FIREHOUSE SDA Station Design Awards

WELCOME TO THE 2018 STATION DESIGN AWARDS

CHAIR OF JUDGING

Janet Wilmoth

Wilmoth grew up in a family of firefighters in a suburb of Chicago. Wilmoth, owner of Wilmoth Associates, worked with *Fire Chief* magazine for 27 years until it closed in 2013. She is currently a project director for Firehouse/Endeavor. Wilmoth currently serves on the board of directors for the Fire Emergency Manufacturers & Services Association.

Firehouse is pleased to present the fifth annual showcase of fire and emergency services facilities. Thirty-six fire stations and one training academy were submitted by 23 architecture firms from across the United States.

The purpose of the Station Design Awards is to identify trends and educate *Firehouse* readers through these new public safety facilities. The trends and innovations in fire, rescue and EMS also serve to demonstrate the work of architectural firms from across the country. With a national collection, costs and style vary greatly and depend on the region, budget, department size, responsibilities and communities served.

As each portfolio came in, I suspected this year would be one of the toughest for the judges—and I was right. Even with limited entries in a couple of categories, defining an award level involved multiple discussions and viewpoints. This year, the competition was extremely close.

We truly believe that every facility featured in this showcase is a "winner" for its department, personnel and community by offering significant improvements with a new or renovated station. The entries to the 2018 Station Design Awards, without question, raised the bar on fire station design and construction. This year's showcase of fire stations and a training academy are proof that the fire and emergency services are working toward building safer, healthier response facilities for their personnel.

The judges this year included two judges from last year, a deputy chief and two new architects. Judges were asked to review each entry and bring their top three choices in each category. No judge had an entry in the award program. During the judging process, conversations circled back to several topics identified as key areas in reviewing the entries and particularly for the finalists. Those areas (in no particular order) for which each entry was reviewed were innovation, flow, exhaust systems, life safety, decontamination and accessibility.

- Innovation was not simply design, but a unique approach to the use of space, materials and site.
- Flow referred to pattern of foot-traffic inside the station, particularly in response access to the apparatus bay.
- Exhaust systems, particularly in the bay area, was a critical discussion and not always obvious in photos.
- Life safety included location of fitness rooms, segregated turnout gear storage and in particular, second-floor exits. (Several two-story facilities had only one interior stairwell and no exterior second-floor exit.)
- Decon areas are designated areas for limiting contaminant exposure.
- Accessibility includes meeting the federal American with Disabilities Act (ADA) required of all public facilities.

Perhaps the most significant change to fire station design is the concept of Hot Zones, first introduced by Paul Erickson, principle, LeMay Erickson Willcox Architects, in a *Firehouse* article in August 2014 and presented at the 2015 Station Design Conference. (Hot Zone design is the separation of "hot" or contaminated areas from "cold" or living areas.) Erickson recalled how that presentation "stunned the crowd" and created a buzz. Subsequently, Erickson has presented the Hot Zone design concept to a variety of organizations and associations. Other architects have taken up the effort and are also researching ways to prohibit carcinogens and toxins from entering the living areas of fire stations and public safety facilities.

The judges agreed that the Career 1 Category Eau Claire, WI, Fire Station 10, by Five Bugles Design, was particularly noteworthy as its floor plan was "… the best decon area among all entries."

The Shared Facilities category had only one entry—the Montgomery County, MD, Public Safety Training Academy. The judges agreed that the category name should be changed to Training Facilities, and the facility was accorded a Silver Award.

Overall, each of the 37 entries this year were significantly advanced in providing a healthier, more gender-neutral and environmentally aware accommodation for firefighters and personnel. These changes are a credit to the educational programs and articles, as well as the efforts of architects and construction firms for sustainable, safer and healthier public safety facilities.

There's an old, frequently repeated adage that says, "The fire service is 150 years of tradition unimpeded by progress." This is certainly not the case when it comes to fire stations! Health and safety in fire stations has changed dramatically and is clearly evident in this 2018 Station Design Awards showcase.

If you are thinking about a new fire station, start your homework now. Study this collection of stations. Note what appeals for your department, and consider attending the 2019 Station Design Conference next May. Learn as much as you can before you start the process and, I promise, you will save time and money in your efforts to build a new station for your department.

— Janet Wilmoth, Special Projects Director

JUDGES

Johnny Fong, AIA, NCARB

Fong is a fire equipment operator/engineer of Engine 2 with the City of Reno, NV, Fire Department as well as the owner and principal of FireHouse Designs. He has a bachelor's degree in architecture from the University of California, Berkeley, and is currently certified by the National Council of Architectural Registration Boards (NCARB) and licensed to practice architecture in multiple sites. Fong has been judging fire station designs since 2002 and has authored several articles on design.

Stephen P. Kromkowski, AIA

Kromkowski is a principal architect for DLZ, an architecture-engineering firm based throughout the Midwest. He is specialized in the practice of fire station and public safety design. Kromkowski is a graduate of the University of Notre Dame and is a registered architect and interior designer in the State of Indiana, as well as nine other states. His 30 years of professional practice has included a full range of public safety project experience, ranging from new regional fire station and headquarters to small rural volunteer fire departments, as well as urban, career departments. DLZ's fire station designs have received national recognition from *Firehouse Magazine*, *Fire Chief*, and the 2017 F.I.E.R.O. Honor Award.

Robert Manns, AIA

Manns is a founding principal of Manns Woodward Studios and has over 15 years of experience in the design of first responder facilities. He holds both undergraduate and master of architecture degrees from The Catholic University of America. Manns has been the lead designer for more than 30 fire stations and training centers over the past five years. Recent awards include a Bronze Award from Station Design Awards for the Lutherville Volunteer Fire Company renovation. His article, "Anatomy of the Apparatus Bay," was published in the August 2017 issue of *Firehouse*.

Fire Marshal Laura McCarthy

McCarthy is the assistant chief and fire marshal for the Bloomington, MN, Fire Department. She has 28 years in the fire service, serving as firefighter, FMO, captain, district chief, training chief and assistant chief. McCarthy has 20 years in fire prevention/investigation division serving as fire inspector I and II, lead fire inspector and fire marshal. She is a graduate of Southwest Minnesota State University, Hennepin Technical College for Fire Science and Alexandria Technical College.

Deputy Fire Chief Scott W. Walker

Walker is the deputy chief for Addison, IL, Fire Protection District. He is a 28-year veteran of the fire service, serving as a firefighter/paramedic and promoting through the ranks to his current level as deputy fire chief. He holds a master's degree in management and organizational behavior from Illinois Benedictine University. During his time with Addison, Walker gained experience with construction of a new station and renovations of existing fire stations.

2018 STATION DESIGN ARCHITECTURE FIRMS

Bentley Architects + Engineers, Inc.
baeonline.com

Blalock and Partners
blalockandpartners.com

BKV Group
bkvgroup.com

BRW Architects
brwarch.com

CDR Maguire, Inc.
cdrmaguire.com

Charles Cunniffe Architects
ccaaspen.com

CR architecture + design
cr-architects.com

Five Bugles Design/Wendel
fivebuglesdesign.com

Jackson Brown Palculict Architects
jbparchitects.com

Kirkpatrick Architecture Studio
k-a-studio.com

LeMay Erickson Willcox Architects
lewarchitects.com

Mackenzie
mcknze.com

Martinez Architects
martinez-architects.com

Mitchell Associates Architects
mitchell-architects.com

Pacheco Ross Architects
pra-pc.com

PGAL
pgal.com

Saccoccio & Associates
sa-architects.com

Short Elliot Hendrickson, Inc (SEH)
sehinc.com

Stewart-Cooper-Newell Architects
Fire-Station.com

TCA Architecture Planning
tca-inc.com

TSK Architects
tska.com

Wold Architects and Engineers
woldae.com

ZBA Architecture
zbaarchitecture.com

CAREER 1 GOLD

Salt Lake City's newest fire station in nearly 30 years, Station 14 was desired to be on the forefront of operational and functional efficiencies so teams focused on the optimization of energy reduction in fire station design.

Salt Lake City is a committed leader on climate change and acts in ways that bolster the long-term vitality of its communities and the health of the planet. In addition to the operational requirements, the city required the new facility

Official Project Name: Salt Lake City Fire Station 14
Project City/State: Salt Lake City, UT
Date Completed: June 1, 2018
Fire Chief: Karl Lieb
Project Area (sq. ft.): 17,100
Total Cost: $7,325,500
Cost Per Square Foot: $428
Architect/Firm Name: Blalock and Partners
Website: blalockandpartners.com
Design Team: Design Architect/ Architect of Record: Kevin Blalock, Principal, Blalock and Partners; Fire Station Specialist Architect: Brian Harris, Principal, TCA Architecture + Planning; Structural: BHB Engineers; Mechanical: Van Boerum & Frank Associates; Electrical: Spectrum Engineering; Geotechnical: Terracon

Salt Lake City Fire Station 14
SALT LAKE CITY, UT

to achieve Net Zero Energy (NZE) entirely within the project's site area. In the facility's first five months of operation, it is "net positive," producing more energy than it consumes. The project is currently targeting LEED Gold certification.

Operationally, the station is a two-story, 17,100-square-foot, multi-company facility accommodating up to 12 fire and emergency personnel. To promote the department's mission of engaging the community, the design incorporated large expanses of glass to create a welcoming glow. Additionally, a flexible meeting room was created to be available for small community events, but secure for the station's use on a day-to-day basis.

The health and comfort of personnel was of paramount importance. The project incorporated Sauna-Ray units for detoxification after returning from intense fire emergencies. Heating and cooling at each dorm room is individually controlled and an operable window affords natural ventilation. A fitness area, outdoor dining and lounge terraces support physical and mental well-being.

Functionally, the station incorporates features such as clear separation and management of internal contaminates; state-of-the-art resilient back-up power supply tied into a 110-kW-PV-array; ground source heating and cooling; a flexible, steel structural frame to withstand a seismic event; triple-glazed, high-efficiency windows; and durable, easily maintained finishes to limit wear and allow for optimal station sanitization.

Brewster Fire/Rescue Department

BREWSTER, MA

Official Project Name: Brewster Fire/Rescue Department
Project City/State: Brewster, MA
Date Completed: July 23, 2018
Fire Chief: Robert Moran
Project Area (sq. ft.): 22,000
Total Cost: $9 million
Cost Per Square Foot: $409.09
Architect/Firm Name: CDR Maguire, Inc.
Website: cdrmaguire.com
Design Team: Architect: CDR Maguire, Inc.; Owner Project Manager: Pomroy Associates; Structural Engineer: Delphi Construction, Inc.; Mechanical, Electrical and Plumbing Engineers: Building Engineering Resources, Inc.; Landscape Architect: Diane Soule & Associates; Cost Estimators: Construction Cost Engineering

A feasibility study for the Brewster Fire/Rescue Department evaluated the interior program design requirements to accommodate current and future departmental needs. From that study, the design team ultimately recommended that the town build a new fire headquarters behind the existing facility to meet current needs and provide for future department growth.

Being a turn-key operation, the construction had minimal impact on the daily station operations.

The facility was built to be compartmentalized with administrative and operational areas, including apparatus bays, support spaces, administrative offices and an emergency operations center (EOC)/training room located on the first floor and firefighter living quarters, dayroom, kitchen and fitness room occupying the second floor.

All of the second-floor areas have direct access to the apparatus bays, minimizing internal response times and therefore allowing a more rapid response and deployment of emergency vehicles. To minimize the building height and construction costs, the second floor did not extend over the apparatus bays.

Being a fire/rescue department, the organization required space and training aids for fire- and emergency medical-based classroom and hands-on training sessions. The first-floor training room is accessed by a stairway off the main lobby and can be used after hours without having to access the rest of the facility. Sufficient classroom space with WiFi capabilities and state-of-the-art presentation resources was a high priority for department administrators.

Fire department directives for hands-on training facilities included a three-story training tower with a standpipe system, an external concrete pad to support the installation of a roof ventilation training prop, a training mezzanine with a built-in confined space prop, a smoke room for search exercises, a training wall with window access for bail-out and ground ladder instruction, and space to conduct hose advancement and firefighter survival/mask confidence training.

