



---

---

*Housing Needs Analysis  
Ayrshire Residential Community  
Green Cove Springs, Florida*

---

---

*November, 2020*

*Prepared for  
**D.R. Horton**  
St. Johns, Florida*

*By  
**URBANOMICS, Inc**  
Ponte Vedra Beach, Florida*

## *Table of Contents*

---

<i>Section and Title</i>	<i>Page</i>
<b>1. Background and Summary</b>	<b>1</b>
Study Objective and Scope	1
Objective	1
Scope of Analysis	1
Project Site and Location	1
Summary of Findings	2
Housing Market Trends	2
Future Population Growth	3
Housing Demand/Needs	4
Implications for D.R. Horton's Ayrshire Community	4
<b>2. Market Characteristics and Trends</b>	<b>5</b>
Housing Market Characteristics	5
Housing Types and Mix	5
Housing and Household Characteristics	7
Housing Development Trends	9
Housing and Household Growth Trends	9
Residential Building Permit Trends	11
Housing Sales Trends	12
Existing Homes	12
New Single Family Homes	13
<b>3. Housing Demand/Market Needs</b>	<b>15</b>
Economic and Population Growth	15
Housing Demand/Market Needs	16
Green Cove Springs Planning District	16
Penney Farms/Asbury District	17
Implications for D.R. Horton's Ayrshire Community	18

# ***1. Background and Summary***

---

## ***STUDY OBJECTIVE AND SCOPE***

### ***Objective***

URBANOMICS, Inc., was retained by D.R. Horton to prepare a housing needs analysis for its proposed “Ayrshire” residential community in and adjacent to the City of Green Cove Springs. This “Needs Analysis” is required by the City to demonstrate the need for a Comprehensive Plan Amendment to accommodate the proposed development. As proposed, this community would contain a maximum of 2,750 housing units, including single-family homes on a mix of 40-foot and 50-foot lots and attached townhomes.

### ***Scope of Analysis***

This report analyzes and describes housing market characteristics of and trends in Clay County and the Green Cove Springs area as background for assessing and projecting demand (needs) for new housing to accommodate future population and household growth in the Green Cove Springs area. Analyses and findings are presented in three sections of this report.

A further description of the proposed development is provided in this section below, followed by an executive summary of key findings detailed in Sections 2 and 3. Section 2. Housing Market Characteristics and Trends details and analyzes trends in the numbers and types of residential building permits issued and in the numbers and prices of homes sold in recent years. The focus of this needs analysis is the Green Cove Springs zip code area (32043), and the Green Cove Springs Planning District, and the adjacent Penney Farms/Asbury Planning District. Planning Districts are those defined by the County.

Section 3. Housing Demand/Needs Analysis, presents analyses and projections of County and local area population and household growth to year 2040. These population and household projections provide the basis for assessing and projecting demand/needs for new housing units in the Green Cove Springs area, as needed to accommodate future numbers of new households.

## ***PROJECT SITE AND LOCATION***

The proposed site consists of property totaling approximately 890 acres located on the south side of the City of Green Cove Springs, as shown on the map below. The property is currently located in unincorporated Clay County and is proposed to be annexed into the City of Green Cove Springs.

The site is bounded along its east side by the CSX Railroad and on the west by County Road 15A (CR15A), S. Oakridge Avenue, a two-lane road linking State Road 16 (SR16) to the north and U.S. Highway 17 (US17) to the south. Green Cove Avenue is its northern border and the right-of-way of the proposed First Coast Expressway “outer beltway” is the southern boundary of the property. Future road connections are proposed to US17 on the northeastern side of the project and two locations on CR15A along the western boundary.



The 3,267-acre Governors Park development is also shown on the map. Approved in 2009, this Development of Regional Impact (DRI) is planned for 6,294 housing units, plus over 3.5 million square feet of commercial and industrial space. No development has taken place to date, as developers may be awaiting construction of the proposed First Coast Expressway interchange within the project boundary in the coming years.

## ***SUMMARY OF FINDINGS***

### ***Housing Market Trends***

- Clay County averaged 1,015 permits for new single-family homes annually in past five years, including 1,246 in 2019. The City of Green Cove Springs averaged 138 single-family home permits per year, including 167 in 2019. Single-family homes were 92.2 percent of all permitted housing units countywide.



- The market share of existing home sales in the Green Cove Springs area increased nearly threefold from 7.7 percent of countywide sales in 2015 to 19.4 percent in 2019.
- New single-family home sales in Zip Code 32043 increased from 20.4 percent of countywide sales in 2015 to 44.1 percent in 2020 through September. This is among a growing list of indicators that the Green Cove Springs area is becoming the emerging Clay County growth center.
- The average price for new single-family homes sold in 2020 through September is \$251,742, which is 90.3 percent of the countywide average. Most desirable were new homes priced from \$200,000 to \$225,000, which accounted for 32.7 percent of 2020 sales, followed by 18.2 percent for new homes sold from \$225,000 to \$250,000.
- Median household incomes in two St. Johns County zip code areas across the river from Green Cove Springs are twice that in Zip Code 32043. Wide differences in median incomes and housing prices indicates that the Green Cove Springs area may provide an attractive lower cost housing alternative to regional commuters. This is a very marketable feature as the First Coast Expressway progresses toward completion to I-95 over the next ten years.

### ***Future Population Growth***

- Demand or need for housing is driven by expected or projected growth of the local resident and seasonal population. For Clay County, the resident population is dominant, as the second homes and vacation housing are not a significant demand factor for most of the County.
- Projections of the resident population by County Planning District in five-year increments to 2040 are presented in the 2017 Evaluation and Appraisal Report of the Clay County 2040 Comprehensive Plan. They show the County adding 70,700 new residents from 2020 to 2040.
- Greatest population increases are projected for the Green Cove Springs Planning District and the adjacent Penney Farms/Asbury Planning District, which would add a projected 26,531 and 25,685 new residents, respectively. Projected population growth in these two Planning Districts account for a significant 73.9 percent of all countywide population growth from 2020 to 2040.
- Key reasons for this concentration of growth in central and southeastern sections of the County include an abundance open developable land and the expected economic impact of completing the construction of the First Coast Expressway “outer bypass” to I-95 in St. Johns County in the next ten years.

### *Housing Demand/Needs*

- Projected population growth in the Green Cove Springs Planning District and adjacent Penney Farms/Asbury Planning District will generate 9,906 and 9,016 new households, respectively, from 2020 to 2040. Household projections reflect average household sizes (persons per household) that vary by District.
- These new households will, in turn, generate demand/need for 10,851 and 9,735 new housing units, respectively, from 2020 to 2040. Projections of housing demand/needs are based on applying vacancy factors to household projections, inasmuch as some units are vacant until sold or rented to new occupants or are vacant for other reasons.
- Population projections in the 2040 County Comprehensive Plan's Evaluation and Appraisal Report are based in part on projections for Florida counties made by the University of Florida's Bureau of Economic and Business Research (BEBR). These projections tend to be conservative and may not fully reflect the potential impact of the completion of the First Coast Expressway on future housing demand in the County. It is entirely likely that the County, particularly the greater Green Cove Springs area, will experience a higher level of population and household growth and resultant housing demand/needs than indicated by existing County projections.

### *Implications for the D.R. Horton's Ayrshire Community*

- There are two large-scale approved developments in the Green Cove Springs Planning District – the Governors Park DRI and a small part of the Saratoga Springs DRI, which has been dormant for the 14 years since its approval. The two projects have a combined total of 7,570 housing units, compared to a demand/need for 10,851 units from 2020 to 2040.
- In addition, there are several much smaller residential projects in development and proposed in the Planning District, including Magnolia West (Phases 3 & 4), Edgewater Landing, Traceland, Black River Village, and Willow Springs. Altogether, these projects may another 500 un-permitted and un-built units.
- D.R. Horton proposes a maximum of 2,750 residential units in its Ayrshire community. The addition of this project would raise the number of potential new housing units to around 10,820, if and when all are fully built out. This is slightly less than the projected and potentially conservative demand for 10,851 housing units in the Green Cove Springs Planning District by 2040. The proposed Ayrshire community fits within projected demand/needs for new housing in Green Cove Springs area by 2040 and helps fulfill those needs.

## 2. Market Characteristics and Trends

### HOUSING MARKET CHARACTERISTICS

#### *Housing Types and Mix*

Details presented in the most recent 2010 US Census provide a useful starting point for characterizing, understanding, and analyzing the Clay County housing market. The market consists of a combination of site-built detached single family homes, attached and multifamily units, and mobile homes. Their numbers and market shares vary widely in different areas of the County, as shown in Table 1 by County Planning District.

Single-family homes are the dominant type, having accounted for 70.7 percent of all units in 2010, followed by multi-family units (16.0 percent) and mobile homes (13.2 percent). The largest concentration of single-family homes in 2010 was in the Doctors Inlet/Ridge district, with over 21,000 units and representing a 39.1 percent share of the County total.

