PREPARED FOR:

PACE CONSTRUCTION AND EXCAVATION, INC.
625 OLD SPARTANBURG HIGHWAY
HENDERSONVILLE, NORTH CAROLINA 28792

RECEIVED

AUG 13 2012

SOLID WASTE SECTION
ASHEVILLE REGIONAL OFFICE

PACE CONSTRUCTION & EXCAVATION INC.
828-696-9118
Hendersonville NC

Fac/Perm/Co ID #	Date	Doc ID#
P1239	8/14/12	17046

CREST ROAD C&D MATERIAL RECOVERY FACILITY
420 CREST ROAD
HENDERSON COUNTY, NC

OPERATIONS PLAN

NOVEMBER 2011
REVISED FEBRUARY 2012

PREPARED BY:

JOYCE ENGINEERING

2211 WEST MEADOWVIEW ROAD, SUITE 101
GREENSBORO, NORTH CAROLINA 27407
NC LICENSE NUMBER C-0782
PHONE: (336) 323-0092
FAX: (336) 323-0093
JEI PROJECT NO. 00854.1101.11.01

TABLE OF CONTENTS

INTRODUCTION: 2

SITE FEATURES: 2

A. General Operations: 2
1) Conditions of Acceptance: 2
2) Waste Disposal Sites: 3
3) Facility Operators: 3
4) Air Quality: 3
5) Storage of Materials: 3
6) Separation and Processing of Material: 4
7) Leachate Management: 5
8) Final Disposition of Unacceptable Material: 5
9) Final Disposition of By-pass Material: 5
10) Final Disposition of Recyclables: 5

B) Material Screening Plan: 6
1) Purpose: 6
2) Procedure for Visual Inspections: 6
3) Record Keeping: 7

C) Management Plan for Unacceptable Materials: 7

D) Management Plan for By-pass Material: 7

E) Management Plan for Recyclable/Reclaimable Material: 8

F) Equipment Information: 8
1) Loading Equipment: 8
Other equipment: 8

G) Fire Prevention: 9

H) Asbestos Containing Materials Management: 9
1. Awareness Training 9
2. Operations 9

I) Financial Assurances: 10

APPENDICES

Appendix I – Location Map and Site layout
Appendix II – Load Inspection Form
Appendix III – Fire Department Response Letter
Appendix IV – Henderson County E&S Permit and TRC Approval Letter

INTRODUCTION:

This permit application is for the operation of Crest Road Construction and Demolition(C&D) Material Recovery Facility(MRF). This facility proposes to accept non-hazardous construction and demolition debris for the purpose of screening, separating and redistributing certain components of the waste stream. Asbestos will not be accepted or handled at this facility. The site is located at 420 Crest Road in East Flat Rock, North Carolina. A site location map is provided in Appendix (I). It is anticipated that this facility will service areas within a 100 mile radius from the site. The facility will be opened Monday through Friday from 7 a.m. to 5 p.m. and on Saturday from 8 a.m. to noon. The facility will be closed on Sunday.

SITE FEATURES:

This facility will include a scale, prefabricated scalehouse and parking lot at the entrance of the site. Access to this site will be controlled by an 8' perimeter fence and a security gate at the driveway entrance that will be locked at the end of each operating day. The fence will also prevent any litter from leaving the onsite management areas. The site has been graded to prevent run-on and graded to sheet flow the run-off into a detention pond that is equipped with a flashboard riser. The site will have A 11,580 sf concrete area for tipping and sorting material. All of this area will be covered. A grated sump will be located such that any liquid waste or water used for cleaning will flow into this sump and drain to a leachate holding tank. A roll off containers for recyclable/reclaimable material storage and stock pile areas will be located adjacent to the tipping and sorting area (See section A) 6) for more detail).
Some green waste may be accepted and ground into mulch.(No painted or treated wood to be ground)

A. General Operations:

1) Conditions of Acceptance:

The waste accepted at the proposed site will be debris from construction, remodeling and repair, and demolished structures. A trained employee will be onsite at all times when the site is in operation to oversee the loading and unloading of waste. Prior to separation, the debris from each load will be screened visually by a trained foreman for potentially hazardous material. If hazardous materials are identified up front then the load will be rejected. All haulers will be notified of acceptable/unacceptable material prior to dumping of materials.

Acceptable material includes wood, roofing, plastic, ferrous & nonferrous metals, drywall, concrete, cardboard, brick, asphalt, carpet, dirt and other miscellaneous construction and demolition materials. Unacceptable wastes include any regulated quantity of hazardous waste, any liquid waste, or other material banned from landfill disposal by North Carolina rule or statute. By-pass materials are materials that the facility will accept, but cannot resell on the market. Examples include treated wood, asphalt, roofing material, visqueen and carpet. The by-pass material will be disposed of in a state approved C&D landfill.

In order to comply with North Carolina's guidelines for treatment and processing facilities, each load entering and exiting the site will be weighed at the scalehouse. This will be done in order to help document the facility's capability to process and remove recyclable material from the waste

stream. Records of weight, material, and use will be made by the scalehouse attendant. The operator of the facility will review these records monthly and submit them to the North Carolina Solid Waste Section for review on a yearly basis.

Regulatory signs will be installed and remain in place for the operational life of the facility. They will be updated to remain in compliance with DENR regulations. An entrance sign will state that C&D type debris are accepted and will also display: No Hazardous Waste, No Asbestos Material, and No MSW. Operating hours, permit number and emergency contact information will also be included on this sign. A detailed material accepted sign will be posted on the scalehouse along with fee amounts.

The site is zoned light industrial. Therefore, noise from daily operations is allowed during normal business hours. Any C&D waste that produces an odor will be hauled off-site. However, other than drywall, most C&D material is odorless. Windblown materials will be contained on-site by the perimeter fence and will be collected by the end of each work day.

2) Waste Disposal Sites:

Crest Road C&D Material Recovery Facility will utilize near-by permitted facilities as their primary and secondary disposal sites. The Shiloh Landfill (Permit #232644-1201) will most likely be utilized for final disposal. However, if a more opportunistic situation arises with another permitted facility, the final waste disposal arrangement may be revised.

3) Facility Operators:

Crest Road C&D Material Recovery Facility will be operated by Pace. All operators will be trained employees and site management will have hazardous awareness and asbestos training.

4) Air Quality:

In order to control dust during dry periods, installed water lines and sprinkler system will be used. A water truck and street sweeper will be used on an as-need basis. This equipment will not be on site full time.

5) Storage of Materials:

The following is a list of materials and the estimated times of storage prior to removal:

Material	Estimated Shipment/Removal Time
Hazardous Material	As need basis
C&D Residual / By-pass Material	5 Days (shipped daily)
C&D Material (Unprocessed)	5 Days (processed daily)

Clean Wood	
– Unprocessed (Stockpiled)	5 Days
– Processed (shredded chips)	Shipped Daily/ Weekly
Plastics	
– HDPE (rigid)	1 Month – when market exists
– PVC (rigid)	1 Month – when market exists
– LDPE (rigid)	1 Month – when market exists
Non-Ferrous Metals	
– Insulated wire	1 Month
– UBC (aluminum cans)	1 Month
– Misc. Aluminum	1 Month
– Copper	1 Month
Ferrous Metals	1 Month (shipped weekly)
Drywall	1 Month – when market exists
Concrete, Asphalt, and Brick	As need basis
OCC (cardboard)	1 Month
Fines (RSM – Recovered Screened Material)	1 Month (shipped daily)

- Commodities should be stored in designated areas only.
- Commodities have a positive value, therefore should not be considered a waste product.
- Commodities are shipped according to market demands, therefore it should be understood that sometimes certain commodities would remain stockpiled for longer than others.

6) Separation and Processing of Material:

Material will enter the site by first passing over the scales, where total weight, source of the load, and material type will be noted. A prefabricated scalehouse will be located adjacent to the scales to handle payments and pre-screenings. Material will be tipped and sorted on the covered concrete area. A wheel loader will then be used to move the material to the sorting area. The tipping floor will be clear of waste at the end of each operating day. Enough material will be staged in the sorting area to begin the following days sorting process. The concrete will be swept or blown clean as needed. A hose bib will be located at the scalehouse to control dust and/or wash the tipping floor as needed. Any water that comes in contact with mixed waste will be divert to the leachate trench drain and conveyed into the concrete holding tank. Incoming trucks will be held until their loads can be screened, unless there is high traffic volume. The material recovery facility will be responsible for unacceptable waste on-site. Materials placed on the processing pad will be processed every two days under normal operating conditions.

Large quantities of by-pass material may be taken directly from the concrete pad to the by-pass bins and not subjected to the fingerscreener and picking process. This material will be dampened as necessary prior to removal to the by-pass or processing storage bins, and will be dampened again as necessary during processing (shredding or grinding or crushing).

Hand separation of recyclable materials and additional by-pass material will then be conducted. Materials will be transferred into the roll off storage bins by an excavator or loader. The bins will be designated as follows: clean wood, plastics, nonferrous metals, ferrous metal, drywall, cardboard, concrete, asphalt and brick. Materials such as treated wood (i.e. wood that has stains, varnishes, creosote, etc.), roofing, dirt, carpet, and other miscellaneous materials that are not hand sorted will be deposited separately and subsequently shipped to the appropriate disposal facility. Dirt may be further screened for resale.

During high winds, snowfall events, or other unusual circumstances that endanger the safety of personnel and/or clients, the clients will be notified that operations will be discontinued. When dust emissions are high due to dry weather, steps will be taken to reduce the amount of emissions by wetting access and ancillary roads. During wet conditions, waste will not be tipped into accumulated precipitation.

7) Leachate Management:

The concrete area used for tipping, sorting and temporary material storage will be covered and graded to drain towards a grated sump. The concrete area will be slightly elevated to prevent stormwater run-on from entering the sump. An outlet pipe will convey any liquid waste from the sump to a 1,000 gallon leachate holding tank. This tank will be inspected weekly and leachate will be pumped and hauled by a permitted contractor as necessary. In the event that sanitary sewer service is extended in Crest Rd R.O.W., direct discharge into the sewer main may be investigated.

8) Final Disposition of Unacceptable Material:

The hazardous material that could be received at the site will be less than 100 kilograms per month. If hazardous materials are identified up front then the load will be rejected. However, if a hazardous waste is introduced on the facility grounds, a roll-off for loading this material will be on-site and a third party will be contracted to handle this waste. Therefore, this site is not considered a small quantity generator, as defined by the United States Environmental Protection Agency (EPA).

9) Final Disposition of By-pass Material:

By-pass material will be shipped daily or when 100 cubic yards is accumulated, to a state approved construction and demolition debris landfill.

10) Final Disposition of Recyclables:

This material will be sold and hauled to various parties depending on economic considerations

and market fluctuations. All parties will be permitted to receive recyclable materials.

B) Material Screening Plan:

1) Purpose:

The purpose of this plan is to comply with NCAC T15A.13B.0302(2). The key elements of the plan include:

1. Visual inspection of each load that enters the facility,
2. Records of all inspections,
3. Training of facility personnel to recognize regulated hazardous and unacceptable waste, including asbestos containing materials; and,
4. A contingency plan to properly manage any unacceptable wastes.

2) Procedure for Visual Inspections:

1. Initial visual inspections will begin with each truck unloading their shipment onto a concrete pad, and prior to being loaded onto the processing equipment. The truck and driver will be detained if unacceptable material is discovered during unloading.

2. The shipment will be spread with a Bobcat and/or hand tools as appropriate. Loads that include items such as large closed containers will be hand-raked to avoid possible rupturing of the containers. Minimum safety equipment will include:

   - Leather or rubber boots
   - Safety boots
   - Safety glasses
   - Long handled hoe
   - Hard hats
   - Fire extinguishers

3. The shipment will be examined for unacceptable and/or hazardous waste and safety hazards:

   - Containers with hazardous placarding or markings,
   - Any material containing asbestos,
   - Household garbage,
   - Any containers with liquids, oils, varnishes, stains, or paints,
   - Sludges,
   - Regulated biomedical (red bag) waste,
   - Any material with "chemical odors," powders, smoke, dusts, or vapors
   - Any drums or commercial sized containers,
   - Materials with bright or unusual colors,
   - Household hazardous wastes and,
   - Any waste banned from landfill disposal by North Carolina statute or rule.

4. In the event that unacceptable wastes are found in a shipment, the appropriate actions are as follows:

- Hold suspect waste for identification by on-site personnel and, if necessary, confirmation by others such as a contract laboratory, hazardous waste management firm, or state and/or federal regulator,
- Interview driver and hauler to identify the source of suspect waste in the load,
- Hold rejected shipment for generator,
- Arrange for a hazardous or liquid waste collection by a licensed collector
- Properly clean the screening area to prevent contamination.

