

SCANNER

NEWSLETTER OF THE AMERICAN SOCIETY OF
HIGHWAY ENGINEERS



February - 1996 - 1

TAMPA BAY SECTION CHARTERED CONGRATULATIONS AND WELCOME



1995 Officers of the Tampa Bay Section of ASHE. L to R Jonathon P. Addison, Jim Law, Treasurer, Steven J. Tidwell, Secretary, Dick Duttenhoeffer, Vice President and William J. Warden, President.

On July 12, 1995 the Tampa Bay Section located in Tampa Bay, Florida was chartered as the 33rd Section of ASHE and became the second section in Florida.

Attending the charter ceremonies were Ray Petrucci, Past National President; Mike Martin, National Director; and Cooper Curtis, National Director. The Central Florida Section was very instrumental in the organization and fast growth of the Tampa Bay Section. C. Curtis along with Bill Hallaway (Past Director) of FDOT and Greg Smith (Chairman of '96 ASHE Conference) of the Central Florida Section began contacts with Dick Duttenhoeffer and Bill Warden of the Tampa Bay area in late 1994 and began organization in January 1995. The first meeting was held in March, 1995 which led the large membership to chartering in July, 1995. The inaugural dinner meeting in March drew over 150 people to hear guest speaker William McDaniel, Secretary, Florida Department of Transportation, District Seven, Tampa. Subsequent meeting speakers included Bob Burleson, President, Florida Transportation Builders Association, Inc.; Les Eighmey, Director, Hillsborough County Roads and Streets; Donald Crane, President, Floridians for Better Transportation. The fast growth resulted from an enthusiastic response from the highway industry in the Tampa Bay Area to establish a local section.

The charter meeting was attended by approximately

140 members. Guest Speaker for the evening was Edward Mierzejewski, Deputy Director for Engineering at the Center for Urban Transportation Research, University of South Florida. A total of 153 charter members received their pins and certificates following the meeting. Section officers who were installed at the meeting along with the membership pledging to accept the challenge and responsibility to uphold the integrity and principals of the organization and foster its purpose. The officers of the Tampa Bay Section are: William J. Warden, President; Dick Duttenhoeffer, Vice President; Steve J. Tidwell, Secretary; and Jim Law, Treasurer.

A special congratulations and thanks for a job well done by the Central Florida Section for their efforts on expansion of ASHE in Florida along with the members of the National Board and New Sections Committee who were instrumental in the chartering of the Tampa Bay Section. ■



**Central Florida Section invites ASHE
Members and their families to the
National Conference - Orlando
June 26-29, 1996 - Plan to Attend.**

NATIONAL BOARD NEWS

The National Board met for a regular board meeting on January 19, 1996 in New Stanton, PA. National President Thomas J. Haslett, P.E. presided over the meeting. The following are highlights of the committee reports and actions.

NEW SECTIONS COMMITTEE:

Chairman David Greenwood was pleased to report that the new Carolina Piedmont Section in Charlotte, North Carolina was presented their charter by President Haslett on January 11, 1996. Bob Pearson was also in attendance to welcome the new Section. Cooper Curtis and Bob Pearson will attend an additional informational/organizational meeting with Georgia DOT representatives on February 27, 1996 to discuss ASHE's purpose and objectives. Also, Bob Pearson attended an informational meeting held with interested officials in the Dallas/Forth Worth area.

LEGISLATIVE COMMITTEE:

Both Houses of Congress recently passed a National Highway System Bill and the President signed the bill into law in accordance with provisions of The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). Some of the highlights of the Legislation are:

National Highway System Designation - The bill designates approximately 159,000 miles of routes on the National Highway System (NHS) as

required by the ISTEA Act of 1991. Approval of the routes means that \$5.2 billion of the \$6.5 billion authorized for NHS and Interstate maintenance activities in 1996 and 1997 can be released to the states.

Cap on Highway Spending - The bill approves two actions: (1) Rescinding of previously authorized projects (including \$125 million from the magnetic levitation rail project) to provide \$511 million for distribution to the states under the ISTEA formula, and (2) Broadening of flexibility so that the states can shift unobligated balances among categories to meet their highest priority needs.

Use of Metric System - The bill repeals authority for the Secretary of Transportation to require states to erect metric highway signs. It also prohibits the requirement for states to use the metric system in preparing highway plans until the year 2000.

National Speed Limit - The national speed limit is repealed, leaving states free to establish speed limits within their borders.

