Universal Builds a New Joplin High School More Than a Half Century After Completing the Old One

Project Brings High School and Franklin Technology Center Under One Roof

On May 22, 2011, Joplin High School (JHS) was destroyed by an EF-5 tornado. A total of 161 people lost their lives, including seven JHS students and one staff member. Franklin Technology Center (FTC), which was located just west of JHS (across Iowa Avenue), was also destroyed.

The former JHS building had been made possible by the private donation of 32 acres and a $2.05 million bond issue approved by voters in 1955. In 1956, Universal Construction Company, which was headquartered in Kansas City, Kansas, but had a small office in Joplin at the time, won the contract to build the facility. Archie W. Smith III, who ran Universal’s Joplin office, attended the groundbreaking. In the fall of 1958, students began school in the new high school building. The former FTC facility was built just west of the high school in 1966.

In 1958, after a decade in Joplin, Archie and his young family returned to his hometown of Kansas City. He would go on to become CEO of Universal, President of the Kansas City Chapter, AGC (1973-74), and Chairman of The Builders’ Association (1983).

In 2011, less than a week before the tornado struck, Steve Smith, President of Universal, was in Joplin preparing to bid on several Joplin School District construction projects. Those plans were unalterably changed by the tornado, which damaged or destroyed 10 of the District’s 20 buildings.

The day after the tornado, Universal sent work crews to Joplin to help the city clean up and get back on its feet. “The School District’s Administration Building, where the computer servers are housed, sustained damage from the tornado,” recalled Mike Johnson, Facilities & Construction Director, Joplin School District. (The Administration Building is about five blocks north of the high school.) “One of the things Universal did was help us cover the roof with tarp. We brought in generators for the servers and were able to run payroll so all the School District’s employees, many of whom had lost their homes or were without power, could get paid.”

In January 2012, Universal was awarded the contract for the new Joplin High School/FTC and separately the contract for Irving Elementary School and East Middle School/Soaring Heights Elementary School. A construction management agency approach was used to allow for construction to proceed while the facilities were being designed and to enable the project team to meet the fast-track schedule, stated Mike. In order to control costs, the

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contracting services for construction were competitively bid separately as drawings became available. JHS/FTC was bid in five phases which included the sitework, building shell, building finishes, field, and audio/visual. Universal acted as a central conduit for the flow of information between the architect and the various subcontractors.

In April 2012, voters approved a $62 million bond issue that helped fund the rebuilding of Joplin schools, including JHS/FTC. On May 22, 2012, the first anniversary of the tornado, school officials held a groundbreaking ceremony at the high school site. Fifty-six years after he attended the groundbreaking on the former high school, Archie Smith III, at age 92, returned to break ground on the replacement facility. He would later pass away on October 23, 2013.

**Project Team**

Archie Smith III was joined at the groundbreaking by his grandson, Archie Smith V, Senior Vice President of Universal. Archie Smith V led the Universal team as Project Executive for the new JHS/FTC, Irving Elementary School, and East Middle School/Soaring Heights Elementary School. The Universal project team also included Jason Bishop and Rex Anderson, Project Managers; Joel Smith, General Superintendent; and Field Managers Larry Bowman, Bob Brashart, and Brett Yount.

Corner Greer & Associates, Inc. was the Architect of Record for JHS/FTC. Chad Greer, AIA, Principal, was the Principal in Charge. He was assisted by Douglas Corner, AIA, Principal. DLR Group assisted with the design and development of the JHS/FTC project. Sapp Design Associates was the Architect-Designer for Irving Elementary School. Hollis + Miller Architects was the Architect for East Middle School and Franklin Technology Center. Sapp Design Associates was the Architect for East Middle School/Soaring Heights Elementary School. The Universal project team also included Jason Bishop and Rex Anderson, Project Managers; Joel Smith, General Superintendent; and Field Managers Larry Bowman, Bob Brashart, and Brett Yount.

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**Subcontractor Members of The Builders’ Association Who Worked on JHS/FTC**

- All Seasons Landscaping and Construction, Inc.
- Allen’s Mechanical
- Apac-Missouri, Inc. – Missouri Division
- Blevins Asphalt Construction Co., Inc.
- Branco Enterprises, Inc.
- DH Restoration, Inc.
- Desco Coatings, Inc.
- Flynn Sellers & Marquis, LP
- Interior Surface Enterprises, LLC
- Kansas City Structural Steel, Inc.
- LanTel Communications Services, Inc.
- Livers Bronze Company
- MVP Painting
- D.H. Pace Co. Inc. dba Overhead Door Co. of Springfield
- P1 Group, Inc.
- PCI (Performance Contracting Inc.)
- Pinnacle Sign Group
- Prestressed Casting Co.

