



MEMORANDUM FOR RECORD

SUBJECT: Department of the Army Environmental Assessment and Statement of Findings for the Above-Referenced Standard Individual Permit Application

This document constitutes the Environmental Assessment, 404(b)(1) Guidelines Evaluation, as applicable, Public Interest Review, and Statement of Findings for the subject application.

1.0 Introduction and Overview: Information about the proposal subject to one or more of the Corps' regulatory authorities is provided in Section 1, detailed evaluation of the activity is found in Sections 2 through 11 and findings are documented in Section 12 of this memorandum. Further, summary information about the activity including administrative history of actions taken during project evaluation is attached (ORM2 Summary) and incorporated in this memorandum.

1.1 Applicant: The following parties are considered applicants, and referred to in this document collectively as "applicant."

Pasco County Board of County Commissioners (Pasco County)
37918 Meridian Avenue
Dade City, Florida 33525

Florida Department of Transportation (FDOT)
Florida's Turnpike Enterprise (FTE)
PO Box 613069
Ocoee, Florida 34761

1.2 Activity location: The project would affect waters of the US associated with the Pithlachascotee River, Fivemile Creek, and Anclote River. The Pithlachascotee River and Anclote River are direct tributaries to the Gulf of Mexico and Fivemile Creek is a direct tributary to the Pithlachascotee River. The project would commence at the intersection of Ridge Road and Decubellis / Moon Lake Road (County Road 587) and end at the intersection of Land O'Lakes Boulevard (U.S. Highway 41) and Connerton Boulevard in Pasco County, Florida, Sections 25-29, 32, and 33 of Township 25 South, Range 17 East, and Sections 21, 22, and 27-30, Township 25 South, Range 18 East. Part of the western portion of the proposed project would traverse the Serenova Tract of the Starkey Wilderness Preserve.

Figure 1-1. Project Location Map

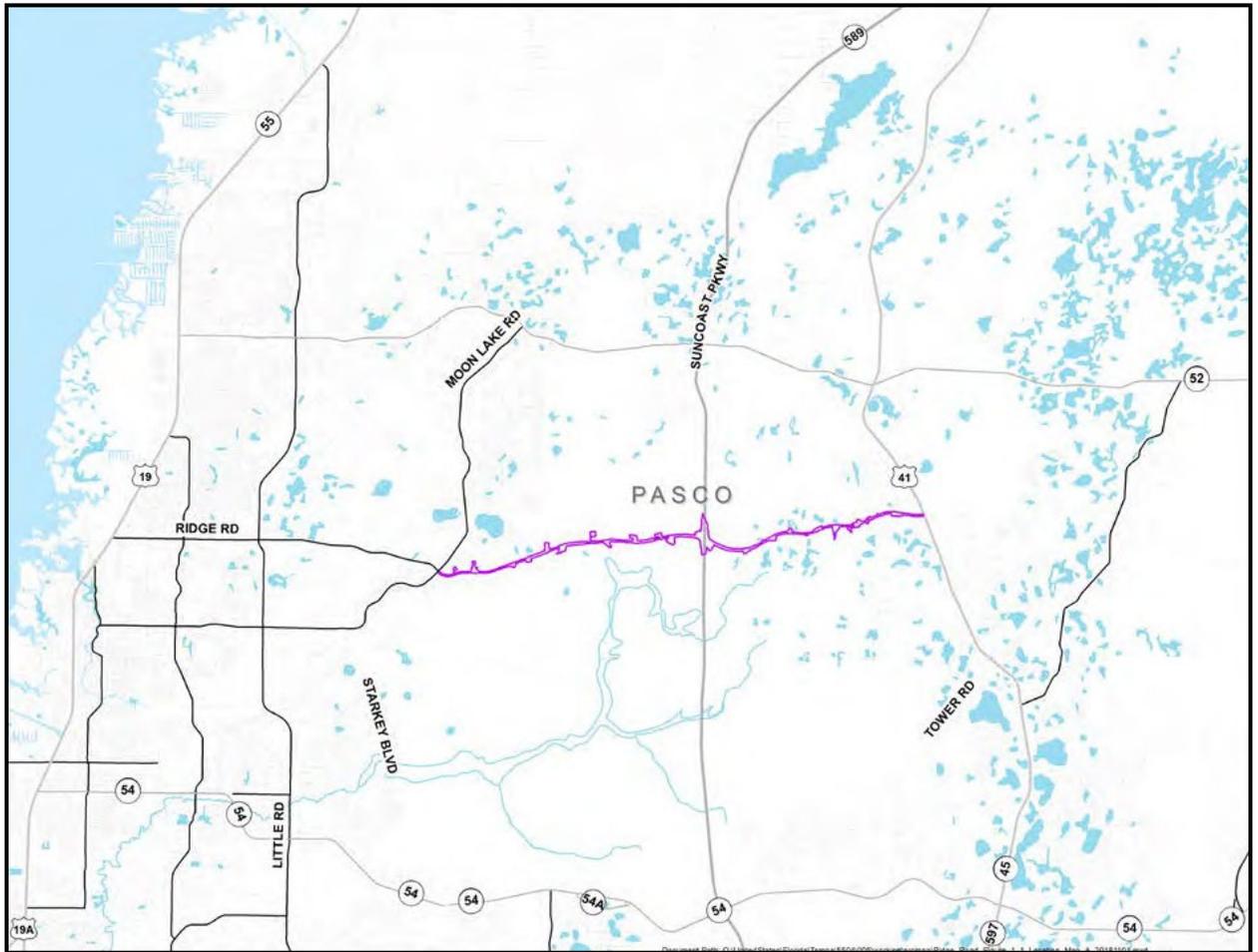


Table 1-1. Latitude and Longitude of Project Boundary

	Eastern (start)	Intersection with Suncoast Parkway	Western (end)
Latitude	28.273340° North	28.282217° North	28.288769° North
Longitude	82.625251° West	82.550395° West	82.488336° West

- 1.3 Description of activity requiring permit: The applicant requested authorization to discharge fill material into 42.40 acres of wetlands for the construction of 8.65 miles of roadway and attendant features referred to as the Ridge Road Extension (RRE), Modified Alternative 7a (Mod 7a). Proposed wetland impacts include 37.37 acres of permanent impact and 5.03 acres of temporary impact. The proposed project would consist of three segments that include Phase I, an interchange with the Suncoast Parkway, and Phase II. Refer to the attached drawings signed 15 November 2019 for additional information.

Table 1-2. Mod 7a Permanent and Temporary Discharge of Fill Material Impacts

	Permanent Impact (acre)	Temporary Impact (acre)
Phase I	7.32	3.86
Suncoast Parkway Interchange	11.72	0.00
Phase II	18.33	1.17
Total	37.37	5.03
Total Perm. and Temp.	42.40	

Phase I

Phase I is the westernmost segment of the project that would consist of a 4-lane 4.2-mile divided roadway with attendant features including a pedestrian sidewalk and a multi-use path, stormwater collection and conveyance, floodplain compensation areas, and wildlife crossings. The proposed roadway would begin at Station 11+78.92 near the Ridge Road and Decubellis / Moon Lake Road (County Road 587) intersection and end at Station 234+00 at the Suncoast Parkway Interchange segment, approximately 3.2 miles south of SR-52 at the existing Suncoast Parkway overpass. The 4.2 miles of Phase I would include approximately 71% of the roadway at grade on a constructed embankment and 29% of the roadway constructed as 14 separate bridges (eastbound and westbound lanes).

The proposed RRE west of the Serenova Tract, would have two access points at Stations 33+74 and 69+50 to access the existing Rosewood at River Ridge development to the south of the RRE where there are two existing stub-outs. One southern access point at Station 89+00 is proposed for future access to a parcel zoned R-4 (high density residential) east of the existing Rosewood at River Ridge development. The applicant indicated this parcel is a potential source of borrow material to construction the proposed RRE since the proposed project has an approximate 400,000 cubic yard fill deficit. This area is privately owned and would be subject to applicable environmental permitting requirements, if necessary, for use as a borrow area. A 5-foot wide pedestrian sidewalk is proposed along approximately 3,435 feet on the north side of the roadway from the westernmost origin at Decubellis / Moon Lake Road (County Road 587) and terminating before the beginning of the Serenova Tract. A 12-foot wide multi-use path would begin at the westernmost origin at Decubellis / Moon Lake Road (County Road 587) and would be constructed along the southern side of the road through the entirety of Phase I. The multi-use path would traverse the Serenova Tract and tie into the existing 42-mile long multi-use

Suncoast Trail system associated with the Suncoast Parkway and the Jay B. Starkey Wilderness Park. The Suncoast Trail begins in northern Hillsborough County traverses 21.6 miles through Pasco County and ends in Hernando County. The multi-use path is part of Florida's Statewide Greenways and Trails System and is owned by the FDOT, FTE, and operated and maintained by the three counties' parks and recreation departments.

Phase I would be constructed for 2.6 miles through a portion of the Serenova Tract of the Starkey Wilderness Preserve from approximately Stations 95+81 (start of the Serenova Tract) to 234+00 (end of Phase I). There would be no access points for residential or commercial developments within the Serenova Tract, and the pedestrian sidewalk would terminate before entering the Serenova Tract. An existing Duke Energy aerial transmission line would intersect the RRE within the Serenova Tract and an at-grade, gated access would be provided for the property owner, Duke Energy, to inspect and maintain the Duke Energy owned corridor from Stations 134+44 to 137+75. As identified above, a multi-use path is proposed along the entire Phase I segment. The applicant indicated a parking area and facilities for the multi-use path may be constructed south of the RRE within the existing Duke Energy electric transmission line corridor.

Seven wildlife crossings would be constructed within Phase I, six of them would be within the limits of the Serenova Tract. The wildlife crossing at Station 84+46 would be within a wetland (W-7) to allow wildlife and water to pass under the proposed roadway. This wetland wildlife crossing and four upland wildlife crossings at 110+47, 132+00, 145+00, and 152+00 would be 5 foot by 3 foot box culvert crossings. A wildlife crossing at 158+15 is proposed as a 12 foot by 10.5 foot vehicle and wildlife crossing to maintain an existing Southwest Florida Water Management District (SWFWMD) service road utilized to manage the Starkey Wilderness Preserve. A vehicle and wildlife crossing bridge at 214+55 would maintain an existing equestrian trail and allow for the movement of wildlife under the roadway. The applicant has proposed bridging seven wetland crossings, which will also allow for the movement of wildlife and water beneath the roadway within the Serenova Tract.

Eleven wet detention ponds would be constructed within Phase I to provide water quality treatment and attenuation, and two floodplain compensation areas would be constructed within Phase I to reduce the floodplain impacts as a requirement of the Florida Environmental Resource Permit (ERP) approved on 24 July 2019 (App ID/Permit No: 767757 / 43018792.006). The ERPs are issued under the provisions of Chapter 373, Florida Statutes, and the rules contained in Chapters 40D-4 and 40D-40, Florida Administrative Code. Issuance of an ERP constitutes certification of compliance with state water quality standards under Section 401 of the Clean Water Act, 33 USC 1341. The floodplain compensation area

associated with a portion of the permanent impact to wetland W-5 (Impact ID 1-04a) and the wet detention pond 11 (Impact ID 1-24) are the only stormwater features that would permanently impact wetlands within Phase I.

A perimeter exclusion fence would be constructed along the entire project on the north and south sides of the roadway. The applicant has designed the fence to be within the limits of construction and would have no unique permanent or temporary impacts to waters of the US. The proposed project would utilize 10-foot Type B Wildlife Fencing in Phase I and the interchange segment, and a 6-foot Type B Wildlife Fencing in Phase II. The 2-inch mesh chain link fence would be topped with barb wire, and the bottom of the fence would be buried to a depth of three feet. A ¼ inch chain link wildlife barrier, referred to as snake mesh, would be added to the bottom 4 feet of the fence above ground and 3 feet below ground, for the specific purpose of preventing snakes and small wildlife from entering the roadway. The perimeter exclusion fencing would be designed to allow free movement under the roadway at bridges and through wildlife crossings.

As described in the following tables, construction of Phase I would result in the permanent discharge of fill material into 7.32 acres of wetlands to create an embankment and construct the roadway and attendant features, temporary impact to 3.80 acres of wetlands with temporary fill or structures, and dredge of 0.06 acre of wetland to connect flood compensation to the surrounding areas. Where bridges would be constructed, the area within the construction limits would be cleared to the ground level without removal of root systems and tree stumps. Geotextile fabric would be placed on the ground surface and temporary fill and structures would be placed on top of the geotextile fabric. Temporary fill material and structures would be removed upon completion of construction and the area would be returned to pre-construction contours and hydrologic conditions.

Table 1-3. Phase I Proposed Permanent Discharges of Fill Material in Wetlands

Approximate Station Ranged		Impact Description	Impact ID	Wetland ID	Wetland Type FLUCCs	Impact Size (acre)
Begin	End					
18+60	19+80	Embankment	1-01a	W-2	641	0.18
35+00	37+20	Embankment	1-03a	W-4	630	0.09
42+00	44+80	Embankment, Flood Plane Compensation Area	1-04a	W-5	621	0.60
50+40	69+20	Embankment	1-06a, 1-06d	W-6	630	3.91

71+80	74+60	Embankment	1-07a, 1-07c	W-7	621	0.10
84+80	86+20	Embankment	1-08a	W-7	617	0.16
95+81		Start of the Serenova Tract				
118+02	126+72	Westbound Bridge 2, 870 feet	1-09a	W-10	630	0.03
117+03	126.83	Eastbound Bridge 1, 980 feet				
153+43	155+23	Westbound Bridge 4, 180 feet	1-11a, 1-11b, 1-11e, 1-11g	W-11	621	0.09
152+43	156+93	Eastbound Bridge 3, 450 feet				
160+23	167+09	Westbound Bridge 6, 685 feet	1-12b	W-12	643	0.01
160+08	166+92	Eastbound Bridge 5, 685 feet				
168+20	169+80	Embankment	1-13	W-12	643	0.20
173+60	177+00	Embankment	1-14	W-13	621	0.34
179+90	181+70	Westbound Bridge 8, 180 feet	1-15a, 1-15b, 1-15d, 1-16a, 1-16c	W-13	643	0.07
181+15	182+70	Eastbound Bridge 7, 155 feet				
182+80	188+10	Westbound Bridge 10, 530 feet				
184+95	188+45	Eastbound Bridge 9, 350 feet				
191+20	193+40	Embankment	1-17	W-13	643	0.31
191+60	194+20	Embankment	1-18	W-13	643	0.24
206+40	208+60	Embankment	1-19a, 1-19c	W-14	643	0.36
213+90	215+20	Wildlife Crossing Bridge, 130 feet	N/A	N/A	N/A	0.00
216+15	218+45	Westbound Bridge 13, 230 feet	1-20a	W-15	621	0.01
214+43	219+23	Eastbound Bridge 11, 480 feet				
222+17	226+98	Westbound Bridge 15, 485 feet	1-21a, 1-21c	W-16	621	0.01
224+84	226+94	Eastbound Bridge 14, 210 feet				
230+40	234+00	Embankment, Pond 11	1-22a, 1-23b, 1-24	W-16, W-17, W-18	643	0.61
Total Permanent Discharge of Fill Material into Wetlands in Phase I						7.32

Table 1-4. Phase I Proposed Temporary Discharges of Fill Material in Wetlands

Approximate Station Ranged		Impact Description	Impact ID	Wetland ID	Wetland Type	Impact Size (acre)
Begin	End					
19+00	19+80	Construction	1-01b	W-2	641	0.01
35+00	37+20	Construction	1-03b	W-4	630	0.02
42+00	44+80	Construction	1-04b	W-5	621	0.03
48+00	48+60	Dredge	1-05	W-6	630	0.03
50+40	69+20	Construction	1-06b, 1-06c, 1-06e, 1-06f	W-6	630	0.32
71+80	74+60	Construction	1-07b, 1-07d	W-7	621	0.03
84+80	86+20	Construction	1-08b	W-7	621	0.01
118+20	126+40	Bridge Construction	1-9b	W-10	630	0.91
122+00	123+60	Dredge	1-10	W-10	630	0.03
152+60	156+60	Bridge Construction	1-11c, 1-11d, 1-11f	W-11	621	0.35
160+20	167+20	Bridge Construction	1-12a	W-12	641	0.75
180+00	182+40	Bridge Construction	1-15c	W-13	621	0.17
183+20	188+60	Bridge Construction	1-16b, 1-16d	W-13	621	0.46
206+40	208+60	Construction	1-19b	W-14	643	0.01
215+80	218+80	Bridge Construction	1-20b	W-15	621	0.30
222+40	226+80	Bridge Construction	1-21b, 1-21d	W-16	621	0.42
230+40	232+00	Construction	1-22b	W-16	621	0.01
Total Temporary Discharge of Fill Material into Wetlands in Phase I						3.86

Suncoast Parkway Interchange

A full diamond interchange and approximately 1 mile of 4-lane divided roadway would be constructed within the limits of the interchange. The Suncoast Parkway has an existing overpass along the north-south roadway at approximately 3.2 miles south of SR-52. The RRE project would utilize the existing overpass and construct the west-east roadway, on and off ramps, multi-use path, stormwater collection and conveyance features, and other attendant features from Stations 234+00 to 286+28. A perimeter exclusion fence would be constructed around the interchange and that would incorporate snake mesh, as described above.

The Suncoast Parkway Interchange segment would permanently discharge fill material into 11.72 acres of wetlands identified in Table 1-5.

Table 1-5. Suncoast Parkway Interchange Proposed Permanent Discharges of Fill Material in Wetlands

Approximate Station Ranged		Impact Description	Impact ID	Wetland ID	Wetland Type	Impact Size (acre)
Begin	End					
234+00	236+00	Embankment	T-1	W-17	641	0.15
238+80	241+20	Embankment	T-02	W-19	641	0.23
240+00	240+80	Embankment	T-03	W-20	641	0.14
242+20	243+20	Embankment	T-04	W-19	641	0.05
242+40	243+80	Embankment	T-05	W-21A	641	0.17
254+00	257+60	Embankment	T-06	W-I-9	621	1.32
256+00	257+00	Embankment	T-13a, T-13b	W-I-5	621	1.37
257+59		End of the Serenova TractSerenova Tract				
257+00	258+00	Embankment	T-11	W-I-4	621	0.54
262+40	266+00	Embankment	T-07	W-I-3	621	2.94
262+40	267+00	Embankment	T-07h	W-I-3	641	0.90
270+40	274+00	Embankment	T-9h	W-26	643	0.27
266+00	268+60	Embankment	T-14a	W-25	621	0.07
272+40	279+20	Embankment	T-9	W-26	621	2.86
261+00	262+00	Embankment	T-10	W-T-10	643	0.03
262+60	263+40	Embankment	T-12a, T-12b	W-I-2	621	0.68
Total Permanent Discharge of Fill Material into Wetlands in the Interchange						11.72

Phase II

Phase II would be located east of the Suncoast Parkway Interchange segment and would consist of 4-lane divided roadway that is 3.44 miles in length between the Suncoast Parkway and Land O'Lakes Boulevard (US Highway 41), Stations 286+28 to 468+09.19. The roadway would be characterized as an arterial roadway that would allow as many as seven signalized intersections (also referred to as "full movement intersections"). The location of the seven intersections has not been determined and the intersections would not be constructed under this proposal. The applicant stated that potential future developers would be responsible for obtaining authorizations for any impacts to waters of the U.S. associated with the future development of intersections. Four upland 5 foot by 3 foot box culvert wildlife crossings would be constructed at Stations 312+97, 333+00, 375+50, and 382+50, and a stream and wetland wildlife crossings would be constructed near Station 428+00 to include two 12 foot by 5.5 foot box culverts and three 10 foot by 6 foot box culverts. This stream

and wetland wildlife crossing would also serve to hydrologically connect Five Mile Creek and result in 471 linear feet of impact. Seventeen stormwater collection and conveyance features would be constructed.

Phase II would result in permanent discharges of fill material into 18.33 acres of wetlands, temporary discharges of fill material into 0.37 acres of wetlands, and dredge 0.80 acres of wetland to connect flood compensation to the surroundings areas as described in Tables 6 and 7. Temporary fill material and structures would be removed upon completion of construction and the area would be returned to pre-construction contours and hydrologic conditions.

Table 1-6. Phase II Proposed Permanent Discharges of Fill Material into Wetlands

Approximate Station Ranged		Impact Description	Impact ID	Wetland ID	Wetland Type	Impact Size (acre)
Begin	End					
301+20	307+00	Embankment	2-01a	W-28	621	1.90
311+80	313+00	Embankment	2-02	W-28	621	0.05
314+00	318+00	Embankment	2-03a, 2-03c	W-30	621	0.45
318+00	320+80	Embankment	2-04b	W-31	630	0.49
331+00	331+80	Embankment	2-05	W-32A	643	0.04
344+60	350+40	Embankment	2-07b	W-33	621	1.64
357+00	366+00	Embankment	2-08a, 2-08ff	W-35	630	1.50
357+00	366+00	Embankment	2-08fh	W-35	641	0.86
371+20	375+00	Embankment	2-09	W-37	621	0.27
375+60	382+20	Embankment	2-10a	W-38	621	0.78
375+60	382+20	Embankment	2-10b	W-38	630	1.34
392+80	397+00	Embankment	2-13b	W-39	621	1.04
400+60	405+00	Embankment, Flood Compensation Area B-5	2-14af	W-40	621	0.99
400+60	405+00	Embankment, Flood Compensation Area B-5	2-14ap	W-40	630	0.79
411+00	417+00	Embankment, Flood Compensation Area B-7 N	2-15a, 2-15d	W-42	630	1.16
423+40	435+60	Embankment	2-16af	W-44	630	0.73
423+40	435+60	Embankment	2-16ah	W-44	631	2.46
439+40	441+60	Embankment, Pond No. 5	2-17	W-45A	631	0.52

444+20	446+80	Embankment, Pond No. 5	2-18	W-45B	631	0.39
452+40	454+20	Embankment	2-19	W-46A	631	0.28
456+40	456+60	Embankment	2-20	W-47	631	0.01
456+20	459+40	Embankment	2-21a, 2-21b	W-48	641	0.37
464+00	465+60	Embankment	2-22	W-50	621	0.27
Total Permanent Discharge of Fill Material into Wetlands in Phase II						18.33

Table 1-7. Phase II Proposed Temporary Discharges of Fill Material into Wetlands

Approximate Station Ranged		Impact Description	Impact ID	Wetland ID	Wetland Type	Impact Size (acre)
Begin	End					
304+20	307+00	Dredge	2-01b*	W-28	621	0.07
316+00	318+00	Dredge	2-03b*, 2-03d	W-30	621	0.04
318+00	318+60	Construction	2-04a	W-31	630	0.02
344+60	346+40	Dredge	2-07a	W-33	621	0.08
346+60	350+40	Construction	2-07c, 2-07d	W-33	621	0.08
357+00	366+00	Construction	2-08b, 2-08c, 2-08d, 2-08e	W-35	630	0.16
364+00	366+00	Dredge	2-08g	W-35	630	0.15
384+20	385+00	Dredge	2-11	W-38	621	0.11
392+80	397+00	Construction	2-13a, 2-13c	W-39	621	0.09
395+00	396+40	Dredge	2-13d	W-39	621	0.07
400+60	405+00	Construction	2-14, 2-14b	W-40	621	0.02
415+00	416+20	Dredge	2-15b, 2-15c*	W-42	630	0.02
425+00	431+20	Dredge	2-16b, 2-16c	W-44	630	0.26
Total Temporary Discharge of Fill Material into Wetlands in Phase II						1.17

*Impact ID 2-01b, 2-03b, and 2-15c were identified as temporary impacts from construction activities on the applicant's 17 November 2019 impact table comparison correspondence. However, based on the 15 November 2019 project drawings, these impact IDs are identified as temporary impacts to wetlands from dredging.

- 1.3.1 Proposed avoidance and minimization measures: A public notice for the development of a roadway connecting the Ridge Road and Decubellis / Moon

Lake Road (County Road 587) intersection to US 41 was first published on 2 February 2000 under permit application number SAJ-1998-02682 (2000 proposed project). The public notice indicated the 2000 proposed project would impact approximately 69.31 acres of wetlands to construct the approximate 8.65 mile project with attendant features. The applicant proposed the western segment from Decubellis / Moon Lake Road (County Road 587) intersection to the Suncoast Parkway as a four-lane divided highway with up to a 64 foot median to accommodate future expansion to six lanes with a 4-ramp interchange at the Suncoast Parkway intersection. The 2000 proposed project proposed a roadway east of the Suncoast Parkway intersection as a two lane divided highway that could be expanded to four lanes.

The applicant identified the following aquatic resource avoidance and minimization measures incorporated into the 2000 proposed project design:

- Bridging the Pithlachascotee River and adjacent wetlands with an 845-foot long bridge, rather than a 520 foot bridge. A 520 foot bridge would be the minimum hydraulic design required to pass river flows. Bridging the river and wetlands reduces the permanent discharge of fill material into these aquatic resources and allows maximum hydraulic conveyance and wildlife movement.
- The applicant used the minimum recommended widths for the sidewalk (5 feet) and multi-use path (12 feet) per the Florida Bicycle Facilities and Design Handbook and the FDOT Plans Preparation Manual.
- In order to minimize impacts in the Serenova Tract, the applicant limited the proposed 5-foot wide sidewalk to the north side of the roadway west of the Suncoast Parkway, outside the limits of the Serenova Tract. The 12-foot multi-use path was proposed along the south side of the roadway through the entirety of the 2000 proposed project west of the Suncoast Parkway intersection.

As required by the ERP, the applicant must provide reasonable assurance that a project will not cause adverse water quantity impacts to receiving waters and adjacent lands, will not cause adverse flooding to on-site or off-site property, will not cause adverse impacts to existing surface water storage and conveyance capabilities, and will not adversely impact the maintenance of surface or ground water levels or surface water flows established pursuant to Section 373.042, F.S., or Chapter 40D-8, F.A.C. To this end, the applicant is required to control stormwater discharges and address flood plain encroachment. The applicant indicated that the stormwater ponds and flood compensation areas required by the ERP were sited in uplands to the maximum extent possible to avoid and minimize the discharge of fill material into waters of the US.

During the review of the 2000 proposed project, the Corps received numerous comments from federal and state agencies, non-governmental organizations, and individual members of the public. In order to evaluate the comments and complete the review of the application, information was requested from the applicant. The Corps worked closely with the applicant to outline and obtain information from the applicant needed to complete the review of the 2000 proposed project, however the entirety of the information needed to complete the review and evaluation of the 2000 proposed project was not provided. The application for the 2000 proposed project was withdrawn in November 2010.

The applicant submitted a revised application for the roadway on 4 February 2011 and the proposal was assigned application number SAJ-2011-00551. After review of the application, the Corps found a significant amount of outdated, conflicting, and omitted information in the February 2011 application and required a new comprehensive application be submitted to the Corps. On 31 May 2011, the applicant submitted a new application. A new public notice was published on 28 November 2011 for the 31 May 2011 application under application number, SAJ-2011-00551 (2011 proposed project). The 2011 proposed project had a similar alignment to the 2000 proposed project, however the applicant completed additional avoidance and minimization by changing roadway design criteria, identified impacts to waters of the US that had been impacted by other projects since 2000, and changed the mitigation proposal to compensate for the unavoidable impacts to waters of the US, and the FTE became a applicant for the proposed project. The Corps published the public notice and began the evaluation of the RRE based solely on the contents of the 31 May 2011 application and subsequent revisions in order to provide the Corps and the public with a clear, concise, accurate, and current set of information sufficient for the Corps to seek relevant public comment and evaluate the 31 May 2011 application for Department of the Army authorization.

The public notice for the 2011 proposed project described 59.41 acres of proposed wetland impacts, a reduction of 9.9 acres from the 2000 proposed project. Approximately 2.55 acres of previously proposed wetland impacts were removed from the project because they were included as impacted wetlands within a FDOT widening project along U.S. Highway 41, authorized by Corps permit SAJ-2008-00329. Disregarding the 2.55 acres that were removed from the 2011 proposed project, the avoidance and minimization efforts of the applicant since the 2000 proposed project resulted in a 7.35-acre reduction in proposed wetland impacts to the 2011 proposed project.

Within Phase I of the project, the majority of the wetland impact reductions that occurred for the 2011 proposed project resulted from major changes to the typical roadway design within the limits of Serenova Tract. The proposed roadway extends approximately 13,800 linear feet through the Serenova Tract. In

order to reduce impacts within this area, the applicant narrowed the median widths over approximately 7,007 linear feet of the proposed project. The median width was reduced through wetland areas W-11, W-12, and W-13 from 64 feet to 40 feet for a distance of 4,238 linear feet (Station 149+84 to Station 192+22) while the median width was also reduced along 2,769 linear feet of upland areas within the Serenova Tract (Station 139+37 to Station 149+84 and Station 192+22 to Station 209+44) to widths ranging from 40 feet to 64 feet. The applicant indicated a 64 foot median width is the desirable width based on design standards, and the 40 foot median width is the minimum allowed by the design standards utilized. Similarly, where the multi-use path or the sidewalk crossed wetland areas, the applicant moved these features as close as possible to the roadway and utilized guardrail and shoulder gutters to minimize embankment widths. Retaining walls were added within wetland areas to reduce the area of the embankment, and the limits of construction at the Pithlachascotee River bridge at wetland area W-10 were narrowed to the minimum needed to support construction activities. By reducing the embankment width, the permanent discharge of fill material into wetlands at the edges of the roadway were minimized. The applicant indicated the layout for the Stormwater Ponds 5 and 6 were revised to allow for a minimum of 50 foot buffer between the pond berm and the wetlands associated with the Pithlachascotee River.

The 2011 public notice also featured several other measures to reduce the project footprint within the limits of the Serenova Tract in Phase I. The applicant proposed steepened roadway slopes from 1:4 to 1:2 on both sides of the roadway. The roadway slopes originally utilized were established at 1:6 based on the minimum embankment slope for the safe recovery of a vehicle that leaves the travel lanes. The increase in the proposed roadway slopes are the steepest allowed for vehicle recovery in select segments and steeper in other areas with the installation of a guardrail. By increasing roadway slopes, the overall width of the embankment was minimized which reduces the permanent discharge of fill material into wetlands. The applicant also utilized a shoulder gutter with inlets and storm sewer system for runoff in lieu of an open swale drainage system in locations where the roadway traverses wetlands. The shoulder gutter and storm sewer system is more costly, but reduces the width of the embankment and minimized the permanent discharge of fill material into wetlands along the edges of the roadway.

Regarding the proposed interchange with the existing Suncoast Parkway, the applicant stated the alignment of the proposed roadway through the interchange was set by the location of the existing bridge on the Suncoast Parkway. Avoidance and minimization measures employed at the proposed interchange location included the use of 2:1 side slopes and limiting clearing and grubbing activities to areas necessary for construction.

Within Phase II of the project, the majority of wetland impact reductions for the 2011 proposed project were the result of a change in the typical roadway design

at wetland areas W-28, W-30, and W-42, which utilized shoulder gutters rather than roadside ditches to collect and convey storm water runoff. The proposed roadway extended approximately 18,181 linear feet through Phase II of the project. The applicant reduced the median width from 64 feet to 40 feet through the majority of Phase II from approximately Station 303+28 to Station 468+09 (approximately 16,481 linear feet). A retaining wall was added at wetland areas W-33 and W-35 to reduce the area of wetland fill. Also, the slope of the maintenance berm on high fill slopes was increased at wetland areas W-39 and W-40.

During the review of the 2011 proposed project, the Corps received numerous comments from federal and state agencies, tribes, non-governmental organizations, and individual members of the public. The Corps actively engaged with these interested parties to conduct the review and evaluation of the 2011 proposed project. The Corps coordinated with the US Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Commission (FWC) pursuant to the Endangered Species Act (ESA) and the Fish and Wildlife Coordination Act, the State Historic Preservation Office (SHPO) and the Seminole Tribe of Florida pursuant to the National Historic Preservation Act (NHPA) and government-to-government consultation with Indian tribes, and the USFWS and the US Environmental Protection Agency (USEPA), the National Marine Fisheries Service, and other federal, state, and local agencies, environmental groups, and the public to yield pertinent environmental information that is instrumental in determining the impact of the 2011 proposed project on the natural resources of the area. The Corps sought views and comments from these interested parties, provided these comments to the applicant, and requested additional information from the application formally and informally throughout the evaluation of the 2011 proposed project.

By letter dated 13 August 2018, the applicant notified the Corps of a modification to the 2011 proposed project that changed Phase II from a limited access roadway with only one point of access to an arterial roadway that could have as many as seven signalized intersections. The letter also described the additional mitigation measures, including eliminating all three northern access points in Phase I as a result of Pasco County purchasing the land north of RRE since 2011 for preservation, and a change in the proposed compensatory mitigation from permittee responsible compensatory mitigation to use of a compensatory mitigation bank. The Corps issued a new public notice on 25 September 2018 due to the changes in the application that would affect the public's review of the proposal (2018 proposed project, RRE, Mod 7a).

Additional avoidance and minimization measures proposed by the applicant for the 2018 proposed project reduced the overall wetland impact from the discharge of fill material from approximately 56.69 acres in the 2011 proposed project, to

42.40 acres, resulting in an approximate 14.29 acre reduction in the discharge of fill material into wetlands. The numbers are based on the most recent comparison between the 2011 proposed project and Mod 7a provided by the applicant on 17 November 2019. The numbers may be slightly different from the 2011 public notice due to the applicant's transition since 2011 to GIS utilization for impacts and UMAM assessment, and a recognition that impacts may have been described and considered differently by the applicant and the Corps since 2011.

The applicant indicated the additional avoidance and minimization of wetland impacts was achieved in the 2018 proposed project by increasing the length of three bridges that were included in the 2011 proposed project, and adding twelve new bridges to Phase I. In addition, the applicant incorporated additional areas of vertical walls in Phase I and Phase II that replaced sloped fills within wetland areas. The applicant moved the pedestrian sidewalk and multi-use path as close to the road as possible in wetland areas with the use of vertical walls and pedestrian rails to further minimize impacts.

The roadway would be placed on bridges over wetlands located in the Serenova Tract to minimize the permanent discharge of fill material into the high quality wetlands. Most of the permanent impacts from the discharge of fill material in the Serenova Tract are to herbaceous fringes of wetlands while preserving the wetland cores. The Phase I segment of the proposed project would permanently impact 2.28 acres of wetlands within the Serenova Tract from the discharge of fill material. The Interchange segment would permanently impact 3.43 acres of wetland within the Serenova Tract. Total wetland impacts in the Serenova Tract would total 5.71 acres. The applicant indicated that additional avoidance and minimization in the Suncoast Parkway Interchange segment was limited because the existing overpass dictates the alignment of the proposed roadway and location of the attendant features. Bridging of wetlands within the interchange segment was not feasible because of design parameters with the interchange's location and width.

Reducing the acreage of permanent and temporary impacts from the discharge of fill material into wetlands is one way to demonstrate avoidance and minimization. Another way to achieve avoidance and minimization is based on wetland functions and services. In this manner, the applicant demonstrated minimization of impacts to wetland functions as assessed through application of the Uniform Mitigation Assessment Method (UMAM). The UMAM was developed by various State of Florida regulatory agencies, with input from local government and the Corps' Jacksonville District. The tool provides a standardized procedure for assessing the ecological functions provided by wetlands and other surface waters and the amount that those functions are reduced by minimization efforts.

The UMAM is also used to determine the amount of mitigation necessary to offset unavoidable impacts to aquatic resources. For the evaluation of minimization measures, the UMAM evaluates functions through consideration of an ecological community's current condition, hydrologic connection, uniqueness, location, and fish and wildlife utilization. (FDEP, <https://floridadep.gov/water/submerged-lands-environmental-resources-coordination/content/uniform-mitigation-assessment>).

Based on the UMAM analysis completed for the proposed project, the 2011 proposed project had 53.91 acres of permanent impact from the discharge of fill material into wetlands with a total loss of 35.86 UMAM units (excluding 2.61 acres as described below with 2.27 UMAM units). Overall, Mod 7a would have 37.37 acres of permanent impact from the discharge of fill material into wetlands with a total loss of 23.66 UMAM units. This demonstrates a 16.54 acre reduction in permanent impacts and a 12.2 unit reduction in UMAM units for Mod 7a compared to the 2011 proposed project.

Phase I UMAM Minimization Analysis: As described by the 17 November 2019 impact tables, the 2011 project proposed permanent impacts to 20.73 acres of wetlands in Phase I. In order to have an equitable comparison with the 2018 proposed project, the permanent discharge of fill material proposed by the 2011 project was determined to be 18.12 acres; impacts to W-10 were described as 2.94 acres by the 2011 proposed project, whereas the permanent discharge of fill material into W-10 was 0.33 acres with 2.61 acres of shading from the bridge. The effects of shading from the bridge are not considered permanent impacts from the discharge of fill material for the evaluation of the 2018 proposed project, but are considered as direct permanent effects attributable to a decrease in wetland function and wetland conversion.

Due to avoidance and minimization measures proposed by the applicant, Mod 7a impacts in Phase I were reduced to 7.32 acres of permanent impact from the discharge of fill material with a total loss of 5.18 UMAM units. This represents a 10.80 acre reduction in the permanent loss of wetlands and an 8.71 unit reduction in UMAM units for Phase I for Mod 7a compared to the 2011 proposed project.

Avoidance and minimization efforts that resulted in a decrease in the permanent discharge of fill material into wetlands for Mod 7a compared to the 2011 proposed project, led to an increase in the proposed temporary impacts from the discharge of fill material, temporary placement of structures, and dredging for Mod 7a as compared to the 2011 proposed project. The increase in proposed temporary impacts was due to the necessity to temporarily access and construct the bridges rather than permanent impacts from the construction of

embankments in Phase I, and temporary access areas for vertical wall construction rather than permanent impacts from the placement of roadway slopes into wetlands. Phase I of the 2011 proposed project had 1.40 acres of temporary impacts while Mod 7a proposed 3.86 acres of temporary impacts, an increase of 2.46 acres of temporary impacts for Mod 7a from the 2011 proposed project.

Suncoast Parkway Interchange UMAM Minimization Analysis: The Mod 7a proposed permanent impacts from the discharge of fill material into 11.72 acres of wetland with a total loss of 7.09 UMAM units was unchanged from the 2011 proposed project. There were no temporary impacts proposed in this segment.

Phase II UMAM Minimization Analysis: The 2011 project proposed 24.07 acres of permanent impact from the discharge of fill material into wetlands with a total loss of 14.88 UMAM units. Due to avoidance and minimization measures proposed by the applicant, Mod 7a impacts in Phase II were reduced to 18.33 acres of permanent impact from the discharge of fill material with a total loss of 11.39 UMAM units. This represents a 5.74 acre reduction in the permanent loss of wetlands and a 3.49 unit reduction in UMAM units for Phase II for Mod 7a compared to the 2011 proposed project.

Avoidance and minimization efforts resulted in a decrease in the proposed temporary impacts from the discharge of fill material, temporary placement of structures, and dredging for Phase II of Mod 7a compared to Phase II of the 2011 proposed project. The 2011 proposed project had 1.38 acres of temporary impacts while Mod 7a proposed 1.17 acres of temporary impacts, a decrease of 0.21 acres of temporary impacts in Phase II for Mod 7a from the 2011 proposed project.

- 1.3.2 Proposed compensatory mitigation: Describe the proposed compensatory mitigation briefly. This should reflect, in summary form, final information submitted from the applicant about compensatory mitigation and not just the statement required in the application in order to issue a public notice for the proposal. The 2011 public notice included the following statement regarding proposed compensatory mitigation. "The 2000 public notice featured a compensatory mitigation plan that included 1) hydrological enhancement of wetlands, exotic/nuisance vegetation control, and reforestation of cleared pastures and cypress domes within the 1,308-acre Anclote River Ranch Tract of the Jay B. Starkey Wilderness Preserve (see Sheet 29) and 2) transfer of the ownership of the previous Ridge Road right-of-way (approximately 205 acres) within the Serenova Tract to the Southwest Florida Water Management District (SWFWMD). In the current application, the applicants have proposed the following compensatory mitigation plans to offset unavoidable functional loss to the aquatic environment: The mitigation plan presented by Pasco County to

offset unavoidable impacts to 47.59 acres of aquatic resources associated with Phases I and II of the proposed roadway includes preservation of the River Ridge site coupled with the preservation of the 4G Ranch Critical Linkage Corridor, the Crockett Lake site, or the Starkey Ranch site. These areas are depicted on attached Sheets 31-35.” The PN went on to describe each of the proposed sites.

The PN also described the mitigation proposed by the FTE for the Suncoast Parkway interchange: “The compensatory mitigation plan presented by the FTE includes a suite of options that the FTE believes will offset the proposed impacts to 11.85 acres of aquatic resources associated with the Suncoast Parkway interchange. The three options presented include: Cone Borrow Pit; Excess Mitigation Credit from the Suncoast Parkway; Purchase of Mitigation Credits from the Conner Tract.” The PN went on to describe each of the proposed options.

This was followed by the updated 2018 public notice which stated the following regarding compensatory mitigation: “The applicant has offered the following compensatory mitigation plan to offset unavoidable functional loss to the aquatic environment: Pasco County proposes to provide compensatory mitigation to offset all unavoidable impacts to wetlands within Phases 1 and 2 through the purchase of Mitigation Credits from the Old Florida Mitigation Bank.

For the Florida Turnpike Enterprise (FTE) segment of the project, the 2011 public notice featured three options for compensatory mitigation: preservation of the Cone Borrow Pit, excess mitigation from the Suncoast Parkway or the purchase of credits from the Conner Tract. FTE now proposes to provide compensatory mitigation via one of two options. The first option is per FTE’s Draft COE Mitigation Plan dated March 13, 2018 that proposes the use of the available unused 5% wetland impact contingency and surplus federal mitigation credits from the original permit for the Suncoast Parkway Project 1 – Ridge Road Interchange (199604305 [IP- MN]). FTE’s mitigation plan is currently under review by the Corps. If the Corps does not accept the submitted Draft Mitigation Plan, FTE’s second option is the purchase of mitigation credits from the Old Florida Mitigation Bank. If the Corps accepts the Draft Mitigation Plan in whole or part but the accepted credits are insufficient to offset all of the unavoidable impacts the FTE would purchase any additional credits needed from the mitigation bank.”

The proposed compensatory mitigation has been further refined to include the following: Pasco County will purchase mitigation bank credits from Old Florida Mitigation Bank. The Corps has approved the FTE to use the excess mitigation credits from the Suncoast Parkway in combination with a purchase of mitigation bank credits from Old Florida mitigation bank. Additional details regarding the

proposed compensatory mitigation plan can be found in Section 8 of this document.

1.4 Existing conditions and any applicable project history:

Project History

Applicable project history is described in Section 1.3.1 and the response to comments document.

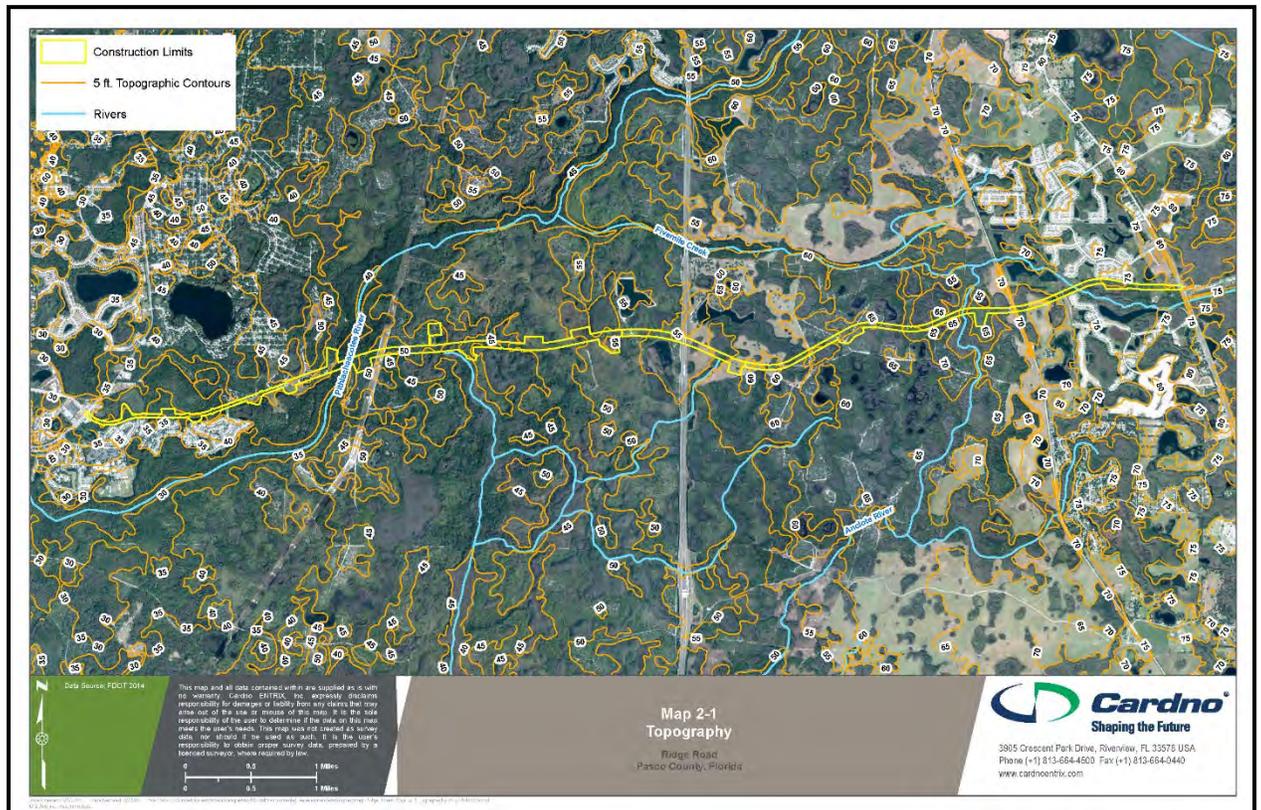
Existing Conditions

The proposed project is located within aquatic resources of the Coastal Rivers Basin of the Pithlachascotee / Upper Pithlachascotee watersheds, and the Pinellas Anclote Basin. The Pithlachascotee River runs in a northeast to southwest direction crossing the proposed project area within Phase I. Five Mile Creek of the Pithlachascotee River runs from east to west crossing the proposed project in Phase II. South of Five Mile Creek is an area which drains through sheet flow and agricultural ditches toward the Anclote River.

Figure 1-2. Watershed Map



Figure 1-3. Topographic Map with Riverine Features Identified



The proposed project area consists of mixed flatwoods communities, bottomland hardwood forests, riverine systems, existing cattle pastures, slash pine farm, mixed Cypress and herbaceous wetland systems. The existing conditions of the proposed project site can best be described based on their location relative to the Suncoast Parkway. The Suncoast Parkway is a 4-lane divided highway constructed from 1998-2001 and serves as a major north/south roadway. Phase I is primarily the proposed project west of the Suncoast Parkway that is mostly characterized as natural areas in conservation and recreation as part of the Serenova Tract of the Starkey Wilderness Preserve. There are residential and institutional developments immediately south of the westernmost portion of Phase I with Pasco County owned conservation land north of the proposed project in this area. There are two utility ROW within Phase I, a Duke Energy transmission line and a Tampa Bay Water well field and water transmission line. East of the Suncoast Parkway is characterized as agriculture, silviculture, and residential development interspersed with natural areas that are primarily wetland. A single track CSX Railroad line crosses the proposed project area east of the Suncoast Parkway. A Pasco County conservation area is on either side of the proposed project near the easternmost portion of Phase II.

The proposed project is located in the southwest portion of the Tampa Plain physiographic region where elevations range from 5 to 90 feet above sea level.

The Tampa Plain is in the southern part of central Florida's Ocala Uplift District. Generally, the topography is flat and most soils are somewhat poorly drained (mesic) and support flatwoods vegetation. There are shallow depressions that typically support wetlands and some deeper depressions that support shallow lakes. Slightly higher area generally have xeric (very dry) conditions and support either sandhill or scrubby vegetation.

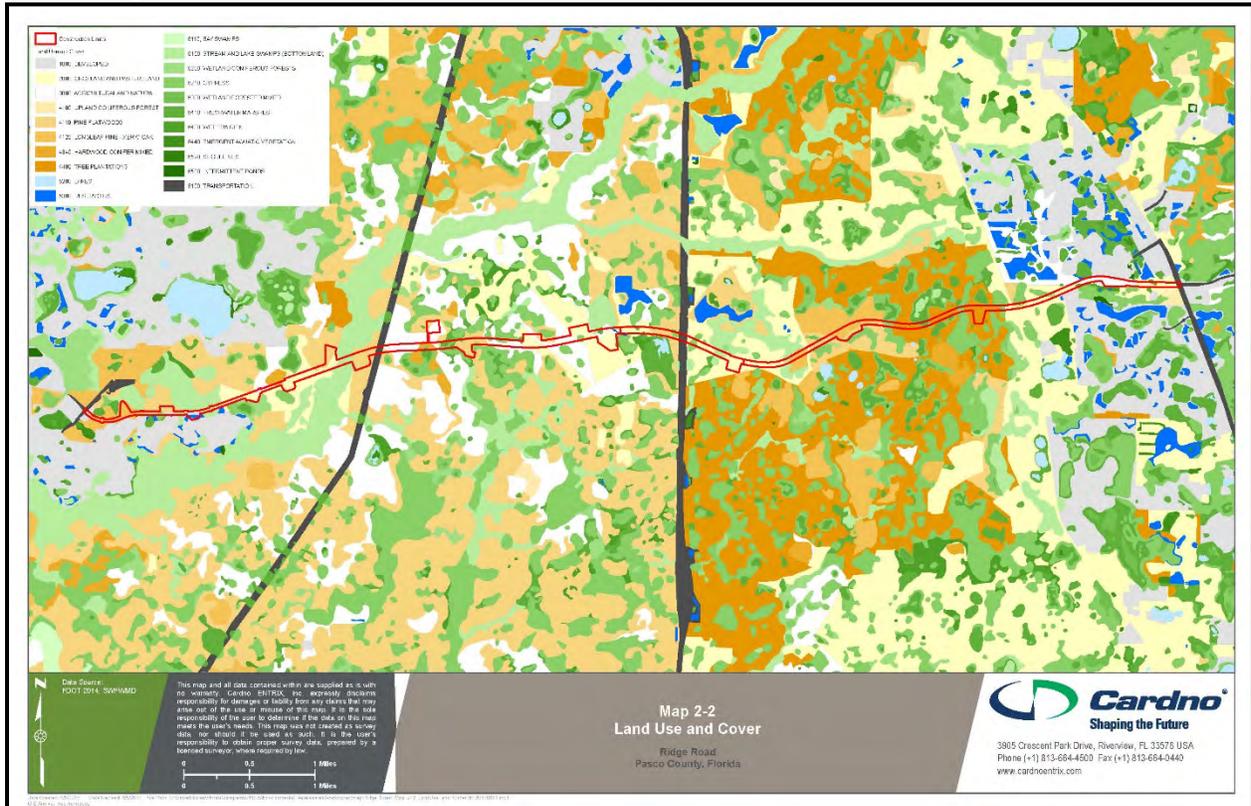
The Corps completed a preliminary jurisdictional determination for the RRE dated 14 June 2017. The preliminary jurisdictional determination was completed after fully evaluating information provided by the applicant and completing several site visits. For the purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary jurisdictional determination will treat all waters and wetlands, which would be affected in any way by the permitted activity on the site, as if they are jurisdictional waters of the US.

The applicant described land use, with an emphasis on the natural communities that provide habitat for wildlife, by the Florida Land Use, Cover, and Forms Classification (FLUCCS) system (<https://myfwc.com/media/20455/land-cover-classification-revision-2018.pdf>). The FLUCCS system provides a general description of land use in the project area and includes wetlands, but due to the limitations of the classification system, the mapped units may not correspond exactly with actual limits of wetlands that were delineated for the proposed project. The applicant described the mapped units based on the conditions observed in the field.

The FLUCCS classification of the lands use within the ROW identified both upland and wetland mapped units. Where mapped units correlated to areas proposed for either the permanent or temporary discharge of fill material into wetlands, the applicant provided an assessment area description and UMAM quantitative analysis. The UMAM quantitative analysis is evaluated in three categories, scored 0-10, with 10 describing a minimally impaired category that provides conditions which support an optimal level of wetland function. As the scoring decreases, the evaluated category is being limited as a percentage of optimal. For example, a UMAM category score of 7 represents the category is limited to 70% of optimal level of function of that category. A qualitative description by combining each of the three categories and dividing by a possible maximum score of 30, provides an overall score described as optimal (1.0), nearly optimal (0.90), optimal-moderate (0.80), moderate (0.70), nearly moderate (0.60), moderate-minimal (0.50), minimal (0.4), nearly minimal (0.30), lower minimal (0.2), minimal-not present (.10), to not present (0.0). As described by the UMAM procedure, the first category evaluated in the assessment area is Location and Landscape Support (location), which examines the ecological

context within which the system operates. The Water Environment (water) is the second category. This category examines inference of hydrologic alternation and water quality impairment. The third category for the UMAM analysis completed for assessment areas with plant cover is Community Structure, with a focus on the vegetation and structural habitat.

Figure 1-4. Area Map with FLUCCS Identified



FLUCCS Unit Descriptions as described in the April 2019 Biological Assessment with the UMAM assessments summary finalized in December 2018 with UMAM forms provided in July 2018 with assessment dates from 2017 and 2018. Where a wetland is described by the UMAM forms the wetland is identified followed by the “Assessment Area Name or Number” that was provided on the corresponding UMAM form.

100 – Developed: This is cleared and developed land including residential, commercial, and industrial lands that provide minimal habitat value for wildlife species. Developed areas occur adjacent to the extreme eastern and western ends of the proposed project. Much of the roadway alignment west of the Pithlachascotee River is bordered on the south by the Rosewood at River Ridge subdivision. Large areas of development occur west of the western terminus. Much of the roadway alignment east of the CSX railroad is bordered by the Tierra del Sol and Lakeshore Ranch Developments, sometimes with a narrow band of

conservation lands separating the roadway from the developed areas. Connerton, a large mixed use development, lies across U.S. Highway 41 from the eastern terminus of the proposed project.

200 – Other Agricultural Lands: This is land is commonly used for agriculture such as row crops and citrus groves that provides minimal habitat value for wildlife species.

211 – Improved Pasture: This is one of the more prevalent cover types to be found in the project area, especially east of the Suncoast Parkway. The improved pastures were historically uplands such as flatwoods and sandhill, which were converted to grazing land through clearing, tilling, and planting with non-native forage grasses, especially bahiagrass. Pastures are dominated by grasses, mostly non-native, plus many herbaceous species. Patches of saw palmetto and an occasional copse of trees (oaks and/or pines) can be found in pastures that have been abandoned. Although not a natural cover type, pastures provide habitat value to many wildlife species. Most of the improved pasture is east of the Suncoast Parkway though there are small areas of pasture west of the Pithlachascotee River. There is a small area of pasture that is being allowed to revert to flatwoods on the Serenova Tract.

321 – Palmetto Prairie: Palmetto prairies are treeless areas where the dominant species is saw palmetto. Along the project area, it is areas that were historically flatwoods from which the overstory was removed by past timbering. Palmetto density varies from solid coverage to only patchy occurrences. Common shrub associates are wax myrtle, tar flower, saltbush, gallberry and fetterbush. Groundcover is usually composed of native grasses such as threeawn grasses, broomsedges, crowngrasses, and carpetgrasses. Canopy cover is sparse with occasional pines and oaks.

411 – Pine Flatwoods: This cover type is similar to palmetto prairie in groundcover vegetation, but it has a canopy of slash or longleaf pines. Several types of pine flatwoods occur along the project area. The most common is flatwoods with longleaf pine in the overstory and a groundcover that is either dominated by saw palmetto or wiregrass, depending on burn frequency and cattle usage. Flatwoods in areas of fire exclusion often has considerable oak in the canopy. Dryer flatwoods, particularly on low ridges, typically has a few dry-site adapted oaks including sand live oak and turkey oak. Low areas that have had fire suppression often include mesic hardwoods such as maples, and red and loblolly bays. The wildlife value of pine flatwoods habitat tends to be high where there has been proper fire management and considerably lower where fire suppressed.

412 – Longleaf Pine-Xeric Oak: Areas mapped as longleaf pine-xeric oak are often referred to as sandhill. These tend to occur on the higher ridges. The overstory is dominated by longleaf pine. In areas that have experienced fire suppression or which have been burned only in winter, there can be a thick subcanopy of turkey oak, sand live oak, and other xeric oak species. Groundcover is typically grassy.

413 – Sand Pine: There are areas along the route of the project area that are characterized by a thick canopy of sand pine with a minimal understory and groundcover. It is a very dry community, so other species that do occur are usually xeric-adapted such as wiregrass, prickly pear cactus, myrtle oak, and rusty staggerbush. These are typically over-aged and fire suppressed. In recent years, land managers have begun burning these sand pine systems, and the burned areas tend to have young sand pine intermixed with xeric oaks. Soils in these areas are usually deep, droughty, nutrient poor sands.

434 – Hardwood – Conifer Mixed: A very ubiquitous cover type, these mixed upland forests have shared dominance of pines and hardwoods. These areas have variable plant species composition, but within the project area, most seem to be second growth forests and forests that have experienced long periods of fire exclusion. Some mixed forest stands are decidedly hydric in nature, while others are very xeric. Canopy, subcanopy, and groundcover all reflect these variable moisture conditions. Species commonly encountered in the canopy include slash pine, longleaf pine, sand pine, live oak, sweet bay, laurel oak, myrtle oak, and sand live oak.

441 – Planted Pine: Pine plantations are prevalent east of the Suncoast Parkway. They are planted with slash pine, and typically have an understory of bushy and broomsedge bluestem, pawpaw, white aster, gallberry, blackberry, dog fennel, and flat-topped goldenrod.

500 – Lakes and Reservoirs: Reservoirs are artificial impoundments of water whereas lakes are natural. Some of this habitat dries out during long periods of low rainfall.

615 – Bottomland Forest: Bottomland forests are hardwood forests associated with streams, lakes and other depressional areas. They are dominated by wetland hardwood tree species such as laurel oak, live oak, water oak, sweet bay, sweetgum, dahoon holly, swamp bay, red maple, and elm. Slash pine and sabal palm occur, but in small numbers relative to the hardwoods. Common understory species are wax myrtle, fetterbush, gallberry, cabbage palm, and dwarf palmetto. Along the streams, there is typically a narrow band of wetland trees such as cypress and swamp tupelo, and there can be an understory/shrub

layer consisting of Carolina willow, pop ash, musclewood, buttonbush, swamp dogwood, dwarf palmetto, and Virginia willow.

The groundcover is characterized by ferns, sedges, and forbs. Common ferns species are cinnamon fern, royal fern, Virginia chainfern, netted chainfern, marsh ferns, and swamp fern. Other common species include hyssop, sedges, coinwort, St. John's-worts, rushes, grasses, wild coffee, and lizard's-tail. Vines can be abundant including poison ivy, muscadine grape, greenbrier, and trumpet vine. Species distribution varies depending on water availability and shade.

617 – Mixed Wetland Hardwoods:

- W-7 (1-08a): UMAM scored 0.67 overall, which indicates a moderate functional wetland score with individual category scores of location 6, water 7, and community structure 7. Review of historic imagery shows this is an area of historic marsh. A portion of the area has begun to be colonized by red maples and appears to be transitioning to a forested system, although the majority of the area is still a marsh. Because of the young age of the colonizing trees and redistricted area, the wetland would be best described as a marsh/shrub marsh. The wetland also has a prevalence of wax myrtle in some areas. The maple dominated area is lacking in herbaceous cover. The more northerly portion of the area is occupied by more typical marsh vegetation, primarily broom sedge, spikerush and maidencane.

620 – Wetland Coniferous Forest: Conifers, primarily pond cypress and some slash pine, dominate these wetlands. Typically, the pines attain dominance over the cypress, but some wetlands are co-dominated by cypress and slash pine. These systems are typically found in the interior wetlands in such places as river flood plains, seepage areas, bayheads and sloughs. However, they typically do not become as wet as pure cypress systems, and may have been cypress sloughs prior to hydrological alterations due to nature (drought) and man (ditches, wellfields, etc.). Groundcover is similar to that which grows in hardwood wetlands, but with a greater proportion of saw palmetto. Quality of wetlands varies greatly, with some near-pristine systems, and others that appear to be heavily impacted by a reduced hydroperiod. A long history of cattle grazing has also had a negative impact on these wetlands.

621 – Cypress: This habitat has a canopy which is characterized by a near mono-culture of pond cypress. Associates include swamp tupelo and dahoon holly. The interiors are the deepest, with shallower water toward the fringes, and a concurrent increase in subcanopy and groundcover vegetation. Slash pines and hardwoods are common along the perimeters. The shrub layer is sparse,

with wax myrtle, fetterbush and dahoon holly on hummocks and along the outer edge. Along the proposed project, this cover type exists in strands (connected systems), isolated domes, and along lake edges.

- W-7 (1-07a, 1-07c): UMAM scored 0.67 overall, which indicates a moderate function wetland score with individual category scores of location 6, water 7, and community structure 7. The canopy is dominated by pond cypress and appears to be in good condition. The understory appears to be somewhat weedy and the water surface is covered with salvinia. The wetland receives stormwater runoff from the adjacent residential development. Weedy species observed include salvinia, Boston fern, hempvine, grape vine and dog fennel. Other herbaceous species observed in the assessment area include warty sedge, netted chain fern and swamp fern.
- W-11 (1-11a, 1-11b, 1-11e, 1-11g): UMAM scored 0.80 overall, which indicates a moderate-optimal wetland score with individual category scores of location 9, water 8, and community structure 7. This wetland is within the Serenova Tract. A cypress wetland with a weedy edge. The canopy at the edge is extremely sparse with a number of snags present edge likely as a result of a recent burn. The edge is dominated by shrubs, primarily wax myrtle with some saw palmetto. The area is somewhat weedy with approximately 20 percent cover of dog fennel observed. The wetland appeared to be inundated at or above the season high water elevation at the time of assessment as a result of Hurricane Irma. However burn scars and dead trees indicate that the area recently experienced a fire perhaps suggesting a reduced hydroperiod.
- W-12 (1-14): UMAM scored 0.87 overall, which indicates a nearly optimal wetland score with individual category scores of location 9, water 9, and community structure 8. This wetland is within the Serenova Tract. The edge of a cypress wetland in good ecological condition. Somewhat shrubby (approximately 70 percent cover), however all shrubs (primarily fetterbush) growing on raised sites. Distinct water level indicators. Overstory consists of approximately 70 percent canopy closure of cypress. Approximately 20 percent cover of dahoon in the subcanopy. Very little herbaceous cover, small amounts of swamp fern and cat briar observed.
- W-15 (1-20a, 1-21a, 1-21c): UMAM scored 0.77 overall, which indicates a moderate-optimal wetland score with individual category scores of location 8, water 8, and community structure 7. This wetland is within the Serenova Tract. The highly disturbed edge of a cypress wetland. The area has been disturbed by the excavation of a fire break and has also recently been

burned. The impact areas are dominated by saw palmetto, wax myrtle, dog fennel, and broom sedge. Scattered slash pines also present.

- W-16 (1-20a, 1-21a, 1-21c): UMAM scored 0.77 overall, which indicates a moderate-optimal wetland score with individual category scores of location 8, water 8, and community structure 7. This wetland is within the Serenova Tract. The highly disturbed edge of a cypress wetland. The area has been disturbed by the excavation of a fire break and has also recently been burned. The impact areas are dominated by saw palmetto, wax myrtle, dog fennel, and broom sedge. Scattered slash pines also present.
- W-I-9 (T-6): UMAM scored 0.63 overall, which indicates a nearly moderate wetland score with individual category scores of location 5, water 7, and community structure 7. This wetland is a small cypress wetland located directly adjacent to the Suncoast Parkway within the Serenova Tract. The edge of the wetland is extremely overgrown and appears to be dewatered as a result of the adjacent borrow pond and possibly by the construction of the Suncoast Parkway which removed part of the contributing basin. Although the interior of the wetland appeared to be in relatively good condition, the presence of approximately 100 percent ground cover of swamp fern suggests a reduced hydroperiod. Herbaceous vegetation in hydrologically unimpacted cypress wetlands in the vicinity is limited almost exclusively to raised microsites provided by cypress knees, hummocks and the bases of trees. The wetland appeared well hydrated at the time of assessment as a result of Hurricane Irma that had recently passed this area.
- W-I-5 (T-13a, T-13b): UMAM scored 0.47 overall, which indicates a moderate-minimal wetland score with individual category scores of location 5, water 4, and community structure 5. This wetland is a cypress wetland located immediately adjacent to the Suncoast Parkway within the Serenova Tract. The eastern third of the wetland was filled by the construction of the Suncoast Parkway. The remaining portion of the wetland shows signs of dewatering as a result of the construction of the borrow pond located to the west of the wetland. At the time of the assessment, the wetland had only a few inches of water in the deepest areas at a time when other forested wetlands in the vicinity had 1.5 feet or more of water as a result of Hurricane Irma. The wetland had abnormally high tree fall, the edge of the wetland has become overgrown with shrubs and grape vine, there is no longer a wet prairie fringe, many of the trees located near the edge of the wetland are either stressed or dead, and herbaceous ground cover in the central portion of the wetland was abnormally high and was not limited to raised sites.

- W-I-4 (T-11): UMAM scored 0.33 overall, which indicates a nearly minimal wetland score with individual category scores of location 4, water 3, and community structure 3. This wetland, located within the Serenova Tract, is a highly dewatered cypress wetland that was bisected by the construction of the Suncoast Parkway, resulting in the loss of the central third of the wetland. The wetland is located directly adjacent to a large borrow pond that has clearly resulted in the dewatering of the wetland. The edge of the wetland has receded downslope and the historic wet prairie fringe has been completely lost. The remaining edge of the wetland is extremely overgrown with grape vine. Many of the cypress trees are dead and the remaining trees in the canopy and the dahoon holly in the understory show distinct signs of hydrologic stress including spindly canopies, bark slough, and other morphological indicators of stress. The area was nearly dry at the time of the assessment when most cypress wetland in the vicinity had 1.5 feet or more of water present in the interior portions of the wetlands as a result of Hurricane Irma.
- W-I-3 (T-7): UMAM scored 0.60 overall, which indicates a nearly moderate wetland score with individual category scores of location 4, water 7, and community structure 7. W-I-3 is a historically physically isolated cypress wetland currently surrounded by improved pasture and located immediately adjacent to the Suncoast Parkway. The wetland has been logged and is drained to the east by a man-made ditch. The spacing of the trees is somewhat sparse and the trees are generally small (4 to 10 inches at dbh). Canopy cover is correspondingly sparse at approximately 60%. The understory appears to be in good condition, with generally appropriate cover and diversity of native plant species. The shrub stratum is dominated by fetterbush that consists of approximately 30 percent cover. Wax myrtle and dahoon holly are also present in the shrub stratum. Shrub are limited to the bases of cypress trees. The most prevalent herbaceous species observed include hedge hyssop, hatpin, coinwort and Virginia chain fern.
- W-25 (T-66b, T-14a): UMAM scored 0.63 overall, which indicates a nearly moderate wetland score with individual category scores of location 5, water 7, and community structure 7. W-25 is a small, historically physically isolated, logged cypress wetland that has been somewhat drained by a ditch. The presence of the ditch and the high amount of herbaceous groundcover indicate that the wetland is dewatered. Many facultative and some upland (saw palmetto) plant species observed in the wetland dominant herbaceous species include broom sedge, maidencane, blue maidencane, cat briar, pennywort and grape vine.

- W-26 (T-09): UMAM scored 0.73 overall, which indicates a moderate wetland score with individual category scores of location 6, water 8, and community structure 8. This wetland is associated with the unnamed tributary of Cross Cypress Branch. W-26 is a logged cypress slough surrounded by pasture and located near the Suncoast Parkway. Most of the assessment area is very shrubby. Shrub cover is 30 to 40 percent. The dominant species is fetterbush (70% cover) and is generally limited to the bases of cypress trees. Ground cover vegetation is minimal, likely the result of long hydroperiod. Patches of sawgrass present in some areas. Generally low species diversity.
- W-I-2 (T-12a, T-12b): UMAM scored 0.53 overall, which indicates a moderate-minimal wetland score with individual category scores of location 4, water 5, and community structure 7. This is the central portion of a physically isolated cypress wetland that was bisected by the construction of the Suncoast Parkway. It is also surrounded by improved pasture. The area is bisected by a 15-foot wide cleared area immediately adjacent to a 12-foot tall chain link fence. The majority of the area is located on the opposite side of the fence, in the existing Suncoast Parkway ROW, limiting access to many species. The canopy is primarily cypress but also includes approximately 20% cover of blackgum and 5% cover of dahoon holly. The understory is very overgrown with approximately 80 percent cover of wax myrtle and 20 percent cover of fetterbush. Herbaceous stratum is dominated by swamp fern with lesser amounts of maidencane, sawgrass and softrush.
- W-28 (2-01a): UMAM scored 0.63 overall, which indicates a nearly moderate wetland score with individual category scores of location 6, water 6, and community structure 7. This wetland shows several signs of hydrologic impact. The edge is extremely overgrown with a tangle of grape vine. The water level is a little lower than in other wetlands observed in the immediate vicinity and the interior of the wetland has more vegetation growing on the ground than would be expected in a long hydroperiod cypress wetland. The dominant herbaceous species present is swamp fern (a species that often proliferates in wetlands with reduced hydroperiods) growing on the ground surface. Shrub cover is approximately 30%, much of which is wax myrtle and much of which is not growing on hummocks. Fetterbush is usually the dominant shrub in unimpacted cypress wetlands in this area. Other shrub species observed include buttonbush, blueberry and fetterbush. Dahoon holly occupies approximately 50% cover in the sub-canopy.

- W-28 (2-02): UMAM scored 0.47 overall, which indicates a moderate-minimal wetland score with individual category scores of location 6, water 4, and community structure 4. W-28 is a marginal wetland with no apparent surface hydrology. The impact area is dominated by upland vegetation and appears to have a very short hydroperiod. Dominant plant species are saw palmetto, grapevine, and wax myrtle. There is a small amount of cover of Virginia chain fern and blueberry. The dominant herbaceous species present is swamp fern (a species that often proliferates in wetlands with reduced hydroperiods) growing on the ground surface. Shrub cover is approximately 30%, much of which is wax myrtle and much of which is not growing on hummocks. Fetterbush is usually the dominant shrub in unimpacted cypress wetlands in this area. Other shrub species observed include buttonbush, blueberry and fetterbush. Dahoon holly pretty occupies approximately 50% cover in the sub-canopy.
- W-30 (2-03a, 2-03c, 2-04b): UMAM scored 0.77 overall, which indicates a moderate-optimal wetland score with individual category scores of location 7, water 8, and community structure 8. W-30 is a logged cypress wetland with a sparse canopy (approximately 50% cover). The dominant herbaceous plant species present is a sparse cover of inundated beak rush, (40% cover) growing on the ground. The cypress that are present are relatively small (10 to 12 inch dbh). Shrub cover is 50%, primarily wax myrtle growing on hummocks. Some bladderwort present, indicating a long hydroperiod. Other species observed include hatpin (1%), catbriar (5%), fetterbush (10-20%). All the shrubs are on hummocks.
- W-33 (2-07b): UMAM scored .70 overall, which indicates a moderate wetland score with individual category scores of location 7, water 7, and community structure 7. W-33 is a cypress slough with flatwoods on one side and a pine plantation on the other.
- W-37 (2-09): UMAM scored 0.63 overall, which indicates a nearly moderate wetland score with individual category scores of location 7, water 6, and community structure 6. The area of impact consists of a historic wet prairie that has been converted to pine plantation.
- W-38 (2-10a): UMAM scored 0.77 overall, which indicates a moderate-optimal wetland score with individual category scores of location 7, water 8, and community structure 8. W-38 is a portion of a cypress slough surrounded by pine plantation.
- W-39 (2-13b): UMAM scored 0.73 overall, which indicates a moderate wetland score with individual category scores of location 6, water 8, and

community structure 8. W-39 is a cypress wetland with actively grazed pasture on the east and planted pine on the west. A portion of the wetland has been converted to pine plantation.

- W-40 (2-14af): UMAM scored 0.63 overall, which indicates a nearly moderate wetland score with individual category scores of location 5, water 7, and community structure 7. W-40 is a cypress wetland with wetland edges contain small amounts of red maple, dahoon, laurel oak and planted slash pine. Hydric indicators are consistent and somewhat distinct. Evidence of past logging exists in the assessment area. Moderate amount of wax myrtle cover throughout but limited to hammocks. Herbs are dominated by swamp fern, cinnamon fern, and royal fern also present. Standing water and game trails are present.
- W-50 (2-22): UMAM scored 0.43 overall, which indicates a minimal wetland score with individual category scores of location 4, water 5, and community structure 5. W-50 is a small physically isolated cypress wetland. Shrub stratum consists of approximately 30 to 40 percent wax myrtle. Approximately 30 to 40 percent swamp fern growing on ground surface (not on hummocks).

630 – Wetland Forested Mixed:

- W-4 (1-03a): UMAM scored 0.43 overall, which indicates a minimal score with individual category scores of location 5, water 4, and community structure 4. Small impacts to the edge of a large, historically forested, wetland. The wetland appears to be receiving high nutrient loading from the surrounding residential development. The wetland also appears to be receiving increased volume of water. There is a discharge pipe present in the wetland impact area. Review of aerial imagery shows a distinct green signature beginning in approximately 2014. The tree canopy has been dramatically reduced, many standing dead trees are present and the remaining live trees look very stressed (sparse canopies, dead branches). The water surface is covered with a layer of floating aquatics. The most dominant is *Salvinia*, an exotic species that proliferates in high nutrient water. Also present is duck weed and mosquito fern. Canopy cover is approximately 40 percent and is dominated by red maple. Shrub cover is approximately 100 percent. The dominant species are fetterbush and wax myrtle with lesser amount of Carolina willow.
- W-6 (1-06a, 1-06d): UMAM scored 0.67 overall, which indicates a moderate wetland score with individual category scores of location 5, water 7, and community structure 8. The impact areas are located on the

transitional edge of a large forested wetland. This wetland receives stormwater discharge from the adjacent residential development. Ground has been mechanically disturbed in some areas. There is a deep green signature visible on aerial imagery resulting from the proliferation of floating aquatic vegetation, presumably as a result of high nutrient inputs. This is similar to wetland impact area 3A and 3B, but not as severe. The canopy remains intact and is dominated by laurel oak (approximately 60 percent cover) and slash pine (Approximately 30 percent cover). Shrub cover is sparse consisting of less than five percent cover of saw palmetto. Herb cover is approximately 25 percent cover. The dominant herbaceous species present are saw grass and lizard's tail. Millet beak rush and *Salvinia* were also observed.