NOMINATING COMMITTEE:

Chairman Ray Petrucci presented the nominating committee's nominated candidates for the elective offices, as follows:

President	David A. Greenwood, P.E.
1st Vice-Pres.	Pasquale A. Dougherty, P.E.
2nd Vice-Pres.	James W. Charles, P.E.
Secretary	Terence D. Conner, P.E.
Treasurer	Robert E. Yeager, R.S.

National Directors

Region #1	David W. Jones
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Region #3	Domenic M. Piccolomini, PLS
Region #4	Sandra K. Ivory
Region #5	Matthew P. McTish, P.E.
Region #6	Rodney P. Pello, P.E.
Region #7	Michael R. Martin, P.E.
Region #8	Robert E. Pearson, P.E.
Region #9	Cooper E. Curtis, P.E.

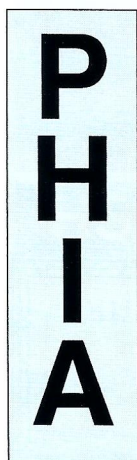
The Constitution under Article VI, Section 8 - provides that additional nominations may be submitted by petition as outlined in the By-Laws. The By-Laws under Article VII, Section 2 - outlines that nominations by petition shall contain the signatures of at least ten (10) percent of the eligible voting membership of the Society and shall be accompanied by a letter from the nominee in acceptance of the nomination. Nomination by petition shall be filed with the Secretary not less than sixty (60) days prior to the published annual date set for concluding the balloting for the election of officers. This date shall coincide with that of the annual meeting.

MEMBERSHIP COMMITTEE:

Chairman Jim Charles distributed a new version of the ASHE Membership Application on diskette. All Sections should begin using this January 2, 1996 version and may customize it to include their Section name, address and dues structure.

The Membership Committee is in the process of printing a new National

Continued on page 3



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<input type="checkbox"/> Sustaining	600

NATIONAL BOARD NEWS

Continued from page 2

Membership Directory. Sections are asked to update their addresses and to submit ad sponsors by April 1, 1996 in order to meet an early Summer publication.

EXECUTIVE DIRECTOR COMMITTEE:

Chairman Michael Martin had requested a detailed cost proposal for *SCANNER* publication as part of ASHE National's Strategic Plan for Association Management Assistance services. At the board meeting, Chairman Martin presented and discussed a multi-year plan (1996-1999) for consideration to implement and expand the use of Management Assistance.

LONG RANGE PLAN:

Chairman Pasquale Dougherty presented a draft of the Long Range Plan 1997 - 2000 for Sections to review and comment on by March 1, 1996. Some changes include revision of the Mission Statement "to advance the highway aspects of intermodal transportation"; to evaluate the need for Executive Director Services to provide assistance to the National Board and to provide an effective method of funding the costs; to expand the duties of the Membership Committee to assist the Sections in maintaining

and expanding their membership; to promote the identity of ASHE by distribution of the *SCANNER* to DOT and FHWA offices; and, to establish a public relations committee in each Section to promote the Society are just a few of the proposed revisions.

SCANNER REPORT

The *SCANNER* was published in December which completed four issues for the 1995 calendar year. This was a 12 page issue including the President's Message, National Board News, a '96 Conference update, two technical articles, two Section/Member articles, and a message from the Managing Editor outlining the history and intent of the current *SCANNER* format, and stressing the need for member involvement for the success of the *SCANNER*.

The December 15, 1995 deadline for the next issue was extended to January 15, 1996. Please note, the advertising and copy deadlines are printed under the rate table in each issue of the *SCANNER*. The next issue will be published in February, 1996, and will include technical articles from Franklin, Central Florida and Triko Valley Sections. A preliminary program and schedule for the 1996

ASHE National Convention and a program and registration information for the 1996 ACPA, CPR3 Conference will also be included. A final notice and registration information for the '96 National Conference will be included in the May *SCANNER*.

Articles are now due from the following Sections by March 1, 1996, for the May issue of *SCANNER*:

Cuyahoga Valley
Altoona
East Penn
Pittsburgh
Harrisburg
North Central New Jersey
Carolina Triangle

The next deadline will be June 15, 1996, for the Summer issue.

At the October 13, 1995 National Board Meeting, 500 additional copies of the *SCANNER* were requested at each printing for organizational efforts and for public relations purposes. For the December issue, there were 200 additional copies printed.

