

# Build with Strength Coalition Undate

Virginia Ready Mixed Concrete Association
Fall Convention
Hilton Virginia Beach Oceanfront
October 19, 2017



# KEY RESEARCH TAKEAWAYS

In comparison to wood, concrete has a natural advantage that we haven't taken advantage of.



We are partnering with Axis Research to conduct quantitative research.

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Concrete wins on two of the three factors that determine building decisions: durability and strength.

# OUR MISSION:

Educate the building and design communities and policymakers on the benefits of ready mixed concrete, and encourage its use as the building material of choice for low- to mid-rise structures. No other material can replicate concrete's advantages in terms of strength, durability, safety, and ease of use.

# WHO WE ARE

Backed by the National Ready Mixed Concrete Association,
Build with Strength is a coalition of architects, builders,
engineers, emergency services personnel and policymakers.

We promote concrete because we know it's the stronger, safer and smarter choice. Period.





Our mission is to educate the building and design communities and policymakers on the benefits of ready mixed concrete, and encourage its use as the building material of choice for low- to midrise structures. No other material can replicate concrete's advantages in terms of strength, durability, safety and ease of use.



### WHAT WE'RE SAYING

Build with strength. It's a clear and unapologetic message for engineers, builders, architects, contractors and policymakers alike. We know that ready mixed concrete is superior to softwood lumber in every possible way--and we're getting the word out.



### **HOW WE SAY IT**

Straightforward, bold and confident. Professional, yet conversational. We're not just promoting concrete. We're conveying a clear, engaging and emotional message through visual and conversational storytelling. Then we make sure that everything we say and do is backed up by data and research. Because we can't just be a source of information—we should be a trusted source.

# CAMPAIGN FUNDAMENTALS

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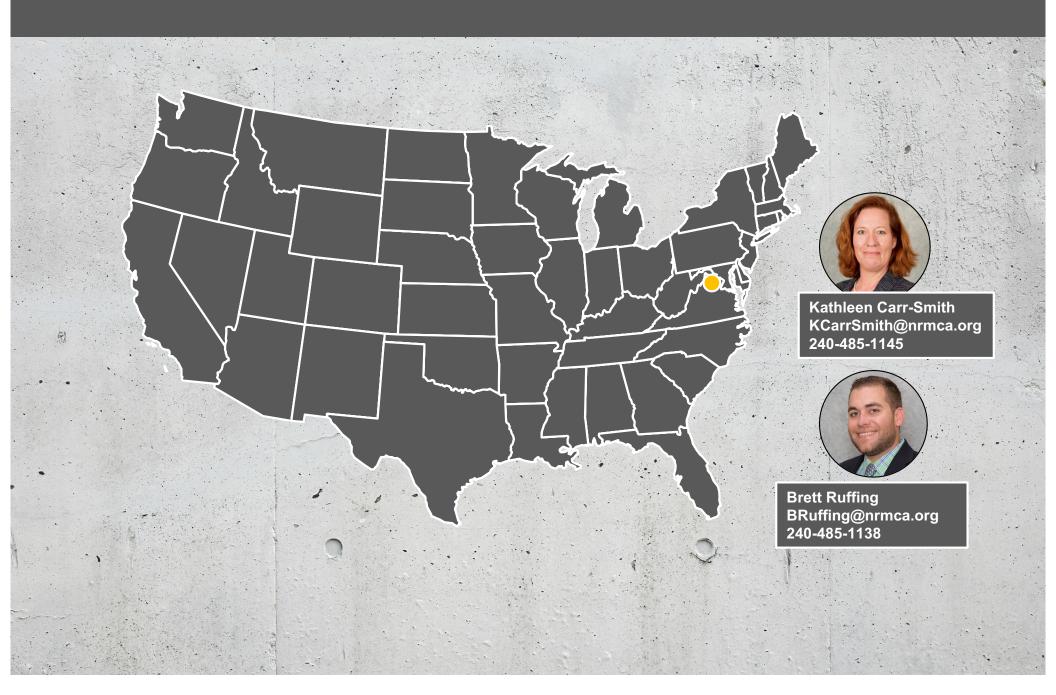
BUILD WITH STRENGTH