5. Document Actions:

- Record inspection,
- Retain reports and,
- Report hazardous or unacceptable shipments to the Solid Waste Section-DENR.

3) Record Keeping:

Report forms for record-keeping purposes are included in Appendix (II). These forms will be completed when unacceptable materials are observed. All reports and resulting correspondence will be maintained at Pace Construction.

C) Management Plan for Unacceptable Materials:

In the event that unacceptable material is unloaded on the processing pad, the entire shipment will immediately be isolated. The waste will be held until it can be shipped to a hazardous waste disposal unit. During the interim, the waste will be properly secured against unauthorized removal, segregated from all other operations and protected against inclement weather conditions. In addition, proper storage will be dictated by RCRA 40 CFR 264 (Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities) and other applicable regulations. It will be the hauler's responsibility to pay for the disposal of unacceptable materials. It will be the responsibility of the facility owner to contract the proper transport and disposal of the unacceptable material by qualified personnel.

D) Management Plan for By-pass Material:

By-pass material includes treated wood, roofing materials, dirt, carpet, wet drywall and other miscellaneous material. The by-pass material will be stored in bins located in a designated area on-site. The material will not be sorted by material type. By-pass material will be stored on-site for a maximum of two days. In addition, by-pass material will be shipped to a state approved construction and demolition landfill on a daily basis, or when 100 cubic yards is accumulated. Trucks carrying the by-pass material will have their loads dampened if needed, and covered before going off-site.

E) Management Plan for Recyclable/Reclaimable Material:

Reclaimable material will include clean wood, plastic, nonferrous metals, ferrous metals, drywall, cardboard, concrete, brick and asphalt. Clean wood products that have been deemed recyclable will be ground for shipment and then shipped as boiler fuel, furniture pressboard, or mulch. Concrete and asphalt will be stored on-site and when quantities reach an appropriate level, a mobile crushing unit will be brought to the site for further processing. The crushed material will be stockpiled on site and sold as road base material. Other reclaimable material will be shipped off-site as the quantities reach an appropriate level. If shingle recycling is determined to be beneficial, operator can further investigate this service and apply for a permit modification. When appropriate levels of green waste have been reached, a mobile grinder will brought to the site for processing. Mulch will then be stockpiled for sale.

F) Equipment Information:

1) Loading Equipment:

1. Caterpillar 322 Hydraulic Excavator or equal: The primary function of this equipment will be to load material from the tipping pad to the storage bins.

Pertinent specifications of this equipment include:

- Maximum operating weight: 35,900 lbs.
- Gross diesel engine power: 102 HP
- Minimum bucket size: 0.48 cy
- Shipping length: 27'-9 ½"
- Shipping height: 9'-1 25/64"
- Maximum loading height is approximately 28'
- Track-based undercarriage

2. Caterpillar Wheel Loader 938 & 950 or equal: The primary function of this piece of equipment will be to push material on the tipping pad towards the excavator and presorted material away from the excavator. In addition, it will be used to load recycled and by-pass material on to receiving trucks to be shipped from the site.

Pertinent specifications of this equipment include:

- Maximum operating weight: 27,510 lbs.
- Gross diesel engine power: 137 HP
- Maximum shipping length with bucket: 24'-5"
- Shipping height: 10'-8"
- Maximum loading height is 16'-8"
- Wheel-based undercarriage

2) Backhoe

Other equipment:

1) 330-gallon portable water tank: Provide water at various locations.

G) Fire Prevention:

If a hot load is received at this facility it will be segregated and smothered or soaked. If needed, the local fire department will be contacted. A fire hydrant will be installed of in the adjacent R.O.W. A letter from the Blue Ridge Fire and Rescue Dept. concerning the ability of the department to respond to an emergency at the facility is included in Appendix (III).

H) Asbestos Containing Materials Management:

The purpose of this section is to describe the asbestos awareness training, and handling of ACM's that potentially are in the C&D waste stream when processing construction and demolition materials.

1. Awareness Training

All employee's associated with C&D processing will undergo awareness training, as well, there will be an on site employee/representative who will have completed an approved Contractor/Supervisor training class.

1A: Components of Awareness Training – processing employees
- A. Types of Asbestos
- B. Health Affects of Asbestos
- C. Common Uses in Building Materials

2A: Asbestos Abatement Contractor/Supervisor Course to be North Carolina accredited – on site employee

2. Operations

- Upon receipt of waste, all trucks will be properly covered until such time that unloading is required.
- All incoming loads to the processing area will be examined.
- Initial visual inspection will occur when the vehicles dump their loads onto the waste receiving pad and pre-sort area.
- The pre-sort area employee will also serve as the asbestos inspector. Inspectors' duties include checking each load for possible asbestos containing materials.
- On site employee will take continuing education courses/annual refresher training course.
- Another visual inspection will occur prior to loading material into the storage bins. The equipment operator who is directly handling the material, will perform this check.
- Appropriate facilities will be in place to minimize dust.

- All screening employees will be provided protective breathing masks for use while processing/screening waste.

- Should materials be discovered that are suspected of containing asbestos, they will be immediately dampened until there is no visible dust and will then be covered or bagged and segregated from all activities.

- A licensed asbestos inspector will take a sample for analysis.

- Upon discovery of regulated asbestos, the reclamation facility will alter operations as necessary for the asbestos to be properly removed by a licensed company.

- The designated licensed company will be Ottinger Systems in Hendersonville, NC.

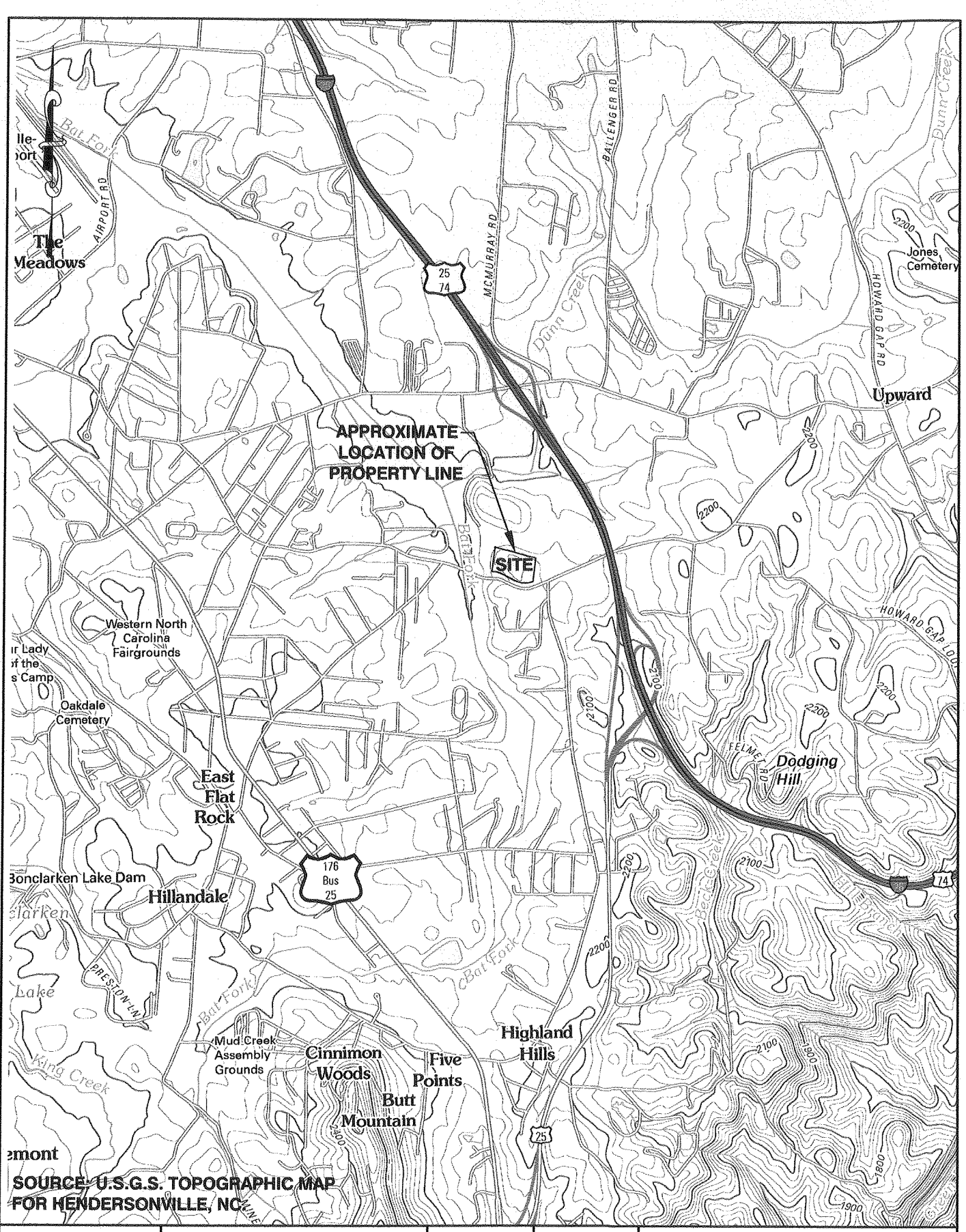
I) Financial Assurances:

The facility proposes to use a financial assurance bond with a company acceptable to the State. This bond will be issued with the Division of Waste Management – Solid Waste Section as the benefactor for the purpose of remedial clean up at the site. The bond will be based on the following information:

- Approximately 2,400 tons of material (including unacceptable, recyclable and by-pass material) will be the maximum amount of material at any given time. However, if it is determined that it is economical to install a second processing line, for which there is room on site, the facility operators will raise this amount based on the capacity of the site.
- Pace Construction will be willing to use whatever financial assurance mechanism that NCDENR deems appropriate.

[END]

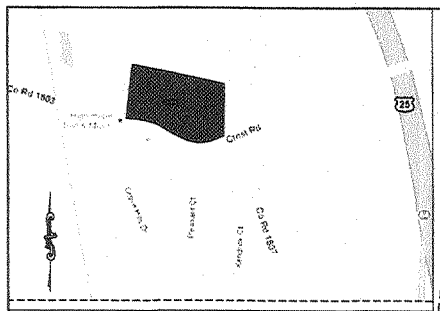
Appendix I



SOURCE: U.S.G.S. TOPOGRAPHIC MAP FOR HENDERSONVILLE, NC

L:\CREST ROAD\sheet set\Pace LCID Site Location Map.dwg

FIGURE NO. 1	JOYCE ENGINEERING 2211 WEST MEADOWVIEW ROAD GREENSBORO, N.C. 27407 PHONE: (336) 323-0092 © 2011 Joyce Engineering, Inc. All rights reserved.	SCALE 1"=2000'	PROJECT NO. 854.1101.11	CREST ROAD C&D MRF SITE LOCATION MAP 9/2011



VICINITY MAP
N.T.S.

GENERAL SITE NOTES:

OWNER'S NAME: MARK PACE
OWNER'S ADDRESS: 415 BABINE DR
HENDERSONVILLE, NC 28739
PHONE NO.: (828) 696-9115

PHYSICAL LOCATION: 420 CREST ROAD
HENDERSON COUNTY, NORTH CAROLINA

PARCEL NUMBER: 0200874
TOTAL ACREAGE: 6.72 ACRES/FUTURE SUBDIVISION 4.00 ACRES

DISTURBED ACREAGE: 2.40 ACRES

ZONING: I

ZONING OF SUBJECT PROPERTY IS INDUSTRIAL. PROPERTIES SOUTH OF SUBJECT PROPERTY AND CREST ROAD ARE RESIDENTIAL-1.

SETBACKS: 20' FRONT
20' SIDE
20' REAR
MAXIMUM BUILDING HEIGHT: 72'

BUFFER: B-2 (30')

EX. NATURAL VEGETATION WILL SERVE AS A BUFFER BETWEEN SITE AND ADJACENT PROPERTY OWNER ON EAST SIDE OF PROPERTY.

EXISTING LAND USE: CONCRETE CRUSHING AND BORROW OPERATIONS
PROPOSED LAND USE: C&D MATERIAL RECOVERY FACILITY

THE OWNER IS PROPOSING TO INSTALL A SCALE HOUSE, SCALE AND 11 -9'x20' PARKING SPACES, ONE OF WHICH IS DESIGNATED AS HANDI-CAP ACCESSIBLE AS PART OF THE SITE PLAN.

SITE LIGHTING WILL BE FULL CUT-OFF FIXTURE TO AVOID LIGHT TRESPASS ONTO ADJOINING PROPERTIES.

EXISTING CITY OF HENDERSONVILLE WATER AND SEWER MAINS WILL BE EXTENDED WITHIN CREST RD TO PROVIDE SERVICE TO THIS FACILITY.

