March 22, 2016

ADDENDUM NO. TWO

MASS GRADING AT THE NORTH FLOYD RAIL SITE
FOR FLOYD COUNTY, GEORGIA
E368A
March 22, 2016
16-0404

Addendum Two consists of responses to questions received and a copy of the Geotechnical Report of the site.

SUBMITTED QUESTIONS AND ANSWERS

1) Is there a plan holders list?
No. Our operating system does not currently have the ability to identify anyone who wishes to download the plans and specifications from our website.

2) Does the RFP have a mandatory or optional pre-bid meeting?
No.

3) Will there be an onsite pre-bid meeting?
No.

4) Can the site be accessed and who needs to be notified?
Yes. Bruce Ivey, Floyd County Engineer, 706-236-2474.

5) Are bidders required to purchase plans and specifications?
No.

6) Can CAD drawing files of the plans be provided?
Yes. The engineer can provide CAD drawings.

7) Is a geotechnical report for the project site available?
Yes. The Geotechnical Report is attached.

8) Who is responsible for materials testing, including soil compaction, etc.?
The Contractor is responsible for all materials testing and job control testing. See Addendum 1.

9) Are the Performance Bond and Payment Bond to be included with the bid?
No. The successful bidder shall submit a Performance Bond and Payment Bond as required.

10) Is the Notice of Commencement to be included with the bid?
No. The successful bidder shall submit a Notice of Commencement as required.

Nancy Lam, CPPB, CPPO
Purchasing Director

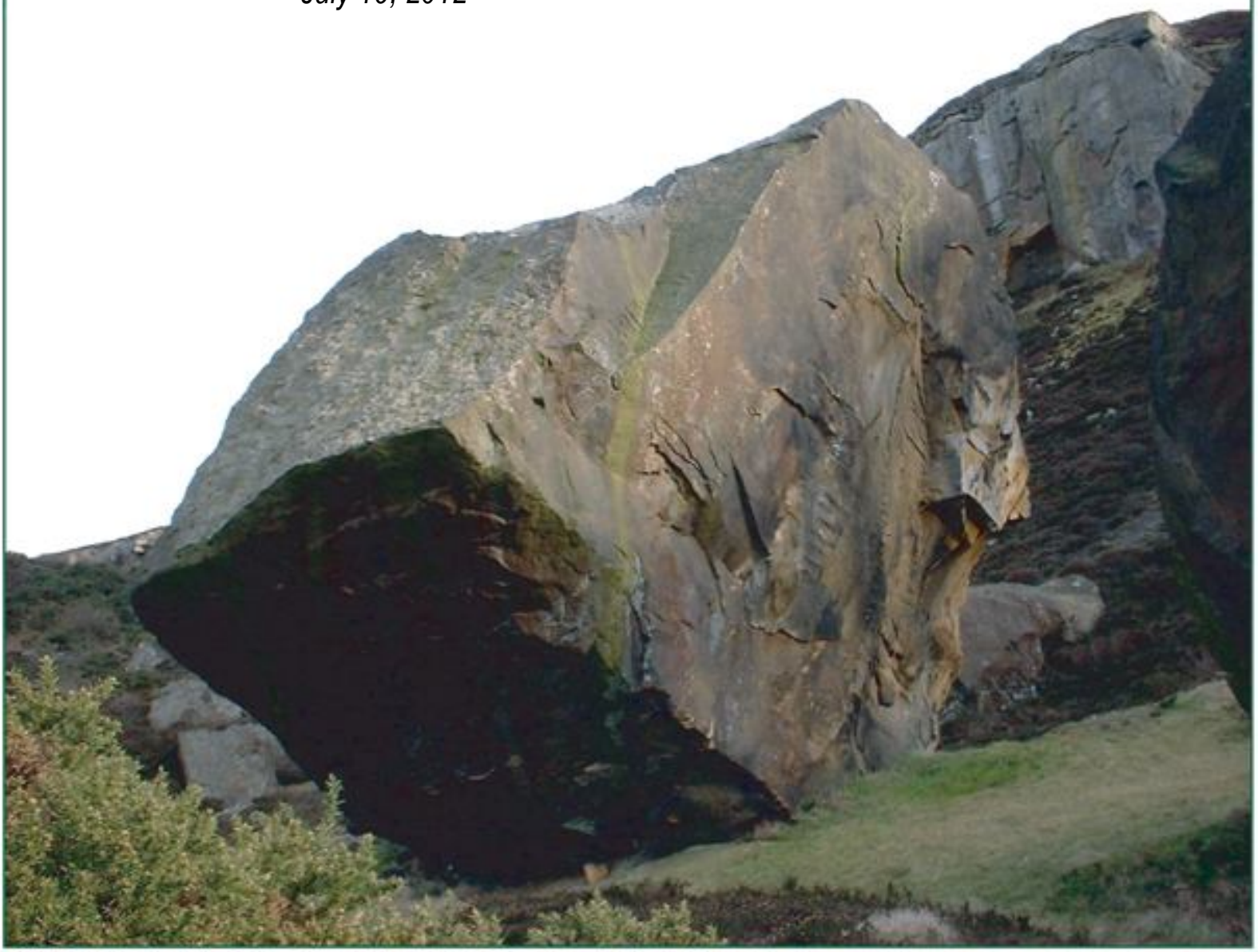
Charles F. Hardin, Jr., P.E.
Project Engineer

