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Frank Nunes Chief Executive Officer

# LET'S KEEP THE MOMENTUM GOING

I'm thankful for the great year we had in construction. Though we made great construction strides in 2017, let's not forget about the Northern California wildfires our region went through; the disaster is estimated to place at over \$4.6 billion in damages and projected to take several decades to get the areas back to their original state.

WACA is doing its part to help with the rebuild effort. We are supporting the Carpenters wildfire initiative "Northern California Carpenters Relief Fund" by donating funds to assist members that have been adversely affected by the wildfires. WACA plans on continuing to support the relief fund in the upcoming year. If you would like to support this initiative, please reach out to Ricky Score with the Northern California Carpenters Regional Council at (510) 568-4788 for more information.

On the construction skyline, we have seen tremendous growth in the construction industry for both work and projects well into the New Year. Construction work in Northern California is at record levels and with that, a shortage in labor force — as you may be experiencing. Contractors, you're not alone — this has been a challenge that the construction industry is powering through. The best thing we can do is team up to promote our trade. This is an effort that WACA is committed to.

On the legislative side, we have been well-engaged and made positive efforts toward a number of progressive laws beneficial to construction. I encourage you to read Eddie Bernacchi's Legislative Scorecard article on pages 6-7, where you will find a detailed summary on priority bills WACA sponsored or supported. We have worked hard to fight some of the policies and are happy to report we brought home some important wins.

On the horizon for this year are negotiations with two of our labor groups, Carpenters and Finishers. We have formed committees to assist with this. If you're an active contractor and have comments or suggestions on the matter, email me at frank@wallandceiling.org.

Going forward we anticipate many opportunities along with continued challenges. With the predicted continued growth in the construction market we have both an opportunity and a challenge to establish an expanded workforce, continue practices for a safer work environment and grow and strengthen our business relationships. Now is a great opportunity for partnering initiatives that benefit our trade, businesses, labor and the community. Let's take advantage of this time and opportunity.



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# **営UARTERLY**

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The Wall And Ceiling Alliance (WACA) is a wall and ceiling trade association that promotes and advocates for the welfare of its members and industry. We support our community by providing vital resources through educational forums, technical assistance, government advocacy, labor relations, industry promotion and unified representation.

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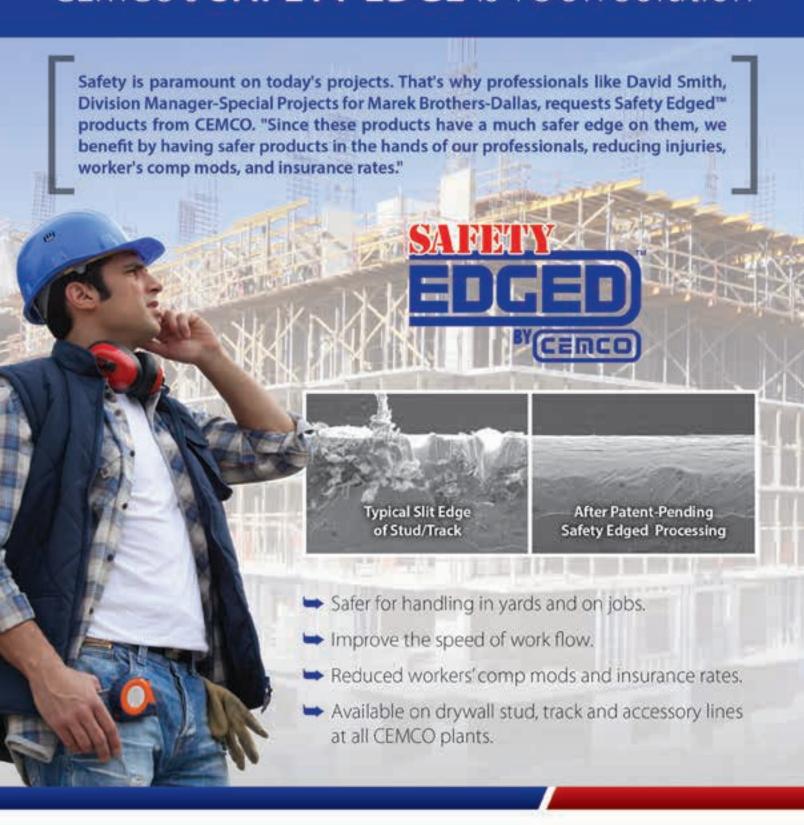
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#### On the cover:



Photo: Matthew Millman California Drywall Co. 2017 CEA Project: ForeScout Architect: Fennie + Mehl

# CEMCO's **SAFETY EDGE** is YOUR Solution





WACA had another positive legislative session with our biggest win coming in the form of extending the 5 percent retention cap on public works projects. That policy is something we have fought hard for, and extending it for another 5 years was a priority. We also brought home victories in the areas of protecting and expanding prevailing wage and improving the skilled and trained workforce requirements as we expand the footprint of that policy. Below is a list of the key bills WACA took positions on in 2017 and how we fared.

#### **Priority Bills WACA Sponsored or Supported**

AB 92 – 5 Percent Retention Cap on Public Works: WACA sponsored legislation that extends, until January 1, 2023, the 5 percent cap on retention withholdings on California public works projects.

Status: Signed into law

**LEGISLATIVE REPORT** 

AB 199 – Prevailing Wage on Redevelopment Successor Agency Projects: Requires private residential projects built on private property, paid for in whole or in part out of public funds, and built pursuant to an agreement with a successor agency to a redevelopment agency, to require the payment of prevailing wages.

Status: Signed into law

AB 591 – School Lease-Leaseback – Skilled and Trained Workforce: Closes a loophole some school districts were using to circumvent the requirement that all contractors on school lease-leaseback projects utilize a skilled and trained workforce

Status: Signed into law

AB 581 – Apprenticeship Funding: Provides that any apprenticeship training program that is unable to demonstrate properly how grant funds were used, or any program found misusing grant funds, shall be ineligible to receive any future grants from the California Apprenticeship Council.

Status: Signed into law

AB 1223 – Construction Contract Payments – Internet Website Posting: Requires, within 10 days of making a construction contract payment, a state agency that maintains an internet website to post on its internet website the project for which the payment was made, the name of the construction contractor or company paid, the date the payment was made and the amount of the payment.

Status: Signed into law

AB 1424 – UC Best Value Contracting/Skilled and Trained Workforce: Allows the University of California (UC) to use best value contracting for construction projects, and, when using best value contracting, requires prime contractors and all subcontractors to utilize a skilled and trained workforce.

