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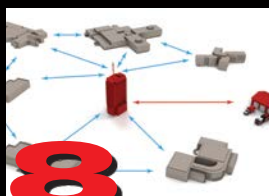
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2
Intrepid Electronic Systems
Wires East Side Union
High School District
Fire Alarm Upgrade



6
Cal Coast Telecom Installs
DATA, AV And Security
At Foothill-De Anza New
Education Center



8
Intrepid Electronic Systems
installs AES-IntelliNet Fire
Alarm reporting system



Intrepid Electronic Systems, Inc. is updating the fire alarm systems of 16 schools in the East Side Union High School District in San Jose, including (clockwise) Andrew P. Hill High School, Calero High School, Foothill High School, and Evergreen High School.

PHOTOS BY NICK ELIAS

Intrepid Electronic Systems Builds State-Of-The-Art Fire Alarm Systems For The East Side Union High School District

Intrepid Electronic Systems, Inc. is updating the fire alarm systems at 16 schools and administrative sites within the East Side Union High School District (ESUHSD) in San Jose, the largest school district in Northern California.

The update covers 178 buildings, and encompasses the installation of over 4,000 devices, including smoke detectors and speaker strobes for fire alarm and mass notification.

Intrepid Electronic Systems' \$15 million design-build fire alarm modernization project will bring state-of-the-art fire safety to the District's schools. Some 24,000 students attend the District's high schools. The fire alarm system modernization project is part of the Measure I Bond Program, Fund 24, which designated \$18.9 million for the upgrade. Study and assessment of the fire alarm systems at all schools sites was completed in 2013-2014.



Intrepid Electronic Systems, Inc. updates the fire alarm systems of the East Side Union High School District in San Jose.

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A publication of the National Electrical Contractors Association (NECA) and the International Brotherhood of Electrical Workers (IBEW) of Northern California.

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PHOTO BY NICK ELIAS



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The upgraded Fire Alarm System is tied into the East Side Union High School District's fiber optic network.

Intrepid Electronic Systems Builds State-Of-The-Art Fire Alarm Systems For The East Side Union High School District

Intrepid Electronic Systems, Inc., with locations in San Jose and Oakland, is an IBEW/NECA contractor (International Brotherhood of Electrical Workers and the National Electrical Contractors Association). The firm specializes in the design-build of low voltage electronic systems such as fire alarm, security and life safety. Intrepid Electronic Systems San Jose office is in the East Side Union High School District (ESUHS), and a number of Intrepid Electronic Systems employees are graduates of schools in the district. Intrepid Electronic Systems has other ties with ESUHS, as many of their staff live within the district and send their children to ESUHS schools.

For the East Side Union High School District, Intrepid Electronic Systems has completed the fire alarm systems upgrades at WC Overfelt High School, Santa Teresa High School, and Foothill High School, and will soon complete the makeovers at Silver Creek High School and Evergreen High School.

Other high schools and higher education facilities slated to receive the fire alarm system makeover include Oak Grove, Calero, Yerba Buena, James Lick, Andrew Hill, Piedmont Hills, Independence, and Mt. Pleasant, along with the East Side Union High School District office. Work on the schools began in June 2016 and

is scheduled for completion in January 2018.

Anthony Revelo, low voltage systems coordinator for the school district, is working with Intrepid Electronic Systems on the project. Michael Zinov, from the International Brotherhood of Electrical Workers (IBEW) Local 6 in San Francisco, is the Superintendent in charge of the project for Intrepid Electronic Systems. Five technicians (see team box) from IBEW Local 332 in San Jose, IBEW Local 302 in Contra Costa County, and IBEW Local 595 in Alameda County are also working on the project. All technicians are certified in the area of fire and life/safety by the State of California.

PHOTO BY NICK ELIAS



Intrepid Electronic Systems wired each room in the schools with a speaker strobe notification system which alerts students of an emergency and provides directions on how to proceed.

PHOTO BY NICK ELIAS



Intrepid Electronic Systems wired smoke detectors on the ceiling in each room at the schools.

PHOTO BY NICK ELIAS



Intrepid Electronic Systems installed network graphic annunciators which are used to convey to the students the steps needed to be taken during an emergency.