GEO HYDRO ENGINEERS

Report of Preliminary Subsurface Exploration and Geotechnical Engineering Evaluation

North Floyd Rail Site
Rome, Georgia

Prepared for Floyd County Government
July 19, 2012



Mr. Blaine Williams
County Manager
Floyd County Government
12 E 4th Avenue
Rome, Georgia 30161

July 19, 2012

Report of Preliminary Subsurface Exploration and Geotechnical Engineering Evaluation
North Floyd Rail Site
Rome, Georgia
Geo-Hydro Project Number 120318.00

Dear Mr. Williams:

Geo-Hydro Engineers, Inc. has completed the authorized subsurface exploration for the above referenced project. The scope of services for this project was outlined in our proposal number 15119 dated June 20, 2012.

Project Information

The project site is located in the northwest quadrant of the intersection of Georgia Highway 140 and Georgia Highway 53 in Rome, Georgia. Figure 1 in the Appendix shows the approximate site location.

The site encompasses about 100-acres of grassed pasture with isolated pockets of trees in the western and southeastern portions of the property. Several ridgelines extend from the northeast to the southwest through the site. In general, the overall terrain can be described as rolling with a general slope down to a drainage feature located in the central portion of the site between the two ridgelines. A small watering pond with several feet of standing water is located within the drainage feature in the north-central portion of the site.

A 180-foot wide Oglethorpe Power easement extends from the southeast to the northwest through the southwest corner of the site. A cellular system tower is located on a hilltop in the southwest corner of the site. The remains of a basement wall from a previous residential structure are located along the ridgeline in an area near the southeast corner of the site. We understand that the hilltop in the southwest corner of the site (south of the Oglethorpe Power easement) is not being considered for development. Figure 2 in the Appendix illustrates the current site conditions.

Preliminary site grading plans are not yet available for review. However, Geo-Hydro understands that due to the necessity of railcar access, maximum site grades post development will be limited to 2 percent. Based on our visual observations and assumptions, we expect that mass grading will require up to 20 vertical feet of excavation and structural fill placement. Detailed development plans were not available at the time of the exploration. We anticipate that the future development of this property will consist of an industrial or manufacturing facility. We anticipate that maximum building column loads will not exceed

100 kips, but overhead rail cranes may be present within the structures. Rail crane column loads may be on the order of 200 kips.

Exploratory Procedures

The subsurface exploration consisted of six machine-drilled soil test borings performed at the approximate locations shown on Figure 2 included in the Appendix. The test borings were located in the field by Geo-Hydro by measuring angles and distances from existing site features. In general, boring locations should be considered approximate.

Standard penetration testing, as provided for in ASTM D-l586, was performed at select intervals in the soil test borings. Soil samples obtained from the drilling operation were examined and classified in general accordance with ASTM D-2488 (Visual-Manual Procedure for Description of Soils). Soil classifications include the use of the Unified Soil Classification System described in ASTM D-2487 (Classification of Soils for Engineering Purposes). The soil classifications also include our evaluation of the geologic origin of the soils. Evaluations of geologic origin are based on our experience and interpretation and may be subject to some degree of error.

Descriptions of the soils encountered, groundwater conditions, standard penetration resistances, and other pertinent information are provided in the test boring records included in the Appendix.

Regional Geology

The project site is located in the Appalachian Valley and Ridge Province of Georgia. Based on review of geologic maps, the site is mapped as being underlain by the eastern belt of the Cambrian Conasauga Group rock formation, which consists primarily of limestone and shale.

