aci

Progress through knowledge

PROGRAM

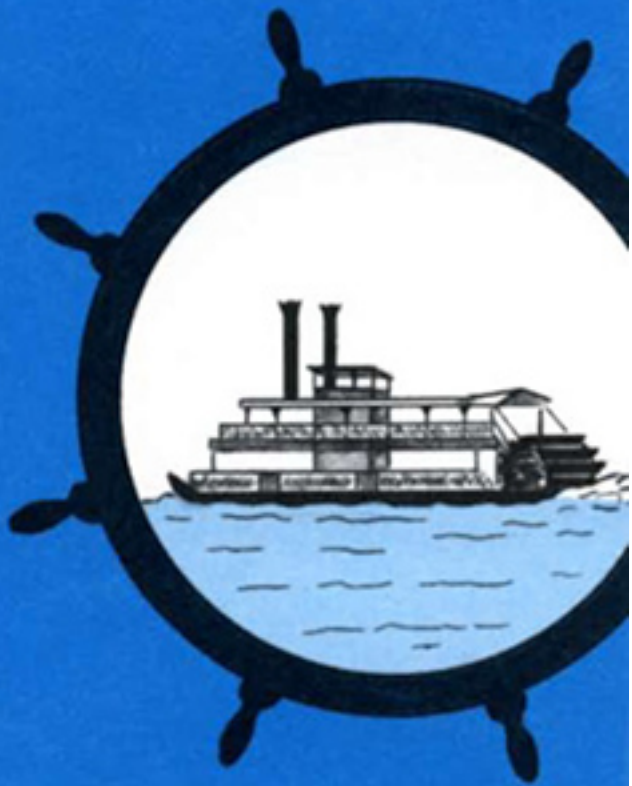
AMERICAN CONCRETE INSTITUTE

1968 Fall Convention

November 3 - 8, 1968

SHERATON - PEABODY

Memphis, Tennessee



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*Address
AMERICAN CONCRETE INSTITUTE
P.O. Box 4754
Detroit, Michigan 48219

— CONVENTION REGISTRATION —

Sunday, November 3 . . 1:00 p.m. to 5:00 p.m.
Monday, November 4 through
Thursday, November 7 . . 8:00 a.m. to 6:00 p.m.
Friday, November 8 . . . 8:00 a.m. to 2:00 p.m.

REGISTRATION FEES:

ACI Members	$15.00
Nonmembers	$25.00
Students	Free

Registration fees cover attendance at all ACI technical committee meetings, general sessions, and symposia.

* * * SPECIAL EVENTS * * *

*Cocktail Party "Concrete Mixer" . . . Thursday, November 7, 6:30 p.m. — Please wear your badge . . . Continental Ballroom

*University of Illinois Alumni Breakfast. Tickets are available from alumni and University of Illinois staff members.

NOTE FOR PROGRAM PARTICIPANTS

A program breakfast is planned for Thursday at 7:30 a.m. in Room 200. Breakfast is by invitation only.

NOTE FLOOR PLANS ON PAGES 8 AND 9 OF YOUR PROGRAM

ACI Headquarters and Press Room in Room 202.

MONDAY, November 4 9 a.m. to 12 noon

TECHNICAL COMMITTEE MEETINGS

Meeting topics are in italics. Be sure to check the bulletin board for last minute changes or added meetings.

COMMITTEE		Meeting Room
213	Subcommittee C, Lightweight Aggregate Concrete—Construction Practices	Arkansas
309	Consolidation of Concrete (runs to 11:15 a.m.)	Louis XVI
315	Detailing Reinforced Concrete Structures *(1970 Manual)*	Airlines
340	Ultimate Strength Design Handbook *(Volumes I and II)*	Cotton

(Continued on Page 2)

MONDAY, November 4

(Continued from Page 1)

COMMITTEE		Meeting Room
344	Circular Prestressed Concrete Structures *(Design)*	Tennessee
423	Prestressed Concrete—Joint ACI-ASCE *(Code Provisions)*	200
438	Torsion *(Tentative recommendation)*	Continental Ballroom
441	Columns *(Code recommendations)*	Venetian
512	Precast Structural Concrete *(Draft of revised Standard)*	Forest
516	High Pressure Steam Curing *(1969 Symposium)*	213
533	Precast Panels *(Chapters 1, 2, 3 of SP-11)*	214
545	Concrete Railroad Ties *(Organizational meeting)*	215

2:00 p.m. to 5:00 p.m.

