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June 10, 2005

Via Hand Delivery

Ms. Susan J. Pelz, P.E.
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Subject: **Request for Major Permit Modification and Renewal**
Angelo's Recycling MRF - Tampa
Hillsborough County, Florida
FDEP Permit #158951-001-SC

HAI #98.0104.018
File 12.0

Dear Ms. Pelz:

On behalf of Angelo's Aggregate Materials, Ltd. (Angelo's), Tetra Tech HAI (Tt HAI) is submitting a request for a major modification and renewal to the above solid waste facility construction permit and a request for a operation permit. A check in the amount of $2,000 for the permit review fee is attached.

The previously approved documents have been amended only as necessary and are organized in the following format.

- Section 1 Application Form
- Section 2 Ownership Documents and Boundary Survey
- Section 3 Engineering Report
- Section 4 Operations Plan
- Section 5 Geotechnical Report and Update
- Section 6 Stormwater Management

Due to the extent of changes to the Engineering Report and Operations Plan, new reports were submitted, rather than revised, using the underline and strike-through method. All plan sheets referenced in the application submittal are bound and are intended to supplement the application. Building and foundation plans will be submitted under separate cover. The modified stormwater management system design is pending and will be submitted under separate cover for review.

201 East Pine Street, Suite 1000, Orlando, FL 32801
Tel 407.839.3955 Fax 407.839.3790
www.tetratech.com

Please call me if you have any questions during the permit application review process.

Very truly yours,

Tetra Tech HAI

6/10/05
Jennifer L. Deal, P.E.
Project Manager

JLD/cr/98.0104.018/corresp/Pelz.jld
Attachment
cc: Neiro DeRubeis, Angelo's
Dominic Iafrate, Angelo's

SECTION 1

APPLICATION FORM

A new application form for the major modification and renewal request is attached.

DEP Form # 62-701.900(4)
Form Title Application to Construct, Operate or Modify a Waste Processing Facility
Effective Date 05-27-01

DEP Application No. _____
(Filled by DEP)

Florida Department of Environmental Protection

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION FOR PERMIT TO CONSTRUCT, OPERATE OR MODIFY A WASTE PROCESSING FACILITY

GENERAL REQUIREMENT: Solid Waste Management Facilities shall be permitted pursuant to Section 403.707, Florida Statutes, (F.S.) and in accordance with Florida Administrative Code (F.A.C.) Chapter 62-701. A minimum of four copies of the application shall be submitted to the Department District Office having jurisdiction over the facility. The appropriate fee in accordance with Rule 62-701.315(4), F.A.C., shall be submitted with the application by check made payable to the Department of Environmental Protection (DEP). Complete appropriate sections for the type of facility for which application is made and include all additional information, drawings, and reports necessary to evaluate the facility.

Please Type or Print in Ink

A. GENERAL INFORMATION

1. Type of facility (check all that apply):
   - [ ] Transfer Station
   - [✓] Materials Recovery Facility:
     - [✓] C&D Recycling
     - [✓] Class III MRF
     - [ ] MSW MRF
     - [ ] Other Describe: _____
   - [ ] Volume Reduction Facility
     - [ ] Pulverizer/Shredder
     - [ ] Compactor/Baling
     - [ ] Other Describe: _____

   NOTE: C&D Disposal facilities that also recycle C&D, shall apply on DEP FORM 62-701.900(6), F.A.C.

2. Type of application:
   - [✓] Construction/Operation
   - [ ] Operation Without Additional Construction

3. Classification of application:
   - [ ] New
   - [✓] Renewal
   - [✓] Substantial Modification
   - [ ] Intermediate Modification
   - [ ] Minor Modification

4. Facility name: Angelo's Recycled Materials

5. DEP ID number: 158951-001-SC County: Hillsborough

6. Facility location (main entrance): 1201 East 148th Avenue
   Lutz, Florida

7. Location coordinates:

   Section: 6 Township: 28S Range: 19E

   UTMs: Zone 17 355.17 km E 3107.79 km N

   Latitude: 28 ° 05 ' 0.19 " Longitude: 82 ° 26 ' 50.13 "

8. Applicant name (operating authority): Angelo's Aggregate Materials, Ltd.

Mailing address: P.O. Box 1493, Largo, FL 33779
Street or P.O. Box City State Zip

Contact person: Dominic Iafrate Telephone: (727) 581-1544

Title: President diafrate@iafrate.com
E-Mail address (if available)

9. Authorized agent/Consultant: Hartman & Associates, Inc.

Mailing address: 201 E. Pine Street, Ste 1000, Orlando, FL
Street or P.O. Box City State Zip

Contact person: Jennifer Deal, P.E. Telephone: (407) 839-3955

Title: Project Manager jennifer.deal@tetratech.com
E-Mail address (if available)

10. Landowner(if different than applicant): Stoney Pointe Development

Mailing address: 26400 Sherwood Avenue, Warren, MI 48091
Street or P.O. Box City State Zip

Contact person: Dominic Iafrate Telephone: (727) 581-1544

diafrate@iafrate.com
E-Mail address (if available)

11. Cities, towns and areas to be served:

Tampa and surrounding vicinities

12. Date site will be ready to be inspected for completion: June 2006

13. Estimated costs:

Total Construction: $ 1,500,000 Closing Costs: $ 1,284,226.83

14. Anticipated construction starting and completion dates:

From: December 2005 To: June 2006

15. Expected volume of waste to be received: 4333 yds^3/day 1300 tons/day

16. Provide a brief description of the operations planned for this facility:

Mixed C&D and Class III material to be sorted and recycled. Concrete, asphalt, and wood to be crushed or chipped. Processed materials will be sold.

B. ADDITIONAL INFORMATION

Please attach the following reports or documentation as required.

1. Provide a description of the solid waste that is proposed to be collected, stored, processed or disposed of by the facility, a projection of those waste types and quantities expected in future years, and the assumptions used to make the projections (Rule 62-701.710(2)(a), F.A.C.).

2. Attach a site plan, signed and sealed by a professional engineer registered under Chapter 471, F.S., with a scale not greater than 200 feet to the inch, which shows the facility location, total acreage of the site, and any other relevant features such as water bodies or wetlands on or within 200 feet of the site, potable water wells on or within 500 feet of the site and wells serving community water supplies on or within 1000 feet of the site (Rule 62-701.710(2)(b), F.A.C.).

3. Provide a description of the operation and functions of all processing equipment that will be used, with design criteria and expected performance. The description shall show the flow of solid waste and associated operations in detail, and shall include (Rule 62-701.710(2)(c), F.A.C.):
   a. Regular facility operations as they are expected to occur;
   b. Procedures for start up operations, and scheduled and unscheduled shut down operations; and
   c. Potential safety hazards and control methods, including fire detection and control.

4. Provide a description of the design requirements for the facility which demonstrate how the applicant will comply with Rule 62-701.710(3), F.A.C.

5. Provide a description of the loading, unloading, storage and processing areas (Rule 62-701.710(2)(d), F.A.C.).

6. Provide the identification and capacity of any on-site storage areas for recyclable materials, non-processable wastes, unauthorized wastes, and residues (Rule 62-701.710(2)(e), F.A.C.).

7. Provide a plan for disposal of unmarketable recyclable materials and residue, and for waste handling capability in the event of breakdowns in the operations or equipment (Rule 62-701.710(2)(f), F.A.C.).

8. Provide a boundary survey, legal description, and topographic survey of the property(Rule 62-701.710(2)(g), F.A.C.).

9. Provide an operation plan which describes how the applicant will comply with Rule 62-701.710(4), F.A.C. (Rule 62-701.710(2)(h), F.A.C.).

10. Provide a closure plan which describes generally how the applicant will comply with Rule 62-701.710(6), F.A.C. (Rule 62-701.710(2)(I). F.A.C.).

11. Unless exempted by Rule 62-701.710(10(a), F.A.C., provide the financial assurance documentation required by Rule 62-701.710(7), F.A.C. (Rule 62-701.710(2)(j), F.A.C.).

12. Provide documentation to show that stormwater will be controlled according to the requirements of Rule 62-701.710(9), F.A.C.

13. Provide documentation to show that the applicant will comply with the recordkeeping requirements of Rule 62-701.710(9), F.A.C.

C. **CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER**

1. Applicant:

The undersigned applicant or authorized representative of Angelo's Aggregate Materials, Ltd. is aware that statements made in this form and attached information are an application for a waste processing facility Permit from the Florida Department of Environmental Protection and certifies that the information in this application is true, correct and complete to the best of his/her knowledge and belief. Further, the undersigned agrees to comply with the provisions of Chapter 403, Florida Statutes, and all rules and regulations of the Department. It is understood that the Permit is not transferable, and the Department will be notified prior to the sale or legal transfer of the permitted facility.

Signature of Applicant or Agent

Dominic Iafrate
Name and Title (please type)

diafrate@iafrate.com
E-Mail address (if available)

P.O. Box 1493
Mailing Address

Largo, Florida 33779
City, State, Zip Code

(727) 581-1544
Telephone Number

Date: 6/6/05

Attach letter of authorization if agent is not a governmental official, owner, or corporate officer.

2. Professional Engineer registered in Florida (or Public Officer if authorized under Sections 403.707 and 403.7075, Florida Statutes):

This is to certify that the engineering features of this waste processing facility have been designed/examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, this facility, when properly maintained and operated, will comply with all applicable statutes of the State of Florida and rules of the Department. It is agreed that the undersigned will provide the applicant with a set of instructions of proper maintenance and operation of the facility.

Signature

Jennifer Deal, P.E.
Name and Title (please type)

68592
Florida Registration Number
(please affix seal)

201 E. Pine St, Ste 1000
Mailing Address

Orlando, FL 32801
City, State, Zip Code

jennifer.deal@tetratech.com
E-Mail address (if available)

(407) 839-3955
Telephone Number

Date: 6/9/05

SECTION 2

OWNERSHIP DOCUMENTS AND BOUNDARY SURVEY

Neither ownership nor boundaries of the subject property has changed since the previous submittal of these documents. Therefore, these items have not been included in this application submittal.

SECTION 3

ENGINEERING REPORT

A revised Engineering Report describing the new features of the facility is attached.

SECTION 3

ENGINEERING REPORT

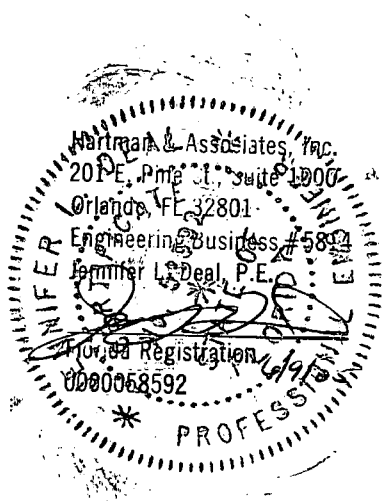
ANGELO'S RECYCLED MATERIALS APPLICATION FOR MAJOR MODIFICATION AND RENEWAL FOR A WASTE PROCESSING FACILITY

PREPARED FOR:

ANGELO'S AGGREGATE MATERIALS, LTD.
1755 20TH AVENUE S.E.
LARGO, FLORIDA 33771

PREPARED BY:

TETRA TECH HAI
201 E. Pine Street, Suite 1000
Orlando, Florida 32801



JUNE 2005

Tt-HAI# 98.0104.018

SECTION 3
ENGINEERING REPORT

3.1 INTRODUCTION

The purpose of the recycling operation is to receive Class III and construction and demolition (C&D) debris materials, and to process and sell as recovered/recycled materials. The process will include concrete crushing, wood handling and chipping gear, screening and sorting line equipment, and site material handling equipment. The operation will include weighing the material brought to the site, sorting and processing, and selling the recovered/recycled materials. Unusable material will be removed from the site and disposed at the locations listed in Appendix G of the Operations Plan. The unusable material is expected to consist mainly of drywall, PVC plastic pipe, insulation, and plastic sheeting.

The facility Site Plan and operations have been modified to increase efficiency of the recycling operation. Modifications include a new scale and scalehouse facilities, new office facilities, a processing building expansion, additional processing equipment, and a modified stormwater management system. These modifications are described throughout the Engineering Report and Operations Plan as necessary.

The proposed building expansion includes approximately 60,000 square feet for processing operations. The proposed building expansion plans, provided by Canco General Contractors (Canco), are submitted under separate cover. A Foundation Plan and details, provided by Warlick/Hall Engineering, Inc., are submitted under separate cover.

3.2 SITE DESCRIPTION

The property currently consists of 20.4 acres in a basically rectangular shape with an existing concrete crushing operation located on the western portion of the site. The topography generally slopes to the south with a slight depression in the southeast corner of the property. The elevation ranges from approximately 52 to 55 feet NGVD. Access will be off of East 148th Avenue and 12th Street along the north-central portion of the property.

3.2.1 Prohibition Compliance

Operation of the proposed facility, as outlined in this report, should not violate the prohibitions of Rule 62-701, Florida Administrative Code as stated below.

(1) (a) No solid waste shall be stored or processed at the site prior to receipt of an FDEP solid waste permit.

(b) No solid waste shall be stored in a manner or location that will cause air quality or water quality standards to be violated, as described in the application.

(2) No onsite solid waste disposal is proposed.

(a) The proposed area for storage of solid waste is not believed to be in an area of unstable geological formations or soils. Soil borings will be taken in the area of the proposed building and scales for geotechnical analysis to ensure suitability for solid waste storage.

(b) A well survey was previously performed to locate existing water supply wells within 500 feet of the proposed facility. The facility has received a variance from the private well setback prohibition. Additionally, the waste is to be stored in a building with leachate collection and a foundation designed to meet the requirements of F.A.C. Rule 62-701.300(14). No solid waste will be stored in a dewatered pit.

(c) The proposed facility is not located within the 100-year flood zone, as indicated on Figure 3-2.

(d) No solid waste will be stored in a water body.

(e) No solid waste will be stored within 200 feet of any natural or artificial body of water or any wetland.

(f) No solid waste will be stored on any road right-of-way.

(g) A well survey was previously performed by the SWFWMD. The proposed WPF is not within 1,000 feet of a community potable well.

(3) No burning is proposed at the site.

(4) Hazardous wastes are unacceptable wastes at the proposed site.

(5) PCB wastes are unacceptable wastes at the proposed site.

(6) Biohazardous wastes are unacceptable wastes at the proposed WPF.

(7) Not applicable. No landfill is proposed.

(8) Not applicable. No landfill is proposed.

(9) Not applicable. No waste-to-energy facility is proposed.

(10) Not applicable. No landfill is proposed.

(11) (a) Not applicable. No landfill is proposed.

(b) Not applicable. No landfill is proposed.

(12) Yard trash received will remain within the designated setback distance requirements.

(13) Not applicable. No solid waste storage tanks are proposed.

(14) The WPF building will have an impervious area and a leachate collection system.

(15) Not applicable. No storage of waste in vehicles is proposed.

3.2.2 Soils

According to the SCS Soil Survey of Hillsborough County, Florida, the soils on the site consist mainly of Zolzo fine sand (Map ID 61) with small occurrences of Malabar fine sand (Map ID 27) and Basinger, Holopaw, and Samsula soils, depressional (Map ID 5) along the western property boundary. Zolzo fine sand is nearly level and somewhat poorly drained with a seasonal high water table at a depth of 24 to 40 inches for more than 2 to 6 months and 60 inches during prolonged dry periods. Malabar fine sand runs along the northwestern boundary and is poorly drained. In most years, the seasonal high water table fluctuates from land surface to a depth of 10 inches for 2 to 6 months. Basinger, Holopaw, and Samsula soils, depressional, cover the southwest corner of the site and are very poorly drained. In most years, the undrained areas in this map unit are ponded for about 6 months. A soils map is provided as Figure 3-1.

3.2.3 Geology

The property is located in the Gulf Coastal Lowlands physiographic province. Based on USGS Map Series No. 110, the site is located in an area consisting of mainly cohesive clayey surficial sediments of low permeability where sinkholes are most numerous, of varying size, and develop abruptly. Surficial sediments in the area consist of approximately 25 feet of sand with shell, clay, and marl. Underlying these sediments is a 25 to 50 foot confining unit of sand and clay (Hawthorn Group) followed by a thick sequence of limestone and dolomite (Arcadia Formation, Suwanee Limestone, Ocala Limestone, and Avon Park Formation) which comprises the Floridan aquifer (SWFWMD Ground-Water Resource Availability Inventory: Hillsborough County, Florida, 1988).

3.2.4 Flood Plain and Wetlands

A flood insurance rate map produced by the Federal Emergency Management Agency is provided as Figure 3-2. The map shows that no portion of the site is within the 100-year flood plain.

A wetlands map taken from the National Wetlands Inventory is provided in Figure 3-3. The map shows that only the very tip of the southwest corner of the property is in an area classified as a wetland. This area will be left undisturbed.

3.2.5 Well Survey

A well survey was performed in 2000, which searched the state, federal, and Southwest Florida Water Management District databases. A field check was conducted to verify the well locations that were indicated to be within 1,000 feet of the subject property boundary. Seven (7) private wells were verified to exist within 1,000-feet and six (6) were within 500-feet. These approximate well locations are shown in Figure 3-4. As numbered on Figure 3-4, well 1 is used for a single trailer; well 2 is used for a small trailer park (less than 15 connections); well 3 and well 5 are used for businesses; well 4 is on the property of a business but did not appear to be in service; well 6 is used for a drilling company; and, well 7 is used for a pool at a trailer park.

The facility has received a variance from the private well setback prohibition of FAC 62-701.300(2)(b), for the waste processing building, since all solid wastes (C&D and Class III) are to be fully contained within the covered processing building. The revised Rule 62-701 also authorizes the building setback exemption.

The proposed facility Site Plan and operations have been modified to increase efficiency of the recycling operation. Modifications include a new scale and scalehouse facilities, new office facilities, a processing building expansion, C&D sorting and processing equipment, and a modified stormwater management system. These modifications are described throughout the Engineering Report and Operations Plan as necessary. Design of the stormwater management system is pending and will be submitted at a later date.

3.3 DESCRIPTION OF MATERIAL TO BE PROCESSED

The solid wastes delivered to the site will consist of local Class III and C&D waste, as defined in F.A.C. 62-701.200, in the form of raw material products such as building debris and suitable commercial products. This Class III and C&D material typically includes: concrete, asphalt, wood wastes, building debris, yard trash, cardboard, furniture, carpet, cloth, paper, glass, metal and plastic and could be source separated or mixed load. Mixed materials are defined as the products, which are combined at the originating site then brought to this facility to be separated. Source separated materials are defined as products which are brought to the site in separate bins for direct processing by the concrete crusher and wood grinder. The main sources anticipated for the recycled C&D wood products are wood pallets and construction C&D waste. Normally, these products will be stored on the ground in designated areas until processed, see Site Plan, Sheet C-2.

Arriving loads will be inspected to determine their acceptability. Acceptable loads will be weighed and visually classified. Depending upon the grade and quality of the material, the loads will be directed primarily to an aggregate area, a wood processing zone, or a mixed material sorting area within the processing building for separation and transfer to the appropriate work zones, see Site Plan, Sheet C-2. The vehicles will be weighed upon leaving and the final cost per load will be based upon the weight, or volume, the initial grading and subsequent notations made during the off loading process.

3.4 QUANTITY PROJECTIONS

The future demand for recycled construction waste material is expected to increase. Material types will be limited to the processing capabilities of this site. The three primary operations will be concrete crushing, yard trash/wood chipping, and screening/sorting of the C&D waste. Estimated demands may require managing approximately 160 loads per day with an average volume of 10 yards each; i.e., 3000 cubic yards (900 tons) per operating day, with a maximum of 1300 tons (4333 cubic yards) per day. This production rate of 89.7 tons per hour is well within the stated equipment capacities. All equipment specified for this site exceeds this initial anticipated average production rate. The recycling equipment production capacities are 300 tons per hour for the concrete crusher, 320 cyds per hour for the wood grinder, and 200 tons per hour for the screening and sorting equipment. The estimated sorting rate for mixed loads is 15 to 20

minutes for load. Cut sheets for the screening and sorting equipment has been added to Appendix E of the Operations Plan.

3.5 OPERATION AND FUNCTION OF PROCESSING EQUIPMENT

The site operation will consist of a concrete crushing machine, wood handling and chipping gear, screening and sorting line equipment, and site material handling equipment. Supporting equipment will consist of a scale and scale house tied to a computerized weighing ticket and invoice generation system, and ample waste storage and recycled material storage zones. The material will be brought to the site and inspected before entering the process area. Once inside the site it will be transferred to an aggregate area, a wood processing zone, or a mixed material sorting area within the building for separation and transfer to the appropriate work zones. The facility's rubber tire front end loader will be utilized as the next stage of rough sorting of the mixed product storage zone with some manual grading, if required, at this stage of the process. Once separated, the wood product will be transferred to the wood chipper/grinder area. The equipment provides for the separation of ferrous metals such as nails and metal building debris such as metal brackets from the processed materials. Wood chips will be stockpiled on site prior to transporting to an incinerator.

Concrete and rock materials, depending on the size of the raw materials, will either be unloaded directly into the crusher staging area or delivered to a jaw type crusher/processor for the initial downsizing of the material. Once downsized, the material is then conveyed to the start of the primary processing station of the aggregate line, see details in Appendix E of the Operations Plan. When processed, the material will be sorted by screening equipment into grades of popular aggregate commodities and then stockpiled for resale. By-products of the process include miscellaneous metals, reinforcing bar, nails and construction materials for sale to metals reprocessing vendors.

Screening and sorting equipment will be used in the processing of C&D waste. After inspection by trained spotters, the material will be processed through a series of elevated conveyors for further material sorting. This process is described further in Section 4.2.2 of the Operations Plan.

3.6 EXPECTED REGULAR FACILITY OPERATIONS

The site is intended to operate from Monday through Friday, 6:00 a.m. to 6:00 p.m. and Saturday 7:00 a.m. to 2:00 p.m. However, operating hours may vary due to actual incoming waste volumes. During non-day light hours, lighting will be provided by 40, 400-watt, high-bay lights on the ceiling of the processing building and two centrally placed lights at either end of the scale driveway, see lighting details in Appendix F. Site operations at maximum intake rates will require a staff of up to 10 yard and equipment operators including one operations manager, one yard foreman, up to six spotters, two maintenance personnel and three equipment operators. The traffic layout allows trucks to circulate through the site and either drop material at the appropriate area or pick up processed material for purchase. Once loaded or unloaded the trucks can easily exit to 148th Avenue or 12th Street.

General traffic routing for delivery trucks and heavy equipment is shown on the Building Layout, Sheet C-6.

Start up and shut down of the processing facility consists of operation of the loaders or crushing equipment when necessary, and operation of the screening and sorting line equipment. No other processing equipment is required for this operation, therefore, startup and shutdown is simple. During off-hours the site will be locked by a fence, which will enclose the site. The gate will only be open during operating hours.

Standard safety protection will be maintained as required to operate the equipment. Additional safety procedures for site processing will be followed to protect the operators and equipment. This equipment may include ear protection, hard hats, eyewear and nose and mouth guards. The operators will be trained by the manufacturer so that they are aware of the proper way to safely operate the equipment. Fire safety for the site includes standard fire protection for the office trailer in compliance with Hillsborough County Fire Protection regulations, and fire extinguishers mounted to each piece of equipment. Fuel for the equipment is by a service, which comes to the site once or twice daily. This service fuels and services the equipment as necessary during their scheduled visit. There is no on-site storage of fuel required for this operation except what is held in each piece of equipment.

3.7 DESCRIPTION OF LOADING, UNLOADING AND PROCESSING AREAS

The loading, unloading and processing areas on the site are indicated on the Site Plan. These areas are specifically designated for material handling and processing as labeled. Instructions for the drivers will include the appropriate area to drop off the waste material as clean concrete, wood, or mixed Class III and construction and demolition debris. The processing capacities are 300 tons per hour for the concrete crusher, 320 cyds per hour for the wood grinder, 200 tons per hour for the screening and sorting line equipment, and 15 to 20 minutes per load for mixed load sorting in the processing building. Safety equipment for those who perform the manual separation may include hard hats, eyewear, steel toe shoes, and gloves. These areas will be constantly maintained so that the accumulation of material will not exceed the capacity of the corresponding processing rate.

3.8 PROVISIONS FOR SOLID WASTE AND LEACHATE CONTAINMENT

Drivers bringing material to the facility for processing will be questioned at the scalehouse as to the content of the loads. The scalehouse operator will direct the driver to the appropriate tipping floor where the waste will be visually inspected by trained spotters. If any load contains visible unauthorized waste it will be turned away. Unacceptable solid waste that is a part of a mixed load will be separated, placed in an on-site storage container then hauled to a Department permitted disposal or processing facility. The site will contain an approved stormwater management system permitted by the Florida Department of Environmental Protection. This stormwater management system is still under design and will be submitted for review at a later date. A copy of the new stormwater permit for the revised stormwater management system will be provided to the FDEP Solid Waste Section when it is available.

A central floor drain will be located in the building to collect any leachate as shown on the Building Layout, Sheet C-6. All areas of the building will slope towards the drain. In addition, pipes will collect drainage from the truck drive-through areas and transfer it to the collection system.

Leachate production is anticipated from the occasional use of water to wash down the tipping area and from any stormwater that may enter the building through the open walls. The leachate will be pumped into an above-ground storage tank on the west side of the building via a lift station with a grinder pump. The leachate will be removed by Howco and taken to a wastewater

treatment plant (WWTP) for treatment and disposal. Washing of the tipping floors will be performed on an as needed basis, and the amount of leachate generated due to floor washing is estimated to be a maximum of 5,200 gallons. This estimate is based on washwater over a floor section 240 feet by 120 feet. A minimal quantity of liquid is expected to be collected from the truck tunnels. This liquid will be drained to the lift station and then pumped to the leachate storage tank. No other potential groundwater or surface water contaminants are expected from this process operation. A dry broom will be used for weekly cleaning of the exposed areas of the building. Information on the recommended leachate storage tank is provided in Appendix E. Details for the leachate storage tank and lift station are provided on Sheet D-3.

3.9 CONTINGENCY PLAN

In case of a natural disaster, measures have been designed to minimize effects to the equipment and processing. The processed and unprocessed materials will be managed so that all areas of the facility can be accessed in the event of a fire. In the event of an impending natural disaster, the facility will stop receiving debris, and operations will be maintained on a limited basis, dependent upon the Operation Manager's determination, to continue removal of debris from the facility. A full Emergency Contingency Plan is provided as Operations Plan, Section 4.1.5.

3.10 BUILDING VENTILATION

The proposed building is partially open on the west side. Additional ventilation is not proposed at this time, but will be added if deemed necessary by the operator.

3.11 CLOSURE PLAN

Closure of the facility will be in accordance with the requirements of FAC Rule 62-701.710. The closure of the facility will include removal of the operational equipment. Any remaining materials will be hauled to a Department appropriate processing facility or landfill. To protect the State from bearing the cost of potential cleanup activities, the Performance Bond will be posted and updated annually pending approval from the FDEP. The purpose of the Bond is to provide for cleanup of the site, if the permittee does not perform. An Engineer's Opinion of Probable Closure Costs for this facility, including the required supporting documentation, is provided in Appendix G of the Operations Plan.

The approved closure steps include notifying the Florida Department of Environmental Protection (FDEP) at least 180 days prior to closure. No additional waste will be received at the facility after the specified closure date. Closure will be completed within 180 days after the final waste load is received and will include removal of all waste, recovered materials and equipment from the facility. At that time a closure report is to be issued to the FDEP to allow time for a site inspection. The FDEP will verify closure within 30 days.

3.12 HISTORY OF ENFORCEMENT

Based on information provided by the Department on May 27, 2005, the following is a summary of three past Department enforcement cases against the applicant.

In 2000, OGC Case #00-0009 was opened against the applicant for the Frontier Recycling facility (now Angelo's) in Largo, Florida. A model consent order was used to resolve the issues of the case. The Department's database did not include information regarding the subject of the enforcement.

In 2004, OCG Case #04-0887 (solid waste) and #04-0426 (stormwater) were opened against the applicant for the Angelo's Recycling facility in Largo, Florida. Angelo's requested a minor permit modification to resolve the solid waste enforcement case. Formal enforcement was not taken to resolve the stormwater case. Instead, it was handled through submittal of a new permit application.

FIGURES

1999 USGS DOQQ Sulphur Springs. FL

LEGEND

61 Zolfo Fine Sand
27 Malabar Fine Sand
5 Basinger/Holopaw/Samsula

N

0 1,000 Feet

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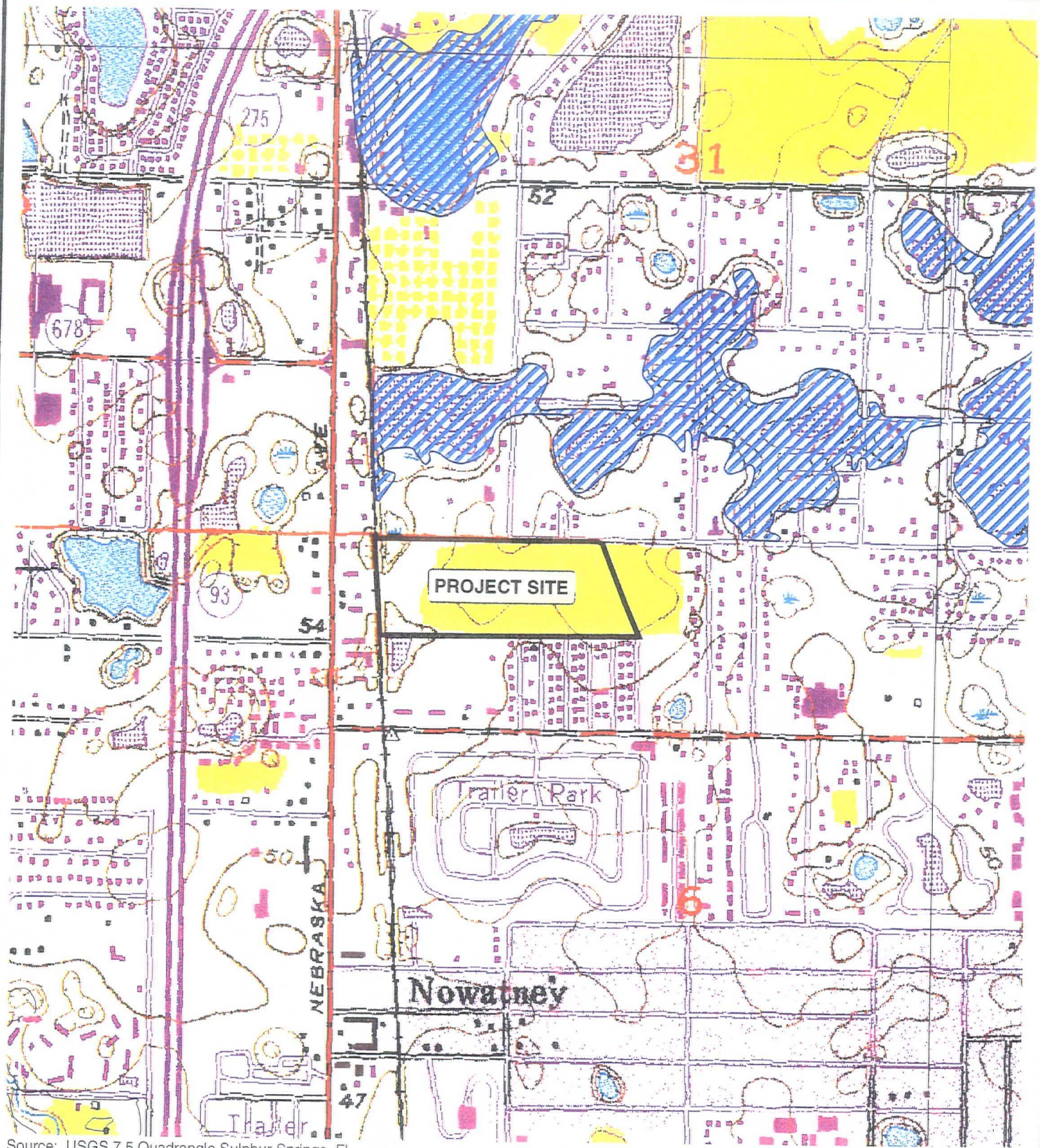
SCS SOIL SURVEY
ANGELO'S RECYCLED MATERIALS
TAMPA, FLORIDA

FIGURE
3-1

S:\Projects\ANGELOS\980104012\Maps\APSF3-1.mxd [10-22-02 bam]



Source: USGS 7.5 Quadrangle Sulphur Springs, FL
FEMA Q3 Flood Data

LEGEND

- 100-year flood zone
- Outside flood zone

N

0 1,000 Feet

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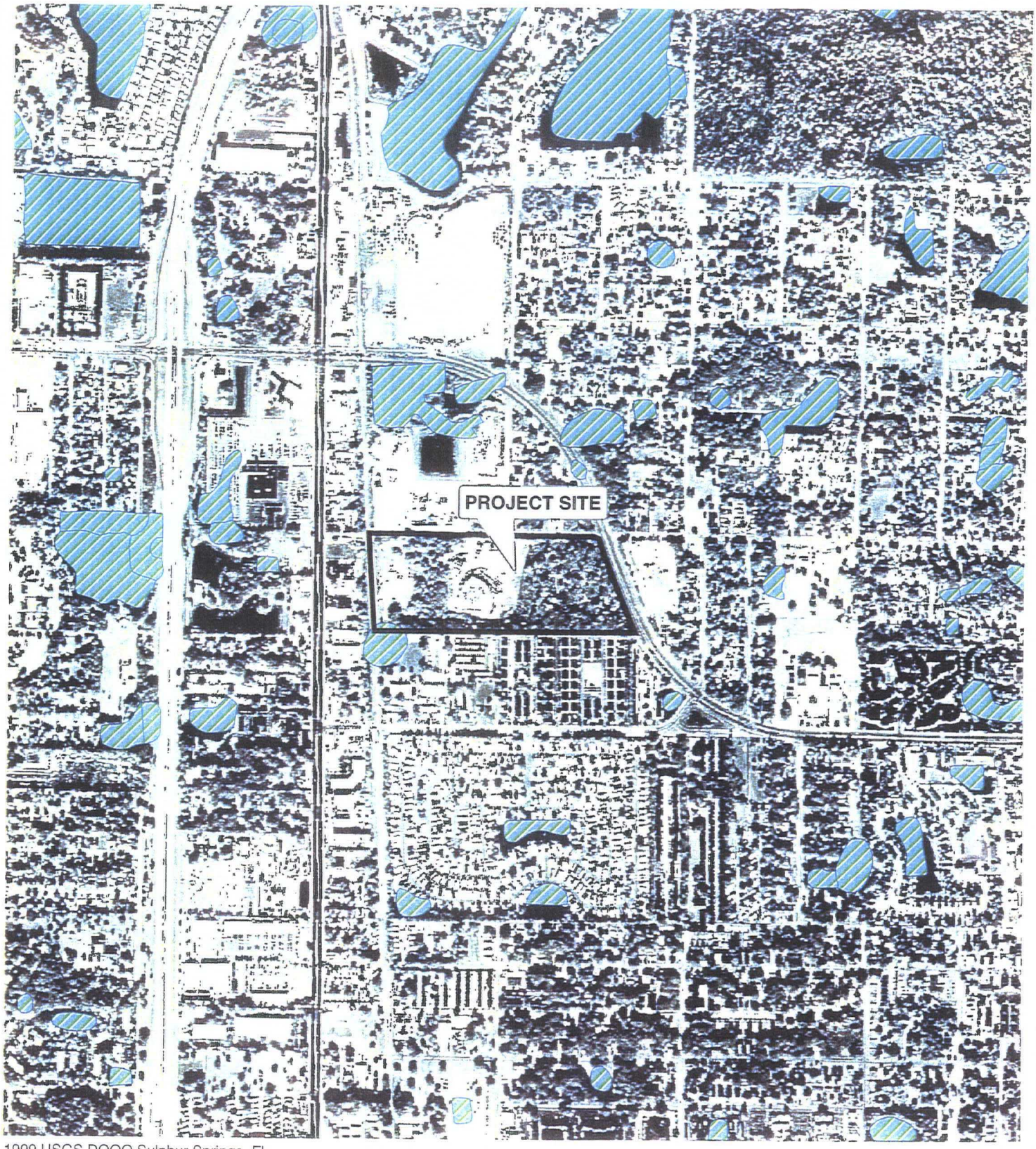
FLOOD INSURANCE RATE MAP
ANGELO'S RECYCLED MATERIALS
TAMPA, FLORIDA

FIGURE 3-2



S:\Projects\AANGELOS\980104012\Maps\APWF3-3.mxd [10-22-02 bam]

1999 USGS DOQQ Sulphur Springs, FL
USFWS National Wetland Inventory, Sulphur Springs, FL

Legend

Wetland

N

0 1,000 Feet

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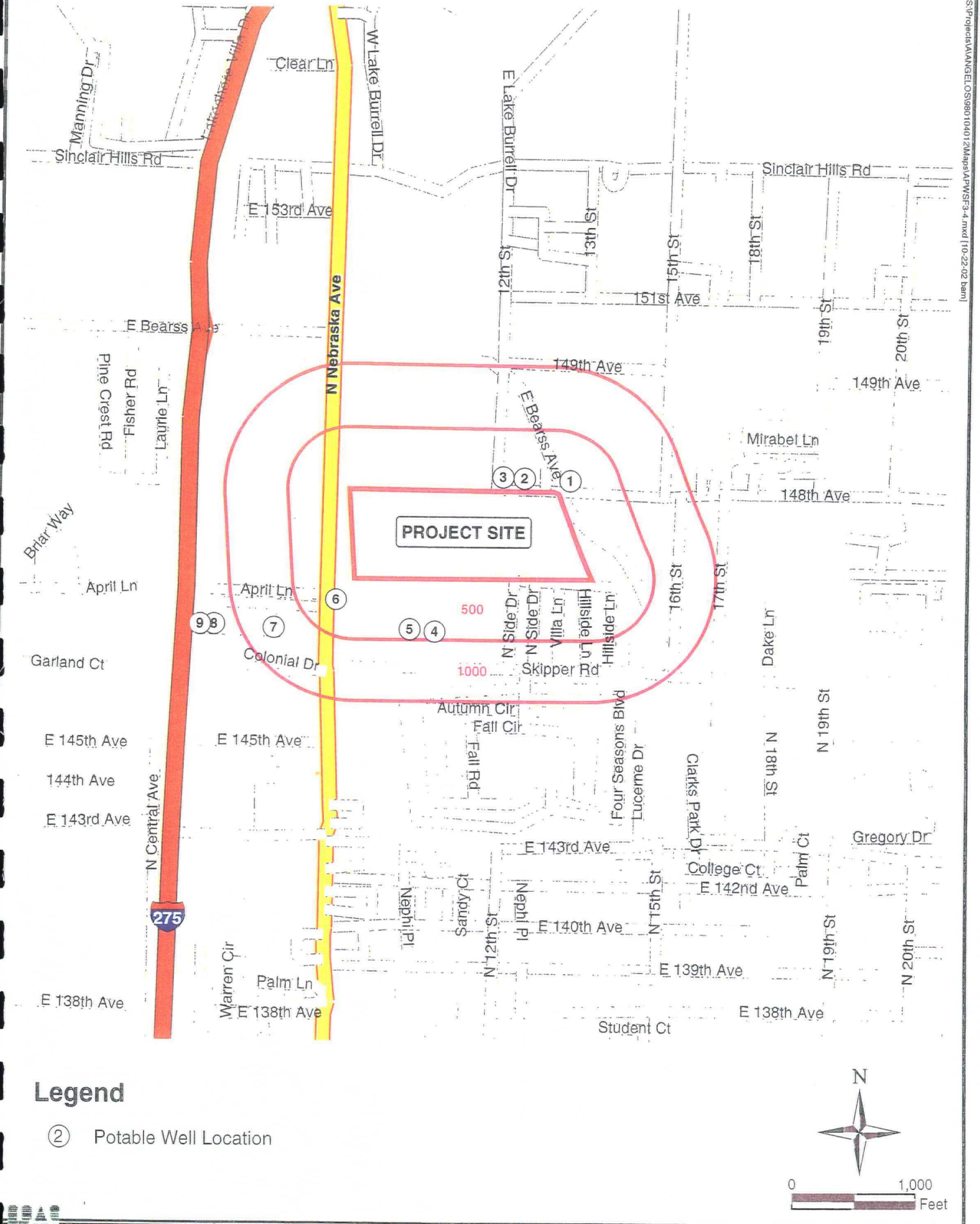
WETLANDS MAP
ANGELO'S RECYCLED MATERIALS
TAMPA, FLORIDA

FIGURE
3-3



Legend

② Potable Well Location

N

0 1,000 Feet

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WELL LOCATION MAP
ANGELO'S RECYCLED MATERIALS
TAMPA, FLORIDA

FIGURE
3-4

SECTION 4

OPERATIONS PLAN

A new Operations Plan describing the operational changes to the facility and the proposed screening and sorting equipment is attached.

SECTION 4

OPERATIONS PLAN

ANGELO'S RECYCLED MATERIALS
APPLICATION FOR MAJOR MODIFICATION AND RENEWAL
FOR A WASTE PROCESSING FACILITY

PREPARED FOR:

ANGELO'S AGGREGATE MATERIALS, LTD.
1755 20TH AVENUE S.E.
LARGO, FLORIDA 33771

PREPARED BY:

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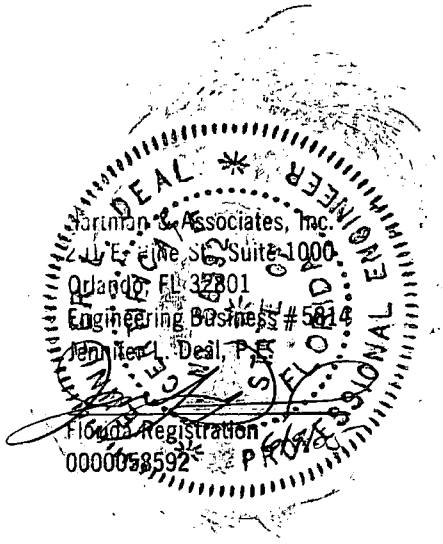
JUNE 2005

Tt-HAI# 98.0104.018



SECTION 4
OPERATION PLAN

4.1 GENERAL

4.1.1 Purpose

The purpose of this operation plan is to describe the operation and maintenance procedures for the Angelo's Recycling Materials, Ltd. (Angelo's) Waste Processing Facility in Tampa, Florida. The facility includes processing and storage areas, scale, waste processing facility (WPF) building for Class III and C&D materials, landscape materials supply (wholesale/retail), concrete processing, and trucking operations. Materials accepted at the site include concrete, asphalt, brick, block, wood products, building debris, yard trash, cardboard, furniture, carpet, cloth, paper, glass, metal, and plastic. Stormwater will be managed by providing on-site treatment and detention.

4.1.2 Process Overview

All waste entering the facility will follow a process of identification and sorting. Trucks entering the facility will be required to pass over a scale, at which time the scale operator will request a load identification from the driver to discourage unloading of unauthorized waste. If the material is unauthorized, the driver will be directed to a solid waste management facility (Hillsborough County) that is permitted to handle the type of material rejected. Appendix A contains a list of typical unauthorized materials for the facility.

