Andrew Conklin Environmental Services, LLC
Integrating Successful Development and Environmental Integrity

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October 21, 2024

Ms. Kamaldai Mohan
5060 Saturday Place
Cocoa, FL 32926

Re: 375 E. Merritt Avenue, Parcel No. 24-36-35-01-D-11.02, Merritt Island
ACES File No. 24612

Dear Ms. Mohan,

Andrew Conklin Environmental Services, LLC (ACES) has completed a review of environmental issues associated with the above-referenced +/-0.43-acre property. Figure 1 depicts the location of the subject site and Figure 2 is a recent aerial photograph of the lot and vicinity depicting current conditions thereon. On October 8, 2024, ACES inspected the site for the presence of wetlands, surface waters, protected species, and indications of protected species habitat. To assess the presence and extent of wetlands, we implemented the jurisdictional wetland identification methodology of the Florida Department of Environmental Protection (DEP), which incorporates an analysis of on-site vegetation, soils, and hydrology to determine the presence or absence of jurisdictional wetlands. Where jurisdictional wetlands were found to exist, ACES identified their boundaries on a recent aerial photograph of the site. The likelihood of protected species habitation was determined by identifying the various vegetative communities and habitat types currently present on the site and referencing these against standards and indicators used by the Florida Fish and Wildlife Conservation Commission (FWC) and the U.S. Fish and Wildlife Service (USFWS). Following is a presentation of our findings.

Soil Types

The USDA Natural Resource Conservation Service (NRCS) identifies one soil type on the site (see Figure 3). Soil maps are used by the environmental regulatory agencies as a general guideline to determine the likelihood of wetland and upland conditions on reviewed properties; soils more commonly associated with wetland conditions potentially indicate areas of lower elevation and greater surface hydrology, whereas soil types that are more commonly associated with uplands are expected to exhibit fewer or no wetland characteristics. Potentially hydric (i.e., wetland) soil types are listed in the *Hydric Soils of Florida Handbook* (Victor W. Carlisle, et al., 2007).

It should be noted that the original USDA soil survey of Brevard County was completed in 1974, and still remains the basis of the existing NRCS soils data; no new comprehensive field data has been generated for Brevard County since 1974. Due to this data gap, it is not uncommon for historical land uses, adjacent development, and drainage alterations to affect surface soils to the point where they might no longer reflect the conditions that were mapped in 1974.

ACES sampled soil types on the subject property by excavating cylindrical soil plugs from the surface, and assessing the soil profiles and characteristics of each plug. Following is a brief description of the soil type that is mapped on the subject site, compared to our observations of current soil conditions.

Myakka-Urban Land Complex – NRCS Code No. 39: This is a nearly level, poorly drained sandy soil found in urban areas that have been altered by historical land clearing, grading, and filling activities. It is not listed as a hydric soil by the *Hydric Soils of Florida Handbook.*

This non-hydric soil type is mapped over the entire site. With the exception of the southwest boundary, on-site soils are composed of non-hydric sand, with crushed concrete spread over the surface of the area west of the residential structure. The southwest boundary of the site includes submerged land and a narrow wetland fringe along the interface of uplands and open water. In this area, soils are perennially inundated or saturated to the surface.

Thus, our observations of soils on the site correspond fairly with the NRCS map. The current location of hydric soils on the property is roughly the same as the location of wetlands, as shown on Figure 4.

Community Types

Using the Florida Land Use, Cover and Forms Classification System (FLUCFCS) as a guideline, ACES categorized the natural communities and land uses on the subject parcel according to FLUCFCS designations and code numbers. Figure 4 depicts the FLUCFCS communities that are present on the property. These are:

Residential, Low Density – FLUCFCS Code No. 110: This upland land use includes the existing residential structure and driveway connecting it to East Merritt Avenue, an area of approximately 0.09 acres.

Herbaceous – FLUCFCS Code No. 310: This non-forested upland community exists south and east of the structure, occupying +/-0.08 acres. It is vegetated with a maintained cover of low-growing herbaceous species, including Bahia grass, tasselflower, Mexican clover, and flat sedge. A few live oaks and cabbage palms are also present. Underlying soils are composed of non-hydric sand imbedded with sandy organic bodies. No wetland hydrologic indicators are present.

