

APPENDIX L

Eastern Black Rail Survey Technical Memorandum

memorandum

date June 1, 2026

to Zakia Williams, U.S. Fish and Wildlife Service (USFWS)

cc Matthew Dockins, PE, HNTB Corporation
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subject Eastern Black Rail Survey Technical Memorandum
SR 70 from Jefferson Avenue to CR 29
FPID 414506-1-22-01
Highlands County, Florida

Introduction

This technical memorandum provides a summary of field investigations from April and May 2025 to determine the potential for presence of the federally listed eastern black rail (*Laterallus jamaicensis jamaicensis*) within the limits of the State Road (SR) 70 from Jefferson Avenue to County Road (CR) 29 proposed project (**Figure 1**), which includes the project limits and a 250-foot buffer. The eastern black rail was federally designated as a threatened species by the U.S. Fish and Wildlife Service (USFWS) in 2020 (85 Federal Register 63764 63803) and is protected by the Endangered Species Act, as amended (16 U.S. Code [U.S.C.] 1531-1544, 87 Stat. 884). Based on the presence of potential habitat and the project's location within the species' range, a species-specific eastern black rail call-response survey was determined to be necessary for this project. A memorandum documenting the proposed survey methodology was prepared and provided to the USFWS for review and concurrence prior to commencement of the survey. Mr. John M. Wrublik of the USFWS approved the proposed survey methodology on March 20, 2025. Environmental scientists who are proficient with call-response survey methodologies and are familiar with the eastern black rail's common calls and the calls of other common marsh bird species and animals in the area conducted a call response survey from April to May 2025 in accordance with the *USFWS Eastern Black Rail Call-Response Survey Protocol for Range-Wide Monitoring, dated April 2023* (USFWS 2023).

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022, and executed by Federal Highway Administration (FHWA) and FDOT.

Preliminary Data Collection

A comprehensive literature and Geographic Information System (GIS) database search was conducted to determine if the eastern black rail was previously documented within the project limits and if suitable habitat was available. The literature and database search included the following: 2017-2019 South Florida Water Management District Land Use Land Cover spatial data, 2020 Southwest Florida Water Management District (SWFWMD) Land Use Land Cover spatial data, 2023 USFWS National Wetlands Inventory spatial data, Species Status Assessment Report for the Eastern Black Rail, Cornell Lab eBird bird occurrence data, and current aerial

imagery. Based on this preliminary protected species data collection effort, eastern black rail findings include the following:

- The project falls within the USFWS current range for the eastern black rail;
- The closest documented, publicly available occurrence of the eastern black rail is approximately 23 miles north of the project in Highlands County at Avon Park Airforce Range (Schwarzer et. al. 2024); and
- Potentially suitable habitat was identified within and adjacent to the project boundary.

Survey Methodology

The eastern black rail survey followed the protocol documented in the *USFWS Eastern Black Rail Call-Response Survey Protocol for Range-Wide Monitoring, dated April 2023* (USFWS 2023). Based on the guidelines, the project mainline and ponds required a minimum of five (5) survey repetitions at each survey point established within potential habitat. Surveys were conducted during the eastern black rail breeding season between April 16 – July 15 (Florida north and central interior, gulf coast saltmarsh). A total of ten (10) survey points were developed based on the guidelines, project limits and associated 250-foot buffer, and evaluation of habitat within the study area. The 10 proposed survey point locations are depicted in the attached figure (**Figure 2**).

