STATION DESIGN AWARDS FIREHOUSE SATELLITE GOLD

Houston Fire/EMS Station No. 84

HOUSTON, TX

Located in an industrial area of Houston with neighboring glass high-rise buildings and commercial strip shopping centers, the Houston Fire/EMS Station No. 84 was designed to respond aesthetically with modern qualities. Natural light is abundant throughout the facility, delivered to the interiors of the living and work spaces through large areas of glazing and clerestory windows above. Private outdoor spaces were created to allow for outdoor activities such as fitness, grilling and dining.

The new 14,717-square-foot station achieved USGBC LEED Silver certification and includes five bays to house fire and EMS apparatus. Walk-up visitors requiring EMS attention are treated in an evaluation room adjacent to the public lobby.

Living quarters accommodate approximately 16 firefighters per shift and include a modern kitchen and dining area, dayroom, an indoor-outdoor fitness area, six two-bed sleeping rooms, and separate captain and lieutenant suites. A separate locker room keeps wardrobes out of the sleeping rooms, thereby limiting personnel disturbance during shift change. A "Clean Room" keeps contaminated gear and equipment

Official Project Name: Houston Fire/EMS Station No. 84
Project City/State: Houston, TX
Date Completed: April 1, 2015
Fire Chief: Terry A. Garrison
Project Area (sq.ft.): 14,717
Total Cost: $6,181,734
Cost Per Square Foot: $420.04
Architect/Firm Name: BRW Architects
Website: brwarch.com
Design Team: Principal-In-Charge: Gary DeVries, AIA, LEED AP BD+C; **Project Manager:** Jeffrey Choyce, AIA, CSI; **Project Architect/CA:** Larry Watkins, AIA, LEED AP BD+C; **Project Designer:** Chris Sano, AIA, LEED AP BD+C; **Intern:** Darryl Rubscha

separate from the living quarters, while walk-off mats at living quarter entry doors limit debris entry.

The facility was designed not only to meet specific Station No. 84 program requirements and the Houston Fire Station Design Manual, but also to incorporate many environmentally conscious strategies. The palette of materials is consistent inside and out, providing a balance of color, texture and scale. A number of LED light fixtures provide longer life, less maintenance and more energy savings. In order to improve the efficiency of heating and cooling the station, a ground-source heat pump mechanical system is projected to cut energy costs in half by rejecting heat into the earth in the summer and extracting heat in the winter.

STATION DESIGN AWARDS

FIREHOUSE

SATELLITE SILVER

Portland Fire & Rescue, Fire Station 21

PORTLAND, OR

The design of Station 21 reflects the collective integration of the complexities of this waterfront LEED Gold facility. The extremely tight site resides directly below an elevated state highway, is constrained to the east by a riverfront esplanade, to the west by the river embankment historically prone to flooding, to the north by a park and to the south by the Hawthorne Street Bridge. These significant constraints informed the schematic layout and two-story station configuration, which doubles the size of the existing station. The project required the deconstruction of the existing station and the design of a new 8,400-square-foot rapid-response fire and rescue facility and boathouse to support river and land operations. The new station was elevated above the flood plain requiring over 300 feet of shoreline stabilization using injection grouting in addition to pile to support the station.

Key programmatic technical goals were to design a seismically strengthened, durable, low maintenance, gender-neutral facility with access to the river for marine rescue with improved security and reduced turnout times. Innovative lighting design was used for all building façades, including materials, openings, lighting levels on the interior and exterior to minimize the potential for accidental strikes from migratory birds commonly found in the area.

The required percentage for the arts was integrated into the design and provides a catwalk for viewing and monitoring river activity, window washing and sunshade on the western exposure. The artwork supports this effort by providing a screen comprised of a series of undulating metal panels inspired by ripples on the waterways and rainy weather that distinguish the environment of the Pacific Northwest. The work reflects the powerful elements of water, which is considered to be the antidote to fire and is yet the adversary to persons in need of rescue on the river.

Official Project Name: Portland Fire & Rescue, Fire Station 21
Project City/State: Portland, OR
Date Completed: Nov. 1, 2014
Fire Chief: Erin Janssens
Project Area (sq.ft.) 8,400
Total Cost: $3,700,000
Cost Per Square Foot: $440
Architect/Firm Name: TCA Architecture Planning Inc.
Website: tca-inc.com
Design Team: Fire Station Design **Specialist:** TCA Architecture • Planning Inc.; **General Architecture:** Whelton Architecture; **Structural Engineer:** KPFF; **Civil Engineer:** KPFF; **Mechanical Engineer:** Interface Engineering; **Electrical Engineer:** Interface Engineering; **Landscape:** 2.ink Studio; **Cost Estimating:** JMB Consulting Group

STATION DESIGN AWARDS FIREHOUSE SATELLITE BRONZE

Spring Fire Station No. 78
SPRING, TX

Fire Station No. 78 resulted from a collaborative approach between the design team, fire department leadership and the emergency services district, which funded the project.