211	Proportioning Concrete Mixes *(Revision of ACI 613-54)*	Cotton
213	Subcommittee B, Lightweight Aggregate Concrete — Concrete Properties	Arkansas
309	Consolidation of Concrete *(Draft of revised standard)*	Louis XVI
315	Detailing Reinforced Concrete Structures *(1970 Manual)*	Airlines
344	Circular Prestressed Concrete Structures *(Design)*	Tennessee
347	Formwork for Concrete *(Revision of Manual)*	213
408	Bond Stress *(Research in progress)*	Forest
421 & 318	*(Joint session on reinforced concrete slabs)* Committee 421—Reinforced Concrete Slabs, Subcommittee 20—Standard Building Code —Slabs and Joists	Venetian
438	Torsion *(Tentative recommendations)*	Continental Ballroom
443	Concrete Bridge Design *(Proposed standard)*	200
504	Joint Sealants	214
515	Coatings for Concrete *(Draft of report)*	215

7:00 p.m.

114	Research and Development	215
213	Subcommittee A, Lightweight Aggregate Concrete—Aggregate Properties	Forest
215	Subcommittee IIB, Fatigue of Concrete — Research Needs	213
318	Subcommittee 8, Standard Building Code — Details of Reinforcement *(1970 Code)*	214
443	Concrete Bridge Design *(Proposed standard)*	200
543	Concrete Piles *(Final draft)*	Louis XVI

TUESDAY, November 5 9 a.m. to 12 noon

COMMITTEE		Meeting Room
212	Admixtures *(Proposed standard)*	200
213	Subcommittee E, Lightweight Aggregate Concrete—Special Projects and Applications	Venetian
224	Cracking *(Subcommittee reports)*	Louis XVI
311	Inspection of Concrete *(Codification)*	Forest
318	Standard Building Code *(1970 Code)*	Continental Ballroom
344	Circular Prestressed Concrete Structures	Tennessee
428	Limit Design *(Committee report)*	213
443	Concrete Bridge Design *(Proposed Standard)*	Arkansas
517	Low Pressure Steam Curing *(Final draft)*	214
523	Insulating and Cellular Concretes *(Preparation of guide, proposed symposium)*	215
533	Precast Panels	216
543	Concrete Piles *(Final draft)*	Airlines

2:00 p.m. to 5:00 p.m.

118	Use of Computers	216
201	Durability of Concrete *(Review of report)*	Forest
213	Lightweight Aggregates and Lightweight Aggregate Concrete	Venetian
216	Fire Resistance	215
308	Curing Concrete *(Proposed standard)*	200
318	Standard Building Code *(1970 Code)*	Continental Ballroom
325	Structural Design of Concrete Pavements for Highways and Airports *(Subcommittee reports)*	214
344	Circular Prestressed Concrete Structures	Tennessee
428	Limit Design *(Committee report)*	213
443	Concrete Bridge Design *(Proposed standard)*	Arkansas
543	Concrete Piles *(Final draft)*	Airlines

7:00 p.m.

301	Specifications for Structural Concrete *(Draft of revised standard)*	Forest
322	Design of Structural Plain Concrete	215
349	Criteria for Nuclear Containment Vessels *(Design criteria)*	216
352	Joints and Connections in Monolithic Structures *(Proposed standard)*	200
443	Concrete Bridge Design *(Proposed standard)*	Arkansas
543	Concrete Piles *(Final draft)*	Airlines