The soils that form from the weathering of the parent rock are termed residual soils. The residual soils derived from limestone or shale are frequently clayey and may be highly plastic. The residual soils typically contain fragments of insoluble rock such as chert.

Solution activity within limestone units occurs in the Valley and Ridge Province particularly along joints, faults, and the bedding planes of the rock. Solution activity in the limestone of this area often results in the development of an extremely irregular rock surface, which frequently has deep slots. The transition from soil to hard rock is generally rather abrupt, with the soils encountered immediately above the rock frequently having a much lower consistency than near the ground surface.

Solutioning in the limestone can result in the formation of caverns within the limestone, and the development of sinkholes and cavities within the overburden soils. Depending upon the stage of sinkhole development, evidence of ground subsidence may be readily observable at the ground surface, or essentially no indication of impending sinkhole development may be visible at the surface. The size and frequency of subsurface voids is highly variable and depends on several factors related to geology, climate, and man-induced conditions. The stability of subsurface voids is related not only to the structural characteristics of the subsurface void; but also to proposed site grading, the magnitude of structural loads, significant changes in groundwater levels, drought, and any number of other factors.

Near-surface geologic conditions at the site have been modified by previous agricultural activities.

Soil Test Boring Summary

Starting at the ground surface, all of the borings encountered topsoil ranging in thickness from about 2 to 3 inches. Detailed measurements necessary for quantity estimation were not performed for this project and actual thicknesses should be expected to vary. For planning purposes, we recommend an arbitrary topsoil thickness of 10 foot.

Beneath the topsoil, borings F-2 through F-6 encountered cultivated soils (agriculturally disturbed) extending to a depth of about 3 feet. The cultivated soils were classified as sandy clay or sandy silt with varying amounts of rock fragments. Standard penetration resistance values recorded in the cultivated soils ranged from 20 to 40 blows per foot. It should be noted that rock fragments and other hard materials will typically amplify the standard penetration resistance. Such higher standard penetration resistances are not a reliable indicator of the condition of the material.

Beneath cultivated soils and surface materials, all of the borings encountered residual soils typical of the Valley and Ridge region. The residual soils were classified as clayey silt, silty clay and sandy clay with varying amounts of rock fragments. Standard penetration resistances in the residual soils ranged from 2 to 32 blows per foot.

Partially weathered rock was encountered in boring F-1, F-2, F-3, and F-6 at depths ranging from 3 to 37 feet. Partially weathered rock is locally defined as residual material having standard penetration resistance values greater than 100 blows per foot.

Auger refusal was encountered in borings F-1, F-2, and F-3 at depths ranging from 8 to 31 feet. Auger refusal is the condition that prevents advancement of the boring using conventional soil drilling techniques. The material causing auger refusal may consist of a boulder, a lens or layer of rock, the upper surface of relatively massive rock, or other hard material.

Groundwater was not encountered in the test boring at the time of drilling. For safety reasons, the borings were backfilled with soil cuttings after completion. It should be noted that groundwater levels will fluctuate depending on yearly and seasonal rainfall variations and other factors, and may rise in the future. Perched groundwater will be highly variable, as its presence will be predominately a function of recent rainfall.

For more detailed descriptions of subsurface soil conditions, please refer to the test boring records included in the Appendix.

Preliminary Evaluations and Recommendations

The following evaluations and recommendations are based on the information available on the proposed construction, the data obtained from the test borings, and our experience with soils and subsurface conditions similar to those encountered at this site. Because the test borings represent a statistically small sampling of subsurface conditions, it is possible that conditions may be encountered during construction that are substantially different from those indicated by the test borings. In these instances, adjustments to the design and construction may be necessary.

Geotechnical Considerations

The following geotechnical characteristics of the site should be taken into account for planning and design:

- Cultivated soils were encountered in most test borings extending to a depth of about 3 feet. The disturbed materials appears to be associated with typical farming activities. Portions of these materials will likely be removed during general site grading. Remaining materials within building areas should be evaluated and removed as necessary. Variations within cultivated materials should be expected, and poor quality (highly organic or unstable) materials may be encountered intermediate of the areas directly explored. Remedial measures such as excavation and replacement of poor quality fill materials may be necessary. Thorough subgrade and foundation bearing surface evaluations will be required during grading and construction.

- Thorough proofrolling will be critical to help identify unstable surface materials. Removal and replacement of some trashy fill should be anticipated. However, most of the cultivated materials as characterized by the test borings can be reused with proper moisture conditioning and recompaction.

