CONSTRUCTION OF THE LAND—ST. MARKO—KRK prestressed concrete bridge between mainland Yugoslavia and the Adriatic island of Krk. The channel will be spanned by two mammoth-sized arch bridges. The larger of the two arches, at 390 m (1280 ft) long and 60 m (197 ft) high, is 85 m (278 ft) longer and 19 m (62 ft) taller than the record-setting Gladesville arch bridge in Australia. The double-arched bridge spans 1330 m (4360 ft) including abutments.

The prestressed concrete design was chosen over an alternate cable-stayed design because of economics and the extreme wind conditions prevalent at the site. The larger arch stretches from the mainland to St. Marko; the second bridge, from St. Marko to Krk, is 244 m (800 ft) long and 47 m (154 ft) high—also slightly taller than the Gladesville bridge; and though 61 m (200 ft) shorter, it is still the seventh longest concrete arch in the world.

On the Krk bridge, cableways placed 22-t (20-ton) prestressed segments hoisted from barges under the span. A temporary system of stays support the arch segments and the deck bents were anchored in bedrock on either side of the arch.

The bridge, situated near a major oil terminal and petrochemical complex, is expected to carry about 1 million vehicles annually.

EDGEWATER CONDOMINIUMS, South Padre Island, Texas. A total of 580 8-in. and 145 6-in. hollow-core slabs were used in this project. Architect: R. A. Lubinski, AIA, Lubinski Associates Architects. Precast Supplier: Houdaille-Duval-Wright Company.

# INDUSTRY NEWS

## Student Award Winners

The 5th Annual Architectural Precast Concrete Student Design Awards Program, sponsored by the Prestressed Concrete Institute and Canadian Prestressed Concrete Institute, drew entries from 20 architectural schools. From these entries, three were designated as winners, and two received honorable mentions.

Entries were required to demonstrate an understanding of proper application, function and detailing, using architectural precast concrete as the primary exterior material.

The distinguished panel of judges was chaired by **Richard C. Peters,** president of the Association of Collegiate Schools of Architecture and professor of architecture at the University of California, Berkeley. Other jurors included: **Peter Hoyt,** of Hellmuth, Obata and Kassabaum, Inc.; and **Peter C. Pran,** of Schmidt, Garden & Erickson.

First place was awarded to a design by **Michael Otavka,** California Polytechnic University, Pomona. Mr. Otavka's design approach made full use of the design problem priority of providing natural illumination for all leasable space in a speculative office building.

Student awards jury with winning entry: (from left) Professor Richard C. Peters, Peter C. Pran and Peter Hoyt.

The design approach used was the result of studying effects of morning and afternoon sun. Horizontal fins have been utilized on the south wall to control the sun's penetration.

Precast concrete palm trees provide lighting at night and serve as a barrier between the pedestrian path and automobile traffic. A long span floor design, with the core over to the side, provides maximum space flexibility and was developed within specific cost guidelines.

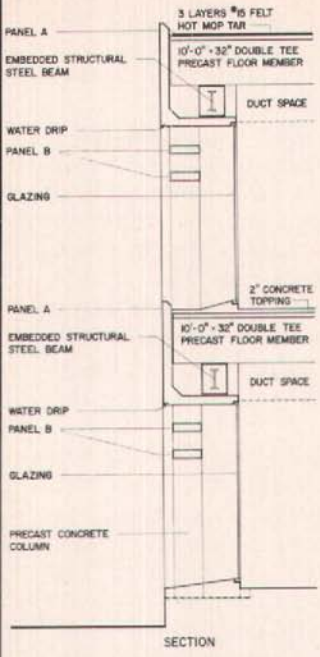
The jury felt his work was a thoughtful, careful esthetic solution that deals with the hard problems of social and environmental restraint. They were impressed with the thought of precast concrete palm trees and felt the entrance was dignified with a straightforward structural expression.

Designer of the second place project was Michael O. Winters, University of Colorado, Denver. Third place was awarded to a University of Wisconsin-Milwaukee project designed by Gregory Baum, Jon Erdman, Mark Helminiak, Douglas Lasch, and Larry Tuttle.

Honorable mentions went to two projects. One was designed by Greg Cook and Scott Georgeson at the University of Wisconsin-Milwaukee, and the other designed by Robert Panuncialman, Jr., at the Illinois Institute of Technology.

