

Build Ohio 2003

Project Name: Renovations and Addition to Main Fire Station /
Training Station, Kent Fire Department, Kent, OH

Company Name: Carmen Construction Co. Inc.

Category: Renovation

Owner: City of Kent

Architect: Moody/Nolan, Inc.

**Project Size/
Contract Amount:** 26,058 sq. ft.
\$3,600,000

Start: September 2001

Completion Date: May 2003





Carmen Construction Co. is proud to enter the recently completed renovation to the Kent Fire Department's Main Fire Station in Kent, Ohio, for consideration for the Build Ohio 2003 Renovation Award. The project was a cooperative effort between Carmen Construction Co., Moody•Nolan, Inc. (Architect) and the City of Kent.

For a number of years, the City of Kent recognized the need for a new facility. The Kent Fire Department provides fire suppression and prevention, as well as rescue and emergency medical services, to residents of the City, the Village of Brady Lake, Sugar Bush Knolls, Franklin Township, and the Main Campus of Kent State University.

The original 6,400 square-foot Main Fire Station was built in 1968 for a volunteer fire department. Subsequently, as needs grew, and the department expanded services, the facility could no longer accommodate their apparatus and equipment. By the mid-1980's, a full-time department occupied the building and had already outgrown the space. Essentially, the old facility was designed to store apparatus and equipment utilized in response to fire calls, as well as providing living space for one 'on-duty' firefighter who maintained the facility and equipment and drove the apparatus on calls. At the onset of the project, several pieces of apparatus were being stored outside and off-site seasonally, affecting usability and at times response. Fire Chief Williams recently stated, "it never fails that once we get out to a site, we get a call, and we don't have the particular piece of equipment with us". Along with additional full-time staffing, fire prevention, and administration, over the years, they saw the inclusion of a number

of new services, such as paramedic response, a hazardous materials unit, and specialized rescue.

Over four times the size of the old facility, the new firehouse is designed to meet the demands of the current fire department, while providing flexibility to accommodate the ever-changing role of the service in the future. This 26,058 square foot building allows all apparatus and equipment to be housed on-site, while maintaining its central location for vitally quick response time. The Department is now composed of 35 career firefighters, with cross-training in many of the disciplines of fire, rescue and emergency services.

MEETING THE CHALLENGE OF A DIFFICULT JOB

As a result of the need to maintain full service throughout the construction of the building, the project was completed in two phases. Each phase had to be broken down into several segments, and had to be carefully coordinated with the Fire Department in order to maintain the required 24-hour operations. Due to the magnitude of the renovation and the fact that the building size consumed all available land, construction progressed in very cramped quarters. Prior to commencing with new construction, two existing houses and a garage were razed; selective demolition of the existing hose tower and workshop were completed; and, existing 911 emergency lines from the public safety building to the original fire station had to be relocated. This preliminary work was necessary to utilize every square inch of land from the existing building to the major

intersection right-of-way on State Route 59 (Haymaker Parkway) and South Depeyster Street.

Phase I began by digging a 14-foot deep basement and pouring reinforced concrete walls. What made this phase especially challenging was the lack of space to dig because of major roadways on the north and east sides. Further complicating the requirements for workspace was the City of Kent's Police Department parking lot and building adjacent to the west of the excavation. To the south, the obstacles were to dig a basement at the edge of an existing apparatus bay that would remain part of the completed project. The existing building did not have a basement. In order to provide access, a road was constructed from Depeyster Street into the basement area. This road was the only way equipment could get into this phase of the project. Materials were staged in very narrow spaces around the excavation.



INNOVATION IN CONSTRUCTION TECHNIQUES OR MATERIALS

Part of this phase's unique look may be attributed to the basement walls formed on the intersection of two structural grids; one generated by the city's urban grid, and the other derived from the angle of Haymaker Parkway. This three-story element incorporates the Department's administrative offices, including a conference room and workroom; training functions, with a fitness center, a 52-foot hose and training tower, a multi-media training room and library; living areas, composed of separate men's and women's dormitories and locker rooms with custom lockers, the kitchen and dining room, and a TV lounge; along with several ancillary spaces: a radio room/watch office, miscellaneous storage, restrooms at each floor, and an area for treatment and evaluation of walk-in medical patients. Vertical circulation through the building was accomplished by utilizing a traditional brass fire pole starting on the second floor and landing prominently in the public lobby of the first floor, along with a three-floor elevator and stairs.