To maximize the potential for detection of eastern black rails, each survey point was placed in potential habitat that was readily accessible. Potential habitat for the eastern black rail includes herbaceous, persistent, emergent wetlands with soils that are moist to inundated with 4 cm of shallow water, and enough topographic variation to create slightly higher patches. Wetlands were at least 2 hectares in size to be considered suitable. Vegetation height requirements can vary among different wetland habitats, but increased shrub densities lower the habitat quality for the species (FDOT 2024). Survey points were recommended to be placed a minimum of 400 meters apart within potential habitat; however, typically only one survey point was placed within each area of suitable habitat. Along the project limits, survey points may occur less than 400 meters apart, but are typically separated by unsuitable habitat or barriers such as roadways preventing individuals from easily crossing from one wetland to another. Prior to initiating the survey, the survey points depicted in **Figure 2** were ground truthed to determine the exact survey point location within the wetlands and to ensure habitat suitability. During ground truthing, some of the areas identified as potentially suitable habitat were observed to include either shrub densities that would likely decrease habitat viability or herbaceous vegetation that was mowed or grazed and not likely to provide the dense overhead cover preferred by the species. Despite the change in suitability, surveys continued at these locations to support data gathering and the effect determination made for the eastern black rail. Survey points were assigned an ID number and GPS coordinates were recorded using the ESRI Field Maps application and mobile phones as GPS receivers. Photographs of each survey point are included in **Appendix A**. General descriptions of the habitat at each survey point are included below:

- Survey Point 1 was located in an herbaceous wetland in active pastureland in the southeast quadrant of the intersection of SR 70 with Jefferson Avenue. Dominant vegetation included soft rush (*Juncus effusus*), manyflower marshpennywort (*Hydrocotyle umbellata*), dotted smartweed (*Persicaria punctata*), and climbing hempvine (*Mikania scandens*). No standing water was present during the surveys; however, soils were saturated.
- Survey Point 2 was located in an herbaceous wetland in active pastureland in the southwest quadrant of the intersection of SR 70 with Park Land Drive. Dominant vegetation included soft rush, manyflower marshpennywort, Carolina ponyfoot (*Dichondra carolinensis*), and torpedograss (*Panicum repens*). No standing water was present during the surveys; however, soils were saturated.
- Survey Point 3 was located in an herbaceous wetland on the south side of SR 70. This survey point was located within a Florida Gas Transmission easement that is regularly mowed and maintained, with forested wetland on either side of the herbaceous wetland. Dominant vegetation included Virginia chain

fern (*Woodwardia virginica*), bushy bluestem (*Andropogon glomeratus*), torpedograss, and limpograss (*Hemarthria altissima*). No standing water was present during the surveys; however, soils were moist to saturated.

- Survey Point 4 was located in an herbaceous wetland on the south side of SR 70. The survey point was located within a Florida Gas Transmission easement that is regularly mowed and maintained, with forested wetland on either side of the herbaceous wetland. Dominant vegetation included torpedograss, and limpograss. No standing water was present during the surveys; however, soils were moist.
- Survey Point 5 was located in an area of wet pasture on the south side of SR 70. Dominant vegetation included Peruvian primrosewillow (*Ludwigia peruviana*), smartweed, and bahiagrass (*Paspalum notatum*). Overall, the wetland was observed to be lacking the dense overhead cover preferred by the eastern black rail. No standing water was present during the surveys; however, soils were moist.
- Survey Point 6 was located in a shrubby wetland on the north side of SR 70. Vegetation included elderberry (*Sambucus nigra*), Peruvian primrosewillow, and grapevine (*Vitis* spp.). It is anticipated that the high shrub density of this wetland decreased the habitat suitability for the eastern black rail. No standing water was present during the surveys; however, soils were moist.
- Survey Point 7 was located in an herbaceous wetland on the north side of SR 70, west of Old SR 8 and the Seaboard Coast railroad. This survey point was located within a Florida Gas Transmission easement that is regularly mowed and maintained, with forested wetland on the north side of the herbaceous wetland. Additional vegetation clearing had also recently occurred to support overhead utility work along the corridor. Vegetation consisted predominantly of fern species such as Virginia chain fern, maiden fern (*Thelypteris* spp.), and swamp fern (*Telmatoblechnum serrulatum*) in addition to sweetscent (*Pluchea odorata*) and grapevine. No standing water was present during the surveys; however, soils were moist to saturated.
- Survey Point 8 was located in an herbaceous wetland on the south side of SR 70, east of Placid Pines Drive. Dominant vegetation included Carolina willow (*Salix caroliniana*), cattails (*Typha* spp.), and torpedograss. No standing water was present during the surveys; however, soils were saturated.
- Survey Point 9 was located in an herbaceous wetland in fallow citrus grove on the north side of SR 70, east of Ekhoﬀ Lane. No standing water was present during the surveys and soils were dry. Dominant vegetation included Brazilian pepper (*Schinus terebinthifolia*), bushy bluestem, Peruvian primrosewillow, ferns, and torpedograss. No standing water was present during the surveys; however, soils were moist to saturated.
- Survey Point 10 was located in an herbaceous wetland in active pastureland on the south side of SR 70, east of CR 29. Dominant vegetation included Peruvian primrosewillow, Mexican primrosewillow (*Ludwigia octovalvis*), and pasture grasses. No standing water was present during the surveys; however, soils were moist to saturated.