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The grand staircase, located at the center of the school, provides students access to social areas such as Eagle Alley, Jo Joe’s Coffee Shop, and the Fusion Bar, as well as the cafeteria, student store, and several lease spaces that can be utilized by the students for fundraising activities.

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JHS’s address is 2104 Indiana Avenue, the same address as the former facility. Although Franklin Technology Center has its own address (2220 Indiana Avenue), the two facilities are now connected under one roof. They contain a total of approximately 500,000 square feet, which increases the total square footage before the tornado by about 35%. The acreage for the combined JHS/FTC has been more than doubled, from 32 acres to 66 acres, according to Mike Johnson. The campus was expanded primarily up the hill to the west but also to the south. FTC’s old address was on Iowa Street, the north-south street which ran parallel to Indiana and dissected JHS and FTC. Iowa Street was removed along with several access roads. While the old JHS sat on the flood plain, the new JHS/FTC building is now west of the flood plain.

The total construction cost for the three projects is expected to be roughly $200 million, stated Mike Johnson. All three projects contain a combined total of approximately 813,000 square feet. JHS/FTC opened in time for the start of school on September 2, 2014. Students began class at both Irving Elementary School and East Middle School/Soaring Heights Elementary School on January 9, 2014.

Universal completed all three projects without a single lost-time incident. They are a member of the Build-Safe Partnership Program (BSPP) with OSHA, a cooperative partnership between The Builders’ Association and OSHA.

Final architectural drawings for Joplin High School and Franklin Technology Center were released in January 2013, allowing for the majority of the project to be put out for bid. Corner Greer provided the School District preliminary drawings to bid out so that work could begin onsite while the drawings were finalized.

In February 2013, as crews were drilling and installing piers, they discovered evidence of mining activity, even though technical investigations had been performed there. The project team switched from pier to micropile construction and completed the footings, slabs and underground mechanical systems in March 2013, in time for the arrival of steel. The Performing Arts Center, which is located on the north side of the facility in the area most affected by the mining-related site issues, is expected to be completed in March 2015.

**Exterior Design**

Decorative metal panels on the building exterior have a factory finish so they will not have to be painted and maintained over time, stated Chad Greer. The exterior has four different veneer finishes: black box-ribbed metal panels, silver composite metal panels, red panels, and burnish block, noted Jason Bishop. The red panels are concrete fiber panels manufactured in Switzerland. The concrete has been pressed and formed, with integral (through-body) color dye. The panels provide a “pop of color” that ties in with the school’s Cardinal red.
JHS/FTC
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brand, said Chad. The panels also come in a lighter shade of red. “This is a large facility and we wanted to be sensitive to the scale. The color variations create texture, depth, and patterning.” The burnish block is a concrete masonry unit (CMU) block containing aggregates.

BUILDING INTERIOR

The Commons is on the second level, at the center of the building. On the lower level of the Commons is Eagle Alley, with a coffee bar and student lease stores where JHS students can sell items to raise funds, or FTC students can sell flowers grown in their onsite greenhouse.

The Library Media Center is located on the second and third levels, slightly north and west of the gymnasium. JHS has a 1:1 laptop program (a personal laptop for every student), and all textbooks are electronic.

The main gymnasium seats 2,500 and is centrally located on the east side, between JHS and FTC. It has a top-loaded court (spectators come in at the top level and walk down to their seats). The top level also serves as an indoor walking and running track for the high school.

There are two auxiliary gyms. An enclosed structural steel bridge with glass sides extends from the upper gymnasium to the commons area, and is part of the building structure. There are also two structural steel outdoor bridges: A 10'-wide walk bridge connects the FTC commons area, and is part of the building structure. There are also two auxiliary gyms.

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winds along the south of the site, from the cul-de-sac off the neighborhood at Missouri Street to a point east of the gymnasiums.

The building has four student/staff safe rooms and one community safe room. (The latter will be contained within the Performing Arts Center.) They are part of the legacy of an event that touched countless lives, including those of Mike Johnson and his family.