WEDNESDAY, Nov. 6 — 9 a.m. to 12 noon

COMMITTEE		Meeting Room
—	Ad Hoc Committee on Structural Model Analysis *(Future role)*	Airlines
207	Mass Concrete *(Final report)*	213
223	Expansive Cement Concretes *(New activities)*	Forest
303	Architectural Concrete *(Committee report)*	Louis XVI
304	Measuring, Mixing, Transporting, and Placing Concrete *(Revised standard)*	200
305	Hot Weather Concreting *(Draft of revised standard)*	215
318	Standard Building Code *(1970 Code)*	Continental Ballroom
332	Residential Concrete Work *(Program and aims)*	Cotton
350	Sanitary Engineering Structures *(Draft report)*	Tennessee
435	Subcommittee 5, Deflection of Concrete Building Structures—Deflection of 2-Way Slabs, Flat Plates and Slabs *(International symposium)*	214
443	Concrete Bridge Design *(Proposed standard)*	Arkansas
531	Concrete Masonry Structures *(Proposed report)*	Venetian
533	Precast Panels	216
	2:00 p.m. to 5:00 p.m.	
104	Notation *(Future plans)*	213
119	Education *(National C/T project)*	216
215	Fatigue of Concrete *(Committee report)*	214
318	Standard Building Code *(1970 Code)*	Continental Ballroom
348	Structural safety *(Probabilistic design)*	Louis XVI
350	Sanitary Engineering Structures *(Draft report)*	Tennessee
439	High Strength Reinforcement in Concrete *(Committee assignments)*	215
443	Concrete Bridge Design *(Proposed standard)*	Arkansas
506	Shotcreting *(Draft of revised standard)*	200
531	Concrete Masonry Structures	Venetian
544	Fiber-Reinforced Concrete *(Literature review)*	Forest
	7:00 p.m.	
301	Specifications for Structural Concrete *(Draft of revised standard)*	Forest
302	Concrete Floor Finishes	216
307	Reinforced Concrete Chimneys	213
313	Concrete Bins and Silos	214
443	Concrete Bridge Design *(Proposed standard)*	200

THURSDAY, November 7 — 9:00 a.m.

FIRST GENERAL SESSION
. . . Continental Ballroom

CHAIRMAN: Frank P. Palumbo, co-chairman, 1968 ACI Fall Convention, and consulting engineer, Memphis, Tennessee

Welcome to Memphis

Revision of ACI Standard
Presentation of the revised standard ACI 613A-59, "Recommended Practice for Selecting Proportions for Structural Lightweight Concrete" by ACI Committee 211, Subcommittee 1, H. I. King, chairman, Subcommittee 1, and concrete consultant, St. Mary's Cement Co., Toronto, Ontario, Canada

Lake Point Tower Instrumentation
(a 6-part presentation)

1. **Introduction** — William Schmidt, principal, William Schmidt and Associates, structural engineers, Chicago, Illinois
2. **Carlson-Type Embedded Instruments** — Douglas McHenry, consultant, Northbrook, Illinois
3. **Dimensional Changes of High-Rise Reinforced Concrete Buildings** — W. S. Kinne, Jr., professor, Department of Civil Engineering, University of Wisconsin, Madison
4. **Time-Dependent Performance of Reinforced Concrete Columns — Laboratory Study** — Donald W. Pfeifer, manager, Concrete Products Research Section, Research and Development Division, Portland Cement Association, Skokie, Illinois
5. **Time-Dependent Performance of Reinforced Concrete Columns — Field Investigation** — Donald D. Magura, research engineer, Concrete Products Research Section, Research and Development Division, Portland Cement Association, Skokie, Illinois
6. **Study of Flat Slab Panels for Instantaneous and Long-time Deflection** — Harry L. Scoggin, project engineer, Wiss, Janney, Elstner and Associates, consulting and research engineers, Northbrook, Illinois

Plugging the Hole with Concrete (Education in Concrete Technology) — Howard C. Wiechman, chairman, ACI Committee 119, and national administrator, Technical and Vocational Education, Portland Cement Association, Skokie, Illinois

U.S.-Japan Seminar on Research on Basic Properties of Various Concretes — Clyde E. Kesler, past president of ACI, and professor of theoretical and applied mechanics and of civil engineering, T & AM Department, University of Illinois, Urbana

CONCURRENT SESSIONS

THURSDAY, November 7
(Note time designations for each topic)

2:00 p.m. to 5:00 p.m.

