



international

*Annual  
Awards  
1995*

*"progress through knowledge"*

March 9, 1995  
Spring Convention  
Salt Lake Hilton  
Salt Lake City, Utah

# AWARDS

## **Honorary Membership**

Eugene H. Boeke, Jr.  
Teodoro E. Harmsen  
Ivar Holand  
Walter E. Kunze  
René Walther

## **Arthur R. Anderson Award**

Pierre-Claude Aïtcin

## **Roger H. Corbetta Concrete Constructor Award**

James E. Cook

## **Joe W. Kelly Award**

Luke M. Snell

## **Henry L. Kennedy Award**

William J. Wilhelm

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Mary K. Hurd

## **Charles S. Whitney Medal**

Figg Engineering Group

## **Cedric Willson Award**

George C. Hoff

## **Wason Medal For Materials Research**

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## **Wason Medal for Most Meritorious Paper**

George C. Hoff

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John S. Beebe  
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**Chapter Activities Award**

H. S. Lew

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**Fellows**

**Chapter Awards - Citations of Excellence**

**Membership Citations**

**Concrete Research Council**

**Robert E. Philleo Award**

Paul E. Klieger

**Reinforced Concrete Research Council**

**Arthur J. Boase Award**

John M. Hanson

**Portland Cement Association**

**Concrete Bridge Awards**

Acosta Bridge, Jacksonville, FL

Oak Canyon Bridge, Spring Canyon Undercrossing  
San Diego, CA

Upper Middle Road, 16-Mile Creek Bridge  
Oakville, Ontario

Route 5/14 Separation and Overhead, Los Angeles, CA  
Scripps Crossing, San Diego, CA

H-3 Windward Viaduct, Oahu, HI

Semiahmoo Trail Bridge, Surrey, BC

Natchez Trace Parkway Bridge, Franklin, TN



## HONORARY MEMBERSHIP TO

### **EUGENE H. BOEKE, JR.**

*"for distinguished service to ACI through his involvement with technical and administrative committees and local chapter activities, and for his service as the President of the American Society of Concrete Construction."*

**Eugene H. Boeke, Jr.**, an ACI member for nearly 25 years and a former member of the Board of Direction, is vice president emeritus of Beers, Inc., an Atlanta, Ga., based construction firm.

A tireless advocate of construction innovation and improved concrete quality, Boeke has been associated with the Beers firm for 45 years, starting as a water boy on construction projects during summer vacations from school. An architectural graduate of Georgia Institute of Technology, he is a long-time member of ACI's Georgia chapter and is a former president of the chapter.

His honors include ACI's Roger H. Corbetta Concrete Constructor Award in 1988 for "frequently demonstrating that innovative concrete construction methods can be cost effective and produce quality results."

Currently the president of the American Society for Concrete Construction, he is a former chairman and a member of ACI's Construction Liaison Committee and is also a member of the Reinforced Concrete Research Council. He serves on Committees 120, History; 303, Architectural Concrete; and 318, Standard Building Code.

He is also a former member of the Educational Activities Committee, the Convention Committee, and the Planning Committee and has been active in ACI's Capital Campaign to raise funds for the construction of a new headquarters building.

As an official of a large construction firm, Boeke, a Fellow of the Institute, has been involved in the erection of numerous major structures, mainly in the southern part of the United States, and has participated in numerous seminars and workshops on concrete construction and technology.

### **HONORARY MEMBERSHIP**

The Institute recognizes persons of eminence in its field, or those who perform extraordinary meritorious services to the Institute, by conferring on them Honorary Membership (see Bylaws, Article II, Section 2).



## HONORARY MEMBERSHIP TO

### TEODORO E. HARMSEN

*"for lifelong leadership and contributions to the advancement of concrete technology through teaching and professional practice and for strengthening United States-South American cooperation in the field of concrete."*

Teodoro E. Harmsen has been associated with Grana y Montero, an international design and construction company based in Lima, Peru, for more than a half century.

An ACI member since 1965 and elected a Fellow in 1989, he joined the Grana firm as a structural engineer and advanced through he ranks to become manager and president. He is also president of GyM, a holding company; executive president of GMI Consulting Engineers, also a subsidiary; and a director of other Grana subsidiaries.

Harmsen received a Bachelor's in engineering from the Catholic University of Peru in 1941 and remained at the university as assistant professor of analytical geometry and calculus. After two years, he introduced a course in reinforced concrete construction and has taught this subject at the same university for more than 50 years.

He received a Master's degree in structures from the National Engineering University of Peru in 1965. Harmsen is also director of a degree program for a Master's in administration of construction and real estate companies, a program jointly administered by the Catholic University of the Polytechnical University of Madrid, Spain.

Harmsen, a member of ACI's Chapter Activities Committee and the International Activities Committee, was an organizing member of ACI's Peru chapter and was its first president. He was also instrumental in the organization of the three ACI student chapters in that South American nation.

His honors include honorary membership in the College of Engineers of Peru in 1989.

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## HONORARY MEMBERSHIP TO

### IVAR HOLAND

*"for leadership in research and development in the areas of structural design and concrete materials, with particular emphasis on high strength concretes and for the promotion of advances in concrete technology throughout Scandinavia and Europe."*

Ivar Holand is the retired director of the Norwegian Cement and Concrete Research Institute and also former professor of structural mechanics at Norwegian Institute of Technology, Trondheim, Norway.

Long active in international standardization activities, he is the current chairman of the Federation Internationale de la Precontrainte (FIP) Working Group on High Strength/High Performance Concrete. He is also a member of Comite Euro-International de Beton (CEB), International Association for Bridge and Structural Engineering, the European Committee for Standardization (CEN), the International Standards Organization (ISO), and the Royal Swedish Academy of Engineering Sciences.

A member of ACI since 1981, he received his civil engineering degree at Trondheim in 1948 and ten years later obtained a Ph.D. from that same school. He retired as a professor in 1981 and as director of the cement and concrete research institute in 1991.

For many years, he has been involved in research on high strength and high performance concrete and has participated in the organization of several recent international symposia on the use of the material.

Holand is currently senior research engineer of SINTEF Structures and Concrete and recently received Norwegian Concrete Association honorary membership and an award from that organization for outstanding achievement in high strength/high performance concrete. He is also an elected member of the Norwegian Academy of Technical Sciences, the Royal Norwegian Society of Sciences and Letters, and the Royal Swedish Academy of Engineering Sciences.

Holand has also received an honorary medal from the Norwegian Society of Professional Engineers and an honorary doctor's degree from Chalmers Institute of Technology, Gothenburg, Sweden.

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## HONORARY MEMBERSHIP TO

### WALTER E. KUNZE

*"for his distinguished service to ACI as president, as member and chair of technical and Board committees, and his important contributions to the concrete industry through his work at the Portland Cement Association."*

Walter E. Kunze was ACI's president in 1986 and has been a member for more than 40 years. In retirement, he divides his time between the United States and Austria.

He was president of Construction Technology Laboratories, Inc., Skokie, Ill., and had been associated with CTL/Portland Cement Association for more than 36 years before retiring.

