

Introduction to and Case Studies Utilizing **Federal and Governmental Buildings**

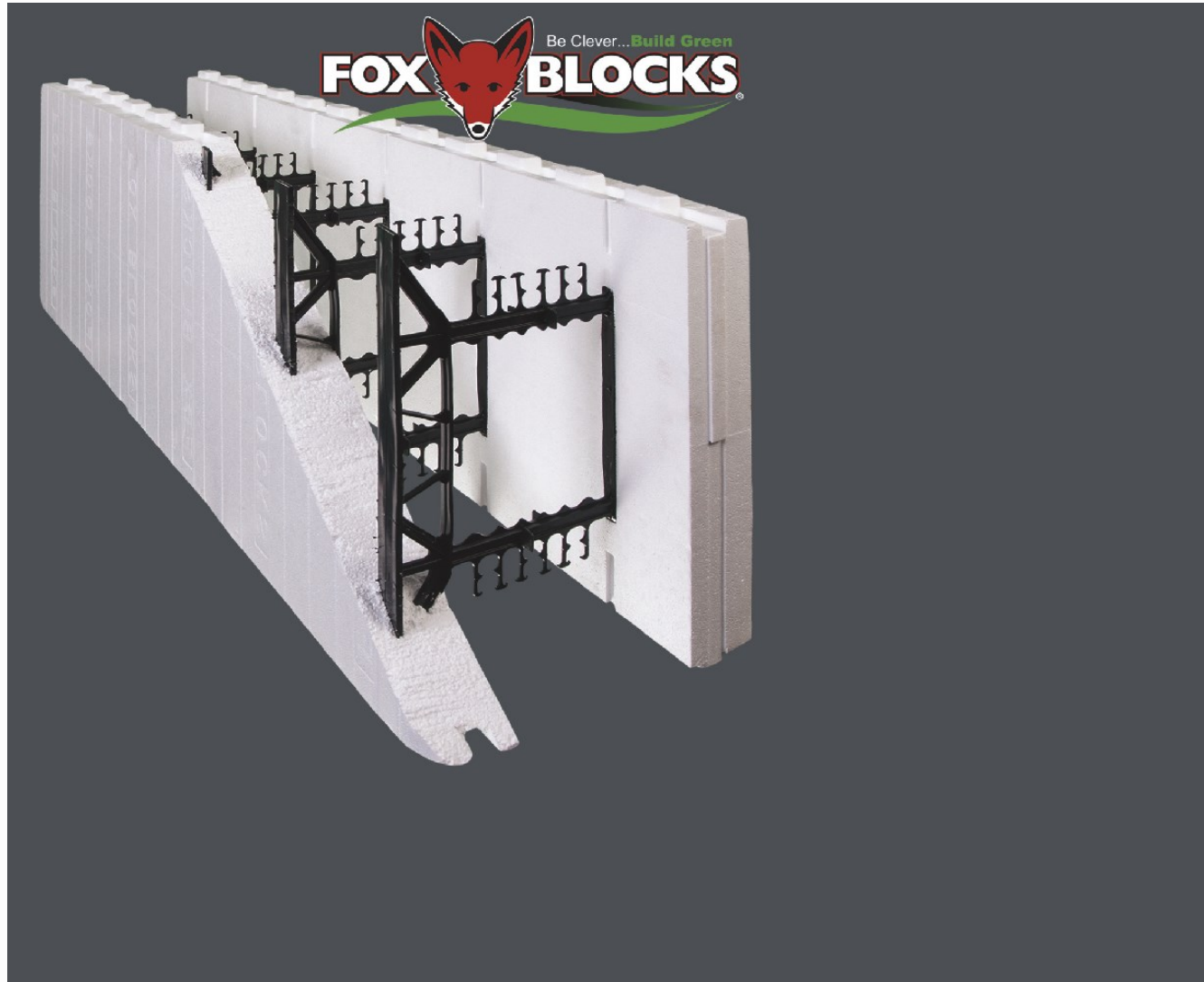
Facilitated by: Mike Kennaw and Brian Medford LEED^{ap}