Largest shares of multi-family units in 2010 were in the Orange Park and Doctors Inlet/Ridge districts, both with over 4,000 units, representing 33.7 and 32.7 percent shares of the County total, respectively. The largest concentration of mobile homes in 2010 was in the Middleburg/Clay Hill district, with nearly 4,000 units and representing a 38.9 percent share of the County total. The Keystone Heights district had almost 3,000 mobile homes in 2010, a 28.7 percent share of the County total.

**Table 1. Housing Mix by County Planning District, 2010**

Planning District	Single-Family (1)	Multi-family (2)	Mobile Home (3)	Total
Orange Park	6,491	4,145	6	10,650
Doctors Inlet/Ridge	21,153	4,019	1,512	26,694
Fleming Island	9,941	2,497	132	12,570
Middleburg/Clay Hill	2,665	98	3,931	6,694
Penney Farms/Asbury	4,614	547	489	5,650
<i>Green Cove Springs</i>	<i>4,349</i>	<i>748</i>	<i>1,133</i>	<i>6,210</i>
Keystone Heights	4,823	261	2,895	7,979
<b>TOTAL</b>	<b>54,046</b>	<b>12,303</b>	<b>10,098</b>	<b>76,447</b>

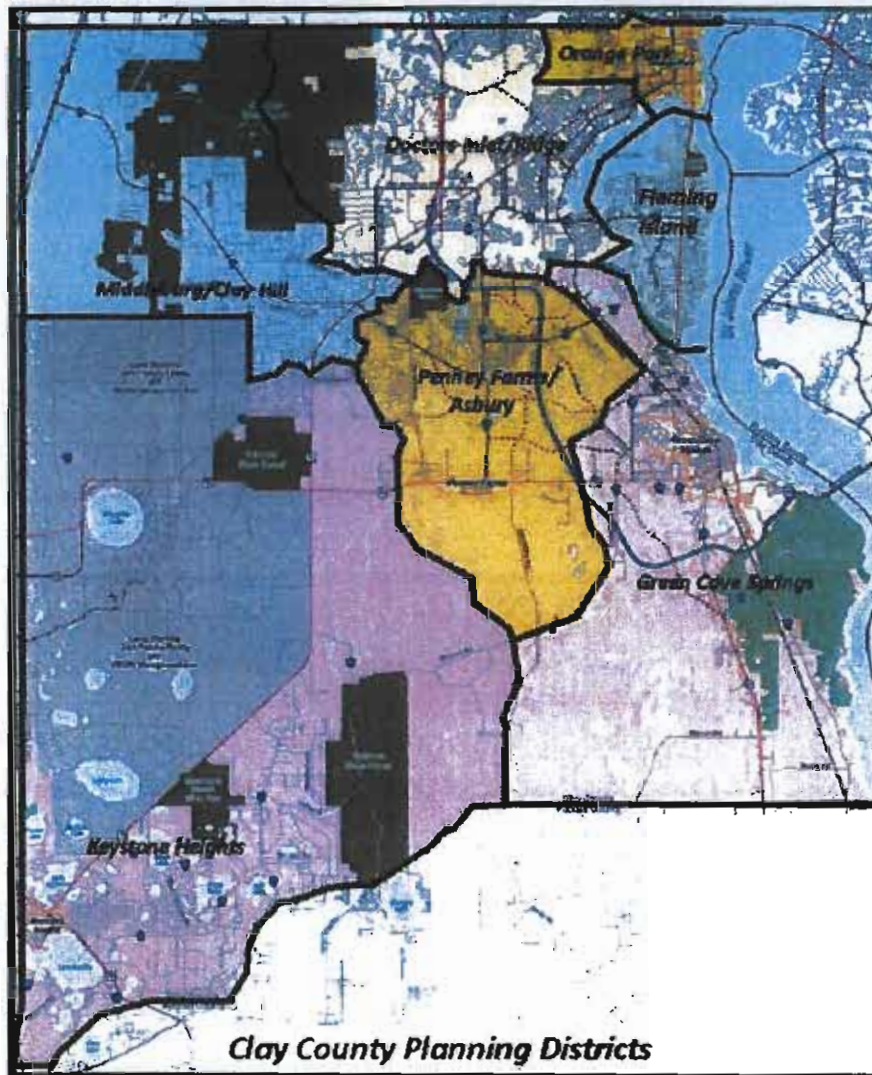
(1). Detached homes.

(2). Residential buildings with two or more units.

(3). Includes a small number of boats and unspecified residential structures.

Sources: www.usa.com (2010 Census data); URBANOMICS, Inc.





This report focuses on housing needs, demand, and opportunities in the Green Cove Springs district and adjacent Penney Farms/Asbury district. In 2010, these two districts accounted for a modest 15.5 percent combined share of all housing units in the County, including 8.1 percent of the County total in the Green Cove Springs district and 7.4 percent in the Penney Farms/Asbury district.

In contrast to the 71-16-13 percent (single family-multifamily-mobile home) mix of housing types countywide in 2010, the mix was 70-12-18 percent in the Green Cove Springs district and 81-10-9 in the Penney Farms/Asbury district. As development in these two districts continues in the future, as projected, and they become more suburban, the mix of housing types is very likely to become more like that in the Doctors Inlet/Ridge and Fleming Island districts, which in 2010 had a combined 79-17-4 percent housing mix of single-family, multi-family, and mobile homes.



***Housing and Household Characteristics***

Housing and household characteristics detailed by Census Tract in the 2010 Census include housing vacancy rate, average household size (i.e., number of persons per household), and the percentage of owner-occupied households. Census Tract data grouped by Planning District for these factors, plus the numbers of housing units and households, are presented in Table 2. **Note:** Numbers of housing units in Table 2 do not match those in Table 1 above, as two different online sources of Census Tract data were used. These differences, however, have little or no effect on the housing and household characteristics analyzed in this subsection.

***Housing Vacancy Rate.*** A countywide housing vacancy rate in 2010 of 8.9 percent occurred during the depth of the national economic downturn that began in 2008 and has long since come back. The Green Cove Springs district had the second highest vacancy rate (10.8 percent) at that time, but has long since dropped into single digits. The Keystone Heights district had the highest vacancy rate (15.6 percent) in 2010. However, 40 percent of vacant units in this district were classified as seasonal, indicating that the vacancy rate for year-round units would have been much lower. Only 10 percent of vacant units in the Green Cove Springs district were seasonal.

***Table 2. Selected Housing Characteristics by County Planning District, 2010***

Planning District	Number of Housing Units	Vacancy Rate (%)	Number of Households	Persons Per Household	Occupied by Owner (%)
Orange Park	10,361	9.2	9,657	2.45	58.0
Doctors Inlet/Ridge	26,041	8.0	23,956	2.90	78.3
Fleming Island	12,401	5.9	11,674	2.77	80.1
Middleburg/Clay Hill	6,895	8.3	6,121	2.90	86.0
Penney Farms/Asbury	5,493	7.8	5,066	2.82	80.6
<b><i>Green Cove Springs</i></b>	<b><i>5,937</i></b>	<b><i>10.8</i></b>	<b><i>5,297</i></b>	<b><i>2.59</i></b>	<b><i>71.7</i></b>
Keystone Heights	8,080	15.6	6,821	2.62	83.6
<b>TOTAL</b>	<b>75,478</b>	<b>8.9</b>	<b>68,592</b>	<b>2.76</b>	<b>76.6</b>

Source: usboundary.com (2010 Census Data); URBANOMICS, Inc.

***Average Household Size.*** The countywide average household size in 2010 was 2.76 persons. This average varied widely among districts, from a low of 2.45 in the Orange Park district to highs of 2.90 in the Doctors Inlet/Ridge and Middleburg/Clay Hill districts. Averages in the Green Cove Springs and Penney Farms/Asbury districts, respectively, were 2.59 and 2.82. The Green Cove Springs district average household size will increase over time toward the county average as new residential development occurs, including the Governors Park development and D.R. Horton’s proposed Ayrshire community.

**Home Ownership.** The countywide homeownership rate in 2010 was 76.6 percent. Four of seven Planning Districts had ownership rates over 80 percent. The Orange Park district had the lowest rate (58.0 percent), largely because of its high percentage of rental apartments. The ownership rate in the Green Cove Springs district will increase over time from 71.7 percent in 2010 as planned and proposed residential communities develop and completion of the First Coast Outer Beltway draws new residents to this part of the county.

**Household Income.** Household income is central to determining the ability to purchase or rent housing and the marketable price of housing. In this regard, the estimated median household income in Clay County is 11 percent higher than that in Duval County (\$56,359) and 95 percent of that in Nassau County (\$66,106), but only 75 percent of that in St. Johns County (\$82,970).