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CAREER 1 BRONZE

Bryan Fire Station No. 2

BRYAN, TX

The City of Bryan, TX, is proud of its history and is continuing to revitalize areas to tell the wonderful story of Bryan's past. This new, 23,082-square-foot, five bay fire station pays homage to its past with historical context and traditional materials while incorporating the latest technology and design to enhance the safety and response time of the personnel. Finishes were carefully selected for their durability, while thoughtful detailing of these materials respect the precedence set by the revitalization of downtown Bryan.

The station's five 100-feet-deep, pull-through apparatus bays split the firefighters' living quarters and the public administration offices. Two separate entrances serve each side of the station, giving firefighter staff privacy by directing the public to the administration portion of the building.

Building comradery among the staff is a key foundation to the Bryan Fire Department's philosophy; therefore, the firefighter living area was designed to encourage staff interaction. The station sleeps a staff of 17 in semi-private dorm rooms, and boasts a beautiful open concept dayroom, dining and kitchen area filled with natural daylight. Even the weight room has storefront walls further connecting the staff in all parts of the facility. The lieutenant and battalion chief offices, located by the entrance, have sliding windows into the lobby to help direct any visitors.

The administration side houses both the building inspectors and the fire marshal staff for the city. An interview room adjacent to the lobby and secured evidence storage help the fire marshal with ongoing investigations. The City's entire fire department is served by the large two-story quartermaster storage area. It is equipped with an elevator lift to provide a safe means of transport of the uniforms and supplies to the second story. Meanwhile, bunker gear and PPE are stored in two separate rooms to prevent contamination. Additionally, a large multi-purpose room is available for both community meetings as well as typical staff training.

Official Project Name: Bryan Fire Station No. 2
Project City/State: Bryan, TX
Date Completed: June 1, 2018
Fire Chief: Randy McGregor
Project Area (sq. ft.): 23,082
Total Cost: $6,382,810
Cost Per Square Foot: $276.53
Architect/Firm Name: Brown Reynolds Watford Architects
Website: brwarch.com
Design Team: BRW Architects: Mark E. Watford, FAIA, LEED AP BD+C, Founding Principal; Ray Holliday, AIA, Managing Principal; Jennifer Bettiol, Project Manager; Marcus Gibbon, Designer; Garrett Barker, Designer; Jordan & Skala Engineers; Strand Associates Inc.; Gessner Engineering, LLC.

Albany Fire Station 11

ALBANY, OR

Albany's Fire Station 11 was 66 years old, and didn't meet the current building code, ADA accessibility requirements or energy code, and lacked the space and flow to meet operational needs. Extensive water infiltration problems and the threat of building collapse during a major earthquake meant something needed to be done to improve the headquarters station.

The resulting facility provides a new home to Albany firefighters, with eight drive-through apparatus bays, including one for the water rescue team; living quarters; and fire department administration offices previously housed at City Hall. The station's large community room is designed to flexibly accommodate several different uses, such as safety seminars, training and meetings, and it can serve as an emergency operations center as needed.

A central project goal was to create an efficient and healthy work environment for the growing and diverse staff stationed in it. The design team focused on both operational requirements and providing a high degree of livability. In addition to a spacious kitchen and common area, there's a second-floor deck for barbeques and open-air relaxation, with a planter wall providing privacy and greenery. There's also a landscaped outdoor plaza with seat walls underneath trees.

Sustainable elements include a photovoltaic solar array, strategic natural daylighting, and an on-site storm water retention system. Lumber reclaimed from a prior structure on the site is used throughout the station, including in a large dining room table crafted by Pacific Northwest furniture makers.

The new building takes every opportunity to respect and honor the department's long history. The department's original bronze bell, dating from 1877, stands by the main entrance. A renovated 1927 American LaFrance fire truck, which served Albany for much of the last century, is on display, while the original pole was preserved and still in use.

Official Project Name: Albany Fire Station 11
Project City/State: Albany, OR
Date Completed: Oct. 6, 2017
Fire Chief: John Bradner
Project Area (sq. ft.): 24,375
Total Cost: $7.4 million
Cost Per Square Foot: $303.59
Architect/Firm Name: Mackenzie
Website: mcknze.com
Design Team: Mackenzie: Jeff Humphreys, Principal-in-Charge, Director of Architecture; Steven Tuttle, Landscape Architect; Josh McDowell, SE, Director of Structural Engineering; Kim Doyle, Interior Designer; Brent Ahrend, Assist. Dept. Head of Transportation Planning; MEP Services: Interface Engineering, Inc.; General Contractor: Gerding Buildings LLC.

Chippewa Falls Fire & EMS Station No. 1

CHIPPEWA FALLS, WI

Official Project Name: Chippewa Falls Fire & EMS Station No. 1
Project City/State: Chippewa Falls, WI
Date Completed: May 1, 2017
Fire Chief: Mike Hepfler
Project Area (sq. ft.): 20,500
Total Cost: $3,850,000
Cost Per Square Foot: $187
Architect/Firm Name: Steve Gausman/ Five Bugles Design, a division of Wendel
Website: fivebuglesdesign.com
Design Team: Five Bugles Design: Robert Krzyzanowski, Program Manager; Ed Mishefske and James Schmidt, Fire Services Specialists; GIS: GRAEF; Civil: Advanced Engineering Concepts; Structural: Northland Consulting Engineers; Mechanical, electrical and plumbing by MEP Associates; Interiors by Laurie Zadra of LZ Designs

In preparation for a new central fire station for the City of Chippewa Falls, WI, the design team worked with the fire department to complete a Space Needs Analysis, which helped city leaders understand the functional requirements of the fire department and how they were operating out of a building one-third the size of what they needed.

After completion of a GIS site location study, it was determined that the new facility would be located on a parcel of land on the southeast corner of the city, while transforming the existing central station into a satellite station. The new facility includes a training room capable of seating over 50, a training tower to allow for on-site training of personnel, full living quarters and all administrative support located in one facility.

The Northwoods-themed building design fit the City of Chippewa Falls and the community's vision of what their fire station should look like. Approaching the front of the facility from the parking area, the original fire bell from 1892 sits on a cast stone pedestal, refurbished by the staff and still functioning to this day. In the lobby, a bronze statue dedicated to the fire service sits centered in the space.

The living quarters are complete with kitchen, dining, day and exercise rooms, as well as gender-neutral toilet/showers and five dorm rooms.

The apparatus bay provides six 20-feet-wide by 80-feet-long bays, one of which was bid as an alternate bid to the project, maximizing the budget's potential. All glass overhead doors, as well as glazing on the west wall, allow for natural lighting throughout the bays, while allowing the visiting children to see their everyday heroes hard at work.

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CAREER 1 NOTABLE

Cottage Grove Central Fire Station

COTTAGE GROVE, MN

The City of Cottage Grove's new fire station replaces and consolidates two aging fire stations into one central station that supports the shift in operations from a paid-on-call duty crew to that of a full-time duty crew. The directive from city leadership to reduce response time informed the change to the full-time duty crew. The existing stations did not include sleeping spaces and needed updating. The solution created a consolidated state-of-the-art fire station that supported the philosophy and design criteria of the community and Cottage Grove firefighters. The final design created space that not only meets the needs of today and the coming decades but also reflects the history of the community and stands as a welcoming resource for the surrounding community.

Official Project Name: Cottage Grove Central Fire Station
Project City/State: Cottage Grove, MN
Date Completed: April 1, 2018
Fire Chief: Rick Redenius
Project Area (sq. ft.): 32,000
Total Cost: $8 million
Cost Per Square Foot: $250
Architect/Firm Name: Wold Architects and Engineers
Website: woldae.com
Design Team: Wold Architects & Engineers, Planning, Programming, Architecture, Mechanical/Electrical Engineering: John McNamara, Partner-in-Charge; Jake Wollensak, Project Manager; Matt Bickel, Fire Safety Planner; Paige Sullivan, Project Designer; Structural Engineering: BKBM Engineers; Civil Engineering: Anderson-Johnson Associates, Inc.

The station's design incorporated input from all users and stakeholders, ensuring that the design philosophy touched every aspect of the new station. The lobby is user-friendly and welcoming to the community, where a display showcases the legacy and history of the Cottage Grove Fire Department. On the glass wall surrounding the conference room, images document the development of the fire department logo over its tenure while retaining an open atmosphere. The station encourages flexibility by creating not only a balanced, open-office work environment but also adaptable spaces for training and fitness—a fully-equipped fitness room, classrooms and a training mezzanine—that plan for the future growth of the city and their fire operations.

The second story supports a full-time duty crew with seven dorm rooms, a laundry room, four bathrooms, and a changing/locker room space. The space also features a full kitchen with expansive windows for daylighting, lounge space outfitted with an entertainment system, and a terrace patio with outdoor seating and space for grilling that overlooks the open prairie landscape beyond the station.

Eau Claire Fire Station No. 10

EAU CLAIRE, WI

The City of Eau Claire needed a new satellite station to replace existing Fire Station No. 10 on the city's East Side. The design team used a comprehensive GIS study to review potential site locations, with a selected site that was densely vegetated, but was known to be a former waste disposal area in the early 1900s.

Based on historic topographic maps, there was a ravine at the proposed site, which locals used to fill with various materials. Geo-technical data indicated that half the station could be placed in the upper northwest corner of the property and still be located in virgin soils, while the other half of the station would need excavation to depths of 30 feet to remove these materials. A phase 2 environmental site assessment was completed, indicating a passive vapor system be installed under the slab of the building. In the fall of 2017, construction began.

When entering the main entrance, in the vestibule sits a display area complete with historical information about the department, a lobby and a training room that can be used by various other groups but still remains secure from the rest of the department with a watch office looking over the apparatus approach.

The living quarters are complete with kitchen, dining, day and exercise rooms, as well as gender-neutral toilet/showers and six dorm rooms. The new station includes five drive-through bays, of which two were bid as an alternate bid to the project. The apparatus bay support area includes a maintenance room, SCBA work room, EMS storage and a state-of-the-art decontamination area, with segregated gear storage, gear laundry, decontamination showers with steam abilities and a clean laundry area.

Official Project Name: Eau Claire Fire Station No.10
Project City/State: Eau Claire, WI
Date Completed: July 1, 2018
Fire Chief: Chris Bell
Project Area (sq. ft.): 19,400
Total Cost: $4,130,000
Cost Per Square Foot: $213
Architect/Firm Name: Steve Gausman/Five Bugles Design, a division of Wendel
Website: fivebuglesdesign.com
Design Team: Five Bugles Design: Robert Krzyzanowski, Program Manager; Ed Mishefske and James Schmidt, Fire Services Specialists; GIS: GRAEF; Civil: Advanced Engineering Concepts; Structural: Northland Consulting Engineers; Mechanical, electrical and plumbing by MEP Associates; Interiors: Laurie Zadra, LZ Designs

City of Gainesville Fire Station #1

GAINESVILLE, FL

Official Project Name: City of Gainesville Fire Station #1
Project City/State: Gainesville, FL
Date Completed: July 17, 2018
Fire Chief: Jeff Lane
Project Area (sq. ft.): 22,259
Total Cost: $8,078,858
Cost Per Square Foot: $363
Architect/Firm Name: Gary Kranston, Project Manager/Architect of Record, Bentley Architects + Engineers, Inc.
Website: baeonline.com
Design Team: Kyle Cartier, MEP, Sims Wilkerson Cartier Engineering; Jennifer Ramski, Interior Designer, Ramski & Company; E.J. Bolduc III, Landscape Architect, CHW Professional Consultants; Jessie Ladson, Project Manager, Gilbane Building Company; Fred Muscatello, LEED Commissioning Agent, FCM Engineering; JoAnne Rice, Deputy Chief, Project Manager, Gainesville Fire-Rescue; Reid River, Project Manager, COG

Fire Station #1 is a new two-story, 22,259-square-foot facility located on S. Main St. just across the street from its previous home. The station serves as a gateway to southeast Gainesville.

