Operation Plan
Hardee County Landfill
Hardee County, Florida

Solid Waste Department
685 Airport Road
Wauchula, FL 33873

Florida Board of Professional Engineers
Certificate No. 00004892

SCS ENGINEERS

June 28, 2013
Updated September 6, 2019
Project No. 09199033.25

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Hardee County Landfill
Operation Plan
Hardee County, Florida

Submitted to:

Florida Department of Environmental Protection

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Prepared for:

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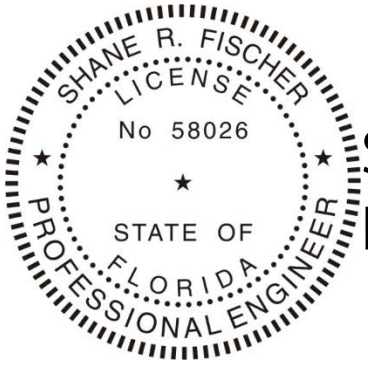

Shane Fischer

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K. OPERATION PLAN

BACKGROUND INFORMATION

The Hardee County (County) Landfill facility is located east of the City of Wauchula on Airport Road. This Operation Plan addresses the regulatory requirements for the operation of the Class I facility and ancillary operations on the site for the Phase II Section I and Phase II Section II disposal areas, Materials Recovery Facility (MRF), Household Hazardous Waste Collection Center (HHWCC), and the Waste Tire Facility. The Waste Tire Facility operates under separate permit conditions that are currently outlined in Permit No. 129318-005-WT/05. Refer to Appendix A for a copy of the Waste Tire Permit. This Operation Plan will be kept at the administrative office and shall be accessible to landfill operators. The facilities on the site include:

- Scalehouse and administrative office,
- Class I Landfill and leachate storage tanks,
- Construction and Demolition (C&D) debris disposal area (closed)
- MRF,
- Waste Tire Facility,
- Yard trash processing area,
- Scrap metal site,
- HHWCC,
- Maintenance building

These facilities are described below and the locations are shown on the Operation Drawings with final revision date June 28, 2013, prepared by SCS, located in Appendix R. Other facilities present at the site are the County's Animal Control Kennel located west of the MRF and the Sheriff's Target Range located in the northeast corner of the site. This Operation Plan does not address operations for the Animal Control Kennel or the Sheriff's Target Range.

Normal operating hours for the Hardee County Landfill facility are Monday - Friday 7:30 am - 5:00 pm and Saturday 7:30 am – 12:00 pm. The Hardee County Landfill facility is closed for the following holidays:

- New Year Day
- July 4th
- Labor Day
- Thanksgiving Day

- Christmas Eve (if waste haulers are not collecting)
- Christmas Day

K.1.a Scalehouse and Administrative Offices

The scalehouse and administrative office is located just inside the entrance to the site. All incoming vehicles must stop at the scalehouse to register. Records, reports, analytical results, and modifications to the operating plan are maintained and kept on file at the administrative office.

K.1.b Phase II Section I and Phase II Section II Disposal Areas

The Hardee County Landfill is located at 685 Airport Road, approximately one mile north of State Road 636 in Wauchula, Florida. The site property lies within Section 35, Township 33 South, Range 25 East in Hardee County, Florida. The Hardee County Landfill is located at Latitude 27°34'17"N, Longitude 81°46'58"W on Airport Road. The Hardee County Landfill serves Hardee County. A Regional Map identifying the location of the Hardee County Landfill is shown on the Cover Sheet of the Operation Drawings located in Appendix R.

K.1.c C&D Debris Disposal Area (Closed)

A closed C&D debris disposal area is located in the southwest corner of the site. This disposal area was covered with 24-inches of soil, compacted, and sloped to promote drainage. Vegetative cover was placed over the entire closed area for erosion control.

K.1.d MRF Facility

Below is a general description of the operations for the MRF as related to the operations of the landfill;

- The MRF is equipped with a 60" Marathon Vertical Baler.
- When electronic items (e-waste), such as computers, VCRs, TVs and TV remote controls, microwaves are found in the incoming waste loads, their batteries are removed and the taken to the on-site HHWCC. Electronic items such as TVs, computer monitors, cell phones, keyboards, and computer peripherals are separated from the waste and taken to the MRF.. The electronic items are dismantled and the recyclable material such as circuit boards are removed by County staff and/or the work squad. The recyclable materials are placed into large plastic bins in the MRF. Once the bins are full they are loaded into a flatbed truck and transported by County staff to a local recycler for further processing. The remaining non-recyclable materials are loaded into a truck and taken to the working face for disposal. Should e-waste glass or components be shattered or smashed into small pieces, then the debris will be collected and placed into a container and placed into storage sheds at the HHWCC. The e-waste contractor or hazardous waste hauler will be contracted to dispose of the small e-waste debris.

K.1.e Waste Tire Facility

The Waste Tire Facility is currently operating under a separate permit, Permit No. 129318-005-WT/05. Refer to the Waste Tire Facility Emergency Preparedness Plan following the permit provided in Appendix A for a detailed discussion on the operations and procedures. Below is a general description of the operations for the Waste Tire Facility as related to the operations of the landfill;

- Incoming waste tires and tires with rims are temporarily stored on-site in a designated area for storage of waste tires. The tires are collected by a contractor on an as-needed basis for removal from the site for processing. Per the existing permit, no more than 1,500 whole waste tires are to be stored at the facility at any one time. A report on the operations of the Waste Tire Facility is submitted annually to the FDEP.

K.1.f Yard Trash Processing Area

Yard trash is collected in separate loads by the waste haulers and delivered directly to the Yard Trash Processing Area. When yard trash loads arrive at the landfill, a spotter escorts the loads to the area designated for yard trash processing as shown on the Operation Drawings located in Appendix R. Loads are spread out to look for unacceptable waste materials or waste material that does not belong in the Yard Trash Processing Area (refer to Section K.2.c Controlling Types of Waste Received). County personnel or contract labor will remove plastic bags prior to pushing the yard trash into a larger pile.

An independent contractor processes the yard trash material on-site. The minimum frequency for processing yard trash is once every 6 months or when 3,000 tons (12,000 cubic yards) are accumulated, whichever is greater. To be considered processed, material must pass a 6-inch sieve. However, logs with a diameter of 6-inches or greater may be stored for up to 12 months before being processed or removed from the area. The logs shall be separated and stored apart from other yard trash material within the area. The processed material is provided to Hardee County residents. The remaining processed yard trash will be used for stabilizing sideslopes, controlling erosion in the Phase II Section I or Phase II Section II disposal areas, as an organic additive to cover soils, or as general landscaping around the landfill.

The Yard Trash Processing Area is operated such that a 20-foot wide, all weather, access road around the perimeter of the area will be maintained. Interior lanes will be maintained to be at least a minimum of 15 feet wide. Dust control and fire protection for the area is provided in accordance with Section K.11.d and K.2.b.3, respectively. No part of the area that is occupied by processed or unprocessed material is more than 50 feet from access by motorized fire-fighting equipment. Refer to Figure 1 for the Yard Trash Processing Area Layout provided at the end of the Operation Plan.

K.1.g Scrap Metal and White Goods Storage Site

When scrap metals and white goods arrive at the landfill, a spotter escorts the loads to the area designated for scrap metals and white goods storage as shown on the Operation Drawings located in Appendix R. Incoming loads of scrap metal, appliances, and white goods (with and without Freon) are segregated and temporarily stored in this area. The storage area has a stable base comprised of compacted shell to minimize rutting due to traffic. The storage area is surrounded by a two foot vegetated stormwater containment berm designed to prevent stormwater from sheet flowing into the nearby wetland. In addition to the berm, silt fence will also be installed around the outer perimeter of the berm to further contain turbidity that may sheet flow off the outer side of the berm. Clean,

unused, recyclable metal cans are also transported to the scrap metal site for temporary storage. Propane tanks are accepted only if they are empty and the valves have been removed.

Lawnmowers are also stored at the scrap metal site. However, lawn mowers are not accepted at the facility unless any oil or gasoline has been removed prior to their delivery. If the scalehouse attendant spots a lawnmower, the attendant will question the driver concerning the gasoline and oil content of the lawnmower; if the lawnmower contains gas or oil, the scalehouse attendant will not accept it. If a lawnmower is found in a load delivered the operating personnel inspect the lawnmower to ensure that it is free of gasoline and oil prior to taking it to the scrap metal site. Gasoline and oil, removed from lawnmowers and other yard tools, will be taken to the HHWCC for storage.

White goods and appliances with Freon are stored separately from the rest of the scrap pile. These items are stored in an upright position to prevent the Freon from discharging to the atmosphere. An independent contractor is hired to remove the scrap metal and white goods from the site. The contractor is required to provide certification of qualification for removal of any chlorofluorohydrocarbons (i.e., Freon or CFCs) from the white goods. Up to 400 tons of scrap metal and white goods (a maximum of 200 individual pieces of white goods) can be stored in this area. The minimum frequency for scrap metal and white good removal is semi-annually (every six months).

K.1.h Household Hazardous Waste Collection Center

A HHWCC is located southeast of the MRF. The HHWCC is comprised of a roofed building with a curb in order to promote spill containment. The HHWCC is used for the temporary storage of special wastes such as used oil, paint, lead acid batteries, florescent light bulbs, and household hazardous wastes. Used oil is consolidated and stored in tanks on a concrete pad that has secondary containment with the capacity to hold the volume of the storage tanks in case of a spill. Lead acid batteries are stacked three high on pallets, with cardboard placed between each layer, and then shrink wrapped when pallets are full. Private contractors are hired for the removal of the special wastes such as the used oil, paint, lead acid batteries, and fluorescent light bulbs. The maximum onsite storage and frequency for removing these recyclable from the site is as follows:

- Used oil (up to 700 gallons) is removed quarterly,
- Paints (up to 100 gallons) removed quarterly,
- Batteries (up to 140 batteries) removed quarterly,
- Light bulbs (up to 400) are to be removed at least every 6 months, and
- Household Hazardous Waste (up to 50 gallons and 250 pound bags of chemicals) to be removed quarterly.

Household hazardous waste is defined as discarded, small quantity residential waste (less than 220 lbs) which is either listed by the U.S. Environmental Protection Agency (EPA) in its hazardous waste regulations or exhibits one of the four (4) following hazardous characteristics:

- Ignitability - It may catch fire.
- Corrosivity - It can damage other materials (including human tissue) on contact.

- Reactivity - It reacts violently with water and may catch fire or explode.
- Toxicity - It may cause illness or health problems if handled incorrectly.

Amnesty days are held four times per year (quarterly) in which residents can deliver their household hazardous wastes (including cans of paint) at no charge. The contractor removes these wastes from the site that same day. Only empty dried out paint cans are accepted throughout the year. If a can of paint or a propane tank with a valve is found by landfill personnel it is taken to the HHWCC for temporary storage in hazardous waste storage sheds until removed from the site by the qualified contractor. The HHWCC is also used to temporarily hold any unacceptable wastes found at any of the other on-site disposal or storage areas. Currently, US Ecology, Inc. removes and properly disposes of the household hazardous wastes. The Household Hazardous Waste Haulers Agreement is contained in Appendix B.

K.1.i Maintenance Building

The onsite maintenance building is within the southeast corner of the lined area of the closed Phase I landfill and to the east of the Phase II Section I Landfill disposal area. Routine maintenance and inspection of landfill equipment is performed in this building. Fuel for the landfill equipment is pumped from a fuel tank, with a containment wall, located immediately adjacent to the maintenance building. Fuel and fluids (engine oil, transmission oil, hydraulic oil, or radiator fluid) are added to the equipment in the maintenance building as needed. If repairs on the equipment are necessary, the equipment is sent to the County's central maintenance shop, located off-site, or to the dealer's authorized maintenance facility.

K.1.j Borrow Area

There are no active borrow areas at the Hardee County Landfill. If offsite borrow material is needed for cover soils or for other operational uses, then a contracted independent contractor will haul in soils.

K.1.k Trained Operators Documentation and Training

In accordance with Rule 62-701.500(1), FAC, key supervisory staff have received Landfill Operator Certification training. A State-certified Landfill Operator will be on site when waste is received for disposal, and a trained spotter is on site during all times when waste is deposited at the landfill working face to detect unacceptable wastes. In addition, the equipment operators have sufficient training and knowledge to move waste and soil, and to develop the site in accordance with the design and operational standards.

As required by Rule 62-701.320(15), FAC a trained operator will be onsite at all times when waste is received at the Hardee County Landfill and a trained spotter will be onsite during all times when solid waste is deposited at the working face. In addition, the equipment operators shall have sufficient training and knowledge to move waste and soil, and to develop the site in accordance with the design and operational standards described in this Operation Plan.

In order to be considered trained; Operators of Class I and Class III landfills shall complete 24 hours of initial training, and shall pass an examination as part of that training. Within three years after

passing the examination, and every three years thereafter, operators shall complete an additional 16 hours of continued training.

In order to be considered trained; spotters shall complete 8 hours of initial training. Within three years after attending the initial training, and every three years thereafter, spotters shall complete an additional 4 hours of continued training.

The following staff positions, along with the names of the current staff, are designated for the landfill operation.

- Solid Waste Director - Tony Perry
- Executive Assistant - Ofelia Reyna
- MRF Operator/Landfill Spotter - Tina Faulkner
- Heavy Equipment Operator/Landfill Operator/Spotter - Dwight Flowers
- Heavy Equipment Operator/Crew Leader/Landfill Operator/Spotter - Troy Weiss
- Equipment Operator/Spotter - Al Hubenka
- Equipment Operator/Leachate Tanker Driver/Landfill Spotter - David Deloach
- Administrative Assistant/Weighmaster - Richard Nichols

Operator and Spotter training courses will be attended as offered by the University of Florida Center for Training, Research and Education for Environmental Occupations (TREEO) and through other FDEP approved sources. A listing of TREEO training courses and schedule is available at www.treeo.ufl.edu and as presented in Appendix C of this Operation Plan.

K.2 LANDFILL OPERATION PLAN

K.2.a Designation of Responsible Operating and Maintenance Personnel

In accordance with Rule 62-701.500(2)a, FAC the Operation Plan designates responsible operating and maintenance personnel. The currently designated person responsible for operations and maintenance at the Hardee County Landfill is:

Tony Perry

Director Solid Waste/Animal Control

Hardee County Solid Waste Department

685 Airport Road

Wauchula, FL 33873

Phone: (863) 773-5089

Any inquiries concerning the management and operation of the Hardee County Landfill facility should be submitted to the Solid Waste Director's attention.

K.2.b Contingency Operations

In accordance with Rule 62-701.500(2)b, FAC the Operation Plan identifies emergency preparedness and response as required in Subsection 62-701.320(16), FAC.

K.2.b.1 Accidental Liquid Spills

In the case of an accidental spill of oil, fuel, leachate, or chemicals, the spill will be minimized by controlling the source immediately (e.g. by closing a valve, turning off switches, or taking other necessary actions to minimize the amount of spillage). The affected area will be controlled by diverting traffic around the spill. Runoff from the affected area will be controlled by placing a berm around the area, plugging a drain or ditch if appropriate, or adding absorbent material. The affected area will be cleaned and the effectiveness of the cleanup will be confirmed by sampling, as needed, depending upon the nature of the spilled material.

If a liquid spill material is found during offloading of waste materials, the hauler will be asked by the County to remove the liquid from the site. If a liquid is found and the hauler cannot be identified or an accidental spill occurs, then absorbent granules or soils will be placed on the spilled liquid by the County. The absorbent granules or soils will be placed in barrels at the HHWCC until a private hauler can remove the material.

K.2.b.2 Handling of Hazardous Waste Materials

Hazardous waste materials are not accepted at the Hardee County Landfill. If a hazardous waste is mistakenly delivered to the landfill or identified after unloading, FDEP will be promptly notified by the County and the hauler identified from a license plate or by hauling records. A front-end loader will isolate the hazardous material from other waste while keeping it within the lined area and marking it with applicable markers. The hazardous materials will be covered with 6-mil visqueen or water-proof plastic tarp and a perimeter berm will be placed around the area to minimize contact with stormwater. The visqueen rolls or plastic tarps are available at the HHWCC. If the hauler is identified, the County will contact the person/entity who dumped the hazardous materials and request removal of the materials within 48 hours. If the 48 hours expire without removal, the County will contact an independent hazardous waste hauler for proper disposal of the hazardous material at a permitted hazardous waste management facility.

Subsequent shipments from sources previously identified for delivery of or delivery from suspected sources of unacceptable waste will only be allowed to dispose of waste materials at the landfill after the load has been thoroughly inspected by County personnel. The inspection will take place prior to unloading the waste and after unloading the waste. After unloading the waste, in a contained designated area, the load will be spread and inspected while the hauler is present. The hauler will be allowed to leave only after the load has been accepted.

In addition to the measures taken at the landfill, the County is involved with several programs, which should reduce the risk of receiving hazardous wastes. The County Public Safety Department

(Emergency Management) contracts with the Central Florida Regional Planning Council (Council) to participate in their Site Notification and Verification and Pollution Prevention Program (Program). In this Program, the Council inspects all businesses in the County, once every five years, to verify the types of wastes generated by each facility and provide proper procedures for handling, storage, transporting, and disposing of any hazardous wastes.

K.2.b.3 Fires

In the event of fire, the responding agency is the Hardee County Fire and Rescue Service (HCFRS), located approximately three miles west of the site in Wauchula, Florida. Additionally, the landfill site is equipped with a dry fire hydrant for the filling of pumper trucks. The dry fire hydrant is located along the access road and is connected to the stormwater pond located immediately north of the scalehouse. Several on-site ponds are also available for filling firefighting trucks equipped with pumps. Four water hydrants are located along the eastside of the Phase I landfill on the east side of the access road. Fire extinguishers are located in the equipment and at the maintenance building for use in the event of small fires. There are also six fire extinguishers and five hose bibs located in the on-site MRF.

If a fire or "hot load" is discovered on the working face, the Solid Waste Director is notified immediately. Landfill equipment is used to pull the burning waste away from the working area and smother it with soil. The area is closed and another area opened to allow landfill operations to continue. If necessary, the HCFRS will be called for assistance. The HCFRS is equipped with self-contained breathing devices. While the service does not receive formal training on fighting landfill fires, the Fire Chief is experienced in dealing with landfill fires and has informed his crew of the proper procedures should a landfill fire occur. Should additional help be necessary, the Hardee County Emergency Management is contacted. In the event that a fire is observed or reported when the landfill is closed, the Sheriff's Office is instructed to contact the Solid Waste Director. The Hardee County Landfill's Fire Contingency Operation Plan is contained in Appendix E.

In addition, the County will also notify the Department via phone or e-mail within 24 hours of a fire occurring at the facility. All fires occurring at the landfill are reported to FDEP by letter, within seven days, explaining the cause, remedial actions, and measures taken to prevent a recurrence.

K.2.b.4 Landfill Shutdown

Should the landfill be shut down for more than 48 hours, FDEP will be notified. The County has a contact list of Class I, Class III, and C&D landfills that neighbor the landfill. Through the "Small County Coalition," various counties work together during times of emergency. The counties on the contact list will work with Hardee County during a time of emergency. The neighboring county's Waste Facility Contact List is contained in Appendix F.

K.2.b.5 Natural Disasters

Natural Disasters are handled by the Hardee County Emergency Management personnel. The Hardee County Emergency Management telephone number is (863) 773-9390. The Solid Waste Director will approve and extend the facility's operating hours during the time of the emergency. The Landfill Hurricane Preparation and Recovery Plan is included as Appendix Q.

K.2.b.6 Emergency Contacts

The following phone numbers can be used to notify the appropriate individual or agency:

Landfill Director:	(863) 773-5089 (Office)
(After hours, call Central Dispatch):	(863) 773-4144
Police:	(863) 773-3265 of 911
Fire and Rescue:	(863) 773-4362 or 911
Hardee Co. Emergency Management:	(863) 773-9390 or 911
FDEP, Tampa:	(813) 470-5700
Public Works:	(863) 773-3272
Equipment Rental:	(813) 671-3700

K.2.c Controlling Types of Waste Received

The landfill operators and scalehouse personnel are responsible for inspecting loads received at the landfill to detect and discourage attempts to dispose of unacceptable wastes. Each vehicle entering the landfill must stop at the scalehouse and have its load weighed in and classified in one of the following categories:

- Residential
- Commercial
- Yard trash and clean wood
- Appliances/scrap metal
- Construction and Demolition debris
- Mixed loads and garbage
- Special handling (including asbestos)
- Pre-tested contaminated soil
- Tires

After classification, the loads are assigned one of the following destinations:

- Class I Landfill
- Construction and Demolition Debris sent to the Class I Landfill

- Yard trash processing area
- Scrap metals and white goods storage area
- MRF
- Waste tire facility
- HHWCC

The scalehouse attendant visually checks each load and, depending on the type of material, directs the driver to the appropriate on-site facility. The waste materials are also visually checked by trained County landfill personnel or spotters at the MRF, landfill working face, yard trash processing area, waste tire facility, scrap metals and white goods storage area, and HHWCC. Random inspections of loads is also practiced to detect and discourage attempts to dispose of unacceptable waste, hazardous wastes, special waste materials or materials that require special processing (e.g. asbestos, contaminated soil, used oil, or biomedical waste). If this inspection reveals any unacceptable or potentially hazardous wastes, the Solid Waste Director is notified immediately.

K.2.c.1 Unacceptable Wastes

Neither Phase II Section I nor the Phase II Section II disposal areas accept closed or sealed containers; all drums, tanks and cans must have one end open and must have been flushed. Other unacceptable wastes include septic tank sludge; paint thinners; gasoline or like liquids; biomedical waste from hospitals, doctor's offices or clinics. The facility does not accept any materials that the hauler cannot identify the composition of nor supply certification that the material is non-hazardous waste. Disposal of liquids or non-liquid (soils, rags, or other debris) containing PCB's (polychlorinated biphenyls) are not accepted at the landfill for disposal or storage. Solid wastes generated from outside the borders of Hardee County are not accepted without prior written approval from the Board of County Commissioners or their designee. All unacceptable waste must be managed as described in this Operation Plan.

A Random Load Inspection Form will be filled out for unacceptable waste; the form is located in Appendix M of this Operation Plan. If the Solid Waste Director deems that the working face should be shut down for safety reasons, another area within the landfill will be opened to allow continuing landfill operations. A private waste hauler will remove unacceptable wastes; the private waste hauler agreement is located in Appendix B.

K.2.c.2 Asbestos

Asbestos Containing Materials (ACM) are accepted at the Hardee County Landfill under certain provision outlined by Chapter 40 CFR Part 61 and the Hardee County Solid Waste Department. The County has notified all known potential asbestos disposers of the required procedures, which must be followed by any person desiring to dispose of ACM. Accepted asbestos material is disposed of using the following procedures (these procedures are also outlined in Appendix G Policy for Asbestos Waste Disposal):

- Prepare a hole three feet in depth and adequate diameter to meet the estimated quantity to be received. Place each package by hand into the prepared hole.

- Cover immediately with one foot of soil and compact with dozer, adding more soil cover material with each pass.

- A site map with the location and depth of each disposal site will be attached in a file with the Waste Shipment Record and record weight ticket.

A minimum of one County personnel will escort the waste hauler to the disposal location and remain with the waste hauler until all of the ACM material has been unloaded and placed into the prepared hole.

K.2.c.3 Contaminated Soils

The County accepts contaminated soils on the condition that they are not hazardous. As stated in the Contaminate Soil Acceptance Criteria, located in Appendix H, it is a requirement that all incoming contaminated soils be TCLP (Toxicity Characteristic Leaching Procedure) and paint filter (Method 9095) tested first before being accepted at this facility for disposal. Depending on the known or suspected contaminant, additional analyses may be required. Records of tests and analyses are kept on file at the landfill facility. Accepted contaminated soils are disposed of in the currently active disposal cell within the bermed working area. The contaminated soil is mixed with soils obtained on site and disposed of as daily cover used for the solid waste only within the lined and bermed working face. The location of contaminated soil can be determined based on the contaminated soils date of arrival and the filling sequence at the landfill. A minimum of one County personnel will escort the waste hauler to the location for the soil and remain with the waste hauler until all of the soil has been unloaded.

K.2.c.4 Used Oil

Used oil shall not be commingled or mixed with solid waste and will not be accepted. Used oil will also not be directly disposed in the Phase II Section I or Phase II Section II disposal areas. Only oily wastes, sorbents, or other materials used for maintenance or to clean up or contain leaks, spills, or accidental releases of oil will be accepted and may be disposed of in the Phase II Section I or Phase II Section II disposal areas.

Used oil, generated by residents only, is collected and stored in the used oil containers in the HHWCC. The used oil at the HHWCC is collected by a private waste disposal service for proper offsite recycling. A minimum of one County personnel will escort the waste hauler to the HHWCC area for unloading.

K.2.c.5 Liquid Restrictions

Noncontainerized liquid waste shall not be placed in solid waste disposal units that accept household waste or construction and demolition debris for disposal unless:

- The waste is household waste other than septic waste; or

- The waste is leachate or gas condensate derived from the solid waste disposal unit, or byproducts of the treatment of such leachate or gas condensate, and the solid waste disposal unit is lined and has a leachate collection system.

Containers holding liquid waste shall not be placed in a solid waste disposal unit unless:

- The container is a small container similar in size to that normally found in household waste;
- The container is designed to hold liquids for use other than storage; or
- The waste is household waste.

Containers or tanks twenty gallons or larger in capacity shall either have one end removed or cut open, or have a series of punctures around the bottom to ensure the container is empty and free of residue. The empty container or tank shall be compacted to its smallest practical volume for disposal.

K.2.c.6 Other Special Waste

- Batteries - Batteries are not accepted for disposal in the Phase II Section I or Phase II Section II disposal areas. Batteries are taken to the HHWCC and stored under cover of the HHWCC. The batteries are stacked three high on pallets, with cardboard placed between each layer. The batteries are covered in shrink wrapped when pallets are full. A minimum of one County personnel will escort the waste hauler to the HHWCC area for unloading.

- Paints - Containers with liquid or "wet" paints are not accepted for disposal in the Phase II Section I or Phase II Section II disposal areas. Only empty dried out paint cans are accepted throughout the year. If a can of paint is found by landfill personnel, the can is taken to the HHWCC for temporary storage in hazardous waste storage sheds until removed from the site by the qualified contractor. A minimum of one County personnel will escort the waste hauler to the HHWCC area for unloading.

- Electronic Waste (e-waste) - When E-Waste items, such as computers, VCRs, TVs and TV remote controls, microwaves are found in the incoming waste loads, their batteries are removed and the batteries taken to the on-site HHWCC. Electronic items such as TVs, computer monitors, cell phones, keyboards, and computer peripherals separated from the waste at the working face will be temporarily stored until placed into a truck and taken to the MRF by the end of the working day or prior to rainfall. The electronic items are dismantled and the recyclable material such as circuit boards are removed by County staff and/or the work squad. The recyclable materials are placed into large plastic bins in the MRF. Once the bins are full they are loaded into a flatbed truck and transported by County staff to a local recycler for further processing. The remaining non-recyclable materials are loaded into a truck and taken to the working face for disposal. Should E-Waste glass or components be shattered or smashed into small pieces, then the debris will be collected and placed into a container and placed into storage sheds at the HHWCC. The E-Waste contractor or hazardous waste haulers will be contracted to dispose of the small E-Waste debris.

- Tires - Incoming waste tires and tires with rims are accepted. Tires will not be disposed in the Phase II Section I or Phase II Section II disposal areas. The waste tires and rims are stored at

the waste tire facility. A minimum of one trained spotter will escort the waste hauler to the waste tire facility for unloading. Refer to Appendix A for the Waste Tire Permit.

- Scrap Metals and White Goods - Scrap metals and white goods will be accepted. These materials are temporarily stored at the scrap metals and white goods storage area. The white goods will be stored in an upright position. All refrigerants, or CFC gases will be collected by the scrap metals contractor (certified to collect refrigerants and gases) prior to being taken off-site for recycling. A minimum of one trained spotter will escort the waste hauler to the scrap metals and white good area for unloading.

- Lawnmowers - Only lawnmowers or other lawn care equipment that has been drained of all the oil and gasoline, prior to delivery, will be accepted. These items will be stored at the white goods and scrap metals area. If a lawnmower or equipment is later found to contain oil and gasoline, the oil and gasoline is drained and the liquids taken to the HHWCC. A minimum of one trained spotter will escort the waste hauler to the scrap metals and white good area for unloading.

- Agricultural Pesticide Containers - Only containers with no pesticide residue, have been thoroughly rinsed, and inspected by landfill personnel, will be accepted. The accepted containers will be disposed in the Phase II Section I or Phase II Section II disposal areas. Containers with liquid or dried pesticide are not accepted for disposal. All residents and business are directed to follow the disposal recommendations on the pesticide container prior to bringing it to the landfill.

- Construction and Demolition (C&D) Debris - The Hardee County Landfill currently does not accept C&D debris from commercial haulers. Residential or mixed loads may contain small amounts of C&D debris material. C&D that is mixed or becomes mixed with Class I waste will be considered Class I waste and will be disposed in the Phase II Section I or Phase II Section II disposal areas.

K.2.c.7 Yard Trash and Clean Wood

Yard trash is defined as vegetative matter resulting from landscaping maintenance or land clearing operations. “Clean” wood defined as lumber, trees, shrubs trunks, branches, and limbs which are free of paints, glue, filler, pentachlorophenol, creosote, tar, asphalt, or other wood preservatives or treatments.

Yard trash is not accepted for disposal in the Phase II Section I or Phase II Section II disposal areas. Only “Clean” wood and yard trash will be accepted for storage and processing at the yard trash processing area. “Unclean” wood, such as painted wood, pressure treated wood, particle board, etc., with the exception of yard trash, will be accepted for disposal in the Phase II Section I or Phase II Section II disposal areas.

When yard trash loads arrive at the landfill, a minimum of one trained spotter will escort the loads to the designated area for yard trash processing.

K.2.c.8 Biomedical

Biomedical waste from hospitals, doctor's offices or clinics is not accepted. The County has a Household Sharps Collection Program permitted through the Florida Department of Health. This program is used to prevent the unauthorized disposal of non-regulated household biomedical waste. The collected materials (i.e. needles, etc.) are temporarily stored in a designated room at the on-site County Animal Control Kennel. The operating procedures for the Sharps Collection program are provided in Appendix I.

K.2.c.9 Procedures for Handling Unacceptable or Improperly Placed Waste Loads

- If unacceptable wastes are discovered, the Solid Waste Director is immediately notified. The waste hauler or generator of the waste is contacted to retrieve and remove the unacceptable waste and instructed on the proper disposal.

- If the waste hauler or generator of the waste is unknown and the unacceptable waste that does not pose a threat to County staff, then the unacceptable waste may be stored, if containers and space are available, at the HHWCC for temporary storage prior to being removed from the site and disposed of properly.

- If unacceptable wastes are of an unknown waste material or pose a threat to County staff or the waste hauler or generator is identified and the quantity of wastes cannot be moved or stored in the HHWCC, a front-end loader will isolate the unacceptable waste from other waste while keeping it within the lined area and marking it with applicable markers. The load will be covered with 6-mil visqueen or water-proof tarp and a perimeter berm will be placed around the load to minimize contact with stormwater. The visqueen rolls or plastic tarps are available at the HHWCC. The County will contact the person/entity who dumped the unacceptable waste and request removal within 48 hours. If the 48 hours expire without removal, the County will contact an independent waste hauler for proper disposal of the waste at a permitted facility.

- Waste materials that can be accepted for storage and disposal; however, are not placed in the appropriate disposal or storage area will be separated from the waste and moved to the appropriate storage or disposal area.

- A Random Load Inspection Form will be filled out for unacceptable waste; the form is located in Appendix M. If the Solid Waste Director deems that the working face should be shut down for safety reasons, another area within the landfill will be opened to allow continuing landfill operations. A private waste hauler will remove unacceptable wastes; the private waste hauler agreement is located in Appendix B.

K.2.d Weighing Incoming Waste

All waste hauling vehicles entering and exiting the landfill are required to pass over the scales located at the facility entrance. Upon entering the facility, the scale house attendant weighs the vehicle and classifies each load, as described in Section K.2.c. The load weights are printed on

tickets and recorded on computer. The waste is categorized and the tonnages are annotated in the appropriate category in the Waste Quantity Form located in Appendix J of this Operation Plan.

K.2.e Vehicle Traffic Control

Signs are posted that indicate name of the operating authority, traffic flow, hours of operation, and restrictions or conditions of disposal. Signs posted at the gate state hours of operation and types of waste restrictions. Upon entering the site, all vehicles are required to stop at the scalehouse for weighing. The scalehouse attendant directs the driver to the appropriate on-site facility for unloading. All site roads are adequate for two-way traffic, and the speed limits are clearly marked. At each on-site facility, landfill personnel direct traffic to unload at the proper area.

K.2.f Method and Sequence of Filling Waste

Refer to the Operation Drawings located in Appendix R for the sequence of filling waste. Loose waste will be spread in two-foot thick layers and compacted to approximately one foot in thickness.

To ensure compliance with the permitted facility filling sequence, the County will survey waste filling approximately monthly, or as needed during operations, to confirm and monitor waste filling elevations, slopes, and dimensions. In addition, as part of the Operation Permit for the facility, an aerial topographic survey is conducted annually which is reviewed to verify waste filling elevations, slopes, and dimensions as part of the annual site life calculations.

The following subsections describe the sequence and procedures for placement and removal of rain tarps on the Phase I sideslope prior to and during the operation of the vertical expansion over Phase I during Phase II Section I and Phase II Section II disposal areas operations at the facility.

K.2.f.1 Phase II Section I Filling

Fill Sequences 1 and 2 have been completed. Fill Sequence 3 is nearly to grade as well.

K.2.f.2 Phase II Section II Disposal Area Southern Portion Filling

The Phase II Section II disposal area consists of the northern portion, approximately 2.33 acres, the center portion approximately 2.22 acres, and the southern portion approximately 1.63 acres. Waste filling of the Phase II Section II disposal areas will be generally conducted as follows.

Generally, the filling of the Phase II Section II disposal area will begin in the southern portion of the disposal area adjacent to the western side of the existing Phase II Section I disposal area. This has been identified as Fill Sequence No. 4 on the Operation Drawings located in Appendix R. The filling will proceed by placing waste along the southern end of this portion and proceeding north and from east to west in this area.

An initial lift of select loose municipal solid waste, a minimum of four feet in thickness, will be placed over the protective sand layer. The select waste will be spread out and inspected for large rigid objects that may puncture the liner system when compacted. This waste thickness will bring the southern portion disposal area slightly below the western and southern perimeter road and the interior separation berm along the north side of the area (which separates it from the Phase II

Section II disposal area center portion). After the layer of select waste has been placed, additional waste will be placed in order to make the first lift approximately 10 feet thick across the Phase II Section II disposal area within this location. The limits of waste (as shown on the Operation Drawings located in Appendix R) and surface of the waste layer will be placed so it is sloped back "into" the landfill cell. Also, the limits of waste along the northern portion of this area will be placed approximately 10 feet to the south of the interior separation berm along the north side of the area to ensure waste/leachate runoff does not enter the Phase II Section II disposal area center portion.

In addition, a perimeter berm will be placed around the exterior of the placed waste (southern and western sides) to ensure no runoff of stormwater from the waste will occur outside of the lined cell area. Successive waste layers will be added in this southern portion in 10-foot lifts working from south to north and east to west. Each layer will be placed across the cell bottom and against the existing western sideslope of the Phase II Section I disposal area. Once the Phase II Section II disposal area southern portion has reached a vertical elevation of approximately EL 113.5 feet NGVD top of waste, filling within the portion will be temporarily stopped. Depending on the quantity of waste received at the facility, filling within this portion could resume within approximately 60 months. During the time period when filling within the portion has been temporarily stopped cover and erosion control measures that will be implemented in the temporarily inactive areas could include soil cover, seeding, mulching, and/or rain tarp placement. Please refer to the Operation Drawings located in Appendix R for a plan view and section views of Fill Sequence No. 4 within the Phase II Section II disposal area southern portion.

K.2.f.3 Phase II Section II Disposal Area Center Portion Filling

Filling will then begin in the center portion of the Phase II Section II disposal area working from north to south. This has been identified as Fill Sequence No. 5. An initial lift of select loose municipal solid waste, a minimum of four feet in thickness, will be placed over the protective sand layer. The select waste will be spread out and inspected for large rigid objects that may puncture the liner system when compacted. After the layer of select waste has been placed, additional waste will be placed in order to make the first lift approximately 10 feet thick across the center portion of the Phase II Section II disposal area. This waste thickness will bring the center portion disposal area slightly below the western perimeter road and the interior separation berm along the south side of the area (which separates it from the Phase II Section II disposal area southern portion). The limits of waste (as shown on the Operation Drawings located in Appendix R) and surface of the waste layer will be placed so it is sloped back "into" the landfill cell.

Also, the limits of waste along the northern portion of this area will be placed approximately 50 feet to the south of the east/west main LCS header trench which has been elevated with protective cover material to create an interior separation berm. This interior separation berm will separate the Phase II Section II disposal area center portion from the northern portion to ensure waste/leachate runoff does not enter the Phase II Section II disposal area northern portion which is covered with a rain tarp. In addition, a perimeter berm will be placed along the exterior of the placed waste (western side) to ensure no runoff of stormwater from the waste will occur outside of the lined cell area.

After the initial 10-foot lift according to the above-mentioned methods, successive waste layers will be added in this center portion in 10-foot lifts. Filling will proceed from north to south and east to west. Each layer will be placed across the cell bottom and against the existing western sideslope of the Phase I disposal area. In addition, while filling from north to south, waste will also be placed against the north sideslope of the Phase II Section II disposal area south portion previously filled in

Fill Sequence No. 4. Eventually, waste filling will reach an elevation that waste will also be placed on the western and top portion of the Phase II Section I disposal area previously filled in Fill Sequence No. 3. Filling in this manner will meet the peak elevation obtained in Fill Sequence No. 3 of approximately EL 166 feet NGVD.

Prior to placing waste against the Phase I sideslope, the procedures outlined below in "Waste Placement Against Phase I Sideslope" will be followed by the County. Once Fill Sequence No. 5 has been completed, filling within the portion will be temporarily stopped. Depending on the quantity of waste received at the facility, filling within this portion could resume within approximately 72 months. During the time period when filling within the portion has been temporarily stopped cover and erosion control measures that will be implemented in the temporarily inactive areas could include soil cover, seeding, mulching, and/or rain tarp placement. Please refer to the Operation Drawings located in Appendix R for plan views and section views of the proposed fill sequencing within the Phase II Section II disposal area center portion.

K.2.f.4 Phase II Section II Disposal Area Northern Portion Filling

Filling will then begin in the northern portion of the Phase II Section II disposal area working from south to north after removal of the rain tarp. This has been identified as Fill Sequence No. 6. An initial lift of select loose municipal solid waste, a minimum of four feet in thickness, will be placed over the protective sand layer. This will also include the 50 foot offset created during Fill Sequence No. 5 between the north and center portions of the Phase II Section II disposal area. The select waste will be spread out and inspected for large rigid objects that may puncture the liner system when compacted. After the layer of select waste has been placed, additional waste will be placed in order to make the first lift approximately 10 feet thick across the entire Phase II Section II disposal area. This waste thickness will bring the northern portion (and the 50 foot offset area) disposal area below the western and northern perimeter road. The limits of waste (as shown on the Operation Drawings located in Appendix R) and surface of the waste layer will be placed so it is sloped back "into" the landfill cell. In addition, a perimeter berm will be placed along the exterior of the placed waste (western and northern sides) to ensure no runoff of stormwater from the waste will occur outside of the lined cell area.

After the initial 10-foot lift according to the above-mentioned methods, successive waste layers will be added in this northern portion in 10-foot lifts. Filling will proceed from south to north and east to west. Each layer will be placed across the cell bottom and against the existing western sideslope of the Phase I disposal area. In addition, while filling from south to north, waste will also be placed against the north sideslope of the Phase II Section II disposal area center portion previously filled in Fill Sequence No. 5. Prior to placing waste against the Phase I sideslope, the procedures outlined below in "Waste Placement Against Phase I Sideslope" will be followed by the County.

K.2.f.5 Waste Placement Against Phase I Sideslope

Prior to placement of waste against the western sideslope of the Phase I disposal area (as indicated above during filling of the center and northern portions of the Phase II Section II disposal area), the County will remove only as much of the rain tarp (installed over the existing sod during construction of the Phase II Section II Expansion) and existing sod within an area of the sideslope where waste would be placed as needed. Rain tarp and sod within select areas will only be removed by the County as needed prior to waste filling. The remainder of the rain tarp and sod along the western sideslope of the Phase I disposal area will remain in place until further removal is required for additional waste

placement to prevent washout of the existing drainage sand material along the sideslope during storm events and stormwater infiltration/runoff into the active waste filling area.

As soon as the rain tarp and sod is removed within a select area of the Phase I sideslope prior to waste filling, County personnel will conduct depth checks by hand (on an approximately 25-foot grid) of the remaining sideslope protective cover material to ensure there is 24-inches (measured perpendicular to the slope) of protective material remaining. If the County depth checks and measurements indicate there is 24-inches of protective material remaining, no other field work will be conducted by the County prior to waste placement along the Phase I sideslope in that area. The County will then notify FDEP according to Part K.2.f.7 prior to waste placement.

If the County depth checks indicate less than 24-inches of protective material is remaining after the rain tarp and sod removal the County will place additional protective material within the area prior to waste placement as needed to obtain the required depth. Following material placement to the required depth by the County, the County will notify FDEP according to Part K.2.f.7 prior to waste placement.

K.2.f.6 Protective Soil/Drainage Sand Material

During construction of the Phase II Section II Expansion, the County stockpiled protective soil/drainage sand material onsite, which met the requirements of the project Technical Specifications (minimum hydraulic conductivity of 1x10-3 cm/sec, gradation, etc.) and was approved by the Engineer during construction, for future use. This material would be placed as needed by the County against the Phase I sideslope prior to waste placement in the locations identified from the depth checks that less than 24-inches of the existing protective material was remaining after the rain tarp and sod removal. If the stockpiled protective material has been depleted by the County and additional material is required, the County shall perform material testing as required for protective soil/drainage sand by Specification Section 02220 Excavation, Backfill, Fill, and Grading (used during the construction of the Phase II Section II Expansion project, a copy has been provided in Appendix S for ease of reference) from a suitable source. After the material has met the requirements of the Specification, the additional material may be utilized by the County.

K.2.f.7 Confirmation of Protective Soil/Drainage Sand Material Depth

After confirmation by the County that 24-inches of protective material is in place along the Phase I sideslope after removal of the rain tarp and existing sod, through the processes as indicated above in Part K.2.f.5, the County shall provide FDEP a certification statement to the effect prior to waste placement. In addition, the County shall provide confirmation that the processes as indicated above in Part K.2.f.6 were followed regarding the protective material placed against the Phase I sideslope after sod removal.

The certification statement shall either be signed and sealed by the Engineer of Record that conducted and/or monitored the protective soil/drainage sand depth checks and soil replacement or reviewed appropriate documentation of the work; or shall include adequate documentation of work that can be reviewed by the Department. In the event that the certification statement is not signed and sealed by the Engineer of Record, the certification statement and supporting documentation shall be submitted at least seven days prior to waste placement over the certified area to allow for Department review of the submittal.

K.2.f.8 Temporary Sideslope Berms

In addition, to reduce the amount of stormwater infiltration and surface water runoff into the Phase II Section II disposal area center and northern portions (and generating additional leachate), the County will ensure the rain tarp (placed during construction of the Phase II Section II Expansion project over the existing sod) is maintained as needed along the western sideslope of the Phase I area. In addition, the County will construct temporary sideslope berms along the western Phase I sideslope during operations as needed (discussed further below). The temporary sideslope berms will be active in nature to ensure the rain tarp directs the surface water runoff away from the active filling area. The County will create temporary sideslope berms as needed to accommodate fill sequencing which will be used to control the surface water runoff from the rain tarp and direct it away from the active filling area to reduce surface water runoff into active waste filling to the extent practical.

The temporary sideslope berms will help direct the southern half of the rain-tarped western Phase I sideslope surface water runoff into the Phase II Section II disposal area northern portion (which will be covered with a rain tarp while waste filling is not occurring) while filling in the center portion. This surface water runoff can then be pumped as needed from the northern portion area into the perimeter stormwater management system.

The temporary sideslope berms created along the northern half of the rain-tarped western Phase I sideslope will help direct the surface water runoff into the northern perimeter stormwater management system swale while filling in the northern portion. This will also reduce the amount of surface water runoff entering the northern portion and generating additional leachate.

In addition, prior to filling, the County will remove the concrete rubble rip rap from within the temporary stormwater downchutes located along the sideslope. After removal of the rip rap, the County will place drainage sand within the downchute areas to a minimum of two feet. After removal of rain tarp, sod, and rip rap, filling will begin by placing waste against the sideslope of the Phase I disposal area and raising the Phase II Section II disposal area up. Final filling will achieve the grades shown on the Operation Drawings located in Appendix R.

The County will not recirculate leachate but will use a temporary movable system to conduct leachate evaporation during operation of the Phase II Section II disposal area. Ditches, berms, or other devices shall be constructed to control leachate runoff during evaporation operation. However, the quantity of leachate applied during leachate evaporation shall not be in such a quantity as to require ditches, berms, or other devices to control leachate runoff or the need to shed runoff to the leachate collection system. Initial and intermediate cover receiving leachate from the leachate evaporation process shall be graded to shed runoff into the leachate collection system and to minimize mixing of leachate runoff and stormwater. Initial and intermediate cover shall be permeable to the extent necessary to prevent perched water conditions and gas buildup. Leachate evaporation shall not be conducted during weather conditions or in quantities that may cause runoff outside the solid waste disposal unit, surface seeps, wind-blown spray, or exceedance of the limits of the leachate head on the liner. The application of leachate for evaporation shall be such that leachate runoff is prevented and leachate is only applied to those areas and cover soils that do not runoff to the stormwater system.

In summary, while no waste filling is occurring in the center and north portions of the Phase II Section II disposal area, the rain tarp placed along the Phase I western sideslope during the Phase II Section Expansion project will remain intact and unchanged. Just prior to waste filling within the center portion of the Phase II Section II disposal area, the County will remove only as much of the

existing rain tarp and sod along the south portion of the Phase I western sideslope as needed to accommodate filling within the center portion (north portion of the sideslope rain tarp will remain in place). After the rain tarp and sod removal the County will construct a temporary sideslope berm within the area which will direct the southern half of the rain-tarped western sideslope surface water runoff into the Phase II Section II disposal area north portion. The County will also wrap the rain tarp over the top of the temporary sideslope berm to minimize erosion of the berm. After the required field work and Department notification has been conducted and provided by the County as indicated within Parts K.2.f.5, K.2.f.6, and K.2.f.7 the County will then begin waste filling within the center portion. Once waste filling within the center portion and up against the Phase I western sideslope has reached the temporary sideslope berm constructed in the area the County will then repeat this process. Rain tarp and sod will be removed, a temporary sideslope berm will be constructed, the remaining rain tarp will be wrapped over the top of the sideslope berm, required field work and Department notification will be conducted and provided as indicated within Parts K.2.f.5, K.2.f.6, and K.2.f.7 and waste filling will continue as per the fill sequencing plans. Once the grades have reached the elevations as indicated in the fill sequencing plans for the center portion, the County will repeat the process along the northern portion of the Phase I western sideslope for waste filling within the Phase II Section II disposal area north portion. The only difference will be the temporary sideslope berms will be constructed by the County in a manner to direct the sideslope surface water runoff into the northern perimeter stormwater management system swale while waste filling in the northern portion.

K.2.g Waste Spreading, Compaction, and Cover Procedures

Waste spreading, compaction, and cover procedures are discussed in Section K.7 of this Operation Plan.

K.2.h Operations of Gas, Leachate, and Stormwater Controls

K.2.h.1 Operation of Gas Controls

Landfill gas (LFG) that is generated by the anaerobic decomposition of the waste buried within the landfill is allowed to vent to the atmosphere. The current LFG management system in place at the landfill consists of 13 LFG monitoring probes located around the perimeter of the existing landfill footprint and at the property boundary. The existing LFG monitoring plan includes quarterly monitoring of these probes, as well as on-site structures.

With the prior construction of the Phase II Section II disposal area to the west and south of the existing landfill, it was necessary to relocate several of the existing LFG monitoring probes outside of the disposal area. The County abandoned LFG monitoring probes GP-3, GP-4, GP-5, and GP-6 and installed replacement LFG monitoring wells designated as GP-3R, GP-4R, GP-5R, GP-6R, GP-7R, and GP-8R, as shown on the Operation Drawings located in Appendix R. The replacement LFG monitoring wells are located along the west side and northwest corner of the property. LFG monitoring well, GP-1, GP-2, and GP-3R, will be used to detect possible subsurface migration of LFG toward the north side of the property.

The Hardee County Landfill does not currently have a LFG management system. LFG that is generated is allowed to vent to the atmosphere. A passive LFG vent system was constructed during the Phase I closure project. Along the western sideslope of the Phase I area where the Phase II

Section II disposal area will "piggy-back" there is an existing passive LFG vent system which includes horizontal LFG vent trenches under the sideslope (bottom liner system). The horizontal LFG vent trenches are identified as HC-2, HC-3, and HC-4. The horizontal LFG vent trenches also contain a vertical LFG vent under the sideslope (bottom liner system) to collect LFG from the uppermost 2/3 of the waste (vertical component of the horizontal LFG vent trenches). The vertical components of the horizontal LFG vent trenches, 4 within the area, are identified as HC-2.1, HC-2.2, HC-3.1 and HC-4.1. In addition, the horizontal LFG vent trenches (connected to the vertical components) are also connected to a horizontal LFG vent gooseneck located at the crest of the Phase I area. The horizontal LFG vent goosenecks, 3 total, are identified as HC-2, HC-3, and HC-4. Refer to the Operation Drawings located in Appendix R.

The existing passive LFG venting system under the western sideslope of the Phase I area will still be permitted to vent freely to the atmosphere due to the Phase II Section II disposal area "piggy-back". LFG will be vented from the interface between the existing Phase I landfill western sideslope (bottom liner system) and the vertical expansion slopes above to prevent accumulation of gas under the existing liner system. The horizontal vent trenches and vertical component of the horizontal LFG vent trenches will convey LFG to the existing vertical vents (goosenecks) at the western crest of the Phase I area outside of the limits of where the Phase II Section II disposal area will "piggy-back".

The LFG gas venting system for the Hardee County Landfill will be designed and permitted upon submittal of the closure application for the area. LFG will be permitted to vent freely to the atmosphere through a proposed passive LFG vent system, vertical vents and horizontal vent trenches, thereby limiting the pressure within the landfill and reducing the potential for lateral migration of LFG through the surrounding subsurface. Surface water and groundwater contact with the wastes will be prevented as demonstrated by the facility design.

K.2.h.2 Operation of Leachate Controls

Operation of the leachate management system is discussed in Section K.8.b of this Operation Plan.

K.2.h.3 Operation of Stormwater Controls

Operation of the stormwater control system is discussed in Section K.10 of this Operations Plan.

K.2.i Water Quality Monitoring

Refer to the Groundwater Monitoring Plan for site-specific test parameters, locations, frequencies, and reports.

K.2.j Maintaining and Cleaning the Leachate Collection System

The Operation Plan identifies maintaining and cleaning the leachate collection system at the landfill. The leachate collection and leak detection laterals and headers shown on the Operation Drawings located in Appendix R will be cleaned and maintained through the cleanout riser pipes. The LCRS pipes will be cleaned by flushing and/or be inspected by video recording in accordance with Rule 62-701.500(8)(h), FAC [effective 8/12/12] at least once every five years during the 20-year Operation

Permit period. The pipes will be inspected by video recording after initial construction in accordance with Rule 62-701.500(8)(h), FAC and after one year of waste placement. If material is found to have settled out in the pipes, the pipes will be cleaned and flushed and re-inspected in 12 months and at least once every five years during the 20-year Operation Permit period. The Phase II Section I and Phase II Section II landfill disposal areas have independent and separate leachate collection systems.

K.2.j.1 Phase I Leachate Collection System

Leachate generated in the Phase I disposal area (with the natural clay bottom and geomembrane sideliner) is collected in a perimeter collection pipe surrounding the waste materials. The leachate collection pipes are accessible through a series of manholes, designated as Manholes 1 through 9 (Manhole Number 8 is the main leachate collection pump station). Leachate in the collection system drains to Manhole Number 8 and is then pumped to one of the leachate storage tanks. The leachate collection lines in the Phase I cell are eight-inch diameter HDPE pipes. The Phase II Section I disposal area construction included replacing the existing 8-inch diameter HDPE leachate collection pipes from MH-6 to MH-7 and MH-7 to MH-8 with new 10-inch diameter HDPE leachate collection pipes. This 10-inch diameter pipe can be accessed through MH-8 for inspection and cleaning as needed. These pipes are adequately sized to allow access for jet cleaning hoses and video cameras.

Manholes one (MH-1), two (MH-2), three (MH-3), four (MH-4), eight (MH-8), and nine (MH-9) will not be waste filled above the manhole and therefore will remain accessible for cleanout and inspection of the pipelines. The Phase I leachate collection system can be video inspected as well as cleaned through MH-1, MH-2, MH-3, MH-4, MH-8, or MH-9. From MH-4, a camera can travel to MH-5, MH-6, and MH-7 to inspect the leachate collection lines.

As part of the maintenance of the leachate collection system for the Phase I disposal area, the manholes will be opened and inspected, at least monthly, for sediment buildup that may impede the flow of leachate. Jet cleaning and/or video taping of the entire system will occur in accordance with Rule 62-701.500(8)(h), FAC [effective 8/12/12] at least once every five years during the 20-year Operation Permit period. **(Note the manholes can gather landfill gases and are a confined space entry. Personnel are required to properly ventilate the manholes and have proper confined space entry training prior to working in the manholes)**. Sediment buildup will be removed, using a vacuum assisted truck, and the manhole re-inspected to assess the clean-up operation.

K.2.j.2 Phase II Section I Disposal Area Leachate Collection/Detection System

The entire Phase II Section I disposal area leachate collection and detection system comprises of geocomposite materials that collect and drain leachate toward eight-inch perforated HDPE pipe spaced approximately 105 feet on center. The eight-inch pipes drain towards a sump located in the northeast corner of the Phase II Section I disposal area. A 24-inch leachate sideslope riser pipe is located in the sump with a pump to discharge leachate into the leachate storage tanks. Access to the leachate collection system can be attained from the 24-inch riser pipe. The leachate collection and detection systems are sized adequately to fit jet cleaning and video camera for cleaning and inspection.

As part of the maintenance of the Phase II Section I disposal area leachate collection system, the 24-inch riser pipes can be accessed, annually, for inspection of sediment buildup that may impede the flow of leachate. (Note the sideslope risers can gather landfill gases. Personnel are required to properly ventilate the risers prior to inspecting or cleaning). Sediment buildup will be removed using a vacuum assisted truck, and the sideslope riser and sump re-inspected to assess the clean-up operation.

K.2.j.3 Phase II Section II Disposal Area Leachate Collection / Detection System

In accordance with Rule 62-701.500(8)h, new leachate collection systems shall be water pressure cleaned or inspected by video recording after construction but prior to initial placement of wastes. The Hardee County Landfill leachate collection system shall be water pressure cleaned and/or inspected by video recording in accordance with Rule 62-701.500(8)(h), FAC [effective 8/12/12] at least once every five years during the 20-year Operation Permit period.

Per the requirement of the Operation Permit, the entire LCRS (Phase I, Phase II Section I, and Phase II Section II) shall be water pressure cleaned and/or video inspected to verify adequate performance. Components not performing adequately shall be cleaned and/or repaired. The inspection report shall include an evaluation of the effectiveness of the system, the location (indicated on a Site Plan) and cause of obstructions encountered, proposed corrective actions as appropriate. The most recent inspection and cleaning of the leachate collection and removal system for Phase I, Phase II Section I, and Phase II Section II southern portion was completed in July 2019.

The LCRS, as shown on the Operation Drawings located in Appendix R, includes the 24-inch thick sloping sand drainage layer, a sloped bi-planar geocomposite (i.e., the geonet or drainage net) and a piping network. The bi-planar geocomposite and the drainage layer are installed at a slope across the Phase II Section II disposal area. A series of sloped 8-inch and 10-inch diameter HDPE perforated pipes are placed in rock-filled trenches wrapped with a geotextile that are spaced at regular, predetermined intervals across the geocomposite lining. Together the piping and geocomposite collect leachate flowing through the drainage layer and transport it to the leachate collection header trench which in turn transports the leachate via gravity to the leachate collection sump. The leachate sump is equipped with submersible pumps that discharge the leachate out of the sump through a pipeline and out of the cell.

From that point the leachate travels in a pressure pipeline (i.e., a force main) from the cell to the leachate collection sideslope risers located along the western side of the south portion of the Phase II Section II disposal area. The sideslope risers are extensions of the leachate collection pipes for the Phase II Section II disposal area area connected to the leachate collection lines located within the Phase II Section I disposal area. Leachate will then flow via gravity to the existing leachate collection sump and pumps located within the Phase II Section I area. From the Phase II Section I sump the leachate will be pumped into the existing above ground leachate storage tanks.

K.2.j.4 Leachate Storage Tanks

The County pumps the leachate tanks on a daily basis and takes loads of leachate to the City of Wauchula Municipal Wastewater Treatment Plant. The Hardee County Landfill has an agreement

with the City of Wauchula Municipal Wastewater Treatment Plant to receive and treat leachate from the landfill facility; this agreement is located in Appendix L.

The exterior of the leachate storage tanks will be inspected, at least weekly, for the adequacy of overfill protection system, the cathodic protection system, for leaks, corrosion, and maintenance deficiencies. The interior of the tanks shall be inspected when the tank is drained, at a minimum of every three years, or at the manufacturers recommended frequency. Interior inspection shall include inspection of the tank wall for corrosion, coatings, or structural damage.

If the inspection reveals a tank or equipment deficiency or leaks that could result in the failure of the tank to contain the leachate, then remedial measures shall be taken immediately to correct the deficiency or leak.

Hardee County personnel monitor the overfill protection system on a weekly basis. County personnel monitor the amount of liquid entering the tanks at the control panel to prevent possible overfilling of the tank, however ultra-sonic liquid level indicators continually monitor the levels in the tank as described in this Operations Plan. The ultra-sonic level indicators shut-off flow to the tanks from the lift station should the levels exceed a pre-determined level. Routine inspections of the overfill protection systems include:

- Inspection of flow meters from the lift station to the tanks to ensure proper operation.
- Inspection and testing of the overfill alarms and shut-off controls for proper operations.
- Examining the overflow pipes in tank 1 for obstructions.
- Check the operations of the ultra-sonic level indicators located on top of each of the tanks for proper operations.
- Monitoring the liquid levels in both tanks.

K.2.k Maintaining and Cleaning the Groundwater Intercept System

Per the requirement of the Operation Permit, the entire groundwater interceptor system (Phase II Section I and the southern portion of the Phase II Section II disposal area) shall be water pressure cleaned and video inspected to verify adequate performance. Components not performing adequately shall be cleaned and/or repaired. The inspection report shall include an evaluation of the effectiveness of the system, the location (indicated on a Site Plan) and cause of obstructions encountered, proposed corrective actions as appropriate. The most recent inspection and cleaning of the groundwater interceptor system was completed in July 2019.

The Phase II Section I and the southern portion of the Phase II Section II disposal areas have a series of nine 8-inch diameter underground groundwater collection pipes, identified as CO1 through CO9, to intercept and collect groundwater variances above the seasonal high groundwater elevations. The underground groundwater collection system consists of a series of 8-inch HDPE laterals running west to east that intercepts rises in the groundwater elevation before it impacts the subbase of the Phase II Section I and southern portion of the Phase II Section II disposal areas. The laterals flow west to east into a 12-inch HDPE common header pipe located beneath the eastern side of the Phase II

Section I disposal area. The header pipe then flows into a groundwater pump station located southeast of the Phase II Section I disposal area.

As part of the maintenance of the Phase II Section I and southern portion of the Phase II Section II disposal areas groundwater intercept system, a series of 10-inch groundwater clean-out risers are located along the western side of the southern portion of the Phase II Section II disposal area that can be accessed to allow jet cleaning (water pressure cleaning) and/or video inspection of the groundwater intercept system. Jet cleaning and/or video inspection of the entire groundwater intercept system will occur in accordance with Rule 62-701.500(8)(h), FAC [effective 8/12/12] at least once every five years during the 20-year Operation Permit period. The groundwater intercept system laterals are 8-inch diameter pipes and are sized adequately to fit jet cleaning hoses and video cameras. The inspection of the groundwater interceptor system, including the pumps on/off levels (groundwater intercept system pumps on/off levels are listed in the Section Operation and Maintenance of Leachate Collection and Removal System and Groundwater Control System under subsection Groundwater Interceptor System), the stormwater swale located adjacent to the groundwater interceptor system pump station which transports the pumped groundwater to the stormwater management system, and the maintained liquid level within the wet well will be used to evaluate the function of the system. **(Note the groundwater cleanout risers can gather landfill gases. Personnel are required to properly ventilate the risers prior to cleaning)**.

Sediment that has been jet cleaned from the groundwater intercept system will be flushed toward the groundwater intercept pump station. The flushed sediment will be removed from the groundwater intercept pump station using a vacuum assisted truck. **(Note the pump station can gather landfill gases and should be considered a confined space entry). Personnel are required to properly ventilate the pump station and have proper confined entry training prior to working in the pump station)**.

K.3 LANDFILL OPERATING RECORD

Copies of the FDEP Operation Permit, all operating records, reports, engineering drawings, training records, etc. are kept on file at the landfill scalehouse. Upon request, the records will be made available for FDEP inspection. All records pertaining to the operation of the facility, except for weigh tickets, will be retained throughout the design life of the landfill. Weigh tickets shall be kept for five years. All water quality records, monitoring records, calibration and maintenance records, and reports required by the Operation Permit will be retained for at least ten years.

K.4 WASTE RECORDS

Waste reports that include waste type and quantity are compiled monthly and submitted to the Department annually. The monthly reports shall be kept on file at the facility and are available for inspection by the Department upon request. The waste information shall be reported to the Department through the DEP Business Portal located at: http://www.fldepportal.com/gov. The waste is categorized and the tonnages are annotated in the appropriate category in the Waste Quantity Form located in Appendix J of this Operation Plan. Reports include: (a) types of solid waste received, and (b) quantities of solid waste received by category. The landfill operator also estimates the amount of the following waste categories:

Residential	Scrap Metals White Goods	Used Oil

Commercial	Asbestos
C&D Debris	Battery
Clean Wood and Yard Trash	Tires

Additionally, the County maintains all manifests provided by the contractors for the recyclable special wastes on file. These manifests are available for FDEP inspection upon request.

K.5 METHODS OF ACCESS CONTROL

To prevent unauthorized waste disposal and unauthorized access to and use of the landfill, the entire site is surrounded by a fence. The entrance/exit to the facility is controlled by the scalehouse attendant. All vehicles entering the site must pass by the scalehouse. All visitors or customers must stop at the scalehouse either to have their vehicle weighed or to register by signing a "visitor log." When the facility is closed the gates are locked.

K.6 LOAD CHECKING PROGRAM

This Operation Plan lists the waste materials and their proper disposal or storage locations at the landfill. Also listed are waste materials that are prohibited from entering or being disposed of in the landfill. Load inspections at the yard trash processing area, and the Phase II Section I, and Phase II Section II disposal areas occur as part of the facility's normal operating procedures. During operations, trained spotters will look for unacceptable waste or waste materials that are not properly stored in the appropriate location on the landfill.

The County will conduct a load-checking program to detect and discourage attempts to dispose of unacceptable and special waste materials. Of these inspections, a minimum of three (3) random load inspections are recorded each week. Each inspection will be completed by personnel trained to recognize unacceptable wastes, regulated hazardous waste, and PCB waste.

At the landfill working face, a waste delivery vehicle will be selected at random and directed by County personnel to an area away from the active disposal area (but still within the lined area). The waste delivery vehicle will discharge the load for a detailed inspection by a minimum of one trained County personnel. The waste delivery vehicle will not be allowed to leave the facility until the load the inspection is complete and determination on the acceptance has been made on the waste load. The waste hauler will be required to remove unacceptable waste materials from the landfill. Waste materials that are not placed in the appropriate disposal or storage area will be reloaded on the vehicle and County personnel will escort the vehicle to the appropriate unloading area. The random load inspections will be documented on a inspection form which includes the date and time, name of the hauling company and the driver of the vehicle, the vehicle's license plate number, the source of the waste or generator, and any notes made by the inspector. **The inspector will identify and note all unacceptable or prohibited wastes found during the random load inspection, estimated quantities, and the action taken for the waste material. The inspector will sign the inspection form. The inspection form will be retained at the Hardee County Landfill.**

The inspection results will be recorded on the Random Load Inspection form, located in Appendix M of this Operation Plan. Upon completion of the random load inspection, the procedures for handling waste loads will be followed as described in this Operation Plan.

K.7 WASTE SPREADING, COMPACTION, AND PROCEDURES

The bulldozer operator at the facility will spread the waste unloaded by trucks. Compaction will be achieved during the spreading and shaping operation with a compactor and by incoming vehicles driving over the in-place waste.

K.7.a Waste Layer Thickness and Compaction Frequencies

When waste is disposed of, it is spread in two-foot thick layers and compacted with equipment of sufficient weight to compact the waste to approximately one-foot in thickness. Generally three to five passes should be sufficient to compact the waste. The maximum lift height is ten feet high.

Waste will be placed and compacted on the designated slopes of the landfill to match the contours as shown on the Operation Drawings located in Appendix R however;

- Previously filled outside slopes designated to receive additional waste shall be surveyed and marked in the field to ensure that at least a two foot compacted thick waste layer is available prior to disturbance, and

- All slopes shall not exceed 3H:1V at any time during waste filling, after application of cover soils, and final closure. All slopes shall conform to the design dimensions, slopes, and elevations shown on the Operations Drawings located in Appendix R.

K.7.b First Layer of Waste

The procedure for filling and compacting the first layer of waste in the Phase II Section II disposal area footprint will protect the integrity of the liner and leachate collection system. An initial lift of select waste, a minimum of four feet in thickness, will be placed over the protective sand layer. The select waste will be loose municipal solid waste. The loose waste will be spread out and inspected for large rigid objects that may puncture the liner system when compacted. Large rigid objects will be removed from the loose waste and placed in an area for future placement and disposal above the initial four foot lift. Heavy vehicles will not be allowed to drive directly on the sand layer.

K.7.c Slopes of Cell Working Face, Side Grades, and Lift Depths

The exterior side slopes of the Phase II Section I and Phase II Section II areas above grade shall not exceed 3H: 1V. The slopes will vary with daily operations but shall conform to the slopes indicated on the Operation Drawings for the landfill. The typical minimum top slopes to promote drainage will be maintained at approximately two percent within the bermed working face and on the intermediate cover areas. All slopes shall conform to the slopes indicated on the Operation Drawings located in Appendix R. The top slope will be maintained at an approximate slope of 4 or 5 percent based on the area of the landfill to promote positive drainage. Waste will typically be dumped in a single pile by each incoming truck and spread into approximately two-foot thick lifts by equipment of sufficient weight to compact the waste to approximately one-foot in thickness. The maximum lift height is ten feet high. When the lift height is reached, daily cover is placed over the lift.

K.7.d Maximum Width of Working Face

The working face will be kept as small as practical but large enough to allow up to four trucks to be unloaded at one time. Also, the direction of waste placement may vary from time to time depending on site-specific conditions and weather. Berms comprised of clean soil will be placed around the working face at all times to contain all leachate and prevent leachate runoff from the working face from entering the stormwater management system or leaving the lined disposal area. Special attention/maintenance will be used on areas where traffic enters the working area to ensure leachate is contained within the bermed area and to prevent leachate from leaving the working area.