Status: Signed into law





Eddie Bernacchi, Politico Group

AB 1701 – Liability on Private Construction Projects: Extends joint and several liabilities for prime contractors to privately funded construction projects. Much like on public works, prime contractors will be liable for unpaid wages and fringe benefit payments of their subcontractors. The law allows prime contractors to request relevant payroll records from subcontractors to limit their exposure and requires prime contractors to comply with all current prompt payment statutes.

Status: Signed into law

SB 35 – Streamlined Approval Process for Affordable Housing: Creates a streamlined, ministerial approval process for infill developments in localities that have failed to meet their regional housing needs assessment numbers. Requires that projects built using this process are covered by prevailing wage and that larger projects must also be built by contractors utilizing a skilled and trained workforce.

Status: Signed into law

SB 418 – Changes to Skilled and Trained Workforce Definition: Revises the definition of a "skilled and trained workforce" to allow for greater compliance by crafts that experienced issues with the policy; in doing so, paving the way for expansion of the policy.

Status: Signed into law

#### **Priority Bills WACA Opposed or Amended**

SB 63 – Protected Parental Leave: Expands the requirement to provide non-compensated but job protected parental leave from employers with 50 or more employees to employers with 20 or more employees.

Status: Signed into law

SB 496 – Design Professionals – Indemnity: Leveraged into SB 1 (gas tax increase) by the sole republican and final needed vote for that measure, this bill provides that a design professional would have no duty to defend claims against other persons or entities until the design professional's degree of fault was determined by a court.

Status: Signed into law

AB 262 – State Contracts – Bid Specifications – Buy Clean California Act: Requires the California Department of General Services (DGS) to establish standards to be used in bid specifications on state public works projects. The bid specifications would provide the allowable greenhouse gas emission standard (based on the manufacturing and transporting of the materials) for carbon steel rebar, flat glass, mineral wool insulation and structural steel that can be used on that project. This bill was amended at our request to move away from being a bid preference requiring the contactor to search for products to be eligible, and placed the onus on DGS to develop standards and compile lists for complying materials and make them part of the bid specs.

Status: Signed into law

SB 1008 – Criminal History Inquiry Restrictions: Prohibits most public and private employers with at least five employees from asking job applicants about criminal convictions until after they have made a conditional offer of employment. We were successful in garnering amendments to the bill to ensure that the law does not apply to situations where state, federal or local law either requires an employer to conduct criminal background checks or restricts employment based on criminal history.

Status: Signed into law



# THE VOICE OF THE WALL AND CEILING INDUSTRY

www.wallandceilingalliance.org

#### **ABOUT US**

The Wall And Ceiling Alliance (WACA) serves signatory wall and ceiling contractors in Northern California. WACA's contracting members make up one of the most highly skilled and experienced union workforces in Northern California. Our associate membership includes manufacturers, distributors and other professional industries that provide products and special services to the wall and ceiling industry.

#### WHY JOIN WACA?

We give our members a stronger presence in the wall and ceiling industry through:

#### Education & Training

Members stay up to date with business and technical practices via our educational workshops, trainings and forums.

#### Technical Assistance

Our technical partner, the Wall and Ceiling Bureau (WCB), offers complimentary assistance with project inspections and recommendations. The technical team keeps our members informed on building codes, safety practices and current wall and ceiling standards. WCB's website; www.wallandceilingbureau.org.

#### Government Advocacy

WACA gives members a stronger voice by representing contractors at the local, state and national levels of government.

#### Labor Relations & Representation

WACA keeps members informed on current and future labor, legal and regulatory compliance issues.

#### Networking Events

WACA provides a variety of networking opportunities to build relationships and create connections. Through events members can form partnerships, exchange ideas and share expertise with business owners, fellow professionals and industry partners.

#### MEMBERSHIP

If you'd like to become a member, download an application by visiting www.wallandceilingalliance.org or by calling (925) 600-0475.

For more information on membership, contact Carmen Castillo at carmen@wallandceiling.org.







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# Performance Contracting, Inc. (PCI)

by David Link, General Manager





Our parent company, Performance Contracting Group, was formed in February 1987, when the 40-year-old contracting division was purchased by several existing employees from Owens Corning. Performance Contracting, Inc. (PCI) has been in business since that same year.

PCI employs more than 950 salaried individuals and 6,300 skilled craft workers across the United States. At our Bay Area interior branch, which covers the Greater Bay Area, there are 50 employees in the office and 250 field workers annually. We have

more than 50 offices throughout the U.S., covering a significant portion of the country. Having over 15 offices in the state allows us a stronger presence in Northern California. We are also 100 percent employee-owned. Being part of an employee-owned company,

our employees have a vested interest in the success of the company.

PCI has two main divisions, Interior Services and Insulation & Specialty Services. These divisions allow us to offer our customers diverse services, making PCI a true "single-source" contractor for many customers.

We're consistently ranked one of the top wall and ceiling contractors in the United States, which we are proud of. On the interior side, we specialize in: preconstructed services, building insulation, metal stud and drywall, raised access flooring, acoustical ceilings, cleanrooms, specialty walls and ceilings, cold storage, EIFS/plaster, fireproofing, painting and wall treatments, and prefabrication services.

The Bay Area interior branch specializes in: preconstruction services, metal stud and dryall, acoustical ceilings, specialty walls and ceilings, EIFS/plaster, fireproofing, and prefabrication services.

As is true for most in the construction industry, we deal with our fair share of challenges — scheduling conflicts, weather challenges and budgetary issues, to name a few. However, we do find that challenges give us opportunities to showcase our strengths and deliver unique solutions. The preconstruction phase in the project is an area where we can really provide great value to the customer. Utilizing things such as value engineering, BIM modeling and clash detection, we're able to find cost savings and overcome logistical challenges to ensure that the project gets off on the right foot.

At PCI, we pride ourselves on having clear, constant communication with our customers and partners during every phase of the project to ensure goals and processes are clearly defined and understood. Often, we work with and manage multiple trades at once. Being on the same page with the trades on-site is vital to the success of the project.

PCI appreciates being a member of WACA, and truly believes in the work that WACA does. It's well-known that our industry faces and will continue to face challenges when it comes to finding skilled labor to help deliver projects throughout the region. If we're to grow and develop the next generation of leaders in the construction industry, we must work hand in hand with organizations such as WACA to make that happen.

As a company, we're most proud of major projects like the New Apple Campus, Samsung









Mission Bay Block 13

HQ and Highland Hospital. We're also very proud to have received *Engineering-News Record's* ranking of PCI as the #1 Wall & Ceiling contractor in the United States this past October. We're currently working on several special projects such as New Apple Campus – Spaceship, Stanford University Medical Center, Marin General Hospital expansion and the renovation of Oakland Sears building.