A native of St. Paul, Minn., Kunze joined PCA in 1952 as an engineer in the Structural and Railways Bureau and was later promoted to manager of that same division. Other job assignments with PCA included manager of personnel training, Midwest division manager, vice president of field operations, and then group vice president of research and development for CTL. When the latter was established in late 1980s as a for-profit corporation independent of PCA, he was named its first president and held this position until retirement in 1989.

A member of ACI's Board of Direction and a vice president before assuming the presidency, Kunze is also a Fellow and former member of several committees, including 317, Design Handbook, and 318, Standard Building Code. He also served on ACI's Financial Advisory Committee and the Membership Committee and chaired both of these committees.

He holds engineering degrees from the Citadel, Charleston, South Carolina, and Massachusetts Institute of Technology, Cambridge, Mass., and was associated with engineering firms in both St. Paul and Boston, Mass., prior to joining PCA. He is also a fellow of the American Society of Civil Engineers and a member of other professional associations.

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## HONORARY MEMBERSHIP TO

### RENÉ WALTHER

*"for significant contributions to structural concrete through his designs, teaching and research, and for his service as President of the Federation Internationale de la Precontrainte."*

René Walther is professor of concrete structures at the Swiss Federal Institute of Technology, Lausanne, Switzerland, and honorary professor at the University of Stuttgart, Germany, a position he has held since 1963.

He is also director of the Institut de Beton Arme et Precontraint (IBAP).

A member of ACI since 1961 and a member of Committee 438, Torsion, he is an honorary member and past president of the Federation Internationale de la Precontrainte (FIP), serving in that position from 1988 to 1992. He also serves on the Comité Euro-International du Béton (CEB) and numerous other European organizations involved in engineering, building materials, and standardization.

Walther has taught at the Lausanne university since 1976 and also serves as its director of Reinforced and Prestressed Concrete Structures. He is chairman of the board of Walther Moiy Maier, a consulting engineering firm based in Basel, Switzerland, formed in 1963.

He earned a civil engineering degree at Swiss Federal Institute of Technology, Zurich, where he was a research assistant before moving to Lehigh University, Bethlehem, Pa., for his Ph.D. in 1957. Before joining the faculty at Lausanne, he was an engineer with a Berne, Switzerland, construction and engineering firm and was head of the steel and concrete division, Otto-Graf Institute, University of Stuttgart.

His awards include FIP's Freyssinet Medal, its highest honor, and the Emil Moersch Medal of the German Concrete Society. He is an honorary fellow of the Institute of Structural Engineers, England, and an honorary member of AICAP, the Italian cement and concrete association.

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## ARTHUR R. ANDERSON AWARD TO

## PIERRE-CLAUDE AÏTCIN

*"in recognition of outstanding laboratory and field research on the composition, structure, and properties of high performance concrete and on superplasticizers and silica fume."*

**Pierre-Claude Aïtcin** is professor of engineering at the Université de Sherbrooke, Quebec, Canada, and has been on the faculty there for 27 years.

A Fellow of ACI, he is a member of Committees 234, Silica Fume, and 363, High Strength Concrete, and is a long-time member and former president of the Institute's Eastern Ontario-Quebec chapter.

A native of France, he has been extensively involved in research on high performance concrete, superplasticizers, silica fume, and other concrete-related materials for more than a quarter century.

An ACI member since 1970, Aïtcin, who has authored numerous technical articles, many of them published by the Institute, moved to Canada and the Sherbrooke faculty in 1967 after receiving degrees from the University of Toulouse, France. He obtained an engineering degree in 1962 and a doctor-engineer degree three years later.

His awards include an ACI-RILEM honor for research involving silica fume, presented at an ACI-RILEM international symposium in Mexico in 1985.

### ARTHUR R. ANDERSON AWARD

The Arthur R. Anderson Award was established in 1972 by the Institute in recognition of Arthur R. Anderson, past president of the Institute, for his imaginative and outstanding leadership and insistence on excellence of concrete quality for engineering works.

The award is given for outstanding contributions to the advancement of knowledge of concrete as a construction material and need not be presented each year. All persons, firms, corporations, or organizations are eligible to receive the award.



## ROGER H. CORBETTA CONCRETE CONSTRUCTOR AWARD TO

### **JAMES E. COOK**

*"for outstanding contributions to the advancement of knowledge of concrete as a construction material, and steadfast commitment to excellence of concrete quality for engineering works."*

James E. Cook, an ACI member for more than 25 years, is general manager of the Florida northern region, Tarmac America, Inc.

He has been with Tarmac for about a year following previous employment with the Gifford-Hill Division, Beazer West, Inc., Dallas, Tex., and its predecessor, Gifford-Hill & Co. He is member of Committees 211, Proportioning; 232, Fly Ash; and 363, High Strength, and is a former chairman of the latter.

A former member of the Northeast Texas chapter and a Fellow of ACI, Cook was vice president and general manager of Gifford-Hill's Dallas Concrete Division before moving to Tarmac. Over the years, he has been extensively involved with applications of Class C fly ash, including its use in high rise structures in Texas.

Cook is a member of ASTM Committee C-9, Concrete and Concrete Aggregates, the National Aggregates Association, the American Society of Military Engineers, and is a former president of the Carolinas Ready Mixed Concrete Association. He joined Gifford-Hill's South Carolina division as general manager in 1969 after employment with the lightweight aggregate division of the Clinchfield Coal Co., South Carolina.

### **ROGER H. CORBETTA CONCRETE CONSTRUCTOR AWARD**

The Roger H. Corbetta Concrete Constructor Award was established in 1972 in recognition of Roger H. Corbetta, past president of the Institute, for his creative leadership and his many outstanding contributions to the use of concrete for construction.

The award is given to an individual or an organization who, or which, as a constructor, has made significant contributions to progress in methods of concrete construction. The award need not be presented each year.



## JOE W. KELLY AWARD TO

**LUKE M. SNELL**

*"for creative efforts, as an author and an educator, which have led to innovative methods of teaching concrete technology to students in universities as well as public schools, and for many outstanding contributions to the educational programs of ACI and concrete industry."*

Luke M. Snell is professor and chairman of the Department of Construction, Southern Illinois University, and has been on the faculty there for 16 years.

A Fellow of the Institute, he is a member of the Educational Activities Committee and is scheduled to assume the chairmanship of EAC at the conclusion of the Salt Lake City convention. He is also a member of Committees E 702, Designing Concrete Structures; E 801, Student Projects; 214, Evaluation of Test Results; and 308, Curing Concrete.

Snell is a former chairman and member of Committee 517, Accelerated Curing, and a former member of Committee 437, Strength Evaluation. A long-time member of the Institute's Missouri chapter, he is a former president and the current secretary of that chapter.

Prior to joining SiU faculty in 1979, he was associated with the Law Engineering Testing Co., Nashville, Tenn., for five years and was an instructor at West Virginia University. Snell holds engineering degrees from the University of Oklahoma.

He is also a Fellow of the American Society of Civil Engineers and is a trainer and examiner for ACI's field technician certification Grade I program.

Snell has been extensively involved in undergraduate education at Southern Illinois, including such programs as ACI's annual concrete testing competition for students, high strength concrete beams, computers in concrete construction, engineering kits for concrete construction, construction video presentations, speaker programs, impact testing, and transportation bidding procedures. In collaboration with his wife, Billie, they have developed early childhood education programs on concrete to stimulate young minds and promote a better understanding of concrete.