SYMPOSIUM ON THE EFFECT OF TEMPERATURE ON CONCRETE

. . . Continental Ballroom

CHAIRMAN: Bruce E. Foster, chairman, ACI Ad Hoc Committee on Effect of Temperature on Concrete, and chief, Codes and Standards Section, National Bureau of Standards, Washington, D.C.

2:00 **Introductory Remarks** — Raymond E. Davis, professor emeritus, University of California, Berkeley

2:10 **Thermal Properties of Concrete Under Sustained Elevated Temperature — a Review** — Nikolai G. Zoldners, head, Construction Materials Section, Mineral Processing Division, Department of Energy, Mines and Resources, Ottawa, Ontario, Canada

2:45 **Compressive Strength of Concrete at Temperatures to 1600°F** — M. S. Abrams, senior research engineer, Fire Research Section, Research and Development Division, Portland Cement Association, Skokie, Illinois

3:15 BREAK

3:30 **Effects of Moisture Content on the Constitution and Structural Properties of Portland Cement Concrete Exposed to Temperatures up to 500°F** — D. R. Lankard, research ceramist; D. L. Birkimer, research structural engineer; F. F. Fondriest, associate chief; and M. J. Snyder, chief, Ceramic Research Division, Battelle Memorial Institute, Columbus, Ohio

4:00 **Properties of Concrete at Elevated Temperatures** — P. J. E. Sullivan, professor and lecturer, Department of Civil Engineering, Imperial College of Science and Technology, London, England; and Mellor P. Poucher, chairman, Civil Engineering Department, Faculty of Engineering Science, University of Western Ontario, London, Ontario, Canada

4:30 **Contraction of Cement Paste Caused by Heat Curing** — R. Malinowski, associate professor, Department of Concrete Structures, Chalmers University of Technology, Gothenburg, Sweden

4:40 **Effect of Elevated Temperature on Strength of Portland Cement** — Rahel Shalon, head, and D. Ravina, research engineer, Building Research Station, Technion — Israel Institute of Technology, Haifa, Israel (D. Ravina is currently at Purdue University, Lafayette.)

SYMPOSIUM ON THE APPLICATION OF PROBABILISTIC CONCEPTS TO THE STRENGTH DESIGN OF REINFORCED CONCRETE MEMBERS

. . . Venetian Room

(Sponsored by ACI Committee 348)

CHAIRMAN: Bertold E. Weinberg, chairman, ACI Committee 348, and planning coordinator, State University Construction Fund, Albany, New York