Upon acceptance, the truck will be directed to the processing building located on-site, where the waste will be placed on a tipping floor. Class III waste will be directed to the southwest portion of the processing building and C&D waste will be directed to the east side of the proposed building expansion. The Class III waste will undergo pre-sorting operations in the form of spreading the waste out by the use of a front-end loader, and then hand sorting or using a front-end loader to remove the materials not acceptable for processing at the facility. The front-end loader will be used to remove large objects. Unsuitable materials (i.e., batteries, fluorescent light bulbs, paint containers, etc.) will be placed in roll-off containers, or special areas as shown on the Site Plan, and transported off-site for proper disposal within the time period shown on the table

in Appendix G. Recyclable materials consisting primarily of wood, cardboard, or metal will be removed for recycling. Recyclable materials will include concrete, brick, roofing tiles and block. Certain recyclable materials will be further reduced through a tub-grinder (dimensional lumber, non-treated wood, yard waste) or concrete crusher. A baler will be used to prepare separated cardboard for shipment.

The C&D waste will be sorted for recycling using a screen and sorting line equipment in the east side of the proposed building. Use of the equipment will allow more efficient recovery of concrete and metals from the C&D waste stream. This process is further detailed in Section 4.2.2.

Once the waste has been sorted, rejected C&D and Class III wastes are loaded by backhoe grapples or wheeled material haulers onto transport trucks in the scale lane of the processing buildings for transport to the disposal facilities on Appendix G.

The cardboard baler will be located inside the south wall of the processing building. Cardboard will be temporarily stored inside the building or in a roll-off container outside the building. The baling operation will be conducted inside the building and baled cardboard will be stored outside the west wall of the proposed expansion, next to the recycled material roll-off containers.

A facility Operations Flow Chart is included in Appendix B.

4.1.3 Management and Operations Personnel

Personnel trained for handling and processing of C&D and Class III material will be designated to operate the facility. Angelo's will have certified operators on staff and an operator on site during all operational hours. Copies of the certification certificates are available on-site. The Director of Operations for Florida is responsible for overseeing operators of Angelo's Facilities within the State. Overall management of the facility and general direction of the facility operations will be the responsibility of the Operations Manager, whose office will be located on-site. The Operations Manager's responsibilities include:

- Managing environmental compliance for the facility.

- Managing personnel requirements for the facility, including hiring of

supervisory and operating personnel, and providing for their training and orientation.

- Ascertaining the operation and maintenance needs for the facility.

- Implementation of the Operations and Maintenance Plan for the facility.

- Implementation of Equipment Maintenance Plans.

In the absence of the Operations Manager, duties and responsibilities of the facility will be performed by the Yard Foreman. The Yard Foreman's additional responsibilities include:

- Supervising the tipping floors;

- Supervising the correct placement of materials;

- Supervising heavy equipment operations; and

- Checking the leachate system.

Up to six (6) certified spotters will be employed to inspect all incoming loads for unacceptable waste and to handle sorting operations within the processing building. Support staff, such as administrative personnel (3), equipment operators (3), and maintenance personnel (2) will be employed to facilitate operations at the facility. A company Environmental Manager will be available for environmental permitting and to resolve or correct adverse environmental impacts to assure compliance with permit conditions.

4.1.4 Emergency Telephone Numbers

Emergency telephone numbers are included in Appendix D.

4.1.5 Emergency and Contingency Plan

In the event of inclement weather, accidents, fires, and equipment breakdowns, the appropriate provision of the contingency plan will be implemented immediately. Amendments will be made

to this plan if the facility design, operations or maintenance procedures change.

Incidents, which might require the assistance of outside emergency response agencies, will be handled by conventional means. In the event of a natural disaster, operations at the Facility shall cease and the facility evacuated until the Operations Manager has deemed the area safe for contingency operations. The evacuation plan for the site includes gathering all personnel on the site at the main office to account for everyone's whereabouts before dismissing the employees and directing them to leave the property. Operations will be maintained on a limited basis, and dependent upon the Operation Manager's determination.

4.1.5.1 Inclement Weather Operations

Tipping and loading will occur under cover. Minor regrading and/or filling may be required from time to time to smooth out ruts in the wood processing and other unpaved areas. The entrance, scalehouse, and truck routing areas around the building will be paved in order to eliminate the need for regarding and to reduce emissions from truck traffic in and out of the site.

The potential problems with wind-blown waste will be minimized at the facility because waste will be deposited on the tipping floor of the processing building. Litter control at the facility will occur on a continuous basis during operating hours as a component of the site maintenance program. Litter outside the building will be picked up at the end of each working day.

Angelo's will maintain a water truck equipped with a spreader-bar for dust control. In the event excessive dust is observed on the haul roads or stockpile areas, water will be sprayed over the problem areas utilizing the tanker truck.

4.1.5.2 Personal lnjury Accidents

In the event of a personal injury at the facility, the nature and extent of the injury will be assessed to the extent possible by the on-site personnel and emergency first aid techniques administered by appropriately trained personnel as necessary. If the injury appears to require professional medical attention, emergency assistance will be summoned. If the injury requires non-emergency medical attention, the injured party will be transported by conventional means to a place of professional medical care, i.e., hospital, emergency room, doctor's office, or clinic. In all cases, the Operations Manager will be notified.

4.1.5.3 Vehicular Accidents

In the event of a vehicular accident at the site, a determination will be made regarding the feasibility of safely moving the vehicle(s) under their own power. If possible, the vehicles will be moved out of the way of normal traffic flow. If the vehicles cannot move under their own power and the vehicles are interrupting traffic flow, the vehicles will be pushed out of the way using on-site equipment. The Operations Manager will be notified and arrangements to have the disabled vehicles removed will be made in accordance with the directions of the Operations Manager.

4.1.5.4 Fire

In case of a fire within the processing building, a fire hydrant will be located within 120 feet of the proposed building. In addition, a water truck is available on-site at all times, which can be used to extinguish small fires. Fire extinguishers will also be located within the building.

Larger fires located anywhere on the site, including in the processing building, will be sprayed with water and smothered with concrete fines to remove the oxygen fueling the point of combustion. This will be accomplished by using dump trucks and a front-end loader to transport fines from the concrete crushing operation to the edge of the fire. The front-end loader will then spread the fines onto the fire, smothering the fire by working from the sides of the fire towards the center.

The primary emergency phone number (911) and the Fire Department will be called immediately to respond to large fires.

During a fire, all placement of combustible waste in the immediate area of the fire will be suspended. Placement of combustible waste in the area of the fire can only resume after a thorough inspection by the Operations Manager.

In the event of a fire in or on facility equipment, the following procedures will be followed by the equipment operator or other nearby facility personnel:

- Activate the on-board fire suppression equipment.

- If possible, safely move the equipment away from the fire immediately, shut off the engine, and drop blade.

- Evacuate the vehicle.

- Signal other operators in the immediate area of the fire via radio or by hand signals.

- Extinguish any reoccurring fires with the fire suppression equipment on the disposal facility vehicles, and use a water truck as a backup if warranted.

Charged and tested fire extinguishers will be located throughout the facility, including the scale house, processing building, maintenance building, and in all cases, the equipment (i.e., dozers and trucks) carry them.

There will be no open burning at the facility. Any accidental fires that take more than one hour to extinguish shall be promptly reported to the County and FDEP.

4.1.5.5 Hot Loads

Any hot load of authorized material observed will be dumped on an area away from the active processing area, see Site Plan. A hot load is any load that is smoking or burning or shows any signs of potentially beginning to burn. The load will immediately be covered with soil or concrete fines if a fire is imminent. The waste will not be processed until it has cooled completely, and the fire hazard has been mitigated. Since no prescreening of a hot load occurs, the material will be handled as a Class I waste.

4.1.5.6 Spills

No hazardous wastes are to be accepted at the facility. The scale operator, spotters, and equipment operators will be responsible for spotting concealed drums, or other suspect wastes. In the event waste materials of questionable nature are unloaded before they are spotted by facility personnel, the hauler will be detained (if possible), and the Operations Manager shall be immediately notified to determine the appropriate action. In the event the hauler has left the site,

the Operations Manager shall be immediately notified, and if possible, the hauler identified via scale records.

Despite these precautions, if hazardous waste, fuel, or oil is spilled at the site, the spill area will be bermed or absorbent material placed to contain the spill. The Operations Manager will be notified immediately in the event a spill occurs. During the operational hours of the facility, at least one person who is trained in the spill plan procedures will be on-site. In case of a spill, the following spill contingency plan will be implemented.

1. In case of, or as soon as any spill is observed, the source of the spill will be located and actions taken to prevent further spillage, if possible.

2. Valves, pumps, and electrical equipment will be shut off as appropriate.

3. Potential ignition sources will be removed from and restricted from entering the area of the spill.

4. Existing floor drains, sumps, and storm drains will be covered or a temporary dike constructed.

5. Absorbent socks/booms will be used where appropriate. A spill response firm will be contacted, if necessary, to assist in these activities. The spill response firm will provide sampling and analysis for spill cleanup materials.

6. All absorbed material or contained liquid will be removed and packaged in Florida Department of Transportation (FDOT) approved containers (55-gallon drums). Used Absorbent materials should be packaged separately from liquids.

7. All containers used for the disposal of petroleum spill response debris will be labeled with type of waste determined by visual inspection and laboratory testing, and the start date of accumulation and disposed in accordance with Federal and State environmental regulations. Debris from large spills will be removed immediately by the spill response firm (Howco). Debris from small spills will be kept in 55-gallon drums, in the processing building, until the three (3) drums are full.

8. Hazardous wastes will be cleaned up and disposed of by Howco, St. Petersburg, Florida.

The following spill clean up equipment will be maintained at the facility:

- Spill response kit capable of containing a spill of at least 25 gallons. This kit includes absorbent spill pads, socks, and/or booms.

- An adequate amount of nitrile gloves, nitrile or rubber boots and other personal protective equipment.

- First aid kit and eye wash.

- Fire extinguishers.

4.1.5.7 Equipment Failure

Sufficient backup equipment will be available for equipment breakdowns and downtime for normal routine equipment maintenance. In case of major equipment failure (both primary and backup equipment fail) the following procedures will be followed:

1. Arrangements with contractors and rental equipment dealers will be made to furnish equipment on a short-term basis. Replacement rental equipment will be available within 72 hours.

2. Applicable facility operations will cease until equipment capacity is retained by renting the necessary equipment, or until equipment repairs are completed.

3. If the mobile concrete crusher fails, crushing operation will cease until the crusher is repaired.

4.1.6 Waste-Type Control Plan

Emphasis will be placed on controlling the types of waste unloaded within the facility. The scale

operator will be briefed by the Operations Manager on the visible characteristics of unauthorized wastes (tires, batteries, drums, household garbage bags, gas cans, oil cans, paint cans, etc.), and will visually screen, to the extent practical, each load of waste arriving at the facility.

A 4-foot by 8-foot painted sign will be constructed at the entrance to the facility, which will indicate the types of waste allowed. The sign will include a notice that attempting to unload unauthorized waste will result in the delivery personnel having to reload the waste and remove the waste from the site.

Control of incoming waste also will be provided by personnel inspecting waste as it is delivered and unloaded at the processing building or other designated recovery areas (i.e., yard waste, concrete rubble). Loads directed to other designated recovery areas include only pre-sorted loads which are verified by the driver delivering the load and by visual inspection. Angelo's will have up to six full-time spotters on the tipping floors trained in identifying hazardous waste and wastes unsuitable for processing within the facility.

In the event waste not suitable for processing within the facility is observed by any spotter or equipment operator, the spotter or equipment operator will be responsible for isolating the suspect waste. If the truck that delivered the waste is still on-site, the truck driver will be directed to reload the unauthorized waste, and remove the waste from the facility. In the event that the delivery vehicle has left the facility, the rejected waste will be loaded into the proper container for disposal off-site and recorded in a log, see log form in Appendix A. The rejected waste will be transferred to the appropriate storage area by hand or by use of the wheeled loader, depending on the size of the item. The containers will be located adjacent to the tipping floor, as shown in the Site Plan, and will include three 8-yard rejected waste containers, one 4x4 pallet for batteries, and one 30-yard tire roll-off.

Recyclable materials, including mixed metal, steel, aluminum, glass, plastic, cardboard, paper, and electrical wire, will be sorted from the processing building and stored in the designated containers for those materials. These containers will be covered or tarped at the end of each working day and during inclement weather. Storage locations are indicated on the Building Layout, Sheet C-6.

White goods that are inadvertently accepted will be stored upright at all times while on-site, unless liquids and freon have been properly removed. White goods that appear to be undamaged

are assumed to contain refrigerant. Hold time for removal of liquids and transfer of refrigerated items will be weekly. Crushed/destroyed white goods will be inspected for evidence of remaining refrigerants or oils. All white goods that have been inspected and are free of liquids will be marked and these items may then be stored in a roll-off container for off-site transport. These and other inadvertently accepted items will be removed from the site within 48 hours.

Batteries will be kept on a wood pallet inside the building. The batteries will be removed for recycling once the pallet is full. Every attempt will be made to return paint containers to the off-loading vehicle. Paint buckets containing oil based and latex paint will be stored inside the building in a 55-gallon drum or on a wood pallet. The paint will be removed for proper disposal or recycling once the drum or pallet is full.

The oil containment area will be maintained and petroleum products will be removed on a monthly basis, or more frequently if necessary. Howco will be contacted to remove and handle petroleum products.

Tires and Class I waste items that are inadvertently accepted will be hand sorted from the tipping area and placed in designated storage containers. These locations are indicated on the Building Layout, Sheet C-6.

Every reasonable effort will be made to prevent the delivery of unauthorized waste to the facility. In the event unauthorized waste is delivered to the facility, it will be handled in accordance with applicable laws. Unauthorized waste that is inadvertently accepted will be handled in the manner described above.

4.1.7 Weighing and Measuring Incoming Wastes

All incoming waste will be weighed prior to processing at the facility. Weighing will be accomplished by certified truck type scales. The scales will be fully automated and computerized with the capability for data storage and retrieval for daily record keeping and reporting. All customers will be issued receipts at final weighing prior to exiting the facility. All records will be retained by Angelo's at the facility's administrative office.

The records will be available to the County and FDEP upon request. Report outputs can include daily, month-to-date and year-to-date totals of waste received from various haulers.

4.1.8 Vehicle Traffic Control and Unloading

Ingress and egress to the facility will be limited to 148th Avenue and 12th Street. The entrance road exists from the facility entrance gate located at the northern property boundary and continues to the scales and the processing building. The entrance road will be accessible in all weather conditions. A lockable gate and fencing will control access to the site.

Angelo's personnel and signage will direct incoming truck traffic to expedite safe movement of vehicles within the facility. Traffic will be directed as necessary to prevent dangerous traffic conditions and to assure that any back up of in-bound vehicles is kept off of the public right-of-way.

Signs clearly indicating truck traffic routes will be erected at all points along the road, and will be maintained by Angelo's personnel. The signage will describe the types of waste suitable for processing at the facility, the location of applicable processing areas, office and maintenance locations, speed limits, and other general information.

4.1.9 Odor

Action shall be taken to prevent fugitive odors and particulates from creating nuisance conditions. These steps include the following:

- Rejection of unacceptable waste that would create odors.
- Removal from the site of putrescible or other rejected waste that could cause odor problems.
- Active management of recycled materials. Yard trash will be processed within six months and removed from the facility within one month after processing.

4.1.10 Dust

The following steps will be taken to minimize fugitive dust emissions at the facility:

- Sprinkling roadways, stockpile areas, and processing areas with water as necessary.

If sprinkling with water does not minimize fugitive dust emissions, Angelo's will implement additional dust control measures. Any additional measures will be determined by the extent of the fugitive dust emissions, and will be proposed to the Department with an estimated timeline of implementation.

4.1.11 Litter

The site, 12th Street and 148th Avenue access roads, will be inspected daily for litter. Litter will not be allowed to accumulate, and will be picked up on a daily basis at the end of each work day and removed from the property. Litter fencing will be constructed as needed to control blowing litter.

4.1.12 Vector Control

The following steps will be taken to minimize vectors at the site:

- Unacceptable (putrescible) wastes will not be accepted at the facility.

- Rejected wastes will be promptly removed and disposed of at an appropriate disposal facility. Batteries will be removed as needed with a maximum hold time of two months while all other rejected waste will be removed within one week.

- Putrescible Class I waste will be disposed off-site within 48 hours.

- Non-active portions of the site will be kept mowed and free from debris accumulation.

- If needed, pesticides will be used in accordance with Florida Department of Agriculture rules and standards.

4.1.13 Hours of Operation

The facility will be open to the public and operate equipment Monday through Friday 6:00 a.m. to 6:00 p.m., and Saturday 7:00 a.m. to 2:00 p.m., and closed on Sunday. However, hours of operation may vary due to actual incoming waste volumes. Personnel will operate on an 8 to 10 hour day, with a lunch break in between and will be on the tipping floor at all times when waste is received or processed. During non-day light hours, lighting will be provided by 40, 400-watt, high-bay lights on the ceiling of the processing building and two centrally placed lights at either end of the scale driveway of the building. Details for the light fixtures are included in Appendix F.

4.1.14 Access Control and Site Security

Access to the facility will be controlled by an existing perimeter fence. Security will be maintained by locking the entrance gates during the times the facility is not operating. Semi-annual inspections of the fence will be conducted to identify locations in need of repair.

4.1.15 Equipment and Operational Procedures

The facility is expected to operate with the following equipment:

- Fork Lift - Primary
- 2 Front-End Loader with Bucket
- 2 Front-End Loader with Clamp
- Wheeled Material Handler
- Water Truck
- Dump Truck
- Several Pickup Trucks
- Mobile Grinder/Shredder
- Mobile Concrete Crusher
- Miscellaneous Containers

  (Three 8-yard rejected waste containers, one 4' x 4' pallet for battery storage, one 30-yard roll-off for tires, one 40-yard roll-off for plastic, one 20-yard roll-off for aluminum, one 20-yard roll-off for electrical wire, one closed container for electronics and fluorescent bulbs, one 20-yard roll-off for paper, one 40-yard

roll-off for cardboard)

- Soil screening equipment
- C&D Debris Screen and Sorting Equipment: finger screen, trommel screen, multiple conveyors, air knives/destoner
- Cardboard baler

Angelo's also proposes to sort paper, cardboard, and plastic for recycling. All roll-off containers for recycled materials will be kept on the west side of the proposed processing building. Recovered steel, stainless steel, and copper will be stored in designated areas on the north side of the Class III transfer vehicle loading ramp. Most of the steel will be picked from the C&D waste stream.

The concrete crusher will be owned by Angelo's, and the grinder/shredder will be brought in by South Florida Recycling. Details on the crusher and grinder are provided in Appendix E. Cut sheets are also provided for the trommel screen and baler in Appendix E. Grinding of wood will either be contracted or be conducted by Angelo's personnel at scheduled intervals. Details on the grinder/shredder, and wheeled material hauler are provided in Appendix E.

Where appropriate, equipment will be fitted with safety cabs, fire extinguishers, and radio communication equipment. The radio equipment will also be stationed in the administrative offices located on-site, along with telephone service.

The on-site administrative offices will include potable water, sanitary facilities, emergency first-aid supplies, and electricity. The building also will provide shelter for employees during inclement weather conditions.

Maintenance to the equipment will be accomplished on-site in a facility equipped with spare parts, tools, and electrical service.

A floor drain will be located in the building to collect any leachate as shown on the Building Layout, Sheet C-6. All areas of the building will slope towards the drain. In addition, PVC pipes will collect drainage from the truck drive-through areas and transfer it to the collection system. The leachate will be drained to a lift station and pumped to an above ground storage tank. A sampling point will be available for sampling leachate for chemical analysis. The foundation of the building will incorporate the necessary drains and pipes for the leachate collection system.

4.1.16 Closure Plan

Angelo's will notify the County and the FDEP of the pending facility closure a minimum 180 days prior to shutting down the site. Upon application for closure construction, Angelo's will submit information on waste removal and equipment removal. Within 30 days after receiving the final waste load, all waste or residue will be removed from the site. Closure will be completed within 180 days after the final waste load and will include removal of all recovered/recycled, and waste materials from the site.

A table listing storage quantities, method, and time is provided in Appendix G, along with an Engineer's Opinion of Probable Closure Costs for the facility.

4.1.17 Notice of Violation

The Operations Manager will provide immediate notice to the Corporate Environmental Manager, in the event Angelo's is notified by Federal, State or local governmental agencies or officials regarding violations of any permits or approvals held by Angelo's relating to the operation and use of this facility. The Environmental Manager will respond appropriately to the various agencies.

4.1.18 Erosion Repair Material

Erosion repair on unpaved roadways will be accomplished using crushed asphalt. Crushed concrete will be used elsewhere for erosion control and stabilization. Erosion repair material will be stockpiled onsite. The location and the size of the stockpile areas may vary from time to time depending on ongoing operations and market conditions.

4.2 WASTE PROCESSING FACILITY

4.2.1 Start Up and Shut down Procedures

Start-up procedures will consist of the Operations Manager inspecting the processing building, and storage areas for safety purposes. Equipment will be turned on and allowed to warm up if necessary. Material storage containers (rejected waste, battery containers, and all other

containers) will be inspected to verify ample storage capacity for the day's activities as well as condition of the containers. If the storage capacity or condition of the bins is inadequate, a spare container will be used.

The facility plans to clear the tipping floor of wastes each day, depending on the availability of personnel, equipment, off-site waste transport and waste intake rates. At the end of each workday, any unprocessed material will be left on the tipping floor for the next day's processing. The processed material will be contained within the confines of the designated storage locations (i.e., containers, trailers, stockpiles, and building). The open floor areas of the building will be swept once weekly, and washed as needed.

4.2.2 Sorting Operations

Within the processing building, front-end loaders equipped with buckets or clamps will move and sort bulky material. Personnel will be available to hand sort bulky materials or unauthorized material from the tipping floor area. Sorted material will be placed in appropriate bins for recycling or disposal off-site. The containers include: three 8-yard rejected waste containers (Class I); one 4' x 4' secure battery container; one 30-yard roll-off for tires; one 40-yard roll-off for plastic; one 20-yard roll-off for aluminum; one 20-yard roll-off for electrical wire; one closed container for electronics and fluorescent bulbs; one 20-yard roll-off for paper, one 40-yard roll-off for cardboard.

Personnel will operate on a 8 to 12-hour day, with a lunch break in between, and will be on the tipping floor at all times when waste is received or processed.

Class III waste loads will be tipped in the west side of the processing building. A loader will be used to separate the waste loads, and materials including concrete, asphalt, plastic, wood, yard trash, cardboard, paper, ferrous metal, copper, and aluminum will be removed for recycling. These materials will generally be hand-picked and placed in the appropriate storage locations, but the loader may be used for large or heavy items. Non-recyclable items Class III waste items are loaded into transfer vehicles for disposal at a Department permitted Class III landfill. Any inadvertently accepted unauthorized items found will be handled in the manner described in Section 4.1.6. No Class III waste loads will be processed through the screen and sorting line equipment.

C&D waste loads will be tipped in the southeast portion of the proposed building. A grapple will be used to place the material onto the sorting line equipment. This process is further described in Section 4.2.3.

4.2.3 Screening and Sorting Equipment

Angelo's proposes to use screening and sorting equipment in the C&D waste recycling operation. All incoming C&D debris will be visually screened by the spotters and sorted using the equipment. Unauthorized materials observed in the C&D waste stream will be removed by the spotters and placed in the appropriate storage containers/areas as described throughout this plan. In addition, loads of source separated or mixed recyclables will be tipped in the C&D portion of the building for hand sorting or placement on the sorting line.

The first component of the sorting equipment is a finger screen. The finger screen will separate materials by size, sending material larger than eight-inches to the primary conveyor and material smaller than eight-inches to the secondary conveyor.

Materials larger than eight-inches will be moved along the primary conveyor. Once on the conveyor, the material will pass under a magnet for removal of ferrous metal. Spotters will hand select recyclable materials and drop them into the bays below the line. These materials will consist mainly of wood, plastic, and cardboard. Unauthorized materials observed will also be removed by hand and placed in the proper storage location as described in Section 4.1.6. Non-recyclable material will be dropped from the end of the primary conveyor. The loader will transfer these wastes to the truck loading area in the northwest portion of the building. A backhoe grapple will be used to load the transfer vehicles and the wastes will be hauled to a Department permitted C&D or Class III landfill for disposal.

Materials smaller than eight-inches will pass through a trommel screen for removal of fines (RSM). The RSM will be transferred from the trommel screen to a stockpile by a conveyor. The remainder of the materials will be moved along the secondary conveyor. Spotters will hand select recyclable materials and drop them into the bays below the line. These materials will consist mainly of metals, but may also include smaller pieces of wood, plastic, or cardboard. Concrete and paper will not be removed from the system at this point, but instead will pass along the air knives/destoner. The purpose of the air knives/destoner is to blow the paper out of the remaining material, which will consist of concrete, asphalt, and masonry. The concrete, asphalt,

and masonry will be transferred to a stockpile at the end of the secondary conveyor system. A loader will be used to transport the material to the concrete crushing operation located in the east portion of the property.

All items hand selected for recycling will be dropped below the sorting lines into bays. The materials will then be moved by a loader to the appropriate storage areas in accordance with this plan. Temporary storage for recycled materials will be located along the west wall of the proposed expansion for loading into transfer vehicles. Additional storage for recycled materials and unauthorized wastes will be available in roll-off containers located west of the building expansion on the proposed paved areas. The material storage quantities are specified in Appendix G.

The resulting RSM will be temporarily stockpiled inside the building until baseline sampling is completed. The temporary storage area is shown on the Building Layout, Sheet C-6. To complete the baseline sampling, the RSM will be collected and sampled in accordance with the Department's "Guidance for the Management of Recovered Screen materials from C&D Debris Recycling Facilities in Florida", dated September 1998, as Angelo's expects to use the RSM in the adjacent concrete operation. Prior to sample collection, a schedule for sampling and analysis will be submitted to the Department for review. Until baseline sampling is completed on the RSM in accordance with the above referenced guidance document, it is proposed to be re-mixed into the reject C&D waste for disposal at a C&D or a Class III landfill. An e-mail from Mr. Richard Tedder, P.E. of the FDEP office in Tallahassee, expressing the position of the FDEP regarding C&D residuals, has been included as Attachment A to this Operations Plan. Details for the sorting equipment are provided in Appendix E.

4.2.4 Leachate Collection and Disposal

The processing building where the tipping floor will be located will be sloped to a commercial grade drain for containment and collection of liquids from the tipping floor. Floors will be free of standing liquids. The leachate will drain to a lift station and be pumped into an above-ground storage tank. Sumps located in the transfer truck tunnels will drain to the lift station. The tank will be drained when full or monthly by a licensed and permitted contractor (Howco) and hauled to a permitted wastewater treatment plant for treatment and disposal. Manual leachate levels checks will be performed weekly. Details on typical commercial grade drains and a recommended storage tank and included in Appendix F. The leachate collection system details

are provided on Sheet D-3. The leachate collection system components shall be appropriate for commercial operations and able to withstand the weight of the operating equipment. The drains, piping, pump and tank associated with the leachate system will be inspected daily on operating days for damage and clogging. Accumulated debris will be removed immediately. The floor drain will be checked/cleaned at least once daily. Clean out locations must be open during floor washing to allow for venting. Washing of the tipping floors will be completed on an as needed bases. A dry broom will be used to sweep the empty portions of the building at the end of each operating week. Angelo's will document leachate system inspections and cleanings and will provide the documentation to the Department upon request.

4.2.5 Processed Material Disposal Plan

After processing, ground wood and yard trash will be transported to the Ridge Power Plant in Polk County or other cogeneration facilities, whichever is more economical. The ground wood may also be used as mulch for on-site landscaping. Steel, stainless steel, copper, and aluminum will be sold to local scrap metal dealers throughout the Tampa Bay region. Cardboard will be sold to local cardboard dealers throughout the Tampa Bay region. Crushed concrete will be sold to local contractors in the Tampa Bay region for construction applications. Other processed materials will be sold/re-used as market conditions warrant. The quantity and maximum storage time for each material is listed in the table in Appendix G.

4.2.6 Equipment Operations and Maintenance Manual

Operations and maintenance for each piece of equipment will be in accordance to manufacturer's recommendations and manuals. Cut sheets for the front-end loader, concrete crusher, wood grinder, and sorting equipment are provided in Appendix G.

4.2.7 Tub Grinder

As shown in the facility Operations Flow Chart in Appendix B, yard waste, land clearing debris, and other wood products (lumber, pallets, untreated wood, unpainted wood) will be diverted from the tipping floor or the sorting areas to an on-site tub grinder for grinding and re-use. The re-use is described in the processed material disposal plan.

4.2.8 Stormwater Management

A stormwater management plan was previously approved by the FDEP as Environmental Resource Permit (ERP) No. 29-0163558-001. A copy of the stormwater permit is provided in Appendix H. The applicant is proposing to modify and re-permit the stormwater system. Design of the modified stormwater management system is pending and the ERP modification application will be submitted to the FDEP ERP Section under separate cover. A copy of the new stormwater permit for the revised stormwater system will be provided to the FDEP when it is available.

Weekly inspections of the stormwater management system and all components will be performed by the Facility Manager. Any necessary repairs will be made within seven days.

4.3 RECORD KEEPING/SUBMITTALS

4.3.1 County Requirements

Record keeping and submittal requirements for the facility will be in compliance with Hillsborough County's requirements for these facilities.

4.3.2 FDEP Requirements

Record keeping and submittal requirements for the facility will be in compliance with the FDEP rule requirements and permitted specific conditions for this facility.

4.4 TRAINING PLAN

The facility will have at least one trained operator on-site at all times during operation, in accordance with FAC Rule 62-701.320(15). Every three years, trained operators will complete eight hours of refresher training.

The facility will have at least one trained spotter on-site at all times that waste is accepted, in accordance with FAC Rule 62-701.320(15). Every three years, trained spotters will complete four hours of refresher training. All courses, initial or refresher training, will be chosen from the list of FDEP approved courses, included in Appendix C of this plan. A copy of the Operator and

Spotter Training Log is located in Appendix C. This log will be maintained on-site and will be made available to the Department upon request.

New employees that have not been trained and are intended to serve as operators or spotters will attend an approved initial training course as described above within one year of employment. Until initial training is completed, these employees will be considered operators-in-training or spotters-in-training. Operators-in-training may perform the duties of a facility operator only under the supervision of a trained operator. Spotters-in-training may perform the duties of a spotter only under the supervision of a trained operator or spotter. Records documenting the above training will be made available at the facility and the office of the Operations Manager.

ATTACHMENT A

Jennifer L. Deal

From: Tedder, Richard [Richard.Tedder@dep.state.fl.us]
Sent: Tuesday, March 23, 2004 4:25 PM
To: Jennifer Deal (E-mail)
Cc: Morgan, Steve
Subject: C&D fines memo, SWM-19.4


SWM-19-4.pdf

Jennifer,

Here is the memo I mentioned. Our current position is that residuals from processing C&D can be treated as C&D. If a facility processes more than just C&D then the C&D portion has to be segregated from the other wastes in order for its residuals to still be treated as C&D. - RT

<<SWM-19-4.pdf>>

Florida Department of Environmental Protection

441

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

May 3, 1994

J. Chris Bird, Director
Environmental Protection Department
Alachua County
226 South Main
Gainesville, Florida 32601-6231

RE: My letter of April 5

Dear Chris:

You recently asked me about a materials recovery facility in Duval County which processes construction and demolition debris (C&D), as well as other solid waste, and sends its residuals out-of-county for disposal. In my response to you of April 5, I explained that when C&D debris is mixed with other solid waste at the materials recovery facility, it cannot be disposed of at a C&D facility. This correctly reflects the Department's interpretation of law.

However, I also explained that "even if the C&D debris coming into the facility were kept segregated from other solid waste, the residuals produced by that facility would still not be considered C&D debris. . . . the by-products of a recycling operation cannot be considered to be debris from the actual construction or destruction of a structure." I have had extensive discussions on this subject with our District staff, and have concluded that this explanation is incorrect. It is now the Department's position that if a materials recovery facility accepts only C&D debris, or if the facility accepts other wastes but can keep the C&D debris segregated and uncontaminated, then the residuals may be disposed of at a C&D disposal facility.

I hope this has not caused you any problems. If I can be of any further help, please feel free to call me at (904) 488-9730.

Sincerely,

Chris McGuire

Chris McGuire
Assistant General Counsel

cc: Mary Jean Yon
Mike Fitzsimmons

APPENDICES

APPENDIX A
UNAUTHORIZED SOLID WASTES
ANGELO'S RECYCLED MATERIALS WPF

Typical unauthorized solid wastes includes:

- Hazardous wastes.
- Chemicals/solvents.
- Paint containers or paint.
- Medical wastes.
- Batteries.
- Household garbage.
- Asbestos.
- Fluorescent light bulbs.
- Oil containers.
- Class I.
- White goods.
- Appliances.
- Electronics.
- Auto parts.

ANGELO'S RECYCLED MATERIALS
TAMPA, FLORIDA

UNAUTHORIZED WASTE RECEIPT LOG

1. DATE: _____

2. TIME: _____

3. HAULING COMPANY: _____

4. VEHICLE INFORMATION: A) TRUCK # _____
   B) LICENSE PLATE # _____

5. NAME OF DRIVER: _____

6. SOURCE OF UNAUTHORIZED WASTE MATERIAL: _____

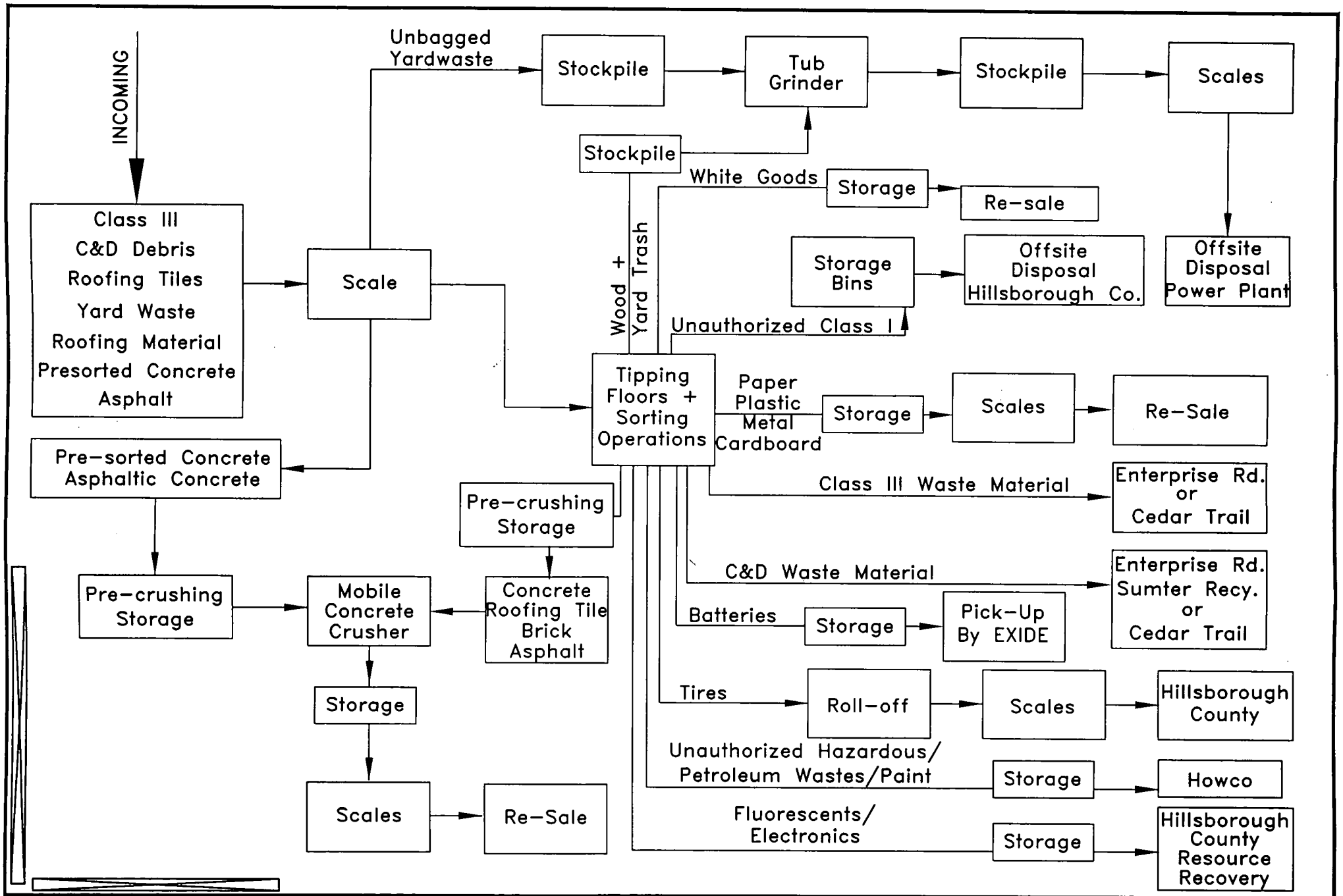
7. DESCRIPTION OF UNAUTHORIZED WASTE MATERIAL: _____
   _____
   _____

8. WHAT PROCEDURES WERE FOLLOWED FOR PROPER DISPOSAL/REMOVAL FROM THE SITE? _____
   _____
   _____
   _____
   _____

9. OTHER OBSERVATIONS: _____
   _____

10. SPOTTER SIGNATURE: _____
    SIGNED

Note: Forms must be maintained in Unauthorized Waste Receipt Log Book



HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
201 EAST PINE STREET - SUITE 1000 - ORLANDO, FL 32801
TELEPHONE (407) 839-3955 - FAX (407) 839-3790

APPENDIX B
FACILITIES OPERATION FLOW CHART

APPENDIX C

ANGELO'S RECYCLED MATERIALS - TAMPA

WASTE PROCESSING FACILITY

TRAINING LOG

COURSE	TRAINED OPERATOR INSTRUCTOR	HRS. ATTENDED	SIGNATURES/ DATE

Florida's Solid Waste Management Facility Operator and Spotter Approved Initial and Continuing Education Courses

Last updated 5/23/2005

Initial training courses can be taken for continuing education credit if the course was not taken as the initial training course.
The initial course can be retaken as continuing education credit during the second three-year training period.
Courses taken prior to your initial training does not count toward continuing education.
No continuing education credit will be given for the same course taken within the same 3-year period.