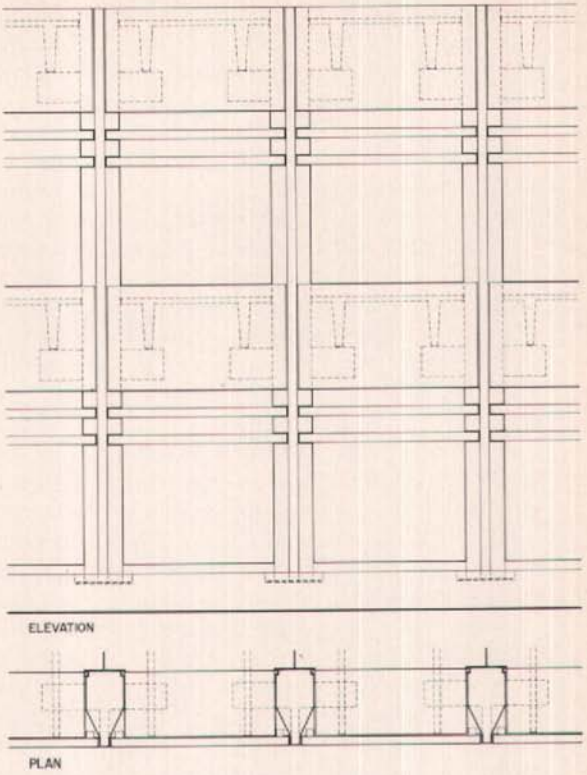
## PCI Technical Committee News

PCI's Technical Activities Committee (TAC) along with 12 of the 18 technical



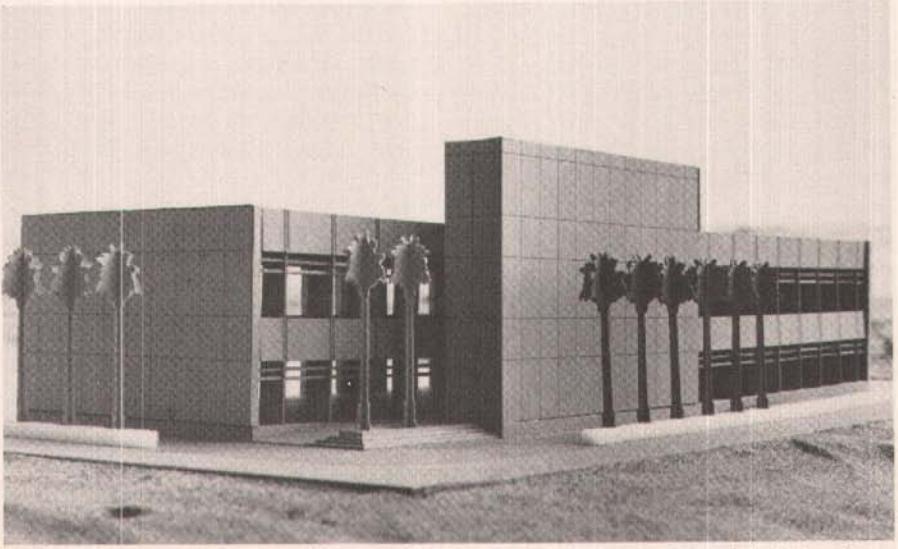

SECTION

SOUTH WALL



ELEVATION

PLAN



Model of the award winning project by Michael Otavka from California Polytechnic University.

committees are scheduled to hold meetings during the PCI Annual Convention. This promises significant progress in reaching committee goals for 1980.

Two committees submitted reports for TAC review and approval:

- The Ad Hoc Committee on HUD Construction Criteria (**Irwin J. Speyer,** chairman) completed revised provisions to be recommended for insertion in HUD's "Minimum Property Standards for Multifamily Housing." These cover sections on Structural Integrity and on Precast and Prestressed Concrete.
- Tolerances (**Helmuth Wilden,** chairman) submitted two chapters of its proposed final report on "Tolerances for Precast and Prestressed Concrete." The introductory chapter and the chapter on Product Tolerances can stand as a unit, and the committee asked that they be published as a preliminary report to generate further comments and discussion. Meanwhile work is proceeding to develop chapters on Erection Tolerances and Interfacing Tolerances.

The Research Committee (**John R. Salmons,** chairman) completed its evaluation of research fellowship proposals and recommended that two fellowships be funded for the academic period 1980-81. They are: "Bearing of Plain and Reinforced Ends of Prestressed Concrete Beams" at University of Wisconsin-Milwaukee, Dr. A. Fattah Shaikh, faculty advisor; "Slenderness of Prestressed Concrete Columns" at University of British Columbia, Dr. Noel D. Nathan, faculty advisor. Note that this is the first time, since the beginning of the program in 1972, that a Canadian university received a PCI Research Fellowship.

Last year's Research Fellowship project at the University of Illinois at Chicago Circle has already resulted in a completed thesis—"Reliability of Partially Prestressed Beams at Serviceability Limit States" by A. Siriaksorn and A. E. Naaman, June 1980. Anyone interested in obtaining a copy of this report should call or write PCI Headquarters.

Some of the committees working on drafts of reports are:

- Prestressed Concrete Poles (**Thomas E. Rodgers, Jr.**, chairman) is developing both a state-of-the-art report on prestressed concrete poles and transmission towers and a guide specification for prestressed concrete poles.
- Seismic (**David A. Sheppard,** chairman) is reviewing a first draft of a basic general report on "Seismic Resistant Design with Prefabricated Concrete Components."
- Precast Concrete Bearing Wall Buildings (**Alexander Popoff, Jr.,** chairman) is reviewing a draft report on "Seismic Design Practice for Precast Concrete Bearing Wall Buildings," and considering it either as a section of the proposed up-dated recommended practice or as a separate committee report.
- Joint PCI-PTI Committee on Segmental Construction (**Walter Podolny, Jr.,** chairman) is near final review on a "Recommended Practice for Segmental Construction in Prestressed Concrete." This report is significant in that it considers buildings and other structures as well as bridges in its scope.
- Precast Prestressed Concrete Storage Tanks (**Mahmoud Z. Arafat,** chairman) has under review a number of completed sections for its needed state-of-the-art report on precast prestressed concrete storage tanks.

