

# TDIndustries Takes To The Skies With Shell

## HOUSTON, TEXAS

Challenges abound in a project where a crane sits atop a 52-story fully occupied skyscraper

■ A rooftop crane, nighttime lifts, and tight quarters create unique challenges in a mechanical construction project. TDIndustries—together with general contractor Harvey—was eager to tackle those challenges.

In the heart of downtown Houston stand **One Shell Plaza** and **Two Shell Plaza**—two high-rise architectural giants that Shell Oil has leased from real estate firm Hines for dozens of years. When Shell signed another lease for the buildings in 2011, the buildings' mechanical systems were clamoring for attention.

### A Powerful Partnership

■ Home to Shell's headquarters and law firm Baker Botts, One Shell Plaza's 52 stories climb 715 feet up and contain 1.6 million square feet. Emptying the building to complete the renovations was not an option. Enter subcontractor Riggingpro's derrick crane, brought to the roof by elevator, assembled onsite, and capable of lifting up to 10 tons.

That lift capacity is critical for the success of the project, which includes:

- Replacing four chillers on the 51st floor by lifting them through a 10-foot-by-25-foot rooftop hatch
- Removing three outdated boilers, each about the size of an outdoor garden shed, and installing higher-tech, smaller versions
- Replacing nine outside air units which provide fresh air to the building
- Renovating the plumbing, tile, and vent lines for eight floors of restrooms



### Heavy Duty Hoisting

■ Since the project start in October, TD has disassembled the old equipment piece by piece. A scrap company shares in the workload, cutting and weighing the scrap for recycling, resulting in LEED credits for the client. Then comes the derrick crane, hoisting the scrap through the rooftop hatch and down the side of the building 52 stories below.

And all of this is being done at night.

With the building fully occupied, working outside regular business hours is a must. “We have taken extreme measures to ensure our customer is not inconvenienced in any way,” said Senior Project Manager **Jim Fawcett**, who has two full-time superintendents on the job each night. “When we’re on the job, we protect everything, we do our work, we clean up. The next morning, it should look like we’ve never been there.”

### Crucial Considerations

■ Projects this large—TD has more than 20 Partners on the job every night—yield special challenges. One challenge is the restroom vent line upgrades, taking place in confined chases behind the restrooms, each measuring about 40 feet long and 3 feet wide. TD addressed the cramped quarters with fresh air monitors to regulate the air quality for the TD Partners working in these tight spaces.

Another key factor in rooftop work at this elevation is weather. Winter months in Houston can mean wind speeds of up to 20 miles an hour on top of One Shell. That impacts when the team can do lifts with the derrick. “We monitor wind speeds starting in the morning and throughout the day,” Fawcett said.

Additionally, since 2008’s Hurricane Ike, both buildings have a new exterior skin and replacement windows. TD has taken painstaking precautions to avoid damage to those during crane lifts.

### Simultaneous Efforts

■ Across the street, renovations at Two Shell are also underway. At 26 stories high and with 566,960 square feet of space, Two Shell has been slightly less demanding. Upgrades here include remodeling eight floors of restrooms to meet ADA requirements plus replacing three outside air units.

“At Two Shell, we’ve been lucky in that two of the three air handling units are on a garage level,” said Project Manager **Tara Gresham**. There, a service elevator provides access to the 25th floor, with a gantry crane on 26th floor to hoist the pieces up higher.

### Come Rain or Shine

■ This project has a firm May 1 completion date. One Shell’s new chillers need to be installed and running at full capacity when the summer starts to sizzle. Gresham and Fawcett are confident about delivering on time. “The weather dictates when we’ll get the work done,” Fawcett said, “but we’ll do whatever it takes to keep our customer happy.”



## Award Recognizes TD’s Dedication to Helping Others

■ The Partners at TDIndustries continue to show the depths of their generosity. The United Way recently honored TD by presenting us with the Live United Award for Construction, Architecture, and Real Estate. This award recognized our excellence in all three parts of the United Way’s call to action: Give, Advocate, and Volunteer.

TDIndustries is proud to be a partner with the United Way, supporting their mission of providing education, health, and income assistance for struggling families. This award illustrates our commitment to serving the communities where we live and work.

### Key Players

■ TD tips its hat to this devoted team of nighttime and weekend workers for meeting demanding expectations on this project:

- Sergio Alvarado**, Pipefitting Foreman
- Francisco Coronado**, HVAC Coordinator
- Ronnie Dean**, Plumbing Coordinator
- Jim Fawcett**, Senior Project Manager
- Mark Gafford**, Production Manager
- Tara Gresham**, Project Manager
- Eloy Hernandez**, Sheetmetal Foreman
- Chad Hubenak**, Superintendent
- Glen Krahn**, HVAC Coordinator
- David Mirabal**, Superintendent
- Ralph Mosqueda**, HVAC Coordinator
- Alvin Schneider**, Plumbing Foreman
- Megha Vyas**, Project Manager

