ICRI CONCRETE REPAIR BALTIMORE WASHINGTON

The Newsletter of the Baltimore Washington DC chapter of ICRI

4th Quarter 2020

The Aggregate

Message from our President

Rich Barrett - *LymTal International, Inc*

It's hard to imagine this year has just over two months left. A lot of us have had to re-evaluate our priorities as we manage risk for COVID. We have had to continually look at how we are handling our day to day activities from not only a work aspect but from a personal standpoint as well. Our children are either going to school online or with a hybrid schedule with more changes expected to come after the 1st of the year. We are constantly asking, what are we comfortable with for ourselves and our families? These are common discussions and decisions that we, our nation and actually the world, have to make almost daily. As we all live our lives waiting for more detailed information to come, one truth stands out to us; We can reflect on the fact that we are here, standing strong though this adversity and ready for the next challenge!

While our ICRI Baltimore Washington Chapter has decided to cancel most of our events out of caution, our members have been able to maintain the relationships that have been developed through the history of our great Chapter. I am looking forward to the next in-person event we have so I can see everyone again. I am sure you are as well.

The Board wants to thank everyone who attended the 29th Annual Golf Outing. With the challenges of changing venues to allow for a shotgun start, the Golf Committee pulled off one of the best Golf Outings we have had to date. I want to personally thank Brian McCabe, Kevin Kline & Taylor Crampton of CP&R as well as all the volunteers for their efforts and time to make this tournament a success. The Taylor Made Tent was an astounding success.

A few updates on our upcoming scheduled events:

- As I am sure it is not a surprise to everyone, **we have cancelled our 4th Quarter Dinner Meeting that was to be held at the Hotel at College Park on November 5th, 2020.**

- Scholarship Applications were received and the Board will be letting the applicants know if they received a scholarship. Thank-you Dominic Huey for your hard work.

- Our 4th Quarter Dinner Meeting is our Outstanding Repair Project 2020 Awards Banquet. We are going to still have the Awards Presentations Virtually and Incorporate our Annual Fall Technical Seminar at the same time. Details Below:

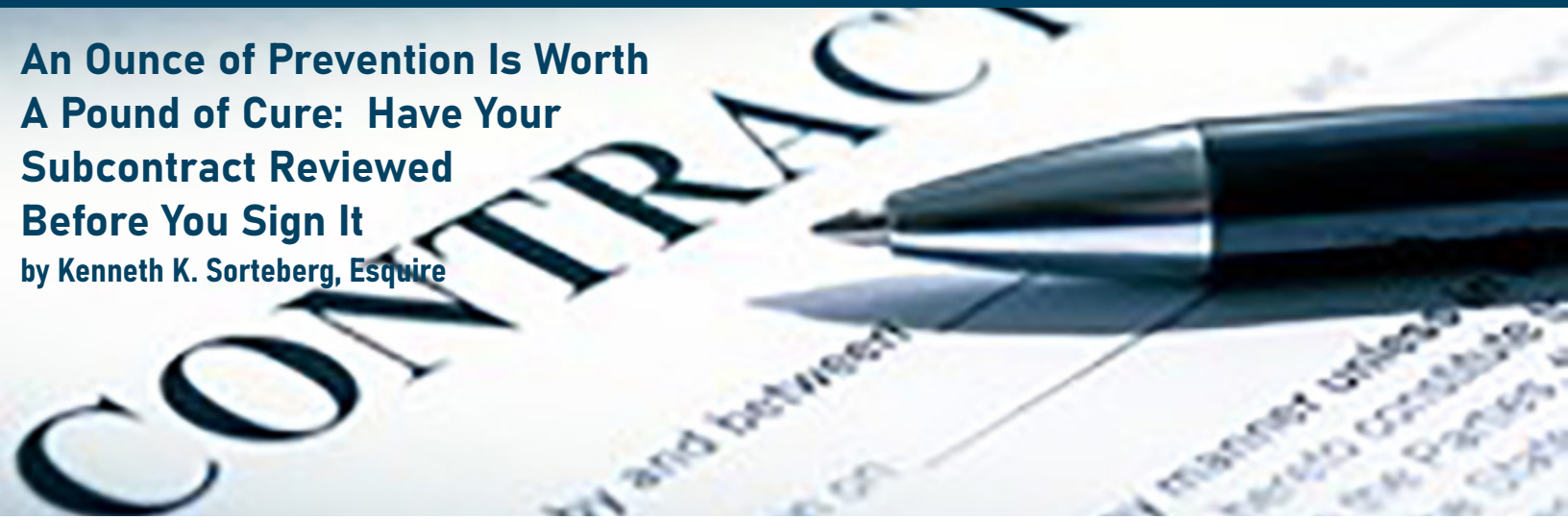
- **Virtual Awards Presentations / Fall Technical Seminar:** Thursday December 10, 2020 from 9-12:30 (more information to follow via e-mail)

As we continue to push forward through this rough and challenging time, I want to wish the best health and safety to you and your families. This is truly a time to reflect and be thankful for what we have in these challenging times.

Please feel free to contact me at rich@lymtal.com with any comments and suggestions for the remainder of the year.

An Ounce of Prevention Is Worth A Pound of Cure: Have Your Subcontract Reviewed Before You Sign It

by Kenneth K. Sorteberg, Esquire



Often my subcontractor clients come to me for advice regarding disputes they have with general contractors. Just as often, I hold my head in my hands and think to myself, "If only my client had come to me before he or she signed this one-sided subcontract."

General contractors typically request that their subcontractors sign customized, onerous, one-sided subcontracts. My advice to subcontractors is first, tell the general contractor you would like to use the standard AIA A401-2007 subcontract form, which is very fair to subcontractors. If the general contractor balks at using this AIA subcontract form, then the next step is to review and modify the general contractor's customized form. I will discuss a few of the possible modifications below.