K.7.e Initial Cover Type

In accordance with Rule 62-701.500(7)e.1 through 62-701.500(7)e.4, FAC initial cover is used to control disease vector/animal attraction, fires, odors, blowing litter, and moisture infiltration. As approved by FDEP, the initial cover used at the landfill will consist of a 6-inch thick layer of soil obtained from off-site borrow sources. Tarps, processed tires, and/or processed mulch may be used as a temporary daily cover on the exposed side of the working face of the disposal area if additional waste material will be deposited within 18 hours. Tarps will be removed before placement of successive lifts. Processed tires that will be used for initial cover are stored in the southwest corner of the site near the concrete stockpiles.

K.7.f Initial Cover Application Procedures and Frequency

The working face shall be covered with a 6-inch thick layer of soil, processed mulch, processed tires, and/or tarps at the end of each working day. All waste materials will be compacted prior to application of initial cover.

The initial cover, if soil is used, will be spread to cover the entire working face with a uniform six-inch soil cover (free of waste) using a dozer or applicable equipment. If tarps are used as temporary daily cover then, the tarps will be spread to cover the waste material. Sand or the tarp spreader bar will be used to minimize uplift be wind. When the working face area exceeds the area of available tarp, then six inches of compacted soil will be placed to cover the waste material. Processed yard trash or clean wood (mulch) may be spread over the initial soil cover for stabilization and erosion control measures.

K.7.g Intermediate Cover Application Procedures

Intermediate cover, an additional 12-inches thick layer of compacted soil on top of the 6-inch thick layer of compacted initial soil cover, will be applied within seven days over areas that will not receive additional waste within 180 days. Intermediate cover consists of compacted sandy soils from an off-site borrow sources. The intermediate cover soils will be spread using a bulldozer. The bulldozer will make a minimum of three to four passes to compact the soils.

Soils containing any waste materials cannot be used as intermediate cover and must be placed within the bermed area of the disposal area. Berms will be placed around the working face to contain all leachate and to prevent leachate runoff from the working face from entering the stormwater management system. The top of the intermediate cover soil will be graded, generally a minimum of two percent, to allow clean, uncontaminated surface water to runoff and to minimize ponding on the top of the cover soil.

When waste is to be placed in areas with intermediate cover, all or part of the intermediate cover can be removed for future use prior to the additional waste placement. The intermediate cover is removed by pushing the cover material into a stockpile on the side or a new berm around the working face with a front-end loader or dozer; the intermediate cover shall be free of waste. After additional waste is placed, the cover material can be used as initial cover by pushing the material back with the loader or dozer. Processed yard trash or clean wood (mulch), may be spread over the intermediate cover for stabilization and erosion control measures.

K.7.h Final Cover Application Time Frame

The Phase II Section I and Phase II Section II disposal areas will be closed in their entirety with a final closure cap once the disposal areas have been filled to the design dimensions.

As areas of the Phase II Section I and Phase II Section II disposal areas reach their design elevations they will receive intermediate cover prior to final closure. The landfill area exterior side slopes will be maintained at a maximum ratio of 3H: 1V as shown on the Operation Drawings located in Appendix R.

Solid waste disposal units which have been filled to design dimensions shall receive final cover within 180 days after attaining final elevations or in accordance with an approved closure plan for the landfill.

The schedule for final closure of the landfill will comply, at a minimum, with Rule 62-701.600 FAC, and is as follows;

- At least one year prior to projected date when wastes will no longer be accepted or when all solid waste disposal units are expected to reach design dimensions, the owner or operator will provide written notice to FDEP with a schedule for cessation of waste acceptance and closure of the landfill.

- At 120 days prior to the date when wastes will no longer be accepted at the landfill, the owner or operator shall advise users of the landfill of the intent to close the landfill by posting signs at the entrance to the landfill. The signs will indicate the date of closure, the location of alternative disposal facilities, and the name of persons responsible for the closure activities.

- At least 10 days prior to the date when waste will no longer be accepted at the landfill, the owner or operator will publish notification of the landfill closure in the legal advertising section of the newspaper of general circulation where the activity is proposed.

- The owner or operator of the landfill shall submit a Closure Permit Application to FDEP for final closure of the landfill at least 90 days before the date when wastes will no longer be accepted at the landfill.

K.7.i Controlling Scavenging and Salvaging

Scavenging and salvaging is not permitted at the Hardee County Landfill. The facility has a fence around the entire perimeter to minimize unauthorized access to the landfill.

K.7.j Litter Policing Methods

On a daily basis, landfill personnel and/or county jail trustees collect litter along the entrance and access roads, at buildings, in the parking areas, and in the vicinity of the working face. Litter control fences are used near the working face to lessen the amount of blown litter.

K.7.k Erosion Control Procedures

Erosion of the initial or intermediate cover material on landfill areas is repaired as soon as possible to maintain the required depth of cover. The establishment and maintenance of a good stand of grass on the finished slopes is important to maintaining erosion control. In addition, it may be necessary to use processed yard trash, silt fences, straw bales, or berms to help prevent erosion. The landfill operator will take appropriate measures to prevent and correct erosion problems on the site.

The fill sequence has been designed to minimize erosion of landfill sideslopes and washout of adjacent areas. The landfill surface will be inspected daily for cracks, eroded areas, and depressions in the landfill surface. In areas where standing water develops, the area will be filled, compacted, and graded to provide positive drainage. For intermediately covered areas, or other areas that discharge to the stormwater management system, which exhibit significant erosion, will be repaired as follows:

- If greater than 50 percent of the soil cover material has eroded, then the area will be repaired within 7 days.
- If waste is exposed, then the area will be repaired by the end of the next working day.
- If erosion cannot be corrected within seven days, the FDEP will be contacted with a corrective actions plan and schedule.

K.8 LEACHATE MANAGEMENT PROCEDURES

K.8.a Leachate Level Monitoring, Sampling, Analysis, and Data Results

The landfill operator is responsible for maintenance and monitoring of the leachate collection system.

K.8.a.1 Leveling Monitoring

PHASE I

The leachate levels within the Phase I landfill can be lowered by adjusting the pumping rate from Manhole Number 8; however leachate levels can only be lowered to the invert of the perimeter collection pipe. The lowest elevation of perimeter collection pipes is located on the south side of the disposal area at approximately Elevation 72.8 (source: PBS&J record drawings dated July, 2000).

PHASE II SECTION I LANDFILL DISPOSAL AREA LEVELING

The liquid level inside of the Phase II Section I disposal area will be controlled by the pressure transducers attached to the leachate collection/detection pumps casing or intakes. Once the liquid levels rise above a predetermined elevation, the pumps will be automatically activated and the liquid will be pumped to the existing leachate storage tanks.

PHASE II SECTION II DISPOSAL AREALEVELING

The liquid level inside of the Phase II Section II disposal area will be controlled by the pressure transducers attached to the leachate collection/detection pumps casing or intakes. Once the liquid levels rise above a predetermined elevation, the pumps will be automatically activated and the liquid will be pumped to the leachate collection cleanout risers.

LEACHATE TANK LEVELING

Liquid levels in the two leachate storage tanks are monitored, either visually or by reading the liquid level readouts on the side of the tanks, to estimate available storage and prevent possible overflow of the tanks. To adjust the levels of leachate in the tanks, liquid can be transferred from one tank to another or additional truckloads can be sent offsite for disposal.

TEMPORARY SIDESLOPE BERMS

In addition, to reduce the amount of surface water runoff into the Phase II Section II disposal area center and northern portions (and generating additional leachate), the County will construct temporary sideslope berms along the western Phase I sideslope during operations as needed (discussed further above in Section K.2.f.8). The temporary sideslope berms will be active in nature. The County will create temporary sideslope berms as needed as discussed above in Section K.2.f.8 to accommodate fill sequencing and reduce surface water runoff into active waste filling to the extent practical.

The temporary sideslope berms will help direct the southern half of the western Phase I sideslope surface water runoff into the Phase II Section II disposal area northern portion (which will be covered with a rain tarp while waste filling is not occurring) while filling in the center portion. This surface water runoff can then be pumped from the northern portion area into the perimeter stormwater management system.

The temporary sideslope berms created along the northern half of the western Phase I sideslope will help direct the surface water runoff into the northern perimeter stormwater management system swale while filling in the northern portion. This will also reduce the amount of surface water runoff entering the northern portion and generating additional leachate.

LEACHATE EVAPORATION

The County will not recirculate leachate but will use a temporary movable system to conduct leachate evaporation during operation of the Phase II Section II disposal area. Ditches, berms, or other devices shall be constructed to control leachate runoff during evaporation operation. However,

the quantity of leachate applied during leachate evaporation shall not be in such a quantity as to require ditches, berms, or other devices to control leachate runoff or the need to shed runoff to the leachate collection system. Initial and intermediate cover receiving leachate from the leachate evaporation process shall be graded to shed runoff into the leachate collection system and to minimize mixing of leachate runoff and stormwater. Initial and intermediate cover shall be permeable to the extent necessary to prevent perched water conditions and gas buildup. Leachate evaporation shall not be conducted during weather conditions or in quantities that may cause runoff outside the solid waste disposal unit, surface seeps, wind-blown spray, or exceedance of the limits of the leachate head on the liner. The application of leachate for evaporation shall be such that leachate runoff is prevented and leachate is only applied to those areas and cover soils that do not runoff to stormwater.

K.8.b Operation and Maintenance of Leachate Collection and Removal System and Groundwater Control System

Surface water runoff that comes in contact with solid waste is considered leachate. With the addition of the Phase II Section II disposal area, leachate generated from the Phase II Section II disposal area north and center portions will be pumped to the leachate collection sideslope risers located along the western side of the south portion of the Phase II Section II disposal area. The sideslope risers are extensions of the leachate collection pipes for the Phase II Section II area which is connected to the leachate collection lines located within the Phase II Section I disposal area. Leachate will flow via gravity to the leachate collection sump and pumps located within the Phase II Section I disposal area. From the Phase II Section I sump the leachate is pumped into the existing above ground leachate storage tanks.

Therefore, to determine the amount of leachate that is generated from Phase I, Phase II Section I, and Phase II Section II disposal areas, the readings from the flow meters discussed below in Section K.8.f will be conducted by the County. The values obtained by the County from the meter readings will be input into the Monthly Leachate Water Balance Form as outlined below for the quantity calculations. Refer to Appendix O of the Operation Plan for a Leachate Water Balance Form.

- Column A is daily total reading from Phase II Section II disposal area north and center collection flow meter.
- Column B is daily total reading from Phase II Section II disposal area north and center detection flow meter.
- Column C is daily total reading from leachate sprayed for evaporation.
- Column D is Phase II Section II disposal area north and center collection flow meter reading + Phase II Section II disposal area north and center detection flow meter reading - reading from leachate sprayed for evaporation {Col A + Col B - Col C}.
- Column E is Phase II Section I disposal area collection flow meter reading.
- Column F is Phase II Section I disposal area detection flow meter reading.

- Column G is Phase II Section I disposal area collection + Phase II Section II disposal area South collection + Phase II Section I disposal area detection + Phase II Section II disposal area South detection - total leachate Phase II Section II disposal area North and Center (less evaporation) {Col E + Col F - Col D}.

- Column H is Phase II Section I disposal area detection and Phase II Section II disposal area South detection + total leachate Phase II Section I disposal area collection and Phase II Section II disposal area South collection and Phase II Section I disposal area detection and Phase II Section II disposal area South detection {Col D + Col G}.

- Column I is daily total reading from MH-8 pump station flow meter (Phase I leachate).

- Column J is total leachate Phase II Section II disposal area and Phase II Section I disposal area + Phase I (pumped from MH-8) {Col H + Col I}.

- Column K is the total daily amount of rainfall read from rain gauge.

- Column L is total daily rainfall times one-inch of depth of tank {Col K * gallon per inch rainfall}.

- Column M is total leachate added to tanks + rainfall added to tanks {Col J + Col L}.

- Column N is total liquid balance in tanks end of previous day {Col Q}.

- Column O is previous day liquid remaining in tanks + total leachate and rainfall added to tanks {Col N + Col M}.

- Column P is liquid hauled from tanks per day.

- Column Q is previous day liquid remaining in tanks and total leachate added and rainfall added - liquid hauled from tanks {Col O - Col P}

PHASE I COLLECTION SYSTEM

Leachate, from water that is in contact with the waste materials within the Phase I disposal area is collected in a perimeter subsurface collection pipe surrounding the waste materials. The perimeter subsurface collection pipe is a perforated pipe that is located along the outside waste limit. A coarse drainage media, wrapped in geotextile, surrounds the perforated pipe and minimizes migration of fine material into the collection pipe.

The perimeter subsurface leachate collection pipes are accessible through a series of manholes, designated as Manholes 1, 2, 3, 4, 8 and 9 (Manhole Number 8 is the main leachate collection pump station). The lids on Manholes 5, 6, and 7 were covered with a concrete cap during the Phase I closure per Permit Number 38414-012-SF/01 dated November 9, 2009. Leachate in the collection system drains to Manhole Number 8 where it is then pumped to one of the leachate storage tanks. The County pumps the leachate tanks on a daily basis and transports loads of leachate to the City of Wauchula Municipal Wastewater Treatment Plant.

PHASE II SECTION I DISPOSAL AREA COLLECTION/DETECTION SYSTEM

The Phase II Section I disposal area collection/detection system collects leachate and drains via gravity to a sump located at the east end of the disposal area. Two sideslope riser pumps collect and discharge leachate to the leachate storage tanks. One pump collects from the detection system and one pump collects from the collection system. Both pumping systems are controlled by independent control panels. The control panels have automatic turn-on and shut-off controls for the pumps.

Independent flow meters were originally installed during the construction of the Phase II Section I disposal area to track the amount of leachate collected from the collection and detection systems from the Phase II Section I disposal area.

The main leachate collection header pipe is located along the eastern and southern toe of slope in a manner so that access is provided to insert a TV camera and flushing equipment. The leachate collection pipes have also been sized to accommodate a TV camera and flushing equipment.

The leachate collection and detection pumps are easily accessible from the surface and are equipped so that the pumps and discharge piping can be completely removed for repairs or replacement. In addition, with the pumps removed, the portion of the pipe forming the intake section in the sump can have TV camera and flushing equipment inserted.

PHASE II SECTION II DISPOSAL AREACOLLECTION/DETECTION SYSTEM

The leachate collection and removal system (LCRS), as shown on the Operation Drawings located in Appendix R, includes a 24-inch thick sloping sand drainage layer, a sloped bi-planar geocomposite (i.e., the geonet or drainage net) and a piping network. The bi-planar geocomposite and the drainage layer are installed at a slope across the Phase II Section II disposal area. A series of sloped 8-inch and 10-inch diameter HDPE perforated pipes are placed in rock-filled trenches wrapped with a geotextile that are spaced at regular, predetermined intervals across the geocomposite lining. Together the piping and geocomposite collect leachate flowing through the drainage layer and transport it to the leachate collection header trench which in turn transports the leachate via gravity to the leachate collection/detection sump located within the Phase II Section II disposal area. The leachate sump is equipped with submersible pumps that discharge the leachate out of the sump through a pipeline and out of the cell.

From the point of discharge the leachate will travel in a pressure pipeline (i.e., a force main) from the leachate collection/detection sump to three leachate collection sideslope risers located along the western side of the south portion of the Phase II Section II disposal area. The leachate force main is sized to serve the flow from the leachate collection and detection pumps. The three sideslope risers are extensions of the leachate collection pipes for the Phase II Section II disposal area that are connected to the existing leachate collection lines located within the Phase II Section I disposal area. Leachate will then flow via gravity to the existing leachate sump and collection/detection pumps located within the Phase II Section I disposal area. From the Phase II Section I disposal area sump the leachate is pumped into the existing above ground leachate storage tanks.

The Phase II Section I disposal area sump has one collection and one detection pump located within two sideslope risers. One pump collects from the detection system and one pump collects from the collection system. Both pumping systems are controlled by independent control panels. The control panels have automatic turn-on and shut-off controls for the pumps.

Near the control panel for the Phase II Section II disposal area the collection and detection discharge lines from the sideslope risers each have independent flow meters. The independent flow meters track the amount of leachate collected from the collection and detection systems from the Phase II Section II Landfill disposal area north and center portions.

The main leachate collection header pipe for the Phase II Section I disposal area is located along the eastern and southern toe of slope in a manner so that access is provided to insert a TV camera and flushing equipment. The main leachate collection header pipe for the Phase II Section II disposal area is located east/west between the north and center portions and slope to the west in a manner so that access is provided to insert a TV camera and flushing equipment. The leachate collection pipes for the Phase II Section I and Phase II Section II disposal areas have also been sized to accommodate a TV camera and flushing equipment.

The Phase II Section I and Phase II Section II leachate collection and detection pumps are easily accessible from the surface and are equipped so the pumps and discharge piping can be completely removed for repairs or replacement. In addition, with the pumps removed, the portion of the pipe forming the intake section in the sump can have TV camera and flushing equipment inserted.

LEACHATE LIFT STATION

The submersible leachate pump station, designated as Manhole Number 8, is a duplex system having a nominal capacity of approximately 130 gallons per minute (gpm). This pump station is operated by float control using the following five floats:

- Lead pump on,
- Lag pump on,
- Pump(s) off,
- High level alarm, and
- Low level shut-off

A control panel, located immediately adjacent to the pump station, has controls to activate the pumps. The pumps can be activated for manual or automatic operations. Meters on the control panel record the amount of leachate pumped from the Phase I area into the storage tanks. The pump station discharges into a 4-inch force main flowing to the leachate storage tanks. For additional reliability, the submersible leachate pump station is also furnished with an emergency pump out connection to allow for removal of leachate directly from the lift station should the storage tanks not be operational.

The overfill protection system of the tanks is provided by ultra-sonic liquid level indicators, located on the top of each of the tank, that provide continual monitoring of the liquid levels. The ultra-sonic level

indicators provide both overflow protection and low liquid level monitoring to protect the pumps at the truck loading area. As liquid levels rise in the tank above a pre-determined height, the ultra-sonic level indicators send a signal to an alarm (an audible and flashing light) on the control panel located at the lift station. A signal is also sent to the control panel at the lift station to shut-off the pump(s). When leachate is pumped from the tanks to the truck loading area, the ultra-sonic level indicators monitor the liquid level in the tanks and shut off the pumps at the truck loading area should the level drop below a pre-determined level. This prevents the pumps from running dry and possibly overheating.

As a back-up contingency plan **(only used should signal alarms and pump shut-offs fail)** the back-up overfill protection system for the tanks are as follows:

1. Tank 1 is filled by the pump station located at Manhole 8 (MH-8). If the liquid level rises above the overfill pipe in Tank 1, the flow is diverted to Tank 2.

2. As Tank 2 fills and equalizes with Tank 1, the two tanks fill simultaneously.

3. Should both tanks continue to fill, each tank has a final overflow pipe, which allows any overfill to be captured in the containment area for each individual tank.

Tanker trucks are used to transport leachate off-site for disposal. The tanker trucks pull around to the western side of the storage tanks and park on top of a concrete lined unloading area. The unloading area is designed to collect accidental spills and convey the spill back into the lift station. After parking the truck, the driver has the option of selecting which tank to begin draining. The control panel, located immediately adjacent to the truck unloading area, allows the truck driver to control the pump while a meter readout allows the driver to monitor the amount of leachate transferred to the truck. Once the truck is full, the leachate is hauled offsite for disposal.

As part of the weekly responsibilities of the landfill operator, the condition of the tanks will be visually inspected, for corrosion, leaks, structural damage to the tanks, loose or broken equipment, for leachate in the secondary containment area of the tanks, integrity of the cathodic protection system, overfill protection system and overflow control piping (located near the top of the tanks). Inspection of the interior of the tanks will be performed whenever the tank is drained or at a minimum of every three years. If the inspection reveals a tank or equipment deficiency, leak, or any other deficiency which could result in the failure of the tank to contain the leachate, then remedial actions will be taken to correct the deficiency immediately.

GROUNDWATER INTERCEPTOR SYSTEM

The Phase II Section I and the southern portion of the Phase II Section II disposal areas have a series of underground groundwater collection pipes to intercept and collect groundwater variances above the seasonal high groundwater elevation. The groundwater interceptor system pump station, designated as Manhole Number 10, is located to the southeast of the Phase II Section I disposal area. There are two skid-mounted duplex pumps located on top of the concrete pad surrounding the wet well. The groundwater interceptor system pumps are operated by float control using the following five floats:

- Lead pump on (Elevation 77.5); Lag pump on (Elevation 78.0); Pump(s) off (Elevation 76.9); High level alarm (Elevation 78.5); Low level shut-off (Elevation 76.9).

A control panel located immediately adjacent to the groundwater interceptor system pump station contains the controls to activate the groundwater interceptor pumps. The groundwater pumps may be activated manually or by automatic operations. To activate the pumps manually, the control panel would be opened and the switch which initiates the required pump(s) would be turned and held to the "manual" position. The switch would be held in the "manual" position during the time the pump(s) was required to operate. Once the switch was released the pump(s) would shut down. The switch would be manually manipulated in this manner to activate the pump(s) when needed. The groundwater interceptor system pump station discharges through a 6-inch ductile iron pipe into the adjacent stormwater swale.

Should the groundwater interceptor pumps in the wet well be rendered inoperable, the hatch would be opened on the top of the wet well and a submersible trash pump (or similar type pump) would be lowered into the wet well for temporary operations. The temporary pump would be operated as needed and the groundwater pumped from the wet well would be discharged into the rip rap lined discharge point located adjacent to the wet well as during normal operations.

K.8.c Procedures for Managing Leachate if Regulated as Hazardous Waste

If at any time the leachate is determined to be hazardous, it will be managed in accordance with Rule 62-730, FAC. If the leachate analysis indicates a contaminant listed in 40 CFR Part 261.24 exceeds the regulatory level, a monthly sampling of leachate will be instituted and FDEP notified. If in any three consecutive months no listed contaminant is found to exceed the regulatory limit, the monthly sampling will be discontinued and the routine sampling schedule will be implemented.

K.8.d Off-Site Leachate Treatment Agreements

An agreement between the County and the City of Wauchula (City) provides for off-site treatment of leachate. The County retains the City to provide treatment and disposal of leachate on an as-needed basis. The County is responsible for testing, reporting, and transportation of leachate to the City's wastewater treatment plant. The services to be performed and the terms of the agreement are subject to FDEP rules and regulations. A copy of the Resolution for the Interlocal Agreement between the County and the City for leachate treatment and disposal is included in Appendix K. A copy of the Interlocal Agreement between the County and the City for leachate treatment and disposal is included in Appendix L.

The County plants at the Vandolah and Wauchula Hills wastewater treatment facilities are also available to receive leachate for treatment. Since these facilities are owned and operated by the County no agreements are necessary.

K.8.e Contingency Plan for Managing Leachate

K.8.e.1 Treatment Plant Options

Currently, leachate is trucked to the City of Wauchula wastewater treatment plant for treatment. If the City of Wauchula Waste Treatment Plant is unavailable then leachate can be diverted to the Vandolah or Wauchula Hills wastewater treatment plants. Should any or all the available treatment

plants become unavailable to the County, arrangements will be made to take the leachate to another treatment facility within seven (7) days.

K.8.e.2 Leachate Lift Station or Tank Repair Options

Leachate may be pumped and stored into either of two leachate storage tanks from the pump station allowing for maintenance on one tank while the other remains in service. Leachate may also be pumped from either storage tank or directly from the pump station into tanker trucks for transport to the City of Wauchula wastewater treatment plant or other treatment plants. Should this plant become unavailable to the County, arrangements will be made to take the leachate to another treatment facility within seven (7) days.

K.8.f Procedures for Recording Quantities of Leachate Generation

The quantities of leachate collected by the leachate collection and removal system are recorded in gallons per day before offsite disposal and are included with the operating record. The quantity of leachate pumped each day is recorded in gal/day and included with the operating record.

K.8.f.1 Phase II Section I Quantities

The leachate collection and detection pumps have independent flow meters to measure the amount of leachate pumped from each layer in the Phase II Section I disposal area to the leachate storage tanks. Daily readings from the two flow meters will be recorded. The amount of leachate generated from the Phase II Section I disposal area will be calculated by the County based on the flow meter readings obtained and calculated from the Leachate Water Balance Form provided in Appendix O.

K.8.f.2 Phase II Section II Quantities

The leachate collection and detection pumps have independent flow meters to measure the amount of leachate pumped from each layer in the Phase II Section II disposal areas north and center portions. Daily readings from the two flow meters will be recorded. The amount of leachate generated from the Phase II Section II disposal area will be calculated by the County based on the flow meter readings obtained and calculated from the Leachate Water Balance Form provided in Appendix O.

K.8.f.3 Lift Station

A 4-inch magnetic flow meter is connected to the forcemain leading from the submersible leachate lift station to the leachate storage tanks. Daily readings of leachate generated from the Phase I area, in gallons per day, are read directly from the meter.

K.8.f.4 Phase I Quantities

The amount of leachate generated from the Phase I area are read directly off of the MH-8 pump station flow meter (Phase I leachate).

K.8.f.5 Leachate Truck Loading Station

Leachate can be pumped from either of the two storage tanks. Flow meters measure flow in the forcemain leading from the tanks to the truck loading station. The amount of leachate hauled off-site will be recorded daily. The amount hauled off-site versus the amount pumped into the tanks will be recorded as storage. Any differences in storage can be accounted for as precipitation or evaporation.

Leachate generation data and the amounts hauled for treatment are recorded daily by landfill personnel on the Leachate Water Balance Form provided in Appendix O.

K.8.g Procedures for Comparing Precipitation with Leachate Generation Rates

A rain gauge is located onsite, operated, and maintained to record precipitation at the Hardee County Landfill. Precipitation records are included with the operating record and are maintained and used by the County to compare with leachate generation rates. A rain gauge, located onsite is used to compare precipitation with leachate generation. Rain data, in excess of one tenth of an inch, is recorded daily in the operating record by landfill personnel. In addition, the National Oceanic and Atmospheric Association (NOAA) also has a weather station located in the City of Wauchula that keeps daily records of rainfall in the area.

K.8.h Procedures for Cleaning and Inspecting the Leachate Collection System

A videotape inspection of the leachate collection system for Phase I and the collection/detection system for the Phase II Section I and Phase II Section II disposal areas shall be conducted in accordance with Rule 62-701.500(8)(h), FAC [effective 8/12/12] at least once every five years during the 20-year Operation Permit period. The leachate collection and detection systems will be pressure jet cleaned prior to the video inspection. The video inspection will be conducted using a camera that can provide sufficient light to illuminate the interior of the pipelines clearly. The video camera will also be capable of recording distances along the pipeline so deficiencies, such as crushed or separated pipe, can be located and repaired if possible.

K.9 ROUTINE GAS MONITORING PROGRAM

The County will conduct landfill gas (LFG) monitoring along the property boundaries and within structures located on the facility property. The LFG monitoring program will monitor gas from gas monitoring probes to detect possible subsurface migration of LFG. The regulatory limit for LFG at the property boundary is 100 percent of the Lower Explosive Limit (LEL) for combustible gases and twenty-five (25) percent of the LEL in the structures.

The LFG management system in place at the Hardee County Landfill consists of 13. LFG monitoring probes located around the perimeter of the existing landfill footprint and at the property boundary. With the prior construction of the Phase II Section II disposal area to the west and south of the existing landfill, it was necessary to relocate several of the existing LFG monitoring probes outside of the disposal area. The County abandoned LFG monitoring probes GP-3, GP-4, GP-5, and GP-6 and installed replacement LFG monitoring wells designated as GP-3R, GP-4R, GP-5R, GP-6R, GP-7R, and

GP-8R, as shown on the Operation Drawings located in Appendix R. The replacement LFG monitoring wells are located along the west side and northwest corner of the property. LFG monitoring well, GP-1, GP-2, and GP-3R, will be used to detect possible subsurface migration of LFG toward the north side of the property.

The LFG monitoring program will also include monitoring for gas from within structures located on the facility property to detect possible gas migration into structures from penetrations in the supporting foundation. The LFG gas monitoring will be conducted at foundation penetrations (restrooms, electrical and mechanical rooms), enclosed spaces such as ground-level cabinets, electrical control boxes, outlets and openings to conduits as well as monitoring the ambient air within the structure for LFG.

The locations of the gas monitoring probes and the monitoring locations within the structures located onsite are shown on Figure 2 Monitoring Locations contained at the end of the Operation Plan and the building layouts contained at the end of the Operation Plan.

At a minimum the LFG monitoring points will be tested quarterly and the results forwarded to FDEP. LFG is monitored following the procedure below:

- Calibrate the field instrument (calibrated to methane),
- Monitoring for gas in the Gas Monitor probes and on-site structures, which include the maintenance building, materials recovery facility, scalehouse, and animal control kennel for methane. Monitoring in the gas monitoring probes will be conducted in the upper portion of the probe and the probe will not be purged (vented) prior to sampling, and
- Record data on the LFG Monitoring Form, located in Appendix P of this Operations Plan.

The LFG Monitoring Form is located in Appendix P. The gas form includes the required monitoring locations, date and time of the sampling event, weather conditions, and methane content as a percentage of the lower explosive limit (LEL).

Gas monitoring at the Hardee County Landfill will be performed using the appropriate hand-held gas-monitoring device capable of measuring and reporting methane as a percentage of the lower explosive limit (LEL) for methane. Hardee County currently owns a X-Check Gas Detector for LFG monitoring. Other industry-standard equipment (such as a GEM-500 Landfill Gas Analyzer) also may be utilized.

If methane gas levels exceed twenty five percent of the lower explosive limit for gases in structures, excluding gas control or recovery components, or the LEL in the gas monitoring probes the landfill operator shall:

- Immediately take all necessary steps to ensure protection of human health and notify FDEP;
- Within seven days of detection, submit to FDEP for approval a remediation plan for the methane gas releases. The plan shall describe the nature and extent of the problem and the proposed remedy. The remedy shall be completed within sixty days of detection unless otherwise approved by FDEP.

Personnel will abide by the following precautions before entering areas where dangerous gases may be present and before entering confined spaces, at a minimum, for worker safety:

- Personnel shall follow the requirements in the "Code of Federal Regulations Title 29, Part 1910.146 OSHA" and the safety guidelines outlined in "A Compilation of Landfill Gas and Field Practices and Procedures" prepared by the SWANA Landfill Gas Division Health and Safety Task Force. The Landfill Manager will keep the most up-to-date version of the above documents available at the facility for personnel to use. The above documents can be obtained at the following websites;
  - Title 29 CFR Part 1910.146 – http://www.gpoaccess.gov/cfr/index.html (Browse for Latest version of Title 29 CFR Part 1910.146)
  - SWANA Landfill Gas Document – http://www.swanastore.com (Publications – landfill Gas Publications)
- Notify the Landfill Manager prior to entry into the area,
- Follow all County safety procedures,
- Ventilate the area with blowers or fans, if possible, or allow to vent a minimum of 24 hours,
- Monitor the air for explosive or hazardous gases, oxygen, and hydrogen sulfide levels, at a minimum, prior to entering the area,
- Monitor the air quality within the immediate working area at all times, using a hand-held or personal monitoring device.
- Provide safety equipment (radios, respirators, gas monitors, air supplies, ladders, ropes, harnesses, first aid kits, emergency contact list, etc.) in case of emergency.

If the facility generates gas concentrations that cause objectionable odors beyond the property boundaries, the follow procedure will be implemented:

- Implement a routine odor monitoring program to determine the timing and extent of any off-site odors;
- If the monitoring program confirms the existence of objectionable odors, an odor remediation plan will be submitted to FDEP for approval. Upon approval, the remediation plan will be initiated within 30 days.

K.10 STORMWATER MANAGEMENT SYSTEM OPERATION AND MAINTENANCE

The stormwater management system at the Hardee County Landfill consists of a series of swales and pipes that divert stormwater from the non-working areas of the landfill to the onsite stormwater ponds. The swales discharge into pipes and/or other swales, or directly into the stormwater ponds. Runoff from the stormwater ponds ultimately discharges into the Peace River.

Stormwater runoff during operation of the facility from the areas that have at least a 6-inch compacted soil cover (free of waste) over the waste materials can be directed to flow into the stormwater management system. Stormwater runoff that has been in contact with waste materials is classified as leachate and cannot be diverted into the stormwater management system. Stormwater runoff from the upper portion of the landfill travels via sheet flow into collection terraces located along the sideslopes of the landfill. Stormwater runoff flows within the collection terraces and is conveyed, via stormwater structures, down the landfill and into ditches that are located on the perimeter of the landfill. The perimeter ditches convey stormwater runoff to a stormwater management pond located in the northeast corner of the facility. Stormwater runoff collected in the pond is allowed to percolate. As the water in the pond rises, an overflow structure located on the south side of the pond, allows water to be discharged into the heavily vegetative wetland area designated as Wetland No. 1, located on the eastside of the facility. Two culverts, located beneath the main access road, allow stormwater to flow from the eastside of the site under the road and along a channel to the southwest corner of the site. The stormwater will then enter the old borrow pit that has been transformed into a wet detention system with a manmade littoral zone. The wet detention system will allow for sediments to fall out of suspension. The littoral zone will enhance removal of sediments and turbidity. The wet detention system is designed to allow for the gradual release of stormwater beneath the road where the water will flow into a ditch that leaves the facility. Once offsite the runoff flows overland and via naturally occurring channels until the flows eventually flows into the Peace River.

Certain procedures have been implemented at the landfill to minimize maintenance requirements and to ensure efficient performance of the stormwater system during operation of the facility. These procedures include:

- No excavated cover material is stockpiled in such a manner as to direct sediment laden runoff outside the project site property limits or into any adjacent stormwater collection facility;
- All drainage ditches are inspected periodically for erosion and reshaped and resodded as required;
- Erosion and siltation control devices are cleaned and repaired when clogged or damaged;
- Temporary erosion control features such as silt fencing or hay bales are removed after installation of permanent erosion controls been completed and any permanent erosion control features damaged by such removal are repaired;
- After vegetation has been established, all swales, channels, and detention ponds are mowed regularly; minimum-mowing frequency is once per year.
- The plant types in the littoral zone are checked periodically and any intruding vegetation is removed if required;
- Drainage sumps are cleaned out at least once per year and the storm sewer lines checked for plugging;
- The area in front of the control structure is checked at least quarterly to remove any excess plants or debris that could cause the structure to plug;

- Additional erosion control measures are implemented when field conditions warrant (i.e. cover material stockpiling, on-site construction activities, etc.).

- Stormwater runoff flows within the collection terraces and is conveyed down the landfill and into ditches that are located on the perimeter of the landfill.

- Rain tarps to reduce the amount of stormwater infiltration and reduce the amount of leachate generation.

- Temporary sideslope berms help rain tarp direct surface water runoff away from the active filling area to the extent practical.

K.11 EQUIPMENT AND OPERATION FEATURE REQUIREMENTS

The site will have sufficient equipment to ensure proper operation of the facility for excavating, spreading, compacting, and covering waste. Normal maintenance will be performed on site. Major maintenance item repairs (e.g., engine, transmissions, and auxiliary drives) will be handled at off-site service facilities.

K.11.a Sufficient Equipment for Operations

There is sufficient equipment on-site so that landfill operations would not cease in the event of an equipment failure. The County has budgeted enough funds for one month's leasing or rental of heavy equipment for contingency purposes. The contingency equipment type and source is located in Appendix D. Equipment from the Hardee County Public Works Road and Bridge Section is available to the Solid Waste Department for use during an emergency. During power outages at the landfill, small portable generators, capable of running the scales and scalehouse computers are available for use from the Hardee County Public Works Department. In addition, the County has developed a comprehensive emergency management plan to allow County department the ability to obtain material and equipment immediately thereby minimizing delays due to purchasing procedures.

The following equipment is owned by the County and is currently available at the landfill:

1995 Ford Dump Truck

1999 Ford Sterling Dump Truck

2006 Volvo Sterling Truck – (Leachate Truck)

2002 Ford Spray Truck – (Water Truck)

2014 Ford Econoline Wagon – (work squad/van)

2004 Ford Explorer

1999 Dodge Ram 1500

1999 Dodge Ram 1500

2001 Dodge Ram 1500 4X4

2003 Ford F-250

2011 Ford F-250 4X4

2008 Ford F-250 4X4 Ext. Cab

2003 International Dump Truck

2003 Caterpillar D7R Dozer

2016 Caterpillar D7E Dozer

2006 816F Caterpillar Compactor

2016 772 Bomag Compactor

2012 624K John Deere Loader

2005 644J John Deere Loader

2015 328E John Deere Skid Steer

K.11.b Reserve Equipment

The existing equipment on site, listed in the section above, is sufficient to handle the incoming waste stream. Should unforeseen circumstances require more equipment than is currently available, the County has budget enough funds for one month's leasing or rental of heavy equipment. Additionally, equipment from the Hardee County Public Works Road and Bridge Section is available to the Solid Waste Department for use during an emergency.

K.11.c Communication Equipment and Shelter

The scalehouse and on-site landfill office are equipped with telephones for emergency communications; two-way radios are available at the scalehouse for distribution to landfill personnel to allow for emergency communications between the scalehouse/landfill office and employees working on the landfill. The scalehouse is equipped with water supply, toilet facilities, and emergency first-aid supplies. The building also provides shelter for employees in case of inclement weather. The maintenance building is equipped with spare parts, tools, equipment, and electrical services for operations and repair.

K.11.d Dust Control Methods

During dry periods, when dust control is needed, such as on haul roads, the yard trash processing area, or in area(s) where dusty conditions cause a vehicle safety problem or dust is blowing offsite, water will be sprayed over these areas as necessary to keep dust particles moist and minimize particles from blowing into the air. Water from the on-site stormwater pond or the onsite water

hydrants will be pumped into a tanker truck equipped with a spray bar and nozzles to use for wetting the roads.

K.11.e Fire Protection and Emergencies

In the event of fire, the responding agency is the Hardee County Fire and Rescue Service, located approximately three miles west of the site, in Wauchula, FL. Additionally, the landfill site is equipped with a dry fire hydrant located adjacent to the pond immediately north of the scalehouse for the filling of pump trucks. Four water hydrants are located along the eastside of the Phase I landfill, on the eastside of the entrance road. Fire extinguishers are located in the equipment and at the maintenance building for use in the event of small fires. There are also six fire extinguishers and five hose bibs located in the on-site MRF. A Fire Contingency Operations Plan is contained in Appendix E.

K.11.f Litter Control Devices

On a daily basis, landfill personnel or contract laborers collect litter along the entrance and access roads, at buildings, in the parking areas, and in the vicinity of the working face. Litter control fences are used along the perimeter of the working face to lessen the amount of blown litter.

K.11.g Signs

A sign at the intersection of S.R. 636 and Airport Road marks the turnoff from S.R. 636 to the Hardee County Landfill. A sign at the entrance to the landfill displays the days and hours of operation. Signs or markers are posted throughout the facility indicating traffic flow directions, types of waste that are not acceptable, speed limits, and underground liner location. All manholes are marked with a warning sign stating “This Manhole Contains Toxic and Explosive Gasses. Do Not Enter Without Proper Ventilation.”

K.12 ALL-WEATHER ACCESS ROAD, INSIDE PERIMETER ROAD, AND OTHER ROADS

The entrance to the landfill, scalehouse, MRF, HHWCC, animal control kennel and next to the leachate storage tanks are asphalt paved. The road leading to the waste tire facility, scrap metals and white goods storage area, and Class I Landfill are dirt paved. The roads are crowned and slightly elevated above the surrounding grades with drainage swales on both sides to promote drainage. The roads with excessive washouts are routinely graded by the onsite Landfill personnel or Hardee County Public Works Department. The access ramp to the Phase II Section II disposal area working face is compacted soil with shell placed over it. This access ramp is adequate for landfill operating equipment and waste collection trucks to reach the working area during inclement weather conditions.

K.13 ADDITIONAL RECORD KEEPING AND REPORTING REQUIREMENTS

Operating records, such as permits, plans, inspections and other records are maintained on site at the scalehouse.

K.13.a Records for Development of Permit Applications

In addition to waste and operating records, supplemental information from the permit applications and information pertaining to the landfill's construction and maintenance are on file at the facility. These records will be retained at the site for the remainder of the landfill's life.

K.13.b Monitoring Information

Records of all monitoring information, including calibration and maintenance records, and copies of reports required by the permit will be retained for at least 10 years. The County maintains all monitoring records at the scalehouse. Copies are submitted to FDEP in accordance with its permit requirements

K.13.c Annual Estimates of Remaining Life

Hardee County will maintain an annual estimate of the remaining solid waste disposal capacity (in cubic yards) and life of the existing landfill. The estimate will be based on the geometry of the solid waste disposal area and the scalehouse waste records. These estimates will be reported to the FDEP annually.

K.13.d Archiving and Record Retrieval

All records pertaining to the operation of the facility will be retained throughout the design life of the landfill. All monitoring records, calibration and maintenance records, and reports required by the operating permit will be retained for at least ten years.

Appendix A

Waste Tire Permit and Waste Tire Emergency Preparedness Plan

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Ryan E. Matthews
Interim Secretary

May 24, 2017

NOTICE OF PERMIT

By-Email
Ken.Wheeler@hardeecounty.net

In the Matter of an
Application for Permit by:
Hardee County Board of County Commissioners
685 Airport Road
Wauchula, FL, 33873

Hardee County
WACS # 40612
Hardee County WTCC

Attention: Mr. Wheeler

DEP File No: 129318-005-WT-05

Enclosed is Permit Number 129318-005-WT-05 to operate a Waste Tire Collection Center, issued pursuant to Section 403.061(14) and 403.707, Florida Statutes.

A person whose substantial interests are affected by this modification of permit may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

Petitions by the applicant or any of the parties listed below must be filed within fourteen days of receipt of this written notice. Petitions filed by other persons must be filed within fourteen days of publication of the notice or receipt of the written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of such notice, regardless of the date of publication. The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding

initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

(a.) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number and the county in which the project is proposed;
(b.) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c.) A statement of how each petitioner's substantial interests are or will be affected by the Department's action or proposed action;
(d.) A statement of all material facts disputed by petitioner or a statement that there are no disputed facts;
(e.) A statement of the ultimate facts alleged, including a statement of the specific facts which the petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f.) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the Department's action or proposed action; and
(g.) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wants the Department to take with respect to the Department's action or proposed action.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In accordance with Section 120.573, F.S., the Department advises that mediation is not available in this case under the provisions of that statute. This does not prevent any interested parties from agreeing to other forms of alternate dispute resolution.

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The

notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Leon County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Kimberly A. Walker, Program Administrator
Permitting and Compliance Assistance Program

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to Section 120.52, F.S. with the designated Department Clerk, receipt of which is hereby acknowledged.

Tamela Starling
Clerk

5/24/2017
Date

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were sent before the close of business on May 24, 2017 to the listed persons.

Tamela Starling
Clerk

Enclosure: Permit No. 129318-005-WT-05

Copies furnished to:
Ken Wheeler, P.E., Hardee County, Ken.Wheeler@hardeecounty.net
Cory Dilmore, P.E, Environmental Administrator, FDEP Solid Waste, cory.dilmore@dep.state.fl.us
Steve Morgan, FDEP Southwest District, steve.morgan@dep.state.fl.us

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Ryan E. Matthews
Interim Secretary

Permit Issued to:

Hardee County Board of County Commissioners
Wauchula, Florida
863-773-5089

Facility WACS ID No.: 40612
Facility Name: Hardee County Solid Waste Department
685 Airport Road
Wauchula, Florida, 33873

Contact Person:
Ken Wheeler, Project Manager
863-773-5089

Solid Waste Operation Permit – Waste Tire Collection Center
Permit No.: 129318-005-WT-05
Permit Modification No.: N/A
Replaces Permit No.: 129318-004-WT-05

Permit Issued: 5/24/2017
Permit Renewal Application Due Date: 3/24/2022
Permit Expires: 5/24/2022

Permitting Authority
Florida Department of Environmental Protection
Florida Department of Environmental Protection
Permitting and Compliance Assistance Program
2600 Blair Stone Road, MS 4565
Tallahassee, Florida 32399-2400
850-245-8705 (voice)
850-245-8803 (fax)

SECTION 1 - SUMMARY INFORMATION

A. Authorization

The permittee is hereby authorized to operate a waste tire collection center in accordance with the specific and general conditions of this permit and any documents attached to this permit or specifically referenced in this permit and made a part of this permit.

This solid waste operation permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4, 62-701, and 62-711.

This permit does not relieve the permittee from complying with any other appropriate local zoning or land use ordinances or with any other laws, rules or ordinances. Receipt of any permit from the Department does not relieve the applicant from obtaining other federal, state, and local permits and/or modifications required by law, including those from other sections within the Department or of the Water Management District.

B. Facility Location

The facility is located at 685 Airport Road, Wauchula, Florida, Section 35, Township 33 South, Range 25 East in Hardee, County, Florida. 27° 34' 10" N and Longitude 81° 47'01" W (WGS84).

C. Facility Description

This facility accepts tires from the general public for temporary storage prior to being transferred to a processing facility for recycling, reuse or disposal. Maximum storage capacity is no more than 1500 tires.

D. Appendices Made Part of This Permit

APPENDIX 1 - General Conditions

APPENDIX 2 – List of Documents Incorporated into this Permit

SECTION 2 - SPECIFIC CONDITIONS

A. Administrative Requirements

1. Documents Part of This Permit. The permit application **as finally revised, replaced or amended** in response to the Department's Request(s) for Additional Information are contained in the Department's files and are made a part of this permit. Those documents that make up the complete permit application are listed in APPENDIX 2.

2. Permit Modification. Any change to construction, operation or monitoring requirements of this permit may require a modification to this permit, in accordance with the provisions of Rule 62-701.320(4), F.A.C.

3. Permit Renewal. In order to ensure uninterrupted operation of this facility, a timely and sufficient permit renewal application must be submitted to the Department in accordance with Rule 62-701.320(10), F.A.C. A permit application submitted at least 61 days prior to the expiration of this permit is considered timely and sufficient.

4. Transfer of Permit or Name Change. In accordance with Rule 62-701.320(11), F.A.C., the Department must be notified in writing within 30 days: (1) of any sale or conveyance of the facility; (2) if a new or different person takes ownership or control of the facility; or (3) if the facility name is changed.

B. Construction Requirements

1. General Construction Requirements. This permit does not authorize construction activities at the waste tire collection center area of the site.

C. Operation Requirements

1. General Operating Requirements. The Permittee shall operate the Waste Tire Collection Center in accordance with the approved Operation Plan (see initial application, APPENDIX 2 - Item 2) and Rule 62-711.550 F.A.C. The Department shall be notified before any changes, other than minor deviations, to the approved Operation Plan are implemented in order to determine whether a permit modification is required.

2. Authorized Waste and Material Types. The facility is authorized to manage only whole waste tires as defined in Rule 62-701.200, F.A.C.

3. Unauthorized Waste Types. The facility is not authorized to accept or manage any waste types not listed in C.2. above. Any unauthorized waste inadvertently received by the facility shall be managed in accordance with the approved Operation Plan.

4. Maximum Storage Quantities. The maximum storage of the facility shall be 1,500 waste tires in accordance with Rule 62-711.550(1)(a), F.A.C.

5. Storage Pile Dimensions. The tire storage pile shall be no more than 50 feet in width, no more than 15 feet in height, and shall be no larger than 10,000 square feet in area. A minimum 50-foot wide fire lane shall be constructed and maintained around the WTCC to provide access for emergency vehicles at all times.

6. Liquid Runoff Control. The WTCC shall be managed in a manner so as to divert stormwater and floodwaters around and away from the waste tire storage containers, and to contain and prevent liquid runoff from a potential waste tire fire from entering water bodies. The Facility shall maintain a two-foot high berm around the waste tire storage area.

7. Mosquito Control. The Permittee shall provide for control of mosquitoes so as to protect public health and welfare.

8. Maintenance. The WTCC shall be kept free of grass, underbrush, and other vegetation that may be flammable at all times.

9. Removal Frequency. The Permittee shall remove waste tires from the site every 90 days or more frequently as needed so the quantity does not exceed 1,500 tires, and at least once a year, all waste tires shall be removed from the WTCC. The waste tires shall only be removed by a registered waste tire collector and shall be taken to an authorized recycling, processing, or disposal facility.

10. Facility Capacity. If the facility has reached its permitted capacity for storage of waste tires, the permittee shall not accept additional waste tires until sufficient capacity has been restored.

11. Storage and Management. All waste tires shall be stored outdoors and shall meet the fire department's standards along with the applicable storage requirements cited in Rule 62-711.540, F.A.C.

12. Emergency Preparedness. The Permittee shall keep a copy of the Emergency Preparedness Manual (EPM) at the Facility's office. It shall be kept in a location easily accessible to all personnel working at the Facility, and shall be updated at least once a year and upon changes to operations at the site. In the event of an emergency, the Permittee shall operate the WTCC in accordance with the EPM.

13. Operations Involving Use of Open Flames. No operations involving the use of open flames shall be conducted within 25 feet of a waste tire pile, Rule 62-711.540(1)(b), F.A.C.

14. Fire Safety. The Permittee shall have the local fire protection authority conduct a fire safety survey at least annually. The fire safety inspection report shall be maintained at the facility for five years and copies shall be provided to the Department upon request.

15. Soil Stockpile. The Permittee shall maintain a stockpile of soil adjacent to the tire storage area that is adequate to extinguish a fire encompassing the maximum number of stored tires.

16. Resulting Contaminated Soil and Liquid. If it is determined to not be a hazardous waste, the contaminated soil resulting from a tire fire may be disposed of in a permitted active Class I landfill. The resultant liquid shall be removed to a facility authorized to accept it. The Permittee shall maintain records of when, to where, and the amount of material removed. Regulated and non-regulated hazardous waste is to be handled in accordance with the applicable local, state and federal regulations.

17. Records. The Permittee shall maintain records of the quantity of waste tires received at the site, stored at the site, and removed from the site. The name(s) and location(s) of the entity removing and/or receiving the waste tires shall be recorded. The records shall be kept at the Facility's office and shall be made immediately available upon request, including during routine inspections.

D. Water Quality Monitoring Requirements

[There are no water quality monitoring requirements for this facility.]

E. Gas Management System Requirements

[There are no gas management requirements for this facility.]

F. Closure Requirements

1. When the Permittee closes the facility all waste tires and residuals will be removed to a waste tire processing facility, a solid waste management facility authorized to accept waste tires, or a legitimate user of waste tires. Logs of the closure shall be maintained, and the Permittee shall notify the Department within 14 days of completion of closure in order to enable the Department to inspect the site.

G. Financial Assurance and Cost Estimates

[There are no financial assurance requirements for this facility, per Rule 62-711.550 F.A.C.]

Executed in Leon County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Kimberly A. Walker

Kimberly A. Walker, Program Administrator
Permitting & Compliance Assistance Program

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to Section 120.52, F.S. with the designated Department Clerk, receipt of which is hereby acknowledged.

Tamela Starling
Clerk

5/24/2017
Date

APPENDIX 1

General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of noncompliance; and
(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit or a copy thereof shall be kept at the work site of the permitted activity.

12. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all

data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:
1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

13. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

APPENDIX 2 – List of Documents Incorporated into this Permit

Approved Application Documents

1. Hardee County, Florida Waste Tire Collection Center Permit Renewal Application dated May 17, 2017. Received by the Tallahassee Solid Waste Section on May 17, 2017.

   Oculus Link:
   https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.261762.1]&[profile=Permitting_Authorization]

Previous Application Documents incorporated by reference

2. Hardee County, Florida Waste Tire Collection Center Permit Renewal Initial Application dated January 23, 2012. Received by the Southwest District Solid Waste Section on February 06, 2012. Includes Approved Site Operation Plan.

   Oculus Link:
   https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.150996.1]&[profile=Permitting_Authorization]

Hardee County Solid Waste Department

Waste Tire Site

Emergency Preparedness Plan

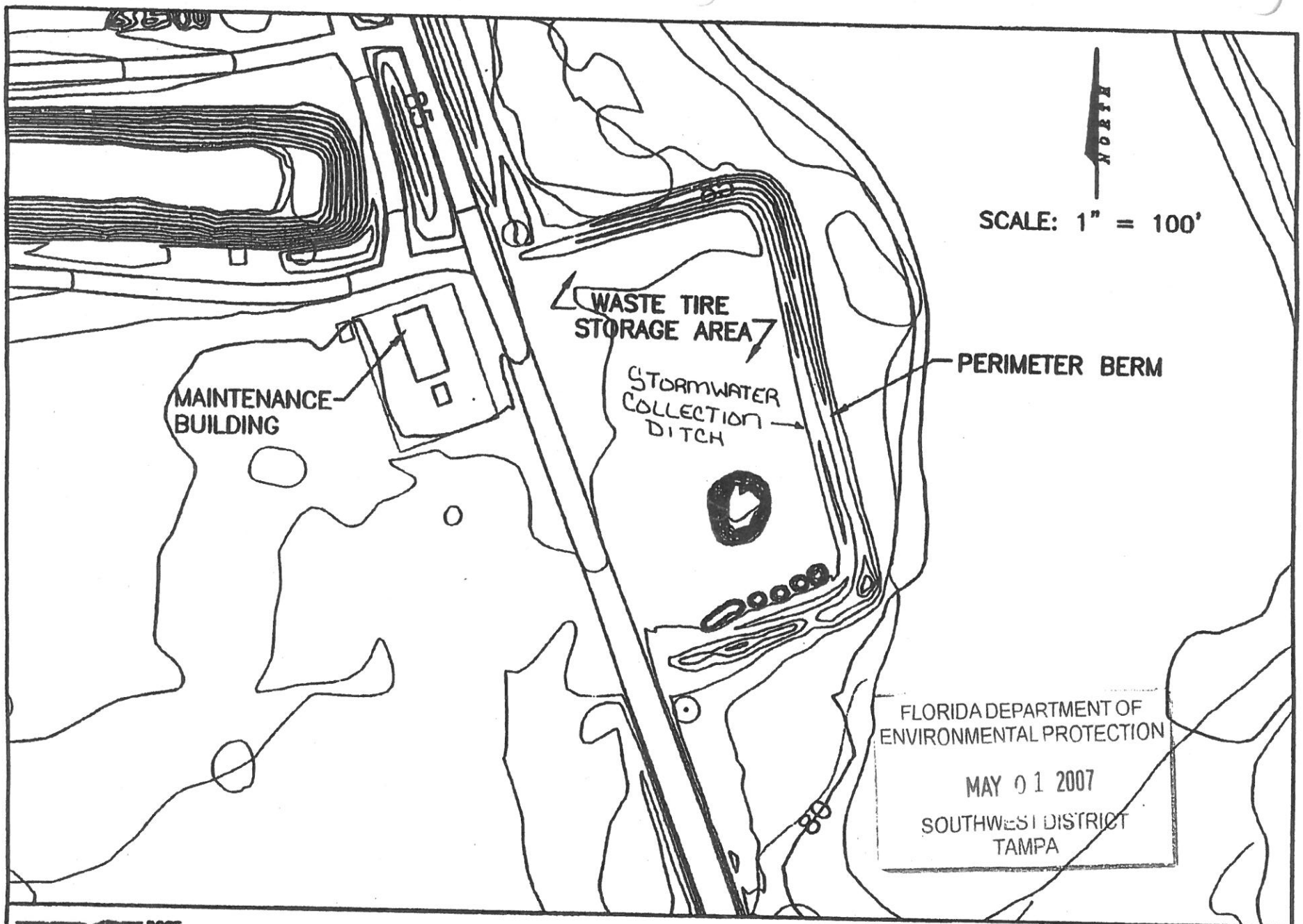
1. Name and Phone Numbers of persons to be contacted in the event of a fire, flood, or other emergency:

Hardee County Fire and Rescue Department	911
	Or
	773-4362
Ken Wheeler PE, Project Manager	773-5089

2. List of the emergency response equipment at the site:
   1. Dry Fire Hydrant located adjacent to the Scale House.
   2. Soil cover material located at the site
   3. CAT D7E Dozer – used to push dirt to smother out a fire.
   4. John Deere 544 Front End Loader – for end loading and moving cover material in case of fire.
   5. Tandem axle dump truck – to haul dirt for cover material.

3. Procedures:
   1. Call the Fire and Rescue Department and the Solid Waste Director.
   2. Contain the fire within the boundaries of the site.
   3. Use equipment listed to move soil cover material at site.
   4. Smother fire by covering it with a blanket of dirt.
   5. If water is used, block the northwest corner of the storm water ditch with available soil to prevent any runoff.
   6. Oily material to be maintained within bermed area of the site.
   7. Contact DEP with the full report.
   8. Clean up oily contaminated dirt and ship it to certified Hazardous Waste Disposal Facility.

NOTE: The site is large enough to maneuver equipment such as the front-end loader and dozer around. In addition, there are sufficient amounts of cover material located at the landfill adjacent to the site, to smother a potential fire. The maximum time between any potential incident and the removal of any fire residue is within 24 hour. It is unlikely that water will be used to extinguish any fires. However, should there be a need to use water, the storm water control system can be quickly bermed off and the water



PBSJ POST, BUCKLEY, SCHUH & JERNIGAN, INC.

WASTE TIRE STORAGE AREA TOPOGRAPHY
HARDEE COUNTY REGIONAL LANDFILL

FIGURE 1

Hardee County Fire Rescue

149 K. D. Revell Rd., Wauchula, FL 33873
Office: (863)773-4362*Fax: (863)773-3827
Joseph Walker, Fire Chief
William Yonce, Deputy Fire Chief
Juanita Gaitan, Fire Prevention Officer
E. Cary Pigman MD FACEP, Medical Director

May 17, 2017

Hardee County Solid Waste
Attention: Kenneth Wheeler
685 Airport Road
Wauchula, FL 33873

Mr. Wheeler,

I have assessed the Solid Waste Facility's fire suppression capabilities. I have found the Collection Center has sufficient water capability to adequately provide the necessary water demands for fire suppression purposes.

If I may be of further assistance please feel free to contact me at 863-773-4362.

Regards,

Juanita Gaitan
Fire Prevention Officer

Appendix B

Waste Hauler Agreement

PROPOSAL
HAZARDOUS WASTE CONTRACTOR SERVICES

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Proposal as principal or principals. is, or are, named herein and that no other person that is herein mentioned has any interest in the Proposal or in the Contract to be entered into; that this Proposal is made without any connection with any other person, company or parties making a bid proposal; and that it is, in all respects, fair and in good faith, without collusion or fraud.

The Bidder proposes and agrees, if this proposal is accepted, to contract with HARDEE COUNTY in the form of Contract specified, to furnish all necessary services for the collection, identification, packaging, treatment, storage, shipping and proper disposal of Household Hazardous Waste as necessary to complete the Scope of Services.

Costs for Collection and Packaging:
The County desires to conduct two house hold hazardous waste collection events consisting of two eight-hour days. The County will require the Proposer to provide a minimum of:

Minimum Required	Actual Supplied
1) _1_ Project Managers	1
2) _1_ Chemists	1-2
3) _2_ Technicians	2-4

The Bidder proposes to charge the County a fee of Eight hundred,twenty-five dollars ($ 825.00) each per four (4) household hazardous waste collection events per year which shall be conducted in the following months: January, April, July, and October. Each event shall be conducted in one-half (1/2) 8-hour day for these services. The Bidder proposes to charge the County a fee of zero dollars ($ 0.00) per hour for services performed in excess of 4 hours per day.

Transportation and Disposal
The County estimates it will generate the following types and quantities of waste per collection and the bidder proposes to charge the County the following for the transportation and disposal of these waste. The management of all wastes shall be limited to the following disposal options listed. The bidder shall identify the disposal method for each waste using the following codes:

(T) Hazardous waste treatment
(L) Hazardous waste landfill
(I) Hazardous waste incineration
(F) Fuel blending
(R) Recycling

TYPES & QUANTITIES:

1) **Flammable Liquid, Low Chlorine, Bulk**

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Fuel Blend	$95.00

30 Gallon	Fuel Blend	$60.00
5 Gallon	Fuel Blend	$25.00

2) **Flammable Liquid, High Chlorine, Bulk**

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Fuel Blend	$140.00
30 Gallon	Fuel Blend	$100.00
5 Gallon	Fuel Blend	$25.00

3) **Flammable, Low Chlorine, Lab Pack**

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Fuel Blend	$150.00
30 Gallon	Fuel Blend	$90.00
5 Gallon	Fuel Blend	$50.00

4) **Flammable Liquid, High Chlorine , Lab Pack**

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Fuel Blend	$150.00
30 Gallon	Fuel Blend	$90.00
5 Gallon	Fuel Blend	$50.00

5) **Flammable Liquid, Poison**

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Incineration	$175.00
30 Gallon	Incineration	$125.00
5 Gallon	Incineration	$50.00

6) **Flammable Solids, Lab Pack**

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Incineration	$160.00
30 Gallon	Incineration	$125.00

5 Gallon	Incineration	$60.00

7) **Aerosol Cans**

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Incineration	$150.00
30 Gallon	Incineration	$115.00
5 Gallon	Incineration	$25.00

8) **Hazardous Waste, Liquid or Solid, Lab Pack**

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Treat / Incin.	$50.00
30 Gallon	Treat / Incin.	$50.00
5 Gallon	Treat / Incin.	$50.00

9) **Poisonous Material, Liquid or Solid , Lab Pack**

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Incineration	$150.00
30 Gallon	Incineration	$125.00
5 Gallon	Incineration	$25.00

10) **Corrosive Material, Lab Pack**

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Treatment	$140.00
30 Gallon	Treatment	$140.00
5 Gallon	Treatment	$75.00

11) **Oxidizers, Liquid, Bulk**

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Treatment	$195.00
30 Gallon	Treatment	$150.00
5 Gallon	Treatment	$60.00

12) Oxidizers, Liquid or Solid, Lab Pack

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Treatment	$150.00
30 Gallon	Treatment	$135.00
5 Gallon	Treatment	$70.00

13) Pesticides or Herbicides, Liquid or Solid, Lab Pack

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Incineration	$190.00
30 Gallon	Incineration	$140.00
5 Gallon	Incineration	$50.00

14) Cyanides or Sulfides, Lab Pack

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Incineration	$300.00
30 Gallon	Incineration	$200.00
5 Gallon	Incineration	$75.00

15) Batteries, Dry Cell

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Recycle	$350.00
30 Gallon	Recycle	$250.00
5 Gallon	Recycle	$75.00

16) Batteries, Lead Acid

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Recycle	$90.00
30 Gallon	Recycle	$75.00
5 Gallon	Recycle	$30.00

18) Antifreeze

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Recycle	$85.00
30 Gallon	Recycle	$75.00
5 Gallon	Recycle	$25.00

19) Used Oil

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Recycle	$40.00
30 Gallon	Recycle	$40.00
5 Gallon	Recycle	$10.00

20) Antifreeze, Bulk Liquid

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Recycle	$85.00
30 Gallon	Recycle	$75.00
5 Gallon	Recycle	$25.00

21) Latex Paint, Bulk Liquid

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Recycle	$90.00
30 Gallon	Recycle	$65.00
5 Gallon	Recycle	$10.00

22) PCB Liquids, Bulk

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Incineration	$650.00
30 Gallon	Incineration	$400.00
5 Gallon	Incineration	$150.00

23) PCB's Bulk

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Incineration	$375.00
30 Gallon	Incineration	$225.00
5 Gallon	Incineration	$125.00

24) Dioxin, Liquid or Solid, Lab Pack

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Incineration	$125.00
30 Gallon	Incineration	$105.00
5 Gallon	Incineration	$25.00

25) Non Regulated Soaps, Polishes, and others

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Stabilization	$90.00
30 Gallon	Stabilization	$65.00
5 Gallon	Stabilization	$65.00

26) Unknown Wastes: Other wastes

SIZE OF CONTAINER	DISPOSAL METHOD	COST
55 Gallon	Incineration	$20.00
30 Gallon	Incineration	$0.00
5 Gallon	Incineration	$0.00

In submitting this proposal, it is understood that the County of Hardee reserves the right to reject any or all proposals and to waive any technicality in any proposal in the interest of the County of Hardee. Furthermore, no proposal may be withdrawn for a period of thirty (30) days from the opening thereof.

Dated this 11th **day of** April **2005.**

INDIVIDUAL) Strike out words

PARTNERSHIP) Not applicable
CORPORATION)

NAME OF FIRM: EQ Florida, Inc. (The Environmental Quality Company)

BY: _____ Account Executive
(Signature of Authorized Person) (Title)

TYPED SIGNATURE: Curt DeBrunner

ADDRESS: 7202 East 8th Avenue

Tampa, FL 33619

TELEPHONE: (813)623-5302 **FAX:** 628-0842

FEIN # 20-0414157

HARDEE COUNTY CODE, ON DISCLOSURE OF RELATIONSHIPS

SWORN STATEMENT UNDER Florida Statute chapter 112,
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal, Proposal or Contract for EQ Florida, Inc.
2. I understand that an "affiliate" as defined in, Hardee County standards of conduct, means: The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of the firm.
5. I understand that the relationship with a County Commissioner or County employee must be disclosed as follows:

   Father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, daughter-in-law, son-in-law, Brother-in-law, sister-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, grandparent, or grandchild.
6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies).

   6.1 X Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, have any relationships as defined in Section 3 Hardee County standards of conduct, with any County Commissioner or County employee.

   6.2 _____The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity have the following relationships with a County Commissioner or County employee:

Name of Affiliate or Entity	Name of County Employee	Relationship

This sworn statement is submitted by:

EQ Florida, Inc.
(Firm)

(Signature)

April 11, 2005
(Date)

20-0414157
(FEIN/SS #_____)

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH
The foregoing instrument was acknowledged before me this 11 day of APRIL, 2005, by CURT DEBRUNNER, who is personally known to me or who has produced _____ as identification.

NOTARY PUBLIC

Joanna M. Daniels

Signature

Print: JOANNA M. DANIELS

State of Florida at Large

My Commission Expires:

12/22/06

(SEAL)

Joanna M. Daniels
My Commission DD173385
Expires December 22, 2006

AGREEMENT

This **AGREEMENT** made this the 2nd day of June, 2005 by and between the **COUNTY OF HARDEE** (a.k.a. the OWNER and the COUNTY) of 412 W. Orange St., Wauchula, FL 33873 and **EQ Florida, Inc.** of 7202 East 8th Ave., Tampa, FL 33619 hereinafter known as the CONTRACTOR.

WITNESSETH that whereas the COUNTY intends to utilize the services of the Contractor to provide the COUNTY with Hazardous Waste Contractor Services. This includes the management and disposal of Household Hazardous Waste, collected from within Hardee County to reduce the amount of hazardous waste in the environment and the County's Solid Waste stream. Hereinafter this will be known as Hazardous Waste Contractor Services, in accordance with the specifications and other Contract documents as prepared by the COUNTY.

Now, THEREFORE, the OWNER and the CONTRACTOR for the considerations hereinafter set forth, agree to the following:

The CONTRACTOR, agrees to furnish all the necessary labor, insurance, supervision, machinery, equipment, and tools required to handle all work required, in strict accordance with all the Contract documents, which are hereby made part of this Contract including the following Addenda:

Addenda No. N/A Dated: _____
No. N/A Dated: _____
No. N/A Dated: _____

The COUNTY agrees to pay, and the Contractor agrees to accept, in full payment for the performance of this Contract as per your proposal dated April 11, 2005.

Successor and Assigns: This agreement and all of the covenants hereof shall insure to the benefit of and be binding upon the COUNTY and the Contractor respectively and his partners, successors, assigns and legal representatives. Neither the COUNTY nor the Contractor shall have the right to assign, transfer or sublet its interests or obligations hereunder without written consent of the other party in accordance with the Contract Documents. The Contract Documents include:

Request for Proposal
Instructions to Proposers,
Scope of Services
Addenda (s)
Proposal Form w/all attachments
Agreement

All Contract documents are made a part of the agreement just as if incorporated herein.

IN WITNESS WHEREOF, the OWNER and the CONTRACTOR, respectively, have caused this agreement to be duly executed the 21st day of June 2005.