On May 22, 2011, Joplin High School’s graduation ceremony was held about three miles away, on the campus of Missouri Southern State University. Mike’s daughter was among the graduates. As Mike and his wife were leaving the ceremony, the sirens went off. The couple went home and took shelter in the basement. Their daughter had already left in her own car, a high school graduation gift. She got out of the car just seconds before it was destroyed by a huge tree, recalled Mike.

The oldest daughter, who was at home when the tornado hit, was “right near ground zero,” he said. “She and her husband and their three kids got in the tub. She remembers flying through the air but not landing. The house was completely destroyed, and they never did find the tub.”

While all of them (except for the husband, who came away relatively unscathed) suffered broken bones and other injuries, everyone survived, although the family dog, a Lab named Molly, was presumed lost.

Two months later, the family received welcome news: Molly had been found and was at the Humane Society. “My daughter was just beside herself,” recalled Mike.

NEW JOPLIN HIGH SCHOOL/FRANKLIN TECHNOLOGY CENTER:
BUILT BY UNIVERSAL AND DEDICATED IN 2014

Aerial view to the north. 20th Street is on the north, Indiana Avenue is on the east, 23rd Street is on the south (running north of the baseball and softball fields and tennis courts), and Grand Avenue is on the west. Franklin Technology Center, which was a stand alone building on the west side of the old campus, is now contiguous to and south of the high school. The high school was formerly located where the sports fields and easternmost parking lots are now located, on the flood plain.

FORMER JOPLIN HIGH SCHOOL: BUILT BY UNIVERSAL AND DEDICATED IN 1958

The images at left, which show the completed high school and the school under construction, are from a vintage Universal Construction Company brochure. The upper photo is of the north elevation. The aerial (circular) view is to the west. During the mid-1950s, school board officials recommended that Joplin High School be moved from downtown Joplin to a barren field off 20th and Indiana. Dedicated in November 1958, the new $2.25 million, 168,000 square foot facility contained 62 classrooms and was built to accommodate a student population of 2,000. In 2003, it was expanded with a major makeover to make room for a substantial increase in the student body. The high school was totally destroyed in the tornado of May 22, 2011.
and hides the catwalk,” said Chad Greer. The Performing Arts area includes a 1,250-seat auditorium; a black box theater with indoor/outdoor seating; choir, band, and orchestra rehearsal halls with sound-isolating practice rooms; and an art gallery to showcase student artwork. Finish work throughout the JHS/FTC campus and on the grounds is also scheduled to be completed by March, stated Archie Smith V.

“The construction management agency approach requires a trustworthy partner who delivers in a hardworking, conscientious way,” stated Mike Johnson. “We are very happy that Universal continues to be such a partner for us.” ▲

IRVING ELEMENTARY SCHOOL: TODAY

Irving Elementary School’s structural steel entrance canopy extends outward to the southeast. The 88,400 square foot school is designed for up to 650 students. Just beyond the entrance, on the north side, is a 5,656 square foot FEMA community tornado safe room/gymnasium. The school is located at 2901 South McClelland Boulevard, about nine blocks west of the old Irving Elementary. The new Irving Elementary School houses children from both the old Irving Elementary as well as Emerson Elementary School, which was built in 1930 and was also destroyed in the tornado.

IRVING ELEMENTARY SCHOOL: LIBRARY

The new library, just inside the main entrance of the school, offers a bright, colorful, light-filled area for kids, with areas for individual study as well as soft seating for group studies or class time. Glass walls (partly visible at left) provide transparent separation from the main entrance (in the foreground, out of view).

EAST MIDDLE SCHOOL: MAIN ENTRY

East Middle School was destroyed in the tornado and rebuilt at its existing site on East 20th Street along with Soaring Heights Elementary School. (Soaring Heights combines Duquesne and Duenweg elementary schools.) The eagle at left is on the portion of the building that includes a shared auditorium accessible by both middle and elementary school students.

SOARING HEIGHTS ELEMENTARY SCHOOL: “THEATRE IN THE PARK”

The seats and sunken floor area in Soaring Heights “Theatre in the Park” face an enclosed courtyard (Soaring Heights “Learning Park™,” out of view at left) with an operable wall. When the wall is open, the courtyard acts as a stage, creating the “theatre” concept.