

Scanned By	Date	DOC ID	Permit
Backus	04/05/2011	13217	25-I



March 7, 2011

PN: 65001

NC Department of Environment and Natural Resources  
Division of Waste Management - Solid Waste Section  
Attn: Patricia M. Backus, P. E.  
1646 Mail Service Center  
Raleigh, NC 27699-1646

<b>APPROVED</b>		
<b>DIVISION OF WASTE MANAGEMENT</b>		
<b>SOLID WASTE SECTION</b>		
<b>Date</b> <u>04/05/2011</u>	<b>By</b> <u>Patricia M. Backus</u>	
<b>Attachment</b> <u>1</u>	<b>Part</b> <u>II</u>	<b>Document</b> <u>3</u>
<b>Permit</b> <u>25-I</u>	<b>Permit DIN</b> <u>13465</u>	

**RE:** Application for Renewal Request  
Cieszko LCID Landfill  
SWS Permit No. 25-I  
(via email and UPS)

Ms. Backus,

On behalf of the Cieszko LCID Landfill, please find attached 2 copies of the application for renewal of the Cieszko LCID Landfill permit. Below is a table of general facility information as requested in the application guidance document. Also attached to this letter are the following items:

1. Airspace Analysis and Expected Life Calculation
2. Executed Applicant Signature Page
3. Updated Operational Plan
4. Updated Facility Plans ( 6 sheets)

We hope that this information is sufficient for the permit renewal. Should you have any questions, concerns, or need additional information, please do not hesitate to contact our office at the numbers below.

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Tyrus Clayton, Jr.", is written over a light blue background.

C. Tyrus Clayton, Jr., PE

attachments

cc: file  
Martin Cieszko

PO Box 578 – 46 West Washington Street - Coats, North Carolina 27521

Phone: 910-897-7070 - Fax: 910-897-6767

Offices located in Coats and New Bern, North Carolina

License No. C-2570 - dba C. T. Clayton, Sr., P. E., Inc. - www.ctclayton.com

### General Facility Information

<b>Facility Name</b>	Cieszko LCID Landfill
<b>SWS Permit No.</b>	25-I (Issued May 8, 2006) (Originally opened as 25-E Cieszko Demolition Landfill, October 11, 1989) (Permit number change to 25-G, April 13, 1992) (25-G Closure, April 26, 2005)
<b>Facility Address</b>	NC Hwy 101, Havelock, NC (4.0 miles East of Hwy 70 and Hwy 101 Intersection)  GPS COORDINATES: N: 34.87495 E: 076.84969
<b>Applicant/Owner Information</b>	Cieszko Construction Company, Inc. Attn: Martin Cieszko PO Box 690 Havelock, North Carolina 28532 (252) 447-2096 (252) 447-0687 fax <a href="mailto:mgcieszko@bizec.rr.com">mgcieszko@bizec.rr.com</a>
<b>Applicant's Consulting Engineer</b>	C. T. Clayton Engineering Attn: C. Tyrus Clayton, Jr., PE PO Box 578 46 West Washington St. Coats, NC 27521 (910) 897-7070 (910) 897-6767 fax <a href="mailto:tyrus@ctclayton.com">tyrus@ctclayton.com</a>
<b>Other NC DENR Permits</b>	Erosion and Sediment Control Plan Crave 2006-008, dated Sept 19, 2005 Stormwater Management Permit SW7050833, dated October 27, 2005

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## Expected Life Remaining in Cell

### Design Info

Total Space =	273,109	cyds
Airspace =	242,085	cyds
2-ft Final Cover =	31,023	cyds

### Calculation of Life Expectancy of New Cell

1) Total volume used =	54,523	cyds	(based on January 2011 survey)
Time =	4.6	years	
=	<b>11,853</b>	<b>cyds/year</b>	

2) Time left before design grade (minus 2-ft final cover) is met

Total Volume Available = 187,562 cyds

Time Left = 187,562 cyds / 11,853 cyd/year

= **15.8 Years**

Disclaimer: Due to the nature of the operation of this facility, the above numbers are an estimate only. This facility is operated on an as-needed basis by the owner to support the general contracting and building business. As the nature of the projects the owner undertakes changes, the volume of waste being disposed will also change. The volume may increase or decrease.

As such, the attached plans depict four main fill cells for the landfill. Each of these is an anticipated 5-year cell. As you can see the first phase, Phase 1, did not receive enough waste to be completely filled. Due to this, the remaining volume in Phase 1, has been depicted as Phase 1A.



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### Applicant Signature Page

Name of facility Cieszko LCID Landfill

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.

  
Signature

Martin G. Cieszko  
Print Name

3 Mar 2011  
Date

President  
Title

Cieszko Construction Co Inc  
Business or organization name

# OPERATION PLAN

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The following Operation Plan has been created for the **Cieszko Land Clearing and Inert Debris Landfill** in accordance with NCDENR-SWS Rule 15A NCAC 13B .0566.

1. The approved plans will be followed.
2. This facility will be open normally Monday thru Friday from 7am to 5pm. During specific projects, the facility may extend its operating hours later during the day, or be open on Saturday and/or Sunday. Refer to Item 3 below.
3. The Cieszko LCID Landfill will be for the private use of the Cieszko Construction Company. The site will be secured with a locked gate. Approved LCID waste will be brought through the locked gates to the appropriate disposal area. Signs will be posted at the entrance to the facility showing the contact name and number and the permit number. Signs are also placed throughout the site giving information regarding allowable waste, procedures for dumping and traffic patterns.
4. Access roads are of all-weather construction and will be properly maintained.
5. The Cieszko LCID Landfill will accept only waste as defined in 15A NCAC 13B .0563 (1)(a). No other waste shall be permitted in this area. The list of wastes accepted at the LCID landfill is as follows:
  - a. Stumps
  - b. Trees
  - c. Limbs
  - d. Brush or Yard Trash
  - e. Other naturally occurring vegetative material
  - f. Unpainted concrete
  - g. Unpainted brick
  - h. Unpainted concrete block
  - i. Uncontaminated soil
  - j. Asphalt
  - k. Gravel
  - l. Rock
  - m. Untreated, unpainted wood (note that pallets, dimensional lumber, or any wood material that is considered to be construction and demolition debris may not be accepted at an LCID landfill)
6. The onsite facility attendant will visually check incoming loads for unauthorized waste and redirect the hauler as appropriate. Hazardous waste and liquids are not accepted. Other unacceptable waste such as waste tires, appliances, construction and demolition debris, and household garbage will not be accepted. Any unacceptable material found on the landfill will be removed, appropriately stored as necessary, and delivered to an approved/permitted facility or landfill for that type of waste. Standard procedures for waste handling and hauling, as dictated

by state and federal laws, will be followed. Unacceptable wastes will be removed from the facility on a weekly basis.

7. In order to maintain an orderly work area and to minimize erosion, the working face of the LCID will be kept as small as possible with a ½ acre maximum size. Waste will be compacted as densely as practical. Waste will be deposited in the upper areas first, thus ensuring that surface runoff is flowing away from the working face.
8. The site will be graded using a bulldozer to ensure that proper drainage of the area is maintained, thus diverting water away from the working face and eliminating any ponding of water on top of the waste.
9. Waste will not be disposed of in water.
10. Any leachate generated shall be managed on site through the use of current best management practices.
11. Adequate soil cover shall be applied monthly, or when the active area reaches one acre in size, whichever comes first. At least one foot of suitable soil cover shall be applied to the phase within 120 calendar days of its completion. Areas must be seeded in order to reduce erosion within 30 working days of completion of any phase.
12. Adequate erosion and sediment control measures, structures, and devices shall be employed and maintained to prevent silt from leaving the site and to prevent excessive erosion.
13. The concentration of explosive gases, if generated by the facility, will not exceed the following:
  - a. 25% of the lower explosive limit (LEL) for the gases in facility structures
  - b. The LEL for the gases at the property boundary
14. Open burning will not be conducted at the landfill. Should an accidental fire start at the landfill, landfill equipment will be summoned to extinguish the blaze. If the fire is beyond the capability of existing equipment, the local fire department will be summoned.
15. All incoming Inert Debris shall go directly to the Landfill or to a recycle stockpile until it can be processed for sale or reuse. There is to be no excessive stockpile of unprocessed material within the processing area. Stockpiled unprocessed Inert Debris and overage is to be covered with 6" of soil at least every 30 days.
16. Periodically, the Operator will evaluate the overall landfill operations. Twice yearly, an evaluation of the general site conditions will look for problems with routine operations. A site inspection checklist is attached to the end of this document. Any deficiencies can be incorporated into a "punch list" for further action. After evaluation, any deficiencies noted should be corrected.

