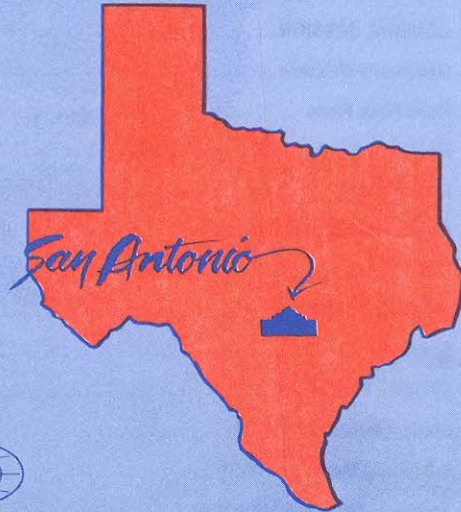


*San Antonio, Texas*  
*ACI's*  
*1987 Annual Convention*

*March 22-27, 1987*

**Convention Theme:  
Quality Concrete**



**AMERICAN CONCRETE INSTITUTE**

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# REGISTRATION

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The ACI staff is eager to answer any questions you may have pertaining to the convention.

The registration desk at the convention center is open to serve you during the following hours:

Sunday	March 22	1:00 PM- 5:00 PM
Monday	March 23	8:00 AM- 5:00 PM
Tuesday	March 24	8:00 AM- 5:00 PM
Wednesday	March 25	8:00 AM- 5:00 PM
Thursday	March 26	8:00 AM- 5:00 PM
Friday	March 27	8:00 AM-10:30 AM

## Fees:

Member	\$110.00 (full week)
Nonmember	\$130.00 (full week)
One-day Member	\$ 50.00 (per day)
One-day Nonmember	\$ 60.00 (per day)
Student	\$ 5.00 (excludes social functions)

Registration fees cover attendance at all ACI technical and educational committee meetings, General Session, and Forums. Also, the Concrete Mixer ticket is included in the full week registration fee.

## Local Tours: (See page 11 for details.)

Dos Rios Wastewater Treatment Plant

Wednesday, March 25, 1987

Time: 1:00 PM Cost: \$ 5.00/person

Stanley Structures Precast Concrete Plant

Wednesday, March 25, 1987

Time: 1:00 PM - 3:30 PM Cost: \$ 5.00/person

Phil M. Ferguson Structural Engineering Research Laboratory

University of Texas at Austin

Thursday, March 26, 1987

Time: 1:00 PM - 7:00 PM Cost: \$15.00/person

### Awards Breakfast

Thursday, March 26, 1987 Cost: \$12.00

8:00 AM - 10:00 AM

Room: Centro A-D, Convention Center

Come meet the awardees. Have fun, enjoy a good breakfast, and watch the multi-media presentation. Please purchase tickets at the ACI Registration Desk by Wednesday afternoon.

## Badges:

Wear your badge on the right side at all times. (In shaking hands the eyes normally fall at shoulder level on the right side of the individual being greeted.) The convention badges are color coded for identification.

Member	White	Student	Blue
Nonmember	Peach	Spouse	Beige
Fellow	White		



TELEPHONE: 313-532-2600  
TELEX: 810 2211454

**american concrete institute**

BOX 19150  
22400 WEST SEVEN MILE ROAD  
DETROIT, MICHIGAN 48219

March 1987

Friends of the American Concrete Institute:

Welcome to San Antonio, deep in the heart of Texas!

The city promises to be the perfect setting for another ACI convention, and there is every indication that this will be another great meeting for the Institute. In recent years, San Antonio has come to the forefront of exciting American cities to visit because of its modern developments, coupled with its historical charms.

"Quality Concrete" is the theme for this convention, and it is hoped that all of us will gain additional expertise that will help insure a superior material worldwide. I urge you to participate in as many of the planned events as possible and certainly to take advantage of the spouse tours scheduled throughout the week.

If I, the other ACI officers, or staff personnel can be of any help during your stay here, do not hesitate to request it.

Frances and I look forward to greeting each of you personally. Make yourself at home, settle back, and enjoy another friendly, informative, and entertaining gathering of the American Concrete Institute.

Best regards,

Walter E. Kunze  
President  
American Concrete Institute

*progress through knowledge*



STATE OF TEXAS  
OFFICE OF THE GOVERNOR  
AUSTIN, TEXAS 78711

WILLIAM P. CLEMENTS, JR.  
GOVERNOR

March, 1987

Greetings:

As Governor of Texas, I am pleased to extend warm greetings to all those attending the American Concrete Institute's International Convention being held in San Antonio.

Texans should realize the importance of — and the work that goes into — the design, construction, use, manufacture and maintenance of concrete products and structures. Your role is a vital one in the development of our state and nation.

Your efforts to further engineering and technical education, scientific investigation and research, and development of standards for the design and construction of concrete structures should be highly commended. On behalf of the State of Texas, I am proud to welcome you to San Antonio.

You have my best wishes for a successful and productive convention.

Sincerely,

A handwritten signature in blue ink that reads "W. P. Clements, Jr." with a stylized flourish at the end.

William P. Clements, Jr.  
Governor of Texas



# CITY OF SAN ANTONIO

SAN ANTONIO, TEXAS 78285



HENRY G. CISNEROS  
MAYOR

## GREETINGS: AMERICAN CONCRETE INSTITUTE

Welcome to San Antonio! We are very pleased that you selected our lovely city as the site for your Annual State Convention to be held March 22-27, at the Convention Center in San Antonio.

We hope you will enjoy your stay and believe that you will experience the warmth and friendliness for which our city and its citizens are so well noted. These are only two of the many reasons that San Antonio was designated as an "All America City" several years ago.

You are invited to take advantage of the many attractions in San Antonio as you visit with us. A wide variety of entertainment, gourmet dining, and enchanting places to visit are available here. Of particular interest is the Paseo del Rio - our famed Riverwalk - with its sidewalk shops and cafes; our historic missions, including The Alamo; and HennisFair, anchored by the spectacular Tower of the Americas, for both visiting and dining enjoyment.

San Antonio, now the nation's 10th largest city, welcomes you and is at your service. Best wishes for a very successful convention!

Sincerely,

Henry G. Cisneros  
Mayor

7

7:30 PM-10:00 PM

- State-of-the-Art Computer Applications (Part I) . . . . River Room A
- FORUM:** Lightweight Insulating Concrete . . . . Hilton, El Mirador

### FRIDAY, March 27, 1987

8:00 AM-10:30 AM

Registration . . . . . 200 Lounge

8:30 AM- 1:00 PM

Technical Committee Meetings

9:00 AM-12:00 NOON

#### TECHNICAL SESSIONS:

- Fiber Reinforced Concrete . . . VIP Room
- Nondestructive Testing (Part II) . . . . . River Room A
- State-of-the-Art Computer Applications (Part II) . . . . River Room B



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# SPECIAL EVENTS

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## AWARDS BREAKFAST

Thursday, March 26, 1987  
8:00 AM-10:00 AM

Centro A-D  
Cost: \$12.00

Come meet the awardees. Have fun, enjoy a good breakfast and watch the multi-media awards presentation.

Please purchase tickets before Wednesday afternoon.

## BREAKFAST MEETINGS (by invitation only)

Monday, March 23, 1987

7:00 AM-8:15 AM  
E-902 Breakfast

La Reina Room - Hilton Hotel

Monday, March 23, 1987

7:15 AM-8:30 AM  
318 Steering Committee Breakfast

La Corona Room - Hilton Hotel

Tuesday, March 24, 1987

7:00 AM-8:30 AM  
Chairman Training Breakfast

Salon Del Rey North Room  
- Hilton Hotel

## COFFEE BAR

Monday through Friday  
8:00 AM-10:00 AM

ACI Registration Area

Join your colleagues every morning for coffee and tea (complimentary) in the ACI Registration Area.

## CONCRETE MIXER

Wednesday, March 25, 1987  
6:30 PM-8:00 PM

River Court Room

All delegates and guests are cordially invited to attend our traditional convention social. (All full-week registrants have received a complimentary mixer ticket upon registration. Others may purchase tickets at the ACI Registration Desk.)

## CONTRACTORS' DAY

Tuesday, March 24, 1987

9:00 AM-12:00 NOON  
2:00 PM- 5:00 PM

Concrete Construction Forum  
Advances in Concrete Technology

Fiesta A

On Tuesday, contractors will find a full day of programs designed to fit their needs. In the morning will be the Concrete Construction Forum presenting problems and solutions to the most vexing problems faced by a concrete constructor today. At this informal session you will be able to ask questions and get answers. Then, in the afternoon, will be Advances in Concrete Technology. This session will explore some of the technological advances in materials such as polymer concrete, superplasticizers, fiber concrete, and high-strength concrete; and some new techniques such as air-inflated forms, and other new forming methods. In addition, there will be a special display of ACI publications and someone on hand to guide you to the information you need to compete in today's concrete world.

## GENERAL SESSION

Thursday, March 26, 1987  
10:00 AM-12:00 NOON

Mission Room

Presidential Address:

Walter E. Kunze, President, Construction Technology Laboratories, Inc., Skokie, Illinois

Proposed revision of Article X of the ACI Bylaws



## LOCAL TOURS

**Wednesday, March 25, 1987**

1:00 PM

Cost \$5.00/person

### **Dos Rios Wastewater Treatment Plant**

The Dos Rios plant is a new \$151 million facility that will provide advanced treatment for all wastewater in the City of San Antonio. The plant will provide secondary treatment for 83 mgd (193 mgd peak) and receive 71 mgd (142 peak) of secondary effluent from three other facilities, and the combined flows will receive advanced treatment.

**Wednesday, March 25, 1987**

1:00 PM - 3:30 PM

Cost \$5.00/person

### **Stanley Structures Precast Concrete Plant**

The Texas Division of Stanley Structures in San Antonio operates facilities for production of structural and architectural precast concrete. Structural products include double tees, inverted tee beams, columns and load bearing spandrels. Architectural products are custom shapes and finishes used as cladding or load bearing members.

**Thursday, March 26, 1987**

1:00 PM - 7:00 PM

Cost \$15.00/person

### **Phil M. Ferguson Structural Engineering Research Laboratory;**

University of Texas at Austin

The Ferguson Laboratory, located in Austin, is one of the most active structural engineering laboratories in the world. Numerous projects in progress will be described by students, faculty and laboratory personnel. Complimentary refreshments will be served on the return trip to the hotel.

## OPENING RECEPTION

**Sunday, March 22, 1987**

**Hilton - Corte Real**

**5:30 PM - 7:00 PM**

The San Antonio Chapter is sponsoring this event — Welcome to San Antonio!!!

## POSTER SESSION

**Tuesday through Thursday**

**200 Corridor**

Tuesday, March 24, 1987

12:00 NOON - 5:00 PM

Wednesday, March 25, 1987

8:00 AM - 5:00 PM

Thursday, March 26, 1987

8:00 AM - 12:00 NOON

Presenters will be with their poster displays during the hours of 12:00 NOON to 3:00 PM on Wednesday, March 25, to answer any questions you may have. Please refer to page 38 for further details.

## 4:30 REHABILITATION (Cash Bar)

**Tuesday, March 24, 1987**

**ACI Registration Area**

**4:30 PM - 6:30 PM**

Rest, relax and restore... the day's meetings are now behind you and the evening is young. Join your colleagues in the ACI Registration Area where a cash bar has been set up for your pleasure.

## SPOUSE PROGRAM

An excellent program has been planned by ACI and the Local ACI San Antonio Area Chapter. All delegates and guests are invited to participate. Check the program in the back of this booklet. There is something of interest for everyone!

## TOURS

Refer to Local Tours listed above or the Spouse Program on page 60.

**NOTE:** All functions will be held in the Convention Center unless otherwise noted.

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# SAN ANTONIO CONVENTION COMMITTEE

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## **General Chairman**

Saul Shenkman  
Stanley Structures

## **Tours**

David Pickett  
Raba-Kistner Consultants Inc.

## **Spouse Program**

Richard Peshorn  
Stanley Structures

## **Spouse Hospitality**

Donald Taubert  
Capitol Cement

## **Publicity**

Chuck Gregory  
McBride-Ratcliff & Associates

## **Finance**

Randall W. Connell  
Southwestern Laboratories

## **Student Activities**

Richard Furlong  
University of Texas at San Antonio

Pat Hogue  
U.S. Army Corps of Engineers  
Kelly Air Force Base

## **Social Program**

Richard Peshorn  
Stanley Structures

## **Contractors' Day**

Ray Gene Whitaker

## **San Antonio Reception Desk**

William Barrow  
Monier Resources

Robert Taggart  
Master Builders

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# ACI SAN ANTONIO CHAPTER

---

**President**

Saul Shenkman  
Stanley Structures

**Vice President**

Ray Gene Whitaker  
Browning Construction Co.