- W-10 (1-09a): UMAM scored 0.87 overall, which indicates a nearly optimal wetland score with individual category scores of location 8, water 9, and community structure 9. This wetland is within the Serenova Tract and is part of the Pithlachascotee River wetland complex. The overstory consists of primarily laurel oak and red maple. The shrub stratum is dominated by a combination of wax myrtle, and saw palmetto. Herbaceous cover is approximately 30 percent. The most prevalent herbaceous species include millet beakrush, Virginia chain fern and cat briar.
- W-31 (2-03a, 2-03c, 2-04b): UMAM scored 0.77 overall, which indicates a moderate-optimal wetland score with individual category scores of location 7, water 8, and community structure 8. W-31 is a logged cypress wetland with a sparse canopy (approximately 50% cover). The dominant herbaceous plant species present is a sparse cover of inundated beak rush, (40% cover) growing on the ground. The cypress present are relatively small (10 to 12 inch dbh). Shrub cover is 50%, primarily wax myrtle growing on hummocks. Some bladderwort present, indicating a long hydroperiod. Other species observed include hatpin (1%), cat briar (5%), fetterbush (10-20%). All the shrubs are on hummocks.
- W-35 (2-08a, 2-08ff): UMAM scored 0.67 overall, which indicates a moderate wetland score with individual category scores of location 7, water 7, and community structure 6. The impact area consists of a cypress fringe around a large marsh. Also includes an area of historic wetland prairie that has been planted with slash pine. The impact area is surrounded by pine plantation.
- W-38 (2-10b): UMAM scored 0.70 overall, which indicates a moderate wetland score with individual category scores of location 7, water 7, and community structure 7. The majority of this area consists of a historic wet

prairie that has been planted with slash pine. Hydroperiod is insufficient to cause problems to the planted pine.

- W-40 (2-14ap): UMAM scored 0.47 overall, which indicates a moderate-minimal wetland score with individual category scores of location 4, water 5, and community structure 5. W-40 is a "pasteurized" area of historic wet prairie, a portion of which has been planted slash pine. The herb stratum is dominated by soft rush with encroaching bahia grass and smutgrass (an upland species). Cattle trails and droppings throughout. Hydric indicators not distinct or consistent in the southern portion of the area.
- W-42 (2-15a): UMAM scored 0.57 overall, which indicates a nearly moderate wetland score with individual category scores of location 4, water 6, and community structure 7. The west side of impact is dominated by cypress and very similar in composition as described for the northern half of (2-14a). Moving to the west, the canopy is dominated by red bay and red maple, with some laurel oak along the edges. Some fallen mature bays within assessment area. Shrub cover is moderate and composed of wax myrtle. Herbaceous cover is dominated by swamp fern. Some edges are heavily vegetated with shrubs and vines, preventing access. This area is higher in elevation as you move east with hydric indicators becoming less consistent and distinct than in the cypress to the west. Minor amounts of dead and dying bays and cypress suggests and dominance of swamp fern suggest hydrologic stress. Along edges, many canopy species have exposed roots which may be a sign of soil subsidence. Small excavated pond within the assessment area and associated spoil pile.
- W-44 (2-16af): UMAM scored 0.57 overall, which indicates a nearly moderate wetland score with individual category scores of location 4, water 6, and community structure 7. W-44 is a mixed forest, primarily laurel oak with some red maple, slash pine and cypress. The small area of cypress has a herbaceous layer of 100 percent cover of swamp fern. More heavily canopied areas have almost no herbaceous cover. The cover of swamp fern in the cypress area is typical of wetlands that have decreased hydrology.

631 – Wetland Scrub

- W-17 (T-01): UMAM scored 0.73 overall, which indicates a moderate wetland score with individual category scores of location 8, water 7, and community structure 7. This wetland is within the Serenova Tract. An area of open water excavated from a cypress wetland. The

impact area includes the shrubby side slope dominated by wax myrtle. The area itself consists of open water with scattered lilies present. No other aquatic vegetation observed. Water appears to be in excess of 3 to 4 feet in depth.

- W-44 (2-16ah): UMAM scored 0.53 overall, which indicates a moderate-minimal wetland score with individual category scores of location 4, water 6, and community structure 6. W-44 is an historic cypress area that has been cleared for the powerline ROW. The area is currently overgrown with shrubs with some slash pine and scattered red maples recruiting. Wax myrtle dominates the shrub layer with scattered salt bush also present. The ground cover is dominated by inundated beak rush and maidencane. Some pasture grass encroaching in western edge and cogon grass is present in surrounding uplands. Standing water is present. Hydric indicators consistent/distinct. Area shows good recruitment (saplings of canopy species). Fence line bisects east/west assessment area.
- W-45a (2-17): UMAM scored 0.40 overall, which indicates a minimal wetland score with individual category scores of location 4, water 4, and community structure 4. W-45a is an historic marsh that has been partially dewatered by the construction of a ditch to the south. The area is currently dominated by salt bush with minor amounts of wax myrtle. High cover of invasive species including blackberry, Caesar weed and primrose willow. In areas that are more open, herbaceous species do occur, but in many areas dominated by cogon grass and chain fern. Pockets of standing water occur only in the holes of uprooted shrubs. Hydric indicators are not strong or consistent. Very little evidence of wildlife utilization. A minor amount of red maple present appear to be stressed and dying possibly due to hydrologic stress. Surrounding area of assessment area consists of impenetrable wall of shrubs and blackberry. Minor amounts of Brazilian pepper also observed.
- W-45b (2-18): UMAM scored 0.30 overall, which indicates a nearly minimal wetland score with individual category scores of location 4, water 3, and community structure 2. This area does not show up as a wetland in historic imagery. This area currently consists of a shrubby wetland dominated by salt bush with minor amounts of wax myrtle present. Small amounts of red maple are present on the edge of the assessment area. Water levels were much lower than expected, and there was no standing water. The edge is dominated by bahia grass. No hydric indicators observed on shrubs. Moderate amount of dog fennel also suggest lack of hydrology. Juncus and bushy broom sedge also present in moderate

amounts. Vegetation surrounding assessment area is very dense shrub layer interwoven with vines making access by non avian wildlife difficult.

- W-46a (2-19, 2-20): UMAM scored 0.33 overall, which indicates a nearly minimal wetland score with individual category scores of location 4, water 3, and community structure 3. W-46a is another historic marsh that has been dewatered as a result of hydrologic alterations in the area including a ditch and a very large stormwater pond. Currently, the area is shrub dominated. The dominant species is salt bush with lesser amounts of wax myrtle. The outer portion is overgrown with blackberry. Scattered maples are present throughout the area. The groundcover is dominated by cogon grass (invasive exotic species) with minor amounts of chain fern, softrush, creeping seedbox, primrose willow and Ceasar weed. No standing water or clear evidence of surface inundation.
- W-47 (2-19, 2-20): UMAM scored 0.33 overall, which indicates a nearly minimal wetland score with individual category scores of location 4, water 3, and community structure 3. W-47 is another historic marsh that has been dewatered as a result of hydrologic alterations in the area including a ditch and a very large stormwater pond. Currently, the area is shrub dominated. The dominant species is salt bush with lesser amounts of wax myrtle. The outer portion is overgrown with blackberry. Scattered maples are present throughout the area. The groundcover is dominated by cogon grass (invasive exotic species) with minor amounts of chain fern, softrush, creeping seedbox, primrose willow and Ceasar weed. No standing water or clear evidence of surface inundation.

641 – Freshwater Marsh: Freshwater marshes may have a wide variety of herbaceous wetland species, including pickerel weed, maidencane, blue maidencane, arrowheads, sandweed, sawgrass, and other grasses and sedges. The vegetation is typically in concentric bands related to water depth and inundation duration. Shallower marshes sometimes have few swamp tupelos or pond cypress in the center. Large deep marshes may have bands of cypress along the outer fringe. The soils are depressional mucks.

- W-2 (1-01a): UMAM scored 0.47 overall, which indicates a moderate-minimal wetland score with individual category scores of location 4, water 5, and community structure 5. W-2 is a small shallow isolated depression that appears to have a relatively short hydroperiod based on the high cover of upland herbaceous and tree species observed (pines, persimmon, smutgrass, dog fennel) and because two small sink holes were in the immediate area. Located near an urban area with numerous signs of mechanical soil disturbance. A cleared right of way (ROW) bisects

the northern portion of the area. The site was fully inundated at the time of the first assessment as a result of hurricane Irma but the water elevation was approximately one foot lower when the site was again visited a week later. The water surface was covered with *Salvinia* (a floating exotic indicative of high nutrients). The other predominant herbaceous species observed include blue maidencane, dog fennel and grape vine. Other species observed included cogon grass, maidencane, smutgrass, pokeweed and peppervine.

- W-19 (T-02, T-03): UMAM scored 0.60 overall, which indicates a nearly moderate wetland score with individual category scores of location 7, water 6, and community structure 5. This wetland is within the Serenova Tract. Wetland shows clear evidence of mechanical ground disturbance as well as vehicular disturbance. Plant species diversity is very low. The dominant herbaceous species observed was blue maidencane, accounting for approximately 50 to 60 percent cover. Approximately 20 percent of the area was dominated by sandweed. The only other prevalent species observed was dog fennel (an upland species). Portion of the area had been heavily rooted by feral hogs. The surrounding habitat consists primarily of a shrubby pasture.
- W-20 (T-02, T-03): UMAM scored 0.60 overall, which indicates a nearly moderate wetland score with individual category scores of location 7, water 6, and community structure 5. This wetland is within the Serenova Tract. Wetland shows clear evidence of mechanical ground disturbance as well as vehicular disturbance. Plant species diversity is very low. The dominant herbaceous species observed was blue maidencane, accounting for approximately 50 to 60 percent cover. Approximately 20 percent of the area was dominated by sandweed. The only other prevalent species observed was dog fennel (an upland species). A portion of the area had been heavily rooted by feral hogs. The surrounding habitat consists primarily of a shrubby pasture.
- W-21a (T-04): UMAM scored 0.63 overall, which indicates a nearly moderate wetland score with individual category scores of location 7, water 6, and community structure 6. This wetland is within the Serenova Tract. The wetland is a small marsh area being colonized by upland trees and by shrubs. The dominant species observed was dog fennel. Other prevalent species observed included love grass and grassy arrowhead. Approximately 20 percent of the plant cover was by sandweed. Scattered slash pine have colonized the wetland. A distinct algal matt suggested possible water quality impacts.

- W-I-3 (T-07h): UMAM scored 0.57 overall, which indicates a nearly moderate wetland score with individual category scores of location 4, water 7, and community structure 6. This wetland is a grazed and mowed wet prairie and a manmade ditch. The vegetation in the ditch is dominated by mermaid-weed, which accounts for approximately 80% cover. The only other common species in the ditch was scattered corkwood amounting to approximately 30% cover. Dominant plant species in the wet prairie area were broom-sedge (30%), blue maidencane (30%), spikerush (20%) and sundew.
- W-35 (2-08fh): UMAM scored 0.83 overall, which indicates a moderate-optimal wetland score with individual category scores of location 7, water 9, and community structure 9. The wetland is a large marsh surrounded by planted pine.
- W-48 (2-21a, 2-21b): UMAM scored 0.40 overall, which indicates a minimal wetland score with individual category scores of location 4, water 4, and community structure 4. W-48 historically consisted of a very small isolated cypress head surrounded by wet prairie. The impact area currently consists of a somewhat dewatered soft rush marsh with a few cypress trees remaining. The area is being colonized by red maple. The transitional fringe is shrubby. The dominant shrubs are red maple (saplings) and wax myrtle. Blackberry is also common in this area. No invasive species were observed.

643 – Wet Prairie: These wetlands occur within pine flatwoods, palmetto prairie of improved pasture, and as fringes around many of the forested wetland systems and water bodies. The dominant species include sandweed maidencane, blue maidencane, yellow-eyed grass, spike rushes, and sedges. The soils vary from sandy on the perimeters to a shallow muck in the interiors of the wetlands.

- W-12 (1-12b, 1-13): UMAM scored 0.90 overall, which indicates a nearly optimal wetland score with individual category scores of location 9, water 9, and community structure 9. This wetland is within the Serenova Tract. The assessment is of a wet prairie fringe of a cypress wetland. Herbaceous cover is approximately 100 percent. The most prevalent species are maidencane and wire grass. Sand weed is also prevalent, accounting for approximately 50 percent cover over the herbaceous stratum.
- W-13 (1-15, 1-15a, 1-15d, 1-16a, 1-16c): UMAM scored 0.90 overall, which indicates a nearly optimal wetland score with individual category

scores of location 9, water 9, and community structure 9. Parts of the wetland also scored 0.83 overall, which indicates a moderate-optimal wetland score with individual category scores of location 9, water 8, and community structure 8. This wetland is within the Serenova Tract. Several small impacts to the non-forested wet prairie fringe of a forested slough system in good ecological condition. The dominant species observed were blue maidencane, wire grass, hatpin and broom sedge. Sand weed, saw palmetto, and bushmint were also common. Algal matt was observed in parts. Parts of W-13 associated with impact ID 1-18 is in an area of wet prairie that appears to have a very short hydroperiod. Quite a bit of upland vegetation present including scattered slash pines, dog fennel and blazing star in this area. Fire scars on pines indicate that the area has been recently burned. The most prevalent herbaceous species present is Virginia chain fern and sandweed and sand cordgrass.

- W-14 (1-19a, 1-19c): UMAM scored 0.83 overall, which indicates a moderate-optimal wetland score with individual category scores of location 9, water 8, and community structure 8. This wetland is within the Serenova Tract. This is a narrow wet prairie connection between wetlands. Although some of the area consists of typical wet prairie plant species, much of the area consists of a solid cover of saw palmetto. The dominant wet prairie species present include bushmint, blue maidencane, nutrush, warty sedge and wire grass. Slash pine is recruiting in much of the area.
- W-16 (1-22a, 1-23b, 1-24): UMAM scored 0.77 overall, which indicates a moderate-optimal wetland score with individual category scores of location 8, water 7, and community structure 8. This wetland is within the Serenova Tract. The assessment is of an excavated area between two larger wetlands. Review of historic imagery indicates that the connection did exist prior to excavation. The area is best described as a marsh. The dominant plant species present include pickerel weed, lance-leave arrowhead, sandweed, sofrush, blackberry and maidencane. Portions of the area have been rooted by feral hogs.
- W-17 (1-22a, 1-23b, 1-24): UMAM scored 0.77 overall, which indicates a moderate-optimal wetland score with individual category scores of location 8, water 7, and community structure 8. This wetland is within the Serenova Tract. The assessment is of an excavated area between two wetlands. Review of historic imagery indicates that the connection did exist prior to excavation. The area is best described as a marsh. The dominant plant species present include pickerelweed, lance-leave arrowhead, sandweed, sofrush, blackberry and maidencane. Portions of the area have been rooted by feral hogs.

- W-18a (1-22a, 1-23b, 1-24): UMAM scored 0.77 overall, which indicates a moderate-optimal wetland score with individual category scores of location 8, water 7, and community structure 8. This wetland is within the Serenova Tract. The assessment is of an excavated area between two wetlands. Review of historic imagery indicates that the connection did exist prior to excavation. The area is best described as a marsh. The dominant plant species present include pickerelweed, lance-leave arrowhead, sandweed, sofrush, blackberry and maidencane. Portions of the area have been rooted by feral hogs.
- W-26 (T-09h): UMAM scored 0.67 overall, which indicates a moderate wetland score with individual category scores of location 6, water 7, and community structure 7. This wetland is associated with the unnamed tributary of Cross Cypress Branch. This assessment area consists primarily of excavated area and a small area of a wet prairie fringe. The vegetation consists of a mixture of invasive and native species. The most prevalent species were beakrush, coinwort, carpet grass, cogon grass and broom sedge.
- W-T-10 (T-10): UMAM scored 0.33 overall, which indicates a nearly minimal wetland score with individual category scores of location 2, water 4, and community structure 4. W-T-10 is an physically isolated portion of a roadside ditch dominated by ruderal wetland plants.
- W-32a (2-05): UMAM scored 0.7 overall, which indicates a moderate wetland score with individual category scores of location 7, water 7, and community structure 7. Two small sinkholes connect by a very short hydroperiod wet prairie surrounded by sand pine. Dominant vegetation in is Virginia chain fern (80% cover) with approximately 20 percent cover of St John's wort. The area of wet prairie appears to have a very short hydroperiod. The dominant vegetation is fetterbush. No seasonal high water indicators observed in area of wet prairie. Standing water observed in the depression.

800 – Communications, Utilities, and Roadways: The Duke Energy property traverses the area west of the Suncoast Parkway from the southwest to the northeast. It is approximately 500-ft wide with a maintenance road traveling the length of the propoerty. The vegetation is a mix of grasses and shrubs that are maintained to exclude trees. Several marshes and wet prairies occur along its length and have been mapped as such.

Tributaries

Three tributaries are identified by the preliminary jurisdictional determination completed for the RRE. The Pithlachascotee River (28.279269, -82.592612) is described as a stream with dry periods that occur during the dry season (HUC12 031002070404). The Pithlachascotee River originates in Crew Lake to the north, which has been altered by construction of the Masaryktwon Canal, reduced flow from Jumping Gully, and impacts from a berm across the lake and a sinkholes in the watershed. The applicant described current and historical conditions of the Pithlachascotee River in the August 2019 Cumulative Impact Analysis report. The Pithlachascotee River is located within Phase I and is within the Serenova Tract and flows from the northeast to the southwest through the RRE. The Pithlachascotee River within the project area is part of a riverine wetland complex identified as wetland 10 and is approximately 800-900 feet wide and is within the FEMA 100-year floodplain. As described above, Wetland 10 is a high quality bottomland hardwood swamp wetland with a UMAM score of 0.87 overall, which indicates a nearly optimal wetland. The wetland complex has a seasonally dry floodplain with a defined central channel of the riverine resource. The overstory consist of primarily laurel oak and red maple with a shrub stratum dominated by a combination of wax myrtle and saw palmetto, and a herb stratum of millet beakrush, Virginia chain fern and cat briar. The Pithlachascotee River and the wetland complex serves as a natural floodwater storage area to reduce the downstream impacts associated with wet weather events. The SWFWMD Starkey Wilderness Preserve Land Management Plan describe the important contribution of the Pithlachascotee River and the wetland complex to water quality enhancement and protection, and water supply protection. The plan describes the riverine wetland complex as being regularly inundated that allows the input of suspended sediment and waterborne pollutants to be filtered through natural processes. The undeveloped nature of the floodplain allows runoff and recharge to be naturally managed for water quality and water supply. The Starkey Wilderness Preserve has two groundwater wellfields managed by Tampa Bay Water (TBW, including the Starkey Wellfield and the North Pasco Wellfield. The applicant stated there has been reduced pumping of groundwater from the wellfields starting in 2008 by TBW where effects of reduced pumping on wetland water levels are documented in TBW's most recent (June 2018) Hydrologic Conditions Update Status Report. The North Pasco Wellfield has since been retired by TBW per their Long-term Master Water Plan report dated December 2018.

An unnamed tributary of Cross Cypress Branch (28.279832, -82.546320) is described as a headwater stream of the Anclote River. The tributary is located on the east side of the Suncoast Parkway within the interchange segment. The unnamed tributary flows from the northeast to the southwest through the project area. The unnamed tributary is associated with the wetland complex identified as wetland 26 and is approximately 500-700 feet wide. As described above, the

wetland was described as a cypress slough with edges of a wet prairie. The cypress wetland had a UMAM score of 0.73 which indicates a moderate wetland score. The wet prairie wetland on the west side of the wetland had a UMAM score of 0.67 which indicates a moderate wetland score. Wetland 26 was characterized as previously disturbed due to logging and excavation surrounded by pasture and located near the Suncoast Parkway.

Five Mile Creek (28.288652, -82.501122) is a tributary to the Pithlachascotee River. The tributary is located near the eastern terminus of RRE in Phase II. The Five Mile Creek tributary has been impacted by ditch construction, water diversions and mining near the project area, and observations by the applicant where it outfalls from an area of former borrow pits just east of the CSX Railway shows that it likely flows into both the Anclote and Pithlachascotee Rivers. The applicant indicated that wetlands were created near the project area to improve wetland hydrology and floodplain detention. Five Mile Creek within in the project area is part of a riverine wetland complex identified as Wetland 44 and is approximately 700 feet wide. As described above, Wetland 44 is a scrub wetland with a UMAM score of 0.53 overall, which indicates a moderate-minimal wetland score. The applicant described Wetland 44 as a former cypress wetland, but due to disturbance from a logging and a powerline ROW and fencing it is overgrown with shrubs with some slash pine and scattered red maples. Wax myrtle dominates the shrub layer with scattered salt bush also present and inundated beak rush and maidencane are the dominant herbaceous vegetation. Some pasture grass encroaching in western edge and cogon grass is present in surrounding uplands. Standing water was present with hydric indicators consistent and distinct. The south western part of the wetland is characterized as a forested wetland with a UMAM score of 0.57 overall, which indicates a nearly moderate wetland score. The forested later is primarily laurel oak with some red maple, slash pine and cypress. The small area of cypress had a herbaceous layer of 100 percent cover of swamp fern whereas the more heavily canopied areas had almost no herbaceous cover. The applicant indicated the cover of swamp fern in the cypress area is typical of wetlands that have decreased hydrology.

Adjacent Properties to Phase I – West of the Suncoast Parkway

From the western terminus of the proposed project to Station 113+00, the northern adjacent property is owned by Pasco County and will not be developed. On the south side of the alignment there will be two access points from Mod 7a to the existing Rosewood at River Ridge subdivision. The two access points will be located at Town Center Road at approximate Station 33+74 and at a currently unnamed connection to Roseland Drive at approximate Station 69+45. These subdivisions contain single family homes and attendant features with open water stormwater basins and forested wetlands mainly on the periphery of the

subdivision. There is an additional tract of land currently zoned R-4 (high density residential) east of the existing Rosewood subdivision. Future access to that parcel is planned at approximate Station 89+00. The applicant has indicated this area may be used for future residential development and as a borrow area for the proposed project.

From the eastern boundary of the Pasco County ownership on the north side of the alignment and from the eastern boundary of the R-4 parcel, the land on both sides of proposed project is the Serenova Tract owned by SWFWMD. The proposed project would traverse the Serenova Tract for 3.06 miles from Stations 95+81 to 257+59. The exception to this continuous ownership is the Duke Energy corridor that bisects the Serenova Tract north to south.

The Serenova Tract is part of the Starkey Wilderness Preserve, an approximate 19,000 acre area of natural lands that consists of three tracts: Jay B. Starkey Wilderness Park, Serenova Tract, and Anclote River Ranch Tract. The Jay B. Starkey Wilderness Park is owned by the SWFWMD and is managed as a regional park by Pasco County with a paved multi-use path, trails for hiking, biking, and equestrian activities, a primitive campground and camping cabins. This tract is located south of the proposed project. The Anclote River Ranch Tract owned by the SWFWMD is more primitive and does not have marked trails, but the existing unmarked trails and roads are accessible through the Jay B. Starkey Wilderness Park. This tract is located south of the Starkey Wilderness Park tract. The Serenova Tract is an approximate 6,500 acre parcel managed by the SWFWMD for conservation and recreation with unpaved multi-use hiking, equestrian, and biking trails, and camping areas with attendant features. The Anclote River Ranch Tract and the Serenova Tract are owned by the SWFWMD as a result of mitigation for impacts resulting from the construction of the Suncoast Parkway. The SWFWMD indicates these tracts are managed to preserve and/or restore natural values and to accommodate compatible recreational use.

The Serenova Tract was described by the applicant as generally comprised of 65% (4,224 acres) upland with native forested/rangeland and former agriculture. The tract is 35% wetland (2,309 acres) with the majority of wetlands described as forested.

Adjacent Properties to Phase II – East of the Suncoast Parkway

East of the Suncoast Parkway is primarily private land in agriculture and silviculture. The applicant indicated the majority of the land was sold to a development group in 2018, and the applicant assumed a full build out of uplands within the developable portion of Phase II. On the east side of the CSX train tracks near the eastern terminus of the RRE are several parcels owned by Pasco

County associated with Five Mile Creek and adjacent wetlands that are not identified for future development.

1.5 Permit Authority: Section 404 of the Clean Water Act (33 USC 1344).

2.0 Scope of review for National Environmental Policy Act (i.e. scope of analysis), Section 7 of the Endangered Species Act (i.e. action area), and Section 106 of the National Historic Preservation Act (i.e. permit area)

2.1 Determination of scope of analysis for National Environmental Policy Act (NEPA):

The scope of analysis includes the specific activity requiring a Department of the Army permit. Other portions of the entire project are included because the Corps does have sufficient control and responsibility to warrant federal review.

Final description of scope of analysis: Pursuant to 33 C.F.R. § 325, Appendix B (7)(b)(2), the district engineer is considered to have control and responsibility for portions of the project beyond the limits of Corps' jurisdiction where the Federal involvement is sufficient to turn an essentially private action into a Federal action. These are cases where the environmental consequences of the larger project are essentially products of the Corps permit action. The following four factors are typically considered in determining whether sufficient "control and responsibility" exists. Under each of the four factors, a discussion has been included to explain how these factors were considered in determining whether sufficient "control and responsibility" exists over the subject project.

1. Whether or not the regulated activity comprises "merely a link" in a corridor type project.

For regulated activities that comprise "merely a link" in a linear transportation project, the Corps' area of responsibility is typically limited to the specific activity requiring a DA permit, and any other portion of the project that is within the control or responsibility of the Corps (or other Federal agencies). The regulated activity is the discharge of dredged and fill material into waters of the U.S. There are many discharges of fill material into wetlands throughout the 8.65 mile roadway, however the discharges are not merely a link between separate and distant discharges. The individual discharges are related based upon the location, configuration, and design of the proposed project. For example, at the western terminus of the proposed project where RRE must align with an existing intersection at Ridge Road and Decubellis / Moon Lake Road (County Road 587), Wetlands 1 and 3 were avoided by the aligning the initial 2,000 feet of the roadway to south of these wetlands and by utilizing vertical wall construction in

lieu of a sloped embankment. However, in order to align with the existing intersection and avoid Wetlands 1 and 3, the unavoidable discharge of fill material into Wetland 2 was necessary to have sufficient area to construct this initial 2,000 feet of roadway. Overall, the applicant indicated the project would be constructed in phases, but the individual segments and individual discharges are not independent of each other. The Corps advertised one project under the Public SAJ-2011-00551 (SP-TSH) on 25 September 2018.

2. Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity.

Factors influencing the limits of the NEPA scope of analysis include upland areas outside the Corps' jurisdiction that affect the location and configuration of the regulated activity and location of upland work in the immediate vicinity dictated by the regulated activity. This proposal would extend the existing Ridge Road eastward to the existing Land O'Lakes Boulevard. The 8.65 mile roadway would intersect the existing Suncoast Parkway at an interchange that was built into the roadway to accommodate the Ridge Road Extension project. Other existing upland facilities, such as transmission lines, railroad crossings, historical sites, and commercial and residential properties are in the immediate vicinity of the proposed project. A specific example of upland resources affecting the regulated activity is the relocation of Flood Compensation Area A-5 to avoid potential effects to a known historical site. The location of A-5 was modified specifically to avoid potential historical resources associated with site PA00668, which are protected under the National Historical Preservation Act (NHPA). These upland facilities and attendant features are integrally related to and affect the location and configuration of the regulated activity.

3. The extent to which the entire project will be within the Corps jurisdiction.

The majority of the proposed project area is located in uplands that do not contain waters of the U.S. Activities that would directly affect waters of the U.S. by the permanent or temporary discharge of dredged or fill material would occur in 42.40 acres of wetlands. In total, approximately 13.7% (42.40 acres/309 acres) of the proposed project would directly impact waters of the U.S. by the discharge of dredged or fill material.

4. The extent of cumulative Federal control and responsibility.

The Corps' area of responsibility for purposes of our NEPA scope of analysis normally includes upland areas in the immediate vicinity of the waters of the U.S. where the regulated activity occurs. The extent of the Corps' area of

responsibility may include additional areas of non-jurisdictional waters or uplands where the district determines there is adequate Federal control and responsibility to justify including those areas within the Corps' NEPA scope of analysis. The extent of cumulative Federal control and responsibility can include other Federal laws and other Federal agencies.

The proposed discharges of dredged or fill material into waters of the U.S. are essential to the construction of the proposed project. The proposed project could not be undertaken without Department of the Army authorization.

In determining whether sufficient cumulative involvement exists to expand the Corps' NEPA scope of analysis, the Corps considers whether other Federal agencies are required to take Federal action under environmental laws including, but not limited to, the ESA and NHPA. The Corps determined that the proposed project would be located within the known range of species protected under the ESA. Those species are within the purview of the USFWS and the Corps is required to undergo consultation with USFWS pursuant to Section 7 of the ESA. Please refer to section 10.1 of this document for information pertaining to the ESA. Additionally, multiple sites protected under the NHPA are located in close proximity to the proposed project. The Corps completed consultation with the SHPO and the Seminole Tribe of Florida Tribal Historic Preservation Office pursuant to Section 106 of the NHPA and government-to-government consultation requirements. Please refer to section 10.3 of this document for information pertaining to the NHPA. These two specific examples demonstrate that there is additional Federal involvement and control in the proposed undertaking. The proposed project requires consideration pursuant to both the ESA and NHPA, as well as other laws, such as the Fish & Wildlife Coordination Act, and warrants expanding the scope of review to the entire project.

The Corps also evaluated whether there is direct Federal funding of the proposed project. The applicant has indicated that no federal funds would be used for the proposed project.

Finally, the Corps evaluated the geographic distribution of waters of the U.S. throughout the entire 8.65 mile roadway, to help determine whether the Corps' NEPA scope of analysis should be expanded beyond the immediate vicinity of waters of the U.S. that would be directly impacted by the project. There are roughly 50 separate impact areas occurring as overall average of one impact per 900 feet of roadway, although many of the impacts would occur within the same wetland at different locations and be closer together than 900 feet. Additionally, the applicant provided an assessment of indirect wetland impacts that would occur to wetlands within 300 feet from the limits of construction. The indirect impacts on wetlands were evaluated and quantified with the UMAM and include

effects on the water environment, fish and wildlife habitat and the vegetative community of wetlands. Based on this analysis, the applicant identified indirect effects to 354.36 acres of wetlands that would be expected to occur throughout the length of the roadway if the project were constructed.

In order to further evaluate the NEPA scope, the Corps considered the direct and indirect effects of the no action alternative. A direct effect is caused by the activity needing the Corps' permit authorization, which occurs at the same time and place. Indirect effects are those caused by the activity needing the Corps permit authorization, but which take place later in time or farther removed in distance. The no action alternative considers the impacts that would occur if the applicant avoids all work within waters of the U.S. to construct the proposed project or if a permit is denied for the proposed work. The impacts considered under the no action alternative serve to inform the Corps decision on the baseline impact and assist in the determination of impacts that are attributable to the Corps action. When analyzing the indirect impacts, the strength of the relationship between the indirect impacts and the regulated portion of the proposed project (i.e. whether or not the impacts are likely to occur even if the permit is not issued) is considered. The applicant described the no action alternative as one where the RRE would not be built. In the event the RRE is not constructed, the applicant expects the developable areas to be developed without the RRE. West of the Suncoast Parkway the applicant does not expect substantial development because the majority of the land was acquired for conservation. East of the Suncoast Parkway, the majority of the surrounding areas are privately held for the purposes of development. The applicant described an area east of the Suncoast Parkway, south of SR 52, west of US 41, and north of Tower Road as a 15,874-acre area of potential future development. The applicant indicated that the RRE will increase the accessibility of the land on either side of the RRE and will increase the speed at which these areas will be developed. However, the actual increased rate of development is not something the applicant could predict. The development of the area is a land use matter regulated by Pasco County and the County Comprehensive Plan, where proposed and approved Master Planned Unit Developments already exist.

The proposed discharges of dredged or fill material into waters of the U.S. are essential to the construction of the proposed project, and the roadway project could not occur without the discharges of dredged or fill material into waters of the U.S. The Corps has determined that upland areas outside of the Corps jurisdiction affect the location and configuration of the regulated activity, and the location of upland work in the immediate vicinity is dictated by the regulated activity. The indirect impacts to wetlands within 300 feet from the proposed project's limits of construction and area of direct wetland impact were quantified.

In view of the above, the extent of cumulative Federal control and responsibility for the proposed RRE project is sufficient to include within the NEPA scope of analysis the upland areas in the immediate vicinity of the waters of the U.S. where the regulated activity would occur and those areas within 300 feet of the limits of construction.

2.2 Determination of the “Corps action area” for Section 7 of the Endangered Species Act (ESA):

The action area includes all areas within and outside of the project boundary that may be directly or indirectly affected by the development including the existing Ridge Road terminus, Serenova Tract of the Starkey Wilderness Area, Suncoast Parkway, wetlands, streams, and all the other areas affected by the proposed action.

2.3 Determination of permit area for Section 106 of the National Historic Preservation Act (NHPA):

The permit area includes those areas comprising waters of the United States that will be directly affected by the proposed work or structures , as well as activities outside of waters of the U.S. because all three tests identified in 33 CFR 325, Appendix C(g)(1) have been met.

Final description of the permit area: The permit area includes all waters of the United States and uplands within the vicinity of the proposed road, inclusive of stormwater management areas and other appurtenant features. Proposed work outside waters of the United States: 1) would not occur without authorization of work within waters of the U.S., 2) would be integrally related to the proposed work within waters of the U.S., and 3) would be directly associated with work proposed within waters of the U.S. The proposed road and appurtenant features, such as stormwater management areas, drainage conveyances, and fencing, are all part of a single and complete project. Features such as stormwater management areas, located within uplands, are required by the State and help satisfy the requirements of Section 401 of the Clean Water Act. Similarly, features such as fencing and wildlife crossings, located both in wetlands and uplands, have been incorporated into the project design through coordination with the U.S. Fish & Wildlife Service and would help to satisfy the requirements of the Endangered Species Act, as well as the Fish & Wildlife Coordination Act. As multiple alignments were considered in the applicants’ Alternatives Analysis, known historical sites and/or resources outside the limits of the applicants’ preferred alternative were also considered as evidenced by inclusion of the number of sites that would be potentially affected by each of the alternatives evaluated.

3.0 Purpose and Need

- 3.1 Purpose and need for the project as provided by the applicant and reviewed by the Corps:
- 3.2 Basic project purpose, as determined by the Corps: The basic purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether the applicant's project is water dependent. As described by the 2018 PN, the basic project purpose is to construct a roadway.
- 3.3 Water dependency determination: The activity does not require access or proximity to or siting within a special aquatic site to fulfill its basic purpose. Therefore, the activity is not water dependent.
- 3.4 Overall project purpose, as determined by the Corps: The overall project purpose serves as the basis for the NEPA and 404(b)(1) alternatives analysis and is determined by further defining the basic purpose in a manner that more specifically describes the applicant's needs for the project and allows a reasonable range of alternatives to be analyzed. The overall project purpose is to improve east-west roadway capacity and enhance overall mobility within the area bound by SR-52 to the north, SR-54 to the south, U.S. Highway 41 to the east, and Moon Lake Road, DeCubellis Road, Starkey Boulevard to the west, and to provide additional roadway capacity and improved routing away from coastal hazard areas and improve evacuation times in the event of a hurricane, or other major weather-related occurrence, in accordance with State of Florida requirements and the County's current Comprehensive Plan.

4.0 Coordination

- 4.1 The results of coordinating the proposal on Public Notice (PN) are identified below, including a summary of issues raised, any applicant response and the Corps' evaluation of concerns.

Were comments received in response to the PN? Yes

Were comments forwarded to the applicant for response? Yes

Was a public meeting and/or hearing requested and, if so, was one conducted? Yes, a public meeting/hearing was requested but was not held. Upon a thorough review of the submitted comments, the Corps found that the substantial issues raised have been considered by the Corps in its evaluation of the application. All relevant information is being addressed in this document and will be posted on the Corps' website. Additional relevant information has also been made available on Pasco County's website.

Comments received in response to public notice: Refer to the attached comment matrix (Attachment 1) for a complete list of commenters and general topics raised. See below for a summary of comments, the applicants' response and the Corps' evaluation.

Comments, Applicant's Response and Corps Evaluation: Refer to the attached comment matrix (Attachment 1) for a complete list of commenters and general topics raised. See below for a summary of comments, the applicants' response and the Corps' evaluation.

1. Conservation

- a. Comments related to information to consider for site visits and maps of the Serenova Tract to assist in site visits.
 - i. *Applicant Response: The Serenova Tract is part of the Starkey Preserve and is owned and managed by SWFWMD for passive, nature based outdoor recreation activities. Access to the property is in accordance with SWFWMD guidelines. Maps and information regarding access to the site is available on SWFWMD's website. :*
<https://www.swfwmd.state.fl.us/recreation/serenova-tract>
The commenter's letter appears to be informational only, and does not actually include a comment.
 - ii. **Corps Evaluation:** Information was provided by commenters prior to Corps site visits of the project area and of the Serenova Tract. Relevant information included maps of the area, general descriptions of the Serenova Tract and the Starkey Wilderness Preserve from SWFWMD and FTE publications, observations of flooding and current conditions of the habitat, information to consider in the evaluation of alternatives, and wellfield pumping volumes in order to provide the Corps with items to consider during the site visit. The Corps completed several site visits (22 July 2011, 21 September 2011, 11 May 2012, 25 September 2015, 29 September 2015, and 16 November 2016), with participants that included the applicant and their consultants, other relevant Pasco County staff, USEPA, USFWS, SWFWMD, FWC, and Citizens for Sanity.
- b. Comments advocated for the protection of the Serenova Tract because it was established as mitigation for the Suncoast Parkway and its role in natural lands preservation and conservation. Comments stated that construction and use of the proposed project through the Serenova Tract would negate or diminish the value of the mitigation required as part of the Suncoast Parkway and the natural lands preservation. Comments were also concerned that the proposed project would impact the future viability of the Serenova Tract to be a conservation area with high quality habitat and wildlife. Comments suggested that the Suncoast Parkway mitigation in the Serenova Tract was intended to remain intact and unbroken and not bisected by future development and road construction.

Comments said that bisecting the Serenova Tract would negatively impact wildlife, the hydraulic movement of water, and ecosystems of the Starkey Wilderness Preserve. Comments stated concern with the proposed project impacting the Pithlachascotee River, Anclote River, and Five Mile Creek watersheds and the important role these watersheds have for conservation. It was stated that the acquisition and perpetual conservation of the Serenova Tract by the Florida Department of Transportation (FDOT) was to serve as compensatory mitigation for the construction of the Suncoast Parkway as required by a Department of the Army permit (permit no. 1996-04305). The comments stated the Corps permit decision for the Suncoast Parkway was a mitigated finding of no significant impact that does not permit the construction of the proposed project through Serenova Tract. The comments stated the permit no. 1996-04305 makes no mention of any road/highway going through the Serenova Tract identified for compensatory mitigation. The Corps' decision document for the Suncoast Parkway stated, "The ARR [Anclote River Ranch] and the ST [Serenova Tract] together with the Starkey Wilderness Park, that is already in public ownership, would provide a continuous wildlife corridor of approximately 18,000 acres or 28 square miles...The applicant would convey both parcels to a state agency (preferably the Southwest Florida Water Management District (SWFWMD)) before the start of construction of the road. The mitigation areas would be managed by the Florida Game and Fresh Water Fish Commission (FGC)." In another section of the decision document the mitigation area was described as an area that totals over 10,000 acres (3,635 acres Anclote River Ranch and 6,533 acres Serenova Tract). In the public interest review section of the decision document the public interest factor "Conservation" stated, "The mitigation for the project would add to the existing public ownership in the immediate area of the roadway in Pasco County. The wildlife corridor would be some 29 square miles covering 18,000 acres. The Serenova DRI [Development of Regional Impact] area of some 7,000 acres was slated for development. The mitigation would ensure that this area would never be developed." The Corps permit contained two special conditions relevant to the compensatory mitigation for the Suncoast Parkway that stated, "6. The permittee shall convey the Serenova DRI and Starkey tract (Anclote River Ranch) to the SWFWMD. Proof of conveyance of these two parcels shall be provided to the Corps of Engineers and the [US]FWS [United States Fish and Wildlife Service] prior to start of construction of any portion of the road," and "7. Details for the management of the property by the SWFWMD will be provided with the proof of conveyance of these properties." The comments suggested that the plain language of the Department of the Army permit issued for the Suncoast Parkway and the required compensatory mitigation of the permit make no mention of the proposed project, that special conditions required conveyance of the preserve properties in their entirety, and that a transfer of the ROW to the applicant constitutes a violation of the 1996-04305 permit and requirements to

satisfy compensatory mitigation. The comments stated granting any permit for the proposed project would be a violation of 32 CFR 651.

- i. Applicant Response: *Department of the Army permit number 1996-04305, dated December 15, 1997 specifically provides for the transfer of ROW for the Ridge Road Extension. Specific condition 1 on page 5 of 54 in permit 04305 states "all of the SWFWMD permit specific conditions are hereby incorporated into this Department of the Army (DA) permit. On page 53 of 54 of permit 04305 Specific Condition 5 from the SWFWMD permit for Suncoast Mitigation, states "The attached Memoranda of Agreement between the District and Pasco County and the District and FDOT, or the attached principles of transfer approved during the February 26, 1997, Governing Board meeting, will govern the transfer of the Serenova and Anclote River Ranch Tracts to the District and the transfer of the Ridge Road right of way." Thus the transfer of ROW for the Ridge Road project is specifically addressed in the DA permit and such transfer would not be a violation of the DA permit. The agreements referenced above in the SWFWMD specific conditions were provided to the Corps as part of the 2011 permit application. Additionally, the conservation easement for Serenova granted by FDOT to the Board of Trustees of the Internal Improvement Fund, State of Florida, specifically states (Articles 3.b and 12) that the easement does not preclude the construction of the proposed extension of Ridge Road through the Serenova property. The form of the conservation easement was defined within the Stipulation of Settlement entered into by Florida Audubon Society, SWFWMD, and FDOT dated November 14, 1997. The Stipulation of Settlement was also provided to the Corps as part of the 2011 permit application.*
- ii. Corps Evaluation: The Serenova Tract is an approximately 6,500 parcel conveyed to the SWFWMD to mitigate for the impacts of construction of the Suncoast Parkway. During the establishment of the Serenova Tract as mitigation for the Suncoast Parkway, FDOT stated a portion of the Serenova Tract was reserved for the RRE.

The applicant provided information regarding the Serenova Tract and its relationship to the Suncoast Parkway mitigation and the RRE within the May 2011 application. The applicant described that in 1989, the Project Development and Environmental Study for the Suncoast Parkway began to discuss the Suncoast Parkway, which included an RRE interchange. The applicant stated that a Partnering Committee was formed where governmental agencies, including the FDOT (The FDOT Turnpike District later became FTE), SWFWMD, FWC, USFWS, and the Corps, met to review and discuss the Suncoast Parkway and relevant matters related to environmental permitting. Through these partnering committee meetings, the applicant indicated that all the parties were aware that the Serenova

Tract was discussed as mitigation for the Suncoast Parkway and that a portion of the Serenova Tract could be conveyed to the county for the RRE.

The applicant stated that on 4 March 1997, Pasco County entered into an agreement with the SWFWMD that reserved the ROW and provided for the conveyance of the land necessary to construct the RRE through the Serenova Tract, and the same year, Pasco County and FDOT entered into an agreement to construct the RRE interchange on the Suncoast Parkway. A Stipulation of Settlement with the Audubon Society executed in November 1997, required that the RRE through the Serenova Tract be a limited access roadway with fencing, and approved crossings for wildlife, management access, and passive recreation. The agreement identified that FDOT had purchased or acquired for environmental preservation and mitigation, the tract of land identified as the Serenova Tract and recognized the county's intent to construct the RRE through this portion of land. The agreement would convey a portion of the Serenova Tract necessary for the construction of RRE, including the interchange segment, with the exact limits of the RRE ROW determined only after the completion of the design and permitting.

The Corps Environmental Assessment and Statement of Findings (EASOF) completed for the Suncoast Parkway application 1996-04305 for Sections 2B, 3, 4, for portions of the Suncoast Parkway project and for the entirety of the mitigation for the Suncoast Parkway was completed on 6 January 1997. The EASOF was completed after review of the application, and the Corps was prepared to issue the permit, however, the state 401 WQC had not been issued and by law the DA permit cannot be issued until the state issues or waives the 401 WQC. The EASOF stated at paragraph 2-a: "The Florida Department of Transportation (FDOT), in order to expedite processing of the permits necessary for this work and to provide an environmentally sound project, began a partnering process with all the involved agencies in August of 1993. In addition to the Corps of Engineers, participating agencies included the U.S. Fish and Wildlife Service (FWS), the Environmental Protection Agency (EPA), the Florida Game and Fresh Water Fish Commission (FGC), the Florida Department of Environmental Protection (FDEP), representatives of the involved counties, the Southwest Florida Water Management District (SWFWMD), the environmental consultant for FDOT, the construction contractors for the various segments, and the FDOT's Turnpike District. Owners of various mitigation tracts were sometimes invited to participate. Meetings were held at least quarterly and all aspects of the project were addressed to include mitigation, roadway alignments, avoidance and minimization of wetland impacts, and avoidance and minimization of upland and listed

wildlife species impacts...The application to the Corps of Engineers would be administered through the use of one permit application number while the SWFWMD would assign separate numbers to each segment mainly because of surface and storm water concerns. Each of these applications to the SWFWMD would be considered applications for water quality certification (WQC) and a Department of the Army (DA) permit or modifications to the DA could not be issued without WQC for each segment. The DA permit, if issued, would be for the initial segment(s) with subsequent segments(s) being treated as modifications to the original DA permit." The EASOF identified at paragraph 2-e the mitigation for the Suncoast Parkway included, "...the preservation of the 3,635-acre Anclote River Ranch (AAR) and the preservation of the 6,533-acre Serenova Tract (ST)...The ARR and the ST together with the Starkey Wilderness Park, that is already in public ownership, would provide a continuous wildlife corridor of approximately 18,000 acres or 28 square miles."

The Corps issued a Department of the Army permit (1996-04305) for Sections 2B, 3, 4, for portions of the Suncoast Parkway project and for the entirety of the mitigation for the Suncoast Parkway on 15 December 1997 after the 401 WQC was issued by the state in November 1997. As a condition of the permit, Special Condition 1 stated, "The attached Special Conditions of Water Quality Certification/Permit number 4315560.00 (Section 2B), 4315753.00 (Section 3), and 4315646.00 (Section 4) issued on November 18, 1997, address the conditions that the District Engineer (DE) has determined are necessary to satisfy legal and public interest requirements for issuance of this permit. Therefore, all of the SWFWMD permit specific conditions are incorporated into this Department of the Army (DA) permit." The SWFWMD permits referenced in Special Condition 1 stated, "Mitigation for wetland impacts will be authorized within a subsequent wetland mitigation Environmental Resource Permit which will offset primary, secondary, and cumulative impacts for the entire FDOT – Suncoast Parkway, Project 1. Special Condition No. 12 has been attached to this permit which requires the authorization of acceptable wetland mitigation prior to any construction." The SWFWMD approved the mitigation plan for the Suncoast Parkway by ERP permit number 4315724.00 on 18 November 1997 with the project name, "FDOT – Suncoast Parkway Project 1, Mitigation (SPN 97869-1393; WPI 7150055)," prior to Corps issuance of the DA permit, and included the ERP approval with the Water Quality Certification for permit numbers 4315560.00 (Section 2B), 4315753.00 (Section 3), and 4315646.00 (Section 4). Permit number 4315724.00 Specific Condition 5 stated, "The attached Memoranda of Agreement between the District and Pasco County and the District and the FDOT, or the attached principles of

transfer approved during the February 26, 1997, Governing Board meeting, will govern the transfer of the Serenova and Anclote River Ranch Tracts to the District and the transfer of the Ridge Road ROW.”

Following permit issuance, on 29 April 1998 the applicant stated the FDOT and SWFWMD entered into an agreement to provide for the transfer of preservation/mitigation property from FDOT to SWFWMD. Pursuant to the agreement and Special Condition 7 of the 15 December 1997 permit that states, “Details for the management of the property by the SWFWMD will be provided with the proof of conveyance of these properties,” the SWFWMD submitted a management plan to the Corps in August 1998 for the use and management of the Serenova Tract. The conservation easement was executed in October 2000, transferring ownership and the conservation and mitigation requirements of the tract from FDOT to SWFWMD. The management plan and conservation easement specifically identify the potential for the construction of the RRE through the Serenova Tract. The conservation easement states, “b. Ridge Road Extension. This Conservation Easement shall not operate to preclude the construction of the proposed extension of Ridge Road through the Serenova property, as contemplated by the pre-existing agreements between Pasco County and the District, and Pasco County and the Grantor, provided that all wetland mitigation involving wetland creation associated with Ridge Road Extension and Ridge Road interchange construction is performed off-site, and not on the Property controlled by this Conservation Easement, and provided that: (1) The ROW through the Serenova property shall be a fenced, limited access ROW, with access to the Serenova property limited to management purposes; and (2) The construction of Ridge Road shall include wildlife crossings to the specifications of the Fish and Wildlife Conservation Commission” and, “12. Agreement between SWFWMD and Pasco County Relating to Ridge Road. Nothing in this Conservation Easement shall limit, modify, or affect in any way, the operation and effect of that certain "Agreement Between the Southwest Florida Water Management District and Pasco County Relating to Ridge Road," which was executed by the Board of County Commissioners of Pasco County, Florida, on March 4, 1997, and by the Southwest Florida Water Management District on February 27, 1997; or the Memorandum of Agreement dated March 11, 1997, between the Florida Department of Transportation (Grantor) and Pasco County, Florida, concerning the proposed extension of Ridge Road, which was executed by the Secretary of the Florida Department of Transportation on March 11, 1997, and by the Board of County Commissioners of Pasco County, Florida on March 4, 1997. A copy of each of the aforementioned documents is available for inspection at the

Southwest Florida Water Management District (Headquarters), 2379
Broad Street, Brooksville, FL 34609-6899.”

In addition to the partnering process for the review and evaluation of the Suncoast Parkway application, Pasco County engaged the Corps in pre-application coordination regarding a potential roadway extension from Ridge Road to the Suncoast parkway and from the Suncoast Parkway to US 41 prior to the Suncoast Parkway DA permit issuance and the approval of the mitigation. For example, Pasco County submitted a wetland assessment and habitat evaluation report to the Corps with several potential alignments for the proposed Ridge Road Extension on 28 July 1997. The proposed alignments of the Ridge Road Extension at that time bisected the future Serenova Tract. In September 1997, Pasco County submitted a Final Route Study of Ridge Road Extension that contained their preferred alignment for the roadway that would go through the Serenova Tract. The Corps responded by letter dated 17 September 1997 and stated that based on recent meetings to discuss the alignments of the proposed Ridge Road Extension, the Corps identified items to complete a permit application and initiate permit processing for the roadway.

The Corps determined that the mitigation plan for the DA permit (1996-04305) for the Suncoast Parkway dated 15 December 1997 accepted the mitigation plan as described in the SWFWMD permit number 4315724.00. The mitigation required for the entire Suncoast Parkway, Project 1 considered the fact that the RRE could be constructed through the Serenova Tract. Subsequent memoranda and the executed conservation easement for the property similarly did not preclude the construction of the RRE through the Serenova Tract, provided certain conditions were met.

The applicant has avoided and minimized wetland and upland impacts within the Serenova Tract. The applicant proposed to construct fourteen bridges at seven locations, reduced the median widths of the roadway and added vertical walls within the Serenova Tract to minimize the permanent discharge of fill material into wetlands. The addition of bridges within the Serenova Tract and the complete spanning of the Pithlachascotee River minimized potential hydrologic impacts to aquatic resources within the Serenova Tract. Wildlife crossings and fencing were added within the Serenova Tract after consultation with the USFWS and FWC to minimize impacts to wildlife.

As indicated above, the SWFWMD is responsible for the use and management of the Serenova Tract. Since 1998, the SWFWMD has

prepared a plan to ensure the property meets the required mitigation requirements and has recognized the RRE could bisect the Serenova Tract. The SWFWMD and the applicant recognize the management of native habitats in the Serenova Tract require fire manage for ecosystem health and wildlife habitat and that district and Pasco County staff would work together to minimize habitat disturbance and impacts to the district properties. The SWFWMD's 2005 land use and management plan for the Starkey Wilderness Preserve, that include the Serenova Tract, states that, "Major management needs and actions include the continuation of a prescribed burn program, scrub restoration, and management and monitoring of resident wildlife to maintain existing biodiversity, and control of several invasive, exotic (non-native) plant species," and that the habitat management actions of the district need to account for the "Reduced effects of fire suppression within the Serenova unit, thus creating a mosaic of habitat conditions that differ as a result of fire frequency and soil moisture."

The applicant worked closely with the SWFWMD to address effective management of the Serenova Tract for vehicular access and prescribed burns. Within the May 2011 application, the applicant provided correspondence from the SWFWMD dated 25 June 2009 that indicated the RRE would not impede the district's ability to access areas for prescribed burns, but did caution that the RRE would reduce the number of safe burning windows and increase the level of difficulty and cost of prescribed burning. The applicant indicated permanent roadway signage and "Amber Alert" signs, or Intelligent Transportation System (ITS), are planned along RRE to aid in providing information to residents during evacuations and other special conditions, and may be used to alert motorist of controlled burns.

The SWFWMD is the landowner of the Serenova Tract and is responsible for the use and management of the Serenova Tract. The SWFWMD is also responsible to evaluate and issue the ERP that constitutes certification of compliance with state water quality standards under Section 401 of the CWA. As such, the SWFWMD issued the Section 401 WQC for RRE on 24 July 2019.

2. Economics

- a. Comments related to the proposed project providing jobs or boosting the economy in general. Comments advocated for the proposed project because it would lead to more investment and continued growth for the area. Comments suggested the construction of the proposed project would have an economic benefit to the construction sector and the creation of jobs. Comments said the proposed project would increase jobs, but only in the short-term. Comments

suggested the proposed project was needed now and delaying the construction would increase the project's costs.

- i. Applicant Response: *Based on a comprehensive analysis the Office of Economic Growth did pertaining to the Project Arthur/Moffitt Cancer Center proposal. The economic benefits the Ridge Road Extension project includes: Major economic benefits and job creation that will benefit the entire state of Florida. The 2018 Florida GDP just topped \$1 trillion for perspective. The proposed Corporate Park, at 24 million square feet of development, would directly support an estimated 49,808 jobs (full time/part time seasonal average), which is roughly 2 employees per 1,000 square feet. The average annual wage of all jobs supported by the Corporate Park was calculated at \$67,354.19, or about 180% of the current Enterprise Florida average annual wage for Pasco County incentives. The Pasco County Job Creation Incentive (JCI) would pay \$4,000 per job at this wage, and \$5,000 per job when the wages meet or exceed the 200% threshold. To incentivize all 49,808 jobs according to the requested \$5,000 per job would cost \$249,040,000 from the general fund. Using an Implan Industry Change model, the fully developed Corporate Park is estimated to generate an annual **Labor Income** of \$3,390,255,051, which accounts for all forms of employment income, including wages and benefits, and proprietor income. Its \$3,792,826,351 **Value Added** represents the annual total of all employee compensation, taxes on production and imports (minus subsidies) and gross operating surplus. **Value Added** is a measure of contribution to the **Gross County Product (GCP)**. The annual Corporate Park **Direct Output** is estimated at \$7,047,501,551, which represents the annual value of production. Future Project Arthur residential development directly aligns to the full-time job creation at the new Moffitt campus.*
 - ii. Corps Evaluation: The applicant and many commenters indicated that the construction of the overall project has the potential for short-term positive job creation during construction, increased revenue for contractors, and increased revenue from companies that sell construction materials. The applicant expects construction would begin soon after a permit is issued and occur over a five year period. Construction of the RRE would have positive effects of job creation during the construction of the roadway. Based on the applicant's description above, and due to an expected increase in demand for residential and commercial development in the surrounding area, the job market related to these construction sectors would be positive in the longer term as well.
- b. Comments supported the proposed project because of the economic benefit from increased residential and commercial development in the area. Comments stated the proposed project would be beneficial since it would raise the property value of nearby communities. Comments were concerned that the proposed project would decrease property values.

- i. Applicant Response: The construction of the Ridge Road Extension would provide substantial enhancement to roadway capacity and connectivity which would result in reduced commuting times to Tampa from existing neighborhoods both east of and west of the project. Travel time estimates generated by Google Maps indicate that commute time to Tampa International Airport from either Moon Lake or from US 41 would be reduced by between 20% and 31% compared to current conditions. It is anticipated that the reduced travel times would result in increased demand for properties located near Ridge Road Extension and a corresponding increase in value for existing homes. Analysis of future conditions which assumed that Ridge Road was not constructed forecasted that traffic congestion would continue to increase on the existing roadways and would reach levels of service which were far outside what is considered acceptable by the County's Comprehensive Plan and Land Development Code. Should these conditions be realized it is likely that commuting from areas served by Ridge Road Extension would become less feasible for current and prospective residents and would likely result in a decrease in demand for these properties and a corresponding decrease in the value of existing homes.*
 - ii. Corps Evaluation: The applicant and many commenters expressed support for the RRE due to an economic benefit of increased residential and commercial development. The applicant indicated the RRE would improve commuting times, improve safety with faster hurricane evacuation times for the public, and create better public access to educational and institutional services. The applicant suggested that an increase in access to services and an improvement in mobility and safety in the region would increase the value for current residents and increase the demand for prospective residents. Although the Corps does not believe that development of the adjacent areas would be dependent upon construction of the RRE, the Corps does concur that construction of the RRE would facilitate the rate of development within the area. As such, the Corps believes that construction of the project would have a beneficial effect on economic development in the vicinity of the project.*
 - c. Comments stated that the expense of the project was not in the public's interest. Comments suggested that more funding for schools, increases in public transportation, additional emergency services, improvements to existing roads, and adding other county provided services should be provided before county tax money is spent on the proposed project. Comments were concerned that public tax dollars were proposed for a project impacting public conservation area and affecting the quality of life of residents. Comments suggested that development of natural areas for the sake of economic gain often result in unsustainable economic growth and detrimental impacts to the environment in the long term.*
 - i. Applicant Response: The funds which are budgeted for the Ridge Road Extension Project are generated by the County's Transportation Impact*

Fee / Mobility Fee program, Pasco County Ordinance No. 18-48. These fees are not tax dollars collected from residents but are fees collected from developments which generate transportation impacts. The County is restricted from using these fees for any use other than providing transportation improvements. Various modes of transportation (Pedestrian and Bicycle, Transit, Roadway) each receive a specified portion of the fee collected. Additionally, the County is divided into zones and any fees paid for development in a given zone are to be used within that same zone. The budgeted funds for the Ridge Road Extension project have been paid to the County as a result of past development in the Transportation Impact Fee / Mobility Fee Zones 1 and 2 and committed for the specific purpose of providing roadway improvements. These funds could not be used by the County for many of the items identified which have their own unique funding sources, including:

- I. Schools
- II. Public Transportation
- III. Emergency Services
- IV. Roadway maintenance

Regarding improvements to other existing roads, the applicant has prepared an alternatives analysis based on Corps defined alternatives which assessed various other roadway improvement projects and compared the costs and benefits of each to a “no build” scenario. Some of the alternatives that were analyzed such as widening SR 52 and/or SR 54 beyond six lanes may result in less damage to the environment, but the 2015 Alternatives Analysis concluded they were not practicable. After carefully reviewing the 2015 Alternatives Analysis the Corps preliminarily determined that the applicant’s proposed alternative Mod 7 was the Least Environmentally Damaging Practicable Alternative.

- ii. Corps Evaluation: Corps regulations at 33 CFR 320.4(q) states that when private enterprise makes application for a permit, it will generally be assumed that appropriate economic evaluations have been completed, the proposal is economically viable, and is needed in the market place. While the applicant is not a private enterprise, the applicant has indicated the proposed project is needed to improve east-west roadway capacity, enhance overall mobility in the area, and provide additional roadway capacity and improved routing away from coastal hazard areas and improve hurricane evacuation times in the event of a hurricane or other weather related event. The applicant stated the RRE is included on the Long Range Transportation Plan for Pasco County developed by the Pasco County Metropolitan Planning Organization. The applicant has determined that the impacts requested for authorization would be completed using funds that are specific to roadway improvement projects and are not capable of being used for other county funded services. The Corps notes that the applicants are both government agencies and

generally serve their constituents based on their respective rules and regulations. The Corps notes that there is both opposition and support for the proposed project within Pasco County and that some argue that the project is needed to improve quality of life. Some commenters noted that the project would affect an area of public conservation and that development of natural areas for the sake of economic gain often result in unsustainable economic growth and detrimental impacts to the environment in the long term. The RRE was envisioned prior to the Serenova Tract being placed in conservation. As such, potential construction of the RRE was considered prior to acceptance of the Serenova Tract as compensatory mitigation for impacts associated with the Suncoast Parkway. Both the conservation documents and the management plan for the Serenova Tract allow for construction of the proposed RRE. It is not clear to the Corps that either the FTE or Pasco County would be constructing the RRE for economic gain.

3. General Environmental Concerns

- a. Comments related to the designation of wetlands within the proposed project as Aquatic Resources of National Importance (ARNI), the role of the ARNI in the permit process, and the requirements for mitigation related to ARNI. By letter dated 27 January 2012 the US Environmental Protection Agency (USEPA or EPA) provided a comment letter for the proposed project advertised by the 2011 public notice. The USEPA stated they consider the “wetlands of the Starkey Wilderness Preserve and the upper Pithlachascotee River and Anclote River watersheds to be Aquatic Resources of National Importance (ARNI), based upon their existing and intact wetland functions, including wildlife habitat, groundwater recharge and water quality enhancements for the nearby downstream estuaries.” The USEPA provided a letter dated 21 February 2012 that stated the “EPA has determined that the project, as currently proposed, does not comply with the Guidelines and will have substantial and unacceptable adverse impacts on an ARNI. Therefore, we recommend denial of the project, as currently proposed. This letter follows the field-level procedures outlined in the August 1992 Memorandum of Agreement between the EPA and the Department of the Army, Part IV, paragraph 3(b) regarding Section 404(q) of the CWA.” By letter dated 29 November 2018 in response to the proposed project described by the 2018 public notice, the USEPA stated, “Based on our review of the available information, including substantial revisions to the project as reflected in the public notice dated September 28, 2018, the EPA no longer believes the project would have a substantial and unacceptable impact on ARNI. Therefore, we hereby remove the project from potential elevation under the 1992 CWA Section 404(q) MOA [Memorandum of Agreement].” The US Fish and Wildlife Service (USFWS) recommended measures to resolves outstanding issues regarding the ARNI designation by letter dated 28 April 2009. USFWS recommendations included 1. twin 120-foot wildlife underpass bridges at Station 214+00; 2. Eliminate Pond No. 10 and the single box culvert at Station 203+00; 3. Provide a 50-foot minimum

buffer between the Pithlachascotee River wetland jurisdictional limits and Pond No. 5A; 4. Provide a 50-foot minimum buffer between the Pithlachascotee River wetland jurisdictional limits and Pond No. 6; 5. Install a 10-foot high fence with ¼ inch metal mesh with 3 feet above ground and 1 foot buried, along the entire Serenova Tract; and, 6. Incorporate grating to allow light in all single box culverts. Other public comments described ARNI as important aquatic resources that should not be impacted for the proposed project. Comments stated that the proposed project should be denied because the wetlands were determined to be ARNI. Comments stated concern with compensatory mitigation for wetlands determined to be ARNI as being more difficult to achieve.

- i. Applicant Response: *The applicant acknowledges the USEPA's current belief, based on the revised design presented in the 2018 Public Notice, that the project would not have a substantial and unacceptable impact on ARNI. USEPA's position regarding impacts to the ARNI should address concerns expressed by other commenters.*

Design changes were undertaken prior to the 2011 permit application to address USFWS 2009 concerns. These included the addition of bridges at Station 241+00 and the reconfiguration of Ponds 4 and 5 to provide increased buffer to the river.*

Coordination with USFWS regarding wildlife crossings that would be incorporated into alternative Mod 7 (partially elevated) took place via a teleconference on February 10, 2017. The size, locations and features to be incorporated into the upland wildlife crossings were agreed to. Briefly, it was agreed the plans would incorporate 14 crossings with soil floors, minimum of 5' horizontal by 3' vertical, fence with snake exclusion fence layout to funnel wildlife to the crossings. The agreed to locations superseded previously proposed locations. The use of grate "skylights" was specifically not requested.

- ii. Corps Evaluation: The Corps is authorized to issue permits for the discharge of dredge or fill material into waters of the US pursuant to Section 404 of the CWA. In order to make a permit decision, the Corps solicits comments and considers the views of state and federal resource agencies, such as the USEPA, as well as the public. In the event the USEPA opposes the Corps issuance of a CWA permit, a dispute resolution process was established. To facilitate the resolution of disputes, Section 404(q) of the CWA (33 USC 1344(q)) established a requirement that the Secretary of the Army and the USEPA administrator enter into an agreement assuring that delays in the issuance of permits under Section 404 are minimized. The Army and the USEPA entered into the 1992 Section 404(q) Memorandum of Agreement (MOA), which outlines the current process and time frames for resolving disputes, in an effort to issue timely permit decisions. The process outlined in the MOA recognizes that the Corps is the project manager for the evaluation of all permit applications and that the USEPA acts as a commenting agency.

As project manager, the Corps will fully consider USEPA's comments when determining compliance with NEPA, the 404(b)(1) Guidelines, and other relevant statutes, regulations, and policies.

The process begins when the Corps publishes a public notice for the proposed project. As per the MOA, if the USEPA believes the proposed project will have a substantial and unacceptable impact on an ARNI, the Regional Administrator will notify the Corps within 25 calendar days after the end of the public notice comment period. This notification would clearly state in detail why there will be substantial and unacceptable impacts to an ARNI, and why the specific permit must be modified, conditioned, or denied to protect the ARNI. The letter should also explain how the determination was made and be based on site specific information.

As set forth in the MOA, only cases that will result in unacceptable adverse impacts to an ARNI can be elevated to the agencies' headquarters for resolution. Accordingly, cases that will not result in unacceptable adverse effects to ARNI cannot be elevated over other disputes, such as those concerning practicable alternatives.

The MOA does not define an ARNI. It compares cases that will cause unacceptable adverse effects to ARNI to be similar in magnitude to cases evaluated under 40 CFR 231, Section 404(c) of the CWA (i.e. when there will be unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas). In addition, factors that the USEPA uses in identifying ARNIs include economic importance of the aquatic resource, rarity or uniqueness, and/or importance of the aquatic resource to the protection, maintenance, or enhancement of the quality of waters of the US.

The 2011 proposed project was published for public notice on 28 November 2011. The comment period for the public notice was extended to 27 January 2012. By letter dated 27 January 2012, the USEPA determined the 2011 proposed project did not comply with the 404(b)(1) Guidelines and "may have substantial and unacceptable adverse impacts on an ARNI." The letter followed the procedures outlined in the 1992 MOA, Part IV, paragraph 3(a) regarding Section 404(q) of the CWA. Then by letter dated 21 February 2012, the USEPA detailed the reasons for the ARNI designation and why the proposed impacts would be substantial and unacceptable stating, "[t]he EPA considers wetlands of the Starkey Wilderness Preserve and the upper Pithlachascotee River and Anclote River watersheds to be Aquatic Resources of National Importance

(ARNI), because of their existing and intact wetland functions, including wildlife habitat, floodwater storage, groundwater recharge and water quality enhancements for the nearby downstream estuaries along the Gulf of Mexico.” The letter followed the procedures outlined in the 1992 MOA, Part IV, paragraph 3(b) regarding Section 404(q) of the CWA, and recommended denial of the project as it was proposed in 2011. The USEPA described concerns with the 2011 proposed project in the 27 January 2012 letter, particularly about the need for: “(1) an updated jurisdictional determination, (2) an appropriate alternatives analysis to enable the Corps to determine the Least Environmentally Damaging Project Alternative (LEDPA), and (3) traffic modeling for different alternative roadway alignments and widenings that would aid in the analysis for the LEDPA determination. Our prior comments also noted that the land preservation action proposed by the applicants as compensatory mitigation would be premature and inappropriately speculative for the EPA to review at this time, because wetland impact avoidance and minimization have not been adequately demonstrated and a LEDPA has not yet been selected.”

As indicated in Section 1.3, and the responses to Topics 1, 3, 4, 6, and 14 in this document, since the 2011 proposed project the applicant has revised the proposed project to further avoid and minimize impacts to aquatic resources, and undertook additional investigation into the boundaries and functional assessment of wetlands in the area. As described in Section 5.0 and Section 8.0, the applicant provided an alternatives analysis with traffic modeling that was fully evaluated by the Corps, and a revised mitigation plan to compensate for the unavoidable impacts to waters. The Corps coordinated with the USEPA multiple times throughout the review of the project since the 2011 proposed project and provided the USEPA comments and recommendations to the applicant.

The USEPA provided comment on the 2018 proposed project after the public notice dated 25 September 2018. By letter dated 29 November 2018 the USEPA stated, “Based on our review of the available information, including substantial revisions to the project as reflected in the public notice dated September 28, 2018, the EPA no longer believes the project would have a substantial and unacceptable impact on ARNI. Therefore, we hereby remove the project from potential elevation under the 1992 CWA Section 404(q) MOA.”

Similar to the USEPA 404(q) MOA, the USFWS and the Department of the Army entered into an MOA for Section 404(q) of the CWA on 21 December 1992. The MOA recognizes that the Corps is the project manager for the evaluation of all permit applications and the USFWS acts

as a commenting agency. As project manager, the Corps will fully consider USFWS comments when determining compliance with NEPA, the 404(b)(1) Guidelines, and other relevant statutes, regulations, and policies, and recognizes the USFWS has an important role in the permit process under the Fish and Wildlife Coordination Act, the CWA, NEPA, ESA, and other relevant statutes. Based on the 2000 proposed project, and pursuant to the USFWS 1992 MOA, Part IV, paragraph 3(a), the USFWS stated the 2000 proposed project may result in substantial and unacceptable adverse impacts to ARNI by letter dated 1 August 2000. The USFWS provided a letter pursuant to the 1992 MOA, Part IV, paragraph 3(b) on 23 August 2000. The applicant, the Corps, and the USFWS regularly coordinated during the evaluation of the 2000 proposed project in the subsequent years. On 28 February 2008 the Corps sent a letter to the applicant outlining outstanding issues with the 2000 proposed project, especially those regarding the USFWS ARNI findings. On 9 May 2008 the applicant responded to the USFWS concerns and then on 14 May 2008, the applicant, the Corps, USFWS, USEPA, and FWC met to discuss how the applicant would address the outstanding issues addressed in the 28 February 2008 letter. On 11 March 2009 the Corps requested the USFWS review the additional information and changes the applicant made to the 2000 proposed project and provide comments to the Corps with regard to the USFWS conclusion that the 2000 proposed project would adversely affect an ARNI. By letter dated 28 April 2009, the USFWS stated: "As discussed in the 14 May 2008 meeting with the Corps and applicant, the Service recommended measures to resolve outstanding issues regarding the ARNI designation. The Service has not received a revised or approved wetland mitigation plan...Pending the incorporation of previous recommendations provided by the Service into the construction plan set along with an approved mitigation plan, the Service will not object to issuance of the Department of the Army permit. These recommendations include twin 120-foot wildlife underpass bridges at Station 214+00, eliminate Pond No. 10 and the single box culvert at Station 203+00, provide a 50-foot minimum buffer between the Pithlachascotee River wetland jurisdictional limits and Pond No. SA, provide a 50-foot minimum buffer between the Pithlachascotee River wetland jurisdictional limits and Pond No.6, install a 10-foot high fence with Y4-inch metal mesh (3-feet above ground and 1-foot buried) along the entire Serenova Tract, and incorporate grating to allow light in all single box culverts...the Service will review the mitigation proposal after the plan has been deemed acceptable by the Corps and the Environmental Protection Agency."

As described in Section 1.3, the applicant submitted a new comprehensive application for a DA permit in May 2011 and a public notice was published.

After the 2011 proposed project was advertised by public notice on 28 November 2011, the USFWS responded by letter dated 24 January 2012 and reiterated the recommendations from the USFWS's 28 April 2009 letter regarding the ARNI.

The applicant indicated the design changes recommended by the USFWS were incorporate into the RRE since the USFWS's 28 April 2009 letter that stated, "Pending the incorporation of previous recommendations provided by the Service into the construction plan set along with an approved mitigation plan, the Service will not object to issuance of the Department of the Army permit." The applicant, the Corps, and the USFWS coordinated numerous times during the review of the proposed project. As described in Section 10.0, the USFWS provided the biological opinion for the RRE by letter dated 20 September 2019. In its letter dated 13 December 2019, the USFWS stated, "[t]o date the Corps has provided the Service with an extensive biological assessment and mitigation plan incorporating the recommendations of the Service." The letter continued by stating, "[t]he Corps has incorporated the Service's recommended measures to resolve all outstanding issues regarding the ARNI designation and the Service will not object to the issuance of the Ridge Road Extension Department of Army permit."

