OPERATION/CONSTRUCTION MANAGERS
Municipal Services
CIVIL/SANITARY ENGINEERS
Engineering Company, P.A.

Ms. Jaclynne Drummond
Solid Waste Section - Compliance
Division of Waste Management
North Carolina Department of Environment and Natural Resources
401 Oberlin Road, Suite 150
Raleigh, NC 27605

February 3, 2010

Re: **Proposed Sample and Analysis Plan**
Jackson County MSW and C&D Transfer Facility
Scott Creek Transfer Station
1172 Mineral Springs Drive
Sylva, NC
Permit No. 50-03T

Ms. Drummond:

Municipal Engineering Services Co., P.A. (MESCO), on behalf of Jackson County, appreciates the opportunity to present this brief Sample and Analysis Plan (SAP). This SAP has been prepared in response to questions regarding potentially-impacted soils and surface waters associated with leachate observed and reported in a Facility Compliance Audit Report performed September 24, 2009 at the Jackson County Municipal Solid Waste and Construction and Demolition (C&D) Transfer Facility, Scott Creek Transfer Station, 1172 Mineral Springs Drive, Sylva, NC.

BACKGROUND

On September 24, 2009, as part of a comprehensive field audit performed by representatives of the North Carolina Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Section (Section), "…water that came in contact with solid waste (leachate) was not contained on the site, not treated prior to discharge from the site"…and apparently "…discharged into the surface water of Ochre Hill Creek, just before it empties into Scott Creek." In a follow-up email to MESCO dated January 27, 2010, you indicated "…sampling the horizontal and vertical extent of the soils and surface water…is very important at this time."

PROPOSED SCOPE OF SERVICES

In response to your requests, MESCO proposes the following tasks to address the identified concerns:

Task 1 – Collect confirmatory soil and surface water samples
Task 2 – Excavate impacted soil (if necessary)
Task 3 – Summary Report

PO Box 97, Garner, North Carolina 27529 (919) 772-5393
PO Box 828, Morehead City, NC 28557 (252) 726-9481
PO Box 349, Boone, North Carolina 28607 (828) 262-1767

Task 1 – Collect confirmatory soil and surface water samples

As shown on Figure 2, two or three confirmatory soil samples will be collected from the southern side of the pavement, west of the approximate spill location. Soil samples will be collected using a stainless-steel hand auger (auger) and field screened with a flame-ionization detector (FID) and/or photo-ionization detector (PID) to measure volatile organic compound (VOC) vapors. Sample locations will be determined and recorded in the field by the environmental professional based on flowpath observations, localized topography, visual and/or potential stormwater flow paths, and FID/PID readings. A background sample will also be collected approximately southeast of the approximate spill location.

At most locations, hand auger borings will be advanced to approximately two feet bgs. At some locations, borings might be terminated prior to reaching two feet due to soil density (refusal). Samples will be collected, placed in re-sealable plastic bags, allowed to volatilize for approximately 10-15 minutes, and FID/PID readings will be recorded. The hand auger handle, stems, and bucket will be cleaned and decontaminated using phosphate-free soap, isopropyl alcohol, and de-ionized or distilled water between sample locations.

Soil samples will be collected from locations south of the pavement along the reported leachate flowpath. The background sample will be collected prior to the downgradient samples to prevent potential cross-contamination. A portion or aliquot of the soil sample with the highest observed FID/PID readings at each boring location will be transferred into laboratory-prepared containers. If elevated readings are not observed in a boring location, a sample collected from approximately two feet bgs will be submitted for analysis. Submitted soil samples will be analyzed for the following:

- VOCs via EPA Test Method 8260B
- Metals via EPA Test Methods 6010 and 7470
- Nitrite-nitrate via EPA Test Method 351
- Phosphorus via EPA Test Method 365
- Sulfate via EPA Test Method 9056A
- Per cent Solids
- pH

A background surface water sample will be collected from Ochre Hill Creek at a location determined to be upgradient from the reported spill. Surface water samples will also be collected where leachate was observed entering Ochre Hill Creek. Surface water samples will be analyzed for the same target analytes using the test methods listed above.

The total number of soil samples and surface water samples will be determined in the field by the MESCO environmental professional based on field conditions observed at the time of the sampling event.

Task 2 – Excavate Impacted Soil (if necessary)

If, based on laboratory analysis, it appears that the surrounding soils have been impacted, soil excavation will be performed to the approximate extent of impact, as determined by elevated FID/PID readings. Excavation will be continued to where FID/PID readings are below background levels or groundwater is encountered. Confirmation soil samples will be collected from the excavation sidewalls and bottoms as prescribed above and submitted for the same laboratory analysis. If sample analysis indicates that the surrounding soils have not been impacted, no additional activities will be performed.

If it appears that surface water is or has been impacted, MESCO personnel will immediately notify the Section to discuss initial abatement, remediation, and notification plans.

