JES
FOUNDATIONVIEW

Foundation, Crawl Space & Basement Solutions for Design Professionals

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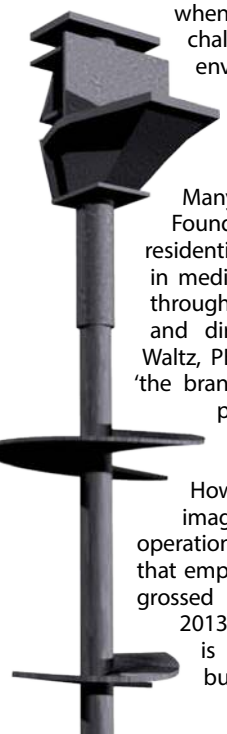
HEAVY LIFTING:
JES Commercial and Industry Business

At JES Foundation Solutions, the commercial business is booming! We're helping general contractors, professional engineers and architects solve some of the most challenging foundation support projects every day. With three offices in Virginia's major metropolitan areas - Hampton Roads, Greater Richmond and Northern Virginia, JES Foundation Solutions is busy with installing foundation support systems throughout the Mid Atlantic. There is a high demand for our niche service - designing and installing foundation support systems for new construction and structural rehabilitation. In addition, JES is sought out by professionals especially when they are faced with unusual challenges such as accessibility, environmental, turnaround... or just seeking a creative solution to a foundation stabilization problem.



Many people are familiar with JES Foundation Repair, the company's residential division. JES invests heavily in media to market to homeowners through radio, television, magazine, and direct mail advertising. Jesse Waltz, PE and his wife Stella are the 'the brand', featured on most of the print advertising, the voices on the radio, and the faces on television advertising. However, behind the homegrown image of a 'mom and pop' operation is a 20 year old company that employs close to 200 people and grossed $24,000,000 in revenue in 2013. While the residential division is the company's 'bread and butter', the commercial and industrial division is on the fast track to further grow the company.

JES Foundation Solutions is owned and operated by professional engineers, all who have backgrounds in the commercial construction industry. Jesse Waltz, PE, JES President, founded the company in 1993 after having been a civilian construction manager for the United States Navy. Scott Davis, PE, JES Vice President, managed construction for the Naval Facilities Engineering Command before joining JES. Dave Stinnette, PE, JES Director of Engineering, served in the Navy after college and worked for a number of large engineering firms before joining JES. This team of talented and knowledgeable engineers joins forces with the professional engineers from Foundation SupportWorks, JES's manufacturing partner. Together they can design a foundation support system for any new construction or structural rehabilitation situation.

A portion of JES' business has always included commercial work. One early example of that is the Southeastern Public Service Authority (SPAS) steam plant in Chesapeake, VA. The case study on that extensive job was recently featured in the first quarter edition of the JES FoundationView newsletter. In 2011, however, the company's long-term growth strategy included increased focus on commercial and industrial work. Since making a major commitment, investment in equipment, personnel, and marketing efforts towards that goal, JES Foundation Solutions has greatly increased that side of the business. Our reputation as the experts for design and installation of foundation support systems for new construction and structural rehabilitation continues to accelerate.

Recent Projects

- *Smithsonian Institute Stamp Gallery (Washington, DC)*
- *Reagan International Airport - JetBlue & US Airways (Arlington, VA)*
- *Homestead Resort Spa Renovations (Homestead, VA)*
- *Hearst ES - New Modular Classroom Buildings (Washington, DC)*
- *Science Museum of Virginia (Richmond, VA)*
- *Ball Aluminum Manufacturing Plant (Verona, VA)*
- *Apple Store Expansion (Short Pump Mall, Henrico County, VA)*
- *Browne ES Gymnasium Wall Support (Washington, DC)*
- *Kingsmill Marina (Williamsburg, VA)*
- *Millworks Headstock - Midlothian Mines Park (Midlothian, VA)*
- *DoubleTree Hotel by Hilton (Annapolis, Maryland)*
- *National Center for Counter Terrorism (McLean, VA)*
- *James Monroe Building (Richmond, VA)*
- *CVS Store (Chesapeake, VA)*
- *Kroger Fueling Canopy (Richmond, VA)*
- *7-Eleven Fueling Canopy (Colonial Beach, VA)*
- *McDonald's Restaurant – Dumpster Corral Enclosure Wall (Henrico County, VA)*
- *Pump-Stations (Tidewater Area)*
- *Crystal Drive Pedestrian Walkway (Arlington, VA)*
- *Patriots Inn Hotel - Elevator Foundation (Williamsburg, VA)*
- *Village Market Place (Chesterfield, VA)*
- *George Washington University (GWU) (Washington, DC)*
- *Hearst Elementary School (Building B Addition)*
- *Southeast Tennis and Learning Center (Washington, DC)*
- *Verizon Building (Richmond, VA)*
- *Williamsburg Landing – Retirement Community (Williamsburg, VA)*
- *Roam Building (Renovations) (Newport News, VA)*
- *Maury ES Gymnasium Bathroom (Alexandria, VA)*
- *Brandermill Woods Retirement Community Activities Building (Chesterfield, VA)*
- *MOTIVA Vapor Extraction Unit (Montvale, VA)*
- *Apple REIT New Building (Downtown Richmond, VA)*

Thank You for Your Referrals!