CONTRACTOR:

By: Robert Mulholland

Robert Mulholland
(Print Name)

General Manager
(Print Title)

WITNESS:

WITNESS:

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

By: Gordon R. Norris

Gordon R. Norris
(Print Name)

Chairman
(Print Title)

WITNESS: Lisa Kalmbacher

WITNESS: Sandra Meeks

ATTEST:

By: B. Hugh Bradley 6/23/2005

B. HUGH BRADLEY
(Print Name)

EX-OFFICIO CLERK TO BCC
(Print Title)

THE ENVIRONMENTAL QUALITY COMPANY®

Notice of Waste Approval Expiration

Customer Account: 010237
Fax: (863) 773-3907

EQ Florida, Inc. (FLD981932494)
7202 East Eighth Ave.
Tampa, FL 33619
February 9, 2012

THERESA CARVER
HARDEE COUNTY SOLID WASTE
685 AIRPORT RD
WAUCHULA, FL 33873

RE-APPROVAL NOTICE

Thank you for selecting EQ as your environmental management partner. Our annual review has determined that the following Approval(s) are scheduled to expire; it is necessary that this form be sent to EQ prior to the date below as approvals will become inactive at that time.

Approval #	Waste Code / Common Name		Expiration Date	Reapprove?
	EPA ID	Generator Name		*(Circle One)*
HAR FLAM SOL LI	D001 / .		01/06/2012	(Y) N
	CESQG	HARDEE COUNTY SOLID WASTE		

To ensure uninterrupted service, please select one of the following recertification options:

NON-PROCESS CHANGES: If each waste stream has been properly documented, characterized and approved, and the process has not changed, please circle "Y" for YES next to the corresponding Approval Number. If you do not wish to obtain a reauthorized Approval, please circle "N" for NO next to the corresponding Approval Number. An authorized generator signature is required at the bottom of this Notice. Upon completion, please fax to the EQ Resource Team at 1-813-628-0842 for immediate processing.

PROCESS CHANGES OR AMENDMENTS: If the process generating the waste has changed, please call the EQ Resource Team at 1-800-624-5302 for immediate assistance. Thank you for your continued patronage.

I, Teresa Carver, Teresa Carver,
Authorized Generator Signature *Printed Generator Name*

hereby certify that I have reviewed the waste stream file(s) for the Approvals listed above and have determined that the processes generating the above wastes have not changed over the past year and that all information is accurate and complete. I agree that, as a condition of extending the Approval(s) listed above, all wastes which are transported, delivered, or tendered to EQ under such Approval(s) shall be subject to the attached Standard Terms and Conditions.

Company Name: Hardee County Date: 2/10/12

To ensure uninterrupted service, please select one of the following recertification options:

NON-PROCESS CHANGES: If each waste stream has been properly documented, characterized and approved, and the process has not changed, please circle "Y" for YES next to the corresponding Approval Number. If you do not wish to obtain a reauthorized Approval, please circle "N" for NO next to the corresponding Approval Number. An authorized generator signature is required at the bottom of this Notice. Upon completion, please fax to the EQ Resource Team at 1-813-628-0842 for immediate processing.

PROCESS CHANGES OR AMENDMENTS: If the process generating the waste has changed, please call the EQ Resource Team at 1-800-624-5302 for immediate assistance. Thank you for your continued patronage.

I, Teresa Carver, Teresa Carver,
(Authorized Generator Signature) *(Printed Generator Name)*

hereby certify that I have reviewed the waste stream file(s) for the Approvals listed above and have determined that the processes generating the above wastes have not changed over the past year and that all information is accurate and complete. I agree that, as a condition of extending the Approval(s) listed above, all wastes which are transported, delivered, or tendered to EQ under such Approval(s) shall be subject to the attached Standard Terms and Conditions.

Company Name: Hardee County Solid Waste Date: 11/13/12

To ensure uninterrupted service, please select one of the following recertification options:

NON-PROCESS CHANGES: If each waste stream has been properly documented, characterized and approved, and the process has not changed, please circle "Y" for YES next to the corresponding Approval Number. If you do not wish to obtain a reauthorized Approval, please circle "N" for NO next to the corresponding Approval Number. An authorized generator signature is required at the bottom of this Notice. Upon completion, please fax to the EQ Resource Team at 1-813-628-0842 for immediate processing.

PROCESS CHANGES OR AMENDMENTS: If the process generating the waste has changed, please call the EQ Resource Team at 1-800-624-5302 for immediate assistance. Thank you for your continued patronage.

I, Teresa Carver, Teresa Carver,
(Authorized Generator Signature) *(Printed Generator Name)*

hereby certify that I have reviewed the waste stream file(s) for the Approvals listed above and have determined that the processes generating the above wastes have not changed over the past year and that all information is accurate and complete. I agree that, as a condition of extending the Approval(s) listed above, all wastes which are transported, delivered, or tendered to EQ under such Approval(s) shall be subject to the attached Standard Terms and Conditions.

Company Name: Hardee County Solid Waste Date: 11/13/12

SCOPE OF WORK

1.0 General

The work to be performed will consist of furnishing all sufficient, competent, trained staff to receive, identify, handle, package, consolidate, treat, store and transport all hazardous waste received and processed as a result of the household hazardous waste collection events.

1.1 The County intends to conduct a total number of four (4) household hazardous waste collection events per year which shall be conducted in the following months: January, April, July, and October. Each event shall be conducted in one-half (1/2) eight-hour day. The collection will be from 8:00 a.m. to 4:00 p.m. (noon).

1.2 Location - The County maintains a permanent Household Hazardous Waste Collection Facility located at 685 Airport Road, Wauchula, FL 33873-8663. This location shall be utilized in connection with the performance of the household hazardous waste collection event and those services required by the County as outlined or directed otherwise by the County.

1.3 The Contractor shall perform any services awarded to it as an independent Contractor and, as such, shall have to maintain complete control over all of its employees and operations. Neither the Contractor nor anyone employed by it shall be, represent, act, purport to act or be deemed to be the agent, representative, employee, or servant of the County.

1.4 The County reserves the right to remove any material from the waste stream, which is collected during the event.

2.0 QUALIFICATIONS

The applicant must be able to adequately demonstrate to the **County** that it meets the qualification and the **County** may, in its sole discretion, disqualify applicants not meeting these qualifications.

2.1 Experience

The **Contractor** shall have a minimum of five (5) years acceptable general experience in the performance of household hazardous waste events similar to those as outlined including at least ten (10) events conducted within the state of Florida. The **Contractor** shall describe this experience and furnish references with contacts, titles, telephone numbers and mailing addresses as part of its submittal to the **County**.

2.2 Insurance

2.2.1. The Contractor shall possess and have in full force and effect and insurance policy covering all sudden and accidental occurrences of releases of hazardous materials and have a minimal amount of $5,000,000 per occurrence and a level of $10,000,000 aggregate coverage. The policy shall have provisions for the payment of any and all remedial activities needed to correct damage resulting from released to the environment caused by the contractor's participation in activities relating to the RFP.

2.2.2 The Contractor shall possess and have in full force and effect an insurance policy covering Workers' Compensation and employer's liability with levels in compliance with State and Federal statutory limits and at a minimum have a $5,000,000 minimum limit per accident or occurrence.

2.2.3 The Contractor shall possess and have in full force and effect an insurance policy covering commercial automobile insurance with a minimal combined value of at least $5,000,000 covering bodily injury and property damage. This coverage must

be endorsed with Form MCS-90 to provide for public liability during the transportation of hazardous substances and with the minimum acceptable limit of $5,000,000 dollars per accident. All insurance shall include owned, hired and leased, or non-owned vehicles.

2.2.4 The Contractor shall posses and have in full force and effect an insurance policy covering commercial general liability including products and completed operations performed by the Contractor. This coverage shall have a minimum limit of $5,000,000 per occurrence with an umbrella liability limit of $10,000,000

The Contractor shall demonstrate all insurance coverage to the County inclusive of this response to the RFP. (List County as additional insured and provide certificate to that effect).

2.3 Licenses and Permits.

2.3.1 The Contractor shall be duly licensed and permitted to treat, store, dispose of and transport hazardous waste and be in possession of an EPA identification Number indicating same. The transporter shall meet the standards applicable to transporters of hazardous waste found in 62-730 F.A.C.

2.3.2 The Contractor shall be duly licensed as required by any regional jurisdiction such as the possession of an occupational license, or any other licenses or permit, which may be required. The Contractor shall be required to determine if any special or specific license or permit is required for his participation in activities defined in the RFP.

2.3.3 The Contractor shall only deliver hazardous material for treatment and/or disposal destination facilities which have obtained and maintain in force a permit from the Environmental Protection Agency (EPA) or from an Authorized State and which is defined as a Treatment, Storage and Disposal Facility (TSDF) as identified in 40 CFR 264. The Contractor shall identify in its proposal the names, addresses, EPA Identification Number, the contact person and telephone number, of the facility, which it will utilize for treatment and/or disposal of hazardous material identified in the RFP. The Contractor shall list the facility, the waste code, and the treatment method in which the facility shall employ for each type of waste the facility shall accept. The Contractor shall disclose any instance of being denied a permit or license for conducting of household hazardous waste collection event or permanent collection center operation during the time he has been engaged in the business.

2.3.4 Damages, penalties and/or fines imposed on or incurred by the **County** or the **Contractor** for failure to obtain and keep current and required licenses or permits, or to comply with any law, ordinance, rule, regulation or special condition applicable to the contract or directly or indirectly relating to or resulting from the handling, identification, packaging, labeling, transportation, storage or disposal of all materials handled or managed by the contractor shall be borne by the **Contractor**.

2.4 **Subcontractors**

The **County** shall allow the use of sub-contractors in the performance of activities specified in the RFP. However, the **Contractor** must meet all of the minimal requirements specified within the RFP for work performed by the **Contractor** and the sub-contractor must meet the minimal requirements for activities which will pertain to functions performed by the sub-contractor. The **Contractor** shall be solely responsible for the activities performed by the sub-contractor and the

Contractor shall indemnify and hold the **County** harmless for any work or services performed by the sub-contractor. The **Contractor** shall identify in its proposal, all subcontractors who will perform work identified in the RFP and the scope of work they will perform. Subcontractor identification shall include the name, address, telephone number, fax number, contact person, license or permit numbers and the experience the subcontractor has performing these activities. A duly licensed disposal facility which is not owned by the **Contractor** and which is approved by the **County** shall not be considered sub-contract activity as relating to the RFP.

3.0 Plans and Procedures

3.1 **The Contractor** must maintain and submit for the **County's** approval, a contingency plan that adequately describes how the **Contractor** shall identify and correct any problems, which it may encounter during the performance of the duties, required by the **Contractor** and identified in the RFP. The plan must include remedial action provisions, spill prevention and control and emergency responses for hazardous waste transportation.

3.2 **The Contractor** must maintain and submit to the **County** a site safety plan. The plan at a minimum shall include provisions for the proper handling of hazardous materials, worker and participant safety and traffic control. The plan must ensure that appropriate measures are taken to prevent damage to human health, the environment and public and private property. Submission of the plan shall in no manner be implied to impose a duty on the part of the County to review or approve said plan.

4.0 Tasks.

The **County** requests that contractors provide proposals and associated costs for certain groups of services as outlined in the Proposal Form. The task is broken down into the following task or service groups:

4.1 **Traffic Control**

The **Contractor** shall establish at the **County's** site, a configuration of logistics and personnel which will allow participants in the collection event to drive through the facility without leaving their car and with the goal of the **Contractor** removing the hazardous material from the participant's vehicle. The **Contractor** shall post signs or other legible instruction to inform participants of their responsibilities and to ensure the safe and smooth flow of traffic.

4.2 **Handling and Packaging of Wastes**

The **Contractor** shall provide on-site, at the **County's** specified location, services for the safe removal of hazardous wastes from vehicles, interviewing participants on the characteristics of their wastes, and determining the appropriate handling and storage of the wastes. The material, once properly identified shall be transported to the contractors packaging and consolidation area located at the site.

4.3 **Temporary Packaging and Consolidation**

The **Contractor** shall select a location at the **County's** site for the collection of household hazardous waste by which it will establish a temporary packaging and consolidation area. The **Contractor** shall provide all of the necessary equipment and materials required for setting up and operating the temporary packaging and storage area. All of the **contractor's** equipment shall be clean, properly maintained

and clearly identifiable as belonging to the **Contractor**. The **Contractor** shall transport all waste accepted during the event to this area for identification, testing, packaging, labeling and temporary storage. Material shall only be packaged in US DOT, containers that are approved for the storage and transportation of the hazardous material contained within and which shall be supplied by the **Contractor**.

4.4 **Identification of Waste**

The **Contractor** shall provide identification of all hazardous waste received at the collection center. Identification shall be sufficient to properly package and label all hazardous waste pursuant to US DOT requirements for transportation of hazardous waste and materials and to ensure acceptance of the waste at an approved, permitted facility as identified in 2.3.of the RFP. The **Contractor** shall provide all materials and equipment necessary for the proper testing and identification of waste received during the event. The **Contractor** shall provide this service through the use of a chemist meeting the minimal requirements for this position as outlined in 7.1 of the RFP.

4.5 **Consolidation of Waste**

The **Contractor** shall make every effort to consolidate compatible waste in its goal to provide the **County** with the lowest practicable disposal cost for those wastes. This shall include, but is not limited to, pouring off, or mixing together chemically compatible liquid oil based paints; pouring off, or mixing together chemically compatible flammable liquids such as oil, kerosene, gasoline, heating oil or other flammable combustible liquids; pouring off , or mixing together chemically compatible liquid pool chlorine or pouring off or mixing together any other material which is chemically compatible and will not change or increase the hazard class or disposal cost of the original materials and would not create an increased risk to employees or participants in the collection event. Material shall only be packaged in US DOT, containers that are approved for the storage and transportation of the hazardous material contained within and which shall be supplied by the **Contractor.**

4.6 **Lab Packing**

The **Contractor** shall provide services for the lab packing of hazardous materials for disposal. Lab packing shall be performed at the temporary packaging and consolidation area, which shall be established by the **Contractor**. Each lab pack shall be accompanied by lab pack list which identifies the individual types, and the exact quantities and hazardous contents of the completed lab pack. The **Contractor** shall supply the **County** with the lab pack lists upon completion of the lab pack. Material shall only be packaged in US DOT containers, which are approved for the storage and transportation of the hazardous material contained within and which shall be supplied by the **Contractor**. The **Contractor** shall use the minimal amount of packing material and the smallest practicable packaging container, which can be safely utilized in the lab packing operation.

4.7 **Storage of Waste**

4.7.1 The Contractor may, unless otherwise specified by the **County,** store properly packaged and labeled hazardous waste in the **County's** permanent storage facility prior to transporting these waste for disposal. The **Contractor** may store these wastes for a period of no longer than seven (7) days. Only waste, which has been accumulated, as a result of the household hazardous waste collection event may be stored at the **County's** location. The **Contractor** may store CESQG waste at the **County's** facility under these same conditions.

4.7.2 Contractor shall own a facility that is permitted and shall have acquired, and shall currently hold, all necessary permits and licenses for conducting household

hazardous waste and conditionally exempt small quantity generator waste collections in its home state and in all states in which it conducts business.

4.8 **Manifesting of Wastes**

4.8.1 The Contractor shall supply and complete a Uniform Hazardous Waste Manifest (US EPA Form 8700-22) in accordance with 40 CFR 262, Subpart B, for all hazardous waste collected and packaged during the project or transported from the **County**, by the **Contractor**, for disposal. The manifest shall adequately describe the contents and amounts of the material being transported and shall comply with all applicable US DOT requirements for the identification of hazardous materials. The **Contractor** shall identify on the manifest the actual weight or quantity estimates of material listed on the manifest. The **Contractor** shall label all containers of hazardous material with the proper EPA waste identification code and start accumulation date of the container. The **Contractor** shall, be identified on the Uniform Hazardous Waste Manifest as the generator for all wastes collected by the **Contractor** during the household hazardous waste collection event and shipped off the **County's** site for disposal by the **Contractor.** The **Contractor** shall supply the **County** with copies of all manifests, which are supplied by the **Contractor** upon completion of the collection event.

4.8.2 The contractor shall be responsible for the preparation of any required Land Disposal Restrictions forms or documents and shall provide the **County** with copies of the completed forms prior to transportation of any material for disposal.

4.9 **Transportation of Wastes**

The **Contractor** shall transport all waste which are approved by the **County** to hazardous waste facilities as identified. The **Contractor** shall be responsible for all activities relating to the transportation of hazardous materials or waste.

4.10 **Disposal of Waste**

4.10.1 The Contractor shall only transport material for disposal, to facilities which are properly licensed and permitted and the **County** shall require and the **Contractor** shall ensure that any materials which are generated as a result of the household hazardous waste collection event be prohibited from disposal in non-hazardous waste landfills, or delivered to non-hazardous waste incinerators except those authorized to burn hazardous waste fuels, or any such facility which is not licensed to conduct Treatment, Storage, or Disposal of hazardous wastes. (The **Contractor** shall supply the **County** with a certificate of destruction for wastes removed by the **Contractor**. The certificate of destruction shall be supplied no later than 90 days from the removal of the waste. The **County** reserves the right to withhold a percentage, of the awarded contract amount until the receipt by the **County** of the certificate of destruction.)

4.10.2 The County may, at its sole discretion, add additional quantities of waste beyond the **County's** estimates. The **Contractor** shall agree to properly dispose of these wastes and charge the **County** a disposal rate, which is specified in the **contractor's** proposal.

4.11 **The Contractor** shall be, identified on the Uniform Hazardous Waste Manifest as the generator for all wastes collected by the **Contractor** during the household hazardous waste collection event and shipped off the **County's** site for disposal by the **Contractor.**

4.12 **Recyclable Materials**

The **Contractor** shall separate and segregate materials, which can be recycled and shall elect to recycle those materials as the preferred method of disposal. This shall include but not limited to anti-freeze, waste oil, Ni-Cad, small lead acid batteries, automobile batteries, latex paint or any other materials, which may be identified by the **Contractor** or the **County** during the collection event.

4.13 Non-Hazardous Waste

The **Contractor** shall not, unless otherwise directed by the **County**, package or dispose of non-hazardous waste or empty containers formerly containing hazardous wastes, which are collected during the household hazardous waste collection event. The **County** shall provide a Dumpster for the disposal of non-hazardous waste and empty containers collected during the event and the **Contractor** shall place these wastes in this Dumpster at the direction of the **County**.

4.14 Unacceptable Waste

Gas cylinders, explosives, radioactive, shock sensitive materials, ammunition, and infectious waste will not be accepted during the household hazardous waste collection event. The **contractor** shall provide a list of other unacceptable waste, state why these wastes are unacceptable, and recommend alternative methods of disposal as part of its proposal.

4.15 CESQG Waste.

4.15.1 The Contractor shall accept hazardous waste from conditionally exempt small quantity generators (CESQG'S) at the **County's** location during the household hazardous waste collection event. CESQG's are defined as generators, which generate less than 220 pounds of hazardous waste per month. The **Contractor** shall identify, consolidate, lab pack, package, manifest, transport and dispose of all of the CESQG wastes received during the event. The **Contractor** shall perform these services pursuant to the conditions outlined for the management of the **County's** household hazardous waste, which is collected during the event.

4.15.2 The Contractor shall collect the costs associated with CESQG waste collection from the CESQG, which delivers the waste. The **Contractor** shall offer the CESQGs the same fee for the services as specified to the **County** in the **Contractor's** proposal.

4.15.3 The Contractor shall assume ownership of the waste upon transfer to the Contractor. The Contractor may store CESQG wastes at the County's facility but must remove these wastes upon completion of the collection event unless their storage is specifically authorized by the County in writing. The Contractor assumes all responsibility for the performance of any activities connected with the collection and disposal of CESQG wastes.

4.16 Small Quantity Generators.

The Contractor shall during the term of the contract with the county, offer the service of collection of wastes from the **County's** Small Quantity Generators. The **County** shall supply the **Contractor** with a mailing list of SQG's and CESQG's at the beginning of the Contract. The **Contractor** shall establish milk runs or small quantity collection schemes in order to provide economical transportation and disposal costs for the **County's** SQG's. The cost for disposal of the **County's** SQG waste shall be paid by the SQG and the **Contractor** shall be responsible for the collection of funds from the SQG. The **Contractor** shall provide a toll free telephone number for the SQG's to contact the **Contractor**. The SQG shall be charged a rate for disposal, which is the same as identified by the **Contractor** in its proposal to the **County's** household hazardous waste collection program.

5.0 Required Equipment

All material and equipment shall be clearly labeled and identified as belonging to the **Contractor**. The **Contractor** shall have available for use at the household hazardous waste collection event the following devices and equipment:

5.1 An internal communication or alarm system capable of providing immediate emergency instructions, either voice or signal, to participating personnel.

5.2 A device such as a telephone or hand held two-way radio, which is capable of summoning emergency assistance from police, fire, or State or local emergency response personnel.

5.3 Fire control equipment, including portable fire extinguishers and chemical extinguishing equipment, such as those using foam, inert gas or dry chemical.

5.4 Spill control equipment including adequate quantities of absorbent materials, non-sparking shovels or devices, chemical neutralizers, over pack drums or any other materials or devices that may be required for the control of spills or releases of material handled by the **Contractor**.

5.5 Personnel Protective equipment in adequate quantities to outfit all participants in the household hazardous waste collection event. Equipment shall provide, at a minimum, the level of protection required for the task performed by the **Contractor.** The **Contractor** shall have adequate quantities of material such as chemical protective suits, protective eye wear, protective boots, chemical protective gloves, respirators, eye wash station, self contained breathing equipment and any other safety equipment required by the **Contractor** in the performance of his duties relating to the event or in the response to emergency situations.

5.6 First aid and CPR supplies and equipment.

5.7 Drums, containers, liners, covers, rings, bolts, hazardous waste labels, manifest, lab pack lists, lab packing materials, material testing equipment or supplies, or any other material or supply as might be needed for the receipt, identification, packaging, transportation and disposal of the material collected during the household hazardous waste event.

6.0 **Title of the Waste**

Title to all wastes accepted by the **Contractor** at the site from residents and CESQGs for transport and disposal by the **Contractor** shall pass directly from such resident or CESQG to the **Contractor** upon acceptance of the waste by the **contractor.**

7.0 **Personnel**

The following personnel shall have these minimal qualifications and responsibilities:

7.1 **Chemist**

7.1.1 Persons identified as chemists shall hold a Four-year degree in chemistry or a related field from a regionally accredited college or university. Individuals shall have at least two years experience in conducting household hazardous waste collection events and participated in the identification, classification and lab packing of chemicals and hazardous materials as part of its duties. Persons shall have participated in 40-Hour hazardous waste workers training program with an annual 8-hour refresher course where applicable.

7.1.2 The responsibility of the chemist shall be to properly handle, identify, segregate incompatible materials, consolidate compatible materials, lab pack, prepare lab pack identification documents associated with lab packs and properly label and

determine the appropriate disposal methods for the hazardous materials collected during the household hazardous waste collection event.

7.2 **Project Manager**

7.2.1 **A project manager** shall hold a four-year degree in chemistry or a related field from a regionally accredited college or university. Individuals shall have at least four years experience in supervising household hazardous waste collection events and participated in the collection, identification, consolidation, labeling, lab packing and properly manifesting and transporting chemicals and hazardous materials for disposal as part of its duties. Individuals shall have participated in 40-hour hazardous waste workers training program with an annual 8-hour refresher course where applicable. Individuals shall have received first aid and CPR training and be familiar with the emergency application of the same.

7.2.2 The responsibility of the project manager shall be to manage, supervise, and take direct responsibility for the actions of all employees and activities of the **Contractor** or Subcontractor during the household hazardous waste collection event and insure compliance to the conditions of the contract. The project manager shall ensure that employees properly handle, identify, segregate incompatible materials, consolidate compatible materials, lab pack, prepare lab pack identification documents, assume responsibility for waste being properly labeled and manifested. The project manager shall be responsible for the **contractor's** actions in the prevention of spills, or releases of hazardous materials and the **contractor's** responses to accidents and releases as a result of activities relating to the **Contractor** or the conduction of the collection of hazardous materials during the household waste collection event.

7.3 **Technician**

7.3.1 **A technician** shall have successfully completed 40-hour hazardous waste workers training program with an annual 8-hour refresher course where applicable. Individuals shall have at least two years experience in the collection and proper handling of household hazardous wastes and participated in the collection identification and manual transporting to the contractors consolidation areas all chemicals and hazardous materials received as part of its collection of hazardous materials at similar household hazardous waste collection events.

7.3.2 **Technicians** shall be responsible for the identification and safe removal of hazardous materials, which are delivered by **County** residents and CESQG's to the household hazardous waste collection event site, technicians shall safely transport hazards related to the handling of these materials.

7.4 **Medical Surveillance**

All site personnel, including any subcontractor, shall have successfully completed a pre-placement or periodic medical examination prior to their assignment to the project.

8.0 Reports

Within 30 days of completion of the household hazardous waste collection event, the **Contractor** shall provide the **County** with the following reports:

8.1 **The Contractor** shall provide a report containing the date, location and the number of hours of the event and the number of cars, or residents, which participated in the event, the type and exact quantity of the material received and the type and quantity of material rejected.

8.2 **The contractor** shall match the quantities of material received with the resultant containers which the **Contractor** placed the received material into for disposal. The

report shall list the hazard class of the container or lab pack as inflammable liquid, poison B, etc.

8.3 The Contractor shall provide a list of all material transported for disposal along with copies of the corresponding manifests. The **Contractor** shall also specify the destination facility and the treatment method for each waste.

8.4 The Contractor shall provide a detailed report of any spills or emergencies, which occurred during performances of his services and outline the outcome of and remedial actions taken to include the current condition of the situation.

8.5 The Contractor shall submit a detailed invoice to the **County** pursuant to the terms and conditions specified in the RFP and the contract between the **County** and the **Contractor.**

9.0 **Transportation and Disposal**

The Contractor shall provide the cost per unit for the transportation, and disposal of items as specified, these costs shall include any drums, or containers required; the labor, equipment, and supplies required for labeling, manifesting, lab packing materials, moving or loading of wastes, and the transportation and disposal costs associated with each specific item. The price shall include any special considerations required by the **Contractor** to conduct this service including costs for identification. The **County** shall provide estimates of the quantities of each item but the **County** is not responsible to provide these estimated amounts of waste, the **Contractor** shall specify the treatment or disposal method for all wastes.

10.0 **Compensation**

- Proposers must complete and return a proposed compensation schedule. It is the responsibility of the Proposer to provide a schedule that clearly identifies the cost and scope of ***all*** services.
- Proposers should declare that, to the best of their knowledge and experience, that all proposed costs are reasonable and customary for the service listed.
- In order to establish a multi-year contractual relationship, the Proposer should address a price escalation / de-escalation methodology.

11.0 **Selection**

A Selection Committee will be established to review and evaluate all proposals. The Committee shall conduct an evaluation of all proposals on the basis of the information provided and other evaluation criteria as set forth in this Request.

Proposals will be evaluated and rated based on the criteria provided in this RFP and will include but not be limited to the following:

- Ability, capacity and skill of the applicant to perform the Scope of Work.
- Experience of the applicant and individual members of the Company in accomplishing similar services.
- Responsiveness of the applicant to the Scope of Work.
- Responses of the client references.
- Compensation Schedule.
- Such other information that may be required or secured.

The **County** reserves the right to:

- Require presentations of any or all applicants.
- Make investigations of the qualifications of applicants, as it deems appropriate.

- Request that applicants furnish additional information.
- Be the sole judge of applicant's qualifications and to verify all information submitted by the applicants.
- Process the selection of successful applicants without further discussion.

12.0 Documents To Be Included In Your Proposal And Numbered As:

Attachment	#A	Contractor Qualifications (see pg 6, 2.0)
	#B	Insurance (see 2.2, pg 6)
	#C	Licenses & Permits (see 2.3, pg 7)
	#D	List of Subcontractors (see 2.4, pg 7)
	#E	Plans & Procedures (see 3.0, pg 8)
	#F	Disposal of Waste (see 4.10, pg 10)
	#G	Personnel (see 7.0, pg 12 & 13)

Appendix C

Training Courses

Florida's Solid Waste Management Facility Operator & Spotter Training Requirements Guide

The 1988 Solid Waste Management Act mandated training for all solid waste landfill operators. In 1989, Rule 62-703, Training Operators of Solid Waste Management Facilities, Florida Administrative Code (F.A.C.), was adopted by the Florida Department of Environmental Protection (FDEP) in response to requirements in the 1988 Act. The new rule 62-701 assures the continued development of the Solid Waste Management Facility Operator training program for all solid waste operators and spotters in Florida. The Solid Waste Management Training Committee (SWMTC) was created to help implement the training program and now approves all initial and continuing education courses for operators and spotters. By providing and encouraging operator training, the FDEP intends to elevate the professional status of those in the field of solid waste management, further protect the environment, and improve solid waste facility compliance.

The University of Florida TREEO Center is providing administrative assistance by processing applications for continuing education course credit and maintaining the solid waste operator/spotter training database. For more information please visit http://landfill.treeo.ufl.edu or contact Vivian Li at vivian@treeo.ufl.edu or (352) 294-7047.

<table>
<tr><td colspan="3">Review your Florida Solid Waste Operator and Spotter Training Transcript at: http://landfill.treeo.ufl.edu
No login needed • Check the expiration date and the training status (Current or Expired) for:</td></tr>
<tr><td>Individual:
- Click on Participants
- Type in last name and hit enter
- Click on the track to see transcript</td><td>Facility:
- Click on Participants
- Use the drop-down list and enter company name
- Type in company name and hit enter
- Click on the track to see transcript</td><td>Facility Report:
- Click on Reports
- Type in the company name
- Click on Run Report</td></tr>
<tr><td colspan="3">If any information is incorrect/missing or if someone is no longer at the facility, please send a notice to:
vivian@treeo.ufl.edu</td></tr>
</table>

Initial Training

To meet the training requirement of FAC 62-701 Operator(s) or spotter(s) must:

- Successfully complete an approved initial training course
- Be in attendance for entire course
- Pass exam – 70% or higher [*operators only*]
- All Initial Face-to-Face training must be completed within 30 days from the start date.
- All Initial Online training must be completed within 90 days from the start date.

Effective May 27, 2001	
Classification	***Initial Course***
Landfill – Class I, III	24 hours + exam
Construction and Demolition [C&D] Landfill	24 hours + exam
Transfer Station [TS]	16 hours + exam
Material Recovery Facility [MRF]	16 hours + exam
Land Clearing Debris Facility	No operator training required
Spotter of all Facilities	8 hours

Initial Training

Approved Initial Training Courses and Providers for time period: 1/1/2015 – 12/31/2020
Must resubmit between 6/1/2020-12/31/2020 for next 5-year period

Landfill Operator (Class I, III) & Construction and Demolition Debris Operator (C&D)

Provider	*Course*
Jerry Wood, P.E. jwpe1@hotmail.com (407) 542-3254	• 24-Hour Initial Training Course for Landfill Operators (Class I, II, III and C&D Sites) ▪ Course #608
Kohl Consulting, Inc. Kohl.consulting.inc@gmail.com (407) 552-1892 ▪ docdump.com	• 24-Hour Initial Training Course for Landfill Operators (Class I, II, III and C&D Sites) ▪ Course #608
Training Consultants, Inc. mark@ustcon.com (718) 407 9947 ▪ ustrainingconsultants.com	• 24-Hour Initial Training Course for Landfill Operators (Class I, II, III and C&D Sites) ▪ Course #608
University of Florida TREEO Center vivian@treeo.ufl.edu (352) 294-3880 ▪ treeo.ufl.edu	• Initial Training Course for Landfill Operators and C&D Sites - 24 Hour ▪ Course #442
Waste University jon@wasteuniversity.com (352) 682-4007 ▪ wasteuniversity.com	• 24-Hour Initial Course for Landfill Operators ▪ Course #999 • 24-Hour Initial Course for Landfill Operators - Online ▪ Course #1000

Transfer Station Operator (TS) & Materials Recovery Facility Operator (MRF)

Provider	*Course*
Jerry Wood, P.E. jwpe1@hotmail.com (407) 542-3254	• 16-Hour Initial Training Course for Transfer Station and MRF Operators ▪ Course #582
Kohl Consulting, Inc Kohl.consulting.inc@gmail.com (407) 552-1892 ▪ docdump.com	• 16-Hour Initial Training Course for Transfer Station and MRF Operators ▪ Course #582
Training Consultants, Inc. mark@ustcon.com (718) 407 9947 ▪ ustrainingconsultants.com	• 16-Hour Initial Training Course for Transfer Station and MRF Operators ▪ Course #582
University of Florida TREEO Center vivian@treeo.ufl.edu (352) 294-3880 ▪ treeo.ufl.edu	• Initial Training Course for Transfer Station Operators and Materials Recovery Facilities - 16 Hour ▪ Course #443
Waste University jon@wasteuniversity.com (352) 682-4007 ▪ wasteuniversity.com	• 16-Hour Initial Course for Materials Recovery Facility and Transfer Station Operators ▪ Course #1004 • 16-Hour Initial Course for Materials Recovery Facility and Transfer Station Operators - Online ▪ Course #1005

Initial Training

Land Clearing Debris Operator - No Training Requirements

Spotter

- Any of these courses are approved for spotters for all types of facilities [Class I, III/ C&D/ Transfer Station/ MRF/ Land Clearing].
- In-house training is allowed effective May 27, 2001. All training must be approved by the SWMTC. See section "In-House Training" for more information.

Provider	*Course*
Jerry Wood, P.E. jwpe1@hotmail.com (407) 542-3254	• 8-Hour Initial Training Course for Spotters at Solid Waste Management Facilities in Florida ▪ Course #812
Kohl Consulting, Inc Kohl.consulting.inc@gmail.com (407) 552-1892 ▪ docdump.com	• 8-Hour Initial Training Course for Spotters at Solid Waste Management Facilities in Florida ▪ Course #812
Training Consultants, Inc. mark@ustcon.com (718) 407 9947 ▪ ustrainingconsultants.com	• 8-Hour Initial Training Course for Spotters at Solid Waste Management Facilities in Florida ▪ Course #812
University of Florida TREEO Center vivian@treeo.ufl.edu (352) 294-3880 ▪ treeo.ufl.edu	• Initial Training Course for Spotters at Landfills, C&D Sites and Transfer Stations - 8 Hour ▪ Course #443 • Spotter Training for Solid Waste Facilities ▪ Course #248 • Spotter Training for Solid Waste Facilities (Initial - 8 Hours) – Online ▪ Course #988
Waste University jon@wasteuniversity.com (352) 682-4007 ▪ wasteuniversity.com	• 1 - 8-Hour Initial Spotter Course - Fundamentals, Tools, and Techniques ▪ Course #1020 • 1 - 8-Hour Initial Spotter Course - Fundamentals, Tools, and Techniques – Online ▪ Course #1021
Wetland Solutions Wetlandsolutions@yahoo.com (850) 484-0825	• Spotter Training ▪ Course #214

Initial Training

- If you are new to Florida, you must complete and pass the exam for one of the approved Initial courses. If you have successfully completed this, then see section "How to have Training Approved or Added to Your Transcript."
- If you have exceeded the three-year training period without completing the minimum number of hours of continuing education, you must start over by taking an approved initial course [and pass the exam for operators].

Types of Job Duties That Can Be Performed

Training Courses	Landfill Operator	C&D Operator	MRF Operator	TS Operator	Spotter
Landfill Operator	X	X			X
C&D Operator		X			X
MRF Operator			X		X
TS Operator				X	X
Spotter					X

If you are trained as an operator, you are also trained as a spotter.				
Operator	→	*LDF training*	☑	*Work at LDF*
Operator	→	*WPF training*	☑	*Work at WPF (TS/MRF)*
Operator	→	*LDF training*	☒	*Cannot work at WPF (TS/MRF)*
Operator	→	*WPF training*	☒	*Cannot work at LDF*
Spotter	→	*Spotter training*	☑	*Can work at LDF, WPF (TS/MRF)*

- All credit hours awarded for courses are approved by the Solid Waste Management Training Committee [SWMTC].

Course Reciprocity

- If you take an Initial operator course for Class I, III landfills, then you are considered trained as an operator for Class I, III landfills and C&D.
- If you took one of the Initial operator courses for C&D, then you are trained as an operator for only C&D.
- If you take a combined Initial course for the Class I, III Landfills and C&D, then you are trained as both.
- If you took the Initial operator course for Transfer Stations, then you are trained as an operator for only Transfer Stations.
- If you took the Initial operator course for MRFs, then you are trained as an operator for only MRFs.
- If you take a combined Initial course for the TS/MRF, then you are trained as both.
- If you take an operator course, then you are also trained as a spotter. No certificate or classification is entered for spotter.
- All approved Spotter courses are approved for training for any type facility.
- If you are an operator and take the spotter training as a refresher course, you do not have to keep the spotter classification 'current' as long as your operator is current, you are trained as a spotter.

Who Approved Training

Solid Waste Management Training Committee [SWMTC]

- The committee reviews and approves training courses.
- The committee consists of the following representatives: FDEP; Local Government; Education; Private Industry
- Committee Meetings
  1. The committee meets the second Thursday of each month by conference call to review training courses.
  2. Course information is submitted through the records manager, reviewed and forwarded to the members.
  3. The committee assigns the number of contact hours for each course. The contact hours may vary from the actual hours of the course.
- The committee set the course completion timeframe at the following:
  1. All Face-to-Face training must be completed within 30 days from the start date.
  2. All Online training must be completed within 90 days from the start date.
  3. No grace period or extensions allowed.

Continuing Education [CE] Contact Hours Refresher Training

Review Your Florida Solid Waste Operator and Spotter Training Transcript – No Login needed	
Individuals	Click on Participants; Type in last name; Click name to see number of hours needed & current 3-year period
Facility	Click on Participants; Use the drop-down list and select company

Continuing Education Contact Hours Requirement Every 3 years Before your Expiration/Anniversary Date	
Classification	*Effective March 2016*
Landfill – Class I, III	16 hours
Construction and Demolition [C&D] Landfill	16 hours
Transfer Station [TS]	8 hours
Material Recovery Facility [MRF]	8 hours
Land Clearing Debris Facility	No training required
Spotter of all Facilities	4 hours

- *Note:* You will need continuing education every 3 years to maintain all your classifications. Many courses offer CE for several classifications. *Example:* If you have the classification as a Landfill Operator and Transfer Station Operators, you will need 16 for LDF and 8 for TS.

Approved Courses	1. Courses are listed on the FDEP Approved Solid Waste Operator and Spotter Training Course List and are categorized by operator classification. http://landfill.treeo.ufl.edu/Courses.aspx 2. Click on the course name for the number of hours awarded for each classification 3. Click on the course name to see the course provider
Continuing Education (CE) or Contact Hours	1. CE training is required before the end of the 3-year period after taking the initial training class. The last day of the class is the expiration date of the 3-year period for that classification. This expiration/anniversary date never changes. 2. The initial course is recorded as 0.0 hours, which indicates you have successfully completed the initial course. 3. No CE credit will be given for courses taken before the initial course is successful completed.
Maintaining "Current" Status	1. To maintain your database records for the next 3-year period, the operator/spotter must have the minimum required number of contact hours. Contact hours received above the minimum requirement do not rollover to the next 3-year period. The new 3-year period starts at zero [0.0]. 2. ***Important Note:*** You can acquire training at any time within the 3-year period. You do not have to wait until the last year of your 3-year period. You are encouraged to get CE 18-6 months before your anniversary/expiration date. Do not wait!!!

Current or Expired

Operators/Spotters who fail to achieve the required number of Contact Hours of CE by the end date of their 3-year period may be considered out of compliance with FAC 62-701. If the person training is tracked in the Florida Solid Waste Operator/Spotters' Database, they are then categorized as "Expired".

1. Expired operators/spotters may be reinstated to "**current**" status if they provide:
   - Proof of training taken during the last 3-year period that meets the number of hours needed include: verification of attendance.
   - Or, the person may start over by taking an approved initial training course (+ exam for operators).
2. It is the operator/spotter's responsibility to submit verification for upkeep in the Operator/Spotter database not the training provider. Forms and verification are submitted to:
   Sienna Horton by: Scan/Email: vivian@treeo.ufl.edu; Fax: (352)392-6910
   Mail: University of Florida TREEO Center, 3900 SW 63 Blvd, Gainesville, FL 32608.
3. Operators/Spotters are required to keep a copy of all training submitted or taken, including any in-house training, and make it available to FDEP Inspectors.
   See section "How to Have Training Approved or Added to your Transcript."

FAC 62-701.320(15)(a) Operator Training

Effective March 13, 2016

(15) Operator and spotter training and special criteria. The owner or operator of a landfill, or other solid waste management facility required by this chapter to have trained operators or spotters, shall not employ a person to perform, nor may any person perform, the duties of an operator or spotter at such facility unless that person is a trained operator or trained spotter. A facility may employ interim spotters, but only if they work under the direct supervision of a trained spotter or trained operator. A facility may employ an interim operator in lieu of a trained operator for no more than three consecutive months.

(a) Owners and operators of facilities shall ensure that operators employed at the facility are properly trained to operate the facility, and that spotters are properly trained to identify and properly manage any unauthorized waste which is received at the facility. A training plan shall be included as part of the permit application. All training courses, whether public or in-house, must be pre-approved by the Department pursuant to Section 403.716, F.S. Such training materials shall be submitted to the Department for pre-approval, and shall be approved by the Department where the course materials are consistent with Department rules applicable to solid waste facilities. Any in-house operator training program which includes an examination required by this subsection must be administered by an independent third party. Any other in-house operator training program must be administered by a trained operator. Any in-house spotter training program must be administered by a trained operator or a trained spotter. The training plan, along with records documenting how the training plan is being implemented, shall be kept at the facility at all times and be made available for inspection by Department staff. The Department will maintain a list of relevant training courses which are available in this State.

(b) In order to be considered trained, operators of the following facilities shall complete the following training requirements at courses described in the facility's operating plan:

1. Operators of landfills, and operators of construction and demolition debris disposal facilities, shall complete 24 hours of initial training, and shall pass an examination as part of that training. Within three years after passing the examination, and every three years thereafter, operators shall complete an additional 16 hours of continued training.

2. Operators of waste processing facilities shall complete 16 hours of initial training, and shall pass an examination as part of that training. Within three years after passing the examination, and every three years thereafter, operators shall complete an additional 8 hours of continued training.

(c) In order to be considered trained, spotters shall complete 8 hours of initial training at courses described in the facility's operating plan. Within three years after attending the initial training, and every three years thereafter, spotters shall complete an additional 4 hours of continued training.

(d) Spotter location.

1. Each facility where spotters are required shall include in its operation plan the number and location of spotters and the procedures to be followed if unauthorized waste is discovered. Spotters shall be stationed where they can inspect each shipment of waste for unauthorized waste.

2. If spotters are to be located on heavy equipment spreading the waste at the working face of a solid waste disposal unit or at a waste processing facility, the operation plan shall specifically provide for the following:

a. The heavy equipment operator is trained as an operator or spotter;

b. When unauthorized waste is discovered, the heavy equipment operator must either move the unauthorized waste away from the active area for later removal and proper management, or must stop operation and notify another person on the ground or on other equipment who will come to the active area and remove the unauthorized waste before operations are resumed; and

c. Each load of waste must be visually inspected for unauthorized waste prior to being compacted or loaded into a transfer vehicle.

(e) Notwithstanding the definition in Rule 62-701.200, F.A.C., and solely for purposes of this subsection, "operator" means any person, including the owner, who is principally engaged in, and is in charge of, the actual operation, supervision, and maintenance of a solid waste management facility and includes the on-site person in charge of a shift or period of operation during any part of the day, such as facility managers, supervisors and equipment operators. It does not include office personnel, laborers, equipment operators not in a supervisory capacity, transporters, corporate directors, elected officials, or other persons in managerial roles unless such persons are directly involved in on-site supervision or operation of a solid waste management facility. A trained operator may perform the duties of a trained spotter.

(f) For purposes of this subsection, "interim operator" means a person who has, in the opinion of the facility manager, shown competency in his chosen occupation through a combination of work experience, education and training and who has at least one year of experience at that facility or a similar facility. An interim operator must become a trained operator within one year of employment as an interim operator.

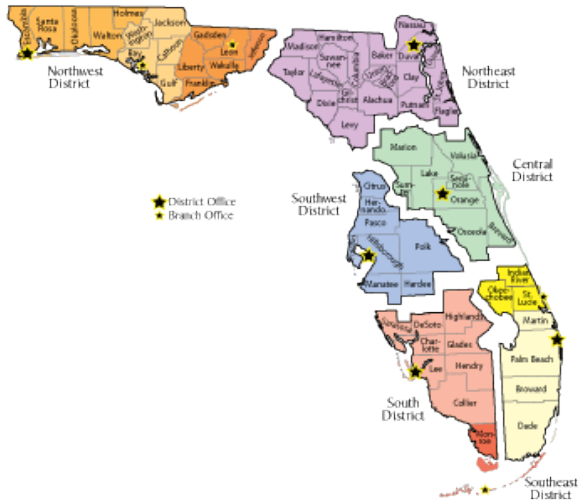
(g) For purposes of this subsection, "spotter" means a person employed at a solid waste management facility whose job it is to inspect incoming waste and to identify and properly manage any unauthorized waste that is received at the facility.

(h) For purposes of this subsection, "interim spotter" means a person who has, in the opinion of the facility manager, shown competency in his chosen occupation through a combination of work experience, education and training. An interim spotter must become a trained spotter or trained operator within three months of employment as an interim spotter.

Solid Waste Training Requirements in the State of Florida

Florida Department of Environmental Protection – District Regulatory Offices

https://floridadep.gov/districts



Northwest District

- http://www.dep.state.fl.us/northwest/
- Jurisdiction: Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson, Leon, Liberty, Okaloosa, Santa Rosa, Wakulla, Walton & Washington
- 160 Governmental Center, Suite 308, Pensacola, FL 32502-5794
- (850) 595-8300

- Northwest District Branch Office (NWDP)
- 470 Harrison Ave, Panama City, FL 32401
- (850) 872-4375

- Northwest District Branch Office (NWDT)
- 2600 Blair Stone Rd, Tallahassee, FL 32399
- (850) 245-2984

Northeast District

- http://www.dep.state.fl.us/northeast/
- Jurisdiction Alachua, Baker, Bradford, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Lafayette, Levy, Madison, Nassau, Putnam, St. Johns, Suwannee, Taylor & Union
- 8800 Baymeadows Way, Suite 100, Jacksonville, FL 32256
- (904) 256-1700

Central District

- http://www.dep.state.fl.us/central/
- Jurisdiction: Brevard, Lake, Marion, Orange, Osceola, Seminole, Sumter & Volusia
- 3319 Maguire Boulevard, Suite 232, Orlando, FL 32803-3767
- (407) 897-4100

South District

- http://www.dep.state.fl.us/south/
- Jurisdiction: Charlotte, Collier, DeSoto, Glades, Hendry, Highlands, Lee, Monroe & Sarasota
- PO Box 2549, Fort Myers, FL 33902-2549
- (239) 344-5600

- South District Branch Office
- 2796 Overseas Highway, Suite 221, Marathon, Florida 33050
- (305) 289-7070

Southeast District (WB)

- http://www.dep.state.fl.us/southeast/
- Jurisdiction: Broward, Dade, Martin, Indian River, Okeechobee, Palm Beach & St. Lucie
- 3301 Gun Club Road, MSC7210-1, West Palm Beach, FL 33406
- (561) 681-6600

- Southeast District Branch Office
- 337 N. US Hwy 1, Suite 307, Ft. Pierce, FL 34950 St. Lucie, FL 34952
- (772) 467-5500

Southwest District

- http://www.dep.state.fl.us/southwest/
- Jurisdiction: Citrus, Hardee, Hernando, Hillsborough, Manatee, Pasco, Pinellas & Polk
- 13051 N Telecom Parkway, Temple Terrace, FL 33637
- (813) 470-5700

- Ombudsman - https://floridadep.gov/comm/ombudsman-public-services
- WasteMap Florida provides web-based GIS mapping system to locate solid waste facilities
- Solid Waste Records Search - http://www.fldepportal.com/go/ or https://depedms.dep.state.fl.us

How to Have Training Approved or Added to your Solid Waste Training Transcript

- All courses that are listed have been approved and are on the FDEP Approved Solid Waste Management Facility Operator and Spotter Training Course List
- All course/event submittals go to the SW Operator & Spotter Database Records Manager
    - Vivian Li – vivian@treeo.ufl.edu; Fax: (352) 392-6910; Phone: (352) 294-7047
    - Mail: Solid Waste Operator Training, UF TREEO Center, 3900 SW 63 Blvd, Gainesville, FL 32608
- Course/events can be submitted by:
    - Operator-Spotter / Provider / Training Institution / Company / Association / Instructor
- **For the Online CEU Form, click here:** CEU Form [Refresher/Initial]

New Course/Event

- Any course/event **not on the list of approved courses** are submitted as a new course for review.
- Information is submitted to the Records Manager for completeness and then forwarded to the committee members for review.
- The submittal packet (electronic format is preferable) should contain:
    1. FDEP Continuing Education Units [CEU] form – Online Form: CEU Form [Refresher/Initial]
    2. Course topics or agenda with time allotments for each subject including a daily start & finish time
    3. Amount of time for breaks and lunch
    4. Short paragraph of what the course is about or detailed outline
    5. Instructor(s) biographical information including company/phone or email/web/qualifications
    6. Training provider information: company/email/phone/web address
    7. Total number of hours requested for course approval and classification: LDF, TS, MRF, Spotter
    8. Required for all Initial courses and in-house training [electronic version of Text or PowerPoint slides/exam] – Upload electronic documents to Dropbox and provide link to vivian@treeo.ufl.edu

    Optional

    9. Flyer or brochure for course/email notice

Submittal Process

- All information should be at UF TREEO no later than the first day of the month, in order to be reviewed at that month's committee meeting.
- All material is reviewed by the Records Manager for its completeness when it arrives.
- The applicant will be notified by email that his/her course information has been received and will be reviewed at the next committee meeting.
- Incomplete Applications
    - The person who submitted the material is notified of what is missing from the packet.
    - This material is needed before the information can be forwarded to the review committee.
- Completed Applications
    - Each course application is forwarded to the committee the first week of each month.
    - Initial courses can sometime take longer than one month to go through the review process.

Course/Event Review

- Approved Courses/Events
    - Applicant is notified by email within 10 working days after the committee meeting.
    - Course/Event is added to current FDEP Approved Solid Waste Operator and Spotter Training Course List.
    - To remain on the current list, course/event must be re-submitted at the end of the current 3-year period (Initial–5 years).
    - Course provider is added to the list of current training providers.
    - Initial course providers must submit attendee list using the following form: Provider CEU Form
- Not Approved – no hours given
    - Applicant is notified by the records manager within 10 working days after the committee meeting by email or fax.
- Pending/Need More Information/Verification
    - Applicant is asked to submit additional information/verification for course to be reviewed again the following month.

How to Have Training Approved or Added to your Solid Waste Training Transcript

In-House Courses

- In-House Initial Spotter training and continuing education courses not on the list of approved courses are submitted as a new course for review.
  1. A person who had been trained as an operator is considered trained as a spotter. This person would be qualified to teach either a continuing education operator or initial spotter course, as long as that in-house course was approved in the facility permit and the operator was current on their continuing education status.
  2. 62-701.320 (15) requires that any course which requires an examination (operator initial training) must be taught by an independent third party. So, a current operator could conduct initial training for spotters and continuing education for spotters and operators but could not conduct in-house initial training for new operators.
  3. The trainer must have attended a Train-the-Trainer or Instructional Training course and submit documentation.
  4. Submittal Process – See page 8

Continuing Education Courses/Event

- If an operator would like to have his/her training records maintained in the FDEP Solid Waste Management Facility Operator & Spotter Training Database, he/she must complete the following, in addition to keeping a record of his/her training at their solid waste facility.
- **For the Online CEU Form, click here:** CEU Form [Refresher/Initial]

New to Florida or Newly Trained Operator or Spotter?

- Make sure you have taken an approved initial training course, and you may be added to the database.
  - See pages 1-3 of this document.

Review Your Florida Solid Waste Operator and Spotter Training Transcript – No Login needed *Make note of your Expiration/Anniversary date(s) and number of hours needed before the date.* *No grace period if hours are not met by expiration date.*	
Individuals	Click on Participants; Type in last name; Click on name to see number of hours needed & current 3-year period
Facility	Click on Participants; Use the drop-down list and select company

- **Adding Training to Your Transcript**
  - Initial Training Providers send their attendee rosters directly to UF TREEO Center;
  - or send Sienna Horton a copy of your certificate
  - Complete CEU Form [Refresher/Initial] Online and attached verification (certificate); Fax (352) 392-6910
  - *Types of verification of completion*
    - Copy of certificate (Provider may be contacted for verification)
    - Sign-in sheet for training (accepted only from provider) or session at a conference
    - An Email from Training Provider, verifying attendance
  - Conferences/Seminars – may have a form available at the event – check at registration desk
- **Completed Forms with Approved Verification**
  - Process can take up to 10 working days to complete
  - Check your training transcript online for the added course/event
- **Incomplete Forms**
  - The operator is notified of what was not included in their application by email.
  - When the missing information is submitted, then the training will be added to the operator's record.
  - Then follow steps listed under completed forms.
  - The incomplete application is returned if missing information is not received with 2 months. The completed packet can be resubmitted.

Questions?

- Contract Vivian Li, UF TREEO Center, vivian@treeo.ufl.edu or (352) 294-7047

Frequently Asked Questions

1. ***I would like someone to come on-site to do my Initial training that has been approved in Florida.***
   - Contact any of the Initial course providers.

2. ***My last spotter quit, and I have an equipment operator that has taken an approved spotter course. Am I ok?***
   - A trained solid waste operator can substitute as a trained spotter. See the FAC 62-701 Training Section for more clarification.

3. ***May I train my own staff including Spotters?***
   - All in-house training for credit must be approved by the Solid Waste Management Training Committee.
   - Make sure you have permission to use the training material from the provider [most course material is copyrighted and the property of the provider].
   - In order for operators to add the training to the database record, the training must be listed on the FDEP Approved Solid Waste Operator Training database or be submitted and approved as a new course.

   Initial Training – In House

   -Initial training that requires an examination has to be done by an independent third party (See FAC 62-701.320.15.a)

4. ***I now live in Pompano Beach and previously was a landfill operator in North Carolina. I had 20 hours of training every year. Can I be added to your Solid Waste Operator Training Database?***
   - Only those who have taken one of the approved initial training courses and exam will be entered in the database after he/she submit the necessary documentation. If you didn't attend one of these courses, then you should follow the new course submittal directions or take one of the approved initial training courses.
   - If you have let your 3-year training period expire without having the minimum number of hours of continuing education hours, you must start over with taking an approved course and exam.

5. ***How do I become a Certified Operator in Florida?***
   What are the procedures for getting licensed in the State of Florida to be a landfill operator?
   - Currently, the State of Florida does not have a certification or licensure program for solid waste operators. If you complete the required initial training and receive the minimum continuing education contact hours per 3-year period, then you are considered a trained operator within the State of Florida and may be in compliance. See FAC 62-701.320(15)a

6. ***Where may I find a list of who offers approved solid waste training in the State of Florida?***
   - At http://landfill.treeo.ufl.edu or you may have a copy email/fax/mail to you: (352) 294-7047 or vivian@treeo.ufl.edu

7. ***My Training Transcript is incorrect. What do I need to do to have it corrected?***
   I need a copy of all my operator's training records, Now!
   - Contact: Sienna Horton at (352) 294-7047 or vivian@treeo.ufl.edu or look at the training database

Review your Florida Solid Waste Operator and Spotter Training Transcript No login needed - Check the expiration date and the training status (Current or Expired) for:		
Individual: • Click on Participants • Type in last name and hit enter • Click on the track to see transcript	Facility: • Click on Participants • Use the drop down list and enter company name • Type in company name and hit enter • Click on the track to see transcript	Facility Report: • Click on Reports • Type in the company name • Click on Run Report
If any information is incorrect/missing or if someone is no longer at the facility, please send a notice to: vivian@treeo.ufl.edu.		

8. ***I have lost my certificate. How do I get another one?***
   The business I was working at closed and I am now working at another facility. I was not able to get any of my original training certificates from the previous employer. How do I get a copy of my certificates?

   - Contact the course provider.

UF | TREEO Center
UNIVERSITY of FLORIDA

Center for Training, Research and Education for Environmental Occupations

Certifies

Tony Perry

attended

Initial Training Course for
Landfill Operators and C&D Sites - 24 Hour

January 18-20, 2017

and is awarded this

Certificate of Completion

Passed with 70% Proficiency

Date Issued: 01/20/2017
CEUs: 2.4
FBPE-Provider #0004021 (Course #0009088): 24 PDHs
Solid Waste Landfill/C&D:16.0; TS/MRF: 8.0; Spotter: 4.0, #442

Carol Hinton

Carol Hinton, Associate Director

University of Florida TREEO Center • 3900 SW 63 Boulevard • Gainesville, FL 32608-3800 • 352-392-9570 • www.treeo.ufl.edu

WASTE UNIVERSITY

ATTESTS THAT

Ofelia Reyna

has successfully completed the Initial 8 Hour Spotter Training Course for Waste Management Facilities – Online (#814) approved by the Florida Solid Waste Training Committee

For the course(s) completed on 12 January 2017

Jon Powell, P.E. Founder

CERTIFICATE OF COMPLETION

Waste University
Clean Environment
2013

This certificate acknowledges that

Tina Faulkner

successfully completed Waste University Course #814, Initial 8-Hour Spotter Training Course for Waste Management Facilities - Online.

Given on this date **May 16, 2019**

JON POWELL, PH.D., P.E.
Principal and Founder

WASTE UNIVERSITY

ATTESTS THAT

David Deloach

has successfully completed the Initial 8 Hour Spotter Training Course for Waste Management Facilities – Online (#814) approved by the Florida Solid Waste Training Committee

For the course(s) completed on 12 December 2017

Jon Powell, P.E. Founder

Waste University 2013

UF | TREEO Center
UNIVERSITY of FLORIDA

Center for Training, Research and Education for Environmental Occupations

Certifies

Dwight Flowers

attended

Initial Training Course for Landfill Operators and C&D Sites - 24 Hour

August 6-8, 2019

and is awarded this

Certificate of Completion

Passed with 70% Proficiency

Date Issued: 08/08/2019
CEUs: 2.4
FBPE-CEHs (#0004021): 24.0 Hours
Solid Waste Landfill/C&D:16.0; TS/MRF: 8.0; Spotter: 4.0, #442

Carol Hinton

Carol Hinton, Associate Director

University of Florida TREEO Center • 3900 SW 63 Boulevard • Gainesville, FL 32608-3800 • 352-392-9570 • www.treeo.ufl.edu

WASTE UNIVERSITY

STATES THAT

Troy Weiss

has successfully completed the following courses:
16-hr Continuing Education for Landfill Operator Course Package - Online (#913, 11/21/2016) approved by the Florida Solid Waste Training Committee and is therefore awarded

16 CEUs

For the course(s) completed on dates listed above

Jon Powell, Founder

WASTE UNIVERSITY

REPORTS THAT

Richard Nichols

has successfully completed the Initial 8 Hour Spotter Training Course for Waste Management Facilities – Online (#814) approved by the Florida Solid Waste Training Committee

For the course(s) completed on May 24, 2017

Jon Powell, Founder

Appendix D

Contingency Equipment

EQUIPMENT CONTINGENCY

D7R Cat Dozer -

5-year maintenance agreement with Ringhaver Equipment covers replacement of the machine due to manufacturer's defects.

Rental - Annual agreement with Ringhaver Equipment Company, 9797 Gibsonton Drive, Riverview, FL 33569, (813) 671-3700.

Loader -

Rental – Annual agreement with Ringhaver Equipment company, 99797 Gibsonton Drive, Riverview, FL 33569, (813) 671-3700.

Flatbed dump truck -

Two spares on site or borrow from Public Works Department.

Pick-up Truck -

Can substitute with old Blazer on site or borrow a vehicle from Public Works.

Water Pumps -

Replace with new pumps or rentals available through Barney Pumps, 3907 Hwy. 98 South, Lakeland, FL 33802, (863) 665-8500.

Generator -

Hardee County Public Works Department has small portable generators capable of running the scales and scalehouse computers.

Leachate Pumps -

The leachate pumps in the main lift station (Manhole Number 8) are part of a pump exchange program where the defective pump is shipped to the manufacturer and a replacement pump is sent within 48 hours back to the site.

One spare leachate collection pump and one spare leachate detection pump is stored onsite for the Phase II Section I Landfill Expansion.

Appendix E

Fire Contingency Operation Plan

FIRE CONTINGENCY OPERATIONS

In the event of tire, the responding agency is the Hardee County Fire and Rescue Services, located approximately three miles west of the site, in Wauchula, FL.

The landfill site is equipped with four fire hydrants located on the east side of the Class I Phase I Landfill and one hydrant located on the west side of the scale house, used for continuous water supply for Fire and Rescue Equipment. Fire extinguishers are located in all county vehicles and equipment and at the maintenance building (southeast corner of the site) for use in the event of small fires. There are also six fire extinguishers and five hoses bibs located at the Material Recovery Facility. Most of the Landfill employees have been trained by Hardee County Fire and Rescue in the proper use of fire extinguishers. All tire suppression equipment is checked and serviced on a biannual basis by a certified contractor.

If a vehicle enters the landfill with burning waste:

- Immediate efforts are made to protect the health, safety and life of all persons present.
- There is a fire extinguisher and two hose bibs located at the scale house (entrance of the landfill) for use in the event of small fires.
- If the fire cannot be extinguished the vehicle will be directed to open area on site away from all buildings and away from the waste and Hardee County Fire and Rescue will be contacted immediately.
- Any contaminated area will be cleaned and disposed of appropriately, immediately following authorization from the Fire and Rescue Department.

If a fire is discovered on the working face:

- Immediate efforts are made to protect the health, safety and life of all persons present.
- The site is immediately shut down and the Solid Waste Director is notified.
- Landfill Equipment is used to pull the burning waste away from the working area and smothered with in-stock soil materials.
- If necessary, the Hardee County Fire and Rescue Department will be contacted.
- In the event of a large scale fire at this site, Hardee County will utilize local, regional and state mutual aid agreements as prescribed under the County's Comprehensive Emergency Management Plan to obtain whatever resources deemed necessary by the Emergency Management Director.

In the event that a fire is observed or reported when the landfill is closed, Central Dispatch will be instructed to contact Hardee County Fire and Rescue, the Solid Waste Director and the Emergency Management Director.

All fires occurring at the landfill are reported to FDEP by letter, within five days, explaining the cause, remedial actions, and measures taken to prevent a recurrence.

The following phone numbers can be used to notify the appropriate individuals or agencies:

Landfill Director	863-773-5089 (office)
Central Dispatch	911 or 863-773-4144
Fire and Rescue	911 or 863-773-4362
Emergency Management	911 or 863-773-6373
Public Works Director	863-773-3272 (office) 863-773-3272 (mobile)
FDEP Tampa District	813-632-7600
Central Fire and Safety Equipment	800-832-0265

On-site Heavy Equipment:

2003 CAT Dozer, Model D7R

2016 Caterpillar D7E Dozer

2006 816F Caterpillar Compactor

2016 772 Bomag Compactor

2012 624K John Deere Loader

2005 644J John Deere Loader

2015 328E John Deere Skid Steer

Appendix F

Waste Facility Contact List

NEIGHBORING LANDFILLS TO HARDEE COUNTY

LANDFILL NAME	TYPE	COUNTY	CITY	PHONE NUMBER
Polk County North Central Landfill	Class I/ C&D	Polk	Winter Haven	(863) 284-4319
Southeast County Landfill	Class I	Hillsborough	Balm	(813) 671-7674
Sun County C&D Landfill	C&D	Hillsborough	Balm	(813) 642-9594
Central County Solid Waste Disposal Complex	Class I/ C&D	Sarasota	Nokomis	(941) 861-5000
Highlands County Solid Waste Management Center	Class I / C&D	Highlands	Sebring	(863) 402-7786
Pembroke - Fort Meade Landfill		Polk	Fort Meade	(863) 285-8393
Cedar Trail Landfill	Class I	Polk	Bartow	(863) 533-3776

Appendix G

Policy for Asbestos Waste Disposal

POLICY FOR ASBESTOS WASTE DISPOSAL

Asbestos containing waste materials may be accepted for disposal at the Class I Landfill provided that it meets the requirements of 40 CFR Part 61 and if the Class I Landfill has an acceptable disposal area available.

Commercial Generated Asbestos

1. Asbestos materials being removed from any institutional, commercial, public, or industrial structures must be brought in by a licensed contractor certified to classify, remove and properly prepare for disposal all types of Asbestos.

2. Contractor must provide proof of being certified asbestos contractor and a written evaluation of the removal plan; noting type of asbestos, estimated quantity, plans for preparing asbestos for disposal and approval of the Florida Department of Environmental Protection.

3. Contractor must provide Waste Shipment Record.

4. Contractor must give at least a 24-hour notice.

5. Asbestos must be packaged in manageable bundles using leak-tight bagging equivalent to 6-mil in thickness, or a 6-mil plastic lined cardboard or a 6-mil plastic lined metal container.

6. Liquids will not be accepted.

7. Wet material for the purpose of preventing the release of particulates is acceptable provided materials are bundled in leak-tight bagging.

Residential Generated Asbestos

1. Asbestos materials being removed from a single-family residential unit is not regulated.

2. Residents knowingly removing asbestos containing materials from their home are encouraged to contact the Florida Department of Environmental Protection, or OSHA to obtain guidance on safe removal practices.

3. Residents must package materials in double trash bags and maintain manageable bundles and must give at least a 24-how notice.

Disposal Practices

1. Prepare a hole 3 feet in depth and adequate diameter to meet reported estimated quantity to be received, hand dispose of each package.

2. Cover immediately with 1 foot of soil and compact with dozer, adding more cover material with each pass, as needed. A minimum of 12 inches of soil will be placed over the asbestos.

3. Attach a site map with location and depth of each disposal site and attach in a file with the

Waste Shipment Record and record weight ticket.

WASTE SHIPMENT RECORD

Generator	1. Work site name and mailing address	Owner's name	Owner's telephone no.
	2. Operator's name and address		Operator's telephone no.
	3. Waste disposal site (WDS) name, mailing address, and physical site location		WDS phone no.
	4. Name, and address of responsible agency		
	5. Description of materials	6. Containers No. Type	7. Total quantity m^3 (yd^3)
	8. Special handling instructions and additional information		
	9. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.		
	Printed/typed name & title	Signature	Month Day Year
Transporter	10. Transporter 1 (Acknowledgment of receipt of materials)		
	Printed/typed name & title Address and telephone no.	Signature	Month Day Year
	11. Transporter 2 (Acknowledgment of receipt of materials)		
	Printed/typed name & title Address and telephone no.	Signature	Month Day Year
Disposal Site	12. Discrepancy indication space		
	13. Waste disposal site Owner or operator: Certification of receipt of asbestos materials covered by this manifest except as noted in Item 12.		
	Printed/typed name & title	Signature	Month Day Year

Source: 40CRF Part 61.149 Figure 4

Waste Generator Section (Items 1-9)

1. Enter the name of the facility at which asbestos waste is generated and the address where the facility is located. In the appropriate spaces, also enter the name of the owner of the facility and the owner's phone number. If a demolition or renovation, enter the name and address of the company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.
2. If a demolition or renovation, enter the name and address of the company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.
3. Enter the name, address, and physical site location of the waste disposal site (WDS) that will be receiving the asbestos materials. In the appropriate spaces, also enter the phone number of the WDS. Enter "on-site" if the waste will be disposed of on the generator's property.
4. Provide the name and address of the local, State, or EPA regional office responsible for administering the asbestos NESHAP program.
5. Indicate the types of asbestos waste materials generated. If from a demolition or renovation, indicate the amount of asbestos that is
   - Friable asbestos material
   - Nonfriable asbestos material
6. Enter the number of containers used to transport the asbestos materials listed in Item 5. Also enter one of the following container codes used in transporting each type of asbestos material (specify any other type of container used if not listed below):

   DM – Metal drums, barrels
   DP – Plastic drums, barrels
   BA – 6 mil plastic bags or wrapping
7. Enter the quantities of each type of asbestos material removed in units of cubic meters (cubic yards).
8. Use this space to indicate special transportation, treatment, storage or disposal or Bill of Lading information. If an alternate waste disposal site is designated, note it here. Emergency response telephone numbers or similar information may be included here.
9. The authorized agent of the waste generator must read and ten sign and date this certification. The date is the date of receipt by transporter.

