

program

# AMERICAN CONCRETE INSTITUTE

61st Annual Convention



MARCH 1-4, 1965 SHERATON-PALACE HOTEL SAN FRANCISCO, CALIFORNIA

## **BOARD OF DIRECTION**

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WILLIAM A. MAPLES

# TECHNICAL ACTIVITIES COMMITTEE

(In charge of convention program and of technical publications)

J. J. SHIDELER, Chairman

BRYANT MATHER, Ex-Officio

WILLIAM A. MAPLES, Secretary\*

ARTHUR R. ANDERSON

S. D. BURKS

G. E. BURNETT'

A. T. HERSEY

CLYDE E. KESLER

PAUL F. RICE

#### \* Address

#### AMERICAN CONCRETE INSTITUTE

P.O. Box 4754, Redford Station Detroit, Michigan 48219

## CONVENTION REGISTRATION

Monday — Thursday, March 1-4 8:00 a.m. — 5:00 p.m. in South Lobby, Main Floor

# Registration Fee — \$5.00

All ladies and **registered** nonmember visitors are welcome to attend technical sessions, Awards Luncheon, and social activities.

See bulletin board in registration area for special announcements.

# TECHNICAL COMMITTEE CHAIRMEN BREAKFASTS

- 7:30 a.m. Monday Breakfast for chairmen of 300 Group Technical Committees (by invitation) in English Room.
- **7:30 a.m. Tuesday** Breakfast for chairmen of 400 Group Technical Committees (by invitation) in English Room.

Note: No special breakfasts scheduled for chairmen of 100, 200, and 500 Group Technical Committees

# **NOTES FOR PROGRAM PARTICIPANTS**

- 7:30 a.m. Wednesday Breakfast for program participants (by invitation) in English Room.
- **8:00 a.m. Thursday** Breakfast for Research Session participants (by invitation) in English Room.

Upon recognition by the Chairman, a discusser will please state his name and company affiliation distinctly and go to the nearest microphone so that he may be heard by all.

A "Convention Review" will be published in the News Letter section of the May 1965 ACI JOURNAL.

# ACI CONVENTION AND PRESS HEADQUARTERS

Convention Office, South Corridor, Main Floor

### SPECIAL EVENTS

A door prize will be awarded at the six convention sessions, courtesy of the Northern California Chapter. These drawings are in addition to the daily door prizes given in conjunction with the Technical-Educational Exhibits.

- **Technical-Educational Exhibits** . . . Monday through Thursday in the Rose Room. Have your program card (inside back flap) stamped to qualify for valuable door prizes.
- Photographic Exhibit of unusual and outstanding concrete structures, Monday through Thursday.
- **Ladies Program** . . . See schedule elsewhere in this program book.
- **Architectural Design Competition** . . . Winning sketch and four honorable mention entries on display beginning Tuesday.
- Cocktail Party . . . 6:30 p.m., Tuesday, Gold Ballroom, compliments of the local committee.
- University of Illinois Alumni Breakfast . . . 8:00 a.m., Wednesday, Comstock Room. Tickets, \$2.85 each, are available from alumni and University of Illinois staff members.
- Awards Luncheon and Installation of new ACI Officers . . . 12:15 p.m., Wednesday, Ralston Room. Purchase tickets by 9:30 a.m., Wednesday at the convention registration desk. \$4.75 per person.
- PCA Alumni Association . . . 5:00 p.m., Wednesday, Rooms 260-262.
- Wine Tasting Party . . . 6:00-8:00 p.m., Wednesday, Ralston Room, compliments of the local committee and the Almaden Vineyards.

## TECHNICAL COMMITTEE MEETINGS

All meetings are open except those indicated as executive or closed sessions. Meeting topics are in italics. Check Bulletin Board in registration area for changes or for technical committee meetings not listed here.

