

SCANNED
8/27/08
DATE

To: Jimmy



Geotechnical, Environmental
and Construction Engineering

Via facsimile and mail
910.630.2225

McDonald Materials, Inc.
2611 Murchison Road
Fayetteville, North Carolina 28301

Attention: Mr. Frank McDonald

Reference: Compacted Structural Fill Material Evaluation
B & B Catering at Anderson Creek
Spring Lake, North Carolina

Project No. 08FCS-2379
Document No. 08F-1690

File in Ser
Folder in Box
April 14, 2008

BB
Imp. Pac.

Dear Mr. McDonald:

As requested, an engineering representative of Pyramid Geosciences, Inc. visited the above referenced site on April 9, 2008 to evaluate compacted structural fill material placed within the limits of the new building area.

Structural fill material was placed within the limits of the new building area to achieve design grades. A bulk sample of the fill material was obtained at the site and transported to our laboratory for evaluation and standard proctor analysis. The maximum dry density and optimum moisture content for the structural fill material were determined in accordance with ASTM D 698 *Laboratory Compaction Characteristics of Soil Using Standard Effort*. Results of the laboratory tests are attached for reference.

The compacted fill material was evaluated by performing a total of three (3) field density tests. Each field test was performed in general accordance with ASTM D 2937: *Standard Test Method for Density of Soil In-Place by the Drive-Cylinder Method*. Results of the field tests and a sketch showing the approximate test locations are attached.

Based on the field density and laboratory test results, the minimum compaction requirement was achieved and the compacted structural fill material is considered to be suitable for support of the new construction.

From: Bill

P.O. Box 9367, Fayetteville, North Carolina 28311
Telephone 910.488.1629
FAX 910.488.9450

Field Report

Pyramid Geosciences, Inc.
136-A Bow Street
Fayetteville, North Carolina 28301
Telephone: 910.488.1629
Fax: 910.488.9450



Project	B & B Catering at Anderson Creek		
Location	Spring Lake, North Carolina		
Date	Apr. 9, 2008	Project No.	08FCS-2379
Contractor	McDonald Materials	Client	McDonald Materials
Weather	Cloudy	Temp	70 °F 12:00 AM
Present at Site	No - one		

TO: Frank McDonald
McDonald Materials, Inc.

Total Time: 6.0 hrs. Mileage: 40

THE FOLLOWING WAS NOTED: Page 1 of 1

Arrived at the project site, as requested, to evaluate compacted structural fill material placed within the planned building pad area and to pick up a bulk sample of the fill material for evaluation and laboratory analysis.

Observations indicate that imported structural fill material was placed within the planned building area to achieve design grade. The compacted structural fill material was evaluated by performing a total of three (3) field density tests using the drive cylinder method at approximate locations shown on the attached field sketch. A bulk sample of the fill material was obtained at the site and transported to our laboratory for evaluation and standard proctor analysis. Results of the field density tests and proctor analysis will be provided upon completion.

ATTACHMENTS: Field Density Test Results & Field Sketch

COPIES TO: _____ SIGNED: Ralph J. Gale

The presence of Pyramid Geosciences, Inc. in the field shall not be construed as an acceptance or approval of activities at the site. Pyramid Geosciences, Inc. is in the field to perform specific services and has certain responsibilities which are limited to those specifically authorized in our PGI FRT-001 (Mar agreement with our client. In no event shall Pyramid Geosciences, Inc. be responsible for the safety or the means and methods of other parties in the field.

Apr 14 03 05:11p

Pyramid Geosciences, Inc. 910.488.9450

Compacted Structural Fill Material Evaluation
McDonald Materials, Inc.
B & B Catering at Anderson Creek
Spring Lake, North Carolina

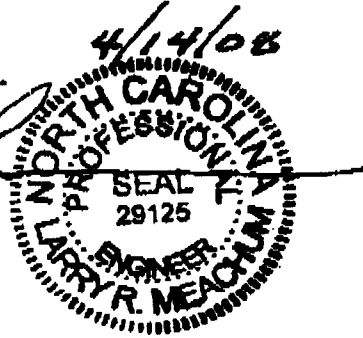
Pyramid Geosciences, Inc.
Project No. 08PCS-2379
Document No. 08F-1690
April 14, 2008
Page 2

Pyramid Geosciences, Inc. appreciates the opportunity to provide services for the project. If we can be of additional service to you, please do not hesitate to contact us.

Sincerely,
PYRAMID GEOSCIENCES, INC.