NOTE: The waste generator must retain a copy of this form.

Transporter Section (Items 10 & 11)

10 & 11. Enter name, address, and telephone number of each transporter used, if applicable. Print or type the full name and title of person accepting responsibility and acknowledging receipt of materials as listed on this waste shipment record for transport. Enter date of receipt and signature.

NOTE: The transporter must retain a copy of this form.

Disposal Site Section (Items 12 & 13)

12. The authorized representative of the WDS must note in this space any discrepancy between waste described on this manifest and waste actually received as well as any improperly enclosed or contained waste. Any rejected materials should be listed and destination of those materials provided. A site that converts asbestos-containing waste material to nonasbestos material is considered a WDS.
13. The signature (by hand) of the authorized WDS agent indicates acceptance and agreement with statements on this manifest except as noted in Item 12. The date is the date of signature and receipt of shipment.

NOTE: The WDS must retain a completed copy of this form. The WDS must also send a completed copy to the operator listed in Item 2.

Source: 40CRF Part 61.149 Figure 4

Appendix H

Contaminated Soil Acceptance Criteria

CONTAMINATED SOIL ACCEPTANCE CRITERIA

Acceptance of contaminated soil at Hardee County Landfill is only conducted on a case-by-case basis whereby soils must be tested for the Toxicity Characteristic Leaching Procedure (TCLP) and the paint filter test (Method 9095). Hardee County personnel evaluate results from these tests to determine whether the soil will be accepted at the landfill. In any case, contaminated soil accepted at the landfill shall be placed directly into the lined active landfill cell, within the bermed working area, and not stockpiled outside of the lined disposal area at the site unless authorized in writing by the Department.

Testing Methods

- EPA TCLP (Toxicity Characteristic Leaching Procedure, EPA SW-846 Method 1311)
- Paint Filter Test (EPA Development Method SW 846, Method 9095)

Testing Parameters

40 CFR Title 40 Part 261

Appendix I

Household Sharps Collection Program Operating Procedures

HARDEE COUNTY HOUSEHOLD SHARPS COLLECTION PROGRAM

OPERATION AND CONTINGENCY PLAN

THIS PROGRAM IS DESIGNED TO PROVIDE HOUSEHOLD RESIDENTS WITH AN APPROPRIATE STORAGE CONTAINER AND DISPOSAL METHOD FOR SHARPS ONLY. OTHER BIOHAZARDOUS WASTE OR BIOHAZARDOUS WASTE FROM A COMMERCIAL BUSINESS WILL NOT BE ACCEPTED.

Upon entering the Landfill, each vehicle is required to check in through the scalehouse. Should a resident want to dispose of a full-approved sharp container, they will be directed to the Animal Control kennel. One of four the trained employees will accept the container. The container will be labeled with a sticker, which has the following information:

Hardee County Household Sharps
Collection Program
685 Airport Road
Wauchula, FL 33873
Date Received: _____

The container will then be taken to the designated room at the kennel where it will be placed in a Rubbermaid container and stored in the euthanasia room. Upon receiving a full Rubbermaid container, and Animal Control officer will place the container into one of the six kennel boxes in the Animal Control truck, it will be further secured with a bungie cord and at no time do they exceed more than 15 pounds in one transport. The containers are transported to Hardee County Fire and Rescue Department (approximately 3 miles) and placed into a 30 gallon cardboard container with a red bag liner, both of which are properly labeled, the Fire Department contracts with Stericycle for proper collection and disposal of biohazardous waste.

Operations Hours are from 8:00 a.m. to 5:00 p.m., Monday through Friday. 8:00 a.m. to 12:00 p.m. on Saturdays. The Kennel's biohazardous waste storage area is restricted during operation hours by keeping the entry door to this room locked at all times. During non-operating hours, the kennel's two roll-up doors are shut and locked and the barrier fence gate will be shut and locked. In addition the exterior fence around the landfill will be shut and locked.

Each person responsible for accepting full sharp containers or handing out replacement containers will receive annual training on how to properly label containers going out with the residents name and address and on how to label full containers coming in with our facility's program name, address and date received. Each person responsible for accepting full sharps containers will also be instructed to wear protective gloves when handling containers, each satellite facility will be responsible for the proper handling of the containers received at their facility, however, written records of containers issued and received at each satellite facility will be maintained and submitted to the Hardee County Solid Waste Department on a quarterly basis.

Disinfectant procedures for the storage area will be done on an as needed basis but no less than weekly. Procedure will include cleaning tables, cabinets and floors with a quaternary disinfectant with a strong detergent and water.

In such cases as fire, explosions or natural disasters; Hardee County Fire and Rescue Department is located approximately 3 miles northwest of the landfill. A copy of the floor plan which lists the euthanasia room as a storage area for biohazardous sharps will be available at the kennel and at the Solid Waste Administrative office. In addition, the outside door will be clearly marked with the international biohazard symbol.

Because this facility will accept only sharps in approved containers and will generate only sharps, a contingency plan for spills or accidental release of biomedical waste into the environment would not apply.

Hardee County Household Sharps Collection Program
Attachments:

BIOMEDICAL WASTE SHARPS COLLECTION PROGRAM
GENERAL PERMIT NOTIFICATION

1. Satellite facilities participating in the household sharps collection program:

- Hardee County Solid Waste Department
- 685 Airport Road
- Wauchula, FL 33873
- 863-773-5089
- Contact person: Teresa Carver

- Hardee County Fire/Rescue Department
- 149 K.D. Revell Road
- Wauchula, FL 33873
- Contact person: David Sloan

- Hardee County Health Department
- 115 K.D Revell
- Wauchula, Fl 33873
- Contact person: Marsha Carlton or Sandy Griffin

Hardee County Household Sharps Collection Program
Attachments:

2. Description of program:

Hardee County, in conjunction with the above-mentioned facilities, has strived to establish a household sharps disposal program. This program will focus on the proper storage and disposal of sharps generated by households by providing household users with an approved sharp storage container and easy, accessible drop-off locations for proper disposal.

On October 5, 1996, a kick-off event was held in a centralized location of Hardee County. At this time, health care staff labeled and distributed sharps containers to household residents and they explained how to properly deposit and store their sharps. They were also given and informative brochure developed to educate the public on how this program works and where the drops off locations are.

After the kick off event, was held, household residents are able to drop off their full containers for proper disposal and pick-up new containers at any of the facilities listed. There is no charge to the residents for the containers or disposal, however donations will be accepted.

Hardee County Solid Waste Department will be responsible for the purchasing of the containers and educational material. These items will be distributed among each participating agency. Each participating agency will be responsible for proper storage and disposal cost of the sharps collected at their facilities.

HARDEE COUNTY SOLID WASTE DEPARTRMENT:

Residents requesting sharps containers at the Hardee County Solid Waste Facility will be required to give their name and address which will be placed on their container with indelible ink and listed on record. The number of containers received for disposal will also be tracked. This department has four full-time employees who will handle the distribution and collection of the containers.

All other participating facilities will be required to keep the above mentioned records. The Solid Waste Staff will be responsible for collection data from each participation facility to compile a monthly or quarterly summary of this program.

Hardee County Household Sharps Collection Program
Attachments:

3 & 4. Sharps storage and disposal method:

All participating facilities will be responsible for their own proper storage and disposal of sharps collected at their facility. As each of these facilities are in the health care business and are considered generators of biohazardous waste, they are familiar with the proper methods of storage and hold the proper permits required for their facilities.

HARDEE COUNTY SOLID WASTE DEPARTMENT

Hardee County Solid Waste Department has established and Animal Control Department. The kennel has an 8'x 7', fully enclosed, secure room to be used for the euthanasia of animals and to store the sharps collected from the kennel operation and from the household program. This room is kept locked at all times and shall be restricted from anyone accept a trained operator. In addition, the outside door will be marked with the international biohazard symbol. Maintenance and cleaning shall be maintained to the highest sanitary condition. The kennel is located at the landfill, however it is separate from any solid waste facilities or activities. The facility is constructed of concrete block and a concrete poured floor with a drain system, sealed with a liquid impermeable sealant. All satellite facilities presently have generator permits and will comply with all requirements listed in 10 D-104.

We are now purchasing sharp containers from Matrix. Each one-quart container is clearly labeled with the international biohazardous waste symbol and the words “danger, biohazardous.” They appear to be leak-resistant, rigid and puncture-resistant; (a copy of the container specifications is attached). Upon receipt of full containers, they will be placed in a Rubbermaid container and stored in the euthanisa room. Upon receiving a full Rubbermaid container, an Animal Control officer will place the container into one of the six kennel boxes in the Animal Control truck it will be further secured with a bungie cord. At no time do they exceed more than 15 pounds in one transport. The containers are transported to the Hardee County Fire and Rescue Department (approximately 3 miles) and placed into a 30-gallon cardboard container with a red bag liner, both of which are properly labeled. The Fire Department contracts with Stericycle for the proper collection and disposal of biohazardous waste.

Appendix J

Waste Quantity Form

WASTE QUANTITY REPORT
REPORTED IN TONS
CALENDAR YEAR

MONTH	RESIDENTIAL WASTE	COMMERCIAL WASTE	CONSTRUCTION AND DEMOLITION DEBRIS	WOOD AND YARD WASTE	SCRAP METAL	TIRES	TOTALS
Jan-19							0.00
Feb-19							0.00
Mar-19							0.00
Apr-19							0.00
May-19							0.00
Jun-19							0.00
Jul-19							0.00
Aug-19							0.00
Sep-19							0.00
Oct-19							0.00
Nov-19							0.00
Dec-19							0.00
TOTALS	0.00	0.00	0.00	0.00	0.00	0.00	0.00

DISPOSITION REPORT
REPORTED IN TONS
CALENDAR YEAR

MONTH	SCRAP METAL RECYCLED	WOOD AND YARD WASTE PROCESSED	WASTE TIRES RECYCLED	PROCESSED AND RECYCLED THROUGH MRF	TOTAL WASTE DISPOSED
Jan-19					0.00
Feb-19					0.00
Mar-19					0.00
Apr-19					0.00
May-19					0.00
Jun-19					0.00
Jul-19					0.00
Aug-19					0.00
Sep-19					0.00
Oct-19					0.00
Nov-19					0.00
Dec-19					0.00
TOTALS	0.00	0.00	0.00	0.00	**0.00**

Appendix K

Resolution for Interlocal Agreement

RESOLUTION 2012-22

RESOLUTION OF THE CITY COMMISSION OF THE CITY OF WAUCHULA, FLORIDA, APPROVING THAT CERTAIN INTERLOCAL AGREEMENT BETWEEN HARDEE COUNTY FLORIDA, AND THE CITY OF WAUCHULA, FLORIDA, FOR THE PROVISION OF TREATMENT AND DISPOSAL OF LEACHATE WATER PRODUCED BY THE HARDEE COUNTY SANITARY LANDFILL; AUTHORIZING THE MAYOR OF THE CITY TO EXECUTE SAID AGREEMENT; AND PROVIDING FOR AN EFFECTIVE DATE.

07-18-12P04:10 RCVD

WHEREAS, Section 125.0101, Florida Statutes (2011), and Section 163.01, Florida Statutes (2011), authorize counties to enter into agreements with other units of government for the provision of essential municipal services; and

WHEREAS, in 1996, Hardee County, Florida (the "County") entered into an interlocal agreement with the City of Wauchula, Florida (the "City") in which the City agreed to provide for treatment and disposal of leachate water produced by the Hardee County Sanitary Landfill for a period of three (3) years; and

WHEREAS, in 1999, the City and the County renewed the above-described interlocal agreement for an additional three (3) years; and

WHEREAS, in 2003, the City and the County renewed the above-described interlocal agreement for an additional three (3) years; and

WHEREAS, in 2006, the City and the County renewed the above-described interlocal agreement for an additional three (3) years; and

WHEREAS, the County desires again to retain the City to provide for treatment and disposal of leachate water produced by the Hardee County Sanitary Landfill; and

WHEREAS, it is to the mutual benefit of the County and the City for the City to provide treatment and disposal of leachate water for the County.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF WAUCHULA, FLORIDA:

1. That the Interlocal Agreement between Hardee County, Florida, and the City of Wauchula, Florida, for the provision of treatment and disposal of leachate water produced by the Hardee County Sanitary Landfill, a copy of which is attached hereto and by this reference made a part hereof, is approved.

2. The Mayor of the City is authorized to execute said Interlocal Agreement.

3. That upon execution, triplicate originals of said Interlocal Agreement, together with a copy of this resolution shall be delivered to the County Manager of Hardee County, Florida, for acceptance and execution by the Board of County Commissioners of Hardee County, Florida.

4. That upon acceptance and execution by the Board of County Commissioners of Hardee County, Florida, one of the original executed agreements shall be delivered to the Clerk of Courts of Hardee County, Florida, for recording in the Public Records of Hardee County, Florida, as required by Section 163.01(11), Florida Statutes (2011).

5. That this resolution shall take effect immediately upon its approval.

On Motion of Commissioner Baker, seconded by Commissioner Detwiler, the above resolution was introduced and approved by the City Commission of the City of Wauchula, Florida, on the 9th day of July, 2012.

(SEAL)

ATTEST:

Holly D. Smith, City Clerk

CITY OF WAUCHULA

By: _____
Richard Keith Nadaskay, Jr., Mayor

APPROVED AS TO FORM:

By: _____
Clifford M. Ables, III, City Attorney

STATE OF FLORIDA
COUNTY OF HARDEE
THIS IS TO CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT COPY OF Resolution 2012-22
AS ADOPTED BY THE BOARD OF COUNTY COMMISSIONERS OF HARDEE COUNTY THE 9th **DAY OF** July **20** 12
WITNESS MY HAND AND OFFICIAL SEAL THIS 24th **DAY OF** July **20** 12.
B. HUGH BRADLEY, CLERK OF CIRCUIT COURT
BY: Laura Barker **D.C.**

Appendix L

Agreement between City of Wauchula Municipal Wastewater Treatment Plant and Hardee County Landfill

INTERLOCAL AGREEMENT BETWEEN HARDEE COUNTY, FLORIDA AND THE CITY OF WAUCHULA, FLORIDA, FOR THE PROVISION OF TREATMENT AND DISPOSAL OF LEACHATE WATER PRODUCED BY THE HARDEE COUNTY SANITARY LANDFILL

THIS INTERLOCAL AGREEMENT, made and entered into this 3rd day of August, 2017, by and between Hardee County, Florida, a political subdivision of the State of Florida, hereinafter referred to as "COUNTY", and the City of Wauchula, Florida, a municipal corporation organized and existing under the laws of the State of Florida, hereinafter referred to as "CITY".

WITNESSETH:

WHEREAS, COUNTY and CITY have the authority to enter into this Interlocal Agreement pursuant to the Florida Interlocal Cooperation Act of 1969, Section 163.01, Florida Statutes (2011); and

WHEREAS, in 1996 Hardee County, Florida, entered into an Interlocal Agreement with the City of Wauchula, Florida, in which City of Wauchula, Florida, agreed to provide for treatment and disposal of leachate water produced by the Hardee County Sanitary Landfill for a period of three (3) years; and

WHEREAS, in 1999 the City of Wauchula, Florida, and Hardee County, Florida, renewed the above described interlocal agreement for an additional three (3) years; and

WHEREAS, in 2003 the City of Wauchula, Florida, and Hardee County, Florida renewed the above-described interlocal agreement for an additional three (3) years; and

WHEREAS, in 2006 the City of Wauchula, Florida and Hardee County, Florida renewed the above-described interlocal agreement for an additional three (3) years; and

WHEREAS, Hardee County, Florida, desires again to retain the City of Wauchula, Florida, to provide for the treatment and disposal of leachate water produced by the Hardee County Sanitary Landfill; and

WHEREAS, it is to the mutual benefit of COUNTY and CITY for the CITY to provide treatment and disposal of leachate water for the COUNTY.

NOW, THEREFORE, in consideration of the premises, the mutual covenants hereinafter set forth and other good and valuable consideration, the CITY and COUNTY do hereby agree that:

1. Purpose: This Interlocal Agreement between the CITY and the COUNTY is made in accordance with Section 163.01, Florida Statutes (2011), known as the Florida Interlocal Cooperation Act of 1969. The purpose of this Interlocal Agreement is to provide for the CITY to treat and dispose of leachate water produced by the Hardee County Sanitary Landfill on an as needed basis.

2. Responsibilities of the COUNTY: As conditions precedent to City's obligations under this Interlocal Agreement the COUNTY shall provide for transporting the leachate water to disposal sites within the City's sewer service area at a regulated rate not to exceed two hundred fifty gallons per minute (250 gpm). The COUNTY shall regularly test the leachate water and provide the test results of all such tests through the term of this agreements to CITY. The COUNTY shall perform any other tests that the CITY and COUNTY agree should be performed, all at the County's expense. COUNTY shall hold CITY, its agents, servants and employees harmless from and against any and all claims, damages, and costs, including, attorney's fees, or causes of action whatsoever kind or nature caused by neglect, errors, omissions or acts undertaken in the delivery of the leachate water, provided that, the COUNTY shall not be responsible for holding the CITY, its agents, servants, and employees harmless for the City's own negligence or the negligence of the City's employees or agents. Such indemnification shall not exceed the limitations set forth in Section 13, Article X, Florida Constitution, and Section 768.28, Florida Statutes (2011).

3. Responsibilities of the CITY: The CITY shall accept, treat and dispose of the leachate water produced by the County's Sanitary Landfill.

4. Rights of the CITY: The CITY shall have the right at any time to restrain or refuse the delivery of leachate water from the COUNTY or require pre-treatment thereof in the event test results indicate, or the CITY reasonably believes, the leachate water contains levels of contaminants which could prove detrimental to the operational efficiency of the City's wastewater treatment plant. Upon notice to the COUNTY, the CITY shall have the right to restrict or reduce the amount of gallons per minute.

5. Compensation to CITY: The CITY shall be compensated by the COUNTY for said accepted treatment and disposal of the leachate water from the County's landfill at the City's regular sewer rates, plus actual charges for any additional water test agreed upon by the CITY and the COUNTY. Monthly billings shall be submitted by the CITY to the COUNTY based upon the number of gallons of leachate water delivered to the CITY by the COUNTY for treatment.

6. Impact Fee: The CITY waives the Impact Fee while retaining the right to negotiate the Impact Fee in the event the COUNTY desires to extend this contract.

7. Rules and Regulations of Governing Agencies: The service to be provided by the CITY to the COUNTY and the terms of this agreement are subject to the rules and regulations of the Florida Department of Environmental Protection (FDEP) and any other state or federal government agency with authority over the County's sanitary landfill or the City's wastewater treatment plant. Any provisions hereof found to be not in compliance with such rules or regulations shall be grounds for cancellation of this agreement by either party.

8. Applicable Law: This Interlocal Agreement shall be governed by the laws of the State of Florida. The venue for any litigation resulting from this Agreement shall be in Hardee County, Florida. Should litigation be necessary to enforce any term or provision of this Agreement, or to collect any portion of the amount payable under this Agreement, then all litigation and collection expenses, witness fees, court cost and attorneys' fees shall be paid to the prevailing party.

9. Terms of Agreement: The term of this agreement shall be for five (5) years commencing upon the effective date of this agreement. This Agreement may be terminated at any time by either party hereto through written notice of intent to terminate given by either party hereto the other party at least thirty (30) days prior to the date of termination.

10. Severability: In the event that any provision of this Interlocal Agreement shall, for any reason, be determined invalid, illegal or unenforceable in any respect, the parties hereto shall negotiate in good faith and agree to such amendments, modifications or supplements of this Interlocal Agreement or such other appropriate actions as shall, to the maximum extent practicable in the light of such determination, implement and give effect to the intentions of the parties as reflected herein. The other provisions of this Interlocal Agreement, as modified, supplemented or otherwise affected by such action, shall remain in full force and effect.

11. Waiver: Unless otherwise specifically provided for by the terms of this Agreement, no delay or failure to exercise a right resulting from any breach of this Agreement shall impair such right or shall be construed to be a waiver thereof, but such right may be exercised from time to time and as often as may be deemed expedient. Any waiver shall be in writing and signed by the party granting such waiver. If any representation, warranty or covenant contained in this Agreement is breached by any party and thereafter waived by another party, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive, either expressly or impliedly, any other breach under this Agreement.

12. Extent of Interlocal Agreement: This Interlocal Agreement represents the entire and integrated agreement between the COUNTY and the CITY and supersedes all prior negotiations, representations or agreement, either written or oral, pertaining to provision of treatment and disposal of leachate water produced by the Hardee County Sanitary Landfill. This Interlocal Agreement shall supersede the April 06, 2006; Interlocal Agreement between COUNTY and CITY for the provision of leachate water services. This Interlocal Agreement may only be amended, supplemented, modified, changed or canceled by a written instrument executed in like manner as this instrument.

13. Notices: Notices required by or related to this Interlocal Agreement shall be sent by First Class United States mail, postage prepaid. Notices to the COUNTY shall be sent to : County Manager, 412 West Orange Street, Room 103A, Wauchula, Florida 33873, and notices to the CITY shall be sent to: City Manager, 126 South Seventh Avenue, Wauchula, Florida 33873.

14. Effective Date: This Interlocal Agreement shall be effective upon the filing of a fully executed copy of this Interlocal Agreement with the Clerk of the Circuit Court of Hardee County, Florida, pursuant to Section 163.01 (11), Florida Statutes (2011).

IN WITNESS WHEREOF, this Interlocal Agreement has been caused to be signed by the respective governing bodies of the parties hereto.

ATTEST:

Victoria L. Rogers

Victoria L. Rogers, Ex-Officio Clerk to the Board of County Commissioners

Two (2) of Two (2) Originals

Date: AUGUST 3, 2017

(SEAL)

Board of County Commissioners
of Hardee County, Florida

By: Colon Lambert

Colon Lambert, Chairman

ATTEST:

Holly Smith

Holly Smith, City Clerk

(SEAL)

CITY OF WAUCHULA, FLORIDA, a Municipal corporation organized and existing under the laws of the State of Florida

By: Keith Nadaskay

Keith Nadaskay Jr., Mayor

APPROVED AS TO FORM:

Thomas A. Cloud,
City Attorney

APPROVED AS TO FORM:

Kenneth B. Evers,
County Attorney

Appendix M

Random Load Inspection Form

RANDOM LOAD INSPECTION FORM

REPORT TYPE: ☐ INSPECTION ☐ VIOLATION ☐ LF RANDOM INSPECTION

LOCATION: _____ DATE: _____ TIME: _____

DELIVERING COMPANY: _____

DRIVER NAME: _____ VEHICLE #: _____

VEHICLE TYPE: ☐ FEL ☐ RO ☐ RL ☐ SL ☐ SEMI ☐ DUMP

OTHER: _____

CUSTOMER/GENERATOR: _____ TRANSACTION #: _____

TYPE OF WASTE:

☐ YARD WASTE	☐ INDUSTRIAL	☐ AUTO PARTS	☐ BY PASS WASTE
☐ C&D	☐ INSULATION	☐ ASH RESIDUE	☐ ANIMAL WASTE
☐ FURNITURE	☐ AG WASTE	☐ ROOFING	☐ SPECIAL WASTE
☐ CARDBOARD	☐ FIELD PLASTICS	☐ METALS	☐ BIOMEDICAL WASTE
☐ COMMERCIAL WASTE		☐ HOUSEHOLD GARBAGE	

☐ OTHER: _____

TYPE OF VIOLATION: ☐ FACILITY ☐ LOAD ☐ SAFETY ☐ CONTAINER

DETAILS: _____

DRIVERS COMMENTS: _____

RESULTS: ☐ ACCEPTED ☐ REJECTED ☐ RELOAD ☐ ALREADY IN LF

INSPECTOR'S SIGNATURE: _____

ADDITIONAL COMMENTS: _____

FEL : Front-End Loader
RO: Roll-Off Container
RL: Rear Loader
SL: Side Loader
SEMI: Semi Trailer
DUMP: Dump Truck

Appendix N

Leachate Leveling Form

MONTHLY LEACHATE WATER LEVELING FORM
HARDEE COUNTY LANDFILL

Date: _____
Personnel: _____
Weather Conditions: _____

Piezometers and Monitoring Wells	Top of Casing	Ground Surface	Depth to Groundwater Table	Estimated Water Level	Comments
P-7	84.47	82.41			
P-8	85.32	83.25			
P-11	88.69	86.16			
P-13	87.96	85.28			
P-14	87.31	84.05			
P-17	88.82	85.88			
P-18	88.74	84.37			
P-19	86.73	84.14			
P-20	87.60	84.68			
P-21	86.63	83.57			
P-22	87.04	84.09			
P-23	86.45	83.71			
MW-1	88.22	86.46			
MW-2	86.19	84.56			
MW-4	87.15	84.22			
MW-6	88.25	85.06			
MW-7	87.88	84.98			
MW-10R	88.57	85.49			
MW-11	88.11	85.17			
MW-12R	89.00	85.71			

Notes:
1. Estimated Water Level = Top of Casing - Depth to Groundwater Table.

Appendix O

Leachate Water Balance Forms

Hardee County Landfill Monthly Leachate Water Balance

Month

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Day	Phase II Section II North/Center Collection (gal)	Phase II Section II North/Center Detection (gal)	Total Leachate Sprayed for Evaporation (gal)	Total Leachate Phase II Section II North/Center (Less Sprayed for Evaporation) (gal)	Phase II Section I Collection and Phase II Section II South Collection (gal)	Phase II Section I Detection and Phase II Section II South Detection (gal)	Total Leachate Phase II Section I Collection and Phase II Section II South Collection and Phase II Section I Detection and Phase II Section II South Detection (gal)	Total Leachate Phase II Section II and Phase II Section I (gal)	Phase I (Pumped From MH-8) (gal)	Total Leachate Added to Tanks (gal)	Rainfall (inches)	Rainfall Added to Tanks (gal)	Total Leachate and Rainfall Added to Tanks (gal)	Previous Day Liquid Remaining in Tanks (gal)	Previous Day Liquid Remaining in Tanks and Total Leachate Added and Rainfall Added (gal)	Liquid Hauled From Tanks (gal)	Total Liquid Balance in Tanks End of Day (gal)
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	
29																	
30																	
31																	
Totals																	

Next Months Beginning Storage =

Notes:

1) Column A is daily total reading from Phase II Section II north and center collection flow meter.
2) Column B is daily total reading from Phase II Section II north and center detection flow meter.
3) Column C is daily total reading from leachate sprayed for evaporation.
4) Column D is Phase II Section II north and center collection flow meter reading + Phase II Section II north and center detection flow meter reading - reading from leachate sprayed for evaporation {Col A + Col B - Col C}.
5) Column E is Phase II Section I collection flow meter reading.
6) Column F is Phase II Section I detection flow meter reading.
7) Column G is Phase II Section I collection + Phase II Section II South collection + Phase II Section I detection + Phase II Section II South detection - total leachate Phase II Section II North and Center (less evaporation) {Col E + Col F - Col D}.
8) Column H is Phase II Section I detection and Phase II Section II South detection + total leachate Phase II Section I collection and Phase II Section II South collection and Phase II Section I detection and Phase II Section II South detection {Col D + Col G}.
9) Column I is daily total reading from MH-8 pump station flow meter (Phase I leachate).
10) Column J is total leachate Phase II Section II and Phase II Section I + Phase I (pumped from MH-8) {Col H + Col I}.
11) Column K is the total daily amount of rainfall read from rain gauge.
12) Column L is total daily rainfall times one-inch of depth of tank {Col K * gallon per inch rainfall}.
13) Column M is total leachate added to tanks + rainfall added to tanks {Col J + Col L}.
14) Column N is total liquid balance in tanks end of previous day {Col Q}.
15) Column O is previous day liquid remaining in tanks + total leachate and rainfall added to tanks {Col N + Col M}.
16) Column P is liquid hauled from tanks per day.
17) Column Q is previous day liquid remaining in tanks and total leachate added and rainfall added - liquid hauled from tanks {Col O - Col P}.

Leachate Tanks

Tank No.	Diameter (ft)	Water In Tank Per Inch Depth (gal/in)
1	29	411.7
2	29	411.7
Total =		823.5 gal/inch of rainfall

Maximum Total Tank Storage

Tank No.	Gallons
1	79,000 gallons
2	79,000 gallons
Total =	158,000 gallons

Appendix P

Gas Monitoring Form

HARDEE COUNTY LANDFILL
LFG MONITORING FORM

SAMPLER'S NAME:		**PROJECT NAME:**	Hardee County Landfill		
DATE:		**PROJECT:**	LFG Monitoring	**LOCATION:**	Wauchula
WEATHER CONDITIONS:					

SAMPLE ID	TIME SAMPLE TAKEN	METHANE CONTENT (%LEL)	COMMENTS:
GP-1			
GP-2			
GP-3R			
GP-4R			
GP-5R			
GP-6R			
GP-7R			
GP-8R			
GP-9			
GP-10			
GP-11			
GP-12			
GP-13			
Maintenance Bldg***			
Scalehouse***			
MRF***			
Animal Control Bldg***			

NOTES:

*** Sample locations within the buildings include any slab penetrations, enclosed spaces, or electrical conduits and as shown on the figures.

Appendix Q

Hurricane Preparation and Recovery Plan

Hardee County Solid Waste Department
Hurricane Preparation and Recovery

In preparation for a hurricane, Hardee County Emergency Management will advise the Solid Waste Director of a possible direct hit, high winds or rains from a hurricane. Upon such notification, the Solid Waste Department will begin the following preparation:

- All diesel tanks and heavy equipment will be filled with fuel.
- The stormwater ponds will be pumped down.
- Landfill Strategies (the debris management contractor) will be contacted.
- All litter will be picked up.
- All items that may blow away will be tarped and stabilized.
- Two temporary debris staging areas will be prepared to receive waste.
- The landfill berms will be checked and stabilized to ensure all leachate is contained.
- The onsite generators will be fueled.
- Contact information for all equipment operators will be confirmed and they will be made aware of their assigned posts following the event.
- The Manatee County Wastewater Department and the emergency leachate hauler will be contacted and put on standby.

In recovering from a hurricane, the following steps will be made:

- The on call heavy equipment operators will be contacted to report to the landfill.
- The temporary debris site at the landfill will be opened and staffed with a debris monitor.
- If required, the generators will be started to service the scalehouse and the MRF.
- If the amount of debris generated is such that the landfill cannot accept the materials or the landfill access road is unsafe, the emergency backup disposal sites will be contacted.
- Necessary repairs to the haul road will be completed.

Appendix R

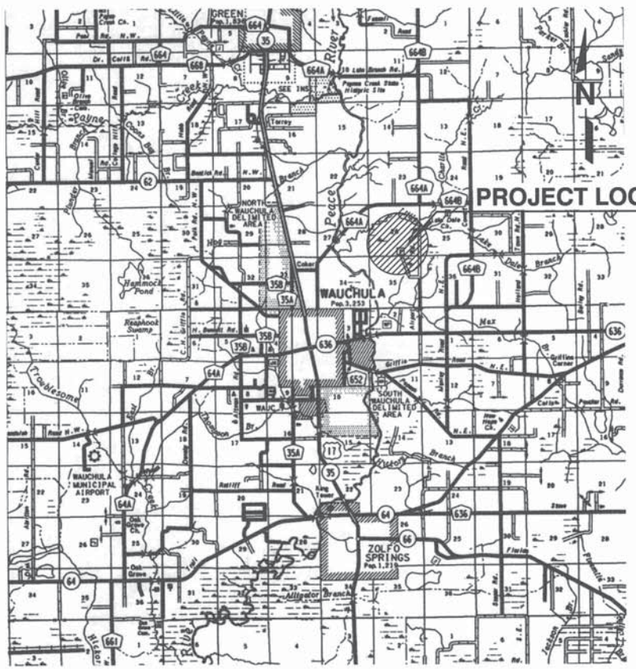
Operation Drawings

HARDEE COUNTY LANDFILL
PHASE II SECTION II
CONSTRUCTION/OPERATIONS DRAWINGS

PREPARED FOR

BOARD OF COUNTY COMMISSIONERS
HARDEE COUNTY, FLORIDA

APRIL 2013



LOCATION MAP
NOT TO SCALE

HARDEE COUNTY 19 21 FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
4041 PARK OAKS BLVD., SUITE 100
TAMPA, FLORIDA 33610
PH (813) 621-0080 FAX NO. (813) 623-6757
WWW.SCSENGINEERS.COM
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892
SCS PROJECT NO. 09199033.23

DRAWING INDEX

DRAWING NO.		DRAWING TITLE
1	-	COVER
2	-	ABBREVIATIONS AND GENERAL NOTES
3	-	OVERALL AERIAL SITE PLAN - (JANUARY 2011)
4	-	EXISTING CONDITIONS - AERIAL PHOTOGRAPH (04/03/2012)
5	-	EXISTING CONDITIONS NORTH - TOPOGRAPHIC SURVEY (04/03/2012)
6	-	EXISTING CONDITIONS SOUTH - TOPOGRAPHIC SURVEY (04/03/2012)
7	-	PROJECT AREA EXISTING CONDITIONS SITE PLAN
8	-	TOP OF SUBGRADE - BOTTOM CELL GRADING SITE PLAN
9	-	LEACHATE COLLECTION SYSTEM - SITE PLAN
10	-	TOP OF PROTECTIVE COVER - BOTTOM CELL GRADING SITE PLAN
11	-	SECTIONS - BOTTOM CELL
12	-	FINAL CLOSURE SITE PLAN
13	-	SECTIONS - FINAL CLOSURE
14	-	PIPING DETAILS - BOTTOM CELL
15	-	TIE-IN DETAILS - BOTTOM CELL
16	-	PERIMETER ROAD AND TRENCH DETAILS - BOTTOM CELL
17	-	SUMP AND SIDESLOPE RISER DETAILS
18	-	DETAILS - 1
19	-	DETAILS - 2
20	-	DETAILS - 3
21	-	DETAILS - 4
22	-	DETAILS - 5
23	-	DETAILS - 6
24	-	DETAILS - 7
25	-	DETAILS - 8
26	-	PHASE II SECTION I FILL SEQUENCE NO. 1 PLAN
27	-	PHASE II SECTION I FILL SEQUENCE NO. 2 PLAN
28	-	PHASE II SECTION I FILL SEQUENCE NO. 3 PLAN
29	-	PHASE II SECTION I AND II FILL SEQUENCE NO. 4 PLAN
30	-	PHASE II SECTION I AND II FILL SEQUENCE NO. 5 PLAN
31	-	PHASE II SECTION I AND II FILL SEQUENCE NO. 6 PLAN
32	-	PHASE II SECTION I FILL SEQUENCE NO. 1 SECTIONS
33	-	PHASE II SECTION I FILL SEQUENCE NO. 2 SECTIONS
34	-	PHASE II SECTION I AND II FILL SEQUENCE NO. 3 SECTIONS
35	-	PHASE II SECTION I AND II FILL SEQUENCE NO. 4 SECTIONS
36	-	PHASE II SECTION I AND II FILL SEQUENCE NO. 5 SECTIONS
37	-	PHASE II SECTION I AND II FILL SEQUENCE NO. 6 SECTIONS
37a	-	PHASE II SECTION I AND II FILL SEQUENCE NO. 6 SECTION

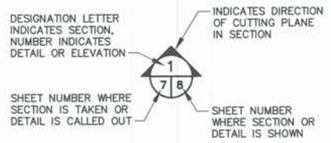
1 DRAWINGS REVISED PER R.A.I. NO. 1 – ISSUED 04/01/13
2 DRAWINGS REVISED PER R.A.I. NO. 2 – ISSUED 06/28/13
3 DRAWINGS REVISED PER OPS PERMIT RENEWAL RAI 1 – ISSUED 06/28/13

SHANE R. FISCHER LICENSED PROFESSIONAL ENGINEER STATE OF FLORIDA
SHANE R. FISCHER, P.E.
LICENSE NO. 58026

G:\PROJECTS\Hardee\09199033.23\Construction\09233OPS.dwg Jun 28, 2013 - 10:5pm By: 217bsp

ABBREVIATIONS:

@	AT
∠	ANGLE
℄	CENTERLINE
Ø	DIAMETER
AB	ANCHOR BOLT
ADD'L	ADDITIONAL
ANCH	ANCHOR
APPROX	APPROXIMATE
BM	BEAM
BOT	BOTTOM
BP	BASE PLATE
C/C	CENTER TO CENTER
CIP	CAST IRON PIPE
CL	CENTER LINE
CLJ	CONTROL JOINT
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
C.O.	CLEAN OUT PORT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CPP	CORRUGATED PLASTIC PIPE
CTR	CENTER
CU. FT	CUBIC FOOT/FEET
DET	DETAIL
DIA	DIAMETER
DI	DUCTILE IRON
DIP	DUCTILE IRON PIPE
D.O.	DITTO
DWG	DRAWING
DWL	DOWEL
E	EAST
EA	EACH
EF	EACH FACE
EL,ELEV	ELEVATION
ENCL	ENCLOSURE
EQL	EQUAL
EW	EACH WAY
FBV	FLORIDA BEARING VALUE
FDN	FOUNDATION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FE	FIRE EXTINGUISHER
FES	FLARED END SECTION
FIN	FINISHED
FL	FLOW LINE, OR FLORIDAN
FM	FORCE MAIN
FO	FIBER OPTIC
FT	FOOT
FTG	FOOTING
FTGS	FOOTINGS
FWM	FIRE MAIN WATER
GA	GAGE
GAL	GALLONS
GALV	GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE
H,HORIZ	HORIZONTAL
I.E.	INVERT ELEVATION
IN	INCH
INV	INVERT
IRR	IRRIGATION
JT	JOINT
KCJ	KEYED CONSTRUCTION JOINT
KWY	KEYWAY
L	ANGLE
LBR	LIMEROCK BEARING RATIO
LF	LINEAR FEET
MAX	MAXIMUM
MES	MITERED END SECTION
MFR	MANUFACTURER
MIN	MINIMUM
MH	MANHOLE
MW	MONITORING WELL
N	NORTH
NE	NORTHEAST
NIC	NOT IN CONTRACT
NO.	NUMBER
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OPNG	OPENING
PC	POINT OF CURVATURE
PE	POLYETHYLENE
PI	POINT OF INTERSECTION
POB	POINT OF BEGINNING
POE	POINT OF ENDING
PT	POINT OF TANGENT
PP	POWER POLE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYLCHLORIDE
PZ	PIEZOMETER
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RCW	RECLAIMED WATER
REINF	REINFORCING
REQ'D	REQUIRED
ROW	RIGHT OF WAY
S	SOUTH
SCHED,SCH	SCHEDULE
SE	SOUTHEAST
SECT	SECTION
SG	STAFF GAUGE
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STIR	STIRRUP
STL	STEEL
SW	SOUTHWEST, OR SURFACE WATER
T	TOP
T & B	TOP AND BOTTOM
TH	TEST HOLE
THK	THICKNESS
T.O.B.	TOP OF BOLT
T.O.C.	TOP OF CONCRETE
T.O.F.	TOP OF FOOTING
T.O.P.	TOP OF PAVEMENT, OR TOP OF PIPE
T.O.S.	TOP OF SLAB
T.O.W.	TOP OF WALL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V,VERT	VERTICAL
W	WEST
W/O	WITHOUT
W/	WITH (COMBINATION FORM)
WM	WATER MAIN
WWF	WELDED WIRE FABRIC
WWM	WOVEN WIRE MESH



SECTION AND DETAIL DESIGNATION

△A INDIVIDUAL DESIGN DRAWING REVISION NUMBER (NOT INTENDED TO CORRESPOND WITH R.A.I., ADDENDA, OR CHANGE ORDER NUMBERS)

△A REVISION CLOUD TO HIGHLIGHT AREA OF CURRENT REVISION WITHIN DESIGN DRAWING

DRAWING REVISIONS LEGEND

GENERAL NOTES:

1. TOPOGRAPHIC SURVEY PERFORMED BY PICKETT & ASSOCIATES, INC., 475 SOUTH FIRST AVENUE, BARTOW, FLORIDA 33830, TEL. (863) 533-9095.
2. TOPOGRAPHIC SURVEY WAS PREPARED BY PHOTOGRAMMETRIC METHODS. SEE THE SURVEYOR'S REPORT FOR MAP ACCURACY AND SURVEYOR'S SIGNATURE AND SEAL. THIS SURVEY IS LIMITED TO THOSE FEATURES VISIBLE ON AERIAL PHOTOGRAPHY. AERIAL PHOTOGRAPHY PERFORMED APRIL 3, 2012.
3. HORIZONTAL DATUM COORDINATES ARE REFERENCED TO THE WEST ZONE OF THE FLORIDA STATE PLANE COORDINATE SYSTEM, NAD 1983, 1999 ADJUSTMENT. VERTICAL ELEVATIONS ARE REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929.
4. TRAFFIC MUST BE MAINTAINED AT ALL TIMES AS PER FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
5. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES, OR PRESERVATION AREAS AND OTHER FEATURES AFFECTING HIS WORK.
6. CONTRACTOR SHALL VERIFY ALL UTILITIES AND NOTIFY THE INDIVIDUAL UTILITY COMPANIES 72 HOURS PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZED EARTH, CURBS, DRIVEWAYS, SIDEWALKS, DRAINAGE CULVERTS, FENCES, ETC. WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION.
8. THE INFORMATION PROVIDED IN THESE PLANS AND REFERENCED IN THE AVAILABLE SOILS REPORT IS SOLELY TO ASSIST THE CONTRACTOR IN ACCESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
9. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY ON CONFLICTS DURING CONSTRUCTION ON ANY IMPROVEMENTS SHOWN ON THE DRAWINGS.
10. PIPE LENGTHS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED AS REQUIRED IN THE FIELD, UPON APPROVAL BY ENGINEER.
11. EROSION CONTROL AND SEDIMENTATION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO BEGINNING ANY CLEARING AND GRUBBING. THEY SHALL BE INSTALLED TO THE LIMITS SHOWN ON THE DRAWING, REQUIRED IN THE SPECIFICATIONS AND IN ACCORDANCE WITH ALL REGULATORY AGENCY REQUIREMENTS.
12. THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS SHALL BE STRICTLY OBSERVED BY THE CONTRACTOR. ALL INGRESS, EGRESS AND TRAFFIC PATTERNS ON THE SITE SHALL BE WITHIN THE LIMITS OF CONSTRUCTION.
13. FINISHED GRADE FOR GROUND ELEVATIONS ON DRAWINGS REFER TO GRADE AFTER SODDING, OR OTHER SURFACE TREATMENT.
14. INSTALLATION OF ALL STORM SEWERS, INLETS, PIPE END TREATMENT AND APPURTENANCES SHALL BE IN ACCORDANCE WITH ALL REQUIREMENTS OF THE APPLICABLE SECTIONS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, OR AS INDICATED ON THE DRAWINGS.
15. CONTRACTOR SHALL PLACE PROTECTIVE BARRIERS AROUND EXISTING MONITORING WELLS TO PREVENT DAMAGE DUE TO CONSTRUCTION ACTIVITIES IF REQUESTED BY THE COUNTY.
16. THE CONTRACTOR SHALL INSTALL SILT FENCING AROUND PERIMETER OF LAYDOWN-STAGING AREA. AT THE CONCLUSION OF PROJECT THE ENTIRE LAYDOWN AREA WILL BE CLEARED OF ALL DEBRIS AND THE AREA SEEDED TO ESTABLISH A GRASS COVER AND STABILIZE THE SOIL.
17. SURFACE AND GROUND WATER ELEVATIONS AND STORMWATER RUNOFF VARY WITH THE TIME OF YEAR AND RAINFALL AMOUNTS ACROSS THE SITE. NEITHER THE CONSULTANT NOR THE COUNTY CAN ACCURATELY ESTIMATE THE SURFACE AND GROUND WATER ELEVATIONS THAT MAY BE ENCOUNTERED DURING THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHOULD BE PREPARED TO PERFORM THE WORK AND BASE THE BID ON THE POTENTIAL SURFACE AND GROUND WATER ON SITE.
18. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN SILT FENCE PER SECTION 01568 – TEMPORARY EROSION AND SEDIMENTATION CONTROL OF THE CONTRACT DOCUMENTS. FDOT DESIGN STANDARDS INDEX NO. 102 TYPE III SILT FENCE SHALL BE INSTALLED BY THE CONTRACTOR ALONG THE ENTIRE EXTERIOR LIMITS OF WORK TO PREVENT DAMAGE TO PROPERTIES OUTSIDE THE LIMITS OF WORK FROM SILTATION DUE TO CONSTRUCTION OF THE PROJECT.

REV	DATE	DESCRIPTION	BY
△			
△			
△			
△			
△			
△			

JANE H. FISCHER LICENSE NUMBER 58026 STATE OF FLORIDA PROFESSIONAL ENGINEER
94/30/13 SIGNATURE DATE
LICENSE NO. 58026

DRAWING TITLE: ABBREVIATIONS AND GENERAL NOTES

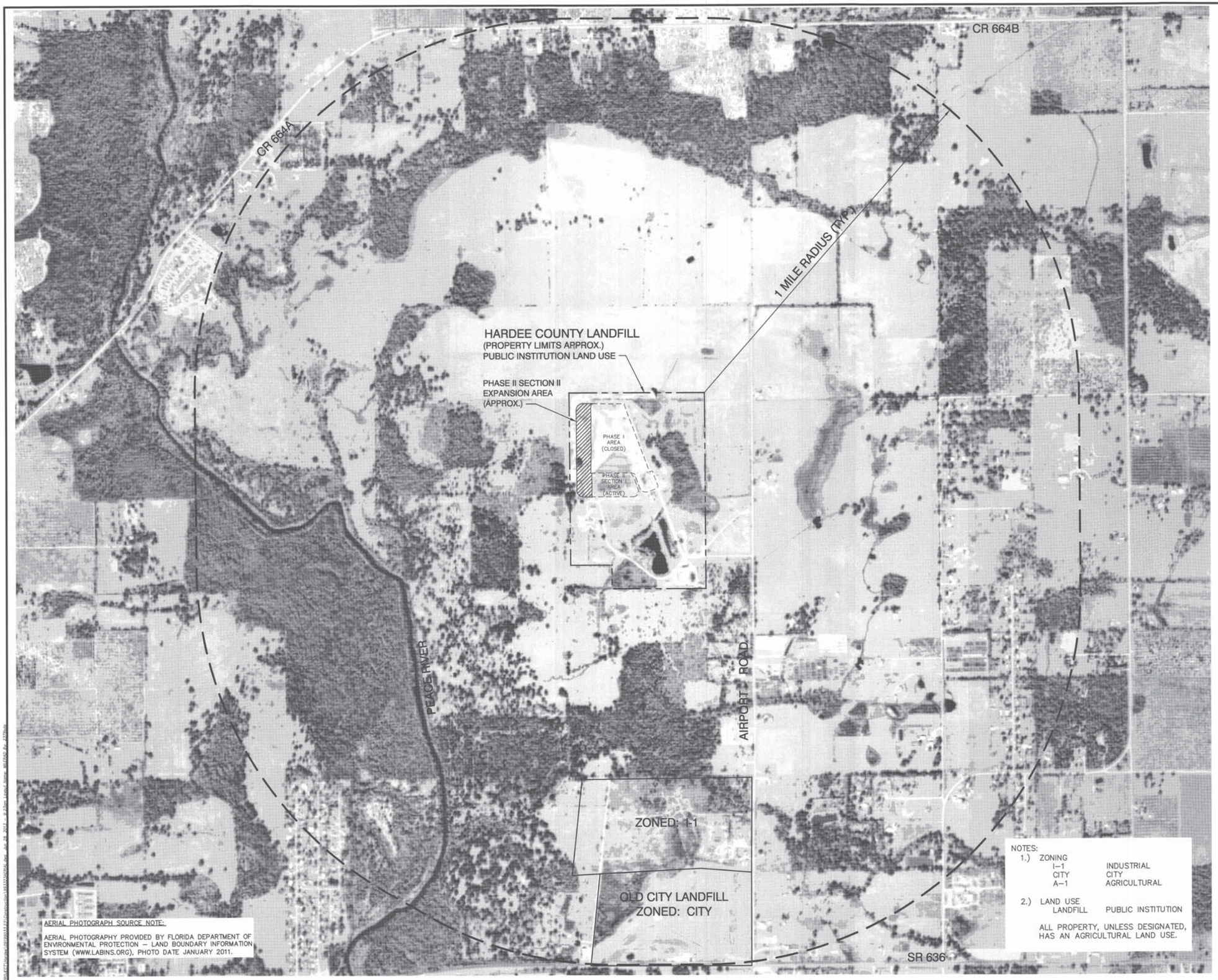
PROJECT TITLE: HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199333.23
DSN. BY: SRF
DWN. BY: SDA
CHK. BY: SRF
Q/A REVIEW BY: CEH
APP. BY: SRF

CADD FILE: 993323GENNOTE
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO. 2 of 37



AERIAL PHOTOGRAPH SOURCE NOTE:

AERIAL PHOTOGRAPHY PROVIDED BY FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION – LAND BOUNDARY INFORMATION SYSTEM (WWW.LABINS.ORG), PHOTO DATE JANUARY 2011.

NOTES:
1.) ZONING
- I–1 INDUSTRIAL
- CITY CITY
- A–1 AGRICULTURAL

2.) LAND USE
- LANDFILL PUBLIC INSTITUTION

ALL PROPERTY, UNLESS DESIGNATED, HAS AN AGRICULTURAL LAND USE.

JAYNE R. FISCHER
LICENSE NO. 58026
STATE OF FLORIDA
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION	BY
1			
2			
3			
4			
5			

DRAWING TITLE
OVERALL AERIAL SITE PLAN (JANUARY 2011)

PROJECT TITLE
HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-5757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO.	DWN. BY:	QA/A RVW BY:
09199033.23	SDA	CEH
TASK NO.	CHK. BY:	APP'D BY:
SRF	SRF	SRF

CADD FILE: 993323AERIAL

DATE: APRIL 2013

SCALE: AS SHOWN

DRAWING NO.
3 of **37**

EXISTING

EXISTING MONITORING WELL TABLE		
WELL NUMBER	NORTHING	EASTING
MW-1	1177604.2260	726482.488
MW-2	1176800.972	727061.767
MW-4	1177588.34	727469.216
*MW-5	1177136.888	726199.5
MW-6	1176081.769	726652.386
MW-7	1175903.729	726370.416
*MW-8	1176543.71	726234.815
*MW-3	1176439.418	726193.823
MW-10R	1176262.89	726947.09
MW-11	1176198.382	726695.813
MW-12R	1176201.53	726403.89

EXISTING GAS PROBE TABLE		
PROBE NUMBER	NORTHING	EASTING
GP-1	1177602.658	726820.612
GP-2	1177601.357	726490.331
*GP-3	1177593.371	726188.964
*GP-4	1177304.268	726203.456
*GP-5	1176913.338	726205.276
*GP-6	1176692.365	726207.86
GP-9	1176697.437	727108.717
GP-10	1177021.197	726982.352
GP-11	1177341.968	726852.393
GP-12	1175710.195	726496.639
GP-13	1175700.036	726690.812

EXISTING PIEZOMETER TABLE		
WELL NUMBER	NORTHING	EASTING
P-7	1175812.82	726774.259
P-8	1175724.264	726530.637
P-11	1177153.801	726939.428
P-13	1176047.296	726494.261
P-14	1175889.67	726516.147
P-17	1177698.331	726212.616
P-18	1177585.22	725955.47
P-19	1177685.19	726890.76
P-20	1177564.956	726849.789
P-21	1177000.302	727105.589
P-22	1176021.166	726023.336
P-23	1175717.48	726021.42

EXISTING STAFF GAUGE TABLE		
POINT NUMBER	NORTHING	EASTING
SG 1	1177149.111	727100.065
SG 2	1177217.671	727292.17

* DENOTES GAS PROBE OR MONITORING WELL TO BE ABANDONED (TYP.)

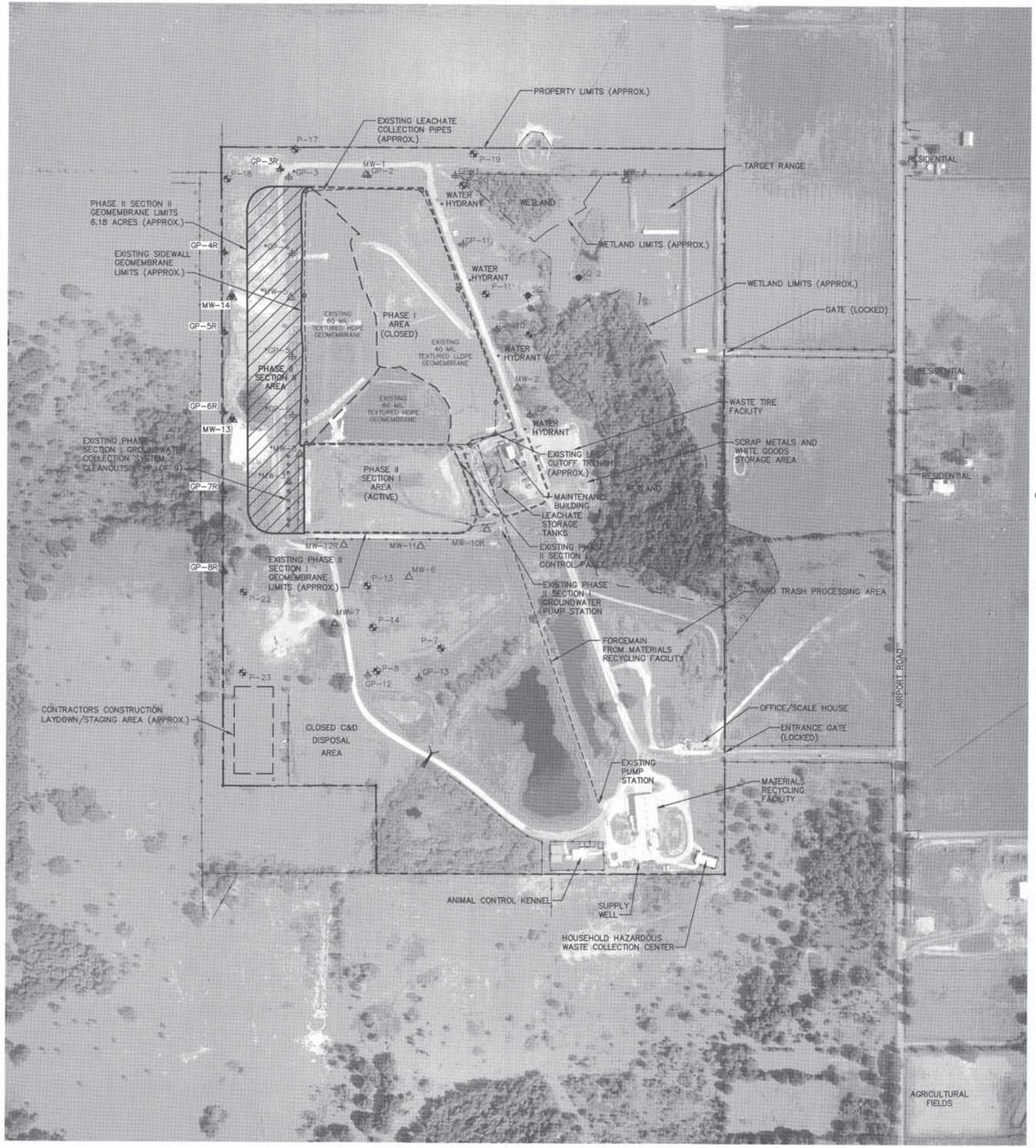
NEW

NEW MONITORING WELL TABLE		
WELL NUMBER	NORTHING	EASTING
MW-13	1176675.10	725978.03
MW-14	1177140.10	725974.39

NEW GAS PROBE TABLE		
PROBE NUMBER	NORTHING	EASTING
GP-3R	1177624.46	726157.43
GP-4R	1177308.20	725945.51
GP-5R	1177004.63	725946.99
GP-6R	1176702.21	725946.53
GP-7R	1176402.21	725946.53
GP-8R	1176099.87	725949.54

AERIAL PHOTOGRAPH SOURCE NOTE:

AERIAL PHOTOGRAPHY PERFORMED BY
PICKETT & ASSOCIATES, INC.
502 MAIN STREET
WACHULA, FLORIDA 33873
PHONE: (863) 773-3990
PHOTO DATE: APRIL 3, 2012.



N

200 100 0 200
SCALE IN FEET

LEGEND

- MW-13 — NEW GROUNDWATER MONITORING WELL
- MW-7 — EXISTING GROUNDWATER MONITORING WELL
- GP-7R — NEW GAS MONITORING PROBE
- GP-6 — EXISTING GAS MONITORING PROBE
- P-15 — EXISTING PIEZOMETER
- EXISTING MANHOLE
- SG-2 — EXISTING STAFF GUAGE
- EXISTING GROUNDWATER COLLECTION SYSTEM CLEANOUTS (APPROX. TYP. 9)
- EXISTING LFG CUTOFF TRENCH
- EXISTING LANDFILL PHASE LIMITS (APPROX.)
- PROPERTY LINE
- WETLAND LIMITS
- CONTRACTORS CONSTRUCTION LAYDOWN/STAGING AREA (APPROX.) – SEE NOTE 1.
- EXISTING LEACHATE COLLECTION PIPE AND MANHOLE
- APPROXIMATE LIMITS OF PHASE II SECTION II GEOMEMBRANE

NOTE:

1. THE GENERAL LOCATION OF THE CONTRACTOR'S CONSTRUCTION LAYDOWN/STAGING AREA IS SHOWN ON THE DRAWING. THE COUNTY AND THE CONTRACTOR WILL COORDINATE ON THE FINAL BOUNDARIES OF THE CONSTRUCTION LAYDOWN/STAGING AREA AND CONTRACTOR'S ACCESS FROM THE AREA TO THE MAIN ROAD AT THE PRE-CONSTRUCTION MEETING. THE CONSTRUCTION LAYDOWN/STAGING AREA SHALL BE GRADED TO EXISTING GRADES, SEEDED AND MULCHED AS REQUIRED UPON COMPLETION OF THE PROJECT PER THE SPECIFICATIONS.

JAMES R. FISCHER LICENSE NO. 58026 STATE OF FLORIDA PROFESSIONAL ENGINEER
SIGNATURE AND DATE
LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY

DRAWING TITLE: EXISTING CONDITIONS AERIAL PHOTOGRAPH (04/03/2012)

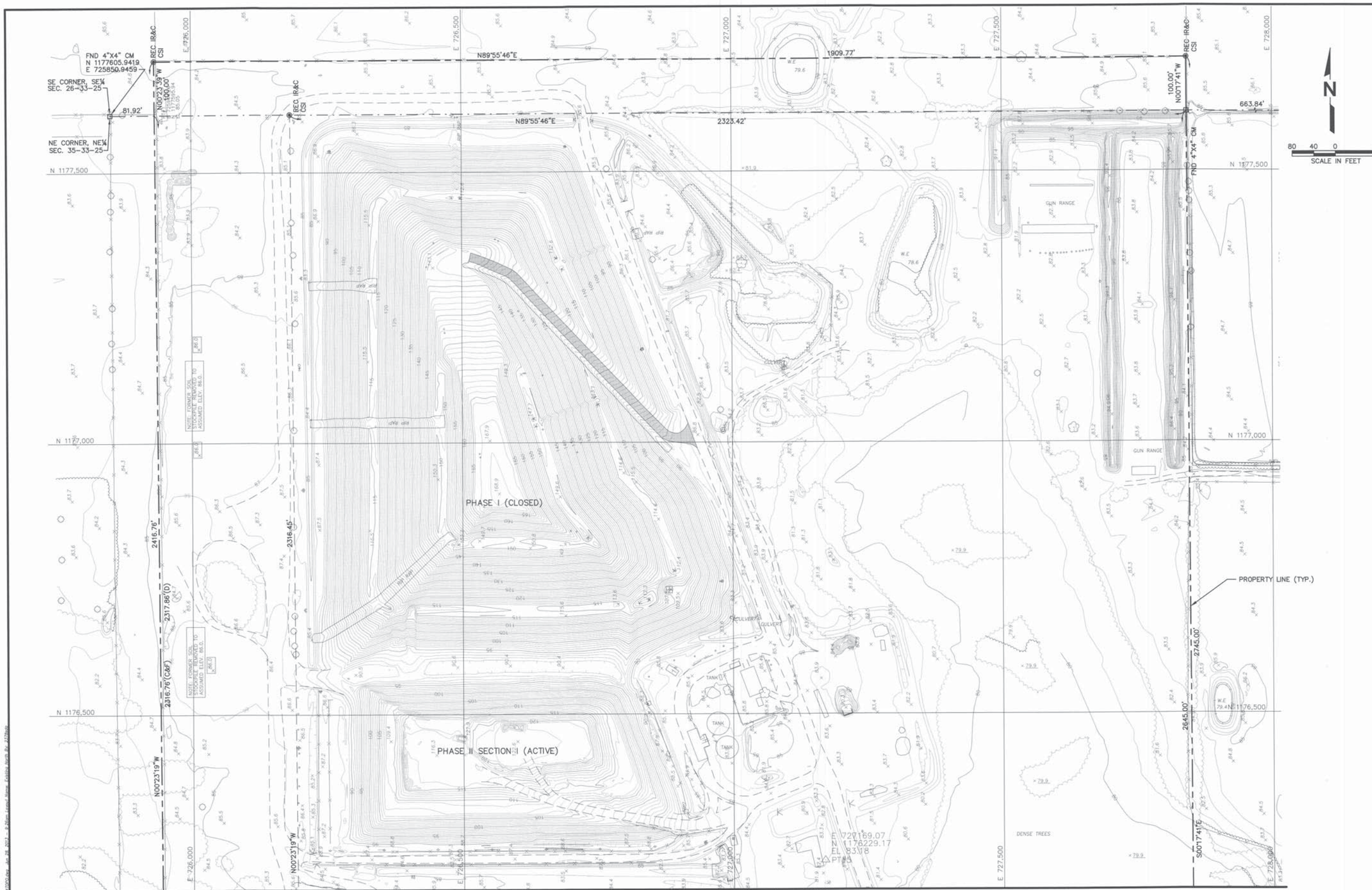
PROJECT TITLE: HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-0757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO: 09199033.23 | DWN. BY: SDA | Q/A R/VW. BY: CEH
DSK. ID: SRF | CHK. BY: SRF | APP. BY: SRF

CADD FILE: 993323AERIAL
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO. 4 of



MATCH LINE (SEE DRAWING NO. 6)

SURVEY SOURCE NOTE:

TOPOGRAPHIC SURVEY PERFORMED BY:
PICKETT & ASSOCIATES, INC.
475 SOUTH FIRST AVENUE
BARTOW, FLORIDA 33830
PHONE: (863) 533-9095
PHOTO DATE: APRIL 3, 2012.

SURVEY NOTES:

1. NORTH, THE GRID, AND THE COORDINATES SHOWN HEREON ARE REFERENCED TO THE WEST ZONE OF THE FLORIDA STATE PLANE COORDINATE SYSTEM, NAD 83, 1999 ADJUSTMENT.
2. ELEVATIONS ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
3. THIS TOPOGRAPHIC SURVEY WAS PREPARED BY PHOTOGRAMMETRIC METHODS. SEE THE SURVEYOR'S REPORT FOR MAP ACCURACY, SURVEYOR'S SIGNATURE, SEAL, AND REFERENCE BENCHMARK INFORMATION. THIS MAP IS LIMITED TO THOSE FEATURES VISIBLE ON AERIAL PHOTOGRAPHY.

LEGEND:

(THESE FEATURES ARE REPRESENTED BY SYMBOLS NOT TO SCALE)

- CONTROL
- PT# TARGET NUMBER
- N NORTHING
- E EASTING
- EL ELEVATION
- UTILITY POLE
- LIGHT POLE
- SIGN
- TRAFFIC LIGHT
- POST
- VALVE
- FLAG
- MAIL BOX
- GUYWIRE
- MANHOLE
- HYDRANT
- CULVERT
- CATCH BASIN
- AIR CONDITIONER
- ELECTRICAL
- MISCELLANEOUS SYMBOL
- TREE
- PALM
- SHRUB
- SWAMP/MARSH
- TOWER

(THESE FEATURES ARE TO SCALE)

- CURB
- PAVED SURFACE
- CONCRETE SURFACE
- UNPAVED ROAD
- FENCE
- GUARDRAIL
- WALL
- RAILROAD
- STRUCTURE
- TREE LINE
- SHRUB LINE
- MISC MISCELLANEOUS
- PIPELINE
- RECREATION
- EDGE OF GROVE
- EDGE OF WATER
- SWAMPLINE
- OBSCURED CONTOUR
- DEPRESSION CONTOUR

(THESE INFORMATIVE LABELS ARE NOT SCALE DEPENDENT)

- W.E. WATER ELEVATION
- ×120.1 SPOT ELEVATION
- ×120.1 OBSCURED SPOT
- 95 ELEVATION CONTOUR (5-FOOT INTERVAL)
- ELEVATION CONTOUR (1-FOOT INTERVAL)

REV	DATE	DESCRIPTION	BY

SHANE H. FISCHER
LICENSE
STATE OF FLORIDA
PROFESSIONAL ENGINEER
SHANE H. FISCHER, P.E.
LICENSE NO. 58026

DRAWING TITLE
EXISTING CONDITIONS NORTH
TOPOGRAPHIC SURVEY (04/03/2012)

PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.23 | DSN. BY: SRF | DWN. BY: SDA | CHK. BY: SRF | Q/A RVW BY: CEH | APP. BY: SRF

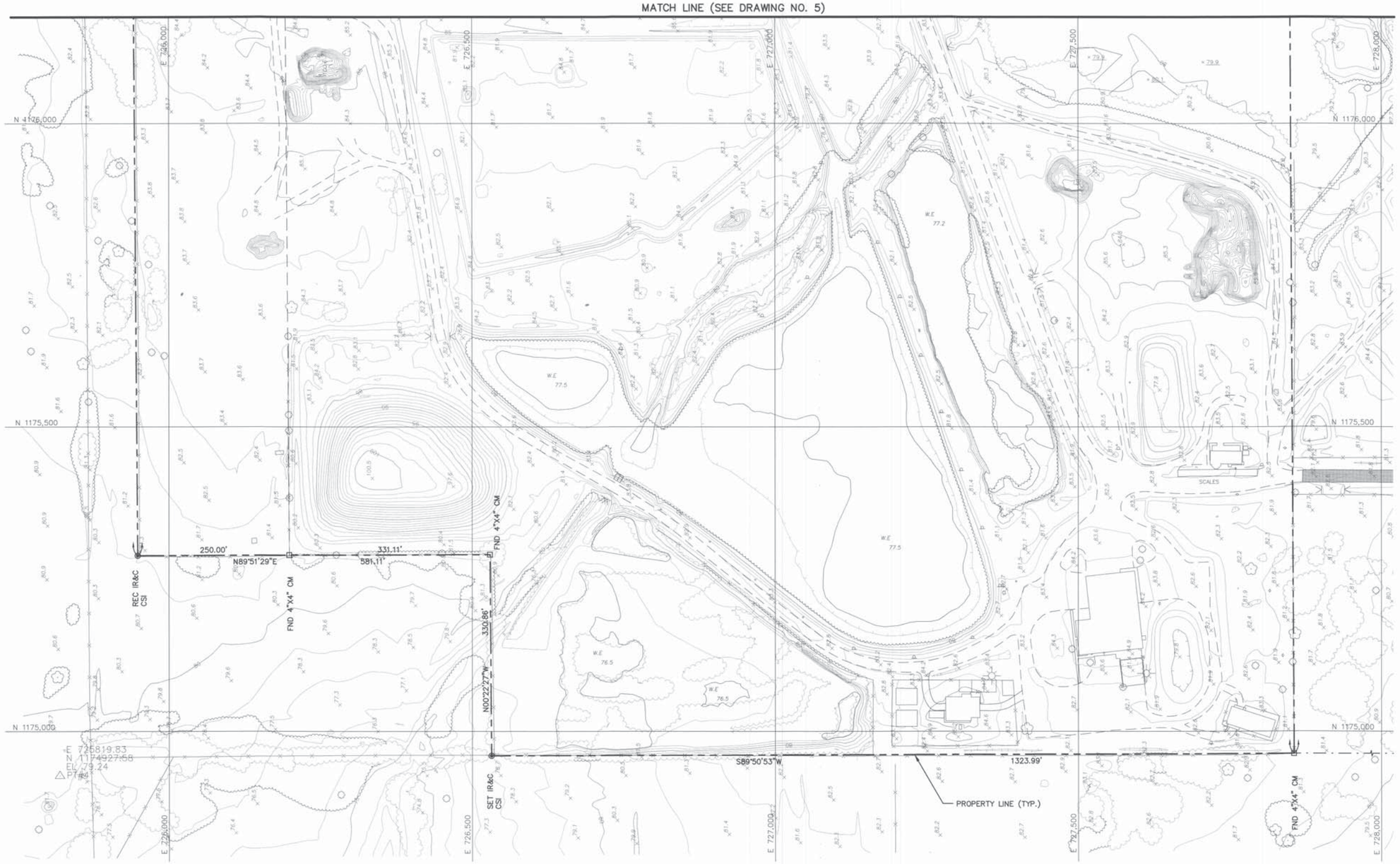
CADD FILE: 993323EXTOPO

DATE: APRIL 2013

SCALE: AS SHOWN

DRAWING NO.
5 of 37

MATCH LINE (SEE DRAWING NO. 5)



N

80 40 0 80
SCALE IN FEET

SURVEY SOURCE NOTE:

TOPOGRAPHIC SURVEY PERFORMED BY:
PICKETT & ASSOCIATES, INC.
475 SOUTH FIRST AVENUE
BARTOW, FLORIDA 33830
PHONE: (863) 533-9095
PHOTO DATE: APRIL 3, 2012.