Presented to: Federal Asset Management Policy Forum

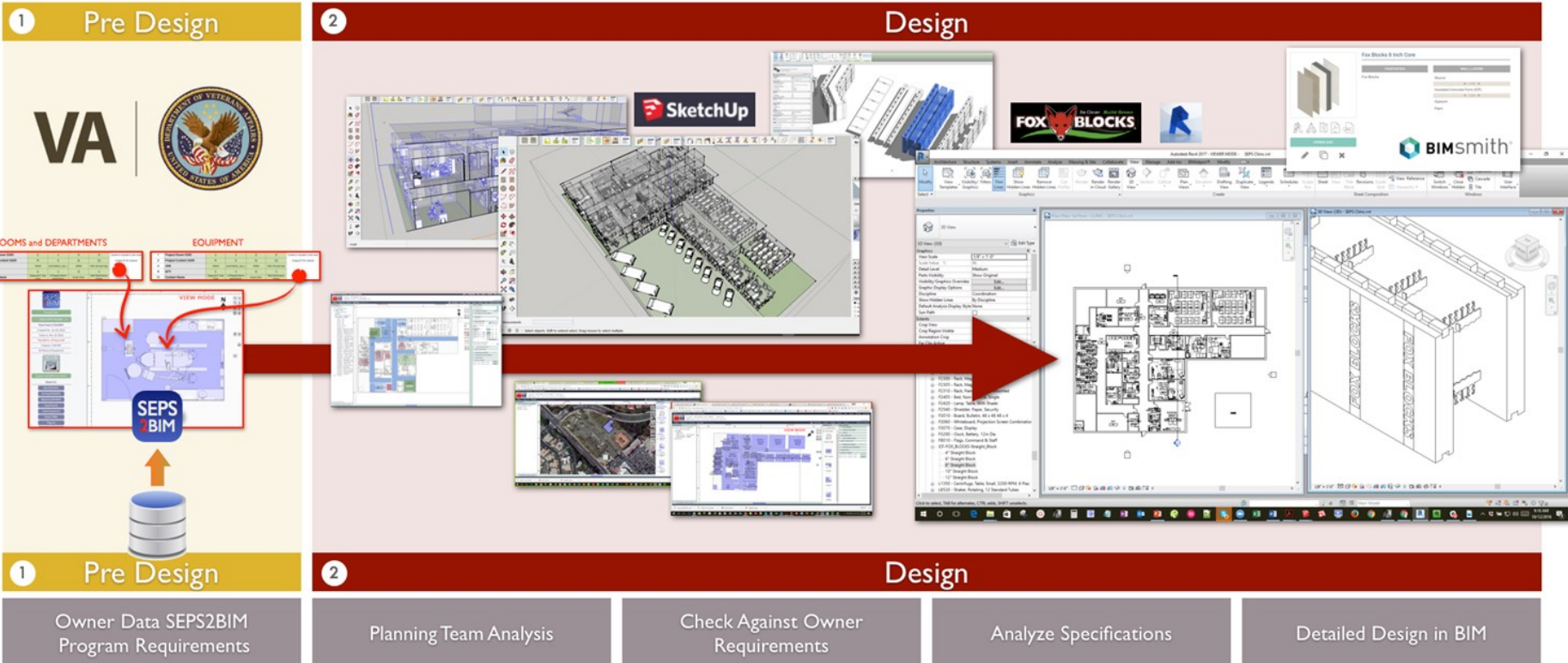
Date: October 17, 2016



Insulated Concrete Forms



Data Resiliency



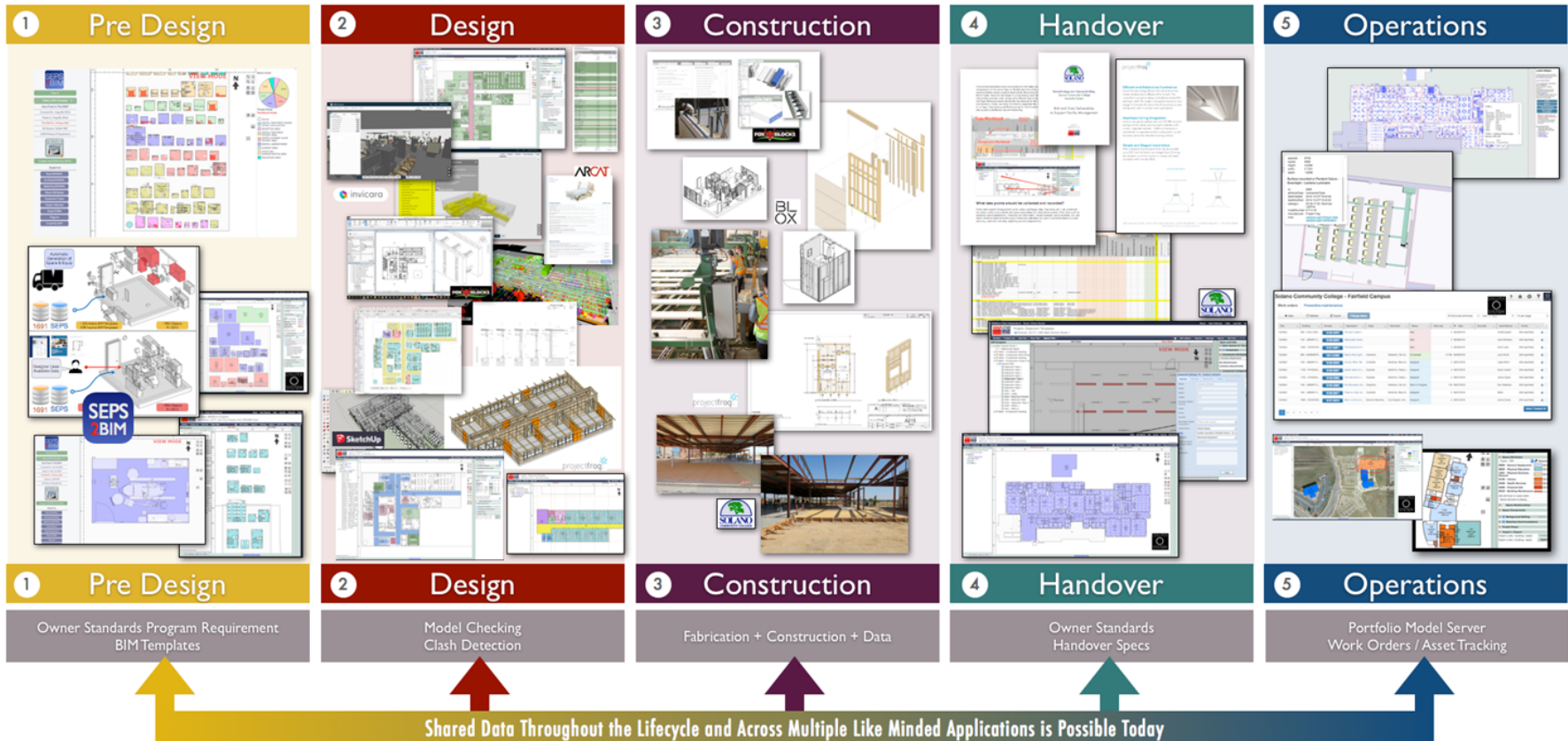
Life Cycle Data Mission Support



This all happened within a few short weeks during:



Join BIMStorm.com for free to become part of this.



Resiliency

Hurricane Katrina





SPEND LESS. GET MORE.



A Sustainable Building Envelope Solution Offering
Faster Construction and Enduring Value