## Yorkdale Named VP E & R at BIA

**Allan H. Yorkdale** has been appointed vice president, Engineering & Research, at the Brick Institute of America in McLean, Virginia. Mr. Yorkdale, active in many professional organizations and technical committees, has had over 30 years in the building design and construction field and is the author of numerous technical papers.

Overall view of the Rock Island parking structure from the north-east corner.

## Precast Parking Structure Wins 1st Place Award

An imaginatively conceived precast prestressed parking structure, in Rock Island, Illinois, designed by Howard May of Conrad Associates East, has won the Best Structure Award in the Structural Engineers Association of Illinois First Annual Awards Competition.

The judges felt this structure presented "a unique structure facade which unified esthetic expression, function, and economy."

This structure has previously won two PCI awards—an award in the National PCI Awards Program in 1978 and the Robert J. Lyman Award. The Lyman award recognizes the year's best design/construction paper in the PCI JOURNAL. This paper appeared in the July-August 1977 PCI JOURNAL.

Other categories given awards in the Structural Engineers Association of Illinois included: Best Structure, Most Innovative and Original Design, and a variety of lesser awards.

## Appointments at Spiroll

Kenneth F. Clark, president of the Spiroll Corp. in Winnipeg, Canada, has announced the appointments of **G. Alan Greenwood** to the position of general manager, international marketing, and **John A. Ingraham** to the position of manager, new products development.

Mr. Greenwood moves to Winnipeg from England where he was marketing manager for the U.K. subsidiary since 1975. He will oversee relations between the company and its almost 100 hollow-core producers in 40 countries. In addition, he will direct the efforts needed for further expansion and the introduction of new technologies, products and services.

Mr. Ingraham has been head of the Winnipeg and the U.K. manufacturing divisions for 10 years. In his new post, he will initiate a plan to acquire new products, ideas and technology transfer by way of licensing or acquisition.

## Plastic Accessories Brochure Available from Spillman

An informative brochure showing a new line of plastic accessories is now available from Spillman Company of Columbus, Ohio. The brochure provides descriptions and specifications with photos telling of the various applications of plastic accessories such as clips for positioning horizontal reinforcement, bar spacers, chairs for reinforcing and mesh, and chain and panel guards.

Edward R. Sturm

Tom A. Thomas III

Timothy N. Thomas

Herman Himes

## Appointments at Thomas Concrete

**Edward R. Sturm** has been named vice president project development, **Tom A. Thomas III** vice president production, **Timothy N. Thomas** vice president transportation, and **Herman Himes** chief engineer of Thomas Concrete Products Company.

The new positions will permit greater efficiency in operations and more complete customer service, says Tom A. Thomas Jr., president of Thomas Concrete Products Company.

Mr. Sturm will serve as company liaison with architects, engineers, contractors and building owners during the initial phases of project development. He will also serve as a consultant to the Thomas engineering department. He came to Thomas in 1965 as Chief Engineer and became vice president engineering in 1970.

As vice president, Tom Thomas III will maintain his responsibilities as plant manager, a position he has held for two years, and will add new administrative duties in personnel supervision.

Tim N. Thomas will remain in charge of materials handling, loading and delivering, as well as assume new administrative duties.

Herman Himes has been involved with precast prestressed concrete engineering since 1964 when he became Design Engineer for the Building Components Division of Ohio-based Price Brothers. Subsequent promotions made him manager of the technical activities for the Building Components Division, as well as engineering manager and principal design engineer. He is a graduate of Ohio University at Athens, Ohio.

## Shapiro Joins Seinuk Consulting Firm

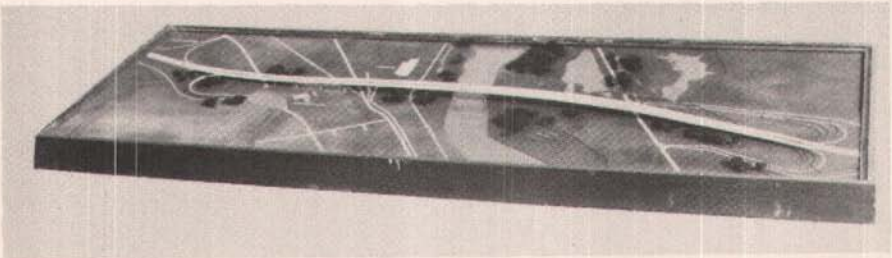
**Bertram Shapiro** has joined the consulting engineering firm of Ysrael A. Seinuk, in New York City. At Seinuk, he will serve as senior project manager. Mr. Shapiro has served as chief engineer for several consulting engineering firms.

## Gulf South Prestressed Announces New Officers

The Gulf South Prestressed Concrete Association has recently announced its new officers.

The new president is **Mott Pevey,** Louisiana Concrete Products Inc. The vice-president is **Jerry Sellers,** Southern Prestressed Concrete; and the secretary-treasurer is **Wayne H. Hyden** of F-S Prestress Inc.

All correspondence for the association should be directed to: Gulf South Prestressed Concrete Association, % F-S Prestress Inc., Star Route Box 130, Princeton, Louisiana 71067.



