

Alternatives

2.1 Project Study Area

In September of 2002, the Governor of Florida issued Executive Order No. 2002-259 creating the Wekiva Basin Area Task Force which was tasked with analyzing and recommending a study area for connecting SR 429 (the Western Beltway) in Apopka to I-4 in Seminole County. The task force consisted of 16 members representing counties, state and regional agencies, and the business and environmental communities. As part of the process of defining the study area, FDOT and the Expressway Authority assisted the Task Force by using land suitability mapping (LSM) to identify constraints and opportunities. The regulatory constraints included wetlands, floodplains, public parks and recreation areas (Section 4(f)), archaeological and historic sites (Section 106 and Section 4(f)), and threatened and endangered species. Other constraints associated with the cultural, natural, physical, and social environment were also mapped. Areas that minimized impacts to the unique environment while meeting the purpose and need for the project were identified.

The assessments for the study area were presented to the Task Force for evaluation. Other stakeholders and the public were offered numerous opportunities to provide comment and input to the purpose and need and the study area evaluations. The task force issued its final report *Recommendations for Planning and Locating the Wekiva Parkway while Preserving the Wekiva River Basin Ecosystem* in January of 2003 which included recommendations addressing the need for the Wekiva Parkway and a suggested study area.

In July of 2003, the Wekiva River Basin Coordinating Committee was created when the Governor signed Executive Order No. 2003-112. That group was charged with addressing several specific issues within the study area, including the Wekiva Parkway. The Coordinating Committee's SR 429 Working Group received input from local communities and suggested revisions to the Wekiva Parkway study area, including the SR 46 Bypass. Using the recommendations from the Wekiva Basin Area Task Force and the SR 429 Working Group, the Wekiva River Basin Coordinating Committee further refined the proposed Wekiva Parkway study area in its final report *Recommendations for Enhanced Land Use Planning Strategies and Development Standards to Protect Water Resources of the Wekiva River Basin* in March of 2004.

The *Wekiva Parkway and Protection Act*, based in large part on the recommendations of the Wekiva River Basin Coordinating Committee, was the culmination of several years of analysis and evaluation by an array of diverse stakeholders. The recommended study area for the Wekiva Parkway and the SR 46 Bypass is the study area used for the Wekiva Parkway (SR 429)/SR 46 Realignment PD&E Study. The project study area is depicted in the previously referenced **Exhibit 1** on page 1-2 of this document.

Numerous initial and viable alternative concepts in Orange, Lake, and Seminole Counties were assessed and evaluated by the PD&E Study team within and in some cases outside of, the recommended study area for potential social, economic, and environmental impacts.

Coordination activities with local and state governmental agencies, as well as many other stakeholders, and various public involvement efforts have been extensive. The Wekiva Parkway (SR 429)/SR 46 Realignment PD&E Study *Environmental Assessment* documents in detail the No Build Alternative and describes the process whereby the alignment alternatives for the proposed Wekiva Parkway and SR 46 Realignment were developed, analyzed and evaluated by the study team. The following subsections mainly focus on the alternatives considered from the Orange/Lake County line in the Neighborhood Lakes area to east of the Wekiva River in Seminole County, which is the project area where the Section 4(f) lands addressed in this *Programmatic Section 4(f) Evaluation* are located.

2.2 No Build (Do Nothing) Alternative

The No Build Alternative assumes that a major new expressway is not provided within the project study area. Only those projects for which funding is committed in the Expressway Authority's *2030 Expressway Master Plan* (adopted March 2006) and METROPLAN ORLANDO's *2025 Long Range Transportation Plan Update* (adopted September 2004) are assumed to be provided to meet the transportation need.

The benefits of the No Build Alternative include the absence of long term impacts such as community displacements and natural environmental intrusion, as well as short term operational impacts associated with actual construction of a major new expressway. However, long term benefits associated with serving future traffic demands, acquiring additional conservation lands, and providing enhanced wildlife habitat connectivity will not be realized with this alternative. Many of the existing roadways within the project study area are currently operating at less than desirable service levels. Operating conditions are projected to worsen in the future, increasing travel time from delays and vehicle crashes due to congestion. Traffic on SR 46 in the area of the Section 4(f) lands is projected to increase by 58% over the next 20 years; the facility currently operates at LOS "F". Also, improved wildlife habitat connectivity between the Section 4(f) lands will not be achieved and wildlife-vehicle conflicts will continue under the No Build scenario.