- Strike out the "pay if paid" clause, which basically says the subcontractor will not get paid unless the general contractor gets paid by the Owner.

- State that you have the right to stop work if you have not been paid within 45 days after submitting your invoice.

- Modify the final payment clause to state that final payment and retainage will be paid to you within 45 days after your work is completed.

- State that the schedule and any updates must be approved by you.

- Modify the "no-damages-for-delay" clause so that you can get paid for your extended equipment costs and extended general conditions costs.

- Limit your exposure to delay and liquidated damages to, say, $10,000.

- Strike out the attorneys' fees clause, or state that you will not be liable for any attorneys' fees incurred by the general contractor or by any others.

Please feel free to contact Ken Sorteberg at sorteberg@constructionlaw.com with any questions or suggestions for future Legal Columns. Mr. Sorteberg is a civil engineer and an attorney (licensed in MD and DC) who focuses his practice on construction law.

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BUILDING A SAFETY CULTURE

By Charles J. Brienza, CHST, Safety Manager, Freyssinet

A strong safety culture can be a company's greatest asset and the lack thereof can prove to be an insurmountable obstacle. The question that contractors continually ask is "How can I do that at my company?" Chances are you've already done it, you just haven't applied it to safety.

It benefits every business to implement a culture of product quality. In many cases this is done by **identifying** hindrances to quality such as cost prohibitive materials or perhaps a labor pool with communication barriers. Then a company **develops** strategies to overcome the obstacles. Companies **teach** managers to overcome the aforementioned obstacles. Success or failure is determined by **reviewing** the process to ensure changes either meet or exceed previous standards of quality. Finally companies **reward** managers that perform with raises and bonuses. This simplifies the process a great deal but the general concept is clear.

You may have noticed several key words in bold print. These keys to success can be modified to meet the needs of almost any problem in any organization no matter what the product or service that is provided. Here, they have been modified to map the critical path to building a safety culture:

Identify = Hazard Identification
Develop = Safety Policy Development
Teaching = Training
Reviewing = Inspection
Rewarding = Encouragement

Ideally, you would start at Hazard Identification but it isn't necessarily required. It is, however, the logical first step.

Now let's review each step:
Hazard Identification – Being the logical first step, it is the responsibility of each business to review their work process(es) to determine if they are exposing people to hazards. I am always a proponent of hiring a third party to help administrate a safety program. If you can do so, this step is a good time. Many times as industry professionals it becomes easy to walk past a hazard that you've been dealing with for so many years you don't even realize you are at risk.

Safety Policy Development – The standard protocol for protecting people from hazards is to first look to engineer out the hazard, then apply administrative controls, and finally implement the use of personal protective equipment. I have often been surprised by employees' ability to strategize effective engineering and administrative controls and thus strongly recommend seeking input from employees to develop protective methods. A critical component of a safety culture is to have employee level buy in and there is no better way to create buy in than to encourage employee ownership of the program.

Training – Utilizing the hazard identifications and the developed safety policy made in the previous steps is the most efficient way to develop a training program. Training needs to be conducted in various different environments and forms; from formalized class work to jobsite, a mock jobsite, or practical training. The training needs to be relevant, topical, timely, and concise. You can do it yourself, hire consultants, invite vendors and manufacturers or ideally use all three methods. The more angles from which you are communicating your expectations to your people, the more effective their retention and use of the subject matter will be.

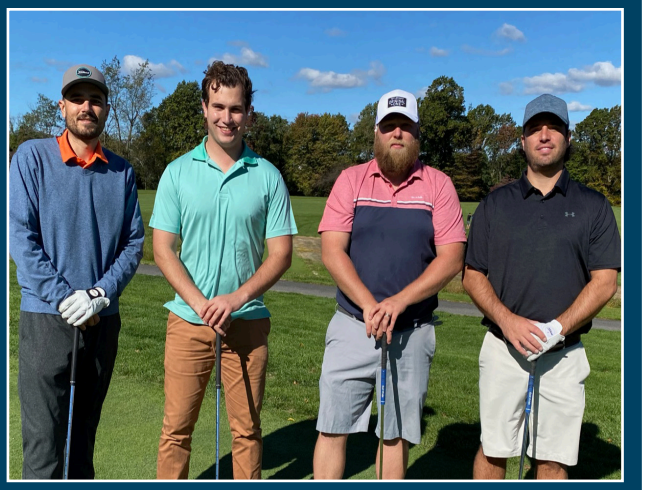
Inspection – This phase of the cycle draws on every phase of the cycle. This phase also affects all other phases. During this phase you are evaluating the effectiveness of your training. Are people responding? You are also conducting a hazard assessment. It is a real life, real time look into the work. During an inspection you are also training. When you discover an issue that needs to be corrected it is an invaluable opportunity to show an employee how to protect themselves and others. It is almost impossible to replicate this in a classroom. This is also a chance to provide encouragement.

Encouragement – Comes in many forms. It's positive, negative, monetary, verbal, written, individual, group, etc. There are a lot of different ways to let a person know they have responded to training. There are a lot of different ways to let a person know they haven't responded to training. How you do it is up to you and what works at your organization but the point is YOU HAVE TO DO IT. If your people don't know they are doing wrong, they'll continue to do it. If you don't encourage good behavior, they may discontinue performing not knowing that you want them to do so.

Books have been written about each of the steps listed. In future articles, a brief outline of each step will provide companies a path to success. Where a business can stumble is by looking at this as a five step plan to building a safety culture. In reality it is a synergistic cycle. No step can be skipped without negatively affecting the effectiveness of the other four steps. You can't get to step five, dust off your hands and discontinue trying to grow the culture. Growing a safety culture is like growing a garden, you plant a seed, care for the seed, watch it grow then reap the benefits. However, if you stop caring your garden will overrun with weeds. If you stop watering your plants will die. Don't let your organization's safety culture whither and die!