THIS PROPERTY DOES NOT LIE WITHIN A 100-YEAR FLOOD ZONE PER FEMA MAP NUMBER 3720092870J DATED 10/2/06.

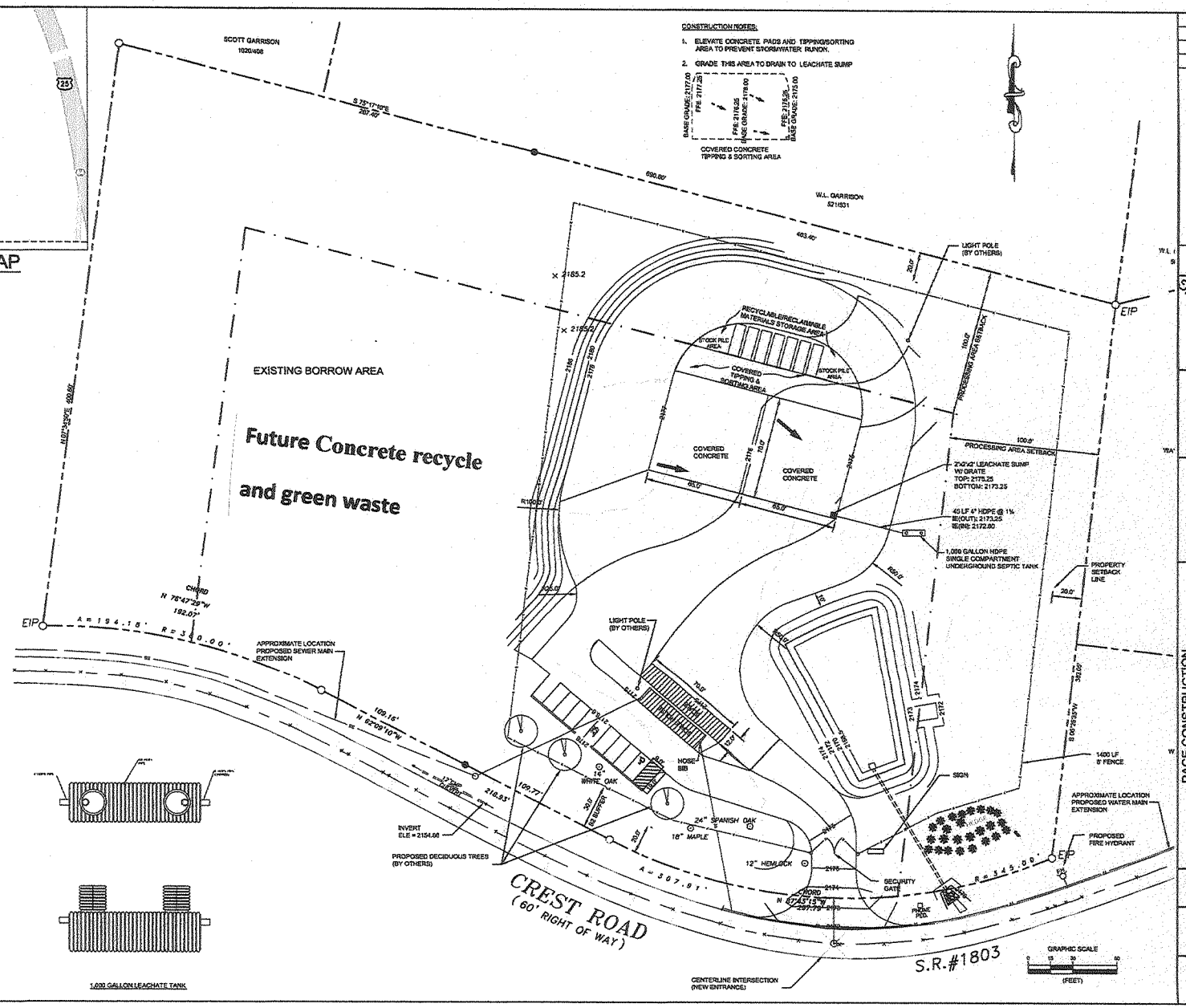
ENGINEERING CONSULTANT:
JOYCE ENGINEERING
2211 W MEADOWVIEW RD. -SUITE 101
GREENSBORO, NC 27407
(336)323-0092

TOPOGRAPHY SURVEY PROVIDED BY:
WAGGONER & RHODES LAND SURVEYORS, PLLC.
545 SOUTH GROVE STREET
HENDERSONVILLE, NC 28792
(828) 693-1022

CREST ROAD C&D MATERIAL RECOVERY FACILITY
NC DENR PERMIT # _____

ENTRANCE SIGN DETAIL
N.T.S.

1,000 GALLON LEACHATE TANK



DATE	REVISIONS AND RECORD OF ISSUE	NO	BY	CK	APP
	REVISED TO CONTAINED WITHIN PROPERTY				

FOR PERMITTING

DESIGNED HRW
DRAWN HRW
CHECKED EEA
APPROVED EEA
DATE 8/26/11

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JOYCE ENGINEERING
2211 W. MEADOWVIEW ROAD
GREENSBORO, NC 27407
PHONE: (336) 323-0092
NC CORP LIC: C-0782

PACE CONSTRUCTION
HENDERSON COUNTY, NC

CREST ROAD C&D MATERIAL RECOVERY FACILITY
SITE OPERATIONS LAYOUT

PROJECT NO.
854.1101.11

SCALE
AS SHOWN

DRAWING NO.
1

L:\CREST ROAD\Sheet set\SITE PLAN, E&S Plan FULL SITE.dwg Layout=SITE OP LAYOUT

Appendix II

RANDOM LOAD INSPECTION RECORD FORM
Crest Road C&D Material Recovery Facility

Date: _____ **Hauler:** _____

Inspector: _____ **Load Source:** _____

Waste **Accepted [ ]** **Rejected [ ]** **Held [ ]**

INSPECTION CHECKLIST:

If "YES" explain in space provided below	YES	NO
Asbestos containing material	_____	_____
Biomedical waste	_____	_____
Containers	_____	_____
Drums or commercial sized containers	_____	_____
Household garbage	_____	_____
Household hazardous waste	_____	_____
Material with:		
Bright or unusual colors	_____	_____
Chemical odors, powders, dust, or vapors	_____	_____
Hazardous placarding	_____	_____
Sludges	_____	_____
Unidentified wastes	_____	_____

Description of materials: _____

_____

_____

Driver's name and comments, if applicable: _____

_____

Agencies Notified: _____

_____

Persons Notified: _____

_____

Appendix III

Blue Ridge Fire & Rescue

INCORPORATED

Pace Construction and Excavation
627 Old Spartanburg Highway
Hendersonville, NC 28792

June 28, 2011

To Whom It May Concern:

The purpose of this letter is to provide documentation that the proposed location of Pace Construction and Excavation, located at 420 Crest Road, is located in the Blue Ridge Fire District and is serviced by Blue Ridge Fire & Rescue, Inc.

Thank You,

Gary Brown

Gary Brown
Chief

2503 Old Spartanburg Road
East Flat Rock, NC 28726

Phone: 828-692-4416
Fax: 828-692-4166

Appendix IV

County of Henderson

EROSION COUNTROL DIVISION
Telephone: (828) 694-6523
Fax: (828) 697-4533
100 N. KING STREET
HENDERSONVILLE, NC 28792

LOCATION: **Crest Road**
RESPONSIBLE PERSON: Mark and Virginia L. Pace
Phone: Mark Pace 828-696-9118

WQ-2011-09-02

Erosion and Sedimentation Control Permit No.

Crest Road C&D MRF

PROJECT NAME

THIS CERTIFIES THAT A EROSION AND SEDIMENTATION CONTROL PERMIT HAS BEEN ISSUED FOR THE CONSTRUCTION WORK SET OUT ABOVE.

Jim Fox

EROSION AND SEDIMENTATION CONTROL TECHNICIAN

THIS CERTIFICATE MUST BE POSTED AT THE CONSTRUCTION SITE IN A SECURE PLACE FROM THE TIME WORK IS COMMENCED UNTIL EROSION AND SEDIMENTATION CONTROL ADMINSTRATOR GIVES FINAL APPROVAL.

A COPY OF THE EROSION AND SEDIMENTATION CONTROL PLAN MUST BE AVAILABLE FOR THE INSPECTORS USE AT ALL TIMES. **October 28, 2011**

Henderson County
TECHNICAL REVIEW COMMITTEE 100 North King Street • Hendersonville, North Carolina 28792
Phone (828) 697-4857 Fax (828) 697-4658

October 18, 2011 RECEIVED OCT 24 2011

Mark Pace
415 Sabine Drive
Hendersonville, NC 28739

Dear Mr. Pace:

This letter confirms the approval from the Henderson County Technical Review Committee (TRC), on October 18, 2011 of the Major Site Plan for Crest Road C&D Recovery Facility. The plan was approved subject to compliance with the following Supplemental Requirements:

SR 10.9. Materials Recovery Facilities (Recycling)
(1) Site Plan. Major Site Plan required in accordance with §200A-331 (Major Site Plan Review).
(2) Lighting. Adequate lighting shall be placed in areas used for vehicular/pedestrian access including, but not limited to: stairs, sidewalks, crosswalks, intersections, or changes in grade. Lighting mitigation required.
(3) Dust Reduction. Unpaved roads, travelways and/or parking areas shall be treated to prevent dust from adverse affects to adjacent properties.
(4) Separation. A materials recovery facility shall not be constructed or newly located within one-half (½) mile of an existing school, library, day care facility, healthcare facility and/or religious institution.
(5) Security. The operations of a materials recovery facility shall be totally enclosed by:
(1) a security fence at least eight (8) feet in height;
(2) a wall at least eight (8) feet in height; or
(3) a fireproof building. Entrances and exits should be secured and locked during non-operating hours.
(6) Perimeter Setback. One hundred (100) feet.
(7) Hours of Operation. 6:00 a.m. to 9:00 p.m.

Upon completion of these conditions, the applicant can apply for Property Address, Zoning Permit, Erosion Control Permit, Environmental Health Permit, Building Permit and any other local, state, or federal permits as required. Major Site Plan approval shall be valid for two years, however, for just cause, the Technical Review Committee may grant extensions of development plan approval for a maximum of one (1) additional year. No full Certificate of Occupancy will be granted until all conditions are met.

Sincerely,

Toby Linville, Director
Henderson County Code Enforcement
TL/kaw

Cc: Joyce Engineering

JOYCE ENGINEERING

2211 W. Meadowview Rd
Suite 101
Geensboro, NC 27407
tel: 336/323-0092
fax: 336/323-0093

www.JoyceEngineering.com

Fac/Perm/Co ID #	Date	Doc ID#
P1239	2/28/12	16165

RECEIVED

AUG 13 2012

SOLID WASTE SECTION
ASHEVILLE REGIONAL OFFICE

February 16, 2012

Mr. Larry Frost
Erosion and Sedimentation Control Technician

Re: Crest Road Recycling LLC-Transfer, Recycle Resource Recovery and Processing Facility Henderson County, DIN 15768

Dear: Mr. Frost,

The responses to the comments that you provided on 12/15/2011 are bulleted below each corresponding comment in ***bold italic*** text.

Operations Plan

1. The Plan must include a service area for the Facility, a list of counties from which the Facility will receive waste.
   - ***Service area information added to Introduction in Operations Plan.***
2. The Plan must include a list of the specific disposal facilities (by facility name and permit number) that the proposed Transfer, Recycle Resource Recovery and Processing Facility will transfer waste to.
   - ***Disposal facilities added to Section A) 2) Waste Disposal Sites.***
3. The Plan must include a description of the equipment, scales, structures, tipping floor, water source for cleaning, picking line, and compactor and hopper.

Note: Tipping floors, mixed waste sorting floors and elevated mixed waste picking lines must be covered in a building.

   - ***Section A) 6) revised to include more detail. Equipment listed in Section F).***
4. The Plan must include a description of site security and access control.
   - ***Site Features section added to Operations Plan.***
5. The Plan must include Facility operating hours.
   - ***Operating hours added to Introduction in Operations Plan.***
6. The Plan must include a description of signs to be posted at the entrance and within the site to direct traffic.

Note: Signs must provide a description of the types of waste received, the types of waste prohibited, operating hours, permit number, and emergency contact phone numbers.