- The test borings indicate generally favorable excavation conditions. Difficult excavation conditions (ripping and blasting) will likely be encountered during mass grading excavation of the hilltops represented by boring F-1 in the western portion of the site.

- Significant groundwater related issues are not anticipated. However, temporary dewatering may be required in the pond and central swale area if remedial excavation is necessary prior to fill placement. Additionally, proposed excavation depths of up to 20 feet may encounter localized areas of perched groundwater. The contractor should be prepared to install trench drains within the central swale, or at the base of excavation slopes if necessary.

- Based on the subsurface conditions encountered at the site, a *Site Class D* should be used as per Table 1613.5.2 of the 2006 International Building Code. A building specific analysis should be performed once building locations and anticipated finished floor elevations have been established. A more favorable Site Class may be available depending on specific building locations within the site. Additionally, the Site Class may also be improved by performing a shear wave velocity profile determination.

- This site is underlain by a geologic unit which contains limestone. The subsurface profile consists of denser, near-surface materials with a general weakening of soils near the rock surface. In some instances areas underlain by limestone can develop pockets or areas of very weak soils commonly referred to as solution zones. It is important to realize that there is an inherent risk associated with foundation support of buildings in areas which are underlain by limestone. However, the great majority of structures in such areas may never experience foundation problems. Based on our local experience, such problems in the general area of the site are relatively rare.

- Following completion of site preparation and grading, an allowable soil bearing pressure of 2,500 psf or less may be used for the design of conventional shallow foundations. This design allowable bearing pressure is intended for evaluation purposes only. A geotechnical exploration tailored to the actual site development and structures will be necessary to develop project-specific design recommendations

Supplemental Exploration

Due to the preliminary nature of this subsurface exploration, we recommend that a supplemental geotechnical exploration be performed when foundation loads and site grading are known. A supplemental exploration will help to further evaluate subsurface conditions and the impact of subsurface conditions on site development.

* * * * * *

We appreciate the opportunity to serve as your geotechnical consultant for this project, and are prepared to provide any additional services you may require. If you have any questions concerning this report or any of our services, please call us.

Sincerely,

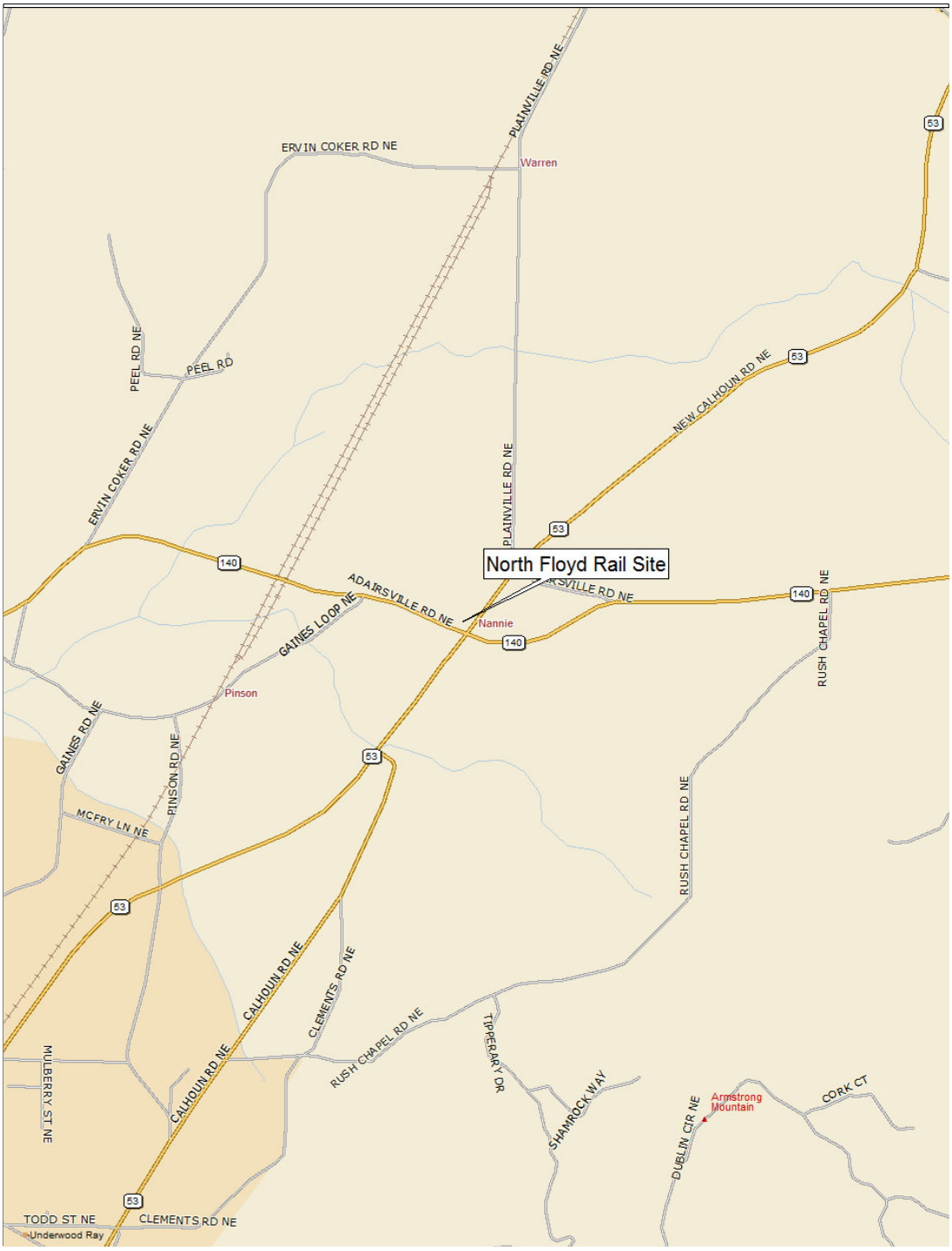
GEO-HYDRO ENGINEERS, INC.

