Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

November 5, 2013

Southern Hospitality Services LLC
115 Hospitality Drive
Flowood, Mississippi 39232

Attention: Mr. Nash Patel

Reference: Proposed Hampton Inn
I-20 Frontage Road at Garrett Road
Monroe, Louisiana
AAI File# 12.94.038A

Gentlemen:

AAI understands the structural engineer has set the shallow footings at the three (3) foot depth per AAI's report. The footings can be placed at the two (2) foot depth with the following stipulation. In some areas a very soft material may be encountered at the two (2) foot depth. In this case the very soft material should be excavated for twelve (12) inches and replaced with a concrete sand. The very soft material may occur in some isolated spots.

Should you have any questions, please feel free to contact our office.

Very truly yours,
ARDAMAN & ASSOCIATES INC.

Lloyd G. Hoover, P.E.
Principal Engineer

LGH/mfh

SUBSURFACE INVESTIGATION
PROPOSED HAMPTON INN
I-20 FRONTAGE ROAD AT GARRETT ROAD
MONROE, LOUISIANA

PREPARED FOR:
SOUTHERN HOSPITALITY SERVICES, LLC
115 HOSPITALITY DRIVE
FLOWOOD, MISSISSIPPI 39232

PREPARED BY:

ARDAMAN & ASSOCIATES, INC.
7222 GREENWOOD ROAD
SHREVEPORT, LOUISIANA 71119

ARDAMAN PROJECT NO.: 113-12-94-8533
AAI SHREVEPORT FILE NO.: 12.94.038

MARCH 12, 2012

TABLE OF CONTENTS

LIST OF APPENDICES

Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

March 12, 2012

Southern Hospitality Services, LLC
115 Hospitality Drive
Flowood, Mississippi 39232

Attention: Mr. Nash Patel
Vice President

Reference: Subsurface Investigation
Proposed Hampton Inn
I-20 Frontage Road at Garrett Road
Monroe, Louisiana
Ardaman Project No.: 113-12-94-8533
AAI Shreveport File No.: 12.94.038

Gentlemen:

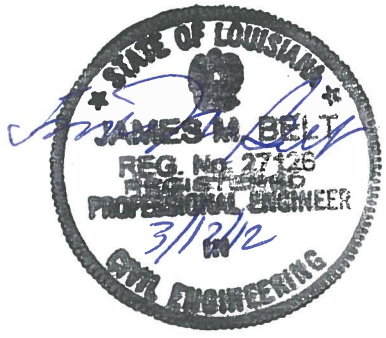
Attached is our Subsurface Investigation Report for the above referenced project. Ardaman & Associates, Inc. (AAI) will be happy to assist you further on this project by furnishing any Construction Materials Testing Services you or the owner may require. We are a full service laboratory with a local presence in West Monroe, Louisiana and can provide any soils or concrete testing you may require.

It has been a pleasure to perform this work for you. If we can be of any further assistance, please do not hesitate to call on us.

Very truly yours,

ARDAMAN & ASSOCIATES, INC.

James M. Belt, P.E.
Branch Manager
Shreveport Area Operations



Lloyd G. Hoover, P.E.
Chief Engineer
Shreveport Area Operations

cc: (2) client

SUBSURFACE INVESTIGATION
PROPOSED HAMPTON INN
I-20 FRONTAGE ROAD AT GARRETT ROAD
MONROE, LOUISIANA

GENERAL

This study was authorized by Mr. Nash Patel, Vice President of Southern Hospitality Services, L.L.C. on February 12, 2012. The purposes of the study were to (1) explore the subsurface conditions present at this site, (2) determine the pertinent engineering properties of the materials encountered, and (3) develop recommendations concerning suitable foundation types and pavement sections for the subsurface soils encountered at this site.

PROJECT DESCRIPTION

AAI understands the proposed 83 room hotel will be four (4) stories in height with a ground level in-door pool. The building will be approximately 16,000 square feet (SF) in footprint. The facility will include parking for 90 vehicles. It is anticipated construction will consist of wood-framed load bearing walls with stucco type veneer. There will be new concrete access drives and parking surrounding the structure. Anticipated loading for this type structure is moderate to light.

The site of the proposed construction is located on the south side of I-20 near the intersection of the Frontage and Garrett Roads. The 1.66 acre lot lies west of Garrett and south of Frontage Road. The site is bounded on the south by the Best Western Airport Inn property and to the north by Sam's Club property. This site has had some recent construction activity. The site appears to have been built up about two (2) feet with imported fill materials. The fill covers about eighty (80) percent of the Lot. This work was reportedly done during a recent expansion of the Sam's Club parking lot just to the north of the property. AAI assumes the finished floor slab elevation for the proposed building will be within one (1) or two (2) feet of the current fill elevation. At the time of this investigation, surface soils were soft and wet, but all of the boring locations were readily accessible to our ATV-mounted drilling equipment.

FIELD OPERATIONS

The subsurface exploration at the site consisted of a total of nine (9) test borings. Five (5) borings were drilled in the area of the proposed new building. These borings were advanced to a depth of twenty (20) feet below the existing ground surface. Four (4) test borings were drilled in areas proposed for paving. These borings were advanced to depths of five (5) feet. This investigation was conducted on February 23, 2012. Boring locations were selected by the geotechnical engineer.

The test borings were advanced utilizing continuous-flight, solid stem augers and samples were obtained for laboratory evaluation in general accordance with provisions of ASTM D1586 and ASTM D1587. Standard, thin-walled, seamless Shelby tube samplers were used to obtain specimens of cohesive materials. These specimens were taken continuously to a depth of ten (10) feet below the existing ground surface. Below this depth, samples were obtained at intervals of five (5) feet as the borings were advanced.

Soils which contained enough cohesionless material or were sufficiently dense to prevent recovery of undisturbed specimens with Shelby Tube samplers were evaluated by means of the Standard Penetration test. This test consists of determining the number of blows required by a 140 pound hammer dropped 30 inches to achieve one foot penetration of the soil. This number is then related to "in situ" density of the material.

All samples obtained were logged, sealed and packaged in the field to protect them from disturbance and maintain their in situ moisture content during transportation to our laboratory. The results of our boring program (Logs of Boring) are included as Appendix "A" of this report.

LABORATORY TESTING

Upon return to our laboratory selected samples were subjected to standard laboratory tests under the supervision of a soils engineer. The Atterberg Limits, in situ unit weights, percent of material passing a #200 sieve, and moisture contents of the different subsurface soils were determined. These soil properties were used to classify the soils and evaluate their potential for volumetric change. Standard Penetration and unconfined compression tests performed on selected undisturbed samples were used to evaluate the shear strength of the different subsurface materials. The results of our testing program are included on the Logs of Boring in Appendix "A" of this report.

SOIL CONDITIONS

Soil conditions described in this section are of a generalized nature and intended to emphasize key features and characteristics. For a more detailed description of the subsurface materials encountered refer to the soil profile on each Log of Boring in Appendix "A". Strata contacts indicated on our Logs are approximate. Actual transitions may be gradual in nature.

Imported fill material encountered at the site varies in thickness from two (2) to three (3) feet. This material is generally soft sandy lean clay, USCS classification (CL). The fill layer was encountered at the locations of test borings B-1, B-2, B-5, B-7, B-8, and B-9. Below this material medium stiff, moderately plastic, lean clay with sand (CL) was encountered to depths of six (6) to eight (8) feet. Below this layer, medium stiff to very soft, lean clay of low plasticity (CL-ML) exists at all but one test boring. At B-2, medium stiff to soft highly plastic fat clay (CH) was encountered between six (6) and ten (10) feet. Soft very silty lean clay (CL-ML) was encountered below a depth of thirteen (13) feet at this test boring.

GROUNDWATER

Shallow groundwater was encountered below a depth of eleven (11) feet during operations. Based on the soil stratification and anticipated construction activities at this site, shallow groundwater should not impact construction activities for the hotel building or parking lot but will likely impact construction activities for the in-ground pool. If excavation below a depth of about ten (10) feet is necessary to install the pool structure, dewatering could be required.