   - ***Section A) 1) revised to include more detail.***
7. The Plan must indicate that a trained employee must be onsite at all times the site is open, overseeing the loading and unloading of waste.
   - ***Added statement to Section A) 1).***

8. The Plan must include a description of surface water control features, including run-on and run-off.
    - ***Site Features section added to Operations Plan.***
9. Any water that has come in contact with wastes must be collected and disposed of as leachate. Describe the collection, storage, and disposal of leachate, contaminated wash water, and contaminated rainfall runoff. Runoff from recyclable storage areas should be collected and properly treated prior to disposal.
    - ***A trench drain and holding tank have been added to the Operations Plan and drawing.***
10. The Plan must include procedures for cleaning and washing down the tipping floor.
    - ***Section A) 6) revised to include more detail.***
11. The Plan must include procedures for maintaining the Facility in a sanitary condition, including actions to be taken to minimize noise, vectors, and odors.
    - ***Added statement to Section A) 1).***
12. The Plan must include a procedure stating, the tipping floor will be clear of waste at the end of each operating day.
    - ***Section A) 6) revised to include more detail.***
13. The Plan must include a procedures for litter and dust control, to prevent blowing litter from leaving the onsite management areas and from leaving the property.
    - ***Site Features section added.***
14. The Plan must include a description of the storage of each separated recyclable and waste on site.
    - ***Section A) 6) revised to include more detail.***
15. The Plan must include information on fire prevention and actions to be taken in the event of an accidental fire.
    - ***Section G) revised to include more detail.***

Traffic Study

The Facility must submit the documentation required by North Carolina General Statute 130A-295.5.

- ***Certification letter from NC DOT attached.***

Signature Page

The Owner/Operator should submit the attached signature page, completed and signed.

- ***Completed, signed Signature Page attached.***

Drawings

The permit applicant must provide drawings showing the Transfer, Recycle Resource Recovery and Processing Facility's;

1. gates/fences or other access control features (access roads must be of all weather construction),
    - ***8' fence already proposed on drawing, Access gate added***

2. utilities (wastewater system and stormwater drains),
    - ***Proposed water and sewer main extensions are shown in R.O.W.***
3. any recyclable storage areas indicating types and sizes of containers,
    - ***Containers added to drawing***
4. leachate and runoff collection details,
    - ***Site Operations Plan revised and E&S Plan and details provided.***
5. buildings (existing and proposed), picking lines and scales/scale house, and
    - ***Shown on drawing***
6. concrete foundations/pads and all other ground cover for the site operation.
    - ***Shown on drawing***

Asphalt Shingles

The applications does not indicate the Facility plans to recycle asphalt shingles, however many facilities are requesting information on shingle recycling. I have attached a copy of the CAPA Best Practices Guide for your consideration.

- ***Client currently has no plans to recycle shingles. Note added under Section E).***

Financial Assurance

- ***No response required***

Compliance Review

- ***Noted***

I hope that the responses provided are sufficient to satisfy the existing comments. Please feel free to contact me with any questions or comments.

Sincerely,
JOYCE ENGINEERING, INC.

Heather Wilburn, E.I.T
Project Consultant

Attachments:
Operations Plan- Revised January 2012
Signature Page
DOT letter
E&S Plans

JOYCE
ENGINEERING

NCDENR

Signature page of applicant –

Name of facility **Crest Road Recycling**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision and that the information provided in this application is true, accurate, and complete to the best of my knowledge.

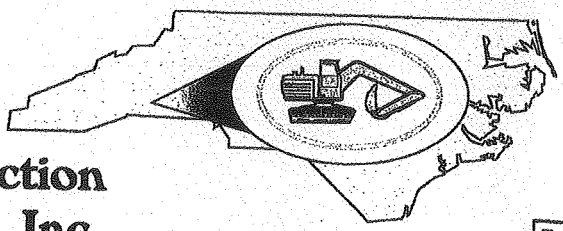
I understand that North Carolina General Statute 130A-22 provides for administrative penalties of up to fifteen thousand dollars ($15,000.00) per day per each violation of the Solid Waste Management Rules. I further understand that the Solid Waste Management Rules may be revised or amended in the future and that the facility siting and operations of this solid waste management facility will be required to comply with all such revisions or amendments.

Mark B Pace	MARK B PACE	8/10/12
Signature	Print Name	Date

PRESIDENT / OWNER
Title

PACE CONSTRUCTION AND EXCAVATION
Business or organization name

Covering Western North Carolina



RECEIVED

JAN 11 2012

SOLID WASTE SECTION
ASHEVILLE REGIONAL OFFICE

Fac/Perm/Co ID #	Date	Doc ID#
P1239	1/11/12	15900

Pace Construction & Excavation, Inc.

625 South Grove Street
Hendersonville, NC 28792

Office: (828) 696-9118
Fax: (828) 696-3411

- Complete Demolition
- Mobile Crusher Servcie
- Material Screening
- Recycled Concrete Aggregate
- Complete Site Work
- Roll Off Containers
- Scrap Metal Processing

Jan.10, 2012

To: Larry Frost
Environmental Engineer--NCDENR
Re: Crest Rd C&D Material Recovery Facility

Mr. Frost,

In regards to N.C. General Statute 130A-295.5 concerning the traffic study requirement on material recovery facilities, we are submitting the attached letter as provided to us by the NCDOT. The letter which was written by Steve Cannon, District Engineer, outlines the DOT's reasons for not requiring a Traffic Impact Analysis nor a turn lane on SR 1803 in granting the driveway permit. We are submitting this cover letter and the attached letter from NCDOT in the hope that they will prove sufficient in meeting NCDENR's requirements. We are trying to provide Henderson County with a much needed recycling option, and are trying to do so with limited financial resources, so any help in this matter would be greatly appreciated. Thank you for your time and your consideration in this matter.

Sincerely,

Mark B. Pace
Pace Construction

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
Governor

EUGENE A. CONTI, JR.
Secretary

January 5, 2012

Mr. Barry Bonnett
Pace Construction
625 South Grove St.
Hendersonville, NC 28792

Dear Mr. Bonnett:

The NCDOT requires a driveway permit for new projects that will access a state roadway. In reviewing your request for the construction of the recycling facility on Crest Road (SR 1803), we asked you to provide us the anticipated volume of traffic (basically large trucks) that will be using the facility on a daily basis. Using the number of vehicles anticipated and the location of the proposed driveway, we found that a) the anticipated volume of traffic did not meet the threshold for requiring a Traffic Impact Analysis, b) the anticipated volume of traffic did not warrant the need for a left turn lane, and c) the sight distance requirement in both directions could be met from the proposed driveway location with grading improvements.

For the DOT to approve your driveway permit, we required you to improve the sight distance in both directions. After you completed this requirement, driveway permit #4511016 was issued for the access to Crest Road.

Should you have any questions or need additional information, please let us know.

Sincerely,

Steve Cannon

Steve L. Cannon, PE
District Engineer

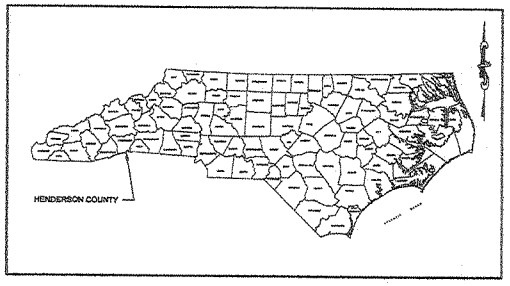
cc: driveway file #4511016

Division 14, District 1
Phone: (828) 891-7911 4142 Haywood Road, Mills River, NC 28759 Fax: (828) 891-5026

CREST ROAD C&D MATERIAL RECOVERY FACILITY

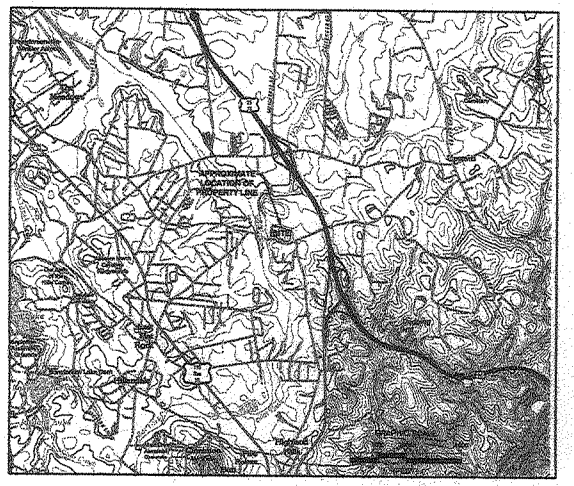
EROSION AND SEDIMENT CONTROL PLAN

EAST FLAT ROCK, NC



STATE

COUNTY LOCATION MAP



VICINITY MAP

DRAWING INDEX	
SHEET	**DESCRIPTION**
EP-T	TITLE SHEET
EP-L	LEGEND AND GENERAL NOTES
EP-01	EXISTING CONDITIONS
EP-02	EROSION AND SEDIMENT CONTROL PLAN
EP-03	EROSION AND SEDIMENT CONTROL DETAILS
EP-04	EROSION AND SEDIMENT CONTROL DETAILS

OWNER INFORMATION	
PREPARED FOR:	PACE CONSTRUCTION & EXCAVATION, INC.
ADDRESS:	625 SOUTH GROVE STREET HENDERSONVILLE, NC 28792
CONTACT:	MARK PACE (828) 696-9118

PROPERTY INFORMATION
ADDRESS: 420 CREST ROAD EAST FLAT ROCK, NC
PARCEL NUMBER: 0200874
ACREAGE: 6.72
ZONING: I

SEPTEMBER 2011

REVISED NOVEMBER 2011

NO	BY	CK	APP	DATE	REVISIONS AND RECORD OF ISSUE
				11/2/11	REVISED TO REFLECT DEQ/DOA COMMENTS
				10/18/11	REVISED PER HENDERSON COUNTY COMMENTS

DESIGNED HSW
DRAWN JRW
CHECKED RW
APPROVED EBA
DATE 9/26/11

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JOYCE ENGINEERING
2211 W. GENERAL WAYNE ROAD
GREENSBORO, NC 27407
PHONE: (336) 323-0002
NC CORP. LIC. C-0793

PACE CONSTRUCTION
HENDERSON COUNTY, NC

TITLE SHEET

PROJECT NO. 854.1101.11

SCALE AS SHOWN

DRAWING NO. EP-T

L:\CREST ROAD\Base Models\P-PAK\854.1101.11 - EP-T.dwg Layout: COVER

CONVENTIONAL SYMBOLS AND GENERAL NOTES

SURVEY FEATURES

- BM BENCHMARK
- CP CONTROL POINT
- PROPERTY LINE
- EASEMENT
- RIGHT OF WAY
- FENCE LINE
- RAILROAD
- GUARDRAIL
- RESOURCE PROTECTION AREA

UTILITIES

- UTILITY POLE
- HYDRANT
- LIGHT POLE
- TANK (SIZE VARIES)
- TRANSFORMER
- MANHOLE
- CLEANOUT
- VALVE
- OHE OVERHEAD ELECTRIC
- UGE UNDERGROUND ELECTRIC
- OHT OVERHEAD TELEPHONE
- UGT UNDERGROUND TELEPHONE
- FM LEACHATE FORCE MAIN
- DCFM DUAL CONTAINED LEACHATE FORCE MAIN
- SS SANITARY SEWER
- PS PROCESS SEWER
- G LANDFILL GAS LINE
- NGG NATURAL GAS LINE
- W POTABLE WATER
- SOLID PIPE (TYPE NOTED)
- PERFORATED PIPE (TYPE NOTED)
- CULVERT (SIZE NOTED)

HATCHING

- WETLANDS
- RIPRAP
- WASHED STONE
- BUFFER AREA
- PROPOSED ROAD
- COMPACTED BACKFILL

LANDFILL AND ROAD FEATURES

- PAVED ROAD
- GRAVEL/DIRT ROAD
- EDGE OF PAVEMENT
- LIMIT OF WASTE/EDGE OF LINER
- FACILITY BOUNDARY/CELL LIMITS/PHASE LIMITS

BUILDINGS AND STRUCTURES

- BUILDING
- DAM
- FOUNDATION

HYDROLOGY

- APPROXIMATE 100 YEAR FLOOD PLAIN
- DITCH FLOW
- STREAM OR RIVER

VEGETATION

- SINGLE TREE
- TREE LINE
- SHRUB

EROSION AND SEDIMENT CONTROL FEATURES

- SF SILT FENCE
- IP INLET PROTECTION
- OUTLET PROTECTION (SIZE VARIES)
- DIVERSION BERM

TOPOGRAPHICAL FEATURES

- 100 EXISTING 10' TOPO CONTOUR
- EXISTING 2' TOPO CONTOUR
- 100 PROPOSED 10' TOPO CONTOUR
- PROPOSED 2' TOPO CONTOUR
- X 100.00 SPOT ELEVATION

SURVEY NOTES:

1. TOPOGRAPHIC CONTOUR INTERVAL = 2 FEET, UNLESS INDICATED OTHERWISE.
2. ON-SITE TOPOGRAPHY PROVIDED BY WAGGONER & RHODES LAND SURVEYORS, PLLC 545 SOUTH GROVE STREET HENDERSONVILLE, NC 28792 PH:(828) 693-1022
3. APPROXIMATE 100-YR FLOODPLAIN TAKEN FROM U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, FEDERAL INSURANCE ADMINISTRATION, FLOOD INSURANCE RATE MAP, 37200 HENDERSON COUNTY, NC, PANEL NO. 8700J, EFFECTIVE 10/2/2008.
4. THIS MAP WAS PREPARED BY DATA COMPILED FROM RECORDED SUBDIVISION PLATS, PARCEL PLATS, DEEDED DESCRIPTION DATA, AND OTHER PUBLIC RECORDS OWNED BY HENDERSON COUNTY. THE COUNTY ASSUMES NO LEGAL RESPONSIBILITY OR LIABILITY FOR ANY OF THE INFORMATION CONTAINED ON THIS MAP.
5. PROPERTY BOUNDARY BEARING AND DISTANCES PROVIDED BY WAGGONER & RHODES, 2011.
6. SITE CONTROL INFORMATION PROVIDED BY WAGGONER & RHODES, 2011.
7. THE SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE SEARCH AND ALL EASEMENTS AND ENCUMBRANCES MAY NOT BE SHOWN.