Armed Forces Reserve Center - Pinellas Park, Florida

Air Refueling Wing Headquarters, Fairchild AFB, Spokane, WA
 Diamond Elementary School, Fort Stewart, GA
 Fire Ready Facility, Fort Greely, AK
 Loveland Army Reserve, Fort Collins, CO
 4th ID CAB Consolidated Battalion Headquarters, Fort Carson, CO
 Kingsolver-Pierce Elementary School, Fort Knox, KY
 Burlington Army National Guard Readiness Center, Burlington, KY
 Army Reserve Center, Sloane, NV
 Patrol Annex Hanford Nuclear Reservation, Hanford WA
 Monterey Presidio Dining Facility, Monterey, CA
 Fort Greely Vehicle Inspection Station, Fairbanks, AL
 Army Reserve Center, Fort Bragg, NC
 Ft. Bragg District Superintendents Office, Fort Bragg, NC
 Barracks, Fort Campbell, TN
 Battalion Chief HQ & Barracks, Fort Campbell, TN
 Bachelor Enlisted Quarters, Fort Buchanan, San Juan, PR
 Armed Forces Reserve Center, Fort Buchanan, San Juan, PR
 Air Traffic Control Tower, Fort Carson, TX
 Shopette-Gas-Car Center, Edwards AFB, CA
 Office & Admin Building, Tinker AFB, OK
 Communications Center, Dover AFB, Dover, DE
 Safety Storage Building, Tinker AFB, OK
 Information Sensitive Project, Camp Davis AFB, Kandahar, Afghanistan
 Officer's Quarters Buildings, Elmendorf AFB, AK
 Air National Guard Training Center, Mansfield, OH
 Munitions Building Naval Air Station Joint Reserve, New Orleans, LA
 Plant Offices McAlester Army Ammunitions, McAlester, OK
 Bachelors Enlisted Quarters, Pensacola Naval Air Station, Pensacola, FL
 Marine Corps Air Station (MCAS) Pilot Training & Simulator Center, and Hangar, Beaufort, SC
 Battalion Brigade HQ Building, Fort Campbell, TN
 Sustainment Brigade Offices & Admin Building, Fort Campbell, TN
 Armed Forces Reserve Center, Pinellas Park, FL
 Armed Forces Reserve Center, Mayaguez, PR



*Air Refueling Wing Headquarters
 Fairchild AFB, Spokane, WA*



*"We selected ICFs for wall
 construction because it presented
 an extremely effective method
 of achieving the reinforcing
 requirements for exterior walls.*

*ICFs presented a reduction in
 labor costs for construction, as well
 as offering advantages of superior
 energy efficiency & sound control."*

WILLIAM H.S. MURRAY, AIA
 URS CORPORATION

DoD: USACE & NAVFAC



Division 3 Concrete Section 03 11 19.00 10 Insulating Concrete Forming



**US Army Corps
of Engineers®**



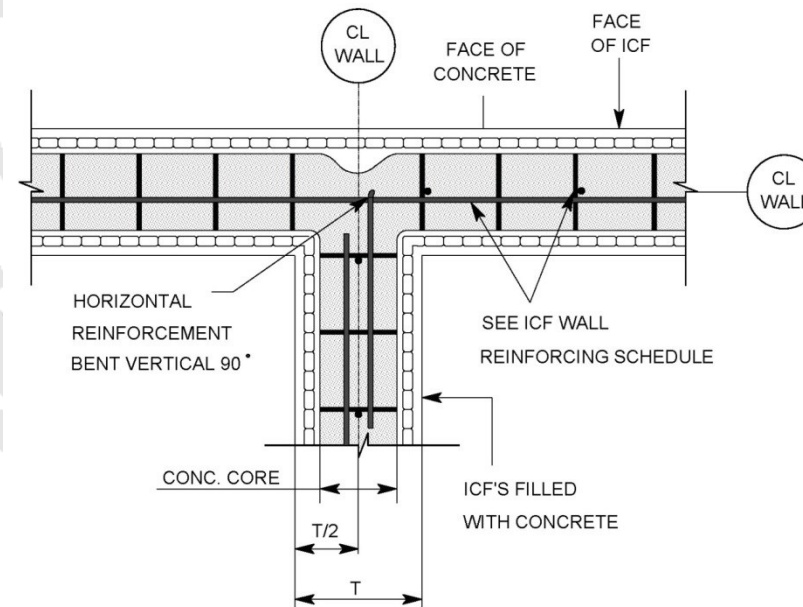
**MCAS P444 Training &
Simulator Facility: Fox Blocks
Detail from sheet S-303**



**BARKLEY ELEMENTARY SCHOOL
FORT CAMPBELL, KENTUCKY**

**PROJECT NUMBER: AM 000028
READY TO ADVERTISE**

SOLICITATION NUMBER: W912QR-13-R-0037



TYPICAL INTERSECTION DETAIL

(WT-1) SHOWN (WT-2, 3, 4) SIMILAR

The highly complex design features multiple wall heights, corners, embeds, and cantilevered "pop-outs."