SUBGRADE PREPARATION

Our SPT testing in the existing fill materials indicates placement of the material was poorly controlled and subsequently the existing fill is poorly compacted. Prior to subsequent construction activity on the site, the existing fill material should be removed and replaced in a controlled manner. After removal, some top soil stripping may be required if the site was not properly grubbed prior to the previous work. Provide drainage of the exposed subgrade by sloping grades and ditching away from the construction site so positive drainage can be maintained throughout the construction phase of the project.

After the undisturbed subgrade is exposed, the upper twelve (12) inches should be scarified; moisture conditioned, and then compacted to a minimum of ninety-five (95) percent of the laboratory maximum density as determined by ASTM D698 at one (1) to three (3) percent above optimum moisture content prior to subsequent fill placement.

FILL RECOMMENDATIONS

Place subsequent lifts of structural fill as necessary to achieve the desired finished grade elevation. Lifts should be placed in thin horizontal layers not exceeding eight (8) inches in loose thickness, moisture conditioned to within two (2) percentage points of optimum moisture and re-compacted to a minimum of ninety-five (95) percent ASTM D698. All imported fill material should be "select". Select materials classify as SC or CL (clayey sand or sandy lean clay) in accordance with the Unified Soils Classification System and will have liquid limits (LL) no greater than thirty-eight (38), plasticity indices (PI) between eight (8) and eighteen (18) with no more than sixty (60) percent passing the No. 200 sieve. Typical specifications for compaction of sandy clay and clayey sand soils are included in Appendix "B" of this report. The onsite fill materials previously recommended for removal are suitable materials for reuse beneath the building or pavements with adequate moisture conditioning and compaction control.

FOUNDATION RECOMMENDATIONS

The near surface soils encountered within the upper six (6) feet below the existing ground surface are considered inactive and are of fair bearing quality. As such, they are suitable to support of a shallow foundation system. A conventionally reinforced, slab-on-grade, shallow foundation system can be used. The base of the footings should be placed approximately two (2) to three (3) feet below the finished floor elevation in the density controlled fill material. An allowable bearing value of 1,500 PSF can be utilized to proportion continuous footings placed as described above. The bearing value contains a minimum factor of safety of two (2) against shear failure of the bearing stratum and was selected to minimize settlement potential of the weaker materials found below a depth of thirteen (13) feet. A minimum footing width of eighteen (18) inches should be maintained for all continuous footings as protection against potential isolated shear failure.

Interior columns or other areas of concentrated load can be supported by isolated spread footings. The base of the footings should be placed in the previously described stratum. An allowable bearing value of 2,000 PSF can be used to proportion all spread footings. The bearing value contains a minimum factor of safety of two (2) against shear failure of the bearing stratum. A minimum footing width of twenty-four (24) inches should be maintained for all spread footings.

The slab for the proposed structure can be placed directly on density controlled fill. AAI recommends the slab be structurally tired to the foundation to differential movement potential. Use of a polyethylene moisture (vapor) barrier is recommended under all climate controlled areas.

Some consolidation settlement should be expected in the clay soils beneath this site. However, if the site is properly prepared and allowable bearing capacities not exceeded, settlement should be limited to an inch or less.

POOL INFORMATION

Ardaman understands an indoor pool will be constructed at this site. The groundwater was encountered at eleven (11) feet but can fluctuate with the seasons of the year and the rise and fall of nearby streams. Perched water can also occur occasionally. Because of the possibility of uplift on the pool due to buoyancy, AAI suggests anchoring the pool in some manner. The type anchoring system may depend upon the type pool installed (pre-fabricated or cast in-place liner system.) The anchoring system should be professionally designed and be able to resist uplift forces with water rising to the ground surface. The uplift pressure will be 62.4 PSF per foot of depth of pool. Additionally a standpipe can be installed to both monitor and to allow any perched water to be pumped out to relieve uplift pressures on the pool when emptying for cleaning.

PAVEMENT INFORMATION

The design of pavement sections for this site is based upon subsurface conditions inferred by the test borings and our experience with facilities of a similar nature. Density controlled select fill will have California Bearing Ratio (CBR) value in the order of ten (10) or a Modulus of Subgrade Reaction (k_s) value in the order of 200 PSI per inch. Use of a nominal thickness of aggregate base material over the compacted fill will increase k_s values by about thirty (30) percent.

Rigid Pavement. Based on the limited space and configuration of the proposed paved areas we recommend Portland Cement Concrete Pavement be given first consideration for this site. Concrete pavement sections for this site are shown below. Minimum flexural strength of the concrete should be 600 pounds per square inch (PSI) or have compressive strength of 3,500 PSI. Ardaman recommends joint spacing not exceeding twelve (12) feet for un-reinforced pavement of the thicknesses outlined below.

Auto Parking Section

5.0 Inches Portland Cement Concrete
over
4.0 Inches Crushed Aggregate Base Material
over
12.0 Inches Density Controlled Select Fill

Drive Section

6.0 Inches Portland Cement Concrete
over
4.0 Inches Crushed Aggregate Base Material
over
12.0 Inches Density Controlled Select Fill

Dumpster Pad

8.0 Inches Portland Cement Concrete
over
6.0 Inches Crushed Aggregate Base Material
over
12.0 Inches Density Controlled Select Fill

Flexible Pavement – Flexible paving sections structurally equivalent to the above rigid sections are provided for your cost comparison. Hot mixed asphaltic concrete (HMAC) mixtures should meet applicable requirements for materials, production, placement and acceptance as outlined in the *Louisiana Standard Specifications for Roads and Bridges, 2000 Edition*, Section 501 for Marshall mixtures or *LSSRB, 2006,* Section 502 for Superpave mixtures. For parking lot applications we recommend utilizing the ½ inch Nominal HMAC mix of either type. This mix produces a more aesthetic surface finish and generally holds up well under automobile parking lot use. The following flexible pavement sections are provided for this site:

Auto Parking Section

2.5 Inches HMAC Pavement
over
8.0 Inches Crushed Aggregate Base Material on Geotechnical Fabric
over
12.0 Inches Density Controlled Select Fill

or

2.5 Inches HMAC Pavement
over
8.0 Inches Soil Cement Base Material
over
12.0 Inches Density Controlled Select Fill

Drive Section

3.5 Inches HMAC Pavement
over
10.0 Inches Crushed Aggregate Base Material on Geotechnical Fabric
over
12.0 Inches Density Controlled Select Fill

or

3.5 Inches HMAC Pavement
over
10.0 Inches Soil Cement Base Material
over
12.0 Inches Density Controlled Select Fill

Specifications for recommended crushed aggregate base materials are included in Appendix "B" of this report. Aggregate base course layers in excess of four (4) inches in thickness should be compacted to not less than 98% of the laboratory maximum as determined by ASTM D698, Method C. Aggregate base layers four (4) inches and less in thickness compacted by several passes of a medium sized drum roller and proof rolled under the observation of the geotechnical engineer.

If a soil/cement base layer is considered, eight (8) percent Type I Portland cement by weight can be used for cost estimating purposes. The actual quantity should be specified by the design engineer. The above quantity should produce unconfined compressive strengths in the order of 300 PSI for the CL and SC soils typical of select fill.

Soil cement base materials develop tension cracks during the curing process and these cracks "reflect" through the overlying asphaltic concrete paving over time. A general rule of thumb for crack propagation is about one (1) vertical inch per year (takes about 2 years to show up through a 2 inch overlay). Although not initially structurally detrimental to the pavement system, the cracks must be periodically sealed to minimize moisture infiltration into the base system. Failure to preform regular maintenance of the cracks can lead to saturated subgrade soils and base failures in the pavement.

Reflective cracking cannot be prevented; however a separation layer can be used to minimize the propagation of reflective cracking. There are commercially available engineered fabrics (underlayment) that claim to reduce crack propagation and a thin layer of crushed aggregate base layer can also be used between the base layer and binder course layers to reduce reflective cracking. Both approaches have pros and cons and the benefit of either must be weighed against installation costs.