Larry R. Meachum, P.E.
Chief Engineer
NC PE Registration No. 029125



Attachments

Field Sketch

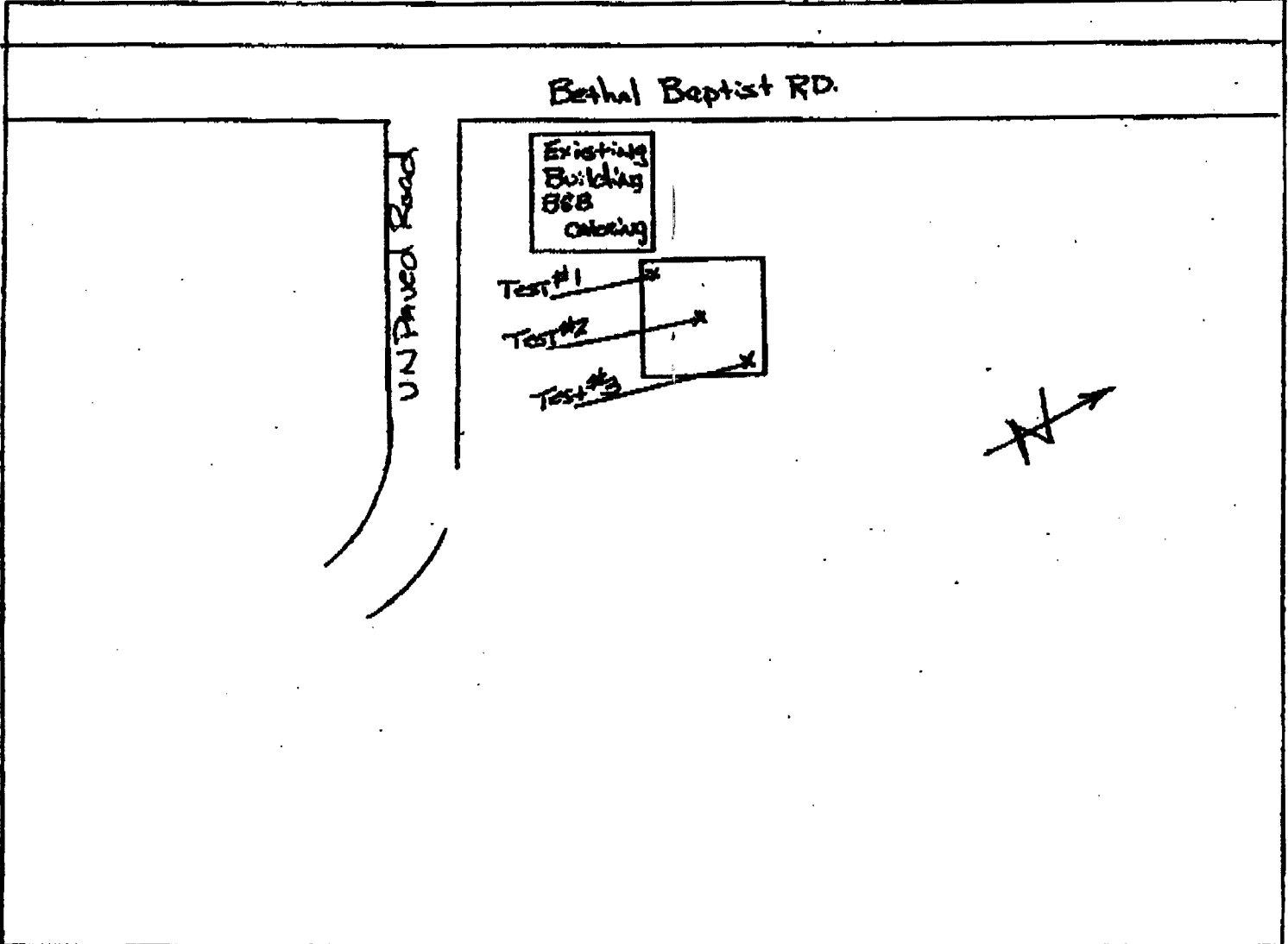
Pyramid Geosciences, Inc.
 126-A Bow Street
 Fayetteville, NC 28301
 Telephone: 910.498.1029
 Fax: 910.498.9650



TO: Frank McDonald
McDonald Materials, Inc.

Project B&B Catering	
Location Anderson Creek, N.C.	
Date 4-9-08	Project No. OBFC5-2379
Contractor McDonald Materials	Client McDonald Materials
Weather Cloudy	Temp 70 ° 12:00PM
Present at Site NO-ONE	

NOT TO SCALE



ATTACHMENTS: Field Report

COPIES TO:

SIGNED: Thompson

PGI FSK-001
 (May 2005)

The presence of Pyramid Geosciences, Inc. in the field shall not be construed as an acceptance or approval of activities at the site. Pyramid Geosciences, Inc. is in the field to perform specific services and has certain responsibilities which are limited to those specifically authorized in our agreement with our client. In no event shall Pyramid Geosciences, Inc. be responsible for the safety or the means and methods of other parties in the field.

