

**MTE**  
**MIKE TANNOUS ENGINEERING**  
**INCORPORATED**

**RESULTS OF MUCK PROBES**  
**2± ACRE PARCEL OF LAND**  
**7367 EAST COLONIAL DRIVE**  
**UNINCORPORATED ORANGE COUNTY**  
**ORLANDO, FLORIDA**  
**MTE, INC. PROJECT NO. 15-130**



**Prepared For**

**Mr. Farhad Mohebban**  
**Samis Realty Group, Inc.**  
**60 parkway Drive**  
**Roslyn Heights, NY 11577-2708**

**March 29, 2015**  
**Revised April 9, 2015**



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Geotechnical Engineering • Construction Materials Testing / Quality Control

March 29, 2015  
Revised April 9, 2015

Samis Realty Group, Inc.  
60 Parkway Drive  
Roslyn Hts., NY 11577-2708

Attention: Mr. Farhad Mohebban

Subject:        ***Results of Muck Probes, Parcel of Land Located at 7367 East Colonial Drive,  
Unincorporated Orange County, Orlando, Florida (MTE, Inc. Project No. 15-130)***

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Dear Mr. Mohebban:

As requested, representatives of our firm performed muck probes within the above referenced property. The following report summarizes the results of these probes.

### **PROJECT DESCRIPTION**

The subject property (Orange County Parcel ID # 14-22-30-0000-00-052) is located along the north side of East Colonial Drive, just a few hundred feet west of its intersection with Goldenrod Road, at 7367 East Colonial Drive, Orlando, Florida. The property is approximately 2 acres in area and is currently very heavily vegetated with trees and shrubbery. A drainage ditch cuts through the central portion of the property in a south to north direction.

We understand that you are considering either selling or developing the subject property. In either case, you needed information regarding the extent/depth of muck/peat soils suspected to exist within the site. Our firm was requested to perform muck probes within the property in an effort to provide general information regarding the vertical and lateral extent of muck soils that may be present in the property.

At a later date, should you decide to proceed with development of the site and once proposed development plans become available, borings will be required in order to evaluate the conditions of the subgrade soils beneath the muck soils.

## **EVALUATIONS AND RESULTS**

### **Review of the U.S.D.A./S.C.S. Soil Survey Map Book**

The USDA/SCS map book is prepared by the United States Department of Agriculture and the Soil Conservation Service, now referred to as the National Resources Conservation Service (NRCS), to identify soil types as well as filled areas or disturbed areas. Prior to mobilizing to the site, we reviewed the Orange County SCS soil map of the area. Our review indicate that three SCS Soil Map Units intersect the site;

- 1) Map Unit #44 - Smyrna Series; This soil type occupies the east side of the property. The Smyrna Series typically consists of relatively poorly drained soils that formed in sandy marine sediments. The wet season groundwater level in these areas typically rises to within inches of the natural ground surface.
- 2) Map Unit #45 - Smyrna urban Land Series; This soil type occupies the west side of the property. These soils are similar to Map Unit 44 discussed above, except the urban Land designation typically suggests that the areas have been developed.
- 3) Map Unit #41 - Samsula-Hontoon-Basinger Series; This soil type occupies the central portion of the site. The series consists of very poorly drained soils that often contain organic matter/soils. The wet season groundwater level in these areas typically rises above the natural ground surface.

The approximate delineation of the varying SCS map Units that intersect the site is graphically shown on the attached Figure 2. Our review of the SCS soil map suggested to us that muck/peat soils would likely be encountered within the central portion of the property (i.e., the portion designated by Soil Map Unit #41).

### Muck Probes

Muck probes were performed at a spacing of approximately 40± to 60± feet in a grid fashion throughout the property. The results of our muck probes confirmed the presence of muck soils within the property. The thickest deposits of muck (up to 6.5 feet in thickness) were encountered within the central portion of the site in the general area designated as Soil Map Unit #41.

Organic soils were also encountered within the east and west sections of the site (areas designated by Map Units 44 and 45), however the thickness of the organic soils in these areas was significantly less (typically 12 inches or less). The approximate locations of our muck probes and approximate thickness of muck soils measured at each probed location are illustrated on the attached Figure 1. It should be noted that the muck thicknesses shown in Figure 1 represent the depth of muck soils encountered at the probed locations. Variations in muck thickness is expected between our probed locations.

### Summary

The results of our probes confirm the presence of muck soils in the site. The muck varied in thickness between a few inches to 6.5 feet below ground surface. The thicker deposits of muck were generally encountered within the central portion of the property. Based on our calculations, an estimated 9,500± cubic yards of soils would be excavated if you elect to de-muck the entire site. An estimated 12,000± cubic yards of imported compacted sandy fill soils would be required to backfill the de-mucking excavations back to current ground surface elevation.

Muck/organic soils are not suitable for providing proper bearing support to proposed structures or pavement areas. Once proposed construction areas are identified on the property, removal of the underlying muck soils from proposed construction areas, followed by backfilling the excavations with more suitable, compacted sandy soils is recommended. Artificial lowering of the groundwater level during de-mucking operations, will be required.