GENERAL NOTES:

1. ALL PROPOSED UTILITIES ARE TO BE INSTALLED UNDERGROUND INCLUDING ELECTRIC, TELEPHONE, AND CATV, UNLESS NOTED OTHERWISE.
2. SITE LIGHTING IS PROPOSED FOR THIS PROJECT.
3. LANDSCAPING IS PROPOSED FOR THIS PROJECT. THE BUFFER AREA SHOWN ON DRAWINGS WILL REMAIN UNDISTURBED EXCEPT FOR THE INSTALLATION OF UTILITIES, STORMWATER DRAINAGE FEATURES AND ACCESS TO THE SITE. WHEN POSSIBLE CLEARING WITHIN THE BUFFER WILL BE ALIGNED TO MINIMIZE VISUAL IMPACTS.
4. SOIL STOCKPILE AREAS WILL BE ESTABLISHED TO FACILITATE PHASED CONSTRUCTION. STOCKPILE LOCATIONS AND SIZE MAY VARY AND MAY NOT BE LIMITED TO THE AREAS SHOWN. SILT FENCE WILL BE INSTALLED AROUND THE BASE OF THE STOCKPILE.
5. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS RELATING TO THE SAFETY OF PERSONS OR PROPERTY, AND TO THE PROTECTION OF PERSONS OR PROPERTY FROM DAMAGE, INJURY, OR LOSS; AND SHALL ERECT AND MAINTAIN ALL NECESSARY SAFEGUARDS FOR SUCH SAFETY AND PROTECTION.

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL DESIGN MANUAL.
2. THE COUNTY INSPECTOR MUST BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING FOR THE ISSUANCE OF A LAND DISTURBING PERMIT. THE CERTIFIED RESPONSIBLE LAND DISTURBER (CRLD) MUST ATTEND THE PRE-CONSTRUCTION MEETING.
3. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE ENVIRONMENTAL ENGINEERING DEPARTMENT.
6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY AS DETERMINED BY THE ENVIRONMENTAL ENGINEERING DEPARTMENT.
7. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
8. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
9. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
10. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE A FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
11. EXPOSED SLOPES SHALL BE STABILIZED WITH TWENTY-DAY CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING; PERMANENT GROUNDCOVER FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
12. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
    - 12.a. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
    - 12.b. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
    - 12.c. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
    - 12.d. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
    - 12.e. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
    - 12.f. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
13. ALL OFF-SITE DRAINAGE EASEMENTS MUST BE RECORDED PRIOR TO ISSUANCE OF A LAND DISTURBANCE PERMIT FOR THIS PROJECT.
14. ALL ON-SITE DRAINAGE EASEMENTS INCLUDING SWM/BMP DRAINAGE EASEMENTS MUST BE RECORDED PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THIS PROJECT.
15. ACCUMULATED SILT MUST BE REMOVED FROM SEDIMENT BASINS PRIOR TO CONVERSION TO A PERMANENT SWM/BMP.
16. THE SWM/BMP FACILITY MUST BE CERTIFIED BY A PROFESSIONAL ENGINEER PRIOR TO ISSUANCE OF ANY OCCUPANCY CERTIFICATES.
17. AN NCDOT DRIVEWAY ENCROACHMENT PERMIT IS REQUIRED FOR THIS PROJECT PRIOR TO ISSUANCE OF A LAND DISTURBANCE PERMIT.
18. AT THE TIME OF THE PRE-CONSTRUCTION MEETING, TWO STANDARD SIGNS MUST BE INSTALLED ON EACH SIDE OF THE CONSTRUCTION ACCESS. THESE SIGNS MAY BE INSTALLED ON TRIPOD DEVICES AND SHOULD STATE EITHER "CONSTRUCTION ENTRANCE AHEAD" OR "TRUCKS ENTERING HIGHWAY".
19. IN THE EVENT THAT MANHOLE STRUCTURES ARE CAST- IN-PLACE, INLET PROTECTION IS REQUIRED FOR ALL DROP INLETS OR BETWEEN DIFFERENT STORM SEWER RUNS DURING INSTALLATION.

CONSTRUCTION SEQUENCE:

1. OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS;
2. FLAG THE LIMITS OF CONSTRUCTION;
4. CLEAR AND GRUB THE AREA AS NEEDED, STOCKPILE TOPSOIL, STABILIZE DISTURBED AREAS;
5. INSTALL TEMPORARY DIVERSIONS AND SEDIMENT FENCING;
6. CONSTRUCT SEDIMENT BASIN;
7. CONSTRUCT AND STABILIZE ALL STORMWATER CONVEYANCE FEATURES;
8. PROCEED WITH ROUGH GRADING OF THE PROPOSED LANDFILL BASEGRADES;
9. SEED AND STABILIZE DENUDED AREAS IMMEDIATELY AFTER GRADING IS COMPLETED;
10. INSPECT ALL EROSION AND CONTROL FEATURES WEEKLY AND FOLLOWING EACH SIGNIFICANT RAINFALL. MAKE REPAIRS IMMEDIATELY; AND
11. AFTER THE SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES AND ESTABLISH PERMANENT VEGETATION ON THE DISTURBED AREAS

PROPERTY NOTES:

OWNER'S NAME: MARK PACE
OWNER'S ADDRESS: 415 SABINE DR
HENDERSONVILLE, NC 28739
PHONE NO.: (828) 698-9118

PHYSICAL LOCATION: 420 CREST ROAD
HENDERSON COUNTY, NORTH CAROLINA

PARCEL NUMBER: 0200874
TOTAL ACREAGE: 8.72 ACRES/FUTURE SUBDIVISION 4.00 ACRES

DISTURBED ACREAGE: 2.40 ACRES

ZONING: I

ZONING OF SUBJECT PROPERTY IS INDUSTRIAL, PROPERTIES SOUTH OF SUBJECT PROPERTY AND CREST ROAD ARE RESIDENTIAL-1.

SETBACKS: 20' FRONT
20' SIDE
20' REAR
MAXIMUM BUILDING HEIGHT: 72'

BUFFER: B-2 (30')

EX. NATURAL VEGETATION WILL SERVE AS A BUFFER BETWEEN SITE AND ADJACENT PROPERTY OWNER ON EAST SIDE OF PROPERTY.

EXISTING LAND USE: CONCRETE CRUSHING AND BORROW OPERATIONS
PROPOSED LAND USE: C&D MATERIAL RECOVERY FACILITY

THE OWNER IS PROPOSING TO INSTALL A SCALE HOUSE, SCALE AND 11 -9'x20' PARKING SPACES, ONE OF WHICH IS DESIGNATED AS HANDI-CAP ACCESSIBLE AS PART OF THE SITE PLAN.

SITE LIGHTING WILL BE FULL CUT-OFF FIXTURE TO AVOID LIGHT TRESPASS ONTO ADJOINING PROPERTIES.

EXISITING CITY OF HENDERSONVILLE WATER AND SEWER MAINS WILL BE EXTENDED WITHIN CREST RD TO PROVIDE SERVICE TO THIS FACILITY.

THIS PROPERTY DOES NOT LIE WITHIN A 100-YEAR FLOOD ZONE PER FEMA MAP NUMBER 3720958700J DATED 10/2/08.

ENGINEERING CONSULTANT:
JOYCE ENGINEERING
2211 W MEADOWVIEW RD. -SUITE 101
GREENSBORO, NC 27407
(336)323-0092

TOPOGRAPHY SURVEY PROVIDED BY:
WAGGONER & RHODES LAND SURVEYORS, PLLC.
545 SOUTH GROVE STREET
HENDERSONVILLE, NC 28792
(828) 693-1022

NO	BY	CK	APP	REVISIONS AND RECORD OF ISSUE	DATE
				REVISED PER HENDERSON COUNTY COMMENTS	10/10/11
				REVISED TO REFLECT DEEDED ACREAGE	11/2/11

NORTH CAROLINA PROFESSIONAL SEAL 27446 ENGINEER EVAN E. ANDREWS

DESIGNED HRW
DRAWN HRW
CHECKED EEA
APPROVED EEA
DATE 8/29/11

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JOYCE ENGINEERING
2211 W. MEADOWVIEW ROAD
GREENSBORO, NC 27407
PHONE: (336) 323-0092
NC CORP LIC C-0782

PACE CONSTRUCTION
HENDERSON COUNTY, NC

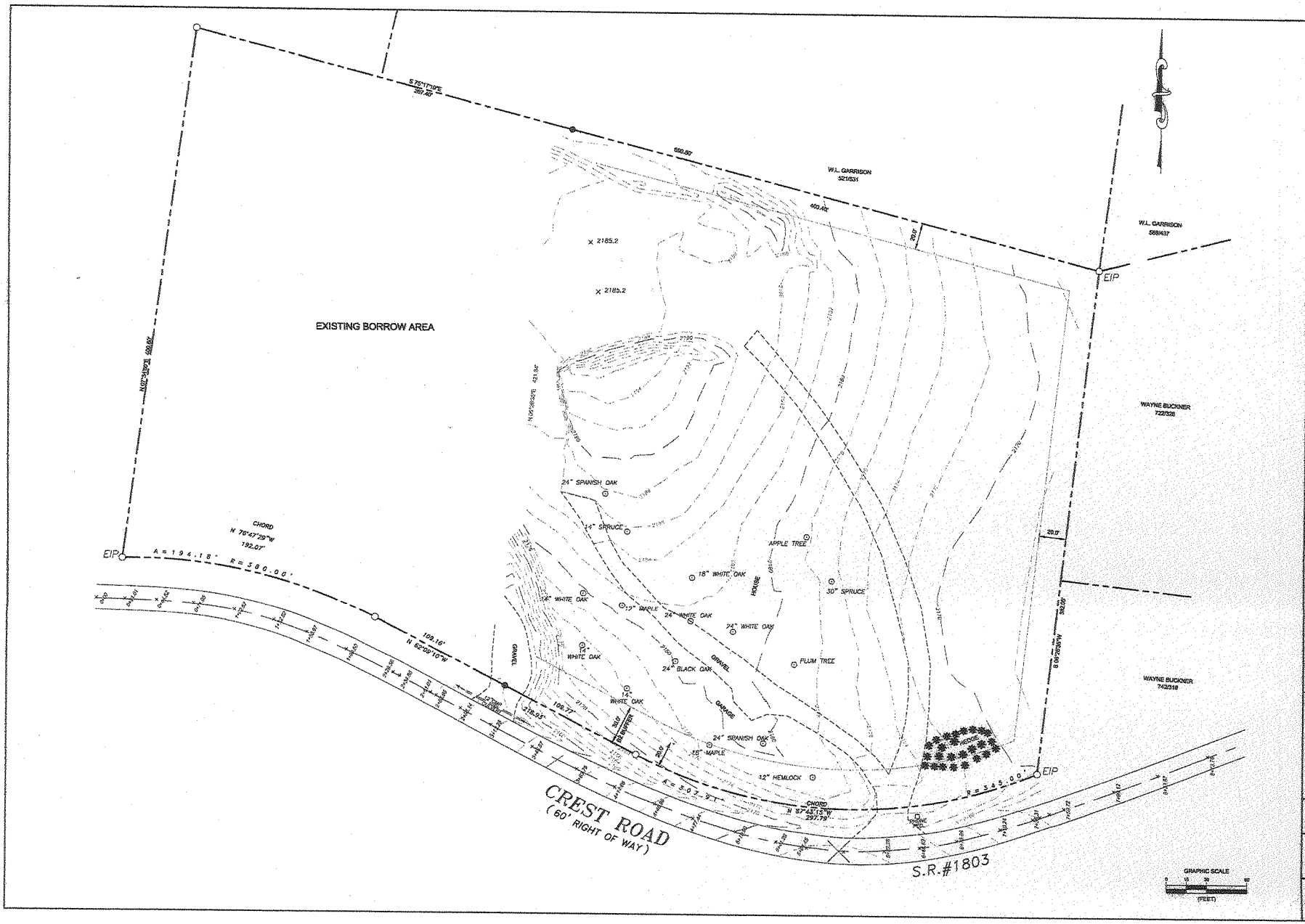
CREST ROAD C&D MATERIAL RECOVERY FACILITY
CONVENTIONAL SYMBOLS AND GENERAL NOTES