The station was built with future growth in mind, but currently houses 12 firefighters and five emergency response apparatus. The health and safety of the firefighters was an integral part of the design process, with attention to safety, controlling contamination, enhancing firefighter training and encouraging physical fitness. The station features a state-of-the-art paging system with individual dorm paging units to reduce alarm fatigue, has an extractor to clean bunker gear, and uses a Safe Air Vehicle Exhaust Filtration System to extract the diesel exhaust from the bays.

Other station features include a three-story training tower, three fire poles, three double-length apparatus bays, two single-length bays, a receiving lobby, an EMS patient treatment area, a community training room, a physical agility room, a kitchen, a briefing room, offices and decontamination room.

In order to keep our firefighters safe and operational during Florida's windy weather, the station is designed with concrete block and steel and reinforced aluminum frame windows with impact-resistant glass. The station was built to a LEED 4.0 Silver Standard.

Site features include a three-story attached training tower, a separate supply and equipment and trailer storage facility and visitor parking with electric vehicle charging stations and a full load natural gas generator.

The station represents a continuous legacy of service that dates back to the 1800s. The former Station #1 was built in 1965 and it replaced the city's first brick station built in 1903, near the former federal building. The dedication stone from the historic structure was recovered several years ago and is now on display in the fire station's lobby.

Plainfield Fire Territory Station No. 122

PLAINFIELD, IN

The Plainfield Fire Territory Station No. 122 is the third of four stations designed by CR architecture + design in partnership with the Town of Plainfield, IN. Each station shares a timeless design and contemporary exterior that matches the local community aesthetics and unites the department's identity through the varied use of brick masonry, metal panels and glass. A desire for the station to feel more like a residential space inspired the "Industrial Loft" design concept for Fire Station No. 122, which blends the comforts of home with the contemporary exterior by emphasizing clean lines and the use of industrial materials, such as epoxy, metal and wood. The station was also designed with sustainable initiatives in mind.

The two-story station includes 12 individual dormitory spaces on the second floor, with a fire pole accessing the three drive-through apparatus bays. The first floor features additional living space, including a fitness room, study, media room and full-service kitchen with dayroom, as well as office and conference room facilities and the Dispatch Center. Maintenance and storage areas are crucial to the upkeep of equipment and vehicles, so shop space and EMS and SCBA storage space were all incorporated into the design to address this need, as well as dedicated turnout gear storage space.

Training is paramount to a firefighter's success in the field and CR's Training by Design program fuses training capabilities into the station design, ultimately saving the department cost and time. On-site training spaces include a training mezzanine for ladder evolutions, rope training and confined space training, as well as a training tower for hoseline evolution drills, repelling and stokes basket training.

Official Project Name: Plainfield Fire Territory Station No. 122
Project City/State: Plainfield, IN
Date Completed: March 31, 2018
Fire Chief: Joel Thacker
Project Area (sq. ft.): 20,418
Total Cost: $4.4 million
Cost Per Square Foot: $215.50
Architect/Firm Name: CR architecture + design
Website: cr-architects.com
Design Team: David Arends, Principal in Charge, CR architecture + design; Design Team: CR architecture + design

Russellville Central Fire Station

LITTLE ROCK, AR

Official Project Name: Russellville Central Fire Station
Project City/State: Little Rock, AR
Date Completed: Jan. 23, 2018
Fire Chief: Terry K. Slone
Project Area (sq. ft.): 24,849
Total Cost: $5,801,754.49
Cost Per Square Foot: $233.48
Architect/Firm Name: Jackson Brown Palculict Architects
Website: jbparchitects.com
Design Team: Russellville Fire Department; Architects: Jackson Brown Palculict Architects; Civil/Landscape Architect: Crafton Tull & Associates; Structural Engineer: Engineering Consultants, Inc.; Mechanical Engineer: Innovated Solution Group Incorporated; Electrical Engineer: Lucas Merriott and Associates; General Contractor: Van Horn Construction; Photographer: Tim Sitler

The new central station for the Russellville Fire Department was designed to meet the function needs of the department and act as a catalyst the downtown re-development.

Complying with the city's downtown masterplan, the facility was designed into the context of the downtown historic buildings as a three-story station on a zero lot line site. The design stitches back together the downtown fabric that had been frayed after years of sprawl and disuse. New streetscaping accommodates vehicular, bicycle and pedestrian circulation and couples the site to Arkansas Tech University and a bustling downtown historic district.

The building's programs are divided by floors and connected through stairs, an elevator and fire poles. This vertical circulation is designed to minimize response times and decrease the tracking of contaminants into the living and working environment. The grade level contains the main and auxiliary apparatus rooms, training room, equipment spaces and offices. The second floor houses the firefighters' bunk rooms, a dayroom, a kitchen, a gym and a small exterior dining patio. The third floor serves the administration and includes offices, a large collaborative work space, a conference room and storage. Due to the limited site, a large roof deck was designed to provide an outdoor living space.

Extensive façade studies were completed on the historic downtown facilities; the lessons and proportions learned were applied to the new station to seamlessly integrate into the fabric of Russellville. The exterior of the building is a combination of masonry and architectural composite metal panel dividing up the massing, and windows allowing natural light into the living spaces. The building stands as a modern interpretation of the existing historic buildings.

The Russellville Central Fire Station is a state-of-the-art facility designed to support the fire department in its service and protection of the City's residents and businesses.

FIREHOUSE SDA Station Design Awards

CAREER 1 NOTABLE

Spokane County Fire District #4 – Fire Station #41

DEER PARK, WA

Official Project Name: Spokane County Fire District #4 – Fire Station #41
Project City/State: Deer Park, WA
Date Completed: June 30, 2018
Fire Chief: Randy Johnson
Project Area (sq. ft.): 31,670
Total Cost: $6,398,264
Cost Per Square Foot: $202.03
Architect/Firm Name: Mark King/ZBA Architecture, P.S.
Website: zbaarchitecture.com
Design Team: Owner: Spokane Fire District No. 4, Randy Johnson, Fire Chief; Architect: Mark King, ZBA Architecture; Civil & Structural: Chad Heimbigner, Coffman Engineers; Landscape Architect: Craig Anderson, AHBL; Mechanical: Alan Leech, Energy Control, Inc.; Electrical: Donald Nielsen, Summit Engineering

Fire Station #41 replaced a small three-bay station originally built in the 1980s. Spokane County Fire District #4 outgrew this facility, making operations difficult.

Finding a site for the new station was challenging. After researching multiple sites in the area with regard to response times and access, it was suggested by the mayor to consider Perrins Field, a city park across from city hall. This site was one block from the current fire station and was perfect for the new fire station, as access was ideal and response times would be better than the current location. Additionally, this was also the site of the City Community Center building, which was once used as an annex building to the high school in the 1920s. The mayor communicated to the fire chief that this building was not serving the city any longer due to its age and accessibility challenges; thus, the site of the new Station #41 was established.

A design charrette was held to establish the parameters for the new fire station. These attendees included fire department personnel, a citizen advisory committee, city officials and the design team. From this event, the new Fire Station #41 was derived.

The new station has five drive-through bays, support spaces, living and sleeping quarters for 16 fire personnel, a triage room located off the main entry to accommodate walk-in patients, a new community center open to the public, and administration offices for the fire department.

The Tri-Cities—consisting of the Cities of Kennewick, Richland and Pasco, WA—is one of fastest changing regions in the state, not just in population, but in ethnic, educational and economic diversity. To support the anticipated growth, in 2014, a fire station design manual, including scalable prototype facilities, was developed to provide regional station consistency. The prototype station allows for flex-space within the stations to address programmatic diversity and individual departmental specialty needs, and is expandable to include community rooms, additional bays and sleeping rooms based on the demands of each target response area.

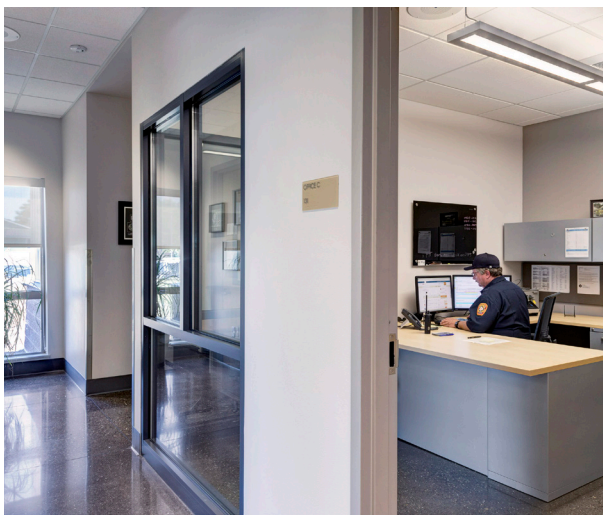
Station 5 is the second station to be constructed based on the manual, with several more stations in the queue. While it is difficult to place a new station in an existing neighborhood, the prototype allows for scalability by using a kit of parts with material and massing change, so it can fit within institutional, commercial and residential settings while maintaining a civic presence.

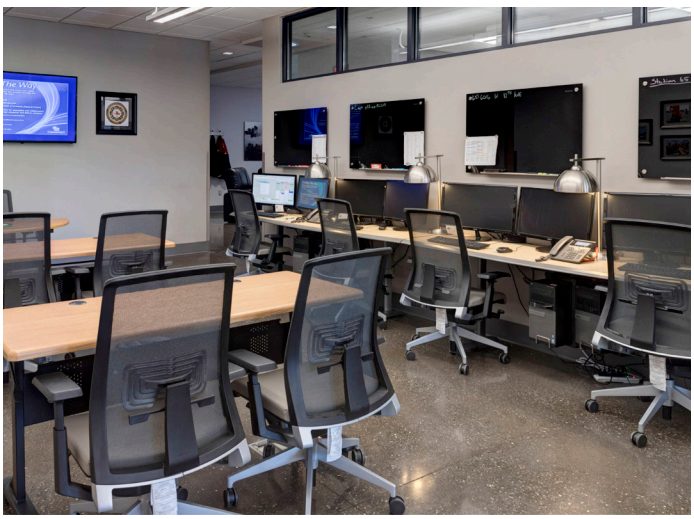
The public/crew side of the station includes core features such a secured lobby with an adjacent space that is convertible to an aid room, community police office or general office expansion, a community meeting/fire department flex space, individual sleeping rooms, gender-flexible shower rooms, a physical fitness area opening to an exterior covered area shared by the dining area for outdoor use, a "clean" laundry room, and easily maintained polished concrete floors.

Kennewick Fire Station 5
KENNEWICK, WA

Official Project Name: Kennewick Fire Station 5
Project City/State: Kennewick, WA
Date Completed: Aug. 1, 2016
Fire Chief: Neil Hines
Project Area (sq. ft.): 12,556
Total Cost: $3,269,515
Cost Per Square Foot: $260
Architect/Firm Name: TCA Architecture Planning Inc.
Website: tca-inc.com
Design Team: TCA Architecture Planning: Brian Harris, Principal in Charge, Architect of Record, and Jason Warner, Project Manager; Structural Engineer: Coughlin Porter Lundeen; Civil Engineer: Harms Engineering; Mechanical Engineer: Interface Engineering; Electrical Engineer: Interface Engineering; Landscape Architect: Heritage Professional Landscaping; Head Cost Estimator: Robinson Company

The drive-through apparatus room, with side-acting doors, includes decontamination and cleaning facilities connected to a turnout gear storage and drying room, access-controlled delivery room with rated O_2 storage, and a restroom to prevent cross-contamination. Unique to the prototype is the ability to add airlocks between the apparatus room and living area and the ability to flip support functions across the bay based on departmental cross-contamination zoning strategies.





