

The Silicon Valley Wire

The latest news from the electrical industry in Silicon Valley

3rd Quarter 2015



Sprig Electric Wires Avaya Stadium, New Home Of The San Jose Earthquakes

Photo By Nick Elias

Sprig Electric wires the new 18,000-seat, \$60 million dollar Avaya Stadium.

A world-class soccer stadium has opened in San Jose, thanks in part to the work of Sprig Electric. Sprig Electric recently completed the electrical infrastructure build out for the city's new \$60 million Avaya Stadium, new home to the San Jose Earthquakes.

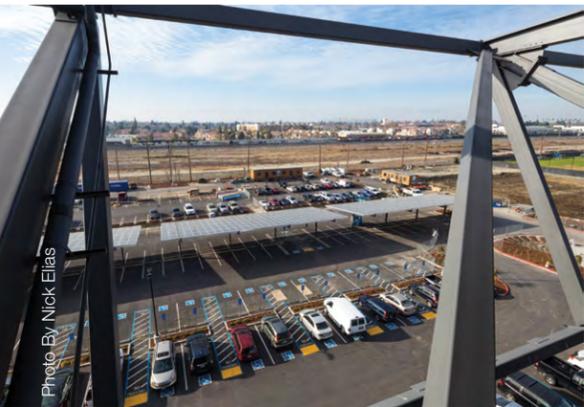


Photo By Nick Elias

Sprig Electric installed the solar panel infrastructure system in the VIP parking lot on top of canopy parking.

The 18,000-seat facility is located on Coleman Avenue across from the San Jose International airport. Sprig Electric began working on the two-phase \$7.5 million Avaya Stadium project in April 2013. Phase one included wiring the team's 24,000 square foot two-story office building, which is built on the west side of the stadium.

The second phase of the project included wiring the stadium itself. Avaya Stadium, a two-story structure that is 75 feet high, has seating going up to about 60 feet.

The stadium includes 12 luxury suites and 576 club seats on the field level, as well as a sky box built for broadcasting. A European roof design covers all stands to hold in sound and build atmosphere.

As part of the design/build project, Sprig Electric provided all electrical services for Avaya Stadium, including internal 3D modeling; underground wiring; incoming service that ties into PG&E; and substructure work for the high voltage connections coming into the stadium.



Photo By Sprig Electric

Power comes into the substations from the main service yard, which is located on the south side of the stadium.

CONTINUED ON PAGE 2

Inside This Issue



Sprig Electric Wires New Avaya Stadium

2



A View Of The New Avaya Stadium From The Sky

4



Elcor Electric Wires The Windhover Contemplative Center At Stanford University

6



Photo By Nick Elias

Dave Kaval, president of the Earthquakes organization, spearheaded the efforts for the construction of the privately financed stadium, which was built to LEED Silver specifications.

Sprig Electric Wires The New Avaya Stadium

CONTINUED FROM PAGE 1

AVAYA STADIUM SPRIG ELECTRIC DESIGN/BUILD SERVICES:

- Internal 3D modeling
- Software Development
- Design Development
- Installation Of Underground Wiring
- Substation (2) Construction
- Installation Of Incoming Service
- Installation Of Substructure Work For High Voltage Connection
- Infrastructure Wiring For Photovoltaic Solar Electric System
- Stadium Lighting Installation

SPRIG ELECTRIC DATA DIVISION SERVICES:

- Lighting Control Systems
- Wiring Of Fire Alarm System
- Duct Structure Wiring For Data Center
- Fiber Optic Transmission Wiring
- Wi-Fi System Wiring

Sprig Electric installed the infrastructure for a solar system in the VIP parking lot on top of canopy parking.

Led by Senior Project Manager Ron Piovesan, Sprig Electric created a joint venture for the project with ERMCO, Inc., an electrical construction firm headquartered in Indianapolis. ERMCO has worked with a number of major sports franchises, including the Cincinnati Bengals, the Houston Rockets, and the Pittsburgh Steelers. Devcon Construction was the general contractor for the project.

The architect is 360 Architecture. Principal Brad Schrock said 360 Architecture designed the facility so that fans would have a great experience with pronounced

sight lines, giving them the ability to see the game all the way around. Some have said the stadium offers the closest views in American soccer.