SURVEY NOTES:

1. NORTH, THE GRID, AND THE COORDINATES SHOWN HEREON ARE REFERENCED TO THE WEST ZONE OF THE FLORIDA STATE PLANE COORDINATE SYSTEM, NAD 83, 1999 ADJUSTMENT.
2. ELEVATIONS ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
3. THIS TOPOGRAPHIC SURVEY WAS PREPARED BY PHOTOGRAMMETRIC METHODS. SEE THE SURVEYOR'S REPORT FOR MAP ACCURACY, SURVEYOR'S SIGNATURE, SEAL, AND REFERENCE BENCHMARK INFORMATION. THIS MAP IS LIMITED TO THOSE FEATURES VISIBLE ON AERIAL PHOTOGRAPHY.

LEGEND:

(THESE FEATURES ARE REPRESENTED BY SYMBOLS NOT TO SCALE)

- CONTROL
- PT# TARGET NUMBER
- N NORTHING
- E EASTING
- EL ELEVATION
- UTILITY POLE
- LIGHT POLE
- SIGN
- TRAFFIC LIGHT
- POST
- VALVE
- FLAG
- MAIL BOX
- GUYWIRE
- MANHOLE
- HYDRANT
- CULVERT
- CATCH BASIN
- AIR CONDITIONER
- ELECTRICAL
- MISCELLANEOUS SYMBOL
- TREE
- PALM
- SHRUB
- SWAMP/MARSH
- TOWER

(THESE FEATURES ARE TO SCALE)

- CURB
- PAVED SURFACE
- CONCRETE SURFACE
- UNPAVED ROAD
- FENCE
- GUARDRAIL
- WALL
- RAILROAD
- STRUCTURE
- TREE LINE
- SHRUB LINE
- MISC MISCELLANEOUS
- PIPELINE
- RECREATION
- EDGE OF GROVE
- EDGE OF WATER
- SWAMPLINE
- OBSCURED CONTOUR
- DEPRESSION CONTOUR

(THESE INFORMATIVE LABELS ARE NOT SCALE DEPENDENT)

- W.E. WATER ELEVATION
- × 120.1 SPOT ELEVATION
- × 120.1 OBSCURED SPOT
- 95 ELEVATION CONTOUR (5-FOOT INTERVAL)
- ELEVATION CONTOUR (1-FOOT INTERVAL)

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JANE H. FISCHER — PUBLIC LICENSE — STATE OF FLORIDA — PROFESSIONAL ENGINEER
Jane H. Fischer
SHANE R. HANNAH, P.E.
LICENSE NO. 56028

REV	DATE	DESCRIPTION	BY

DRAWING TITLE
EXISTING CONDITIONS SOUTH
TOPOGRAPHIC SURVEY (04/03/2012)

PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 853-5757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJECT NO. 09199033.23
DSN. BY: SDA
DRN. BY: CEH
CHK. BY: SRF
QA/QC BY: SRF
APP'D. BY: SRF

CADD FILE:
993323EXTOPO

DATE:
APRIL 2013

SCALE:
AS SHOWN

DRAWING NO.
6 of 37

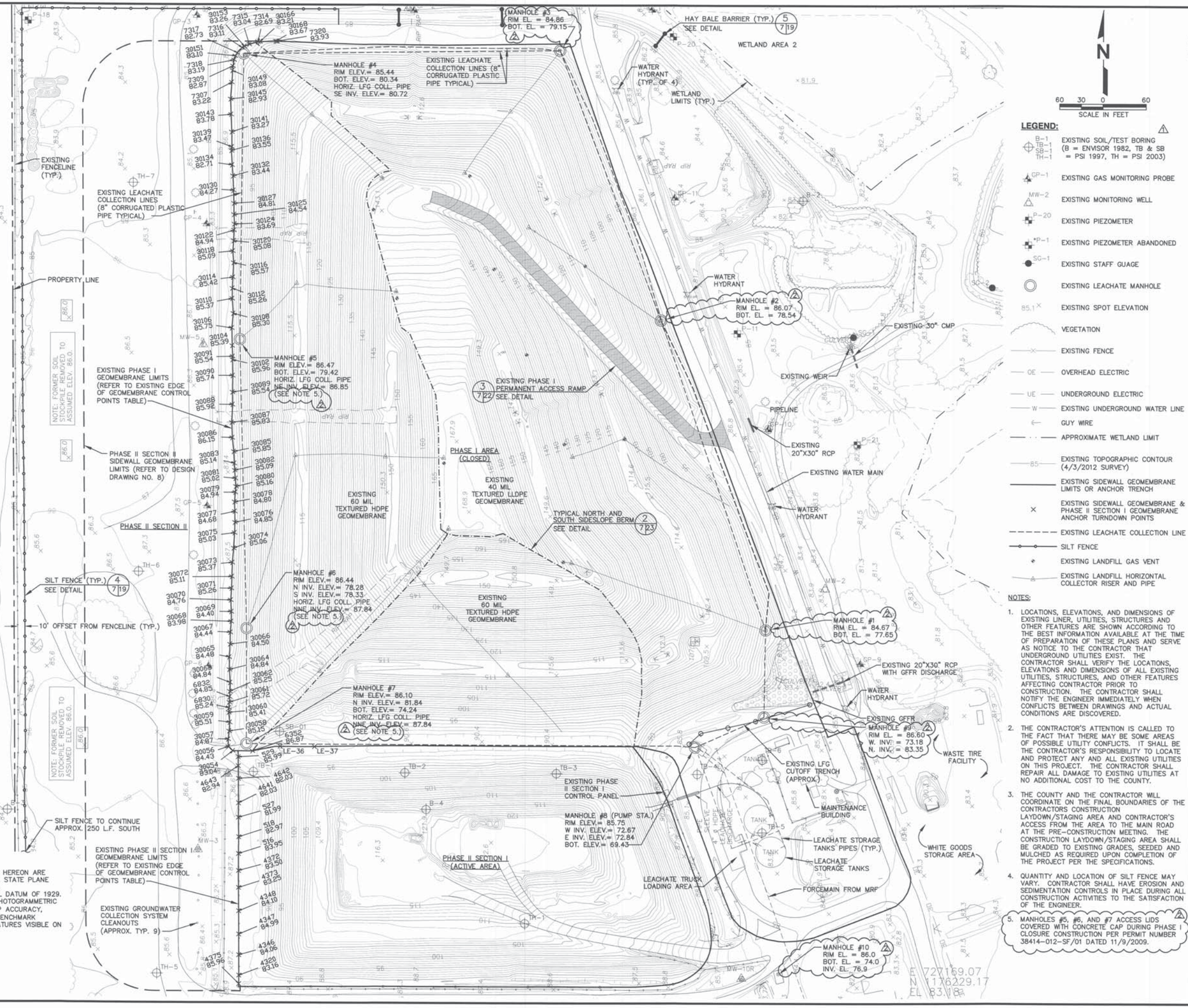
EXISTING EDGE OF GEOMEMBRANE CONTROL POINTS TABLE			
PHASE I			
POINT NO.	NORTHING	EASTING	ELEV.
6352	1176575.36	726268.86	86.87
6830	1176634.79	726236.20	85.24
6832	1176649.88	726237.10	84.85
7307	1177500.33	726237.77	83.22
7309	1177522.85	726239.30	82.87
7314	1177556.67	726273.80	82.69
7315	1177553.10	726261.87	83.04
7316	1177548.53	726251.95	83.11
7317	1177541.37	726245.22	82.73
7318	1177531.41	726240.95	83.19
7320	1177557.59	726300.26	83.93
30054	1176575.38	726241.81	83.04
30056	1176581.27	726235.48	84.43
30057	1176591.49	726235.30	84.87
30058	1176602.76	726236.60	85.15
30059	1176614.77	726237.30	85.51
30060	1176628.47	726235.87	85.41
30061	1176642.39	726236.69	85.72
30062	1176657.38	726237.30	85.25
30063	1176669.44	726237.66	84.84
30064	1176687.39	726236.72	84.84
30065	1176704.83	726236.45	84.48
30066	1176722.75	726237.49	84.50
30067	1176739.20	726237.86	84.44
30068	1176754.36	726239.05	83.98
30069	1176767.82	726239.10	84.40
30070	1176783.88	726238.34	84.76
30071	1176799.90	726239.33	85.26
30072	1176816.01	726239.79	85.11
30073	1176835.50	726240.34	85.37
30074	1176855.30	726242.13	85.06
30075	1176876.44	726243.40	85.03
30076	1176890.39	726243.84	84.85
30077	1176905.67	726243.59	84.68
30078	1176918.75	726243.15	84.80
30079	1176932.01	726244.23	84.94
30080	1176940.16	726245.08	85.16
30081	1176951.31	726244.44	85.02
30082	1176962.71	726243.15	85.09
30083	1176972.29	726242.73	85.14
30085	1176988.54	726241.84	85.85
30086	1177007.69	726239.81	86.15
30087	1177028.59	726238.95	85.83
30088	1177053.37	726240.06	85.92
30089	1177070.62	726239.89	85.54
30090	1177093.55	726240.19	85.74
30091	1177120.23	726240.02	85.54
30102	1177115.63	726239.77	85.96
30104	1177135.28	726239.29	85.39
30106	1177159.77	726238.74	85.75
30108	1177179.95	726240.67	85.30
30110	1177200.53	726239.17	85.37
30112	1177214.78	726239.17	85.26
30114	1177229.97	726240.17	85.42
30116	1177250.11	726240.89	85.57
30118	1177266.27	726239.92	85.09
30120	1177280.46	726240.91	85.08
30122	1177295.20	726241.46	84.94
30124	1177303.91	726241.99	83.69
30125	1177317.09	726241.37	84.54
30127	1177332.62	726241.20	84.81
30130	1177350.72	726240.59	84.27
30132	1177370.54	726239.80	83.44
30134	1177385.65	726238.52	82.71
30136	1177405.43	726237.45	83.55
30139	1177410.66	726238.10	83.47
30141	1177431.42	726237.91	83.27
30143	1177455.81	726236.91	83.78
30145	1177477.13	726236.14	82.93
30149	1177516.56	726238.60	83.08
30151	1177536.88	726242.70	83.10
30153	1177550.26	726255.13	83.26
30166	1177556.78	726276.50	83.21
30168	1177557.52	726298.49	83.67
LE-36	1176581.89	726307.44	83.89
LE-37	1176581.43	726354.95	84.36
PHASE II SECTION I			
POINT NO.	NORTHING	EASTING	ELEV.
516	1176433.66	726249.99	83.95
518	1176456.87	726250.29	82.97
527	1176483.79	726249.81	81.99
529	1176567.06	726249.29	85.99
4320	1176265.62	726250.98	83.16
4346	1176293.94	726250.80	84.06
4347	1176322.48	726250.71	84.99
4348	1176354.55	726250.49	84.10
4372	1176410.37	726250.10	83.50
4373	1176386.89	726250.16	83.25
4375	1176253.85	726251.00	85.96
4641	1176503.68	726249.87	82.03
4642	1176537.47	726249.68	82.03
4643	1176554.72	726249.44	82.94

SURVEY NOTES:

1. NORTH, THE GRID, AND THE COORDINATES SHOWN HEREON ARE REFERENCED TO THE WEST ZONE OF THE FLORIDA STATE PLANE COORDINATE SYSTEM, NAD 83, 1999 ADJUSTMENT.
2. ELEVATIONS ARE TO NATIONAL GEODETIC VERTICAL DATUM OF 1929.
3. THIS TOPOGRAPHIC SURVEY WAS PREPARED BY PHOTOGRAMMETRIC METHODS. SEE THE SURVEYOR'S REPORT FOR MAP ACCURACY, SURVEYOR'S SIGNATURE, SEAL, AND REFERENCE BENCHMARK INFORMATION. THIS MAP IS LIMITED TO THOSE FEATURES VISIBLE ON AERIAL PHOTOGRAPHY.

SURVEY SOURCE NOTE:

TOPOGRAPHIC SURVEY PERFORMED BY:
PICKETT & ASSOCIATES, INC.
475 SOUTH FIRST AVENUE
BARTOW, FLORIDA 33830
PHONE: (863) 533-9095
PHOTO DATE: APRIL 3, 2012.



LEGEND:

- EXISTING SOIL/TEST BORING (B = ENVISOR 1982, TB & SB = PSI 1997, TH = PSI 2003)
- EXISTING GAS MONITORING PROBE
- EXISTING MONITORING WELL
- EXISTING PIEZOMETER
- EXISTING PIEZOMETER ABANDONED
- EXISTING STAFF GUAGE
- EXISTING LEACHATE MANHOLE
- EXISTING SPOT ELEVATION
- VEGETATION
- EXISTING FENCE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- EXISTING UNDERGROUND WATER LINE
- GUY WIRE
- APPROXIMATE WETLAND LIMIT
- EXISTING TOPOGRAPHIC CONTOUR (4/3/2012 SURVEY)
- EXISTING SIDEWALL GEOMEMBRANE LIMITS OR ANCHOR TRENCH
- EXISTING SIDEWALL GEOMEMBRANE & PHASE II SECTION I GEOMEMBRANE ANCHOR TURNDOWN POINTS
- EXISTING LEACHATE COLLECTION LINE
- SILT FENCE
- EXISTING LANDFILL GAS VENT
- EXISTING LANDFILL HORIZONTAL COLLECTOR RISER AND PIPE

NOTES:

1. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING LINER, UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS AND SERVE AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED.
2. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE MAY BE SOME AREAS OF POSSIBLE UTILITY CONFLICTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ANY AND ALL EXISTING UTILITIES ON THIS PROJECT. THE CONTRACTOR SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES AT NO ADDITIONAL COST TO THE COUNTY.
3. THE COUNTY AND THE CONTRACTOR WILL COORDINATE ON THE FINAL BOUNDARIES OF THE CONTRACTORS CONSTRUCTION LAYDOWN/STAGING AREA AND CONTRACTOR'S ACCESS FROM THE AREA TO THE MAIN ROAD AT THE PRE-CONSTRUCTION MEETING. THE CONSTRUCTION LAYDOWN/STAGING AREA SHALL BE GRADED TO EXISTING GRADES, SEEDED AND MULCHED AS REQUIRED UPON COMPLETION OF THE PROJECT PER THE SPECIFICATIONS.
4. QUANTITY AND LOCATION OF SILT FENCE MAY VARY. CONTRACTOR SHALL HAVE EROSION AND SEDIMENTATION CONTROLS IN PLACE DURING ALL CONSTRUCTION ACTIVITIES TO THE SATISFACTION OF THE ENGINEER.
5. MANHOLES #5, #6, AND #7 ACCESS LIDS COVERED WITH CONCRETE CAP DURING PHASE I CLOSURE CONSTRUCTION PER PERMIT NUMBER 38414-012-SF/01 DATED 11/9/2009.

R. FISCHER LICENSE NO. 58026 STATE OF FLORIDA PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION	BY
1	04/01/13	REVISED PER R.A.I. NO. 1	SRF
2	06/28/13	REVISED PER OPS PERMIT RENEWAL RAI 1	SRF

DRAWING TITLE: PROJECT AREA EXISTING CONDITIONS SITE PLAN

PROJECT TITLE: HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJECT NO. 09199033.23
DSN. BY: SDA
DWN. BY: CEH
CHK. BY: SRF
QA/QC BY: SRF
APP. BY: SRF

CADD FILE: 993323EXSITE
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO. 7 of 37

N

60 30 0 60
SCALE IN FEET

GROUNDWATER CONTROL PIPING SYSTEM DETAIL (TYP.) SEE DETAIL 1/8|14
GROUNDWATER PIPE TRENCH DETAIL (TYP.) SEE DETAIL 4/8|14
8" PERF. SDR 11 HDPE GROUNDWATER COLLECTION PIPE @ 0.5% SLOPE (TYP. OF 9)
TRANSITION AND TIE TO EXISTING ROAD AT 5% SLOPE
REGRADE EXISTING SWALE TO DRAIN EAST
EAST SLOPE TIE-IN TO EXIST. PHASE II SECTION I (TYP.) SEE DETAIL 3/8|15
EAST SLOPE TIE-IN TO EXIST. PHASE II SECTION I AT LCS PIPE TRENCH (TYP.) SEE DETAIL 4/8|15
ANCHOR TRENCH SEE DETAIL 2/8|16
PROPERTY LINE
LIMIT OF PRIMARY GRADING WORK
10' SWALE BOT. (TYP.)
15' PERIMETER ROAD (TYP.)
PERIMETER BERM (TYP.)
PERIMETER ROAD AND SWALE SEE DETAIL 1/8|16
PERIMETER SWALE (TYP.)
ANCHOR TRENCH (TYP.)
BOTTOM LINER SYSTEM SEE DETAIL 5/8|14
PHASE II SECTION II
PHASE II SECTION I (ACTIVE)
PHASE I (CLOSED)
"*" DENOTES GAS PROBE OR MONITORING WELL TO BE ABANDONED (TYP.)
EAST SLOPE TIE-IN TO EXIST. SOUTH PHASE I (TYP.) SEE DETAIL 2/8|15
EAST SLOPE TIE-IN TO EXIST. PHASE I (TYP.) SEE DETAIL 1/8|15
EXISTING VENT TRENCH TIE-IN TO MANHOLE DETAIL (MH-5 AND MH-6) SEE DETAIL 2/8|19
EXISTING HORIZONTAL LANDFILL GAS VENT TRENCH SEE DETAIL 3/8|20
EXISTING VENT TRENCH TIE-IN TO MANHOLE SEE DETAIL 1/8|19
EXISTING 8" GROUNDWATER COLLECTION PIPE (TYP. OF 9)
EXISTING 8" LEACHATE COLLECTION PIPE (TYP. OF 3)
LIMITS OF ADDITIONAL LAYER 60-MIL LINER TO ELEV. 82.5
STORMWATER FLUME (TYP.) SEE DETAIL 1/8|17
BOTTOM LINER SYSTEM WITH ADDL. LAYER OF 60-MIL LINER SEE DETAIL 6/8|14
TRANSITION AND TIE TO EXISTING ROAD AT 5% SLOPE
H.P. 86.3
P-18 PT #1 E 725944.26 N 1177595.94 EL 85.05
4" ø HDPE LEACHATE DISCHARGE
PIPE SLEEVE
RIP RAP

LEGEND

- EXISTING ELEVATIONAL CONTOUR (5 FOOT INTERVAL) APRIL 2012 SURVEY
- EXISTING ELEVATIONAL CONTOUR (1 FOOT INTERVAL) APRIL 2012 SURVEY
- EXISTING SPOT ELEVATION DEC. 2010 SURVEY
- EXISTING PROPERTY LINE/BOUNDARY (CHASTAIN SKILLMAN SURVEY)
- NEW GROUNDWATER MONITORING WELL
- EXISTING GROUNDWATER MONITORING WELL
- NEW GAS MONITORING PROBE
- EXISTING GAS MONITORING PROBE
- EXISTING PIEZOMETER
- EXISTING LEACHATE MANHOLE
- EXISTING LANDFILL GAS VENT
- EXISTING LANDFILL HORIZONTAL COLLECTOR RISER AND PIPE
- EXISTING EDGE OF LINER (SEE DRAWING NO. 7 FOR COORDINATE LOCATIONS)
- FINISHED GRADE ELEVATIONAL CONTOUR (5 FOOT INTERVAL)
- FINISHED GRADE ELEVATIONAL CONTOUR (1 FOOT INTERVAL)
- FINISHED GRADE TOE OF SLOPE/TOP OF SLOPE
- FINISHED GRADE SPOT ELEVATION
- ACCESS ROAD COMPACTED LIMEROCK
- ROADWAY CENTERLINE/BASELINE
- SURFACE WATER FLOW DIRECTION
- LEACHATE SHEET FLOW DIRECTION
- ADDITIONAL LAYER OF 60-MIL LINER TO ELEV. 82.5
- LIMIT OF PRIMARY GRADING WORK
- GROUNDWATER CONTROL PIPE AND CLEAN-OUT
- LEACHATE COLLECTION PIPE AND CLEAN-OUT
- EXISTING GROUNDWATER CONTROL PIPE AND CLEAN-OUT
- EXISTING LEACHATE COLLECTION PIPE AND CLEAN-OUT

REV	DATE	DESCRIPTION	BY
1	06/28/13	REVISED PER OPS PERMIT RENEWAL RAI 1	SRF

DRAWING TITLE: TOP OF SUBGRADE BOTTOM CELL GRADING SITE PLAN

PROJECT TITLE: HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

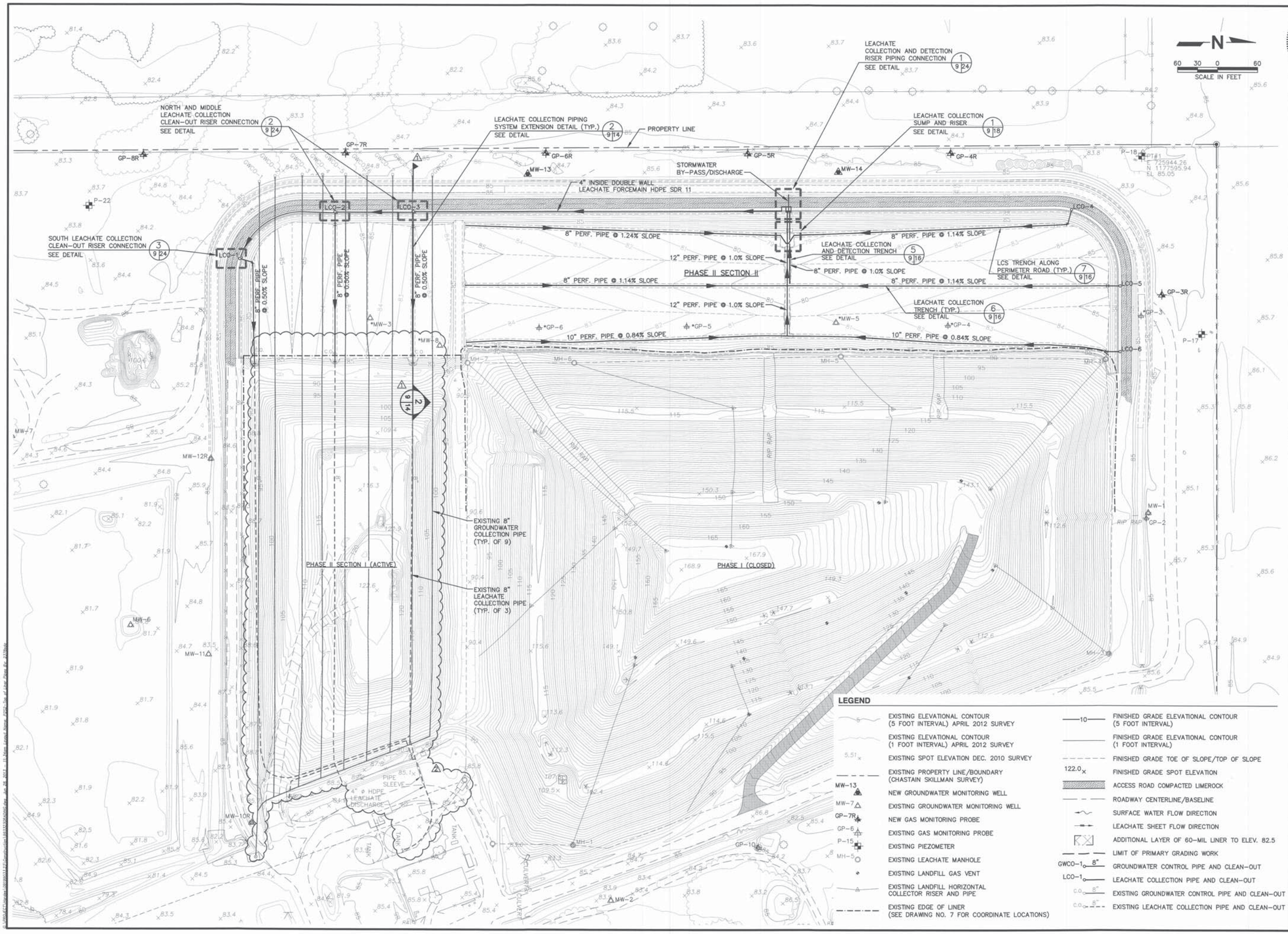
CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJECT NO. 09199033.23
DWN. BY: SDA
DSN. BY: SRF
CHK. BY: SRF
APP. BY: SRF
O/A REVIEW: CEH

CADD FILE: 993323GRADING
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO. 8 of 37

SHERRIE R. HARRIS, P.E. LICENSE NO. 58026
STATE OF FLORIDA PROFESSIONAL ENGINEER



LEGEND

EXISTING ELEVATIONAL CONTOUR (5 FOOT INTERVAL) APRIL 2012 SURVEY	FINISHED GRADE ELEVATIONAL CONTOUR (5 FOOT INTERVAL)
EXISTING ELEVATIONAL CONTOUR (1 FOOT INTERVAL) APRIL 2012 SURVEY	FINISHED GRADE ELEVATIONAL CONTOUR (1 FOOT INTERVAL)
EXISTING SPOT ELEVATION DEC. 2010 SURVEY	FINISHED GRADE TOE OF SLOPE/TOP OF SLOPE
EXISTING PROPERTY LINE/BOUNDARY (CHASTAIN SKILLMAN SURVEY)	FINISHED GRADE SPOT ELEVATION
MW-13 NEW GROUNDWATER MONITORING WELL	ACCESS ROAD COMPACTED LIMEROCK
MW-7 EXISTING GROUNDWATER MONITORING WELL	ROADWAY CENTERLINE/BASELINE
GP-7R NEW GAS MONITORING PROBE	SURFACE WATER FLOW DIRECTION
GP-6 EXISTING GAS MONITORING PROBE	LEACHATE SHEET FLOW DIRECTION
P-15 EXISTING PIEZOMETER	ADDITIONAL LAYER OF 60-MIL LINER TO ELEV. 82.5
MH-5 EXISTING LEACHATE MANHOLE	LIMIT OF PRIMARY GRADING WORK
EXISTING LANDFILL GAS VENT	GWCO-1 8" GROUNDWATER CONTROL PIPE AND CLEAN-OUT
EXISTING LANDFILL HORIZONTAL COLLECTOR RISER AND PIPE	LCO-1 LEACHATE COLLECTION PIPE AND CLEAN-OUT
EXISTING EDGE OF LINER (SEE DRAWING NO. 7 FOR COORDINATE LOCATIONS)	C.O. 8" EXISTING GROUNDWATER CONTROL PIPE AND CLEAN-OUT
	C.O. 8" EXISTING LEACHATE COLLECTION PIPE AND CLEAN-OUT

REV	DATE	DESCRIPTION	BY
1	04/01/13	REVISED PER R.A.I. NO. 1	SRF
2	06/28/13	REVISED PER OPS PERMIT RENEWAL RAI 1	SRF

DRAWING TITLE: LEACHATE COLLECTION SYSTEM SITE PLAN

PROJECT TITLE: HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

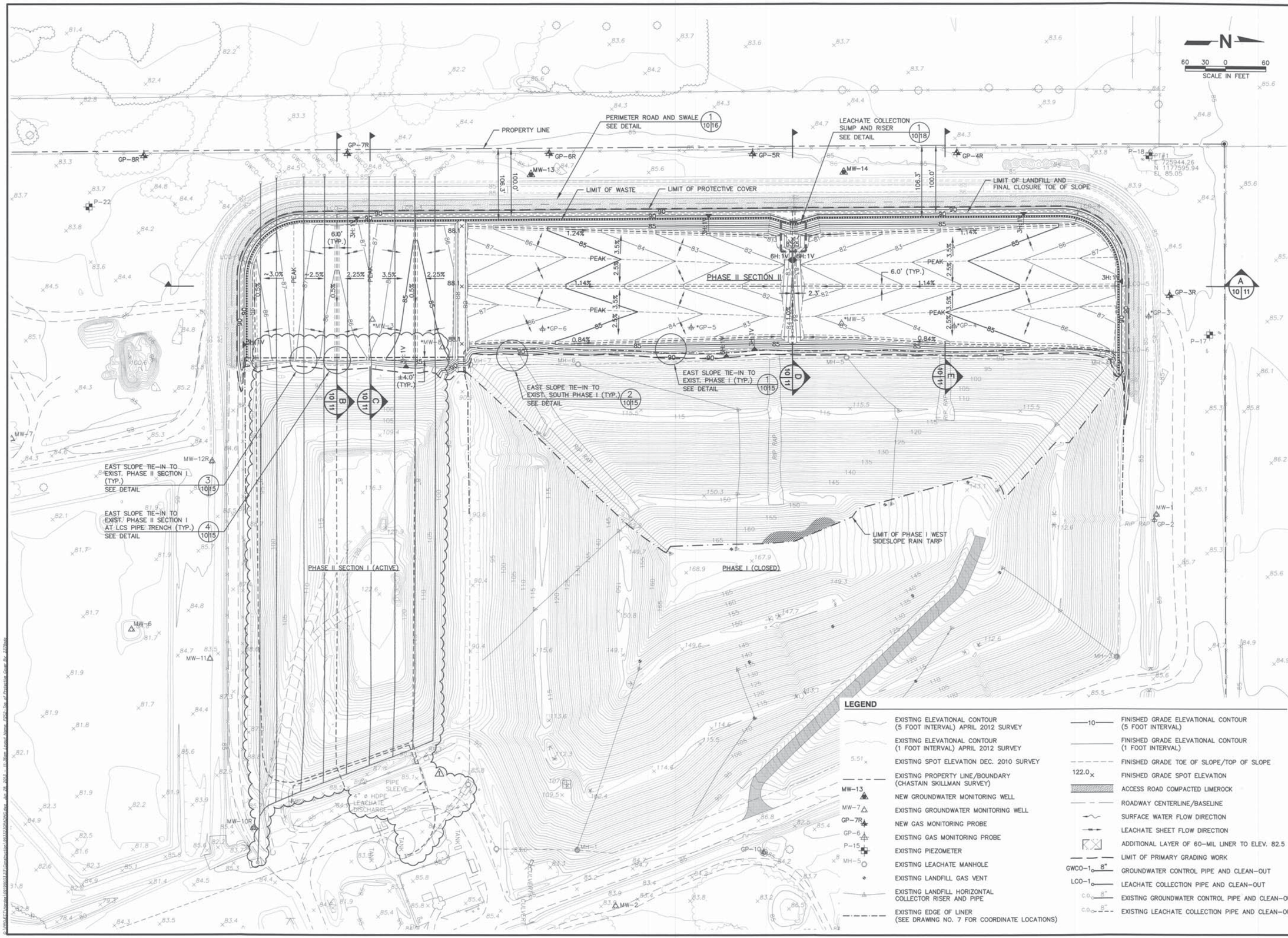
PROJ. NO. 09199033.23 | DSN. BY: SRF | DWN. BY: SDA | CHK. BY: SRF | Q/A RVW BY: CEH | APP. BY: SRF

CADD FILE: 993323GRADING

DATE: APRIL 2013

SCALE: AS SHOWN

DRAWING NO. 9 of 37



REV	DATE	DESCRIPTION	BY
1	06/28/13	REVISED PER OPS PERMIT RENEWAL RAI 1	SRF

DRAWING TITLE
TOP OF PROTECTIVE COVER
BOTTOM CELL GRADING SITE PLAN

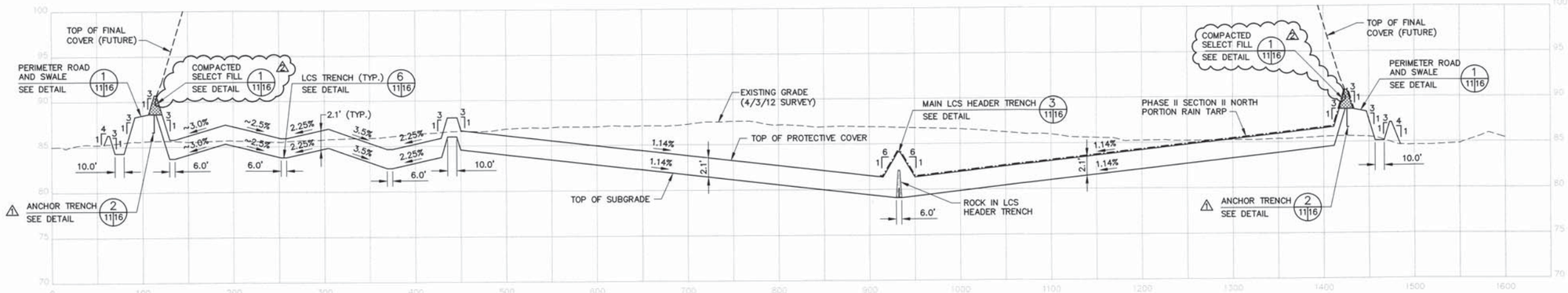
PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

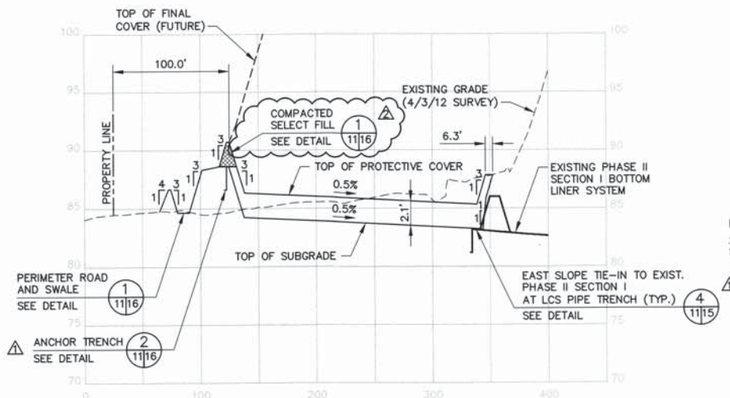
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.23 | DSN. BY: SRF | DWN. BY: SDA | CHK. BY: SRF | Q/A RVW BY: CEH | APP. BY: SRF

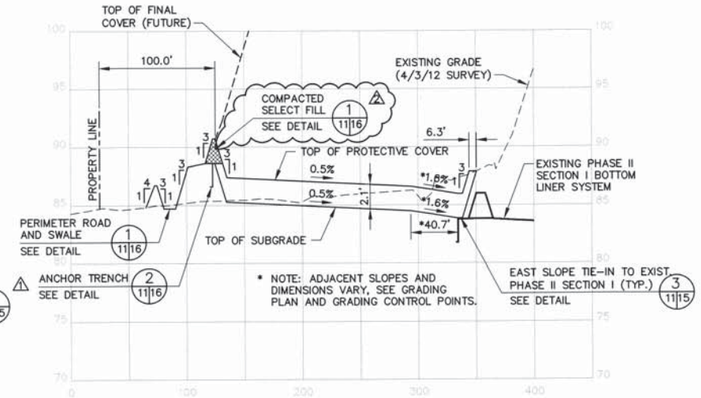
CADD FILE: 993323GRADING
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO. 10 of 37



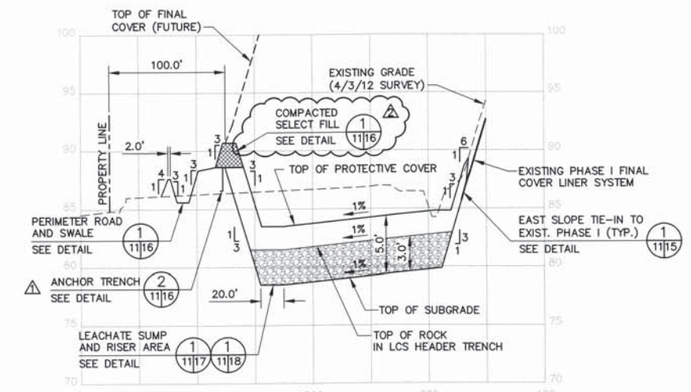
SECTION A 11
SCALE: 1" = 60' HORIZ. 1" = 6' VERT. 8.10



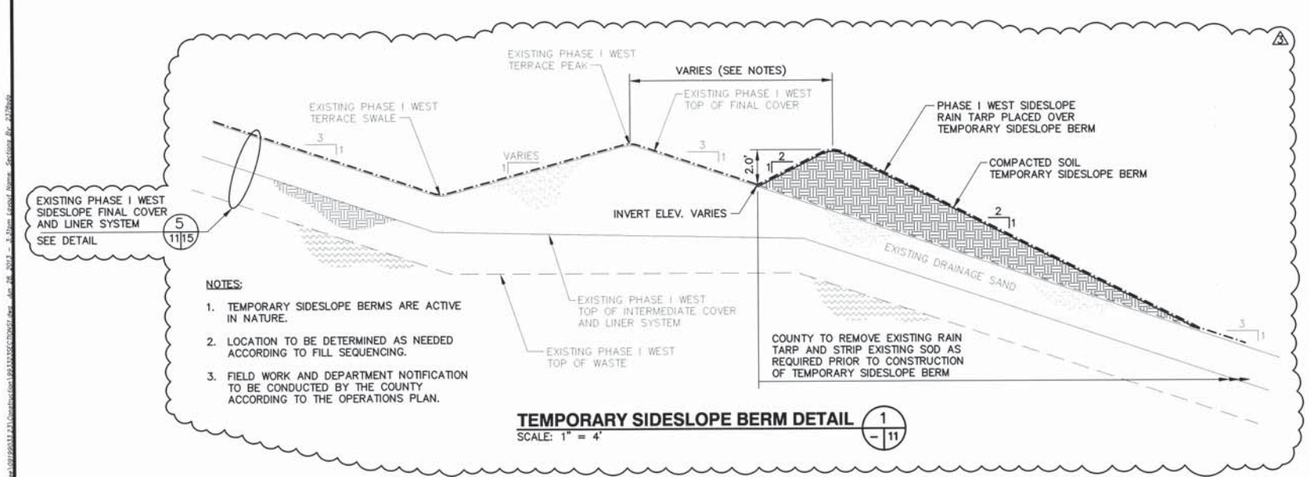
SECTION B 11
SCALE: 1" = 60' HORIZ. 1" = 6' VERT. 8.10



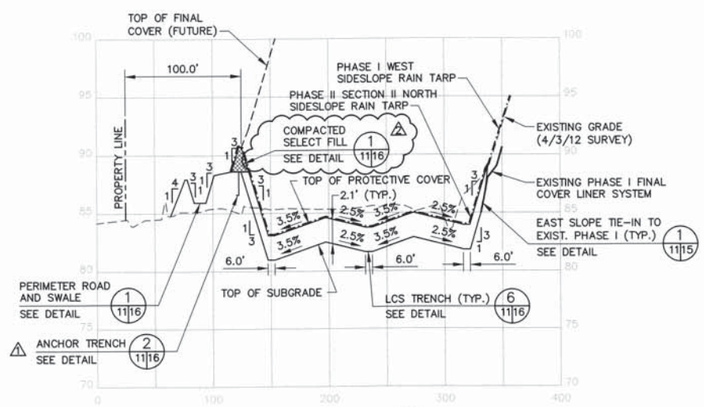
SECTION C 11
SCALE: 1" = 60' HORIZ. 1" = 6' VERT. 8.10



SECTION D 11
SCALE: 1" = 60' HORIZ. 1" = 6' VERT. 8.10



TEMPORARY SIDESLOPE BERM DETAIL 1 – 11
SCALE: 1" = 4'



SECTION E 11
SCALE: 1" = 60' HORIZ. 1" = 6' VERT. 8.10

REV	DATE	DESCRIPTION	BY
1	04/01/13	REVISED PER R.A.I. NO. 1	SRF
2	06/28/13	REVISED PER R.A.I. NO. 2	SRF
3	06/28/13	REVISED PER DPS PERMIT RENEWAL RAI 1	SRF

STEVEN R. FRANCIS * STATE OF FLORIDA * PROFESSIONAL ENGINEER
STEVEN R. FRANCIS, P.E.
LICENSE NO. 58026

DRAWING TITLE: **SECTIONS - BOTTOM CELL**

PROJECT TITLE: **HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS**

CLIENT: **HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

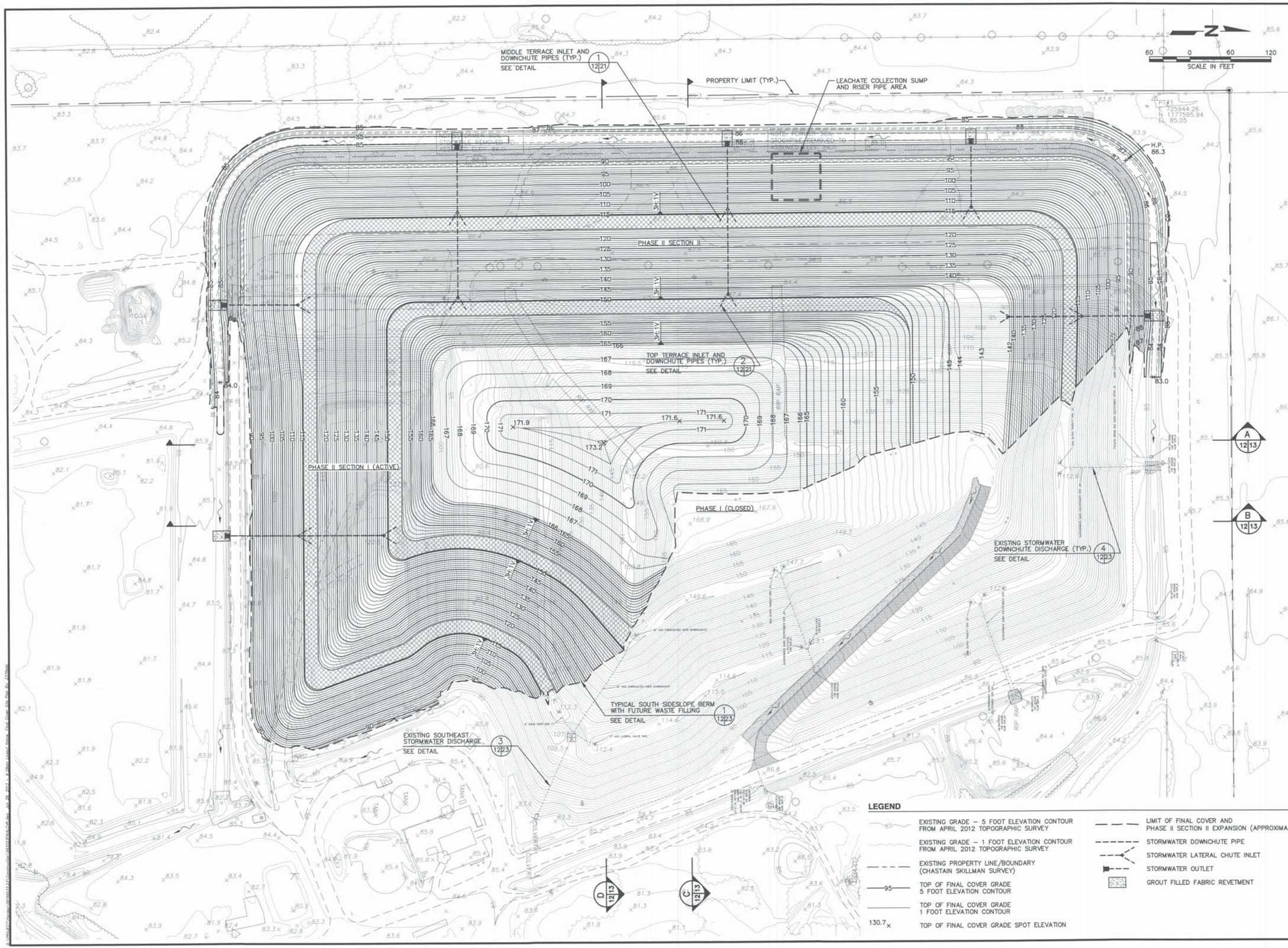
PROJ. NO. 01199033.23 | DWN. BY SDA | CHK. BY SRF | QA/A RVW BY CEH | APP. BY SRF

CADD FILE: 993323SECTIONS1

DATE: APRIL 2013

SCALE: AS SHOWN

DRAWING NO. **11** of 37



SHANE H. FISCHER LICENSE STATE OF FLORIDA PROFESSIONAL ENGINEER
SHANE H. FISCHER, P.E. LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY

DRAWING TITLE
FINAL CLOSURE SITE PLAN

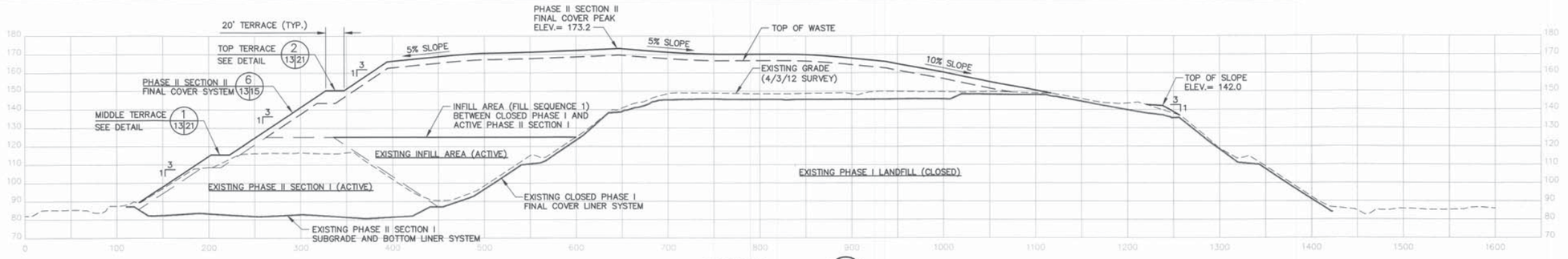
PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

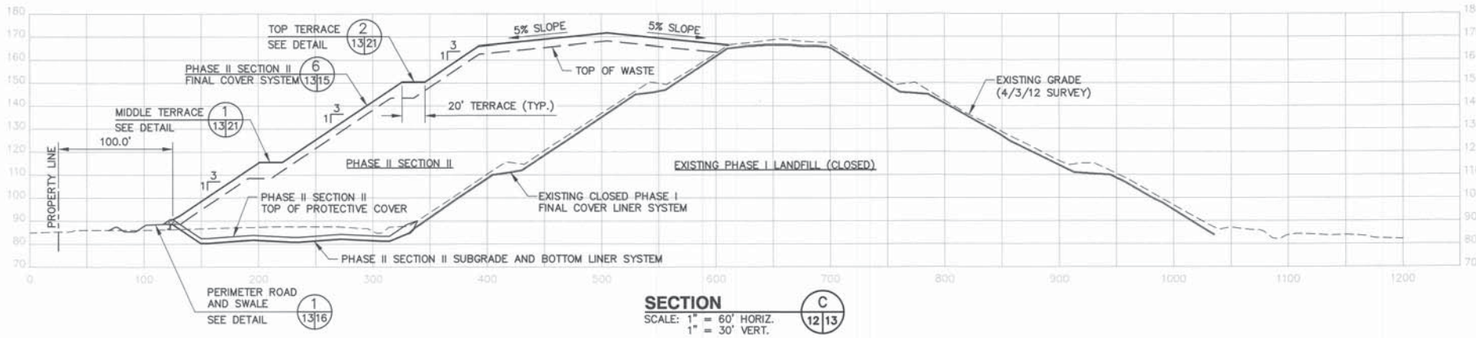
PROJ. NO. 09199033.23 | DSN. BY: SRF | DWN. BY: SDA | CHK. BY: SRF | Q/A RVW BY: CEH | APP. BY: SRF

CADD FILE: 993323FINALCVR
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO.
12 of 37

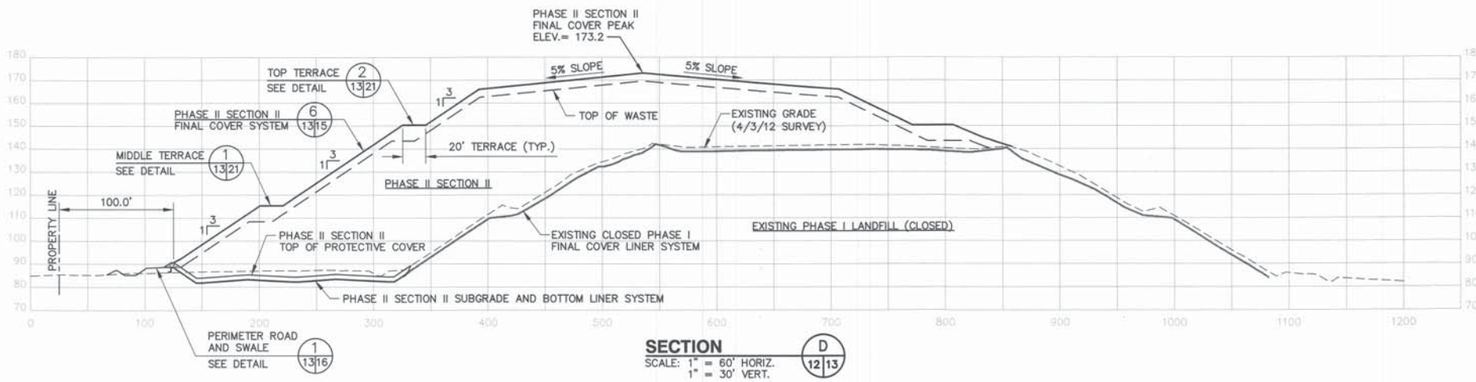


SECTION A 12|13
SCALE: 1" = 60' HORIZ.
1" = 30' VERT.

SECTION B 12|13
SCALE: 1" = 60' HORIZ.
1" = 30' VERT.



SECTION C 12|13
SCALE: 1" = 60' HORIZ.
1" = 30' VERT.



SECTION D 12|13
SCALE: 1" = 60' HORIZ.
1" = 30' VERT.

NOTE:

1. SLOPES SHALL NOT EXCEED 3H:1V AT ANY TIME, AFTER APPLICATION OF COVER SOILS. ALL FINAL SLOPES SHALL CONFORM TO THE DESIGN DIMENSIONS, SLOPES, AND ELEVATIONS.

JAMES R. FISCHER — LICENSE NO. 58026 — STATE OF FLORIDA — PROFESSIONAL ENGINEER — SIGNATURE AND DATE

REV	DATE	DESCRIPTION	BY

DRAWING TITLE: SECTIONS - FINAL CLOSURE

PROJECT TITLE: HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD, SUITE 150, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

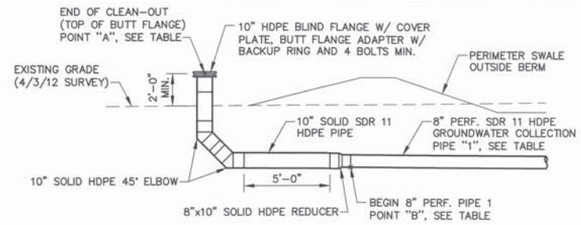
PROJ. NO.	DWN. BY	Q/A WDK BY	APP. BY
09199033.23	SDA	CEH	SRF
CONS. NO.	CHK. BY		
SRF	SRF		

CADD FILE: 993323SECTIONS1

DATE: APRIL 2013

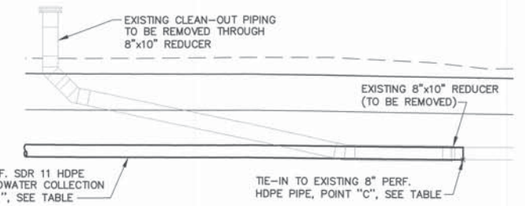
SCALE: AS SHOWN

DRAWING NO. 13 of 37

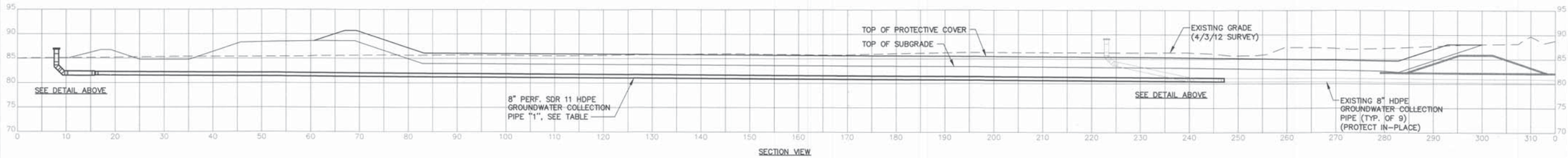


GROUNDWATER COLLECTION PIPE CLEAN-OUT DETAIL

GROUNDWATER COLLECTION PIPE TABLE										
END OF CLEAN-OUT (POINT "A")				BEGIN 8" PERF. PIPE (POINT "B")			8" PERF. PIPE (PIPE "1")	END 8" PERF. PIPE AND TIE-IN TO EXISITNG PIPE (POINT "C")		
CLEAN-OUT NO.	NORTHING	EASTING	ELEV.	NORTHING	EASTING	ELEV.	LINEAR FEET/SLOPE	NORTHING	EASTING	ELEV.
GWCO-1	1176273.17	725989.76	87.0	1176273.17	725998.17	81.65	224.0' @ 0.5%	1176273.17	726222.19	80.53
GWCO-2	1176296.68	725981.25	87.0	1176296.68	725989.78	81.53	234.3' @ 0.5%	1176296.68	726224.04	80.36
GWCO-3	1176337.32	725978.92	87.0	1176337.32	725987.52	81.46	234.8' @ 0.5%	1176337.32	726222.28	80.28
GWCO-4	1176368.12	725978.92	87.0	1176368.12	725987.53	81.45	233.6' @ 0.5%	1176368.12	726221.05	80.28
GWCO-5	1176402.41	725978.92	87.0	1176402.41	725987.50	81.48	230.2' @ 0.5%	1176402.41	726217.62	80.32
GWCO-6	1176434.31	725978.92	87.0	1176434.31	725987.48	81.49	233.2' @ 0.5%	1176434.31	726220.75	80.32
GWCO-7	1176472.76	725978.92	87.0	1176472.76	725987.41	81.57	230.7' @ 0.5%	1176472.76	726218.06	80.41
GWCO-8	1176502.37	725978.92	87.5	1176502.37	725987.95	81.02	228.8' @ 0.5%	1176502.37	726216.73	79.87
GWCO-9	1176532.36	725978.92	88.0	1176532.36	725988.04	80.94	233.6' @ 0.5%	1176532.36	726221.64	79.77



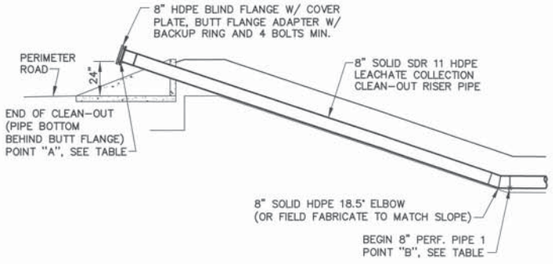
GROUNDWATER COLLECTION PIPE TIE-IN DETAIL



SECTION VIEW

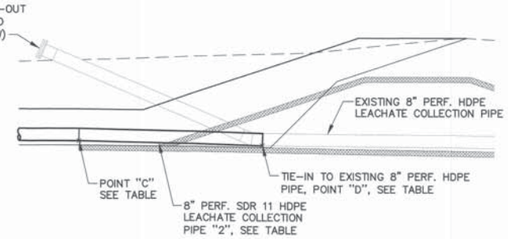
GROUNDWATER CONTROL PIPING SYSTEM DETAIL (TYP.) 1/8|14

SCALE: 1" = 10'

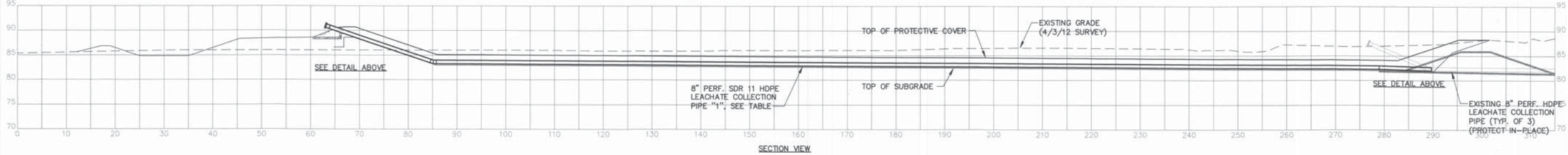


LEACHATE COLLECTION PIPE CLEAN-OUT DETAIL

LEACHATE COLLECTION PIPE TABLE															
END OF CLEAN-OUT (POINT "A")				BEGIN 8" PERF. PIPE 1 (POINT "B")			8" PERF. PIPE 1 (PIPE "1")	END 8" PERF. PIPE PIPE 1 AND BEGIN PIPE 2 (POINT "C")			8" PERF. PIPE 2 (PIPE "2")	END 8" PERF. PIPE 2 AND TIE-IN TO EXISITNG PIPE (POINT "D")		
CLEAN-OUT NO.	NORTHING	EASTING	ELEV.	NORTHING	EASTING	ELEV.	LINEAR FEET/SLOPE	NORTHING	EASTING	ELEV.	LINEAR FEET/SLOPE	NORTHING	EASTING	ELEV.
LCO-1	1176244.26	726105.81	90.60	1176263.48	726112.55	84.48	108.6' @ 0.5%	1176265.12	726221.12	83.94	41.2' @ 0.5%	1176266.37	726262.31	83.73
LCO-2	1176386.49	726034.78	90.60	1176386.62	726053.78	84.48	196.4' @ 0.5%	1176386.62	726250.16	83.50	8.9' @ 1.0%	1176386.62	726259.07	83.41
LCO-3	1176503.31	726033.98	90.60	1176503.45	726056.68	83.25	193.2' @ 0.5%	1176503.45	726249.88	82.28	10.7' @ 2.9%	1176503.45	726260.59	81.97



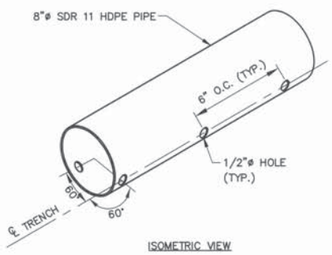
LEACHATE COLLECTION PIPE TIE-IN DETAIL



SECTION VIEW

LEACHATE COLLECTION PIPING SYSTEM EXTENSION DETAIL (TYP.) 2/9|14

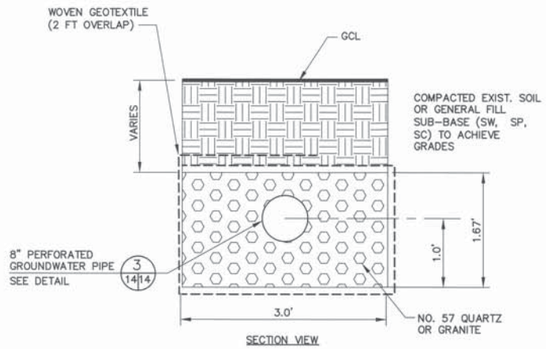
SCALE: 1" = 10'



ISOMETRIC VIEW

8" PERFORATED GROUNDWATER PIPE DETAIL 3/14|14

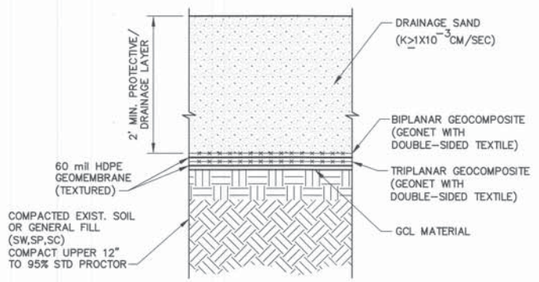
NOT TO SCALE



SECTION VIEW

GROUNDWATER PIPE TRENCH DETAIL 4/8|14

SCALE: 1" = 4'



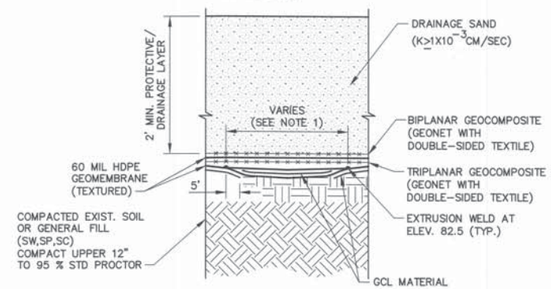
SECTION VIEW

BOTTOM LINER SYSTEM DETAIL 5/14

NOT TO SCALE

8,16,18,23

NOTE:
1. SEE DRAWING NO. 8 FOR HORIZONTAL LIMITS OF ADDITIONAL LAYER OF 60-MIL LINER.



SECTION VIEW

BOTTOM LINER SYSTEM WITH ADDL. LAYER OF 60-MIL LINER DETAIL 6/14

NOT TO SCALE

8,16,17,18

JAMES H. FISCHER LICENSE NO. 58026 STATE OF FLORIDA PROFESSIONAL ENGINEER
SHEET NUMBER P.E. LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY

DRAWING TITLE: PIPING DETAILS - BOTTOM CELL

PROJECT TITLE: HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

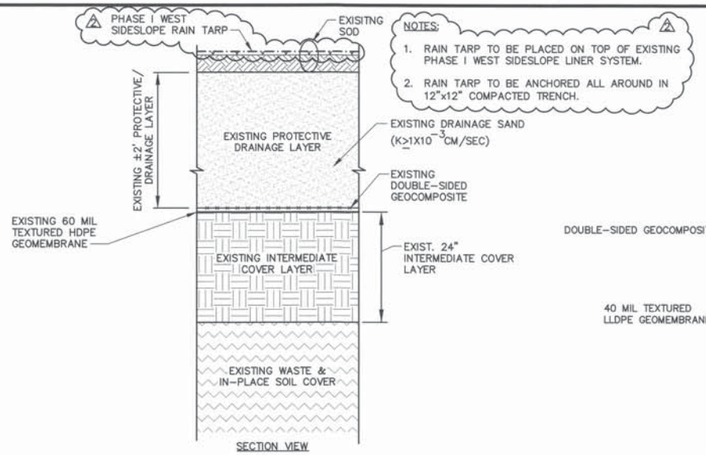
PROJ. NO. 993033.23 | DWN. BY: SDA | CHK. BY: SRF | QA/QC REVIEW BY: CEH | APP. BY: SRF

CADD FILE: 993323SECTIONS1

DATE: APRIL 2013

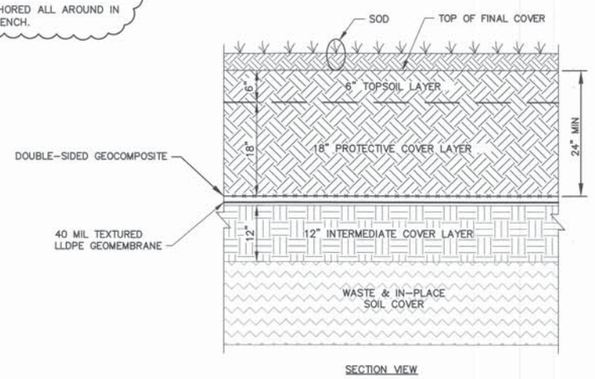
SCALE: AS SHOWN

DRAWING NO. 14 of 37

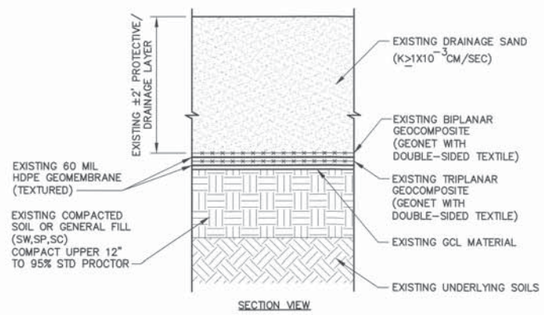


NOTES:
1. RAIN TARP TO BE PLACED ON TOP OF EXISTING PHASE I WEST SIDESLOPE LINER SYSTEM.
2. RAIN TARP TO BE ANCHORED ALL AROUND IN 12"x12" COMPACTED TRENCH.