Five (5) survey repetitions at each survey point occurred with approximately seven (7) days between each survey repetition. Surveys were conducted when the wind speed was less than 10 knots and outside of sustained rain or heavy fog. Surveys were conducted beginning 30 minutes before sunrise to three hours after sunrise and three hours before sunset to 30 minutes after sunset. At each survey point, a call-broadcast player with the 10-minute eastern black rail playback recording at a volume of approximately 80-90 dB at one meter was utilized. The call-broadcast player was raised parallel to the ground at approximately 120 centimeters above ground and three meters from the survey point.

Results

Call-response surveys were conducted over five consecutive weeks in April and May 2025 on the following dates:

- Survey 1 – April 24, 2025
- Survey 2 – May 7, 2025
- Survey 3 – May 15, 2025
- Survey 4 – May 22, 2025
- Survey 5 – May 29, 2025

No eastern black rails were heard or observed during the survey. Datasheets from each survey event are included in **Appendix B**.

Summary

An eastern black rail call-response survey was conducted in support of the FDOT District One SR 70 from Jefferson Avenue to CR 29 proposed project to determine the potential for the project to result in the incidental take of the species. Five survey repetitions were completed at 10 survey points throughout the project limits in habitat suitable to support the eastern black rail. No eastern black rails were heard or observed during the survey. Due to the absence of eastern black rails utilizing suitable habitat within the project limits, no conservation or mitigation measures are being proposed. As a result, it is anticipated that the proposed project will result in a **May Affect, Not Likely to Adversely Affect (MANLAA)** for the eastern black rail. Per recent guidance, it is anticipated that the results of the survey will be valid for two years as long as there are no substantial changes to the surveyed habitat.

References

Florida Department of Transportation (FDOT) Office of Environmental Management (OEM). 2024. Eastern Black Rail Webinar – Project Evaluation [Video]. Retrieved from <https://www.youtube.com/watch?v=hYdKbJ-Ni4>.