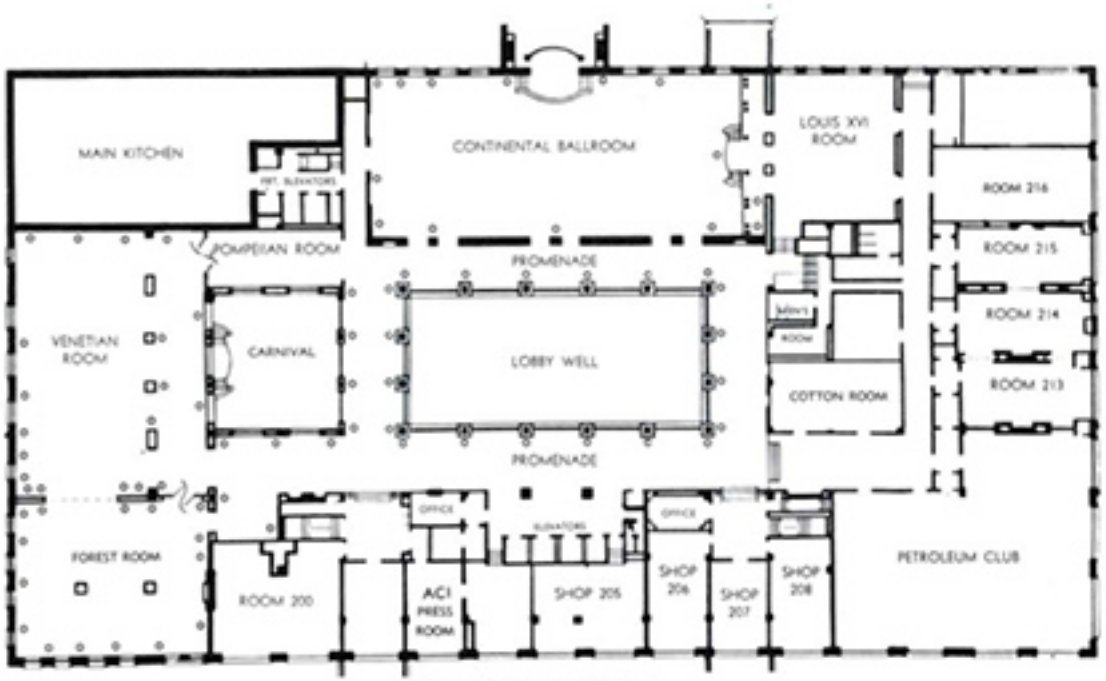
2:00 **The Rational Probabilistic Code Format** — Subcommittee E of Committee 348. Presented by H. C. Shah, associate professor, Department of Civil Engineering, Stanford University, Stanford, California

2:45 **Difficulties in Application of Probabilistic Code Formats to Real Structures** — Robert G. Sexsmith, assistant professor, Department of Structural Engineering, Cornell University, Ithaca, New York; and Mark F. Nelson, assistant professor, Department of Civil Engineering, Massachusetts Institute of Technology, Cambridge

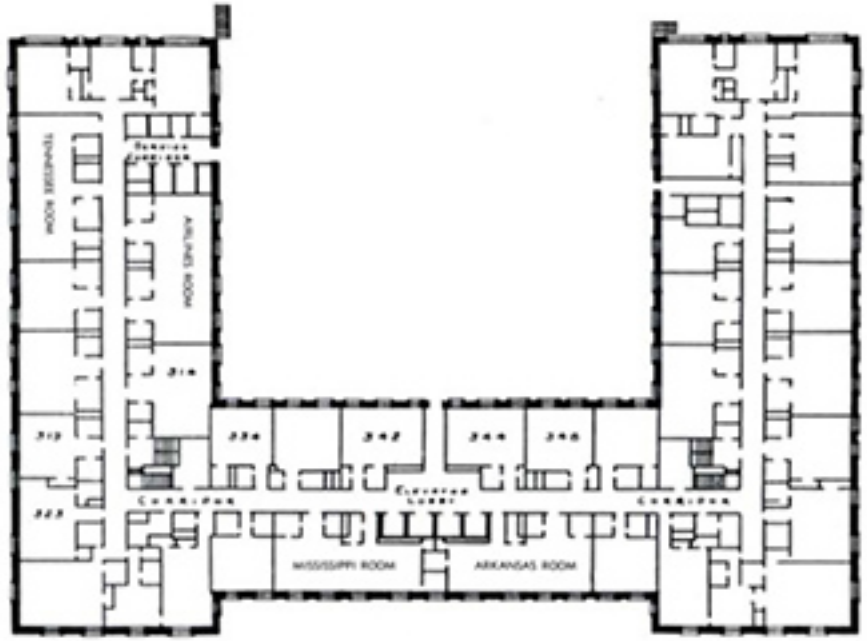
3:25 BREAK

3:40 **A Probabilistic Basis for a Deterministic Code** — Jack R. Benjamin, professor, Department of Civil Engineering, Stanford University, Stanford, California; and Neils C. Lind, professor, Department of Civil Engineering, University of Waterloo, Waterloo, Ontario, Canada

4:20 **A Probability-Based Structural Code** — C. Allin Cornell, associate professor, Department of Civil Engineering, Massachusetts Institute of Technology, Cambridge