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Intrepid Electronic Systems Project Team (Left To Right): Johnny Ponce, Technician; Jeffrey Hunseker, Apprentice; Kurtis Burnette, Technician; Michael Zinov, Superintendent; Chris Collum, Senior Technician; Bob Craig, Senior Technician (not pictured); Kurt Brinkman, CEO & Project Manager (not pictured)

The General Contractor is Gonsalves & Stronck Construction Company; Ackerman-Practicon is the Engineer of Record; Interface Engineering provided the design criteria for the project. Smith and Sons Electric Company of Fremont, another IBEW contractor, is also implementing the fire alarm upgrades at other locations.

Zinov, the Intrepid Electronic Systems Superintendent, said the biggest challenge for the project was the need to limit disruption to students and staff while school is in session, since all schools are occupied. Consequently, much of the work was done during a “swing shift” from 3 p.m. to 11 p.m.

Intrepid Electronic Systems used networked AES-Intellinet fire alarm system equipment for the updates. The state-of-the-art equipment (see center spread, pages 4-5)

includes 56 networked fire alarm panels that monitor over 100 buildings. The fire alarm panel at each site is located in an IDF closet (computer room control center) at the school. The fire alarm panel is then patched into an existing fiber optic network.

Additional equipment installed at the project includes over 4,000 smoke detectors and speaker strobe safety notification speakers, along with many high temperature heat detectors. These devices are located in every classroom, office, hallway, and bathroom on each campus. Intrepid Electronic Systems installed a network graphic annunciator from Gamewell-FCI (Fire Control Instruments) in the administrative office at each site, used to announce alarm conditions if an emergency occurs.

CONTINUED ON PAGE 8



A pull station fire alarm is installed in public areas, such as auditorium or gymnasium, not in a classroom. This allows for manual activation in a populated space.



Intrepid Electronic Systems installed exterior RF Antennas to monitor building and maintenance records, and report the current status of the system and its individual devices via a mesh network.

Intrepid Electronic Systems Team List

East Side Union High School District:

OWNER:
East Side Union High School District
Anthony Revelo, Low Voltage Systems Coordinator

ARCHITECT:
Division Of The State Architect

CONSTRUCTION MANAGEMENT:
Swinerton Construction Management

GENERAL CONTRACTOR:
Gonsalves & Stronck Construction Company

ENGINEER OF RECORD:
Ackerman-Practicon

FIRE ALARM SYSTEMS CONTRACTOR:
Intrepid Electronic Systems, Inc.

INTREPID ELECTRONIC SYSTEMS FIRE ALARM MANAGEMENT TEAM:
Heather Lent, President & Project Manager
Michael Zinov, Superintendent

FIRE ALARM INSTALLERS FROM INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS (IBEW) LOCAL 332, SAN JOSE; LOCAL 6, SAN FRANCISCO; LOCAL 595, DUBLIN:
Chris Collum, Senior Technician
Bob Craig, Senior Technician
Johnny Ponce, Technician
Kurtis Burnette, Technician
Jeffrey Hunseker, Apprentice

Intrepid Electronic Systems Upgrades The East Side

Thanks to the wiring of Intrepid Electronics, the East Side Union High School District will be much safer

