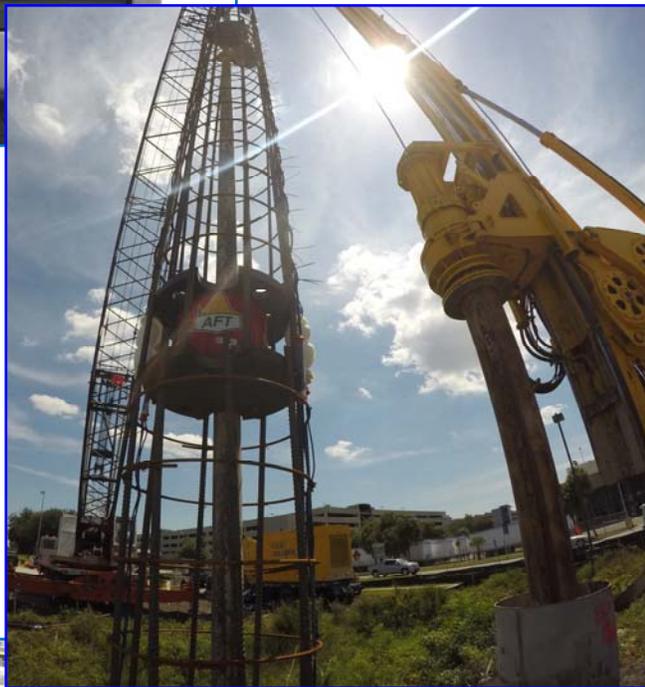


APPLIED FOUNDATION TESTING

SPECIALTY GEOTECHNICAL SERVICES

AFT-Cell Bi-Directional Load Test Statement of Qualifications



Services:

- AFT-Cell Bi-Directional
- STATNOMIC TESTING
- DYNAMIC TESTING
 - PDA
 - EDC
 - APPLE
- STATIC TESTING
- INSTRUMENTATION
- DATA ACQUISITION
- NON-DESTRUCTIVE INTEGRITY TESTING
 - CSL
 - Thermal
 - Gamma-Gamma
 - Pulse Echo
- MINI-SID
- SONIC CALIPER
- BASE GROUTED DRILLED SHAFTS
 - Design
 - Fabrication
 - Grouting
 - Consulting
- NOISE & VIBRATION MONITORING
- SOIL/ROCK ANCHOR
 - Design
 - Stressing & Testing
- EXPERT SPECIALTY GEOTECHNICAL CONSULTING
- VALUE ENGINEERING
- DESIGN/BUILD

APPLIED FOUNDATION TESTING



AFT-Cell Bi-Directional Load Testing Statement of Qualifications

Our load testing experience runs deep at Applied Foundation Testing (AFT). We are now in our 22nd year of business providing load testing services. This experience stems from being the world leader in STATNAMIC load testing, having performed thousands of tests since our inception. From the beginning we have also performed countless top-down static load tests and several true bi-directional load tests. Add to that our extensive drilled shaft base grouting experience which has many cross-over features and similarities to bi-directional load testing. After all, base grouting is a simple form of bi-directional loading in itself.

Early on in our company history we recognized the importance of controlling the quality and schedule of the embedded strain and displacement sensors used in our load testing. That gave birth to our in-house instrumentation manufacturing laboratory facility over 20 years ago. Through the thousands of manufactured instruments and tests over the years we have honed the art and science of embedded instrumentation.

Our development did not stop there. AFT's capabilities include NI certified LabVIEW development for our own data acquisition systems and data analysis software as well as for our clients' applications. We perform analysis of bi-directional test data consistent with industry accepted practice, as many design codes have been calibrated to this standard of practice.

AFT-Cell bi-directional loading testing is a natural fit to our service line. The AFT-Cell is brought to you after many years of our own research and development and is constantly undergoing continued improvement. Our design centers around high precision machining and high pressure seal design. AFT-Cells are proudly **made in the USA**.