**Table 3. Household Income by Zip Code Area, 2020**

Zip Code	Median Household Income (\$)	Avg. Household Income (\$)
32073 - Orange Park	57,723	76,714
32065 - Orange Park	66,761	82,872
32003 - Fleming Island	90,172	110,261
32068 - Middleburg	59,697	76,560
<b>32043 - Green Cove Springs</b>	<b>58,947</b>	<b>77,247</b>
32656 - Keystone Heights	50,871	63,208
Clay County	62,545	81,079

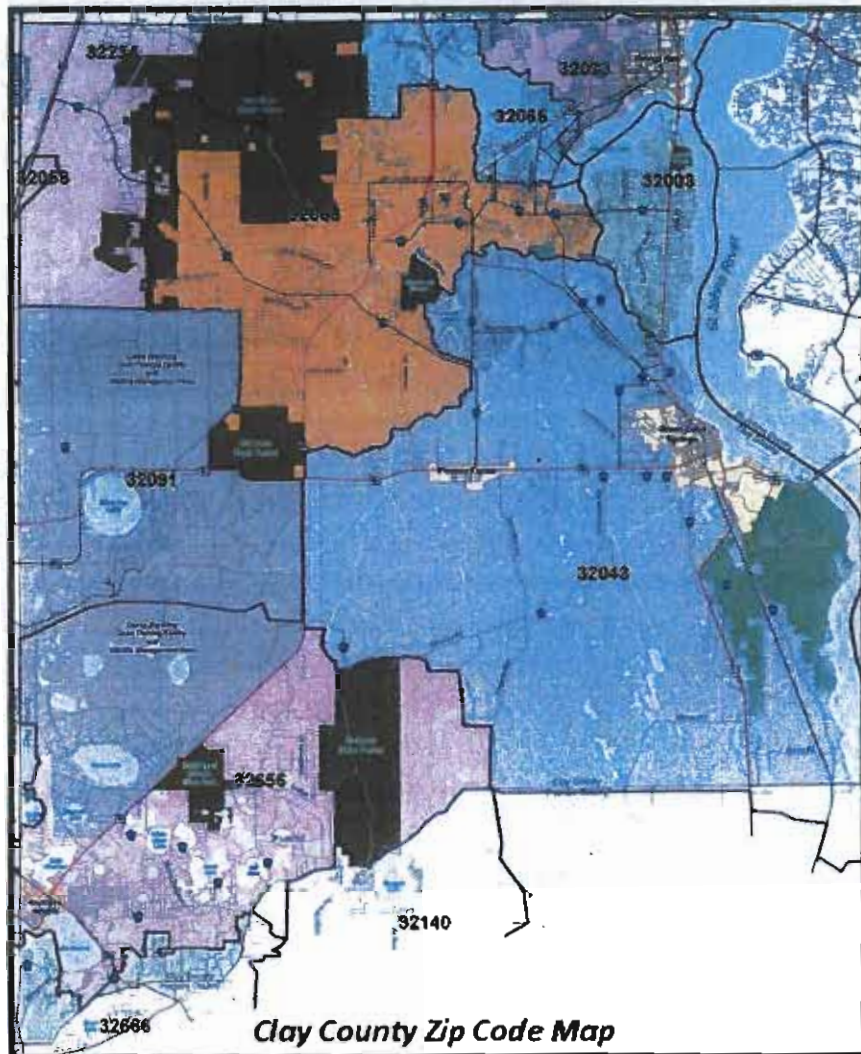
Source: florida.hometownlocator.com; URBANOMICS, Inc.

Clay County Zip Codes with the highest median incomes have been the most active housing markets in recent years. These are Zip Code 32065, including the Oakleaf Plantation area with a median income of \$66,761, and Zip Code 32003, Fleming Island, with a median income of \$90,172.

The Penney Farms/Asbury district has become an area of significant market activity. This area is included mostly in Zip Code 32043, Green Cove Springs, and partly in Zip Code 32068, Middleburg. Both areas have median incomes slightly lower than the County average.

Median incomes in Zip Code 32043 are certain to rise in the future with continued residential development in the Lake Asbury area and development of Governors Park and other residential projects near Green Cove Springs. These will benefit from the construction and eventual completion of the First Coast Expressway link to I-95 in St. Johns County, just as the Oakleaf area benefits from its Expressway linkage to I-10 and employment centers in northern and western Duval County.





St. Johns County zip code areas directly across the river from Green Cove Springs, 32259 (St. Johns/Fruit Cove) and 32092 (St. Augustine/World Golf Village), have current median incomes approximately twice that of the Green Cove Springs zip code area. Median household income in 32259 is \$112,159 and 32092 is \$101,775. Current high average housing prices in Northwest St. Johns County are evidence of these high median incomes. **The Green Cove Springs area provides a lower housing cost alternative to Northwest St. Johns County, which is likely to become an attractive and marketable feature as the First Coast Expressway moves toward completion.**

***HOUSING DEVELOPMENT TRENDS***

***Housing and Household Growth Trends***

Clay County added an estimated 10,927 new housing units and 11,793 new households from 2010 to 2020, averaging 993 units and 1,072 households per year over the eleven-year period



(Table 4). Numbers of new households exceeded new housing units during this period due to the re-occupancy of many existing housing units that were vacant during the national economic downturn that began in 2008 and adversely affected the real estate market for several years.

Leading the way in terms of new housing units and new households added from 2010 to 2020 were Zip Codes 32068 and 32065, which added a combined 5,855 housing units and 6,217 households. These were followed by Zip Code 32043, Green Cove Springs, which added 1,774 housing units and 1,965 households, averaging 161 new housing units and 179 new households annually.

**Table 4. Housing Unit and Household Growth Trends by Zip Code, 2010-2020**

Zip Code Area	Housing Units			Households		
	2010	2020	Growth	2010	2020	Growth
32073 - Orange Park	16,219	17,312	1,093	14,871	16,105	1,234
32065 - Orange Park	12,339	15,184	2,845	11,166	14,177	3,011
32003 - Fleming Island	10,140	11,581	1,441	9,821	11,004	1,183
32068 - Middleburg	19,029	22,040	3,011	17,608	20,814	3,206
<b>32043 - Green Cove Springs (1)</b>	<b>10,000</b>	<b>11,774</b>	<b>1,774</b>	<b>9,054</b>	<b>11,019</b>	<b>1,965</b>
32656 - Keystone Heights	6,489	7,248	759	5,498	6,154	656
Other Zip Codes (2)	1,262	1,266	4	574	1,112	538
<b>County</b>	<b>75,478</b>	<b>86,405</b>	<b>10,927</b>	<b>68,592</b>	<b>80,385</b>	<b>11,793</b>

(1). Estimates include Zip Code 32079, Penney Farms

(2). Other Zip Code areas with partial overlaps in western and southern Clay County include 32666 (Melrose), 32234 (Baldwin), 32091 (Starke), and 32058 (Lawtey).

Source: [unitedstateszipcodes.org](http://unitedstateszipcodes.org) (2010 Census); [florida.hometownlocator.com](http://florida.hometownlocator.com) (2020 ests.); URBANOMICS, Inc.

Totals in Table 4 include comparatively small numbers of housing units and households located in four rural zip code areas that partially overlap Clay County along its western and southwestern borders. The Melrose Zip Code 32666 (Putnam County) adjoins the Keystone Heights area and is the most developed of the four. The largest overlapping area is the Starke Zip Code 32091 (Bradford County), which includes a large section of Camp Blanding and the Kingsley Lake area in Clay County.

The northwestern corner of the County is overlapped by the sparsely populated Baldwin ZIP Code 32234 (Duval County) and a small undeveloped portion of the Lawtey Zip Code 32058 (Bradford County). These four zip code areas account for an estimated 2020 total of 1,266 housing units and 1,112 households in Clay County.

### ***Residential Building Permit Trends***

**Countywide.** Permits were issued for 7,856 new housing units countywide in the past ten years (2010-2019), including 7,255 single-family homes and 601 multi-family units (Table 4). Permits for all units have averaged over 1,000 per year for the past seven years, peaking in 2019 with 1,320 units permitted. Year 2000 is on pace through August to top 1,000 units, even in light of the COVID-19 pandemic, although it is likely to fall well short of 2019 peak by year end.

Single-family homes peaked in 2019 with 1,246 units permitted. The housing market has rebounded well after the national economic downturn that began in 2008. The low point was 2009, in which only 459 single-family homes were permitted. Single-family permits have averaged 1,015 annually since 2015. The high point in recent decades, however, was 2005 when 3,831 single-family homes were permitted.

**Table 4. Building Permit Trends, Clay County and Green Cove Springs, 2010-2020**

Year	Clay County			Green Cove Springs			Share of County (%)	
	SF	MF	Total	SF	MF	Total	SF	MF
2020, thru August	656	23	679	30	21	51	4.6	91.3
2019, thru August	801	0	801	108	0	108	13.5	0.0
2019	1,246	74	1,320	167	0	167	13.4	0.0
2018	900	0	900	107	0	107	11.9	0.0
2017	981	133	1,014	131	0	131	13.4	0.0
2016	1,046	144	1,190	144	0	144	13.8	0.0
2015	902	80	982	142	0	142	15.7	0.0
2014	813	102	915	47	0	47	5.8	0.0
2013	948	12	960	29	0	29	3.1	0.0
2012	669	26	695	13	0	13	1.9	0.0
2011	468	7	475	3	0	3	0.6	0.0
2010	528	23	551	13	0	13	2.5	0.0
<b>Total, 2010-2019</b>	<b>7,255</b>	<b>601</b>	<b>7,856</b>	<b>796</b>	<b>21</b>	<b>817</b>	<b>11.0</b>	<b>3.5</b>
<b>Annual Averages</b>								
2015-2019	1,015	86	1,101	138	0	138	13.6	0.0
2010-2014	685	34	719	21	0	21	3.1	0.0

SF – Single-family

MF – Multi-family

Source: US Dept. Housing and Urban Development, SCODC Building Permit Database; URBANOMICS, Inc.