PROJECT NO. 854.1101.11

SCALE AS SHOWN

DRAWING NO. EP-L

L:\CREST ROAD\sheet set\SITE PLAN, E&S Plan FULL SITE.dwg Layout=LEGEND



NO	BY	CK	APP
1	10/20/11	REVISED TO REFLECT REVISED HORIZONTAL	
2	10/10/11	REVISED PER HENDERSON COUNTY COMMENTS	
DATE		REVISIONS AND RECORD OF ISSUE	

DESIGNED RBW
DRAWN WWC
CHECKED EEA
APPROVED EEA
DATE 10/2011

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JOYCE ENGINEERING
2211 W. MEADOWVIEW ROAD
GREENSBORO, NC 27407
PHONE: 336-294-4700
NC COA P-0187 C-0782

PACE CONSTRUCTION
HENDERSON COUNTY, NC

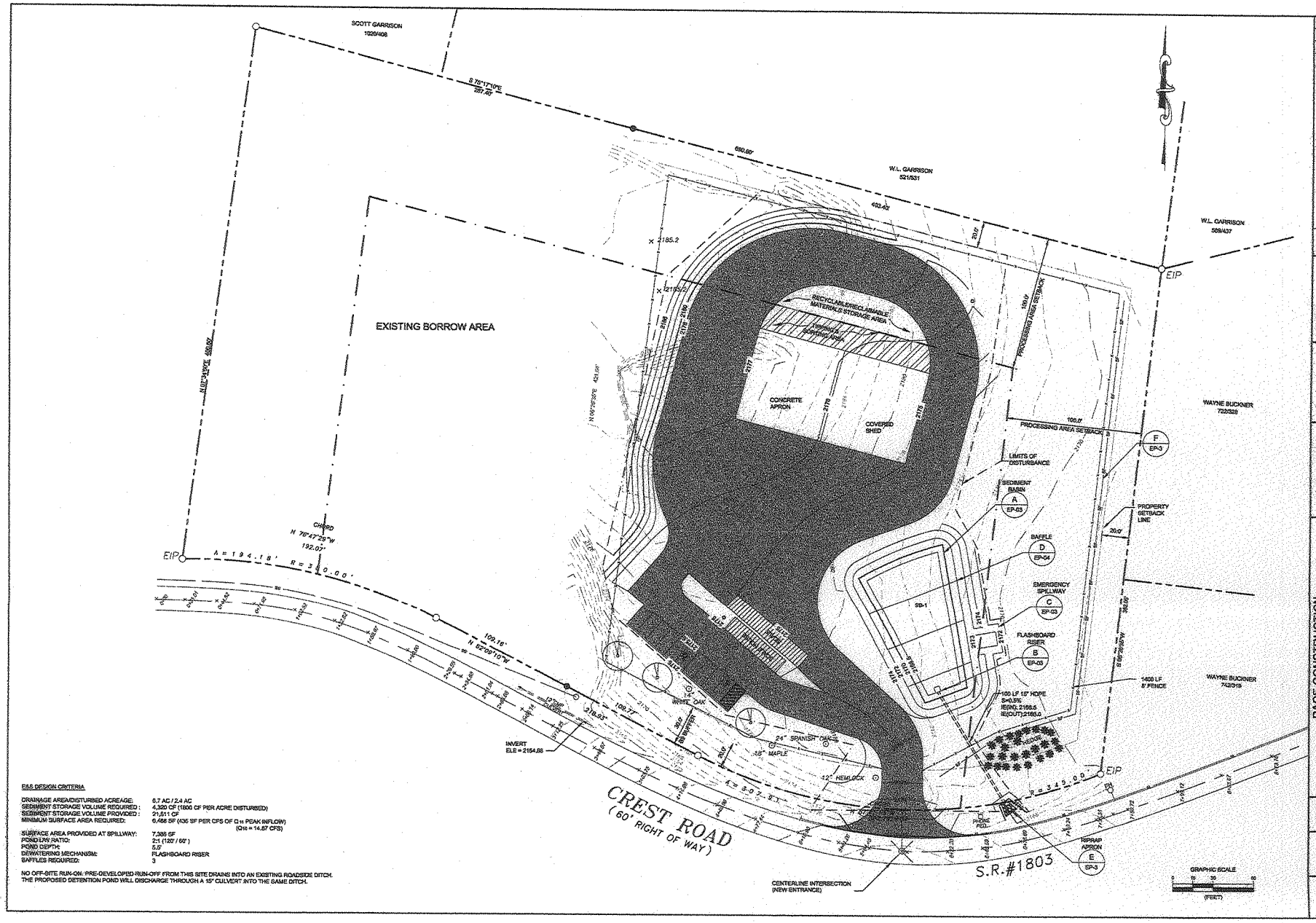
CREST ROAD C&D MATERIAL RECOVERY FACILITY
EXISTING CONDITIONS

PROJECT NO.
854.1101.11

SCALE
AS SHOWN

DRAWING NO.
EP-01

L:\854\854.1101.11 CREST ROAD C&D MATERIAL RECOVERY FACILITY\DWG\EXISTING CONDITIONS.dwg



E&S DESIGN CRITERIA

DRAINAGE AREA/DISTURBED ACREAGE:	6.7 AC / 2.4 AC
SEDIMENT STORAGE VOLUME REQUIRED :	4,320 CF (1800 CF PER ACRE DISTURBED)
SEDIMENT STORAGE VOLUME PROVIDED :	21,511 CF
MINIMUM SURFACE AREA REQUIRED:	6,468 SF (435 SF PER CFS OF Q 10 PEAK INFLOW) (Q_{10} = 14.87 CFS)
SURFACE AREA PROVIDED AT SPILLWAY:	7,388 SF
POND LW RATIO:	2:1 (120' / 60')
POND DEPTH:	5.0'
DEWATERING MECHANISM:	FLASHBOARD RISER
BAFFLES REQUIRED:	3

NO OFF-SITE RUN-ON. PRE-DEVELOPED RUN-OFF FROM THIS SITE DRAINS INTO AN EXISTING ROADSIDE DITCH. THE PROPOSED DETENTION POND WILL DISCHARGE THROUGH A 15" CULVERT INTO THE SAME DITCH.

DATE	REVISIONS AND RECORD OF ISSUE	NO	BY	CK	APP
1/18/11	REVISED TO REFLECT DEEDED ACREAGE				
9/10/11	REVISED PER HENDERSON COUNTY COMMENTS				

DESIGNED HSV
DRAWN HSV
CHECKED EEA
APPROVED EEA
DATE 9/9/11

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JOYCE ENGINEERING
211 N. BROADVIEW ROAD
GREENSBORO, NC 27407
PHONE: (336) 292-9000
NC CORP. LIC. C-0793

PACE CONSTRUCTION
HENDERSON COUNTY, NC

CREST ROAD C&D MATERIAL RECOVERY FACILITY
EROSION AND SEDIMENT CONTROL PLAN

PROJECT NO.
854.1101.11

SCALE
AS SHOWN

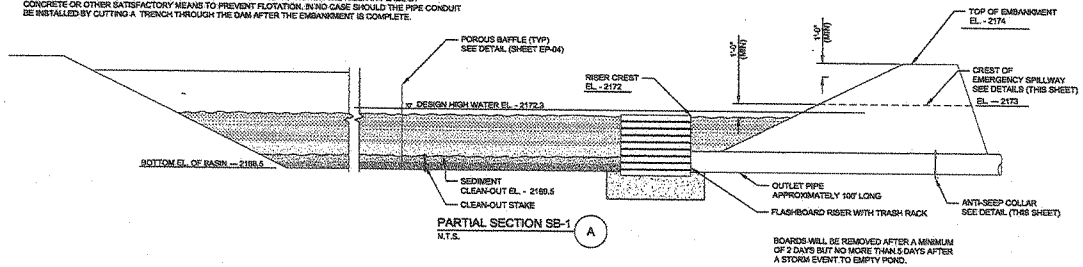
DRAWING NO.
EP-02

L:\CREST ROAD\dwgs\SITE PLAN\ E&S Plan FULL SITE.dwg Layout:EP-02

CONSTRUCTION NOTES:

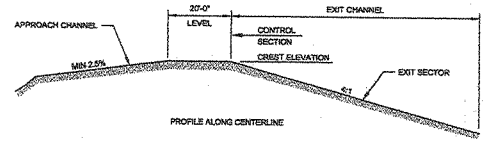
1. CONDUIT SPILLWAYS - SECURELY ATTACH THE RISER TO THE BARREL OR BARREL STUB TO MAKE A WATERTIGHT STRUCTURAL CONNECTION. SECURE ALL CONNECTIONS BETWEEN BARREL SECTIONS BY APPROVED WATERTIGHT ASSEMBLIES. PLACE THE BARREL AND RISER ON A FIRM FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND TH EPIPE OR ANTI-SEEP COLLARS. PLACE THE FILL MATERIAL AROUNF THE PIPE SPILLWAY IN 4-INCH LAYERS, AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MIN. OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. ANCHOR THE RISER IN PLACE BY CONCRETE OR OTHER SATISFACTORY MEANS TO PREVENT FLOTATION. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.

2. EMERGENCY SPILLWAYS - INSTALL THE EMERGENCY SPILLWAY IN UNDISTURBED SOIL. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE WIDTH, AND ENTRANCE AND EXIT SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF AN EMERGENCY SPILLWAY.



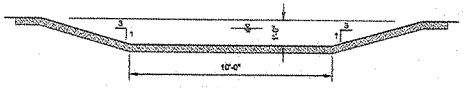
PARTIAL SECTION SB-1 (A)
N.T.S.

BOARDS WILL BE REMOVED AFTER A MINIMUM OF 2 DAYS BUT NO MORE THAN 5 DAYS AFTER A STORM EVENT TO EMPTY POND.



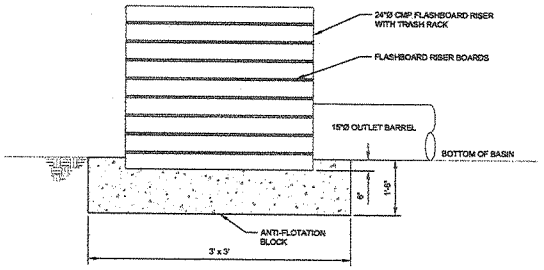
NOTES:

1. CONSTRUCT THE ENTIRE FLOW AREA OF THE EMERGENCY SPILLWAY IN UNDISTURBED SOIL.

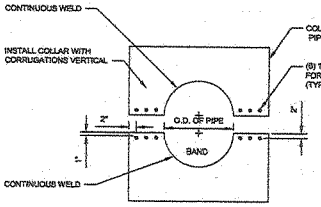


VIEW AT CONTROL SECTION

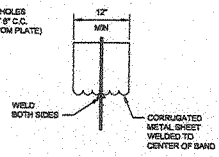
EMERGENCY SPILLWAY DETAILS (C)
N.T.S.



FLASHBOARD RISER (B)
N.T.S.



ELEVATION OF UNASSEMBLED COLLAR

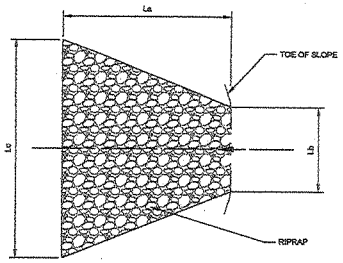


PROFILE

NOTES:

1. ALL MATERIAL TO BE IN ACCORDANCE WITH CONSTRUCTION AND CONSTRUCTION MATERIAL SPECIFICATIONS.
2. WHEN SPECIFIED ON THE PLANS, COATING OF COLLARS SHALL BE IN ACCORDANCE WITH CONSTRUCTION AND CONSTRUCTION MATERIAL SPECIFIED.
3. UNASSEMBLED COLLARS SHALL BE MARKED BY PAINTING OR TAGGING TO IDENTIFY MATCHING PAIRS.
4. THE LAP BETWEEN THE TWO HALF SECTIONS AND BETWEEN THE PIPE AND CONNECTING BAND SHALL BE CAULKED WITH ASPHALT MASTIC AT TIME OF INSTALLATION.
5. EACH COLLAR SHALL BE FURNISHED WITH TWO 1/2" DIAMETER RODS WITH STANDARD TANK LUGS FOR CONNECTING COLLARS TO PIPE.
6. THE COLLAR SHELL BE INSTALLED DOWNSTREAM FROM THE EMBANKMENT CENTERLINE.