17. Markers shall be placed to clearly delineate the edge-of-waste around the perimeter of every active, inactive and closed disposal area. All markers must be maintained throughout the life of the landfill and throughout the required period of post-closure care. In addition, facility staff should be aware of and be able to show Division staff the permitted boundary of the facility.
18. Closure Activities: On or before 120 calendar days after completion of any phase of disposal operations, or upon revocation of a permit, the disposal area shall be covered with a minimum of one foot of suitable soil cover sloped to allow surface water runoff in a controlled manner. The soil cover shall be fertilized, limed and seeded. Erosion control matting shall be applied to assist in achieving stabilization. Further actions in order to correct any condition which is or may become injurious to the public health or a nuisance to the community may be required by DENR.
19. Post Closure Activities: Due to the non-putrescible nature of LCID waste, it is anticipated that the post-closure activities for the LCID landfill will not extend beyond cover/site maintenance. Once the LCID landfill is closed, the site will be stabilized with vegetation. Erosion and sediment control measures will be monitored and maintained throughout the post closure care period.

Under post closure care, the Operator shall maintain the closure cap on the LCID landfill as necessary. It is important that the vegetative cover be retained in a good condition and this task is accomplished through reseeding, fertilizing and mowing. The LCID landfill shall have a soil cap. The grass on the LCID landfill shall be mowed once a year. In addition, the access roads into and on the facility caps, and the stormwater conveyance system shall be maintained in good condition. These facilities shall be inspected periodically and repaired as necessary.

The LCID landfill property will be maintained as open space after completion of closure activities.

20. All required records, correspondence, etc. that pertain to the operation and permit compliance of this facility will be stored at the office of Cieszko Construction Company, Inc. located at:

Cieszko Construction Company, Inc.  
249 Us Highway 70 W  
Havelock, NC 28532  
(252) 447-2096

Should this location change, the Owner will notify the NCDENR – Solid Waste Section of the change.

## SEMI-ANNUAL INSPECTION CHECKLIST

### CIESZKO LCID LANDFILL SWS PERMIT #25-I

Date of Inspection: \_\_\_\_\_ Weather: \_\_\_\_\_

Inspector's Name: \_\_\_\_\_

Category	No.	Inspection Item to be Conducted	(Circle Answer)	
<b>Site Access and Control</b>	<b>1</b>	Is entrance gate and lock functioning properly?	Yes	No
	<b>2</b>	Is fencing maintained?	Yes	No
	<b>3</b>	Is access controlled by wooded areas where no fence exists?	Yes	No
	<b>4</b>	Are conditions of roads from State Road to landfill acceptable?	Yes	No
	<b>5</b>	Is traffic pattern safe for landfill users?	Yes	No
<b>Waste Handling</b>	<b>6</b>	Are wastes being deposited and contained within designated areas?	Yes	No
	<b>7</b>	Is working face contained to ½ acre or less?	Yes	No
	<b>8</b>	Are any unacceptable wastes present on working face or surrounding areas?	Yes	No
	<b>9</b>	Are unacceptable wastes removed from cell being handled and removed from site per the operational plan?	Yes	No
	<b>10</b>	Is surface water being properly diverted away from the working face?		
<b>Closed and Inactive Areas</b>	<b>11</b>	Are finished areas of the cell being properly covered with soils?	Yes	No
	<b>12</b>	Is there any waste exposed on inactive areas of the cell?	Yes	No
	<b>13</b>	Has final cover been applied to areas at final grade?	Yes	No
	<b>14</b>	Is vegetative cover established on closed and inactive areas?	Yes	No
	<b>15</b>	Is there settlement occurring or water ponding on closed or inactive areas?	Yes	No
	<b>16</b>	Does the vegetation require mowing and is the vegetation healthy?	Yes	No
<b>Erosion and Sediment Control</b>	<b>17</b>	Are the Erosion & Sediment Control devices being properly maintained?	Yes	No
	<b>18</b>	Is there any evidence of erosion, rills, or gullies on the surface of the landfill and surrounding areas?	Yes	No
	<b>19</b>	Do the sediment basins/traps require cleaning?	Yes	No
	<b>20</b>	Are inactive and closed areas receiving vegetative cover in a timely manner?	Yes	No
<b>Records</b>	<b>21</b>	Are previous inspection records up to date and properly filed?	Yes	No
	<b>22</b>	Is a copy of the current SWS permit in the file?	Yes	No
	<b>23</b>	Are records of facility audits by SWS present?	Yes	No
	<b>24</b>	Are records maintained of incoming waste volumes/loads?	Yes	No
	<b>25</b>	Are records of rejected loads/materials and actions taken maintained?	Yes	No

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

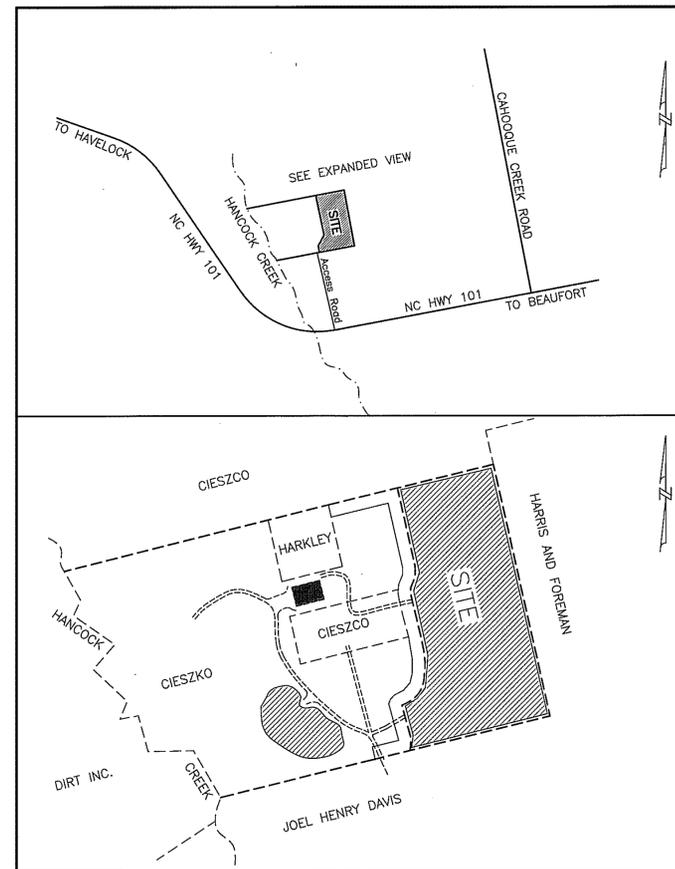
(use back as necessary)

# CIESZKO LCID LANDFILL

## CRAVEN COUNTY - NORTH CAROLINA 2011 PERMIT RENEWAL

FEBRUARY 2011

OWNER/DEVELOPER:  
CIESZKO CONSTRUCTION CO., INC.  
POST OFFICE BOX 690  
HAVELOCK, NC 28532-0690  
PHONE: 252-447-2096  
FAX: 252-447-0687



VICINITY MAP  
NOT TO SCALE

### INDEX

COVER SHEET	
EXISTING CONDITIONS	1
BASE GRADING PLAN	2
FINAL GRADING PLAN	3
PROFILES	4
DETAILS - 1	5
DETAILS - 2	6

EROSION AND SEDIMENT CONTROL PLAN  
No. CRAVE-2006-008 - DATE: SEPTEMBER 9, 2005

SOLID WASTE PERMIT  
No. 25-I - DATE: MAY 8, 2006

REVISIONS  
1. REVISED OWNERSHIP ON VICINITY MAP 03-04-11

 **CLAYTON**  
**Engineering**  
Civil and Environmental  
PO Box 578 · Coats, North Carolina 27521  
Phone 910-897-7070 · Fax 910-897-6767  
License No. C-2570 · www.ctclayton.com