Dave Kaval, President of the Earthquakes organization, spearheaded the efforts for the construction of the privately financed stadium, which was built to LEED Silver specifications. The facility is designed to meet Major League Soccer (MLS) standards.

Officials say its presence will have a significant impact on MLS, as well as a major economic impact on San Jose. The facility includes plans for a major mixed-use project next door, featuring office, hotel, and retail space. The city is building out four adjacent soccer fields, which

will attract major tournaments to the downtown area.

According to Piovesan, Sprig Electric constructed two substations for the stadium because of the distance requirements of the construction on the 74-acre site. "One substation is located on the east side of the stadium and one is located on the west side," said Piovesan. "Power comes into the substations from the main service yard, which is located on the south side of the stadium. Power flows from the main service yard to the two substations."

During the construction of the stadium, construction crews unearthed more than 60 vaults and basements originally built as bomb shelters under the property by a former tenant,



Photo By Nick Elias

One of the biggest challenges during the initial stages of wiring the stadium was hoisting Sprig's electricians high into the air inside the structure so that lighting could be installed on the perimeter.



Photo By Nick Elias

Sprig Electric Senior Project Manager Ron Piovesan led the \$7.5 million electrical infrastructure build out of the new Avaya Stadium.



Photo By Nick Elias

Sprig Electric also wired the Avaya Stadium's two-acre epicenter, which includes the largest outdoor bar in North America.



Photo By Nick Elias

Phase one of the Avaya Stadium project included wiring of the team's 24,000 square foot two-story office building, which is built on the west side of the stadium.

Food Machinery Corporation (FMC Corporation). The vaults and basements contained ground water, which was tested for contamination, then filtered. "Remediation pumps for the groundwater were required to remain operational during and after construction," said Piovesan. "This required creativity in providing temporary power and new service to the site from the existing PG&E 12 kV overhead system."

One of the biggest challenges during the initial stages of wiring the stadium was hoisting Sprig Electric's electricians high into the air inside the structure so that lighting could be installed on the perimeter of the stadium.

"We used special knuckle

booms to get our guys up in the air so they could work," said Piovesan. "Because we had to do everything at an angle, our electricians end up going up 135 feet or so. You have to be able to move vertically and horizontally and so you have a strong bouncing effect. Going up is one thing, but coming down was more difficult."

Musco Sports Lighting, LLC. designed the lights that Sprig Electric installed on the booms. "The lights are fabricated so that you have three to four lights aimed at any point on the field, so there aren't shadows," said Piovesan. "These lights are pre-aimed in the factory to point in a certain direction and we install them that way. They meet foot candle and glare requirements

for world-wide broadcasting."

Sprig Electric also wired the stadium's two-acre epicenter and scoreboard, which includes the largest outdoor bar in North America (310 feet long). A screen on the back side of the scoreboard allows the community to enjoy movie nights on the grassy lawn facing Coleman Avenue. Various portable grills and concessions are scattered around the area.

"This is a big-league ballpark," said Piovesan. "We are really excited to be a part of it."

For more information about Sprig Electric and its services, contact AJ Ramirez, marketing coordinator (aramirez@sprigelectric.com) or call (408) 298-3134 ext. 303.



Photo By Nick Elias

Sprig Electric provided all electrical services for the high voltage connections coming into the stadium.



Photo By Nick Elias

The stadium lights are fabricated with 3 to 4 lights aimed at any point on the field, so there aren't shadows.



Photo By Nick Elias

Sprig Electric project team members include:

STANDING LEFT TO RIGHT: Scott Casem; Ivan Sincek; Pat Jobe; Danny Pascua; David Bryce; Chuck Wilkie; Sean Lockard - Forman; Ron Piovesan - Senior Project Manager; Dan Lira - General Foreman

KNEELING LEFT TO RIGHT: Juan Rios; Luis Montoya

SPRIG ELECTRIC TEAM LIST AVAYA STADIUM:

OWNER:

San Jose Earthquakes, LLC.

ARCHITECT:

360-CA Schrock Architects, P.C.

GENERAL CONTRACTOR:

Devcon Construction Inc.