CONSTRUCTION CONCERNS

The upper soils at the site are fine-grained materials composed of significant silt and clay fractions. Silty and/or clayey soils are subject to extreme changes in shear strength with varying moisture conditions. If construction is initiated during wetter seasons of the year, it may be very difficult to move equipment about the site. Once these type soils become saturated, compaction operations can be seriously hampered by a tendency of the silt to "pump" and the clay to "shear".

Consequently it is recommended, adequate site drainage be established prior to, during, and following construction operations to prevent water ponding on or adjacent to construction areas. Compaction operations may be expedited by using light compaction equipment and thin lifts of soil. Rolling only as necessary to obtain compaction is advisable because further repetitive loading may cause the subgrade to "pump" or fail. Once soils begin to pump, it is usually necessary to either start the moisture conditioning process over or remove and replace the saturated material. AAI can provide experience soils technicians to monitor the contractor's compaction operations and assist in expediting the site work.

Compaction operations and installation of the foundations should be supervised by a qualified soils technician under the supervision of the Geotechnical Engineer. All foundation excavations should be inspected to verify cleanliness and adequate bearing. Concrete should be placed in foundation excavations as soon as practical after forming and final clean-up have been approved, to avoid prolonged exposure of the bearing stratum and possible disturbance due to standing water, desiccation or other construction operations.

Earthwork performed during wet periods of the climatic cycle may warrant special considerations. The use of hydrated lime or Portland cement stabilization should be considered to provide a working platform. The need for such techniques is dependent upon earthwork scheduling with respect to weather patterns and good site management of drainage during the construction phase.

LIMITATIONS

This study has been prepared in accordance with generally accepted geotechnical engineering principles and practices in this area at this time. We make no other warranty either express or implied.

The conclusions and recommendations submitted in this report are based upon the data obtained from the exploratory borings drilled at the location(s) indicated in Appendix A, the proposed type of construction and our experience in the area. Our findings include interpolation and extrapolation of the subsurface conditions identified at the exploratory boring(s) and variations in the subsurface conditions may not become evident until excavations are performed. If conditions encountered during construction appear to be different from those described in this report, we should be notified at once so that supplemental recommendations can be made if required.

This study has been prepared for the exclusive use by our client for design purposes. We are not responsible for technical interpretations by others of our exploratory information, which has not been described or documented in this report. As the project evolves, we should provide continued consultation and field services during design and construction to review and monitor the implementation of our recommendations, and to verify that the recommendations have been appropriately interpreted. Significant design changes may require additional analysis or modifications of the recommendations presented herein. We recommend on-site observation of excavations and foundation bearing strata by a representative of the geotechnical engineer.

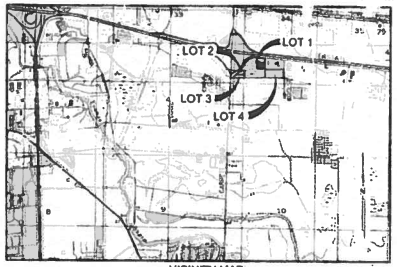
Analysis by: James M. Belt, P.E.

APPENDIX A

LOCATION DIAGRAMS
AND
LOGS OF BORING

SAM'S CLUB I-20 EAST RESUBDIVISION

RESUBDIVISION OF A PORTION OF LOTS 4, 5, 6, 7 & 8 OF H.R. HAYES GARRETT ROAD SUBDIVISION,
LOCATED IN SECTION 3, TOWNSHIP 17 NORTH, RANGE 4 EAST, DISTRICT NORTH OF RED RIVER,
CITY OF MONROE, OUACHITA PARISH, LOUISIANA



VICINITY MAP
NOT TO SCALE

SURVEY REFERENCES

- PLAT "A" INDICATING H.R. HAYES GARRETT ROAD SUBDIVISION, PREPARED BY THOMAS H. [illegible] CIVIL ENGINEER, DATED JULY 7, 1948, RECORDED IN PLAT BOOK 7, PAGE 33, RECORDS OF THE OUACHITA PARISH CLERK OF COURT.
- STATE OF LOUISIANA DEPARTMENT OF HIGHWAYS, RIGHT-OF-WAY ACQUISITION MAPS FOR STATE PROJECT NO. 451-06-03, F.A.P. NO. I-20-3(7)10, TITLED, "MONROE – RAYVILLE INTERSTATE HIGHWAY, ROUTE I-20, OUACHITA PARISH, LA.", DATED AUGUST 10, 1964.
- STATE OF LOUISIANA DEPARTMENT OF HIGHWAYS, RIGHT-OF-WAY ACQUISITION MAPS FOR STATE PROJECT NO. 451-08-03, F.A.P. NO. I-20-3(7)10, TITLED, "MONROE – RAYVILLE INTERSTATE HIGHWAY, ROUTE I-20, OUACHITA PARISH, LA.", DATED JUNE 26, 1967.
- PLAT OF SURVEY BY T.F. ARNOLD, PLS, DATED AUGUST 23, 1976.
- PLAT OF SURVEY BY LAWSON LEE MARSH, PLS, DATED APRIL 1984, FOR SHARPCO, INC.
- PLAT OF SURVEY BY M.A. HUSKA, CIVIL ENGINEER, DATED JANUARY 1970, FOR CHURCH OF GOD.
- PLAT OF SURVEY BY T.A. ROBERTS, JR., PLS, DATED JANUARY 11, 1977, FOR ROBERT CAMPBELL.
- ALTA/ACSM LAND TITLE SURVEY BY PAN AMERICAN ENGINEERS – ALEXANDRIA, LA., PAE JOB NO 7211, PAE DRAWING NO. 10271, DATED FEBRUARY 21, 2006, FOR SUPER SAVER WAREHOUSE CLUB, INC. AND I-20 CORRIDOR PROPERTIES.

BASIS OF BEARINGS:

- BEARINGS INDICATED HEREON ARE BASED ON THE LOUISIANA STATE PLANE COORDINATE SYSTEM, NORTH ZONE, IN DATUM OF 1983 (NAD 83), LA NORTH ZONE, (1701) CONTROLLING MONUMENTS: 370M71 LADH 1973, ID 002733 & 370004 LADH 1973, PID 002732.

FLOOD NOTE:

- THE SURVEYED LOTS ARE LOCATED IN ZONE "X" PER THE FEMA FLOOD INSURANCE RATE MAPS FOR OUACHITA PARISH, LOUISIANA AND INCORPORATED AREAS, COMMUNITY PANEL NO. 220723C0075 E, DATED MARCH 15, 1994.
- ZONE "X" – AREAS OF 500-YEAR FLOOD; AREAS OF 100-YEAR FLOOD WITH AVERAGE DEPTHS OF LESS THAN ONE (1) FOOT OR WITH DRAINAGE AREAS LESS THAN ONE (1) SQUARE MILE, AND AREAS PROTECTED BY LEVEES FROM 100-YEAR FLOOD.

