

8000 Corporate Center Dr.  
Suite 200  
Charlotte, NC 28226  
(704) 541-8345  
(704) 541-8416 (fax)

August 2, 2012

NCDENR – Division of Waste Management  
1646 Mail Service Center  
Raleigh, North Carolina 27699-1646



Attention: Mr. Edward Mussler

Reference: Operations Plan – Application for Permit  
Proposed Green Recycling Solutions LLC – C&D Recycling / Recovery  
Facility - Maysville, Jones County, North Carolina

Mr. Mussler:

On behalf of Green Recycling Solutions LLC, ERM NC, Inc. (ERM) is submitting the attached Operations Plan for the proposed Green Recycling Solutions LLC, C&D Recycling / Recovery Facility in Maysville, North Carolina. The Operations Plan was prepared for the operations of the proposed Green Recycling Solutions LLC (“Green Recycling”) construction and demolition debris (C&D) materials recovery and recycling facility (“Facility”) located at 11710 Highway 17 in Maysville, North Carolina. The Facility will be located adjacent to a proposed C&D Landfill that will also be owned and operated by Green Recycling. The anticipated service area for the facility is Jones County and its surrounding counties including Craven, Carteret, Onslow, Duplin and Lenoir. Debris will not be accepted from out-of-state.

Local government approval has been procured from the Town of Maysville for the development and operation of the C&D recycling and recovery center. A copy of the Conditional Use Approval dated August 4, 2011 for development of the project in I-1 zoning is attached with this letter. The Conditional Use Approval addresses development of the recycling and recovery center as well as a proposed C&D Landfill.

Erosion and Sedimentation Control approval has been obtained from NCDENR – Division of Land Quality for construction of the project. A copy of the approved plans is included in the Operations Plan. A copy of the Approval is included with this letter. Storm water NPDES permitting will be obtained following approval from Division of Waste Management.

In order to efficiently prepare the Operations Plan, ERM referenced the most recently approved C&D recycling and recovery facility Operations Plan for the Abbey Green facility located in Winston – Salem, North Carolina. The Abbey Green approved plan was used for format and content while developing the Green Recycling plan.

Mr. Edward Mussler  
August 2, 2012  
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If you should have any questions or require additional information concerning this Application for Permit please contact me at your convenience.

Sincerely,

*ERM NC, Inc.*

David W. Wasiela, P.E.  
Senior Engineer  
NC Registration #20770

cc: Mr. Edward Mussler – Division of Waste Management (2)  
Mr. James Maides – Green Recycling Solutions LLC (1)

Attch: Maysville Conditional Use Approval – August 4, 2011  
Erosion & Sedimentation Control Approval – July 18, 2012  
Operations Plan – July 2012

*Maysville Conditional Use Approval - August 4, 2011*

*Final  
CU Permit*

**DECISION OF BOARD OF COMMISSIONERS  
SITTING AS THE BOARD OF ADJUSTMENT  
for the  
TOWN OF MAYSVILLE**

Applicant: Mr. James E. Maides  
Property: 58.2 acres owned by Mr. and Mrs. Woodrow Lassiter, located on Hwy 17 North, portions of Tax Parcel ID Numbers 5423-62-9542-00 and 5423-54-4325-00, Maysville, North Carolina  
Request: Conditional Use Permit to operate a Construction and Demolition Debris (C&D) Landfill and Recycling Center in I-1 zoning district as a permitted use under §7.07C of the Maysville Zoning Ordinance

Introduction

On May 24, 2011, Mr. James E. Maides submitted an application to the Town for a conditional use permit to operate a C&D Landfill and Recycling Center in an I-1 zoning district as a permitted use under §7.07C of the Zoning Ordinance of the Town of Maysville. After proper notice, the Board conducted a public hearing on the conditional use permit request at its July 7, 2011 meeting.

Mr. John Parker, Mr. David Wasiela and Mr. Richard Howard appeared and testified in support of the application for a conditional use permit. Mr. Bob Clark, Maysville Town Planner, and Mr. Wayne Sayland, Maysville Planning Board Chairman, appeared and testified on behalf of the Maysville Planning Board regarding the Planning Board recommendations.

The property for which the conditional use permit is requested is zoned I-1 (Industrial) and located on 58.2 acres on Hwy 17 North, Maysville, North Carolina, approximately 1.2 miles north of the intersection of Old White Oak River Road, and owned by Woodrow and Joyce Lassiter. With the signed consent of Mr. and Mrs. Lassiter, an application was submitted to the Town by Mr. James E. Maides requesting a conditional use permit for the site as permitted in §7.07C of the Zoning Ordinance in order to construct and operate a Construction and Demolition Debris Landfill and Recycling Center.

The following are incorporated into this decision by reference: (1) all maps, plats, documents, correspondence, and materials submitted to the Board at the July 7, 2011 hearing, including but not limited to, the exhibits submitted by the Applicant; (2) the Board's minutes from the July 7, 2011 hearing; and (3) the Town of Maysville Zoning Ordinance and Zoning Map.

**Findings of Fact:**

1. That the subject property is located off of Hwy 17 North, 1.2 miles north of the intersection of Old White Oak River Road, on 58.2 acres of property. **SEE Facility Plan, EXHIBIT 1.**
2. That woodlands, fields and wetlands surround the property. No wetlands will be impacted by the proposed site locations of the recycling center and landfill.
3. That the proposed site location of the recycling center is more than 1,000 feet from the nearest residential structure; that the proposed site location of the landfill waste limits is approximately 1,777 feet from the nearest residential structure; and that the minimum distance allowed between those two points, as required by the State, is 500 feet. **SEE Composite Map, EXHIBIT 2.**
4. That there will be a 200 foot buffer around the landfill as required by the State. This buffer is wooded, and cannot be disturbed under the State permit needed for the landfill. **SEE EXHIBIT 2.**
5. That the proposed road into the recycling center is approximately 200 feet, except at the connection area at U.S. Highway 17, from any nearest residence and will be paved to NCDOT standards from Hwy 17 North to the recycling center.
6. That the Maysville Planning Board recommended, and the applicant agreed, that additional buffering of the residential properties would be possible by construction of a permanent 6 foot high earthen berm and tree plantings reaching at least 20 feet high to give a solid screen; and that this buffer would be along the western property lines of the residential properties adjoining the subject property. The Maysville Planning Board recommended to this Board that the Applicant's Conditional Use Permit application be approved subject to the aforementioned conditions.
7. That the recycling center and landfill will be gated and fenced.
8. That the landfill area will contain equipment to collect any leachate that accumulates, which will then be treated and properly disposed of, as required under the State permit for the landfill. Thus, no leachate will be allowed to migrate from the site onto neighboring properties. There will also be groundwater monitoring wells around the landfill, as required under the State permit for the landfill.
9. That stormwater will be collected and properly treated on site for all facilities. Thus, no untreated stormwater will be allowed to migrate from the site onto any neighboring property.
10. That there will be no significant impact on traffic along Highway 17 from the proposed use. **SEE Traffic Report, EXHIBIT 3.**

11. That noise from the proposed use of the recycling center will not exceed OSHA requirements.
12. That the proposed use of the C&D recycling center and landfill would be subject to the conditions and requirements set forth in the Franchise Agreement entered into with the Town of Maysville on May 27, 2011. **SEE Franchise Agreement, EXHIBIT 4.**
13. That Section 7.07(C) (4) of the Maysville Zoning Ordinance permits C&D recycling centers and landfills as a permitted use in the I-1 zoning classification.
14. That the conditional use permit public hearing was posted at the site and notice and publication was complied with in accordance with the Zoning Ordinance of the Town of Maysville.

**Decision:**

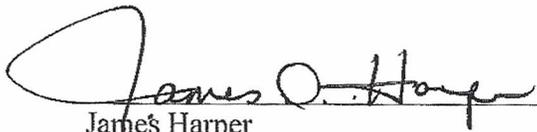
The Board of Commissioners voted unanimously 4 to 0 as follows (with Commissioner Flowers recused from voting on the matter):

1. That the proposed conditional use of a C&D landfill and recycling center will not materially endanger the public health and safety, if located where proposed and developed according to the proposed Facility Plan and subject to the conditions set forth herein and in the Franchise Agreement.
2. That Mr. James E. Maides, the applicant, has met all the requirements and specifications of the Town of Maysville Zoning Ordinance regarding Conditional Use Permits within an I-1 Zoning Classification.
3. That the proposed conditional use of a C&D landfill and recycling center will not substantially injure the value of adjoining or abutting property.
4. That the proposed conditional use of a C&D landfill and recycling center will be in conformity with the general plans for the development of the Town of Maysville.
5. That the proposed conditional use of a C&D landfill and recycling center will not constitute a nuisance or hazard because of the number of persons who will attend or use such facility, vehicular movement, noise, waste or fume generation, drainage, type of physical activity, or hazardous-by-products, or other materials on site.
6. That the proposed conditional use of a C&D landfill and recycling center will not be adversely affected by the existing uses.
7. That the proposed conditional use of a C&D landfill and recycling center will be placed on a lot of sufficient size to satisfy the space requirements of said use.

In view of the above findings Mr. Maides' request for a conditional use permit as described herein was approved with the further conditions:

1. That the applicant complies with all the requirements of the Maysville Zoning Ordinance with regards to site plan submission and approval.
2. That the applicant install a buffer consisting of a 6 foot high earthen berm and adjacent tree plantings following along the westernmost property lines of the adjoining residentially developed properties fronting Hwy 17 and placement of a 6 foot high solid fence along the road entrance adjacent to Bradley Hill's residential property on the north and Mr. Lassiter's residential property on the south.

This the 4<sup>th</sup> day of ~~July~~ <sup>August</sup>, 2011.

  
James Harper  
Mayor

**Appeal Rights:**

If the applicant or other interested person with appropriate standing is not satisfied with the decision of this Board, the applicant or such person has the right to file an appeal to the Superior Court of Jones County within (30) days of the filing of this decision.

*Erosion & Sedimentation Control Approval*  
*July 18, 2012*



North Carolina Department of Environment and Natural Resources  
**Division of Land Resources**  
**Land Quality Section**

James D. Simons, PG, PE  
 Director and State Geologist

Beverly Eaves Perdue, Governor  
 Dee Freeman, Secretary

July 18, 2012

**LETTER OF APPROVAL WITH MODIFICATIONS**

Green Recycling Solutions, LLC  
 ATTN: Mr. James E. Maides, Manager  
 166 Center Street  
 Jacksonville, North Carolina 28546

RE: Erosion and Sedimentation Control Plan No.: Jones-2012-004  
 Project Name: Jones County C & D Recycling Center  
 Location: US Highway 17 N, Maysville County: Jones  
 River Basin: White Oak  
 Date Received by LQS: July 3, 2012  
 Acres Approved: 19.1 Project Type: Revised  
 Project Description: Grading associated with the construction of a building, parking area, stockpile area, septic system and a screening berm.

Dear Sir:

This office has reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval with Modifications. The modifications required for approval are listed on the attached page. This plan approval shall expire three (3) years following the date of approval, if no land-disturbing activity has been undertaken, as required by 15A NCAC 4B.0129, unless modified by other legislation.

Please be advised that 15A NCAC 4B.0118(a) requires that a copy of the approved erosion and sedimentation control plan be on file at the job site. Also, you should consider this letter as giving the Notice required by G.S. 113A-61.1(a) of our right of periodic inspection to ensure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Program is performance oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, it is determined that the erosion and sedimentation control plan is inadequate to meet the requirements of the Sedimentation Pollution Control Act of 1973 (G.S. 113A-51 through 66), this office may require revisions to the plan and implementation of the revisions to ensure compliance with the Act.

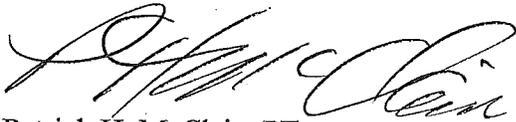
Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval

Green Recycling Solutions, LLC  
ATTN: Mr. James E. Maides, Manager  
July 18, 2012  
Page 2

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility/Ownership Form, which you have submitted. You are required to file an amended form if there is any change in the information included on the form. NOTE: Neither this approval nor the financial responsibility/liability cited in it automatically transfer with a change in project ownership. In addition, 15A NCAC 4B.0127(c) requires that you notify this office of the proposed starting date for this project (using the enclosed Project Information Sheet). Please notify us if you plan to have a preconstruction conference.

Please be aware that your project will be covered by the enclosed NPDES General Stormwater Permit NCG010000 (Construction Activities). You should first become familiar with all of the requirements for compliance with the enclosed permit.

Sincerely,



Patrick H. McClain, PE  
Regional Engineer

Enclosures

cc w/o enc: Timothy M. Stewart, PE, Parker & Associates  
Tom Hogg, Town Manager, Maysville  
Alton Hodge, Division of Water Quality

Erosion and Sedimentation Control Plan No.: Jones-2012-004

Project Name: Jones County C & D Landfill

July 18, 2012

**MODIFICATIONS**

Page A

1. **AS THE DECLARED RESPONSIBLE PARTY, YOUR LEGAL RESPONSIBILITY** is to understand the Act and comply with the following minimum requirements of the Act:
  - A. In the event of a conflict between the requirements of the Sedimentation Pollution Control Act, the submitted plan and/or the contract specifications, the more restrictive requirement shall prevail;
  - B. The land disturbing activity shall be conducted in accordance with the approved erosion and sedimentation control plan;
  - C. The **LATEST APPROVED** erosion and sediment control plan will be used during periodic unannounced inspections to determine compliance and a copy of the plan must be on file at the job site. If it is determined that the implemented plan is inadequate, this office may require the installation of additional measures and/or that the plan be revised to comply with state law.
  - D. All site revisions, including those required by other local, state or federal agencies, which affect site layout, drainage patterns, limits of disturbance and/or disturbed acreage must be submitted to this office for approval a minimum of 15 day prior implementing the revision;
  - E. Revisions exceeding the approved scope of this project without this office's prior approval of the plan showing the changes can be considered a violation. Failure to comply with any part of the approved plan or with any requirements of this program could result in appropriate legal action (civil or criminal) against the financially responsible party. Legal actions could include Stop Work Orders, the assessing of a civil penalty of up to \$5000 for the initial violation and/or a civil penalty of up to \$5000 per day for each day the site is out of compliance.
  - F. The **CERTIFICATE OF PLAN APPROVAL** must be posted at the primary entrance to the job site and remain until the site is permanently stabilized
  - G. In cases of natural disaster related changes to the proposed land disturbing activity, all appropriate actions and adequate measure installations may be performed to prevent sediment damage, prior to submitting and receiving approval of the revised plan. A revised plan must be submitted for approval as soon as possible, but no later than 15 days after all emergency actions have been performed;

Erosion and Sedimentation Control Plan No.: Jones-2012-004

Project Name: Jones County C & D Landfill

July 18, 2012

## MODIFICATIONS

Page B

- H. Erosion and sediment control measures or devices are to be constructed and/or installed to safely withstand the runoff resulting from a 10 year storm event (25 year storm event in High Quality Zones). The 10 year storm event is generally equivalent to a storm producing 6.5 - 7 inches in 24 hours or at the rate of 6.5 - 7 inches in 1 hour, depending on the location of the project within the region;
- I. No earthen material is to be brought on or removed from the project site, until the off-site borrow and/or disposal sites are identified as part of the erosion control plan. If an off-site borrow and/or disposal site is to be utilized, submit the name and identification number (E&SCP# or Mine Permit #), prior to use.
- J. A buffer zone, sufficient to restrain visible sedimentation within the 25% of the width closest to the land disturbance, must be provided and maintained between the land-disturbing activity and any adjacent property or watercourse.
- K. In order to comply with the intent of the Act, the scheduling of the land-disturbing activities is to be such that both the area of exposure and the time between the land disturbance and the providing of a ground cover is minimized.
- L. Unless a temporary, manufactured, lining material has been specified, a clean straw mulch must be applied, at the minimum rate of 2 tons/acre, to all seeded areas. The mulch must cover at least 75% of the seeded area after it is either tacked, with an acceptable tacking material, or crimped in place.
- M. New or affected cut or filled slopes must be at an angle that can be retained by vegetative cover or other adequate erosion-control devices or structures appropriate, **AND must be provided with a ground cover** sufficient to restrain erosion **within 21 calendar days of completion of any phase (rough or final) of grading** (**ANNUAL RYE GRASS IS NOT** in the **APPROVED** seeding specifications **NOR** is it an **ACCEPTABLE** substitute for the providing of a temporary ground cover).
- N. A **permanent ground cover**, sufficient restrain erosion, **must be provided** within the shorter of 15 working or 90 calendar days (if in a High Quality Zone, the shorter of 15 working or 60 calendar days) after completion of construction or development on any portion of the tract (**ANNUAL RYE GRASS IS NOT** in the **APPROVED** seeding specifications **NOR** is it an **ACCEPTABLE** substitute for the providing of a nurse cover for the permanent grass cover).

Erosion and Sedimentation Control Plan No.: Jones-2012-004

Project Name: Jones County C & D Landfill

July 18, 2012

**MODIFICATIONS**

Page C

- O. All sediment and erosion control details for this project must conform to the standards as shown in the current Erosion & Sediment Control Planning and Design Manual; These details must be utilized for construction and incorporated in the plan. The Design Manual may be found on-line at: <http://portal.ncdenr.org/web/lr/publications>
2. Adequate and appropriate measures must be properly installed downstream, within the limits of disturbance, of any land disturbing activity to prevent sediment from leaving the limits of disturbance, entering existing drainage systems, impacting an on-site natural watercourse or adjoining property
3. Regardless of the area affected for the construction of the access road from US Highway 17 to the project area, an erosion and sedimentation control must be submitted to and approved by the Land Quality Section prior to initiating any grading activity associated with its construction. Therefore, this approval does not include nor authorize any grading activity within the Town of Maysville's 50 foot right-of-way beyond any maintenance of the existing path, within its current width and alignment, necessary to access the project area.

## PROJECT INFORMATION SHEET

APPROVAL DATE: JULY 18, 2012

RESPONSIBLE PARTY: *GREEN RECYCLING SOLUTIONS, LLC*

PROJECT: JONES COUNTY C & D LANDFILL

COUNTY: JONES NO.: 2012-004

START-UP DATE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

ON-SITE CONTRACT: \_\_\_\_\_

ON-SITE TELEPHONE NO. : \_\_\_\_\_

OFFICE TELEPHONE NO.: \_\_\_\_\_

PLEASE COMPLETE & RETURN TO:

N.C.D.E.N.R.  
LAND QUALITY SECTION  
ATTN: *PAUL WORTHINGTON*  
943 WASHINGTON SQUARE MALL  
WASHINGTON, NORTH CAROLINA 27889

# CERTIFICATE OF PLAN APPROVAL

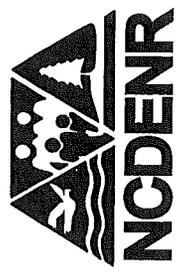


The posting of this certificate certifies that an erosion and sedimentation control plan has been approved for this project by the North Carolina Department of Environment and Natural Resources in accordance with North Carolina General Statute 113A - 57 (4) and 113A - 54 (d) (4) and North Carolina Administrative Code, Title 15A, Chapter 4B.0107 (c). This certificate must be posted at the primary entrance of the job site before construction begins and until establishment of permanent groundcover as required by North Carolina Administrative Code, Title 15A, Chapter 4B.0127 (b). **JAMES CO. C + D LANDFILL**

**US 17 N, MAYSVILLE - JAMES COUNTY**  
Project Name and Location

**7-18-12**  
Date of Plan Approval

**[Signature]**  
Regional Engineer





Green Recycling Solutions LLC

# Operations Plan - Maysville C&D Recycling & Recovery Facility *Maysville, North Carolina*

July 2012

# OPERATIONS PLAN – GREEN RECYCLING SOLUTIONS LLC

## MAYSVILLE, NORTH CAROLINA

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- 1. METAL TECH SYSTEMS C&D DEBRIS RECOVERY SYSTEM - DESCRIPTION**
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- 4. PRELIMINARY BUILDING PLANS (PREPARED BY STILLWATER ENGINEERING)**

## **1.0 GENERAL FACILITY OPERATIONS**

### **1.1 OVERVIEW**

This Operations Plan was prepared for the operations of the proposed Green Recycling Solutions LLC ("Green Recycling") construction and demolition debris (C&D) materials recovery and recycling facility ("Facility") located at 11710 Highway 17 in Maysville, North Carolina. The Facility will be located adjacent to a proposed C&D Landfill that will also be owned and operated by Green Recycling. A separate Operations Plan for the C&D Landfill portion of the Facility shall be referenced for specific landfill related items. A site location plan is included as Figure 1-1 on the following page.

This Operations Plan may be updated by Facility management and authorized personnel as dictated by changing site conditions or typical operations. A copy of this Operations Plan will be maintained at the Facility and will be available for review, inspection and training at all times.

### **1.2 CONTACT**

All correspondence and questions concerning the operation of the Facility should be directed to the contact listed below. For fire or police emergencies, dial 911.

Green Recycling Solutions LLC (Operator)  
11710 Highway 17  
Maysville, North Carolina 28555  
Phone: (910) 938-5900  
Contact: James Maides  
Email: JAMESMAIDES@CSBENC.com

### **1.3 FACILITY OPERATING HOURS**

Proposed hours of operation will be 7:00 AM to 6:00 PM Monday through Friday and Saturday 7:00 AM to 6:00 PM, excluding official holidays, which shall include New Year's Day, Independence Day, Thanksgiving Day, and Christmas Day, unless otherwise mutually agreed to from time to time between Green Recycling, the Town of Maysville, and the DWM regional office. The facility will typically be closed for normal operation on Sundays. Maintenance and other activities may be performed on any day or time. In the event of disaster or other emergency situations, the supervisor may request approval from the DWM regional office to allow additional temporary operating hours.

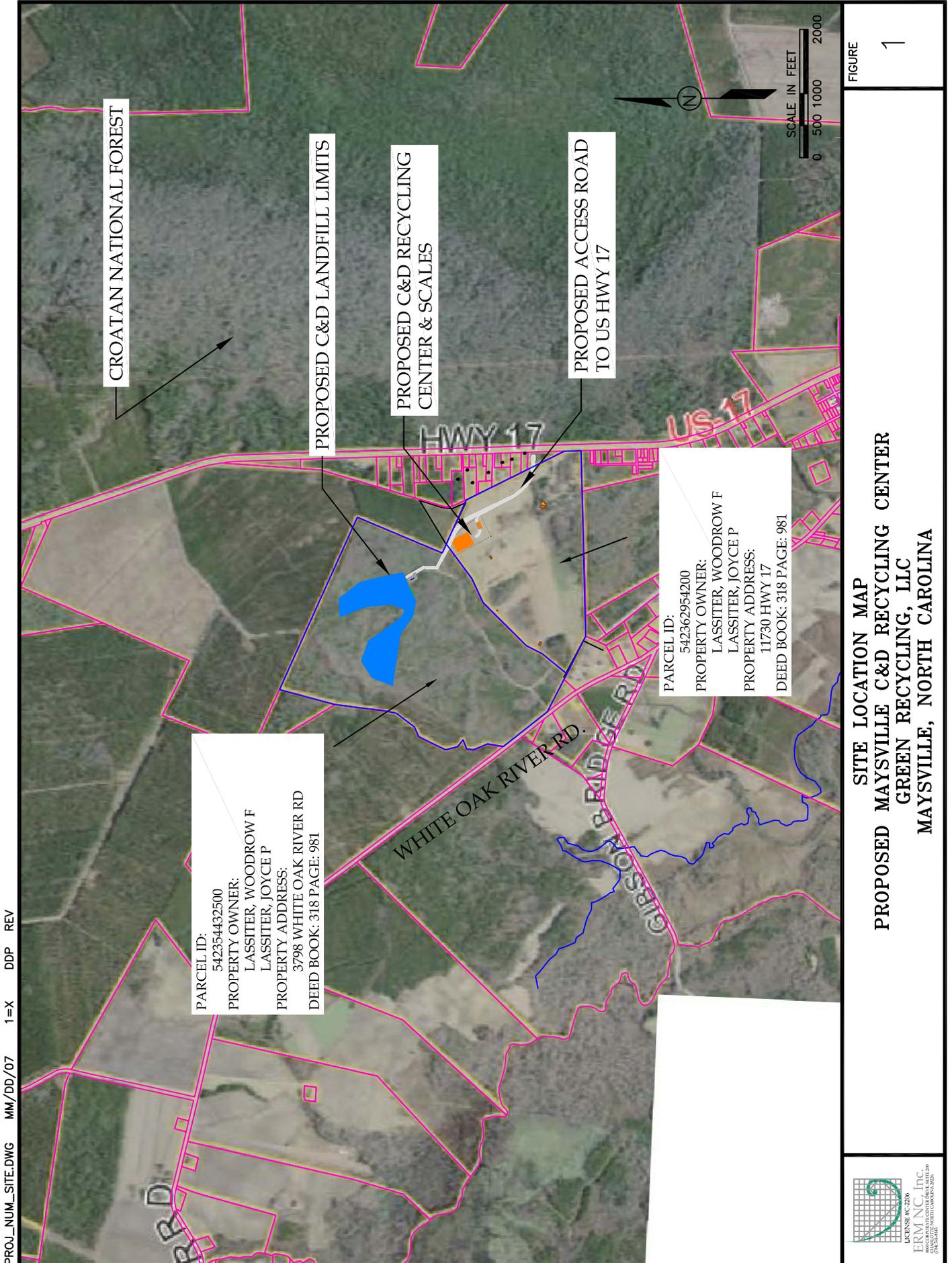


Figure 1-1 - Site Location

## 1.4 ACCESS CONTROL

Access to process and storage areas of the facility will be controlled by a combination of fences, gates, and natural barriers and strictly enforced operating hours. An attendant will be on duty at all times when the facility is open for public use to enforce access restrictions.