Fire Station No. 2

DENTON, TX

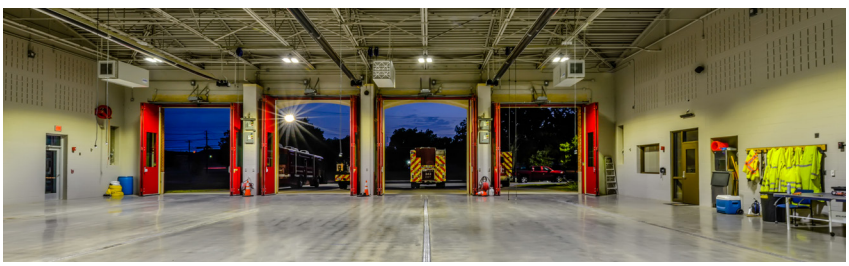
Fire Station No. 2 is built on a heavily wooded site in a residential area. The goal was to retain as many of the trees as possible and incorporate them into the design where it made sense. The design team worked closely with the engineers and the city in following the city's tree ordinance to maintain as much of the tree canopy as feasible. This also added points to the city's goal of achieving LEED certification for this station.

The design goal of the project was to create a prototype station that could be duplicated with modifications to fit other available property in the city. The idea was to "put the space where they needed it," and with the help of a very involved design committee from the fire department and city, an understated yet practical design evolved that fit extremely well in the existing neighborhood.

Official Project Name: Fire Station No. 2
Project City/State: Denton, TX
Date Completed: Jan. 16, 2017
Fire Chief: Robin Paulsgrove (ret.)/ Kenneth Hedges
Project Area (sq. ft.): 14,040
Total Cost: $4,769,278
Cost Per Square Foot: $340
Architect/Firm Name: Kirkpatrick Architecture Studio
Website: k-a-studio.com
Design Team: Kirkpatrick Architecture Studio: David M. Robinson, AIA LEED AP BD+C, Lead Architect; Structural Engineer: L.A. Fess Partners; Mechanical/Electrical/ Plumbing: TLC Engineering; Civil: MJ Thomas Engineering; Landscape Design: Christopher Russell

Design features include four double-stacked apparatus bays, sleeping quarters for a crew of six, plus an additional sleeping quarter for ride-alongs, a separate captain's suite, an exercise room sized for multiple users, a tiered dayroom to accommodate the large crew, a spacious kitchen for multiple cooks, and a great patio off the kitchen, set against the trees on the property. In addition, the facility has a commanding brick tower that is in keeping with the design of not only other fire stations, but other municipal buildings throughout the city.

Life safety features include pressurized vestibules between the bays and the living quarters with walk-off mats in the floor to catch airborne contaminants, and the laundry/EMS storage area also serves as a hardened Safe Room. A secured parking lot at the rear of the station is accessible with a coded keypad.



FIREHOUSE SDA Station Design Awards

CAREER 2 BRONZE

City of Conroe Fire Station #7

CONROE, TX

Official Project Name: City of Conroe Fire Station #7
Project City/State: Conroe, TX
Date Completed: April 27, 2018
Fire Chief: Ken Kreger
Project Area (sq. ft.): 11,000
Total Cost: $4 million
Cost Per Square Foot: $364
Architect/Firm Name: PGAL, Inc.
Website: pgal.com
Design Team: PGAL: Jeff Gerber, Principal-In-Charge/Project Manager; Ryan McLemore, Project Designer/Manager; Alysha Koenig, Interior Designer; William Pace, Civil Engineer; Mechanical/Electrical/Plumbing: Kenneth Roland, Engineer, DBR; Structural: Gabriel Garza, Engineer, Garza + McLain; Landscape Design: Edward Wong, Wong and Associates

The City of Conroe's new 11,000-square-foot fire station is a beacon of safety for the community and a healthy facility for the firefighters who live and work within.

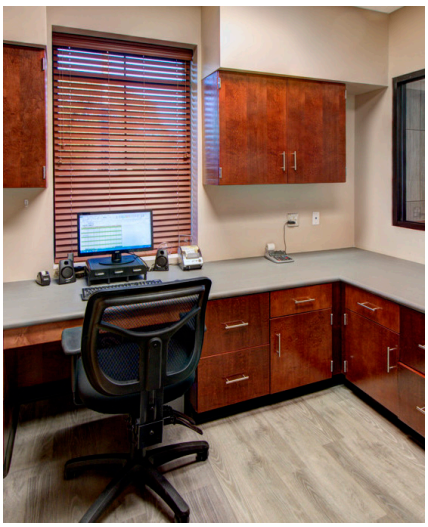
The exterior presents natural stone and brick tones that seamlessly respond to the neighboring communities and wooded areas. A custom station LED-backlit logo and large timber trusses with exposed fasteners celebrate the entrance to the facility.

The station includes three 80-foot, drive-through apparatus bays, featuring fire-engine red folding bay doors and an enhanced exhaust vent system. Inside, firefighters enjoy a large dayroom that opens to a full kitchen built around a stainless-steel island. Sleeping quarters with built-in desks and storage lockers and a full fitness center help provide the comforts of home to the staff.

A mezzanine level is also available to accommodate future expansion.

Beaufort Fire Station No. 1

BEAUFORT, NC



Downtown Beaufort's historic district buildings define a character of mixed Roman and early-American architecture. The architects' focus and design intent was to blend the new fire department building with the old town feel and building character, but with a twist of a modern material and contemporary look to express the fast and growing population and progress of the city, which then makes the building character transitional.

The main focal point of the new building is the 30-foot main entry tower; it defines the old downtown feel and character, and projects the strong leadership and stability of the town. Arches, keystones, cast stones and clerestory windows are some of the architectural details that were incorporated to give more historic character to the building.

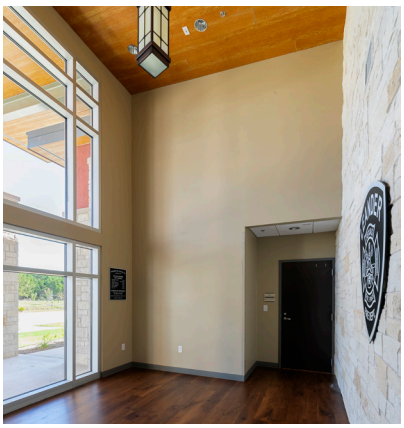
The facility is designed to last 50-plus years, and can expand to add bays or sleep rooms as needed.

Reducing the exposure of contaminants to firefighters was made a priority early in the design process, so a Hot Zone layout was incorporated into the floorplan.

Official Project Name: Beaufort Fire Station No. 1
Project City/State: Beaufort, NC
Date Completed: Feb. 1, 2017
Fire Chief: Larry Fulp
Project Area (sq. ft.): 12,784
Total Cost: $3,150,000
Cost Per Square Foot: $246
Architect/Firm Name: Stewart-Cooper-Newell Architects
Website: Fire-Station.com
Design Team: James Stumbo, AIA, Project Architect, Stewart-Cooper-Newell Architects; Jody Jackson, Project Manager; Ren Ramsey, Construction Administrator

Leander Fire Station No. 4

LEANDER, TX



With the goal of responsibly using taxpayer money as a driving force, every aspect of Leander Fire Station No. 4 was designed to meet a high standard both functionally and aesthetically. While the striking shed roofs offer a contemporary look, they also direct water away from the building, reduce heat gain, and create covered porches to symbolize the Southern hospitality of the adjacent developing residential area. Similarly, the locally quarried limestone and stucco cladding are both timeless in appearance and durable in its application.

Official Project Name: Leander Fire Station No. 4
Project City/State: Leander, TX
Date Completed: Aug. 22, 2017
Fire Chief: Bill Gardner
Project Area (sq. ft.): 8,865
Total Cost: $3,998,554
Cost Per Square Foot: $451
Architect/Firm Name: Brown Reynolds Watford Architects
Website: brwarch.com
Design Team: BRW Architects: Mark E. Watford, FAIA, LEED AP BD+C, Founding Principal; Ray Holliday, AIA, Principal In Charge; Jennifer Bettiol, AIA, Project Manager; Jackson Wells, Designer; Dianne Jones, Designer; Engineering: Dawson Van Orden; Gessner Engineering LLC; American Constructors

This 8,800-square-foot fire station serves three shifts of seven people, and its simple floor plan allows for swift travel from any location in the station to the apparatus bay. Staff is given added privacy with sleeping quarters located at the rear of the station, while the entry and offices are open to visits from the public. In line with the overall goal of efficiency, the dining room, strategically placed between the lobby and kitchen, can quickly be converted into a training room or conference room for either the staff's or the community's use. The station's watch room allows the staff to write reports while surveilling the entry and apparatus bays, enabling them to easily see if a visitor is approaching the station.

A turnout room on the far side of the apparatus bay keeps contaminates out of the living portion of the station, while airlocks help to further separate the living side from carcinogens in the apparatus bay. The bays' exhaust fans completely extract and replenish the air in fewer than seven minutes and are on a three-minute delay to ensure that fan noise does not interfere with the alerting system speakers.

The team responsibly created an efficient building the entire community would be proud of for decades to come.

Little Elm Fire Station No. 3

LITTLE ELM, TX

Official Project Name: Little Elm Fire Station No. 3
Project City/State: Little Elm, TX
Date Completed: Feb. 1, 2018
Fire Chief: Brian Ranch
Project Area (sq. ft.): 14,013
Total Cost: $5,049,083
Cost Per Square Foot: $360
Architect/Firm Name: BRW Architects
Website: brwarch.com
Design Team: BRW Architects: Gary DeVries, Principal-in-Charge; Stephen Hilt, Project Manager; Carol Kesler, Project Architect; Chris Sano, Project Director

Located on Navo Road, south of a recently constructed middle school, Little Elm Fire Station No. 3 is situated on two acres of cleared land donated by the Union Park (a large, adjacent residential neighborhood) development. The new fire station is oriented with three drive-through apparatus bays on the north end of the building, administrative spaces facing west toward Navo Road and living quarters facing east.

The building façades are a blend of masonry materials consisting of limestone, stained fiber cement, and stucco. Aluminum composite metal panels and floor-to-ceiling glazing accents the building's exterior. Emphasizing the public entry and creating a secure welcome entry for visitors, a steel and wood-framed canopy wraps the southwest corner of the building. Similar covered patio areas sit on the east side of the facility to provide shade for outdoor dining, grilling and physical training. The apparatus bays include glazed four-fold doors that are flanked by steel columns that support a canopy system to emphasize continuity throughout the entire building.

Prior to design of the fire station, it was expressed by the neighborhood developers to have the new fire station that would blend with a similar style to the neighborhood as well as maintain a distinct identity from residential development. The architects presented a design concept that captured their vision to the neighborhood. The interior of the facility is an open concept from the dayroom, dining and kitchen areas, making the dayroom a central hub of the station living quarters. The kitchen quarters serve as another gathering space, with an island large enough for the entire shift to stand and work around when preparing meals.

FIREHOUSE SDA Station Design Awards

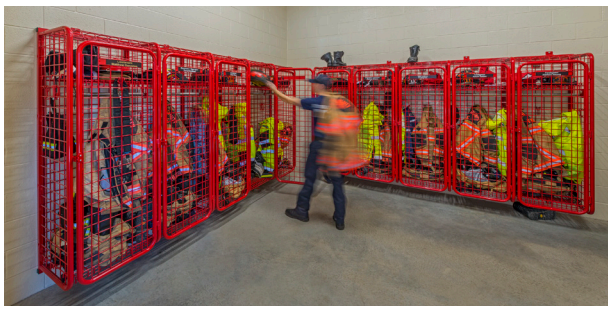
CAREER 2 NOTABLE

South Montgomery County ESD No. 8 – Station 11-6

SPRING, TX

The firm provided programming and full architectural services for South Montgomery County Emergency Services District (ESD) No. 8's newest ground-up Fire Station, No. 11-6.

The 8,500-square-foot station has two fully secured drive-through apparatus bays and houses five full-time department personnel. The living program includes a full kitchen, living spaces, sleeping quarters and administrative space. The masonry exterior and overall classic aesthetic of this fire station is complementary to the master planned surrounding area and provides an iconic nod to the community it directly serves.



The firm also provided design for related site work on the raw undeveloped, approximately 2.24-acre site near the intersection of Discovery Creek Boulevard and Tara Lane. Discovery Creek Boulevard is the main thoroughfare to and from the property, and now provides the fire trucks efficient access to the serviced community.