Task 3 – Summary Report

A summary report presenting the sample results and subsequent actions taken, if any, will be submitted for your review and approval.

CLOSING

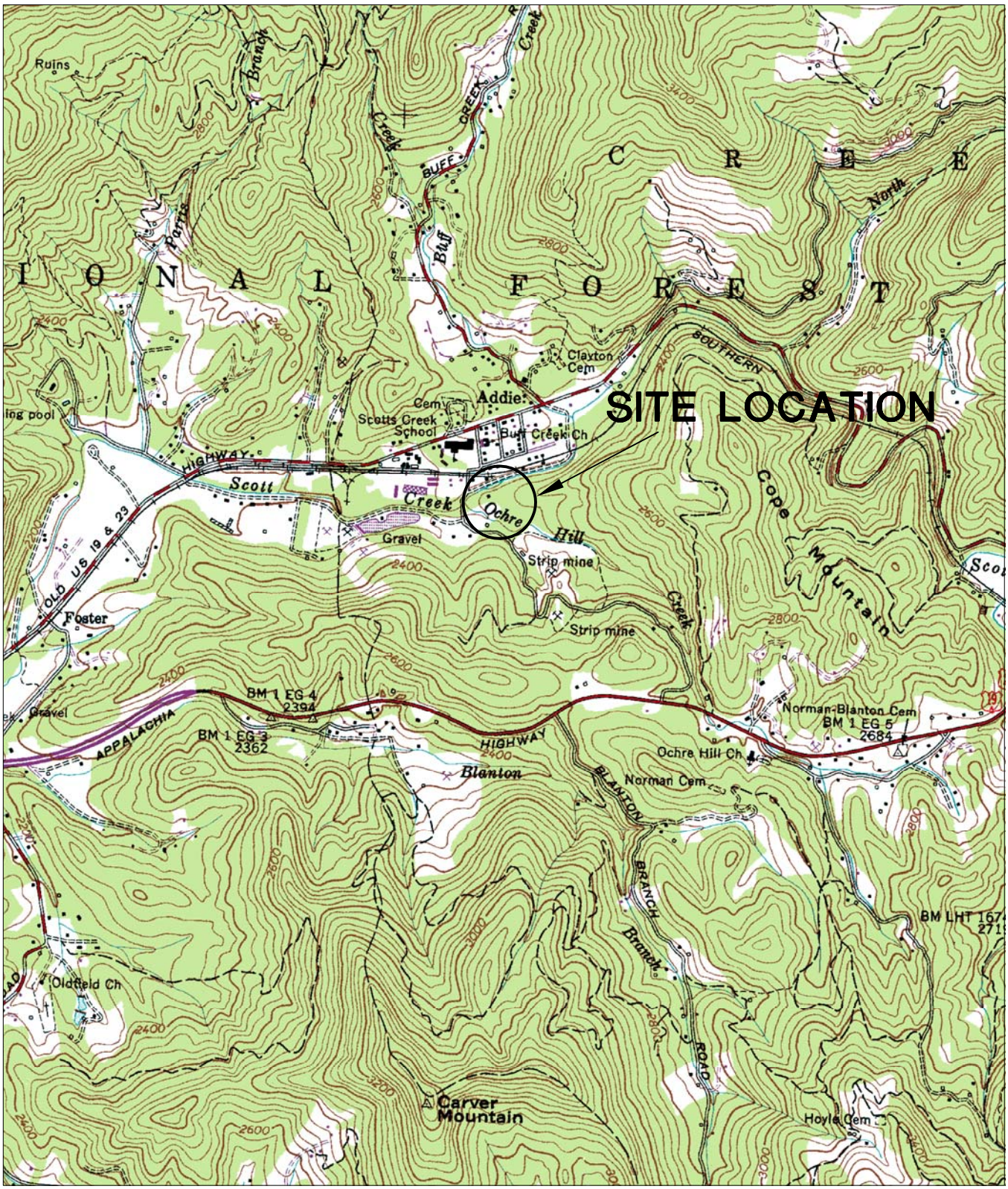
Municipal Engineering Services Co., P.A., on behalf of Jackson County, appreciates the opportunity to submit this brief SAP to the Solid Waste Section. Please contact us at (919) 772-5393 or mbrown@mesco.com if you have any questions or comments regarding this plan.

Sincerely,
MUNICIPAL ENGINEERING SERVICES CO., P.A.

Mark Brown, LG, PG

Enclosures

cc: Mr. Chad Parker, Jackson County Solid Waste Director
Wayne Sullivan, MESCO



MAP SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC – SYLVA NORTH, NC

N

GRAPHIC SCALE

0' 2000' 4000'

LICENSE NUMBER: C-0261

Municipal Services Engineering Company, P.A.