Through extensive in-house testing with our 5,000 ton calibration frame and NIST-traceable calibration processes, we have demonstrated internal pressures up to 15,000 psi could be attained with repeatability and linearity. For this reason, our AFT-Cells are just as reliable above ground as below ground. They are powerful and pack a serious punch. And did you know, AFT has the largest calibration frame in North America and possibly the world.

AFT's mission is to provide our clients with the best solution to their foundation testing needs. We are the only firm that offers all load testing methods under a single source. Whether a Bi-Directional (AFT-Cell®), conventional Static (ASTM D1143, D3689, D3966), Statnamic (ASTM D7383) or Dynamic (ASTM D4945), AFT will bring our expertise in load testing to you and your project.



Bi-Directional Load Test Experience (Osterberg Type)

Hillsborough Avenue over the Hillsborough River – Tampa, FL - Completed 1995. Mr. Donald Robertson now President of AFT was the Geotechnical Engineer of Record for this FDOT, District 7, complex bascule bridge project. Work on this project included all foundation design, planning and implementation of the Bi-Directional Load Testing, and foundation construction monitoring. The project load test program consisted of two Osterberg Cell load tests for both 30 and 48 inch diameter drilled shafts. With the Osterberg Cell patent still in effect during this project, Don performed the entire bi-directional testing scope other than supplying the cells. This included supervising installation of all load cells, bearing plates, and hydraulic lines. Don personally installed all strain gages, telltales, and LVDTs. He subsequently, performed the load tests using a Micro-10 data logging system, collected and analyzed the raw data, and finally presented a report of the bi-directional load testing to FDOT.

Reference: Terry Puckett, FDOT District 1 and 7 Geotechnical Engineer
Contractor: Bauer Foundation Corp.

Interstate I-95 over the St. John's River (Fuller Warren Bridge) – Jacksonville, FL – Completed 1996. Mr. Mike Muchard now Vice President of AFT was the Construction Geotechnical Engineer for this FDOT, District 2, Category 2 complex bridge project. Work on this project included Construction Engineering Services including review of foundation design, implementation of the Bi-Directional Load Testing, and foundation construction monitoring. The project load test program consisted of four Osterberg Cell load tests for both 36 and 48 inch diameter drilled shafts. With the Osterberg Cell patent still in effect during this project, Mike performed the entire bi-directional testing scope other than supplying the cells. This included supervision of installation of all load cells, bearing plates, and hydraulic lines. Mike installed strain gages, telltales, and LVDTs. He subsequently, performed the load tests using a Micro-10 data logging system, collected and analyzed the raw data, and finally presented a report to FDOT.

Reference: Ray Castelli, Geotechnical Engineer PB World
Contractor: Balfour Beatty (self performed the drilled shafts)

Cooper River Bridge, Charleston, South Carolina Completed 1998. Design phase load test program by SCDOT for the new cable stay bridge and approaches. AFT had a major scope of work including Statnamic and Osterberg load tests on 12 test drilled shafts with an 8 foot diameter up to 225 feet in length. Our contract included installation of strain instrumentation, data acquisition, and monitoring of Eight (8) Osterberg load tests. The project included installation of over 480 strain gages, drilled shaft bottom inspections with Mini-SID, four (4) 3,600 ton axial STATNAMIC™ load tests, 24 lateral STATNAMIC™ load tests, 3 static lateral load tests, installed and monitored over 100 electronic piezometers simultaneously during blast induced soil liquefaction. Performed extensive data analysis including Osterberg and Statnamic methods.