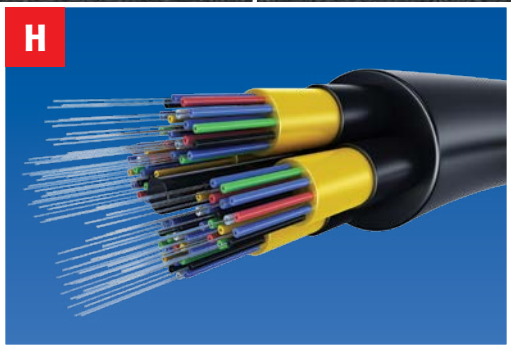
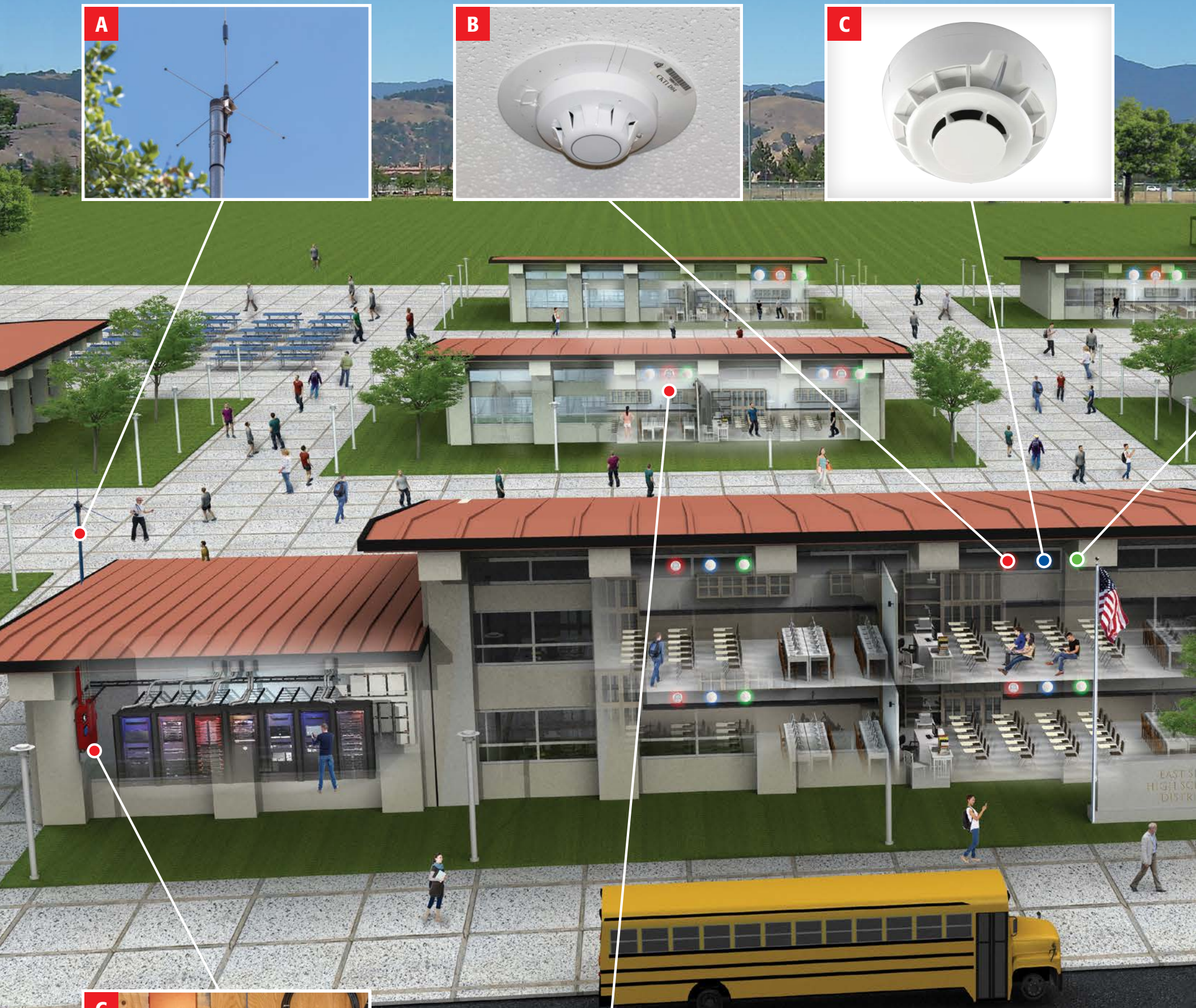