In October 1979 crews began work on the 8100 ft (approximately 2469 m) long Zilwaukee Bridge (on Interstate I-75 over the Saginaw River in the town of Zilwaukee, Michigan). This bridge will be a twin 26-span precast, prestressed post-tensioned concrete structure, with the segments being the largest ever erected in North America in cantilever. When the bridge is completed, each direction of traffic will have four lanes, three for through traffic and one for slow-moving traffic. With an underclearance of 125 ft (38 m) the new bridge will make continuous shipping possible. The completion date is set for 1983.
Top photograph is of existing bridge; bottom picture is a model of the new segmental bridge currently under construction.

Morris Schupack

Mario G. Suarez

William Cavanaugh

Melvin R. Larson

## Schupack Name Change

Schupack Associates and Company has changed their name to Schupack Suarez Engineers, Inc.

The addition of Mr. Suarez to the company name occurs one year after Mario G. Suarez joined the company as a partner.

The firm combines structural engineering with the material technology of concrete and prestressed concrete. Its services also include product design, research and development, material behavior evaluations, structural investigations, product testing and expert opinion.

Under its new name, the firm will continue to draw from the more than 60 years of combined professional experience of its two principals, Schupack and Suarez, and to provide its clients with the specialized quality engineering services for which it is recognized.

## Carl Walker Firm Opens New Denver Office

Carl Walker & Associates, Inc., nationally recognized engineers/parking consultants, has opened a branch office in Denver, Colorado. This office will be managed by Donald R. Monahan, PE.

Besides the new office in Denver, Carl Walker & Associates has offices in Kalamazoo, Minneapolis, Chicago, Elgin, Detroit, and Indianapolis.

## Cavanaugh Appointed President of ASTM

William T. Cavanaugh has been appointed the president of the American Society for Testing and Materials (ASTM). ASTM is the largest developer of voluntary standards in the world.

Mr. Cavanaugh became associated with ASTM in 1967 when he was named director of field operations. Three years later, he was appointed managing director and chief executive officer of the Society. He holds a BS degree from Seton Hall College.

## Concrete Columns Under Earthquake-Resistant Investigation

The Construction Technology Laboratories (CTL) have been awarded a National Science Foundation grant to investigate the application of lightweight concrete columns in earthquake-resistant construction. (CTL is the contract research arm of the Portland Cement Association, Skokie, Illinois).

Under the two-year program, full-scale specimens will be tested under simulated earthquake conditions to develop improved design criteria that will insure against catastrophic failure from severe earthquakes. The test specimens will represent portions of high-rise building frames at the joint between columns and beams.

## Larson Named President of Wells Concrete Products

**Melvin R. Larson** has been promoted to president of Wells Concrete Products Company, Wells, Minnesota. Mr. Larson joined Wells Concrete Products in 1960 and worked in the field construction and production departments. For the past 10 years, he has been in charge of the production facilities at the prestress plant. Mr. Larson received his CE degree from Iowa State University.

## Errata

In Reference 1 on page 164 in the article on "Research Answers Needed for Greater Utilization of High Strength Concrete," by Arthur R. Anderson (July-August 1980 PCI JOURNAL) two lines were inadvertently dropped in the printing process. The full reference should read:

1. Symposium on "Practical and Potential Applications of High Strength Concrete," ACI Annual Convention, Milwaukee, Wisconsin, March 22, 1979.

## Cement Use Forcasted to Rise

Cement use in the United States will grow to an average of 85 million tons per year in the next five years, compared with an annual use of 78 million tons in the 1970's, according to a new forecast by the Portland Cement Association.

The forecast predicts that cement shipments will recover slowly in 1981, then rise more sharply through 1985, possibly reaching 90 million tons as early as 1983.

PCA President Richard E. Reuss said that all areas of the country are forecast to experience stronger cement demand, with the largest gains expected in the West, Southwest, and Southeast.

ARC American President C. Mack Albertson (left) presents the first ARC America Award to Frank Coulter.

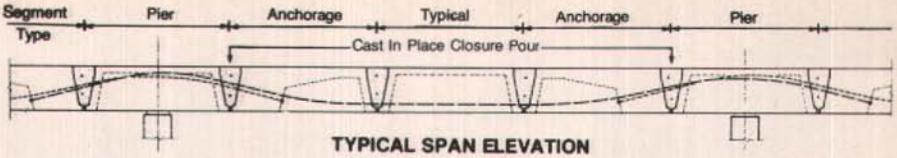
## Coulter Receives ARC America Award

**Frank L. Coulter,** engineer, Hydro Conduit Corp., Corona, California plant, has been honored as recipient of the first ARC America Award. Mr. Coulter received this award for 10 years of charitable work for the poor and the orphan children of Mexico.

Mr. Coulter first collected canned food and clothing donations for the residents of a shack town in San Felipe. He made a trip there every month for about 6 years. The 600-mile round trip finally became too much and he turned his efforts to the Miracle Ranch Orphanage, 50 miles south of the Mexican border.

In addition to Mr. Coulter's efforts, Hydro Conduit gave a substantial donation last fall to the Miracle Ranch Orphanage.

With modesty Mr. Coulter downplays his role in the project. "The people who give me the food and clothing deserve just as much credit as I do," he explained. "All I do is take it there."



