



American Concrete Institute



ACI Resource Centers

Training – Education – Certification

William R. “Rusty” Owings III, AIA



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Do Not Enter Clear



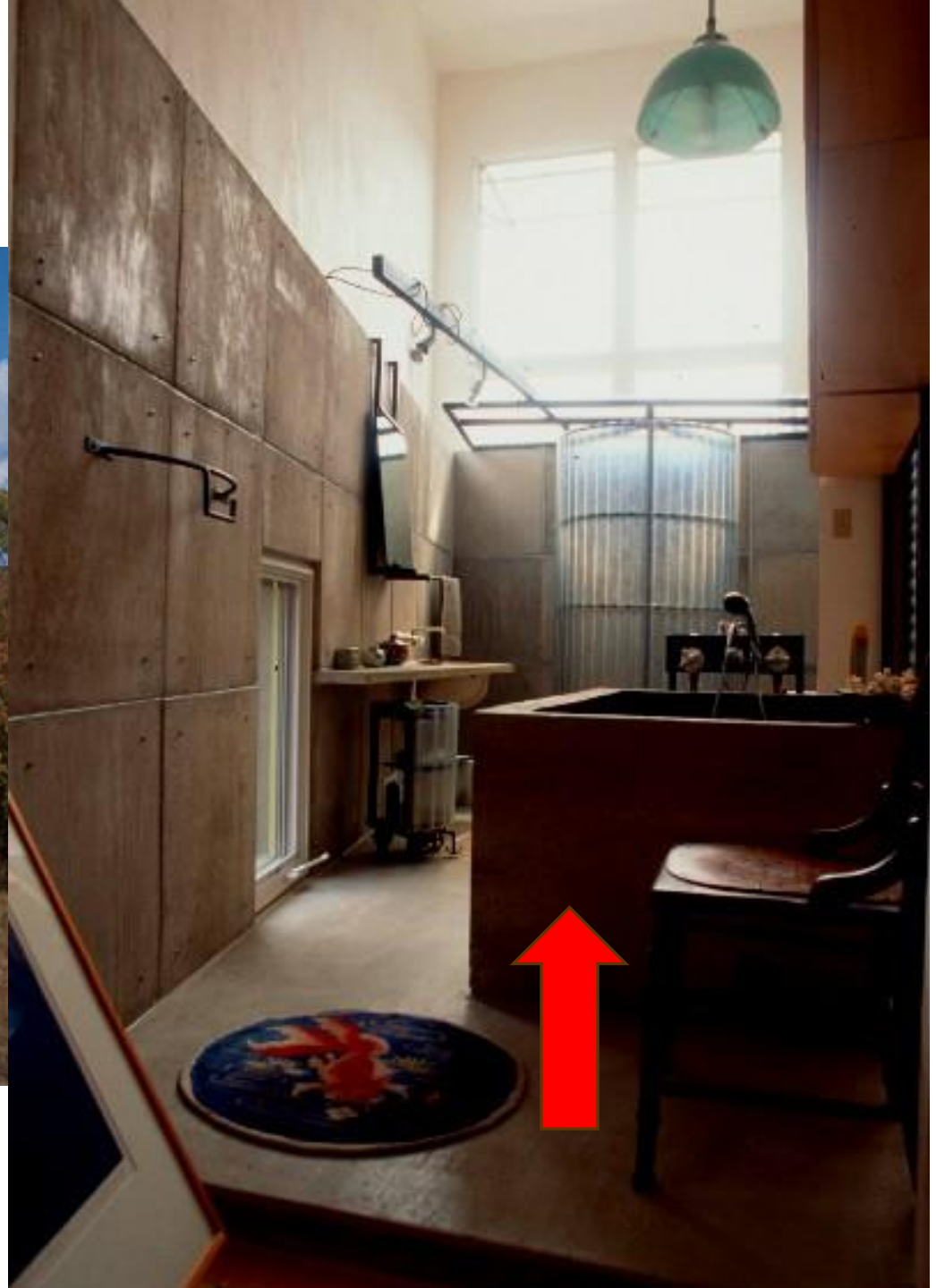




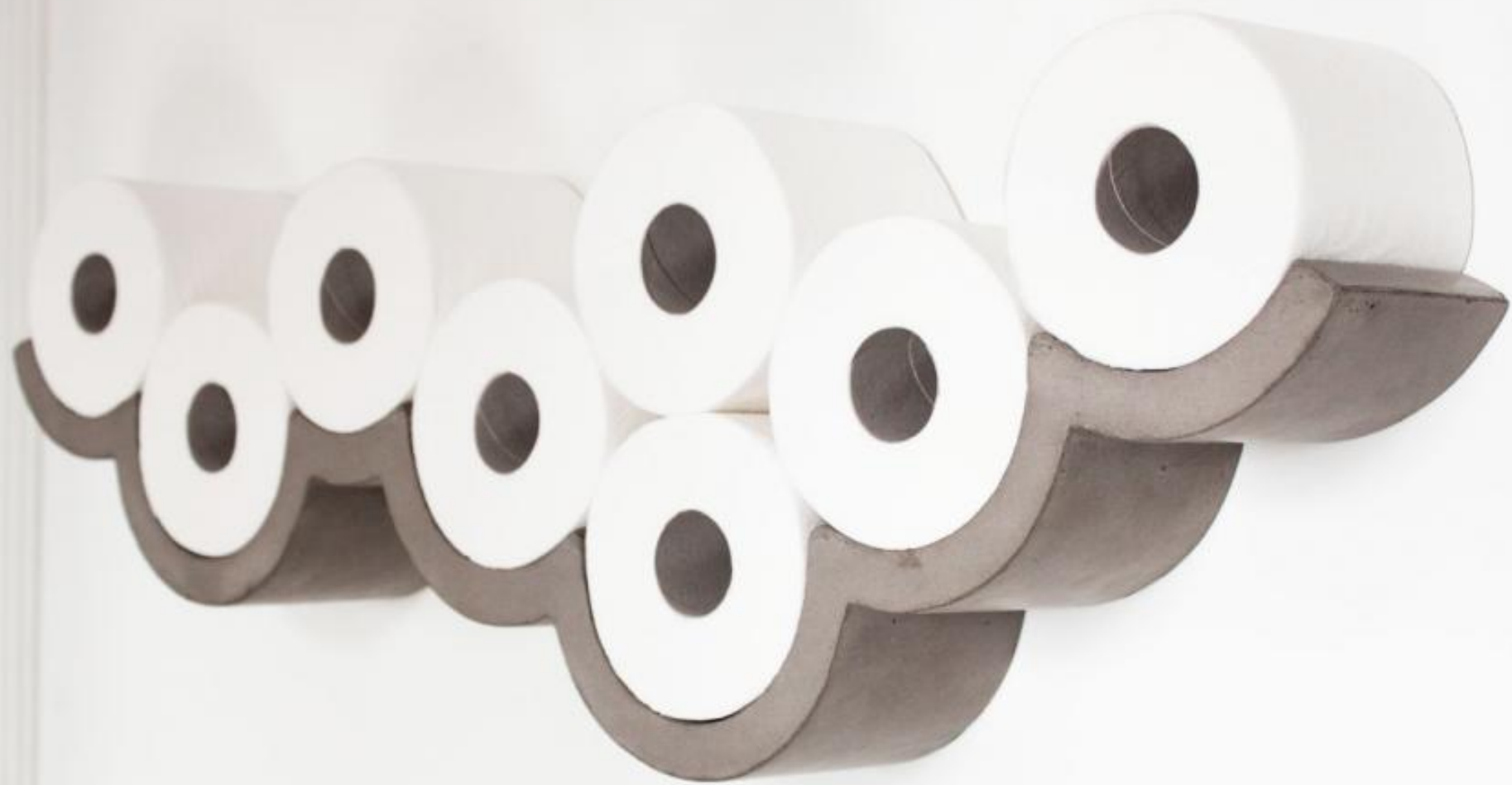