2020 ICRI Golf Tournament
Thursday October 8th, 2020

by Kevin Kline



Despite the obvious hurdles associated with 2020 and a somewhat last-minute change in venue… the annual ICRI B-W Chapter Golf Outing was held on Thursday October 8th, 2020 at Waverly Woods Golf Club in Marriottsville, MD. We anticipated less turnout than usual; however, we were surprised, and happy to host 100 golfers for this years tournament. Sadly, we were not able to hold our usual putting competition or buffet luncheon at the end of the day, but we did try some new things this year including a Chick-fil-A breakfast (which was a hit, of course) and instead of an umbrella or cooler as a giveaway, we provided $50 gift cards for each golfer to spend at a TaylorMade tent where they could pick out what they wanted from a variety of items. The outing was a success! The Chapter appreciates all the golfers who joined us for the day, and we are thankful for the support of all our Hole Sponsors and Premium Sponsors.

The Chapter also wants to recognize the following tournament sponsors for their support with Premium Sponsorships:

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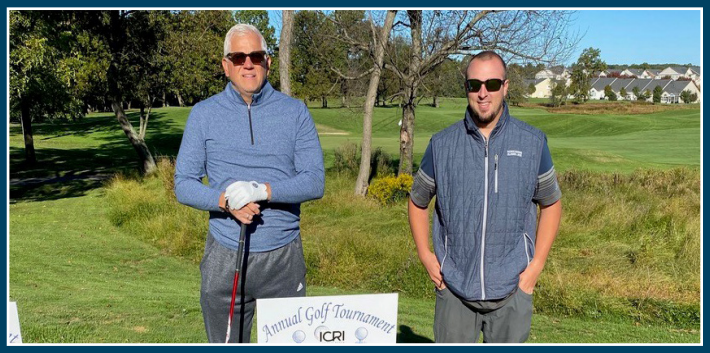
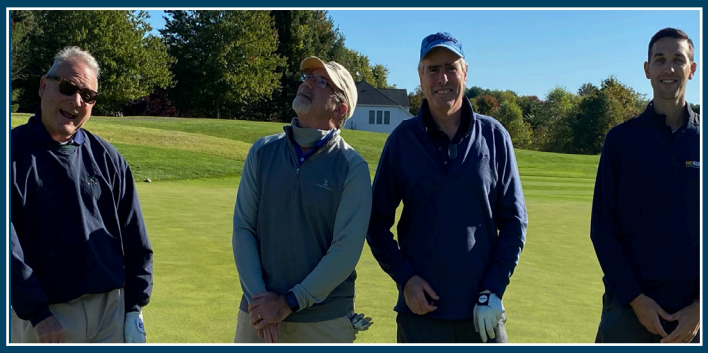




GOLF WINNERS:

1st Place Team – Score = 59
Brian Baker
Kevin Leasure
Bryan Monahan
Lance Conley

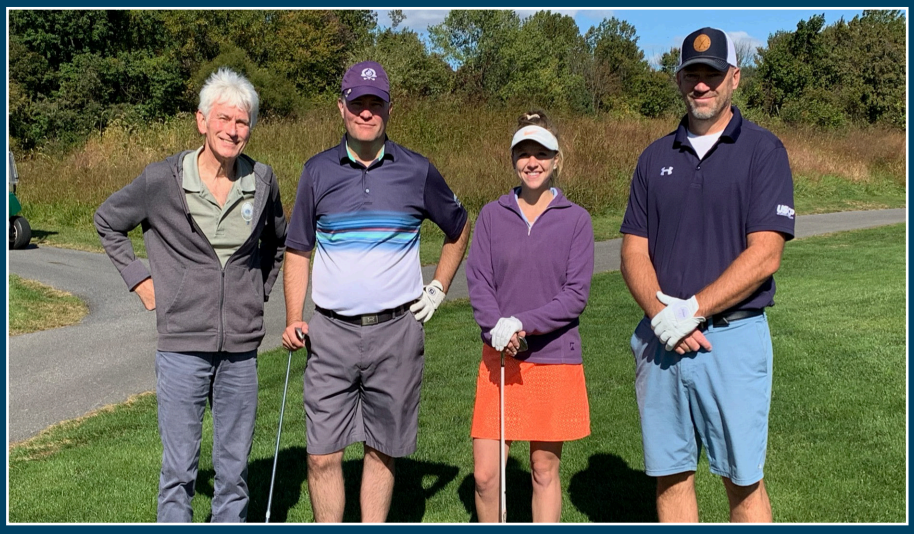
2nd Place Team – Score = 62
Patrick McGinty
Chad Warren
Garth Viar
Rick Hart

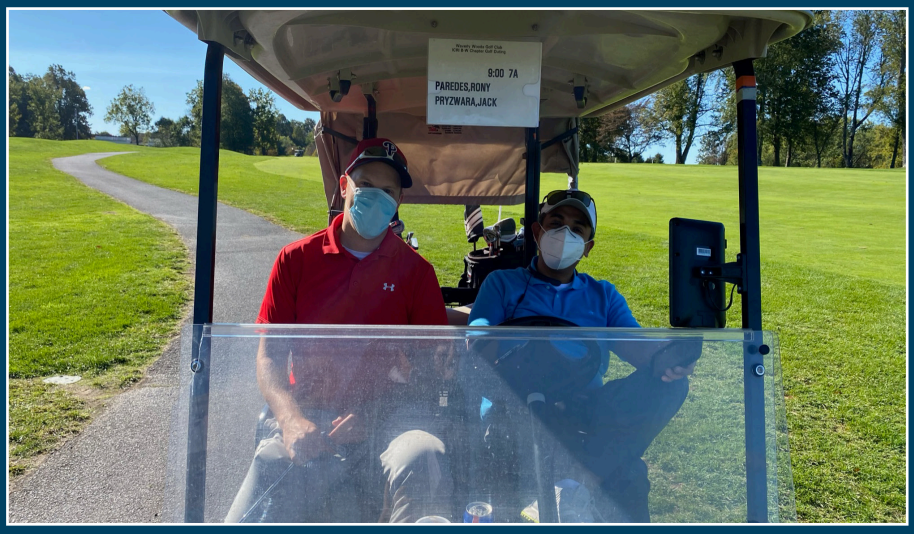
3rd Place Team – Score = 62
Dan Malatesta
Vince Christiana
Anthony Paoletti
Joe Spina