# Sunday Afternoon, February 28 2:00 p.m. - 5:00 p.m.

Lightweight Aggregates and Lightweight Aggre-

Meeting Room

Committee

gate Concrete

213

		gate Coliciete	49 61
		Monday Morning, March 1 9:00 a.m 12:00 Noon	
	-	Board Committee on Coordination in crete Industry (Closed meeting)	the Con- 214
	_	Ad Hoc Committee on Cracking ( Symposium for 1966 Convention)	Planning 49'er
	118	Use of Computers (Publication; future sium; first principles code for computer on design)	
	209	Creep and Volume Changes in Concret	e Regency
	211	Recommended Practice for Proportion crete Mixes	
	214	Evaluation of Results of Strength Tests crete (Task group reports; proposed	
		revisions)	262
	307	Design and Construction of Reinforced Chimneys (Draft of proposed specificat	
	313	Concrete Bins and Silos (Reorganiza sumption of work)	tion; re- 260
	340	Ultimate Strength Design Handbook meeting)	(Closed Parlor C
:	344	Circular Prestressed Concrete Structures	s (Closed Parlor D
. :	349	Criteria for Nuclear Containment Vesse	els 210
4	421	Design of Reinforced Concrete Slabs, Jo	
		ASCE (Development of new design red dations)	commen- Comstock
4	126	Shear and Diagonal Tension, Joint Ad	CI-ASCE
		(Subcommittee reports; research on	
		shear)	Concert
4	143	Concrete Bridge Design (Closed meeting)	Parlor E
5	504	Joint Sealants (Final draft of committee Gold	e report) len Gate

Com	mittee Meeting Room		Monday Evening, March 1		
506	Application of Mortar by Pneumatic Pressure (Discussion of fourth draft) French Parlor		5:00 p.m.		
516	High Pressure Steam Curing (New committee assignment) Concert	Comm	nittee Meeting Room		
523	Insulating and Cellular Concretes (Third drafts of Recommended Practice for Low Density Concrete)  California		ACI-PCI Liaison Committee (Closed meeting) Golden Gate		
	Monday Afternoon, March 1		Monday Evening, March 1		
	2:00 p.m 5:00 p.m.		7:00 p.m.		
_	Chapter Forum Concert Board Committee on International Activities (Closed meeting) Parlor D	408	Bond Stress (Subcommittee & research reports) Comstock		
115 117	Research (Executive committee only) Parlor C Tolerances (1965 work) 264	441	Reinforced Concrete Columns (Subcommittee activities; research reports; future publications & sessions) Regency		
118	Use of Computers (continuation of morning session)  Parlor G	515	Coatings for Concrete (Recommended Practice)		
207	Mass Concrete (Draft of committee report, Principles Applied to Mass Concrete Construc- tion) Comstock		49'er		
301	Specifications for Structural Concrete (Final		Tuesday Morning, March 2		
200	review of specifications; future work) 49'er		9:00 a.m 12:00 Noon		
309	Consolidation of Concrete (Committee report; recent developments & current research)	103	Monographs (Closed meeting) Parlor C		
311	Bonanza Inspection of Concrete (Inspection Manual; pro-	201	Durability of Concrete in Service (Recom- mended practice) Comstock		
311	posed Inspection Code; papers for publication) Golden Gate	212	Admixtures (Committee work) Concert		
318	Standard Building Code (Closed meeting) Regency Design of Structural Plain Concrete (Final draft	216	Fire Resistance and Fire Protection of Structures (Proposed Guide; future work on time temperature curve & fire test; survey of fires & experience)  French Parlor		
325	of committee report) 214 Structural Design of Concrete Pavements for Highways and Airports (Subgrade & subbase,	302	Concrete Floor Finishes (Closed meeting) Parlor D		
	prestress, continuous pavements, overlays; preparation of Standards) 260	305	Hot Weather Concreting (Outline of revised standard) Regency		
345	Concrete Bridge Decks (bridge deck problems; future activities)  French Parlor	316	Specifications for Concrete Pavements and Bases (Organization of subcommittees) 260		
437	Strength Evaluation of Existing Concrete Structures (Report of Subcommittee 1) 262	334	Concrete Shell Structures 49'er		
443	Concrete Bridge Design (Closed meeting) Parlor E	435	Deflection of Concrete Building Structures (Redraft of committee report; progress of subcommittee report)  California		
523	Insulating and Cellular Concretes (continuation of morning session)  California	437	Strength Evaluation of Existing Concrete Struc-		
531	Structures of Concrete Masonry Units (Review of bibliography; design recommendations)  Concert	441	Reinforced Concrete Columns (Continuation of Monday evening session) Golden Gate		