LIGHT COMMERCIAL

WINNER

FIRE STATION 108

Project Statistics

Location: Las Vegas, Nev.

Type: Municipal Fire Station

Size: 7,640 sq. ft. (floor)

ICF Use: 9,700 sq. ft.

Cost: \$4.9 million

Total Construction: 10 months

ICF Installation time: 23 days

ICF Market - DoD



Unified Facilities Guide Specifications (**UFGS**) provides all branches of military and Federal Government clear guidelines for construction specifications.

Division 3 Concrete Section 03 11 19.00 10 Insulating Concrete Forming.



ICF Testing & Code Approvals



Look for the
Miami-Dade County
Approval Seal



National Fire Protection Association
The authority on fire, electrical, and building safety



DoD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS

Force Protection Equipment
Demonstration

Quantico Marine Corps Base

Blast Test Site



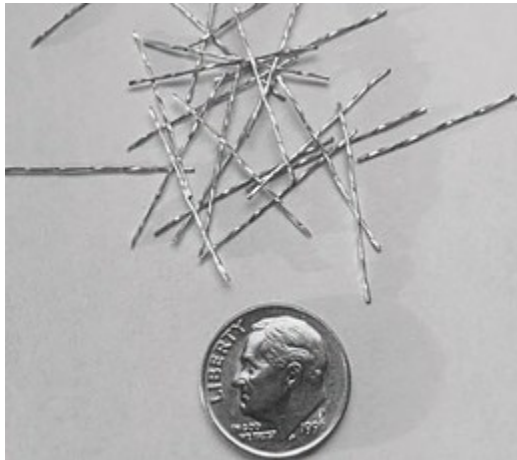
Blast Test Results

Assesment:

EPS foam was the major contributor to the blast mitigation.
No visible cracking of the concrete.



Helix Micro Rebar

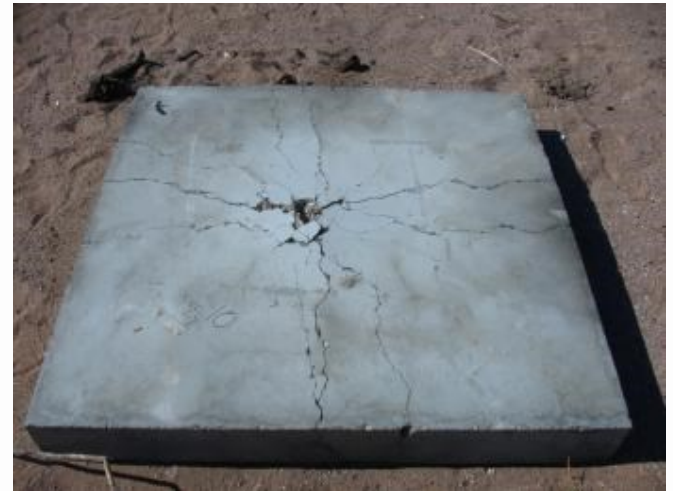


- Blast and seismic resistant concrete
- 3rd party approved primary reinforcement; UES 0279
- Decreases or eliminates rebar and mesh injuries
- Decreases or eliminates placement issues
- Almost always provides significant cost savings when used to replace traditional reinforcement
- Accelerates construction schedules
- Protects public investment by dramatically improving the durability of the concrete structure

Helix for Blast Resistance



Rebar Only



With Helix & 50% Less Rebar

Resilient Buildings



Tornado Resiliency

Concrete Home Survives Tornado



Fire Resiliency

Some ICF's have UL listings *up to* a 4 hour fire rating (FRR)

Third Party Testing & Performance-Expanded Polystyrene (EPS):