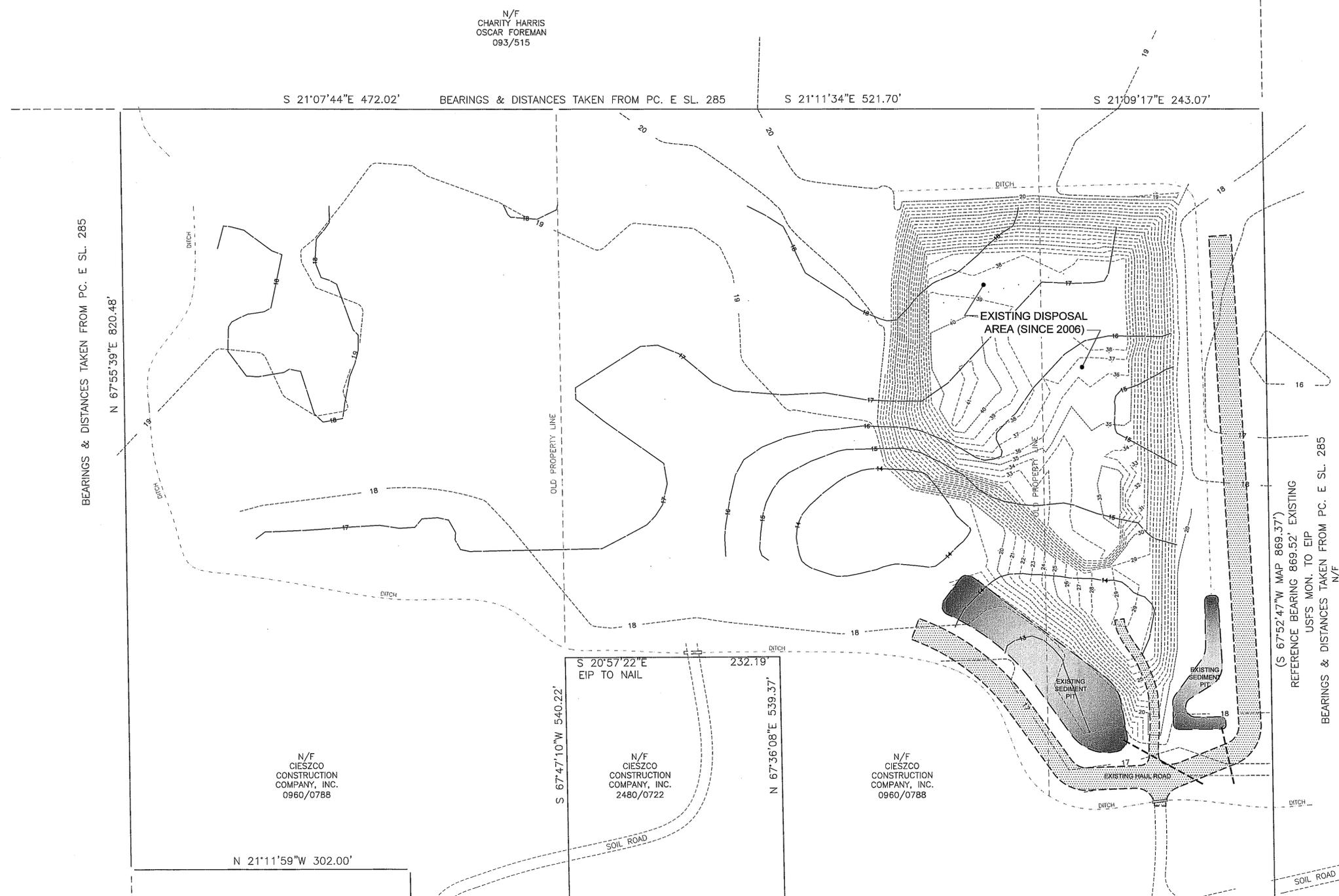
DESIGNED	CTC JR.		DATE:	FEBRUARY 2011
DRAWN	JWL / AEB		PROJ. #	65001
CHECKED	CTC JR.		DWG FILE	65001 MAS
PROJ. ENG.	CTC SR.		DATE:	3/4/2011

LEGEND	SYMBOL
EXISTING CONTOURS - MAJOR	-----20-----
EXISTING CONTOURS - MINOR	-----20-----
SEASONAL HIGH GROUNDWATER CONTOURS - MAJOR	-----15-----
SEASONAL HIGH GROUNDWATER CONTOURS - MINOR	-----14-----
EXISTING DITCH	-----

NOTES:

1. TOPOGRAPHIC SURVEY AND BOUNDARY INFORMATION FROM SURVEY DATED JUNE 3, 2003 AND SURVEY DATED JANUARY 28, 2001 BY JAMES C. SIMMONS AND ASSOCIATES.
2. GROUNDWATER CONTOURS SHOWN PER REPORT DATED OCTOBER 20, 2003 BY CPEC ENVIRONMENTAL, INC.
3. EXISTING CONDITIONS PRIOR TO WASTE DISPOSAL AND ISSUANCE OF SWS PERMIT No. 25-1 CAN BE FOUND ON DRAWINGS BY C. T. CLAYTON, Sr., P. E., Inc. DATED DECEMBER 15, 2005.

N/F  
CHARITY HARRIS  
OSCAR FOREMAN  
093/515



(S 67°52'47"W MAP 869.37')  
REFERENCE BEARING 869.52' EXISTING  
USFS MON. TO EIP  
BEARINGS & DISTANCES TAKEN FROM PC. E SL. 285  
N/F  
JOEL HENRY DAVIS, JR.  
1547/015  
FAMILY LTD. PARTNERSHIP

No.	Revision/Issue	Date
1	REVISED OWNERSHIP OF TRACTS	3/4/11

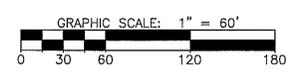
Professional Engineer Seal for C. T. Clayton, Jr., License No. 028909, dated 03/04/2011.

**CLAYTON Engineering**  
Civil and Environmental  
PO Box 578 • Coats, North Carolina 27521  
Phone 910-897-7070 • Fax 910-897-6787  
License No. C-2570 • www.ctclayton.com

**CIESZKO CONSTRUCTION COMPANY, INC.**  
CIESZKO LCID LANDFILL  
2011 PERMIT RENEWAL  
CRAVEN COUNTY - NORTH CAROLINA

Project No:	65001	File Name:	65001.MAS
Designed By:	CTC Jr.	Drawn By:	JWL / AEB
Checked By:	CTC Jr.	Proj. Eng.:	CTC

Sheet Title	
EXISTING CONDITIONS	
Date	FEBRUARY 2011
Scale	1" = 60'
Sheet	1 OF 6

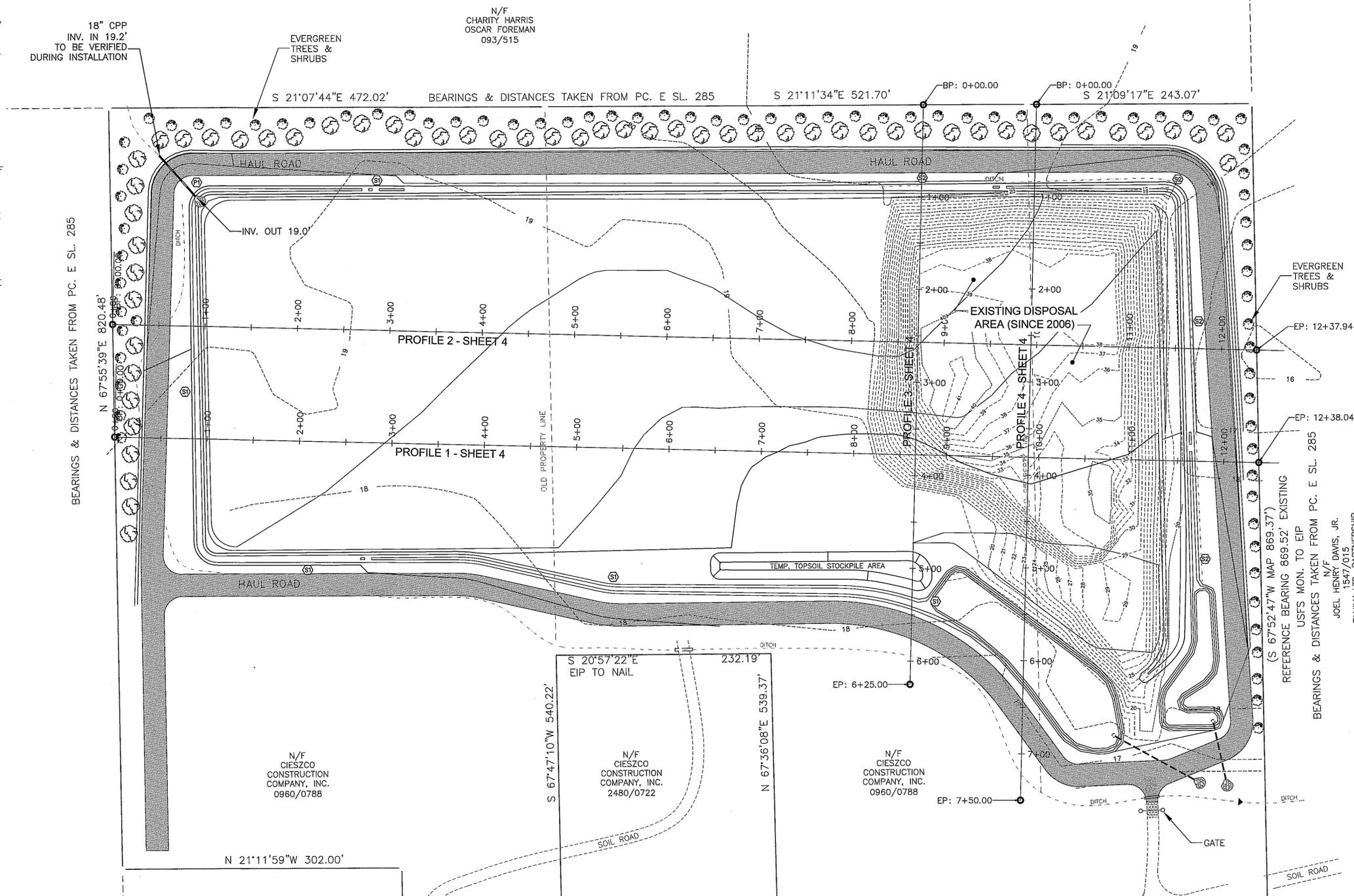


THIS DRAWING IS THE PROPERTY OF C. T. CLAYTON, Sr., P. E., Inc. NEITHER THIS DRAWING NOR THE INFORMATION SHOWN HEREON IS TO BE COPIED OR IN PART WITHOUT THE EXPRESS PERMISSION OF C. T. CLAYTON, Sr., P. E., Inc.

