

Permit No.	Date	Document ID No.
06-03	March 31, 2010	10251

Design Modification No. 1



<b>Project:</b>	Avery County C&D Landfill Phase III - Cell 1 Construction Avery County, North Carolina
<b>Owner:</b>	Avery County Solid Waste Attn: Buddy Norris 175 Linville Street Newland, North Carolina 28657
<b>Contractor:</b>	Blue Ridge Grading & Trucking, Inc. ATTN: Russell Fox 20 E. US Hwy 19E Bypass Burnsville, North Carolina 28714

**Regulatory Review Required (Y/N):** Y  
 \*If Yes, see below.

**Reference(s):**  
 Underdrain Profile Drawing No. X1

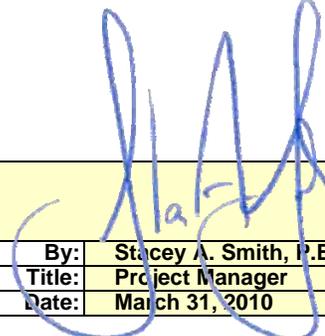
**Description of Modification(s):**  
 During excavation of the underdrain and general clearing some unsuitable materials were encountered at the southern end of Cell 1. Therefore, overexcavation was performed. Additionally, areas of groundwater seepage were encountered and required "bridging" with fabric wrapped stone drain as shown on attached drawing. Additionally, additional groundwater seepage was encountered through northern section of cell also covered with fabric wrapped stone drain. In all areas of stone drain and underdrain, GCL is to be extended a minimum of ten (10) feet beyond limits of fabric drains as shown on the attached drawing.

**Reason for Modification(s):**  
 This modification was generated in response to a combination of unsuitable soils and sediments which settled just upstream of existing road and drainage culvert and areas where groundwater seepage was encountered and hindered fill placement.

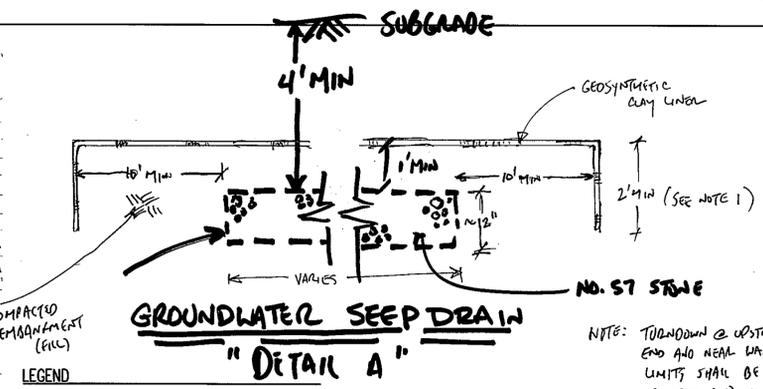
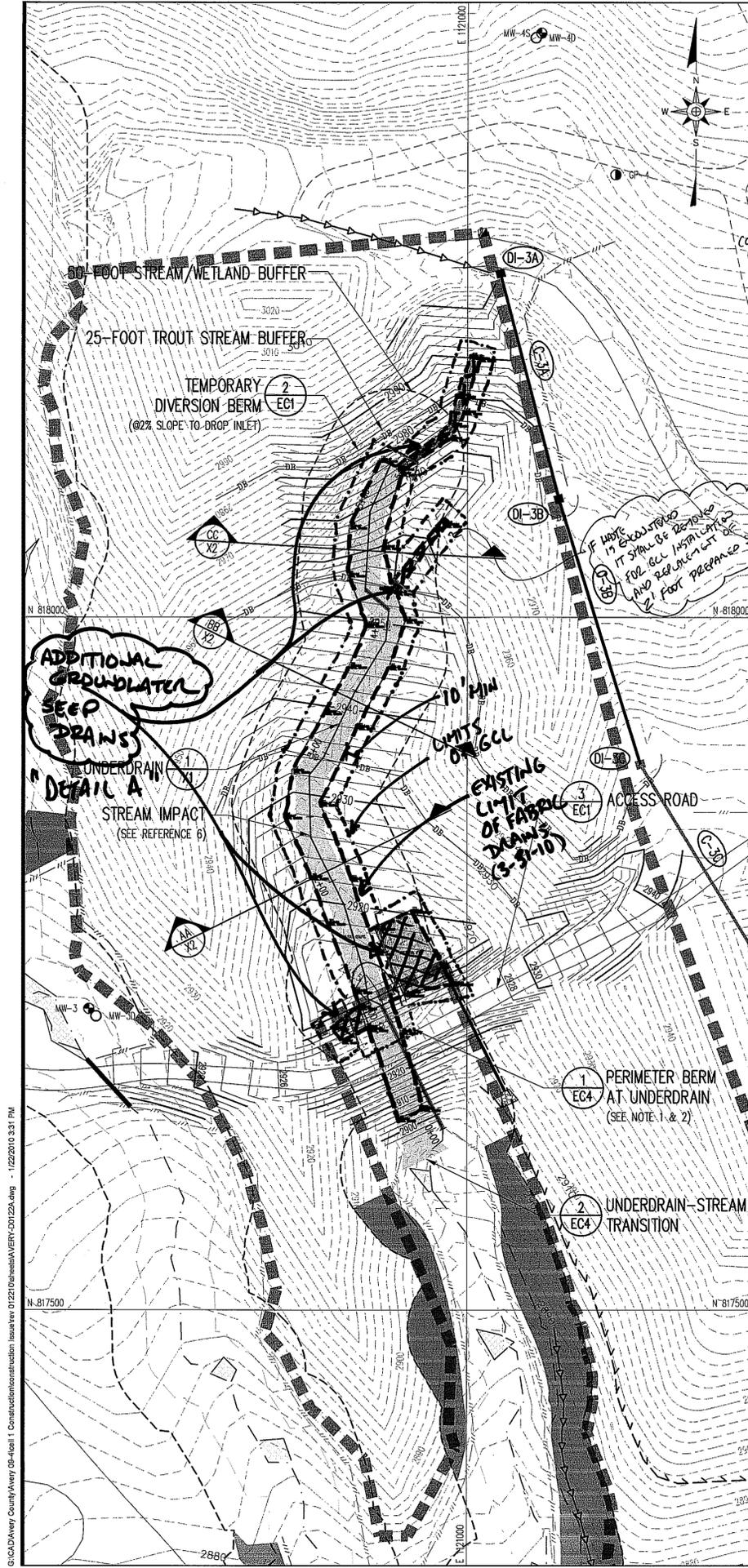
**Attachments:**  
 Drawings X1.