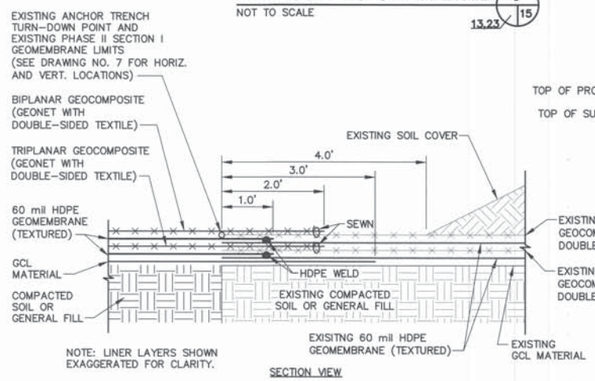
EXISTING PHASE I WEST SIDESLOPE FINAL COVER AND LINER SYSTEM DETAIL (5 / 17|15)
NOT TO SCALE



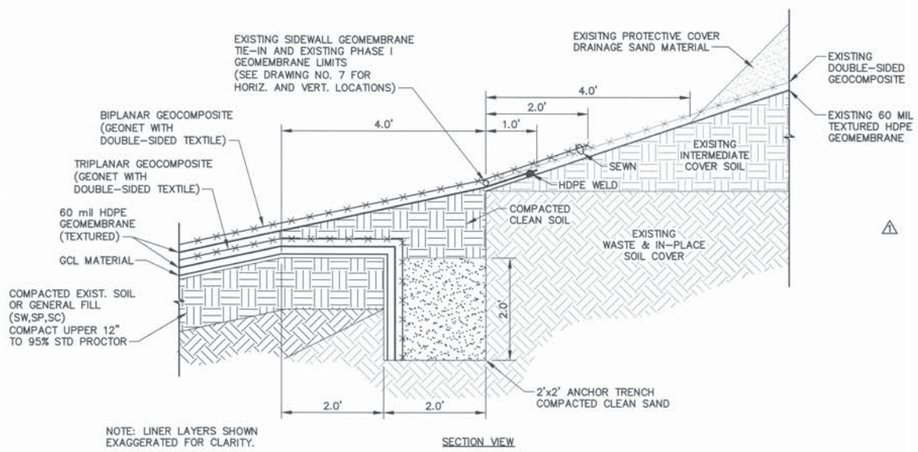
PHASE II SECTION II FINAL COVER SYSTEM DETAIL (6 / 15)
NOT TO SCALE
13,23



EXISTING PHASE II SECTION I BOTTOM LINER SYSTEM DETAIL (7 / 15|15)
NOT TO SCALE

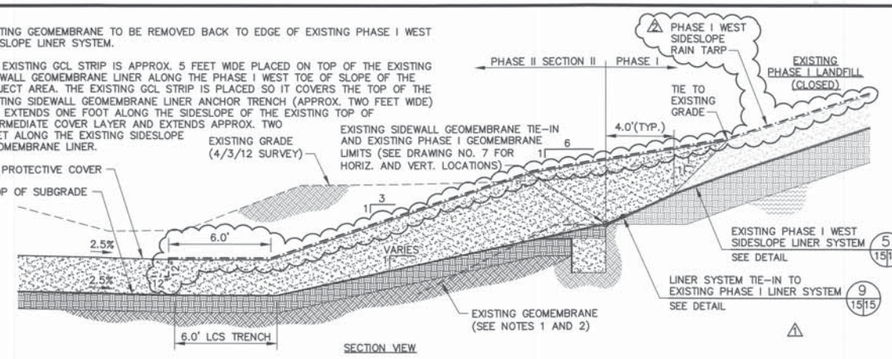


LINER SYSTEM TIE-IN TO EXISITNG PHASE II SECTION I LINER SYSTEM DETAIL (8 / 15|15)
NOT TO SCALE

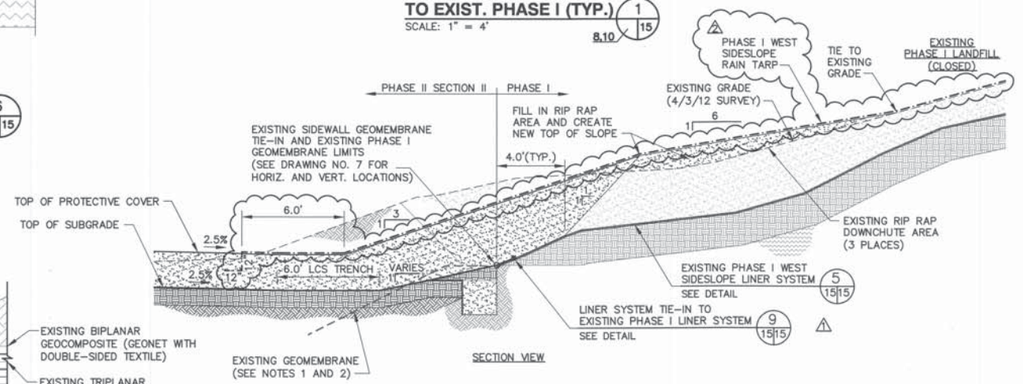


LINER SYSTEM TIE-IN TO EXISTING PHASE I LINER SYSTEM DETAIL (9 / 15|15)
NOT TO SCALE

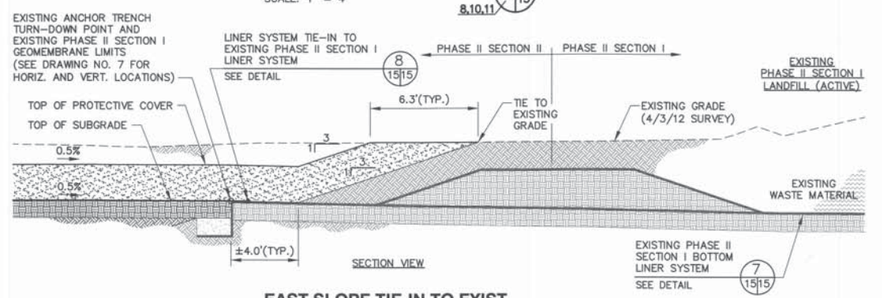
NOTES:
1. EXISTING GEOMEMBRANE TO BE REMOVED BACK TO EDGE OF EXISTING PHASE I WEST SIDESLOPE LINER SYSTEM.
2. THE EXISTING GCL STRIP IS APPROX. 5 FEET WIDE PLACED ON TOP OF THE EXISTING SIDEWALL GEOMEMBRANE LINER ALONG THE PHASE I WEST TOE OF SLOPE OF THE PROJECT AREA. THE EXISTING GCL STRIP IS PLACED SO IT COVERS THE TOP OF THE EXISTING SIDEWALL GEOMEMBRANE LINER ANCHOR TRENCH (APPROX. TWO FEET WIDE) AND EXTENDS ONE FOOT ALONG THE SIDESLOPE OF THE EXISTING TOP OF INTERMEDIATE COVER LAYER AND EXTENDS APPROX. TWO FEET ALONG THE EXISTING SIDESLOPE GEOMEMBRANE LINER.



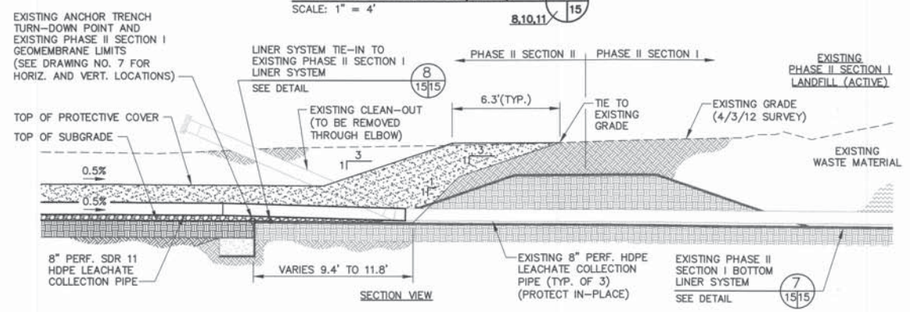
EAST SLOPE TIE-IN TO EXIST. PHASE I (TYP.) (1 / 15)
SCALE: 1" = 4'
8,10



EAST SLOPE TIE-IN TO EXIST. SOUTH PHASE I (2 / 15)
SCALE: 1" = 4'
8,10,11



EAST SLOPE TIE-IN TO EXIST. PHASE II SECTION I (TYP.) (3 / 15)
SCALE: 1" = 4'
8,10,11



EAST SLOPE TIE-IN TO EXIST. PHASE II SECTION I AT LCS PIPE TRENCH (TYP.) (4 / 15)
SCALE: 1" = 4'
8,10,11

REV	DATE	DESCRIPTION	BY
1	04/01/13	REVISED PER R.A.I. NO. 1	SRF
2	06/28/13	REVISED PER R.A.I. NO. 2	SRF

STATE OF FLORIDA — S. R. FISCHER — LICENSE NO. 58026

DRAWING TITLE: TIE-IN DETAILS - BOTTOM CELL

PROJECT TITLE: HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD, SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

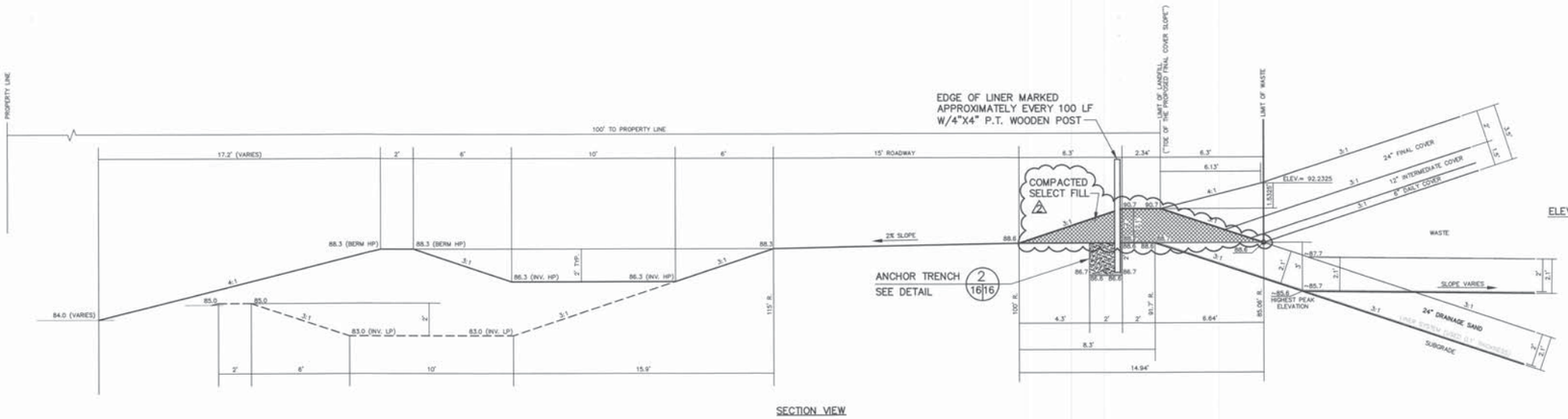
PROJ. NO. 09199033.23 | DSN. BY: SRF | DWN. BY: SDA | CHK. BY: SRF | QA/A RVW BY: CEH | APP. BY: SRF

CADD FILE: 993323SECTIONS1

DATE: APRIL 2013

SCALE: AS SHOWN

DRAWING NO. 15 of 37

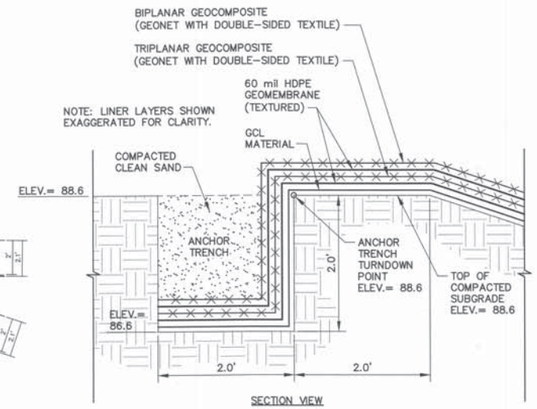


SECTION VIEW

PERIMETER ROAD AND SWALE DETAIL 1 16

SCALE: 1" = 4'

8,10,11,13

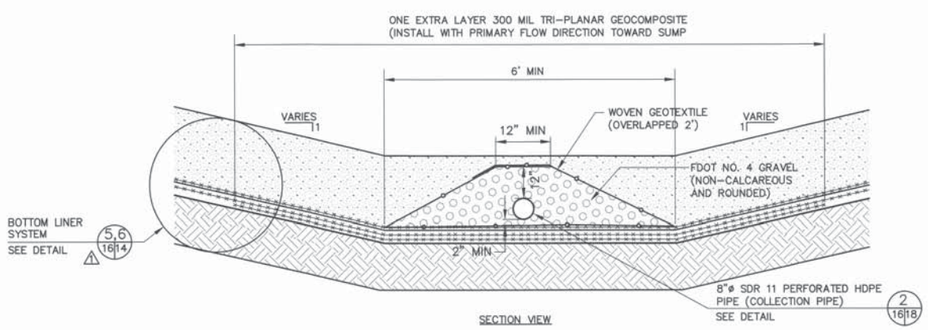


SECTION VIEW

ANCHOR TRENCH DETAIL 2 16

SCALE: 1" = 1'-0"

8,11,16

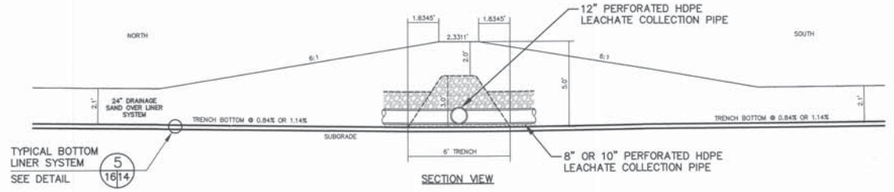


SECTION VIEW

LEACHATE COLLECTION SYSTEM TRENCH DETAIL (TYP.) 6 16

NOT TO SCALE

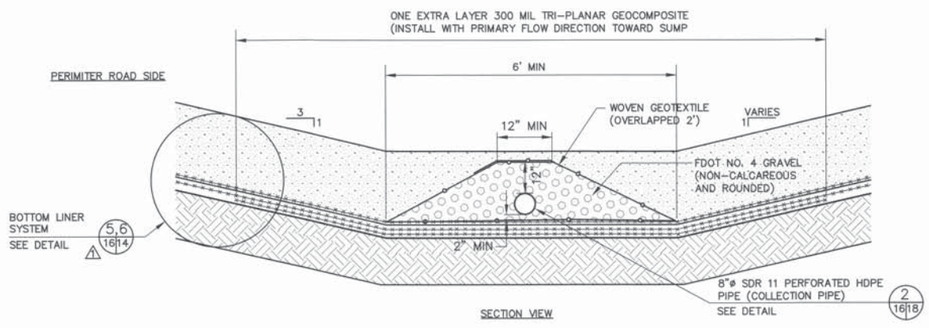
9,11



SECTION VIEW

MAIN LCS HEADER TRENCH AT TRENCH INTERSECTION DETAIL 3 11|16

SCALE: 1" = 4'

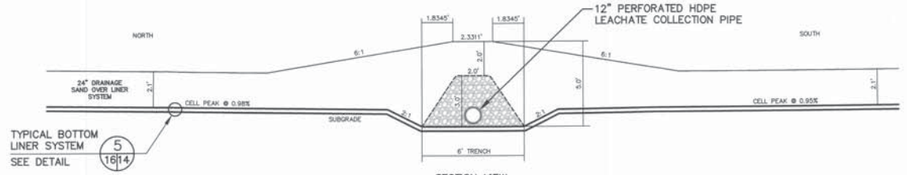


SECTION VIEW

LEACHATE COLLECTION SYSTEM TRENCH ALONG PERIMETER ROAD DETAIL (TYP.) 7 16

NOT TO SCALE

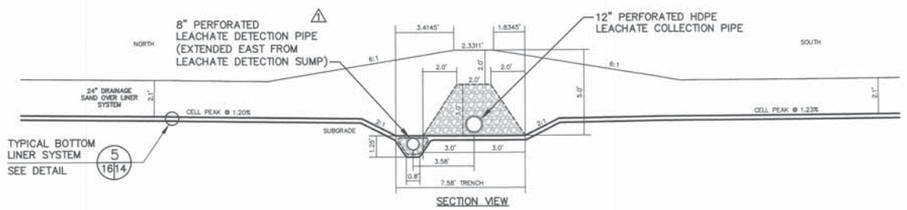
9,11



SECTION VIEW

MAIN LCS HEADER TRENCH AT CELL PEAK DETAIL 4 9|16

SCALE: 1" = 4'



SECTION VIEW

MAIN LCS AND LDS HEADER TRENCH AT CELL PEAK DETAIL 5 9|16

SCALE: 1" = 4'

JAIME R. FISCHER LICENSE NO. 58026 STATE OF FLORIDA PROFESSIONAL ENGINEER
SHANE R. FINNEY, P.E. LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY
1	04/01/13	REVISED PER R.A.I. NO. 1	SRF
2	06/28/13	REVISED PER R.A.I. NO. 2	SRF

DRAWING TITLE: PERIMETER ROAD AND TRENCH DETAILS BOTTOM CELL

PROJECT TITLE: HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

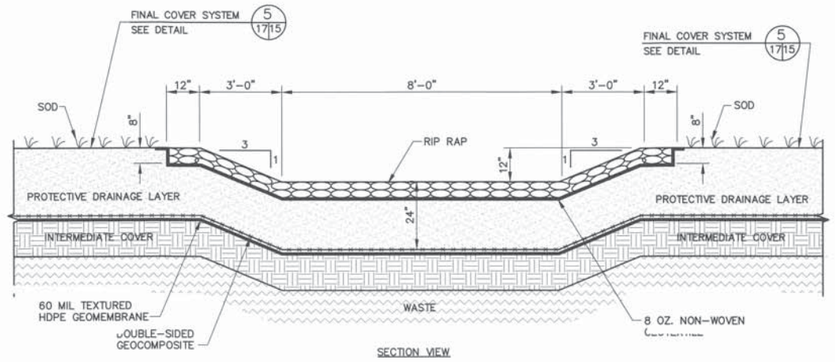
PROJ. NO. 09199033.23 | DSN. BY: SRF | DWN. BY: SDA | CHK. BY: SRF | QA/A RVW BY: CEH | APP. BY: SRF

CADD FILE: 993323SECTIONS1

DATE: APRIL 2013

SCALE: AS SHOWN

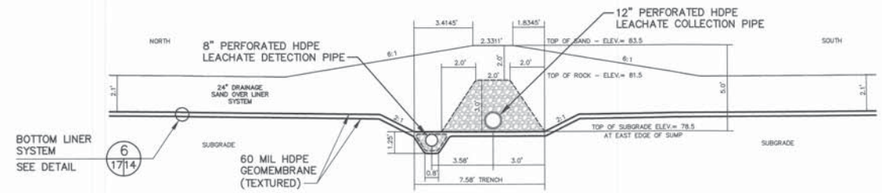
DRAWING NO. 16 of 37



SECTION VIEW

EXISTING PHASE I TEMPORARY STORMWATER FLUME DETAIL 1 | 8 | 17

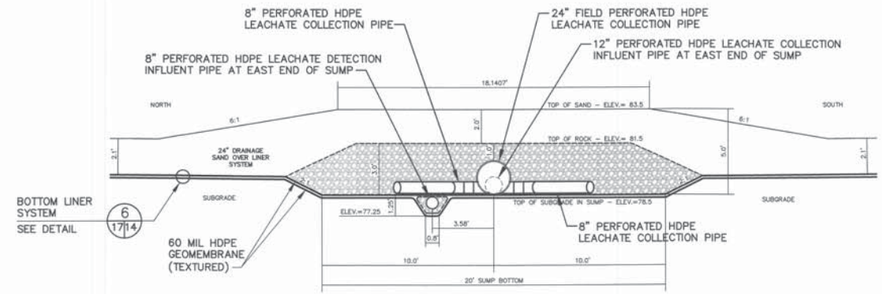
SCALE: 1" = 2'-0"



SUMP MOUND AND COLLECTION TRENCH AT EAST SUMP ENTRANCE

SECTION A | 18 | 17 ⚠

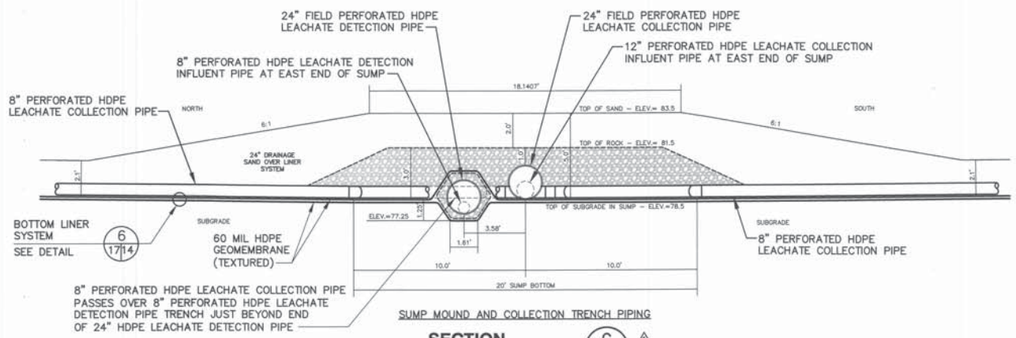
SCALE: 1" = 4'



SUMP MOUND AND COLLECTION TRENCH PIPING

SECTION B | 18 | 17 ⚠

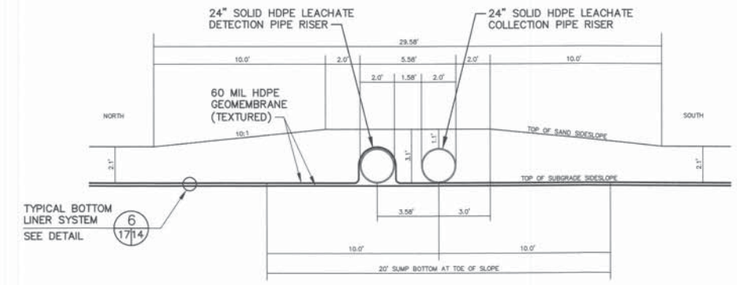
SCALE: 1" = 4'



SUMP MOUND AND COLLECTION TRENCH PIPING

SECTION C | 18 | 17 ⚠

SCALE: 1" = 4'



SIDESLOPE RISER MOUND AND PIPING

SECTION D | 18 | 17 ⚠

SCALE: 1" = 4'

REV	DATE	DESCRIPTION	BY
⚠	04/01/13	REVISED PER R.A.I. NO. 1	SRF

DRAWING TITLE
SUMP AND SIDESLOPE RISER DETAILS

PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 01190333.23 | DSN. BY: SDA | CHK. BY: SRF | QA/QC BY: CEH | APP. BY: SRF

CADD FILE: 993323SECTIONS1

DATE: APRIL 2013

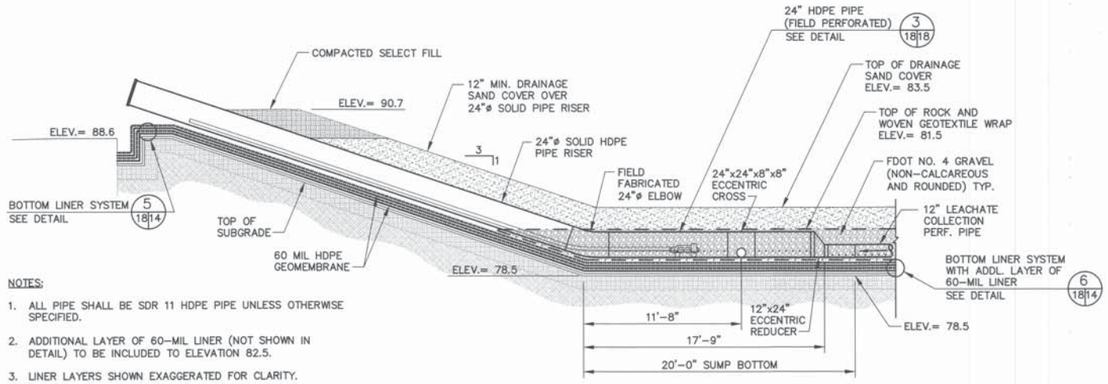
SCALE: AS SHOWN

DRAWING NO.

17 of 37

SHANE R. FISCHER, P.E.
LICENSE NO. 56026
STATE OF FLORIDA
PROFESSIONAL ENGINEER

C:\ARCHIVES\Projects\01190333.23\Construction\993323SECTIONS1.dgn, Jun 28, 2013 – 9:16am, Lionel Alfaro, Sump & Sideslope Riser Details By: 2178dlp

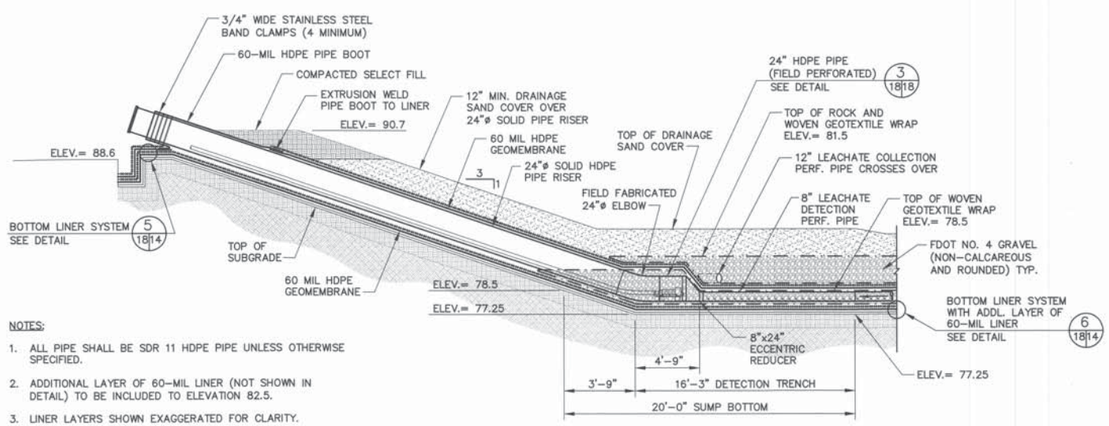


NOTES:

1. ALL PIPE SHALL BE SDR 11 HDPE PIPE UNLESS OTHERWISE SPECIFIED.
2. ADDITIONAL LAYER OF 60-MIL LINER (NOT SHOWN IN DETAIL) TO BE INCLUDED TO ELEVATION 82.5.
3. LINER LAYERS SHOWN EXAGGERATED FOR CLARITY.

LEACHATE COLLECTION PUMPING SECTION (A 18|18)

NOT TO SCALE

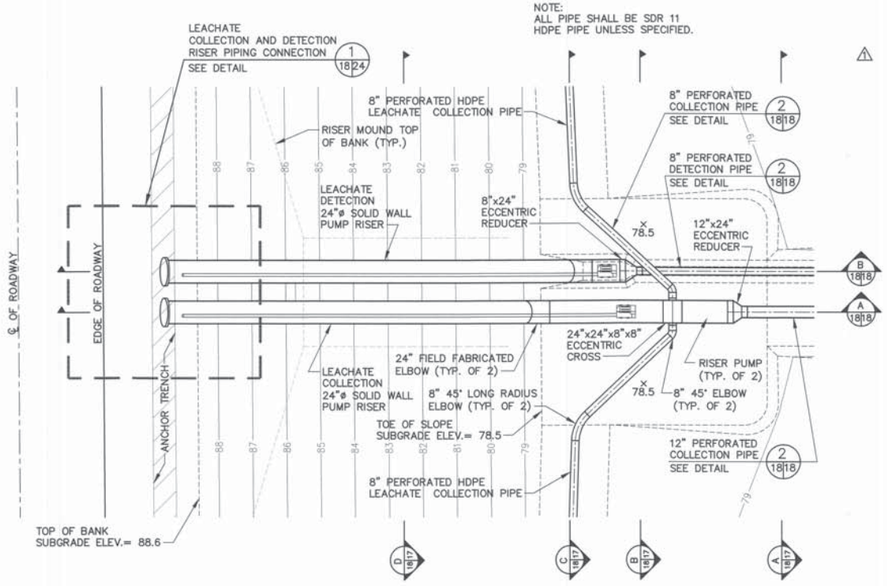


NOTES:

1. ALL PIPE SHALL BE SDR 11 HDPE PIPE UNLESS OTHERWISE SPECIFIED.
2. ADDITIONAL LAYER OF 60-MIL LINER (NOT SHOWN IN DETAIL) TO BE INCLUDED TO ELEVATION 82.5.
3. LINER LAYERS SHOWN EXAGGERATED FOR CLARITY.

LEACHATE DETECTION PUMPING SECTION (B 18|18)

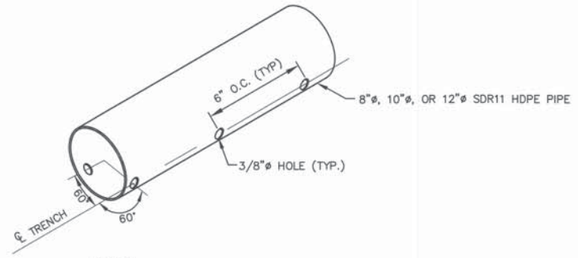
NOT TO SCALE



LEACHATE SUMP AND RISER DETAIL (1 18)

SCALE: 1" = 6'-0"

9,10



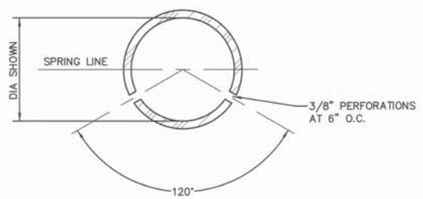
NOTES:

1. CONTRACTOR SHALL PLACE PERFORATED PIPE AS SHOWN (HOLES TOWARDS BOTTOM OF TRENCH).
2. PIPE SHALL HAVE SIX PERFORATIONS FOR EVERY ONE FOOT OF PIPE.

COLLECTION/DETECTION PIPE PERFORATION DETAIL (2 18)

NOT TO SCALE

16,18



FIELD PERF. PIPE DETAIL (3 18|18)

NOT TO SCALE

JAIME R. FISCHER LICENSE NO. 58026 STATE OF FLORIDA PROFESSIONAL ENGINEER
SHANE R. FISCHER, P.E. LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY
1	04/01/13	REVISED PER R.A.I. NO. 1	SRF

DRAWING TITLE: DETAILS - 1

PROJECT TITLE: HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

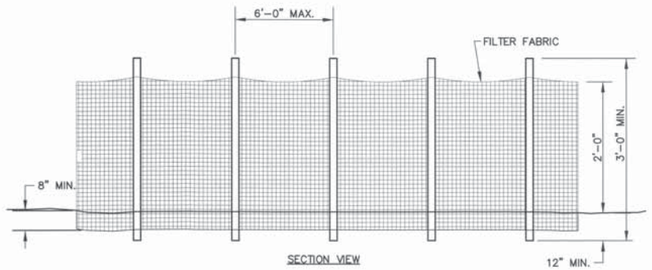
CLIENT: HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

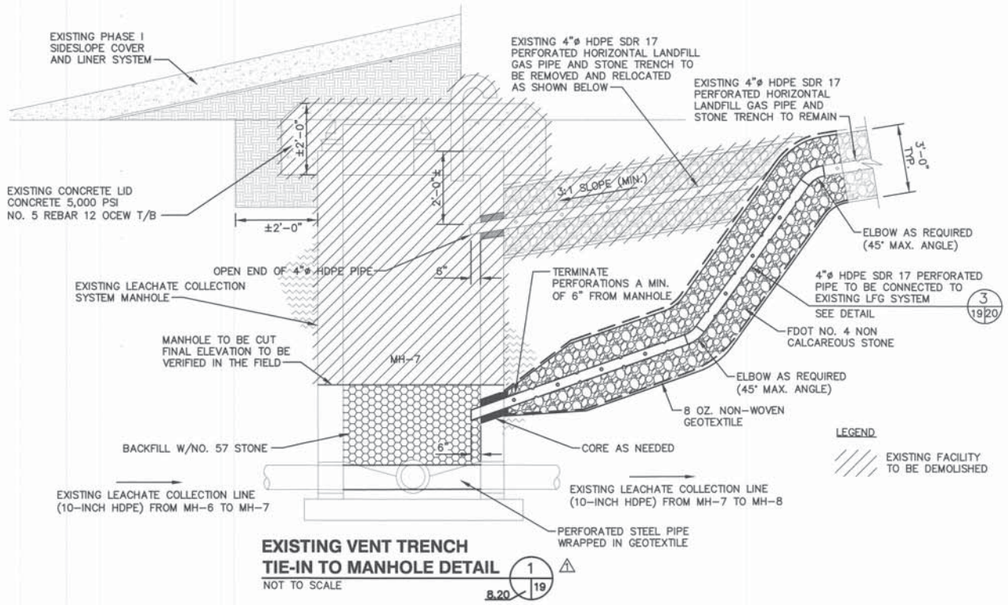
PROJ. NO. 09199033.23
DSN. BY: SRF
DWN. BY: SDA
CHK. BY: SRF
Q/A REVIEW BY: CEH
APP. BY: SRF

CADD FILE: 993323SUMPDETLS1
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO. 18 of 37

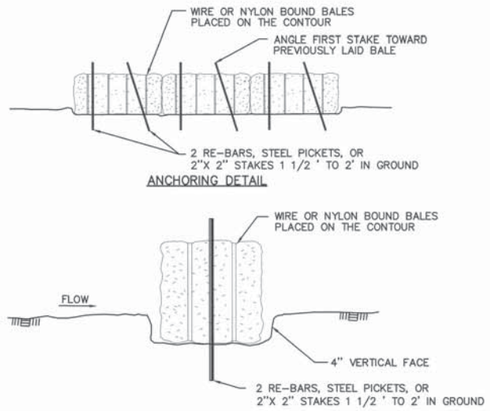
C:\SCS ACCESS\Projects\09199033.23\Construction\993323\SUMPDETLS1.dwg, Jun 28, 2013 - 8:37pm, Layout Name - Layout1, By: JSTiffin



TYPE III FDOT
SILT FENCE BARRIER DETAIL (4 / 7 | 19)
NOT TO SCALE



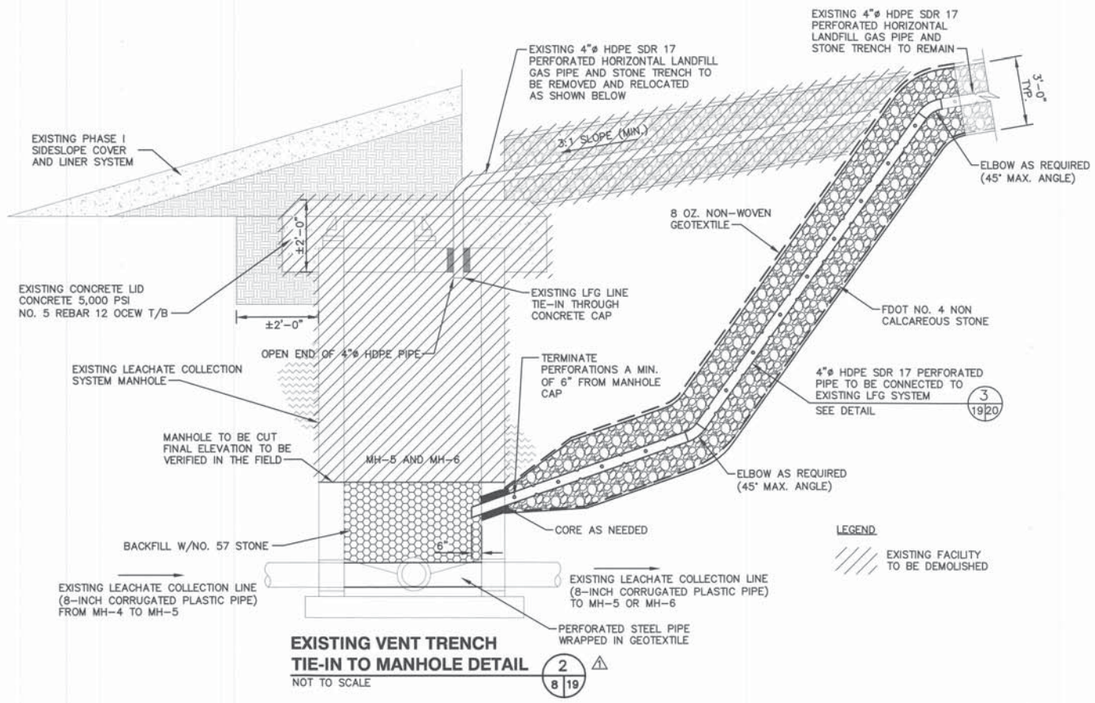
EXISTING VENT TRENCH
TIE-IN TO MANHOLE DETAIL (1 / 8.20 | 19) ⚠
NOT TO SCALE



NOTES:

1. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF FOUR INCHES.
2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY 3/8 INCH REBAR STAKES DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
3. INSPECTION SHALL BE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
4. WHEN SILT REACHES A DEPTH OF 6 INCHES, IT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AS TO NOT CREATE A SILTATION PROBLEM.
5. AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE BALE AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED SPOIL DISPOSAL SITE.

HAY BALE BARRIER DETAIL (5 / 7 | 19)
NOT TO SCALE



EXISTING VENT TRENCH
TIE-IN TO MANHOLE DETAIL (2 / 8 | 19) ⚠
NOT TO SCALE

JAIME R. FISCHER LICENSE No. 54828 STATE OF FLORIDA PROFESSIONAL ENGINEER
SHANE A. MAYNARD, P.E. LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY
1	04/01/13	REVISED PER R.A.I. NO. 1	SRF

DRAWING TITLE: **DETAILS - 2**

PROJECT TITLE: **HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS**

CLIENT: **HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

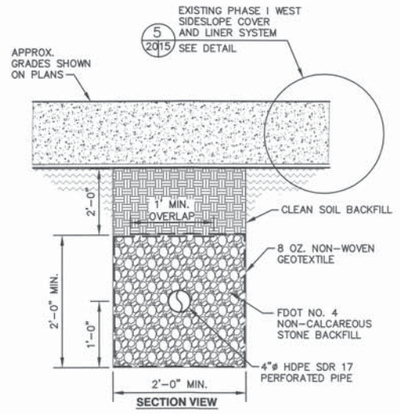
PROJ. NO. 0993323.23 | DSN. BY: SDA | CHK. BY: SRF | O/A ROW DEPT. APP. BY: SRF | DSR. BY: SRF

CADD FILE: 993323LFGDETL1

DATE: APRIL 2013

SCALE: AS SHOWN

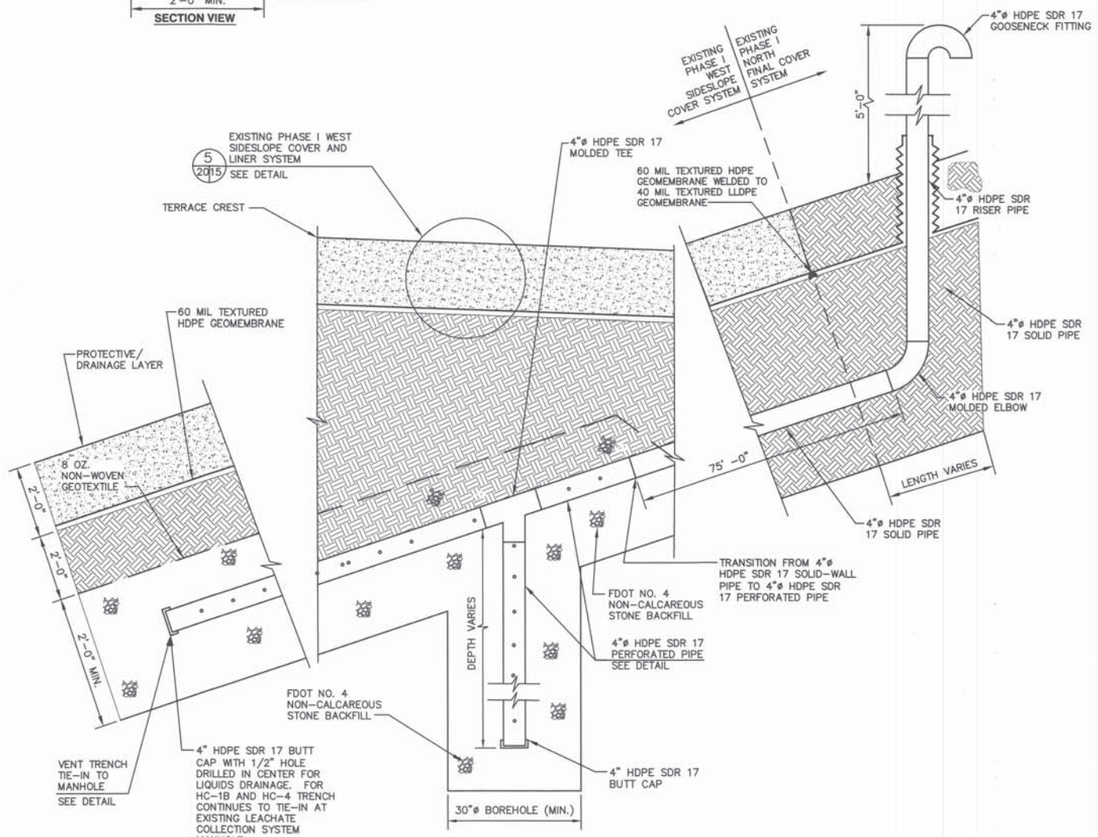
DRAWING NO. **19** of 37



SECTION VIEW

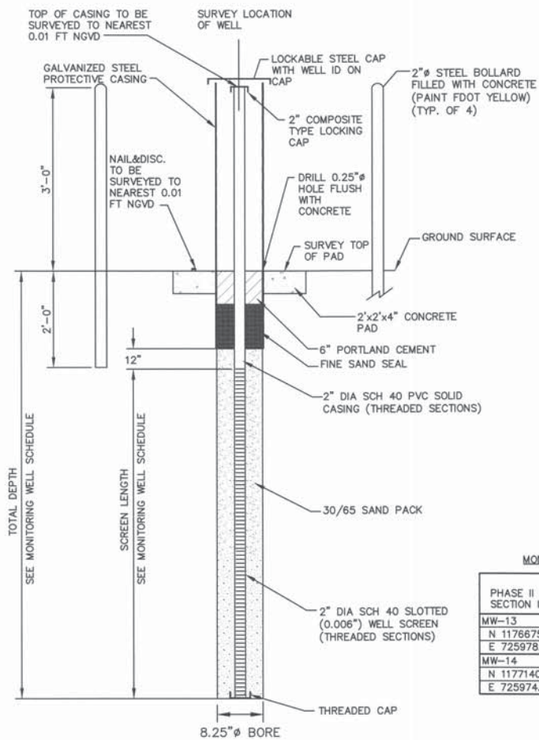
LANDFILL GAS MONITORING PROBE SCHEDULE

Probe ID	Northing	Easting	Approx. Ground Surface	Well Depth	Slotted Pipe Length	Solid Pipe Length Below Grade	Solid Pipe Length Above Grade
GP-3R	1177624.46	726157.43	85.0	7.56	7.05	2.5	3
GP-4R	1177308.20	725945.51	83.8	8.54	5.85	2.5	3
GP-5R	1177004.63	725946.99	85.5	9.54	7.55	2.5	3
GP-6R	1176702.21	725946.53	85.0	9.92	7.92	2.5	3
GP-7R	1176402.21	725946.53	84.4	9.42	6.52	2.5	3
GP-8R	1176099.87	725949.54	83.7	10.59	5.82	2.5	3



EXISTING HORIZONTAL LANDFILL GAS VENT TRENCH DETAIL (TYP.) 3/8|20

NOT TO SCALE

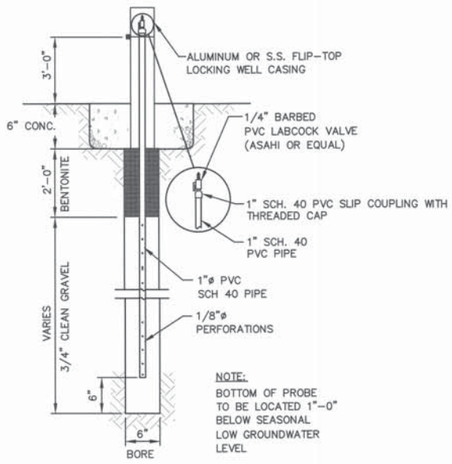


MONITORING WELL SCHEDULE

PHASE II SECTION II	GROUND ELEV. (FT NGVD)	TOTAL DEPTH (FT BLS)	SCREEN LENGTH (FT)
MW-13	85.9	17.0	15.0
N 1176675.10			
E 725978.03			
MW-14	86.0	17.0	15.0
N 1177140.10			
E 725974.39			

TYPICAL MONITORING WELL DETAIL 1/4,8,9|20

NOT TO SCALE



LANDFILL GAS MONITORING PROBE (GP) DETAIL 2/4,8,9|20

NOT TO SCALE

JOSEPH H. FISCHER LICENSED PROFESSIONAL ENGINEER STATE OF FLORIDA
SHANNON R. FISCHER, P.E. LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY
1	06/28/13	REVISED PER R.A.I. NO. 2	SRF

DRAWING TITLE: DETAILS - 3

PROJECT TITLE: HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD, SUITE 160, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

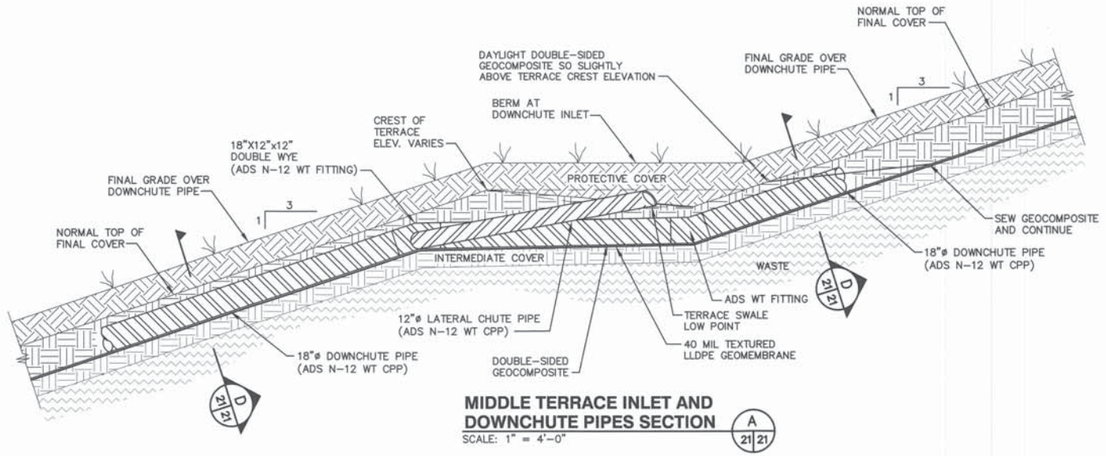
PROJ. NO. 09199033.23 | DWN. BY: SDA | Q/A R/W BY: CEH | DSNR. BY: SRF | CHK. BY: SRF | APP. BY: SRF

CADD FILE: 993323LFGDETL1

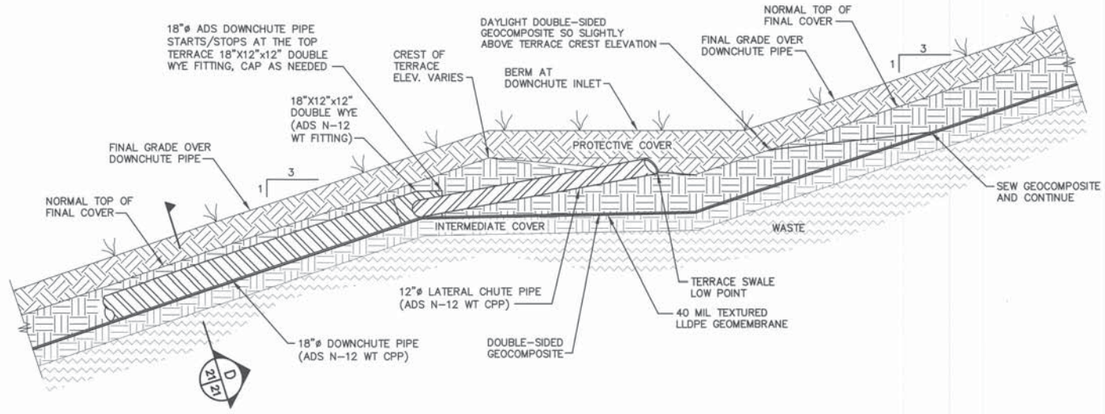
DATE: APRIL 2013

SCALE: AS SHOWN

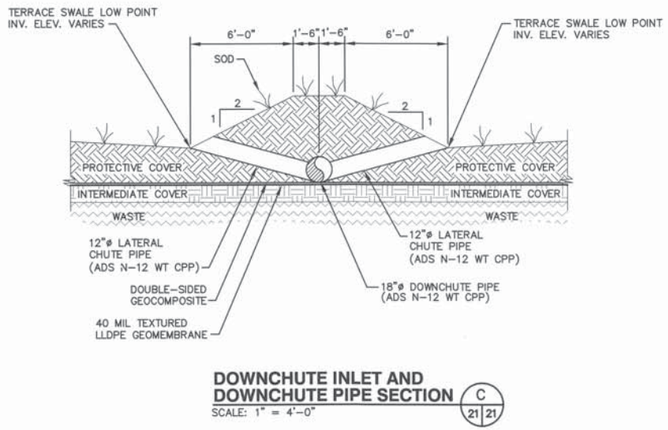
DRAWING NO. 20 of 37



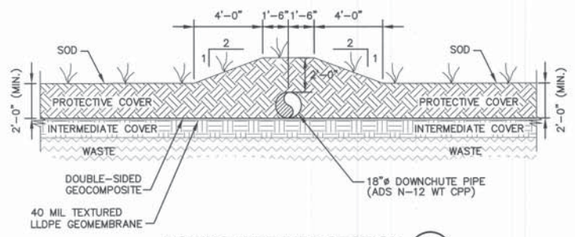
MIDDLE TERRACE INLET AND DOWNCHUTE PIPES SECTION A 21 21
SCALE: 1" = 4'-0"



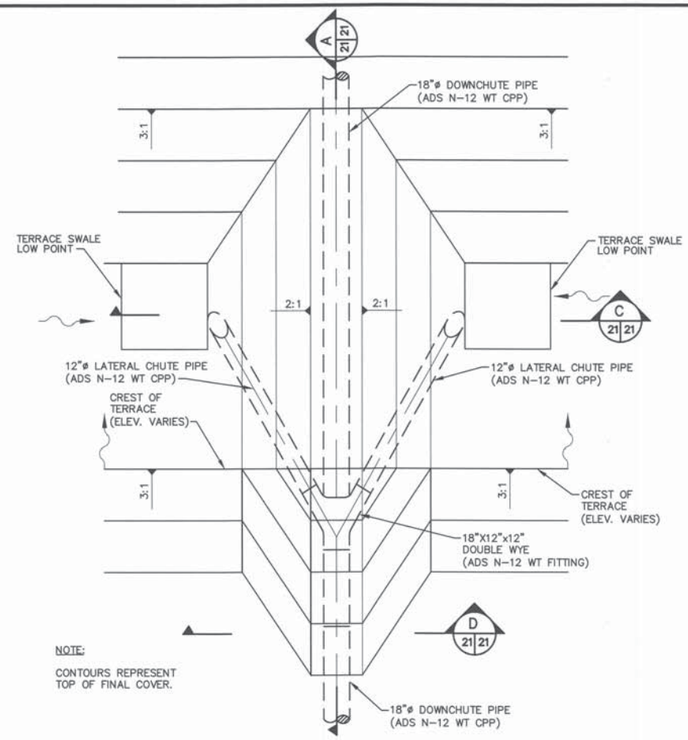
TOP TERRACE INLET AND DOWNCHUTE PIPES SECTION B 21 21
SCALE: 1" = 4'-0"



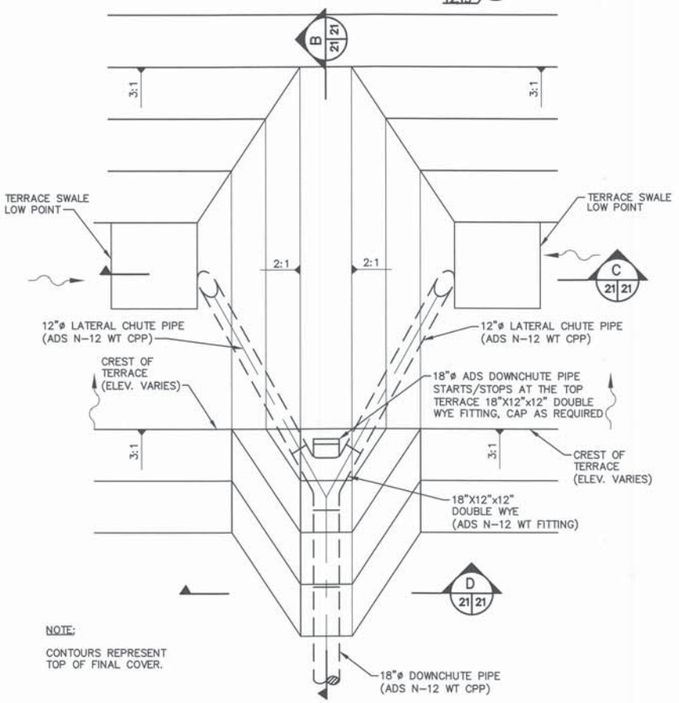
DOWNCHUTE INLET AND DOWNCHUTE PIPE SECTION C 21 21
SCALE: 1" = 4'-0"



DOWNCHUTE PIPE SECTION D 21 21
SCALE: 1" = 4'-0"



MIDDLE TERRACE INLET AND DOWNCHUTE PIPES DETAIL 1 21
SCALE: 1" = 4'-0"
12.13



TOP TERRACE INLET AND DOWNCHUTE PIPES DETAIL 2 21
SCALE: 1" = 4'-0"
12.13

JEROME R. FISCHER LICENSE STATE OF FLORIDA PROFESSIONAL ENGINEER
SIGNATURE AND P.E. LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY

DRAWING TITLE: DETAILS - 4

PROJECT TITLE: HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD, SUITE 150, TAMPA, FL 33610
813 621-0080 FAX 813 623-5757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

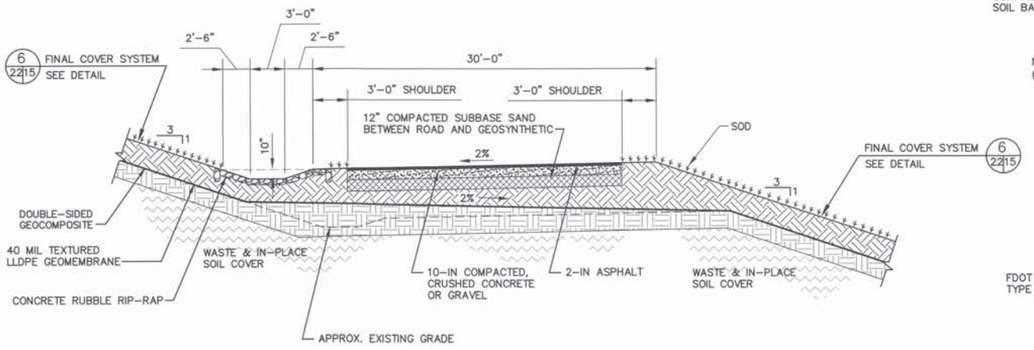
PROJ. NO. 09199033.23 | DWN. BY: SDA | Q/A REVIEW BY: CEH
DSN. BY: SRF | CHK. BY: SRF | APP. BY: SRF

CADD FILE: 993323DETAILS2

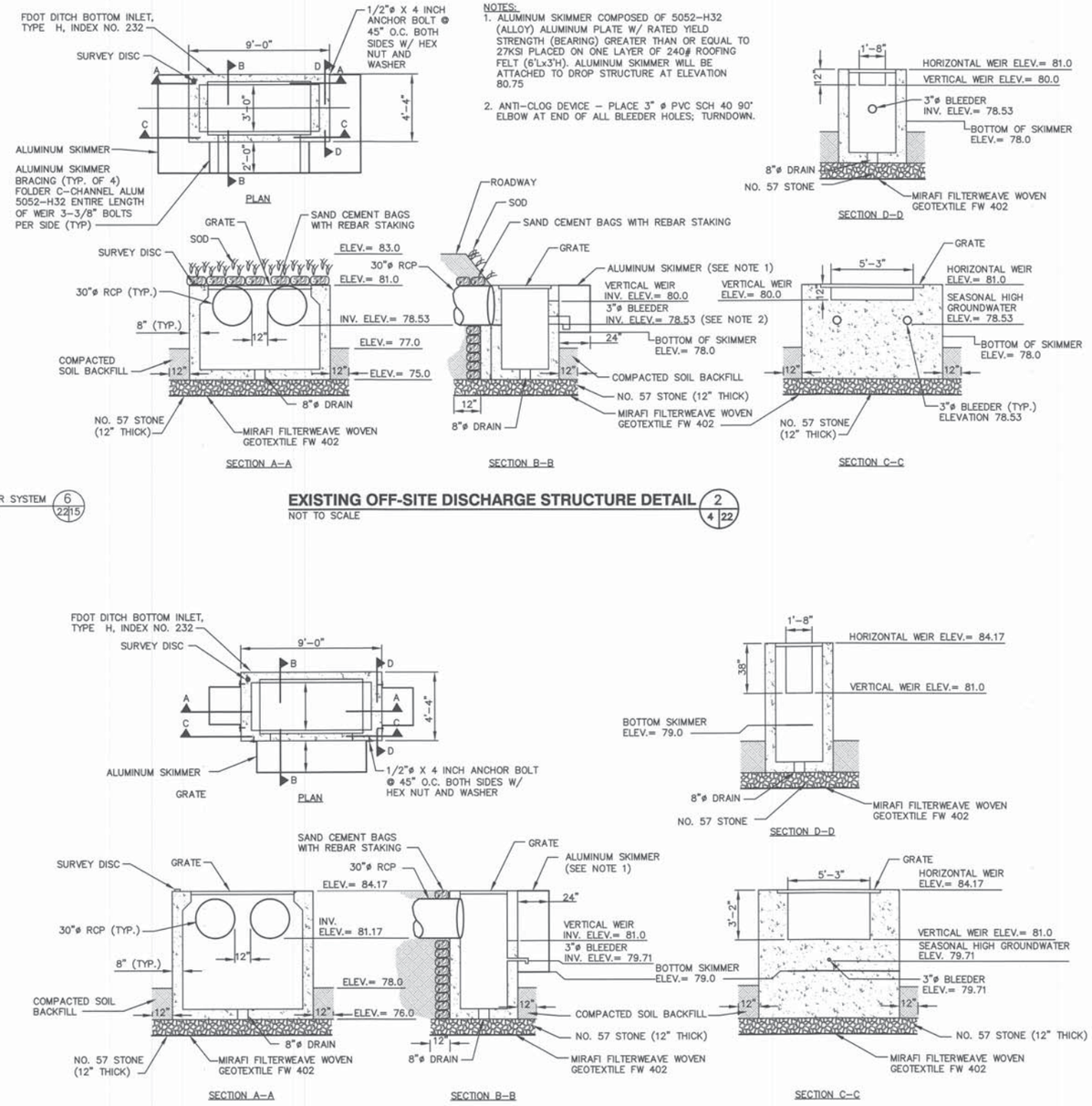
DATE: APRIL 2013

SCALE: AS SHOWN

DRAWING NO. 21 of 37



EXISTING PHASE I PERMANENT ACCESS RAMP DETAIL 3 / 10 22
SCALE: 1" = 6'



EXISTING OFF-SITE DISCHARGE STRUCTURE DETAIL 2 / 4 22
NOT TO SCALE

DROP STRUCTURE SCHEDULE											
Location	Discharge Pipe Invert	Discharge Pipe Diameter (Inches)	No. of Discharge Pipes	horizontal Weir Invert	Horizontal Weir Dimensions	Vertical Weir Invert	Vertical Weir Dimensions	No. of Vertical Weirs	Bleeder Elevation	Bleeder Diameter (Inches)	No. of Bleeders
Primary Pond	81.17	30	2	84.17	79"x36"	81	63"x38"	1	79.71	3	1
						81	20"x38"	2			
Borrow Pit	78.53	30	2	81.00	79"x36"	80	63"x12"	1	78.53	3	4
						80	20"x12"				

THE DROP STRUCTURES ARE FDOT DITCH BOTTOM INLETS, TYPE H, INDEX NO. 232

EXISTING WETLAND DISCHARGE STRUCTURE DETAIL 1 / 4 22
NOT TO SCALE

JAMES R. FISCHER LICENSE STATE OF FLORIDA PROFESSIONAL ENGINEER
SHANNON R. MAHAR, P.E.
LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY

DRAWING TITLE: DETAILS - 5

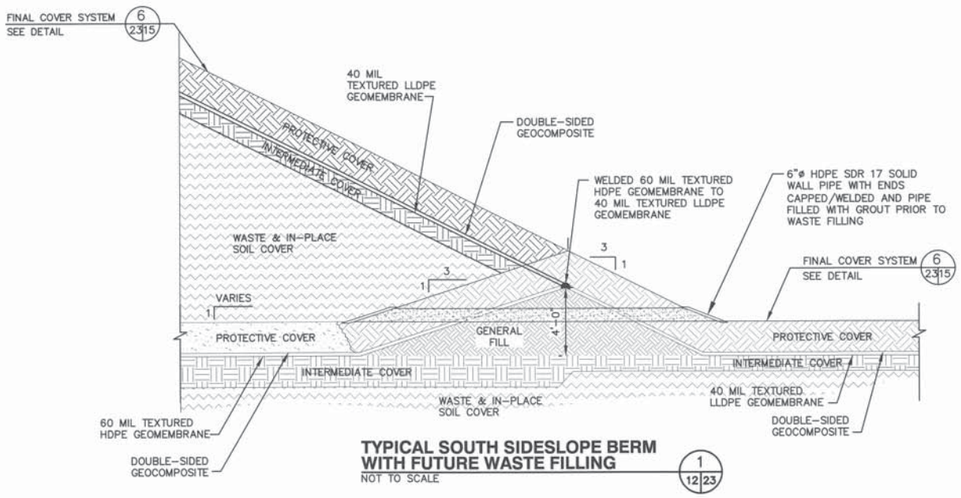
PROJECT TITLE: HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-0757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

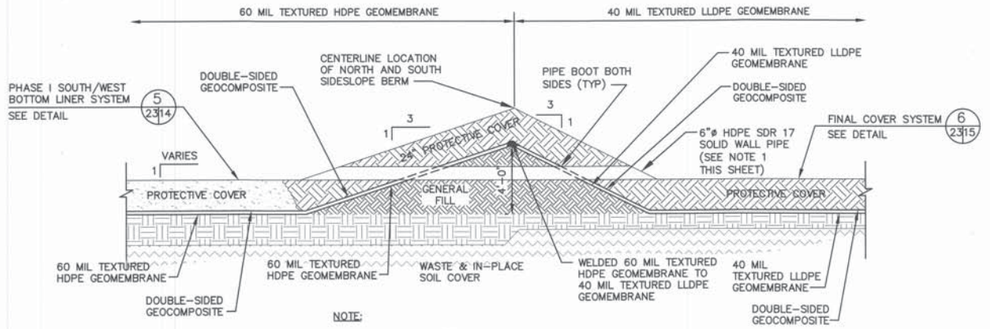
PROJ. NO. 09199033.23
DWN. BY: SDA
CHK. BY: SRF
QA/A RVW BY: CEH
APP. BY: SRF

CADD FILE: 993323DETAILS5
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO. 22 of 37



TYPICAL SOUTH SIDESLOPE BERM WITH FUTURE WASTE FILLING 1 12 23

NOT TO SCALE

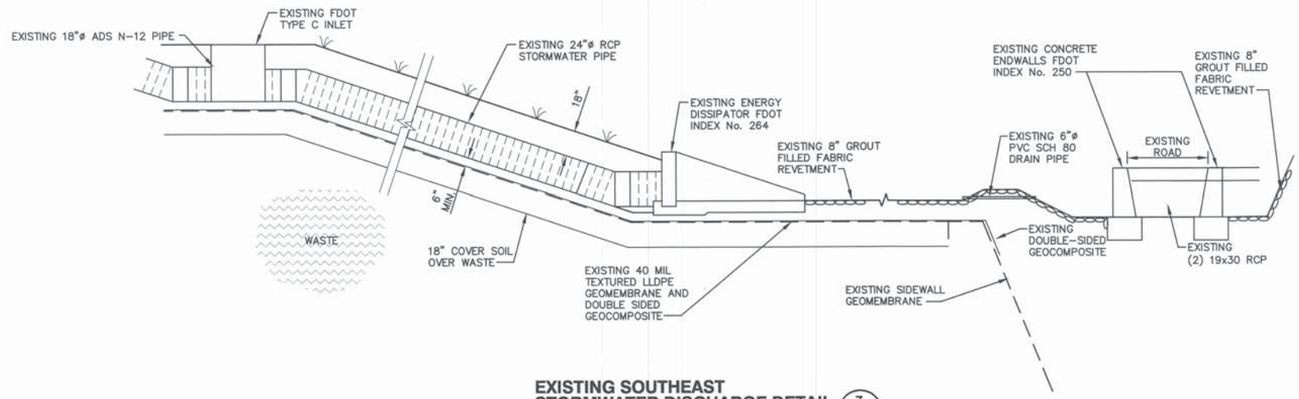


NOTE:

1. THE TEMPORARY 6"ø HDPE SDR 17 SOLID WALL PIPE AND PIPE BOOTS SHOWN ON DETAILS 1 AND 2 OF THIS SHEET ARE ONLY LOCATED THROUGH THE SOUTH SIDESLOPE BERMS.