Comm	nittee Meeting Room	
443	Concrete Bridge Design (Closed meeting)	
	Parlor E	
503	Adhesives for Concrete (Guide expansion; research developments; specifications) Bonanza	
512	Precast Structural Concrete Design and Con- struction, Joint ACI-ASCE (Draft of recom- mended practice) Concert	
543	Concrete Piles (Closed meeting) 264	
	Tuesday Afternoon, March 2	
	2:00 p.m 5:00 p.m.	
116	Nomenclature Golden Gate	
215	Fatigue of Concrete (Current research) Concert	
216	Fire Resistance and Fire Protection of Structures (continuation of morning session)	
	French Parlor	
221	Aggregates (Alkali carbonate reaction; freezing & thawing)  Parlor C	
318	Standard Building Code (Closed meeting)	
	Regency	
332	Recommended Practice for Residential Concrete Work (Closed meeting) Parlor G	
334	Concrete Shell Structures 49'er	
347	Formwork for Concrete (Revisions to Recom- mended Practice; precast concrete; formwork failures) California	
348	Structural Safety (Exploratory discussions) Bonanza	
423	Prestressed Concrete, Joint ACI-ASCE (Closed	
	meeting) 260	
437	Strength Evaluation of Existing Concrete Structures (continuation of morning session) 262	
439	High-Strength Reinforcement in Concrete Comstock	
442	Lateral Forces on Multistory Frames (Closed meeting) Parlor D	
503	Adhesives for Concrete (Closed meeting) Parlor E	
506	Application of Mortar by Pneumatic Pressure (Closed meeting) 214	
533	Precast Panels (Committee report) Concert	
543	Concrete Piles (Closed meeting) 264	

# **Tuesday Evening, March 2** 6:30 p.m.

Cocktail Party in the Gold Ballroom, compliments of the local committee.

# Wednesday Evening, March 3 7:00 p.m.

# **Meeting Room** Committee

- Design and Construction of Composite Struc-333 tures, Joint ACI-ASCE (Closed meeting) 49'er
- Publications Committee of Reinforced Concrete Research Council (Closed meeting) Parlor E

# Thursday Evening, March 4 7:00 p.m.

Executive Committee of Reinforced Concrete Research Council (Closed meeting)

# Friday Morning, March 5 8:30 a.m.

Executive Committee of Reinforced Concrete Research Council (Closed meeting) Golden Gate



# FIRST GENERAL SESSION

9:30 a.m. - 12:00 Noon

Gold Ballroom

CHAIRMAN S. D. Burks

General Chairman
San Francisco Convention

& Manager, Rock Products Chemicals-West Dewey and Almy Chemical Division W. R. Grace & Company San Leandro, California

**Presidential Address** 

Bryant Mather President, ACI

& Chief, Engineering Sciences Branch, Concrete Division U. S. Army Engineer Waterways Experiment Station, Corps of Engineers Jackson, Mississippi

Proposed ACI Standard: Recommended Practice for Selecting Proportions for No-Slump Concrete **Paul Klieger** 

Chairman, Subcommittee 2 of Committee 211

& Manager, Applied Research Section Portland Cement Association Research and Development Laboratories Skokie, Illinois

Technical Committee Progress Reports

Moderated by Samuel J. Henry

Technical Director

American Concrete Institute Detroit, Michigan

Committee 103, Monographs

G. E. Burnett

Chairman, Committee 103

& Chief Research Scientist U. S. Bureau of Reclamation Denver, Colorado

Committee 340, Ultimate Strength Design Handbook **Edward Cohen** 

Chairman, Committee 340

& Associate Ammann and Whitney Consulting Engineers New York, New York

Committee 408, Bond Stress

Phil M. Ferguson

Chairman, Committee 408

& Professor of Civil Engineering University of Texas Austin, Texas

Committee 531, Structures of Concrete Masonry Units

R. O. Hedstrom

Chairman, Committee 531

Associate Development Engineer Portland Cement Association Research and Development Laboratories Skokie, Illinois Wednesday, March 3

## **AWARDS LUNCHEON**

12:15 p.m. RALSTON ROOM

#### **ELECTION TO HONORARY MEMBERSHIP**

FRANCO LEVI DOUGLAS MCHENRY

## **HENRY C. TURNER MEDAL to**

DOUGLAS MCHENRY

"For leadership in new developments in structural concepts in concrete"

#### ALFRED E. LINDAU AWARD to

FELIX CANDELA

"For advanced design and imaginative construction of a wide range of concrete shell structures"

#### **HENRY L. KENNEDY AWARD to**

WALTER H. PRICE

"For long-time enthusiastic participation in technical committee and administrative activities of the Institute"