### 1.4.1 *Physical Restraints*

The site will be accessed by an entrance from US Highway 17. Waste will be screened at the scales by the scale house operator. All waste will have been weighed prior to being processed on the site. The entrance will have a gate which will be securely locked during non-operating hours.

### 1.4.2 *Security*

Haulers will be stopped at the scale house for scanning and documentation of incoming loads. Drivers will be required to identify the contents of the load and origin. Incoming loads on closed trailers or trucks will be inspected upon unloading at the tipping floor. Unacceptable materials will not be permitted. Deliveries of unacceptable materials will be directed to leave the site. Frequent inspections of gates and fences will be performed by facility personnel. Evidence of trespassing, vandalism, or illegal activities will be reported to the Owner. The facility will be securely locked during non-operating hours.

## 1.5 SIGNAGE

Prominent signage containing the information required by the North Carolina Division of Waste Management (DWM) and Health Hazards Control Unit will be placed at the main facility entrance. The signs will provide information as follows;

- Operating hours,
- Emergency contact information,
- Permit number,
- Operating procedures for customers and/or visitors,
- List of acceptable debris,
- List of unacceptable wastes, and
- Traffic directional signs for vehicles which are tipping and are picking up recycled products.

Service and maintenance roads for use by operations personnel will be clearly marked and barriers (e.g., traffic cones, barrels, etc.) will be provided as required.

## 1.6 *PERSONNEL REQUIREMENTS*

The anticipated personnel requirements for operation and maintenance of the facility are listed as follows:

1. General Manager & Office Staff (3): Overall management of the Facility
2. Scale House Attendant (1): Receiving and weight for incoming loads, identification of load content and screening for prohibited waste
3. Operators (2): Management of tipping floor and recycling areas and screening for prohibited waste
4. Commercial Drivers (1): Transfer of processed C&D material (subject to change in response to actual volume of debris received)
5. Labor (12): General labor and operational staff around the site

One member of the supervisory staff, trained and certified in facility operations, will be on site at all times during all operating hours of the facility in accordance with G.S. 130 A-309.25 of the North Carolina Code. Each facility employee will participate in an annual training course (led by supervisory staff). As part of this training, personnel learn to recognize loads which may contain prohibited wastes. All personnel will receive a minimum of two-hour asbestos awareness training. A minimum number of personnel will be required to operate the facility efficiently. A scale house attendant, laborers to work on the tipping floor and processing line(s), equipment operators, and a site supervisor are anticipated to be employed for the daily operation of the facility.

## 1.7 *HEALTH AND SAFETY*

All aspects of the operation of the facility were developed with the health and safety of operations staff, customers, and neighbors in mind. Prior to commencement of operation of the facility, a member of the operating staff will be designated as the site safety officer. This individual, together with the facility's management will modify the site safety and emergency response program to remain consistent with National Solid Waste Management Association and Occupational Safety and Health Administration (OSHA) guidance. All personnel will receive a minimum of two-hour asbestos awareness training.

Processing equipment will be appointed with protection from moving parts, pinching, electrical connections, and sharp objects. Automated and/or manual emergency shut-off controls will also be provided. Safety devices for mobile equipment will include equipment rollover protective cabs, seat belts, audible reverse warning devices, hard hats, safety shoes, and first aid kits. Equipment exhaust should be vented at an appropriate height in excess of the breathing zone. Other personal protective equipment (gloves, hearing protection,

coveralls, or boots) will be required based on an employee's duties. Management and lead personnel will be encouraged to complete the American Red Cross Basic First Aid course to aid on site in case of an emergency. All personnel should be familiar with the equipment and duties of their position such that they will be able to identify potential hazards.

Each facility employee will participate in monthly safety meetings with topics relevant to worker safety at the Facility. Each facility employee will participate in an annual training course in health and safety (led by supervisory staff). All training shall be documented and attested to by signatures of the trainer and trainee.

Each employee of Green Recycling will be required to submit to pre-hiring drug and alcohol tests by a third party testing company.

The following are some general requirements for the health and safety of workers at the Facility.

### **1.7.1** *Personal Hygiene*

The following items are recommended as a minimum practice:

- Wash hands before eating, drinking, or smoking,
- Wear appropriate personal protective equipment,
- Wash, disinfect, and bandage any cuts, no matter how small, and
- Maintain closely trimmed fingernails.

### **1.7.2** *Personal Protective Equipment (PPE)*

Prior to the issuance of personal protective equipment (PPE) a job hazard analysis will be performed by a qualified industrial hygienist. PPE must be evaluated as to the level of protection necessary for particular operating conditions and then made available to facility employees. The list below includes PPE typically used and/or required in a solid waste management facility workplace.

- Safety shoes with steel toes
- Hearing protection in areas where exposure to high noise levels is expected
- Hard hat
- Gloves
- High-visibility vest and/or other clothing

Following use, PPE should be disposed of or adequately cleaned, dried, or readied for reuse.

### 1.7.3 *Mechanical Equipment Hazard Protection*

The loaders and other equipment should be operated with care and caution. All safety equipment such as horns, backup alarms, and lights shall be functional or taken out of service until repaired. A Lockout-Tagout program shall be used to identify equipment in need of or under repair and ensure that operation is “off-limits” prior to maintenance or repair. All operators shall be trained in the proper operation of equipment.

### 1.7.4 *Employee Health and Safety*

Review the following periodically with each employee:

- Consider safety first when planning and conducting activities,
- Post emergency contact phone numbers,
- Post route to nearest emergency medical facility,
- Post evacuation plan,
- Provide easy and visible access to the Right to Know materials, and
- Provide easy and visible access to the first aid kits and fire extinguishers.

### 1.7.5 *Physical Exposure*

Facility personnel may come in contact with fluids, solids, and airborne constituents found at the recycling center. Routine training should be conducted regarding the individual and collective materials used in the recycling process and their associated hazards. Training concerning safe work practices around these potential exposures should include use of PPE and proper disposal procedures. All personnel will receive a minimum of two-hour asbestos awareness training.

The tipping floor, sorting areas, and unloading areas must be maintained in a clean, sanitary condition.

## 1.8 *COMMUNICATIONS*

The scale house, office and sorting building have telephones in case of emergency and to conduct day-to-day business. The scale house and office will communicate with equipment operators and supervisors at the facility by radio or cell phone.

In an emergency the facility will make an announcement over the loud-speaker system and employees will be trained to congregate at a rally point. Emergency telephone numbers will be displayed in the scale house and office.

Fires and non-conforming waste incidents shall be reported to the Regional Waste Management Specialist within twenty-four hours followed by a written notification to be submitted within fifteen days.

## **1.9 UTILITIES**

Electrical power, water, and telephone will be provided at the scale house and office. Water will also be available at the tipping floor and processing equipment in the event that asbestos containing materials are identified. Restrooms will be provided at the site.

## **1.10 LITTER CONTROL**

The perimeter fence will act as a barrier to keep litter contained within the site. Facility operators will inspect materials entering the facility. If unacceptable materials are delivered to the facility, the operators will deny the load or unacceptable materials will be returned on the same truck. Litter sorted out during processing will be contained in an appropriate receptacle for delivery to an approved disposal facility. Windblown materials must be collected by the end of the day and reasonable effort will be made so that no windblown material may be allowed to leave the facility boundary. The material will be collected in the event that this happens

## **1.11 FIRE PREVENTION AND CONTROL**

Due to the risk of fire and health and safety of personnel, incentives will be in place to discourage smoking on the premises. However, smoking is limited to personnel breaks and only in designated areas screened and located well away from the tipping floor, the processing line, and the storage of processed materials. Fire lanes will be maintained and passable at all times.

The possibility of fire within the facility or a piece of equipment must be anticipated in the daily operation of the facility. Fire suppression equipment shall be provided to control accidental fires and arrangements have been made with the local fire protection agency to ensure any incident at the facility will be handled with the appropriate equipment. A combination of factory installed fire suppression systems and/or portable fire extinguishers will be operational on all heavy pieces of equipment at all times. For larger or more serious outbreaks, local fire and emergency agencies will be called (dial 911).

Green Recycling Solutions, LLC will verbally notify the DWM within 24 hours of discovery of a fire within the recycling area. Additionally, written documentation describing the fire, the actions carried out to extinguish the fire, and a strategy for preventing future occurrences will be provided to the DWM within fifteen days following any such occurrence.

## **1.12 SEVERE WEATHER CONDITIONS**

Unusual weather conditions can directly affect the operation of the facility. Some of these weather conditions and recommended operational responses are as follows.

### **1.12.1 Ice Storms**

An ice storm can make access to the facility dangerous, prevent movement and, thus, may require closure of the facility until any ice deemed unsafe is removed or has melted.

### **1.12.2 Electrical Storms**

The open recycling areas of the facility are susceptible to the hazards associated with lightning. If necessary, recycling activities will be temporarily suspended during severe lightning. All personnel will be removed to a safe area

### **1.12.3 Windy Conditions**

Facility operations during a particularly windy period may require that the active tipping area and sorting operations be temporarily suspended.

### **1.12.4 Violent Storms**

In the event of hurricane, tornado, or severe summer and/or winter storm warning issued by the National Weather Service, facility operations may be temporarily suspended.

## **1.13 RECORD KEEPING PROGRAM**

The Owner will maintain the following information in an operating record at the site:

1. Debris inspection records;
2. Tonnage records including source of generation and scale certifications;
3. List of generators and haulers that have attempted to dispose of restricted wastes;
4. Employee training procedures and records of training completed;
5. Annual facility reports (to be submitted by August 1 of each year for the previous July 1 through June 30); and
6. Reports of asbestos testing, sampling data, analytical results, and acceptance or refusal of the materials.

Operating records will be presented, upon request, to the DWM for inspection. A copy of the current Operations Manual will be available at the facility for use at all times.

#### 1.14 *FINANCIAL ASSURANCE*

A closure cost estimate equal to the cost to hire a third party to remove and clean up a week's worth of C&D waste from the facility has been provided below. A bond in this amount will be held for financial assurance.

##### **Closure Cost Estimate:**

##### Assumptions

- 163,875 tons per year potential
- Closure based on 163,875 tons or 3,151 tons per week
- 3,151 tons divided by 20.5 tons/load = 154 loads
- \$102.5 /load cost to load and haul
- 24 man-hours @ \$15/hr cleanup = \$360
- 24 man-hours @ \$30/hr broom tip floor = \$720

##### Summary of Costs

Disposal costs (Onslow)	3151 tons x \$49/ton = \$154,399.00
Load and Hauling costs	154 loads x \$102.5/load = \$15,785.00
Clean up and broom floor costs	\$360 + \$720 = \$1,080.00
<b>Total Estimated Cost of Closure</b>	<b>= \$171,264.00</b>

## 2.0 *DEBRIS HANDLING OPERATIONS*

### 2.1 *OVERVIEW*

This section describes the required debris handling operations for the Green Recycling, Recycling facility. In addition to the C&D debris received at this facility, the facility also processes new construction debris such as lumber, ferrous and non-ferrous metals, etc. These materials are stored at the facility until there are sufficient quantities for pick up or delivery to various recycling contractors or end-users. The list of acceptable debris is shown below. Debris may be received from industrial sources if the material is 100% recyclable or the unrecyclable residual from industrial sources is kept physically separated from residuals to be taken to approved C&D landfills. A copy of the Site Plans prepared by Parker & Associates is included in Appendix 3 for reference.

### 2.2 *ACCEPTABLE DEBRIS*

The facility will be permitted to accept construction and demolition debris including the following that may be recycled at the facility:

- clean wood (treated, untreated, and engineered wood products);
- aggregates and inerts (clean concrete, asphalt pavement, brick, block, stones and soil);
- drywall;
- roofing shingles;
- clean metals;
- white goods;
- plastics;
- cardboard and paper;
- carpet and padding;
- Modular buildings, mobile home buildings, trailer campers; and
- other wastes as approved by the Solid Waste Section of the Division of Waste Management.

### 2.3 *PROHIBITED WASTES*

Only wastes, as defined in Section 2.2 above or approved by the DWM may be accepted. No other wastes may be accepted. Asbestos containing materials will not be accepted. Suspect asbestos-containing materials found to contain greater than 1 percent asbestos will not be accepted.

## 2.4 *DEBRIS SCREENING PROGRAM*

In order to assure that prohibited wastes are not entering the facility, a screening program will be implemented. Only waste that is initially received and processed at the recycling center will be disposed of at the Facility landfill.

Debris entering the facility will be screened by trained personnel. These individuals have been trained to recognize indications of suspicious wastes, including: hazardous placards or markings; liquids, powders, or dusts; asbestos containing materials; sludge; bright or unusual colors; drums or commercial size containers; and “chemical” odors. The screening program for visual and olfactory characteristics of prohibited wastes is an ongoing part of the facility operation.

All vehicles must stop at the scale house located at the entrance of the facility and visitors are required to sign-in. All debris transportation vehicles are weighed and the content of the load assessed by the scale attendant’s inquiry, photographic equipment, and scanners. The scale attendant requests from the driver of the vehicle a description of the debris it is carrying to ensure that unacceptable waste is not allowed into the facility. The attendant then visually checks the vehicle as it crosses the scale. Signs informing users of the acceptable and unacceptable types of waste are posted at the scale house. Once passing the scales, the vehicles are routed to the tipping floor.

Facility staff trained to identify wastes that are unacceptable will inspect the debris discharged at the tipping floor. If unacceptable waste (other than asbestos) is found upon unloading on the tipping floor, the load will be isolated, reloaded, and the generator/hauler will be logged and escorted out of the facility. Periodically, minor wastes may be encountered while sorting and processing (i.e. random bag of household waste, litter, etc.). Containers will be staged on-site such that these minor wastes will be placed in a container to be disposed at an appropriate licensed facility.

In accordance with the requirements from the State of North Carolina, Division of Epidemiology, a facility representative who has successfully completed an approved asbestos contractor/supervisor training class will be present at, or readily available to, the facility during hours of operation. Any incoming waste including recognizable suspect asbestos containing material must be accompanied by a report from an accredited asbestos inspector indicating the materials do not contain asbestos. Recognizable suspect asbestos-containing materials will not be unloaded without proper documentation. If unacceptable waste is found upon unloading on the tipping floor, the load will be isolated, wetted, and covered until it can be determined whether the material contains asbestos. Water will be available throughout the facility to eliminate dust production and migration. Sampling suspect material will be completed by a North Carolina accredited asbestos inspector. If asbestos-containing material is found to have entered the waste stream, the area around the material should be properly marked and the material wetted and covered. North Carolina accredited personnel will be required to clean-up the contaminated site in accordance with applicable regulations and transport the asbestos-containing waste to a proper disposal

facility. The facility will have an accredited inspector and abatement contractor respond should a suspect load be received. If asbestos containing materials have contaminated the staging area or pick line, all work will stop and the Health Hazards Control Unit will be notified.

## 2.5 *FACILITY OPERATIONS*

### 2.5.1 *Operating Capacity*

The maximum operating capacity (design capacity) for the recycling facility is estimated to be approximately 575 tons per day of C&D debris. Expected Facility capacity for each year of operation is presented in [Table 2-1](#) below. The anticipated annual waste stream arriving at the facility is 300 tons per day, and reaches the maximum of 575 tons per day for operational years 24 through 30.

As the facility begins operation, the expected recycling/recovery rate is 63% of waste received. The recycling rate is expected to steadily increase to a maximum of 87% of waste received at operational year 9, which continues through year 30.

The recycling rate figures are based on results seen at similar facilities in Florida which use the same equipment and operations for recycling. The anticipated waste received at the Facility is based upon current disposal rates of C&D waste by the larger construction and contracting companies in the proposed service area.

Table 2-1 – Preliminary Facility Sizing

Year	Avg. Daily C&D Waste (Tons)	Total C&D/YR Waste Received (Tons)	Percentage of C&D Waste Recovered	C&D Waste to Landfill (Tons)	C&D Landfill Airspace Required (CY)
1	300	85,500	0.63	31,635	42,180
2	310	88,350	0.68	28,272	37,696
3	325	92,625	0.70	27,788	37,050
4	350	99,750	0.72	27,930	37,240
5	400	114,000	0.85	17,100	22,800
6	400	114,000	0.85	17,100	22,800
7	450	128,250	0.85	19,238	25,650
8	450	128,250	0.85	19,238	25,650
9	475	135,375	0.87	17,599	23,465
10	475	135,375	0.87	17,599	23,465
11	475	135,375	0.87	17,599	23,465
12	500	142,500	0.87	18,525	24,700
13	500	142,500	0.87	18,525	24,700
14	500	142,500	0.87	18,525	24,700
15	500	142,500	0.87	18,525	24,700
16	525	149,625	0.87	19,451	25,935
17	525	149,625	0.87	19,451	25,935
18	525	149,625	0.87	19,451	25,935
19	525	149,625	0.87	19,451	25,935
20	550	156,750	0.87	20,378	27,170
21	550	156,750	0.87	20,378	27,170
22	550	156,750	0.87	20,378	27,170
23	550	156,750	0.87	20,378	27,170
24	575	163,875	0.87	21,304	28,405
25	575	163,875	0.87	21,304	28,405
26	575	163,875	0.87	21,304	28,405
27	575	163,875	0.87	21,304	28,405
28	575	163,875	0.87	21,304	28,405
29	575	163,875	0.87	21,304	28,405
30	575	163,875	0.87	21,304	28,405
<b>TOTALS</b>		<b>4,199,475</b>		<b>623,637</b>	<b>831,516</b>

The expected recycling rates for each type of material in the initial years of operation are presented in [Table 2-2](#) below. As shown in the table, wood is anticipated to be the largest single type of material by weight received at the Facility in the first year.

Table 2-2 – C&amp;D Recovery Rates

Waste Stream Material	Anticipated Waste Stream (%)	Material Received (tons/hour)	Recycling Rate (%)	Recovered Material (tons/hour)	Unrecovered Material (tons/hour)
Wood	34%	8.5	75%	6.38	2.13
Concrete	17%	4.25	75%	3.19	1.06
Drywall	5%	1.25	70%	0.88	0.38
Dirt and Soil	18%	4.5	85%	3.83	0.68
Ferrous Metal	5%	1.25	95%	1.19	0.06
Cardboard	4%	1	80%	0.80	0.20
Roofing/Shingles	3%	0.75	75%	0.56	0.19
Plastic	2%	0.5	80%	0.40	0.10
MSW	2.25%	0.5625	0%	0.00	0.56
Other Building Material	8%	2	50%	1.00	1.00
Non-Ferrous Metal	0.75%	0.1875	90%	0.17	0.02
Fiber for Fuel	1%	0.25	95%	0.24	0.01
<b>TOTALS</b>	<b>100%</b>	<b>25</b>		<b>18.62</b>	<b>6.38</b>
<b>WEIGHTED AVG.</b>			<b>74.48%</b>		

The first column (% Anticipated Waste Stream) is our projected expectation of the percentages of the material we will find in the debris stream measured by weight. The second column (% Recycling Rate) is the percentage of that stream that we project we will recover for sale.

It is the intent that processed materials will not be stored on site for more than 90 days, however:

- Some materials have lower volume (such as PVC pipe) which may require longer storage time to acquire enough material to sell in bulk; and
- Some materials (such as brick chips and ball field dust) which are seasonal in their markets may be stored longer to meet a seasonal demand.

### 2.5.2 *Service Area*

The anticipated service area for the facility is generally anticipated to be concentrated in Jones County and its surrounding counties including Craven, Carteret, Onslow, Duplin and Lenoir. Debris will not be accepted from out-of-state.

### 2.5.3 *Disposal Facilities*

Residual C&D debris which cannot be recycled will be disposed in the proposed adjacent C&D landfill or other properly permitted facility. Only acceptable C&D waste which has

been screened and sorted at the Facility will be placed in the adjacent landfill (if it is not recoverable).

Residual municipal solid waste (MSW) generated by the facility will be disposed at a permitted MSW facility.

#### 2.5.4 *Mobile Equipment Requirements*

Green Recycling will maintain on-site equipment required to perform the necessary recycling activities. Periodic maintenance of all equipment and minor and major repair work will be performed within designated maintenance zones or off-site. Generally, loading, hauling, dumping, mixing, and lift equipment may be used for various tasks at the facility.

The anticipated equipment requirements for operation and maintenance of the site are listed in the following table:

DESCRIPTION	PRIMARY FUNCTION (ALLOCATION)
Excavator	Loading and sorting
Front End Loader	Loading, recycling, storage, and site cleanup
Transfer Truck	Collection and transfer of C&D material

## 2.6 *RECYCLING OPERATIONS*

The facility's recycling building is used to store, separate, and contain co-mingled recyclable materials or pre-sorted materials such as new construction materials. The facility will utilize equipment as defined in the *Mobile Equipment Requirements* section to facilitate hand sorting of materials and bins for storage. A detailed summary of proposed equipment is included Appendix 1 with Preliminary Plans included in Appendix 2; both provided by MetalTech Systems.

### 2.6.1 *General Procedures*

Waste transfer operations will be conducted in accordance with this plan. Specifically, the facility operations are anticipated as follows:

1. Collection vehicles enter through the main entrance from US Highway 17.
2. Collection vehicles are weighed, recorded and logged upon entering the scale house. The content of the vehicles is assessed by the scale attendant by visual inspection and questioning.
3. Collection vehicles which do not appear to contain unacceptable wastes are directed to discharge their load onto the tipping floor of the recycling center. Collection

vehicles which are found to contain unacceptable wastes are escorted from the Facility, and the name(s) of the generator and/or hauler are logged.

4. Facility staff trained to identify unacceptable wastes will inspect the debris discharged at the tipping floor. If unacceptable wastes are identified upon unloading, the load will be isolated and reloaded, the collection vehicle will be escorted from the Facility, and the name(s) of the generator and/or hauler are logged. If asbestos-containing wastes are suspected, it is managed in accordance with the procedures outlined in the *Debris Screening Program* section above.
5. All waste at the Facility will then be processed at the recycling center. The tipping floor and loading areas must be maintained in a clean, sanitary condition at all times and must be cleaned at least daily. Waste will not be stored on the tipping floor after operating hours except for the equivalent of four 30 yard containers of material staged to process the next day. Unprocessed debris may be stored on-site a maximum of 5 working days. Storage of unprocessed debris will be placed in trucks or containers and stored under a weather proof cover or tarped if exposed to the weather. Storage of waste will be handled in a manner not to cause any nuisance, such as odor or attraction of vectors.
6. Plastics, concrete, aggregates and other inert materials, and recoverable materials will be placed in containers, except for wood.
7. Non-recyclable materials to be transported to a landfill or other disposal facilities will be securely placed in containers or trucks, placed under a weather proof cover or tarped if exposed to the weather, and removed within 5 days.