A COALITION OF THE NATIONAL READY MIXED CONCRETE ASSOCIATION

*Adv*ocacy

# Public Affairs

# **BwS Public Affairs Team**



# SOCIAL

### HEID BUILDING

veloper: PRDC Properties

### **BUILT FOR A LIFETIME**

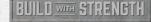
Nothing is stronger or more durable than concrete. For proof, look at the 100-year-old concrete warehouse that used to be the Frank P. Heid & Company hat factory. Built in 1927, it has been sitting empty for eleven years-but this diamond-in-the-rough's durability is shining through. Developers are focused on restoring the area's existing structures rather than building from the ground up, and this eight-story former factory is worth the investment. Building up from its solid concrete bones, the Heid Building's renovation will turn the historic industrial warehouse into a

The original construction was a marvel of its time. Built in only 7 months, the concrete building is now included on the National

Since concrete won't rot, mold, rust, or deteriorate, developers can merge the old with the new and keep the same durability that has lasted a century.

### "The hone

says the d repurposir 04 Indus .The Heid B



### CASE STUDY: STRENGTH

### NORTON CHILDREN'S **MEDICAL CENTER**

4910 Chamberlain Ln., Louisville, KY 40241

Project Size: 71,000 sq. ft.

Project Owner: Norton Healthcare

Architect: Laughlin Millea Hillman, LMH Architecture, Louisville, KY



### DESIGNING A SAFE PLACE FOR CHILDREN.

Going to the hospital can be a scary experience for children. That's why when Norton Healthcare decided to build a new children's hospital in Louisville, Kentucky, they decided to build one that was kid-friendly. The building is designed using bright colors and cheerful art in an effort to alleviate the fears and concerns of the hospital's young patients. From a four-foot tall door made for kids to oversized, family-friendly treatment areas, children feel more at-ease during their hospital visit.

When precious lives are at stake, one shouldn't worry about the safety of the structure they are in. Concrete

The hospital walls were built using Nudura insulated concrete forms (ICFs). ICFs are resilient and can stand up to fire, floods and wind. ICFs are also incredibly energy efficient, making them an ideal choice

### 03. Recognized for energy efficiency.

### 04. Cleaner air for patients on the mend.

Maintaining a healthy environment is important to hospital staff. Concrete does not harbor toxic mold

### CASE STUDY: SUSTAINABILITY

### FOURTH&

### SUSTAINABILITY WITH A SMALL FOOTPRINT

sustainability, flexibility, and a small footprint? Concrete, of course The designers of the new Fourth& exclusively used concrete and steel in its framing structure, setting a new trend in the area's midriso family developments. The 4-Star Austin Energy Green Building is also the only building in East Austin to offer micro-loft condominiums, small-footprint units slightly larger than a 1-car garage. Fourth& continues its focus on sustainable design with pre-insulated recycled steel panels, rooftop solar panels, and LED lighting throughout.

### 01 Unique Construction

Fourth& uses no wood in its construction, only steel and concrete-it's a

### urth& parki

### MEADOWBROOK VILLAGE CHRISTIAN RETIREMENT COMMUNITY BUILDING

100 Holland Glen, Escondido, CA 92026

ICF Completion: 2016 Project Size: 69,696 sq. ft

MEADOWBROOK

Project Owner: SRM Development ICF Manufacturer: Fox Blocks

### BULD WITH STRENGT

### CASE STUDY: ICES



### A SAFER PLACE TO LIVE

How do you build for safety, strength and efficiency? You start with Insulated Concrete Forms (ICFs). Meadowbrook Village is the largest ICF structure on the West Coast. The multi-residential structure features 66 individual units and was designed with comfort in mind. The structure's ICF construction allows for unique heating and cooling within each unit. Another benefit of ICF construction, the building's developer will see long-term savings in energy costs and low maintenance. Talk about a win-win situation.

### 01. Faster build time

The use of ICFs for the subterranean parking garage, the above-grade exterior walls and the interior walls allowed for faster production time and reduced the number of sub-contractors needed to

### 02. Reflecting Meadowbrook's mission in its design.

Meadowbrook is a Christian community. In an effort to reflect this, the building appears as the shape of a cross from an aerial perspective

### 03. Built-in energy efficiency.

ICF walls provide an estimated 40-50 percent energy savings for the overall structure. ICFs form a solid concrete wall with continuous insulation, offering unparalleled energy efficiency.

### 04. Building for California.

Earthquakes and other natural disasters such as wild fires are a major concern for many in California. By choosing ICFs, residents can rest a little easier as ICF structures create more strength against natural disasters





structures are designed to last for centuries and can outlast any natural disaster.

for the project.