The team approach among these three groups produced a fire station project that began as a repeat design of prototype plans from previous stations, and ended up as a truly unique facility in terms of exterior aesthetic and use of second-floor mezzanine space for functional programs, while maintaining the positive aspects of the prototype plan such as the large, open-concept of the dayroom and kitchen area, as well as the visual access all the way through the building, from the dining area to the apparatus bay.

To reach the final design, the design team produced numerous variations represented through digital 3D modeling and rendering. These images and video animations were shared interactively with leaders from both the fire department and the emergency services district to gain cooperative feedback and direction about the building composition, the site layout, the durability of materials and the overall aesthetic as enhanced by custom lighting design and accent paving areas.

Key aspects of site development include:
- Simple and efficient site layout and circulation complement the structurally efficient layout of the building.
- Naturally day-lit second-floor exercise area gives personnel the opportunity to momentarily find a quiet and semi-private space to relax and improve physical conditioning.
- Unique structural column design at building entry.

Enhancing features include:
- Restroom areas provide gender-equal, single-use facilities for flexibility in staffing and privacy for staff.
- State-of-the-art vehicle bay exhaust system, emergency generator and hurricane force rating.

Official Project Name: Spring Fire Station No. 78
Project City/State: Spring, TX
Fire Chief: Scott Seifert
Project Area (sq.ft.) 15,144
Total Cost: $4,232,354
Cost Per Square Foot: $280
Architect/Firm Name: Joiner Architects
Website: joinerarchitects.com
Design Team: Carl Joiner, AIA; Ricardo Martinez, AIA; **Construction Administration:** Chad Joiner; **General Contractor:** Brookstone; **Civil:** Jones and Carter; **MEP:** DBR Engineering Consultants; **Structural:** Matrix Structural

STATION DESIGN AWARDS FIREHOUSE SATELLITE BRONZE

Georgetown Fire Station No. 5
GEORGETOWN, TX

Georgetown's Fire Station No. 5 and Training Facility is the first step in a master plan to develop a public safety complex on a 20-plus-acre site within the recharge zone of the Edwards Aquifer, which is one of the world's most prolific artesian aquifers and that serves 2 million people and is home to many endangered species. Inspired by the Texas Hill Country vernacular, the design incorporates locally quarried limestone, stained Hardie lap siding, metal roofing and a covered front porch lined with stone columns. Elements such as curved roofs, steel brackets and red aluminum storefront windows give the station a refined yet comfortable look that sets the tone for future development of the site.

The design team worked diligently to meet the challenging requirements of the Texas Commission on Environmental Quality to protect the aquifer while strategically meeting city regulations. Several site layouts were explored to balance cost, maximize functionality and preserve the site's 80-plus Heritage trees while planning for maximum flexibility for the city's future complex.

The 8.4 acres of developed area consists of the 12,137-square-foot fire station, a 2,838-square-foot indoor/outdoor training classroom building with additional storage bays, a 1,799-square-foot four-story fire simulation burn tower, and large sand filtration and detention ponds to filter storm water.

The three-bay, pull-through station features an open kitchen/dining/dayroom, library, weight room, shop, individual bedrooms and private bathrooms. In addition to serving two officers and eight full-time firefighters, the station is designed to temporarily accommodate fire administration for 3-5 years until the Public Safety Building is built on the remainder of the site. Once vacated, the administration portion of the station will be converted to include a third officer's suite, a dedicated turnout gear room and a first-floor weight room, all with minimal renovation costs.

Official Project Name: Georgetown Fire Station No. 5
Project City/State: Georgetown, TX
Date Completed: Sept. 26, 2012
Fire Chief: Robert Fite
Project Area (sq.ft.): 16,774
Total Cost: $4,217,000
Cost Per Square Foot: $251.40
Architect/Firm Name: Brown Reynolds Watford Architects
Website: brwarch.com
Design Team: Principal: Mark E. Watford, FAIA, LEEP AP BD+C; **Project Architect:** Ray Holliday, AIA, ASLA, LI; **Architectural Designers:** Daniel Pesek, AIA, Hector Ochoa, Diana Smith; **Communications Coordinator:** Laura Pivonka, IESNA; **Civil:** O'Malley Engineers, LLP ; **MEP:** Jordan & Skala Engineers, Inc.; **Structural:** Gessner Engineering, LLC

Manhattan Fire Department Station 5

MANHATTAN, KS

Because "The Little Apple"—Manhattan, KS—continued to experience rapid growth, the Manhattan Fire Department needed to open two new fire stations. These stations were strategically placed to optimize coverage to underserved areas.