## 2.6.2 *Recycling/Source Separation*

As a means of capturing recyclable materials and/or debris screening, source separation will be conducted as follows:

- 1) Materials placed on the tipping floor will be separated using mobile equipment.
- 2) All materials to be recycled and/or processed may stay on the floor until the end of operating hours except for the equivalent of four 30 yard containers of material staged to process the next day.
- 3) Materials to be processed using stationary sorting equipment will be loaded onto a conveyor, whereupon recyclable materials will be sorted into containers using a combination of a vibratory finger screen, 12-station picking line, magnetic separator, and secondary finger screen, amongst other equipment.
- 4) Concrete (cement and asphaltic/bituminous): may be delivered and stockpiled at the limits of the recycling area. The concrete debris will be crushed and subsequently stockpiled

in this same area until it is removed from the site for sale as fill, aggregate, etc. as markets allow.

5) Source separated wood, wood pallets and cardboard may be unloaded directly onto the sorted clean wood pile and cardboard containers, respectively.

### 2.6.3 *Containers*

Containers, generally 36" x 48", used for holding recyclables and unacceptable waste will be stored in the recycling area. The containers will be removed from the processing area to designated storage areas as they are filled.

### 2.6.4 *Markets*

1) The final destination of the recyclable materials may vary depending upon market demand and prices for such materials. In general, materials which have valid markets will be recycled; however, market fluctuation is anticipated. In any case, no more than one week design volume of unprocessed debris, sorted recycled materials, and residual material shall be stored at the recycling facility. Should the Facility require larger storage capacity based on increased business demand, the Facility will be required to increase its closure bond. Recycled materials sensitive to moisture and/or likely to generate leachate shall be covered with tarpaulins.

Anticipated end markets for the recyclable materials are as follows:

Metals - Delivered to local metals recycling facility.

Wood - Facility near site for boiler fuel

Concrete, Aggregates, and Inerts - Bricks may be banded and palletized for sale to landscaping contractors; concrete, asphalt, broken brick and block will be stockpiled until it is removed from the site for sale as fill, aggregate, etc. as markets allow.

Soils - recovered and sold to companies who mix soil with compost and sell product to contractors and landscapers. Soil may also be transported to the adjacent C&D Landfill for use as cover. Stone is recovered and sold to contractors.

Drywall Gypsum - is purchased by local farmers who use gypsum to amend soils.

Carpeting and Padding - Local recycling facility, as markets allow.

Baled Plastic - Delivered to local recycled plastics company

Baled Cardboard - Sale in local market for recycled paper products

Shingles - If certified as asbestos-free, will be transported to Jacksonville asphalt plant for use in asphalt production.

#### 2.6.4 *Down-Stream Processing and Storage*

The site drawings show where these activities happen at the Facility.

- Wood will be shredded mechanically and screened for boiler fuel in the stockpile area. Shredded wood will be removed from the site within 5 days
- Drywall will be shredded with a slow speed shredder or broken up by an excavator with a thumb attachment or pulverized with the tracks of a track loader and screened. This activity will take place in the stockpile areas. Storage on site will not exceed 250 tons of separated drywall and 200 tons of processed drywall. Sheetrock will be kept dry except for moisture required to alleviate dust in the shredding process
- Plastics will be shredded mechanically or granulized. This activity will take place in the stockpile areas. Shredding may not be necessary based on market demands.
- Asphalt shingles will be shredded mechanically. This activity will take place in the stockpile area. Shredding may not be necessary based on market demands.
- Concrete and other inerts will be stockpiled for transportation off site. Soils recovered by screening will be tested periodically for heavy metals and asbestos. Soil will also be screened to recover stone. This activity will take place within the stockpile areas.
- Cardboard will be baled or transported loose in containers. This activity will take place on the main site.
- Modular buildings, mobile home buildings and trailer campers will be deconstructed on the tipping floor and the debris processed by hand or on the sort line. The Facility will have no more than two manufactured buildings on site at any one time.

### 3.0 ENVIRONMENTAL MANAGEMENT

#### 3.1 OVERVIEW

This section reviews the overall environmental management tasks required for the successful operation of the facility.

#### 3.2 SURFACE WATER CONTROL

As used herein, the definition of “surface water” is water which results from precipitation or site run-on that has not contacted the debris.

Proper control of surface water will accomplish the following goals:

- Tipping floor and recovery & recycling operations are contained under roof;
- Prevent run-on of surface water into debris handling areas;
- Prevent the run-off of surface water that has come into contact with the debris (i.e. leachate);
- Limit the erosion caused by surface waters; and
- Limit sediments carried off-site by surface waters.

An erosion and sedimentation control plan will be prepared and approved by NCDENR Division of Land Quality (Plans are included in Appendix 3). The plan will describe both short and long term engineered features and practices for preventing erosion and controlling sedimentation at this site. Sedimentation and erosion control activities must be conducted in accordance with the Sedimentation Control Act (NCGS 113A-50, et seq.) and rules promulgated thereunder (15A NCAC 4).

Erosion control measures have been designed within the drainage channels and at points of stormwater discharge. The erosion control maintenance plan includes the following:

- 1) Inspect all sedimentation and erosion control devices for stability and function each week and following each rainfall event.
- 2) Remove silt/sediment from sediment traps and stormwater infiltration ditches when accumulated volume has reached 50% of capacity.

3) Remove accumulated silt/sediment from behind temporary sediment fence when depth exceeds approximately 0.5 feet. Repair and replace silt fence as necessary.

### 3.3 *LEACHATE MANAGEMENT*

The tipping floor and recycling & recovery operations will be contained under roof within a metal framed and metal skinned building. All in-coming materials will be unloaded on the tipping floor beneath the roof. The tipping floor will be sloped to a sump for collection of wash down water for periodic cleaning of the tipping floor. The sump will be plumbed to the on site sanitary sewer system (septic field and distribution). Pre-sorting activities and staged materials for the picking line will be covered by the roof. The loading/staging area for the sort line and the picking line will be covered under roof.

Containerized unprocessed waste will be covered at all times if exposed to weather.

### 3.4 *VECTOR CONTROL*

Control of insects, rodents, and other vermin will be accomplished by periodic cleaning of the Facility. Spilled or wind-blown debris along the access road will be cleaned up daily. The Facility will be cleaned, as necessary, each day to maintain a sanitary operation. Effective vector control measures must be applied at all times.

### 3.5 *DUST CONTROL*

Dust related to debris hauler traffic on the access roads in the stockpile areas will be minimized by using a water truck to limit dust on the gravel portion of the road, if necessary. Fugitive dust emissions are prohibited. The remainder of the facility contains concrete or asphalt pavement.

Contractors on-site to process concrete, brick, block, and sheetrock are required to comply with all applicable air quality requirements including 40 CFR Part 63, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants.

## ***APPENDICES***

- 1. METAL TECH SYSTEMS C&D DEBRIS RECOVERY SYSTEM - DESCRIPTION***
- 2. METAL TECH SYSTEMS C&D DEBRIS RECOVERY SYSTEM - PRELIMINARY PLANS***
- 3. SITE PLANS (PREPARED BY PARKER & ASSOCIATES)***
- 4. PRELIMINARY BUILDING PLANS (PREPARED BY STILLWATER ENGINEERING)***

***APPENDIX 1***

***METAL TECH SYSTEMS C&D DEBRIS  
RECOVERY SYSTEM - DESCRIPTION***

## Equipment Operations - Supplied by Metal Tech Systems

### MetalTech Systems - C&D Debris Recovery System

#### Description of Operation:

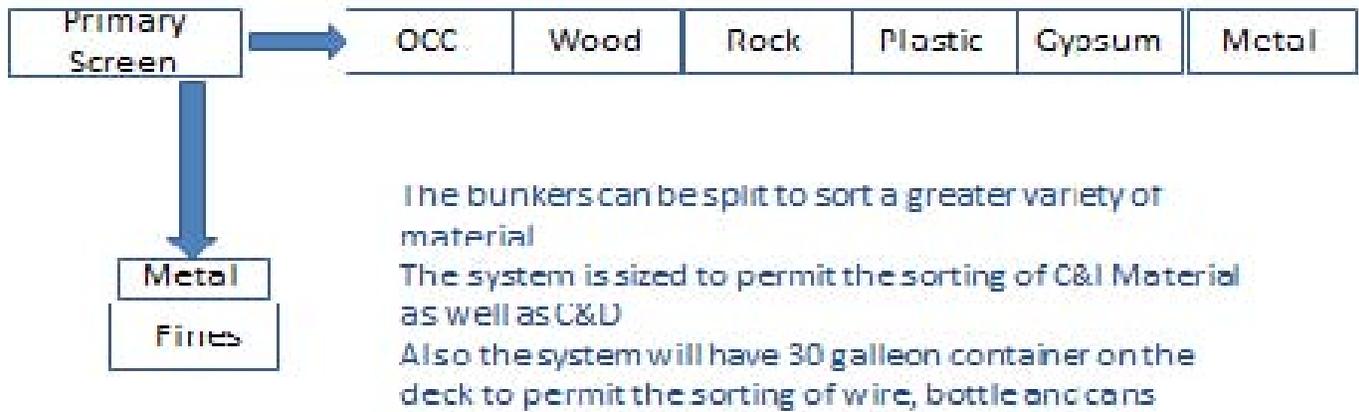
The System will process C&D debris material at a rate of up to 250 cubic yards per hour that is loaded onto a *Vibratory Finger Screen*, manufactured by **General Kinematics Corporation**. The main *Vibratory Finger Screen* will separate the material by size. The plus 2-1/2" material from the main screen will go to the *A-Line Picking Conveyor* to be positively sorted. The minus 2-1/2" material will drop to a *Unders Belt Conveyor* with an *Overhead Magnet* to remove ferrous metal and be deposited on a bunker.

#### Operational Notes:

**Material Weight and Volume:** The operational volume is assumed to be 500 pounds per cubic yard. The requested operational tonnage of 36 tons per hour is approximately 144 cubic yards an hour. The C&D System as designed by MTS has the capacity to exceed that volume since down time and other operational interruptions were not calculated into the loading specification. The Finger Screen and A-Line Picking Conveyor are sized for future expansion of up to 450 yards per hour. The System could be downsized for economic reasons but given the desire to create new markets and expected increased volume the more robust system seems a reasonable choice.

**Primary Screen:** The primary screen selected for the System is a General Kinematics Vibratory Finger Screen. The original intent of the screen was to have 6" finger decks with a B-Line to handle the minus 6" material. It is the recommendation of MTS is that the Primary Finger Deck has a minimum of a 2-1/2" screen sizing. The Vibratory Screen would have the ability to increase the size of the decking if the decision to add a B-line is undertaken. Also the Finger Screen would have several drops in the decking to promote the agitation and rolling of the material. The specification for the screen will be determined at the proposal review meeting but the changes discussed above will not affect pricing.

## Green Recycling Solutions, LLC Flow Diagram



**Fines Material:** The fines material was specified as being  $\frac{3}{4}$ ". It is our opinion that Green Recycling Solutions, LLC as owner of the landfill may be able to use a larger sized material as ADC. The costs of having a secondary screening process if required may be reduced by using a much smaller screen or even a used piece of equipment instead of using a primary screen to create the ADC. The results would be to obtain a useable and economic ADC. We would not recommend using a trommel as the only screen since it is best used on more homogeneous materials for extracting the dirt portion of the waste stream later in the sorting processing.

## MetalTech Systems - C&D Debris Recovery System

### Equipment Description:

#### Item 1 - Finger Screen

One (1) MODEL FNGR-C 72 X 36.0 **SYNCRO-COIL® FINGER-SCREEN®** CONVEYOR, 72" wide by 60" deep by 36'-0" long with Counterpoise Design "D" balancing. Unit is to be installed on a 6° decline, and designed to handle 250 CYPH of C&D material at 10-30 PCF.

#### DESCRIPTION:

##### Trough Construction:

Trough will be fabricated of 5/16" thick mild steel formed to make a vertical sided trough 72" wide by 60" deep by 36'-0" long. The first 6'-4" will be a 3/8" thick load distribution plate followed by eight (8) removable **FINGER-SCREEN®** sections each approximately 3'-9" long having tapered slot openings.

The last portion of the deck will be a solid plate to ease discharge of oversize material.

Minus 3" material passing through **FINGER-SCREEN®** sections will be conveyed on a lower deck, and will discharge at the end of the unit.

##### Trough Supporting System:

The **SYNCRO-COIL®** conveyor has a synchronized frequency trough supporting system comprised of heavy-duty coil springs and stabilizer arms. The coil reactor springs are fabricated of high grade alloy spring steel, 100% shot peened; magnaflux inspected, and kept within conservative stress limits far below their normal fatigue stress range.

The stabilizer arms are high strength alloy castings fitted with heavy-duty steel encased rubber torsion bushings at each of the articulation points. Both springs and arms are held in place by domestically manufactured and certified high tensile bolts, hardened washer and lock nuts.

##### Eccentric Drive:

Unit will be equipped with exclusive, patented, heavy-duty **SYNCRO-CUSHION®** drive wherein a solid, single piece, alloy steel machined eccentric shaft, with a fixed eccentric, operates in heavy-duty self-aligning bearings to provide suitable trough stroke. Bearings are specially designed for vibratory service and feature special internal fit.

Drive trough connection will be equipped with alloy steel coil springs which permit the shaft oscillating action to fully synchronize with the natural frequency of the reactor spring system, thereby reducing drive thrusts to a minimum, reducing starting torque and eliminating high stress concentration in the drive bracket connection.

This "cushioned drive" design allows repeated starts and stops of the unit under a full product load, and accommodates surge loading, or other system upset conditions, without overstressing the various drive components.

##### Motor:

Unit will be provided with a 50 HP, 1200 RPM, T.E.F.C., Nema Design "B" normal torque motor wound for 230/460 volt, 3 phase, 60 cycle power supply.

**Base:**

The unit will be equipped with a rugged fabricated steel base comprised primarily of standard structural members arranged for mounting in an elevated location

**Counterpoise Dynamic Balancing:**

Unit will be dynamically counter-balanced by a positively driven balancer mass which moves 180° out-of-phase with the trough mass. The weight of the balancer is determined by consideration of the normal vibrating weight of the trough, and the various live load conditions that may occur. The balancer assembly is mounted to a coil spring reactor system similar to that supporting the trough. A single **SYNCRO-CUSHION®** eccentric drive assembly and coil spring equipped pivot linkage assembly work together to maintain the correct out-of-phase relationship to assure full balancing under all loading conditions.

## Item 2- A- Line Picking Conveyor

One (1) 72" wide by 99' center to center long Variable Speed Pick Belt Conveyor.

Description:

Design: Slider bed in picking areas and troughing belt on inclined section

Speed: 60 FPM with VFD for variable speed operation

Length: 99' long

Width: 72"

Motor: 7.5 HP, 1800 RPM, 230/460V, 60 Hz, 3 phase

Belting: Black heavy-duty belting 2-ply

Safety Guards: All rotating parts guarded in accordance with OSHA regulations

Head Pulley: Drum Type, crowned, 14" dia. x 75" face, 3/8" herringbone lagging, 3-7/16" bearings and shafting

Tail Pulley: Wing Type, crowned, 14" dia. x 75" face, 2-15/16" bearings and shafting

Take-up Frame: 9" travel, wide slot type

**□ Exact length of the conveyor and engineering specifications are subject to final design criteria. The stated sizes and material are used to indicate type and class of material used in construction. The length of the incline section may vary with design criteria for material loading height.**

### Item 3 - Picking Platform

One (1) Elevated Picking Platform consisting of:

- Heavy-Duty structural steel picking platform with support structure
- Bunker spacing is 12' wide x 12' tall
- Access Non-Skid Stairways, Handrails, toe kicks, and solid decking platform panels
- Twelve (12) 36" x 48" picking boxes spaced for center of bunker

### Item 4- Unders Transfer Conveyor

One (1) 36" wide **Idler Transfer Conveyor** consisting of the following:

Type: Idler

Material: C&D Debris (Unders, minus 2-1/2")

Material density: Estimated at 10 to 30 Lb. /ft<sup>3</sup>

Speed: 250 FPM

Length 38' inclined

Width: 36"

Motor: Baldor or equal Heavy Duty Motor, 1800 RPM, 230/460V, 60Hz, 3 Ph., TEFC

Reducer: Dodge Shaft Mount Speed Reducer

Shafting 3-7/16" cold rolled precision shafting

Bearings: Rex Type E Pillow Block

Belting: Black HEAVY DUTY 1/4" Chevron Cleated 3PLY-330 PIW 3/16" x BB

Fastener System: FLEXCO Bolt Hinged Fastener 375 Stainless Steel

Pulleys: Head: 14" Dia. Heavy Duty Stainless Steel Drum Pulley crown faced and lagged 3/8" thick diamond pattern complete with XT Hubs and bushings.

Tail: 12" Dia. Wing type, crown faced - Self-cleaning with XT Hubs and bushings

Frame: Structural channel stringers with angle cross members and tubing supports.

Take-up: Telescopic Screw Take-up

Safety Guards: All rotating parts guarded in accordance with OSHA regulations

Paint: Industrial Blue

### **Item 5- Overhead Magnet- (Unit 3)**

One (1) Dings Model 15PCM-36 in Line Self Cleaning Permanent Magnet

36 inch belt width, 250 FPM belt speed, 6 to 8 inch material depth, 30 PCF. Magnet to be suspended inline at the head pulley at 12 to 13 inches.

### **Item 6 - Control Panel**

One (1) Integral control panel assembly for the MetalTech Sorting System will consist of a single control panel enclosure mounted within 15' of the picking platform and One (1) remote operator push button station.

The control panel will contain a main disconnect for the System and all necessary fuses, fuse blocks, circuit breakers, motor starting equipment, terminal blocks, push buttons and pilot lights required for complete interlock operation. The variable speed picking belt is supplied with a variable frequency drive to enable the speed of the belt to be adjusted to the load.

Starting and stopping of the system will be initiated by push button control by the operator located on the face of the control panel. Speed control for the variable speed picking belt will also be located on the face of the control panel.

The remote operator push button station will allow for the starting, stopping and pausing of the system.

Field disconnect switches will be provided for each motor and located near the respective motor for each of the machines. Pull cord Stop switches will be provided on the variable speed picking belt.

All control equipment and enclosures will be suitable for indoor or outdoor use.

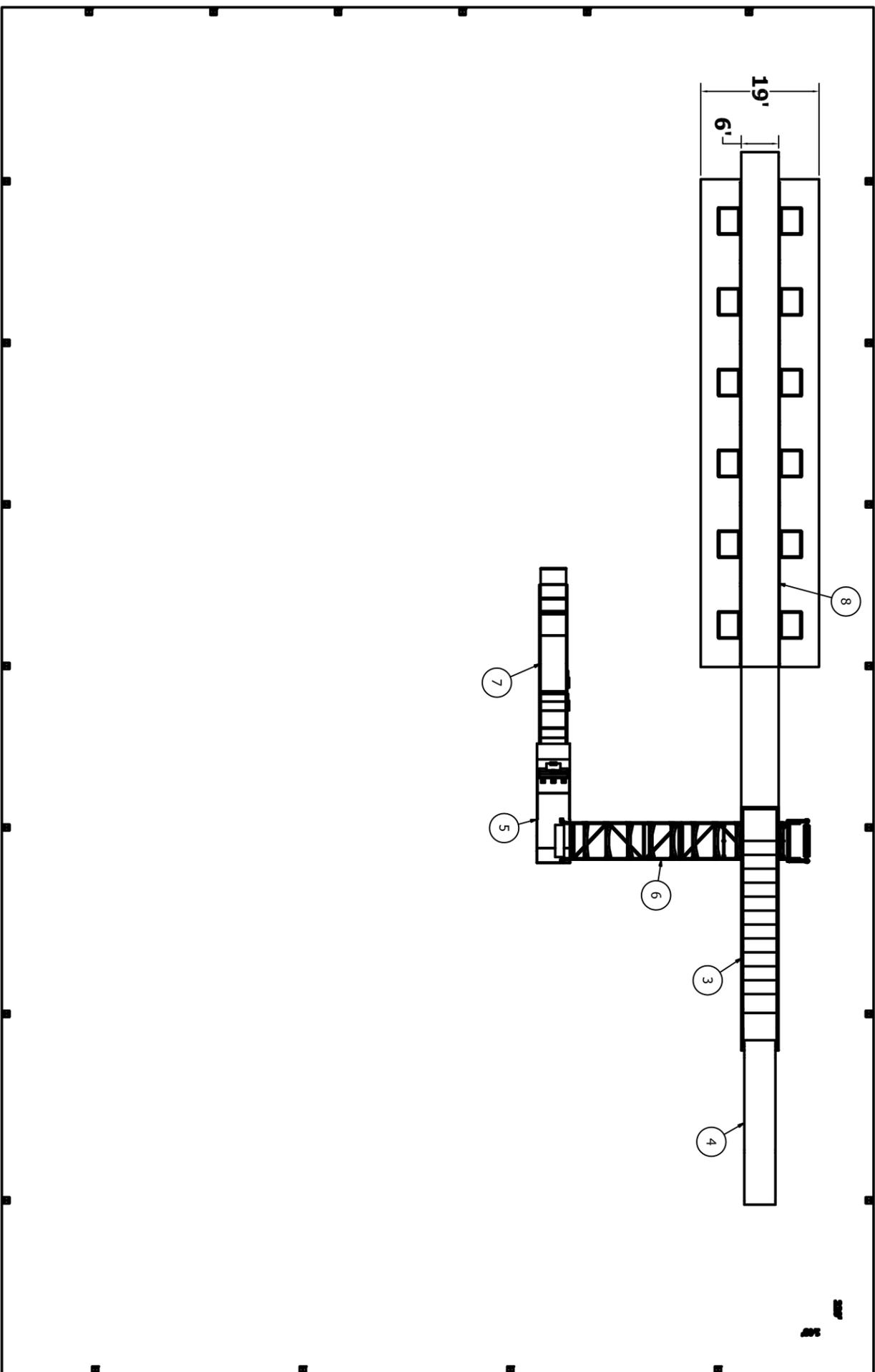
**NOTE:** System components will be shipped in the most complete manner as possible to allow for quick and efficient installation and operation once delivered

**APPENDIX 2**

**METAL TECH SYSTEMS C&D DEBRIS**

**RECOVERY SYSTEM - PRELIMINARY PLANS**

*(Plans have been reduced to 11" X 17" for reference purposes only)*



PARTS LIST		
ITEM	QTY	DESCRIPTION
3	1	Primary Screen
4	1	Apron - Feed Conveyor
5	1	Secondary Screen
6	1	36" Fines Transfer Conveyor
7	1	B-Line Destoner
8	1	Idler/Sliderbed Picking Conveyor