- b. Comments suggested the proposed project should be evaluated with an Environmental Impact Statement rather than an Environmental Assessment due to the complexity of the proposed project, the public objections to the proposed project, the extended time-frame for review, and the rate of development in the area. Comments suggested that an Environmental Impact Statement was appropriate, so all alternatives could be updated to reflect current conditions and costs and current wildlife surveys and wetland assessments could be completed since portions of proposed alternatives have been constructed in part and there were funding concerns that would preclude the construction of Phase II. Comments questioned whether state and federal agencies had provided comments or if there were outstanding issues to resolve.
 - i. Applicant Response: *The applicants provided a new and expanded Alternatives Analysis that included all the alternatives defined by the Corps and as requested in the August 8, 2013 letter from the Corps to the applicants. The applicants do not believe the Corps has made a determination that an Environmental Impact Statement is required for this project.*

- ii. Corps Evaluation: Under NEPA, if the quality of the human environment is not significantly affected after considering the impacts of the proposed action and required mitigation, a Finding of No Significant Impact (FONSI) will be made. If a FONSI cannot be made, then an Environmental Impact Statement (EIS) will be prepared to further analyze the impacts of the proposed action and alternatives. Significant impacts are determined based on the context in which they occur and the intensity of the action (40 CFR 1508.27). The context of the action is based on society in general, the affected region, affected interests, and locality of the project area. Intensity refers to the “severity of the impact” on the human environment. The Corps has evaluated both the short-term and the long-term effects of the proposed project. The Corps evaluated the permanent and temporary direct impact from the proposed discharges of fill material into aquatic resources and the compensatory mitigation proposed to offset the unavoidable impacts, as well as the indirect effect and cumulative effects of the proposed project. The Corps evaluated the probable impact which the proposed activity may have on the public interest, and evaluated compliance with the 404(b)(1) Guidelines. The Corps completed consultation pursuant to the ESA for impacts to threatened and endangered species, and the NHPA for impacts to historic properties. The Corps has determined the impacts of the RRE are less than significant and therefore do not rise to a level commensurate with the need to prepare an EIS based on the following considerations of 40 CFR 1508.27.
 1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
 - The proposed project would have both beneficial and adverse effects, although none of the effects would be significant.
 2. The degree to which the proposed action affects public health or safety
 - The effects on public health and safety were considered in this document. The RRE would have beneficial effects on public health and safety. The Daily Travel Assessment completed for the Alternatives Analysis show that the construction of the RRE improves numerous measures of mobility including the Crash Rate. The Evacuation Assessment showed that construction of the RRE enhances overall mobility as well as improved routing from coastal hazard areas and improved evacuation clearance times better than other alternatives analyzed. The applicant indicated that the proposed project would enable better access to emergency services including police and fire, and access to healthcare to areas both west and east

of the proposed project. The RRE would have fencing completely surrounding the roadway to minimize impacts to wildlife roadway mortality and the safety concerns with vehicle-wildlife strikes. The fence would also serve to keep the public on the roadway from accessing the adjacent lands and keep the public within the recreation areas from accessing the roadway. The RRE would contain two wildlife crossings at existing trails within the Serenova Tract to maintain recreational access at safe crossing locations, and the RRE would maintain an existing access road for the SWFWMD to maintain access for management of the Serenova Tract.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
 - The RRE would have no effect on historic or cultural resources (Section 10.3), prime farmlands, or wild and scenic rivers.
 - The proposed project would bisect the existing Serenova Tract, which is owned by the SWFWMD for conservation and managed to preserve and/or restore natural values and to accommodate compatible recreational use. The approximate 6,500 acre Serenova Tract was previously described by the applicant as being 35% (2,309 acre) wetland. The RRE would be constructed through 3.06 miles of the Serenova Tract and permanently impact 5.71 acres of wetlands in the Serenova Tract within Phase I and the Interchange segments. This represents permanent impact to 0.2% of the wetlands within the Serenova Tract. The applicant made substantial design revisions to the RRE to avoid and minimize impacts to wetlands with the Serenova Tract including the incorporation of bridges to maintain hydrologic connection and function of the wetland as well as physical connection for wetland dependent wildlife species.
 - The establishment of the Serenova Tract as mitigation for the Suncoast Parkway and the use and management of the mitigation area has accounted for the RRE bisecting the mitigation area. The RRE would not have significant effects to the Serenova Tract or to the wetlands affected by the RRE.
4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.
 - The RRE has had opposition from a share of the public, including many non-governmental organizations such as

the Citizens for Sanity, Florida Audubon Society, and Sierra Club. Conversely, the RRE has had sustained support from other public commenters including, local residents, businesses, and community groups. The Corps coordinated all comments received from federal, state, and local agencies, and the public with the applicant during the evaluation of the proposed project. The Corps requested formal and informal request for information throughout the evaluation of the proposal to notify the applicant of comments and concerns so that they may be addressed. Notably, the applicant made substantial revisions to the RRE to avoid and minimize impacts to aquatic resources and the Serenova Tract, and designed and completed wildlife surveys in the BA to support the USFWS's BO concerning threatened and endangered species. As discussed in this document, the proposed project would incorporate several measures to minimize impacts to wildlife, including wildlife crossings beneath the road, fencing and mesh to minimize movement of wildlife across the road, conducting pre-construction surveys for gopher tortoises and Eastern indigo snake, and implementation of construction conditions intended to afford protection to the Eastern indigo snake. Specifically within the Serenova Tract, the applicant proposed bridging seven wetlands crossings, including completely bridging the crossing of the Pithlachascotee River and its associated wetlands. There would be no access points for residential or commercial developments within the Serenova Tract. These measures would minimize impacts to aquatic resources and wildlife within the Serenova Tract and allow for the movement of water and wildlife beneath the road.

- The Corps has evaluated the permanent and temporary discharge of fill material into aquatic resources, the indirect impact to wetlands that are immediately adjacent to the limits of the project, and completed a cumulative effects evaluation for the proposed project. The Corps completed many site visits, completed a preliminary jurisdictional determination for the aquatic resources in the review area, and reviewed and evaluated UMAM wetland assessment forms to characterize the functions and the values of the wetlands. There is not substantial dispute as to the amount and nature of the proposed permanent and temporary impacts from the discharge of fill material into wetlands. There is considerable opposition to the RRE being

constructed through the Serenova Tract due to concerns over land use, aquatic resources, and wildlife. However, the Corps finds the RRE was envisioned prior to those lands being placed in conservation. As such, potential construction of the RRE was considered prior to acceptance of the Serenova Tract as compensatory mitigation for impacts associated with the Suncoast Parkway. Both the conservation documents and the management plan for the Serenova Tract allow for construction of the proposed RRE. The applicant has minimized impacts to aquatic resources and wildlife habitat throughout the RRE by reducing the median width of the roadway through wetlands and uplands, adding vertical walls and pedestrian rails to minimize the construction limits within wetlands and uplands, incorporated bridging to minimize impacts from the permanent discharge of fill material into wetlands and allow for the movement of water and wildlife beneath the roadway, constructed stormwater and flood plain compensation areas within upland areas to the maximum extent practicable, and added wildlife exclusionary fence to the entirety of the proposed project. A portion of the proposed project would be constructed through the Serenova Tract, although the proposed project would impact approximately 0.2% of the wetlands within the Serenova Tract. Federal and State agencies were consulted throughout the evaluation of the RRE, and no substantial disputes are outstanding. These measures and others described within this document, have informed the Corps determination that the RRE will not have significant effects on land use, waters, or wildlife.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
 - The Corps has identified no highly uncertain effects or unique or unknown risks that would be applicable to large adverse effects on the human environment. There are no known risks that would result in substantial damage to lives, structures, and ecosystems. The SWFWMD issued the 401 WQC that indicates the RRE compliance with applicable provisions of the CWA and would not cause adverse water quantity impacts to receiving waters and adjacent lands, adverse flooding to on-site or off-site property, adverse impacts to existing surface water storage and conveyance capabilities, and will not adversely impact

the maintenance of surface or ground water levels or surface water flows established pursuant to Section 373.042, F.S., or Chapter 40D-8, F.A.C. The Corps completed consultation with the USFWS relative to the proposed project's potential effects on threatened and endangered species pursuant to Section 7 of the ESA. The proposed project is fully consistent with the LRTP.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
 - The action does not represent a precedential activity. The construction of roadways and their impacts to aquatic resources are well understood. An action to issue a permit for the RRE does not make it more likely that proposed future actions related to roads and developments in the area are more likely to be approved. The development of the area is a land use matter regulated by Pasco County and the County Comprehensive Plan, where proposed and approved Master Planned Unit Developments already exist for the area of notable development outside of Phase II. Future proposals for roadway construction and development would be evaluated by the Corps within the scope of analysis for a particular project.
7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
 - The cumulative impact is the impact on the environmental which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. The incremental contribution of the proposed activity to cumulative impacts in the area described in Section 9.0 of this document, are not considered to be significant.
8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
 - Based on the Corps evaluation in Section 10.3, the proposed project would cause no effect to historic properties. This determination is based on the findings of the archaeological surveys, project modifications to avoid

areas of concern, and consultation with both the Florida State Historical Preservation Officer (SHPO) and Seminole Tribe of Florida -Tribal Historic Preservation Office (STOF-THPO). There are no known scientific, cultural, or historical resources unique to the RRE that have not been identified and appropriately avoided, minimized, or mitigated.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
 - The RRE was evaluated relative to its potential effects on threatened and endangered species pursuant to Section 7 of the ESA. A report of listed species, consultation areas, and or designated critical habitat for the project area was assessed within the Action Area as described in Section 10.1. The applicant, Corps, FWC, and the USFWS coordinated survey protocols and requirements in order to complete a BA and consultation pursuant to Section 7 of the ESA. The USFWS reviewed the applicant's BA and provided a BO for the RRE on 20 September 2019. The Service concurred with the Corps' effect determinations and stated that the proposed project would not jeopardize the continued existence of any listed species. The permit, if issued, will contain a special condition that requires compliance with the Terms and Conditions of the BO.
 10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.
 - As described in the EASOF, the proposed action complies with all regulatory requirements. The Corps has evaluated the proposed project and its effects on the environment. The Corps has determined the proposed project is in compliance with the 404(b)(1) Guidelines and is not contrary to the public interest. Section 7 requirements under the ESA and Section 106 obligations pursuant to the NHPA have been fulfilled. The SWFWMD issued Section 402 WQC for RRE and the proposal is consistent with local land use planning requirements. There are no outstanding comments or concerns with any Federal or State agencies.
- c. Comments from the public and from the USEPA by letter dated 27 January 2012 that state direct, secondary, and cumulative impacts and/or minimization and mitigation were not sufficiently addressed for the proposed project as described by the 2011 public notice. Comments provided by the public and the USEPA by

letter dated 27 January 2012 stated the applicant did not follow the 2008 Mitigation Rule for avoidance, minimization, and compensatory mitigation for the proposed project described by the 2011 public notice. Comments stated that the applicant did not sufficiently minimize project impacts and additional avoidance and minimization of wetland impacts was needed. Comments suggested that reducing the area of the ROW by altering the roadway design and lowering the design speed of the proposed project would further minimize impacts. A comment suggested the use of jersey barriers to further reduce medians and minimize impacts of the proposed project should be considered. Comments suggested that utilizing the rural roadway design was unnecessary and utilizing a smaller median would further reduce impacts to the proposed project. Comments suggested the alignment of the proposed project was first selected based on a higher design speed, and this speed was no longer applicable, but the alignment was not further considered for minimization. The comments suggested the proposed project alignment was chosen based on ROW donations rather than the evaluation of environmental impacts. Other comments stated it was difficult to determine if adequate compensation was described by the 2011 public notice because there were too many options and unclear objectives. Other comments on the 2011 public notice stated that preservation of lands was not a suitable method to compensate for the proposed project or that the areas identified for preservation were no longer available or did not have sufficient functions and values. Other comments stated that the compensatory mitigation for the proposed project as described by the 2011 public notice would not provide compensation for a loss of biodiversity found within the proposed project. Comments were concerned the proposed FDOT compensatory mitigation was improper and duplicated previous mitigation credits. Comments on the FDOT mitigation suggested that the preservation areas were already under management of the SWFWMD and in order to get any credit for the project, there must be additional functional gain. There were comments that disagreed with relying on previous FDOT mitigation to account for the proposed impacts since the original FDOT mitigation was determined and calculated with outdated mitigation regulation and guidance.

- i. Applicant Response: The applicants have incorporated extensive avoidance and minimization features into the design of the roadway. A summary of the most current minimization features was provided to the Corps as part of the August 14, 2018 submittal to assist with the Corps' preparation of a public notice as a result of the County's project modification.*

The limits and type of typical section (urban vs rural) as well as the respective design speeds were selected based on safety and compliance with applicable design criteria. The use of bridges, vertical walls and steep side slopes protected with guard rail minimized wetland impacts to the maximum extent practicable while still considering motorist safety.

The development of an alignment that considered environmental (and not property) factors dates back to 1995 and the partnering meetings held for the Suncoast Parkway that Pasco County attended to initiate coordination with the regulatory agencies that included the Corps and SWFWMD (see 2015 Alternatives Analysis, Attachment A, Appendix A-1). At one of those meetings the Corps' representative (Mike Nowicki) asked Pasco County to provide the least damaging route for connection with a Ridge Road interchange. At another Pasco County presented alternative alignments and interchange locations for comment. Pasco County subsequently engaged a consultant to prepare a Route Study to determine the least damaging route based on numerous criteria as outlined in the document titled "Final Route Study of Ridge Road Extension", dated September 1997. The study compared 7 build and the no-build alternative. As part of the study, letters were obtained from both SWFWMD and the Corps. SWFWMD, in its letter dated September 4, 1997 stated:

"...we would consider alignment ABA-2 as the preferred route for the extension of Ridge Road through west central Pasco County. Considering wetland quality and function, wildlife habitat and overall ecosystems within the various routes, Alignment ABA-2 appears to provide one of the best alternatives."

The Corps in its letter dated September 17, 1997 stated:

The Corps of Engineers (Corps) acknowledges that you have made significant efforts to explore many possible alignments for the proposed road and their probable impacts to the local environment.

This office ...applaud(s) your proactive efforts. We are certain that your work will lead to expedited processing of your permit application, once submitted."

The alignment ABA-2, that SWFWMD stated was the preferred route was the basis for the route of the proposed project.

The applicant's proposed primary mitigation method to be used for the project is the purchase of credits from a mitigation bank which is the preferred option under the current mitigation rule. The applicants note that the Corps has accepted the proposal by Florida's Turnpike Enterprise to apply the remaining amount of unused credits from the original Suncoast Parkway project.

- ii. Corps Evaluation: Since the 2011 proposed project, the applicant completed additional avoidance and minimization for impacts to aquatic resources as explained in Section 1.0. Since the 2011 proposed project, the applicant proposed a new compensatory mitigation proposal for unavoidable impacts to aquatic resources following the 2008 Mitigation Rule. The applicant provided an Alternatives Analysis, which includes the Revised Alternatives Analysis submitted in 2015 (Revised Alternatives Analysis) and the Alternatives Analysis Addendum (AA Addendum)

submitted on 17 September 2019. Overall, this was a revision of an Alternatives Analysis previously submitted by the applicant on 18 December 2013. The plan for the Alternatives Analysis and selection of the screening criteria were discussed with the Corps multiple times between 2012 and 2014. Both the Corps and the EPA provided feedback on the screening criteria in 2014, prior to submittal of the Revised Alternatives Analysis in 2015. The alternatives analysis evaluated seventeen different alternatives and incorporated the SWFWMD preferred alignment of the RRE identified during the evaluation of the Suncoast Parkway. The Corps determined the applicant avoided and minimized impacts to aquatic resources to the maximum extent practicable and proposed adequate compensatory mitigation for the unavoidable impacts to aquatic resources. Alternative Mod 7a has been determined to be the LEDPA. The FDOT mitigation was fully evaluated and it was determined the currently proposed mitigation meets the requirements of the 2008 Mitigation Rule. The mitigation plan for the overall project relies heavily on purchasing credits at a nearby mitigation bank. The Corps has determined the proposed mitigation would appropriately offset the unavoidable impacts to aquatic resources.

4. Wetlands

- a. Comments stated the proposed project would result in an additional 3.5 acres of wetland impact than described by the 2018 public notice due to fencing around the interchange segment that was not previously identified as a direct wetland impact. The comments suggested that the additional direct wetland impacts would affect the determination of the 404(b)(1) Guidelines least environmental damaging practicable alternative (LEDPA), consultation with the USFWS, and the consideration of compensatory mitigation.
 - i. Applicant Response: *A review of the location of fencing throughout the entire length of the project including within the interchange segment was completed by the applicants. Where fence locations may have resulted in additional wetland impacts, the location of the fence was revised to eliminate the impacts. Permit plans submitted in October 2019 illustrate the updated locations of the fence. As a result of the revisions to the fence locations there are no additional direct impacts to wetlands.*
 - ii. Corps Evaluation: The Corps agrees that the applicants had not accounted for all wetland impacts resulting from fencing within the interchange. The Corps requested that the applicants review all fencing locations and account for any additional wetland impacts associated with fencing. Fencing within the interchange was subsequently reconfigured to avoid any additional direct wetland impacts beyond that advertised in the public notice. Revised drawings were provided to the Corps and no further coordination for this aspect of the project is necessary.

- b. The USEPA provided a comment letter on 27 January 2012 and stated that the Corps should complete a new jurisdictional determination for the proposed project due to the age of the supporting information, missing information, and due to potential changes in groundwater and wetland water levels after a decrease in groundwater pumping. Comments stated Tampa Bay Water had substantially reduced their groundwater pumping and wetlands within the Serenova Tract have been recovering to highly functioning wetlands. The comments stated wetlands within the Serenova Tract were primarily described as in excellent condition with minimal modification of hydrology. The comment found the wetland assessments completed by Pitman, Hartenstein & Associates, Inc., titled Wetland Impact Assessment & Mitigation Plan: Ridge Road Extension, Pasco County, Florida, dated 12 October 1998 were consistent with their findings. Although, the comments disagreed with the findings of the 22 April 2005 letter written by Biological Research Associates that found wetlands were in poor condition because the findings were misleading and/or misrepresented. Similar comments suggested that the jurisdictional determinations for the proposed project as described by the 2011 public notice were completed in 2000 and 2006 and their associated functional assessments were no longer valid and should be redone because of a decrease in groundwater pumping and potential changes to wetland boundaries and characteristics. The comments stated that additional wetland delineation and functional assessments were needed because of the roadway alignment changes to avoid 8PA668, where delineation boundary and assessments were changed they were updated without any additional on-site assessment, and due to site conditions changing from high water conditions in 2019 that could affect wetland boundaries and characteristics. Comments were concerned that a preliminary jurisdictional determination was completed and suggested an approved jurisdictional determination should have been completed. Comments stated direct impacts to jurisdictional waters was not clearly stated and the Wetland Rapid Assessment Procedure (WRAP)/ Uniform Mitigation Assessment Method (UMAM) scores associated with the impacts were not described.

- i. Applicant Response: *The applicants are aware that over the past years there has been reduced pumping of groundwater from the Starkey/North Pasco Wellfields by Tampa Bay Water (TBW). The effects of this reduced pumping on the wetland water levels is documented in TBW's most recent (June 2018) Hydrologic Conditions Update Status Report. Per Figure 10 in the report, pumping was significantly reduced starting in 2008. The start of the reduced pumping corresponds to a rise in the level of the Florida Aquifer (Well PZ-4D) although there is not a corresponding rise in the wetland water levels (STKY S-95, located in Serenova in close proximity to the RRE Alignment). Per TBW data it is evident that the variations in wetland water levels correspond closely to the total annual rainfall depth and do not show an increase that corresponds with the reduced pumping. The majority of the wetlands in the project area are*

forested wetlands and the original delineation of the boundaries took into consideration long-term indicators that would not readily be affected by wellfield pumpage, including forested vegetation, palmetto edges and long-term hydrologic indicators such as cypress buttressing. Therefore no effects to the wetland boundaries would be associated with the pumping reductions. The North Pasco Wellfield has since been retired by TBW per their Long-term Master Water Plan report dated December 2018.

During November 2016, a site review was conducted by the USACE specifically to determine if there had been any changes in the wetland boundaries. Based on that field review it was determined that no changes to the wetland boundaries were necessary. A Preliminary Jurisdictional Determination (PJD) was issued by the Corps on June 15, 2017. All direct impacts to jurisdictional waters were based on the jurisdictional lines established by the PJD. UMAM and not WRAP was used for the assessment of wetlands. Completed Part I (Qualitative Description) and Part II (Quantification of Assessment Area) forms were submitted for all wetland impacts.

- ii. Corps Evaluation: In November 2016, the Corps reviewed the site to specifically inspect segments of the previous wetland delineation and to review the relative quality of wetlands within the proposed alignment. Prior to the site inspection, the Corps completed a review of soil maps, hydric soil ratings, National Wetlands Inventory maps, National Hydrographic Data, and aerial photography. Following this review, the Corps identified multiple locations along the proposed alignment that would be reviewed during the November 2016 site inspection. Prior to the site inspection, Pasco County's survey crew located the previous delineation in the areas identified by the Corps. As the prior survey of the delineation had utilized steel survey pins placed in the ground, the survey crew was able to locate these pins with a metal detector. These areas were flagged so that they were easily identifiable during the field review and the vegetation around the survey pins had been pushed aside to expose the pins. At every location reviewed, the Corps found the previous delineation to be acceptable. As such, it is the Corps' position that an updated delineation is not warranted. The Corps completed a preliminary jurisdictional determination (PJD) for the project area on 14 June 2017.

Some commenters expressed concern that a PJD was completed and suggested that an approved jurisdictional determination (AJD) should have been completed instead. The Corps' Regulatory Guidance Letter (RGL) 16-01, dated October 2016, provides guidance to the Corps' use of PJDs and AJDs. For this project, the Corps clearly explained both options to the applicants and the applicant's stated preference was for a PJD.

Additionally, the Corps identified several wetland areas within the review area that appear to potentially be isolated and shared this information with the applicants. If confirmed through an AJD, these isolated areas would not be subject to Corps jurisdiction and therefore would not require compensatory mitigation. By choosing a PJD, the applicants chose not to confirm whether these areas were isolated and agreed to account for all wetland impacts within the review area and to offset those wetland impacts with compensatory mitigation.

Some comments stated that direct impacts to jurisdictional waters was not clearly stated. The Corps' public notice, published 25 September 2018, clearly stated that "[w]etland impacts would include 37.38 acres of permanent impact and 2.78 acres of temporary impact". An additional description of the impacts was provided as was a summary table identifying impacts within Phase I, Phase II, and the Interchange. Additionally, these impacts were also compared to the impacts previously proposed and published in the Corps' 2011 public notice. The Corps believes that the proposed wetland impacts were clearly stated and that the public notice was sufficient to generate meaningful public comments. As the proposed project design elements have been further refined, the project impacts have also been refined, but are still very similar to the level described in the Corps' most recent public notice.

Finally, some comments noted that the Uniform Mitigation Assessment Method (UMAM) scores associated with the impacts were not described in the public notice. The Corps notes that, pursuant to the 2008 Mitigation Rule, only a statement regarding compensatory mitigation is needed for the public notice. A final mitigation plan is not required for a public notice and is often not available at that point in an evaluation. It should be noted that the Corps is not required to concur with the UMAM scores submitted for any particular application. For this application, the Corps completed a thorough review of the UMAM scores and supporting rationale submitted by the applicants. Several revisions to the scores were made in response to Corps comments. The Corps believes that the final scores for direct and indirect impacts are appropriate based on the condition and location of the wetlands proposed for impact.

- c. There were comments that stated the proposed project is not compliant with the 404(b)(1) Guidelines because the proposed project would disrupt sanctuaries and refuges as described by 40 CFR 230.40. The comment suggested the proposed project would lead to loss of values regarding 40 CFR 230.40(b)(1)-(5), notably disrupting critical life requirements of wildlife and modifying sanctuary or refuge management practices.
 - i. Applicant Response: *Sanctuaries and refuges consist of areas designated under [State](#) and Federal laws or local ordinances to be*

managed principally for the [preservation](#) and use of fish and wildlife resources. Under this definition, it may be possible that the Serenova Tract within the Starkey Preserve would be considered a state established sanctuary or refuge although it was established principally as mitigation for the Suncoast Parkway project. The conservation easement for the Serenova Tract, granted by FDOT to the Board of Trustees of the Internal Improvement Fund, State of Florida, specifically states (Articles 3.b and 12) that the easement does not preclude the construction of the proposed extension of Ridge Road through the Serenova Tract. Therefore, any effect on the Serenova Tract associated with the discharge of fill material from Ridge Road cannot be considered a possible loss of value to the tract as it had been considered when it was originally established and the impacts were expected to be offset by mitigation outside the tract.

- ii. Corps Evaluation: Approximately the western half of the proposed project would pass through the Serenova Tract. The Serenova Tract is one of three tracts that comprise the Starkey Wilderness Preserve in Pasco County, Florida. The Serenova Tract is the result of compensatory mitigation for wetland impacts associated with construction of the Suncoast Parkway. Both the conservation easement and the management plan for the Serenova Tract are conditioned to allow for the future construction of the proposed project. The Serenova Tract is currently managed by the Southwest Florida Water Management District for passive outdoor recreation and, as such, is readily accessible to the public and is used for hiking, equestrian and other passive recreational uses. Considering the avoidance, minimization, and compensatory mitigation efforts proposed, the Corps has determined that the values of sanctuaries and refuges at 40 CFR 230.40 would not be adversely affected by the proposed project.
- d. Comments suggested the proposed project as described by the 2011 public notice had minimal impacts on the environment and/or that the impacts were appropriately minimized. Comments suggested the proposed project's mitigation meets or exceeds the ratios and/or the requirements for compensatory mitigation and that the proposed project would adequately off set the impacts from the proposed project. Comments indicated that the proposed project would impact an area that is a small percentage of the overall Serenova Tract. Comments supported the proposed project and impacts to the Serenova Tract because they stated the Suncoast Parkway mitigation had already anticipated and accounted for the proposed project. Comments stated the proposed minimization and the use of best management practices would result in the proposed project having a minimal effect on the environment.
 - i. Applicant Response: *The applicants acknowledge the comments related to the project as it was designed in 2011. The current design has reduced wetland impacts considerably since the 2011 design as indicated*

in the 2018 public notice. The applicants have incorporated extensive avoidance and minimization features into the design of the roadway. A summary of the most current minimization features was provided to the Corps as part of the August 14, 2018 submittal to assist with the Corps' preparation of the 2018 public notice. The impacts of the roadway do represent a small percentage of the total Serenova Tract however, the conservation easement for the Serenova Tract, granted by FDOT to the Board of Trustees of the Internal Improvement Fund, State of Florida, specifically states (Articles 3.b and 12) that the easement does not preclude the construction of the proposed extension of Ridge Road through the Serenova Tract. Therefore the impacts had been anticipated when the tract was originally established and were expected to be offset by mitigation outside of the tract.

- ii. Corps Evaluation: The proposed wetland impacts and the method of compensatory mitigation have both changed since the 2011 public notice. Additional bridging and minimization measures have reduced permanent wetland impacts from 53.91 acres , to the currently proposed 37.37 acres as noted in the 17 November 2019 impact comparison tables. The proposed compensatory mitigation has also shifted from permittee-responsible mitigation to, primarily, purchase of credits from a federally approved mitigation bank. Excess mitigation previously accomplished for the Suncoast Parkway would be used to offset part of the wetland impact associated with construction of the interchange by Florida's Turnpike Enterprise. The Corps believes that the amount of compensatory mitigation proposed for the overall project is the appropriate amount and is neither excessive nor insufficient. The Corps also acknowledges that the conservation easement and management plan for the Serenova Tract both accommodate construction of a Ridge Road Extension.
- e. Comments on the proposed project as described by the 2018 public notice stated that adequate minimization and compensatory mitigation was proposed by the applicant to account for the impacts of the proposed project. Comments suggested the proposed project's mitigation meets or exceeds the ratios and/or the requirements for compensatory mitigation and that the proposed project would adequately off set the impacts from the proposed project.
- i. Applicant Response: *The applicants agree with the commenter that adequate minimization features have been incorporated into the project and that adequate mitigation (primarily through a bank) is being provided to offset the unavoidable direct wetland impacts as well as indirect impacts.*
 - ii. Corps Evaluation: The Corps is satisfied that the applicants have taken appropriate measures to avoid and minimize impacts to waters of the US. Additional discussion of specific avoidance and minimization measures is provided in section 1.3.1 of this document. These measures include alignment of the roadway, bridges, wildlife crossings, minimization of

slopes, and other best management practices. The Corps has determined that the amount of compensatory mitigation proposed for the overall project is the appropriate amount and is neither excessive nor insufficient.

- f. Comments stated the applicant had not clearly demonstrated that alternatives not involving special aquatic sites pursuant the 404(b)(1) Guidelines were successfully rebutted. In addition, the comments stated the applicant did not demonstrate that proposed project had less adverse impacts on the aquatic environment as compared to practicable alternatives that do not involve a discharge into a special aquatic site pursuant to the 404(b)(1) Guidelines.
 - i. Applicant Response: *The 2015 Alternatives Analysis and the 2019 Addendum clearly described which alternatives were practicable. Table 4-3 in the Addendum summarizes the practicable alternatives. All practicable alternatives include the Ridge Road Extension. All practicable alternatives include the crossing of the Serenova Tract. The selected alternative has the least amount of direct wetland impacts.*
 - ii. Corps Evaluation: All alternatives considered would include impacts to special aquatic sites. The Corps completed a review of the applicants' 2015 Revised Alternatives Analysis as well as the subsequent Alternatives Analysis Addendum (AA Addendum). The Corps' evaluation of alternatives is found in section 5.0 of this document.
- g. Comments asserted the proposed project would cause or contribute to significant degradation of waters of the US as described by the 404(b)(1) Guidelines. The comments stated that impacts to aquatic resources within the proposed project constituted a finding of significant degradation because waters were identified as ARNI, the adverse effects of the discharge of pollutants, the loss of fish and wildlife habitat and comments that stated the proposed project would have 450 acres of indirect impact.
 - i. Applicant Response: *By letter dated 29 November 2018 in response to the proposed project described by the 2018 public notice, the USEPA stated, "Based on our review of the available information, including substantial revisions to the project as reflected in the public notice dated September 28, 2018, the EPA no longer believes the project would have a substantial and unacceptable impact on ARNI. The applicant acknowledges the USEPA's current belief, based on the revised design presented in the 2018 Public Notice, that the project would not have a substantial and unacceptable impact on ARNI. USEPA's position regarding impacts to the ARNI provides the response to the concerns expressed by the commenter. The final indirect wetland impacts related to the entire project are 354.36 acres, not 450 as claimed by the commenter.*
 - ii. Corps Evaluation: On 28 November 2011 the Corps published a public notice for a previous iteration of the proposed project that would have resulted in direct impact to 59.41 acres of waters of the US. Following

that notice, EPA submitted letters to the Corps pursuant to Part IV, sections 3(a) and 3(b) of the 1992 Clean Water Act (SWA) Section 404(q) Memorandum of Agreement (MOA) between the EPA and the Department of the Army. The 3(a) letter was submitted in January 2012 and the 3(b) letter was submitted in February 2012. In those letters, EPA asserted that the proposed project would have a “substantial and unacceptable impact on ARNI”. Since that time, the project has been revised to include additional bridging. Other minimization measures, such as reducing fill slopes, where possible, have also been incorporated into the project design. The Corps published another public notice on 28 September 2018, describing the currently proposed project. Following that notice, the EPA provided a letter, dated 29 November 2018, stating that “the EPA no longer believes the project would have a substantial and unacceptable impact on an ARNI”. By that letter, the EPA removed the project from potential elevation under the 1992 CWA Section 404(q) MOA. The Corps concurs with the EPA determination that the project will not have a substantial and unacceptable impact on an ARNI.

In regards to the comments about the effects of the discharge of pollutants, the Corps notes that Southwest Florida Water Management District (SWFWMD) has granted a permit for the proposed project. The SWFWMD permit constitutes the State of Florida water quality certification of the project pursuant to Section 401 of the Clean Water Act.

The proposed project would have some effect on fish and wildlife habitat. Measures to avoid and minimize impacts would include the use of bridges at several locations, incorporation of numerous wildlife crossings, fencing and installation of mesh to minimize wildlife access to the roadway, adherence to Eastern indigo snake construction guidelines, pre-construction surveys for gopher tortoises and Eastern indigo snakes, use of clean fill material, and compensatory mitigation for wetland impacts. Both the US Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission have been consulted during the review process and have had no objections to the project, as described in the 2018 public notice.

Regarding commenter’s assertion that the proposed project would result in 450 acres of indirect impact. The proposed impacts to wetlands have been further revised as the project has reached a further phase of design. The currently proposed impacts to wetlands includes 42.40 acres of direct impact and approximately 354 acres of indirect impact. Both direct and indirect wetland impacts were assessed using UMAM. The Corps has determined that the applicants’ proposed compensatory mitigation is sufficient to offset the proposed direct and indirect wetland impacts of the

proposed project. Mitigation of wetland impacts is further discussed in section 8.0 of this document.

- h. Comments were in opposition to the proposed project because information regarding the potential intersections along Phase II of the proposed project were not identified, potential future developers were not identified, and future impacts to waters were unknown. Comments stated that wetland impacts and impacts to streams from the proposed project were not properly accounted for and must be considered in the evaluation. The comments described additional direct wetland impacts that would occur near the mixed-use parcel east of the interchange and the proposed project has a median cut to allow this future foreseeable interchange. The comments suggested the mixed-use parcel would not be constructed without the proposed project and therefore the intersection and the development must be considered in the proposed project's evaluation of impacts to waters. Comments stated the applicant was legally required to construct an interchange at 296+50 for the mixed-use parcel and that direct wetland impacts associated with the construction of the intersection as well as direct impacts from the mixed-use development itself must be considered in the direct impact assessment. The comments also suggested that the locations of future known intersections at Station 354+00 for Sunlake Boulevard (previously Bexley Easement Bridge) and Station 420+00 for Asbel Road must be considered in the evaluation of alternatives and selection of the LEDPA. Comments stated the applicant was legally required to allow a full intersection at 354+00, which if constructed would have direct and indirect wetland effects that must be considered in the evaluation of the proposed project. Other comments stated that impacts from any/all of the potential seven intersections was a reasonably foreseeable future impact that must be considered and additional direct wetland impacts from the ingress and egress from the seven intersections must be considered. The comments suggested that intersections could not be completed without direct wetland impacts and therefore the comments asserted those impacts must be considered in the permit evaluation for the proposed project and consideration of the LEDPA. The comments stated development of agricultural land to residential and commercial properties near Phase II was dependent on the proposed project. The comments were concerned that the direct, indirect and cumulative impacts of the proposed project and the future foreseeable project impacts related to hydrology and water quality, vegetative community, fish and wildlife habitat, and noise and light impacts have not been assessed for the entirety of the proposed project since seven intersections would be part of Phase II. The comments stated that the proposed project would have secondary effects because the proposed project would promote development in the area and lead to changes in land use and population density that would have a measurable environmental change and impact the overall wetland system of the area. Additionally, comments suggested that wetland impacts and UMAM assessments for Phase II were not sufficiently completed because they relied on data

extrapolation and would not be considered the best available scientific information without on-site assessment. The comments suggested the use of historical data and current aerial images do not provide sufficient accuracy for wetland delineation and assessment without on-site investigation.

- i. Applicant Response: *The applicants have identified one potential development east of the Suncoast Parkway that is known to the applicants, Project Arthur. Based on available information regarding Project Arthur and potential changes to the Pasco County's transportation "Vision Map" internal to Project Arthur there may reasonably only be 3 connections (see exhibit provided in the AA Addendum) east of the Suncoast Parkway, not the maximum of 7 as allowed by the County's access management restrictions. The exhibit also illustrates that there may be 4 new connections to SR 52. This compares to Pasco's original Vision Map that shows 3 new connections to SR 52 and 3 north-south roads that would have to cross a limited access Ridge Road (Mod 7) via a grade separation (overpass). The potential for wetland impacts associated with the long embankment slopes to achieve grade separation at the roadway crossing location are potentially substantial. As noted in the Alternatives Analysis Addendum, this indicates that future connections to any of the alternatives, while reasonably foreseeable, are not known with respect to time, number or location. Addressing the potential impacts associated with these potential future connections has therefore been consistently and appropriately addressed as indirect impacts for all alternatives.*

The cumulative impacts associated with the alternative the applicants believe is the LEDPA (Mod 7A) are addressed in a document titled Ridge Road Extension Cumulative Impact Analysis submitted to the Corps September 10, 2019. The conclusion of the Cumulative Impact Analysis was that the Ridge Road Extension project will increase access to the large undeveloped tract of land located east of the Suncoast Parkway (focus area). Access to the periphery of this area is already available via US 41, State Road 52 and SR 54. Considering current development trends, this area would likely be developed with or without the Ridge Road Extension; however, the increased access to this area created by the Ridge Road Extension will likely increase the rate at which the property is developed. Additionally it was concluded, the area of wetlands that may be impacted by the developments was estimated to be small, provide minimal functional value, and would likely be impacted with or without the Ridge Road Extension. Impacts to these wetlands are not substantial in comparison to the improvement in overall public services and safety that will result from the construction of the roadway and the positive environmental benefits of the numerous environmental stewardship projects that have been completed and are proposed by the County.

UMAM assessments were completed for the entire project following an acceptable methodology and submitted to the Corps and subsequently accepted by the Corps. The field reviews completed by Corps and project scientists on November 16 and 17, 2016 provided an opportunity to confirm current wetland conditions for preparation of the UMAM assessment.

There are no legal requirements for Pasco County to construct any interchanges along Ridge Road east of the Suncoast Parkway.

- ii. Corps Evaluation: The change in the roadway designation from limited access to arterial would allow for a maximum of seven signalized intersections within Phase II of the proposed project. The applicants have indicated to the Corps that the number and location of future intersections is unknown at this time and may be less than the number allowed under the arterial roadway classification. The applicants have asserted that they have no legal obligation to construct intersections to accommodate future development and that any such future work would be accomplished by other parties. The applicants' are not proposing impacts for future intersections and there is no assurance that any particular intersection would be granted a permit by the Corps. Additionally, the Corps completed a preliminary jurisdictional determination for wetlands within the limits of construction. However, the Corps expects that some of the wetlands within Phase II may be isolated and previously conveyed that information to the applicants. At that time, however, the applicants opted for a preliminary jurisdictional determination and assumed that all wetlands within the limits of construction are within Corps jurisdiction. If determined non-jurisdictional through an approved jurisdictional determination, then any non-jurisdictional wetlands could be impacted, in the future, without authorization from the Corps. For any future wetland impacts subject to Corps regulation, the Corps would evaluate the proposed project in accordance with federal regulations at the time the project is proposed and would seek appropriate avoidance and minimization of wetland impacts.

The Corps does not concur that future residential development of the lands adjacent to Phase II is dependent on the RRE. Based on media reports, in the first half of 2019, Lennar, one of the nation's largest residential developers, paid \$23.65 million for approximately 2,900 acres, adjacent to Phase II. That purchase was part of the 6,400 acres listed for sale by the Angeline Corporation. The Corps has already received an application for the first phase of a residential development known as Project Arthur, which will be located just north of the planned RRE within Phase II. Additionally, residential developments currently accessed from SR 54 continue to sprawl and have already expanded north of Tower Road, into the previously undeveloped lands south of the proposed RRE

Phase II. All this is occurring prior to any authorization of RRE by the Corps or assurance that the RRE would actually be constructed. It is evident that the areas adjacent to the planned Phase II of RRE will continue to be developed in response to the demand for new homes and development trends in the area and that these developments are not dependent on the RRE. Additionally, residential roads, including Broadporch Run, Bexley Village Drive, Ballantrae Boulevard, and Sunlake Boulevard are already extending north of Tower Road and facilitating residential development within the previous agricultural lands located south of the planned RRE Phase II. Furthermore, other comments submitted for this evaluation, summarized in section 14.h below, assert that Phase II is a low priority for the developers of the Project Arthur, Lennar Homes, and Bexley Trust properties and that the developers in the area of Phase II do not want the proposed project and would rather rely on their own designs for roadways. The Corps does agree that the RRE would afford more efficient transportation for the currently proposed and any future developments, as well as the existing residents in the area, which is consistent with the project purpose of improved mobility within the target area.

For this application, the Corps reviewed both the delineation of waters of the US and the functional assessments of proposed wetland impacts. The Corps completed a preliminary jurisdictional determination on 14 June 2017. Functional assessments were completing using UMAM. The Corps completed a thorough review of the UMAM scores and supporting rationale submitted by the applicants. Several revisions to the scores were made in response to Corps comments. The Corps believes that the final scores of direct and indirect impacts is appropriate based on the condition and location of the wetlands proposed for impact.

- i. Comments suggested the need to impact wetlands has not been demonstrated or that the proposed project was not the LEDPA and recommended alternatives are available such as upgrading SR 52, SR 54, Moon Lake Road, Tower Road and using the Bi-County Expressway as a less damaging alternatives. Other comments stated the applicant did not consider the comparison of the proposed project to the no action alternative. The comments suggested the existing roadways could be expanded to serve the same evacuation purposes with less impacts to waters. Comments stated the expansion of existing roads would have less environmental impact because there would be less direct wetland impacts and impacts to lower quality wetlands that had been previously impacted by road construction. Comments suggested the effects to lower quality wetlands should be part of the consideration of the LEDPA determination since the proposed project would impact high quality wetlands that have little previous disturbance. Comments were concerned that evacuation to the Suncoast Parkway or to US 41 was not logical since these roads would eventually feed evacuees onto SR 52

and 54 and the applicant's expectation that evacuees would shelter with friends and family before reaching these bottlenecks is not supported. Comments stated that alternatives were unreasonably designed to increase the cost to eliminate other alternatives as not practicable. Comments suggested the true cost of alternatives, including ROW acquisition, consultant and survey costs, and mitigation costs, must be considered for each alternative following all applicable guidance. Comments suggested that not all cost associated with the proposed project was included in the cost estimate including bridge approaches or related drainage improvements, and all wildlife crossings. The comments state that sunk monetary cost of partially constructed or completed projects and similar sunk cost of wetland impacts should not be included in the analysis of alternatives to compare the proposed project against and determination of the LEDPA. Comments stated that the Bi-County Expressway could be constructed along mostly donated ROW and connect to I-75 to serve as a better evacuation route. Other comments suggested alternatives should include public transportation options to meet the project purpose. Comments regarding the elimination of alternatives for widening roads beyond six lanes was described as not valid since FDOT had many existing roads that are wider than six lanes. Comments asserted state law does not restrict FDOT to six lanes or even preclude roadways in excess of ten lanes. For this reason the comments suggested that even though SR 54 or SR 52 was planned to be expanded in the Long Range Transportation Plan (LRTP) with a Ridge Road extension, the alternatives analysis should evaluate an expansion to SR 54 or SR 52 without a Ridge Road extension using managed lanes. The comments suggest that FDOT policy or opinion that alternatives greater than six general use lanes as not likely to receive an FDOT permit was not valid to screen alternatives because it was an attempt to violate the Supremacy Clause of the US Constitution, and unnecessarily restricts practicable alternatives. The comments suggested that other FDOT widening projects to greater than six lanes were done to reduce congestion, increase traffic capacity, and provide additional safety to pedestrians, bicyclist, and the motoring public. The comments suggested that Pasco County's Metropolitan Planning Organization (MPO) can add expansion projects to the LRTP so they could be considered for funding or cost-sharing with FDOT, including widening projects greater than six lanes. The comments identified over 124 miles of Florida FDOT roadways over six lanes including other projects in the region. The comments stated the applicant should consider alternatives that include managed lanes on state roads pursuant to state law with the same criteria as evaluating general use lanes. Comments stated that an alternative for the proposed project with less impacts would be an elevated or partially elevated SR 54/52 4-lane expansion funded by several sources that should not be eliminated as an alternative based on cost and cost estimates that have eliminated elevated roadways provided by the applicant are not correct. Comments suggested that funding the elevated or partially elevated expansion of SR 52 and/or SR 54 could serve the same purpose of hurricane evacuation and

additional east-west mobility with less expense and impact less wetlands regardless whether the expansion is general use or managed lanes. The comments suggested the existing alignments of SR 52 and 54 with additional expansion would be more beneficial for evacuations since they have a direct connection to I-75, unlike the proposed project, and are part of a regional planning effort to expand US 19 east to US 301. Comments identified the 2012 Tampa Bay Area Regional Transit Authority (TBARTA) study of SR 54/56 corridor and recommended a six lane SR 54 with a four lane elevated managed roadway from the Suncoast Parkway to I-75, in conjunction with the SR 56 Bruce B. Downs to US 301, to provide an alternative to achieve the overall project purpose with less environmental impacts and costs than the proposed project. The comments stated that alternative 11 should be revisited as an 4-lane SR 54 elevated and tolled from the Suncoast Parkway east to US 41, and 8 lanes containing 2 managed/tolled lanes at grade from Little Road east to the Suncoast Parkway alternative because the Pasco County Planning and Development Department identified the project cost to the applicant would be \$0 with 0.4 acres of wetland impacts. Comments suggest this alternative has state and local support because it provides the “missing link” to the regional road network and must be reconsidered since the cost is no longer unreasonable and wetland impacts are minimal. The comments suggested another alternative (#14) that would require the MPO add two managed lane option to the LRTP and include two lane Tower Road and add two at-grade managed lanes to SR 52. The comments stated this alternative had 14.5 acres wetland impacts and cost \$82.8 million. Comments suggested that alternatives are available to the proposed project that meet the project purpose with less wetland impact and cost to the applicant that would be the LEDPA since the LEDPA determination does not allow for a “better than” determination. That is, the determination of the LEDPA does not allow for the selection of an alternative that had a better evacuation time or more east-west traffic flow but had more wetland impacts.

- i. Applicant Response: *The alternatives included in the 2015 Alternatives Analysis were those defined by the Corps. Other alternatives may exist (as suggested in the comment) but the applicant was not requested to include them in the alternatives analysis and does not believe they would be determined practicable. The applicants have acknowledged there is not an FDOT policy prohibiting widening state roads to greater than 6 lanes. However, two consecutive FDOT District Secretaries for the FDOT district encompassing Pasco County have gone on record stating the department “seldom” widens an arterial to 8 lanes or beyond (2015 Alternatives Analysis, Attachment E, Appendix E-4). The letters from the District Secretaries both cited safety as a concern with arterials wider than 6 lanes. The mobility analysis showed that Alternative 9 (10 lane SR 54) would result in 374 more crashes per year than the No-Build alternative and 434 more crashes per year than the proposed project. This reduction in safety and the associated cost to the public associated*

with it is unacceptable to the County. The County's concern for safety is reflected in an adopted policy of the Pasco County MPO that states "Future road improvements on non-freeway/expressway roads shall be limited to a maximum of six general purpose through-lanes. Exceptions may be made on roads that necessitate special use or auxiliary lanes." The Pasco County Expressway Authority began a feasibility study of the Bi-County Expressway in 1987 and concluded in 1995 that the project was not feasible. The Authority subsequently became inactive. Thus, the Bi-County Expressway is not a viable alternative as it is not included in the LRTP and therefore does not meet one of the basic tenets of the Corps defined project purpose.

The 2012 TBARTA study did not advance beyond the feasibility stage. In 2013 the FDOT received an un-solicited proposal to lease certain ROW needed to construct a tolled elevated expansion of SR 54/56. There was strong public opposition to the project and FDOT ultimately rejected the proposal (<https://neighborhoodnewsonline.net/2014/05/s-r-5456-toll-road-proposal-officially-axed/>). It is noted that Pasco County MPO currently has a study underway known as Vision 54/56. It is a study designed to define a transportation vision for the future of the SR 54/56 corridor, from US 19 to Bruce B Downs Boulevard. The main objective of that study is to develop consensus on the best solutions for addressing congestion, safety and mobility within the SR 54/56 corridor. Per the LRTP, future improvements to SR 54/56 are in addition to the Ridge Road Extension, not a substitute for it. Expanding the limits for Alternative 11 is beyond the Corps defined scope of the Ridge Road Alternatives Analysis. Alternative 14 had minimal mobility improvements and minimal improvements to evacuation time. Alternative 14 was not one of the alternatives found to be practicable.

Cost estimates for all alternatives were consistently prepared following the same methodology that was concurred with by the Corps.

The applicant acknowledges that some of the Corps defined alternatives that were analyzed such as widening SR 52 and/or SR 54 may result in less damage to the environment but the 2015 Alternatives Analysis concluded they were not practicable and therefore, by definition, could not be considered in determination of the LEDPA. After carefully reviewing the 2015 Alternatives Analysis the Corps preliminarily determined that the applicant's proposed alternative Mod 7 was the Least Environmentally Damaging Practicable Alternative. The selection of what the applicants believe is the LEDPA is not a "better than" selection as alleged in the comment. Of all the practicable alternatives, Alternative Mod 7A is tied with Mod 7 for the least amount of wetland impacts.

- ii. Corps Evaluation: The Revised Alternatives Analysis submitted by the applicants does consider a no action alternative, which is identified as Alternative 1. The Corps' evaluation of alternatives, including the no*

action alternative, is available in section 5.0 of this document. The screening criteria for the alternatives included impacts to wetlands. However, the determination of practicability is not solely dependent on the amount of wetland impact as there are several screening criteria. The Corps acknowledges that some of the alternatives considered would result in less impact to wetlands than the applicants' preferred alternative. However, those alternatives were found to be not practicable. All alternatives were evaluated using the same methodology, as laid out in the Revised Alternatives Analysis and the subsequent AA Addendum. Some commenters stated that certain costs, such as acquisition, mitigation, and consulting costs, were not included in the alternatives evaluation. The Corps notes that the methodology for estimating costs was submitted to the Corps for review on 19 September 2012 and was subsequently updated in response to Corps comments. Estimation of costs for each alternative was broken down into three categories that include construction cost, ROW cost, and mitigation cost. Construction cost estimates utilized FDOT cost estimate tables for District 7, which includes Pasco County. This appears to have been the best information available at the time the Revised Alternatives Analysis was completed. The costs were updated in the AA Addendum submitted to the Corps in 2019 based on refinement of the estimated wetland impacts and associated compensatory mitigation. Section 2.0 and Attachment B of the Revised Alternatives Analysis both provide information regarding cost. The estimated cost of ROW acquisition and the cost of compensatory mitigation to offset wetland impacts were both provided in the analysis. Other costs, such as engineering, are likely inherent to the cost estimate tables from FDOT, which were used for the estimates. The Corps believes that the methodology for estimating costs has been consistently applied to the alternatives and that the findings are sufficient for comparison of the alternatives. The Corps also notes that it possible that some alternatives favored by some of the commenters, such as widening existing roads, could also have additional costs that have not been captured. For example, the cost of safety monitoring and traffic management would be expected to be much higher for widening existing roads, such as SR 52 or SR 54, as compared to constructing a road through undeveloped land, such as the RRE.

Some comments stated that the quality of wetlands should be considered when determining the LEDPA. The Corps notes that many evaluations consider the potential impacts of several alternatives. Often, alternatives under consideration may not be under the ownership or control of an applicant. It is typically not practical for an applicant to complete wetland delineations, functional assessments, and provide right of entry to the Corps, for numerous alternatives under consideration. Information such as the National Wetlands Inventory, National Hydrographic Data, publicly available property information, aerial photography, and the like are

utilized to develop an alternatives analysis. This same approach is also applied to an applicant's preferred alternative so that it is neither unfairly advantaged nor disadvantaged based on access to higher quality data such as site specific wetland delineations and functional assessments of individual wetland areas. Comparison of qualitative assessments for wetlands within every alternative is not feasible.

Some commenters asserted that use of the RRE would not be a logical evacuation route as it would convey traffic back to SR 52 and SR 54. The Corps discussed this concept with Pasco County during previous meetings. The County stressed the importance of moving people out of the coastal hazard area, which is more likely to be affected by storm surge during a tropical storm. Although not ideal, shelters of last resort do provide legitimate options during an emergency response. It is a reality that schools, places of worship, football stadiums, and a variety of less than ideal accommodations are sometimes utilized during emergency situations. Additionally, depending on the approach a storm, access to the Suncoast Parkway via an RRE would provide one additional route north or south to evacuate the immediate vicinity of coastal Pasco County.

The applicants' response regarding the Bi-County Expressway indicates that it is not a viable option.

Some commenters stated that it is not valid to eliminate alternatives that included widening roads beyond six lanes. Comments also asserted that numerous State Roads have been expanded beyond six lanes. The Corps notes that none of the alternatives were eliminated solely because they would have exceeded six lanes. Alternatives have been evaluated against a number of screening criteria, which include logistics. As indicated in the applicants' response, above, the State does sometimes allow expansion of a state road beyond six lanes. As noted by the applicants, two FDOT District Secretaries, for the FDOT district encompassing Pasco County, have gone on record stating the department "seldom" widens an arterial to eight lanes. The Corps also notes that the County's Long Range Transportation Plan (LRTP) is also developed in partnership with the FDOT. The Corps believes that it would be a legitimate logistical obstacle for the County to update its LRTP, in partnership with FDOT, for an alternative that the FDOT has clearly indicated they do not support. Furthermore, FDOT, the transportation authority within Florida, has further commented that a grid network of roadways has been demonstrated to provide better overall mobility than widening a limited number of roads. The FDOT also cited safety concerns associated with widening roads beyond six lanes, which is contrary to the position asserted by some commenters, that expanding beyond six lanes would improve safety. This correlates strongly with the results of the mobility study, cited in the applicants response, above, which indicates that Alternative 9 (10 lane SR 54) would result in 374 more crashes per year than the no action alternative and 434 more crashes per year than the applicants preferred alternative, Alternative Mod 7a.

Commenters provided several statements regarding alternatives, associated costs, and the LEDPA determination. The Corps notes that the Revised Alternatives Analysis was developed by the applicants and incorporated several recommendations from the Corps. The Corps is satisfied that the Revised Alternatives Analysis includes an appropriate level of analysis for the numerous alternatives considered.

5. Historic Properties

- a. Comments related to potential archaeological and historic properties located within the proposed project area and the need for surveys, assessments, and consultation with the state and tribes. Comments stated that archaeological resource surveys for the proposed project as described by the 2011 public notice were not completed for the entirety of the proposed project. Other comments suggested the surveys completed for the proposed project as described by the 2011 public notice were outdated and no longer valid. Comments stated the proposed project as described by the 2011 public notice was not in the public interest for impacts to historic properties.
 - i. Applicant Response: *Comments associated with the 2011 public notice have been addressed by the completion of additional surveys, assessments and consultation with the SHPO subsequent to the 2011 public notice.*
 - ii. Corps Evaluation: As discussed in sections 10.3 and 10.4 of this document, several cultural resource assessment surveys (CRAS) have been completed to assess potential resources within the permit area. The Corps does not concur that the previous surveys are outdated as the permit area has not been subject to activities that would introduce new resources into the permit area or redistribute existing resources within the permit area. As detailed in sections 10.3 and 10.4 of this document, known historical and cultural sites within the permit area have been considered, as have the findings of multiple CRAS, to determine whether or not the proposed project would affect historic or cultural resources. The Corps' coordination with the Florida State Historic Preservation Officer (SHPO) resulted in a letter, dated 10 October 2016, stating that no historic properties would be affected. Similarly, the Corps' coordination with the Seminole Tribe of Florida – Tribal Historic Preservation Office (STOF-THPO) resulted in letter, dated 27 October 2016, stating that the STOF-THPO has no objections to the proposed project.
- b. Comments asserted that the proposed project would impact site 8PA668. The comments stated surveys completed for the proposed project were not adequate to substitute for previous Level I and Level II surveys completed for the area. The comments suggested the proposed project must completely avoid impacts to 8PA668, and a shift in the ROW to completely avoid the 8PA668 site would have

additional wetland impacts that would need to be considered. However, the comments suggested the shift in the alignment for the proposed project to avoid site 8PA668 did not correlate with expected wetland impacts, and questioned if the alignment was shifted far enough south to avoid impacts to 8PA668 and if the wetland boundaries changed. The comments calculated a ROW shift between 12-37 feet south, which the comments suggested would impact the B33 series and the 8PA668 site. Additionally, the comments stated the shift in the alignment for the proposed project for Pond 102-C (Pond A-5 or FPC A-5) was still within the 8PA668 site and would impact archaeological deposits in B33. Comments were concerned the Archaeological Consultants, Inc. survey for the alignment adjustment did not appropriately consider and survey the east side of 8PA668, misidentified the boundary of 8PA668, mislabeled Pond 2 as FPC A-5, and misidentified habitat as an area of planted pine between Stations 315+00 and 345+00. The comments recommended complete avoidance of B33. The comments suggested that the ROW shift was not adequately explained and did not have the intended purpose to avoid impacts to the archaeological sites.

- i. Applicant Response: *A Cultural Resource Assessment Survey (CRAS) entitled Archeological Survey and Evaluation of Selected Portions of the Ridge Road Extension Project in Pasco County was completed in October 2013 to address the concerns regarding potential impacts to 8PA668. The alignment adjustment to minimize potential impacts to 8PA668 was made well before the CRAS was completed and was specifically limited to that which would not increase wetland impacts. An additional adjustment to the project design to avoid impacts to 8PA668 was the reconfiguration of Flood Compensation Area A-5. The reconfiguration of FCA A-5 undertaken to reduce potential impacts to 8PA668 was completed prior to the 2018 public notice and the reconfiguration was completed without additional direct wetland impacts. After review of the CRAS and supplemental information provided, SHPO has concurred with the findings of the CRAS of no historic properties affected.*
- ii. Corps Evaluation: The Corps reinitiated consultation with both the Florida SHPO and STOF-THPO by separate letters dated 3 March 2016, to assess potential effects to cultural and historical resources within the permit area. Sites 8PA70 and 8PA668 were specifically referenced in both letters. The October 2013 CRAS, which was completed after the alignment was adjusted, was included with the Corps' requests for consultation. The Corps participated in a teleconference with the applicants, their consultants, and SHPO staff to specifically discuss potential effects to site 8PA668. Following that discussion, Floodplain Compensation Area (FCA) A-5 was reconfigured to avoid potential impacts to site 8PA668. The updated drawings depicting the reconfiguration of FCA A-5 were provided to both SHPO and STOF-THPO. Shortly thereafter, both the SHPO and STOF-THPO provided

letters to the Corps with no further objections, thereby concluding consultation for cultural and historic resources. The Corps is satisfied that the appropriate State and Tribal agencies have concurred that the currently proposed project would not adversely affect site 8PA668.

- c. The State Historic Preservation Office (SHPO) provided a comment letter dated 17 April 2012 that indicated the project area was previously reviewed by the SHPO (DHR No. 2010-2651) and opined the proposed undertaking was unlikely to affect significant historic properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). By letter dated 8 May 2012 the SHPO indicated additional information regarding the proposed project was identified and additional survey work was required for previously un-surveyed portions of the proposed project in order for the SHPO to review impacts to cultural resources and make a determination of NRHP eligibility for 8PA70. The letter stated all project activities should avoid the NRHP eligible site, 8PA668 and further consultation would be required if there would be impacts to 8PA668. By letter dated 10 October 2016 the SHPO stated that based on the submitted CRAS and the evaluations and findings within, the SHPO concurred with the finding of no historic properties affected per 36 CFR 800.4(d)(1).
 - i. Applicant Response: *A Cultural Resource Assessment Survey was completed in October 2013 to address the concerns expressed in the SHPO letter regarding 8APA70 and 8PA668. As noted in the comment summary SHPO has concurred with the findings of the CRAS of no historic properties affected.*
 - ii. Corps Evaluation: The Corps concurs with the applicants' response. The Corps reinitiated consultation with the Florida SHPO by letter dated 3 March 2016, to assess potential effects to cultural and historical resources within the permit area. Sites 8PA70 and 8PA668 were specifically referenced in the letter and the 2013 CRAS was included as an attachment. By letter dated 10 October 2016, the SHPO concurred with the finding of no historic properties affected. The Corps is satisfied that the appropriate State agency has concurred that the currently proposed project would not adversely affect sites 8PA70 and 8PA668.
- d. The Seminole Tribe of Florida's Tribal Historic Preservation Office (THPO) provided a comment letter (THPO-009124) dated 22 March 2012 and indicated they received the 2011 public notice and stated that the THPO would need to review the results of a CRAS for the proposed project prior to providing additional comments. By letter dated 7 May 2012 the THPO stated that additional survey work needed to be conducted in the area around site 8PA70 as well as in any areas of the area of potential effect which have not yet been systematically tested for cultural resources in order to ascertain eligibility status for the NRHP. The THPO requested that archaeological site 8PA668 be avoided by the proposed project and further consultation would be required if there would be impacts to 8PA668. By letter dated 27 October 2016, the THPO stated no

objections to the proposed project and requested notification if any archaeological, historical, or burial resources are inadvertently discovered during the construction process.

- i. Applicant Response: *A Cultural Resource Assessment Survey was completed in October 2013 to address the concerns expressed in the THPO letter regarding 8APA 70 and 8PA668. As noted in the comments summary THPO has stated no objections to the proposed project.*
 - ii. Corps Evaluation: The Corps concurs with the applicants' response. The Corps reinitiated consultation with the STOF-THPO by letter dated 3 March 2016, to assess potential effects to cultural and historical resources within the permit area. Sites 8PA70 8PA668 were specifically referenced in the letter and the 2013 CRAS was included as an attachment. By letter dated 27 October 2016, the STOF-THPO stated they have no objections to the proposed project. The Corps is satisfied that the appropriate Tribal agency has concurred that the currently proposed project would not adversely affect sites 8PA70 and 8PA668.
- e. The American Indian Movement (AIM) submitted a comment by letter dated 22 March 2012. The AIM was opposed to disturbance of ancestral sites in the path of the proposed project. The AIM requested consultation prior to archeological fieldwork to identify potential archaeological and historic properties. The comment wanted to ensure AIM was consulted as to the findings with respect to the value of the site [PA00668] and the effect the undertaking would have on the site and other potential sites of traditional religious and cultural significance. The AIM requested the proposed project avoid sites with the potential for listing on the NRHP.
 - i. Applicant Response: *Both SHPO and THPO have had their concerns regarding potential impacts to 8PA668 satisfactorily addressed as evidenced by their letters dated 10 October 2016 and 27 October 2016, respectively. The applicants believe concerns expressed by AIM have thus been addressed appropriately.*
 - ii. Corps Evaluation: The Corps notes that PA0068 is older designation number for the Bexley site, which is currently referred to as site 8PA668. To be clear, PA0068 and 8PA668 are the same site. As previously discussed, the Corps completed consultation with both SHPO and STOF-THPO. Additional investigation in the vicinity of site 8PA668 was completed for the 2013 CRAS. The STOF-THPO, as well as the SHPO, had no further objections to the proposed project or concerns regarding this site. As such, the Corps believes that AIM's concerns regarding site 8PA668 have been adequately addressed.

6. Wildlife Values

- a. Comments were submitted in opposition to the proposed project because of the value of the area as important habitat for bird species and other wildlife species and the importance of protecting natural lands from development. Comments

stated the proposed project would directly and indirectly impact high quality and highly valuable natural habitat for wildlife. Comments stated the proposed project would adversely affect a large number of bird species, gopher tortoise, deer, raccoon, armadillo, fox, coyote, bear, alligator, aquatic amphibians, snakes, and others. Annual Christmas Bird Counts from the area recorded between 57-71 species of birds in the Serenova Tract from 2007 to 2015. Comments were concerned about the proposed project increasing development in the area which would lead to a decrease in natural areas and further impacts to wildlife affecting the survival and migration of wildlife that utilize the area.

- i. Applicant Response: *In response to a USACE request subsequent to the submittal of the permit application, wildlife surveys were performed for the entire alignment including within the Serenova Tract in 2013. The results of these surveys were the basis for submittal of a Biological Assessment (BA) to USACE in December 2013 and for an updated BA that was submitted to USACE in January 2019. USACE completed its evaluation on the impacts the proposed project may have on species protected by the Endangered Species Act and forwarded the BA to USFWS on February 27, 2019. USACE findings were the project may affect, but is not likely to adversely affect the wood stork and gopher tortoise and may affect and is likely to adversely affect the indigo snake. Based on their findings USACE requested that USFWS initiate consultation under Section 7 of the ESA. USFWS issued its Biological Opinion in September 2019. It confirmed the Biological Assessment with the exception of a reduction in the take of Indigo Snakes. The take was reduced from one snake and one clutch of eggs to one snake or one clutch of eggs. The Cumulative Impacts Analysis report addressed the cumulative effects of the project on non-protected species. The conclusion was that cumulative impacts to wildlife resulting from construction of the roadway are not anticipated to be substantial. The assessment area is not currently used by species that require large undeveloped home ranges. The species currently present are those that can tolerate isolation from other large blocks of habitat and that can tolerate some interaction with humans. The roadway has been designed to minimize both direct, indirect and cumulative impacts by maintaining habitat connectivity through the use of wildlife crossings under the road, and by excluding wildlife from entering the roadway through the use of exclusionary fencing.*
- ii. Corps Evaluation: The applicant has provided extensive documentation regarding wildlife in the project area, including for Federally protected, threatened and endangered species. The Corps considered all information provided by the applicant, state and Federal agencies, other stakeholders, and by public comment in conducting our assessment of effects to fish and wildlife. Information that was relevant to Federally listed species was then reviewed by the USFWS whom issued a BO in September 2019 indicating their concurrence with the Corps effect

determination. This BO concluded that the project will not jeopardize any threatened or endangered species. While it is likely that wildlife in the area will be disturbed and temporarily displaced by the proposed project, it is expected that they will still utilize the areas surrounding the project. . The applicants incorporated numerous minimization measures into the project design, such as, for example, the use of retaining walls to eliminate side slopes to reduce the project footprint, incorporating 19 bridges, and 11 wildlife corridors/crossing to maintain wildlife movement throughout the project corridor. These efforts will allow for continued movement of species north and south of the RRE corridor.

In addition, in analyzing the proposed project's indirect effects, the Corps considered impacts that may occur as a result of the proposed RRE extending greater than 300-feet north and 300-feet south of the construction limits. Pasco County's website includes several public documents (Comprehensive Plan, Long-range transportation plan, etc.) that indicate the area to the east of the Suncoast Parkway is slated for development. Research into the plans and review of land use and zoning documents indicate development (Project Arthur, Project Excalibur, Bexley Ranch, etc) will occur even without the construction of the proposed RRE. For example, there are several roads planned within the noted area that would facilitate travel with or without the construction of RRE. The western side of the project from the Suncoast west to the existing terminus of Ridge Road would largely be protected from development as a majority of this area is within the Starkey Wilderness Preserve. The Starkey Wilderness Preserve is under management of the SWFWMD and is protect by a conservation easement. In this area Phase I of RRE would be limited access with no option for intersections.

- b. Comments related to the concern of habitat fragmentation, vehicular traffic, and additional noise from the proposed project and its impact on wildlife that utilize the area. Comments stated the proposed project would have negative impacts on wildlife during and after construction of the proposed project including habitat loss, decrease in habitat quality, habitat fragmentation, decrease in wildlife mobility, increase in roadway mortality, increased access for humans to hunt and poach wildlife, and increased risk of invasive and exotic species along the corridors. Comments stated the time period of construction where disturbance from clearing, grading, and construction was not defined. Comments stated the proposed project would interfere and complicate prescribed burns that are required to manage habitat for wildlife.
 - i. Applicant Response: *The size and locations of under-crossings included in the project design have been coordinated with USFWS to minimize the effects of upland habitat fragmentation caused by the roadway. Bridges have been included at wetlands throughout Serenova that will minimize*

the effects of wetland habitat fragmentation. Fence that includes snake exclusion mesh is included along the entire project to reduce the potential of roadway mortality. The fence will also serve to help prevent access from the roadway to adjacent lands thereby reducing the risk of poaching native species or introducing invasive species. The increased access to Serenova the multi-use trail will provide is a public benefit as it will enhance the public's ability to enjoy the passive recreation opportunities available within Serenova.

The SWFWMD Land Resource Department has indicated that the access points provided within Serenova will facilitate access for heavy equipment and emergency response vehicles for the purpose of prescribed burning or fighting wild fires. Burning in the vicinity of the RRE Project will pose no more of a problem than may be encountered with habitat management along SR 52 or SR 54. In fact, SWFWMD management of habitat adjacent to SR 52 and SR 54 will be more difficult because of the development along these roads. There will be no such development along the RRE Project within the SWFWMD managed lands. In a letter from SWFWMD to Pasco County dated June 25, 2009, the District stated: "Based on District staff analysis and internal discussions; it does not appear that the Ridge Road Extension (RRX) will impede in any meaningful way our ability to access areas for prescribed burning. While the road does make movement across it inconvenient the planned under-crossing should sufficiently accommodate District fire equipment."

- ii. Corps Evaluation: The applicants have incorporated 19 bridges and 11 wildlife crossings throughout the project corridor to facilitate wildlife movement north and south of the RRE corridor. In addition, the applicants are fencing the entire ROW and the fence will include a wildlife exclusion mesh so that animals are less likely to be subject to vehicle strikes. Both the Corps and the USFWS have reviewed the plans and determined the fencing and mesh were appropriate to minimize adverse effects to species. As the applicant stated above, the SWFWMD provided a letter to Pasco County indicating the proposed roadway would be an additional obstacle but would not prevent prescribed burns, or overall management, within the Serenova Tract. In addition, the state has issued an ERP for the proposed project, which indicates State of Florida questions or concerns regarding the project effect on management of the preserve have been resolved.

- c. Comments stated that the USFWS was required to assess critical habitat on 7,000 acres of Phase II in order to determine if the proposed project would jeopardize the continued existence of species listed as endangered or threatened under the Endangered Species Act or if the proposed project would result in likelihood of the destruction or adverse modification of a habitat which is

determined by the Secretary of Interior or Commerce to be critical habitat under the Endangered Species Act pursuant to the 404(b)(1) Guidelines.

- i. Applicant Response: *On November 16 and 17, 2016, representatives from USACE, USEPA, USFWS and FFWCC completed a field review of the entire length of the project including the segment east of the Suncoast Parkway. Based on extensive coordination with the USFWS, the applicants do not believe that the area east of the Suncoast Parkway to be critical habitat.*
 - ii. Corps Evaluation: There is not federally designated critical habitat present within or adjacent to project boundaries. The BO states that the project would not jeopardize the continued existence or destroy or adversely modify critical habitat. It's relevant to note that the Corps worked with the USFWS to determine which species to survey for and when to survey. The Corps did consider the cumulative effects of the proposed action on wildlife, as discussed in Section 9. The final determination was that some aspects of the project would have a minimal detrimental effect on wildlife. Additional information on can be found in both the public interest review and the cumulative impacts sections.
- d. Comments were concerned with the impact on threatened and endangered species. Comments stated the proposed project would negatively affect federally-listed species. Comments said the proposed project as described by the 2011 public notice contained insufficient information in the biological assessment to make an informed decision. Comments stated the surveys completed for the proposed project as described by the 2011 public notice were invalid, did not follow USFWS protocol, and were outdated and scientifically flawed. Similar comments were made regarding the proposed project as described by the 2018 public notice. Comments suggested that insufficient data was available for agencies to provide appropriate input. Comments stated the wildlife surveys used for the biological assessment were outdated, did not follow the approved survey protocols, and new surveys must be completed. Comments stated that habitat conditions have changed since the previous surveys were completed in 2013 due to active habitat management in the area. For this reason the comments stated that new surveys should be completed using current methodologies to identify changes in habitat from previous surveys and determine if species had migrated to the proposed project area. The comments stated that USFWS had previously suggested wildlife surveys are generally only good for three years and some USFWS survey protocols identified a time period for which they are valid. There was concern that effects determinations with the USFWS were based on wildlife surveys that did not include the entirety of the proposed project. Comments stated that wildlife surveys completed by extrapolation do not follow wildlife survey requirements and were not valid. Comments stated that due to the modification of the proposed project as described by the 2018 public notice, a large area of indirect and cumulative

effects on wildlife in the Phase II area must be considered. The comments stated the rate of habitat loss and susceptibility to the species must be assessed as a cumulative effect of the indirect consequences of the proposed project due to the proposed project increasing capacity with additional intersections in a new location. The comments suggested the proposed project had a clear link to or was planned to promote subsequent development in Phase II, which would render the proposed project's secondary and cumulative impacts great in the consideration of threatened and endangered species. Comments stated the modification to the proposed project rendered the USFWS's 2006 biological opinion and subsequent biological assessments submitted by the applicant as of 10 July 2019 as invalid because they were outdated and based on surveys that were no longer valid. The comments stated the applicant's attempt to update the biological assessments do not constitute the best available scientific data or represent an update to reflect current conditions. The comments suggested the use of historical data and current aerial images do not provide sufficient accuracy for wildlife and habitat surveys without on-site investigation. Comments stated that USFWS could not complete consultation with the Corps for endangered species because the compensatory mitigation plan had not been finalized or used appropriate information to determine impacts, especially in Phase II. The comments suggested that a LEDPA could not be determined without valid wildlife surveys. Comment were concerned that agency consultation had not occurred and questioned if or requested that consultation with USFWS, USEPA, and/or National Marine Fisheries Service (NMFS) be completed to seek concurrence, provided comment, and/or approved the proposed project.

1. Wood stork – The comments stated that wood stork surveys must be completed in accordance with the requirements of the 2008 USFWS Wood Stork Key for Central and North Peninsular Florida. The comments stated that wood stork colonies and foraging behaviors can change in short time frames and habitat management practices have improved potential foraging habitat that necessitates more current surveys for the species and potential habitat.
2. Florida scrub jay – The comments asserted the current suitability of the scrub-jay habitat should be re-assessed due to potential for habitat development due to additional habitat management activities that occurred in the Serenova Tract. The comments stated the interrelated and independent effects of the proposed project would impact scrub jay habitat that had not been surveyed in Phase II. The comments stated the wildlife surveys for the specie were outdated and not valid because species could have more recently dispersed to the project area because known populations have been identified in the Starkey Wilderness Preserve and others are within the dispersal range of known locations of the specie.

3. Eastern indigo snake – The comments referenced the 25 January 2010 Eastern Indigo Snake Programmatic Effect Determination Key and the Survey Protocol for the Eastern Indigo Snake in North and Central Florida. The survey protocol indicates the results would be valid for two years from the date of completion. The comments stated the species disperse long distances and could reoccupy formerly surveyed areas and therefore recommend up to date surveys.
 4. Striped newt - The comments asserted the current suitability of the striped newt habitat should be re-assessed due to potential for habitat to increase or decrease from previous surveys.
 5. Plant surveys - The comments asserted the current suitability of the plant species should be re-assessed due to potential for habitat to increase or decrease from previous surveys.
 6. Red cockated woodpecker - The comments asserted the current suitability of the red cockated woodpecker habitat should be re-assessed due to the potential for habitat development since the most recent survey. Also, the comments stated the species could have dispersed to the project area since known habitat is present within the project area, and known populations are within documented dispersal range for the specie. The comments stated the biological assessment's measured distance of the nearest cockated woodpecker colony was incorrect. The biological assessment described the distance was 35 miles and the comments asserted the distance was 26.7 miles. The comments also expressed disagreement with the biological assessments statement regarding the species dispersal characteristics. The comments assert that the species dispersal distance of up to 210 miles have been documented. The comments stated the interrelated and independent effects of the proposed project would impact red cockated woodpecker habitat that had not been surveyed in Phase II. Combined, these concerns with the biological assessment were used to support the comments assertion that additional wildlife surveys were needed following USFWS methodology and the interrelated and independent effects for the entirety of the proposed project must be determined.
- i. Applicant Response: *In response to a USACE request subsequent to the submittal of the permit application, wildlife surveys were performed for the entire alignment including within the Serenova Tract in 2013. The results of these surveys were the basis for submittal of a Biological Assessment (BA) to USACE in December 2013 and for an updated BA that was submitted to USACE in January 2019. USACE completed its evaluation on the impacts the proposed project may have*

on species protected by the Endangered Species Act and forwarded the BA to USFWS on February 27, 2019. USACE findings were the project may affect, but is not likely to adversely affect the wood stork and gopher tortoise and may affect and is likely to adversely affect the indigo snake. Based on their findings USACE requested that USFWS initiate consultation under Section 7 of the ESA. USFWS issued its Biological Opinion in September 2019. The Biological Opinion confirmed the results of the Biological Assessment with the exception of a reduction in the take of Indigo Snakes. The predicted take was reduced from one snake and one clutch of eggs to one snake or one clutch of eggs.