Water – FLUCFCS Code No. 500: This category refers to waters of the perennially-inundated pond southwest of the property, the northeast limit of which runs along the southwest property line. Approximately 0.01 acres of open water are located on the site.

Wetland Shrub – FLUCFCS Code No. 631: This non-forested wetland category refers to a narrow +/-0.01-acre strip of wetlands that extends along the boundary between open water and uplands. It is vegetated with flat sedge, water primrose, marsh pennywort, and cattails. The underlying soil is composed of hydric mucky-textured sand.

Auto Parking – FLUCFCS Code No. 818: This upland land use occupies about 0.24 acres west of the house. It currently consists of a graded surface of crushed concrete over non-hydric sand. Although no vegetation is present, the aerial photo (Figure 2) indicates it was previously vegetated with low-growing species similar to those in the Herbaceous community. No wetland hydrologic indicators were observed.

Thus, the site contains a total of approximately 0.41 acres of uplands, with about 0.02 acres of wetlands and inundated land along the southwest site boundary.

Wetland Considerations

All topographical alteration or construction within wetlands is prohibited without the appropriate permits from DEP and Brevard County. Any time an applicant proposes to conduct work within wetlands, it must first be demonstrated that there is no way to accomplish the development goals without impacting wetlands. Because there already are sufficient uplands present to accommodate a single-family home, garage, driveway, septic system, yard space, etc., and since on-site uplands are directly accessible from E. Merritt Avenue, DEP and Brevard County are not expected to entertain any proposals to impact on-site wetlands. As such, wetland permitting and mitigation are not expected to be an issue on this site.

Protected Species

On the date of our site assessment, ACES assessed the property for any indications of habitation by protected wildlife species. This included examining the property for direct visual and auditory evidence of protected species themselves, as well as assessing the site for the presence of secondary indicators, such as burrows, nests, nesting cavities, scat, tracks, trails, bird rookeries, etc. Following is a presentation of our findings.

> Wading Birds: A variety of protected wading birds may occasionally be present within the Wetland Shrub and Water communities for foraging purposes. These include the tricolored heron, sandhill crane, and wood stork. There is no rookery habitat on the site to support nesting of any of these species, and none of these species were observed on the site during our inspection. Although it is possible that some or all of these species may be present from time to time along the southwest boundary of the site, such behavior is opportunistic, and not indicative of critical reliance on any on-site natural resources. Therefore, no special permits for potential impacts to these species are expected to be required.