### JOE W. KELLY AWARD

The Joe W. Kelly Award was established in 1974 in recognition of the contributions of Joe W. Kelly, past president of the Institute, to concrete technology, his devotion to teaching, the advancement of his profession, and the use of concrete in construction.

The token of the award (a plaque) is given only for outstanding contributions to education in the broad field of concrete and need not be given each year.



## HENRY L. KENNEDY AWARD TO

## WILLIAM J. WILHELM

*"for outstanding efforts on behalf of concrete education and significant service to the Institute through long term involvement with the Educational Activities Committee and other Board committees."*

**William J. Wilhelm**, a Fellow of the Institute, is the current chairman of ACI's Convention Committee and former chairman of the Educational Activities Committee.

An ACI member for nearly 30 years, he is dean of engineering, College of Engineering, Wichita State University, Wichita, Kan., and has been on the faculty there for 16 years. He is a former member of the Board of Direction and has also served on the Financial Advisory Committee; the Planning Committee; Committee 116, Notation and Nomenclature; 213, Lightweight Aggregate Concrete; E 702, Educational Materials; and E 903, Convention Training.

His honors include ACI's Joe W. Kelly Award in 1986 for "extensive efforts toward promotion and improving" the Institute's educational activities. He is a long-time member of the Kansas chapter.

Wilhelm holds engineering degrees from Auburn University and North Carolina State University and was an instructor at Auburn before joining the faculty at West Virginia University. He advanced to chairman of the department at WVU before moving to Wichita in 1979.

He has been extensively involved in educational programs of the American Society of Civil Engineers, the Prestressed Concrete Institute, the American Society for Engineering Education, and the Accreditation Board of Engineering and Technology. Wilhelm is the past chairman of ASEE's civil engineering division and ASCE's Committee on Curricula and Accreditation.

### HENRY L. KENNEDY AWARD

The Henry L. Kennedy Award was established in 1958 by the Institute to honor the late Henry L. Kennedy, an extremely active Institute member who was a past president and, at the time of his death, chairman of the Institute's Building Committee.

The award is given only for outstanding technical or administrative service to the Institute and is not mandatory each year. The basis for selection of awardees is outstanding activity or service that has enhanced the Institute's prestige, marked leadership in technical, administrative, or special committee work or other distinguished service to the Institute.

Except under unusual circumstances, honorary members, past presidents, and current officers and directors will not be considered for this award. The award is in the form of a framed scroll.



## ALFRED E. LINDAU AWARD TO

### HIROYUKI AOYAMA

*"for leadership in developing design concepts for concrete buildings in seismic regions, as exemplified by his research and his work in organizing the U.S.-Japan seminars; and for his pioneering work in the use of high strength concrete and reinforcement in seismic regions."*

Hiroyuki Aoyama is professor, College of Science and Technology, Nihon University, Tokyo, Japan, and also heads the university's research center named in his honor.

A Fellow of the Institute, he is a member of Committee 352 Joints and Connections, and a former member of Committees 104, Notation, and 118, Use of Computers.

Internationally known for his research in structural design in seismic areas, Aoyama has been a member of ACI since 1961 when he was a graduate student at the University of Illinois. He also holds degrees from the University of Tokyo where he was an associate professor before moving to Nihon.

Aoyama is active in numerous Japanese engineering and architectural organizations and serves on several Architectural Institute of Japan committees. In 1987, he received an AIJ award for his studies on earthquake resistance of reinforced concrete elements.

He has been an active participant in several recent United States/Japan collaborative research efforts involving design for earthquake resistance.

### ALFRED E. LINDAU AWARD

The Alfred E. Lindau Award was founded in 1947 by the Concrete Reinforcing Steel Institute to honor the memory of Alfred E. Lindau, past president of the American Concrete Institute.

The award shall be given only for outstanding contributions to reinforced concrete design practice and is not mandatory each year. Any and all persons, firms, or corporations are eligible to compete for and receive the award.

The token of the award is a bronze plaque bearing a bas-relief portrait of Mr. Lindau.



## HENRY C. TURNER MEDAL TO

### MARY K. HURD

*"for highly meritorious service to the concrete industry through work on the ACI staff, as editor of Concrete Construction magazine, and author of Formwork for Concrete, and for active participation in the technical, administrative, and Board activities of the Institute, including chairperson of Committee 124, Concrete Aesthetics."*

Mary K. Hurd, a former Board of Direction member, is the principal of Engineered Publications, Farmington Hills, Mich.

A Fellow of the Institute, she is a member of the Publications Committee and a member and former chairman of Committee 124 as mentioned in the citation. Hurd is also a member and a past chairman of Committee 347, Formwork. She was the original editor and continues to edit "Formwork for Concrete," first published in 1963 and with total sales of nearly 100,000; a sixth edition is scheduled for 1995 release.

Hurd is past president of ACI's Michigan chapter and last year receive its Arthur Y. Moy Award for "outstanding service" in concrete technology in the chapter area. She is also a former chairman of the Concrete Improvement Board of Detroit

An engineering graduate of Iowa State University, she was a member of the Institute's staff in Detroit on two different occasions, as a staff engineer and as an associate editor. From 1983 to 1990, Hurd was associated with *Concrete Construction* magazine, published by the Aberdeen Group, Addison, Illinois, as engineering editor and as editor.

Her honors include ACI's Delmar L. Bloem Distinguished Service Award in 1990 for her technical achievements and the Construction Practice Award in both 1982 and 1988. These latter awards were for authorship of outstanding papers related to construction practices.

Hurd is a former member of the Planning Committee and the International Activities Committee and has been involved in numerous engineering seminars, talks, and lectures as an organizer and speaker.

### HENRY C. TURNER MEDAL

The Henry C. Turner Medal was founded in 1927 by Henry C. Turner, past president, American Concrete Institute. It is awarded for notable achievements in, or service to, the concrete industry.

In making selections for the Turner Medal the committee is not restricted to members of the Institute nor to the achievements of any particular period. It may be awarded once in any year, but not necessarily in each year.

# CHARLES S. WHITNEY MEDAL FOR ENGINEERING DEVELOPMENT TO

## FIGG ENGINEERING GROUP



*"For many outstanding achievements in precast segmental bridge construction including the design and construction of the first U.S. precast segmental arches for the Natchez Trace Parkway near Nashville, Tennessee."*

**Figg Engineering Group**, headquartered in Tallahassee, Fla., is a family of engineering firms specializing in the design, management, and construction engineering services of bridges and bridge projects and is recognized worldwide as a leader in the design of prestressed concrete segmental bridges.

Eugene C. Figg, Jr., is president and chief executive officer of the group. He began his career with the Florida State Road Department as a bridge engineer and six years later entered private practice as a partner in charge of structural engineering for the firm of Barrett Daffin and Figg. In 1978, he co-founded F&M Engineers, Inc., and in 1988 became the sole owner. Effective in January 1990, Figg Engineering Group was established; firms within this group are Figg Engineers, Inc.; Figg Construction Services, Inc.; and F&M Engineers, Inc.