**MTS**  
 MetaTech Systems  
 Engineering Services  
 P.O. BOX 3217  
 Pawleys Island, SC 29585

**PROJECT**  
**GRS Building Layout**  
**SHEET TITLE**  
**GA\_V3 - Plan View**

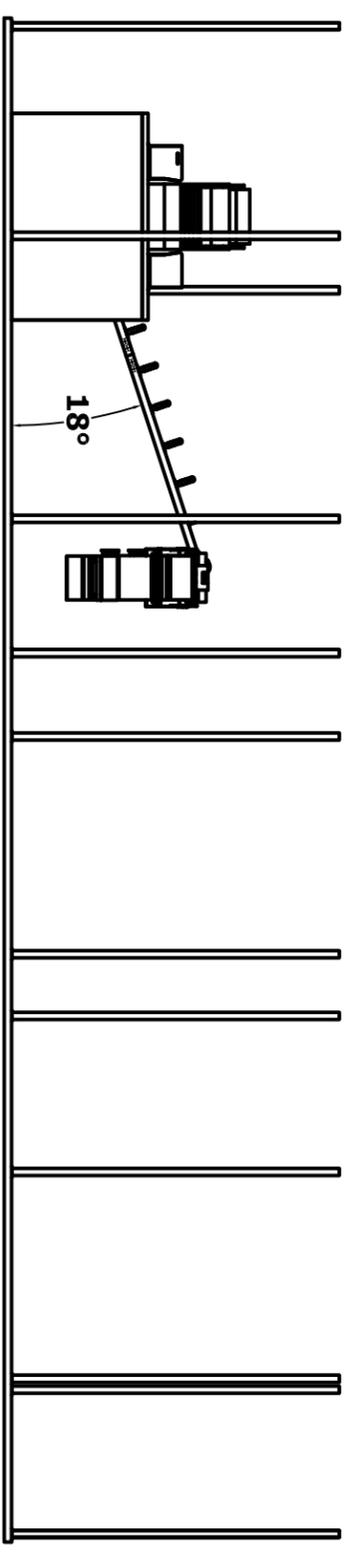
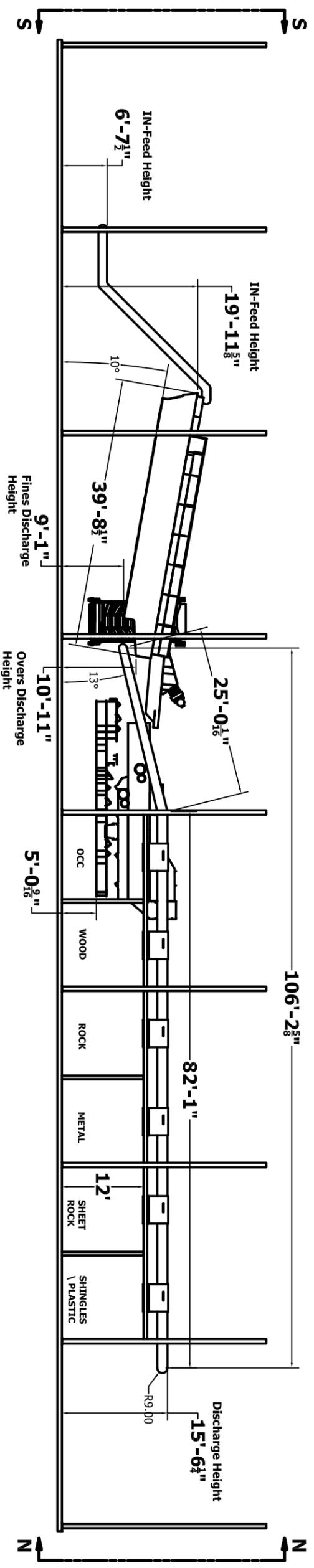
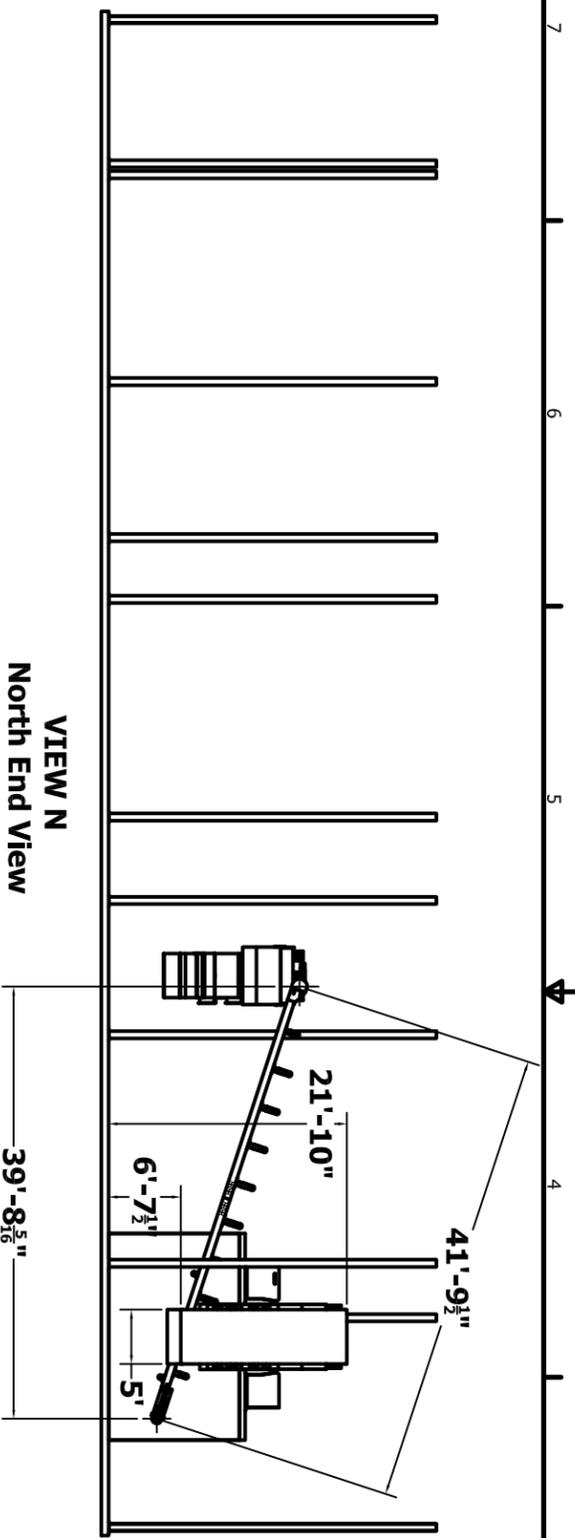
REVISIONS	
DATE	DESCRIPTION

DATE: **02/13/2012**  
 CHECKED: \_\_\_\_\_  
 DRAWN: \_\_\_\_\_  
 SCALE: **FREE**  
 PROJECT NUMBER: **GRS GA**

DWG NO: \_\_\_\_\_  
 SHEET: **1 OF 4**

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VIEW N  
North End View

VIEW S  
South End View

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Engineering Services  
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Pawleys Island, SC 29585

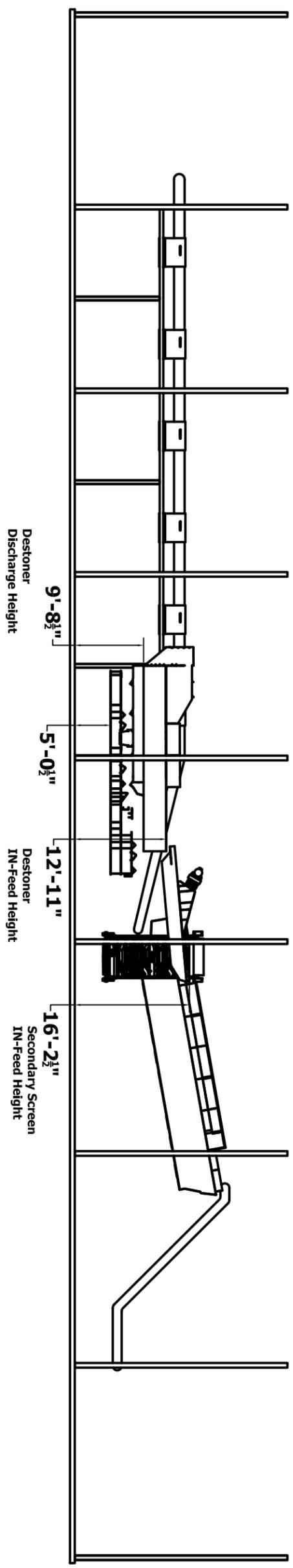
PROJECT  
**GRS Building Layout**  
SHEET TITLE  
**GA\_V3 - Elevation Views**

REVISIONS	DATE	DESCRIPTION

APPROVED  
DATE  
**02/13/2012**  
CHECKED

DRAWN  
Michael Hewitt  
SCALE  
**FREE**  
PROJECT NUMBER  
**GRS GA**

DWG NO  
SHEET  
2 OF 4



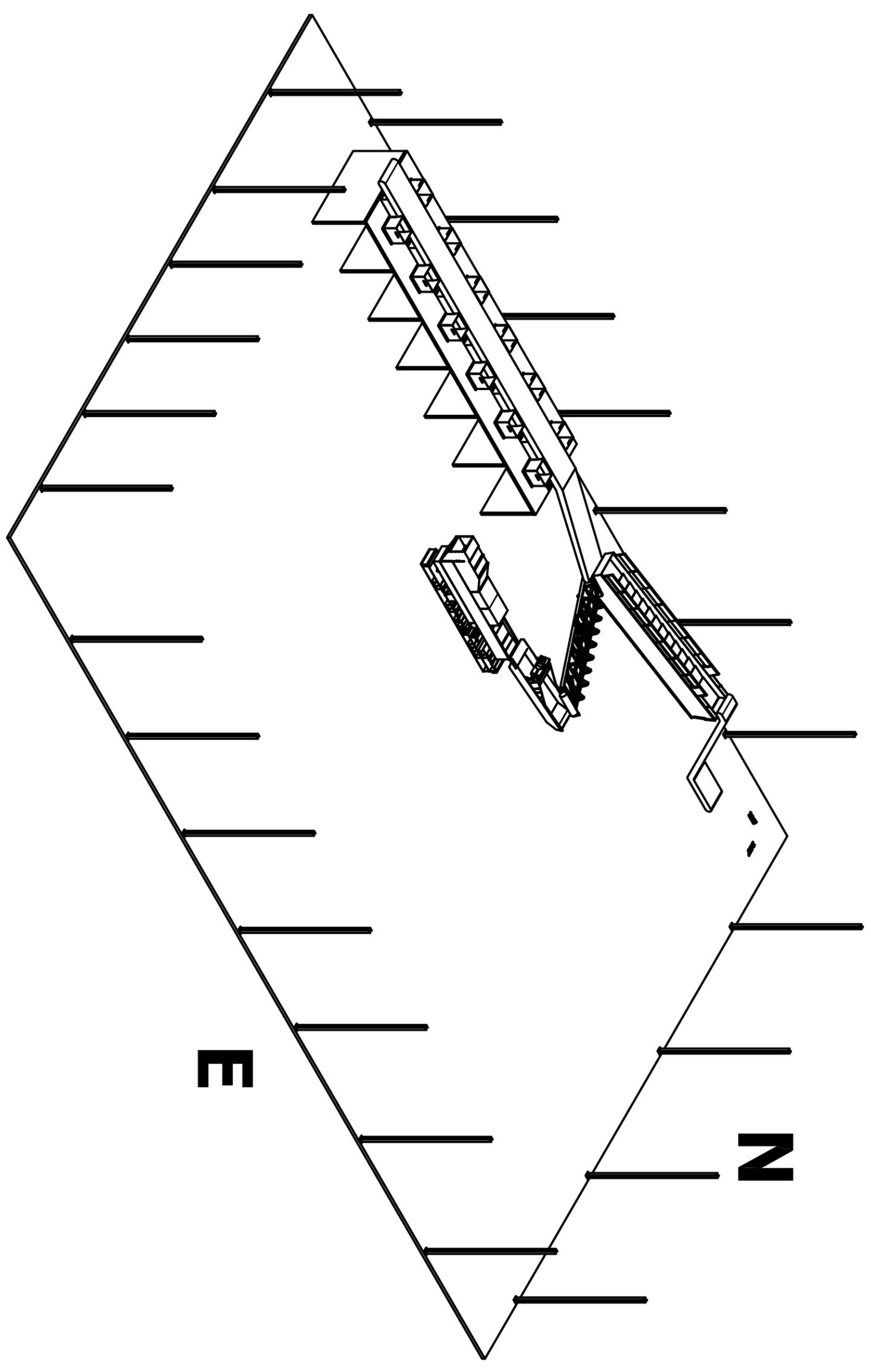
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 Engineering Services  
 P.O. BOX 3217  
 Pawleys Island, SC 29585

PROJECT  
**GRS Building Layout**  
 SHEET TITLE  
**GA\_V3 - Rear Elevation View**

REVISIONS	
NO.	DESCRIPTION

APPROVED  
 DATE **02/13/2012**  
 CHECKED  
 DRAWN  
 Michael Hewitt  
 SCALE **FREE**  
 PROJECT NUMBER  
**GRS GA**  
 DWG NO  
 SHEET  
 3 OF 4



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 Pawleys Island, SC 29585

PROJECT  
**GRS Building Layout**  
 SHEET TITLE  
**GA\_V3 - ISO View**

REVISIONS	
NO.	DESCRIPTION

APPROVED  
 DATE **02/13/2012**  
 CHECKED  
 DRAWN  
 Michael Hewitt  
 SCALE **FREE**  
 PROJECT NUMBER  
**GRS GA**  
 DWG NO  
 SHEET

4 OF 4  
 SHEET

**APPENDIX 3**

**SITE PLANS (PREPARED BY PARKER & ASSOCIATES)**

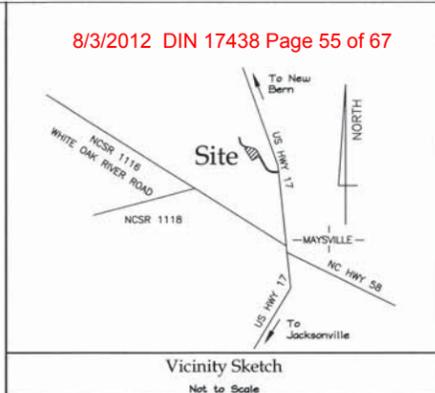
*(Plans have been reduced to 11" X 17" for reference purposes only)*

LEGEND

- Conc. - Concrete
- D.B. - Deed Book
- Ex. - Existing
- FFE - Finished Floor Elevation
- M.B. - Map Book
- Pg. - Page
- R - Radius
- R/W - Right-of-way
- Typ. - Typical

- Existing Fence
- Fence
- Wetlands
- Woodline

Heyerhauser Co.  
D.B. 199, Pg. 157  
D.B. 110, Pg. 249

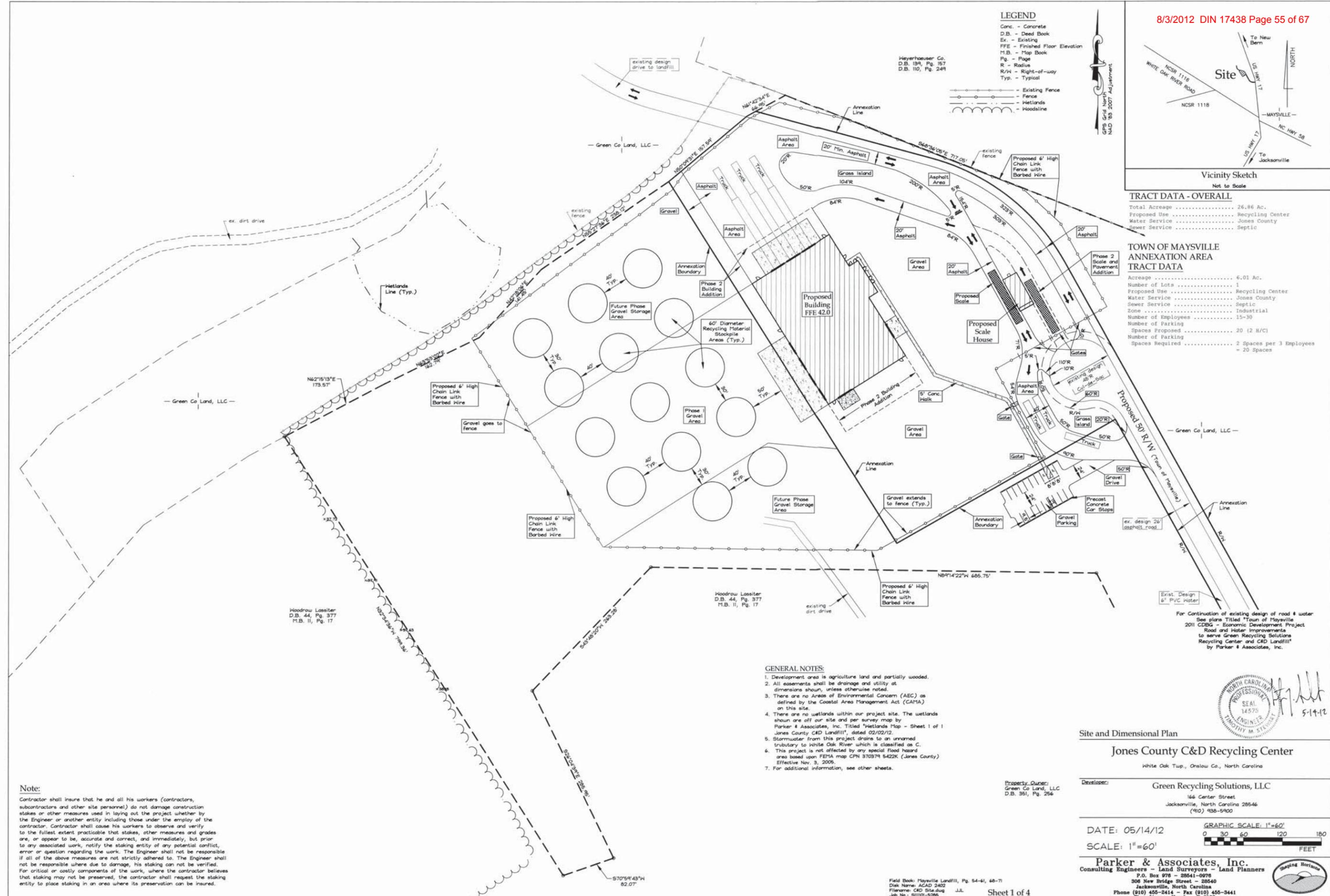


TRACT DATA - OVERALL

Total Acreage ..... 26.86 Ac.  
Proposed Use ..... Recycling Center  
Water Service ..... Jones County  
Sewer Service ..... Septic

TOWN OF MAYSVILLE ANNEXATION AREA TRACT DATA

Acreage ..... 6.01 Ac.  
Number of Lots ..... 1  
Proposed Use ..... Recycling Center  
Water Service ..... Jones County  
Sewer Service ..... Septic  
Zone ..... Industrial  
Number of Employees ..... 15-30  
Number of Parking Spaces Proposed ..... 20 (2 R/C)  
Number of Parking Spaces Required ..... 2 Spaces per 3 Employees = 20 Spaces



GENERAL NOTES:

1. Development area is agriculture land and partially wooded.
2. All easements shall be drainage and utility at dimensions shown, unless otherwise noted.
3. There are no Areas of Environmental Concern (AEC) as defined by the Coastal Area Management Act (CAMA) on this site.
4. There are no wetlands within our project site. The wetlands shown are off our site and per survey map by Parker & Associates, Inc. Titled "Wetlands Map - Sheet 1 of 1 Jones County C&D Landfill", dated 02/02/12.
5. Stormwater from this project drains to an unnamed tributary to White Oak River which is classified as C.
6. This project is not affected by any special flood hazard area based upon FEMA map CPN 370379 S422K (Jones County) Effective Nov. 3, 2005.
7. For additional information, see other sheets.

Note:

Contractor shall insure that he and all his workers (contractors, subcontractors and other site personnel) do not damage construction stakes or other measures used in laying out the project whether by the Engineer or another entity including those under the employ of the contractor. Contractor shall cause his workers to observe and verify to the fullest extent practicable that stakes, other measures and grades are, or appear to be, accurate and correct, and immediately, but prior to any associated work, notify the staking entity of any potential conflict, error or question regarding the work. The Engineer shall not be responsible if all of the above measures are not strictly adhered to. The Engineer shall not be responsible where due to damage, his staking can not be verified. For critical or costly components of the work, where the contractor believes that staking may not be preserved, the contractor shall request the staking entity to place staking in an area where its preservation can be insured.

Property Owner:  
Green Co Land, LLC  
D.B. 351, Pg. 256

Site and Dimensional Plan

Jones County C&D Recycling Center

White Oak Twp., Onslow Co., North Carolina

Developer: Green Recycling Solutions, LLC

166 Center Street  
Jacksonville, North Carolina 28546  
(910) 938-5900

DATE: 05/14/12

SCALE: 1"=60'

**Parker & Associates, Inc.**  
Consulting Engineers - Land Surveyors - Land Planners  
P.O. Box 978 - 28541-0978  
306 New Bridge Street - 28540  
Jacksonville, North Carolina  
Phone (910) 455-2414 - Fax (910) 455-8441  
Firm License Number: F-1108



Field Book: Maysville Landfill, Pg. 54-61, 60-71  
Disk Name: ACAD 2402  
Filename: CAD Site.dwg  
Job No.: 511101-5205

**TRACT DATA - OVERALL**

Total Acreage ..... 26.86 Ac.  
 Proposed Use ..... Recycling Center  
 Water Service ..... Jones County  
 Sewer Service ..... Septic

**TOWN OF MAYSVILLE ANNEXATION AREA TRACT DATA**

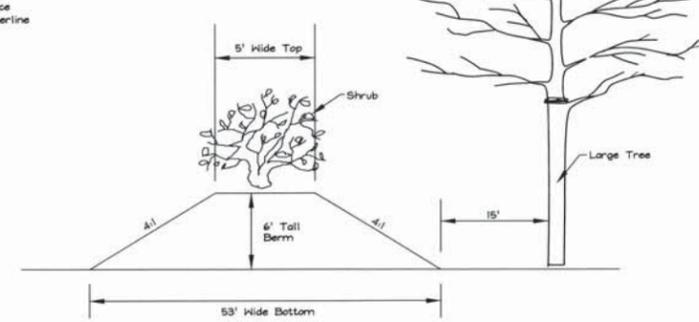
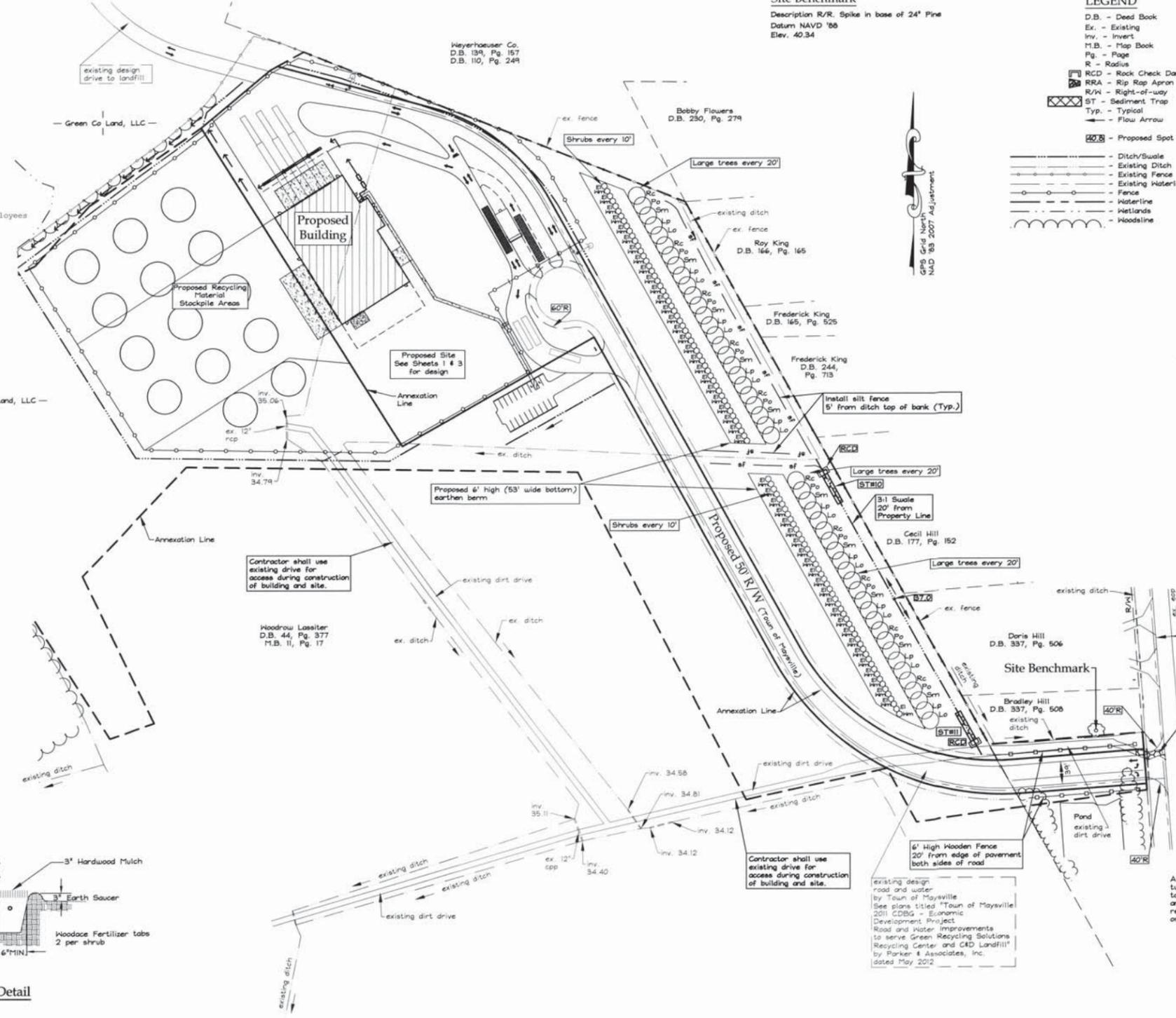
Acreage ..... 6.01 Ac.  
 Number of Lots ..... 1  
 Proposed Use ..... Recycling Center  
 Water Service ..... Jones County  
 Sewer Service ..... Septic  
 Zone ..... Industrial  
 Number of Employees ..... 15-30  
 Number of Parking .....  
 Spaces Proposed ..... 20 (2 H/C)  
 Number of Parking .....  
 Spaces Required ..... 2 Spaces per 3 Employees = 20 Spaces