LEGEND	SYMBOL
EXISTING CONTOURS - MAJOR	-----
EXISTING CONTOURS - MINOR	.....
PROPOSED CONTOURS - MAJOR	—————
PROPOSED CONTOURS - MINOR	—————
PROPERTY LINE	—————
LIMITS OF CONSTRUCTION	- - - - -
SWALE	—————

- NOTES:
- EXTEND RIPRAP OUTLET PROTECTION TO THE BOTTOM OF THE SEDIMENT BASINS.
  - PERFORATE RISER 1 WITH 3-3 INCH HOLES EVENLY SPACED AT THE BARREL INVERT ELEVATION. PERFORATE RISER 2 WITH 3-2 INCH HOLES EVENLY SPACED AT THE BARREL INVERT ELEVATION.
  - ALL OUTLET PROTECTION SHALL BE UNDERLAIN WITH A 6oz NON-WOVEN FILTER FABRIC. (AMOCO 2006 OR APPROVED EQUAL)
  - CONSTRUCTION ROAD STABILIZATION SHALL INCLUDE THE PLACEMENT OF A 6" LIFT OF NCDOT ABC STONE AS REQUIRED TO PREVENT EROSION OF THE ROAD BED.
  - ALL EXPOSED SLOPES SHALL BE SEEDED WITHIN 30 WORKING DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING. PERMANENT GROUND COVER SHALL BE COMPLETED FOR ALL DISTURBED AREAS WITHIN 30 WORKING DAYS OR 120 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION.
  - THE RECEIVING WATERCOURSE FOR ALL STORMWATER FLOW IS HANCOCK CREEK.
  - DISTURBED ACREAGE: 15.9 ACRES  
TOTAL ACREAGE OF TRACT: 17.8 ACRES
  - IMPERVIOUS AREA (GRAVEL ROAD): 128,500 SF  
TOTAL % IMPERVIOUS: 16.8%
  - PROPERTY IS CURRENTLY CLEARED WITH SOME LIMITED GROUND COVER AND SMALL PINES.
  - NO LAND DISTURBING ACTIVITY SHALL OCCUR ON ADJACENT PROPERTIES.
  - THERE IS NO EVIDENCE OF WETLANDS ON THIS SITE.
  - SEASONAL HIGH GROUNDWATER IS LOCATED A MINIMUM OF 4.5FT BELOW BASE GRADES.

STRU. No.	DESCRIPTION
①	SEDIMENT BASIN 24" RISER, 12" BARREL (SEE DETAIL)
②	SEDIMENT BASIN 24" RISER, 12" BARREL (SEE DETAIL)
③	2' DEEP SWALE (SEE DETAIL)
④	2' DEEP SWALE (SEE DETAIL)
⑤	18" CPP (SMOOTH CORE)



1	REVISED OWNERSHIP OF TRACTS	3/4/11
No.	Revision/Issue	Date

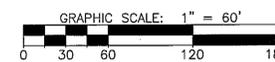
Tyus Clayton  
 03/04/2011

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**CIESZKO CONSTRUCTION COMPANY, INC.**  
 CIESZKO LCID LANDFILL  
 2011 PERMIT RENEWAL  
 CRAVEN COUNTY - NORTH CAROLINA

Project No:	65001	File Name:	65001.MAS
Designed By:	CTC Jr.	Drawn By:	JWL / AEB
Checked By:	CTC Jr.	Proj. Eng.:	CTC

Sheet Title	
BASE GRADING PLAN	
Date	FEBRUARY 2011
Scale	1" = 60'
Sheet	2
OF	6



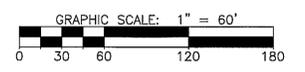
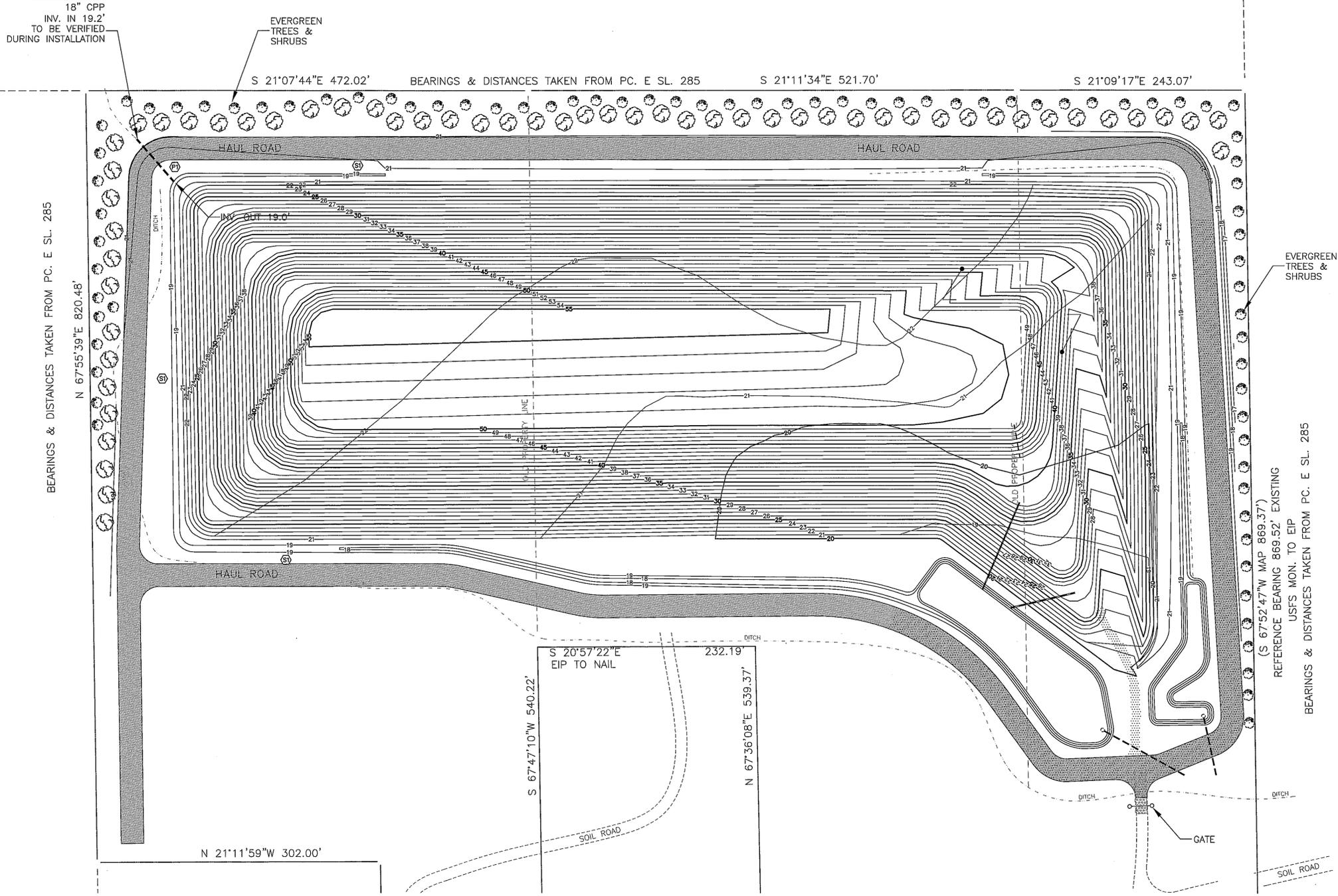
LEGEND	SYMBOL
EXISTING CONTOURS - MAJOR	-----
EXISTING CONTOURS - MINOR	-----
PROPOSED CONTOURS - MAJOR	-----
PROPOSED CONTOURS - MINOR	-----
PROPERTY LINE	-----
PROPOSED STORMWATER PIPES	-----
LIMITS OF CONSTRUCTION	-----
SWALE	-----
CELL SLOPE DRAINAGE SWALE	-----
STORMWATER/E&S STRUCTURE	(S)

No.	TITLE	KEY	SYMBOL
6.62	SILT FENCE	(SF)	-----
N/A	CULVERT INLET PROTECTION	(CIP)	-----
6.41	OUTLET PROTECTION	(OP)	-----
6.06	TEMPORARY STONE CONSTRUCTION ENTRANCE	(CE)	-----
6.11	PERMANENT SEEDING	(PS)	(PS)
6.10	TEMPORARY SEEDING	(TS)	(TS)
6.20	TEMPORARY DIVERSION DIKE	(DD)	-----

PROPOSED AIRSPACE:  
265,000 cu yd.