The hospital is LEED Silver certified. Concrete's thermal mass properties save nearly 5-8% In annual energy costs and reduce greenhouse gas emissions over the building's lifecycle by 3-5%.

# Case Studies:

- Wilshire Grand Center- Los Angeles
- Meadowbrook Village Christian Retirement
   Community- Escondido, CA
- Perot Museum of Nature & Science- Dallas, TX
- Fourth&- Austin, TX
- Heid Building- Philadelphia, PA
- Harrisburg University Academic Center Harrisburg,
   PA
- If you have great concrete projects in your area, we can turn them into case studies

# AMERICA ISBURNING

# Fires of combustible materials are reducing apartment buildings to ashes and putting lives at risk.

The recent spate of fires in low- and mid-rise structures throughout the country is raising questions and concerns about the safety of wood-built buildings. It's clear that codes and inspections are failing to keep residents and communities safe. It's time for builders, contractors, developers, first responders and residents to come together to create new solutions that embrace non-combustible materials like steel and concrete.



### ALASKA:

### Anchorage, AK - 2.16.17

Former hotel-turned-apartment building was destroyed by fire. http://bit.ly/2ppukX3

### ARIZONA:

### Gilbert, AZ - 4.23.16

A "monster" five-alarm fire destroyed woodframed apartment buildings under construction. http://bit.ly/2nN5t0P

### Mesa, AZ - 8.2.16

A hotel under construction was destroyed by a two-alarm fire that could be seen for miles. It also caused damage to a nearby hotel. http://bit.ly/2oQ46ev

### Phoenix, AZ - 3.18.17

Three-alarm fire consumed a three-story elderly care facility. The estimated cost of damage could be around \$7 million. http://bit.ly/2meRrFy

### CALIFORNIA:

Los Angeles, CA – 12.8.14
A massive fire engulfed a residential tower

http://lat.ms/2n1EGuq

### Oakland, CA - 12.3.16

36 people were killed after ignited wood pallets burned down a warehouse. http://bayareane.ws/2nLW2yC

### Oakland, CA - 3,27,17

Three people died after a massive blaze ignited inside an Oakland apartment building. http://bit.ly/2o7Gs1d

### Los Angeles, CA - 6.12.17

A fire erupted at a Los Angeles construction site and damaged an adjacent residential building. The apartment building was in the wood-frame stage of construction. 20 people have been displaced from their homes. http://bit.ly/2s32kxb

### Los Angeles, CA - 7.4.17

A fire spread through a two-story, woodframed condo. 122 firefighters were needed at the scene and 3 were injured. http://bit.ly/2tQelq6

### Oakland, CA - 7.7.2017

A massive, 4-alarm fire gutted a 7-story Oakland building that was under construction. At least 700 people who lived nearby were displaced. http://bit.ly/2u9tq6p

### CONNECTICUT:

### Waterbury, CT - 5.17.17

A large fire spread and destroyed four woodframed, three-story, multi-family homes, four firefighters were injured and up to 20 families are displaced. http://bit.ly/zpWSSq2

### Waterbury, CT - 6.16.17

A two-alarm fire in Waterbury was located in a two-story, wood-framed residential building. The fire spread to a 3-story, 3-unit structure. 2 Firefighters were taken to the hospital, and 6 families are displaced. https://bit.y/2tka9EH

### **FLORIDA**

### Tampa, FL - 4.28.17

A two-alarm fire spread in an apartment building in Tampa, Florida. This was the second large fire in recent months to tear through the wood-framed buildings inside the complex. https://bit.lv/zpv33BY

### St. Petersburg, FL - 5.12.17

A wood-framed apartment complex fire was too dangerous for firefighters to enter and they were forced to fight the filames from outside. The building is a complete loss, and at least a dozen people lost their homes. https://bil.y/zabl/w/bp

### GEORGIA:

### Evans, GA - 6.2.15

Marshall Square Retirement Resort, a fully occupied retirement complex, was destroyed. One elderly woman died in the fire. http://bit.lv/188e8Pu

### Warner Robins, GA - 7.10.17

Eight Families were displaced after a fire ripped through a wood-framed apartment building in Warner Robins, Georgia. http://on.wmaz.com/2u8UD8I