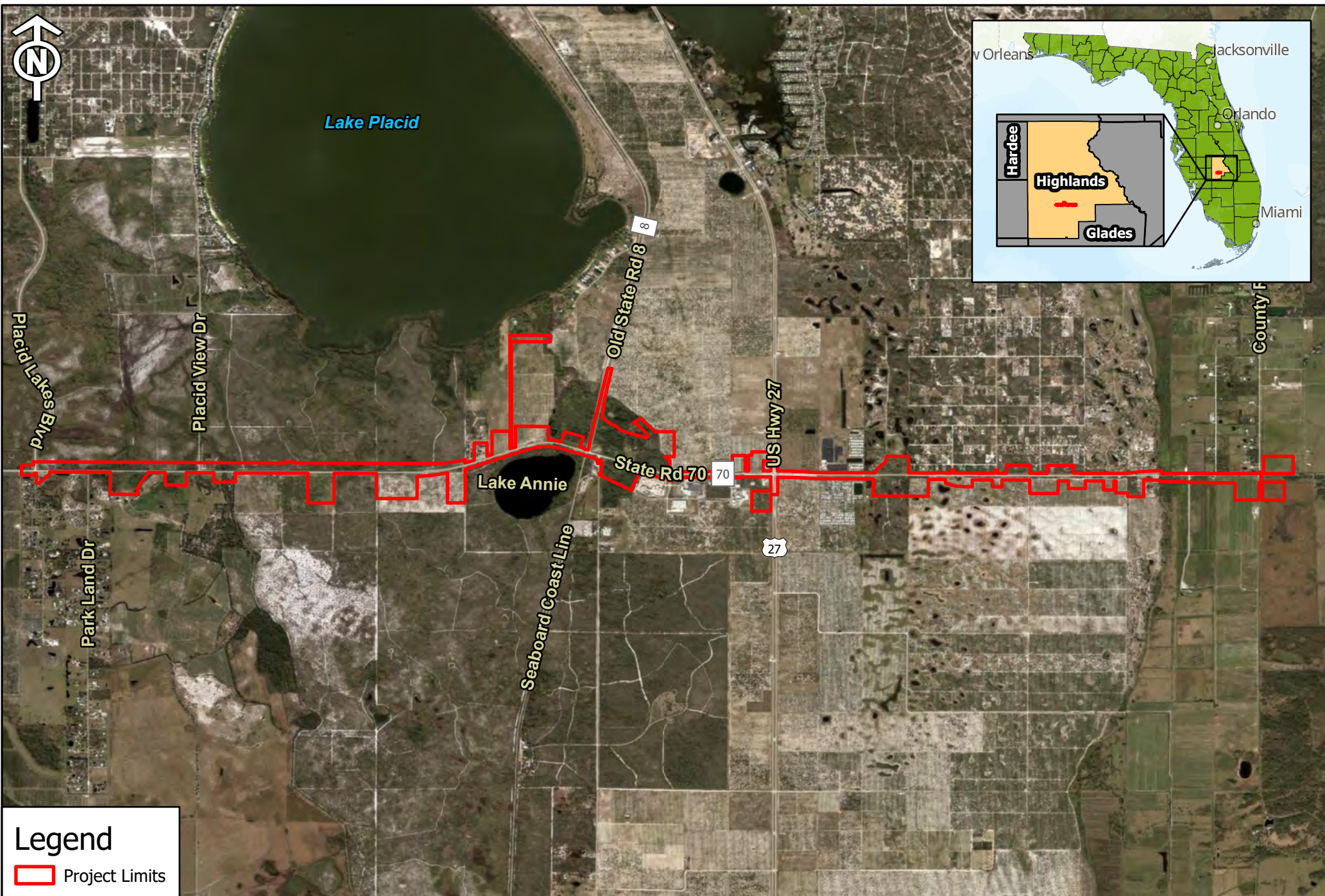
Schwarzer, Amy C.; Kent, Gina; Watts, Bryan D.; Meyer, Ken; Powell, Amanda; Bankovich, Brittany; and Cox, W. Andrew. 2024. "Current Distribution of Black Rails in Florida," Florida Field Naturalist: Vol. 51 : Iss. 2 , Article 1. Available at: <https://digitalcommons.usf.edu/ffn/vol51/iss2/1>

U.S. Fish and Wildlife Service (USFWS). 2023. Eastern Black Rail Call-Response Survey Protocol, version 1.0 2023. Christy Hand, Amy Schwarzer, Maureen Correll, Alix Godar, Heather Levy, Liza Rossi, Michelle Stantial, Morgan Wolf. Eastern Black Rail Protocol Team.

Figures

Figure 1 Project Location

Figure 2 Eastern Black Rail Survey Point Locations



Legend

 Project Limits



Figure 1 - Project Location

SR 70 from Jefferson Avenue to CR 29
FPID 414506-1-22-01
Highlands County, Florida

0 1 Miles

A horizontal scale bar with a vertical tick at the left end and a vertical tick at the right end, representing a distance of 1 mile.