CORRUGATED METAL ANTI-SEEP COLLAR

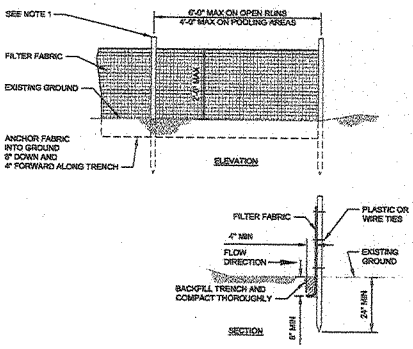


OUTLET PROTECTION SCHEDULE				
OUTLET NO	La	Lc	d_{50} RIPRAP	Lb
OP-1	6'	9.25'	0.25'	3.75'

OUTLET PROTECTION DETAIL - TYPE II (E)
N.T.S.

CONSTRUCTION NOTES:

1. INSTALL FILTER FABRIC BETWEEN RIPRAP AND SOIL FOUNDATION.
2. Lb EQUALS 3x DIAMETER OF PIPE OR FULL WIDTH OF RECEIVING CHANNEL (WHICHEVER IS LARGER).
3. MAXIMUM STONE SIZE = 1.5 * d50
4. APRON THICKNESS = 1.5 * MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6 INCHES.
5. RIPRAP SHOULD BE A WELL-GRADED MIXTURE WITH 50% BY WEIGHT LARGER THAN THE SPECIFIED DESIGN SIZE. THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE SHOULD BE 1.5 TIMES THE D50 SIZE WITH SMALLER SIZES GRADING DOWN TO 1 INCH.
6. STONE FOR RIPRAP MAY CONSIST OF FIELD STONE OR QUARRY STONE. THE STONE SHOULD BE HARD, ANGULAR, OF SUCH QUALITY THAT IT WILL NOT BREAK DOWN ON EXPOSURE TO WATER OR WEATHERING, AND SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED. THE SPECIFIC GRAVITY OF THE INDIVIDUAL STONES SHOULD BE AT LEAST 2.5.
7. PLACEMENT OF RIPRAP SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER. PLACE RIPRAP SO THAT IT FORMS A DENSE, WELL-GRADED MASS OF STONE WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF STONES THROUGHOUT THE MASS MAY BE OBTAINED BY SELECTIVE LOADING AT THE QUARRY, AND CONTROLLED DUMPING DURING FINAL PLACEMENT. PLACE RIPRAP TO ITS FULL THICKNESS IN ONE OPERATION. DO NOT PLACE RIPRAP BY DUMPING THROUGH CHUTES OR OTHER METHODS THAT CAUSE SEGREGATION OF STONE SIZES. TAKE CARE NOT TO DISLODGE THE UNDERLYING BASE OR FILTER WHEN PLACING THE STONES. THE TOE OF THE RIPRAP SLOPE SHOULD BE KEYED TO A STABLE FOUNDATION AT ITS BASE. THE TOE SHOULD BE EXCAVATED TO A DEPTH ABOUT 1.5 TIMES THE DESIGN THICKNESS OF THE RIPRAP, AND SHOULD EXTEND HORIZONTALLY FROM THE SLOPE. THE FINISHED SLOPE SHOULD BE FREE OF POCKETS OF SMALL STONE OR CLUSTERS OF LARGE STONES. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE PROPER DISTRIBUTION OF STONE SIZES TO PRODUCE A RELATIVELY SMOOTH, UNIFORM SURFACE. THE FINISHED GRADE OF THE RIPRAP SHOULD BLEND WITH THE SURROUNDING AREA. NO OVERFALL OR PROTRUSION OF RIPRAP SHOULD BE APPARENT.



SEDIMENT FENCE DETAIL (F)
N.T.S.

CONSTRUCTION NOTES:

1. USE A SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D461. SYNTHETIC FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE 0 F° TO 120° F.
2. ENSURE THAT POSTS ARE 1.33 LB/LF STEEL WITH A MIN. LENGTH OF 5 FT. MAKE SURE STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.
3. FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MIN. 14 GAUGE AND A MAX. MESH SPACING OF 6 INCHES. FASTEN SECURELY TO THE UPSLOPE SIDE OF POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MIN. 50 LB TENSILE STRENGTH.
4. ENSURE THAT THE HEIGHT OF THE FENCE DOES NOT EXCEED 24" ABOVE GROUND SURFACE.
5. CONSTRUCT THE FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FABRIC ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP.
6. WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAX. OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MIN. OF 24 INCHES.
7. EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NTO REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MIN. 50 LB TENSILE STRENGTH.
8. EXCAVATE A TRENCH APPROX. 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
9. PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
10. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
11. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

NO	BY	CK	APP	DATE	REVISIONS AND RECORD OF ISSUE
1				1/10/11	REVISED TO REFLECT REVISED LOADING
2				09/07/11	REVISED PER HENDERSON COUNTY COMMENTS

DESIGNED HRW
DRAWN HRW
REVIEWED EEA
APPROVED EEA
DATE 4/28/11

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NC CORP LIC: C-0793

PACE CONSTRUCTION
HENDERSON COUNTY, NC

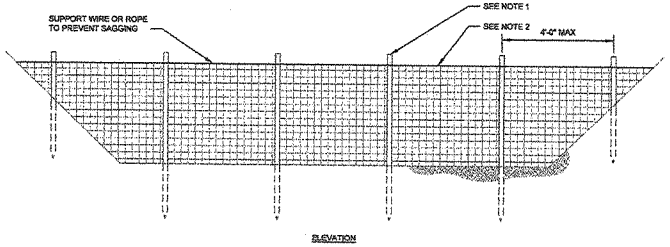
CREST ROAD C&D MATERIAL RECOVERY FACILITY
EROSION CONTROL DETAILS

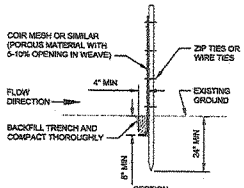
PROJECT NO.
854.1101.11

SCALE
AS SHOWN

DRAWING NO.
EP-03

L:\CREST ROAD\Sheet sets\SITE PLAN, EMS Plan FLA1, SITE Arch Layout\EP-03

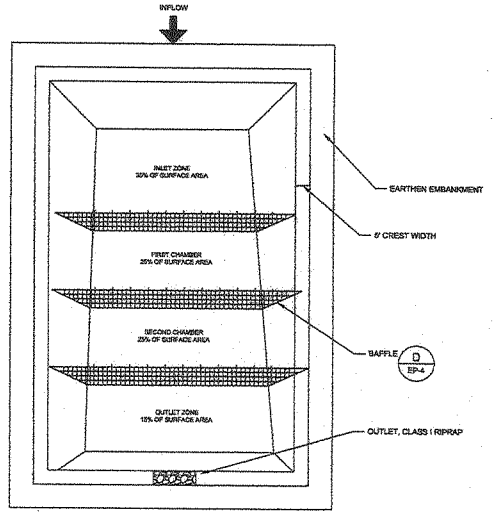




NOTES:

1. STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES, SPACED A MAXIMUM OF 4 FEET APART, AND INSTALLED UP THE SIDES OF THE BASIN AS WELL. THE TOP OF THE FABRIC SHOULD BE 6-INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERM.
2. INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN 20 FEET IN LENGTH MAY USE 2 BAFFLES.
3. WHEN USING POSTS, ADD A SUPPORT WIRE OR ROPE ACROSS THE TOP OF THE MEASURE TO PREVENT SAGGING.
4. WRAP POROUS MATERIAL, LIKE JUTE BACKED COIR MATERIAL, OVER A SAWHORSE OR THE TOP WIRE. HAMMER REBAR INTO THE SAWHORSE LEGS FOR ANCHORING. THE FABRIC SHOULD HAVE FIVE TO TEN PERCENT OPENINGS IN THE WEAVE. ATTACH FABRIC TO A ROPE AND A SUPPORT STRUCTURE WITH ZIP TIES, WIRE OR STAPLES.
5. THE BOTTOM AND SIDES OF THE FABRIC SHOULD BE ANCHORED IN A TRENCH OR PINNED WITH 8-INCH EROSION CONTROL MATTING STAPLES.
6. DO NOT SPLICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE BASIN.

POROUS BAFFLE DETAIL (D)
N.T.S.



TYPICAL POROUS BAFFLE LAYOUT
N.T.S.

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL DESIGN MANUAL.
2. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
3. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
4. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE DIVISION.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY AS DETERMINED BY THE DIVISION.
6. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
7. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
8. THE OWNER OR CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
9. ACCUMULATED SILT MUST BE REMOVED FROM SEDIMENT BASINS PRIOR TO CONVERSION TO A PERMANENT SWM/BMP.
10. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE A FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
11. MAINTENANCE OF EROSION AND SEDIMENT CONTROL FEATURES SHALL BE THE RESPONSIBILITY OF GRANVILLE COUNTY (CONTACT JASON FALLS 919-603-1355).

MAINTENANCE:

1. MAINTENANCE OF EROSION AND SEDIMENT CONTROL FEATURES, AS DESCRIBED BELOW, IS THE RESPONSIBILITY OF THE COUNTY.
2. THE SEDIMENT BASINS SHALL BE INSPECTED REGULARLY DURING LAND DISTURBING ACTIVITIES AND AFTER EACH SIGNIFICANT RAINFALL. SEDIMENT SHALL BE REMOVED, AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH. THE EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE INSPECTED REGULARLY FOR SIGNS OF PIPING AND SETTLEMENT. REPAIRS SHALL BE MADE IMMEDIATELY. THE RISER AND POOL AREA SHALL BE KEPT FREE OF TRASH AND OTHER DEBRIS.
3. INSPECT THE BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC COLLAPSE, TEAR DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE AND STABILIZE IT.
4. INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1" OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE. IN GENERAL, ONCE A RIPRAP INSTALLATION HAS BEEN PROPERLY DESIGNED AND INSTALLED IT REQUIRES VERY LITTLE MAINTENANCE. RIPRAP SHOULD BE INSPECTED PERIODICALLY FOR SCOUR OR DISLODGED STONES. CONTROL OF WEED AND BRUSH GROWTH MAY BE NEEDED IN SOME LOCATIONS.
5. INSPECT SEDIMENT FENCES WILL BE CHECKED AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL FOR OVERTOPPING, UNDERMINING, STRUCTURAL FAILURE, AND DETERIORATION OF THE FABRIC. MAKE ANY REPAIRS IMMEDIATELY. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALFWAY TO THE TOP OF THE BARRIER OR AS NECESSARY.
6. THE SEEDED AREAS WILL BE INSPECTED REGULARLY TO ENSURE THAT A GOOD STAND OF VEGETATION IS MAINTAINED. AREAS WITHOUT ESTABLISHED VEGETATION SHOULD BE FERTILIZED AND RESEEDED ANNUALLY.