### INDIANA

### New Albany, IN - 2.25.2017

A \$26.5 million dollar luxury apartment complex under construction was damaged by a massive fire. Over 90 firefighters were needed at the scenhttp://ciky.it/2vpdBaV

### KANSAS:

### Overlands Park, KS - 3.20.17

A towering blaze consumed the newly woodconstructed Royale at City Place Apartments and attacked 22 nearby homes. http://bit.ly/2nLsdvE

### LOUISIANA:

### Hollygrove, LA - 4.12.17

30 People, including 18 children, lost their homes in a two-alarm fire of a wood-framed apartment complex. http://bit.lv/2pafINB

### MAINE

### Sandy River Plantation, ME - 2.7.17

A large fire engulfed a condominium building drawing emergency crews from throughout the county. http://bit.ly/2nEAUd8

### Biddeford, ME - 4.17.17

A fire spread in a two-story, wood-framed apartment building that was constructed in 1800. Firefighters were able to control the fire before any residents were injured. https://bit.l//zpof6EZ



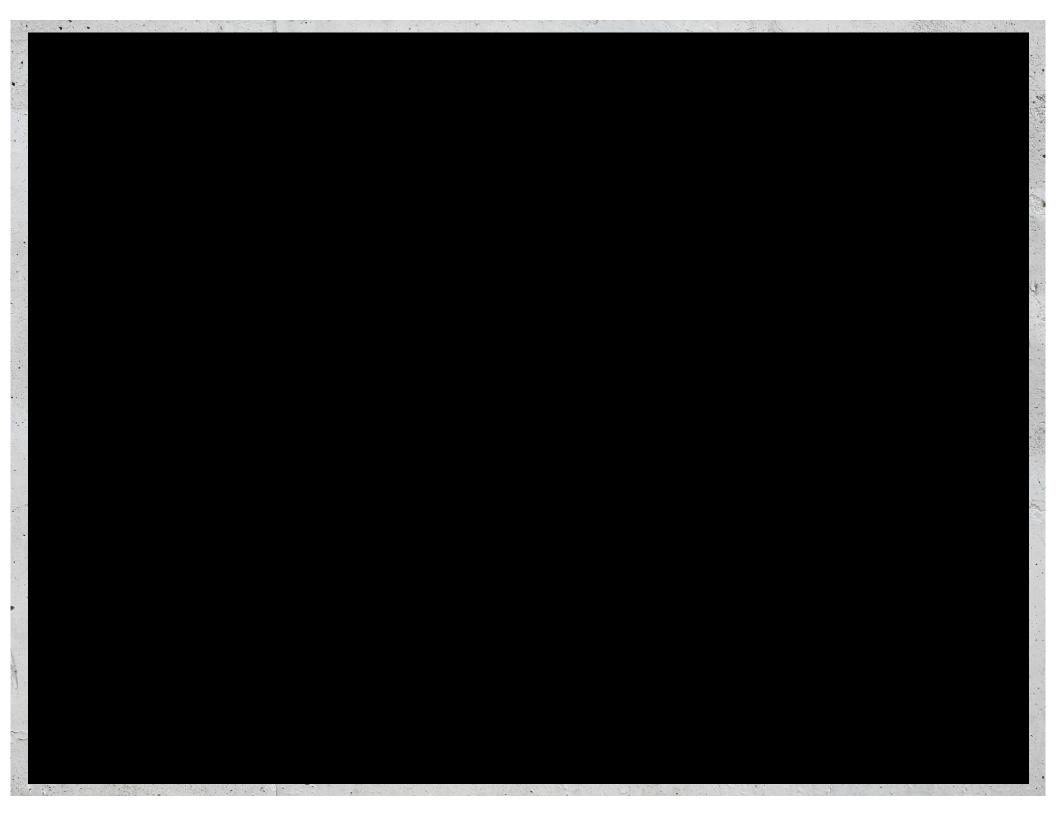
# SOUND ADVICE FOR ANY BUILDER.

Ask any developer their number one complaint from tenants. Noise tops the list. That's why more builders are turning to Insulated Concrete Forms (ICFs) for apartments, hotels and dorms. They reduce sound by over 50% compared with insulated wood walls.