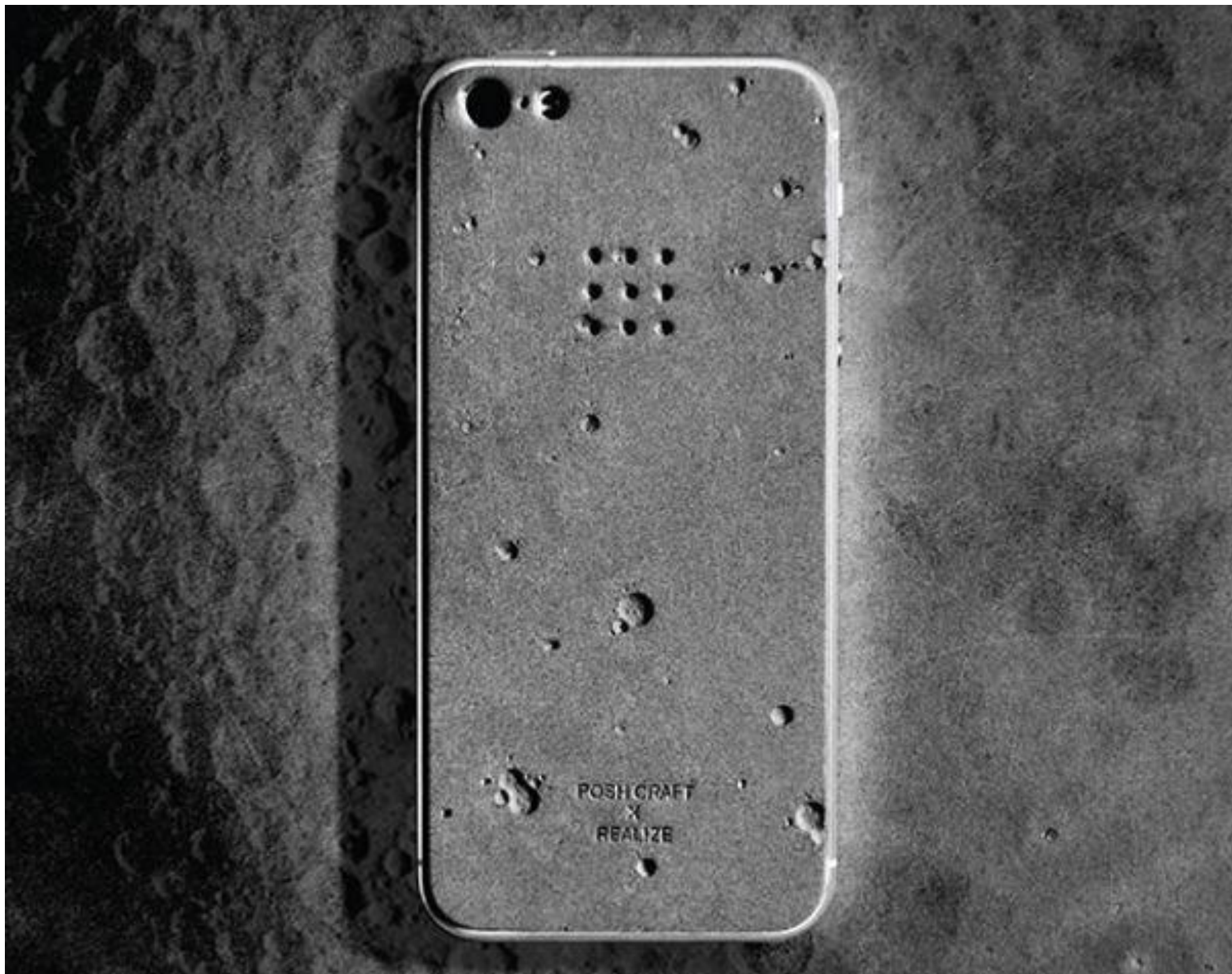
























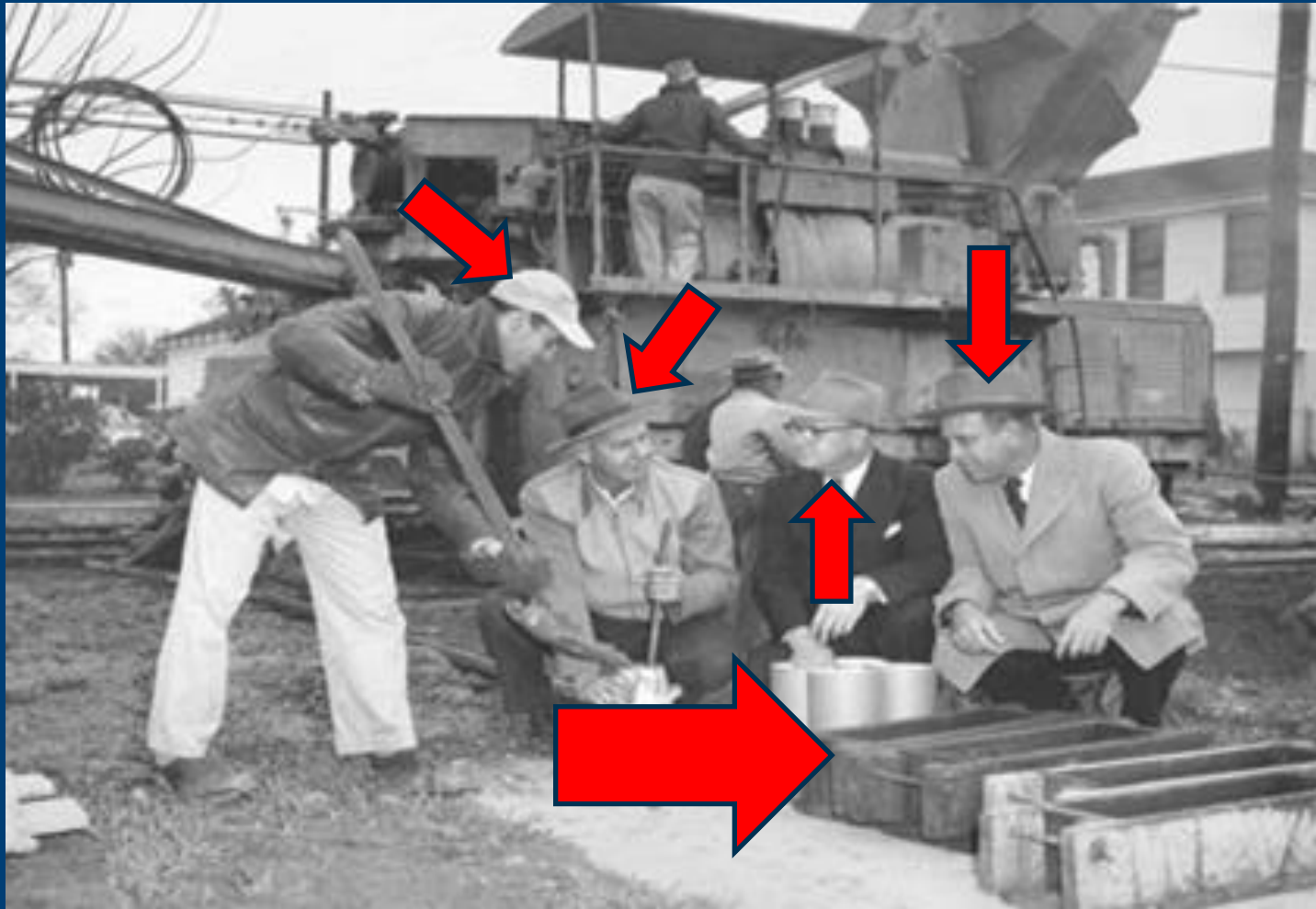












Typical Concrete Testing in the Field following ASTM Standards



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ACI Standards

An ACI Standard

Building Code Requirements
for Structural Concrete
(ACI 318-19)