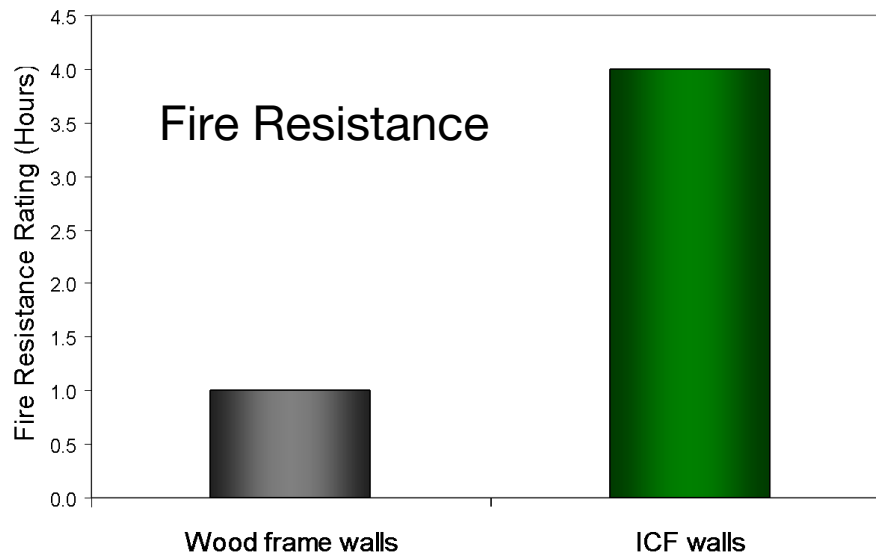
ICF Flame Spread / Smoke Development Index

Flame Spread Index (FSI) is less than 25

Max. per Code is 75

Smoke Development Index (SDI) is less than 450

Max. per Code is 450



Fire Resiliency

Wild Fires
Concrete has
showed resiliency

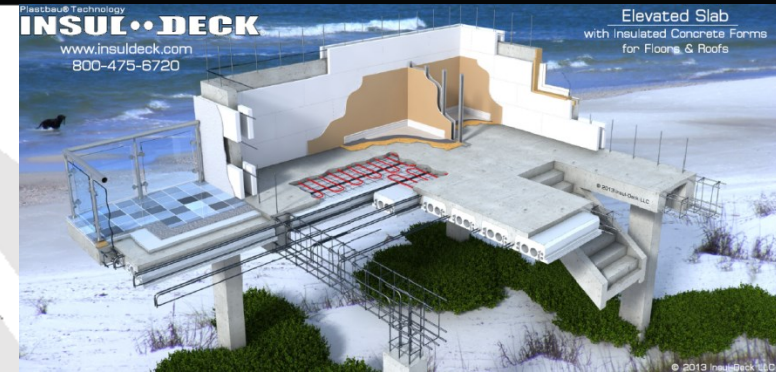


Surge Resiliency

Breezy Point, NY - Concrete Showed Resiliency



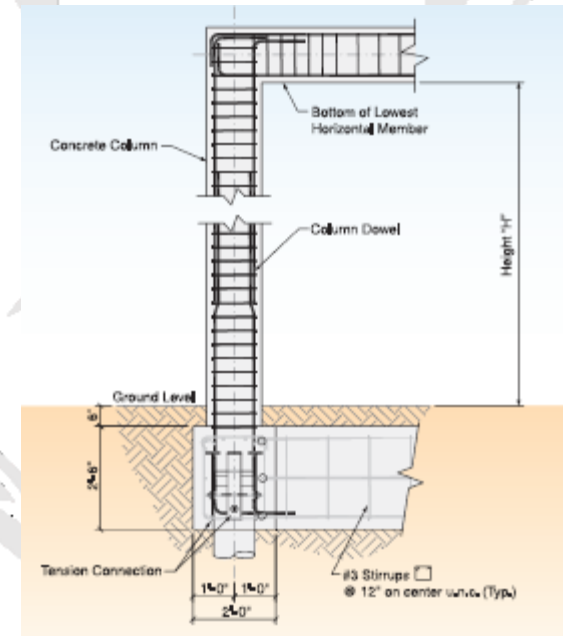
FEMA Recommendations



Recommended Residential Construction for Coastal Areas

Building on Strong and Safe Foundations

FEMA P-550, Second Edition/December 2009



Thank You!

For more information visit;
www.foxblocks.com