# Infographics:

- America Is Burning Map- updated as multifamily fires occur
- Sound Advice For Any Builder- highlights
   Sound Transmission Class of ICFs v. Wood Frame



# · Videos:

- Cost-Benefit Analysis- wood v. ICF
- Team Work- highlights the Concrete Design Center
- Chesapeake Village- Stephensville, MD- 1<sup>st</sup>
   ICF project on Maryland's Eastern Shoreutilized the Concrete Design Center

# Insurance Study:

- Survey of Insurance Costs
   for Multifamily Buildings
   Constructed with Wood frame and Concrete
  - Dr. Pieter VanderWerf & Nicholas Haidari, Boston College
  - 5 reference cities: Edgewater,
     NJ; Towson, MD; Orlando, FL;
     Dallas, TX; and Los Angeles,
     CA

NRMCA Publication Number 2PR01

## Survey of Insurance Costs for Multifamily Buildings Constructed with Wood-frame and Concrete

Dr. Pieter VanderWerf and Nicholas Haidari, Boston College

October 2017



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# **Coalition Building**

- Build With Strength is building the coalition in the following locales:
  - Pacific Northwest
  - Maryland
  - New Jersey
  - Carolinas
  - Georgia
  - Florida
  - Los Angèles
- Build With Strength is investigating potential activity in:
  - Philadelphia
  - Boston

#Build WithStrength



You Tube (2)