Reference: Billy Camp, Geotechnical Engineer, S&ME
Contractor: Modern Continental



Bi-Directional Load Test Experience (AFT-Cell Type)

Williams Energy Canada Conversion Facility, Ft. Saskatchewan, Alberta, Canada - Completed June 2015. Design Phase load test program for future power plant. AFT was involved in the planning and implementation of the AFT-Cell Load Testing. The project load test program consisted of installation and testing of two piles. One was a 24 inch diameter pile with a length of 65 feet and the other was a 30 inch diameter pile with a length of 82 feet. AFT-Cells successfully loaded the piles in excess of 450 kips (2000 kN) for the 24 inch pile and 900 kips (4,000 kN) for the 30 inch pile. Our scope included: load test submittal, shop drawings, installation of all AFT-Cells, bearing plates, hydraulic pumps, lines, and LVDTs. We performed the load tests with data acquisition equipment, analyzed the raw data, and finally presented reports for each AFT-Cell load test including load and displacement. The piles were load tested in accordance with ASTM D1143 Procedure A "Quick Test". All tests were executed successfully to loads in excess of the requirements with both piles performing well beyond their design standards.

Contractor: Force Pile Driving, Inc.

APM Guideway Tampa International Airport – Tampa, FL - Completed September 2015. Design/Build project to construct an elevated light rail and stations from the main terminal to the rental car facility. The project utilized almost 500 drilled shafts. AFT was involved in the planning stages of the AFT-Cell Bi-Directional Load Testing program through its implementation. The load test program consisted of installation of three 39 inch (1 meter) diameter drilled shafts socketed in limestone. AFT performed bi-directional testing on all three test shafts to loads of 4,000 kips including the following scope: assistance with design of test shafts, meetings with the project team, shop drawings, installation of all load cells, bearing plates, hydraulic lines, strain gages, telltales, and LVDTs. Subsequently, performed the load tests with data acquisition equipment, analyzed the raw data, and finally presented reports for each bi-directional load test including load and displacement and load distribution.

Reference: Craig Anstett, Geotechnical Engineer of Record, Terracon (813) 321 0328

Contractor: Stuart Williams – Case Atlantic

Southport Office Building, Seattle, Washington – Complete January 2016 – Highrise building project supported on 16-inch diameter Dewitt grout piles, which are a form of displacement cast-in-place piles. Pile lengths varied from 50 feet to 90 feet. AFT's scope includes bi-directional load testing on four (4) test piles to loads of 1,300 kips including the following: assistance with design of test shafts, meetings with the project team, shop drawings, installation of all load cells, bearing plates, hydraulic lines, strain gages, telltales, and LVDTs. Performance of the load tests with data acquisition system, analyze data, and provide reports for each bi-directional load test including load and displacement and load distribution.

Reference: Brice Exley, Geotechnical Engineer of Record, Hart-Crowser

Contractor: Dewitt



Bi-Directional Load Test Experience

I-15 and US 95 Corridor Improvements (Project Neon), Las Vegas, Nevada – Completed March 2016. Project Neon extends 3.7 miles along I-15 from Sahara to the US95/I-15 Interchange in Las Vegas. It consist of numerous bridge structures supported on drilled shafts. A drilled shaft load test program was performed including four test shafts, two with an 8-foot diameter up to 110 feet in length, and two test shafts with 4-foot diameter. The large diameter test shafts included a single level of three (3) AFT-Cell's and eight levels of strain instrumentation. The small diameter test shafts include a single AFT-Cell and multiple levels of strain instrumentation. AFT performed a maximum test load of 22,000 kips.

Contractor / AFT Client: Kiewit
Owner: Nevada Department of Transportation

Duke Energy Power Plant - Combined Cycle Project – Crystal River, Florida - Completed April 2016. Project consists of four (4) combustion turbine/ generators and their associated equipment (stacks, transformers duct banks, etc.); two (2) steam turbine/generators; cooling towers; pipe rack; and storage tanks. The project includes hundreds of drilled shafts. AFT was involved in the planning stages of the AFT-Cell Bi-Directional Load Testing program through its implementation. The load test program consisted of installation of two 42 inch diameter drilled shafts socketed in limestone. Test shafts included 7 levels of strain gages. AFT performed bi-directional testing on the test shafts to loads over 4,000 kips including the following scope: assistance with design of test shafts, meetings with the project team, shop drawings, installation of all load cells, bearing plates, hydraulic lines, strain gages, telltales, and LVDTs. Subsequently, performing the load tests with data acquisition equipment, analyzing the raw data, and finally presenting reports for each bi-directional load test including load and displacement and load distribution.