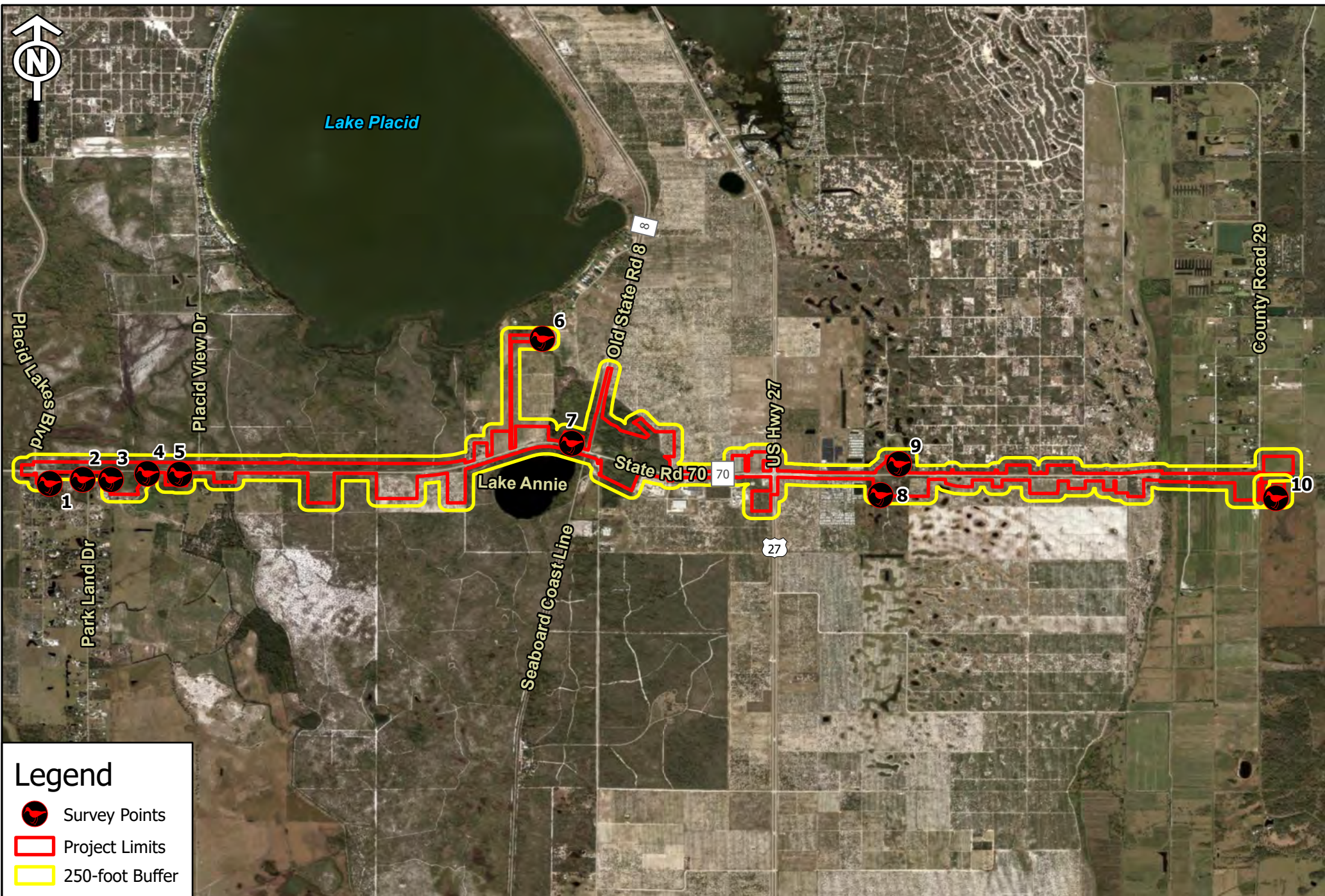


Figure 2 - Eastern Black Rail Survey Point Locations

SR 70 from Jefferson Avenue to CR 29
FPID 414506-1-22-01
Highlands County, Florida