Class I, II, III Landfill Operators [*Initial Training*]

No.	COURSE TITLE	PROVIDED BY	I, II, III	C&D	Transfer	MRF	Spotter
30	SWANA - Manager of Landfill Operations Training Course [MOLO®]	SWANA	30				
160	SWANA - Manager of Landfill Operations [MOLO®]	SWANA-FL / UF TREEO	30	30			
195	24-Hour Initial Training Course for Landfill Operators (Class I, II and III and C&D Sites)	Kohl Consulting, Inc.	24				

Construction and Demolition Debris Operators [C & D] [*Initial Training*]

No.	COURSE TITLE	PROVIDED BY	I, II, III	C&D	Transfer	MRF	Spotter
200	Construction and Demolition Debris Landfills - A Short Course for Operators-24 hours	SWANA-FL / UF TREEO		24			
195	24-Hour Initial Training Course for Landfill Operators (Class I, II and III and C&D Sites)	Kohl Consulting, Inc	24	24			

Transfer Stations [*Initial Training*]

No.	COURSE TITLE	PROVIDED BY	I, II, III	C&D	Transfer	MRF	Spotter
196	16-Hour Initial Training Course for Transfer Station Operators	Kohl Consulting, Inc			16		
225	19-Hour Initial Training for Transfer Station and MRF Operators	Kohl Consulting, Inc			19	19	
42	Transfer Station Design & Operations	SWANA			16		
222	SWANA - Managing MSW Transfer Station Systems	Solid Waste Association of North America SWANA			16		

Materials Recovery Facilities [MRF] [*Initial Training*]

No.	COURSE TITLE	PROVIDED BY	I, II, III	C&D	Transfer	MRF	Spotter
225	19-Hour Initial Training for Transfer Station and MRF Operators	Kohl Consulting, Inc			19	19	
197	16-Hour Initial Training Course for Materials Recovery Facilities [MRFs]	Kohl Consulting, Inc				16	

Spotters [*Initial Training*]

No.	COURSE TITLE	PROVIDED BY	I, II, III	C&D	Transfer	MRF	Spotter
203	8 Hour Initial Training for Spotters at Class I, II, III Landfills, Waste Processing Facilities, and C&D Sites	Kohl Consulting, Inc.	8	8	8	8	8
219	8-Hour Initial Training for Spotters	Consolidated Resource Recovery, Inc.	8	8	8	8	8
97	Basic Landfill Operations	Kohl Consulting, Inc.	8	8	8	8	8
91	Eight Hour Spotter Training for C&D Sites	Kohl Consulting, Inc.	8	8	8	8	8
121	Eight-Hour Training for Personnel at C&D Materials Recovery Facilities	Kohl Consulting, Inc.	8	8	8	8	8
111	Landfill Operations and Waste Screening for Class I, II & III Sites	Kohl Consulting, Inc.	8	8	8	8	8
257	Spotter Training Course – 8 Hours Initial Training	Hewitt Contracting Company, Inc.	8	8	8	8	8
248	Spotter Training for Solid Waste Facilities	UF TREEO	8	8	8	8	8
214	Spotter Training Plan for Land Clearing Debris Site	Wetland Solutions	8	8	8	8	8
147	Training for Spotters at Landfills, C&D Sites and Transfer Stations	JEA/TREEO	8	8	8	8	8
36	Waste Screening & Identification For Landfill Operators and Spotters	TREEO	8	8	8	8	8
122	Waste Screening and Operation Orientation for Transfer Station Personnel	Kohl Consulting, Inc.	8	8	8	8	8
9	Waste Screening at MSW Management Facilities {On-site Delivery}	SWANA	10	10	10	10	10

Continuing Education			I, II, III	C&D	Transfer	MRF	Spotter
No.	COURSE TITLE	PROVIDED BY					
204	1-Hour Overview of Health & Safety Issues at Solid Waste Facilities	Kohl Consulting, Inc	1	1	1	1	
105	11th Annual SE Recycling Conference & Trade Show [3/1-4/98]	SE Recycling	8	8			
197	16-Hour Initial Training Course for Materials Recovery Facility (MFR) Operators	Kohl Consulting, Inc.	10	10	8	8	
196	16-Hour Initial Training Course for Transfer Station Operators	Kohl Consulting, Inc.	10	10	8	8	
52	17-701 & 17-703 Update [6/17/94]	SWANA - FL	4				
225	19-Hour Initial Training Course for Transfer Station and MRF Operators	Kohl Consulting, Inc	10	10	8	8	
282	24-Hour HazWoper Technician Training	Safety Training & Consulting	6	6	6	6	
195	24-Hour Initial Training Course for Landfill Operators (Class I, II, III, and C&D Sites)	Kohl Consulting, Inc.	16	16			
169	40-hour Train-the-Trainer Program for Hazardous Waste Operations and Emergency Response Program	Chinn Training	8	8	8	8	
314	8-hour Bioreadiness Training	USF Center for Biological Defense	8	8	8	8	
283	8-Hour DOT HM-126 Training	Safety Training & Consulting	4	4	4	4	
167	8-Hour HazWoper OSHA Refresher	FDEP / All Pro	4	4	4	4	
280	8-Hour HazWoper Refresher	USF / ERC	4	4	4	4	
290	8-Hour HazWoper Refresher (same as #266)	Sunshine ERC	4	4	4	4	4
144	8-Hour HazWoper Refresher Training	Stephen Mraz	4	4	4	4	
307	8-Hour HazWoper Refresher Training	Emergency Response Educators and Consultants, Inc.	4	4	4	4	4
371	8-Hour HazWoper Refresher	WPB Fire Rescue Special Op	4	4	4	4	4
203	8-Hour Initial Training Course for Spotters at Class I, II, III Facilities, Waste Processing Facilities, and C&D Facilities	Kohl Consulting, Inc.	8	8	8	8	8
219	8-Hour Initial Training for Spotters	Consolidated Resource Recovery, Inc.	8	8	8	8	8
288	A Little is Enough: Reducing Man-Made mercury Impacts	UF TREEO Center	2	2	2	2	2
357	Adult First Aid/CPR	American Health & Safety Institute	4	4	4	4	2
270	Advanced Topics in Compost Utilization	UF IFAS Extension Office	2	2		2	2
182	Air Compliance and LGF System Operation [11/9-10/00]	SCS Engineers	16				
171	An Overview of Solid Waste Technologies and Waste Screening Review	Kohl Consulting, Inc.	2	2	2	2	2
71	Asbestos Awareness Course for Landfill Operators	UF TREEO Center	4	4	4	4	4
127	Asbestos Awareness Refresher Course for Landfill Operators	UF TREEO Center	2	2	2	2	2
236	Authorized Entrant for Permit – Required Confined Spaces	UF TREEO Center	16				
145	Avoiding OSHA Citations and Liabilities in Florida [6/29/99]	Lorman Education Services	6				
143	Basic Confined Space [8/17/99]	North Florida Environmental Services	8	8	8	8	8
97	Basic Landfill Operations	Kohl Consulting, Inc.	8	8	8	8	8
253	Basic Math for Water and Wastewater Operations at FW&PCOA Annual or Regional Short School	Michael Switzer	5	5	5	5	
339	Bioreactor Landfill Workshop	FCSHWM	8				
313	Bioreadiness for Government Professionals	USF Center for Biological Defense	2	2	2	2	2
72	Bird and Wildlife Management at Solid Waste Mgmt Facilities	UF TREEO Center	8	8	8		
206	Bird Management at Solid Waste Facilities	UF TREEO Center	4	4	4		
312	Building Material ReUse Workshop	SWIX, FDEP, UF-Rinker	3	6	3	3	
318	C&D Operator/Spotter Training Refresher	Kohl Consulting, Inc.	4	4	4	4	4
285	Chemical Compatibility and Storage	UF TREEO Center	4	4	4	4	4
233	Chemicals That You Work With	Charlotte County	2	2	2	2	2

Continuing Education			I, II, III	C&D	Transfer	MRF	Spotter
No.	COURSE TITLE	PROVIDED BY					
391	Chemical Spill Response Training	Dept of Agriculture and Consumer Services	8	8	8	8	8
12	Chemistry for Environmental Professionals	UF TREEO Center	8	8	8	8	8
37	Chemistry for Environmental Professionals (Same as #12)	UF TREEO Center	8	8	8	8	8
386	Community Hurricane Preparedness - Online	Emergency Management Institute	7	7	7	7	
16	Complete Preventative Maintenance: Using New Technologies *[No longer offered]*	UF TREEO Center	13				
278	Compost Tour and Hands-On Training [5/20/03]	UF – IFAS Extension Office	3				
35	Confined Space Entry & Assessment	Applied Associates International	8	8	8	8	
18	Confined Space Entry & Assessment *[no longer offered]*	UF TREEO Center	20				
29	Confined Space Entry & Rescue	South Tech Fire Academy	40	40	40	40	
181	Confined Space for Private Industry	Sarasota Co. Tech	24	24	24	24	
80	Construction and Demolition Debris Landfills - A Short Course for Operators *[no longer offered] (See #200)*	UF TREEO Center/ SWANA – FL	20	20			
200	Construction and Demolition Debris Landfills - A Short Course for Operators - 24 hours	UF TREEO Center/ SWANA – FL	16	16			
103	Construction and Demolition Waste Recycling	UF TREEO Center	7	7		7	7
114	Debris Management G202	FEMA/FL Div	12	12	12	12	12
136	Debris Management-Advanced Course (G202-Advanced)	FDEP/FEMA	8	8	8	8	8
161	Design of Lateral Drainage Systems for Landfills [3/14/00]	Tenax	5				
108	Developing a Usable Operations Plan	Kohl Consulting, Inc.	4	4	4	4	4
130	Eight Hour Confined Space Training Course	Charles Davis	8	8	8	8	8
91	Eight Hour Spotter Training for Construction & Demolition Sites	Kohl Consulting, Inc.	8	8	8	8	8
287	Emergency Response Operations for Incident Command	UF TREEO Center	4	4	4	4	
40	Environmental Drilling, Well Installation & Sampling	Nielson Environmental Field School, Inc.	16	16			
316	Environmental Impacts of Preservative Treated Wood Conference [2/8-11/04]	UF FICESS	12	12		6	
271	Environmental Management Systems - Introduction	UF TREEO Center	2	2	2	2	
175	Environmental Management Systems - Overview	UF TREEO Center	4	4	4	4	
176	Environmental Management Systems Internal Audit Procedures	UF TREEO Center	4	4	4	4	
384	Environmental Management System Webcast	UF TREEO	1	1	1	1	
43	Environmental Sampling Laboratory & Data Analysis [12/12-12/94]	Executive Enterprises, Inc.	12				
100	Excavation, Trenching: Competent Person Training	UF TREEO Center	8	8			
284	Excavation, Trenching: Competent Person Training 16-Hour	UF TREEO Center	16	16			
66	Exposure to Bloodborne and Waterborne Pathogens *[No longer offered]*	UF TREEO Center	8				
167	FDEP 8-Hour HazWoper OSHA Refresher [5/3/00]	FDEP / All Pro	4	4	4	4	
199	FDEP 8 Hour HazWoper OSHA Refresher [5/1/01]	FDEP	4	4	4	4	
228	FDEP 8 Hour HazWoper OSHA Refresher [5/22/02]	FDEP / Kenton Brown	4	4	4	4	
232	FDEP 8 Hour HazWoper OSHA Refresher [5/22/02]	FDEP [Bottcher/Knox]	4	4	4	4	
266	FDEP 8 Hour HazWoper OSHA Refresher [5/5/03, 5/9/03]	FDEP	4	4	4	4	
361	FDEP 8 Hour HazWoper OSHA Refresher [12/04]	FDEP	4	4	4	4	
48	FDEP Annual SQG Assessment, Notification & Verification Program Workshop [4/30/96]	FDEP	5				
88	FDEP Annual SQG Assessment, Notification & Verification Program Workshop [5/5-7/97]	FDEP	5				
107	FDEP Annual SQG Assessment, Notification & Verification Program Workshop [5/4-6/98]	FDEP	7	7	7	7	
134	FDEP Annual SQG Assessment, Notification & Verification Program Workshop [5/3-5/99]	FDEP	5	5	5	5	

Continuing Education			I, II, III	C&D	Transfer	MRF	Spotter
No.	COURSE TITLE	PROVIDED BY					
226	FDEP Annual SQG Assessment, Notification & Verification Program Workshop [5/20-21/02]	FDEP	5	5	5	5	
264	FDEP Annual SQG Assessment, Notification & Verification Program Workshop [5/5-6/03]	FDEP	5	5	5	5	
360	FDEP Annual HHW-SQG Workshop & 2004 NAHMMA Conf [12/04]	FDEP & NAHAMMA Conf	5	5	5	5	5
366	FDEP/NAHMMA Behavior Change Training [12/7/04]	FDEP & NAHAMMA Conf	4	4	4	4	
367	FDEP/NAHMMA Identification of Unknowns and Chemistry for Non-Chemists Training [12/10/04]	FDEP & NAHAMMA Conf	4	4	4	4	4
267	FDEP DOT 4 Hour Awareness Training [5/5/03, 12/04]	FDEP	2	2	2	2	2
268	FDEP HHW Facility Design [5/9/03]	FDEP	4	4	4	4	4
54	FDEP HHW & Conditionally Exempt SQG [5/3-5/95]	FDEP	14				
59	FDEP HHW & Conditionally Exempt SQG [5/1/96]	FDEP	5				
84	FDEP HHW & Conditionally Exempt SQG [5/5-7/97]	FDEP	5				
106	FDEP HHW & Conditionally Exempt SQG [5/6-8/98]	FDEP	5	5	5	5	
135	FDEP HHW & Conditionally Exempt SQG [5/5-7/99]	FDEP	5	5	5	5	
166	FDEP HHW & Conditionally Exempt SQG [5/1-3/00]	FDEP	5	5	5	5	
198	FDEP HHW & Conditionally Exempt SQG [4/30-5/1/01]	FDEP	5	5	5	5	
227	FDEP HHW & Conditionally Exempt SQG [5/22-24/02]	FDEP	5	5	5	5	
265	FDEP HHW & Conditionally Exempt SQG [5/7-8/03]	FDEP	5	5	5	5	5
330	FDEP SOP Sampling Training for Groundwater, Surface Water and Wastewater	UF TREEO Center	7	7			
32	Field Sampling Short School [7/22-24/91]	Environmental Technology Center	22				
110	Fires at Landfills	Kohl Consulting, Inc.	2	2		2	
291	Fleet Management	Fleet Solutions	4	4	4	4	
293	Fleet Management and Predictive Maintenance	Fleet Solutions	8	8	8	8	
377	Florida Landfill Gas to Energy Symposium	Florida Energy Office	5	5			
273	Florida Master Naturalist Program – Florida Freshwater Wetlands Systems	UF IFAS Extension Office	4	4	4	4	
289	Florida Stormwater and Erosion Control and Sedimentation Inspector Training Program (same as #203)	METRA-North, UF TREEO, FDEP	12	12	8	4	
155	Four Hour Spotter Orientation for Class I, II and III Supervisors	Kohl Consulting, Inc.	4	4	4	4	4
156	Four Hour Spotter Orientation for Class I, II, and III Landfills	Kohl Consulting, Inc.	4	4	4	4	4
119	Four Hour Spotter Training Refresher for Construction & Demolition Sites	Kohl Consulting, Inc.	4	4	4	4	4
113	Full Cost Accounting for Municipal Solid Waste Management [2/17/98]	Terra Tech EM Inc	6				
120	Fundamentals of Operations for MRF Facilities Personnel	Kohl Consulting, Inc.	8			8	
274	Fundamentals of Slope Stability	UF TREEO Center	16	16			
271	General Environmental Workshop [Feb-Mar 2003]	METRA	4	4	4	4	4
154	Geosynthetics for Advanced Solutions [11/4/99]	GSE Lining Tech	6				
338	Governor's Hurricane Conference - 2004 [Debris Management track-only]	Florida Dept of Community Affairs	6	6	6	6	6
393	Governor's Hurricane Conference - 2005	Governor's Hurricane Conference	7	7	7	7	
152	Groundwater Issues for Landfill Operators [No longer offered]	UF TREEO Center	6	6			
308	Groundwater Issues for Landfill Operators - 8 Hours [Effective 11 2003-	UF TREEO Center	8	8			
17	Groundwater Monitoring, Analysis and Data Interpretation	UF TREEO Center	12	12			
76	Groundwater Monitoring, Requirements and Techniques for Landfills	Kohl Consulting, Inc.	2	2			
101	Hazard Communications Course	Escambia County Emergency Prep	4	4	4	4	4
85	Hazardous Material and Site Investigations	EnSafe	6	6	6	6	6
82	Hazardous Material Chemistry for Non-Chemist [1/18/95]	St. Petersburg Junior College	7				
286	Hazardous Materials Chemistry for Non-Chemist	UF TREEO Center	8	8	8	8	
131	Hazardous Material Recognition Awareness Level Refresher [3/1/96]	Citrus County	4				

Continuing Education			I, II, III	C&D	Transfer	MRF	Spotter
No.	COURSE TITLE	PROVIDED BY					
81	Hazardous Material Transportation *[no longer offered]*	UF TREEO Center	4				
304	Hazardous Materials Awareness for Solid Waste Online	UF TREEO Center	5	5	5	5	2
50	Hazardous Materials Awareness Training [1/25/94]	Citrus County	8				
102	Hazardous Materials in Construction & Demolition Waste	UF TREEO Center	4	4			
224	Hazardous Materials in Construction & Demolition Waste OnLine	UF TREEO Center	4	4			
86	Hazardous Materials Incident Awareness Level Training [2/5/97]	Escambia County Emergency Prep	8	8	8	8	8
356	Hazardous Materials Incident Response Operations (165.5)	Kenton Brown	8	8	8	8	4
70	Hazardous Materials Management Conference [11/6-9/96]	International City & County Mgmt Associate	12				
98	Hazardous Materials Transportation Seminar [5/7-8/97]	City Environmental Services, Inc of Florida	5	5	5		
34	Hazardous Waste & Emergency Response	Applied Associates International	8	8	8	8	8
53	Hazardous Waste Management for Government Employees [9/95, 10/95]	UF TREEO Center	6				
60	Hazardous Waste Mgmt 40 CFR 261-265 [4/17/96]	Occupational Safety Training, Inc.	8				
99	Hazardous Waste Operations & Emergency Response	Sterling Fibers/ESP	3	3	3		
188	Hazardous Waste Operations Emergency Response Refresher	Orange Co. Environmental Protection Division	4	4	4	4	
379	Hazardous Waste Operations & Emergency Response Site Supervision 8 Hour Course	USF Sunshine ERC	4	4	4	4	2
63	Hazardous Waste Regulations for Generators	UF TREEO Center	4	4	4	4	4
20	Hazardous Waste Training for Solid Waste Managers [7/16/93]	SWANA – FL	5				
217	HazWoper 24-Hour Moderate Risk Online	UF TREEO Center	6	6	6	6	3
216	HazWoper 40-Hour OSHA Health & Safety Online	UF TREEO Center	8	8	8	8	
218	HazWoper 8-Hour Refresher Online	UF TREEO Center	4	4	4	4	4
269	HazWoper 8 Hour OSHA Refresher	Gulf Coast Industrial Services Inc.	4	4	4	4	4
115	HazWoper Material Control & Emergency Response	Air Safe	8	8	8	8	4
170	Health & Safety Issues for Solid Waste Management Facilities	Kohl Consulting, Inc.	8	8	8	8	4
281	Health and Safety for Solid Waste Workers	UF TREEO Center	8	8	8	8	8
69	Health and Safety Training for Hazardous Materials: 40-Hour OSHA Compliance Course	UF TREEO Center	8	8	8	8	
62	Health and Safety Training for Hazardous Materials: 8 hour OSHA Refresher	UF TREEO Center	4	4	4	4	2
223	Health and Safety Training for Landfill Operations OnLine [no longer offered 11/03, see course #304]	UF TREEO Center	5	5	5	5	2
149	Health and Safety Training for Landfill Operations	UF TREEO Center	5	5	5	5	2
295	Heavy Equipment Operator Training – 4 hour	Fleet Solutions	4	4	4	4	
201	Hiring and Retaining Good Employees	UF TREEO Center	2	2	2	2	
33	Household Hazardous Waste [6/30/94]	Care Environmental Corp.	4				
306	Household Hazardous Waste Training Workshop	Charlotte County Solid Waste	4	4	4	4	4
209	Hurricane Preparedness and Post Disaster Recovery Workshop [8/10/01]	Dewberry & Davis LLC	8	8	8	8	8
19	Hydrogeology: Applications of Fundamental Concepts & Field Techniques to Florida Groundwater Investigations *[No longer offered]*	UF TREEO Center	20	20			
11	Inspection Procedures for Agri-chemical Containers offered for Recycling *[No longer offered]*	Dept. of Agriculture & Consumer Services	1				
44	Inspection Procedures for Agri-chemical Containers offered for Recycling [Pesticide] *[No longer offered]*	Institute of Food & Agriculture Science [IFAS]	1				
129	Inspector's Handbook for Construction Projects	Hillsborough County Solid Waste	7				
151	Integrated Management Course: Hurricane Recovery and Mitigation	FEMA/EMI	7	7	7	7	
37	Introduction to Electrical Maintenance *[prior to 1/1/02]*	UF TREEO Center	7				
212	Introduction to Electrical Maintenance *[taken after 1/1/02]*	UF TREEO Center	16	16	16	16	

Continuing Education			I, II, III	C&D	Transfer	MRF	Spotter
No.	COURSE TITLE	PROVIDED BY					
14	Introduction to Groundwater: Contamination, Investigation, & Remediation Assessment	UF TREEO Center	13	13			
124	Landfill Compaction Training School *[prior to 1/1/02]*	Caterpillar & Ringhaver Equipment	5	5			
229	Landfill Compaction Training School - 8 hours *[taken after 1/1/02]*	Caterpillar & Ringhaver Equipment	8	8			
75	Landfill Compliance Inspections	Kohl Consulting, Inc.	2	2			2
157	Landfill Design and Construction	UF TREEO Center	28				
4	Landfill Design: Cell Design & Construction [3/9/92]	UF TREEO Center	14				
6	Landfill Design: Closure & Long Term Care [5/19/92]	UF TREEO Center	15				
2	Landfill Design: Conceptual Design Operations & Monitoring [1/12/92]	UF TREEO Center	14				
78	Landfill Design: Landfill Design and Construction [5/5-9/97], [3/27-30/00]	UF TREEO Center	28				
5	Landfill Design: Leachate & Gas Management [3/11/92]	UF TREEO Center	15				
79	Landfill Design: Leachate and Gas Management System Design [6/10-12/97]	UF TREEO Center	21				
3	Landfill Design: Liner Systems Materials Installation & Quality Assurance [2/11/92]	UF TREEO Center	14				
1	Landfill Design: Planning & Permitting [1/21/92]	UF TREEO Center	14				
77	Landfill Design: Planning and Permitting for Solid Waste Management [4/8-9/97]	UF TREEO Center	16				
179	Landfill Gas & Energy: Alternative Uses [9/25-27/00]	CDM, Inc.	8				
49	Landfill Gas & Leachate Systems	UF TREEO Center / SCS Engineers	8	8			
172	Landfill Gas Collection and Control Systems [8/19-20/99]	CDM, Inc.	8				
276	Landfill Gas Collection and Control Systems Operator Training [9/2002]	Waste Management.	12				
83	Landfill Gas NSPS Workshop [7/15/96]	FDEP	6				
67	Landfill Gas NSPS Workshop [7/9/96]	SWANA - FL	4				
311	Landfill Gas Safety Training Program – Nature, Hazards, Regulations, Response	UF TREEO Center / SCS Engineers	4	4			4
57	Landfill Gas System Design- A Practical Approach [6/14-15/94]	Landfill Control Technologies	8				
89	Landfill Gas: How to Profit From the New Mandates [6/17/97]	FDEP	7				
194	Landfill Operating Issues for Class I, II, III and C&D Sites	Kohl Consulting, Inc.	8	8			8
260	Landfill Operation Online	UF TREEO Center	16	16			
261	Landfill Operation	UF TREEO Center	16	16			
111	Landfill Operations and Waste Screening for Class I, II & III Sites	Kohl Consulting, Inc.	8				8
58	Landfill Operator Education (Landfill Mining and Landfill Gas and Leachate Mgmt) [3/22/96]	SWANA - FL	4				
168	Landfill Service School (Leachate Pumps and Controls School) [3/25-26/99]	EPG Companies	7	7			
118	Landfill Wildlife Training Course	Applied Technology & Management, Inc – ATM/UF TREEO Center	4	4			
277	Laws and Rules for Florida Engineers - *only for PEs	UF TREEO Center	4				
158	Leachate and Gas Management System Design [5/9-10/00]	UF TREEO Center	12				
340	Leachate and Landfill Gas Management System Design-2004	UF TREEO Center	16				
387	Low-Flow Ground Water Sampling and Florida SOPs	STL & QED and FDEP	5	5			
125	Management of Leachate, Gas, Stormwater and Odor at Class I, II, III Landfills	Kohl Consulting, Inc.	8	8			
249	Management of Special Waste for SWM Facility Operators	Kohl Consulting, Inc.	4	4	4	4	4
389	Map and Plan Reading Class	Sarasota Co. Tech	5	5	5	5	5
333	Mathematics for Landfill Operators	Wetland Solutions	8	8			
109	Measurements and Calculations for Landfill Operators	Kohl Consulting, Inc.	5	5			
38	Mechanical Maintenance (Pumps and Pumping) *(prior to 1/1/02)* (see #213)	UF TREEO Center	7				

Continuing Education							
No.	COURSE TITLE	PROVIDED BY	I, II, III	C&D	Transfer	MRF	Spotter
140	Meeting the Challenges of Environmental Liability with Case Studies in Solid Waste [6/16/99]	SWANA - FL	4				
128	Methods of Erosion and Sedimentation Control for Construction Sites	UF TREEO Center/FDEP	6	6			
390	MicroPurge Low-Flow Purging and Groundwater Sampling	The Nielsen Environmental Field School	8	8			
208	NPDES Phase II Inspector Certification Course	University of Florida – T2 Center	12	12	8	4	
180	NUCA Competent Person Training	Sarasota Co. Tech	8	8			
364	Odor Control at Class I II III	SWA PBC	8				
10	On Site Operations Personnel [11/91]	SWANA - FL					
332	Operational Techniques and Compliance Inspections for Landfills	Wetland Solutions	8	8			
352	Operator Safety on Heavy Equipment	Ring Power	4	4	4	4	4
177	OSHA 40-Hour Course	R. Cooey	8	8	8	8	
165	OSHA 8-Hour HazWoper Annual Refresher [8/25/00]	University of North Florida Safety America	4	4	4	4	2
359	OSHA 8-Hour HazWoper Annual Refresher -Online	Compliance Solutions	4	4	4	4	2
142	OSHA 8-Hour Refresher for Hazardous Waste Operations and Emergency Response	FDEP/Jamson	4	4	4	4	2
68	OSHA Update Seminar [8/7/96]	J.J. Keller & Associates, Inc.	6				
183	Overview of Class I Landfill Operations and Waste Screening	Kohl Consulting, Inc.	3	3			3
92	Overview of Solid Waste Management Technologies	Kohl Consulting, Inc.	3				
184	Overview of Transfer Stations Operations and Waste Screening Review	Kohl Consulting, Inc.			3	3	3
301	Overview of Transfer Stations Operations and Waste Screening Review	Kohl Consulting, Inc			4	4	4
15	Overview Understanding the Planning & Training Requirements of Big 3:OSHA, EPA, DOT (Regulatory Overview)	UF TREEO Center	7				
192	Pedestrian, Vehicles and Equipment Safety at Transfer Stations	Kohl Consulting, Inc.			2	2	2
186	Pedestrian, Vehicles and Equipment Safely in the Landfill	Kohl Consulting, Inc.	2	2			2
104	Permit Required Confined Space Training	UF TREEO Center	8	8	8	8	
388	Permit Required Confined Space Training	Jones Edmunds & Associates	5	5	5	5	5
96	Personnel Law Up-date [12/11-12/96]	Council on Education in Management	5				
372	Phase I and II Environmental Site Assessment	Florida Environmental Assessor Association (FEAA)	2				
239	Pollution Prevention and Environmental Essentials Conference	UF TREEO Center	5	1	5	5	
362	Pollution Prevention Conference [8/4-6/2004]	UF TREEO Center	2	1			
292	Predictive Maintenance	Fleet Solutions	4	4	4	4	
230	Proper Maintenance of Heavy Equipment and Safety	Caterpillar & Ringhaver Equipment	3	3	3	3	3
153	Pump Maintenance [4/13-14/00]	National Tech Transfer	7				
213	Pumps and Pumping *(taken after 1/2/02)*	UF TREEO Center	16	16	16	16	
237	Recycle Organics 2002	University of Florida - IFAS	4	4	4	4	
280	Recycle Florida Today 10th Annual Conference [6/3-6/03]	Recycle Florida Today	5	4	5	5	
380	Recycle Florida Today 2004 Annual Conference - 6/4-6/04	Recycle Florida Today				3	
381	Recycle Florida Today 2005 Annual Conference - 6/6-8/05	Recycle Florida Today				3	
327	Recycle Florida Today 2004 Issues Forum [2/04]	Recycle Florida Today			8		
373	Recycle Florida Today 2005 Issues Forum [2/23-24/05]	Recycle Florida Today	4	4	4	4	
90	Recycling Coordinator Training Course 1997 (Basic Recycling Training) [5/19-21/97]	UF TREEO Center	8	8			
137	Recycling Coordinator Training Course 1999	UF TREEO Center	8	8			
205	Recycling Coordinators Training Course 2001 [8/2--24/01]	SWANA - FL	8	8			
146	Recycling Disaster Debris [8/6/99]	University of Central Florida /	6	6	6	6	6

Continuing Education							
No.	COURSE TITLE	PROVIDED BY	I, II, III	C&D	Transfer	MRF	Spotter
		Engineering					
193	Safe Operating Issues for Transfer Stations	Kohl Consulting, Inc.			2	2	
309	Safety Awareness Training for Transfer Stations	UF TREEO Center			8	8	
331	Safety Issues for Solid Waste Management Facilities-4 hour	Kohl Consulting, Inc.	4	4	4	4	4
365	Safety Issues for Solid Waste Management Facilities-8 hour	Kohl Consulting, Inc.	8	8	8	8	8
358	Safety Issues for Transfer Station and Landfill Operators	Kohl Consulting, Inc.	4	4	4	4	4
123	School/University Advanced Recycler Training Course [10/20-21/98]	UF TREEO Center	7	7			
7	Site Monitoring at Solid Waste Facilities	SWANA - FL	10				
139	Solid Waste Facility Operations for Construction and Demolition Operators *[No longer offered]* (See #196)	Kohl Consulting, Inc.		20			
138	Solid Waste Facility Operations for Landfill Operators *[No longer offered]* (See #196)	Kohl Consulting, Inc.	20				
41	Solid Waste in Florida's Small Counties Workshop	Florida Counties Foundation & the Florida Institute of Government	4				
21	Solid Waste Landfill Operators Short School *[No longer offered]*	UF TREEO Ctr/SWANA - FL	20				
28	Solid Waste Landfills Correspondence Course (course # C240-A180)	University of Wisconsin	20	20			
22	Solid Waste Management: Managing Special Waste [5/19/92]	UF TREEO Center	6				
55	Solid Waste Regulatory Review Workshop [3/10/95]	SWANA - FL	3				
301	Spotter Safety and Waste Control at Landfills	Kohl Consulting, Inc	4	4			4
300	Spotter Safety and Waste Control at Transfer Stations	Kohl Consulting, Inc			4	4	4
257	Spotter Training Course – 8 Hours Initial Training	Hewitt Contracting Company, Inc.	8	8	8	8	8
263	Spotter Training for Solid Waste Facilities Refresher	UF TREEO Center	4	4	4	4	4
248	Spotter Training for Solid Waste Facilities	UF TREEO Center	8	8	8	8	8
378	Spotter Training for Solid Waste Facilities - Spanish	UF TREEO Center	8	8	8	8	8
214	Spotter Training Plan for Land Clearing Debris Site	Wetland Solutions	8	8	8	8	8
375	Spotter Training Plan for Land Clearing Debris Site 4-Hour Refresher	Wetland Solutions	4	4	4	4	4
150	Storm Water Management Training	S2Li	4				
315	Stormwater Design and Permitting: An Introduction in Using Computers to Solve Stormwater Problems	UF TREEO Center	7	7			
329	Stormwater Control and Florida Inspection Certification (same as 202& 289)	UF TREEO Center	12	12			
202	Stormwater Inspector Certification Course	Sarasota Co. Tech	12	12	8	4	
39	Stormwater Management for Landfills *[No longer offered]*	UF TREEO Center	8				
370	Stormwater Management at Solid Waste Facilities	Jones Edmunds & Associates	8	8	8	8	
56	Successfully Contracting for Solid Waste Services [7/14/95]	SWANA - FL	4				
61	Successfully Contracting Solid Waste Services	UF TREEO Center / SCS Engineers	4				
319	SWANA E-Seminar: What is Single Stream [1/7/04]	SWANA				1	
320	SWANA E-Seminar: Single Stream in Action [1/21/04]	SWANA				1	
321	SWANA E-Seminar: Heavy Metals in Landfills [2/4/04]	SWANA	1	1			
322	SWANA E-Seminar: Bioreactors - Next Generation Landfills [2/11/04]	SWANA	1				
323	SWANA E-Seminar: Landfill Gas and Micro-Turbines [2/18/04]	SWANA	1				
334	SWANA E-Seminar: Special Waste Mesa County [3/3/04]	SWANA			1	1	
335	SWANA E-Seminar: SWM - SPSA Chesapeake VA [3/10/04]	SWANA			1	1	
336	SWANA E-Seminar: Marketing - City of Hamilton [3/17/04]	SWANA			1	1	
337	SWANA E-Seminar: GRVD WTE Facility [4/7/04]	SWANA	1	1	1	1	
341	SWANA E-Seminar: Making Ends Meet When Revenues Start to Disappear [5/5/04]	SWANA	1				
342	SWANA E-Seminar: What Middle Managers Say About Change [5/12/04]	SWANA	1				
343	SWANA E-Seminar: Improving Operational Efficiencies Through Team	SWANA	1				

Continuing Education			I, II, III	C&D	Transfer	MRF	Spotter
No.	COURSE TITLE	PROVIDED BY					
	Bonus Incentives [5/19/05]						
349	SWANA E-Seminar: Changing Services -City of San Jose's Transition to Single Stream Recycling [6/2/04]	SWANA	1	1	1	1	1
350	SWANA E- Seminar: Business Recycling - How to Increase Participation [6/9/04]	SWANA	1	1	1	1	1
351	SWANA E- Seminar: New York City's Waste Less Website [6/16/04]	SWANA	1	1	1	1	1
215	SWANA - 2001 Special Waste Conference [12/3-4/01]	SWANA	10	9	10	8	
258	SWANA - 2002 Special Waste Conference [12/5-6/02]	SWANA	10	9	9	9	
310	SWANA - 2003 Special Waste Conference [12/11-12/03]	SWANA	10	9	9	9	
345	SWANA - Bioreactor Landfill Course	SWANA	8	8			
242	SWANA - Business Planning, Marketing and Communications for the Solid Waste Industry	SWANA	8	8	4	4	
252	SWANA - FEMA's Debris Management	SWANA	8	8	8	8	8
250	SWANA - Construction and Demolition Debris Course	SWANA	22	22	22	22	8
47	SWANA - Financing Integrated MSW Management Systems [5/14/96]	SWANA	8				
46	SWANA - Groundwater Monitoring/Leachate Mgmt	SWANA	8	8			
94	SWANA - Health & Safety at MSW Landfills	SWANA	10	10			
238	SWANA - Household Hazardous Waste & CESQG Facility Operations 24 hour Training	SWANA / SWANA - FL	15	15	15	15	15
26	SWANA - International Meeting [8/11-13/91]	SWANA	20				
244	SWANA - Landfill Gas Basics	SWANA	8	8			
27	SWANA - Landfill Gas Management (Spring Seminar 1994) [3/4/94]	SWANA	4				
133	SWANA - Landfill Gas Symposium 22nd Annual [3/22-25/99]	SWANA	15				
163	SWANA - Landfill Gas Symposium 23rd Annual [3/22-30/00]	SWANA	15				
190	SWANA - Landfill Gas Symposium 24th Annual [3/19-23/01]	SWANA	18				
262	SWANA - Landfill Gas Symposium 26th Annual [3/25-27/03]	SWANA	15	15			
325	SWANA - Landfill Gas Symposium 27th Annual [3/22-25/04]	SWANA	18	18			
368	SWANA - Landfill Gas Symposium 28th Annual [3/7-10/05]	SWANA	15	15			
231	SWANA - Landfill Gas System Operation and Maintenance	SWANA	16	16			
93	SWANA - Landfill Operational Issues	SWANA	8	8			
74	SWANA - Landfill Symposium 1st Annual [11/4-6/96]	SWANA	17				
87	SWANA - Landfill Symposium 2nd Annual [2/4-6/97]	SWANA	18				
117	SWANA - Landfill Symposium 3rd Annual [7/22-24/98]	SWANA	18				
159	SWANA - Landfill Symposium 4th Annual [6/28-30/99]	SWANA	16				
211	SWANA - Landfill Symposium 6th Annual [6/18-20/01]	SWANA	18				
275	SWANA - Landfill Symposium 8th Annual [6/17-19/03]	SWANA	13				
376	SWANA - Landfill Symposium 10th & Solid Waste Managers Conf [6/2005]	SWANA	15	15	7	7	
344	SWANA Landfill Symposium and Solid Waste Managers Conference	SWANA	17	17			
245	SWANA - Leadership Skill Development for Solid Waste Professionals	SWANA	8	8	4	4	
8	SWANA - Managing Landfill Gas at MSW Landfills	SWANA	10	10	10	10	10
95	SWANA - Managing Landfill Gas at MSW Landfills [1997] *Onsite Delivery*	SWANA	5	5			
30	SWANA - Manager of Landfill Operations	SWANA	16	16			4
160	SWANA - Manager of Landfill Operations [MOLO®]	UF TREEO Ctr/SWANA - FL	16	16	8	8	
000	SWANA - Manager of Landfill Operations [MOLO®] Exam Only	SWANA/ SWANA - FL	0				
243	SWANA - Managing Composting Programs	SWANA	10	10			
251	SWANA - Managing MSW Collection Systems	SWANA	8		8	8	
246	SWANA - Managing MSW and Recyclables Collection Efficiency Workshop	SWANA	8	8	4	4	
234	SWANA - Managing MSW Recycling Systems	SWANA / SWANA - FL	7	7	7	7	
001	SWANA - Managing MSW Recycling Systems Exam Only	SWANA/ SWANA - FL	0				
222	SWANA - Managing Transfer Station Systems	SWANA			8	8	
297	SWANA Online – Health & Safety at MSW Landfills	SWANA	6	6			
296	SWANA Online – Training Sanitary Landfill Operation Personnel	SWANA	5				

Continuing Education:			I, II, III	C&D	Transfer	MRF	Spotter
No.	COURSE TITLE	PROVIDED BY					
298	SWANA Online – Waste Screening at MSWM Facilities	SWANA	6				
247	SWANA - Outsourcing Decisions and Contracting Strategies: Risk and Rewards	SWANA	8	8	4	4	
178	SWANA - Paying for your MSW Management Systems-Revenue Generation & Cost Accounting [10/24/00] [10/14/01]	SWANA	7				
174	SWANA - Principles of Managing Integrated Municipal Solid Waste Management Systems	SWANA	7				
45	SWANA - Principles of Managing IMSWM Systems [Certified Municipal Solid Waste Manager I]	SWANA	24				
346	SWANA - Promoting Mercury Containing Lamp Recycling: A Guide for Solid Waste Managers	SWANA & SWANA-FL	4				
383	SWANA - Relationship is the Key Workshop	SWANA	2	2	2	2	
303	SWANA - Southern States Regional Conference	SWANA	11				
132	SWANA - Training Sanitary Landfill Operating Personnel	SWANA	5				
216	SWANA - Transfer Station Design & Operations [*course taken after 1/1/2002*]	SWANA			8	8	4
42	SWANA - Transfer Station Design & Operations [*course taken prior to 1/1/2002*]	SWANA	16		16		
191	SWANA - Waste Con 2000 [10/23-26/00]	SWANA	13		13		
221	SWANA - Waste Con 2001 [10/15-18/01]	SWANA	8	2			
254	SWANA - Waste Con 2002 [10/15-18/02]	SWANA	6	6	6	6	
317	SWANA – Waste Con 2003 [10/12-14/03]	SWANA	5	5	3	4	
354	SWANA – Waste Con 2004 [9/21-23/04]	SWANA	6	4	4	4	
259	SWANA - Waste Reduction, Recycling and Composting 14th Annual Symposium [2/24-3/1/2003]	SWANA	7	7	15	15	
324	SWANA - Waste Reduction, Recycling and Composting 15th Annual Symposium [2/9-14/2004]	SWANA			12	12	
51	SWANA - Waste Screening at Municipal Solid Waste [5/23/94,etc]	SWANA	6				
9	SWANA - Waste Screening at MSW Mgmt Facilities [On-site Delivery]	SWANA	10	10	10	10	10
369	SWANA – Winter Technical Symposia	SWANA	7	16	16	16	
141	SWANA-Florida 1999 Summer Conference [8/3-5/99]	SWANA - FL	4				
173	SWANA-Florida 2000 Summer Conference [8/10-11/00]	SWANA - FL	6	6			
189	SWANA-Florida 2001 Spring Conference [3/29-31/01]	SWANA - FL	3	3			
207	SWANA-Florida 2001Summer Conference	SWANA - FL	5	5	5	5	1
162	SWANA-Florida 2000 Spring Tri-State Conference [4/3-5/00]	SWANA - FL	3				
220	SWANA-Florida 2002 Spring Tri-State Conference [4/7-10/02]	SWANA - FL	6	6	6	6	
326	SWANA-Florida 2004 Spring Tri-State Conference [4/4-7/04]	SWANA - FL	12	12	12	12	
235	SWANA-Florida 2002 Summer Conference [7/24-26/02]	SWANA - FL	4	4	2	1	
255	SWANA-Florida 2003 Spring Conference [4/7-12/03]	SWANA - FL	6	6	5	5	3
294	SWANA-Florida 2003 Summer Conference [8/21-22/03]	SWANA - FL	12	12	12	12	
353	SWANA-Florida 2004 Summer Conference	SWANA - FL	4	2	2	2	
374	SWANA-Florida 2005 Spring Conference [4/10-13/05]	SWANA - FL	6	6	4	5	2
385	SWANA-Florida 2005 Summer Conference [6/26-29/05]	SWANA - FL	8	5	3	3	1
116	The Complete Ground-Water Monitoring Course	Nielson Environmental Field School, Inc.	16	16			
241	The Old Landfill Seminar	UF TREEO Center / SCS Engineers	5	5			
187	Traffic and Equipment Safety at Landfills	Kohl Consulting, Inc.	2	2			2
13	Train-The-Trainer for Environmental Occupations (Management Credit ONLY)	UF TREEO Center	7	7	7	7	
305	Train-The-Trainer Refresher	UF TREEO Center	7	7	7	7	
121	Training for Personnel at Construction & Demolition Materials Recovery Facilities	Kohl Consulting, Inc.	8			8	
147	Training for Spotters at Landfills, Construction & Demolition Sites and Transfer Stations	JEA, Inc. / UF TREEO Center	8	8	8	8	8
347	Training in the Production and Utilization of Compost in Florida 5/2004	FORCE				8	

Continuing Education							
No.	COURSE TITLE	PROVIDED BY	I, II, III	C&D	Transfer	MRF	Spotter
355	Training in the Production and Utilization of Compost in Florida 6/2004	FORCE				4	
363	Training in the Production and Utilization of Compost in Florida 10/2004	FORCE	2	2			
148	Two-Hour Landfill Spotter Refresher Training Online	JEA, Inc.	2	2	2	2	2
392	Unacceptable Employee Behavior	Fred Pryor Seminars	6	6	6	6	
112	US DOT Hazardous Material / Waste Transportation	UF TREEO Center	6	6	6	6	
23	Utility Management Certification: Financial Management *[No longer offered]*	UF TREEO Center	7				
24	Utility Management Certification: Management & Supervision *[No longer offered]*	UF TREEO Center	7				
25	Utility Management Certification: Personnel Management *[No longer offered]*	UF TREEO Center	7				
126	Waste Acceptability for Spotters, Equipment Operators and Scale House Personnel	Kohl Consulting, Inc.	2	2	2	2	2
210	Waste Control and Spotter Safety Awareness	Kohl Consulting, Inc.	2	2	2	2	2
328	Waste Issues Forum 2004	The Solid & Hazardous Waste Public Information Committee (SHWPIC) serving the Alachua County area	4	4			
382	Waste Issues Forum 2005	The Solid & Hazardous Waste Public Information Committee (SHWPIC) serving the Alachua County area	3	3			
31	Waste Management of North America (Landfill University) *(no longer offered)*	Landfill University	20				
302	Waste Management Technologies and Operating Guidelines	Kohl Consulting, Inc	8	8	8	8	4
36	Waste Screening & Identification For Landfill Operators and Spotters	UF TREEO Center / SCS Engineers	8	8	8	8	8
256	Waste Screening & Identification For Landfill Operators and Spotters Refresher	Citrus County – Hazardous Waste Section	4	4	4	4	4
122	Waste Screening and Operation Orientation for Transfer Station Personnel	Kohl Consulting, Inc.	8		8		
164	Waste Tech 2000 [3/5-8/00]	Waste Tech	7				
185	Weighmaster Orientation and Waste Screening Review	Kohl Consulting, Inc.	2	2	2	2	2
73	Wet Weather Operations	Kohl Consulting, Inc.	4	4			
65	What Can I Accept & How Do I Keep It From Blowing Around	Kohl Consulting, Inc.	2				
64	When it Rains, It Pours (And We Stay Open)	Kohl Consulting, Inc	2	2			
279	Wildlife and Wetland Training for Solid Waste Facilities	UF TREEO Center	8	8			
348	Wood Waste Recycling Conference-2004	RFT	6	6			
240	WMI Odor School [5/29/02]	WMI / St. Croix Sensory, Inc.	7	7	7	7	7

APPENDIX D
EMERGENCY TELEPHONE NUMBERS

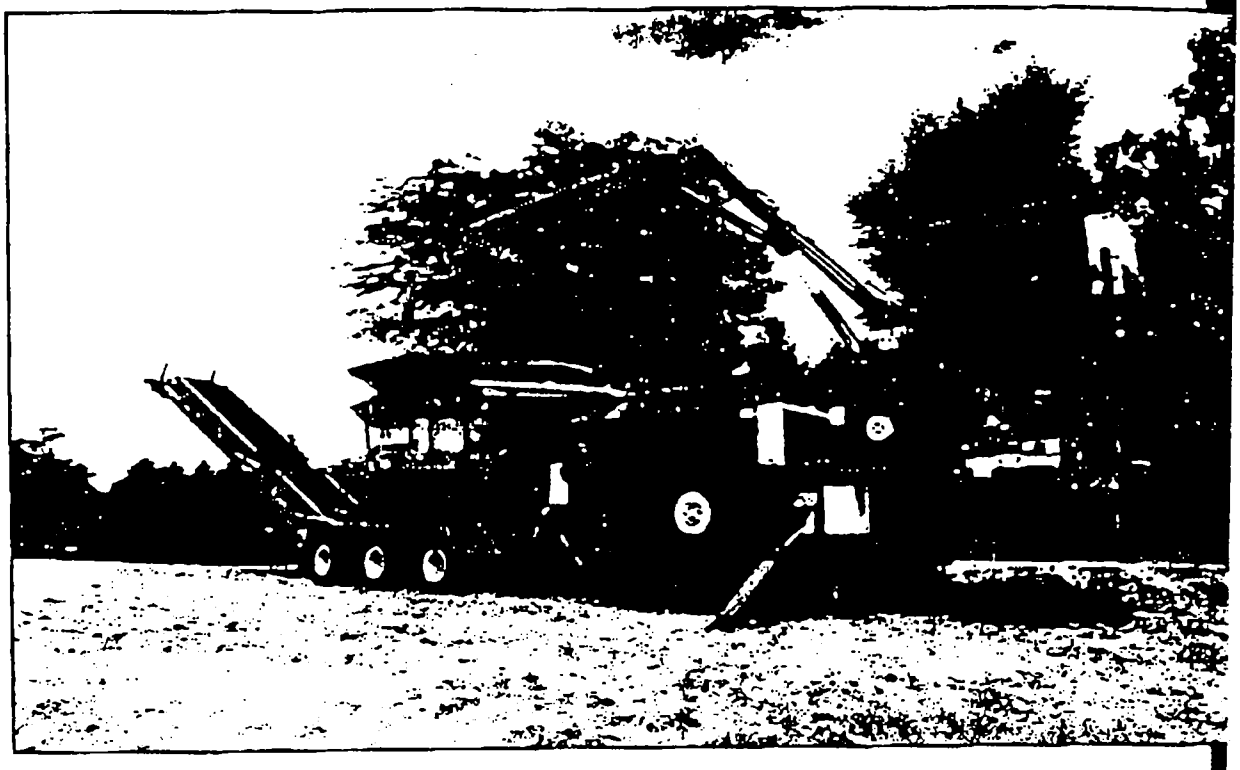
Organization	Phone Number
Primary Emergency Response	911
Fire Department	(813) 272-5665
Hazard Response - Howco Environmental Services 843 43rd St. S. St. Petersburg	(813) 323-0818
Police - Hillsborough County Sheriff Police - Tampa	(813) 247-8000 (813) 273-0770
Dominic Iafrate - Florida Operations Manager Office Phone Office Fax Mobile & Voice Mail	 (727) 581-1544 (727) 585-2134 (810) 217-0726
Angelo Iafrate – Facilities Manager Site Office Phone Site Office Fax	 (813) 903-0588 (813) 632-9157
Florida Department of Environmental Protection - Susan Pelz	 (813) 744-6100 (Ext. 386)
Hillsborough County Department of Environmental Protection Commission - Ronald Cope	 (813) 272- 5788

APPENDIX E

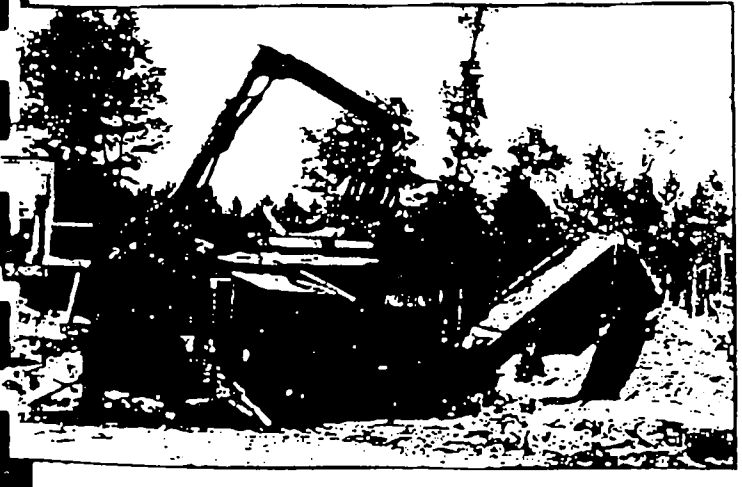
Morbark Tub Grinder

Product Information

Model 1300



Decision makers who invest in organic grinding equipment will find another very attractive option with the Morbark Model 1300 Tub Grinder. The latest in Morbark grinding technology, the Model 1300 delivers an unparalleled blend of power, torque and productivity.