MEZZANINE FLOOR



3RD FLOOR PLAN

CONCURRENT SESSIONS

FRIDAY, November 8 — **9:00 a.m. to 12:00 Noon**

SYMPOSIUM ON THE EFFECT OF TEMPERATURE ON CONCRETE (continued)

. . . Continental Ballroom

CHAIRMAN: Paul Klieger, manager, Applied Research Section, Research and Development Division, Portland Cement Association, Skokie, Illinois

9:00 **Creep of Concrete at Low Stress-Strength Ratios and Elevated Temperatures** — K. W. Nasser, associate professor, Department of Civil Engineering, University of Saskatchewan, Saskatoon, Sask., Canada

9:30 **Thermoelectric Application of Temperatures on Models of Concrete Structures** — Gilbert L. Butler, supervisory structural engineer, Division of Research, Bureau of Reclamation, Denver, Colorado

9:55 **Effects of Temperature on a Prestressed Concrete Reactor Vessel Model** — T. E. Northup, manager, Structural Engineering Branch; and F. S. Ople, Jr., structural research and development engineer, HTGR Division, Gulf General Atomic, Inc., San Diego, California

10:25 BREAK

10:35 **The Modulus of Concrete and the Coefficient of Expansion of Concrete and Reinforced Concrete at Below Normal Temperatures and Thermal and Shrinkage Stresses in Composite Bridge Structures** — Carl Berwanger, associate professor, Department of Civil Engineering, University of Ottawa, Ottawa, Ontario, Canada

11:05 **Analysis of Warping Stresses and Temperature Measurements in Concrete Pavements**— Josef Eisenmann, associate professor, Institut für Eisenbahnbau und Strassenbau, Technische Hochschule München, Munich, Germany

11:35 **Influence of Temperature on the Creep of Mass Concrete** — A. F. da Silveira, head, Department of Dams; and C. A. Florentino, head, Observation Division, Department of Dams, Laboratorio Nacional de Engenharia Civil, Ministerio das Obras Publicas, Lisbon, Portugal

11:45 **Temperature Rise of Mass Concrete Mixtures** — William O. Tynes, chief, Concrete and Rock Properties Section, Engineering Mechanics Branch, Concrete Division, U.S. Army Engineer Waterways Experiment Station, Jackson, Mississippi

DESIGN/CONSTRUCTION

. . . Venetian Room

CHAIRMAN: Warner Howe, consulting engineer, Gardner and Howe, consulting engineers, Memphis, Tennessee

9:00 **Preview of the 1970 Code . . . Provisions for Reinforced Concrete Slab Design** — Mete A. Sozen, secretary, ACI-ASCE Committee 421, and professor, Department of Civil Engineering, University of Illinois, Urbana

9:45 **The State Office Building — Memphis, Tennessee**—O. Clarke Mann, consulting engineer, Memphis, Tennessee

10:20 BREAK

10:35 **Corrosion of Aluminum and Other Metals in Concrete** — Richard C. Elstner, a principal and secretary; Kenneth T. Burton, development engineer, Wiss, Janney, Elstner and Associates, consulting and research engineers, Northbrook, Illinois; Norman L. Scott, president, The Consulting Engineers Group, Glenview Illinois; and Robert D. Krause, consulting engineer, Santa Fe, New Mexico

11:15 **Some Field Experience in the Use of An Accelerated Method of Estimating 28-Day Strength of Concrete** — V. M. Malhotra, concrete engineer; and N. G. Zoldners, head, Construction Materials Section, Mineral Processing Division, Department of Energy, Mines, and Resources, Ottawa, Ontario, Canada

RESEARCH SESSION

FRIDAY, November 8 — **2:00 p.m. to 5:00 p.m.—Continental Ballroom**

RESEARCH ON PLAIN AND REINFORCED CONCRETE

Under the supervision of ACI Committee 115 — Current Research. This research in progress session differs from the other ACI general sessions in that the reports given are not for publication. Request is made that the proceedings be regarded as confidential.