Permits for new multi-family units vary significantly year-to-year. The recent peak period was 2014-2017, when 459 units were permitted, including a high of 144 units in 2016. Only 74 units were permitted in the last two years (2018-2019). The high point in recent decades was 2006, when 1,076 multi-family units were permitted.

**Green Cove Springs.** Interestingly if not surprisingly, permits for new single-family homes in the City of Green Cove Springs since 2010 account for 11.0 percent of the countywide total, including 13.6 percent of countywide permits since 2015. Permits for new single family homes in Green Cove Springs have averaged 138 annually since 2015, peaking in 2019 with 167 units permitted. On the other hand, no new multi-family units were permitted in the City in the last 10 years, although 21 new units have been permitted in 2020 through August.

**Active Developments.** Building permits issued for single-family homes in the Green Cove Springs zip code area (32043) are shown in Table 6 from 2105 to 2020 through October for seven active developments. Of these, Magnolia West is in the City. These seven active projects accounted for a 37.2 percent share of countywide single-family housing permits in 2019. **These and many other planned and proposed residential developments will continue and expand the Green Cove Springs area as Clay County’s emerging growth center.**

**Table 6. Single Family Building Permits in Active Developments, 2015-2020**

Development	2015	2016	2017	2018	2019	2020 (1)	TOTAL
Black Creek Village	---	---	---	25	40	13	78
Cross Creek	---	---	---	---	193	57	250
Edgewater Landing	---	12	27	28	38	36	141
Magnolia West	83	70	84	78	88	29	432
Rolling Hills	56	77	97	19	43	15	302
Royal Pointe	16	8	32	36	26	18	136
Traceland				3	36	42	83

(1). Through October

Source: Clay County building permit and property records; URBANOMICS, Inc.

## **HOUSING SALES TRENDS**

### **Existing Homes**

Sales of existing homes for five Clay County market areas, as defined by the Northeast Florida Association of Realtors (NEFAR), are shown in Table 7. These closed sales totals include mixes of existing single-family homes, condominiums, and townhomes and new construction homes that vary widely by county and market area in Northeast Florida. For example, the Clay County mix in 2019 consists of 12.0 percent new construction homes and 9.6 percent condos and



townhomes. The mix in the Green Cove Springs market area in 2019 consists of 29.8 percent new construction homes and only 0.9 percent condos and townhomes.

Despite widely different mixes of unit types among areas, the overall number of sales provide a gauge of market area trends and strength. The Green Cove Springs area has a growing share of all housing sales in Clay County, increasing nearly threefold from only 7.7 percent in 2015 to 19.4 percent in 2019 countywide sales.

**Table 7. Existing Home Sales Trends by Market Area, 2015-2020**

Market Area	2015	2016	2017	2018	2019	2020 (1)
12 – Fleming Island	595	631	677	618	612	511
13 – Orange Park	1,828	1,739	1,765	1,532	1,563	1,130
14 – Middleburg	984	1,003	962	970	1,115	806
15 – Keystone Heights	174	179	220	194	196	144
16 – Green Cove Springs	282	271	294	486	644	622
<b>Total – Clay County</b>	<b>3,683</b>	<b>3,777</b>	<b>3,896</b>	<b>3,773</b>	<b>4,130</b>	<b>3,199</b>

(1). Through September

Source: Northeast Florida Association of Realtors (NEFAR); URBANOMICS, Inc.

***New Single-Family Homes***

**Number of Sales.** An upward trend for the Green Cove Springs area (Zip Code 32043) is also shown in Table 8 for sales of new single-family homes, which increased from a 20.4 percent share of the countywide total in 2015 to a 44.1 percent share in 2020 through September. The number of new homes sold has more than doubled from 192 in 2015 to 401 in 2020 through September. Through September, 2020 is on pace to reach 535 single-family homes sold by year end, which would be nearly a threefold increase in the number of homes sold from 2015.

**Table 8. New Single Family Home Sales, 2015-2020**

Area	2015	2016	2017	2018	2019	2020 (1)
<b><i>Number of New Homes Sold</i></b>						
Green Cove Springs (32043)	192	257	294	234	321	401
Clay County	940	1,035	952	906	893	910
Percent of County Sales	20.4	24.8	30.9	25.8	36.0	44.1
<b><i>Average Price of New Homes Sold</i></b>						
Green Cove Springs	234,746	241,964	245,691	280,385	236,307	251,742
Clay County	240,446	246,595	258,577	286,840	266,875	278,849
Percent of County Average	97.6	98.1	95.0	97.7	88.5	90.3

(1). Through September

Source: Metro Market Trends; URBANOMICS, Inc.

Number of new single-family homes sold in six active developments in the Green Cove Springs area (Zip Code 32043) are shown in Table 9. These developments represent 83.8 percent of all new homes sold in 2019 and 89.3 percent of sales in 2020 through September. Magnolia West was the leader in 2019 with 124 of 321 sales (38.6 percent) in the zip code area. Cross Creek is the leader in 2020 with 157 of 401 sales (39.1 percent).

**Table 9. Number of New Homes Sold, Selected Developments, 2015-2020**

Development	2015	2016	2017	2018	2019	2020 (1)
Cross Creek	---	---	---	---	70	157
Edgewater Landing	---	---	14	21	28	40
Magnolia West	58	72	78	48	124	75
Rolling Hills	31	79	66	58	28	18
Royal Pointe	15	9	10	25	10	4
Traceland	---	---	---	---	9	64
Zip Code 32043	192	257	244	234	321	401

(1). Through September

Source: Metro Market Trends; URBANOMICS, Inc.

The price distribution of the 401 new homes sold in Zip Code 32043 in 2020 is shown in Table 10. The leading market segment is the \$200,000-\$225,000 price range with 32.7 percent of sales. This is followed by the \$225,000-\$250,000 segment with 18.2 percent of sales and the \$250,000-\$275,000 segment with 10.7 percent of sales. These segments total 61.6 percent of sales.

**Table 10. New Single-Family Home Sales by Price Range, Zip Code 32043, 2020 (1)**

Price Range	Number Sold	Percent of Total
Under \$175,000	16	4.0
\$175,000-\$200,000	34	8.5
\$200,000-\$225,000	131	32.7
\$225,000-\$250,000	73	18.2
\$250,000-\$275,000	43	10.7
\$275,000-\$300,000	21	5.2
\$300,000-\$325,000	30	7.5
\$325,000-\$350,000	21	5.2
\$350,000-\$400,000	28	7.0
Over \$400,000	4	1.0
<b>TOTAL</b>	<b>401</b>	<b>100.0</b>

(1). Through September

Source: Metro Market Trends; URBANOMICS, Inc.

### ***3. Housing Demand/Market Needs***

#### ***ECONOMIC AND POPULATION GROWTH***

Demand and need for housing in an area is driven by the composition and growth of regional and local economies and by a range of demographic and economic factors, which in turn drive growth of the regional and local populations and household formation. These drivers include availability of and access to employment, availability and quality of community infrastructure and services, including educational and medical services, and various other quality of life factors.

Among the many factors that drive or affect economic, population, and household growth and resulting demand/need for housing in Clay County is the presence and eventual completion of the First Coast Expressway linking I-10 to the north in Jacksonville with I-95 to the east in St. Johns County, providing a western outer bypass around the urban center. Growth impacts of this outer bypass are already evident in the north central (Oakleaf) area of Clay County and are increasing rapidly in the central (Lake Asbury) and southeastern (Green Cove Springs) areas of the County.

This growth trend is recognized by population projections for the County and its seven Planning Districts presented in Table 5 of the Evaluation and Appraisal Report of the Clay County 2040 Comprehensive Plan. This report presents data and analyses supporting the Future Land Use Element of the Comprehensive Plan. Table 11 below presents the same 2020-2040 population projections for the County and its seven Planning Districts as are presented in Table 5 (pg. 52) of the Evaluation and Appraisal Report.