**Site Benchmark**

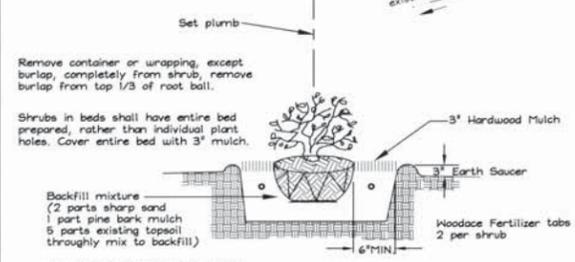
Description R/R Spike in base of 24" Pine  
 Datum NAVD '86  
 Elev. 40.34

**LEGEND**

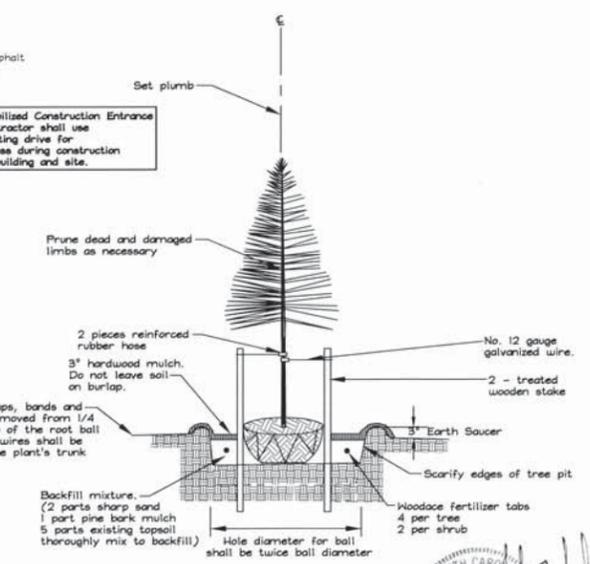
- D.B. - Deed Book
- Ex. - Existing
- Inv. - Invert
- M.B. - Map Book
- Pg. - Page
- R - Radius
- RCD - Rock Check Dam
- RRA - Rip Rap Apron
- R/W - Right-of-Way
- ST - Sediment Trap
- Typ. - Typical
- Flow Arrow
- 40'± - Proposed Spot Elevation
- Ditch/Suole
- Existing Ditch
- Existing Fence
- Existing Waterline
- Fence
- Waterline
- Wetlands
- Woodline



**Berm & Landscaping Buffer Detail**  
Not to Scale



**Shrub Planting Detail**  
Not to scale



**Canopy Tree Planting Detail**  
Not to scale

**Berm Landscaping Chart**

Shrubs		Quantity	Key	Common Name	Botanical Name	Shrub Type	At Maturity
							Height Spread
30	SH	Thorny Elaeagnus	Staeagnus pungens	Evergreen	10' - 15'	15' - 20'	
50	WM	Wax Myrtle	Myrica pensylvanica	Evergreen	10' - 15'	8' - 10'	
100	Total						

Note: Plant shrubs on top of berm 10' apart.

**Berm Landscaping Chart**

Large Canopy Trees		Quantity	Key	Common Name	Botanical Name	Tree Type	At Maturity
							Height Spread
10	RC	Eastern Red Cedar	Juniperus Virginiana	Evergreen	30' - 40'	10' - 20'	
10	PO	Pin Oak	Quercus Palustris	Deciduous	60' - 80'	40' - 50'	
10	SM	Southern Magnolia	Magnolia Grandiflora	Evergreen	40' - 60'	25' - 30'	
10	LP	Loblolly Pine	Pinus Taeda	Evergreen	70' - 80'	30' - 40'	
10	LO	Live Oak	Quercus Virginiana	Evergreen	30' - 50'	50' - 80'	
50	Total						

Note: Plant large trees 15' from base of berm, spaced at 20'.

**Landscaping Notes:**

- Each large tree at the time of planting shall be a minimum of 2 inches in caliper and 8 feet in height.
- Each shrub at the time of planting shall be a minimum of 3 gallons.
- The developer may substitute landscaping species as long as landscaping ordinances are met. Substitutions should be confirmed with the Engineer.

**Overall Plan**

**Jones County C&D Recycling Center**  
 White Oak Twp., Onslow Co., North Carolina  
 Developer: **Green Recycling Solutions, LLC**  
 166 Center Street  
 Jacksonville, North Carolina 28546  
 (910) 436-5400

DATE: 05/14/12  
 SCALE: 1"=100'



**Parker & Associates, Inc.**  
 Consulting Engineers - Land Surveyors - Land Planners  
 P.O. Box 978 - 28541-0978  
 306 New Bridge Street - 28540  
 Jacksonville, North Carolina  
 Phone (910) 455-2414 - Fax (910) 455-3441  
 Firm License Number: P-0108



Erosion And Sedimentation Control Notes:

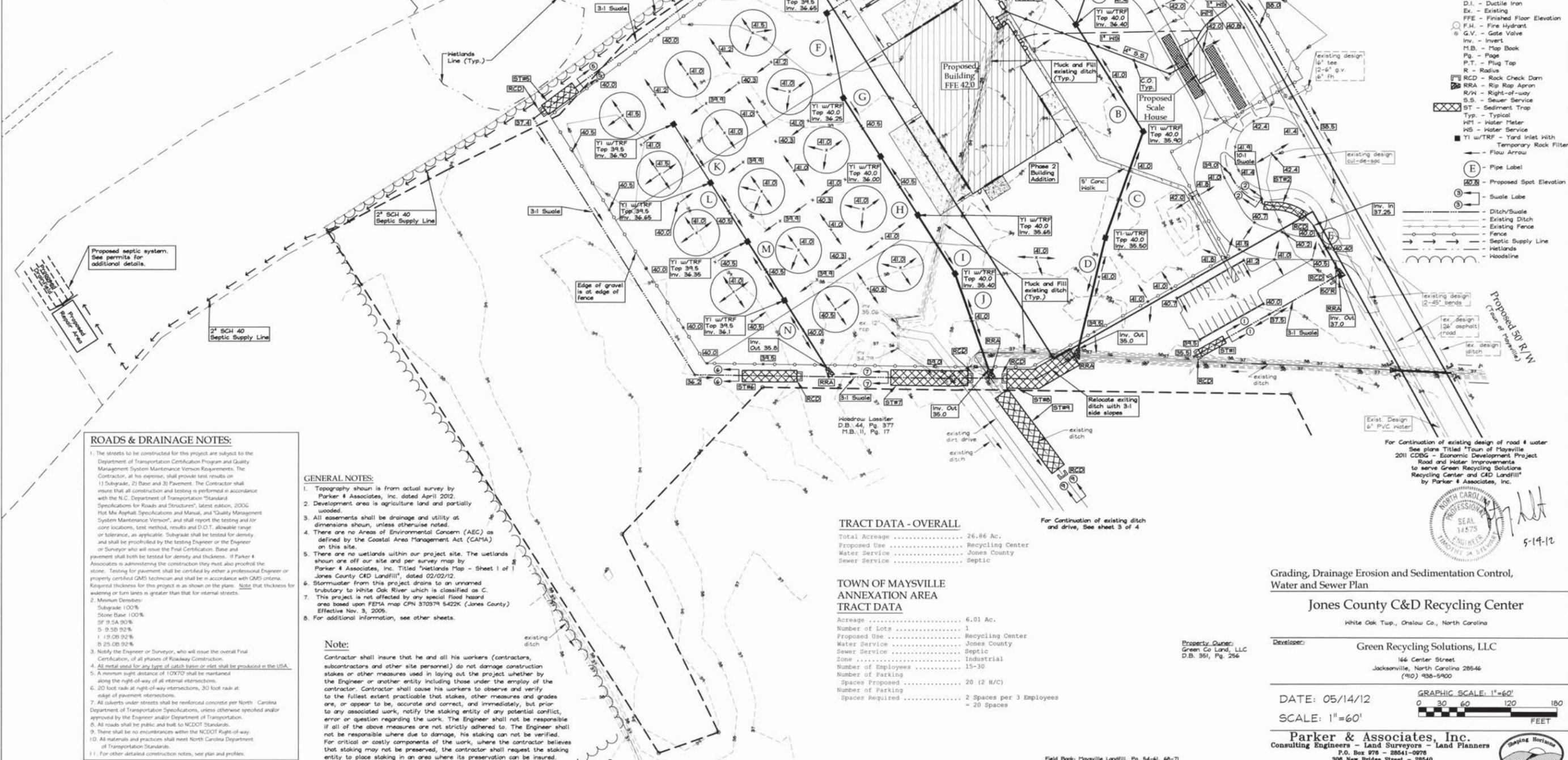
- 1. Sediment control devices and structure shall be installed, maintained and amended as needed to provide effective control of accelerated sedimentation... 2. Construction Sequence: A. Notify Owner, Engineer and NCDENR, Land Quality Section prior to beginning construction...

Table with 2 columns: Material and Application Rate. Includes items like Lime (3000 lbs./ac.), Fertilizer (10-10-10) (750 lbs./ac.), Mulch (2 tons/ac.), and various seeding materials like Common Bermuda and Rye Grain.

Site Benchmark Description R/R. Spike in base of 24" Pine Datum NAVD '88 Elev. 40.34 See Overall Plan sheet 3 of 4 for location.



- LEGEND: B.O. - Blow Off, C.O. - Clean Out, Conc. - Concrete, D.B. - Deed Book, D.I. - Ductile Iron, Ex. - Existing, FFE - Finished Floor Elevation, F.H. - Fire Hydrant, G.V. - Gate Valve, Inv. - Invert, M.B. - Map Book, Pg. - Page, P.T. - Plug Tap, R - Radius, RCD - Rock Check Dam, RRA - Rip Rap Apron, R/W - Right-of-way, S.S. - Sewer Service, ST - Sediment Trap, Typ. - Typical, WM - Water Meter, WS - Water Service, YI w/TRF - Yard Inlet with Temporary Rock Filter, Flow Arrow, Pipe Label, Proposed Spot Elevation, Swale Label, Ditch/Swale, Existing Ditch, Existing Fence, Fence, Septic Supply Line, Wetlands, Woodline.



ROADS & DRAINAGE NOTES: 1. The streets to be constructed for this project are subject to the Department of Transportation Certification Program and Quality Management System Maintenance Version Requirements. The Contractor, at his expense, shall provide test results on 1) Subgrade, 2) Base and 3) Pavement...

GENERAL NOTES: 1. Topography shown is from actual survey by Parker & Associates, Inc. dated April 2012. 2. Development area is agriculture land and partially wooded. 3. All easements shall be drainage and utility at dimensions shown, unless otherwise noted.

Note: Contractor shall insure that he and all his workers (contractors, subcontractors and other site personnel) do not damage construction stakes or other measures used in laying out the project whether by the Engineer or another entity including those under the employ of the contractor.

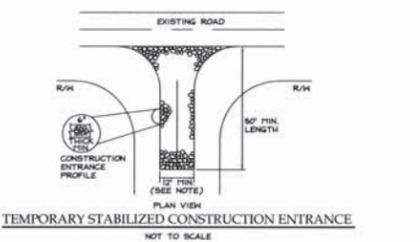
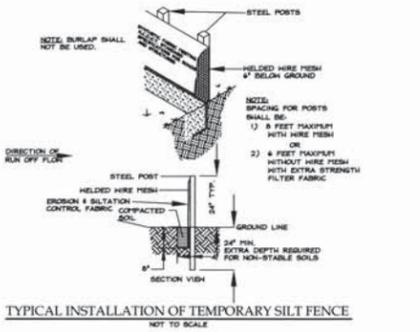
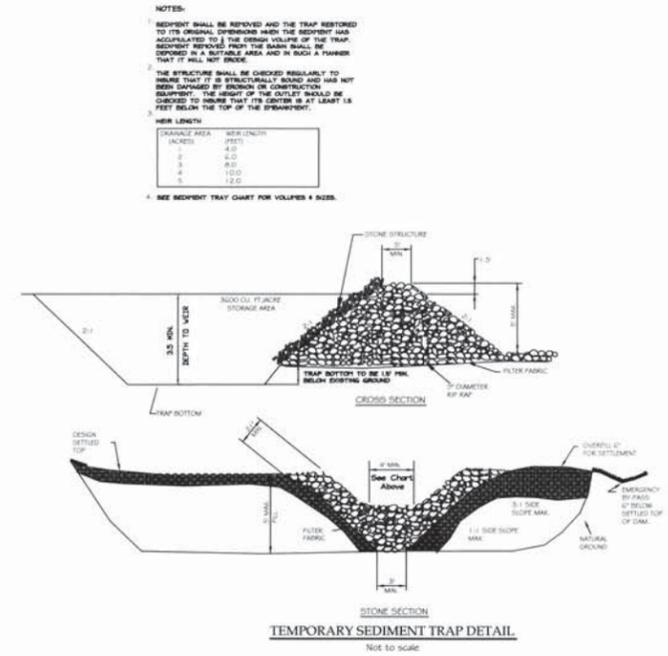
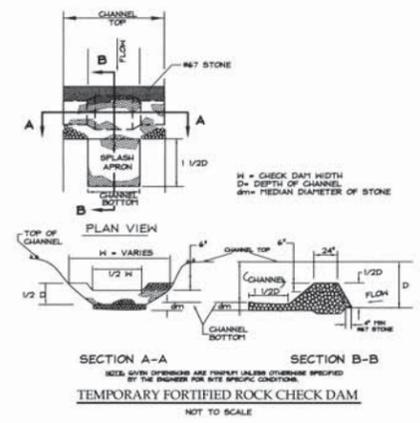
TRACT DATA - OVERALL: Total Acreage 26.86 Ac., Proposed Use Recycling Center, Water Service Jones County, Sewer Service Septic.

TOWN OF MAYSVILLE ANNEXATION AREA TRACT DATA: Acreage 6.01 Ac., Number of Lots 1, Proposed Use Recycling Center, Water Service Jones County, Sewer Service Septic, Zone Industrial, Number of Employees 15-30, Number of Parking 20 (2 H/C), Spaces Proposed 20 (2 H/C), Spaces Required 2 Spaces per 3 Employees = 20 Spaces.

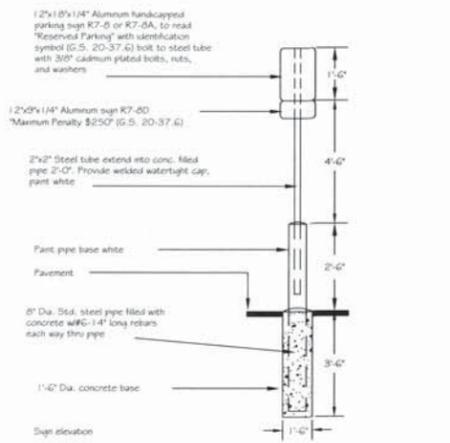
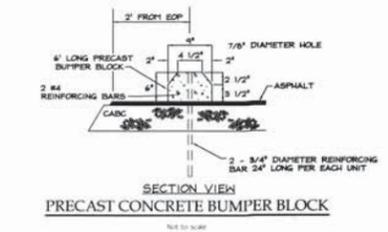
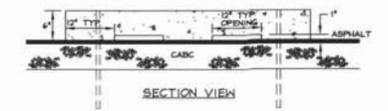
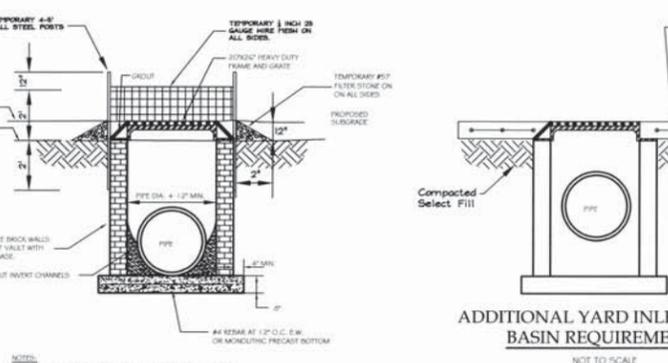
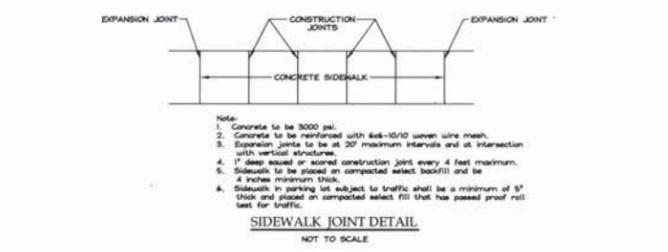
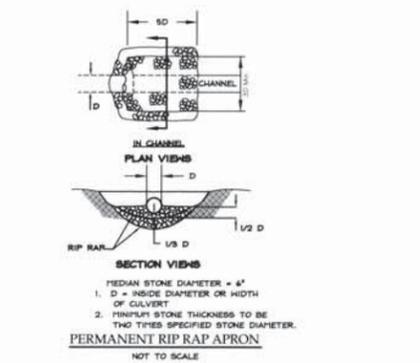
For Continuation of existing design of road & water See plans Titled "Town of Maysville 2011 CDBG - Economic Development Project Road and Water Improvements to serve Green Recycling Solutions by Parker & Associates, Inc."



Grading, Drainage Erosion and Sedimentation Control, Water and Sewer Plan. Jones County C&D Recycling Center. White Oak Twp., Onslow Co., North Carolina. Developer: Green Recycling Solutions, LLC. 166 Center Street, Jacksonville, North Carolina 28546. DATE: 05/14/12. SCALE: 1"=60'. Parker & Associates, Inc. Consulting Engineers - Land Surveyors - Land Planners. 306 New Bridge Street - 28540, Jacksonville, North Carolina. Phone (910) 455-2414 - Fax (910) 455-9441. Firm License Number: P-0109.



- Construction Specifications**
- Stone size - Use MSHA size No. 2 (2-1/2" to 1") or AASHTO designation #48, size No. 2 (2-1/2" to 1-1/2"). Use crushed stone.
  - Length - As effective, but not less than 50 feet.
  - Thickness - Not less than 4.5 inches.
  - Height - Not less than full width of all points of ingress or egress. Minimum of 12".
  - Flowing - When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch, or watercourse through use of sandbags, gravel, boards, or other approved methods.
  - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment, spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.



**Drainage Pipe Chart**

PIPE	AREA (acres)	Q10 (cfs)	DIAMETER (inches)	GRADE (ft / ft)	LENGTH (lf)	OUTLET VELOCITY (fps)
A	0.03	5.1	18" RCP	0.003	160	--
B	2.12	13.0	24" RCP	0.0035	164	--
C	2.91	18.9	30" RCP	0.0025	146	--
D	3.70	24.0	30" RCP	0.0035	148	5.6
E	0.52	3.0	15" RCP	0.003	90	--
F	1.17	7.6	2-15" RCP	0.0035	112	--
G	1.54	10.0	24" RCP	0.0025	90	--
H	1.95	12.6	24" RCP	0.0035	90	--
I	2.39	15.5	30" RCP	0.0025	90	--
J	2.70	17.5	30" RCP	0.0025	132	4.7
K	0.41	2.7	15" RCP	0.003	90	--
L	0.82	5.3	18" RCP	0.0035	90	--
M	1.23	8.0	24" RCP	0.0025	90	--
N	1.63	10.6	24" RCP	0.0025	104	4.1

Q=CIA  
C=Varies  
to=5 min.  
110=7.17 in/hr.

RCP = Reinforced Concrete Pipe  
CFS = Cubic Feet per Second  
LF = Linear Feet  
FPS = Feet per Second

- NOTE:**
- Contractor shall use invert elevations shown on plans for construction. Grades shown above are rounded.
  - Lengths shown are @ CB to @ CB. Actual pipe lengths will be less.

**Swale Calculations Chart**

Section	Area (acres)	Q10 (cfs)	Side-Slope	Channel Slope (ft)	Velocity (bare) (fps)	Velocity (grassed) (fps)
1 - 1	0.40	2.3	3:1	0.018	3.6	1.8
2 - 2	0.55	3.2	10:1	0.0145	3.6	1.8
3 - 3	0.37	2.1	3:1	0.0075	2.6	1.3
4 - 4	0.67	3.9	3:1	0.005	2.6	1.3
5 - 5	0.81	4.7	3:1	0.003	2.2	1.1
6 - 6	1.99	11.5	3:1	0.003	2.8	1.4
7 - 7	4.21	24.2	3:1	0.003	3.3	1.7
8 - 8	4.18	25.6	3:1	0.003	3.4	1.7
9 - 9	11.1	67.9	3:1	0.002	3.7	1.9

Q=CIA  
C=Varies  
110=7.17 in/hr.

Friction Factors  
n=0.02 Bare Earth  
n=0.05 Grass  
n=1.49 R 2/3 s 1/2

- NOTE:**
- See site plan for typical section locations.
  - Line bottom of all ditches and swales with American Excelsior Curlex Blanket.

**Sediment Trap Chart**

Sediment Trap	Disturbed Area (acres)	Volume (Cubic Yards)	Size (Length x Width x Depth)
1	0.40	54	36'L x 10'W x 4'D
2	0.55	74	50'L x 10'W x 4'D
3	0.37	50	34'L x 10'W x 4'D
4	0.67	90	61'L x 10'W x 4'D
5	0.81	108	49'L x 15'W x 4'D
6	1.18	157	71'L x 15'W x 4'D
7	2.22	296	100'L x 20'W x 4'D
8	3.2	427	115'L x 25'W x 4'D
9	2.7	360	122'L x 20'W x 4'D
10	0.62	83	56'L x 10'W x 4'D
11	0.62	83	56'L x 10'W x 4'D

Design Standard - 133.3 CY Sediment Trap Volume per Disturbed Acre.