#### WASON MEDAL FOR RESEARCH to

THOMAS T. C. HSU, FLOYD O. SLATE, GERALD M. STURMAN, GEORGE WINTER, AND STANLEY OLSEFSKI

For the following papers:

"Microcracking of Plain Concrete and the Shape of the Stress-Strain Curve," by Thomas T. C. Hsu, Floyd O. Slate, Gerald M. Sturman, and George Winter, ACI JOURNAL, February 1963 "Mathematical Analysis of Shinkage Stresses in a Model of Hardened Concrete," by Thomas T. C. Hsu, ACI JOURNAL, March 1963

"Tensile Bond Strength Between Aggregate and Cement Paste or Mortar," by Thomas T. C. Hsu and Floyd O. Slate, ACI JOUR-NAL, April 1963

"X-rays for Study of Internal Structures and Microcracking of Concrete," by Floyd O. Slate and Stanley Olsefski, ACI JOUR-NAL, May 1963

# WASON MEDAL FOR "THE MOST MERITORIOUS PAPER" to J. A. HANSON

For his paper "Optimum Steam Curing Procedures in Precasting Plants" published in the ACI JOURNAL, January 1963

#### CONSTRUCTION PRACTICE AWARD to

JAMES B. LYTTLE

For his paper "Unique Roof Construction at Dulles Airport" published in the ACI JOURNAL, July 1963

Announcement of Student Winners in Architectural Design Competition

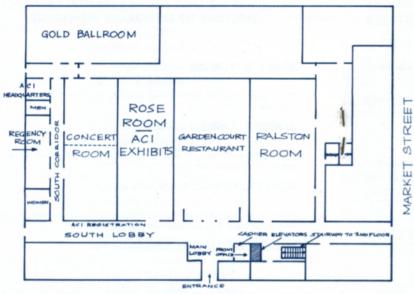
**Recognition of Retiring Officers** 

Report of Tellers and Introduction of New Officers

**Presentation of Memento to Retiring President** 

# **ROOM LOCATOR MAP FOR SHERATON-PALACE HOTEL**

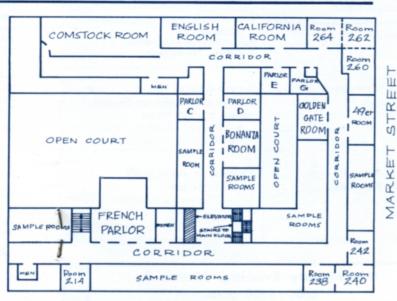
# MAIN FLOOR



Note: Rooms 210 and 220 are not shown on this floor plan, but they are located on Second Floor.

NEW MONTGOMERY STREET

# SECOND FLOOR



NEW MONTGOMERY STREET

CONCURRENT	
SYMPOSIUM ON USE OF COMPUTERS  2:30 p.m. – 5:30 p.m.  Concert Room	CHAIRMAN A. M. Lount Chairman ACI Committee 118 & President, A. M. Lount & Associates & Enelco Ltd. Toronto, Ontario
Statistical Quality Control	H. A. Radzikowski Deputy Director for Development Office of Research and Development Bureau of Public Roads Washington, D. C.
Computers and Thin Shell Analysis	D. P. Billington Associate Professor of Civil Engineering Princeton University Princeton, New Jersey
Automatic Data Processing for Reinforcing Bar Estimating, Detailing, and Shop-Order Entry	William C. Black Chief Engineer Reinforcing Bars and Construction Specialties Bethlehem Steel Corporation Bethlehem, Pennsylvania
Design of Highway Bridges and Highways	Andre Bonnet Bridge and Highway Engineer Ministry of Public Works and Transport Paris, France
Computer Analysis and Design of Flat-Slabs and Plates	Richard D. McConnell Chief Engineer Fortune Engineering Associates & Partner, ASDEC Alexandria, Virginia

# Wednesday Evening, March 3 6:00 - 8:00 p.m.

Wine Tasting Party in Ralston Room, compliments of the local committee and the Almaden Vineyards.