- NOTES:
- CLOSURE ACTIVITIES WILL COMMENCE WITHIN 30 DAYS AFTER THE DATE OF THE KNOWN FINAL RECEIPT OF WASTE FOR A SUBCELL, PER THE PROPOSED CLOSURE PLAN.
  - ALL EXPOSED SLOPES SHALL BE SEEDED WITHIN 30 WORKING DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING. PERMANENT GROUND COVER SHALL BE COMPLETED FOR ALL DISTURBED AREAS WITHIN 30 WORKING DAYS OR 120 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION.
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(2)	SEDIMENT BASIN 24" RISER, 12" BARREL (SEE DETAIL)
(S1)	2' DEEP SWALE (SEE DETAIL)
(S2)	2' DEEP SWALE (SEE DETAIL)
(CP)	15" CPP
(CS)	2' DEEP CELL SLOPE SWALE (SEE DETAIL)
(CP)	15" CPP
(CS)	2' DEEP CELL SLOPE SWALE (SEE DETAIL)
(CP)	15" CPP
(P1)	18" CPP (SMOOTH CORE)



No.	Revision/Issue	Date

Travis Clayton, Inc.  
Professional Engineer  
No. 028909

*Travis Clayton*  
Signature

03/4/2011  
Date

**CLAYTON Engineering**  
Civil and Environmental  
PO Box 578 • Castle, North Carolina 27521  
Phone 910-897-7070 • Fax 910-897-6767  
License No. C-2570 • www.ctclayton.com

**CIESZKO CONSTRUCTION COMPANY, INC.**  
CIESZKO LCID LANDFILL  
2011 PERMIT RENEWAL

CRAVEN COUNTY - NORTH CAROLINA

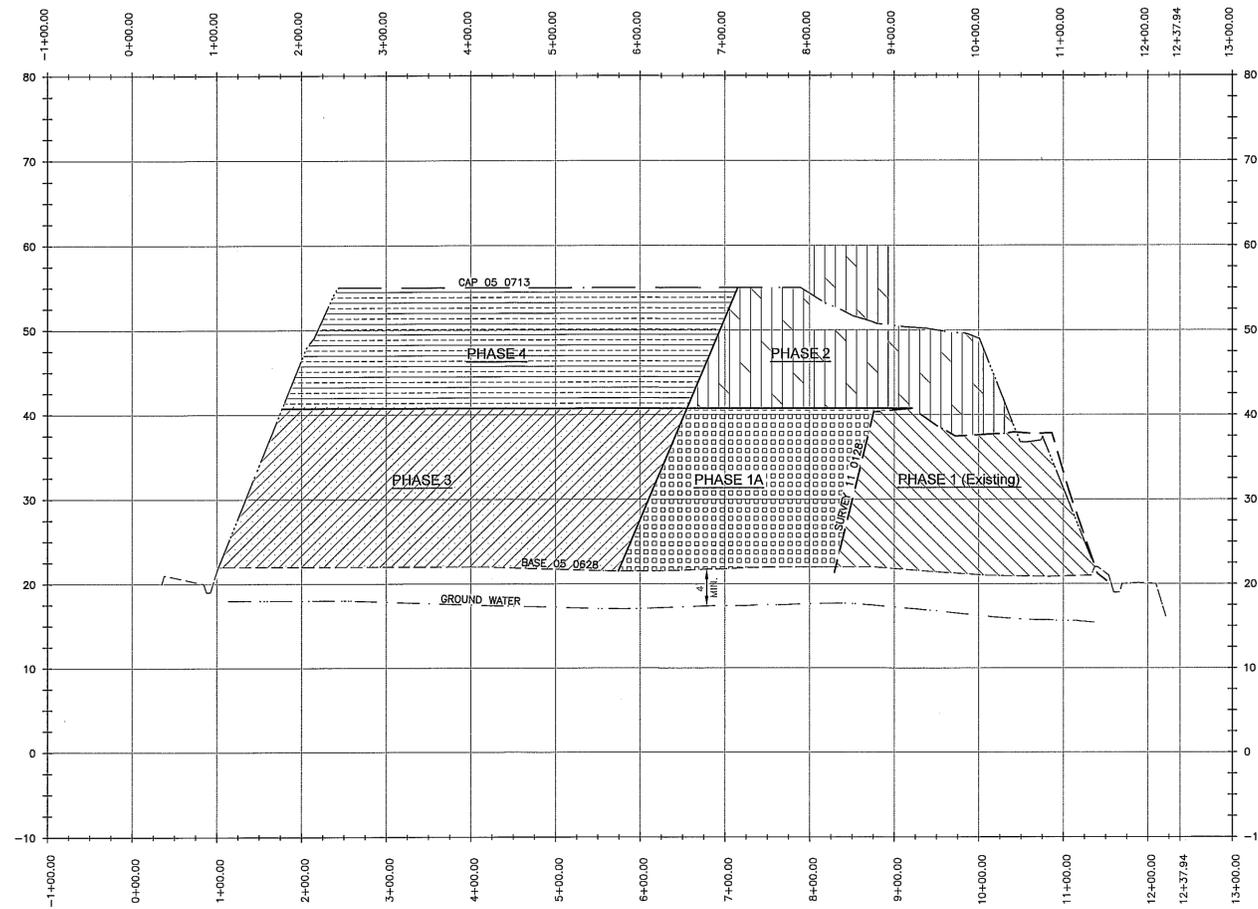
Project No: 65001	File Name: 65001.MAS
Designed By: CTC Jr.	Drawn By: JWJ / AEB
Checked By: CTC Jr.	Proj. Eng: CTC

**FINAL GRADING PLAN**

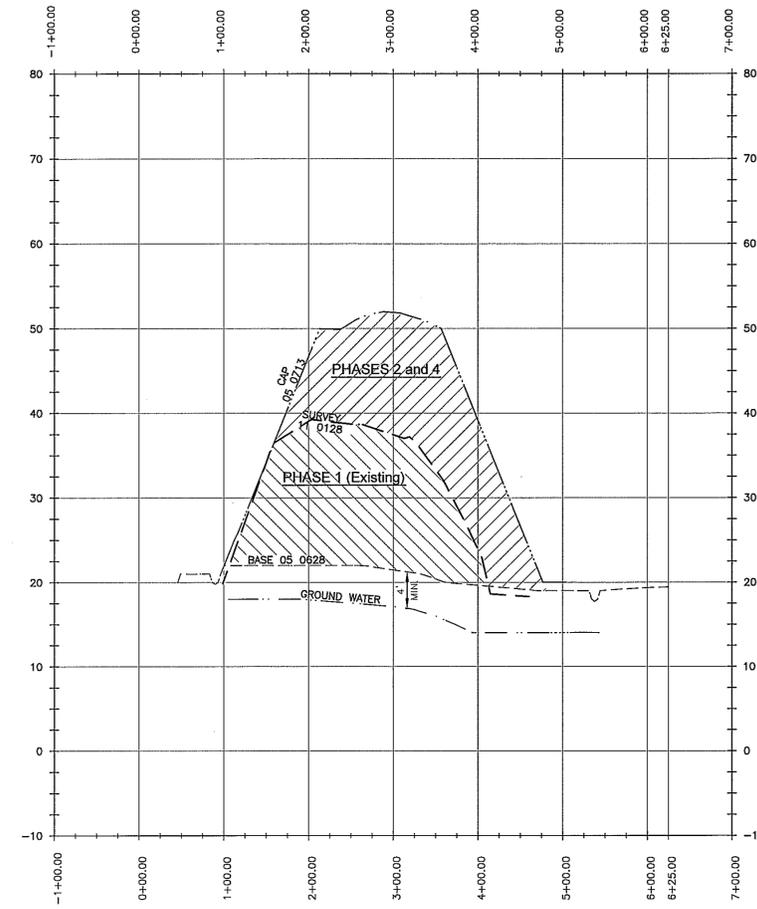
Date: FEBRUARY 2011	Sheet: <b>3</b>
Scale: 1" = 60'	OF 6