Specifically, the No Build Alternative will offer no benefits to address the existing or projected future traffic congestion on SR 46. The existing two-lane arterial road does not meet the current design standards for safety and capacity. As discussed under subsection 1.2 (Project Purpose and Need), FDOT data indicates SR 46 through Lake and Seminole Counties has a high rate of vehicle crashes and resultant deaths and injuries. In 2004 alone, 20 people died in vehicle crashes on SR 46 in Lake and Seminole Counties. On a per mile basis, the section of SR 46 through Lake County is the most dangerous roadway in Central Florida based on analysis of FDOT crash data. The section of SR 46 through Seminole County is the region's second most dangerous stretch of road.

As previously discussed in subsection 1.2 (Project Purpose and Need), over 50 Florida black bears have been killed in collisions with vehicles in the past 20 years along SR 46 in Lake County between Mt. Plymouth Road (CR 435) and the Wekiva River bridge. Two wildlife crossings, a 26-foot culvert built in 1994 and a 52-foot bridge structure built in 2004, have somewhat reduced the incidence of wildlife-vehicle conflicts; however, those existing crossings are used primarily by larger species and do not provide habitat connectivity for smaller species. The Wekiva Parkway will replace those structures, as well as the existing 561-foot Wekiva River

bridge, with a total of 7,710 feet of wildlife bridging from west of Old McDonald Road to east of the Wekiva River in immediate proximity to the Section 4(f) public lands. The proposed parallel service road also incorporates wildlife bridging of similar lengths in these locations. These long bridge spans will greatly improve wildlife habitat connectivity between Seminole State Forest and Rock Springs Run State Reserve, and further reduce the number of wildlife fatalities.

SR 46 is one of only three east-west travel options within a 25-mile envelope. The No Build Alternative will result in a higher number of wildlife-vehicle collisions as traffic increases along the existing rural roadway.

The distinct advantages and disadvantages associated with the No Build Alternative are described below.

Advantages

- No impedance to traffic flow during construction,
- No expenditure of funds for right of way acquisition, engineering, design or construction,
- No impact to the adjacent natural, physical, and human environments, and
- No disruption to existing land uses due to construction related activities.

Disadvantages

- Increase in traffic congestion, resulting in unacceptable levels of service and an increase in road user costs,
- Increase in vehicle crashes associated with increased traffic volumes on an inadequate roadway network, as well as an increase in wildlife-vehicle conflicts,
- Increase in level of wildlife habitat fragmentation in the Wekiva-Ocala Greenway,
- Increase in carbon monoxide levels and other air pollutants caused by an increase in traffic congestion,
- Increase in maintenance costs due to roadway and structure deterioration,
- Increase in emergency service response time due to heavy congestion,
- Increase in evacuation time during weather emergencies as a result of heavy congestion.
- The No Build Alternative would not meet the Purpose and Need for the project.

2.3 Initial and Viable Alignment Alternatives

During the initial and viable alternatives phases of the PD&E Study, numerous alignment alternatives were developed and evaluated. The PD&E Study team has fully evaluated and documented all potential alternatives within, or originating within, the study area.

Following the Initial Alternatives Public Workshops, the Orange County Environmental Protection Division (OCEPD) identified corridor constraints and made a request that the final alignment of the Wekiva Parkway avoid impacts to two conservation properties recently purchased by Orange County, as well as a seepage spring located on private property (refer to **Appendix C** for correspondence). Due to the OCEPD request, several initial alignment alternatives were eliminated from further evaluation through the Orange County portion of the study area in order to avoid the conservation lands. The remaining initial alignments were

further modified and refined due to design considerations and to avoid and/or minimize impacts to the following constraints: Section 4(f) lands, the OCEPD conservation lands, a historic resource that is potentially eligible for NRHP listing, floodplains, and sensitive wildlife habitat. These refined alignments through Orange County affected specific alignments into east Lake County.