0 1 Miles

Appendix A

Photographs of Survey Points



Survey Point 1



Survey Point 2



Survey Point 3



Survey Point 4



Survey Point 5



Survey Point 6

SR 70 from Jefferson Ave to CR 29
FPID No. 414506-1-22-01

Appendix A
Photographs of Survey Points



Survey Point 7



Survey Point 8



Survey Point 9



Survey Point 10

Appendix B

Survey Data Sheets

Surveyor Name: A. Ramos, S. Freeman

Date: 4/24/25

Wind Speed Type (circle):

kts (#.#, Kestrel, 30 sec average) or Beaufort Scale (#)

Comments:

Point Identifier	BKGD Noise	Sky	Temp (°F)	Wind Speed (kts)	Start Time	Species BLRA or NO BLRA	Passive 1	Passive 2	Passive 3	Passive 4	Passive 5	KKD	Churt/Grr	Break	All Calls	Break	Outside Survey	Detected at previous point?	Distance (m)	Direction (bearing)	Call Type(s)
							0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10					
Station 1	2	0	65°F	2	6:30	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 2	2	0	65°F	2	6:49	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 3	2	0	66°F	2	7:12	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 4	3	0	67°F	2	7:27	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 5	3	0	67°F	2	7:45	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 6	1	0	70°F	2	8:08	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 8	1	0	73°F	2	8:47	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 10	1	0	77°F	3	9:10	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 9	2	0	77°F	3	9:33	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 7	3	0	78°F	3	9:49	NO BLRA	0	0	0	0	0	0	0	0	0	0					

Date: DD Month YYYY. Noise: 0 = no noise; 1 = faint noise; 2 = moderate noise (probably cannot hear BLRA beyond 100m for >30 sec. of survey); 3 = loud noise (probably cannot hear BLRA beyond 50m for >30 sec. of survey); 4 = intense noise (probably cannot hear BLRA beyond 25m for >30 sec. of survey). Sky: 0 = clear or a few clouds; 1 = partly cloudy or variable sky; 2 = cloudy or overcast; 4 = fog/smoke; 5 = drizzle; 8 = showers. Time: 24 hr format. Call Type (list all calls in order they were heard): kickee-doo (KKD); growl (GRR), churt (CHR), or ink-ink-ink (INK).

BLRA detections: Write "0" in the appropriate minute column if nothing was heard, "1" if a BLRA was heard, "S" if seen, and "1S" if both heard and seen. If BLRA was detected before or after the survey but NOT during the survey, Outside Survey = Yes. If no BLRA detections, Species = NO BLRA. Minute columns can be left blank.

Surveyor Name: <u>Alexandra Hyslop</u>	Comments: <u>Lindsay Cross (ESA)</u>
Date: <u>5/7/25</u>	
Wind Speed Type (circle): kts (#.#, Kestrel, 30 sec average) or <u>Beaufort Scale (#)</u>	

Point Identifier	BKND Noise	Sky	Temp (°F)	Wind Speed (kts) <i>(Beaufort)</i>	Start Time	Species BLRA or NO BLRA	Passive 1	Passive 2	Passive 3	Passive 4	Passive 5	KKD	Churt/Grr	Break	All Calls	Break	Outside Survey	Detected at previous point?	Distance (m)	Direction (bearing)	Call Type(s)
							0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10					
Station 1	2	1	89	2	1702	NO BLRA															
Station 2	2	1	89	2	1722	NO BLRA															
Station 3	2	1	88	2	1743	NO BLRA															
Station 4	2	1	88	2	1758	NO BLRA															
Station 5	2	1	88	2	1814	NO BLRA															
Station 6	0	2	87	2	1841	NO BLRA															
Station 7	2	2	86	2	1912	NO BLRA															
Station 8	1	2	84	2	1934	NO BLRA															
Station 9	2	2	83	2	1956	NO BLRA															
Station 10	2	2	82	2	2018	NO BLRA															