# CONCURRENT SESSION SYMPOSIUM ON SHOTCRETE 2:30 p.m. - 5:00 p.m.

Gold Ballroom

Shotcrete as a Construction Material

**Dry-Mix Shotcrete Placement** 

**Wet-Mix Shotcrete Practice** 

Structural Quality Lightweight Shotcrete

**Shotcrete Repairs** of Waterfront Substructures

**Laboratory Study** of Shotcrete

# **CHAIRMAN**

Thomas J. Reading Chairman **ACI Committee 506** 

### Thomas J. Reading Chief Materials Engineer Missouri River Division, U. S. Army Corps of Engineers

Theodore R. Crom President The Crom Corporation

Omaha, Nebraska

Gainesville, Florida

Theodore A. Hoffmeyer Senior Engineer

Department of Plant Services University of Minnesota Minneapolis, Minnesota

Philip D. Barnard

# District Manager Southern Inspection Service, Inc. Houston, Texas

Robert E. Tobin Director of Engineering Ridgelite Products, Inc. Los Angeles, California

Paul J. Fluss **Testing Engineer** 

Glenn E. Gibson Construction Supervisor San Francisco Port Authority San Francisco, California

**Albert Litvin** Senior Development Engineer

J. J. Shideler Director of Technical Information Portland Cement Association Research and Development Division Skokie, Illinois

# CONCURRENT SESSION CONSTRUCTION SESSION

9:30 a.m. - 12:00 Noon

Ralston Room

## CHAIRMAN Robert F. Adams

President, ACI Northern California Chapter

& Supervisor of Concrete Laboratory California Department of

Water Resources Sacramento, California CONCURRENT SESSION

SESSION ON REINFORCED CONCRETE COLUMNS

9:30 a.m. - 12:00 Noon

Gold Ballroom

CHAIRMAN **Boris Bresler** Chairman **ACI-ASCE Committee 441** 

# **Reinforced Concrete Chimney** at Oak Ridge, Tennessee

Arthur B. Cassidy

Manager Chimney Division

D. W. MacDonald

Chimney Construction Superintendent

M. W. Kellogg Company New York, New York

**Everette W. Osgood** 

Aetron-Blume-Atkinson

Palo Alto, California

James Keith

**Brief Report on Committee** Activities

**Boris Bresler** Professor of Structural Engineer-

ing and Structural Mechanics University of California Berkeley, California

The Reinforced Concrete Column in Perspective

Mete A. Sozen

Professor of Civil Engineering University of Illinois

Urbana, Illinois

Bengt B. Broms

Director

Royal Swedish Geotechnical Institute Stockholm, Sweden

Roger Diaz de Cossio Research Professor and Head

of Graduate Division National University of Mexico

Mexico City, Mexico

Ignacio Martin Vice President

SACMAG International, Inc. San Juan, Puerto Rico

Concrete Lining of the San Luis Canal

Construction of the

the Stanford Linear

**Accelerator Center** 

Accelerator Housing at

Max R. Johnson **Associate Project Construction** 

Engineer

San Luis Unit of the Central Valley Project U. S. Bureau of Reclamation Los Banos, California

**Review of Design Criteria** for Tied Reinforced Concrete Columns

Ignacio Martin

Vice President SACMAG International, Inc. San Juan, Puerto Rico

J. G. MacGregor Associate Professor of Civil

Engineering University of Alberta Edmonton, Alberta, Canada

(Continued)

# **Bell-Pier Construction: Recent Developments** and Trends

Ben C. Gerwick, Jr. President Ben C. Gerwick, Inc. San Francisco, California

# Capacity of Restrained **Eccentrically Loaded Long** Columns

#### Alfred L. Parme Principal Engineer Advanced Engineering Group Portland Cement Association Chicago, Illinois

# An Investigation of the Long Concrete Column in a Frame Subjected to Lateral Load

# John E. Breen Assistant Professor of Civil Engineering

## Phil M. Ferguson Professor of Civil Engineering University of Texas Austin, Texas

#### **NOTES**

# RESEARCH SESSION

# 2:00 p.m. - 5:00 p.m.

### Gold Ballroom

**Physical Factors** 

This annual open meeting of ACI Committee 115, Research, differs from general sessions in that the information is not released for publication. Request is made that the proceedings be regarded as CONFIDENTIAL.