Property Owner: Green Co Land, LLC  
D.B. 351, Pg. 256

Developer: Green Recycling Solutions, LLC  
166 Center Street  
Jacksonville, North Carolina 28546  
(910) 436-5900

DATE: 05/14/12  
SCALE: AS NOTED

**Parker & Associates, Inc.**  
Consulting Engineers - Land Surveyors - Land Planners  
P.O. Box 978 - 28541-0978  
306 New Bridge Street - 28540  
Jacksonville, North Carolina  
Phone (910) 455-2414 - Fax (910) 455-8441  
Firm License Number P-1108



**Jones County C&D Recycling Center**  
White Oak Twp., Onslow Co., North Carolina

**Green Recycling Solutions, LLC**  
166 Center Street  
Jacksonville, North Carolina 28546  
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**APPENDIX 4**

**PRELIMINARY BUILDING PLANS (PREPARED BY STILLWATER  
ENGINEERING)**

*(Plans have been reduced to 11" X 17" for reference purposes only)*

# GREEN RECYCLING SOLUTIONS, LLC

## JONES COUNTY C&D LANDFILL

### MAYSVILLE, NORTH CAROLINA

## APPENDIX B - RECYCLE BUILDING

## DRAWING INDEX

SHEET #	SHEET NAME	DESCRIPTION
1	T-1	TITLE SHEET & APPENDIX B
		CIVIL
		BY OTHERS
2	S-1	STRUCTURAL FLOOR PLAN - RECYCLE BUILDING
3	S-2	FOUNDATION PLAN - RECYCLE BUILDING
4	S-3	ENLARGED FLOOR PLAN & DETAILS FLOOR/ROUND, PLANS - SCALE HOUSE/OFFICE
5	S-4	FLOOR/ROUND, PLANS - SCALE HOUSE/OFFICE
6	S-5	ROOF PLAN & DETAILS - SCALE HOUSE/OFFICE
7	S-6	MECHANICAL MECHANICAL PLAN
		MECHANICAL
X	M-1	MECHANICAL PLUMBING
		PLUMBING
X	P-1	PLUMBING PLAN
		ELECTRICAL
X	E-1	ELECTRICAL PLAN

## VICINITY MAP

### 2012 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2 FAMILY DWELLINGS AND ROWS/ROW/S)

NAME OF PROJECT	OWNER	PROJECT NO.	DATE
Jones County C&D Landfill - Recycle Building	Green Recycling Solutions, LLC	13-237	11/2011

### 2012 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2 FAMILY DWELLINGS AND ROWS/ROW/S)

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Jones County C&D Landfill - Recycle Building	Green Recycling Solutions, LLC	13-237	11/2011

## APPENDIX B - SCALE HOUSE/OFFICE

### 2012 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2 FAMILY DWELLINGS AND ROWS/ROW/S)

NAME OF PROJECT	OWNER	PROJECT NO.	DATE
Jones County C&D Landfill - Recycle Building	Green Recycling Solutions, LLC	13-237	11/2011

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Jones County C&D Landfill - Recycle Building	Green Recycling Solutions, LLC	13-237	11/2011

REVISIONS

PRELIMINARY  
NOT FOR CONSTRUCTION

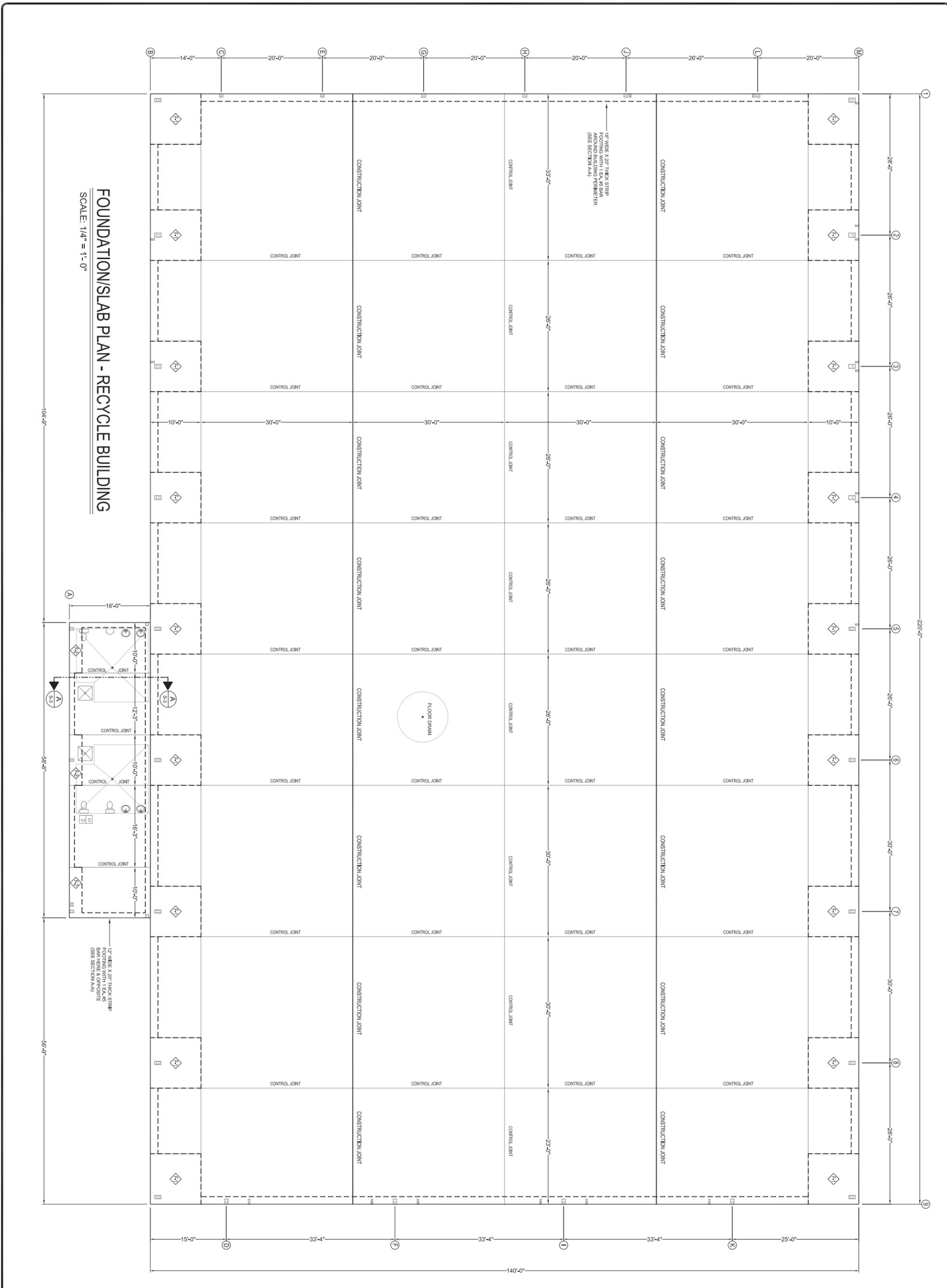

**STILLWATER ENGINEERING INCORPORATED**  
 P.O. BOX 477  
 13471-A US HWY 17  
 HAMPSTEAD, N.C. 28443  
 (910) 270-9889 PH/FAX  
 FIRM LICENSE C-2448  
 stillwaterengineering@charter.net

PREPARED FOR:  
**GREEN RECYCLING SOLUTIONS**  
 166 CENTER STREET  
 JACKSONVILLE, NC 28546  
 PHONE: (910) 937-0003

**TITLE SHEET & APPENDIX B**  
**JONES COUNTY C&D LANDFILL**  
 11710 HIGHWAY 17  
 MAYSVILLE, N.C. 28555  
**JONES COUNTY**

PROJECT #  
 E-12-6  
 DATE  
 3-20-12  
 SCALE  
 SHOWN  
**T-1**  
 SHEET  
 1 of X  
 DRAWN BY  
 NKS





**FOUNDATION/SLAB PLAN - RECYCLE BUILDING**

SCALE: 1/4" = 1'-0"

**FOUNDATION PLAN - RECYCLE BUILDING**

JONES COUNTY C&D LANDFILL  
 11710 HIGHWAY 17  
 MAYSVILLE, N.C. 28555  
 JONES COUNTY

PREPARED FOR:

**GREEN RECYCLING SOLUTIONS**  
 166 CENTER STREET  
 JACKSONVILLE, NC 28546  
 PHONE: (910) 937-0003



**STILLWATER ENGINEERING INCORPORATED**

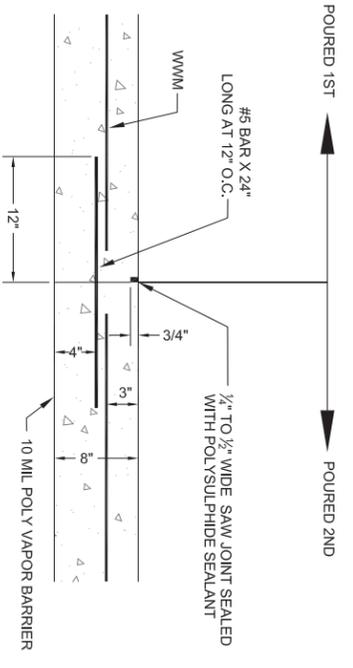
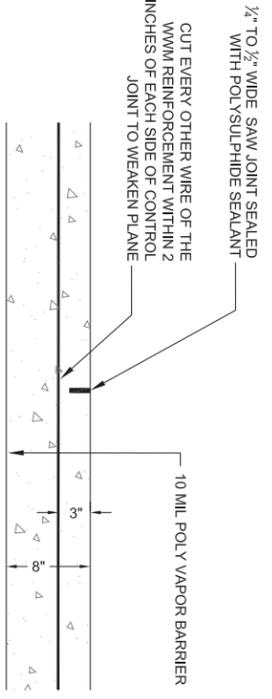
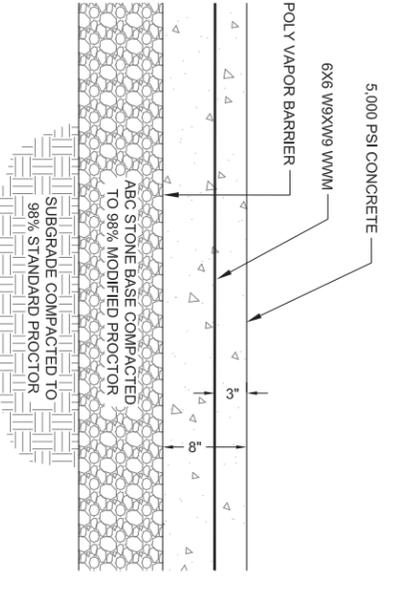
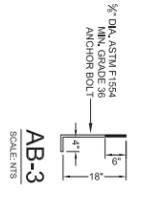
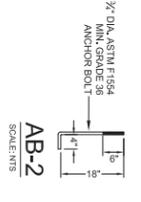
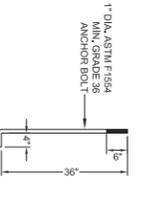
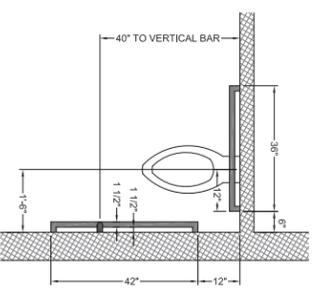
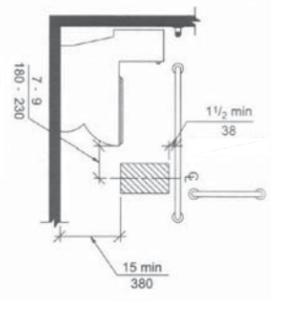
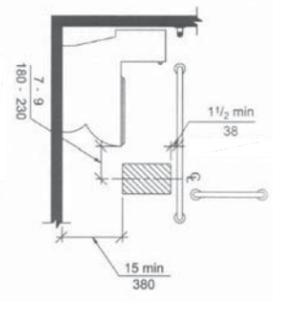
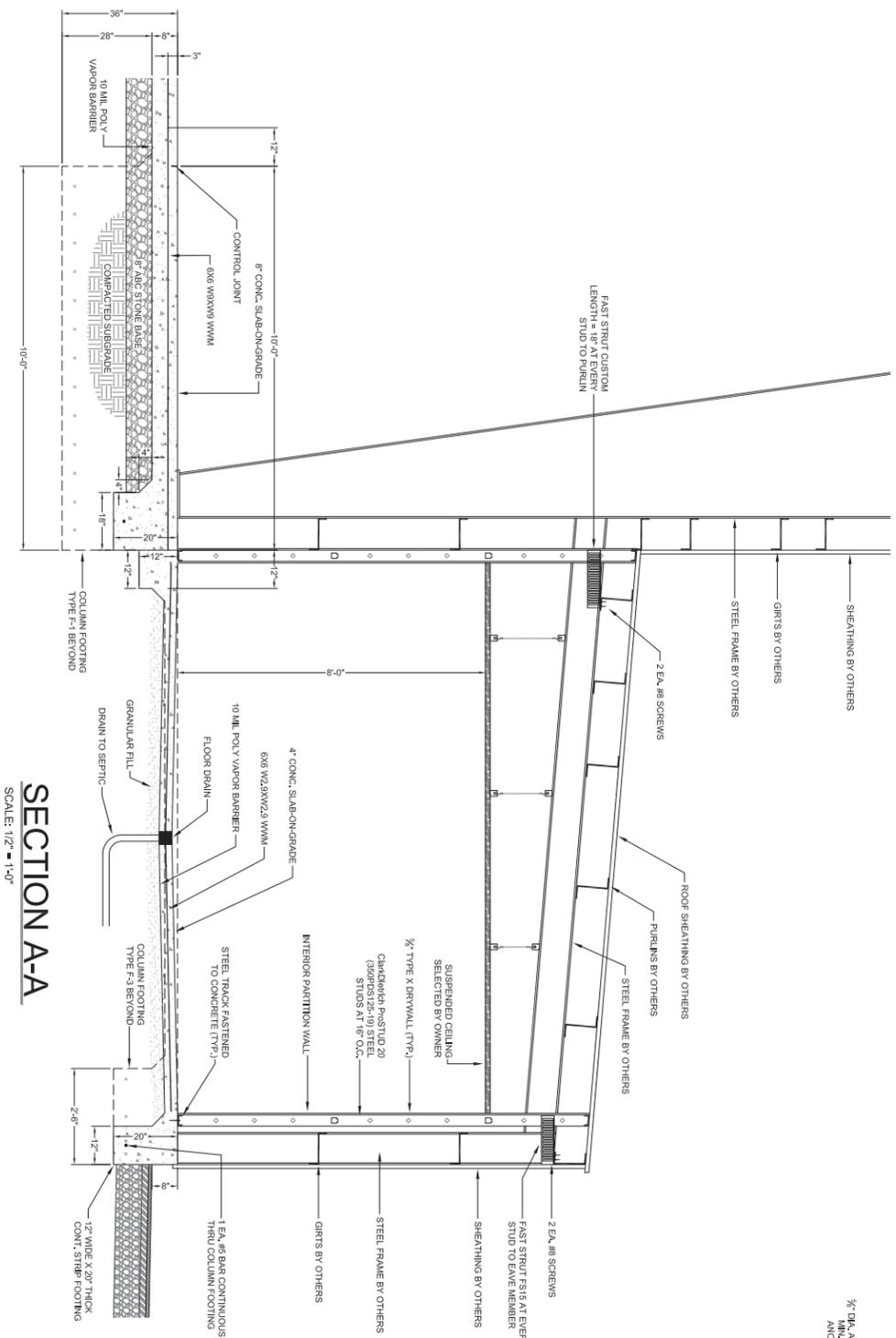
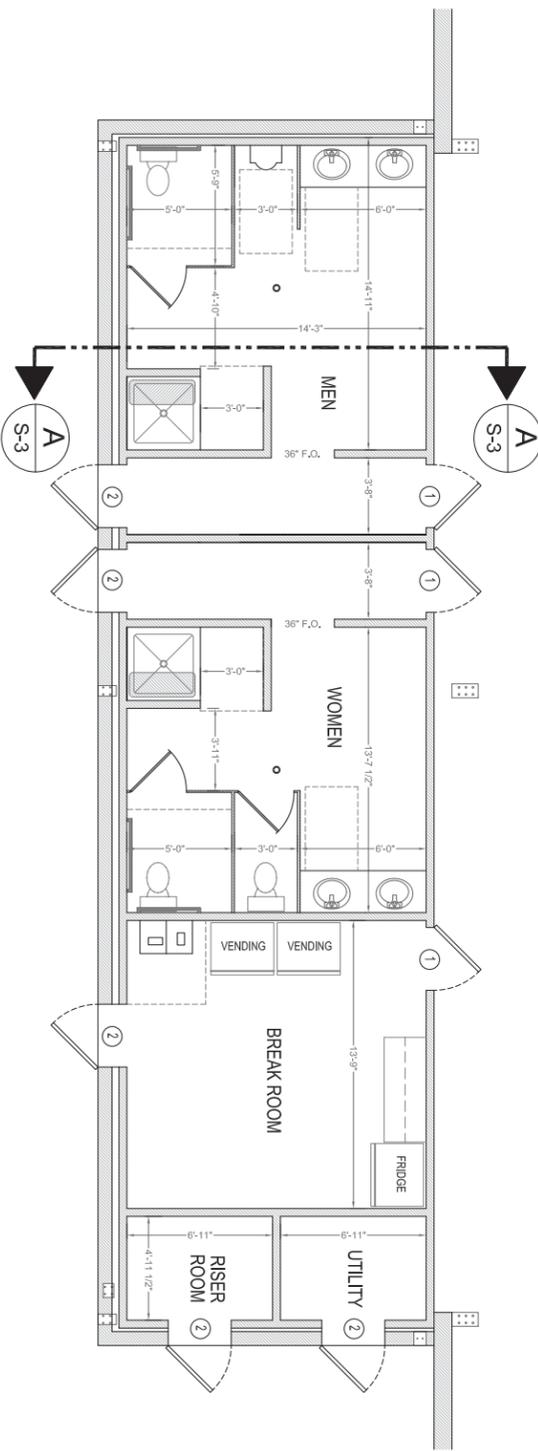
P.O. BOX 477  
 13471-A US HWY 17  
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 (910) 270-9889 PH/FAX  
 FIRM LICENSE C-2448

stillwaterengineering@charter.net

**PRELIMINARY**  
 NOT FOR CONSTRUCTION

REVISIONS	

PROJECT # E-12-6  
 DATE 3-20-12  
 SCALE SHOWN  
 DRAWN BY NKS  
 SHEET **S-2**  
 3 of X



ENLARGED FLOOR PLAN & DETAILS

JONES COUNTY C&D LANDFILL  
11710 HIGHWAY 17  
MAYSVILLE, N.C. 28555  
JONES COUNTY

PREPARED FOR:

GREEN RECYCLING SOLUTIONS  
166 CENTER STREET  
JACKSONVILLE, NC 28546  
PHONE: (910) 937-0003

STILLWATER ENGINEERING INCORPORATED

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FIRM LICENSE C-2448

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PRELIMINARY  
NOT FOR CONSTRUCTION

NO.	REVISIONS

PROJECT # E-12-6  
DATE 3-20-12  
SCALE SHOWN  
DRAWN BY NKS

SHEET S-3  
4 OF X

**RECYCLE BUILDING NOTES:**

1. IF ANY CONFLICTS OR DISCREPANCIES ARE DISCOVERED BETWEEN THESE DRAWINGS AND THE NORTH CAROLINA STATE BUILDING CODE, 2012 EDITION (HEREIN REFERRED TO AS CODE), THEN CONTACT THE ENGINEER FOR CLARIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO BEGINNING ANY WORK OR CONSTRUCTION.
3. THIS STRIP FOOTING IS NOT LOCATED WITHIN ANY FLOOD ZONE.
4. METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
5. CONTRACTOR SHALL OBTAIN AND BEAR THE COST OF ALL PERMITS OR ANY IMPACT FEES.
6. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ANY EXISTING UTILITIES PRIOR TO BEGINNING WORK. CALL NC 811 BEFORE YOU DIG.
7. RECYCLE BUILDING WILL BE A PRE-ENGINEERED STEEL-FRAMED BUILDING DESIGNED BY OTHERS. COLUMN REACTIONS AND ANCHOR BOLT DIMENSIONS/DETAILS WERE PROVIDED TO STILLWATER ENGINEERING BY THE BUILDING SYSTEMS. STILLWATER ENGINEERING HAS REVIEWED ALL DIMENSIONS AND DETAILS AND FOUND THEM TO BE CORRECT. ALL EQUIPMENT IS BY OTHERS. EQUIPMENT LOADS WERE PROVIDED TO STILLWATER ENGINEERING BY MAINTENANCE SYSTEMS/ENGINEERS.
8. CONTRACTOR SHALL COORDINATE INSPECTIONS WITH LOCAL CODE ENFORCEMENT OFFICIAL.
9. EACH DESIGNER IS RESPONSIBLE FOR PROVIDING APPROPRIATE INFORMATION FOR THEIR DISCIPLINE.

**TESTING & SPECIAL INSPECTIONS:**

1. CONTRACTOR SHALL HIRE QUALIFIED PERSONNEL TO PERFORM ANY TESTING AND/OR SPECIAL INSPECTIONS REQUIRED. OWNER AND ENGINEER SHALL BE PROVIDED A COPY OF ALL TESTING REPORTS.
2. FOUNDATIONS BEARING ON FILL SOILS, FILL MUST BE SUITABLE STRUCTURAL FILL, COMPACTED TO A MIN. OF 98% STANDARD PROCTOR DEGREE OF SOIL COMPACTATION TO BE VERIFIED BY GEOTECHNICAL ENGINEER.
3. ALL BACKFILL SHALL BE SUITABLE STRUCTURAL FILL THAT IS FREE OF ORGANIC MATTER AND SHALL BE COMPACTED TO 98% STANDARD PROCTOR. THIS INCLUDES BACKFILL USED 4. BEFORE ALL TOPSOIL AND ORGANIC MATERIAL (ROOTS, STUMPS, LIMBS, ETC.) FROM FOUNDATION AND BUILDING PAD AREAS.
5. SOIL BEARING CAPACITY FOR FOUNDATION SHALL BE VERIFIED BY ENGINEER.

**FOUNDATION NOTES:**

1. FOUNDATIONS SHALL BEAR ON UNDISTURBED SOIL WITH A MIN. NET ALLOWABLE CAPACITY OF 10,000 LBS.
2. FOUNDATIONS BEARING ON FILL SOILS, FILL MUST BE SUITABLE STRUCTURAL FILL, COMPACTED TO A MIN. OF 98% STANDARD PROCTOR DEGREE OF SOIL COMPACTATION TO BE VERIFIED BY GEOTECHNICAL ENGINEER.
3. ALL BACKFILL SHALL BE SUITABLE STRUCTURAL FILL THAT IS FREE OF ORGANIC MATTER AND SHALL BE COMPACTED TO 98% STANDARD PROCTOR. THIS INCLUDES BACKFILL USED 4. BEFORE ALL TOPSOIL AND ORGANIC MATERIAL (ROOTS, STUMPS, LIMBS, ETC.) FROM FOUNDATION AND BUILDING PAD AREAS.
5. SOIL BEARING CAPACITY FOR FOUNDATION SHALL BE VERIFIED BY ENGINEER.

**ACCESSIBILITY REQUIREMENTS:**

CONTRACTOR SHALL ENSURE THAT ALL ACCESSIBILITY REQUIREMENTS ARE MET IN ACCORDANCE WITH ICC/ADA 119.1, 2009, NORTH CAROLINA BUILDING CODE, 2012 EDITION, ADA AND LOCAL CODES FOR ACCESSIBLE ROUTES, CLEARANCES, BUILDING FACILITIES, THRESHOLDS, DOOR HARDWARE, PLUMBING FIXTURES, SANITARY DISPENSERS, ETC.

**CONCRETE NOTES:**

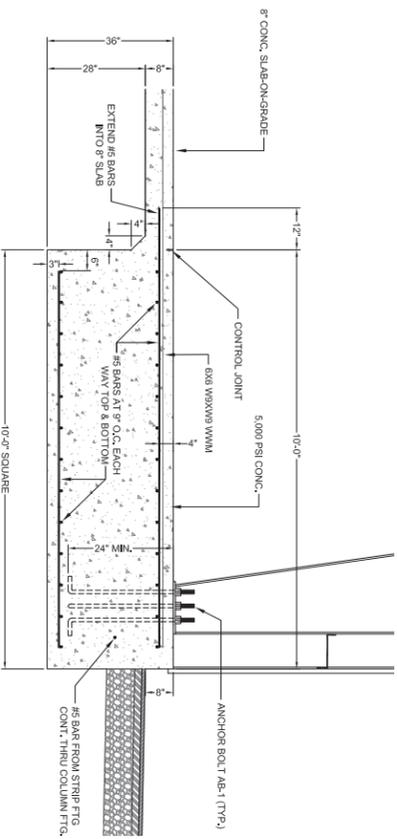
1. ALL CONCRETE SHALL BE NORMAL WEIGHT WITH A MAXIMUM WATER/CEMENT RATIO OF 0.5 AND A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS.
2. CONCRETE SHALL BE AIR ENTRAINED WITH 4% MIN. TO 8% MAX. AIR CONTENT. CONCRETE SHALL BE PROTECTED FROM WEATHER PROTECTION AFTER EACH POUR. IF REQUIRED, PROTECT CONCRETE IN ACCORDANCE WITH ACI 308R WHEN AIR TEMPERATURES ARE EXPECTED TO FALL BELOW 40 DEGREES F.
3. CONCRETE SHALL HAVE A HARD TROWEL FINISH.
4. CONCRETE SHALL HAVE A HARD TROWEL FINISH.
5. ALL CONCRETE SURFACES SHALL BE PROTECTED FROM PREMATURITY DRYING FOR A MINIMUM OF 7 DAYS. CONCRETE SHALL BE PROTECTED FROM PREMATURITY DRYING FOR A MINIMUM OF 7 DAYS. CONCRETE SHALL BE PROTECTED FROM PREMATURITY DRYING FOR A MINIMUM OF 7 DAYS. CONCRETE SHALL BE PROTECTED FROM PREMATURITY DRYING FOR A MINIMUM OF 7 DAYS.
6. ONCE CONCRETE SLABS ARE THOROUGHLY CURED, ALL SALT LIQUID, DIRT AND DEBRIS, ALLOW TO DRY FOR AT LEAST 12 HOURS PRIOR TO APPLYING LIQUID DENSIFIER/SEALER.
7. APPLY EPOXY DIAMOND HARD LIQUID DENSIFIER AND SEALER TO CONCRETE SLAB AT RECYCLE BUILDING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REPAIRS, UNO, MAINTAIN A MIN. OF 3" CLEAR COVER WHEN CONCRETE IS EXPOSED TO WEATHER OR SOIL. WMM SHALL BE OVERLAPPED 8 INCHES. REBAR SHALL BE LAPPED 25 INCHES AT ALL SPICES.
8. SAW CONTROL JOINTS AS SHOWN ON PLAN. JOINTS SHALL BE 1/4" THE DEPTH OF SLAB THRU REINFORCEMENT AT CONTROL JOINTS TO OBTAIN A WEATHERED PLANE PER SECTION.
9. AT EXPANSION JOINTS, CONTRACTOR SHALL REMOVE UPPER 1/2" OF EXPANSION MATERIAL AND SEAL WITH EXTERIOR GRADE CALK. INTERIOR EXPANSION JOINTS SHALL BE CONSTRUCTED SO THAT THEY ARE COMPLETELY COVERED BY RUBBER WALL BASE.
10. A 10 MIL POLYETHYLENE VAPOUR BARRIER SHALL BE PLACED BETWEEN CONCRETE AND EXISTING CONCRETE. REBAR SHALL BE PLACED BETWEEN CONCRETE AND EXISTING CONCRETE. REBAR SHALL BE PLACED BETWEEN CONCRETE AND EXISTING CONCRETE.
11. ALL POLYETHYLENE VAPOUR BARRIER SHALL BE PLACED BETWEEN CONCRETE AND EXISTING CONCRETE. REBAR SHALL BE PLACED BETWEEN CONCRETE AND EXISTING CONCRETE.