While production varies depending on the type of material being processed, output as high as 320 cubic yards per hour has been documented with the Model 1300. A standard 750 HP diesel from Caterpillar or Cummins supplies the power, while torque to the hammermill is increased by a factor of 1:6 through a gearbox drive. The engine, clutch and drive train are protected with a full break away torque limiter. Dual tub drive motors provide consistent feeding of material and dual 16-inch augers remove processed material quickly and efficiently. Oil pumping capacity to the knuckleboom loader has been enhanced for the additional loader speed required to keep pace with this grinder.

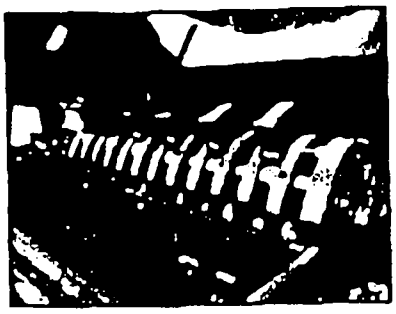
All these features and more are brought together in just the right combination to make an impact on the organic grinding industry. Calling on years of experience as the top selling tub grinder manufacturer, Morbark designers score another big hit with the Model 1300 Tub Grinder.

Morbark Sales Corporation

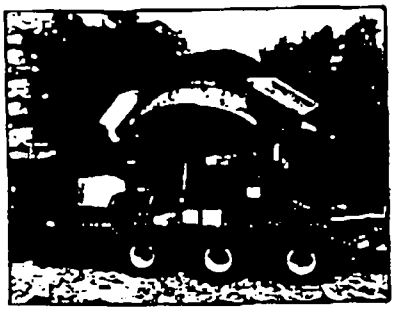
8507 S. Winn Road
P.O. Box 1000
Winn, MI 48896

(800) 233-6065
(517) 866-2381
Fax (517) 866-2280

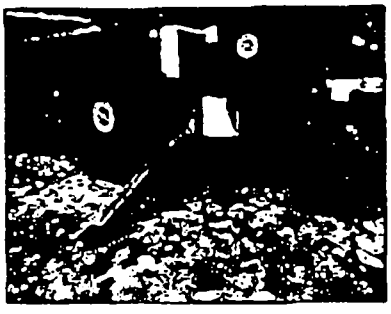
Morbark Tub Grinder **Model 1300**



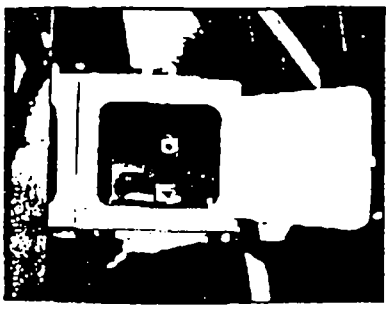
20" heavy duty hammermill rotor is equipped with 24 T-1 steel fixed hammers with double-edged, replaceable carbide cutting tools.



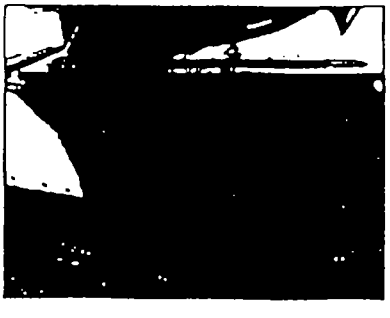
Full hydraulic tub tilt provides safe and easy access to hammermill during routine maintenance.



Two hydraulic stabilizing legs and two hydraulic outriggers provide added stability during operation.



Full break away torque limiter protects engine and clutch against shock or overload.



Dual 16" diameter underneath discharge augers require less maintenance and provide longer life than a belt.

GENERAL

Length	38'6"
Height	13'4"
Width (transport)	11'11"
Gross weight	72,000 lbs
Tongue weight	21,000 lbs.
Axle weight	51,000 lbs.
Tri-axle trailer	60,000 lbs. suspension
Tires (12)	10.00 x 15, 14-ply radial
Brakes	air
Stabilizer legs (2)	hydraulic
Outriggers (2)	hydraulic
Drive	direct w/full break-away torque limiter
Towing arrangement	fifth wheel
Engine	Caterpillar or Cummins
Horsepower	650 - 800
Fuel tank capacity	400 gallon
Hydraulic oil tank capacity	240 gallon
Water spray dust suppression system	
Auxiliary air compressor	10 HP

CAB & LOADER

Enclosed weatherized operator's cab, 6-way adjustable seat, complete with all controls
Morlift model 400 knuckleboom loader with 29' extended reach and 280° continuous swing bypass grapple with 360° turn
Lift capacity 8,300 lbs. at 10'

TUB

Full hydraulic tilt
13' diameter tub opening, 10' diameter at inside base, and 56" deep
Walls constructed of 3/8" thick reinforced steel plate, floor constructed of 1/2" thick T-1 steel
Tub supported by (16) rubber tire guide rolls, carried on a 1-1/2" diameter chrome shaft
Hydraulic forward & reverse
Safety shutdown system
Electronic RPM sensor for tub drive

HAMMERMILL & SCREENS

31" x 55" hammermill opening
20" diameter x 54" long rotor with (8) 2-1/4" heat-treated hammer retaining rods mounted on a 7" diameter rotor shaft
Equipped with (24) 2" thick T-1 steel fixed hammers with double-edged, replaceable cutting tools
1" thick wear form steel split screens
Wear plate & screen area 3,025 sq. inches

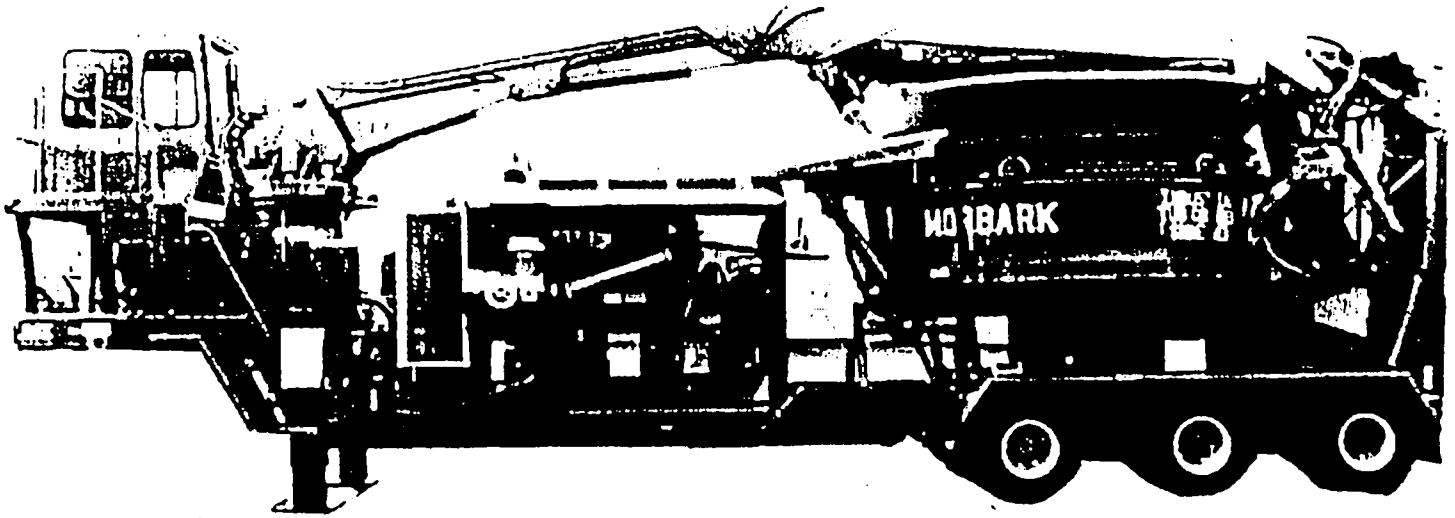
DISCHARGE SYSTEM

Two (2) 16" diameter augers discharge onto a 36" wide x 26' long heavy duty belt conveyor, discharge height of 17'

OPTIONS

Electric power
Air conditioner/heater
Joy stick controls
Wireless remote control
Heavy duty 36" grapple
Magnetized end pulley with collecting slide tray for ferrous metal extraction
Hydraulic reversing radiator fan

MoBARK 1300



MAIN COMPONENTS

SPECIFICATIONS

General

Length	42'
Transport Width	11'11"
Transport Height	13'4"
Operating Width	approx. 17'
Operating Height	approx. 13'4"
Weight	approx. 68,000 lbs.
Electrical System	24 volt

Power Options

Caterpillar	650 H.P. to 750 H.P.
Cummins	650 H.P. to 750 H.P.

Loader

Style	Morbark Mor-Lift 400
Main Boom Length	12' 4"
Jib Boom Length	13' 10"
Extended Lift Capacity	2300 lbs.
Retracted Lift Capacity	8300 lbs.

Grapple

Style	Morbark H462
Grapple Open to	62"
Grapple Close to	4"
Rotation	Hydraulic (continuous)

SPECIFICATIONS

Tub Features

Top Opening	12'6" Dia.
Inner Base Opening	10' Dia.
Roller Guides	14
Hammermill Opening	32" x 59"
Rotor	20" Dia.
Rotor Shaft	7" Dia.

Tank Capacities

Diesel Fuel	400 U.S. Gallons
Hydraulic Fluid	180 U.S. Gallons

information regarding operation and servicing of your plant.

OPERATING GUIDELINES

The Model RC-14 Portable Recycle Plant is designed to process the following:

Raw Materials

asphalt	concrete with wire mesh
brick	concrete with rebar steel*
ceramic products	concrete tile
cinder block	glass
concrete	rubble
concrete pipe	selected wood

*Maximum 1-inch diameter rebar steel imbedded in concrete is acceptable. Concrete containing imbedded rebar steel at 15% of total weight is acceptable. Concrete columns with rebar steel clusters are not acceptable, since the rebar steel content exceeds 15% of total weight. Concrete should be trimmed of excess rebar steel to limit length of rebar to 2-foot long pieces.

Equipment Components

A. FEED HOPPER

The feed hopper is designed to accept loading from either side of the plant. Raw material should be prepared to size prior to loading the hopper.

RC-14 PORTABLE CRUSHER

B. FEEDER

The vibrating grizzly feeder is designed to accept raw material dumped onto the solid impact deck. It is good practice to load the feeder with a cushion of material on the deck to prolong the life of the equipment. The 6-foot long grizzly section has adjustable bars to control the size of material passing through the openings. The collecting hopper and chute with flop gate located under the grizzly bars is designed to handle material at a maximum setting of 2 1/2-inch spacing on the bars. The grizzly section of the feeder is employed to bypass "fines" prior to the crusher to prolong the wear life of the crusher blow bars and to provide maximum capacity for the crusher.

C. FEED HOOD

The feed hood is designed to contain the raw material prior to entering the feed chamber of the crusher. A heavy duty chain and rubber curtain hangs vertically near the opening of the feed hood to prevent splash-back of crushed material. An optional top recirculating feed hopper is available to introduce screened oversize material for further reduction.

The feed hood has a feed opening 41-inch high by 58-inch wide. It is recommended that raw material chunks entering this feed opening be pre-sized by a rock breaker or hydraulic shear to prevent restriction or bridging of this feed opening. Operating capacity of the model RC-14 recycle plant will be adversely affected by clogging of oversize chunks of raw material in the feed hood opening.

D. CRUSHER

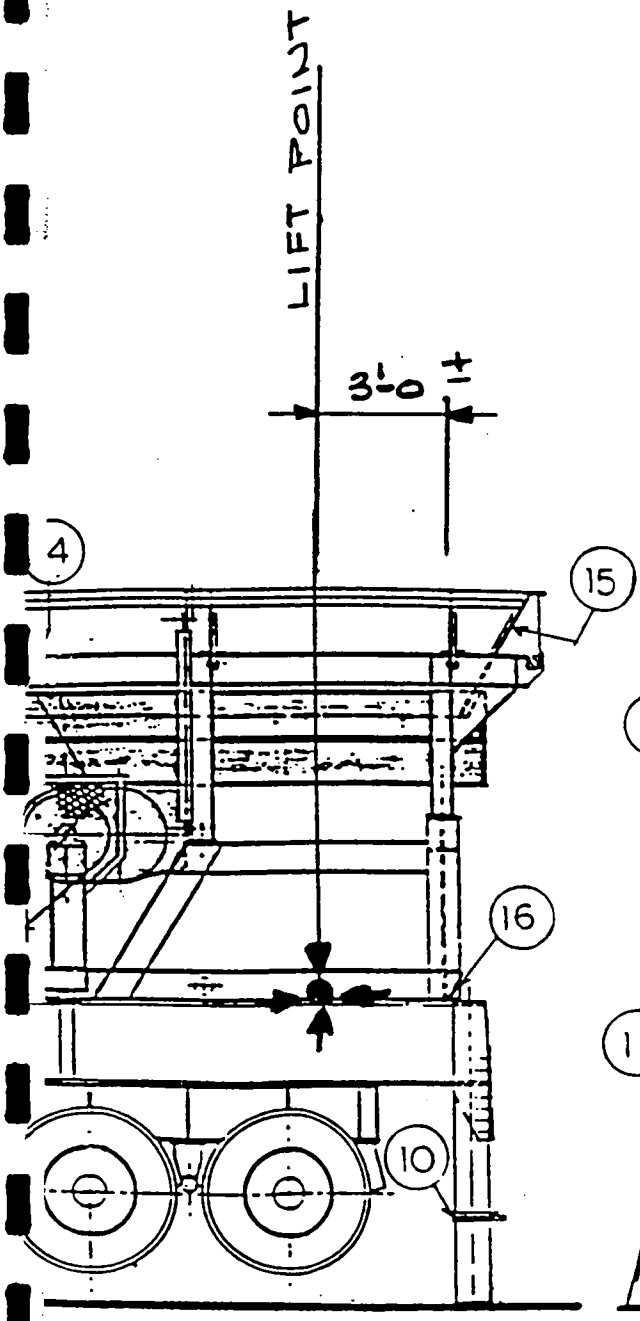
The model RC-14 horizontal shaft impact crusher has an operating capacity up to 300 tons per hour providing the raw material is consistently sized at 24-inches, which is 65% of the feed opening.

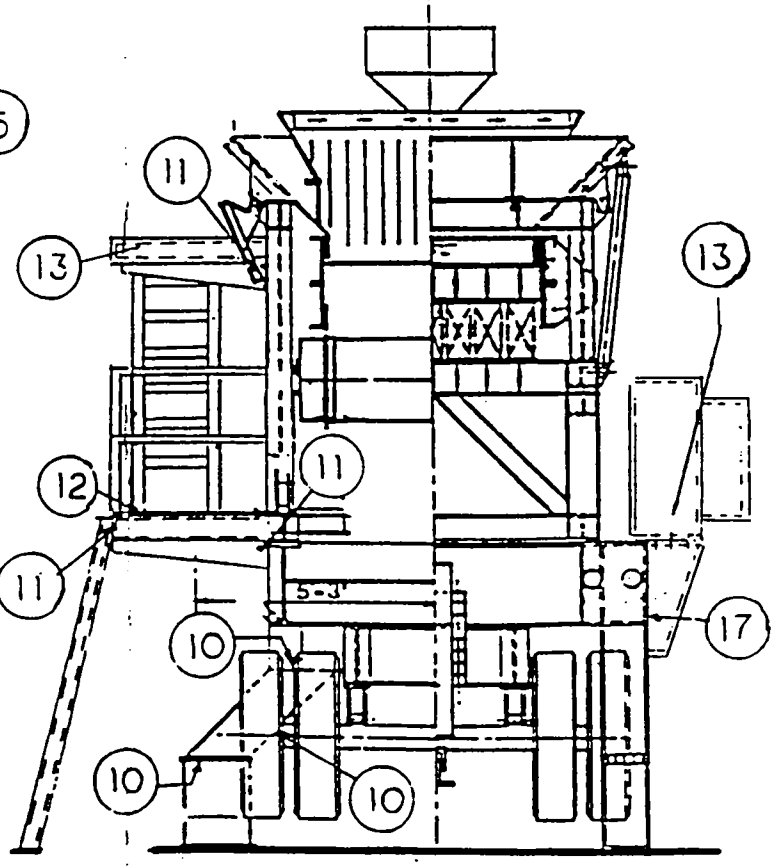
The crusher is designed to crush the raw materials shown in the listing on page 7. These raw materials, in most cases, have low compressive strengths and are reduced at a high ratio of reduction. The rebar steel imbedded in concrete is not "crushable." The crusher rotor strips the concrete from the rebar and allows the rebar steel to pass through the machine. The steel is separated from the crushed concrete at a later stage through an overhead magnet.

Rule of Thumb: If the rotor can properly impact the material, it will be crushed. Production, however, will suffer dramatically if the crusher is fed oversize or overlength material. Try to maintain 65% of the feed opening for the raw feed BUT not as a single piece. For example, the model RC-14 crusher has a 37-inch by 57-inch feed opening.

With the feed hood attached, the optimum raw feed would be a piece 24-inch by 24-inch, with some smaller pieces completing the equation.

ITEM NO	QTY	DISCRIPTION
10	88	HEX HD BOLT 5/8 x 2 1/2" C/W HN & LW
11	16	HEX HD BOLT 3/4 x 2" C/W HN & LW
12	2	HEX HD BOLT 1/2 x 1 1/2 C/W HN & LW
13	5	HEX HD BOLT 3/8 x 1 1/2 C/W HN & LW
14	12	HEX HD BOLT 3/4 x 3 C/W HN & LW
15	14	HEX HD BOLT 3/4 x 2 1/2 C/W HN & LW
16	10	HEX HD BOLT 3/4 x 2 3/4 C/W HN & LW
17	8	HEX HD BOLT 5/8 x 2 C/W HN & LW





SECTION

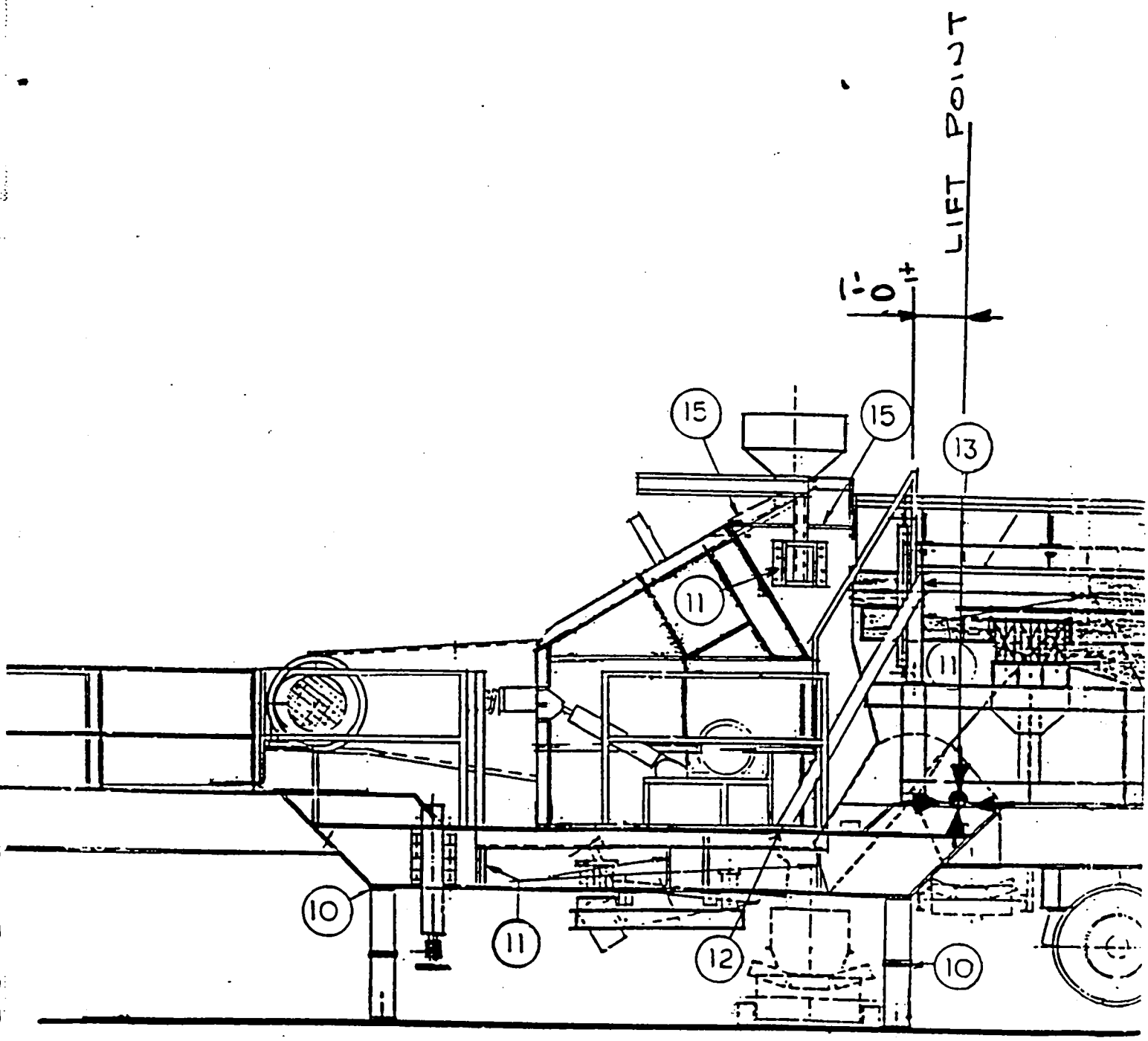
REAR VIEW

PORTABLE RECYCLING PLANT
RC-14

BOEHRINGER, INC.

1-1011

37-030-00



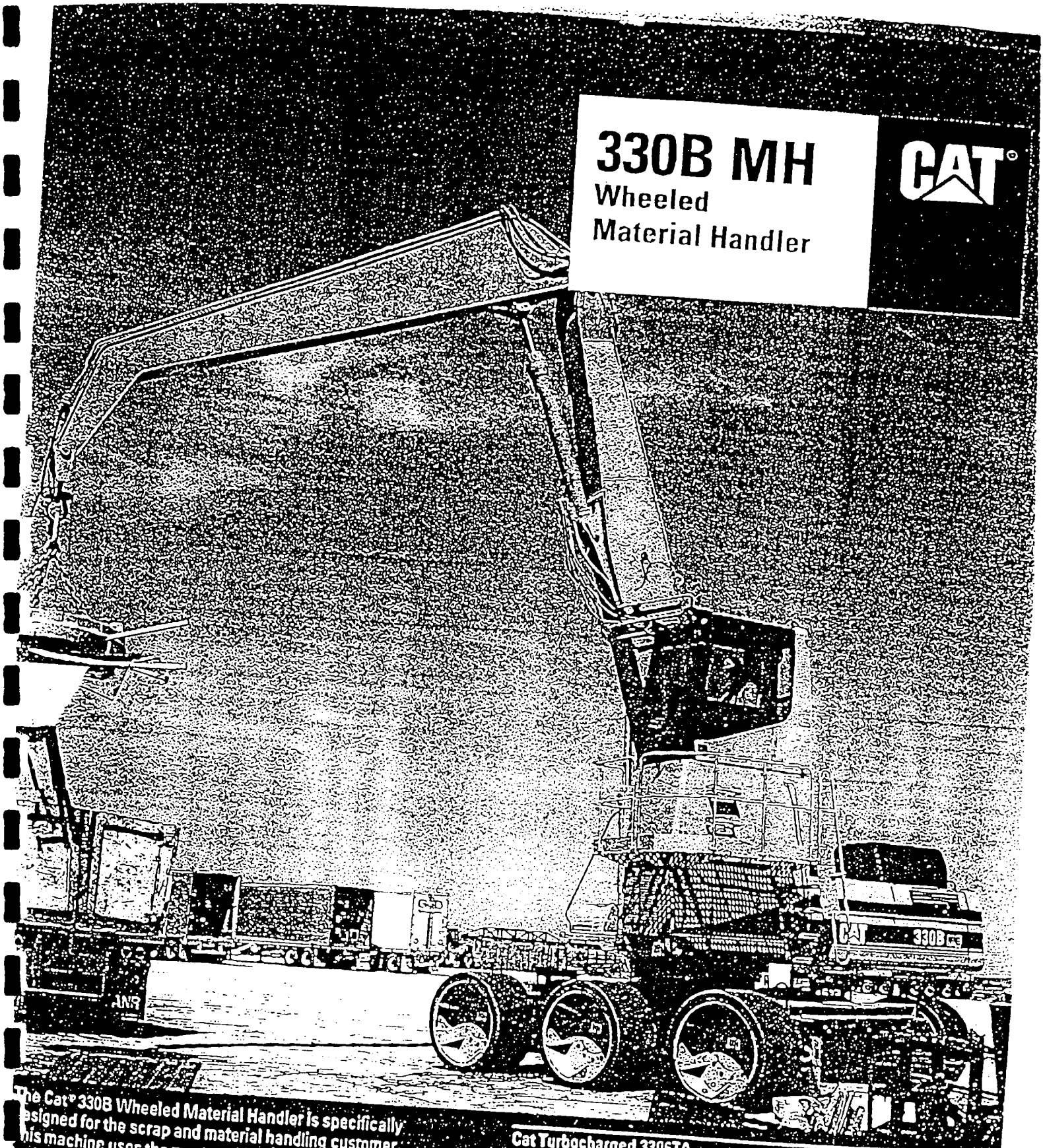
NOTE BEFORE REMOVING HOPPER C/W FEEDER

1) SIDE & END PANELS OF HOPPER MUST BE IN POSITION AND BOLTED WITH SIDE TUBINGS AND TOP CROSS MEMBER BOLTED BEFORE LIFTING.

2) LIFTING POINTS ARE MARKED ON BOTTOM BEAM (LIFT HERE).

330B MH
Wheeled Material Handler

CAT



The Cat® 330B Wheeled Material Handler is specifically designed for the scrap and material handling customer. This machine uses the most sophisticated manufacturing technology to ensure the highest level of manufacturing quality. This quality, with high Cat design standards, means that the 330B Wheeled Material Handler will deliver the reliability and productivity you demand from Caterpillar.

Cat Turbocharged 3306TA Diesel Engine	165 kW	222 hp
Operating Weight	52 800 kg	116,300 lb
Drawbar Pull	29 730 kg	65,490 lb
Maximum Travel Speed	12.1 km/h	7.5 mph
Cat Two-Piece Material Handling Linkage Arrangement	14.4 m	47'3
Cat Cab Riser		

Lift Capacities

330B Wheeled Material Handler equipped with Cat two-piece, 14.4 m (47'3") front.

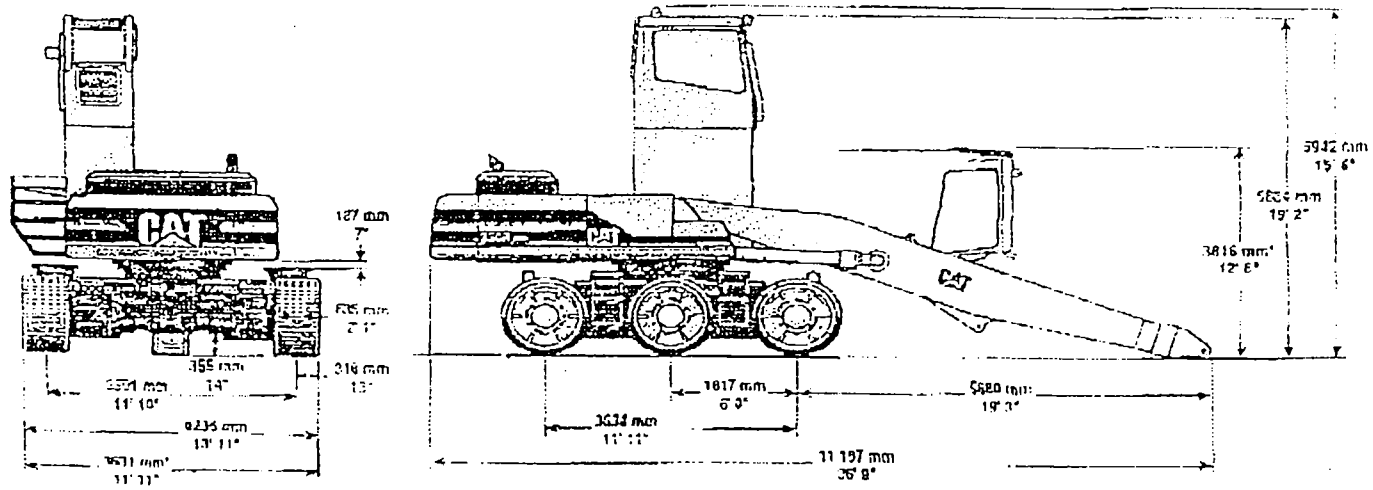
Load Point Height — Load at Maximum Reach — Load Radius Over Front — Load Radius Over Side

		2.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		9.0 m/30.0 ft		10.5 m/35.0 ft		12.0 m/40.0 ft		13.5 m/45.0 ft				
																				m ft
15.0 m 50.0 ft	kg lb					*5000	*5000											*6700 *14,900	*6700 *14,900	6.52 19.95
13.5 m 45.0 ft	kg lb							*7600 *17,000	*7600 *17,000									*6600 *15,200	*6600 *15,200	8.33 28.37
12.0 m 40.0 ft	kg lb									*6700 *14,900	*6700 *14,900	*6000	*6000					*6900 *13,200	*5300 *13,300	10.56 34.05
10.5 m 35.0 ft	kg lb									*6500 *14,700	*6500 *14,700	*6200 *13,800	*6200 *13,800					*5500 *12,200	*5600 *12,200	11.79 38.25
9.0 m 30.0 ft	kg lb									*6500 *14,500	*6500 *14,500	*6100 *13,600	*6100 *13,600	*5800 *12,900	*5800 *12,900			*5200 *11,600	*5200 *11,600	12.70 41.42
7.5 m 25.0 ft	kg lb									*8700 *14,700	*6700 *14,700	*6200 *13,700	*6200 *13,700	*5800 *12,700	*5800 *12,700			*5100 *11,300	*5100 *11,300	13.39 43.78
6.0 m 20.0 ft	kg lb							*7700 *16,900	*7700 *16,900	*7000 *15,300	*7000 *15,300	*6400 *14,000	*6400 *14,000	*5300 *12,800	*5300 *12,800	*5300 *11,600	*5300 *11,600	*5000 *11,100	*5000 *11,100	13.83 45.46
4.5 m 15.0 ft	kg lb					*9300 *21,300	*9300 *21,300	*8400 *18,300	*8400 *18,300	*7400 *16,100	*7400 *16,100	*6600 *14,400	*6600 *14,400	*5900 *13,000	*5900 *13,000	*5300 *11,600	*5300 *11,600	*5000 *11,100	*5000 *11,100	14.21 46.57
3.0 m 10.0 ft	kg lb					*11 100 *24,100	*11 100 *24,100	*9100 *19,900	*9100 *19,900	*7600 *17,000	*7600 *17,000	*6900 *14,900	*6900 *14,900	*6000 *13,200	*6000 *13,200	*5300 *11,500	*5300 *11,500	*4800 *10,700	*4800 *10,700	14.36 47.10
1.5 m 5.0 ft	kg lb					*12 200 *26,600	*12 200 *26,600	*9800 *21,300	*9800 *21,300	*8100 *17,800	*8100 *17,800	*7000 *15,300	*7000 *15,300	*6100 *13,300	*6100 *13,300	*5200 *11,300	*5200 *11,300	*4600 *10,200	*4600 *10,200	14.35 47.10
0.0 m 0.0 ft	kg lb			*7600 *16,800	*7600 *16,800	*12 800 *28,000	*12 800 *28,000	*10 100 *22,000	*10 100 *22,000	*8300 *18,100	*8300 *18,100	*7000 *15,300	*7000 *15,300	*6000 *13,000	*6000 *13,000	*5000 *10,800	*5000 *10,800	*4400 *9600	*4400 *9600	14.19 46.55
-1.5 m -5.0 ft	kg lb	*2800 *6700	*2600 *6700	*7200 *16,500	*7200 *16,300	*12 800 *27,600	*12 800 *27,600	*10 100 *21,900	*10 100 *21,900	*8200 *17,900	*8200 *17,900	*6900 *14,900	*6900 *14,900	*5700 *12,400	*5700 *12,600	*4500 *9500	*4500 *9500	*4100 *9100	*4100 *9100	13.85 45.45
-3.0 m -10.0 ft	kg lb	*4800 *10,500	*4800 *10,500	*8300 *18,100	*8300 *18,100	*12 100 *26,400	*12 100 *26,400	*9600 *21,000	*9600 *21,000	*7800 *16,900	*7800 *16,900	*6400 *14,000	*6400 *14,000	*5200 *11,100	*5200 *11,100			*3700 *8000	*3700 *8300	13.35 43.76
-4.5 m -15.0 ft	kg lb	*6300 *13,400	*6300 *14,400	*9900 *22,600	*9900 *22,600	*10 700 *23,100	*10 700 *23,400	*8600 *18,800	*8600 *18,800	*7000 *15,200	*7000 *15,200	*5850 *12,100	*5850 *12,100	*4700 *9600	*4700 *9600			*3200 *7200	*3200 *7200	12.65 41.37
-6.0 m -20.0 ft	kg lb			*10 500 *22,900	*10 500 *22,900	*8500 *18,700	*8500 *18,700	*7000 *15,100	*7000 *15,100	*5600 *12,000	*5600 *12,000	*4700 *9700	*4700 *9700							

* Indicates that the load is limited by hydraulic capacity rather than tipping capacity. Lift capacity ratings are based on SAE standard J1097. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity.

Dimensions

Note: Standard equipment may vary. Consult your Caterpillar Dealer for specifics.

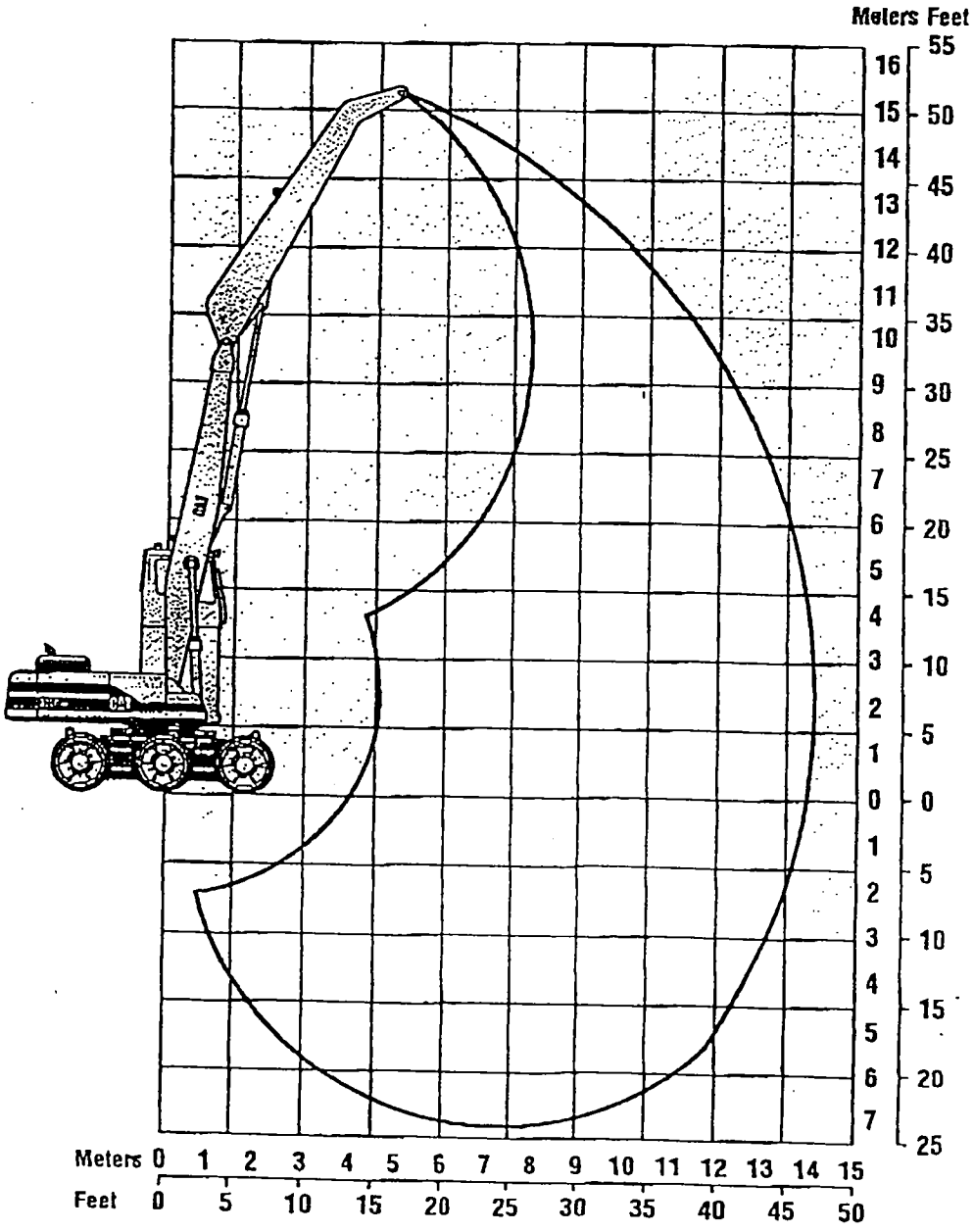


* Shipping dimensions require removal of wheel assemblies, ladder, walkway and handrail assemblies on left-hand side of cab riser, handrail group on right-hand

Working Ranges – Two-Piece Front

Machine equipped with 14.4 m (47'3") two-piece front. Check with your Cat Dealer for other available options.