Official Project Name: South Montgomery County Emergency Services District (ESD) No. 8 Station 11-6
Project City/State: Spring, TX
Date Completed: Aug. 23, 2017
Fire Chief: Robert Hudson
Project Area (sq. ft.): 8,500
Total Cost: $3.4 million
Cost Per Square Foot: $400
Architect/Firm Name: PGAL, Inc.
Website: pgal.com
Design Team: PGAL: Jeff Gerber, Principal-In-Charge/Project Manager; Gerri Gusler, Project Designer; Megan Houtchens, Civil Engineer; Mechanical/Electrical/Plumbing: Curt Jones, Jones Engineers; Structural: Bryan McDaniel, Structural Engineer, Innovative Structural; Surveying: Walter Sass, Weisser Engineering; Landscape Design: Michael Mauer, M2L Associates

FIREHOUSE SDA Station Design Awards

CAREER 2 NOTABLE

Truckee Meadows Fire Protection District Station #14

RENO, NV

Official Project Name: Truckee Meadows Fire Protection District Station #14
Project City/State: Reno, NV
Date Completed: May 18, 2018
Fire Chief: Charles Moore
Project Area (sq. ft.): 10,662
Total Cost: $5,403,310
Cost Per Square Foot: $506.78
Architect/Firm Name: TSK Architects
Website: tska.com
Design Team: TSK Architects: Pat Pusich, AIA, Principal-in-Charge; Vince Novak, AIA, Lead Designer; Marshall Cowan, AIA; Sheena Habibian; Structural Design: Forbes Engineering; Civil Design: CFA, Inc.; Electrical: Jensen Engineering; Mechanical: CR Engineering

Truckee Meadows Fire Station #14 is a new station site for the relocation of an existing station. The existing site, which was rural when initially built, was situated within a high growth area and, ultimately, it was surrounded by high-density shopping, which created significant traffic concerns for the fire district.

The new site for Station #14 was selected for its excellent access to the two major arterials for quick north-south and east-west access. It is also in close proximity to two elementary schools and, in particular, the county's only school for children with severe disabilities. The school is thrilled to have Station #14's paramedics literally less than two minutes away.

It sits on a 3-acre site with approximately half being dedicated to Station #14. The balance of the site is master planned for additional county functions with fire department administration, logistics and training classrooms being considered.

The original design of the fire station had a three-story training tower planned; however, there was significant public opposition to this element. It was removed from the project at the request of the neighborhood.

Clute Fire & EMS Station No. 1

CLUTE, TX

The land for the new Clute Fire & EMS station was donated to the city by the BASF Chemical Corporation, with the caveat that BASF could occasionally use the station's training room. Due to its occasional joint use with BASF, security and privacy of staff in the 15,122-square-foot station was a top priority.

The floor plan of the station is divided into five different secured zones. The first public zone allows visitors into the lobby tower where a receptionist can buzz them into the training corridor. This zone features public restrooms and a large training room that holds up to 60 people and is equipped to double as an Emergency Operation Center for the city as well as a secondary EOC for BASF. The next zone is the administration wing consisting of several offices and a conference room.

The semi-private living quarters zone is comprised of the kitchen, dayroom, dining room and staircases that allow access to the fourth zone. Five semi-private dorm rooms on the second floor make up the fourth private employee-only zone. Additionally, the second floor offers staff their own utility room, a second sitting area with TV and couches, locker rooms with showers, and additional storage.

The last zone is the apparatus bay and its support spaces. The bay can be accessed from either the administration wing or the semi-private living quarters and is comprised of three pull-through double-deep bays, as well as one single-stacked bay. Due to its distance from a major hospital, the station has a helipad on site to life-flight patients to hospitals in Houston.

The department's unique relationship with BASF allowed them to create a state-of-the-art facility that has enabled them to better serve their community for years to come.

Official Project Name: Clute Fire & EMS Station No. 1
Project City/State: Clute, TX
Date Completed: Feb. 9, 2018
Fire Chief: Mike Doucet
Project Area (sq. ft.): 15,122
Total Cost: $3,992,575
Cost Per Square Foot: $264
Architect/Firm Name: Brown Reynolds Watford Architects
Website: brwarch.com
Design Team: Clute EMS: Michael Waguespack, EMS Director; BRW Architects: Mark Watford, FAIA, LEED AP BD+C, Founding Principal; Ray Holliday, AIA, ASLA, Managing Principal; Daniel Pesek AIA, LEED AP BD+C, Project Manager; Nathan Brandt, AIA, Designer; Justin Hoermann, Associate AIA, Designer; Gessner Engineering, LLC

Harris County ESD 9 Fire Station No. 2

CYPRESS, TX

Official Project Name: Harris County ESD 9 Fire Station No. 2
Project City/State: Cypress, TX (Cy-Fair VFD)
Date Completed: May 1, 2018
Fire Chief: Amy Ramon, JD
Project Area (sq. ft.): 16,450
Total Cost: $6,041,988
Cost Per Square Foot: $367
Architect/Firm Name: Martinez Architects
Website: martinez-architects.com
Design Team: Ricardo Martinez, AIA, Project Manager/Project Architect and Justin Myers, AIA, Project Lead Designer

Fire Station No. 2 is part of an overall project that included the simultaneous design and construction of four separate new fire facilities. Station 2 shares the same floor plan as one of the other four stations, but the exterior design is vastly different to reflect the preferences of the department and to complement the local surrounding environment.

The site design allows for ample public and department parking, which are separated by proximity-sensor controlled security fence and gates. The layout also provides apparatus circulation to four double-deep drive-through bays, which are equipped with high-speed bi-fold doors.

The bay itself features a fully automated and hose-free exhaust removal system to remove carcinogens and other harmful gases. The ventilation is aided by large louvers over each bay door equipped with powerful exhaust fans. Additionally, high-volume low-speed fans encourage air-flow to the exhaust systems and improve the thermal comfort against the region's humid climate. Another feature of the NFPA 1581-compliant design is the location of the ice-maker within a climate-controlled, non-carcinogenic room.

Mezzanine space in the bay is utilized for additional storage, as well as for mechanical/electrical room space. Other ancillary functions off the bay include double-locked EMS storage equipped with stainless-steel surfaces, as well as a "wet" room utilized for post-call decontamination and the extractor for firefighter gear. The PPE room features direct exhaust and a negative air-pressure design, which further aids in the health-promoting measures considered in the facility's design.

The living side of Harris County ESD 9 Fire Station No. 2 features a community-accessible multi-purpose training room, access control, and efficient access from dorm areas to the apparatus bay. The dayroom, kitchen and dining areas are open-concept and provide space for report writing. Interior finish materials are durable and anti-microbial, including the polished/stained concrete floors utilized throughout the living area.

Klein Fire Station No. 8

SPRING, TX

Official Project Name: Klein Fire Station No. 8
Project City/State: Spring, TX
Date Completed: Feb. 8, 2018
Fire Chief: Josh Wenzel
Project Area (sq. ft.): 10,907
Total Cost: $3,619,825
Cost Per Square Foot: $332
Architect/Firm Name: Brown Reynolds Watford Architects
Website: brwarch.com
Design Team: Mark E. Watford, FAIA, LEED AP BD+C, Founding Principal; Ray Holliday, AIA, ASLA, LI, Managing Principal; Nathan Brandt AIA, Project Architect; Lesley Gaston, Project Coordinator, BRW Architects; Gessner Engineering, LLC.; Jordan & Skala Engineers; Strand Associates Inc.

Located in a residential neighborhood and staffed by a volunteer fire department, the new Fire Station No 8. was designed to fully maximize the county's tax revenue and to meet the community's long-term needs.

The simple wood-framed station was designed to be cost-efficient not only in up-front material cost but also in long-term life-cycle expenses. LED lighting was used throughout the facility along with a high-efficiency mechanical system and "water sense" water fixtures. The design team worked diligently to provide a water-tight and efficient building envelope, including a seamless roof with zero penetrations. Low maintenance and durable materials are used both on the interior and the outside of the station. The station is also equipped with the latest in emergency alerting technology, with fully automated access control, and Bluetooth-enabled speakers.

The station sleeps eight staff members in individual bedrooms and encourages camaraderie with its open concept kitchen/dining/dayroom and covered patio. Safety and function played major roles during design. The fully sprinklered building is protected by solenoid shut-off valves at the gas grill and stove. The valves are tied into the alerting system ensuring that all open flames are extinguished when the staff leaves the station.

The bay, which is separated from the living side of the station by airlocks, is designed to automatically turn over and replenish all air with exhaust fans three minutes after a call comes in. If a second call comes in during this time, the system automatically turns off, allowing staff to hear the new tones before restarting. A decontamination shower room is provided directly off the bay, allowing staff to clean up after a call without entering the living portion of the station and the turnout gear is protected from UV exposure in its own designated storage room.

FIREHOUSE SDA Station Design Awards

VOLUNTEER/ COMBINATION NOTABLE

Bainbridge Island Fire Station 21

BAINBRIDGE ISLAND, WA

The new Bainbridge Island Fire Station 21, the island's headquarters station, is designed to be an integral part of the community's civic identity for decades to come. The station replaces an aging facility built in 1978, when the island's population was less than one-tenth of its current population of over 24,000. It's the result of an in-depth needs assessment process that evaluated and articulated deficiencies in the old station's building systems, structural integrity, ADA accessibility and functional capacity.

As a centrally located and publicly funded facility, the station's importance to the community was clear from the outset. The designers sought to capture this significance with a facility that has a strong visual presence and clearly communicates the department's identity. This was achieved through the use of fire-engine red in the entry wall, a color the community associates with the department. This striking color is part of a wayfinding strategy that highlights the station number and creates a common visual language with the in-progress Station 22 (which will share complementary materials), and the existing, repainted Station 21. The entry is the central point of focus for the public, and includes a plaza with seat walls for visitors and staff. The plaza serves as a flexible outdoor amenity space and can be used as an extension of an adjacent, publicly accessible community room.

Beyond housing the station's staff, the station also provides administrative offices, a community room, and air ambulance services from an on-site helipad. The station has five drive-through bays and two pull-in bays, support space, living area, bunk rooms for seven firefighters and two officers, a fitness room, a training room, offices for administrative and command staff, and a public community room.

Official Project Name: Bainbridge Island Fire Station 21
Project City/State: Bainbridge Island, WA
Date Completed: April 30, 2018
Fire Chief: Hank Teran
Project Area (sq. ft.): 28,350
Total Cost: $7.2 million
Cost Per Square Foot: $253.97
Architect/Firm Name: Mackenzie
Website: mcknze.com
Design Team: Mackenzie: Jeff Humphreys, Principal-in-Charge, Architect; Brett Hanson, Project Manager, Architect; Cathy Bowman, Project Architect; Chauncey Drinon, Architectural Designer; Landscape Architecture: Fischer Bouma Partnership; Mechanical/Electrical/Plumbing: Interface Engineering; General Contractor: FORMA Construction

Bethel Park Volunteer Fire Company

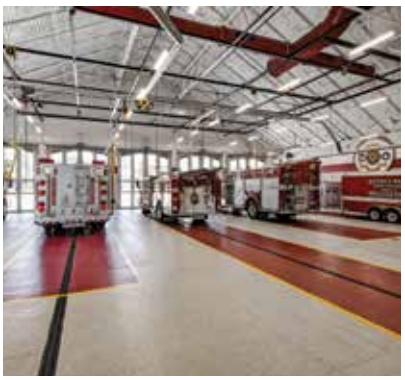
BETHEL PARK, PA

Official Project Name: Bethel Park Volunteer Fire Company
Project City/State: Bethel Park, PA
Date Completed: June 21, 2016
Fire Chief: Dave Gerber
Project Area (sq. ft.): 21,700
Total Cost: $7 million
Cost Per Square Foot: $378
Architect/Firm Name: Pacheco Ross Architects, P.C.
Website: pra-pc.com
Design Team: PRA: Dennis A. Ross, David J. Pacheco and Katrina N. Pacheco; Structural: Craig Maloney, P.E.; Civil: Fahringer, McCarty, Grey, Inc.; Mechanical/Electrical/Plumbing: MH Professional Engineering; Municipality: Edward Schmidt, Chairman; Dave Gerber, Jeff Gothe, Bill Wiles, Co-Chairs; Joe Heyl, Bethel VFC; Tim Moury, Council President; Susan Dolinar, Supervisor Public Works; Gerard Duke, Zoning (former)

Donations had dried up. Accounts were nearly empty. Desperate to build a new facility and tapped out from maintaining an aging and problematic station, Bethel Park Volunteer Fire Company was looking for innovative ways to replace their facility. The Municipality of Bethel Park stepped up to the plate with an enlightened idea that was pioneering and original. The Fire Company and Municipality would join forces, utilizing progressive thinking and cooperation that exemplifies the very best of community commitment.