# ONGOING RAPID RESPONSE

**EARNED** 

**MEDIA** 

Jayne Miller

WBAL 🕗

Home

Posts

Videos

Photos

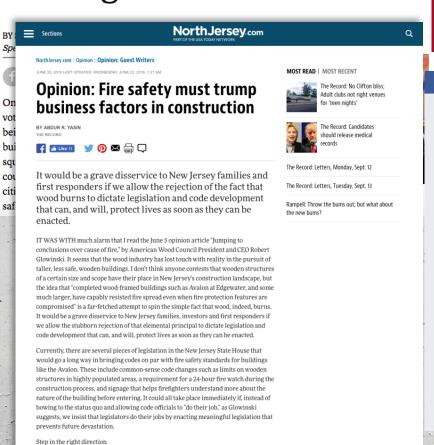
Likes

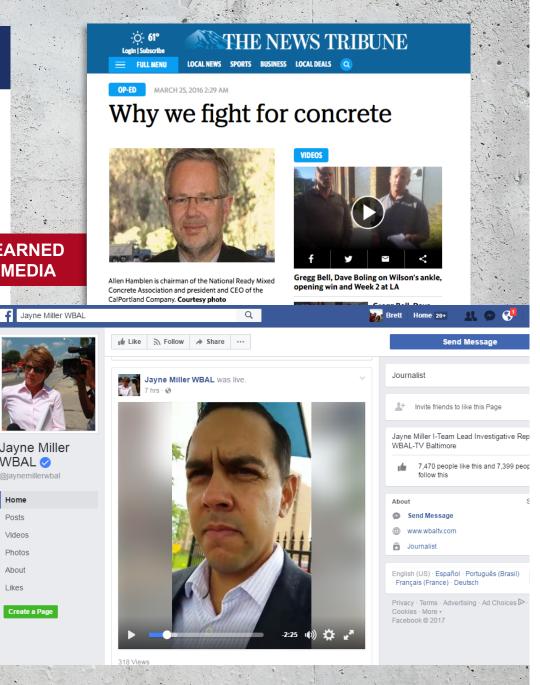
Create a Page

@jaynemillerwbal



# Sandy Springs City Council stands strong for durable buildings



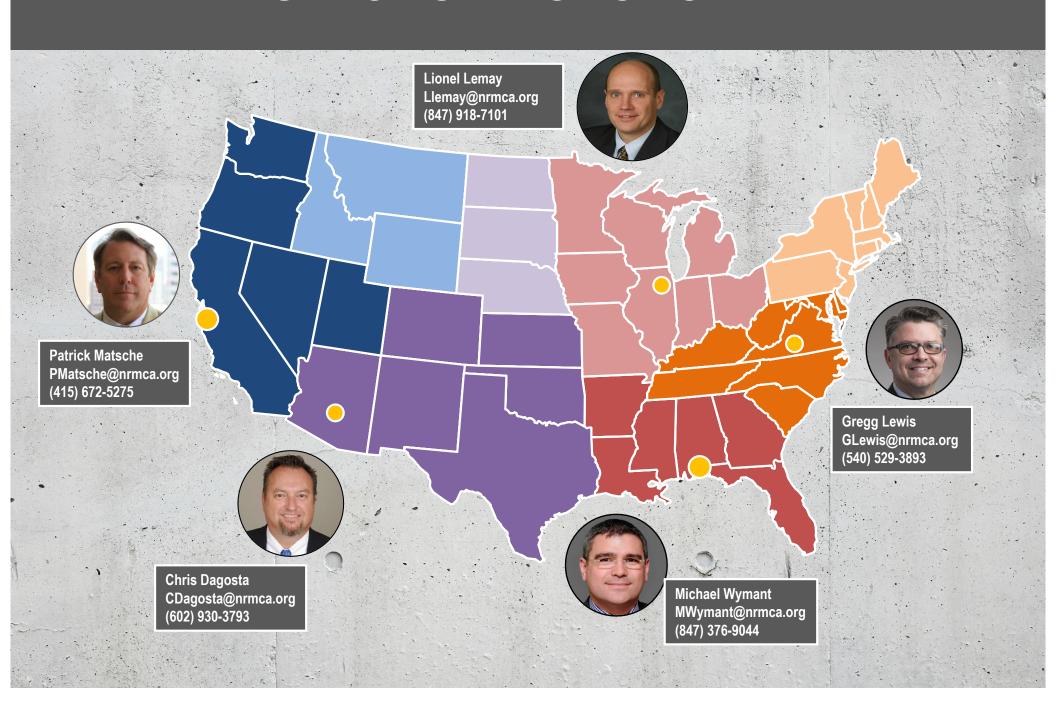


# **Social Media**

- Continues to be very active on the social media platforms:
  - Facebook
  - Twitter
  - YouTube
  - Medium
  - LinkedIn
- Please liké and share the activities on these platforms

BISTIESS. Develonment & Direct Project Promotion Concrete Design Center

# **BWS PROJECT PROMOTION TEAM**



# Concrete Design Center

|  |                         |                       | r                     |                      | 1                    |           |
|--|-------------------------|-----------------------|-----------------------|----------------------|----------------------|-----------|
| Project Where<br>NRMCA<br>Provided<br>Consulting<br>Services |                         |                       |                       |                      |                      |           |
| Consulted<br>Projects  | Consulted<br>Concrete   | Projects<br>Converted | Concrete<br>Converted | Projects<br>Retained | Concrete<br>Retained | % Success |
| 125  | 2836825                 | O 16                  | 60300                 | 15                   | 1611901              | 59%       |
| Projects Where<br>NRMCA<br>Provided Full<br>Design Services  |                         |                       |                       |                      |                      | **        |
| Full Design<br>Projects                                      | Full Design<br>Concrete | Projects<br>Converted | Concrete<br>Converted | Projects<br>Retained | Concrete<br>Retained | % Success |
| 25   | 155301                  | 5                     | 13000                 | 1                    | 2,700                | 10%       |

# Concrete Design Center

# Statistics:

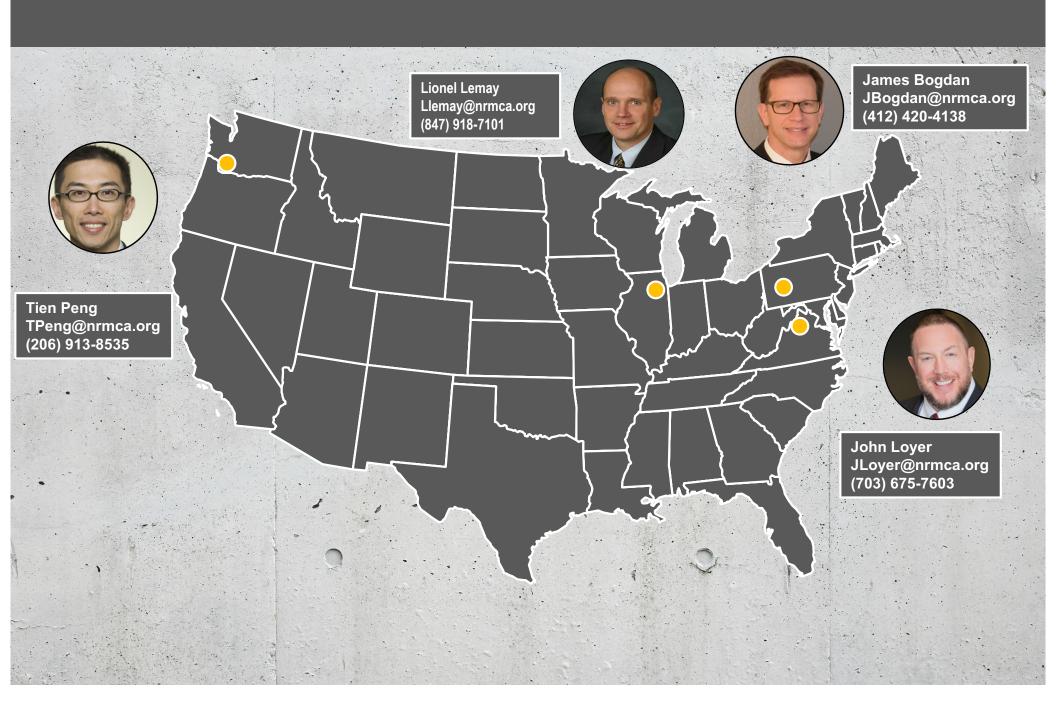
- Where NRMCA provided consulting services:
  - 125 projects consulted; 2.8 million cubic yards
    - Converted to concrete- 16 projects
    - Retained with concrete- 15 projects
- Where NRMCA provided full design services
  - 25 full projects- 155,300 cubic yards
    - Converted to concrete- 5 projects
    - Retained with concrete- 1 project
- Some of these projects are still in process