Commentary on
Building Code Requirements
for Structural Concrete
(ACI 318R-19)

Reported by ACI Committee 318

ACI 318-19



- ACI 319-19 :
**Building Code
Requirements
for Structural
Concrete**



- ACI 301-20 :
**Specifications
for Concrete
Construction**



IN-LEB International Edition

An ACI Standard

Specifications for Concrete
Construction (ACI 301-20)

Reported by ACI Committee 301

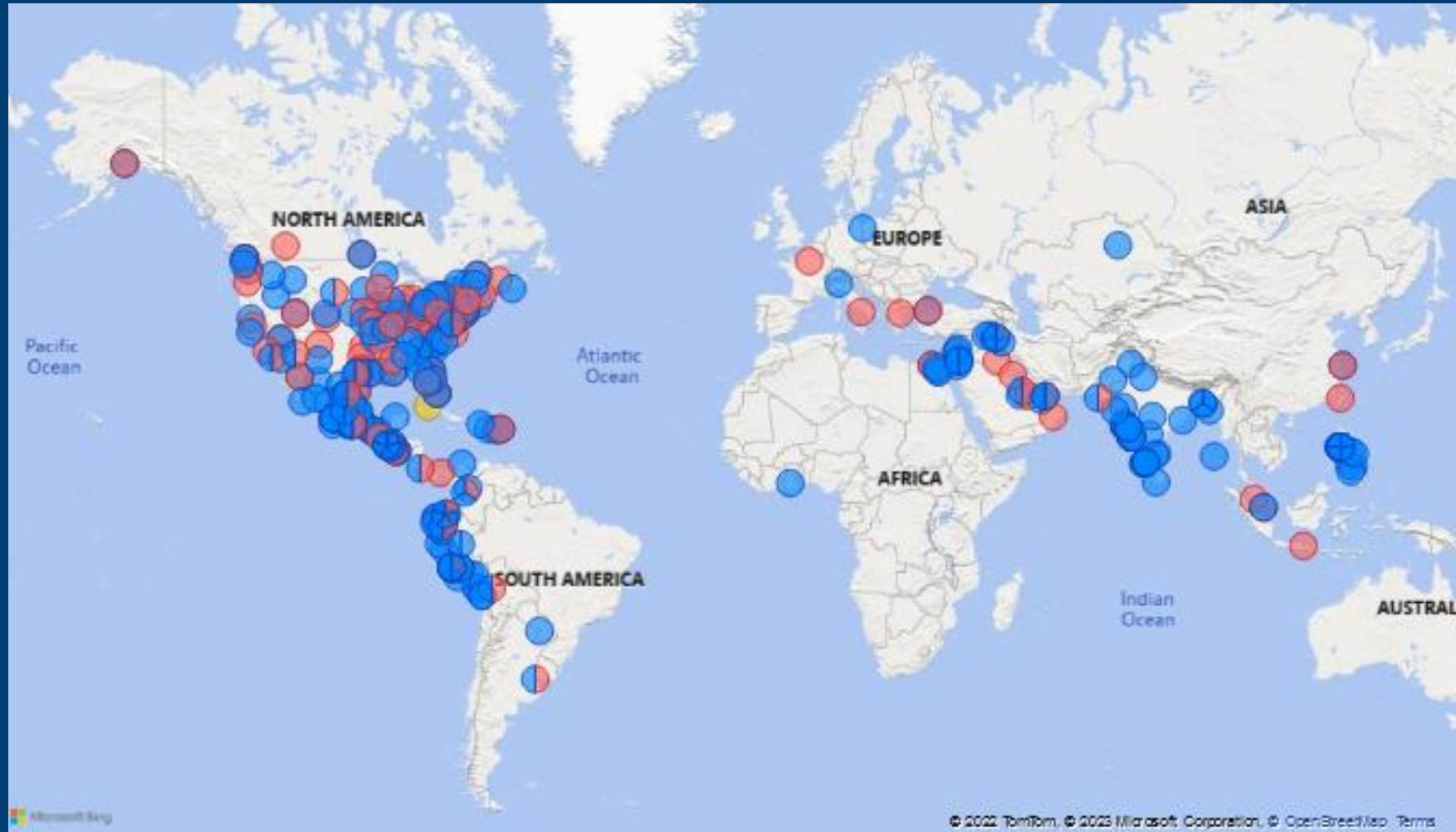
ACI 301-20



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The American Concrete Institute spans across the globe



Over 130
Chapters
and
Sponsoring
Groups



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ACI Certification – History

- **February 1983** – First Concrete Field Testing Grade 1 session conducted
- **February 1993** – Exceeded 50,000 participants
- **March 2001** – First International Certification established
- **December 2003** – Exceeded 200,000 participants
- **October 2004** – ACI Certification Award established
- **December 2014** – Exceeded 500,000 participants
- **October 2019** – ACI Board approves 3 ACI Resource Centers
- **February 2023** – 3 ACI Resource Center operational



ACI Resource Centers

ACI Certification Programs are expanding to meet the needs of the construction industry...

Significant *growth over the last 10 years....*

- ✓ Increase in the number of Programs
- ✓ Increase in the number of Certifications



ACI Resource Centers

www.concrete.org

30 programs in 3 areas:

Testing Programs

Inspection Programs

Construction/Specialist Programs

Why ACI Certification

Verify a Certification

Certification Programs

Testing Locations

Upcoming Instruction & Testing

Certification FAQs

Sponsoring Group Resources

Americans with Disabilities Act (ADA) Info

Certification Programs

Testing Programs

Assess the knowledge and ability to perform, record, and report the results of concrete field/laboratory tests

- AGGREGATE TESTING
- CEMENT TESTING
- FIELD CONCRETE TESTING
- LABORATORY CONCRETE TESTING
- MASONRY TESTING

Inspection Programs

Assess the knowledge to inspect various concrete installation and construction practices.

- CONCRETE ANCHOR INSTALLATION INSPECTION
- CONCRETE CONSTRUCTION INSPECTION
- NONDESTRUCTIVE TESTING
- SHOTCRETE INSPECTION

Construction / Specialist Programs

Assess the knowledge of concrete construction practices in various specialty applications.