Corporate headquarters are in Tallahassee; Figg Engineers, Inc., has regional offices in Tallahassee as well as Denver, Colo. and Miami, Fla. Figg Construction Services, which provides engineering and support services, is also headquartered in Tallahassee.

Figg & Muller Engineering, Inc., received this same award from ACI in 1983 in recognition of "innovation and cost savings in design and construction of concrete segmental bridges."

*Continued*

Member firms of the Figg Engineering Group have projects completed, under design, or in construction in 27 states and three other nations with total construction costs of over \$3.5 billion. These included 20 cable-stayed spans with main lengths from 300 to 1750 ft and more segmental bridge designs than any other firm in the United States.

The firm is perhaps best known for its award-winning designs of the Linn Cove Viaduct in North Carolina; the Sunshine Skyway Bridge in Tampa, Fla.; Hanging Lake Viaduct on Interstate 70 in Colorado; and spans on the Keys south of Florida.

The Natchez span mentioned in the citation is a part of a parkway that follows an early American, 450 mile route between Nashville, Tenn., and Natchez, Miss. The parkway, under construction since the late 1930s, is owned and maintained by the National Park Service; the Federal Highway Administration's Eastern Federal Lands Highway Division is responsible for design and construction on the parkway.

The bridge itself crosses 155 ft above Route 96 near Franklin, Tenn., and represents the first use of precast segmental technology for an arch bridge in the United States. The span, with a total of 1572 ft between abutment bearing centerlines and a main arch of 582 ft., was designed to blend with the surrounding mountainous terrain.

Figg, an ACI member for more than 25 years, is scheduled to attend the Awards Breakfast to receive the award.



### **CHARLES S. WHITNEY MEDAL**

The Charles S. Whitney Medal for Engineering Development was founded in 1961 by Ammann and Whitney to honor the memory of Charles S. Whitney. It may be bestowed once in any year, but not necessarily in each year, for noteworthy engineering development work in concrete design or construction. The recognition may be extended to a firm or agency alone or to an individual.

Any outstanding engineering development work contributing importantly, through development of general engineering practice or through application in specific noteworthy projects, to the advancement of the sciences or arts of concrete design or construction is eligible.



## CEDRIC WILLSON AWARD TO **GEORGE C. HOFF**

*"for many contributions to lightweight concrete technology in the areas of development, applications, and construction, extending from low density controlled strength concretes to high strength lightweight concretes."*

**George C. Hoff**, a past president of the Institute, is a senior associate engineer, Mobil Research and Development Corp., Dallas, Tex., and has been extensively involved in ACI activities and programs for more than 30 years.

His previous ACI honors include the Chapter Activities Award in 1987 in recognition of his service as chairman of the Chapter Activities Committee; the Henry L. Kennedy Award in 1983 for his "vigorous efforts in promoting and encouraging effective chapter activities"; and the Wason Medal for Materials Research in 1985 for coauthorship of a paper on prevention of damage to concrete frozen at early ages. He is also a Fellow of the Institute.

Hoff currently serves on the Hot Topic Committee, TAC's High Performance Concrete Committee, and technical committees 223, Shrinkage Compensating Concrete; 357, Offshore and Marine Structures; 523, Cellular Concrete; 544, Fiber Reinforcement; and 548, Polymers. He is a past chairman of both 357 and 523 and formerly was secretary of 223.

In addition to service as president, vice president, and Board of Direction member, Hoff formerly served on the Convention, Financial Advisory, Chapter Activities, and Fellows Nominating committees.

He joined Mobil in 1982 after more than 20 years with the U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss. A native of the Chicago, Ill. area, he received Bachelor's and Master's degrees from the University of Illinois and a Ph.D. from Texas A. & M. University prior to joining the Corps of Engineers.

### **CEDRIC WILLSON AWARD**

The Cedric Willson Award was established by the Northeast Texas Chapter and approved by the ACI Board of Direction in 1976 in recognition of Cedric Willson's many contributions in the fields of lightweight aggregate, lightweight concrete, and lightweight concrete masonry. The award is given for outstanding contributions to one or more of these fields. A person, firm, or organization is eligible for the award.

The token of the award is a plaque, and the award need not be given annually.



## WASON MEDAL FOR MATERIALS RESEARCH TO

### EMMANUEL K. ATTIOGBE

*"for his paper ('Mean Spacing of Air Voids in Hardened Concrete,' published in the ACI Materials Journal, March-April 1993 issue) which applies geometric probability concepts and stereological principles to derive a new equation for the mean spacing of air voids in hardened concrete which yields a better estimate of the actual spacing of air voids than the standard spacing factor."*

Emmanuel K. Attiogbe is a research scientist at the Kuwait Institute for Scientific Research, Kuwait, and was previously senior research engineer at Master Builders, Inc., Cleveland, Ohio.

An ACI member for about 15 years, he is an associate member of Committees 201, Durability, and 231, Properties of Concrete at Early Ages. Attiogbe also served as chairman at the Open Paper Sessions at ACI's 1992 conventions.

Attiogbe received his Bachelor's degree from the University of Science and Technology, Ghana, and Master's and Ph.D. degrees in civil engineering from the University of Kansas.

### WASON MEDAL FOR MATERIALS RESEARCH

The Wason Medal for Materials Research was founded in 1917 by Leonard C. Wason, past president, American Concrete Institute. It may be bestowed once in any year, but not necessarily in each year, on the member or members of the Institute reporting in a paper before the Institute, within the year noteworthy original research work or discovery relating to materials.

Any report of original research work on concrete materials and their uses, or a discovery which advances the state of knowledge of materials used in the concrete industry, is eligible for the Wason Medal for Materials Research. When awarded, it is bestowed for the research discovery judged worthy of special commendation. It is restricted to members of the Institute, but if a paper of multiple authorship has one author an ACI member, all coauthors become eligible for the award.

Prior to the awards for 1971, this medal was awarded to research papers dealing with any phase of Institute interests. The medal is bronze.



## WASON MEDAL FOR MOST MERITORIOUS PAPER TO GEORGE C. HOFF

*"for his paper ('High Strength Lightweight Aggregate Concrete for Arctic Applications — Part I,' published in Special Publication 136, 'Structural Lightweight Aggregate Concrete Performance,' 1992) which describes a comprehensive program of research and development of high strength lightweight concretes to be used for construction of offshore oil exploration platforms in Arctic regions."*

George C. Hoff has been extensively involved in ACI activities and programs for more than 30 years. A past president of the Institute, he is senior associate engineer, Mobil Research and Development Corp., Dallas, Tex.

His previous ACI honors include the Chapter Activities Award in 1987 in recognition of his service as chairman of the Chapter Activities Committee; the Henry L. Kennedy Award in 1983 for his "vigorous efforts in promoting and encouraging effective chapter activities"; and the Wason Medal for Materials Research in 1985 for coauthorship of a paper on prevention of damage to concrete frozen at early ages. He is also a Fellow of the Institute.