**Secretary-Treasurer**

C. R. Guruprasad  
Day & Zimmerman, Inc.

**Directors**

Richard Brown  
Richard R. Brown Construction Co.

Randall W. Connell  
Southwestern Laboratories

Richard Furlong  
University of Texas at San Antonio

Jeffrey L. Lilley  
Southform Systems/Supply

David Lee Pickett  
Raba-Kistner Consultants Inc.

W. C. Reiffert  
Walter P. Moore & Associates

The officers, staff, and members of ACI would like to thank the Local Convention Committee, the Hostesses, and the San Antonio Area Chapter for their contribution to a successful 1987 Annual Convention.

**THANK YOU**

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# PROGRAM COMMITTEE MEETINGS

Be sure to check the bulletin board  
for last minute changes or added meetings.

**NOTE:** All meetings are located in the  
Convention Center unless otherwise noted.

## SATURDAY/SUNDAY/MONDAY

DAY/TIME	FUNCTION	ROOM
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### SATURDAY, March 21, 1987

#### 8:00 AM-6:00 PM

TAC Full	Technical Activities Committee	Marriott-Salon F
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### SUNDAY, March 22, 1987

#### 8:00 AM-6:00 PM

TAC Sub	Technical Activities Committee	
	Review Group 1	Marriott-Salon F
	Review Group 2	Marriott-Salon E
	Review Group 3	Marriott-Crockett
	Review Group 4	Marriott-Bonham

#### 9:00 AM-5:00 PM

EAC Full	Educational Activities Committee	Marriott-Valero
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#### 2:00 PM-5:00 PM

	Planning Committee	Marriott-Milam
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#### 5:00 PM-7:00 PM

	Opening Reception	Hilton-Corte Real
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### MONDAY, March 23, 1987

#### 8:00 AM-12:00 NOON

TAC Full	Technical Activities Committee (4 hrs)	Marriott-Salon F
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#### 8:30 AM-10:00 AM

CLC	Construction Liaison Committee (1-1/2 hrs)	203
E902-A	Field Technician I (3 hrs)	206
E902-Z	Training Courses (3 hrs)	205
FAC	Financial Advisory Committee (CLOSED)	204
122	Energy Conservation (3 hrs)	210
201	Durability (3 hrs)	Centro C
211-D	High Strength (3 hrs)	208
212	Chemical Admixtures (3 hrs)	Centro D
223	Expansive Cement (3 hrs)	Plaza A
336	Footings (4-1/2 hrs)	Plaza D
351-4	Grouting of Equip/Mach (4-1/2 hrs)	209
441	Columns (3 hrs)	Plaza C
445	Shear & Torsion (3 hrs)	Centro B

COMMITTEES

<b>DAY/TIME</b>	<b>FUNCTION</b>	<b>ROOM</b>
<b>8:30 AM-10:00 AM (continued)</b>		
506	Shotcreting (4-1/2 hrs)	207
530-J	Masonry Structures (9 hrs)	Plaza B
<b>10:00 AM-11:30 AM</b>		
CRC	Construction Review Committee (1-1/2 hrs)	203
*E902-A	Field Technician I	206
*E902-Z	Training Courses	205
*FAC	Financial Advisory Committee (CLOSED)	204
* 122	Energy Conservation	210
* 201	Durability	Centro C
* 211-D	High Strength	208
* 212	Chemical Admixtures	Centro D
* 223	Expansive Cement	Plaza A
318 Full	<u>Standard Building Code (3 hrs)</u>	Centro A
* 336	Footings	Plaza D
* 351-4	Grouting of Equip/Mach	209
* 441	Columns	Plaza C
* 445	Shear & Torsion	Centro B
* 506	Shotcreting	207
* 530-J	Masonry Structures	Plaza B
<b>11:30 AM-1:00 PM</b>		
E702	Designing Structures (1-1/2 hrs)	203
E901	Scholarships (1-1/2 hrs)	206
E902-F	Formwork Designer (1-1/2 hrs)	205
*FAC	Financial Advisory Committee (CLOSED)	204
120	History (1-1/2 hrs)	Centro B
211-E	Evaluation (1-1/2 hrs)	208
308	Curing (1-1/2 hrs)	210
* 318 Full	<u>Standard Building Code</u>	Centro A
* 336	Footings	Plaza D
* 351-4	Grouting of Equip/Mach	209
367	Precast Chimneys (1-1/2 hrs)	Centro D
* 506	Shotcreting	207
515	Coatings (1-1/2 hrs)	Centro C
* 530-J	Masonry Structures	Plaza B
552	Cement Grouting (1-1/2 hrs)	Plaza A
<b>1:00 PM-2:00 PM</b>		
<b>Lunch Break</b>		
<b>2:00 PM-3:30 PM</b>		
E703	Construction Practices (3 hrs)	207
E902-B	Lab Technician (3 hrs)	203
E902-C	Concrete Const. Inspector (3 hrs)	205
RC	Responsibility in Construction (3 hrs)	Marriott, Austin Room
207	Mass Concrete (4-1/2 hrs)	Plaza C
211-B	Lightweight (3 hrs)	208
318-B	<u>Reinf. &amp; Develop. (4-1/2 hrs)</u>	Centro A
318-C	<u>Serviceability/Safety (4-1/2 hrs)</u>	Centro B

**COMMITTEES**

## MONDAY

DAY/TIME	FUNCTION	ROOM
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## 2:00 PM-3:30 PM (continued)

318-D	Flexure & Axial Loads (4-1/2 hrs)	Centro C
318-F	Two-Way Slabs (4-1/2 hrs)	Centro D
351	Equipment Foundations (4-1/2 hrs)	209
363	High Strength (1-1/2 hrs)	204
* 530-J	Masonry Structures	Plaza B
533	Wall Panels (1-1/2 hrs)	Plaza A
543	Piles (3 hrs)	Plaza D
548-A	Polymer PC Concrete (1-1/2 hrs)	210
553	Swimming Pools (1-1/2 hrs)	206

## 2:00 PM-5:00 PM SESSION:

- Research in Progress **Fiesta D**

## 3:30 PM-5:00 PM

*E703	Construction Practices	207
*E902-B	Lab Technician	203
*E902-C	Concrete Const. Inspector	205
E902-D	Concrete Craftsman (3 hrs)	206
IAC	International Activities Committee (2-1/2 hrs)	204
RC	Responsibility in Construction (3 hrs)	Marriott-Austin
* 207	Mass Concrete	Plaza C
* 211-B	Lightweight	208
* 318-B	Reinf. & Develop.	Centro A
* 318-C	Serviceability/Safety	Centro B
* 318-D	Flexure & Axial Loads	Centro C
* 318-F	Two-Way Slabs	Centro D
* 349-3	Embedded Steel (3 hrs)	Plaza A
* 351	Equipment Foundations	209
* 530-J	Masonry Structures	Plaza B
* 543	Piles	Plaza D
548-B	Sub on Standard Tests (1-1/2 hrs)	210

## 5:00 PM-6:30 PM

*E902-D	Concrete Craftsman	206
E902-G	Shotcrete Nozzlemen (1-1/2 hrs)	205
*IAC	International Activities Committee	204
* 207	Mass Concrete	Plaza C
222	Corrosion (1-1/2 hrs)	Plaza D
229	Controlled Low Strength (1-1/2 hrs)	208
* 318-B	Reinf. & Develop.	Centro A
* 318-C	Serviceability/Safety	Centro B
* 318-D	Flexure & Axial Loads	Centro C
* 318-F	Two-Way Slabs	Centro D
* 349-3	Embedded Steel	Plaza A
* 351	Equipment Foundations	209
362	Parking Structures (1-1/2 hrs)	207
* 530-J	Masonry Structures	Plaza B
546-1	Underwater Repair (1-1/2 hrs)	203
548-C	PC Overlays (1-1/2 hrs)	210

## 7:30 PM-9:00 PM

E801	Student Concrete Projects (1-1/2 hrs)	Marriott-Salon B
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COMMITTEES

DAY/TIME	FUNCTION	ROOM
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**TUESDAY, March 24, 1987****8:30 AM-10:00 AM**

E701	Construction Materials (3 hrs)	207
E705	Educational Computer Act. (3 hrs)	208
E902	Certification (4-1/2 hrs)	206
	Membership Committee (3 hrs)	203
117	Tolerances (4-1/2 hrs)	Plaza D
211-A	Edit & Coordination (3 hrs)	209
230	Soil Cement (1-1/2 hrs)	204
307	Reinforced Conc. Chimneys (4-1/2 hrs)	Plaza C
<u>318-A</u>	<u>General Conc. &amp; Const. (4-1/2 hrs)</u>	Centro A
<u>318-E</u>	<u>Shear &amp; Torsion (4-1/2 hrs)</u>	Centro B
<u>318-G</u>	<u>Prestressed Precast (4-1/2 hrs)</u>	Centro C
<u>318-H</u>	<u>Seismic Provisions (4-1/2 hrs)</u>	Centro D
343	Bridge Design (3 hrs)	210
530-J	Masonry Structures (9 hrs)	Plaza B
550	Precast Structures (3 hrs)	Plaza A

**9:00 AM-12:00 NOON SESSIONS:**

- **Concrete Construction Forum** **Fiesta A**
- **Good Concrete Mixtures Under Dwindling Supply of Good Quality Aggregates** **Fiesta B**
- **Seminar for Educators/Students** **Fiesta C**

**9:00 AM-6:00 PM**

ACI Board of Direction	205
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**10:00 AM-11:30 AM**

*E701	Construction Materials	207
*E705	Educational Computer Act.	208
*E902	Certification	206
*	Membership Committee	203
* 117	Tolerances	Plaza D
* 211-A	Edit & Coordination	209
* 307	Reinforced Conc. Chimneys	Plaza C
* <u>318-A</u>	<u>General Conc. &amp; Const.</u>	Centro A
* <u>318-E</u>	<u>Shear &amp; Torsion</u>	Centro B
* <u>318-G</u>	<u>Prestressed Precast</u>	Centro C
* <u>318-H</u>	<u>Seismic Provisions</u>	Centro D
* 343	Bridge Design	210
* 530-J	Masonry Structures	Plaza B
* 550	Precast Structures	Plaza A

**10:00 AM-5:00 PM SESSION:**

- **Film Session** **Fiesta D**

**11:30 AM-1:00 PM**

*E902	Certification	206
* 117	Tolerances	Plaza D
213	Lightweight Aggregates (1-1/2 hrs)	207
306	Cold Weather (1-1/2 hrs)	Plaza A
* 307	Reinforced Conc. Chimneys	Plaza C
* <u>318-A</u>	<u>General Conc. &amp; Const.</u>	Centro A
* <u>318-E</u>	<u>Shear &amp; Torsion</u>	Centro B

COMMITTEES

## TUESDAY

DAY/TIME	FUNCTION	ROOM
<b>11:30 AM-1:00 PM (continued)</b>		
* 318-G	Prestressed Precast	Centro C
* 318-H	Seismic Provisions	Centro D
349-1	General Materials Const. (1-1/2 hrs)	208
• 349-2	Design (1-1/2 hrs)	209
• 349-3	Embedded Steel (1-1/2 hrs)	210
* 530-J	Masonry Structures	Plaza B
546	Repair (1-1/2 hrs)	203
<b>12:00 NOON-5:00 PM SESSION:</b>		
•	Poster Session	200 Corridor
<b>1:00 PM-2:00 PM</b>		
Lunch Break		
<b>2:00 PM-3:30 PM</b>		
EAC Full	Educational Activities Committee (4-1/2 hrs)	203
210	Erosion in Hydraulic Struct. (1-1/2 hrs)	207
211-C	No Slump (3 hrs)	206
214	Strength Tests (3 hrs)	Centro D
302	Construction of Floors (4-1/2 hrs)	210
318 Full	Standard Building Code (4-1/2 hrs)	Centro A
• 349 Full	Nuclear Structures (3 hrs)	208
357 Sub	Offshore Structures (1-1/2 hrs)	Plaza A
421-J	Slabs (3 hrs)	Plaza C
435	Deflection (3 hrs)	Centro B
503	Adhesives (1-1/2 hrs)	Centro C
* 530-J	Masonry Structures	Plaza B
551	Tilt-Up (4-1/2 hrs)	209
554	Bearing Systems (3 hrs)	Plaza D
<b>2:00 PM-5:00 PM SESSIONS:</b>		
•	Advances in Concrete Technology	Fiesta A
•	Open Paper Session	Fiesta B
•	New Techniques in Proportioning	Fiesta C
<b>3:30 PM-5:00 PM</b>		
*EAC Full	Educational Activities Committee	203
116	Notation & Nomenclature (3 hrs)	Centro C
* 211-C	No Slump	206
* 214	Strength Tests	Centro D
* 302	Construction of Floors	210
* 318 Full	Standard Building Code	Centro A
325	Pavements (3 hrs)	207
• 349 Full	Nuclear Structures	208
357 Full	Offshore Structures (3 hrs)	Plaza A
* 421-J	Slabs	Plaza C
* 435	Deflection	Centro B
437	Strength of Structures (3 hrs)	204
* 530-J	Masonry Structures	Plaza B
* 551	Tilt-Up	209
* 554	Bearing Systems	Plaza D
<b>5:00 PM-6:30 PM SESSION:</b>		
•	Student Concrete Beam Contest	208