***Table 11. Population Estimates and Projections by Planning District, 2010-2040***

Planning District	2010	Projected				
		2020	2025	2030	2035	2040
Middleburg/Clay Hill	18,888	19,216	19,054	18,793	18,611	18,502
Doctors Inlet/Ridgewood	73,900	87,894	94,105	94,095	98,807	104,016
Orange Park	25,069	26,154	27,067	27,608	28,106	28,659
Fleming Island	27,126	28,644	29,275	28,831	28,535	28,424
<i>Green Cove Springs</i>	<i>14,318</i>	<i>18,419</i>	<i>21,775</i>	<i>32,105</i>	<i>38,881</i>	<i>44,950</i>
<i>Penney Farms/Asbury</i>	<i>14,183</i>	<i>24,899</i>	<i>34,365</i>	<i>42,032</i>	<i>46,981</i>	<i>50,584</i>
Keystone Heights	17,381	18,174	18,558	18,635	18,780	18,963
<b>TOTAL</b>	<b>190,865</b>	<b>223,400</b>	<b>244,200</b>	<b>262,100</b>	<b>278,700</b>	<b>294,100</b>

Source: Clay County 2040 Comprehensive Plan, Evaluation and Appraisal Report; URBANOMICS, Inc.



Several noteworthy inferences can be drawn from these projections:

- The Clay County population is projected to increase by 70,700 persons from 2020 to 2040.
- The population of the Green Cove Springs Planning District is projected to increase by 26,531 from 2020 to 2040, which is 37.5 percent of countywide population growth.
- The population of the adjacent Penney Farms/Asbury Planning District is projected to increase by 25,685 from 2020 to 2040, which is 36.3 percent of countywide population growth.
- Projected 2020-2040 population growth in the two Planning Districts together represents nearly three-fourths (73.8 percent) of countywide growth over the next 20 years.
- Growth projections for the greater Green Cove Springs area reflect an abundance of open, developable land and the expected influence and economic impact of progress toward completion of the First Coast Expressway through the local area and across the St. Johns River to I-95 in St. Johns County over the next ten years and its continuing economic impact in the years beyond.

## ***HOUSING DEMAND/MARKET NEEDS***

### ***Green Cove Springs Planning District***

Estimates and projections of demand/needs for new housing units in this Planning District are derived from the numbers of new households generated by projected population growth of 26,531 new residents from 2020 to 2040. This population growth will generate a projected 9,906 new households by 2040, as shown in Table 12. A Planning District map is included on page 18.

Projected growth of the number of households is based on the average size of households in the District. It is assumed that average household size will increase over time from 2.59 persons, as determined in the 2010 Census, toward the countywide average of 2.76 persons per household. Assumed increased household sizes are shown in Table 12.

Numbers of housing units needed to accommodate new households are determined by applying a vacancy factor to account for vacant or unoccupied housing units that are for sale, for rent, or are vacant for other reasons. The 2010 reported a high 10.8 percent vacancy rate for the Green Cove Springs Planning District, which was at or near its low point during the collapse on the national real estate market. The vacancy rate is expected to improve over time to a more normal 8.0 percent by 2040.

**Table 12. Projected Households and Housing Demand/Needs, 2020-2040**

Area and Parameter	2020 to 2025	2025 to 2030	2030 to 2035	2035 to 2040	Total 2020-2040
<i>Green Cove Springs Planning District</i>					
Population Growth (Table 11)	3,356	10,330	6,776	6,069	26,531
Population in Households (1)	3,322	10,227	6,708	6,008	26,265
Population Per Household (2)	2.62	2.64	2.66	2.68	---
New Households Added	1,268	3,874	2,522	2,242	9,906
Housing Vacancy Rate (%) (3)	9.50	9.00	8.50	8.00	---
<b>Housing Demand/Needs</b>	<b>1,401</b>	<b>4,257</b>	<b>2,756</b>	<b>2,437</b>	<b>10,851</b>
<i>Penney Farms/Asbury Planning District</i>					
Population Growth (Table 11)	9,466	7,667	4,949	3,603	25,685
Population in Households (1)	9,371	7,590	4,900	3,567	24,428
Population Per Household (4)	2.82	2.82	2.82	2.82	---
New Households Added	3,323	2,691	1,738	1,264	9,016
Housing Vacancy Rate (%) (5)	7.50	7.40	7.30	7.20	---
<b>Housing Demand/Needs</b>	<b>3,592</b>	<b>2,906</b>	<b>1,875</b>	<b>1,362</b>	<b>9,735</b>
<i>Total-- Both Planning Districts</i>					
<b>Housing Demand/Needs</b>	<b>4,993</b>	<b>7,163</b>	<b>4,631</b>	<b>3,799</b>	<b>20,586</b>

(1). Population in households assumed to be 99.0 percent of total population; remainder lives in group quarters.

(2). Average household size assumed to increase over time from 2.59 in 2010.

(3). Vacancy rate is assumed to decline over time from 10.8 percent in 2010.

(4). Average household size assumed to remain the same at 2.82 in 2010.

(5). Vacancy rate is assumed to decline slightly over time from 7.70 percent in 2010.

Source: URBANOMICS, Inc.

The number of new housing units needed from 2020 to 2040 to accommodate a projected 9,906 new households in the Green Cove Springs Planning District is 10,851, as shown in Table 12.

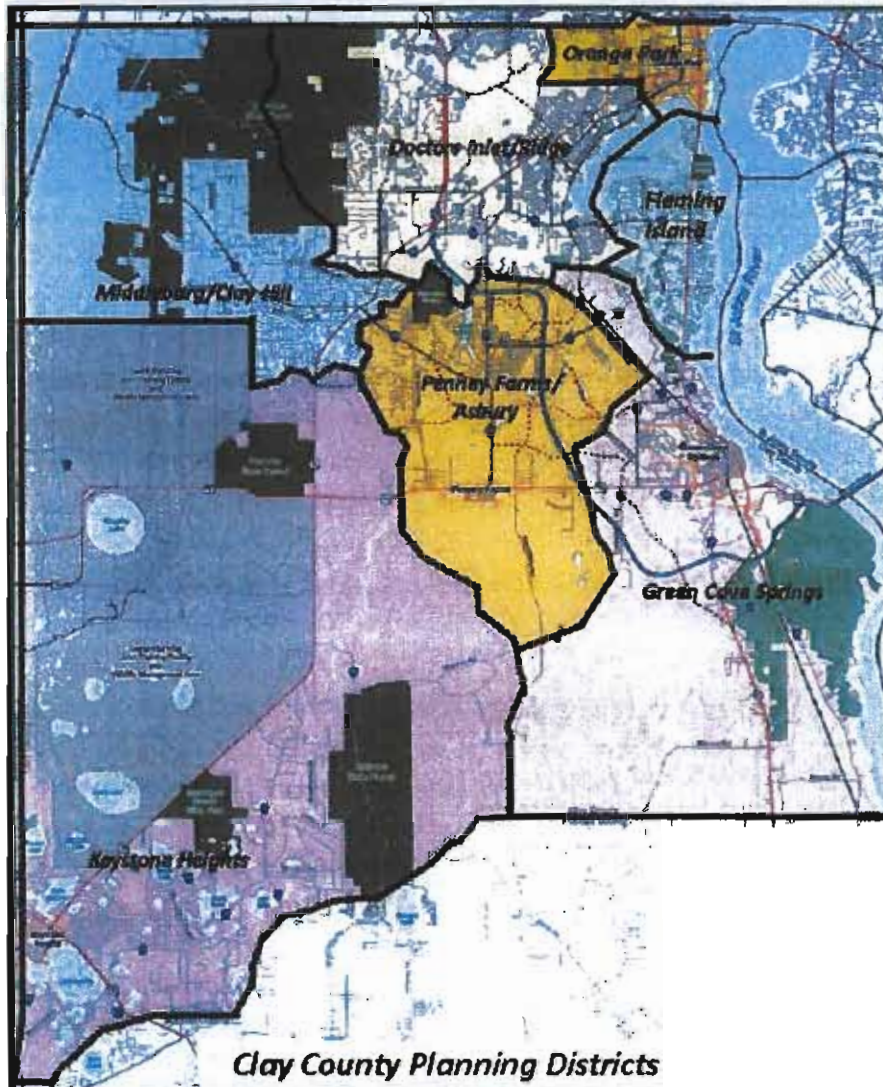
### ***Penney Farms/Asbury Planning District***

Demand/needs for new housing from 2020 to 2040 are similarly analyzed and projected for the Penney Farms/Asbury Planning District, inasmuch as a major portion of the District shares the Green Cove Springs Zip Code 32043.

The District population is projected to grow by 25,685 new residents from 2020 to 2040, which will generate 9,016 new households over the next 20 years. This is based on the assumption that average household size will continue at its 2010 Census average of 2.82 persons per household, which is higher than the countywide average. This District tends to attract larger families with children of school age.



This District also has a comparatively low housing vacancy rate that is expected to trend slightly lower over time from the 7.7 percent reported in the 2010 Census. The projected number of new housing units needed to accommodate 9,016 new households in this District from 2020 to 2040 is 9,735, as shown in Table 12 above.



### ***IMPLICATIONS FOR D.R. HORTON'S AYRSHIRE COMMUNITY***

The Governors Park DRI and part of the Saratoga Springs DRI are located in the Green Cove Springs Planning District. Governors Park has a planned total of 6,294 housing units, and is likely to take 20 or more years to be fully built out. The majority of Saratoga Springs is in the Penney Farms/Asbury Planning District. That portion in the Green Cove Springs Planning District (approximately 30 percent) would accommodate an estimated 1,276 of a planned total



of 4,256 housing at full buildout. The project has been dormant during the 14 years since its approval in 2006, and its future development is unclear at this time. On the assumption that both Governors Park and Saratoga Springs can reach full buildout by 2040, they would account for a combined total of 7,570 housing units, compared to a projected demand/need for 10,851 housing units in the Green Cove Springs Planning District by 2040.