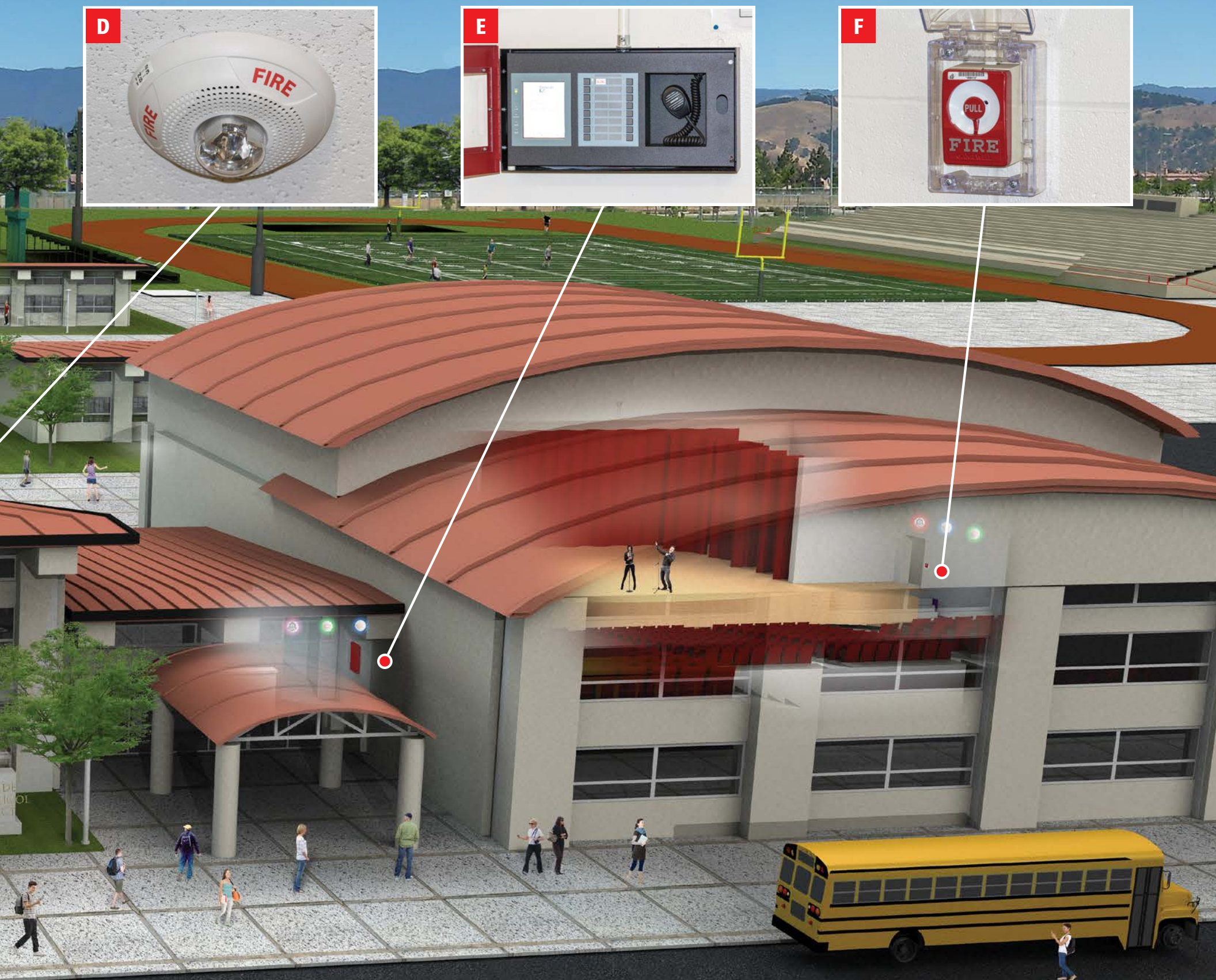