COMMITTEES



## TUESDAY/WEDNESDAY

DAY/TIME	FUNCTION	ROOM
<b>5:00 PM-6:30 PM</b>		
*EAC Full	Educational Activities Committee	203
* 116	Notation & Nomenclature	Centro C
209	Creep & Shrinkage (1-1/2 hrs)	206
216	Fire Resistance (1-1/2 hrs)	Centro D
226-3	Silica Fume (1-1/2 hrs)	Centro B
* 302	Construction of Floors	210
* <u>318 Full</u>	<u>Standard Building Code</u>	Centro A
* 325	Pavements	207
350	Environmental Eng. Struct. (1-1/2 hrs)	Plaza C
* 357 Full	Offshore Structures	Plaza A
* 437	Strength of Structures	204
504	Joint Sealants (1-1/2 hrs)	Plaza D
* 530-J	Masonry Structures	Plaza B
* 551	Tilt-Up	209

**WEDNESDAY, March 25, 1987****8:00 AM-5:00 PM SESSION:**

- **Poster Session** 200 Corridor

**8:30 AM-10:00 AM**

	Personal Awards Committee (CLOSED)	204
121-TG	QA-Designer (1-1/2 hrs)	207
121-TG	QA-Owners (1-1/2 hrs)	206
305	Hot Weather (4-1/2 hrs)	Plaza D
311	Inspection (4-1/2 hrs)	Plaza C
<u>318 Full</u>	<u>Standard Building Code (4-1/2 hrs)</u>	Centro A
344-1	Wrapped Tank (1-1/2 hrs)	203
344-2	Tendon Tank (1-1/2 hrs)	210
345	Bridge Construction (1-1/2 hrs)	Centro B
347	Formwork (4-1/2 hrs)	208
355	Anchorage (9 hrs)	Centro D
439	Steel Reinforcement (3 hrs)	Plaza A
442	Lateral Forces (4-1/2 hrs)	209
524	Plastering (3 hrs)	205
530-J	Masonry Structures (9 hrs)	Plaza B
544	Fiber Reinforced (9 hrs)	Centro C

**9:00 AM-12:00 NOON SESSIONS:**

- Mexico Earthquakes Fiesta D
- Evaluation of Concrete Strength Test Results (Part I) River Room B
- High-Strength Concrete (Part I) River Room A

**10:00 AM-11:30 AM**

	Publications (3 hrs)	203
118-Sub	Concrete Comp. Users Group (3 hrs)	Centro B
121-SG	QA-Material Supplier (1-1/2 hrs)	207
121-SG	QA-Contractors (1-1/2 hrs)	206
* 305	Hot Weather	Plaza D
* 311	Inspection	Plaza C
* <u>318 Full</u>	<u>Standard Building Code</u>	Centro A
344	Circular Prestressed Tanks (7-1/2 hrs)	210

COMMITTEES

WED

WEDNESDAY

DAY/TIME                      FUNCTION                      ROOM

10:00 AM-11:30 AM (continued)

* 347	Formwork	208
* 355	Anchorage	Centro D
* 439	Steel Reinforcement	Plaza A
* 442	Lateral Forces	209
* 524	Plastering	205
* 530-J	Masonry Structures	Plaza B
* 544	Fiber Reinforced	Centro C

11:30 AM-1:00 PM

*	Publications	203
* 118-Sub	Concrete Comp. Users Group	Centro B
121-SG	Inspection/Testing (1-1/2 hrs)	207
213-Sub	High Strength (1-1/2 hrs)	204
224	Cracking (1-1/2 hrs)	Plaza A
* 305	Hot Weather	Plaza D
* 311	Inspection	Plaza C
* 318 Full	<u>Standard Building Code</u>	Centro A
325-E	RC Compacted Conc. Pav. (1-1/2 hrs)	205
330	Parking Lots (1-1/2 hrs)	206
* 344	Circular Prestressed Tanks	210
* 347	Formwork	208
* 355	Anchorage	Centro D
* 442	Lateral Forces	209
* 530-J	Masonry Structures	Plaza B
* 544	Fiber Reinforced	Centro C

1:00 PM-2:00 PM

Lunch Break

2:00 PM-3:30 PM

	Fellows Nominating Committee	206
	(CLOSED)	
CAC	Chapter Activities Committee (4-1/2 hrs)	203
	Convention Committee (3 hrs)	204
CMRC	Concrete Mat'l Res. Council (3 hrs)	207
E902-E	Concrete Inspector-Nuclear (4-1/2 hrs)	208
SC	Specifications (3 hrs)	205
118 Full	Computers (3 hrs)	Centro B
121 Full	Quality Assurance (1-1/2 hrs)	209
303	Architectural C I P (1-1/2 hrs)	Plaza D
* 344	Circular Prestressed Tanks	210
* 355	Anchorage	Centro D
364	Rehabilitation (1-1/2 hrs)	Plaza A
531-J	Concrete Masonry Structure (4-1/2 hrs)	Plaza B
* 544	Fiber Reinforced	Centro C
548 Full	Polymers (3 hrs)	Centro A

2:00 PM-5:00 PM SESSIONS:

- Chile Earthquakes                      **Fiesta D**
- **Evaluation of Concrete Strength**                      **River Room B**  
   **Test Results (Part II)**
- **High-Strength Concrete (Part II)**                      **River Room A**

3:30 PM-5:00 PM

*E902-E	Concrete Inspector-Nuclear	208
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COMMITTEES

DAY/TIME                      FUNCTION                      ROOM

**3:30 PM-5:00 PM (continued)**

*CAC	Chapter Activities Committee	203
*	Convention Committee	204
*CMRC	Concrete Mat'l Res. Council	207
*SC	Specifications	205
* 118 Full	Computers	Centro B
124	Esthetics (3 hrs)	209
211 Full	Proportioning (3 hrs)	206
332	Residential (3 hrs)	Plaza D
* 344	Circular Prestressed Tanks	210
* 355	Anchorage	Centro D
423-J	Prestressed (3 hrs)	Plaza A
* 531-J	Concrete Masonry Structure	Plaza B
* 544	Fiber Reinforced	Centro C
* 548 Full	Polymers	Centro A

**5:00 PM-6:30 PM**

*CAC	Chapter Activities Committee	203
*E902-E	Concrete Inspector-Nuclear	208
* 124	Esthetics	209
* 211 Full	Proportioning	206
226	Fly Ash, Pozzolan, Slag (1-1/2 hrs)	204
231	Early Age (1-1/2 hrs)	205
* 332	Residential	Plaza D
* 344	Circular Prestressed Tanks	210
* 355	Anchorage	Centro D
360	Design of Slabs on Grade (1-1/2 hrs)	Centro B
408	Bond & Develop. of Reinf. (1-1/2 hrs)	Plaza C
* 423-J	Prestressed	Plaza A
444	Models of Structures (1-1/2 hrs)	Centro A
* 531-J	Concrete Masonry Structure	Plaza B
* 544	Fiber Reinforced	Centro C
555	Removal & Reuse (1-1/2 hrs)	207

**6:30 PM-8:00 PM**

- Concrete Mixer                      River Court

**THURSDAY, March 26, 1987**

**8:00 AM-10:00 AM**

- Awards Breakfast                      Centro A-D

**8:00 AM-12:00 NOON SESSION:**

- Poster Session                      200 Corridor

**8:30 AM-10:00 AM**

228	Nondestructive Testing (3 hrs)	204
301	Structural Specifications (9 hrs)	210
309	Consolidation (3 hrs)	205
315	Detailing of Reinforcement (3 hrs)	207
• 359-2	Design (7-1/2 hrs)	208
• 359-3	Mat'ls. Const. & Ex. (7-1/2 hrs)	209
531-J	Concrete Masonry Structure (4-1/2 hrs)	206
549	Ferrocement (1-1/2 hrs)	203

**10:00 AM-11:30 AM**

* 228	Nondestructive Testing	204
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**COMMITTEES**

## THURSDAY

DAY/TIME	FUNCTION	ROOM
<b>10:00 AM-11:30 AM (continued)</b>		
* 301	Structural Specifications	210
* 309	Consolidation	205
* 315	Detailing of Reinforcement	207
359-2	Design	208
359-3	Mat'ls. Const. & Ex.	209
* 531-J	Concrete Masonry Structure	206
<b>10:00 AM-12:00 NOON</b>		
	• <b>General Session (2 hrs)</b>	<b>Mission Room</b>
<b>11:30 AM-1:00 PM</b>		
* 301	Structural Specifications	210
352	Joints (1-1/2 hrs)	207
359-2	Design	208
359-3	Mat'ls. Const. & Ex.	209
* 531-J	Concrete Masonry Structure	206
<b>12:00 NOON-12:30 PM</b>		
	• <b>Standards Presentation (1/2 hrs)</b>	<b>Mission Room</b>
<b>12:30 PM-1:00 PM</b>		
	Standards Board Committee (1/2 hr)	203
<b>1:00 PM-2:00 PM</b>		
	<b>Lunch Break</b>	
<b>2:00 PM-3:30 PM</b>		
	Board of Direction (4 hrs)	205
123	Research (1-1/2 hrs)	Centro A
215	Fatigue (3 hrs)	Centro C
* 301	Structural Specifications	210
304	Meas., Mix Trans/Placing (1-1/2 hrs)	204
313	Bins & Silos (4-1/2 hrs)	Centro B
340	Design Aids (3 hrs)	203
359-2	Design	208
359-3	Mat'ls. Const. & Ex.	209
442	Lateral Forces (3 hrs)	207
532	Concrete Masonry (1-1/2 hrs)	206
<b>2:00 PM-5:00 PM SESSIONS:</b>		
	• <b>Applications of Ferrocement</b>	<b>Mission Room</b>
	• <b>Control of Cracking Through Proper Construction Practice</b>	<b>Plaza A-B</b>
	• <b>Nondestructive Testing (Part I)</b>	<b>Plaza C-D</b>
	• <b>ACI Certification of Concrete Construction Inspectors</b>	<b>River Room B</b>
	• <b>State-of-the-Art Computer Applications (Part I)</b>	<b>River Room A</b>
<b>3:30 PM-5:00 PM</b>		
* 301	Board of Direction	205
* 215	Fatigue	Centro C
226-1	Fly Ash (1-1/2 hrs)	Centro A
226-2	Slag (1-1/2 hrs)	204
* 301	Structural Specifications	210

DAY/TIME	FUNCTION	ROOM
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**3:30 PM-5:00 PM (continued)**

* 313	Bins & Silos	Centro B
* 340	Design Aids	203
359-2	Design	208
359-3	Mat'ls. Const. & Ex.	209
* 442	Lateral Forces	207
517	Accelerated Curing (1-1/2 hrs)	206

**5:00 PM-6:30 PM**

*	Board of Direction	205
225	Hydraulic Cements (1-1/2 hrs)	Centro C
* 301	Structural Specifications	210
* 313	Bins & Silos	Centro B
523	Insulating & Cellular (1-1/2 hrs)	207

**7:30 PM-10:00 PM**

- **FORUM: Lightweight Insulating Concrete** Hilton, El Mirador/  
La Condesa

**FRIDAY, March 27, 1987****8:30 AM-11:00 AM**

Nominating Committee (CLOSED)	Hilton, El Mirador West
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**8:30 AM-1:00 PM**

359-J	Nuclear Vessels (4-1/2 hrs)	Hilton, Las Espada
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**10:00 AM-11:30 AM**

Nominating Committee (CLOSED)	Hilton, El Mirador West
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**2:00 PM-5:00 PM SESSIONS:**

- **Fiber Reinforced Concrete** VIP Room
- **Nondestructive Testing (Part II)** River Room A
- **State-of-the-Art Computer Applications (Part II)** River Room B

COMMITTEES

**NOTE:** All functions will be held in the Convention Center unless otherwise noted.

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# ACI FUTURE CONVENTIONS

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**1987 Fall Convention**

November 8-13  
Seattle Sheraton  
Seattle, Washington

**1988 Annual Convention**

March 20-25  
Marriott's Orlando World Center  
Orlando, Florida

**1988 Fall Convention**

October 30-November 4  
Hyatt Regency—Houston  
Houston, Texas

**1989 Annual Convention**

February 19-24  
Atlanta, Georgia

**Note:** The convention preview will be distributed to ACI members three months prior to each convention. Others may receive a copy by contacting Institute Headquarters.