Hoff currently serves on the Hot Topic Committee, TAC's High Performance Concrete Committee, and technical committees 223, Shrinkage Compensating Concrete; 357, Offshore and Marine Structures; 523, Cellular Concrete; 544, Fiber Reinforcement; and 548, Polymers. He is a past chairman of both 357 and 523 and formerly was secretary of 223.

In addition to service as president, vice president, and Board of Direction member, Hoff formerly held memberships on the Convention, Financial Advisory, Chapter Activities, and Fellow Nominating committees.

He joined Mobil in 1982 after more than 20 years with the U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss. A native of the Chicago, Ill., area, he received Bachelor's and Master's degrees from the University of Illinois and a Ph.D. from Texas A. & M. University prior to joining the Corps of Engineers.

### WASON MEDAL FOR MOST MERITORIOUS PAPER

The Wason Medal for The Most Meritorious Paper was founded in 1917 by Leonard C. Wason, past president, American Concrete Institute and has been awarded continuously since that date. It is awarded each year to the author or authors of the most meritorious paper published by the Institute.

All original papers presented to the Institute by members (or if coauthored at least one author must be an ACI member) and published by the Institute during the volume year for which the medal is awarded are eligible, provided such papers have not previously been published. The medal is bronze.



## ACI CONSTRUCTION PRACTICE AWARD TO

### **JOHN S. BEEBE AND ROBERT R. MCGLOHN**

*"for their paper ('Installing and Testing Large Adhesive Anchors,' published in Concrete International, May 1993) describing an innovative and practical approach to the design, construction, and field testing of modifications to the anchorage of an existing boiler stack."*

**John S. Beebe** is senior civil/structural engineer with Champion International Corp., Hamilton, Ohio.

With Champion since 1973, he has been involved in numerous major projects in the paper industry; the May 1993 *Concrete International* article described modernization of a Champion paper mill in North Carolina.

Beebe holds a Bachelor's degree in civil engineering from the University of Illinois.

**Robert R. McGlohn** is a senior design engineer with Rust Engineering Co., Birmingham, Ala., and was a consultant on the Champion project in North Carolina.

He joined Rust in 1978 after receiving Bachelor's and Master's degrees in civil engineering from Mississippi State University.

### **ACI CONSTRUCTION PRACTICE AWARD**

The ACI Construction Practice Award was founded in 1944 by the Institute, in the hope that it would help to enrich the literature of that field of work and to honor the construction man — the man whose resourcefulness comes in between the paper conception and the solid fact of a completed structure. It may be given annually, but not necessarily in each year, for a paper of outstanding merit on concrete construction practice published by the American Concrete Institute. It is not restricted to members of the Institute. The token of the award is a plaque of bronze.



## ACI STRUCTURAL RESEARCH AWARD TO

**BILAL S. HAMAD  
AND  
JAMES O. JIRSA**



*"for their paper ('Strength of Epoxy-Coated Reinforced Bar Splices Confined with Transverse Reinforcement,') ACI Structural Journal, January-February 1993 issue) which provides design recommendations for the anchorage of epoxy-coated reinforcement based on their reported test results and a comprehensive review of other studies."*

Bilal S. Hamad is assistant professor of civil engineering at the American University, Beirut, Lebanon, where he obtained his Bachelor's degree in 1976.

At the time of the research and the preparation of the paper, he was a doctorate student at The University of Texas, Austin, Tex. He previously received a Master's at Texas in 1978. Prior to continuing his studies at Texas and joining the faculty in Beirut, Hamad was a structural engineer with construction firms and was involved in several major projects in Lebanon and Saudi Arabia.

He is also a member of the American Society of Civil Engineers, the International Association for Bridge and Structural Engineering, and the Order of Engineers, Beirut.

James O. Jirsa holds the Janet S. Cockrell Centennial Chair in Engineering at The University of Texas, Austin, Tex., and has been on the faculty there for 23 years.

A former Board of Direction member and chairman of ACI's Technical Activities Committee, Jirsa has received this same award on two previous occasions when the honor was named in memory of past president Raymond C. Reese. These awards were in 1977 for coauthorship of a paper regarding bar anchorages and 1979 for coauthorship of a paper on testing of development length and splices.

A Fellow of ACI, Jirsa's other honors by the Institute include the Delmar L. Bloem Distinguished Service Award in 1990, the Wason Medal for Most Meritorious Paper in 1977, and the Alfred E. Lindau Award in 1986 for "outstanding contributions" in the development of design practices for reinforcing bar hooks, splices, anchorage, and beam-column joints. Jirsa is a member of Committee 318, Standard Building Code, and chaired its subcommittee on two-way slabs during the 1995 code cycle, and also serves on Committees 369, Seismic Repair, and 408, Bond and Development of Reinforcement.

In addition to service on the Board and TAC, he is a former member of Committees 352, Joints and Connections, and 421, Design of Reinforced Slabs.

Jirsa, who holds engineering degrees from the universities of Nebraska and Illinois, was on the faculty at Rice University, Houston, before moving to Austin in 1972. He was named to the Phil M. Ferguson Professorship at Texas in 1984 and also served as director of the Ferguson Structural Engineering Laboratory before receiving the Cockrell endowed chair.

### ACI STRUCTURAL RESEARCH AWARD

The ACI Structural Research Award Medal is awarded not necessarily annually but at least biennially to the author or authors of a paper published by the Institute in the period subsequent to the last award that describes a notable achievement in research related to structural engineering and which indicates how the research can be used.



## MAURICE P. van BUREN STRUCTURAL ENGINEERING AWARD TO

### **JAVIER F. HORVILLEUR**

*"for his paper ('The Nations Bank Tower,' published in Concrete International, November 1993) which describes an innovative and economical approach to the design of a 60-story building using 75 ksi reinforcement combined with high strength, normal weight, and light weight concrete."*

Javier F. Horvilleur is vice president, Structural Division, Walter P. Moore and Associates, Inc., Houston, Tex., and has been with the firm for 15 years.

He is a member of ACI Committees 336, Combined Footings and Piers, and 442, Response to Lateral Forces.

Horvilleur received both Bachelor's and Master's degrees from The University of Texas, Austin, Tex., and served as a project manager for an engineering firm in Nicaragua before joining the Moore firm.

He was the project engineer for the Nations Bank Corporate Center, located in downtown Charlotte, N. C., and completed in 1992. It is believed to be the tallest building in southeastern United States and the nation's third highest structure of reinforced concrete.

### **MAURICE P. van BUREN STRUCTURAL ENGINEERING AWARD**

The Maurice P. van Buren Structural Engineering Award was established in 1981. The award is given for an outstanding concrete building project incorporating advanced structural design concepts, advanced structural design techniques, or both, described in a paper published by the Institute. The project must be completed, but not more than three years prior to the award. The award need not be presented each year. Recipients are given a certificate citing the awardee and the project.



## CHAPTER ACTIVITIES AWARD TO

**H. S. LEW**

*"in recognition for his many contributions to the Capital Chapter of ACI, his outstanding service as Chairman of the Chapter Activities Committee, and the promotion of ACI chapters worldwide."*

H. S. Lew, a former member of the Institute's Board of Direction and a current member of the Technical Activities Committee, is chief, Structures Division, National Institute of Standards and Technology, Gaithersburg, Md., and has been with that federal agency for 26 years.