ILLUSTRATION BY PATCHING WEI
PHOTOS BY NICK ELIAS

De Union High School District Fire Alarm System

due to the fire alarm upgrade performed to the 16 different schools in the district. Here's how it works:



A Exterior RF Antenna

The exterior RF (Radio Frequency) Antenna distributes building and maintenance records, and reports the current status of the system and its individual devices via a mesh network of RF antennas between all the schools in the district.

B Smoke Detectors

Each room in a school is monitored by a smoke detector on the ceiling.

C High Temp Heat Detectors

Each room in a school has a high temperature heat detector which sits above the ceiling tile.

D Speaker/Strobe Fire Alarm Notification

Each room in a school has a speaker/strobe notification system which alerts students of an emergency and provides directions on how to proceed.

E Network Graphic Annunciator

A network graphic annunciator is installed in the administrative office, and is used to convey to the students and staff the steps needed to be taken during an emergency.

F Pull Station Fire Alarm

A pull station fire alarm is installed in public areas, such as auditorium or gymnasium, not in a classroom. This allows for manual activation in a populated space.

G Fire Alarm Control Panel and RF Antenna

The main fire alarm control panel is located in the schools Intermediate Distribution Frame (IDF). The fire alarm panel is connect to an RF Antenna which distributes the status of the system to Crime Alerts and the Fire Department via a mesh network. (see diagram on page 8)

H Fiber Electronic Network

The fire alarm system is connected via the schools existing electronic network.

PHOTO BY NICK ELIAS



Cal Coast Telecom installed data, AV, and security low voltage systems for the new Foothill-De Anza Community College District Education Center in Moffett Park.

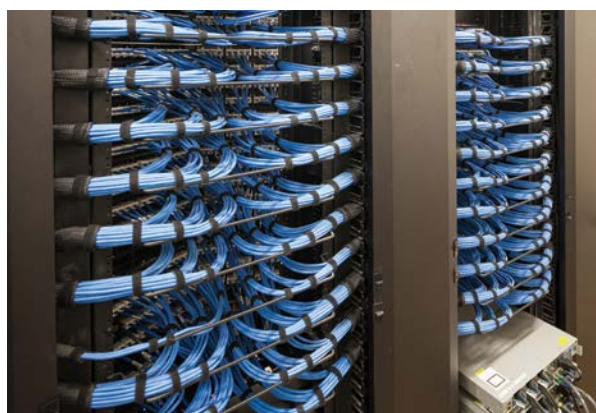
Cal Coast Telecom Wires Data, AV, CCTV and Access Control for Foothill-De Anza Education Center

PHOTO BY NICK ELIAS



Cal Coast Telecom Project Team (Left To Right): Mitch Fountaine, Audio Video Project Manager; Doug Wright, Data Systems Project Manager; Phillip Butler, Security Project Manager; James Hartley, Security Sales Engineer (not pictured)

PHOTO BY NICK ELIAS



Cal Coast Telecom built out the two IDF closets on the northern side of the building and completed the fiber backbone which supported the students and faculty.

Cal Coast Telecom recently installed several low voltage systems for the new Foothill-De Anza Community College District Education Center in Moffett Park, including the data, AV, and security systems.

Cal Coast Telecom worked as a union telecommunications contractor for the project, in conjunction with technicians from the International Brotherhood of Electrical Workers Local 332 in San Jose.

The new \$25 million education center in Sunnyvale, now offering an expanded technology curriculum to students in Silicon Valley, replaces the iconic building known as the “Blue Cube,” once the main center at the old Onizuka Air Force Station, which once occupied the site. The “Blue Cube” served as a satellite operations facility for 50 years, closed in 2010, and was then demolished.

The new 46,000-square-foot education center offers expanded programs in technology and computer sciences, as well as liberal arts. The facility includes classrooms, offices and student spaces. The building has a unique architectural design, including an open atrium and radiant floor heating.

It is located immediately adjacent to offices for tech companies and to the Moffett Towers office complex. C.W. Driver was the general contractor; CSI Electrical Contractors served as the electrical contractor.

Cal Coast Telecom wired data connections to over 500 workstations located on two floors in the new facility. The data wiring was completed with CAT6 cabling, designed to a specific Panduit standard. Cal Coast Telecom also built out the two IDF closets on the northern side of the building and completed the fiber backbone as well.

In order to “hide” the data wiring with the atrium-styled building, Cal Coast Telecom had to maneuver its wiring around the atrium. The company ultimately designed a channel above the beams in the atrium that allowed them to successfully circumvent the open architecture and to keep the cabling hidden.

Cal Coast Telecom also installed the AV infrastructure and support structure for the dual screens and dual projectors wired throughout most of the 24 classrooms in the building. A few smaller classrooms only had one screen and projector installed.



Cal Coast Telecom installed the AV infrastructure and support structure for the dual screens and dual projectors wired throughout most of the 24 classrooms in the building.