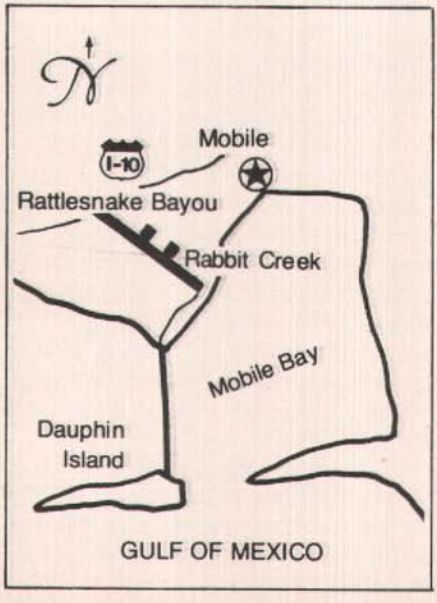

**TYPICAL SPAN ELEVATION**
Showing erection tendons

# Segmental Alternate Design for Rattlesnake Bayou and Rabbit Creek Bridges

Figg and Muller Engineers, Inc. have proposed a precast segmental alternate design with several options for the Rattlesnake Bayou and Rabbit Creek Bridges south of Mobile, Alabama.

A major requirement of the Alabama State Highway Department is that the sensitive marshland not be destroyed in building the bridges. Dredging and filling is also prohibited.

The proposed construction method is to build the bridges entirely from the level of the superstructure, i.e., from the top down. Items offered for the contractors' consideration include a new segmental shape, novel erection method, 41 ft (12.5 m) span length, and segments not match cast.




The segmental design is based on a span-by-span erection concept. An entire span is erected and assembled in one operation. Since all erection equipment will be supported by the superstructure and substructure, it was necessary to minimize span length.

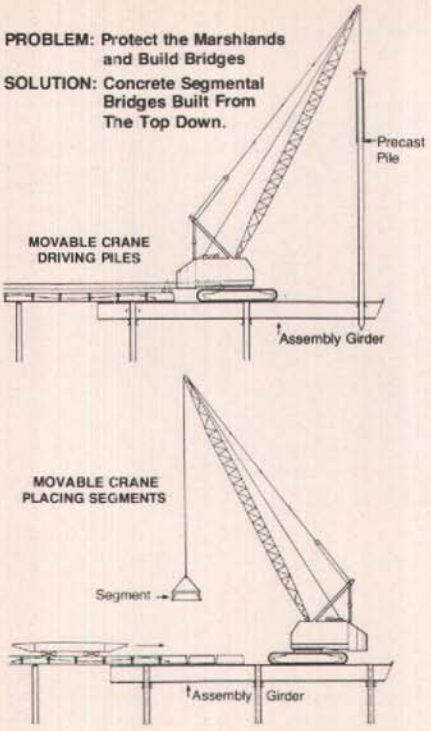
The span length chosen was 41 ft 4 in. (12.6 m). The cross section for the segments was selected on the basis of being simple to cast and handle. The twin web configuration chosen was judged to be the most efficient for the span length. The segments are 10 ft 4 in. (3.1 m) in length and are bounded at the longitudinal extremities by transverse ribs.

Three types of segments are utilized: typical span segments, anchorage segments and pier segments. Four segments, consisting of two anchorage segments, one typical span segment and one pier segment are post-tensioned together to make up one span. All segments are prestressed transversely.

In the first system, segments are cast independently and are connected at the time of erection with cast-in-place closure joints at every segment interface. This method permits reduced segment handling in the casting yard when compared with a match cast system.

The second system utilizes the more familiar match cast joint concept. Segments are connected at the time of erection with epoxy glued joints.

The substructure consists of two driven piles per bent, one under each web. The superstructure is supported on




**Rattlesnake Bayou and Rabbit Creek Bridges Particulars**

Location: Mobile County, Alabama, South of Mobile.
Owner: Alabama State Highway Dept.
Design Engineers: Figg and Muller Engineers, Tallahassee, Florida.
Total length: Rabbit Creek 590 ft (179.8 m); Rattlesnake Bayou 1190 ft (362.7 m).
Span lengths: End spans 37 ft (11.3 m). Intermediate spans 41 ft 4 in. (12.6 m).
Roadway width: 40 ft (12.2 m) roadway, each structure.
Superstructure: Precast, twin web section. Segment length 10 ft 4 in. (3.1 m).
Option I: Cast-in-place concrete joints (not match cast).
Option II: Epoxy glued joints (match cast).
Substructure: 24 in. (61 mm) square prestressed or 36 in. (91.4 mm) diameter cylinder pile.
Superstructure erection method: Span by span with assembly girder; complete construction from deck level.

the piles by means of elastomeric bearing pads. A 24-in. (610 mm) square precast, pretensioned concrete pile, and a 36-in. (914 mm) diameter cylindrical precast, post-tensioned concrete pile have been designed. The two piles per bent will be the only elements of the bridge that touch the environmentally sensitive marshland beneath the bridge.