Cumulative impacts for the modified project were assessed in the document titled Ridge Road Extension – Cumulative Impacts Analysis submitted to the Corps on September 10, 2019. The analysis concluded that the Cumulative impacts to wildlife resulting from construction of the roadway are not anticipated to be substantial. The assessment area is not currently used by species that require large undeveloped home ranges. The BA shows that the species currently present are those that can tolerate isolation from other large blocks of habitat and that can tolerate some interaction with humans. The roadway has been designed to minimize both direct, indirect and cumulative impacts by maintaining habitat connectivity through the use of wildlife crossings under the road, and by excluding wildlife from entering the roadway through the use of exclusionary fencing. The proposed Ridge Road Extension does not include exits from the roadway as it crosses the Serenova Tract of the Starkey Preserve and the land management agency has a commitment to maintaining habitat quality on the Preserve.

- ii.* Corps Evaluation: The Corps requested updated surveys for the proposed action area on 12 October 2012. The applicant provided a BA with the updated information in December 2013 and an additional updated BA in January 2019. The Corps reviewed the information and provided a copy to the USFWS along with a request to initiate formal consultation. In response the USFWS indicated the data was sufficient for their review and deemed the consultation request complete. The USFWS provided a BO on 20 September 2019.

- e. The Florida Fish and Wildlife Conservation Commission (FWC) provided a letter dated 6 February 2012 that identified the proposed project and offered assistance to the Corps if there were any outstanding issues related to fish and wildlife resources. By email on 9 April 2012 the FWC indicated the applicant's Wildlife Survey Protocols were sufficient for the species identified in the report. The FWC recommended adding language describing their study plan and

identified State and Federally listed species that may occur within the proposed project area. By email on 25 May 2012, the FWC stated that questions regarding Indigo snake would be deferred to the USFWS. The FWC provided guidance for gopher tortoise burrow surveys, and the FWC recommended surveying the proposed project area for suitable Sherman's fox squirrel habitat and Florida sandhill crane nesting habitat to determine State permitting requirements and to avoid the potential for take of these species. By email on 4 December 2016 the FWC provided six recommendations for the proposed project including:

1. Plant appropriate native pine and hardwood trees within the outside recovery zone of Ridge Road as a barrier to reduce roadway noise, light, impacts on wildlife and recreation users of the public lands along the roadway.
 2. Erect nest boxes for the State Threatened Southeastern American kestrel along appropriate areas of the ROW of Ridge Road, Serenova, and on lands proposed for wetland mitigation.
 3. Install "Amber Alert" signs along Ridge Road for use in speed limit reductions and public information as an aid for highway safety by reducing speed limits during controlled burning for proper land management on public lands along the ROW.
 4. Set up defined inspection protocols for the animal proof fencing erected along Ridge Road to insure quick response and repair after damage to fencing caused by falling trees, vandalism, and traffic accidents.
 5. The Mowing plan along Ridge Road should consider the protection and proliferation of State and Federally listed plant species. The plan could also include relocation of listed plants from the existing ROW take area and other disturbed location such as Drainage Retention Area locations prior to construction following applicable State and Federal regulations.
 6. A portion of the shoreline of required wet Drainage Retention Areas (DRAs) for stormwater storage and attenuation could be designed and constructed with shallow side slopes, deeper areas to maintain fish and invertebrates during low water, and revegetated with marsh plants and wetland trees to serve as additional habitat along the roadway.
- i. Applicant Response: *The applicants have performed surveys for state species, including gopher tortoises, and coordination with FWC to obtain take permits as appropriate is ongoing.*

On November 16 and 17, 2016, representatives from USACE, USEPA, USFWS and FFWCC completed a field review of the entire length of the project including the segment east of the Suncoast Parkway. The FWC comments referenced were prepared after the field review. The applicants provided responses to the FWC comments as part of an RAI response dated February 6, 2017. FWC provided comments to

SWFWMD on August 30, 2018 as part of the state permitting process. The applicants are committed to following the FWC August 30, 2018 Comments and Recommendations.

By letter dated 25 January 2012 and 4 October 2018, NMFS stated that it does not appear that the project would directly impact any NMFS trust resources. The road extension would cross upstream portions of the Pithlachascotee and Anclote Rivers, which drain to the Gulf of Mexico. The road extension could result in an increase in the amount of sediment, metals, oil and grease, and other pollutants reaching estuarine and marine habitats utilized by marine fishery resources at the mouth of the Pithlachascotee and Anclote Rivers and in the Gulf of Mexico. Therefore, NMFS recommended that stormwater treatment systems be designed to prevent degraded water from reaching estuarine and marine habitats. In addition, best management practices should be employed during road construction to prevent siltation of these aquatic habitats.

Applicant Response: All stormwater from the roadway and bridges is captured and routed to treatment ponds prior to discharge. All ponds were designed in accordance with SWFWMD requirements and the SWFWMD has issued an Environmental Resource Permit for the project (No. 18792.006). Discharge structures from the ponds include skimmers to reduce the potential for oil and grease discharges.

During construction, the contractor must comply with the erosion and sediment control plans that are a part of the ERP permit plans as well as comply with General Conditions c and d included in the ERP. These general conditions require implementation of performance based erosion and sediment control best management practices and that the contractor obtain an NPDES stormwater general permit.

- ii. Corps Evaluation: The project design incorporated the comments of the FWC and the comments noted above were made part of record.

- f. Comments stated the proposed project must protect Essential Fish Habitat (EFH) and comply with the Magnuson-Stevens Act. Comments stated that consultation with NMFS must occur to address potential adverse effects of the proposed project on the Pithlachascotee River and the Anclote River. By letter dated 25 January 2012, the NMFS commented on the proposed project as described by the 2011 public notice, that compensatory mitigation in the form of preservation would result in a loss of wetland functions and not offset the project's proposed wetland impacts. By letter dated 4 October 2018, NMFS stated the concerns stated in the 25 January 2012 letter regarding compensatory mitigation had been addressed by the proposed project as described in the 2018 public notice. Similarly, NMFS provided comments in the letter dated 25 January 2012 and expressed concerns the proposed project might alter the local hydrology with potential downstream effects to estuarine habitats. By letter dated 4 October 2018, NMFS stated the concerns were addressed due to the lengthening of three

of the proposed bridges and the addition of twelve new bridges that span wetlands.

- i. Applicant Response: *Applicants concur that the lengthening of some bridges and addition of new bridges addresses concerns regarding the protection of Essential Fish Habitat.*
 - ii. Corps Evaluation: Changes to the project design have occurred to address NMFS comments and concerns. The above referenced comments are noted and made part of record. EFH is discussed further in Section 10.2 of this decision document.
- g. Comments related to the proposed project as described by the 2011 public notice stated the proposed project would have minimal impact on natural lands and wildlife. Comments identified the wildlife crossings, culverts, fencing, and bridged portions as components of the proposed project to minimize adverse environmental effects and effects to wildlife.
- i. Applicant Response: *The project features intended to reduce impacts on natural lands and wildlife as described by the 2011 public notice have been enhanced by the features described by the 2018 public notice. The applicants added bridging of the wetlands within Serenova, additional upland wildlife under-crossings and snake exclusion fence throughout Phase II of the project.*
 - ii. Corps Evaluation: Comments noted. The project described in the 2018 public notice included additional bridges and wildlife crossings to further minimize effects to wetlands and wildlife.
- h. By letter dated 24 January 2012 in response to the proposed project described by the 2011 public notice, the USFWS stated they would review wetland mitigation and potential effects on wood storks once the compensatory mitigation plan was approved by the Corps and USEPA to determine if the mitigation minimizes the risk of take to an insignificant or discountable level.
- i. Applicant Response: *Pursuant to the USACE's 2008 Compensatory Mitigation for Losses of Aquatic Resources Final Rule, the applicants will provide the appropriate type and amount of mitigation for Phases 1, 2, and a portion of the Suncoast Parkway Interchange, through the purchase of the appropriate type and amount of wetland credits needed to compensate for lost wetland functions (including wood stork foraging habitat function) from the Old Florida Mitigation Bank or other Corps approved bank. The Corps has accepted the proposal by Florida's Turnpike Enterprise to apply the remaining amount of unused credits from the original Suncoast Parkway project which provides the balance of mitigation appropriate for the Suncoast Parkway Interchange.*
 - ii. Corps Evaluation: The 20 September 2019 BO from the USFWS deemed the compensatory mitigation acceptable, in conjunction with stormwater

management provided by the proposed project, to offset impacts to the wood stork.

- i. Comments stated the Serenova Tract is part of a globally-designated Important Bird Area recognized by the National Audubon Society. Comments stated the proposed project would impact the highest quality pine flatwoods in the area which contain an important breeding area for the Bachman's Sparrow. Comments stated that while no breeding colonies of threatened or endangered species were identified within the Serenova Tract, at least 115 species of birds breed in Pasco County. The proposed project would lead to additional habitat destruction and will lead to more species becoming endangered and threatened. Comments suggested that the proposed project would impact important habitat for the Brown-headed Nuthatches, Hairy Woodpecker, Redheaded Woodpecker, and Wood Stork.
 - i. Applicant Response: *The globally-designated important bird area is comprised of 23,999 acres according to the Audubon Society website (<https://netapp.audubon.org/iba/Reports/91>). The Ridge Road Extension ROW through the Serenova Tract (one part of the total designated bird area) consists of less than 167 acres or about 0.7% of the total designated bird area. But more importantly, the area within the limits of construction that will be cleared for roadway and pond construction is only approximately 123 acres or about 0.5% of the designated bird area and a portion of this disturbed area will be restored with Florida friendly landscaping. The applicants believe this small area of habitat disruption will not have substantial impacts on the bird species within the designated bird area.*
 - ii. Corps Evaluation: The Corps acknowledges the listing of the Serenova Tract as an important bird area recognized by the National Audubon Society. The USFWS assessed the proposed project for impacts to avian species as did the state FWC. Both agencies determined the project impact to species would be within an acceptable level. The Corps assumes that minor habitat alteration for avian species would occur.
- j. There was concern that reasonably foreseeable impacts of habitat loss from land clearing activities, indirect impacts from roadway mortality, and the cumulative effect from a potential decrease in prescribed fire management to improve habitat were not considered as direct, indirect and cumulative effects of the entire proposed project on wildlife. Comments asserted that cumulative and indirect assessment of impacts to Phase II were not completed by the applicant and would be later determined by future developers of the region was not a valid approach to assess impacts. The comments stated that fire suppression in surrounding areas due to the proposed project would lead to a degradation of nesting and foraging habitat for red cockated woodpecker and Florida scrub jay.

The comments stated that a decrease in the beneficial effects of fire management that would occur due to the proposed project cannot be replaced by mechanical means of habitat restoration. The comments suggested that a decrease in fire management would degrade the habitat, lead to a decline of listed species, and not encourage dispersal of species to the area. Comments stated the proposed project would negatively affect the management of the Serenova Tract.

- i. Applicant Response: *The SWFWMD Land Resource Department has indicated that the access points provided within Serenova will facilitate access for heavy equipment and emergency response vehicles for the purpose of prescribed burning or fighting wild fires. Burning in the vicinity of the RRE Project will pose no more of a problem than may be encountered with habitat management along SR 52 or SR 54. In fact, SWFWMD management of habitat adjacent to SR 52 and SR 54 will be more difficult because of the development along these roads. There will be no such development along the RRE Project within Serenova. In a letter from SWFWMD to Pasco County dated June 25, 2009, the District stated:*

"Based on District staff analysis and internal discussions; it does not appear that the Ridge Road Extension (RRX) will impede in any meaningful way our ability to access areas for prescribed burning. While the road does make movement across it inconvenient the planned under-crossing should sufficiently accommodate District fire equipment." The Ridge Road Extension – Cumulative Impacts Analysis submitted to the Corps on September 10, 2019 concluded that considering current development trends, it appears the Phase II area would likely be developed with or without the Ridge Road Extension although the additional access to the area will likely increase the rate at which the property is developed.

- ii. Corps Evaluation: The Corps considered indirect impacts to a corridor extending 300-ft either side of the RRE ROW. The review included potential impacts to listed species as well as wetland habitat degradation and changes to vegetative communities. The indirect effects were assessed using UMAM and the applicant will provide compensatory mitigation for these effects by purchasing credits as the OFMB. In addition to assessing indirect effects, the Corps completed a cumulative impact assessment that covered the three HUC-12 sub-watershed that encompass the RRE. This area encompasses approximately 56,000 acres. Again the Corps considered cumulative impacts to wildlife and wetlands in addition to a number of other categories. Please see Section 10 for additional information regarding the assessment of cumulative impacts. The SWFWMD indicated that the construction of the RRE would not impede their ability to manage the Starkey Tract including use of prescribed burns.

- k. Comments provided for the proposed project as described by the 2011 public notice stated the proposed project would act as a barrier to wildlife movement within the Serenova Tract. The comments were concerned that barriers to movement would lead to isolating populations of wildlife and have an overall negative effects to wildlife. Comments stated that additional wildlife crossings, bridging, and fencing were necessary to reduce the impacts of the proposed project to wildlife. Comments stated that the proposed project would lead to an increase in traffic and development and additional wildlife loss from vehicular strikes. The comments suggest that even with wildlife corridors, not all wildlife would use these crossings. Additionally, there would be an increase in avian road kill regardless of wildlife crossings. A road kill survey was requested to identify the impact on wildlife.
 - i. Applicant Response: *The size and locations of under-crossings included in the project design have been coordinated with USFWS to minimize the effects of upland habitat fragmentation caused by the roadway. Bridges have been included at wetlands throughout Serenova that will minimize the effects of wetland habitat fragmentation. Fence that includes snake exclusion mesh is included along the entire project to reduce the potential of roadway mortality. Pond 3A, which is in close proximity to the road will have plantings of red maple trees at 20' centers. The intent is to minimize vehicle strikes of water birds which tend to have a lower climbing trajectory.*
 - ii. Corps Evaluation: The applicants have provided 19 bridges and 11 wildlife crossings throughout the proposed project. This action will facilitate wildlife movement north and south of the RRE corridor. Both the Corps and the USFWS have reviewed the plans and determined this was sufficient to minimize adverse effects to species. The USFWS issued a BO for the proposed project on 20 September 2019 which document the Services assessment of effects to Federally listed species.

- l. By letter dated 24 January 2012 in response to the proposed project described by the 2011 public notice, the USFWS stated Florida scrub-jay surveys were required prior to construction and every 2 years for a 10 year duration following completion of the project with survey results submitted to USFWS for review.
 - i. Applicant Response: *The applicant is unaware of a similar request from USFWS relative to the 2018 public notice or 2019 Biological Assessment. The Biological Assessment submitted to the Corps in January 2019 (and subsequently revised during coordination with USFWS as a part of the Corps Section 7 Consultation) concluded there are no anticipated direct, indirect, interrelated, or interdependent impacts to Florida scrub-jays as the species does not currently occur within the Action Area. Thus, there are no direct effects on the Florida scrub-jay.*

- ii. Corps Evaluation: The final determination by the USFWS did not require Florida scrub-jay surveys prior to or after completion of the project.
- m. By letter dated 24 January 2012 in response to the proposed project described by the 2011 public notice, the USFWS required Indigo Snake Survey Protocol to be implemented in the event that the proposed project is keyed to a "May Affect" using the Indigo Snake Effects Determination Key. Because the key uses the number of gopher tortoise burrows at the site as part of the effects determination, gopher tortoise surveys needed to be updated. Other public comments indicated the eastern indigo snake survey was outdated for consultation with the USFWS as of July 2019.
 - i. Applicant Response: *Project biologists surveyed for eastern indigo snakes within the Action Area using the wildlife detection dog survey protocol outlined in the USFWS approved Ridge Road Extension Wildlife Survey Protocol (September 28, 2012) as requested by the USACE as the fourth of its acceptable options for conducting the survey (USACE letters from July 3, 2012 and October 12, 2012 and meeting notes for October 17, 2012).*
Field work targeting eastern indigo snakes was conducted from December 3, 2012 through March 19, 2013, when this species is most susceptible to direct observation while basking near gopher tortoise burrows. Gopher tortoise burrows were first identified by pedestrian transect surveys covering 100% of the habitat identified as eastern indigo snake survey areas. All tortoise burrows were marked with plastic flagging and their locations were recorded with GPS. The biologists conducting the gopher tortoise burrow survey were vigilant for eastern indigo snakes and their sign (i.e., shed skins and eggs). Regarding the eastern indigo snake, a single shed skin was found within a one mile Action Area surrounding and including the construction limits during 2849-person hours of field effort, resulting in an encounter rate of 0.00035 indigo snakes per field hour. This encounter rate is three orders of magnitude lower than the encounter rate that has been documented in high quality habitats. Because eastern indigo snakes appear to be present only in very low numbers, it is unlikely that the species will be negatively affected by clearing and construction activities, including disturbance, injury or mortality of snakes and eggs. Potential impacts are to be minimized by the implementation of USFWS "Standard Protection Measures for the Eastern Indigo Snake". The USFWS issued their Biological Opinion in September 2019 that included a take of one snake or one clutch of eggs.
Gopher tortoises, a federal candidate and state threatened species, were documented within and adjacent to the construction limits during a survey completed in September 2019. Currently, there are no federal protection requirements for gopher tortoises, but compliance with Florida Fish and

Wildlife Conservation Commission (FWC) Gopher Tortoise Permitting Guidelines precludes construction-related injury or death to gopher tortoises. It is anticipated that all gopher tortoises within the project footprint will be captured and relocated to appropriate recipient areas under a permit from the FWC. This relocation effort will also help to prevent impacts to other wildlife species that use tortoise burrows, including eastern indigo snakes.

- ii. Corps Evaluation: The Corps worked with the USFWS and the applicants to determine a surveying protocol that would be acceptable to the USFWS. The applicant performed required surveys and provided the results in the final BA dated January 2019. The USFWS reviewed the BA and found it complete and issued a BO on 20 September 2019.

- n. By letter dated 24 January 2012 in response to the proposed project described by the 2011 public notice, the USFWS stated the SWFWMD was the land managing entity and should be consulted for fire management issues.
 - i. Applicant Response: *SWFWMD had been contacted early in the design phase for the project and their input incorporated into the design as practicable. The SWFWMD Land Resource Department has indicated that the access points provided within Serenova will facilitate access for heavy equipment and emergency response vehicles for the purpose of prescribed burning or fighting wild fires. Burning in the vicinity of the RRE Project will pose no more of a problem than may be encountered with habitat management along SR 52 or SR 54. In fact, SWFWMD management of habitat adjacent to SR 52 and SR 54 will be more difficult because of the development along these roads. There will be no such development along the RRE Project within the Serenova Tract. In a letter from SWFWMD to Pasco County dated June 25, 2009, the District stated: "Based on District staff analysis and internal discussions; it does not appear that the Ridge Road Extension (RRX) will impede in any meaningful way our ability to access areas for prescribed burning. While the road does make movement across it inconvenient the planned under-crossing should sufficiently accommodate District fire equipment."*
 - ii. Corps Evaluation: The SWFWMD provided a letter to Pasco County indicating the proposed roadway would be an additional obstacle but would not prevent prescribed burns, or overall management, within the Serenova Tract. In addition, the state has issued an ERP for the proposed project, so the Corps assumes conditions regarding their management of the wilderness areas has been resolved.

- o. By letter dated 24 April 2019, the USFWS acknowledged receipt of the Corps 27 February 2019 letter requesting initiation of formal section 7 consultation for the proposed project. The letter stated that information required to initiate consultation was included with the Corps letter or was otherwise accessible for

the USFWS consideration and reference. The letter states Section 7 of the ESA allowed the USFWS up to 90 days to conclude formal consultation and an additional 45 days to prepare the biological opinion, unless an extension is mutually agreed to.

- i. Applicant Response: *The applicants acknowledge the section 7 consultation schedule and understand the Service issued their Biological Opinion in September 2019.*
- ii. Corps Evaluation: Noted

7. Floodplain Hazards and Values

- a. Comments related to the proposed project's negative impact on the floodplain storage and retention. Comments suggested the proposed project should avoid and minimize impacts to all riverine floodways. Comments suggested the proposed project would lead to a decrease in water retention causing flooding of nearby roads, homes, and businesses. A comment stated that wetlands can temporarily store large amounts of water and questioned whether the proposed project would lead to increased risk of downstream flooding.
 - i. Applicant Response: *The SWFWMD has issued an Environmental Resource Permit (ERP) for the project. One of the criteria for ERP issuance is no net encroachment into the floodplain up to that encompassed by the 100-year event. This includes not increasing flood stages either up or down stream of the project. Cup for cup compensation has been provided for unavoidable fill placed within the floodplain. The issuance of the ERP is presumptive confirmation that the project will not impact the floodplain or cause flooding.*
 - ii. Corps Evaluation: Wetland impacts associated with the proposed project have been minimized in order to eliminate impacts to floodplains of the main waterways and their associated wetlands. The construction of bridges over waterways such as the Pithlachascotee River and Five Mile Creek will minimize any changes to hydrology. In addition, the SWFWMD has reviewed and issued a permit for the proposed project which included floodplain compensation where needed. The SWFWMD is the regulating entity for water quality and quantity reviews. State regulations require no change in water flows from pre-construction to post-construction conditions. The SWFWMD has issued a permit for the proposed project which includes their water quality and water management approval.

8. Recreation

- a. Comments related to the use of the Serenova Tract and surrounding preserve areas for passive, active, and nature based recreation. Comments were concerned that the proposed project would negatively affect recreational activities for birding, hiking, camping, hunting, horse riding, and bicycling. Comments stated the Serenova Tract and surrounding areas were popular areas for horse trail riding and associated activities, and the proposed project would

negatively impact these forms of recreation. Comments suggest that the proposed project would negatively affect recreation due to a loss of true wilderness and that the roadway would bring additional noise, litter, and development into the natural areas.

i. Applicant Response: *The Ridge Road Extension includes numerous under-crossings that will provide for continued north-south access for both wildlife and recreational users of Serenova. The project includes a multi-use trail along the Phase I segment that will connect to the existing Suncoast Trail. This trail will provide additional access to the Serenova tract for pedestrian and bicycle users and especially disabled persons thereby increasing the ease by which the public can enjoy the passive, active and nature based recreation available in the Serenova tract including birding, camping and bicycling. Continued north-south access within Serenova tract for horse riding has been included in the project by the provision of underpasses at two existing trails.*

It is noted that hunting is not permitted in the Serenova tract.

ii. Corps Evaluation: The applicant has provided several opportunities for recreation or maintaining recreation within the overall project footprint. The project includes a multi-use path west of the Suncoast Parkway that will tie into the existing Suncoast Trail. The Suncoast Trail is a 42-mile trail that begins in Hillsborough County, traverses through Pasco County, and ends in Hernando County. The trail is part of the Florida Statewide Greenway and Trail System. The addition of the multi-use path west of Suncoast Parkway will provide additional recreational opportunities for the public.

Some commenters indicated that the RRE would create a negative effect on the recreational opportunities currently available in the Starkey Wilderness Preserve. The applicants designed a series of 11 wildlife crossings and 19 bridges to allow for continued recreational use.

b. Comments related to the support for the proposed project and the addition of a multi-use path to connect with the existing trail system.

i. Applicant Response: *The applicants agree with the comments supporting the project and the inclusion of a multi-use path that will connect to the existing trail system. A multi-use trail along the Ridge Road Extension has been included in Pasco County's Long Range Transportation Plans. The multi-use trail along Ridge Road Extension will connect to the existing Suncoast Trail and thereby improve connectivity of the trail network within Pasco County.*

ii. Corps Evaluation: Noted. The proposed RRE will include a multi-use path west of Suncoast Parkway that will tie into the Suncoast Trail system.

- c. Some commenters were opposed to the inclusion of a multi-use path as a component of the proposed project. Comments said that the multi-use path could be eliminated to reduce the width of the ROW, which would minimize impacts to upland and wetlands habitats. Comments stated the multi-use path was not needed because there was an existing multi-use path located 2-3 miles south of the proposed project. Comments suggested that the multi-use path has direct impacts to wetlands and the need for the trail is not a component of the project purpose.
 - i. Applicant Response: *A multi-use trail along the Ridge Road Extension has been included in Pasco County's Long Range Transportation Plans. The incorporation of the multi-use trail along Ridge Road Extension will improve connectivity of the trail network within Pasco County. This trail will provide additional access to the Serenova tract for pedestrian and bicycle users and especially disabled persons thereby increasing the ease by which the public can enjoy the passive, active and nature based recreation available in the Serenova tract.*
 - ii. Corps Evaluation: The Corps is aware there is an existing multi-use path located 2-3 miles south of the proposed RRE ROW. However the Pasco County long range transportation plan included a multi-use path. The original plan also called for a sidewalk, however as the applicants minimized the construction footprint, they eliminated the sidewalk leaving only the 12-foot multi-use path. The path will result in additional public opportunity for appreciation of preservation lands and recreational opportunities for the public. The additional 12-foot width will have a minimal impact on wetlands.

9. Water Supply and Conservation

- a. Comments related to the proposed project being located within a critical aquifer-recharge site for the watershed and for drinking water sources. There were concerns the proposed project would negatively affect aquifer recharge. Comments suggested the proposed project would result in an increase in development of the area leading to an increase in water demand that could not be satisfied with existing groundwater sources. Comments were concerned that increased demand would lead to increased pumping rates within the area aquifers and the impacts of the increased pumping would lead to additional sinkholes and an indirect impacts to wetlands with a decrease in water availability.
 - i. Applicant Response: *The applicants are aware that over the past years there has been reduced pumping of groundwater from the Starkey/North Pasco Wellfields by Tampa Bay Water (TBW). The effects of this reduced pumping on the wetland water levels is documented in TBW's most recent (June 2018) Hydrologic Conditions Update Status Report. Per Figure 10 in the report, pumping was significantly reduced starting in 2008. The start of the reduced pumping corresponds to a rise in the level*

of the Florida Aquifer (Well PZ-4D) although there is not a corresponding rise in the wetland water levels (STKY S-95, located in Serenova in close proximity to the RRE Alignment). Per TBW data it is evident that the variations in wetland water levels correspond closely to the total annual rainfall depth and do not show an increase that corresponds with the reduced pumping. The majority of the wetlands in the project area are forested wetlands and the original delineation of the boundaries took into consideration long-term indicators that would not readily be affected by wellfield pumpage, including forested vegetation, palmetto edges and long-term hydrologic indicators such as cypress buttressing. Therefore no effects to the wetland boundaries would be associated with the pumping reductions. The North Pasco Wellfield has since been retired by TBW per their Long-term Master Water Plan report dated December 2018.

A site review was conducted by the USACE specifically to determine if there had been any changes in the wetland boundaries in November of 2016. Based on that field review it was determined that no changes to the wetland boundaries were necessary. A Preliminary Jurisdictional Determination was issued by the Corps on June 15, 2017.

- ii. Corps Evaluation: The Corps is aware that the Starkey wellfield exists within areas nearby to the proposed RRE. The cumulative effects analysis considered the projects effects on hydrology and the public interest review on water supply and conservation. The project may or may not have an effect on the development of adjacent parcels, specifically in Phase II. Based on County planning documents it is apparent that the lands adjacent to Phase II are likely to be developed regardless of the existence of RRE. Several of the projects have already been permitted by the SWFWMD and one is under review by the Corps. The SWFWMD will review any applications for development in the area for impacts to water recharge areas and any additional use of the system will require water use permits. In addition to state requirements, the wellfield is managed by Tampa Bay Water and they would be involved in facilitating any water use changes within the Starkey wellfield.

10. Water Quality

- a. Comments stated the proposed project would increase pollution in the Pithlachascotee and Anclote Rivers as a result of the construction of the proposed project and use of the roadway once constructed. Comments were concerned the proposed project would impact water quality in the aquifer recharge area and downstream estuaries.
 - i. Applicant Response: *The SWFWMD issued an Environmental Resource Permit (ERP) for the project on July 24, 2019. One of the criteria for ERP issuance is meeting applicable state stormwater treatment standards.*

The issuance of the ERP is presumptive confirmation that the project meets stormwater treatment standards and will not impact the water quality of surface or groundwaters.

The ERP also constitutes certification of compliance with state water quality standards under Section 401 of the Clean Water Act, 33 U.S.C. 1341.

- ii. Corps Evaluation: Runoff waters from the proposed roadway will be directed to constructed stormwater management ponds. The ponds will treat the water before they discharge off-site. In receiving a SWFWMD permit, the applicant has provided reasonable assurance that the project:
 - a. Will not cause adverse water quantity impacts to receiving waters and adjacent lands;
 - b. Will not cause adverse flooding to on-site or off-site property;
 - c. Will not cause adverse impacts to existing surface water storage and conveyance capabilities; and
 - d. Will not adversely impact the maintenance of surface or ground water levels or surface water flows established pursuant to Section 373.042, F.S., or Chapter 40D-8, F.A.C.

Treatment of runoff in stormwater ponds will aid in removing any pollutants introduced from the roadway. The RRE ponds utilize the wet detention treatment method and detain for treatment prior to discharge one inch of runoff from the contributing area. This treatment volume is in addition to any detention volume required to meet the discharge rate criteria. Once the waters leave the ponds they should meet water quality standards and will contribute surface waters to the overall watershed.

11. Safety

- a. Comments stated the proposed project would be an important part of the evacuation needs for the area in the event of a hurricane, storm event, forest fire, or other emergency. Comments suggested that existing roads are unable to handle the evacuation needs of the area and that even more residential development is planned for the area. Comments stated that hurricane forecasts can change quickly, making quick and efficient evacuations important to protect human life. Comments described the proposed project as also improving safety on the roadways in general for the region from increased access, mobility, and allowing for additional options in the event of an evacuation, but also in the event of an accident or traffic on existing roads.
 - i. Applicant Response: *The applicants agree that the Ridge Road Extension will enhance evacuation during a hurricane or severe storm event. The Daily Travel Assessment completed for the Alternatives Analysis show that the construction of the Ridge Road Extension improves numerous measures of mobility including Vehicle-Miles of Travel, Vehicle-Hours of*

Travel, Network Average Speed, Weighted Volume:Capacity Ratio, and Crash Rate. Similarly, the Evacuation Assessment showed that construction of the Ridge Road Extension reduces the clearance time out of the coastal high hazard area. The Corps defined project purpose includes improvement of east-west roadway capacity and enhancement of overall mobility as well as improved routing from coastal hazard areas and improved evacuation clearance times. The Ridge Road Extension project meets these features of the project purpose better than other alternatives analyzed.

- ii. Corps Evaluation: Commenters in support of the proposed project asserted the need for an additional evacuation route and stated that improved mobility would also result in improved safety. The Corps notes that the FDOT letter to Pasco County, dated 27 August 2013, stated that “[c]onsistently, research shows a network of roads and a grid system increases capacity and mobility through a region; whereas traffic focus on a limited number of wider corridors results in operational, safety, bicycle, and pedestrian issues”. That letter was submitted as part of the applicants’ Revised Alternatives Analysis and can be found in Appendix E-4 of that document. The Corps notes that the alternatives were modeled using the *Tampa Bay Regional (Transportation) Planning Model* (TBRPM) to determine changes to travel time within the study area. Additionally, evacuation times were modeled using the Transportation Interface for Modeling Evacuations (TIME). Additional information on both the TBRPM and TIME models are available in the Revised Alternatives Analysis. The results of both models are considered in the Corps evaluation of the proposed project. Importantly, improved mobility and reduced evacuation time within the study area are central to the overall project purpose. Safety concerns are also considered in the Corps’ public interest review.
- b. Comments specifically referred to the hurricane preparedness and evacuation of Hurricane Irma in 2017. The comments stated that Pasco County ordered evacuation based on a Category 3 hurricane with mandatory evacuations to include all residents living west of Little Road (CR 1), which would include as many as 200,000 in-county evacuees. The comments suggested that the applicant recognized an evacuation based on a Category 5 hurricane would be substantially similar to a planned Category 3 evacuation model. Due to the local evacuation orders, the assumptions of evacuees from Pasco County and a large number of evacuees from other parts of Florida, the comments suggested the evacuations from Hurricane Irma was real-life large scale evacuation event. The comments stated the Pasco County’s Assistant Administrator for Public Safety was asked if SR 54, SR 52 and the Pasco-Hernando Countyline Road that connects to US 41 and I-75 experienced overcrowding so that there was concern about congestions and unsafe conditions during the evacuation. The comments quoted the assistant administrator as stating, “We were very concerned that this

would be an issue however, but we never saw significant back up on our roads with the exception of I-75.” The assistant administrator stated that highway patrol did not have to physically direct traffic on county roads during the evacuation phase of the event. Comments suggested with photographs taken 12 hours prior to Hurricane Irma landfall that SR 54 was not congested. These comments asserted that the need for additional hurricane evacuation was not demonstrated for Hurricane Irma and the overall project purpose of the proposed project was not valid.

- i. Applicant Response: *The methodology for accessing the time to clear the coastal hazard areas was the use of the Transportation Interface for Modeling Evacuations (TIME) modeling software. The Corps concurred with the use of this model. Based on the results of the TIME analyses, the Ridge Road Extension provided the most reduction in clearance time of any practicable alternative. The use of [anecdotal] input gathered after select events to determine the need for evacuation improvements is not consistent with the methodology. The Corps defined the project purpose and the applicants believe all aspects of the project purpose, including improved hurricane evacuation clearance times, are valid.*
- ii. Corps Evaluation: The TIME modeling software was used to estimate evacuation times for all the alternatives considered in the Revised Alternatives Analysis. According to the Statewide Regional Evacuation Study Program, Regional Evacuation Transportation Analysis, Volume 1-11, Technical Data Report (TDR 1-11), the Statewide Regional Evacuation Study Program was developed through “coordination and input from all eleven planning councils in Florida, along with the Division of Emergency Management, Department of Transportation, Department of Community Affairs, and local county emergency management teams”. TDR 1-11 also identifies Wilbur Smith Associates as the transportation consultant involved with the study at the statewide level. TDR 1-11 further explains that the TIME modeling software was developed by Wilbur Smith Associates to make it easier for regional planning councils and transportation planners to use the findings and model developed as part of the Statewide Regional Evacuation Study Program. The Corps believes that utilizing the model developed through collaboration of several agencies and organizations, whose expertise include emergency response and evacuations in Florida, is the appropriate method for estimating evacuation times for the alternatives considered. A limited number of observations for a single evacuation event does not supersede the results of the model developed through the collaboration of numerous emergency management, transportation, evacuation, and community planning professionals.
- c. Comments questioned or disagreed with the validity or necessity for an additional route for evacuation due to a hurricane, storm event, or other emergency. Comments disagreed with the need for additional capacity to evacuate when

forecasting for natural disasters often allow for several days of warning for the population to evacuate the area. Comments stated that recent hurricane evacuations were completed without any major problems. Other comments suggested that the proposed project would not be a viable emergency evacuation route due to the potential for the roadway to be flooded. Comments suggested the proposed project is not necessary since SR 52, SR 54, and the Bi-County Expressway could manage the evacuation or that completing and expanding these existing roads would better serve as an evacuation route. Comments questioned how the geographic area or population size of the evacuation area was determined and suggested the evacuation population was around 19,000. Comments suggested reversing lanes and using roadside shoulders on SR 52 and SR 54 to evacuate coastal communities from west to east for additional capacity to meet the proposed projects purpose of hurricane evacuation similar to plans for other parts of the state. Comments asserted that including evacuating citizens from illogical areas, such as Charlotte County, in the analysis of evacuation renders the evacuation conclusion invalid. The comments stated the county identified SR 54/US 41 and SR 52/US 41 intersections as hurricane evacuation bottlenecks and the proposed project would lead to additional congestion at these intersections. The comments also suggested that bottlenecks would occur at all intersections where east-west roadways intersect with north-south roadways and all the alternatives essentially move traffic similarly to existing bottlenecks. The comments assert that no alternative is any better at regional clearance, and that added capacity of the proposed project represents an over reach to try and justify an overall project purpose. Other comments identified there were secondary evacuation routes to SR 52 and 54 located within 10 miles of the roadways that were not considered even though the county identified secondary evacuation routes at greater distances for other roadways. Comments disagreed with the applicant's expectation that evacuees would move inland to stay with friends and family within the county and along the route of the proposed project and suggested the assumption was speculative and not supported by facts or demographic information. The comments noted the majority of family and friends for the evacuees to shelter with are located along population centers along SR 52 and SR 54. Comments suggested that evacuating along the proposed project would not make sense because the evacuees would have to eventually get onto SR 52 or SR 54 to get to designated hurricane evacuation shelters or other such buildings such as schools, churches, and shopping centers which are considered true Destination of Last Resort. Comments regarding the applicant's Destination of Last Resort selected in the hurricane evaluation for the proposed project are not designated hurricane evacuation shelters but were chosen by the applicant on the east side of the proposed project and Tower Road to advantage the proposed project and disadvantage SR 52 or SR 54 alternatives for the hurricane evacuation simulation. Comments suggested Destinations of Last Resort are specific to individual alternatives since they are intended to accommodate evacuees

stranded on the regional evacuation routes. Comments suggested that traveling to I-75 is ultimately needed for an evacuation plan to work and that the proposed project would not have the benefit of reaching I-75. Similarly, comments stated that alternatives to widen existing roads would alleviate any east-west mobility issues the county experiences. Comments suggested that the applicant could widen SR 54 and SR 52 for more east-west traffic flow, as well as utilizing the Bi-County Expressway. There were comments that highlighted recent widening of SR 54 and SR 52 that could be further expanded to alleviate traffic congestion and not require the need for the proposed project. Comments suggested the recently constructed Tower Road segments in the Starkey Ranch Master Planned Unit Development (MPUD) with Town Avenue, as a parallel road, increased east-west traffic capacity that fulfilled the project purpose of increasing east-west mobility without the need for the proposed project. There was concern the addition of seven intersections to the proposed project and the roadway in general would lead to further growth and need for additional capacity for evacuation and lead to additional east-west congestion. Comments suggested the county's Comprehensive Plan was flawed, and the proposed project would lead to a bottleneck of traffic rather than improved east-west mobility. There was concern that the applicant did not have funding to complete the roadway in its entirety and would not be completed and therefore not serve the project purpose to serve as a true hurricane evacuation route or additional east-west mobility.

- i. Applicant Response: *Improved routing away from coastal hazard areas and improve hurricane evacuation clearance times are part of the Corps defined project purpose. Improvement to the Regional Evacuation time is not part of the project purpose. The Evacuation Assessment completed as part of the 2015 Alternatives Analysis (and subsequent updates) documents the reduction in evacuation time from the coastal hazard area with the proposed project.*

The Alternatives Analysis showed that improvements to SR 52, SR 54 and/or Tower Road (with the exception of Alternative 15, 2-lane Ridge Road and 2-lane Tower Road) were not practicable and the Corps accepted this conclusion with their preliminary determination that Alternative Mod 7 was the Least Environmentally Damaging Practicable Alternative.

The Pasco County Expressway Authority began a feasibility study of the Bi-County Expressway in 1987 and concluded in 1995 that the project was not feasible. The Authority subsequently became inactive. Thus, the Bi-County Expressway is not a viable alternative as it is not included in the LRTP and therefore does not meet one of the basic tenets of the Corps defined project purpose.

As per Chapter 73C-49, F.A.C., at least every seven years, local governments are required to review their Comprehensive Plans to determine if amendments are needed to reflect changes in state

requirements. In 2013, it was determined that Pasco County's Comprehensive Plan is in compliance with such requirements. Pasco County Board of County Commissioners have approved funding for Phase II of the project for fiscal years 22/23.

- ii. Corps Evaluation: As stated in the applicants' revised permit application, submitted to the Corps on 31 May 2011, the proposed RRE would "...fulfill Pasco County's current need to improve east-west roadway capacity and enhance overall mobility in both west and central Pasco County in accordance with the County's current Comprehensive Plan and the Metropolitan Planning Organization (MPO) Long Range Transportation Plan (LRTP)". The results of the TIME model indicate that the proposed project would reduce evacuation time out of the coastal hazard area and the results of the TBRPM model indicate that the proposed project would improve mobility within the study area.

Some commenters stated that an additional evacuation route is not needed or that the proposed RRE would not provide a benefit for evacuation. The commenters do not provide hard data supporting their position. The Corps refers back to the results of the TIME model used for estimating the time it would take for evacuation out of the coastal hazard area for each alternative. The results of the model indicate that the proposed RRE would reduce evacuation time. Although forecasting capabilities do provide advance notice of an approaching storm, they are, at best, predictions. Unexpected shifts in a storm's track or faster than expected intensification could result in shorter time frames for evacuation. Additionally, evacuees departing the area in advance of an approaching storm may still be faced with extremely congested traffic, prolonged travel delays, stress, sudden fuel shortages along major routes, and similar complications. According to the TIME model, the evacuation time for the applicants' preferred alternative would be reduced from 23.4 hours to 16.6 hours, as compared to the no action alternative. The Corps believes that reducing the evacuation time for evacuees by 6.8 hours would result in increased safety in the form of reduced opportunity for traffic accidents, reduced stress, and less likelihood of running out of fuel while sitting in traffic. Some commenters stated evacuation via RRE would require travel to US 41 to either SR 52 or SR 54 and then travel east to I-75. The Corps believes that a large number of evacuees would seek to leave the area via I-75. However, evacuation routes are somewhat determined by the expected track and intensity of an approaching storm. If a storm were approaching the coastal area of Pasco County from the southwest or northwest, then access to the Suncoast Parkway to move away from the immediate coastal area may be an option for many. In such a scenario, evacuees would not necessarily have to travel to I-75. Additionally, Pasco County asserts that the proposed RRE would help move the

coastal population out of the coastal hazard area. The concept is to move people out of the area that would likely be affected by storm surge and, even if that means using shelters of last resort. Pasco County has referred to statistics indicating that most deaths associated with tropical storms are due to drowning. Although shelters of last resort are not ideal, the Corps concurs that, in an emergency response scenario, people would likely be safer in a shelter of last resort located along US 41 than they would be remaining near the coast in an area affected by storm surge.

- d. Comments suggested the hurricane evacuation need of the proposed project is not valid and referred to two planning tools. The comments stated the MPO used a Roadway Project Prioritization Criteria where evacuation contributes 10% or less and project funding contributes 15% in the decision making process. Comments suggested that the applicant does not have funding for Phase II in the decision making process and evacuation contributes a maximum of 10%. Together, the comments suggested that the proposed project would have a maximum of 10% out a potential 25% for consideration in the prioritization based on these two factors. Comments referenced the Transportation Interface for Modeling Evacuations (TIME) Model the applicant used to evaluate the evacuation times of the alternatives. These comments stated the TIME model demonstrated alternatives which used a Ridge Road extension had the longest evacuation times and clearance times when compared with alternatives that did not include a Ridge Road extension. The comments stated the applicant downplayed and rejected parts of the hurricane evaluation where the proposed project did poorly and emphasized and accepted results for parts where the proposed project did well. The comments stated the hurricane evacuation of the proposed project has good zone clearance times but poor regional clearance times. For example, the comments suggested that alternatives that were able to clear evacuees out of the coastal evacuation zone with long regional clearance times do not necessarily improve hurricane evacuation to meet the project purpose since they strand evacuees on roadways. The comments suggested that standards built into the TIME model for “to shelter” and “out of county” were rejected without justification. Based on the TIME model, the comments suggested that the proposed project was not the LEDPA because other alternatives that did not include a Ridge Road extension would result in shorter evacuation times, be less costly for the applicant since they would be funded by other entities, and would have fewer impacts to wetlands of lesser quality. Comments asserted hurricane evacuation through Pasco County includes evacuees from nearby counties and stated the standard report identified three alternatives were better than the proposed project for hurricane evacuation for Pasco County and the Tampa Bay region as a whole.

- i. Applicant Response: *Improved routing away from coastal hazard areas and improve hurricane evacuation clearance times are part of the Corps*

defined project purpose. The Evacuation Assessment completed as part of the 2015 Alternatives Analysis (and subsequent updates) documents the reduction in evacuation time from the coastal hazard area with the proposed project. The TIME model produces numerous results that are not pertinent to whether or not the proposed project or other alternatives meet the project purpose by improving the evacuation clearance time away from the coastal hazard areas. The Ridge Road Extension is a County project and the project purpose of improving evacuation time for County residents within the coast evacuation zone reflects this. Improvement to the regional evacuation time is not part of the project purpose. Improvements to regional evacuation times are more effectively addressed by governmental entities whose responsibility is to serve a region such as the FDOT.

Pasco County Board of County Commissioners have approved funding for Phase II of the project for fiscal years 22/23.

- ii. Corps Evaluation: In the narrative provided with their revised application submittal, dated 31 May 2011, the applicants identified improved routing away from coastal hazard areas and improved hurricane evacuation clearance times as part of the project purpose. Section 5.0 of that narrative indicates that any selected alternative must improve the County's ability to evacuate people out of the coastal hazard area to shelters or other safe locations. As stated in the applicants' response, the project was not envisioned to improve regional evacuation, but to facilitate evacuation of the coastal population of Pasco County outside the hazard area. The population in the coastal hazard area is at higher risk, in part, due to the possibility of storm surge. The proposed project is intended, in part to move people out of those areas. The Statewide Regional Evacuation Program, Volume 1-11 Technical Data Report, describes the TIME model as having a number of variables that can be used assess various evacuation scenarios. As such, the Corps believe that use of TIME model by Pasco County to estimate evacuation out of the coastal hazard area identified by the County is consistent with the intended use of the model.

The Corps acknowledges that some of the alternatives evaluated would result in less direct wetland impact than the applicants' preferred alternative. However, the relative function and quality of all wetlands for all alternatives is not known. Additionally, the determination as to whether or not an alternative is practicable does not rely solely on the amount of wetland impact. See Section 5 for the Corps' evaluation of alternatives.

As indicated in the applicants' response to this comment, the Pasco County Board of County Commissioners have approved funding for Phase II of the proposed project in fiscal years 2022 and 2023.

- e. The USEPA commented by letter dated 27 January 2012 in response to the proposed project as described by the 2011 public notice and stated that traffic modeling, “should evaluate options for hurricane evacuation and associated public safety options, such [as] local shelter facilities or shelter-in-place options. The Tampa Bay Regional Planning Council also should be consulted as the expert agency for local hurricane evacuation issues and predictive modeling on traffic congestion points during an evacuation, with and without various potential road projects as alternatives to the proposed Ridge Road Extension.” The comment continued, “Updated and thorough traffic modeling for future analyses also is needed for the evaluation of how the project purpose may be attained under different project alternatives identified, especially considering how the public notice submittal package by the applicant seems to be based upon an analysis from 2001 for traffic conditions projected for 2020 and 2025. That analysis from September 2001 concludes that the proposed Ridge Road Extension in 2020 would yield traffic Levels of Service (LoS, a measurement of congestion) at level C (moderate) for the Phase I (western) segment and level EIF (unstable or jammed congestion) for the Phase II (eastern) segment of the proposed roadway. Concurrently, the same analysis in the 2001 report predicts that congestion in 2020 would be less (LoS at B/C) for the existing State Routes 52 and 54 as other alternatives. This traffic modeling report in the public notice package implies that a Ridge Road Extension alternative would be congested with traffic as soon as it is built in 2020, exceeding congestion at the alternative routes identified as State Routes 52 and 54. Also, as the applicant-preferred project alternative, it would not be fulfilling the stated project purpose or at least a goal to improve traffic congestion.”
- i. Applicant Response: *Considering the EPA’s recommendations, completely new traffic modeling was completed as part of the 2015 Alternatives Analysis. Methodologies for both the daily travel assessment and the evacuation modeling were submitted to the Corps for review and Corps concurrence was obtained prior to the performance of the modeling. The results of the modeling was used in the comparison of and subsequent identification of practicable alternatives.*
 - ii. Corps Evaluation: The Corps notes that updated traffic modeling was completed in 2015, subsequent to the referenced comment by the EPA. The alternatives were modeled using the *Tampa Bay Regional (Transportation) Planning Model (TBRPM)* to determine changes to travel time within the study area. Additionally, evacuation times were modeled using the *Transportation Interface for Modeling Evacuations (TIME)*. Both the TBRPM and TIME models are were developed as part of a larger, collaborative effort and are intended for use in the locale of the proposed project. The results of both models are considered in the Corps evaluation of the proposed project. Modeling of the applicants’ preferred alternative, using the TBRPM, does indicate mobility improvements. The EPA was provided a copy of the Revised Alternatives Analysis and all

supporting documentation. By letter dated 25 March 2019, the EPA removed the project from potential elevation under the 1992 Clean Water Act Section 404(q) Memorandum of Agreement and did not state any further objections to the proposed project.

- f. Comments stated the proposed project would enable better access to emergency services including police and fire, and access to healthcare to areas both west and east of the proposed project. Comments suggested the proposed project would help law enforcement and emergency support provide more efficient and timely access in the event of an emergency and more efficient transport to emergency services.
 - i. *Applicant Response: The applicants agree with the comments that the proposed project would enable better access to emergency services including police and fire, and access to healthcare to areas both west and east of the proposed project. This has been substantiated by the traffic assessment completed as part of the Alternatives Analysis. It showed that the Ridge Road Extension would improve mobility compared to the no action alternative. The assessment demonstrated a reduction in congestion (overall volume to capacity ratio improvement from 1.11 to 1.008) and an increase in average travel speed (from 18.9 to 21.68 miles per hour). The traffic analysis also predicts a reduction in the daily number of vehicle hours spent traveling (from 113,974 to 105,008).*
 - ii. **Corps Evaluation:** The Corps believes that an additional direct route between US 41 and the western, coastal area of Pasco County could potentially be advantageous to emergency services. Depending on the specific location for an emergency response, construction of the proposed project would, at a minimum, provide one additional option for first responders to travel between the western coastal part of the county and the corridor along SR 41.

12. Consideration of Property Ownership

- a. Comments were concerned that the applicant did not own the ROW and permission to access the ROW was not granted to the applicant. The comments stated that without permission to access the land the applicant was unable to conduct surveys for wetland delineation, assessment, threatened and endangered wildlife surveys, and engineering designs to establish the ROW, geotechnical surveys, and stormwater management areas. Comments stated the potential for losses to wetlands and wildlife could not be quantified and therefore not appropriately mitigated in the event of a permit decision. The comments stated that the applicant did not own or have rights to the entirety of the proposed project's ROW and the applicant would be unable to complete construction of the project as proposed. There was concern that if a permit is granted for the proposed project, the final agreements or eminent domain through private property may require adjustments to the proposed project's alignment necessitating permit modification and additional evaluation. Any

adjustment to the proposed project at some later date may require additional wetland impacts which would have affected the original determination of the LEDPA. Comments were concerned that only a portion of the project would be constructed by the applicant and the reliance on others completing portions of the project is not a valid assumption. Comments suggested that wetland impacts and UMAM assessments that were completed for Phase II were not sufficiently completed because they had to rely on data extrapolation and would not be considered the best available scientific information without on-site assessment.

- i. Applicant Response: *On November 16 and 17, 2016, representatives from the Corps, USEPA, USFWS and FFWCC completed a field review of the entire length of the project including the segment east of the Suncoast Parkway.*

During the November 2016 site review, Corps representatives specifically included the determination of any changes in the wetland boundaries from those previously delineated and surveyed. Based on that field review it was determined that no changes to the wetland boundaries were necessary. A Preliminary Jurisdictional Determination was issued by the Corps on June 15, 2017. During the field review, project scientists for the applicants were also able to confirm wetland conditions for use in preparing UMAM assessments for the project.

The applicants anticipate that the ROW needed for the portion of the project east of Suncoast Parkway and west of the CSX Railroad will be obtained through negotiated sale from a willing seller. As a governmental entity, Pasco County does have the power of eminent domain for the acquisition of ROW for a public project. Pasco County does not believe it will be necessary to exercise this power to acquire the needed ROW. The applicants have no reason to believe that the alignments for the project will need to be revised as a result of ROW acquisition.

- ii. Corps Evaluation: The Corps completed a preliminary jurisdictional determination for the RRE dated 14 June 2017. The preliminary jurisdictional determination was completed after fully evaluating information provided by the applicant and completing several site visits. Information used to support a preliminary jurisdictional determination does not require site visits. For the purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary jurisdictional determination will treat all waters and wetlands, which would be affected in any way by the permitted activity on the site, as if they are jurisdictional waters of the US. The aquatic resources identified on-site were evaluated with the UMAM, a standardized procedure for assessing the ecological functions provided by wetlands and other surface waters. The UMAM assessment is evaluated based on two main parts, a qualitative description and a quantification of the assessment area evaluated in three categories and scored from 0 to 10. Much of the

information in the qualitative characterization can be compiled in the office using remote tools and resources. The quantitative assessment should be completed based on information obtained during a site visit. The applicant completed UMAM assessment for all wetlands on site and submitted them to the Corps. The Corps fully evaluated the UMAM assessment and requested changes and revisions to the assessment, which the applicant completed. The applicant indicated that UMAM forms were filled out based on remote tools and resources as well as being informed by site visits. The Corps utilized the UMAM assessment as one of the ways to characterize the aquatic resources functions and conditions on-site and to quantify the credits and debits in the determination of compensatory mitigation. Based on all the available information, the Corps determined the UMAM assessment provided by the applicant and evaluated by the Corps, provides sufficient information on the aquatic resource characteristics, functions, and values in order to complete Corps permit processing procedures and determine appropriate compensatory mitigation. In regards to wildlife surveys, the applicant, Corps, FWC, and the USFWS fully coordinated survey protocols and requirements in order to complete consultation pursuant to Section 7 of the ESA. The USFWS reviewed the applicant's BA and provided a BO for the RRE on 20 September 2019.

In regards to the acquisition of the ROW for the proposed project, the applicant provided the following information: From Moon Lake Road (near Station 10) to near Station 50, the ROW was acquired through Conditions of Approval of the River Ridge MPUD; from near Station 50 to near Station 100, the ROW was purchased for the Ridge Road Extension Project; from near Station 100 to the Suncoast Parkway (near Station 255), Pasco County entered into agreements with the Florida Department of Transportation and South West Florida Water Management District for the ROW to be transferred to Pasco County upon the issuance of all permits for RRE; from near Station 260 to near Station 400, Conditions of Approval of the Project Arthur MPUD require the dedication of ROW, the applicant expects the developer/landowner will provide this ROW by January of 2020; from near Station 400 to near Station 415, Pasco County is in communication with the landowner, and this land may require eminent domain to obtain the ROW even though Pasco County intends to make all reasonable efforts to avoid eminent domain; From near Station 415 to US 41 near Station 470, the ROW was acquired through Conditions of Approval of the Tierra del Sol and Lakeshore Ranch MPUD's.

A Corps permit does not convey a property right, either in real estate or material, or any exclusive privileges. The applicant affirmed the ROW is

possessed or will possess the requisite property interest to undertake the proposed activity. Consideration of property ownership is considered in the Corps' public interest review, however a dispute over property ownership is not a factor in the Corps public interest decision. If a DA permit is authorized for the RRE, and modification is necessary at some point in the future, the Corps will evaluate the proposed modification pursuant to 33 CFR 325.7.

- b. Comments regarding the proposed project as described by the 2011 public notice stated the proposed project would negatively affect the landowner of Phase II to include wildlife loss, aesthetic blight, business disruption, property devaluation, loss of access, legal difficulties, security problems, liability concerns, noise, traffic, pollution, fire hazard, intrusive surveys and environmental studies ranging far beyond the ROW.
 - i. Applicant Response: *Since the time of the 2011 public notice, there has been substantial changes with respect to land development and ownership east of the Suncoast Parkway. Most of the land north of SR 54, west of CSX railroad and south of Tower road is now developed and development is rapidly continuing north of Tower Road. A large tract of land east of the Suncoast Parkway, south of SR 52 that was once under a single land owner, has sold and is planned for development. The Ridge Road Extension – Cumulative Impacts Analysis submitted to the Corps on September 10, 2019 concluded that considering current development trends, it appears this area would likely be developed with or without the Ridge Road Extension although the additional access to the area will likely increase the rate at which the property is developed.*
 - ii. Corps Evaluation: This landowner within Phase II has changed since the submission of this landowner specific comment. The area is now proposed for development and the Corps does not anticipate negative effects to the landowner in Phase II.

13. Needs and Welfare of the People

- a. Comments stated the proposed project would be an asset to the community. Comments suggested the proposed project would improve access, traffic, and mobility in the area by providing more direct east-west travel routes and access to the Suncoast Parkway. The ability for easier access to the Suncoast Parkway would improve commute times to points north and south of the Suncoast Parkway. Comments suggested the proposed project would reduce congestion and travel times and allow for greater mobility through the region for services, commerce, education, and healthcare. Comments suggested the improved travel conditions would improve public safety, improve air quality from the reduction in fuel consumption and carbon emissions, and benefit individual quality of life. Comments suggested that current traffic on SR 54 and SR 52 is dangerous and will continue to get worse with additional construction of new homes. Support for the proposed project was expressed for safety reasons

because the proposed project would offer improvements to access, transportation, and traffic patterns for the schools located near the proposed project. Comments supported the proposed project because it would allow better access to existing residential communities near the east and west terminus of the proposed project.

- i. Applicant Response: *These comments highlight many of the benefits which are defined in the first sentence of the Project Purpose: “To improve east-west roadway capacity and enhance overall mobility within the area bounded by SR-52 to the north, SR-54 to the south, US-41 to the east, and Moon Lake Road, DeCubellis Road, Starkey Boulevard to the west in accordance with the County’s current Comprehensive Plan and the Metropolitan Planning Organization’s Long-Range Transportation Plan...”*
The Alternatives Analysis identifies and quantifies many of these benefits when compared to a no-build alternative, including a reduction in congestion (overall volume to capacity ratio improvement from 1.11 to 1.008) and an increase in average travel speed (from 18.9 to 21.68 miles per hour). The traffic analysis also predicts a reduction in the number of vehicle hours spent traveling daily (from 113,974 to 105,008). The Alternatives Analysis forecasted that traffic volumes would continue to increase on State Road 54 and throughout the studied network. This trend has been observed in the time since the study was conducted and is forecasted to continue into the future as previously approved developments continue to build out and additional development approvals are sought.
Vehicle emissions were not considered in the study but improvements in other metrics indicate that fuel consumption and carbon emissions would be reduced. The SWFWMD issued an Environmental Resource Permit (ERP) for the project on July 24, 2019. One of the criteria for ERP issuance is meeting applicable state stormwater treatment standards. The issuance of the ERP is presumptive confirmation that the project meets stormwater treatment standards and will not impact the water quality of surface or groundwaters. The ERP also constitutes certification of compliance with state water quality standards under Section 401 of the Clean Water Act, 33 U.S.C. 1341.
The most significant access benefit from the Project will likely be to the existing Rosewood neighborhood and the adjacent River Ridge High School and Middle School. The neighborhood and schools were planned and built anticipating the connection to Ridge Road. Without the Project there is only one roadway (Town Center Boulevard) which provides access to the schools and homes. Two roadway stubs exist today which can be connected to Ridge Road to triple the number of access points. The Board of County Commissioners has approved a \$195,000 incentive which the construction Contractor can earn if a new connection to the

schools and neighborhood is open to the public before the start of the next school year.

- ii. Corps Evaluation: The applicant and many commenters indicated that the RRE would have positive effects of job creation during the construction of the roadway, an economic benefit of increased residential and commercial development and demand, would improve commuting times, reduce congestion and emission of air pollution, improve safety with faster hurricane evacuation times for the public, and create better public access to educational and institutional services. The applicant stated that the RRE project has been the subject of extensive review and analysis and has been included in the county's Comprehensive Plan and LRTP.
- b. Comments were concerned the proposed project would increase access and traffic to existing residential areas near the proposed project and this would have a negative effect on traffic, noise, pollution, crime, litter, and a decrease in the natural surroundings on these residential areas. Comments from homeowners near the proposed project stated their home sites were chosen for their location near natural areas, and for minimal residential traffic and noise, and low crime. Other comments suggested the existing Ridge Road, Moon Lake, and DeCubellis intersection would be heavily congested with the proposed project negatively affecting the existing residential area.
 - i. Applicant Response: *The Alternatives Analysis includes forecasted future traffic volumes and levels of service with the construction of the Project and without. In addition to improving east-west traffic capacity, the analysis forecasts that traffic volumes will generally be reduced, and levels of service improved, on the existing roadways in the vicinity of the project such as Moon Lake Road, DeCubellis Road, and US 41. This is likely a result of traffic which would otherwise utilize these roadways to reach SR 52 and SR 54 to travel east-west instead utilizing Ridge Road Extension. The applicant acknowledges that there are existing and forecasted future needs for improvements to roadways in the vicinity of Ridge Road Extension. The County has budgeted funding for the widening of the remaining two-lane segments of DeCubellis Road south of Ridge Road to four lanes and is assessing the extension of the merge area on northbound Moon Lake Road north of Ridge Road. Additionally, FDOT has funded the widening of US 41 north of Ridge Road / Connerton Boulevard from two lanes to four lanes. Even with the reduction in volumes, the projects mentioned above would still be necessary. Ridge Road, Moon Lake Road, DeCubellis Road, Connerton Boulevard, and US 41 are all Collector and Arterial Roads maintained by either Pasco County or FDOT. It is not anticipated that any local or neighborhood roads would see significant increases in traffic as a result of the Project.*

The Ridge Road Extension Project has been planned for many years and all the neighborhoods adjacent to the project were designed and constructed with the Ridge Road Extension Project in mind. This included the construction of roadway stub-outs that would connect to Ridge Road Extension, but also included screening of the homes from the future roadway. In most cases homes were placed well away from the alignment of the future roadway, separated by wooded wetland areas and ponds which would remain in place with the construction of the Project. In some instances, homes were placed near the anticipated road alignment and wall was installed to screen the road from homes. The design of the roadway also incorporates features to minimize the impacts to adjacent homes. The speed limit is reduced in the vicinity of the existing neighborhoods which will reduce the noise levels. There is also extensive landscaping thought the project which will help to screen the road and reduce the noise heard from homes.

The applicant acknowledges that the existing Ridge Road Extension ROW is often used for illegal dumping, especially the existing roadway stub-outs where even vehicles without four-wheel drive can easily park and deposit waste. Pasco County Public Works will be responsible for the maintenance of the Ridge Road Extension once it is complete and open to traffic, to include mowing and litter removal. When the road is constructed, those who wish to illegally dump garbage and other materials will have fewer locations to park and be much more visible to law enforcement. The dumping that happens today in the unimproved ROW and at the existing stub-outs will likely be reduced. In addition to this, Pasco County has an "Adopt a Road" program where citizens or groups can volunteer to provide additional roadway cleanup.

There are almost no developable areas in the vicinity of the Ridge Road Extension that would be visible to existing neighborhoods. Much of the undeveloped land located west of Suncoast Parkway is under Public ownership for the purpose of conservation. This includes both the Serenova Tract which is owned by SWFWMD and the Crockett Lake property which is owned by Pasco County. East of the Suncoast Property much of the land is privately owned and either developable or already developed, however Pasco County has acquired lands along the Ridge Road Extension and Five Mile Creek and is continuing to pursue the purchase of more land along this waterway to provide a wildlife connection from Serenova to Connerton, and a connection from Serenova to Crossbar Ranch.

The Ridge Road Extension Project would traverse lands which are preserved but open to the public. The project includes the construction of a paved trail that would allow those areas to be enjoyed by bicycle or on

foot and would connect to the existing Suncoast Parkway Trail, from which the Starkey Wilderness Trail can be accessed. The planned widening of DeCubellis Road also includes paved trail, which would also provide connection to the Starkey Wilderness Trail and complete a loop through and around the preserved lands.

- ii. Corps Evaluation: The Corps recognizes some homeowners, especially those near the western terminus of the project may experience a change in noise, light, and traffic as a result of the RRE. The applicant indicated that affects to local residents were minimized with a reduction in speed limits, maintaining vegetation buffers, and proposed vegetative landscaping. The nearest residents are in a subdivision which the applicant stated was constructed with the potential for the RRE to be constructed and contain stub-outs for future connections. Other anticipated effects such as crime and litter within the community are far removed from the Corps actions and unable to be evaluated.

14. Other Items

- a. Comments from the proposed project as described by the 2011 public notice suggested supporting information to demonstrate how analyses were completed and the conclusions drawn from them were not provided or are not clear, such as those completed for the WRAP, UMAM, GIS, wildlife surveys, historic properties surveys, and other assessment surveys. Comments were concerned that the 2011 public notice had insufficient mitigation information for the public to provide adequate comment. Comments generally stated the proposed project as described by the 2011 public notice utilized outdated or inadequate studies, analyses, data, and requested the applicant complete new studies. The comments also suggested the Corps should establish time limits for the applicant to provide this additional information and make a decision.
 - i. Applicant Response: *The information in the 2011 public notice has been superseded by the information in the 2018 public notice. Since the 2011 public notice, updated and/or supplemental studies were completed for wildlife, wetlands/UMAM and historic properties. Per the 2018 public notice the primary mitigation method to be used for the project is the purchase of credits from a mitigation bank which is the preferred option under the current mitigation rule. The applicants note that the Corps has accepted the proposal by Florida's Turnpike Enterprise to apply the remaining amount of unused credits from the original Suncoast Parkway project.*
 - ii. Corps Evaluation: Comments received in relation to the 2011 proposed project were fully evaluated and precipitated many revisions to the RRE. Notably, the applicant provided additional avoidance and minimization of impacts to wetland and upland habitat in the Serenova Tract. As described in Section 1.0, the applicant reduced the permanent discharge of fill material into wetlands by 10.80 acres and reduced the UMAM

impacts by 8.71 units for the permanent discharge of fill material in Phase I for Mod 7a compared to the 2011 proposed project. There were no additional impact reductions within the interchange segment, however, Phase II has a 5.74 acre reduction in the permanent loss of wetlands and a 3.49 unit reduction in UMAM units for the permanent discharge of fill material for Mod 7a compared to the 2011 proposed project. The 2011 proposed project identified several different compensatory mitigation proposals that included preserving nearby lands as part of the compensatory mitigation. In response to the comments received from the 2011 public notice and evaluation by the Corps, the applicants proposal now includes the use of a the OFMW, a compensatory mitigation bank, in compliance with the 2008 mitigation rule for unavoidable impacts to aquatic resources for Phase I and Phase II of the RRE. The unavoidable impacts from the interchange segment would be mitigated by a combination of excess mitigation credits that remain from the construction of the Suncoast Parkway and credits purchased from OFMB. As described in Section 8.0, the proposed mitigation plan is adequate to compensate for the unavoidable impacts to aquatic resources. Discussed above, the aquatic resources identified on-site were evaluated with the UMAM, a standardized procedure for assessing the ecological functions provided by wetlands and other surface waters. The WRAP assessment was not utilized in the evaluation of the RRE. The applicant completed UMAM assessment for all wetlands on site and submitted them to the Corps in 2017 and 2018. The Corps fully evaluated the UMAM assessment and requested changes and revisions to the assessment, which the applicant completed. Based on all the available information, the Corps determined the UMAM assessment provided by the applicant and evaluated by the Corps, provides sufficient information on the aquatic resource characteristics, functions, and values in order to complete Corps permit processing procedures and determine appropriate compensatory mitigation. In regards to wildlife surveys, the applicant, Corps, FWC, and the USFWS fully coordinated survey protocols and requirements in order to complete consultation pursuant to Section 7 of the ESA since the 2011 proposed project. The USFWS reviewed the applicant's BA and provided a BO for the RRE on 20 September 2019. Throughout the evaluation of the RRE and since the 2011 proposed project, the Corps has notify the applicant of comments and concerns from the federal and state agencies and the public, and asked the applicant for formal and informal request for information throughout the evaluation of the proposal so that the applicant can address the comments and the concerns. Refer to the request for additional information summary to highlight the extensive coordination taken by the Corps and the applicant during the evaluation.

- b. Comments that offered to provide assistance or notified the Corps of the intent to submit additional comments or request a meeting. Comments provided links or

attachments of news articles written about Pasco County, and regional roadway discussions and construction. Comments requested hard copies of the administrative record. Comments requested a 30-day extension to provide comments on the 2018 public notice.

- i. Applicant Response: *The applicant notes the various notices to the Corps and requests by commenters and had no objections to the 30 day extension.*
 - ii. Corps Evaluation: The Corps extended the public notice comment period for the 2011 proposed project and the 2018 proposed project when requested. The Corps provided responses to those seeking information pursuant to the Freedom of Information Act many times throughout the evaluation of the RRE. The Corps notes and includes in the record comments received that included news and other media publications submitted to the Corps during the RRE evaluation.
- c. Comments received from the public were based on the proposed project submitted on 31 May 2011, described by the 28 November 2011 public notice and the 25 September 2018 public notice, and an understanding of the administrative record provided through freedom of information act requests, and other information available. The Corps reviewed these comments throughout the evaluation process and sent multiple request for additional information letters to the applicant requesting clarification of issues raised throughout the process. The applicant provided responses to the additional information requests. Subsequent to many of the comments received, the proposed project was modified, additional information was provided to the Corps for evaluation of the proposed project, and consultation with agencies continued.
- i. Applicant Response: *The applicant notes that the majority of comments received prior to the 2018 public notice were likely based on the proposed project as described in the 2011 public notice. There were however, a number of comments submitted to the Corps by a select group of objectors after the applicants' submittal of the Alternatives Analysis in 2015. The applicants notified the Corps of a modification to the proposed project on August 13, 2018 which was after the Corps preliminarily determined that the applicant's previously proposed alternative Mod 7 was the Least Environmentally Damaging Practicable Alternative. The applicants' modification to the project was to change the functional classification of the segment of the project east of the Suncoast Parkway from a limited access roadway to an arterial roadway. No other changes to Mod 7 were proposed to be made. This change to the roadway functional classification will eliminate the requirement for overpasses for future, planned north-south roadways and instead allow for at grade roadway connections and signalized intersections between the Suncoast Parkway interchange and US 41. The 2018 public notice described the project as currently proposed by the applicants. Since the second public notice was issued the vast majority of the comments*

submitted to the Corps have been in support of the project. This support is not surprising since the 2018 public noticed described for the first time all of the design features the applicants had incorporated into the project to further avoid and minimize wetland impacts. These features included bridging all of the wetlands within the Serenova Tract and increasing the use of vertical walls in lieu of fill slopes, which significantly increased the project cost. Additionally, features to reduce potential impacts to wildlife were also increased including added wildlife under-crossings and increased use of snake exclusion fencing.

In 2019, the applicants submitted an Addendum to the 2015 Alternatives Analysis as an update and supplemental document to the AA that incorporated information from supplemental submittals to the Corps as well as providing information on the change to the proposed project.

- ii. Corps Evaluation: As described above, the Corps has notify the applicant of comments and concerns from the federal and state agencies and the public throughout the evaluation of the RRE. The Corps has made numerous formal and informal request for information so that the applicant can address the comments and the concerns of the agencies, public, and the Corps. The Corps has determined there is sufficient information in the administrative record to complete the EASOF and make a permit decision.
- d. Comments stated the USEPA guidelines require the USEPA place special emphasis on keeping already established “preserves” intact. This comment stated this is applicable for the proposed project because of project impacts to the Serenova Tract.
- i. Applicant Response: *Sanctuaries and refuges (assumed to be what the commenter is referring to by “preserves”) consist of areas designated under [State](#) and Federal laws or local ordinances to be managed principally for the [preservation](#) and use of fish and wildlife resources. Under this definition, it may be possible that the Serenova Tract within the Starkey Preserve would be considered a state established sanctuary or refuge although it was established principally as mitigation for the Suncoast Parkway project. The conservation easement for the Serenova Tract, granted by FDOT to the Board of Trustees of the Internal Improvement Fund, State of Florida, specifically states (Articles 3.b and 12) that the easement does not preclude the construction of the proposed extension of Ridge Road through the Serenova Tract. Therefore, any effect on the Serenova Tract associated with the discharge of fill material from Ridge Road cannot be considered a possible loss of value to the tract as it had been considered when it was originally established and the impacts were expected to be offset by mitigation outside the tract.*
 - ii. Corps Evaluation: In Section 6.0, the Corps determined the RRE will have short term minor adverse effect on the Serenova Tract, and no effect on any other sanctuary or refuge. The Corps has fully evaluated the direct

and indirect effects to the Serenova Tract and of the whole RRE, including the cumulative effects. As described above, the USEPA found the 2011 proposed project would result in substantial and unacceptable impact to ARNI. The applicant completed further avoidance, minimization, and proposed compensatory mitigation for the RRE, and by letter dated 29 November 2018 the USEPA stated, "Based on our review of the available information, including substantial revisions to the project as reflected in the public notice dated September 28, 2018, the EPA no longer believes the project would have a substantial and unacceptable impact on ARNI."