Maximum reach at 1.5 m (5')	14.4 m	47'3"
Maximum height at 5.09 m (16'8")	16.0 m	52'5"



Wheel Loaders (cont'd)

Model	Product Identification No. Prefix	Years Built	Flywheel Horsepower	Approx Shipping Wt. kg (lb)	Rated Capacity m³ (yd³)	Breakout Force kg (lb)	Width Over Tires m (ft)	Ground Clearance mm (in)	Max. Reach at Max Height mm (ft)	Dump Clearance at Max Height m (ft)	Maximum Speeds km/h (mph) Fwd.	Rev.	Remarks
950F	7ZF	90-92	170	16 086 (35,463)	3.1 (4.0)	14 954 (32,974)	2.76 (9'0")	474 (18.7")	1160 (3'10")	2.85 (9'4")	39.3 (24.4)	43.0 (26.7)	3116 Engine W/o Disc Brakes
950F Series II	5SK	93-98	170	16 880 (37,220)	3.1 (4.0)	14 960 (32,980)	2.76 (9'0")	460 (18.1")	1160 (3'10")	2.83 (9'3")	38.7 (24.0)	42.7 (26.5)	Integral ROPS Electronic Shift
960F	3ZJ	94-99	200	18 070 (39,840)	3.5 (4.5)	14 500 (31,970)	2.77 (9'1")	454 (17.8")	1030 (3'5")	2.92 (9'6")	39.6 (24.5)	43.2 (26.8)	Material Handler
966A	33A	60-63	140	13 000 (28,800)	2.10 (2.75)	13 470 (29,700)	2.70 (8'10")	450 (18")	900 (3'0")	2.85 (9'8")	43.0 (26.7)	51.5 (32.3)	
966B	75A	63-68	150	14 300 (31,500)	2.29 (3.0)	14 000 (31,000)	2.70 (8'10")	400 (16")	950 (3'0")	2.95 (9'8")	38.5 (23.8)	46.3 (28.8)	
966C	76J	68-81	170	18 730 (36,890)	3.1 (4.0)	11 600 (25,578)	2.77 (9'1")	400 (15.7")	1420 (4'8")	2.95 (9'8")	38.0 (23.6)	45.1 (28.0)	3306 Engine
966D	89Y	80-87	200	19 730 (43,500)	3.3 (4.25)	20 872 (46,150)	2.86 (9'4.8")	451 (17.8")	1230 (4'0")	3.14 (10'3.5")	34.3 (21.3)	38.1 (23.7)	3306 Engine Z Bar Linkage
966E	99Y	87-89	216	20 324 (44,787)	3.8 (5.0)	18 939 (41,715)	2.94 (9'8")	476 (18.7")	1290 (4'3")	2.97 (9'9")	38.2 (23.7)	43.8 (27.0)	26.5-25 Std. Tires
966F	4YG	90-93	220	20 486 (45,118)	3.8 (5.0)	20 493 (45,187)	2.84 (9'6")	476 (18.7")	1280 (4'2")	2.90 (9'9")	37.6 (23.4)	42.6 (26.4)	Wet Disc Brakes
966F Series II	1SL	93-98	220	21 290 (46,950)	3.8 (5.0)	20 490 (45,180)	2.94 (9'8")	476 (18.7")	1277 (4'2")	2.89 (9'9")	38.6 (24.1)	43.9 (27.3)	Integral ROPS Electronic Shift
970F	7SK	93-98	250	23 690 (52,240)	4.7 (6.0)	16 510 (36,400)	2.94 (9'8")	402 (18")	1357 (4'5")	3.22 (10'6")	37.3 (23.2)	42.7 (26.5)	Material Handler New Model
980	42H	66-70	235	20 000 (44,000)	3.06 (4.0)	18 860 (41,570)	2.87 (9'5")	390 (16")	1190 (3'11")	3.07 (10'1")	42.0 (26.1)	29.7 (18.6)	
980B	89P	70-78	280	23 360 (51,500)	3.44-4.21 (4.5-5.5)	15 600 (35,160)	3.11 (10'2")	—	1120 (3'8")	3.20 (10'6")	43.0 (26.7)	27.4 (17.0)	
980C	63X	79-91	270	27 559 (60,755)	5.2 (6.75)	23 188 (51,121)	3.15 (10'4")	417 (16.4")	1480 (4'10")	3.19 (10'6")	34.8 (21.6)	39.6 (24.5)	Dual Z Bar Linkage
980C Series II	8CJ	91-92 92-95	275	27 580 (60,800)	5.3 (7.0)	23 188 (51,121)	3.15 (10'4")	469 (18.5")	1500 (4'11")	3.16 (10'5")	37.4 (23.2)	42.8 (26.6)	Electronic Shift
980G	2KR	95-01	300	29 480 (65,000)	5.4 (7.0)	23 760 (52,300)	3.25 (10'8")	467 (18.4")	1540 (5'1")	3.27 (10'8")	37.4 (23.2)	42.8 (26.6)	
988	87A	63-76	325	35 800 (79,000)	4.6-5.4 (6.0-7.0)	21 380 (47,130)	3.20 (10'7")	570 (22.5")	1450 (4'9")	3.33 (10'11")	30.6 (19.0)	30.6 (19.0)	
988B	50W	76-83	375	43 365 (95,600)	5.4-6.3 (7.0-8.25)	36 330 (80,100)	3.52 (11'7")	474 (18")	2150 (7'1")	3.19 (10'5")	36.2 (22.5)	41.4 (25.7)	3408 Engine Z Bar Linkage
988F	8YG	83-95	400	43 540 (95,800)	5.4-6.1 (7.0-8.0)	37 363 (82,371)	3.52 (11'7")	486 (19")	1830 (6'0")	3.21 (10'6")	35.1 (21.8)	23.5 (14.6)	Bucket/HP increase STIC Steer
988F Series II	2ZR	95-00	475	45 678 (100,492)	6.1-6.9 (8.0-9.0)	37 400 (82,202)	3.52 (11'7")	486 (19")	1611 (5'3")	3.22 (10'7")	35.1 (21.8)	23.5 (14.6)	3408E HEUI Engine Axle Shaft Brakes
990	7HK	90-95	610	72 910 (160,800)	8.6 (11.2)	59 776 (131,784)	4.13 (13'6")	552 (21.7")	2670 (8'10")	3.99 (13'1")	22.5 (14.0)	25.0 (15.5)	ICTC & New Model
992	2SK	68-73	550	47 670 (105,100)	7.65 (10.0)	38 900 (81,360)	3.83 (12'11")	530 (21")	2620 (8'3")	4.52 (14'10")	35.6 (22.1)	38.5 (23.8)	
992B	25K	73-77	550	64 320 (141,600)	7.65 (10.0)	29 330 (64,660)	—	—	1930 (6'4")	4.34 (14'3")	40.2 (25.0)	43.8 (27.1)	
992C	9YX	77-81	690	85 640 (188,800)	9.6 (12.5)	68 240 (146,030)	4.55 (14'11")	533 (21")	2310 (7'7")	4.17 (13'8")	21.1 (13.1)	23.3 (14.5)	3412 PCT Engine Z Bar Linkage
992C	49Z	81-92	890	88 430 (194,850)	10.4 (13.5)	66 285 (146,132)	4.50 (14'9")	544 (21")	2310 (7'7")	4.17 (13'8")	21.0 (13.0)	22.9 (14.2)	3412 DIT Engine
992D	7MJ	92-97	710	88 690 (195,125)	10.7 (14.0)	62 670 (137,670)	4.50 (14'9")	544 (21")	2300 (7'7")	4.17 (13'8")	21.0 (13.0)	22.9 (14.2)	
994	8YF	90-98	1250	177 000 (390,300)	10.3 (13.5)	103 420 (228,000)	5.20 (17'1")	662 (26")	2692 (8'10")	6.20 (20'4")	24.7 (15.0)	26.6 (16.5)	

Bucket Controls

Pilot-operated lift and tilt circuits.

Lift circuit features

- four positions: raise, hold, lower and float
- in-cab adjustable automatic kickouts from lower position to full lift

Tilt circuit features

- three positions: tilt back, hold and dump
- can adjust automatic bucket positioner to desired loading angle
- does not require visual spotting

Service Refill Capacities

	L	Gallons
Fuel tank— standard	470	124
Cooling system	79	21
Crankcase	28	7
Transmission	62	16
Differentials and final drives		
front	87	23
rear	81	21
Hydraulic system (including tank)	208	55
Hydraulic tank	125	33

Steering

Full hydraulic power steering.

Features

- center-point frame articulation
- front and rear wheels track
- hydraulic power with flow-amplified system
- load sensing steering
- steering-wheel operated pilot valve controls flow to steering cylinders
- full-flow filtering
- adjustable steering column

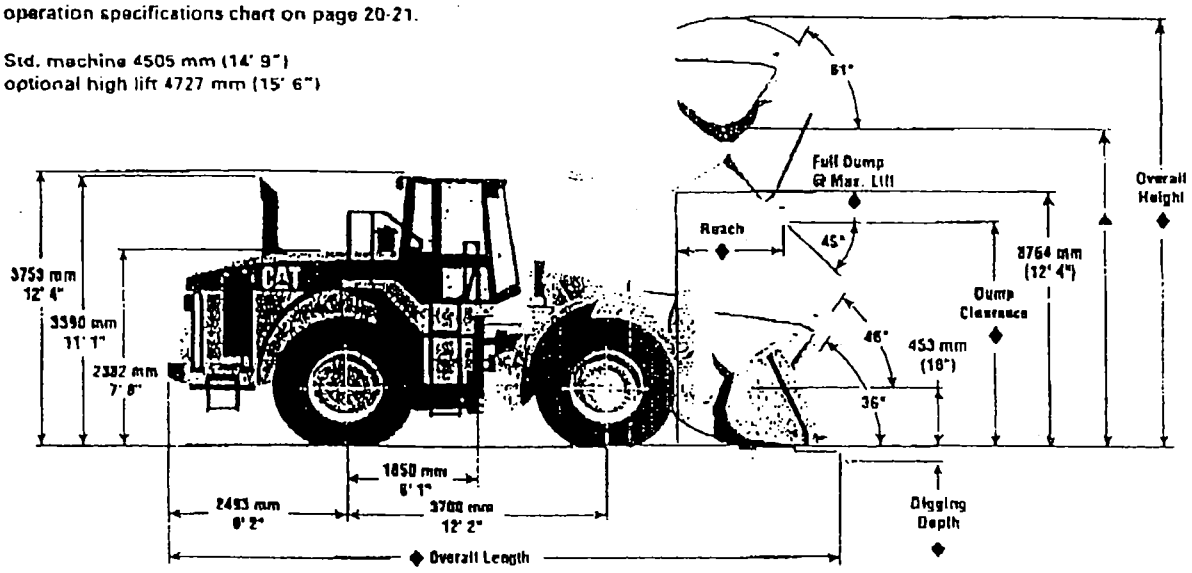
Dimensions

All dimensions are approximate.

980G

◆ Dimensions vary with bucket. Refer to operation specifications chart on page 20-21.

▲ Std. machine 4505 mm (14' 9") optional high lift 4727 mm (15' 6")



Tread width for 29.5-25 is 2440 mm (8')

	Width over tires		Ground clearance		Change in vertical dimensions	
	mm	inches	mm	inches	mm	inches
29.5-25, (L-5)	3274	128.9	521	20.5	+54	+2.1
29.5-25, (L-4)	3285	129.3	515	20.3	+48	+1.9
29.5-25, (L-3)	3265	128.5	484	19.1	+17	+.7
29.5-R25 (L-3)	3248	127.9	467	18.4	—	—
29.5-R25 (L-2/L-3)	3253	128.1	470	18.5	+3	+.1
29.5-R25 (L-5)	3258	128.3	492	19.4	+25	+1.0

Met Pro Supply, Inc.
1550 Centennial Blvd
Bartow FL 33830
863/533-7155 ph
863/533-7401 fax

May 5, 2004

FAXED
MAY 0 5 2004
BY:

Ref: Quote # 04-1501

Stan Gibson
Morbark Parts & Service
PO Box 1000
Winn MI 48896

COPY

Stan:

Please find the following specifications on the 6' x 28' screen:

Number of Decks:	Three (3)
Mechanism:	#5
Slope:	10° tilt
Feed Rate:	200 tph
Throw:	5/8"
Suspension:	base trunion mounted steel coil springs
Screen Surface:	Top Deck: 1" finger rods x 7" spacing Middle Deck: 1" finger rods x 3" spacing Bottom Deck: 1/2" opening perforated plate
Motor:	25hp, 1800 rpm, high torque Nema C, 3 phase, 60 Hz, 240/480 volt TEFC motor

Please call with any questions that you may have.

Best Regards,

Tom Gunter

Tom Gunter
Met Pro Supply

MORBARK, INC.
8507 S. WINN RD P.O. BOX 1000
WINN, MICHIGAN 48896 (989) 866-2381 FAX (989) 866-2260 www.morbark.com

May 13, 2004

Niero
Angelo's Recycled Materials

6008 Picking Station Specifications:

- 60" wide belt
- 240/480 volt, 3 phase, TEFC electric motor
- Belt speed 0 to 250 feet per minute with speed control
- Head pulley torque 900 foot pounds to the belt
- 12' clearance
- 5 to 1 dual gear speed reducer

If you have any questions please feel free to call.

Thank you,

Stan Gibson

"With Pride in Performance"

CRIPPEN MFG. CO., INC

400 Woodside Drive, St. Louis, MI 48880
Phone: (989) 681-4323 Fax: (989) 681-3818

Fax

To: Stan Gibson	**From:** Tim Throop
Fax: (941) 751-1026	**Pages:** 1 -including cover
Phone: (941) 360-3542	**Date:** 04/30/04
Re: Crippen Air Knife Destoner	

☐ Urgent x For Review ☐ Please Comment ☐ Please Recycle

STAN,

THE FOLLOWING ARE THE BASIC PRODUCT SPECIFICATIONS FOR THE AIR KNIFE:

- CAPACITY OF 8,000 CUBIC FT./HR.
- SIZE OF PRODUCT TO BE A MAX. OF AN 8" CUBE
- ACTIVE COUNTER-BALANCE FOR SMOOTER OPERATION
- 100% SELF-CLEANING PAN DESIGN

STARTING MONDAY I WILL DEEP INTO THE ENGINEERING ON THIS PROJECT. I WILL BE SITTING DOWN WITH KEITH AND GETTING ALL OF THE DETAILS. I AM SURE THAT I WILL BE IN TOUCH WITH SOME QUESTIONS.

THANKS,

TIM THROOP

GENERAL MANAGER, ENGINEERING & DESIGN

(800) 872-2474

Jennifer L. Deal, P.E.

From: Stanleyjgibson@aol.com
Sent: Saturday, April 30, 2005 3:56 PM
To: Neiro DeRubeis
Subject: Model 6008 Picking Station

Morbark model 6008 Picking Station.

- 225' plus square feet material sorting surface.
- 75' long x 72" wide rubber belt sorting surface.
- Belt has 1/2" molded rubber flits.
- Sorting surface is sealed to prevent any leakage.
- Belt is a flat pan slider design.
- 12 sorting stations, 6 per side.
- Main frame is fabricated with 15" x 3-1/2" x 1/2" thick C-channel.
- Station is equipped with stairs, walk way and safety rails.
- Unit is driven with a 50:1 double gear speed reducer.
- Gear box is driven with 30 HP electric motor, 220/440 3 phase.

Capacities of the 6008 Picking Stations.

- The picking station is variable speed from 1' per minute to 500' per minute.
- The picking station can convey up to 100 tons of C&D per hour.
- The picking station is designed to convey C&D product or yard waste.
- The speed is of this station is controlled from a master switch board.
- The under clearance of the picking station chute is 12'.
- The Debris is discharged from end of the unit to the floor.

Jennifer L. Deal, P.E.

From: Stanleyjgibson@aol.com
Sent: Saturday, April 30, 2005 3:11 PM
To: Neiro DeRubeis
Subject: Statioary System Descriptions

Mr. Neiro

The following is a description of the Equipment for the Largo Yard.

> Morbark St 737 Trommel Screen.
- Trommel Tube is 7' inside diameter X 37' long.
- Tube is fabricated with 3/8" plate steel.
- Driven with a 75 HP Electric Motor, Controlled with a variable speed drive.
- Tube is fitted with 3/8" thick punch plate for two product size.
- Tube is supported with 6 steel rollers mounted with pillow block bearings.
- Tube Diameter is inclosed with gauge metal to help prevent dust.
- Trommel is equipped with a leg package to 15'.
- Trommel is controlled from a master switch board.
- This unit runs on 220 / 440, 3-phase electric.
- THIS TROMMEL IS NOT EQUIPPED WITH A DUST SUPPRESSION SYSTEM.

Jennifer L. Deal, P.E.

From: Stanleyjgibson@aol.com
Sent: Saturday, April 30, 2005 4:24 PM
To: Neiro DeRubeis
Subject: C&D Finger Screen

C&D Finger Screen

- 6' Wide x 28' oal vibrating horizontal screen.
- 6 Degree tilt.
- Top deck equipped with fingers at 8" minus.
- Fingers are fabricated from 3/8" thick steel plate.
- Screen has 4 mounting points to the stand.
- Screen is equipped with a 8" minus product conveyor.
- Unit can be equipped with a second plate screen if needed.
- Screen is 220/440, 3-phase electrical, OFF - ON SWITCH ONLY.

Capacities of the Finger Screen

- The Finger Screen is capable of processing 200 tons of C&D per hour.
- Tonnage will vary depending on type of product.

Jennifer L. Deal, P.E.

From: Stanleyjgibson@aol.com
Sent: Saturday, April 30, 2005 5:07 PM
To: Neiro DeRubeis
Subject: Destoner / Air Knife

Destoner / Air Knife

- Destoner has two product decks for sizeing of product.
- Air Knife system has two adjustable nozzles for separation.
- System is equipped with two high flow fans for separation.
- Each deck has adjustable out let doors for tuning separation.
- Fans are 220/440, 3-phase electric motors, OFF, ON SWITCHING ONLY.
- Impact decks have replaceable wear plates.

Capacities of the Destoner / Air Knife.

- This unit separates to stone from the 8" minus C&D product Finger Screen.
- This unit will take stone up to 12" x 12" square.
- The unit can process 60 tons per hour depending on type of product.
- This unit will not remove 2" minus stones from the waste stream.
- The Destoner / Air Knife is not equipped with any dust suppression system.

Jennifer L. Deal, P.E.

From: Stanleyjgibson@aol.com
Sent: Saturday, April 30, 2005 4:08 PM
To: Neiro DeRubeis
Subject: Flat Pan End and Side Shuttle Debris Belts

End and Side Shuttle Debris Belts.

- Conveyors are 60" wide and run the length of the Picking Station.
- Belts have 1/2" molded rubber flits.
- Pan is fabricated with Gauge metal.
- Driven with 20 HP (Bi-directional) motor, 220/440, 3-phase.

Capacities for the Shuttle belts.

- Belts carry the lite picked product, card board, wood, plastics to either end of the station.
- Belts will convey up to 30 tons of product per hour.
- Belts are controlled from a master switch board.

Electro-Magnetic Separators

Self-Cleaning Models

Air-cooled, self-cleaning electro-magnets are suspended overhead magnets designed for removing ferrous steel and other magnetic materials from your burden during the crushing, screening and sorting processes.

An *armor clad conveyor belt* travels around the magnet and carries the ferrous material that is drawn upward, away and into collecting hoppers or onto the ground. These units are typically installed either in-line (as in the photo), or cross-belt (90 deg. across the conveyor belt.) They are ideal for removing miscellaneous metallic debris from crushed and recycled material and are designed to provide long-term, trouble free operation. *All units are equipped with the required rectifier to power the magnet.*

Specifications

- Magnets equipped with heavy steel side plates
- Aluminum Wound coils with class H insulation
- Two year warranty against magnetic coil burnout
- Solid steel core
- NEMA 4X terminal box
- Four pulley design
- Adjustable screw take-ups on tail pulley
- 5 hp motor for self-cleaning belt
- **Stainless Steel Clad Belt** *INCLUDED*
- **Rectifier** *INCLUDED*

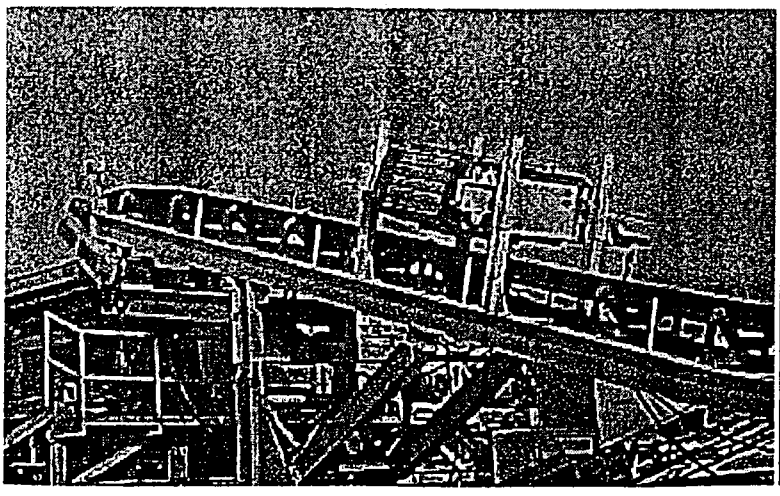
Applications

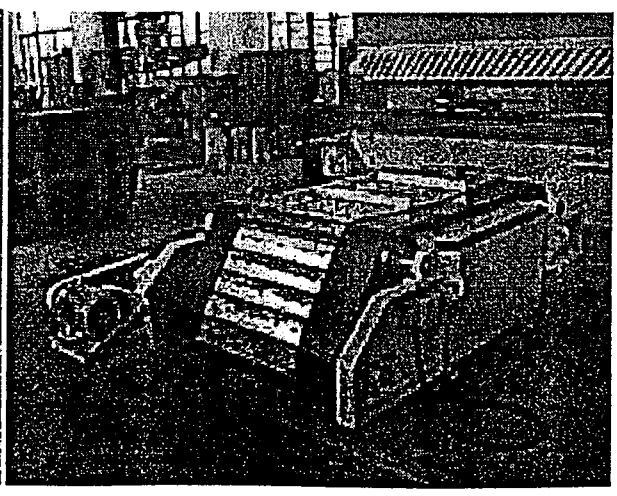
- Mixed demolition debris
- Crushed or broken aggregate
- Mixed solids at MRF facilities
- Refuse at mixed waste facilities
- Shredded tire processing
- Mill and Scrap Yard Processing

*** Magnet size is based upon application evaluation. (i.e. belt width, belt speed, burden depth, size of recoverable ferrous)**

Models, Dimensions and Weights

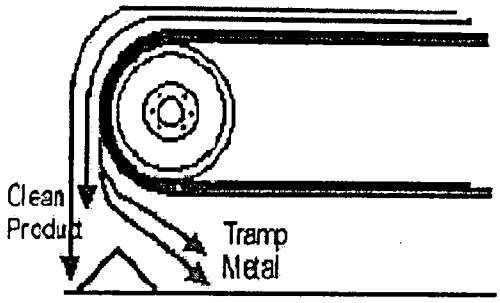
CR36	(for up to 36" conveyor)	Overall Dim: 100" l x 44" w x 25" h	Weight: 3200 lbs.
CR42	(for up to 42" conveyor)	Overall Dim: 106" l x 50" w x 25" h	Weight: 5100 lbs.
CR48	(for up to 48" conveyor)	Overall Dim: 112" l x 56" w x 25" h	Weight: 7200 lbs.
CR54	(for up to 60" conveyor)	Overall Dim: 118" l x 62" w x 25" h	Weight: 9300 lbs.





Magnetic Separation Pulleys

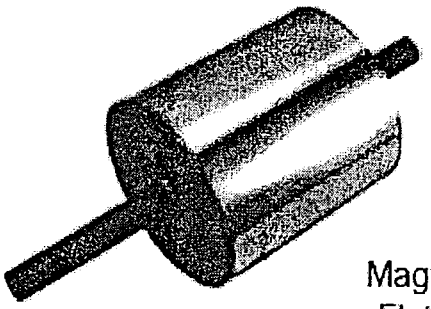
Magnetic Separation Pulleys are installed as head pulleys in conveyor systems to improve product purity and to protect equipment from tramp metal damage. They provide continuous, effective removal of ferrous metal from the product flow.



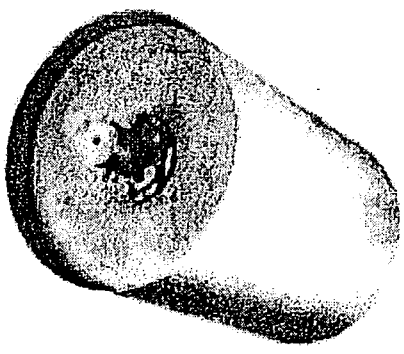
This method of ferrous metal separation requires that the magnetic pulley be installed at the discharge end of the conveyor replacing the existing pulley. As the mixture of product and ferrous metal travels over the magnetic head pulley and reaches the drop-off point, product falls freely from the end of the line into storage bins or processing chutes. Any ferrous metal that is mixed in with the product is attracted and held to the face of the belt and carried to the underside of the pulley

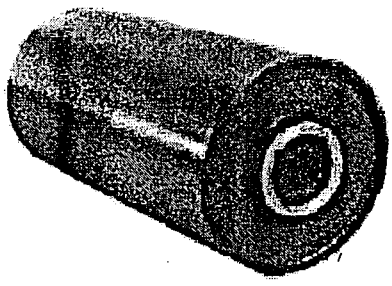
When the portion of the belt to which the ferrous metal is being held clears the magnetic pulley, the ferrous metal is allowed to fall. By placing a collection bin or chute under the drop location, tramp material is automatically collected for disposal.

Applications:
- Wood & Plastic Recycling
- Crushed or Broken Stone
- Processing at MRF's
- Pallet Recycling
- Shredded Tire Processing
- Glass Recycling



Magnetic Pulley Features:
- Flat or Crowned Pulley Face
- Four Available Hub Styles:
  - Recessed Hubs
  - Flush Hubs
  - Extended Hubs
  - No Hubs
- Smooth or Lagged Surface
- Fixed Shaft or No Shaft
- Precision Machined Keyways
- Taper Locks and Set Screws





Magnetic Separation Pulleys are available in a variety of sizes and strengths to fit many applications. Pulleys are sized based on application evaluation. (i.e. belt width, belt speed, burden depth, size or recoverable ferrous.)

APPENDIX F

HAZARDOUS LOCATION LIGHTING

DEFINITION AND CLASSIFICATION OF HAZARDOUS LOCATION

WHAT CONSTITUTES A HAZARDOUS LOCATION?

The classification of a given area as to Class, Division, and Group is solely the judgment of THE OWNER, INSURANCE COMPANY, AND THE AUTHORITY HAVING JURISDICTION.

Articles 500-517 of the National Electrical Code define, categorize and provide the basic ground rules of the application and installation of lighting fixtures in hazardous locations.

Hazardous locations are defined in terms of Class, Division and Group, per the NEC. The definition of each is as follows:

"CLASS I locations are those in which flammable Gases or Vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures."

"CLASS II locations are those that are hazardous because of the presence of Combustible Dust."

"CLASS III locations are those that are hazardous because of the presence of easily ignitable Fibers or Flyings, but in which such fibers or flyings are not likely to be in suspension in the air in quantities sufficient to produce ignitable mixtures."

Each "CLASS" is further defined as either Division 1 or Divisio

DIVISION 1 is an environment that is Normally Hazardous.

DIVISION 2 is an environment that is Not Normally Hazardou

Each Division may be further classified according to the part lar gas, vapor or dust, by defining the areas by groups, see tal below.

Don't confuse UL844 with UL1572 which meets the standard those locations which require only enclosed and gasketed pro ucts.

You can't readily differentiate between UL1572 and UL844 li luminaires by examining the product. So how do you tell on from the other? THE BEST WAY TO BE SURE OF A UL844 LISTING IS TO EXAMINE THE LABEL AND SEE THE WO "LISTED ELECTRIC LIGHTING FIXTURES FOR HAZARI LOCATIONS" OR "LISTED ELECTRIC LIGHTING FIXTU FOR HAZARDOUS LOCATIONS" IN CLOSE PROXIMITY THE CIRCULAR UL LOGO.

UL844 IS THE ONLY UL STANDARD FOR HAZARDOUS L TION LIGHTING

SUMMARY OF HAZARDOUS ATMOSPHERES*

NEC CLASS	DIVISION	GROUP	TYPICAL ATMOSPHERE AND AUTOIGNITION TEMPERATURES	TEMPERATURE MEASURED	LIMITING VALUE	GE TYPE ORDERING NUMBER
I GASES, VAPORS	1 Normally hazardous	A	Acetylene (305°C, 581°F)	Maximum exterior temperature in 40°C ambient. H8 is in 25°C ambient	280°C (538°F) and Articles 500-503 of NEC	Not Available
		B	Hydrogen (502°C, 986°F) manufactured gases containing more than 30% hydrogen (by volume)		290°C (566°F) and Articles 500-503 of NEC	
		C	ethylene (450°C, 842°F) cyclopropane (503°C, 938°F)		180°C (356°F) and Articles 500-503 of NEC	H4
		D	hexanes (225°C, 437 °F) butane (289°C, 550°F) propane (450°C, 842°F acetone (465°C, 869°F) benzene (420°C, 788°F gasoline (280-471°C, 536-880°F)		280°C (526°F) and Articles 500-503 of NEC	H9 H8
	2** Not normally hazardous	A	Same as Division 1	Max interior temperature in 40°C ambient. PF4H and P54H are in 25°C ambient	Max temp of luminaire not to exceed the auto-ignition temp (°C) of gas or vapor involved. Ref. Articles 500-503 of NEC	H2 PMGA MGH
		B	Same as Division 1			
		C	Same as Division 1			
		D	Same as Division 1			
II COMBUSTIBLE DUSTS	1 Normally hazardous	E	Metal dust including aluminum, magnesium, and their commercial alloys, and other metals of similarly hazardous characteristics	Max exterior temperature in 40°C ambient with a dust blanket. H8 is in 25°C ambient.	200°C (392°F) and Articles 500-503 of NEC	H2 MGH
		F	Carbon black, coal, coke dust		200°C (392°F) and Articles 500-503 of NEC	H4
		G	Flour, starch, grain dusts.		165°C (329°F) and Articles 500-503 of NEC	H8
	2** Not normally hazardous	G	Same as Division 1	Max exterior temp under conditions of use	165°C (329°F) and Articles 500-503 of NEC	
III EASILY IGNITIBLE FIBERS AND FLYINGS	1, 2		Same as Class II, Division 2	Same as Class II, Div. 2	165°C (329°F) and Articles 500-503 of NEC	H2

* Information for this table is extracted from the National Electrical Code (NEC), Article 500, and from the National Fire Prevention Association's "National Electrical Code Hand to NFPA 497M).

** Not normally hazardous means that the gases or dusts are not normally present.

The classification of a given area as to Class, Division, and Group is solely the judgement of THE OWNER, INSURANCE COMPANY, AND THE AUTHORITY HAVING JURISDICTIO

Data subject to change without notice

Gary Tyler

FILTR•GARD® H2 AND H2U LUMINAIRE
UL844, UL1572 OUTDOOR SALT WATER MARINE, UL1572 SUITABLE FOR WET LOCATIONS

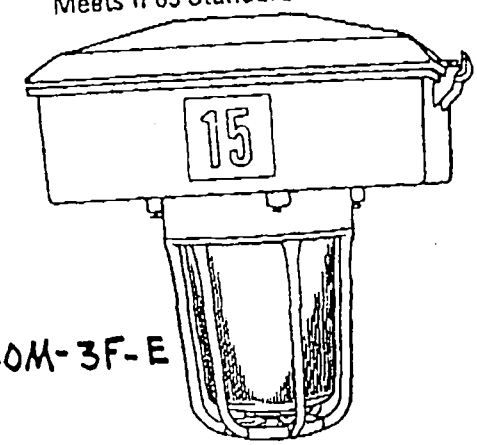
YOU MUST USE TEMPERATURE PROFILE DATA TO PROPERLY SELECT LUMINAIRE

See pages 242-4

UL844 Listed
Class I, Division 2, Groups A, B, C and D
Class II, Division 1, Groups E, F and G
Class II, Division 2, Group G
Class III, Divisions 1 and 2

UL1572 Listed
General Non-Hazardous
SUITABLE FOR WET LOCATIONS
For metal halide lamps in polymeric lamp containment barriers.

UL1572 Outdoor Salt Water Marine Listed
Outdoor Salt Water Marine
(formerly UL595)
Meets NEMA 4X Standards
Meets IP65 Standards



H2-0-40M-3F-E

APPLICATIONS
For adverse, severe duty and hazardous classifications (HID lamps)

SPECIFICATION FEATURES
- Standard construction is IP55
- Maxi-Lux® guard
- Charcoal filters
- Multiple optical assemblies
- NEMA decal
- Wiring compartment
- Electro-epoxidized gray paint finish
- H2 shipped as components: Ballast, Mounting, Optical, Accessories
- H2U shipped all in one carton with lamp and optical installed
- Low copper aluminum alloys
- Quick disconnect
- Mogul base socket
- Multiple mounting arrangements
- Safety chain provisions

UL LISTED

ORDERING NUMBER LOGIC

H2 O ~~05L~~ 40M ~~3C~~ 3F ~~GG~~ E no guard

PRODUCT ID. XX(X)	VOLTAGE X	WATTAGE/LIGHT SOURCE/ BALLAST TYPE** XXX	MOUNTING (includes ballast cover) XX	OPTICAL*** XX(X)	OPTIONS XXX
H2 = Filtr•Gard H2 Luminaire CAUTION: see pages 242-4 for Temperature Profile Data and Limitations. Standard: No lamp included. H2U-Filtr•Gard H2 Luminaire shipped all in one carton with lamp and optical installed	60 Hz* 0 = 120/208/240/277 Multivolt 1 = 120 2 = 208 3 = 240 4 = 277 5 = 480 *For 50 Hz, contact factory	See Ballast Selection Table UL844, UL1572 05L = 50W/HPS/HPF/Reactor or Lag 07L = 70W/HPS/HPF Reactor or Lag 10L = 100W HPS/HPF Reactor or Lag 15L = 150W(55V)/HPS/HPF Reactor or Lag 05K = 50W/HPS/Hot Restart HPF Reactor 07K = 70W/HPS/Hot Restart HPF Reactor 10K = 100W/HPS/Hot Restart HPF Reactor 15K = 150W(55V)/HPS/Hot Restart HPF Reactor 07S = 70W/HPS/Mag-Reg 10S = 100W/HPS/Mag-Reg 15S = 150W/HPS/Mag-Reg 25S = 250W/HPS/Autoreg 40S = 400W/HPS/Autoreg 10M = 100W/MH/HPF Lag (Med Base) Standard: Lamp not included except with H2U 17M = 175W/MH/Autoreg 25M = 250W/MH/Autoreg 40M = 400W/MH/Autoreg 10C = 100W/Merc/Merc-Reg 17C = 175W/Merc/Merc-Reg 25C = 250W/Merc/Merc-Autoreg 40C = 400W/Merc/Autoreg	3C = 3/4-in. Ceiling 4C = 1-in. Ceiling 3F = 3/4-in. Flexible pendant* 4F = 1-in. Flexible Pendant* 5J = 1-1/4-in. Angle Stanchion** 6J = 1-1/2-in. Angle Stanchion** 3L = 3/4-in. Low Profile*** 4L = 1-in. Low Profile*** 3P = 3/4-in. Pendant 4P = 1-in. Pendant 5S = 1-1/4-in. Straight Stanchion 6S = 1-1/2-in. Straight Stanchion 3W = 3/4-in. Wall 4W = 1-in. Wall Caution: For metal halide, a universal burning type lamp must be used. *Use when support is non-rigid. **For limits see Temperature Profile. ***Cannot be used for 250 and 400 watt units, switched quartz units or hot restart units.	UL844, UL1572, UL1572 Outdoor Salt Water Marine GG = Small Globe with Guard FG = Large Globe with Guard EG = Enclosed Reflector ALGLAS® finish with Guard (not UL1572 Outdoor Salt Water Marine) NOTE: Not available with H2U V5G = 8-in. (203mm) Glass Refractor Type V with guard V2G = 8-in. (203mm) Glass Refractor Type II with Guard R5G = 12-in. (305mm) Glass Refractor Type V with Guard R2G = 12-in. (305mm) Glass Refractor Type II with Guard W5G = Universal Glass Refractor with Guerd (not UL1572 Outdoor Salt Water Marine) UL844, UL1572 ONLY* A5G = 12-in. (305mm) Acrylic Refractor Type V with Guard A2G = 12-in. (305mm) Acrylic Refractor Type II with Guard L5G = 12-in. (305MM) Polycarbonate Refractor Type V with Guerd L2G = 12-in. (305mm) Polycarbonate Refractor Type II with Guard NOTE: Remove G as last digit to eliminate Guard For additional information, see Photometric Selection Table	F = Fusing (Not available with multivolt or UL1572 Outdoor Salt Water Marine units) Q = Time Delay Automatically Switched Quartz is available in certain ratings for Class II only. (Not available for Low Profile mounting.) For availability and Temperature Profile and Limitations with quartz lamp. see page 242 U = UL1572 Outdoor Salt Water Marine UL844 ***Before us see pages 24 for Tempera Profile inform tion.

**Standard max Ambient Temp is 40°C — for 55°C, 65°C, 90°C, contact factory.

*NOTE: When using one of these opticals for a classified area, a special ballast assembly is required. Order, for example, similar to H201L3PASG except for use with specified optical.

The catalog numbers, options and modifications on this page are UL Listed unless otherwise noted.

FILTR•GARD® H2 AND H2U LUMINAIRE
UL844, UL1572 OUTDOOR SALTWATER MARINE, UL1572 SUITABLE FOR WET LOCATIONS
YOU MUST USE TEMPERATURE PROFILE DATA TO PROPERLY SELECT LUMINAIRE

See pages 242-4

DIMENSIONS

See next page for drawings

OPTICAL ELIGIBILITY AND PHOTOMETRIC SELECTION TABLE

Photometric curve number 35-17 - - - - All light sources are clear unless otherwise indicated. Before using, imperative to check Temperature Profile information to properly match Optical to Classification - see pages 242-4.

Filtr•Gard Luminaire	70, 100, 150W(55V) HFS	250W HPS	100W MH	175W MH	250W MH	400W MH	100W Merc (Coated)	175W Merc (Coated)	250W Merc (Coated)	400W Merc (Coated)
Globe and guard (FG, 250W max) (GG, 175W max)	6618	(FG) 6633	8323	6835	(FG) 6835	N/A	6693	6693	(FG) 6742	N/A
Globe and guard (FG, 250W max) (GG, 175W max) and dome reflector (H2000-001)	6619	(FG) 6634	8324	6836	(FG) 6836	N/A	6695	6695	(FG) 6743	N/A
Globe and guard (FG, 250W max) (GG, 175W max*) and deep dome reflector (H2000-006)	7024	(FG) 7445	8325	(GG) 7446	(FG) 9155	N/A	7044	7044	(FG) 9157	N/A
Globe and guard (FG, 250W max) (GG, 175W max) and angle dome reflector (H2000-002)	6609	(FG) 6645	8326	6838	(FG) 9150	N/A	6803	6803	(FG) 6745	N/A
Angle Stanchion (5J or 6J) with globe and guard (FG, 250W max) (GG, 175W max)	7037	9136	8329	(GG) 9130	(FG) 9137	N/A	(GG) 9131	(FG) 9132	(FG) 9132	N/A
Angle Stanchion (5J or 6J) with globe and guard (FG, 250W max) (GG, 175W max) and dome reflector (H2000-001)	6814	9139	8330	(GG) 9133	(FG) 9140	N/A	(GG) 9134	(GG) 9135	(GG) 9141	N/A
Glass refractor Type V with guard (V5G, 175W max) (R5G, 400W max)	5807	(R5G) 6639**	8331	6837	(R5G) 9156	(R5G) 6778	6696	6696	(R5G) 6696	(R5G) 6830
Glass refractor Type II with guard (V2G, 175W max) (R2G, 400W max)	6810	(R2G) 6646**	(V2G) 9151	6839	(R2G) 9149	9153	6800	6800	(R2G) 6800	(R2G) 6834
Acrylic refractor Type V with guard (A5G, 150W max)	6867	N/A	8332	N/A	N/A	N/A	6868	N/A	N/A	N/A
Acrylic refractor Type II with guard (A2G, 150W max)	6874	N/A	8333	N/A	N/A	N/A	6877	N/A	N/A	N/A
Polycarbonate refractor Type V with guard (L5G, 150W max)	6864	N/A	8334	N/A	N/A	N/A	6872	N/A	N/A	N/A
Polycarbonate refractor Type II with guard (L2G, 150W max)	9152	N/A	8335	N/A	N/A	N/A	9154	N/A	N/A	N/A
Enclosed reflector with ALGLAS® (400W max) finish (without guard H2000-EN) [illegible]	8709	6725**	N/A	6731	6731	7838 (Coated)	6841	6841	6841	6711
Universal glass refractor (W5G, 175W max) with guard	7032	N/A	8336	7847	N/A	N/A	9158	9159	N/A	N/A

NOTE: C/F=Contact Factory
N/A=Not Available

NOTE: *For some ratings shown in Temperature Profile Information, GG can be used up to 250 watt maximum.
NOTE: **These curves are for 400 watt HPS also.

BALLAST SELECTION TABLE+

Temperature is 40°C unless otherwise indicated.

Wattage	Light Source	Ballast Type/Voltage: Multivolt	120	208	240	277	480
50	HPS	L	K,L	N/A	N/A	N/A	N/A
70, 100	HPS	L,K	L,K,S	L,K,S	L,K,S	L,K,S	K,S
150 (55V)	HPS	L,K	L,K,S	L,K,S	L,K,S	L,K,S	K,S
250, 400	HPS	S	S	S	S	S	S
100	MH	M*	M*	M*	M*	M*	M*
175, 250, 400	MH	M	M	M	M	M	M
100, 175, 250,400	Merc	C	C	C	C	C	C

+Ballast Type—
N/A = Not Available
C = Mercury, Reg (Autoreg 250W)
K = Hot Restart (HPF Reactor Type)
L = High Pressure Sodium HPF Reactor or Lag
M = Metal Halide, Autoreg
M*=Metal Halide, HPF Lag
S = High Pressure Sodium Mag-Reg or Autoreg

DATA

See Dimensions Pages for Approximate Net Weight. Add weight for each component to get total luminaire weight

REFERENCES

See Page 277 for Component Ordering Number Logic
See Pages 242-4 for Temperature Profiles and Limitations
See Page 272 for start of Accessories
See Page 279 for Explanation of Options and Other Terms Used

GE Lighting Systems, Inc.