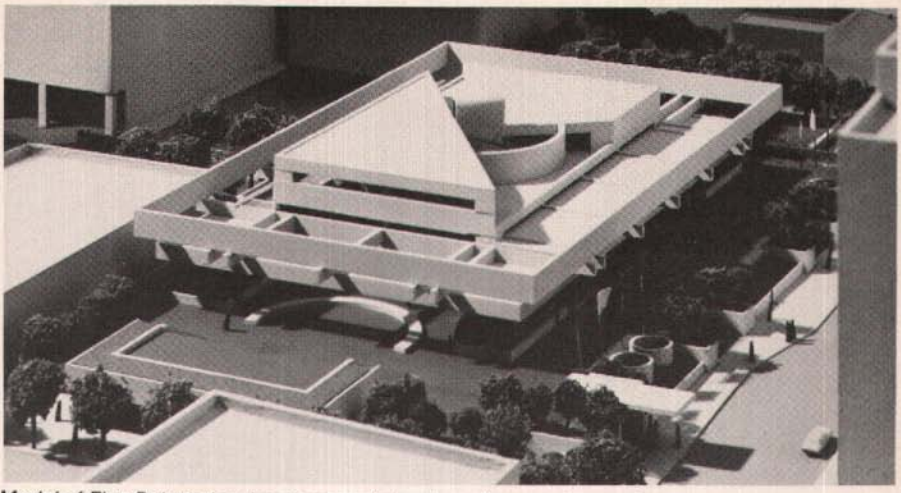
While the basic erection concept relies on an assembly girder, the equipment used to drive piles and assemble segments has been varied. Either piece of equipment will be used to drive piles as the construction advances.

The first scheme utilizes a stiff leg derrick attached to the previously assembled span. From this position, piles are driven and the assembly girder advanced. The girder is supported on collars attached to the piles. After the girder is in the proper position, the derrick places the segments of the new span. Segments are furnished by traveling over the completed deck. With all segments erected, the longitudinal post-tensioning is installed and stressed. The derrick is then advanced, drives the next pair of piles, and the procedure is repeated.

The second scheme shown is similar in concept except that the equipment used is a movable crane. The crane is supported on the assembly girder and from this position, piles are driven and segments placed. When a span is completed, the crane and girder are advanced together.

Due to environmental restrictions, construction on the conventional design of the Rattlesnake Bayou Bridge will probably require a work bridge.

Alternate designs using AASHTO girders and steel beams were prepared by the Alabama Highway Department Bridge Bureau. All designs for the project will be bid in early 1981.



*Model of Five Points showing huge roof structure of precast concrete.*

# Five Points Station
# Metropolitan Atlanta Rapid Transit System
# Atlanta, Georgia

The massive roof structure for this $42-million transit station is the major architectural feature. It is made up entirely of precast components (some 450 in all) except for the reinforced concrete columns.

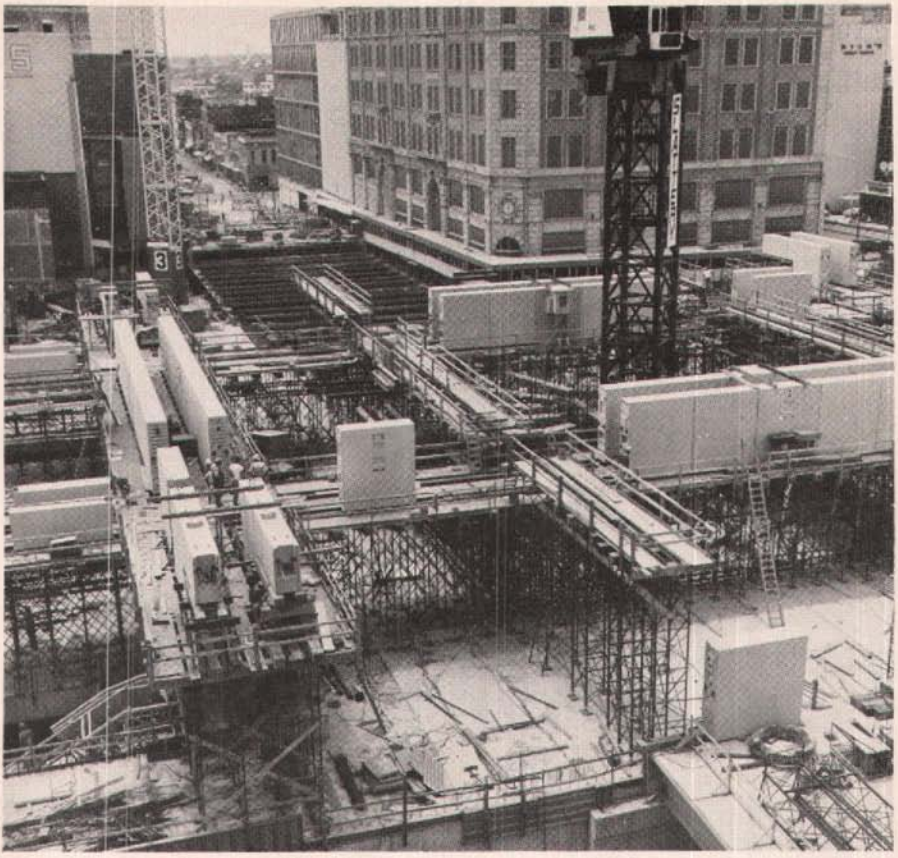
The major elements of the roof structure are nine longitudinal beams 262 ft long and 11 transverse beams, 167 ft long. These beams are composed of up to 20 precast segments, 13 ft long, 10 ft 8 in. high and 2 ft 6 in. wide.

This structure is probably one of the most imposing ever designed for precast design.

Five Points is the largest of the 41 stations on the 53-mile MARTA rapid transit network. It serves as the hub of the new system, at the intersection of the north-south and east-west lines. When the entire system is completed, more than 300,000 patrons a day will use this station as a destination or transfer point.