Contractor / AFT Client: Case Atlantic, A Keller Company
C/O Scott Jacobs, Fluor

ONE St Petersburg – St Petersburg, Florida Completed May 2016. At 41 stories, this is the tallest building in the Tampa Bay Area. It is supported on drilled shafts with diameters up to 6 feet and lengths to 125 feet. AFT performed AFT-Cell Bi-directional load testing of three (3) strain instrumented test shafts. AFT used Thermal Integrity Profiling (TIP) for shape analysis of the load test shafts to assist in the strain gage analysis.

Contractor / AFT Client: Case Atlantic, A Keller Company





Bi-Directional Load Test Experience

915 Franklin Apartment Tower, Tampa, Florida

Completed May 2016 – 23 story apartment tower located in downtown Tampa. The building is supported on drilled shafts socketed into limestone. A single 36-inch test drilled shaft, 67 feet in length was installed and load tested with the AFT-Cell. The shaft included five levels of strain instrumentation and Thermal Integrity Profiling wires for shape analysis. The AFT-Cell load test was carried out to a maximum load of 4,570 kips yielding ultimate side shear values in the Limestone.

Contractor / AFT Client: Case Atlantic, A Keller Company



West Loch Station, Waipahu, Oahu, Hawaii

Completed June 2016 - As part of the Honolulu Rail Transit Project, several stations are being constructed for passenger access to the rail. The west Loch station includes 30 inch diameter drilled shafts. AFT performed AFT-Cell Bi-directional load testing of one strain instrumented test shaft which AFT included Thermal Integrity Profiling wire method for shape analysis of the load test shafts to assist in the strain gage analysis.

Contractor / AFT Client: Condon-Johnson Associates/Hawaiian Dredging JV

MD Anderson Cancer Center, Jacksonville, Florida

Completed August 2016 – 18 story hospital addition located in downtown Jacksonville. The building is supported on drilled shafts socketed into limestone. A single 36-inch test drilled shaft, 55 feet in length was installed and load tested with the AFT-Cell. The shaft included five levels of strain instrumentation and Thermal Integrity Profiling wires for shape analysis. The AFT-Cell load test was carried out to a maximum load of 4,500 kips.

Contractor / AFT Client: Case Atlantic, A Keller Company

Arkansas State Highway and Transportation Department / University of Arkansas

Research Project TRC-1502, Completed July 2016. Project Site: Cloverleaf of I-55 and US 63, Turrell, Arkansas. AFT-Cell bi-directional load testing of two driven piles; an 18 inch square prestressed concrete pile, 81 feet in length; and an 18 inch diameter steel pipe, 82 feet in length. Both AFTCell's used were capable of providing over 1,000 kips bi-directionally

AFT Client: Richard A. Coffman, PhD, PE, PLS, Associate Professor, Department of Civil Engineering, University of Arkansas at Fayetteville



Bi-Directional Load Test Experience

Channel Club, Tampa, Florida

September 2016 – 23 story apartment tower located in downtown Tampa. The building is supported on drilled shafts socketed into limestone. A single 36-inch test drilled shaft, 85 feet in length was installed and load tested with the AFT-Cell. The shaft included five levels of strain instrumentation and THERMAL INTEGRITY PROFILING wires for shape analysis. AFT also performed CALIPER LOGGING of the test shaft and one production shaft. The AFT-Cell load test was carried out to a maximum load of 2,000 kips.