We emphasize the importance of continuous education for all employees. Extensive training programs have been developed for key positions throughout the organization and are offered through multiple delivery systems, including small and large group trainings, one-on-one instruction, outsourced seminars and online courses. We believe that learning is a never-ending process and with the right training, every person's performance can be optimized to the highest possible level. Ongoing training and development is especially

important for those in key field positions, which is why we offer extensive training for project engineers, project managers, general foremen and superintendents. OSHA training is also key to ensuring the safety of our employees as well as everyone who steps foot onto our job sites.

Safety is our number-one core value, and it's a priority above all else. Our goal is to ensure our employees are completely aware of and comprehensively trained in the processes and procedures to prevent all injuries. We believe each and every employee is accountable to create a safe environment for the protection of the health and well-being of all our employees. The safety of our employees is our primary objective and is more important than productivity, quality or profit. Safety is paramount in our culture and is an integral part of our thoughts, communications and actions. We want every employee to go home safely every day.





# **Frequently Asked Questions**

## **Relating to New Silica Standards Enforcement**

by Wall and Ceiling Conference Committee

The new exposure limit within the OSHA/CALOSHA standard for respirable crystalline silica began on September 23, 2017. This standard was first enacted in 1972 and stated that the Permissible Exposure Limit (PEL) to respirable crystalline silica was 250 micrograms per cubic meter (ug/cm3) in a time-weighted eight-hour period. The new standard has changed the PEL to 50 ug/cm3 in a time-weighted eight-hour period. Further, if the project is proven to have respirable silica exposure of 25 ug/cm3, known as the action level, or less in a time-weighted eight-hour period, then no further action is required.

#### 1. Why are the silica standards changing?

Only inhaling air with the minimal amount of silica micrograms can cause silicosis, but eliminating respirable silica exposure is not realistic. The 50 micrograms per cubic liter rule was determined to be feasible.

### 2. Can you explain the terms action level and PEL?

When work areas monitored for respirable crystalline silica exposure show levels that are less than 25 micrograms per cubic meter (ug/cm3), no further action is necessary. When monitoring indicates levels between 25 ug/cm3 but less than 50 ug/cm3 additional monitoring will be required. This range is known is as the action level. When levels reach 50 ug/cm3, the PEL or maximum employee exposure occurs. Employee exposure is defined by OSHA as "exposure to respirable crystalline silica that would occur if the employee were not using a respirator."

#### 3. What are record keeping requirements?

All employers must implement a written exposure control program that details procedures to limit employee exposure to respirable crystalline silica dust. The program should be the responsibility of the competent person.

# 4. What is the purpose of a written exposure control program and when must it be provided?

The written exposure control program includes the following:

-  $\mbox{\ \ Implemented}$  by the competent person



- Description of workplace tasks involving silica dust exposure
- Description of engineering controls, work practices and respiratory protection used to limit employee exposure
- List of housekeeping measures including no "dry-sweeping" and not using compressed air to clean clothing or surfaces unless a proper ventilation system is used
- Description of procedures to restrict work access when necessary to reduce respirable crystalline silica exposure, including exposure generated by other employers or sole proprietors

Employers should have this plan in affect by September 23, 2017.

## 5. Who is the competent person and what are his or her responsibilities?

 Employed by Employer, a person (e.g. existing safety manager or QA/QC person)

- capable of identifying existing and foreseeable respirable crystalline silica hazards in the workplace
- Has authorization to take prompt corrective measures to eliminate or minimize them
- Responsible for maintaining written exposure control plan
- Every employee should be notified of the competent person

Employers should appoint a competent person by September 23, 2017.

## 6. What is OSHA Table 1: Specified Exposure Control Methods?

One of three methods Employers can use to limit employee exposure. Employer may also measure employee exposure, but if Table 1 is followed, employee measurement is not required.

## 7. Is there a method the employer can take if activities are not included in Table 1?

When employee task is not in Table 1, or if employer cannot fully implement Table 1, the employer shall ensure that no employee is exposed to airborne concentration of respirable crystalline silica one of two ways:

- 1. Performance option
  - Any combination of air monitoring data and objective data
- 2. Scheduled monitoring option
  - Time-weighted eight-hour monitoring of a percentage of employees who are performing similar tasks in potentially silica-exposure areas

## 8. What are the OSHA requirements for "Objective Data"?

- Monitoring data from industry wide surveys or calculations
- Demonstrates a relative exposure to a product or material or related to a specific task, process or activity
- Workplace conditions or exposure potentials cannot be higher than objective data conditions If Objective Data evidence indicates respirable silica levels are below established levels, no additional air monitoring is required.

## 9. How is air monitoring sampling for silica conducted and who implements sampling?

Through the following methods:

- An industrial hygienist or the competent person (must be properly trained to perform monitoring) will use a combination device called a cyclone assembly and a sampling pump to trap tiny respirable silica particles from the air in the work environment
- The cyclone assembly and sampling pump will be placed on the Employee, who will wear the device throughout the work shift for up to eight hours or over a time-weighted average (TWA)
- Employees may be fitted with the sampling device or just a fraction of workers doing similar work and who are closest to the silica source may be fitted
- The industrial hygienist or competent person will return at the end of the sampling period to de-activate the sampling pump and remove the filters to be sent to an accredited lab for analysis

# 10. What happens when air monitoring indicates respirable silica levels are below established levels set by OSHA?

If initial test indicates silica levels are below 25 ug/cm3, no further testing is required. If test indicates silica levels above 25 micrograms, known as the action level, but does not exceed the PEL of 50 micrograms per cubic meter, then an additional test should be performed within six months after the most recent test. If crystalline silica levels are above 50 micrograms, then refer to the written exposure control plan.

# 11. What is the purpose of the respirator program and what are employer requirements?

Toensuretheemployee is not exposed (breathes in) an airborne concentration of respirable crystalline silica more than 50 micrograms and known as the PEL. The PEL is calculated and averaged out for a time-weighted eighthour period known as the TWA. The employer must supply appropriate respiratory devices (dust masks) to all employees exposed to silica dust unless exempted by Table 1, Appendix A of employer's silica written control plan or from onsite monitoring that shows acceptable crystalline limits.

# 12. Does the presence of Silica in a product or SDS then require air monitoring to confirm actual respirable silica levels?

No, unless airborne particles are created.