- e. Comments stated the evaluation of alternative 11 in the alternative analysis was not valid. The comments stated alternative 11 had very good results from the traffic analysis and very poor results in the hurricane evacuation analysis. The comments suggested the poor hurricane evacuation analysis resulted from modeling an outdated style of toll plaza, did not align with the at-grade portion of SR 54, did not have a connection to Trinity Blvd, and had illogical terminal points. There was concern that the hurricane evacuation analysis considered the time and congestion that would occur due to tolls, even though in an evacuation event the tolls would not be collected. The comments recommended moving alternative 11 to include the US 41 intersection and to less congested points along the alternatives route that would likely improve hurricane evacuation times in the model. The comments stated that modifying and re-running hurricane evacuation routes was a recommended practice and is not unduly expensive. The comments were concerned that cost associated with constructing tolled roadways and the revenues generated from tolled roadways was not considered in the evaluation of the alternative.
 - i. Applicant Response: *All alternatives were evaluated in the same manner using the methodologies that the Corps had concurred with. The limits for Alternative 11 were defined by the Corps as they were for all alternatives. Alternative 11 increases reliance on the SR 54, an already congested corridor, for evacuation. It is noted that Pasco County MPO currently has a study underway known as Vision 54/56. It is a study designed to define a transportation vision for the future of the SR 54/56 corridor, from US 19 to Bruce B Downs Boulevard. The main objective of that study is to develop consensus on the best solutions for addressing congestion, safety and mobility within the SR 54/56 corridor. Expanding the limits for Alternative 11 is beyond the Corps defined scope of the Ridge Road Alternatives Analysis and potential improvements to SR 54/56 are being independently addressed by the MPO.*
 - ii. Corps Evaluation:
- f. Comments stated the 4-lane Tower Road alternative (#10) dismissed as not practicable was not a valid determination. The comments suggested the

alternative accomplished the project purpose of moving more east-west traffic and provided additional evacuation opportunities with fewer wetland impacts of lower functional value. The comments suggested the Tower Road alternative was the LEDPA as compared with any alternative that included a Ridge Road extension. The comments identified other unrelated county projects that had more residential and business impacts than the Tower Road alternative including SR 54 widening project east of I-75 and the Chancey Parkway project and therefore it was not a valid reason to determine the Tower Road alternative was not practicable. As of 2017, the comments stated the Tower Road alternative was already complete in parts where the cost of construction and mitigation were completed by others and the wetland impacts had occurred under other permits. The comments suggested that the reduction in cost from \$68 million to approximately \$58 million and the reduction in wetland impacts from 22.2 acres to 10.2 acres should be updated in the alternatives analysis and consideration of the LEDPA for the proposed project. The amount also excluded portions of alternative 10 that the comments suggested were incorrectly attributed to the county when the cost were funded by developers. Comments from 2019 identified additional work completed on Tower Road further reducing potential costs and impacts of the Tower Road alternative. The comments stated the traffic analysis and evacuation study incorporated the completed construction along Tower Road into the analysis for the proposed project, but did not make updates to cost and impacts in the consideration of the LEDPA. The comments also suggested the Tower Road alternative did not consider logical minimization of the ROW and placement of the alternative along existing ROWs. The comments identified a minimized ROW along existing corridors would reduce impacts to residence, wetlands, and wildlife. The comments stated the logistical constraints of residential and business impacts, the concept of community cohesion impacts, the use of existing ROWs, and the minimization of ROW for consideration of alternatives for the proposed project were not equitably considered compared to other county projects. The comments suggested Pasco County has fixed the flooding issues on SR 54 at Seven Springs that was used in the determination of practicability of alternative 10 should be reassessed, and that flooding issues follow an evacuation event rather than precede them. Comments provided rationale that asserted flood prone areas of SR 54 would be flooded by a hurricane only after the area had been evacuated. The comments suggested that if flooding prevented evacuation on SR 54, many other areas in in Category 3 would have already been flooded indicating an orderly evacuation event should already have occurred. Other comments suggested that the hurricane evacuation purpose as proposed by the applicant would not be possible due to roadway closures at points other than SR 54. The comments stated that Tropical Storm Debbie in 2012 that closed SR 54 also closed other roadways that would be needed for hurricane evacuation along the proposed project. The comments identified roadway closures in 2015 due to flooding on Ridge Road, including several main feeder roads to the proposed project (US 19 and Ridge Road,

Starkey Blvd and DeCubellis Road, Little Road and Trouble Creek Road, and Little Road), that would have prevented hurricane evacuation as suggested by the proposed project. The comments stated the county had not improved stormwater management along feeder roads to alleviate the flooding and it could happen again. The comments stated SR 54 did not flood during the 2015 event. Taken together, the comments suggested that one, the hurricane evacuation would occur before the flood event, two, eliminating alternatives due to SR 54 flooding is not valid, and three, if the proposed project was constructed the flooding issues would persist and access to the proposed project would be severely limited. The comments also suggested that the applicant used unreasonably restrictive or illogical criteria to eliminate potential alternatives as not practicable, such as the flooding issue described above. As another example, the comments suggested that eliminating alternatives as not practicable because of uncertainty due to timing and construction by others is not valid. The comments stated the county has funding options to bond or borrow money for construction and have developers reimburse the county when development occurs as has occurred for other projects. Comments suggested that roundabouts on the Tower Road alternative that had rendered the alternative as not practicable could one day be constructed on the proposed project at one of the potential seven intersections. The comments stated the county approved an MPUD where developers can unilaterally decide to put roundabouts on the proposed project. The comments stated this would affect the ability for the proposed project to satisfy the overall project purpose and improve hurricane evacuation times, and would otherwise render the proposed project as not practicable similar to the Tower Road alternative. Comments also suggested determining Tower Road as not practicable because it did not have or could not have interchange with Suncoast Parkway was not valid because other roadways have multiple intersections based on similar distances. Comments in 2019 stated the draft 2045 LRTP now includes a Tower Road-Suncoast Parkway full on/off intersection constructed by Pasco County that contradicts previous practicability determinations regarding cost and logistics. The comments suggested that when multiple alternatives are practicable, emphasis should be placed on environmental factors to include impacts to the acreage and functional loss of aquatic resources. The comments asserted that the draft 2045 LRTP combined with less environmental effects, demonstrate that the Tower Road alternative is the LEDPA when compared to Mod 7a.

- i. Applicant Response: *All alternatives were evaluated in the same manner using the methodologies that the Corps had concurred with. The magnitude of impacts to residences and businesses was only one of a number of criteria used in determining practicability. As documented in the 2015 Alternatives Analysis and subsequent 2019 Addendum, Alternative 10 did not provide reasonable improvements to mobility nor hurricane evacuation time. Improvements to mobility and reduced evacuation clearance times out of the coastal hazard zone are two of the*

main goals for the project as included in the Corps defined project purpose and Alternative 10 did not provide reasonable improvements of those measures. It is also noted that flooding on SR 54 or any other roadway was not assumed for any of the hurricane evacuation modeling. Additionally, Alternative 10, as did all alternatives, included a minimized typical section utilizing vertical walls when it passed through wetlands.

- ii. Corps Evaluation:
 - g. By memo dated 22 November 2016, the USEPA provided the following comments:
 - 1. The EPA requests aerial maps of the project which include bridge locations and quality assessment (1-3) conducted on each wetland by applicant.
 - 2. The EPA request a map detailing the adjacent property owners to the proposed project in order to begin our cumulative impact analysis review. In addition, please provide any additional information the applicant may have to assist in this review.
 - 3. The EPA requests a copy of the criteria used to determine bridge locations for the project. The EPA finds it concerning that no bridging is proposed east of the Suncoast Parkway.
 - 4. The Florida Department of Transportation (FDOT) needs to consider bridging in their section of the project as well.
 - 5. A wetland jurisdiction determination needs to be conducted for the project.
 - 6. The EPA requests the U.S. Army Corps of Engineers (Corps) review all of the other alternatives proposed to ensure the Least Environmentally Damaging Practicable Alternative is selected.
 - 7. Please provide in detail the FDOT schedule for construction of State Road 52 from US 1 to Interstate 75. This should include current as well as future conditions when build out is completed.
 - 8. The EPA requests the Corps complete a thorough analysis of the proposed project before any permit decision is made. There appears to be no imminent time frame necessary for a permit decision when the applicant does not have the ROW to construct the project.
 - 9. The EPA will be providing additional comments on the project once the above information is received.
 - i. Applicant Response: *The applicant provided responses to the EPA comments by letter to the Corps dated February 6, 2017. By letter dated 29 November 2018 in response to the proposed project described by the 2018 public notice, the USEPA stated, "Based on our review of the available information, including substantial revisions to the project as reflected in the public notice dated September 28, 2018, the EPA no longer believes the project would have a substantial and unacceptable impact on ARNI."*

- ii. Corps Evaluation: The applicant provided a response to the comments by the USEPA as indicated above. Since the comments were provided in 2016, the applicant provided UMAM assessments that were evaluated by the Corps, the Corps completed a preliminary jurisdictional determination for the RRE, the applicant updated the alternatives analysis. The 2018 proposed project was advertised by public notice and the USEPA responded, by letter dated 29 November 2018 that stated: "...the project as proposed on November 28, 2011, would impact aquatic resources of national importance (ARNI) and did not fully comply with the CWA Section 404(b)(1) Guidelines (Guidelines). Specifically, the EPA identified concerns regarding the need for a valid jurisdictional determination and Uniform Mitigation Assessment Methodology, a complete alternatives analysis, minimization of road impacts, and a compensatory mitigation plan that complies with the Guidelines. Based on our review of the available information, including substantial revisions to the project as reflected in the public notice dated September 28, 2019, the EPA no longer believes the project would have a substantial and unacceptable impact on ARNI."
- h. Comments suggested Phase II of the proposed project would likely not be constructed in its entirety as proposed by the applicant. The comments reference local planning development discussions and approvals that the comments suggested document that the construction of Phase II was a low priority for the developers of the Project Arthur, Lennar Homes, and Bexley Trust properties. Additionally, the comments stated the developers in the area of Phase II do not want the proposed project and would rather rely on their own community designs for roadways and community characteristics that do not necessitate the proposed project. Comments stated that developers do not need or want the proposed project and have received local planning, development, and zoning approvals without need for the proposed project. The comments suggested that with additional ingress and egress options required by local planning, development, and zoning approvals for the developers of the Phase II area, the need for mobility in the area has been addressed without the proposed project. The comments suggested that a permit for the proposed project would have a five year expiration timeframe and Phase II cannot be constructed within that time period. Comments stated there was no timeframe to complete Phase I, the interchange segment, or Phase II. The comments continued and stated it was unlikely Phase II of the proposed project would be constructed since there was no agreement for critical pieces of the proposed project such as bridges over the CSX railroad track in Phase II of the project or agreements from developers to fund the bridges or the roadway. Comments asserted that since the engineering plans and agreements for the CSX bridges and roadway construction have not been finalized, there could be additional wetland impacts, adjustments to the ROW, and adjustments to cost, in the event a future agreement is reached, which would require additional surveys and consultation

requirements. Additionally, the comments stated that there would be no developer to construct the easternmost 1.28 miles of the proposed project from the CSX tracks to the eastern terminus. The comments stated that the applicant was unable to force developers to include construction of the Phase II segment as a condition of the MPUD and the Project Arthur MPUD would allow the developer to unilaterally decide whether or not Phase II would be constructed through their future development. The comments stated that the proposed project must be considered one planned roadway whose segments do not have independent utility or the applicant must submit an application for evaluation only for Phase I. Other comments suggested a Phase 3 of the proposed project from US 41 across the Cypress Creek Wellfield has been discussed and should be included in the evaluation of the proposed project to avoid inappropriate segmentation. Comments asserted that the applicant intended to construct Phase I and the interchange segment and then erect a barricade at the end of the interchange segment because the applicant did not have funding to construct Phase II. Comments stated the ROW acquisition cost to Phase II has been eliminated from the cost estimate of the proposed project. The comments suggested that all the floodplain compensation areas are included in Phase II, and therefore the cost of floodplain management was unfairly excluded from the county's cost for Phase I, and if Phase II is never constructed or delayed for years the flood compensation and its intended effect will not occur to offset impacts. Comments stated the avoidance and minimization considered reasonable by the applicant for Phase I must also be considered for Phase II and that minimization for Phase II was not completed. Taken together, the comment suggested that without the support of developers near Phase II, the proposed project not being consistent with the existing LRTP, the potential cost of the CSX bridges to the applicant, potential modifications to the proposed project at some point in the future, and no entity identified to construct the 1.28 miles, the applicant is unable to demonstrate with any certainty the entirety of the proposed project would be constructed and therefore the overall project purpose would not be met. The comments suggested the construction of the proposed project in its entirety is too speculative to be considered as likely to occur in the foreseeable future. The comments referenced a USEPA guidance document for USEPA reviewers of National Environmental Policy Act documents with a focus of cumulative effects related to Section 309 of the Clean Air Act (EPA 315-R-99-002/May 1999) that suggested projects on a 5-year budget cycle may be considered as reasonably foreseeable while projects on a 10-25 year strategic plan would be less likely to be a foreseeable future action and may be considered speculative. In addition, comments stated the Pasco County Fiscal Year 2018 Final Budget and Annual Revised Capital Improvement Fund estimated the cost of the proposed project was \$151.5 million dollars; \$85.7 million for Phase I, \$1.0 million for the county's portion of the interchange segment, and \$65.9 million for Phase II. The total cost of the proposed project with the interchange segment included totaled \$166.6 million. When the Phase II

cost was adjusted for inflation the cost was described as \$74.3 million, resulting in the proposed project costing \$179.8 million. The comments asserted that since the applicant would ultimately be responsible for all costs to include land, construction, and mitigation associated with Phase II because there was no developer/agreement in place, the cost must be factored into the practicability determination of the LEDPA, which would render the proposed project as not practicable. Comments in 2019 stated the draft 2045 LRTP now shows the total cost of Phase I, the interchange segment, and Phase II as \$153 million. These comments suggested that the true cost to the county of the proposed project would render the proposed project unaffordable since the applicant had previously indicated \$109.3 million was the most the applicant could afford. The comments stated the proposed project was not the LEDPA because it was not practicable as it was not “capable of being done” both logistically and financially. The applicant stated that four other alternatives (numbers 8, 10, 14, 16) were affordable based on the \$109.3 million budget with fewer wetland impacts. Due to concerns regarding the validity of the cost estimates related to alternatives the comments recommended an independent economic cost benefit analysis should be completed for the proposed project.

- i. Applicant Response: *Typical of the majority of roadway projects that are constructed by public entities, the Ridge Road Extension project is intended to be constructed in segments. The first segment that will be constructed is from the current terminus of Ridge Road at the intersection of Moon Lake Road and extends east to approximately 0.75 miles east of the Suncoast Parkway. This segment is funded and Pasco County has solicited bids for its construction. It is anticipated a contract will be awarded to the successful bidder in late October or early November 2019. The duration of construction is anticipated to be approximately 30 months. The next segment planned for construction is the ramp work at the Suncoast Parkway to complete the interchange with the Ridge Road Extension. This segment is anticipated to be bid in early 2020. The construction duration for this segment is such that it should be completed at approximately the same time as the first two lanes of the first segment allowing the roadway to be opened to two-lane, two-way traffic prior to the 2021 hurricane season. It is anticipated the segment will be fully constructed prior to the 2022 hurricane season. Funding for the segment of the project from 0.75 miles east of the Suncoast Parkway to US 41 (Phase II) was approved by the Pasco County BOCC in September 2019 for fiscal years 2022 and 2023. This funding window is intended to provide for the construction (at a minimum, completion of permitted impacts) of the last segment of RRE prior to the 5 year expiration of a Corps permit.*
- i. *Corps Evaluation:* Some commenters asserted that construction of Phase II is a low priority for the developers of the Project Arthur, Lennar Homes, and Bexley Trust properties. Additionally, the comments stated the

developers in the area of Phase II do not want the proposed project and would rather rely on their own community designs for roadways and community characteristics that do not necessitate the proposed project. The Corps notes that these comments contradict other comments received by the Corps asserting that the proposed project would induce growth adjacent to Phase II and contribute to unacceptable cumulative impacts. Pasco County has advised that some funding has been approved for fiscal years 2022 and 2023 in order to commence construction of Phase II and accomplish the permitted impacts. The Corps acknowledges that the road, if authorized, would be constructed in segments.

Some commented that flood compensation areas were all located within Phase II and associated costs were unfairly not included as costs for Phase I. The Corps notes that flood compensation areas are not required by the Corps. The Corps notes that siting the flood compensation areas within Phase helps reduce disturbance within the Serenova Tract. Additionally, Phase I would have more bridging than Phase II and this may have been a factor in siting the flood compensation areas. In the evaluation of alternatives in section 5.0 of this document, the Corps focused on overall cost of the alternatives rather than costs of individual segments of each alternative. Pasco County has indicated that funding for Phase I is currently available and funding for construction of Phase II has been approved for fiscal years 2022 and 2023.

The Corps is aware of the previous concept of a Phase III segment of the roadway. The Corps specifically discussed Phase III with Pasco County during a face-to-face meeting. It's the Corps' understanding that there are no plans to construct Phase III, as such, there is nothing to evaluate.

Some comments asserted that Phase II might not be constructed, that developers would not construction the easternmost 1.28 miles, that the bridge over the railway might need to be modified, and expressed general doubt about the feasibility of Phase II being constructed. Some of these comments are speculative in nature. Any construction project is subject to unforeseen circumstances or unexpected costs. Pasco County has asserted that Phase II would be constructed, if authorized, and has indicated that funding for construction of Phase II has been approved for fiscal years 2022 and 2023. As this funding is within the 5-year time frame, construction of Phase II would be deemed reasonably foreseeable, rather than speculative, based on the commenters explanation of the referenced EPA guidance.

Some commenters asserted that the cost of the proposed project is greater than originally estimated by the applicants and that Pasco County could not afford to construct the project. Comments stated that the

proposed project should be deemed not practicable due to cost. The Revised Alternatives Analysis and the AA Addendum both use cost methodology that was previously reviewed and accepted by the Corps. The FDOT's Long Range Estimate System was used to estimate cost for each of the alternatives. The information specific to FDOT District 7, which includes Pasco County, was utilized. This method seems appropriate and was consistently applied to all the alternatives. As the Corps has previously stated, use of higher quality data, such as site specific wetland delineations, functional assessments, final designs, and the like, that are not available for all alternatives, does not result in a fair comparison of alternatives and may unfairly advantage or disadvantage some alternatives.

- i. Comments identified by Citizens for Sanity (CFS) as comment number 21 was originally submitted via email on 21 October 2018 and resent on 8 November 2018. The Corps was unable to download the email attachments and notified CFS on 9 November 2018. The CFS sent the email with attachments again on 20 November 2018, and again on 20 November 2018 the Corps was unable to download the attachments. The CFS provided comment number 21 via email on 10 April 2019 that was able to be accessed and added to the administrative record.
 - i. Applicant Response: *Comment 21 from CFS primarily addresses the change in the functional classification for Phase II of the Ridge Road Extension project from limited access to arterial. The commenter claims that for Alternative Mod 7A, the County must define the impacts associated with foreseeable future connections that are unknown with respect to timing, location or size even though this same demand was not applied to any other alternative. Consistent with the analysis of all the other alternatives the wetland impacts associated with potential intersecting roadways (either at grade or grade separated) are not considered as direct impacts. Rather, since the intersections are not guaranteed to be constructed and if constructed they would be later in time, the wetland impacts associated with them have appropriately been accounted for as part of indirect impacts for all alternatives. The commenter went on to question the scope and fee that was approved by the Pasco BOCC for Change Order (CO) 19. The scope and fee for the Change Order had been negotiated by the consultant team with Pasco County Project Management staff to provide for the completion of a number of items including the update of the design for the interchange (which accounted for about half the fee). Also included were the preparation of various reports to support the Corps permitting process including the Alternatives Analysis Addendum, the Cumulative Impacts Analysis and ongoing permit coordination including preparation of comment summaries and responses. The CO did not include, as claimed*

by the commenter, any tasks that would be related to the design and permitting of future connections to Ridge Road.

- ii. Corps Evaluation: The applicants assert that location and configuration of any future intersections are not known at this time. The applicants have not requested authorization of any potential future intersections. As such, if the currently proposed Mod 7a is authorized, subsequent authorization of any future proposed wetland impacts for intersections would not be guaranteed. The Corps also notes, that some wetlands within Phase II are potentially isolated. If confirmed through an approved jurisdictional determination, impacts to isolated wetlands would not be subject to regulation by the Corps, based on current regulations. Due to the uncertainty of the location and number of any future intersections, the Corps has determined that evaluation of any resulting direct wetland impacts cannot be completed at this time. As such, any future proposed wetland impacts resulting from intersections would best be evaluated at the point in time when specific information regarding location and configuration would be available. That would also include evaluation of site-specific wetland delineations, functional assessments of the actual wetlands proposed for impact, if any, and jurisdictional assessment of any waters of the US that would be affected.
- j. A CFS comment dated 10 October 2018 with subject line "Comment to the Florida Turnpike Enterprise regarding the proposed Ridge Road Extension" was received via email with an extension to download the comment package. The Corps notified CFS the comment could not be downloaded on 5 November 2018. CFS provided a brief summary of the comment package and highlights of an upcoming comment package via email on 5 November 2018 that was included in the administrative record, but the package was unable to be downloaded. The CFS attempted to email the documents to the Corps again on 6 November 2018, and again the Corps was unable to download the files.
 - i. Applicant Response: *Should the commenter be able to provide the Corps its comments in a manner assessable and acceptable to the Corps the applicant would be pleased to provide responses.*
 - ii. Corps Evaluation: The Corps was unable to download the comment package. However, the comment summary made by CFS in the email on 5 November 2018 were evaluated and included in this document.
- k. Comments stated that the proposed project would violate Florida Department of Agriculture and Consumer Services state statute that require the Florida State Minimum Technical Standards for surveying. The comments asserted that without surveys that meet the state's minimum standards, the violation of law is grounds for non-compliance with the 404(b)(1) Guidelines and impacts from the proposed project cannot be accurately assessed. The comments referenced a quote that stated the 404(b)(1) Guidelines require "...the project will not cause or contribute to the violation of applicable state or Federal laws," although this quote is not a direct quote from the 404(b)(1) Guidelines regulations. The comments

suggested that without unsigned surveys the exact location of the proposed project could not be determined to assess direct and indirect impacts and any necessary compensatory mitigation. The comments also stated the proposed project would violate the Pasco County LRTP. The comments suggested that the proposed project is not consistent with the LRTP due to the proposed project replacing two bridge overpasses in Phase II with intersections at the future location of Sunlake Boulevard and Asbel Road and an intersection with the mixed-use parcel. Other comments stated that since the proposed project would be a violation of the LRTP a Corps permit decision could not be made until the proposed project is in compliance with the LRTP because the applicant would be legally unable to construct the project. The comments stated that FDOT does not support projects that are inconsistent with the LRTP and without FDOT support the proposed project could not be constructed. These comments related to the practicability of the proposed project and the determination of the LEDPA. Other comments suggested the use of the LRTP and areas where FDOT owned ROWs to reject alternatives as not practicable was not valid because it was an attempt to violate the Supremacy Clause of the US Constitution, and the comments suggested that any applicant or DOT could unduly restrict and eliminate alternatives by not including them on local planning or allowing a DOT land use decision to preempt practicable alternatives. For this reason, the comments asserted using the LRTP and ROWs not available for acquisition due FDOT ownership was unreasonably restrictive criteria to eliminate potential alternatives as not practicable. Comments were also concerned that the applicant misrepresented the ability to consider adding at-grade or managed lanes to SR 54 and/or SR 52 alternatives as not practicable due to not having control of the LRTP and assuming the cost to the applicant. The comments suggested that Pasco County has the ability to make amendments and changes to the LRTP and the cost associated with these alternatives could then have been shared with FDOT. The comments suggested that alternatives with lane additions should be considered with costs shared with other entities like FDOT even if not currently on the LRTP (alternatives 8, 9, 12, 13, 14, 16, and 17). As examples, the comments suggested alternative 14 with FDOT inclusion could reduce Pasco County's cost from \$82 million to \$42 million and alternative 10 from \$68 million to \$58.5 million. The comments suggested that even if Pasco County was required to fund an alternative itself, such as alternative 13, other projects completed by the county were undertaken at more expense as compared with the proposed project. The comments provided an example of the Wesley Chapel widening costing the county \$29.75 million per mile while alternative 13 would cost the county \$22.37 million per mile.

- i. Applicant Response: *Surveys used for the design of the Ridge Road Extension met or exceeded Florida's minimum technical standards for surveys. These included the specific purpose surveys to define wetland limits that were used to develop the Preliminary Jurisdictional Determination that was issued by the Corps for the project.*

No changes to the roadway design were required to allow for the change in facility type and the project as it is proposed and designed is fully consistent with the LRTP. The LRTP does show the future Sunlake Boulevard and Asbel Road being grade separated “over” Ridge Road Extension. Thus Ridge Road Extension is shown in the LRTP as being the at-grade facility and consistent with the LRTP it is being design and permitted as such. The intersecting roadways could be designed, permitted, and constructed with grade separation fully consistent with the LRTP. As noted in the September 2019 update to the Alternative Analysis Addendum, the location, number and nature of future intersecting roadways are not currently known. The fact that the arterial classification for Ridge Road Extension Phase II may allow for up to seven (7) at grade full access intersections does not guarantee there will be seven locations. Independent of the County’s RRE project there has been a Comprehensive Plan Revision request for what is known as Project Arthur. The September 2019 Alternatives Analysis Addendum includes a proposed revision to the County’s Highway Vision Map as developed for Project Arthur that shows only three future full service intersections. The LRTP does not have to be revised for the RRE to be consistent but may need to be revised to provide for consistency for the independent future projects of Sunlake Boulevard and Asbel Road that are not a part of this proposed action. Thus applicants believe the use of consistency with the LRTP as one of a number of different practicability tests for all alternatives is reasonable and consistent with the Corps defined project purpose. The applicant also believes that speculating on the potential for cost sharing by the FDOT on roadway improvements that would violate the LRTP six general use lane policy is unreasonable. (The LRTP includes the adopted policy statement: Future road improvements on non-freeway/expressway roads shall be limited to a maximum of six general purpose through-lanes. Exceptions may be made on roads that necessitate special use or auxiliary lanes.)

- ii. *Corps Evaluation:* Some comments stated that the project would violate a Florida Department of Agriculture and Consumer Services state statute. The Corps notes that the State of Florida is the appropriate authority for determining compliance with its rules and regulations. The Corps must determine jurisdiction over a wide range of scenarios across the nation. Determinations may be limited to small residential parcels, less than a tenth of an acre in size, to large tracts exceeding thousands of acres. In 2016, the Corps completed a thorough review of soil maps, stream maps, and aerial photography and compared that information to the wetland delineation maps. The Corps then chose several areas of the delineation to investigate. Prior to the Corps’ field review, a Pasco County survey crew utilized metal detectors to locate the survey pins from the previous wetland delineation. The area around the survey pins was cleared away

to expose the pins and flagging was attached to vegetation at the location of each pin. During the field review, the Corps found the delineation to be accurate and consistent with the current conditions. The Corps is satisfied that the extent of proposed wetland impact has been adequately document and is suitable for evaluation under the 404(b)(1) guidelines. The Corps also notes that the applicants opted for a preliminary jurisdictional determination (PJD) and assumed that all wetlands proposed for impact where within Corps jurisdiction. Prior to the applicants making that determination, the Corps conveyed its opinion that some wetlands proposed for impact may be isolated, but could only be determined so through an approved jurisdictional determination (AJD). Still, the applicants opted for the PJD. The Corps believes this is important to note, as the decision to utilize a PJD is contrary to the idea that the applicants were seeking to somehow under-report wetland impact or unfairly reduce the amount of compensatory mitigation needed to offset the unavoidable wetland impacts.

It is the Corps understanding that the proposed project would not violate Pasco County's LRTP. The Corps believes that all alternatives were evaluated consistently against the screening criteria. Additionally, the Corps did not eliminate alternatives from evaluation based solely on inconsistency with the LRTP or FDOT policy for its ROW. However, these were considered to be logistical challenges for some of the alternatives. Furthermore, the Corps did not eliminate any alternatives from consideration based solely on the cost of the alternative to Pasco County.

- I. The USEPA provided a comment letter on 27 January 2012 that stated concern with the alternative analysis completed for the proposed project described by the 2011 public notice. The USEPA recommended the consideration of multiple alternatives in the LEDPA determination process to included:
 1. An alternative that would widen the existing State Route 52. This route is an east-west highway that spans the project area and already connects Moon Lake Road with US Hwy. 41.
 2. An alternative that was "...already identified in local plans and funded to widen Moon Lake Road from 2 to 4 lanes (and eliminate the proposed Ridge Road Extension), thereby improving traffic circulation in a north-south direction and thus more readily allowing traffic access to the existing State Routes 52 and 54 that extend in an east-west direction."
 3. An alternative for temporary reverse-directional lane configurations on SR 52 and 54.
 4. Other combinations of local roadway and highway widening and other infrastructure improvements.

Other comments on the alternatives analysis completed for the 2011 public notice suggested the analysis relied on the 1999 Florida Land Use, Cover, and Forms Classification System layer for agricultural and wetlands but used a more recent layer for community impacts. The comments asserted this gave an unfair advantage to the proposed project over other alternatives because development had occurred since 1999. The comments suggested the disadvantaged alternatives appeared to have higher wetland impacts and higher impacts to residential and commercial developments.

- i. Applicant Response: *The Corps defined alternatives that were requested to be included in the 2015 Alternatives Analysis were developed subsequent to the USEPA's letter. They included multiple alternatives including various combinations of improvements to SR 52, SR 54 and Tower Road as suggested by USEPA. An alternative not included was the consideration of temporary reverse direction lane configurations (contra-flow) as that is no longer a strategy used in Florida.*
- ii. Corps Evaluation: Subsequent to EPA's 27 January 2012 letter there have been multiple revisions to the alternatives analysis submitted by the applicants, including the 2013 Alternatives Analysis, the Revised Alternatives Analysis submitted in 2015, and the AA Addendum submitted in 2019. Numerous comments and recommendations were addressed by the updated documents. The EPA was provided a copy of the Revised Alternatives Analysis and all supporting documentation. By letter dated 25 March 2019, the EPA removed the project from potential elevation under the 1992 Clean Water Act Section 404(q) Memorandum of Agreement and did not state any further objections to the proposed project.
- m. The USEPA provided a comment letter on 27 January 2012 for the proposed project described by the 2011 public notice that discussed the LEDPA determination process. The USEPA recommended that the Corps clarify how practicability is defined for the proposed project. The USEPA stated that submittal reports by the applicant declared that project financial cost was the sole basis for their practicability determination and that cost was a "fatal flaw" and a justification for why the proposed project was the only practicable option. The USEPA further stated the applicant contended that other potential project alternatives, such as widening of existing highways, were considered to have this financial "fatal flaw" because their cost estimates exceed the amount of funding already secured or anticipated several years prior for the proposed project. The USEPA recommended that the Corps require an updated cost estimate for all of the proposed alternatives given marked changes in the economy and heightened competitive bidding during the prior years, post-recession. Other comments were concerned that the LEDPA consideration incorrectly used the practicality criteria of cost. The comments suggested that the practicability determination of

project for evaluating alternatives. Being applicants for the Corps permit does not change the fact that the project is a county project being funded by the County. The FTE followed FDOT guidelines that were in affect at the time the interchange type and location were established. The Alternatives Analysis completed for the project followed guidelines provided by the Corps to satisfy federal 404(b)(1) requirements. The RRE project is included on the Long Range Transportation Plan for Pasco County developed by the Pasco County Metropolitan Planning Organization (MPO). When developing the LRTP the MPO considers many of the same attributes for projects as the FDOT guidelines. It considers projects that will:

- 1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;*
- 2. Increase the safety and security of the transportation system for motorized and non-motorized users;*
- 3. Increase the accessibility and mobility options available to people and for freight;*
- 4. Protect and enhance the environment, promote energy conservation, and improve quality of life;*
- 5. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;*
- 6. Promote efficient system management and operation; and*
- 7. Emphasize the preservation of the existing transportation system.*

The LRTP includes the adopted policy statement: Future road improvements on non-freeway/expressway roads shall be limited to a maximum of six general purpose through-lanes. Exceptions may be made on roads that necessitate special use or auxiliary lanes.

- ii. Corps Evaluation: Some commented that the alternatives analysis must follow FDOT guidelines because FTE, a component of FDOT, is a applicant. The Corps does not agree with this comment. The alternatives analysis submitted to the Corps should be intended to satisfy Corps permitting requirements. The FDOT is the appropriate authority for ensuring that its internal reviews and obligations are fulfilled. The Corps notes that multiple alternatives analyses could be completed, if needed, to evaluate different criteria for different purposes.
- o. Comments stated the Corps has ignored the Council on Environmental Quality regulations at 40 CFR 1501.8(b) for request from the public for time limits to the Nation Environmental Policy Act process. The comments stated that numerous requests had been made to set a time limit for a final decision from public pursuant to 40 CFR 1501.8(c). The comments noted the lengthy period of time the proposed project had been under consideration and the numerous times requests for additional information and responses with additional information had occurred that did not meet the requirements in Corps regulation at 33 CFR

325.2(d)(5). In addition, the comments stated the Corps has not followed the Regulatory Standard Operating Procedures for processing applications at “14. Permit Application Evaluation.” The comments suggested that the proposed project was unmanageable due to years of review requiring continual public involvement, the creation of false hopes for the applicant, changes to the proposed project that required a new public notice, and the submission of partial information by the applicant. Other comments suggested the duration of the review, multiple submittals, request for additional information, and many updates to the evaluations and studies in the application should be viewed as not complying with the 404(b)(1) Guidelines at CFR 230.12(a)(iv). Taken together, the comments asserted that the review was in violation of the Administrative Procedures Act, regulations, guidance, and standard operating procedures.

- i. Applicant Response: *The applicants have worked closely with the Corps to provide the most complete and update information possible throughout the permitting process. Representatives of Pasco County, FTE, and their consultants conduct regular conference calls and electronic communications with the Corps to coordinate activities to fulfill the Corps’ CWA 404 permit review requirements. The Corps tracks the overall CWA 404 process for the co-application using a summary “flow chart” and has discretion as to time frame for responses from applicants.*
 - ii. Corps Evaluation: The Corps acknowledges that evaluation of the proposed project has been prolonged. Several milestones such as completing wildlife surveys, developing and updating the alternatives analysis, and conducting surveys for cultural and historical resources, were time consuming and required a high level of coordination between the applicants, the Corps, and other agencies. Additionally, the high level of public comment has resulted in thousands of pages of documents for both the Corps and the applicants to consider. Numerous comments have been submitted to the Corps well beyond the requested timeframes established in the 2011 and 2018 public notices. For the past several years, the Corps has been participating in weekly conference calls with the applicants. The applicants have been consistently providing information needed for the Corps to continue its evaluation of the proposed project. At times, the Corps could potentially have withdrawn the application from review. Such an action would not have negatively biased subsequent review of the proposed work. Additionally, it has been the practice of the Jacksonville District to resume evaluations if additional information is submitted within one year of the Corps’ request. As the applicants have continued to make progress and respond to Corps’ requests, the evaluation has not been withdrawn. The Corps is working diligently to take final action on the pending evaluation.
- p. Comments related to the proposed project meeting the Tampa Bay Regional Planning Council’s policies on mitigation and Natural Resources on Regional

Significance. The council provided applicable policies by letter dated 13 February 2012.

- i. Applicant Response: *The comments from Tampa Bay Regional Planning Council were based on the proposed project as it was described in the 2011 public notice. The proposed project as described in the 2018 public notice incorporate numerous features that reduce the impacts to Natural Resources of Regional Significance in compliance with many of TBRPC's applicable policies. These include minimization of adverse impacts to wetland and riverine systems, the use of mitigation banking for impact mitigation, being consistent with the local government comprehensive plans and the transportation plans of the Metropolitan Planning Organizations and the Florida Department of Transportation.*
 - ii. *Corps Evaluation:* As stated by the applicants' response, comments submitted by the Tampa Bay Regional Planning Council were based on the 2011 public notice. The currently proposed project has incorporated additional measures to minimize wetland impacts, additional bridging of wetlands, wildlife crossings as recommended by the US Fish & Wildlife Service, and compensatory mitigation that would be primarily accomplished through purchase of credits from a permitted mitigation bank within the watershed. Proposed wetland impacts have been reduced from 56.69 acres of permanent and temporary impacts from the discharge of fill material for the 2011 proposed project, to the currently proposed 42.40 acres of permanent and temporary impacts from the discharge of fill material, a 25.2% reduction in proposed permanent and temporary wetland impact.
- q. Comments were submitted that related to the hurricane evacuation and traffic analysis submitted by the applicant. The comments were concerned that population figures were not properly considered with a comparison of a Category 3 event and a Category 5 event. The comments noted that the Pasco County total vulnerable population for an evacuation event of zones A-C was described as 169,392 in the 2010 Hurricane Evacuation Study by the Florida Statewide Regional Evacuation Study Program while the applicant identified the total evacuating population for a Category 3 would be 190,804. For a Category 5 event, the total vulnerable population described in the 2010 Hurricane Evacuation Study was 229,366, but the total evacuating population used by the applicant was less at 227,286. The comments suggest that the traffic loadings and distribution pattern for a Category 3 storm are not similar to a Category 5 event, and the applicant's analysis failed to account for evacuating traffic outside of evacuation zones or outside of sub-areas, including evacuating populations from the south that skewed the results. The comments suggested the population within two miles of Ridge Road does not equal 178,000 as described by the applicant, but was much less and required clarification.
- i. Applicant Response: *The commenter refers to the 2010 Hurricane Evacuation Study when citing inconsistencies in population figures. The*

2010 study was not used in support of the 2015 Alternatives Analysis. All evacuation modeling was completely redone using the Transportation Interface for Modeling Evacuations (TIME) model. Prior to undertaking this analysis, a methodology statement proposing analysis assumptions and procedures was prepared and was submitted to the ACOE on September 19, 2012 for review. Based on input from the North East Regional Planning Council, the agency charged with oversight of the use of the TIME model in Florida, a revised methodology was prepared and submitted to the USACE in November of 2012. The approved methodology included the use of demographic data with a 2015 horizon, behavioral response assuming 100% evacuation and evacuation of zones A through E. The methodology did not include evacuation from other than zones A through E which is the worst case. The results of the evacuation modeling for the 2015 Alternatives Analysis was included as Attachment D to the Alternatives Analysis, in a document titled Ridge Road: Moon Lake Road/Starkey Road to US 41 Extension Alternatives Evacuation Assessment.

- ii. *Corps Evaluation:* The Corps believes that the applicants' response to this comment sufficiently clarifies the apparent discrepancies.
- r. Comments identified roadways that were not correctly classified in the 2013 and 2015 traffic analysis and hurricane evacuation study and questioned whether this rendered the subsequent analyses invalid. The comments suggested that roadway changes and widening preceded the evaluations and should have been updated in the study for the proposed project to get the most accurate traffic and evacuation findings and/or because the Pasco County MPO, which was controlled by the applicant, was responsible for updating the roadway classifications. Comments from CFS submitted on 3 March 2017 were in response to the applicant's response to CFS comments dated 3 August 2015. The comments suggested that roadway classifications that CFS determined to not be accurate as explained in the 3 March 2017 comments were not accurately updated by the applicant and include SR 52, Little Road, and SR 54, Star Trail, Timber Oaks, and DeCubellis Road between Ridge Road and Starkey Blvd near the study area. Comments asserted the length and facility type of the "4D" section in the "TBRPM7 2014 E+C" networks was incorrect. Other comments suggested the applicant updated facility types based on changes of the MPO and the 2040 LRTP when the changes were beneficial to the applicant's analysis, but did not change other facility type classifications that would be detrimental to the analysis and relied on the outdated 2035 LRTP. The comments were concerned the incorrect classifications would not have the "same effect" on alternatives as suggested by the applicant. The comments stated the traffic analysis and hurricane evacuation analysis rely on the roadway network, even those that are further removed from Ridge Road, and mischaracterizing the roadway network would affect rates of traffic and evacuation times disproportional between the alternatives. The comments evaluated the effect of the mischaracterizations and

stated the incorrect classifications slowed down overall traffic analysis times and hurricane evacuations times.

- i. Applicant Response: *The 2013 traffic analysis was not used in support of the 2015 Alternatives Analysis so only comments relating the 2015 analysis are pertinent.*

Comments related to facility type coding have previously been addressed and where appropriate the model was updated and the analysis rerun. The 2019 Addendum to the Alternatives Analysis provides the updated results in Table 4-1. In many cases, the facility type coding discrepancies are the result of “legacy” coding of the models and were inherited when use of the then-current MPO and TIME evacuation models was agreed upon. Certain other changes to the model roadway networks were made, judged to be the ones of significance when the work was done. While the reviewer does point out some specific situations where, due to traffic signal density or installing a median to divide a roadway, a facility type should have been changed, the differences (a +/- 5 to 6-mile-per hour or 15 percent change in capacity) have less impact when alternative facilities to or from which traffic may be shifted are not in close proximity. The reviewer acknowledges this in a comment: “In my 3-3-17 Comment I admitted that falsely classified roadways more than one or two traffic signals away from the study area would not affect the results of the traffic analysis.” Further, since the analyses undertaken are comparative in nature, it is important to note that these “falsely classified roads” (away from the study network) were held consistent between all the alternatives considered, thus still maintaining a reasonable and defensible comparative analysis of alternatives.

Regarding change in facility type for “Phase II” of the Ridge Road Extension from a limited access, higher-speed facility (Parkway) to an interrupted-flow facility. Previous analyses available at the time of Mr. Sommerville’s comments had coded western portions of the Ridge Road Phase II Extension (from the Suncoast Parkway to US 41) as a “Parkway” and eastern portions as an interrupted flow facility. Coding the entire Phase II segment (Suncoast Parkway to US 41) to an interrupted flow facility would result in a lower capacity and slower speed, presumably making the Ridge Road Extension a less attractive facility for both routine daily traffic movement as well as hurricane evacuation. This issue was addressed in a supplemental analysis undertaken after Mr. Sommerville’s comments were written, dated June 21, 2019 where the full extent of the RRE from the Suncoast Parkway to US 41 was coded as an interrupted-flow facility and other north-south roadways were connected to it to allow for full circulation benefit.

With respect to two-digit facility types in the TIME (evacuation) model, it is noted that TIME documentation indicates the use of two-digit facility types in the TIME model. However, the version of the TIME model used, current

at the time the analysis was undertaken, mostly makes use of single-digit facility types (e.g. use of Facility Type 30 for all undivided arterials, or Facility Type 20 for all divided arterials). Review of the network provided to us indicates that 20,204 of the 24,717 roadway links in the evacuation network were coded with facility types in multiples of “10” (81.7%). Thus, while some limited use of two-digit coding was present in the version of the model we were directed to use, use of single-digit facility types cannot be said to be “incorrect” for this early version of TIME.

- ii. **Corps Evaluation:** The Corps concurs that comments based on use of the 2013 traffic analysis are no longer germane. The Corps believes that the response from the applicants has merit. It appears that any errors in facility type were somewhat removed from the immediate study area and would have had little effect on the overall results. It is important to note that the same scenario was utilized for all alternatives considered.
- s. Comments recommended an additional alternative be added to the consideration of the alternatives analysis. The comments suggested a 4-lane partially elevated roadway design in a raised median on 6.76 miles of SR 54 west of the Suncoast Parkway, and a fully elevated 4-lane 5.08 miles segment east of the Suncoast Parkway as an alternative to the proposed project. The comments suggested that this alternative would cost less than the fully elevated alternative 11, and recommended the applicant evaluate the cost and direct, indirect, and cumulative impacts of their recommended alternative.
 - i. **Applicant Response:** *As documented in the 2015 Alternatives Analysis and 2019 Addendum, Alternative 11 increased evacuation time. The commenter described allegedly less costly alternative would likely have the same or similar mobility and evacuation results as Alternative 11 and would thus not meet the Corps defined project purpose and therefore not be considered practicable.*
 - ii. **Corps Evaluation:** The list of alternatives to be considered was previously reviewed and agreed to by the Corps. The Corps is satisfied that the applicants have analyzed multiple alternatives within the study area in response to Corps and public comments. The Corps does not agree that analysis of additional alternatives is warranted.
- t. Comments questioned why and when Florida’s Turnpike Enterprise became a applicant.
 - i. **Applicant Response:** *Florida’s Turnpike Enterprise (FTE) became a applicant with the submittal of the 2011 permit application. The County’s segments of the project would not have independent utility without the connection to the Suncoast Parkway that would be provided by FTE’s segment of the project. Likewise there would be no independent utility for FTE’s interchange segment without at least one of the County’s segments. Thus combining the project under one permit was the most reasonable way to assure that if a favorable permit decision was made by*

the Corps the timing of the construction of the projects could be most efficiently coordinated.

- ii. *Corps Evaluation:* The proposed project is for a single project that involves work that would be completed by both Pasco County and FTE. The 2011 application included completed permit application forms for both Pasco County and FTE, in Volume I, sections A and C, respectively, of the submittal.
- u. Comments stated that all comments made in reference to the proposed project dating back to the original public notice should be included and considered without exception because the project had never substantially changed.
 - i. *Applicant Response:* *The applicants note the commenter's opinion regarding the nature of the changes to the project and believe that the changes in the project as described by the 2018 public notice amount to a substantial change. However, the applicants are providing responses to all comments including those based on the outdated 2011 public notice.*
 - ii. *Corps Evaluation:* The current file number assigned to the permit application is SAJ-2011-00551 and was assigned upon receipt of a substantially updated permit application on 31 May 2011. The Corps published a public notice on 28 November 2011. Following the change in classification of Phase II from limited access to arterial, the Corps published a public notice on 25 September 2018. That public notice advised that comments submitted in response to the Corps' 2011 public notice would be considered. This evaluation considered all comments received in response to both the 2011 and 2018 public notices. Permitting history for a proposed RRE dates back to a previous permit application with an assigned file number of SAJ-1998-02682. The Corps published a public notice, under that file number, on 2 February 2000. The pending application was later withdrawn from evaluation by the Corps. Comments submitted in response to the Corps' 2000 public notice are not considered in this evaluation.
- v. Comments provided a cost estimate of the proposed project based on FDOT cost estimates adjusted for inflation, other information available to them, and assumption of some project components as of 2017. The comments asserted the costs associated with the proposed project including construction of the roadway, stormwater control, land, fencing, two wildlife crossings, and compensatory mitigation factor into the practicability determination of alternatives and suggested that these cost in 2017 rendered the proposed project as not affordable to Pasco County and the proposed project could not be considered practicable in the 404(b)(1) Guidelines evaluation. The comments stated the applicant previously indicated \$109.3 million was the maximum cost Pasco County could afford. The comments suggested these were conservative estimates of costs. The comments did not include adjustments to the costs associate with all the multi-use path, bridges, engineering and design. Costs for the smaller wildlife crossings were not included. The comments stated the

mitigation bank credits may be as high 300 credits that would require \$33 million cost for compensatory mitigation.

Inflation adjusted construction costs in 2017 for Phase I	2017 Urban and Rural plus inflation adjustment	\$89,001,213
Pond Construction Phase I and 2	106 acres at \$83,333 per acre	\$8,833,298
Land for Ponds Phase II	43.5 acres at \$40,000 per acre	\$1,740,000
Land for ROW Phase II	83.48 acres at \$40,000 per acre	\$3,339,200
Fencing	16 miles: EI fence addition, 10 foot Phase I, and 6 foot Phase II	\$428,811
Upland Wildlife Crossing	2 - 10 foot high box culverts	\$750,000
Compensation at Old Florida MB	150 credits at \$110,333	\$16,549,950
	Total calculated based on above	\$120,642,472
	Total provided in comments	\$121,037,472

- i. Applicant Response: *All cost estimates developed for the Alternatives Analysis followed the same methodology and are therefore comparable. The commenter has singled out the cost estimate for the proposed project to cast doubt regarding affordability of the project. The commenter's cost estimate cannot be compared to the other alternatives unless similar "adjustments" were made to them as well. If similar adjustments were made to all the other alternatives then it is likely all the cost estimates would be "inflated" near equally and a new comparison and determination of affordability could then be made. The purpose of the development of the cost estimates for the alternatives analysis was to provide a valid means of comparison between alternatives and not to establish cost for use in county budgeting and capital improvement plan development.*
- ii. Corps Evaluation: The Corps concurs with the response provided by the applicants. In response to multiple comments, the Corps has noted that analysis of the selected alternatives must rely on information that is reasonably available for all alternatives. An applicant often does not have ownership or control of property for all alternatives under consideration. As such, it is not feasible to complete wetland delineations, provide rights of entry to the Corps, complete surveys, complete functional assessment of wetland impact areas, and the like. Data such as the National Wetlands Inventory, National Hydrographic Data, soil maps, topographic maps, flood zone maps, parcel data, etc. must be used for comparison of alternatives. Using higher quality data such as site specific wetland delineations, functional assessments of wetland impact areas, site specific surveys, and more refined construction and engineering data, against other alternatives assessed with lower quality data, does not result in a fair comparison of alternatives. The Corps notes that the commenter's estimate of possibly needing 300 mitigation bank credits at a cost of \$33 million is exaggerated. Additionally, in

the constructed cost shown above, the commenter estimated purchase of 150 mitigation bank credits for a total cost of \$16.5 million. Based on functional assessments of the proposed wetland impacts, a total of 40.65 mitigation bank credits would be required. The commenter's estimate is in error, on the order of several million dollars, on just this one element.

- 4.2 Were additional issues raised by the Corps including any as a result of coordination with other Corps offices? Yes
If yes, provide discussion including coordination of concerns with the applicant, applicant's response and Corps' evaluation of the response: *See Attachment 4 of this decision document.*
- 4.3 Were comments raised that do not require further discussion because they address activities and/or effects outside of the Corps' purview? Yes, see *administrative record.*

5.0 Alternatives Analysis (33 CFR Part 325 Appendix B(7), 40 CFR 230.5(c) and 40 CFR 1502.14). An evaluation of alternatives is required under NEPA for all jurisdictional activities. An evaluation of alternatives is required under the Section 404(b) (1) Guidelines for projects that include the discharge of dredged or fill material. NEPA requires discussion of a reasonable range of alternatives, including the no action alternative, and the effects of those alternatives; under the Guidelines, practicability of alternatives is taken into consideration and no alternative may be permitted if there is a less environmentally damaging practicable alternative. It should be noted that alternatives were assessed using the same criteria and readily available information. Site specific data, such as wetland delineations and wildlife surveys, is not available for every alternative and was not used in comparison of alternatives. To allow for an equitable comparison, wetlands within the alignments of each alternative were mapped using the Florida Land Use, Cover, and Forms system, as described in the Revised Alternatives Analysis.

As part of a comprehensive response to multiple requests for information, the applicants submitted an Alternatives Analysis to the Corps on 18 December 2013. The Alternatives Analysis was subsequently revised and provided to the Corps on 15 April 2015 (Revised Alternatives Analysis). Finally, an Alternatives Analysis Addendum was provided to the Corps on 24 July 2019 to address the change in designation of Phase II from a limited access road to an arterial road. This change in designation would allow as many as seven signalized intersections within Phase II of the proposed RRE. In response to Corps comments, the applicants submitted an updated Alternatives Analysis Addendum on 17 September 2019 (AA Addendum). The Corps' analysis in this document refers to the most recent versions of the applicants' Alternatives Analysis, which includes the Revised Alternatives Analysis submitted in 2015 and the AA Addendum submitted on 17 September 2019. As the Revised Alternatives Analysis, its

supporting documentation, and the AA Addendum constitute more than 1,000 pages, it is not practical to capture every detail in this decision. Additional details, including methodology for the applicants' assessments, can be found in the above-referenced documents that are part of the administrative record for this evaluation. Table 4-1 of the AA Addendum provides a summary of the screening criteria data for each of the alternatives considered.

5.1 Site selection/screening criteria: In order to be practicable, an alternative must be available, achieve the overall project purpose (as defined by the Corps), and be feasible when considering cost, logistics and existing technology.

Criteria for evaluating alternatives as evaluated and determined by the Corps: The applicants submitted their *Alternatives Analysis for Ridge Road Extension*, dated 15 April 2015, for the Pasco County Engineering Services Department. This was a revision of an Alternatives Analysis previously submitted by the applicants on 18 December 2013. The plan for the Alternatives Analysis and selection of the screening criteria were discussed with the Corps multiple times between 2012 and 2014. Both the Corps and the EPA provided feedback on the screening criteria in 2014, prior to submittal of the Revised Alternatives Analysis in 2015.

Screening criteria included:

- a. Mobility improvement. Mobility improvement was assessed by the applicants using the average travel speed, in miles per hour (mph), within the study area. The Revised Alternatives Analysis submitted by the applicants states that "this is a criteria used by state and regional planning organizations to evaluate mobility improvements". The analysis also includes Volume to Capacity Ratios (V:C) for each alternative, which indicates the amount of traffic in relation to the capacity of the roadway. A lower V:C (smaller number) predicts less traffic than a higher V:C (larger number). These assessments were completed using the Tampa Bay Regional (Transportation) Planning Model, which was developed by the Florida Department of Transportation (FDOT).
- b. Evacuation improvement. The reduction or increase in time, measured in hours, required to evacuate the population within the Coastal Evacuation Area to safer areas outside the evacuation zones.
- c. Costs. Total estimated costs including the costs of construction, costs of obtaining ROWs, and costs of compensatory mitigation for wetland impacts.
- d. Logistics. Assessment of any limitations or logistical obstacles to construction of each alternative. For this criterion, the applicants specifically identified the following as considerations: availability, impacts to businesses and residences,

likelihood of authorization by the FDOT, consistency with Pasco County's Long Range Transportation Plan (LRTP). Potential impacts to businesses and residences were considered and additional details were provided for the number of properties that would need to be acquired. A property was considered to be impacted if the ROW of an alternative infringed on a property. If the ROW of an alternative was within 20 feet of an existing structure, such as a residence or commercial building, then it was considered a relocation and would require acquisition of the property. Several of the alternatives considered would require expansion of roads that are owned and managed by the State. As such, approval from the FDOT would be required to implement those alternatives and such approval was considered a logistical constraint by the applicants. As stated above, the applicants also identified consistency with Pasco's LRTP as a constraint. The Revised Alternatives Analysis states that the LRTP is a document prepared in compliance with a Federally mandated transportation planning process. As the FDOT would also be a party to any modification of the LRTP, the applicants assert that alternatives that are not supported by the FDOT are less likely to be adopted into the LRTP.

- e. Impacts to cultural/historical resources. Consideration of acres of direct impacts to archaeological/historic sites and indirect impacts to such sites within 300 feet of the ROW for each alternative. Impacts were measured by estimating the number of acres of archaeological or historical sites, as identified in the Florida Master Site File, within the ROW of each alternative. Additionally, the number of historic structures that would be either directly or indirectly impacted by the proposed alternative was assessed.
- f. Impacts to waters of the United States, including wetlands. Consideration of the direct and indirect impact to waters of the US within 300 feet from the limits of construction.
- g. Impacts to streams. Impacts to streams for installation or extension of drain pipes or box culverts where roadway crossings would be constructed or expanded. Stream impacts are quantified as linear feet of impact.
- h. Impacts to wildlife species, including federally protected species. The Revised Alternatives Analysis provides additional detail regarding the likelihood of specific species being affected by the proposed alternatives. The applicants' assessment utilized the Integrated Wildlife Habitat Ranking System and six categories of potential impacts including very high impact, high impact, moderate impact, low impact, very low impact, and no impact. The Corps determined that the Eastern indigo snake and wood stork, both protected under the Endangered Species Act (ESA), may be affected by the proposed project and therefore a brief discussion

of these species is included in the discussion of alternatives. Potential effects to these species are discussed in greater detail in section 10.1 of this document.

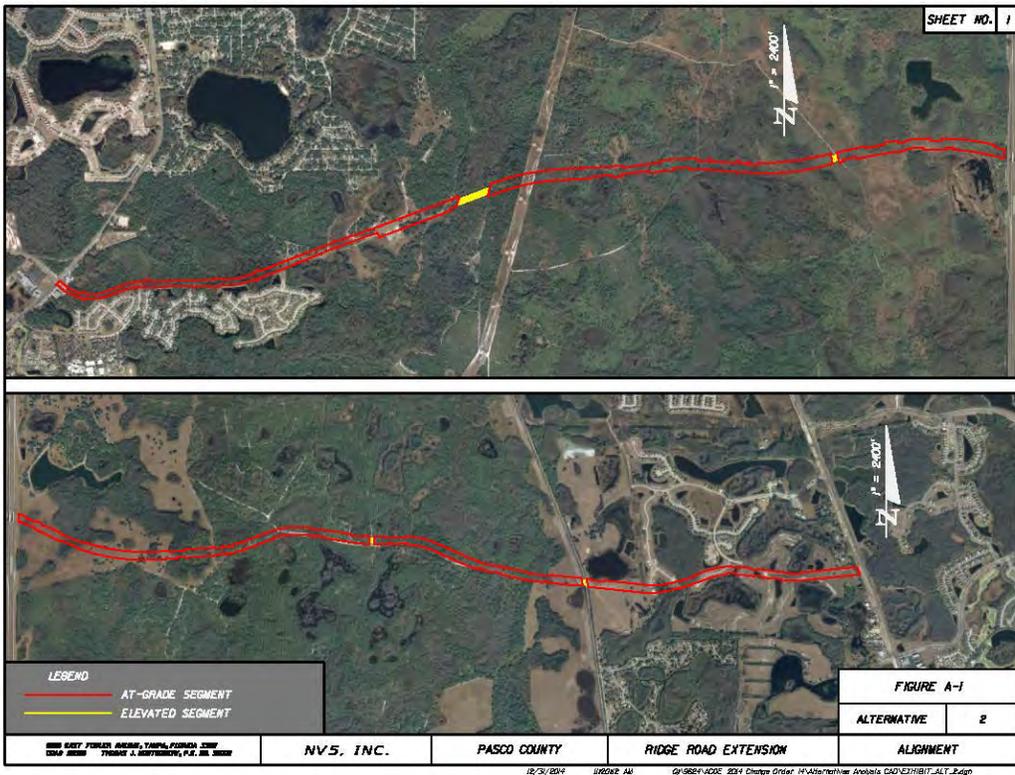
5.2 Description and evaluation of alternatives: For ease of reference, the following alternatives are numbered as found in the Revised Alternatives Analysis and AA Addendum provided by the applicants. Alternatives that include an extension of Ridge Road, including the applicants' preferred alternative, are noted as on-site alternatives. Alternatives that involve expansion of existing roads or construction of new roads other than RRE are noted as off-site alternatives. Table 4-1 of the Revised Alternatives Analysis (**Attachment 2**) provides a summary of the alternatives with respect to the screening criteria.

5.2.1 No action alternative (Alternative 1):

Description: The no action alternative could include denial of a permit or an alternative that does not include impacts to waters of the United States. In the Revised Alternatives Analysis, the no action alternative assumed that other planned improvements, which would occur within the five-year period from 2015 to 2019, would be completed. Those improvements included the widening of SR 54, by FDOT, to six lanes between the Suncoast Parkway and US Highway 41. As of the date of this document, the widening of SR 54 to six lanes, between the Suncoast Parkway and US Highway 41, has been completed. For the purpose of cross-referencing the administrative record, please note that the no action alternative is identified as Alternative 1 in the Revised Alternatives Analysis submitted by the applicants. The no action alternative would result in an average travel speed within the Study Area of 18.9 mph, resulting in a V:C ratio of 1.110. Based on the Hurricane Evacuation Assessment, the no action alternative would result in an evacuation time of 23.4 hours. There would be no construction, ROW, or mitigation costs for the no action alternative. The no action alternative is not consistent with Pasco County's LRTP, which calls for four additional lanes of roadway in central Pasco County. As there would not be any construction, a permit from FDOT would not be required. The no action alternative would not impact any existing residences or businesses. Similarly, there would be no impacts to archaeological sites or historic structures. The no action alternative would not impact wetlands, stream, or wildlife.

Evaluation: The no action alternative would not improve east-west roadway capacity within the targeted area and would not reduce evacuation times for the coastal population of Pasco County. The no action alternative is not consistent with Pasco County's LRTP. The Corps believes that the no action alternative is not practicable as it would not satisfy the overall project purpose.

Alternative 2 (on-site):



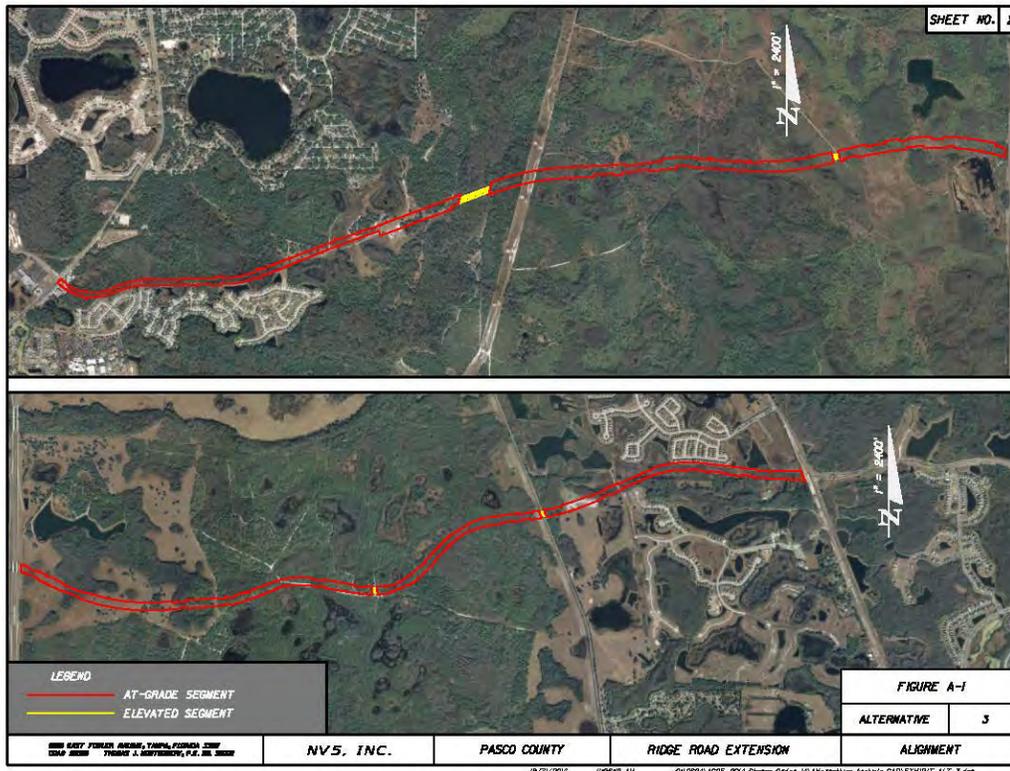
Description: Alternative 2 is the at-grade extension of existing Ridge Road eastward to US Highway 41 as a divided four-lane road. This alternative is approximately 8.9 miles long and includes a bridge over the Pithlachascotee River and three short bridges, east of the Suncoast Parkway, for vehicle access and to cross an existing railway. This alternative would provide two commercial driveway connections and two residential street connections within the western-most 1.5 miles of Phase I. The roadway segment located east of the Suncoast Parkway, Phase II, would be designated as limited access and would be limited to a single driveway connection to a commercial parcel located immediately east of the Suncoast Parkway. Alternative 2 would increase average travel speed within the Study Area from 18.9 mph to 20.79 mph and result in a V:C ratio of 1.032. Based on the Hurricane Evacuation Assessment, Alternative 2 would reduce evacuation time from 23.4 hours to 16.8 hours, a reduction of 6.6 hours. The total estimated cost for Alternative 2, as updated in the AA Addendum is \$106,008,000. Alternative 2 is consistent with Pasco County's LRTP. As this alternative would not involve modification of a state road, it would not require a permit from FDOT. Alternative 2 would infringe upon the property boundaries of 22 existing residences and 85 vacant lots within an existing subdivision. Acquisition of all 22 residences would be required. This alternative would potentially result in direct impacts to 31.6 acres and indirect impacts to 42.8 acres of archaeological/historical sites, including five previously recorded archaeological sites. Alternative 2 would directly impact 27.5 acres of wetlands and indirectly impact 229.3 acres of wetlands. Alternative 2 would result in

moderate impacts to five species, low impacts to six species, very low impacts to four species, and no impact to five species. General impacts to wildlife would include noise, construction activities, vehicle strikes, and habitat fragmentation. Fencing constructed along the project and proposed wildlife crossings and bridges would help minimize vehicle strikes and habitat fragmentation. Alternative 2 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the Endangered Species Act (ESA). Potential effects to the Eastern indigo snake would be minimized by providing wildlife crossings, using snake mesh along the fencing to exclude snakes from the roadway, and by following the USFWS *Protection Measures for the Eastern Indigo Snake*, August 2013. Potential effects to the wood stork would be due to loss of Suitable Foraging Habitat (SFH), which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 2 is one of the eight alternatives that would rely solely on extension of Ridge Road. Alternative 2 would transect an existing residential subdivision that did not exist when permitting efforts for this project originally began. As evaluated in the Revised Alternative Analysis (March 2015), this alternative would require the acquisition of 22 private residences and would infringe on the property boundaries of an additional 85 residential lots. Based on the Corps' review of current aerial photography and the Alternative 2 alignment, it is apparent, at the time of drafting this document, that a substantial number of the 85 vacant lots have been developed subsequent to the applicants' Revised Alternatives Analysis. As such, the number of residences that would need to be acquired has nearly doubled. Due to the drastic increase in development within the subdivision, the Corps requested an updated estimate of the number of residences that would be affected. A similar assessment was not made for the remaining alternatives as the change since the Revised Alternatives Analysis is not as substantial. Based on the methodology used to estimate acquisition and relocation costs, which includes the cost of appraisals, attorneys, consulting, administrative items, and the like, the Corps believes that the additional acquisition of residences would likely increase the cost of Alternative 2 by approximately \$10 million, bringing the total cost to approximately \$116 million. Acquisition of approximately 40 or more homes within a single residential development, and relocation of the residents occupying those homes, would be disruptive to the affected residents. The Corps believes that selecting a residence is typically a very personal decision that considers numerous factors including community amenities, style and architectural features, school zoning, commute times, proximity to friends and families, and numerous other considerations, and the relocation of these residents would be expected to be extremely disruptive. Homes affected may also have sentimental value to the affected families that could not be replaced through relocation. The Corps expects that property values for the remaining homes and residential parcels located in proximity to this alternative would be adversely affected due to increased noise pollution, proximity to an arterial roadway, and, in some cases, loss of property to the road ROW. This alternative would potentially result in direct impacts to 31.6 acres or archaeological/historical sites,

including five previously recorded archaeological sites. As Alternative 2 would result in adverse impacts to numerous existing residences, including the relocation of a large number of residents, the Corps has determined that this alternative is not practicable.

Alternative 3 (on-site):

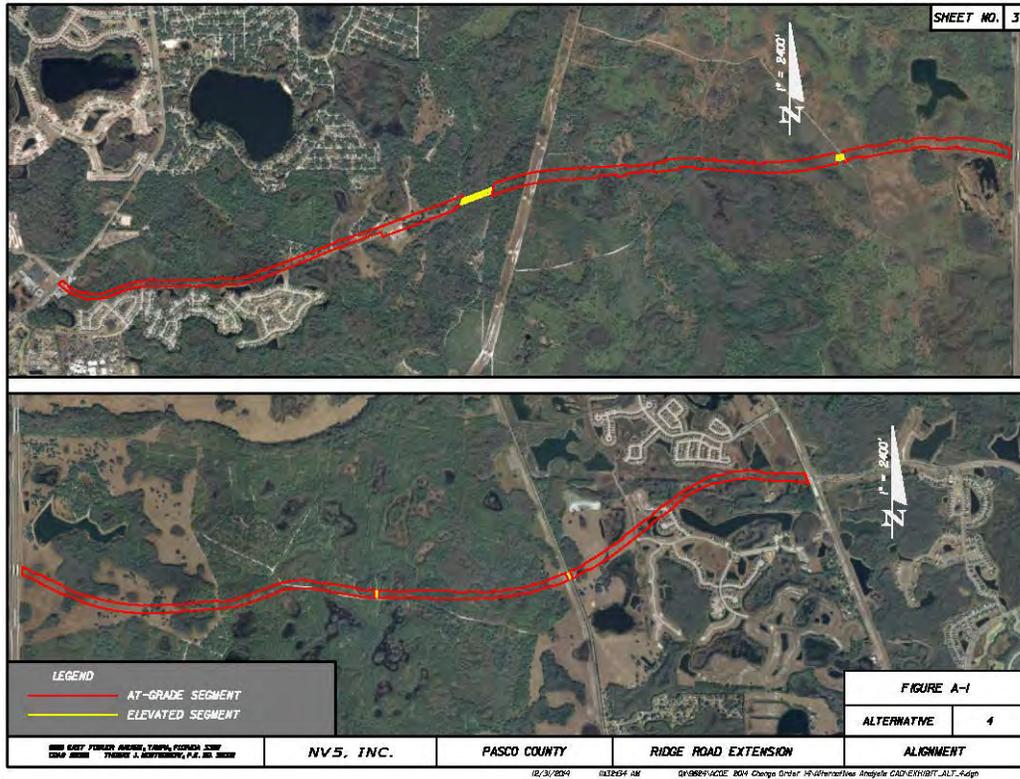


Description: Alternative 3 is the at-grade extension of existing Ridge Road eastward to US Highway 41 as a divided four-lane road. This alternative is approximately 8.7 miles long and includes a bridge over the Pithlachascotee River and three short bridges, east of the Suncoast Parkway, for vehicle access and to cross an existing railway. This alternative would provide two commercial driveway connections and two residential street connections within the western-most 1.5 miles of Phase I. Phase II would be designated as limited access and would be limited to a single driveway connection to a commercial parcel located immediately east of the Suncoast Parkway. Alternative 3 would increase average travel speed within the Study Area from 18.9 mph to 20.79 mph and result in a V:C ratio of 1.032. Based on the Hurricane Evacuation Assessment, Alternative 3 would reduce evacuation time from 23.4 hours to 16.8 hours, a reduction of 6.6 hours. The total estimated cost for Alternative 3, as updated in the AA Addendum, is \$83,845,000. Alternative 3 is consistent with Pasco County's LRTP. As this alternative would not involve modification of a state road, it would not require a permit from FDOT. Alternative 3 would not infringe upon the property boundaries of any existing residences or businesses. This alternative would potentially result in direct

impacts to 17.7 acres and indirect impacts to 32.5 acres of archaeological/historical sites. Alternative 3 would directly impact 33 acres of wetlands and indirectly impact 243 acres of wetlands. There would be 470 linear feet of stream impacts associated with installation of drain pipes and/or box culverts for this alternative. Alternative 3 would result in moderate impacts to five species, low impacts to six species, very low impacts to four species, and no impact to five species. General impacts to wildlife would include noise, construction activities, vehicle strikes, and habitat fragmentation. Fencing constructed along the project and proposed wildlife crossings and bridges would help minimize vehicle strikes and habitat fragmentation. Alternative 3 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by providing wildlife crossings, using snake mesh along the fencing to exclude snakes from the roadway, and by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 3: Alternative 3 is one of the eight alternatives that would rely solely on extension of Ridge Road. This alternative would satisfy the overall project purpose of improving mobility and evacuation times within the study area and would not have substantial adverse effects on the screening criteria. Alternative 3 would result in improvements to mobility and evacuation within the study area, is less costly than the applicants' preferred alternative, and would not adversely impact residences or businesses or result in the relocation of residents. As such, the Corps believes that Alternative 3 is a practicable alternative.

Alternative 4 (on-site):

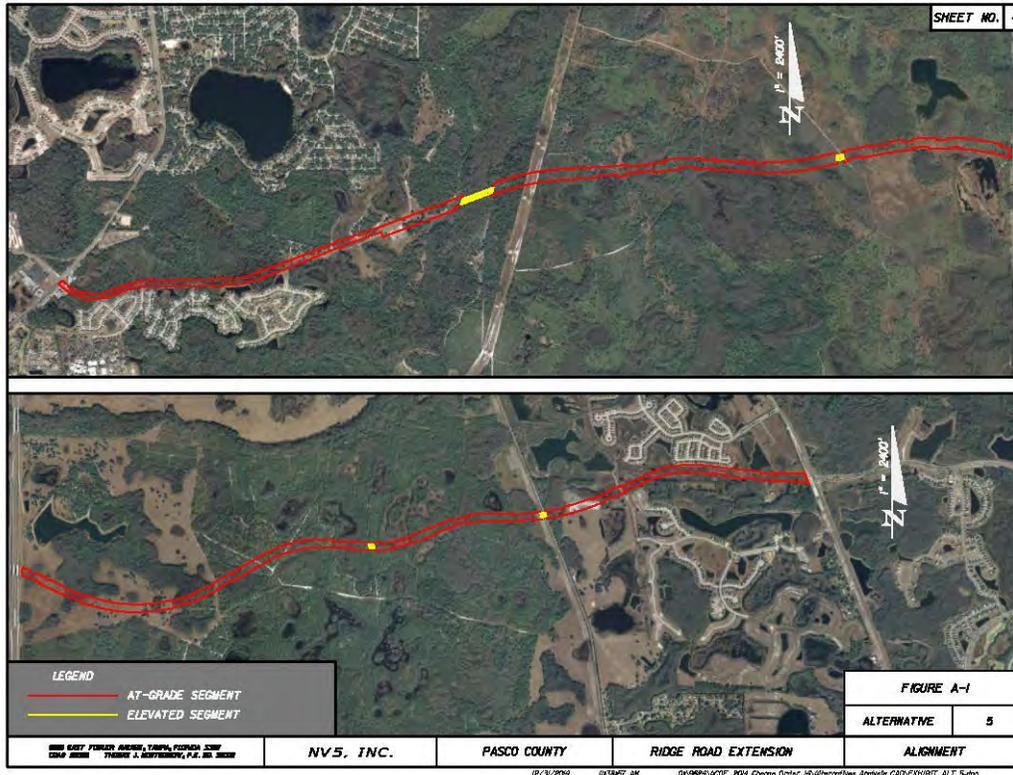


Description: Alternative 4 is the at-grade extension of existing Ridge Road eastward to US Highway 41 as a divided four-lane road. This alternative is approximately 8.7 miles long and includes a bridge over the Pithlachascotee River and three short bridges, east of the Suncoast Parkway, for vehicle access and to cross an existing railway. This alternative would provide two commercial driveway connections and two residential street connections within the western-most 1.5 miles of Phase I. Phase II would be designated as limited access and would be limited to a single driveway connection to a commercial parcel located immediately east of the Suncoast Parkway. Alternative 4 would increase average travel speed within the Study Area from 18.9 mph to 20.79 mph and result in a V:C ratio of 1.032. Based on the Hurricane Evacuation Assessment, Alternative 4 would reduce evacuation time from 23.4 hours to 16.8 hours, a reduction of 6.6 hours. The total estimated cost for Alternative 4, as updated in the AA Addendum, is \$92,043,000. Alternative 4 is consistent with Pasco County's LRTP. As this alternative would not involve modification of a state road, it would not require a permit from FDOT. Alternative 4 would infringe upon the property boundaries of 16 residences and would require acquisition of 11 of those properties. This alternative would potentially result in direct impacts to 18.9 acres and indirect impacts to 33.1 acres of archaeological/historical sites. Alternative 4 would directly impact 33.1 acres of wetlands and indirectly impact 240.7 acres of wetlands. There would be 278 linear feet of stream impacts associated with installation of drain pipes and/or box culverts for this alternative. Alternative 4 would result in moderate impacts to five species, low impacts

to six species, very low impacts to four species, and no impact to five species. General impacts to wildlife would include noise, construction activities, vehicle strikes, and habitat fragmentation. Fencing constructed along the project and proposed wildlife crossings and bridges would help minimize vehicle strikes and habitat fragmentation. Alternative 4 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by providing wildlife crossings, using snake mesh along the fencing to exclude snakes from the roadway, and by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 4 is one of the eight alternatives that would rely solely on extension of Ridge Road. This alternative would transect the northern extent of the same subdivision that would be impacted by Alternative 2. As mentioned above, this subdivision did not exist when permitting efforts began. This alternative would require the acquisition of 11 private residences and would infringe upon the property boundaries of an additional five residences. Acquisition of 11 homes within the residential development would be disruptive to the affected residents. The Corps believes that selecting a residence is typically a very personal decision that considers numerous factors, including community amenities, style and architectural features, school zoning, commute times, proximity to friends and families, and numerous other considerations, and the relocation of the residents occupying these homes would be expected to be extremely disruptive. Homes affected may also have sentimental value to the affected families that could not be replaced through relocation. The Corps expects that property values for the remaining homes and residential parcels located in proximity to this alternative would be adversely affected due to increased noise pollution, proximity to an arterial roadway, and, in some cases, loss of property to the road ROW. As Alternative 4 would result in adverse impacts to a number of residences, including the relocation of a number of residents, the Corps has determined that this alternative is not practicable.