- ADHESIVE ANCHOR INSTALLATION
- CONCRETE FLATWORK FINISHING
- CONCRETE FOUNDATION
- CONCRETE QUALITY MANAGEMENT
- SHOTCRETE CONSTRUCTION



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ACI Certification Program Growth

- **9 new** programs over 8 years (2010-2018)
- **3 new** programs introduced in 2019
- **30** Certification Programs offered in 2020
- **67%** increase in Program offerings



ACI Certification Program Growth

- Adhesive Anchor Installer (2011)
- Masonry Field Testing Technician (2014)
- Masonry Laboratory Testing Technician (2014)
- Concrete Quality Technical Manager (2016)
- Adhesive Anchor Installation Inspector (2017)
- Cement Physical Tester Technician (2017)
- Self-Consolidating Concrete Testing Technician (2018)
- Decorative Concrete Flatwork Finisher (2018)
- EN Concrete Field-Testing Technician (2018)



ACI Certification Program Growth

Programs available in 2019

- Post-Installed Concrete Anchor Installation Inspector
- Shotcrete Inspector
- Concrete Flatwork Finisher (*Updated*)

Programs available in 2020

- Non-Destructive Testing Specialist I

Programs available in the near future

- Concrete Construction Sustainability Assessor



ACI Certification Program Growth

International Certification -

- **EN Standards Concrete Field-Testing Technician**
- EN Standards Concrete Strength Testing Technician
- IS Standards Concrete Field-Testing Technician
- **IRAM Standards Concrete Field-Testing Technician**
- ICCG Cement Physical Tester



ACI Certification continues to grow...

- **37,800** exams processed in 2018
- **Record 39,400 in 2019**
- Annual exams processed increased **66%** over 10 yrs.
- In 2019 **135,000+** Active Certifications
- Industry Leader, Strong and Respected Brand

2023 – Celebrating 40 Years of ACI Certification Programs!

Support for our growing industry = Resource Centers!!!



What is an ACI Resource Center?



RESOURCE CENTER

Education – Training – Certification

ACI Regional Resource Centers

- Provide Instant Access to All **30** ACI Certification Programs & Training Programs
- Customer Focused / Always Available
- Quick Turnaround
- Strategic Locations across the US near interstates or with reasonable transportation costs serviced by multiple airlines and hotels



ACI Regional Resource Centers

- Promote Education by coordinating seminars and forums with ACI University and Industry Partners 
- Host Regional ACI Certification Summits and ACI Chapter Roundtables and New Program Orientations
- Support local ACI Chapters and Sponsoring groups (SG's)





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ACI Regional Resource Centers

- Provide a physical **location** and **resources** for Training programs
- **Train/Qualify new Examiners** for new and existing programs
- Produce training videos/images for ACI marketing efforts & publications



TRAINING -

Introduction to Aggregate Testing

ACI Training Seminars



ONE DAY PROGRAM FOR UP TO 10 PARTICIPANTS

This training program includes a classroom review and hands on demonstration of procedures, test methods, and equipment required to be able to properly perform various aggregate tests used in the field of concrete. The instructors will provide methodology and understanding of each test.

Program Content:

Testing

Why do we test? What can we test? When do we test? How do we test?

Fundamentals of Aggregate Testing

Classroom and Laboratory hands-on training; Best practices and tips; How to interpret the results and identify common errors

Use, Maintenance, and Calibration of Equipment

How to properly use equipment; How to maintain and routinely calibrate equipment

ASTM Standards

These test methods will be included in the classroom and hands-on laboratory training:

- AASHTO T2/ASTM D75 – Sampling of Aggregates
- AASHTO R76/ASTM C702 – Reducing Samples
- AASHTO T11/ASTM C117 – Materials Finer than 75-um
- AASHTO T27/ASTM C136 – Sieve Analysis
- AASHTO T85/ASTM C127 – Absorption (Coarse aggregate)
- AASHTO T84/ASTM C128 – Absorption (Fine Aggregate)
- AASHTO T255/ASTM C566 – Moisture Content
- AASHTO T 21/ASTM C40 – Organic Impurities

These additional standards and specifications will be discussed:

- ASTM C33 – Standard Specification for Concrete Aggregates
- ASTM C88 – Soundness of Aggregates
- ASTM C131 – LA Abrasion

Who should attend: Staff from Testing Aggregate Quarries/Mining/Dredging & Mix Concrete Batch facilities, Pre-Cast who routinely conduct aggregate testing laboratory staff, project managers, Dept Transportation inspectors, or anyone interested in properly test aggregates for use in concrete.

Cost

This training program is offered for \$1 the Program binder for best practices and for Aggregate Testing Technician Level

Instructors:

Michael Morrison, Manager, Certification Program Development, has over 35 years of experience in cement and concrete industry.

Rusty Owings, Resource Center Manager, has over 20 years of experience in the design and construction industry.

This is a training session ONLY and ACI certification is NOT part of this program.



www.concrete.org/socialresourcecenter.aspx

Physical Tester – Basics of Cement Testing Training

ACI Training Seminars



2-DAY PROGRAM FOR UP TO 10 PARTICIPANTS

This training program provides a classroom review and hands on demonstration of procedures, test methods, and equipment to be able to properly perform multiple physical tests. Focus will be on methodology and understanding the results of each test.

Cost - This training program is offered for \$299 and includes Program binder for best practices and Study guide for Physical Tester.

Who should attend: Laboratory staff who tests cement and cementitious materials, including new laboratory staff, QA/QC supervisors/managers, lab supervisors, project managers, or anyone interested in the basics of testing cementitious materials.

Program Content:

Testing

Why do we test? What can we test? When do we test? How do we test?

Fundamentals of Cement Testing

Classroom and Laboratory hands on training; Best practices and tips; How to interpret the results and identify common errors

Use, Maintenance, and Calibration of Equipment

How to properly use equipment; How to maintain and routinely calibrate equipment

ASTM Standards

These test methods will be included in the classroom and the hands-on training in the laboratory:

- ASTM C109 – Compressive Strength of Mortar
- ASTM C151 – Autoclave Expansion
- ASTM C187 – Normal Consistency of Cement
- ASTM C191 and ASTM C266 – Time of Set
- ASTM C185 – Air Content of Mortar
- ASTM C1437 – Flow Determination of Mortar
- ASTM C451 – False Set of Paste and ASTM C451 – Mortar
- ASTM C204 – Blaine Fineness
- ASTM C430 – Fineness by the 45-mm (#325) Sieve

This is a training session ONLY and ACI certification is NOT part of this program.



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These additional standards and specifications will be discussed:

- ASTM C150 – Portland cement and
- ASTM C1157 – Hydraulic cement
- ASTM C305 – Mixing of pastes and mortars
- ASTM C778 – Standard sand and ASTM C219 – Ternary
- ASTM C490 – Length Comparator
- ASTM C511 – Temperature & Humidity
- ASTM C395 – Blended hydraulic cements
- ASTM C389 – Slag cement and ASTM C230 – Flow Test
- ASTM C618 – Fly ash and natural pozzolans

Testing for Optional ASTM Requirements

(Open Request - Additional fees and time required)

Sulfate resistance • False set • Drying shrinkage • Moisture expansion (ASR)

Other Cementitious Materials

Blended cement • Fly ash • Slag cement • Silica fume

Instructors:

Michael Morrison, Manager, Certification Program Development, has over 35 years of experience in the concrete industry. He was supervisor of PCA/CI, Ce laboratory for 10 years and has successfully trained 200 cement testers over the last 25 years.

Rusty Owings, Resource Center Manager, has over 20 years of experience in the design and construction industry, working for major cement manufacturer, a worldwide manufacturer and a large regional Ready-Mix operator.

Masonry Laboratory Training

ACI Training Seminars



ONE DAY PROGRAM FOR UP TO 10 PARTICIPANTS

This training program provides a classroom review and hands on demonstration of various procedures, test methods, and equipment required to be able to properly perform multiple tests for masonry materials and specimens in the laboratory. Focus will be on methodology and understanding the results of each test.

Cost - This training program is offered for \$199 and includes Program binder including best practices and Study guide for Masonry Laboratory Testing Technician.

Who should attend: Staff at Testing Laboratories, Masonry Contractors, and Ready Mix Concrete Batch facilities who routinely test masonry materials used for construction, including laboratory staff, QA/QC Supervisors, project managers, Code Enforcement officials, City inspectors, or anyone interested in how to properly test masonry construction in the field.

