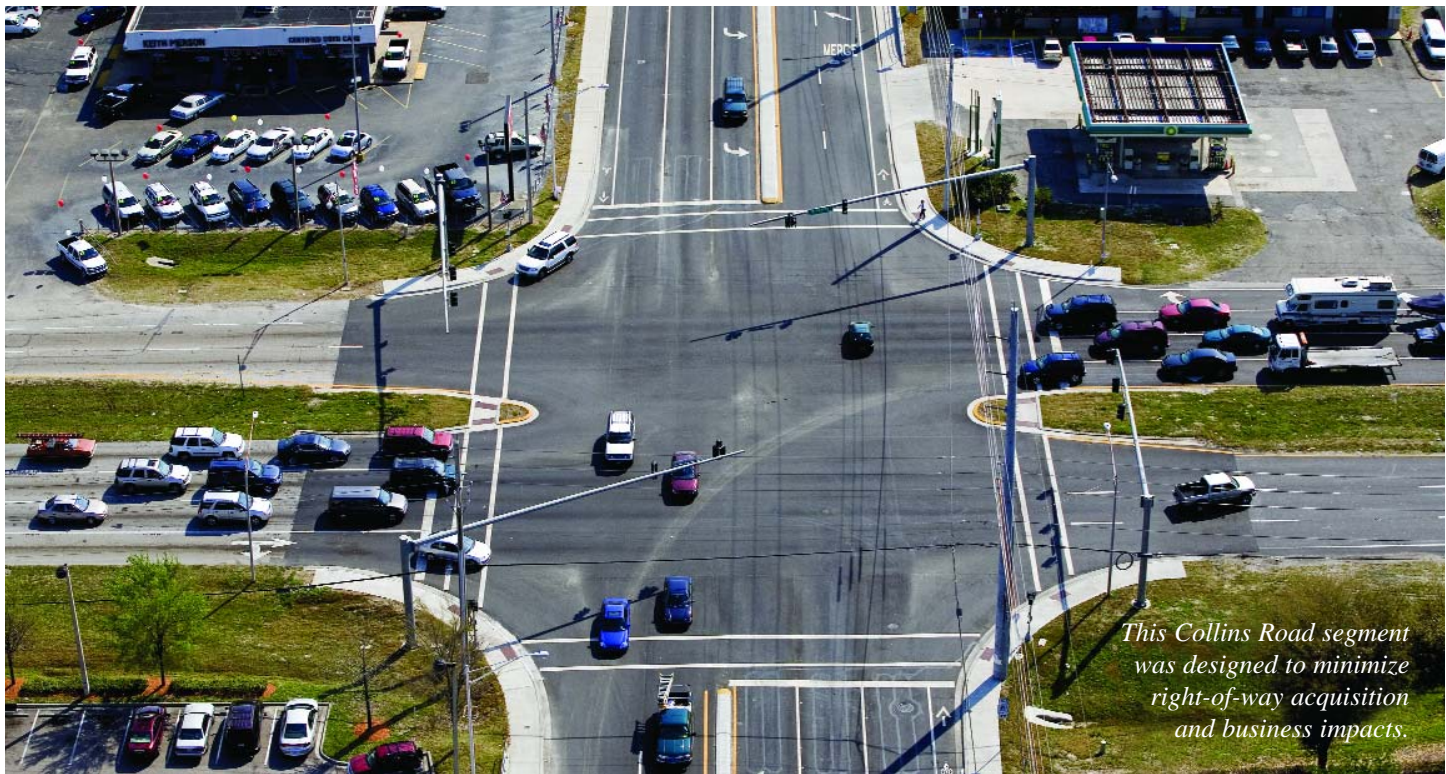




As the first constructed segment of the Collins Road project, the Blanding Boulevard intersection set the tone for 7 miles of improvements planned for Collins Road from Roosevelt Boulevard to Old Middleburg Road.



This Collins Road segment was designed to minimize right-of-way acquisition and business impacts.

Hit the road JAX

Collins Road projects help start Better Jacksonville Plan on right foot

By Patricia Bates McGhee

When the population of the once-sleepy City of Jacksonville in northeast Florida jumped 21 percent in the 1990s, change became the norm. So in 2000 the City rolled out its Better Jacksonville Plan (BJP) to catch up with the infrastructure challenges that come with rapid growth.

The plan, a \$2.25 billion comprehensive growth management strategy, provides infrastructure improvements, environmental preservation, and targeted economic development. More than half of the plan’s budget – \$1.5 billion – is earmarked for roads and infrastructure.

Ayres Associates helped to get one of the first major roadway intersection projects of the BJP constructed on schedule while helping to establish procedures and protocol that has served the City well as it continues to move ahead with the overall BJP transportation initiative.

Projects include key intersection, bridge interchange

Ayres Associates was awarded two of the BJP’s major roadway projects along busy Collins Road in southwest Jacksonville. Those projects are part of the 7 miles of Collins Road improvements from Roosevelt Boulevard (US 17) west to Old Middleburg Road. The projects are paving the way for a much-needed major east-west arterial in the heavily traveled area.