FILTR-GARD® H2 AND H2U LUMINAIRE
UL844, UL1572 OUTDOOR SALT WATER MARINE, UL1572 SUITABLE FOR WET LOCATIONS

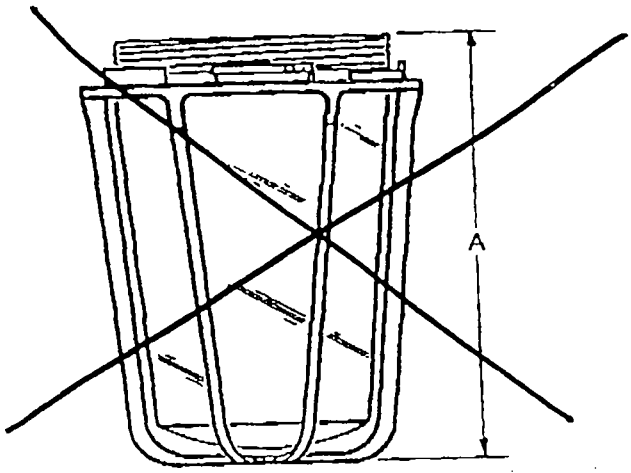
YOU MUST USE TEMPERATURE PROFILE DATA TO PROPERLY SELECT LUMINAIRE

DIMENSIONS

OPTICALS CHECK TEMPERATURE PROFILES AND LISTINGS

~~GLOBE AND GUARD (FG or GG)~~

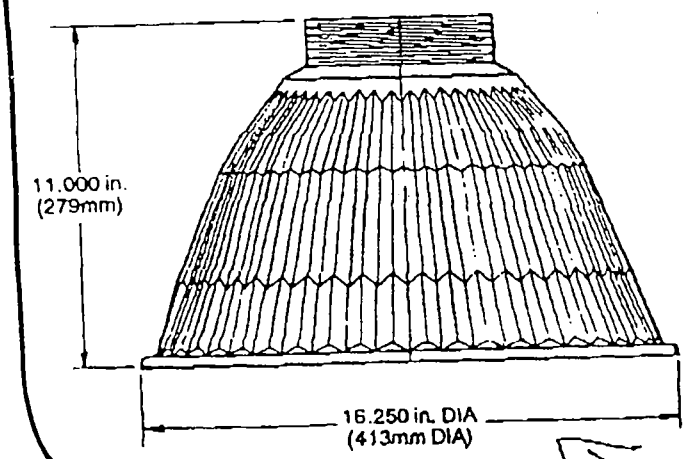
~~Approximate Net Weight~~	~~FG 9 in. (229mm)~~	~~9.7 lbs~~	~~2 kgs~~
	~~GG 7 in. (178mm)~~	~~8.8 lbs~~	~~4 kgs~~



~~Dim~~	~~FG 9 in. (229mm)~~	~~GG 7 in. (178mm)~~
~~A~~	~~9.250 in. 235mm~~	~~8.125 in. 206mm~~

ENCLOSED INDUSTRIAL REFLECTOR (EG or EN)

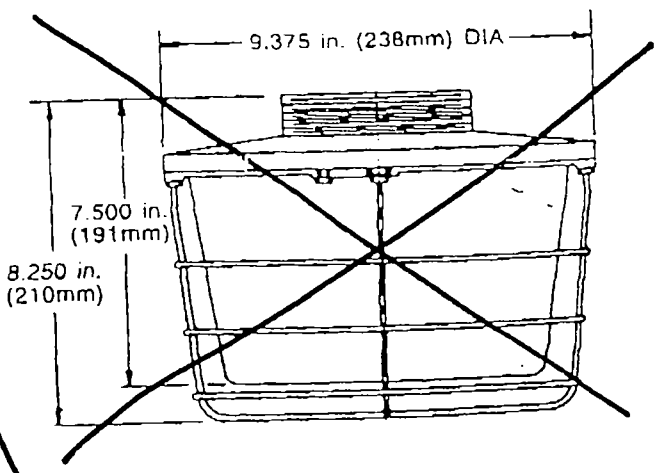
Approximate Net Weight	5 lbs	2 kgs



E option

~~8 INCH GLASS REFRACTOR (VZG or VSG)~~

~~Approximate Net Weight~~	~~3.0 lbs~~	~~1.5 kgs~~



002/004

DESCRIPTION

The Steeler combines computerized design, durable cold-rolled steel and a field-adjustable reflector to provide a degree of versatility unmatched in other industrials. U.L. 1572 listed and labeled for damp location. CSA Certified.

APPLICATION

The Steeler is perfect for warehouses, gymnasiums, assembly areas, hangars, manufacturing and automotive service areas.

SPECIFICATION FEATURES

A···Mounting
Easy slide-on die-cast aluminum mounting box with tapped opening for 3/4" conduit.

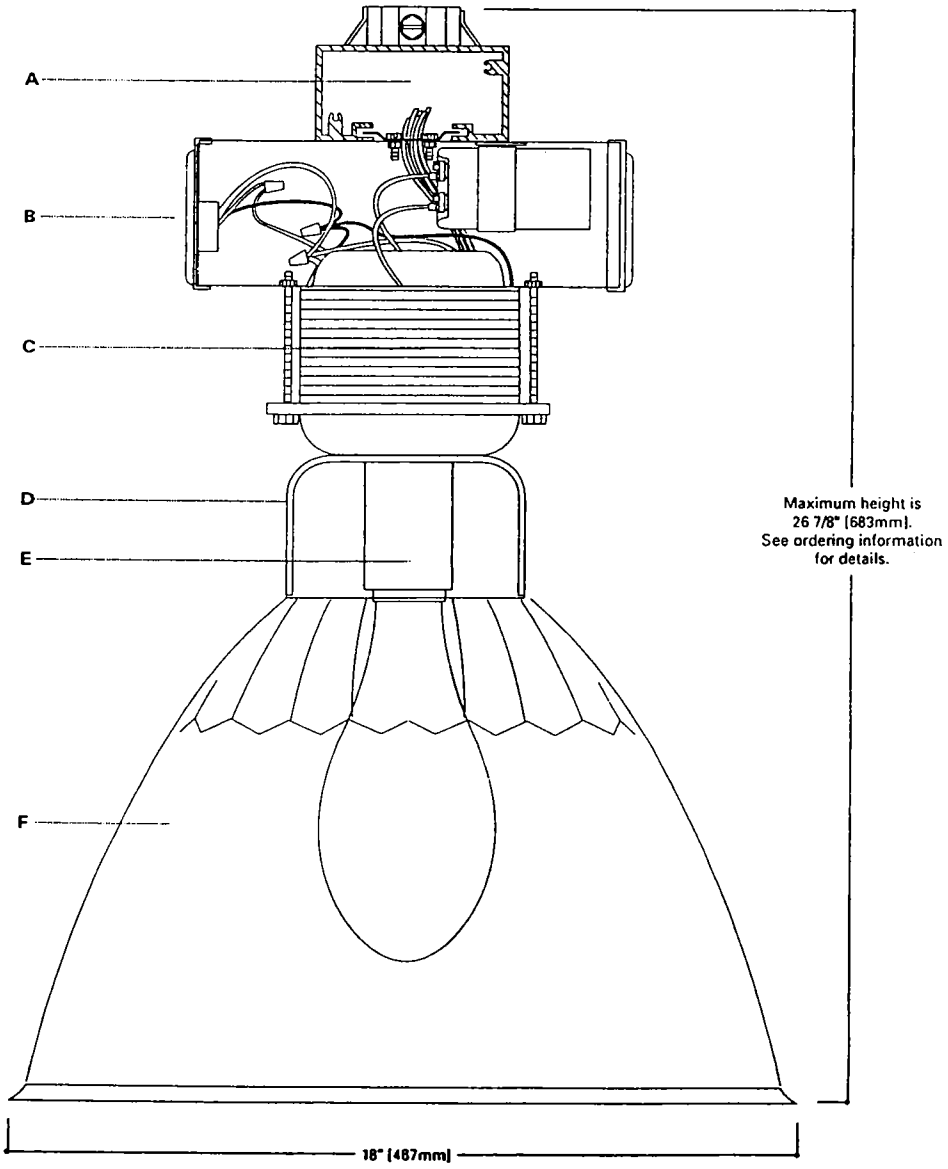
B···Housing
Heavy-duty, formed steel housing with an open air ballast for cooler operation is finished in a white polyester powder coat.

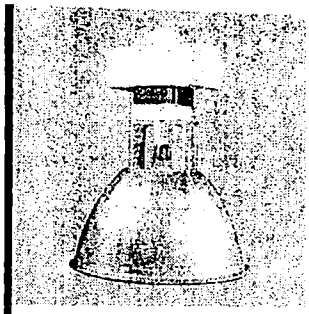
C···Ballast
High power factor ballast with class H insulation. U.L. listed for 65°C (149°F) ambient temperature operation. Minimum starting temperature is -40°C (-40°F) for HPS and -30°C (-20°F) for MH. CSA certified.

D···Universal Brackets
Universal ladder brackets allow for the flexibility to change out with other reflectors available in acrylic or glass.

E···Socket
Mogul-base porcelain socket.

F···Reflector
Computer-designed, field-adjustable reflector mounts easily and allows multiple distribution patterns for precise control.





SS18" STEELER

175-400W
High Pressure Sodium
Metal Halide

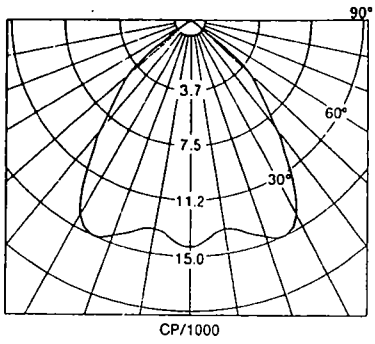
HIGH-BAY
INDUSTRIAL LUMINAIRE

ENERGY DATA

CWI Ballast Input Watts
250W HPS HPF (300 Watts)
250W MH HPF (300 Watts)
400W HPS HPF (465 Watts)
400W MH HPF (475 Watts)

CWA Ballast Input Watts
175W MH HPF (210 Watts)
250W HPS HPF (300 Watts)
250W MH HPF (295 Watts)
320W MP HPF (365 Watts)
350W MP HPF (395 Watts)
400W HPS HPF (465 Watts)
400W MP HPF (448 Watts)
400W MH HPF (455 Watts)

PHOTOMETRICS



MHSS-SA18-M-400
400-Watt MH, Medium Distribution
36,000-Lumen Clear Lamp

Coefficients Of Utilization

Effective floor cavity reflectance 20%

rc	80%				70%				50%			30%			10%			0%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
1	92	89	87	84	89	87	84	82	82	80	78	77	76	75	73	72	71	69
2	86	81	77	73	83	79	75	72	75	72	69	71	68	66	67	66	64	62
3	80	73	68	64	77	71	67	63	68	64	61	65	62	59	62	59	57	55
4	74	67	61	56	72	65	60	56	62	58	54	59	56	53	57	54	51	49
5	69	61	54	50	67	59	54	49	57	52	48	54	50	47	52	49	46	44
6	65	55	49	45	63	54	48	44	52	47	43	50	46	42	48	44	42	40
7	60	51	45	40	59	50	44	40	48	43	39	46	42	38	45	41	38	36
8	56	47	41	36	55	46	40	36	44	39	35	43	38	35	41	37	34	33
9	53	43	37	33	51	42	37	33	41	36	32	40	35	32	38	34	31	30
10	50	40	34	30	48	39	34	30	38	33	30	37	32	29	36	32	29	27

Spacing Criterion 1.3

Zone	%Lamp	Zone	%Lamp
0-30	33.6	0-90	76.2
0-40	53.6	90-180	7.6
0-60	74.6	Total	83.8

Candlepower

Degree	CP
0	14419
5	13965
15	13922
25	15045
35	11578
45	6661
55	2266
65	432
75	47
85	3
90	0
95	2
105	6
115	23
125	69
135	1066
145	1799
155	1294
165	188
175	46
180	44

ORDERING INFORMATION

SAMPLE NUMBER: HPSS-SA18-M-400-MT-Q

SS | | **18** | | | |

Lamp Type
HP=High Pressure Sodium
MH=Metal Halide
MP=Pulse Start MH (CWA)[8, 11]
ML=Pulse Start MH (Linear Reactor)[8, 9, 10, 11]

Series
SS=Steeler

Reflector Type
SA=Anodized Spun Aluminum
SGB=Safety Glass Bottom

Reflector Diameter
18=18"

Socket Position/ Distribution
C=Concentrated
M=Medium
W=Wide

Lamp Wattage
175=175W
200=200W[3]
250=250W
320=320W[3]
350=350W[3]
400=400W

Voltage[4]
120V
208V
240V
277V
347V
480V
MT=Multi-Tap[5]
TT=Triple-Tap[5]

Options (add as suffix)
F1=Single Fuse—120, 277 or 347V (Specify single voltage only)
F2=Double Fused—208, 240 or 480V (Specify single voltage only)
Q=Quartz Restrike DC Bayonet Base (Hot strike only)
QD=Quick Disconnect Die-Cast Pendant Mount Box—Specify single voltage (Not compatible with PC3, PHC, C3, MWS or HC)
RM=Remote Mount
EM=Quartz Restrike with "Delay Relay" (Strikes at cold start)
EM/SC=Emergency Separate Circuit
SCF=3' Aircraft Safety Cable-Housing to Ceiling
SCR=Aircraft Safety Cable-Housing to Reflector
SS=Space Saver Feature
MWS=Modular Wiring System Available. Consult Factory
P=Pre-set socket position from Factory. Specify desired position[6]
DL100=100% Downlight
HL=LumaWatt Fixture Control Module (Allows low voltage control wire to be daisy-chained between fixtures outside AC conduit run similar to low voltage intercom's, fire alarms and phone systems)[7]
HC=LumaWatt Fixture Control Module (Low voltage leads pulled out of top connection box for areas requiring all wiring to be installed in conduit)[7, 9]
OR=Open rated socket for pulse start Metal Halide

Accessories (order separately)
FH-1=Fixture Hook
FL-1=Fixture Loop
SHK=Hook with Safety Screw
PC3=3' Cord for with NEMA Plugs (120V-L5-15P, 208V-L6-15P, 240V-L6-15P, 277V-L7-15P, 347V-L37-20P and 480V-L8-20P) Other Lengths Available. Requires FH-1 or FL-1. Use with TPPH-NEMA. Specify Voltage
PHC=Power Cord and Plug (18" cord, non-NEMA plug requires FL-1 and TPPH)
TPPH-NEMA=Thru-way Pendant Power Hook. Requires FL-1 and PC3. Specify Voltage
TPPH=Thru-Way Pendant Power Hook Requires FL-1 and PHC. Specify Voltage
TPPH-F=Thru-Way Pendant Power Hook-Single Fuse, 120, 277 or 347 Volt. Requires FL-1 and PHC. Specify Voltage
TPPH-F2=Thru-Way Pendant Power Hook-Double Fused, 208, 240 or 480 Volt. Requires FL-1 and PHC. Specify Voltage
TPPH-F-QD=Thru-Way Pendant Power Hook-Single Fuse, Quick Disconnect. Requires FL-1 and PHC. Specify Voltage
TPPH-F2-QD=Thru-Way Pendant Power Hook-Double Fused, Quick Disconnect. Requires FL-1 and PHC. Specify Voltage
TWMBS=Thru-way Mounting Box
WG18=Wire Guard (not compatible with "SGB18")
WG18/GLC=Gym Wire Guard w/ Safety Glass
C3=3' Cord-No Plug-Requires FH-1 or FL-1
MBT=Twin Mount Bracket (Fixtures must be same voltage and without hooks, loops or plugs)
SGB18=Safety Glass Bottom (not compatible with "WG18")
BZ=Bronze Finish
LL=Lamp Included

Catalog Number[1]	Lamp Type/Base	Lamp Wattage	S/MH	Distribution	Net Wt. (lbs.)	Fixture Height	Shipping Volume (cu. ft.)
HPSS-SA18-C-250	HPS/Mogul	250	1.0	Concentrated	22	24 3/4" [629mm]	
HPSS-SA18-M-250	HPS/Mogul	250	1.4	Medium	22	24" [610mm]	
HPSS-SA18-W-250	HPS/Mogul	250	1.6	Wide	22	23 1/4" [591mm]	Reflector
HPSS-SA18-C-400	HPS/Mogul	400	1.0	Concentrated	30	22 3/4" [578mm]	10/ctn
HPSS-SA18-M-400	HPS/Mogul	400	1.4	Medium	30	24" [610mm]	3.66
HPSS-SA18-W-400	HPS/Mogul	400	1.6	Wide	30	23 1/4" [591mm]	
MHSS-SGB18-C-250[8]	MH/Mogul	250	1.0	Concentrated	22	24 3/4" [629mm]	
MHSS-SGB18-M-250[8]	MH/Mogul	250	1.4	Medium	22	24" [610mm]	
MHSS-SGB18-W-250[8]	MH/Mogul	250	1.6	Wide	22	23 1/4" [591mm]	
MHSS-SA18-C-400	MH/Mogul	400	0.9	Concentrated	26	26 7/8" [683mm]	
MHSS-SA18-M-400	MH/Mogul	400	1.2	Medium	26	26 1/8" [664mm]	
MHSS-SA18-W-400	MH/Mogul	400	1.6	Wide	25 3/8" [645mm]		

NOTES: [3] Multi-Tap ballast is 120/208/240/277V wired 277V. Triple-Tap ballast is 120/277/347V wired 347V. Add desired voltage before "MT" or "TT". [4] Supplied with safety glass bottom closure per lamp maker's recommendation. [5] Pulse Start Metal Halide only. Various ballast configurations available. [6] Products also available in non-US voltages and 50Hz for international markets. Various ballast configurations available. [7] 175, 200, 250, 320, 350, & 400W only. [8] 277V only, not available with Q, EM, HL or HC option. [9] 30 Second time delay when switching from bright to dim above 400W. Consult individual lamp manufacturers recommendations for compatible lamps. For use with CWA ballast only. [10] Factory set for concentrated, medium or wide distribution otherwise fixture is shipped in medium setting for 18" reflector. [11] Not available with QD, PC3, C3, PHC or MWS. [12] Not available with HL or HC. [13] Must specify "OR" open rated socket or safety glass bottom enclosure.

NOTE: Specifications and dimensions subject to change without notice.

COOPER Lighting
Visit our web site at www.cooperlighting.com
Customer First Center 1121 Highway 74 South Peachtree City, GA 30269 770.486.4800 FAX 770.486.4801 ADH990200

TETRA TECH, INC. HARTMAN & ASSOCIATES, INC. engineers, hydrogeologists, surveyors & management consultants	SH. NO.: 1	JOB NO.: 98.0104.018
	MADE BY: JLD	DATE: 6/4/05
	CHECKED BY:	DATE:

Class III Maximum Storage Quantity

90' x 90' x 15' pyramid shape pile

(90')(90')(15')(1/3)/27 = 1,500 yd^3

C+D Maximum Storage Quantity

110' x 110' (average) x 15' pyramid shape pile

(110')(110')(15')(1/3)/27 = 2,240 yd^3

RSM Storage Area

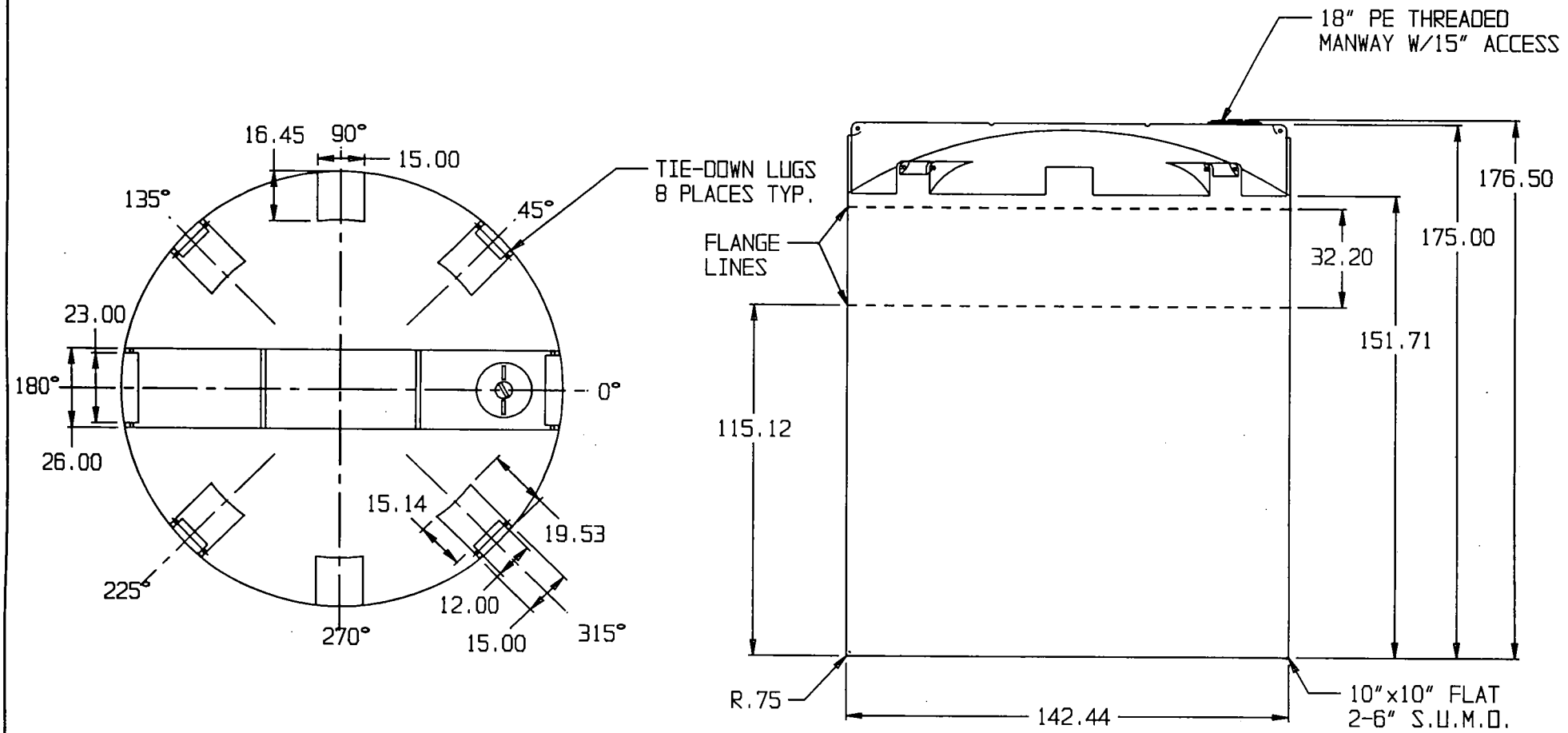
25' x 15' x 5' pyramid shape pile

(25)(15)(5)(1/3)/27 = 23.13 cy ≃ 25 cy

Mixed Temporary Recyclable Materials Storage

120' x 40' x 5' triangular shape pile

(120)(40)(5)(1/2)/27 = 444.4 cy ≃ 450 cy



SNYDER INDUSTRIES INC.

(all dimensions in inches)

BASE FITTINGS TO BE LEFT INSTALLED AT TIME OF SHIPMENT PER SII PROCEDURE

10,500 GALLON FLAT BOTTOM TANK

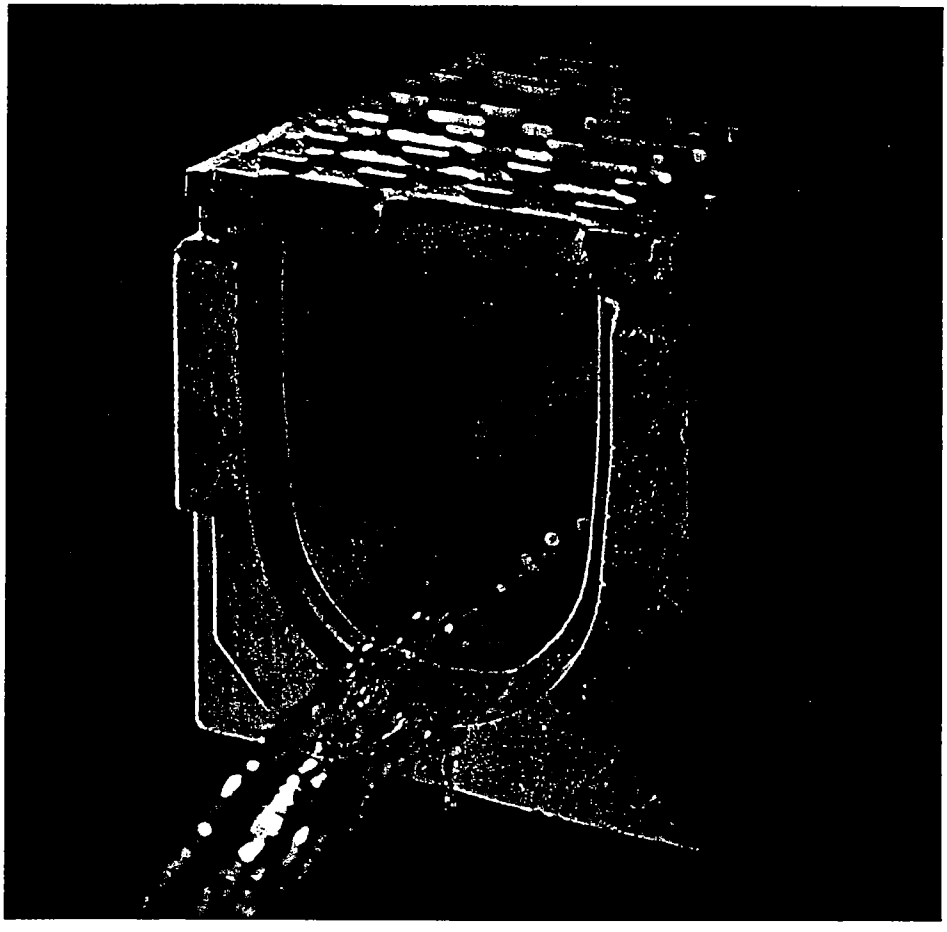
PART # TANK: H533030000--

REF#: 0000

04/24/03

ACO DRAIN® III

Product Catalog



Precast Trench Drainage channel systems
for industrial and commercial applications

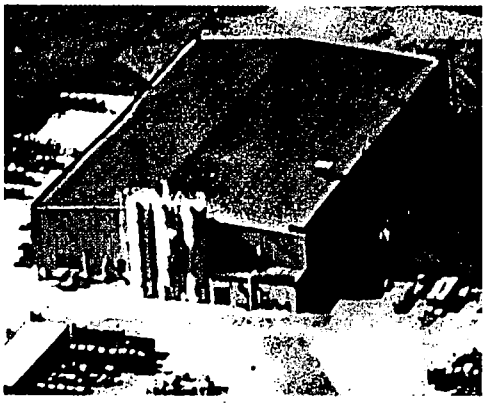
ACO

ACO DRAIN® III

ACO Polymer Products, Inc.

The first ACO company was established in 1946, specializing in mineral products such as sanitary and bathroom fittings produced from terrazzo concrete and concrete framed industrial window systems. In the late sixties, ACO started working with what was then a new material -polymer concrete. In 1970 the company introduced its first line of precast polymer concrete surface drainage channels. It was an untapped market ACO discovered, and since then, the company has experienced tremendous growth and become a world pioneer in the mass production of polymer concrete products. Today, after continuous refinement of the polymer concrete material, and improvement of manufacturing processes, ACO offers a wide range of precast linear surface drainage systems for almost all applications in the construction industry.

ACO Polymer Products manufacturing plant at Chardon, Ohio



ACO Polymer Products, Inc.
P.O. Box 245
12080 Ravenna Road
Chardon, Ohio 44024
(440) 285-7000 Telephone
(440) 285-7005 Fax
(800) 543-4764 Toll Free
ACO web site "http://www.acousa.com"
ACO email: "aco@acousa.com"

Polymer Concrete

ACO polymer concrete is a versatile, highly durable material; its smooth surface finish is ideal for the channel drainage systems. It consists of polyester or vinylester resin (binder) reinforced by mineral aggregates and fillers. Compared to conventional concrete it offers considerable advantages:

- Low moisture absorption rate
- Resilient to repeated freeze-thaw cycles
- Smooth surface, lower friction coefficient, higher hydraulic performance
- Light weight
- Higher compressive strength

ACO Drain Line

ACO Drain is the world's widest and most comprehensive line of precast polymer concrete drainage systems. It offers specifiers and designers a precise solution for almost any surface drainage application:

- from car parking lots to airport runways
- from loading docks to sophisticated shopping malls
- from residential driveways to chemical processing plants.

Easy to design

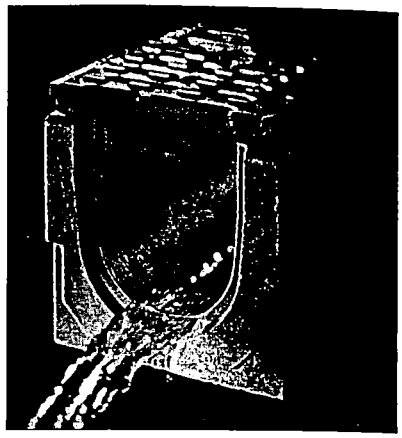
ACO Drain systems are easy to design. There are no complicated falls to calculate (built-in slope), and they are easily specified and detailed. The choice between different systems, loading capacities and grating selection make ACO systems applicable in almost any situation.

Easy to install

Laying out the system and installation of the channels is simple and time efficient. Compared to the traditional cast-in-place method, construction is quick and straightforward, yet with far less labor.

Efficiency / Performance

The smooth interior radiused channel surface improves the overall hydraulic performance of the system. The removable grating permits easy access for cleaning and maintenance. The durability of the polymer concrete improves and extends the life of the drainage system.



ACO Services

ACO has member companies in 14 countries, and sales offices in 36. Considerable resources are devoted to researching new, more advanced methods of production, and developing new markets. ACO is the largest and most experienced manufacturer of polymer concrete drainage systems, worldwide.

The ACO Drain product line is designed to provide solutions for the surface drainage industry and meet the needs of all customers.

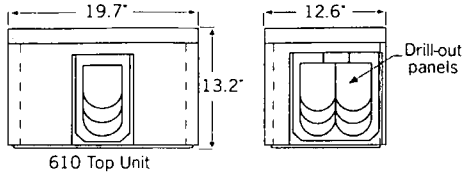
ACO products are sold through qualified distributors in the United States, Canada and Mexico.

Customer service is staffed with skilled sales professionals who have experience and in-depth knowledge of the complete range of products and systems, and are available to provide the customers with detailed product information.

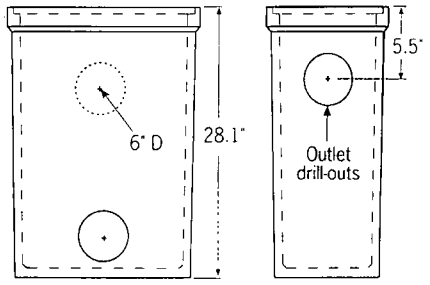
Using the latest CAD technology, the Engineering Department offers technical advice along with designs and layouts for large and complicated projects. Regional sales managers are always available for site and office visits throughout U.S and Canada.

ACO Polymer Products .....

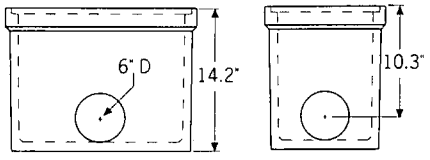
the experts in precast polymer concrete channel drainage systems



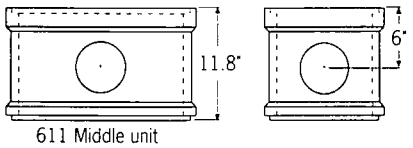
610 Top Unit



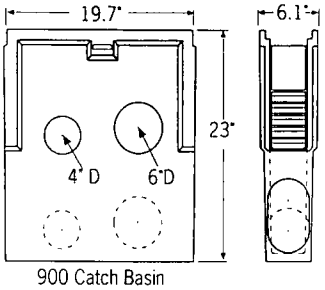
612 Long Base



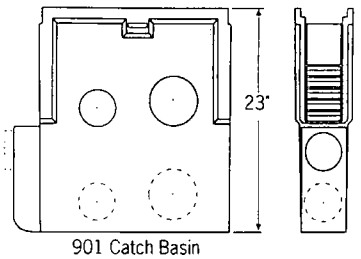
612 Short Base



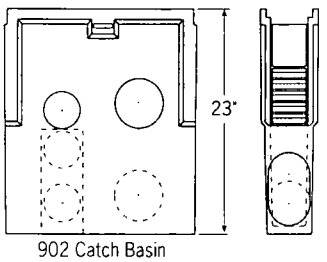
611 Middle unit



900 Catch Basin



901 Catch Basin

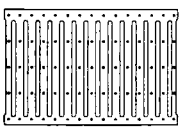


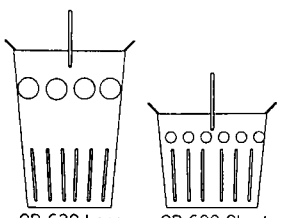
902 Catch Basin

Catch Basins

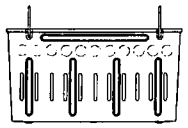
900 and 600 series

ACO Catch Basins are designed to fit ACO DRAIN systems. They are manufactured from the same polyester or vinylester concrete material.
The 900 series catch basins accept the same gratings as the channels for visual continuity. Plumbing and channel connections are accessible from preformed outlet and panel drill-outs.
The 600 series consists of a Top unit (610), which is supplied as standard with cast-in grey iron frame and grating, and Base units (612S, 612L) . An optional extension unit (611) can be placed in the middle allowing components to be stacked to provide required invert depth.
Foul air traps are available for both the 900 and 600 series


Cast Iron grate for 610 Top Unit


CB 630 Long Trash Bucket

CB 620 Short Trash Bucket


Trash Bucket for 900 Series

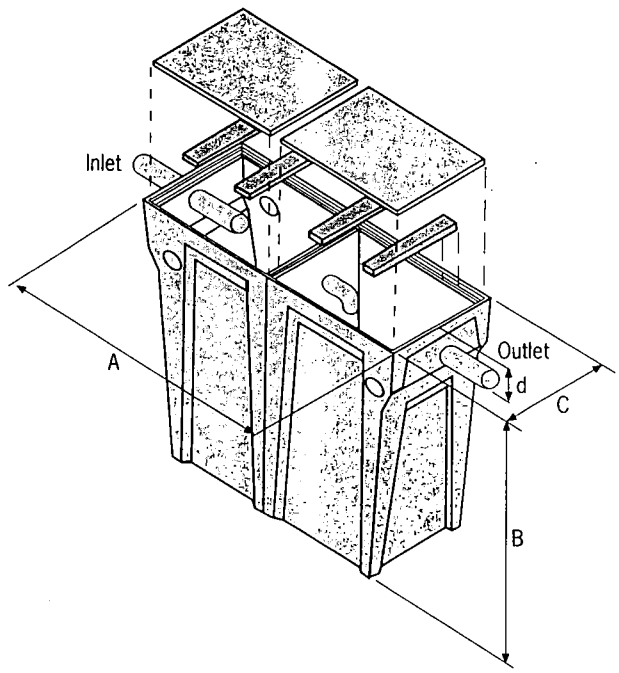
Component list

Component	Part No	Dimensions (in) L X W X D	Dimensions (mm)	Weight
900 Series	900	19.7 x 6.1 x 23	500x155x582	57 lbs
w/foul air trap on end	901	19.7 x 6.1 x 23	500x155x582	66 lbs
w/foul air trap on side	902	19.7 x 6.1 x 23	500x155x582	66 lbs
Trash Buckets				
Galvanized steel		fits all Catch basins		5.5 lbs
Plastic		fits all Catch basins		3.0 lbs
Stainless steel		fits all Catch basins		5.5 lbs
Gratings see pages 16-17		19.7" length	500 mm length	
600 Series	620	19.7 x 12.6 x 27.4	500x320x695	192 lbs
	630	19.7 x 12.6 x 41.3	500x320x1050	245 lbs
600 components	610 Top	19.7 x 12.6 x 13.2	500x320x335	66 lbs
	611 Middle	19.7 x 12.6 x 11.8	500x320x300	45 lbs
	612 Short	19.7 x 12.6 x 14.2	500x320x360	60 lbs
	612 Long	19.7 x 12.6 x 28.1	500x320x714	110 lbs
Grating (600 series)	Cast Iron	19.7" length	500mm length	55 lbs
	Fiberglass	19.7" length	500mm length	7.0 lbs
Trash Buckets				
Galvanized steel short	620			10.4 lbs
Galvanized steel long	630			13.7 lbs
Stainless steel short	620			10.4 lbs
Stainless steel long	630			13.7 lbs
Foul air trap 6" outlet	612 Long			11.0 lbs

ACO Oil Separators

ACO Polymer Products has developed a product-solution to help businesses in their effort to control wastes and maintain a cleaner environment. By effectively separating oil, grease and solids from waste water sewage, businesses reduce environmental pollution and meet governmental permit guidelines.

The ACO oil separator is based on the specific gravity principle, where lighter than water liquids such as oils and grease float to the surface and heavier than water solids, such as sand, stay on the bottom. The unique characteristics of polymer concrete, (0.1% water absorption rate, salt and frost proof, light-weight, compressive strength three times stronger than conventional concrete), reinforces ACO Oil separators's overall performance.
ACO Oil separators are manufactured in a double basin design in three standard sizes. A single sand/solid trap separator is also available. Covers include a 1/4" diamond checkered steel E-Coated plate with handles. The cover is rated load class A (Max. load 3,500 lbs).
Optional holes for venting and gasketing for cover plates are also available.

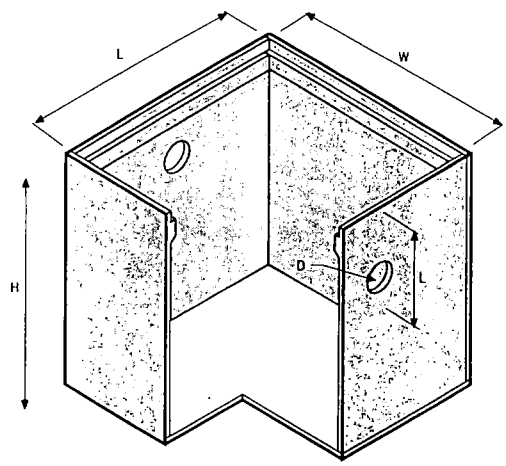


Capacity	Length/set (A)	Height (B)	Width (C)	Invert (d)	Weight /set	w/cover /set
140g (530 lt)	76"(193cm)	31"(79cm)	26"(66cm)	12"(30cm)	685 lbs	829 lbs
200g (757 lt)	76"(193cm)	41"(104cm)	26"(66cm)	12"(30cm)	725 lbs	869 lbs
260g (985 lt)	76"(193cm)	51"(130cm)	26"(66cm)	12"(30cm)	800 lbs	944 lbs

ACO Sump Boxes

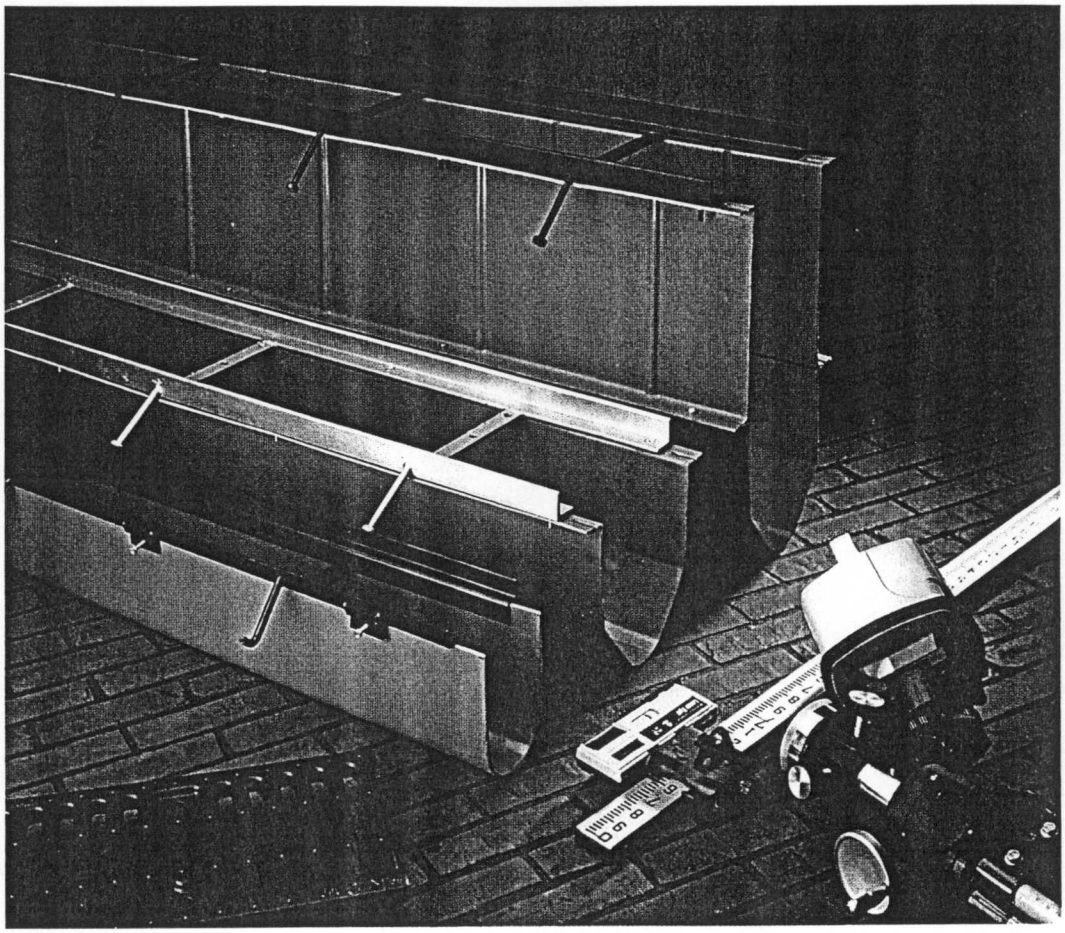
Polyester or Vinylester concrete preassembled modular units designed for handling high volume flow rates.

ACO Sump boxes are available in three standard sizes and can be connected to trench drainage systems. Drill-outs can be custom fabricated for piping connections, at various positions to meet specification requirements.
Cast Iron slotted and fiberglass mesh gratings are available in three sizes. Fiberglass mesh is available in polyester and vinylester material.



Size	Capacity	Weight Box only	weight w/cover
(2'x2'x2') (60cmx60cmx60cm)	57 gal. (217 lt)	250 lbs	550 lbs
(3'x3'x3') (90cmx90cmx90cm)	196 gal. (743 lt)	500 lbs	1100 lbs
(4'x4'x4') (120cmx120cmx120cm)	469 gal (1775 lt)	900 lbs	2200 lbs

ACO DRAIN®



Fiberglass Trench Drain Systems

for Industrial and Commercial Applications

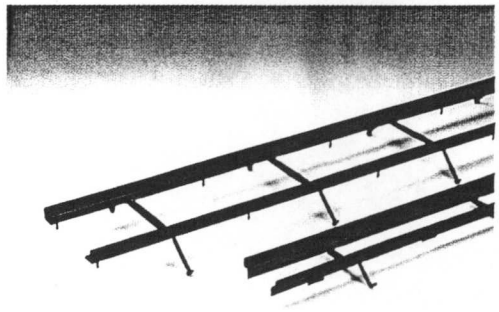
ACO

FG 200 System

Product	Description	Length
FG 200	Sloped Channels #801 - 816	6 ft. (1.82 m)
FG 200	Non-Sloped Channels #800N, 801N, 806N, 811N, 815N	6 ft. (1.82 m)
Extensions	12" high sidewall extensions # 850	6 ft. (1.82 m)

FG 200 Grate Frames

Description	Length
Coated Steel	6', 12', 18'
Galvanized Steel	6', 12', 18'
Type 304 Stainless Steel	6', 12', 18'
Coated Steel end frame	-
Galvanized Steel end frame	-
Type 304 Stainless Steel end frame	-

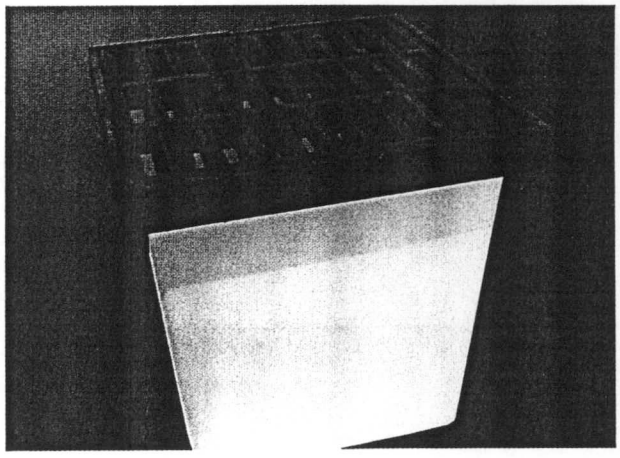


Fiberglass Frames

FG 200 Grates

(see pg. 13)

Load Class	Description	Length
C	Gray Iron Slotted	18 in.
D	Ductile Iron Slotted	18 in.
C	Galvanized Steel Bar	36 in.
C	304 Stainless Steel Bar	36 in.