The Municipality proposed to amend its Municipal Charter by adding a mill levy whose sole purpose would be for the ownership, repair, construction and lifetime maintenance of the three existing fire stations. The firefighters would have the responsibility to respond, train, recruit and buy equipment. By amending their charter, the future of the fire department could never be held hostage to annual budgets or political whims. A charter amendment, akin to a constitutional amendment, required a community vote, which was overwhelming in favor of the idea.

A pivotal requirement of the arrangement was that a new state-of-the-art facility be designed and constructed utilizing an architect specializing in fire stations. Additionally, the architect had to have extensive expertise and experience in community support campaigns.



The 75-year lifespan structure includes advanced active training regimens, optimized response configuration for an all-volunteer department, contaminant mitigation systems, sustainable technologies and materials, new drive-through capability on a challenging, tight, sloping site, space for all identified needs now and into the foreseeable future, all with the idea of operational priority and responder health and safety as the critical elements. The project was divided into four separate phases: abatement, building demolition, site utilities and new construction.

Recruitment is up, there's enough money to help buy equipment, and all parties are happy after two years running of a win-win-win arrangement.

Fitchburg North West Fire Station

FITCHBURG, WI

Official Project Name: Fitchburg North West Fire Station
Project City/State: Fitchburg, WI
Date Completed: Sept. 8, 2017
Fire Chief: Joe Pulvermacher
Project Area (sq. ft.): 25,000
Total Cost: $5.1 million
Cost Per Square Foot: $204
Architect/Firm Name: Trevor Frank, AIA, LEED AP, NCARB/Short Elliott Hendrickson Inc.
Website: sehinc.com
Design Team: Architecture: Short Elliott Hendrickson Inc.; Structural Engineering: raSmith; Civil Engineering: Oneida Total Integrated Enterprises; Landscape Architecture: Ken Saiki Design; HVAC: Fredericksen Engineering, Inc.; Geothermal: Sustainable Engineering Group LLC (now HGA); Interior Design: Building Service Inc.; Electrical, Plumbing and Fire Protection: Muermann Engineering, LLC

The North West Fire Station is phase 1 of a two-phase project to construct two new fire stations in the City of Fitchburg. The growth of the City as well as the desire to remain up-to-date served as the catalyst to move forward with the project.

Due to a tight 1.6-acre site and the desire to accommodate a 25,000-square-foot building on a single level, the design was laid out in a sawtooth fashion. The sawtooth design maximized the site area for on-site stormwater retention and vehicular ingress and egress and was necessary to keep the building within the setback lines along two major commercial streets in a busy commercial district.

The station features four drive-through apparatus bays, an emergency operations center, decontamination facilities, turnout gear rooms, exercise facility, nine bunk rooms, storage space, a state-of-the-art kitchen and numerous training amenities. There are operable windows throughout the facility for individualized occupant comfort. The windows around the building have a low-emissivity glazing and the apparatus bays are flooded with natural light. The bi-fold doors, featured on the front of the station, provide a high-speed/low-maintenance door for the department's frontline apparatus.

The design also incorporated several sustainable features, including a geothermal system, radiant in-floor heating, rooftop photovoltaic panels, LED lighting, a solar hot-water heating system, and is estimated to save the city $46,265/year in energy costs. Overall, the project was estimated at $5.5 million and built for $5.1 million, and was completed two months ahead of schedule.

Harris County ESD 9 Fire Station No. 7

CYPRESS, TX

Fire Station No. 7 replaced an existing station on a space-limited site. During demolition and construction, a temporary station and covered apparatus parking area was set up to keep the station active during the entire process.

The station's exterior and building envelope design include the following features:

- Double insulation in exterior walls (R-19 batt insulation plus rigid insulation board). Adequate insulation in the hot and humid Houston-area climate is an important part of an overall design approach to make up the 30+ temperature degree difference between humid outdoor air and the preferred indoor air to ensure firefighters can comfortably sleep and avoid sleep deprivation.
- Durable, maintenance-free exterior materials.

Official Project Name: Harris County ESD 9 Fire Station No. 7
Project City/State: Cypress, TX (Cy-Fair VFD)
Date Completed: June 1, 2018
Fire Chief: Amy Ramon, JD
Project Area (sq. ft.): 14,971
Total Cost: $5,448,776
Cost Per Square Foot: $364
Architect/Firm Name: Martinez Architects
Website: martinez-architects.com
Design Team: Ricardo Martinez, AIA, Project Manager and Justin Myers, AIA, Project Lead Designer, Martinez Architects

- Dedicated climate-controlled mechanical space inside the facility avoids the need for roof-penetrating HVAC equipment and assists with the operational efficiency of the cooling systems.

Despite the small site, the two-story station design and site layout allow for drive-through apparatus bays and separate, secure parking areas for public and private use. On-site amenities also include a natural-gas powered standby emergency generator.

The interior of the station includes offices, a community/training room, open living areas, upstairs unisex dormitories and an elevator. Finishes, including stained concrete, through-body porcelain tile, and quartz counters, were selected to provide anti-microbial benefits along with durability and ease of maintenance. Additionally, the entire facility is fire sprinklered and otherwise complies with *NFPA 101: Life Safety Code*.

The apparatus bay features a fully automated and hose-free exhaust removal system to remove carcinogens and other harmful gases. Additionally, high-volume, low-speed fans encourage air-flow to the exhaust systems and improve the thermal comfort against the region's humid climate. The PPE room features direct exhaust and a negative air-pressure design, which further aids in the health-promoting measures considered in the facility's design.

Kaukauna Fire Station

KAUKAUNA, WI

Developing plans for a seven-bay station on 1.6-acres presented challenges for the design team. Bound on three sides by city streets and built against the existing fire station that was to remain operational during construction, the fire station's floor plan and site layout are tied to the available area left by these constraints. With these restrictions, a two-story station was the best solution for the site and the department's needs. In November 2017, the City of Kaukauna moved into their new 25,000-square-foot fire station.

Official Project Name: Kaukauna Fire Station
Project City/State: Kaukauna, WI
Date Completed: Nov. 30, 2017
Fire Chief: Paul Hirte
Project Area (sq. ft.): 25,000
Total Cost: $6.5 million
Cost Per Square Foot: $260
Architect/Firm Name: Trevor Frank, AIA, LEED AP, NCARB/Short Elliott Hendrickson Inc.
Website: sehinc.com
Design Team: Short Elliott Hendrickson Inc., Architecture; raSmith, Civil and Structural Engineering/Survey; Ken Saiki Design, Landscape Architecture; Fredericksen Engineering, Inc., HVAC; Sustainable Engineering Group LLC (now HGA), Geothermal; Building Service Inc., Interior Design; Muermann Engineering, LLC, Electrical, Plumbing and Fire Protection

The station added training facilities including a three-story training tower with an exterior balcony. This incorporates limitless on-site training opportunities, including ladder testing and evolutions, attack line evolutions, balcony rescue simulation, SCBA confidence course, rappelling and a below-grade confined entry area.

The first level contains a seven-bay, drive-through apparatus bay, with a storage mezzanine, workshop and turnout gear area. Three bays are dedicated to first response apparatus and feature four-fold doors for quicker response time. Health and safety was a top priority and to reduce the carcinogens found from exhaust fumes, the apparatus bays are equipped with a new air exchanger. Nearby is a laundry room, complete with a turnout gear washer and dryer.

The first floor also provides a training room (which doubles as the EOC for the City and a backup EOC for the County), conference room, personnel offices and workspaces, department history room, records and additional storage, and a fitness center. In contrast to the busy public spaces of the first floor, the second floor houses the living quarters with 10 large bunk rooms, as well as a modern kitchen and comfortable dayroom. There is also access to a patio with outdoor cooking and dining facilities permanently built in, which overlooks 2nd Street and Kaukauna's historic downtown.

FIREHOUSE SDA Station Design Awards

VOLUNTEER/ COMBINATION NOTABLE

Niagara Engine Company No. 6 Fire Station

SCHOHARIE, NY

Official Project Name: Niagara Engine Company No. 6 Fire Station
Project City/State: Schoharie, NY
Date Completed: Oct. 1, 2017
Fire Chief: Marty Pierce
Project Area (sq. ft.): 20,313
Total Cost: $5,812,000
Cost Per Square Foot: $286
Architect/Firm Name: Mitchell Associates Architects
Website: mitchell-architects.com
Design Team: Robert Mitchell, Architect, Mitchell Associates Architects; Craig Maloney, P.E., Structural Engineer; Lamont Engineers, P.C., Civil Engineer; Hesnor Engineering Associates, PLLC, MEP; Green Tech Consulting, Envelope Commissioning; Nasco Construction Services, Estimating; Daniel Loucks, P.E., Geotechnical Engineer; Ron Simmons, Simmons Recovery Consulting, FEMA Liaison

After Hurricane Irene hit in 2011, the Schoharie Fire Department, Niagara Engine Company No. 6, needed a new station. Flooded to a depth of 8 feet during the storm, their 1955 building was condemned. The department quickly set up temporary quarters in a ramshackle Quonset hut with a framed addition that had been a tractor dealership. In 2012, the Federal Emergency Management Agency (FEMA) funded the construction of a temporary pole barn.

The fire department received FEMA funding commitment for a new fire station, requiring that the new station replace the old station "in-kind," with no "betterments" that were not mandated by law or code. With careful documentation, the department presented convincing arguments to FEMA that resulted in approval in 2015 of a fully modern station. Because the new site is located in a Historic Overlay District, zoning required façades that blend with a nearby 1772 stone church. The result is a handsome, historic-looking building.

The first-floor area is 13,360 square feet, with a 630-square-foot mezzanine and 5,940-square-foot walkout basement. The four-bay, double deep apparatus bay is 6,000 square feet. The decon/laundry has a washer/extractor, drying cabinet, and separate washer and dryer. The SCBA fill compressor is isolated for hearing protection. Training space is provided by a classroom, a mezzanine with a bailout window and a confined space extrication manhole, and an exercise room in the basement.

The meeting/training room accommodates 82 seated at tables. It can be divided into two rooms and is serviced by a kitchen, A/V room, and storage for tables, chairs and training props. The kitchen equipment was donated by a local restaurant.

Six years after Irene, community pride was on full display at the Grand Opening in October 2017. The station represents the can-do spirit of the fire company and the Town of Schoharie.

South River Fire Headquarters

SOUTH RIVER, NJ

The South River Fire Department is a 70-member volunteer department. Established in 1896, the department serves the borough of South River, NJ, and was working out of its circa 1917 station when it was surrounded by flooded roads during Superstorm Sandy in 2012. It was clear that a new station at a new location was needed.

Official Project Name: South River Fire Headquarters
Project City/State: South River, NJ
Date Completed: May 1, 2018
Fire Chief: Charles Matts III
Project Area (sq. ft.): 23,461
Total Cost: $7,586,050
Cost Per Square Foot: $323
Architect/Firm Name: Mitchell Associates Architects
Website: mitchell-architects.com
Design Team: Robert Mitchell, Mitchell Associates Architects; Craig Maloney, P.E., Structural Engineer; Craig Huston, P.E., Huston Engineering, LLC, MEP; David Samuel, P.E., CME Associates, Civil Engineer; Edward Hiney, CCP, Nasco Construction Services, Inc., Estimator

The borough is 95 percent built-out with much of it located in the flood plain. Determining a new site was a complicated two-year process. After the first proposed site was opposed by neighbors, the project was eventually located on a combined parcel—a former Knights of Columbus property and a gas station. Site issues resulted in the building being constructed on 325 helical piles and required the removal of contaminated soil to a depth of 15 feet.