#### 13. What is medical surveillance?

The employer must make medical surveillance available free of charge for each employee that uses a respirator for 30 days or more per year for exclusive protection from crystalline silica. The initial exam must occur within 30 days of initial assignment.

## 14. What type of facility is qualified to perform medical surveillance?

A physician or licensed health care professional (PLCHP) legally permitted to independently provide or be delegated the responsibility to provide some or health care services when monitoring an employee. Testing is performed by a licensed laboratory that analyzes air samples for respirable crystalline silica.

## 15. What are the employer's requirements for silica education of employees?

Employers must comply with the hazard communication standard (29 CFR 1910.1200), including training workers on the silica hazard, the health effects of exposure, protective measures (controls used to reduce exposures), the identity of the competent person, and the medical surveillance program.

## 16. When and how often must an employee undergo a medical exam?

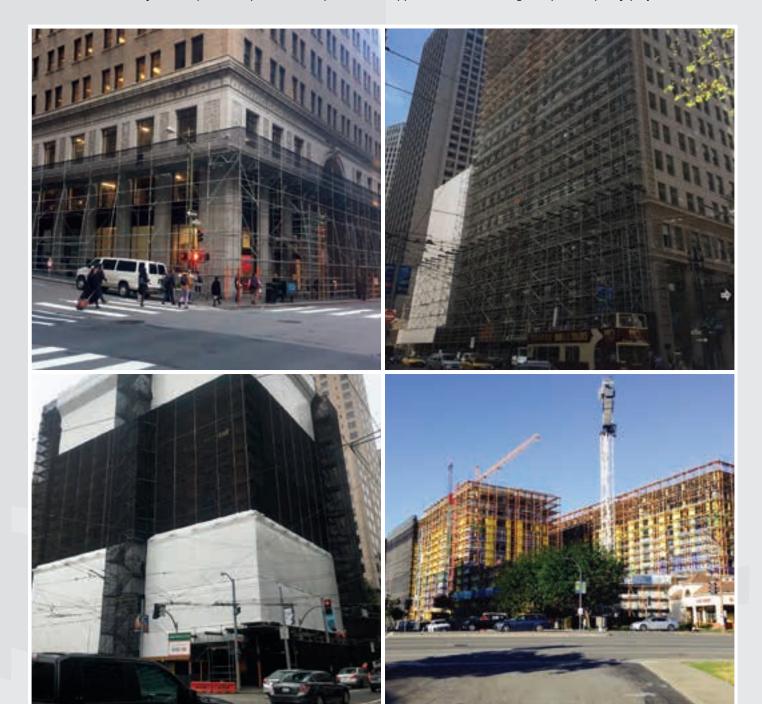
Every three years or sooner if the PLHCP deems it necessary.

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The Wall & Ceiling Conference is a national, technical organization supporting the wall and ceiling industry. WCC provides relevant technical support to the design community and code officials through the establishment of industry standards in a non-proprietary and unified voice. To learn more about WCC, visit www.wccinfo.org.



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# Winter Wonderland Holiday Party?

The holiday party sold out sooner than ever! Nearly 450 guests attended this seasonal event at the Fairmont San Francisco. A dazzling winter wonderland of snowflakes, sapphire blue and glittering white set the mood in the grand ballroom.

As guests entered through trailing snow-white curtains, they were greeted by the sparkling charms of a champagne girl, who served chilled bubbly from her champagne skirt. At the bar stood a giant snowflake ice sculpture, made by David Fong, with WACA's logo carved into it. A blue signature WACA cocktail was available, complimentary to guests. Not one but two photo booths were offered for pictures to be taken and printed on the spot as keepsakes of the special evening.

Entrées included short ribs and crisp chicken thighs with braised lentils, and delectable desserts, such as chocolate hazelnut dome and cinnamon

apple parfait. To add some fun, at each table, Santa's elves secretly placed a sticker on just one cookie, so one winner per table received a \$100 gift card. Over 40 gift cards were given away! And each guest got to take home a custom WACA Oreo cookie as a party favor.

Wonder Bread 5 — the band that knows how to get people dancing! — played again by members' request. Classic songs from past decades were played along with modern hits while partygoers danced the winter night away.

Our generous holiday party sponsors allowed WACA to grow this event and make it the spectacular holiday gathering it has become.

Pictures of the event can be seen on our website via the Photo Gallery.















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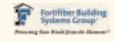




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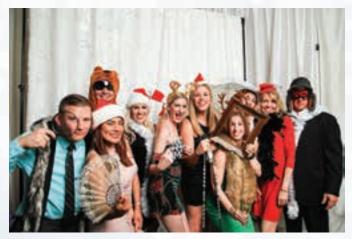










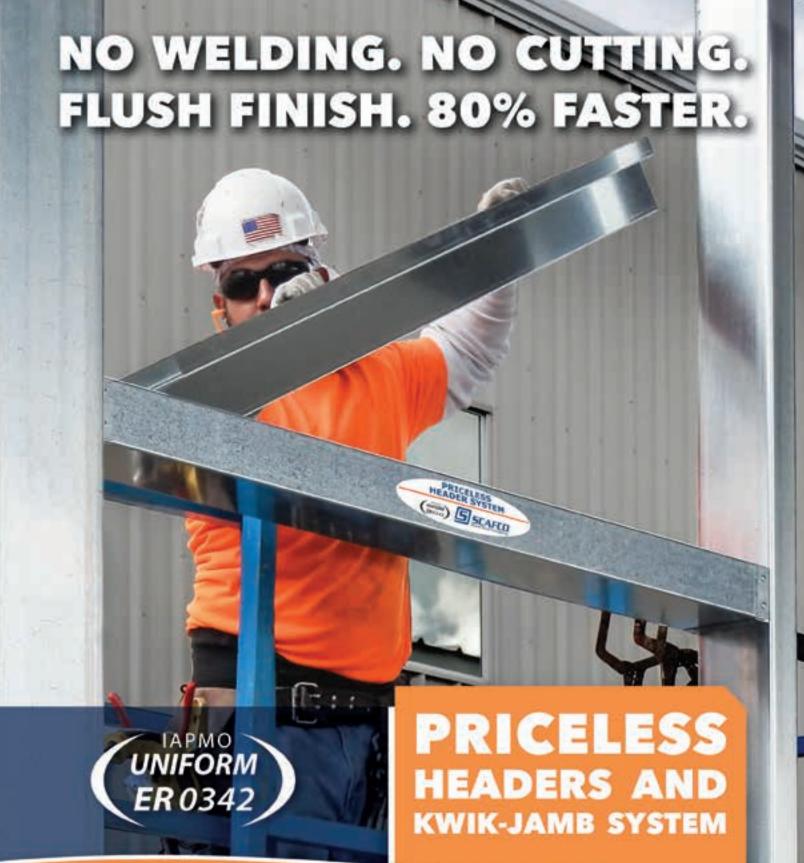
















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Photo 1: A six-story building was panelized and erected on a shake table at UCSD.