Closest-to-the-Pin @ Hole # 15
Lance Conley (14')

Longest Drive @ Hole # 9
Butch Smith

the 50/50 raffle is still unclaimed!
The winning ticket is 629714.
Email Kevin Kline to claim:
kkline@concretecpr.com





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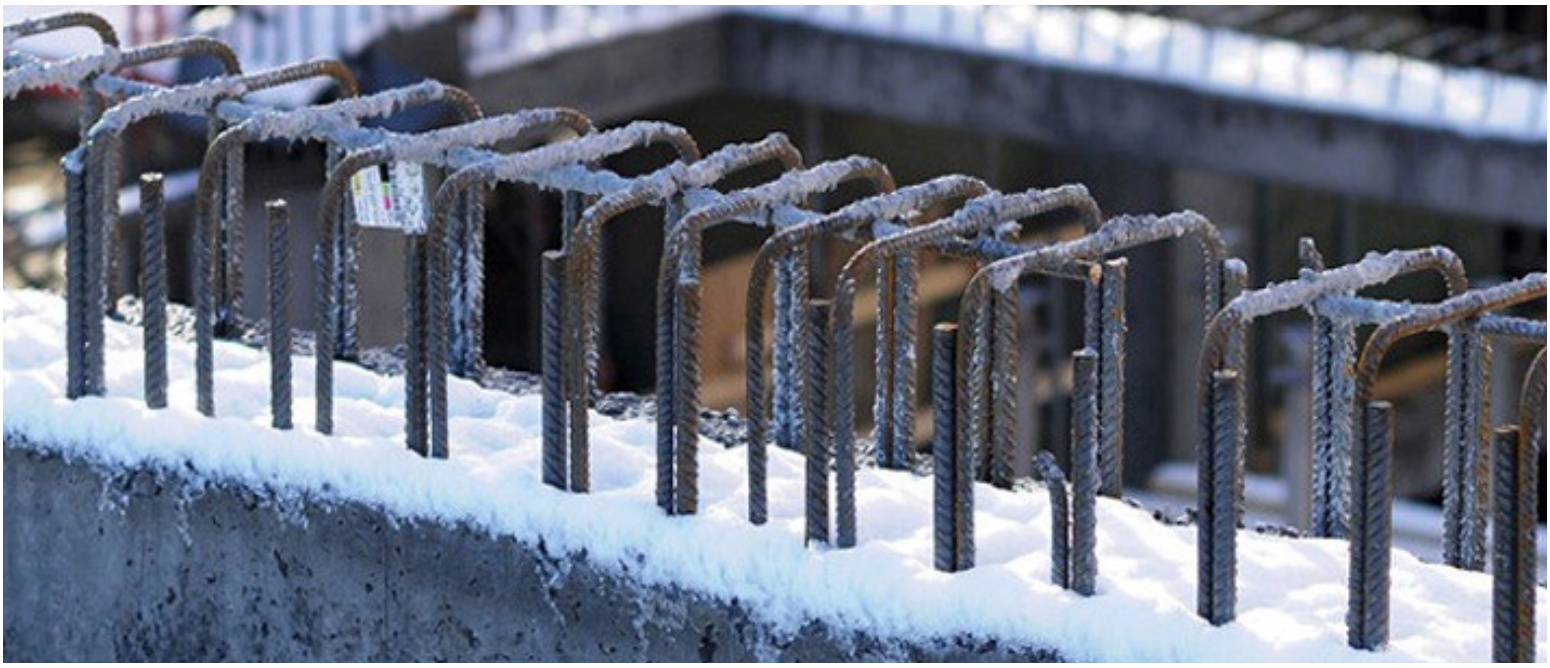
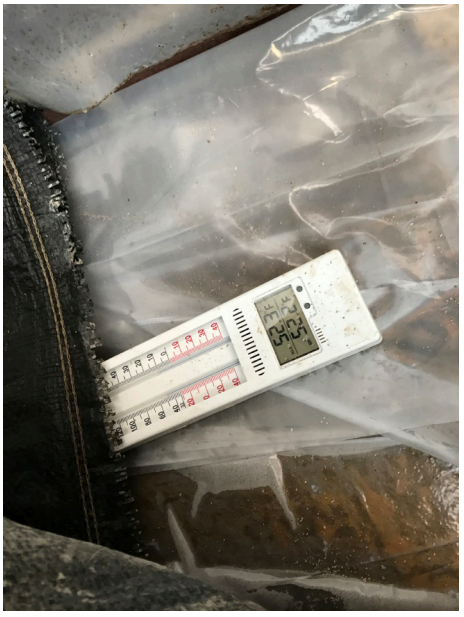