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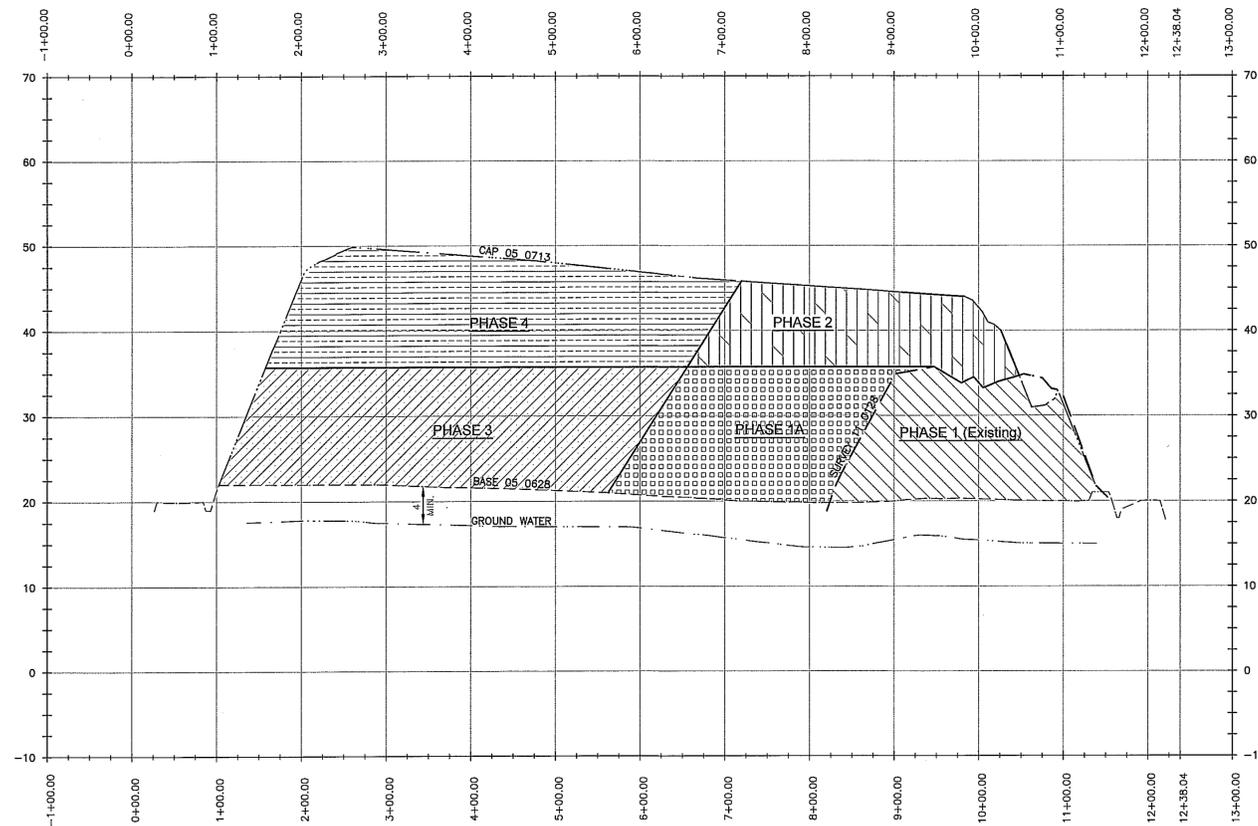
THIS DRAWING IS THE PROPERTY OF C. T. CLAYTON, Sr., P. E., INC. NEITHER THIS DRAWING NOR THE INFORMATION SHOWN HEREON IS TO BE USED ON ANY OTHER PROJECT AND MUST BE RETURNED TO C. T. CLAYTON, Sr., P. E., INC.



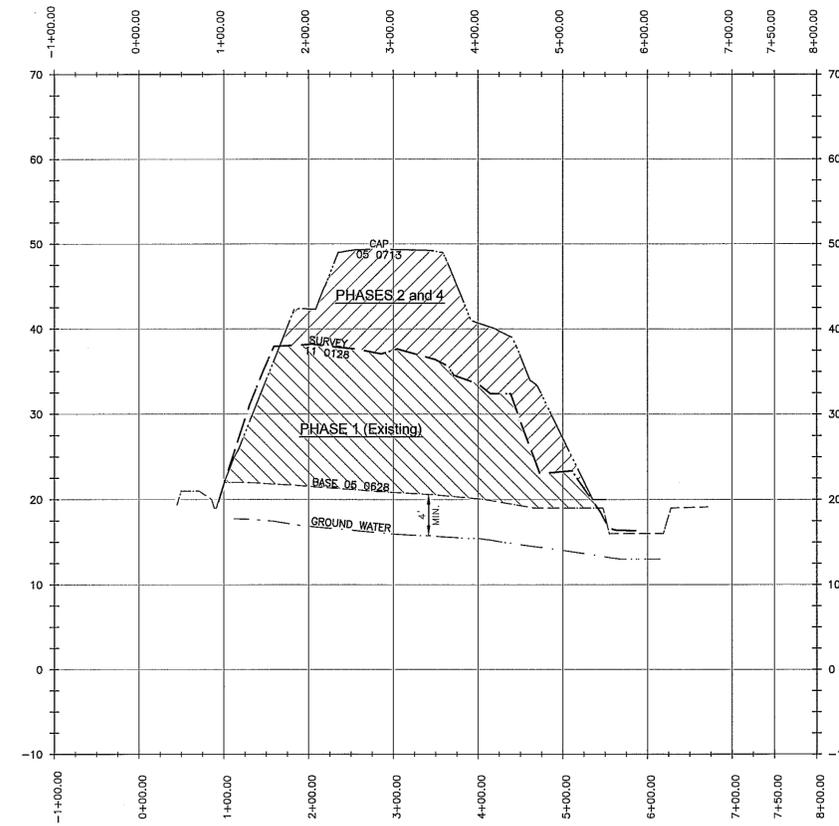
PROFILE 1



PROFILE 3



PROFILE 2



PROFILE 4

General Notes

No.	Revision/Issue	Date



*Trus Clayton*  
Signature  
Date  
03/04/2011



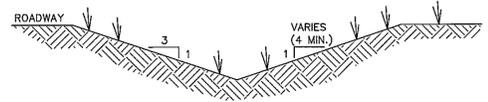
**CIESZKO CONSTRUCTION COMPANY, INC.**  
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2011 PERMIT RENEWAL

GRAVEN COUNTY - NORTH CAROLINA

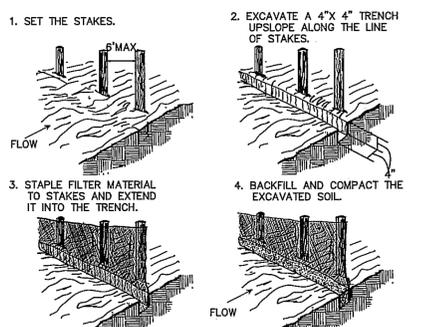
Project No:	65001	File Name:	65001 MAS
Designed By:	CTC Jr.	Drawn By:	JWJ/AEB
Checked By:	CTC Jr.	Proj. Eng.:	CTC

Sheet Title: **PROFILES**

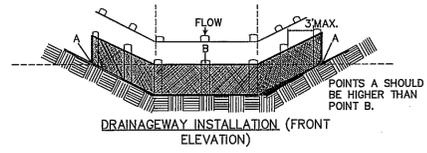
Date:	FEBRUARY 2011	Sheet:	4
Scale:	HORZ. 1" = 100' VERT. 1" = 10'		OF 6



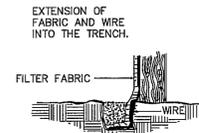
**GRASS LINED SWALE (TYP)**  
NOT TO SCALE



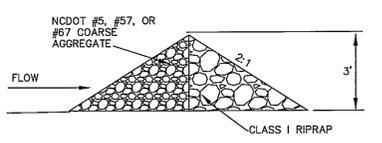
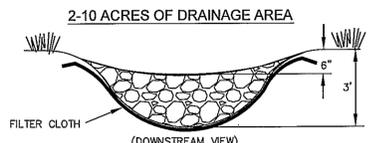
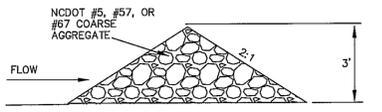
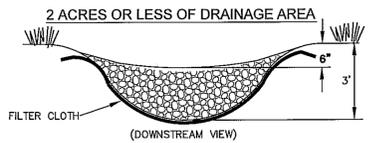
**SHEET FLOW INSTALLATION**  
(PERSPECTIVE VIEW)



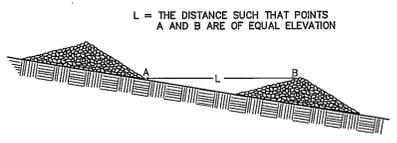
**DRAINAGEWAY INSTALLATION**  
(FRONT ELEVATION)