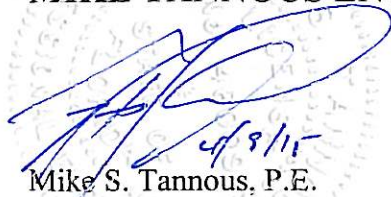


## **CLOSURE**

We have appreciated the opportunity of providing our service on this project and trust that the information contained in this report is satisfactory. Should you elect to proceed with development of the site, we can provide more specific recommendations relating to proper de-mucking and backfilling procedures. In the meanwhile, please do not hesitate to contact our office should you have any questions or require additional information.

Sincerely,

**MIKE TANNOUS ENGINEERING, INC.**



Mike S. Tannous, P.E.

Principal Engineer

FL. Registration No. 46009

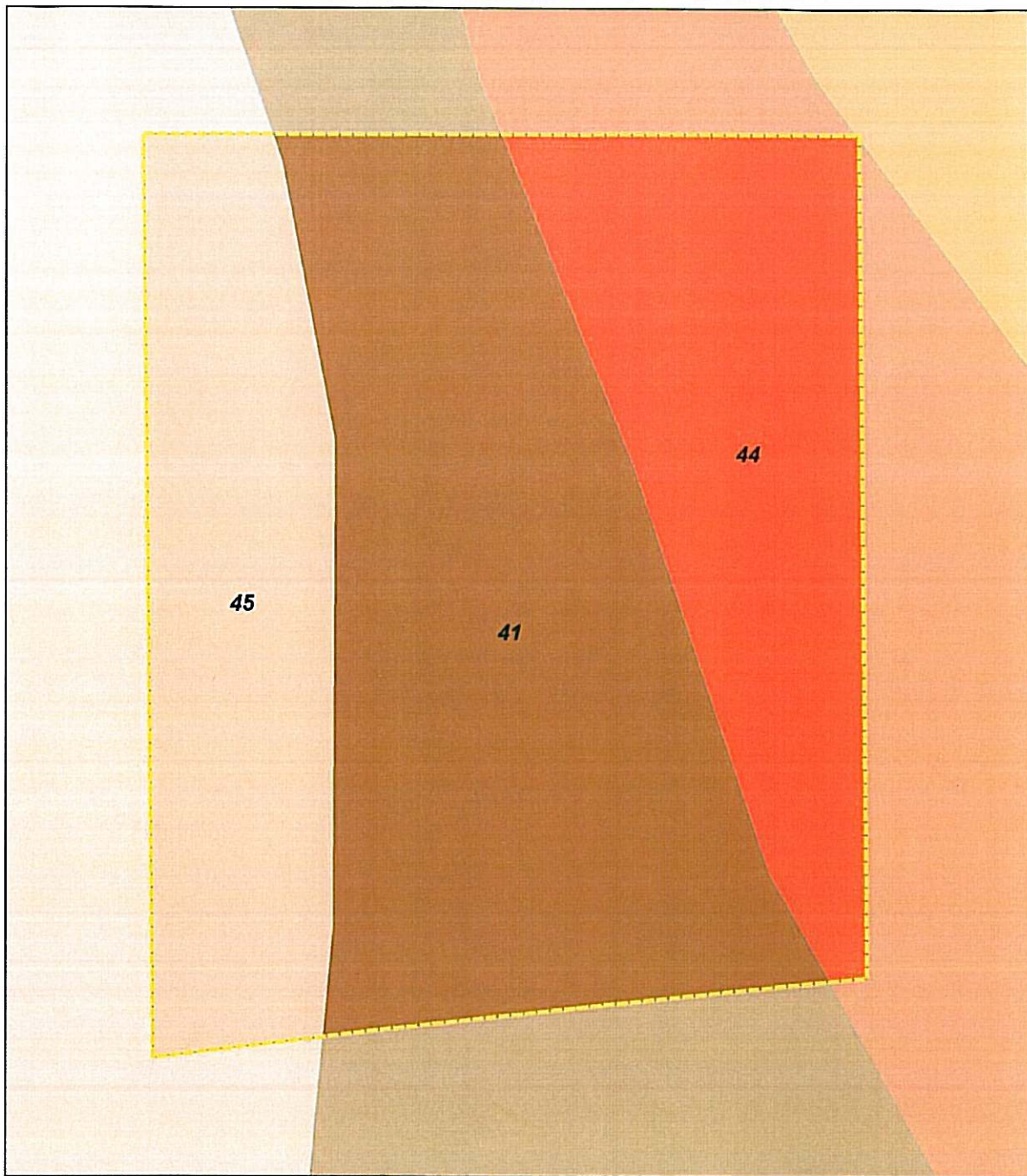
Attachments: SCS Soil Map and Results of Muck Probes



1.0+

DRAWN: RLG	APPROVED: MT	DATE: 5/29/15
SCALE: 1"=60'	FIGURE: 1	JOB NO.: 15-130





**LEGEND**

- 41: Samsula-Hontoon-Basinger Association, Depressional
- 44: Smyrna-Smyrna, Wet, Fine Sand 0-2% Slopes
- 45: Smyrna-Urban Land Complex

SOILS MAP  
MOHEBBAN PROPERTY  
7367 E. COLONIAL DRIVE  
ORLANDO, FLORIDA

**MTE**  
**MIKE TANNOUS ENGINEERING**  
INCORPORATED

DRAWN:	RLG	APPROVED:	MT	DATE:	5/29/15
SCALE:	1"=60'	FIGURE:	2	JOB NO.:	15-130