Best Practices for Cold Weather Concreting

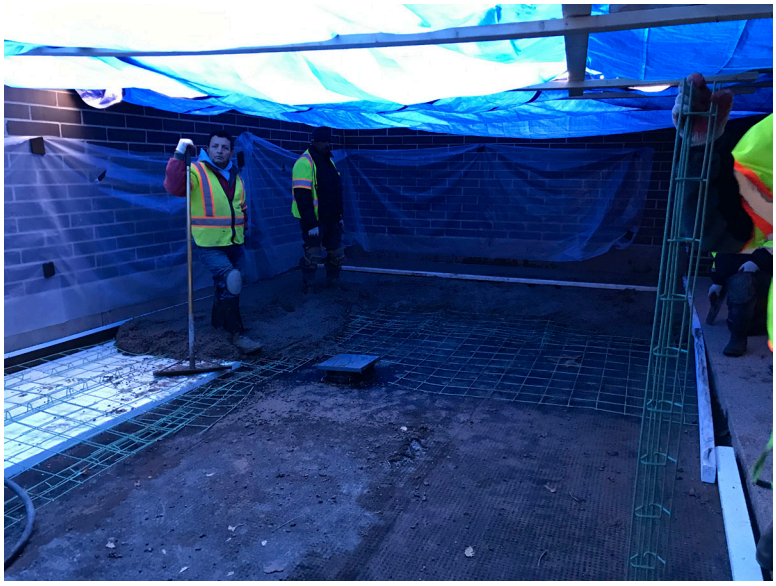
J. Michael Camarda, PE
Project Manager | Repair + Restoration
SK&A | Structural Engineers

Concrete is a material that is sensitive to environmental factors where conditions during curing can have significant impacts on performance and long-term durability. As the seasons change from fall to winter, it is of paramount importance that contractors and engineers adhere to "cold weather" concrete standards when warranted. For practical purposes, cold weather is defined by ambient air temperatures being 40°F (5°C) or less during the protection period for the freshly placed concrete. ACI defines it as "a period when the average daily ambient temperature is below 40°F (5°C) for more than 3 successive days" but it is important to be cognizant of the fact that temperature fluctuations may necessitate that cold weather concreting procedures be followed even if the "average" temperature is above 40 degrees. When placing concrete in these conditions, installers must verify that the concrete is properly produced, properly placed, and properly protected. If best practices are not followed in all three of these phases, concrete can develop defects leading to insufficient strength or durability concerns that render it incapable of meeting service requirements.



When producing concrete for placement in cold weather conditions, heating water is a common first step to mitigate the effects of cold ambient air temperatures. Hot water used to mix concrete should not exceed 180°F or it may cause issues with hydration impacting the strength of the concrete. It is also possible to heat aggregate, and aggregate that is "frozen" (or has visible ice or frost on the surface) should not be used in a concrete mix.

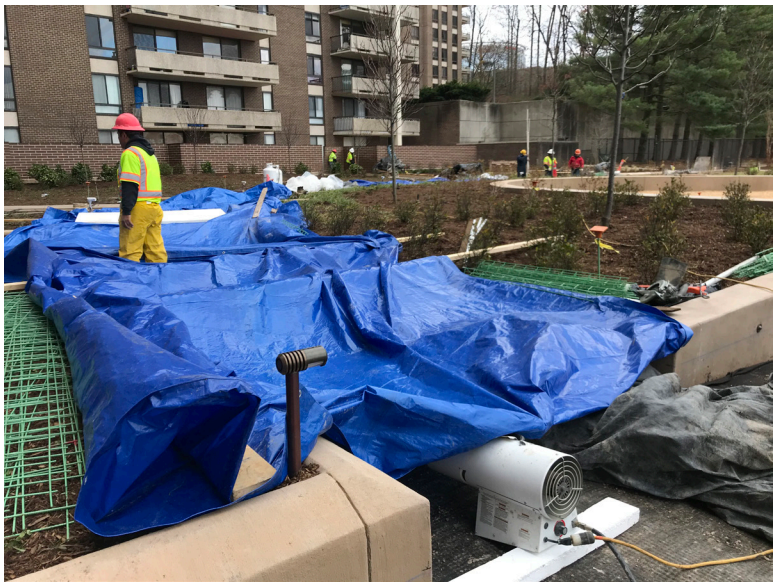
Admixtures can also be utilized to reduce the set time of concrete in cold weather. Accelerants are often used in cold weather, but do not provide freeze protection for the concrete during the protection period. Common



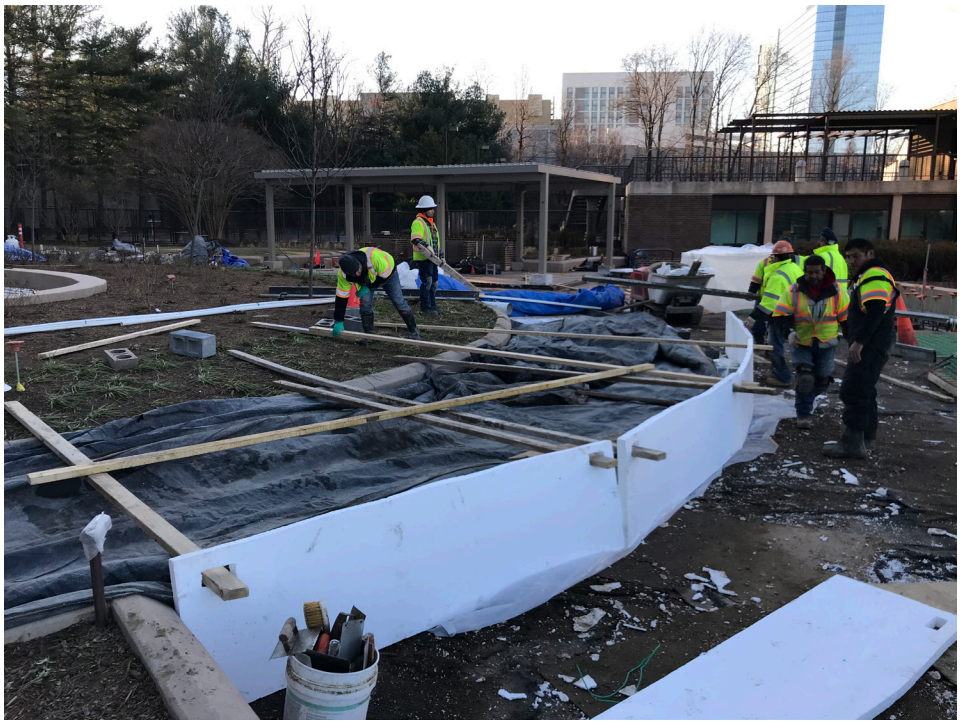
admixtures are ASTM C 494 – Type C and Type E, and include sodium nitrite, calcium nitrite, and calcium chloride. It is extremely important that calcium chloride not be used in reinforced concrete because the added chlorides accelerate corrosion of the embedded reinforcing steel. Calcium chloride is acceptable for unreinforced application, such as sidewalks and slab-on-grades.