Cal Coast Telecom wired data connections to over 500 workstations located on two floors in the new facility.

The drop ceilings in the classrooms presented a challenge for the AV wiring, as the space within the drop ceiling was tight and required considerable skill to fit in all the AV wiring along with other wiring connection. Cal Coast Telecom also set up AV infrastructure in other areas, including the conference rooms, library, and lecture hall.

Cal Coast Telecom installed the access control system in the facility, as well as the CCTV and intrusion system. The systems are monitored by a central server at another college location. The access control system was wired to each perimeter door, as well as to a total of 46 main doors, including classrooms and conference areas.

Cal Coast Telecom technicians wired some 24 Pelco CCTV cameras around the first floor perimeter, along walkways and busy areas, as well as the stairwells. There are 14 CCTV cameras inside near main doorways and main common areas. The Bosch intrusion system installed by Cal Coast Telecom included 104 sensors on the first floor, guarding the entire perimeter of the building.

Cal Coast Telecom is headquartered in San Jose and provides telecom, wireless, AV, security, and DAS infrastructure. For more information about Cal Coast Telecom, contact their corporate office at (408) 275-8888 or go to www.cctcom.net.



Cal Coast Telecom installed the Bosch intrusion system which includes 104 sensors on the first floor, and the entire perimeter of the building.



Cal Coast Telecom built out the two IDF closets on the northern side of the building and completed the fiber backbone which supported the students and faculty.



Cal Coast Telecom technicians wired some 24 Pelco CCTV cameras around the first floor perimeter, along walkways and busy areas, as well as the stairwells. There are 14 CCTV cameras inside near main doorways and main common areas.

Cal Coast Telecom Team List Foothill-De Anza Education Center

- OWNER:**
Foothill-De Anza Community College District
- ARCHITECT:**
Lionakis, San Francisco
- GENERAL CONTRACTOR:**
CW Driver, San Jose
- ELECTRICAL CONTRACTOR:**
CSI Electrical Contractors, San Jose
- CAL COAST TELECOM LOW VOLTAGE SYSTEMS MANAGEMENT TEAM:**
Gary Olson, Operations Manager
Doug Wright, Data Systems Project Manager
Mitch Fountaine, Audio Video Project Manager
James Hartley, Security Sales Engineer
Phillip Butler, Security Project Manager
- LOW VOLTAGE INSTALLERS FROM INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS (IBEW) LOCAL 332, SAN JOSE**
Salvador Aquino, Greg Boucher, Chris Caldwell, Jaime Hawelu, Victor Lopez, Esteban Martinez, Telly Rollins