Alternative 5 (on-site):



Description: Alternative 5 is the at grade extension of existing Ridge Road eastward to US Highway 41 as a divided four-lane road. This alternative most closely resembles the applicants' previous preferred alternative, which was the subject of the Corps' public notice dated 28 November 2011. This alternative is approximately 8.7 miles long and includes a bridge over the Pithlachascotee River and three short bridges, east of the Suncoast Parkway, for vehicle access and to cross an existing railway. This alternative would provide two commercial driveway connections and two residential street connections within the western-most 1.5 miles of Phase I. Phase II would be designated as limited access and would be limited to a single driveway connection to a commercial parcel located immediately east of the Suncoast Parkway. Alternative 5 would increase average travel speed within the Study Area from 18.9 mph to 20.79 mph and result in a V:C ratio of 1.032. Based on the Hurricane Evacuation Assessment, Alternative 5 would reduce evacuation time from 23.4 hours to 16.8 hours, a reduction of 6.6 hours. The total estimated cost for Alternative 5, as updated in the AA Addendum, is \$80,588,000. Alternative 5 is consistent with Pasco County's LRTP. As this alternative would not involve modification of a state road, it would not require a permit from FDOT. Alternative 5 would not infringe upon the property boundaries of any existing residences or businesses. This alternative would potentially result in direct impacts to 13.1 acres and indirect impacts to 43.3 acres of archaeological/historical sites. Alternative 5 would directly impact 33.7 acres of wetlands and indirectly impact 240.9 acres of wetlands. There would be 470 linear feet of stream impacts associated with installation of drain

pipes and/or box culverts for this alternative. Alternative 5 would result in moderate impacts to five species, low impacts to six species, very low impacts to four species, and no impact to five species. General impacts to wildlife would include noise, construction activities, vehicle strikes, and habitat fragmentation. Fencing constructed along the project and proposed wildlife crossings and bridges would help minimize vehicle strikes and habitat fragmentation. Alternative 5 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by providing wildlife crossings, using snake mesh along the fencing to exclude snakes from the roadway, and by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

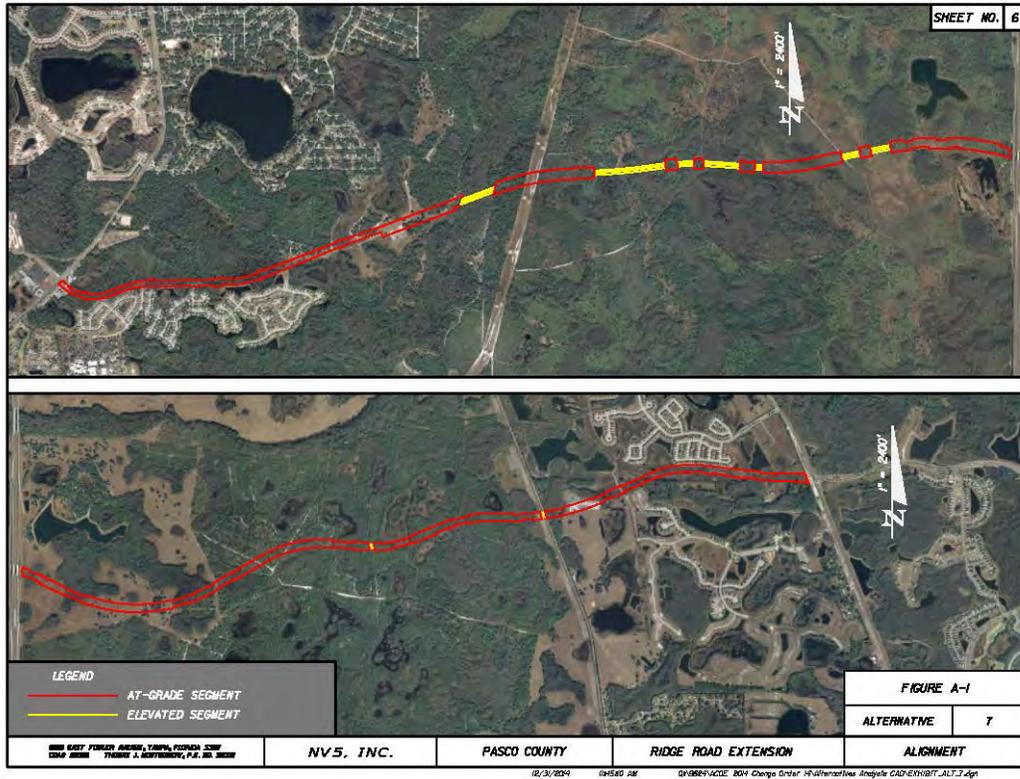
Evaluation: Alternative 5 is one of the eight alternatives that would rely solely on extension of Ridge Road. This alternative would satisfy the overall project purpose of improving mobility and evacuation times within the study area and would not have substantial adverse effects on the screening criteria. Alternative 5 would result in improvements to mobility and evacuation within the study area, would be less costly than the applicants' preferred alternative, and would not result in the relocation of residents or businesses. As such, the Corps believes that Alternative 5 is a practicable alternative.

Alternative 6 (on-site):

culverts for this alternative. Alternative 6 would result in low impacts to five species, very low impacts to 10 species, and no impact to five species. Fencing constructed along the project and proposed wildlife crossings and bridges would help minimize vehicle strikes and habitat fragmentation. Alternative 6 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by providing wildlife crossings, using snake mesh along the fencing to exclude snakes from the roadway, and by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 6 is one of the eight alternatives that would rely solely on extension of Ridge Road. This alternative incorporates the most bridging of any of the Ridge Road Extension alternatives and would incorporate bridges through the majority of uplands and wetlands within the Serenova Tract. The Corps notes that Alternative 6 has an estimated cost of \$198,979,000 and would directly impact an estimated 27.7 acres of wetlands. For comparison, the applicants' preferred alternative, Alternative Mod 7a, has an estimated cost of \$102,383,000 and would directly impact an estimated 28.5 acres of wetlands. As such, Alternative 6 would cost \$96,596,000 more than Alternative Mod7a and would reduce direct wetland impacts by only 0.8 acre. This represents an increase in costs by 94.35% and a reduction of wetland impacts by 2.8%. When considering the nature and location of wetlands that would be affected by the proposed project, the Corps does not believe that the additional cost of \$96,596,000 to avoid impacts to an additional 0.8 acre of wetlands is warranted. Alternative 6 is not practicable as it would increase costs by 94.35%, as compared to the applicants' preferred alternative.

Alternative 7 (on-site):



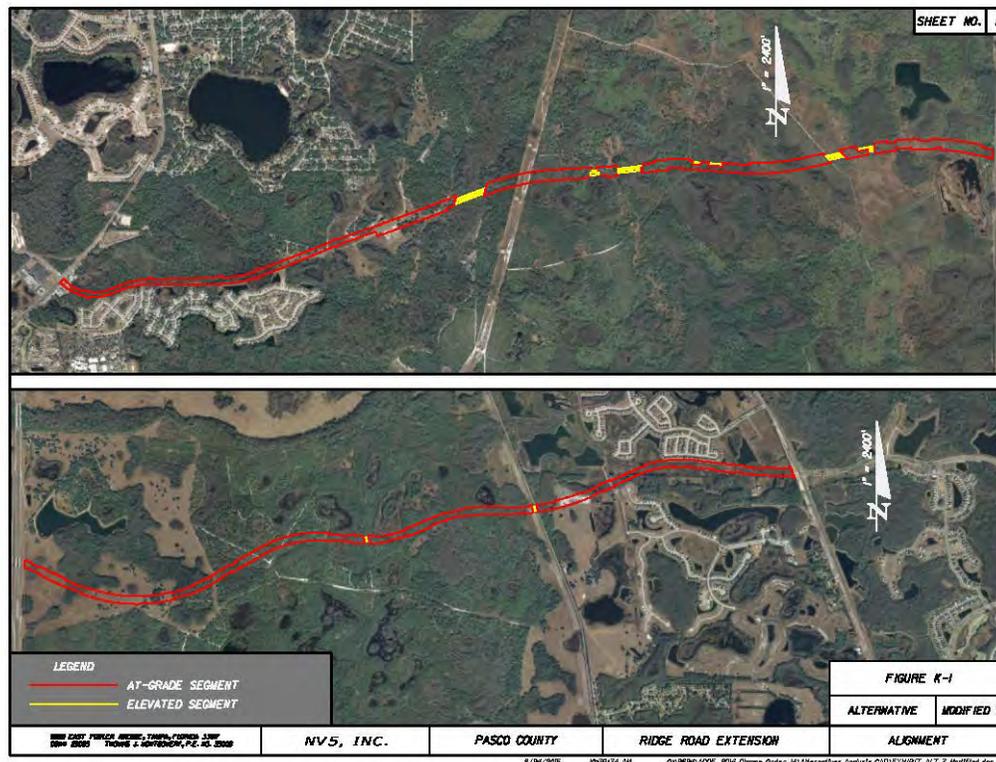
Description: Alternative 7 is the extension of existing Ridge Road eastward to US Highway 41 as a divided four-lane road. This alternative is approximately 8.7 miles long and would include bridges over all wetlands and some uplands within the Serenova Tract, including a bridge over the Pithlachascotee River. Two short bridges would also be constructed east of the Suncoast Parkway for vehicle access and to cross an existing railway. By comparison, Alternative 7 would have less bridging, within Phase I, than Alternative 6, but would have more bridging, within Phase I, than Alternatives 5, Mod7, or Mod7a. This alternative would provide two commercial driveway connections and two residential street connections within the western-most 1.5 miles of Phase I. Phase II would be designated as limited access and would be limited to a single driveway connection to a commercial parcel located immediately east of the Suncoast Parkway. Alternative 7 would increase average travel speed within the Study Area from 18.9 mph to 20.79 mph and result in a V:C ratio of 1.032. Based on the Hurricane Evacuation Assessment, Alternative 7 would reduce evacuation time from 23.4 hours to 16.8 hours, a reduction of 6.6 hours. The total estimated cost for Alternative 7, as updated in the AA Addendum is \$138,093,000. Alternative 7 is consistent with Pasco County's LRTP. As this alternative would not involve modification of a state road, it would not require a permit from FDOT. Alternative 7 would not infringe upon the property boundaries of any existing residences or businesses. This alternative would potentially result in direct impacts to 13.1 acres and indirect impacts to 43.3 acres of archaeological/historical sites. Alternative 7 would directly impact 27.7 acres of

wetlands and indirectly impact 243.4 acres of wetlands. There would be 470 linear feet of stream impacts associated with installation of drain pipes and/or box culverts for this alternative. Alternative 7 would result in moderate impacts to five species, low impacts to three species, very low impacts to seven species, and no impact to five species. Fencing constructed along the project and proposed wildlife crossings and bridges would help minimize vehicle strikes and habitat fragmentation. Alternative 7 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by providing wildlife crossings, using snake mesh along the fencing to exclude snakes from the roadway, and by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 7 is one of the eight alternatives that would rely solely on extension of Ridge Road. Alternative 7 incorporates more bridging than other Ridge Road Extension alternatives, except for Alternative 6, and would incorporate bridges through all wetlands and some uplands within the Serenova Tract. The Corps notes that Alternative 7 has an estimated cost of \$138,093,000 and would directly impact an estimated 27.7 acres of wetlands. For comparison, the applicants' preferred alternative, Alternative Mod 7a, has an estimated cost of \$102,383,000 and would directly impact an estimated 28.5 acres of wetlands. As such, Alternative 7 would cost \$35,710,000 more than Alternative Mod7a and would reduce direct wetland impacts by 0.8 acre. This represents an increase in costs by 34.87% and a reduction of wetland impacts by 2.8%. When considering the nature and location of wetlands that would be affected by the proposed project, the Corps does not believe that the additional cost of \$35,710,000 to avoid impacts to an additional 0.8 acre of wetlands is warranted. The Corps finds that Alternative 7 is not practicable based on cost.

Alternative Modified 7 (Mod 7) (on-site):

CESAJ-RD SAJ-2011-00551 (SP-TSH)
 Ridge Road Extension, Phase I, Phase II, and Suncoast Parkway Interchange



Description: Alternative Modified 7 (Mod 7) is the extension of existing Ridge Road eastward to US Highway 41 as a divided four-lane road. This alternative is approximately 8.7 miles long and is the same horizontal alignment as Alternatives 5 and 7. Alternative Mod 7 has more bridging than Alternative 5 and less bridging than Alternative 7. Most wetlands within the Serenova Tract would be bridged. This alternative would provide two commercial driveway connections and two residential street connections within the western-most 1.5 miles of Phase I. Phase II would be designated as limited access and would be limited to a single driveway connection to a commercial parcel located immediately east of the Suncoast Parkway. Alternative Mod 7 would increase average travel speed within the Study Area from 18.9 mph to 20.79 mph and result in a V:C ratio of 1.032. Based on the Hurricane Evacuation Assessment, Alternative Mod 7 would reduce evacuation time from 23.4 hours to 16.8 hours, a reduction of 6.6 hours. The total estimated cost for Alternative Mod 7, as updated in the AA Addendum is \$102,383,000. Alternative Mod 7 is consistent with Pasco County's LRTP. As this alternative would not involve modification of a state road, it would not require a permit from FDOT. Alternative Mod 7 would not infringe upon the property boundaries of any existing residences or businesses. This alternative would potentially result in direct impacts to 13.1 acres and indirect impacts to 43.3 acres of archaeological/historical sites. Alternative Mod 7 would directly impact 28.5 acres of wetlands and indirectly impact 245.3 acres of wetlands. There would be 470 linear feet of stream impacts associated with installation of drain pipes and/or box culverts for this

alternative. Alternative Mod 7 would result in moderate impacts to five species, low impacts to six species, very low impacts to four species, and no impact to five species. General impacts to wildlife would include noise, construction activities, vehicle strikes, and habitat fragmentation. Fencing constructed along the project and proposed wildlife crossings and bridges would help minimize vehicle strikes and habitat fragmentation. Alternative Mod 7 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by providing wildlife crossings, using snake mesh along the fencing to exclude snakes from the roadway, and by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative Mod 7: This was the applicants' preferred alternative before the project was modified in August 2018. Mod 7 and Mod 7a have exactly the same horizontal and vertical (bridging) alignment; they differ only in the classification, and subsequent use of the road segment located east of the Suncoast Parkway. Mod 7 would be designated as limited access and Mod 7a would be designated as arterial, allowing for future roadway connections and intersections. Alternative Mod 7 is one of the eight alternatives that would rely solely on extension of Ridge Road. This alternative would satisfy the overall project purpose of improving mobility and evacuation times within the study area and would not have substantial adverse effects on the screening criteria. Alternative Mod 7 is available to the applicants, would result in improvements to mobility and evacuation within the study area, is the same cost as the preferred alternative, would not result in the relocation of residents or businesses, and is consistent with Pasco County's LRTP. The Corps finds that Alternative Mod 7 is a practicable alternative.

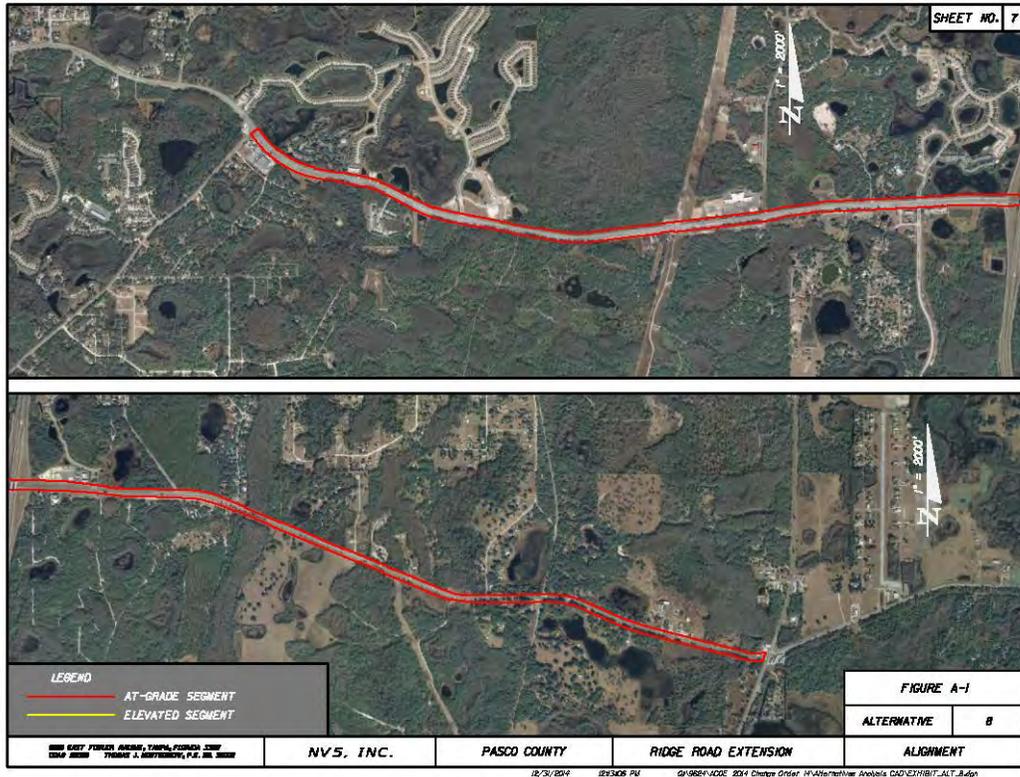
Description: Alternative Modified 7a (Mod 7a) (on-site): This is the applicants' preferred alternative. Alternative Mod 7a is the extension of existing Ridge Road eastward to US Highway 41 as a divided four-lane road. This alternative is approximately 8.7 miles long and is the same horizontal alignment as Alternatives 5, 7, and Mod 7. The horizontal and vertical (i.e., bridging) alignment of Alternative Mod 7a is identical to that of Mod 7. The only difference between Mod 7 and Mod 7a is the designation of Phase II. For Mod 7, Phase II would be designated as limited access and only one driveway connection would be allowed to provide access to a commercial parcel located immediately east of the Suncoast Parkway; this single driveway connection would be solely for providing access to that single parcel and not to other lands. For Mod 7a, Phase II would be designated as arterial and would allow as many as seven signalized intersections to be added in the future. Those intersections are not currently proposed. Most wetlands within the Serenova Tract would be bridged. This alternative would provide two commercial driveway connections and two residential street connections within the western-most 1.5 miles of Phase I. Alternative Mod 7a would increase average travel

speed within the Study Area from 18.9 mph to 21.68 mph and result in a V:C ratio of 1.008. Based on the Hurricane Evacuation Assessment, Alternative Mod 7a would reduce evacuation time from 23.4 hours to 16.6 hours, a reduction of 6.8 hours. The total estimated cost for Alternative Mod 7a, as updated in the AA Addendum is \$102,383,000. Alternative Mod 7a is consistent with Pasco County's LRTP. As this alternative would not involve modification of a state road, it would not require a permit from FDOT. Alternative Mod 7a would not infringe upon the property boundaries of any existing residences or businesses. This alternative would potentially result in direct impacts to 13.1 acres and indirect impacts to 43.3 acres of archaeological/historical sites. Alternative Mod 7a would directly impact 28.5 acres of wetlands and indirectly impact 245.3 acres of wetlands. There would be 470 linear feet of stream impacts associated with installation of drain pipes and/or box culverts for this alternative. Alternative Mod 7a would result in moderate impacts to five species, low impacts to six species, very low impacts to four species, and no impact to five species. General impacts to wildlife would include noise, construction activities, vehicle strikes, and habitat fragmentation. Fencing constructed along the project and proposed wildlife crossings and bridges would help minimize vehicle strikes and habitat fragmentation. Alternative Mod 7a could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by providing wildlife crossings, using snake mesh along the fencing to exclude snakes from the roadway, and by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative Mod 7a: This is the applicants' preferred alternative. Alternative Mod 7a is one of the eight alternatives that would rely solely on extension of Ridge Road. As discussed above, Mod 7 and Mod 7a have exactly the same alignment and differ only in the classification, and subsequent use, of the road segment located east of the Suncoast Parkway. This alternative would satisfy the overall project purpose of improving mobility and evacuation times within the study area and would not have substantial adverse effects on the screening criteria. Alternative Mod 7a is available to the applicants, would result in improvements to mobility and evacuation within the study area, has a cost that is comparable to other practicable alternatives, would not infringe upon existing residences or businesses, and is consistent with Pasco County's LRTP. The Corps finds that Alternative Mod 7a is a practicable alternative.

Alternative 8 (off-site):

CESAJ-RD SAJ-2011-00551 (SP-TSH)
 Ridge Road Extension, Phase I, Phase II, and Suncoast Parkway Interchange



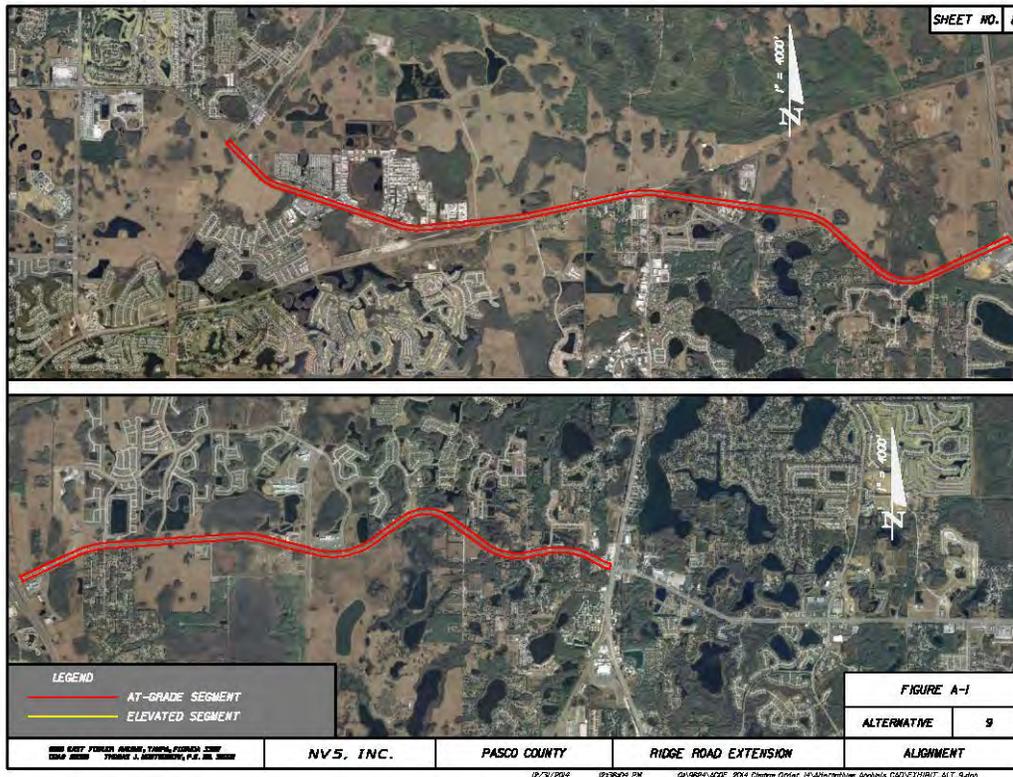
Description: Alternative 8 is the addition of four lanes to State Road (SR) 52 between Moon Lake Road and US Highway 41. The existing, divided six lanes from Moon Lake Road to the Suncoast Parkway would be expanded to a divided 10-lane road and the existing, undivided two lanes between the Suncoast Parkway and US Highway 41 would be widened to a divided six-lane road. Alternative 8 would increase average travel speed within the Study Area from 18.9 mph to 19.95 mph and result in a V:C ratio of 1.073. Based on the Hurricane Evacuation Assessment, Alternative 8 would reduce evacuation time from 23.4 hours to 19.5 hours, a reduction of 3.9 hours. The total estimated cost for Alternative 8, as updated in the AA Addendum is \$137,022,000. Alternative 8 is inconsistent with Pasco County's LRTP. As this alternative would involve modification of a state road, it would require a permit from FDOT. Correspondence from FDOT submitted as an attachment to the applicant's Revised Alternatives Analysis indicates that FDOT does not support any alternative that is not consistent with Pasco County's LRTP. Additionally, FDOT has indicated that it does not support the expansion of non-managed, at-grade roadways beyond six lanes due to safety concerns. Alternative 8 would infringe upon the property boundaries of 20 residences and six businesses. Acquisition of 10 of the residences would be required. This alternative would potentially result in direct impacts to 0.9 acre and indirect impacts to 3.8 acres of archaeological/historical sites. One historic structure would be directly impacted and eight historic structures would be indirectly impacted. Alternative 8 would

directly impact 2.8 acres of wetlands and indirectly impact 117.4 acres of wetlands. There would be impacts to 120 linear feet of stream associated with extension of culverts. Alternative 8 would result in moderate impacts to two species, low impacts to eight species, very low impacts to five species, and no impact to five species. General impacts to wildlife would include noise, construction activities, and vehicle strikes. As this alternative is for expansion of an existing road, effects of habitat fragmentation have already occurred. Alternative 8 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by following the USFWS *Standard Protection Measures for the Eastern Indigo Snake*, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 8 is the addition of four lanes to SR 52. To implement this alternative, the segment of SR 52 between Moon Lake Road and the Suncoast Parkway would be expanded to a divided 10-lane road. The Revised Alternatives Analysis indicates that this alternative is not consistent with Pasco County's LRTP. In a letter to Pasco County, dated 27 August 2013, FDOT stated that Federal Highway Administration regulations require FDOT and Pasco County to work together on needed transportation within the county and the required document is the LRTP, which compiles the list of needed transportation projects. In its letter, FDOT clearly states that it "does not support any improvements inconsistent with the Pasco County Metropolitan Planning Organization (MPO) LRTP". Furthermore, the FDOT stated that it "seldom widens an arterial (such as SR 52, SR 54, US 19, US 41, etc) to 8 lanes or beyond". FDOT also indicated that research shows that a network of roads and a grid system increases capacity and mobility whereas a "limited number of wider corridors results in operational, safety, bicycle, and pedestrian issues". This alternative would also infringe upon six businesses and 20 residences and require acquisition of 10 of the residences. Acquisition of 10 homes, and relocation of the residents occupying those homes, would be disruptive to the affected residents. The Corps believes that selecting a residence is typically a very personal decision that considers numerous factors, including community amenities, style and architectural features, school zoning, commute times, proximity to friends and families, and numerous other considerations, and the relocation of these residents would be expected to be extremely disruptive. Homes affected may also have sentimental value to the affected families that could not be replaced through relocation. The Corps expects that property values for the remaining homes and residential parcels located in proximity to this alternative would be adversely affected due to increased noise pollution, proximity to an arterial roadway, and, in some cases, loss of property to the road ROW. This alternative would directly impact one historic structure. When compared to the applicants' preferred alternative, Alternative 8 would cost an additional \$34,970,000 and does not provide the same level of improvements to mobility or evacuation. Based on a combination of factors including lack of support from FDOT to modify a state road in the manner proposed, disruption to existing homes and

businesses, including the relocation of a number of residents, and an increased cost of \$34,970,000, the Corps finds that Alternative 8 is not a practicable alternative in terms of cost and logistics.

Alternative 9 (off-site):



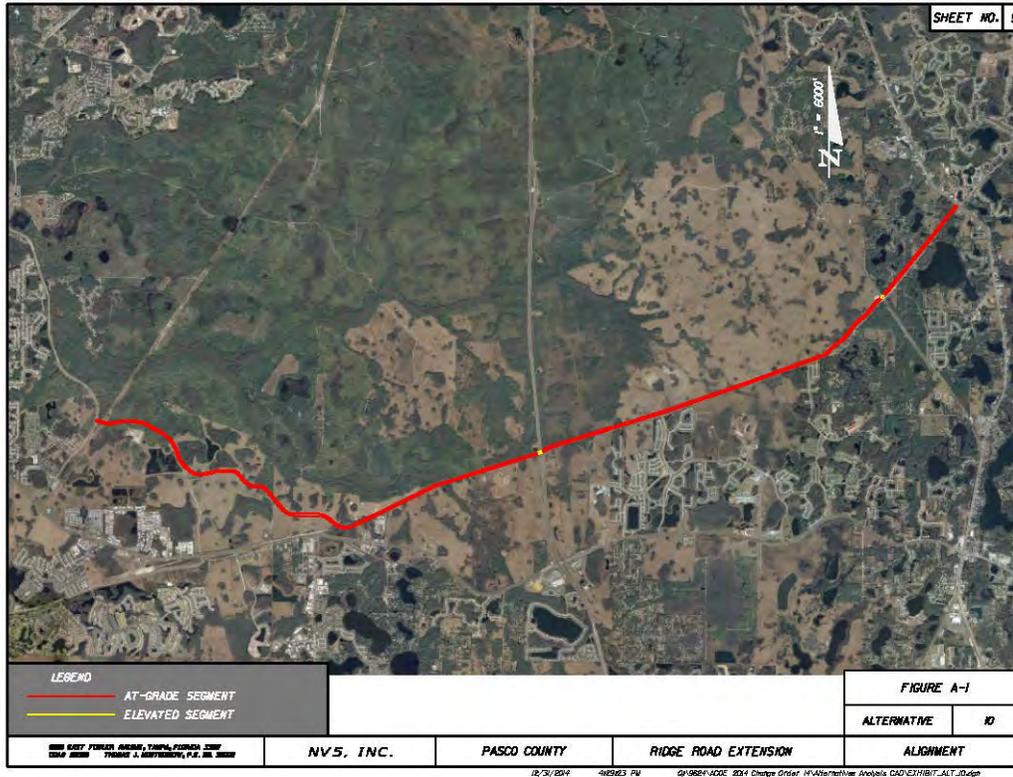
Description: Alternative 9 is the widening of SR 54 from six to ten lanes from Starkey Boulevard to U.S Highway 41. Alternative 9 would increase average travel speed within the Study Area from 18.9 mph to 21.81 mph and result in a V:C ratio of 1.005. Based on the Hurricane Evacuation Assessment, Alternative 9 would reduce evacuation time from 23.4 hours to 17.1 hours, a reduction of 6.3 hours. The total estimated cost for Alternative 9, as updated in the AA Addendum is \$217,207,000. Alternative 9 is inconsistent with Pasco County’s LRTP and would require a permit from FDOT. Correspondence from FDOT submitted as an attachment to the applicant’s Revised Alternatives Analysis indicates that FDOT does not support any alternative that is not consistent with Pasco County’s LRTP. Additionally, FDOT has indicated that it does not support the expansion of non-managed, at-grade roadways beyond six lanes due to safety concerns. Alternative 9 would infringe upon the property boundaries of three residences and 19 businesses. Acquisition of two of the commercial parcels would be required. This alternative would potentially result in direct impacts to 6.2 acres and indirect impacts to 17.5 acres of archaeological/historical sites. Four historic structures

would be indirectly impacted. Alternative 9 would directly impact 1.7 acres of wetlands and indirectly impact 159.5 acres of wetlands. There would be no impacts to streams. Alternative 9 would result in low impacts to two species, very low impacts to 12 species, and no impact to six species. General impacts to wildlife would include noise, construction activities, and vehicle strikes. As this alternative is for expansion of an existing road, effects of habitat fragmentation have already occurred. Alternative 9 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 9 is the addition of four lanes to SR 54. This would involve widening SR 54 from six to 10 lanes from Starkey Boulevard to US Highway 41. The Revised Alternatives Analysis indicates that this alternative is not consistent with Pasco County's LRTP. In a letter to Pasco County, dated 27 August 2013, FDOT stated that Federal Highway Administration regulations require FDOT and Pasco County to work together on needed transportation within the county and the required document is the LRTP, which compiles the list of needed transportation projects. In its letter, FDOT clearly states that it "does not support any improvements inconsistent with the Pasco County Metropolitan Planning Organization (MPO) LRTP". Furthermore, the FDOT stated that it "seldom widens an arterial (such as SR 52, SR 54, US 19, US 41, etc) to 8 lanes or beyond". FDOT also indicated that research shows that a network of roads and a grid system increases capacity and mobility whereas a "limited number of wider corridors results in operational, safety, bicycle, and pedestrian issues". The Corps believes that the prospect of modifying the LRTP to include an option that is not supported by FDOT would present a legitimate obstacle to implementation of this alternative. An additional logistical challenge for this alternative is that it would infringe upon the property boundaries of 17 businesses and three residences and require acquisition of two of the commercial parcels. Two businesses would need to be relocated and therefore normal operation of those businesses would be disrupted due to the need to relocate and re-establish a business presence at the new location. Widening the existing road would reduce the separation between the roadway and the remaining homes and businesses. The Corps expects that property values for the remaining homes and residential parcels located in proximity to this alternative would be adversely affected due to increased noise pollution, proximity to an arterial roadway, and, in some cases, loss of property to the road ROW. It is feasible that affected businesses could be left with reduced parking areas for customers and employees. With an estimated cost of \$217,207,000, Alternative 9 would cost more than twice as much as the applicants' preferred alternative, Mod 7a, which has an estimated cost of \$102,383,000. Based on a combination of factors including lack of support from FDOT to modify a state road in the manner proposed, relocation of two businesses,

infringement upon the property boundaries of 17 businesses and three residences, and an increased cost of \$114,824,000, the Corps finds that Alternative 9 is not a practicable alternative in terms of cost and logistics.

Alternative 10 (off-site):



Description: Alternative 10 is the construction of Tower Road as a four-lane, at-grade road from Starkey Boulevard to US Highway 41. This alternative would include an overpass at the Suncoast Parkway, but would not provide a direct connection to the Suncoast Parkway. Alternative 10 would increase average travel speed within the Study Area from 18.9 mph to 20.08 mph and result in a V:C ratio of 1.035. Based on the Hurricane Evacuation Assessment, Alternative 10 would reduce evacuation time from 23.4 hours to 21.8 hours, a reduction of 1.6 hours. The total estimated cost for Alternative 10, as updated in the AA Addendum is \$109,401,000. Alternative 10 is consistent with Pasco County's LRTP and would not require a permit from FDOT. Alternative 10 would infringe upon the property boundaries of 20 residences and one business. Acquisition of 14 of the residences would be required. This alternative would potentially result in direct impacts to 23.4 acres and indirect impacts to 24.3 acres of archaeological/historical sites. Two historic structures would be indirectly impacted. Alternative 10 would directly impact 22.2 acres of wetlands and indirectly impact 171.7 acres of wetlands. There would be impacts to 212 linear feet of stream associated with

culverted crossings. Alternative 10 would result in moderate impacts to two species, low impacts to two species, very low impacts to 10 species, and no impact to six species. General impacts to wildlife would include noise, construction activities, vehicle strikes, and habitat fragmentation. Alternative 10 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

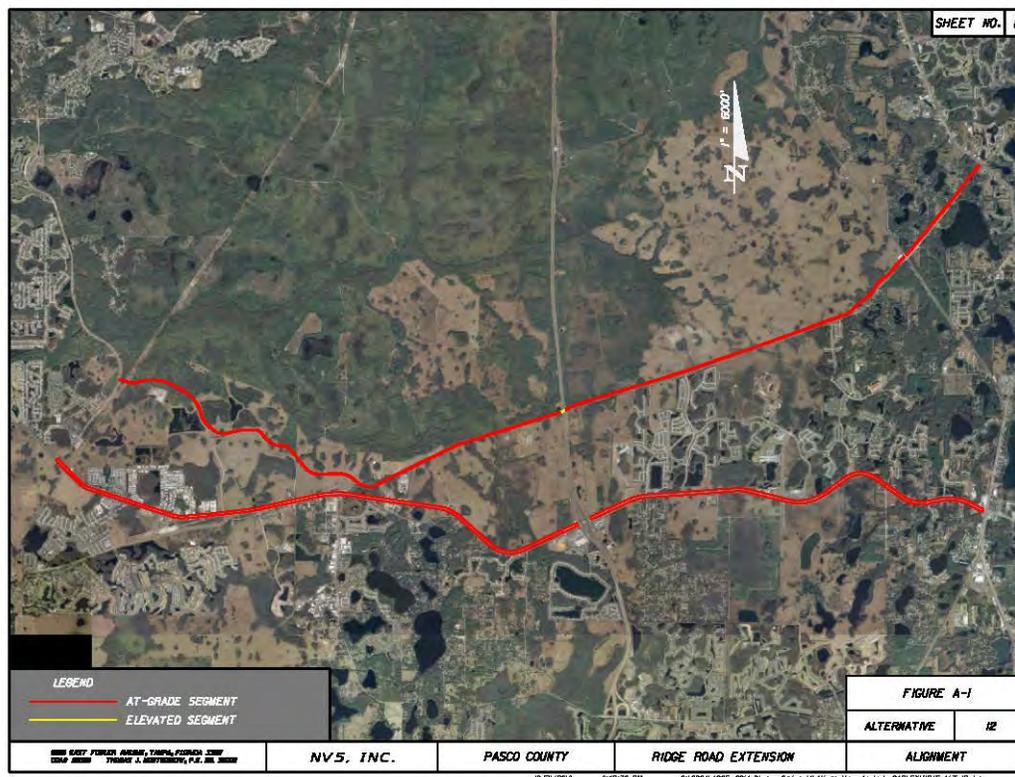
Evaluation: Alternative 10 is the construction of Tower Road as a four-lane, at grade facility. Alternative 10 has an estimated cost of \$109,401,000, which is \$7,018,000, or 6.85%, more costly than the applicants' preferred alternative. The Corps notes that the nature of Tower Road and the surrounding lands have changed notably in the past eight years. Alternative 10 would provide improvement to mobility and only marginal improvement to evacuation time. Average travel speed within the study area would increase from 18.90 mph, under the no action alternative, to 20.08 mph. Evacuation time would be reduced from 23.4 hours, under the no action alternative, to 21.8 hours for Alternative 10, a reduction of only 1.6 hours in evacuation time. For comparison, the applicants' preferred alternative, Mod 7a, would increase average travel speed to 21.68 mph and reduce evacuation time to 16.6 hours. Pasco County asserts that the cost of Alternative 10 is not reasonable for the level of improvements expected. . Alternative 10 would require acquisition of 14 residences and would infringe upon the property boundaries of an additional six residences and one business. Acquisition of 14 homes would be disruptive to the affected residents. The Corps believes that selecting a residence is typically a very personal decision that considers numerous factors, including community amenities, style and architectural features, school zoning, commute times, proximity to friends and families, and numerous other considerations, and the relocation of these families would be expected to be extremely disruptive. Homes affected may also have sentimental value to the affected families that could not be replaced through relocation. The Corps expects that property values for the remaining homes and residential parcels located in proximity to this alternative would be adversely affected due to increased noise pollution, proximity to an arterial roadway, and, in some cases, loss of property to the road ROW. Alternative 10 would also directly impact 23.4 acres of archaeological/historic sites. In comparison to the applicants' preferred alternative, Mod 7a, Alternative 10 would provide less improvement to mobility, markedly less improvement to evacuation and would be more expensive by \$7,018,000. The Corps finds that Alternative 10 is not practicable in terms of logistics as it would require relocation of 14 families and would provide only marginal improvement to evacuation times.

Alternative 11 (off-site):

wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 11 is the addition of four lanes to SR 54 by constructing four elevated lanes from the median. Alternative 11 has an estimated cost of \$1,373,011,000, which is, by far, the most expensive alternative analyzed. The cost of Alternative 11 is approximately 13.4 times (1,341%) more expensive than the applicants' preferred alternative, Mod 7a, and is approximately 6.3 times (632%) more expensive than the second most expensive alternative, Alternative 9. Based on the traffic and evacuation analyses, Alternative 11 would improve mobility, but would increase evacuation time by 2.4 hours, as compared to the no action alternative. As Alternative 11 would increase time needed for evacuation, it would not satisfy one of the project purposes of improving evacuation times in the event of a hurricane or other emergency. Two businesses would need to be relocated and therefore normal operation of those businesses would be disrupted. The Corps finds that Alternative 11 is not practicable in terms of cost and would not satisfy one of the project purposes to improve evacuation time of the coastal hazard area.

Alternative 12 (off-site):

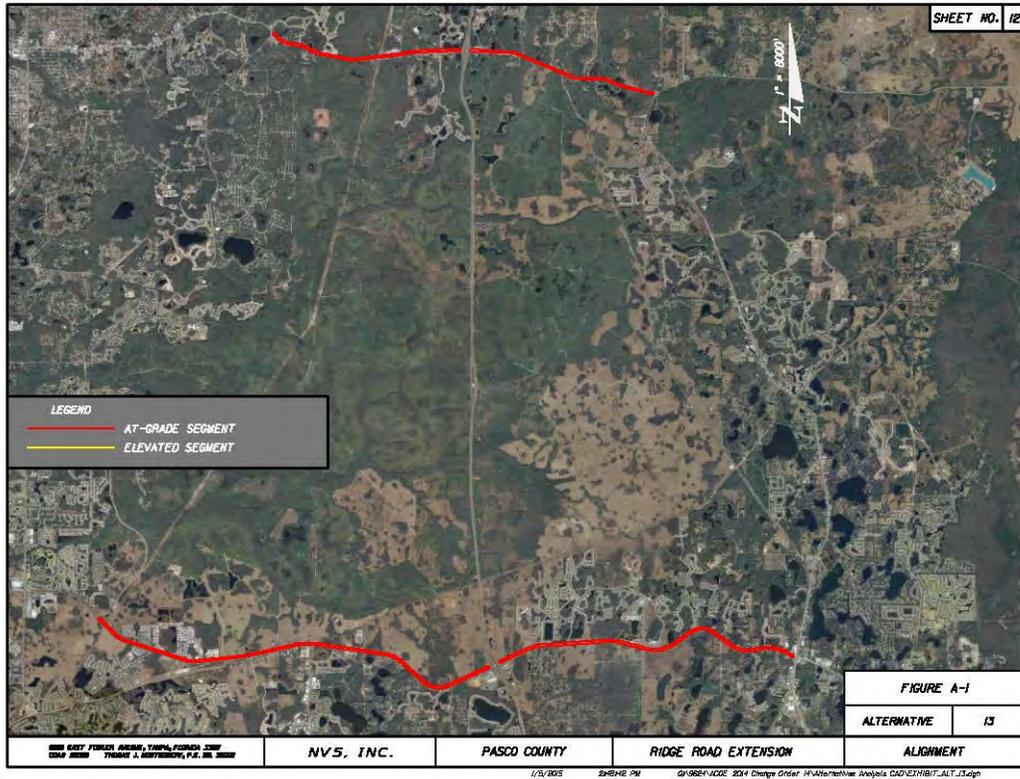


Description: Alternative 12 is the construction of Tower Road as a two-lane, at grade road from Starkey Boulevard to U.S Highway 41 and the at grade expansion of SR 54 to eight lanes between Starkey Boulevard and US Highway 41. Tower Road would include an overpass of the Suncoast Parkway, but would not provide a direct connection to the Suncoast Parkway. Alternative 12 would increase average travel speed within the Study Area from 18.9 mph to 20.78 mph and result in a V:C ratio of 1.023. Based on the Hurricane Evacuation Assessment, Alternative 12 would increase evacuation time from 23.4 hours to 26 hours, an additional delay of 2.6 hours. The total estimated cost for Alternative 12, as updated in the AA Addendum is \$198,942,000. Alternative 12 is not consistent with Pasco County's LRTP. As this alternative would involve modification of a state road, it would require a permit from FDOT. Correspondence from FDOT submitted as an attachment to the applicant's Revised Alternatives Analysis indicates that FDOT does not support any alternative that is inconsistent with Pasco County's LRTP. Additionally, FDOT has indicated that it does not support the expansion of non-managed, at-grade roadways beyond six lanes due to safety concerns. Alternative 12 would infringe upon the property boundaries of 22 residences and 14 businesses. Acquisition of 12 of the residences and one of the commercial parcels would be required. This alternative would potentially result in direct impacts to 13.2 acres and indirect impacts to 37.7 acres of archaeological/historical sites. Six historic structures would be indirectly impacted. Alternative 12 would directly impact 13.4 acres of wetlands and indirectly impact 265.2 acres of wetlands. There would be impacts to 120 linear feet of streams in association with culverted crossings. Alternative 12 would result in moderate impacts to two species, low impacts to three species, very low impacts to nine species, and no impact to six species. General impacts to wildlife would include noise, construction activities, vehicle strikes, and, to some extent, habitat fragmentation. Alternative 12 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 12 is the construction of Tower Road as a two-lane facility in combination with the addition of two lanes to SR 54. Because Alternative 12 combines some aspects of both Alternatives 9 and Alternative 10, it is also has some of the same challenges with respect to the screening criteria. The aspect of this alternative to expand SR 54 beyond six lanes is not consistent with the LRTP. In its letter to Pasco County, dated 27 August 2013, FDOT clearly states that it "does not support any improvements inconsistent with the Pasco County Metropolitan Planning Organization (MPO) LRTP". Furthermore, the FDOT stated that it "seldom widens an arterial (such as SR 52, SR 54, US 19, US 41, etc) to 8 lanes or beyond". FDOT also indicated that research shows that a network of roads and a grid system increases capacity and

mobility whereas a “limited number of wider corridors results in operational, safety, bicycle, and pedestrian issues”. The Corps believes that the prospect of modifying the LRTP to include an option that is not supported by FDOT would present a legitimate obstacle to implementation of this alternative. An additional logistical challenge for Alternative 12 is that it would infringe upon the property boundaries of 22 residences and 14 businesses and would require acquisition of 12 of the residences and one of the businesses. Acquisition of 12 homes and relocation of those residents would be disruptive to those residents. The Corps believes that selecting a residence is typically a very personal decision that considers numerous factors, including community amenities, style and architectural features, school zoning, commute times, proximity to friends and families, and numerous other considerations, and the relocation of these residents would be expected to be extremely disruptive to those residents’ lives. Homes affected may also have sentimental value to the affected families that could not be replaced through relocation. Acquisition of one of the commercial parcels would be required and would disrupt normal operation of that business as it would have to relocate and re-establish its presence at a new location. This alternative would infringe on the property boundaries of an additional 13 businesses and therefore would likely adversely affect those business by reducing property area, thereby potentially reducing parking area or other essential elements of the business and potentially limiting how the property could be further developed. Alternative 12 is also one of the more expensive alternatives with an estimated cost of \$198,942,000, which is approximately 94.3% more expensive than the applicants’ preferred alternative. In comparison to the no action alternative, Alternative 12 would improve mobility by increasing average speed within the study area from 18.9 mph to 20.76 mph. However, it would increase the time needed for evacuation by 2.4 hours; therefore, it would not satisfy one of the project purposes of improving evacuation times in the event of a hurricane or other emergency. The Corps finds that Alternative 12 is not practicable in terms of cost and logistics as it would be approximately 94.3% more expensive than the applicants’ preferred alternative, it would require acquisition of 12 homes and relocation of the affected residents and would infringe upon the properties of several existing business. Additionally, it would not satisfy one of the project purposes to improve evacuation time.

Alternative 13 (off-site):



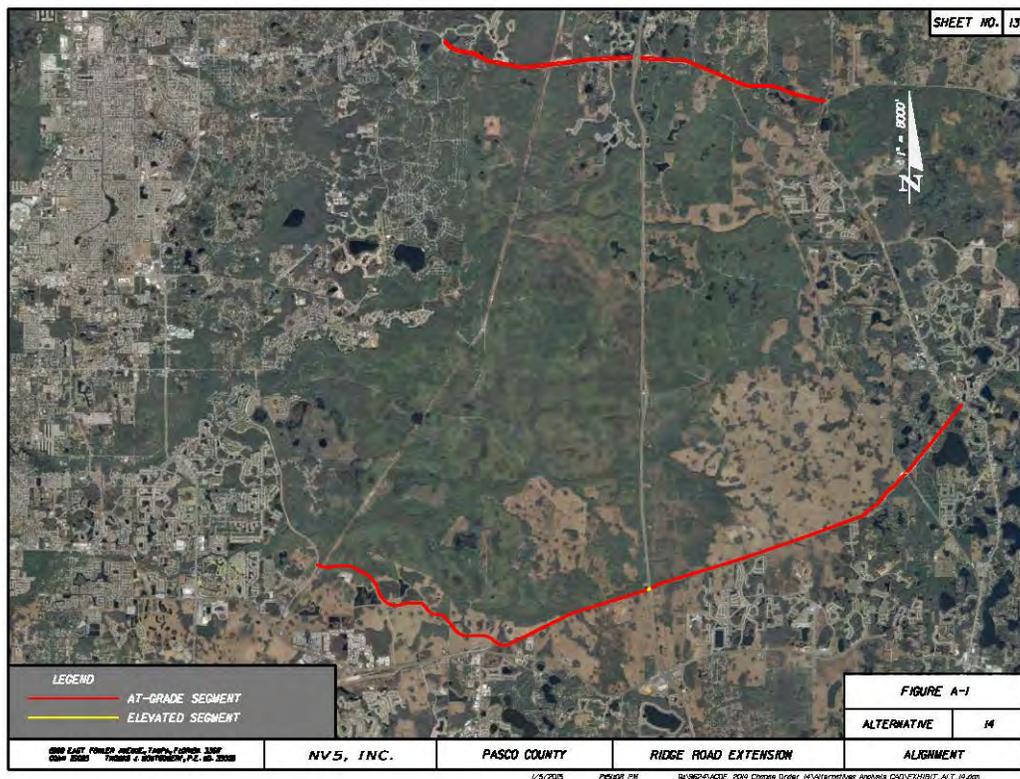
Description: Alternative 13 is the expansion of both SR 52 and SR54 by adding two, at grade lanes to both roads. SR 52 would be widened from six lanes to eight lanes between Moon Lake Road and the Suncoast Parkway and widened from two lanes to four lanes between the Suncoast Parkway and US 41. Additionally, SR 54 would be widened from six lanes to eight lanes between Starkey Boulevard and US Highway 41. Alternative 13 would increase average travel speed within the study area from 18.9 mph to 20.96 mph and result in a V:C ratio of 1.049. Based on the Hurricane Evacuation Assessment, Alternative 13 would reduce evacuation time from 23.4 hours to 20.4 hours, a reduction of 3 hours. The total estimated cost for Alternative 13, as updated in the AA Addendum is \$186,189,000. Alternative 13 is not consistent with Pasco County's LRTP. As this alternative would involve modifying two state roads, it would require a permit from FDOT. Correspondence from FDOT submitted as an attachment to the applicant's Revised Alternatives Analysis indicates that FDOT does not support any alternative that is inconsistent with Pasco County's LRTP. Additionally, FDOT has indicated that it does not support the expansion of non-managed, at-grade roadways beyond six lanes due to safety concerns. Alternative 13 would infringe upon the property boundaries of 22 residences and 17 businesses. Acquisition of nine of the residences and one of the businesses would be required. This alternative would potentially result in direct impacts to two acres and indirect impacts to eight acres of archaeological/historical sites. One historic structure would be directly impacted and 12 historic structures would be indirectly impacted. Alternative 13 would directly impact 1.5

acres of wetlands and indirectly impact 208 acres of wetlands. There would be impacts to 120 linear feet of streams associated with culverted crossings. Alternative 13 would result in moderate impacts to one species, low impacts to nine species, very low impacts to six species, and no impact to four species. General impacts to wildlife would include noise, construction activities, and vehicle strikes. Alternative 13 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 13 is the addition of two lanes to SR 52 in combination with the addition of two lanes to SR 54. Because Alternative 13 combines some aspects of both Alternative 8 and Alternative 9, it also has some of the same challenges with respect to the screening criteria. Alternative 13 would result in segments of both SR 52 and SR 54 being widened to eight lanes. The Revised Alternatives Analysis indicates that this alternative is not consistent with Pasco County's LRTP. In a letter to Pasco County, dated 27 August 2013, FDOT stated that Federal Highway Administration regulations require FDOT and Pasco County to work together on needed transportation within the county and the required document is the LRTP, which compiles the list of needed transportation projects. In its letter, FDOT clearly states that it "does not support any improvements inconsistent with the Pasco County Metropolitan Planning Organization (MPO) LRTP". Furthermore, the FDOT stated that it "seldom widens an arterial (such as SR 52, SR 54, US 19, US 41, etc) to 8 lanes or beyond". FDOT also indicated that research shows that a network of roads and a grid system increases capacity and mobility whereas a "limited number of wider corridors results in operational, safety, bicycle, and pedestrian issues". The Corps believes that the prospect of modifying the LRTP to include an option that is not supported by FDOT would present a legitimate obstacle to implementation of this alternative. Additionally, Alternative 13 would infringe upon the property boundaries of 22 residences and 17 businesses. Acquisition of nine of the residences and relocation of those residents, would be disruptive to those residents. The Corps believes that selecting a residence is typically a very personal decision that considers numerous factors, including community amenities, style and architectural features, school zoning, commute times, proximity to friends and families, and numerous other considerations, and relocation of these residents would be expected to be extremely disruptive to their lives. Homes affected may also have sentimental value to the affected residents that could not be replaced through relocation. Similar to considerations for Alternatives 8 and 9, widening SR 52 and SR54 would reduce the separation between the roadways and the remaining residences and businesses along those roads. Acquisition of one commercial parcel would be required and would disrupt normal operation of that business as the business would have to relocate and re-establish its presence at a new location. This alternative would infringe

on the property boundaries of an additional 16 businesses and therefore would likely adversely affect those business by reducing property area, thereby potentially reducing parking area or other essential elements of the business and potentially limiting how the property could be further developed. Alternative 13 would directly impact one historic structure. The Corps finds that Alternative 13 is not practicable in terms of cost and logistics as it would be approximately 81.8% more expensive than the applicants' preferred alternative and would require acquisition of nine homes and relocation of the affected residents, would infringe on the properties of 17 business, and would require acquisition of one grade commercial parcel and relocation of the affected business.

Alternative 14 (off-site):



Description: Alternative 14 is the construction of Tower Road as a two-lane, at grade road from Starkey Boulevard to U.S Highway 41 and the addition of two lanes to SR 52. Tower Road would include an overpass of the Suncoast Parkway and would not provide a direct connection to the Suncoast Parkway. SR 52 would be widened from six lanes to eight lanes between Moon Lake Road and the Suncoast Parkway and widened from two lanes to four lanes between the Suncoast Parkway and US Highway 41. Alternative 14 would increase average travel speed within the Study Area from 18.9 mph to 20.31 mph and result in a V:C ratio of 1.046. Based on the Hurricane Evacuation Assessment, Alternative 14 would reduce evacuation time from 23.4 hours to 22.7 hours, a reduction of 0.7 hour. The total estimated cost for Alternative 14, as updated in the AA Addendum

is \$164,308,000. Alternative 14 is not consistent with Pasco County's LRTP. As this alternative would involve modification of a state road, it would require a permit from FDOT. Correspondence from FDOT submitted as an attachment to the applicant's Revised Alternatives Analysis indicates that FDOT does not support any alternative that is inconsistent with Pasco County's LRTP. Additionally, FDOT has indicated that it does not support the expansion of non-managed, at grade roadways beyond six lanes due to safety concerns. Alternative 14 would infringe upon the property boundaries of 40 residences and six businesses. Acquisition of 21 of the residences would be required. This alternative would potentially result in direct impacts to 14.6 acres and indirect impacts to 37.4 acres of archaeological/historical sites. One historic structure would be directly impacted and 10 historic structures would be indirectly impacted. Alternative 14 would directly impact 14.5 acres of wetlands and indirectly impact 269.2 acres of wetlands. There would be impacts to 240 linear feet of streams in association with culverted crossings. Alternative 14 would result in moderate impacts to two species, low impacts to eight species, very low impacts to six species, and no impact to four species. General impacts to wildlife would include noise, construction activities, vehicle strikes, and, to some extent, habitat fragmentation. Alternative 14 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 14 is the construction of Tower Road as a two-lane facility in combination with the addition of two lanes to SR 52. Because Alternative 14 combines some aspects of both Alternative 8 and Alternative 10, it also has some of the same challenges with respect to the screening criteria. Alternative 14 would result in a segment of SR 52 being widened to eight lanes. The Revised Alternatives Analysis indicates that this alternative is not consistent with Pasco County's LRTP. In a letter to Pasco County, dated 27 August 2013, FDOT stated that Federal Highway Administration regulations require FDOT and Pasco County to work together on needed transportation within the county and the required document is the LRTP, which compiles the list of needed transportation projects. In its letter, FDOT clearly states that it "does not support any improvements inconsistent with the Pasco County Metropolitan Planning Organization (MPO) LRTP". Furthermore, the FDOT stated that it "seldom widens an arterial (such as SR 52, SR 54, US 19, US 41, etc) to 8 lanes or beyond". FDOT also indicated that research shows that a network of roads and a grid system increases capacity and mobility whereas a "limited number of wider corridors results in operational, safety, bicycle, and pedestrian issues". The Corps believes that the prospect of modifying the LRTP to include an option that is not supported by FDOT would present a legitimate obstacle to implementation of this alternative. Additionally, Alternative 14 would infringe upon the property boundaries of 40 residences and six

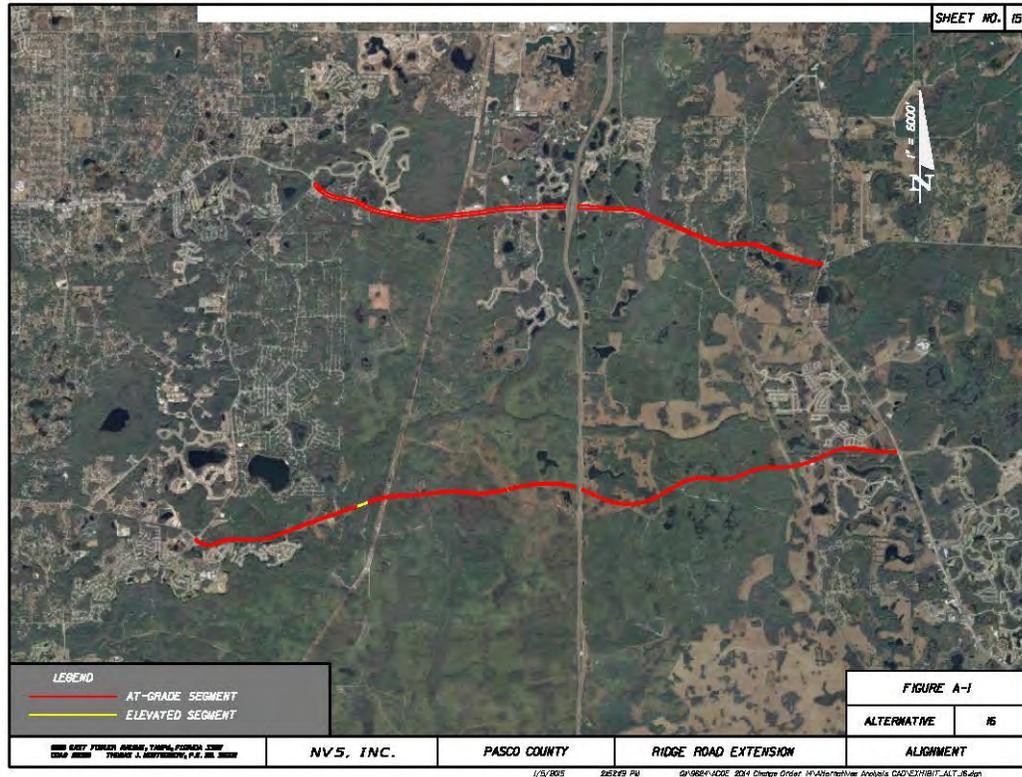
businesses. Acquisition of 21 of the residences would be required. Acquisition of 21 homes and relocation of those residents would be disruptive to those residents. The Corps believes that selecting a residence is typically a very personal decision that considers numerous factors, including community amenities, style and architectural features, school zoning, commute times, proximity to friends and families, and numerous other considerations, and relocation of these families would be expected to be extremely disruptive to those residents' lives. Homes affected may also have sentimental values that could not be replaced through relocation. This alternative would infringe on the property boundaries of six businesses and therefore would likely adversely affect those business by reducing property area, thereby potentially reducing parking area or other essential elements of the business and potentially limiting how the property could be further developed. Alternative 14 would directly impact one historic structure. With an estimated cost of \$164,308,000, Alternative 14 exceeds the estimated cost of the applicants' preferred alternative by \$61,925,000. Alternative 14 would increase mobility within the study area and increase average travel speeds from 18.90 mph to 20.31 mph, as compared to the no action alternative. Alternative 14 would provide only a minor improvement in evacuation times, decreasing the estimated evacuation time from 23.4 hours to 22.7 hours, a reduction of 0.7 hour, as compared to the no action alternative. The Corps finds that Alternative 14 is not practicable in terms of logistics and cost as it would require acquisition of 21 homes and relocation of the affected residents, infringe on the property boundaries of an additional 19 residences and six businesses, and would cost approximately 60.4% more than the applicants' preferred alternative while providing only marginal improvements to evacuation time.

Alternative 15 (off-site and on-site):

also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 15 is the construction of a Ridge Road Extension as a two-lane facility in combination with construction of Tower Road as a two-lane facility. Alternative 15 combines some aspects of Alternatives 5 and 10. This alternative is consistent with the LRTP. The Corps notes that Alternative 15 has an estimated cost of \$133,570,000 and would directly impact an estimated 32.5 acres of wetlands. For comparison, the applicants' preferred alternative, Alternative Mod 7a, has an estimated cost of \$102,383,000 and would directly impact an estimated 28.5 acres of wetlands. As such, Alternative 15 would cost \$31,187,000 more than Alternative Mod7a and would increase direct wetland impacts by 4 acres. This represents an increase in costs by 30.46% and an increase in wetland impacts by 14.04%. Furthermore, Alternative 15 would infringe on the property boundaries of 20 residences and one business and require acquisition of 12 of the residences. Acquisition of 12 homes and relocation of those residents would be disruptive to those residents. The Corps believes that selecting a residence is typically a very personal decision that considers numerous factors, including community amenities, style and architectural features, school zoning, commute times, proximity to friends and families, and numerous other considerations, and relocation of these families would be expected to be extremely disruptive to those residents' lives. Homes affected may also have sentimental values that could not be replaced through relocation. This alternative would infringe on the property boundary of one business, thereby potentially limiting how the property could be further developed. Alternative 15 would potentially result in direct impacts to 22.5 acres of archaeological/historical sites. Alternative 15 would improve both mobility and evacuation time within the study area, as compared to the no action alternative, and would have an average travel speed of 20.91 mph and an evacuation time of 19.3 hours. For comparison, the applicants' preferred alternative, Mod 7a, would have an average travel speed of 21.68 mph and an evacuation time of 16.8 hours. The Corps finds that Alternative 15 is not practicable in terms of cost and logistics as it would be 30.46% more expensive, result in 14.04% greater wetland impacts than the applicants' preferred alternative, and would require the acquisition of 12 homes and relocation of the affected residents.

Alternative 16 (off-site and on-site):



Description: Alternative 16 includes construction of the Ridge Road Extension as a two-lane roadway and the addition of two lanes to SR 52. The Ridge Road Extension would be constructed within the same alignment as Alternative 5 and would include an interchange with Suncoast Parkway at the existing underpass. SR 52 would be widened from six lanes to eight lanes between Moon Lake road and the Suncoast Parkway and widened from two lanes to four lanes between the Suncoast Parkway and US Highway 41. Alternative 16 would increase average travel speed within the Study Area from 18.9 mph to 20.72 mph and result in a V:C ratio of 1.051. Based on the Hurricane Evacuation Assessment, Alternative 16 would increase evacuation time from 23.4 hours to 26 hours, an increase of 2.6 hours. The total estimated cost for Alternative 16, as updated in the AA Addendum is \$140,440,000. Alternative 16 is consistent with Pasco County's LRTP. As this alternative would not involve modification of a state road, it would not require a permit from FDOT. Alternative 16 would infringe upon the property boundaries of 20 residences and five businesses. Acquisition of nine of the residences would be required. This alternative would potentially result in direct impacts to 9.2 acres and indirect impacts to 47.9 acres of archaeological/historical sites. One historic structure would be directly impacted and eight historic structures would be indirectly impacted. Alternative 16 would directly impact 20.6 acres of wetlands and indirectly impact 325.2 acres of wetlands. There would be impacts to 275 linear feet of streams in association with culverted crossings. Alternative 16 would result in moderate impacts to six species, low impacts to five species, very low impacts to five species, and no impact to four species. General impacts to wildlife would include noise, construction activities, vehicle

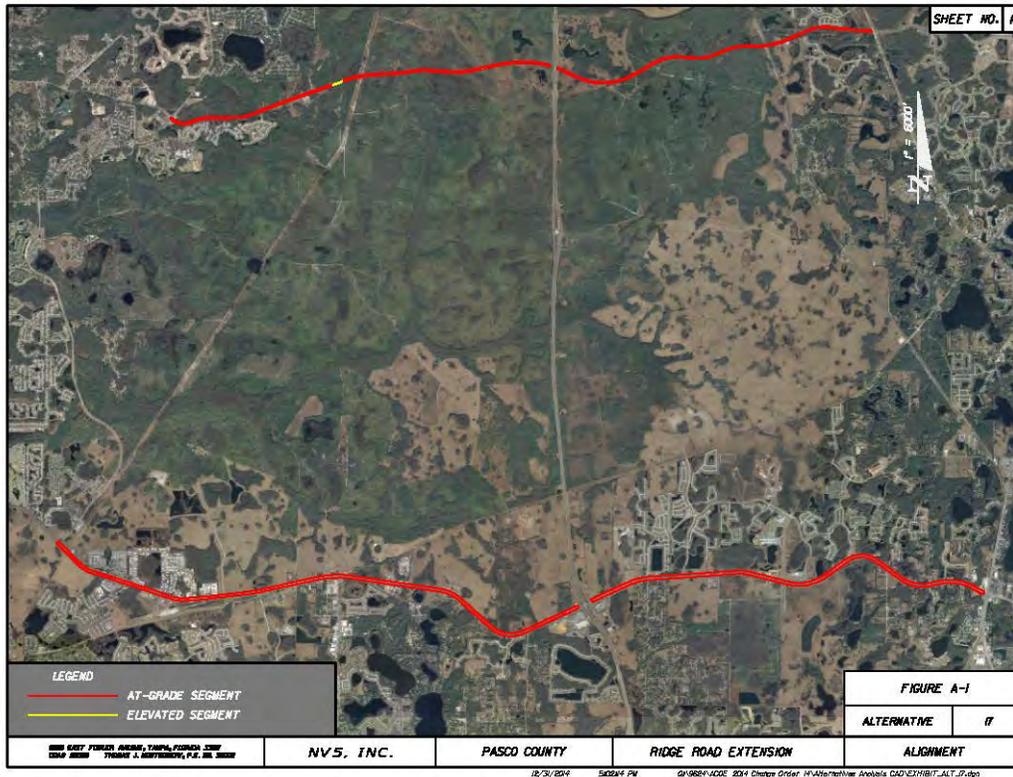
strikes, and habitat fragmentation. Alternative 16 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 16 is the construction of a Ridge Road Extension as a two-lane facility in combination with the addition of two lanes to SR 52. Alternative 16 combines some aspects of Alternatives 5 and 8. The aspect of this alternative to expand SR 52 beyond six lanes is not consistent with the LRTP. In its letter to Pasco County, dated 27 August 2013, FDOT clearly states that it “does not support any improvements inconsistent with the Pasco County Metropolitan Planning Organization (MPO) LRTP”. Furthermore, the FDOT stated that it “seldom widens an arterial (such as SR 52, SR 54, US 19, US 41, etc) to 8 lanes or beyond”. FDOT also indicated that research shows that a network of roads and a grid system increases capacity and mobility whereas a “limited number of wider corridors results in operational, safety, bicycle, and pedestrian issues”. The Corps believes that the prospect of modifying the LRTP to include an option that is not supported by FDOT would present a legitimate obstacle to implementation of this alternative. Alternative 16 has an estimated cost of \$140,440,000, which, for comparison, is \$38,057,000 more than the applicants’ preferred alternative, Mod 7a. Alternative 16 would infringe upon the property boundaries of 20 residences and 5 businesses and would require acquisition of 9 of the residences. Acquisition of nine homes and relocation of those residents would be disruptive to those residents. The Corps believes that selecting a residence is typically a very personal decision that considers numerous factors, including community amenities, style and architectural features, school zoning, commute times, proximity to friends and families, and numerous other considerations, and relocation of these residents would be expected to be extremely disruptive to those residents’ lives. Homes affected may also have sentimental values that could not be replaced through relocation. Similar to considerations for Alternatives 8 and 9, widening SR 52 would reduce the separation between the roadway and the remaining residences and businesses. This alternative would infringe on the property boundaries of five businesses, thereby potentially limiting how those properties could be further developed. Alternative 16 would directly impact one historic structure. This alternative would provide an improvement in mobility, increasing the average speed from 18.90 mph to 20.72 within the study area, as compared to the no action alternative. However, Alternative 16 would increase the time needed for evacuation, requiring 26.0 hours as compared to the 23.4 hours required in the no action alternative. As such, this alternative would not satisfy one of the project purposes of improving evacuation times in the event of a hurricane or other emergency. The Corps finds that Alternative 16 is not practicable as it would not satisfy the project purpose of improving evacuation time, would require acquisition of nine residences and

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relocation of those residents, and would be 37.17% more expensive than the applicants' preferred alternative.

Alternative 17 (off-site and on-site):



Description: Alternative 17 includes construction of the Ridge Road Extension as a two-lane roadway, with the same alignment as Alternative 5, and the addition of two lanes to SR 54. The Ridge Road Extension would include an interchange with Suncoast Parkway at the existing underpass. SR 54 would be widened from six lanes to eight lanes between Starkey Boulevard and the Suncoast Parkway and widened from four lanes to six lanes between the Suncoast Parkway and US Highway 41. Alternative 17 would increase average travel speed within the Study Area from 18.9 mph to 21.68 mph and result in a V:C ratio of 1.025. Based on the Hurricane Evacuation Assessment, Alternative 17 would reduce evacuation time from 23.4 hours to 15.8 hours, a reduction of 7.6 hours. The total estimated cost for Alternative 17, as updated in the AA Addendum is \$174,759,000. Alternative 17 is not consistent with Pasco County's LRTP. As this alternative would involve modification of a state road, it would require a permit from FDOT. Correspondence from FDOT submitted as an attachment to the applicant's Revised Alternatives Analysis indicates that FDOT does not support any alternative that is inconsistent with Pasco County's LRTP. Additionally, FDOT has indicated that it does not support the expansion of non-managed, at-grade roadways beyond six lanes due to safety concerns. Alternative 17 would impact two residences and 12 businesses.

Acquisition of one of the businesses would be required. This alternative would potentially result in direct impacts to 10 acres and indirect impacts to 48.2 acres of archaeological/historical sites. Four historic structures would be indirectly impacted. Alternative 17 would directly impact 19.5 acres of wetlands and indirectly impact 320.1 acres of wetlands. There would be impacts to 155 linear feet of streams in association with culverted crossings. Alternative 17 would result in moderate impacts to five species, low impacts to six species, very low impacts to four species, and no impact to five species. General impacts to wildlife would include noise, construction activities, vehicle strikes, and habitat fragmentation. Alternative 17 could also affect the threatened Eastern indigo snake and the threatened wood stork, both of which are protected under the ESA. Potential effects to the Eastern indigo snake would be minimized by following the USFWS Standard Protection Measures for the Eastern Indigo Snake, August 2013. Potential effects to the wood stork would be due to loss of SFH, which would be expected to be offset by compensatory mitigation for wetland impacts.

Evaluation: Alternative 17 is the construction of a Ridge Road Extension as a two-lane facility in combination with the addition of two lanes to SR 54. The aspect of this alternative to expand SR 54 beyond six lanes is not consistent with the LRTP. In its letter to Pasco County, dated 27 August 2013, FDOT clearly states that it “does not support any improvements inconsistent with the Pasco County Metropolitan Planning Organization (MPO) LRTP”. Furthermore, the FDOT stated that it “seldom widens an arterial (such as SR 52, SR 54, US 19, US 41, etc) to 8 lanes or beyond”. FDOT also indicated that research shows that a network of roads and a grid system increases capacity and mobility whereas a “limited number of wider corridors results in operational, safety, bicycle, and pedestrian issues”. The Corps believes that the prospect of modifying the LRTP to include an option that is not supported by FDOT would present a legitimate obstacle to implementation of this alternative. Alternative 17 has an estimated cost of \$174,759,000, which, for comparison, is \$72,376,000 more than the applicants’ preferred alternative, Mod 7a. Alternative 17 would infringe upon the property boundaries of two residences and 12 businesses and would require acquisition of one of the commercial parcels. One business would need to be relocated and therefore normal operation of that business would be disrupted as the business would have to relocate and re-establish its presence at a new location. Similar to considerations for Alternatives 8 and 9, widening SR 54 would reduce the separation between the roadway and the remaining residences and businesses. This alternative would infringe on the property boundaries of 12 businesses, thereby potentially limiting how those properties could be further developed. The Corps finds that Alternative 17 is not practicable in terms of cost and logistics as it would be 70.7% more expensive than the applicant’s preferred alternative, would require the acquisition of land on which one business operates and the relocation of that business, and would infringe upon the property boundaries of 11 additional businesses and two residences.

5.4 Least environmentally damaging practicable alternative under the 404(b)(1) Guidelines (if applicable) and the environmentally preferable alternative under NEPA:

The Corps finds that Alternatives 3, 5, Mod 7, and Mod 7a are all both reasonable and practicable.

Alternatives carried forward for further evaluation					
Alternative	Direct wetland impact (acres)	Indirect wetland impact (acres)	Stream impact (linear feet)	Average travel speed in study area (mph)	Evacuation time out of coastal area (hours)
3	33.0	243.0	470	20.79	16.8
5	33.7	240.9	470	20.79	16.8
Mod 7	28.5	245.3	470	20.79	16.8
Mod 7a	28.5	245.3	470	21.68	16.6

Alternative 3 is the construction of a Ridge Road extension as a four-lane, at-grade facility. This alternative would satisfy the overall project purpose and provide improvements for both mobility and evacuation within the study area. With 33 acres of direct wetland impact and impacts to 470 linear feet of stream, Alternative 3 would have greater impact than Alternative Mod 7 and Mod 7a.