Program Content:

Testing

Why do we test? What can we test? When do we test? How do we test?

Fundamentals of Masonry Laboratory Testing

Classroom and Laboratory hands-on training; Best practices and tips; How to interpret the results and identify common errors

Use, Maintenance, and Calibration of Equipment

How to properly use equipment; How to maintain and routinely calibrate equipment

ASTM Standards

These test methods will be included in the classroom and the hands-on training in the laboratory:

- ASTM C140 – Sampling and Testing CMU's
- ASTM C1019 – Sampling and Testing Grout
- ASTM C780 Annex A4 – Mortar Aggregate Ratio
- ASTM C780 Annex A6 – Compressive Strength of Mortar
- ASTM C1152 – Capping CMU's

This is a training session ONLY and ACI certification is NOT part of this program.

These specifications will be discussed:

- ASTM C90 Specification for Load Bearing Concrete Masonry Units
- ASTM C270 – Specification for Mortar for Unit Masonry
- ASTM C1314 – Compressive Strength of Masonry Prisms
- ASTM C39 – Compressive Strength of Cylindrical Concrete Specimens
- ASTM C109 – Compressive Strength of Hydraulic Cement Mortars
- ASTM C617 – Capping Cylindrical Concrete Specimens

Instructors:

Michael Morrison, Manager, Certification Program Development, has over 35 years of experience in the cement and concrete industry.

Rusty Owings, Resource Center Manager, has over 20 years of experience in the design and construction industry.



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ACI Regional Resource Centers Support

- Provide a Venue for our Chapters, SG's, and Industry Partners
- Host various Meetings & Special Events
 - ACI Executive Committee meetings
 - Joint industry meetings
 - PCI, ACPA, IRMCA, CRSI, ICRI, CAMRA, PCA, NRMCA...
 - Chapter and Industry partners activities and events
- Regional Student Chapter certifications
- Regional Student Chapter competitions





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Half of the US population lives in just **9 states**

9 most populous states = **161.1 million**

Half US population = **161.5 million**



Where are ACI Resource Centers?

SOURCE: US Census

TECH INSIDER

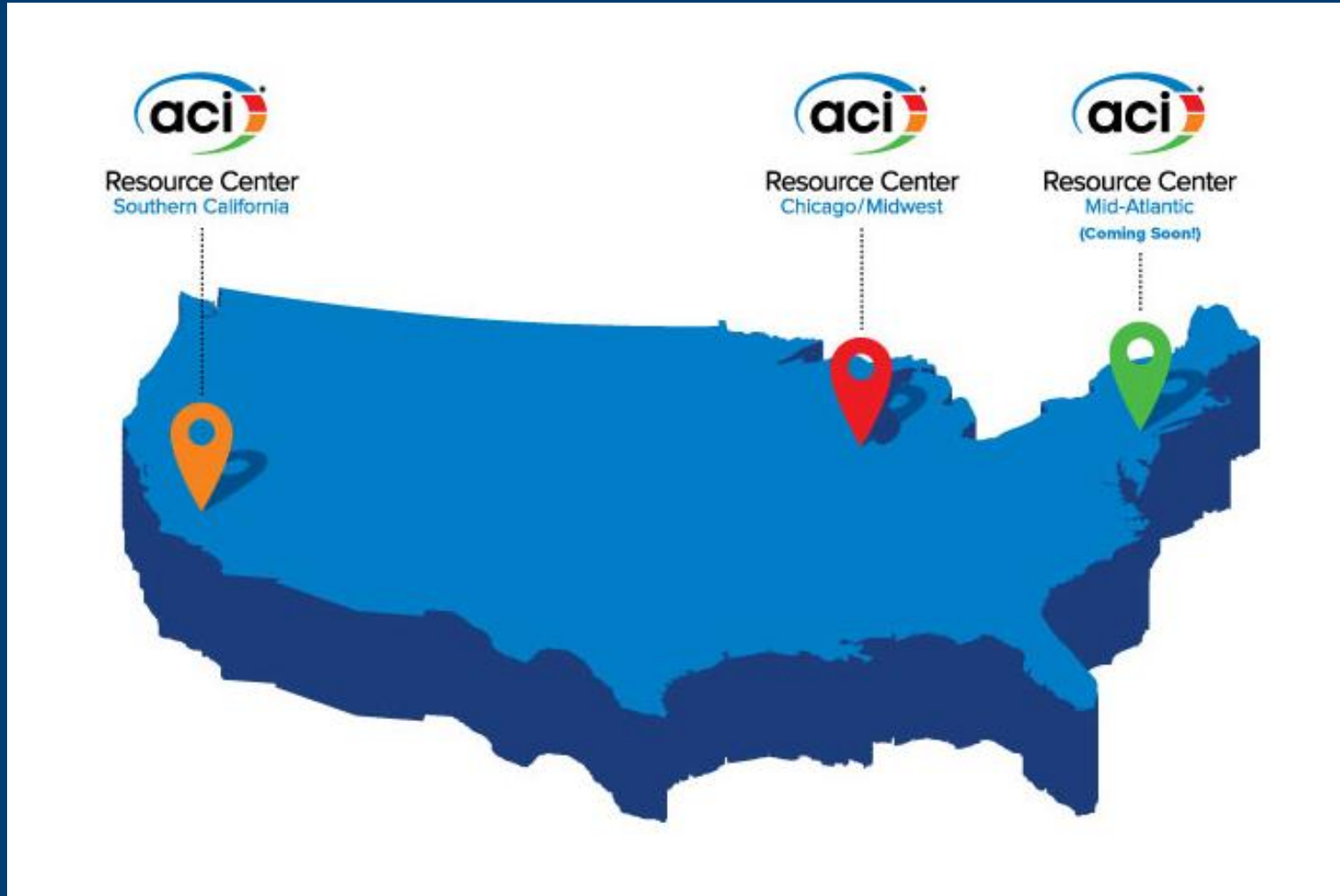
Source:
Business Insider,
Fu and Weller,
June 2016.



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ACI Regional Resource Center Locations



ACI Resource Centers

Resource Center Team

- SoCal – San Bernardino, CA (Los Angeles)
- Midwest – Elk Grove Village, IL (Chicago)
- Mid-Atlantic – Columbia, MD (Baltimore)

Let's take a look at our team!



