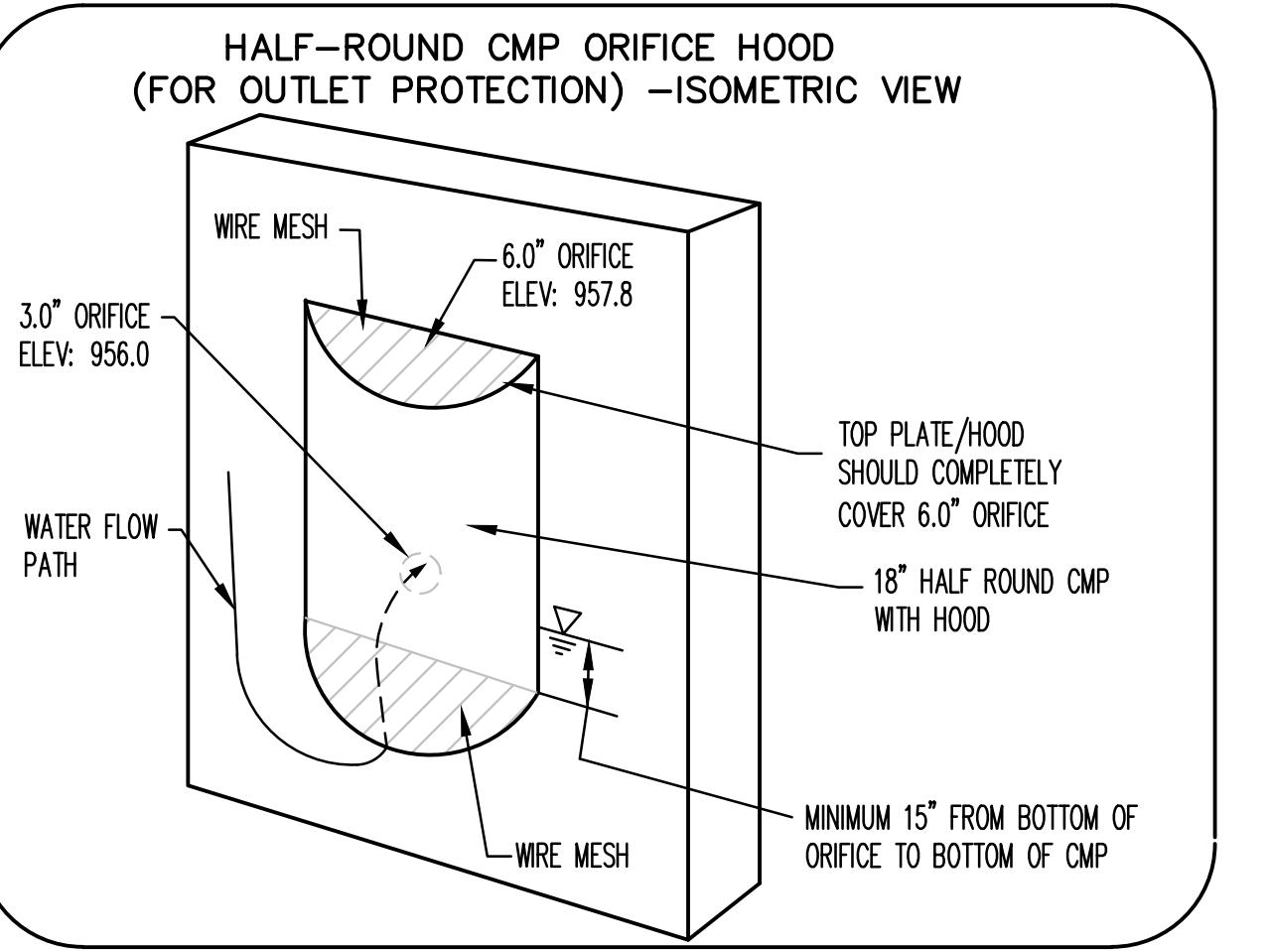


STORMWATER MANAGEMENT FACILITY

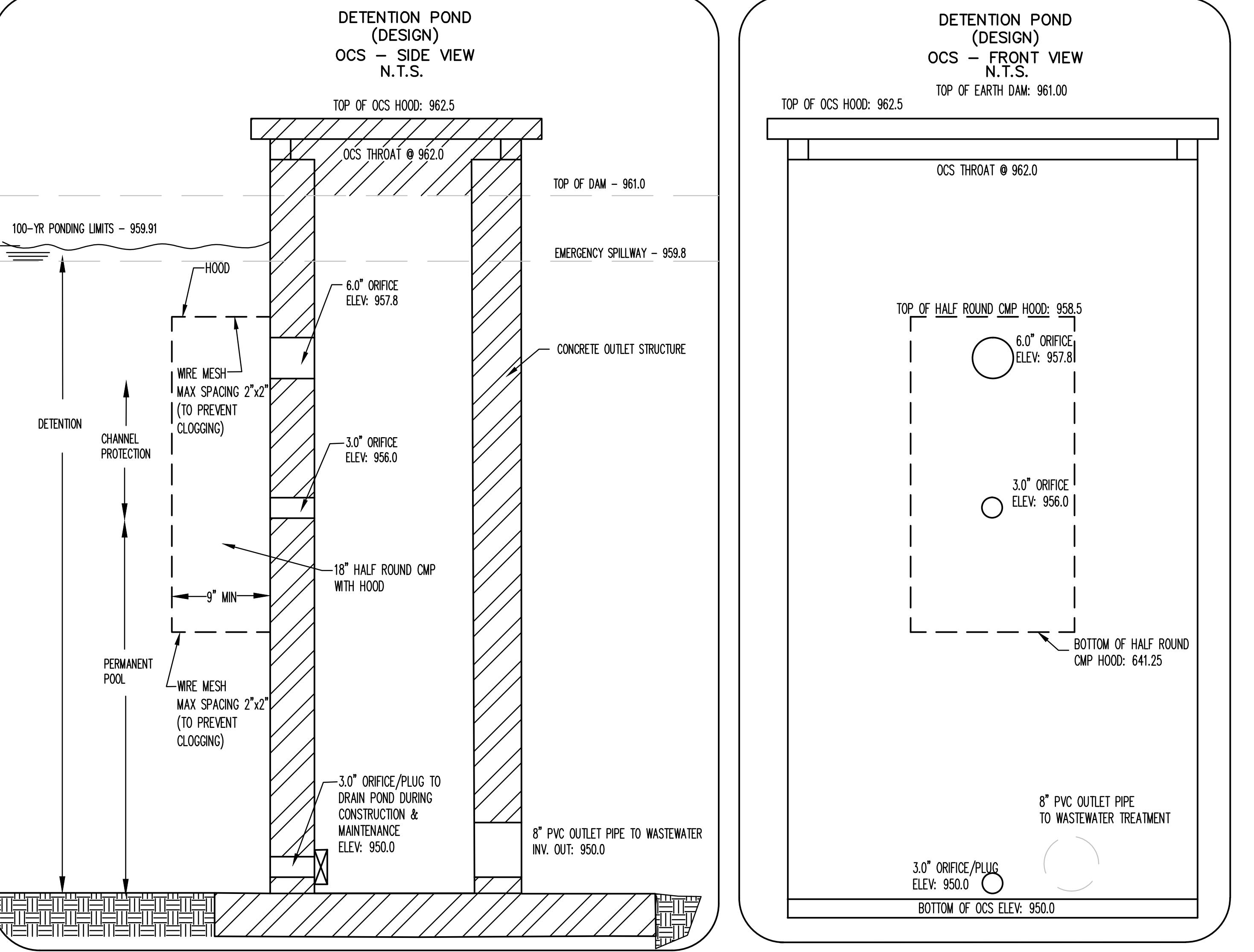
1"=50'



CONCRETE SUMP DETAIL (NEAR COMPOST MIXING BLDG)