When placing concrete in cold weather, the first step is verifying that you have a suitable substrate for placement. Concrete should never be placed in frozen formwork or on frozen ground. When necessary, heat the substrate prior to placement. The contractor must account for increased set times when placing the concrete and must protect the concrete from freezing during this period. Concrete should be placed at the lowest practical slump and water-cement ratio to reduce set time and susceptibility to freezing. If ice crystals form in the concrete during placement, it negatively impacts hydration which in turn negatively impacts strength. Temperature differentials between the interior and outer surface of the concrete can also cause distress to the concrete if not controlled. For large pours, this can be monitored with thermometers located throughout the repair area prior to placing the concrete. The temperature differential between different parts of the concrete should not exceed 35°F. The most common ways to control concrete temperature are with insulation and heaters as part of the "protection" for the newly placed concrete.

When protecting concrete after placement and finishing, contractors should follow the guidelines set forth in ACI 306R and ACI 306.1. Protection is important because the concrete is still susceptible to adverse effects from temperature until it has reached certain benchmarks. Generally speaking, concrete needs to be protected from freezing cycles until it has reached 3500 psi or 75% of its design strength. Concrete is particularly susceptible to damage if it freezes before reaching 500 psi in compressive strength. There are many methods – ranging from insulating blankets to heated enclosures – for protecting concrete in cold weather environments. Selecting the most suitable methods is a project specific decision that must be made by the contractor and/or engineer to achieve the desired conditions (i.e. no concrete freezing, minimal temperature differentials in the concrete, etc.). It is important to consider that exposed corners and edges of repair areas are the most susceptible to heat loss, and that insulating blankets applied to the top surface have minimal impact to the underside of the concrete.

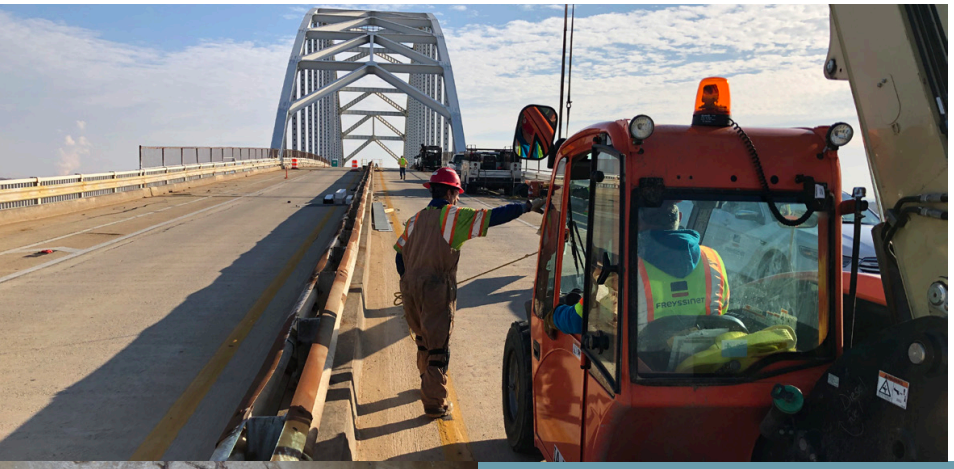


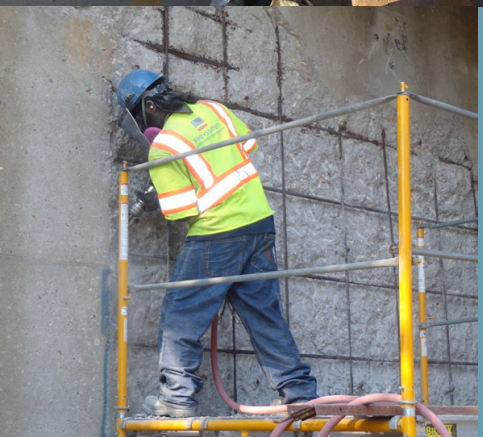
The protection period for concrete during cold weather concreting is typically three days; however, that period can be extended based on the performance of the concrete in situ. Field cured concrete cylinders can



be utilized to evaluate the strength gain of the concrete and whether protections can be removed. When removing protections, if possible they should be removed gradually to reduce thermal shock to the concrete.

Cold weather concreting practices exist to ensure that concrete installed in low temperature environments still meets the intended service requirements of the structure. The consequences for not following cold weather concreting can be expensive and difficult to repair, and often will not immediately present themselves. Flaking, scaling, cracking, and other surface defects can arise months after incorrectly placing concrete in cold weather. While the cost adhering to ACI guidelines is not insignificant in some cases, the economic impact of not following best practices and having to perform corrective work in the future far surpasses that of providing adequate preparation and protection during the initial work. It is in the best interest of all stakeholders – the client, the contractor, and the consultant – to ensure that cold weather concreting guidelines be followed at all times and all necessary steps are taken to protect the concrete.