The new two-story, 21,388-square-foot fire headquarters includes an additional 2,073 square feet in the former Knights' boxing school, which will house Fire Prevention, Ladies Auxiliary, Exempt/Relief Association, and records storage.

The 5,730-square-foot apparatus bay has three double-deep drive-through and two back-in bays, allowing the cab of the ladder truck to be lifted while inside. The decon/laundry has two 105-pound capacity washer/extractors and two drying cabinets. The SCBA fill compressor is isolated from the fill station room for hearing protection. Training space is provided by a classroom, a mezzanine with a bailout window and a confined space extrication manhole, and an exercise room.

The meeting/training room can accommodate 85 seated at tables and can be divided into two rooms. It is serviced by a kitchenette and storage for tables, chairs and training props.

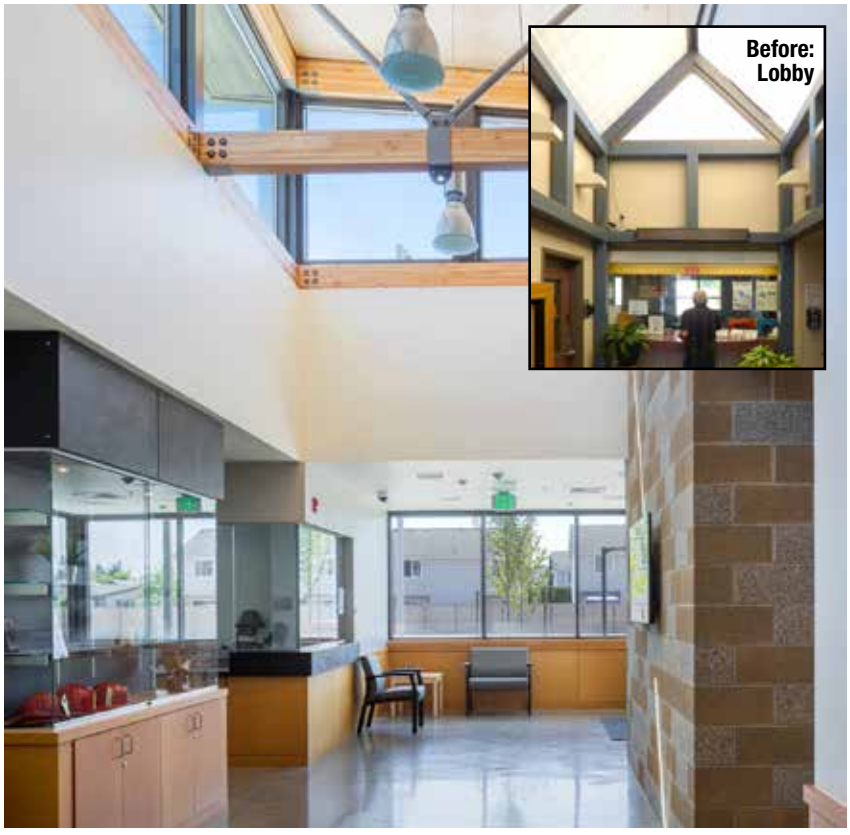
The station has future bunking for 10 firefighters. The building envelope and all mechanical and electrical systems exceed current energy efficiency standards. Funding was provided by the U.S. Department of Agriculture.

RENOVATION GOLD

The original tilt-up concrete fire station was erected in 1979 for Fire District 7 in Spanaway, WA. The District added a simple training tower to the site in 1987. In the 90s, Fire District 7 merged into Central Pierce Fire and Rescue (CPFR), and the facility became Headquarters Fire Station 60. CPFR added a portable to expand administrative space and a pole barn served as a classroom; however, as service and training demands increased, it became clear the facility would need to be rethought. A remodel/addition was determined to be the best approach and use of public dollars, but proved a complex logistical challenge.

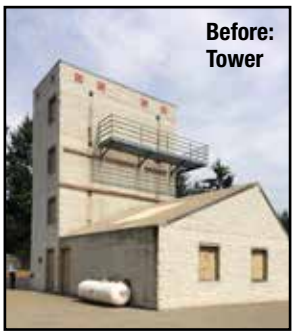
In addition to facility design, an interim solution to meet uninterrupted service and administrative needs was required. Construction was structured into three major phases. The firefighters continued to operate out of the station in the first phase while a temporary crew portable and apparatus tent were brought online. The second phase saw the lion's share of the work with completion of the additions and remodeling. For the final phase, the improved station became operational, and the temporary station was decommissioned. Ultimately, 6,200 square feet were added to the existing 13,300-square-foot headquarters station.

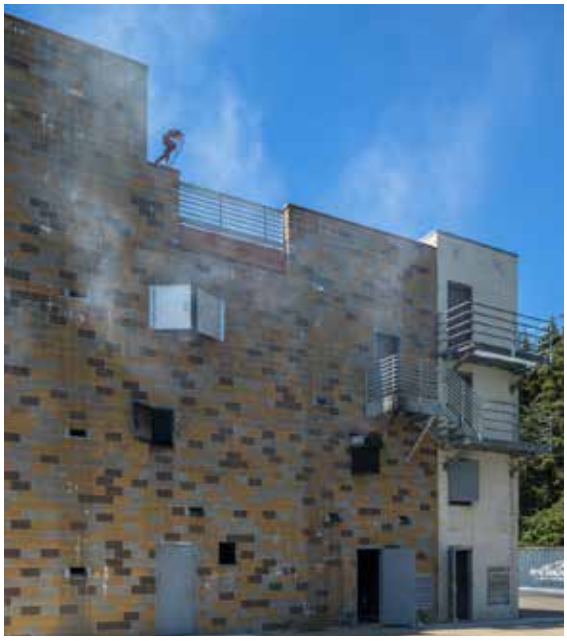
The poorly insulated, weathered concrete shell was thermally improved and reskinned to yield an energy-efficient building with a renewed civic presence. Clerestories and relites bring daylight into the public and work spaces. Flexible meeting, conference and EOC functions were added. The former administrative portable was moved to the training grounds and remodeled as a "dirty" classroom. A state-of-the-art training tower rounds out



Central Pierce Fire & Rescue Fire Station 60

TACOMA, WA

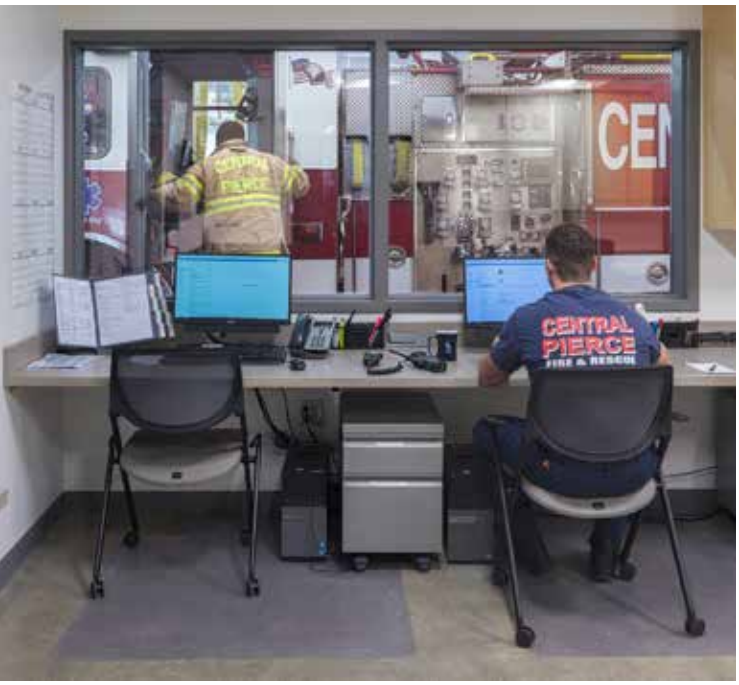

Before: Tower



the improved campus and now offers 7,500 square feet over five levels with gas-fired burn props and a plumbed smoke system. After nearly 40 years of service life, CPFR has strategically improved their headquarters facility to serve well into the 21st century.

Official Project Name: Central Pierce Fire & Rescue Fire Station 60
Project City/State: Tacoma, WA
Date Completed: June 1, 2018
Fire Chief: Dan Olsen
Project Area (sq. ft.): 19,500
Total Cost: $7.8 million
Cost Per Square Foot: $400
Architect/Firm Name: TCA Architecture Planning Inc.
Website: tca-inc.com
Design Team: Brian Harris, Principal in Charge, Architect of Record; Forest Hooker, Senior Associate, TCA Architecture Planning; PCS Structural Solutions, Structural Engineer; Apex Engineering, Civil Engineer; Sider and Byers Associates, Mechanical Engineer; TFWB Engineers, Electrical Engineer; EHS-International, Environmental; AHBL, Landscape Architect; Apex Engineering, Survey; Associated Earth Science, Geotechnical Engineer


Before: Apparatus Bay



Sandy Fire District Main Station

SANDY, OR

Official Project Name: Sandy Fire District Main Station
Project City/State: Sandy, OR
Date Completed: June 7, 2018
Fire Chief: Paul Schneider
Project Area (sq. ft.): 17,878
Total Cost: $6 million
Cost Per Square Foot: $335.60
Architect/Firm Name: Mackenzie
Website: mcknze.com
Design Team: Mackenzie: Jeff Humphreys, Principal-in-Charge, Architect; Scott Moore, Project Manager, Architect; Cyrus Beedles, Architect; Jocelyn Gorman, Architectural Designer; David Linton – Structural Engineer; Sohaila Starks – Professional Engineer; MEP: Interface Engineering, Inc.; General Contractor: Skyward Construction

The major renovation of Sandy Fire District Main Station entailed a seismic retrofit, doubled capacity for staff, and a reimagined aesthetic in line with new city guidelines.

A combination station with career and volunteer firefighters, Sandy Fire serves a region stretching from the outskirts of the Portland metro area to the base of Mt. Hood. The renovated facility now fully supports a growing community, provides a healthier work environment for its staff, and sets an aspirational standard of design for the city.

A headquarters station, Sandy Fire houses district offices, administrative staff and 24-hour fire crews. The facility has five apparatus bays, two with double doors, and includes a community-accessible training room, and outdoor training grounds. All building systems were upgraded, including the exhaust system and a fully integrated alerting system that ties into county dispatch. The renovation added rooftop patio space as an outdoor amenity for staff, and mitigated noise entering living quarters from the nearby highway.

The project's central challenges were the requirements of a new structural system and the city's mandated style. The "Sandy Style" is Cascadian in character, inspired by mountain buildings with steep roofs, post and beam construction, and an emphasis on natural colors and materials. The old station reflected none of these traits. The team also determined that a cost-effective seismic upgrade required a steel frame on the building's exterior. The solution combined these functional and aesthetic requirements, using the steel structural elements to evoke post-and-beam construction. A new roofline reflects the Cascadian style, and together the design elements give the station its own identity as an authentic fire station while remaining true to the city's overall vision.

FIREHOUSE SDA Station Design Awards

RENOVATION BRONZE

Engine Company Number 16

WASHINGTON, DC

Official Project Name: Engine Company Number 16
Project City/State: Washington, DC
Date Completed: Dec. 7, 2017
Fire Chief: Gregory M. Dean
Project Area (sq. ft.): 25,032
Total Cost: $8,899,306
Cost Per Square Foot: $355
Architect/Firm Name: LeMay Erickson Willcox Architects
Website: lewarchitects.com
Design Team: LeMay Erickson Willcox Architects; Structural: Ehlert Bryan, Inc.; Mechanical/Electrical/Plumbing, Fire Protection: Global Engineering Solutions; Civil: Wiles Mensch Corp.; Cost Estimating: Downey & Scott, LLC; Commissioning: Brinjac Engineering

Designed as a showpiece of the City Government by prominent Architect Albert L. Harris in 1935, Engine Company Number 16 was one of the first buildings commissioned by the District of Columbia.