SUBDIVISION / SURVEY NOTES:

- RESEARCH OF THE RECORDS OF OUACHITA PARISH FOR SERVITUDES OR RIGHTS-OF-WAYS WHICH MAY ENCUMBER THE SURVEYED TRACTS OTHER THAN THOSE THAT MAY APPEAR HEREON, WAS NEITHER PERFORMED BY, NOR REQUESTED OF PAN AMERICAN ENGINEERS – ALEXANDRIA, INC.
- ALL LOTS CURRENTLY HAVE DIRECT AND CONTINUOUS ACCESS TO PUBLIC RIGHTS-OF-WAYS (WOOLSEY ROAD & INTERSTATE HIGHWAY 20 FRONTAGE ROAD, AS THE CASE MAY BE); HOWEVER, IT IS ANTICIPATED THAT THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT (LDOTD) WILL NOT ALLOW INGRESS AND EGRESS TO LOTS 2 & 3 FROM INTERSTATE HIGHWAY 20 FRONTAGE ROAD DUE TO THE CLOSE PROXIMITY OF THE PROPOSED I-20 OUTLOT ACCESS DRIVE TO BE CONSTRUCTED OVER A PORTION OF LOT 1 AND LYING ALONG THE NORTH AND EAST BOUNDARIES OF LOT 2 AND ALONG THE EAST BOUNDARY OF LOT 3. CONSEQUENTLY, FUTURE OWNERS OF LOTS 2 & 3 WOULD NEED TO OBTAIN AN ACCESS SERVITUDE ALONG THIS PROPOSED OUTLOT ACCESS DRIVE FROM THE OWNER OF LOT 1 TO ALLOW FOR INGRESS AND EGRESS TO INTERSTATE HIGHWAY 20 FRONTAGE ROAD.
- ALL LOTS CREATED AS A RESULT OF THIS SUBDIVISION WILL BE FOR COMMERCIAL USE ONLY.
- THE LOTS CREATED HEREON ARE LOCATED WITHIN THE CORPORATE LIMITS OF THE CITY OF MONROE, OUACHITA PARISH, LOUISIANA AND HAVE A ZONING DESIGNATION OF B-3, GENERAL BUSINESS.
- ACCORDING TO THE CITY OF MONROE CODE OF ORDINANCES, NEW CONSTRUCTION BUILDING SETBACK REQUIREMENTS FOR THE PROPOSED LOTS ARE AS FOLLOWS: FRONT YARD = THIRTY-FIVE (35) FEET, SIDE YARD = NO MINIMUM REQUIREMENT, SIDE CORNER YARD = TWENTY (20) FEET, REAR YARD = TEN (10) FEET. IT IS RECOMMENDED THAT THE INDIVIDUAL LOT SETBACK REQUIREMENTS BE VERIFIED WITH THE CITY OF MONROE DEPARTMENT OF PLANNING AND ZONING PRIOR TO CONSTRUCTION OF ANY BUILDINGS ON THE PROPOSED LOTS.
- ACCORDING TO THE CITY OF MONROE CODE OF ORDINANCES, UNLESS OTHERWISE PROVIDED, NO STRUCTURE WITHIN A B-3, GENERAL BUSINESS DISTRICT, SHALL BE ERECTED OR ALTERED TO EXCEED THIRTY-FIVE (35) FEET IN HEIGHT.
- ACCORDING TO THE CITY OF MONROE CODE OF ORDINANCES, THERE IS NO MINIMUM BUILDING SITE AREA REQUIRED IN B-3 GENERAL BUSINESS DISTRICTS.
- SECTION 18-166 OF THE CITY OF MONROE CODE OF ORDINANCES, FOR OFF-STREET PARKING AND LOADING REQUIREMENTS.
- THE CITY OF MONROE CODE OF ORDINANCES CAN BE VIEWED ONLINE AT WWW.AMLEGAL.COM.
- THE TOTAL COMBINED ACREAGE OF LOTS 1 THROUGH 4 = 29.230± ACRES, 1,273,230± SQUARE FEET.
- THERE ARE NO IMPROVEMENTS ON LOT 1 ARE NOT SHOWN HEREON; LOT 1 IS THE CURRENT LOCATION OF SAM'S WAREHOUSE CLUB.
- LOTS 2, 3 & 4 ARE CURRENTLY UNDEVELOPED WITH NO IMPROVEMENTS.
- THIS SUBDIVISION IS A RESUBDIVISION OF LOTS 4, 5, 6, 7, 8 & 9 OF H.R. HAYES GARRETT SUBDIVISION RECORDED IN PLAT BOOK 7, PAGE 33, OFFICIAL RECORDS OF THE OUACHITA PARISH CLERK OF COURT.

CERTIFICATION OF RECORD OWNER / SUBDIVIDER:

THE UNDERSIGNED DULY AUTHORIZED REPRESENTATIVE DECLARES THAT SAM'S REAL ESTATE BUSINESS TRUST IS THE RECORD OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND HEREBY APPROVES THE PLATTING AND FILING OF THIS SUBDIVISION.

BY: _____
CHRIS CALLAWAY
REGIONAL VICE PRESIDENT

BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, PERSONALLY CAME AND APPEARED SAM'S REAL ESTATE BUSINESS TRUST, MAILING ADDRESS: 201 S.E. 10th STREET, BENTONVILLE, ARKANSAS 72716, THROUGH ITS DULY AUTHORIZED REPRESENTATIVE, SWORN AND SUBSCRIBED BEFORE ME THIS ___ DAY OF _____, 2009.

BY: _____
NOTARY PUBLIC
Commission # 99447177
Benton, Arkansas

APPROVAL OF SUBDIVISION:

BY: _____ 9/2/09
DANIEL MORELOCK, P.E.
CITY ENGINEER

BY: _____
MONROE PLANNING COMMISSION

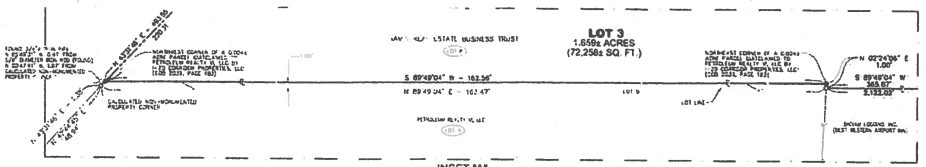
SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, BELIEF, THAT THIS PLAT IS A PRELIMINARY AN ACTUAL GROUND SURVEY PERFORMED UNDER MY DIRECTION AND SUPERVISION AND IT ADHERES TO THE REQUIREMENTS FOR THE MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS AS FOUND IN THE LOUISIANA ADMINISTRATIVE CODE FOR CLASS "B" SURVEYS AND THE REQUIREMENTS OF LOUISIANA R.S. 33:5051 ET SEQ. AND CONFORMS TO ALL ORDINANCES GOVERNING THE SUBDIVISION OF LAND.

STATE OF LOUISIANA
THOMAS C. DAVID, JR.
RED NO 4539
REGISTERED PROFESSIONAL LAND SURVEYOR

THOMAS C. DAVID, JR.
REGISTERED PROFESSIONAL LAND SURVEYOR, REGISTRATION NO 4539

7.8.09
DATE



INSET "A"
SCALE: 1" = 10'

CURVE TABLE					
NUMBER	CHORD DIRECTION	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH
C1	N 42°07'49" E	18.70'	672.82'	37.40'	37.40'
C2	N 37°09'37" E	78.10'	672.82'	151.55'	151.20'
C3	N 38°10'56" E	113.35'	533.82'	224.01'	222.68'
C4	N 72°20'43" E	256.43'	583.82'	484.13'	470.83'

- GEOGRAPHIC COORDINATES SHOWN HEREON ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
- STATE PLANE COORDINATES REFERENCED TO THE LOUISIANA STATE PLANE COORDINATE SYSTEM, NORTH ZONE (1701), NORTH AMERICAN DATUM OF 1983 (NAD 83 US FEET).