An initial Lake County East alternative, farthest south of existing SR 46, passed through the northwest portion of the Rock Springs Run State Reserve and an uplands portion of Wekiva River Mitigation Bank property. This alignment was eliminated from further evaluation following the Initial Alternatives Public Workshops due to objections from the FDEP, Division of Recreation and Parks, the PD&E Study Environmental Advisory Committee, the Seminole Soil and Water Conservation Commission, and several environmental groups that compose the Wekiva Coalition. Several other alternatives closer to SR 46 with less impact to Rock Springs Run State Reserve were further developed as viable alternatives. Those alignment alternatives also had access options, including partial or full interchanges. Three alignment alternatives in Neighborhood Lakes were selected for further evaluation: one that was as far west as possible, one as far east as possible, and one through the central section of the property. This resulted in numerous viable alignment alternatives from the Orange/Lake County line to the Wekiva River that were presented at the Viable Alternatives Public Workshops. Since they were within the study area, and paralleled or followed existing SR 46, each of these alignments had unavoidable impacts to the Seminole State Forest and Rock Springs Run State Reserve.

In Seminole County just east of the Wekiva River, the initial and viable alternatives followed existing SR 46. However, an additional 70 feet of right-of way was needed for the viable alternative. The widening would have to be either to the north or to the south. On the north lies the Lower Wekiva River Preserve State Park; on the south there is significant residential development. Residents and local elected officials strongly opposed the south widening option at, and in meetings following, the Viable Alternatives Public Workshops.

Therefore, impacts to Section 4(f) lands are unavoidable by roadway alignment shifts, because in Seminole County alternative alignments would result in substantial adverse social and economic impacts, and in Lake County East alternative alignments would require the use of more Section 4(f) lands resulting in impacts of greater magnitude when compared to the proposed use of Section 4(f) lands.

2.4 Proposed Alignment Alternative

Fulfills Purpose and Need

The proposed alternative will achieve regional connectivity through implementation of the missing segment of the Western Beltway (SR 429) and provide a safe, high capacity east-west travel facility to replace portions of SR 46. The Traffic Report prepared for the PD&E Study determined that the existing roadway network is inadequate and traditional widening of SR 46 will not accommodate projected demand. The proposed improvements will meet the increased travel demand from population growth in an environmentally sensitive and compatible manner, including enhanced wildlife habitat connectivity.

Unavoidable Section 4(f) Land Impacts Due to Proximity to Existing SR 46

The existing SR 46 right-of-way width varies from approximately 66 feet to 100 feet from the Neighborhood Lakes area to west of the Wekiva River. The proposed alignment requires a 300-

foot right-of-way for a rural expressway. The two-lane, two-way service road parallel to the Wekiva Parkway would be constructed within the previously identified right-of-way for Wekiva Parkway. The existing SR 46 right-of-way for the two-lane rural arterial is not sufficient to accommodate a limited access expressway, and the existing horizontal alignment does not meet the curve criteria for an expressway typical section. In addition to requiring additional right-of-way for an expressway typical section, existing SR 46 will need to remain open during construction of Wekiva Parkway, as it is the only east-west corridor between the Mount Dora area in Lake County and the I-4/ Sanford area in Seminole County.

Seminole State Forest and Rock Springs Run State Reserve are on the north and south sides, respectively, of existing SR 46 right-of-way through east Lake County. Lower Wekiva River Preserve State Park is adjacent to the northern right-of-way of SR 46 in Seminole County, east of the Wekiva River. The proposed Wekiva Parkway is to be constructed on essentially the same alignment as SR 46 through the area where the Section 4(f) properties are located, and the Wekiva River crossing must be at approximately the same location as the existing bridge. However, impacts to these state lands are unavoidable as the geometric constraints prevent utilizing only the existing two-lane SR 46 right-of-way. Efforts to minimize environmental impacts and to balance impacts to private property and publicly owned land through this section of the project study area have been the primary focus in identifying alternative alignments and access concepts.

