

PARTNERS *in* PROGRESS

E&A's Part in Progress

Ellis & Associates was fortunate to have been involved in all three segments of the I-95 project, partnering with both public and private sector interests.

The Florida Department of Transportation (FDOT) District 2 chose Ellis & Associates to provide Verification Testing (VT) on all three segments of the project including conducting all of the laboratory soil testing, concrete testing and asphalt testing requirements. This type of VT is used to confirm that the constructed project actually meets all of the predetermined specifications and regulations as outlined in the design. E&A also performed the field soils and concrete VT for the FDOT on the southern segment of the project. In addition, the FDOT contracted Ellis & Associates to research the satisfactory placement of a 12-inch thick limerock base in one lift instead of the typical several lifts.

"Ellis & Associates continuously achieved **Completely Satisfied** on the District Materials Satisfaction Survey which is the highest rank possible," said Jeff Williams, Senior Engineer with FDOT. "Ellis did a great job on I-95 and we look forward to working with them on future projects."

E&A also partnered with private sector civil engineering firms Connelly & Wicker Inc. and Parsons Transportation Group to provide Geotechnical services for the project. Working for Parsons Transportation Group on the northern segment of the project, E&A performed foundation design and PDA testing. On the central segment, E&A performed geotechnical exploration for the roadways, signs and ponds for civil engineering consultants Connelly & Wicker.

The Two-Year Widening of I-95

Ellis & Associates is proud to be a partner in progress with the Florida Department of Transportation (FDOT) and a host of contractors on the two-year effort to widen a 35-mile stretch of I-95 in Northeast Florida. The total cost of the three-section, 35-mile design/build project was more than \$83 million, a hefty bill that was paid by the FDOT and the Federal Highway Administration. The widening project will result in expediting the traffic through Northeast Florida, thus improving tourism to NE and Central Florida and increasing the economical benefits to the region.

The ambitious project was broken down into three consecutive segments: the northern segment which starts at the Duval County line and stretches to International Golf Parkway; the central segment which goes from International Golf Parkway to just South of SR 207. The southern segment runs from SR 207 to the Flagler County line.

The project included widening 35-miles of Interstate 95 from four to six lanes, adding guardrails and shoulders, milling and resurfacing all of the existing lanes and shoulders as well as re-landscaping the entire project. Construction on the northern and central segments began in July of 2002, and construction on the southern segment was launched in July of 2002. To the relief of many North Floridians, mid 2004 marked the end of the I-95 construction in St. Johns County.



EPIC's TECHNOLOGY PAVES A NEW WAY

While it may not seem like it, there is a lot more involved when expanding a highway than just placing a new layer of asphalt. One of the most time-consuming phases of placing asphalt is verifying the quality of the composition and construction of the existing asphalt. Ellis & Associates has partnered with Lyric Technologies, through its new operating company, EPIC, to apply a revolutionary, new radar-based quality assurance and quality control service during the full production stage on two FDOT projects using the SIDARS technology. The new technology is a form of ground-penetrating radar. But it is such a departure from the traditional uses of ground-penetrating radar that it has been given a new name: "HyperOptics" meaning that the wave length of the electromagnetic waves used in the scanning traces is longer than visible light waves.

Traditional methods of evaluating the quality of pavement normally requires the construction crew to block a lane of traffic; then a technician must take sample cores and deliver it to the lab where it is measured for quality and composition, or in the field, the technician makes sample measurements in a specified place with nuclear moisture-density equipment. During the analysis, a team examines the layer thickness, the asphalt versus water content, the dry and total unit weight, the porosity or voids in the mineral aggregate, the percent air, and the air voids. However both of the traditional methods only provide spot checks of the quality of the contractor's work.

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