**RESTROOM PARTITIONS:**

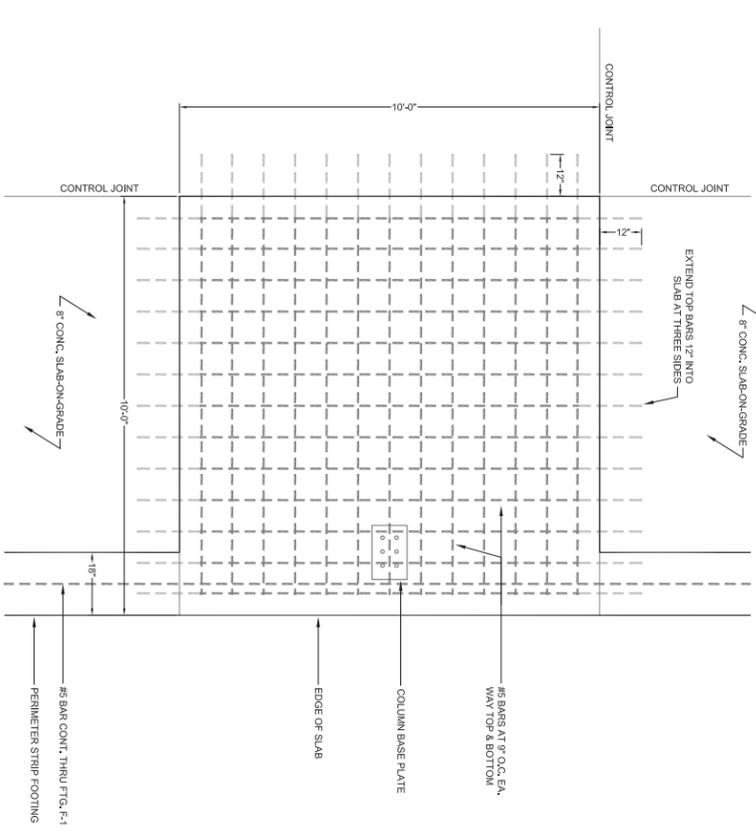
1. RESTROOM PARTITIONS SHALL BE INSTALLED SUCH THAT ALL NORTH CAROLINA BUILDING CODE, 2012 EDITION, ICC/ANSI A117.1-2009 AND ADA REQUIREMENTS ARE MET.
2. ALL PARTITIONS SHALL BE FLOOR TO CEILING.
3. INSTALL PARTITIONS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. INSTALL BLOCCING BETWEEN TRUSSES AS REQUIRED TO SECURE PARTITIONS TO CEILING.
5. PARTITIONS SHALL BE MECHANICALLY UNDOGGED TO FLOOR.

**DOORS AND WINDOWS:**

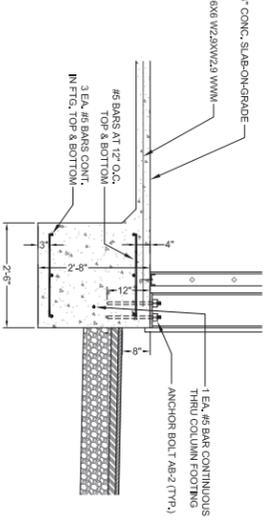
1. WINDOWS SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH WINDOW SCHEDULE.
2. WINDOWS SHALL HAVE 1/2" E-G GLASS AND A V-F FACTOR OF 0.28 AS SPECIFIED BY WINDOW SCHEDULE.
3. CONTRACTOR SHALL COORDINATE COLOR WITH OWNER PRIOR TO ORDERING.
4. WINDOWS SHALL BE AT LEAST FG30 AS DEFINED BY MANUFACTURER.
5. DOORS SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH DOOR SCHEDULE.
6. DOORS SHALL HAVE A V-F FACTOR OF 0.34 AS A MINIMUM.
7. CONTRACTOR SHALL COORDINATE COLOR WITH OWNER PRIOR TO ORDERING.
8. ALL DOOR HARDWARE SHALL BE ACCESSIBLE. DOOR HARDWARE SPECIFIED SHALL BE APPROVED BY OWNER. PRIOR TO ORDERING/PROVIDING. EXTERIOR DOORS SHALL NOT BE KEYPAD OR LOCKABLE AT INTERIOR (EGRESS) SIDE.
9. DOORS WITH HARDWARE SHALL MEET OR EXCEED THE DESIGN PRESSURE SPECIFICATIONS FOR THE 150 MPH WIND ZONE PER MANUFACTURER'S SPECIFICATIONS.



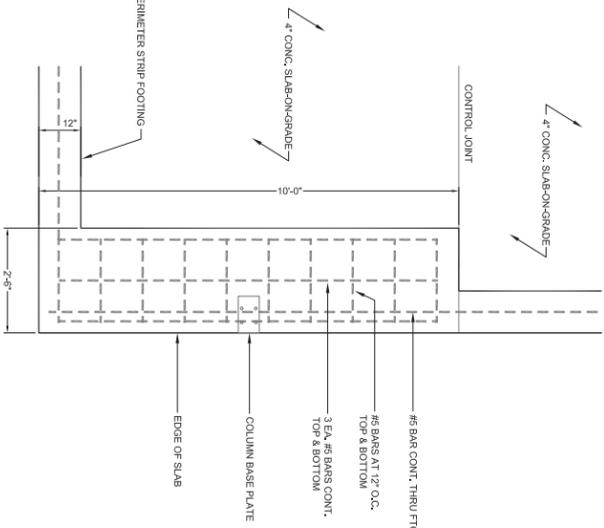
**F-1 FOOTING SECTION**  
SCALE: 1/2" = 1'-0"



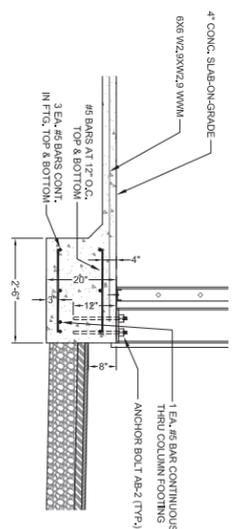
**F-1 FOOTING PLAN VIEW**  
SCALE: 1/2" = 1'-0"



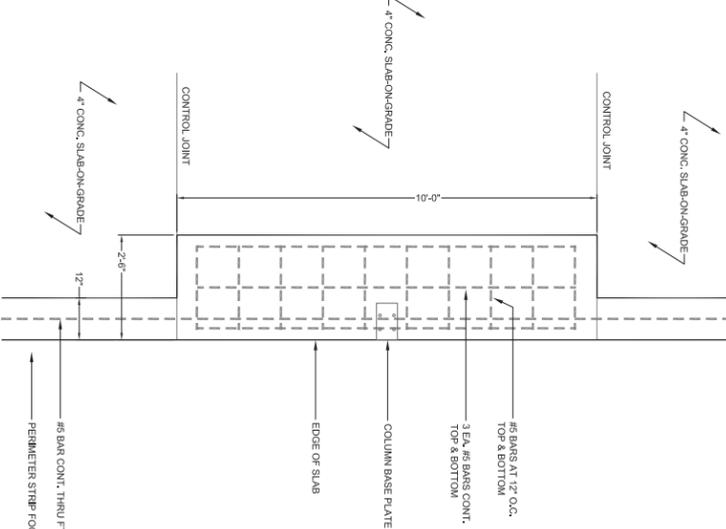
**F-2 FOOTING SECTION**  
SCALE: 1/2" = 1'-0"



**F-2 FOOTING PLAN VIEW**  
SCALE: 1/2" = 1'-0"



**F-3 FOOTING SECTION**  
SCALE: 1/2" = 1'-0"



**F-3 FOOTING PLAN VIEW**  
SCALE: 1/2" = 1'-0"

**DOOR SCHEDULE - RECYCLE BUILDING**

DOOR	UNIT WIDTH (CLEAR OPENING)	UNIT HEIGHT	UNIT TYPE	GLASS PERFORMANCE	MANUFACTURER/MODEL #	COLOR	HARDWARE
1	3'-4" (27)	6'-4"	INTERIOR	NA			LOOKS & LATCHES
2	3'-4" (27)	6'-4"	EXTERIOR STEEL (UM/24)	U/UM1A +1280 SPOCCOEF. U/TS			ACCESSIBLE - SELECTED BY OWNER

**RECYCLE BLDG. NOTES & FOOTING DETAILS**  
 JONES COUNTY C&D LANDFILL  
 11710 HIGHWAY 17  
 MAYSVILLE, N.C. 28555  
 JONES COUNTY

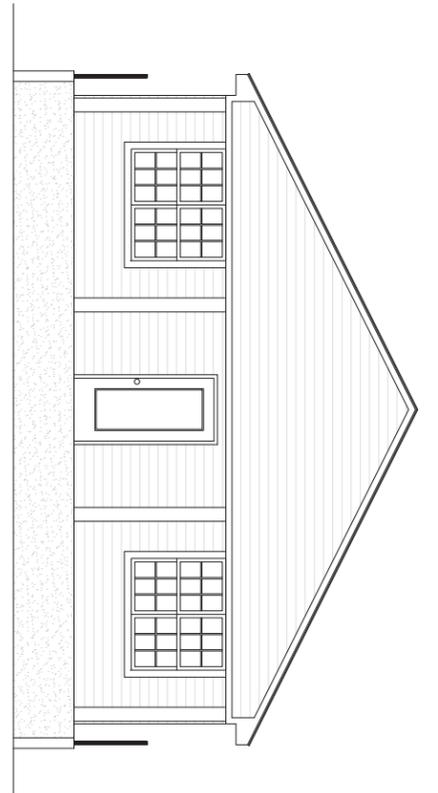
**PREPARED FOR:**  
 GREEN RECYCLING SOLUTIONS  
 166 CENTER STREET  
 JACKSONVILLE, NC 28546  
 PHONE: (910) 937-0003

**STILLWATER ENGINEERING INCORPORATED**  
 P.O. BOX 477  
 13471-A US HWY 17  
 HAMPSTEAD, N.C. 28443  
 (910) 270-9889 PH/FAX  
 FIRM LICENSE C-2448  
 stillwaterengineering@charter.net

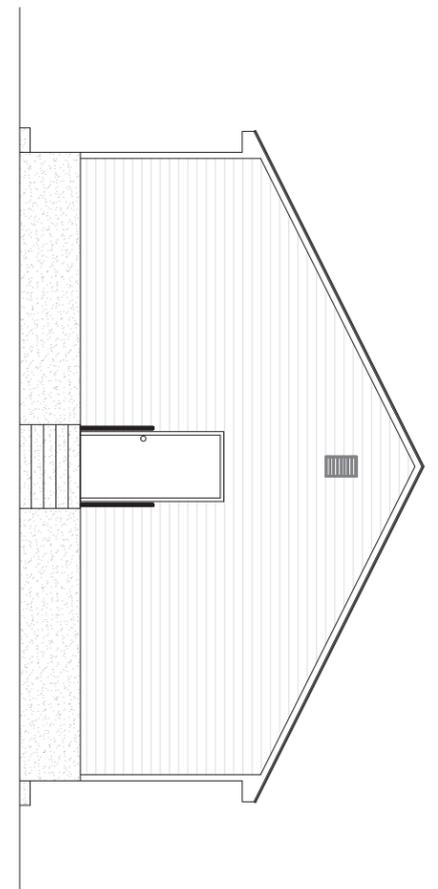
**PRELIMINARY NOT FOR CONSTRUCTION**

**REVISIONS**

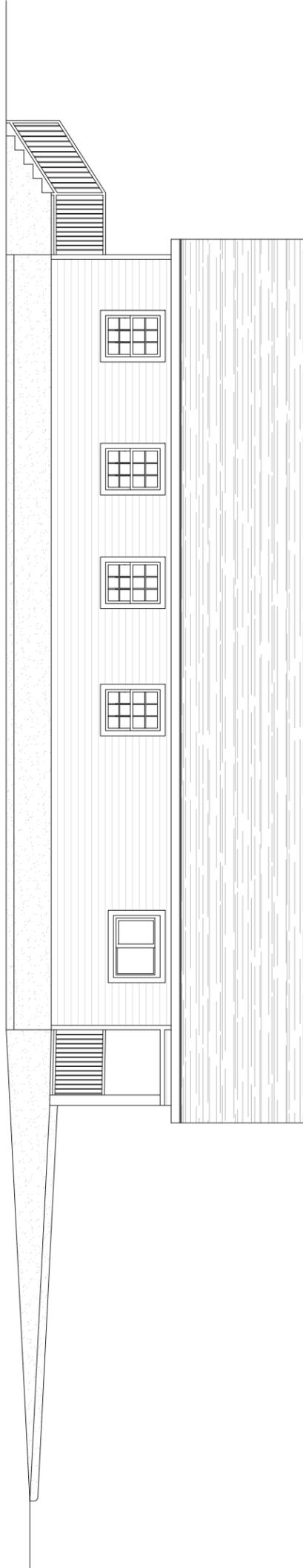

PROJECT # E-12-6  
 DATE 3-20-12  
 SCALE SHOWN  
 DRAWN BY NKS  
 SHEET **S-4**  
 4 of X



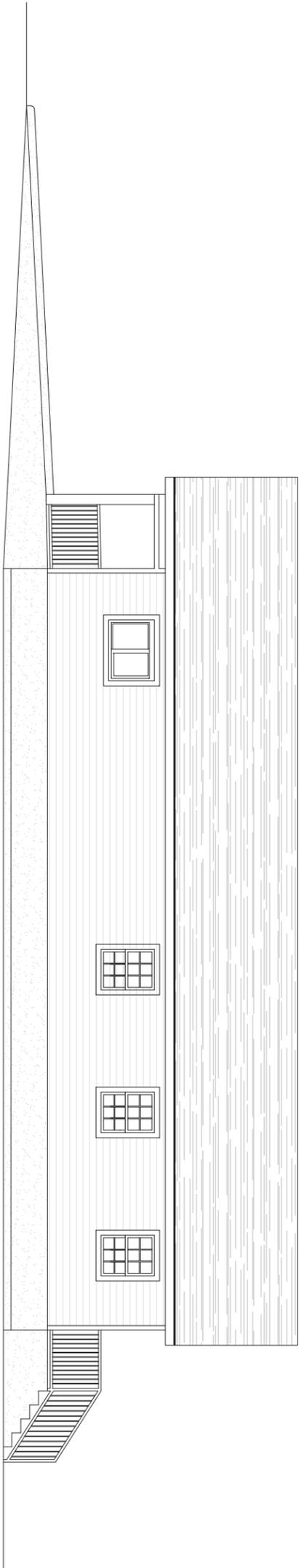
FRONT ELEVATION - SCALE HOUSE/OFFICE  
SCALE: 1/4" = 1'-0"



REAR ELEVATION - SCALE HOUSE/OFFICE  
SCALE: 1/4" = 1'-0"



LEFT SIDE ELEVATION - SCALE HOUSE/OFFICE  
SCALE: 1/4" = 1'-0"



RIGHT SIDE ELEVATION - SCALE HOUSE/OFFICE  
SCALE: 1/4" = 1'-0"

PROJECT #	E-12-6
DATE	3-20-12
SCALE	SHOWN
DRAWN BY	NKS
SHEET	<b>S-5</b>
	5 of X

**ELEVATIONS - SCALE HOUSE/OFFICE**  
 JONES COUNTY C&D LANDFILL  
 11710 HIGHWAY 17  
 MAYSVILLE, N.C. 28555  
 JONES COUNTY

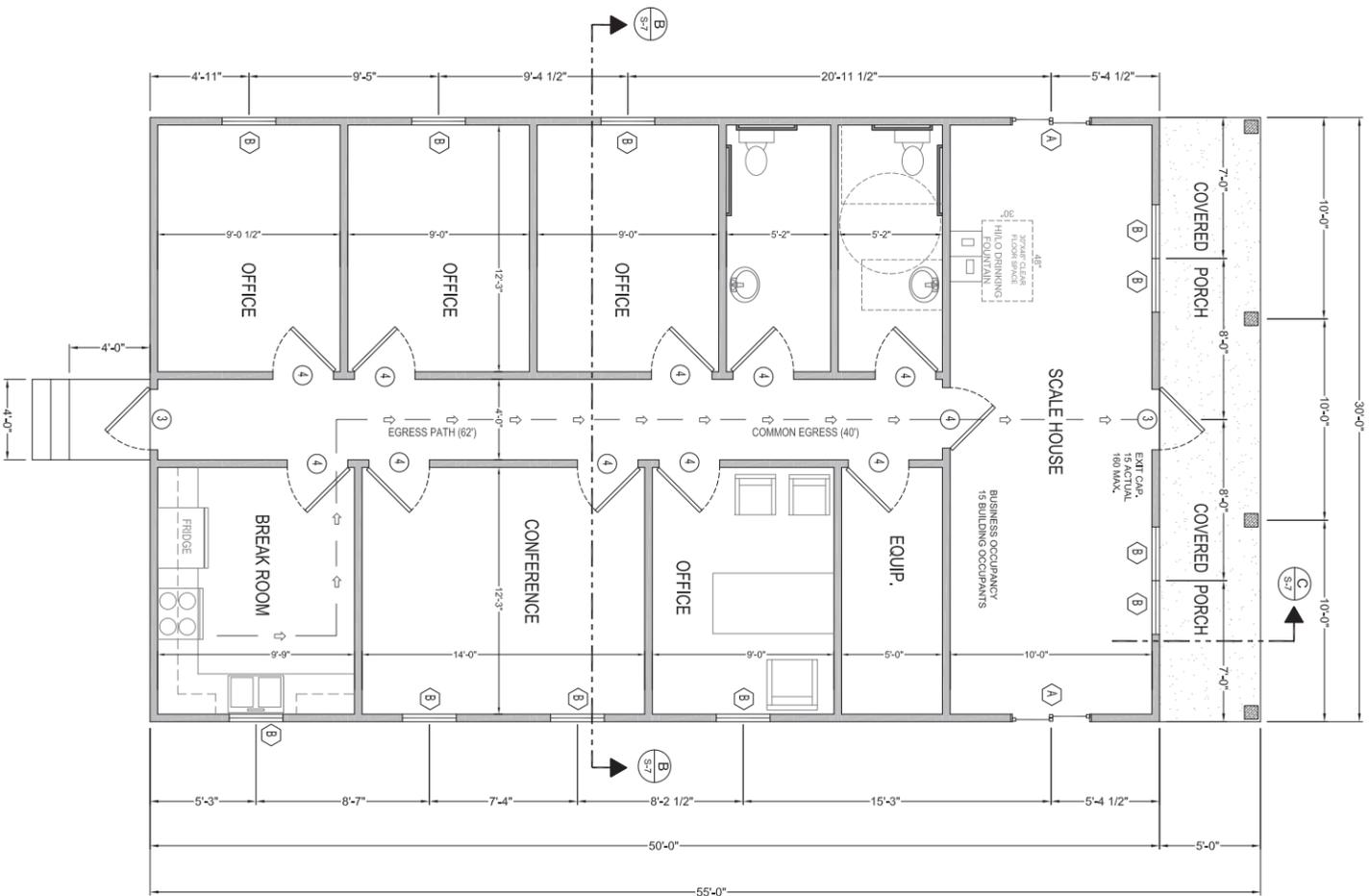
PREPARED FOR:  
 GREEN RECYCLING SOLUTIONS  
 166 CENTER STREET  
 JACKSONVILLE, NC 28546  
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 NOT FOR CONSTRUCTION

REVISIONS	

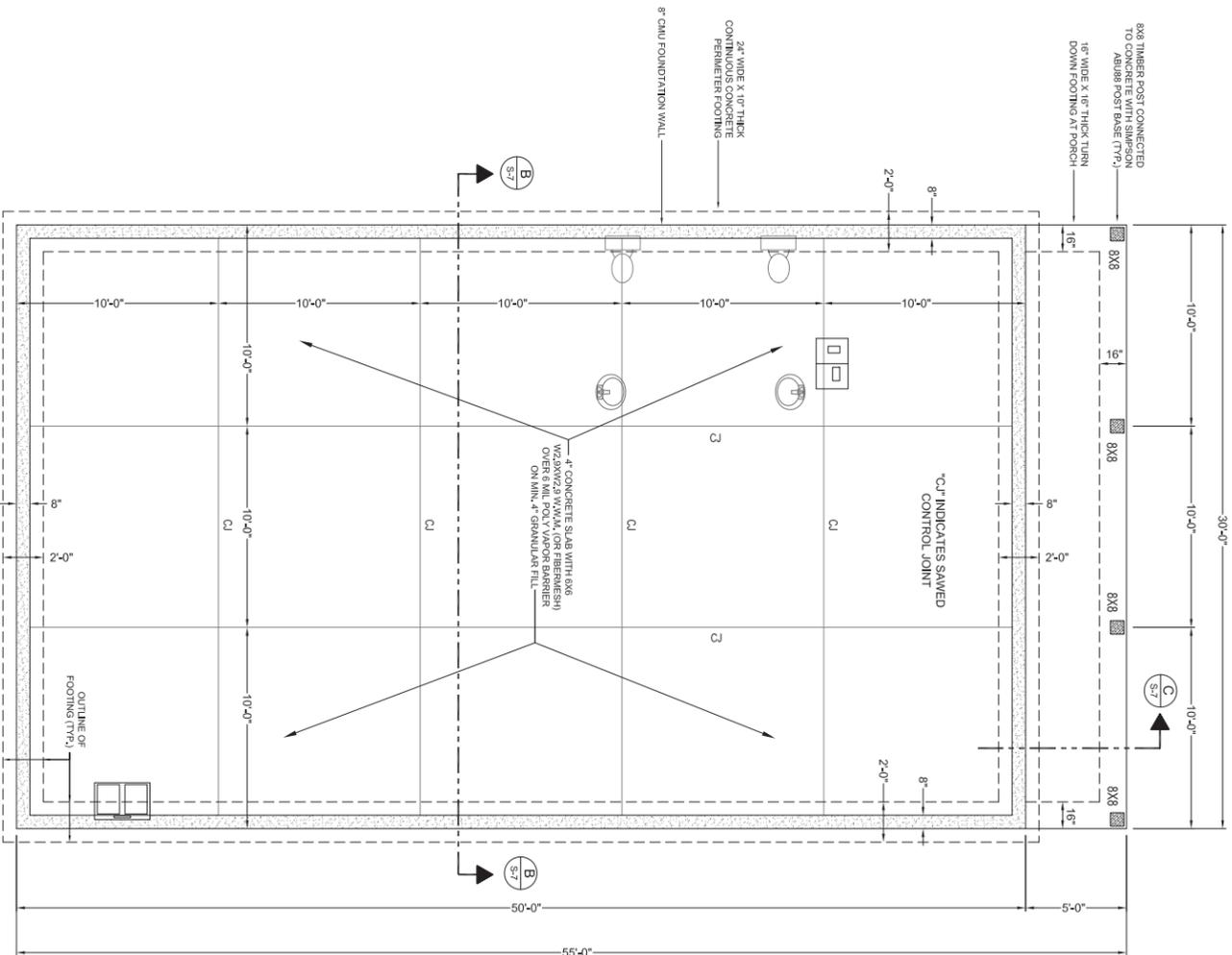
WINDOW SCHEDULE - SCALE HOUSE/OFFICE BUILDING						
WINDOW	UNIT WIDTH	UNIT HEIGHT	UNIT TYPE	GLASS PERFORMANCE	MANUFACTURER/MODEL #	COLOR
(A)	2'-0"	3'-0"	SLIDING SERVICE	U/WM1 = 0.280 SP-DOORCF-1.785	SELECTED BY OWNER	SELECTED BY OWNER
(B)	2'-0"	3'-0"	DOUBLE-HING	U/WM1 = 0.280 SP-DOORCF-1.785	SELECTED BY OWNER	SELECTED BY OWNER
(C)	2'-0"	4'-0"	DOUBLE-HING	U/WM1 = 0.280 SP-DOORCF-1.785	SELECTED BY OWNER	SELECTED BY OWNER