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# TECHNICAL SESSIONS

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**MONDAY, March 23, 1987**

2:00 PM-5:00 PM

Room: **Fiesta D Convention Center**

## RESEARCH IN PROGRESS

Sponsored by Committee 123

SESSIONS

**Session Chairman:** Menashi D. Cohen  
Professor  
Northeastern University  
Civil Engineering Dept.  
Boston, Massachusetts

### **Freezing and Thawing Durability of High Volume Fly Ash Concrete**

V. M. Malhotra, Head, Construction Materials Section, Mineral Sciences Laboratories, CANMET/EMR, Ottawa, Ontario, Canada

### **Development of Laboratory Testing Methods for Roller Compacted Concrete**

Sandor Popovics, Professor, Civil Engineering Dept., Drexel University, Philadelphia, Pennsylvania; Scott D. Brown, Civil Engineering Dept., Drexel University, Philadelphia, Pennsylvania; John A. Nawn, Dept. of Civil Engineering, Drexel University, Philadelphia, Pennsylvania; Vince M. Vangrossi, Dept. of Civil Engineering, Drexel University, Philadelphia, Pennsylvania

### **Flexural Behavior of Confined Concrete Columns While Subjected to Large Axial Loads**

C. C. Yeh, Graduate Student, Dept. of Civil Engineering, University of Houston, Houston, Texas; Shamim A. Sheikh, Associate Professor, Dept. of Civil Engineering, University of Houston, Houston, Texas

### **Set Time Control Studies of Polymer Concrete**

Robert G. Mathey, Materials Research Engineer, National Bureau of Standards, Gaithersburg, Maryland; James M. Pommersheim, Professor, Dept. of Chemical Engineering, Bucknell University, Lewisburg, Pennsylvania

### **U.S. - Coordinated Program for Masonry Building Research**

J. L. Noland, President, Atkinson-Noland & Assoc., Inc., Boulder, Colorado

*(continued next page)*

MONDAY, March 23, 1987

2:00 PM-5:00 PM

Room: **Fiesta D Convention Center****RESEARCH IN PROGRESS** (Continued)**A New and Simple Apparatus to Measure the Air Content of Fresh Concrete**

K.W. Nasser, Professor, Dept. of Civil Engineering, University of Saskatchewan, Saskatoon, Saskatchewan, Canada; B.D. Whaley, Graduate Student, Dept. of Civil Engineering, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

**Lithium Salts as Set Accelerators for Concrete**

Thomas Novinson, Research Chemist, Materials Science Division, Naval Civil Engineering Laboratory, Port Hueneme, California

**Experimental Investigation of Earthquake Resistant Squat Walls**

Z.F. Wasiewicz, Graduate Student, Dept. of Civil Engineering, University of Ottawa, Ottawa, Ontario, Canada; C.F. Pilette, Graduate Student, Dept. of Civil Engineering, University of Ottawa, Ottawa, Ontario, Canada; M. Saatcioglu, Associate Professor, Dept. of Civil Engineering, University of Ottawa, Ottawa, Ontario, Canada

**Effects of Strain Rate on Cement Paste and Mortar in Compression**

David Darwin, Professor, Civil Engineering Dept., University of Kansas, Lawrence, Kansas; Shen Zhenjia, Visiting Scholar, Civil Engineering Dept., University of Kansas, Lawrence, Kansas; Shraddhakar Harsh, Research Assistant, Civil Engineering Dept., University of Kansas, Lawrence, Kansas

**Shear Strength of Plain High-Strength Concrete Deep Beams Subjected to Axial Compressive Stresses**

Yook-Kong Yong, Assistant Professor, Dept. of Civil and Environmental Engineering, Rutgers University, Piscataway, New Jersey; Manoj Sethi, Graduate Student, Dept. of Civil and Environmental Engineering, Rutgers University, Piscataway, New Jersey

**Durability of Portland Cement/Condensed Silica Fume in Sulfate Solutions**

Menashi D. Cohen, Professor, Dept. of Civil Engineering, Northeastern University, Boston, Massachusetts; Arnon Bentur, Associate Professor, Dept. of Civil Engineering, Building Research Station, Technion, Israel Institute of Technology, Technion City, Haifa, Israel

TUESDAY, March 24, 1987

9:00 AM-12:00 NOON

Room: Fiesta B Convention Center

## **GOOD CONCRETE MIXTURES UNDER DWINDLING SUPPLY OF GOOD QUALITY AGGREGATES**

Sponsored by Committee 211

**Session Chairman:** Donald E. Dixon  
President  
Chastain Forensics Corporation  
Tucker, Georgia

### **Expanding Concrete Market for Do-It-Yourself Application**

George R.U. Burg, Division Engineer, Master Builders, Inc., Cleveland, Ohio

### **Coal Combustion Waste Concrete**

Jerry G. Rose, Associate Professor of Civil Engineering, University of Kentucky, Lexington, Kentucky; Charles E. Jones, Research Chemist, Kentucky Energy Cabinet Laboratory, Lexington, Kentucky; Alan E. Bland, Program Director, Kentucky Energy Cabinet Laboratory, Lexington, Kentucky; Marvin N. Jarrett, Environmental Engineer, Tennessee Valley Authority, Chattanooga, Tennessee

### **Limerock Crusher - Run and Tailing in Compaction Concrete for Pavement Applications**

Antonio Nanni, Assistant Professor, University of Miami, Dept. of Civil and Architectural Engineers, Coral Gables, Florida; Mukhlis A. Shahrour, Graduate Assistant, University of Miami, Coral Gables, Florida

### **Production of High-Strength Concrete in Costa Rica**

Juan A. Pastor, Chief of Laboratory of Materials and Structures Models, University of Costa Rica, San José, Costa Rica

### **Use, and Quality Control of Concrete in Central America and the Caribbean**

Antonio J. Guerra, A.J. Guerra - Consulting Engineers, Santo Domingo, Dominican Republic

### **Two Types of Concrete for Mexico City**

José Nieto, General Director, Instituto Mexicano Del Cemento Y Del Concreto, A.C., Mexico City, Mexico

## Personal Log 1987 Annual Convention

Delegate's Name \_\_\_\_\_

**NOTE:** All functions will be held in the Convention Center unless otherwise noted.

### Sunday, March 22, 1987

8:00 AM—

1:00 PM \_\_\_\_\_

5:30 PM—

7:00 PM Opening Reception

Hilton - Corte Real Room

### Monday, March 23, 1987

7:00 AM—

8:30 AM 7:15-8:18 Steering Comm.

8:30 AM—

10:00 AM \_\_\_\_\_

10:00 AM—

11:30 AM—

ACI 318

11:30 AM—

1:00 PM—

ACI 318

1:00 PM—

2:00 PM—

Lunch Break

2:00 PM—

5:00 PM—

Session:

- Research in Progress

Fiesta D

ACI 318 B, C, D, F

5:00 PM—

6:30 PM—

6:30 PM—

8:00 PM—

PRES. RECEPTION

8:00 PM—

9:30 PM \_\_\_\_\_

### Tuesday, March 24, 1987

7:00 AM—

8:30 AM \_\_\_\_\_

8:30 AM—

10:00 AM—

ACI 318 A, E, G, H

9:00 AM—

10:30 AM \_\_\_\_\_

**Tuesday, March 24, 1987 (continued)**

9:00 AM— Sessions:  
12:00 NOON • Concrete Construction Forum Fiesta A

• Good Concrete Mixtures Under Dwindling Supply  
of Good Quality Aggregates Fiesta B

• Seminar for Educators/Students Fiesta C

10:00 AM—  
11:30 AM **ACL 318 A, E, G, H**

10:00 AM—  
5:00 PM Film Session (All Day) Fiesta D

11:30 AM—  
1:00 PM

12:00 NOON—  
5:00 PM Poster Session (Runs through Thursday) 200 Corridor

12:30 PM—  
2:00 PM

1:00 PM—  
2:00 PM Lunch Break

2:00 PM—  
3:30 PM **ACL 318**

2:00 PM— Sessions:  
5:00 PM • Advances in Concrete Technology Fiesta A

• New Techniques in Proportioning Fiesta C

• Open Paper Session Fiesta B

3:30 PM—  
5:00 PM

5:00 PM—  
6:30 PM • Student Concrete Beam Contest Room 208

6:30 PM—  
8:00 PM

7:30 PM—  
10:00 PM

8:00 PM—  
9:30 PM

**Wednesday, March 25, 1987**

7:00 AM—  
8:30 AM

**Wednesday, March 25, 1987 (continued)**

8:30 AM— 10:00 AM		
	<b>ACI 318.</b>	
9:00 AM— 12:00 NOON	<b>Sessions:</b> • <u>Mexico Earthquakes</u>	Fiesta D
	• Evaluation of Concrete Strength Test Results (Part I)	River Room B
	• High-Strength Concrete (Part I)	River Room A
10:00 AM— 11:30 AM		
11:30 AM— 1:00 PM		
1:00 PM— 2:00 PM	<u>Lunch Break</u>	
2:00 PM— 3:30 PM		
2:00 PM— 5:00 PM	<b>Sessions:</b> • <u>Chile Earthquakes</u>	Fiesta D
	• Evaluation of Concrete Strength Test Results (Part II)	River Room B
	• High-Strength Concrete (Part II)	River Room A
3:30 PM— 5:00 PM		
5:00 PM— 6:30 PM		
6:30 PM— 8:00 PM	<u>Concrete Mixer</u>	Convention Center River Court
6:30 PM— 8:00 PM		
8:00 PM— 9:30 PM		

**Thursday, March 26, 1987**

7:00 AM— 8:30 AM		
8:00 AM— 10:00 AM	<u>Awards Breakfast</u>	Centro A-D
10:00 AM— 12:00 NOON	<u>General Session</u>	Mission Room

**Thursday, March 26, 1987 (continued)**

12:00 NOON—

12:30 PM Standards Presentation Mission Room

1:00 PM—

2:00 PM Lunch Break

2:00 PM—

3:30 PM

2:00 PM— **Sessions:**

5:00 PM • Applications of Ferrocement Mission Room

• Control of Cracking Through Proper Construction

Practice Plaza A-B

• Nondestructive Testing (Part I)

Plaza C-D

• ACI Certification of Concrete Construction Inspectors

River Room B

• State-of-the-Art Computer Applications (Part I)

River Room A

3:30 PM—

5:00 PM

5:00 PM—

6:30 PM

6:30 PM—

8:00 PM

7:30 PM— **FORUM:**

10:00 PM Lightweight Insulating Concrete Hilton - El Mirador

8:00 PM—

9:30 PM

**Friday, March 27, 1987**

7:00 AM—

8:30 AM

8:30 AM—

10:00 AM

9:00 AM— **Sessions:**

12:00 NOON • Fiber Reinforced Concrete VIP Room

• Nondestructive Testing (Part II)

River Room A

• State-of-the-Art Computer Applications (Part II)

River Room B

10:00 AM—

11:30 AM

11:30 AM—

1:00 PM



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# EDUCATORS/STUDENTS PROGRAM

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TUESDAY, March 24, 1987

9:00 AM-7:00 PM

## SEMINAR FOR EDUCATORS/STUDENTS

Sponsored by Committees E702 and E801

**Co-Chairmen:** R. John Craig  
Professor  
Civil & Environmental Engineering Dept.  
New Jersey Institute of Technology  
Newark, New Jersey

Luke M. Snell  
Professor  
Dept. of Engineering  
Southern Illinois University  
Edwardsville, Illinois

**Moderator:** Kenneth H. Murray  
Engineer  
Gilbert Associates, Inc.  
Reading, Pennsylvania

SESSIONS

9:00 AM-12:00 NOON Room: **Fiesta C Convention Center**

### **Promoting Concrete Activities at the University**

Ringo C. Boyd, Professor, University of Cincinnati, Cincinnati, Ohio

### **Using Lotus 1-2-3 in Teaching Reinforced Concrete Design**

Charles G. Salmon, Professor, University of Wisconsin-Madison,  
Madison, Wisconsin

### **Innovative Approaches In Concrete Education**

Luke M. Snell, Professor, Dept. of Engineering, Southern Illinois  
University, Edwardsville, Illinois

### **Student Concrete Projects-Schools and ACI**

R. John Craig, Professor, Civil and Environmental Engineering Dept.,  
New Jersey Institute of Technology, Newark, New Jersey

### **Careers in Concrete Construction and Structures**

### **Technical Presentation**

### **Student Presentations**

12:00 NOON-2:00 PM

### **Lunch on your own**

2:00 PM-5:00 PM

Room: **see pages 39, 40 & 41**

### **Attend ACI Technical Sessions**

(Refer to pages 39, 40 and 41 for details.)