*Photo 2*: After a series of simulated earthquakes, the second and sixth floor were set on fire to analyze the full effects of a natural disaster.

# Shaked and Baked BUT STILL STANDING

by Don Pilz, CEMCO

Last summer, a six-story steel framed structure with stood multiple, massive earthquakes and fires in San Diego. If you didn't hear about such an event, here's the story. Researchers at UCSD Jacobs School of Engineering put a 6-story, lightweight, cold-formed steel building through a series of scaled motion earthquakes.

The six-story building layout was designed to replicate a multi-family residential structure. The test summary video can be observed at: www.youtube.com/watch?v=AVvII76OgmU.

One of the main purposes of the tests was to see if it was even possible to withstand a historic earthquake combined with an ensuing fire in a multi-story, multi-family structure. The results of the tests, as outlined in this article, proved that cold-formed steel framing could not only withstand the earthquakes and fire but could also be built much more efficiently than traditional wood or concrete structures.

This project was a collaboration between two academic institutions (University of California, San Diego and Worcester Polytechnic Institute), two government or institutional granting agencies (Department of Housing and Urban Development and the California Seismic Safety

Commission) and more than 15 industry partners. Industry sponsors included California Expanded Metal Products Inc. (CEMCO) and Sure-Board®, which provided financial, construction and materials support, as well as DCI Engineers, SWS Panels, Rivante, State Farm Insurance, the Insurance Institute for Business and Home Safety, DPR Construction, Walters & Wolf and MiTek, which also provided support.

The test building was subjected to a sequence of seven earthquake motions prior to fire tests on the second and sixth floors, with two more earthquake motions following. The input earthquake motions adopted for the shake table testing were selected from four historical earthquake records, namely: Rio Dell Overpass from the 1992 Cape Mendocino earthquake in California; both Canoga Park and Rinaldi Receiving Station from the 1994 Northridge earthquake in California; and Curico from the 2010 Maule earthquake in Chile.

This was the tallest cold-formed structure (CFS) steel building to ever undergo tests on a shake table. This type of building is lighter than a concrete building of the same height, so it has less mass to generate damaging forces.

The purpose of the UCSD shaker table test was to construct a building per the current CBC & ASCE 7-10 design requirements at an R = 6.5. Using a combination of cold form steel framing, Sure-Board® wall and diaphragm shear (series 200 & 200S), as well as Zone 4 tie down system, the building was then subjected to a real-world earthquake scenario. This building was not built on "performance-based design" as most of the predecessors before, thus giving a *true outcome* of how a field built structure might react in a real earthquake. Some of the benefits that this system can offer in this type of construction are its inherent non-combustibility, higher shear and diaphragm capabilities compared to

similar types of construction methods, as well as offering the ability to have a habitable and safe structure after such a large natural event.

The Sure-Board® system is a non-combustible floor sheathing. The series 200S is unique in its ability to be installed by a single person, as well as eliminating the necessity for blocking at panel joints due to its proprietary tab feature. While series 200 shear panels have the finish board already laminated to the .027 (22g) sheet steel, the installer is applying their lateral shear and non-combustible finish board in one step of labor instead of two. Beyond just their installation benefits, these products, installed in conjunction with the Zone 4 tie down system, created a dynamic and ductile building. This structure could withstand multiple ground movements, including a 150 percent MCE (Maximum Considered Earthquake) of the 1994 Northridge earthquake, while only suffering superficial cracking on exterior walls. This system proved not only resilient but also capable of handling future unseen events while keeping the occupants safe.

Though the UCSD shaker table program was designed to test this system's seismic shear capabilities, as well as fire resistance and



Photo 3: The results of the traditional method at the non-fire side where the paper tape cracks and pulls apart, which, in return, allows smoke to pass through the head-of-wall joint.



Photo 4: The HOTROD Compressible Firestopping on the non-fire side. Although the double metal door failed and allowed fire and smoke to pass through the door, fire or smoke was unable to pass through the head-of-wall joint as indicated in the clean, off-white seal between the ceiling and the wall.

resilience, this type of construction has many other benefits that can be useful nationally, even worldwide. It can be easily panelized and erected quickly on-site, and the products used are mold, termite and weather resistant. This system has been tested as well for use in catastrophic events, such as hurricane force winds, flying debris and even as far as blast and ballistic protection. With these accomplishments, there is great opportunity for future designs.

CFS framed structures can offer lower installation and maintenance costs than other structural types, particularly when erected with prefabricated assemblies. They are also durable, formed of an inherently ductile material of consistent behavior, lightweight and manufactured from recycled materials. Compared to other lightweight framing solutions, CFS is non-combustible, an important basic characteristic to minimize fire spread.

Knowing that the structure would be tested under substantial movement before and after a fire, it was important to see how the fire-rated building joints would perform. For the head-ofwall joints, two different forms of fire protection were installed and observed. The traditional method of paper tape and joint compound was applied to some of the perimeter joints while other head-of-wall joints were treated with CEMCO HOT ROD Compressible Intumescent Firestopping. Photo 3 shows the results of the traditional method at the non-fire side where the paper tape cracks and pulls apart, which, in return, allows smoke to pass through the head of the wall joint. Photo 4 shows the HOT ROD Compressible Firestopping on the non-fire side. Although the double metal door failed and allowed fire and smoke to pass through the door, fire or smoke was unable to pass through the head of the wall joint as indicated in the clean, off-white seal line between the ceiling and the wall. Photo 5 shows HOT ROD on the fire side. As shown in the photo, the intumescent material expands under fire and seals against the ceiling, which prevents any smoke from passing to the non-fire side.

#### **Test Results**

*Pre-Fire Earthquake Tests*: The test building suffered minimal damage during the service level earthquake tests and remained largely in the quasi-linear range, with very low drift demands imposed on the specimen (interstory drift < 0.2%).

Fire Tests: Post-flashover conditions were achieved in all six compartment fire tests at the given ventilation conditions, with the corresponding maximum compartment temperatures ranging between 800°C and 1100°C (four out of six tests exceeding 1000°C).



Photo 5: HOTROD on the fire side. The intumescent material expands under fire and seals against the ceiling which prevents any smoke from passing to the non-fire side.