Alternative 5 is the construction of a Ridge Road extension as a four-lane, at-grade facility. This alternative would satisfy the overall project purpose and provide improvements for both mobility and evacuation within the study area. With 33.7 acres of direct wetland impact and impacts to 470 linear feet of stream, Alternative 5 would have greater impact than Alternatives 3, Mod 7, and Mod 7a.

Alternative Mod 7 is the construction of a Ridge Road extension as a four-lane, at-grade facility with additional bridging of wetlands within the Serenova Tract, as compared to Alternatives 3 and 5. This alternative would satisfy the overall project purpose and provide improvements for both mobility and evacuation within the study area. With 28.5 acres of direct wetland impact and impacts to 470 linear feet of stream, Alternative Mod 7 would have less impact than Alternatives 3 and 5 and would have exactly the same impact as Alternative Mod 7a. As previously discussed, Mod 7 and Mod 7a differ only in the functional classification of the road segment located east of the Suncoast Parkway. Mod 7 would be managed as a limited access roadway and allow only one driveway connection to a commercial parcel located immediately east of the Suncoast Parkway, with no additional access to adjacent lands.

Alternative Mod 7a is construction of a Ridge Road extension as a four-lane, at-grade facility with additional bridging of wetlands within the Serenova Tract, as compared to Alternatives 3 and 5. Alternative Mod 7a is the applicants' preferred alternative. This alternative would provide improvements for both mobility and evacuation within the study area. With 28.5 acres of direct wetland impact and impacts to 470 linear feet of stream, Alternative Mod 7a would have less impact than Alternatives 3 and 5 and would have exactly the same impact as Alternative Mod 7. As previously discussed, Mod 7 and Mod 7a differ only in the functional classification of the road segment located east of the Suncoast Parkway. Classification of this road segment as an arterial roadway would allow a maximum of seven signalized intersections between the Suncoast Parkway and US Highway 41. As a result of these additional intersections, the model predicts that both mobility and evacuation times within the study area would have slight improvements, as compared to Mod 7. Additionally, Mod 7a would have the same impacts to wetlands and streams as Mod 7, but would better serve the overall project purpose due to additional improvements to both mobility and evacuation times within the study area. As such, the Corps has determined that Alternative Mod 7a is the least environmentally damaging, practicable alternative.

6.0 Evaluation for Compliance with the Section 404(b)(1) Guidelines.

6.1 Practicable alternatives to the proposed discharge consistent with 40 CFR 230.5(c) are evaluated in Section 5. The statements below summarize the analysis of alternatives.

In summary, based on the analysis in Section 5.0 above, the no-action alternative, which would not involve discharge into waters, is not practicable.

For those projects that would discharge into a special aquatic site and are not water dependent, the applicant has demonstrated there are no practicable alternatives that do not involve special aquatic sites.

It has been determined that there are no alternatives to the proposed discharge that would be less environmentally damaging. (Subpart B, 40 CFR 230.10(a)). The proposed discharge in this evaluation is the practicable alternative with the least adverse impact on the aquatic ecosystem, and it does not have other significant environmental consequences.

6.2 Candidate disposal site delineation (Subpart B, 40 CFR 230.11(f)). Each disposal site shall be specified through the application of these Guidelines:

Discussion: For the purposes of this evaluation, project impacts will utilize clean fill material. The applicant will utilize BMPs during construction as required by the

DA permit, such as use of silt screens and turbidity curtains as necessary, to confine RRE impacts to the proposed project footprint and ensure that there are no significant adverse impacts outside of RRE boundaries.

6.3 Potential impacts on physical and chemical characteristics of the aquatic ecosystem (Subpart C 40 CFR 230.20). See Table 1:

Physical and Chemical Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Substrate			X			
Suspended particulates/ turbidity			X			
Water			X			
Current patterns and water circulation			X			
Normal water fluctuations			X			
Salinity gradients		X				

Discussion:

Substrate:

As defined in 40 CFR 230.20(a), the substrate of an aquatic ecosystem underlies open waters of the United States and constitutes the surface of wetlands. It consists of organic and inorganic solid materials and includes water and other liquids or gases that fill the spaces between solid particles. As described in Section 1.3 of this document, RRE will have permanent impacts to 37.37 acres and temporary impacts to 5.03 acres of wetlands.

The proposed project would result in discharges of fill material into waters of the United States which would alter the substrate of the waters by replacing the aquatic areas with dry land, thus changing the physical, chemical, and biological characteristics of the substrate. If species are present, mobile organisms would likely avoid the area during construction and return to RRE area once construction is completed. The filling activity would eliminate macro- and micro-invertebrates, including infaunal, sessile, and non-motile organisms within the disposal sites. However, these organisms would re-populate within the adjacent wetlands and within water control and treatment components of RRE with the ultimate outcome being that the invertebrate communities within those aquatic resources would be restored to near pre-project conditions. Higher rates of erosion may result during construction, but the 401 Water Quality Certification

(WQC) issued on 24 July 2019 requires the use of appropriate measures to control soil erosion and sediment. Additionally, a DA permit, if issued for this proposed project, would include special conditions requiring the use of BMPs for construction to control and minimize soil erosion and sedimentation of aquatic resources. Post-construction conditions of erosion rates are expected to be similar to current conditions due to the implementation of BMPs and requirements of the WQC. As previously noted surface water connectivity would be maintained in accordance with WQC.

In summary, section 1.3.1 of this document describes the impact avoidance and minimization measures that have resulted in a reduction in permanent impacts from 55.95 to 37.37 acres. Specific measures that address impacts to substrate include use of clean fill material, use of reduced side slopes and vertical walls to minimize the fill footprint, bridging of wetlands and floodplains, and best management practices such as silt screens to minimize the potential for secondary effects to substrate outside of the alignment. Section 1.3 describes the final project, including the acreage of wetland impacts. Section 8 describes the required compensatory mitigation for RRE for any unavoidable functional losses associated with RRE impacts.

Based on the above factors, the Corps has determined that RRE is expected to have a short term negligible adverse effect on substrate.

Suspended Particulates/Turbidity:

Suspended particulates in the aquatic ecosystem normally consist of fine-grained mineral particles, usually smaller than silt, and organic particles. Turbidity is a measure of how these suspended particulates scatter light passing through water and affect transparency. Suspended particulates may enter water bodies as a result of natural events such as runoff, flooding, vegetative and planktonic breakdown, and re-suspension of bottom sediments. Human activities, such as the dredging and filling of waters of the U.S., may also cause turbidity in said waters. The level of impact and the degree of the turbidity will depend on factors such as the amount of agitation in the water, particulate specific gravity, particle shape, and physical and chemical properties of particle surfaces.

In light of the method of construction, soil erosion and sedimentation control measures which are implemented, equipment utilized, composition of the bottom substrate, etc. the discharge of fill material as proposed may temporarily increase water turbidity. Sediments that would be discharged would be of a physical nature (grain size, composition, etc.) as to be stable and have no more than minimal effect. Additionally, the DA permit, if issued, will include a special condition requiring the applicant to stabilize exposed soils and other areas of construction with silt fences and other erosion and sedimentation control barriers (BMP) in light of the kinds and concentrations of suspended mineral or organic particulates which could be dispersed. The BMP and other actions would reduce

the potential for sedimentation and avoid and minimize the entry of soil into the aquatic environment and avoid water quality degradation. Consideration was given to the method, volume and rate of discharge and resulting influence on suspended particulates, as well as methods to minimize adverse effects resulting from the discharge. The issuance of Environmental Resource Permit (ERP) No. 43018792.006 by the Southwest Florida Water Management District on 24 July 2019 constitutes water quality certification under Section 401 of the Clean Water Act. The ERP contains conditions which minimize the influence of the project on receiving waters. The design features required by the issued ERP will address potential impacts to water quality, including turbidity, during the life of the roadway.

In light of the above information the Corps has determined that RRE will have a short term negligible adverse effect on suspended particulates and turbidity.

Water:

Water is the part of the aquatic ecosystem in which organic and inorganic constituents are dissolved and suspended. It constitutes part of the liquid phase and is contained by the substrate. Water forms part of a dynamic aquatic life-supporting system. Water clarity, nutrients and chemical content, physical and biological content, dissolved gas levels, pH, and temperature contribute to its life-sustaining capabilities. During construction, changes in the clarity, color, odor, and taste of water and the addition of contaminants can temporarily reduce or eliminate the suitability of water bodies for populations of aquatic organisms, and for human consumption, recreation, and aesthetics. The introduction of nutrients or organic material to the water column as a result of the discharge can lead to a high biochemical oxygen demand (BOD), which in turn can lead to reduced dissolved oxygen, thereby potentially affecting the survival of many aquatic organisms. Increases in nutrients can favor one group of organisms such as algae to the detriment of other more desirable types such as submerged aquatic vegetation, potentially causing adverse health effects, objectionable tastes and odors, and other problems.

The DA permit will include a special condition requiring the applicant to implement sedimentation control BMPs during the construction stages of RRE. This would provide the necessary protection for receiving waters and minimize the potential of pollutants from entering waters outside of the discharge locations. Aquatic organisms present within the waters to be filled would be affected due to alterations to the existing water chemistry composition. However, organisms would recolonize once construction is completed, as the proposed project includes water control and treatment features as well as culverts, bridges, and other features to maintain surface water flows. Given the above factors, it is anticipated that the proposed project would have a minor and short term effect on water.

In summary, section 1.3.1 of this document describes the impact avoidance and minimization measures for this project and section 8 describes the required compensatory mitigation for RRE for any unavoidable functional losses associated with RRE impacts.

The Corps has determined that RRE will have a short term negligible adverse effect on water.

Current Patterns and Water Circulation:

Current patterns and water circulation are the physical movements of water in the aquatic ecosystem. Currents and circulation respond to natural forces as modified by basin shape and cover, physical and chemical characteristics of water strata and masses, and energy dissipating factors.

Consideration is be given to several parameters such as water chemistry, color, clarity, and temperature, including along existing surface waters such as the Anclote River and Five Mile Creek. The final plan for the road includes culverts and above-grade bridges to allow water to flow from one side of the road to the other to eliminate obstructions and minimize erosion and alterations of daily, seasonal, or annual current patterns, flow velocity and direction, and water column stratification. Fill would alter bottom contours, however, culverts, bridges, and other flow conveyances would maintain or minimize effects to currents, circulation patterns, and timing of the same.

In summary, section 1.3.1 of this document describes the impact avoidance and minimization measures for this project and section 8 describes the required compensatory mitigation for RRE for any unavoidable functional losses associated with RRE impacts.

The Corps has determined that RRE will have a short term negligible adverse effect on water circulation.

Normal Water Fluctuations:

Normal water fluctuations in a natural aquatic system consist of daily, seasonal, and annual tidal and flood fluctuations in water level. Biological and physical components of such a system are either attuned to or characterized by these periodic water fluctuations.

Consideration is be given to several parameters such as water chemistry, color, clarity, and temperature, including along existing surface waters such as the Anclote River and Five Mile Creek. The final plan for the project includes culverts and above-grade bridges to allow water to flow from one side of the road to the other to eliminate obstructions and minimize alterations of daily, seasonal, or annual current patterns and fluctuations, flow velocity and direction, and water column stratification. Fill would alter bottom contours, however, culverts, bridges, and other flow conveyances would maintain or minimize effects to currents,

circulation patterns, and timing and fluctuations of the same.

In summary, section 1.3.1 of this document describes the impact avoidance and minimization measures for this project and section 8 describes the required compensatory mitigation for RRE for any unavoidable functional losses associated with RRE impacts.

The Corps has determined that RRE will have a short term negligible adverse effect on water fluctuation.

Salinity Gradients:

Salinity gradients form where salt water from the ocean meets and mixes with fresh water from land.

RRE corridor is not near an estuarine system and would maintain downstream flow. Thus, RRE would not have an effect on downstream salinity.

6.4 Potential impacts on the living communities or human uses (Subparts D, E and F):

6.4.1 Potential impacts on the biological characteristics of the aquatic ecosystem (Subpart D 40 CFR 230.30). See Table 2:

Biological characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Threatened and endangered species			X			
Fish, crustaceans, mollusk, and other aquatic organisms			X			
Other wildlife			X			

Discussion:

Threatened and Endangered Species:

The Guidelines specifically state that “where consultation with the Secretary of the Interior occurs under Section 7 of the Endangered Species Act, the conclusions of the Secretary concerning the impact(s) of the discharge on threatened and endangered species and their habitat shall be considered final.” As discussed in Section 10 of this document, the Corps considered the effect of RRE on species within the purview of both the United States Fish and Wildlife

Service (FWS) and the National Marine Fisheries Service (NMFS). The Corps determined that the proposed project may affect the listed and candidate species as referenced in the Biological Assessment dated 21 February 2019, which was provided to the FWS in accordance with ESA Section 7(a)(2). The FWS issued a Biological Opinion (BO), dated 20 September 2019, regarding RRE's effect on Federally listed species and candidate species, or their designated, or proposed for designation, critical habitat. The Service concurred with the Corps' effect determinations and stated that the proposed project would not jeopardize the continued existence of any listed species. The permit, if issued, will contain a special condition that requires compliance with the Terms and Conditions of the BO. In consideration of the above information, the Corps has determined that the proposed project will have a negligible effect on Federally listed species. Please see Section 10.1 Section 7(a)(2) of the Endangered Species Act, of this document, for further details.

In light of the above information, the Corps has determined RRE would have only a short term negligible effects on Federally listed species

Fish, Crustaceans, Mollusks and Other Aquatic Organisms in the Food Web: Aquatic organisms in the food web include, but are not limited to, finfish, crustaceans, mollusks, insects, annelids, planktonic organisms, and the plants and animals on which they feed and depend upon for their needs. All forms and life stages of an organism, throughout its geographic range, are included in this category. The discharge of dredged or fill material can variously affect populations of fish, crustaceans, mollusks, and other food web organisms, through the release of contaminants which adversely affect adults, juveniles, larvae, or eggs, or result in the establishment or proliferation of an undesirable competitive species of plant or animal at the expense of the desired resident species. Suspended particulates settling on attached or buried eggs can smother the eggs by limiting or sealing off their exposure to oxygenated water. Discharge of dredged and fill material may result in the debilitation or death of sedentary organisms by smothering, exposure to chemical contaminants in dissolved or suspended form, exposure to high levels of suspended particulates, reduction in food supply, or alteration of the substrate upon which they are dependent. Mollusks are particularly sensitive to the discharge of material during periods of reproduction growth, and development due primarily to their limited mobility. They can be rendered unfit for human consumption by tainting, production and accumulation of toxins, or ingestion and retention of pathogenic organisms, viruses, heavy metals, or persistent synthetic organic chemicals. The discharge of dredged or fill material can redirect, delay, or stop the reproductive and feeding movements of some species of fish and crustaceans, thus preventing their aggregation in accustomed places such as spawning or nursery grounds, and potentially leading to reduced populations. Reduction of detrital feeding species or other representatives of lower trophic levels can impair the flow of energy from primary consumers to higher trophic levels. The reduction or potential elimination of food chain organism populations decreases the overall

productivity and nutrient export capability of the ecosystem.

The Corps has determined that there may be minor effects on aquatic organisms in the immediate discharge sites due to construction activities. Mobile organisms will move from the RRE area during construction, while sessile organisms will be buried and/or lost. The RRE area will continue to provide suitable habitat for mobile aquatic organisms. The implementation of BMPs, as noted in the discussion of avoidance and minimization in Section 1.3.1 of this document and as required by the DA permit, should ensure that sediment does not erode into adjacent wetlands during storm events and this will minimize any potential impacts to fish, crustaceans, mollusks, and other aquatic organisms both on-site and downstream of the RRE area. As discussed in Section 8, compensatory mitigation will involve the purchase of 40.57 wetland credits from the Old Florida Mitigation Bank as compensatory mitigation for proposed impacts to waters of the U.S., including wetlands, and the credit purchase will offset impacts to fish and wildlife foraging habitat. With regard to potential water quality impacts to aquatic organisms, Section 6.3 of this document describes the Corps' consideration of RRE's effects on suspended particulates/turbidity, and Sections 7.1 and 9.5 describes the Corps' consideration of RRE's effects on water quality during and after construction.

After reviewing all of the above factors, which include measures to avoid and minimize impacts to fish, crustaceans, mollusks, and other aquatic organisms in the food web, and with consideration of the actual area of direct and indirect impacts to aquatic resources within the overall project area, as well as proposed compensatory mitigation, the Corps has determined that the impacts of RRE are expected to be short term and negligible.

Other Wildlife:

Wildlife associated with aquatic ecosystems includes resident and transient mammals, birds, reptiles, and amphibians. The discharge of fill material can result in the loss or change of breeding and nesting areas, escape cover, travel corridors, and preferred food sources for resident and transient wildlife species associated with the aquatic ecosystem. These adverse impacts upon wildlife habitat may result from changes in water levels, water flow and circulation, salinity, chemical content, and substrate characteristics and elevation. Increased water turbidity can adversely affect wildlife species which rely upon sight to feed, and disrupt the respiration and feeding of certain aquatic wildlife and food chain organisms. The availability of contaminants from the discharge of dredged or fill material may lead to the bioaccumulation of such contaminants in wildlife. Changes in such physical and chemical factors of the environment may favor the introduction of undesirable plant and animal species at the expense of resident species and communities. In some aquatic environments lowering plant and animal species diversity may disrupt the normal functions of the ecosystem and lead to reductions in overall biological productivity.

RRE would result in the discharge of fill material in waters of the U.S. and sessile species occupying these areas will be lost, but more mobile species will move outside of the impact areas during construction and ultimately re-occupy habitat within the project area upon completion of construction. Most of the RRE project area is surrounded by undeveloped agricultural lands, forested uplands and wetlands, and pasture lands, which would allow for the cover, forage, and movement of small, medium, and large birds, reptiles, amphibians, and mammals to continue. The purchase of 40.57 credits from the Old Florida Mitigation Bank as compensatory mitigation for proposed impacts to waters of the U.S., including wetlands, will offset impacts to fish and wildlife foraging habitat within the watershed.

Following construction, traffic on the road may have an indirect impact on wildlife though fencing along the ROW (ROW) will minimize that impact. Section 10 of this document describes the measures taken to avoid and minimize the direct impacts for this project, which will minimize the direct impacts to wildlife. RRE design includes multiple wildlife crossings to minimize indirect impacts over the life of RRE.

In consideration of these factors, the Corps has determined that impacts (in consideration of impact area versus the entire reach of the affected system), along with proposed mitigative measures, are expected to be short term and negligible.

6.4.2 Potential impacts on special aquatic sites (Subpart E 40 CFR 230.40). See Table 3:

Table 6-3 – Potential Impacts on Special Aquatic Sites						
Special Aquatic Sites	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Sanctuaries and refuges				X		
Wetlands			X			
Mud flats		X				
Vegetated shallows		X				
Coral reefs		X				

Discussion:

Sanctuaries and Refuges:

Sanctuaries and refuges consist of areas designated under State and Federal laws or local ordinances to be managed principally for the preservation and use of fish and wildlife resources.

The proposed road alignment between Moon Lake Road and the Suncoast Parkway runs through the Serenova Tract. The Florida Department of Transportation (FDOT) purchased this tract as mitigation for construction of the Suncoast Parkway, and transferred it to the SWFWMD, while retaining the right to request authorization for this project. The Corps has considered the potential effects of RRE on the Serenova Tract pursuant to 40 C.F.R. § 230.40. The Serenova Tract meets the definition of “sanctuaries and refuges” as stated in that regulation. However, as described in Section 7 and other sections of this document, RRE has avoided and minimized potential impacts to wildlife, habitat, and other values, and provided compensation for unavoidable impacts.

The Corps has determined that RRE will have a short term minor adverse effect on the Serenova Tract, and no effect on any other sanctuaries and refuges.

Wetlands:

Wetlands consist of areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Section 6 of this document provides project-specific information about RRE’s impacts to aquatic resources, Section 1.3.1 describes how the applicant has avoided and minimized impacts to aquatic resources, and Section 8 provides project-specific information about mitigation, including compensatory mitigation for unavoidable impacts to aquatic resources.

The Corps has determined that RRE will have a short term negligible adverse effect on wetlands.

Mud Flats:

Mud flats are broad flat areas along the sea coast and in coastal rivers to the head of tidal influence and in inland lakes, ponds, and riverine systems. When mud flats are inundated, wind and wave action may re-suspend bottom sediments. Coastal mud flats are exposed at extremely low tides and inundated at high tides with the water table at or near the surface of the substrate. The substrate of mud flats contains organic material and particles smaller in size than sand. They are either un-vegetated or vegetated only by algal mats.

There are no mud flats within or near the RRE area and, therefore, the Corps has determined that RRE will have no effect on mud flats.

Vegetated Shallows:

Vegetated shallows are permanently inundated areas that under normal circumstances support communities of rooted aquatic vegetation, such as freshwater species in rivers and lakes and salt-tolerant species in shallow tidal

waters. The discharge of dredged or fill material can smother vegetation and benthic organisms. It may also create unsuitable conditions for their continued vigor by: changing water circulation patterns; releasing nutrients that increase undesirable algal populations; releasing chemicals that adversely affect plants and animals; increasing turbidity levels, thereby reducing light penetration and hence photosynthesis; and changing the capacity of a vegetated shallow to stabilize bottom materials and decrease channel shoaling. The discharge of dredged or fill material may reduce the value of vegetated shallows as nesting, spawning, nursery, cover, and forage areas, as well as their value in protecting shorelines from erosion and wave actions. It may also encourage the growth of nuisance vegetation.

There are no vegetated shallows within or near the RRE area and, therefore, the Corps has determined that RRE will have no effect on vegetated shallows.

Coral Reefs:

Coral reefs consist of the skeletal deposit, usually of calcareous or siliceous materials, produced by the vital activities of anthozoan polyps or other invertebrate organisms present in growing portions of the reef.

There are no coral reefs within or near the RRE area and, therefore, the Corps has determined that RRE will have no effect on coral reefs.

6.4.3 Potential impacts on human use characteristics (Subpart F 40 CFR 230.50). See Table 4:

Table 6-4 – Potential Impacts on Human Use Characteristics						
Human Use Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Municipal and private water supplies		X				
Recreational and commercial fisheries		X				
Water-related recreation		X				
Aesthetics			X			
Parks, national and historical monuments, national seashores, wilderness areas,				X		

Table 6-4 – Potential Impacts on Human Use Characteristics						
Human Use Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
research sites, and similar preserves						

Discussion:

Municipal and Private Water Supplies:

Municipal and private water supplies consist of surface water or ground water which is directed to the intake of a municipal or private water supply system. Discharges can affect the quality of water supplies with respect to color, taste, odor, chemical content, and suspended particulate concentration, in such a way as to reduce the fitness of the water for consumption. Water can be rendered unpalatable or unhealthy by the addition of suspended particulates, viruses and pathogenic organisms, and dissolved materials. The expense of removing such substances before the water is delivered for consumption can be high. Discharges may also affect the quantity of water available for municipal and private water supplies. In addition, certain commonly used water treatment chemicals have the potential for combining with some suspended or dissolved substances from dredged or fill material to form other products that can have a toxic effect on consumers.

This project may affect surface or groundwater supplies by consumptive use for dust control activities and other operational uses during project construction, but no long-term consumptive use permit is required for the proposed project. Based on available data, the Corps is not aware of any public surface water supplies downstream of RRE. Sections 7.1 and 9.5 of this document describes the Corps' consideration of RRE's effects on water quality during and after construction. As stated in that section, the issuance of ERP No. 43018792.006 by the Southwest Florida Water Management District on 24 July 2019 constitutes water quality certification under Section 401 of the Clean Water Act.

In consideration of the information above, the Corps has determined that RRE will have no effect on municipal and private water supplies.

Recreational and Commercial Fisheries:

Recreational and commercial fisheries consist of harvestable fish, crustaceans, shellfish, and other aquatic organisms used by man. The discharge of dredged or fill material can affect the suitability of recreational and commercial fishing grounds as habitat for populations of consumable aquatic organisms. Discharges can result in the chemical contamination of recreational or commercial fisheries. They may also interfere with the reproductive success of

recreational and commercially important aquatic species through disruption of migration and spawning areas. The introduction of pollutants at critical times in their life cycle may directly reduce populations of commercially important aquatic organisms or indirectly reduce them by reducing organisms upon which they depend for food. Any of these impacts can be of short duration or prolonged, depending upon the physical and chemical impacts of the discharge and the biological availability of contaminants to aquatic organisms.

The proposed project will fill non-tidal wetlands and, while some wetlands may potentially support some aquatic organisms such as small fish, these resources are not open to the public for fishing nor do they support commercial fisheries. Therefore, the proposed project will have no impact to recreational and commercial fisheries.

In consideration of the above information, the Corps determined the proposed project would have no effect on recreational and commercial fisheries.

Water-Related Recreation:

Water-related recreation encompasses activities undertaken for amusement and relaxation. Activities encompass two broad categories of use: consumptive, e.g., harvesting resources by hunting and fishing; and non-consumptive, e.g., canoeing and sight-seeing. One of the more important direct impacts of dredged or fill disposal is to impair or destroy the resources which support recreation activities. The disposal of dredged or fill material may adversely modify or destroy water use for recreation by changing turbidity, suspended particulates, temperature, dissolved oxygen, dissolved materials, toxic materials, pathogenic organisms, quality of habitat, and the aesthetic qualities of sight, taste, odor, and color.

The proposed project will discharge fill material into wetlands. However, these features are not open to the public for fishing or other recreational activities. In addition, these resources are not large enough for navigation, so the public could not use small recreational vessels (canoes/kayaks) on site.

In consideration of the above information, the Corps determined the proposed project would have no effect on water-related recreation.

Aesthetics:

Aesthetics associated with the aquatic ecosystem consist of the perception of beauty by one or a combination of the senses of sight, hearing, touch, and smell. Aesthetics of aquatic ecosystems apply to the quality of life enjoyed by the general public and property owners. The discharge of dredged or fill material can mar the beauty of natural aquatic ecosystems by degrading water quality, creating distracting disposal sites, inducing inappropriate development, encouraging unplanned and incompatible human access, and by destroying vital elements that contribute to the compositional harmony or unity, visual

distinctiveness, or diversity of an area. The discharge of dredged or fill material can adversely affect the particular features, traits, or characteristics of an aquatic area which make it valuable to property owners. Activities which degrade water quality, disrupt natural substrate and vegetation characteristics, deny access to or visibility of the resource, or result in changes in odor, air quality, or noise levels, may reduce the value of an aquatic area to private property owners.

This project will result in minor, short- and long-term impacts to aesthetics. As described in Section 7.4.1 of this document, the western part of the road alignment runs through a public recreation area. The road will have the dual effect of adversely impacting the aesthetic landscape within the direct footprint of the road and beneficially providing additional public access to the scenery within the preserve. Land uses immediately adjacent to the RRE site consist of cattle grazing lands and undeveloped forested uplands/wetlands; there is only minimal residential development adjacent to the RRE site. In addition, the utilization of BMPs will prevent sediment and erosion from expanding beyond RRE limits causing unsightly fill in unauthorized areas. This text is also relevant to discussion immediately below regarding Parks, national and historical monuments, national seashores, wilderness areas, research sites and similar preserves

In consideration of the above information, the Corps has determined that RRE will have a short term negligible effect on aesthetics.

Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves:

This consist of areas designated under Federal and State laws or local ordinances to be managed for their aesthetic, educational, historical, recreational, or scientific value. The discharge of dredged or fill material into such areas may modify the aesthetic, educational, historical, recreational and/or scientific qualities thereby reducing or eliminating the uses for which such sites are set aside and managed.

The proposed road alignment between Moon Lake Road and the Suncoast Parkway runs through the Serenova Tract. The Florida Department of Transportation (FDOT) purchased this tract as mitigation for construction of the Suncoast Parkway, and transferred it to the SWFWMD, while retaining the right to request authorization for this project. The Corps has considered the potential effects of RRE on the Serenova Tract in accordance with 40 C.F.R. § 230.40. The Serenova Tract does qualify as a “preserve” as stated above. However, as described in Section 7 and other sections of this document, RRE has avoided and minimized potential impacts to the intended uses and values of the preserve, and provided compensation for unavoidable impacts.

In consideration of the above information, the Corps has determined that the RRE will have a short term minor adverse effect on the Serenova Tract, and no

effect on any other parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves.

6.5 Pre-testing evaluation (Subpart G, 40 CFR 230.60):

The following has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. See Table 5:

Table 6-5 – Possible Contaminants in Dredged/Fill Material	
Physical characteristics	X
Hydrography in relation to known or anticipated sources of contaminants	
Results from previous testing of the material or similar material in the vicinity of the project	
Known, significant sources of persistent pesticides from land runoff or percolation	
Spill records for petroleum products or designated (Section 331 of CWA) hazardous substances	
Other public records or significant introduction of contaminants from industries, municipalities, or other sources	
Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities.	

Discussion:

The fill material would be free from items such as trash, debris, automotive parts, asphalt, construction materials, and concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act. Any permit issued for RRE would incorporate a special condition stipulating the use of clean fill. Therefore, this evaluation indicates that the proposed discharge material meets the testing exclusion criteria.

It has been determined that testing is not required because the proposed material is not likely to be a carrier of contaminants because it is comprised of sand, gravel or other naturally occurring inert material.

6.6 Evaluation and testing (Subpart G, 40 CFR 230-61):

Discussion: The site is undeveloped and comprised of agricultural pasture fields. The applicant would be required to use clean fill material. This evaluation indicates that the proposed discharge material meets the testing exclusion criteria for the reason cited in Section 6.7 below.

- 6.7 Actions to minimize adverse impacts (Subpart H). The following actions, as appropriate, have been taken through application of 40 CFR 230.70-230.77 to ensure minimal adverse effects of the proposed discharge. See Table 6:

Actions concerning the location of the discharge	X
Actions concerning the material to be discharged	X
Actions controlling the material after discharge	X
Actions affecting the method of dispersion	X
Actions affecting plant and animal populations	X
Actions affecting human use	X

Discussion: The discharge will be comprised of clean material. The discharged material will be stabilized with vegetation such as sod and landscaping once at final grade or capped by impervious surfaces resulting from the construction of the project. Silt fences and other erosion control measures will be utilized to prevent turbidity outside of the material disposal areas. Runoff and other discharges from fill activities will be controlled.

- 6.8 Factual Determinations (Subpart B, 40 CFR 230.11). The following determinations are made based on the applicable information above, including actions to minimize effects and consideration for contaminants. See Table 7:

Site	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Physical substrate			X			
Water circulation, fluctuation and salinity			X			
Suspended particulates/turbidity			X			
Contaminants			X			
Aquatic ecosystem and organisms			X			
Proposed disposal site			X			
Cumulative effects on the aquatic ecosystem			X			

Site	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Secondary effects on the aquatic ecosystem			X			

Discussion:

Physical Substrate (40 C.F.R. § 230.11(a)): Sections 6.4 through 6.7 of this document describes the Corps' consideration of RRE's effects on physical substrate.

Water circulation, fluctuation, and salinity (40 C.F.R. § 230.11(b)): Sections 6.4 through 6.7 of this document describes the Corps' consideration of RRE's effects on water circulation, fluctuation, and salinity.

Suspended particulates/turbidity (40 C.F.R. § 230.11(c)): Sections 6.4 through 6.7 of this document describes the Corps' consideration of RRE's effects on suspended particulates/turbidity.

Contaminant Availability (40 C.F.R. § 230.11(d)): As described in the introduction to this section, the fill associated with this project is clean fill from an appropriate upland source. There is a potential for runoff from RRE during the construction of the road and during the life of the roadway and BMP would be implemented to contain contaminants. The applicant will utilize BMP during construction as required by the DA permit, such as use of silt screens and turbidity curtains as necessary, to minimize impacts to adjacent waters. The issuance of ERP No. 43018792.006 by the Southwest Florida Water Management District on 24 July 2019 constitutes water quality certification under Section 401 of the Clean Water Act. The design features required by the issued ERP will address potential impacts to water quality during the life of the roadway.

The Corps has determined that RRE will have a short term negligible adverse effect on contaminant availability.

Aquatic Ecosystem Effects (40 C.F.R. § 230.11(e)): Section 6 of this document provides project-specific information about RRE's impacts to aquatic resources, Section 1.3.1 describes how the applicant has avoided and minimized impacts to aquatic resources, and Section 8 provides project-specific information about mitigation, including compensatory mitigation for unavoidable impacts to aquatic resources.

The Corps has determined that RRE will have a short term negligible adverse effect on structure and function of aquatic resources.

Proposed Disposal Site (40 C.F.R. § 230.11(f)): The applicant will utilize BMPs during construction as required by the DA permit, such as use of silt screens and turbidity curtains as necessary, to confine RRE impacts to the proposed project footprint and ensure that there are no significantly adverse impacts outside of RRE boundaries.

Cumulative Effects on the Aquatic Ecosystem (40 C.F.R. § 230.11(g)): Section 9 of this document provides the Corps' cumulative effect analyses for this project, including the Corps' determinations of degree of effect and significance for cumulative effects. The Corps has determined that RRE will have negligible cumulative effects on aquatic resources.

Secondary Effects on the Aquatic Ecosystem (40 C.F.R. § 230.11(h)): Section 8.4 of this document describes RREs' secondary effects on aquatic resources. The Corps has determined that RRE will have short term negligible secondary effects on aquatic resources.

- 6.9 Findings of compliance or non-compliance with the restrictions on discharges (40 CFR 230.10(a-d) and 230.12). Based on the information above, including the factual determinations, the proposed discharge has been evaluated to determine whether any of the restrictions on discharge would occur. See Table 8:

Subject	Yes	No
1. Is there a practicable alternative to the proposed discharge that would be less damaging to the environment (any alternative with less aquatic resource effects, or an alternative with more aquatic resource effects that avoids other significant adverse environmental consequences?)		X
2. Will the discharge cause or contribute to violations of any applicable water quality standards?		X
3. Will the discharge violate any toxic effluent standards (under Section 307 of the Act)?		X
4. Will the discharge jeopardize the continued existence of endangered or threatened species or their critical habitat?		X
5. Will the discharge violate standards set by the Department of Commerce to protect marine sanctuaries?		X
6. Will the discharge cause or contribute to significant degradation of waters of the U.S.?		X
7. Have all appropriate and practicable steps (Subpart H, 40 CFR	X	

230.70) been taken to minimize the potential adverse impacts of the discharge on the aquatic ecosystem?		
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Discussion: NA

7.0 General Public Interest Review (33 CFR 320.4 and RGL 84-09)

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest as stated at 33 CFR 320.4(a). To the extent appropriate, the public interest review below also includes consideration of additional policies as described in 33 CFR 320.4(b) through (r). The benefits which reasonably may be expected to accrue from the proposal are balanced against its reasonably foreseeable detriments.

7.1 All public interest factors have been reviewed and those that are relevant to the proposal are considered and discussed in additional detail. See Table 9 and any discussion that follows.

Table 9: Public Interest Factors	Effects					
	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
1. Conservation: See below for discussion.				X		
2. Economics: See below for discussion.					X	
3. Aesthetics: See below for discussion.				X		
4. General Environmental Concerns: See below for discussion.			X			
5. Wetlands: See below for discussion.			X			
6. Historic Properties: See below for discussion.	X					
7. Fish and Wildlife Values: See below for discussion.			X			
8. Flood Hazards: See below for discussion.					X	
9. Floodplain Values: See below for discussion.			X			
10. Land Use: See below for discussion.			X			

Table 9: Public Interest Factors	Effects					
	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
11. Navigation:						X
12. Shoreline Erosion and Accretion:						X
13. Recreation: See below for discussion.			X			
14. Water Supply and Conservation: See below for discussion.				X		
15. Water Quality:: See below for discussion.				X		
16. Energy Needs:						X
17. Safety: See below for discussion.					X	
18. Food and Fiber Production:						X
19. Mineral Needs:						X
20. Consideration of Property Ownership: See below for discussion.					X	
21. Needs and Welfare of the People: See below for discussion.					X	

Additional discussion of effects on factors above:

NOTE: Additional information relevant to these factors may be found in the Public Notice Response Section of this EASOF (Section X).

Conservation: Even though the ROW for the proposed project through the Serenova Tract is approximately 167 acres (about 2.5% of the Serenova Tract’s 6,533 acres), the disturbed area is only 123 acres or about 1.9% of the Serenova Tract. Through the implementation of wetland minimization measures incorporated into the project the applicant has conserved to the maximum extent practicable the value and area of wetlands within the Serenova Tract. Conservation of the wetlands crossed by the proposed project has been maintained through the incorporation of bridges that maintain hydrologic connection and function of the wetland as well as physical connection for wetland dependent wildlife species. In addition, the applicant utilized other minimization

techniques such as vertical walls, smaller construction footprints, and siting of ponds in uplands to avoid impacts and preserve conservation areas. These minimization techniques were applied to the whole of the project, not only within the existing conservation lands. As the RRE project has received the SWFWMD ERP it is evident that the state review did not expect the addition of the roadway to effect its management or the conservation of the Starkey Wilderness Preserve.

To further conservation in the general area, the County recently purchased over 800 acres of property that is west of and directly adjoins the Serenova Tract. This property, previously slated for development as part of project Arthur, has been put into preservation with the County's Environmental Lands Acquisition and Management Program (ELAMP). The ELAMP has placed approximately 3,800 acres of high-quality lands in conservation since its creation in 2004. The ELAMP has several large conservation properties in the area surrounding the RRE. These conservation areas contribute to the protection of native lands and greenway corridors for the County. The overall effect to conservation as a result of the RRE is long-term but negligible.

Economics: The applicant indicated the project will improve the mobility within the highway network in this area of Pasco County. Traffic studies document increased travel speeds and reduced travel time on roads. Mobility in the area will facilitate growth and access to employment options. In addition, construction of the roadway would provide employment opportunities for design, engineering, construction and maintenance of the project. Potential for residential and commercial construction exists, and if developed would lead to more long-term economic benefits. The effects of the RRE on economics are long-term and beneficial.

Aesthetics: Phase I of RRE will cross the Starkey Wilderness Preserve in a previously determined ROW. This will bisect a large undeveloped, natural area. The existing project plans elevate numerous sections of the roadway to limit impacts to the preserve area. A scenic value enhancement is being provided with the inclusion of a wayside adjacent to the multi-use path. The wayside is located on an embankment area approximately 17' above existing grade thereby offering scenic vistas of the Serenova Tract to the south. In addition, the applicants have elected not to provide roadway lighting along the RRE through the Serenova Tract. The only exception to this is the interchange at the Suncoast Parkway where lighting is included in the design criteria for safety reasons. Phase II of the RRE will traverse private agriculture and undeveloped areas. Generally, the aesthetics in this area will change from agriculture/undeveloped to a roadway.

Aesthetics is ultimately dependent on ones perspectives as it relates to development of roadways and new residential, commercial, and institutional

developments. To minimize aesthetic impacts, the applicants plan to landscape the ROW along the entire length of the project with trees, shrubs and ground covers to provide greenery and vegetative screening. Aesthetic impacts are considered long-term but negligible.

General Environmental Concerns: Neutral/Mitigated - Numerous revisions to the project have occurred to limit impacts to wetlands and other sensitive areas and resources. Examples include narrowing construction corridors in some areas and the incorporation of bridges in others. In addition, wildlife crossings are located throughout the project footprint to facilitate movement of species on either side of the proposed roadway. Impacts to wetlands are neutral as a result of the compensatory mitigation plan. Erosion, sediment, and turbidity control measures consistent with Best Management Practices (BMPs) will be implemented during construction to prevent potential for adverse effect on the general environment. These BMP's, as well as, Federal, state, and local regulations will help to limit environmental concerns from construction as well as long term use (stormwater management and flood compensation). The project has received state water quality certification.

One objective of RRE construction is to facilitate better traffic flow and east-west mobility. If the project reduces travel times, one could assume reduced fossil-fuel use. The applicant provided the following information that was generated as part of their traffic study. "Alt 7A compared to the No-Action Alternative shows that Alt 7A results in a reduction of 4731 kg (7.8%) of Carbon Monoxide, 316 Kg (7.9%) of Hydrocarbons and 324 Kg (6.9%) of Oxides of Nitrogen. So generally, Alt 7A would result in about a 7% reduction in emissions compared to the No-Action Alternative based on Vehicle Hours Traveled."

General environmental concerns are considered long-term and neutral as a result of minimization and mitigation.

Wetlands: The proposed project will directly impact wetlands from the permanent discharge of fill material into 37.37 acres of Corps jurisdictional wetlands with a functional unit loss of 23.66. The project would indirectly effect 354.36 acres of wetlands resulting in a projected functional unit loss of 22.93. The wetland impacts have been minimized to the maximum extent practicable while still providing for a roadway design that meets applicable safety and design criteria. The efforts by the applicant to further avoid and minimize wetland impacts, particularly within the higher quality wetlands in the Serenova Tract, but as well as along the entire roadway have reduced the discharge of fill material into wetlands from 69.31 acres in the 2000 public notice to the currently proposed 37.37 acres. Substantial wetland impact minimization features incorporated in the design of the final proposed roadway are the bridging of numerous wetlands

within the Serenova Tract, the extensive use of vertical walls, and segments of steep embankment slopes which reduce project footprint.

Per Pasco County's final mitigation plan, the County will utilize federally approved mitigation credits purchased from the Old Florida Mitigation Bank to mitigate for unavoidable wetland impacts associated with the Ridge Road Extension project Phase I and for the initial 0.25 mile long segment of Phase II. This initial construction phase will result in a functional loss of 18.74 units. Mitigation for the remaining portion of Phase II will be provided through the purchase of mitigation credits from a federally approved mitigation bank prior to wetland impacts. The final construction phase will result in a functional loss of 19.29 units. As documented in the Florida's Turnpike Enterprise (FTE) letter dated 6 June 2019 to the Corps, FTE will utilize a combination of excess mitigation credits from the Suncoast Parkway project and the purchase of mitigation credits from OFMB to mitigate the unavoidable wetland impacts associated with the interchange segment of the project. The Suncoast Interchange will result in a functional loss of 8.21 units. With the 6.73 unit credit from the excess Suncoast Parkway mitigation, the FTE is responsible for 2.54 units. Because the impacts to wetland functions and values will be fully mitigated, the effect to wetlands is considered neutral.

Historic Properties: Negligible - The Corps coordinated the proposed project with the SHPO and THPO-STOF numerous times during the review. Despite several archaeological/historical sites being present in the review area, the final determination relevant to historic properties was that there would be no effect to these resources.

Fish and Wildlife Values: The roadway has been designed to minimize direct, indirect, and cumulative impacts by maintaining habitat connectivity through the use of wildlife crossings under the road by utilizing both bridging of wetlands and upland wildlife underpasses (box culverts). The project will also exclude wildlife from entering the roadway corridor through the use of exclusionary fencing along the entire length of the project, except at prescribed locations, to allow safe wildlife crossings. The proposed RRE does not include exits from the roadway as it crosses the Serenova Tract of the Starkey Preserve and the land management agency (SWFWMD) has a commitment to maintaining habitat quality on the Preserve. As documented in Section 10 of this decision document, the National Marine Fisheries Service (NMFS), by letter of 4 October 2018, expressed that their concerns regarding local hydrology and potential downstream effects have been addressed. The United States Fish and Wildlife Service (USFWS) played a vital role in providing feedback on project components and design that reduce project effects on fish and wildlife resources. As documented in Section 10 of this

decision document the USFWS issued a biological opinion (BO) on 20 September 2019 to document their assessment of effects on listed species.

The Corps gave full consideration to the views of federal and state agencies responsible for fish and wildlife resources. While impacts to fish and wildlife have been minimized, the overall effect has been determined to be minor, yet long-term, and the adverse effects have been mitigated.

Flood Hazards: The SWFWMD has issued an ERP for the project. One of the criteria for ERP issuance is no net encroachment into the floodplain up to the areas encompassed by the 100-year event. This includes not increasing flood stages either up or down stream of the project. Cup for cup compensation has been provided for unavoidable fill placed within the floodplain. The issuance of the ERP is presumptive confirmation that the project would have no more than minimal impact on the floodplain or cause flooding. In addition, the project need is to facilitate evacuation of residents from coastal flooding areas. This additional evacuation route will help to satisfy that need. The result of the proposed project will have long-term benefits on flood hazards.

Floodplain Values: Negligible - Bridging of waterways in the project area will help to maintain hydrologic connections in the watersheds. An example of which is the bridging of the Pithlachascotee River and adjacent wetlands with an 845-foot long bridge, rather than a 520-foot long bridge. (A 520-foot bridge would be the minimum hydraulic design required to pass river flows.) Bridging the river and wetlands reduces the permanent discharge of fill material into these aquatic resources and allows maximum hydraulic conveyance. Similar design adjustments were incorporated in other areas along the RRE corridor. The spanning of waterways and reduction of fill will result in long-term but neutral effects to floodplain values.

Land Use: Land use regulation and zoning requirements are generally a local government issue. The proposed project is consistent with the land use restrictions contained in the documents and agreements that established the Serenova Tract within the Starkey Preserve. It is also supportive of the planning and land use trends in the area between SR 52 and SR 54 east of the Suncoast Parkway and west of US 41, which have shown rapid mixed use growth that is anticipated to continue.

The proposed project is consistent with the federally mandated Long Range Transportation Plan (LRTP) prepared by the Pasco County Metropolitan Planning Organization. The LRTP is consistent with all applicable federal and state planning requirements as well as the Comprehensive Plans of the county and the 6 incorporated cities within the county. The LRTP is prepared based on

recognition of the inextricable tie between land use and transportation and considers changes and shifts in demographic and socio-economic trends that impact land use and the transportation needs to support it. Projects included in the LRTP are based on meeting the projected growth and land use changes with consideration of population, employment and geographic areas. Thus with the proposed project being consistent with the LRTP it is supportive of current and future land use and the planning and zoning regulations the county uses to support it. The effect on land use has been determined to be neutral.

Recreation: The project will likely have both positive and negative effects on recreational values depending upon personal interest. The multi-use path that will commence at the western terminus of the project and extend through the Serenova Tract will connect to the existing Suncoast Trail. This will enhance the recreational value for multi-use path users such as bicyclists, runners, and walkers. Access to Serenova will be enhanced by the new multi-use path especially those that are mobility disadvantaged. Serenova Tract use for hikers, off-road bicyclists, and equestrian users may be negatively impacted due to the introduction of the east-west roadway. To mitigate impacts to north-south movement by Serenova Tract users, the proposed project includes two under-crossings (with sufficient headroom for equestrian use) that are located at existing trails within Serenova. The under-crossings and bridge spans were coordinated with the SWFWMD and decided on based on volume of trail use. The interchange and Phase II segments have limited recreational opportunities for the public. The overall effect to recreation would be long-term and neutral.

Water Supply and Conservation: The Starkey wellfield is located within the Starkey Wilderness Preserve and is part of a system of wells that provide drinking water for the Tampa Bay area. The wellfield is managed by Tampa Bay Water with regulatory oversight by the SWFWMD. The SWFWMD has issued a permit for the proposed project and therefore the Corps expects that water supply and conservation have been considered regarding the management of this wellfield. In addition to the Starkey wellfield, several others are located within the same watersheds as the proposed project. Given the avoidance of impacts to wetlands as well as the bridging of waterways and wetland complexes, the Corps does not anticipate the project will have more than a negligible effect on water supply and conservation.

Water Quality: The SWFWMD issued water quality certification on 24 July 2019, as part of the ERP issued for the project. A Department of the Army permit, if issued, would include a condition requiring compliance with the water quality certification. The Corps does not anticipate the project will have more than a negligible effect on water quality.

Safety: The proposed project is intended to reduce evacuation times for coastal residents. The June 2019 memo from the applicant provided discussion on the proposed benefits of the mod7a alternative. The traffic model predicted that 99 percent of evacuees will clear the evacuation zone in 16.6 hours compared with 16.8 hours with Mod7 and 23.4 hours with the no-action alternative. In addition to a reduced evacuation time for coastal residents, the proposed roadway will alleviate local congestion by providing an additional east-west corridor for daily traffic. The traffic model resulted in the following: 2.4 percent less vehicle-miles of travel, 4.3 percent higher speeds, and 2.3 percent less congestion than Modified Alternative 7. The applicants state this finding is reasonable because additional access to the Ridge Road corridor provides for some trips to be made with less circuitous travel routes (e.g. with direct access to Ridge Road, trips wanting to travel westward on Ridge Road no longer need to travel eastward to US 41 to access Ridge Road). Conversion of Ridge Road from an uninterrupted flow, limited access facility to a less-safe interrupted-flow arterial road introduces the possibility of additional crashes. This is reflected in an expected crash rate of 4.216 crashes per million vehicle miles travelled, which is a slight increase from the 4.209 crashes expected with the Mod7, but a decrease from the no action of 4.220 crashes. Overall, the Corps expects the effects on public safety to be beneficial.

Consideration of Property Ownership: Beneficial - The applicants either own the property that is the subject of this permit application, will have the property transferred to County ownership through the execution of existing agreements (SWFWMD), or will negotiate the acquisition of needed ROW from willing sellers. Realization of the proposed project will have a beneficial effect on property ownership.

Needs and Welfare of the People: The proposed project is consistent with the county LRTP prepared by the Pasco County Metropolitan Planning Organization. The proposed project addresses the transportation needs and welfare of the people by improving both daily mobility and hurricane evacuation times. Compared to the existing conditions (no action alternative), the daily mobility improvements include reduced travel time, increased travel speed, and reduced volume to capacity ratio (a measure indicating lessened congestion). These improvements are forecasted to reduce the number of person hours spent traveling in the study area by thousands of hours per day. Additionally, the project is forecasted to reduce the number of crashes per vehicle miles traveled (a measure of improved safety). The welfare of the people is also enhanced through the substantial reduction in evacuation time from the coastal hazard area compared to the no action alternative. In addition to these directly measurable

benefits, the needs and welfare of the people are further enhanced by a number of additional benefits including the following:

- Improved emergency services access and circulation with the benefit of reduced response times.
- Improved access to parks and other recreational facilities including the Serenova Tract.
- Improved access to north-south corridors (Suncoast Parkway and US 41) for residents of western Pasco County.
- Expansion of the regional multi-use path system for pedestrians and bicyclists.
- Improve access to the local middle and high school campus.

The Corps expects the service that the road will provide will have a long-term, beneficial effect on the needs and welfare of the people.

7.1.1 Climate Change. The proposed activities within the Corps federal control and responsibility likely will result in a negligible release of greenhouse gases into the atmosphere when compared to global greenhouse gas emissions. Greenhouse gas emissions have been shown to contribute to climate change. Aquatic resources can be sources and/or sinks of greenhouse gases. For instance, some aquatic resources sequester carbon dioxide whereas others release methane; therefore, authorized impacts to aquatic resources can result in either an increase or decrease in atmospheric greenhouse gas. These impacts are considered de minimis and are negated through compensatory mitigation. Greenhouse gas emissions associated with the Corps federal action may also occur from the combustion of fossil fuels associated with the operation of construction equipment, increases in traffic, etc. The Corps has no authority to regulate emissions that result from the combustion of fossil fuels. These are subject to federal regulations under the Clean Air Act and/or the Corporate Average Fuel Economy (CAFE) Program. Greenhouse gas emissions from the Corps action have been weighed against national goals of energy independence, national security, and economic development and determined not contrary to the public interest.

7.2 The relative extent of the public and private need for the proposed structure or work:

Public and private benefits include reduced evacuation times, reduced travel times, benefits to safety and employment, and improved access to public facilities (schools, emergency services).

- 7.3 If there are unresolved conflicts as to resource use, explain how the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work was considered.

Discussion: There were no unresolved conflicts identified as to resource use.

- 7.4 The extent and permanence of the beneficial and/or detrimental effects that the proposed work is likely to have on the public and private use to which the area is suited:

Detrimental effects are expected to be minimal and permanent.

Beneficial effects are expected to be more than minimal and permanent.

Detrimental impacts are expected to be minimal since the project is consistent with land use plans and long-term transportation corridor designs approved by the County. In addition, significant measures have been taken to avoid impacts to wetlands and fish/wildlife species. On-site wetland losses would be permanent but would be mitigated at a federally approved mitigation bank to ensure no net loss of wetland functions. The beneficial effects associated with the roadway capacity improvement and evacuation times would be permanent. Review details in Section 7.1 for specifics on detrimental and beneficial effects.

- 8.0 Mitigation**(33 CFR 320.4(r), 33 CFR Part 332, 40 CFR 230.70-77, 40 CFR 1508.20 and 40 CFR 1502.14)

- 8.1 Avoidance and Minimization: When evaluating a proposal including regulated activities in waters of the United States, consideration must be given to avoiding and minimizing effects to those waters. Avoidance and minimization measures are described above in Sections 1 and 3.

Were any other mitigative actions including project modifications discussed with the applicant implemented to minimize adverse project impacts? (see 33 CFR 320.4(r)(1)(i)) Yes

The Corps and the applicants discussed the use of fencing in the FTE interchange area as some of the fencing was to be placed in wetlands. The FTE requires fencing around infrastructure for safety reasons. The applicant revised their proposed plans to move the fencing out of wetland areas. This further avoided impacts to wetlands associated with the interchange.

- 8.2 Is compensatory mitigation required to offset environmental losses resulting from proposed unavoidable impacts to waters of the United States? Yes

Provide rationale: The proposed project will include impacts to wetlands and waters of the US, therefore compensatory mitigation will be required.

8.3 Type and location of compensatory mitigation

8.3.1 Is the impact in the service area of an approved mitigation bank? Yes

If yes, does the mitigation bank have appropriate number and resource type of credits available? Yes

8.3.2 Is the impact in the service area of an approved in-lieu fee program? No

If yes, does the in-lieu fee program have the appropriate number and resource type of credits available? N/A

8.3.3 Selected compensatory mitigation type/location(s). See Table 8-1:

Mitigation Type and Location	
Mitigation bank credits	X
In-lieu fee program credits	
Permittee-responsible mitigation under a watershed approach	X
Permittee-responsible mitigation, on-site and in-kind	
Permittee-responsible mitigation, off-site and/or out of kind	

Table 8-1

8.3.4 Does the selected compensatory mitigation option deviate from the order of the options presented in §332.3(b)(2)-(6)? Yes

If yes, provide rationale for the deviation, including the likelihood for ecological success and sustainability, location of the compensation site relative to the impact site and their significance within the watershed, and/or the costs of the compensatory mitigation project (see 33 CFR §332.3(a)(1)):

As discussed previously, the proposed project is broken into three parts, Phase I, the Suncoast Parkway Interchange, and Phase II. Phase I and II are being mitigated by Pasco County and the Suncoast Parkway Interchange is being mitigated by the FTE. Pasco County is proposing to mitigate for wetland impacts (both direct and indirect) through the purchase of credits at Old Florida Mitigation Bank (OFMB). This portion of the mitigation does meet the Corps preference hierarchy. FTE is proposing to mitigate for impacts associated with the Suncoast Parkway-Ridge Road Interchange. These impacts are associated with completing the interchange (on/off ramps, roadways, stormwater features, etc.).

The FTE is proposing to utilize a combination of excess mitigation credits that remain from the construction of the Suncoast Parkway and credits purchased from OFMB. Their proposed mitigation does deviate from the preferred hierarchy.

During permit review for the Suncoast Parkway, the intersection for the proposed Ridge Road Extension was discussed but not included in any of the Corps permit actions (SAJ-1996-04305). The permit for the Suncoast Parkway included a compensatory mitigation requirement for 402.11 credits. Although not required by the Corps, the Florida Department of Transportation, as applicant/permittee, provided a total of 408.84 mitigation credits, as was documented in the permit instrument. (See table below.) This mitigation included conveyance of the Serenova Tract and Anclote River Ranch Tract to the SWFWMD. These two tracts include just over 10,000 acres of conservation lands. Proof of the conveyance was submitted to the Corps upon commencement of the project. In addition, the Permittee was also required to provide a detailed management plan for the maintenance and enhancement of the properties. The SWFWMD maintains a publicly accessible management plan detailing the maintenance and enhancement activities that are planned for the Starkey Wilderness Preserve. In June 2019, the Corps completed a brief compliance review of the mitigation areas. The sites are performing as expected and appear to be actively managed. (Field notes can be found in the administrative record.)

Section 33 CFR 332.3(b) allows for deviations from the hierarchy when warranted. The Suncoast mitigation in concert with adjacent lands provides 19,266 acres and forms the Starkey Wilderness Preserve. The Corps believes the benefits provided by this large conservation area are significant within the watershed and therefore we are willing to acknowledge the completion of the full 408.84 credits.

Mitigation Site	Habitat Type	Acres	Mitigation Ratio	Mitigation Credits
Anclote River Ranch	Upland	2,570	20:1	128.5
Anclote River Ranch	Wetland	679.3	60:1	11.32
Anclote River Ranch	Disturbed marsh enhancement area/assoc. forested wetlands	386.7	20:1	19.34
			TOTAL	159.16
Serenova	Upland	4,224	20:1	211.20

Serenova	Wetland	2,308.5	60:1	38.48
			TOTAL	249.68
Total for both sites				408.84

Table 8-2

The FTE provided a draft mitigation proposal to the Corps on 13 March 2018. This package included several options for the Corps to consider, including alternate ways to interpret the completed mitigation in light of the 2008 mitigation rule. The Corps does not concur with the approach of re-assessing all of the Suncoast Parkway compensatory mitigation under the UMAM. However, the Corps is willing to acknowledge that excess mitigation was completed and allow the 6.73 excess credits to be applied toward offsetting wetland impacts currently proposed for the Suncoast Parkway-RRE Interchange. (See Section 8.4 below for specific requirements associated with each phase.)

2019 Corps Assessment of FTE Mitigation	Mitigation Credits
Total mitigation generated	408.84
Mitigation required for Suncoast Parkway	-402.11
Remaining credits	6.73
Mitigation required for Interchange	-9.27
Total remaining credits to be purchased	2.54

Table 8-3: Suncoast Parkway mitigation specifics.

8.4 Amount of compensatory mitigation: Phase I impacts include 7.32 acres of direct fill impact to wetlands, 172.22 acres of wetlands that are indirectly affected; Phase II impacts include 18.33 acres of direct fill impact to wetlands, 139.41 acres of wetlands that are indirectly affected; Suncoast Parkway Interchange includes 11.72 acres of direct fill impact to wetlands, 42.73 acres of wetlands that are indirectly affected. The table below provides the functional loss associated with each phase of construction.

Ridge Road Extension			Unit Type		Acres	
Assessment Area	Acres	Units	Forested	Herbaceous	Forested	Herbaceous
Ph. I – County Direct	7.32	5.18	3.62	1.56	5.35	1.98

Ridge Road Extension, Phase I, Phase II, and Suncoast Parkway Interchange

Ph. I – County Indirect	172.22	11.82	11.71	0.11	170.7	1.52
Ph. II – County Direct	18.33	11.39	10.55	0.75	17.27	0.9
Ph. II – County Indirect	139.41	8.93	8.92	0.01	139.32	0.09
County Total	337.29	37.23	34.80	2.43	332.64	2.7
Interchange - Direct	11.72	7.09	6.03	1.06	9.93	1.79
Interchange – Indirect	42.73	2.18	2.18	0.0	42.73	0
FTE Total	54.45	9.27	8.21	1.06	52.66	1.79
Project Totals	391.86	46.50	43.01	3.49	385.3	4.49

Table 8-4

Rationale for required compensatory mitigation amount: Direct wetland impacts resulting from the construction of Phase I and Phase II of the RRE total 25.65 acres. Indirect impacts to wetlands total 311.63 acres. In addition, the project would result in 3.21 acres of wetlands sustaining a temporary functional loss of 0.80 units at bridge locations. Using the Uniform Mitigation Assessment Method (UMAM), the functional loss resulting from the permanent impacts is 16.57 units; indirect impacts is 20.75 units; and the temporary impacts is 0.80 units. The applicant has proposed to purchase credits from the Old Florida Mitigation Bank (SAJ-2013-01810) to offset this functional loss. The OFMB is located just north-east of the proposed road extension and the service area includes the Crystal-Pithlachascotee sub-basin (03100207 HUC).

The UMAM assessment of the impacts resulting from the Suncoast Parkway Interchange (direct = 11.72 acres, indirect = 42.73 acres) results in a functional loss of 9.27 units. The use of 6.73 excess functional units of gain from the Suncoast Parkway permit leaves a balance of 2.54 functional units that need to be offset. Therefore, the FTE needs to provide 2.54 credits to offset that deficit. FTE has proposed to purchase the credits from OFMB. (See table below for summary.)

Ridge Road Extension	Unit Type	
	Acres	Units/Credits
Ph. I – County Direct	7.32	-5.18
Ph. I – County Indirect	172.22	-11.82
Ph. I – County Temp. Construction	3.21	-0.80
Ph. II – County Direct	18.33	-11.39

Ph. II – County Indirect	139.25	-8.92
County Total	340.33	-38.11
Interchange – Direct	11.72	-7.09
Interchange – Indirect	42.73	-2.18
Excess Credits from Suncoast	n/a	6.73
FTE Total	54.45	-2.54
Project Totals	394.78	-40.65

Table 8-5

The applicant provided a final mitigation plan on 11 November 2019. The plan details the information provided above and includes a copy of the reservation letter from OFMB. The total required credit purchase for the RRE is 40.65 credits (37.92 forested and 2.73 herbaceous). The applicant indicated in this letter that they would like to phase the mitigation purchase with the planned construction. The initial construction of RRE will be limited to Phase I, the Suncoast Parkway Interchange, and a 0.25-mile segment of Phase II. This phased approach is ultimately due to funding for the construction and the Pasco County Capital Improvement Plan.

The first phase of mitigation would include all impacts associated with Phase I and the Suncoast Parkway Interchange. The 0.25-mile portion of Phase II would start at the eastern terminus of the interchange (station 286+28) and end at Station 299+50. There are no direct wetland impacts proposed within this segment. Indirect impacts for the small portion of Phase II will total 14.04 acres and is calculated to have a functional loss of 0.94 units. (See table below.)

Ridge Road Extension			Unit Type	
Assessment Area	Acres	Units	Forested	Herbaceous
Ph. I – County Direct	7.32	-5.18	3.62	1.56
Ph. I – County Indirect	172.22	-11.82	11.71	0.11
Ph. I – County Temp. Construction	3.21	-0.80	0.80	0.0
Ph. II – County Initial Segment (Temp)	14.04	-0.94	0.94	0.0
County Total	196.79	-18.74	17.07	1.67
Interchange - Direct	11.72	-7.09	6.03	1.06

Interchange – Indirect	42.73	-2.18	2.18	0.0
Excess Credits from Suncoast	n/a	6.73	-5.97	-0.76
FTE Total	54.45	-2.54	2.24	0.3
Project Totals	251.25	-21.28	19.61	1.67

Table 8-6

Upon commencement of the project, the applicants will purchase 21.28 credits (19.31 forested credits and 1.97 emergent credits) from the OFMB. A special condition will be included in the permit that requires the purchase of the additional 19.37 credits upon the commencement of that portion of Phase II to the east of Station 286+28.

- 8.5 For permittee responsible mitigation identified in 9.3.3 above, the final mitigation plan must include the items described in 33 CFR 332.4(c)(2) through (c)(14) at a level of detail commensurate with the scale and scope of the impacts. As an alternative, the district engineer may determine that it would be more appropriate to address any of the items described in (c)(2) through (c)(14) as permit conditions, instead of components of a compensatory mitigation plan. Presence of sufficient information related to each of these requirements in the applicant's mitigation plan is indicated by "Yes" in Table 11. "No" indicates absence or insufficient information in the plan, in which case, additional rationale must be provided below on how these requirements will be addressed through special conditions or why a special condition is not required: A portion of the impacts that will occur at the Suncoast Parkway Interchange will be offset through permittee-responsible mitigation. FTE completed and is maintaining this mitigation in advance of project impacts as documented in the text above. FTE submitted a 12 point compensatory mitigation plan in March 2018 and it is hereby incorporated by reference. (The FTE submittal can be found in the administrative record titled *20180313 02 SAJ-2011-00551 FDOT Draft Mitigation Plan 258958-1.pdf*)

9.0 Consideration of Cumulative Impacts

(40 CFR 230.11(g) and 40 CFR 1508.7, RGL 84-9) Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor direct and indirect but collectively significant actions taking place over a period of time. A cumulative effects assessment should consider how the direct and indirect environmental effects caused by the proposed activity requiring DA

authorization (i.e., the incremental impact of the action) contribute to cumulative effects, and whether that incremental contribution is significant or not. .

- 9.1 Identify/describe the direct and indirect effects caused by the proposed activity:
NOTE: Several resources were used to inform the following discussion of cumulative impacts. These include: Cumulative Impacts Assessment provided to the Corps; State ERP permits for Arthur and Excalibur; Corps permit for Bexley Ranch; Pasco County 2025 Plans and Long-Range Transportation Plans (2035) from the Pasco County website; and Tampa Bay Times article on Moffitt Cancer Center.

The total proposed roadway is 8.65 miles long extending from the current terminus of Ridge Road and heading east, ending at U.S. Highway 41. The corridor connects several existing north-south corridors (Moon Lake Road-Starkey Road and US Highway 41) and traverses through several preservation areas, undeveloped lands, and existing residential development. The direct effects from the proposed roadway include impacts to 37.37 acres of wetlands. In addition, the Corps considered a 300-foot corridor for indirect effects to wetland resources which included 354.36 acres of wetland impacts.

The evaluation of indirect effects to a 300-foot corridor was determined based on the indirect effects assessment tool that the Corps (Jacksonville District) was using at the time. The tool was created in 2014 by Jacksonville District staff using numerous scientific articles to generate a framework for assessing indirect effects. The tool included an assessment of several location, environmental, and activity parameters to help project managers decide on an appropriate distance for assessing indirect effects. Three hundred (300) feet was the maximum distance included in the tool and is often the distance associated with major transportation corridors. (Indirect Effects Guidance, Attachment 3.) Assessment of indirect effects to wetlands within this RRE corridor was essentially to capture the “encroachment-alteration effect” that a new roadway would have on undeveloped land. It is likely that the wetland systems adjacent to the corridor may become slightly degraded due to their proximity to the roadway. An UMAM assessment was completed to address this potential loss of function within the wetlands located in the 300-foot corridor. The functional loss will be offset by the purchase of mitigation credits from a federally approved mitigation bank. (See additional information on mitigation in Section 8.)

In addition to indirect effects to wetlands, the Corps considered whether or not the proposed RRE may have a growth-inducing effect on the surrounding area. The defined purpose of the roadway is to improve east-west roadway capacity and enhance overall mobility within the area bound by SR 52 to the north, SR 54 to the south, U.S. Highway 41 to the east, and Moon Lake Road-DeCubellis Road-Starkey Boulevard to the west, and to provide additional roadway capacity

and improved routing away from coastal hazard areas and improve evacuation times in the event of a hurricane, or other major weather-related occurrence, in accordance with State of Florida requirements and the County's current Comprehensive Plan. As the roadway will enhance mobility and is likely to increase accessibility to the area, the Corps determined it necessary to consider the potential development effects associated with the roadway. Within areas adjacent to Phase I of the project it is unlikely that growth-induced effects will be realized due to the existing conservation easements and protected nature of the Starkey Wilderness Preserve.

Within Phase II, the applicant has allowed for up to seven interchanges to be proposed and constructed along the RRE in the future. The number of and location of interchanges are unknown at this time and are subject to future proposals. The Pasco County 2035 Long Range Transportation Plan (LRTP) includes a map depicting the needed number of lanes based on future traffic projections (Figure 9-1). A review of the area proposed to be bisected by the RRE indicates several new roads between SR 54 and SR 52, and the Suncoast Parkway and U.S. Highway 41. Further review of the LRTP includes information regarding the expected population growth within Pasco County. The forecasted population figure shows the lands adjacent to Phase II will be home to +/- 53,000 people in 2035 (Figure 9-2). The 2006 population of this same area was estimated at 15,500. (These numbers were taken from the county maps and include the highest number on the range provided.) It is clear that the planned growth in this area is fairly substantial and further explains the need for additional roads in this area. Given the number of proposed roads surrounding Phase II of the RRE, such as Sunlake Boulevard, Tower Road Extension, and several unnamed roads, the Corps can assume that as development progresses these additional roads will be constructed. The Corps can also assume that even if the RRE was not constructed, both residential and commercial development would still take place in an effort for the County to realize its comprehensive development plans and accommodate its expanding population. Based on the information above, development may occur more rapidly as a result of the RRE and the seven potential interchanges. Therefore, the Corps does not expect construction of Phase II to induce development or notably alter the nature of the proposed developments surrounding Phase II.

CESAJ-RD SAJ-2011-00551 (SP-TSH)
 Ridge Road Extension, Phase I, Phase II, and Suncoast Parkway Interchange

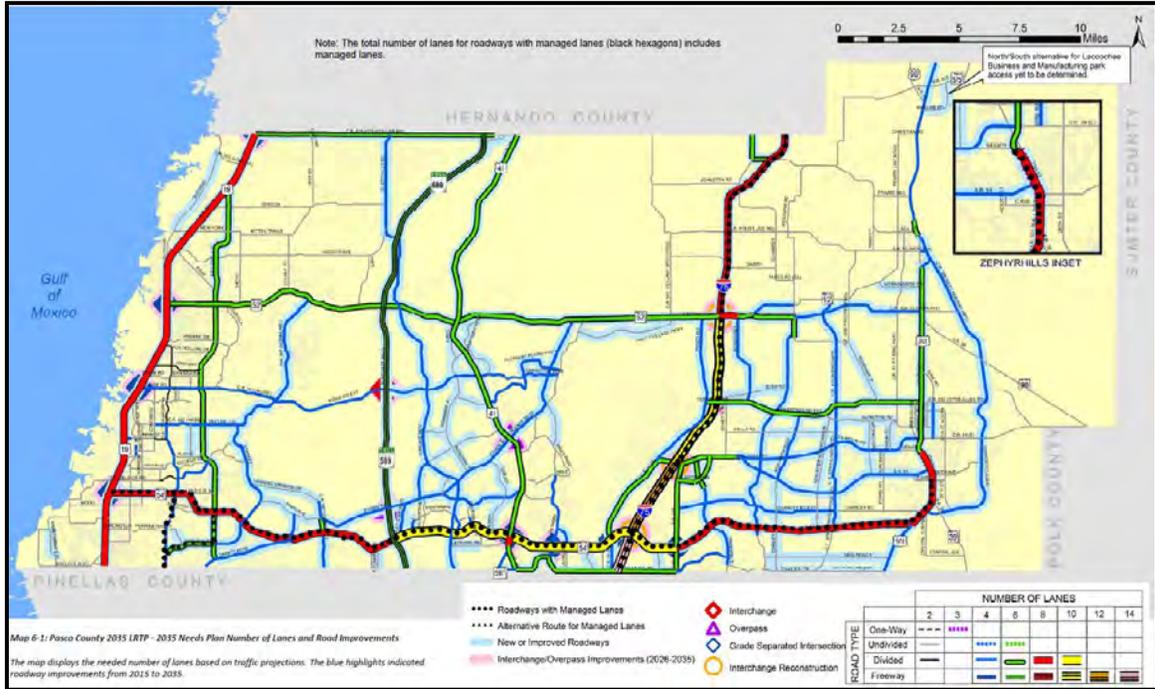


Figure 9-1: Pasco County Transportation Needs. Source: Pasco County 2035 L RTP

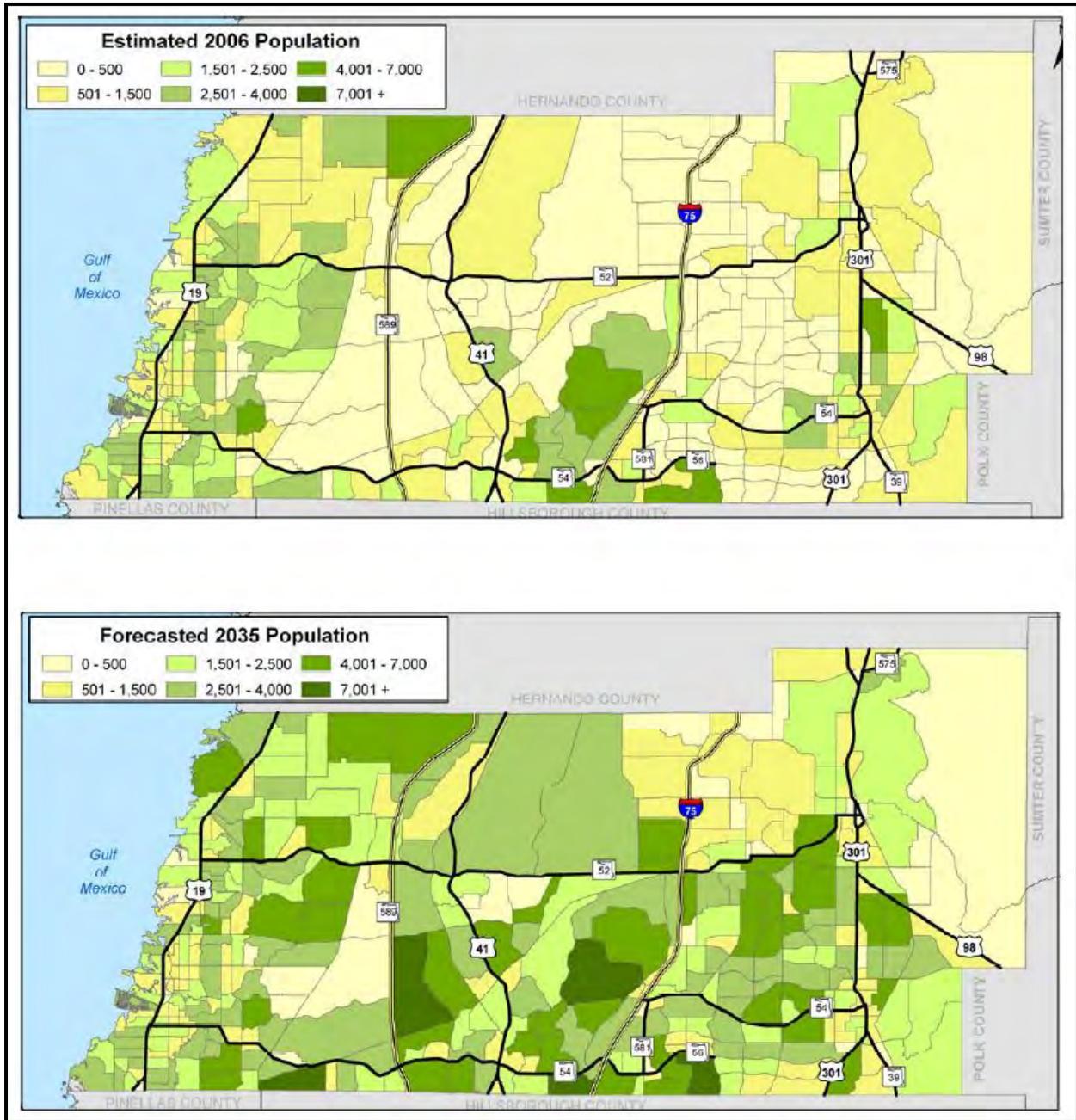


Figure 9-2: 2006 and 2035 forecasted populations. Source: Pasco County 2035 L RTP

- 9.2 The geographic scope for the cumulative effects assessment is: The proposed roadway crosses two watersheds, the Anclote and the Pithlachascotee river basins (10-digit HUCs are Anclote: 0310020705 and Pithlachascotee: 0310020704). These two basins encompass approximately 292,119 acres of land which includes 41,329 acres of wetlands. The RRE crosses the boundary of the two watersheds multiple times for most of its

planned route. Figure 9-3 below shows the location of the proposed roadway in relation to the two watersheds.