N.T.S.



HALF-ROUND CMP ORIFICE HOOD
(FOR OUTLET PROTECTION) -ISOMETRIC VIEW



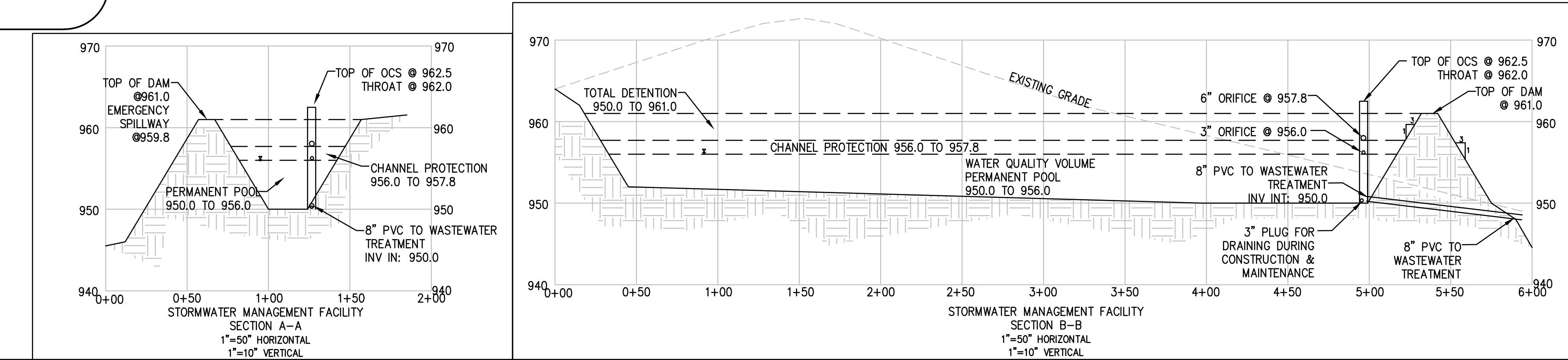
TYPICAL MAINTENANCE ACTIVITIES FOR PONDS
(SOURCE: EPA, 1999)