The elevated temperature caused significant degradation of interior fire rated gypsum wallboards on sheet steel and plain fire rated gypsum wallboards leading to the loss of some structural strength.

Post-Fire Earthquake Tests: The low-amplitude aftershock significantly attenuated seismic demands in the building because of the elongated period caused by the pre-fire earthquake sequence. However, in the end, the test building resisted collapse due to redistribution of loads and framing action of the Sure-Board® and the Zone 4 tie-down system. Not only did the structure resist collapse, researchers were still able to safely walk through the test building and analyze the structures post-fire/earthquake condition.

"As the nation's largest general contractor that self performs drywall, we at DPR Construction were proud to participate in the seismic performance test of steel stud construction. The test results make a very compelling argument for steel stud framed buildings in lieu of wood and even concrete. Changing the building codes to utilize these construction materials is the first step in building safer, more sustainable communities. DPR will keep leading change in the building industry alongside companies like CEMCO Steel." - Carl Spaete, DPR San Diego

#### References:

Earthquake and Fire Performance of a Mid-Rise Cold-Formed Steel Framed building – Test Program and Test Results: Rapid Release Report by Xiang Wang, Tara Hutchinson, Gilbert Hegemier, Srikar Gunisetty (UCSD), Praveen Kamath, Brian Meacham (WPI)

After 30 years in the construction industry as a foreman and building consultant, Pilz is now the research and design manager for CEMCO assisting consultants, architects and contractors with interior and exterior performance detailing. He can be reached at (626) 506-3881 or dpilz@cemcosteel.com.

Walls & Ceilings Magazine, October 2017, reprinted with edits approved by Don Pilz.

# **CARPENTERS ≅ BLUEBEAM CLASS**



Following are Bluebeam classes to be offered as journey-level advancements starting in 2018. Class size will be limited to 10 UBC (United Brotherhood of Carpenters) members or less. To register, contact Jennifer at (925) 462-9640.

#### INTRODUCTION TO BLUEBEAM

This is an introductory class for the use of Bluebeam. The objective of this eight-hour class is to give students a good understanding of how Bluebeam works in relation to blueprints. Attendees will be given a quick tutorial on how to use a device such as an iPad or tablet on the job. They will see how the technology, when used correctly, can boost productivity on the job. Once attendees have a solid understanding of the technology, they can register for Bluebeam Plan Reading as the second part of this series.

The class is held for two evenings from 5:30-9:30 p.m. for a total of eight hours of instruction. Dates and locations include:

Mar 6 & 7
Mar 13 & 14
Mar 20 & 21
Mar 27 & 28
Pleasanton Training Center, 2350 Santa Rita Road, Pleasanton, CA 94566
Carpenters Local 751, 1706 Corby Avenue, Santa Rosa, CA 95407
Fresno Training Center, 1360 North Hulbert Avenue, Fresno, CA 93728
Carpenters Local 605, 910 2nd Avenue, Marina, CA 93933

### **BLUEBEAM PLAN READING**

This is the second part of Bluebeam training. Once students are comfortable with the basics of Bluebeam, the content learned in Bluebeam Introduction, the next step is learning how to navigate blueprints using Bluebeam. The objective of this eight-hour class is to demonstrate how efficient blueprint reading can be by using technology such as Bluebeam. The UBC member will learn how hyperlinked details and pages make blueprint reading easier and faster, making the attendee a more efficient leader on the job. More training is being developed to make requests for information (RFIs) and blueprint markups easier and more streamlined in order to be as efficient as possible.

The class is held for two evenings from 5:30-9:30 p.m. for a total of eight hours of instruction. Dates and locations include:

Mar 8 & 9
 Mar 15 & 16
 Mar 22 & 23
 Mar 29 & 30
 Pleasanton Training Center, 2350 Santa Rita Road, Pleasanton, CA 94566
 Carpenters Local 751, 1706 Corby Avenue, Santa Rosa, CA 95407
 Fresno Training Center, 1360 North Hulbert Avenue, Fresno, CA 93728
 Carpenters Local 605, 910 2nd Avenue, Marina, CA 93933

These classes are designed to get members started with Bluebeam. Additional classes are being developed to review the more advanced capabilities of Bluebeam. A Plan Grid class may be provided later in 2018. To register, contact Jennifer Thorton at (925) 462-9645.



# **CTCNC CLASS CALENDAR**

Carpenters Training Committee for Northern California

Register by contacting Jennifer Thorton at (925) 462-9645 or Bonnie Stone at (925) 462-9649.

Class	Start date	End date	Class location	Class days	Class times	Class hours	Class sponsor	Contact name	Contact phone
Rigging/Certification	3/27/18	4/7/18	Morgan Hill Training Center	Tue-Fri eves, Sat	5:30pm-9:30pm Eves, 8:00am-4:30pm Sats	40	CTCNCTD	CTCNC Training Dept.	(925) 462-9640
Scaffold User Safety	4/4/18	4/5/18	Pleasanton Training Center	Tue-Wed	5:30pm-9:30pm	8	CTCNCTD	CTCNC Training Dept.	(925) 462-9640
Fork Lift Safety/Industrial	4/7/18	4/7/18	Pleasanton Training Center	Saturday	8:00am-4:30pm	8	CTCNCTD	CTCNC Training Dept.	(925) 462-9640
Fork Lift Safety/Rough Terrain	4/11/18	4/12/18	LU 751, Eureka	Wed-Thur	5:30pm-9:30pm	8	CTCNCTD	CTCNC Training Dept.	(925) 462-9640
Rigging/Refresher/Certification	4/13/18	4/14/18	LU 751, Eureka	Fri-Sat	8:00am-4:30pm	16	CTCNCTD	CTCNC Training Dept.	(925) 462-9640
Bridge Building/Certification	4/17/18	4/25/18	Fairfield Training Center	Tues-Sat, Mon-Weds	5:30-9:30pm Eves, 8am-4:30pm Sat	40	CTCNCTD	CTCNC Training Dept.	(925) 462-9640
Commercial Door Hardware	4/17/18	4/27/18	Pleasanton Training Center	Tue-Fri	5:30pm-9:30pm	32	CTCNCTD	CTCNC Training Dept.	(925) 462-9640



# WELDING SHOP CALENDAR

Carpenters Training Committee for Northern California

Welding Schedule subject to change — verify at www.ctcnc.org/welding-shop-hours-and-location. Open Shop Hours are listed below or call for an appointment.