“Expansion along Collins Road will transform the two-lane rural road flanked by typical side ditch drainage systems to a four-lane, median-divided urban roadway with curb and gutter, sidewalks, bike lanes, landscaped median, closed drainage system, intersection signalization, lighting, and associated utility systems improvements,” said David Kemp, PE, Ayres Associates vice president in Jacksonville.



Intersection improvements at Collins Road and Blanding Boulevard produced immediate improvements in traffic flow and safety.

The first of the Ayres Associates-engineered Collins Road projects – a 1.9-mile-long stretch from Blanding Boulevard to Rampart Road – has two phases. Phase 1, completed in December, was the first leg of the Collins Road project and involved expansion of the Blanding Boulevard/Collins Road intersection.

“Collins and Blanding is one of the busier intersections here in Jacksonville, and that’s why it was done first,” said Kevin Shell, PE, project manager for consultant HDR/RS&H, which serves as BJP program manager.

Phase 2, which is in the final design phase and slated for construction starting in fall 2007, completes the project to Rampart Road and includes a new overpass bridge/interchange spanning I-295.

“A key component of Phase 2 is that after the City constructs its project, including the new Collins Road over I-295 bridge and initial interchange ramp structures, the Florida Department of Transportation (FDOT) will complete the interchange ramps along with overall I-295 improvements, including a parallel collector-distributor roadway system,” said Roger Miller, PE, HDR/RS&H project manager. “The Collins Road bridge profile will be raised about 8 feet higher than what it is today over I-295 to facilitate the ultimate FDOT improvements to I-295, which will then be handling about 105,000 vehicles per day,” he said.

“Essentially, we’re building a bridge with initial ramp connection facilities to complete the City’s portion of that project, and then FDOT will come in, put in the final ramps connecting to its I-295 improvements, thus completing the new Collins Road/I-295 interchange,” Kemp said.

The second Ayres Associates project – a 1.4-mile segment connecting Shindler Drive and Old Middleburg Road – is at the western end of the overall proposed BJP Collins Road improvements. Construction is slated to begin in April 2008 and will take about two years to complete.

Fitting the parts into a complex whole

How do these two projects fit into the BJP? Miller explains: “Ultimately we have 10 Better Jacksonville Plan projects in that general area, all of which tie together in some way or are contiguous with each other as BJP projects, with Collins representing the most significant east-west connector roadway. We’re also improving at least three of the roadways that intersect Collins in the north-south direction, so we’re improving an entire grid system in that area – north-south and east-west.”

Collins Road will become the main arterial that all of these other grid streets will funnel traffic to, Miller said. “And when we’re done, Collins will be a four-lane arterial all the way from Old Middleburg Road up to I-295 and then from I-295 to Roosevelt Boulevard (US 17),” he said.

Through the I-295 interchange, the surrounding collector-distributor roads will be provided ramp access while allowing interstate drivers to move through quickly in the faster lanes of the highway.