CHAIRMAN: Adrian Pauw, chairman of ACI Committee 115, and acting dean, College of Engineering, University of Missouri, Columbia

SECRETARY: J. H. Walker, secretary of ACI Committee 115, and vice-president, Research and Development Division, Portland Cement Association, Skokie, Illinois

Recent Work on Alkali-Carbonate Rock Reaction in Concrete — Alan D. Buck, geologist, Concrete Division, U.S. Army Engineer Waterways Experiment Station, Jackson, Mississippi

The Shear Strength of Reinforced Concrete Slab-Column Connections Subjected to Static and Dynamic Loads — Marvin E. Criswell, research structural engineer, Nuclear Weapons Effects Division, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi

Fatigue Strength of High-Yield Reinforcing Bars — John M. Hanson, principal research engineer; and Norman F. Somes, research engineer, Structural Research Section, Research and Development Division, Portland Cement Association, Skokie, Illinois

Field Investigation of Prestressed Concrete Highway Bridges—William L. Gamble, assistant professor, Department of Civil Engineering, University of Illinois, Urbana

Combined Torsion, Shear, and Flexure in Prestressed Concrete Beams — H. Aldridge Gillespie, assistant chairman, School of Civil Engineering and Environmental Sciences, University of Oklahoma, Norman

BREAK

Gap-Graded vs. Continuously-Graded Concrete — Shu-t'ien Li, professor, Department of Civil Engineering, and director; and P. S. Dravid, associate director, Concrete Technology Research, South Dakota School of Mines and Technology, Rapid City.

Effect of Test Specimen Size on the Direct-Tensile, Ring-Tensile, and Splitting-Tensile Strengths of Concrete—V. M. Malhotra, concrete engineer, Construction Materials Section, Mineral Processing Division, Mines Branch, Department of Energy, Mines and Resources, Ottawa, Ontario, Canada

Fly Ash Aggregate Lightweight Concrete — Donald W. Pfeifer, manager, Concrete Products Research Section, Research and Development Section, Portland Cement Association, Skokie, Illinois

Incremental Collapse Due to Progressive Bond Failure — Richard E. Woodring, professor, Department of Civil Engineering, Drexel Institute of Technology, Philadelphia, Pennsylvania (Currently on leave of absence in engineering practice with Sanders & Thomas, Inc., Pottstown, Pennsylvania)

Deterioration of Concrete Due to Wetting and Drying Cycles Using Various Salt Solutions — Roger M. Zimmerman, assistant dean, College of Engineering, New Mexico State University, Las Cruces; and Wayne P. Dominick, associate professor, Civil Engineering Department, Fresno State College, Fresno, California

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LADIES PROGRAM

HOSPITALITY SUITE . . . Mississippi Room

Monday, November 4

9:00 a.m. - 4:00 p.m. —Registration and Hospitality

Tuesday, November 5

9:30 a.m. - 11:30 a.m. —Registration and Hospitality

11:30 a.m. —Luncheon and elegant Fabric Showing at Sheraton-Peabody — followed by tour of the Fontaine House

Wednesday, November 6

9:30 a.m. - 12:00 —Registration and Hospitality

10:30 a.m. —Tour of Holiday Inn Institutional Mart, Luncheon at the Mart — Bus trip back to Sheraton-Peabody via Elvis Presley home

Thursday, November 7

9:30 a.m. - 12:00 —Hospitality

10:00 a.m. —Tour of Brooks Art Museum Sightseeing

12:30 p.m. —Luncheon at the Summit Club

Friday, November 8

9:30 a.m. - 12:00 —Hospitality

REGISTRATION: $9.00. Covers all the listed events above.

NOTES

MEMPHIS CONVENTION COMMITTEE

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Frank P. Palumbo
Consulting Engineer,
Memphis, Tennessee

Co-Chairman
Charles McVean
Supervisory Construction Engineer,
U.S. Army Corps of Engineers, Memphis

Secretary
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Publicity
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Registration
Joe Thomas

Membership Promotion
James Barksdale

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John Brough

Finance
Robert Mosby

Social Activities
Ed Tate Parker

Ladies Program
Mrs. Walter Baker

NOTES