Contractor / AFT Client: Bauer Foundation Corp.
Geotechnical Engineer: Surendra V. Sagi, MS, PE
ECS Florida, LLC



Replacement of US 51 Bridge over Coldwater River, Desoto County, Mississippi DOT

October 2016 - The existing 1,100 ft bridge is being replaced ahead of schedule with a 2,000 ft bridge after recent floods caused damage. The bridge has been closed since March and construction is fast tracked. Drilled shafts are being used as the foundation for the new bridge. The drilled shafts have a 72-inch diameter with lengths up to 145 feet. AFT's scope of work included performing an AFT-Cell bi-directional load test up to 3,200 kips including multiple levels of strain gages. AFT also performed THERMAL INTEGRITY PROFILING (TIP) wire method for shape analysis of the load test shafts to assist in the strain gage analysis.

Contractor / AFT Client:
A.H. Beck
Foundation Company, Inc.





Bi-Directional Load Test Experience

SEA-TAC International Arrivals Facility (IAF), Seattle, Washington (November 2016)

A design-build project delivering a new International Arrivals Facility (IAF). The project includes an elevated sterile corridor and an iconic bridge that will span approximately 900 linear feet from the new IAF to the south satellite. The bridge will offer views of Mount Rainer and the Olympic Mountains. Drilled shafts will provide the foundation for the major structures. The drilled shafts have a 72-inch diameter with lengths up to 93 feet. AFT's scope of work includes performing a multi-cell AFT-Cell bi-directional load test up to 27,000 kips including seven levels of strain gages. AFT is also performing Thermal Integrity Profiling (TIP) wire method for shape analysis of the load test shaft to assist in the strain gage analysis.

Contractor / AFT Client:
Malcolm Drilling

Geotechnical Engineer:
Hart-Crowser
Brice Exley





Bi-Directional Load Test Experience

Los Angeles Rams NFL / Sports Stadium, Los Angeles, California (December 2016)

The largest and most technologically advanced, 80,000-seat, sports stadium in the world for the Los Angeles Rams NFL football team. This sports and entertainment venue is the centerpiece of a 298-acre mixed-use project in Inglewood, California a few miles from Los Angeles.

The project includes over 800 CFA piles and Drilled Shafts known locally as Cast-In-Drilled-Hole (CIDH) piles. Foundation diameters range from 2 to 6 feet with lengths of 130 feet.

AFT's scope of work included performing AFT-Cell bi-directional load tests of six (6) test piles. The test program consisted of four (4) CFA test piles with a diameter of 36 inches and a length of 130 feet; and two (2) CIDH piles with a diameter of 5 feet and a length of 130 feet. All six test piles included 10 levels of strain gages. The CFA test piles included a single AFT-Cell with bi-directional test capacities of 4,500 kips and 9,000 kips. The Drilled Shafts utilized a test arrangement consisting of 3 AFT-Cells on a single level to make up a total test capacity of 12,500 kips.

Contractor / AFT Client:
Malcolm Drilling Company, Inc.
Steven Lapsley

Geotechnical Engineer:
Group Delta
Michael Reader





Bi-Directional Load Test Experience

Oceanwide Center, San Francisco, California (January 2017 through January 2018)

The project will involve construction of two mixed-use towers with office, retail, residential and hotel space located at 1st and Mission Streets in San Francisco, California. Tower 1 is 75 stories and tower 2 is 54 stories. Drilled shafts were installed to astounding depths of 340 feet (104 meters) and load tested with our AFT-Cell Bi-Directional Load Test system. Two levels of AFT-Cell assemblies with three cells per level were used to apply test loads in excess of 30,000 kips. The new Oceanwide Center project in San Francisco, California will have the deepest drilled shafts in the USA founded well within the Franciscan Complex bedrock. AFT with our load test services provided engineers with the data needed to optimize the drilled shaft design and have piece of mind in the foundation performance. AFT is proud to have successfully load tested a total of three (3) test shafts of the highest complexity in the industry on this project.