CIVIL ENGINEER:

Kier & Wright

STRUCTURAL ENGINEER

Magnusson Klemencic Associates

ELECTRICAL CONTRACTOR:

Sprig Electric in a Joint Venture With ERMCO, Inc.

SPRIG ELECTRIC MANAGEMENT TEAM:

Mike Glogovac, Vice President;
Ron Piovesan, Senior Project Manager;
Dan Lira, General Foreman;
Sean Lockard, Foreman

ELECTRICIANS FROM INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS (IBEW) LOCAL 332, SAN JOSE:

Scott Casem, Pat Jobe, David Bryce, Ivan Sincek, Danny Pascua, Chuck Wilkie, Juan Rios, Luis Montoya.

ERMCO, INC. MANAGEMENT TEAM:

Dave Peterson, Senior Vice President, Business Development & Marketing;
Megan Gossett, Marketing Coordinator

DATA AND COMMUNICATIONS CONTRACTOR:

Sprig Electric Data Division

AUDIO VIDEO AND BROADCAST DESIGN CONTRACTOR:

ProMedia Ultrasound

LIGHTING CONTRACTOR:

Musco Sports Lighting, LLC.
Mark Flesner, Senior Project Manager

Sprig Electric Designs And Wires Avaya Stadium



Construction of two substations on the east and west sides of the stadium. Power is received from the main service yard on the south side of the stadium.



Installation of lighting for the stadium.

Wi-Fi System Wiring

Installation of data center wiring in stadium



Design and installation of fire alarm system.

A 300-foot walkway connects the office building to the stadium, allowing players to travel directly from the walkway and into the stadium for the game.

FAST FACTS ABOUT AVAYA STADIUM:

- 18,000 seats on a 74-acre site
- Two-story stadium, 75 feet high
- \$60 million construction cost
- 12 luxury suites and 576 club seats
- Sky box for broadcasting
- Built to LEED Silver specifications
- Designed to meet Major League Soccer (MLS) standards
- Largest bar in North America (310 feet long)



Wiring of scoreboard and replay screen, along with wiring of stadium's epicenter, concession areas, and the largest outdoor bar in North America (310 feet long)

um, New Home To The San Jose Earthquakes

Installation of substructure for high-voltage connection into the center.

Installation of substructure work for high-voltage connection



Installation of substructure wiring for photovoltaic solar electric system in VIP parking lot on top of canopy parking.

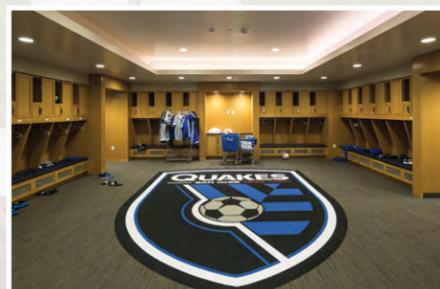
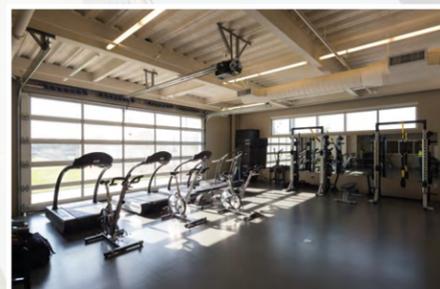


Installation of incoming service that ties into existing PG&E 12 kV overhead system.

10-foot gap separates building from stadium, allowing level across the field to go directly to stadium on days.



Wiring sky box for broadcasting.



Wiring the team's 24,000-sq.-ft. two-story office building. The top floor contains offices; the lower floor has locker room, gym, and workout rooms.



Wiring 12 luxury suites and 576 club seats.



Photo By Matthew Millman

Elcor Electric installed both the Lutron Quantum Lighting Control System and Embedia Technology System to maximize energy savings during day and night.

Elcor Electric Wires The Windhover Contemplative Center, An Instant Getaway At Stanford University

Windhover Contemplative Center at Stanford University, a design build project wired by Elcor Electric, brings the opportunity for quiet contemplation to the campus. The distinctive rammed-earth and glass structure is part spiritual sanctuary, part art gallery and part contemplative garden. It offers a space for structured meditation and quiet observation of art and nature.