Date: DD Month YYYY. Noise: 0 = no noise; 1 = faint noise; 2 = moderate noise (probably cannot hear BLRA beyond 100m for >30 sec. of survey); 3 = loud noise (probably cannot hear BLRA beyond 50m for >30 sec. of survey); 4 = intense noise (probably cannot hear BLRA beyond 25m for >30 sec. of survey). Sky: 0 = clear or a few clouds; 1 = partly cloudy or variable sky; 2 = cloudy or overcast; 4 = fog/smoke; 5 = drizzle; 8 = showers. Time: 24 hr format. Call Type (list all calls in order they were heard): kickee-doo (KKD); growl (GRR), churt (CHR), or ink-ink-ink (INK).

BLRA detections: Write "0" in the appropriate minute column if nothing was heard, "1" if a BLRA was heard, "S" if seen, and "1S" if both heard and seen. If BLRA was detected before or after the survey but NOT during the survey, Outside Survey = Yes. If no BLRA detections, Species = NO BLRA. Minute columns can be left blank.

Surveyor Name: <u>A. Ramos</u>	Comments:
Date: <u>5/16/25</u>	
Wind Speed Type (circle): kts (#, Kestrel, 30 sec average) or <u>Beaufort Scale (#)</u>	

Point Identifier	BKGD Noise	Sky	Temp (°F)	Wind Speed (kts)	Start Time	Species BLRA or NO BLRA	Passive 1	Passive 2	Passive 3	Passive 4	Passive 5	KKD	Churt/Grr	Break	All Calls	Break	Outside Survey	Detected at previous point?	Distance (m)	Direction (bearing)	Call Type(s)
							0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10					
station 10	2	1	72	1	6:16	NO BLRA	0	0	0	0	0	0	0	0	0	0					
station 9	2	0	72	1	6:40	NO BLRA	0	0	0	0	0	0	0	0	0	0					
station 8	2	0	72	1	6:55	NO BLRA	0	0	0	0	0	0	0	0	0	0					
station 7	3	0	72	1	7:11	NO BLRA	0	0	0	0	0	0	0	0	0	0					
station 6	1	0	73	1	7:27	NO BLRA	0	0	0	0	0	0	0	0	0	0					
station 5	2	0	74	1	7:50	NO BLRA	0	0	0	0	0	0	0	0	0	0					
station 4	2	0	76	1	8:03	NO BLRA	0	0	0	0	0	0	0	0	0	0					
station 3	2	0	76	1	8:20	NO BLRA	0	0	0	0	0	0	0	0	0	0					
station 2	2	0	77	1	8:35	NO BLRA	0	0	0	0	0	0	0	0	0	0					
station 1	2	0	77	1	8:55	NO BLRA	0	0	0	0	0	0	0	0	0	0					

Date: DD Month YYYY. Noise: 0 = no noise; 1 = faint noise; 2 = moderate noise (probably cannot hear BLRA beyond 100m for >30 sec. of survey); 3 = loud noise (probably cannot hear BLRA beyond 50m for >30 sec. of survey); 4 = intense noise (probably cannot hear BLRA beyond 25m for >30 sec. of survey). Sky: 0 = clear or a few clouds; 1 = partly cloudy or variable sky; 2 = cloudy or overcast; 4 = fog/smoke; 5 = drizzle; 8 = showers. Time: 24 hr format. Call Type (list all calls in order they were heard): kickee-doo (KKD); growl (GRR), churt (CHR), or ink-ink-ink (INK).