Hose Tower under construction from highway



Brass Fire Pole

The tower accomplishes multiple functions, including the traditional drying and storage of firefighting hose; as well as training with exterior platforms, interior landings and windows provided to aide firefighters in practicing entry and exit, advancing hose lines in multi-level buildings, with aerial and ground ladder drills, and climbing and repelling. Firefighters can now simulate high-rise rescue, rope rescue, and rescuing people out of windows without going offsite to do those exercises. The tower was uniquely designed and built to allow water used during training exercises to drain away without harming the building.



Kitchen



Work-out Room



Custom-made Lockers



Apparatus bay from mezzanine

Phase II involved the demolition of the existing offices and living spaces to make way for additional apparatus bays; a turnout-gear and equipment cleaning room; a storage mezzanine, including manhole for confined-space rescue training; and several spaces for support and storage. After this demolition, the only portion remaining of the original fire station is an area housing three apparatus bays. In addition to completely new mechanical systems throughout, a source capture vehicle exhaust evacuation system and new lighting were installed in both the new and old apparatus bays.

Overall, Moody•Nolan, Inc. designed a finished building having a unique mixture of natural limestone and over 90,000 red brick, resting on a heavy base of over-sized split-faced “Grandeur Block,” topped off by an elegant standing seam metal roof. The firehouse presents a very “open to the public” fronting with fully-glazed apparatus doors and a centrally-located public entrance and lobby. The building is surrounded by coordinated landscape, focusing at the front on a large fire bell from the station replaced by the 1968 engine house, and new concrete approach ramps, walks and parking. Secure and state-of-the-art communications, paging and data management are integrated throughout the entire firehouse, with provisions and flexibility to upgrade and evolve with future requirements. The training room and library are networked to further enhance training. The building provides a secure base of operations with an amalgamation of keyed, push-button-entry, and proximity card activated locksets.

EXCELLENCE IN PROJECT MANAGEMENT

After much analysis of the phases, we realized that the job could be streamlined by beginning Phase II prior the conclusion of Phase I construction. We began construction of the two-story new service bay walls around the existing one-story occupied living quarters and offices. The original plan was to wait until the old building was vacated and razed. This project management decision proved to be a crucial element and key to staying ahead of schedule, in spite of the severe winter weather conditions. As Fire Chief Williams stated, "With the winter we had, that was a good decision".

A job with this level of complexity required intense weekly project meetings, regularly attended by job superintendents, the project manager, the architect and sub contractors, as well as the Fire Chief and Safety Director. These weekly meetings gave everyone involved ample opportunity to express project goals and obstacles, as well as address the need to maintain functionality of the Main Fire Station on a continuing basis. Because of these interactions, a difficult project went forward seamlessly without disruption of vital, life-saving services, so this 24-hour operation remained undisturbed.

EXCELLENCE IN CLIENT SERVICE

At the projects end, enthusiastic approval of local Kent official and the community at large led to, not only a timely and successful project, but also a rewarding one for the

contractor and architect involved. A single example of the satisfaction was expressed by James Williams, Kent Fire Chief, who said, **“I’m not sure I can even describe the change. The space is much larger and more efficient. It’s a tremendous improvement.”** Because of this high degree of cooperation, the fire station was successfully completed ahead of schedule and under budget, in spite of a difficult construction site, the need to coordinate with existing structure, and the need to maintain services.

The completion of this facility has greatly enhanced the Kent Fire Department’s ability to answer and train for the public’s call for fire, rescue and emergency medical response, and provides the citizens with a world-class, state-of-the-art facility, which will serve them well into the 21st century. In summary, we feel that this project is a successful example of both aesthetically pleasing and quality functional public construction. We are proud to be associated with this work and we’re confident that it will serve the Kent community well for many years.