The three-story building, with basement, housed the fire equipment and common spaces on the first floor, the living quarters for station personnel on the second floor, and the Fire and Police Clinic on the third floor. Accessed through a separate courtyard, the clinic included medical records storage, doctor's offices, operatory with recovery area, and dentistry. These facilities treated on-the-job injuries and provided standard medical exams for the fire and police department personnel. As the facility aged, however, it became clear that the critical infrastructure that once supported its

crew members was no longer adequate to meet the operational needs of a 21st century fire department or the expanding DC metro area.

In 2016, the District embarked on a major renovation of Engine Company 16, including demolition of the interior spaces to support a new floor plan design and new building systems, including mechanical and electrical systems. Work on the exterior of the building, which is

listed on the National Register of Historic Places, was limited to widening the bay doors, window and roof replacement, stabilization of existing masonry elements, and installing period-style security light fixtures.

In addition to modernizing the facility, the design strived to return the 80-year-old structure to its former glory as a civic landmark. Specific features included recreating and installing the lost original copper weather vane, replacing the copper vaulted roof vents, refurbishing the stately cupola, repairing/refinishing the original terrazzo flooring, repairing the original fire poles and safety cages, stripping/refinishing the existing central stairs, and repurposing the existing marble wall and shower panels to use as countertops.

Basalt Fire Station #41

BASALT, CO

The Basalt Fire Station consists of an addition and renovation of a 40-year old structure resulting in a 9,301-square-foot facility, completed under budget. Due to city utilities under the drive, a tight/angled building envelope, and budget requiring the existing bays, roof and loft to be preserved, the architects were to expand and remodel within setbacks and an existing roof.

The façade now complements the surrounding context while distinguishing itself as a public safety building with masonry, steel and glass. Bands of concrete masonry units of varying color and texture break up the massing. Stepped metal fascia is intersected by a CMU datum wall that differentiates the apparatus bays and crew quarters/offices.

All entrances are secured with WiFi key pads with customizable key codes. A district-wide alerting system was added throughout the building. The main entrance vestibule houses an emergency phone and is open 24/7, and the lobby with glass walls showcases the district's antique fire truck. Five new offices, a break area and a conference/training room access the apparatus bays.

The addition to the two west bays allows for new, longer apparatus or four shorter apparatus along with turnout storage and equipment, accommodating the range of emergency services the station provides. Airtight separations and negative pressure balancing between the living areas and apparatus bays as well as a new exhaust system in the bays help protect from carcinogens.

Stairs lead to the new separate, secure and airtight living quarters, containing a dayroom with expansive windows that provide passive solar and ventilation and a dining area with three workstations to foster socialization. The kitchen has refrigerators and pantries for the three shifts and sits adjacent to the outdoor grilling deck. Four sleeping rooms with built-in shift storage are set back, allowing for quiet relaxation. Nearby are two unisex baths with upgraded tile and a laundry area.

Official Project Name: Basalt Fire Station #41
Project City/State: Basalt, CO
Date Completed: Nov. 1, 2017
Fire Chief: Scott Thompson
Project Area (sq. ft.): 9,301
Total Cost: $1,749,032
Cost Per Square Foot: $188
Architect/Firm Name: Charles Cunniffe Architects
Website: ccaaspen.com
Design Team: Charles Cunniffe Architects: Charles Cunniffe, FAIA, Principal; Brian West, Senior Project Architect; Scott Smith, Senior Project Architect; Tori MacPherson, Project Architect; Basalt & Rural Fire Protection District: Scott Thompson, Fire Chief; Pete Bradshaw, Deputy Chief; FCI Constructors, Inc.; KL&A Structural Engineers; MEP: AEC, Inc.; Landscape: DHM Design; Civil: Sopris Engineering

FIREHOUSE SDA Station Design Awards

SATELLITE GOLD

Henrico County Fire House #19 was an opportunity for the County to depart from an old prototype design and create a new kit-of-parts that reflected the most current thinking in fire station design. The planning effort prioritized response times and firefighter health and safety, but also took into consideration issues related to sleep deprivation, accommodation of a diverse workforce, modern apparatus sizes, fostering camaraderie, and sustainability.

The station has 12 bunk rooms and four single-user shower/toilet rooms. Offices for the firefighters and for the station captain are located near the public entrance, and the dayroom, dining and kitchen areas are situated directly adjacent to the apparatus bays for direct response. Support spaces, located on the opposite side of the apparatus bays, include turnout gear storage and decontamination. Fire House #19 is located in a burgeoning part of the County, directly adjacent to a new development of single-family homes. The County's goal for the project was to create a house for firefighters and fire apparatus, more specifically, a house that blended seamlessly with the immediate neighborhood and was distinct from other stations in the County. To that end, the materials used on the façade (fiber cement siding and manufactured stone) are the

Henrico County Fire House #19
GLEN ALLEN, VA

same as those used on the local houses, but are installed as a rain screen to improve longevity and energy performance. The exterior concept uses multiple pitched roof elements connected with flat roof elements to break down the scale of the structure to something compatible with the two-story homes nearby.

The building is set back on the site to accommodate a sanitary sewer line running diagonally across the front of the parcel, which serves the homes in the nearby development. The front of the station is oriented toward the intersection to allow passersby to build a connection with the fire department.

Official Project Name: Henrico County Fire House #19
Project City/State: Glen Allen, VA
Date Completed: March 1, 2018
Fire Chief: Tony McDowell
Project Area (sq. ft.): 12,684
Total Cost: $5,003,131
Cost Per Square Foot: $394.44
Architect/Firm Name: BKV Group
Website: bkvgroup.com
Design Team: BKV Group: Mark Manetti, Craig Carter, Ioana Gruita, Clarissa Lazaro, Sarah Doherty, Kyle Olson, Alex Hoffman, Josh Ortmann, Chad Kurdi, Ed Heinen, Jim Hansing; Timmons Group: Bruce McCloy; Sustainable Building Partners: Rachel Nicely, Dan Wilcox, Paul Brefka; Ascent: Boyd Headley; Henrico County: Chief Tony McDowell, Captain Daniel Schwartz and Chuck Phan

Willowfork Fire Station No. 3

KATY, TX

The design team welcomed the opportunity to renew their relationship with Fort Bend County ESD No. 2 for their new Fire Station No. 3. Wanting to have consistent designs and layouts between stations, Station No. 3 is a site adaptation of the previously completed Willowfork Fire Station No. 2. By using similar designs, the department hopes to make transitioning between stations easier on staff as well as create a consistent aesthetic image/style that helps citizens easily identify the stations.

The 2.35-acre triangular site is located in a mainly residential neighborhood across the street from a daycare center and future apartment complex. The station is designed to sleep four shifts of seven people, and all necessary support spaces are located on the first floor. The staff has a straight shot from the dormitories to the apparatus bay, and an open concept dayroom, kitchen and dining open out to a covered patio with grill.

In the future, the department plans to partner with a separate EMS company; therefore, the weight room was designed to be converted to a dedicated space for the paramedics with its own living, sleeping and bathing facility. In the meantime, the weight room will be relocated to the climate-controlled storage space on the second floor.

Built to withstand hurricane-speed winds, the new station features a unique double-door system in the bays that allows for the openness and transparency of glazed sectional doors with the added protection and durability of roll-up galvanized steel doors.

The 13,392-square-foot station meets the new ADA standards and is a welcomed addition to the community and fire department. Its low-maintenance and durable finishes are a wise use of the taxpayers' funds and also help to protect and bring comfort to the staff of people that protect this community.

Official Project Name: Willowfork Fire Station No. 3
Project City/State: Katy, TX
Date Completed: March 19, 2018
Fire Chief: Billy Wilson
Project Area (sq. ft.): 13,392
Total Cost: $3,978,574
Cost Per Square Foot: $297
Architect/Firm Name: Brown Reynolds Watford Architects
Website: brwarch.com
Design Team: BRW Architects: Mark E. Watford, FAIA, LEED AP BD+C, Founding Principal; Ray Holliday AIA, ASLA, LI, Managing Principal; Lisa Andel, Project Coordinator; Madelyn Walker, Designer; Micaela Fangue, Designer; O'Malley Strand Associates, Inc.; Gessner Engineering; Jordan & Skala Engineers, Inc.

FIREHOUSE SDA Station Design Awards

SATELLITE BRONZE

Harrisburg Fire Station #3

HARRISBURG, NC

Harrisburg Fire Station #3 also houses the Cabarrus County EMS Station No. 10. Both serve this rapidly growing suburb of Charlotte, NC.

The station includes two drive-through bays, a decontamination room, a commercial-grade kitchen, a private patio, individual showers, and dorm-style bedrooms to accommodate up to 10 fire and EMS personnel. It also has two dayrooms, one for firefighters and one for EMS personnel. The facility is designed to last 50-plus years, and can expand to add bays or sleep rooms as needed. The floorplan is easily adaptable to other site conditions, which allows the city to use Fire Station #3 as a prototype for future fire and EMS stations.

Reducing the exposure of contaminants to firefighters was a priority early in the design process, so a Hot Zone layout was incorporated into the floorplan. This partnership between the County EMS and the City of Harrisburg Fire Department allows for better fiscal management, while improving response times for the local residents. This project utilized the Construction Manager at Risk design and construction method.

Official Project Name: Harrisburg Fire Station #3
Project City/State: Harrisburg, NC
Date Completed: June 1, 2016
Fire Chief: Bryan Dunn
Project Area (sq. ft.): 9,195
Total Cost: $2.1 million
Cost Per Square Foot: $228
Architect/Firm Name: Stewart-Cooper-Newell Architects
Website: fire-station.com
Design Team: Ken Newell, AIA, Design Architect, Stewart-Cooper-Newell Architects; D.R. Reynolds Company, Construction Manager At Risk

FIREHOUSE SDA Station Design Awards

TRAINING FACILITIES SILVER

Montgomery County Public Safety Training Academy

GAITHERSBURG, MD

Official Project Name: Montgomery County Public Safety Training Academy
Project City/State: Gaithersburg, MD
Date Completed: Oct. 28, 2016
Fire Chief: R. Michael Clemens
Project Area (sq. ft.): 284,169
Total Cost: $68,755,000
Cost Per Square Foot: $242
Architect/Firm Name: LeMay Erickson Willcox Architects
Website: lewarchitects.com
Design Team: LeMay Erickson Willcox Architects; Baker and Associates; Convergent Technology; Abercrombie Planning + Design; Elliott LeBoeuf & Associates; Vanderweil Engineers; Enwright Associates; Soltesz

In 2016, Montgomery County, MD, opened the Montgomery County Public Safety Training Academy (MC-PSTA) in Gaithersburg, MD. The new $68 million shared-facility provides increased instructional capacity and start-of-the-art training environments for the Montgomery County Fire and Rescue Service (MCFRS) and the Montgomery County Police Department (MCPD).

The 12-building MC-PSTA campus includes the academic/classroom building, parking garage, canine training center, Training Fire Station, high-bay

interior fire training building, two fire training burn buildings, a four-building cityscape, and a driver training building. The MC-PSTA campus also provides numerous outdoor training facilities, including live-fire prop areas, urban search and rescue training, a driving track, driver training skills pad and skid pan, and drafting training.

Working closely with the representatives of the MCFRS and the MCPD, the phrase Train Like You Play became the design mantra for the entire MC-PSTA campus. From the six-story live-fire training building to the half-mile driving track, each training area and element was designed to provide highly realistic scenarios and maximize flexibility for variations on training experiences.

Health and safety was a primary design consideration throughout the campus. Hot Zone design strategies were applied to manage exposure to contaminants and provide for appropriate decontamination. Facilities that house vehicles, such as the Training Fire Station, are equipped with direct capture exhaust extraction. Closed-circuit TV cameras are installed throughout the campus and buildings for security purposes and to monitor training activities. The occupied buildings are sprinklered.

The facility is targeting LEED Gold (academic building)/Silver (apparatus bay, canine building, driver training building) certification. Sustainable design strategies include brownfield redevelopment, recycled content materials, vegetative and low solar reflectance index roofs, regional materials, water-efficient landscaping, low-VOC interior finishes, and rapidly renewable materials.