5:00 PM-6:30 PM

Room: **208 Convention Center**

### **Student Concrete Beam Contest**

TUESDAY, March 24, 1987

9:00 AM-12:00 NOON

Room: **Fiesta A Convention Center**

## CONCRETE CONSTRUCTION FORUM

Sponsored by TAC Ad hoc Committee

**Moderator:** Joseph F. Camellerie  
Construction Manager  
Ebasco Constructors Inc.  
Huntington, New York

SESSIONS

### **Constructibility: Engineer's and Contractor's Responsibilities**

Michael Neeser, President, CONTEK/Concrete Technical Specialists,  
Reno, Nevada

### **Types of Plywood Used in Concrete Forming: Differences, Uses, and Quality of Resulting Concrete**

John V. Gould, Associate Director of Product Development, Simpson  
Timber Company, Shelton, Washington

### **A Proven Method of Concrete Quality Assurance**

Clifford Gordon, Concrete Consultant, Eastern Infrastructure Group,  
CRS Sirrinc, Inc., New York, New York; Salvatore J. Vitale, Senior Vice  
President, Eastern Infrastructure Group, CRS Sirrinc, Inc., Baltimore,  
Maryland; Tarun R. Naik, Associate Professor of Civil Engineering,  
University of Wisconsin at Milwaukee, Milwaukee, Wisconsin; John  
Quadrozzi, President and Chief Executive Officer, Quadrozzi Concrete  
Corp., Arverne, New York

### **Pumping Architectural Concrete Walls From the Bottom Up**

James Bullock, Project Manager, Algernon Blair, Inc., Montgomery,  
Alabama

### **Floor Flatness Testing**

Robert F. Ytterberg, President, Kalman Floor Company, Evergreen,  
Colorado

# FILM SESSION

TUESDAY, March 24, 1987

10:00 AM-5:00 PM

Room: **Fiesta D Convention Center**

TIME First Showing	TIME Second Showing	FILM
10:00 AM	2:00 PM	<b>"Construction: Hilton Palacio Del Rio"</b> Source: Portland Cement Association
10:30 AM	2:30 PM	<b>"Something Concrete"</b> Source: International Film Bureau, Inc.
11:00 AM	3:00 PM	<b>"Palace on the River"</b> Source: (Unknown - produced in San Antonio)
11:30 AM	3:30 PM	<b>"Hangman - Construction Safety"</b> Source: International Film Bureau, Inc.
	12:00 NOON-2:00 PM	<b>Lunch Break</b>
	4:00 PM-5:00 PM	<b>Open for Special Film Requests</b>

SESSIONS

## ACI ACCESSORIES

At the ACI convention registration desk you may place an order or purchase the following accessories:

<b>ACI Fellow Pin/Tie Tac</b> Our ACI emblem and Fellow designation in 10k gold	\$11.25
<b>ACI Members Pin/Tie Tac</b> Our ACI emblem in blue enamel & rhodium	\$10.75
<b>Necktie</b> Dark blue or maroon, embroidered with "American Concrete Institute"	\$11.75
<b>Golf Hat</b> Dark blue with ACI logo	\$6.95
<b>ACI Key Tag</b> Ring mesh, with a pewter finish	\$3.95
<b>ACI Desk Pen Set</b> Walnut base with ACI Symbol laser engraved in concrete - gold-tone ball point pen	\$26.25

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# POSTER SESSION

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**TUESDAY, March 24, 1987** 12:00 NOON- 5:00 PM  
**WEDNESDAY, March 25, 1987** 8:00 AM- 5:00 PM \*  
**THURSDAY, March 26, 1987** 8:00 AM-12:00 NOON

Room: **Registration Area (200 Corridor) Convention Center**

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SESSIONS

## POSTER SESSION

Sponsored by TAC Ad hoc Committee

**Session Chairman:** James R. Libby  
President  
James R. Libby and Associates  
San Diego, California

- 1. Design of Reinforced Concrete Haunched Beams under Shear**  
E.I. El-Niema, Associate Professor, Civil Engineering Dept.,  
Khartoum University, Khartoum, Sudan
- 2. Computer Spreadsheet for Concrete Quality Control**  
Kenneth W. Day, Senior Engineer, Concrete Pavements, Aerodrome  
& Road Engineering Branch, Australian Government, Dickson,  
Australia
- 3. ACI On-Line Index**  
Lawrence Kaetzel, Computer Specialist, National Bureau of  
Standards, Gaithersburg, Maryland
- 4. Construction with Reinforced Fiber Concrete**  
R. John Craig, Professor, Civil and Environmental Engineering  
Dept., New Jersey Institute of Technology, Newark, New Jersey
- 5. Student Concrete Projects through ACI**  
Committee E-801; Student Concrete Projects; R. John Craig
- 6. Microscopy - Important Tool for Concrete Quality Control**  
A. Jornet, LPM Inc., Testing Laboratory, Amsee, Switzerland

\* Presenters will be with their poster displays during the hours of  
12:00 NOON - 3:00 PM on Wednesday, March 25, to answer any  
questions you may have.

TUESDAY, March 24, 1987

2:00 PM-5:00 PM

Room: **Fiesta A Convention Center**

## ADVANCES IN CONCRETE TECHNOLOGY

Sponsored by Construction Liaison Committee

**Session Chairman:** Paul Sommers  
Chief Engineer  
Algernon Blair, Inc.  
Montgomery, Alabama

### Introduction

Paul Sommers, Chief Engineer, Algernon Blair, Inc., Montgomery, Alabama

### Cost Effective Use of Superplasticizers

Tom G. Guennewig, Vice President and General Manager, MAC-USA, Plano, Texas

### Fiber Concrete: Applications and Techniques

Dan Biddle, Sales Director, Forta Corp., Grove City, Pennsylvania

### High-Early-Strength Concrete

(Speaker to be announced)

### Polymer Concrete

David Fowler, Professor, Dept. of Civil Engineering, University of Texas, Austin, Texas

### Inflated Forming Alternatives

Mary K. Hurd, Senior Editor, Concrete Construction Magazine, Farmington Hills, Michigan

### Changes to ACI 347 Recommended Practice for Concrete Formwork

Randy Bordner, Vice President of Engineering, Dun-Par Engineered Forms Co., Raytown, Missouri

SESSIONS

TUESDAY, March 24, 1987

2:00 PM-5:00 PM

Room: **Fiesta C Convention Center**

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SESSIONS  
-  
TIMES

## NEW TECHNIQUES IN PROPORTIONING

Sponsored by Committee 211

**Session Chairman:** Ramon L. Carrasquillo  
Associate Professor  
University of Texas at Austin  
Ferguson Structural Eng. Lab.  
Austin, Texas

### Mix Proportioning - What's on the Horizon?

Donald E. Dixon, President, Chastain Forensics Corp., Tucker, Georgia

### Mix Proportioning to Meet Construction Needs

James M. Shilstone, Sr., Shilstone and Associates, Inc., Dallas, Texas

### Guidelines for Determination of the Required Average Compressive Strength for Mix Proportioning

James E. Cook, Gifford-Hill & Co., Inc., Dallas, Texas; Ramon L. Carrasquillo, Ferguson Structural Engineering Laboratory, University of Texas at Austin, Austin, Texas

### High Quality Concrete from Marginal Sands

Kenneth W. Day, Senior Engineer, Concrete Pavements, Aerodrome & Road Engineering Branch, Australian Government, Australia

### Use of Statistics in Mixture Proportioning

James M. Shilstone, Jr., Shilstone and Associates, Inc. Dallas, Texas

### Panel Discussion on New Techniques for Mix Proportioning

**Moderator:** Ramon L. Carrasquillo

**Panelists:** Donald E. Dixon  
James M. Shilstone, Sr.  
James E. Cook  
Kenneth W. Day  
James M. Shilstone, Jr.

SESSIONS

**TUESDAY, March 24, 1987**

2:00 PM-5:00 PM

Room: **Fiesta B Convention Center**

## **OPEN PAPER SESSION**

Sponsored by TAC Ad hoc Committee

**Session Co-Chairmen:** Catherine W. French  
Assistant Professor  
University of Minnesota  
Minneapolis, Minnesota

Ahmad J. Durrani  
Assistant Professor  
Rice University  
Houston, Texas

### **Concepts in Concrete Design Applicable to Sealing a Nuclear Waste Repository in Basalt**

Robert D. Allen, Staff Engineer, Rockwell Hanford Operations, Richland, Washington; Harold L. Benny, Senior Engineer, Rockwell Hanford Operations, Richland, Washington

### **Behavior and Design of Slab-Column Frames in Seismic Regions**

Jack P. Moehle, Associate Professor, University of California at Berkeley, Berkeley, California

### **Effects of Fly Ash on Concrete — A 20 Year Summary of PCA Research**

Steven Kosmatka, Portland Cement Assoc., Bldg. Tech. Dept., Skokie, Illinois

### **Development Length for Epoxy Coated Reinforcing Bars in Concrete**

Saeed Daniali, Assistant Professor, Dept. of Civil Engineering, Lamar University, Beaumont, Texas

### **Roller-Compacted Concrete Pathing at Conley Terminal - Boston**

S.D. Tayabji, Manager of Transportation and Development Dept., Construction Technology Laboratories, Inc., Skokie, Illinois; G. Whittie, Project Engineer, Whitman and Howard, Inc., Boston, Massachusetts; U. Inbal, Supervisor of Materials Laboratory, Massachusetts Port Authority, Boston, Massachusetts

### **Evaluation of Present Codified Design Criteria for Fixed Offshore Concrete Structures**

Dimitris Diamantiðis, Senior Research Engineer, A.S. Veritas Research, Hovik, Norway

### **Analysis and Behavior of Reinforced Concrete Buildings During September 1985 Earthquake in Mexico City**

Roberto Meli, Professor, Universidad Nacional Autonoma De Mexico, Instituto De Ingenieria, Mexico City, Mexico

WEDNESDAY, March 25, 1987

9:00 AM-12:00 NOON

Room: **Fiesta D Convention Center**

## **MEXICO EARTHQUAKES**

Sponsored by Instituto Mexicano Del Cemento Y Del Concreto, A.C.