#### **CHAIRMAN**

### William A. Cordon

(Chairman, ACI Committee 115) Associate Professor of Civil and Irrigation Engineering Utah State University Logan, Utah

# Stephen J. Chamberlin

(Secretary, ACI Committee 115) Professor of Theoretical and Applied Mechanics Iowa State University

# Ames, Iowa

# Influencing Resistance of Concrete to Deicing Agents

# Ward R. Malisch Research Assistant

Department of Civil Engineering University of Illinois Urbana, Illinois

## Strength of Plain Concrete under High **Triaxial Compressive** Stresses

#### Roger M. Zimmerman Assistant Professor of

Civil Engineering New Mexico State University University Park, New Mexico

# James Chinn

Professor of Civil Engineering

# University of Colorado Boulder, Colorado

# Very High Strength Concrete

#### Paul Klieger Manager, Applied Research Section

Portland Cement Association Research and Development Laboratories Skokie, Illinois

# Volume Changes of Paste and Concrete from Time Zero to Seven Days

# Floyd O. Slate Associate Professor of **Engineering Materials**

Cornell University Ithaca, New York

(Continued)

# THURSDAY AFTERNOON (Continued)

Ring Test for Determining the Tensile Strength of Concrete V. M. Malhotra
Senior Scientific Officer
Construction Materials Section
Mineral Processing Division

N. G. Zoldners
Head, Construction Materials
Section
Mineral Processing Division

H. M. Woodrooffe
Supervisor, Industrial Minerals
Sub-Divisions
Canada Department of Mines
and Technical Surveys, Mines Branch
Ottawa, Ontario

Bond Strength in Lightweight Concrete J. W. Baldwin, Jr. Associate Professor

Adrian Pauw
Chairman, Department of
Civil Engineering
University of Missouri
Columbia, Missouri

Fundamental Study of Bond between Steel and Expanding and Contracting Concrete Colin B. Brown
Assistant Professor of
Civil Engineering
University of California
Berkeley, California

Study of Stress Redistribution in Concrete Members Using Birefringent Coatings Robert J. Brungraber Assistant Professor of Civil Engineering Princeton University Princeton, New Jersey

Tests of Columns with Special Large Sized Deformed Bars Richard C. Elstner
Partner
Wiss, Janney, Elstner and
Associates
Des Plaines, Illinois

Tests of Slender Reinforced Concrete Columns Bent in Double Curvature Ignacio Martin Research Professor

Elmer Olivieri-Cintrón Associate Professor of Engineering University of Puerto Rico Mayaguez, Puerto Rico

# SAN FRANCISCO COMMITTEES

GENERAL CHAIRMAN

S. D. BURKS

SECRETARY-TREASURER

W. E. MOULTON

FINANCE COMMITTEE

C. F. MORAN, Chairman

**ENTERTAINMENT COMMITTEE** 

R. A. NIEMAN, Chairman

HOUSING COMMITTEE

Jay S. SIMONS, Chairman

**EDUCATIONAL COMMITTEE** 

MILOS POLIVKA, Chairman

MEMBERSHIP COMMITTEE

PAUL R. STODOLA, Chairman

**EXHIBITS-DISPLAYS COMMITTEE** 

H. L. McFalls, Chairman

TRANSPORTATION COMMITTEE

L. L. MAYFIELD, Chairman

**PUBLIC RELATIONS COMMITTEE** 

J. R. TRAYLER, Chairman

LADIES PROGRAM COMMITTEE

MRS. MARIAN BURKS, Chairman

## LADIES PROGRAM

Your Hospitality Suite is located on the 2nd floor of the hotel in Suite 240. It will be open at 9:00 A.M. daily, March 1 though 4, with morning coffee until 10:30 A.M. You are urged to use the Hospitality Suite as a "get-acquainted" center, to register there for the events which are planned for you, and to use it as a rendevous to meet friends for personal shopping, etc.

# Monday, March 1

9:00 a.m. Registration and Get-acquainted Coffee in Hospitality Suite

# Tuesday, March 2

9:00 a.m. Registration and Get-Acquainted Coffee in Hospitality Suite

11:00 a.m. Buses leave Montgomery Street entrance for luncheon at Ondine's Restaurant across the Bay in Sausalito, compliments of the Local Committee. After luncheon, personal shopping is available in the quaint shops of this popular artist's colony. Buses will return to the hotel at 4:00 P.M.

6:30 p.m. Cocktail party, Gold Ballroom, compliments of the Local Committee

# Wednesday, March 3

9:00-10:30 a.m. Coffee Hour, Hospitality Suite

12:15 p.m. Awards Luncheon in the Ralston Room. Ladies invited. \$4.75 per person

6:00-8:00 p.m. Wine Tasting party in the Ralston Room, compliments of the Local Committee and the Almaden Vineyards

# Thursday, March 4

9:00-10:30 a.m. Coffee Hour, Hospitality Suite

1:00 p.m. Buses leave the Montgomery Street entrance for a complimentary 3-hour sightseeing tour of San Francisco.