**Comments:**

**Regulatory Agency:** NCDENR - Division of Waste Management  
 ATTN: Allen Gaither  
 Asheville Regional Office  
 Swannanoa, North Carolina

  
**By:** Stacey A. Smith, P.E.  
**Title:** Project Manager  
**Date:** March 31, 2010

**Distribution:**  Owner  Contractor  Field  File  Regulatory Agency



**LEGEND**

2840	EXISTING 10' CONTOUR (SEE REFERENCE 1)
	EXISTING 2' CONTOUR
3000	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	PROPERTY LINE (SEE REFERENCE 2)
	WASTE LIMITS
	SILT FENCE
	SILT FENCE (EXISTING)
	DIVERSION BERM
	DIVERSION CHANNEL
	SIDE SLOPE SWALE
	APPROX. STREAM LOCATION (SEE REFERENCE 3, 5)
	WETLANDS (SEE REFERENCE 3)
	50-FOOT STREAM AND WETLAND BUFFER
	25-FOOT TROUT STREAM BUFFER
	PROPOSED BUFFER RESTORATION AREAS
	MONITORING WELL
	PIEZOMETER
	PROPOSED GAS PROBE
(C-3A)	CULVERT
(DI-3A)	DROP INLET
	PROPOSED LIMIT OF WASTE MARKER

**NOTE**

- CONTRACTOR SHALL PREPARE PIPE REMOVAL, UNDERDRAIN INSTALLATION, AND BACKFILL WORK PLAN PRIOR TO DISTURBANCE OF THIS AREA. NO WORK SHALL OCCUR UNTIL APPROVAL IS GRANTED BY THE ENGINEER.
- WATER DISCHARGED FROM DISTURBED AREAS DURING INSTALLATION OF THE UNDERDRAIN SYSTEM SHALL BE TREATED WITH FLOCCULANT BEFORE DISCHARGING INTO A SPECIAL STILLING BASIN (OR SEDIMENT BASIN NO. 3) FOLLOWING THE DESIGN CRITERIA IN THE NC EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, "PRACTICE STANDARD AND SPECIFICATION 6.86, FLOCCULANTS."