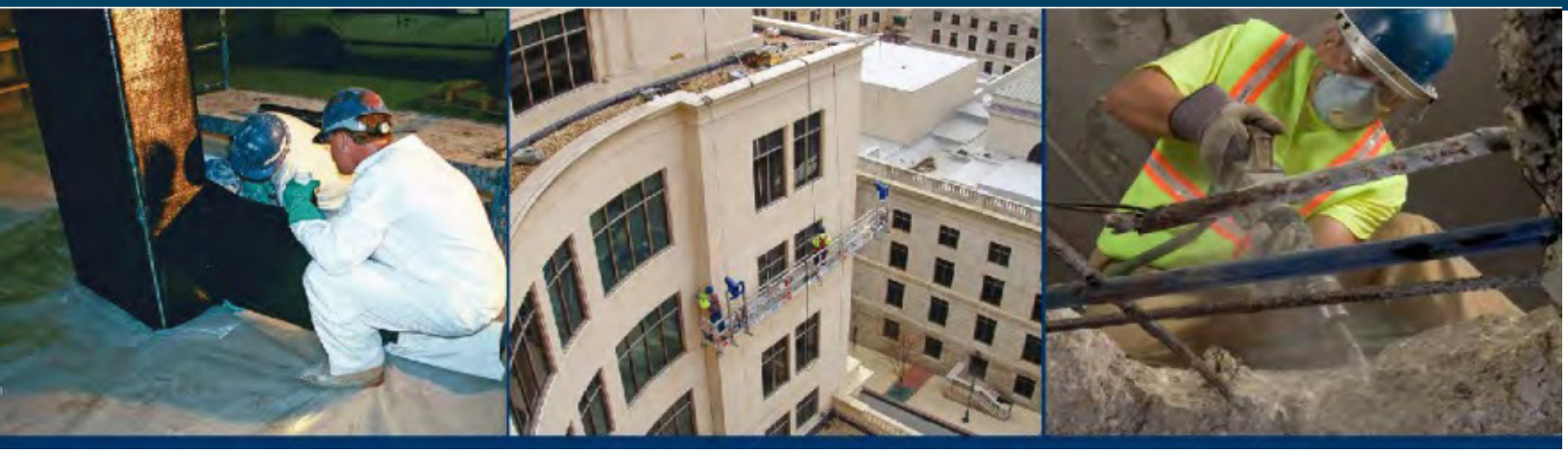
THE AGGREGATE

The Baltimore/Washington D.C. Chapter of ICRI is seeking technical articles for publication in its quarterly newsletter, The Aggregate.

The Aggregate is the official newsletter for The Baltimore/ Washington, DC Chapter of The International Concrete Repair Institute and is published quarterly and sent to tall current sustaining members of the chapter. In addition to chapter news, highlights, and possible advertising opportunities, The Aggregate includes informative technical articles on a variety of issues related to the concrete repair industry.

The ICRI BWC chapter is looking for individuals interested in contributing a technical article (s) related to industry practice or instruction, technology and design, professional concepts/issues, project profiles, or any other topics relevant to ICRI members. Articles will be presented as the main article in an upcoming edition of The Aggregate. Articles do not necessarily need to be authored by an ICRI member, so please forward this request to any individual outside of the organization who may be interested in submitting. This could be a great opportunity for younger professions to get published or for someone to share an informative or interesting lesson learned article. Please visit the Aggregate archives on the ICRI-BWC website to see the types of articles that have been published previously.

Also, technical article contributors to the Aggregate will recieve a complimentary registration for the succeeding quarterly dinner meeting for ICRI BWC. Please contact Rich Barrett (rich@lymtal.com), Chapter President for more details.



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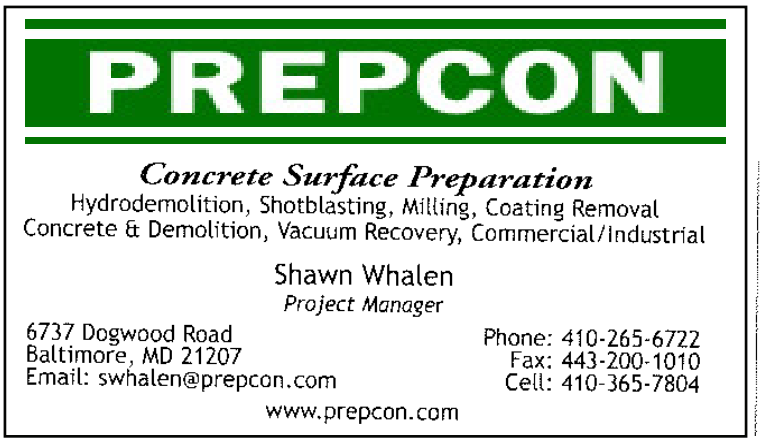