Photo By Matthew Millman

Elcor Electric installed a Lutron Quantum Lighting Control System which is able to raise and lower the shades as well as dim the light fixtures based upon the amount of ambient light.

To light up the building, Elcor needed to maintain the contemplative and aesthetic quality of the facility, while making the wiring and control systems state-of-the-art.

Windhover was designed by Aidlin Darling Design in honor of the work of artist Nathan Oliviera's meditative Windhover series, inspired by kestrels in flight. Oliviera, an internationally known figurative painter, taught art at Stanford University for more than 30 years.

The contemporary-style building, which opened last year, serves as a spiritual retreat for Stanford's students, faculty, and staff. It combines the minimalism of rammed-earth and wood

siding walls with the lighter elements of aluminum and glass, and shows the influence of Japanese architecture. The general contractor is SC Builders, Inc.

The architect's goal was to "create a space where art, landscape, and architecture come together to replenish and invigorate the spirit." A long, private garden sheltered from the outside world allows visitors to enter the building in serenity. Fountains in the building and in an adjacent courtyard provide soothing sound, with a still reflecting pool and garden situated to the south. Exterior courtyards allow visitors to view the paintings through the building's long expanses of glass without having to enter the Center.



Photo By Matthew Millman

The building combines the minimalism of rammed earth and wood siding walls, with the lighter elements of aluminum and glass.

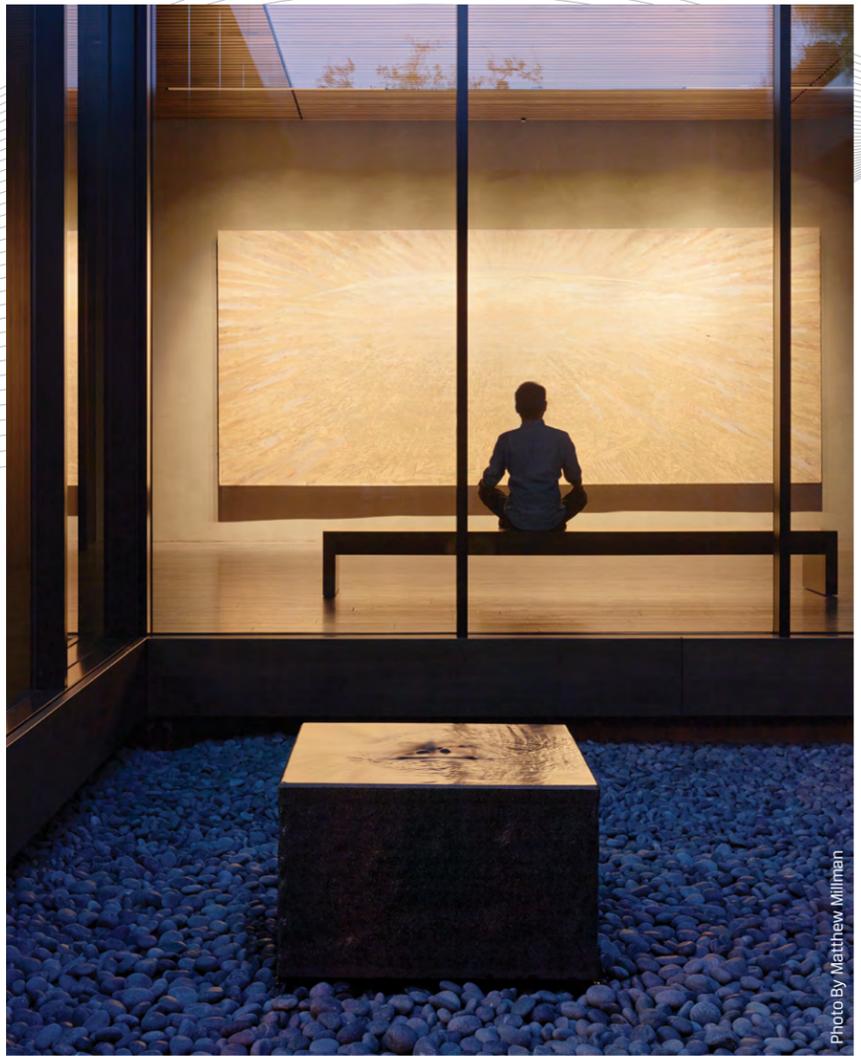


Photo By Matthew Millman

Elcor Electric installed an Embedia Technology System to control the metal louvers mounted horizontally below the skylights.