José Nieto

General Director  
Instituto Mexicano Del Cemento Y  
Del Concreto, A.C.  
Mexico City, Mexico

SESSIONS

### **Structural Aspects of Damaged Buildings**

Roberto Meli, Investigator, National University of Mexico, Mexico City, Mexico

### **Comments on the New Regulations for Construction in the Federal District**

Perez Caballero, Investigator, Instituto Mexicano Del Cemento Y Del Concreto, A.C., Mexico City, Mexico

### **Strengthening of Reinforced Concrete Structures**

Horacio Ramirez, Asesor Tecnico, Instituto Mexicano Del Cemento Y Del Concreto, A.C., Mexico City, Mexico

### **Repair of Damaged Structures**

Victor M. Pavon, General Director, Consultores del Concreto, Ciudad Satelite, Mexico

### **Concrete in the Reconstruction of Low-Cost Housing**

Jaime Lezama, Jefe de la Division de Diseno Y Edificacion, Escuela Nacional de Estudios Profesionales, Naucalpan, Mexico

### **Quality Index of Earthquake-Resistant Structures**

Hector Gallegos, Professor, Pontificia Universidad Catolica del Peru, Domicilio Conocido, Lima, Peru

### **Venezuelan Specifications for Reinforcing Steel in Structures**

Joaquin Marin, Professor, Instituto de Materiales y Moderlos Estructurales, Caracas, Venezuela

### **Rebuilding High-Rise Structures: Two Examples**

Ignacio Holtz, General Director, Constructora Serna, Mexico City, Mexico



WEDNESDAY, March 25, 1987

9:00 AM-12:00 NOON

Room: River Room B Convention Center

## EVALUATION OF CONCRETE STRENGTH TEST RESULTS (PART I)

Sponsored by Committee 214

**Session Chairman:** John A. Bickley  
Vice President  
Concrete Division  
The Trow Group, Ltd.  
Rexdale, Ontario, Canada

### The Complete Quality Control Report

Vladimir Novokshchenov, Senior Research Engineer, Construction Technology Laboratories, Inc., Skokie, Illinois

### Quality Assurance Program for Volume, Batched, High-Strength Concrete used in the Alex Fraser Bridge Deck Overlay

Neil A. Cumming, Manager, Construction Materials Division, B.H. Levelton & Associates, Vancouver, British Columbia, Canada; P.T. Seabrook, Vice President, B.H. Levelton & Associates, Vancouver, British Columbia, Canada

### In-Place Bond Test of Concrete

Kal R. Hindo, Principal, Neyer, Tiseo & Hindo, Ltd., Farmington Hills, Michigan

### Statistical Evaluations of Flexural Strengths using Spreadsheet, Database and Graphics Features of PC Software

Ronald L. Dilly, Assistant Professor, College of Technology, University of Houston, Civil Technology Dept., Houston, Texas; Vahid Beizai, MRA/Materials Engineers, Inc., Houston, Texas; Woodward L. Vogt, President, MRA/Materials Engineers, Inc., Houston, Texas

### Statistical Parameters for Flexural Strength Concrete

Wilbur Charles Greer, Jr., Assistant Vice President, Law Engineering Testing Company, Atlanta, Georgia

SESSIONS

**NOTE:**

Part II will be presented on Wednesday, March 25, 1987 at 2:00 PM - 5:00 PM in River Room B in the Convention Center.

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**TECHNICAL SESSION**

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**WEDNESDAY, March 25, 1987**

9:00 AM-12:00 NOON

Room: **River Room A Convention Center**

## **HIGH-STRENGTH CONCRETE (PART I)**

Sponsored by Committee 363

**Session Chairman:** Henry G. Russell  
Director - Structural Development Dept.  
Construction Technology Labs., Inc.  
Skokie, Illinois

**SESSIONS**

### **Optimization of the Way of Introducing the Admixture in High-Strength Superplasticized Concretes**

A.M. Paillere, Head, Mat. Durability Section, Laboratoire Central des Ponts et Chaussees, Paris, France; M. Buil, Research Engineer, Laboratoire Central des Ponts et Chaussees, Paris, France

### **Reevaluation of the Ultimate Shear Behavior of High-Strength Concrete Prestressed I-Beams**

M.K. Kaufman, Graduate Research Assistant, Purdue University, West Lafayette, Indiana; J.A. Ramirez, Assistant Professor, Purdue University, Civil and Structural Engineering Dept., West Lafayette, Indiana

### **Evaluation of the Use of Current Concrete Practice on the Production of High-Strength Concrete**

P.L. Musser; R.L. Carrasquillo, Dept. of Civil Engineering, University of Texas at Austin, Austin, Texas

### **Flexural Ductility of Ultra-High-Strength Concrete Members**

S.W. Shin; S.K. Ghosh, Dept. of Civil Engineering Mechanics, and Metallurgy, University of Illinois at Chicago, Chicago, Illinois; Jaime Moreno, Manager, Technical Marketing, Material Service Corp., Chicago, Illinois

### **Influence of Temperature Rise on the Compressive Strength of Very High-Strength Concrete**

Pierre-Claude Aitcin, Professor, Universite de Sherbrooke, Faculty of Applied Sciences, Dept. of Civil Engineering, Sherbrooke, Quebec, Canada; Nahhas Riad, Former graduate student, Universite de Sherbrooke, Faculty of Applied Sciences, Dept. of Civil Engineering, Sherbrooke, Quebec, Canada

### **Effects of Elevated Temperatures on High-Strength Concrete**

Ronald G. Burg, Manager, Fire/Thermal Technology, Construction Technology Laboratories, Inc., Skokie, Illinois; Scott T. Shirley, Assistant Research Engineer, Construction Technology Laboratories, Inc., Skokie, Illinois; Anthony E. Fiorato, Vice President, Construction Technology Laboratories, Inc., Skokie, Illinois

**NOTE:**

Part II will be presented on Wednesday, March 25, 1987 at 2:00 PM-5:00 PM in River Room A in the Convention Center.

WEDNESDAY, March 25, 1987

2:00 PM-5:00 PM

Room: Fiesta D Convention Center

## **CHILE EARTHQUAKES**

Sponsored by TAC

**Session Chairman:** \* Mete A. Sozen  
Professor, Civil Engineering Dept.  
University of Illinois  
Urbana, Illinois

### What We May Learn from the Chile 1985 Earthquake

- \* Mete A. Sozen, Professor, Civil Engineering Dept., University of Illinois, Urbana, Illinois

### Development of the Art of Earthquake-Resistant Design in Chile

Rafael Riddell, Catholic University of Chile, Santiago, Chile

### Reinforced Concrete Structures in Vina del Mar: Evaluation of Proportions and Stiffness

- \* Sharon Wood, University of Illinois, Urbana, Illinois

### Reinforced Concrete Structures in Vina del Mar: Evaluation of Details

- \* James K. Wight, University of Michigan, Ann Arbor, Michigan

### Reinforced Concrete Structures in Vina del Mar: Evaluation of Dynamic Response

- \* Jack P. Moehle, University of California, Berkeley, California

### Masonry Structures in Chile

Richard E. Klingner, University of Texas at Austin, Austin, Texas

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**TECHNICAL SESSION**

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**WEDNESDAY, March 25, 1987**

2:00 PM-5:00 PM

Room: **River Room B Convention Center**

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## **EVALUATION OF CONCRETE STRENGTH TEST RESULTS (PART II)**

Sponsored by Committee 214

**Session Chairman:** V. Mohan Malhotra  
Head, Construction Materials Section  
CANMET/EMR  
Ottawa, Ontario  
Canada

### **Introduction to ACI 214**

V.M. Malhotra, Head, Construction Materials Section, CANMET/EMR,  
Ottawa, Ontario, Canada

### **Variation in Strength**

Tarun R. Naik, Associate Professor, University of Wisconsin, Mil-  
waukee, Wisconsin

### **Analysis of Strength Data: Statistical Approach**

Robert E. Philleo, Consulting Engineer, Annandale, Virginia

### **Criteria For Strength Requirements**

J. Derle Thorpe, Associate Professor, Utah State University, Logan,  
Utah

### **Quality Control Charts**

Steven F. Gebler, Senior Research Engineer, Construction Technology  
Laboratories, Inc., Skokie, Illinois

### **Tests and Specimens Required**

Kenneth R. Lauer, Professor, Notre Dame, Indiana

### **Closing Remarks**

V. Ramakrishnan, Professor, South Dakota School of Mines &  
Technology, Rapid City, South Dakota

SESSIONS

**WEDNESDAY, March 25, 1987**

2:00 PM-5:00 PM

Room: **River Room A Convention Center**

## **HIGH-STRENGTH CONCRETE (PART II)**

Sponsored by Committee 363

**Session Chairman:** Paul Zia  
Professor and Head Civil Engineering Dept.  
North Carolina State University  
Raleigh, North Carolina

### **Economic Feasibility of High-Strength Concretes in Columns**

F.N. Rad, Professor of Civil Engineering, Dept. of Civil Engineering, Portland State University, Portland, Oregon; G.J. Smith, Project Engineer, S.J. Groves & Sons Company, Contractors and Engineers, Loomis, California

### **Mix Proportioning Guidelines for High-Strength Concrete**

R.L. Carrasquillo, Associate Professor of Civil Engineering, University of Texas at Austin, Austin, Texas; J.E. Cook, V.P. Technical Services Division, Gifford-Hill & Co., Inc., Dallas, Texas

### **Twelve Years of Deformations in Water Tower Place**

H.G. Russell, Construction Technology Laboratories, Inc., Skokie, Illinois

### **Proportioning High-Strength Concrete to Control Creep and Shrinkage**

T.M. Collins, Civil Engineer, Twin City Testing Corp., St. Paul, Minnesota

### **Utilization of Steel Fibers for Improving the Ductility of Very High-Strength Silica Fume Concretes**

A.M. Paillere, Head, Durability Section, Laboratoire Central des Ponts et Chaussees, Paris, France; M. Buil, Research Engineer, Laboratoire Central des Ponts et Chaussees, Paris, France; J.J. Serrano, Senior Technician, Laboratoire Central des Ponts et Chaussees, Paris, France

### **Seismic Response of High-Strength Concrete Frames**

Mohammad R. Ehsani, Assistant Professor, University of Arizona, Dept. of Civil Engineering, Tucson, Arizona

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# AWARDS BREAKFAST

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THURSDAY, March 26, 1987

8:00 AM-10:00 AM

Room: Centro A-D, Convention Center

## AWARDS BREAKFAST

Cost: \$12.00

Come meet the awardees. Have fun, enjoy a good breakfast, and watch the multi-media awards presentation. Please purchase tickets before Wednesday.

SESSIONS

### AWARDS

#### Honorary Membership

Bertrand Goldberg

Jean M. Muller

Thomas Paulay

#### Henry C. Turner Medal

L. Leon Glassgold

#### Arthur R. Anderson Award

John E. Breen

#### Charles S. Whitney Medal

Stewart C. Watson

#### Joe W. Kelly Award

William J. Wilhelm

#### Roger H. Corbetta Concrete Constructor Award

Paul H. Sommers

#### Henry L. Kennedy Certificate

Joseph A. Dobrowolski

#### Alfred E. Lindau Award

James R. Clifton

Robert G. Mathey

#### Construction Practice Award

James M. Shilstone, Sr.

#### Raymond C. Reese Structural Research Award

Vitelmo V. Bertero

Ahmet E. Aktan

Finley A. Charney

Richard Sause

#### Wason Medal for Materials Research

William C. Stone

Bruce J. Giza

#### Wason Medal for the Most Meritorious Paper

Arthur H. Nilson

#### Chapter Activities Award

George C. Hoff

#### Maurice P. van Buren Award

Joseph S. Grossman

#### Delmar L. Bloem Awards for Distinguished Service

James L. Cope

David G. Manning

#### Reinforced Concrete Research Council

#### Arthur J. Boase Award

John E. Breen

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# GENERAL SESSION

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THURSDAY, March 26, 1987  
10:00 AM-12:00 NOON

Room: Mission Room,  
Convention Center

## GENERAL SESSION

**Session Chairman:** Saul Shenkman  
General Chairman  
1987 Annual Convention  
San Antonio Chapter

### Welcome to San Antonio

Saul Shenkman, General Chairman, 1987 Annual Convention, San Antonio Chapter

### Presentation of Certificates of Appreciation for the 1987 Annual Convention

### Introduction of International Visitors

### Recognition of Chapter Officers

### Recognition of Retiring Officers

### Recognition of Past Presidents Present

### Proposed Revision of Article X of the ACI Bylaws

### Presidential Address:

Walter E. Kunze, President, Construction Technology Laboratories, Inc., Skokie, Illinois

### Tellers Report

### Presentation of Memento to Retiring President

### Closing Remarks

SESSIONS

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# STANDARDS PRESENTATION

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**THURSDAY, March 26, 1987**

12:00 NOON-12:30 PM Room: **Mission Room Convention Center**

## STANDARDS PRESENTATION

SESSIONS

**Session Chairman:** T. E. Northup  
Manager, Engineering Dept.  
GA Technologies, Inc.  
San Diego, California

**Proposed ACI Standard: "Specification for Cold Weather Concreting (ACI 306.1)"**

Nicholas J. Carino, Chairman ACI Committee 306, National Bureau of Standards, Gaithersburg, Maryland



THURSDAY, March 26, 1987

2:00 PM-5:00 PM

Room: **Mission Room Convention Center****APPLICATIONS OF FERROCEMENT**

Sponsored by Committee 549

**Session Chairman:** Gordon Batson  
 Professor  
 Civil and Environmental Engineering  
 Clarkson University  
 Potsdam, New York