By letter of November 4, 1995, one National Director per member state was requested to submit addresses of State DOT officials for the purpose of placing them on the Non-Member *SCANNER* mailing list. Responses were received and addressed (by title only) were compiled for the following States:

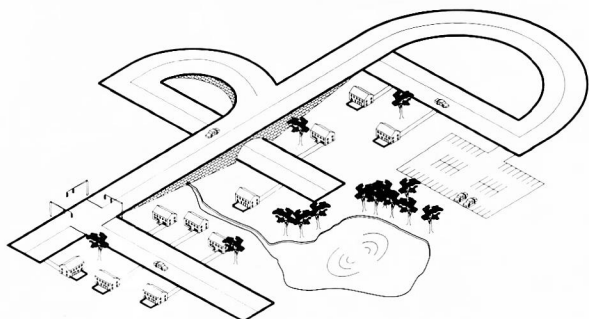
Pennsylvania	14
Ohio - Districts	48
Ohio - Central Office	21
West Virginia	13
Florida	5
North Carolina	21
Missouri	25
Kansas	5
Illinois	5
Iowa	1
Nebraska	1
Total	159

The current Non-Member list was purged to eliminate duplicates due to the above new addresses. Addresses are requested for the following States:

Delaware
Maryland
New Jersey
North Dakota
Virginia

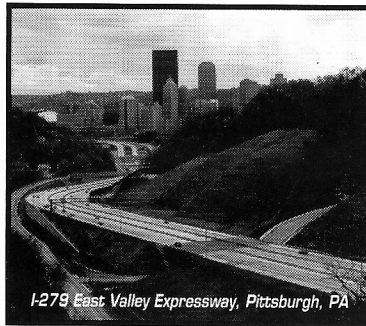
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DOBBINS LANDING, PRESQUE ISLE BAY CITY OF ERIE, PENNSYLVANIA ENHANCEMENT PROJECT SUCCESS "THE HOT MIX"

Submitted By William G. Petit, P.E., ASHE - Franklin Section

Many transportation engineers and planners consider the "hot mix" to be a combination of bitumen and aggregate placed at 290+/- degrees to provide a roadway surface on which vehicles travel. The advent of ISTEA legislation in 1991 and the intermodal framework in which it was conceived has brought a new definition to the term. In the case of the enhancement project at Dobbins Landing in Erie, Pennsylvania, it has meant a partnership with local planners and developers, the Erie-Western Pennsylvania Port Authority (the project sponsor) and their design consultant Urban Engineers of Erie, Inc., state and federal regulatory agencies the Federal Highway Administration (FHWA) and the Pennsylvania Department of Transportation (PennDOT); a new "hot mix"

This combination of talents has successfully developed an enhancement project on the shore of Presque Isle Bay; using federal dollars provided through provisions in ISTEA that created a new discretionary funding category for the construction of ferry boats and ferry terminal facilities. The vision of the Executive Director of the Erie-Western Pennsylvania Port Authority and local planners can be credited for developing a creative, phased approach to the Presque Isle Ferry Boat Service Plan. The four (4) parts of the plan were:

1. to rehabilitate and reface the dock wall of Dobbins Landing. This involved the placement of steel sheet piling along the three (3) sides of the pier that extend into the waters of Presque Isle Bay, the placement of a cast-in-place concrete wall along the perimeter, "in-wall" lighting and marine electrical services, and sidewalks along the top of the landing area.

2. to rehabilitate and cap the dock face along the Penelec Development Site, immediately to the east of Dobbins Landing. This site will also need to be dredged to allow for the docking of the ferry boat, utilities and lighting must be established and a covered waiting area must be constructed.

3. to construct a full-service terminal that will provide room for an operator area, a waiting area, a snack bar and a bait stand. This site is central to the ferry boat dock and will

be located in an area that will be developed for parking to accommodate the visitors to the area.

4. to purchase a 100-passenger vessel. The research conducted by the Port Authority indicates that a vessel of this size will allow for the most efficient use of the docking sites available at the Presque Isle State Park and the city side of the bay.