ACTIVITY	SCHEDULE
- CLEAN AND REMOVE DEBRIS FROM INLET AND OUTLET STRUCTURES. MOW SIDE SLOPES.	MONTHLY
- IF WETLAND COMPONENTS ARE INCLUDED, INSPECT FOR INVASIVE VEGETATION.	SEMI-ANNUALLY
- INSPECT FOR DAMAGE, PAYING PARTICULAR ATTENTION TO THE CONTROL STRUCTURE. CHECK FOR SIGNS OF EUTROPHIC CONDITIONS. NOTE SIGNS OF HYDROCARBON BUILD-UP AND REMOVE APPROPRIATELY.	ANNUALLY
- MONITOR FOR SEDIMENT ACCUMULATION IN THE FACILITY AND FOREBAY.	
- EXAMINE TO ENSURE THAT INLET AND OUTLET DEVICES ARE FREE OF DEBRIS AND OPERATIONAL. CHECK ALL CONTROL GATES, VALVES OR OTHER MECHANICAL DEVICES.	
- REPAIR UNDERCUT OR ERODED AREAS.	AS NEEDED
- PERFORM WETLAND PLANT MANAGEMENT AND HARVESTING.	ANNUALLY (IF NEEDED)
- REMOVE SEDIMENT FROM THE FOREBAY.	5 TO 7 YEARS OR AFTER 50% OF THE TOTAL FOREBAY CAPACITY HAS BEEN LOST
- MONITOR SEDIMENT ACCUMULATIONS, AND REMOVE SEDIMENT WHEN THE POOL VOLUME HAS BECOME REDUCED SIGNIFICANTLY, OR THE POND BECOMES EUTROPHIC.	10 TO 20 YEARS OR AFTER 25% OF THE PERMANENT POOL VOLUME HAS BEEN LOST

Additional Maintenance Considerations and Requirements

- A SEDIMENT MARKER SHOULD BE LOCATED IN THE POND TO DETERMINE WHEN SEDIMENT REMOVAL IS REQUIRED.
- SEDDIMENTS EXCAVATED FROM STORMWATER PONDS THAT DO NOT RECEIVE RUNOFF FROM DESIGNATED HOTSPOTS ARE NOT CONSIDERED TOXIC OR HAZARDOUS MATERIAL AND CAN BE SAFELY DISPOSED OF BY EITHER LAND APPLICATION OR LANDFILLING. SEDIMENT TESTING MAY BE REQUIRED PRIOR TO SEDIMENT DISPOSAL WHEN A HOTSPOT LAND USE IS PRESENT.
- PERIODIC MOWING OF THE POND BUFFER IS ONLY REQUIRED ALONG MAINTENANCE RIGHTS-OF-WAY AND THE EMBANKMENT. THE REMAINING BUFFER CAN BE MANAGED AS A MEADOW (MOWING EVERY OTHER YEAR) OF FOREST.
- CARE SHOULD BE EXERCISED DURING POND DRAWDOWNS TO PREVENT DOWNSTREAM DISCHARGE OF SEDIMENTS, ANOXIC WATER, OR HIGH FLOWS WITH EROSION VELOCITIES. THE APPROVING JURISDICTION SHOULD BE NOTIFIED BEFORE DRAINING A STORMWATER POND.

REGULAR INSPECTION AND MAINTENANCE IS CRITICAL TO THE EFFECTIVE OPERATION OF STORMWATER PONDS AS DESIGNED. MAINTENANCE RESPONSIBILITY WILL BE WILBROS LLC.



NO.	REVISION	DATE
1	1	5/6/2010
2	2	9/27/2012

NO. 08-048
DRAWN BY: TTS
CHECKED BY: WWH
SCALE: SHEET D4.1
DATE: 4/6/09 REV 2