In addition to TAC, his current ACI memberships include the Convention Committee; Planning Committee; TAC committees on metrication, technology transfer, and high performance concrete; and technical committees 318, Standard Building Code, 228; Nondestructive Testing; and 347, Formwork. His former committee service includes 214, Evaluation of Test Results; 348, Structural Safety; and 437, Strength Evaluation; the International Activities Committee; and the Publications Committee.

His previous ACI honors were the Kennedy Award in 1990 for "outstanding leadership activities" both in technical affairs and in the development of chapters; the Wason Medal for Materials Research in 1980 for coauthorship of a paper on strength prediction; and the Wason Medal for Most Meritorious Paper in 1988 for coauthorship of a paper on shoring loads and slab capacity during multi-story construction.

A long-time member of ACI's National Capital chapter, he is a former president of that chapter.

Lew holds engineering degrees from Washington University in St. Louis, Mo., Lehigh University, and The University of Texas. He was a research engineer at both Lehigh and Texas before joining NIST, then the National Bureau of Standards, in 1968.

### **CHAPTER ACTIVITIES AWARD**

The Chapter Activities Award was founded in 1975 to recognize outstanding service in the promotion and development of a chapter or chapters by a member of the American Concrete Institute. Nominations are made by the Chapter Activities Committee, and recommendations are approved by the Board.

The token of this award is a plaque. The award need not be presented each year.



## DELMAR L. BLOEM AWARDS FOR DISTINGUISHED SERVICE TO

### **DANIEL P. JENNY AND D. GERRY WALTERS**

*"for his unwavering effort as a member of ACI Committee 318, Standard Building Code, and as Chairman of the 318 Precast and Prestressed Concrete Subcommittee, culminating in the rewrite of Chapter 16 of the ACI Building Code and Commentary."*

Daniel P. Jenny is the retired technical director of the Precast/Prestressed Concrete Institute, Chicago, Ill., but remains as PCI's representative in several capacities, including membership on ACI Committee 318, Standard Building Code.

Jenny, a Fellow of ACI and a member for more than 40 years, retired from PCI at the end of 1990 after more than 24 years with that organization.

His awards include ACI's Henry C. Turner Medal in 1991 for "a distinguished career-long service...that has advanced the understanding of reinforced and precast, prestressed concrete" and for his "dedication to the highest levels of professional integrity." At that same convention in 1991, Jenny received the Arthur J. Boase Award of the Reinforced Concrete Research Council in recognition of his "dedicated leadership" in research and code provisions that advanced the use of lightweight and prestressed concrete."

In addition to service on 318 for more than 20 years, Jenny is also a member of Committees 213, Lightweight Aggregates, and 423, Prestressed Concrete. A former member of ACI's Board of Direction and Technical Activities Committee, Jenny also served on the Convention, Metrication, and Fellows Nominating Committees and several technical committees.

He joined PCI in 1966 as technical director, was named research director in 1987, and was appointed vice president two years later. In these positions, Jenny directed PCI's technical activities and served as secretary of the organization's Technical Activities Committee.

*Continued*

An engineering graduate of Marquette University and the University of Minnesota, Jenny was with the Portland Cement Association, Skokie, Ill., and was chief engineer for the Expanded Shale, Clay, and Slate Institute, Washington, D. C., before moving to PCI.

*"for significant contributions and remarkable service as a technical committee member and chairman, especially in the field of polymers in concrete."*

D. Gerry Walters is senior research associate, Reichhold Chemicals, Inc., Emulsion Polymer Division, Triangle Park, N. C., and has been with that firm for 25 years.

An ACI member since 1980, he is currently a member of Committees 503, Adhesives; 546, Repair, and 548, Polymers in Concrete, and is the present chairman of the latter.

During his tenure as chairman of Committee 548, that committee produced several new documents, including "Guide for the Use of Polymers in Concrete (ACI 548.1R-92)" and "State-of-the-Art Report on Polymer Modified Concrete (ACI 548.3R-91)."

Other new 548 documents compiled during his chairmanship are "Standard Specification for Latex-Modified Concrete (LMC) Overlay (ACI 548.4R-93)," "Guide for Mixing and Placing Sulfur Concrete in Construction (ACI 548.2R-93)," and "Guide for Polymer Concrete Overlays (ACI 548.5R-94)." The committee also sponsored a forum at a 1992 convention and two technical sessions at the 1994 fall meeting in Tarpon Springs, Fla.

A native of England with a chemistry degree from Gloucester Technical College, he was associated with several latex manufacturing firms in that nation and in Canada before joining Reichhold Chemicals. Walters was manager of technical service and product development in Dover, Del., offices prior to transferring to the North Carolina offices.

### **DELMAR L. BLOEM DISTINGUISHED SERVICE AWARD**

The Institute established a Distinguished Service Award in 1969 to recognize noteworthy work on ACI technical committees. The name of the award was changed to the Delmar Bloem because he had demonstrated, over a period of many years, the characteristics and dedication required for the award. The award is given to a current (or recent) chairman of a technical committee, or under special circumstances, to deserving individuals other than committee chairmen, in recognition of outstanding performance.

Usually one award will be given each year; however, there may be none or more than one in any particular year.

# ELECTED FELLOWS

## ACI FELLOWS

*"A Fellow shall be a person who has made outstanding contributions to the production or use of concrete materials, products, and structures in the areas of education, research, development, design, construction, or management. A Fellow shall have the same rights and privileges as a Member."* (see Bylaws, Article II, Section 3.)

The Bylaws provide that Fellows are nominated by a Fellows Nominating Committee and elected by the Board. Nominations to the Fellows Nominating Committee for selection may come from the committee, from chapters, from the International Activities committee, or by petition by five current ACI members. The final selection takes into account service to ACI or unusual service in the field of concrete.



**P. N. Balaguru**



**Robert P. Barnett**

The following have been elected Fellows of the American Concrete Institute:



**Carl Bimel**



**Catherine W. French**



**N. J. (John) Gardner**



**Cheng Tzu T. Hsu**



**Mohammad A.  
Mansur**



**Donald E. Milks**



**Walter P. Moore, Jr.**



**Gerald R. Murphy**



**Bart C. L. Phong**



**Predrag L. Popovic**



**Randall W. Poston**



**Kenneth B. Rear**



**Terry W. Sherman**



**Philip A. Smith**



**Stephan B. Tatro**



**Valery Tokar**



**Alexander M. Vayshurd**



**Lillian D. Wakeley**

# CHAPTER AWARDS CITATIONS OF EXCELLENCE

These awards are given to those Chapters that have achieved excellence in chapter activities and have made significant contributions to ACI activities.

Consideration is given in areas of education and certification activities; membership; meetings; local chapter award programs; public relations; newsletters; convention participation; student scholarships and/or Sponsor-a-Student program.

## **EXCELLENT CHAPTERS**

To be announced at the Awards Breakfast.

## **OUTSTANDING CHAPTERS**

To be announced at the Awards Breakfast.