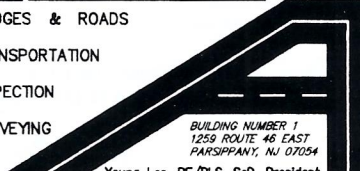
This plan has been conceptualized with a full appreciation of the dynamic transformation underway in the Bayfront area and is designed to compliment many other intermodal initiatives in progress. An Intermodal Complex at the Bayfront Centre, to be located just north of the recently completed Bayfront Parkway and immediately south of the docking sites along the bay, will represent the northern terminus for the Peach Street Corridor Intermodal Transportation demonstration project. The complex is to feature an all-weather transit hub and transfer point, a minibus and taxi station, ferry and vaporetto (water taxi) service, an airport transfer station, a heliport, a promenade and skywalks to the new Library and Museum facility and other sites, and a high occupancy garage


Part 1 of this plan is currently becoming a reality with the start of the construction work this fall. The development of the construction plan was complicated by the unique nature of the transportation facility and the design parameters and criterion. Urban Engineers of Erie had to work closely with the regulatory agencies, especially the Army Corp of Engineers and the Department of Environmental Protection, to obtain necessary permits and satisfy the National Environmental Policy Act (NEPA) requirements for environmental clearance. This task necessarily preceded the design effort. PennDOT administered the project as the agent of the FHWA and assisted in the coordination effort and the plan development.

The partnership that was created allowed the project sponsor, the Erie-Western Pennsylvania Port Authority, to take a progressive first step towards the realization of their goal to enhance the Bayfront area and further the intent of the legislators who authored ISTEA. ■

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I-71/I-75 RECONSTRUCTION IN COVINGTON, KENTUCKY

By George R. Hoffman, Pre-Construction Engineer, Kentucky Transportation Cabinet

The two major north/south Interstate Routes I-71 and I-75 approach Cincinnati from the South through Kentucky as a combined route. Opened to traffic in 1962 and designed to carry approximately 53,000 vehicles by the Year 1975, the actual count reached 120,000 ADT by the design year, resulting in increased accidents and traffic delays.

This portion of interstate was one of the early designs and employed several minimum standards. A 1.5 mile grade of 5 percent was combined with a series of three 6 degree back-to-back curves at the bottom of the hill, with an interchange and substandard distances between ramp terminals. While all of grade and curvature met minimum standards, the combination of grades, curves, and interchange produced 23 fatalities between 1964 to 1968. The high number of fatalities resulted in a congressional investigation and the name of 'Death Hill' by local newspapers and residents. The initial 16 foot curbed grass median with shrubs was replaced with a double faced guard rail and then several years later with a New Jersey Concrete Barrier Wall. The placement of the barrier wall significantly reduced deaths, however, accidents still continued to occur on the hill and as a result of traffic back-ups at the bridge over the Ohio River. Eventually all through trucks were banned from this portion of the interstate.

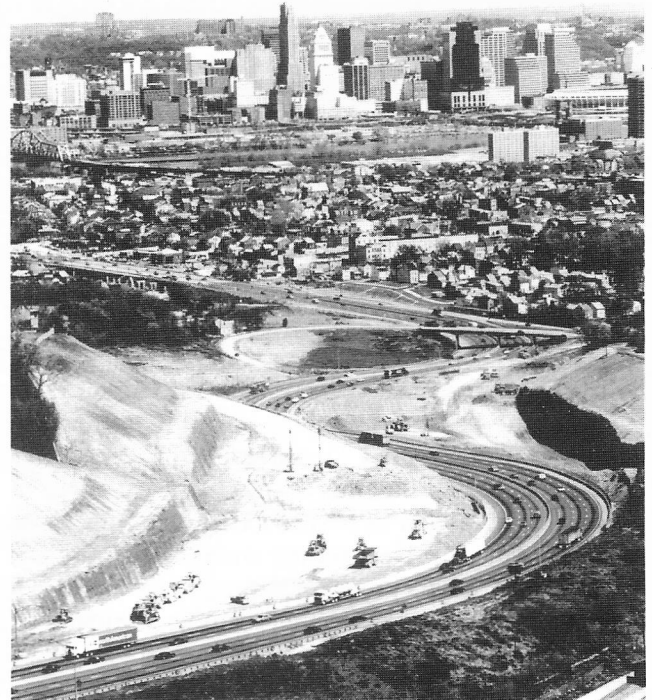
When the Kentucky Department of Transportation began the process to reconstruct the interstate in this area, the initial attempt was to add a lane up the hill for trucks and improve the capacity of the Ohio River Bridge. The upgrade was severely restricted because trucks would crawl up the hill at speeds of 15 to 20 miles an hour effectively reducing the interstate to two lanes. Through the public involvement process, the local community felt, that if the Department was planning to reconstruct the roadway and spend a significant amount of money, that they should go ahead and try to fix the problem once and for all while

they endured construction delays, particularly with respect to the curves. Some ramps in the interchange at the bottom of the hill had already been eliminated in an attempt to reduce accidents. The Department agreed to expand the project which resulted in the largest single construction project ever awarded by the Kentucky Department of Transportation. The \$50 million dollar reconstruction was awarded to Incisa-USA, the first United States venture of the Italian Firm.