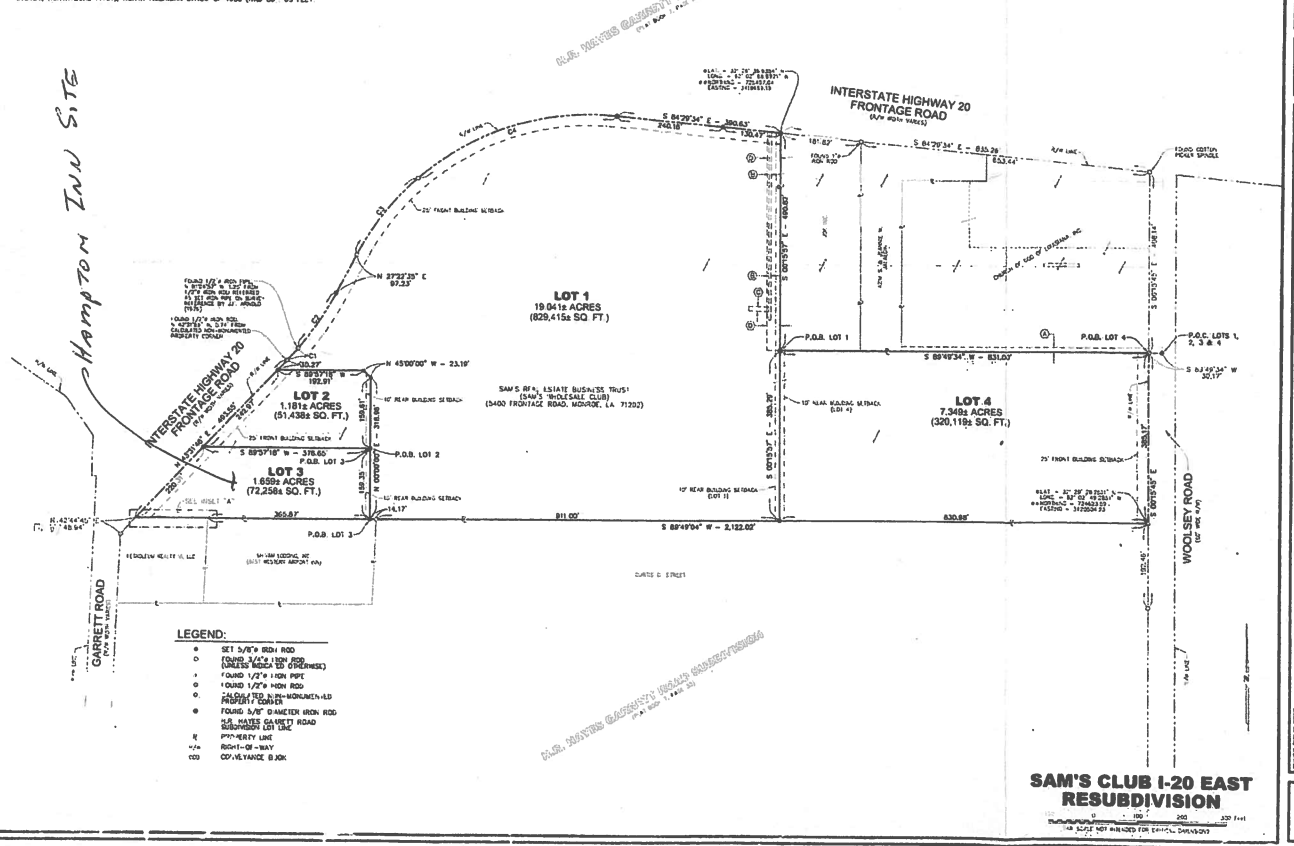
(A) 10' WIDE SERVITUDE GRANTED BY C.E. WOOLSEY, ET UX TO R.C. MOORE, ET AL, DATED JANUARY 25, 1974, RECORDED IN COB 1013, FOLIO 875, INSTRUMENT NO. 652594, RECORDS OF THE OUACHITA PARISH CLERK OF COURT.

(B) 5' WIDE RIGHT-OF-WAY PERMIT GRANTED BY SUPER SAVER WAREHOUSE CLUB, INC TO LOUISIANA POWER & LIGHT COMPANY, DATED JUNE 7, 1988, RECORDED IN COB 1446, FOLIO 877, INSTRUMENT NO. 992459, RECORDS OF THE OUACHITA PARISH CLERK OF COURT. INCLUDES PROVISION IN DOCUMENT ALLOWING ATTACHMENT OF WIRES FROM ANY OTHER PERSON OR COMPANY TO POLES.

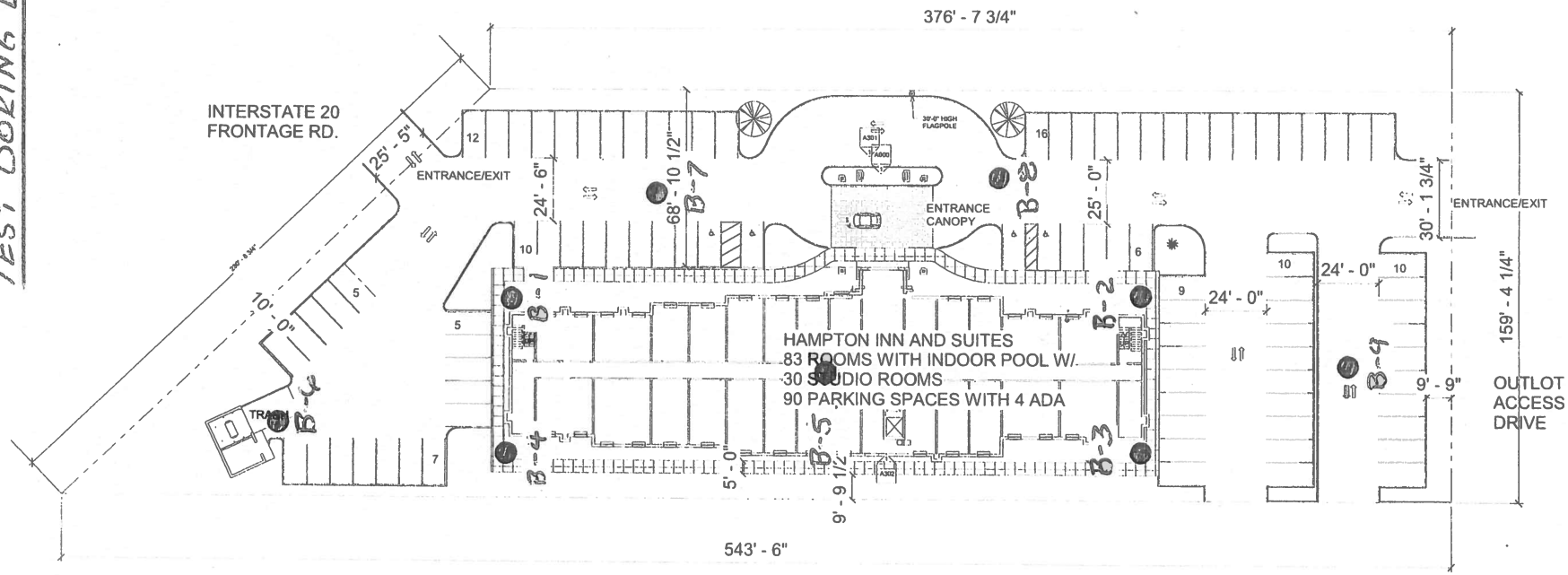
(F) 10' WIDE RIGHT-OF-WAY PERMIT GRANTED BY SUPER SAVER WAREHOUSE CLUB, INC. TO LOUISIANA POWER & LIGHT COMPANY, DATED JUNE 7, 1988, RECORDED IN COB 1446, FOLIO 879, INSTRUMENTNO. 992460, RECORDS OF THE OUACHITA PARISH CLERK OF COURT.

(G) 30' WIDE STORM WATER DRAINAGE EASEMENT GRANTED BY SAM'S REAL ESTATE BUSINESS TRUST TO THE OUACHITA PARISH POLICE JURY, DATED SEPTEMBER 14, 2001, RECORDED IN COB 1844, FOLIO 129, INSTRUMENT NO. 1327442, RECORDS OF THE OUACHITA PARISH CLERK OF COURT.

NOTE:
EXCEPT AS ALREADY PROVIDED BY THE SERVITUDE DOCUMENTS, THE FORGOING SERVITUDES, REFERENCE TO WHICH ARE FOR ILLUSTRATION PURPOSES ONLY, ARE NOT INTENDED TO CONFIRM, RATIFY OR REIMPOSE ANY RIGHTS, INTERRUPT OR SUSPEND PRESCRIPTION, OR GRANT ANY RIGHTS IN FAVOR OF THE PUBLIC.