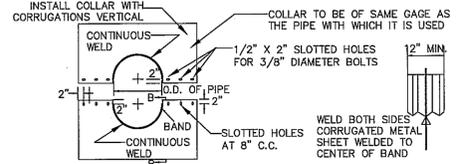
**CONSTRUCTION OF A SILT FENCE**  
(WITHOUT WIRE SUPPORT)  
NOT TO SCALE



**SPACING BETWEEN CHECK DAMS**



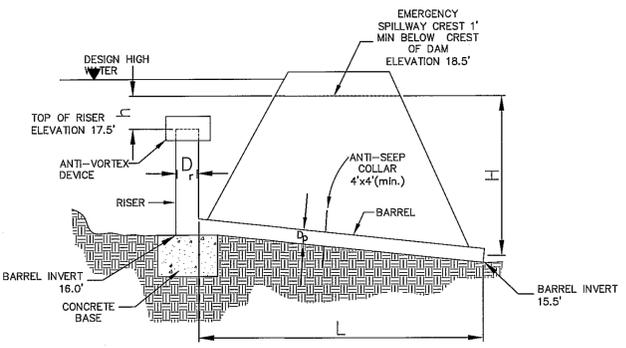
**ROCK CHECK DAM**  
NOT TO SCALE



**ELEVATION OF UNASSEMBLED COLLAR**      **SECTION B-B**

**NOTES FOR COLLARS:**  
1. ALL MATERIALS 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 SPECIFICATIONS.  
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 CALLED 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.

**DETAILS OF CORRUGATED METAL ANTI-SEEP COLLAR (TYP)**  
NOT TO SCALE

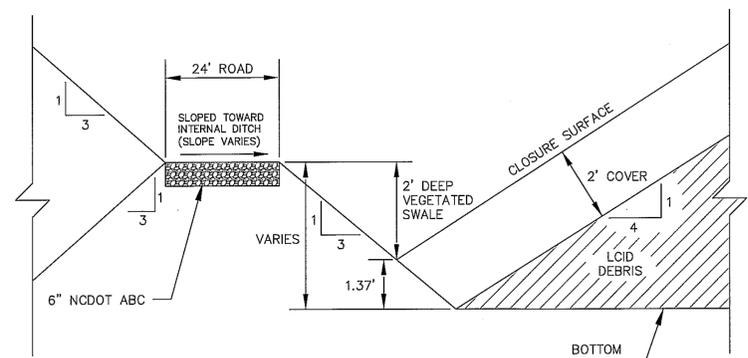


H = HEAD ON PIPE THROUGH EMBANKMENT  
h = HEAD OVER RISER CREST  
L = LENGTH OF PIPE THROUGH EMBANKMENT  
D<sub>e</sub> = DIAMETER OF PIPE THROUGH EMBANKMENT  
D<sub>r</sub> = DIAMETER OF RISER  
b = WIDTH OF EMERGENCY SPILLWAY BOTTOM

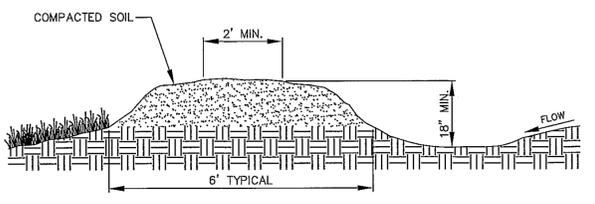
**NOTE:** EMERGENCY SPILLWAY SHALL BE CONSTRUCTED IN UNDISTURBED FILL. THE SIDE SLOPES OF THE EMERGENCY SPILLWAY SHALL BE 3:1 OR FLATTER. THE CONTROL SECTION (FLAT CREST AREA) SHALL BE AT LEAST 20 FOOT LONG AND THE EXIT CHANNEL SHALL BE AT A SLOPE OF 4% OR LESS. UTILIZE RIP RAP TO INHIBIT EROSION AS NEEDED.

	SEDIMENT BASIN 1	SEDIMENT BASIN 2
H	2.5ft	2.5ft
h	1ft	1ft
L	100ft	65ft
D <sub>e</sub>	12in	12in
D <sub>r</sub>	24in	24in
b	8ft	8ft

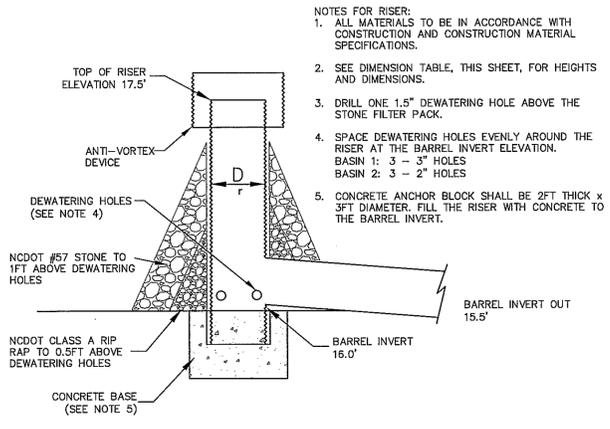
**PRINCIPAL SPILLWAY DESIGN**  
**DETAIL (TYP)**  
NOT TO SCALE



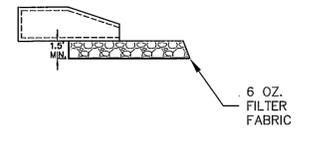
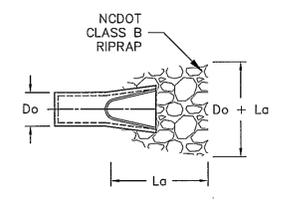
**PROPOSED CELL/BERM AND HAUL ROAD**  
**TYPICAL CROSS-SECTION**  
NOT TO SCALE



**TEMPORARY EARTHEN DIVERSION DIKE**  
NOT TO SCALE



**RISER BARREL DETAIL (TYP)**  
NOT TO SCALE



	D <sub>o</sub>	L <sub>a</sub>	D <sub>o</sub> + L <sub>a</sub>	RIP RAP
PIPE TO BASIN 1	15"	8'	10'	CLASS 1
SPILLWAY BARREL 1	12"	6'	7'	CLASS A
SPILLWAY BARREL 2	12"	8'	9'	CLASS A

**OUTLET PROTECTION**  
NOT TO SCALE

**NOTES FOR RISER:**  
1. ALL MATERIALS TO BE IN ACCORDANCE WITH CONSTRUCTION AND CONSTRUCTION MATERIAL SPECIFICATIONS.  
2. SEE DIMENSION TABLE, THIS SHEET, FOR HEIGHTS AND DIMENSIONS.  
3. DRILL ONE 1.5" DEWATERING HOLE ABOVE THE STONE FILTER PACK.  
4. SPACE DEWATERING HOLES EVENLY AROUND THE RISER AT THE BARREL INVERT ELEVATION.  
BASIN 1: 3 - 3" HOLES  
BASIN 2: 3 - 2" HOLES  
5. CONCRETE ANCHOR BLOCK SHALL BE 2FT THICK X 3FT DIAMETER. FILL THE RISER WITH CONCRETE TO THE BARREL INVERT.

**TEMPORARY SEEDING SCHEDULE**

Shoulders, Side Ditches, Slopes

DATE:	TYPE:	PLANTING RATES:
Aug 15 - Dec 31	Rye (grain)	120 lbs./acre
Dec 31 - May 1	Rye (grain) Annual Lespedeza*	120 lbs./acre 50 lbs./acre
May 1 - Aug 15	German Millet	40 lbs./acre

Consult the Conservation Engineer or the Soil Conservation Service for additional information concerning other alternative for vegetation of denuded areas.

Ground cover must be installed on exposed slopes within 15 working days or 30 calendar days following completion of any phase of grading.

\* Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

\*\*Temporary - Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow over 12" in height before mowing, otherwise fescue may be shaded out.

**SEEDBED PREPARATION**

- Chisel compacted areas and spread topsoil 3" deep over adverse soil conditions, if available.
- Rip the entire area to 6" depth.
- Remove all loose rock, roots, and other obstructions leaving surface reasonably smooth and uniform.
- Apply agricultural lime, fertilizer, and superphosphate uniformly and mix with soil (see below\*).
- Continue tillage unit a well-pulverized, firm, reasonably uniform seedbed is prepared 4" to 6" deep.
- Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment or cultipack after seeding.
- Mulch immediately after seeding and anchor mulch.
- Inspect all seeded areas and make necessary repairs or reseeding within the planting season, if possible. If stand should be over 60% damaged reestablish following original lime, fertilizer and seeding rates.
- Consult the Conservation Inspector on maintenance treatment and fertilization after permanent cover is established.

\*Apply: Agricultural Limestone - 2 tons/acre or 3 tons/acre in clay soils.  
Fertilizer - 750 lbs/acre (10-20-10)  
Mulch - 2 tons/acre (small grain straw)  
Anchor - asphalt emulsion at 450 gal./acre is straw is not crimped in place.