Our commercial/industrial division grew considerably in 2013 thanks to you and your confident referrals. We hold your referrals in the highest regard as they are the strongest indication we have that we are doing our job well. Remember, JES not only specializes in the design and installation of foundation support systems for new construction and structural rehabilitation, we also offer poly-leveling, commercial crawl space encapsulation and many other related foundation services.

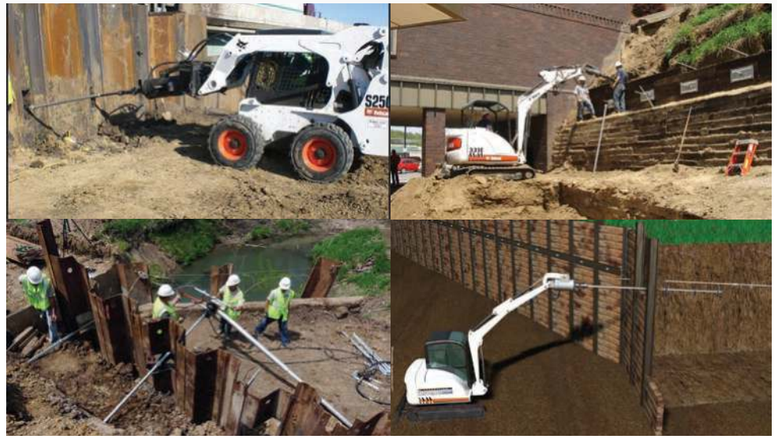
Contact Director of Engineering, Dave Stinnette, PE directly at dstinnette@jesnow.com.

Commercial /Industrial Division New Website

JES is currently developing a new website specifically for our commercial / industrial division. The new site will feature news, information and resources geared specifically toward our work in the commercial field. The site will showcase the multitude of projects we have completed all over the region with new enhanced Case Studies, large photo galleries and technical resources. The focus of the new site will be in supporting commercial prospects in understanding the scope of services that JES has expertly provided for over two decades.

JES Trusted Partners

JES is looking for strategic business partners within our industry such as engineers, designers, architects, property management and real estate professionals that share in a commitment to service excellence. The purpose of JES Trusted Partners will be to strengthen referral relationships as well as to share resources and information. Each JES Trusted Partner will be showcased on our new commercially focused website for their area of specialty later this summer. For more information on becoming a JES Trusted Partner, contact Eric Lackey at elackey@jesnow.



Helical TieBack applications and cross-section illustration

HELICAL TIEBACKS

When walls of any kind are used to hold back the earth, geological conditions can and will tax the materials of those walls to the point of failure. In our residential work, homes with basements often see the effects of this pressure in the form of cracked, bowing and leaning walls. Helical tiebacks are often used to stabilize existing earth retaining structures that have experienced excessive movement. This wall distress may be the result in soil moisture, rise is groundwater levels, plugging of the wall drainage system over time, expansive clay soils, frost jacking, or surcharge loads above the wall.

Helical Tiebacks are commonly used in tension applications to lateral support for applications including:

- Earth retentions systems such as concrete retaining walls, soldier pile and timber lagging and sheet piling
- Seismic restraint for foundation uplift and lateral support systems
- Guy anchor support for power line and communication towers

Helical tiebacks are manufactured with similar helix plate sizes and helix spacing as helical piles (see our last issue of Foundation View) which are installed vertically. Tiebacks differ from helical piles in that they are typically installed in a horizontal to 45-degrees downward from horizontal orientation to laterally support the tops of earth retaining structures. Helix plates are typically limited to the leade section or the lead and first extension of the tieback. Helix plate design depends on the soil strength parameters and the required working capacity.

Advantages of Helical Anchors

- Predictable capacity
- Helix blade configuration selected to achieve design embedment and capacity
- All-weather installation
- Can be installed in areas of limited or tight access
- Installation does not generate spoils
- Clean installation with no messy grout
- Load tests can be performed immediately following installation
- Available with optional hot-dip galvanizing for added corrosion protection

Helical History

Did you know that the use of helical foundation systems in construction dates back nearly 200 years? In the 1830's, the earliest versions of today's helicals were used in England for moorings and for the foundations of lighthouses. Today, helical piles are used in both tension and compression load applications and because of their versatility are gaining worldwide acceptance throughout the construction industry.