CONTACT PERSON RESPONSIBLE FOR MAINTENANCE: MARK PACE (OWNER)
CELL# (828) 696-9118

NPDES NOTES:

THE NORTH CAROLINA DIVISION OF WATER QUALITY ISSUED A NEW NPDES GENERAL STORMWATER PERMIT NCG 010000 CONSTRUCTION ACTIVITIES ON AUGUST 3, 2011. THE MAJOR CHANGE IN THE PERMIT FROM THE PREVIOUS ONE IS THE SHORTER TIMES TO APPLY GROUND STABILIZATION WITH AS MULCH, WHEAT STRAW, OR GRASSES. THE NO LAWS AND RULES RELATING TO THE SEDIMENT ACT REQUIRE, IN MOST PLACES, GROUND STABILIZATION WITHIN 21 DAYS. BASED ON THE NEW EPA REQUIREMENTS AND 9-MONTHS WORK WITH A VERNAT ADVISORY GROUP, CTAG, THE DIVISION AND EPA-DEVELOPED PERMIT, NOW CONTAINS REQUIREMENTS FOR GROUND COVER WITHIN 14, AND IN SOME PLACES, 7 DAYS. SEVERAL OTHER CHANGES WERE MADE. THEREFORE, *THE COMPLETE PERMIT SHOULD BE USED TO ASSURE FULL IMPLEMENTATION. SEE WEBSITE:*
HTTP://PORTAL.NCDENR.ORG/WEB/WQ/AQ/SU/CONSTRUCTION

SELF INSPECTION PROGRAM:

1. THIS PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES AND APPLIES TO ALL PROJECTS. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
2. THE INSPECTION MUST BE CONDUCTED BY THE LANDOWNER, FINANCIALLY RESPONSIBLE PARTY OR THEIR AGENT. THE GOAL IS TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED, INCLUDING THE INSTALLATION AND MAINTENANCE OF MEASURES, AND THE PROVISION OF GROUND COVER IN A TIMELY MANNER.
3. ALL OF THE EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING SEDIMENTATION CONTROL BASINS, SEDIMENTATION TRAPS, SEDIMENTATION PONDS, ROCK DAMS, TEMPORARY DIVERSIONS, TEMPORARY SLOPE DRAINS, ROCK CHECK DAMS, SEDIMENT FENCE OR BARRIERS, ALL FORMS OF INLET PROTECTION, STORM DRAINAGE FACILITIES, ENERGY DISSIPATERS, AND STABILIZATION METHODS OF OPEN CHANNELS MUST BE INSPECTED.
4. THE NEED FOR GROUND COVER SHOULD BE CHECKED. TEMPORARY OR PERMANENT GROUND COVER MUST BE PROVIDED ON EXPOSED GRADED SLOPES AND FILLS WITHIN 21 CALENDAR DAYS OF THE COMPLETION OF A PHASE OF GRADING. PERMANENT GROUND COVER MUST BE PROVIDED WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (60 DAYS IN H(W ZONES), WHICHEVER TERM IS SHORTER, UPON THE COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
5. THE ACTUAL DIMENSIONS OF THE BASINS HAVE TO BE CHECKED, USUALLY WITH A TAPE MEASURE, AND COMPARED TO THE DIMENSIONS ON THE APPROVED PLAN. A LEVEL AND SURVEY ROD MAY BE USEFUL IN CHECKING THE DEPTH OF A BASIN, ONLY RELATIVE ELEVATIONS, COMPARING THE BOTTOM AND TOP ELEVATIONS ARE NECESSARY.
6. A SIGNIFICANT DEVIATION MEANS AN OMISSION, ALTERATION OR RELOCATION OF AN EROSION OR SEDIMENTATION CONTROL MEASURE THAT PREVENTS THE MEASURE FROM PERFORMING AS INTENDED. IF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN CANNOT BE FOLLOWED, A REVISED PLAN SHOULD BE SUBMITTED FOR REVIEW.
7. A "SELF-INSPECTION REPORT FOR LAND DISTURBING ACTIVITY AS REQUIRED BY NCGS 113A-54.1" IS AVAILABLE FOR USE. IT CAN BE COMPLETED BY HAND OR COMPLETED AS AN EXCEL SPREADSHEET. AN ALTERNATIVE IS TO MAKE NOTATIONS ON THE COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN THAT IS KEPT ON THE PROJECT SITE. RULE 15A NCAC 04B, 0131 STATES THAT "... DOCUMENTATION SHALL BE ACCOMPLISHED BY INITIALING AND DATING EACH MEASURE OR PRACTICE SHOWN ON A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR BY COMPLETING, DATING AND SIGNING AN INSPECTION REPORT THAT LISTS EACH MEASURE, PRACTICE OR DEVICE SHOWN ON THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN."
THE SELF-INSPECTION REPORT FORM CAN BE FOUND AT NC DENR'S WEBSITE:
HTTP://WWW.DLR.ENR.STATE.NC.US/PAGES/SEDIMENTATION_NEW.HTML
6. THE NPDES SELF-MONITORING REPORT MAY ONLY BE USED TO REPORT THAT THE MAINTENANCE AND REPAIR REQUIREMENTS FOR ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL MEASURES, PRACTICES AND DEVICES HAVE BEEN PERFORMED.
9. UNLIKE THE NPDES SELF-MONITORING REPORT, THE SELF-INSPECTION REPORT FOR LAND-DISTURBING ACTIVITY DOES NOT HAVE TO BE WEEKLY. RATHER, THIS REPORT IS COMPLETED AFTER EACH PHASE OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS COMPLETE. NOT EVERY PROJECT WILL HAVE ALL THE POSSIBLE PHASES, BUT THE LIST OF PHASES INCLUDES THE FOLLOWING:
   - INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL MEASURES;
   - CLEARING AND GRUBBING OF EXISTING GROUND COVER;
   - COMPLETION OF ANY PHASE OF GRADING OF SLOPES OR FILLS;
   - INSTALLATION OF STORM DRAINAGE FACILITIES;
   - COMPLETION OF CONSTRUCTION OR DEVELOPMENT;
   - ESTABLISHMENT OF PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION.
10. DO NOT MAIL THE REPORT. THE RECORDS MUST BE MADE AVAILABLE TO THE EROSION CONTROL INSPECTOR AT THE SITE. ANY DOCUMENTATION OF INSPECTIONS THAT OCCUR ON A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN SHALL OCCUR ON A SINGLE COPY OF THE PLAN AND THAT PLAN SHALL BE MADE AVAILABLE ON THE SITE. ANY INSPECTION REPORTS SHALL ALSO BE MADE AVAILABLE ON THE SITE

SEEDING SPECIFICATIONS:

FERTILIZER AND LIME

A. APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS. OR APPLY LIME AT THE RATE OF 90 LBS/1000 SQ.FT. AND FERTILIZER AT THE RATE OF 90 LBS/1000 SQ.FT.
B. MIX THOROUGHLY INTO UPPER 4 INCHES OF TOPSOIL.
C. LIGHTLY WATER TO AID THE DISSIPATION OF FERTILIZER AND LIME.

SEEDBED PREPARATION

A. PREPARE SEEDBED TO A DEPTH OF 4 TO 6 INCHES.
B. REMOVE LOOSE ROCKS, ROOTS AND OTHER OBSTRUCTIONS SO THAT THEY WILL NOT INTERFERE WITH THE ESTABLISHMENT AND MAINTENANCE OF VEGETATION.

TEMPORARY SEEDING

A. PROVIDE TEMPORARY SEEDING ON ANY CLEARED, UN-VEGETATED, OR SPARSELY VEGETATED SOIL SURFACE WHERE VEGETATIVE COVER IS NEEDED FOR LESS THAN ONE YEAR OR WHEN SEEDING DATES WILL PREVENT THE ESTABLISHMENT OF VEGETATIVE COVER IF PERMANENT SEEDING IS ATTEMPTED.
B. SEED IN ACCORDANCE WITH THE GUIDELINES BELOW:

TEMPORARY SEEDING RECOMMENDATIONS:

A. LATE WINTER, EARLY SPRING
SEEDING MIXTURE

SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120
KOBE LESPEDEZA	60

SEEDING DATES: JANUARY 1 - MAY 1

B. SUMMER
SEEDING MIXTURE

SPECIES	RATE (LB/ACRE)
GERMAN MILLET	40

A SMALL-STEMMED SUNDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE.
SEEDING DATES: MAY 1 - AUGUST 15

C. FALL
SEEDING MIXTURE

SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120

SEEDING DATES: AUGUST 15 - DECEMBER 30

D. SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

E. MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

F. MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

PERMANENT SEEDING RECOMMENDATIONS:

A. STEEP SLOPES (3:1)
SEED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE , SPECIFICATIONS, AND APPLICATION RATES:

SEEDING DATES	SEEDING MIXTURE SPECIES	RATE (LBS/ACRE)
FEBRUARY 1 - APRIL 15	TALL FESCUE	100
AUGUST 25 - SEPTEMBER 15	SERICEA LESPEDEZA	30
	KOBE LESPEDEZA	10

B. GRASSED CHANNELS
SEED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE , SPECIFICATIONS, AND APPLICATION RATES:

SEEDING DATES	SEEDING MIXTURE SPECIES	RATE (LBS/ACRE)
FEBRUARY 1 - APRIL 15	TALL FESCUE	200
SEEDING DATES	SEEDING MIXTURE SPECIES	RATE (LBS/ACRE)
MAY 1 - AUGUST 15	TALL FESCUE	200
	GERMAN MILLET	10
SEEDING DATES	SEEDING MIXTURE SPECIES	RATE (LBS/ACRE)
APRIL 1 - MAY 1	TALL FESCUE	200
AUGUST 15 - AUGUST 25	RYE (GRAIN)	40

C. LOW MAINTENANCE AREAS
SEED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE , SPECIFICATIONS, AND APPLICATION RATES:

SEEDING DATES	SEEDING MIXTURE SPECIES	RATE (LBS/ACRE)
FEBRUARY 1 - APRIL 15	TALL FESCUE	60
AUGUST 20 - OCTOBER 25	SERICEA LESPEDEZA	20
	KOBE LESPEDEZA	10
SEEDING DATES	SEEDING MIXTURE SPECIES	RATE (LBS/ACRE)
APRIL 1 - MAY 1	TALL FESCUE	60
AUGUST 15 - AUGUST 25	SERICEA LESPEDEZA	20
	KOBE LESPEDEZA	10
	RYE (GRAIN)	40
SEEDING DATES	SEEDING MIXTURE SPECIES	RATE (LBS/ACRE)
MAY 1 - AUGUST 15	TALL FESCUE	60
	SERICEA LESPEDEZA	20
	KOBE LESPEDEZA	10
	GERMAN MILLET	10

D. COMPACT SEEDED AREAS BY MEANS OF A ROLLER OR OTHER APPROVED EQUIPMENT IMMEDIATELY AFTER SOWING.

E. MULCH IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND APPLICATION RATES STEEP SLOPES (3:1): APPLY 4,000 - 5,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCHING MATERIAL. ANCHOR MULCH BY TACKING WITH ASPHALT, ROVING, OR NETTING. NETTING IS THE PREFERRED ANCHORING METHOD ON STEEP SLOPES.

1. GRASSED CHANNELS: INSTALL EXCELSIOR MAT IN THE CHANNEL TO THE TOP OF THE CHANNEL, AND SECURE ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. LOW MAINTENANCE AREAS: APPLY 4,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF OTHER SUITABLE MULCHING MATERIAL. ANCHOR MULCH BY TACKING WITH ASPHALT, ROVING, OR NETTING. NETTING IS THE PREFERRED ANCHORING METHOD ON STEEP SLOPES.
3. REFERTILIZE IN THE SECOND YEAR UNLESS GROWTH IS FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH DAMAGED AREAS IMMEDIATELY.

NO	BY	CK	APP	DATE	REVISIONS AND REISSUE FOR ISSUE
1				1/18/11	REVISED TO REFLECT GRADED AREAS
2				1/18/11	REISSUED FOR REVIEW COUNTY COMMENTS

DESIGNED HRV
DRAWN HRV
CHECKED EEA
APPROVED EEA
DATE 1/18/11

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GREENSBORO, NC 27407
PHONE: (336) 294-4505
NC CORP LIC. C-0782

PACE CONSTRUCTION
HENDERSON COUNTY, NC

CREST ROAD C&D MATERIAL RECOVERY FACILITY
EROSION CONTROL DETAILS

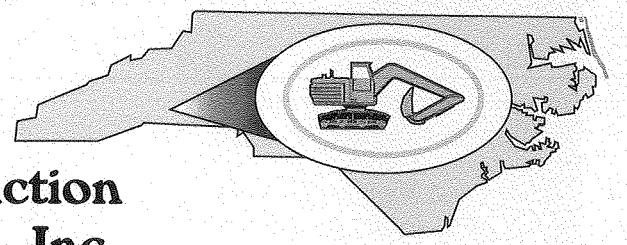
PROJECT NO. 854.1101.11

SCALE AS SHOWN

DRAWING NO. EP-04

L:\CREST ROAD\Sheet set\SITE PLAN\ESI Plan FULL SITE.dwg Layout=EP-04

Covering Western North Carolina



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AUG 13 2012

SOLID WASTE SECTION
ASHEVILLE REGIONAL OFFICE

Pace Construction & Excavation, Inc.

625 South Grove Street
Hendersonville, NC 28792

Office: (828) 696-9118
Fax: (828) 696-3411

- Complete Demolition
- Mobile Crusher Servcie
- Material Screening
- Recycled Concrete Aggregate
- Complete Site Work
- Roll Off Containers
- Scrap Metal Processing

Aug. 10, 2012

Fac/Perm/Co ID #	Date	Doc ID#
P1239	8/14/12	17046

To: Larry Frost
Re: Crest Rd. C&D Material Recovery
Facility Operations Plan

Mr. Frost:

Included in the following packet are the revisions of our previously submitted Operations Plan, an organizational chart for Pace Construction, and a revised set of numbers for our closure cost analysis. Please feel free to call if you have any questions, or need anything else from us. My mobile number is 828-808-4405. Thank you for your time.

Sincerely,

Barry Bonnett
Pace Construction

Enclosures:

- Crest Rd. C&D MRF Operations Plan
- Revisions from first submittal
- Henderson County E&S permit
- Henderson County TRC letter of approval
- Pace Construction and Excavation organizational chart
- Crest Rd. C&D MRF closure cost analysis