In order to realize the desired goal, the architects for the station drafted numerous schemes using alternative materials. After exhausting studies and consultations with various structural feasibility, a scheme utilizing precast, prestressed architectural concrete was chosen. The use of precast concrete, using a specified mix, single-source aggregate and cement was specified in order to obtain a uniform surface texture and color. The roof in addition to being a sculpture, provides shelter to pedestrians entering the station.

As shown in the photographs the structure is a series of sculptured elements. Except for the columns, all of the concrete is precast. The main beams are match-cast construction glued together with epoxy. In plan the roof is 167 ft wide and 262 ft long. It rises almost 50 ft above the at-grade Plaza level. The heaviest precast pieces (weighing up to 23 tons apiece) are those that make up the main beams.

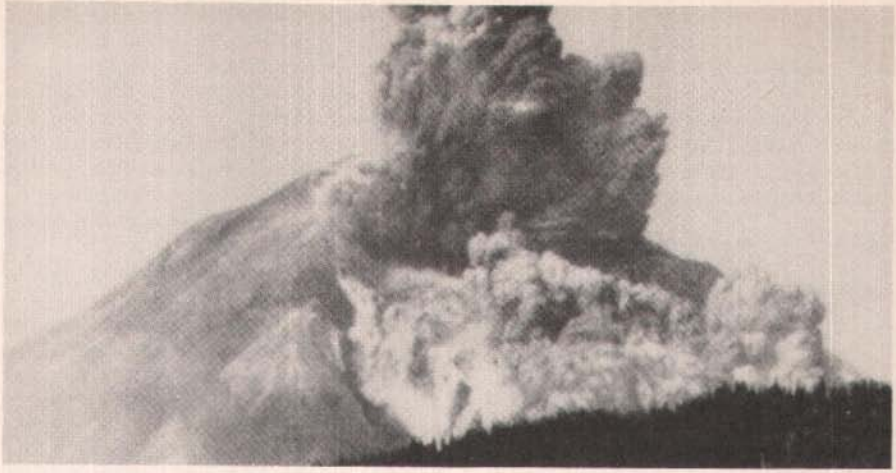


*Big precast concrete segments which have been epoxy glued and stressed to from main beams in roof structure of Five Points Station. These units are 10 ft 8 in. high and 2 ft 6 in. wide.*

The largest precast pieces are those of the exterior fascia. These panels are 9 ft 8 in. high by 54 ft long and 4 ft thick. The panels are stiffened with reinforced cast-in-place ribs as well as five prestressed strains added for handling stresses. The panels were made in pairs, then bolted together like a sandwich to form a hollow beam.

## Credits

Architect: Finch-Heery, Atlanta (Henry Teague).
Structural Engineer: Parsons Brinckerhoff, New York (Michael J. Abrahams).
Others involved in the roof structure project:
Concrete Consultant: Architectural Concrete Consultants, Dallas (Kay D. Kennedy).
Contractor: Slattery Associates, New York (Jim Hastie).
Precaster: Southeast Shockbeton, Lavonia, Georgia (Ernie Schultz).
Tensioning Materials: Stressed, Wilkes Barre, Pennsylvania, and Prescon Corp., San Antonio, Texas.
Precast Concrete Plank: H. D. W. Houdaille, Jonesboro, Georgia (John D. Campbell).
Erection Consultant and Shop Drawings: T. J. Ecsedi & Assoc., Toronto, Canada (Peter Kluchert).



TONS OF VOLCANIC ASH from Mt. St. Helens fell on Associated Sand and Gravel Company's Satsop plant. About 1000 tons of aggregates had to be scraped from the stockpiles and reprocessed at the pit and washed clean. Even the equipment was not spared. The facilities and machinery had to be scrubbed or blown clean, a process which took several days.

## Engineering Foundation Conference

The Engineering Foundation will sponsor a conference on "Mechanical Properties of Concrete Systems for Use in the 1980's."

The conference will be held at Miramar Hotel, Santa Barbara, California, November 30-December 5, 1980.

The theme of the conference will be divided into five smaller areas; these are: problems, resources, needs, opportunities and responsibilities of those in the concrete field in the 1980's.

Proposed sessions will meet these challenges by high level technical discussions between representatives of industries, universities, research foundations and government agencies from all over the world.

Attendance to the conference is by invitation or application. Those wishing further information, or to apply should contact the Engineering Foundation, 345 East 47th Street, New York, New York 10017, (212) 644-7835, or Dr. Sabnis, Suite 400, 5711 Sarvis Avenue, Riverdale, Maryland 20840.

## Sabnis Joins Sheladia Associates, Inc.

**Gajanan M. Sabnis** has joined the consulting firm of Sheladia Associates, Inc., in Riverdale, Maryland, as one of its principals. Dr. Sabnis is currently on sabbatical.

For several years Dr. Sabnis has been a professor in the Department of Civil Engineering at Howard University in Washington, D.C. He has been active in technical committee work of various societies and is the author of several papers in the field of reinforced and prestressed concrete.

## Lura W. Bates to be New President of NAWIC

The National Association of Women in Construction (NAWIC) has installed **Lura W. Bates** as its 26th national president during the Association's annual convention in Phoenix, Arizona.

Mrs. Bates attended the University of Arkansas, majoring in marketing and economics. Employed by Associated General Contractors of Mississippi for the past 22 years, she is currently serving as director of administrative services for this construction trade association.