2.5 Improvements without using Section 4(f) Property

As previously discussed, Rock Springs Run State Reserve is south of the existing SR 46 alignment, and Seminole State Forest and Lower Wekiva River Preserve State Park are north of the roadway. The proposed Wekiva Parkway is to be constructed on essentially the same alignment as SR 46 through the area where the Section 4(f) properties are located, and the Wekiva River crossing must be at approximately the same location as the existing bridge in order to avoid even greater impacts. However, impacts to these state lands are unavoidable as the geometric constraints prevent utilizing only the existing two-lane SR 46 right-of-way. Several alternatives through this area were developed to minimize impacts to residences adjacent to SR 46, while also minimizing environmental impacts and maximizing use of the parcels identified for acquisition for Wekiva Parkway right-of-way and conservation lands in the *Wekiva Parkway and Protection Act*. A summary of the viable alternatives evaluation leading to identification of the proposed alignment alternative near the Section 4(f) lands in Lake County East and Seminole County is provided below.

2.5.1 Lake County East Alternatives

Rock Springs Run State Reserve and Seminole State Forest Area

From west of Old McDonald Road to the Wekiva River, the proposed alternative would replace the existing SR 46 two-lane roadway with a four-lane (expandable to six-lanes in the median) rural expressway within a 300-foot limited access right-of-way. As previously mentioned, a two-lane, two-way non-tolled service road would be parallel to and on the north side of the expressway, within the previously identified 300-foot right-of-way from north of the Wekiva Parkway interchange near Neighborhood Lakes to just east of the Wekiva River. The service road would provide access to and circulation between the privately owned properties west of

the Wekiva River, as well as access to Rock Springs Run State Reserve and Seminole State Forest. In addition to providing access, the service road would provide area residents with a non-tolled alternative for local trips.

Previously Proposed Alternatives

Previous access alternatives (developed for a non-tolled expressway prior to 2009) for providing access to the cluster of residential properties in the vicinity of the “hump” in SR 46 and to the residential properties west of the Wekiva River included:

Split Diamond Interchange Access Alternative

The split diamond interchange concept consists of two half-diamond interchanges with a cul de sac remnant of SR 46 remaining open for local residential traffic to access the directional interchanges:

- A half-diamond interchange in the location of the existing SR 46/CR 46A intersection would provide access to and from the west.
- A second half-diamond interchange located between Wekiva Pines Country Estates and Wekiva River Road would provide access to and from the east.

Two Full Interchanges Access Alternative

- A full interchange in the location of the existing SR 46/CR 46A intersection, and
- A full interchange located between Wekiva Pines Country Estates and Wekiva River Road.

Agency Coordination

Because of the low projected traffic demand generated by the residential enclaves, and after comparison of right-of-way and construction costs, the proposed alternative was, initially, the split diamond concept; however, the proposed alternative was modified to include two full interchanges due to the following agency consultation:

- The Wekiva River Basin Commission (June 1, 2007 meeting) requested FDOT to consider the two full interchanges concept given concerns about remnants of existing SR 46 remaining open with the split diamond alternative, which could diminish the enhanced wildlife habitat connectivity provided by the proposed bridging through the area.
- The Lake County Commission (June 5, 2007 meeting) indicated a similar preference for the two full interchanges concept.
- During a project coordination meeting in Tallahassee (July 17, 2007), FDEP senior staff emphasized that having the two full interchanges concept in the proposed alternative, to eliminate local traffic on remnants of SR 46 that would occur with the split-diamond concept, was critical to their continued support of the Wekiva Parkway project.

Currently Proposed Alternative

Due to the need for tolling for project financial feasibility identified in 2009, and the required addition of the service road with associated bridges over the wildlife corridors, the split or full interchanges are no longer required for access. In addition, the service road concept does not leave a continuous at-grade SR 46 roadway through the wildlife corridor areas. Because the service road is within the proposed right-of-way for Wekiva Parkway, impacts to the state lands

adjacent to SR 46 would be substantially less than either of the previous access alternatives. The project study team met with citizens, elected officials and members of the environmental stakeholder community in September 2009 and with FDEP senior staff in November 2009 during development and analysis of the service road concept to solicit input for the proposed preliminary design. A Public Workshop on the service road concept was held in December 2009 in the east Lake County study area.