Another contract to rework the Ohio River crossing took an existing three lane bridge and converted it to four lanes with the cooperation of the Federal Highway Administration resulting in 11 foot lanes with one foot shoulders, thus significantly reducing the back-ups. This work was done prior to the hill reconstruction.

While the grade on the hill remains at 5%, the three reverse curves have been reduced to two-four degree curves and the interchange at the bottom have been completely eliminated. The project designed by H. W. Lochner Incorporated of Lexington, Kentucky, has been fatality free for the year that it has been completely opened to traffic.

Also, in an effort to reduce the impact of an interstate in an urban area, agreement was reached with the



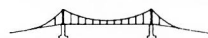
I-71/I-75 looking North toward the Ohio River and Cincinnati with the original alignment and showing the start of reconstruction.

City of Covington to buy additional homes in order to provide a green buffer along the interstate since noise walls were anticipated to be ineffective. A total of 40 homes were acquired to provide the buffer. The total cost of the overall 3 mile reconstruction project as designed by H. W. Lochner was \$75 million dollars. The construction was accomplished maintaining two lanes down the hill and three lanes up the hill. A decision was made early in the project not to add additional lanes down the hill as the three lanes approaching the bridge could handle the capacity of the four lane bridge with its various ramps and narrow lanes. ■

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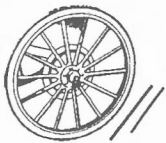
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TAMPA BAY SECTION NEWS

The new Tampa Bay Section is off and running with its 150+ members, having a very active year since the charter meeting in July, 1995. To date, a golf tournament, Tampa Bay Buc's Tailgate Party, and a Christmas party have taken place in addition to the regularly scheduled monthly meetings. A joint meeting with the area chapter of Suncoast Utility Contractors Association was a particularly enlightening event and guest speakers have included David May, FDOT District Seven Consultant contracts Administrator, Sandra Piccirilli, FDOT I-4 Resident Engineer, Randy Larson of the Hillsborough County Metropolitan Planning Organization and Diana Carsey, Director of Planning, Hillsborough County Area Regional Transit.

Plans are currently being made for an exciting roster of speakers for 1996 and upcoming group activities include a tour of the University of South Florida's Museum of Science and Industry, a Yankees game at the almost completed New York Yankees Spring Training Stadium in Tampa and of course, more golf tournaments!! The Tampa Bay Section is a spirited group, anxious to fulfill the purpose of ASHE and to serve the transportation industry of Florida. ■

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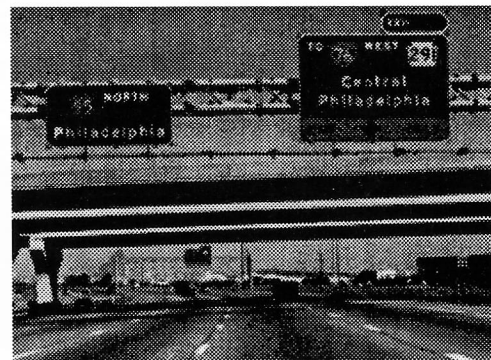
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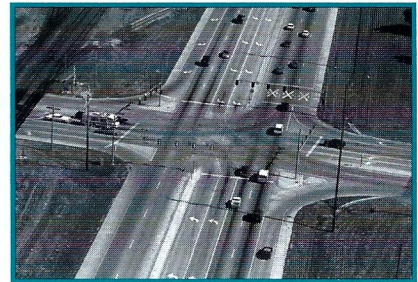
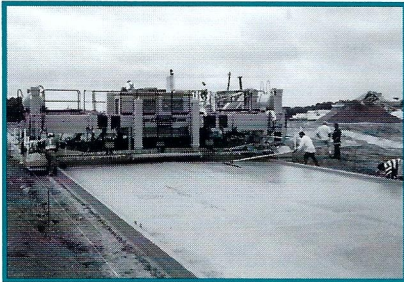
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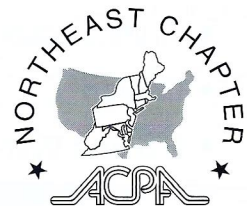


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Hotel reservations must be made by **Friday, March 15, 1996** to guarantee availability of accommodations at the seminar rate. Contact the Sheraton Inn Harrisburg directly at 717-561-2800 or by **FAX 717-561-8398** and identify yourself as being with the American Concrete Pavement Association **CPR³** Seminar. A special room rate of \$65.00 (plus tax) single or double has been secured for seminar attendees. The mailing address of the Sheraton Inn Harrisburg is 800 East Park Drive, Harrisburg, Pennsylvania 17111.