ACI Regional Resource Center Locations



ACI SoCal Resource Center, San Bernardino, CA

4500 ft²



Classroom setting for 20 attendees with 65-in monitor

Multipurpose room with dual overhead projectors seats up to 40

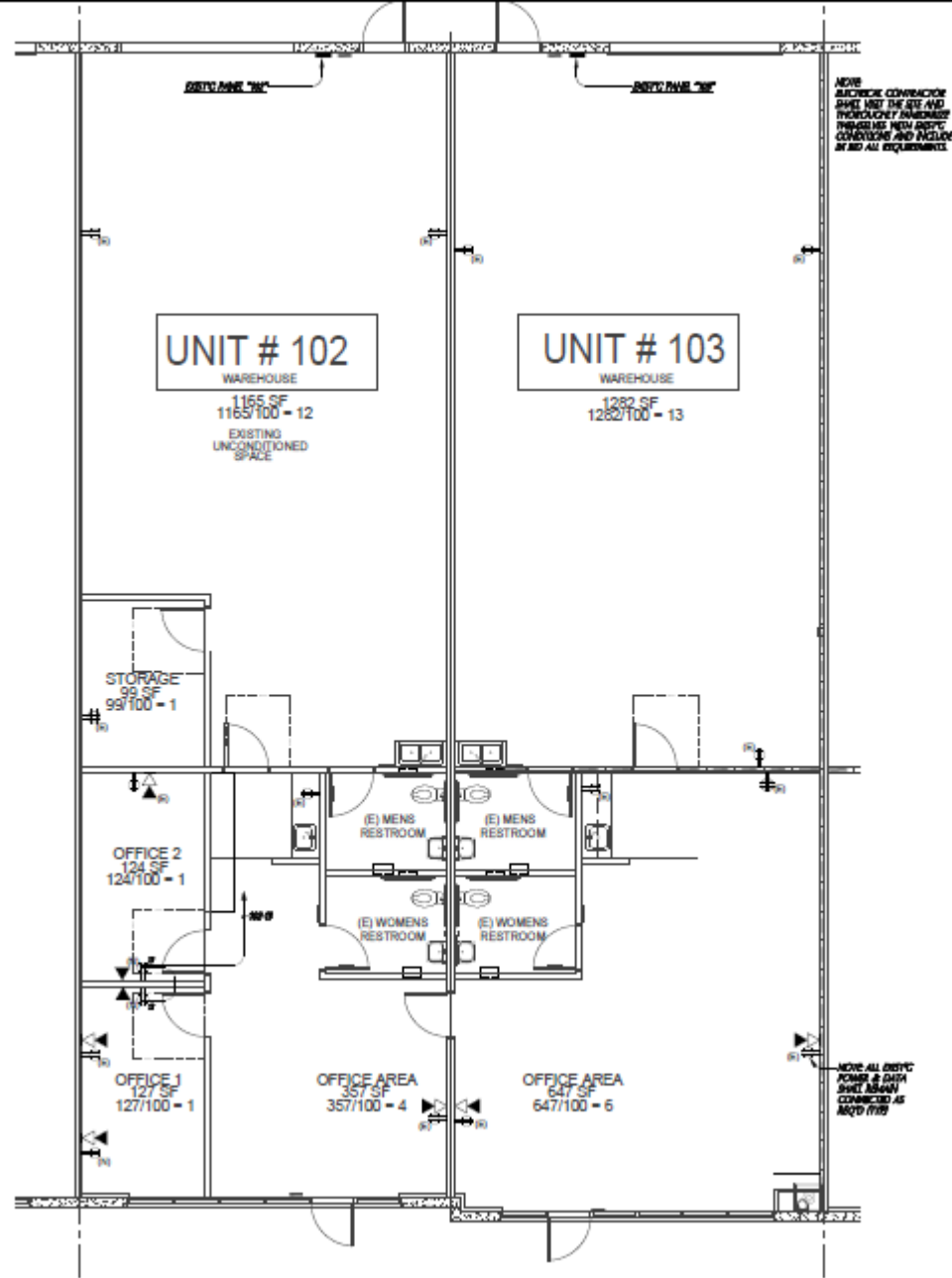
Laboratory area with dedicated stations and concrete mixing area

Located about 15 minutes from Ontario airport, 60 minutes from John Wayne airport, 90 minutes from LAX airport



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ACI SoCal Resource Center Manager

- 15 yrs. of experience in the design & construction industry
- Ready Mix Concrete, Aggregates, Admixtures
- Active with ACI SoCAL Chapter

- ACI Concrete Quality Technical Manager
- ACI Aggregate Testing Technician - Level 1
- ACI Concrete Strength Testing Technician
- ACI Concrete Laboratory Testing Technician - Level 1
- ACI Concrete Field-Testing Technician – Grade 1
- ACI Flatwork Finisher Associate
- ACI Self Consolidating Concrete Technician
- ACI Adhesive Anchor Installer
- American Red Cross 1st Aid and CPR training and certification



Tim King





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Strength Testing

Aggregate Testing
Level I & II

Aggregate/Soils
Base Testing



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Masonry Testing

Cement Testing

Nondestructive
Testing

EXIT





**ACI Southern California Chapter
Board Members with
2021 President Cary Kopczynski**

ACI Regional Resource Center Locations



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ACI Midwest Resource Center, Elk Grove Village, IL

6000 ft²



Classroom/Multi-purpose space that seats up to 70 with 2 overhead projection screens

Laboratory area with dedicated stations and concrete mixing area

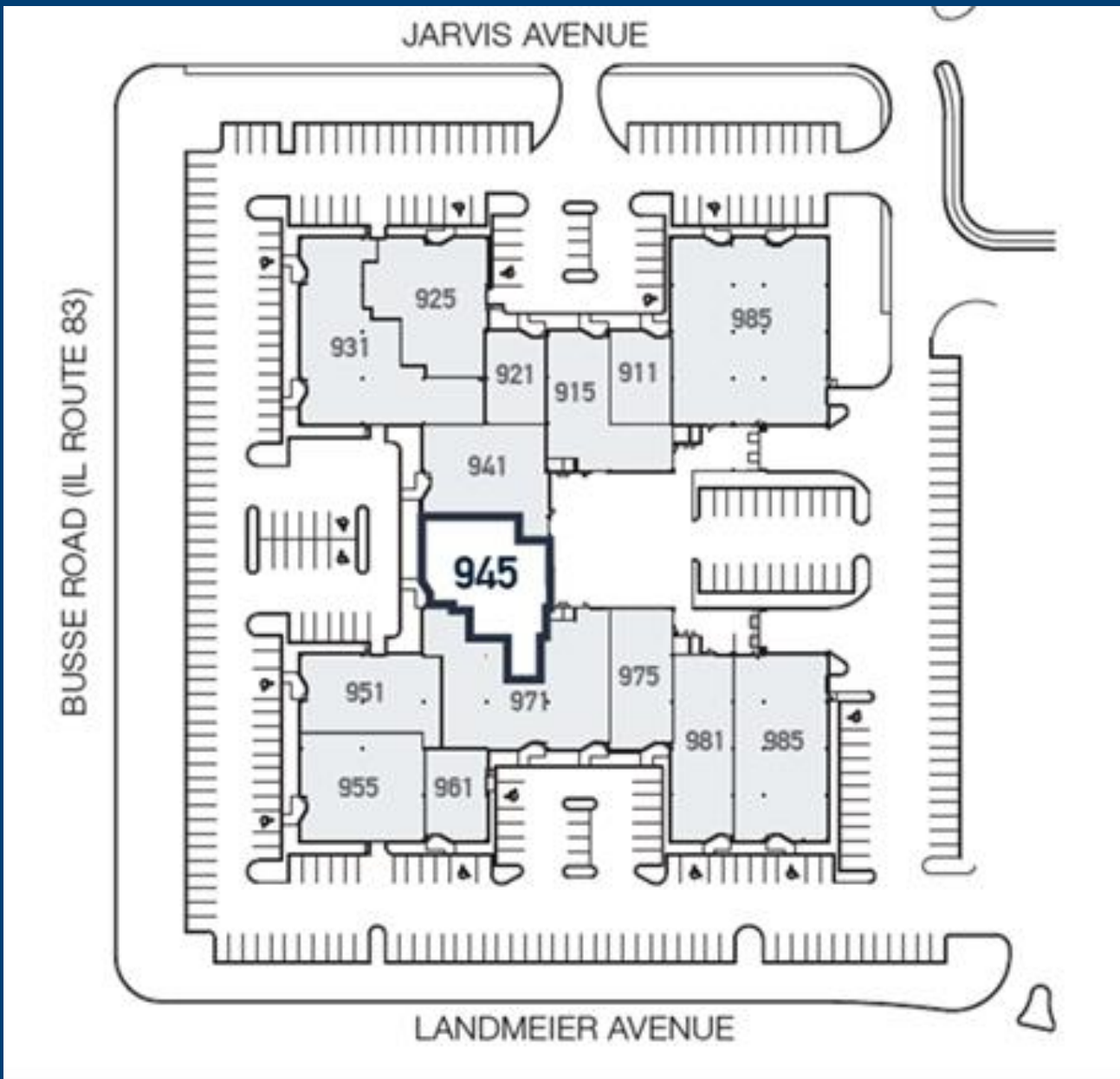
Green Room for video production

Located about 10 minutes from Chicago O'Hare airport



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ACI Midwest Resource Center Manager