# Concrete Design Center Projects

- Current projects that are now public:
  - Chesapeake Village video about project now on BWS YouTube Channel
    - ICF project in Stevensville, MD
  - 17 South- ICF project in Charleston, SC
    - Project video and case study coming soon
- As projects allow for release of information to the public, more will become available as videos and case studies

# ADWOGAGY

# **BWS ADVOCACY TEAM**



# **Local and State Advocacy**

- Statistics (past and current):
  - Legislation supported: 32
  - Legislation opposed: 15
- States included in the stats:
  - Georgia, Kentucky, New Jersey, Oklahoma,
     Washington, Oregon, California, Florida,
     Pennsylvania, New York, Maryland, Texas,
     Virginia, Mississippi, Tennessee, Nevada,
     Louisiana, Alabama, Ohio, Massachusetts,
     North Carolina

# **Local & State Advocacy**

- Fire Safety Ordinances:
  - Build With Strength has had successes over the past 2 years, like Sandy Springs, GA, and Maitland, FL
  - Currently, Build With Strength is working on fire safety ordinances and legislation:
    - Maryland, New Jersey
    - Los Angeles
  - Build With Strength is investigating activity in:
    - · Philadelphia, Boston (and Massachusetts), Texas

# CAMPAIGN EUTURE



www.buildwithstrength.com



www.rmc-foundation.org



# RMC FOUNDATION & MIT CSHUB THE SCIENCE AND CREDIBILITY BEHIND



PAVE AHEAD

DURABLE, SUSTAINABLE, CONCRETE.

### **COMMUNICATIONS**

Dr. Jeremy Gregory, executive director of the MIT Concrete Sustainability Hub (CSHub), discusses benefits of building with concrete in a video on the Build with Strength website. MIT researchers have also participated in press events and contributed articles and editorials to support the Build with Strength message.



# READY MIXED CONCRETE, READY FOR A SOLID INVESTMENT.



### RESEARCH

MIT CSHub peer-reviewed research is cited throughout the Build with Strength campaign resources and is being used to advance opportunities in model codes and legislation. It is also being used to debunk the false and misleading claims of the wood industry with science that cannot be refuted.

### **PARTNERSHIPS**

The RMC Foundation is a major cofunder of fire safety research with the National Association of State Fire Marshals (NAFSM). This important research will help in Build with Strength codes efforts to protect life and property. NAFSM has become an important ally in the Build with Strength campaign.