# CERTIFICATES OF MEMBERSHIP APPRECIATION

The American Concrete Institute expresses its appreciation to the following Members, who have been valued members of the Institute for 50 years. *Your support through the years has contributed to the success of ACI.*



**Clinton P. Atkins**



**Richard C. Mielenz**



**George A. McCammon**



**George E. Hatch**

**Rodrigo Flores**  
**Arthur Krueger**  
**Robert S. Loomis**  
**Oliva Francisco Santos**  
**Harold F. Sommerschild**



## CONCRETE RESEARCH COUNCIL ROBERT E. PHILLEO AWARD TO

### PAUL KLIEGER

*"in recognition for outstanding contributions to the advancement of concrete technology through application of the results of concrete materials research."*

Paul Klieger, an Honorary Member and a member of the Institute for nearly a half century, is a concrete and concrete materials consultant based in Northbrook, Ill.

Associated with the Portland Cement Association, Skokie, Ill., for more than 45 years before establishing his own practice, Klieger was accorded Honorary Membership in the Institute in 1985 for "distinguished service" and "outstanding personal leadership and understanding of concrete materials technology."

A Fellow and the Raymond E. Davis Lecturer in 1979, he now serves on TAC's High Performance Concrete Committee and technical committees 201, Durability; 232, Fly Ash and Natural Pozzolans; 233, Ground Slag; 234, Silica Fume; 318, Standard Building Code; and 365, Service Life. Klieger is a former member of the Board of Direction, the Technical Activities Committee, and several technical committees.

In addition to Honorary Membership, his other ACI honors include the Arthur R. Anderson Award in 1980 for "continuing significant contributions to the advancement of concrete technology" and a Delmar L. Bloem Distinguished Service Award in 1970 for technical committee contributions.

A graduate of the University of Wisconsin, he joined PCA's research staff in 1941 and was later named director of the Concrete Materials Research Department.

### THE ROBERT E. PHILLEO AWARD

The Robert E. Philleo Award of the Concrete Research Council, American Concrete Institute, established in 1992, is given in recognition of a person, persons, or an organization for outstanding research in the concrete materials field, or for outstanding contributions to the advancement of concrete technology through application of the results of concrete materials research. The award is a plaque suitably inscribed with the name of the recipient and the citation.

It is given in memory of an Institute past president and Honorary Member who was also chairman of the Concrete Materials Research Council, now the Concrete Research Council.



## REINFORCED CONCRETE RESEARCH COUNCIL ARTHUR J. BOASE AWARD TO

### JOHN M. HANSON

*"for service to the art and science of reinforced concrete design as a researcher, a practitioner, a member of code committees, and as president of a number of technical societies, including the Reinforced Concrete Research Council."*

**John M. Hanson**, a past president of ACI, is distinguished professor of civil engineering and construction at North Carolina State University, Raleigh, N. C., and is currently the chairman of the Reinforced Concrete Research Council.

He joined the NCSU faculty in early 1993 after 20 years with the consulting firm of Wiss, Janney, Elstner Associates, Northbrook, Ill., including 13 years as its president. A member of ACI for more than 30 years, Hanson is also a Fellow.

President of ACI in 1990 following service as a vice president and member of the Board of Direction, he is a member of Committees 318, Standard Building Code; 215, Fatigue of Concrete; and previously served on 444, Shear and Torsion. His ACI honors include the Delmar L. Bloem Distinguished Service Award in 1975 for outstanding contributions in technical activities.

Hanson joined WJE in 1972 following seven years with the Portland Cement Association, Skokie, Ill., where he was involved in a wide range of investigations and experimental research.

He holds engineering degrees from South Dakota State University, Iowa State University, and Lehigh University and was an assistant professor at the latter after earning a Ph.D. and before joining PCA.

Hanson is a member of numerous professional organizations and is the current president of the International Association of Bridge and Structural Engineering, the first non-European to hold this position. He is also a former chairman of the Precast/Prestressed Concrete Institute's Technical Activities Committee.

### ARTHUR J. BOASE AWARD

The Arthur J. Boase Award, presented by the Reinforced Concrete Research Council, was first awarded in 1971 in recognition for outstanding activities and achievements in the reinforced concrete field.

The award consists of a certificate suitably inscribed with the name of the recipient and circumstances of the award.

# PORTLAND CEMENT ASSOCIATION CONCRETE BRIDGE AWARDS

The Portland Cement Association has named eight winners in its fourth biennial bridge awards competition. PCA notes that the winning bridges show the versatility of concrete; concrete can be used for aesthetics, as it was in a pedestrian bridge, and for structural soundness, as it was in an earthquake-prone California structure. Judging of the entries was based on engineering innovation, economy, and environmental treatment, and construction of concrete bridges.

PCA's 1994 bridge program attracted 63 outstanding entries from Canada and the United States, and included new construction, seismic design, and replacement and rehabilitated structures; short, medium and long spans; precast, cast-in-place and composites of both; slabs, girders, arches, and cable-stayed structures; conventionally reinforced, pretensioned, post-tensioned and combinations of methods; highway, pedestrian, railroad, transit and even aircraft-supporting structures.

The judges were Kris G. Bassi, consultant, previously head of design, Ontario Ministry of Transportation; Robert C. Cassano, consultant, previously chief, Division of Structures, California Department of Transportation; and Arun M. Shirole, director of structures and deputy chief engineer, New York State Department of Transportation.

## **Acosta Bridge, Jacksonville, Fla.**

This bridge provides a fixed high-level crossing that replaces a 69-year-old lift span bridge for a major thoroughfare in the downtown area. During construction, highway and river traffic were maintained and an adjacent railroad bridge was protected from potential scour. The dual five-span bridges are asymmetrical continuous concrete structures with a main span of 630 feet and a length of 1,645 feet. The variable-depth



arched-soffit box girder, 38 feet deep at one pier, was cast-in-place using balanced cantilever construction.

Jury comments: Nice sweeping form. Looks graceful over the water. Long spans opened up the waterway.

## **Oak Canyon Bridge, Spring Canyon Undercrossing, San Diego, Calif.**

These bridges carry the Route 52 Extension across two canyons that are part of the Mission Trails Regional Park. The two three-span dual structures have 300 foot main spans with length of 720 and 780 feet. The bridges are cast-in-place post-tensioned concrete box girders with parabolic haunches varying in

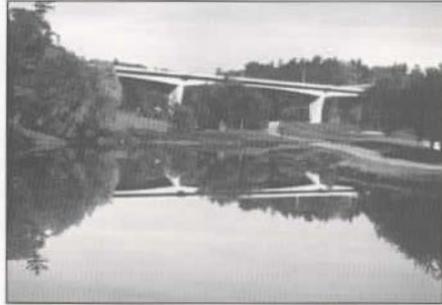


depth from 8 feet to 15 feet. The rectangular columns have parabolic flares in both directions to provide a smooth transition from the column to the superstructure.

Jury comments: Long spans give the structures a pleasant, open look that does not intrude on the canyons they span. Attractive textured piers are appropriate for the site. Elegantly designed using very clean lines.