H.R. HAYES GARRETT ROAD SUBDIVISION
Plat Book 7, Page 33
INTERSTATE HIGHWAY 20
FRONTAGE ROAD
(R/W WIDTH VARIES)
S 84°29'34" E – 390.63'
240.18'
S 84°29'34" E – 835.29'
Hampton Inn Site
LOT 1
19.041± ACRES
(829,415± SQ. FT.)
P.O.B. LOT 1
P.O.B. LOT 4
P.O.C. LOTS 1, 2, 3 & 4
S 89°49'34" W – 831.07'
S 84°29'34" W
30.17'
LOT 2
1.181± ACRES
(51,438± SQ. FT.)
N 45°00'00" W – 23.19'
S 89°57'18" W – 378.65'
P.O.B. LOT 2
LOT 3
1.659± ACRES
(72,258± SQ. FT.)
P.O.B. LOT 3
LOT 4
7.349± ACRES
(320,119± SQ. FT.)
SAM'S REAL ESTATE BUSINESS TRUST
(SAM'S WHOLESALE CLUB)
(3400 FRONTAGE ROAD, MONROE, LA 71202)
S 89°49'04" W – 2,122.02'
830.86'
WOOLSEY ROAD
(50' R/W WIDTH)
GARRETT ROAD
(R/W WIDTH VARIES)
CURTIS D. STREET
SEE INSET "A"
365.87'
N 27°22'29" E
97.23'
N 42°43'45" W
49.84'
25' FRONT BUILDING SETBACK
10' REAR BUILDING SETBACK
10' SIDE BUILDING SETBACK
10' REAR BUILDING SETBACK (LOT 4)
10' SIDE BUILDING SETBACK (LOT 4)
25' FRONT BUILDING SETBACK
10' REAR BUILDING SETBACK (LOT 1)
10' SIDE BUILDING SETBACK (LOT 1)
FERGUSON REALTY VI, LLC
SHOW LODGING INC
(WEST MONROE AIRPORT HWY)
FOUND 1/2" IRON ROD
N 42°43'45" W, 0.71' FROM CALCULATED NON-MONUMENTED PROPERTY CORNER
FOUND 1/2" IRON ROD
N 42°43'45" W, 0.71' FROM CALCULATED NON-MONUMENTED PROPERTY CORNER
FOUND 1/2" IRON ROD
S 42°43'45" E, 0.71' FROM CALCULATED NON-MONUMENTED PROPERTY CORNER
FOUND 1/2" IRON ROD
S 42°43'45" E, 0.71' FROM CALCULATED NON-MONUMENTED PROPERTY CORNER
FOUND 1/2" IRON ROD
N 42°43'45" W

TEST BORING LOCATIONS



① Site
1" = 20'-0"

MISHRA
ARCHITECTURE PLLC
522 Shalom Way Flowood, MS 39232
Ph. (601) 272-4645 Fax. (601) 992-7898
EMAIL: ashish@mishrarch.com
WEB www.mishrarch.com

CIVIL
J M Garrett & Son, LLC
1109 South Hull Street
Montgomery, Alabama 36104
Phone (334) 264-2247
Fax (334) 264-2278
Email richbdd@bellsouth.net

STRUCTURAL
S. K. International, Inc.
130 Main Street
Huntsville, AL 35811
Phone. (256) 852-3088
Fax. (256) 851-0088
Email: skint97@aol.com

ELECTRICAL
William Council Tuberville
1880 Transport
Memphis, TN 38116
Phone. (901)926-8050

MECHANICAL
Thompson Engineers, Inc.
97 Tillman Street
Memphis, TN 38111
Phone: (901) 452-2500
Fax:(901) 452-2530
Email: jerry@thompsonengineers.com

REVISIONS

No.	Date	Description

KEY PLAN

Southern Hospitality Services

Hampton Inn and Suites

5400 I-20 & Frontage Rd.
Monroe, LA 71201

Drawing Title
Site Plan

Phase
Preliminary

Project No	11-XXX	Sheet No	A002
Prepared by	Author		
Checked by	Checker		
Date	August 26, 2011		

Hampton Inn and Suites

9/6/2011 11:42:02 AM

LOG OF BORING NO. B-1

PROJECT: Hampton Inn

SHEET 1 of 1

CLIENT: Southern Hospitality Services LLC

LOCATION: Monroe, Louisiana

DATE: 2/23/12

SURFACE ELEV:

DRILLING METHOD(S): Auger

GROUNDWATER INFORMATION: Water encountered at eleven (11) feet depth

FIELD DATA				LABORATORY DATA									
SOIL & ROCK SYMBOL	DEPTH (FT)	SAMPLE TYPE	N: SPT, BLOWS/FT T: THD, BLOWS/FT P: HAND PEN, TSF	MOISTURE CONTENT, %	DRY DENSITY POUNDS/CU.FT	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	MINUS NO. 200 SIEVE, %	COMPRESSIVE STRENGTH, KSF	FAILURE STRAIN (%)	CONFINING PRESSURE PSI	DESCRIPTION OF STRATUM
			N = 2	12		25	12	13	57				Very soft reddish brown silty sandy clay (Fill material) 2.0
	5		N = 9 N = 10	10 13		27	14	13	55				Medium brownish gray silty sandy clay 6.0
	10		N = 10 N = 7	19 23					87				Medium brown very silty clay with trace sand
	15		N = 2	25					91				--Very soft, wet 18.0
	20		N = 6	29		34	17	17					Medium brown and gray silty clay 20.0
	25												Bottom of boring at 20 feet

TUBE SAMPLE | AUGER SAMPLE | SPLIT-SPOON | ROCK CORE | THD CONE PEN. | NO RECOVERY

REMARKS:

LOG OF BORING NO. B-2

PROJECT: Hampton Inn

SHEET 1 of 1

CLIENT: Southern Hospitality Services LLC

LOCATION: Monroe, Louisiana

DATE: 2/23/12

SURFACE ELEV:

DRILLING METHOD(S): Auger

GROUNDWATER INFORMATION: Water encountered at eleven (11) feet depth

FIELD DATA				LABORATORY DATA									
SOIL & ROCK SYMBOL	DEPTH (FT)	SAMPLE TYPE	N: SPT, BLOWS/FT T: THD, BLOWS/FT P: HAND PEN, TSF	MOISTURE CONTENT, %	DRY DENSITY POUNDS/CU.FT	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	MINUS NO. 200 SIEVE, %	COMPRESSIVE STRENGTH, KSF	FAILURE STRAIN (%)	CONFINING PRESSURE PSI	DESCRIPTION OF STRATUM
			N=3	21		34	13	21	68				Soft reddish brown silty sandy clay (fill material) 2.0
	5		N=11	12		33	12	21	73				Medium grayish brown silty sandy clay
			N=4	15		29	13	16	68				--Soft 6.0
	10		N=10	27									Medium brown silty clay with trace sand
			N=4	24		57	31	26					--Soft 13.0
	15		N=1	28									Very soft grayish brown ery silty clay with trace sand
			N=5	29									20.0
	20												Bottom of boring at 20 feet
	25												

TUBE SAMPLE | AUGER SAMPLE | SPLIT-SPOON | ROCK CORE | THD CONE PEN. | NO RECOVERY

REMARKS:

LOG OF BORING NO. B-3

PROJECT: Hampton Inn

SHEET 1 of 1

CLIENT: Southern Hospitality Services LLC

LOCATION: Monroe, Louisiana

DATE: 2/25/12

SURFACE ELEV:

DRILLING METHOD(S): Auger

GROUNDWATER INFORMATION: Water encountered at eleven (11) feet depth

FIELD DATA				LABORATORY DATA									
SOIL & ROCK SYMBOL	DEPTH (FT)	SAMPLE TYPE	N: SPT, BLOWS/FT T: THD, BLOWS/FT P: HAND PEN, TSF	MOISTURE CONTENT, %	DRY DENSITY POUNDS/CU.FT	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	MINUS NO. 200 SIEVE, %	COMPRESSIVE STRENGTH, KSF	FAILURE STRAIN (%)	CONFINING PRESSURE PSI	DESCRIPTION OF STRATUM
			N=4	16		28	13	15	65				Soft grayish brown silty sandy clay
			N=9	12									--Medium
	5		N=9	23		39	17	22					
			N=12	19									8.0
			N=7	22		27	20	7	73				Medium brown very silty clay with sand
	10												
			N=3	29					97				--Soft with less sand
	15												
			N=4	32									--Soft
	20												20.0
													Bottom of boring at 20 feet
	25												