880 Catch Basin

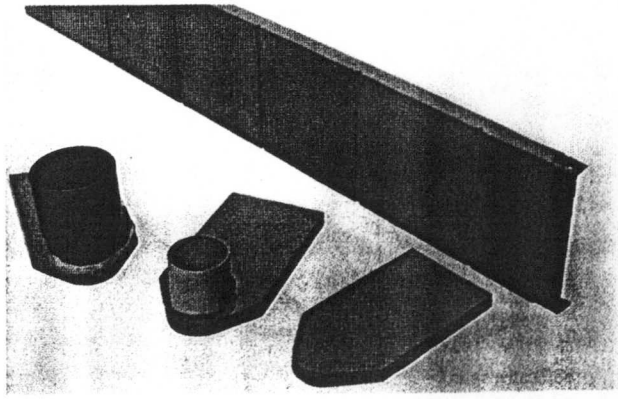
FG 200 Catch Basins

(Catch basin frames and grates are offered in the same material as the channels)

Product	Length	Width	Depth
600	24"	12"	26"
880	24"	24"	26-3/4"

FG 200 Accessories

Description	Size
Closed end plate, Shallow	Universal
Inlet end plate	4", 6", 8"
Closed end plate, deep	Universal
Outlet end plate	4", 6", 8"
Vertical outlet adapter	4", 6", 8"



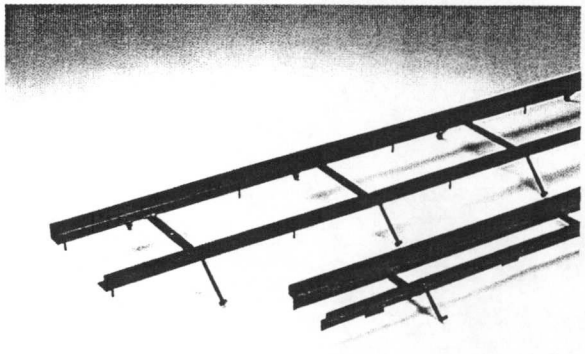
Fiberglass Accessories

FG 100 System

Product	Description	Length
FG 100	Sloped Channels #401 - 416	3 m (9.84 ft.)
FG 100	Non-Sloped Channels #400N, 401N, 408N, 411N, 416N	3 m (9.84 ft.)
	#401N-1, 406N-1, 411N-1, 415N-1	1 m (3.28 ft.)

FG 100 Grate Frames

Description	Length
Coated Steel	3 m (9.84 ft.)
Galvanized Steel	3 m (9.84 ft.)
Type 304 Stainless Steel	3 m (9.84 ft.)
Coated Steel end frame	-
Galvanized Steel end frame	-
Type 304 Stainless Steel end frame	-



Fiberglass Frames

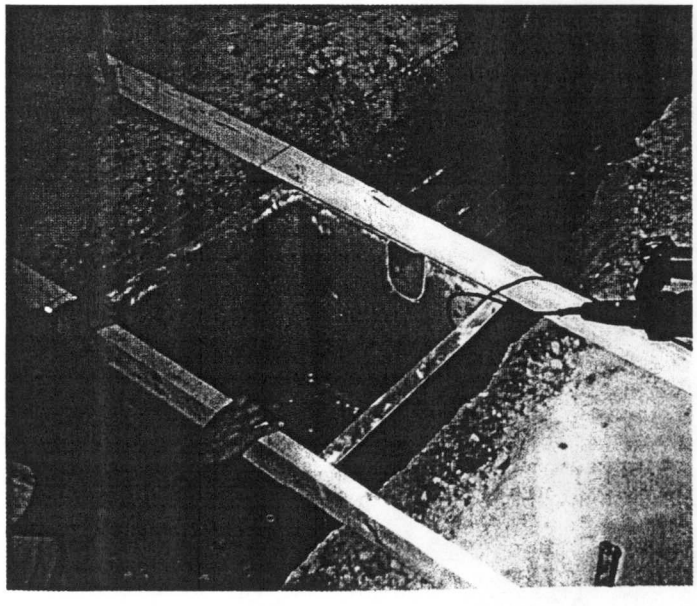
FG 100 Catch Basins

(catch basin frames and grates are offered in the same material as the channels)

Product	Length	Width	Depth
600	24"	12"	26"
880	24"	24"	26-3/4"
900	19.68"	4"	23"
901	19.68"	4"	35"

FG 100 Accessories

Description	Size
Closed end plate, Shallow	Universal
Inlet end plate	4", 6"
Closed end plate, deep	Universal
Outlet end plate	4", 6"
Vertical outlet adapter	4", 6"



880 Catch Basin connected to FG 100 channel.

APPENDIX G

MATERIAL DISPOSITION
ANGELO'S RECYCLED MATERIALS
TAMPA, FLORIDA

Material Type	Maximum Storage Quantity (CY)	Density (lbs/CY)	Covered or Uncovered	Method of Storage	Disposal/Recycling Location	Maximum Hold Time
Unprocessed Class III	1,500	605	Covered	Processing Bldg.	Enterprise Road Landfill	1Week
Unprocessed C&D	2,240	667	Covered	Processing Bldg.	Enterprise Road Landfill	
Recovered Yard Trash/Wood	5,000	500	Uncovered	Open Ground	Goldstar/Okeelanta	6 Months
Unprocessed Concrete*	20,000	2,595	Uncovered	Open Ground	Re-Sale Public	6 Months
Recovered Asphaltic Concrete*	8,148	1,380	Uncovered	Open Ground	Re-Sale Public	6 Months
Mixed Recyclables	450	906	Covered	Processing Bldg.	Re-Sale Public	6 Months
Cardboard - Loose	40	100	Uncovered	Roll-off	Re-Sale City of Tampa	6 Months
Cardboard - Baled	60	600	Uncovered	Open Ground	Re-Sale City of Tampa	6 Months
Paper	30	400	Uncovered	Roll-off	Re-Sale City of Tampa	6 Months
Ferrous Metal	190	906	Uncovered	Open Storage	Re-Sale Tampa Scrap Metal	6 Months
Aluminum	20	250	Uncovered	Roll-off	Re-Sale Tampa Scrap Metal	6 Months
Copper	40	340	Uncovered	Open Storage	Re-Sale Tampa Scrap Metal	6 Months
Plastic	40	220	Uncovered	Roll-off	Re-Sale City of Tampa	6 Months
Clean Wood	60	500	Uncovered	Open Ground	Re-Sale Okeelanta	6 Months
Tires	30	400	Uncovered	Roll-off	Hillsborough Co. Resource Recovery	1Week
Class I Waste	24	500	Covered	Container	Hillsborough Co. Resource Recovery	48 Hours
Batteries	1	4,000	Covered	Container	Re-Sale Public	2 Months
Florescent Bulbs	0.5	-	Covered	Carton	Hillsborough Co. Resource Recovery	6 Months
Waste Oil / Hazardous Waste	275 Gallons	-	Covered	55-gallon drum	Howco	10 Days

Notes:

Storage Location of Material is shown on the Site Plan

Resale vendors may vary

* Processed/Recovered concrete source separated goes directed to Angelo's Aggregate Materials-separate from WPF.

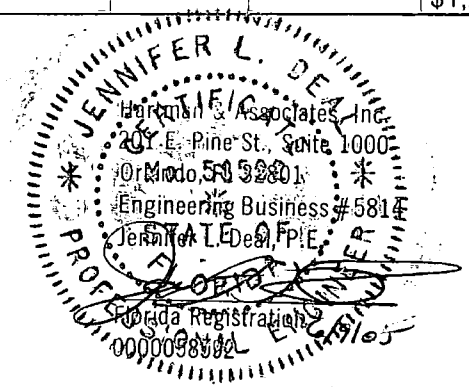
OPINION OF PROBABLE CLOSURE COST
ANGELO'S RECYCLED MATERIALS – WPF
TAMPA, FLORIDA

Material Type	Maximum Storage Quantity	Maximum Storage Quantity,	Loading Cost/Ton	Total Loading	Hauling Cost/Ton	Total Hauling	Disposal Cost/Ton	Total Disposal	Total Cost
Unprocessed Class III [1]	1,500 CY	454	$2.20	$998.80	$9.15	$4,154.10	$18.97	$8,612.38	$13,765.28
Unprocessed C&D [1][5]	2,240 CY	747	$2.20	$1,643.40	$9.15	$6,835.05	$18.97	$14,170.59	$22,649.04
Yard Trash and Wood [1]	5,000 CY	1,250	$2.20	$2,750.00	$9.15	$11,437.50	$18.97	$23,712.50	$37,900.00
Concrete [4][5]	45,000 CY	58,388	$2.20	$128,453.60	$9.15	$534,250.20	$7.18	$419,225.84	$1,081,929.64
Asphaltic Concrete	8,148 CY	5,622	$2.20	$12,368.40	$9.15	$51,441.30	$7.18	$40,365.96	$104,175.66
Cardboard – Loose [3]	40 CY	2	$2.20	$4.40	$9.15	$18.30	$18.97	$37.94	$60.64
Cardboard – Baled [3]	60 CY	18	$2.20	$39.60	$9.15	$164.70	$18.97	$341.46	$545.76
Paper [3]	30 CY	9	$2.20	$19.80	$9.15	$82.35	$18.97	$170.73	$272.88
Metal Ferrous [3]	190 CY	86	$2.20	$189.20	$9.15	$786.90	$18.97	$1,631.42	$2,607.52
Metal Copper [3]	40 CY	7	$2.20	$15.40	$9.15	$64.05	$18.97	$132.79	$212.24
Metal Aluminum [3]	20 CY	2.5	$2.20	$5.50	$9.15	$22.88	$18.97	$47.43	$75.80
Plastic [3]	40 CY	1.5	$2.20	$3.30	$9.15	$13.73	$18.97	$28.46	$45.48
Clean Wood [1][6]	60 CY	18	$2.20	$39.60	$9.15	$164.70	$8.20	$147.60	$351.90
Tires [2]	30 CY	6	$2.20	$13.20	$9.15	$54.90	$38.18	$229.08	$297.18
Class I [2]	24 CY	6	$2.20	$13.20	$9.15	$54.90	$38.18	$229.08	$297.18
Batteries [2]	0.5 CY	1	$2.20	$2.20	$9.15	$9.15	$38.18	$38.18	$49.53
Florescent Bulbs	0.5 CY	0.25	$2.20	$0.55	$9.15	$2.29	$38.18	$9.55	$12.38
Total									$1,265,248.11
Contingency (15%)									$18,978.72
Grand Total									$1,284,226.83

Y/jld/angelo's tampa/closure cost.xls

060905

The above referenced Opinion of Probable Closure Costs is An Engineer's opinion of probable costs for the facility, based Upon a number of assumptions. These costs may vary due to Specific decisions made by the contractor including cost and extent of labor, equipment and materials, and market conditions, and a variety of other conditions over which the engineer and Hartman & Associates, Inc. have no control.



Cedar Trail Landfill
Information Sheet

CEDAR TRAIL LANDFILL DOES NOT ACCEPT THE FOLLOWING ITEMS:

- ASBESTOS
- WHOLE TIRES
- MSW GARBAGE (HOUSEHOLD)
- SLUDGES
- LIQUIDS OF ANY KIND
- BATTERIES
- MEDICAL WASTE
- STREET SWEEPINGS
- BIO HAZARDOUS
- HAZARDOUS/ TOXIC WASTE
- ELECTRONICS
- APPLIANCES

ADDRESS:

Cedar Trail Landfill
2500 S.R. 60 West
Bartow, Florida 33830

MAILING ADDRESS:

Cedar Trail Landfill
P.O. Box 2586
Bartow, Florida 33831

PHONE NUMBER:
(863) 533-8776

HOURS OPEN TO PUBLIC:
Monday – Friday 7:30 to 5:00
Saturday 7:30 to 12:30

CHARGE PER TON (ONLY):
$ 18.50
FOR ALL MATERIALS BROUGHT INTO LANDFILL

THERE IS NOW A MINIUMUM CHARGE AS OF 6/19/03 OF $18.50 IF YOUR LOAD IS UNDER A TON!!!

R.I.P. INC.
5355 W. Grover Cleveland Boulevard
Homosassa, Florida 34446
352-628-0075 Fax# 352-628-2004

July 10, 2003

Current tipping fees

C & D $7.00 per ton
Brush (landclearing) $8.00 per yard
Minimum dump fee for both C &D and Brush is $35.00.

APPENDIX H

Department of
Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

SUBMERGED LANDS AND ENVIRONMENTAL RESOURCES
FINAL PERMIT
ENVIRONMENTAL RESOURCE STANDARD GENERAL PERMIT

PERMITTEE/AUTHORIZED ENTITY:
Dennis Price, P.G.
Angelo's Recycled Materials
4974 62nd Street
Live Oak, FL 32060

AGENT:
Roderick K. Cashe, P.E.
Hartman & Associates, Inc.
201 E. Pine St., Suite 1000
Orlando, FL 32801

Permit/Authorization Number:
29-0163558-001

Date of Issue: December 13, 1999

Expiration Date of Construction Phase: December 13, 2004

County: Hillsborough

Project: Surface water management system for material recycling facility.

This permit is issued under the authority of Part IV of Chapter 373, F.S., 40D-4, and Title 62, Florida Administrative Code (F.A.C.). The activity is not exempt from the requirement to obtain an environmental resource permit. Pursuant to Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing and taking final agency action on this activity.

This permit also constitutes certification compliance with water quality standards under Section 404 of the Clean Water Act, 33 U.S.C. 1344.

As staff to the Board of Trustees, the Department has reviewed the activity described below, and has determined the activity is not on state-owned submerged lands. Therefore, your project is exempt from the further requirements of Chapter 253, Florida Statutes.

A copy of this authorization also has been sent to the U.S. Army Corps of Engineers (USACOE) for review. The USACOE may require a separate permit. Failure to obtain this authorization prior to construction could subject you to enforcement action by that agency. You are hereby advised that authorizations also may be required by other federal, state, and local entities. This authorization does not relieve you from the requirements to obtain all other required permits and authorizations.

The above named permittee is hereby authorized to construct the work shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof. **This permit is subject to the limits, conditions, and locations of work shown in the attached drawings, and is also subject to the**

attached General Conditions and Specific Conditions, which are a binding part of this permit. You are advised to read and understand these drawings and conditions prior to commencing the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings. If you are utilizing a contractor, the contractor also should read and understand these drawings and conditions prior to commencing the authorized activities. Failure to comply with all drawings and conditions shall constitute grounds for revocation of the permit and appropriate enforcement action.

Operation of the facility is not authorized except when determined to be in conformance with all applicable rules and with the general and specific conditions of this permit/certification/authorization, as specifically described below.

ACTIVITY DESCRIPTION:
The project consists of the construction of a surface water management system for a construction and demolition debris recycling facility and a future development tract, serving a total project area of 28.4 acres.

The facility is as shown on the set of drawings prepared by Hartman and Associates, Inc., and received at the Department on October 8, 1999. Sheet D-1 was revised and received on November 12, 1999.

The West Retention Area consists of a 1.24 acre (@TOB) basin which will receive runoff from 12.71 acres of project area and the East Retention Area which consists of a 1.40 acre (@TOB) basin which will receive runoff from 15.70 acres of project area, including the Future Development Tract.

The system is designed to treat by percolation the first one-half inch of runoff from the project area and provide attenuation for the 25 year, 24 hour storm event. No wetlands are proposed to be impacted and no activity will take place within the 100 year flood plain.

The project is located in Section 6, Township 28, Range 19, in Hillsborough County.

SPECIFIC CONDITIONS:
1. "If historical or archaeological artifacts, such as Indian canoes, pottery are discovered at any time within the project site the permittee shall immediately notify Wetlands Resource Management at the Southwest District Office of the Department of Environmental Protection and the Division of Historical Resources, History and Records Management, R.A. Gray Building, 500 South Bronough, Tallahassee, FL 32399-0250 or phone (904)488-1480."

2. All submittals required herein shall be directed to:

Department of Environmental Protection
Environmental Administrator
Submerged Lands & Environmental Resources
Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619

hereafter referred to as "the Department". Such submittals include, but are not limited to, record drawings, progress reports, mitigation monitoring reports and water quality monitoring reports.

All submittals shall include the permittee's name and permit number.

3. In the event that the permittee files for bankruptcy prior to completion of all work permitted and required by this permit, the permittee must notify the Department within 30 days of filing. The notification shall identify the bankruptcy court and case number and shall include a copy of the bankruptcy petition.

4. If the approved permit, drawings and the Specific Conditions contradict each other, then the Specific Conditions shall prevail.

5. The permittee shall notify the Department in writing within 14 days of any change in agents designated in the approved permit application.

6. The permittee is responsible for retaining a professional engineer registered in the State of Florida to certify that the construction of the project is in compliance with the approved permit plans.

7. All drawings, record drawings, land surveys and as-built surveys required herein shall be certified by a Professional Engineer or Registered Land Surveyor, as appropriate, registered in the State of Florida.

8. Progress reports for the project shall be submitted to the Department beginning twelve (12) months after permit issuance and shall continue to be submitted every twelve (12) months until all permitted construction of the project is completed. Progress reports must be submitted to the Department even if there is no ongoing construction. Reports shall include the current project status and the construction schedule for the following twelve month period.

9. The retention ponds are intended to become dry within 72 hours after a rainfall event. A system that is regularly wet will be considered as not in compliance with this permit and possible modifications to the system may be required.

10. Excavation of the retention ponds are limited to the permitted design elevation. If limestone bedrock is encountered during construction the Department shall be notified and construction in the affected area shall cease.

11. In addition to the forms required in General Condition #13, the permittee shall submit two copies of signed, dated and sealed as-built drawings to the Department within 30 days of completion of construction. The as-built drawings shall be based on the Department permitted construction drawings which shall be revised to reflect any changes made during construction. Both the original design and constructed elevation must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. All surveyed dimensions and elevations required shall be verified and signed, dated and sealed by a Florida registered surveyor or engineer. Record drawings shall include the invert elevations of all culverts and controlling elevations of all permitted structures as shown in the permitted drawings.

12. The Operation and Maintenance Entity shall submit inspection reports in the form required by the Department, FDEP Form # 62-343.900(6), *Inspection Certification*, 24 months after operation is authorized and every 24 months thereafter.

13. The permittee shall be aware of and operate under #1 through #25 of the attached "General/Limiting Conditions for Environmental Standard General and Individual Permits". General/Limiting Permit Conditions are binding upon the permittee and enforceable pursuant to Chapter 403 of the Florida Statutes.

RIGHTS OF AFFECTED PARTIES

This permit is hereby granted unless a sufficient petition for an administrative hearing is timely filed under sections 120.569 and 120.57 of the Florida Statutes as provided below. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received by the clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Mediation may also be pursued as specified below.

Because the administrative hearing process is designed to redetermine final agency action on the application, the filing of a petition for an administrative hearing may result in a modification of the permit or even a denial of the application. If a sufficient petition for an administrative hearing or request for an extension of time to file a petition is timely filed, this permit automatically becomes only proposed agency action on the application, subject to the result of the administrative review process. Mediation may also change the final disposition of the application. Accordingly, the applicant is advised not to commence construction or other activities under this permit until the deadlines noted below for filing a petition for an administrative hearing or request for an extension of time have expired.

Under rule 62-110.106(4) of the Florida Administrative Code, a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon. If a request is filed late, the Department may still grant it upon a motion by the requesting party showing that the failure to file a request for an extension of time before the deadline was the result of excusable neglect.

In the event that a timely and sufficient petition for an administrative hearing is filed, other persons whose substantial interests will be affected by the outcome of the administrative process have the right to petition to intervene in the proceeding. Intervention will be only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

In accordance with rules 28-106.111(2) and 62-110.106(3)(a)(4), petitions for an administrative hearing by the applicant must be filed

within 21 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under section 120.60(3) of the Florida Statutes, must be filed within 21 days of publication of the notice or within 21 days of receipt of the written notice, whichever occurs first.

Under section 120.60(3) of the Florida Statutes, however, any person who has asked the Department for notice of agency action may file a petition within 21 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 for an administrative hearing or pursue mediation as provided below within the appropriate time period shall constitute a waiver of those rights.

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

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action; and

(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action;

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's 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. Under sections 120.569(2)(c) and (d) of the Florida Statutes, a petition for administrative hearing must be dismissed by the agency if the petition does not substantially comply with the above requirements or is untimely filed.

In addition to petitioning for an administrative hearing, any person who has previously filed a petition for an administrative hearing may pursue mediation. If a written mediation agreement with all parties to the proceeding (i.e., the applicant, the Department, and any person who has filed a timely and sufficient petition for a hearing) is filed with the Department within 10 days after the deadline for filing a petition for an administrative hearing, the time limitations imposed by sections 120.569 and 120.57 shall be tolled to allow mediation to proceed. The agreement must contain all the information required by rule 28-106.404. The agreement must be received by the clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the deadline noted above. Pursuing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement.

Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. As noted above, persons seeking to protect their substantial interests that would be affected by such a final decision modified through mediation must file their petitions within 21 days of receipt or publication of this notice as provided above, or they shall be deemed to have waived their right to a proceeding under sections 120.569 and 120.57. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under sections 120.569 and 120.57 remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.

This action is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above. Upon the timely filing of a petition this order will not be effective until further order of the Department.

This permit constitutes an order of the Department. The applicant has the right to seek judicial review of the order under section 120.68 of the Florida Statutes, by the filing of a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, 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 30 days from the date when the final order is filed with the Clerk of the Department.

Executed in Tampa, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

for Bob Stetler
Environmental Administrator
Submerged Lands and
Environmental Resources

Copies furnished to:
Dennis Price, P.G., Angelo's Recycled Materials, 4974 62nd Street, Live Oak, FL 32060
Bob Butera, P.E., FDEP Solid Waste section
file

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this permit, including all copies were mailed before the close of business on 12/13, 1999, to the above listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to 120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Ernestine Robinson 12/13/99

Clerk Date

Recommend by : Randal R. Cooper, P.E., and Don DePra, ES II
Prepared by: Ernestine Robinson

ATTACHMENT "A"
GENERAL LIMITING CONDITIONS FOR ENVIRONMENTAL STANDARD GENERAL AND INDIVIDUAL PERMITS

1. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.

2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by Department staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

3. Activities approved by this permit shall be conducted in a manner which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and a pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

4. Water quality data for the water discharged from the permittee's property or into the surface waters of the state shall be submitted to the Department as required by the permit. Analyses shall be performed according to procedures outlined in the current edition of Standard Methods for the Examination of Water and Wastewater by the American Public Health Association or Methods for Chemical Analyses of Water and Wastes by the U.S. Environmental Protection Agency. If water quality data are required, the permittee shall provide data as required on volumes of water discharged, including total volume discharged during the days of sampling and total monthly volume discharged from the property or into surface waters of the state.

5. Department staff must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in offsite discharge or sediment transport into wetlands or surface waters, a written dewatering plan must either have been submitted and approved with the permit application or submitted to the Department as a permit prior to the dewatering event as a permit modification. The permittee is advised that the rules of the Southwest Florida Water Management District state that a water use permit may be required prior to any use exceeding the thresholds in Chapter 40D-2, F.A.C.

6. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.

7. Off site discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream stages. Stages may be subject to operation schedules satisfactory to the Department.

8. The permittee shall complete construction of all aspects of the surface water management system, including wetland compensation (grading mulching, planting), water quality treatment features, and discharge control facilities prior to beneficial occupancy or use of the development being served by this system.

9. The following shall be properly abandoned and/or removed in accordance with the applicable regulations:

a. Any existing wells in the path of construction shall be properly plugged and abandoned by a licensed well contractor.

b. Any existing septic tanks on site shall be abandoned at the beginning of construction.

c. Any existing fuel storage tanks and fuel pumps shall be removed at the beginning of construction.

10. All surface water management systems shall be operated to conserve water in order to maintain environmental quality and resource protection; to increase the efficiency of transport, application and use; to decrease waste; to minimize unnatural runoff from the property and to minimize dewatering of offsite property.

11. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the Department a written notification of commencement using an "Environmental Resource Permit Construction Commencement" notice (Form No. 62-343.900(3), F.A.C.) indicating the actual start date and the expected completion date.

12. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the occupation of the site or operation of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of that phase or portion of the system to a local government or other responsible entity.

13. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required "Environmental Resource Permit As-Built Certification by a Registered Professional" (Form No. 62-343.900(5), F.A.C.), and "Request for Transfer of Environmental Resource Permit Construction Phase to Operation Phase" (Form 62-343-900(7), F.A.C.). Additionally, if deviation from the approved drawings are discovered during the certification process the certification must be accompanied by a copy of the approved permit drawings with deviations noted.

14. This permit is valid only for the specific processes, operations and designs indicated on the approved drawings or exhibits submitted in support of the permit application. Any substantial deviation from the approved drawings, exhibits, specifications or permit conditions, including construction within the total land area but outside the approved project area(s), may constitute grounds for revocation or enforcement action by the Department, unless a

modification has been applied for and approved. Examples of substantial deviations include excavation of ponds, ditches or sump areas deeper than shown on the approved plans.

15. The operation phase of this permit shall not become effective until the permittee has complied with the requirements of the conditions herein, the Department determines the system to be in compliance with the permitted plans, and the entity approved by the Department accepts responsibility for operation and maintenance of the system. The permit may not be transferred to the operation and maintenance entity approved by the Department until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the Department, the permittee shall request transfer of the permit to the responsible operation and maintenance entity approved by the Department, if different from the permittee. Until a transfer is approved by the Department pursuant to Section 62-343.110(1)(d), F.A.C., the permittee shall be liable for compliance with the terms of the permit.

16. Should any other regulatory agency require changes to the permitted system, the Department shall be notified of the changes prior to implementation so that a determination can be made whether a permit modification is required.

17. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations including a determination of the proposed activities' compliance with the applicable comprehensive plan prior to the start of any activity approved by this permit.

18. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40D-4 or Chapter 40D-40, F.A.C.

19. The permittee is hereby advised that Section 253.77, F.S., states that a person may not commence any excavation, construction, other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.

20. The permittee shall hold and save the Department harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.

21. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under section 373.421(2), F.S., provides otherwise.

22. The permittee shall notify the Department in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of section 62-343.130, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as

a result of any permit violations prior to such sale, conveyance or other transfer.

23. Upon reasonable notice to the permittee, Department authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with Department rules, regulations and conditions of the permits.

24. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the Department and the Florida Department of State, Division of Historical Resources.

25. The permittee shall immediately notify the Department in writing of any previously submitted information that is later discovered to be inaccurate.

ENVIRONMENTAL RESOURCE PERMIT APPLICATION

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

2379 BROAD STREET • BROOKSVILLE, FL 34609-6899
(904)796-7211 or FLORIDA WATS 1(800)423-1476

FOR AGENCY USE ONLY

ACOE Application # _____ DEP/WMD Application # _____
Date Received _____ Date Received _____
Proposed Project Lat. ___ ° ___ ' ___ " Fee Received $ _____
Proposed Project Long. ___ ° ___ ' ___ " Fee Receipt # _____

SECTION A

PART 1:
Are any of the activities described in this application proposed to occur in, on, or over wetlands or other surface waters?
☐ yes ☒ no
Is this application being filed by or on behalf of an entity eligible for a fee reduction ☐ yes ☒ no

PART 2:

A. Type of Environmental Resource Permit Requested (check at least one)

☐ Noticed General - Include information requested in Section B
☐ Standard General (Single Family Dwelling) - Include information requested in Sections C and D.
☒ Standard General (all other projects) - Include information requested in Sections C and E.
☐ Standard General (minor systems) - Include information requested in Sections C and H.
☐ Standard General (borrow pits) - Include information requested in Sections C and I.
☐ Individual (Single Family Dwelling) - Include information requested in Sections C and D.
☐ Individual (all other projects) - Include information requested in Sections C and E.
☐ Individual General (borrow pits) - Include information requested in Sections C and I.
☐ Conceptual - Include information requested in Sections C and E.
☐ Mitigation Bank Permit (construction) - Include information requested in Sections C and F.
(If the proposed mitigation bank involves the construction of a surface water management system requiring another permit defined above, check the appropriate box and submit the information requested by the applicable section.)
☐ Mitigation Bank (conceptual) - Include information requested in Sections C and F.

B. Type of activity for which you are applying (check at least one)

☒ Construction and operation of a new system including dredging or filling in, on or over wetlands and other surface waters. (If reapplying for an expired, denied or withdrawn permit/application, please provide previous permit #__N/A_____.)
☐ Alteration and operation of an existing system which was not previously permitted by a SWFWMD or DEP.
☐ Modification of a system previously permitted by a SWFWMD or DEP. Provide previous permit numbers:#_____ and check applicable modification type.
☐ Alteration of a system ☐ Extension of permit duration ☐ Abandonment of a system
☐ Construction of additional phases of a system ☐ Removal of a system

C. Are you requesting authorization to use State Owned Submerged Lands? ☐ yes ☒ no
If yes, include the information requested in Section G.

D. N/A For activities in, on or over wetlands or other surface waters, check type of federal dredge and fill and fill permit requested: Not Applicable
☐ Individual ☐ Programmatic General ☐ General ☐ Nationwide ☐ Removal of a System

E. Are you claiming to qualify for an exemption? ☐ yes ☒ no
If yes, provide rule number if known _____.

PART 3: A. OWNER(S) OF LAND	B. APPLICANT (IF OTHER THAN OWNER)
NAME Angelo's Recycled Materials Attn: Dennis Price	NAME
COMPANY AND TITLE Angelo's Recycled Materials	COMPANY AND TITLE
ADDRESS 4974 62nd Street	ADDRESS
CITY, STATE, ZIP Live Oak, FL 32060	CITY, STATE, ZIP
TELEPHONE (904) 792-3696 FAX (904) 792-1112	TELEPHONE ( ) FAX ( )
C. AGENT AUTHORIZED TO SECURE PERMIT (IF AN AGENT IS USED)	D. CONSULTANT (IF DIFFERENT FROM AGENT)
NAME	NAME Roderick K. Cashe, P.E.
COMPANY AND TITLE	COMPANY AND TITLE Hartman & Associates, Inc. / Associate
ADDRESS	ADDRESS 201 E. Pine St., Suite 1000
CITY, STATE, ZIP	CITY, STATE, ZIP Orlando, FL 32801
TELEPHONE ( ) FAX ( )	TELEPHONE (407) 839-3955 FAX (407) 481-8447

PART 4: PROJECTION INFORMATION

A. Name of project, including phase if applicable: Angelo's Recycled Materials – Tampa

B. Is this application for part of a multi-phase project? ☐ yes ☒ no

C. Total Applicant-owned area contiguous to the project: 28.41 ac

D. Total project area for which a permit is sought: 28.41 ac

E. Impervious area for which a permit is sought: 9.43 ac

F. N/A What is the total area (metric equivalent for Federally funded projects) of work in, on, or over wetlands or other surface waters? _____ acres OR _____ square feet (_____ hectares _____ square meters)

G. N/A If a docking facility, the number of proposed new boat slips: _____

PART 5: PROJECTION LOCATION (use additional sheets, if needed)

County(ies) Hillsborough

Section(s) 6 **Township(s)** 28 S **Range(s)** 19 E

Section(s) _____ **Township(s)** _____ **Range(s)** _____

Land Grant name, if applicable N/A

Tax Parcel Identification Number _____

Street address, road, or other location Intersection of 148th Ave. and Bearss Ave.

City, Zip code if applicable N/A

PART 6: DESCRIBE IN GENERAL TERMS THE PROPOSED PROJECT, SYSTEM, OR ACTIVITY

The proposed project is to construct a master stormwater system to serve a material recycling plant, associated facilities and a future developable tract along the east side of this property.

PART 7:

A. **If there have been any pre-application meetings for the proposed project, with regulatory staff, please list the date(s), location(s), and names of key staff and project representatives.**

Date(s)	Location(s)	Names
1-6-99	FDEP SW District – Tampa	Randy Cooper, FDEP
		Roderick K. Cashe, HAI
		George A. Genero, HAI

B. Please identify by number any MSSW/WRM (dredge & fill)/ERP/ACOE permits or applications pending, issued or denied and any related enforcement actions at the proposed project site.

N/A

Agency	Date	Number/Type	Action Taken

C. Note: The following information is required for projects proposed to occur in, on or over wetlands that need a federal dredge and fill permit and/or authorization to use state owned submerged lands. Please provide the names, address and zip codes of property owners whose property directly adjoins the project (excluding applicant) and/or is located within a 500' foot radius of the project boundary (for proprietary authorizations, if any). Please provide a drawing identifying each owner and adjoining property lines. (Use additional sheets, if needed).

1.

2.

3.

4.

5.

6.

PART 8:

A. **By signing this application form, I am applying, or I am applying on behalf of the owner or applicant, for the permit and/or proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application, and represent that such information is true, complete and accurate. I understand that knowingly making any false statement or representation in the application is a violation of Section 373.430. F.S. and 18 U.S.C. Section 1001. I understand this is an application and not a permit and work prior to approval is a violation. I understand that this application and any permit or proprietary authorization issued pursuant thereto, does not relieve me of any obligation for obtaining any other required federal, state, water management district or local permit prior to commencement of construction. I agree, or I agree on behalf of the owner or applicant, to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a responsible operation entity.**

Dennis Price — Environmental Manager
Typed/Printed Name of Owner, Applicant or Agent — Corporate Title, if applicable

Dennis J Price — 9/28/99
Signature of Owner, Applicant or Agent — Date

B. AN AGENT MAY SIGN ABOVE ONLY IF THE FOLLOWING IS COMPLETED.

I hereby designate and authorize the agent listed above to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above; and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirement which may be necessary to procure the permit or authorization indicated above.

Typed/Printed Name of Owner or Applicant — Corporate Title, if applicable

Signature of Owner or Applicant — Date

C. PERSON AUTHORIZING ACCESS TO THE PROPERTY MUST COMPLETE THE FOLLOWING:

I either own the property described in this application or I have legal authority to allow access to the property, and I consent, after receiving prior notification, to any site visit on the property by agents or personnel from the Department of Environmental Protection, the Southwest Florida Wastewater Management District and the U.S. Army Corps of Engineers necessary for the review and inspection of the proposed project specified in this application. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review and inspection. Further, I agree to provide entry to the project site for such agents or personnel to monitor authorized work if a permit is granted.

Dennis Price — Environmental Manager
Typed/Printed Name — Corporate Title, if applicable

Dennis J Price — 9/28/99
Signature — Date

D. I certify that the engineering features of this surface water management system have been designed by me or under my responsible charge and in my professional opinion conform with sound engineering principles and all applicable rules and specifications. I further agree that I or my engineering firm will furnish the applicant/ permittee with a set of guidelines and schedules for maintenance and operation of the surface water management system.

By: Roderick Cash — 10/7/99
Signature of Engineer of Record — Date

• AFFIX SEAL

Date:

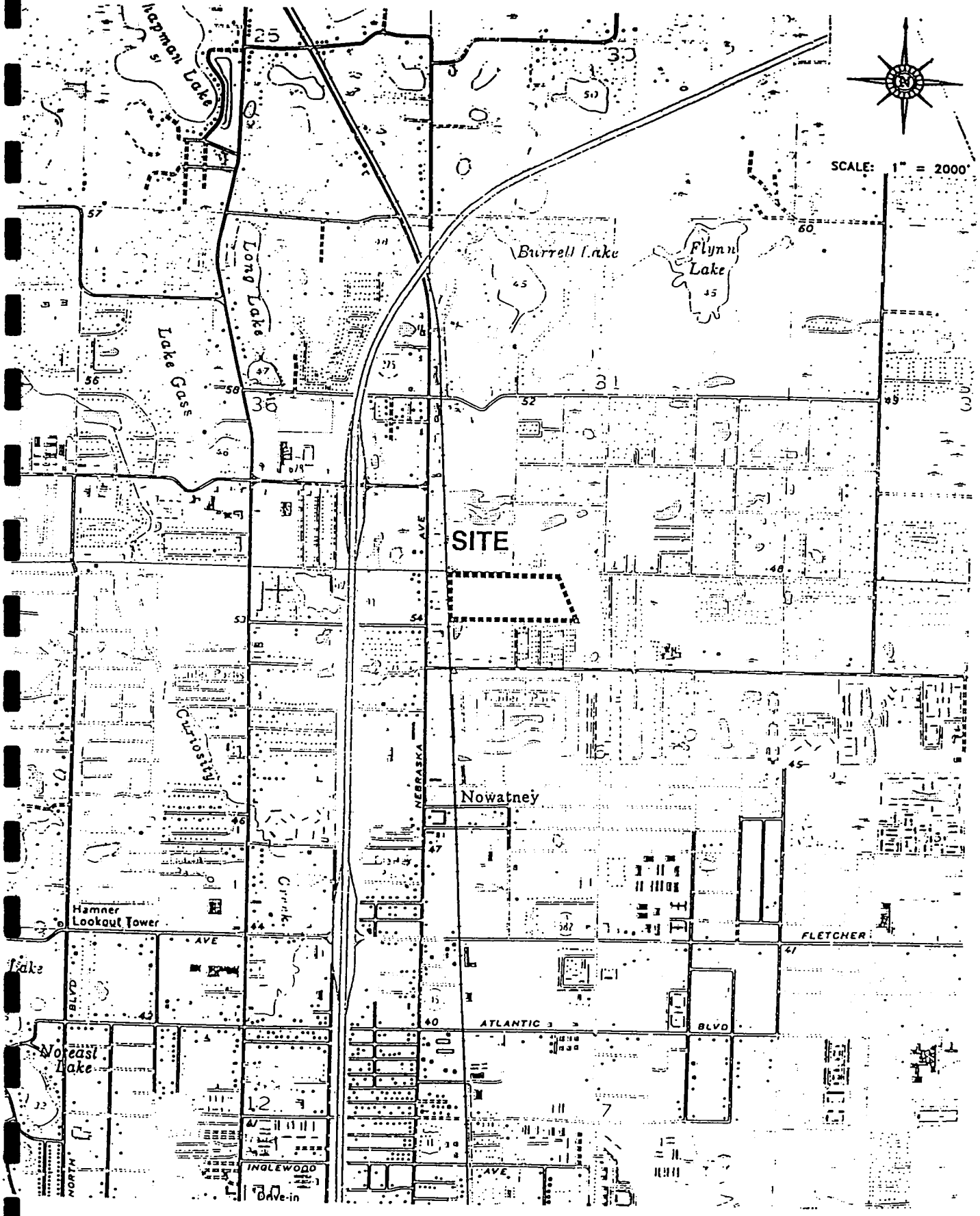
Phone: (407) 843-8399

Roderick K. Cashe, P.E. #45,169
Name (please type) — FL P.E. No.

Hartman & Associates, Inc.
Company Name

201 E. Pine St., Suite 1000
Company Address

Orlando, FL 32801
City, State, Zip



HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
201 EAST PINE STREET – SUITE 1000 – ORLANDO, FL 32801
TELEPHONE (407) 839-3955 – FAX (407) 839-3790

LOCATION MAP
ANGELO'S RECYCLED MATERIALS
TAMPA, FLORIDA

FIGURE 2

Form #62-343.900(3), F.A.C.
Form Title: Construction Commencement Notice
Date: October 3, 1995

ENVIRONMENTAL RESOURCE PERMIT
Construction Commencement Notice

PROJECT:_____ PHASE:_____

I hereby notify the Department of Environmental Protection that the construction of the surface water management system authorized by Environmental Resource Permit No._____ has commenced / is expected to commence on _____ 199__, and will require a duration of approximately _____ months _____ weeks _____ days to complete. It is understood that should the construction term extend beyond one year, I am obligated to submit the Annual Status Report for Surface Water Management System Construction.

PLEASE NOTE: If the actual construction commencement date is not known, Department staff should be so notified in writing in order to satisfy permit conditions.

_____ _____ _____
Permittee or Authorized Agent | Title and Company | Date

_____ _____
Phone | Address

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
3804 COCONUT PALM DR.
TAMPA, FLORIDA 33619

Form #62-343.900(5), F.A.C.
Form Title: As-Built Certification by a Registered Professional
Date: October 3, 1995

ENVIRONMENTAL RESOURCE PERMIT
AS-BUILT CERTIFICATION BY A REGISTERED PROFESSIONAL

Permit Number: _____

Project Name: _____

I hereby certify that all components of this surface water management system have been built substantially in accordance with the approved plans and specifications and are ready for inspection. Any substantial deviations (noted below) from the approved plans and specifications will not prevent the system from functioning as designed when properly maintained and operated. These determinations are based upon on-site observation of the system conducted by me or by my designee under my direct supervision and/or my review of as-built plans certified by a registered professional or other appropriate individual as authorized by law.

_____ Name (please print)

_____ Signature of Professional

_____ Company Name

_____ Florida Registration Number

_____ Company Address

_____ Date

_____ City, State, Zip Code

_____ Telephone Number

(Affix Seal)

Substantial deviations from the approved plans and specifications:

_____

_____

_____

_____

(Note: attach two copies of as-built plans when there are substantial deviations)

Within 30 days of completion of the system, submit two copies of the form to:

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
3804 COCONUT PALM DR.
TAMPA, FLORIDA 33619

Form # 62-343.900(6), F.A.C.
Form Title: Inspection Certification
Date: October 3, 1995

ENVIRONMENTAL RESOURCE PERMIT
INSPECTION CERTIFICATION

Permit Number: _____

Project Name: _____

Inspection Date(s): _____

Inspection Results: (check one)

____I hearby certify that I or my designee under my direct supervision have inspected the system at the above referenced project and that the system appears to be functioning in accordance with the requirements of the permit and Chapter 373 F.S. (as applicable).

____The following necessary maintenance was conducted:

_____

_____

____I hearby certify that I or my designee under my direct supervision has inspected the system at the above referenced project and that the system does not appear to be functioning in accordance with the requirements of the permit and Chapter 373 F.S. (as applicable). I have informed the operation and maintenance entity of the following: (a) that the system does not appear to be functioning properly, (b) that maintenance is required to bring the system into compliance, and (c) if maintenance measures are not adequate to bring the system into compliance, the system may have to be replaced or an alternative design constructed subsequent to Department approval.

_____ Name (please print)

_____ Signature of Professional Engineer

_____ Company Name

_____ Florida Registration Number

_____ Company Address

_____ Date

_____ City, State, Zip Code

_____ Telephone Number

(Affix Seal)

Within 30 days of completion of the inspection, submit two copies of this form to the following Department Office:

Department of Environmental Protection

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
3804 COCONUT PALM DR.
TAMPA, FLORIDA 33619

Form #62-343.900(7), F.A.C.
Form Title: Request for Transfer to Operation Phase
Date: October 3, 1995

REQUEST FOR TRANSFER OF ENVIRONMENTAL RESOURCE PERMIT CONSTRUCTION PHASE TO OPERATION PHASE

(To be completed and submitted by the operating entity)

Florida Department of Environmental Protection

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
3804 COCONUT PALM DR.
TAMPA, FLORIDA 33619

It is requested that Department Permit No. _____ authorizing the construction and operation of a surface water management system for the below mentioned project be transferred from the construction phase permittee to the operation phase operating entity.