FLOOR PLAN - SCALE HOUSE/OFFICE

SCALE: 1/4" = 1'-0"

DOOR SCHEDULE - SCALE HOUSE/OFFICE BUILDING						HARDWARE	
DOOR	UNIT WIDTH (CLEAR OPENING)	UNIT HEIGHT	UNIT TYPE	GLASS PERFORMANCE	MANUFACTURER/MODEL #	COLOR	LOOKS & LATCHES
(3)	3'-0" (32")	6'-0"	EXTERIOR (LH/RH)	U/WM1 = 0.280 SP-DOORCF-1.785	SELECTED BY OWNER	SELECTED BY OWNER	ACCESSIBLE - SELECTED BY OWNER
(4)	3'-0" (32")	6'-0"	INTERIOR	N/A	SELECTED BY OWNER	SELECTED BY OWNER	ACCESSIBLE - SELECTED BY OWNER



FOUNDATION PLAN - SCALE HOUSE/OFFICE

SCALE: 1/4" = 1'-0"

PROJECT # E-12-6  
DATE 3-20-12  
SCALE SHOWN  
DRAWN BY NKS  
SHEET S-6  
6 of X

FLOOR/FOUND. PLANS - SCALE HOUSE/OFFICE  
JONES COUNTY C&D LANDFILL  
11710 HIGHWAY 17  
MAYSVILLE, N.C. 28555  
JONES COUNTY

PREPARED FOR:  
GREEN RECYCLING SOLUTIONS  
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NOT FOR CONSTRUCTION

REVISIONS

**SCALE HOUSE/OFFICE NOTES:**

- IF ANY CONFLICTS OR DISCREPANCIES ARE DISCOVERED BETWEEN THESE DRAWINGS AND THE NORTH CAROLINA STATE BUILDING CODE, 2012 EDITION (HEREIN REFERRED TO AS CODE), THEN CONTACT THE ENGINEER FOR CLARIFICATION.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO BEGINNING ANY WORK OR BEFORE PACKAGING OR OTHERWISE OCCURRING ANY MATERIALS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- CONTRACTOR SHALL OBTAIN AND BEAR THE COST OF ALL PERMITS OR ANY IMPACT FEES PRIOR TO BEGINNING WORK. CALL NC 811 BEFORE YOU DIG.
- CONTRACTOR SHALL COORDINATE INSPECTIONS WITH LOCAL CODE ENFORCEMENT OFFICIAL.
- EACH DESIGNER IS RESPONSIBLE FOR PROVIDING APPENDIX B INFORMATION FOR THEIR SPECIAL INSPECTIONS REQUIRED. OWNER AND ENGINEER SHALL BE PROVIDED A COPY OF ALL TESTING REPORTS.
- CONSTRUCTION TESTING WILL BE REQUIRED FOR STRUCTURAL TELL AT SCALE HOUSE/OFFICE BUILDING. TELL SHALL BE PLACED IN LIPS TO MEMBER MAX 8" GLOBE DESIGN. TESTS REQUIRED PER LIP FOR EACH BUILDING PAD.
- CONTRACTOR SHALL EMPLOY A GEOTECHNICAL ENGINEER TO VERIFY BEARING CAPACITY IN OPEN FOOTINGS.
- CONCRETE SHALL BE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF ACI 318. A FORTING AND ONE (1) FOR EACH OF SCALE HOUSE/OFFICE BUILDING. ONE CYLINDER SHALL BE TESTED AT 7 DAYS, TWO CYLINDERS SHALL BE TESTED AT 28 DAYS AND THE FINAL CYLINDER SHALL BE SAVED AS A RESERVE FOR EACH SET. ADDITIONAL CYLINDERS MAY BE MADE AND TESTED AT THE REQUEST OF OWNER/CONTRACTOR.
- SPECIAL INSPECTIONS SHALL BE PERFORMED AS REQUIRED BY CODE.

**TESTING & SPECIAL INSPECTIONS:**

- WOOD MEMBERS ON THESE DRAWINGS, OTHER THAN TRIM AND BLOCKING, SHALL BE SPRUCE-PINE-FIR, GRADE NO. 2 OR BETTER. IF ANY WOOD MEMBER IS EXPOSED TO THE ELEMENTS, THEN IT SHALL BE TREATED.
- TREATED WOOD MEMBERS SHALL BE TREATED IN ACCORDANCE WITH CODE AND SHALL MEET THE REQUIREMENTS OF FEMA USE CATEGORY UO4A GROUND CONTACT AS A MINIMUM.
- ALL WORK IS TO BE IN STRICT ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE, 2012 EDITION (CODE) INCLUDING WOOD CONNECTIONS AND DETAILS NOT SHOWN.
- HARDWARE/FASTENERS EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED. INSTALL CONNECTORS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ALL MEMBERS SHALL BE INSTALLED PER CODE UNLESS NOTED OTHERWISE.
- ALL SHEATHING SHALL BE APA RATED STRUCTURAL SHEATHING. FASTEN SHEATHING AS SHOWN ON PLANS.
- FLASHING SHALL BE PROVIDED AT ALL ROOF PENETRATIONS.
- FLY BEAMS SHALL BE LAMINATED VENEER LUMBER WITH A MIN. P = 2380 PSI AND E = 1,900,000 PSI. MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED. MANUFACTURERS REQUIREMENTS FOR FASTENING TOGETHER MULTIPLE MEMBERS, NOTICING OR CUTTING OF MEMBERS, CONNECTION REQUIREMENTS AND MINIMUM BEARING REQUIREMENTS, L.V. BEAMS AT EXTERIOR OF BUILDING SHALL BE PERMANENTLY PROTECTED FROM WEATHER.
- PRE-ENGINEERED TRUSSES SHALL BE DESIGNED, FABRICATED AND ERRECTED IN ACCORDANCE WITH TRUSS INSTITUTE (T.I.) STANDARDS. TRUSS MANUFACTURER SHALL PROVIDE SHOP DRAWINGS THAT CLEARLY INDICATE BRACING SIZES AND LOCATIONS. TRUSSES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN NORTH CAROLINA.
- CONTRACTOR SHALL SUBMIT PRE-ENGINEERED TRUSS DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO ORDERING.

**FRAMING NOTES:**

- WOOD MEMBERS ON THESE DRAWINGS, OTHER THAN TRIM AND BLOCKING, SHALL BE SPRUCE-PINE-FIR, GRADE NO. 2 OR BETTER. IF ANY WOOD MEMBER IS EXPOSED TO THE ELEMENTS, THEN IT SHALL BE TREATED.
- TREATED WOOD MEMBERS SHALL BE TREATED IN ACCORDANCE WITH CODE AND SHALL MEET THE REQUIREMENTS OF FEMA USE CATEGORY UO4A GROUND CONTACT AS A MINIMUM.
- ALL WORK IS TO BE IN STRICT ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE, 2012 EDITION (CODE) INCLUDING WOOD CONNECTIONS AND DETAILS NOT SHOWN.
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- ALL MEMBERS SHALL BE INSTALLED PER CODE UNLESS NOTED OTHERWISE.
- ALL SHEATHING SHALL BE APA RATED STRUCTURAL SHEATHING. FASTEN SHEATHING AS SHOWN ON PLANS.
- FLASHING SHALL BE PROVIDED AT ALL ROOF PENETRATIONS.
- FLY BEAMS SHALL BE LAMINATED VENEER LUMBER WITH A MIN. P = 2380 PSI AND E = 1,900,000 PSI. MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED. MANUFACTURERS REQUIREMENTS FOR FASTENING TOGETHER MULTIPLE MEMBERS, NOTICING OR CUTTING OF MEMBERS, CONNECTION REQUIREMENTS AND MINIMUM BEARING REQUIREMENTS, L.V. BEAMS AT EXTERIOR OF BUILDING SHALL BE PERMANENTLY PROTECTED FROM WEATHER.
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- CONTRACTOR SHALL SUBMIT PRE-ENGINEERED TRUSS DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO ORDERING.

**COMPONENTS AND CLADDING:**

- GAF TIMBERLINE ULTRA HD ASPHALT ROOF SHINGLES SHALL BE INSTALLED WITH RECOMMENDED UNDERLAYMENT AND SHALL BE FASTENED (ENHANCED NAILING PATTERN) TO ROOF DECK IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR 130 MPH WIND ZONE. REFER TO MANUFACTURER'S GOLDEN PLEIODE LIMITED WARRANTY FOR ADDITIONAL DETAILS.
- WINDOWS SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH WINDOW SCHEDULE.
- WINDOWS SHALL HAVE LOW-E GLASS AND A U-FACTOR OF 0.28 AS SPECIFIED BY MANUFACTURER. CONCRETE COPS WITH OWNERS PRIOR TO ORDERING.
- DOORS SHALL NOT BE KEVED OR LOCKABLE AT INTERIOR EGRESS SIDE.
- DOORS WITH HARDWARE SHALL MEET OR EXCEED THE DESIGN PRESSURE REQUIREMENTS FOR THE 130 MPH WIND ZONE PER MANUFACTURER'S SPECIFICATIONS.
- DOORS SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH DOOR SCHEDULE.
- ALL DOORS SHALL HAVE A U-FACTOR OF 0.24 AS A MINIMUM.
- ALL DOORS SHALL BE APPROVED BY THE APPLICABLE LOCAL CODES AND SHALL BE APPROVED BY OWNER PRIOR TO ORDERING EXTERIOR HARDWARE.
- DOORS WITH HARDWARE SHALL MEET OR EXCEED THE DESIGN PRESSURE REQUIREMENTS FOR THE 130 MPH WIND ZONE PER MANUFACTURER'S SPECIFICATIONS.

**FOUNDATION NOTES:**

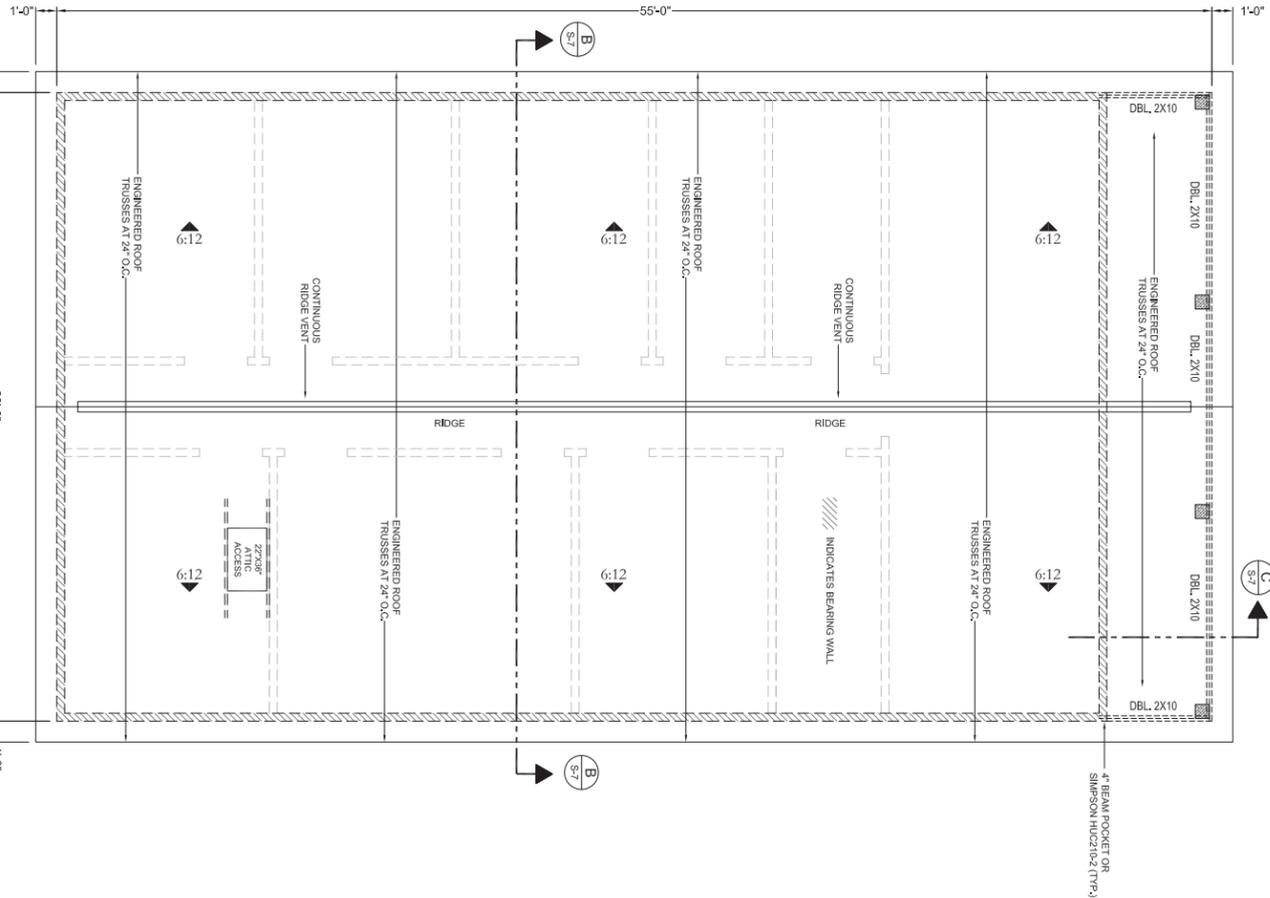
- FOUNDATIONS SHALL BEAR ON UNDISTURBED SOIL WITH A MIN. NET ALLOWABLE BEARING CAPACITY OF 2000 PSF.
- IF FOUNDATION IS BEARING ON FILL SOILS, FILL MUST BE SATURATED STRUCTURAL FILL COMPACTED TO A MIN. OF 98% STANDARD PROCTOR DENSITY OR SOIL COMPACTED TO BE DETERMINED BY GEOTECHNICAL ENGINEER.
- FOUNDATIONS SHALL BE PROTECTED FROM SETTLEMENT BY GEOTECHNICAL ENGINEER AND SHALL BE COMPACTED TO 98% STANDARD PROCTOR. THIS INCLUDES SLOPE FILLED TO SUPPORT CONCRETE SLAB-ON-GRADE.
- REMOVE ALL TOPSOIL AND ORGANIC MATERIAL, ROOTS, STUMPS, LIMBS, ETC. FROM FOUNDATION AND BUILDING FOOTPRINTS.
- SOIL BEARING CAPACITY FOR FOUNDATION SHALL BE VERIFIED BY ENGINEER.

**ACCESSIBILITY REQUIREMENTS:**

- CONTRACTOR SHALL ENSURE THAT ALL ACCESSIBILITY REQUIREMENTS ARE MET IN ACCORDANCE WITH ICC/ANSI A117.1-2009 NORTH CAROLINA BUILDING CODE 2012 EDITION, ADA AND LOCAL CODES FOR ACCESSIBLE ROUTES, CLEARANCES, BUILDING FACILITIES, THERSHOLDS, DOOR HARDWARE, PLUMBING FIXTURES, SANITARY DISPENSERS, ETC.

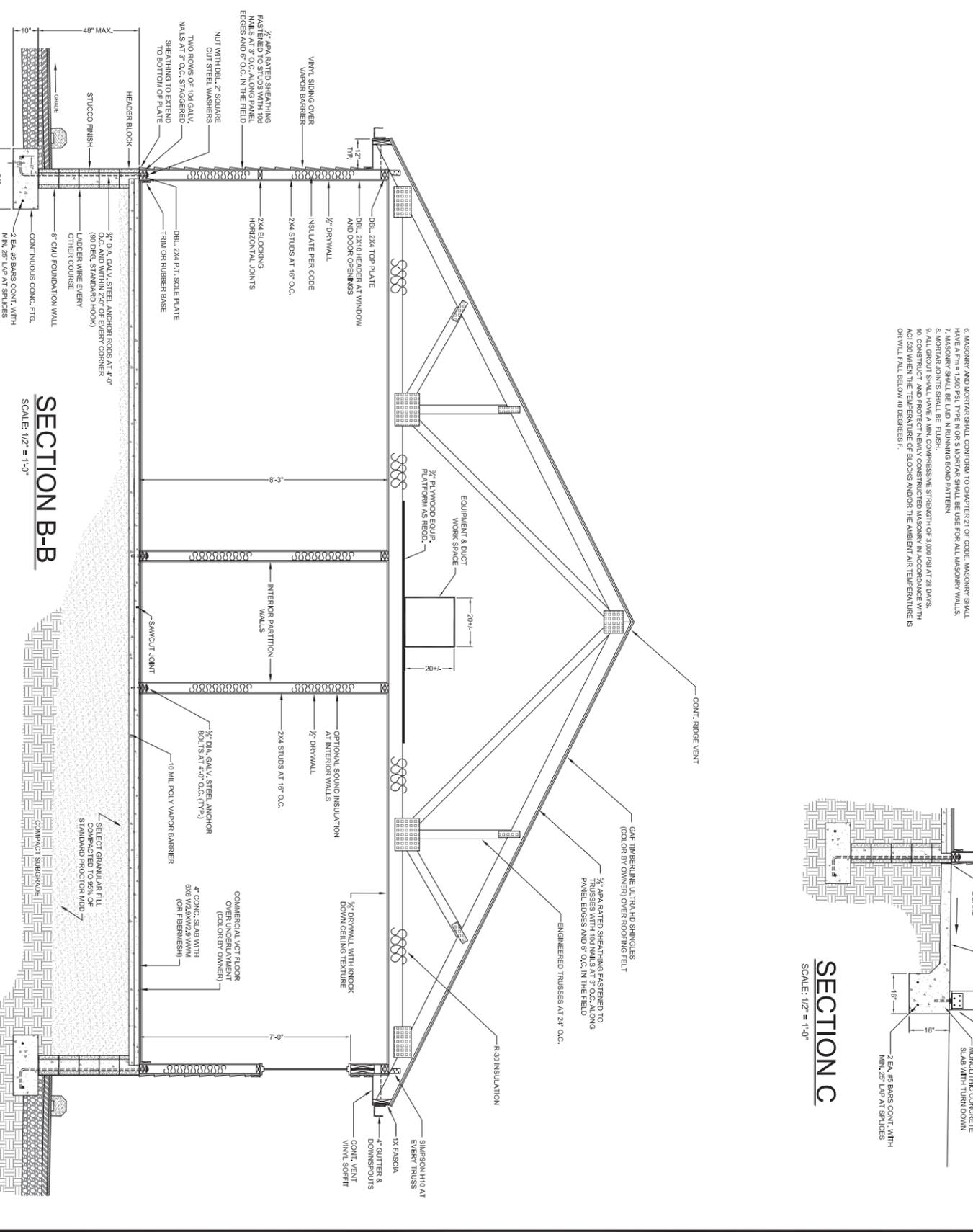
**CONCRETE/MASONRY NOTES:**

- ALL CONCRETE FOR SCALE HOUSE/OFFICE BUILDING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS. CONCRETE SHALL BE AIR ENHANCED WITH 5% MIN. TO 7% MAX. AIR CONTENT.
- CONTRACTOR TO PROVIDE WEATHER PROTECTION AFTER EACH POUR. IF REQUIRED, PROTECT CONCRETE IN ACCORDANCE WITH ACI 308R WHEN AIR TEMPERATURES ARE EXPECTED TO FALL BELOW 40 DEGREES F.
- CONCRETE SHALL BE PROTECTED FROM FREEZING AND SHALL BE FREE OF DEBRIS, UNO. MAINTAIN A MIN. OF 3" CLEAR COVER WHEN CONCRETE IS EXPOSED TO WEATHER OR SOIL. WMA SHALL BE 6X6 W24X129 AND SHALL BE OVERLAPPED 8 INCHES AT EXCES. REBAR SHALL BE LAPPED 24 INCHES AT SPLICES.
- SAW CONTROL JOINTS AS SHOWN ON PLAN, BUT NO GREATER THAN 15' ON CENTER. JOINTS SHALL BE 2/3 THE DEPTH OF SLAB. INTERRUPT REINFORCEMENT BY CUTTING AND SEAL WITH EXTERIOR GRADE CAULK.
- 5.4" EXPANSION JOINTS. CONTRACTOR SHALL REMOVE UPPER 7/8" OF EXPANSION MATERIAL AND SEAL WITH EXTERIOR GRADE CAULK.
- MASONRY SHALL BE LAMINATING BOARD PATTERN.
- MASONRY AND MORTAR SHALL CONFORM TO CHAPTER 21 OF CODE. MASONRY SHALL HAVE A P.M. = 1,500 PSI TYPE N OR S MORTAR SHALL BE USE FOR ALL MASONRY WALLS.
- ALL GROUT SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
- ALL CONSTRUCT AND PROTECT NEWLY CONSTRUCTED MASONRY IN ACCORDANCE WITH ACI 530 WHEN THE TEMPERATURE OF BLOCKS AND/OR THE AMBIENT AIR TEMPERATURE IS OR WILL FALL BELOW 40 DEGREES F.



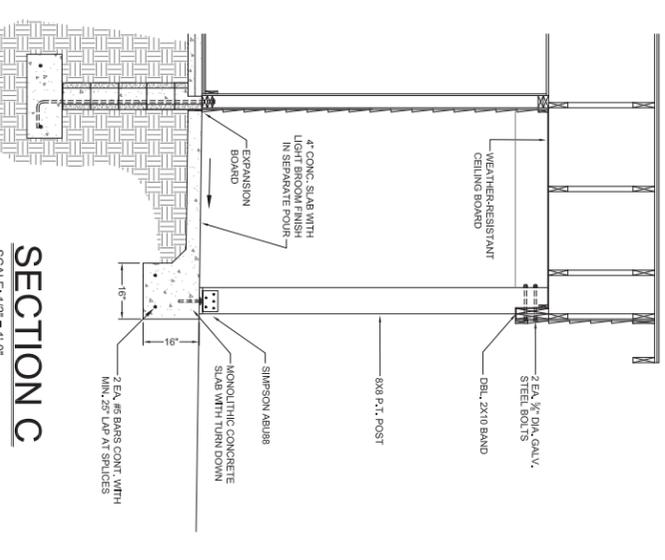
**ROOF PLAN - SCALE HOUSE/OFFICE**

SCALE: 1/4" = 1'-0"



**SECTION B-B**

SCALE: 1/2" = 1'-0"



**SECTION C**

SCALE: 1/2" = 1'-0"

**ROOF PLAN & DETAILS - SCALE HOUSE/OFFICE**

JONES COUNTY C&D LANDFILL  
11710 HIGHWAY 17  
MAYSVILLE, N.C. 28555  
JONES COUNTY

PREPARED FOR:

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NO.	REVISIONS

PROJECT # E-12-6  
DATE 3-20-12  
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DRAWN BY NKS

SHEET **S-7** 7 of X