TUBE SAMPLE | AUGER SAMPLE | SPLIT-SPOON | ROCK CORE | THD CONE PEN. | NO RECOVERY

REMARKS:

LOG OF BORING NO. B-4

PROJECT: Hampton Inn

SHEET 1 of 1

CLIENT: Southern Hospitality Services LLC

LOCATION: Monroe, Louisiana

DATE: 2/23/12

SURFACE ELEV:

DRILLING METHOD(S): Auger

GROUNDWATER INFORMATION: Water encountered at eleven (11) feet depth

FIELD DATA				LABORATORY DATA									
SOIL & ROCK SYMBOL	DEPTH (FT)	SAMPLE TYPE	N: SPT, BLOWS/FT T: THD, BLOWS/FT P: HAND PEN, TSF	MOISTURE CONTENT, %	DRY DENSITY POUNDS/CU.FT	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	MINUS NO. 200 SIEVE, %	COMPRESSIVE STRENGTH, KSF	FAILURE STRAIN (%)	CONFINING PRESSURE PSI	DESCRIPTION OF STRATUM
			N = 3	14		28	12	16	60				Soft grayish brown silty sandy clay
			N = 3	16									
	5		N = 9	20		39	19	20	90				--Medium with less sand
			N = 11	19									8.0
	10		N = 7	21		25	19	6	92				Medium brown very silty clay with trace sand
			N = 1	30									--Very soft
	15												
			N = 5	29		23	19	4					--Soft
	20												20.0
													Bottom of boring at 20 feet
	25												

TUBE SAMPLE | AUGER SAMPLE | SPLIT-SPOON | ROCK CORE | THD CONE PEN. | NO RECOVERY

REMARKS:

LOG OF BORING NO. B-5

PROJECT: Hampton Inn

SHEET 1 of 1

CLIENT: Southern Hospitality Services LLC

LOCATION: Monroe, Louisiana

DATE: 2/23/12

SURFACE ELEV:

DRILLING METHOD(S): Auger

GROUNDWATER INFORMATION: Water encountered at eleven (11) feet depth

FIELD DATA				LABORATORY DATA										
SOIL & ROCK SYMBOL	DEPTH (FT)	SAMPLE TYPE	N: SPT, BLOWS/FT T: THD, BLOWS/FT P: HAND PEN, TSF	MOISTURE CONTENT, %	DRY DENSITY POUNDS/CU.FT	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	MINUS NO. 200 SIEVE, %	COMPRESSIVE STRENGTH, KSF	FAILURE STRAIN (%)	CONFINING PRESSURE PSI	DESCRIPTION OF STRATUM	
			N = 2	13		25	15	10	60				Very soft reddish silty sandy clay (fill material)	2.0
	5		N = 4	14		27	11	16	57				Soft grayish brown silty sandy clay	
			N = 7	17									--Medium with less sand	6.0
	10		N = 9	20		24	19	5	81				Medium grayish brown very silty clay with sand	
			N = 5	22									--Soft with less sand	
	15		N = 1	32									--Very soft, wet	
			N = 3	32									--Soft	20.0
	20												Bottom of boring at 20 feet	
	25													

TUBE SAMPLE | AUGER SAMPLE | SPLIT-SPOON | ROCK CORE | THD CONE PEN. | NO RECOVERY

REMARKS:

LOG OF BORING NO. B-6

PROJECT: Hampton Inn

SHEET 1 of 1

CLIENT: Southern Hospitality Services LLC

LOCATION: Monroe, Louisiana

DATE: 2/23/12

SURFACE ELEV:

DRILLING METHOD(S): Auger

GROUNDWATER INFORMATION: No water encountered

FIELD DATA				LABORATORY DATA									
SOIL & ROCK SYMBOL	DEPTH (FT)	SAMPLE TYPE	N: SPT, BLOWS/FT T: THD, BLOWS/FT P: HAND PEN, TSF	MOISTURE CONTENT, %	DRY DENSITY POUNDS/CU.FT	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	MINUS NO. 200 SIEVE, %	COMPRESSIVE STRENGTH, KSF	FAILURE STRAIN (%)	CONFINING PRESSURE PSI	DESCRIPTION OF STRATUM
			N = 1	21		27	16	11	72				Very soft grayish brown silty sandy clay
			N = 5	21									--Soft
													4.0
	5		N = 7	19									Medium brown silty clay with sand
													6.0
													Bottom of boring at 6 feet
	10												

REMARKS:

TUBE SAMPLE | AUGER SAMPLE | SPLIT-SPOON | ROCK CORE | THD CONE PEN. | NO RECOVERY

LOG OF BORING NO. B-7

PROJECT: Hampton Inn

SHEET 1 of 1

CLIENT: Southern Hospitality Services LLC

LOCATION: Monroe, Louisiana

DATE: 2/23/12

SURFACE ELEV:

DRILLING METHOD(S): Auger

GROUNDWATER INFORMATION: No water encountered

FIELD DATA				LABORATORY DATA									
SOIL & ROCK SYMBOL	DEPTH (FT)	SAMPLE TYPE	N: SPT, BLOWS/FT T: THD, BLOWS/FT P: HAND PEN, TSF	MOISTURE CONTENT, %	DRY DENSITY POUNDS/CU.FT	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	MINUS NO. 200 SIEVE, %	COMPRESSIVE STRENGTH, KSF	FAILURE STRAIN (%)	CONFINING PRESSURE PSI	DESCRIPTION OF STRATUM
			N = 1	17		25	12	13					Very soft reddish brown silty sandy clay (fill material)
													2.0
			N = 11	11									Medium grayish brown silty sandy clay
	5		N = 10	18									
													6.0
													Bottom of boring at 6 feet
	10												

TUBE SAMPLE | AUGER SAMPLE | SPLIT-SPOON | ROCK CORE | THD CONE PEN. | NO RECOVERY

REMARKS:

LOG OF BORING NO. B-8

PROJECT: Hampton Inn

SHEET 1 of 1

CLIENT: Southern Hospitality Services LLC

LOCATION: Monroe, Louisiana

DATE: 2/23/12

SURFACE ELEV:

DRILLING METHOD(S): Auger

GROUNDWATER INFORMATION: No water encountered

FIELD DATA				LABORATORY DATA									
SOIL & ROCK SYMBOL	DEPTH (FT)	SAMPLE TYPE	N: SPT, BLOWS/FT T: THD, BLOWS/FT P: HAND PEN, TSF	MOISTURE CONTENT, %	DRY DENSITY POUNDS/CU.FT	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	MINUS NO. 200 SIEVE, %	COMPRESSIVE STRENGTH, KSF	FAILURE STRAIN (%)	CONFINING PRESSURE PSI	DESCRIPTION OF STRATUM
			N = 1	20		25	14	11	65				Very soft reddish brown silty sandy clay (fill material)
													2.0
			N = 9	13									Medium grayish brown silty sandy clay
	5		N = 7	17									
													6.0
													Bottom of boring at 6 feet
	10												

TUBE SAMPLE | AUGER SAMPLE | SPLIT-SPOON | ROCK CORE | THD CONE PEN. | NO RECOVERY

REMARKS:

LOG OF BORING NO. B-9

PROJECT: Hampton Inn

SHEET 1 of 1

CLIENT: Southern Hospitality Services LLC

LOCATION: Monroe, Louisiana

DATE: 2/23/12

SURFACE ELEV:

DRILLING METHOD(S): Auger

GROUNDWATER INFORMATION: No water encountered

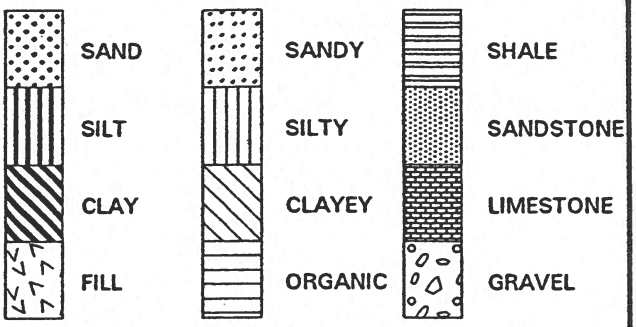
FIELD DATA				LABORATORY DATA									
SOIL & ROCK SYMBOL	DEPTH (FT)	SAMPLE TYPE	N: SPT, BLOWS/FT T: THD, BLOWS/FT P: HAND PEN, TSF	MOISTURE CONTENT, %	DRY DENSITY POUNDS/CU.FT	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	MINUS NO. 200 SIEVE, %	COMPRESSIVE STRENGTH, KSF	FAILURE STRAIN (%)	CONFINING PRESSURE PSI	DESCRIPTION OF STRATUM
			N=12	15		30	13	17	66				Medium reddish brown silty sandy clay (fill material) 2.0
	5		N=9	11									Medium grayish brown silty sandy clay
			N=10	17									6.0
													Bottom of boring at 6 feet
	10												

TUBE SAMPLE | AUGER SAMPLE | SPLIT-SPOON | ROCK CORE | THD CONE PEN. | NO RECOVERY

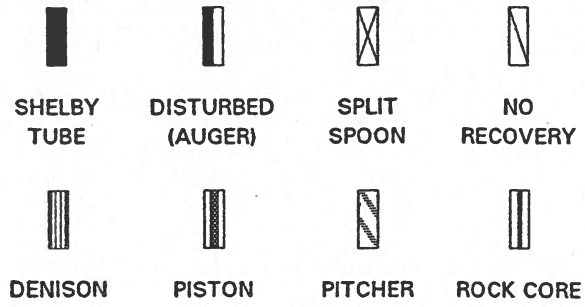
REMARKS:

KEY TO SOIL CLASSIFICATION TERMS AND SYMBOLS

SOIL OR ROCK TYPES



SAMPLER TYPES



CONSISTENCY OF COHESIVE SOILS (MAJOR PORTION PASSING NO. 200 SIEVE)

DESCRIPTIVE TERM	UNDRAINED SHEAR STRENGTH, TONS/SQ FT
VERY SOFT	LESS THAN 0.25
SOFT	0.25 TO 0.5
FIRM	0.5 TO 1.0
STIFF	1.0 TO 2.0
VERY STIFF	2.0 TO 4.0
HARD	GREATER THAN 4.0

RELATIVE DENSITY OF GRANULAR SOILS (MAJOR PORTION RETAINED ON NO. 200 SIEVE)

DESCRIPTIVE TERM	RELATIVE DENSITY, %
VERY LOOSE	LESS THAN 15
LOOSE	15 TO 35
MEDIUM DENSE	35 TO 65
DENSE	65 TO 85
VERY DENSE	GREATER THAN 85

WATER LEVELS

▼ - DEPTH GROUNDWATER FIRST ENCOUNTERED DURING DRILLING

▽ - GROUNDWATER LEVEL AFTER 24 HOURS (UNLESS OTHERWISE NOTED)

TERMS DESCRIBING SOIL STRUCTURE

Parting: paper thin in thickness

Seam: 1/8" - 3" in thickness

Layer: greater than 3" in thickness

Calcareous: containing appreciable quanties of calcium carbonate

Ferrous: containing appreciable quantities of iron

Well-graded: having wide range in grain size & similar proportions of all intermediate sizes

Poorly graded: predominately one grain size or having a range of sizes with few or no particles of some intermediate sizes

Fissured: containing shrinkage cracks, frequently filled with fine sand or silt, usually more or less vertical

Interbedded: composed of alternate layers of different soil types

Laminated: composed of thin layers of varying color and texture

Slickensided: having inclined planes of weakness that are slick & glossy in appearance

NOTE: Clays possessing slickensided or fissured structure may exhibit lower measured shear strength than indicated by the described consistency. The consistency of such soil is interpreted using the measured shear strength along with pocket penetrometer results.

APPENDIX B

MATERIAL SPECIFICATIONS

B.1 SPECIFICATIONS FOR COMPACTION

Sandy Clay and Clayey Sand Soils

The thickness of lifts used should be no more than the height of the teeth on sheepsfoot rollers. Generally, for a forty-eight (48) inch diameter or smaller drum roller, the maximum compacted lift thickness acceptable is six (6) inches. For rollers with drums of sixty (60) inches in diameter and larger with teeth about nine (9) inches long, a nine (9) inch final compacted lift thickness will be acceptable. The sole determination of the thickness of a lift will be the capability of the contractor's equipment to obtain the required compaction.

When obtaining the average density of a lift to determine its conformance to specifications, the lift should be immediately rejected if any density is more than 2% below the required average.

Generally, sheepsfoot rollers are most suitable for compaction of sandy clay and clayey sand soils, the contractor may use spiketooth rollers, rubber tired rollers, or any fill compaction equipment that has sufficient mass to compact the soil. Generally, the drums of sheepsfoot rollers should be filled with water or for additional weight with both water and sand. Tractors or other vehicles used primarily for hauling WILL NOT be allowed as fill compaction equipment. The contractor should also have smooth wheel rollers to seal the working area at the end of the day's operations so overnight rains will not saturate the soil and delay his work. These rollers should also be used to seal the surface whenever rainfall is imminent.

The soil engineer or his representative will perform density tests and will accept or reject a lift within two (2) hours after being tested. No material will be placed on any lift that has not been accepted by the engineer.

B.2 COARSE AGGREGATE SPECIFICATIONS

Crushed Stone
Crushed Concrete

Crushed stone base course shall be composed of crusher-run broken stone. The material shall be crushed and consist of durable particles of stone mixed with approved soil binder material.

Gradation

The base material shall meet the following requirements:

Pass #1-1/2"	100%
Pass #1"	90-100%
Pass #3/4"	70-100%
Pass #4	35-65%
Pass #40	12-32%
Pass #200	5-12%

Soil Binder

Material passing the No. 40 sieve shall be known as "soil binder" and shall meet the following requirements:

Plasticity Index < 15

Compaction

Compaction shall be obtained by a minimum of 12 passes of a 5,000 pound sheepsfoot roller 3 to 4 feet wide. Surface shall be finished rolled by sufficient passes of a steel wheel roller to provide a smooth surface for application of the surface course.

Note

Extra binder material may be added with the approval of the geotechnical or design engineer.

Soundness and Los Angeles abrasion tests should meet Louisiana Department of Transportation Specifications.

B.3 GEOTEXTILE FABRIC SPECIFICATIONS

The following proven woven Geotextile Fabrics are approved:

1. Amoco Pro Pex 2006
2. Beltech Style 980
3. ConTech C300
4. Mirafi 600X
5. Hanes (Terra Tex) HD

If alternate geotextile fabric from above is requested, the following qualifications should be met:

SPECIFICATIONS

Property	Test Method	Minimum Requirements
Fabric Structure	-	Woven
Polymer Composition	-	Polypropylene
Fabric Width	-	12½', 15', 17½'
Weight	ASTM D-3776C	5 oz. /yd.
Grab Strength	ASTM D-4632	300 x 300 lbs.
Elongation	ASTM D-4632	20%
Trap Tear Strength	ASTM D-4533	115 lbs. x 115 lbs.
Burst Strength	ASTM D-3786	575 psi.
Puncture	ASTM D-4833	120 lbs.
UV Resistance	ASTM D-4355	> 70%
A.O.S.	ASTM D-4751	35

NOTE:

1. Requires Mill Certification from manufacturer.
2. Minimum requirements are not minimum average values. Minimum average values per roll are not an acceptable specification.