PROJECT:_____

FROM: Name:_____
Address:_____
City:_____ State:_____
Zipcode:_____

TO: Name:_____
Address:_____
City:_____ State:_____
Zipcode:_____

The surface water management facilities are hearby accepted for operation and maintenance in accordance with the engineers certification and as outlined in the restrictive covenants and articles of incorporation for the operating entity. Enclosed is a copy of the document transferring title of the operating entity for the common areas on which the surface water management system is located. Note that if the operating entity has not been previously approved, the applicant should contact the Department staff prior to filing for a permit transfer.

The undersigned hearby agrees that all terms and conditions of the permit and subsequent modifications, if any, have been reviewed, are understood and are hearby accepted. Any proposed modifications shall be applied for and obtained prior to such modification.

Operating Entity _____

Name _____ Title _____

Telephone _____

Enclosure:
( ) Copy of recorded transfer of title surface water management system
( ) Copy of plat(s)
( ) Copy of recorded restrictive covenants, articles of incorporation, and certificate of incorporation

SECTION 5

GEOTECHNICAL REPORT

An update to the previously submitted Geotechnical Report, provided by Universal Engineering Sciences, is attached.

UNIVERSAL
ENGINEERING SCIENCES
Consultants in: Geotechnical Engineering • Environmental Sciences
Construction Materials Testing • Threshold Inspection • Private Provider Inspection

April 7, 2005

Mr. Neiro De Rubeis
Angelo's Recycled Materials, Inc.
26400 Sherwood Avenue
Warren, Michigan 48091

Reference: Geotechnical Exploration - Update
Proposed Angelo's Recycling Building
1201 East 148th Avenue
Tampa, Florida
UES Project No. 80626-001-01

Dear Mr. De Rubeis:

Universal Engineering Sciences, Inc. (UES) has reviewed the updated site layout and structural loading information you have provided for the above referenced project. Based on the new site layout, it appears that the pond borings (B-6, B-7, B-8) we completed during our previous exploration are located within, or adjacent to, the new limits of proposed building.

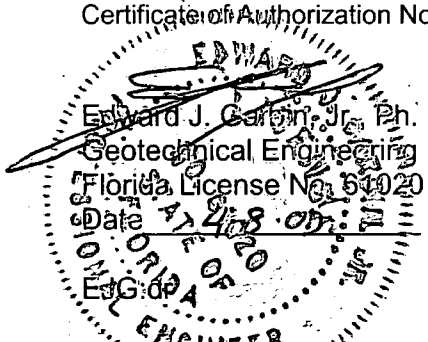
You informed us that the maximum anticipated column loads for the new building will be on the order of 100 kips, with typical loads ranging from 30 kips to 68 kips. For our earlier foundation recommendations (see report dated January 26, 2004) we had estimated column loads of 80 kips.

Based on the data obtained from the soil borings already completed and on the newly available site layout and structural loading information, it is our opinion that the recommendations contained in our previous report for the project are still valid. At this time, we do not see the need for additional exploration. However, if conditions are encountered during construction that were not discussed in our original report, please contact us immediately so we may assess the situation.

We appreciate the opportunity to have worked with you on this project and look forward to a continued association.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization No. 549



Edward J. Carlon, Jr., Ph. D., P.E.
Geotechnical Engineering Manager
Florida License No. 51020
Date 4/8/05

EJC:dp

Distribution: Client (1)

9802 Palm River Road • Tampa, Fl 33619-4438 • (813) 740-8506 • Fax (813) 740-8706

UNIVERSAL
ENGINEERING SCIENCES

GEOTECHNICAL EXPLORATION

Proposed Angelo's Recycling Building
1201 East 148th Avenue
Tampa, Florida

UES Project No. 80626-001-01

Prepared By:

Universal Engineering Sciences
9802 Palm River Road
Tampa, Florida 33619
(813) 740-8506

January 26, 2004

UNIVERSAL
ENGINEERING SCIENCES
Consultants in: Geotechnical Engineering • Environmental Sciences
Construction Materials Testing • Threshold Inspection • Private Provider Inspection

January 26, 2004

Mr. Neiro De Rubeis
Angelo's Recycled Materials, Inc.
1755 20th Avenue SE
Largo, FL 34641

Reference: Geotechnical Exploration
Proposed Angelo's Recycling Building
1201 East 148th Avenue
Tampa, Florida
UES Project No. 80626-001-01

Dear Mr. De Rubeis:

Universal Engineering Sciences, Inc. (UES) has completed the geotechnical site exploration at the above-referenced site in Hillsborough County, Florida. The scope of our services was planned in conjunction with, and authorized by you.

This report contains the results of our study, an engineering interpretation of these with respect to the project characteristics described to us, and recommendations for foundation, floor slab, and preliminary pavement design, as well as general site preparation.

We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization No. 549

Mark K. Hardy, P.E.
Tampa Branch Manager
Professional Engineer No. 57233

Dr. Edward J. Garbin, Jr., P.E.
Geotechnical Project Manager
Professional Engineer No. 61020
Date 1·26·04

EJG/MH:dr

cc: Client (3)

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 GENERAL

In this report, we present the results of a geotechnical evaluation of the subsurface conditions on the site of the proposed Angelo's Recycling Building located at 1201 East 148th Avenue in Tampa, Florida. We have divided this report into the following sections:

- SCOPE OF SERVICES - Defines what we did
- FINDINGS - Describes what we encountered
- RECOMMENDATIONS - Discusses what we encourage you to do
- LIMITATIONS - Describes the restrictions inherent in this report
- APPENDICES - Presents support materials referenced in this report.

1.2 PROJECT DESCRIPTION

We understand that the project consists of a proposed 52,800 square foot, steel-framed structure and associated pavement areas. We have been provided with a faxed copy of the preliminary site layout, and have used this in planning our exploration. However, we were informed by you that the dimensions of the proposed building were changed from those appearing on the site layout we received. Also, no roadway boring locations were provided by you, so an analysis of the subsurface conditions in regards to planned roadway infrastructure was not completed for this report.

No preliminary design plans or structural loadings were available for our analyses. We have assumed that loads on continuous footings will be 4 kips per lineal foot or less and loads on individual column footings will be 80 kips or less. In addition, we have not been provided information about equipment loads or storage loads associated with the planned use that might impact our recommendations. Therefore, we have assumed floor slab loads of less than 500 psf or less.

Our geotechnical recommendations are based upon the above considerations. If any of this information is incorrect or if you anticipate any changes, please inform Universal Engineering Sciences so that we may review our recommendations, and make revisions as needed.

A general location map of the project area appears in Appendix A: Site Location Map.

2.0 PURPOSE AND SCOPE OF SERVICES

2.1 PURPOSE

The purpose of our services was:

- to explore the general subsurface conditions at the site using SPT and auger borings;

- to interpret and review the subsurface conditions with respect to the proposed construction; and

- to provide geotechnical engineering recommendations for foundation and floor slab design, preliminary pavement design, and site preparation.

This report presents an evaluation of site conditions on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards.

Our study was confined to the zone of soil likely to be influenced by the proposed structural foundation and pavement. Our scope of services did not address the potential for surface expression of deep geological conditions, such as sinkhole development related to karst activity.

2.2 FIELD EXPLORATION

The subsurface conditions within the proposed building footprint were explored with six (6) borings advanced to depths of 20 to 25 feet, while performing the Standard Penetration Test (SPT).

We performed the Standard Penetration Test according to the procedures of ASTM D-1586; however, we used continuous sampling to detect slight variations in the soil profile at shallow depths. The basic procedure for the Standard Penetration Test is as follows: A standard split-barrel sampler is driven into the soil by a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler 12 inches, after seating 6 inches, is designated the penetration resistance, or N-value; this value is an index to soil strength and consistency.

Additionally, in and around the proposed building footprint we completed five (5) manual hand-auger borings to a depth of 5 feet below existing grade.

In several areas, the presence of buried debris necessitated the use of pre-excavation using a front end loader, prior to SPT testing or hand auger drilling. Specifically, in the vicinity of Boring B-01 approximately 5 feet of material was removed, and in the vicinity of Boring B-04 approximately 3 feet of material was removed prior to drilling.

Consider the indicated locations and depths to be approximate. Our drilling crew located the borings based upon estimated distances and taped measurements from existing site features and the proposed building corners, which were staked by Hartman and Associates. The Boring Location Plan is presented in Appendix B.

Jar samples of the soils encountered will be held in our laboratory for your inspection for 60 days unless we are notified otherwise.

2.3 LABORATORY TESTING

The recovered soil samples were returned to our laboratory and then visually classified by one of our geotechnical engineers. No additional laboratory testing was performed.

3.0 FINDINGS

3.1 SURFACE CONDITIONS

A Universal Engineering Sciences geotechnical engineer performed a visual site inspection of the subject property to gain a general familiarity with the project area. The site is the current Angelo's Recycled Materials yard, located at 1201 East 148th Avenue, in Tampa, Florida. Development is planned to the south and east of the current facility. In that area, the perimeter of the site has vegetation consisting of dense trees and brush, while the remainder of the site is free of vegetation, shows rutting from the use of heavy equipment, and contains various mounds of fill dirt, construction debris, and other dumped waste material.

We also reviewed U.S.G.S. aerial photographs and topographic quadrangle maps, as well as the USDA Soil Conservation Service Soil Survey of Hillsborough County, for relevant information about the site. The native, near-surface soil type for this area is Zolfo fine sand. This material is typically nearly level and somewhat poorly drained, with rapid permeability in the surface and subsurface layers. The seasonal high water table for soils of this type is usually located between 24 to 40 inches below the ground surface.

3.2 SUBSURFACE CONDITIONS

The boring locations and detailed subsurface conditions are illustrated in Appendix B: Boring Location Plan and Boring Logs. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples and a limited number of laboratory tests. Also, see Appendix B: Soils Classification Chart, for further explanation of the symbols and placement of data on the Boring Logs.

Based on the soil boring information, the general soil profile can be described as follows:

> At the boring locations, the subsurface soil conditions are highly variable. Buried debris exists across the entire site. The content of this debris is also highly variable, but generally consists of large pieces of concrete, clumps of asphalt, sheet metal, glass, brick, and organic debris in the form of tree branches, roots, and stumps. The depth of the buried debris at the boring locations reached a maximum of about 5 feet in Boring B-01. The debris appears to have been buried using near-surface fill excavated from the site, which is generally gray to dark gray fine sand (SP) and was not compacted. Below this, loose fine sands (SP) were encountered to a depth of about 15 feet. These sands were underlain by medium-stiff sandy clays (CL) to the termination depth of each deep boring.

The water table was located approximately 7 feet below existing grade for most of the site, with the maximum depth of 8.8 feet below the surface encountered at Boring B-01. Detailed water table locations are listing on the Boring Logs in Appendix B.

4.0 RECOMMENDATIONS

4.1 GENERAL

The following recommendations are made based upon a review of the attached soil test data, our understanding of the proposed construction, and experience with similar projects and subsurface conditions. When final grading plans and site layout is determined, we request the opportunity to review and possibly amend our recommendations if necessary.

Additionally, if subsurface conditions are encountered during construction which were not encountered in the borings, report those conditions immediately to us for observation and recommendations.

In this section of the report, we present our detailed recommendations for building foundation and floor slab design, allowable soil bearing capacity, anticipated total and differential settlement, subgrade/base for pavement design, and construction related services.

4.2 GROUNDWATER CONTROL

Based upon our inspection of the recovered soil samples, U.S.G.S. data, Hillsborough County Soils Survey information, and knowledge of regional hydrogeology, our best estimate for the seasonal high groundwater table could be on the order of 2.5 feet below the existing grade at the test boring locations. As stated earlier, the water table is currently about 7 feet below existing grade.

It should be noted, the estimated seasonal high groundwater levels do not provide any assurance that groundwater levels will not exceed these estimated levels during any given year in the future. Should impediments to surface water drainage exist on the site, or should rainfall intensity and duration, or total rainfall quantities, exceed the normally anticipated rainfall quantities, groundwater levels might once again exceed our seasonal high estimates. We recommend positive drainage be established and maintained on the site during construction. We further recommend permanent measures be constructed to maintain positive drainage from the site throughout the life of the project.

We recommend all pavement grades, and stormwater retention analysis account for the seasonal high groundwater conditions.

Temporary dewatering may be required at this site if construction proceeds during the wet season. We recommend that the contract documents provide for determining the depth to the groundwater table just prior to construction, and for any required remedial dewatering. Further, we recommend that the groundwater table be maintained at least 24 inches below all earthwork and compaction surfaces.

Additionally, we recommend the dewatering contractor submit a "Dewatering Plan", indicating the projected zone of influence, method of installation, and anticipated timing of pumping. Further, we recommend that a representative of Universal Engineering Sciences review this submittal to evaluate whether the contractor's plans follow the design intent and to monitor the dewatering

activities to see that the contractor's work accomplishes the design criteria.

4.3 BUILDING FOUNDATION AND FLOOR SLAB

The native soil strata encountered below the fill materials within the proposed building footprint should be adequate to support the proposed structure using a conventional shallow foundation system, with the following provisions. First, the entire building area must be compacted with a heavy vibratory roller, making a minimum of 8 passes in each direction. Second, at a minimum, due to the miscellaneous characterization of the fill soils and the presence of deleterious materials, it will be necessary to undercut material in the foundation locations to the native sandy soils, which are at depths of 2 to 5 feet below the existing ground surface. Then, fill these cuts with properly compacted structural fill or well-graded gravel to the proposed design bottom of the footings. Consideration should be made to removing all the miscellaneous and deleterious materials within the building footprint, compacting the subgrade, and placing compacted structural fill to the design subgrade elevation for the building slab, in order to provide uniformity in the building area.

Once the building area has been prepared as described above and the following site preparations have been followed, we recommend using shallow strip or spread foundations, sized to exert a maximum soil bearing pressure of 2,000 pounds per square foot (psf). All individual foundations should be embedded at least 2.0 feet below lowest adjacent grade (finished surrounding grade, for example).

Further, maintain minimum foundation widths of 24 and 36 inches for individual strip and spread footings, respectively, even though the maximum allowable soil bearing pressure may not be developed in all cases. We estimate that foundations so designed will have a minimum factor of safety of two against bearing capacity failure.

Due to the highly variable nature of the subsurface soils, the floor slab may experience excessive cracking due to potentially large differential settlements. Several options are available to reduce the severity of cracking. First, the entire site within the proposed building footprint could be undercut to a native soils at depths of 2 feet to 5 feet below the existing ground surface. Then, properly placed and densified structural fill or well-graded gravel could be used to bring the site up to grade prior to pouring the slab. Alternatively, the site could be proof-rolled using the procedure described in Section 4.5 of this report. Any areas experiencing large vertical deflections can then be filled with well graded gravel, and properly compacted. Finally, the use of rebar reinforcement in the floor slab (as opposed to wire mesh) is recommended to add flexural strength to the finished slab. A post-tensioned slab could also be used, but higher construction costs may preclude this option.

For foundations and slabs designed as recommended, and site earthwork accomplished according to the recommendations provided in Section 4.5 of this report, we estimate total settlement of less than one inch (assuming large debris and deleterious materials have been removed), and differential settlement of less than one half inch (assuming large debris and deleterious materials have been removed).

4.4 PAVEMENT SECTIONS

4.4.1 GENERAL

We preliminarily recommend using a heavy duty, flexible pavement section on this project. Flexible pavements combine the strength and durability of several layer components to produce an appropriate and cost-effective combination of available materials.

4.4.2 LAYER COMPONENTS

For preliminary pavement designs, we recommend using a three-layer pavement section consisting of stabilized subgrade, base course, and surface course placed on top of existing subgrade or a compacted embankment.

We recommend that heavy duty pavement section have 10 inches of stabilized subgrade, 8 inches of base course, and 2 inches of surface course.

The minimum recommended thicknesses may lead to more than normal periodic maintenance and may not meet typical life expectancies for some pavements. If projected traffic loads become available, we recommend that an appropriate pavement design be used and the component thicknesses be adjusted accordingly. For loading conditions greater than those presented in Table 1, we recommend that you have a complete pavement design performed based on projected traffic data.

Table 1
Flexible Pavement Component Recommendations

Traffic Group	FDOT Structural Number	Component Thickness (inches)		
		Stabilized Subgrade	Base Course	Surface Course
Parking lots - heavy duty	2.1	10	8	2.0

Parking lots-heavy duty: commercial driveways; twenty trucks or less per day; average gross vehicle weight of 25,000 pounds

Because heavily-loaded truck traffic will be frequent at this site, and due to the extremely variable nature of the subsurface conditions, a complete traffic study and detail subsurface exploration of the proposed roadways and parking areas is highly recommended. Consider the pavement recommendations outlined in this report to be preliminary, and not adequate for final design purposes.

4.4.3 STABILIZED SUBGRADE

We recommend that subgrade materials be compacted to at least 98 percent of Modified Proctor Maximum Dry Density (ASTM D1557) according to the requirements in the "Site Preparation" section of this report. Further, stabilize the subgrade materials to a minimum Limerock Bearing

Ratio (LBR) value of 40, or Florida Bearing Value (FBV) of 50 psi, as specified by Florida Department of Transportation (FDOT) requirements for Type B or Type C Stabilized Subgrade. The stabilized subgrade should be "free draining" when overlain by crushed concrete base.

The stabilized subgrade can be imported material or a blend of on-site soils and imported materials. If a blend is proposed, we recommend that the contractor perform a mix design to find the optimum mix proportions.

4.4.4 BASE COURSE

We recommend the base course be either limerock or crushed concrete. The base should have a minimum LBR value of 100. The crushed concrete base should meet current FDOT requirements for graded aggregate base. Place base material in maximum 6-inch lifts and compact each lift to a minimum density of 98 percent of the Modified Proctor maximum dry density.

Perform compliance base material density testing to a depth of 1-foot at a frequency of one test per 10,000 square feet, or at a minimum of two test locations, whichever is greater.

4.4.5 FLEXIBLE SURFACE COURSE

In heavy duty pavement areas, we recommend FDOT Type S-1 asphaltic concrete, which has a minimum stability of 1500 pounds.

Asphaltic concrete mixes should be a current FDOT approved design of the materials actually used. Test samples of the materials delivered to the project to verify that the aggregate gradation and asphalt content satisfies the mix design requirements. Compact the asphalt to a minimum of 95 percent of the Marshall design density.

After placement and field compaction, core the wearing surface to evaluate material thickness and to perform laboratory densities. Obtain cores at frequencies of at least one core per 3,000 square feet of placed pavement or a minimum of two cores per day's production.

In parking lots, for extended life expectancy of the surface course, we recommend applying a coal tar emulsion sealer at least six months after placement of the surface course. The seal coat will help to patch cracks and voids, and protect the surface from damaging ultraviolet light and automobile liquid spillage. Please note that applying the seal coat prior to six months after placement may hinder the "curing" of the surface course, leading to its early deterioration.

4.4.6 RIGID PAVEMENT OPTION

Alternatively, we recommend using rigid concrete pavement for durability, strength, and longer life and in high traffic areas. Concrete pavement is a rigid pavement that distributes wheel loads to the subgrade soils over a larger area than a flexible asphalt pavement. This results in reduced localized stress to the subgrade soil. We recommend using a compacted subgrade below concrete pavement with the following stipulations:

1. Subgrade soils must be densified to at least 98 percent of Modified Proctor test maximum dry density (ASTM D 1557) for a depth of at least 1-foot directly below the bottom of concrete slab.

2. The surface of the subgrade soils must be smooth, and any disturbances or wheel rutting corrected prior to placement of concrete.

3. The subgrade soils must be moistened prior to placement of concrete.

4. Concrete pavement thickness should be uniform throughout, with exception to the thickened edges (curb or footing).

5. The bottom of the pavement should be separated from the estimated seasonal high groundwater level by at least 1foot.

Our preliminary recommendations on slab thickness for standard duty concrete pavements are based on (1) the subgrade soils densified to at least 98 percent of Modified Proctor test maximum dry density (ASTM D 1557), (2) modulus of subgrade reaction (k) equal to 150 pounds per cubic inch, (3) a 20-year design life, and (4) total equivalent 18 kip single axle loads (ESAL) of 13,000. We recommend using the design shown in the following table for standard duty concrete pavements.

Table 2
Rigid Pavement Component Recommendations - Light Duty

STANDARD DUTY (UNREINFORCED) CONCRETE PAVEMENT Autos And Light Pick-Up Truck, Only		
Minimum Pavement Thickness	Maximum Control Joint Spacing	Minimum Saw-cut Depth
5 Inches	10 Feet x 10 Feet	1-1/4 Inches

Our recommendations on slab thickness for heavy duty concrete pavements are based on the same factors as above with the exception of a total ESAL increased to 335,000. Our recommended design for heavy duty concrete pavement is shown in Table 3 below.

Table 3
Rigid Pavement Component Recommendations - Heavy Duty

HEAVY DUTY (UNREINFORCED) CONCRETE PAVEMENT 18 Kip Single Axle Loads		
Minimum Pavement Thickness	Maximum Control Joint Spacing	Minimum Saw-cut Depth
7 Inches	14 Feet x 14 Feet	1½ Inches

We recommend using 4,000 psi compressive strength concrete with a minimum 28-day flexural strength (modulus of rupture) of at least 600 pounds per square inch, based on the 3rd point loading of concrete beam test samples. Layout of the saw-cut control joints should form square panels, and the depth of saw-cut joints should be at least ¼ of the concrete slab thickness.

We recommend allowing Universal Engineering Sciences to review and comment on the final concrete pavement design, including section and joint details (type of joints, joint spacing, etc.), prior to the start of construction.

For further details on concrete pavement construction, please reference the "Guide to Jointing of Non-Reinforced Concrete Pavements" published by the Florida Concrete and Products Association, Inc., and "Building Quality Concrete Parking Areas," published by the Portland Cement Association.

4.4.7 EFFECTS OF GROUNDWATER

One of the most critical influences on the pavement performance in Florida is the relationship between the pavement subgrade and the seasonal high groundwater level. Many roadways and parking areas have been damaged as a result of deterioration of the base and the base/surface course bond.

Regardless of the type of base selected, we recommend that the seasonal high groundwater level and the bottom of the base course be separated by at least 18-inches. At this site pavement constructed at or above existing grades should meet the minimum recommended separation.

4.4.8 CURBING

We recommend that curbing around the landscaped sections adjacent to the parking lots and driveways be constructed with full-depth curb sections. Using extruded curb sections which lie directly on top of the final asphalt level, or eliminating the curbing entirely, can allow migration of irrigation water from the landscape areas to the interface between the asphalt and the base. This migration often causes separation of the wearing surface from the base and subsequent rippling and pavement deterioration.

4.4.9 CONSTRUCTION TRAFFIC

Light duty roadways and incomplete pavement sections will not perform satisfactorily under construction traffic loadings. We recommend that construction traffic (construction equipment, concrete trucks, sod trucks, garbage trucks, dump trucks, etc.) be re-routed away from these roadways or that the pavement section be designed for these loadings.

4.5 SITE PREPARATION

We recommend only normal, good-practice site preparation procedures. These procedures include: proof-rolling and proof-compacting the subgrade, and filling to grade with engineered fill. A more detailed synopsis of this work is as follows:

1. Strip the surface of grass, roots and organically contaminated soils within all building and pavement areas. Then proof-roll the subgrade with a heavily loaded, rubber-tired vehicle under the observation of a Universal Engineering Sciences geotechnical engineer or his representative. Proof-rolling will help locate any zones of especially loose or soft soils not encountered in the soil test borings. Then undercut, or otherwise treat these zones as recommended by the engineer.

2. Proof-compact the subgrade using a heavy self-propelled vibratory roller making a minimum of 8 overlapping passes in each direction over the building footprint extending a minimum of 5 feet beyond. Proof compacting should continue until you obtain a minimum density of 95 percent of the Modified Proctor maximum dry density (ASTM D-1557), to a depth of 2 feet below the base of the foundations in the building limits and to a depth of 1 foot below the bottom of the base course in the pavement areas. Water will need to be added to facilitate the compaction of the upper sandy soils to the recommended degree and depth.

3. Test the subgrade for compaction at a frequency of not less than one test per 2,500 square feet per foot of depth improvement in the building area. In paved areas, perform compliance tests on the stabilized subgrade for full depth at a frequency of one test per 10,000 square feet, or at a minimum of two test locations, whichever is greater.

4. Place fill material, as required. The fill should consist of "clean," fine sand with less than 5 percent soil fines. You may use fill materials with soil fines between 5 and 10 percent, but strict moisture control may be required. Place fill in uniform 10- to 12-inch loose lifts and compact each lift to a minimum density of 95 percent of the Modified Proctor maximum dry density.

5. Perform compliance tests within the fill at a frequency of not less than one test per 2,500 square feet per lift in the building areas, or at a minimum of two test locations, whichever is greater. In paved areas, perform compliance tests at a frequency of not less than one test per 10,000 square feet per lift, or at a minimum of two test locations, whichever is greater.

6. Test all footing cuts for compaction to a depth of 2 feet. Additionally, we recommend you test one out of every four column footings, and one test per every 50 lineal feet of wall footing.

Using vibratory compaction equipment at this site may disturb adjacent structures, if present. Heavy duty compaction equipment should not be used within a 75 foot radius of any adjacent structure. We recommend you monitor nearby structures before and during proof-compaction. If disturbance is noted, halt vibratory compaction and inform Universal Engineering Sciences immediately. We will review the compaction procedures and evaluate if the compactive effort results in a satisfactory subgrade, complying with our original design assumptions.

4.6 CONSTRUCTION RELATED SERVICES

We recommend the owner retain Universal Engineering Sciences to perform construction materials tests and observations on this project. Field tests and observations include verification of foundation and pavement subgrades by monitoring proof-rolling operations and performing quality assurance tests on the placement of compacted structural fill and pavement courses.

The geotechnical engineering design does not end with the advertisement of the construction documents. The design is an on-going process throughout construction. Because of our familiarity with the site conditions and the intent of the engineering design, we are most qualified to address problems that might arise during construction in a timely and cost-effective manner.

5.0 LIMITATIONS

During the early stages of most construction projects, geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible subsurface variations. An Association of Engineering Firms Practicing in the Geosciences (ASFE) publication, "Important Information About Your Geotechnical Engineering Report" appears in Appendix C, and will help explain the nature of geotechnical issues.

Further, we present documents in Appendix C: Constraints and Restrictions, to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

6.0 SUMMARY

In summary, we understand you propose to construct a steel-framed, 52,800 square foot building and associated pavement areas on this site. We have performed field exploration to provide geotechnical engineering recommendations for foundation and floor slab design, and preliminary pavement design, as well as site preparation.

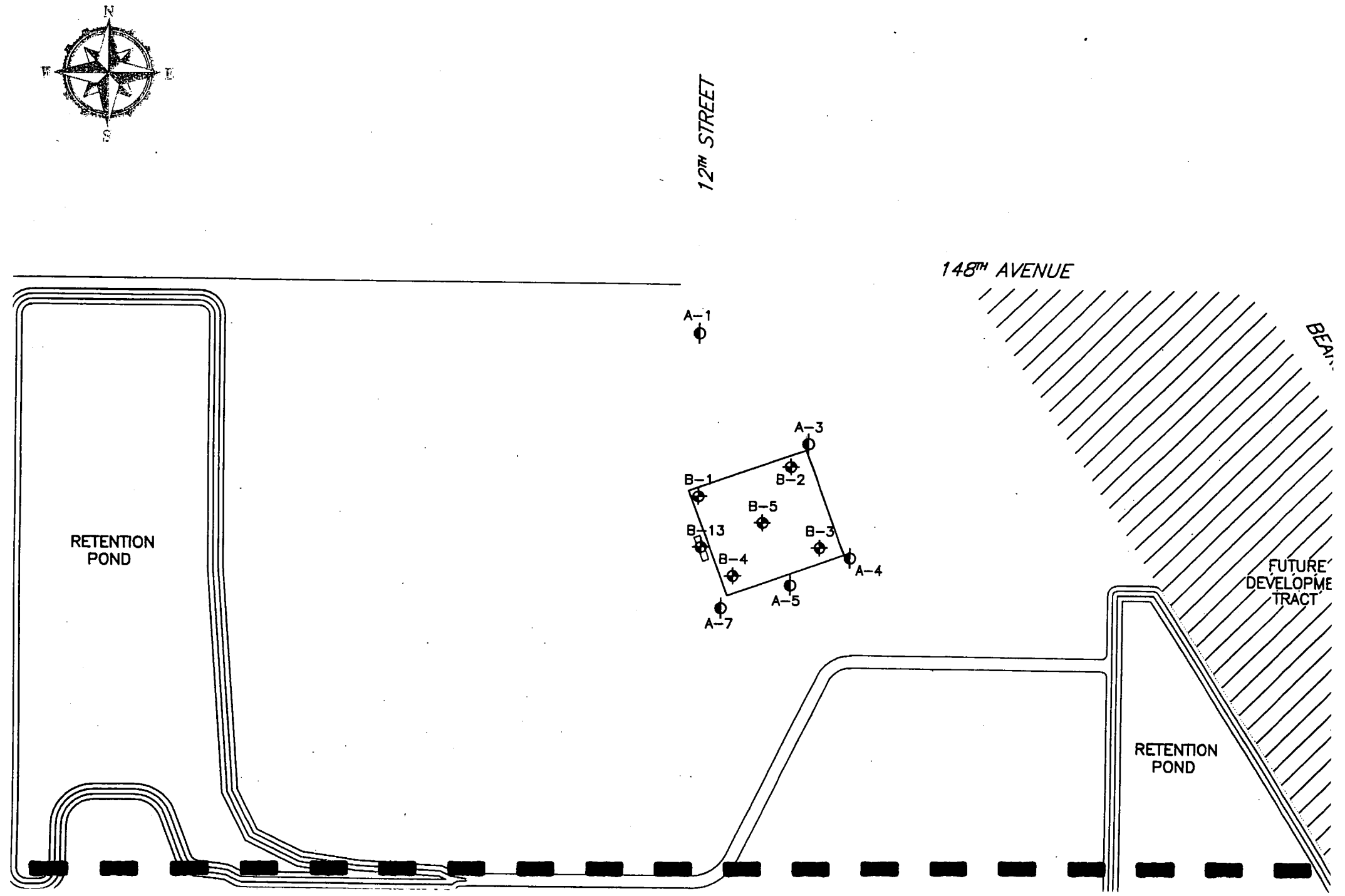
The soils encountered consist mainly of loose sands (SP) to about 15 feet deep, underlain by sandy clay (CL). In the upper 5 feet at most boring locations, debris of various organic and inorganic content was encountered. The debris was buried and covered using fill excavated from the site, and was not compacted. The groundwater table was located approximately 7 feet below the surface (on average), and the estimated seasonal high groundwater table could be on the order of 2.5 feet below the existing grade.

We recommend that the proposed buildings be supported on a conventional, shallow foundation with an allowable soil bearing pressure of 2,000 psf, only after the removal and replacement of deleterious fill materials, to the native sands, with properly compacted structural fill or well-graded gravel. Special considerations for proper foundation and floor slab design, to account for the highly variable subsurface conditions, are discussed within this report.

Pavements should be designed as a function of the anticipated traffic loadings. We preliminarily recommend using a three-layer pavement section consisting of stabilized subgrade, base course, and a surface course. All pavement designs should incorporate the effects of groundwater, irrigated landscape areas, and construction traffic.

We recommend only normal, good-practice site preparation procedures to prepare the subgrade to support the structures and pavements. Compaction of the existing soils to a depth of 2 feet below base of foundation elevation is recommended.

We hope this report meets your needs and discusses the geotechnical issues associated with the proposed development. We would be pleased to meet with you and discuss any geotechnical engineering aspects of the project.



UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	80626-001-01
REPORT NO.:	
PAGE:	1

JECT: Angelo's Recycling
1201 East 148th Ave
Tampa, Florida

NT: Angelo's Recycled Materials, Inc.

ATION: SEE BORING LOCATION PLAN

AR: N.F. = "NOT FOUND"

BORING DESIGNATION: **A-01** SHEET: **1 of 1**
SECTION: 31 TOWNSHIP: 27S RANGE: 19E

G.S. ELEVATION (ft):
WATER TABLE (ft): N.F.
DATE OF READING: 1/21/2004
EST. W.S.W.T. (ft): 2.5

DATE STARTED: 1/21/04
DATE FINISHED: 1/21/04
DRILLED BY: D.E.E.
TYPE OF SAMPLING: AUGER

PT T.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0												
						Gray sand with buried concrete debris (FILL)						
				▽		Pale to very light brown fine sand (SP)						
						Light brown to brown fine sand to sand w/ trace silt (SP)						
5						Boring terminated at 5 feet.						

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1201 East 148th Ave
Tampa, Florida

CLIENT: Angelo's Recycled Materials, Inc.

LOCATION: SEE BORING LOCATION PLAN

REMARKS: N.F. = "NOT FOUND"

BORING DESIGNATION: **A-03** SHEET: **1 of 1**
SECTION: 31 TOWNSHIP: 27S RANGE: 19E

G.S. ELEVATION (ft):
WATER TABLE (ft): N.F.
DATE OF READING: 1/21/2004
EST. W.S.W.T. (ft): 2.5

DATE STARTED: 1/21/04
DATE FINISHED: 1/21/04
DRILLED BY: D.E.E.
TYPE OF SAMPLING: AUGER

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Brown fine sand w/ traces of yellow sand (SP)						
				▽		Yellow fine sand (SP)						
5						Boring terminated at 5 feet.						

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1201 East 148th Ave
Tampa, Florida

CLIENT: Angelo's Recycled Materials, Inc.

LOCATION: SEE BORING LOCATION PLAN

REMARKS: N.F. = "NOT FOUND"

BORING DESIGNATION: **A-04** SHEET: **1 of 1**
SECTION: 31 TOWNSHIP: 27S RANGE: 19E

G.S. ELEVATION (ft):
WATER TABLE (ft): N.F.
DATE OF READING: 1/21/2004
EST. W.S.W.T. (ft): 2.5

DATE STARTED: 1/21/04
DATE FINISHED: 1/21/04
DRILLED BY: D.E.E.
TYPE OF SAMPLING: AUGER

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0				▽		Pale to very light brown fine sand (SP)						
5						Boring terminated at 5 feet.						

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LOCATION: SEE BORING LOCATION PLAN

REMARKS: N.F. = "NOT FOUND"

BORING DESIGNATION: **A-05** SHEET: **1 of 1**
SECTION: 31 TOWNSHIP: 27S RANGE: 19E

G.S. ELEVATION (ft):
WATER TABLE (ft): N.F.
DATE OF READING: 1/21/2004
EST. W.S.W.T. (ft): 2.5

DATE STARTED: 1/21/04
DATE FINISHED: 1/21/04
DRILLED BY: D.E.E.
TYPE OF SAMPLING: AUGER

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0												
				▽		Gray to brown fine sand w/ traces of root (SP)						
						Pale to very light brown fine sand to sand w/ trace clay (SP)						
5						Boring terminated at 5 feet.						

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LOCATION: SEE BORING LOCATION PLAN

REMARKS: N.F. = "NOT FOUND"

BORING DESIGNATION: **A-07** SHEET: **1 of 1**
SECTION: 31 TOWNSHIP: 27S RANGE: 19E

G.S. ELEVATION (ft):
WATER TABLE (ft): N.F.
DATE OF READING: 1/21/2004
EST. W.S.W.T. (ft): 2.5

DATE STARTED: 1/21/04
DATE FINISHED: 1/21/04
DRILLED BY: D.E.E.
TYPE OF SAMPLING: AUGER

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0				▽		Gray sand with buried concrete debris (FILL)						
						Yellow fine sand (SP)						
5						Boring terminated at 5 feet.						

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SECTION: 31 TOWNSHIP: 27S RANGE: 19E

G.S. ELEVATION (ft):
WATER TABLE (ft): 8.8
DATE OF READING: 1/21/2004
EST. W.S.W.T. (ft): 2.5

DATE STARTED: 1/21/04
DATE FINISHED: 1/21/04
DRILLED BY: D.E.E.
TYPE OF SAMPLING: SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0												
	○			▽		Gray sand w/ extensive buried debris: concrete, asphalt, sheet metal, tree stumps, brick, glass (FILL)						
5						Gray fine sand (SP)						
	⊠	2-3-3-2	6									
	⊠	4-5-4-3	9	▼		Light brown to brown fine sand (SP)						
10	⊠	3-4-4-3	8									
15	⊠	4-4-6	10									
						Brown clay w/ sand (CL)						
20	⊠	4-4-4	8									
						Boring terminated at 20 feet.						

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REMARKS:

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SECTION: 31 TOWNSHIP: 27S RANGE: 19E

G.S. ELEVATION (ft):
WATER TABLE (ft): 6.5
DATE OF READING: 1/14/2004
EST. W.S.W.T. (ft): 2.5

DATE STARTED: 1/14/04
DATE FINISHED: 1/14/04
DRILLED BY: D.E.E.
TYPE OF SAMPLING: SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0												
	X	1-2-2-3	4	▽		Gray fine sand (SP)						
	X	4-4-3-2	7			Light brown to brown fine sand to sand w/ trace silt (SP)						
5	X	3-2-2-2	4	▼								
	X	3-2-3-3	5									
	X	2-3-3-3	6									
10												
	X	4-4-5	9									
15												
	X	5-4-5	9									
20												
						Brown clay w/ sand (CL)						
	X	4-4-5	9									
25						Boring terminated at 25 feet.						

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LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-03** SHEET: **1 of 1**
SECTION: 31 TOWNSHIP: 27S RANGE: 19E

G.S. ELEVATION (ft):
WATER TABLE (ft): 8.4
DATE OF READING: 1/14/2004
EST. W.S.W.T. (ft): 2.5

DATE STARTED: 1/14/04
DATE FINISHED: 1/14/04
DRILLED BY: D.E.E.
TYPE OF SAMPLING: SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0												
	X	1-1-3-4	4	▽		Gray fine sand (SP)						
	X	3-2-1-1	3			Light brown to brown fine sand to sand w/ trace silt (SP)						
5	X	2-2-1-1	3									
	X	2-2-1-1	3	▼								
10	X	2-1-2-2	3									
15	X	4-5-6	11			Brown clay w/ sand (CL)						
20	X	2-2-3	5			Light green clay w/ sand and trace limestone fragments (CL)						
25	X	3-3-5	8									
						Boring terminated at 25 feet.						

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SECTION: 31 TOWNSHIP: 27S RANGE: 19E

G.S. ELEVATION (ft):
WATER TABLE (ft): 8.0
DATE OF READING: 1/21/2004
EST. W.S.W.T. (ft): 2.5

DATE STARTED: 1/21/04
DATE FINISHED: 1/21/04
DRILLED BY: D.E.E.
TYPE OF SAMPLING: SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0												
	○			▽		Gray sand w/ extensive buried debris: concrete, asphalt, sheet metal, tree stumps, brick, glass (FILL)						
	⊠					Light brown to brown fine sand (SP)						
5	⊠	1-2-2-2	4									
	⊠	4-6-5-5	11	▼								
	⊠	5-3-3-2	6									
10	⊠	3-2-2-2	4									
15	⊠	4-5-6	11									
						Brown to gray brown clay w/ sand (CL)						
	⊠											
20	⊠	3-4-6	10									
						Boring terminated at 20 feet.						

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SECTION: 31 TOWNSHIP: 27S RANGE: 19E

G.S. ELEVATION (ft):
WATER TABLE (ft): 6.5
DATE OF READING: 1/14/2004
EST. W.S.W.T. (ft): 2.5

DATE STARTED: 1/14/04
DATE FINISHED: 1/14/04
DRILLED BY: D.E.E.
TYPE OF SAMPLING: SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0												
		3-4-4-3	8	▽		Gray and brown sand w/ buried debris: concrete, asphalt, bricks (FILL)						
		2-2-3-3	5			Light brown fine sand (SP)						
5		3-2-3-3	5	▼		Pale to very light brown fine sand (SP)						
		3-3-3-3	6									
10		3-4-3-4	7									
						Brown to dark brown fine sand (SP)						
15		2-2-2	4									
						Brown clay w/ sand (CL)						
20		4-4-5	9									
25						Boring terminated at 25 feet.						

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PROJECT: Angelo's Recycling
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CLIENT: Angelo's Recycled Materials, Inc.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

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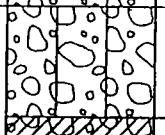
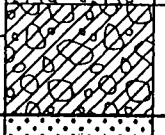
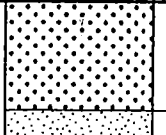
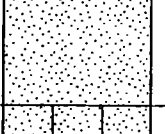
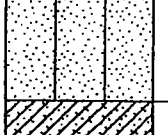
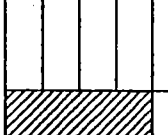
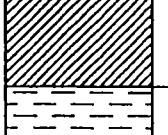
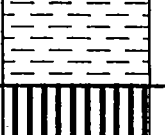
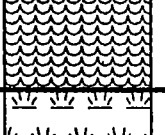
SECTION: 31 TOWNSHIP: 27S RANGE: 19E

G.S. ELEVATION (ft):
WATER TABLE (ft): 7.2
DATE OF READING: 1/21/2004
EST. W.S.W.T. (ft): 2.5

DATE STARTED: 1/21/04
DATE FINISHED: 1/21/04
DRILLED BY: D.E.E.
TYPE OF SAMPLING: SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0												
		12-46-33-13	79	▽		Gray and brown sand w/ buried debris: concrete, asphalt, bricks (FILL)						
		12-12-12-11	24			Gray fine sand (SP)						
5		6-7-7-6	14			Light brown to brown fine sand to sand w/ trace silt (SP)						
		4-3-4-3	7	▼								
10		3-4-4-4	8									
15		1-2-2	4									
						Gray brown clay w/ sand (CL)						
20		2-3-3	6									
25		3-4-5	9									
						Boring terminated at 25 feet.						

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

APPENDIX C

Important Information About Your Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

The following information is provided to help you manage your risks.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. *No one except you* should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one—not even you*—should apply the report for any purpose or project except the one originally contemplated.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, *do not rely on a geotechnical engineering report* that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions *only* at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an *opinion* about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report Is Subject To Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce such risks, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations", many of these provisions indicate where geotechnical engineers responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Rely on Your Geotechnical Engineer for Additional Assistance

Membership in ASFE exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.

ASFE PROFESSIONAL FIRMS PRACTICING IN THE GEOSCIENCES

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email: info@asfe.org www.asfe.org

IIGER06983.5M

CONSTRAINTS AND RESTRICTIONS

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until construction begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other explorations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of exploration. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.

SECTION 6

STORMWATER MANAGEMENT

Design of the modified stormwater management system is pending. Once completed, an application will be submitted to the Florida Department of Environmental Protection. A copy of the application will be submitted to the Solid Waste Section for review.