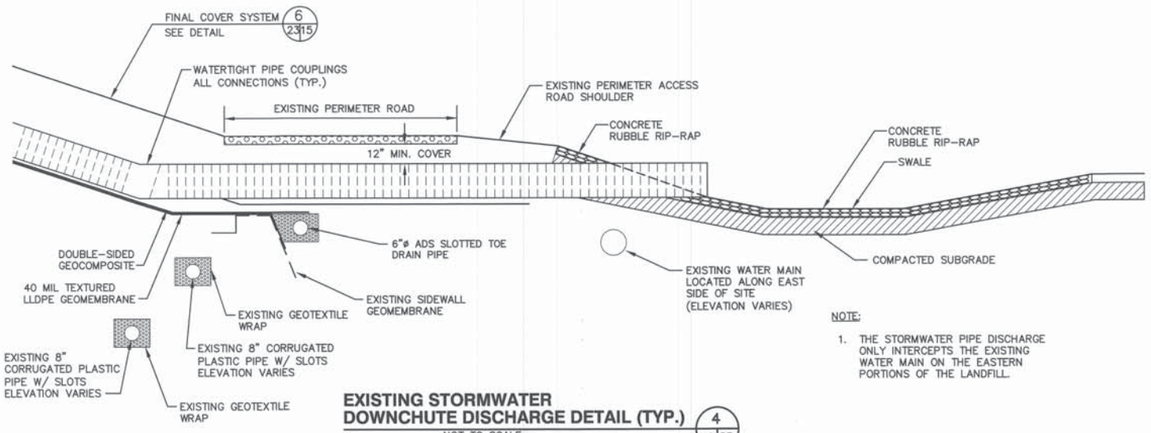
TYPICAL NORTH AND SOUTH SIDESLOPE BERM 2 7 23

NOT TO SCALE



EXISTING SOUTHEAST STORMWATER DISCHARGE DETAIL 3 12 23

NOT TO SCALE



NOTE:

1. THE STORMWATER PIPE DISCHARGE ONLY INTERCEPTS THE EXISTING WATER MAIN ON THE EASTERN PORTIONS OF THE LANDFILL.

EXISTING STORMWATER DOWNCHUTE DISCHARGE DETAIL (TYP.) 4 12 23

NOT TO SCALE

JAIME R. FISCHER LICENSE NO. 58026 STATE OF FLORIDA PROFESSIONAL ENGINEER
SIGNED / PRINTED P.E. LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY

DRAWING TITLE: DETAILS - 5

PROJECT TITLE: HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
401 PARK OAKS BLVD, SUITE 150, TAMPA, FL 33610
813 621-0080 FAX 813 623-5757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

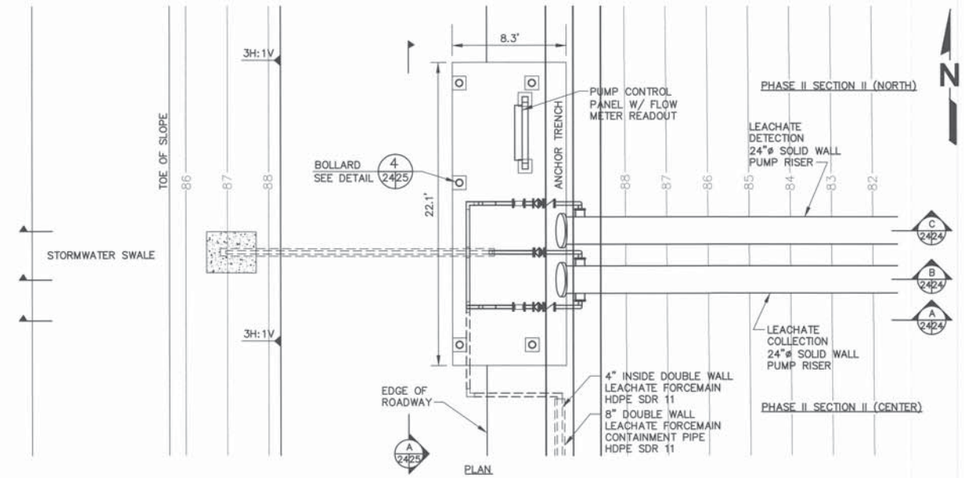
PROJ. NO. 09199033.23 | DWN. BY: SDA | QA/A RVW BY: CEH
DSN. BY: SRF | CHK. BY: SRF | APP. BY: SRF

CADD FILE: 993323DETAILS5

DATE: APRIL 2013

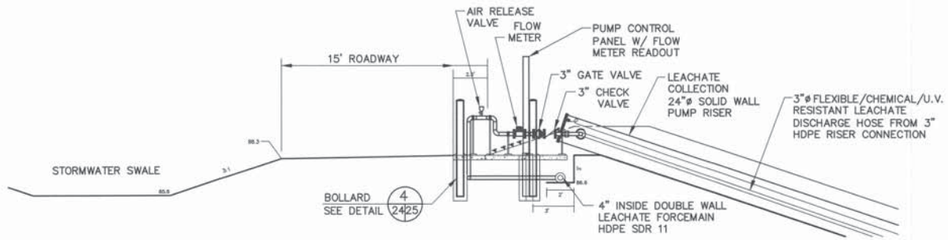
SCALE: AS SHOWN

DRAWING NO. 23 of 37



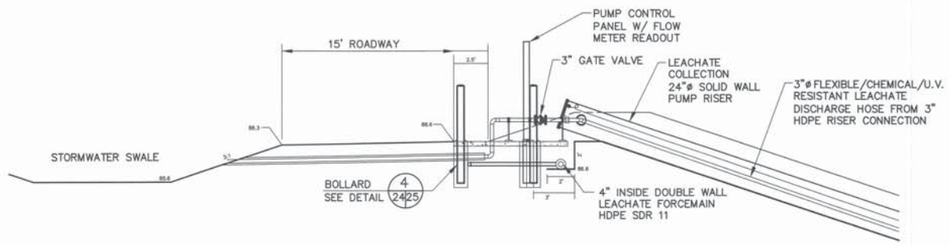
LEACHATE COLLECTION AND DETECTION RISER PIPING CONNECTION DETAIL 1 9,18 24

SCALE: 1" = 5'



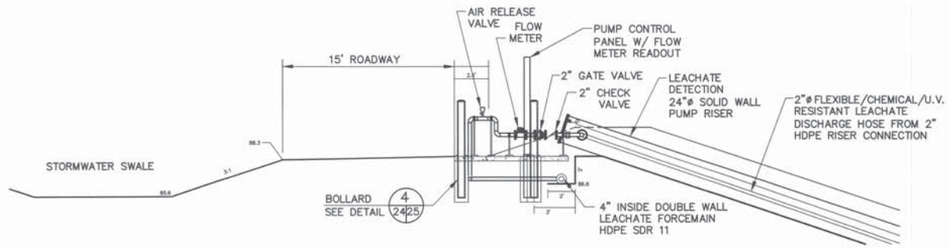
LEACHATE COLLECTION RISER PIPE CONNECTION SECTION A 24 24

SCALE: 1" = 5'



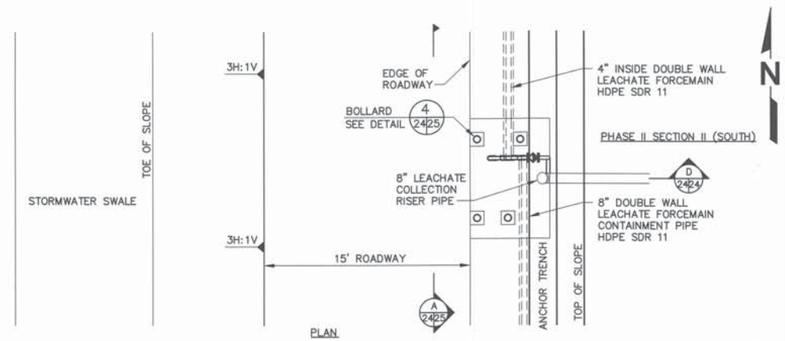
LEACHATE COLLECTION RISER PIPE STORMWATER BY-PASS CONNECTION SECTION B 24 24

SCALE: 1" = 5'



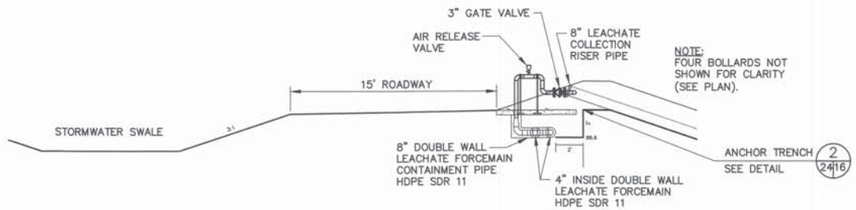
LEACHATE DETECTION RISER PIPE CONNECTION SECTION C 24 24

SCALE: 1" = 5'



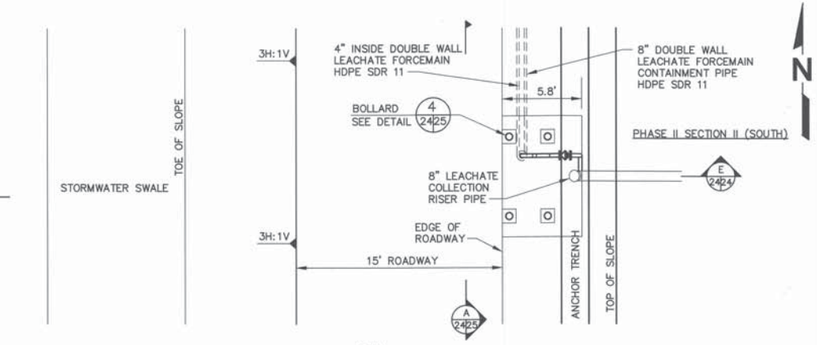
NORTH AND MIDDLE LEACHATE COLLECTION CLEAN-OUT RISER CONNECTION DETAIL 2 9 24

SCALE: 1" = 5'



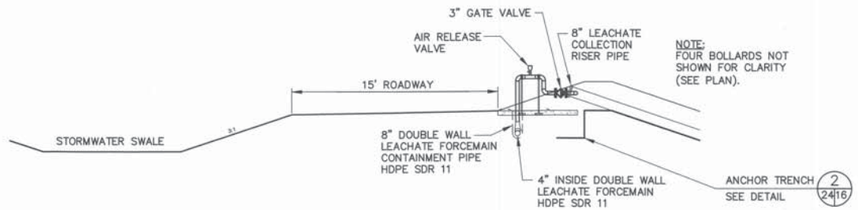
NORTH AND MIDDLE LEACHATE COLLECTION CLEAN-OUT RISER CONNECTION SECTION D 24 24

SCALE: 1" = 5'



SOUTH LEACHATE COLLECTION CLEAN-OUT RISER CONNECTION DETAIL 3 9 24

SCALE: 1" = 5'



SOUTH LEACHATE COLLECTION CLEAN-OUT RISER CONNECTION SECTION E 24 24

SCALE: 1" = 5'

JAIME H. FISCHER LICENSE NUMBER 58026 STATE OF FLORIDA PROFESSIONAL ENGINEER
SIGNATURE, P.E.
LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY

DRAWING TITLE: **DETAILS - 7**

PROJECT TITLE: **HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS**

CLIENT: **HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

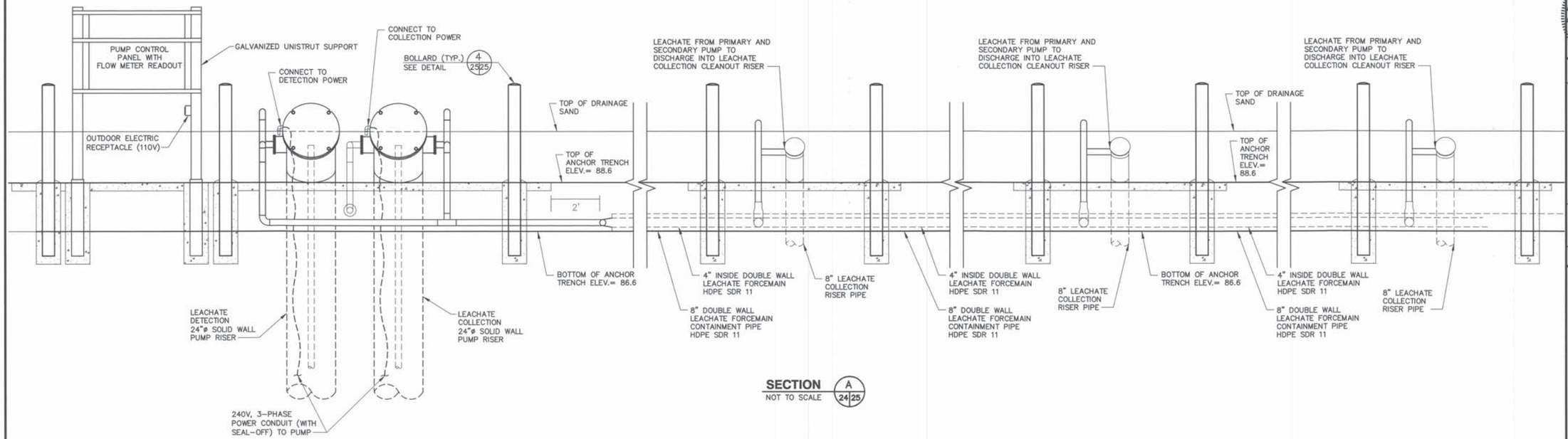
PROJ. NO: 09199033.23 | DWN. BY: SDA | CK'D BY: SRF | QA/QC REVIEW BY: CEH | APP'D BY: SRF

CADD FILE: 993323SUMPDETLS2

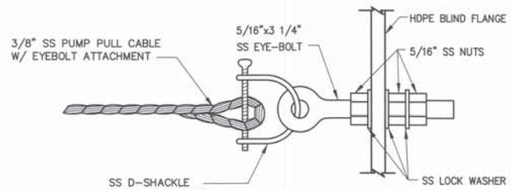
DATE: APRIL 2013

SCALE: AS SHOWN

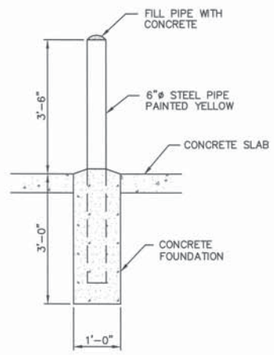
DRAWING NO.: **24** of **37**



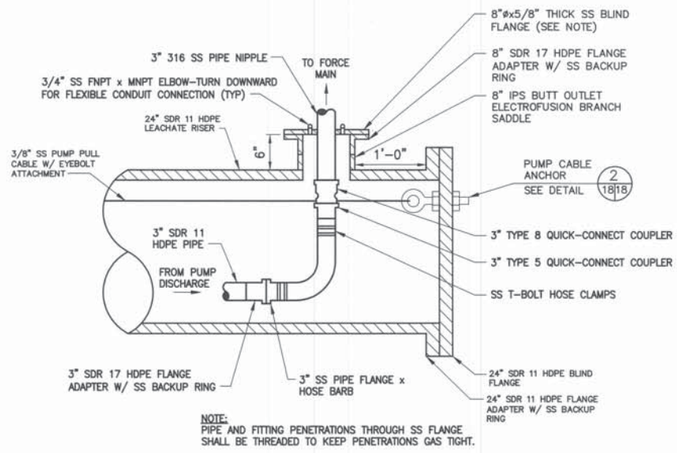
SECTION A 24/25
NOT TO SCALE



PUMP ANCHOR DETAIL 1/18/18
NOT TO SCALE

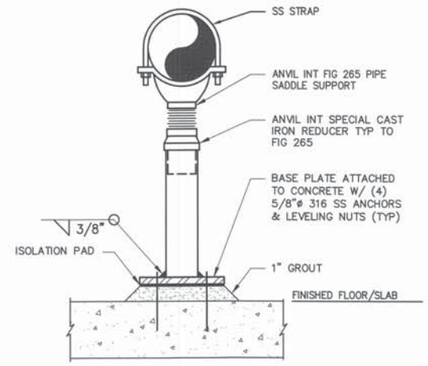


BOLLARD DETAIL 4/24,25/25
NOT TO SCALE



NOTE:
PIPE AND FITTING PENETRATIONS THROUGH SS FLANGE SHALL BE THREADED TO KEEP PENETRATIONS GAS TIGHT.

RISER DISCHARGE DETAIL 3/18/18
NOT TO SCALE



PIPE SUPPORT DETAIL 2/18/18
NOT TO SCALE

JANE R. HISCHEMOLLER
LICENSE NO. 58026
STATE OF FLORIDA
PROFESSIONAL ENGINEER
SHEET NUMBER

REV	DATE	DESCRIPTION	BY

DRAWING TITLE: DETAILS - 8

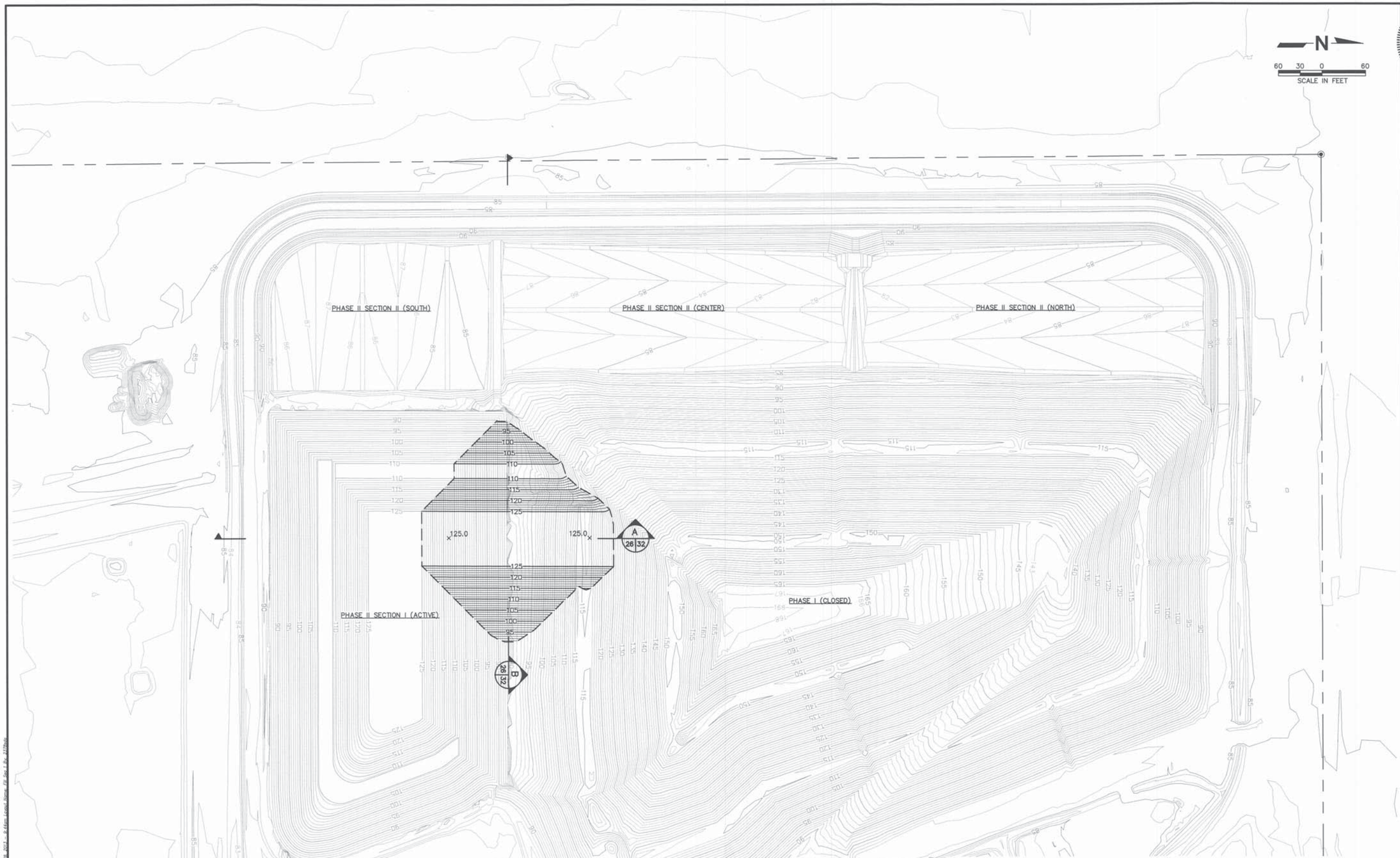
PROJECT TITLE:
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT:
HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-0757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO.	DWN. BY:	D/A RVW BY:	JOB# BY:
09199033.23	SDA	CEH	SRF
DSN. BY: SRF	CHK. BY: SRF		

CADD FILE: 993323SUMPDETLS2
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO.
25 of 37



LEGEND

- EXISTING GRADE – 5 FOOT ELEVATION CONTOUR FROM APRIL 2012 TOPOGRAPHIC SURVEY AND PREVIOUSLY CONSTRUCTED FILL SEQUENCE
- EXISTING GRADE – 1 FOOT ELEVATION CONTOUR FROM APRIL 2012 TOPOGRAPHIC SURVEY AND PREVIOUSLY CONSTRUCTED FILL SEQUENCE
- EXISTING PROPERTY LINE/BOUNDARY (CHASTAIN SKILLMAN SURVEY)
- TOP OF WASTE GRADE 5 FOOT ELEVATION CONTOUR
- TOP OF WASTE GRADE 1 FOOT ELEVATION CONTOUR
- TOP OF WASTE GRADE SPOT ELEVATION
- LIMIT OF WASTE AND FILL SEQUENCE

JAMES R. FISCHER — LICENSE NO. 58026 — STATE OF FLORIDA — PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION	BY

DRAWING TITLE
PHASE II SECTION I FILL SEQUENCE NO. 1 PLAN

PROJECT TITLE
HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-0757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

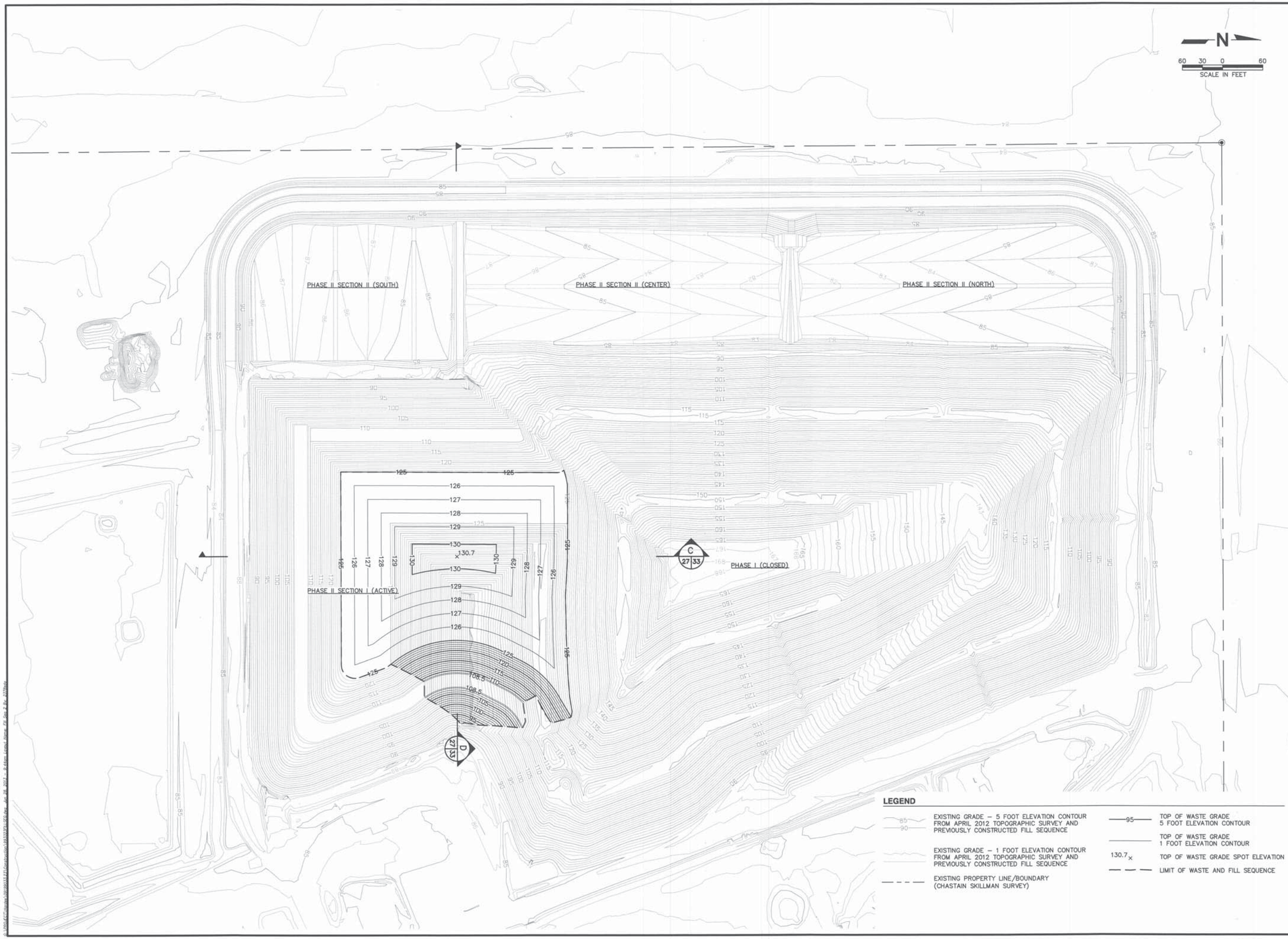
PROJ. NO.	DWN. BY	Q/A RVW. BY	
09199033.23	SDA	CEH	
DSK. BY	CHK. BY	APP. BY	
SRF	SRF	SRF	

CADD FILE: 993323FILLSEQ

DATE: APRIL 2013

SCALE: AS SHOWN

DRAWING NO.
26 of **37**



JAMES R. FISCHER LICENSE NO. 58026 STATE OF FLORIDA PROFESSIONAL ENGINEER

SIGNATURE, P.E.

REV	DATE	DESCRIPTION	BY

DRAWING TITLE
PHASE II SECTION I FILL SEQUENCE NO. 2 PLAN

PROJECT TITLE
HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.23 | DWN. BY: SDA | CHK. BY: SRF | QA/A RVW BY: CEH | APP. BY: SRF

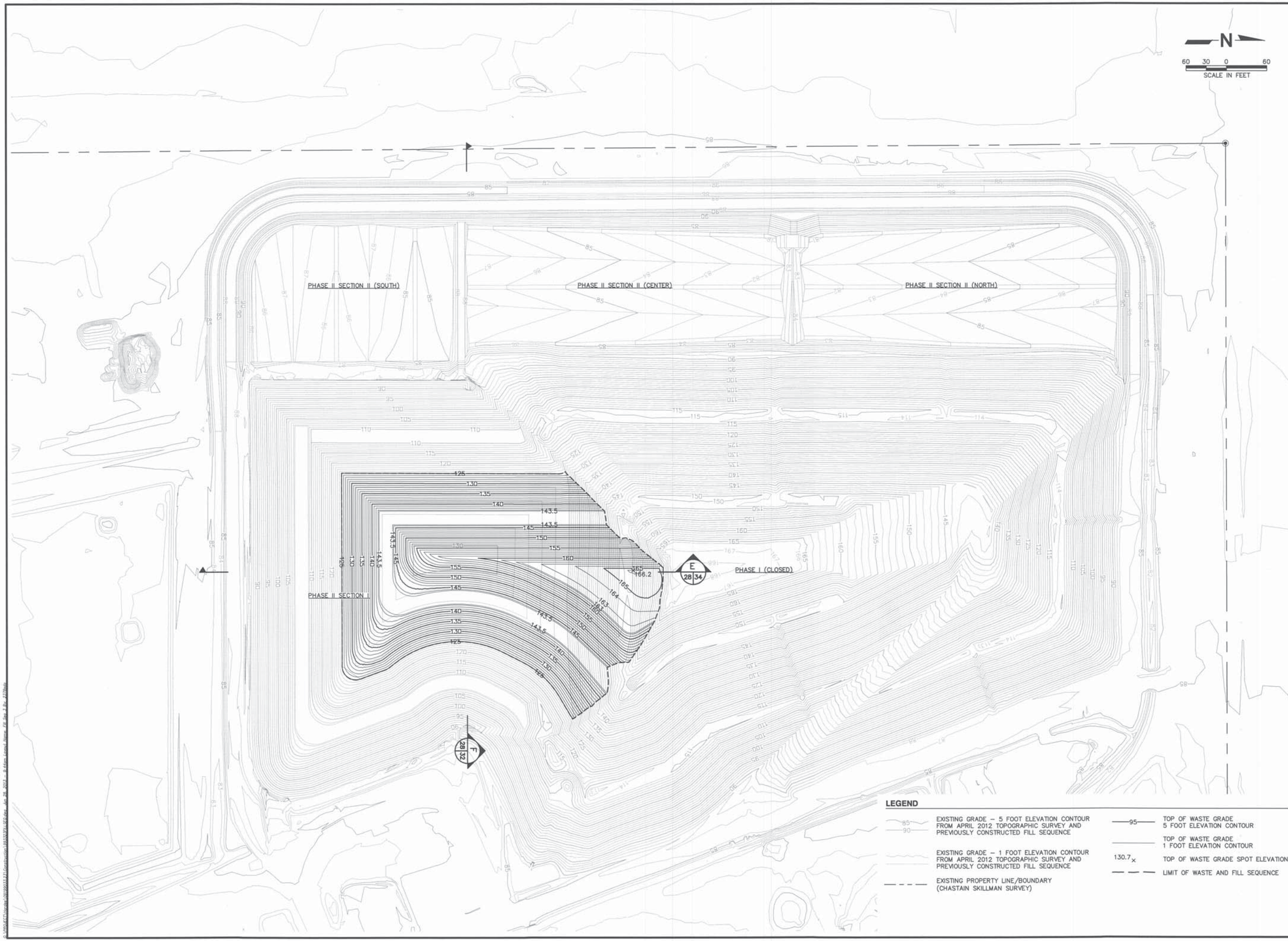
CADD FILE: 993323FILLSEQ

DATE: APRIL 2013

SCALE: AS SHOWN

DRAWING NO.

27 of 37



LEGEND

85 / 90	EXISTING GRADE – 5 FOOT ELEVATION CONTOUR FROM APRIL 2012 TOPOGRAPHIC SURVEY AND PREVIOUSLY CONSTRUCTED FILL SEQUENCE
	EXISTING GRADE – 1 FOOT ELEVATION CONTOUR FROM APRIL 2012 TOPOGRAPHIC SURVEY AND PREVIOUSLY CONSTRUCTED FILL SEQUENCE
	EXISTING PROPERTY LINE/BOUNDARY (CHASTAIN SKILLMAN SURVEY)
95	TOP OF WASTE GRADE 5 FOOT ELEVATION CONTOUR
	TOP OF WASTE GRADE 1 FOOT ELEVATION CONTOUR
130.7 ×	TOP OF WASTE GRADE SPOT ELEVATION
	LIMIT OF WASTE AND FILL SEQUENCE

SHANE R. FISCHER LICENSE STATE OF FLORIDA PROFESSIONAL ENGINEER
SHANE R. FISCHER, P.E.
LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY

DRAWING TITLE
PHASE II SECTION I FILL SEQUENCE NO. 3 PLAN

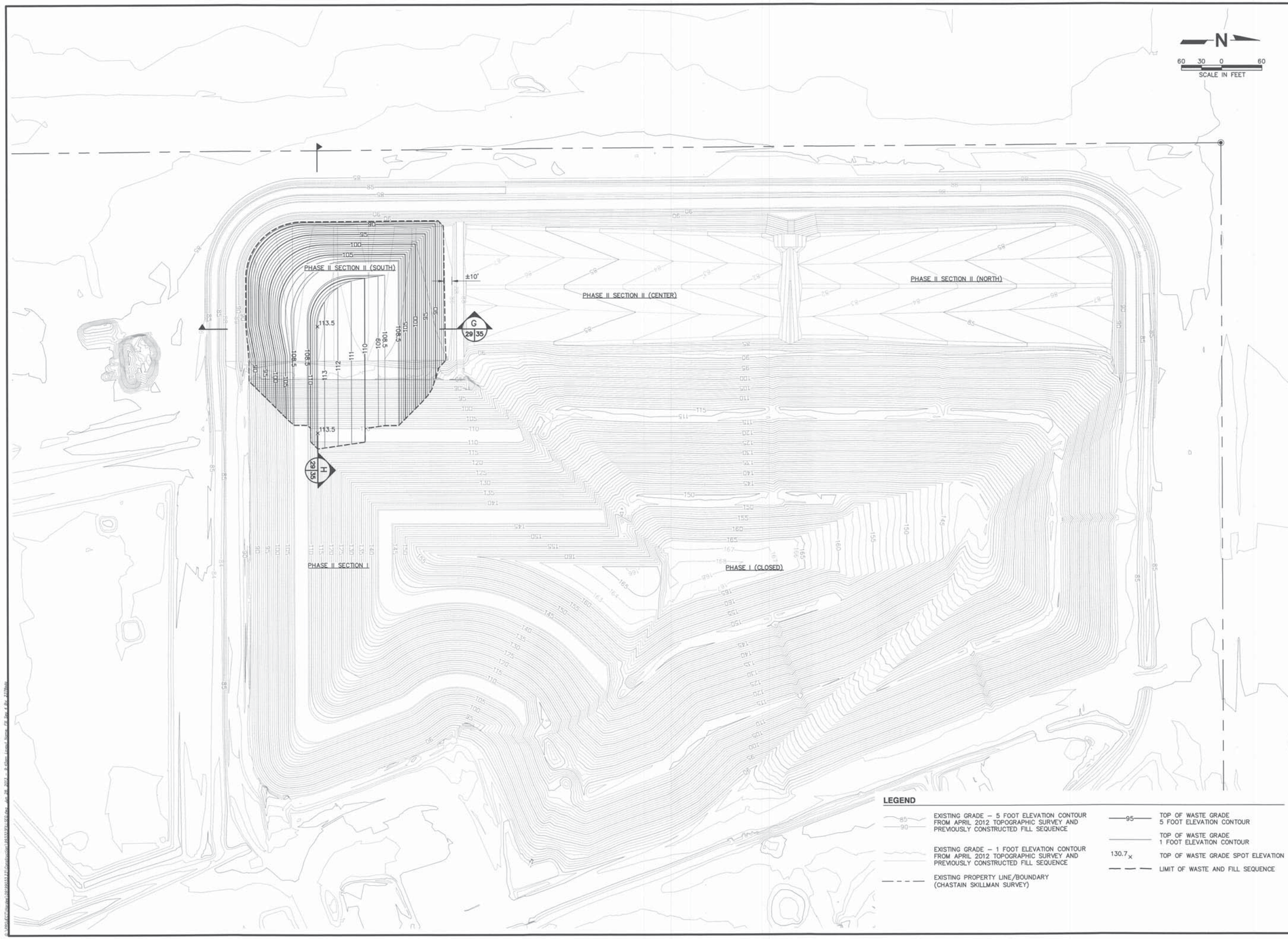
PROJECT TITLE
HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.23
DSN. BY: SRF
DWN. BY: SDA
CHK. BY: SRF
Q/A RVW BY: CEH
APP. BY: SRF

CADD FILE: 993323FILLSEQ
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO.
28 of 37



DRAWING TITLE
PHASE II SECTION I AND II FILL SEQUENCE NO. 4 PLAN

PROJECT TITLE
HARDEE COUNTY LANDFILL PHASE II SECTION II EXPANSION CONSTRUCTION/OPERATIONS DRAWINGS

REV	DATE	DESCRIPTION	BY

WAYNE R. FISCHER — GENERAL ENGINEER — STATE OF FLORIDA — PROFESSIONAL ENGINEER
SIGNATURE AND DATE P.E. LICENSE NO. 58026

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 631-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

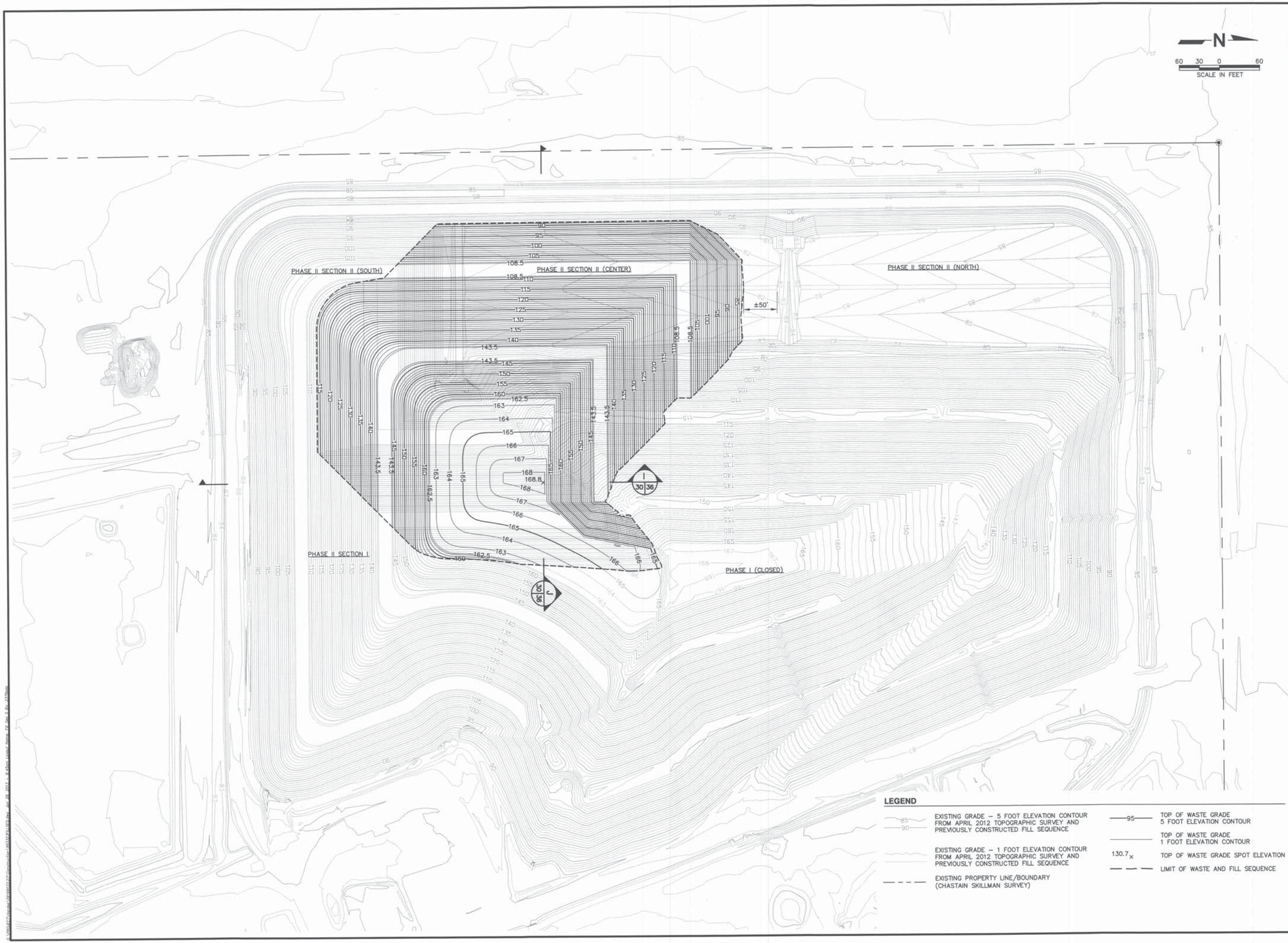
PROJ. NO.	DWN. BY	Q/A RVW. BY	
09199033.23	SDA	CEH	
DSN. BY	CHK. BY	APP. BY	
SRF	SRF	SRF	

CADD FILE: 993323FILLSEQ

DATE: APRIL 2013

SCALE: AS SHOWN

DRAWING NO.
29 of **37**



REV	DATE	DESCRIPTION	BY

STATE OF FLORIDA PROFESSIONAL ENGINEER
SHANE R. FISCHER LICENSE NO. 58026
SHANE R. FISCHER, P.E.
LICENSE NO. 58026

DRAWING TITLE
PHASE II SECTION I AND II FILL SEQUENCE NO. 5 PLAN

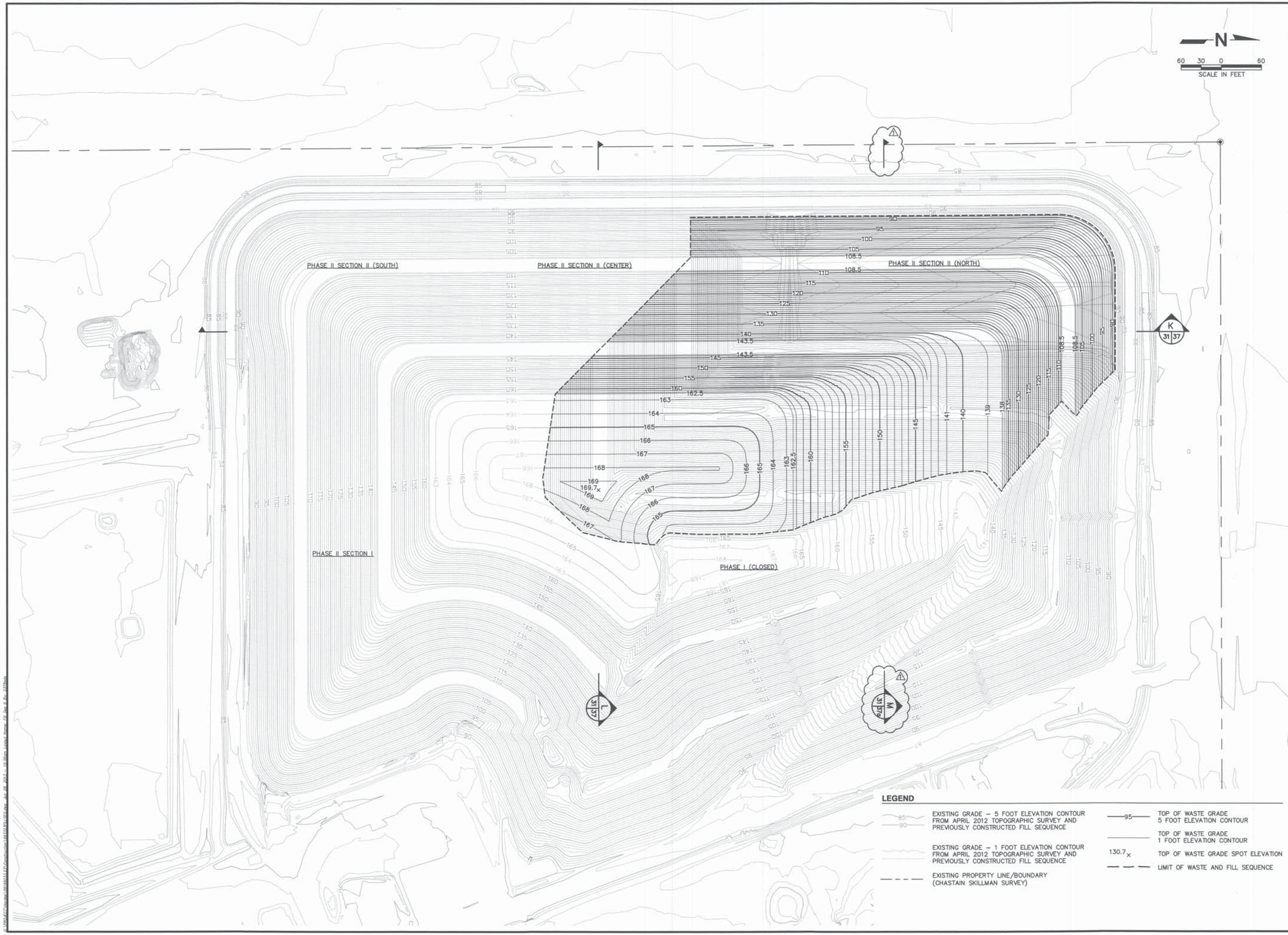
PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD, SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.23
DSNR. BY: SRF
DWN. BY: SDA
CHK. BY: SRF
QA/QC REV BY: CEH
APP. BY: SRF

CADD FILE: 993323FILLSEQ
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO. **30** of 37



REV	DATE	DESCRIPTION	BY
1	06/28/13	REVISED PER OPS PERMIT RENEWAL RAI 1	SRF

SHANE R. FISCHER LICENSE NO. 58026 STATE OF FLORIDA PROFESSIONAL ENGINEER

SHANE R. FISCHER, P.E.
LICENSE NO. 58026

DRAWING TITLE
PHASE II SECTION I AND II
FILL SEQUENCE NO. 6 PLAN

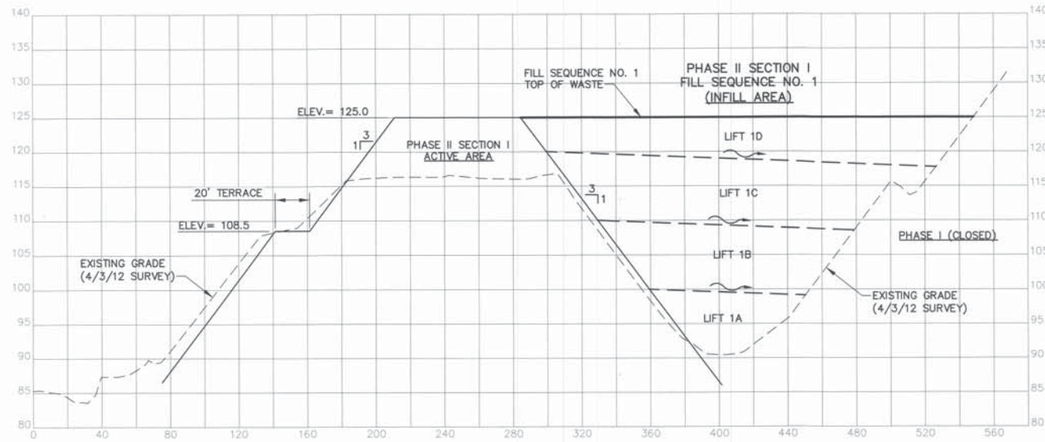
PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

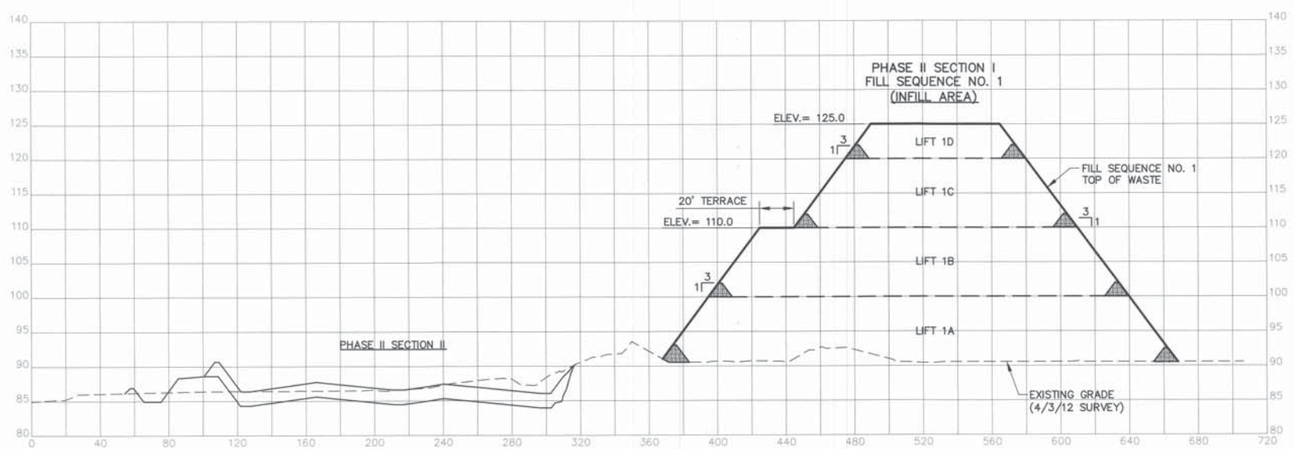
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.23
DSN. BY: SRF
DWN. BY: SDA
CHK. BY: SRF
Q/A RVW BY: CEH
APP. BY: SRF

CADD FILE: 993323FILLSEQ
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO.
31 of 37



SECTION A 26|32
SCALE: 1" = 40' HORIZ.
1" = 10' VERT.



SECTION B 26|32
SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

NOTE:

1. SLOPES SHALL NOT EXCEED 3H:1V AT ANY TIME, AFTER APPLICATION OF COVER SOILS. ALL FINAL SLOPES SHALL CONFORM TO THE DESIGN DIMENSIONS, SLOPES, AND ELEVATIONS.

REV	DATE	DESCRIPTION	BY

DRAWING TITLE
PHASE II SECTION I
FILL SEQUENCE NO. 1 SECTIONS

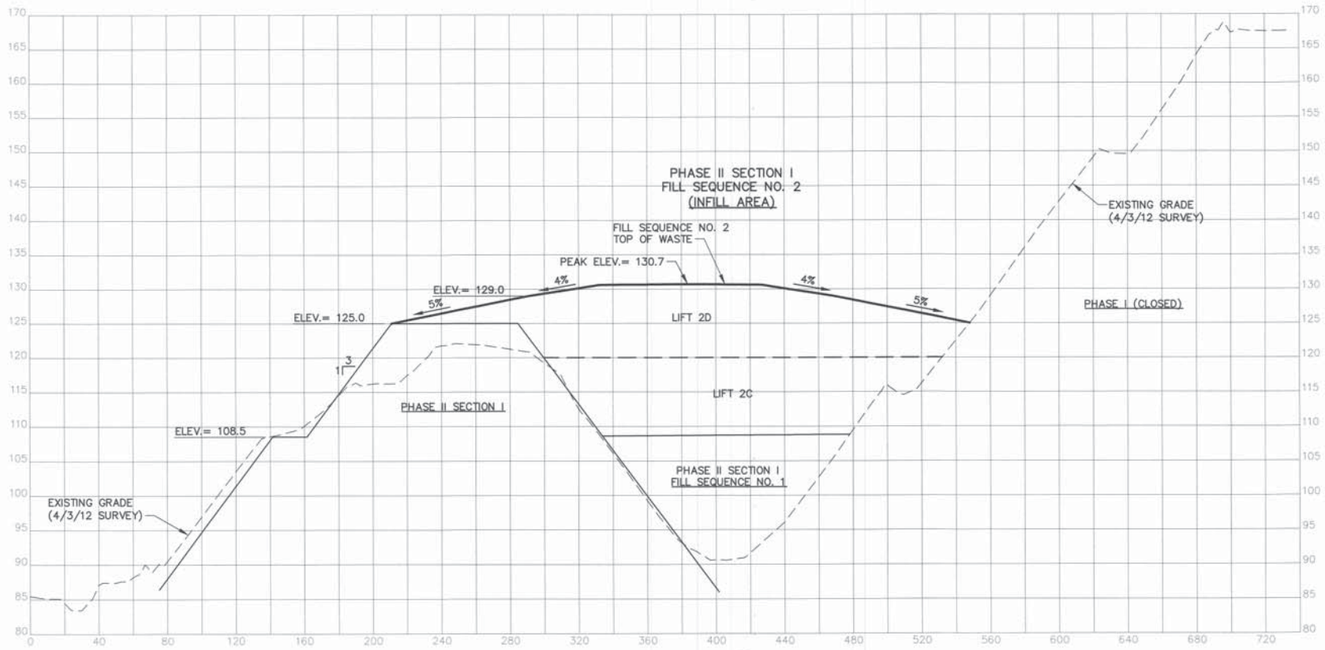
PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

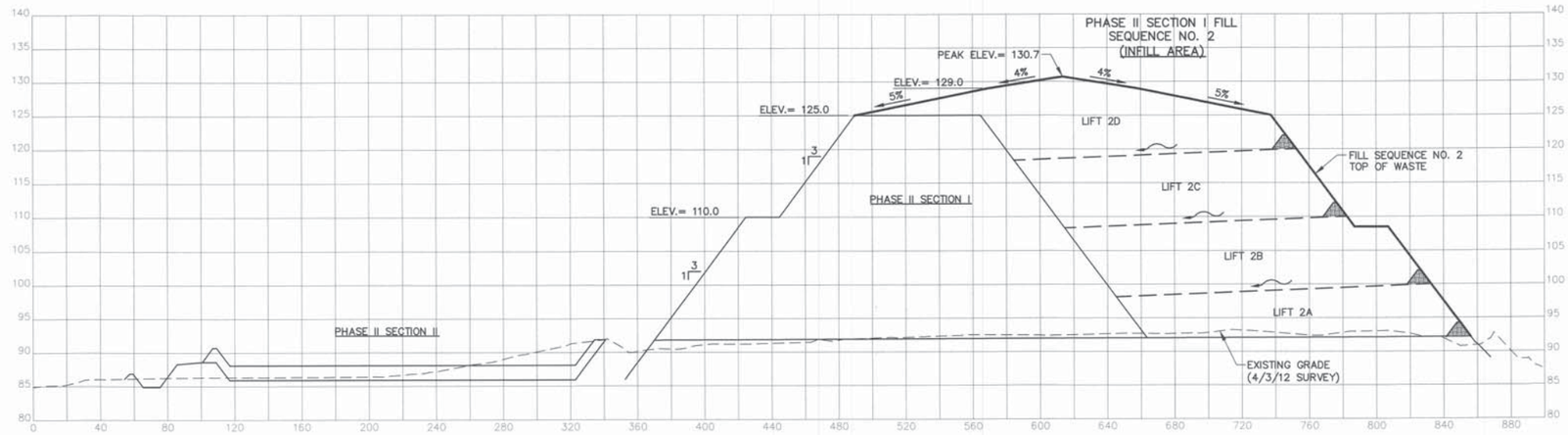
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.23
DSN. BY: SRF
DWN. BY: SDA
CHK. BY: SRF
Q/A RVW BY: CEH
APP. BY: SRF

CADD FILE: 993323SECTIONS2
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO.
32 of 37



SECTION C
SCALE: 1" = 40' HORIZ.
1" = 10' VERT.
27 | 33



SECTION D
SCALE: 1" = 40' HORIZ.
1" = 10' VERT.
27 | 33

NOTE:

1. SLOPES SHALL NOT EXCEED 3H:1V AT ANY TIME, AFTER APPLICATION OF COVER SOILS. ALL FINAL SLOPES SHALL CONFORM TO THE DESIGN DIMENSIONS, SLOPES, AND ELEVATIONS.

JAIME R. FISCHER — STATE OF FLORIDA — PROFESSIONAL ENGINEER
SIGNATURE: [illegible] P.E.
LICENSE NO. 58926

REV	DATE	DESCRIPTION	BY
1			
2			
3			
4			
5			

DRAWING TITLE
PHASE II SECTION I
FILL SEQUENCE NO. 2 SECTIONS

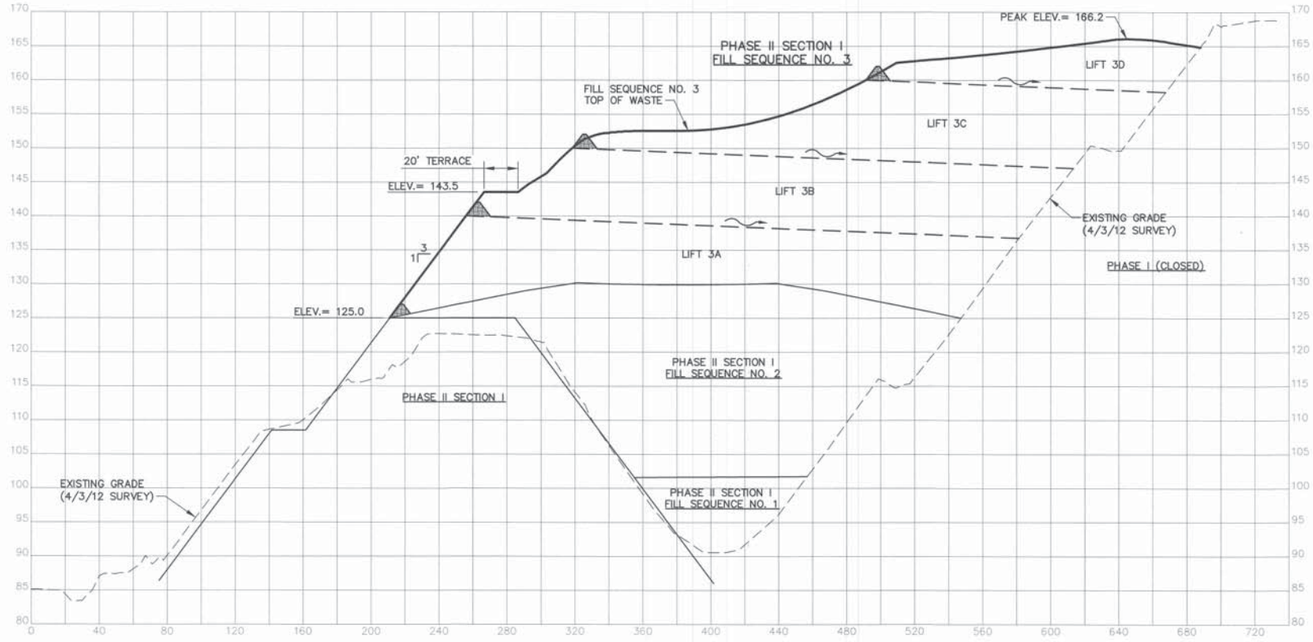
PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

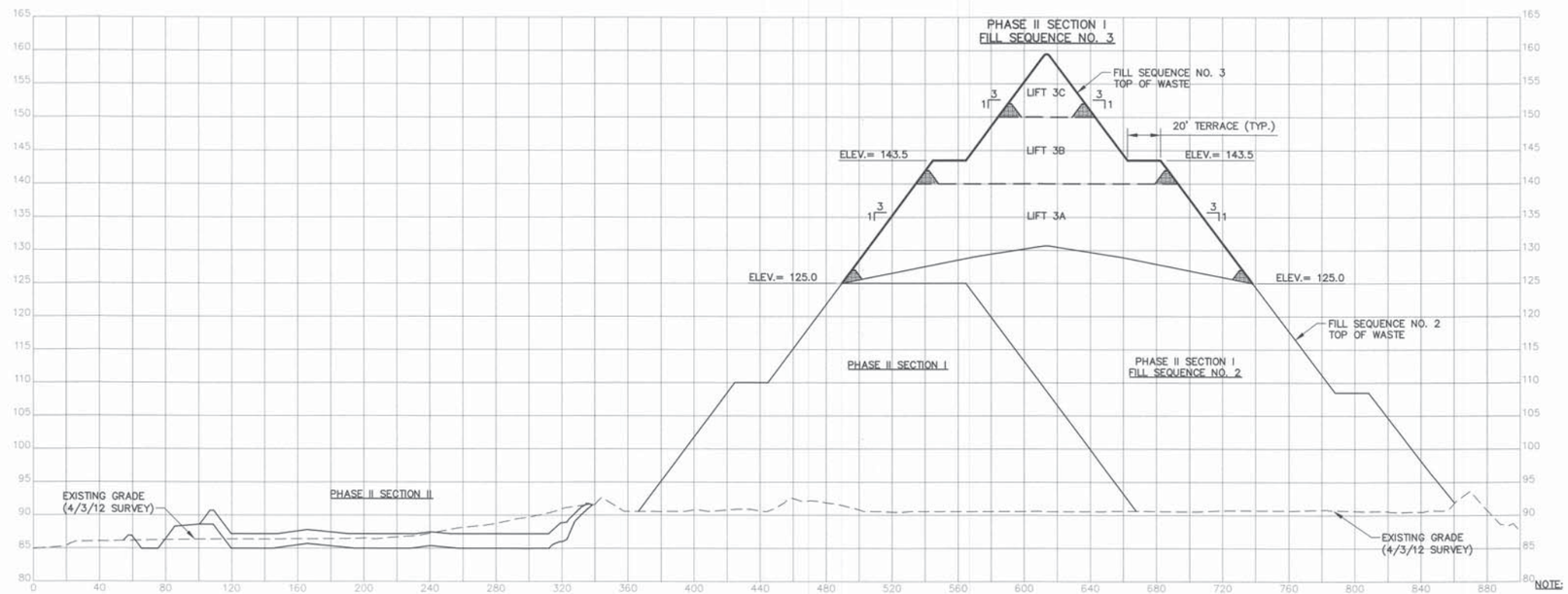
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 150, TAMPA, FL 33610
813 621-0080 FAX 813 623-0757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO.	DWN. BY	Q/A REVR. BY	
09J99033.23	SDA	CEH	
CONT. NO.	CHK. BY	APP. BY	
SRF	SRF	SRF	

CADD FILE: 993323SECTIONS2
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO.
33 of 37



SECTION E 28 34
SCALE: 1" = 40' HORIZ.
1" = 10' VERT.



SECTION F 28 34
SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

NOTE:

1. SLOPES SHALL NOT EXCEED 3H:1V AT ANY TIME, AFTER APPLICATION OF COVER SOILS. ALL FINAL SLOPES SHALL CONFORM TO THE DESIGN DIMENSIONS, SLOPES, AND ELEVATIONS.

STATE OF FLORIDA LICENSED PROFESSIONAL ENGINEER
SHARON R. TYNER, P.E.
LICENSE NO. 58028

REV	DATE	DESCRIPTION	BY

DRAWING TITLE
PHASE II SECTION I
FILL SEQUENCE NO. 3 SECTIONS

PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD, SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO.	DWN. BY:	Q/A BY:
09199033.23	SDA	CEH
DSN. BY:	CHK. BY:	APP. BY:
SRF	SRF	SRF

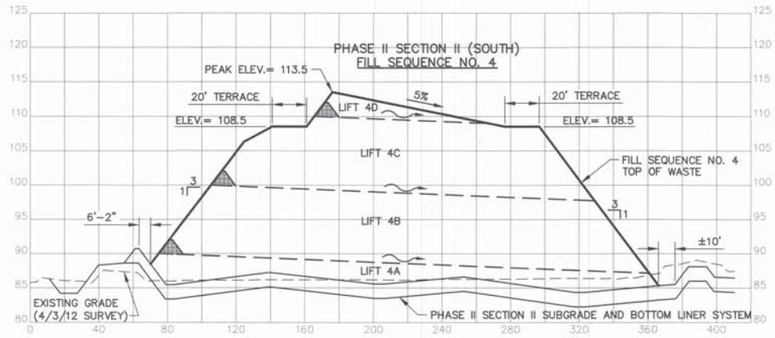
CADD FILE:
993323SECTIONS2

DATE:
APRIL 2013

SCALE:
AS SHOWN

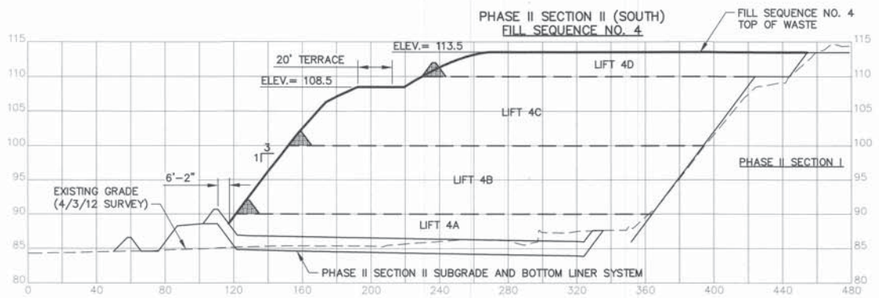
DRAWING NO.
34 of 37

C:\PROJECTS\active\09199033.23\Construction\Permit\Drawings\Sections F-F By Z.dgn 08-Apr-2013 - 8:47am Layout: Name: Sections F-F By Z.dgn



SECTION G 29 35

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.



SECTION H 29 35

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

NOTE:

1. SLOPES SHALL NOT EXCEED 3H:1V AT ANY TIME, AFTER APPLICATION OF COVER SOILS. ALL FINAL SLOPES SHALL CONFORM TO THE DESIGN DIMENSIONS, SLOPES, AND ELEVATIONS.

REV	DATE	DESCRIPTION	BY

DRAWING TITLE
PHASE II SECTION I AND II
FILL SEQUENCE NO. 4 SECTIONS

PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

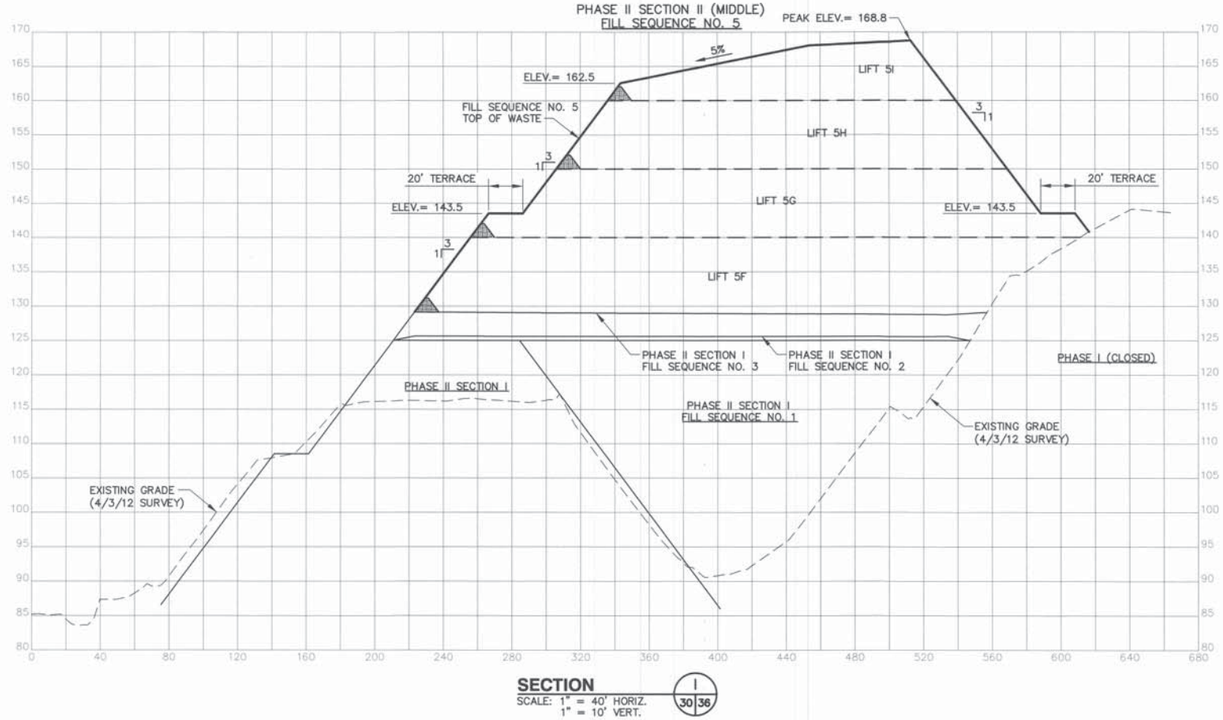
PROJ. NO. 09199033.23
DSN. BY: SRF
DWN. BY: SDA
CHK. BY: SRF
Q/A RVW BY: CEH
APP. BY: SRF

CADD FILE: 993323SECTIONS2

DATE: APRIL 2013

SCALE: AS SHOWN

DRAWING NO.



SECTION I 30 36
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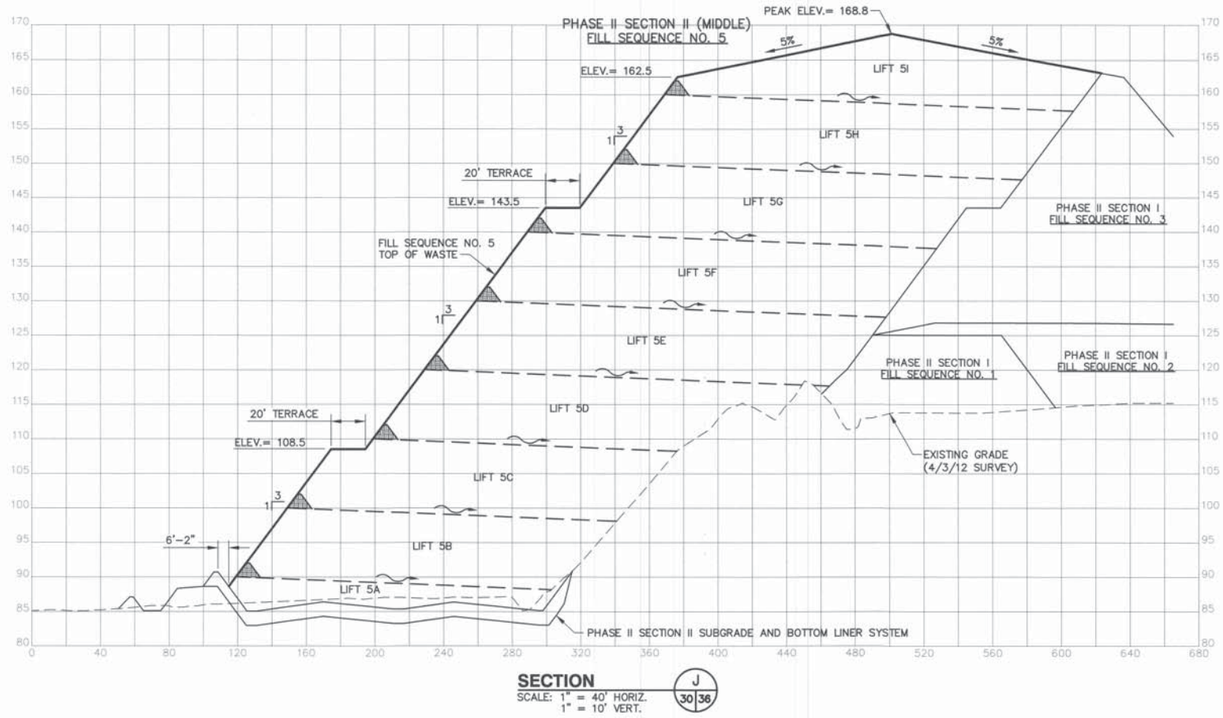
1" = 10' VERT.



SECTION J 30 36
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1" = 10' VERT.

NOTE:

1. SLOPES SHALL NOT EXCEED 3H:1V AT ANY TIME, AFTER APPLICATION OF COVER SOILS. ALL FINAL SLOPES SHALL CONFORM TO THE DESIGN DIMENSIONS, SLOPES, AND ELEVATIONS.