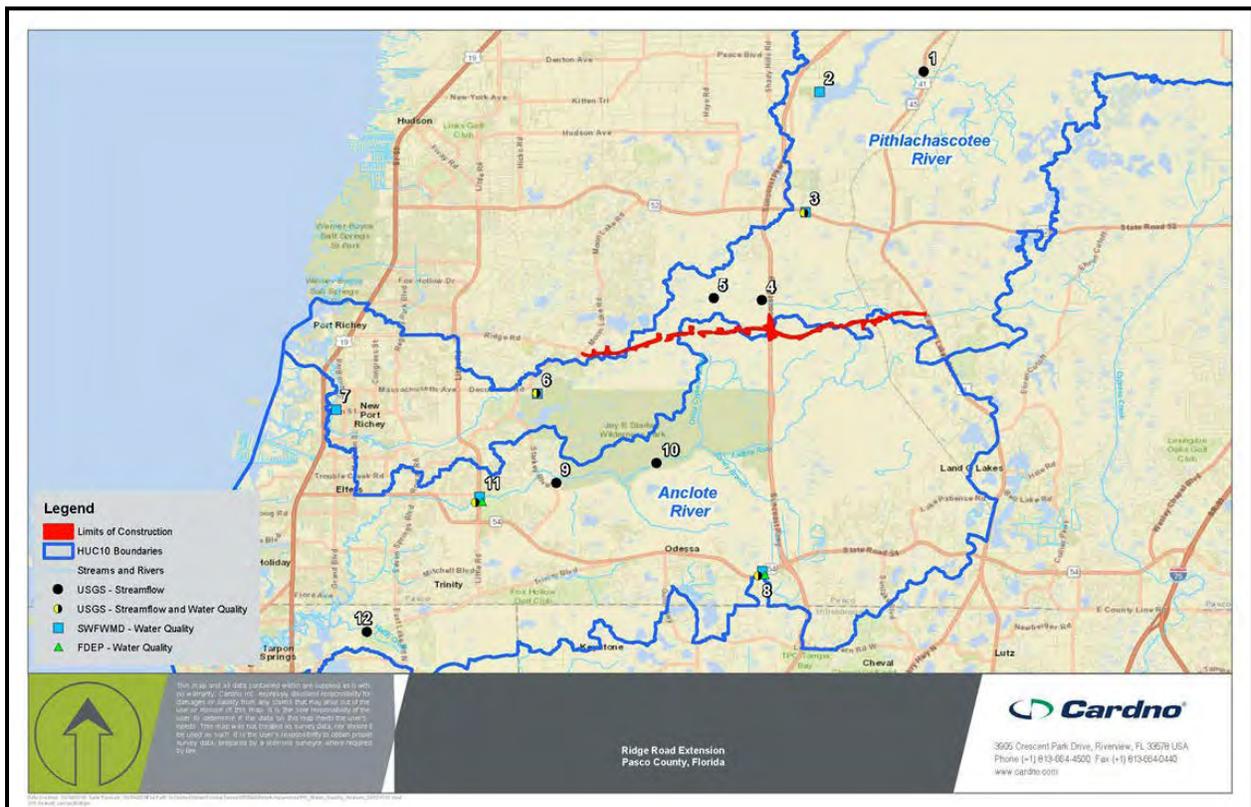


Figure 9-3: Project location within the Anclote and Pithlachascotee Watersheds. Source: Applicant submittal

The two watersheds are large and extend to great distances north and south of RRE corridor (Figure 9-4). The influence of the proposed roadway will diminish with increasing distance from the RRE corridor such that the more extreme northern and southern portions of the watershed are unlikely to be impacted by any effects of the proposed work. The more intense focus of the review will be the lands within the HUC-12 sub-watersheds most adjacent to the proposed roadway. Further discussion of this more focused geographic scope is found in Section 9.4 below.

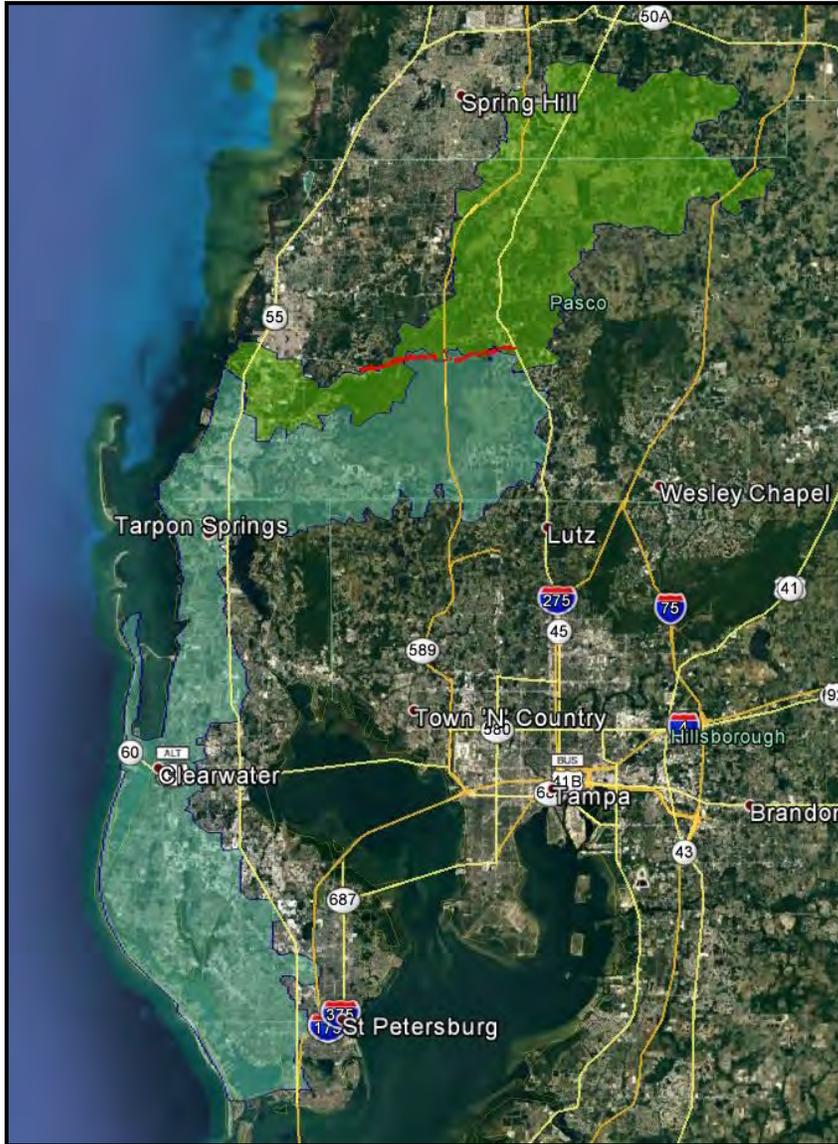


Figure 9-4: Anclote River Basin (blue), Pithlachascotee River Basin (green).
Source: Google Earth

- 9.3 The temporal scope of this assessment covers: approximately 50 years, from 1980-2030. The time frame beginning in 1980 was selected to encompass the early years of the Clean Water Act (CWA) regulations as well as the availability of aerial photography. The time frame was also considered appropriate because most of the non-agricultural development has occurred since that time. (This does not include the urban areas along the coast which were largely constructed in the 1960's.) Although waters of the U.S. within the RRE construction corridor may be filled within the 5-year construction window of the permit, associated development may occur for 5-10 additional years in light of present development trends and zoning and land use regulations. For example, the proposed Project

Arthur is a multi-phase development and the applicants indicated the project could take 5-10 years to complete. Therefore, the year 2030 was selected as the end date for reasonably foreseeable impacts.

- 9.4 Describe the affected environment: The 178,595-acre Anclote River basin is located in Pasco, Hillsborough and Pinellas Counties. The eastern most portions of the watershed about U.S. Highway 41, a north-south route through Pasco County. The watershed follows the Anclote River to the west where the basin extends from U.S. Highway 19 to the Gulf of Mexico. The largest portions of the watershed are located in southwestern Pasco County and western Pinellas County. The watershed from SR 54 in Pasco to the southern tip in Pinellas County is mostly developed. From SR 54 north, the watershed is mostly undeveloped land either in its natural state or currently used for agriculture and cattle grazing, or minor residential/commercial development. The 113,524-acre Pithlachascotee River basin is located in Pasco and Hernando Counties. The watershed is essentially contained between Interstate-75 and the Suncoast Parkway (both north-south corridors). It makes a turn to the west just south of SR 52 and ends at the Gulf of Mexico near New Port Richey where the Pithlachascotee River enters the Gulf of Mexico. The watershed has been altered from its natural state in many areas by agriculture and cattle grazing. There are a few areas of development along road corridors and in New Port Richey. Together, the Anclote-Pithlachascotee River watersheds makeup a large assortment of land areas from natural/protected areas and undeveloped/agricultural areas, to highly developed urban areas as shown above in Figure 9-4.

The two watersheds have experienced notable growth in the last approximately 30 years (1990's to 2019) as Pasco County has become a bedroom community for Tampa and people commute to work in the Tampa area. A study of aerial imagery over this time period shows development patterns that tend to avoid wetlands, particularly larger systems. This is likely attributed to state and Federal laws protecting wetlands and the requirement for mitigation (avoiding, minimizing, and compensating for an impact) for those wetlands that are impacted. A review of the Corps database for this time frame reveals a total of 107 acres of fill in the Pithlachascotee River watershed and a total of 390 acres in the Anclote River watershed. Mitigation to offset those impacts totaled 135 acres of permittee responsible mitigation (PRM) and the purchase of 21 credits at a Federal mitigation bank for the Pithlachascotee River watershed; and 2,200 acres of PRM and the purchase of 24 credits at a Federal mitigation bank for the Anclote River watershed. Despite the transition of areas from undeveloped to developed, the loss of wetlands has been fairly minimal. In addition to wetland avoidance and preservation, other areas have been converted to open waters to act as stormwater management for these new developments. Thus, the area has

seen an increase in the acreage of surface waters. The applicants provided the graph below (Figure 9-5) based on state land use data. It is notable that wetland acreage has not changed dramatically despite an increase in development.

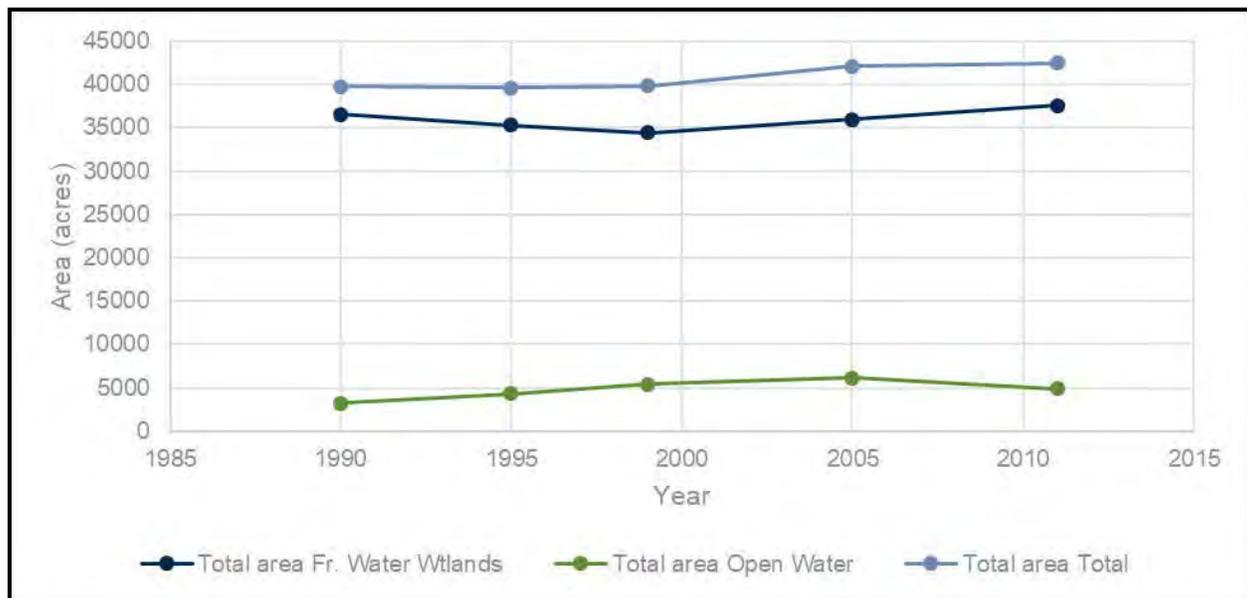


Figure 9-5: Freshwater wetlands and open water areas in the Anclote-Pithlachascotee watersheds. Source: Applicant Submittal.

As previously stated in Section 9.2, the affected environment can be narrowed to the areas surrounding the RRE. There are three (3) sub-watersheds that encompass the RRE, the Oyster Creek-Rocky Creek Frontal (HUC 031002070502), the Upper Anclote (HUC 031002070501), and the Pithlachascotee River (HUC 031002070404). These watersheds will form the “Focus Area” for the remainder of this analysis, see boundary shown in Figure 9-6 below. Included in this area are Five Mile Creek and the Pithlachascotee River as well as the Anclote River and several of its tributaries. A review of the Corps database revealed the following details about past permitting actions in these watersheds; within the Oyster Creek-Rocky Creek Frontal watershed the Corps has approved 71.93 acres of impacts; within the Upper Anclote the Corps has approved 247.92 acres of impacts; and within the Pithlachascotee watershed the Corps has approved 64.62 acres of impacts. Many of those permitted impacts required compensatory mitigation. The mitigation figures for the same watersheds are as follows: the Oyster Creek-Rocky Creek Frontal 96.42 acres of permittee responsible mitigation (PRM) and 9.26 mitigation bank credits; the Upper Anclote 1,991.08 acres of PRM and 8.11 mitigation bank credits; and the Pithlachascotee 54.55 acres of PRM and 14.97 mitigation bank credits. The data shows that the volume of impacts over time is not substantial given the requirements for avoidance and mitigation. However, it is often left to regulatory

agencies to make sure the proposed projects don't result in an overall loss of wetland functions in the watersheds.

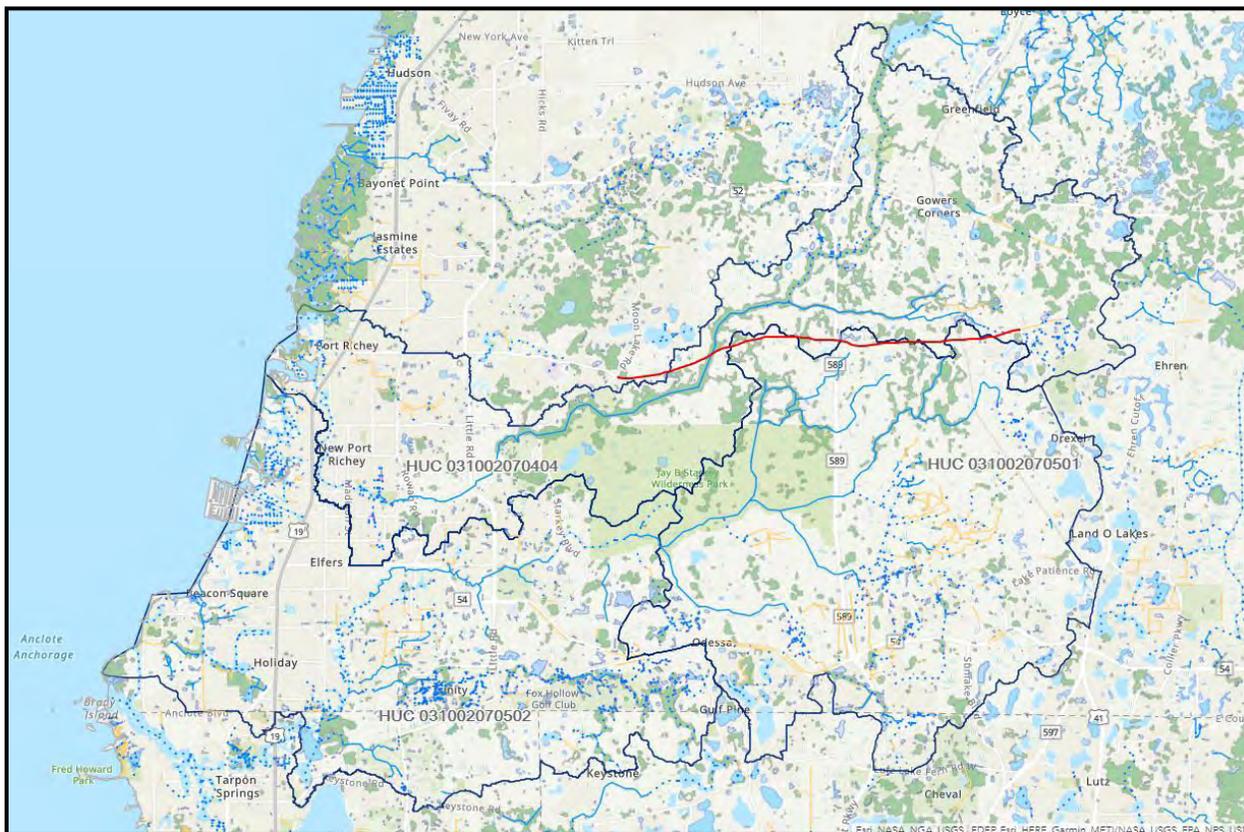


Figure 9-6: Defined focus area (dark blue boundaries) and waterways from the National Hydrography Dataset (NHD). Source: Google Earth

- 9.5 Determine the environmental consequences: Within the focus area boundary, Phase I will impact an area that is largely preserved and is unlikely to experience many impacts outside of the immediate roadway. The road in this area is limited access so there is no opportunity for additional roads to join the RRE. Right-of-ways for the proposed road were included on the conservation easement documents for these tracts of land as well as in the land management plans. To preserve the pristine nature of this area it was important to minimize the footprint of the roadway. The proposed plan includes 14 separate bridges (eastbound and westbound lanes) that will span wetlands and waterways as well as existing trails. The remaining roadway will be constructed along an embankment with steep slopes and retaining walls in order to minimize the construction footprint. As compared to Phase I, Phase II is more likely to contribute to cumulative impacts as a result of the RRE, as Phase II is more easily accessed and has fewer land restrictions and encumbrances. Steps were taken to minimize the construction footprint within Phase II including 4 bridges (eastbound and westbound lanes) and a reduced construction footprint. Phase II of the RRE does

allow for up to seven signalized intersections. The locations of the intersections have not been determined and would not be completed under this proposal.

Based on past practices, current trends, and a review of the Pasco County 2025 Comprehensive Plan (and its amendments), it can be easily assumed that the land area encompassing Phase II will be developed. Development companies have begun acquiring land and permits for a series of new developments in the area. Some of these include "Project Arthur", "Project Excalibur", and the extension of Sun Lake Boulevard from its terminus at Tower Road, north to SR 52 (Figure 9-7). Additional projects, although smaller in scope, are likely to occur along SR 54, SR 52, and U.S. Highway 41. Planned developments in these areas include both residential and commercial properties.

Project Arthur is a large scale master-planned unit development covering approximately 6,800 acres. The current SWFWMD proposal is an 815-acre property that is proposed for residential development in Phase II and north of the RRE. The site contains approximately 257.68 acres of wetlands. The plans permitted by the SWFWMD appear to include the north-south Sunlake Boulevard extension (from Bexley Ranch to SR 52). The SWFWMD issued a conceptual ERP for this project on 24 September 2019. On 20 November 2019, the Corps issued a permit for Project Arthur authorizing a 584 acres residential development with 0.47 acres of wetland impacts. However, the project plans are slightly different (Sunlake Boulevard extension is not included) and encompass a smaller area than the state approved conceptual permit. Project Excalibur is a 775-acre property located adjacent to Phase II and south of the RRE. The site contains approximately 270.87 acres of wetlands and is proposed for residential development. The SWFWMD issued a conceptual ERP for this project on 1 August 2019. While the SWFWMD permit indicates Excalibur is a residential development, reporting by the Tampa Bay Times indicates a portion of this area will be used for commercial purposes, as a medical facility is planned to house a new campus of Moffitt Cancer Center (Tampa Bay Times article).

In addition, the southern area of Phase II includes a large (4,630-acre) planned development known as Bexley Ranch that extends north from Tower Road to the proposed RRE. This project has been permitted by the SWFWMD as well as the Corps (SAJ-2003-04991). The Corps authorized a 1,400 acre residential development in Bexley Ranch in 2009 and reauthorized it in 2017. The permit authorized 164.89 acres of wetland impacts. Mitigation for these impacts included a mix of on-site permittee-responsible areas (215.99 acres of wetland creation and 983.23 acres of wetland preservation) as well as credits purchased from Old Florida Mitigation Bank (4.05 federal credits). The current permit for Bexley Ranch is active until 28 February 2024. The Corps cannot approximate future wetland impacts from the conceptual permits or County comprehensive

plans, however both state and federal permits will be required so wetland avoidance, minimization, and mitigation will be included.

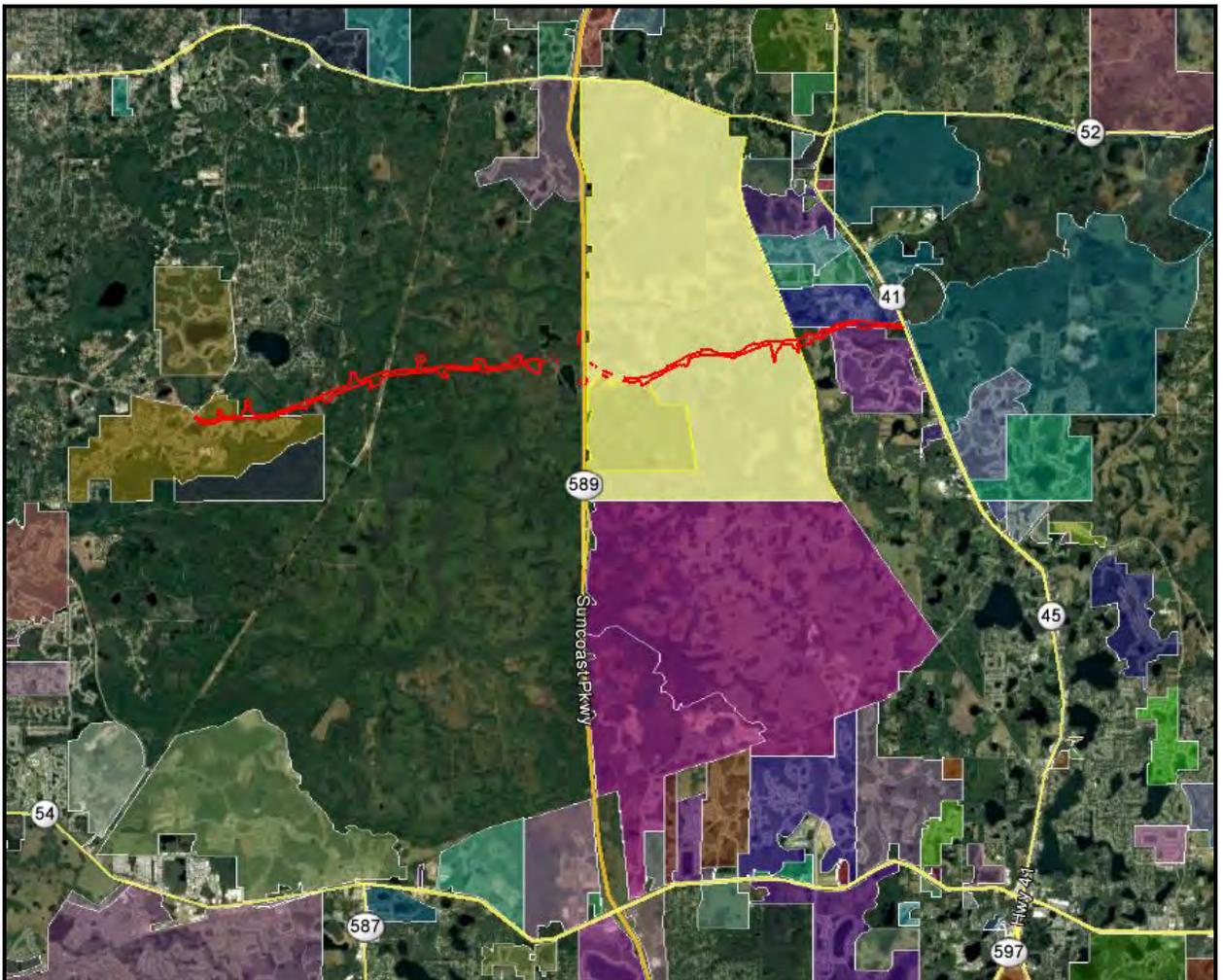


Figure 9-7: Development project boundaries. Source: Pasco County

Further removed from the proposed roadway but still within the 3 sub-watershed focus area are several other notable locations, including: the Starkey MPUD (just south of the Starkey Wilderness Preserve) which is largely built out; just upstream of the project is the Old Florida Mitigation Bank, situated to the east of U.S. Highway 41 and south of SR 52; and the Trinity area, located on the Pasco-Hillsborough County line, which has seen a significant amount of development over the past years. It is evident from all of these actions that this general area is trending toward development of the remaining available lands, however that development is occurring in concert with the existence of large tracts of conservation lands as well as a federal mitigation bank.

Resources of concern within the 3 sub-watershed focus area include wildlife habitat, wetland loss and/or degradation, water quality, hydrology, and cultural/historic resources. In the September 2019 Cumulative Impact Analysis (CIA), the applicant's agent provided an assessment of these categories. The Corps has reviewed this and other additional information and has determined the following:

1. Wildlife Habitat – Wildlife habitat in these watersheds includes a mosaic of different land-use types. Species have been affected over the years by minor development and farming but have generally had access to open tracts of land to sustain life cycle development. Species that utilize the area are relatively transient but due to historical development and farming practices in the area, species that require large ranges, such as the Florida Black Bear, are no longer present whereas those requiring a smaller range remain. Current development patterns along many of the roadways are slowly diminishing the land available to species, however the interior areas are still accessible. The RRE, if constructed, as well as the numerous proposed developments would reduce the availability of habitat. Species would be pushed to preservation and conservation areas if they cannot sustain their way of life within lands incurring development. This loss of habitat will cause wildlife to alter their habitat use and relocate accordingly. However, many roadways, including RRE, as well as local developments, plan for wildlife accommodations by incorporating green spaces or corridors to allow uninterrupted travel patterns. In particular, the proposed RRE is providing 11 wildlife crossings to allow migration of species north and south of the roadway. In addition, the roadway will be fenced with a wildlife exclusion mesh so that animals are less likely to be subject to vehicle strikes. Past permits, such as Bexley, also included wildlife minimization measures, such as avoidance of larger wetland systems, wetland mitigation, and maintaining a habitat corridor with the Starkey Preserve. Habitat fragmentation and isolation of remaining habitats is a relevant issue, however preservation of native habitat and existing greenway corridors already occurring in this area will help to maintain wildlife usage. Preservation of the Serenova Tract and Anclote River Ranch as mitigation for the Suncoast Parkway is another example of past actions to preserve wildlife habitat. The Corps will continue to apply the same sequence of avoidance and minimization of wildlife habitat during future reviews as commensurate with project impacts. With future planning and the oversight of regulatory programs, the Corps can reasonably assume cumulative impacts to wildlife habitat will be insignificant.
2. Wetlands – The 3 sub-watersheds include large areas of wetland habitat particularly to the east of the coastal developments along U.S. Highway 19. Historically wetlands were not readily avoided. Wetlands were often ditched

as nearby areas were used for agriculture and industry (mining). Those practices were common until the Clean Water Act was implemented and protections for wetland areas became more prevalent. Data from the National Wetland Inventory currently lists approximately 29,317 acres of wetlands within this focus area. As mentioned above, these sub-watersheds have experienced approximately 384.47 acres of impacts and 2,142.05 acres of PRM over the 30-year time-frame. The Applicants provided data based on state permit history that indicates small wetlands are more likely to be impacted than large wetlands. It is expected that this result would be found among Federal wetland impacts as well. This is likely due to avoidance and minimization measures by developers and environmental regulators to keep wetland impacts minimal. Wetlands eliminated or altered by development were often mitigated for, either on-site or at a mitigation bank. In addition to wetland loss through development, these watersheds are also used as wellfields to provide drinking water for the Tampa Bay area. During dry years and with enough pumping, the water levels in area wetlands can be affected. In the more recent past this has been better managed to avoid substantial water loss in the wetlands and associated waterways. (The wellfields are under management by Tampa Bay Water with oversight by the SWFWMD.) Future development plans will be reviewed by permitting agencies and wetland areas will be avoided and minimized to the maximum extent practicable. Wetland loss (both acreage and functional) can be minimized with appropriate mitigation and with the inclusion of state water quality and quantity regulations. As planned development moves forward, future wetland conditions are likely to resemble those at present. The Corps does not expect cumulative impacts to hydrology to be significant.

3. Water Quality – Data provided by multiple agencies (SWFWMD, FDEP, USGS) provides some insight into water quality in these watersheds. Historical sampling shows minor fluctuations within each of the sampling parameters both upstream and downstream of the proposed roadway, but no appreciable difference was noted. This trend continues into current day, with the one exception being pH which has had some minor deviations. The applicant theorizes this is due to the large amount of wetlands in the basin and not a result of runoff from land development. Pine and Cypress forests are known to reduce pH in nearby waterways, so this could be a likely reason for the change. The lower pH may also be the result of agricultural practices in the watershed as fertilizers can cause fluctuations in pH. Future conditions, with the RRE and the other proposed roadways and developments, could reasonably be expected to cause minor changes to the water quality in the area. These changes could include the introduction of trash, pollutants from fertilizers and/or road runoff, etc. However, state required stormwater management and water quality standards will negate any increases to

pollutants in the waterways and maintains drainage basin fidelity by compartmentalizing stormwater management by basins. In addition, many areas along streams and rivers in the watershed are protected or proposed for protection and their buffering effect should also help to filter pollutants prior to entering these waterways. State ERP's often include wetland buffers for residential and commercial developments. In addition, many of the waterways in these watersheds have adjacent public or private conservation lands. These include county owned lands along the Pithlachascotee River, conservation areas along Five Mile Creek in Connerton, the Old Florida Mitigation Bank, and the Starkey Wilderness Preserve. (See additional discussion on conservation lands below.) Considering the minimization measure associated with RRE and that all future development in the basins will be required to obtain an ERP and implement appropriate measures to avoid and minimize impacts to water quality, it is anticipated that cumulative water quality impacts will not be significant.

4. Hydrology – Water quantity in the watersheds is measured by a series of stream gauges. The applicants provided data from gauge stations both up and down stream of the proposed RRE and potential development areas. Historically, there are notable changes in downstream flows in the watershed attributable to events such as well-field construction, ditch and canal construction, wet and dry periods, El Nino effects, and numerous others. More current flow changes are likely attributable to major rainfall events, droughts and management of the well-fields. To help avoid unexpected changes to hydrology the applicants included a number of bridges throughout the proposed roadway. These bridges were specifically placed in areas that have existing flows in order to maintain hydrology to downstream waters. To address hydrology for proposed development, the state implemented regulations in the mid-1990's that limits the amount of flows exiting developments. These regulations require that the post-construction discharges cannot be any greater than the pre-construction volumes. Stormwater plans and floodplain compensation maintain drainage basin fidelity. Current and any future developments will be required to provide site data, modeling, and other reasonable assurances to the state in order to obtain their ERP. The RRE has received the state ERP. Any future development will be required to obtain an ERP. As such, cumulative effects on the hydrology in the watershed are expected to be minimal and not significant.
5. Cultural/Historic Resources – The cultural resources geographic scope has been further minimized to include the areas adjacent to the proposed RRE bounded by SR 52 to the north, SR 54 to the south, U.S. Highway 41 to the east, and Moon Lake Road-DeCubellis Road-Starkey Boulevard to the west.

Due to the static nature of historic resources, the Corps determined that the 3 sub-watersheds was a larger review area than necessary.

The applicants provided several cultural resource surveys to the Corps that covered areas to be impacted by the proposed RRE as well as lands that are adjacent. Historically the area included a previous sawmill town, Fivay, located near the intersection of SR 52 and the CSX railroad. In addition, some farms and citrus groves were present in the southern portion of the area near what is now Tower Road. As of 2018, 40 cultural resource surveys have been conducted within the defined boundary. These surveys were conducted over about 9,477 acres. The surveys resulted in 52 archaeological sites, 58 historic structures, and 6 historic resource groups. Of the 52 archaeological sites, SHPO has evaluated 37 as ineligible for the National Register of Historic Places (NRHP), 2 have insufficient information for evaluation and they have not evaluated the remaining 13. Of the 58 historic structures, the SHPO has evaluated 37 as ineligible for the NRHP and has not evaluated the other 21. Those not evaluated by the SHPO were reviewed by the archeology firm recording them and 20 of the 21 were noted as ineligible for the NRHP and one was listed as having insufficient information for an evaluation. The 6 historic resources groups recorded include three railroads or railroad segments, two historic roads, and one mobile home park. The SHPO has evaluated five of the resource groups as ineligible for the NRHP. The remaining group is a short segment of a tramway associated with the sawmill at Fivay and is considered by the SHPO to have insufficient information for evaluation.

With much of the focus area un-surveyed, the Corps can assume similar findings with additional surveys. Both the permitted Bexley project and the Arthur project have been reviewed by the SHPO and determined to have no effect on historic resources. With any future development and regulatory review, additional surveys are likely to be required and any findings will be documented and reviewed by the appropriate agencies. The Corps does not anticipate that the cumulative effects to any cultural or historic resources that may be present in the area will be significant.

- 9.6 Discuss any mitigation to avoid, minimize or compensate for cumulative effects: Pasco County has a series of plans in place to protect natural resources in the 3 watershed focus area. This is most apparent in their 2025 Comprehensive Plan as well as in the mission of the Environmental Lands Acquisition and Management Program (ELAMP). The 2025 Comprehensive Plan includes objectives to minimize long-term environmental impacts while still providing for growth in the county. The ELAMP is responsible for purchasing and enhancing environmentally sensitive lands throughout the county. The ELAMP properties as

well as SWFWMD and other preserved areas are shown on Figure 9-8 below. It is evident from Figure 9-8 that preservation of natural areas is important on both the state and County level.

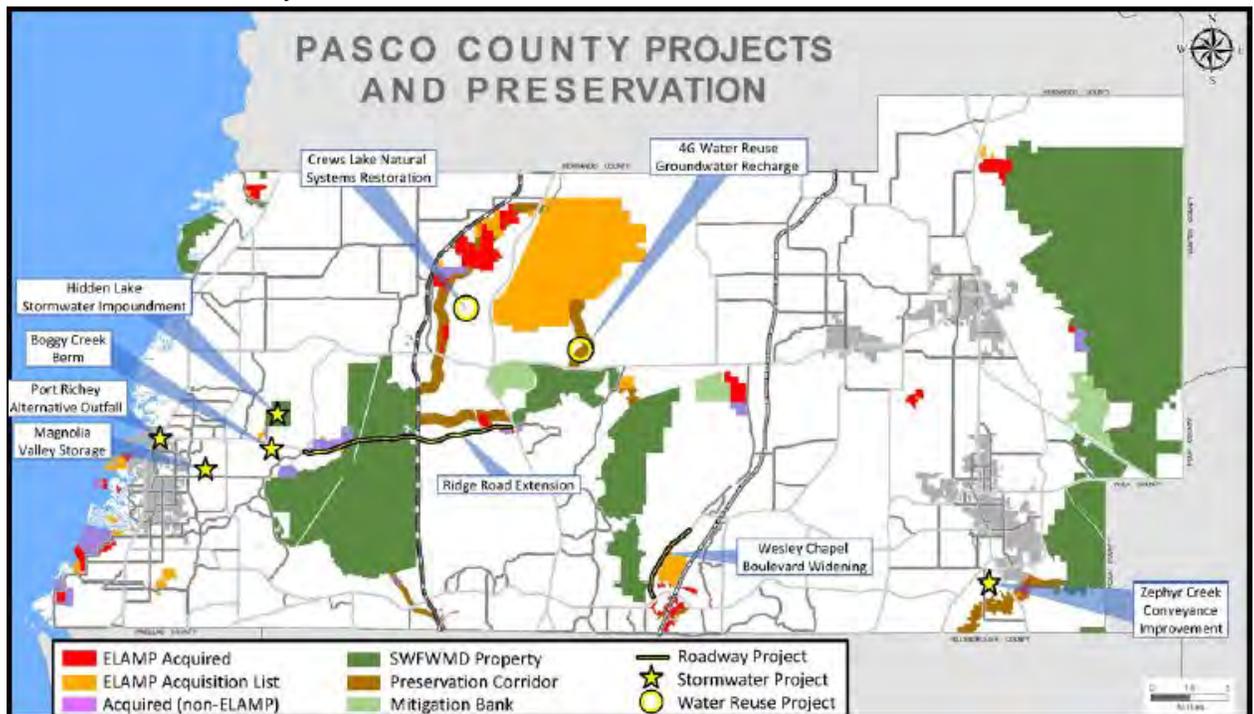


Figure 9-8: Pasco County ELAMP projects. Source: Applicant Submittal

In addition to preservation of lands, the applicants will purchase mitigation credits to offset any functional loss associated with direct and indirect effects of the proposed RRE. All current and future applications for development will be required to meet regulatory avoidance, minimization and mitigation requirements. With appropriate oversight there should be no net loss to wetland functions in these watersheds.

9.7 Conclusions regarding cumulative impacts:

When considering the overall impacts that will result from the proposed activity, in relation to the overall impacts from past, present, and reasonably foreseeable future activities, the incremental contribution of the proposed activity to cumulative impacts in the area described in section 9.2, are not considered to be significant. Compensatory mitigation will be required to help offset the impacts to eliminate or minimize the proposed activity's incremental contribution to cumulative effects within the geographic area described in Section 9.2. Mitigation required for the proposed activity is discussed in Section 8.0.

10.0 Compliance with Other Laws, Policies, and Requirements

10.1 Section 7(a)(2) of the Endangered Species Act (ESA): Refer to Section 2.2 for description of the Corps action area for Section 7.

10.1.1 Are there listed species or designated critical habitat present or in the vicinity of the Corps' action area? Yes

Effect determination(s), including no effect, for all known species/habitat, and basis for determination(s):

A report of listed species, consultation areas, and/or designated critical habitat for the project areas was assessed within the Action Area. The Corps formally coordinated with the USFWS on 27 February 2019 on the following species.

Table 10-1. Name of species potentially present managed by the USFWS

Common Name	Scientific Name	Effect Determination ¹	Status ¹	Date of Listing	Federal Register Notice of Species Listing	Date of CH Designation	Federal Register Notice of DCH
Florida scrub jay	<i>Aphelocoma coerulescens</i>	No effect	T	6/3/1987	52 FR 20715 20719	N/A	N/A
Wood stork	<i>Mycteria americana</i>	NLAA	E	6/30/2014	79 FR 37077 37103	N/A	N/A
Red-cockaded woodpecker	<i>Picoides borealis</i>	No effect	E	10/13/1970	35 FR 16047 16048	N/A	N/A
Eastern indigo snake	<i>Drymarchon corais couperi</i>	LAA	T	1/31/1978	43 FR 4026 4029	N/A	N/A
Gopher tortoise	<i>Gopherus polyphemus</i>	NLAA	C	12/2/2016	81 FR 87246	N/A	N/A
Striped newt	<i>Notophthalmus perstriatus</i>	No effect	No Longer Candidate Species	12/19/2018	83 FR 65127 65134	N/A	N/A
Robin's bellflower	<i>Campanula robinsiae</i>	No effect	E	7/27/1989	54 FR 31190 31196	N/A	N/A
Cooley's water-willow	<i>Justicia cooleyi</i> ²	No effect	E	7/27/1989	54 FR 31190 31196	N/A	N/A
Britton's beargrass	<i>Nolina brittoniana</i>	No effect	E	4/27/1993	58 FR 25746 25755	N/A	N/A

¹=Acronyms

LAA	May affect likely to adversely affect
NLAA	May affect not likely to adversely affect
E	Endangered
T	Threatened
C	Candidate Species or Proposed for Listing
<p>2=Together, <i>Justicia cooleyi</i> (Florida), <i>J. pringlei</i> s.str. (Mexico & Guatemala), <i>J. galapagana</i> (Galápagos), and <i>J. saltensis</i> (South America) form a closely related group of species (Kiel et al. 2018) that are each difficult to define morphologically. Based on the perceived lack of unique morphological characters, <i>J. cooleyi</i> was synonymized with <i>J. pringlei</i> (Daniel 2013). <i>Justicia pringlei</i> is now the accepted synonym for this species (Cooley's water-willow).</p>	

As noted in the table above, the Corps determined there would be no effect to six of the nine identified. The USFWS ultimately concurred with the Corps' determination.

Eastern Indigo Snake – The Corps has determined the proposed project “may affect, likely to adversely affect” the Eastern Indigo Snake. Based on the Eastern Indigo Snake Effect Determination Key (dated 25 January 2010; 13 August 2013 Addendum), the Corps determination sequence is as follows: A (The project is not located in open water or salt marsh.) > B (The permit will be conditioned for use of the Service's standard Protection Measures for the Eastern Indigo snake during site preparation and construction) > C (There are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities) > D (The project will impact more than 25 acres of xeric habitat (scrubby flatwoods) or more than 25 active and inactive gopher tortoise burrows) = May Affect Likely To Adversely Affect (LAA). The Corps initiated formal consultation with USFWS on 27 February 2019.

The Biological Assessment (BA) dated April 2016 (Revised January 2019), details the survey protocol employed (wildlife detection dog survey protocol, requested), survey preparations, the amount of survey hours required to provide adequate coverage within the project corridor, and the results of the survey efforts. Within the area surveyed, a total of 2,703 gopher tortoise burrows and a single eastern indigo snake shed skin were observed during 1,339-person hours of field effort. The shed was found on 13 December 2012 in an area of scrub adjacent to the powerline alignment on the western half of the RRE that was modeled as having the highest probability of indigo snake occurrence. No eastern indigo snakes or other evidence of their use of the habitat (i.e., shed skins) were observed during the subsequent surveys of gopher tortoise burrows and an additional 74 above-ground refugia (e.g., fallen logs and brush piles) by the dog detection team. The two-person dog team logged a total of 480 hours during their field searches. Furthermore, no eastern indigo snakes or shed skins were observed during an additional 1,018-person hours of field work targeting other wildlife species within the Action Area.

The USFWS provided a draft Biological Opinion on 14 August 2019. The Corps provided comments back to the USFWS on the draft on 27 August 2019. The final Biological Opinion was received on 20 September 2019. The USFWS

concluded in their final opinion that the proposed action is not likely to jeopardize the continued existence of the eastern indigo snake and based this decision on the following:

1. The proposed project is an 8.65-mile linear roadway that has anticipated impacts to approximately 286 acres of suitable indigo snake habitat. The proposed project impacts are relatively small compared to the total amount of potential habitat for eastern indigo snakes within the Starkey Wilderness Preserve (approximately 19,000 acres) and across their range. Additionally, eastern indigo snakes are large ranging species and require large tracks of contiguous unfragmented conservation lands to persist long term (Moler 1992).
2. The Applicant has agreed to incorporate wildlife crossings and additional bridges to help offset species impacts throughout the project limits. The project has been designed to minimize indirect effects of road mortality and habitat fragmentation. Exclusion from the roadway will be accomplished by the construction of specialized fencing that prevents snakes from crossing over and under the fencing. The exclusion fence will surround the entire roadway.
3. The Applicant will follow the USFWS's Standard Protection Measures for the Eastern Indigo Snake to ensure that no eastern indigo snakes are harmed during clearing and construction. All construction personnel will be trained to identify and protect eastern indigo snakes if discovered, per Conservation Measure 2 of the final Biological Opinion.

The USACE was provided an Incidental Take Statement (ITS) of one individual snake and/or one clutch of eggs as well as four Reasonable and Prudent Measures (RPMs) and associated Terms and Conditions which dictate the special conditions required to minimize effects on Eastern Indigo Snake. Should the applicant encounter more than one snake or one clutch of eggs, the applicant would need to reinitiate consultation.

Florida Scrub-Jay – The Corps determined the proposed project would have “No Effect” on the Florida scrub-jay (*Aphelocoma coerulescens*), which is currently listed as threatened by the USFWS because of habitat destruction (52 FR 20715 20719). There is no designated critical habitat for the scrub-jay listed in the federal register. Florida scrub-jays have been documented historically on parts of the Starkey Wilderness Preserve, but no recent reports suggest the presence of any resident scrub-jay families. The BA details several scrub-jay surveys conducted within the vicinity of the Action Area, the earliest in 1995 and the most recent in 2013. In 2004-2005, a pair of scrub-jays (with one juvenile in 2004) was observed by SWFWMD and Florida Natural Areas Inventory (FNAI) staff at a restored scrub site on the Starkey Wilderness Preserve, but none were found

within 0.5 mile of the alignment during a new survey in 2005. No Florida scrub-jay sightings have been reported by qualified observers since 2005. Per the BA, the absence of scrub-jays from the Action Area is likely the result of loss of habitat to development and fire suppression within the undeveloped Action Area. Overall, there will be a shift from large tract former agricultural/silvicultural properties (which typically are open and possess suitable habitat for Florida scrub-jays) toward residential and commercial development (which tend to develop all suitable habitat for Florida scrub-jays). The only land with potentially suitable habitat that will not be developed, likely in the next 20 years, are conservation lands within the Starkey Wilderness Preserve.

Within the Starkey Wilderness Preserve, much of the habitat that was once suitable for scrub-jays is overgrown and no longer suitable for scrub-jays. The SWFWMD has been burning some of the overgrown habitat, but it remains isolated, and based on Boughton and Bowman (2011), it is highly unlikely that any viable population remains within dispersal distance of the Action Area or any part of the Starkey Wilderness Preserve. Therefore, recolonization is not a reasonably foreseeable outcome. Construction of the RRE would not preclude burning in the Starkey Wilderness Preserve.

The closest known Florida scrub-jay family occupies a territory east of the Cross Bar Ranch on the northern border of 4G Ranch, more than 6.5 miles from the closest potential scrub-jay habitat in the Action Area. Habitats that likely once connected the Action Area to the Cross Bar/4G population, and possibly to another, more distant, small population along the coast, have largely been lost to development (i.e., residential subdivision/commercial buildings) or active agriculture (i.e., row crops, improved pasture, etc.) and the little remaining natural areas are mostly overgrown or not the right type of habitat.

In the absence of other current, site-specific data indicating the presence of scrub-jay within the Action Area, and the lack of reasonably foreseeable cumulative effects, the Corps determination is that the RRE will have “No Effect” on scrub-jay. The USFWS does not provide concurrence of “No Effect” calls, and therefore does not mention the Florida scrub-jay in its final Biological Opinion for this project. USFWS concurrence of the “No Effect” determination is assumed given the USFWS’s reliance on the information provided in the BA, as noted in the last paragraph of the Biological Opinion in Section 1 (Proposed Action).

Red-Cockaded Woodpecker - The Corps determined the proposed project would have “No Effect” on the red-cockaded woodpecker (RCW). The BA details several RCW surveys within the vicinity of the Action Area, the earliest in 1994 and the most recent in 2013. Based on the survey results, suitable foraging and nesting habitat occurs along the RRE. However, none of the suitable habitat is currently occupied by RCWs. Coupled with historic data indicating that RCWs have not been observed within the Starkey Wilderness Preserve since prior to 1994, the survey results support a conclusion the species does not occur within

the Action Area, so there are no direct or indirect effects expected as a result of construction of the RRE.

Per the BA, the absence of RCWs from the Action Area is likely the result of loss of habitat to development and fire suppression within the undeveloped Action Area. Overall, there will be a shift from large tract former agricultural /silvicultural properties (which typically are open and possess suitable habitat for RCWs) toward residential and commercial development (which tend to develop all suitable habitat for RCWs). The only land with potentially suitable habitat that will not be developed, likely in the next 20 years, are conservation lands within the Starkey Wilderness Preserve.

Within the Starkey Wilderness Preserve, much of the habitat that was once suitable for RCWs is overgrown and no longer suitable for RCWs. The SWFWMD has been burning some of the overgrown habitat, but it remains isolated, and it is highly unlikely that any viable population remains within dispersal distance of the Action Area or any part of the Starkey Wilderness Preserve. Therefore, recolonization is not a reasonably foreseeable outcome. Construction of the RRE would not preclude burning in the Starkey Wilderness Preserve.

All lands occupied by RCWs within 100 miles of the RRE are publicly owned, with the Withlacoochee State Forest populations being closest. The birds on those lands are not under threat of displacement by development. Further, given the remote locations of colonies within the Withlacoochee State Forest, the RRE and any development that occurs following construction of the roadway should not have any effect on management of the Withlacoochee State Forest or the habitats of these birds. There should be no cumulative effects to an existing population.

In the absence of other current, site-specific data indicating the presence of RCWs within the Action Area, and the lack of reasonably foreseeable cumulative effects, the Corps' determination is that the RRE will have "No Effect" on RCWs. The USFWS does not provide concurrence of "No Effect" calls, and therefore does not mention the Florida scrub-jay in its final Biological Opinion for this project. USFWS's concurrence of the "No Effect" determination is assumed given the USFWS's reliance on the information provided in the BA, as noted in the last paragraph of the Biological Opinion in Section 1 (Proposed Action).

Wood Stork - The Corps determined the proposed project "may affect, but is not likely to adversely affect" wood stork. The proposed activity is within the Core Foraging Area (CFA) of four rookeries; the project supports Suitable Foraging Habitat (SFH) for wood stork, and will impact ±37.37 acres within the CFA of 11 colonies. The project will have several routes of effect on the wood stork through various phases of the action, (i.e., silt fence installation, gopher tortoise

relocation, land clearing/grubbing/grading, road construction, and road operation). Impacts from these actions will cause wood stork avoidance of SFH; displacement from SFH; missed foraging opportunities within the CFA; and injury/mortality. However, the loss of SFH resulting from the project represents an insignificant or discountable (0.3%) percentage of the available SFH (12,822 acres) in the Action Area; SFH outside of the construction limits will remain in public ownership and should continue to be managed to benefit wildlife.

In an effort to offset adverse effects, the applicant will provide SFH compensation in the form of credit purchase from Old Florida Mitigation Bank (OFMB), which provides an equivalent amount of habitat and foraging function. In addition to mitigation, the ERP issued by SWFWMD requires the construction of water retention and treatment ponds with littoral shelves which will provide new additional foraging habitat. The Environmental Resource Permit Applicant's Handbook Volume 1 (General and Environmental) for SWFWMD specifies that "a regulated activity will not adversely impact the value of functions provided to fish and wildlife and listed species by wetlands and other surface waters [see Section 10.1]". This includes impacts to wetland hydrology through reducing or increasing the depth, duration or frequency of inundation or saturation in wetlands and surface waters adjacent to the project alignment. Wood storks forage in wetland systems that are located in closer proximity to their nest site during sensitive times of the nesting cycle, suggesting that missed foraging opportunities should not affect nest success. Due to the required construction of stormwater retention and treatment ponds with littoral shelves, direct impacts to potential foraging areas will be replaced and missed foraging opportunities should not occur, for wood storks that have nests near the project.

In the absence of roadside ditches and surface water management facilities in close proximity to the roadway, the risk of road mortality to wood storks is considered to be low; nearby colonies and foraging bird observations demonstrate that wading birds are typically tolerant of traffic and will forage and even nest in areas with routine vehicle traffic. Appropriate nest site availability appears to increase as more surface water management ponds are created, likely because most of these ponds are deeper than natural wetlands and thereby provide better protection from predation. Foraging areas also appear to increase in areas with development as current ERP requirements include creation of littoral shelves in stormwater treatment ponds, and these shelves often provide foraging areas when natural systems are dry.

Construction of the RRE will result in loss of some wetlands used by wood storks for foraging and loafing and will impact SFH within the CFA of surrounding wood stork breeding colonies. Impacts to nesting activities are not expected as the closest colony is nearly 5 miles from the RRE.

In accordance with 33 C.F.R. Part 332, the applicants will provide the appropriate type and amount of mitigation for impacts through the purchase of the

appropriate type and amount of wetland credits needed to compensate for lost wetland functions (including wood stork foraging habitat function) from the OFMB. More specifically, the applicant will purchase 40.57 mitigation credits (37.84 forested and 2.73 herbaceous). Additional information regarding compensatory mitigation can be found in Section 8 of this document.

In accordance with the Wood Stork Key, the proposed project mitigation will provide appropriate and practicable SFH compensation that would support a determination of “May Affect, Not Likely to Adversely Affect” for wood storks. USFWS concurrence of the “May Affect, Not Likely to Adversely Affect” determination was requested, and per the Programmatic Concurrence provided by the Wood Stork Key, no further consultation is required for wood storks.

Brooksville bellflower, Cooley’s water-willow, Britton’s beargrass – The USACE requested that the applicants survey for three endangered plants: Brooksville bellflower (*Campanula robinsiae*), Cooley’s water-willow (*Justicia cooley*), and Britton’s beargrass (*Nolina brittoniana*) (Federal Register 54 FR 31190 and 58 FR 25746). All three species are threatened by habitat destruction associated with agricultural and development activities. Britton’s beargrass is also threatened by fire suppression. There is no literature or other records to suggest that any of these endangered plants have ever occurred within the area near the RRE. Surveys for listed plants were previously conducted in all habitats within the RRE construction limits. General listed plant surveys were conducted for state and federally listed species in 1997-1998. In 2005, surveys were conducted for listed plants including Brooksville bellflower, Cooley’s water-willow and Britton’s beargrass. Suitable habitat within the project limits was intensively covered by walking meandering transects to thoroughly survey the areas. No federally listed plant species were seen during either survey. Based on the available literature, there are no scientific or commercial data available to suggest that any of these plants currently occupy, or historically occupied, the Action Area.

In the absence of other current, site-specific scientific and commercial data indicating the presence of these endangered plants within the Action Area, the USACE determined that the RRE project will have “No Effect” on Brooksville bellflower, Cooley’s water-willow, and Britton’s beargrass. The USFWS does not provide concurrence of “No Effect” calls, and therefore does not mention the Brooksville bellflower, Cooley’s water-willow, and Britton’s beargrass in its final Biological Opinion for this project. USFWS concurrence of the “No Effect” determination is assumed given the USFWS’s reliance on the information provided in the BA, as noted in the last paragraph of the Biological Opinion in Section 1 (Proposed Action).

Gopher tortoise - The gopher tortoise (*Gopherus polyphemus*) is currently a candidate species east of the Mobile and Tombigbee Rivers, within Alabama,

Florida, Georgia, South Carolina whose federal listing is warranted but precluded by other USFWS listing priorities (Federal Register 84 FR 54732 54757). Gopher tortoises are currently listed as threatened by the Florida Fish and Wildlife Conservation Commission (FWC) and protected pursuant to Florida Administrative Code Rule 68A-27.003. West of the Tombigbee and Mobile Rivers, gopher tortoises are federally listed as threatened.

The applicant's agent conducted a 100% census of gopher tortoise burrows within 1-mile of the project alignment as part of the sampling for eastern indigo snakes. These data were then analyzed to determine the number of gopher tortoises within and immediately adjacent to (within 25 feet of) the proposed project alignment.

Gopher tortoises have been documented within and adjacent to the project alignment during all previous wildlife surveys. A gopher tortoise survey was conducted in 1997 and 1998 in accordance with the techniques outlined in *Ecology and Habitat Protection Needs of Gopher Tortoise (Gopherus polyphemus) Populations Found on Lands Slated for Development in Florida* (Cox et al. 1987). Habitats that were suspected of supporting tortoise populations because of the nature of the vegetation, hydrology and soils, were selected for the survey. From the data provided in the Ridge Road Extension Tortoise Inventory summary table (p.16) of the Environmental Management Systems, Inc. report (1998) and application of a 0.614 gopher tortoise to burrow conversion factor (Cox et al. 1987), an estimated 77 tortoises were documented within the survey area of approximately 225 acres. Recent surveys (17 January 2013 and 5 March 2013) show that an estimated 115 gopher tortoises occur in uplands on, or within 25 feet of, the construction limits.

The current status of gopher tortoise in the Action Area is likely the result of current public land conservation, losses of formerly occupied lands to development, and the conversion of private lands from naturally vegetated areas to agriculture including managed pastures and pine plantations. Public conservation lands provide habitat, but portions of those lands have become overgrown due to fire suppression and likely support fewer tortoises than they would support if they were more open.

The populations in the vicinity of the RRE likely have good connectivity with populations that are outside of, but contiguous with, the Action Area. However, at a larger scale, connectivity likely comes at the expense of roadway mortality. The applicant's agent) is unaware of any local documentation for roadway mortality, but in other areas roadways are known to cause gopher tortoise mortality. (see Enge et al. 2006).

The primary direct effect of the project on gopher tortoises is the potential for mortality during land clearing and construction within the project alignment.

Construction-related mortality will be precluded by the relocation of gopher tortoises within and immediately adjacent to the project footprint in accordance with the current FWC Gopher Tortoise Permitting Guidelines. Prior to the initiation of clearing, a 100% survey of the project alignment and 25 feet on either side will be completed and a permit application prepared requesting authorization from the FWC to capture and relocate gopher tortoises from within the survey area.

To minimize potential fragmenting effects of the roadway, the project has been designed to prevent wildlife access to the roadway and to provide underpasses for wildlife movement (see Figure 2-3 of BA). Pasco County has agreed to use wildlife-exclusion fencing to prevent access to the roadway by gopher tortoises and other small and medium sized animals. Underpasses, including bridges or elevated sections of roadway and culverts will be installed under the project to make the roadway permeable to wildlife, including tortoises. These wildlife crossing structures will be positioned to increase permeability to both upland and wetland species.

Pasco County will implement the following Construction Measures to minimize adverse effects of the proposed project to gopher tortoises: 1) the project will implement the current FWC Gopher Tortoise Permitting Guidelines. Consistent with the Guidelines, the County will pursue relocating tortoises from within the construction limits to the adjacent publicly-owned lands within the Starkey Wilderness Preserve; 2) the roadway has been designed to prevent wildlife access to road travel lanes. Bridges and culverts that will allow gopher tortoise passage will be provided at numerous locations to allow movement under the roadway; and 3) during construction, the following list of measures will be strictly adhered to by construction workers:

- Pre-construction surveys and relocation of all gopher tortoises within the project alignment and 25 feet on either side would be completed in accordance with current FWC Gopher Tortoise Permitting Guidelines;
- The project will be cleared in a manner that: (1) avoids the creation of uncleared habitat islands surrounded by cleared land, and (2) provides escape routes from the construction area for wildlife;
- Construction access will minimize intrusion to areas outside of the project footprint;
- Slow speed limits will be posted and enforced for all construction traffic; and
- Silt fences will be maintained around the project perimeter to discourage wildlife access into the project area.

The applicants will comply with the FWC Gopher Tortoise Permitting Guidelines and relocate all gopher tortoises from the project limits of construction and 25 feet on either side. As a result, construction-related direct mortality of tortoises

would be avoided. Considering the implementation of a successful relocation program in accordance with FWC requirements and continued management of gopher tortoise habitat on adjacent conservation lands, the USACE determined that the project “May Affect, Not Likely to Adversely Affect” the gopher tortoise. The USFWS does not provide concurrence of “No Effect” calls, and therefore does not mention the Gopher Tortoise in its final Biological Opinion for this project. USFWS concurrence of the “May Affect, Not Likely to Adversely Affect” determination is assumed given the USFWS’s reliance on the information provided in the BA, as noted in the last paragraph of the Biological Opinion in Section 1 (Proposed Action).

Striped newt – At the time of the BA compilation, the striped newt (*Notophthalmus perstriatus*) was a candidate species whose federal listing was warranted but precluded by other USFWS listing priorities (76 FR 32911-32929). On 19 December 2018, the USFWS’s 12-Month Findings on Petitions to List 13 Species as Endangered or Threatened Species (83 FR 65127 65134) found, after a thorough review of the best available scientific and commercial information, that it is not warranted to list the striped newt. Therefore, at this time, the striped newt is no longer a Candidate Species, and will not be considered further in this document.

10.1.2 Has another federal agency been identified as the lead agency for complying with Section 7 of the ESA with the Corps designated as a cooperating agency and has that consultation been completed? No

10.1.3 Consultation with either the National Marine Fisheries Service and/or the U.S. Fish and Wildlife Service was initiated and completed as required, for any determinations other than “no effect” (see the attached ORM2 Summary sheet for begin date, end date and closure method of the consultation). Based on a review of the above information, the Corps has determined that it has fulfilled its responsibilities under Section 7(a)(2) of the ESA. The documentation of the consultation is incorporated by reference.

10.2 Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), Essential Fish Habitat (EFH).

10.2.1 Did the proposed project require review under the Magnuson-Stevens Act? No.

10.2.2 If yes, EFH species or complexes considered: Enter EFH species or complexes considered here

Effect(s) determination and basis for that determination(s): No Effect, no NMFS HCD trust resources present within the project Action Area.

10.2.3 Has another federal agency been identified as the lead agency for complying with the EFH provisions of the Magnuson-Stevens Act with the Corps designated as a cooperating agency and has that consultation been completed? No

10.2.4 Consultation with the National Marine Fisheries Service was initiated and completed as required (see the attached ORM2 Summary sheet for consultation type, begin date, end date and closure method of the consultation). Based on a review of the above information, the Corps has determined that it has fulfilled its responsibilities under EFH provisions of the Magnuson-Stevens Act.

10.3 **Section 106 of the National Historic Preservation Act (Section 106):** Refer to Section 2.3 for permit area determination.

10.3.1 Has another federal agency been identified as the lead federal agency for complying with Section 106 of the National Historic Preservation Act with the Corps designated as a cooperating agency and has that consultation been completed? No

10.3.2 Known historic properties present? Yes. Additional consultation is necessary to ensure compliance of the regulated activity with Section 106 of the NHPA.

Effect determination and basis for that determination: The Corps has determined that the proposed project would cause no effect to historic properties. This determination is based on the findings of the archaeological surveys, project modifications to avoid areas of concern, and consultation with both the Florida State Historical Preservation Officer (SHPO) and Seminole Tribe of Florida - Tribal Historic Preservation Office (STOF-THPO), as further described in sections 10.3.3 and 10.4 of this document.

10.3.3 Consultation was initiated and completed with the appropriate agencies, tribes and/or other parties for any determinations other than “no potential to cause effects” (see the attached ORM2 Summary sheet for consultation type, begin date, end date and closure method of the consultation).

The applicants submitted a revised permit application for the Ridge Road Extension on 31 May 2011. The revised permit application included the following supporting documentation:

Appendix 16	Cultural Resource Assessment of the Proposed RRE Pasco County, Florida, December 1998
Appendix 17	State Historic Preservation Officer (SHPO) letter, dated 21 January 2000
Appendix 18	A Cultural Resources Assessment of Two Retention Pond Locations, Pasco County, Florida, December 1999

Appendix 19	SHPO letter, dated 25 April 2000
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The applicants provided additional information related to the Cultural Resource Assessment Survey (CRAS) on 16 October 2011. The Corps published a public notice on 28 November 2011, which included information on six archeological sites identified in the 1998 Cultural Resource Assessment. The STOF-THPO responded to the public notice by letter dated 22 March 2012 and requested they be provided a CRAS for the project's Area of Potential Effect (APE). The Florida Department of State, Division of Historical Resources, Deputy State Historic Preservation Officer (SHPO) responded to the public notice by letter dated 17 April 2012 and provided her opinion that the proposed undertaking is unlikely to affect significant historic properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). The Corps participated in a teleconference with Florida's Deputy SHPO and the STOF-THPO on 7 May 2012. Following the teleconference, the STOF-THPO provided an updated comment letter, dated 7 May 2012, requesting: 1) additional survey work to ascertain if site 8Pa70 is eligible for the National Register of Historic Places (NRHP), 2) additional survey work for any areas of the APE that had not been tested for cultural resources, 3) the report that led to the eligibility determination for site 8Pa70, and 4) site 8Pa668 be avoided by all construction activities due to its classification as eligible for the NRHP. The Deputy SHPO also provided an updated comment letter, dated 8 May 2012, advising that additional survey work was required for previously un-surveyed portions of the project in order to review impact on cultural resources and specifically, to make a determination of NRHP eligibility for site 8Pa70. The Deputy SHPO also advised that all project activities should avoid site 8Pa668 and that further consultation would be required if impacts to site 8Pa668 are unavoidable. Please note that site 8Pa668 is also known as the "Bexley Site" and is depicted as site "PA00668" on some of the drawings. By letter dated 23 July 2012, the Corps requested additional information from the applicants, including information pertaining to cultural resources. On 18 December 2013, the applicants' submitted additional information regarding to cultural resources within the project's APE. This additional information included an Archaeological Survey and Evaluation of Selected Portions of the Ridge Road Extension Project in Pasco County, Florida, dated October 2013. This survey included investigation of several areas where stormwater ponds or floodplain compensation ponds were proposed and also an approximately 1,700 linear foot segment of the proposed alignment near the western limits of the project. The Corps reinitiated consultation with the SHPO by letter dated 3 March 2016, which included the October 2013 survey, as well as other information. By letter dated 29 April 2016, the Corps requested that the applicants provide clarifications and additional information pertaining to cultural resources. The applicants provided additional information on 1 June 2016. The Corps participated in a teleconference with the applicants and staff from the Florida SHPO office, on 11 August 2016. Following the conference call, flood compensation area A-5 (FCA A-5) was reconfigured to avoid an area adjacent to site 8Pa668. The SAJ-RD archeologist provided updated plans and drawings to the SHPO via e-mail on 25

August 2016. The SHPO responded by letter dated 10 October 2016 and stated that “based on the submitted [CRAS], and the evaluations and findings within, our office concurs with the finding of no historic properties affected [as per 36 C.F.R. Part 800, §800.4(d)(1)].” As described in section 10.4 below, the STOF-THPO also provided a letter, dated 27 October 2016, indicating that they had no objections to the project.

Based on a review of the information above, the Corps has determined that it has fulfilled its responsibilities under Section 106 of the NHPA. Compliance documentation incorporated by reference.

10.4 Tribal Trust Responsibilities

10.4.1 Was government-to-government consultation conducted with Federally-recognized Tribe(s)? Yes

Provide a description of any consultation (s) conducted including results and how concerns were addressed.

A public notice for the previous iteration of the proposed project was published by the Corps on 28 November 2011. The STOF-THPO provided comments by letter dated 22 March 2012, and requested to review a CRAS for the project’s APE. On 7 May 2012, the Corps participated in a teleconference with the STOF-THPO and SHPO to discuss previously completed cultural resource surveys and known cultural resources in proximity to the proposed project. The Corps provided the STOF-THPO with additional information following the teleconference. The STOF-THPO provided an updated comment letter, dated 7 May 2012, requesting: 1) additional survey work to ascertain if site 8Pa70 is eligible for the National Register of Historic Places (NRHP), 2) additional survey work for any areas of the APE that had not been tested for cultural resources, 3) the report that led to the eligibility determination for site 8Pa70, and 4) site 8Pa668 be avoided by all construction activities due to its classification as eligible for the NRHP. By letter dated 23 July 2012, the Corps requested additional information from the applicants, including information pertaining to cultural resources. On 18 December 2013, the applicants submitted additional information regarding cultural resources within the project’s APE. This additional information included an Archaeological Survey and Evaluation of Selected Portions of the Ridge Road Extension Project in Pasco County, Florida, dated October 2013. This survey included investigation of several areas where stormwater ponds or floodplain compensation ponds were proposed and also an approximately 1,700 linear foot segment of the proposed alignment near the western limits of the project. The Corps reinitiated consultation with the STOF-THPO by letter dated 3 March 2016, which included the October 2013 survey, as well as other information. By letter dated 29 April 2016, the Corps requested that the applicants provide clarifications and additional information pertaining to cultural resources. The

applicants provided additional information on 1 June 2016. The Corps participated in a teleconference with the applicants and staff from the Florida SHPO office on 11 August 2016. Following the conference call, flood compensation area A-5 (FCA A-5) was reconfigured to avoid an area adjacent to site 8Pa668. The Corps provided updated plans and drawings to STOF-THPO via e-mail on 25 August 2016. By letter dated 27 October 2016, the STOF-THPO stated that they have no objections to the project and requested to be notified of any inadvertent discoveries of archaeological, historical, or burial resources. The STOF-THPO reference number is 0029424.

Based on a review of the information above, the Corps has determined that it has fulfilled its tribal trust responsibilities.

10.4.2 Other Tribal including any discussion of Tribal Treaty rights? N/A

10.5 Section 401 of the Clean Water Act – Water Quality Certification (WQC)

10.5.1 Is a Section 401 WQC required, and if so, has the certification been issued, waived or presumed? An individual water quality certification is required and has been issued by the certifying agency. An individual water quality certification is required and has been issued by the certifying agency.

10.6 Coastal Zone Management Act (CZMA)

10.6.1 Is a CZMA consistency concurrence required, and if so, has the concurrence been issued, waived or presumed? An individual CZMA consistency concurrence is required and has been issued by the appropriate agency. An individual CZMA consistency concurrence is required and has been issued by the appropriate agency.

10.7 Wild and Scenic Rivers Act

10.7.1 Is the project located in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system? No

If yes, summarize coordination and the determination on whether activity will adversely affect the Wild and Scenic River designation or study status. The Corps has determined that it has fulfilled its responsibilities under the Wild and Scenic Rivers Act.

10.8 Effects on Corps Civil Works Projects (33 USC 408)

10.8.1 Does the applicant also require permission under Section 14 of the Rivers and Harbors Act (33 USC 408) because the activity, in whole or in part, would alter, occupy or use a Corps Civil Works project? No, there are no federal projects in or near the vicinity of the proposal.

If yes, provide date that decision was made and whether permission was granted or denied: N/A

10.9 **Corps Wetland Policy (33 CFR 320.4(b))**

10.9.1 Does the project propose to impact wetlands? Yes

10.9.2 Based on the public interest review herein, the beneficial effects of the project outweigh the detrimental impacts of the project.

10.10 **Other (as needed):** N/A

11.0 **Special Conditions**

11.1 Are special conditions required to protect the public interest, ensure effects are not significant and/or ensure compliance of the activity with any of the laws above? Yes

If no, provide rationale: N/A

11.2 Required special condition(s)

Special condition(s): See permit instrument.

Rationale: Special conditions required by law.

12.0 **Findings and Determinations**

12.1 Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit will not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.

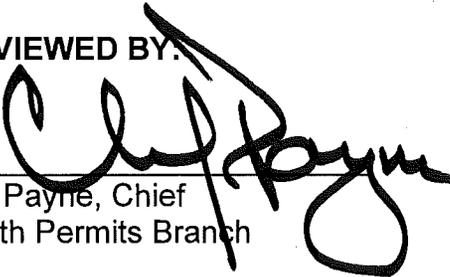
12.2 Presidential Executive Orders (EO)

- 12.2.1 EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians: This action has no substantial effect on one or more Indian tribes, Alaska or Hawaiian natives.
- 12.2.2 EO 11988, Floodplain Management: Alternatives to location within the floodplain, minimization and compensatory mitigation of the effects were considered above.
- 12.2.3 EO 12898, Environmental Justice: The Corps has determined that the proposed project would not use methods or practices that discriminate on the basis of race, color or national origin nor would it have a disproportionate effect on minority or low-income communities.
- 12.2.4 EO 13112, Invasive Species: The evaluation provided above included invasive species concerns in the analysis of impacts at the project site and associated compensatory mitigation projects.
- 12.2.5 EO 13212 and EO 13302, Energy Supply and Availability: The proposal is not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety.
- 12.3 Findings of No Significant Impact: Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an environmental impact statement will not be required.
- 12.4 Compliance with the Section 404(b)(1) Guidelines: Having completed the evaluation above, I have determined that the proposed discharge complies with the Guidelines.
- 12.5 Public interest determination: Having reviewed and considered the information above, I find that the proposed project is not contrary to the public interest.

PREPARED BY:

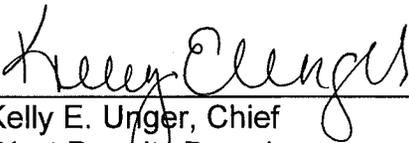
Shayne Hayes
Jacob Siegrist
Candice Wheelahan
Ryan Hendren
John Fellows

REVIEWED BY:


Clif Payne, Chief
North Permits Branch

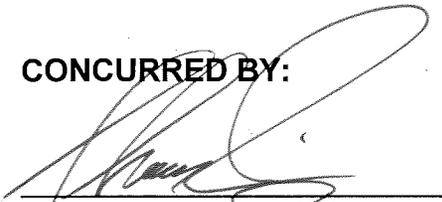
Date: 12/20/19

REVIEWED BY:


Kelly E. Unger, Chief
West Permits Branch

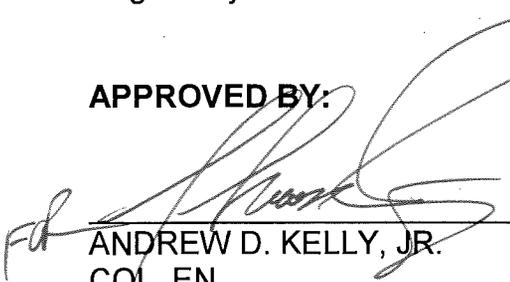
Date: 12/20/19

CONCURRED BY:


Shawn H. Zinszer, Chief
Regulatory Division

Date: 12/20/19

APPROVED BY:


ANDREW D. KELLY, JR.
COL, EN
Commanding

Date: 12/20/19