#### LADIES COMMITTEE

MRS. S. D. BURKS, Chairman MRS. L. H. TUTHILL MRS. WARREN SCOTT MRS. J. R. TRAYLER MRS. C. F. MORAN MRS. R. A. NIEMAN

# ACI DOOR PRIZE CARD

To qualify for daily door prize drawings, visit the Technical-Educational Exhibits and have card rubber-stamped with corresponding booth numbers at each exhibit booth. Deposit card in Door Prize Drawing Box at registration desk. You need not be present at drawings to win, but give complete identification below.

1	2	3	4	5
6	7	8-9	10	11-12
13	14	15	16	17
18-19	20	21-22	23	24
25	26	27-28	29-30	31
32	33-34	35	36-37	38
				39

Name	
Home Address	
Hotel & Room No.	

#### **EXHIBIT HOURS**

Mon., Mar. 1-2:00 p.m.-6:00 p.m.

Wed., Mar. 3-10:00 a.m.-6:00 p.m.

Tues., Mar. 2-10:00 a.m.-6:00 p.m. Thurs., Mar. 4-9:00 a.m.-2:30 p.m.

# SAN FRANCISCO CONVENTION EXHIBITORS

The Technical-Educational Exhibits hold the answer to your concrete design-construction problems. Visit the Exhibits daily to find out what materials, equipment and services can help you—and at the same time qualify for valuable door prizes.

-	_	 N	1-1

1	Edoco	Technical	Products,	Inc.	Long	Beach.	Calif.
	Euoco	rechinical	riodocis,	1116.,	Long	Deach,	Caiii.

- 2 Pittsburgh Testing Laboratory, Pittsburgh, Pa.
- 3 Stressteel Corporation, Wilkes Barre, Pa.
- 4 The Prescon Corporation, Corpus Christi, Tex.
- 5 Textured Coatings of America, Inc., Los Angeles, Calif.
- 6 Erico Products, Inc., Cleveland, O.
- 7 Warner Construction Corp., Los Angeles, Calif.
- 8-9 Bethlehem Steel Corp., Bethlehem. Pa.
- 10 Western Concrete Structures Co., Inc., Gardena, Calif.
- 11-12 Sika Chemical Corp., Passaic, N. J.
- 13 True Gun-All Division, Detroit Tool & Engineering Co., Lebanon, Mo.
- 14 Marathon, Division of American Can Co., Neenah, Wis.
- 15 B. M. Heede California, Inc., South San Francisco, Calif.
- 16 Adhesive Engineering Co., San Carlos, Calif.
- 17 Gateway Erectors, Inc., Chicago, Ill.
- 18-19 Johns-Manville Corp., New York, N. Y.
- 20 Sonoco Products Co., Hartsville, S. C.
- 21-22 W. R. Grace & Co., Construction Materials Division, Cambridge, Mass.
- 23 Northwest Lift Slab Co., Inc., Portland, Ore.
- 24 American Machine & Foundry Co., York, Pa.
- 25 United States Steel, Pittsburgh, Pa.
- 26 Calcium Chloride Institute, Washington, D. C.
- 27-28 Noble Co., Oakland, Calif.
- 29-30 Livermore Valley Producers, San Francisco, Calif.
- 31 Atlas Service Corp., Van Nuys, Calif.
- 32 Thermex Metallurgical, Inc., Lakehurst, N. J.
- 33-34 Crown Zellerbach Corp., Camas, Wash.
- 35 Vacuum Concrete Corp., Philadelphia, Pa., and Gamma Enterprises, Inc., Sunnyvale, Calif.
- 36-37 The Master Builders Co., Cleveland, O.
- 38 Challenge-Cook Bros., Inc., Los Angeles, Calif.
- 39 Protex Industries Inc., Denver, Colo.

#### **EXHIBIT HOURS**

Monday, March 1—2:00 p.m. - 6:00 p.m.

Tuesday, March 2—10:00 a.m. - 6:00 p.m

Wednesday, March 3—10:00 a.m. - 6:00 p.m.

Thursday, March 4—9:00 a.m. - 2:30 p.m.