REV	DATE	DESCRIPTION	BY

SHANE H. FISCHER, LICENSE, NO. 58026, STATE OF FLORIDA, PROFESSIONAL ENGINEER
SHANE H. FISCHER, P.E.
LICENSE NO. 58026

DRAWING TITLE
PHASE II SECTION I AND II
FILL SEQUENCE NO. 5 SECTIONS

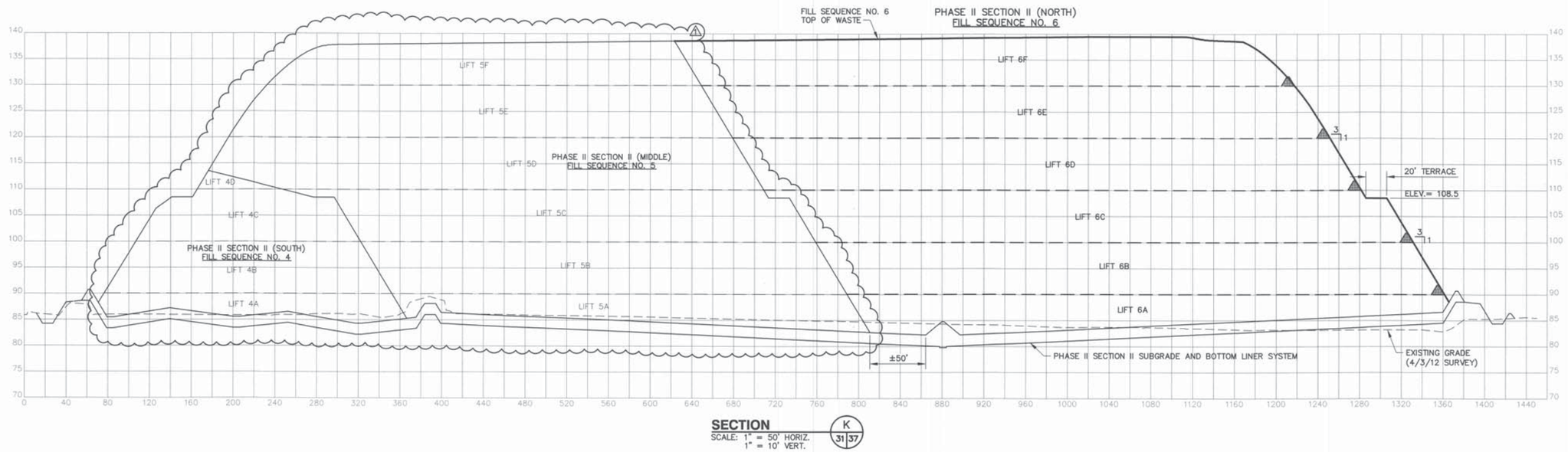
PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.23
DSN. BY: SRF
DWN. BY: SDA
CHK. BY: SRF
Q/A RVW BY: CEH
APP. BY: SRF

CADD FILE: 993323SECTIONS2
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO.
36 of 37



SECTION (K 31|37)
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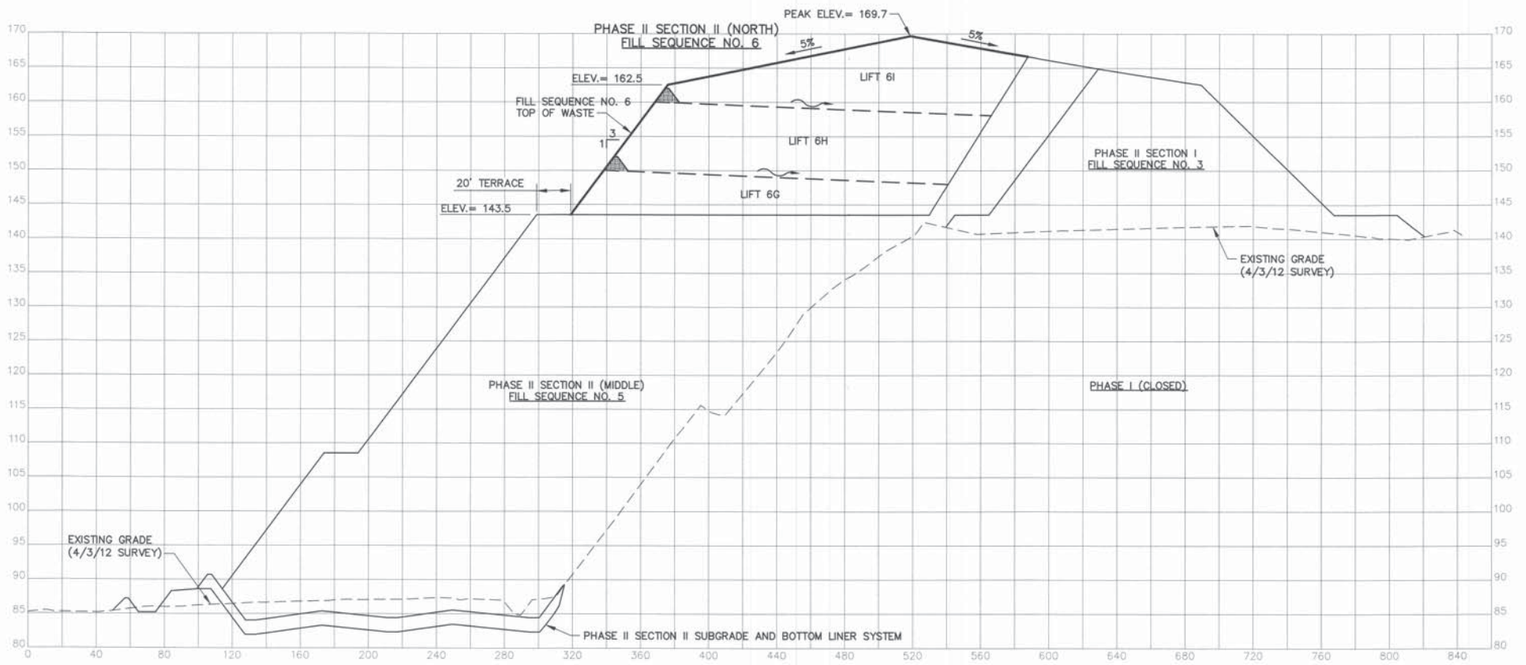

SECTION (L 31|37)
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1" = 10' VERT.

NOTE:

1. SLOPES SHALL NOT EXCEED 3H:1V AT ANY TIME, AFTER APPLICATION OF COVER SOILS. ALL FINAL SLOPES SHALL CONFORM TO THE DESIGN DIMENSIONS, SLOPES, AND ELEVATIONS.

JAMES H. FISCHER — LICENSE — STATE OF FLORIDA — PROFESSIONAL ENGINEER
SHANE R. FISCHER, P.E.
LICENSE NO. 58026

REV	DATE	DESCRIPTION	BY
1	06/28/13	REVISED PER OPS PERMIT RENEWAL RAI 1	SRF

DRAWING TITLE
PHASE II SECTION I AND II
FILL SEQUENCE NO. 6 SECTIONS

PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
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FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09J199033.23 | DWN. BY SDA | Q/A BY/E CEH
TASK NO. SRF | CHK. BY SRF | APP. BY SRF

CADD FILE: 993323SECTIONS2
DATE: APRIL 2013
SCALE: AS SHOWN
DRAWING NO. **37** of 37

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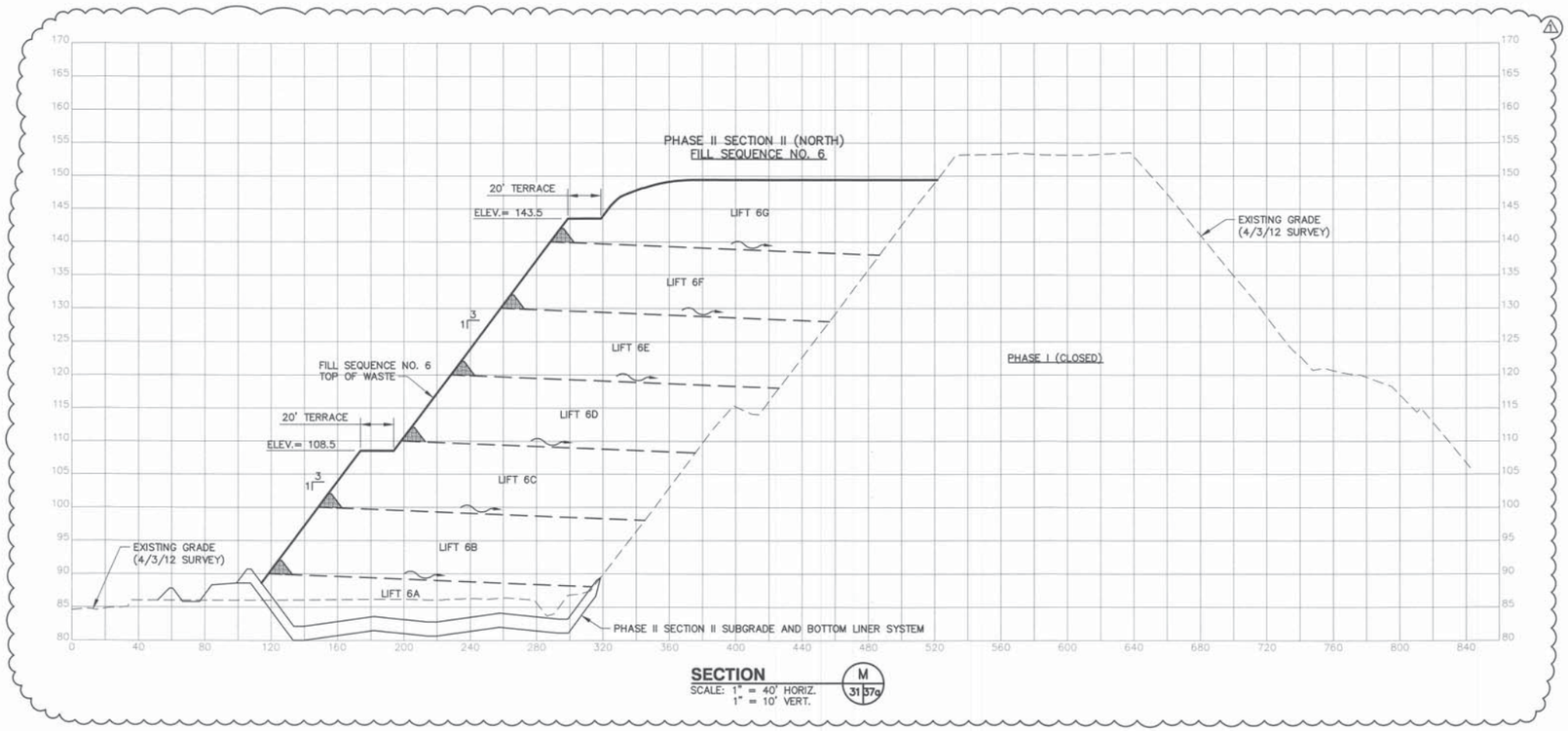

SECTION (M 31 37a)
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1" = 10' VERT.

NOTE:

1. SLOPES SHALL NOT EXCEED 3H:1V AT ANY TIME, AFTER APPLICATION OF COVER SOILS. ALL FINAL SLOPES SHALL CONFORM TO THE DESIGN DIMENSIONS, SLOPES, AND ELEVATIONS.

REV	DATE	DESCRIPTION	BY
1	06/28/13	DRAWING ADDED PER DEP'S PERMIT RENEWAL RAI 1	SRF

DRAWING TITLE
PHASE II SECTION I AND II
FILL SEQUENCE NO. 6 SECTION

PROJECT TITLE
HARDEE COUNTY LANDFILL
PHASE II SECTION II EXPANSION
CONSTRUCTION/OPERATIONS DRAWINGS

CLIENT
HARDEE COUNTY
BOARD OF
COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
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813 621-0080 FAX 813 623-5757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO.	DWN. BY:	QA/A RVW BY:
09199033.23	SDA	CEH
DSGN. BY:	CHK. BY:	APP. BY:
SRF	SRF	SRF

CADD FILE: 993323SECTIONS2

DATE: JUNE 2013

SCALE: AS SHOWN

DRAWING NO. 1 **37a** of 37

SIGNED, R. SCOTT RUSHING, P.E. LICENSE NO. 58026

Appendix S

Specification Section 02220 Excavation, Backfill, Fill, and Grading

SECTION 02220
EXCAVATION, BACKFILL, FILL, AND GRADING

PART 1 - GENERAL

1.01 DESCRIPTION

A. The WORK specified in this Section includes excavating, trenching, transporting, stockpiling, placing, backfilling, compacting, grading, disposing of materials, field testing, and quality control/quality assurance laboratory services required for the construction and appurtenances necessary for the WORK as shown on the Contract Drawings and described in the Specifications.

B. Excavated soil that does not contain waste, as determined by the ENGINEER, may be reused and incorporated into the project if it meets the requirements of this Section.

C. Excavation, backfilling, sampling, and testing shall be performed by the CONTRACTOR only when the ENGINEER or CQA REPRESENTATIVE is present. A minimum of 24 hours prior notice shall be provided to the ENGINEER or CQA REPRESENTATIVE.

D. Upon identification, the CONTRACTOR shall notify the ENGINEER in writing if the site conditions encountered during construction differ from that indicated on the Contract Drawings. Notification by the CONTRATOR shall include an explicit description of the differences.

E. The CONTRACTOR shall be responsible for controlling stormwater runoff from the adjacent landfill slopes through the use of berms, dikes, swales, or other acceptable methods as determined by the CONTRACTOR to direct stormwater away from construction areas to areas where the CONTRACTOR shall remove stormwater through the use of temporary pumps or other means and methods as determined by the CONTRACTOR.

F. Construction Quality Assurance (CQA) will be performed by a designated CQA CONSULTANT retained by the OWNER. The CQA CONSULTANT, or his CQA REPRESENTATIVE, shall observe and inspect all geotechnical activities and conduct CQA testing at a random frequency and location.

G. Any damage to the existing Phase I or Phase II Section I landfill liner systems or any other features shall be repaired as directed by the ENGINEER at the CONTRACTOR'S expense.

1.02 DEFINITIONS

A. Topsoil - A fertile, natural or amended soil, typical of locality, free from large stones, roots, sticks, clay, weeds, and sod, and suitable for use as a growing

medium for vegetation.

B. Suitable Soil - Soil that meets the requirements as specified in Part 2.

C. Unsuitable Soil - Soil that does not meet the requirements as specified in Part 2.

D. Existing Subgrade Soils - Existing onsite soil within the project area. Existing Subgrade Soils shall be compacted to meet the specified requirements contained within this Section.

E. General Fill - Suitable soil that is placed back into the project area and compacted after unsuitable soils are excavated and removed. General Fill shall be compacted to meet the specified requirements contained within this Section.

F. Structural Fill - Soil that is called out in specific locations for the project which are required as opposed to General Fill. The Structural Fill shall be compacted to meet the specified requirements contained within this Section.

G. CQC CONSULTANT - Independent geotechnical consultant retained by the CONTRACTOR to perform the Construction Quality Control (CQC) testing of the material sources, materials, and in-place density testing. The CQC CONSULTANT shall oversee the geotechnical activities and the Quality Control testing services as presented in these Specifications for the CONTRACTOR.

H. CQA CONSULTANT - Construction Quality Assurance (CQA) will be performed by a designated CQA CONSULTANT retained by the OWNER. The CQA CONSULTANT, or his CQA REPRESENTATIVE, shall observe and inspect all geotechnical activities and conduct CQA testing at a random frequency and location.

1.03 PROJECT CONDITIONS

A. Existing project conditions are shown on the Contract Drawings or otherwise described herein.

B. This information has been obtained from existing records. It is not guaranteed to be correct or complete and is shown for the convenience of the CONTRACTOR. The CONTRACTOR shall explore ahead of the required excavation to determine the exact location of all existing structures, utilities, etc.

C. Structures shall be supported and protected from damage by the CONTRACTOR. If structures are broken or damaged, the CONTRACTOR shall restore structures, utilities, etc. to their original condition at no additional cost to the OWNER. Repair of damaged features or structures shall be approved by the ENGINEER and OWNER.

1.04 QUALITY CONTROL

A. Construction Quality Control (CQC) will be performed by an independent geotechnical consultant retained by the CONTRACTOR. The CQC CONSULTANT cannot be the same CONSULTANT retained by the OWNER for the Construction Quality Assurance (CQA).

B. The CQC CONSULTANT shall oversee all geotechnical activities and the Quality Control testing as specified herein to be performed by the CONTRACTOR. The CQC CONSULTANT shall perform CQC testing of the material borrow sources, materials, and in-place density testing and moisture content.

1. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

C. Refer to Part 1.05.C of this Section for the information to be submitted for the qualifications of the CQC CONSULTANT.

1.05 SUBMITTALS

A. Health and Safety Plan

1. The CONTRACTOR shall prepare and submit a Health and Safety Plan to the ENGINEER. The review of the Health and Safety Plan by the ENGINEER shall be for method and content only, and to inform the ENGINEER of the health and safety procedures which must be followed by the ENGINEER and OWNER.

2. The CONTRACTOR shall retain complete responsibility for the application, adequacy and safety of the methods chosen. However, construction shall not begin until the Health and Safety Plan has been submitted and reviewed by the ENGINEER.

3. The Health and Safety Plan shall include descriptions of the methods, equipment, and safety procedures to be used during construction activities including excavating, backfilling, and compacting. In preparing the Health and Safety Plan, the CONTRACTOR shall consider the various materials that may be encountered while conducting all operations necessary to complete the WORK.

4. Refer to Section 01800 Health and Safety.

B. Excavation Plan

1. Prior to beginning WORK, the CONTRACTOR shall provide a detailed Excavation Plan to the ENGINEER for review and approval for addressing

excavation, soil segregation (especially for the landfill embankment construction), backfilling, compacting, grading, etc. that are addressed in this Section prior to starting WORK.

2. The Excavation Plan shall include methods of excavation, stormwater run-on and runoff control, slope stabilization, shoring, stockpiling, stormwater removal, and backfilling techniques.

3. The Excavation Plan shall include a breakdown of each of soil types specified for backfill, possible sources of each, and shall show that sufficient quantity is available from the borrow sources identified to complete the project.

4. The Excavation Plan shall address safety issues in consideration of OSHA, Federal, State, and local safety requirements, and the document "A Compilation of Landfill Gas Laboratory and Field Practices and Procedures - Health and Safety Section" (Safety Guidelines) prepared by the Solid Waste Association of North America (SWANA), Landfill Gas Division, August 1991. A copy of this document is attached at the end of Section 01800 Health and Safety Requirements for reference.

5. Excavation may be made without sheeting and bracing within the limitations and requirements of the governmental agencies having jurisdiction. Failure of the ENGINEER or CQA REPRESENTATIVE to order the use of bracing or sheeting and shoring or direct changes to systems in place, shall not in any way or to any extent relieve the CONTRACTOR of any responsibility concerning the condition of excavations or of his obligations under the Contract. The CONTRACTOR shall be responsible for the condition of all excavations. All slides and caves shall be removed without extra compensation, at whatever time and under whatever circumstances that they may occur.

6. All excavation shall comply with the applicable requirements as stated in the following:

    a. OSHA excavation safety standards 29 CFR, 1926-650, subpart P.

    b. State (Trench Safety Act Section 553.60-553.64 Florida Statutes) and County construction safety regulations.

    c. Trench safety guidelines as specified by the Landfill Gas Division of the Solid Waste Association of North America (SWANA).

7. The Excavation Plan shall include temporary controls for stormwater runoff and erosion control in full conformance with all existing permits. The CONTRACTOR is responsible for directing, controlling, and

managing stormwater runoff from all areas surrounding the construction including runoff from the landfill slopes.

8. The CONTRACTOR shall be responsible for vehicle traffic safety and shall coordinate with the OWNER to determine site-specific safety concerns.

9. The CONTRACTOR shall sweep or wash paved roadways which become covered with soil. The CONTRACTOR shall provide all equipment, water, and personnel necessary to clear the paved roads.

C. Qualifications of the CQC CONSULTANT

1. The Qualifications of the geotechnical CQC CONSULTANT retained by the CONTRACTOR shall be submitted to the ENGINEER at least 15 calendar days prior to conducting any geotechnical laboratory or field testing related to the project. The submittal shall include, at a minimum, the following information:

a. The resumes of key personnel involved in the geotechnical testing and observation activities. Key personnel shall include field personnel, laboratory personnel and immediate supervisors. The CQC CONSULTANT shall have a minimum experience of 2 prior similar projects (landfills only) within the last 5 years.

b. Written confirmation that the CQC CONSULTANT has sufficient personnel and equipment available to meet the project schedule.

c. Written confirmation the project Specifications have been received and that WORK shall be performed in compliance with the project Specifications (Contractor Verification Form Page 00830-4).

D. Construction Quality Control (CQC) Plan

1. The CONTRACTOR shall provide a detailed Construction Quality Control (CQC) Plan signed by the CONTRACTOR addressing procedures and schedules for material source certifications, testing soils, testing in-place soils, submitting test results to the ENGINEER for review, and retesting failed tests.

E. Construction Quality Control Submittals

1. During construction, the CONTRACTOR shall submit CQC Test Reports and documentation generated by the CQC CONSULTANT signed and sealed by a Professional Engineer licensed in the State of Florida for review. Electronic copies shall be submitted to the ENGINEER within 72

hours after sampling or testing for each test required. Hard copy signed-and-sealed test reports shall be submitted to the ENGINEER within 7 days of sampling or testing for each test required.

2. CQC Test Reports for different material types or standards shall receive a unique submittal number and shall not be combined with other material types on any pages in the report.

3. After construction, the CQC CONSULTANT shall prepare a Final Report certifying the geotechnical activities performed on the project are in accordance with the Specifications. The final report shall be signed and sealed by a Professional Engineer licensed in the State of Florida and submitted to the ENGINEER. The Final Report shall include at a minimum:

   a. Field Density Test Report (with field activity log and test location map).

   b. Summary of test results from qualifying the products.

F. Drainage Material Installation Plan

1. The CONTRACTOR shall provide a detailed Drainage Material Installation Plan signed by the CONTRACTOR addressing the placement methods of the Protective Soil/Drainage Sand Layer and Leachate Collection and Removal System Trench Gravel to demonstrate that the bottom liner geosynthetic materials will be protected and safeguarded from damage during placement of the overlying materials.

2. The Drainage Material Installation Plan shall include material types, minimum thickness of each lift of materials during placement, description of thickness markers, methods for measuring material thicknesses, and methods for removing markers. The marker shall be free standing and shall not be sharp or pointed so it cannot damage the geosynthetic liner materials if hit by equipment.

3. The Drainage Material Installation Plan shall include a method for removing markers without disturbing in-place materials.

G. Borrow Source Materials - Pre-construction Materials Evaluation

1. For any off-site material borrow sources, the CONTRACTOR shall notify the ENGINEER in writing of the material source for each soil type specified within Part 2 of this Section at least 21 calendar days prior to the date of anticipated use of such material. Notification shall include at a minimum:

a. Supplier's name

b. Borrow location

c. Documentation confirming adequate quantities are available to complete the WORK

d. A representative sample of the proposed material, consisting of one 5-gallon, sealed container

e. Test results as required within Part 2 of this Section

2. The CONTRACTOR shall submit to the ENGINEER the CQC CONSULTANT'S laboratory test results for each soil type specified within Part 2 of this Section at least 21 calendar days prior to the date of anticipated use of such material. Materials shall not be incorporated into the project until approved by the ENGINEER.

3. The CONTRACTOR shall submit Material Source Certificates of Compliance signed by the CONTRACTOR for each of the proposed materials, General Fill, Structural Fill, Protective Soil/Drainage Sand Layer, Leachate Collection and Removal System Trench Gravel, Groundwater Underdrain Gravel, and Limerock from each of the proposed sources to the ENGINEER. The Material Source Certificates of Compliance shall include the project title, project location, soil type, source name and description, proposed use, test identification number and laboratory test results.

4. Pre-construction materials evaluations shall be performed on samples from potential soil borrow sources by the CONTRACTORS independent CQC Laboratory prior to incorporation into construction to ascertain their acceptability as construction materials. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

H. Pipe Surveys

1. Proposed stationing and pipeline identification procedures. Prior to the start of any pipe installation, the CONTRACTOR shall supply an example layout drawing showing how the header and laterals will be marked with stations for the conformance surveys. The example layout drawing and stations must be consistent with the requirements of Sections 01050 Site Conditions Survey and 01300 Contractor Submittals.

2. The CONTRACTOR shall include in their daily report a daily log detailing length of trench excavated and backfilled, with reference to pipe

stationing and details sufficient to properly describe the WORK completed to date.

I. Topographic Surveys

1. Prior to performing any earthwork, a pre-construction survey (Record Drawing) of the limits of construction and 25 feet beyond the limits of construction as defined in the Contract Documents will be prepared by a registered land surveyor licensed in the State of Florida. The topographic information shall be collected on a 50 foot by 50 foot grid, at a minimum, and as necessary (i.e., spot elevations, grade breaks, ditches, mounds, etc.) so as to provide an accurate representation of the contour topography.

2. A location survey of the edge of the existing 60 mil textured HDPE geomembrane along the western side of the closed Phase I landfill area. This survey shall represent the limits of the existing geomembrane and shall be staked and surveyed every 25 feet, at a minimum, and as necessary (i.e., spot elevations, grade breaks, etc.).

3. A location survey of the edge of the existing 60 mil textured HDPE geomembrane along the western side of the active Phase II Section I landfill area. This survey shall represent the limits of the existing geomembrane and shall be staked and surveyed every 25 feet, at a minimum, and as necessary (i.e., spot elevations, grade breaks, etc.).

4. A location survey of the western-most existing HDPE Groundwater Collection System (GCS) pipes inverts and western-most existing Leachate Collection and Removal System (LCRS) pipes invert along the western side of the active Phase II Section I landfill area. This survey shall represent the existing GCS and LCRS pipes and shall be staked and surveyed as required.

5. A topographic survey (Record Drawing) of the completed top of Subbase Surface Layer shall be collected on a 50 foot by 50 foot grid, at a minimum, and as necessary (i.e., spot elevations, grade breaks, points referenced in the control points table of the Contract Documents, etc.) so as to provide an accurate representation of the contour topography. This survey shall be representative of the top of the Subbase Surface Layer prior to placement of the additional layer of 60 mil textured HDPE geomembrane in the area identified in the Contract Documents or Geosynthetic Clay Liner (GCL).

    a. No GCL installation shall occur until the survey of the surface upon which the GCL is to be installed (Subbase) has been completed, submitted, reviewed, and approval received from the ENGINEER.

b. No liner installation shall occur until the survey of the surface upon which the additional layer of 60 mil textured HDPE geomembrane in the area identified in the Contract Documents is to be installed (Subbase) has been completed, submitted, reviewed, and approval received from the ENGINEER.

6. A topographic survey (Record Drawing) of the top of the installed Protective Soil/Drainage Sand Layer shall be collected on a 50 foot by 50 foot grid, at a minimum, and as necessary (i.e., spot elevations, grade breaks, sideslopes, points referenced in the control points table of the Contract Documents, etc.) so as to provide an accurate representation of the contour topography. A minimum of 24 inches measured perpendicular to the slope is required above the primary geocomposite.

7. Refer to Section 01050 Site Conditions Survey.

J. Certification of Subbase Acceptance

1. Upon completion of the Subbase Layer construction and acceptance of the topographic survey (Record Drawing) of the completed Subbase Layer, a "Certificate of Subbase Acceptance" shall be co-signed by the INSTALLER along with the CQA REPRESENTATIVE prior to the installation of the additional layer of 60 mil textured HDPE geomembrane in the area identified in the Contract Documents or GCL certifying the Subbase Layer was constructed in accordance with the approved Contract Documents and Specifications.

2. Refer to Section 02776 HDPE Polyethylene Geomembrane Liner.

3. Refer to Section 02077 Geosynthetic Clay Liner (GCL).

K. Submittal Review

1. The CONTRACTOR shall schedule all WORK to allow at least 30 working days for submittal review and approval by the ENGINEER. There shall be no additional compensation to the CONTRACTOR for any construction delays caused by the CONTRACTOR'S failure to plan, obtain approval or schedule WORK to include all CQC/CQA testing.

2. Refer to Section 01300 Contractor Submittals.

1.06 SITE ACCESS

A. WORK shall be performed so as to not block or hinder site access, except as authorized by the OWNER.

PART 2 - PRODUCTS

2.01 EXISTING SUBGRADE SOILS

A. Existing Subgrade Soils shall be non-organic, free of debris, sticks, roots, stones and sharp materials greater than ½-inch in any dimension.

B. Subgrade Soils shall be well-graded sand (SW), poorly graded sand (SP), poorly graded sand with clay (SP-SC), poorly graded sand with silt (SP-SM), well graded sand with clay (SW-SC), well graded sand with silt (SW-SM), or clayey sand (SC) as classified by the Unified Soil Classification System (USCS), or other soil as approved by the ENGINEER. For soils with Atterberg Limits, Liquid Limit shall be less than 50 with a Plasticity Index less than 20.

C. Unsuitable Subgrade Soils

1. ASTM D2487 Soil Classification Groups: ML, MH, OH, OL and PT.

2. Soils excessively wet or dry at time of compaction. Allow such material to dry, or moisten, as required, to bring material generally within 3 percent of optimum moisture content range for specified compaction.

3. Soils, which yield or exhibit pumping due to excessive moisture shall be excavated and replaced with General Fill that meets the project Specifications.

4. If encountered, the CONTRACTOR shall excavate the area of unsuitable subgrade soils to 18 inches vertically and horizontally around the unsuitable area only within the limits of the bottom liner system area as shown on the Contract Drawings. Excavated unsuitable subgrade soils shall be backfilled with excavated Existing Subgrade Soil or General Fill that meets the project Specifications.

D. Prior to excavated Existing Subgrade Soil being reused or incorporated into the WORK, such as for the landfill cell embankment or stormwater swale construction, the CQC CONSULTANT shall provide laboratory test results in accordance with Table 02220-1.

1. Pre-construction materials evaluations shall be performed on samples from the existing subgrade soils by the Soils CQA Laboratory prior to incorporation into the WORK to verify material compliance with the Plans and Technical Specifications.

E. During placement, all materials shall be tested by the CQC CONSULTANT in accordance with Table 02220-2.

1. Testing shall be performed by the Soils CQA Laboratory during the course

of the WORK to verify continued material compliance with the Plans and Technical Specifications.

2.02 GENERAL FILL

A. General Fill shall be non-organic, free of debris, sticks, roots, stones and sharp materials greater than ½-inch in any dimension.

B. In the areas where General Fill is placed and compacted to bring the landfill cell bottom to the lines and grades shown on the Contract Drawings for use as Subbase it shall be chemically compatible with the GCL in accordance with ASTM D6141.

C. General Fill shall be well-graded sand (SW), poorly graded sand (SP), poorly graded sand with clay (SP-SC), poorly graded sand with silt (SP-SM), well graded sand with clay (SW-SC), well graded sand with silt (SW-SM), or clayey sand (SC) as classified by USCS, or other soil as approved by the ENGINEER. For soils with Atterberg Limits, Liquid Limit shall be less than 50 with a Plasticity Index less than 20.

D. Unsuitable General Fill

1. ASTM D2487 Soil Classification Groups: ML, MH, OH, OL and PT.

2. Soils also include satisfactory soils not maintained within 3 percent of optimum moisture content at the time of compaction.

E. Prior to placement, CQC CONSULTANT shall provide laboratory test results in accordance with Table 02220-1.

1. Pre-construction materials evaluations shall be performed on samples from potential soil borrow sources by the CONTRACTORS independent CQC Laboratory prior to incorporation into construction to ascertain their acceptability as construction materials. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

F. During placement, all materials shall be tested by the CQC CONSULTANT in accordance with Table 02220-2.

1. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

2.03 STRUCTURAL FILL

A. Structural Fill soils non-organic, free of debris, sticks, roots, stones and sharp

materials greater than ½-inch in any dimension.

B. Structural Fill shall be well-graded sand (SW), poorly graded sand (SP), poorly graded sand with clay (SP-SC), poorly graded sand with silt (SP-SM), well graded sand with clay (SW-SC), well graded sand with silt (SW-SM), or clayey sand (SC) as classified by USCS, or other soil as approved by the ENGINEER.

C. Unsuitable Structural Fill

1. ASTM D2487 Soil Classification Groups: ML, MH, OH, OL and PT.

2. Soils also include satisfactory soils not maintained within 3 percent of optimum moisture content at the time of compaction.

D. Prior to placement, CQC CONSULTANT shall provide laboratory test results in accordance with Table 02220-1.

1. Pre-construction materials evaluations shall be performed on samples from potential soil borrow sources by the CONTRACTORS independent CQC Laboratory prior to incorporation into construction to ascertain their acceptability as construction materials. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

E. During placement, all materials shall be tested by the CQC CONSULTANT in accordance with Table 02220-2.

1. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

2.04 PROTECTIVE SOIL/DRAINAGE SAND

A. Protective Soil/Drainage Sand shall be non-carbonate, non-organic, free of debris, waste, sticks, roots, organics, or other deleterious materials and stones larger than ¼-inch in any dimension.

B. The material shall be sand with a minimum hydraulic conductivity of $1x10^{-3}$ cm/sec (0.001 cm/sec) when placed in accordance with this Section.

C. The laboratory hydraulic conductivity test shall be performed in accordance with ASTM D2434 on a sample compacted to 95 percent Standard Proctor dry density.

D. Protective Soil/Drainage Sand shall meet the following gradation requirements:

SIEVE SIZE	MAXIMUM PERCENT PASSING
No. 4	100
No. 30	95
No. 50	65
No. 70	20
No. 200	10

E. The above gradations may be modified by the ENGINEER if the Protective Soil/Drainage Sand gradation varies from the gradation curve above but still meets the following:

1. Geotextile requirements refer to Section 02940 Geotextile.

2. Interface shear strength requirements refer to Section 02931 Bi-planar Geocomposite.

F. Prior to placement, CQC CONSULTANT shall provide laboratory test results in accordance with Table 02220-1.

1. Pre-construction materials evaluations shall be performed on samples from potential soil borrow sources by the CONTRACTORS independent CQC Laboratory prior to incorporation into construction to ascertain their acceptability as construction materials. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

G. During placement, all materials shall be tested by the CQC CONSULTANT in accordance with Table 02220-2.

1. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

H. The CONTRACTOR shall supply additional protective soil/drainage sand material per the quantity specified in Section 01025 Measurement and Payment which has met the requirements of the Project Specifications and is approved by the ENGINEER. The material shall be stockpiled onsite by the CONTRACTOR in a location as directed by the ENGINEER for future use by the OWNER.

2.05 LEACHATE TRENCH GRAVEL

A. Leachate Trench Gravel placed around the leachate collection pipes shall be non-carbonate, non-organic, free of debris, waste, vegetation, sticks, roots, organics, or other deleterious materials.

B. Leachate Trench Gravel shall be rounded to well-rounded quartz or granite-based

gravel.

C. The gradation shall comply with the requirements for No. 4 aggregate as specified in the Florida Department of Transportation's (FDOT), Standard Specifications for Road and Bridge Construction (2000), Section 901, Table 1, Standard Sizes of Coarse Aggregate, or other materials as approved by the ENGINEER.

D. Prior to placement, CQC CONSULTANT shall provide laboratory test results in accordance with Table 02220-1.

1. Pre-construction materials evaluations shall be performed on samples from potential soil borrow sources by the CONTRACTORS independent CQC Laboratory prior to incorporation into construction to ascertain their acceptability as construction materials. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

E. During placement, all materials shall be tested by the CQC CONSULTANT in accordance with Table 02220-2.

1. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

2.06 GROUNDWATER COLLECTION SYSTEM GRAVEL

A. Groundwater Collection System Gravel placed around the groundwater collection system pipes shall be non-carbonate, non-organic, free of debris, waste, vegetation, sticks, roots, organics, or other deleterious materials.

B. Groundwater Collection System Gravel shall be limerock, quartz or granite-based crushed or rounded river rock, washed and free of deleterious material.

C. The gradation shall comply with the requirements for No. 4 or 57 aggregate as specified in the Florida Department of Transportation's (FDOT), Standard Specifications for Road and Bridge Construction (2000), Section 901, Table 1, Standard Sizes of Coarse Aggregate, or other materials as approved by the ENGINEER.

D. Prior to placement, CQC CONSULTANT shall provide laboratory test results in accordance with Table 02220-1.

1. Pre-construction materials evaluations shall be performed on samples from potential soil borrow sources by the CONTRACTORS independent CQC Laboratory prior to incorporation into construction to ascertain their acceptability as construction materials. Testing shall be performed by the

Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

E. During placement, all materials shall be tested by the CQC CONSULTANT in accordance with Table 02220-2.

1. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

2.07 TOPSOIL

A. Topsoil shall be fertile, natural or amended soil, typical of the locality, free of debris, waste, large stones, roots, sticks, clay, peat, weeds and sod, and obtained from naturally well drained areas.

B. Topsoil shall not be excessively acid or alkaline nor contain toxic material harmful to plant growth. The source of the topsoil shall be approved by the ENGINEER prior to placement by the CONTRACTOR.

C. Upon request by the ENGINEER, the CONTRACTOR shall submit representative samples for use in sodding and seeding operations and results of analysis by a private laboratory to determine nutrient content.

D. The material shall comply with the requirements of FDOT's Standard Specifications for Road and Bridge Construction (2000), Section 987 for Topsoil.

2.08 LIMEROCK

A. Limerock for the access road along the top of the landfill cell embankment shall meet the requirements of Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Section 911.

B. In place density tests of the access road shall be taken at two hundred (200) foot intervals along the centerline of the road using nuclear densiometer per ASTM D6938.

C. In place density tests of the access road finished grade shall be 95% of the maximum dry density as determined by ASTM D698.

PART 3 - EXECUTION

3.01 PREPARATION

A. The CONTRACTOR is responsible for layout of all excavations and establishment of grades as shown on the Contract Drawings. CONTRACTOR shall replace existing survey markers to original location if disturbed or destroyed

at no additional cost to OWNER. Layout WORK shall be performed by a licensed land surveyor registered in the State of Florida.

B. Prior to clearing, grubbing and stripping of the project area the CONTRACTOR shall have performed and submitted to the ENGINEER the topographic surveys as required in Section 01050 Site Conditions Survey.

C. The CONTRACTOR shall provide protection as required to prevent damage to existing improvements indicated to remain in place.

3.02 TEMPORARY EROSION AND SEDIMENTATION CONTROL

A. The CONTRACTOR shall provide temporary erosion and sedimentation control methods in accordance with requirements of authorities having jurisdiction, as specified in the Contract Documents and in Section 01568 Temporary Erosion and Sedimentation Control.

B. The CONTRACTOR shall protect excavated/graded areas against action of the elements. Re-establish grades where settlement, washouts, or erosion damage occurs. Any erosion that takes place during the construction of the project shall be repaired by the CONTRACTOR at no additional cost to the OWNER as per the Specifications provided herein.

3.03 CLEARING, GRUBBING, AND STRIPPING

A. Clear areas required for access to the site and execution of the WORK. Clearing and grubbing shall consist of the complete removal and disposal of all trees, brush, stumps, roots, grass, weeds, rubbish and all other obstructions resting on or protruding through the surface of the existing ground and the surface of the areas to be excavated which are understood by generally accepted practice not to be suitable for construction.

B. Clearing and grubbing shall be accomplished in all areas designated for site grading. Areas to be excavated or filled upon shall be stripped of grass and roots to a depth of six (6) inches. Stripped materials suitable for topsoil shall be stockpiled for later use and all other material shall be disposed of onsite by the CONTRACTOR.

C. Where clearing, grubbing or excavation is conducted within the area where the bottom liner system will be installed, all stumps, roots and other debris protruding through or appearing at the ground surface shall be removed to a depth of not less than 18 inches below the ground surface and the voids replaced with General Fill and compacted with equipment suitable for the WORK to bring the material to the required density and grade as specified in this Section.

3.04 DEWATERING

A. Water that enters excavations with waste shall be considered leachate and shall not be discharged to the ground or other means that are typical for stormwater. Water determined to be leachate by the ENGINEER shall be pumped into sealed tanks, hauled, and disposed into Manhole No. 9 located at the southeast corner of the Phase I area, or as directed by the ENGINEER.

B. The CONTRACTOR shall at all times during construction provide and maintain proper equipment and facilities to remove water entering excavations. CONTRACTOR shall keep such excavations dry so as to obtain a satisfactory foundation condition for all WORK.

C. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottom and soil changes detrimental to stability of subgrades and foundations. Subgrade soils which become soft, loose, "quick", or otherwise unsatisfactory for support of structure as a result of inadequate dewatering or other construction methods shall be removed and replaced by suitable materials as approved by the ENGINEER at the CONTRACTOR'S expense. Provide and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.

D. The CONTRACTOR shall establish and maintain temporary drainage ditches, diversions outside excavation limits, or other acceptable methods as determined by the CONTRACTOR and approved by the ENGINEER to convey rain water and water removed from excavations to collecting or runoff areas as deemed necessary. The CONTRACTOR shall not use trench excavations as temporary drainage ditches.

E. Disposal of Water Removed by Dewatering

1. Water conveyed away from excavations which has not contacted waste materials shall be discharged to areas approved by the ENGINEER.

2. Dispose of water by procedures approved by the ENGINEER in such a manner as to cause no inconvenience to the OWNER, the ENGINEER, or others involved in WORK about the site.

3.05 DISPOSAL OF WASTE MATERIAL

A. Material that does not contain waste, as determined by the ENGINEER, and meets the project Specifications, may be reused and incorporated into the project.

B. The CONTRACTOR shall be responsible for loading and transporting waste and waste materials not incorporated into the project to the landfill (active Phase II Section I filling area) working face or other area as directed by the OWNER for

disposal. The OWNER will not charge the CONTRACTOR a tipping fee, but the CONTRACTOR shall be responsible for all other costs.

C. Exposed waste, or soil containing waste materials, shall not be allowed to remain exposed overnight. At the end of each work day, the CONTRACTOR shall cover exposed waste, or soil containing waste materials, in a temporary or permanent manner by the means of an earthen cover or suitable tarp. At no time shall water exposed to waste be allowed to enter the stormwater management system. Water exposed to waste shall be considered leachate and handled accordingly.

3.06 STOCKPILE OF MATERIALS

A. Excavated material shall be transported to stockpile areas designated by the OWNER for material that will be incorporated into the WORK, surplus, or unsuitable materials. No materials shall be removed from the site or disposed of by the CONTRACTOR except as directed by the ENGINEER. Excavated materials may be segregated during excavation and the ENGINEER or CQA REPRESENTATIVE shall direct locations for segregated materials. The CONTRACTOR shall coordinate disposal activities with the ENGINEER to not interfere with on-going landfill operations activities.

B. The CONTRACTOR shall be responsible for vehicle traffic safety and shall coordinate with the ENGINEER to determine site-specific safety concerns.

C. The CONTRACTOR shall sweep or wash paved roadways that become covered with soil. The CONTRACTOR shall provide all equipment, water, and personnel necessary to clear the paved roads. This activity shall be performed at a minimum of once per week or as the CQA REPRESENTATIVE directs.

3.07 EXCAVATION

A. Layout all excavations and establish grades as shown on the Contract Drawings. Replace existing survey markers at original location if disturbed or destroyed. Layout work shall be performed by a licensed land surveyor registered in the State of Florida.

B. The CONTRACTOR shall provide drainage at all times during construction by shaping excavated areas and maintaining ditches and berms. CONTRACTOR will protect graded areas against action of elements and re-establish grades where settlement, washouts, or erosion damage occurs. Damaged areas shall be repaired at no additional cost to the OWNER.

C. The CONTRACTOR shall excavate soil as required to the lines, grades, and elevations indicated on the Contract Drawings as needed to construct the subbase. Excavate unsuitable subgrade soils if encountered to 18 inches vertically and horizontally around the unsuitable area only within the limits of the bottom liner

system area lines and grades shown on the Contract Drawings. Backfill excavated unsuitable subgrade soil with excavated suitable Existing Subgrade Soil or General Fill and compact with equipment suitable for the WORK to bring the material to the required density and grade.

D. If the bottom of any excavation is removed below the limits shown on the Contract Drawings, it shall be backfilled at the CONTRACTOR'S expense with material approved by the ENGINEER at no additional cost to the OWNER.

E. Excavation, backfilling, sampling, and testing shall be performed by the CONTRACTOR'S CQC CONSULTANT only when the CQA REPRESENTATIVE is present. A minimum of 24-hours prior notice shall be given to the ENGINEER and CQA REPRESENTATIVE.

F. All excavations shall conform to the Health and Safety Plan and Excavation Plan submitted by the CONTRACTOR.

3.08 SUBBASE PREPARATION

A. Conduct subgrade excavation activities, perform grading improvements, and construct embankment to the lines and grades shown on Contract Drawings in preparation for the additional layer of 60 mil textured HDPE geomembrane in the area identified in the Contract Documents and GCL placement. Smooth finish surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated or between such points and existing grades. The ENGINEER reserves the right to make adjustments or revisions in lines or grades as the WORK progresses while still achieving the intent of the grading plan.

B. Compact (and moisture condition as needed) the existing exposed satisfactory subgrade soils for subbase preparation to a minimum of 90% relative compaction as determined by ASTM D698. The exposed subgrade soils shall be proof-rolled a minimum of 4 complete passes with a vibratory steel drum roller (with vibratory action turned on) or other equipment approved by the ENGINEER.

C. Areas that cannot be made to compact readily, deflect, pump or rut under this operation shall be removed and replaced with excavated suitable Existing Subgrade Soil or General Fill and compacted as indicated in Part 3.09 of this Section. Subgrade soils excessively wet or dry are considered unsuitable soils and shall be removed and replaced with excavated suitable Existing Subgrade Soil or General Fill and compacted as indicated in Part 3.09 of this Section. Care shall be taken when selecting construction equipment sizes and the amount of traffic on the subgrade. The combination of heavy construction equipment and excess surface moisture can cause pumping and deterioration of the near surface soils.

D. In cuts, all loose or protruding rocks on the excavated sideslopes shall be loosened

and removed to line or finished grade of slope. All cut and fill slopes shall be as shown on the Contract Drawings or as directed by the ENGINEER.

E. Areas of the prepared subbase which do not achieve the lines and grades shown on Contract Drawings, the CONTRACTOR shall place and compact excavated suitable Existing Subgrade Soil or General Fill in accordance with Part 3.09 of this Section to achieve the lines and grades.

F. Within the area which the additional layer of 60 mil textured HDPE geomembrane in the area identified in the Contract Documents and GCL will be placed, remove any debris, sticks, roots, stones and sharp materials greater than ½-inch in any dimension from the finished subbase surface. Smooth finished subbase surface to remove rutting and tire marks. The CONTRACTOR shall avoid sharp turns, sudden starts or stops, spinning and digging of tracks, or any other operation that could damage the surface.

G. Grade the prepared subbase to the required vertical tolerance. By survey methods, verify that all grades, slopes and elevations conform to specified requirements. Record elevations of each component in accordance with Section 01050 Site Condition Surveys. If there is a discrepancy, immediately notify the ENGINEER. Do not proceed with installation in an area of discrepancy until the ENGINEER gives approval.

H. Maintain proper drainage during grading operations until final acceptance. Repair any fill or grading materials which may be lost or displaced as a result of natural causes such as storms, squalls, etc., with acceptable material. Repair shall be performed at no additional cost to the OWNER. The additional survey or documentation necessary to conduct the repairs shall be at no additional cost to the OWNER.

I. Maintain the soil moisture until covered by GCL and liner materials. The groundwater level shall be maintained during construction as required in Section 02140 Dewatering.

J. Placement of the additional layer of 60 mil textured HDPE geomembrane in the area identified in the Contract Documents or GCL on the completed subbase shall not begin until the "Certificate of Subbase Acceptance" has been co-signed by the INSTALLER along with the CQA REPRESENTATIVE certifying the Subbase Layer was constructed in accordance with the approved Contract Documents and Specifications. Refer to Section 02077 Geosynthetic Clay Liner (GCL).

K. Placement of the additional layer of 60 mil textured HDPE geomembrane in the area identified in the Contract Documents or GCL on the completed subbase shall not begin until the topographic survey (Record Drawing) of the completed Subbase Layer has been submitted by the CONTRACTOR and approved by the ENGINEER. Refer to Section 01050 Site Condition Surveys.

L. Prior to material placement, CQC CONSULTANT shall provide laboratory test results in accordance with Table 02220-1.

1. Pre-construction materials evaluations shall be performed on samples from potential soil borrow sources by the CONTRACTORS independent CQC Laboratory prior to incorporation into construction to ascertain their acceptability as construction materials. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

M. During material placement, all materials shall be tested by the CQC CONSULTANT in accordance with Table 02220-2.

1. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

3.09 PLACEMENT OF SOIL FILL AND COMPACTION

A. Place designated soil fill materials, excavated Existing Subgrade Soil, General Fill or Structural Fill, perform grading improvements, compact, and construct embankments to the lines and grades shown on Contract Drawings. Smooth finish surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated or between such points and existing grades. The ENGINEER reserves the right to make adjustments or revisions in lines or grades as the WORK progresses while still achieving the intent of the grading plan.

B. Place designated soil fill material in the areas required in loose lifts not exceeding 12 inches.

C. Each lift shall be compacted to the required density based on the type of soil fill material.

1. General Fill - Compact each lift to a minimum of 90% relative compaction as determined by ASTM D698.

2. Structural Fill - Compact each lift to a minimum of 95% relative compaction as determined by ASTM D698.

3. Excavated Existing Subgrade Soil - Compact each lift to a minimum of 90% relative compaction as determined by ASTM D698.

D. Compaction equipment used is at the discretion of the CONTRACTOR.

E. Areas that deflect, pump or rut under this operation shall be reworked by the CONTRACTOR.

F. Within the excavated Existing Subgrade Soil or General Fill area which the additional layer of 60 mil textured HDPE geomembrane in the area identified in the Contract Documents or GCL will be placed, remove any debris, sticks, roots, stones and sharp materials greater than ½-inch in any dimension from the finished subbase surface. Smooth finished subbase surface to remove rutting and tire marks. The CONTRACTOR shall avoid sharp turns, sudden starts or stops, spinning and digging of tracks, or any other operation that could damage the surface.

G. Grade the prepared filled area to the required vertical tolerance. By survey methods, verify that all grades, slopes and elevations conform to specified requirements. Record elevations of each component in accordance with Section 01050 Site Condition Surveys. If there is a discrepancy, immediately notify the ENGINEER. Do not proceed with installation in an area of discrepancy until the ENGINEER gives approval.

H. Maintain proper drainage during grading operations until final acceptance. Repair any fill or grading materials which may be lost or displaced as a result of natural causes such as storms, squalls, etc., with acceptable material. Repair shall be performed at no additional cost to the OWNER. The additional survey or documentation necessary to conduct the repairs shall be at no additional cost to the OWNER.

I. Maintain the soil moisture within the area which GCL will be placed until covered by GCL and liner materials. The groundwater level shall be maintained during construction as required in Section 02140 Dewatering.

J. Placement within areas intended for the additional layer of 60 mil textured HDPE geomembrane in the area identified in the Contract Documents or GCL installation shall not begin until the "Certificate of Subbase Acceptance" has been co-signed by the INSTALLER along with the CQA REPRESENTATIVE certifying the Subbase Layer was constructed in accordance with the approved Contract Documents and Specifications. Refer to Section 02077 Geosynthetic Clay Liner (GCL).

K. Placement within areas intended for the additional layer of 60 mil textured HDPE geomembrane in the area identified in the Contract Documents or GCL installation shall not begin until the topographic survey (Record Drawing) of the completed Subbase Layer has been submitted by the CONTRACTOR and approved by the ENGINEER. Refer to Section 01050 Site Condition Surveys.

L. Prior to material placement, CQC CONSULTANT shall provide laboratory test results in accordance with Table 02220-1.

1. Pre-construction materials evaluations shall be performed on samples from potential soil borrow sources by the CONTRACTORS independent CQC

Laboratory prior to incorporation into construction to ascertain their acceptability as construction materials. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

2. Pre-construction materials evaluations shall be performed on samples from the existing subgrade soil by the CONTRACTORS independent CQC Laboratory prior to incorporation into construction. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

M. During material placement, all materials shall be tested by the CQC CONSULTANT in accordance with Table 02220-2.

1. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

3.10 PLACEMENT OF GROUNDWATER COLLECTION SYSTEM GRAVEL

A. Place Groundwater Collection System Gravel around the groundwater collection pipes wrapped with woven geotextile to the lines and grades shown on the Contract Drawings.

B. Refer to Section 02940 Geotextile.

3.11 PLACEMENT OF LEACHATE TRENCH GRAVEL

A. Placement of the Leachate Collection System materials will only occur after the underlying geosynthetic material installations are complete and approved in accordance with the Specifications. Placement of the Leachate Collection System materials shall be conducted in accordance with the Drainage Material Installation Plan submitted by the CONTRACTOR.

B. Place Leachate Trench Gravel around the leachate collection pipes wrapped with geotextile to the lines and grades shown on the Contract Drawings.

C. Refer to Section 02940 Geotextile.

3.12 PLACEMENT OF PROTECTIVE/DRAINAGE SOIL

A. Placement of the Protective Soil/Drainage Sand materials will only occur after the underlying geosynthetic material installations are complete and approved in accordance with the Specifications. Placement of Protective Soil/Drainage Sand

shall be conducted in accordance with the Drainage Material Installation Plan submitted by the CONTRACTOR.

B. Place Protective Soil/Drainage Sand to the lines and grades shown on the Contract Drawings. The CONTRACTOR shall place a minimum of 24 inches of Protective Soil/Drainage Sand (measured perpendicular to the slope) meeting the requirements specified in this Section.

C. Low ground pressure equipment shall be used to place and spread the Protective Soil/Drainage Sand. The CONTRACTOR shall use extreme care when working above the geosynthetic liner system. A minimum of 18 inches of soil shall be between the low ground pressure equipment and the geosynthetic liner system at all times. Any damage to the geosynthetic liner system shall be repaired by the CONTRACTOR at no additional cost to OWNER.

D. Place Protective Soil/Drainage Sand in a manner to not cause wrinkles and undue stresses to the underlying geosynthetic liner system.

E. The CONTRACTOR shall provide and maintain a means of continuously observing the installed depth of the Protective Soil/Drainage Sand as indicated in the Drainage Material Installation Plan on the required grid intervals. If temporary markers are used, the marker shall be free standing and shall not be sharp or pointed so it cannot damage the geosynthetic liner materials if hit by equipment. Markers shall be removed after use and shall not be abandoned in-place after Protective Soil/Drainage Sand installation.

F. Maintain proper drainage during grading operations until final acceptance. Repair any fill or grading materials which may be lost or displaced as a result of natural causes such as storms, squalls, etc., with acceptable material. Repair shall be performed at no additional cost to the OWNER. The additional survey or documentation necessary to conduct the repairs shall be at no additional cost to the OWNER.

G. By survey methods, verify that all grades, slopes, and elevations conform to specified requirements. Record elevations in accordance with Section 01050 Site Condition Surveys. If there is a discrepancy, immediately notify the ENGINEER. Do not proceed with installation in an area of discrepancy until the ENGINEER gives approval.

H. A Geosynthetic Rain Tarp shall be required on a portion of the Protective Soil/Drainage Sand as indicated on the Contract Drawings. Refer to Section 02941 Geosynthetic Rain Tarp.

3.13 PLACEMENT OF TOPSOIL

A. Place Topsoil, perform grading improvements, and construct embankments to the lines and grades shown on Contract Drawings. Smooth finish surface within

specified tolerances, compact with uniform levels or slopes between points where elevations are indicated or between such points and existing grades. The ENGINEER reserves the right to make adjustments or revisions in lines or grades as the WORK progresses while still achieving the intent of the grading plan.

B. Materials excessively wet or dry are considered unsuitable. Allow such material to dry, or moisten, as required, to bring material generally within 3 percent of optimum moisture content range for specified compaction.

C. Maintain proper drainage during grading operations until final acceptance. Repair any fill or grading materials which may be lost or displaced as a result of natural causes such as storms, squalls, etc., with acceptable material. Repair shall be performed at no additional cost to the OWNER. The additional survey or documentation necessary to conduct the repairs shall be at no additional cost to the OWNER.

3.14 SODDING/REVEGETATION

A. Grass seeding and mulching shall be required in the entire area of the CONTRACTOR'S construction staging/laydown area, regardless of the approximate limits that may be indicated on the Contract Drawings. Refer to Section 02900 Seeding and Sodding.

B. CONTRACTOR shall maintain the seeded and sodded areas in accordance with Section 02900 Seeding and Sodding.

3.15 TESTING REQUIREMENTS DURING PLACMENT

A. Prior to material placement, CQC CONSULTANT shall provide laboratory test results in accordance with Table 02220-1.

1. Pre-construction materials evaluations shall be performed on samples from potential soil borrow sources by the CONTRACTORS independent CQC Laboratory prior to incorporation into construction to ascertain their acceptability as construction materials. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

B. During material placement, all materials shall be tested by the CQC CONSULTANT in accordance with Table 02220-2.

1. Testing shall be performed by the Soils CQA Laboratory during the course of the WORK to verify continued material compliance with the Plans and Technical Specifications.

C. Composite soil samples are not allowed.

D. Nuclear determination of field density may be used.

E. Location of field moisture-density tests shall be approved by the ENGINEER.

3.16 TOLERANCES

A. The CONTRACTOR shall bring final grading to within the tolerances specified in Section 01050 Site Conditions Survey.

3.17 DUST CONTROL

A. The CONTRACTOR shall spray water over the construction area, haul roads, or other places impacted by the CONTRACTOR, in order to limit airborne dust, or as directed by the ENGINEER or OWNER.

B. If due to construction activities the dust reduces the visibility so vehicles and personnel are limited and cause a Health and Safety problem, all construction activities will be stopped immediately until the CONTRACTOR applies water to the construction area, haul roads, or other places being impacted by the CONTRACTOR'S activities.

TABLE 02220-1 SOIL QUALIFICATION TESTING

MATERIAL	TEST	ASTM NO.	FREQUENCY
Excavated Existing Subgrade Soil	Natural Moisture Content	ASTM D2216	1 test per source or change in material
	Standard Proctor	ASTM D698	
	Soil Classification	ASTM D2487	
	Sieve Analysis	ASTM D422	
	Atterberg Limits	ASTM D4318	
General Fill	Natural Moisture Content	ASTM D2216	1 test per source or change in material
	Standard Proctor	ASTM D698	
	Soil Classification	ASTM D2487	
	Sieve Analysis	ASTM D422	
	Atterberg Limits	ASTM D4318	
	Chemical Compatibility	ASTM D6141	
Structural Fill	Natural Moisture Content	ASTM D2216	1 test per source or change in material
	Soil Classification	ASTM D2487	
	Sieve Analysis	ASTM D422	
	Atterberg Limits	ASTM D4318	
	Standard Proctor	ASTM D698	
Protective Soil/Drainage Sand and Additional Stockpile Material	Sieve Analysis	ASTM D422	1 test per source or change in material sample compacted to 95% Standard Proctor in lab
	Hydraulic Conductivity	ASTM D2434	
Leachate Trench Gravel	Sieve Analysis	ASTM D422	1 test per source or change in material
Groundwater Collection System Gravel	Sieve Analysis	ASTM D422	1 test per source or change in material
Limerock	Sieve Analysis	ASTM D422	1 test per source or change in material
	Atterberg Limits	ASTM D4318	
	Standard Proctor	ASTM D698	
	Limerock Bearing Ratio	FM 5-515	
Topsoil	Soil Classification	ASTM D2487	1 test per source or change in material
	Organic Content	ASTM D2974	

TABLE 02220-2 TESTING DURING PLACMENT

MATERIAL	TEST	ASTM NO.	FREQUENCY	VALUE
In-place Density Testing (Subbase)	Density	ASTM D6938	2/Acre	95% of Standard Proctor
In-place Density Testing (Excavated Existing Subgrade Soil and General Fill)	Density	ASTM D6938	2/Acre/Lift (Cell Bottom) 1/300 Feet/Lift (Embankment)	95% of Standard Proctor
In-place Density Testing (Structural Fill)	Density	ASTM D6938	2/Acre/Lift	95% of Standard Proctor
Excavated Existing Subgrade Soil and General Fill	Natural Moisture Content	ASTM D2216	1/5,000 CY	See 02220-2.01.B and 02220-2.02.C
	Standard Proctor	ASTM D698		
	Soil Classification	ASTM D2487		
	Sieve Analysis	ASTM D422		
	Atterberg Limits	ASTM D4318		
	Chemical Compatibility	ASTM D6141		
Structural Fill	Natural Moisture Content	ASTM D2216	1/5,000 CY	See 02220-2.03.B
	Standard Proctor	ASTM D698		
	Soil Classification	ASTM D2487		
	Sieve Analysis	ASTM D422		
	Atterberg Limits	ASTM D4318		
Protective Soil/Drainage Sand	Sieve Analysis	ASTM D422	1/5,000 CY	See 02220-2.04.B and C
	Hydraulic Conductivity (@95% Std Proctor)	ASTM D2434		1.0×10^{-3} cm/sec
Leachate Trench Gravel	Sieve Analysis	ASTM D422	1/5,000 CY	No. 4 or 57
Groundwater Collection System Gravel	Sieve Analysis	ASTM D422	1/5,000 CY	No. 4 or 57

Limerock Access Road	Density	ASTM D6938	1/200 Feet	95% of Standard Proctor
Topsoil	Organic Content	ASTM D2974	1 test per source or change in material	2 to 10 percent

END OF SECTION

FIGURES

Figure 1 Yard Trash Processing Area Layout

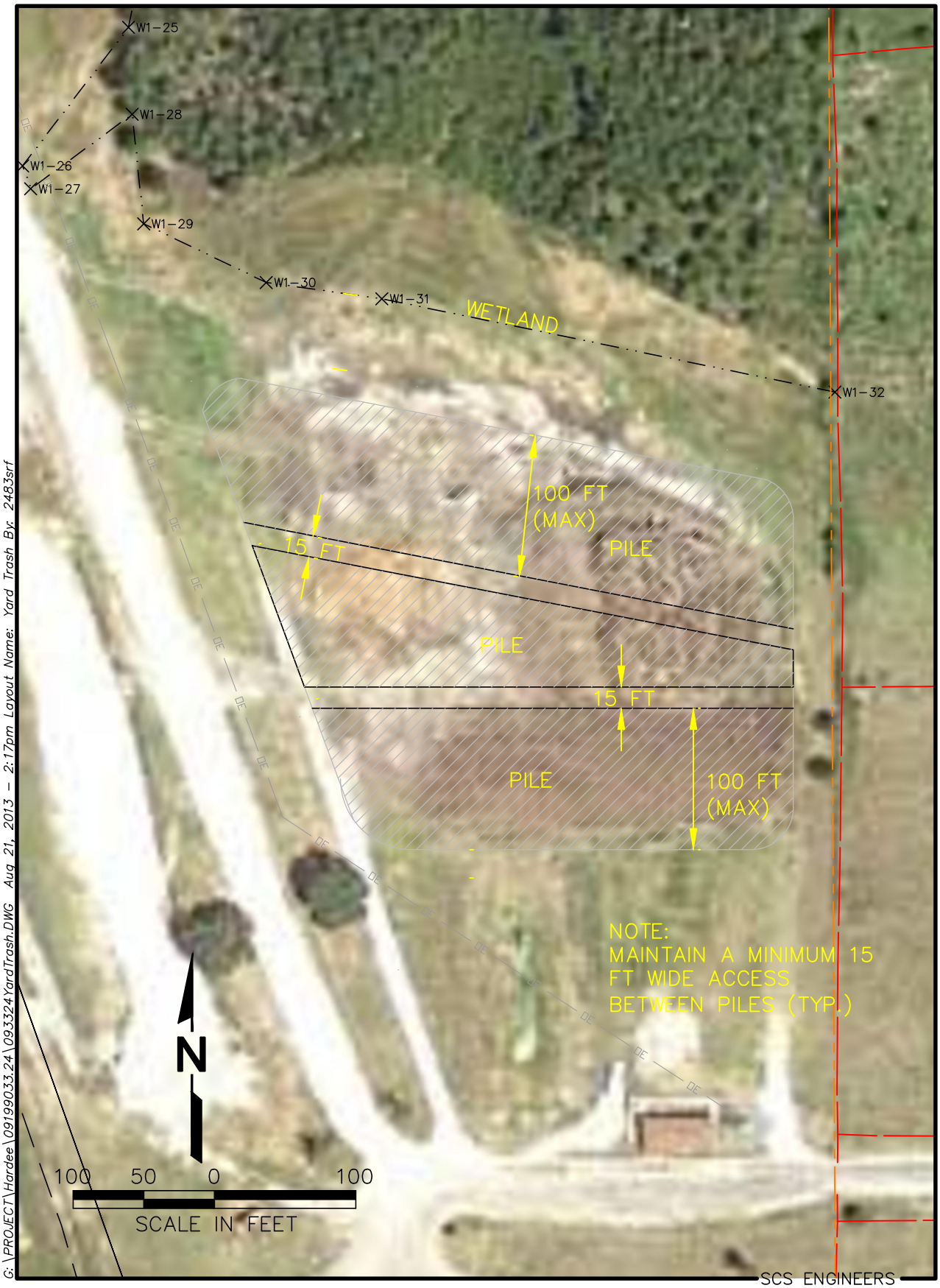

Figure 1. Yard Trash Processing Area Layout

Figure 2 Monitoring Locations

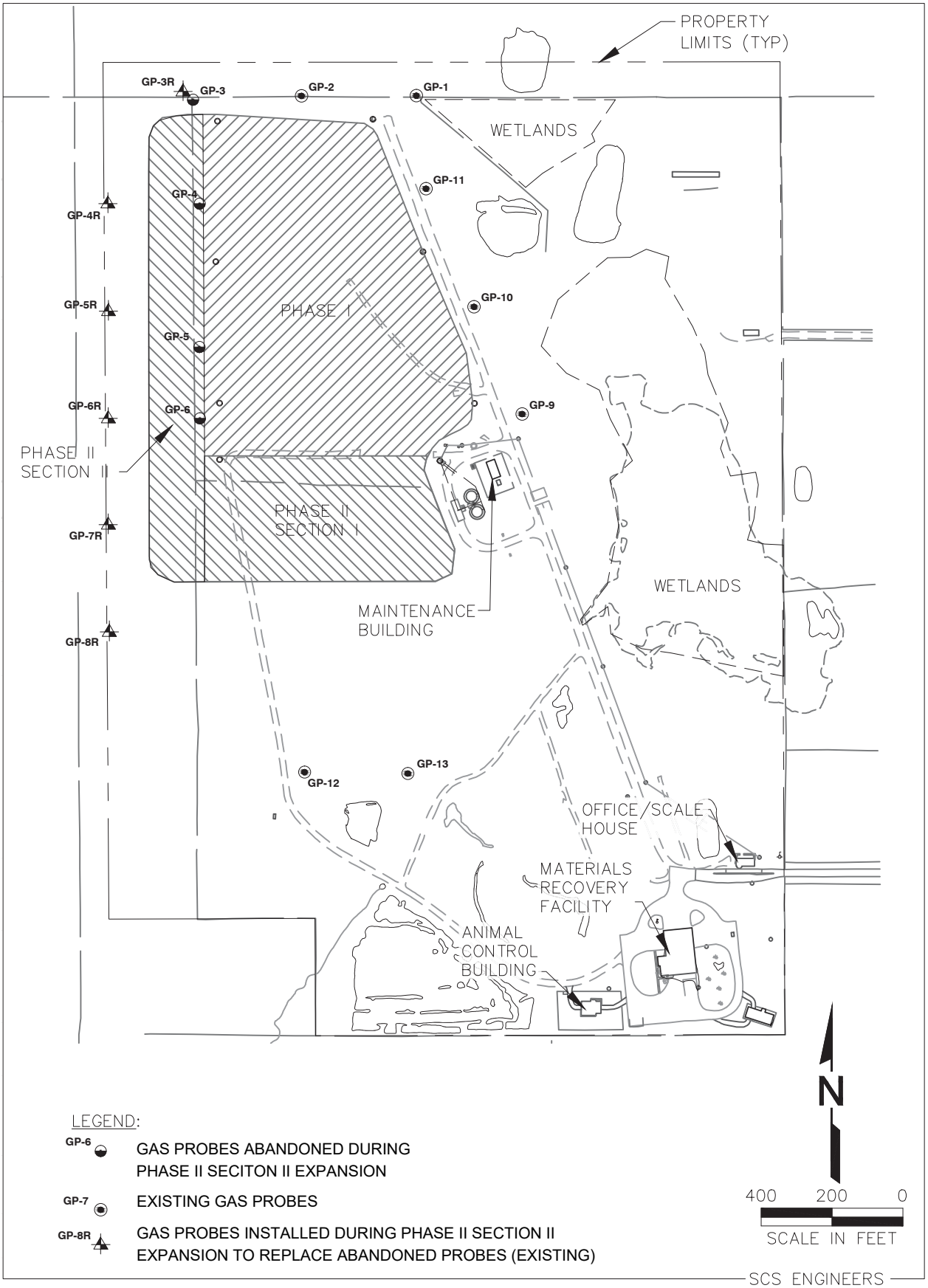

Figure 2. Hardee County Solid Waste, Monitoring Locations
Hardee County, Florida.