The building's thick rammed-earth walls make typical routing of power through walls unfeasible, requiring that Elcor find alternative ways to run the connections. In the case of Windhover, Elcor wired the building through the floor instead of the walls to avoid the rammed-earth. Power was brought in to the building off the main distribution loop of the campus.

"Our goal was to provide sufficient lighting and power without negatively impacting the aesthetics of the building" said Clint Woodley, project

executive for Elcor Electric. "We put a significant amount of effort into concealing and minimizing the electrical features, but still create a utilitarian building in the end."

The need to have natural day-lighting illuminate the art work in the building during the day meant that Elcor had to carefully install and integrate lighting controls to balance natural and artificial light.

The design team utilized a comprehensive daylight study from Loisos + Ubbelohde Associates, Inc., to create an overall strategy for

illuminating the space. The model incorporated multiple variables, such as the position of the building, the time of year and the time of the day.

Based on the results of the modeling, an algorithm was produced by the architectural daylighting consultant and integrated by Elcor into the Lutron Quantum Lighting Control System. The Lutron System is able to raise and lower the shades as well as dim the light fixtures based upon the amount of ambient light entering the space at any given time. The system also regulates the exterior

lighting installed by Elcor.

Daylight sensors within the Lutron System are programmed to control the lights, based on the amount of natural daylight coming in. "The goal of the project is that the gallery be filled with ambient light," added Woodley. "But there are days when natural light is inadequate, requiring inside lighting at a low level."

The Lutron Quantum Control Hub, located in the main electrical room off the North Gallery, controls the automation.

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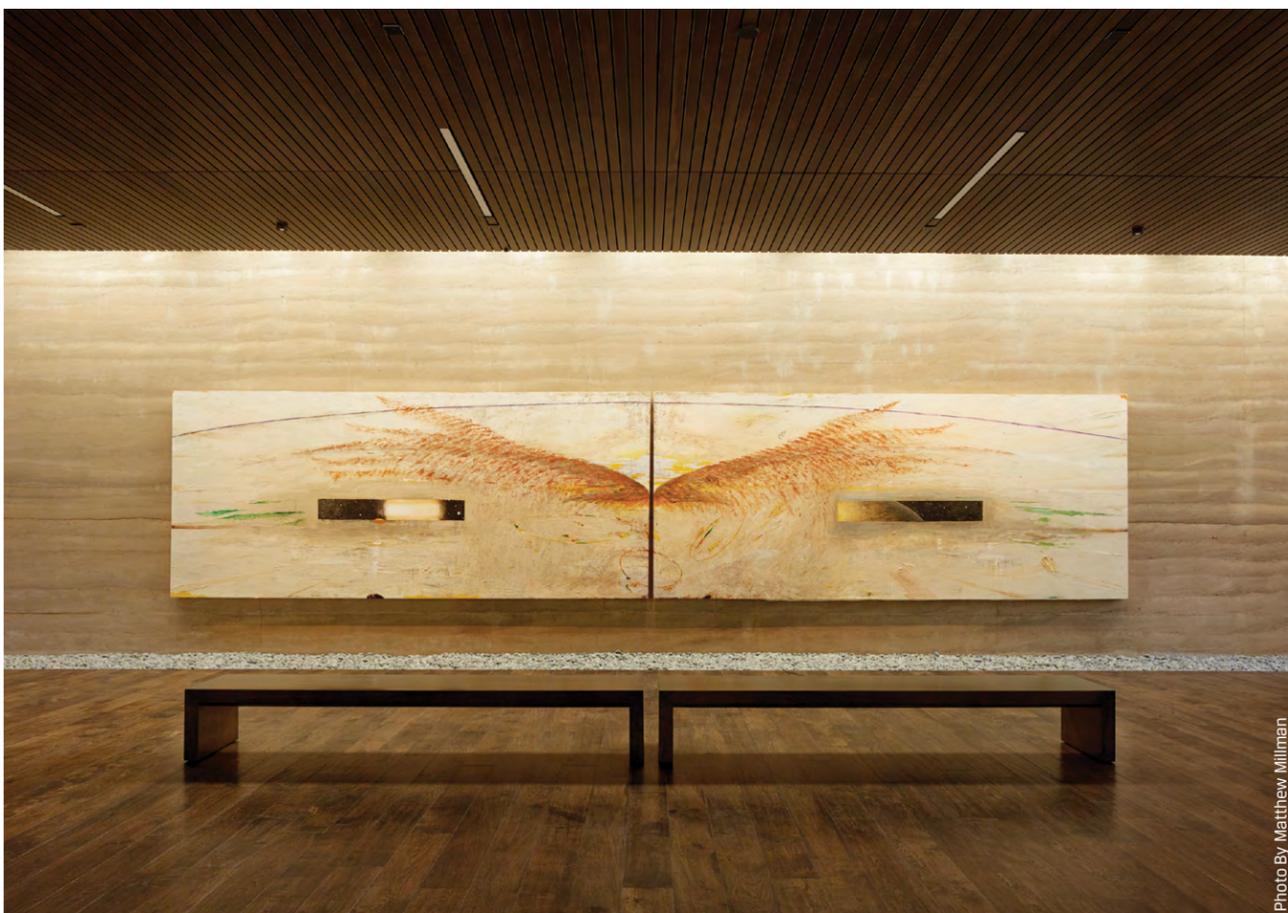