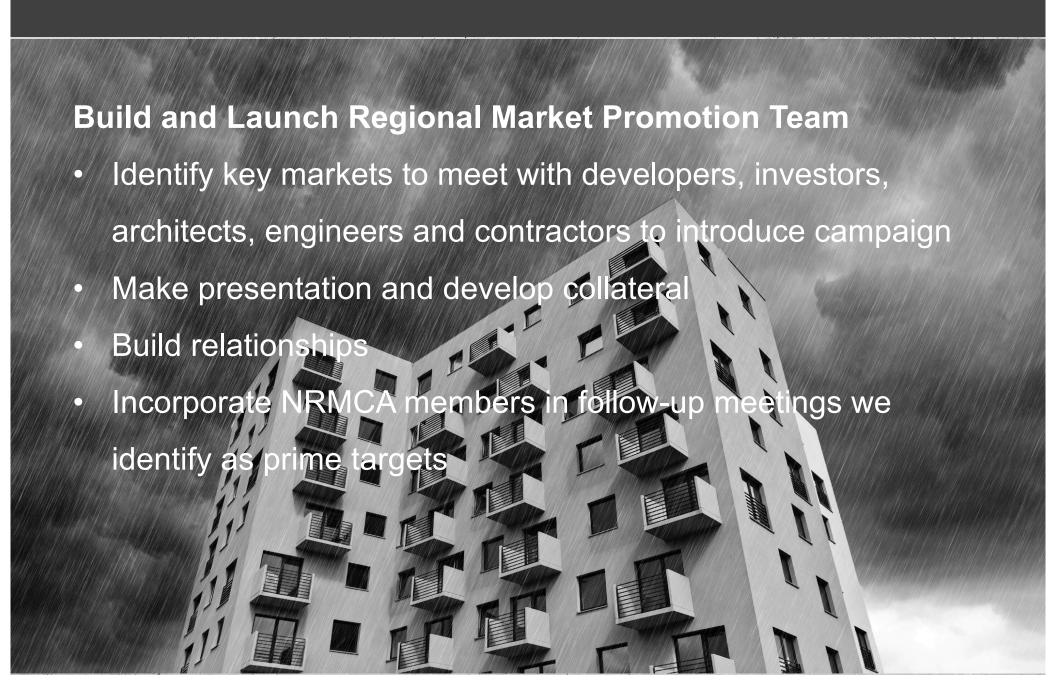
# **SUPPORT LEGISLATIVE ACTION**



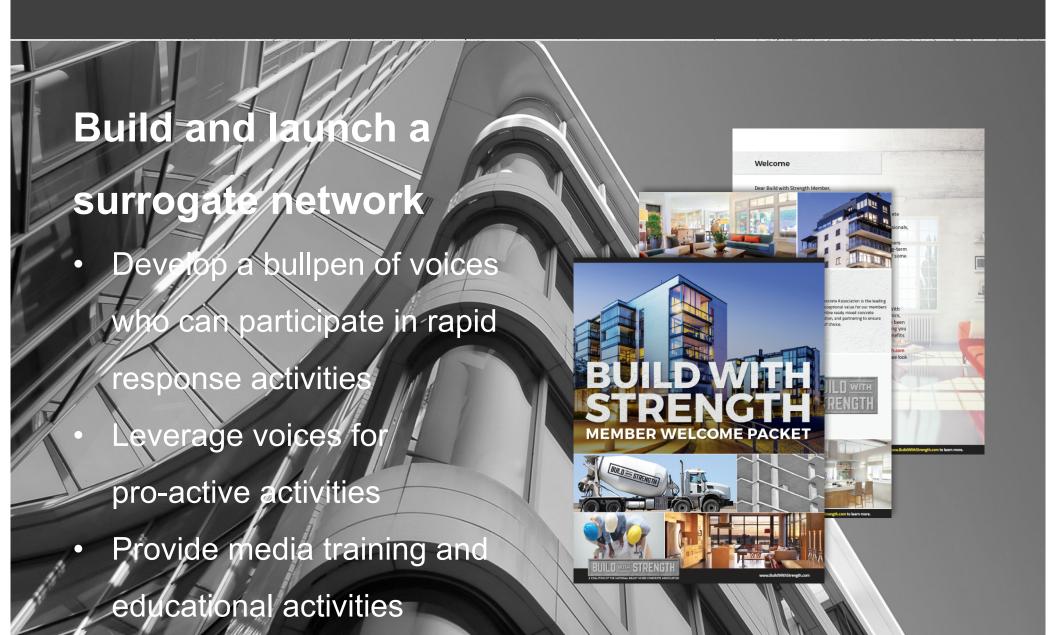
# SUPPORT BUSINESS DEVELOPMENT



# SUPPORT BUSINESS DEVELOPMENT



# **SURROGATE NETWORK**





# **QUESTIONS?**

# Brett D. Ruffing, LEED Green Associate

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