Short Pump Town Center is an upscale, open-air shopping mecca close to Richmond, VA.

CASE STUDY: *The Apple Store*

The Challenge

The Apple Store is the iconic retail chain of Apple Computers with over 30,000 employees working in hundreds of US stores. Apple is known for trailblazing innovation in their computer and technology products. They are also known for their building architecture, such as the 59th Street "Glass Box" in New York City. When The Apple Store in Short Pump, Virginia needed to double their size in the Short Pump Town Center Mall by moving into an adjacent unit, some challenges arose for the nationally recognized technology giant. The problem with the new space was that several steel columns, supporting the floor upstairs, were in the middle of the new proposed showroom.

The Solution

The solution by the architect and structural engineer was to erect new columns and beams along the perimeter of the new space and transfer the load from the steel bar joists supporting the second floor to the new beams. The no-longer needed original interior columns would be then be removed. To support the pile caps for the new columns, Helical piles were chosen because they could be installed inside the space with limited headroom, do not generate any soil spoils or vibrations and the pile cap concrete could be placed as soon as the pile installation was completed.

The Project Summary

JES installed a required 28 Helical Piles (3.5" diameter with a rated capacity of 40 kips, or 20 tons) which were used to support pile caps in order to support the new columns. The piles were installed to a typical depth of 40 - 44 feet. The average torque required of 11,429 FT-LBS was exceeded on all piles. Minimum installation depth and torque was based on subsurface soil conditions described in the ECS Soil Test Borings and JES' experience with soils in the general project vicinity. The working capacity of each pile based on a Factor of Safety of 2.

The ultimate capacity of each pile, based on torque correlation, was verified during installation using a calibrated Pro-Dig C440 Torque Transducer. The C440 measures the torque applied between two flanges on the drive head and transmits the torque reading to a hand held unit for display via Bluetooth with remarkable accuracy.

This was a fast track project that required work to be done at night and on the weekend because of normal retail operations and a strict deadline. The skid steer used to operate the 20k torque motor used to install the Helical Piles was moved through the open-air mall during off hours and entered the workspace through the front door of the store.

JES provided all of the pile cap construction, through the use of a sub-contractor.

Visible columns before renovations. Columns will be removed and replaced with new beams around the perimeter to distribute the weight of the floor above.

Installing four helicals to support dual beams. Pro-Dig handheld display assisting with the installation to insure lasting stability of the helical designs.

Four helicals with pile caps and rebar are awaiting concrete.

Dual beams on four helical piles providing foundation support.

New perimeter beams on helical supported footings.

CHOOSING THE RIGHT CONTRACTOR: *Hallmark of Service*

"You can't build a reputation on what you are going to do."
~ Henry Ford

Foundation support and repair continues to be an emerging industry across the United States. Geological dynamics, environmental conditions, construction inefficiencies and change as a whole, all create an ongoing need for lasting foundation solutions in a multitude of applications. When considering JES for your commercial project, we want to remind you that, while some small companies are trying to appear large, JES is a big company trying to appear small. Ultimately, it is people we serve in our business, and our founders Jesse and Stella Waltz never wish to lose sight of those values. With our commercial customers either erecting a new building or structure, or rehabilitating an existing one, we have found that choosing us as the right contractor has largely been a matter of our "hallmark of service".

Many professional attributes go into qualifying whether or not a company can satisfy the needs of large scale industrial projects. These attributes include technical understanding, qualified labor, proper equipment, accurate record keeping, communication and a maturity in meeting budget and deadline expectations. JES incorporates the leading edge of modern foundation support systems from borings and soil testing, to digital helical design and fabrication. Our leadership of Professional Engineers oversee each of our projects as well as our certified installers in the field. Our world-class solutions are installed and monitored with the most reliable equipment available in order to meet job objectives and insure reliability.

JES is also a stickler for details having developed our own Business Management System (BizWIz) for the purposes of managing customer relationships and documenting activity on all of our jobs. Lastly, twenty years of providing and correcting foundation solutions has granted us a degree of seniority in our industry that is nearly second to none.

These attributes can mean the difference in any commercial or industrial endeavor. Each of them are individually important, but it is what they represent together that is JES' hallmark of service for which more and more companies are turning to; our experience.

"The years teach much which the days never know."
~ Ralph Waldo Emerson

If you'd like to book a JES expert to speak at your company or industry meeting, go to www.jeswork.com/professional-resources/speakers-bureau.aspx

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The mid-Atlantic's premier engineered solution expert for foundation repair, new construction deep foundation installation, crawl space moisture management and basement waterproofing.

Foundation Solutions
New Construction ★ Rehabilitation
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