



GREEN BUILDING TOURS

February 18, 2011



Greater Harris County 9-1-1 Emergency Network Tom Bass Building Houston, Texas

LEED NC v2.02

91% Construction waste recycled

18% Energy usage savings

40% Less water used

LEED® Facts

GHC 9-1-1 Emergency Network
Tom Bass Building
Houston, TX

LEED for New Construction v 2.02
Certification awarded 2010

Silver 33*

Sustainable Sites 7/14

Water Efficiency 3/15

Energy & Atmosphere 2/17

Materials & Resources 6/13

Indoor Environmental Quality 11/15

Innovation & Design 4/5

*Out of a possible 69 points



PROJECT PROFILE

Greater Harris County 9-1-1 Emergency Network Tom Bass Building

Emergency Operations Center/ Administration Headquarters



PROJECT BACKGROUND

The Greater Harris County 9-1-1 Emergency Network is a separate governmental entity known as a communication district authorized to implement and administer 9-1-1 service in defined areas. This agency works with all jurisdictions and public officials within the territory providing a communication link between the citizens needing emergency assistance and the agencies who respond.

The Greater Harris County (GHC) 9-1-1 Emergency Network selected PGAL to design their new 9-1-1 facility and administration headquarters known as the Tom Bass Building. The 48,600 sf, mission critical facility including a Tier 4 Data Center is responsible for maintaining critical call center equipment for all 9-1-1 emergency calls handled by a total of 41 answering points (call taker locations) for 49 cities over a two county region. During normal operations the facility can accommodate up to 55 staff members and during an emergency the building can accommodate approx. 125 people including both GHC 9-1-1 staff and 9-1-1 call center personnel.

It was designed to be fully self-supporting for up to 10 days off the grid during a disaster with its own critical server rooms, power generation, water, food and sleeping quarters. The hardened building can withstand 150 mile/hour sustained winds that may occur during a hurricane or tornado, and is protected with state-of-the-art security, audio-visual and information technology systems all contained within one LEED Silver Certified facility.

GETTING TO GREEN

The owner's concern about being a good neighbor to the existing community evolved into the commitment to provide a community-friendly facility that bucked the usual design trend for civic buildings. Aesthetically pleasing for the community, staff and visitors, this civic building is a testament that government facilities can indeed be designed for functionality, public service, beauty and sustainability.

Did You Know.....

- The building utilizes 40% less water, saving 69,681 gallons /year - enough water for 15 people for one month.
- 25% of all the material used was purchased within 500 miles of the construction site translating into \$629,000 reinvested in our regional economy and results in less transportation cost and fuel consumption reducing the project's carbon footprint.
- The building saves 18% on energy usage - every 4-1/2 years, the energy savings will supply the building for an entire year.
- 91% of the construction waste and debris was recycled for incorporation into other materials and products equaling 8,428 cu yards of construction waste - enough trash to fill the entire first floor of the building (24,300 SF) up to a height of 9'.
- The building utilizes a roofing material that is 85% reflective. On an 85 degree day, the average heat gain difference between conventional asphalt roofing material and a reflective roof is equal to approximately 60 degrees Fahrenheit.
- The building contains more than 40 different products or materials that contain recycled content, including: structural steel, concrete, insulation, glass, gypsum board, ceiling tile, carpet and chain link fencing.

STRATEGIES AND RESULTS

Providing an essential component of warmth and atmosphere to create a calming and home-like environment during times of high stress was a chief design mandate. Green elements that support this include:

Indoor Air Quality (11/15): Low-emitting materials were specified for paints and coatings, carpet systems, composite wood, agrifiber products, adhesives and sealants used throughout the project. Individual controllability of lighting and thermal comfort allows occupants to utilize task lighting, light only those areas which are occupied and control thermal comfort via a raised floor system. The required warmth and comfort of the space was augmented by providing 75% daylighting into the space. Air quality is further enhanced by prohibiting smoking in the building..

Energy & Atmosphere (2/17): The HVAC system optimizes energy performance by 16.6%.

Materials and Resources (6/13): Onsite storage and collection of recyclables serves to reinforce the ongoing commitment of the client to maintaining a green facility.

Sustainable Sites (7/14): Site development included maximization of open space with 20% of the site dedicated to vegetated open area. Stormwater design was achieved through a detention pond at the rear of the property that also serves as an amenity. Alternative transportation includes bicycle storage and changing rooms, access to public transport and preferred parking spaces for fuel efficient vehicles. The Heat Island Effect was minimized through a light reflective roof. The building was located strategically on the site to minimize impact on bordering neighborhood and leave the site in as "natural" a state as possible. The portion of the site facing the street was left in an "undeveloped" state with pine/mulch ground covering and existing trees. This serves as a visual buffer to the street and also adds a further security layer for the building. The detention pond is located to the rear of the property to provide separation between the project and neighboring houses. The building was sited at the "sweet spot" of the property – with a buffer zone of clearance from the road and neighboring properties and to maximize the number of trees left intact.

Water Efficiency (3/5): Water efficient, indigenous landscaping reduces water usage by over 40% .

INNOVATION POINTS (4/5)

A wonderful element of the LEED Rating System is the category called Innovation in Design. These points reward the creative and "out of the box" solutions designers create to further green up their projects. Four Innovation in Design points were awarded for an active green housekeeping plan and exemplary performance on water efficiency. Additionally, the building features a self-guided permanent tour which features "stations" throughout the building which call out the sustainable features and how LEED points were attained and the effect/benefit those implemented features impart to the building.

"The team from PGAL was first rate. Our LEED Silver rating just tops off this successful project and we have a terrific building we are so proud of."

*- Lavergne Schwender
Executive Director*

Owner: GHC 9-1-1
Emergency Network

Architect: PGAL

Engineer: IA Naman (MEP);
PGAL (Civil); Walter P Moore
(Structural)

Contractor: Vaughn
Construction

Technology: PGAL

Landscape Architect: M2L

Commissioning Agent:
Rennell Associates

Project Size: 48,600 GSF
Construction Cost: \$16M

Photography courtesy of
PGAL Jud Haggard
Photographer (interior)
Ted Washington Photographer
(exterior)

ABOUT LEED

The LEED Green Building Rating System is the national benchmark for the design, construction, and operations of high-performance green buildings. Visit the U.S.Green Building Council's Web site at www.usgbc.org to learn more about how you can make LEED work for you. Support the local chapter of USGBC by visiting www.usgbc-houston.org