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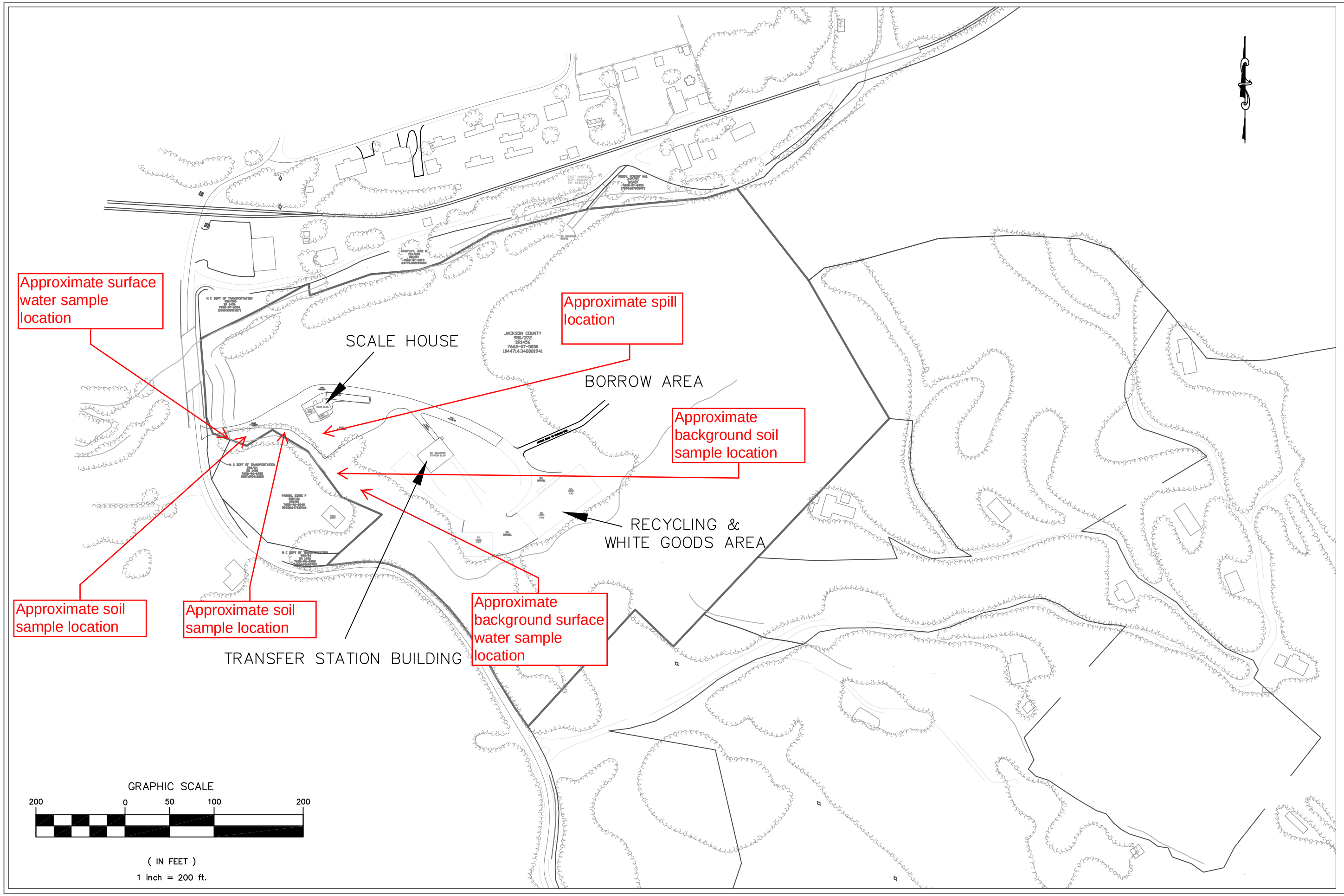
P.O. BOX 549 BOONE, N.C. 28607 (828) 262-1767

P.O. BOX 825 MOREHEAD CITY, N.C. 28557 (252) 726-9481

SITE LOCATION MAP

JACKSON COUNTY SOLID WASTE DEPARTMENT
JACKSON COUNTY TRANSFER STATION
1172 MINERAL SPRINGS ROAD
SYLVA, JACKSON COUNTY, NORTH CAROLINA

PROJECT NO.	G09116.0	DRAWN BY:	SKP	DATE:	10/14/09
SCALE:	1" = 2,000'	CHECKED BY:	SMB	FIGURE NO.	1



Municipal Engineering Services Company, P.A.

JACKSON COUNTY TRANSFER STATION
1172 MINERAL SPRINGS DRIVE
JACKSON COUNTY, NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

SITE LAYOUT MAP

SCALE:	1"=200'
DATE:	10/14/09
DRWN. BY:	S. PATRICK
CHKD. BY:	S. PATRICK
PROJECT NUMBER	G09116.0
DRAWING NO.	2
SHEET NO.	