- 25+ yrs. of experience in the construction industry
- 15 yrs. laboratory experience
- 8 yrs. Project Manager/Special Inspector
- Numerous Industry Certifications across multiple disciplines
- Active with Local Sponsoring Group in Hawaii
- 5 yrs. as Program leader and Supplemental Examiner



Emily Boirum



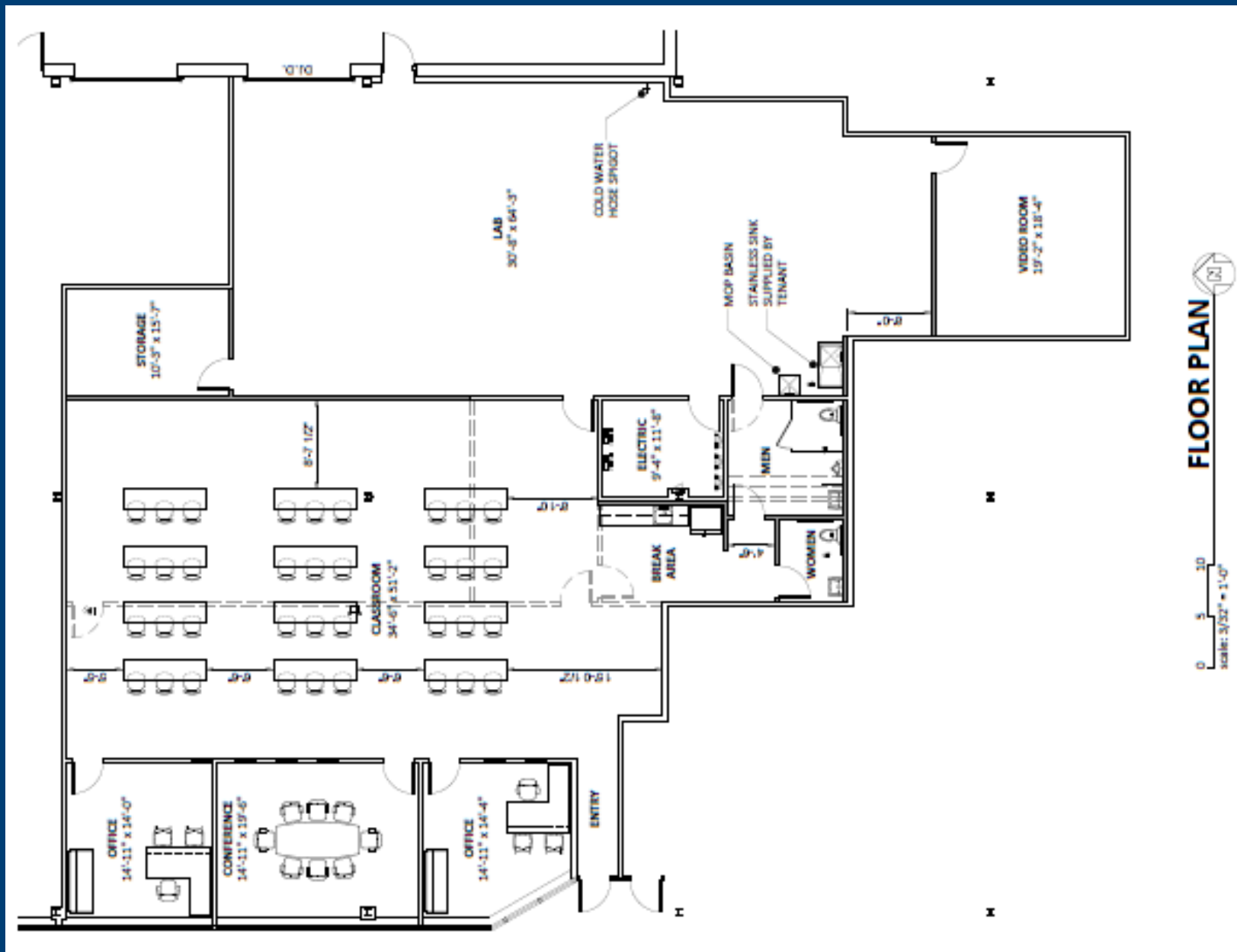
ACI Midwest Resource Center Manager

- CCM Certified Construction Manager
- ICC Reinforced Concrete Special Inspector
- ICC Soils Special Inspector
- ACI Concrete Transportation Inspector
- ACI Aggregate Testing Technician - Level 1
- ACI Aggregate Testing Technician - Level 2
- ACI Aggregate Base Testing Technician
- ACI Concrete Laboratory Testing Technician - Level 1
- ACI Concrete Strength Testing Technician
- ACI Concrete Field Testing Technician
- CISEC Certified Inspector in Sediment and Erosion Controls
- NICET Level 1 in Construction Materials: Asphalt / Concrete / Soils
- American Red Cross 1st Aid and CPR training and certification