AFT Client:
Malcolm Drilling Company, Inc.
John Morgan

Geotechnical Engineer:
Langan





Bi-Directional Load Test Experience

HART Guideway and Stations Design Build, Honolulu, Hawaii

(Load Testing Completed October 2017) Multi-billion dollar design-build project including over 20 miles of elevated guideway rail supported on hundreds of non-redundant drilled shafts. AFT scope of services included: numerous AFT-Cell bi-directional load tests on shafts ranging from 8 feet to 12 feet in diameter with lengths up to 226 feet. All bi-directional test shafts included 3 to 4 AFT-Cells per level and up to 11 levels of strain gages. AFT is also performing on-going production shaft testing including: drilled shaft bottom assessment using the Shaft Inspection Device (Mini-SID), drilled shaft integrity evaluation with Cross-hole Sonic Logging (CSL), and NHI certified drilled shaft inspection.

AFT Client:

Shimmick/Traylor/Granite JV: Rusty Lucido

Geotechnical Engineer: Shannon and Wilson
Gerard Buechel





Bi-Directional Load Test Experience

US 81 Harbor Bridge, Corpus Christi, Texas – Test program completed March 2018. Landmark project includes constructing a new six lane cable stayed bridge over the shipping channel to the Port of Corpus Christi. Drilled shafts will be used for the two main pylon foundations. The drilled shaft load test program included four (4) 8-foot diameter test shafts with lengths of 225 feet. Each test shaft had double levels of three to four AFT-Cell's per level and eight levels of strain instrumentation. The total test capacity available was in excess of 64,000 kips.

AFT Client: Professional Service Industries (PSI)

Contractor / AFT Client: Flatiron-Dragados JV, Figg Bridge, and PSI

Owner: Texas Department of Transportation





Bi-Directional Load Test Experience

(Top Sail Bridge) Bridge 16 over Intracoastal Waterway NC 50/ NC 210, NCDOT (January 2017)

The bridge project is located on North Carolina's famed Outer Banks barrier islands. Drilled shafts will provide the foundation for the new bridge. The drilled shafts are 48-inch and 60-inch diameter socketed into limestone rock with lengths up to 100 feet. AFT's scope of work includes performing AFT-Cell bi-directional load tests on two test shafts with loads up to 12,000 kips including multiple levels of strain gages.

AFT Client:

AH Beck Foundation Co., Inc.

Owner:

North Carolina

Department of Transportation



I-81 New River Bridge Replacement, Montgomery, Virginia (December 2017)

Drilled shafts will provide the foundation for the new bridges. The drilled shafts have a 72-inch diameter with socket lengths of 30 feet into hard rock. AFT's scope of work includes performing an AFT-Cell bi-directional load test up to 12,000 kips including multiple levels of strain gages. AFT is also performing Thermal Integrity Profiling (TIP) wire method for all production shafts.

Contractor / AFT Client:

Bryman Construction Corporation





Bi-Directional Load Test Experience

Farrington Highway Stations, Waipahu, Oahu, Hawaii (February 2017)

As part of the Honolulu Rail Transit Project, several stations are being constructed for passenger access to the rail. The Farrington station includes 24 inch diameter CFA Piles with lengths of 120 feet. AFT's scope of work includes performed AFT-Cell Bi-directional load testing of two (2) strain instrumented test piles, up to 1,200 kips, which will include Thermal Integrity Profiling wire method for shape analysis of the load test shafts to assist in the strain gage analysis.

Contractor / AFT Client:
Condon-Johnson Associates
/Hawaiian Dredging JV



GA 26 Bridges across the Ocmulgee River, Hawkinsville Georgia DOT (February 2017)

The project will span about 6 tenths of a mile. Drilled shafts will provide the foundation for the new bridges. The drilled shafts have a 60-inch diameter with lengths up to 66 feet. AFT's scope of work includes performing a double level AFT-Cell bi-directional load test including multiple levels of strain gages.