**REFERENCES**

- OVERALL SITE TOPOGRAPHY FROM NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, DATA GENERATED FROM LIDAR DATED MARCH 2005, TOPO IN AREAS IN AND SURROUNDING PHASES 1 AND 2 FROM FIELD SURVEY DATED 9/07, BY SURVEYING SOLUTIONS, P.C. PHASE 1 AREA NORTH OF GRAVEL ACCESS ROAD TOPOGRAPHY FROM FIELD SURVEY BY SURVEYING SOLUTIONS, P.C., DATED 10/8/09. PHASE 1 AREA SOUTH OF GRAVEL ACCESS ROAD AND PHASE 2 TOPOGRAPHY FROM FIELD SURVEY BY APPALACHIAN PROFESSIONAL LAND SURVEYORS AND CONSULTANTS, P.A., DATED 1/11/10 AND REVISED 1/19/10.
- SITE PROPERTY LINE AND MONITORING WELL LOCATIONS FROM FIELD SURVEYS DATED 9/07 AND 1/14/08, BY SURVEYING SOLUTIONS, P.C.
- STREAM AND WETLAND LOCATIONS IN NORTHERN SECTOR OF SITE OBTAINED FROM GPS FIELD SURVEY DATED 4/07, BY CAROLINA ECOSYSTEMS, INC.
- STREAMS AND WETLANDS NEAR PHASE 1 AND 2 FROM FIELD SURVEY DATED 2/18/08 BY SURVEYING SOLUTIONS, P.C.
- BRUSHY CREEK LOCATION FROM AVERY COUNTY GIS DEPARTMENT.
- ALL IMPACT AREAS ARE UNDER APPROVAL OF ACTION ID 2008-03130 NATIONWIDE PERMIT NO. 39 BY THE US ARMY CORP OF ENGINEERS DATED NOVEMBER 9, 2008 AND NC DIVISION OF WATER QUALITY DATED NOVEMBER 21, 2008 DWQ PROJECT NO. #08-1464.
- POTABLE WELL LOCATIONS ARE APPROXIMATE.
- POTENTIOMETRIC SURFACE SHOWN WAS OBTAINED FROM DRAWING, AVERY COUNTY C&D LANDFILL POTENTIOMETRIC MAP SPRING '09, CREATED BY RICHARDSON SMITH GARDNER AND ASSOCIATES IN JULY 2009.