Location	Phone	Dates	Days	Times	Dates	Nights	Times	
Hayward Training Center	(510) 377-5172	P	lease call for an appoi	ntment				
Fresno Training Center	(559) 266-0101	Please call for an appointment						
Fairfield Training Center	(925) 250-7765	March 20-24	Tue-Sat	7:00am - 3:30pm	March 22-23	Thur-Fri	3:30pm - 9:30pm	
		April 3-7	Tue-Sat	7:00am - 3:30pm	April 5-6	Thur-Fri	3:30pm - 9:30pm	
		April 16-20	Tue-Fri	7:00am - 3:30pm	April 19-20	Thur-Fri	3:30pm - 9:30pm	
Pleasanton Training Center	(925) 250-7765	March 26-30	Mon-Fri	7:00am - 3:30pm	March 15-16	Thur-Fri	3:30pm - 9:30pm	
		April 9-13	Mon-Fri	7:00am - 3:30pm	March 29-30	Thur-Fri	3:30pm - 9:30pm	
		April 28	Sat	7:00am - 3:30pm	April 12-13	Thur-Fri	3:30pm - 9:30pm	
					April 26-27	Thur-Fri	2:00pm - 9:30pm	



# WACA IS OFFERING THREE (3) SCHOLARSHIPS AT \$5,000 EACH

**Application Deadline: May 4, 2018** 

#### **ABOUT THE AWARD**

WACA is proudly giving back to our community and industry. Three scholarships for \$5,000 each will go toward tuition. The scholarships are designed to help further the undergraduate studies of students pursuing a construction management, construction engineering or architecture degree. Scholarship recipients will be highlighted in WACA's magazine *The Quarterly* and may be featured in other industry trade publications.

#### **HOW TO APPLY?**

Application available on homepage: www.wallandceilingalliance.org

#### **SCHOLARSHIP ELIGIBILITY**

The following requirements must be met for a student to be eligible for the scholarship:

- Enrolled as a full-time student at a four-year university
- Junior or senior level
- Enrolled in a construction management, construction engineering or architecture degree program
- Must demonstrate academic achievement

#### **APPLICATION SUBMITTAL**

There are three ways to apply for the WACA scholarship:

- An online and/or pdf application can be found at www.wallandceilingalliance.org
- An email application and supporting material can be sent to Julie Dunaway at julie@ wallandceiling.org
- Mail in application and supporting material postmarked by May 4 to:

WACA, Attn: Julie Dunaway, 5726 Sonoma Drive, Pleasanton, CA 94566

**QUESTIONS? Contact Julie at** julie@wallandceiling.org

# LIUNA! BUILDS PARTNERSHIPS

The Laborers' Union knows that its members' success goes hand-inhand with the contractor and provides the resources to foster mutual success. No matter what the issue is, the Laborers are here to help.

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- · Training and apprenticeship
- OSHA and regulatory assistance
- · Workers' Comp / ADR programs

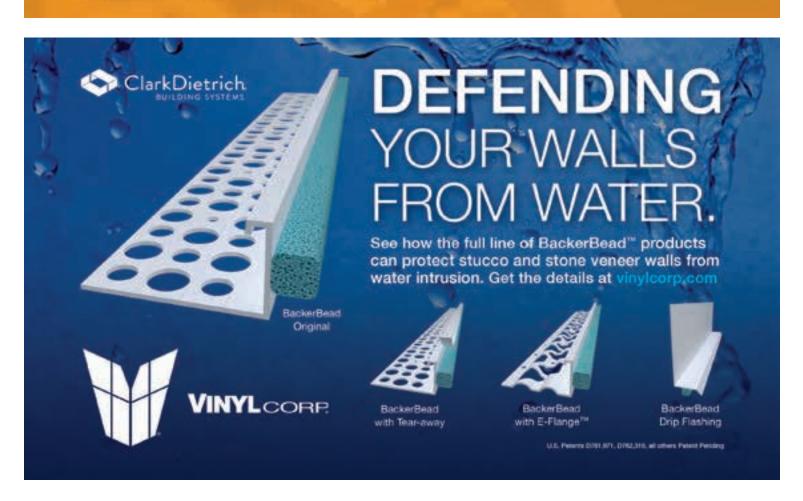
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### WELCOME NEW CONTRACTOR MEMBERS

#### » FDR Drywall, Inc.

FDR Drywall, Inc. was established in July 2014. The company is based out of Penn Valley, California. It operates in the counties of Alameda, Santa Clara, Contra Costa, San Francisco and San Mateo, generally serving the entire Bay Area. Owners are Frank Silva (president), Dennis Carroll (vice president) and Ryan Carroll (chief financial officer). FDR Drywall specializes in metal framing, drywall and taping. For more information, contact Dennis Carroll at dennis@fdrdrywall.com and (925) 775-5152.

#### » RBE Construction Inc. DBA: Slingshot Drywall

Slingshot Drywall serves all of San Francisco and the surrounding areas. The business has been around for two years, with the team offering over 28 years of experience in all phases of the drywall industry. Services offered include: drywall installation, repair, texturing, plastering, duct insulation and sealing. Slingshot Drywall is located in Pittsburg, California. For more information, contact Roberto Elizondo at roberto@slingshotdrywall.com and (925) 382-1724.

#### » S&R Drywall, Inc.

S&R Drywall, Inc. is a union drywall contractor performing work in the Bay Area for over 25 years. Services include metal stud framing, drywall installation and drywall finishing, with projects varying in size from large commercial projects to small residential remodels. Office and field staff includes two full time estimator/project managers, a safety coordinator, framing field superintendent, four carpenters and taper foremen who have at least 25 to 30 years' experience each in the drywall trade. For more information, contact Steve Rossa, president, at steve@srdrywall.com and (650) 588-6266.

# **STAY<u><u>E</u>KNOW</u>**

#### ► Michael Gardner Retiring from the ICC

Michael Gardner, executive vice president of compliance programs, has announced his plans to retire at the end of this year. Before his role as executive vice president of compliance programs at the International Code Council (ICC), he was the executive director and CEO of the Gypsum Association for 11 years. Michael will be staying on in a limited role as a part-time contractor after his retirement. He has agreed to continue to work with the ICC team from time to time as special projects arise. Congratulations to Gardner on his well-deserved retirement.

## New CEO at Cahill Contractors

Kathryn Cahill, a fourth generation member of the construction family business, has accepted the role of chief executive officer at Cahill Contractors. Cahill graduated from Dartmouth College in 2000 and earned an MBA at Stanford University before joining the company as a project engineer. Cahill takes over a 110-year-old company that has earned construction achievements such as San Francisco's Huntington Hotel, Fox Plaza and St. Mary's Cathedral.