**Guide to the Design, Construction and Repair of Ferrocement**

Antoine E. Naaman, Professor of Civil Engineering, University of Michigan, Ann Arbor, Michigan; R. Zollo, Professor, Civil Engineering Dept., University of Miami, Coral Gables, Florida; M. Iorns, Ferrocement Consultant, West Sacramento, California

**Construction and Testing of Ferrocement Hypars Reinforced with Fiberglass**

Evan H. Curtis, U.S. National Park Service, Vienna, Virginia

**Ferrocement Shelter Making Technique**

Mikhail Linestsky, Inventor, Willowdale, Ontario, Canada

**Study of the Flexural Behavior and Design of Ferrocement I-Beams and Hollow Box Beams**

Ghazi J. Al-Sulaimani, Assistant Professor, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia; S. Farooq Ahmad, Structural Engineer, Mushtaq and Bilal Consulting Engineers, Karachi, Pakistan; Islem A. Basunbul, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

**Design Criteria for Ferrocement: Recommendation and Design Aids**

Antoine E. Naaman, Professor of Civil Engineering, University of Michigan, Ann Arbor, Michigan

**Analysis of Ferrocement Plates**

K.V.G. Prakhya, Research Student, Civil Engineering Dept., Cambridge University, Cambridge, England; S.R. Adidam, Professor, Dept. of Civil Engineering, Indian Institute of Technology, Kanpur, India

**In-Plane Shear Strength of Ferrocement**

Gordon Batson, Professor of Civil and Environmental Engineering, Clarkson University, Potsdam, New York; Michael Zicko, Engineer, Fort Miller Co., Inc., Fort Miller, New York

THURSDAY, March 26, 1987

2:00 PM-5:00 PM

Room: Plaza A-B Convention Center

## CONTROL OF CRACKING THROUGH PROPER CONSTRUCTION PRACTICE

Sponsored by Committee 224

**Session Chairman:** Grant T. Halvorsen  
Associate Professor  
West Virginia University  
Morgantown, West Virginia

### **Curing Control by Microcomputer**

Steinar Helland, Vice President, Selmer-Furuholmen A/S, Oslo, Norway

### **Cracks in Parking Structures**

Vladimir Novokshchenov, Senior Research Engineer, Construction Technology Laboratories, Inc., Skokie, Illinois

### **Analysis of Factors Related to Shrinkage Cracking in Reinforced Concrete Structures**

Masatoshi Nakanishi, Institute of Technology, Shimizu Construction Company, Ltd., Koto-Ku, Tokyo, Japan

### **Crack Resistance of Polymeric Fiber Reinforced Concrete**

Gary L. Vondran, Director of Research and Development, Fibermesh, Inc., San Jose, California

### **Control of Flexural Cracking with Epoxy-Coated Reinforcement**

Grant T. Halvorsen; K. Emman Nwobu; Pericles C. Stivaros; Dept. of Civil Engineering, West Virginia University, Morgantown, West Virginia

THURSDAY, March 26, 1987

2:00 PM-5:00 PM

Room: Plaza C-D Convention Center

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N**NONDESTRUCTIVE TESTING (PART I)**

Sponsored by Committee 228

**Session Chairman:** Philip T. Seabrook  
Vice President  
B.H. Levelton and Associates  
Vancouver, British Columbia, Canada

**Nondestructive Testing of In Situ Concrete for Properties Other Than Strength**

Kenneth R. Lauer, Professor, Dept. of Civil Engineering, University of Notre Dame, South Bend, Indiana

**Laboratory and Field Studies of the Impact-Echo Method for Flaw Detection in Concrete**

Mary Sansalone, Research Engineer, National Bureau of Standards, Gaithersburg, Maryland; Nicholas J. Carino, Research Engineer, National Bureau of Standards, Gaithersburg, Maryland

**Ultrasonic Pitch-Catch and Pulse-Echo Measurements in Concrete**

A. Michel Alexander, Research Physicist, USAE Waterways Experiment Station, Vicksburg, Mississippi; Henry T. Thornton, Supervisor, Research Physicist, USAE Waterways Experiment Station, Vicksburg, Mississippi

**Evaluation of Concrete Using Radiation Attenuation**

Michael A. Taylor, Dept. of Civil Engineering, University of California, Davis, California

**Diagnostics of Cracks in Concrete Based on Acoustic Emission**

Masayasu Ohtsu, Associate Professor, Dept. of Civil Engineering, Kumamoto University, Kumamoto, Japan

**Application of Acoustic Emission and Laser Holography to Study Microfracture in Concrete**

S.P. Shah, Professor, Dept. of Civil Engineering, Northwestern University, Evanston, Illinois; A.K. Maji, Graduate Assistant, Dept. of Civil Engineering, Northwestern University, Evanston, Illinois

SESSIONS

**NOTE:**

Part II will be presented on Friday, March 27, 1987 at 9:00 AM-12:00 NOON in River Room A in the Convention Center.

THURSDAY, March 26, 1987

2:00 PM-5:00 PM

Room: River Room B Convention Center

## ACI CERTIFICATION OF CONCRETE CONSTRUCTION INSPECTORS

Sponsored by Committees E902 and 311

**Session Chairman:** Russell T. Flynn  
Technical Service Manager  
General Portland, Inc.  
Tampa, Florida

SESSIONS

### A New Guide for Concrete Inspection Programs

Roger Wilson, Manager, Education and Training, Portland Cement Association, Skokie, Illinois

### Batch Plant Inspection and Field Testing of Ready-Mixed Concrete

Claude E. Jaycox, President, Municipal Testing Laboratories, Inc., Hicksville, New York

### The ACI Certification Program

Ronald H. Hall, Partner, Concrete Solutions, Inc., Salt Lake City, Utah

### Certification of Concrete Construction Inspectors - Grade II

Russell T. Flynn, Technical Service Manager, General Portland Inc., Tampa, Florida

### Training Materials - Panel Discussion

THURSDAY, March 26, 1987

2:00 PM-5:00 PM

Room: River Room A Convention Center

## STATE-OF-THE-ART COMPUTER APPLICATIONS (PART I)

Sponsored by Committee 118

**Session Chairman:** Victor E. Saouma  
Assistant Professor of Civil Engineering  
University of Colorado  
Boulder, Colorado

### Computer-Aided Design Tools in the Corps of Engineers for Concrete Structures

N. Radhakrishnan, Supervisor, Research Civil Engineer, USAE Waterways Experiment Station, Vicksburg, Mississippi

### Computer Analyses of Time-Dependent Behavior of Continuous Precast, Prestressed Bridges

Joseph D. Glikin, Senior Structural Engineer, Construction Technology Laboratories, Inc., Skokie, Illinois; Ralph G. Oesterle, Manager, Analytical Design Section, Construction Technology Laboratories, Inc., Skokie, Illinois

### Prediction of Shear Failure Modes in Concrete Structures Using Nonlinear Finite Element Analysis

Robert H. Iding, Consultant, Wiss, Janney, Elstner Associates, Inc., Emeryville, California; Boris Bresler, Principal, Wiss, Janney, Elstner Associates, Inc., Emeryville, California; Susan P. Dawson, Engineer, Wiss, Janney, Elstner Associates, Inc., Emeryville, California

### Substructure Modeling of Two-Way Slab Systems

Fernando E. Fagundo, Associate Professor, University of Florida, Gainesville, Florida; Marc Hoit, Assistant Professor, University of Florida, Gainesville, Florida; Trey Hamilton, Structural Engineer, Bodo & Associates, Inc., Gainesville, Florida

### A Graphics Preprocessor for IDECS

C. Penquena; F. Fagundo; Dept. of Civil Engineering, University of Puerto Rico, Mayaguez, Puerto Rico

SESSIONS

#### NOTE:

Part II will be presented on Friday, March 27, 1987 at 9:00 AM-12:00 NOON in River Room B in the Convention Center.

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**FORUM**

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**THURSDAY, March 26, 1987**

7:30 PM-10:00 PM

Room: Hilton - El Mirador

## **FORUM: LIGHTWEIGHT INSULATING CONCRETE**

Sponsored by Committee 123

**Session Chairman:** Robert Henry  
Consultant  
Wiss, Janney, Elstner Assoc.  
Arlington, Texas

**Moderator:** Leo Legatski  
President  
Elastizell Corp. of America  
Ann Arbor, Michigan

**SESSIONS**

### **Cellular Concrete and Living Comfort**

George Ford, Consultant, Florida Celcore, Inc., Fort Lauderdale, Florida

### **Precast Panel Applications**

Lester Gorsline, Owner, Neopor Inc., Half Moon Bay, California

### **Housing Applications in Malaysia**

Ron Vogt, Owner, R.W. Vogt & Associates, Melbourne, Australia

### **A Cast-In-Place Wall System**

Leo Legatski, President, Elastizell Corp. of America, Ann Arbor, Michigan

**FRIDAY, March 27, 1987**

9:00 AM-12:00 NOON

Room: **VIP Room Convention Center**

## **FIBER REINFORCED CONCRETE**

Sponsored by Committee 544

**Session Co-Chairmen:** Gordon Batson  
Professor  
Civil Engineering Dept.  
Clarkson University  
Potsdam, New York

Surendra P. Shah  
Professor  
Civil Engineering Dept.  
Northwestern University  
Evanston, Illinois

### **A Fundamental Study of the Mechanism of Hybrid-Type Fiber Reinforced Concrete**

Masatoshi Nakanishi, Chief Research Engineer, Institute of Technology, Shimizu Construction Company, Koto-Ku, Tokyo, Japan

### **An Experimental Study of Synthetic Fiber Reinforced Cementitious Composites**

Y. Wang, Graduate Student, Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts; Victor C. Li, Professor of Civil Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts; Stanley Backer, Professor, Mechanical Engineering Department, Massachusetts Institute of Technology, Cambridge, Massachusetts

### **Properties of Lightweight Fiber Reinforced Concrete**

P. Balaguru, Associate Professor of Civil Engineering, Rutgers University, Piscataway, New Jersey; V. Ramakrishnan, Professor of Civil Engineering, South Dakota School of Mines and Technology, Rapid City, South Dakota

### **Flexural Fatigue Strength of Steel Fiber Reinforced Concrete**

V. Ramakrishnan, Professor of Civil Engineering, South Dakota School of Mines and Technology, Rapid City, South Dakota; Gary B. Oberling, Structural Engineer, DMJM Phillips-Reister Haley, Inc., Denver, Colorado

FRIDAY, March 27, 1987

9:00 AM-12:00 NOON

Room: River Room A Convention Center

## NONDESTRUCTIVE TESTING (PART II)

Sponsored by Committee 228

**Session Chairman:** H.S. Lew  
Leader, Structural Evaluation Group  
National Bureau of Standards  
Gaithersburg, Maryland

SESSIONS

### **In-Place Methods for Determination of Strength of Concrete**

John A. Bickley, Vice President, Concrete Division, The Trow Group Ltd., Brampton, Ontario, Canada

### **In-Place Evaluation of Shotcrete**

Ramond Schutz; Materials Consultant, Waupun, Wisconsin

### **Comparative Evaluation of Nondestructive Test Methods for In-Place Strength Determination**

Choul Ho Yun, Head of Structural Systems, Dept. of Nuclear Safety Center, Korea Advanced Energy Research Institute, Daedukdanji, Chung-Nam, Korea; Kang Ryong Choi, Researcher of Structural Systems, Dept. of Nuclear Safety Center, Korea Advanced Energy Research Institute, Daedukdanji, Chung-Nam, Korea; Young Chul Song, Senior Researcher, Dept. of Civil/Architectural Engineering, Korea Electric Power Corp. Research Center, Dea Jeon City, Korea; Sang Yun Kim, Researcher of Structural Systems, Dept. of the Nuclear Safety Center, Korea Advanced Energy Research Institute, Daedukdanji, Chung-Nam, Korea

### **The Use of Simultaneous Nondestructive Tests to Predict the Compressive Strength of Concrete**

George Teodoru, Professor, Institute of Tropica Technology, Cologne, Koln, West Germany

### **Nondestructive Use in Evaluating the Form Removal Time for a Large Diameter Tunnel Concrete Lining**

Roy Harrell, Senior Engineer, Southern Electric International, Inc., Birmingham, Alabama

### **A Statistical Study of the Correlation between Field Penetration Strength and Field Cylinder Strength**

P. Zoltanetzky, Jr., Chief of Plant Operations, Dept. of Environmental Protection, New York, New York; H.P. Lim, Senior Vice President, Chief Executive Officer, Michael Baker Jr. of New York, North White Plains, New York; Clifford Gordon, Consultant, CRS Sirrinc Inc., New York, New York