### **Upper Middle Road, 16-Mile Creek Bridge, Oakville, ONT**

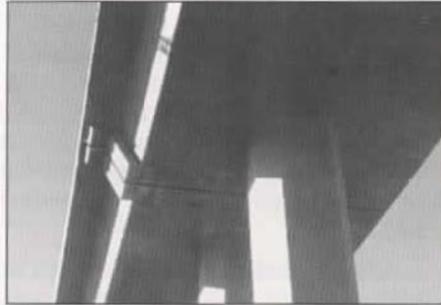
This 1,099 ft bridge crosses a scenic valley and is adjacent to a championship golf course, so several architectural features were incorporated into the design. The five-span dual structures have a maximum span of 328 feet and carry three lanes of traffic in each direction. However, the current roadway has only two lanes, so the third lane is covered by a removable concrete median. Crews constructed the main spans using the cast-in-place cantilever balanced segmental method, and two approach spans were erected as large segments supported on falsework. A pedestrian bridge also was part of the project, completed one year ahead of schedule.



Jury comments: Appealing, "people-friendly," blends with the natural beauty of the terrain. Outstanding architectural features including stone-paved median, sidewalks with pedestrian over-looks, tapered columns, and unique textures.

### **Route 5/14 Separation and Overhead, Los Angeles, Calif.**

The Northridge Earthquake inflicted irreparable damage to the interchange of State Highway 14 and Interstate 5. These replacement structures, a pair of connectors, feature several seismic design innovations to improve performance in future earthquakes. The superstructures consist of 8 ft deep concrete box girders cast in place and post-tensioned. Single columns vary in height from 20 to 128 ft. One innovation was to equalize column stiffness by increasing the flexibility of shorter columns, accomplished by reducing the column size and placing oversized casings around columns to allow movement to a specified depth below the surface. The two structures, 1,040 and 1,582 ft long, were completed and opened to traffic in 115 days.



Jury comments: Rapid state-of-the-art design and construction, esthetically pleasing and structurally reliable. Seismic design innovations include "tuned" columns to equalize the stiffness of members with different lengths, and abutments that resist lateral loads with ductile members.

### **Scripps Crossing, San Diego, Calif.**

This pedestrian crossing, a key link in the master plan of the University of California/San Diego campus, is the first cable-stayed bridge in California. Seismic and esthetic concerns strongly influenced the design. The single large pile beneath the asymmetrically placed pylon entirely supports the cast-in-place concrete structure. This was accomplished by anchoring the back stays in a link beam running between the abutment and the pile. The main span over the roadway is supported by stays attached to the outer edges of the walkway while the back stays are arranged in a single plane that penetrates the deck. The 140 ft bridge has a structure depth of 13 in. High-strength steel bars encased in grout-filled stainless steel tubes were used for the stays.



Jury comments: Interesting, unique, innovative. Single pylon allows unrestricted downhill vistas along scenic drive. Dramatic use of lighting.

### **H-3 Windward Viaduct, Hawaii**

These twin 6,600 ft structures are composed of 24 variable-depth spans ranging in length from 240 to 300 ft. The spans were originally designed for cast-in-place segmental construction with cantilever erection, but the successful bidder submitted a value engineering proposal for precast segments. The contractor used such segments to decrease site work and allow the overhead erection of the superstructure. Other changes in the value engineering proposal included converting foundations to drilled shafts from driven piles and revising the bearing systems. A self-launching gantry was used to construct both structures simultaneously. The project was completed several months ahead of schedule.



Jury comments: Looks like a ribbon wrapping around the hill. Structure flows with the terrain, blending beautifully with the natural setting. An excellent solution for an environmentally sensitive area.

### **Semiahmoo Trall, British Columbia**

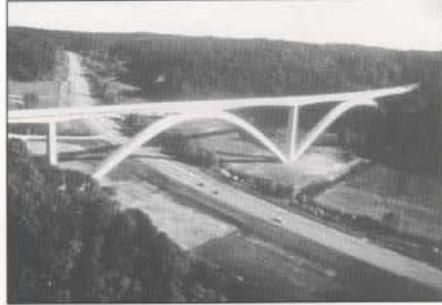
This concrete rigid frame pedestrian bridge carries the Semiahmoo Trail across a local roadway. The superstructure is a 20 in. thick concrete slab cast-in-place and post-tensioned. It is supported on two inclined precast reinforced concrete legs, providing a clear span of 80 ft. The layout and design of the structure allows the 12 ft wide deck to be supported entirely by the legs without abutments.



Jury comments: Clean, simple design. Tapered legs and no visible abutments are appropriate for rustic setting and add to the grace of the structure.

**Natchez Trace Bridge, Franklin, Tenn.**

This arch bridge forms one of the final links on the Natchez Trace Parkway. The two arches, which span 582 and 450 feet, carry park way traffic 155 ft. above the roadway. The arches were built using a combination of precast and cast-in-place concrete segments, making this the first use of precast concrete segments for arch construction in the United States. Eight spans compose the 1,648 ft single-cell concrete box-girder superstructure. The variable-depth girder segments were erected by the balanced cantilever technique with the use of a crane on the valley floor.



Jury comments: Clean and simple, yet elegant and functional. Arches fit gracefully into the rural setting. You can feel the flow of forces in this structure without having to do any analysis.

## PROJECT CREDITS

**Acosta Bridge:** Florida Department of Transportation, owner; DRC Consultants, Inc./Fred Wilson & Associates, engineers; Recchi America, Inc., contractor; Alfred Benesch & Company, construction engineer; Steinman Consulting Engineers, construction engineering and inspections; and Florida Mining & Materials, Inc., concrete supplier.

**Oak Canyon Bridge, Spring Canyon Undercrossing:** California Department of Transportation, owner, engineer, and architect; Daley Corporation, contractor; and Nelson & Sloan, concrete supplier.

**Upper Middle Road:** Town of Oakville, owner; McCormick Rankin & Associates Ltd./DRC Consultants, Inc., engineers; DuToit, Allsopp, Hillier, architect; Dufferin Construction Company, contractor; and Dufferin Custom Concrete Group, concrete supplier.

**Route 5/14 :** California Department of Transportation, owner, engineer, and architect; and Kasler Corporation, contractor.

**Scripps Crossing:** University of California, San Diego, owner; SEQAD Inc./Burkett & Wong, Inc., engineers; SEQAD Inc./Taal Safdie Architect, architects; Nielsen Construction Company, contractor; and Premixed Concrete Company, concrete supplier.

**H-3 Viaduct:** State of Hawaii, Department of Transportation, Highways Division, owner; Wilson Okamoto and Associates/DRC Consultants Inc./J. Multer International/Libby Engineers/Law Crandall, engineers; SCl Engineers & Constructors Inc./E. E. Black Ltd., a joint venture, contractor and precaster; and Ameron HC & D, concrete supplier.

**Semiahmoo Trail:** City of Surrey, owner; A. A. Williams & Associates Ltd., engineer; Joram Construction Ltd., contractor; Ocean Construction Supplies Ltd., concrete supplier; and Canwest Post-Tensioning & Rebar, post-tensioning supplier.

**Natchez Trace:** U.S. National Park Service, Department of the Interior, owner and architect; Eastern Federal Lands Highway Division, Federal Highway Administration/Figg Engineering Group, engineers; PCL Civil Constructors, Inc., contractor and precaster; and Williamson County Ready-Mix, concrete supplier.

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*Congratulations*  
*1995*  
*Awardees*