Station 5 was built in response to growth on the city's western edge and serves as the regional hazardous materials response team for the State Fire Marshal's Office. Station 5 was designed to respond aesthetically to the prominent master-planned golf course community where it is located. Many of the material selections and building forms are designed to reflect the quality of the buildings and upscale homes surrounding it.

The interior was designed to be warm and comfortable for the firefighters who live there. A trendy dayroom provides living space for crewmembers, along with a state-of-the-art kitchen, sleeping quarters for six, three private bathrooms, an exercise room, laundry equipment and personal storage areas. Other, more utilitarian components of the station include a decontamination room, a compressor room, a tool shop, an EMS storage room, a storage mezzanine and outside storage rooms—all with direct access to the apparatus bays. The building is also protected by a diesel generator backup power system, and the station has a sprinkler system. Additionally, Station 5 was designed to allow for expansion of the apparatus bays as well as the bunkrooms in the future.

Station 5 was designed with sustainability in mind. The main structure is a post-and-beam system with an envelope of structural insulated panels, creating an extremely tight, thermally efficient envelope. The building also incorporates efficient lighting strategies and controls, as well as a geothermal HVAC system.

Both new Stations—5 and 3—were designed in collaboration with Action Pact Design (formerly Anderson-Knight Architects). Stewart-Cooper-Newell Architects provided programming and schematic design consultation.

Official Project Name: Manhattan Fire Department Station 5
Project City/State: Manhattan, KS
Date Completed: Aug. 1, 2012
Fire Chief: Jerry Snyder
Project Area (sq.ft.): 11,400
Total Cost: $2,490,000
Cost Per Square Foot: $218.42
Architect/Firm Name: Action Pact Design and Stewart-Cooper-Newell Architects
Website: fire-station.com
Design Team: Architect of Record: Anderson-Knight Architects; **Consulting Architect:** Stewart-Cooper-Newell Architects; **Construction Manager:** Murray and Sons Construction Company; **Civil:** SMH Consultants, P.A.; **P/M/E:** LST Consulting Engineers, P.A.; **Structural:** BSE

Richland Fire Station No. 74
RICHLAND, WA

Perlman Architects collaborated with Architects West, providing full design services for the new Richland, WA, Fire Station No. 74. The project was the first Design-Build Delivery Method Project for the City of Richland. The Perlman/AW Team worked very closely with the contractor, subcontractor, sub-consultants and client representatives, creating multiple design options to ensure that the city and fire department had both functional and aesthetic options while providing flexible construction cost alternatives to ensure that the aggressive project budget was adhered to.

Major project challenges included: 1) coordination of site design with existing and future parking areas, roadways and utilities; 2) master plan for an integrated future training tower; 3) cohesive architectural vernacular integration with the adjacent existing Public Works Municipal Center and surrounding neighborhood, while maintaining its identity as a fire station; 4) extensive VE process/design options to help realize a fourth apparatus bay within the original proposed three-bay project budget; and 5) design and rough-in for future dispatch/communication system upgrades.

Efficient site/floor plan design, simple massing/material selections and efficient/sustainable building systems assisted in improving response times, increased durability and lowering maintenance cost while creating a prototype fire station design that is simple yet dynamic.

The new Richland Fire Station No. 74 represents the best in the Design-Build Delivery Method. True collaboration and open communication by all stakeholders was instrumental in achieving the city's budget expectations while enhancing the day-to-day function/operations and living environment for their firefighters for decades to come.

Official Project Name: Richland Fire Station No. 74
Project City/State: Richland, WA
Date Completed: June 15, 2015
Fire Chief: Thomas Huntington
Project Area (sq.ft.): 11,648
Total Cost: $2,640,000
Cost Per Square Foot: $227.00
Architect/Firm Name: Design Architect: Perlman Architects of AZ, Inc.;
Website: perlmanaz.com
Design Team: Design Architect/ Programming/Design: Perlman Architects of AZ, Inc., Ken Powers/ Erik Thomsen; **Architect of Record:** Architects West, Inc., Marcus Valentine