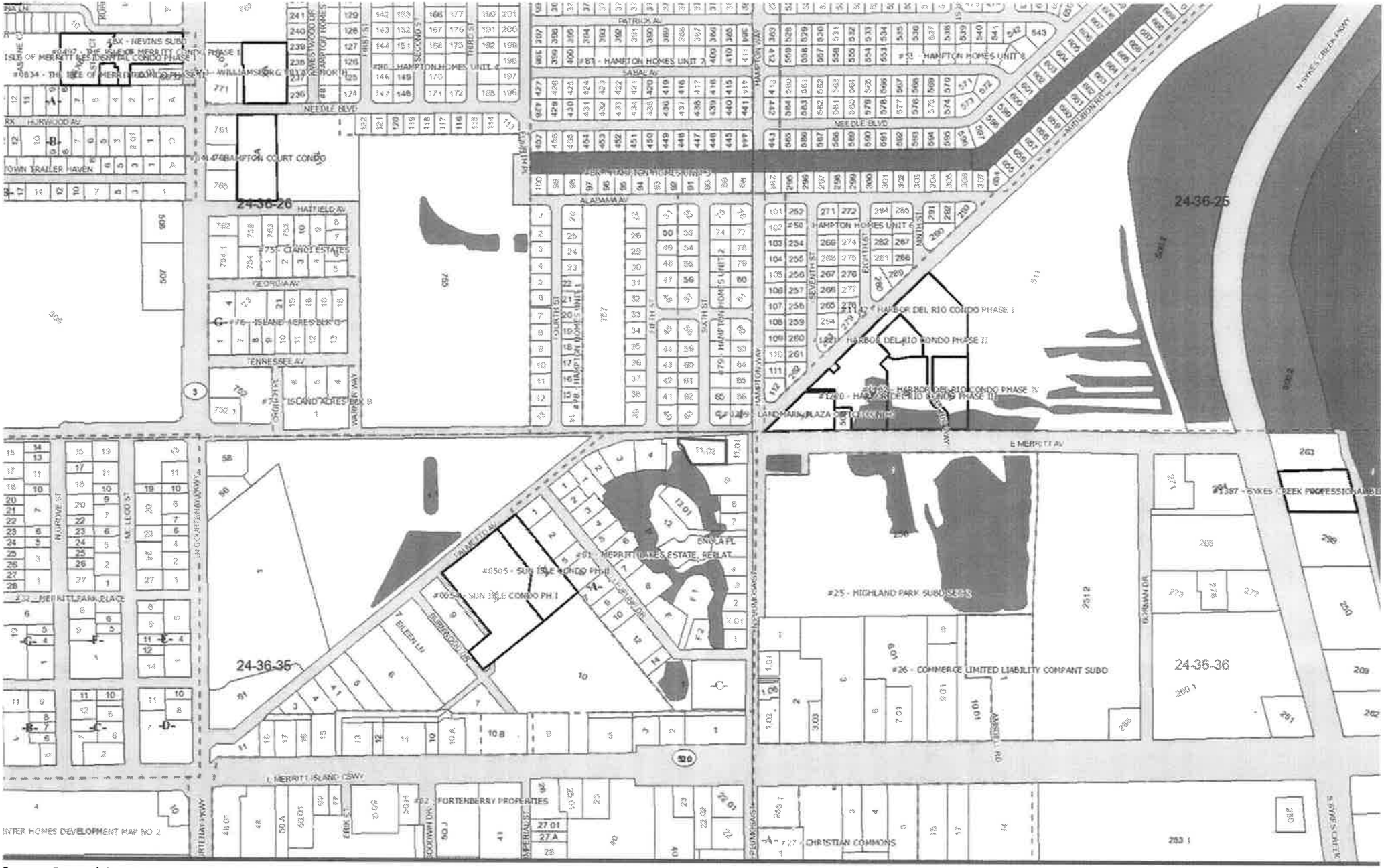
No other protected species or protected species habitat were observed on the property that might be affected by site development. Therefore, it is our determination that protected species are not likely be adversely affected by site development and/or management.

Summary and Conclusion

ACES has completed an environmental assessment of 375 E. Merritt Avenue in Merritt Island. It is our determination that the parcel consists of approximately 0.41 acres of uplands and approximately 0.02 acres of wetlands. The wetlands do not impede access to the on-site developable uplands, and there are more than sufficient uplands to support a single-family home, garage, septic system, and other amenities. As such, the wetland regulatory agencies are not expected to permit impacts to any wetlands on the site. No evidence of listed species was found on the property; we therefore do not expect that permits or mitigation for potential impacts to listed species will be required prior to site development. If you have any questions or need any further information, please do not hesitate to contact our office.

Sincerely,

Andrew Conklin – President, ACES, LLC



Source: Brevard County Property Appraiser

ACES File No. 24612 – 375 E. Merritt Ave.

Figure 1 – Location Map

-Property Boundary

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Source: Brevard County Property Appraiser

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Figure 2 – Aerial Site Photograph

-Property Boundary

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Source: USDA Natural Resources Conservation Service (NRCS)

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Figure 3 – NRCS Soils Map

-Property Boundary

3 – Myakka-Urban Land Complex (entire site)

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Source: Brevard County Property Appraiser
Codes referenced to the Florida Land Use Cover and Forms Classification System (FLUCFCS)

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Figure 4 – Environmental Survey Map

-Property Boundary

-FLUCFCS Community and Land Use Boundaries

-On-Site Wetlands, +/- 0.02 Acres

110 – Residential, Low Density
310 – Herbaceous
500 – Water
631 – Wetland Shrub
818 – Auto Parking

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