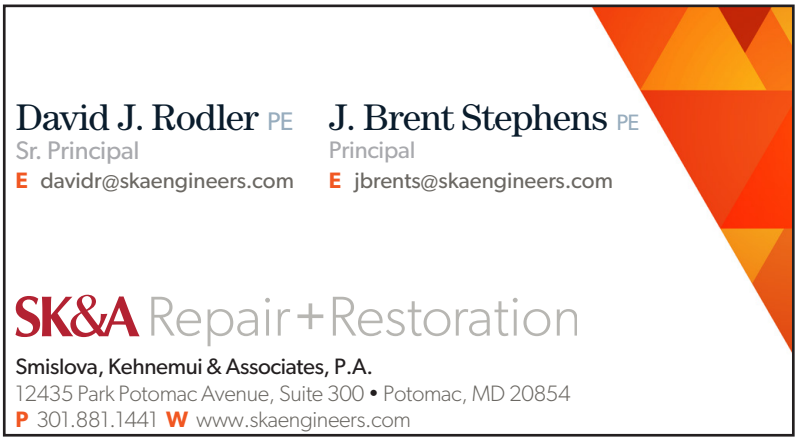

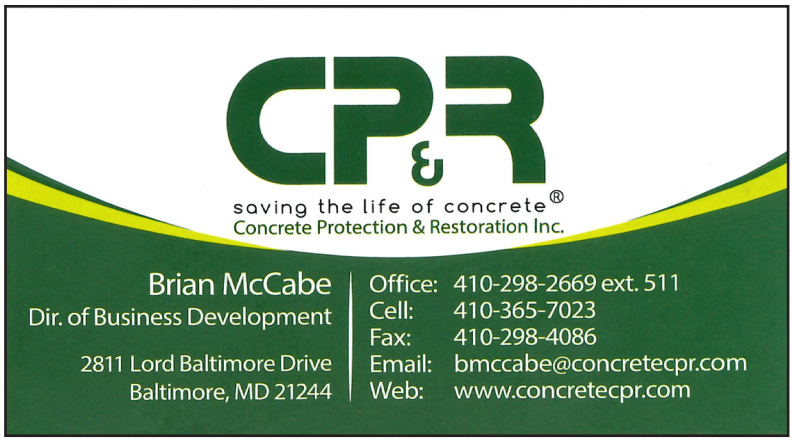

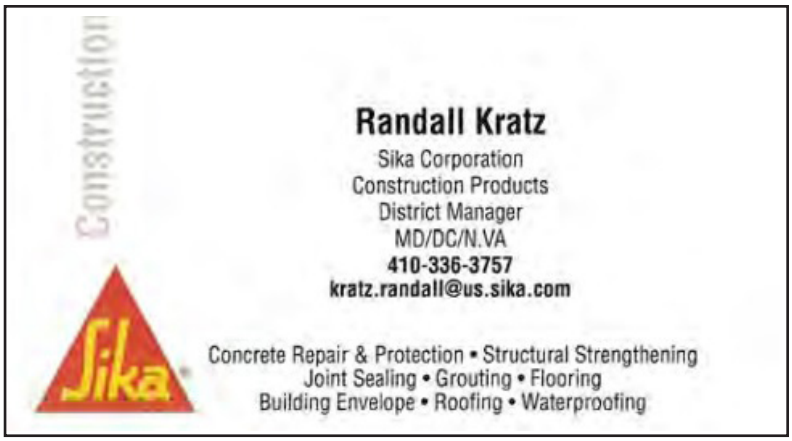
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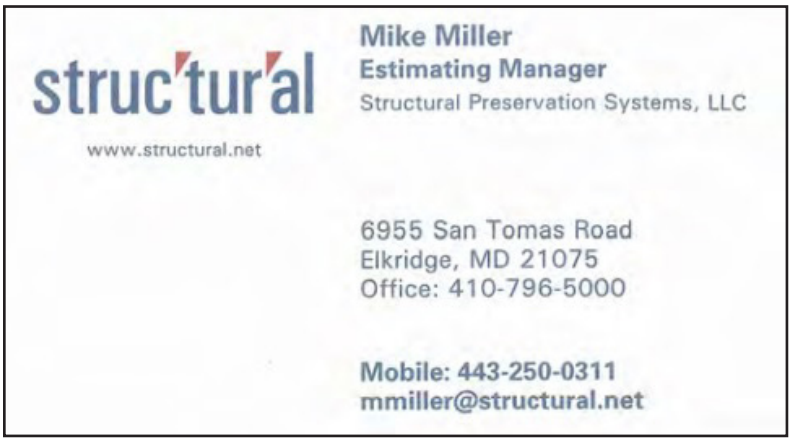
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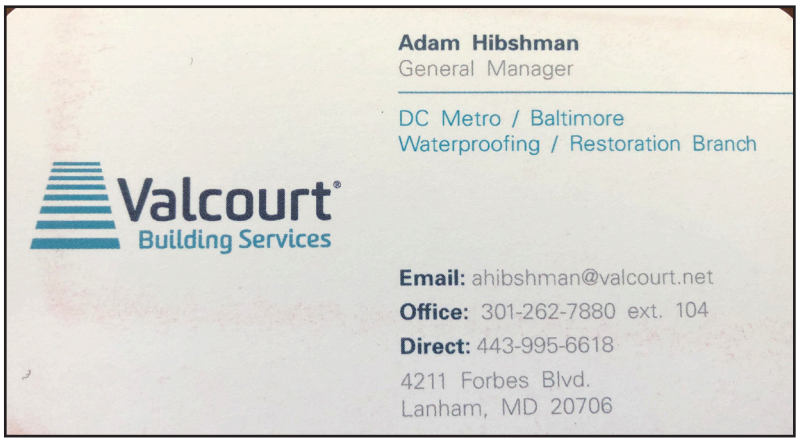
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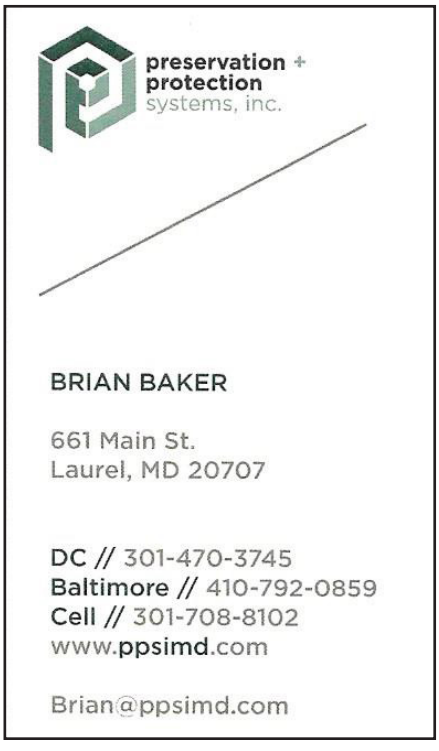
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