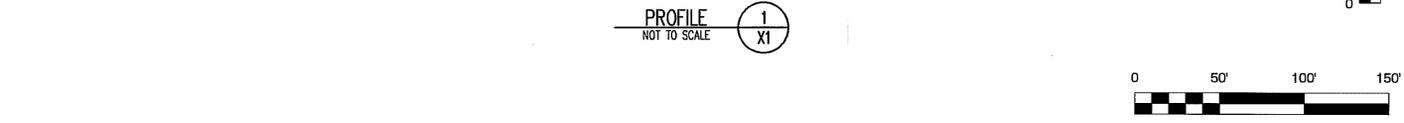
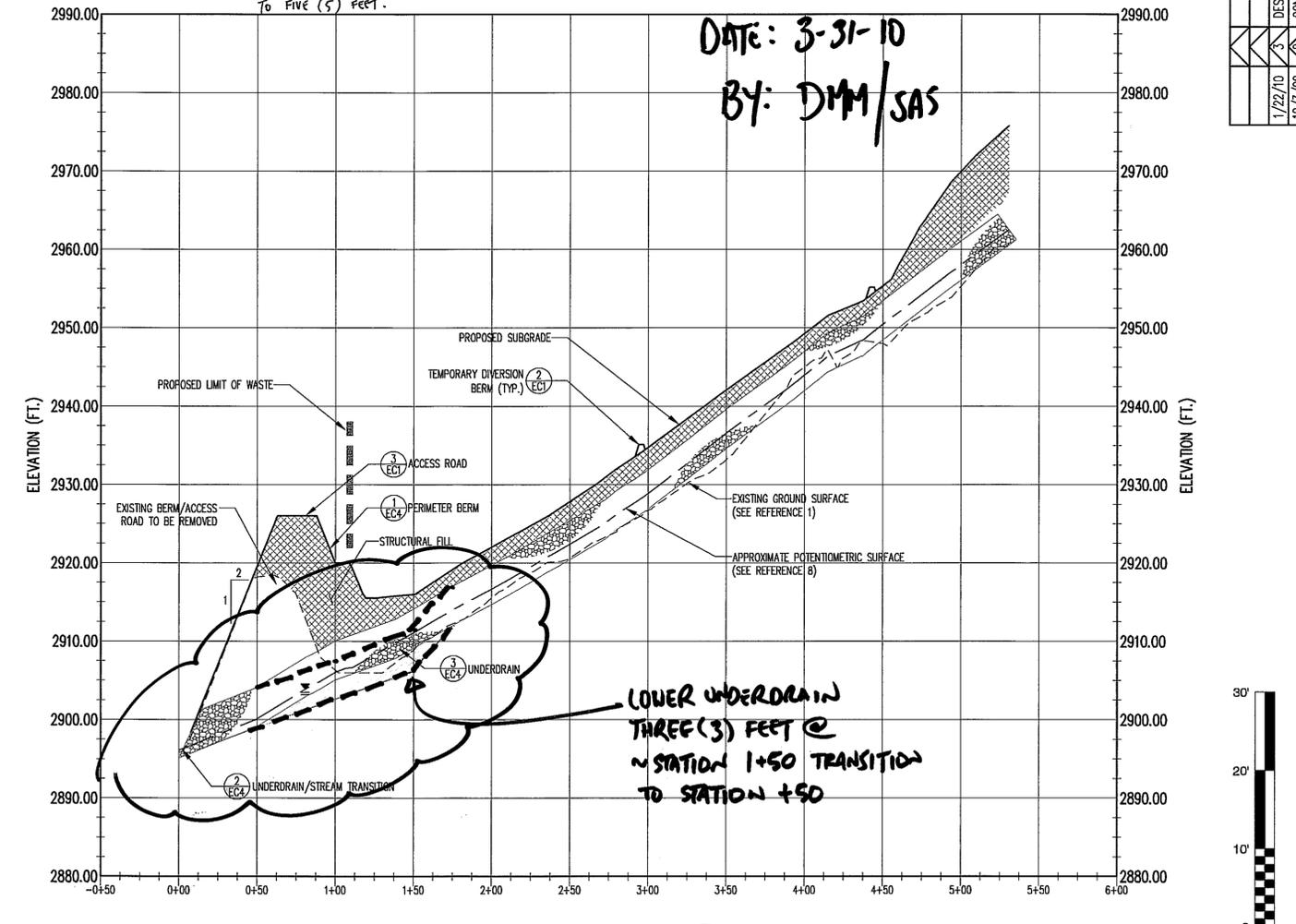


**DESIGN MODIFICATION NO. 1**

**AVERY COUNTY**

**GROUNDWATER SEEP MODIFICATION**

DATE: 3-31-10  
BY: DIM/SAS



**LEGEND**

---	EXISTING GROUND SURFACE (SEE REFERENCE 1)
---	PROPOSED SUBGRADE
---	POTENTIOMETRIC SURFACE (SEE REFERENCE 8)

**SAFETY NOTE:**  
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, or 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.

**ISSUED FOR CONSTRUCTION**

DESIGN CLARIFICATION NO. 2
CONSTRUCTION ISSUE
DATE
NO.
REVISION

1/22/10  
12/5/09

**RICHARDSON SMITH GARDNER & ASSOCIATES**  
14 N. Boykin Ave.  
Raleigh, N.C. 27603  
PH: 919-928-4877  
FAX: 919-928-8899  
www.rsgengineers.com

**UNDERDRAIN PROFILE**

PROJECT TITLE: AVERY COUNTY C&D LANDFILL PHASE III - CELL 1 CONSTRUCTION DRAWINGS

DESIGNED BY: S.A.S.	DRAWN BY: C.T.J.
CHECKED BY:	PROJECT NO.: AVERY 09-4
SCALE: AS SHOWN	DATE: OCT. 2009
FILE NAME: AVERY-D0122A	
SHEET NO.: 5	DRAWING NO.: X1

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