Brian K. Ingram, P.E.
Senior Geotechnical Engineer
bingram@geohydro.com

Luis E. Babler, P.E.
Chief Engineer
luis@geohydro.com

BKI/LEB/sh/120069.00 Floyd Medical Center Report

APPENDIX



0 0.25 0.5 1 1.5

Approximate Scale, Miles

Figure 1: Site Location Plan

North Floyd Rail Site
Rome, Georgia
Geo-Hydro Project Number 120318.00

LEGEND: Soil Test Boring

0 350 700 1400 2100

Approximate Scale: 1"=700'

Figure 2: Boring Location Plan

North Floyd Rail Site
Rome, Georgia
Geo-Hydro Project Number 120318.00

Symbols and Nomenclature

Symbols

▌	Thin-walled tube (TWT) sample recovered
▯	Thin-walled tube (TWT) sample not recovered
●	Standard penetration resistance (ASTM D1586)
50/2”	Number of blows (50) to drive the split-spoon a number of inches (2)
65%	Percentage of rock core recovered
RQD	Rock quality designation - % of recovered core sample which is 4 or more inches long
GW	Groundwater
	Water level at least 24 hours after drilling
	Water level one hour or less after drilling
ALLUV	Alluvium
TOP	Topsoil
PM	Pavement Materials
CONC	Concrete
FILL	Fill Material
RES	Residual Soil
PWR	Partially Weathered Rock
SPT	Standard Penetration Testing

Penetration Resistance Results	Number of Blows, N	Approximate Relative Density
Sands	0-4	very loose
	5-10	loose
	11-20	firm
	21-30	very firm
	31-50	dense
	Over 50	very dense

	Number of Blows, N	Approximate Consistency
Silts and	0-1	very soft
Clays	2-4	soft
	5-8	firm
	9-15	stiff
	16-30	very stiff
	31-50	hard
	Over 50	very hard

Drilling Procedures

Soil sampling and standard penetration testing performed in accordance with ASTM D 1586. The standard penetration resistance is the number of blows of a 140-pound hammer falling 30 inches to drive a 2-inch O.D., 1.4-inch I.D. split-spoon sampler one foot. Rock coring is performed in accordance with ASTM D 2113. Thin-walled tube sampling is performed in accordance with ASTM D 1587.

F-1

Test Boring Record

GEO HYDRO ENGINEERS

Project: **North Floyd Rail Site**		Project No: **120318.00**
Location: **Rome, Georgia**		Date: **7/6/12**
Method: **HSA- ASTM D1586**	GWT at Drilling: **Not Encountered**	G.S. Elev:
Driller: **B&C (AUTO-HAMMER)**	GWT at 24 hrs: **N/A Boring Backfilled**	Logged By: **BKI**

Elev. (Ft)	Depth (Ft)	GWT	Symbol	Description	N	Standard Penetration Test (Blows/Foot)
				Topsoil (Approximately 3 inches)		
				Very stiff tan fine sandy silt (ML) (RESIDUUM)	19	
	5			Partially weathered rock sampled as tan to orange fine sandy silt (ML)	50/4"	
					50/5"	
	10				50/3"	
	15				50/5"	
	20				50/1"	
				Auger Refusal at 21 feet		
	25					
	30					
	35					
	40					
	45					