Contractor / AFT Client:
Case Atlantic, A Keller Company





Bi-Directional Load Test Experience

H-1 (Kapolei Interchange), Kapolei, Oahu, Hawaii DOT (March 2017)

The new interchange includes the Wakea Street Overpass bridge structure. A total of 28 drilled shafts with diameters of 5 and 6 feet comprise the foundation system for the new bridge. The drilled shafts were socketed into Basalt rock with lengths up to 72 feet. AFT's scope of work includes performing an AFT-Cell bi-directional load test up to 6,000 kips including multiple levels of strain gages. AFT also performed mechanical calipering of the shaft excavation as well as Thermal Integrity Profiling (TIP) wire method for shape analysis of the load test shafts to assist in the strain gage analysis.

Drilled Shaft Contractor / AFT Client:
Hawaiian Dredging Construction Company

Owner:
Hawaii Department of Transportation



Port Access Road, Charleston, South Carolina (April 2017) New interchange structures were on 5 foot diameter drilled shafts. AFT's scope of work included performing an AFT-Cell bi-directional load test on a 5-foot diameter test shaft 111 feet in length. Double levels of cells were used to provide a test load of 3,000 kips. Multiple levels of strain gages were used to measure load distribution.

Contractor / AFT Client:

A.H. Beck
Foundation Company, Inc.





Bi-Directional Load Test Experience

SR 6 over Tallahatchie River, Panola County, Mississippi (May 2017) The new bridge foundations were 4, 6, and 8 foot diameter drilled shafts. AFT's scope of work included performing an AFT-Cell bi-directional load test on a 6-foot diameter test shaft 141 feet in length. Three cells were used on a single level to provide a test load of 5,800 kips. Multiple levels of strain gages were used. AFT also performed Thermal Integrity Profiling (TIP) wire method for shape analysis of the load test shafts to assist in the strain gage analysis.

Contractor / AFT Client:

A.H. Beck
Foundation Company, Inc.



I-10: LA 347 to Atchafalaya Floodway Bridge St. Martin Parish, Louisiana (August 2017)

New bridge structure used 5 foot diameter drilled shafts. AFT's scope of work included performing an AFT-Cell bi-directional load test on a 5-foot diameter test shaft 80 feet in length with multiple levels of strain gages for load distribution. AFT-cell was used to provide a test load of 2,150 kips.

Contractor / AFT Client:

Case Atlantic Company, Inc.





Bi-Directional Load Test Experience

Listing of other AFT-Cell Bi-Directional Load Test Projects

Transportation and Government Sector

Phoenix Airport People Mover, Phoenix, Arizona
Lee Roy Selmon Expressway Extension, Tampa, Florida
I-10 Mobile River Load Test Contract, Mobile, Alabama
US 71 Rapids Parish, Louisiana
SR 45 over Cordray's Pond, near Macon, Georgia
I-20 N. Frontage over KCSRR, near Jackson, Mississippi
Camino Royal Bascule Bridge, Boyton Beach, Florida
Maipalaoa Bridge, Waianae, Oahu, Hawaii DOT
Blue Origin Launch Rocket Facility, Cape Canaveral, Florida
O.N. Stevens Water Treatment Plant, Corpus Christi, Texas

Private Sector

Tutwiler Parking Garage, Tuscaloosa, Alabama
Elysee Condominiums, Miami, Florida
USF Morsani College of Medicin, Tampa, Florida
The Pointe Condominiums, Nassau, Bahamas
Virage Condominiums, Tampa, Florida
Coresite 3, Reston, Virginia
Riverwalk, Philadelphia, Pennsylvania
Clearwater Aquarium, Clearwater, Florida