FRIDAY, March 27, 1987

9:00 AM-12:00 NOON

Room: River Room B Convention Center

## STATE-OF-THE-ART COMPUTER APPLICATIONS (PART II)

Sponsored by Committee 118

**Session Chairman:** Victor E. Saouma  
Assistant Professor of Civil Engineering  
University of Colorado  
Boulder, Colorado

### Computer Aided Design of Reinforced Concrete

Michael Jones, Graduate Research Assistant, University of Colorado, Boulder, Colorado; Michael Sikiotin, Graduate Research Assistant, University of Colorado, Boulder, Colorado

### Elastic Foundation and Circular Tank Design

R. Sheth, Project Engineer, Kupper Associates, Piscataway, New Jersey

### An Automatic Quantitative Image Analysis System for Cement and Concrete Research

Dexiang Shi, Civil Engineering Dept., Purdue University, West Lafayette, Indiana

### A Three-Dimensional Stability Analysis/Design Computer Program for Concrete Monolithic Structures

Fred T. Tracy, Chief, Computer Science Group, Information Technology Laboratory, Vicksburg, Mississippi

### The Maintenance and Implementation of an Expert System for Durable Concrete

Lawrence J. Kaetzel, Computer Specialist, National Bureau of Standards, Center for Building Technology, Gaithersburg, Maryland; James R. Clifton, Group Leader, Inorganic Materials, National Bureau of Standards, Center for Building Technology, Gaithersburg, Maryland

### A Short History of the NSPE/PEC Bulletin Board

John Pepper, Vice President, Gopman-Pepper Associates, Inc., North Miami Beach, Florida

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# SPOUSE PROGRAM

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## Spouse Hospitality Room — La Vista-Hilton Hotel

Welcome to the ACI 1987 Annual Convention. The ACI San Antonio Local Chapter is looking forward to meeting you in the Spouse Hospitality Room: La Vista. Join us for coffee and pastries sponsored by the San Antonio ACI Chapter.

### SUNDAY, March 22, 1987

- 1:00 PM- 5:00 PM    **Spouse Registration —**  
200 Lounge Convention Center
- 5:30 PM- 7:00 PM    **Opening Reception — Hilton - Corte Real**  
Sponsored by the ACI San Antonio Chapter

### MONDAY, March 23, 1987

- 8:30 AM- 3:00 PM    **Hospitality Room — Hilton - La Vista**  
A hostess is available to register new guests and to answer your questions. Coffee and pastries served from 8:30 AM to 10:00 AM.
- 10:00 AM-11:00 AM    **Orientation Program — Hilton - La Vista**
- 3:00 PM- 5:00 PM    **Spouse Wine & Cheese Open House — Hilton**  
Hosted by Mrs. Frances Kunze in her hotel suite. Please check with the hostess for exact location. We are unable to publish suite numbers in advance.

### TUESDAY, March 24, 1987

- 8:30 AM- 3:00 PM    **Hospitality Room — Hilton - La Vista**  
Coffee & pastries served 8:30 AM to 10:00 AM
- 8:00 AM- 6:00 PM \*    **"South of the Border"**  
**Meet: Hilton - La Vista**  
Join us for a light breakfast on the bus as we head for an enchanting getaway to Old Mexico. Enjoy a scenic drive to the fun shops and quaint plazas of Nuevo Laredo, Mexico. A local guide will help you find the best buys and recommend luncheon locations (Lunch on your own). On your way home you will enjoy refreshing margaritas! (U.S. citizens need proper proof of I.D. Non-U.S. citizens need a multiple entry permit & passport.)  
\$28.00 per person
- 10:00 AM- 1:00 PM \*    **"Mission and Heritage Tour"**  
**Meet: Hilton - La Vista**  
Enjoy the history of San Antonio. Visit Mission San Jose, the Alamo, and the city of La Villita. You will also stop at the Mexican shopping market, El Mercado, before returning to the hotel. \$12.00 per person

**WEDNESDAY, March 25, 1987**

- 8:30 AM- 3:00 PM     **Hospitality Room — Hilton - La Vista**  
Coffee & pastries served 8:30 AM to 10:00 AM
- 9:00 AM-12:30 PM \*     **"Historical San Antonio Tour"**  
**Meet: Hilton - La Vista**  
A morning of discovery! Visit the Fort Sam Houston Quadrangle (birthplace of military aviation), King William residential district (elegant 19th century homes), Lone Star Brewery (see the Buckhorn Hall of Horns), the Yturri Edmonds home (simple life of centuries past), and the Institute of Texan Culture. \$15.00 per person
- 6:30 PM- 8:00 PM     **Concrete Mixer —**  
**River Court Convention Center**

**THURSDAY, March 26, 1987**

- 8:30 AM- 3:00 PM     **Hospitality Room — Hilton - La Vista**  
Coffee & pastries served 8:30 AM to 10:00 AM
- 8:00 AM-10:00 AM     **Awards Breakfast —**  
**Centro A Convention Center**
- 10:00 AM-  
12:00 NOON     **General Session —**  
**Mission Room Convention Center**  
All are invited to attend this business meeting of the Institute
- 1:00 PM- 2:30 PM \*     **"Lunch on the River Barge"**  
**Meet: Hilton - La Vista**  
The serene little San Antonio River that meanders through the heart of downtown is the setting for a delightful lunch with friends. \$18.00 per person

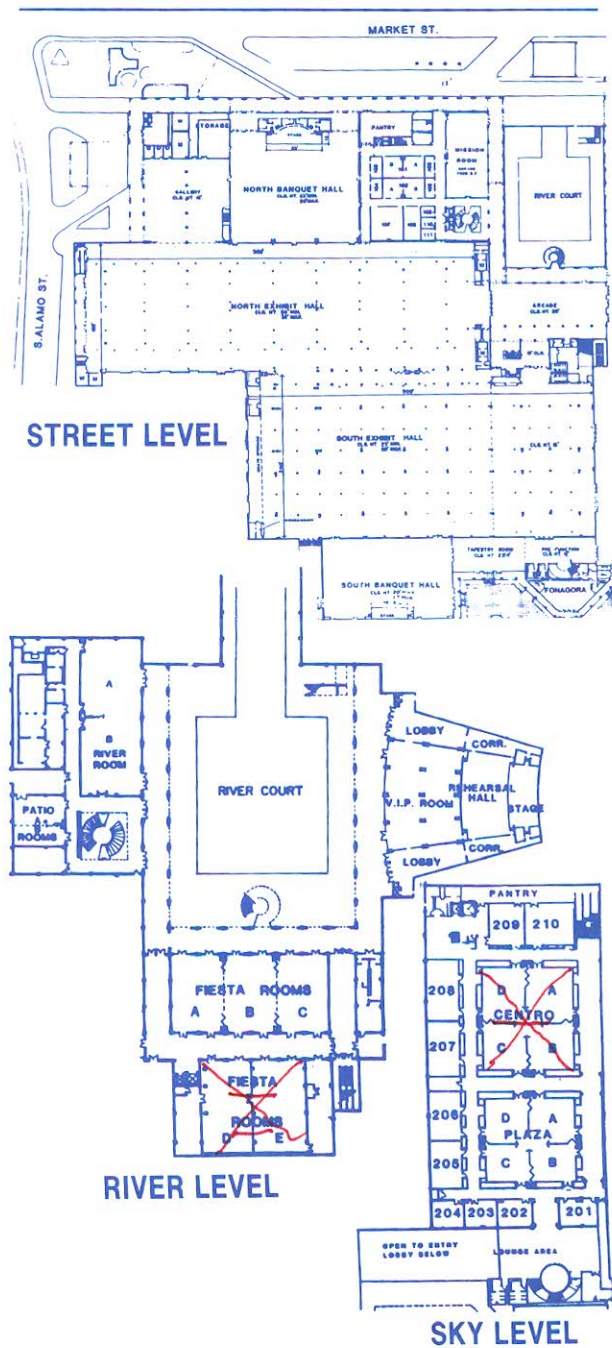
**FRIDAY, March 27, 1987**

- 8:30 AM-10:00 AM     **Hospitality Room — Hilton La Vista**  
Coffee & pastries served 8:30 AM to 10:00 AM

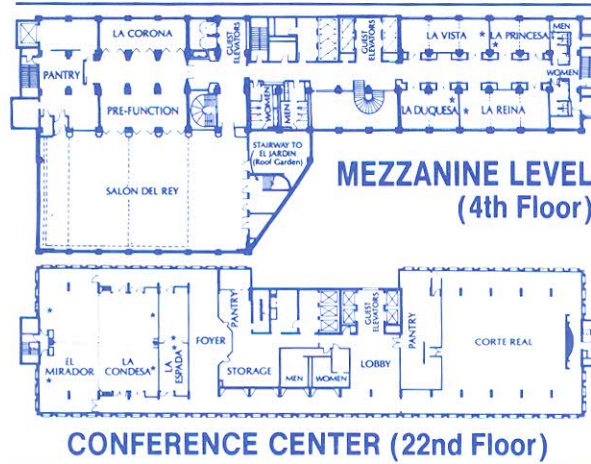
**\* NOTE:**

Please congregate for all tours in the spouse hospitality room at the Hilton Hotel.

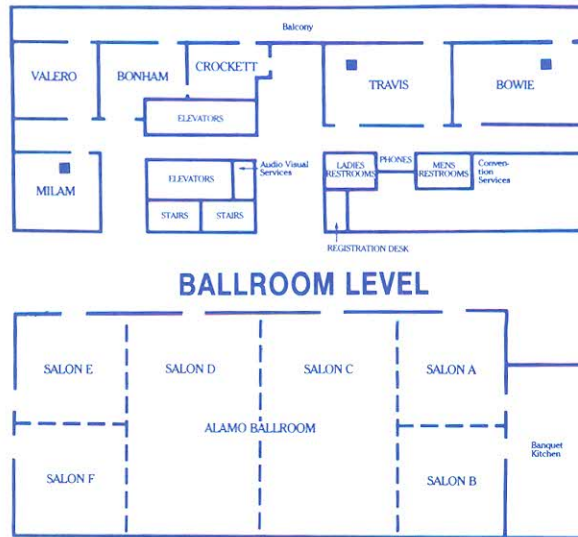
# FLOOR PLAN CONVENTION CENTER



# FLOOR PLAN HILTON HOTEL (Palacio del Rio Hilton Hotel)

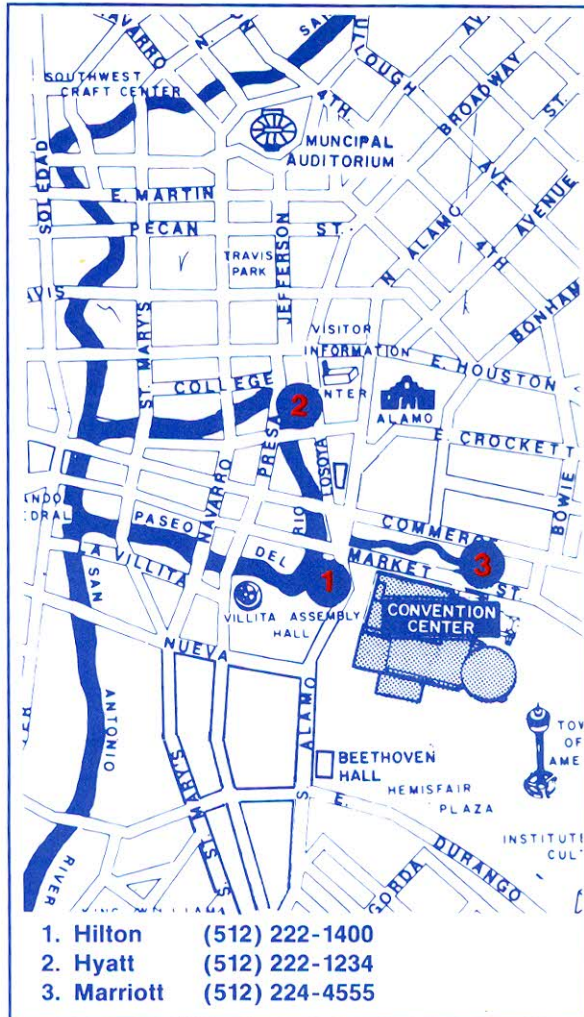


# FLOOR PLAN MARRIOTT HOTEL



Note: Austin Room is located on the Pool level.

# CITY MAP



*American Concrete Institute  
Convention Department  
P.O. Box 19150  
Detroit, Michigan 48219  
(313) 532-2600*