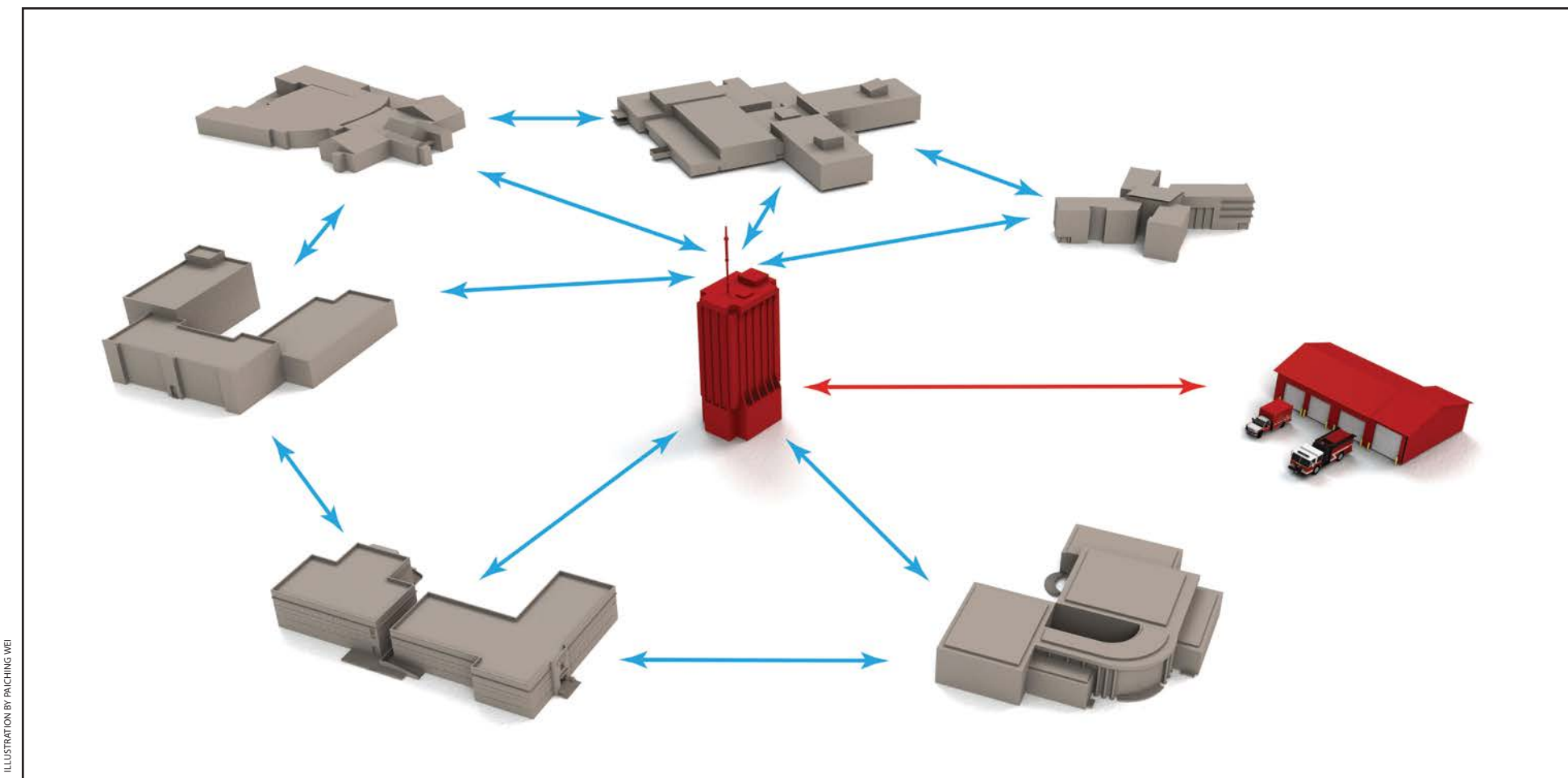


ILLUSTRATION BY PAICHING WEI

CONTINUED FROM PAGE 3

Intrepid Electronic Systems installed the AES-IntelliNet Fire Alarm reporting system at each of the 16 schools in the district. It monitors and reports the status of all the fire alarm devices via a RF mesh network to the district office (center). The district office notifies the remote monitoring company and the fire department instantaneously in an emergency.

Intrepid Electronic Systems installed a UL Listed Redundant Central Station AES-IntelliNet Fire Alarm reporting system, which monitors all the fire alarm devices, and can display the specific location of a device if there is trouble.

AES-IntelliNet is comprised of a mesh radio network and a fire alarm receiving center. The AES equipment is installed at each school, which connects to a central monitoring station (the East Side Union High School District Headquarters), and uses its own designated radio frequency (RF) to create a licensed private wireless mesh network. This network works as a receiver, transmitter and repeater of signals across the network. Each alarm site is linked to the network by the smart device.

Signals automatically follow the shortest, most optimal path available, ensuring fast and highly reliable alarm communications.

Signals that need to get from a monitored alarm panel to the central alarm monitoring station may either go directly to the panel or the station, or “hop” among other AES devices along the way in a different route to get to the central alarm station.

Intrepid Electronic Systems, Inc. is located in Oakland and San Jose, and provides low voltage electronic systems such as fire alarm, security and life safety. CEO Kurt Brinkman can be reached at Kurt@intrepidelectronic.com or 888.826.3040. www.intrepidelectronics.com



PHOTO BY NICK ELIAS

Intrepid Electronic Systems installed the AES-IntelliNet Fire Alarm reporting system, which via the fire alarm panel monitors and reports the status of all the fire alarm devices via a RF mesh network.

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