Project Description:

Haley-Greer, Inc. was contracted by Anslow Bryant Construction, LTD to erect this two-story, 14,700 square-foot Double Platinum LEED and Design Build structure. Glass handrails, curtain wall glass, metal panels and wood make up this extraordinary architectural design which functions as the owner's office and meeting space.

Why Is This Project Special and Why Does It Qualify For An Award?

This geometric- shaped building was designed to resemble a modern day Treehouse. It has sloped curtain walls, patterned silkscreen glass, a rooftop garden and even a "monkey bridge" which connects this structure to the adjacent office building.

The Treehouse was the result of the owner's dedication to quality design and their sustainable building practices. The building is currently listed as the #1 Ranked Double Platinum LEED building in Texas, and in the top 3 nationally.

Haley-Greer, Inc. partnered early to engineer the curtain wall in order to meet the owner and architects design intent while ensuring a water-tight building. The unique blend of pattern silkscreen glass made it very difficult to install because each piece was specifically designed to fit its proper place. There was no room for error during the installation process. The weight of the glass ranged from 300-550 lbs. per unit. A 10,000 lb. all terrain forklift with an engineered steel boom extension and power cups were needed to set the glass at the sloped curtain wall. All glass had to be set from the exterior making the task even more difficult.

The Treehouse deserves an Excellence in Construction Award due to the unique design, complex installation and challenges we overcame for a successful and safe completion.

Innovation Programs Relating to Quality Control:

Prior to mobilization, field pre-planning was done with the entire design team to meticulously review the sloped curtain wall installation and the fitting of the crucial, multi-pieced glass. There were 8-10 different patterned silkscreen glass types that had to perfectly match the triangular and trapezoidal shapes. There was zero room for errors with material fabrications.

Haley-Greer, Inc. also performed thorough inspections of the glass prior to it ever shipping out to the jobsite. Our team ensured proper glass sizes and placement of silkscreen patterns for alignment.

In the field, daily inspections were also conducted on the internal caulk joints to prevent any water infiltration. Onsite water static testing was also conducted periodically during our installation, which is a standard operating procedure for Haley-Greer.

Innovative Programs Relating to Scheduling:

Scheduling was a challenge on this fast paced project.

Coordination was a key factor during the glazing process due to exterior ground work and concrete work being performed simultaneously due to the accelerated schedule. Material shipments had to be scheduled for early AM deliveries. Haley-Greer had 60 days to dry in. We had to work very closely with the steel subcontractor to ensure the sloped curtain walls and steel were properly coordinated. HGI worked 7 days a week, 10-12 hour days until dry in was achieved. Our employees were pushed to the limit, but our superintendent and foremen did a great job balancing the work schedules to keep our crews safe while maintaining quality installation.

"It takes a special team to build at the speed we have been asked to over the last few years. Haley-Greer is at the core of our team. As one of the four building envelope contractors used on the project, Haley-Greer is integral in the expedited completion of our projects. The Haley-Greer team is always ready to step up, move fast, find solutions, and work with us to deliver what the project stakeholder needs to begin generating revenue. We could not ask for a better partner." **Steve Thomas, Anslow Bryant Construction**

Value Analysis/Engineering Process Used on Project:

The Treehouse was a unique project for Haley-Greer, Inc. The owner wanted their vision brought to fruition so they were willing to invest the funds for the desired outcome. There was no VE used on this project for our scope of work.

Innovative Programs Related to Productivity:

As mentioned, Haley-Greer had to work all hours most days. We had two crews to maximize production. One crew focused on our metal installation while the other crew was dedicated to glass. We were able to ensure the crews could completely focus on the difficult installation of the sloped curtain wall and patterned multi-sized glass. Long hours, weekend work and lots of overtime were needed to complete our schedule. Haley-Greer put our most seasoned curtain wall erectors on this high profile project to ensure top quality installation and a safe working environment.

"Over the last nine years, I have worked with Haley-Greer's Houston team. The team is always ready to motivate and move their teams to complete the difficult projects. More frequently we have seen the project complexities increase and schedules decrease and HGI is always ready to step in and make it work." **Steve Thomas, Anslow Bryant**

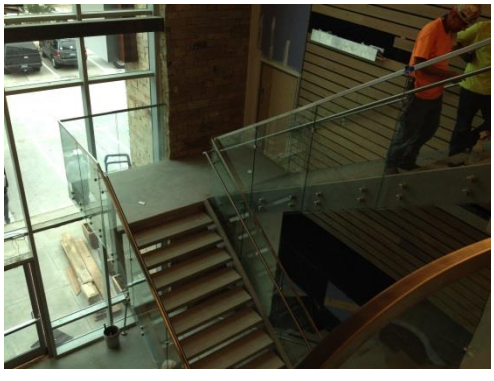
Special Obstacles/ Difficulties/ Challenges Overcome Completing the Project:

Glass: Multiple patterned silkscreen glass types had varying pie shapes and sizes. The glass patterns all had a "vine" silkscreen on them to go along with the look of the modern day version treehouse. Layout was crucial to matching all the pattern types. The other glass obstacle was the size of the glass (300-550 lbs.), which was all hand set in a very tight confined space. The triangular and trapezoidal shapes alternated from perpendicular to sloped glass walls.

Our job superintendent Joe Montoya commented that installing this glass was like working a jigsaw puzzle.

Sloped Curtain Wall: The curtain wall had 18 and 11 degree sloped walls along with straight walls right next to them. This made our layout extremely difficult due to the intricate corner joints that had to be installed perfectly in order for our glass patterns to match. The mullions were spliced and mitered which also hindered our layout and installation. We had to coordinate the curtain wall with the concrete structure for a proper fit.

Interior Staircase and Handrails: Our scope included the interior staircase and handrails. The staircase had three platforms going up the building. We encased the concrete stairway with glass and all connections had to be pre-measured before anchored. All glass was at an angle. The glass had to be field measured with notches to transition between each concrete platform level. All anchor points had to be lined up perfectly. This was extremely challenging with all the other trades working on the interiors along side us. The stainless steel handrails had to be field welded onsite.



Elliptical/Sloped Skylight: There is a skylight on the roof top garden that is made of pie shaped glass, metal trim and sealants. After the installation of glass, a special film was applied to the glass to decrease the amount of U.V. rays penetrating the office space below. All glass had to be set by hand in lieu of equipment. Exact layout and field measurements were required for error-free installation.

"Monkey Bridge": The project has a suspension bridge that connects the Treehouse to the corporate office in the building next door. Haley-Greer had to demo the existing curtain wall in order to access the area for the bridge to connect. We then had to engineer and install a modified curtain wall around the bridge penetration with a new glass door for access to and from the office building. All work had to be done at night since the office building was occupied along with the ongoing Treehouse schedule.

Conclusion: This is one of the most unique and prestigious projects we have had the honor to work on. The owner and design team helped create a Houston landmark that not only honors the environment but also demonstrates a beautiful and fully functional office and meeting space.