APPLIED FOUNDATION TESTING

SPECIALTY GEOTECHNICAL SERVICES

About AFT

Applied Foundation Testing, Inc. (AFT) is a Specialty Geotechnical Engineering and Testing Firm that performs Deep Foundation load testing and quality Assurance test methods. AFT is a team of highly specialized geotechnical engineers, technicians and support professionals totally devoted to the foundation industry. AFT was founded January 1, 1997 by Mr. Don Robertson, P.E. and Mr. Mike Muchard, P.E. Our most important founding beliefs were to apply all of our energy into specialization and offer our skills as a true independent agency. Unlike other geotechnical firms, AFT is 100 percent focused on sophisticated foundation design and testing technologies. Therein, we have developed unparalleled technical knowledge of each test method offered. However, we have been told by our clients that one of our greatest qualities is our uncommon ability to provide practical interpretation of geotechnical test data as it relates to their project needs.

Our independent status is particularly valuable to owners and contractors, whom are our greatest clients, seeking third party services. Our independence also allows AFT to provide a competitive advantage to consultants by strengthening their capabilities, not competing with them. Now with offices nationwide, these principles proved to be an equation for success and continuing growth. AFT works in a niche market which demands high mobility of our professionals. Our ability to provide quick response to regional, national and international clients is not bounded by geographical distinctions. We understand the paramount importance of project schedules and budgets and are very cognizant of both.

We are committed to continual investment in equipment and training so you can be assured that no other firm is more qualified than AFT in the methods we offer. We have pioneered new technologies which have had profound effects on the foundation industry such as **STATNAMIC™ Load Testing, Wireless Dynamic Pile Testing, and Post Grouted Drilled Shafts. We manufacture the AFT-SID™ - the most advanced Mini-SID in the industry - and the highly successful AFT-Cell® Bi-Directional load test device.** AFT is the nationwide leader in these technologies. We constantly read and react to industry needs and stay one step ahead of newly developing trends. We maintain close relationships with academia and support deep foundation research activities. Our contributions have led to many significant advances in equipment development, data acquisition, more accurate analysis methods and most importantly safer and more cost effective foundations.



AFT Services Testing

- AFT-Cell ® Bi-Directional Load Testing
- Statnamic® Load Testing
 - Axial and Lateral up to 5,000 tons
- High Strain Dynamic Pile Testing (PDA)
 - **Wave Equation Analysis (WEAP)**
 - **CAPWAP Analysis**
- Drop Hammer (APPLE Equivalent) Testing
- Static Load Testing – Turn Key – Currently Up to 2,000 tons
- Instrumentation and Data Acquisition
 - **In-house Manufacturing Facility in Tampa Office**
- Drilled Shaft Inspection Device (Mini-SID)
- Caliper
- Crosshole Sonic Logging (CSL)
- Gamma-Gamma Density Logging (GDL)
- Thermal Integrity Profiling (TIP)
- Low Strain/Pulse Echo Integrity Testing (SIT)
- Unknown Foundation Length Studies
 - **Parallel Seismic**
 - **Ultra Seismic**
 - **Pulse Echo/Impulse Response**
- Vibration and Noise Monitoring / Structure Surveys
- Calibration Services NIST Traceable hydraulic jacks and load cells
- Fabrication and Machine Shop at Jacksonville Facility



AFT Services Professional Engineering

- Drilled Shaft Design and Construction Consulting Services
- Driven Pile Design and Construction Consulting Services
- Augercast Design and Construction Consulting Services
- Tiebacks, Soil and Rock Anchor Design, Stressing and Testing
- Micropiles Design and Construction Consulting Services
- Post Grouted Drilled Shafts
 - Design Services
 - Fabrication of Grout Plates
 - Grouting Services
- CTQP Certified Pile Driving Inspection
- CTQP Certified Drilled Shaft Inspection
- Owner Review and Verification Testing of Deep Foundation Design and Construction
- Value Engineering of Deep Foundation Systems
- Design-Build Project Geotechnical support
- Load testing program design, execution, interpretation, and application
- Integrity Testing Evaluation and Recommendations
- Construction Problem Consulting
- Foundation Remediation Design
- EAR (Engineering Analysis Reviews)