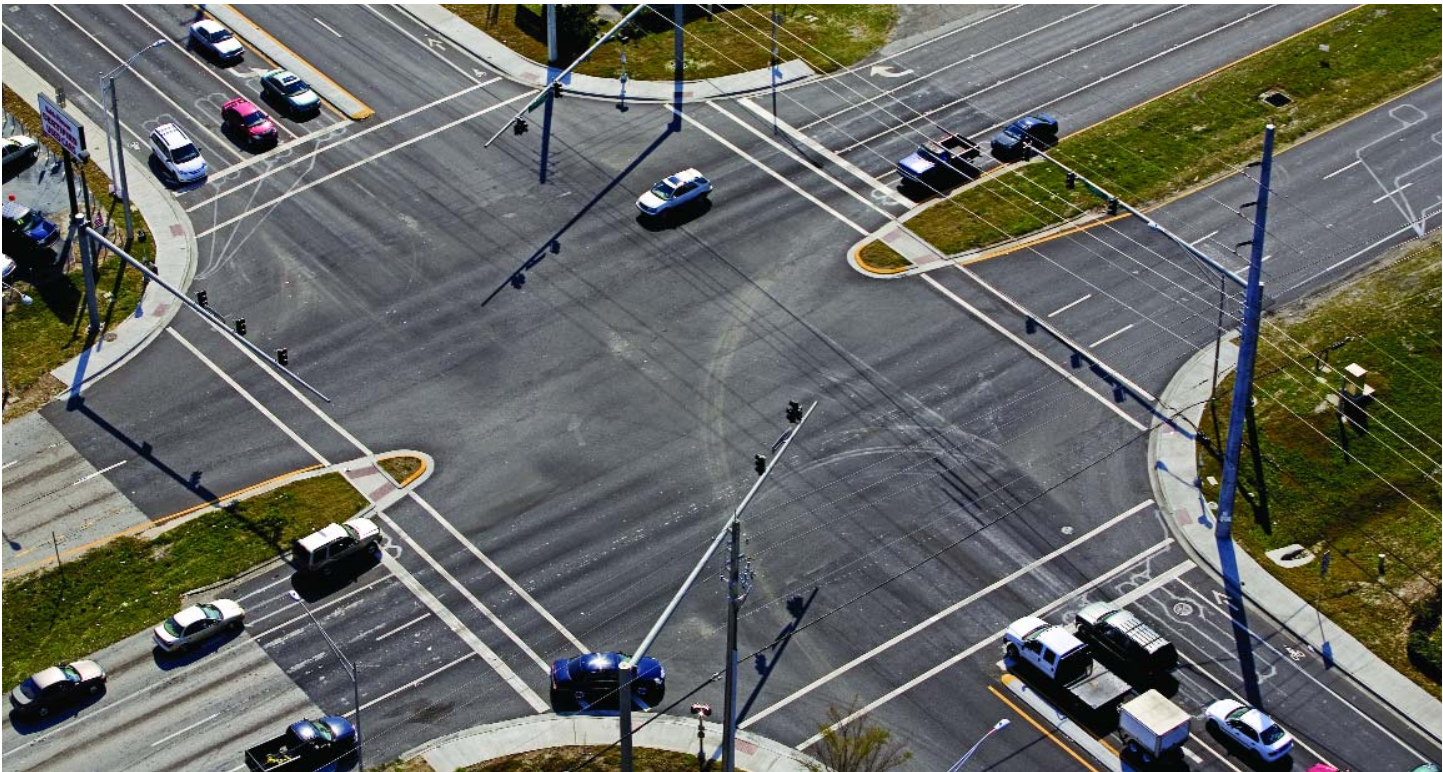
And the overpass bridge structure and its ramps at I-295 posed vertical and horizontal clearance challenges, said David Schneider, senior project manager for Jacksonville’s department of public works, who worked with Ayres Associates and HDR/RS&H.



Collins Road, originally a two-lane rural roadway, is being converted to a four-lane, median-divided urban street with curb and gutter, sidewalk, and bike lanes.



The Collins Road overpass will be replaced with a full interchange as part of Ayres Associates' Blanding Boulevard to Rampart Road project.



An improved traffic signal system at Collins Road and Blanding Boulevard will be interconnected via fiber optics with the future I-295 interchange and other Collins Road intersections.

Schneider said Ayres Associates met these challenges by conducting cost-benefit analyses, studying safety considerations, and developing a lot of “what if” scenarios.

Communication was a priority throughout design. “The future I-295 collector-distributor system and proposed interchange at Collins Road required a tremendous amount of coordination among all parties serving FDOT and the City of Jacksonville,” Kemp said. “Ayres Associates and its sub-consultants had to make sure their Collins Road design will work well with the design FDOT, RS&H, and its subconsultants are providing for associated I-295 improvements. Not to mention the need to look out for the interests of affected utilities on both projects.”

Remaining flexible during projects’ metamorphosis

Communication has been a priority, especially when schedules changed and conflicts surfaced. “During Phase 1 we had conflicts between the new signal poles and existing utilities at the Blanding intersection,” said Sam Okular, senior construction manager for HDR/RS&H. “With Ayres Associates’ immediate help, this was resolved without delay.”

Ground rules changed as the project evolved, creating additional challenges. “Because this project was incorporated into the BJP after it entered the final design stage, priorities and focus changed as real estate was acquired,” Kemp said. “The fact that we made some design modifications as we went along was probably the biggest challenge we had.”

Plus, the project was one of the first in which the City had to acquire real estate for a major intersection. “That required keen attention to business issues and impacts, not

to mention drainage, utilities relocation, and traffic maintenance that constrained design,” Kemp said. “We worked closely with the City as it addressed these issues and remained flexible by developing design modifications within evolving budgetary constraints.”

Despite these challenges, Kemp says things went well and continue to go well, thanks to careful coordination.

“Ayres Associates had an excellent set of plans without having issues in the field per se or any major change orders,” Okular said. “The Ayres Associates team also helped the City deal with the challenges of escalating construction and materials costs,” he said.

“We actually went back and re-evaluated the overall design concept a couple of times to reduce right-of-way takes so the City could minimize those costs in terms of required right-of-way acquisition and other business impacts,” Kemp said. “We also worked with the contractor to incorporate minor modifications to the drainage system during the construction phase shop drawing review/approval that resulted in cost savings.”

Smoothing path for remaining BJP projects

The design work on these early sections of the overall Collins Road project have allowed the design team to nail down nuances that will make future segments of the project go even more smoothly – particularly in coordinating design changes and optimizing right-of-way acquisition. “From the original study to the final design, we ended up setting the tone toward optimizing overall cost-effectiveness for a lot of the follow-on projects for the BJP,” Kemp said. ■