Proposed Alternative Recommendation

- **Impacts to the Rock Springs Run State Reserve and Seminole State Forest are unavoidable as these resources are located immediately adjacent to the SR 46 right-of-way.**
- **Therefore, it is not feasible and prudent to avoid the Rock Springs Run State Reserve and Seminole State Forest Section 4(f) lands by roadway design or transportation management techniques.**

2.5.2 Seminole County Alternatives

Near Lower Wekiva River Preserve State Park

The proposed improvements in Seminole County involve placing the Wekiva Parkway mainline in the center of the right-of-way between two one-way frontage roads for local access. This concept requires approximately 270 feet of right-of-way. The existing SR 46 right-of-way is 200 feet wide. In this area east of the Wekiva River, two viable alternatives were examined along the SR 46 corridor:

South Widening Alternative

The South Widening Alternative involves acquiring approximately 70 feet of additional right-of-way to the south of SR 46, which impacts a significant number of residential parcels. The South Widening Alternative avoids use of Section 4(f) lands.

North Widening Alternative

The North Widening Alternative involves acquiring right-of-way to the north of SR 46, which impacts Section 4(f) lands of the Lower Wekiva River Preserve State Park, and requires relocation of a 26-inch natural gas pipeline within a 50-foot easement north of existing SR 46.

Comparison Evaluation

- The North Alternative requires additional costs for the gas line relocation and easement;
- However, those utility relocation costs are significantly less than the right-of-way costs for the South Alternative due to the higher land/improved property values.

Agency Coordination

- The Seminole County Expressway Authority has indicated a strong preference for the North Alternative to avoid significant impacts to the residential areas south of SR 46.
- FDEP indicated their preference for the South Alternative to avoid impacts to the Lower Wekiva River Preserve State Park. However, FDEP did acknowledge the difficulty of acceptance of the South Alternative for residents and County leaders, and indicated a willingness to work with FDOT on the North Widening Alternative.

Proposed Alternative Recommendation

- To avoid substantial adverse community impacts to adjacent residential properties and substantially increased project costs, the North Alternative was identified as the proposed alternative with impacts to the *Lower Wekiva River Preserve State Park*.
- Impacts to the *Lower Wekiva River Preserve State Park* are unavoidable as the Preserve is located immediately adjacent to the SR 46 right-of-way.
- Therefore, it is not feasible and prudent to avoid the *Lower Wekiva River Preserve State Park* Section 4(f) lands by roadway design or transportation management techniques.

2.6 Alternatives on New Location without using Section 4(f) Property

The study area for the Wekiva Parkway generally follows the existing SR 46 alignment from the Neighborhood Lakes area to east of the Wekiva River. Section 4(f) lands lie on both sides of SR 46. The intent is to follow the naturally higher ground through the Wekiva Protection Area and to utilize the existing bridge crossing location between Lake and Seminole Counties to minimize impacts to the Wekiva River, which is a Florida Aquatic Preserve, Outstanding Florida Water, and National Wild and Scenic River.

Proposed Alternative Recommendation

- Due to the proximity of Section 4(f) resources within the project study area, there is no alternative on new alignment that would avoid these resources entirely.
- A new alignment is not a viable alternative because it would result in greater impacts to adjacent Section 4(f) resources and it would require a new river crossing location over the Wekiva River resulting in substantial damage to wetlands or other sensitive natural areas. These impacts would be of extraordinary magnitude when compared with the proposed use of Section 4(f) lands.
- Therefore, to avoid and minimize substantial adverse social, economic, and environmental impacts to adjacent conservation lands and residential properties, the proposed alternative maximizes the use, where feasible, of existing roadway alignments through environmentally sensitive areas.
- Impacts to the Section 4(f) lands of the *Rock Springs Run State Reserve*, *Seminole State Forest* and *Lower Wekiva River Preserve State Park* are unavoidable as these resources are located immediately adjacent to the existing SR 46 right-of-way.
- Therefore, it is not feasible and prudent to avoid Section 4(f) lands by constructing on new alignment.