PYRAMID GEOSCIENCES, INC.
 135A Bow Street
 Fayetteville, North Carolina 28301

SUMMARY OF DENSITY TEST RESULTS

Project: B & B Catering at Anderson Creek
 Project Location: Spring Lake, North Carolina
 Project No.: QBFCS-2378
 Client: McDonald Materials, Inc.
 Date: 9-Apr-08

Test No.	In-Place Density Test			One Point Check Plug Data		Reference Standard			Compaction		Depth (ft.)	Reference	
	Type	Method	Dry Density	Moisture Content	Dry Density	Moisture Content	Method	Dry Density	Moisture Content	Percent Specified			Percent in-Place
1	Drive Cylinder	D 2937	109.1	10.0			D 998	115.0	11.0	96	95	See Sketch	Top of Building Pad
2	Drive Cylinder	D 2937	111.3	10.0			D 998	115.0	11.0	95	97	See Sketch	Top of Building Pad
3	Drive Cylinder	D 2937	111.8	10.0			D 998	115.0	11.0	95	97	See Sketch	Top of Building Pad

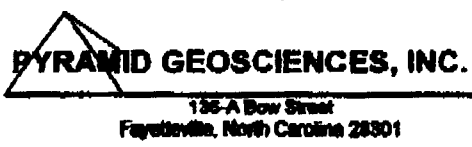
NOTES: All test locations and elevations are approximate
 * Failed Moisture Content Specification
 ** Failed Compaction Specification
 FG Indicates Final Grade
 F8G Indicates Final Sub-grade

REFERENCES:
 ASTM D 1556: Density and Unit Weight of Soil in Place by the Sand Cone Method
 ASTM D 2937: Standard Test Method for Density of Soil in Place by the Drive-Cylinder Method
 ASTM D 998: Laboratory Compaction Characteristics of Soil Using Standard Effort
 ASTM D 1557: Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort
 AASHTO T89: Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 300-mm (12-in.) Drop
 AASHTO T 190: Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 305-mm (12-in.) Drop

 Name (Technical Responsibility)

Larry R. Meachum
 Signature

 Engineer
 Position



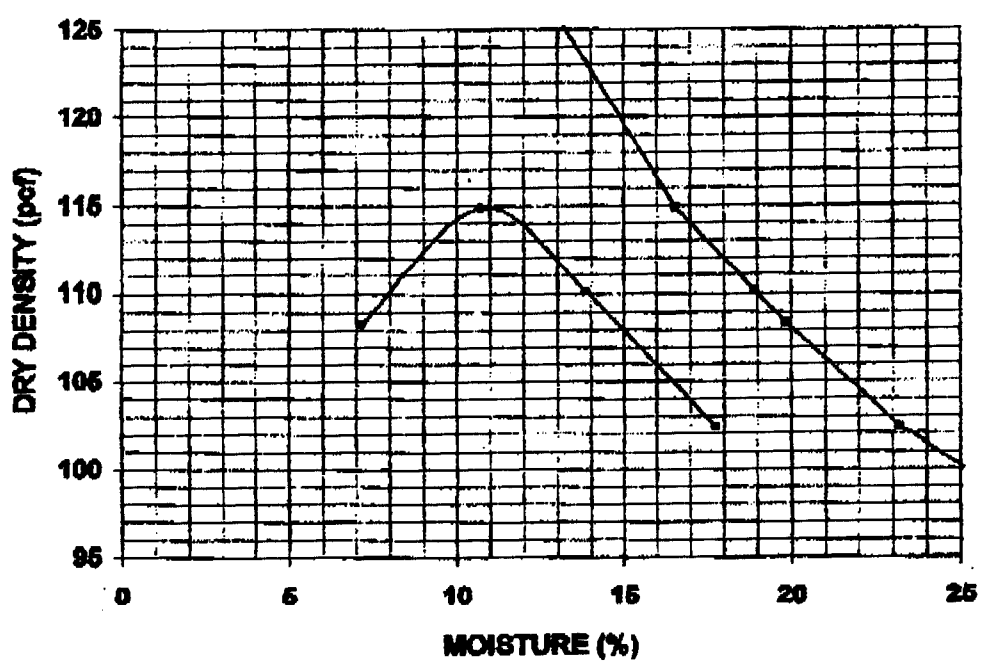
LABORATORY

PROJECT: B & B Catering at Anderson Creek
 PROJECT LOCATION: Spring Lake, NC
 PROJECT NO.: 08FCS-2379
 CLIENT: McDonald Materials, Inc.

DATE: 11-Apr-08
 DATE SAMPLED: 9-Apr-08
 LOCATION SAMPLED: Building Pad
 LAB NO.: 08PL-0331
 CURVE NO.: 1

MATERIAL SOURCE: Imported from Off-site Borrow Source
 MATERIAL DESCRIPTION: Yellowish Brown Poorly-graded Sand with Silt (SP-SM)

METHOD: X ASTM D 698, Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort
 ASTM D 1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort
 AASHTO T 99, Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop
 AASHTO T 100, Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop



--- Proctor Curve --- Zero Air Voids Curve (Gs = 2.65) • Points

Maximum Dry Density (pcf): 115.0
 Optimum Moisture Content (%): 11.0
 Passing # 200 Sieve (%): 8.5

Larry R. Meachum, P.E. *Larry R. Meachum* Engineer
 Name (Technical Responsibility) Signature Position