Photo By Matthew Millman

Elcor Electric has wired the building through its floors in order to avoid the buildings rammed earth walls.

**WINDHOVER
CONTEMPLATIVE CENTER
STANFORD UNIVERSITY
PROJECT TEAM SNAPSHOT:**

ARCHITECT:
Aidlin Darling Design;
San Francisco, CA

LANDSCAPE DESIGN:
Andrea Cochran
Landscape Architecture;
San Francisco, CA

GENERAL CONTRACTOR:
SC Builders, Inc.;
Sunnyvale, CA

ELECTRICAL CONTRACTOR:
Elcor Electric, Inc.;
Santa Clara, CA

LIGHTING CONSULTANT:
Auerbach, Glasow & French
Architectural Lighting Design &
Consulting; San Francisco, CA

**ARCHITECTURAL DAY
LIGHTING CONSULTANT:**
Loisos + Ubbelohde
Associates, Inc.; Alameda, CA



Photo By Matthew Millman

Elcor Electric carefully installed and integrated lighting controls to balance natural and artificial light.

Elcor Electric Wires The Windhover Contemplative Center At Stanford University

CONTINUED FROM PAGE 7



Photo Courtesy Elcor Electric

The Elcor Electric project team includes Victor Jaquez, project foreman, along with electricians and apprentices from IBEW Local 332.

Elcor installed a separate Embedia Technology System to control the metal louvers mounted horizontally below the skylights. The Embedia System maximizes the use of day-lighting by controlling the amount and direction of sunlight that comes into the galleries throughout the day.

"These two state-of-the-art control systems generate an ideal balance between creating an idyllic tranquil space for students, faculty and staff, and maximized energy savings day and night," said Woodley.

The Windhover Contemplative Center is open daily from 11 a.m. to 11 p.m. to students, faculty, and staff; and open to the public once a week during a docent-led tour on Tuesday. Visit the Windhover Contemplative Center's website for more information (windhover.stanford.edu).

For more information about Elcor Electric and its services, contact Clint Woodley, project executive (cwoodley@elcorelectric.com) or call (408) 986-1320.

WINDHOVER CONTEMPLATIVE CENTER, STANFORD UNIVERSITY ELECTRICAL TEAM:

ELECTRICAL CONTRACTOR:
Elcor Electric, Inc.; Santa Clara, CA

SCOPE OF WORK:

- Electrical Design Build Engineering
- Electrical Infrastructure
- Lighting
- Lighting Controls
- Fire Alarm

PROJECT MANAGEMENT:
Clinton Woodley, Project Executive
Ryan Woodley, Project Manager
Victor Jaquez, Project Foreman

ELECTRICIANS, TECHNICIANS AND APPRENTICES:
International Brotherhood of Electrical Workers (IBEW) Local 332; San Jose, CA