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Surveyor Name: <u>A. Ramos</u>	Comments:
Date: <u>5/22/25</u>	
Wind Speed Type (circle): kts (##, Kestrel, 30 sec average) or Beaufort Scale (#)	

Point Identifier	BKGD Noise	Sky	Temp (°F)	Wind Speed (kts)	Start Time	Species BLRA or NO BLRA	Passive 1 0-1	Passive 2 1-2	Passive 3 2-3	Passive 4 3-4	Passive 5 4-5	KKD 5-6	Churt/Grr 6-7	Break 7-8	All Calls 8-9	Break 9-10	Outside Survey	Detected at previous point?	Distance (m)	Direction (bearing)	Call Type(s)
Station 10	2	0	74	2	6:20	NO BLRA	0	0	0	0	0	0	0	0	0	0					
9	2	0	74	1	6:43	NO BLRA	0	0	0	0	0	0	0	0	0	0					
8	2	0	74	1	6:57	NO BLRA	0	0	0	0	0	0	0	0	0	0					
7	3	0	75	2	7:15	NO BLRA	0	0	0	0	0	0	0	0	0	0					
6	1	0	76	2	7:31	NO BLRA	0	0	0	0	0	0	0	0	0	0					
5	3	0	77	2	7:48	NO BLRA	0	0	0	0	0	0	0	0	0	0					
4	2	0	78	2	8:03	NO BLRA	0	0	0	0	0	0	0	0	0	0					
3	2	0	78	2	8:17	NO BLRA	0	0	0	0	0	0	0	0	0	0					
2	1	0	79	2	8:38	NO BLRA	0	0	0	0	0	0	0	0	0	0					
1	2	0	80	2	8:54	NO BLRA	0	0	0	0	0	0	0	0	0	0					

Date: DD Month YYYY. Noise: 0 = no noise; 1 = faint noise; 2 = moderate noise (probably cannot hear BLRA beyond 100m for >30 sec. of survey); 3 = loud noise (probably cannot hear BLRA beyond 50m for >30 sec. of survey); 4 = intense noise (probably cannot hear BLRA beyond 25m for >30 sec. of survey). Sky: 0 = clear or a few clouds; 1 = partly cloudy or variable sky; 2 = cloudy or overcast; 4 = fog/smoke; 5 = drizzle; 8 = showers. Time: 24 hr format. Call Type (list all calls in order they were heard): kickee-doo (KKD); growl (GRR), churt (CHR), or ink-ink-ink (INK).

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Surveyor Name: <u>A. RAMOS</u>	Comments:
Date: <u>5/29/23</u>	
Wind Speed Type (circle): kts (#.#, Kestrel, 30 sec average) or <u>Beaufort Scale (#)</u>	

Point Identifier	BKND Noise	Sky	Temp (°F)	Wind Speed (kts)	Start Time	Species BLRA or NO BLRA	Passive 1	Passive 2	Passive 3	Passive 4	Passive 5	KKD	Churt/Grr	Break	All Calls	Break	Outside Survey	Detected at previous point?	Distance (m)	Direction (bearing)	Call Type(s)
							0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10					
Station 1	2	0	73	2	6:27	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 2	2	0	73	2	6:43	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 3	2	0	73	2	6:57	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 4	3	0	74	1	7:09	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 5	3	0	74	1	7:23	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 6	1	0	77	1	7:40	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 7	3	0	79	2	8:03	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 8	1	0	80	2	8:18	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 9	2	0	80	2	8:35	NO BLRA	0	0	0	0	0	0	0	0	0	0					
Station 10	1	0	80	2	8:56	NO BLRA	0	0	0	0	0	0	0	0	0	0					

Date: DD Month YYYY. Noise: 0 = no noise; 1 = faint noise; 2 = moderate noise (probably cannot hear BLRA beyond 100m for >30 sec. of survey); 3 = loud noise (probably cannot hear BLRA beyond 50m for >30 sec. of survey); 4 = intense noise (probably cannot hear BLRA beyond 25m for >30 sec. of survey). Sky: 0 = clear or a few clouds; 1 = partly cloudy or variable sky; 2 = cloudy or overcast; 4 = fog/smoke; 5 = drizzle; 8 = showers. Time: 24 hr format. Call Type (list all calls in order they were heard): kickee-doo (KKD); growl (GRR), churt (CHR), or ink-ink-ink (INK).

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