In addition, there are several, much smaller residential projects in development and proposed in the Green Cove Springs Planning District, including Magnolia West (Phases 3 & 4), Edgewater Landing, Traceland, Black River Village, and Willow Springs. Altogether, these projects may have as many as another 500 un-permitted and un-built units. Approved, planned, and proposed residential developments in Green Cove Springs Zip Code 32043 are listed in Table 13 below and shown in the accompanying map on page 20. This zip code area includes all of the Green Cove Springs Planning District and a most of the Penney Farms/Asbury Planning District.

**Table 13. Significant Active, Planned, and Proposed Developments, Zip Code 32043**

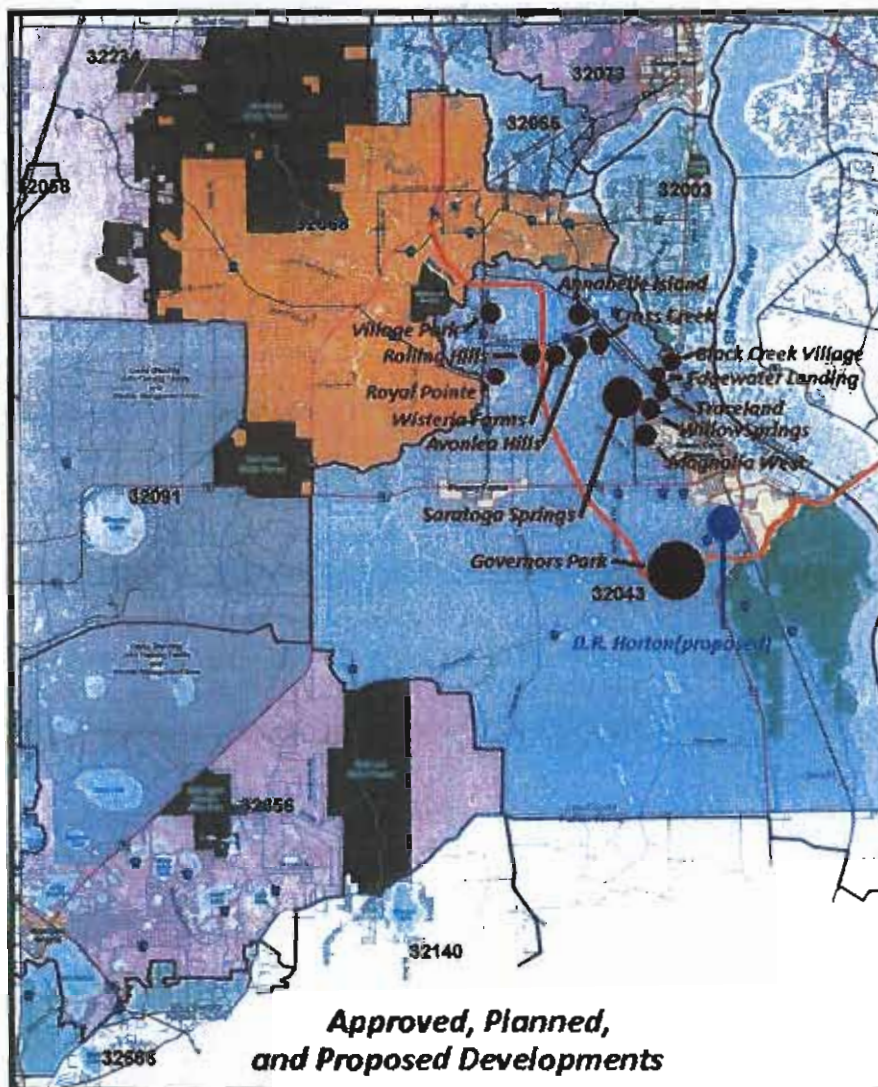
Development	Housing Units	Status
<i>Penney Farms/Asbury Planning District</i>		
Saratoga Springs DRI (part)	2,980	Approved; undeveloped
Cross Creek	998	Developing
Wisteria Farms	847	Proposed
Annabelle Island	773	Proposed
Avonlea Hills	754	Proposed
Reinhold North	725	Proposed
Village Park	648	Developing
<i>Green Cove Springs Planning District</i>		
Governors Park DRI	6,294	Approved; undeveloped
Saratoga Springs DRI (part)	1,276	Approved; undeveloped
Willow Springs	379	Proposed
Magnolia West, Phases 3 & 4	194	Developing
Edgewater Landing	171	Developing
Traceland	107	Developing

Source: Various local reports; URBANOMICS, Inc.

D.R. Horton’s proposed Ayrshire community would add a maximum of 2,750 new housing units, and would raise the number of potential new housing units in the Green Cove Springs Planning District to a total of 10,820, if and when all are fully built out. This total of potential new units is slightly less than the projected and potentially conservative demand/need for 10,851 housing

units in the District by 2040. The proposed Ayrshire community fits within projected 2020-2040 housing demand/needs in Green Cove Springs Planning District and helps fulfill these needs.

This projected level of housing demand/needs is viewed as potentially conservative because of the conservative nature of county population projections made by the University of Florida's Bureau of Economic and Business Research (BEBR). Population projections in the 2040 County Comprehensive Plan's Evaluation and Appraisal Report are based in part on BEBR projections and may not fully reflect the potential impact of the completion of the First Coast Expressway on future housing demand in the County. It is entirely likely that the County, particularly the greater Green Cove Springs area, will experience a higher level of population and household growth and resultant housing demand/needs than indicated by existing County projections.





## Clay County Utility Authority

3176 Old Jennings Road  
Middleburg, Florida 32068-3907  
Telephone (904) 272-5999  
Facsimile (904) 213-2469

*Working together to  
protect public health,  
conserve our natural  
resources, and create  
long-term value for  
our ratepayers.*

---

November 19, 2020

Mr. Robert S. Porter  
D.R. Horton, Inc. - Jacksonville  
4220 Race Track Road  
St. Johns, Florida 32259

Re: Letter of Understanding, regarding availability of water, wastewater and reclaimed water service to the proposed Ayrshire Subdivision (2,750 Residential Lots), Parcel Number 38-06-26-016515-000-00, located in Green Cove Springs, Clay County, Florida.

Dear Mr. Porter:

Availability of water, wastewater and reclaimed water to the above-referenced development, will be contingent upon the following conditions; completion and acceptance of a water treatment plant and a wastewater treatment plant, to be located within the Governors Park DRI. The completion and acceptance of necessary off-site infrastructure to reach your proposed development and the Developer of the Ayrshire development adhering to the rules, regulations and requirements of the Clay County Utility Authority (CCUA). Additionally, the Developer will be required to enter into a Master Utility Service Agreement with CCUA, which will define all provisions of service to this development.

CCUA will be able to serve this property with water, wastewater and reclaimed water service and will design the water plant and wastewater treatment plant to adequately accommodate the Ayrshire development and future developments as they arise.

Please feel free to contact me, at (904) 213-2410, or via e-mail at [drawlins@clayutility.org](mailto:drawlins@clayutility.org), if you have any questions or require any additional information.

Sincerely,  
CLAY COUNTY UTILITY AUTHORITY

*David Rawlins*

David Rawlins  
Service Availability Manager

JMC





42 Masters Drive St. Augustine, FL 32084  
Tel: 904.540.1786  
www.carterenv.com

January 12, 2021

BY EMAIL:

[jrgislason@drhorton.com](mailto:jrgislason@drhorton.com)

John Gislason  
Land Acquisition  
D.R. Horton  
4220 Race Track Road  
St Johns, Florida, 32259

**SUBJECT:** Environmental Assessment Report  
D.R. Horton - Ayrshire (CR 15A/Gustafson Parcel)  
Green Cove Springs, Florida

Dear John,

Thank you for contacting Carter Environmental Services (CES). We appreciate the opportunity to be of service to you. The purpose of our work on the referenced property was to delineate the onsite wetlands as defined by both the Army Corps of Engineers and the St Johns River Water Management District. Additionally, CES was also tasked with performing a preliminary protected species assessment of the subject property.

I trust that this information will be helpful in your preliminary planning. Please call Ryan Carter or myself if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Jeff".

Dave Jeff  
Senior Project Manager



## 1.0 CURRENT SITE CONDITIONS

The subject property (County Road 15A/Gustafson parcel) is approximately 881.17 acres in size. It is bound to the north by a parcel owned by Green Cove Springs which is composed of undeveloped uplands and wetlands, to the east by a CSX railway, to the south by the (future) First Coast Outer Expressway and to the west by County Road 15A. More specifically, the property is located within Section 38, Township 06 South, Range 26 East, Clay County, Florida. The Clay County parcel identification number is listed as: 38-06-26-016515-000-00.