**PERMANENT SEEDING SCHEDULE**

Shoulders, Side Ditches, Slopes (Max. 3:1)

DATE:	TYPE:	PLANTING RATES:
Aug 15 - Nov 1	Tall Fescue	300 lbs./acre
Nov 1 - Mar 1	Tall Fescue and Abruzzi Rye	300 lbs./acre 25 lbs./acre
Mar 1 - Apr 15	Tall Fescue	300 lbs./acre
Apr 15 - Jun 30	Hulled Common Bermudagrass	25 lbs./acre
Jul 1 - Aug 15	Tall Fescue and *Browntop Millet *or Sorghum - Sudan Hybrids	120 lbs./acre 35 lbs./acre 30 lbs./acre
	Slopes (3:1 to 2:1)	
Mar 1 - Jun 1 (Mar 1 - Apr 15)	Sericea Lespedeza (scarified) and Add Tall Fescue	50 lbs./acre 120 lbs./acre
(Mar 1 - Jun 30)	Or Add Hulled Common Bermudagrass	25 lbs./acre
Jun 1 - Sep 1	*Tall Fescue and *Browntop Millet * or Sorghum - Sudan Hybrids	120 lbs./acre 35 lbs./acre 30 lbs./acre
Sep 1 - Mar 1 (Nov 1 - Mar 1)	Sericea Lespedeza (unhulled - unscarified) and Tall Fescue Add Abruzzi Rye	70 lbs./acre 120 lbs./acre 25 lbs./acre

Consult the Conservation Engineer or the Soil Conservation Service for additional information concerning other alternative for vegetation of denuded areas.

Permanent ground cover must be installed on all disturbed areas within 15 working days or 90 calendar days (whichever is shorter) following completion of construction or development.

\*\*Temporary - Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow over 12" in height before mowing, otherwise fescue may be shaded out.

**SEEDBED PREPARATION**

- Chisel compacted areas and spread topsoil 3" deep over adverse soil conditions, if available.
- Rip the entire area to 6" depth.
- Remove all loose rock, roots, and other obstructions leaving surface reasonably smooth and uniform.
- Apply agricultural lime, fertilizer, and superphosphate uniformly and mix with soil (see below\*).
- Continue tillage unit a well-pulverized, firm, reasonably uniform seedbed is prepared 4" to 6" deep.
- Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment or cultipack after seeding.
- Mulch immediately after seeding and anchor mulch.
- Inspect all seeded areas and make necessary repairs or reseeding within the planting season, if possible. If stand should be over 60% damaged reestablish following original lime, fertilizer and seeding rates.
- Consult the Conservation Inspector on maintenance treatment and fertilization after permanent cover is established.

\*Apply: Agricultural Limestone - 2 tons/acre or 3 tons/acre in clay soils.  
Fertilizer - 1000 lbs/acre  
Superphosphate - 500 lbs/acre (20%)  
Mulch - 2 tons/acre (small grain straw)  
Anchor - asphalt emulsion at 450 gal./acre

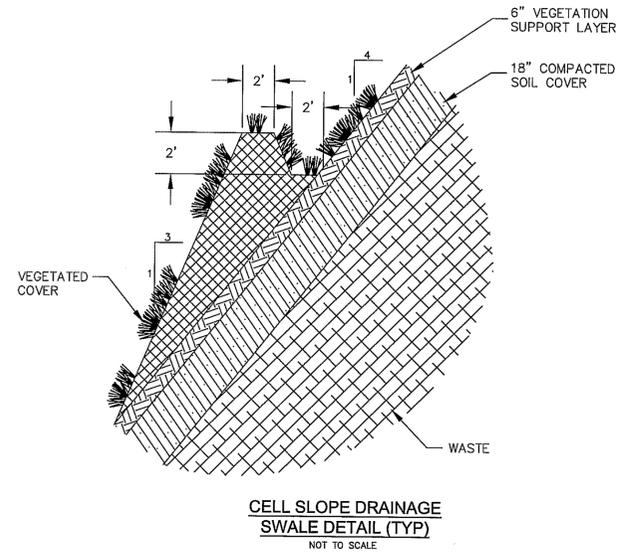
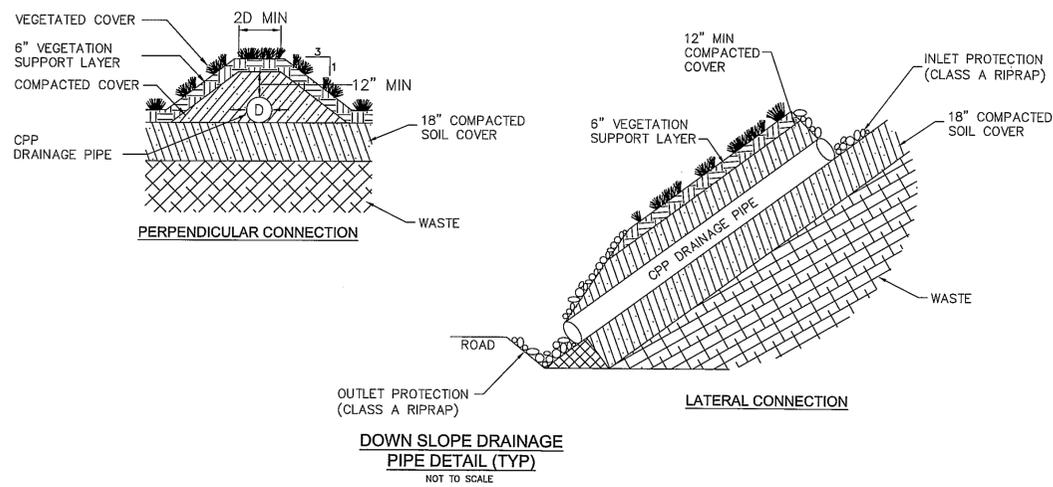
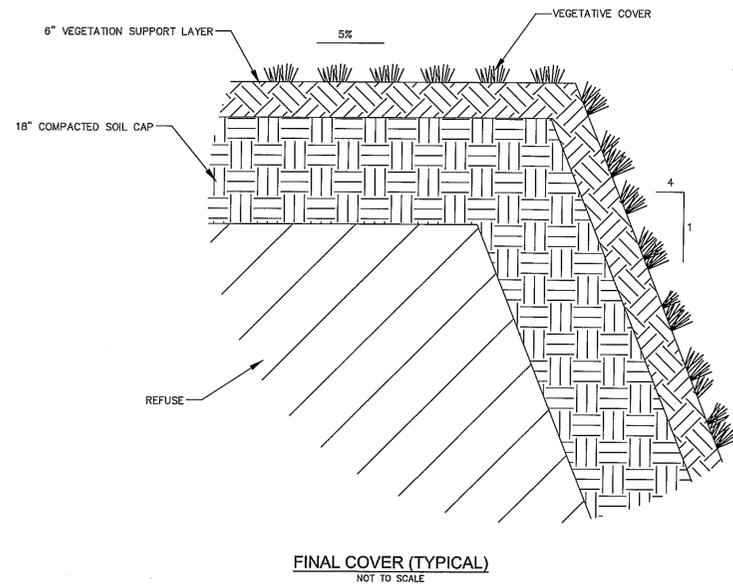
Professional Engineer Seal for C. T. Clayton, No. 026908, State of North Carolina. Signature: C. T. Clayton, Date: 03/04/2011.

**CLAYTON Engineering**  
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PO Box 578 - Coats, North Carolina 27521  
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**CIESZKO CONSTRUCTION COMPANY, INC.**  
CIESZKO LCID LANDFILL  
2011 PERMIT RENEWAL  
CRAVEN COUNTY - NORTH CAROLINA

Project No: 65001	File Name: 65001 MAS
Designed By: CTC Jr.	Drawn By: JWL / AEB
Checked By: CTC Jr.	Proj. Eng.: CTC

Sheet Title: DETAILS - 1	
Date: FEBRUARY 2011	Sheet: 5
Scale: AS NOTED	OF 6



No.	Revision/Issue	Date

SEAL  
028608  
C. TRUS CLAYTON, P.E.  
ENGINEER

*C. Trus Clayton*  
Signature  
Date: 03/4/2011

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CIESZKO CONSTRUCTION COMPANY, INC.  
CIESZKO LCID LANDFILL  
2011 PERMIT RENEWAL

CRAVEN COUNTY - NORTH CAROLINA

Project No: 65001	File Name: 65001 MAS
Designed By: CTC Jr.	Drawn By: JWL / AEB
Checked By: CTC Jr.	Prod. Eng.: CTC

DETAILS - 2

Date: FEBRUARY 2011	Sheet: 6
Scale: AS NOTED	OF 6