Standard Penetration Test (Blows/Foot): 0 10 20 30 40 50 60 70 80 90 100

Remarks:

TEST BORING RECORD NORTH FLOYD BORING LOGS.GPJ GEO HYDRO.GDT 7/19/12

F-2

Test Boring Record

GEO HYDRO ENGINEERS

Project: **North Floyd Rail Site**		Project No: **120318.00**
Location: **Rome, Georgia**		Date: **7/5/12**
Method: **HSA- ASTM D1586**	GWT at Drilling: **Not Encountered**	G.S. Elev:
Driller: **B&C (AUTO-HAMMER)**	GWT at 24 hrs: **N/A Boring Backfilled**	Logged By: **BKI**

Elev. (Ft)	Depth (Ft)	GWT	Symbol	Description	N
	0			Topsoil (Approximately 3 inches)	
				Very stiff brown fine sandy clay (CL) with rock fragments (CULTIVATED)	20
	5			Very stiff brown fine sandy silty (ML) (RESIDUUM)	23
				Hard tan clayey silt (ML) with rock fragments	31
				Stiff to very stiff tan clayey silt (ML)	
	10				24
	15				10
				Soft tan clayey silt (ML)	
	20				4
	25				2
				Partially weathered rock - NO SAMPLE RECOVERY	
	30				50/1"
				Auger Refusal at 31 feet	
	35				
	40				
	45				

Standard Penetration Test (Blows/Foot)

0 10 20 30 40 50 60 70 80 90 100

Remarks:

TEST BORING RECORD NORTH FLOYD BORING LOGS.GPJ GEO HYDRO.GDT 7/19/12

F-3

Test Boring Record

GEO HYDRO ENGINEERS

Project: **North Floyd Rail Site**		Project No: **120318.00**
Location: **Rome, Georgia**		Date: **7/6/12**
Method: **HSA- ASTM D1586**	GWT at Drilling: **Not Encountered**	G.S. Elev:
Driller: **B&C (AUTO-HAMMER)**	GWT at 24 hrs: **N/A Boring Backfilled**	Logged By: **BKI**

Elev. (Ft)	Depth (Ft)	GWT	Symbol	Description	N
	0			Topsoil (Approximately 2 inches)	
				Very stiff tan sandy clay (CL) with rock fragments (CULTIVATED)	24
	5			Very stiff gray sandy clay (CL) with rock fragments (RESIDUUM)	19
				Partially weathered rock sampled as fine sandy silt (ML)	50/1"
	8			Auger Refusal at 8 feet	
	10				
	15				
	20				
	25				
	30				
	35				
	40				
	45				

Standard Penetration Test (Blows/Foot)

0 10 20 30 40 50 60 70 80 90 100

Remarks:

TEST BORING RECORD NORTH FLOYD BORING LOGS.GPJ GEO HYDRO.GDT 7/19/12

F-4

Test Boring Record

GEO HYDRO ENGINEERS

Project: **North Floyd Rail Site**		Project No: **120318.00**
Location: **Rome, Georgia**		Date: **7/6/12**
Method: **HSA- ASTM D1586**	GWT at Drilling: **Not Encountered**	G.S. Elev:
Driller: **B&C (AUTO-HAMMER)**	GWT at 24 hrs: **N/A Boring Backfilled**	Logged By: **BKI**

Elev. (Ft)	Depth (Ft)	GWT	Symbol	Description	N
	0			Topsoil (Approximately 3 inches)	
				Very stiff fine sandy clay (CL) with rock fragments (CULTIVATED)	27
				Stiff brown fine clayey silt (ML) (RESIDUUM)	
	5				14
				Stiff brown clayey silt (ML)	14
	10				18
				Stiff brown silty clay (CL)	
	15				8
	20			Boring Terminated at 20 feet	5
	25				
	30				
	35				
	40				
	45				

Standard Penetration Test (Blows/Foot)

0 10 20 30 40 50 60 70 80 90 100

Remarks:

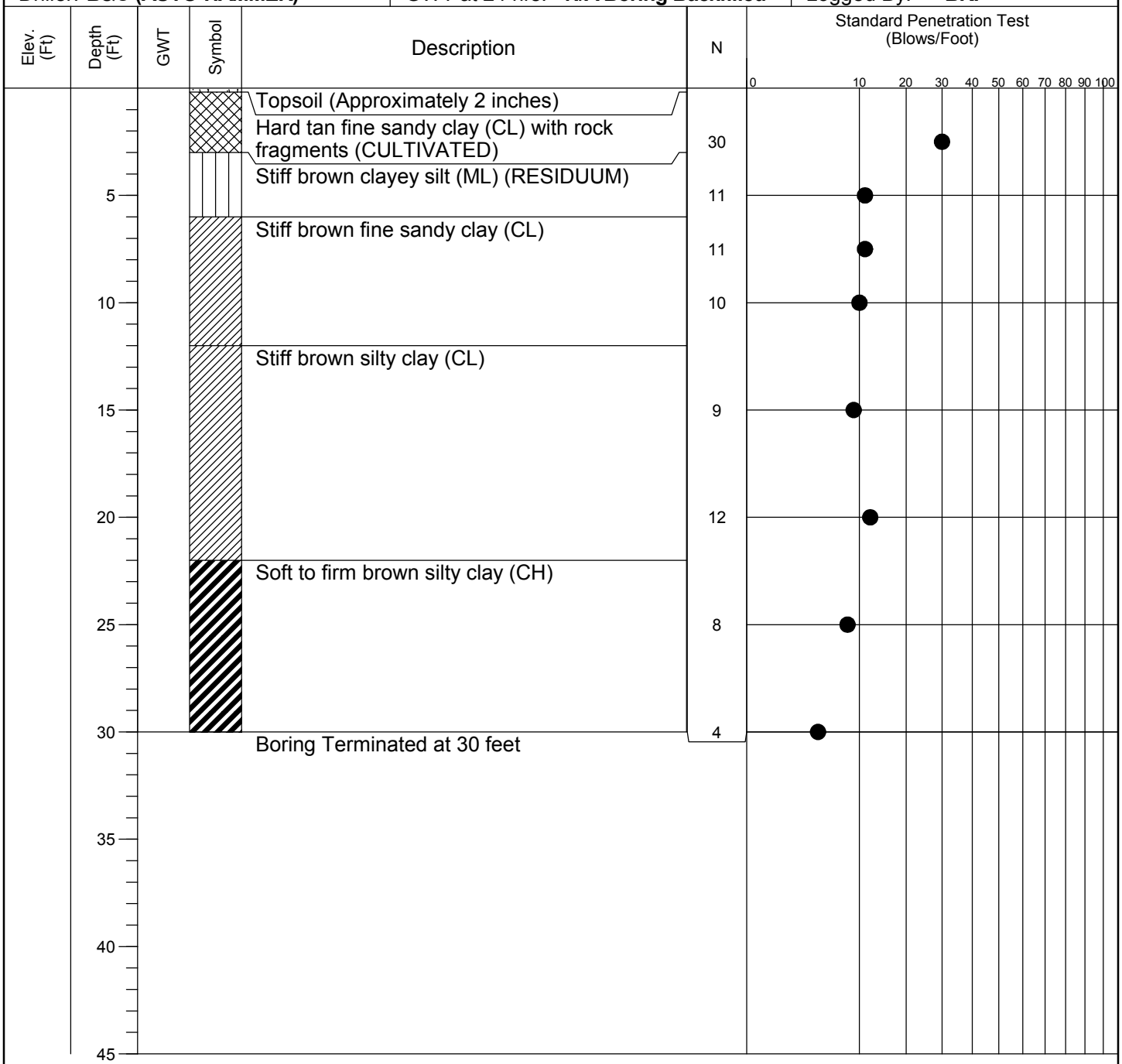
TEST BORING RECORD NORTH FLOYD BORING LOGS.GPJ GEO HYDRO.GDT 7/19/12

F-5

Test Boring Record

GEO HYDRO ENGINEERS

Project: **North Floyd Rail Site**		Project No: **120318.00**
Location: **Rome, Georgia**		Date: **7/6/12**
Method: **HSA- ASTM D1586**	GWT at Drilling: **Not Encountered**	G.S. Elev:
Driller: **B&C (AUTO-HAMMER)**	GWT at 24 hrs: **N/A Boring Backfilled**	Logged By: **BKI**



Remarks:

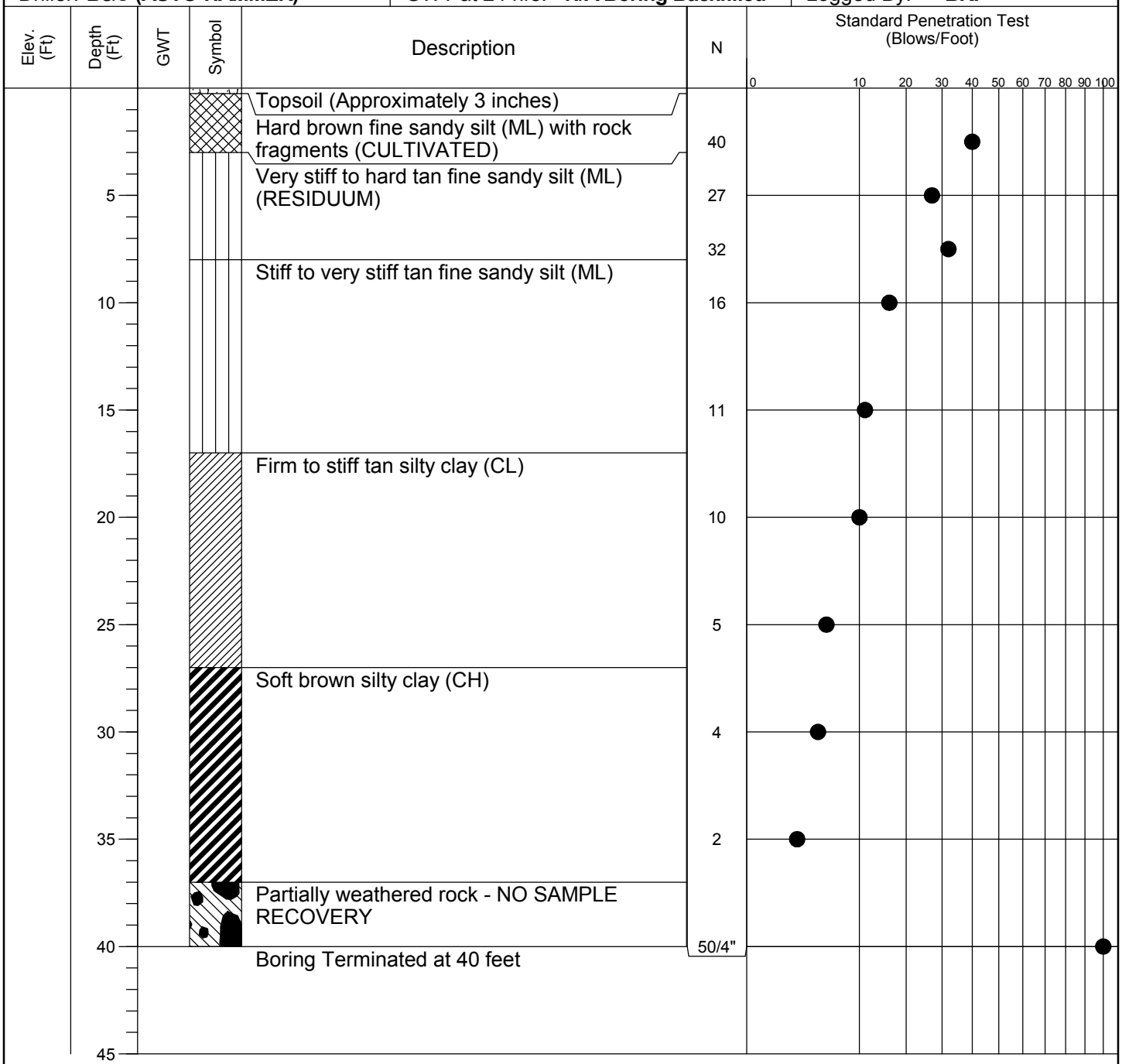
TEST BORING RECORD NORTH FLOYD BORING LOGS.GPJ GEO HYDRO.GDT 7/19/12

F-6

Test Boring Record

GEO HYDRO ENGINEERS

Project: **North Floyd Rail Site**		Project No: **120318.00**
Location: **Rome, Georgia**		Date: **7/6/12**
Method: **HSA- ASTM D1586**	GWT at Drilling: **Not Encountered**	G.S. Elev:
Driller: **B&C (AUTO-HAMMER)**	GWT at 24 hrs: **N/A Boring Backfilled**	Logged By: **BKI**



Remarks:

TEST BORING RECORD NORTH FLOYD BORING LOGS.GPJ GEO HYDRO.GDT 7/19/12

SITE PHOTOS

Looking east across property

Looking north across property