Day One, Tuesday, April 2, 1996

8:00 a.m. - 12:00 p.m.

- Pavement Design Seminar using ACPA PAS Program (Special registration fee is \$150.00, attendees are encouraged to bring lap top computer. Attendees receive PAS program valued at \$200.00 in ACPA catalog. Limited to 30 attendees)
- Exhibit set up completed by Noon

1:00 p.m. - 5:00 p.m.

Opening General Session

5:30 p.m. - 7:00 p.m.

Reception in Exhibit Area

Day Two, Wednesday, April 3, 1996

8:00 a.m. - 5:00 p.m.

General Sessions

5:30 p.m. - 6:30 p.m.

Reception in Exhibit Area

Day Three, Thursday, April 4, 1996

8:00 a.m. - 3:00 p.m.

General Sessions

Exhibits close after morning break

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ENVIRONMENTAL CHALLENGES OF THE CENTRAL FLORIDA GREENEWAY

By: Susan A. Gratch, P.E., ASHE - Central Florida Section

In response to the substantial growth occurring in Central Florida, the design and construction of a beltway around the eastern side of metropolitan Orlando, also known as the Central Florida GreeneWay (S.R. 417), is one step closer to completion. A 12-mile, limited-access section of the toll road, recently completed by the Florida Department of Transportation, Turnpike District and the Seminole County Expressway Authority (SCEA), required not only the cooperative efforts of engineers and planners, but also coordination between and input from scientists and biologists to overcome any of the unique environmental challenges.

One of the first major challenges was obtaining environmental permits for the project. Through extensive alternatives analyses for the project, wetland impacts were minimized. Mitigation, however, was required for unavoidable impacts. After evaluation of various options for mitigation, it was determined that the establishment of a mitigation bank was preferable to the creation of many small isolated wetlands scattered along the beltway.

A large area of land (1,735 acres) on the north shore of Lake Jesup was identified as the mitigation site. The selected property, historically connected to marshes and overflow land, had been drastically altered and drained for agricultural purposes. Through intensive negotiations with both the Florida Department of Environmental Protection (FDEP) and the Army Corps of Engineers (ACOE), the final mitigation plan consisted of 184 acres of wetland creation, 756 acres of wetland restoration, and 795 acres of wetland and upland enhancement. More than 75,000 trees were planted to create the 184 acres of forested wetlands.

The second major environmental challenge came as a result of a pair of bald eagles establishing a nest adjacent to the approved alignment prior to initiation of construction activities. The SCEA worked closely with the U.S. Fish and



Wildlife Service to develop alternatives that would reduce impacts to the nest. The proposed ramp near the nest was redesigned to provide an additional buffer between the roadway and the nesting tree. To provide a more natural habitat between the tree and the expressway, a vertical-faced, reinforced earth embankment was proposed to be constructed along the expressway, and roadway lighting was designed to minimize light emanating toward the nest. In addition to these design changes, construction schedules were altered to avoid disturbance to the area during the nesting season. The SCEA also authorized a nesting monitoring program to be conducted prior to construction, during construction, and for one year during highway operation.

A major engineering challenge on this portion of the Central Florida GreeneWay was the development of geotechnical solutions for driving piles at the Lake Jesup bridge (see photo). Soil borings indicated that there was a thin confining layer over an artesian aquifer at the 1.7-mile-long twin structure location. Solutions were developed to allow piles to be driven in excess of 100 feet through the layer, while not allowing the artesian pressure to blow out around the piles. Procedures were also developed to ensure that any potential contaminants from the aquifer were restricted from flowing into the lake. These bridges, which were completed three months ahead of schedule, are among the longest inland bridges within the state of Florida and received the Florida Transportation Builder's Association, Inc. Best Bridge Award.

Today, the Central Florida GreeneWay is considered integral part of Central Florida's transportation system and the area's long-range transportation plan. Through teamwork and innovative design techniques, the Seminole County portion is now providing vital access points for the Orlando area's rapidly growing northeastern communities. ■

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