Historically, the parcel was utilized as a dairy farm with many of the ponds and ditches acting as stormwater/wastewater treatment. However, the dairy is no longer in service and the site has remained unmanaged and has been allowed to go fallow. The lack of land management has resulted in dense vegetation growth in many portions of the site along with proliferation of many invasive exotic plants including but not limited to: coral ardisia (*Ardisia crenata*), camphor tree (*Cinnamomum camphora*), wild taro (*Dioscorea bulbifera*), cogongrass (*Imperata cylindrica*), Peruvian primrosewillow (*Ludwigia peruviana*), Brazilian pepper (*Schinus terebinthifolia*), tropical soda apple (*Solanum viarum*), Caesar's weed (*Urena lobata*) and Chinese tallow (*Sapium sebiferum*). Additionally, large drainage ditches placed prior to State/Federal wetland protection rules have resulted in the hydrologic drawdown and alteration of the groundwater table.

### 1.1 Wetlands

Pursuant to the current methodologies of the U.S. Army Corps of Engineers (ACOE), St. Johns River Water Management District (SJRWMD) and Florida Department of Environmental Protection (DEP), CES conducted a full wetland delineation of the subject parcel in 2020 (see Figure 3). Prior to our field work, our investigation included a Geographic Information System (GIS) review of the relevant maps for the area, including: the U.S.G.S. topographic sheet, the National Wetlands Inventory (NWI) map, the *Soil Survey of Clay County, Florida*, Digital Elevation Model and both current and historic aerial photographs (from 1953, 1970, 1984, 1999-current) of the project area.

Wetlands are defined by the state and federal government as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation that is typically adapted for life in saturated soil conditions." Criteria that make up a jurisdictional wetland include hydrophytic vegetation (wetland plants), hydric soils, and evidence of hydrology. ACOE requires all three criteria while the state agencies (SJRWMD and DEP) require only two of the three criteria.

CES has delineated approximately 137.28 acres of wetlands and has aerielly interpreted



approximately 8.16 acres of wetlands (See Figure 3). In late 2020, CES requested a pre-application informal wetland review with SRJWMD. However, in late December the Florida Department of Environmental Protection (FDEP) assumed ACOE's Section 404 wetland permitting program. Following that assumption, all pre-application wetland reviews were postponed until such meetings could be coordinated via a joint FDEP/SRJWMD site visit. We are currently awaiting guidance from FDEP on how field reviews will be conducted. Once the site's wetland lines are reviewed/approved, the wetland flags will be ready for survey and incorporation into the engineering plans along with areas SRJWMD/FDEP and CES agree on via aerial interpretation. Aerially interpreted areas are either too vegetatively thick to delineate and/or too dangerous due to extremely steep side slopes.

Also, in late 2020 CES applied for an approved jurisdictional determination (AJD) with ACOE. CES believes the submitted AJD is pursuant to the new federal Navigable Waters Protection Rule. The AJD will clarify which onsite wetlands are and are not jurisdictional to ACOE and ultimately what type of ACOE permitting will be required (i.e. no permit required letter, Nationwide Permit, Individual Permit). Following the FDEP assumption of the ACOE's Section 404 program, the AJD was transferred to FDEP on January 9, 2021. CES is currently waiting for a FDEP reviewer to be assigned to process the AJD request.

## 1.2 Wetland Impact Considerations (SRJWMD)

Both SRJWMD and ACOE require applicants to demonstrate elimination and reduction of wetland impacts. However, for the State (SRJWMD), regionally significant mitigation (i.e. mitigation bank credits) offers a distinct advantage. Mitigation Banks meet the "out rule" as outlined in Section 10.2.1.2 (b) Applicant's Handbook Volume I which states:

*The Agency will not require the applicant to implement practicable design modifications to reduce or eliminate impacts when:*

- a) The ecological value of the functions provided by the area of wetland or other surface water to be adversely affected is low, based on a site specific analysis using factors in section 10.2.2.3, below, and the proposed mitigation will provide greater long term ecological value than the area of wetland or other surface water to be adversely affected, or*
- b) The applicant proposes mitigation that implements all or part of a plan that provides regional ecological value and that provides greater long term ecological value than the area of wetland or other*





### **1.3 Federal Wetland Impact Considerations**

As mentioned above, the AJD and proposed impacts will dictate the extent of the required federal permitting (now implemented by FDEP). The project will either receive a "no permit required" letter, a Nationwide Permit or Individual Permit. Should the project require a wetland impacts, the follow discussion below will be applicable.

While projects with the District can meet the "out provision" of 10.2.1 Applicant's Handbook Volume I by purchasing mitigation bank credits or providing other mitigation which provides both regional significant value and greater term ecological value than the wetlands being impacted, the ACOE does not have such an "out provision".

With ACOE, avoidance and minimization of wetland impacts must be demonstrated in exhaustive detail. A project's wetland impacts must be thoroughly justified, unless the project can demonstrate a benefit to public health, safety or welfare. Examples of a public benefit would be a public roadway, homeless shelter, hospital, etc. Typically, the ACOE will allow activities such as wetland road crossings to reach usable uplands but will not allow lot fill for wetlands unless a pro forma is provided demonstrating wetland impacts are necessary to maintain a 10% return on the project. The 10% profit is the maximum that the Supreme Court has allowed for impacting wetlands for economic gain. At this time, CES is unsure if FDEP will be as stringent as ACOE in regards to wetland impact avoidance and minimization. However, we believe they will follow ACOE guidance and implement the Section 404 program nearly identical to ACOE.

### **1.4 Mitigation Costs**

The project is situated within SJRWMD Drainage Basin 8. Currently, mitigation bank credits within this basin are almost all ratio only. By the time this project would be in need of mitigation, CES expects the UMAM mitigation banks to have obtained releases of UMAM credits. Both UMAM and ratio credits have been selling for \$100,000. Based on the general onsite wetland quality, CES estimates the cost per acre of wetland impact for UMAM credits will equate to \$70,000 per acre. However, if UMAM credits are not available, ratio credits will be more costly and could range from \$150,000-\$200,000 per acre of fill. The cost of the wetland mitigation can be reduced by placing a regulatory conservation easement over the remaining wetlands onsite. Once the wetland lines are approved and we receive a final site plan, CES will be able to better estimate the total cost of wetland mitigation.



## 1.5 Listed Species

CES has conducted a limited pedestrian survey of the proposed project area to assess the presence of or potential utilization by any threatened, endangered, or species of special concern (SSC) as listed by the U.S. Fish and Wildlife Service (FWS) or the Florida Fish and Wildlife Conservation Commission (FWC). Prior to the site visit, CES compiled a list of potentially occurring species. The resources used to compile this list included a literature review of the soil units mapped on-site and both historic and current aerial photographs of the property.

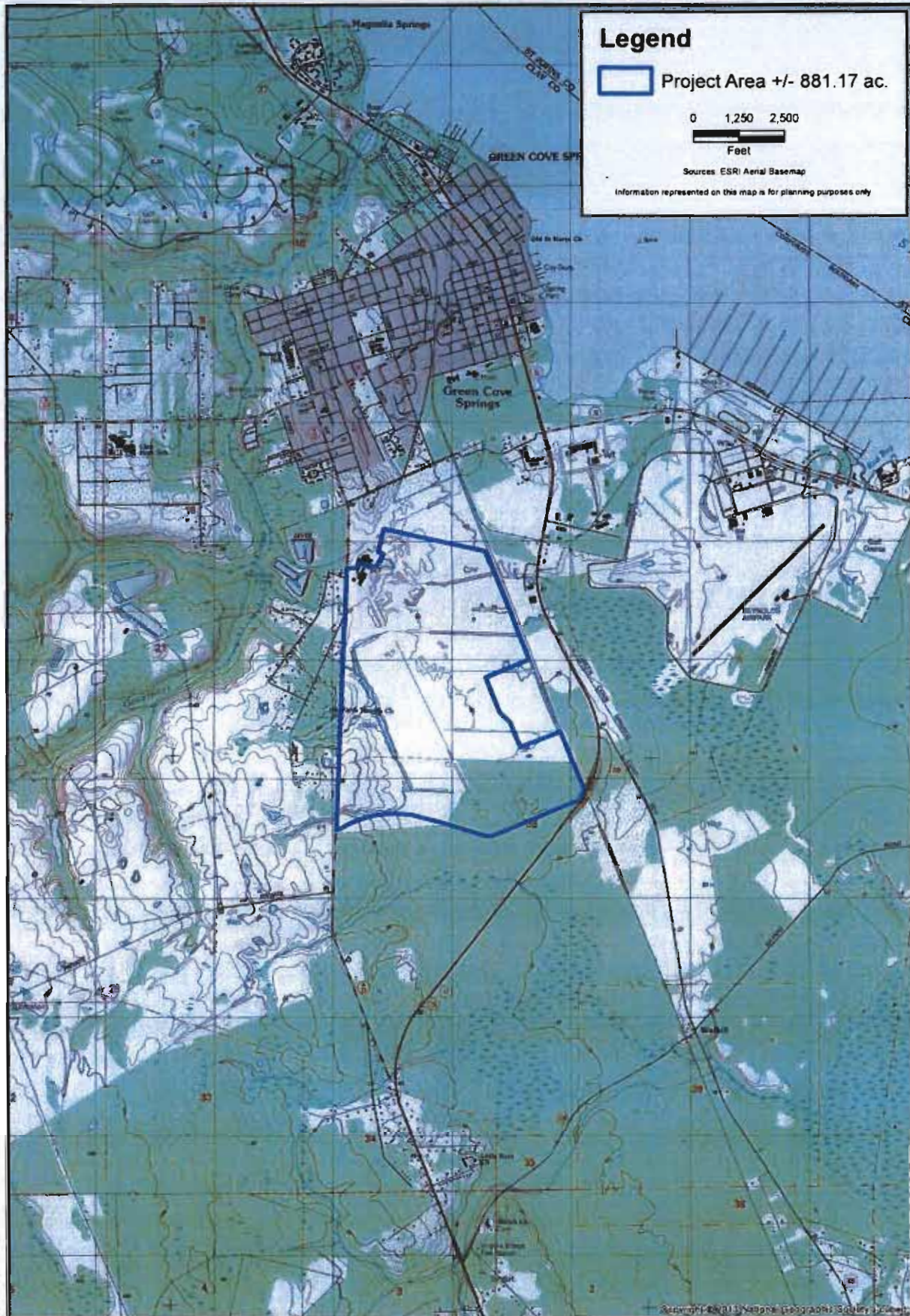
CES located one (1) gopher tortoise (*Gopherus polyphemus*) burrow onsite. Prior to construction, a 100% survey will be required and the proper FWC gopher tortoise relocation permit will need to be obtained.