Lura W. Bates

Joseph P. LoBuono

## LoBuono Promoted at Figg and Muller

**Joseph P. LoBuono** has been promoted to chief bridge engineer in the Southeastern Regional Office of Figg and Muller Engineers, Inc.

Under the direction of Jean Muller, Mr. LoBuono's responsibilities include all concrete segmental bridge design in the Southeastern office.

Mr. LoBuono has been with Figg and Muller since May, 1979. He received his CE degree from Manhattan College in New York. Before coming to Figg and Muller he worked for Howard Needles Tammen & Bergendoff. He is also a member of the PCI Bridge Committee.

## Muller to Address ASCE Philadelphia Chapter

On the 30th anniversary of the construction of the Walnut lane Bridge in Philadelphia, Pennsylvania, **Jean Muller,** Chairman of the Board of Figg & Muller Engineers, Inc., Tallahassee, Florida, will address on December 9th the monthly meeting of Philadelphia's Chapter of the American Society of Civil Engineers.

The subject of his talk will be "Prestressed Concrete: Yesterday, Today, and Tomorrow." A large audience is expected as other professional engineering societies including PCI members and personnel from the Departments of Transportation from surrounding states will be invited to attend.

## Morse Brothers Expands Prestress Facilities

On September 26, Morse Brothers celebrated the inauguration of their new prestress plant at Clackamus, Oregon, with a combined plant tour and old-fashioned outdoor barbecue. It is expected that the new facility will expand the capabilities and services of the company.

## Growth at Everman

The Everman Corporation has announced construction will begin immediately on two new facilities.

One project is a $2 million plant expansion project. This will include three buildings, to be completed within a year, to consolidate and modernize the existing operation in Everman, Texas.

Plans for the Everman expansion call for 109,752 sq ft of enclosed manufacturing and support space. The modernized plant will include a computerized concrete batch plant, providing the most accurate concrete mixing system available. The computerized system will virtually eliminate waste of building mate-

rials and will produce much more consistent concrete than manually-mixed concrete. This building is also planned to use solar heat facilities for curing concrete building products.

The second Everman project is a new $2.5 million precast concrete plant near Houston, Texas. Construction of this 70,000 sq ft building will begin in November with a completion date in the first quarter of 1981.

Everman is also introducing, to the building industry of the southwest, a 10-ft wide prestressed double tee unit. This unit is designed to cut construction costs up to 10 percent.

The traditional tee is customarily 8 ft wide. By increasing its width by 2 ft, the unit's weight per sq ft becomes lighter and can therefore be translated into a savings of about 30 cents per sq ft to the purchaser.

## Conference on Housing and Energy Innovations

With emphasis on alternate energy research, an international conference on housing and energy innovations will be held December 7-12, 1980 in Miami Beach, Florida.

Over 100 papers addressing the energy requirements, as well as methods of energy conservation in industrial and institutional buildings and other human enclosures, will be presented by the authors during the conference.

Internationally-known experts will present their experiences and expertise on areas of design and construction of buildings that could better house the world's growing population.

The proceedings of the conference aim at helping to alleviate the world's energy crisis and confront the worldwide need for re-aligning architectural and engineering practices.

Samples of work, models and other systems related to these areas of research and practice will be on display. A two-volume, 1400-page hardcover book containing selected manuscripts will be published as the official document of the conference and will be available to participants.

For more information and registration, contact the Department of Conferences, Florida International University, Tamiami Trail, Miami, Florida 33199, (305) 552-2600. For more technical information regarding the conference, contact Dr. Oktay Ural, Conference Chairman, Florida International University, (305) 552-2764.

## Harter Elected Chairman of ASTM Committee on Precast Concrete Products

**Marion M. Harter,** chief of the Design Branch, Engineering Division, Kansas City District, Corps of Engineers, Department of the Army, Kansas, Missouri, was recently elected chairman of Committee C-27 on Precast Concrete Products of the American Society for Testing and Materials (ASTM).

Mr. Harter will head the 107 member committee concerned with the formulation of test methods, specifications, definitions, recommended practices, and the promotion of knowledge relating to precast concrete products excluding concrete pipe.

## Master Builders Expands New Headquarters

Two months after the formal dedication of Master Builders new World Headquarters and Technical Center in Cleveland, Ohio, site excavation and preliminary underground construction have begun on a $1½ million Dispenser Center on the company's 20-acre site.

Scheduled for completion in spring, 1981, the Dispenser Center handles the design, assembling of components,

building and shipping of dispenser units, as well as extensive research and development.

The new 27,000 sq ft building will have precast concrete panels with exposed aggregate on the exterior. This is similar in design to the main headquarters building.

## First International Conference on Cryogenics Concrete

The Concrete Society in association with The British Cryogenics Council and The Institution of Gas Engineers are arranging for the first International Conference on Cryogenics Concrete, on March 25-26, 1981 to be held at The Gosforth Park Hotel, Newcastle-upon-Tyne, England.

This conference will make available, for the first time, the accumulated expertise gained throughout the world in the low-temperature performance of concrete, and will provide a full review of the present-day state-of-the-art. Many experts are planning to give their views and ideas, and an exhibition is also planned to complement the convention.

Further information is available from Julia Headley-Neill, The Concrete Society, Terminal House, Grosvenor Gardens, London, ENGLAND SW 1W 0AJ.