# ► New Employee Updates at BMI

Joao Esteves is replacing Rui Bronze as director of sales at BMI Sika Corporation. Esteves may be reached at (949) 613-4641 and esteves.joao@us.sika.com.

In addition, Josh Rush has joined the BMI team in Milpitas as an outside sales representative. Rush can be reached at (510) 507-2148 and rush.joshua@us.sika.com.



# **CALENDAR OF EVENTS**

#### MARCH 24-28, 2018

#### **AWCI's Annual Convention**

Walt Disney World Swan Hotel and Dolphin Resort Orlando, Florida

#### MAY 3-5, 2018

#### Northwest Wall & Ceiling Bureau Convention

The Westin La Paloma Resort & Spa Tucson, Arizona

#### JUNE 3-6, 2018

## Safety Professional Development Conference & Exposition

Henry B. Gonzalez Convention Center San Antonio, Texas

#### JUNE 4-6, 2018

#### ENR FutureTech

Hyatt Regency San Francisco San Francisco, California

#### JUNE 21-23, 2018

#### A'18: AIA Conference on Architecture

Jacob K. Javits Convention Center New York City, New York

#### JUNE 23-26, 2018

#### **BOMA International Conference & Expo**

Henry B. Gonzalez Convention Center San Antonio, Texas



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Bruce K. Hall Construction

California Drywall Co.

Coast Building Products

Component West

Concord Drywall, Inc.

Creative Ceilings & Drywall

Custom Drywall, Inc.

Daley's Drywall & Taping, Inc.

Dasco Construction & Drywall, Inc.

Davidson Plastering Inc.

Denham Contracting, Inc.

Elite Plastering, Inc.

Eric Stark Interiors, Inc.

Excel Lathing, Inc.

FDR Drywall, Inc.

Fisher Lath and Plaster, Inc.

Freas Plastering

Frey Plastering, Inc.

G & S Drywall, Inc.

Giampolini Contractors

Golden Gate Drywall

Halstead Drywall, Inc.

Harrison Drywall, Inc.

Hartley Construction, Inc.

Henley & Company

Ironwood Commercial Builders, Inc.

J&J Acoustics, Inc.

Karsyn Construction, Inc.

KHS&S Contractors

Kirk Builders

Magnum Drywall

Nevell Group, Inc.

North Counties Drywall, Inc.

O'Donnell Plastering, Inc.

Olea Plastering

Pace, Inc. dba Pace Drywall

Pacific West Lath & Plaster, Inc.

Patrick J. Ruane, Inc.

Performance Contracting, Inc. (PCI)

Psi3g, Inc. (Partition Specialties, Inc.)

R. Davidson Plastering, Inc.

Raymond-Northern California, Inc.

RBE Construction Inc. DBA: Slingshot Drywall

RFJ Meiswinkel Company

Robert Boeger Plastering, Inc.

Russell Hinton Co. Inc.

S&R Drywall, Inc.

Service Plastering II

Spacetone Acoustics, Inc.

SRJ Drywall

Standard Drywall, Inc.

Stockham Construction, Inc.

Sunshine Construction

Surber Drywall Construction, Inc.

Swinerton Builders

Thomas Interiors, Inc.

Western Partitions, Inc.

# ASSOCIATE MEMBERS

Action Gypsum Supply, LP

Allura Fiber Cement

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**AMES Taping Tools** 

Armstrong World Industries

Artisan Plaster Supply

BackrTape

BASF Senergy

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Structural Engineers, Inc.

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JHS CPAs LLP

L&W Supply dba CalPly

Leonidou & Rosin Professional Corporation

Littler Mendelson

Merlex Stucco, Inc.

National Gypsum Co.

Omega Products

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Parex USA Incorporated

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Pentarisk Insurance Services

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Pliteq Inc. QuietRock

OUIKRETE

Radius Track Corporation

**REW Materials** 

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S & K Marketing Group, LLC

Saint-Gobain ADFORS

Salsbury & Associates Insurance Services, Inc.

SCAFCO Steel Stud Company

Scaffold Solutions Inc.

Service West, Inc.

Simpson Strong-Tie

Specified Technologies Inc. (STI) dba Firestop

Starr's Building Supply

Steeler Inc. (Newark Division)

Sto Corp.

Structa Wire Corp.

Summit Financial Group, LLC

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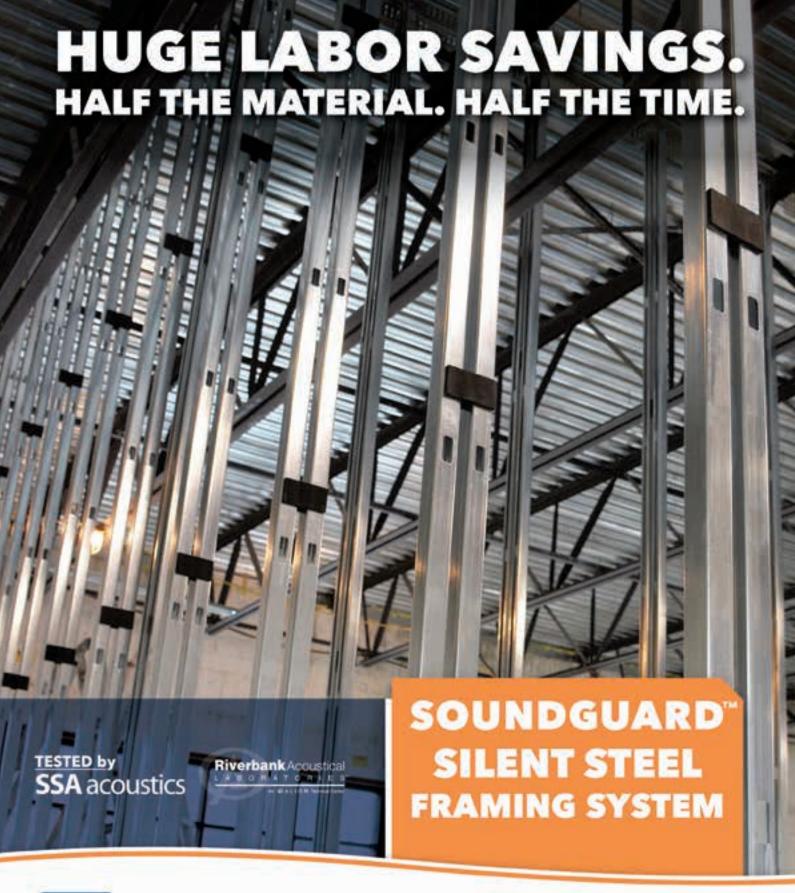
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