Utilizing the FWC Eagle Nest Locator Database, there are no active bald eagle (*Haliaeetus leucocephalus*) nests on record within a 1,500-foot radius of the property. One nest (CL009) is located south of the project boundary (south of the First Coast Outer Expressway). However, the nest has been listed as inactive since 1990. Therefore, there should be no regulatory concern for bald eagles on the subject property.

Lastly, CES has determined there are active wading bird rookeries within the large central pond. The pond will need to be surveyed during the spring nesting season to determine the full extent/usage and exactly which wading bird species are utilizing the site as a rookery. Following the spring survey, CES will be able to determine which FWC restrictions will be applicable. To date, CES has observed one (1) little blue heron rookery. During nesting season (March through August), a 330-foot buffer must be maintained around protected wading bird species rookeries. Outside of nesting season, the only restriction is no development (disturbance) can occur within 50-feet of the nest trees. The buffer areas are mostly contained within the large central pond area. Please refer to Figure 4 which depicts the presumed rookery areas and their buffers. Again, more information will be presented following the full 2021 spring rookery assessment.

We trust that this information is helpful. Please contact us with any questions or concerns you may have.





**Legend**

Project Area +/- 881.17 ac.

0 1,250 2,500  
 Feet

Sources: ESRI Aerial Basemap  
 Information represented on this map is for planning purposes only

**CARTER ENVIRONMENTAL SERVICES, INC.**

**CES** 42 Masters Drive  
 St. Augustine, FL 32084  
 904-540-1786  
[www.carterenv.com](http://www.carterenv.com)

Location Map  
**Gustafson CR15A**  
 Clay County, Florida

Project:	5.20092
Date:	Oct 09 2020
Figure:	1





**CARTER ENVIRONMENTAL SERVICES, INC.**



42 Masters Drive  
St. Augustine, FL 32084  
904-540-1786

[www.carterenv.com](http://www.carterenv.com)

Soils Map  
**Gustafson CR15A**  
Clay County, Florida

Project:	5.20092
Date:	Oct 09 2020
Figure:	2

Sources: Data: ESRI Aerial Basemap, ESRI Digital Elevation Data, USGS, 1993; MapScale: 1:50,000; Date: 10/09/2020





**CARTER ENVIRONMENTAL SERVICES, INC.**



42 Masters Drive  
St. Augustine, FL 32084  
904-540-1786

[www.carterenv.com](http://www.carterenv.com)

**Wetland Delineation Assessment Map**  
**Gustafson CR15A**  
Clay County, Florida

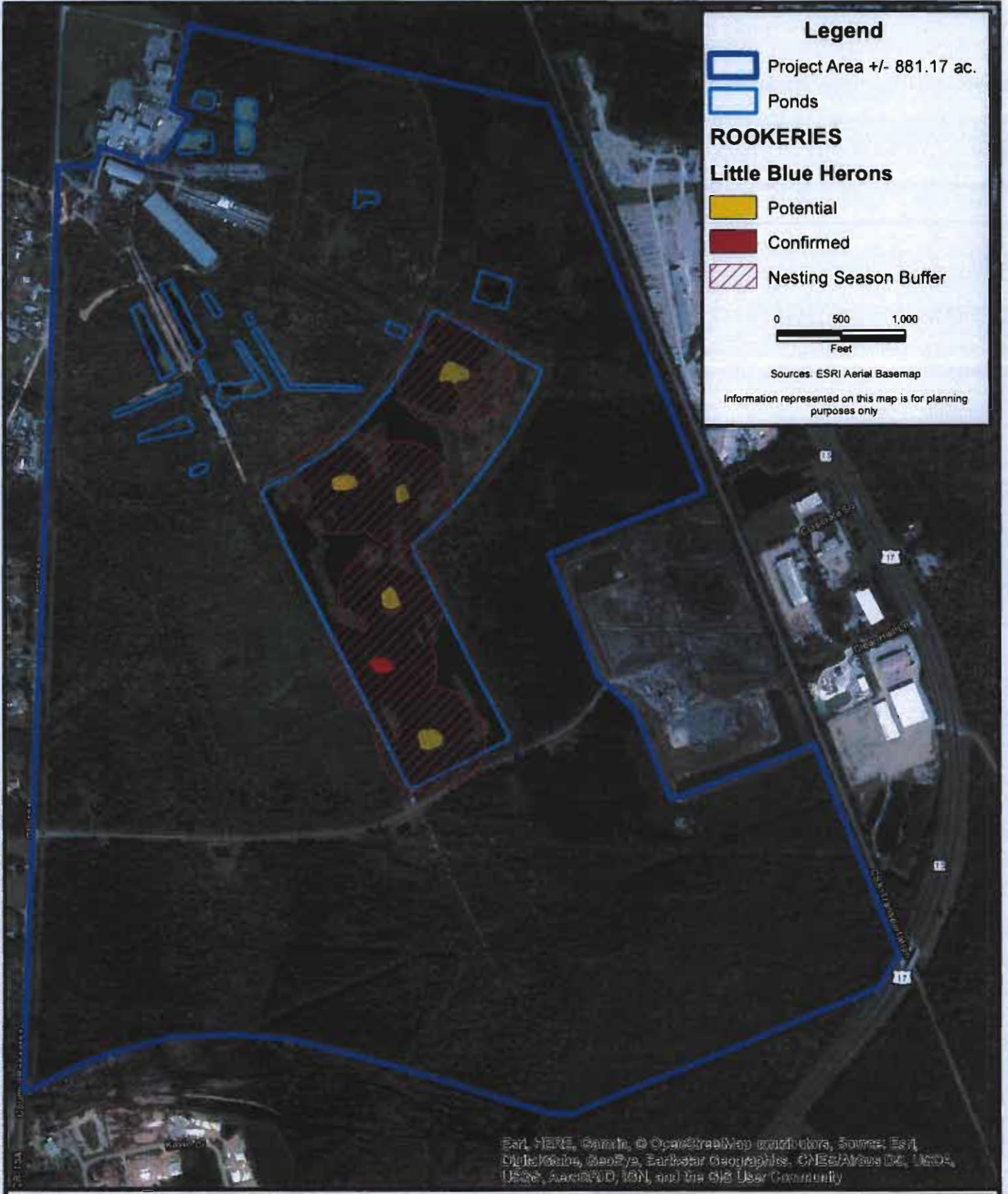
Project: 5.20092

Date: Oct 23 2020

Figure: 3



F:\CES Project\Project Files\Sub\Project Files\2020\6.20092 DR CR 15A\GIS\W\CDR CR 15A Wading Bird Rookeries.mxd



**Legend**

- Project Area +/- 881.17 ac.
- Ponds

**ROOKERIES**

**Little Blue Herons**

- Potential
- Confirmed
- Nesting Season Buffer

0      500      1,000  
 Feet

Sources: ESRI Aerial Basemap  
 Information represented on this map is for planning purposes only

Map HERE, Garmin, © OpenStreetMap contributors, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**CARTER ENVIRONMENTAL SERVICES, INC.**

**CES** 42 Masters Drive  
 St. Augustine, FL 32084  
 904-540-1786

www.carterenv.com

**Wading Bird Rookery Implications Map**

**DR CR 15A**

Project: 5.20092	Clay County, FL	Date: Sep 21 2020	Figure: 4
------------------	-----------------	-------------------	-----------