Emily Boirum

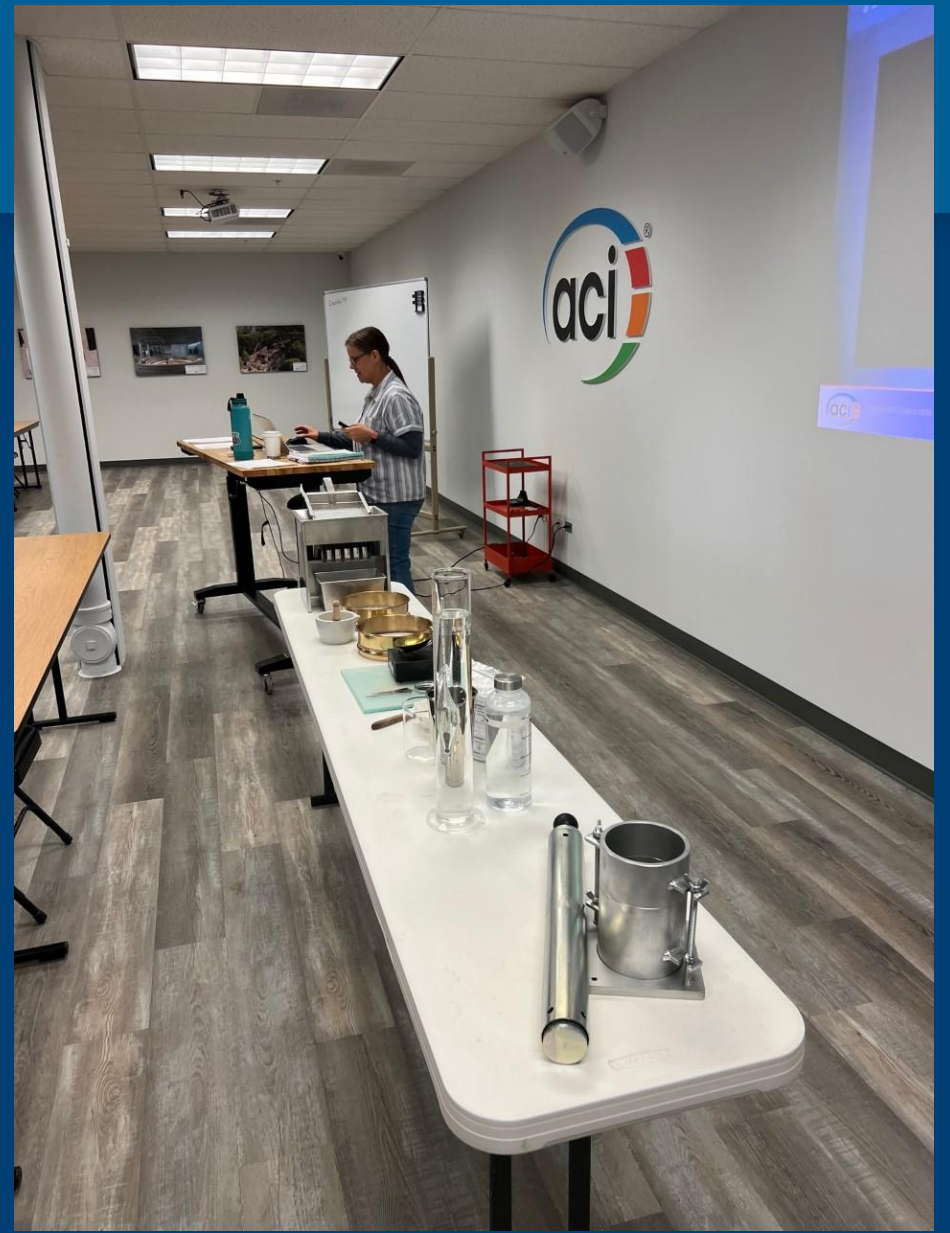






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ACI SG Orientation & Certification Program
NDT Specialist I – Concrete Strength
ACI Midwest Resource Center / September 2022



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ACI Midwest Resource Center – NDT Orientation



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ACI Regional Resource Center Locations



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ACI Resource Centers

Mid-Atlantic Resource Center Manager -

- 10+ yrs. experience construction industry
- CMT Laboratory/Field (Manager)
- Past CCRL Inspector
- Experienced with airfield paving operations for USACE and NAVAC projects
- Numerous Industry Certifications
- Recently Active with ACI Maryland Chapter



Ken Coffey



ACI Resource Centers

10 Certifications

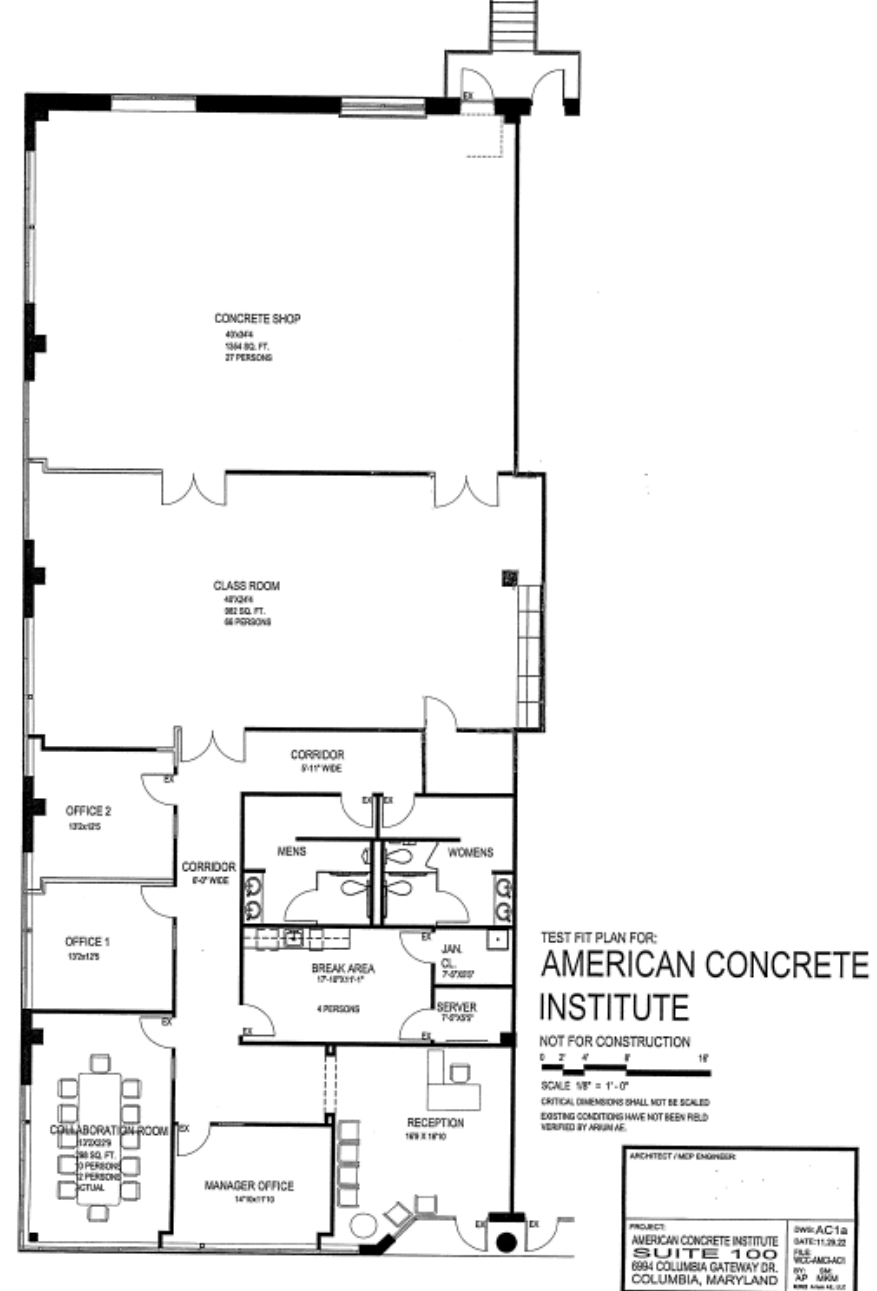
- ACI Concrete Field-Testing Technician
- ACI Aggregate Testing Technician - Level 1
- ACI Concrete Strength Testing Technician
- ACI Concrete Laboratory Testing Technician - Level 1
- ACI Concrete Transportation Construction Inspector
- ACI Cement Physical Tester
- MARTCP Asphalt Plant Technician – Level I
- MARTCP Asphalt Plant Technician – Level II
- MARTCP Soil and Aggregate Compaction Technician



Ken Coffey



Floor Plan



Main Entrance



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Lobby



Classroom



Laboratory



Laboratory



Laboratory





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NEW ACI RESOURCE CENTER OPENING IN COLUMBIA, MARYLAND

The Institute is opening a third Resource Center, located in Columbia, MD, to serve Mid-Atlantic based communities in the concrete industry.

[READ MORE »](#)



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Why ACI Certification

Verify a Certification

Certification Programs

Testing Locations

Resource Centers

ACI SoCal Resource Center

ACI Midwest Resource Center

ACI Mid Atlantic Resource Center

Meet The Staff

Upcoming Instruction & Testing

Certification FAQs

Sponsoring Group Resources



Through a coordinated effort with ACI and its volunteers, chapters, and sponsoring groups, ACI Resource Centers provide on-demand regional access to ACI offerings for inspectors, contractors, designers, and engineers.

www.aciresourcecenters.org



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Questions



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